ACTIVE SHOOTER INCIDENT AND RESULTING AIRPORT DISRUPTION

A REVIEW OF RESPONSE OPERATIONS

Los Angeles
World Airports

Building on World Class Safety and Security

March 18, 2014

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Los Angeles
World Airports

MEMORANDUM

Date: March 18, 2014

Memo to: Board of Airport Commissioners

From: Gina Marie Lindsey, Executive Director

Subject: After Action Report and Implementation Plan

Friday morning, November 1, 2013 dawned with clear skies and streaming sunshine. Flights were arriving and departing Los Angeles International Airport (LAX) with no delay and most travelers were anticipating a wonderful weekend -- until 9:18 a.m. when LAX Terminal 3 was invaded by a person with apparent intent to harm members of the LAX community.

Tragically, TSA Agent Gerardo Hernandez was killed, and two other agents and one passenger wounded. The shooter was quickly apprehended and the airport eventually returned to full normal operation approximately 30 hours later.

However, as you have made clear, the incident is not over.

It is incumbent upon all of us at Los Angeles World Airports to take a clear-eyed, detailed look at every aspect of this incident to identify any action we might undertake that could prevent a similar occurrence, enable us to better manage emergency events, and ensure we harness all available resources to ensure appropriate customer care during prolonged operational disruptions. This report is just that.

While the many responders and incident managers to the November 1, 2013 active shooting event did amazing work, every emergency event provides the opportunity, and the responsibility, to analyze what can be done better. We are grateful for your consistent leadership and support for a constant quest to improve. This report is our template to ensure our staff, all members of the LAX operating community, and our partner agencies, are even better prepared to meet the threats of an ever changing world.

GML

Attachments

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I. Introduction and Executive Summary

On November 1, 2013, the Los Angeles International Airport (LAX) was the scene of an unconscionable act of violence by a lone gunman who murdered a Transportation Security Administration (TSA) official and wounded two others along with one airline passenger. The entire LAX community was devastated by this senseless loss of life and continues to mourn the death of Transportation Security Officer (TSO) Gerardo Hernandez, who dedicated his life to faithfully protecting his fellow citizens from similar acts of violence.

The shooting of Officer Hernandez triggered one of the largest multi-jurisdictional law enforcement operations in the Los Angeles region in recent years. It also had cascading effects that rippled across the airport for the better part of two days, impacting about 1,500 flights and 171,000 passengers and disrupting the operations of the entire air transportation system. LAX spans more than 3,425 acres and contains nine passenger terminals that served nearly 66.7 million passengers in 2013. Law enforcement and emergency response operations at the airport are complex. Airport emergencies typically require a high degree of multiagency and public/private sector coordination in an effort to assure public security, and respond and recover from a disruptive event as safely and rapidly as possible.

In light of the lethal and uncertain nature of the security threat that emerged on November 1, the need to manage the situation with extreme caution, and the overall complexity of the airport environment, it is remarkable that the majority of the LAX Central Terminal Area (CTA) was returned to normal operations within a matter of hours. Almost as notable was the fact that Terminal 3, the scene of a horrific crime, was also returned to full service the following day on November 2.

The successful response and recovery to the active shooter incident and the airport-wide disruption that followed is largely attributable to several key factors:

- The Los Angeles World Airports Police Division and City of Los Angeles Police Department officers who initially responded did so as a team, with courage, skill, and professionalism.
- There was an immediate and substantial multiagency response by other public safety organizations from across the region, to include the Los Angeles City Fire Department and local police agencies.
- A unified multiagency command was established and maintained throughout, to include the direct involvement of airport operations.
- The entire response team was leaning hard on two overarching objectives: protecting the people at LAX from any further harm, and verifying the safety of the airport to facilitate its rapid recovery.

While the overall response was successful, there were key lessons learned that indicate the need for improvement by Los Angeles World Airports (LAWA) in partnership with its public safety partners:

- Emergency alert and warning systems, to include duress phones or “Red Phones,” need to be updated and the technologies for 911 notifications to Airport Police must be better integrated.
- Although the emphasis on multiagency coordination and unified command was very strong among the agencies participating, there needs to be continuing emphasis on incident command basics.

- While major efforts were made to use social networking and commercial media to inform the general public, public mass notification within the airport was lacking and must be addressed.
- Even though significant attention and resources have been applied, the observations in this report indicate a need to take a more focused risk-based approach to security and preparedness.

Overview of the Incident

At approximately 9:18 AM PST on November 1, 2013, an armed gunman entered Terminal 3 at Los Angeles International Airport. The suspect approached a TSA Officer and fired at point blank range, killing the Officer within minutes. The suspect then made his way through the concourse shooting and wounding several other victims, including two TSOs and one passenger. At 9:20 AM, Los Angeles World Airports Police Division (LAWAPD) and Los Angeles Police Department (LAPD) dispatch centers began receiving emergency calls about the shooting and immediately broadcast notifications to units in the vicinity. At 9:25 AM, LAWAPD officers reported that the suspect was down at Gate 35 and, thirty seconds later, those officers had the suspect firmly in custody.

Once Terminal 3 was secured, emphasis transitioned to police clearing operations across the rest of the LAX CTA. Meanwhile, Airport Operations focused on passenger assistance and mass care for the approximately 4,500 passengers who self-evacuated from Terminals 1, 2, and 3 and the more than 20,000 passengers who were sheltered in place on aircraft, and in terminals. At approximately 2:00 PM, airline employees and flight crews were allowed to re-enter the CTA to prepare for normal operations. At 4:00 PM, all screening checkpoints, except for Terminal 3, were reactivated and the CTA was opened for all vehicle traffic at 6:51 PM. Terminal 3 reopened at 1:05 PM on November 2.

Response and recovery efforts lasted approximately 30 hours. Throughout that period, personnel from first responder agencies, tenants, airport executives and employees, and mutual aid agencies worked tirelessly to isolate and clear every threat, provide mass care for all passengers, and keep the public informed with the best information possible. While the shooting was limited to the confines of Terminal 3 and only lasted a few minutes, the cascading effects were felt throughout the airport and the immediate surrounding area, with over 1,500 flights and 171,000 passengers affected.

Approach

Immediately following the active shooter event and the airport-wide disruption that followed over the course of November 1 and 2, 2013, LAWA Executive Director commissioned a comprehensive review of the emergency. On November 5, 2013, the Board of Airport Commissioners convened a special four-hour meeting and directed staff to include in the review a thorough assessment of the multiagency emergency response effort and identify lessons learned and areas requiring improvement. The LAWA review involved a wide cross-section of stakeholder input and had two main components: 1) work by LAWA staff through two multidisciplinary working groups – one focused on public safety and one on airport operations and emergency management; and 2) assistance by an outside consultant to collect and analyze the input provided by the two working groups and prepare a consolidated report. An overview this review was shared with the Board of Airport Commissioners on February 3, 2013.

Major Observations and Recommendations

To provide focus for LAWA's efforts toward continuous improvement in its security and emergency preparedness programs, the following seven priority observations merit special consideration. The full inventory of nineteen observations and associated recommendations are covered in detail within the Observations and Recommendations section of this report. They are labeled here as they appear in that section. In addition, page numbers for the full text of each observation are provided for reference.

Observation 1: Security and Incident Prevention (Page 14)

Personnel, procedures, and technology related to the security of the Airport and the public it serves must be layered and fully integrated to ensure a holistic an effective security risk mitigation program.

Recommendation 1.1: Evolve the LAX security program to reflect a more integrated assessment of security risk and provide for the ongoing development and management of mitigation measures.

Recommendation 1.2: Based on the risk assessment and updated security plan, consider the focus and structure of security functions to determine whether realignment and integration are needed.

Recommendation 1.3: With the benefit of recent vulnerability and risk assessments, take a risk-based approach to evaluating current security programs and explore intelligent use of technology.

Observation 4: Alert and Response Mobilization (Page 26)

The right systems, clear lines of responsibility, and well documented processes for alert notification are critical to avoiding delay in mobilizing a response during the early stages of any emergency.

Recommendation 4.1: Explore and make needed enhancements to emergency alerting methods, technologies, and protocols to include 911 call handling and a more reliable Red Phone system.

Recommendation 4.2: Ensure singular responsibility for administrating notification processes and systems as an integrated program and perform audits, tests, and updates on a regular basis.

Recommendation 4.2: Address core staffing and augmentation support needed in the LAWAPD Communications Unit and in the communications and call handling functions of the DOC/ARCC.

Observation 6: Evolution of Incident Command (Page 32)

Disciplined build-out of the incident command structure and deliberate integration of all response partners is key to achieving unity of command and leveraging the full capability of all available assets.

Recommendation 6.1: Make efforts to address the naturally occurring organizational bias that may inhibit full integration of public safety and civilian operations in unified incident command.

Recommendation 6.2: Expand LAWA's Readiness Assessment and Performance Improvement Drills to train and evaluate staff in executing incident command and the build-out of an ICS organization.

Recommendation 6.3: Advance on-going "position-specific" training for police, civilian personnel, and public safety partners to ensure readiness to fulfill key roles in the incident command structure.

Observation 8: Department Operations Center (Page 41)

Achieving the DOC's full potential requires synchronizing the ICP/DOC interface, trained staff, and processes to support decision-making and resource management, and senior leadership participation.

Recommendation 8.1: Resolve staffing and process constraints that limit the DOC's ability to develop a common operational picture and engage in coordinated incident planning with the ICP.

