



CASE STUDY

Calexico Border Patrol Station Relocation

Location:

Calexico, CA

Business Needs:

The CBP was in need of an upgraded Border Patrol Station but could not afford any lapse in coverage or reliability

CommDEX Solution:

- Tower site design & engineering
- Installation of an interoperability gateway system
- Civil development and construction of the new tower site
- Facilities upgrade of the RVSS control room
- Installation of a new temporary microwave link between old and new RVSS locations
- Relocation of the existing 16 microwave links

Customer Profile

The first Border Patrol Station at Calexico was established in 1939 with only six officers assigned for duty. The Calexico Border Patrol Station is responsible for patrolling 37.1 linear miles of the border and 731 square miles of Imperial County in the Sonoran Desert. This area of responsibility includes the densely populated area of downtown Calexico, the New River, 27 miles along the All-American Canal, and a barely discernible line of uninhabited desert. Thus, the Calexico Station utilizes a variety of equipment and methods to accomplish its mission and be effective in such diverse terrain. The current Calexico Station was officially opened on September 12, 1995. Due to the additions of personnel and continuing increases in illegal alien and narcotic traffic through the years, a new station was proposed and completed in 2012.

Customer Challenge

Customs and Border Protection's Border Patrol Station (BPS) located in Calexico, CA is being moved to a new location approximately one mile away from the current location. The CBP will move into a temporary facility that has been built on the new site while the new building is being constructed. As part of this move, all Remote Video Surveillance System (RVSS) activities will need to be moved to the new location which affects all the video links, radio interoperability, backhaul, server equipment, and facilities required to support these operations.

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CommDEX Roles

FACILITIES PLANNING AND DEPLOYMENT

Services included design of the 160' tower to be constructed at the new site and a new 12'x38' concrete communications shelter. Improvements were also made to the new RVSS control room. By reviewing supplied specification documents and visiting the site, CommDEX developed a plan that incorporated current design needs as well as addressing future growth.

MICROWAVE PATH STUDIES AND SYSTEM DESIGN

CommDEX worked with the equipment manufacturers to ensure the microwave path studies and path designs incorporated the requirements of CBP for operations, interoperability and survivability, using state-of-the-art design applications. The microwave network was designed to ensure that all new paths were designed to "5-nines" (99.999%) reliability criteria, and sustained network reliability during changes in propagation. An additional path was designed to allow for connectivity between the existing and the new facility to ease the transition of the RVSS equipment and minimize downtime to the users.

RVSS SYSTEM IMPROVEMENTS

CommDEX included all equipment and services to upgrade the existing RVSS camera network to an IP-based solution including a Digital Video Recorder (DVR) that would capture the IP video streams for all camera locations. New IP video encoders were included for all camera sites as well as upgrades to the existing transport network to accommodate the IP traffic. This coupled with a new RVSS control center including video wall and operator equipment provides a modern and efficient operation that enhances CBP's mission.

COMMISSIONING AND TESTING OF EQUIPMENT

As the final phase of the project, engineering oversight of the commissioning and operational testing of the system was included to bring all new systems online and manage the transition from the existing facility. This process was engineered to minimize downtime and operational impact to the users.

ABOUT COMMDEX

CommDEX is a leading systems integrator, providing a broad range of mission critical solutions and services for telecom networks, communications systems and information technology. We have global experience and specialized expertise across breadth of technologies and full life cycle of communications systems. For more information about CommDEX's products and services, call CommDEX Sales at

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