



H-3 Trans-Koolau Tunnel Traffic Surveillance & Control System

Client: Hawaii DOT

Location: Oahu, HI



System Features

- DYNAC® Software
- Automatic Incident Detection
- Intrusion Detection
- Display Wall
- 32-bit Servers
- Overheight Vehicle Detection
- DMS
- CCTV
- Traffic Controllers
- RTU's
- Embedded Loops
- Fire Detection
- Environmental Monitors
- Ventilation
- AM/FM Rebroadcast
- Weather Information
- Telephone
- Fiber Optics

DYNAC®

The Trans-Koolau tunnel complex on the H-3 highway provides a third connection between the Honolulu metropolitan area and the northeast side of the Island of Oahu. This state-of-the-art highway system has a sophisticated traffic surveillance and control system to manage traffic incidents and provide real-time traffic information to motorists.

From the west tunnel portal control center, operators are able to manage various subsystems such as CCTV, Dynamic Message Signs (DMS), rebroadcast AM/FM in the tunnel, emergency radio, telephone PBX, emergency roadside telephones, fire detection and ventilation. The system also enables personnel to control tunnel facility systems such as power, lighting and weather. Traffic is directly controlled and monitored using TC170 traffic controllers that are connected to embedded loop detectors, lane use signals, Changeable Message Signs (CMS) and traffic signals.

Managed by Transdyn's DYNAC® ATMS software running on redundant servers, the system provides a unified interface for monitoring and controlling the facility, detects incidents, enables operators to increase life safety, and reduces congestion. The system also monitors traffic and tunnel conditions and can automatically change the traffic configuration (e.g. close one tunnel bore). Traffic and tunnel information is then disseminated to travelers via DMS and motorist advisory radio.