DRAFT JUNE 2007

2005 LONG RANGE TRANSPORTATION PLAN
AND
TRANSPORTATION DEMAND MANAGEMENT PLAN
UNIVERSITY OF WISCONSIN-MADISON

I. THE PLANNING PROCESS AND PURPOSE OF THE PLAN

This Long Range Transportation Plan (LRTP) has been developed in coordination with and as an element of the 2005 Campus Master Plan of the University of Wisconsin-Madison. It both responds to and helps shape the overall development plan for the campus over the next 20 years and beyond. Unlike most municipal or regional plans, this transportation plan does not call for any new roadway capacity or additional parking. It does include plans for intersection improvements—mostly to help pedestrian movement—and road realignments to boost connectivity. Parking will remain capped at its current level of approximately 13,000 spaces and virtually all of the specific improvements and program changes called for in this plan are strategies designed to make travel without a private motor vehicle safer and more convenient. For that reason, this long range plan is also the University's Transportation Demand Management (TDM) Plan.

The University has long demonstrated its commitment to TDM and has created TDM plans for specific building projects, notably the Kohl Center and Camp Randall. In 2006 the United States Environmental Protection Agency recognized the University of Wisconsin-Madison with an award for being a Best Employer for Commuters. However, it has never had a formal and comprehensive transportation demand management plan for the University as a whole. This plan will act as a guide to the University's own goals for improving an already stellar TDM program, and respond to a new City of Madison ordinance requiring TDM plans in association with major developments. Although previous physical master plans have had transportation elements, the University has never had a comprehensive and genuine long range transportation plan. Importantly, this plan fulfills University of Wisconsin Regent requirements (Section 80-5) adopted 7/11/1980 regarding campus transportation planning.

As an element of the University's larger 2005 Campus Master Plan, this transportation plan was developed within an unprecedentedly robust public input and consultation process that involved members of the campus community, the surrounding neighborhoods, and various local governments and agencies.[1] The University is particularly indebted to the ongoing assistance and advice it has received from the planning and traffic engineering departments and committees of the City of Madison and the Madison Area Metropolitan Planning Organization. In addition, the University has been an active member of various local planning processes, including the study of commuter rail or Transport 2020, the City of Madison's streetcar feasibility study, and the Dane County Clean Air Coalition as it involves the reduction of transportation-related emissions.

The structure and contents of the long range transportation plan follow the outline shown below:

I. The Planning Process, Purpose, and Outline of the Plan
II. Transportation Vision Statement and Goals
    A. Vision Statement:
    B. Goals for Improving Travel to and from Campus
    C. Goals for Improving Travel on the Campus
III. The Campus Transportation System Today: Success and Future Challenges for TDM
    A. Historical Background and Context
        1. Topography and the History of the Roadway Network
        2. Regional Context
        3. Campus Tradition of Alternative Transportation
    B. Getting To and From Campus

[1] The Campus Master Plan public participation process, of which this transportation plan was an element, included over 200 meetings with neighborhood associations, students, faculty, and staff, as well as presentations and consultations with the City of Madison's Pedestrian Bicycle and Motor Vehicle Commission, Long Range Transportation Committee, Traffic Engineering Department, the Madison Area Metropolitan Planning Organization, and other public agencies and organizations such as the Wisconsin Chapter of the Institute of Traffic Engineers.

1. Where We Live
2. Individual Preferences and Circumstances Affecting How We Get to Campus
3. Specific Programs and Modes of Transportation
    a. Transit to and from Campus
        1) Transit Travel Times
        2) Extent of Transit Service
        3) Park-and-Ride Transit Service
        4) Frequency of Transit Service
        5) Better Education, about Existing Service and Amenities
    b. Van and Carpool Programs
    c. Bicycle Routes and Facilities
    d. Pedestrian Facilities and Routes
    e. Parking Facilities for Commuters and Visitors
    f. Mopeds and Moped Parking

C. Getting Around on Campus
1. Existing Roadways
2. Intra-Campus Transit
3. Intra-Campus Bicycle Facilities
4. Intra-Campus Pedestrian Facilities
5. Driving between Points on Campus

IV. Infrastructure and Program Plans for the Future

A. Planned Transportation Improvements: Travel to and From the Campus
1. Transit Service Improvements to and from Campus
    a. Extensions, including Express Service, to the Periphery and Outlying Communities
    b. Additional Park-and Ride Service
    c. Signal Prioritization
    d. Commuter Rail
    e. Streetcars
2. Van and Car Pool Improvements to and from Campus
    a. Start-Up Vanpool Subsidy
    b. Targeted Vanpool Assistance Offers
    c. Targeted Carpool Assistance Offers

3. Bicycling Improvements to and from Campus
    a. Additional Bike Lanes on City of Madison Roadways
        1) Randall Avenue, from Monroe Street to University Avenue

    b. Additional Multi-Use Bicycle and Pedestrian Paths
        1) Extension of the Waisman Path
        2) Campus Drive Path
        3) Southwest Path Extension
    c. New Bicycle Stations
        1) Union South
        2) Humanities Building Redevelopment
        3) Union West
    d. Signed Bicycle Routes
    e. Bicyclist Amenities
4. Pedestrian Improvements to and from Campus
    a. New Sidewalks
        1) Highland Avenue
        2) University Bay Drive
    b. Pedestrian and Bicycle Bridges
        1) Across Campus Drive
        2) Across University Avenue
    c. Employee Housing Assistance Program
5. Roadway Improvements to and from Campus
    a. Reconfigured Intersections
        1) University Avenue and Campus Drive
        2) University Avenue and University Bay Drive
        3) Ramp Improvements to Campus Drive from Highland Avenue
        4) New intersection between Campus Drive and Walnut Street
6. Planned Parking Improvements for Commuters and Visitors
    a. Improved TDM to Limit Demand for Parking
    b. Automobile Parking Ramp Expansions

1) Lot 36 Expansion
2) Lot 46 Expansion

c. New Automobile Parking Ramps to Replace Surface Parking
1) Union South Ramp
2) Physical Plant Parking
3) Biotron Ramp
4) Humanities Ramp
5) Union West Ramp
6) CSC Visitor/Garden Ramp
7) Linden Drive Southside Ramp

d. Visitor Parking

e. Additional and Improved Parking Permit and Information Centers

f. Service Parking

g. Proximate Park-and-Ride

h. Moped Parking Facilities

7. Improved Information about Transportation Options

a. Individualized Online Advice
1) Long-term travel time information
2) Detailed route information
3) Real-time information
4) Enabling information
5) User feedback area

b. Localized Dissemination of Information about Alternatives

B. Planned Transportation Improvements: Travel on the Campus

1. Transit Service Improvements for Traveling around on Campus

a. Intra-Campus Bus Route Improvements
1) East/West Express Route
2)Southeast Circulator Route
3) Clockwise Southeastern Circulator
4) West Circulator

b. Intra-Campus Bus Service Improvements
1) Increased Bus Capacity:
2) Allow Boarding at All Doors:

3) Larger Rear Door for Boarding and Alighting:

4) Peripheral Seating:

5) Unique Campus Bus Identity and Improved Route Names:

6) Signal Prioritization:

7) Bus Stop Platforms:

c. Streetcars

2. Planned Bicycling Improvements on the Campus

a. Additional Bike Lanes on Campus Roadways

1) Observatory Drive

2) Walnut Street

3) Highland Avenue

4) Linden Drive

5) University Bay Drive

b. New Multi-Use Bicycle and Pedestrian Paths

1) Campus Drive Path

2) Southwest Path Extension

c. Bicycle and Pedestrian Bridges:

1) Crewhouse Dock Overpass

d. Signed Bicycle Routes

3. Planned Pedestrian Improvements on the Campus

a. New Sidewalks

b. East Campus Mall

c. New Traffic and Pedestrian Walk Signals

1) University Avenue and Murray Street. (Phase 1)

2) University Avenue and Orchard Street. (Phase 1)

3) Johnson Street and Orchard Street. (Phase 1)

d. Other Signal and Crosswalk Improvements

1) Reconfigure signal location(s)

2) Add pedestrian crosswalk across Campus Drive

3) Add count-down walk signals

e. Pedestrian and Bicycle Bridges

1) Across Campus Drive at Chamberlain Avenue

f. Pedestrian Bridges

II. TRANSPORTATION VISION STATEMENT AND GOALS

The University of Wisconsin – Madison is known nationally for its comprehensive array of options for traveling to, from, and around the campus. As a consequence, almost 50% of faculty and staff and over 90% of students use an alternative to driving alone to get to the campus. This achievement reflects the University's commitment to minimizing traffic impacts on nearby neighborhoods in Madison and the Village of Shorewood Hills. Moreover, it reflects the University's strong conviction about the importance of sustainability and about the responsibility it shares for providing faculty, staff, and students with the means for making environmentally smart transportation choices.

Fig. 1. Howard Temin Lakeshore Path: Combining Transportation and Open Space.

As a vital part of its Madison metropolitan and Dane County communities, the University is also committed to doing its part to fulfill local and regional planning goals. In particular, it is cognizant of its role regarding the following Dane County Vision 2020 goals and their implications for campus transportation:

- Promote compact urban development.

- Provide an integrated all-mode transportation system.
- Concentrate employment and activity centers along public transit corridors.
- Maintain downtown Madison as the region's major activity center.

The University has been and will remain an active partner and participant in local and regional planning efforts, including those of the Madison Area Metropolitan Planning Organization, the City of Madison, and the Village of Shorewood Hills.

The following vision statement and goals define the University's approach to improving its campus transportation system within the context of its relationship to surrounding communities for the next 20 years and beyond.

A. Vision Statement:

As its 2005 Master Plan unfolds, the University will continue to lead the nation with a campus transportation system that supports more productive interconnections among programs and members of the campus community, as well as between the campus and the communities that surround it. Campus transportation linkages will become more effective at the same time that they contribute to enhanced and more attractive open spaces that form a key element of the campus' sense of place.

The University is committed to a sustainable environment and will use this Long Range Transportation Plan (LRTP) to make significant improvements in the programs and infrastructure by which it provides the campus with customer-oriented alternatives to driving alone. *Above all, the University aims to make it possible for nearly all members of the campus community to choose a TDM alternative that fits their needs.* Although a portion of the campus community will always need to drive to the campus and park here, the University will look for ways to make options to driving alone not only feasible, but also convenient for more of those who work and study here.

The campus' network of roadways will be improved and maintained to provide both for the efficient circulation of motor vehicles as well as for the safer and more convenient circulation of pedestrians, bicyclists, and transit riders. In particular, the University will provide faster ways to travel without driving between the east and west parts of campus

as well as safer and more convenient pedestrian crossings to link the north and south parts of the campus across University Avenue and West Johnson Street. Parking will be maintained and relocated as needed to serve members of the campus community who must drive as well as support the future development of the University within its limited boundaries.

In the development of this vision, a number of supporting goals have been identified both for getting to and from the campus, and for getting around on the campus itself:

B. Goals for Improving Travel to and from Campus

1. Prioritize alternatives to driving alone as the preferred modes for accessing the campus for the maximum number of commuters.
2. Make transit an attractive option for those commuters living within the transit service area by improving frequency, hours of operation, reliability, and service quality.
3. In the longer term, serve the campus with fast, commuter rail transit.
4. Provide transit service that conveniently links outlying campus facilities.
5. Make vanpools, express buses, and park-and-ride service available for longer-distance commuters wherever feasible.
6. Make it possible for pedestrians and bicyclists to travel more safely and conveniently to and from the campus and all surrounding neighborhoods.
7. Provide amenities to bicyclists, such as covered parking, that make bicycling more attractive, including in winter and extreme weather.
8. Locate and design potential rail transit stations to maximize pedestrian, bus, and bike accessibility.
9. Provide and efficiently manage 13,000 parking spaces, the same number of spaces as currently exists, to accommodate members of the campus community who must drive, and fulfill the University's commitment to the City of Madison and the Village of Shorewood Hills that it will minimize traffic impacts to surrounding neighborhoods.
10. Set parking fees to reflect the full cost of building, maintaining, and operating the parking system and sustaining supporting elements of the campus transportation system.
11. Consolidate parking in structures to allow surface parking areas to be redeveloped into needed buildings and open space.
12. Make it possible for campus visitors and hospital patients to travel conveniently to the campus, including by driving and parking within a five-minute walking distance of their destination.
13. Continue to amplify Transportation Services' customer service and advance technology to stay on the cutting edge.

C. Goals for Improving Travel on the Campus

1. Provide transit service that makes it possible to travel to and from all parts of the campus within 15 minutes (including the maximum waiting time) between 7:00 AM and 5:00 PM on weekdays.
2. Provide off-peak hour transit service that allows members of the campus community to travel safely between campus destinations at reasonable frequencies.
3. Explore the feasibility of streetcars with the City of Madison as a potential part of an efficient city and campus transit system.
4. Make it possible to travel more safely, conveniently, and quickly to and from all parts of the campus by foot and bicycle.
5. Make improvements to University Avenue, West Johnson Street, and other City of Madison streets on campus to create a more pedestrian-friendly environment and ensure that travelers through the University understand that they are on the campus.
6. Make it easier and safer for pedestrians and bicyclists to move from the north campus to the south campus across University Avenue, West Johnson Street and other City of Madison streets within the campus boundary.
7. Minimize the amount of private vehicular traffic, including delivery and service trucks, on the campus and direct it to designated roadways so as to reduce conflicts with pedestrians and the emission of pollutants.
8. Make improvements in roadway connections to allow vehicular traffic to move more efficiently around the campus and onto regional arterials.
9. Manage the use and parking of mopeds to reduce conflicts with pedestrians, improve safety, and ensure fulfillment of the landscape goals of the campus.
10. Ensure accessibility for persons with disabilities in all related transportation facilities.

III. THE CAMPUS TRANSPORTATION SYSTEM TODAY: SUCCESS AND FUTURE CHALLENGES FOR TDM

The University of Wisconsin – Madison boasts one of the most successful and comprehensive Transportation Demand Management (TDM) programs in the country. Nearly half of its employees travel to campus by means other than a private automobile, while only 10% of the University's students use a private automobile to regularly travel to campus. Just as significantly, the University manages an efficient parking program committed to the twin goals of minimizing the impacts of parking on local neighborhood streets and providing for the needs of faculty and staff that must drive. This section of the plan describes the University's existing transportation system as well as the growing set of challenges it faces in order to improve on its success with TDM and the maintenance of an adequate but stable supply of parking.

A. Historical Background and Context

The current University transportation system, and the challenges it faces to improve that system, are strongly defined by the campus' remarkable topography, its unique street and railway network, and the powerful transportation and land use development dynamics of metropolitan Madison and the Dane County region.

1. Topography and the History of the Roadway Network

The University of Wisconsin-Madison is located near the heart of Madison, Wisconsin. It is an urban campus and yet much of its transportation infrastructure harkens back to its bucolic roots. What were once cow paths and buggy trails have become major corridors connecting the University internally and to the surrounding community. Although City of Madison streets around the campus were laid out in a typical urban grid, this never really took place north of University Avenue where the topography of the land continues to dominate the configuration of roadways. For example, State Street ends at Bascom Hill and, although Lathrop Drive once provided access to Bascom Hall, the only way there by car today is a "new" road, Observatory Drive, that twists its way up the contours of the steep hill east of Muir Knoll. Another reflection of the dominance of topography is the configuration of almost all of the roads west of North Charter Street that follow paths originally laid out around glacial drumlin hills and other land features by farmers and other first settlers in the area.

Some of the campus' departures from the kind of classic roadway grid laid out by the City of Madison in the 1800s are deliberate. For example, Breese Terrace once continued north into the campus to Linden Drive but was truncated in about 1910 to suit the railroad alignment now located there along where Campus Drive was later constructed in 1969. (See figure below.) Both the tracks and Campus Drive have thereafter defined the southern border of the western part of the campus as well as limited north/south access to the campus either partly or completely from Babcock Drive to University Bay Drive.

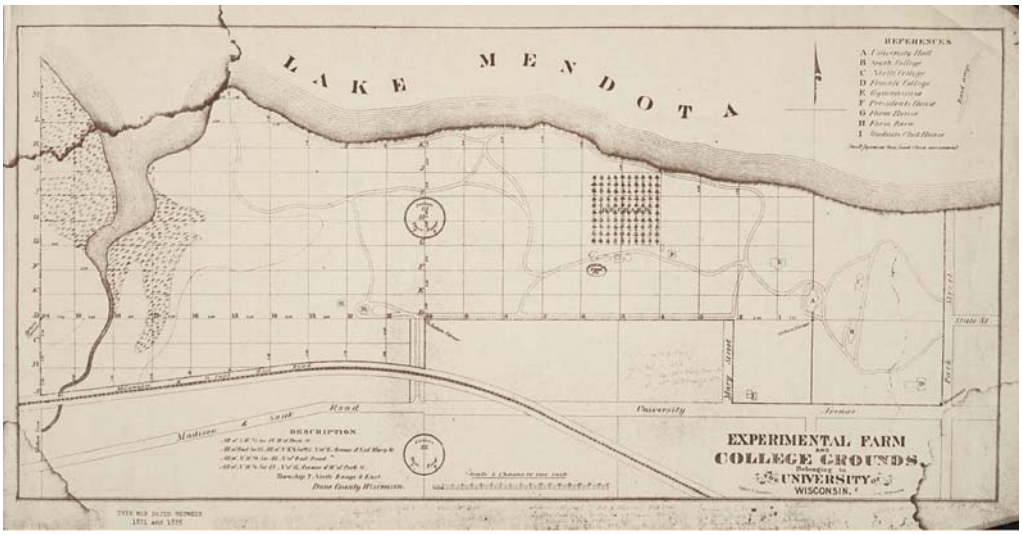


Fig. 2a. UW-Madison Campus Roadways circa 1870.

When the campus first expanded into the agricultural lands of the west campus, Linden Drive served as the only east-west link providing access to the test fields west of Agricultural Hall. Sometime before 1910, however, Observatory Drive was straightened out, relocated from the south side of Washburn Observatory to its present location, and then extended east down the north side of Bascom Hill via a narrow and steep switchback to North Park and Langdon Streets. The next big change to the road network came in the 1970s when Highland Avenue was built to accommodate the University Hospital and Clinics. Since then, the only change to campus streets has been the realignment of Observatory Drive and Walnut Street with its intersection at University Bay Drive to accommodate the new Rennebohm School of Pharmacy Building.

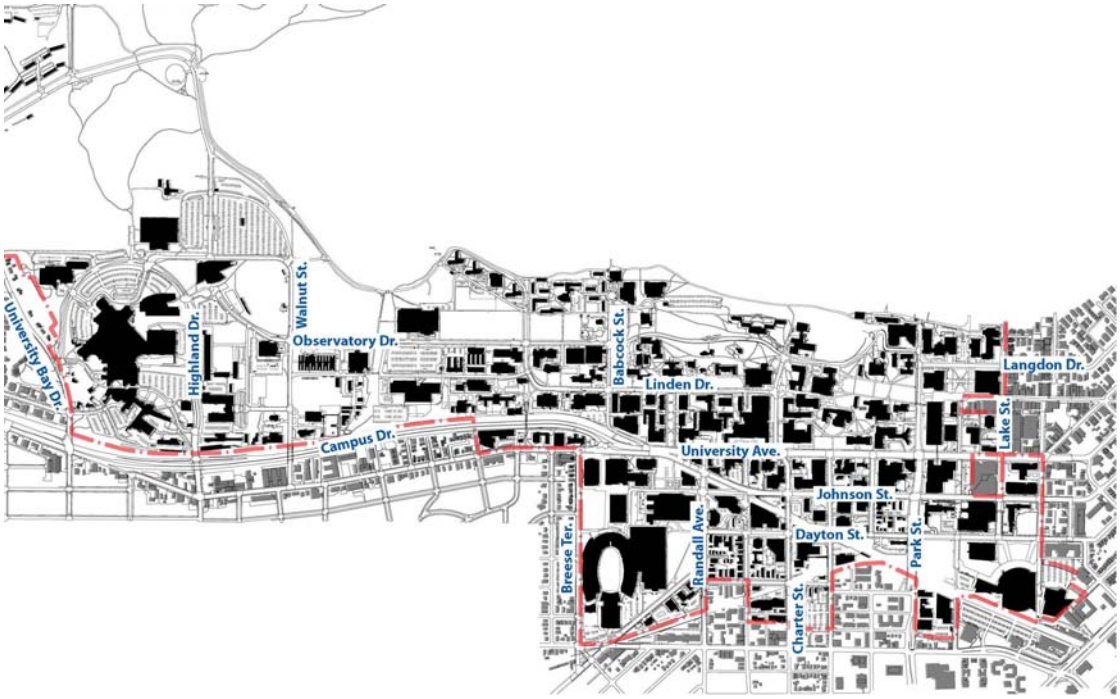


Fig. 2b. UW-Madison Campus Roadways in 2005.

While the effects of the campus' topography are most apparent in the case of its road network, it also defines the nature of the University's transportation system more generally. For example, because the walk up Bascom Hill is steep, many students and staff opt for a motorized form of transport up that hill and thus generate capacity challenges for the free intra-campus bus system as well as a growing interest in the use of mopeds or motor scooters. Moreover, although much of Madison is relatively level and thus ideal for bicycle travel, the decision to locate the campus on some of the steepest hills in the City has relegated most east/west travel by bicycle across the campus to the busy automobile corridor of University Avenue and West Johnson Street. Finally, the sheer size of the campus, covering nearly 1,000 acres and spanning in excess of two miles from east to west, creates a real impediment to providing a seamless academic environment. Notably, as the western and central parts of the campus develop, this challenge will only increase.

2. Regional Context

The Madison metropolitan area's transportation system is strongly shaped by the location of the central business district and the campus on and around an isthmus of land between

Lakes Mendota and Monona. As a consequence, much of the regional traffic moving east and west must travel through the heart of the campus on University Avenue and West Johnson Street. In recent years, congestion on these streets as well as on other regional, spoke-like arteries that radiate out from the isthmus has significantly increased. University Avenue is currently identified as "very congested" with a level of service (LOS) of D through F—the maximum value—during peak hours just west of the university. This high level of congestion on streets with a high functional classification and thus up to three or four travel lanes on streets such as University Avenue and Johnson Streets within the heart of the campus has three implications for the University:

- Pedestrians and bicyclists experience inconvenience and danger crossing a number of City streets within the campus, especially when traveling to and from the northern and southern halves of the campus.
- Commuters experience increasing delays and frustrations traveling to and from the campus in private automobiles as they do in many parts of the region. This makes some members of the campus community more open to alternative forms of transportation such as potential commuter rail and van service, but also discourages some from employment on the campus and other central city employers.
- Because buses must travel primarily in regular traffic, they are subject to increases in congestion and to the same trends as private motor vehicles regarding longer and longer commute times.

The second major regional trend to which the campus must respond is the rapid growth of development in and beyond the periphery of Madison. A result of the congestion described above as well as the overall population growth associated with Dane County's national reputation as a highly livable area of the country is that more and more of those who work and study at the University live further away from the campus. This is also a function of the higher price of housing near the campus relative to prices on the periphery. From a transportation viewpoint the result is the same: more and more members of the campus community live beyond current transit service areas and too far away to conveniently walk or bicycle to the campus.

In response to these trends and the challenges they represent, the University has been an active participant over the past five years in transit planning studies with the City of

Madison, Dane County, the Madison Area Metropolitan Planning Organization (MPO), and the Wisconsin Department of Transportation for a rapid regional commuter rail transit system operating on its own right-of-way. Similarly, the University is an active participant in the City of Madison's streetcar feasibility study. Finally, the University also supports the state's proposed and federally approved high speed rail link from Madison east to Milwaukee and Chicago, and the west to the Twin Cities. Coupled with other forms of transit and taxi service, this passenger rail link could significantly expedite travel for visitors to the University as well as students and staff.

3. Campus Tradition of Alternative Transportation

The University has a long history of addressing the challenges of devising successful transportation policies within the context of a growing dependence on automobiles. The Transportation Services department itself was founded in 1924 in response to parking demand outstripping supply. Historical photos of how parking once took over Henry Mall clearly reflect the need for such policies. Ultimately, one of these policies, enacted in 1932, banned students entirely from parking on campus. Since then, Transportation Services has built up an office that staffs over a dozen separate programs and compiled a Business Policy Manual with over 35 separate policies. These policies are designed to accommodate and manage the use of automobiles on campus while being mindful of Transportation Services' other main concerns, including the limited availability of land, the encouragement of alternatives to driving, and campus aesthetics.

Fig. 3. Parking on Henry Mall circa 1930.

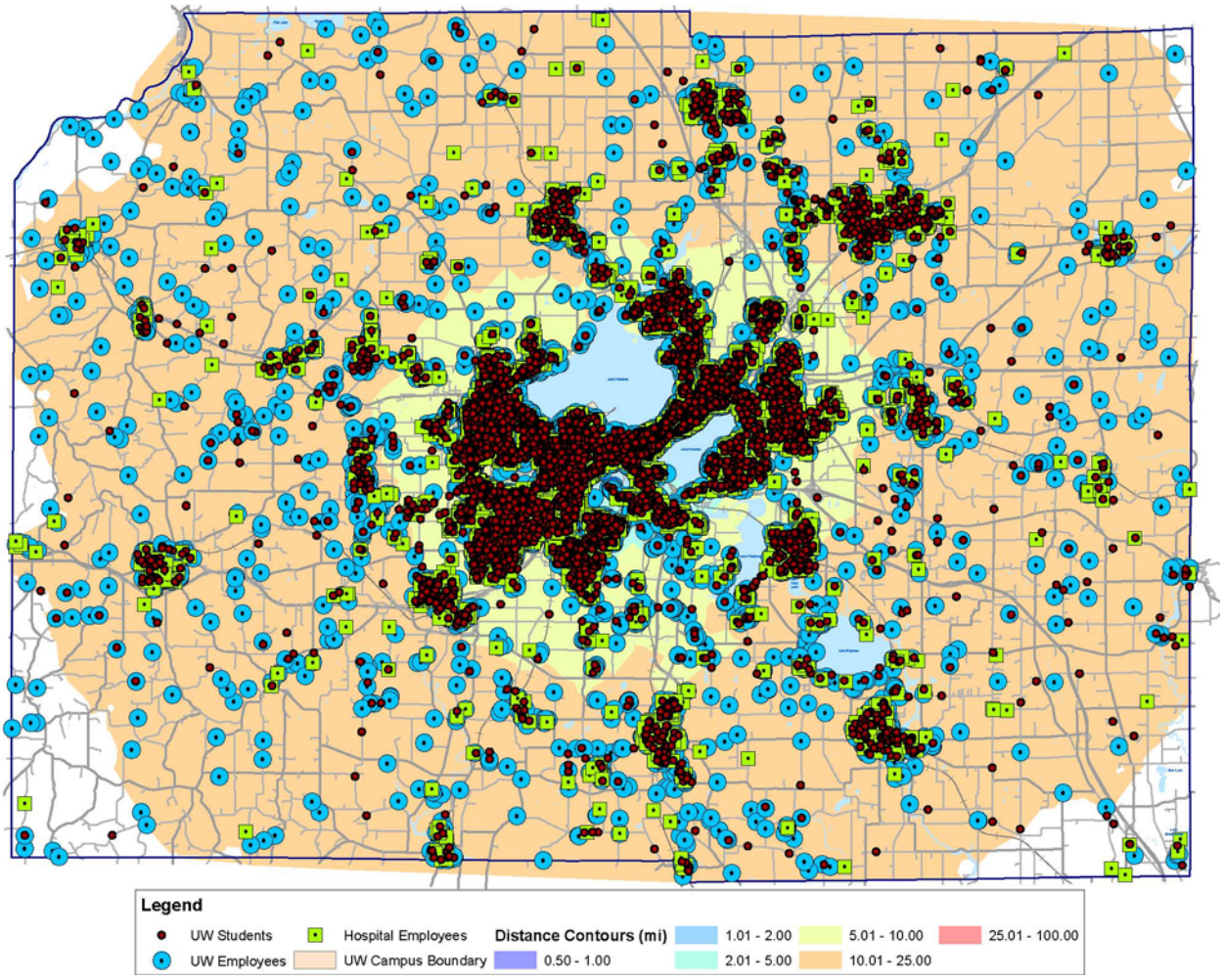
B. Getting To and From Campus

Much of the foregoing background information addresses trends and circumstances that strongly impact the University but lie beyond the boundaries of the campus and thus often beyond its control. For that reason, many of the elements of the campus' current successful transportation system regarding commuters involve the cooperation of other public agencies, such as Madison Metro or the Madison Area MPO. This section describes in more detail some of the key influences on the choices campus commuters make and how the University and cooperating agencies have worked together to solve them. This section also discusses problems and new challenges for campus commuters that then provide the basis for the campus transportation plan.

1. Where We Live

In order to understand how and why individuals select a particular mode of travel to the campus, it is important to know where they live. Based on records maintained by the

University, the home addresses of virtually all members of the campus community were geo-coded or spatially located as they were distributed across Dane County.



Figs. 4. Home locations of members of campus community.

Although most of the campus community still lives within the City of Madison, the regional distribution of campus residential addresses is relatively wide, including not only central city locations close to the campus, but also the periphery of Madison as well as nearby and distant suburbs and towns. In turn, a faculty, staff, or student's choice of transportation mode generally reflects the distance between the campus and his or her residence. As Figure 5 illustrates, the closer someone lives to campus, the more likely she or he is to walk or ride a bike. Conversely, those further away are more likely to drive. The important nuance to this not-surprising correlation is that those living beyond a certain car-commuting distance are more likely to carpool or use a state van to avoid the

tedium and great expense involved in using one's own personal motor vehicle. Bus ridership, meanwhile, is highest among those who live in-between.

This distance-driven explanation of travel behavior also helps explain differences between students and University employees. That is, since students generally live closer to campus than university employees, they tend to walk and bicycle at higher rates than faculty and staff. This travel choice is also affected by the fact that students are typically not able to obtain parking permits. And, as Figure 5 illustrates, the specific regional differences other than distance can influence mode split, including availability of transit and its relative isolation of a neighborhood. The lack of car and vanpooling in Madison's new neighborhoods on the far eastern side of I-90/39 might be a function of its very newness.

