

## BORMAN EXPRESSWAY TRAFFIC & INCIDENT MANAGEMENT SYSTEM

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The Borman Expressway (I-80/94) is a critical Interstate Highway link through the northwestern portion of the State of Indiana. The Borman along with the Indiana Toll Road (I-90) are the two east-west limited access highways serving the northern portion of the state. Each experiences significant congestion with resulting major negative impacts on commerce in the region. In the early 1990's, a number of studies were undertaken by the Indiana Department of Transportation to address congestion on the Borman and assess the overall operation of the facility. These studies showed the need for additional capacity in the corridor, and also documented the types of traffic impacted by the congestion and delays. These studies also showed a need to better manage the transportation system to maximize its effectiveness. As a result of these studies, INDOT initiated an aggressive traffic and incident management program to minimize the impacts of congestion and incidents on users of the Borman Expressway. The program would focus on reducing the impacts of incidents and provide users with information on the roadway conditions ahead. The program was initiated in 1995 with a commitment by INDOT to immediately implement a motorist assistance program and began design of a comprehensive traffic management system which would provide real time traffic and incident information to INDOT engineers, state police, and to Borman users.

The first initiative undertaken was the deployment of four motorist assistance vehicles aptly named "Hoosier Helpers". These vehicles provided assistance to address minor problems ranging from flat tires and running out of gas, to being the first on the scene for major crashes and hazardous materials spills. From their humble beginnings using retrofitted pickup trucks, the "Hoosier Helpers" have evolved into one of the Midwest's most comprehensive and technology assisted incident response programs with capabilities to actively manage an incident on-site and electronically provide information to response agencies and motorists. The "Hoosier Helper" program now operates 24 hours a day, seven days a week. This program has significantly improved traffic flow and reduced secondary crashes by up to one-third.

The comprehensive traffic management system design began concurrently with deployment of the "Hoosier Helpers". The Indiana Department of Transportation entered into a contract with Hughes Electronics to develop and test component technology which would be used to manage traffic flow along the Borman Expressway and eventually throughout the state of Indiana. As a result of these efforts, in 1999 the Indiana Department of Transportation began construction of the Borman Traffic Management Center (TMC) to serve the northwestern portion of the state of Indiana. This Center is designed to serve as the hub for all management activities for expressways in this portion of the state. The TMC uses closed-circuit television cameras and sensors to monitor real-time traffic conditions. Four primary communications tools (variable message signs, highway advisory radio, alphanumeric pagers, and the internet) provide information to motorists and others. The Borman TMC building was completed in July, 2000. It houses operations staff associated with the TMC, the Hoosier Helper program, and the Indiana State Police. The TMC is operational, however not all systems are completed. The present schedule calls for all traffic management components to be installed and be fully operational by November, 2001.

The Borman TMC has been designed in accordance with the architecture for the Gary Chicago Milwaukee Corridor and also serves as a prototype for management centers elsewhere in the state of Indiana. By using this design philosophy, the Indiana Department of Transportation is creating a state-of-the-art system which can be used to benefit motorists throughout Indiana and the GCM Corridor.