Recommendation 8.2: Conduct training and exercises that require competence in the exchange of situational awareness, coordinated planning, and joint decision-making between the ICP and DOC.

Recommendation 8.3: Establish an Executive Command Group of top senior leadership at LAWA and supplement it with senior leaders from other organizations as appropriate to the situation.

Observation 10: Public Mass Notification (Page 51)

Developing and integrating a full range of strategies and systems for public alert and mass notification are vital to ensuring awareness, safety, and comfort of those impacted by a crisis.

Recommendation 10.1: Fully integrate and exploit the potential of an LAX-wide Mass Notification System, capitalize on existing public address capability, and link these systems back to the LAX DOC.

Recommendation 10.2: Implement a mass notification strategy that capitalizes on all forms of real-time communication with the public, whether controlled by LAWA, its tenants, or regional partners.

Observation 13: Evacuation and Shelter-in-Place (Page 60)

Terminal evacuations must be enabled by effective public communications, personnel trained to guide and assist evacuee behavior, and rapid mobilization of additional help to ensure public safety.

Recommendation 13.1: Train LAWA and tenant personnel in shelter-in-place and evacuation procedures to ensure the safety of evacuees, particularly those with disabilities or special needs.

Recommendation 13.2: Support ongoing awareness of emergency evacuation and sheltering procedures through a sustained information campaign to include public address announcements.

Recommendation 13.3: Plan for rapid mobilization of LAWA police or civilian staff to any shelter-in-place or evacuation location to enable safe containment or evacuee marshalling and transport.

Observation 15: Passenger Assistance and Mass Care (Page 64)

Response plans must provide for mobilization of care for persons displaced by an emergency and with special needs, to include basic health and comfort, family reunification, and interim sheltering.

Recommendation 15.1: Conduct joint planning with the Red Cross to assess potential needs and develop strategies for delivering passenger assistance and mass care under a range of scenarios.

Recommendation 15.2: Estimate logistics requirements related to providing passenger assistance and mass care support and decide on the best ways to ensure immediate access to those resources.

Recommendation 15.3: Update existing plans and conduct training as required to provide effective passenger assistance and mass care to access and functional needs populations in an emergency.

II. Background

Airport Orientation

Los Angeles International Airport (LAX) spans more than 3,425 acres, contains nine passenger terminals, and provides 12,500 parking stalls for travelers. As of 2013, it was the sixth busiest airport in the world and third busiest in the United States, offering 680 daily flights to 96 domestic cities and 910 weekly nonstop flights to 59 cities in 30 countries on 60 commercial air carriers. It ranked 14th in the world and fifth in the U.S. in air cargo tonnage processed. With 95 passenger and cargo airlines, LAX is the primary airport serving the Greater Los Angeles Area. It is located in southwestern Los Angeles along the Pacific coast in the neighborhood of Westchester, 16 miles from Downtown Los Angeles. LAX is owned and operated by Los Angeles World Airports (LAWA), an agency of the Los Angeles city government.

Figure 1: Los Angeles International Airport

In 2013, LAX served nearly 66.7 million passengers, it processed over 1.9 million tons of air cargo valued at over $86.9 billion, and handled 614,917 aircraft operations (landings and takeoffs). An economic impact study reported that operations at LAX generated 294,400 jobs in Los Angeles County with labor income of $13.6 billion and economic output of more than $39.7 billion. This activity added $2.5 billion to local and state revenues.

The Central Terminal Area or "CTA" is the central complex of LAX and is shown in Figure 2. It features nine passenger terminals connected by a U-shaped, two-level roadway. Terminals 1 – 8 service domestic travel. The ninth terminal is the Tom Bradly International Terminal (TBIT) at the west end, which hosts LAX's international airlines and travelers.

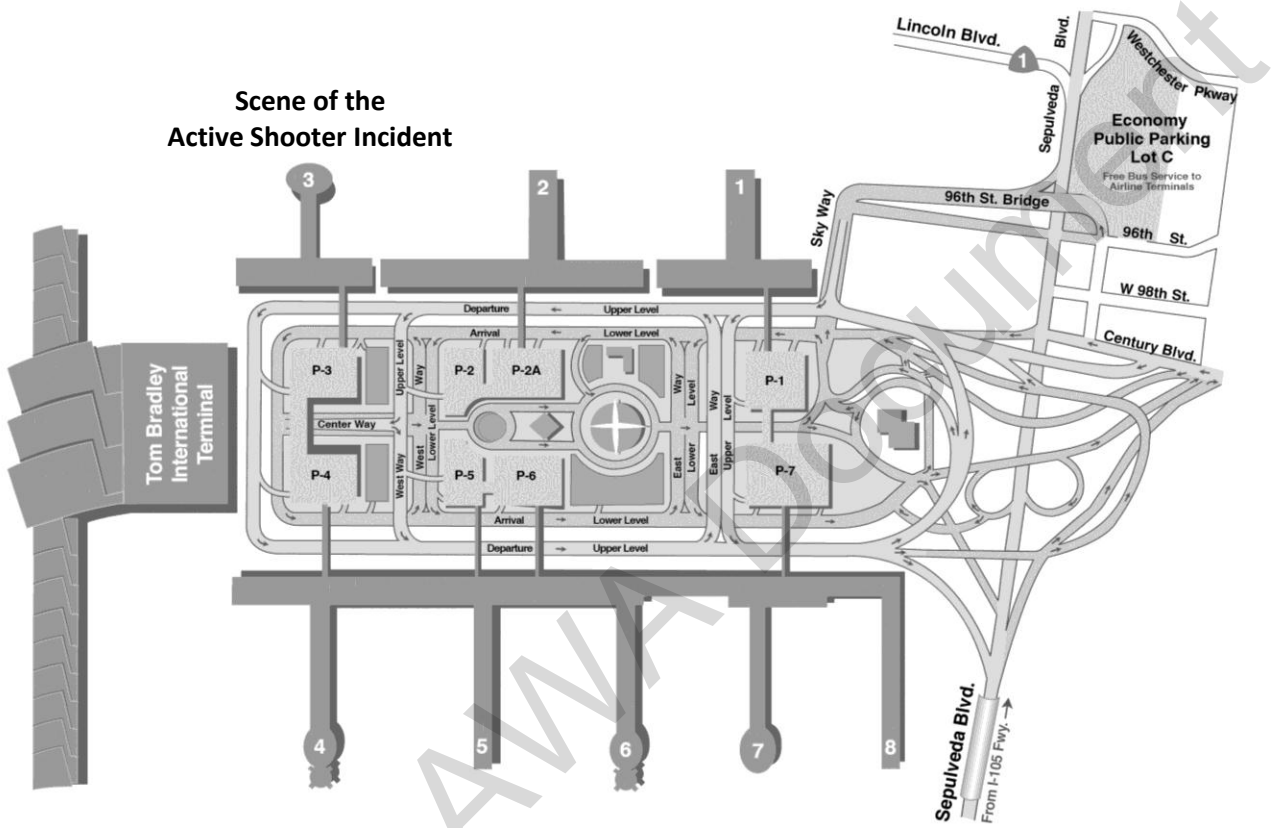

Figure 2: Los Angeles International Airport – Central Terminal Area (CTA)

The CTA comprises two levels: Check-in and Departures are on the upper level and Baggage Claim and Arrivals on the lower level. Restaurants, cocktail lounges, gift shops, newsstands, duty free shops for international flights, restrooms, public telephones, business centers, airline lounges, and other convenient services for the traveling public are located throughout the terminals.

Terminal 3, the scene of the active shooter event on November 1, 2013, is located at the northwest corner of the CTA, in close proximity to the Tom Bradly International Terminal, and opposite Terminal 4, which sits on the southwest corner of the CTA.

Overview of Public Safety

Primary responsibility for law enforcement and security at LAWA facilities, to include LAX, rests with the LAWA Police Division (LAWAPD). Having a dedicated police force has proved vital considering the airport's role as an international gateway and its prominence as a possible target of crime and terrorism. LAX is also a nexus for the activities of a variety of local, State and federal law enforcement agencies to include the Los Angeles Police Department (LAPD); Federal Bureau of Investigation (FBI); Transportation Security Administration (TSA); Customs and Border Protection (CBP); Immigration and Customs Enforcement (ICE); and the Drug Enforcement Agency (DEA). In addition, the Los Angeles City Fire Department (LAFD) provides fire-fighting and emergency medical services. The LAWA Office of Operations and Emergency Management administer planning, training, and exercise programs for LAX, and supports LAWAPD and allied public safety agencies in any emergency response.

LAWA Police Division (LAWAPD) – Consisting of roughly 1,110 police, security officers, and civilian staff, LAWAPD is the largest force of its kind solely dedicated to airport policing in the Nation. The Chief of Police leads LAWAPD and reports to the Deputy Executive Director for Homeland Security and Law Enforcement. Three Assistant Chiefs provide leadership for subordinate activities to include Operations, Support Services, and Homeland Security and Intelligence.

In addition to its patrol force, LAWAPD capabilities include K-9 bomb detection teams; traffic control via security officers and motorcycle and bicycle units; a commercial vehicle enforcement unit; and a security and access control unit that regulates entry into sensitive areas of the airport. Other specialized activities include critical infrastructure protection, emergency services, and vulnerability assessment and analysis. LAPD also patrols the airport under a joint agreement and provides the LAWAPD with support when needed, to include Bomb Squad, Hazardous Materials, and Special Weapons and Tactics units.

