INTRADEPARTMENTAL CORRESPONDENCE

August 26, 2011
12.3

BPC No. 11-0346

TO: The Honorable Board of Police Commissioners

FROM: Chief of Police

SUBJECT: RECOMMENDATION FOR THE POLICE COMMISSION UNIT CITATION

RECOMMENDED ACTIONS

1. That the Board of Police Commissioners award the Police Commission Unit Citation for service.

   Detective Ronald Capra, Serial No. 24971, Emergency Services Division
   Detective Kevin Korne, Serial No. 26663, Emergency Services Division
   Police Officer Steven Hennigan, Serial No. 25966, Emergency Services Division
   Police Officer Anthony Huerstel, Serial No. 27215, Emergency Services Division
   Police Officer Michael Wang, Serial No. 30805, Emergency Services Division
   Police Officer Christian Christensen, Serial No. 32157, Emergency Services Division
   Police Officer Steven Kuranishi, Serial No. 32669, Emergency Services Division
   Police Officer Richard Nagatoshi, Serial No. 24674, Emergency Services Division
   Police Officer Jeffrey Ennis, Serial No. 26861, Emergency Services Division
   Police Officer Oscar Iturralde, Serial No. 30477, Emergency Services Division

DISCUSSION

POLICE COMMISSION UNIT CITATION

DETECTIVE RONALD CAPRA
DETECTIVE KEVIN KORNE
POLICE OFFICER STEVEN HENNIGAN
POLICE OFFICER ANTHONY HUERSTEL
POLICE OFFICER MICHAEL WANG
POLICE OFFICER CHRISTIAN CHRISTIANSEN
POLICE OFFICER STEVEN KURANISHI
POLICE OFFICER RICHARD NAGATOSHI
POLICE OFFICER JEFFREY ENNIS
POLICE OFFICER OSCAR ITURRALDE

Vehicle Borne Improvised Explosive Devices (VBIED) have been the primary method of conveyance for terrorist attacks throughout the world. If such a device were utilized, the results could be as devastating as the attack on the Federal Building in Oklahoma City, where a structure was demolished by a truck bomb carrying approximately two tons of explosives. The use of VBIED allow terrorists to place large amounts of explosives against hard or soft targets with a high degree of mobility, turning these VBIED into precision weapons able to cause mass casualties and physical destruction, and pose complex security challenges that have proven to be a huge obstacle for bomb squads nationwide.

The Department of Homeland Security (DHS) believes that truck bombings by terrorists may be preempted by precautionary defenses and facility consequence analysis. These protective measures were outlined by DHS to complicate attack planning and surveillance, protect potential targets, and mitigate the risk of attack. The recommended effective approach to successfully prevent such an attack identified several key areas including assessment and detection by confirming a verified VBIED and the National Bomb Squad's ability to respond to and defeat the improvised VBIED, thereby minimizing loss of life.

A key area identified by DHS, Bombing Prevention Unit (BPU) was to measure bomb squads' capabilities to detect, deter, prevent and respond to numerous attacks where improvised explosive devices (IED) are used against critical infrastructure resources and soft targets. Establishing requirements and capabilities identifying gaps in security, along with a measure for explosive device response, were all necessary to determine the effectiveness of the nation's public safety bomb squads. It was agreed that this could only be gauged by conducting on-site analysis of major bomb squads by BPU representatives.

On January 26, 2006, Detective Ronald Capra was selected as one of ten representatives from across the nation's accredited bomb squads to lend expertise to the Counterterrorism Group meeting (CG), Office of Bombing Prevention. This meeting was the first of many in the furtherance of an important initiative that will enhance capabilities at the state and local levels in the development of IED identification and incident prevention.

As a result of the philosophy emphasized by Detective Capra at CG meetings, the Los Angeles Police Department's (LAPD) Bomb Squad was one of three agencies selected to determine a base line to establish measures of effectiveness for all other bomb squads. In addition, the decision to select the LAPD Bomb Squad was due to the numerous trained technicians, individually equipped with the necessary tools to handle simultaneous explosions throughout the city similar to those in Mumbai, India in 2008. Unlike most major metropolitan bomb squads, the LAPD's Bomb Squad can work in teams of two and are not limited to only one or two equipped response trucks.

