

Talking Points

Northeastern University Design for the Sears Rotary

- A. The Muddy River flood control and landscape restoration project being undertaken by the Army Corps of Engineers is now (May, 2007) at 50% design, with construction due to begin in 2008. At the Sears Rotary, they will tear up all the roads going over the Muddy River, build new bridges to carry those roads over the Muddy, and replace the roads *exactly as they are today*, unless told otherwise by the DCR, the owner of the roads.
- B. It is universally recognized that the roads in the Sears Rotary are failing us in several ways. The primary ways they fail us are:
 1. They create a total barrier to the Muddy River walking and bicycling path network. What should be a greenway attracting people to walk & bike is instead a web of interlocking ramps.
 2. The Riverway / Park Drive merge is dangerous and reduces the traffic capacity of a bottleneck intersection because of how it results in lanes often being blocked.
- C. Northeastern University civil engineering seniors, advised by Prof. Peter Furth, have developed a feasible roadway design (see attached handout) that
 - results in safe and attractive pedestrian and bicycle paths along the Muddy River connecting the paths in Riverway Park with the paths in the Back Bay Fens, restoring the Emerald Necklace's function as a *greenway*
 - improves traffic safety and traffic capacity, thus accommodating economic growth
 - reduces the overall roadway footprint
- D. The main feature of this design is a change in the roadway at the upstream end of the rotary, where Park Drive and Riverway meet. The existing web of interlocking loops is replaced with a pair of T-intersections connected by a narrow roadway, with the new bridge carrying this roadway over the Muddy. Raising the roadway only 3 feet (a trivial amount) will give it the headroom needed for a bike path to pass under the bridge, next to the river (see rendering in the handout).
- E. Transportation planning for the Sears Rotary, due to start in a few months with funding from the \$55 million Economic Stimulus law, has to be put on a fast track so that a roadway configuration approved by the DCR will be in place when the Army Corps of Engineers is ready to build their new bridges. Otherwise, the opportunity to create a bike / pedestrian underpass and solve the rotary's traffic safety and capacity problem will be lost.
- F. The lead engineer from the Army Corps of Engineers reviewed the concept, and thinks it will actually reduce overall construction cost, because of its smaller roadway footprint and easy construction staging.



Landmark Center Rotary Path and Roadway Redesign



Advisor: Peter Furth

Team Members: Will Miller, Nick Gaboury, John Tamburrini & Jon Simmons

Main Problems with the Rotary

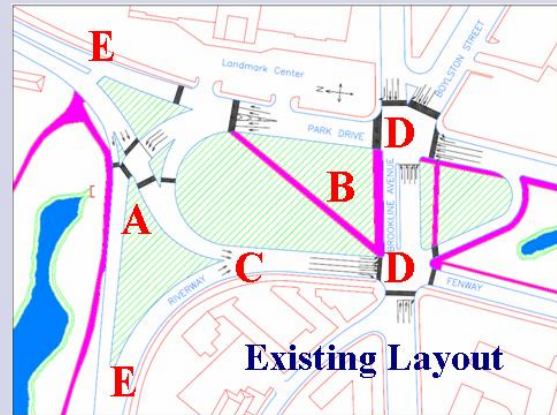
A) Inhospitable 4-stage pedestrian crossing from Riverway park paths. The Sears Rotary has long been a barrier in the Emerald Necklace Greenway.



B) No "interior" crossing to connect to Fens Paths



C) Riverway Merge: traffic blockage and dangerous pedestrian crossing



D) Gridlock at Brookline Ave. Intersections

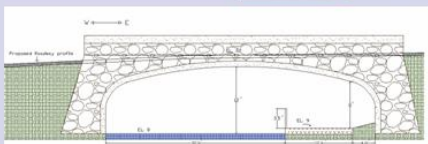
E) Lack of direct Riverway to Park Drive connection (adds 10% traffic to Brookline Ave Intersections)



Northeastern's Proposed Design

1 - Riverside path under the Riverway: requires raising road only 3 feet.

2 - Road Diet: 4 lanes, narrower bridge, shorter underpass, more green space



3 - Direct Riverway to Park Drive Connection

4 - Complete path network including footbridge to preserve diagonal path



5 - Signal Timing Improvements: More capacity and an interior ped crossing

6 - Improved Riverway Merge by signaling the intersection