Los Angeles City Fire Department (LAFD) – LAFD provides aircraft rescue and firefighting, structural firefighting, and emergency medical services (EMS) support to LAX. Specifically, Fire Station 80 and Fire Station 51, which belong to LAFD Battalion 4, provide these services to LAX. Battalion 4 includes five other stations covering a 23-square mile area around the airport. Among them is Fire Station 5 that lies in close proximity to the northeast perimeter of LAX. LAFD also maintains routine liaison with LAX through an Assistant Chief assigned to coordinate all airport related activities with the LAWA Deputy Executive Director for Homeland Security and Law Enforcement and in turn, the Chief of LAWAPD and LAWA Emergency Management.

LAWA Emergency Management Division (EMD) – LAWA EMD resides within the Office of Operations and Emergency Management. The Division manages a program of emergency management planning that encompasses the development and maintenance of all Airport Emergency Plans (AEPs) and a full portfolio of AEP annexes that provide detailed guidance for AEP execution. EMD administers FEMA sanctioned incident command training for LAWA staff and implements a supporting program of FAA mandated and supplemental exercises to validate AEP assumptions and reinforce skills acquired through structured training. EMD is also the custodian of the Department Operations Center (DOC).

Sequence of Events

In the week following the active shooter incident of November 1, 2013, a Joint Public Safety Working Group was formed consisting of the Los Angeles World Airports Police Division (LAWAPD), Los Angeles Police Department (LAPD), and Los Angeles Fire Department (LAFD). Facilitated by the LAWA Deputy Executive Director for Homeland Security and Law Enforcement, the group conducted a Public Safety focused review of the incident to assess lessons learned and identify opportunities for improvement.

In the course of the group's review, it considered the chronology of events as they unfolded and in so doing, consulted a range of official records. These included dispatch voice recorder logs, video recorder logs, Mobile Data Terminal logs, and dispatch records. Where records were not available, the group interviewed individual responders to fill in any gaps. The following has been taken from the work of that review. An expanded representation of these same events is contained in Appendix B.

The Initial Shooting – At approximately 9:18 AM Pacific Standard Time (PST) on November 1, 2013, an armed gunman entered Terminal 3 concealing a semiautomatic weapon, five 30-round magazines, and hundreds of additional rounds of ammunition contained in boxes. Within two minutes of arrival, the suspect approached the passenger queue line at the base of the escalator leading to the screening checkpoint and fired multiple rounds into a Transportation Security Administration (TSA) Officer (TSO) at point blank range. As shots rang out, nearby TSOs and passengers took cover or fled the immediate area at the base of the escalator. The suspect began to proceed up the escalator, paused, and returned to the screening checkpoint and fired additional shots into the previously hit victim at point blank range. Afterwards, the suspect continued up the escalator towards the screening checkpoint.

Advance Through the Terminal – At the top of the escalator, most passengers and TSA security personnel within the screening checkpoint self-evacuated when the initial shots were fired. Many fled into the concourse area or through doors leading them onto the airfield; those that stayed within the terminal hid inside stores, closets, restrooms, and behind other forms of cover. After the suspect walked past several passengers and through the exit lane of the screening checkpoint into the concourse area, passengers fled the terminal toward the street exits. The suspect made his way through the concourse, shooting at fleeing passengers and TSOs wounding several victims, including two TSOs and one passenger. Each victim was able to flee or take cover after being wounded.

Calls to Police – At 9:20 AM PST, LAWAPD and LAPD communications centers began receiving emergency calls about the shooting via mobile phone and emergency direct-connect "Red Phones" located at screening checkpoints. Dispatchers immediately broadcast notifications on their respective frequencies, LAWAPD and LAPD Pacific (PAC), and dispatched several units to LAX Terminal 3.

Pursuit of the Suspect – At 9:22 AM PST, many LAWAPD officers converged at Terminal 3 accompanied by CBP and LAPD officer(s) on regular assignment to LAX, accessing multiple entries and exits (e.g., airfield doors, pedestrian bridges, upper and lower levels, etc.) to enter the facility. To prevent additional casualties, the police officers quickly formed into strike teams and entered the concourse to stop the active shooter and secure the area as quickly as possible. At 9:24 AM PST, LAWAPD ordered the closure of all roadways into the CTA. Airfield perimeter security access posts were also ordered locked-down as a protective measure.

Shooter in Custody – At about 9:25 AM PST, LAWAPD reported that the suspect was down at Gate 35; 30 seconds later LAWAPD had the suspect in custody. LAWAPD and LAPD then worked together to secure the crime scene and search the terminal for other possible suspects and threats, such as improvised explosive devices. As teams progressed through the terminal, they attended to the wounded, and cleared hiding passengers and directed them to exit the terminal.

Security Operations and Emergency Response – Beginning at 9:20 AM PST and for almost the next 6 hours, passengers evacuated from or sheltered-in-place within the terminals. Once outside, evacuees were directed toward witness collection points at the TBIT. LAWAPD supervisors then ordered that a perimeter be established around the terminal and a systematic search be conducted of the airfield. At 9:32 AM PST, as the search for additional threats continued, an Incident Command Post (ICP) was established on the east end of Terminal 3. LAFD staged its vehicles at the east end of Terminal 2 and also established a street-side triage area. At 9:48 AM PST, the LAWA DOC was activated to support the multiagency response. These efforts included the movement of self-evacuees from Terminals 1, 2, and 3 to TBIT, relieving and providing provisions for passengers sheltering on over 10 aircraft, as well as providing mass care for individuals once they were relocated to a secure facility. The provision of mass care was not limited to evacuated passengers, but included providing individual assistance and behavioral health services to responders, airport tenants, and employees.

Because of ongoing responder activities and the large number of self-evacuees on the airfield, LAWAPD requested that all traffic and operations on the airfield be shut down at 10:03 AM PST. At 10:16 AM PST, the Federal Aviation Administration (FAA) issued a Tier 1 ground stop for LAX arrivals because of the buildup of aircraft on the airfield. Responding units worked through this period to clear the 301 and 401 parking structures, Terminal 3, and the airfield between Terminals 3 and 2.

Airport Recovery – As the initial response phase wound down, the first press conference was conducted at 11:52 AM PST. It included the Mayor of the City of Los Angeles, the LAWA Executive Director, and LAWAPD, LAPD, and LAFD representatives. At approximately 2:00 PM PST, airline employees and flight crews were allowed to re-enter the CTA to prepare for normal operations. All airfield access posts were re-opened at 3:20 PM PST and passengers and employees who sheltered-in-place were allowed to leave. At 4:00 PM PST, all screening checkpoints, except for Terminal 3, were reactivated and the CTA was opened for all vehicle traffic at 6:51 PM PST. Terminal 3 remained closed until the investigation and rehabilitation was completed at 1:05 PM PST on November 2, 2013.

Response and recovery efforts lasted approximately 30 hours. Throughout this period, all personnel -- from first responders, tenants, airport executives, employees, and mutual-aid agencies -- worked tirelessly to isolate and clear every threat, provide mass care for all passengers, and keep the public informed with the best information possible. While the shooting was limited to the confines of Terminal 3 and only lasted a few minutes, the cascading effects were felt throughout the airport and the immediate surrounding area; over 1,500 flights and 171,000 passengers were affected.

Approach

Immediately following the active shooter event and the airport-wide disruption that followed over the course of November 1 and 2, 2013, LAWA Executive Director commissioned a comprehensive review of the emergency. On November 5, 2013, the Board of Airport Commissioners convened a special four-hour meeting and directed staff to include in the review a thorough assessment of the whole of the multiagency emergency response effort and identify lessons learned and areas requiring improvement. That LAWA review involved a wide cross-section of stakeholder input and had two main components: 1) work by LAWA staff through two stakeholder working groups, one focused on public safety and one focused on airport operations and emergency management; and 2) assistance by an outside consultant to collect and analyze the input provided by the two working groups and prepare a consolidated report.

LAWA Staff Working Groups

Joint Public Safety Working Group – As a part of the LAWA-wide review process, a Joint Public Safety Working Group was formed consisting of the LAWAPD, LAPD, and LAFD. This work spanned a range of issues related to: prevention and preparedness; incident detection and notifications; use of video surveillance; police and EMS capabilities; radio communications interoperability; and emergency evacuation of airport terminals.

Operations and Emergency Management Working Group – As a complement to and in close coordination with the Public Safety group, the focus of this part of the review was on overall emergency management operations and the effectiveness of multiagency coordination. The Operations and Emergency Management Working Group conducted over 25 stakeholder meetings, engaging over 100 people, both internal and external to LAX. This work included outreach across all LAWA divisions, city agencies, federal partners (FAA, TSA, CBP), and 25 airlines operating from LAX. An intense day-long session was also conducted where senior officials from all of the organizations involved shared experiences, identified issues, and made suggestions for improvement.

National Standards and Best Practice

To provide a framework for the collection of information and guide the analysis of input provided from the two LAWA stakeholder working groups, a set of nationally recognized standards and best practices were applied. These standards provided an objective basis from which to conduct additional fact-finding on emerging issues and helped shape development of recommendations. They included:

- The National Preparedness System (NPS)
- The National Incident Management System (NIMS)
- The Emergency Management Accreditation Program (EMAP)
- The National Fire Protection Association Standard 1600 (NFPA 1600)

National Preparedness System (NPS) – As national policy, the NPS provides a universal framework for the risk-based assessment of needs and the more deliberate development of prevention, protection, response, and recovery capabilities. The NPS encompasses a cycle of continuous improvement in preparedness capabilities as described in Figure 3. That cycle begins with the assessment of risks the agency is likely to confront, followed by examination of current capabilities and capability gaps. Risk-based priorities are then set for the development of needed capabilities. The strength of those capabilities are then validated through training and exercises, and those efforts are reviewed and updated on a regular basis as the cycle of improvement is repeated to achieve and sustain needed capabilities over time.

