

West Side Highway

Manhattan, NY | Highway Reconstruction



ROAD ZIPPER™

Moveable Barrier Keeps Traffic Flowing

The Miller Highway Viaduct was the last section of the elevated West Side Highway to be completely rebuilt. It is the only major arterial servicing the West Side of Manhattan, and high traffic volumes required that construction could not reduce capacity in the peak direction. To minimize the impact on communities and local roads, the New York State Department of Transportation (NYDOT) developed construction staging which specified the use of Quickchange® Moveable Barrier (QMB®). One mile of QMB was moved twice a day for almost 4 years. Prior to construction, the road consisted of 5 lanes separated by a permanent median barrier (3 southbound lanes into Manhattan and 2 northbound lanes out).

Stage 1 consisted of demolishing the permanent barrier and restriping the road for 4 lanes. The QMB was used to gain additional access to a very restricted median, and it increased productivity by about

25%. In Stage 2, the QMB provided a reversible traffic pattern designed to maintain capacity for the peak direction. The morning configuration was 3 lanes into Manhattan and 1 lane out. The QMB was moved in the afternoon to create 2 lanes in either direction.

During Stage 2, additional deterioration to the structure was found, and the project was suddenly faced with a complete shutdown of 6 to 12 months as the contractor waited for new steel to be manufactured. Yonkers Construction Company and state DOT engineers devised an innovative Maintenance of Traffic Plan whereby the QMB would be serpentine through the construction area, creating pockets where work could be continued. This was only possible because of the flexibility of the QMB.

With a new MOT Plan in place, construction went smoothly, and the project finished on schedule

with no associated claims. Stage 3 maintained this traffic pattern only on the other side of the road, as the structure was built in thirds.

A New York Times article described the project by saying, "Traffic was being moved through the construction area very well by the Barrier Moving Machine." Yonkers Construction Company also received an "Award of Excellence in Safety" from their insurance carrier. From a technological improvement basis, this project marked the introduction of Variable Length Barriers (VLBs) and a Capstan Drive System into the Barrier Systems, Inc. construction fleet. These tools became necessary, as within the project limits there were two "S" curves with 500 foot radii and a 7% grade on cobblestone. We are pleased to report these technologies eliminated the difficulties which might have arisen and are now considered standard equipment.



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