A review of the LAPD's Bomb Squad capabilities was conducted by inventorying the Unit's operations data (equipment, training, education) and how well this unit can meet the needs of the local community during international or domestic threats in comparison to other bomb squads nationwide. This review addressed capabilities that had not been established on a national level. This information was passed on to development stakeholders within the federal government so they could work together with all the Bomb Squad Technical Support Groups to coordinate the standardization of new training, procedures and technologies.

The results of this study verified that LAPD's Bomb Squad was ranked capable in 97% of the established measuring categories. It is important to note this capability analysis had no categories to measure or identify a rapid attack for VBIED, capabilities to safely disrupt radio frequency and passive infrared initiated devices. Although this was not measured on the federal level, it identified a void in the LAPD Bomb Squad's capabilities. In addition, it raised a red flag for the National Bomb Squad Commanders Advisory Board to intensify efforts to develop, build technologies and educate other squads to safely mitigate large VBIED.

This prompted the LAPD Bomb Squad to seriously look at all the areas identified as targets and to rank their abilities as "capable" or "needs improvement." It was determined that there were no established protocols to counter VBIED and radio controlled devices. At the national level, efforts were underway to develop technologies and build trained resources for remote VBIED response capabilities for United States Bomb Squads. However, until such remote techniques could be developed, fielded and trained, manual approaches were inevitable.

The LAPD Bomb Squad was successful in the development of response and prevention tools to remotely attack radio controlled IED and to fill the voids needed to effectively attack a confirmed VBIED and prevent the initiation of large amounts of explosives. This research and development was a culmination of hard work by numerous technicians dedicated in developing tools that could be used nationally to help save lives. The tools developed included: 1) the Bomb Assessment Tactical Counter Assault Tool; 2) the Frangible Round Extended Distance Disruption System; and, 3) the Modular Disablement Charges.

- BOMB ASSESSMENT TACTICAL COUNTER ASSAULT TOOL
  The LAPD Bomb Squad researched render safe paths to attack the cargo or cab portion of the VBIED. If the explosives were centered in the cargo portion of the VBIED, technicians developed the ability to expel the main charge of explosives from the conveyance and ensure that enough force was used to breach the skin of the medium and move the mass amount of explosives out of the conveyance. The results involved expelling several hundred to several thousand pounds of explosives, picking up the main charge and moving it out of the conveyance. Separating the explosives must result in preservation of the target. The tools to complete this task included the Bomb Assessment Tactical Counter Assault Tool (BATCAT) and deployment of counter-measure tools such as the Van Trepan, Bottler and Modular Large Vehicle Device (MLVD).

This innovative approach vastly differed from the nationally established practice of manual placement of countercharges on the side paneling of the truck. This method constantly failed and placed bomb technicians in harm's way.

In 2007, Officers Richard Nagatoshi and Anthony Huerstel began the process of designing a more modern, operator friendly, Large Vehicle Bomb (LVB) assault tool. The requirements of this tool encompassed a wide variety of functions for disabling various types of LVBs including diverse camera positions, lifting capacities, firing systems, long-range wireless radio systems, emergency safety systems and the capability to add numerous attachments.
They conducted an examination of the very limited, existing LVB assault technologies that existed nationwide and decided on the creation of LAPD's new BATCAT.

As the innovation of the BATCAT design progressed, numerous challenges were overcome and Officers Steven Kuranishi and Jeffrey Ennis were instrumental in the design from an operator's point of view for both operations and specialized equipment needs. The result of their experience and hard work was a user friendly, fully robotic system that is familiar to bomb technicians. Additionally, the production of the BATCAT was completed during times of extreme financial hardship for the Department. Officer Richard Nagatoshi single handedly secured the $900,000 funding from the City of Los Angeles to complete this project.