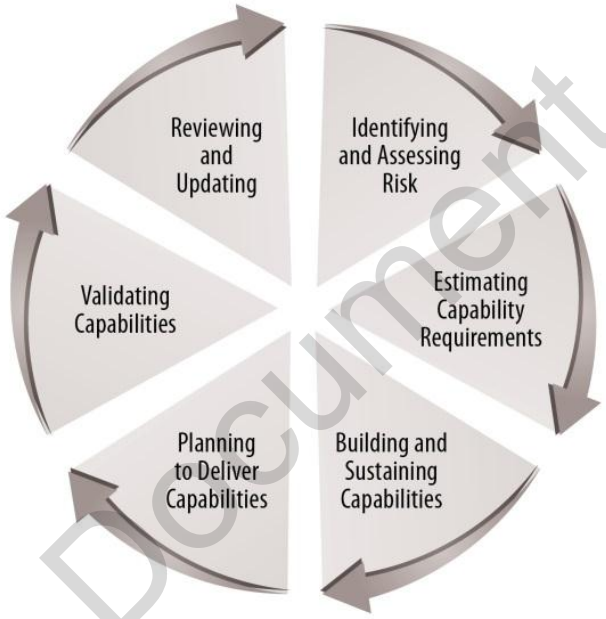

Figure 3: National Preparedness System

National Incident Management System (NIMS) – As described by FEMA, NIMS identifies concepts and principles that guide how to manage emergencies, from preparedness through to recovery, regardless of their cause, size, location, or complexity. NIMS provides a consistent, nationwide approach and vocabulary for multiple agencies or jurisdictions to work together to build, sustain, and deliver the core capabilities needed for effective emergency management. A core component of NIMS is the Incident Command System (ICS). ICS is a management system designed to enable effective and efficient command and control by integrating a combination of personnel, facilities, equipment, and communications assets operating within a unified command (UC) structure. ICS is a national best practice employed by first responders, civilian agencies, and private sector organizations across the country.

NFPA 1600 – Standard on Disaster/Emergency Management Programs – NFPA 1600 establishes a common set of criteria for all hazards disaster and emergency management programs and provides the fundamental criteria to develop, implement, assess, and maintain prevention, mitigation, preparedness, response, and recovery capabilities. It applies equally to public, not-for-profit, and nongovernmental entities. NFPA 1600 also lays out a process for review and corrective action to ensure a common approach is followed in addressing deficiencies and resolving shortfalls.

The Emergency Management Accreditation Program (EMAP) – Based largely on NFPA 1600, EMAP is a voluntary assessment and accreditation process focused at local and state emergency management programs. Applicants engage in self-critique and incremental improvement typically culminating in a formal assessment by EMAP evaluators. The process is scalable, and can be applied by any public sector organization, whether seeking accreditation or not. Given that the standard represents nationally recognized minimum performance criteria, it can also be applied as a tool for strategic improvement in the administration of emergency management programs, like that at LAWA.

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III. Observations and Recommendations

Public Safety

It is almost impossible for law enforcement to prevent a threat such as the one that occurred at LAX on November 1, 2013. The response by LAWAPD was immediate and heroic and the threat posed by the shooter was ended without additional loss of life due to the training and tactical ability of the officers involved. However, the event does give the opportunity to pause and consider how a more sophisticated shooter, multiple shooters, or simultaneous events should be managed in the future.

This section focuses a subset of issues touched on by the Joint Public Safety Working Group, and includes others that have surfaced either through post-event interviews or group debriefing sessions. The discussion below blends these inputs into a refined set of global observations and recommendations for public safety community and LAWA management consideration. Additional observations and associated recommendations related to incident management, response operations, and emergency preparedness are reflected in greater detail within the respective sections that follow.

The observations below are not intended to be an exhaustive examination of overall security or police and fire department tactics during the active shooter incident of November 1, 2013 but are intended to point the way toward some basic improvements and a more holistic and integrated security program.

Joint Public Safety Review

In the week following the active shooter incident of November 1, 2013, a Joint Public Safety Working Group was formed consisting of LAWAPD, LAPD, and LAFD. Facilitated by the LAWA Deputy Executive Director for Homeland Security and Law Enforcement, the group conducted a Public Safety focused review of the incident to assess lessons learned and identify opportunities for improvement.

The Public Safety review spanned a range of issues related to: prevention and preparedness; incident detection and notifications; use of video surveillance; police and EMS capabilities; radio communications interoperability; and emergency evacuation of airport terminals. There were also four current security and prevention/protection activities that were given special consideration by the group: randomization of patrol practices; vehicle screening at checkpoints; use of closed circuit television (CCTV) cameras; and tactical response operations.

Patrol Practices – LAWAPD has implemented random patrol and show-of-force tactics designed to continually change the face of police presence at LAX and make attempts at pre-attack surveillance and prediction of police security posture difficult. These Random Action Measures (RAMs) include directed patrol of teams of officers and K-9s to densely populated areas of the airport and special patrol details to provide a sudden high visibility police presence at any place or time on the facility.

Operation Safe Entry – Another RAM tactic is the Operation Safe Entry Vehicle Checkpoint program employed by the LAWAPD. These checkpoints randomly inspect vehicles entering key access points to the LAX CTA. On the morning of November 1, LAWAPD was operating multiple Operation Safe Entry checkpoints. The Public Safety Working Group concluded that it is possible the shooter accessed the

CTA through one of these checkpoints and, if he did, uniformed officers screening vehicles did not deter him nor was he detected at those locations.

CCTV Employment – LAWAPD has access to CCTV cameras that cover LAX and those cameras were integral to law enforcement and emergency management operations on November 1. The Public Safety Review concluded that, in addition to their overall importance to security threat detection and interdiction, with appropriate technological enhancements, LAX surveillance systems can provide even greater value to the management of large-scale incident command operations.

Tactical Response Operations – In advance of the November 1 incident at LAX, LAWAPD had invested and continues to invest significant resources to train its officers in active shooter response tactics, to include Multi-Assault Counter-Terrorism Action Capabilities (MACTAC). MACTAC involves tactical maneuvers adapted from close-quarter battle tactics develop by the military for use in urban combat, but as adapted for law enforcement. The Public Safety Review credited the effective and speedy resolution of the active shooter threat to the MACTAC tactics employed by the officers involved.

Successful employment of MACTAC in complex multi-faceted attacks requires effective multi-agency incident command, interoperable communications, resource management and EMS integration, and the right weapons and protective equipment necessary to mount a determined response. The Public Safety Working Group subject matter experts identified challenges in each of these areas. Aside from the expected initial confusion that typifies such events, the establishment of Unified Command and build-out of the ICP was delayed, non-interoperable radio systems caused gaps in cross-agency coordination, and mutual-aid response, though substantial, needed better resource management.

When viewed in the context of the November 1 active shooter incident and, more importantly, with respect to the risk of future armed threats that might be more complex, aggressive, and lethal, the lessons learned coming from the Public Safety Working Group review suggest some overarching opportunities to strengthen prevention, protection, and response efforts to mitigate the risks associated with future threats. Those opportunities are presented in the Observations that follow.

Observation 1: Security and Incident Prevention

Personnel, procedures, and technology related to the security of the Airport and the public it serves must be layered and fully integrated to ensure a holistic and effective security risk mitigation program.

The nature of criminal activity and the terrorist threat at the nation's major airports are as complex and varied as the facilities themselves. From petty theft to drug trafficking, criminal activities at airports have always posed unique policing and security challenges. The events of 9/11 focused much attention on threats to the air transportation system and specifically aircraft. However, well before 9/11, airports and the people who populate them have been the target of attacks by terrorists or lone gunmen. Despite major investments in airport security across the country, that threat persists. The discussion below considers the larger implications of the active shooter event of November 1, 2013 for LAWA's overall security and incident prevention programs.

Background

Airport police must maintain a robust capacity to interdict armed threats whether by criminals, lone shooters, or terrorists using conventional weapons and/or explosives. Plots and armed attacks against airports are not without precedent and have been a constant concern for airport authorities worldwide. As history has demonstrated, such threats could be more aggressive and lethal than the events of November 1, 2013; thus, any evaluation of security effectiveness should not use that incident alone as the benchmark. Had the attacker not been highly selective in his targets, and/or had there been multiple attackers with weapons of greater lethality, the outcome might have been far different.

Although it may not be possible to prevent a major crime or attack on an airport, it is possible to identify its potential, deter its occurrence, and respond to a threat once it has materialized. An ability to carry out these actions places a premium on intelligence, private sector/civilian engagement, security design and systems, situational awareness, interoperable communications, command and control, operational capability, and a high level of coordination, not only among law enforcement agencies but also with civilian stakeholders and security counterparts. Whether focused on thwarting crime or violent attacks, security operations should be risk-based, holistic, layered, and well-integrated, as described below:

Risk-Based – Airports are highly complex systems, with a wide array of potential threats and vulnerabilities to be considered. However, simply adding more security does not necessarily provide better security. Determining priorities and where to achieve greatest value for the dollars invested requires regular, systematic assessment of the likelihood and consequences (or risks) associated with a range of threat scenarios that morph and change more quickly now than ever before. Collaborative engagement in a security risk assessment process across the airport community builds the buy-in needed to develop and sustain a holistic security program over time. Not all risk reduction strategies yield the same value and what may have been a prudent measure at one point in time may need to be reevaluated as the threat evolves and conditions change. Leaders must be open to challenging established practices and demonstrate a willingness to change direction as needed.