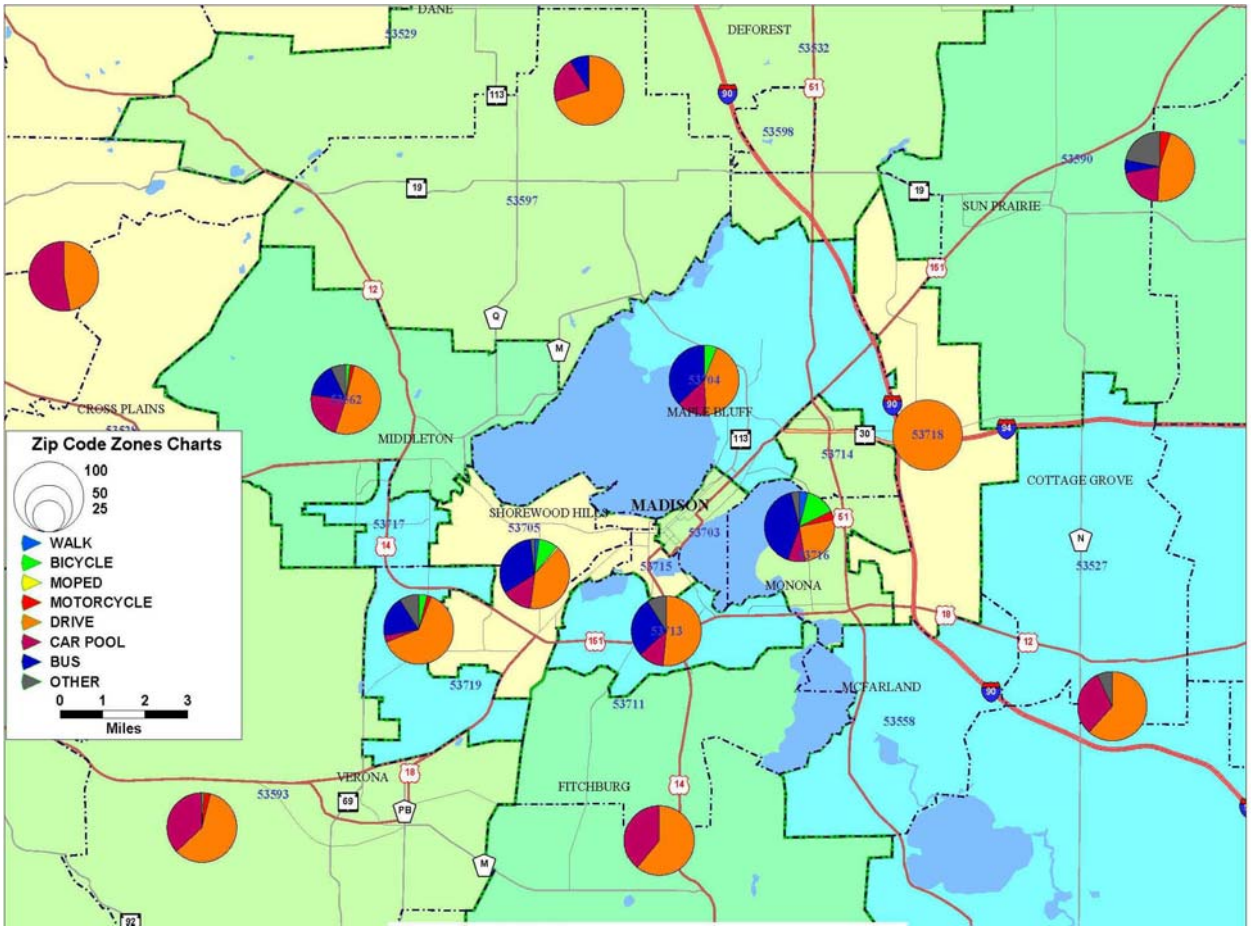


Fig. 5. Regional mode shifts.

2. Individual Preferences and Circumstances Affecting How We Get to Campus

Although it would appear at first glance that someone's preferred mode of transportation is determined entirely by his or her residential location, there is more to it than that. Over time, the University has worked on its own, and often with other nearby agencies, to make it possible for persons who were previously outside the reach of alternative transportation options to choose a TDM strategy. This success has been achieved largely by discovering what would make it possible and desirable for people who live relatively far from campus to choose an alternative to driving. In December 2004, in an effort to go about this more systematically, the University conducted a survey of the preferences and travel behavior of a stratified random sample of University faculty, staff, hospital staff, and students. Care was taken to ensure that samples of persons residing out of Madison in smaller communities were large enough to support statistically significant interpretations.

Survey questions were designed to identify not only current travel patterns, but also the reasons behind them. For each mode, respondents were asked whether they use that regularly to travel to and from campus and then around the campus once there. If they did not regularly use a given mode, they were then asked to select from a number of improvements and choose any that would make them likely to use that mode on a regular basis. Each question included a free response section in addition to the item "no improvement would make me use this mode." The results of this survey are integrated into the separate sections below addressing individual modes and transportation strategies. (For a detailed report of this survey, refer to Appendix A, Transportation Survey Report)

3. Specific Programs and Modes of Transportation

University Transportation Services coordinates a range of TDM programs as well as parking and employs a TDM coordinator who manages these programs and is available to work with individuals to provide information and assistance on alternative modes. This includes identification of bus routes, bike routes and walking paths. It can also include recommendations or assistance in outfitting a bike or accompaniment along the first journey to work via an alternate mode. Specific transportation programs and facilities available to faculty, staff, and students are described below.

a. Transit to and from Campus

The growth in transit service to the campus is a mirror of the evolution of transit in the City of Madison as a whole. Starting in the early 1900s, the campus was served by steel-wheel trolley service. By 1921, streetcars ran in both directions on double track from the Capitol Square down State Street to Park Street (through today's State Street Mall) turning onto University Avenue from Park Street and then down Breese Terrace to Regent Street. A spur from University Avenue also carried riders up and down Mills Street almost to the Arboretum. While trolleys dominated City streets through the campus during the 1920s, soon after that they were replaced by rubber-tire transit—buses.

Overall, the campus community is very well-served by the current Madison Metro bus system. Metro has been active in extending service to more areas of the City, including the periphery via a network of four transfer points. Eight separate bus routes traverse the northern campus providing commuter service to the hospitals and the traditional academic core. Moreover, the dedicated, westbound bus lane on University Avenue serves more than a dozen routes and provides a tremendous amount of bus capacity through the heart of the campus. The Metro system served about 55,000 passengers across the metropolitan area on a typical weekday in 2003.

For the most part, Madison Metro's service district is concentrated in the City of Madison. Service to and from Middleton and Monona does exist but is sparse. Service to the outlying community of Verona has recently begun and is planned for Sun Prairie. Despite some signs of interest, no plans exist for other communities such as Fitchburg, Waunakee, McFarland, and Stoughton. Park-and-ride service is provided by Madison Metro at its North and East Transfer Points. In addition, the University maintains a permitted off-campus park-and-ride lot at the University Research Park. This lot is reserved for University employees and is offered at a significantly reduced rate. The University did, for a time, contract with the city to provide express bus service (#53) between the lot and the campus. However, the relatively low number of users did not justify the high cost of the service and the route was discontinued (regular bus service replaced the express bus service). The University continues to seek out new ways to make Park and Ride express bus service feasible.

Fig. 6. Madison Metro Bus Routes Penetrating the UW-Madison Campus in 2005.

The best indicator of the adequacy of the current commuter bus system is that over 85% of students live within a quarter mile (five-minute walk) of a transit route, while over 55% of University employees and 47% of hospital employees live close to a transit line. Of these, 99% of students, 96% of faculty/staff, and 94% of hospital employees have a one-seat (no transfer) ride to the University in the peak hour.

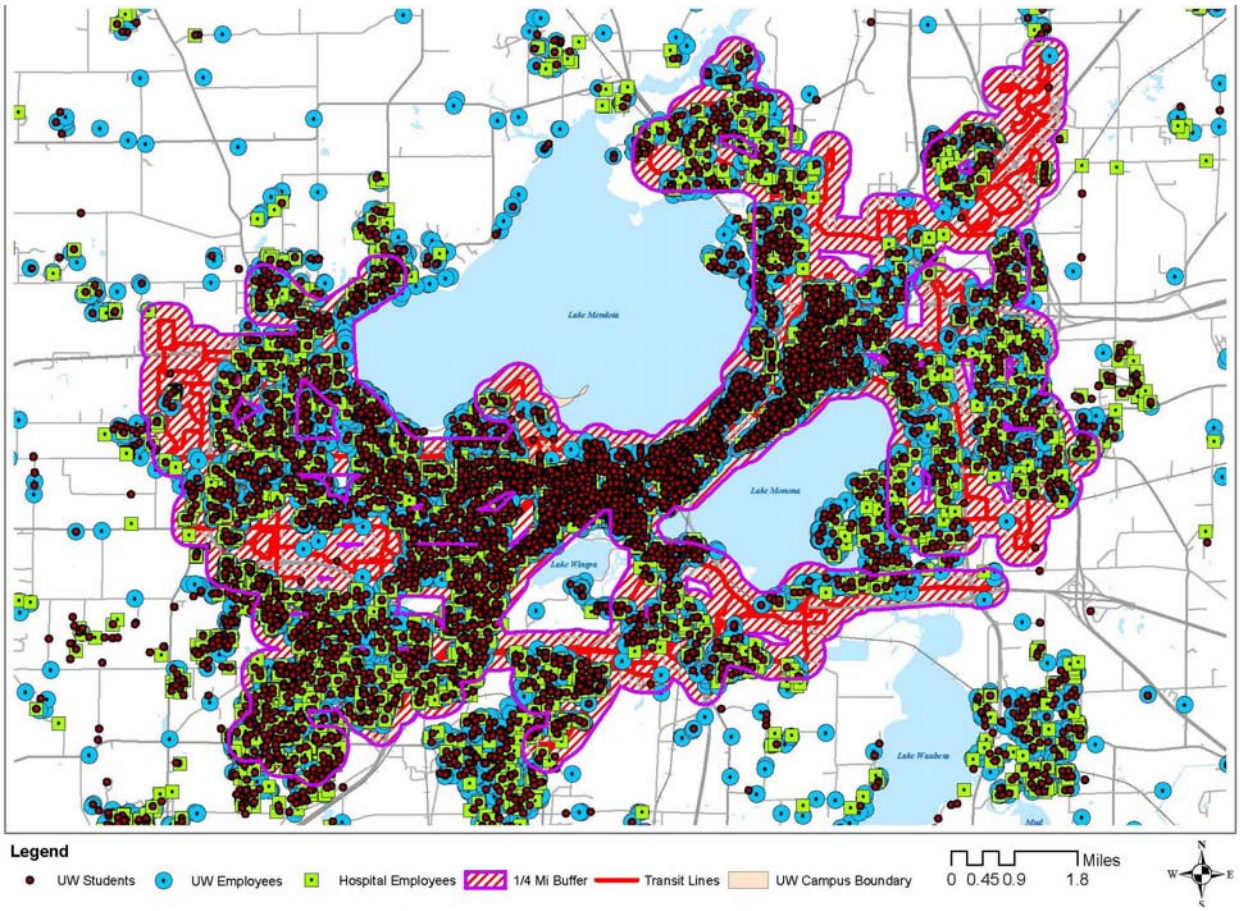


Fig. 7. Madison Metro Bus Routes in Relation to UW-Madison Residential Locations.

The result of providing free access to this relatively comprehensive system of bus service is that 10% of faculty and staff ride the bus regularly, a number that increases to 16% when many bicycle riders switch to the bus in winter or in otherwise inclement weather. Thirteen percent of students, meanwhile, ride the bus in good weather, a number that increases to 23% when the weather is not as conducive to bicycling. This relatively strong statistic is also partly a function of the free bus student pass instituted in 1996 and then extended to faculty and staff in 2003. Everyone on campus may now obtain a free pass from UW Transportation Services that will allow him or her to take any bus within the larger Metro route system at any time for a period of one year. The cost of the pass is covered by Transportation Services in the case of employees and by the Associated Students of Madison by means of a small, segregated student fee in the case of students. The consequence of this pass is that student bus ridership increased from 13% in 1987 to 21% in 1999 during bad weather, mostly at the expense of bicycling.

Despite this strong record of ridership, an analysis of survey results reveals significant problems with the current commuter bus service:

1) Transit Travel Times: The first and most important problem from the viewpoint of faculty and staff is that travel time by bus to the campus is not typically competitive with a private automobile. Although many of Metro's routes serve the campus, they also sometimes divert from a direct route to serve other areas, thereby increasing travel times. Moreover, there is only so much that can be done to improve travel times for local service bus routes, especially as these routes get longer to address the growth in service areas. An increasing weakness with many local service routes in the metro area is an inevitable function of the growth of the metropolitan area and the congestion of its road network. Today it simply takes longer to drive to the campus from many parts of Dane County than it did a decade ago. In turn, bus service in regular traffic using standard all-vehicle lanes is subject to the same congestion delays as private motor vehicles. Travel times are further increased for buses as a route becomes longer because the increase in the sheer number of bus stops increases the total dwell time. All of this also affects Madison Metro's otherwise very welcome new, planned service (2006) from Verona and Sun Prairie. This new service will not travel directly to downtown employment centers but instead connect at a peripheral transfer point to an existing local service route to the campus and downtown area. Although much better than nothing, this kind of service has a limited appeal for University employees and other commuters and will probably not attract a majority of those who might be interested in a faster form of bus service.

Beyond a certain point, travel speed improvements capable of attracting a maximum number of campus commuters out of their cars can only be achieved via an express bus service that is not now generally available in any of the metropolitan area's commuter-sheds. This service comes in two types: a traditional bus that picks up passengers in a neighborhood or community which then travels directly to its destination without any more stops—in this case the campus and downtown area; and a "premium" bus (akin to a tour bus) that operates between a limited set of stops, usually one or two pick-up points and a similar number of drop-off points at the destination. To date, Madison Metro has generally not operated express buses of any type with the exception of Route 53, a campus dedicated and financed bus that picked up riders at a park-and-ride lot at University Research Park on Madison's west side. The Route 53 service was

discontinued because of low use and high cost. Regular bus service replaced the express bus service. The University would like to continue to pursue Park and Ride express bus service, but must find more cost-effective ways to implement this option. Partnerships amongst entities may make the service feasible in the future.

2) Extent of Transit Service: About a quarter of employees surveyed indicated a willingness to ride the bus if there were more convenient locations, free parking at park-and-rides, and express buses from peripheral locations. For example, among those with identifiable addresses, although almost 2,000 University Hospital employees live in Madison, over 1,400 live in other communities largely without transit service. Counting students, faculty, and all staff including hospital employees, almost 1,400 members of the campus live in Fitchburg, 300 in Stoughton, 300 in Oregon, and almost 300 in McFarland. As noted elsewhere, these outlying communities are growing at a much faster rate than Madison and they include a growing segment of the campus community. (See Appendix B, Residential Location of University Faculty, Staff, and Students by Municipality.) Unfortunately, although Madison Metro is initiating service from Verona and Sun Prairie to its peripheral transfer points (2006), most outlying communities do not have transit service to Madison and the limited service that is planned will not be express service directly to the downtown and campus area. Among the biggest gaps in services is the absence of any park-and-ride facility or transit service from the west in Middleton near US Highways 12 and 14—that is, from the commutershed for many employees who live in Madison's western and northwestern suburbs and municipalities. Another commutershed not directly served includes US Highway 151/Verona Road.

Of particular interest within the metropolitan area itself is the case of Middleton. Many University employees in that Metropolitan Madison area community have not been well-served by transit, particularly on the north and western edges of the city. Although most of the routes currently serving Middleton also serve the University, they are often circuitous in their routing, resulting in long travel times. As this plan goes to press, Madison Metro has announced its plan to expand service and add routes in Middleton. The University strongly supports this decision and would point out that the potential market for campus employee bus riders is twice as large there as in any other neighboring community. The University also is committed to working with Madison Metro to find ways to increase the transit service attractiveness with minimal expansion in service

hours. For example, a short extension of the Route 60 north along highway Q would bring 150 faculty, staff and students within walking distance of a transit stop. Additionally, routes with large loops could be realigned such that the travel time for university affiliates is minimized.

3) Park-and-Ride Transit Service: According to survey results, park-and-ride service has the single biggest potential for an increase in market share of the transportation alternatives currently available to the University. Seventeen percent of all faculty and staff who do not normally take the bus (nearly 15 percent of the total population) would consider doing so from a park-and-ride along their normal route to work. Park-and-ride service is also the best available way to respond to the growing number of those who do not want to leave their cars entirely or otherwise convert to a regular transit mode of travel by living where it is available.

4) Frequency of Transit Service: The second most common concern of surveyed faculty, staff, and students was that bus service frequencies were not high enough. While a few routes operate every 15 minutes during the peak hour, most travel on 30-minute headways with many dropping to 60-minute headways off-peak. Finally, all groups indicated a strong desire for extended service hours.

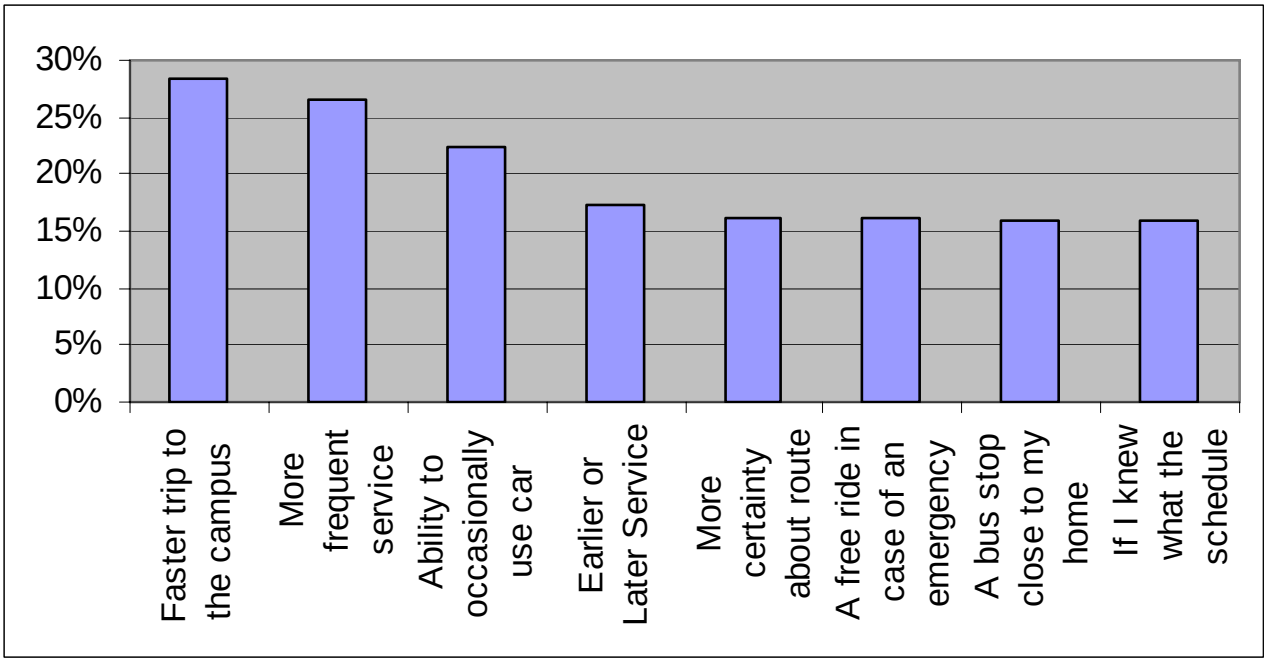


Fig. 8. Most Frequently Suggested Transit Improvements
from UW-Madison Travel Survey December, 2004.

5) Better Education, about Existing Service and Amenities: Students, in particular, indicated that they needed more information about Metro's route structure and timetable. Depending upon the question, this was their second or third most pressing need. Survey results for faculty and staff, meanwhile, also indicated that they need more education about existing transportation options and programs. Many of the respondents requested improvements that already exist. Faculty and staff often reported that the ability to occasionally use their car is critical, even though this option already exists via the availability of hourly, half-day and daily parking permits. Also important, particularly to hospital employees, was the ability to receive a ride home or elsewhere in case of an emergency. Again, this program is already available to all faculty and staff who do not regularly drive their car to campus.

b. Van and Carpool Programs

The University actively promotes carpool and vanpool programs. In addition to access to TDM programs, vanpool participants are automatically granted a parking permit for their first choice parking lot. Carpools are encouraged by access to the Dane County Ride

Share program and by allowing participants to split the cost of a parking permit and apply it to more than one car. Van and carpool participants are also eligible for the free emergency ride home program.

In 2004, approximately 9% of employees carpooled to campus while 2% participated in a vanpool. Another 4.5% of all employees are regularly dropped off on campus by someone else in good weather and 6.5% in bad weather. Although rideshare usage is generally related to an employee's distance from the campus, levels of ridesharing are actually higher among those who live within Madison than those living in the surrounding communities.

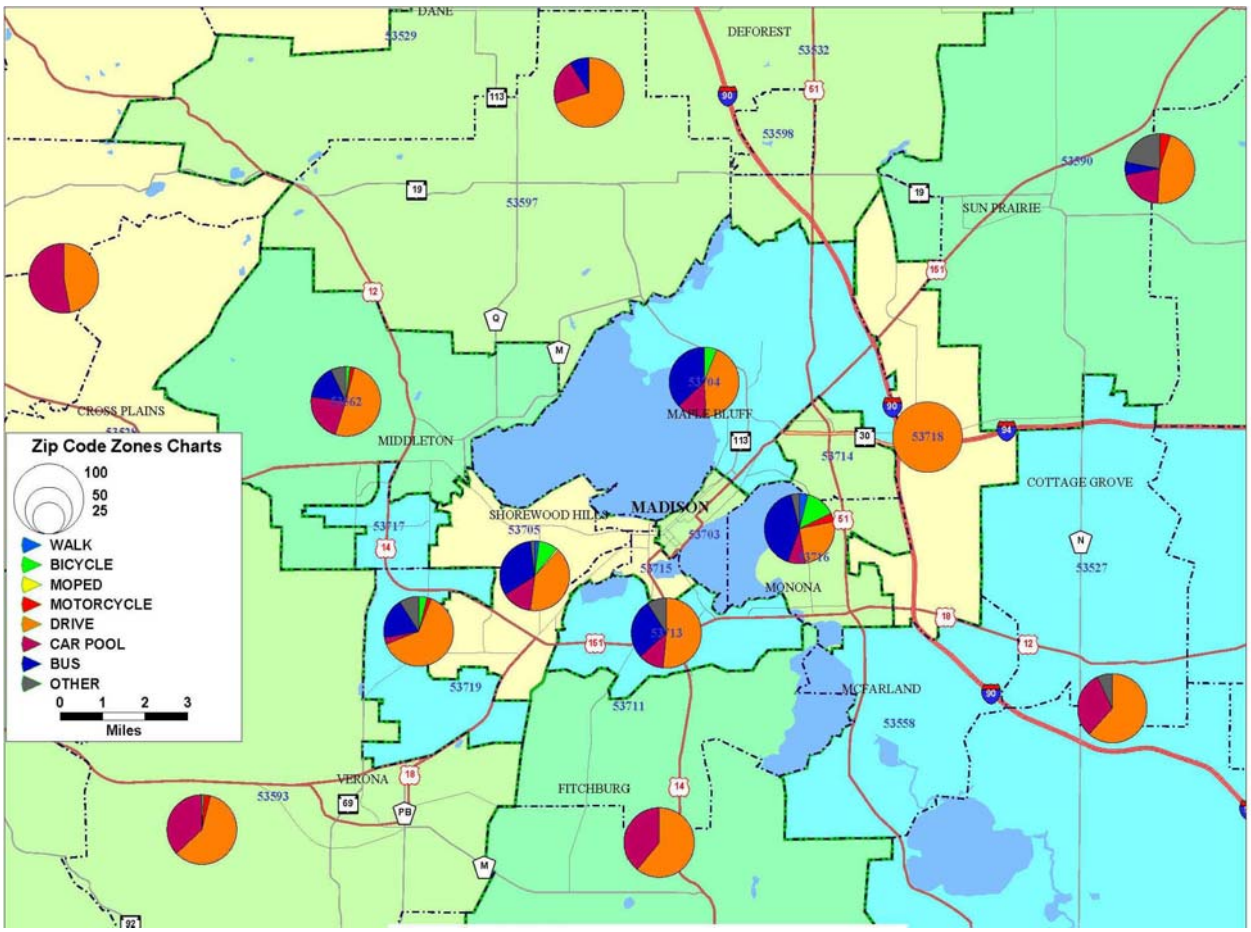


Fig. 9. Distribution of UW-Madison Van/Carpool Users and Other Modes in 2004.

Not surprisingly, the largest perceived impediment to ridesharing is its lack of flexibility relative to traveling alone in one's own private automobile. Thus, the improvement that

would prove most attractive to potential van ands carpool users is arranging arrival and departure times to more exactly fit the user's schedule, both in terms of non-standard work hours and daily variability. Nearly as important is the ability to occasionally drive themselves and a trip to campus that is fast enough to be nearly equivalent to driving alone. The former is really a function of the carpool's organization with regards to driving responsibilities, cost-sharing, etc. but is typically an implicit part of a carpool. Aside from the possible creation of high-occupancy vehicle (HOV) lanes on roads throughout the region (an effort beyond the University's purview), travel time points back to a need for improved coordination so that willing participants can locate a carpool near their home and achieve lower pickup times.

A final problem is the difficulty that potential vanpool members face with starting one in the first place. Initiators of a new van line must pay for the entire van rental and maintenance cost and any attendant costs no matter how many people are signed up in the beginning. Typical costs for operating a van from one of Madison's nearby suburban or rural towns can exceed $225 per week (Sauk City). Meanwhile, a van sometimes needs to operate for a while to attract enough members to make the price reasonable on a per person basis. Once a vanpool has been established with a full contingent of 15 members, costs are typically less than $15 per week per person.

c. Bicycle Routes and Facilities

The City of Madison and its surrounding communities feature one of the best bike networks of any metropolitan region in the country. In addition to on-street bike lanes, many multi-use paths exist. Among the most popular are the Temin Lakeshore Path, providing a connection to the west, and the Southwest Bike Path, a rails-to-trails project connecting Fitchburg with the University along a continuous path that includes a bridge over the Beltline. University Avenue is another central corridor for bicyclists to and through the campus as it contains both an on-street bike lane and a median separated contra-flow bike lane. West Dayton Street also plays a central role in the bike network as its painted bike lanes in conjunction with relatively low traffic volumes make it an ideal bike corridor.

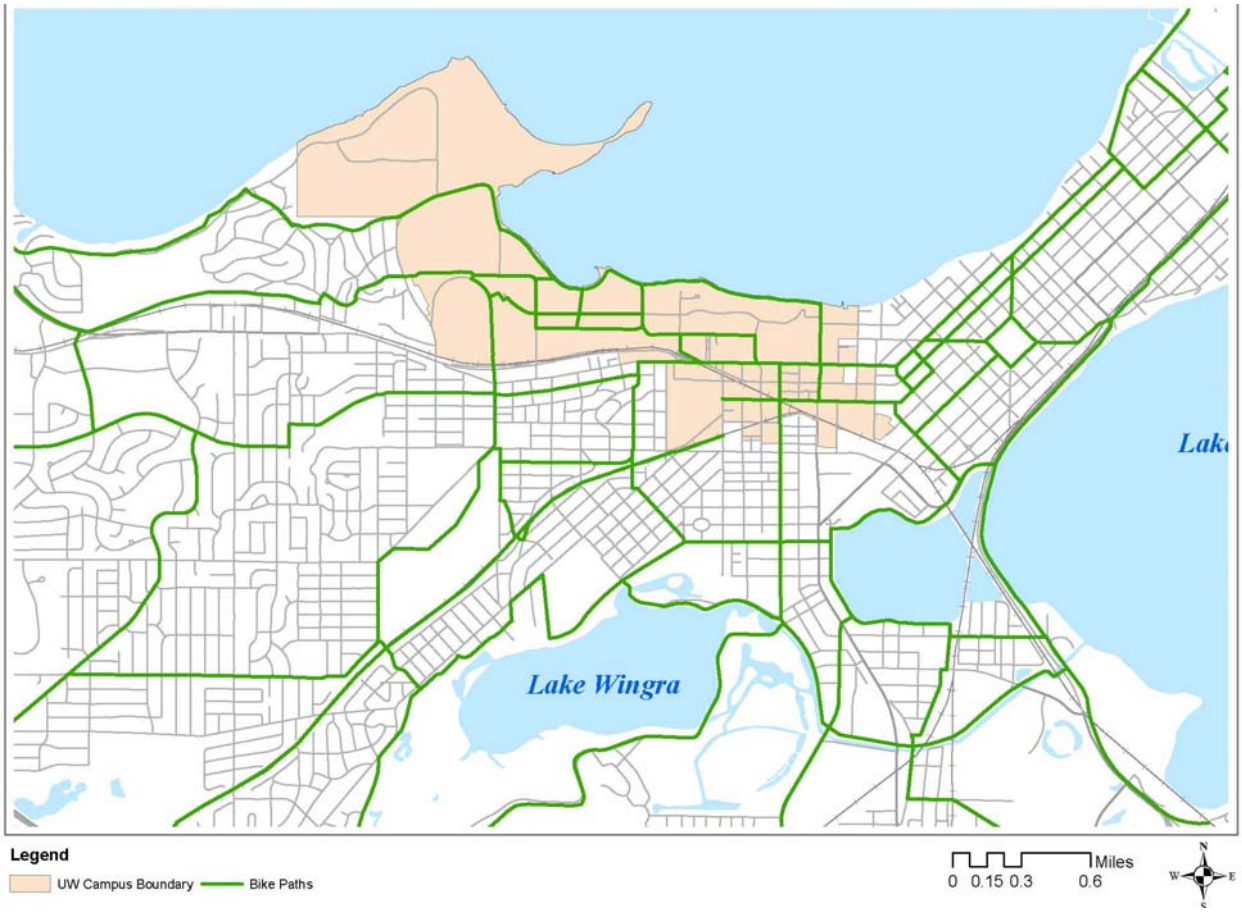


Fig. 10. Existing Bicycle Routes on and near the UW-Madison Campus in 2005.

Significant impediments remain, however, to bicycling to and from the campus. University employees indicated that the single most important factor related to any potential decision to begin bicycling regularly to campus was distance. Although 80% of all students live within five street-miles of campus, barely a third of all employees live this close, in part because of the higher cost and limited supply of single family homes closer to campus. At 15 miles per hour—a good clip for even a seasoned commuter—it takes 20 minutes to cover five miles, a travel time limitation on the number of persons willing to bicycle is evident in Figure 11. Significantly, this issue of distance will only become more of a challenge in the future if the number of UW staff and students living outside Madison continues to grow as it has for the regional population as a whole.

