

**Client: State Highway Administration**

**Final Project Completion: August, 2009**

**Construction Cost at Award: \$41.5 million**



WBCM was the Lead Design Engineer for this Design/Build project. WBCM was responsible for the design of a 4.4-mile bypass of Hampstead for MD 30. The project design included 4-miles of roadway, 4 bridges, 3 Roundabouts, 3,500 lineal feet of noise wall or noise berms, 19 stormwater management facilities, erosion and sediment control, signing, lighting, and traffic signals. WBCM performed HEC-RAS modeling to size bridge openings. Scour analysis was performed using SHA ABSCOUR program. WBCM prepared the Joint Permit applications for impacts to wetlands.

The First Roundabout is at the southern end of the project which ties the Bypass into existing MD 30 and connected a relocated access road (Phillips Drive) into the Wolf Hill subdivision. The existing access to the subdivision which is directly from MD 30 was closed. The Second Roundabout is located where the Bypass intersects MD 482, Mexico Road, approximately midway through the project. The Third Roundabout is located at the northern end of the project and ties the Bypass back into existing MD 30. The MD 30 legs of the roundabouts were designed using methods to achieve speed reduction due to the high design speed on MD 30. The method used to achieve speed reduction was to introduce a series of progressively sharper reverse curves on the approaches to slow traffic to an appropriate entry speed.