

## Bike Lanes, Paths & Greenways

For cyclists, bollards are an invaluable tool to prevent cars from encroaching on bike lanes, separated paths and greenways. Bollards can also alert and slow cyclists and drivers as they approach a hazardous intersection.

Manhattan's **Hudson River Greenway** is the most heavily used greenway in an urban area in the U.S. and runs adjacent to an eight-lane highway. The greenway's proximity to a major arterial and multiple intersections for vehicles to access riverfront facilities pose a major safety challenge.

*Flexible reflective bollards caution drivers and path users that an intersection is approaching and are a preventative measure against cars entering the path (photo, right). Emergency vehicles are still able to enter the path.*



The styles and specifications of the bollards differ along the Hudson River Greenway and makes for an excellent study area. The use of bollards as both a design and safety feature and can be seen throughout the length of the greenway. Flexible plastic bollards are used on the inside of the path, while permanent steel bollards have been installed at path entrances and along the highway median.

After two cyclists were hit and killed on the Hudson River Greenway in the summer and fall of 2006, a task force of agencies was formed to consider permanent bollards on the path to increase the level of safety for cyclists and pedestrians, and at any location where cars cross the greenway.



*At the Intrepid Museum, attractive steel bollards protect the plaza from turning tourist coaches and wayward vehicles, while a flexible bollard alerts users to the path entrance (photo, above left). In Lower Manhattan, the Greenway features permanent steel bollards on both sides to protect path users and secure office buildings (photo, below left).*