The second general impediment to bicycling is the weather. Cold, snowy winters discourage a majority of bikers and prompt them to seek other means of getting to and from campus. Although 10% of all employees and 16% of students bike to campus in

good weather, these numbers drop to just 2% and 4%, respectively, in bad weather. Thus, survey results and consultations with campus bicyclists indicate a strong desire for amenities such as covered bicycle parking, bicycle stations, shower facilities, bicycle storage lockers, and other features that make bicycling more attractive and convenient, especially when it is raining or cold and a change of clothes might be desirable.

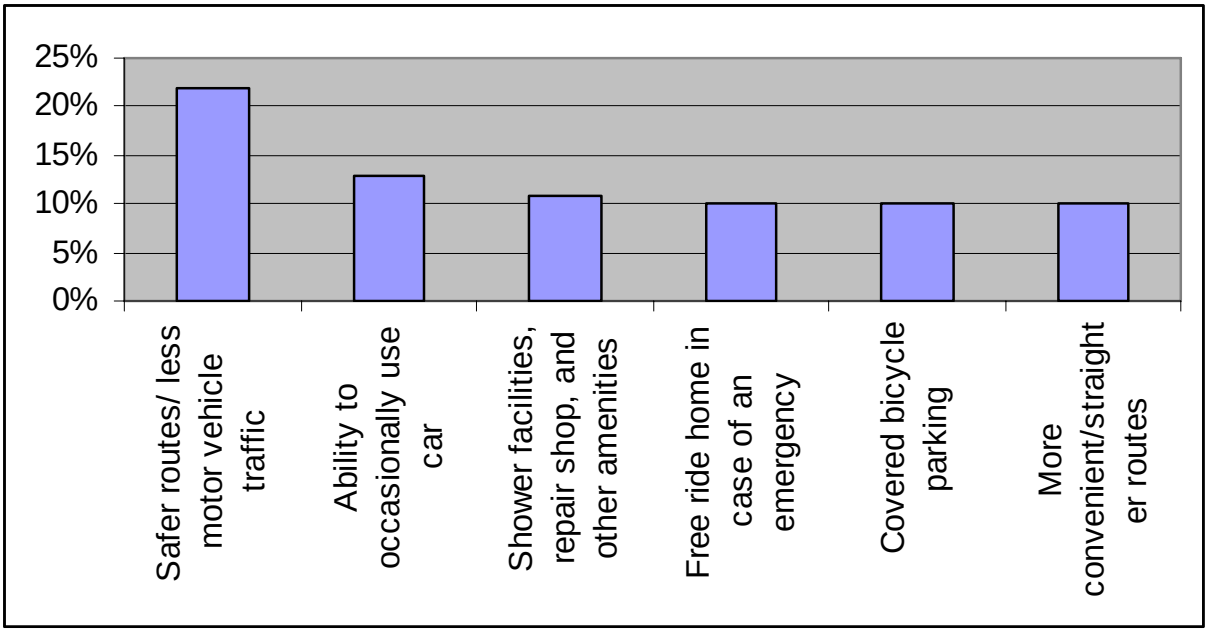


Fig. 11. Most Frequently Suggested Bicycle Improvements
from UW-Madison Travel Survey December, 2004.

Also important is the perceived lack of safe routes to the campus from some directions. With the exception of the most experienced and aggressive or "A-level" bicyclists, most students and employees would much prefer to travel to campus along routes that are only minimally exposed to motor vehicle traffic—that is, on either low-volume residential streets or multi-use paths. Unfortunately, many campus area roadways are intimidating to bicyclists because they are characterized by fast and busy traffic with right-of-ways that are too narrow for either bike lanes or motorists to safely pass bicyclists.

The first example of this problem is the absence of safe and direct routes to campus for commuters from the west and southwest of the campus. To be sure, the new Blackhawk Path is a great amenity for bicyclists coming in from the west, but it ends partway through the Village of Shorewood Hills. Meanwhile, the most direct route from the west,

University Avenue and then along Campus Drive, involves traffic that is too busy, too fast, and otherwise inappropriate for bicycling. Nor does (old) University Avenue provide an adequate alternative since its lanes are very narrow (10') and typically busy with peak-hour traffic. Finally, although there is a route to the north that leads east into the campus via the Lakeshore Path, it is not convenient for many bicyclists from southwest of the campus, especially those with destinations in the central part of the campus. This route involves Highland Avenue which has steep hills, no bike lanes, and which circles out of its way around two suburban-style "super blocks" containing the UW Hospital, the Veterans Administration Hospital, and the Forest Products Laboratory facilities.

Bicyclists from the east face fewer problems but some still exist. The City's bicycle routes from the east include well-marked bike lanes along East Johnson and East Gorham Streets, the Capitol City Trail, the John Nolan Path, and now the "Missing Link" portion of the Southwest Path. All of these are convenient, safe, and relatively direct. However, once bicyclists penetrate the campus itself, those traveling further west face bike lanes located between an active bus/right turn lane and a regular travel lane where the traffic often drives in excess of 35 mph. Avoiding this "Type A" bicycle experience is possible, but much more indirect and/or physically challenging. Bicyclists can opt for State Street and the Lakeshore path, but the Lakeshore path is not convenient for destinations that are not at the northern edge of campus. They can also opt for Observatory Drive or Lathrop drive, but both are steep and Lathrop Drive does not take them very far.

A third area where traffic intimidation is a major problem is that area south of Camp Randall in the Vilas, Greenbush, and Regent Neighborhoods where bicyclists who need to access northern parts of the campus face a lack of safe and convenient routes. One option, Randall Avenue, is very direct but is also characterized by narrow lanes and busy traffic for much of the day. Meanwhile, the next street over, Orchard Street, ends at Dayton Street while Charter Street to the east has narrow lanes and is always very busy.

A final general problem for bicycle commuters, especially novices and those traveling to destinations that are not part of their regular routine, is the absence of signed routes that indicate where they come from and where they go. Some routes on campus and within the adjacent city streets are signed as bicycle routes but the signage is sporadic and not complete across campus.

d. Pedestrian Facilities and Routes

The City of Madison has a robust sidewalk network. Thus, in most locations, the campus is accessible from all directions along city streets or multi-use paths. Exceptions to this general rule include a lack of sidewalks along the east side of two parts of Highland Avenue and, as in the case of bicycle routes, the very indirect connections to the campus from neighborhoods west of the campus caused by the “super blocks” associated with the University Hospital and the Veterans Administration Hospital on the one hand, and the Forest Products Laboratory on the other hand.

The other problem besetting pedestrians accessing the campus is the relatively bleak streetscape along certain streets. Closely related to the campus concern for quality open space and landscape, the lack of street trees, terraces, and other amenities along much of University Avenue, West Johnson Street, Charter Street, Highland Avenue, and other major roadway entrances to the campus leaves the pedestrian in a hard and uninviting environment. Moreover, in some cases, including on University Avenue, the absence of street trees creates a lack of “verticality” along the street and encourages faster vehicular speeds, creating dangerous conditions for the pedestrians that must cross those streets. In other respects, this harsh streetscape decreases a pedestrian’s feeling of safety, an important if intangible factor in an individual’s decision to walk somewhere. A similar issue is the lack of “pedestrian scale” on some parts of campus, especially to the west, near Campus Drive and its interchanges.

Pedestrians on campus do benefit from the Lightway Walking Paths and Emergency Phones.The lightway is a network of well-lighted sidewalks and paths for pedestrians. Many sidewalks are adjacent to campus buildings that are heavily used at night. The University encourages walking along lightway paths when walking around the campus at night. Lightway routes are marked with reflected lightway logs affixed to light poles. Over 60 emergency telephones are located throughout the campus. All phones, with the exception of those in Memorial Library and the Chemistry Building, have a blue light above them and are labeled "911-Emergency.”

Finally, as it is for bicyclists, the biggest impediment to increased access to the University by foot is distance. Most individuals will elect not to walk if the distance

exceeds two miles. As noted earlier, because of evolving housing supply and price dynamics, more and more employees now live further away where affordable housing can be found.

e. SAFE Nighttime Services

Safe Arrival for Everyone (SAFE) stands alone as one of the nation's premiere, integrated, and multimodal approaches to late night campus transportation and safety. Three programs operate under the SAFE Nighttime Services umbrella: SAFEride Bus service, SAFEride Cab service and SAFEwalk Escort service. All three of the services are intended for use when individuals find themselves in an unsafe situation or location and are unable to find an alternative safe way to their desired destination. Each service is designed to meet a specific university community need and to supplement the other two services.

The mission of the SAFE Nighttime Services is to improve personal safety by means of providing safe travel options, to encourage people to plan ahead and make sound decisions when traveling at night, to empower the community to enjoy campus to its fullest without fear of being a victim, and to provide a dependable presence on and around the University of Wisconsin – Madison campus for all students, faculty, staff, and guests. SAFE's guiding principle is that there is safety in numbers and danger in solitude. Using SAFE Nighttime Services does not guarantee that one will not be the victim of crime, but it will reduce one's risk of becoming a victim.

Designing the SAFE Nighttime Services to operate on a systemic level instead of an individual service/mode level has allowed for better management, better planning, and synergistic gains that would not be possible with a non-system approach. All three of SAFE's programs are administered and coordinated by the University's Transportation Services Department. Funds for these programs come from Transportation Services revenues (parking fines, meters, special events parking, etc.) and from the Associated Students of Madison (ASM). Employee training and support comes from the UW Police, the Dean of Students office, The Office of Human Resources and Development, University Health Services, the Rape Crisis Center, as well as other University units and

departments.

1) SAFEride Bus: The first SAFE service to be developed was the SAFEride Bus, which was launched in October 1991 as an extension of the forty-year-old campus bus system. One of most recent precursors to SAFEride Bus, called the Badger Run, was a three route system with lines extending east, south and west of campus into the heavily student populated areas surrounding campus. The Badger Run was abandoned due to low ridership and high expenses.

After a review of the Badger Run, the SAFEride Bus service was introduced in August 1992. Improvements included better focus of service to campus housing, academic and recreation areas, extended hours of operation, and improved marketing. Additional system refinements, ease of use, as well as education and marketing efforts have and continue to contribute to the success of the program. It has always been and remains the backbone of the triad, transporting the bulk of total SAFE Nighttime Services users.

Presently, SAFEride Bus offers free rides on Madison Metro routes 80, 81, and 82 (formerly the 'L' and 'LN' Metro routes) to all university students, faculty, staff and guests from 6:30 p.m. to 1:45 a.m. Sunday – Thursday nights and from 6:30 p.m. to 3:00 a.m. on Friday and Saturday nights.

SAFEride Bus runs in three circular routes providing service from the Memorial Union to Eagle Heights, from the Lakeshore residence halls to Langdon, Johnson, and Gorham Streets, and from Regent Street and Breese Terrace to Bedford, Bassett and Broom Streets. With an increase in high-capacity student housing complexes in the downtown area, student housing patterns have changed and have begun to move closer in towards the campus than in previous years. Changes in the SAFEride Bus routes are being explored to better serve growing housing areas and to circumvent less populated areas.

2) SAFEride Cab: Begun in the fall of 1992, SAFEride Cab grew out of a need to provide

a rapid response, non-fixed route, door to door nighttime transportation service. While the SAFEride Bus service would continue to be the backbone of SAFE Nighttime Services, the SAFEride Cab program would compensate for some of the SAFEride Bus' shortcomings:

- SAFEride Bus offers limited flexibility in pick-up/drop-off locations,
- It requires lone travelers to wait at bus stops in dark, semi-isolated areas,
- It cannot give service in urgent situations as patrons must wait for a bus (up to 30 minutes)
- Some bus routes may end service too early at night.

Increased restrictions have been periodically necessary to maintain the integrity of the SAFEride Cab program as a genuine safety service and to keep the easily-burgeoning costs for it under control. Currently, the maximum number of SAFErides that can be given a night is approximately 120 and typically, most weekend nights SAFEride is running at capacity. This is due to a number of factors, including the amount of time the computer program takes to verify and record information (1-2 minutes per call), the number or people that can get through on a four-line phone system, and the number of cabs that Union Cab (the largest vendor in Madison) has available. Thursday, Friday, Saturday nights, the phone lines are busy from 10:30 p.m. – 3:00 a.m. with many people never receiving service. Improvements and refinements to the SAFE Database and as well as to the phone system, which will allow us to serve more patrons faster, are upcoming goals for the SAFEride Cab Program. Currently, the service runs nightly between the hours of 10:30 p.m. and 3:00 a.m. with service hour extended to 6:00 a.m. during final exam periods.

3) SAFEwalk Escort: Developed out of a Dean of Students task force with the financial and administrative support of Transportation Services, the Office of the Dean of Students (DOS), University Housing, and the University of Wisconsin Police Department (UWPD) (formerly the University Police & Security (UW P&S)), SAFEwalk began service, on a pilot program basis, in October 1993. The concept of a walking escort service was not unprecedented at UW–Madison, but SAFEwalk marked a different approach to the walking escort concept. Previous attempts at walking escort services consisted of ad hoc organizations using volunteers with little or no University support.

SAFEwalk was developed out of a partnership between the students and administration, drawing upon the expertise and resources of several departments and units throughout the University.

SAFEwalk Escorts are paid employees of the University of Wisconsin; they receive practical training from the UWPD and are supervised by the SAFE Program Coordinator within Transportation Services. The scope of the initial pilot was limited to one escort team and one dispatcher service a three block area of campus. Initial response to the service was modest due partly to the lack of marketing, the restrictions on service area and hours, and the existence of free SAFEride Cab rides.

There are a number of challenges relating to the SAFEwalk Escort program that have existed since its inception. Coming into existence after and acting as a restrictor on the wildly popular SAFEride Cab service, SAFEwalk has received undue criticism and has been the most difficult SAFE service to sell to the University Community. Many feel as though they are being short-changed by getting offered a SAFEwalk instead of a SAFEride Cab as SAFEwalk is an 'active program' whereas the SAFEride Cab and SAFEride Bus are more 'passive programs', which require less involvement on the part of the user. SAFEwalk typically sees heavy increases in its usage when a highly-publicized on or near campus assault or robbery occurs. With the on-going image and staffing improvements that have recently gone into effect, one of the major goals for the SAFE programs is to position SAFEwalk alongside SAFEride Cab and SAFEride Bus as an understood, valued, and purposeful program

Since the student SAFEwalkers and SAFEride Dispatchers (who are tenured SAFEwalk Escorts) are the only University representatives of the three programs (the other representatives being the cab and bus drivers), the SAFEwalk program sits at the center of the success of the SAFE Nighttime Services. SAFEwalk serves as the primary vessel to promote and educate the University community on SAFE's three services. Recognizing the central role SAFEwalk plays to the correct utilization and success of the three programs, improvements have been made to the program to makes it more user-friendly, more visually attractive, and more understood, which include:

- New promotional materials (signage, give-aways, etc.)
- Stylish clothing,
- Highly publicized hiring campaigns to attract a wide range of highly-qualified students,
- Increased practical training sessions for SAFEwalk staff.

After observing the three services in operation for some time, it was concluded that each service was meeting a niche need within the university community. SAFEride Bus meets the bulk of the transportation needs of the students, especially those living in on-campus housing. It fails, however, to meet the transportation needs of individuals in certain circumstances, especially those with short trips or those traveling north or south. Bus routes are not extensive enough to serve all off-campus student housing areas either. SAFEride Cab is very adept in meeting the transportation needs of those living off-campus, providing fast, flexible, door to door service. It is very inefficient, however, for on-campus transportation, as the 'per-ride' cost is very high and cannot carry the numbers that the SAFEride Bus is able to on a nightly basis. SAFEwalk is able to meet the short distance transportation needs of those on or very near to campus—trips that could be walked faster than riding the bus and in some cases taking a cab.

f. Parking Facilities for Commuters and Visitors

The campus has kept records of the parking infrastructure on campus since the creation of the Transportation Services Department in 1924. Since that time, campus parking spaces have grown from 750 spaces to approximately 13,000 permit spaces in 2005. Despite this substantial growth, the University of Wisconsin – Madison has the lowest faculty and staff ration to the number of parking stalls of any public agency in the state, the lowest rate of any Big Ten university, and one of the lowest ratios of spaces per member of the campus community of any university in the entire country at 0.22 spaces per person. Part of the reason for this parking efficiency is that only a very small number (approximately 300) of permits are awarded to students, and then only in cases of disability or significant need. Importantly, the University's strong parking management polices form the backbone for its exceptional TDM record. Moreover, this same management has allowed the campus to avoid the struggles over more and "closer" parking that now dominate

many major universities elsewhere in the United States.

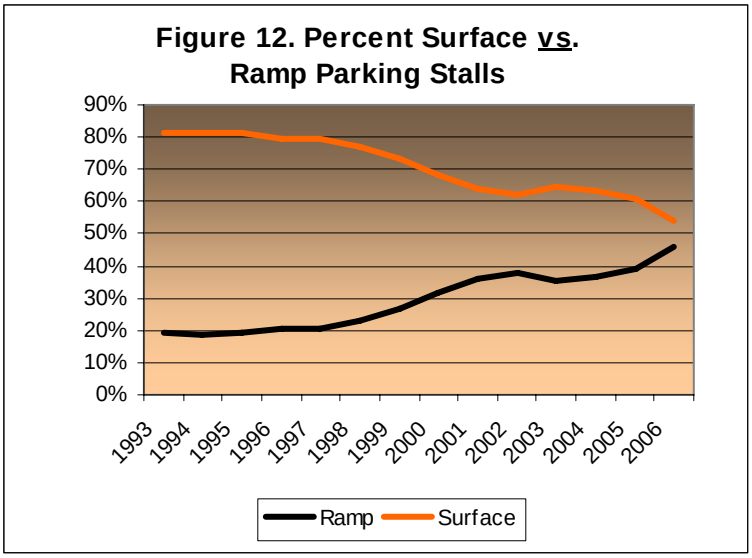


Figure 12. Trend of Surface vs. Structured Parking, 1993 to 2005.

University parking is divided into four major categories: permit, visitor, accessible, and departmental parking. Permit parking is made available primarily to faculty and staff at a cost of $445 to $1,045 for a specified base lot. (See Table 1.) Permits are assigned in a relatively decentralized fashion based on a parking priority as established by an individual's department or other administrative unit. As Table 1 shows, 8,637 permits were issued in 2005 amounting to about 67% of all available parking on campus.

TABLE 1. NUMBER OF PARKING STALLS BY TYPE IN 2004[2]		
Type of Stall	**Number**	**Percent of Total**
Permit (Annual and Short Term)	8,637	67%
Visitor:	2,747	21%
Daily Permits	*1,827*	*14%*
25 minute meters	*225*	*2%*
2-10 hour meters	*695*	*5%*
Accessible (Persons with Disabilities)	483	4%
Departmental (Reserved and Others)	723	6%
Motorcycle	374	3%
TOTAL	12,964	100%

As Table 1 also shows, a significant portion of campus parking, 21%, is reserved for visitors in the form of metered parking stalls and daily permits. About 4% of all parking stalls are designated for persons with disabilities, and this exceeds the federal ADAAG requirement of roughly 2%. Many University departments also buy stalls near key buildings which they reserve for their own use as they choose. Finally, nearly 400 stalls are reserved for motorcycles, which are considered separately from mopeds which have their own parking policies and requirements. (See Transportation Services Business Policy Manual for more information on permit types and pricing.)

[2] Data for 2005 are skewed by the closure of Lot 63 prior to the construction of Lot 76.

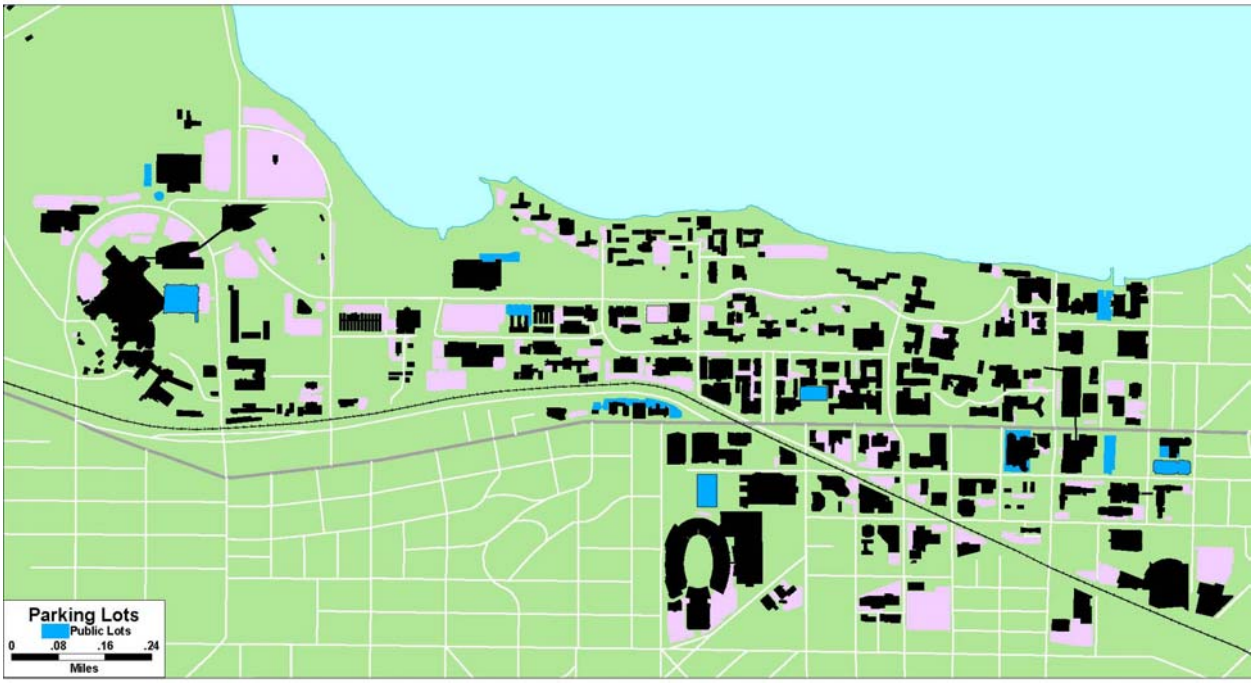


Fig. 13. Location of Parking Lots on UW-Madison Campus in 2005.

Until very recently, as Figure 12 shows, a majority of the University's parking spaces were in surface lots. However, this figure also shows that the clear trend has been to replace surface parking with structured parking—that is, parking located in free-standing ramps as well as in underground and under-building facilities, as surface lots have been redeveloped for new buildings and open space. With many acres in surface parking currently on campus, it has been shown that based on the current cost of land in downtown Madison, the highest and best use for this land is not relatively inefficient surface parking. As the campus continues to redevelop and become more dense within its current boundaries, it is clear parking spaces in surface lots must be moved into more efficient, yet expensive, ramp parking. Land values in Madison and the campus' ability to purchase land adjacent to the campus for expansion have required this concept to become a reality.

This conversion from surface to ramp parking has occurred almost entirely during the past two decades and most of the campus' parking is now located at the edges of the campus near major arterial streets. Nearly one-third of the spaces are south of University Avenue. Forty percent of all parking is located west of Willow Creek, much of this serving the University Hospital, including a large patient-visitor ramp. There are just

1,500 spaces (less than 12%) in the campus core north of University Avenue and east of Babcock Drive. There are another 2,000 spaces between Babcock Drive and Willow Creek. Importantly, the campus has limited itself to no new net increase in parking on the western campus as part of an agreement with the Village of Shorewood Hills and the City of Madison to minimize attendant traffic impacts.

Fig. 14. In-Car Meter Used by Flex Permit Holders.

To encourage TDM and support persons who typically choose not to drive to campus but must on occasion do so, the University offers a “Flex” parking permit system in lieu of the purchase of an annual parking permit for employees. An employee is given a count-up timer or meter that is valid only in the assigned lot. The meter is hung on the mirror of a car and displays the total time that an employee has been parked in the lot. Fees are currently discounted from the regular price for a daily permit.

The University has also created a TDM plan on file with the City of Madison that identifies special “event parking” provisions for activities at the Kohl Center and Camp Randall. Tickets for basketball and hockey games at the Kohl Center include assignments in local area private and University lots that are typically underutilized in the evening in order to avoid the construction of new parking capacity and maintain the pedestrian-friendly nature of the neighborhood surrounding the Center. Similarly, attendees at football games at Camp Randall park in existing, designated lots on campus and in privately offered spaces in the local neighborhood and then either walk to the stadium or

ride a free Madison Metro shuttle bus. In addition, the TDM plan calls for a discounted "Bucky Pass" for game-day use of specified Madison Metro bus routes and secure bicycle parking area to encourage non-motor vehicle travel to the stadium. (See the TDM Plans for the Kohl Center and Camp Randall for further details.) A joint City-University TDM committee continues to monitor and revise the TDM plans for both the Kohl Center and Camp Randall.

f. Mopeds and Moped Parking

Although one could almost count the number of mopeds on campus on two hands just 10 years ago, the campus now counts almost 900 mopeds at academic buildings and other locations at peak class time during the school day. Hundreds of others are parked at residence halls and at apartments near the campus. Although a growing phenomenon at other campuses across the country, it appears that the University of Wisconsin-Madison has perhaps the highest single concentration of mopeds of any institution in the nation. (See Appendix C, Inventory and Location of Moped Parking - Fall 2005)

The results of this mushrooming in the number of mopeds on campus include the following:

- Widespread conflicts with pedestrians as mopeds drive up wheelchair ramps and down sidewalks to the entrances of buildings.
- Parked mopeds blocking sidewalks and building entrances, including emergency evacuation routes.
- Mopeds parked in numbers that exceed available paved space and that impact landscaped grounds.
- Uncontrolled entry and exits from street traffic as mopeds use wheelchair ramps.
- Other moving violations, including riding with a passenger (which is not legal in Wisconsin), failure to use signals and appropriate lanes and not stopping at a controlled intersection.

Mopeds owned by University students and staff account for nearly all of the crashes in the City of Madison involving mopeds and the vast majority occur within or very near campus boundaries. For the year 2003-2004, there were 37 moped crashes with injuries serious enough to report to police.

C. Getting Around on Campus

As it does in the case of commuting to the campus, the University of Wisconsin-Madison prioritizes alternatives to driving in the case of getting around on campus. It is constantly seeking to upgrade a robust network of pedestrian, bicycle, and transit facilities and programs to make it possible for the vast majority of faculty, staff, and students to travel from activity to activity on the campus in an efficient manner. As the following sections indicate, however, this system, as good as it is, clearly leaves room for significant improvement.

1. Existing Roadways

Important as TDM is to the University's approach to getting around on campus, it's the existing roadways that really frame the opportunities and challenges confronting not only motorists, but also pedestrians, bicyclists, and transit users. Although the majority of the campus is in an urban setting, the western portion is bordered by suburban style development and is itself more suburban in design. In particular, the road network in the western campus is characterized by the lack of a regular grid, curving roads, and much longer blocks that impede pedestrians, bicyclists, and even motorists at times. Meanwhile, the southern campus consists of a traditional grid system dominated by the east-west urban arterial pair of University Avenue and West Johnson Street. Together these streets carry in excess of 65,000 vehicles each day and present major obstacles to all modes of travel moving north and south.

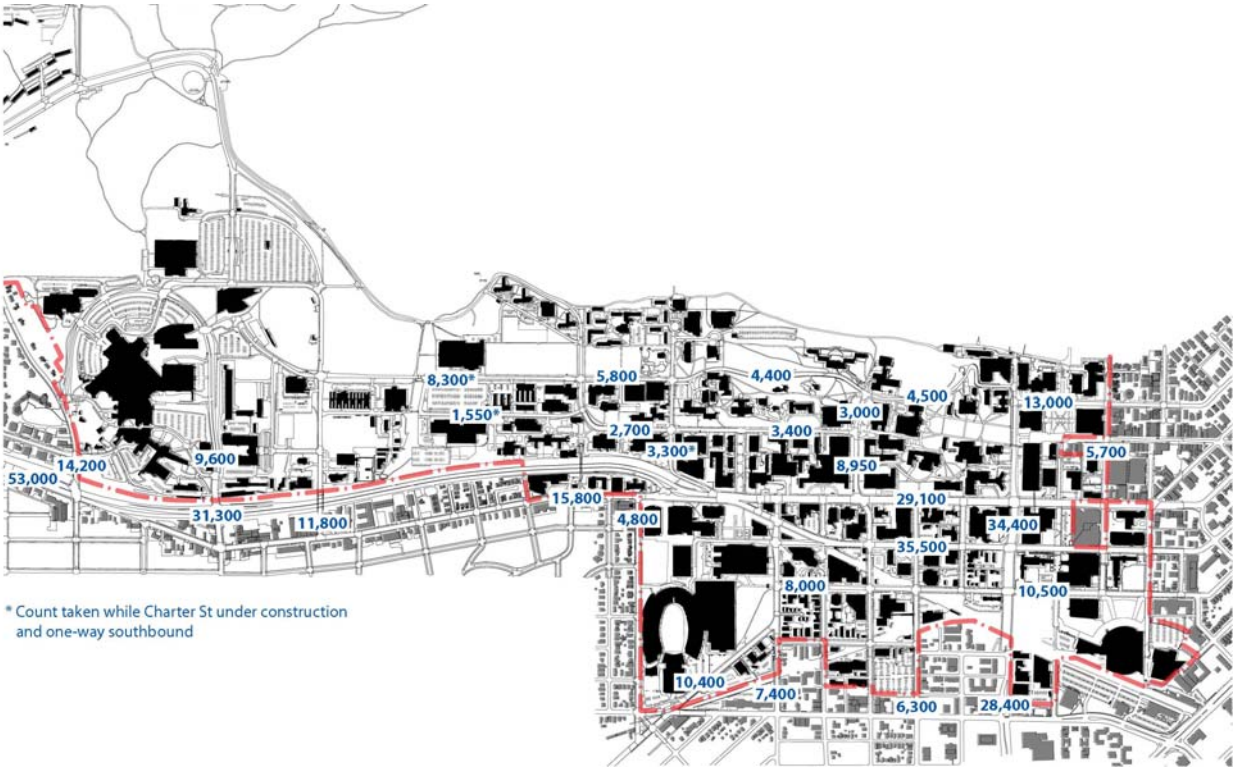


Fig. 15. Average Daily Traffic Counts on UW-Madison Campus in 2004.

Finally, although the southern campus has a robust road network, directly to the north the campus is dominated by a large quadrangle (Bascom Hill) encircled by roads (Observatory Drive and Lathrop Drive) that follow the hilly topography and a rural pattern typical at the time of the University's founding. To the west, roadways continue to follow a more rural approach so that there are very few roads through this part of campus in any direction. The relative lack of both east/west and north/south connectivity between University Avenue and Lake Mendota means that some motor vehicle congestion occurs during peak hours in some corridors. However, most intersections operate at an LOS of "C" or better and average daily traffic is still acceptable for the University's mainly two-lane roads. More importantly, the lack of connectivity on campus severely limits transit route options, increases travel times, and generates significant conflicts between motorists and bicyclists and pedestrians.