Holistic – As often happens in complex systems, airport security can evolve in a less than planned way. Responsibility for key functions may be divided across organizations, practices and systems may develop as silos unconnected to the greater whole and, as a result of that fragmentation, holes in the fabric of security may develop and new vulnerabilities emerge. An effective risk assessment uncovers those vulnerabilities and provides focus on what is missing or misaligned and suggests ways to fill those gaps. That includes using layers of security that are integrated to leverage a more complete and well-rounded program that is flexible to adjust as risks evolve. Risk and vulnerability assessments of LAX will likely continue to be performed by a variety of agencies for different purposes. LAWA must work collaboratively with those agencies to ensure it receives maximum value from those assessments and is able to integrate assessment results into its own more holistic risk management program.

Layered – Typically the most robust aspects of airport security are at the perimeters and screening points leading into the protected areas. Considerable focus and effort goes into these locations and often less so across the rest of the facility. To avoid single points of failure, security strategy must follow a defense-in-depth mindset, where all parts of a layered and interdependent security program

(intelligence, civilian engagement, CCTV and alarms, communications, command and control, and operations, etc.) are integrated in concentric rings around the airport and its most critical elements.

Well-integrated – All aspects of the security program need to be harmonized and mutually supporting in a way that makes the whole greater than the sum of the parts. Operational security (e.g., patrols, intelligence, suspicious activity reporting), technological security (e.g., sensors, CCTV, alarms), and architectural security (e.g., fencing, lighting, barriers) all need to evolve with such harmony in mind. In that integration, airport security should be adaptive to emerging threats, flexible in responding to changes in the security landscape, and scalable to expand or contract its posture as may be required.

Analysis

Recommendations made by the Joint Public Safety Working Group, such as the ones highlighted in the paragraphs below, will provide some incremental threat mitigation value and should be considered. However, those same recommendations also point toward the need for LAWA to consider the overall management of the airport's security program against industry best practices to ensure that program is returning the greatest security and risk reduction return-on-investment possible. LAWA spends about $125 million on security annually. That does not include security related capital investments. Better integration of security functions and the implementation of risk management practices will help assure that every dollar spent is providing the best value possible for the security of the traveling public.

Adoption of Community Policing – The Public Safety Working Group appropriately recommends implementation of community policing as a way to engage more effectively the airport residents they protect. In recent weeks, LAWAPD initiated a community policing strategy to fill this potential gap in its overall security program. LAWAPD understands that civilian engagement and security awareness must integrate with and strengthen police patrol and other threat mitigation efforts. Enlisting airport tenants as an active part of the LAWA security team is essential to holistic security, as is working in partnership with LAPD in the extension of civilian engagement to the environs surrounding the airport.

Review of RAM Tactics – Directed show-of-force and high profile patrol details can randomly alter the face of police presence and are good best practices. However, the value of randomization can be limited if other elements of security operations across the airport, to include those of airport tenants, are not similarly randomized and coordinated (i.e., random rotation of guards assigned to fixed security posts, covering down on gaps in RAM patrol deployment, etc.). It is suggested that LAWAPD perform its own Red-Team assessment of RAM tactics before any changes are undertaken.

Recommendations

Recommendation 1.1: Evolve the LAX security program to reflect a more integrated assessment of security risk and provide for the ongoing development and management of mitigation measures.

Security at LAX is governed by 49 CFR 1542 - Airport Security, which requires the maintenance of a TSA approved security program. These regulations are regularly updated to reflect changing threat conditions and are standards that must be met. However, Federal regulations do not assume to address all threats and hazards faced by a particular facility, or suggest all security measures essential for prudent and cost-effective mitigation of those risks. Since the basic requirements of 49 CFR 1542 were formulated, there has been a continuous evolution in airport security practices and technology

and those lessons can be applied in the ongoing evolution of the LAX security plan and the development of any new risk-based security initiatives, as conditions warrant.

Recommendation 1.2: Based on the risk assessment and updated security plan, consider the focus and structure of security functions to determine whether realignment and integration are needed.

There is no single locus of control for non-law enforcement aspects of LAX security, short of the Chief of Police, and some key roles are divided among several LAWAPD units. The mission of the Homeland Security and Intelligence Section within the Office of Homeland Security emphasizes compliance with aviation security mandates (as opposed to risk management) and includes separate Vulnerability Assessment & Analysis and Critical Infrastructure Protection units. Security Officers reside in the Traffic and Security Section of the Office of Operations while the Video Observation Officer position is in the Field Support Section of the Office of Support Services. Realignment of key functions may offer enhanced capability to better manage security risks across a highly complex and dynamic facility.

Recommendation 1.3: With the benefit of recent vulnerability and risk assessments, take a risk-based approach to evaluating current security programs and explore intelligent use of technology.

As LAWA explores new options to enhance airport security, it must evaluate existing practices and personnel deployments at the same time to determine their effectiveness and relevancy. Simply layering new security practices into old ones may not only be less than cost-effective, it may also be counterproductive. Security should be comprehensive, integrated, and holistic. A dollar wasted on less then effective security strategies means that another need may go unmet. LAWA should also assess its use of security technologies and determine whether it is getting maximum value from the systems in which it has already invested. One example is in the use of advanced video analytics and video target tracking and indexing technologies to maximize the value of installed CCTV systems.

Observation 2: Response to Armed Threats

Response to armed threats at LAX must consider a range of scenarios and provide for training and tactical integration of public safety partners as well as readiness of the airport's civilian residents.

Since the 1970s, there have been numerous reported cases of armed attacks at airports around the world. Moreover, the series of active shooter incidents across the country over the past few years gives further witness to the fact that the threat may come not just from terrorists, but also from deranged individuals whose intentions are even less clear and harder to detect. With great foresight, LAWAPD and its LAPD counterparts have been training for just such a potential.

The well-executed interdiction of the LAX attacker on November 1, 2013 is among the first successful applications of advanced active shooter tactics by a local police agency in the country. However, lessons learned, to include challenges in public safety incident command, EMS integration, and public alerting during the phases of the response that followed, provide ample reason to consider how things may have been different, especially if there had been multiple attackers and/or had the attack been more lethal.

Background

A 2013 study of active shooter incidents conducted by Texas State University reinforces the notion that this threat may be on the rise and that its lethality may be escalating, with 21 events occurring in 2010 alone. According to the study, nearly half of these events are over before police arrive. However, police were required to use force to stop the killing in 30 percent of all cases studied. Of those cases where force was used, the majority (71%) required use of deadly force. The study further notes that officers were shot in 15 percent of events underway when they arrived. *"That makes an active shooter call among the most dangerous in law enforcement."*[1] Thus, the study highlights the need for coordinated response by police and other public safety partners. It also offers ideas for consideration in three areas:[2]

Police Preparedness – Police require training in the tactical skills necessary to deal with active shooter incidents; such training must span both indoor and outdoor environments. As active shooters may employ a variety of weapons to include high-powered rifles, and engagements may occur both over long distances and in proximity to innocent victims, officers must be equipped with or have quick access to patrol rifles and possess the marksmanship skills to apply precision fire if needed. Given the lethality of the weapons officers may encounter, appropriate ballistic protection is also essential.

Medical Assistance – The priority of first arriving officers to an active shooter event must be to stop the violence by mitigating the threat. This may mean initially moving quickly past the injured with the expectation that medical help will follow. Because the more critically injured may succumb before the area is secure, EMS personnel should be trained to enter the area under police protection and, outfitted with the necessary ballistic armor, provide life-saving help sufficient to permit evacuation. Likewise, police should be trained and equipped to perform basic trauma first aid to assist EMS efforts.

Training for Civilians – Almost half of all active shooter events are over before police are on scene and *"the five highest casualty events since 2000 happened despite police arriving on scene in about 3 minutes."*[3] Thus, active shooter awareness training for civilians resident in a potential target venue could be a key element in saving lives. Police must work with the people they serve to ensure that those who may be at risk understand how to respond to an active shooter threat if one were to occur.

The terrorist attacks in Mumbai India in 2008 and the Westgate Mall in Nairobi Kenya in 2013 have shown the lethal potential of coordinated attacks by teams of individuals using conventional weapons or explosives on relatively soft or lightly protected targets. Whether such attacks are likely in this country is uncertain. What does seem clear is that active shooter events are only one end of the violence spectrum and that there is a range of plausible threats scenarios that airports must also now consider.

After reviewing 30 active shooter incidents and exercises, DHS has identified three areas needing continued emphasis: incident management, medical response, and public safety and security.[4] Failure to address any of these may create cascading problems that affect other aspects of the response.

Incident Management – Active shooter incidents are rapid and dynamic, making it essential that, as the initial tactical response is simultaneously unfolding, incident command be quickly established to enable operational coordination and communications, joint planning, and site security and protection.

Medical Response – Response protocols must consider the pressing medical needs of the wounded as balanced against the operational risk. This makes quick establishment of unified incident command and well-executed EMS logistics key to getting emergency medical care to victims in a timely manner.

