

Location: Dover Toll Plaza
Client: Delaware Department of Transportation (DelDOT)
Application : Idris AT600, SmartToll Application
ITP: Peek Traffic Corporation



Background:

In 1998, the Delaware Department of Toll Roads was looking for a classification system that could function at high accuracy levels in express ETC lanes. The first site of this type was installed at Biddles Corner, north of Dover on the SR-1 (State Road 1) toll road. Following on from the success of this project the Dover Plaza was implemented in spring 2004. The installation consisted of two express, free flow running lanes and 2 shoulders complete with AVI & violation functionalities.

Project Detail:

SR-1 is not only a major thoroughfare north and south through the state carrying considerable commercial traffic, but it is also located in a major agricultural area. Accordingly, many types of trailers are utilised, including goosenecks, and at peak times congestion does occur. Further, Delaware experiences a full scope of weather patterns ranging from snow and ice to blowing rain and fog. Any tolling solution considered needed to take into account and handle all these factors.

Having already been proven at Biddles Corner, Idris technology was once again the technology of choice. The Dover Plaza installation was a substantial upgrade that required the selected Idris technology providers, Peek Traffic Corporation, to work with the system integrators implementing Peeks SmartToll hardware.

Challenges:

The main challenge was to provide a system that could accurately classify, catch violators and function in all traffic flows. Peeks experience working with Idris and their SmartToll application made such a system possible.

One of the first major requirements for Peek on the project was to guarantee a good loop installation for the AVC technology. The loop array is a major contributor to the accuracy of Idris, as a precision instrument, the more meticulous the installation, the higher the accuracy levels achievable. Thus, when the opportunity arose for the team to determine the most suitable loop array locations in the newly laid concrete they ensured there was no crossing of the expansion joints thereby providing a better detection environment.

Outcome:

The accuracy levels achieved from the outset have been in the region of 99.5% or better.

Conclusion:

Due to the team work, effort of those involved with the Dover Plaza project and the attention to detail, the installation was straight forward, successful and generated few technical issues.