2. Intra-Campus Transit

Even after commuting faculty, staff, and students have reached the campus, its sheer geographic size presents a special challenge to those who then need to travel within the

campus from one activity to another. The campus spans more than two miles from east to west and nearly a mile from the edge of Lake Mendota to a variety of residence halls, offices, academic buildings, and athletic facilities to the south. Because of this distance, traveling on foot from one activity to the next on the campus is often not feasible when time is short.

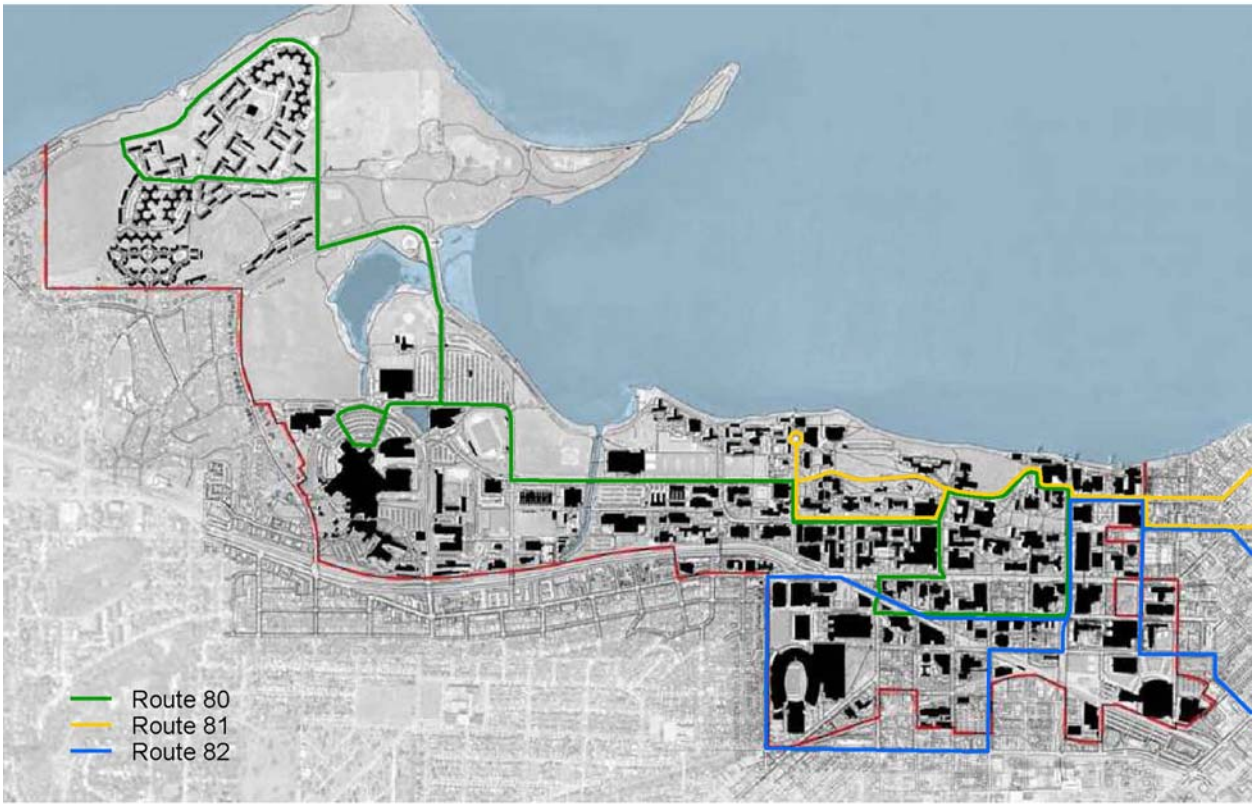


Fig. 16. UW-Madison Intra-Campus Bus Routes Operated by Madison Metro in 2005.

A key element in the University's effort to connect people across such a big campus is the Route 80 bus operated by Madison Metro. It connects the Memorial Union with Linden Drive, the Health Sciences campus, graduate student housing at Eagle Heights, and Union South. At night, two additional routes, the Route 81 and Route 82, provide service from the Lakeshore Residence Halls to the east side retail areas and neighborhoods, as part of a SAFEride Bus program designed to help students and staff traveling at night to and from popular nearby destinations. All three of these campus-oriented bus routes are free. On an average school day, the Route 80 bus served approximately 7,500 passengers per day in 2003, while the combined ridership of the Route 81 and Route 82 was about 2,000 passengers per day for the same year.

Supplementing the campus' primary transit service is an express shuttle between the Hospital and the Medical Sciences Center (MSC). The MSC-CSC shuttle operates every 20 minutes and serves only the endpoints of the route. Although it serves a very small fraction of the community, it has a solid ridership base and is very important to those who use it. Its ultimate future is uncertain, however, as all of the medical staff will eventually leave the MSC for facilities closer to the Hospital.

Compared to many other major campuses across the nation, the University of Wisconsin-Madison's campus has relatively few separate bus routes. For the most part, this is the natural result of the campus' unique geography and roadway grid. First, compared to most campuses, this University is quite dense. While it is about two miles long, it is only one mile wide at the same time that other universities are often several miles on a side and/or are split up among various separate campuses located in different places that must be connected by some sort of transit. In addition, as noted earlier, the very limited number of east/west and north/south roadway corridors crossing the campus severely restricts the number of route options available to transit planners.

Even so, the intra-campus transit system suffers from a number of significant problems. First, although the Route 80 bus succeeds in serving the entire campus, precisely because it tries to do so along a fairly limited selection of thoroughfares, the bus takes 50 minutes to complete its route. For those wanting to travel from Memorial Union to South Campus or from South Campus to West Campus or Eagle Heights, the bus is impractical and does not come close to meeting the students' need to travel across the campus within the 15 minutes typically allowed for changing classes.

Second, the bus also suffers from capacity problems, principally during class changes. This is particularly noticeable during poor weather when campus bus ridership increases dramatically. Student usage increases seven-fold (from 3% to 22%) and employee usage nearly triples (from 9% to 25%) at these times. Moreover, even during seasonable weather, the Route 80 can be over-capacity for the trip up Bascom Hill from Memorial Union. These situations of severe overcrowding mean that dwell times at individual bus stops can regularly exceed one minute and that passengers must be left standing at crowded stops for lack of room on the bus. This overcrowding also severely impacts the

ability of the Route 80 bus to accommodate users with disabilities. To a considerable extent, excessive dwell times also reflect the limitations of a traditionally sized bus doors and Metro's requirement that students board the bus from only the front door.

Fig. 17. Crowded campus bus loads.

Third, although frequent by most transit standards, the headway or time between Route 80 buses is sufficiently high at seven to eight minutes that many users do not feel that they can rely upon it to get them to classes or to meetings on time. Notably, University surveys indicate that 35% of the students and 20% of the employees who do not now ride the bus on campus would do so regularly if it came more frequently, for example every four minutes. In addition, 26% of the students and 12% of employees feel that they would need to know the schedule in order to regularly ride the bus on campus, assuming the present headways. Of course, if the bus came every four minutes, the schedule would become a moot point, as long as the gaps between the arrival of buses was regular.

Fourth, transit routes are limited by the physical constraints of the road system it must use. For example, the tightness of the steep curve on Observatory Drive going up Bascom Hill prevents two buses from passing. Without reconfiguring this somewhat historic curve, routes cannot be regularly scheduled in both directions in this segment of

Observatory Drive. Moreover, the campus lacks the kind of robust street grid that allows for a variety of different ways of crossing the campus. For example, Babcock Drive is one-way northbound from University Avenue north and, although Henry Mall allows for southbound travel, the median in University Avenue prevents a bus from crossing that street to reach Union South more directly. Thus, there is nearly a mile between southbound exits from the campus between Walnut Street and North Charter Street. The effect of this constrained pattern of streets is that a bus traveling to Union South must continue east to North Charter Street (effectively past the Union) and then turn west on University Avenue, effectively reversing direction through a number of traffic signals.

Finally, unlike many other campuses with both commuter and intra-campus bus service, the University of Wisconsin-Madison's intra-campus buses have no clear or uniquely visible identity. As a result, infrequent or inexperienced bus riders cannot quickly distinguish a commuter bus from the bus that they feel they can trust to get them around on campus. The result is that they often avoid riding the bus altogether.

3. Intra-Campus Bicycle Facilities

Not only is the University of Wisconsin-Madison well known for the number of commuters who use bicycles, but it is also well-known for the number of people who ride bicycles to and from activities on the campus itself. Facilities such as the Howard Temin Lakeshore Path and the contra bike lane on University Avenue conveniently connect many destinations within the campus itself as well as serve commuters to the campus. As a result, the number of bicycles moving on campus approaches 500 per hour in some locations. For example, every 15 minutes almost 150 bicycles cross University Avenue at North Park Street and North Charter Street in the middle of the afternoon, most of them in the same direction depending on class shifts. More typically, streets such as Walnut Street, Linden Drive, and Observatory Drive experience 20 to over 100 bicycles during peak 15-minute periods. Of course, these counts reflect bicycling during the Spring, Summer, and Fall when the weather is not inclement. During the winter and in inclement weather, most bicyclists seek other modes of transportation, although a significant number, for example, 3-5% of students, continue to bicycle even in "bad weather."

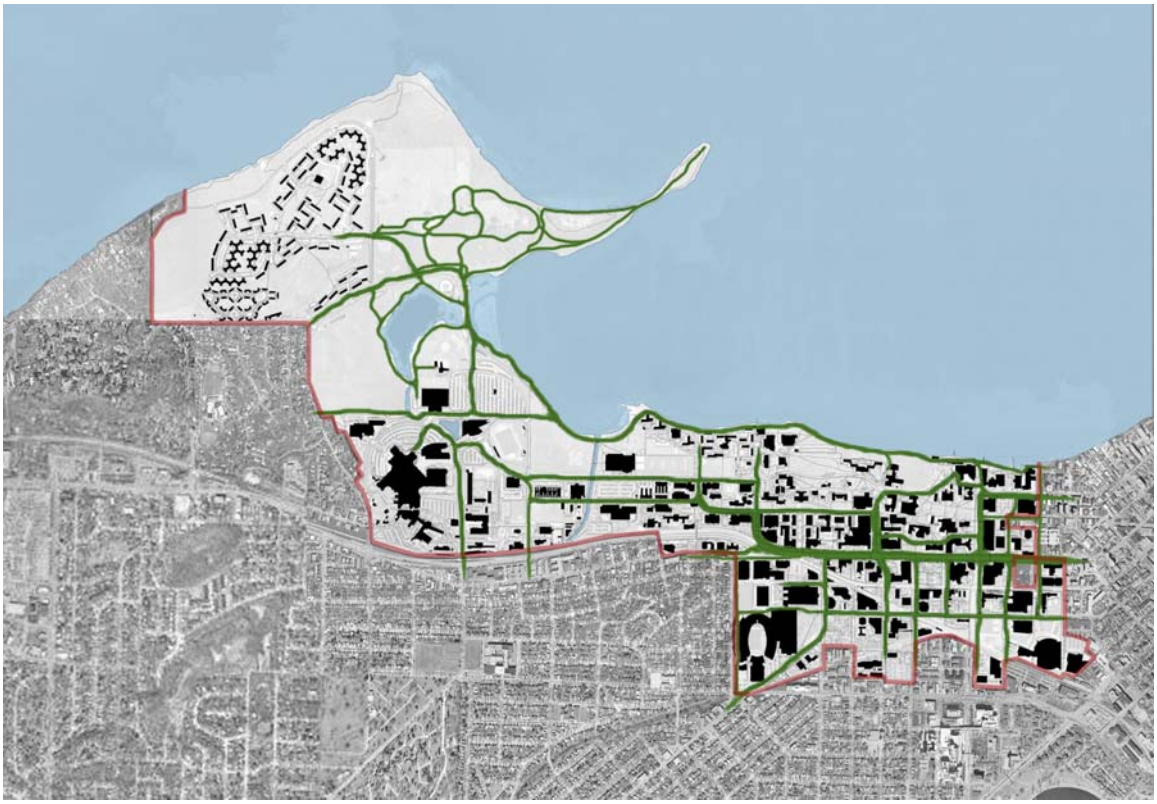


Fig. 18. Bicycle Traffic Flows on UW-Madison Campus in 2004.

As good as the intra-campus bicycle system is, a number of obstacles confront those who now bicycle that also incline others to avoid bicycling on campus in the first place. Some of these problems are listed in the Campus Bicycle and Pedestrian Task List kept by the Campus Bicycle Pedestrian Sub Committee (See Appendix D.) In most respects, these problems are identical to those discussed earlier that also confront commuters who bicycle. Of course, cold winters and otherwise inclement weather compel a majority of bicyclists to leave their bikes at home—at least temporarily. Second, those who bicycle now as well as those who might otherwise be interested in bicycling are discouraged by a lack of efficient, direct routes in the western portion of the campus generally and in some other parts of the rest of campus as a result of few options for both north/south and east/west travel. These include east/west travel in the Bascom Hill area and north/south travel between Babcock Drive and Walnut St.

Third, parts of campus lack routes that many current and would-be bicyclists consider safe—that is, not exposed to automobile traffic. As noted earlier for bicycle commuters, many individuals do not feel comfortable traveling in the westbound bike lane on

University Avenue between the bus lane and traffic lane. Although most do feel comfortable in the eastbound contra-flow lane on University Avenue, it is out of the way for many traveling from the southwestern campus to points east and north of University Avenue, including the Memorial Union and Red Gym. Additionally, making left turns north across University Avenue from the contra lane can be dangerous, particularly since pedestrians waiting to cross University Avenue will often spill into the bike lane. Although the lakeshore path provides a pleasant option for east/west bicycle travel, it does not directly serve parts of the campus further to the south. Meanwhile, Lathrop Drive does serve part of the campus between University Avenue and the lakeshore path, but many bicyclists find its steep hills too challenging and the street extends only between Park and Charter Streets. Just as problematic, many high-volume University streets lack bike lanes, including portions of Observatory Drive, Highland Avenue, Walnut Street, Linden Drive, and University Bay Drive.

Most other of the issues facing bicyclists apply to the campus in general. In some locations, the capacity of bike racks is insufficient. This has become a bigger problem in recent years such that in most locations the demand for bicycle racks exceeds supply. Moreover, as mentioned earlier for bicycle commuters, many bicyclists are eager to see amenities such as covered parking. Finally, the University lacks a comprehensive system of clearly signed bicycle routes that indicates where routes start and end.

4. Intra-Campus Pedestrian Facilities

On the whole, the University's pedestrian facilities are quite good. Connections on foot exist between nearly all destinations and sidewalks are generally in good repair. In addition to multiuse paths such as the Howard Temin Lakeshore Path mentioned above, pedestrians have access to an excellent, unbroken sidewalk network in the vicinity of the university. To further enhance pedestrian safety and convenience, the University has constructed several pedestrian overpasses in the vicinity of the campus. A well-used bridge over North Park Street connects the sidewalk on Bascom Hill to the second level of the Humanities Building. The south end of the Humanities building is also connected to the Vilas Communication Hall via a less well-used crossing over University Avenue parallel to Park Street. In the south campus, a bridge spans Lake Street between Gordon Commons and Witte Hall. In the west campus, a pedestrian and bike bridge crosses Campus Drive, connecting Elm Drive and Linden Drive to University Avenue. Finally, as

part of the Health Sciences Learning Center (HSLC) project an enclosed walkway was recently constructed spanning Highland Avenue to connect the Pharmacy Building with the rest of the hospital.

Key pedestrian corridors include Bascom Hill and State Street, North Charter Street, University Avenue and North Park Street. Key street crossings include North Charter Street and University Avenue and North Park Street and University Avenue. Both of these intersections experience as many as 1,100 pedestrians crossing north and south per hour, with as many as half of those crossing in the peak 15 minute class change periods. In the evening, when a relative lack of people creates safety issues, the University operates a SAFEwalk Escort program that offers walking escorts to persons on campus, as well as a network of Lighted Walking Paths and Emergency Phones.

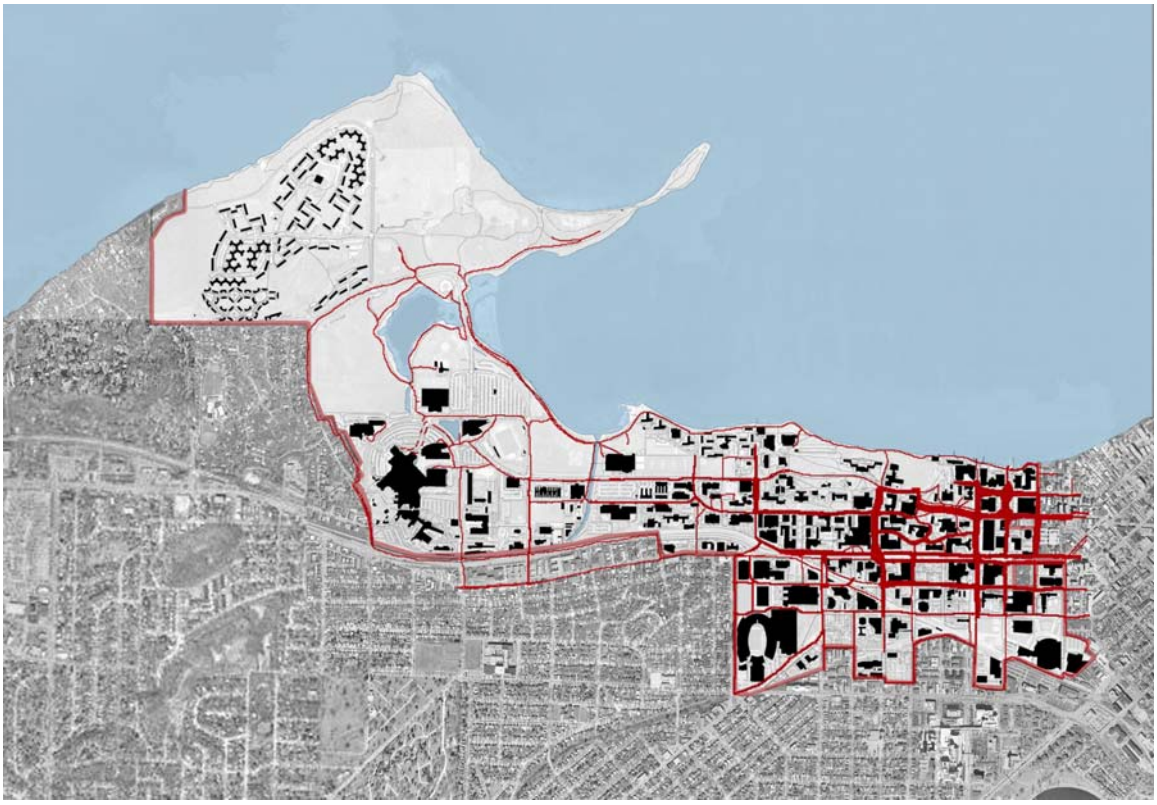


Fig. 19. Pedestrian Traffic Flows on UW-Madison Campus in 2004.

Despite a vibrant pedestrian scene, the campus still suffers from a number of features unfriendly to pedestrians. The greatest single problem is University Avenue. With three lanes of westbound vehicle traffic, two bike lanes, a bus lane and a median, the facility

presents an intimidating expanse of concrete to cross. Doing so is only made worse by speeding motorists. Although the road is posted with a 25-mph speed limit, vehicles regularly attain speeds of 40 mph and higher. As noted earlier, despite the barrier that it poses, University Avenue's crosswalks are some of the busiest on the entire campus.

To increase pedestrian safety, a low fence—the "staples"—has been installed between Charter Street and North Park Street on both sides of University Avenue. As noted earlier, a walkway crosses University Avenue between the Humanities Building and Vilas Communications Building but it is little used by pedestrians who overwhelming favor crossing at grade. Meanwhile, there is no signalized connection at grade across University Avenue at Murray Street. Nor are there signalized crossings of University Avenue at North Orchard Street or between Henry Mall and the Engineering Mall—despite the alignment of these two malls and the longstanding desire on the part of the campus to create a better connection between them. This lack of connection is exacerbated by a general lack of crossings west of Randall Avenue. Nearly as many pedestrians dart across traffic in that vicinity hoping to save a minute over crossing at properly signalized crosswalks. Finally, the primary signalized crossing in this area, between Biochemistry and Materials Science, is timed such that pedestrians must cross in two segments. However, since the refuge area between the two carriageways is quite small, many end up running across the entire width of seven travel lanes, hoping to beat the traffic.

Fig. 20. Three Vehicle Travel Lanes, Two Bike Lanes, and a Bus Lane Make Crossing University Avenue on Foot a Major Challenge.

Equally bad is the lack of a direct connection between Babcock Drive and the engineering campus. Many students walk down Babcock Drive from the lakeshore residence halls and, rather than walk down to the signalized crosswalk, attempt to hop from island to island in the middle of the intersection of Campus Drive and University Avenue. Although there is a series of painted crosswalks at this intersection, these are inconvenient since they can only be reached by walking an extra block west. Rather than do this, most pedestrians seek refuge on the planted islands where they often stand just inches from cars traveling in excess of 40 mph heading to or leaving Campus Drive.

A second, less problematic area for pedestrians is the corridor along North Charter Street between University Avenue and Observatory Drive. As discussed above, this corridor has the heaviest student flow during the day, particularly at class change time. Aside from the problems at University Avenue, Charter Street is a key vehicle route since it serves as the primary street entrance to the central campus. Seas of pedestrians often overflow the sidewalk into the street during class change time, often to the aggravation of motorists and bicyclists trying to travel in the roadway. This problem is particularly acute adjacent

to the Social Sciences building. Significant numbers of pedestrians converge on this point, coming down from Bascom Hill and up from North Charter Street.

Two other areas are particularly worthy of note. First, the area in front of the Memorial Union and Red Gym is awash with pedestrians. At the same time, there are a large number of vehicles passing through this area, many of them first-time visitors to the campus or otherwise preoccupied, such as with looking for a place to park. Lastly, the area surrounding the hospitals is not in general friendly to pedestrians. As noted earlier, this portion of the campus is suburban in its layout and is characterized by super blocks where the Veterans Administration Hospital, the Forest Products Lab, and UW Hospital are located as well as by curving roads, extra long blocks, and actual gaps in the sidewalk network.

A related problem is the generally poor condition and non-uniform marking of crosswalks on campus. In many cases the crosswalk markings have completely faded from the pavement, providing no indication to motorists of a crosswalk. There are also a number of non-standard designs utilized throughout the campus providing an unclear message to drivers and pedestrians both.

For a listing of many specific problems facing pedestrians please see Appendix D, the Campus Bicycle and Pedestrian Task List compiled by the Campus Pedestrian and Bicycle Committee.

4. SAFE Nighttime Services

Approximately 13 years after the amalgamation of SAFEride Bus, SAFEride Cab, and SAFEwalk Escort programs, each of the services has dealt with its own growing pains and has responded to necessary changes in programming. While the three services do still meet their intended goals and purposes, improvements and refinements continue to be necessary to ensure the success of the programs. Upcoming improvements and refinements include:

- Enhanced literature and promotional materials production to encourage improved, correct use of all three services (especially of the SAFEride Cab Program). Materials should also stress the importance of and the reasoning behind the SAFE triad of services.
- Positioning of SAFEwalk as an epicenter of student-initiated campus safety programming and education.

- Place SAFE Nighttime Services into a larger framework of campus safety, best practices, and value to the University community. Continue to integrate programming with other campus units and departments.
- A newly-designed computer program/database which allows administration to collect various pieces of data about usage of the program, decrease amount of time spent per call, record new types of data, allow two dispatchers simultaneous access to the program, and analyze where improvements are necessary. The new program should also include up-to-date technologically-abled functions, such as on-line ride and walk reservations as well as the ability to be used by two dispatchers simultaneously.
- A new phone system that can hold a larger queue of callers and that can be accessed by two dispatchers.
- New, more reliable radios for the SAFEwalk program.
- Additional review of the Lightway Path as a safety service, which was a precursor to the SAFEwalk program.
- A review of the SAFEride Bus routes which determines if we are concentrating service in the right areas or if the routes need to be amended to respond to changes in off-campus housing patterns.

5. Driving between Points on Campus

Driving from one point to another on campus is discouraged by requiring a permit for parking anywhere on campus not covered by a meter and by limiting all permit holders to one assigned lot. Those who must drive from one location to another on campus for a legitimate, work-related reasons must have a regular, "base lot" permit and may then purchase a Business Alternate Permit for a specific lot on another part of campus for an additional $100 annually (2005).

To encourage the use of alternatives to driving one's own private motor vehicle, the University also provides for an increasingly popular car sharing program operated by a professional contractor. Participants typically use the cars provided to drive off campus to some destination and then back again. They pay a simple, flat hourly rate which includes rental, gas, maintenance, and insurance costs that allows them the chance to use one of three hybrid cars parked in different locations to drive to and from campus without the need to own a car or buy a permit to park it. The price is approximately $7 to $9 per hour all costs included and, prorated over a year to about $1,000 annually compares well to the $7,000 average cost of a privately owned and operated car.

IV. INFRASTRUCTURE AND PROGRAM PLANS FOR THE FUTURE

This section is divided into two major parts. The first section describes planned improvements to infrastructure and programs designed to make it easier to get to and from campus without driving alone, while maintaining a capped supply of convenient parking that accommodates future development. The second section identifies improvements that will make it easier to get around on campus without a car once you are there. The improvements described in both of these sections seek to build upon the campus' unusually successful TDM record to date, and respond to the specific challenges and problems as well as the survey results identified in the earlier section that analyzed the University's existing transportation system. The presentation of these planned improvements is further divided into specific modes of transportation, including transit, pedestrian facilities, and the new parking structures that will replace surface parking.

A. Planned Transportation Improvements: Travel to and From the Campus

The following plans for improving transportation infrastructure and programs are divided into specific modes of transportation and program categories. They reflect the challenges and problems identified earlier in the analysis section of the plan as well as the survey results discussed in the section regarding the needs, interests, and attitudes of the faculty, staff, and students who comprise the campus community. Suggested phasing as part of the overall campus master plan implementation is noted below parenthetically as part of the text in each section, (i.e. Phase 1, Phase 2, Phase 3 or Beyond. See Appendix E for a list of all planned transportation improvements and their proposed phase of construction.)

1. Transit Service Improvements to and from Campus

a. Extensions of Service to the Periphery and Outlying Communities: Madison Metro has recently extended service to Verona and has taken important new steps to bring service to

other outlying cities, especially Sun Prairie and Oregon. The University proposes that Metro explore additional service to other communities such as Fitchburg, McFarland, and Stoughton. This service could serve as a precursor to eventual commuter rail service to and from these communities. Moreover, a more robust network of routes is needed in the periphery of the Madison metropolitan area, especially Middleton and Monona. Madison Metro is already poised to install a new, northwest transfer point in the Middleton area. The University agrees that this is very important and will support an increasingly comprehensive network of bus service in this area. In addition, service extensions to locations such as Century Avenue in Middleton and the vicinity of Stoughton Road/US 51 could connect with potential park-n-ride facilities. (Phase 1)

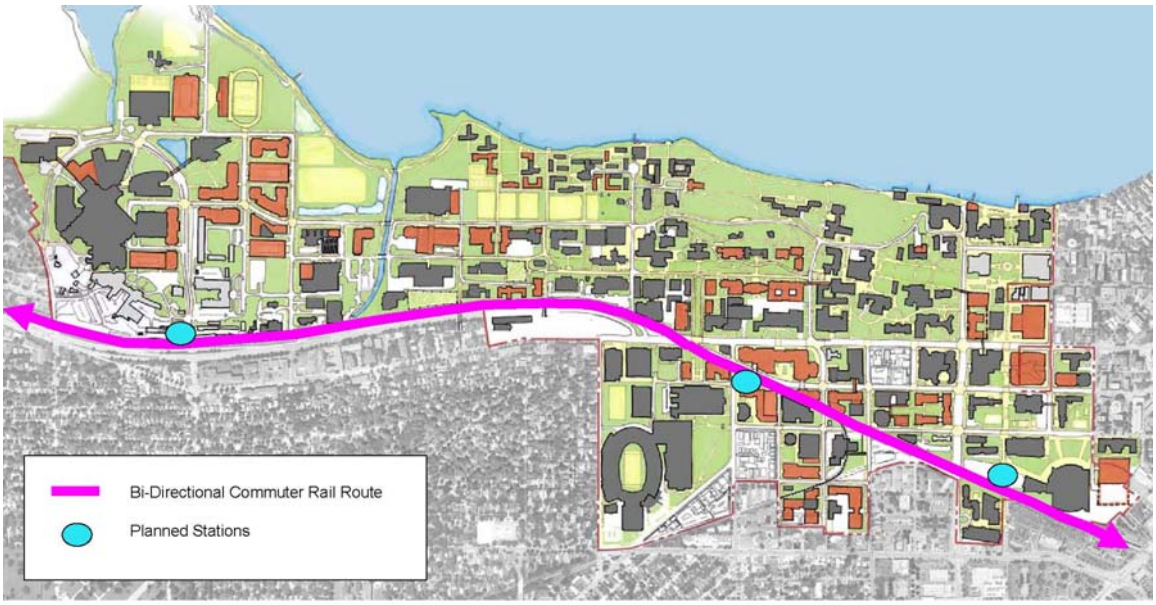


Fig. 21. Alignment of Potential Regional Commuter Rail Route
and Reserved Campus Station Locations.

b. Express Service from the Periphery: As noted earlier in the section that analyzed existing service, traditional “local” type service from peripheral areas increasingly results in long travel times that strongly limit transit’s ability to attract people out of their cars. Faster, “express” type service should be provided in a number of commuter-sheds to deal with the growth of Metro’s service area, delays due to congestion, and the growing number of University and other residents in the periphery. “Limited” service routes that do not now exist might prove the most feasible way to begin express service. Buses on these routes might collect passengers from relatively standard routes with the usual

number of stops in communities such as Fitchburg, Middleton, Sun Prairie, Verona, and Monona, and then travel directly to the University with only a few stops along the way at employment centers downtown and on the campus. From Sun Prairie, for example, the bus would pick-up riders from a local-service type route and finally from a park-and-ride lot on the edge of city and then drive directly to the University with a strictly limited number of stops at locations such as the American Family Office Park, on East Washington at East Towne Mall, at the state capitol and a few locations on the campus. Similarly, in order to speed the service to the campus from Middleton, a "limited" express service, might collect riders from one or more local routes in that city and then express from Allen Boulevard or some point at the edge of its border with Madison directly down University Avenue stopping only near Segoe Road and the Wisconsin Department of Transportation as well as at the Hilldale Shopping Center, a couple of places within the campus, and then near the capitol. The available number of potential riders from a number of the communities noted above make this service relatively feasible in the near term.