Public Safety and Security – To limit exposure to the threat and divert potential victims and the public at-large away from the scene, immediate public alert notifications must be made to ensure that people are aware of the nature and status of the threat and the actions being taken in response.

In a recent article in *Homeland Security Affairs*, researchers suggested that multifaceted attacks using conventional weapons and tactics require new more cooperative strategies beyond those of a single public safety agency. They encourage a "whole-community" approach and challenge the public safety disciplines to operate as members of an integrated team.[5] The most significant example of this thinking is reflected in the program called the Joint Counterterrorism Awareness Workshop Series (JCTAWS).

Sponsored by the National Counterterrorism Center, DHS, and the FBI, JCTAWS promotes whole-community cooperation across levels of government and among the police, fire, EMS, and emergency management disciplines, as well as the civilian private sector. The intent of JCTAWS is to promote whole-community integration and to use exercises to learn from a jurisdiction's collective response to a hypothetical attack similar to Mumbai or Nairobi. The LAPD sponsored such a JCTAWS exercise in 2012.

Analysis

The tactical response to the active shooter incident of November 1 was well-executed, and the LAX CTA swept and secured within hours. It reflected a remarkable effort by all involved. That said, the Public Safety Working Group review provided a unique lens through which to assess its implications relative to other potential threats that may be more complex and/or lethal. That analysis might be viewed in three parts: response operations; EMS integration; and public awareness.

Response Operations – According the Public Safety review, the active shooter incident on November 1 began at about 9:20 AM with LAWAPD officers arriving at the location of the initial shooting within 90 seconds of the first "shots fired" broadcast. Advancing quickly into Terminal 3, these officers engaged the gunman and by 9:25 AM had taken him into custody. This quick and effective action is attributed to both the skill and heroism of the officers involved and the Active Shooter and MACTAC training that was and continues to be provided to LAWAPD officers and their LAPD counterparts.

Although an ICP was established at 9:32 AM by the first arriving LAWAPD supervisor, LAPD and LAFD initially set up separate ICPs at different locations. The Public Safety Working Group review determined that all responding agencies did not join together in a Unified Command structure until 45 minutes later (10:14 AM). Moreover, the first incident objectives meeting occurred at 11:00 AM, about 1.5 hours after the incident began. The ICP structure did not ever fully mature and this, along with a lack of radio interoperability, caused gaps in interagency coordination. These challenges were intensified by a lack of familiarity with terminology and airport layout among some LAPD and LAFD responders. MACTAC training is essential to police readiness in response to active shooter events, but in itself is not enough. Intensive training in multi-agency incident command, interoperable communications, and the right individual equipment are also key.

EMS Integration – The Public Safety review found that LAFD did not initially integrate with the

LAWAPD ICP due to security concerns about the ICP location, which was in close proximity to the scene of the initial shooting. This hampered the incident commander's ability to coordinate law enforcement and fire department activities related to victim extraction from the danger area. In accordance with standard operating procedure at the time, police officers brought those victims out of the danger area where they could be safety treated and transported by EMS.

Although an LAFD initiative to develop a tactical EMS capability was in development, the program was not yet in effect at the time of the active shooter incident. LAFD is now providing its personnel with Tactical Emergency Medical Support (TEMS) training to address this need. The Public Safety review recommended that police officers assigned to LAX also receive First Responder - Operational level TEMS training. LAFD and LAWAPD trainers have already begun the initial stages of establishing a training plan for airport officers. These training initiatives will provide the capability to form joint police and LAFD EMS Rescue Task Forces that may be employed during a future active shooter event.

Public Awareness – Given the rapid and dynamic nature active shooter incidents, the first few minutes can be the most critical. Seconds can save lives. Accordingly, the better aware and informed people are in advance about how to recognize and respond to an active shooter event, the more likely it will be that they take the personal initiative necessary to not only protect themselves but also possibly enable the safety of others around them. The Public Safety review recognized the value of a community policing-based public engagement model and recommended its implementation at LAX as a vehicle to advance public awareness on a range of preparedness topics, to include active shooter response.

During an actual active shooter incident, the faster information is conveyed to those in harm's way, the more time they will have to react and take protective action. Likewise, alerts must be broadcast to those outside the area so that they stay away and do not hamper the response. Although public address systems exist in every terminal, these were not used. However, great effort was made to communicate to the public via the web, social media, and public news outlets.

In light of the observations made by the Public Safety Working Group and information developed elsewhere in this report, had the events of November 1 been larger, more complex, and/or more lethal, challenges related to incident command, interoperability, EMS integration, and public awareness and alerting may have greatly hampered the public safety community's ability to resolve it. Preparedness for risks higher on the threat continuum requires an integrated and collaborative whole community approach.

Recommendations

Recommendation 2.1: Conduct a mini-JCTAWS workshop that stresses multi-agency incident command and whole community integration to reveal gaps in capabilities needing improvement.

Although the federal JCTAWS program is conducted on a regional or metropolitan scale, the basic purpose and approach holds for any jurisdiction or major target venue like an international airport. Similar to JCTAWS, a mini-JCTAWS workshop at LAX would seek to promote whole community participation across city, State, regional, and federal entities and the airport's private sector tenants and stakeholders. Building off lessons learned from the November 1, 2013 active shooter incident, the workshop would also explore gaps in the knowledge and capabilities needed to address and resolve a complex and multi-faceted armed attack on the airport.

Recommendation 2.2: A year after the recommended mini-JCTAWS workshop, conduct a full-scale tactical exercise to evaluate all aspects of response operations, EMS integration, and pubic alerting.

As part of the integrated LAWA review, each member of Public Safety Working Group (LAWAPD, LAPD, LAFD) has also individually identified improvement actions to address perceived gaps in organization, training, and equipment for an active shooter event to be addressed within their respective agencies. That work, coupled with lessons learned from a workshop focused on a whole community response to a complex and multi-faceted attack, will help strengthen individual and joint preparedness efforts that can then be tested and validated through a full-scale exercise. The process used should mirror the standard cycle for capability building, which includes: 1) planning or revising plans based on lessons learned; 2) making changes in organization, training, and equipment; 3) exercising to validate and adjust the changes made; and 4) repeating the cycle in a process of continuous evaluation and improvement.

Incident Command

Major airports are a complex and interdependent network of hundreds of individual operations. A disruption in any one of those operations can have cascading effects across that network and the greater air transportation system. Beyond the effects of weather and other natural hazards, airports are also vulnerable to threats like terrorism and individual acts of violence, such as what occurred at LAX on November 1, 2013. Managing the consequences of a significant airport disruption, especially an armed attack, requires not only the coordinated activities of a host of uniformed public safety agencies, but the cooperation and integrated effort of the airport's civilian management, operations personnel, tenants, and even its transient public population.

Effective response and recovery requires a "whole-community" approach. That approach must be reflected in the implementation of incident command. This section of the report largely concerns the execution of incident command in responding to the active shooter event of November 1. Put simply, it addresses the "how" of the incident response process. The Response Operations section that follows addresses more specifically the "what" of the response as it unfolded. In addition to considering the execution of ICS, a number of related capabilities and processes are also outlined.

Incident Command System

When an emergency requires a response from a variety of organizations and functional disciplines, the use of common management processes and systems are vital to effective coordination. The ICS is designed to enable effective and efficient command and control by integrating a combination of personnel, facilities, equipment, and communication assets operating within a universal command structure. Developed in the 1970s, ICS has since evolved as a standard, national best practice. Thus, it is widely employed by first responders, civilian agencies, and private sector organizations across the country to manage multi-agency and multi-jurisdictional disaster response operations. In addition to ICS guidance provided by FEMA, the FAA has adopted these same principles for the development and implemention of multi-hazard Airport Emergency Plans (AEPs).

Application of ICS – In their management of the security threat and the resulting airport disruption, all of the agencies involved (uniformed and civilian) made a determined effort to employ ICS practices. Use of those practices, especially joint-agency "unified command" were key in achieving a successful outcome. The shooter was neutralized in a matter of minutes, the impacted terminal cleared and secured in less than 2 hours, and the entire CTA was assured safe and the majority of airport operations resumed only 6 hours later. This could not have been achieved without the professionalism, operational skill, and intense spirit of cooperation that was evident on that day.

Lessons learned – The application of incident command on November 1 indicated the need for improvements in: situational awareness; alert and notification; interoperable communications; the build-out of ICS structure; role definition between incident command facilities; information flow within the ICS structure; and resource management. Enhancements in these areas will strengthen the general preparedness of LAWA and its regional public safety partners.

Observation 3: Airport Response Coordination Center

The ARCC must provide continuous situational awareness essential to developing a relevant common operational picture for the Department Operations Center and Incident Command Post.

LAWA's Airport Response Coordination Center (ARCC) brings together in one place a range of airport activities essential to the effective day-to-day management of ongoing operations. By fostering close and continuous exchange of information among Airport Operations, Facilities Management, LAWAPD, and the TSA, the ARCC provides an around-the-clock capability for maintaining general awareness of airport activity and resolving routine issues requiring coordinated action. Physically adjacent to the DOC, the ARCC also provides information and facilitates coordination in support of emergency response operations. During LAWA's response to the incident on November 1, 2013, gaps in DOC/ARCC procedures and staffing inhibited it from reaching its full potential as an information and coordination clearinghouse.

