

New York State Police



Command and Control Center for new Troop G Headquarters

BACKGROUND

The New York State Police, founded in 1917, states its mission as working to ensure the safety of the state's roadways, prevent and investigate crime, prepare for and respond to emergencies and disasters and provide support to other law enforcement agencies. It's vision is to serve, protect and defend the people while preserving the rights and dignity of all.

The only technology that the first 232 graduates to ride out of the training barracks had were the horses they rode on and the sidearm strapped to their waist. Today's Troopers rely on a myriad of complex technologies to assist them in achieving their admirable goals while protecting themselves and the public they serve. When Troop G, based in Albany needed to move to new headquarters,

they knew that these technologies would have to be essential components of their new facility. Recognizing that the complexities of those technologies would be beyond their own skills to imagine, let alone implement, they sought out an audio visual design consultant to work with the rest of the project's design team to handle those aspects of the large project.

As part of a team that included 2 architectural firms plus the usual contingent of MEP engineers, landscape, code compliance and other professionals, the consultant was tasked with designing the systems that would be used by a variety of state agencies. The New York State Office of General Services led the project and represented the end users of the facility. These included the Departments of Transportation, State Police, Environmental Protection, Traffic and Park Police who would be housed under one roof for the

first time. With such a diversity of groups, each with their own specific requirements, the first daunting task that faced the Design Team was sorting through each group's individual needs. Meetings were held with each user group and the team talked through their "wish list" of what they would like to see

in the space. Various display and communication technologies were investigated and considered for their applicability, cost and usability.



THE PROJECT

One of the first challenges to face the AV design team was that of designing systems today, for a building whose occupancy was 5 years away. Since space planning and layout was an integral part of their services, future growth of personnel had to also be considered. Technology advancements had to be factored in, which necessitated answers to questions like "How will we be able to easily and inexpensively upgrade to new display technologies."

Once the initial programming meetings were completed, the team had a comprehensive list of what were the "can't live without" and the "nice to have" issues for each user group. They then prioritized those requests and set about the task of budgeting each item, then distilling them down to practical applications with consideration to what could work within the designed environment, the allotted budget and project's schedule.

Another major challenge was unifying all of the very specific requirements of each user group. For example, the State Police require the use of many maps, which are vertical in orientation while the display technology utilizes a horizontal orientation. The Department of Transportation has numerous cameras located throughout Troop G's territory, many of which use different communication protocols than the cameras used by other groups.

With so many diverse groups under the same roof and sharing the same systems, simple, intuitive control was paramount. The best designed systems become boat anchors if the people operating them cannot easily and quickly execute the commands required in a given situation, many of which are dire emergencies. Reliability and simplicity were absolute requirements for controlling the many viewing options that the Command Center is capable of.

RESULTS

The consultant's extensive experience in Command and Control environments as well as their diverse expertise in networking and communication systems gave the design team the input that the project demanded. Technology obsolescence was resolved by designing the systems so that upgrading individual components could be done without ripping and replacing entire subsystems. Incompatible camera communication was resolved by selecting interfaces that would allow cameras with unusual and dynamic protocols to seamlessly communicate with the control desk. In some cases, they worked with equipment manufacturers to create interfaces where what was required did not exist. The conflicting map format issue was resolved by selecting software that allowed multiple, pre-programmed presets to quickly and easily be displayed in various locations within the display array.

Each aspect of the design was considered in the context of how it affected the other disciplines impacted by those choices. Issues such as how the placement of the primary display array would

affect the placement of structural elements of the building were resolved by considering various options and identifying how each would impact cost, usability and other factors. By presenting the decision makers with carefully thought out, detailed analyses of each option, the design team was able to move the project forward to successful completion.

The new facility provides the various agencies housed within it a bright, open, modern space to carry out their important missions in serving the people of New York state. All of the various systems installed work together to give the operators, technicians, officers and other personnel the tools they need, when they need them with as little effort as possible. The design team, proud of the work they'd accomplished, was especially pleased when they received letters of commendation from users of the space. They are also honored to have been selected as the technology consultant for other projects that grew out of the Troop G project.



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