A second, high-quality or premium type of express bus service, akin to a tour bus, should be considered in the longer term for long-distance commutes where the quality and comfort of the service matter. Trips to and from communities such as Waunakee, Stoughton, and Cross Plains may be best suited for this type of service. Riders would either walk or drive to the terminus in their community, board the bus, and then travel directly to the campus, with the bus continuing to a couple of stops downtown. The relatively small size of the available market for this kind of service, however, makes the viability of this kind of service questionable, in the near term. The vehicles would likely have to be much smaller, carrying 15 to 25 passengers, with only one or two trips in the morning and evening peak hours. Such a service begins to resemble a vanpool or a "buspool."

c. Additional Park-and-Ride Service: Madison Metro must be commended for opening up park-and-ride facilities on the north and east sides of Madison and in Verona. To attract a greater number of its own employees and other downtown commuters out of their cars, the University proposes that Madison Metro develop park-and-ride facilities in a many more locations, both in outlying communities with new –ideally, express— service that connects directly to downtown and campus destinations, and at convenient

entry points along key commuter-sheds in the periphery of the metropolitan area itself. For example, new service to and from a park-and-ride facility on the west side in Middleton near US Highways 12 and 14 should be explored. Aside from its immediate value to downtown commuters, such a facility could also serve as a precursor to a potential commuter rail station with parking for commuters. An additional park-and-ride facility should be explored in the region of US Highway 151/Verona Road and the beltline as a stop for the planned commuter service from Verona. (Phase 1)

Park-and-ride locations should, in general, be sited to integrate with existing transit services. This will allow Madison Metro to serve these locations for a minimal marginal cost. At key locations—and these locations will likely change over time as residence patterns change—express service to and from the campus should be provided during peak commute times. In addition to maximizing transit synergies, park-and-ride lots should be sited where they balance drive time with "capture." It is particularly important that a lot not make a person drive far out of their way and that it be easily accessed. For example, a primary park-and-ride lot for Sun Prairie is better suited at the southwest corner of the city, along USH 151 than in the center of town. Additionally, it is important that a park-and-ride facility be far enough from the campus that remaining travel time to the campus noticeably outweighs the time spent transferring to and waiting for the bus. It is also important to strike a balance between permitted and public park-and-ride lots. While some individuals would rather have a "reserved" space at a park-and-ride lot akin to the current system, others will prefer not to pay as they do not feel the benefits of the permit justify the cost.

d. Signal Prioritization: The University should request that Madison Metro buses be equipped and granted signal priority on their routes where feasible on appropriate City streets. As a first step, the potential time savings for buses and the impacts on traffic should be evaluated.

e. Commuter Rail: To address recent increases in travel times associated with congestion problems and peripheral residential development, the campus needs the kind of transit service that can only be provided by a fast, regional commuter rail system. This service would boost the feasibility of the University's commitment to current parking limits and respond to the trend for more and more employees and students to live further away from

downtown Madison.

In support of this goal, the University has been a member of both the advisory and technical committees associated with the Transport 2020 (commuter rail) Alternatives Analysis and currently the project's preliminary engineering and environmental impact study. The University will not only continue to support Transport 2020, but also stands ready to act as a partner in the actual implementation of commuter rail service along the existing rail right-of-way through the campus. It has identified three potential commuter rail stations: near the Veterans Administration Hospital, near Union South at North Randall Street, and at the Kohl Center. The University has also reserved a line item in its transportation capital budget to contribute to the cost of constructing these stations. (Phases 1 and 2)

Fig. 22. Alternative Alignments for Potential Streetcar Route on and near Campus.

f. Streetcars: Proposed streetcar or "trolley" service in the City of Madison is now the subject of a feasibility study that will commence in early 2006. The University supports this work and is a member of both the advisory and technical committees associated with this study. Further, as depicted in Figure 22, the University has identified two possible alignments for the streetcar on or near the campus. The preferred alignment is centered on Park Street and University Avenue for reasons of the development potential the new service promises with respect to a possible "biomedical corridor" uniting health and

research facilities on campus with Meriter Hospital, St. Mary's Hospital and Dean Clinic. This service could also boost retail and residential development along (old) University Avenue in an area adjoining the campus where the University has pledged to assist planning efforts there on the part of the neighborhood and the City of Madison.

An alternative potential alignment would use the Linden Drive corridor. This alignment would need to be carefully coordinated with planned development in the central campus, including plans for a pedestrian mall and possible conflicts with farm animals that are a critical part of the activities pursued by the college of Agriculture and Life Sciences. Choosing this corridor would also require addressing the comparative costs and benefits of existing bus service in light of the University's challenging topography and limited street grid. (Phase 1 or 2)

2. Van and Car Pool Improvements to and from Campus

The University seeks to make vanpool and carpool options more available to those who live relatively far outside existing transit service by means of the following program improvements:

a. Start Up Vanpool Subsidy: The University will explore the possibility of subsidizing the marginal difference between the higher cost of running a van with relatively few persons for the first six months (or some other period) vs. the lower cost achieved with a full pool of 15 persons. (Phase 1)

b. Targeted Vanpool Assistance Offers: Transportation Services will develop a program that targets potential members of a vanpool in a given commutershed with information about how they could begin or join a pool, how it could work, and what it would cost using a startup subsidy. (Phase 1)

c. Targeted Carpool Assistance Offers: Transportation Services will develop a program that targets potential members of a car pool in a given commutershed with information about how they could begin or join a pool using the Dane County Ride-Share program. (Phase 1)

3. Bicycling Improvements to and from Campus

The University seeks to make bicycling to and from the campus as safe and attractive as possible. It recognizes the desire on the part of most potential bicycle commuters for routes that are separated from traffic either in bike lanes or independent paths. Many if not all of the following improvements are also highly desirable to those who bicycle between different destinations once on campus. The following bicycle improvements are thought to primarily serve commuters. (Other bicycle improvements on campus are listed in a later section addressing bicycle improvements primarily within the campus.)

a. Additional Bike Lanes on City of Madison Roadways:

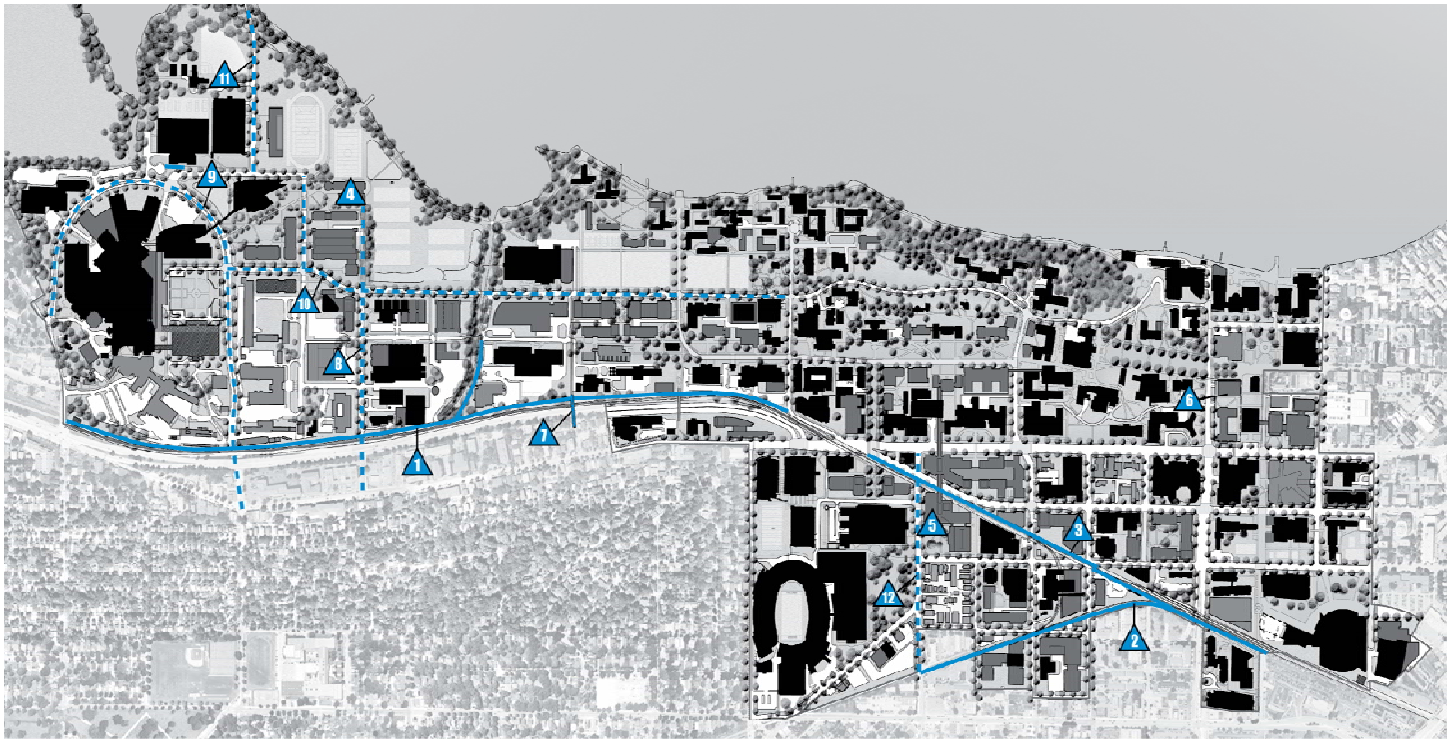
1) Randall Avenue, from Monroe Street to University Avenue. This project will need approval and cooperation from the City of Madison and is made possible by the potential increase road right-of-way that is part of the Union South and Wisconsin Institute for Discovery projects. (Phase 1)

b. Additional Multi-Use Bicycle and Pedestrian Paths:

1) Extension of the Waisman Path: from the eastern end of the path (west of Nielsen Tennis Stadium) to University Bay Drive (Phase 1).

2) Campus Drive Path: Running along the northern edge of the WisDOT rail right-of-way north of Campus Drive from University Bay Drive to Babcock Drive (Phases 1 and 2).

3) Southwest Path Extension: Running along the WisDOT rail right-of-way from the Southwest Path to the Engineering campus and Babcock Drive (Phase 2).



1	Campus Dr Path	7	Ped/Bicycle Bridge across Campus Dr
2	Extension of Southwest Bike Path {"Missing Link"}	8	Bicycle Lanes on Walnut St
3	Extension of Southwest Path along Rail ROW	9	Bicycle Lanes, Traffic Calming on Highland Ave
4	Bicycle Station at Union West	10	Bicycle Lanes on Observatory Dr
5	Bicycle Station at Union South	11	Bicycle Lanes on University Bay Dr
6	Bicycle Station at Humanities	12	Bicycle Lanes on Randall Ave

Fig. 23. Planned Bicycle Improvements on UW-Madison Campus.

c. New Bicycle Stations:

The University already maintains a small do-it yourself bicycle repair station called The Bike Annex in a small building at Lot 60. Bicycle stations would be a big step beyond that. A relatively recent phenomenon, bicycle stations combine high-quality and secure indoor bicycle parking with access to showers, lockers, and professional repair service. Typically, members of a station pay a small annual fee and the stations and/or services within the stations are operated on a lease basis and by independent contractors. Bicycle stations have proven highly popular where constructed and are beginning to find a home at universities across the country. The University of Wisconsin-Madison believes that they would both attract more bicyclists (and thus help check motor vehicle commuting),

and provide some relief with the campus's growing lack of adequate bicycle parking spaces in some areas. Bicycle stations are planned for the following three locations:

1) Union South. (Phase 1)

2) Humanities Building Redevelopment. (Phase 3)

3) Union West. (Beyond)

d. Signed Bicycle Routes: Existing and planned bicycle routes and paths both on and near the campus will be named to suggest their origins and destinations and signed at appropriate locations to aid new and occasional bicyclists. Routes beginning on City of Madison and Village of Shorewood Hills streets will require cooperation with the City and Village. (Phase 1)

e. Bicyclist Amenities: Facilities such as covered bicycle parking and secure showers within buildings will be included with the design and construction of new buildings whenever feasible. (All Phases)

(Note: See planned pedestrian facilities below regarding bridges, new traffic signals, and other improvements that will also improve mobility for bicyclists.)

4. Pedestrian Improvements to and from Campus

Most of the University's pedestrian improvement projects affect mobility on the campus itself and are thus described in a later section. The following proposals are thought to primarily affect commuters on foot:

a. New Sidewalks:

1) Highland Avenue (east side), from Campus Drive to entrance to University Hospital. (Phase 1)

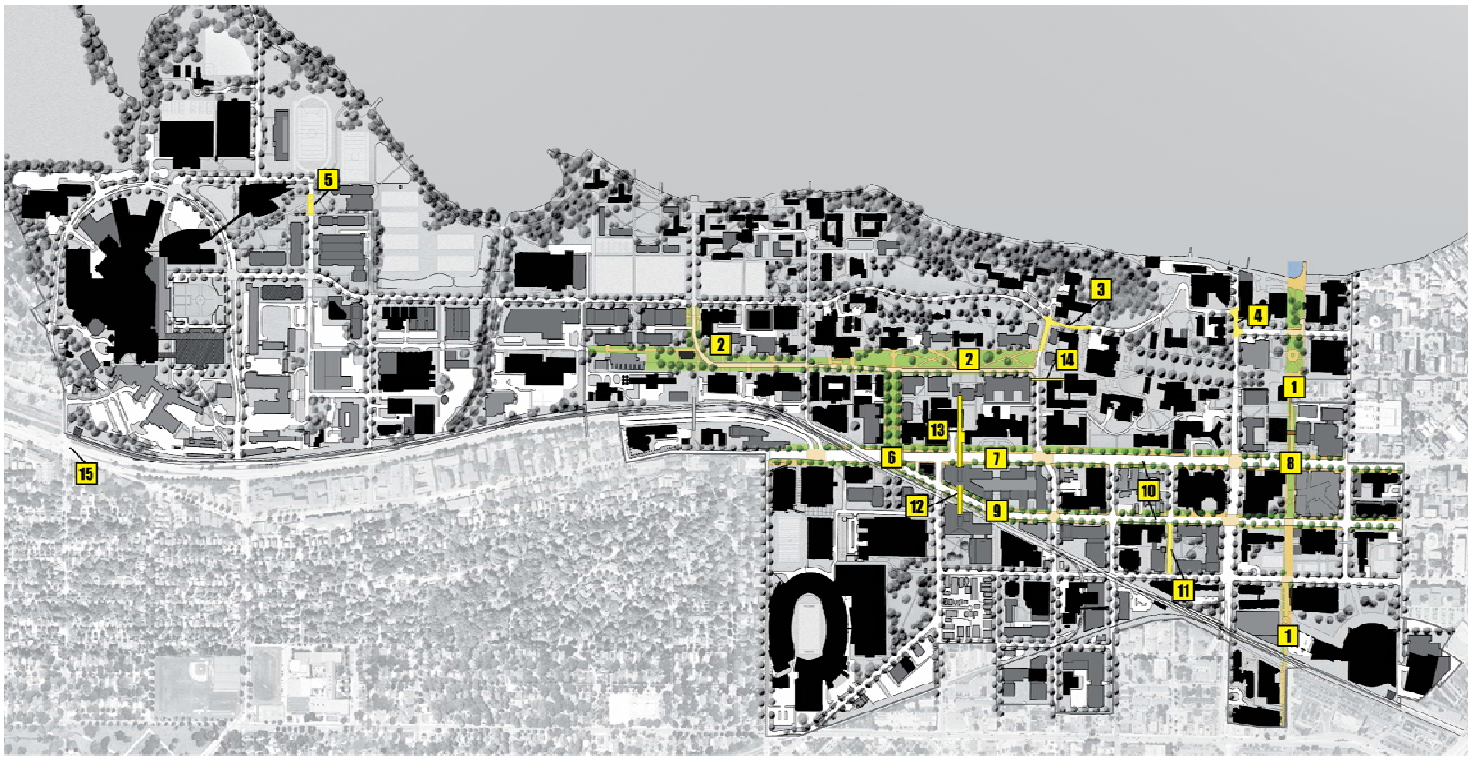
2) University Bay Drive (east side), from University Avenue to Children's Hospital entrance. (Phase 1)

b. Pedestrian and Bicycle Bridges:

1) Across Campus Drive at Chamberlain Avenue: This project is planned as part of the Campus Drive Path and would connect the bike route along Chamberlain Avenue with the Campus Drive Path and Linden Drive. (Phase 2)

2) Across University Avenue between Farley Avenue and University Bay Drive: This project is contingent on need and further study in conjunction with potential commuter rail station there and reconstruction of Campus Drive and University Avenue

(Phase 2 or 3).



1	East Campus Mall	9	Signal, Crosswalk on University Ave at Orchard St
2	Conversion of Linden Dt to Ped, Bike, Transit Mall	10	Traffic Calming and Streetscape Improvements on University Ave and Johnson St
3	Pedestrian Priority Streetscape on Observatory Dr	11	Conversion of Brooks St to Ped and Bike Cooridor-Dayton St to Johnson St
4	Pedestrian Priority Streetscape on Langdon	12	Pedestrian Bridge across Johnson St between Union South and WID
5	Pedestrian Priority Streetscape at Union West	13	Pedestrian Bridge across University Ave between WID and MSC Area South and WID
6	Relocation of Babcock Crossing to connect Henry Mall and Engineering Mall	14	Pedestrian Bridge across Charter St from Van Vleck to New Building north of MSC
7	Signal, Crosswalk on University Ave at MSC/WID	15	Ped/Bicycle Bridge across University Ave at Farley and University Bay Dr
8	Signal, Crosswalk on University Ave at East Campus Mall		

Fig. 24. Planned Pedestrian Improvements on the UW-Madison Campus.

c. Employee Housing Assistance Program: Madison already boasts a robust sidewalk and path network leaving the University with relatively few options for making it easier for faculty, staff, and students to walk to campus. Primary among these is making it possible for more staff and faculty to live closer to the campus. To this end, the University is working with the City of Madison to develop joint programs that would support faculty and staff redevelopment of nearby housing as part of a program that would also generally support neighborhood redevelopment plans in those areas. Please refer to the Campus Master Plan for more general information about this program.

5. Roadway Improvements to and from Campus

Most of the University's planned roadway improvements enhance pedestrian mobility around campus and are described in the next section. The following improvements primarily serve commuters:

a. Reconfigured Intersections:

1) University Avenue and Campus Drive: This project would allow Campus Drive to intersect University Avenue at more of a right angle to calm traffic and better announce to motorists that they are entering the campus. The feasibility of the project is subject to the availability of sufficient right-of-way. Implementation will take cooperation with the City of Madison and can only occur when Campus Drive and/or University Avenue are reconstructed 10 to 15 years in the future. (Phase 2 or 3)

2) University Avenue and University Bay Drive: The University proposes that possible improvements to this intersection be explored in conjunction with the reconstruction of University Avenue and/or Campus Drive to ease traffic flow to and from University Bay Drive. (Phase 2 or 3)

3) Ramp Improvements to Campus Drive from Highland Avenue: The University proposes that possible improvements to this intersection be explored in conjunction with the reconstruction of University Avenue and/or Campus Drive to ease traffic flow to and from University Bay Drive. (Phase 2 or 3)

4) New intersection between Campus Drive and Walnut Street: The University proposes that possible improvements to this intersection be explored in conjunction with possible ramps to and/or from eastbound Campus Drive for Walnut Street traffic. Land acquisition may be an issue that will need to be overcome in this area. (Phase 2 or 3)

1	Vacation of Johnson St-Randall Ave to Campus Dr	6	New North-South Road between Observatory Dr Extended and Walnut St
2	Vacation of Capitol Ct-Orchard St to Charter St	7	East-Bound Ramps on Campus Dr at Walnut St
3	Improved Switchback on Observatory Dr	8	Ramp Improvements at Highland Ave
4	Reconfiguration of Intersection of University Ave and Campus Dt	9	Improvements to University Ave and University Bay Dr, Farley Intersection
5	Extension of Observatory Drive		

Fig. 25. Planned Roadway Improvements on the UW-Madison Campus.

6. Planned Parking Improvements for Commuters and Visitors:

The University is committed to the maintenance of a convenient and stable quantity of 13,000 parking spaces for the overall campus to limit traffic impact concerns as expressed by area neighborhoods, the City of Madison, and the Village of Shorewood Hills. Rather than expand its boundaries, moreover, the campus will convert existing surface parking to buildings and open space by constructing ramps to replace surface parking lost in that manner.

a. Improved TDM to Limit Demand for Parking: The University's parking strategy is an integral part of the overall campus TDM strategy. First, parking revenues help support TDM programs and infrastructure such as bus passes and independent paths and bridges for pedestrians and bicyclists. Second, the management of parking spaces and pricing ensures that commuter TDM options remain competitive and attractive relative to driving alone. Experience elsewhere shows that campuses that subsidize inexpensive parking and/or that continue to increase parking capacity—even at the periphery—typically fail to convince significant portions of their staff and students to ride the bus, bicycle, or to use vans and carpooling.

1	CSC Visitor Ramp Replacement	6	Linden Dr. South Under-Building Ramp
2	Union West Ramp	7	Physical Plant Parking (Lot 51 Replacement)
3	Biotron Site Ramp	8	New Humanities Under-Building Ramp
4	Steenbock Ramp (Lot 36) Expansion	9	SE Public Ramp (Lot 46) Expansion
5	Union South Ramp		

Fig. 26. Map of Parking Development and Phasing on UW-Madison Campus.

b. Automobile Parking Ramp Expansions:

As noted elsewhere, the University is committed to maintaining and capping the net number of parking spaces on campus at approximately 13,000. Even so, at any given point during the 20-year period of this master plan, the actual number spaces may be higher or, more typically, lower than that number for a short time. Moreover, it has not been possible to plan an exact match of spaces lost and gained through the closures of old surface lots and the construction of new or expanded parking ramps. The limitations of available campus space imply that the location of new spaces may differ significantly from old locations. Please see Figure 26 and Table 2 for more information about the relative shift of spaces around the campus during the planning period.

1) Lot 36 Expansion: 117 spaces will offset spaces lost primarily in the Lakeshore Residence Hall area. (Phase 1)

2) Lot 46 Expansion: 250 spaces will replace others lost primarily at University Square, the Chazen Museum, and elsewhere. (Phase 1)

	Parking			
A6a	Improved TDM to reduce demand for parking	Campus	All Phases	Improved TDM strategies and integration with parking policies
A6b. 1)	Lot 36 Ramp Expansion (W23) (to replace Lakeshore Res Hall Parking)	West (W23)	Phase 2	117 spaces. Tied to loss of parking associated with new residence hall developments in this area.
A6b. 2)	Lot 46 (Taj) Ramp Expansion	South (S15)	Phase 1	250 spaces.
A6c. 1)	New Union South Ramp	South (S5b)	Phase 1	250-500 spaces - Tied to WID project time.
A6c. 2)	Physical Plant Parking (Replace Lot 51)	South (S10a)	Phase 1	135 spaces.
A6c. 3)	New Ramp at former Biotron Bldg.	West (W13))	Phase 2	500-1,000 spaces.
A6c. 4)	New Humanities Bldg. Ramp	North (N12b)	Phase 3	250-500 spaces.
A6c. 5)	Union West	West (W9a)	Beyond	1,200-1,500 spaces.
A6c. 6)	CSC Visitor Ramp Replacement	West (W2)	Beyond	1,200-1,500 spaces; replaces Lots 75, 79.
A6c. 7)	Linden Dr. South Ramp (Replacing Lot 34, Observatory Dr., etc.)	North (N6b)	Phase 3	500-750 spaces.
A6f	Service Parking Guidelines for new projects	Campus	All Phases	
A6g	Proximate Parking at Hilldale or Elsewhere	Off Campus	All Phases	
A6h	Moped Parking Areas and Policies	Campus	All Phases	Maintain approx. 1,100 spaces.

Table 2. Development and Phasing of Parking Stalls on UW-Madison Campus.

c. New Multimodal Automobile Parking Ramps to Replace Surface Parking:

As it has recently done in the case of the under-building parking ramp for the new North Park Street Office Building, the University is interested in making more of its ramps multimodal facilities through the addition of inside bicycle parking, including adjacent bicycle stations (See more about this at A3c.), and easy access to buses and, potentially in the future, commuter rail and streetcars.

1) Union South Ramp: 250-500 spaces would replace surface parking lost through development in the central and southern campus, especially Lots 42, 15, and 22 which will be used for construction of the WID buildings. This ramp would also be the location for the first of the University's three planned bicycle stations. (Phase 1)

2) Physical Plant Parking: 135 spaces will replace those lost due to redevelopment of Lot 51 to house the Physical Plant. (Phase 1)

3) Biotron Ramp: The Biotron will be demolished to provide for 500-1,000 spaces that will partly replace surface stalls lost through redevelopment of Lots 60, 62, 4, and elsewhere. (Phase 2)

4) Humanities Ramp: 250-500 spaces will be built under the new Humanities Buildings—one level under the northern building and one under the southern building—to replace surface stalls around Memorial Union and the redevelopment of Lots 2 and 3 for new museum and music performance space. (Phase 3)

5) Union West Ramp: 1,200-1,500 spaces will partly replace those lost through the redevelopment of surface parking of Lots 60, 64, and 85. (Phase 3 or Beyond)

6) Clinical Sciences Center (CSC) Visitor/Garden Ramp: Lots 75 and 79, which currently accommodates a total of 1,400 spaces, will be replaced in a new 1,200-1,500 space structure at a lower grade to provide for an open space in front of the hospital that connects with the quadrangle extending from there to the new Union West to the northeast. (Beyond)

7) Linden Drive Southside Ramp: 500-750 spaces at an under-building ramp in the vicinity of the Bardeen and Middleton buildings will replace surface parking at Lot 23 when Van Hise is demolished and at Lot 34 and along Observatory Dr. (Phase 3 or Beyond)

d. Visitor Parking

Although there are no plans to increase the total number of parking stalls on the campus, the University will continue to explore different mixes of types of those stalls, especially the number and location of spaces devoted to visitor parking. Survey results clearly indicate the need for additional parking for "traditional" visitors—that is, those who are not very familiar with the campus. Transportation Services should consider a systematic analysis of the number and location of visitor parking in its existing and planned parking lots. (The University will continue to serve those who are familiar with the campus, including "regular" visitors as well as users of alternative transportation without flex parking permits who need occasionally to drive to campus alone, with daily and half-day permits.) For example, proposed parking at the new humanities buildings, Union South, Union West, North Park Street Welcome Center, and various medical and CALS facilities should include substantial amounts of visitor parking to address future needs and replace spaces lost in each area, particularly near Memorial Union in Lot 1. In each case, the University should also consider providing better information about visiting the university, including maps of the campus and access to intra-campus bus service.

In general, short-term spaces, aside from those for traditional visitors, should be minimized on the campus. They encourage vehicle trips into the campus that otherwise might be made by another mode. Such spaces should be provided only in places where extensive loading and unloading would otherwise encourage illegal parking.

e. Additional and Improved Parking Permit and Information Centers: To make obtaining permits, especially daily permits, easier and more convenient the University will move its primary customer service center in the fall of 2006 to the first floor of the North Park Street office building. This new facility, located at a prominent gateway to the campus, will include visitor parking, drive-through service, and access to a new intra-campus bus route. In doing so, Transportation Services is partnering with other University departments to ensure the success of a new Welcome Center that is also located the North Park Street Building. In addition, Transportation Services will explore the viability of satellite locations for booths at other locations on the campus that allow customers to buy permits and perform related transactions from their vehicle with provisions for easy entry and exit from the facility. The point is to provide seamless, one-stop service for all

members of the traveling campus community.

f. Service Parking: All additional facilities proposed to be built in fulfillment of the Campus Master Plan must provide adequate parking spaces for projected University Physical Plant and vendor needs. This space should not be an “add on” to the design of the structure and its site, but rather it should be integrated into the site design and building footprint from the outset so that it functions well without dominating the appearance of some part of the site and so that it does not create chronic pedestrian and other conflicts. In addition, wherever possible, modifications to existing buildings should include service parking improvements whenever those modifications involve changes to the site.

g. Proximate Park-and-Ride: The University will explore opportunities to jointly develop or utilize parking at private ramps in strategic locations along commuter-sheds linked to transit or shuttle service. This “proximate” or “satellite” parking is typically located beyond easy walking distance, but between five and 10 minutes by shuttle bus to most destinations on campus. Such facilities shift the need for large parking facilities away from the heart of the campus to areas with lower land costs and better access to the regional transportation infrastructure. Such an aggregation also allows for the introduction of end-user amenities that could not otherwise be supported for lack of passenger flow. Amenities might range from restrooms and enclosed and heated waiting areas to child care facilities and small retail or food outlets. By providing these kinds of amenities, cheaper parking, and frequent shuttle service, such facilities can become as or more attractive than on-campus parking lots. There are no specific proposals under consideration at this time.

h. Moped Parking Facilities: Moped parking areas and stalls will be located and designed to minimize the possibility that mopeds will drive on sidewalks, wheelchair ramps, and otherwise conflict with pedestrians and enter or exit street traffic in an illegal and uncontrolled manner. Parking for mopeds will be separated from bicycle parking with signed and individually marked and paved stalls located as conveniently as possible but not so as to block entrances, fire lanes, fire evacuation routes, key pedestrian features, or signature campus buildings or monuments. Moped parking will be limited roughly to existing 2005 levels—1,100 spaces, excluding residence halls—since the campus capacity for moped parking has been reached in virtually all parts of the campus. Finally, wherever possible, sufficient parking for mopeds will be provided as close as possible to the buildings where moped users wish to go. However, this effort will necessarily be constrained by space limitations in some locations, including those that reflect the need to maintain clear sidewalks, fire evacuation routes, and significant landscape features.

Fig. 27a. Key Design Elements of New Moped Parking Areas.