Background

The organization and technological capability of the ARCC provides it with a unique perspective on airport-wide activity. ARCC personnel have access to information concerning airfield operations, passenger terminals, roadways and parking lots, and the general situation around the airport perimeter. In addition, inclusion of the LAWAPD Airport Police Information and Intelligence Center (APIIC) provides the ARCC Duty Manager with direct access to information concerning law enforcement activity, to the extent that activity is not law enforcement sensitive. The intended focus of the ARCC in an emergency response is to help integrate information from across operations, facilities, emergency management, and public safety in a way that supports decision-making. It is also intended to use its everyday connections to various airport functions to enable cross-airport collaboration at the request of the DOC Director. (The ARCC Duty Manager transitions to the DOC Director upon activation of the DOC.)

Importance of a Common Operational Picture – The ARCC has at its disposal an array of technology and other resources to assist in its mission. This includes, but is not limited to access to all LAWA closed circuit television (CCTV) cameras; crisis management tracking and reporting software; geographic system (GIS) mapping; fire safety systems; and an alerting and mass notification application called Everbridge. Integration of much of this information is to occur through a program known as Situator. Situator is designed to be the ARCC tool that melds incident related information in to a single common operational picture. The phrase *common operational picture* (COP) is taken from military usage and represents the idea of a single identical depiction of incident-specific information that can be accessed by multiple units. This literal "picture" supports shared situational awareness for collaborative planning and coordinated operations. The result of having a common operational picture is that everyone… *knows the same thing, at the same time, and in the same way*. More than anything, the primary product of the ARCC should be a relevant common operational picture.

Incident Alert and Notification – On the morning of November 1, the ARCC Duty Manager first learned of the incident when he heard the initial reports of a shooting in Terminal 3 broadcast over the LAWAPD radio channel he happened to be monitoring. He confirmed the incident with APIIC staff in the ARCC who were already conducting an initial round of law enforcement notifications through the Everbridge system. He then contacted Airport Operations management personnel to initiate their

response and broadcast a radio warning over the OPSMAIN channel to alert other operations personnel in the vicinity of the incident to exercise caution. Through the monitoring of cameras, ARCC staff began to see passengers self-evacuating onto the airfield from Terminal 3 and initiated actions to close the neighboring taxiway and marshal airfield buses to contain and transport the passengers away from the scene. The ARCC Duty Manager continued to personally make notifications in accordance with standard procedure and then directed immediate activation of the LAWA DOC.

LAWA DOC Activation – On activating the DOC, the ARCC Duty Manager assumed the role of DOC Director, appointed a replacement ARCC Duty Manager, and went about organizing the staffing of positions in the DOC. This was done first by stripping a portion of the ARCC shift already in place and then by filling in with supplemental LAWA personnel as they arrived. As a part of this transition to DOC activation, ARCC personnel were required to physically leave their workstations in the ARCC and move across the floor and into a separate room to activate their DOC workstations. The DOC room is not staffed and its systems and workstations are normally maintained in a "cold" state until activated. This left certain ARCC roles uncovered during the critical early stages of the incident.

Throughout the remainder of the incident, the ARCC worked in support of the DOC in an attempt to reinforce information exchange and assist the DOC in its coordination of non-public safety aspects of the response not being addressed by the ICP. By most accounts, the DOC/ARCC played minimal role in support of the ICP, and the ARCC never produced a common operational picture.

Analysis

Since normal ARCC functioning was interrupted in the transition to DOC activation, there was some loss of situational awareness and continuity of ARCC operations during the critical early moments of a rapidly developing emergency situation. The ARCC Duty Manager, as senior Airport Operations representative in the facility had to pull away from the ARCC to get the DOC in a ready state and plug ARCC staff into key DOC roles, all while personally attempting to make key notifications of LAWA senior leaders. As this process unfolded, communications activity in the ARCC and DOC began to increase in tempo. During the confusion of that activity, a key ARCC role – the release of a second round of alert notifications via the Everbridge system – was not initiated until much later.

ARCC and DOC Operational Models – The current cooperative model of the ARCC certainly provides great benefits to LAX in handling of routine incidents. In that day-to-day model, the ARCC Duty Manager essentially performs as a "broker," facilitating the sharing of information and enabling voluntary collaborative efforts across the LAWA organization. Personnel in the ARCC act as liaisons from their various organizational units and disciplines making connections and providing value where they can. This is unlike the functioning of an incident command facility such as the DOC where members step out of their functional roles and perform as an integrated team. That team works together to achieve a common set of objectives in direct support of response activities and under the orchestration of an operations center "director." On activation, the ARCC is an extension of the DOC, and as such should support incident management processes while also handling more routine tasks.

Procedures, Staffing and Training – Lacking sufficient training and experience, the DOC Director and the ARCC staff assigned to the DOC reverted to what they knew best. They performed their DOC roles

much in the same fashion they normally do in the ARCC. They brokered information sharing and collaboration but did not do any planning or otherwise help manage the totality of the response effort as an important adjunct to activity in the ICP. This would include producing a common operational picture. Moreover, there is no definition of what a COP is at LAWA; no procedure for creating and maintaining one; and no means to get that picture to the ICP on a regular basis for use in coordinating the response and synchronizing the activities of the ICP and DOC.

The paradox of building and sharing situational awareness is that the DOC/ARCC has to get information if it is going to refine it and give it back. The DOC/ARCC will only get that information if those units that must give it (the ICP and others) feel that what they get in return is value added. The ICP did not continually inform the DOC/ARCC nor did the ICP request DOC/ARCC help in painting a common operational picture of the broader emergency. The ICP simply did not see the DOC/ARCC as relevant and/or did not understand or appreciate its intended purpose or capability. The ARCC as an arm of the DOC has great potential value in better informing the response to any emergency. Despite its technology, that value was not fully realized on November 1 due to lack of procedures and training.

Recommendations

Recommendation 3.1: Create and codify procedures for the ARCC that support the production of a daily common operational picture and associated briefings necessary during incident response.

An old military saying is… *"You will fight as you train."* The ARCC works well for its intended day-to-day purpose, but this model is not wholly supportive of its functioning in a high-pressure, time-compressed environment such as an operations center in the midst of a crisis. The rhythm and daily processes of the ARCC simply must mirror those that will be employed on DOC activation so that the transition is as seamless as possible. The ARCC staff must also work together as a team and practice the kind of information gathering, status monitoring, situation reporting, and operational briefings that it would support subsequent to activation of the DOC in a real emergency. In doing so, it will hone these skills and be much better prepared to create a common operational picture at the outset of an emergency. LAWAPD and airport operations should work together to define the common operational picture requirements and dissemination processes for use within the DOC and the ICP.

Recommendation 3.2: Define requirements and process for maintaining continual situational awareness across all airport functions and the systems necessary to facilitate information exchange.

The ARCC's ability to create a common operational picture in the heat of a crisis will be largely dependent on its ability to maintain continual situational awareness across not only the general operations of the airport, but also all aspects of an ongoing emergency response. To do this, information requirements from various LAWA activities will need to be better defined and the processes for situation reporting and continual exchange between the ICP and the DOC/ARCC will need to be stipulated and reinforced in training and exercises. The posture in the DOC/ARCC must become one of being energetically proactive in organizing and pushing out situational awareness information, rather than being reactive and waiting for requests from the incident command team. Synchronizing the operational rhythm (e.g., schedule for reporting, briefings, and shift changes) will be vital to ensuring that the exchange between the ICP and DOC/ARCC is productive and mutually supporting.

Recommendation 3.3: Align ARCC organization, staffing, and technology as needed to perform as the de facto first level of DOC activation and the core of the DOC planning section thereafter.

Because there is tremendous interdependency between the missions of the ARCC and DOC, leaving them as structured (as two separate operating theaters) creates artificial barriers to communication, coordination, and support. The ARCC and DOC should be combined as a DOC that operates at a first-level of activation on a day-to-day basis. When the DOC is moved to the next level of activation (the staffing of incident command positions), the ARCC should work in support of the DOC Planning Section. Day-to-day functions should not be stripped to fill incident command positions but instead should continue to function and build the common operational picture, handle communications, and support rapid assessment and mobilization. A DOC custodian should turn-on DOC systems kept in a ready "warm" state and prepare those for the arrival of qualified incident command leadership.

Observation 4: Alert and Response Mobilization

The right systems, clear lines of responsibility, and well documented processes for alert notification are critical to avoiding delay in mobilizing a response during the early stages of any emergency.

Timely and accurate communication throughout the lifecycle of an event is essential to enabling a more effective overall response. The ongoing cycle of alert, notification, and response begins with the very first report of an emergency. The means for that initial alert must be available, reliable, and support the rapid communication of the essential *"who, what, why, where, and when"* of the situation. With as much information as can be obtained, public safety officials can then immediately dispatch help to the scene and notify others who need to support the response or otherwise have a need to know. Ongoing notification of response personnel must likewise provide for timely and accurate situational awareness.

Background

At the onset of the active shooter event of November 1, 2013, the initial public alert to LAWAPD was immediate and the response by LAWAPD Communications and police officers was swift and effective. There was no delay in getting the right help to the scene and the situation was resolved within minutes. However, the incident surfaced some issues that could be problematic in another emergency if not corrected. These include duress phones ("Red Phones") at TSA screening stations; the method of routing of 911 calls to LAWAPD; capacity to handle high call volume in the LAWAPD Communications Unit; and the processes and division of responsibility for LAWA staff and stakeholder notifications.

