Traffic Engineering and Parking Divisions

David C. Dryer, P.E., City Traffic Engineer

Madison Municipal Building Suite 100
215 Martin Luther King, Jr. Boulevard
P.O. Box 2986
Madison, Wisconsin 53701-2986
(Phone) 608 266 4761
(TTY) 608 267 9623
(FAX) 608 267-1158

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TO: Pedestrian/Bicycle/Motor Vehicle Commission

FROM: David C. Dryer, City Traffic Engineer

RE: University Avenue pedestrian crossing issues, follow-up to PBMVC 4/25/06 agenda item

In response to the motion adopted by the PBMVC at its 4/25/06 meeting, Traffic Engineering staff has made the following actions/recommendations:

Countdown Pedestrian Signals:
The list of locations within the UW-Madison campus area to have countdown pedestrian signals installed this year has been expanded to include all the locations shown on the University's Draft Count Down Priority List. These intersections include the following:

- On University Avenue: Randall, Charter, Park, Murray, Lake, Frances
- On Johnson Avenue: Randall, Charter, Park, Murray, Lake
- On Dayton Street: Park (for crossing Park Street Only)

At the Park-University and Park-Johnson intersections, the countdown signals will be provided for crossing all four legs of the intersection. At the other intersections on Johnson and University, the countdowns will be provided for crossing Johnson or University.

Feasibility of audible signals at University Avenue intersections with Park, Randall and Charter:
Audible signals have been installed at several locations in Madison in response to individual requests on a case-by-case basis to address identified needs. For example, last April, Traffic Engineering installed an audible signal for crossing University Avenue at Mills Street in response to a request from a blind individual who needed to cross at that location to get to work on a daily basis. Traffic Engineering staff have been responsive to individual requests in the past and will continue to respond to such requests in the future. A request was made just prior to last month's meeting, asking that audible signals be installed at all locations where countdowns are installed. Such a blanket use of audible signals is not consistent with our policy. Audible signals will be installed at locations where there is an identified need for such signals irrespective of whether or not countdowns are installed.

Options for increasing capacity for pedestrian crossings of University Avenue:
The following are changes/proposed changes for increasing capacity for pedestrian crossings of University Avenue:

- Changes have been made to increase pedestrian walk times during peak traffic periods where practical.
- Additional increases to pedestrian walk times during off-peak periods (prior to 6:30 a.m.; 9:00 a.m. to 3:00 p.m.; and after 6:30 p.m.) are planned to be implemented at the University Avenue intersections with Brooks, Mills, Charter, and Randall. These changes will provide Walk times 57 to 86 percent greater for crossing University Avenue.
- Widening University Avenue crosswalks. This change will require painting for some crosswalks, and a combination of painting and concrete work to remove portions of the median separating the bike and vehicle lanes for other crosswalks. See Table-1.

These changes will increase the pedestrian capacity of these intersections by enabling a greater number of pedestrians to enter the crosswalks during the WALK interval.

Even with these changes, some pedestrians will be best served if they start to cross on a fresh Walk signal, a standard educational message in pedestrian safety materials targeting the elderly. For example, the following quote is from a National Highway Traffic Safety Administration **(**NHTSA**)** website/program called Stepping Out - - Mature Adults: Be Healthy, Walk Safely
http://www.nhtsa.dot.gov/people/injury/olddrive/SteppingOut/index.html

> " **Wait for a "fresh green" [or WALK] when crossing at signals.** Don't start to cross the street unless the traffic signal has just turned green [the WALK signal has just turned on]. By waiting for a fresh green[/WALK], you allow yourself the most time to cross the intersection safely. " [TE additions]

This is an important message for people with mobility disabilities as well as for the elderly in general.

Safety for drivers and pedestrians is not just an engineering problem. Drivers at a red traffic signal do not have the right to start up as soon as the signal turns green. Drivers are required to first yield to vehicles or pedestrians lawfully in the intersection. The following is the State statute:

> **346.37 Traffic−control signal legend. (1)** Whenever traffic is controlled by traffic control signals exhibiting different colored lights successively, or with arrows, the following colors shall be used and shall indicate and apply to operators of vehicles and pedestrians as follows:
> (a) *Green.* 1. Vehicular traffic facing a green signal may proceed straight through or turn right or left unless a sign at such place prohibits either such turn, ***but vehicular traffic shall yield the right−of−way to other vehicles and to pedestrians lawfully within the intersection or an adjacent crosswalk at the time such signal is exhibited. (emphasis added)***

Thus drivers with a green signal first need to yield to a pedestrian who started to cross the street on the walk signal but did not complete the crossing before the signal changed from red to green for cross street traffic. This is a behavior/education and enforcement issue as well as an engineering issue and we need to enlist the efforts of educators (Safe Community Coalition, elderly and disabled groups, etc.) and police (MPD and UWPD) to help. No matter how much time we give for pedestrians to cross, some pedestrians will (and do) start late and are not able to complete their crossing before the signal changes. In analyzing traffic crash reports for the past ten years, we find little evidence of motorists hitting pedestrians who did not complete their crossing before the signal changed. Drivers have generally been quite tolerant and accommodating of the risk-taking pedestrians in the University area who start to cross when the signal is flashing DONT WALK.

Table 1: Proposed Crosswalk Width Modifications

University Avenue Crossing Locations		Existing Crosswalk Width (Feet)	Proposed Crosswalk Width (Feet)	Median Work Required
Lake	E-Leg	10	NC	NA
	W-Leg	12	20	Yes
Park	E-Leg	16	20	No
	W-Leg	16	20	Yes
Brooks	E-Leg	15	20	Yes
Mills	E-Leg	12	20	Yes
	W-Leg	12	20	Yes
Charter	E-Leg	12	20	Yes
	W-Leg	12	20	Yes
Randall	E-Leg	15	20	Yes