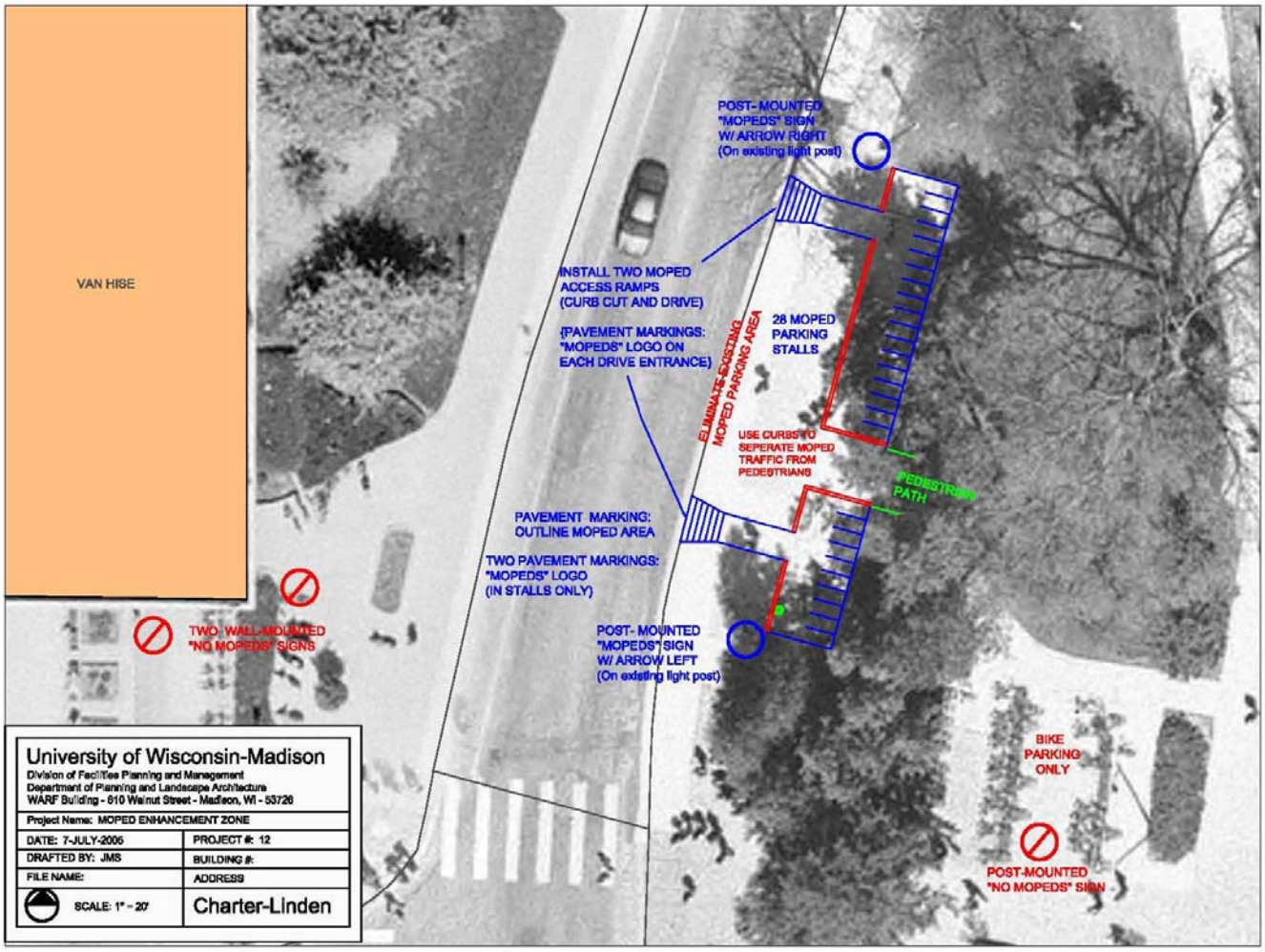


Fig. 27b. Key Design Elements of New Moped Parking Areas.

7. Improved Information about TDM Options

A central aspect of the improved Transportation Demand Management (TDM) plan transcends the alternatives themselves to highlight an improved awareness of the plan and the University's transportation facilities, services, and programs. Nearly a quarter of the university community believes the university is doing too little to promote alternatives modes of transportation while a a full third feel that they have too little information to answer the question. This is a clear indication that much progress can be made in educating individuals about their options. This need is further reinforced by the repeated request in surveys for improvements to alternatives that already exist, such as the ability to drive to campus occasionally when one's primary mode of transportation is not a

single occupancy auto. As discussed below, the dissemination of improved information about transportation options should concentrate on both the availability of that information and the culture in which those options are presented.

a. Individualized Online Advice

Whether it is not knowing the bus schedule to or how to find a carpool, the lack of adequate information and the consequent unfamiliarity of a particular travel option makes it very unlikely that an individual will elect to use it. One of the best ways to counter this problem is the provision of a single, comprehensive storehouse of transportation options that is readily accessible and capable of providing customizable solutions. While the Transportation Services staff possess much of this information today, it is important that it be available at any time, anywhere and on a qualitatively greater scale that does not require individual staff attention and interactions.

The current technology of choice is the online "trip planning website." Such a site allows participants to enter their origins and destinations as well as desired departure times in order to find out how to most conveniently make a trip via public transport. There are also sites which provide ride-matching services and others with general information on transportation alternatives with links to programs and schedules.

There are few, if any, however, of these technologies that fully integrate all aspects of transportation and provide for a comprehensive provision of choices rather than a particular mode. In order to be fully successful such a website also needs to be easy to use interface. Some key aspects include:

1) Long-term travel time information for all significant modes: That is, for regular transit, campus express transit, park-and-ride transit, bicycling, walking, and vans and carpools. This travel time information should be expressed in realistic averages, based on origin and time of departure. For example, the site might tell you that it normally takes 15 minutes by bus, 20 minutes by bike, 80 minutes by foot, 15 minutes by carpool and 17 minutes by park-and-ride to reach the campus if you leave at 7:30 AM. This travel time information would provide general information without overwhelming an individual with details. It should also be able to address an individual's arrival time requirements. For example, it would indicate that to get to campus by 7:45 AM on the bus you would normally need to leave at 7:30AM, and so on.

2) Detailed route information: Turn-by-turn directions for traveling between two points at the requested time. These should be customizable, for example: if by bus, “minimize transfers” or “use only the route 8” for bus; or by bicycle, “avoid congested intersections during the peak hour” and “maximize percent on multi-use paths.”

3) Real-time information: Two types of real-time information would be valuable and boost use of alternatives to single occupancy vehicle trips:

- First, an “I am leaving now” option, providing real-time, GPS-based information on bus locations street congestion, etc. This feature would also provide a link to carpools and vans traveling to a user’s destination over the next several hours. An individual would thus be able to contact another rideshare about traveling home with them instead of his or her normal rideshare she or he needed to stay late. An additional feature would allow mobile phone access to this same real-time information.
- Second, access to a website that shows on a route map where Metro buses equipped with GPS transmitters are in real time. Experience at other Universities such as Harvard and the University of North Carolina at Chapel Hill demonstrate that these sites are valued by students and make them more likely to rely on buses to get where they need to go. Clearly, this type of information would also boost ridership generally for Metro, especially for routes where frequencies are relatively low.

4) Enabling information: For each mode there should also be available easy-to-use background information that is necessary to use the mode. This would include information about schedules, routes, and fares for transit, including how to obtain a transit pass. For bicycles, it would include information on routes, rules of the road, campus bicycle stations, and links to bicycle shops near campus and one’s residence. For walkers, it might include information on pedestrian paths, the University’s SAFEwalk program, and the location of “code blue” emergency phones. It would also include information on current and possible ride-share groups. Faculty, staff, and students should be able to readily obtain a list of carpools and vans near their points of origin, available seats, and contact information. There should also be a “potential carpool” option, whereby persons could indicate their interest in carpooling, allowing others nearby to contact them about establishing a carpool.

5) User feedback/forum area: The website should include an interactive component.

Users should be encouraged to register on the site. As part of the registration they can answer a short set of survey questions and be re-polled periodically to track overall trends in mode use. They can also make suggestions to Transportation Services and ask questions and receive answers from staff to suit their needs.

An enabling tool for the entire TDM plan, this website cannot be fully designed at this stage and will require several years to develop. First steps involve working with the providers of the information that currently exists on websites, especially the Madison Area Metropolitan Planning Organization and its rideshare resource, as well as Madison Metro Transit which provides an origin and destination on the "Trip Planning" page of its "My Metro" site. Early strategies could include links among sites that provide information about particular modes and to various University websites. The University might join with other agencies to write a request for proposals from consultants who could design and install such a system for the University and participating agencies. Regardless, the primary goal of such a resource would be the provision of unencumbered information about a comprehensive array of travel options and conditions that can be accessed in an interactive, individualized, and easy-to-use manner.

b. Localized Dissemination of Information about Transportation Alternatives: Just as important as making individualized information on the internet will be the culture in which it is presented. Although the University currently maintains transportation coordinators for each of its 27 departments and centers, their primary role is to facilitate the allotment of parking permits, not provide information about transportation options in general. Instead, they should be sources of knowledge about alternatives and provide direction to additional information. Similarly, it is critical that all new members of the University community receive information about alternative ways to reach the campus when they first arrive—if not before—on the campus. For students this information should arrive as part of the acceptance package; faculty and staff should get it as either a part of their initial employee orientation or by a meeting with the unit transportation coordinator. This initial packet should include basic information on each of the alternative modes, including the most recent transit and bicycle route maps, and where to get more information. Optionally, the information packet could be augmented by a "hands-on" orientation session where groups were offered an option of taking a bicycle ride around and off the campus or on a transit ride downtown and back. While much of this information sharing can occur through the online portal discussed above, additional

campaigns will be needed at a day-to-day level in order to see a noticeable increase in the alternatives' success.

B. Planned Transportation Improvements: Travel on the Campus

Equally if not more so than is the case for commuters, the University emphasizes alternatives to driving as a means for getting around on campus.

1. Transit Service Improvements for Traveling around on Campus

a. Intra-Campus Bus Route Improvements:

The four bus route concept proposals presented here have a number of purposes, including:

- Streamline routes and thus reduce travel times so that riders may travel from one destination to another on campus in 10 to 15 minutes;
- Decrease "dwell times" at bus stops to reduce travel times;
- Provide new service from Memorial Union to Union South and other campus destinations such as the North Park Street facilities for the first time;
- Increase capacity and thus decrease crowding on buses and situations where buses must leave some riders stranded at bus stops.

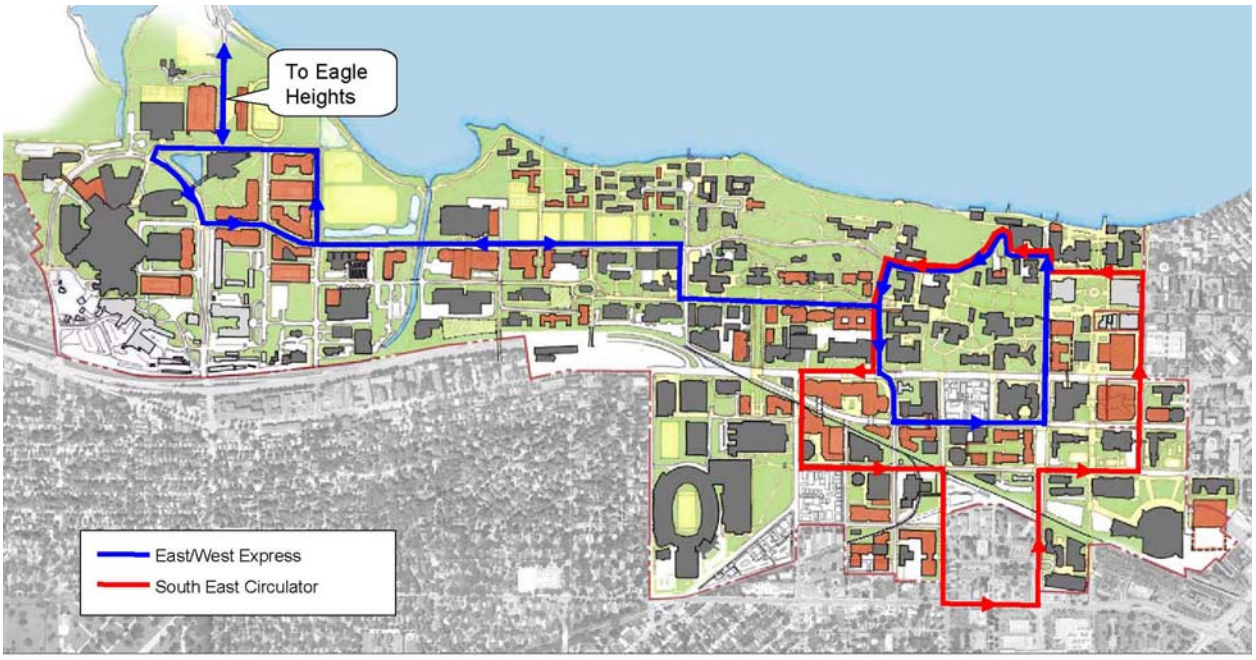


Fig. 28. Potential Intra-Campus Bus Routes.

Four major route reconfigurations highlight plans for better intra-campus bus service:

1) Southeast Circulator Route: This route would provide service for the first time from Memorial Union to Union South and to and from the new North Park Street offices, parking ramp, and residence halls. It would also provide service to most of the lakeshore residence halls, the engineering campus, and buildings close to Lake and State Streets.

2) East/West Express Route: This route would streamline the existing Route 80 by eliminating the "backwards" portion of the route that goes west on University Avenue to stop at Union South. (Eastbound riders wishing to go to Union South would walk south from a stop on Linden Drive down Henry Mall or transfer to the Southeast Circulator described below.) This new route would also use the planned extension of Observatory Drive to Highland to reduce travel time in the vicinity of the health science buildings on the west side. The estimated time savings for the conversion of the Route 80 bus to this new route is approximately six minutes so that a trip from the Hospital to the Memorial Union would be reduced from 18 minutes to 10-12 minutes. This new route would also free up a bus or allow frequencies to be improved by about one minute.

3) Clockwise Southeastern Circulator: After enough time has passed to sufficiently monitor and evaluate the performance of the proposed Southeastern Circulator, the University should consider the value of an additional circulator on roughly the same route

that would travel in a clockwise direction, providing service "down" Bascom Hill. If additional funding becomes available, a clockwise service could shorten travel times for those journeying in the opposite direction.

4) West Circulator: This route would respond to later phase development on the western campus, particularly in the health sciences, Union West, and CALS areas. No route suggestion is being made at this time since the need for this service is probably not until Phase 2 if not Phase 3.

b. Intra-Campus Bus Service Improvements

1) Increased Bus Capacity: To reduce overcrowding, long loading and dwell times, and cases where riders must be left at a stop, one or more measures of the following would be employed:

- Increase the number of buses with improved frequencies on the same route. Current frequencies of six to eight minutes should be improved to service every four to five minutes.
- Increase the number of buses with overlapping routes and complimentary schedules, particularly in the most crowded corridors such as Observatory Drive west from Memorial Union.
- Convert existing coaches to larger buses such as articulated buses with good turning radii. This would probably necessitate increasing the size of campus bus pullouts.

2) Allow Boarding at All Doors: By allowing passengers to board and alight through both the front and rear sets of doors, dwell times can be significantly reduced. In addition, the utilization of the existing bus capacity can be increased since passengers will distribute themselves more uniformly and more quickly.

3) Larger Rear Door for Boarding and Alighting: A larger rear door would reduce dwell times at bus stops by reducing the time needed for riders to alight. Since the campus bus is free, it would be possible to allow riders to board at the rear door as well. This would, however, complicate Madison Metro's ridership count and some adjustment would need to be made in that regard.

4) Peripheral Seating: Bus seats would be confined to the periphery of the inside of the

bus so that standing room was increased and so that passenger loading and unloading could happen more quickly. Seats could also be installed that were capable of closing up against the walls to make more room available.

5) Unique Campus Bus Identity and Improved Route Names: Buses should be wrapped or otherwise be made distinct from standard Metro buses so that riders unfamiliar with the bus system could easily spot a campus bus and feel comfortable about its route. Route names, in turn, should provide some indication of the nature of the route as well as the destination, such as: “East/West Express” and” Southeast Circulator.” And, unless operational requirements make it impossible, the bus for each campus route should ideally be distinct in appearance.

6) Signal Prioritization: As in the case for Metro commuter buses, the University would request that campus buses have signal priority on their routes where feasible on City streets. As a first step, the potential time savings for buses and the impacts on traffic should be evaluated.

7) Bus Stop Platforms: Consider the installation of high curbs at certain high-volume bus stops such as at Memorial Union. High curbs allow for level boarding into low-floor buses and speed the boarding process. They also increase the accessibility of the buses by alleviating the need for lifts or kneeling buses.

c. Streetcars: One potential alignment of the City of Madison’s proposed streetcar system would use the Linden Drive corridor and could serve east/west transit needs for some destinations on the campus. (See Figure 22.) As noted earlier, a feasibility study of streetcars has just begun and little information is yet available regarding alignments, ridership, and service characteristics. The study will necessarily need to evaluate the costs and benefits of streetcar service on the campus itself relative to the existing bus service, including possible traffic impacts on the University’s two-lane streets. A potential Linden Drive alignment would also need to be carefully coordinated with planned development in the central campus, including plans for a pedestrian mall and possible conflicts with farm animals that are a critical part of the activities pursued by the College of Agricultural and Life Sciences. (Phases 1 or 2)

2. Planned Bicycling Improvements on the Campus

The University seeks to make bicycling on the campus as safe and attractive as possible to serve as an effective alternative to using private motor vehicles, whether automobiles or mopeds. (See Figure 23 for a map of planned bicycle improvements.) A number of the bicycle facility improvements described earlier with respect to commuters are also relevant to faculty, staff, and students traveling from one destination to another on campus itself. The following improvements, however, possess special value in this regard:

a. Additional Bike Lanes on Campus Roadways:

Add new bike lanes, expanding the right-of-way if needed, to the following roadways: (See Figure 23.)

1) Observatory Drive, from Babcock Dr. to Highland Avenue (assuming the extension of Observatory Drive to Highland Avenue): This project includes the addition of trees and lighting to improve safety and contribute to traffic calming. (Phase 1)

2) Walnut Street, from Campus Drive to Highland Avenue. (Phase 1)

3) Highland Avenue, from University Bay Drive to the entrance to the Veterans Administration Hospital: This project would also install a sidewalk on the east side as well as terraces and street trees as described in the open areas portion of the Master Plan. (Phase 1)

4) Linden Drive, from Walnut Street to Willow Creek. (Phase 1) And later: Linden Drive, from Babcock Drive to Elm Drive: This project is conceived as an interim measure leading up to the completion of the Linden Pedestrian and Bicycle Mall. (Phase 1)

5) University Bay Drive, from Lot 60 to Lakeshore Path. (Phase 1)

b. New Multi-Use Bicycle and Pedestrian Paths:

1) Campus Drive Path: Running along the northern edge of the WisDOT rail right-of-way north of Campus Drive from University Bay Drive to Babcock Drive. (This facility is cross-listed with facilities for commuters since it will serve both intra-campus and commuter travel needs.) (Phases 1 and 2)

2) Southwest Path Extension: Running along the WisDOT rail right-of-way from the Southwest Path to the engineering campus and Babcock Drive. (This facility is cross-listed with facilities for commuters since it will serve both intra-campus and commuter travel needs.) (Phase 2)

c. Bicycle and Pedestrian Bridges:

1) Crewhouse Dock Overpass: The University will continue to seek ways to fund a bridge within the Howard Temin Lakeshore Path over the area between the Crewhouse and their dock. This area is closed and gated off forcing a detour around the Crewhouse, including during peak bicycle traffic hours.

d. Signed Bicycle Routes: Existing and planned bicycle routes and paths on the campus will be named to suggest their origins and destinations and signed at appropriate locations to aid new and occasional bicyclists. Routes beginning on City of Madison streets will require cooperation with the City. (This facility is cross-listed with facilities for commuters since it will serve both intra-campus and commuter travel needs.) (Phase 1)

Note: See planned pedestrian facilities below regarding bridges, new traffic signals, and other improvements that will also improve mobility for bicyclists.

3. Planned Pedestrian Improvements on the Campus

Pedestrian projects comprise the single biggest category of transportation improvements proposed in this plan. The University puts a top priority on reducing pedestrian/vehicular conflicts, improving pedestrian connectivity, and generally making walking on the campus feasible and attractive. (See Figure 23 for a map of planned pedestrian improvements on the campus.)

a. New Sidewalks: Observatory Drive (north and south sides where absent), from Willow Creek to Highland Avenue (assuming extension of Observatory Drive to Highland Avenue). (Phase 1)

b. East Campus Mall: A multi-use pedestrian and bicycle route (giving priority to

pedestrians) from Southwest Path near the North Park Street buildings to Lake Mendota and the Memorial Union/Red gym area. (All segments to be constructed in Phase 1 in association with adjacent building projects except for the segment between State Street Mall and Lake Mendota constructed in Phase 3.)

c. New Traffic and Pedestrian Walk Signals:

1) University Avenue and Murray Street. (Phase 1)

2) University Avenue and Orchard Street. (Phase 1)

3) Johnson Street and Orchard Street. (Phase 1)

d. Other Signal and Crosswalk Improvements:

1) Reconfigure signal location(s): On University Avenue at Babcock Drive to allow for crosswalk from Henry Mall to engineering campus and Expo Mall.

2) Add pedestrian crosswalk across Campus Drive: From Mechanical Engineering to north sidewalk just west of Babcock Drive by utilizing existing islands, moving stop bars, and other small changes.

3) Add count-down walk signals: Improve pedestrian crossings generally, especially across University Avenue, Johnson Street, Campus Drive, North Park Street, North Charter Street, and other intersections where pedestrian traffic is high and in conflict with vehicular traffic.

e. Pedestrian and Bicycle Bridges:

1) Across Campus Drive at Chamberlain Avenue: This project is planned as part of the Campus Drive Path and would connect the bike route along Chamberlain Avenue with the Campus Drive Path and Linden Drive. (This facility is cross-listed with facilities for commuters since it will serve both intra-campus and commuter travel needs.) (Phase 2)

f. Pedestrian Bridges:

1) Across Johnson St. Between Union South and WID. (Phase 1)

2) Across University Avenue between WID and the vicinity of Lot 20 ramp and MSC. (Phase 2)

3) Across Charter Street between the higher elevation of the Van Vleck/Bascom plaza and a new building behind the Medical Sciences Center on the south side of Linden Drive. (Phase 3)

4) Across Johnson Street between Chemistry and Zoology. This project is contingent on plans and funding for those buildings. (Phase 3)

5) Across Park Street between Bascom Hill and the replacement for the Humanities Building (Phase 3)

g. Pedestrian Priority Streetscapes on:

1) Observatory Drive at Social Science Building between Charter Street and the crosswalk at Bascom Hill. This project will ramp roadway to the height of sidewalk, install pavers and bollards to demarcate the sidewalk from the travel lanes.

2) Linden Drive between Charter Street and the Veterinary Medicine Building west of Elm Drive. This project will convert Linden Drive to a pedestrian, bicycle, and transit mall by ramping the roadway to the height of sidewalk and installing pavers and bollards to demarcate the sidewalk from the travel lanes. This project is also part of a larger project to develop a mall and quadrangle between Charter and Babcock Dr. when Van Hise is demolished and between Elm Drive and Veterinary Medicine when that portion of the campus is redeveloped.

3) Langdon Street at Memorial Union: This project will explore pedestrian enhancements such as raised crosswalk. Explore designs with restoration of Memorial Union project (Phase 1).

4) New street accessing the health sciences expansion area in front of the new Union West: This project will explore pedestrian priority design when that area is developed (Phase 3).

h. Improve Streetscapes with Landscaping and Other Enhancements:

1) University Avenue and Johnson Street: This project would add street trees, improve the size of the median between traffic and the contra-flow bicycle lane on University Avenue to calm traffic, improve appearances, and enhance the pedestrian experience. This project also suggests improvements to the north side of University Avenue to increase plantings, provide more street trees and maintain pedestrian flow capacities. It would occur in conjunction with the reconstruction of University Avenue and/or West Johnson Street. (Phase 2 or 3) (This facility is cross-listed with facilities for commuters since it will serve both intra-campus and commuter travel needs.)

2) Observatory Drive between Charter Street and Babcock Drive: This project would remove on-street parking and utilize the resulting space to widen the sidewalk and plant trees and landscape appropriately. (Phase 3)

3) General Improvements to Pedestrian Facilities: Continually use opportunities as the present themselves to improve all features of pedestrian facilities, including UW standards for corner radii, terraces and trees, lighting, sidewalks, and accessibility, including curb cuts and ramps.

4. Planned Roadway Improvements on the Campus

Most of the University's planned roadway improvements emphasize enhancements to the campus' pedestrian and bicycle environment. (See Figure 24 for a map of planned roadway improvements on the campus.) In other cases, improvements emphasize increase roadway connectivity that will both improve vehicular mobility and mitigate traffic impacts of streets belonging to the City of Madison and Village of Shorewood Hills. Major changes such as street vacations to provide for needed development are very limited in number in light of City of Madison vehicular mobility needs.

a. Roadway Vacations:

1) North Murray Street between University Avenue and State Street: This street vacation facilitates the development of the East Campus Pedestrian Mall from Regent Street to Lake Mendota and is a key link as part of the Arts & Humanities district redevelopment. The street vacation in this area will need to be coordinated with the privately owned Pres House development along the north east side of this block. (Phase 1)

2) Fitch Court north of University Avenue to State Street: This street redevelopment is necessary to accommodate plans to expand the Chazen Museum of Art and a new Music Performance Facility between North Murray Street and North Lake Street. Fitch Court may be the name used for the "new" service drive from Lake Street that provides access in to the middle of the block for the Chazen Museum Addition, the new Music Performance facility and the Pres House Apartment complex. (Phase 1 or 2)

3) West Johnson Street between Randall Avenue and Campus Drive: This change is vital to the project to reconstruct Union South. The University is aware that it must provide evidence to the City of Madison that this vacation is feasible with respect to traffic impact issues. This project will also include consideration of ways to install bike lanes for the first time on Randall Ave. (Phase 1)

4) Portion of Capitol Court between North Orchard and North Charter Streets: This vacation is a vital part of the Primate Center redevelopment project (Phase 1 or 2).

b. Roadway Conversions:

The following projects would convert existing streets now used for vehicular traffic to pedestrian and bicycle thoroughfares accessible by service and emergency vehicles, as well as those parking in university lots:

1) Linden Drive from North Charter Street to Veterinary Medicine east of Elm Drive. This project would convert Linden Drive from North Charter Street to Babcock Drive or Elm Drive to a pedestrian, bicycle, and transit mall. The segment further west would be converted to a pedestrian and bicycle mall. (The project would proceed in phases with the segment between Charter Street and Babcock Drive in Phase 1 and later parts as the CALS part of the campus develops in Phases 2 and 3).

2) North Brooks Street between West Dayton Street and West Johnson Street: This project would support a quadrangle and development in that two-block area (Phase 3).

c. Reconfigured Intersections:

1) University Avenue and Campus Drive: This project would make Campus Drive intersect University Avenue at more of a right angle to calm traffic and better announce to motorists that they are entering the campus. The feasibility of the project is contingent upon sufficient right of way and detailed traffic engineering analysis. Implementation

will take cooperation with the City of Madison and can only occur when Campus Drive and/or University Avenue are reconstructed 10 to 15 years in the future. (Phase 2 or 3)

d. Improved Linden Drive Bridge over Willow Creek: This project would replace the current non-standard pedestrian bridge with one that could support two pedestrians, bicyclists, transit and potentially regular motor vehicle traffic if necessary. It would occur in conjunction with the West Utility Project partly as a detour facility while the Observatory Drive bridge is replaced.

e. Improved Switchback on Observatory Drive at Muir Knoll. This project is exploratory and would minimally change the inside radius configuration of this portion of the roadway to allow two (primarily intra-campus) buses to pass each other in opposite directions. (Phase 1 to 3)

V. GLOSSARY OF TERMS USED

- **Commutershed:** Those areas within a predetermined commuting range or threshold to the identified major destination." For example, within 30 minutes drive by car. Commutershed areas can be divided according to predominate travel paths, say along a specific highway such as USH 12 or USH 24. (WisDOT)
- **Flex Parking:** A type of parking permit allowing the user the ability to choose when he or she will park at a pro-rated price depending on the time parked. In the University's case, this is achieved by means of an in-car meter.
- **Level of Service (LOS):** The degree of vehicular congestion on a particular roadway that ranges from level "A" (no congestion) to level "F" (severe congestion, e.g., "bumper to bumper" traffic).
- **Mode Split:** The distribution of travel choices for commuters or others among a range of different types of transportation, principally driving alone, van or carpooling, transit, bicycling, walking, or use of mopeds and motorcycles.
- **Moped and Motor Scooter:** A moped is a powered private vehicle with pedals designed for one rider. Wisconsin registration procedures and license plates do not distinguish between motor scooters which do not have pedals and mopeds. As a consequence, motor scooters are typically called mopeds on the campus. University regulations and policies apply equally to both mopeds and motor scooters.
- **Transportation Demand Management (TDM):** Transportation Demand Management refers to the set of policies, infrastructure, and programs an institution employs to reduce single occupancy vehicle use by changing travel behavior and an individuals' choice of travel mode. Typically, TDM includes transit, van and carpooling, bicycling, and walking.
- **Wisconsin Institute for Discovery (WID**): The WID is a major project of the University located between University Avenue and Johnson Street between Randal Avenue and Charter Street. WID will bring together a variety of departments to conduct research regarding biomedical and biotechnical questions.