- FRANGIBLE ROUND EXTENDED DISTANCE DISRUPTION SYSTEM
The Frangible Round Extended Distance Disruption System (FREDD) was pursued and developed by other agencies in 2001. In 2007, Detective Kevin Korne and Officers Anthony Huerstel and Christen Christensen began refining a more precision ammunition and design of the FREDD to address IED with passive infrared technology or remote initiation systems which could not be successfully rendered safe through traditional means, such as the Bomb Squad robot. After researching the FREDD over a two-year period, a system was developed wherein a bomb technician could utilize a .308 rifle to fire a frangible projectile at an explosive device from a safe distance to achieve a precision disruption. The frangible round produced sufficient energy to penetrate IED constructed of a variety of materials such as metal, wood, or plastic, and those devices which include liquid filled containers. The frangible ammunition was designed to expend its energy and disintegrate when striking the intended target. This substantially eliminated any down-range hazards. Use of a frangible projectile is considered a viable component of the Bomb Squad's VBIED countermeasures strategy.

  As part of the "Fast Remote Attack" response, the Bomb Squad considers deployment of the FREDD to break a window in the target vehicle. This facilitates a rapid robotic insertion of a disablement charge (Bottler), designed to defeat the IED initiation system inside the passenger compartment.

During the last nine months, several demonstrations of the FREDD involving simulated vehicle-borne and other remotely-initiated IED have been conducted for Training Division and Counter-Terrorism & Special Operations Bureau personnel. Each of these demonstrations has confirmed the value of the FREDD as a safe and viable component of the Bomb Squad's IED countermeasures strategy.

- MODULAR DISABLEMENT CHARGES
  In 2007, Bomb Squad Technicians Detective Capra and Officers Anthony Huerstel and Christen Christensen began testing a number of disablement charges designed to attack VBIED remotely. This research and testing culminated in a selection of three manufactured tools that were successfully used to remotely attack VBIED. Two of these tools, the Van Trepan and Bottler were used in conjunction with the Andros robot. This allowed the Bomb Squad to successfully deploy remote counter-measures against a vehicle or truck borne IED via the front or side window in conjunction with the FREDD. The cargo portion of a truck bomb which housed the bulk of the explosives continued to be problematic and resulted in failures locally and nationally due to limited approaches in attacking the siding of the truck panels.

  These technicians continued to research the possibility of successfully attacking the cargo portion of a truck containing the bulk of the explosives via the roof. Technicians worked with the MLVD charge and were confident that if a remote tool could be designed to assist with the placement of that charge on the roof a large truck bomb, it could successfully be defeated.

  In March 2009, a two-day symposium, coordinated by Detective Ronald Capra and Officer Michael Wang, was an effort to improve the operational capabilities of the Southern California Bomb Squad's ability to attack a vehicle or truck borne IED. The participating Southern California Bomb Squads were invited to demonstrate any proven or developed technologies in attacking VBIED, so all the attending agencies could expand and improve their own methods of deployment. At this event, Detective Capra introduced a VBIED Countermeasures Options Chart, a reference chart allowing bomb technicians to make proper decisions on the selected countermeasures tools.

  On November 10, 2009, LAPD Bomb Technicians Ronald Capra, Anthony Huerstel, Christian Christiansen, Steven Kuranishi, Richard Nagatoshi, Jeffrey Ennis, Steven Hennigan and Oscar Iturralde deployed all the developed tools remotely against live working IED in a vehicle and truck. Technicians were successful in deploying the first robotic remote rooftop countermeasure ever attempted against a truck filled with 500 pounds of urea. In a robotic, wireless mode, the BATCAT, without a human operator, was able to deploy a charge on top of a large truck, resulting in a complete and successful expulsion of all the trucks explosive contents without a detonation.

Because of their hard work and effort, LAPD Bomb Squad technicians have filled a void identified by the Bomb Squad that can be deployed on a national level and ultimately help save countless lives.

Should you have any questions, please contact Police Administrator II Gloria Grube, Commanding Officer, Personnel Group, at (213) 486-4720.

Respectfully,

CHARLIE BECK
Chief of Police