VI. APPENDICES

A. Transportation Survey Report,
B. Residential Location of Faculty, Staff, and Students by Municipality
C. Inventory and Location of Moped Parking
D. Campus Bicycle and Pedestrian Project Task List
E. List of Improvements for the Long Range Transportation Plan

APPENDIX A: 2004 TRANSPORTATION SURVEY REPORT

FACULTY/STAFF QUESTIONNAIRE

SECTION I: THE DAILY COMMUTE TO CAMPUS

1. How many miles is it **one way** from your current daily residence to campus? *Circle one.*

3.9% (1) Less than 1 mile
10.6% (2) 1 to 2 miles
24.2% (3) 2 to 5 miles
28.6% (4) 5 to 10 miles
21.3% (5) 10 to 25 miles
9.8% (6) 25 or more miles

2. What is your most frequent way of traveling to campus or class **during good weather**? *Circle one.*

6.0% (1) Walk
13.9% (2) Bicycle
0.5% (3) Moped
1.3% (4) Motorcycle
49.6% (5) Drive alone in car/van/truck
1.7% (11) Other, please specify_____
0.5% (6) Private commuter bus
4.6% (7) Passenger in car/van/truck (not pool)
8.7% (8) Driver or passenger in car/van/truck pool
9.5% (9) City bus (not Route 80)
2.4% (10) Campus bus (Route 80)

3. How long does it usually take you to travel to campus from your current residence in **good weather**? *Circle one.*

9.2% (1) 10 minutes or less
39.2% (2) 11 to 20 minutes
30.6% (3) 21 to 30 minutes
14.5% (4) 31 to 45 minutes
3.6% (5) 46 to 60 minutes
1.9% (6) 61 minutes or more

4. What is your most frequent way of traveling to campus or class **during bad weather**? *Circle one.*

5.8% (1) Walk
2.1% (2) Bicycle
0.2% (3) Moped
0% (4) Motorcycle
53.9% (5) Drive alone in car/van/truck
1.4% (11) Other, please specify_____
7.4% (7) Passenger in car/van/truck (not pool)
8.4% (8) Driver or passenger in car/van/truck pool
16.4% (9) City bus (not Route 80)
2.7% (10) Campus bus (Route 80)

0.5% (6) Private commuter bus

5. How long does it usually take you to travel to campus or class from your current residence in **bad weather**? *Circle one.*

4.7% (1) 10 minutes or less
24.3% (2) 11 to 20 minutes
27.3% (3) 21 to 30 minutes
26.9% (4) 31 to 45 minutes
10.9% (5) 46 to 60 minutes
4.6% (6) 61 minutes or more

6. When do you usually arrive on campus? *Circle one.*

13.3% (1) Before 7:00 a.m.
32.5% (2) 7:00 a.m. to 7:59 a.m.
34.3% (3) 8:00 a.m. to 8:59 a.m.
10.0% (4) 9:00 a.m. to 9:59 a.m.
2.8% (5) 10:00 a.m. to 10:59 a.m.
1.2% (6) 11:00 a.m. to 12:59 p.m.
1.6% (7) 1:00 p.m. to 2:59 p.m.
0.3% (8) 3:00 p.m. to 3:59 p.m.
0.9% (9) 4:00 p.m. to 4:59 p.m.
1.0% (10) 5:00 p.m. to 5:59 p.m.
0.2% (11) 6:00 p.m. to 6:59 p.m.
1.1% (12) 7:00 p.m. or later

7. When do you usually leave campus for the day? *Circle one.*

1.4% (1) Before 7:00 a.m.
1.1% (2) 7:00 a.m. to 7:59 a.m.
0.5% (3) 8:00 a.m. to 8:59 a.m.
0% (4) 9:00 a.m. to 9:59 a.m.
0.2% (5) 10:00 a.m. to 10:59 a.m.
1.4% (6) 11:00 a.m. to 12:59 p.m.
4.5% (7) 1:00 p.m. to 2:59 p.m.
10.7% (8) 3:00 p.m. to 3:59 p.m.
31.8% (9) 4:00 p.m. to 4:59 p.m.
31.3% (10) 5:00 p.m. to 5:59 p.m.
7.9% (11) 6:00 p.m. to 6:59 p.m.
7.0% (12) 7:00 p.m. or later

8. Based on this semester's schedule, which days of the week are you normally on campus? *Circle all that apply.*

12.5% (1) Sunday
92.1% (2) Monday
93.5% (3) Tuesday
92.9% (4) Wednesday
92.6% (5) Thursday
88.8% (6) Friday
13.0% (7) Saturday

SECTION II: DRIVING TO CAMPUS

9. On average how many days a week do you drive a car or van to campus?

6.3% (1) Never, I ride with someone else (ie. a friend, spouse or car-pool)
GO TO Q 15

12.6% (2) Never, I do not commute to campus by car/van/truck
GO TO Q 17
9.8% (3) Seldom (less than once a week)
GO TO Q 10
5.8% (4) Occasionally (about once a week)
GO TO Q 10
15.6% (5) Regularly (more than once a week)
GO TO Q 10
47.9% (6) Every day
GO TO Q 10

10. Where do you park most frequently when you drive to campus during the semester? *Circle one.*

10.3% (1) Street
5.8% (2) City or County ramp
4.9% (3) Lake/France St Ramp
3.3% (4) Private or City Lot (other than above)
2.5% (5) On-campus metered stall
7.4% (6) University lot 60
55.8% (7) Another University Lot
7.6% (8) Other

11. Do you have a permit to park in a University lot, and if not, why not? *Circle one.*

66.3% (1) Yes, Have "UW" parking permit
GO TO Q 12
1.8% (2) No, Unable to get permit
GO TO Q 15
12.1% (3) No, Permit too expensive
GO TO Q 15
0.4% (4) No, Convenient location not available
GO TO Q 15
7.8% (5) No, Do not drive enough
GO TO Q 15
2.9% (6) No, I am employed part-time and don't want to pay full-time prices
GO TO Q 15
1.0% (7) No, carpool partner has a permit **GO TO Q 15**
6.2% (8) No, Other please specify_____ **GO TO Q 15**

12. On average, how many days a week do you park in a permit lot? .

20.7% (1) None, I haven't needed to use my car this semester **GO TO Q 15**

8.4% (2) Seldom (less than once a week) **GO TO Q 13**
3.7% (3) Occasionally (about once a week) **GO TO Q 13**
14.8% (4) Regularly (more than once a week) **GO TO Q 13**
50.5% (5) Every day **GO TO Q 13**

13. Do you use a permit when you park in a University Lot?

6.9% (1) No permit, I use a meter
1.0% (2) No permit, I just risk getting a ticket
83.0% (3) Yes, Annual permit
5.4% (4) Yes, Temporary Permit

14. What permit lot are you currently assigned to? _____

15. Many University parking lots are now free after 4:30 pm and on the weekends. Have you made more use of these lots because of these changes?

36.3% (1) Yes
30.4% (2) No, I still park as I usually would
31.6% (3) No, I usually don't park on campus after 4:30 pm or on the weekends

16. Thinking about the times when you come to campus by car/van/truck, **either as a driver or passenger**, how many people are usually in the vehicle (including the driver)?

73.1% (1) One, I drive alone
21.0% (2) Two
2.2% (3) Three
0.2% (4) Four
0.2% (5) Five
1.8% (6) Six or more

17. Do you currently participate on a regular basis in a car/van/truck pool to campus, either as a driver or a rider? *Circle one.*

11.0% (1) Yes **go to Q19**
16.5% (2) No, I live too close to campus **go to Q18**
2.2% (3) No, I don't know how to join one **go to Q18**
39.1% (4) No, I have irregular work hours **go to Q18**
13.4% (5) No, the cost of driving by myself is not overly expensive **go to Q18**

32.5% (6) No, I need my own car after work **go to Q18**
23.0% (7) No, I need my car during the day **go to Q18**
15.0% (8) Other: Please Specify:

18. What incentives might increase your likelihood of participating in a car or van pool?
Check all the apply.

6.9% (1) Getting your first choice of lot assignment
11.8% (2) Reserved parking spots close to your office
24.2% (3) Reduced parking costs
8.9% (4) Payroll deduction for all carpool participants
17.7% (5) Reduced parking fees for the times that I do need to drive in by myself
30.1% (6) Other; Please specify:

19. Do you currently use a park and ride to get to campus? If so, which one?

92.3% (1) No I do not use a park and ride **go to Q20**
2.2% (2) No, I have never heard of this **go to Q20**
0.2% (3) Yes, UW Research Park and Ride **go to Q21**
0.5% (4) Yes, Villager Mall **go to Q21**
0.3% (5) Yes, Metro Park and Ride **go to Q21**
0.9% (6) Yes, I park on the street near a Metro bus stop/transfer point **go to Q21**
0.6% (7) Yes, I park in a residential area and ride the bus to campus from there **go to Q21**
0.2% (8) Yes, Other; Please specify: **go to Q21**

20. What might increase your likelihood of using a park and ride?
Check all that apply.

24.4% (1) If the service was free
16.7% (2) If the service was in a more convenient location; please specify.
28.4% (3) If the buses offered express service during peak hours
24.7% (4) Other; Please specify.

21. Overall do you feel that it has become easier or more difficult over the past few years for your campus visitors to access campus parking?

8.2% (1) Easier
50.7% (2) More difficult

35.1% (3) Not applicable; I do not have campus visitors

22. Within the last year, have you stopped driving and parking on campus? If so, was this because of the cost of parking, the new free bus pass program, or some other reason?
Check all the apply.

61.5% (1) No, I still park on campus
21.0% (2) No, I never drove to campus to begin with
7.6% (3) Yes, parking rates became too high
9.3% (4) Yes, because of the free bus pass
5.1% (5) Yes, for some other reason; Please specify:

23. Business alternate parking permits now cost $75. Did this cost increase prevent you from applying for one of these permits, or do you still apply?

7.9% (1) Yes, I did not apply because of the new fee
4.4% (2) No, I still applied
10.3% (3) No, Other
70.6% (4) I don't need an alternate permit

SECTION III: BUS RIDERSHIP

24. Does a Madison Metro bus stop within four blocks of your residence? *Circle one.*

55% (1) Yes **38.5%** (2) No **5.1%** (3) Not Sure

25. How often, if ever, do you commute to campus by a Madison Metro bus **during good weather?**

69.8% (1) Never
10.1% (2) Less than once a week
3.3% (3) About once a week
6.0% (4) More than once a week
9.2% (5) Every day

26. How often, if ever, do you commute to campus by a Madison Metro bus **during bad weather?**

65.9% (1) Never
8.7% (2) Less than once a week

3.3% (3) About once a week
8.7% (4) More than once a week
11.8% (5) Every day

IF YOU *NEVER* COMMUTE TO CAMPUS BY A MADISON METRO BUS PLEASE GO TO QUESTION 29

27. What is the usual duration of your regular **one-way** bus trips to campus, including transfers? *Circle one.*

1.8% (1) 5 minutes or less
7.1% (2) 6 to 10 minutes
18.1% (3) 11 to 15 minutes
17.3% (4) 16 to 20 minutes
11.5% (5) 21 to 25 minutes
15.0% (6) 26 to 30 minutes
10.6% (7) 31 to 40 minutes
7.1% (8) 41 to 50 minutes
3.1% (9) 51 to 60 minutes
0.4% (10) More than an hour

28. What statement best describes the bus trips you take to campus this semester? Check one.

10.6% (1) Campus bus route only (Route 80, 81 and 82)
66.4% (2) City bus, directly to campus area, no transfers
3.1% (3) City bus, transfer to campus bus (Routes 80, 81 and 82)
8.0% (4) City bus, transfer to another city bus
0.4% (5) Other; Please specify:

29. How often, if ever, do you ride the campus L bus? *Circle one.*

54.3% (1) Never
25.0% (2) Less than once a week
6.3% (3) About once a week
7.1% (4) More than once a week
3.2% (5) Every day

30. Have you picked up your free employee bus pass for Madison Metro buses? If not, why not?

51.8% (1) Yes go to Q31
2.5% (2) No, I don't know where I can get one go to Q34
3.0% (3) No, I didn't know I could get one
30.6% (4) No, I don't ride the bus and don't need one
8.2% (5) No, other; Please specify:

31. How has receiving the free employee bus pass affected your ridership?

17.0% (1) I It has increased my ridership by a lot
20.5% (2) It has increased my ridership by a little
17.3% (3) I still ride the bus as often as I used to
37.5% (4) I still rarely or never use the bus

32. Since starting to use the bus pass would you say that you now ride the bus more than you drive, or do you still drive as often as you used to?

18.8% (1) I drive less now because of the bus pass
48.0% (2) I still drive the same amount
23.3% (3) Not applicable: I don't drive to campus

33. Did you give up your parking permit after you started using your free employee bus pass?

2.6% (1) Yes
44.0% (2) No
44.6% (3) Didn't have a permit

Unless you never commute to campus by a Madison Metro bus, please skip ahead to Question 35.

34. Why do you not ride the bus? *Check all that apply.*

31.7% (1) I live outside of the bus system
27.0% (2) I need to run errands after work
14.7% (3) Childcare responsibilities
17.9% (4) I need a car during the day to perform my job
32.1% (5) The bus takes too much time
22.6% (6) Other; Please specifiy:

SECTION IV: Other Commuting Alternatives

35. Which of these programs and services have you heard of? *Check all that apply.*

34.0% (1) Emergency Ride Home program for University employees who do not have a parking permit

18.5% (2) UW bike lockers where you can rent an enclosed locked stall to store your bike while you are on campus

75.8% (3) Free campus bus routes (Route 80, 81 and 82)

7.0% (4) The new UW Ambassador bicycle and pedestrian education program

30.0% (5) The "Great Choices" alternative transportation newsletter in "Wisconsin Week"

36. Do you ever use a moped to get to campus? If so, do you usually have trouble finding a parking space?

95.4% (1) No, I don't ride a moped

0.8% (2) Yes, but I usually don't have trouble parking it

0.3% (3) Yes, I have trouble parking my moped; Please specify where:

37. How much per year would you be willing to pay for a moped parking permit if the permit fee went toward more designated moped parking areas?

67.1% (1) Nothing

5.7% (2) $25 or less

3.5% (3) $25 to $50

1.1% (4) More than $50

SECTION V: Customer Service

38. How satisfied are you with the UW Transportation Services website?

13.6% (1) Very Satisfied

31.9% (2) Somewhat Satisfied

7.9% (3) Somewhat Dissatisfied

2.2% (4) Very Dissatisfied

40.9% (5) I have never used the website **go to Q40**

39. When you visit the UW Transportation Services website, what information do you usually look for? *Check all that apply*

2.4% (1) SAFE Nighttime Services Information
50.3% (2) Campus map/Parking lot locations
16.6% (3) Special Events Parking Information
17.9% (4) Citations Information (e.g. parking tickets)
13.1% (5) Alternative transportation information
62.0% (6) Parking Application information
11.8% (7) Construction information
10.4% (8) "Lot Full" form
6.4% (9) Other; Please specify:

40. If you have used it, how satisfied are you with the online parking permit application?

25.0% (1) Very Satisfied
17.4% (2) Somewhat Satisfied
4.4% (3) Somewhat Dissatisfied
1.4% (4) Not at all satisfied
44.4% (5) I have not used this service

41. What additional online services would you like UW Transportation Services to provide? Check all that apply.

18.2% (1) Updated information on daily parking availability
33.8% (2) Sell temporary parking permits online
6.2% (3) Regular email newsletter
19.9% (4) Pay parking citations online
17.1% (5) Flex parking smart card sales

42. How satisfied have you been with the service at our Memorial Union "Information Place" office?

12.8% (1) Very Satisfied
8.1% (2) Somewhat Satisfied
1.6% (3) Somewhat Dissatisfied

0.2% (4) Not at all satisfied
71.4% (5) I have not visited this office

SECTION V: NIGHTTIME TRANSPORTATION

43. Do you feel safe coming to or from the campus area at night?

67.9% (1)Yes
9.2% (2) No
19.4% (3) I am never on campus at night

44. Which of these nighttime safety services and programs are you familiar with?

45.7% (1) Lightway walking paths
58.0% (2) Emergency phone system
31.1% (3) SAFE Nighttime Services
16.9% (4) Chimera self-defense program
23.1% (5) I have not heard of any of these

45. Overall, which programs do you feel are the most effective in improving campus safety at night? Check all that apply.

34.3% (1) SAFE-walk Escorts
39.7% (2) SAFE-ride Cab Services
44.5% (3) SAFE-ride Bus Services (Route 80, 81 and 82)
54.2% (4) Lighted Walkways
45.2% (5) Emergency Phones
12.3% (6) Chimera Self-Defense Program
43.4% (7) Campus police and security
29.9% (8) Education and publicity about campus safety issues

SECTION V: NEW PROGRAMS AND INITIATIVES

46. Which of the following services would you be willing to make a donation towards? Check all that apply.

21.5% (1) New Bike Paths
8.2% (2) Covered Bike Parking

6.2% (3) Bicycle Safety and Education Programs
11.4% (4) Improved SAFE Nighttime Programs
10.0% (5) Additional campus bus services (like Routes 80, 81 and 82)
10.1% (6) Other, specify:

SECTION VII: BACKGROUND QUESTIONS

47. What is your university classification? *Circle one.*

18.6% (1) Faculty
30.3% (2) Classified staff
42.3% (3) Academic Staff
6.0% (4) Other

48. What is your employment status with the university? *Circle one*

73.8% (1) Full Time
Part Time: please specify: _____%

49. Are you: **46.3%** (1) Male **52.1%** (2) Female

50. What is your age? _____

51. What is your zip code?_____

52. Are you a resident of Eagle Heights? **2.8%** (1) Yes **95.4%** (2) No

53. What is the yearly income category for your household? *Circle one.*

1.7% (1) Under $15,000
4.4% (2) $15,000 to $24,999
13.3% (3) $25,000 to $34,999
9.3% (4) $35,000 to $44,999
8.8% (5) $45,000 to $54,999
8.7% (6) $55,000 to $64,999
7.1% (7) $65,000 to $75,000
7.3% (8) $75,000 to $84,599
28.9% (9) $85,000 or higher

54. Finally, are there any comments you would like to make about your transportation experiences in coming to and from your work at the University of Wisconsin-Madison?

_____

_____

STUDENT QUESTIONNAIRE

Section 1: The Daily Commute to Campus

1. How many miles is it **one way** from your current daily residence to campus? *Check one.*

48.8%	(1) Less than 1 mile	7.7%	(4) 5 to 10 miles
16.4%	(2) 1 to 2 miles	4.7%	(5) 10 to 25 miles
16.2%	(3) 2 to 5 miles	4.4%	(6) 25 miles or more

2. What is your most frequent way of traveling to campus or class during **good weather**? *Check one.*

46.3%	(1) Walk	0%	(6) Private commuter bus
17.5%	(2) Bicycle	3%	(7) Passenger in car (not pool)
3.3%	(3) Moped	1.1%	(8) Driver or passenger in car or van pool
0%	(4) Motorcycle	13.2%	(9) City bus (**not** Route 80,81, or 82)
11.2%	(5) Drive alone in car	2.5%	(10) Campus bus (Route 80, 81 or 82)
		0.8%	(11) Other; Please specify:

3. How long does it usually take you to travel to campus or class from your current residence in **good weather**? *Check one.*

34.8%	(1) 10 minutes or less	7.7%	(4) 31 to 45 minutes
40.3%	(2) 11 to 20 minutes	1.6%	(5) 46 to 60 minutes
13.7%	(3) 21 to 30 minutes	0.8%	(6) More than an hour

4. What is your most frequent way of traveling to campus or class during **bad weather**? *Check one.*

41.6%	(1) Walk	0%	(6) Private commuter bus
5.2%	(2) Bicycle	3.8%	(7) Passenger in car (not pool)
1.6%	(3) Moped	1.4%	(8) Driver or passenger in car or van pool
0%	(4) Motorcycle	22.7%	(9) City bus (**not** Route 80, 81, or 82)
14.0%	(5) Drive alone in a car	7.9%	(10) Campus bus (Route 80, 81, or 82)

5. How long does it usually take you to travel to campus or class from your current residence in **bad weather**? *Check one*.

23.0%	(1) 10 minutes or less	9.6%	(4) 31 to 45 minutes
40.0%	(2) 11 to 20 minutes	3.6%	(5) 46 to 60 minutes
19.7%	(3) 21 to 30 minutes	2.2%	(6) more than an hour

6. When do you usually arrive on campus? *Check one.*

2.5%	(1) Before 7:00 a.m.	1.6%	(8) 1:00 p.m. to 1:59 p.m.
10.1%	(2) 7:00 a.m. to 7:59 a.m.	0.5%	(9) 2:00 p.m. to 2:59 p.m.
36.7%	(3) 8:00 a.m. to 8:59 a.m.	0.8%	(10) 3:00 p.m. to 3:59 p.m.
26.0%	(4) 9:00 a.m. to 9:59 a.m.	1.4%	(11) 4:00 p.m. to 4:59 p.m.
11.2%	(5) 10:00 a.m. to 10:59 a.m.	0.8%	(12) 5:00 p.m. to 5:59 p.m.
4.1%	(6) 11:00 a.m. to 11:59 a.m.	0%	(13) 6:00 p.m. to 6:59 p.m.
1.6%	(7) 12:00 a.m. to 12:59 p.m.	0.3%	(14) After 7:00 p.m.

7. When do you usually leave campus for the day? *Check one.*

0.5%	(1) Before 7:00 a.m.	4.7%	(8) 1:00 p.m. to 1:59 p.m.
1.9%	(2) 7:00 a.m. to 7:59 a.m.	9.9%	(9) 2:00 p.m. to 2:59 p.m.
3.8%	(3) 8:00 a.m. to 8:59 a.m.	18.6%	(10) 3:00 p.m. to 3:59 p.m.
3.3%	(4) 9:00 a.m. to 9:59 a.m.	15.9%	(11) 4:00 p.m. to 4:59 p.m.
1.4%	(5) 10:00 a.m. to 10:59 a.m.	13.7%	(12) 5:00 p.m. to 5:59 p.m.
1.9%	(6) 11:00 a.m. to 11:59 a.m.	5.8%	(13) 6:00 p.m. to 6:59 p.m.
4.1%	(7) 12:00 a.m. to 12:59 p.m.	12.1%	(14) After 7:00 p.m.

8. Based on this semester's schedule, which days of the week are you normally on campus? *Check all that apply.*

23.8%	(1) Sunday	89.0%	(5) Thursday
91.8%	(2) Monday	89.0%	(6) Friday
89.3%	(3) Tuesday	23.3%	(7) Saturday
90.7%	(4) Wednesday		

Section 2: Driving to Campus

9. On average, how many days a week do you drive a car or van to campus? *Check one.*

10.4% (1) Never, I ride with someone else (e.g. a friend, spouse or carpool)
→ **go to Q15**

49.6% (2) Never, I do not commute to campus by car or van
→ **go to Q16**

9.6% (3) Less than once a week
→ **go to Q10**

12.1% (4) About once a week
→ **go to Q10**

9.3% (5) More than once a week
→ **go to Q10**

7.1% (6) Every day
→ **go to Q10**

10. (Of respondents who do drive to campus:) Where do you park **most frequently** when you drive to campus during the semester? *Check one.*

19.9%	(1) Street	15.1%	(5) University metered lot
6.2%	(2) University cashiered lot	5.5%	(6) University Lot 60
25.3%	(3) Lake/Frances St. ramp	8.9%	(7) Other University lot (permit required)
4.1%	(4) Other Private/city lot	11.6%	(8) Other; Please specify:

11. (Of respondents who do drive to campus:) Do you have a permit to park in a University lot? If not, why not? *Check one.*

8.2%	(1) Yes, have UW permit	4.8%	(4) No, convenient location not available
19.9%	(2) No, unable to get permit	26.7%	(5) No, do not drive enough
28.1%	(3) No, permit too expensive	8.9%	(6) No, other; Please specify

12. (Of respondents who do drive to campus:) On average, how many days a week do you park in a University Permit lot?

47.3% (1) Never → **go to Q14**

17.8% (2) Less than once a week → **go to Q13**
15.1% (3) About once a week → **go to Q13**
8.9% (4) More than once a week → **go to Q13**
7.5% (5) Every day → **go to Q13**

13. (Of respondents who do drive to campus and park in University permit lots:) Do you use a permit when you park in a University lot?

45.5% (1) No permit, I use a meter
10.4% (2) No permit, I just risk getting a ticket
14.3% (3) Yes, Annual permit
11.7% (4) Yes, Temporary permit

14. (Of respondents who do drive to campus:) Many University parking lots are now free after 4:30 p.m. and on the weekend. Have you made more use of these lots because of these changes?

52.1% (1) Yes
24.7% (2) No, I still park as I usually would
19.2% (3) No, I usually don't park on campus after 4:30 p.m. or on the weekends

15. (Of students who drive or carpool:) Thinking about the times when you come to campus by car or van, either as a driver or passenger, how many people are usually in the vehicle (including the driver)?

51.6% (1) One, I drive alone
33.7% (2) Two
8.2% (3) Three
2.2% (4) Four
0% (5) Five
0% (6) Six or more

Section 3: Bus Ridership

16. Does a Madison Metro bus stop within four blocks of your residence?

87.9% (1) Yes
7.9% (2) No
3.3% (3) Not sure

17. How often do you commute to campus by a Madison Metro bus **during good weather**?

55.6%	(1) Never	14.0%	(4) More than once a week
14.2%	(2) Less than once a week	9.3%	(6) Every day
6.0%	(3) About once a week		

18. How often do you commute to campus by a Madison Metro bus **during bad weather**?

42.5%	(1) Never	19.2%	(4) More than once a week
13.7%	(2) Less than once a week	15.9%	(6) Every day
7.7%	(3) About once a week		

If you *never* commute to campus by bus, please go to Question 21.

19. (Of students who commute by bus:) What is the usual duration of your regular one-way bus trips to campus, including transfers? *Check one.*

20.

12.6%	(1) 5 minutes or less	4.2%	(6) 26 to 30 minutes
29.3%	(2) 6 to 10 minutes	6.0%	(7) 31 to 40 minutes
17.2%	(3) 11 to 15 minutes	2.8%	(8) 41 to 50 minutes
9.3%	(4) 16 to 20 minutes	0%	(9) 51 to 60 minutes
8.8%	(5) 21 to 25 minutes	0.9%	(10) More than an hour

20. (Of students who commute by bus:) Which statement best describes the bus trips you take to campus this semester?

32.6%	(1) Campus bus route only (Routes 80, 81, and 82)
52.6%	(2) City bus, directly to campus area, no transfers
2.3%	(3) City bus, transfer to campus bus (Routes 80, 81, and 82)
2.8%	(4) City bus, transfer to another bus
0.9%	(5) Other; please specify:_____

21. How often, if ever, do you ride the campus bus (Routes 80, 81, and 82)?

40.5%	(1) Never	14.5%	(4) More than once a week

26.3% (2) Less than once a week 4.1% (5) Every day
12.9% (3) About once a week

22. Have you picked up your ASM bus pass for Madison Metro buses? If not, why not?

75.1% (1) Yes → **go to Q23**
1.9% (2) No, I don't know where I can get one → **go to Q25**
1.1% (3) No, I didn't know I could get one → **go to Q25**
14.2% (4) No, I don't ride the bus and don't need one → **go to Q25**
7.1% (5) No, other; Please specify:_____ → **go to Q25**

23. (Of people who picked up ASM bus pass:) How has receiving the ASM bus pass affected your ridership?

39.9% (1) It has increased my ridership by a lot
17.4% (2) It has increased my ridership by a little
12.3% (3) I still ride the bus as often as I used to
29.3% (4) I still rarely or never use the bus

24. (Of people who picked up ASM bus pass:) Has the ASM bus pass led you to live further away from campus because you don't have to pay for transportation?

18.5% (1) Yes 79.7% (2) No

Section 4: Other Commuting Alternatives

25. If you bike to campus, is it easy to find a space in the bike racks?

24.9% (1) Yes → **go to Q27**
15.1% (2) No, I sometimes have difficulty finding a space → **go to Q26**
1.4% (3) No, I often have considerable difficulty finding a space → **go to Q26**
54.5% (4) Not applicable: I never bike to campus → **go to Q27**

26. Please list the University buildings nearest the rack sites which are often full:

27. Have you ever heard of the new UW Ambassador bike and pedestrian education program?

7.9% (1) Yes
90.4% (2) No

28. Do you ever use a moped to get to campus? If so, do you usually have trouble finding a parking space?

92.9% (1) No, I don't ride a moped
3.8% (2) Yes, but I usually don't have trouble parking it.
1.6% (3) Yes, I have trouble parking my moped; Please specify where:_____

29. How much per year would you be willing to pay for a moped parking permit if the permit fee went toward constructing more designated moped parking areas?

64.1% (1) Nothing
18.4% (2) $25 or less
2.5% (3) $25 to $50
1.9% (4) More than $50

Section 5: Customer Service

30. How satisfied are you with the UW Transportation Services Website?

4.7% (1) Very Satisfied
9.0% (2) Somewhat Satisfied
1.9% (3) Somewhat Dissatisfied
81.6% (4) Have never used website → **go to Q32**

31. (Of respondents who have used the website:) When you visit the UW Transportation Services website, what information to you look for? *Check all that apply.*

19.4% (1) SAFE Nighttime Services Information
56.7% (2) Campus map/Parking lot locations
16.4% (3) Special Events Parking Information
23.9% (4) Citation information (e.g. parking tickets)
11.9% (5) Alternative transportation information
10.7% (6) Other; Please specify:_____

Section 6: Nighttime Transportation

32. Do you feel safe on campus at night?

81.6% (1) Yes 13.2% (2) No

33. Which of these nighttime safety services and programs have you used? *Check all that apply.*

35.6% (1) Lightway walking paths
0.3% (2) Emergency phones system
21.6% (3) SAFE Nighttime Services
1.1% (4) Chimera Self-defense Program
54.8% (5) I have not used any of these → **go to Q32**

34. Why have you used these nighttime safety services and programs? *Check all that apply.*
13.3% (1) I don't feel safe on campus
21.8% (2) Inexpensive forms of transportation
55.2% (3) I am on campus at night for school or work
52.7% (4) I am on campus at night for social events
11.5% (5) Other, please specify:_____

35. How did you first hear about SAFE Nighttime Services? *Check all that apply.*

21.4% (1) Student Newspapers 7.1% (5) University Rep
26.3% (2) Posters 49.9% (6) SOAR
26.3% (3) Friends or acquaintances 12.6% (7) Other; Please specify: _____
1.9% (4) Transportation Services website

36. Overall, which programs do you feel are the most effective in improving campus safety at night? *Check all that may apply.*

40.8% (1) SAFE-walk Escorts
58.9% (2) SAFE-ride Cab Services

61.4% (3) SAFE-ride Bus Services (Routes 80, 81, and 82)
59.5% (4) Lighted Walkways
41.1% (5) Emergency Phones
14.2% (6) Chimera Self-defense Program
40.5% (7) Campus police and security
26.3% (8) Education and publicity about campus safety issues

Section 7: New Programs and Initiatives

37. Which of these following services would you be willing to pay more in student fees for? *Check all that apply.*

24.1% (1) New Bike Paths
7.9% (2) Covered Bike Parking
3.6% (3) Bicycle Safety and Education Programs
19.7% (4) Improved SAFE Nighttime Programs
34.2% (5) Additional Campus bus services (like Routes 80, 81, and 82)
14.8% (6) Other, please specify: _____

Section 8: Background Questions

38. What is your student classification?

15.1% (1) Freshman
16.5% (2) Sophomore
13.7% (3) Junior
24.9% (4) Senior
29.6% (5) Graduate student
5.2% (6) Special student

39. How many credits are you currently taking?

12.3% (1) 3 credits or less
15.6% (2) 4 to 11 credits
40.0% (3) 12 to 14 credits
27.9% (4) 15 to 17 credits
4.1% (5) 18 or more credits

40. Are you:

43.8% (1) Male 55.9% (2) Female

41. What is your age? _____

42. What is your zip code? _____

43. Where do you **currently** live?

3.3% (1) Lakeshore Dorms
9.0% (2) Southeast Dorms
2.5% (3) Liz Waters
2.5% (4) Chadbourn/Barnard
2.5% (5) Eagle Heights
3.8% (6) Private Dorm
15.3% (7) Regent-Breese/Bedford-Broom Neighborhood
8.5% (8) East Johnson/East Gorham Neighborhoods
52.3% (9) Off-Campus, other

44. Finally, are there any comments you would like to make about your transportation experiences in coming to and from the University of Wisconsin-Madison campus?

_____

APPENDIX B: RESIDENTIAL LOCATION OF FACULTY, STAFF, AND STUDENTS BY MUNICIPALITY

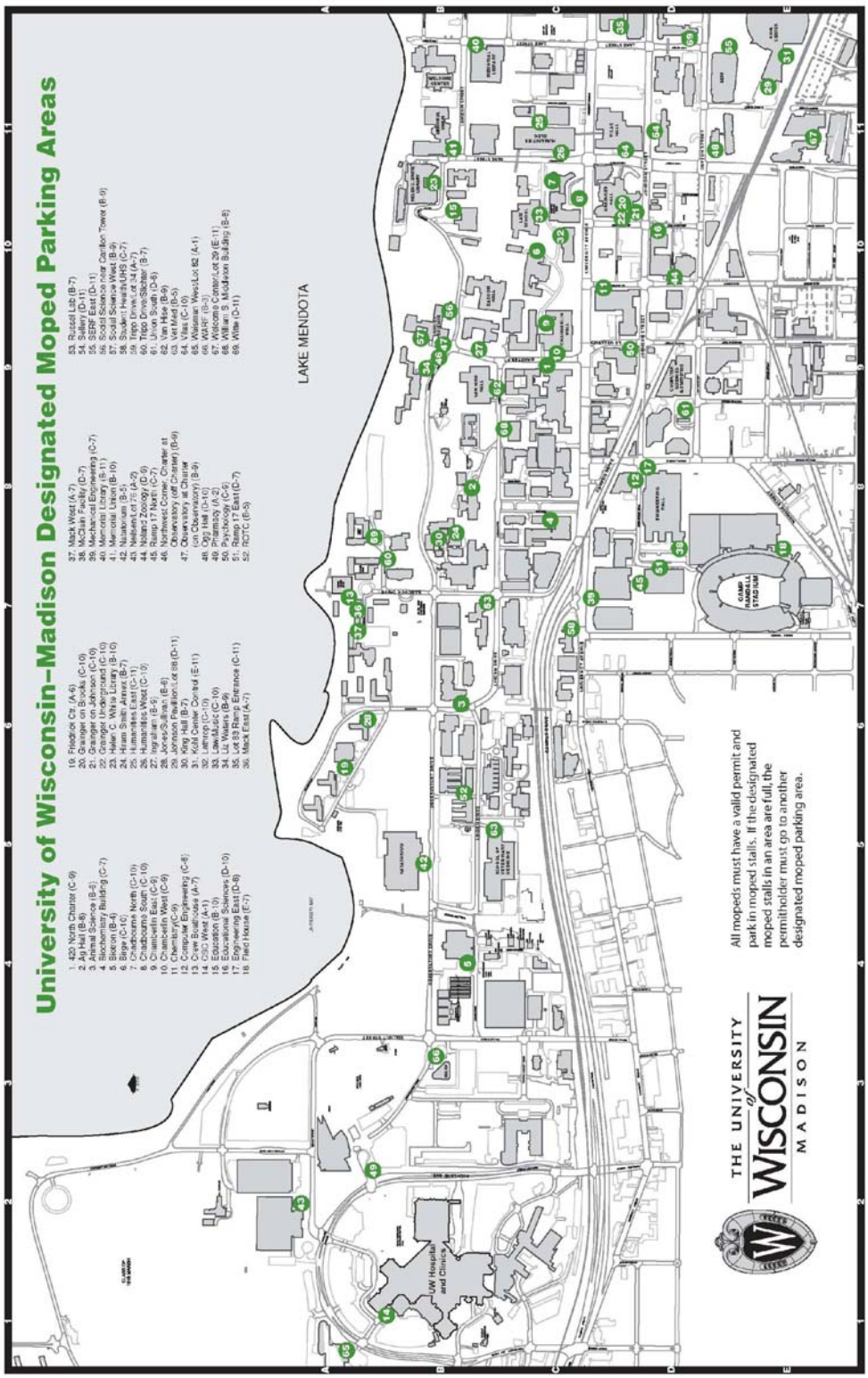
Faculty and Staff

ZIP Code Zones	Count	%
1 - Near East Madison	112	18%
2 - Near West Madison	221	36%
3 - Middleton and West Madison	74	12%
4 - Waunakee and North	20	3%
5 - Sun Prairie and Northeast	30	5%
6 - Stoughton and Southwest	25	4%
7 - Fitchburg and South	45	7%
8 - Verona and Southwest	26	4%
9 - Northwest	12	2%
10 - Other	46	8%
Total Fac/Staff Respondents	611	100%

Students

ZIP Code Zones	Count	%
1 - Near East Madison	99	27%
2 - Near West Madison	151	41%
3 - Middleton and West Madison	11	3%
4 - Waunakee and North	27	7%
5 - Sun Prairie and Northeast	3	1%
6 - Stoughton and Southwest	10	3%
7 - Fitchburg and South	17	5%
8 - Verona and Southwest	7	2%
9 - Northwest	1	0%
10 - Other	15	4%
11 - No data	6	2%
12 - Northeast Madison	11	3%
13 - Middleton	6	2%
15 - Blooming Grove	1	0%
17 - South Madison	0	0%
Total Student Respondents	365	100%

APPENDIX C: INVENTORY AND LOCATION OF MOPED PARKING



5/4/2007

Sec. #	Lot Letter/Area/Building Info	Stalls
M01	A - Dayton Street Res. Hall	0
M01	B - SERF West	0
M01	C - SERF East	40
M01	D - Johnson Pav./Lot 88	28
M01	E - Welcome Center/Lot 29	38
M01	F - Kohl Center Control	29
M03	A - Field House	24
M03	B - Space Science	0
M05	A - Vilas	20
M05	B - Sellery	21
M05	C - Ogg	20
M05	D - Witte	30
M05	E – Lot 83 Ramp Entrance	16
M06	A – Chemistry	16
M06	B - Grainger on Brooks	21
M06	C - Grainger on Johnson	29
M06	D - Noland Zoology	16
M06	E - Teacher Ed	0
M06	F - Educational Sciences	13
M06	G - Grainger Underground	21
M07	A - McClain Facility	97
M07	B - Ramp 17 East	60
M07	C - Computer Engineering	26
M07	D - Engineering East	11
M07	E - Psychology	20
M07	F - Union South	19
M07	G - Ramp 17 North	30
M08	A - Mech Engineering	12
M12	A - Humanities West	57
M12	B - Humanities East	28
M12	C - Memorial Library	12

M13 A - Ingraham	**23**
M13 B - Chamberlin West	**20**
M13 C - Chamberlin East	**48**
M13 D - Birge	**20**
M13 E - Lathrop	**9**
M13 F - Law/Music	**7**
M13 G - Chadbourne North	**6**
M13 H - Chadbourne South	**18**
M14 A - King Hall	**7**
M14 B - Ag Hall	**21**
M14 C - Van Hise	**33**
M14 D - Biochemistry Bldg.	**22**
M14 E - Wm. S Middleton Building	**21**
M14 F - Medical Science Center	**0**
M14 G - 420 N Charter	**18**
M14 H - Hiram Smith Annex	**13**
M15 A - Animal Science	**13**
M15 B - Russel Lab	**27**
M15 C - Student Health	**4**
M16 A - Vet Med	**16**
M16 B - Meat Science	**0**
M16 C - ROTC	**6**
M17 A - WARF	**3**
M17 B - Biotron	**6**
M18 A - CSC West	**10**
M19 A - Memorial Union	**19**
M20 A - NW Corner Charter & Obser	**13**
M20 B - Social Science West	**8**
M20 C - Social Science near tower	**24**
M20 D - Education	**4**
M20 E - H.C. White Library	**120**
M21 A - Liz Waters	**26**
M21 B - Tripp Drive/Slichter	**14**
M21 C - Tripp Drive/Lot 34	**9**

M21 D - Observatory Dr at Charter	**25**
M22 A - Crew Boathouse	**14**
M22 B - Jones/Sullivan	**20**
M22 C - Mack West	**7**
M22 D - Mack East	**10**
M23 A - Natatorium	**40**
M23 B - Friedrick Center	**12**
M23 C - Bradley	**0**
M24 A - Pharmacy/Lot 85	**60**
M24 B - Pharmacy East	**0**
M25 A - Waisman West/Lot 82	**6**
M25 B - Neilsen/Lot 76	**12**

77 Locations 1568 stalls

69 w/stalls

8 w/o stalls

APPENDIX D: CAMPUS BICYCLE/PEDESTRIAN TASK LIST

(Last Updated: May 10, 2007)

Intersections

Task	Location	Issue	Solution	Jur.	Init. Date	Comp. Date	UW Action Status	UW Contact Person
IN-05-01	Park and University	Timing of walk signals creates conflicts between peds and cars	Adjust timing of walk signals	City	6/05	N/A	Waiting for response from City	Bike/Ped Coord. 263-2969
IN-05-02	Mills and University	Timing of walk signals creates conflicts between peds and cars	Adjust timing of walk signals	City	6/05	N/A	Waiting for response from City	Bike/Ped Coord. 263-2969
IN-05-03	Dayton and Randall	Eastbound sensor does not work	Fix sensor	UW/ City	6/05	N/A	Waiting for response from City	Bike/Ped Coord. 263-2969
IN-05-05	Charter and Linden	Major pedestrian/motorist/bicyclist conflicts	Requires large-scale improvement project. Part of master planning process.	UW	6/05	N/A	Long term solution	Bike/Ped Coord. 263-2969
IN-05-06	Charter and Observatory	Major pedestrian/motorist/bicyclist conflicts	Requires large-scale improvement project. Part of master planning process.	UW	6/05	N/A	Long term solution	Bike/Ped Coord. 263-2969
IN-05-07	Park and Langdon	Poor layout. Pedestrians crossing everywhere, bus stop causes back-ups, no stop sign for Park St.	Requires large-scale improvement project. Part of master planning process.	UW	6/05	N/A	Long term solution	Bike/Ped Coord. 263-2969

Pedestrian Facilities

Task	Location	Issue	Solution	Jur.	Init. Date	Comp. Date	UW Action Status	UW Contact Person
PF-05-01	Murray St. pedestrian walkway near lot 88	No railing creates hazard for pedestrians	Install railing	UW	6/06	8/07	Place work order	Bike/Ped Coord. 263-2969
PF-05-02	Mid-block crosswalk on Parks St. between Humanities and Bascom Hill	Major pedestrian crossing on busy street	Add traffic calming devices on Park St. near pedestrian bridge and more crosswalks in useful places	City	6/06	N/A	Requires further study	Bike/Ped Coord. 263-2969
PF-05-03	General – peds	Faded crosswalks	Repaint all crosswalks more frequently	UW	6/05	Ongoing	Arrange painting schedule with UW paint shop	Bike/Ped Coord. 263-2969
PF-05-04	North side of University Ave. between Ridge St. and Marshall Ct. and University Bay Dr.	No sidewalk; no continuous , safe route for peds between these two points; Marshall Ct. has a fragmented and very limited sidewalk system	Add sidewalk	City	6/06	N/A	Contact City Engineering/Planning	Bike/Ped Coord. 263-2969

PF-05-05	Crosswalk on University Ave. at Engineering Hall	Difficult to cross because of the timing of the crosswalk signals	Redesign expected as part of the University Ave. reconstruction project. Pedestrian bridge also potentially part of the WID project	City	12/05	N/A	Long term project involving the reconstruction of University Ave. and the Biotech/Engineering campus	Bike/Ped Coord. 263-2969
PF-05-06	Murray Mall at Dayton St.	No pedestrian accommodations for crossing Dayton St. as there are on Johnson St.	Pedestrian accommodations will be added as part of the Park St. residence halls	UW	12/05	N/A	Long term project involving the Park St. residence halls	Bike/Ped Coord. 263-2969
PF-05-07	Mills St. at University Ave.	Crosswalk on University Ave. creates conflicts between pedestrians and left turning vehicles	Give pedestrians advanced signal or do not allow pedestrians to cross there (similar to the treatment at Brooks St. and University Ave.)	City	12/05	N/A	Requires further study	Bike/Ped Coord. 263-2969

Bicycle Facilities

Task	**Location**	**Issue**	**Solution**	**Jur.**	**Init. Date**	**Comp. Date**	**UW Action Status**	**UW Contact Person**
BF-05-02	Dayton St. bike lanes at RR track crossings	Pavement immediately surrounding RR tracks is in poor condition	Install an apron around the tracks	UW/City/RR	6/05	N/A	Determine jurisdiction	Bike/Ped Coord. 263-2969
BF-05-03	University Ave. bike lanes	Cyclists going the wrong way in both bike lanes	Improved pavement markings	City	6/05	N/A	Issue raised at City PBMVC meeting	Bike/Ped Coord. 263-2969

BF-05-04	Park St. near Library Mall	Bike lane ends suddenly	Create better transition zones between bike lanes and shared lanes	UW/City	6/05	N/A	Requires further research	Bike/Ped Coord. 263-2969
BF-05-05	General – bikes	Faded bike lane markings	Repaint all bike lanes more frequently	UW/City	6/05	ong oing	Arrange painting schedule with UW paint shop	Bike/Ped Coord. 263-2969
BF-05-06	University Ave.	Potholes/Cracks in University Av bike lanes	City experimenting with better patching materials	City	6/05	N/A	Issue raised at City PBMVC meeting/new material being tested	Bike/Ped Coord. 263-2969
BF-05-08	Walnut St. in front of Nielson Tennis Stadium	Bike lane ends suddenly	Create better transition zones between bike lanes and shared lanes	UW	6/05	N/A	Requires further research	Bike/Ped Coord. 263-2969
BF-05-09	Waisman Path	Waisman path and Walnut St. bike lanes do not hook up	Connector path needed between Waisman path and Walnut St. bike lanes	UW	12/05	N/A	Requires further research	Bike/Ped Coord. 263-2969

Bicycle Parking

Task	**Location**	**Issue**	**Solution**	**Jur.**	**Init. Date**	**Comp. Date**	**UW Action Status**	**UW Contact Person**
BP-05-04	College Library	Scattered bike racks	Organize racks according to plan	UW	10/05	8/07	Create rack plan with facilities managers and UW Planning	Bike/Ped Coord. 263-2969
BP-05-06	MSC along Charter St.	Bike rack installation not complete	Add double sided bike racks (8 stalls each) to each current row	UW	6/05	8/07	Machine shop fabricating materials for	Bike/Ped Coord. 263-2969

							racks	
BP-05-12	Computer Science and Statistics—Dayton entrance	Old racks	Organize and install duckbill racks	UW	6/05	8/07	Machine shop fabricating materials for racks	Bike/Ped Coord. 263-2969
BP-05-13	Noland east side entrance	Lack of bike parking	Remove bushes and add more racks north of entrance	UW	6/05	8/07	Needs plan drawn	Bike/Ped Coord. 263-2969
BP-05-14	Willow Beach	Lack of bike parking	Add racks	UW	6/05	8/07	Ongoing	Bike/Ped Coord. 263-2969
BP-05-23	CSC/HSLC	Lack of covered bike parking	Add racks in parking ramps	UW	12/05	5/06	Ongoing	Bike/Ped Coord. 263-2969
BP-06-01	Ag. Engineering	Lack of bike parking	Add rack to grass area	UW	5/06	7/06	Landscape Arch. will create a plan	Bike/Ped Coord. 263-2969
BP-06-02	Ag. Journalism	Bikes on grass	Add mulch to protect soil	UW	5/06	7/06	Landscape Arch. will create a plan	Bike/Ped Coord. 263-2969

Streets

Task	**Location**	**Issue**	**Solution**	**Jur.**	**Init. Date**	**Comp. Date**	**UW Action Status**	**UW Contact Person**
ST-05-02	Lathrop Dr behind Law School	Many pedestrians and vehicles, but no sidewalk	Master plan consideration of sidewalks	UW	6/05	N/A	Long term solution	Bike/Ped Coord. 263-2969
ST-05-03	Observatory Dr. between Ingraham and Social Science	Busy and disorderly pedestrian crossing	Speed table	UW	6/05	N/A	Long term solution	Bike/Ped Coord. 263-2969
ST-05-04	Charter St. north of	Busy and disorderly pedestrian crossing	Speed table, improved crosswalks	UW	12/05	N/A	Long term solution	Bike/Ped Coord. 263-2969

	University Ave.							

Shared Use Paths

Task	Location	Issue	Solution	Jur.	Init. Date	Comp. Date	UW Action Status	UW Contact Person
SP-05-01	Campus Dr	East/West bike path needed	Construct shared use path between Highland Ave. and Babcock Dr.	UW	6/05	6/07	Construction set to begin	Bike/Ped Coord. 263-2969
SP-05-02	Lakeshore Path	Blind corner at Chamberlin House	Install mirror	UW	12/05	6/06	Coordinate work with maintenance crew	Bike/Ped Coord. 263-2969

Education/Enforcement Efforts

Task	Location	Issue	Solution	Jur.	Init. Date	Comp. Date	UW Action Status	UW Contact Person
ED-05-01	Charter, north of University Ave.	Bicycles entering roadway from sidewalk and service drive without regard to traffic	Bike Ambassador education effort	UW	6/05	Ongoing	Continue education effort	Bike/Ped Coord. 263-2969
ED-05-02	University Ave. bike lanes	Difficult for cyclists to make left turns anywhere on University Ave. and dangerous if they do it incorrectly	Bike Ambassador effort to educate cyclists on proper technique for left turns	UW	6/05	Ongoing	Continue education effort	Bike/Ped Coord. 263-2969
ED-05-03	University Ave. bike	Cyclists going the wrong way in both	Bike Ambassador effort to educate cyclists on proper	UW	6/05	Ongoing	Continue education	Bike/Ped Coord. 263-2969

	lanes	bike lanes	use of one-way bike lanes				effort	
ED-05-04	Lakeshore Path at Limnology bldg	Cyclists and peds don't know proper way to go around bldg, creating conflicts	Bike Ambassador effort to educate cyclists	UW	6/05	Ongoing	Continue education effort	Bike/Ped Coord. 263-2969
ED-05-05	(Old) University Avenue	Difficult to cross street at pedestrian bridge	Educate pedestrians about using marked cross walks at Lathrop Street or Prospect Avenue.	UW	6/05	Ongoing	Continue education effort	Bike/Ped Coord. 263-2969
ED-05-06	General	Cyclists riding on sidewalks where prohibited	Educate cyclists about where they are allowed to ride on sidewalks	UW	12/05	Ongoing	Continue education effort	Bike/Ped Coord. 263-2969

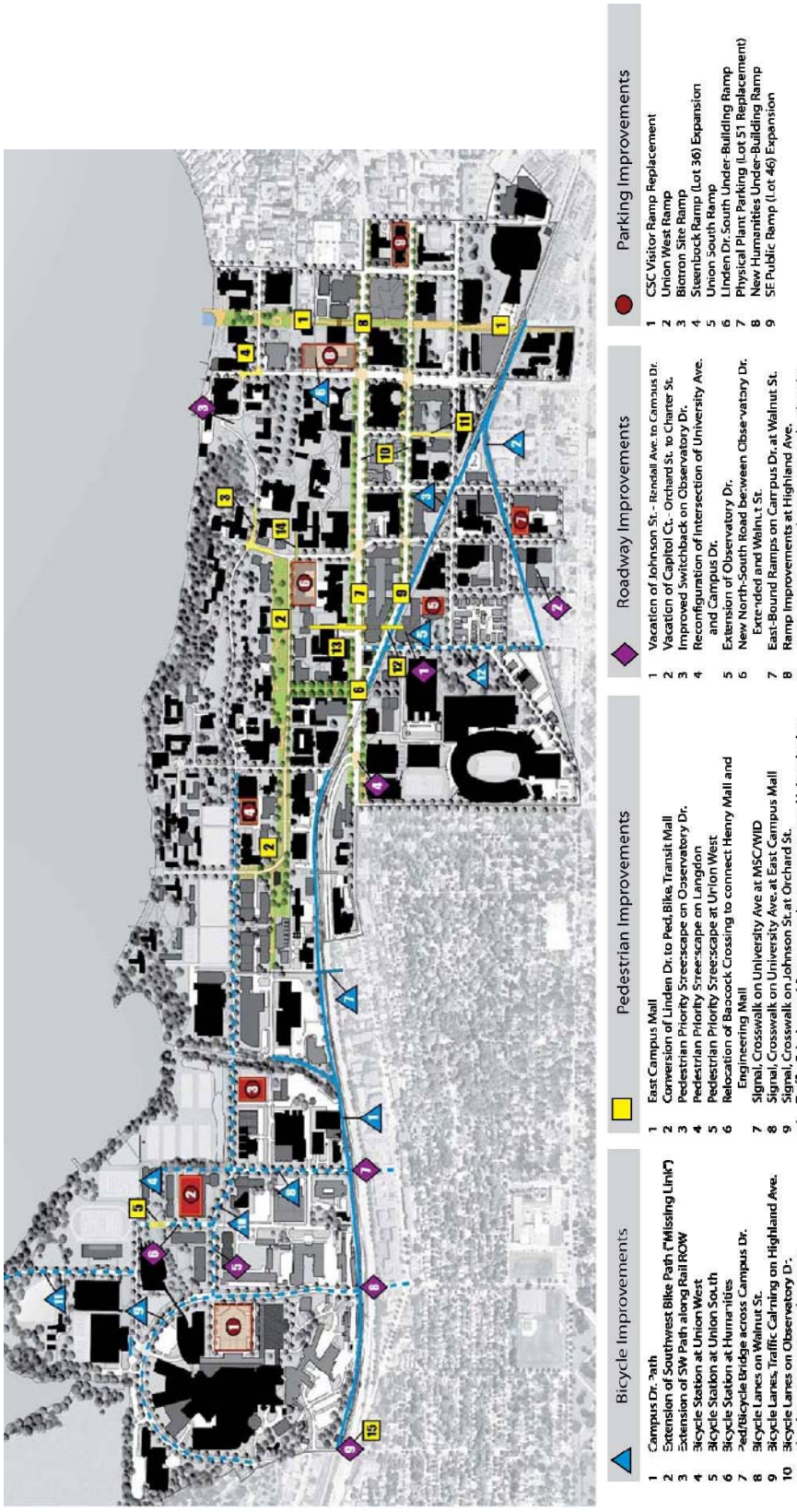
Completed Tasks

Task	**Location**	**Issue**	**Solution**	**Jur.**	**Init. Date**	**Comp. Date**	**UW Action Status**	**UW Contact Person**
SI-05-01	Lakeshore Path	Cyclists and Peds not using their designated parts of the path	Signs and pavement markings need to be installed	UW	2/05	4/05	Completed	Bike/Ped Coord. 263-2969
SI-05-02	Sidewalk near sailboats, just off Park St. circle drive	Dangerous situation with bicycles riding on the sidewalk causing conflicts with pedestrians near the water	"Walk your bike signs needed"	UW	4/05	5/05	Completed	Bike/Ped Coord. 263-2969
BP-05-01	North of Bardeen and south of Ingraham, along Linden Dr.	Unorganized bike racks	Organize racks	UW	6/05	7/05	Completed	Bike/Ped Coord. 263-2969
BP-05-02	Ingraham	Bike Racks old and mangled	Replace all racks	UW	6/05	7/05	Completed	Bike/Ped Coord. 263-2969

BP-05-03	Lathrop—north side (70 and 71)	Bikes parked at racks extend into sidewalk	Move racks to east side of bldg.	UW	6/05	8/05	Completed	Bike/Ped Coord. 263-2969
BF-05-01	Tripp/Adams Dorms	Temporary trail that runs from dorms to Lakeshore Path is steep and dangerous	No need for trail now that lakeshore path is reopened—remove this temporary path and replace it with grass	UW	5/05	7/05	Completed	Bike/Ped Coord. 263-2969
BP-05-10	Psychology Building	Bike/moped parking overcrowded	Add bike racks and define moped parking	UW	6/05	9/05	Completed	Bike/Ped Coord. 263-2969
BP-05-16	Engineering Hall	Racks needed	Add racks to north and south sides of building	UW	6/05	9/05	Completed	Bike/Ped Coord. 263-2969
BP-05-18	Ag. Hall	Racks needed	Add racks to new bike parking area	UW	6/05	9/05	Completed	Bike/Ped Coord. 263-2969
BP-05-19	Lot 91	Racks needed	Add racks north of building	UW	8/05	10/05	Completed	Bike/Ped Coord. 263-2969
BP-05-17	HSLC	Racks needed	Add racks to south side of building	UW	8/05	9/05	Completed	Bike/Ped Coord. 263-2969
SI-05-03	Campus	Moped parking areas need signage	Create and install signs	UW	10/05	12/05	Completed	Bike/Ped Coord. 263-2969
BP-05-22	Van Hise	Racks in construction staging area	Relocate racks	UW	12/05	12/05	Completed	Bike/Ped Coord. 263-2969
BP-05-20	Crew House	Racks disorganized	Organize and bolt racks	UW	6/05	12/05	Completed	Bike/Ped Coord. 263-2969
SI-05-04	Lakeshore Path at Limnology bldg	Cyclists and peds don't follow proper way to go around bldg, creating conflicts	Improved signage	UW	8/05	12/05	Completed	Bike/Ped Coord. 263-2969
BP-05-15	General	Snow removal issues	Move racks, install signs	UW	10/05	2/06	Completed	Bike/Ped Coord. 263-2969
PF-06-11	Comp. Sci. courtyard	Erosion and dead grass	Pave dirt trails and improve bike locker pad	UW	5/06	7/06	Completed	Bike/Ped Coord. 263-2969
MO-05-01	Campus	Moped parking areas needed	Creation of moped areas	UW	6/05	8/06	In progress	Bike/Ped Coord. 263-2969
BP-05-	Memorial	Old/broken bike racks	Replace racks	UW	6/05	6/06	Completed	Bike/Ped Coord.

11	Union	at SW and SE corners						263-2969
BP-05-21	General	Various rack locations doing damage to tree roots and grass	Move racks away from trees	UW	11/05	4/06	Completed	Bike/Ped Coord. 263-2969
BF-05-07	Observatory Dr.	Road too narrow for bikes to ride safely with automobile traffic	Widen road and install bike lanes as part of utility work	UW	6/05	6/06	Ongoing	Bike/Ped Coord. 263-2969
PF-05-08	Limnology building	Wheelchair users cannot use the pedestrian path on the north side of the Limnology building	For safety reasons, TS decided that wheelchair users should use the path on the south side of the building	UW	12/05	5/07	Issue addressed with the ADA coordinator	Bike/Ped Coord. 263-2969
BF-05-10	Crew House Detour	The crew house detour has several sharp turns, blind corners, and obstacles	Install mirrors, signs, and move the jersey barriers	UW	8/05	3/06	ongoing	Bike/Ped Coord. 263-2969
BP-05-05	Van Vleck Hall	Need more bike racks. Need covered bike racks.	Add bike racks	UW	6/05	6/06	Completed	Bike/Ped Coord. 263-2969
BP-05-07	Henry Mall—West of Genetics/Biotech	Racks too close to sidewalk	Move racks closer to street and secure	UW	6/05	5/06	Completed	Bike/Ped Coord. 263-2969
BP-05-24	Rust/Schreiner	Bike rack in driveway prevents snow removal for pedestrian access	Move rack to better location	UW	12/05	12/05	Completed	Bike/Ped Coord. 263-2969

APPENDIX E: LIST OF IMPROVEMENTS FOR THE LONG RANGE TRANSPORTATION PLAN



Bicycle Improvements

1. Campus Dr. Path
2. Extension of Southwest Bike Path ("Missing Link")
3. Extension of SW Path along Rail ROW
4. Bicycle Station at Union West
5. Bicycle Station at Union South
6. Bicycle Station at Humanities
7. Ped/Bicycle Bridge across Campus Dr.
8. Bicycle Lanes on Walnut St.
9. Bicycle Lanes, Traffic Calming on Highland Ave.
10. Bicycle Lanes on Observatory Dr.
11. Bicycle Lanes on University Bay Dr.
12. Bicycle Lanes on Randall Ave.

Pedestrian Improvements

1. East Campus Mall
2. Conversion of Linden Dr. to Ped, Bike Transit Mall
3. Pedestrian Priority Streetscape on Observatory Dr.
4. Pedestrian Priority Streetscape on Langdon
5. Pedestrian Priority Streetscape at Union West
6. Relocation of Babcock Crossing to connect Henry Mall and Engineering Mall
7. Signal, Crosswalk on University Ave at MSC/WID
8. Signal, Crosswalk on University Ave. at East Campus Mall
9. Signal, Crosswalk on Johnson St. at Orchard St.
10. Traffic Calming and Streetscape Improvements on University Ave. and Johnson St.
11. Conversion of Brooks St. to Ped and Bike Corridor - Dayton St. to Johnson St.
12. Pedestrian Bridge across Johnson St. between Union South & WID
13. Pedestrian Bridge across University Ave. between WID and MSC Area
14. Pedestrian Bridge across Charter St. from Van Vleck to New Building north of MSC
15. Ped/Bicycle Bridge across University Ave. at Farley and University Bay Dr.

Roadway Improvements

1. Vacation of Johnson St. - Randall Ave. to Campus Dr.
2. Vacation of Capitol Ct. - Orchard St. to Charter St.
3. Improved Switchback on Observatory Dr.
4. Reconfiguration of Intersection of University Ave. and Campus Dr.
5. Extension of Observatory Dr.
6. New North-South Road between Observatory Dr. Extended and Walnut St.
7. East-Bound Ramps on Campus Dr. at Walnut St.
8. Ramp Improvements at Highland Ave.
9. Improvements to University Ave. and University Bay Dr., Farley Intersection

Parking Improvements

1. CSC Visitor Ramp Replacement
2. Union West Ramp
3. Biotron Site Ramp
4. Steenbock Ramp (Lot 36) Expansion
5. Union South Ramp
6. Linden Dr. South Under-Building Ramp
7. Physical Plant Parking (Lot 51 Replacement)
8. New Humanities Under-Building Ramp
9. SE Public Ramp (Lot 46) Expansion