LAWAPD Communications and the APIIC – The LAWAPD Communications Unit handles incoming emergency calls and dispatching of public safety personnel to emergencies at LAX. The unit monitors the status of these incidents, helps coordinate the deployment of police units, makes emergency notifications, and provides status updates to key LAWA personnel and other law enforcement partners. Another point of alert and notification is the LAWAPD APIIC located in the ARCC.

The APIIC performs the following functions: provides information on the status of airport operations to the LAWAPD Communications Unit and operational supervisors; monitors LAWAPD and airport operations radio traffic for situational awareness; shares non-sensitive information on the status of

police operations with the ARCC Duty Manager and staff; ensures liaison with the TSA representative to the ARCC; and, as of November 1, was responsible for making an initial round of Everbridge notifications. The protocol at the time was for the APICC to make the first set of Everbridge notifications to public safety stakeholders and then the ARCC would send a second set to an expanded list of airport staff and associated partners. Everbridge is an alert and mass notification system that speeds the emergency notification process.

Alert Capabilities – Alerts to emergency situations and calls for assistance can be received by LAWAPD in a number of ways. These include radio calls from officers in the field; notices from the ARCC via the APICC; 911 calls received by other police agencies and routed to LAWAPD; and direct calls made to LAWAPD via its own unique emergency call number – (310) 646-7911. It can also receive direct calls from LAX in-house airport phones by callers dialing 6-7911. LAWAPD is not a Public Safety Answering Point (PSAP) for the handling of general 911 calls made over the commercial network.

When 911 calls are made from non-LAWA phones at LAX, they go directly to LAPD and are routed back to LAWAPD. When 911 calls are made from mobile phones on the airport or in the vicinity, they are answered by the California Highway Patrol (CHP) and are likewise routed to LAWAPD. In addition to these general methods of alerting LAWAPD of an emergency, there are Red Phones located at each TSA passenger checkpoint to permit immediate and direct communications with Airport Police. TSA can also reach LAWAPD via the posted emergency number or via the TSA representative in the ARCC who in turn would relay that information to the LAWAPD Communications Unit via the APIIC.

Initial Alerts – On November 1, the first indication of an emergency came at 09:19 AM, immediately after the first shots were fired. This alert came via a call from the Red Phone located at the Terminal 3 TSA passenger checkpoint. An unidentified TSA agent apparently picked up the Red Phone but immediately dropped it in the hasty evacuation from the checkpoint. The LAWAPD operator only heard the sounds of shouting and gunshots. With no caller identification for a call from a Red Phone, and no one on the other end of the line, it was not initially known from where the call originated.

The next alert came immediately following at 09:20 AM from an airport employee who made the call to LAWAPD from his personal mobile phone and advised that a shooting had just occurred at Terminal 3. LAWAPD dispatcher immediately broadcast a notification of shots fired on the primary LAWAPD radio channel and thus initiated the police response. A steady stream of telephone calls and radio communications into the LAWAPD Communications Unit followed, nearly overwhelming the operators. These included direct calls from people in the vicinity of the shooting and continuous calls from LAPD and the CHP communications centers relaying calls they received from their 911 systems.

Emergency Notifications – As the LAWAPD Communications unit was handling the deluge of calls and coordinating the LAWAPD response at Terminal 3, it was also simultaneously making emergency notifications to numerous internal and external stakeholders by radio, phone, text messaging, and E-mail according to pre-identified lists. The LAWAPD APIIC was making other notifications using the Everbridge mass notification system from the ARCC. ARCC airport operations personnel made still more notifications, again using the Everbridge system, and via phone calls made personally by the DOC Director in accordance with standard protocol. All of this was in addition to external notifications to other stakeholders made by the LAWA Media and Public Relations Division via E-mail and phone.

Analysis

LAWAPD candidly acknowledges that many airport residents and most travelers and visitors who transit the facility do not know how to contact Airport Police in an emergency. The LAWAPD phone number – (310) 646-7911 – is not well known, well posted, or user friendly. Unless a caller knows and has access to an in-house airport phone, emergency 911 calls go directly to either the LAPD or CHP and must be relayed to LAWAPD. This can cause delay and introduce the opportunity for error. The Public Safety Working Group discovered technical malfunctions in the emergency alert systems at the Terminal 3 TSA passenger checkpoint. Moreover, the working group reports that an airport-wide audit of Red Phone and panic alarms found that some of these devices were also not working properly.

On notification of the incident, the APIIC, which resides within the ARCC, was requested to issue immediate Everbridge notifications to key stakeholders. At 9:25 AM, the APIIC sent a message to the Law Enforcement Notification Group only. That list of notifications was limited to a select set of personnel from airport operations, airport police, and LAX executive management. At 10:15 AM, it was brought to the attention of the LAWA DOC Director that Everbridge notifications were not being sent to all key stakeholders. Though the DOC Director took corrective action, in the heat of DOC activity, those additional notifications did not go out until 10:54 AM, almost an hour and thirty minutes after the initial shooting took place. Since November 1, LAWA learned that a number of the Everbridge notifications either went to the wrong recipients or did not connect with their intended targets as the lists needed to be updated. Those updates have since been completed by LAWA.

In addition to the tremendously high call volume into the LAWAPD Communications Unit that would normally be expected from such an incident, problems with mass notification meant that some stakeholder organizations reached out to LAWAPD directly for information on the emergency. Added to this were the insatiable and persistent inquiries of the media for information, which further served to hamper the unit's ability to devote time and attention to more pressing operational communications. These same issues spilled over into the ARCC, which also found itself expending considerable energy on handling the high volume of requests for information and guidance coming from a variety of sources.

In every emergency there is an ongoing cycle of alert, notification, and response that repeats itself as the situation unfolds. The more timely, actionable, and targeted the information, the more rapid and successful the response. The interdiction of the shooter on November 1 was quick and successful because a sharp airport employee knew who to call and what to say, and the LAWAPD dispatcher could calmly inform and guide the responding officers to where they were needed to prevent further tragedy.

Speed is life. LAWA alert and notification systems and protocols must be designed to be available, reliable, and support the rapid communication of essential information. Improvements are needed in handling 911 calls; the reliability and automatic identification of Red Phones; management of stakeholder notifications; and LAWAPD Communications Unit and ARCC capability to manage call volume.

Recommendations

Recommendation 4.1: Explore and make needed enhancements to emergency alerting methods, technologies, and protocols to include 911 call handling and a more reliable Red Phone system.

The current fragmentation of systems and communications channels for initial public alert need to be better integrated to ensure that the LAWAPD Communications Unit can handle every call as it did on November 1. The regional 911 system serving the airport needs to be rationalized and a study conducted on the feasibility of establishing the LAWAPD Communications Unit as a secondary Public Safety Answering Point (PSAP) to handle 911 calls. A modification in the routing of 911 calls made from mobile phones on and in the vicinity of the airport should also be considered. Red Phone reliability and functionality improvements should be implemented to include the incorporation of caller identification technology. A comprehensive awareness program should be developed to ensure that LAX tenants, employees, and the traveling public are aware of how to contact LAWAPD and the essential information required in an emergency.

Recommendation 4.2: Ensure singular responsibility for administrating notification processes and systems as an integrated program and perform audits, tests, and updates on a regular basis.

On November 1, at least four separate LAWA units made emergency notifications to large audiences of stakeholders through a wide variety of technologies and from an even larger array of contact lists; some of these were of questionable accuracy. There was considerable duplication of effort, no central monitoring or accountability for what messages were sent, to whom they were sent, and whether they actually reached their intended audiences. Though it may be necessary that notifications to different audiences be handled by different units, related methodologies, messages, and technologies should be harmonized under a single integrated program and monitored centrally for quality control. The DOC/ARCC should serve as that single point of control for ensuring an effective notification effort.

Recommendation 4.2: Address core staffing and augmentation support needed in the LAWAPD Communications Unit and in the communications and call handling functions of the DOC/ARCC.

The LAWAPD Communications Unit and the DOC/ARCC are staffed to support steady state operations and not the tremendous call volume experienced on November 1, 2013. After filling any current vacancies in the LAWAPD Communications Unit, LAWA should conduct an analysis of call traffic handled on that day and consider strategies for flexible scaling of call-handling capability in an emergency. Those strategies might include: additional communications positions kept in a “warm” ready state; an on-call cadre of employees trained to handle dispatch functions; rolling-over calls to other emergency communications centers; and/or a call center contract that can be activated in an emergency. Staffing of the DOC/ARCC communications suite should likewise be evaluated.

Observation 5: Interoperable Communications

Unity of command and effective coordination of interdependent response operations rely greatly on a well-integrated and rehearsed communications plan and having interoperable equipment.

Incompatibility of radio systems is one of the most common problems facing first responder agencies. The ability of police, fire, EMS, and emergency management units to communicate with whom they need to, when they need to, and as authorized is essential to sharing information, coordinating operations, and ultimately saving lives in a crisis. The multi-agency response to the November 1, 2013 active shooter incident involved many local, state, and federal agencies, LAWA civilian operations, and private sector partners. Communications among all of these entities proved a daunting challenge.

The communications challenge was especially acute among the large number of police agencies that deployed in support of LAWAPD. Many of these agencies took a direct part in the massive effort to provide perimeter protection and help clear and secure the LAX CTA of any remaining threats to the airport population. This effort required coordinated operations over a wide area and a readiness to respond together if any new threat emerged. The lack of interoperable radio communication between LAWAPD and LAPD and its regional partners made it difficult for the ICP to track what was cleared and what remained, and to redirect assets as needed.

Background

In 2011, and in advance of many regional public safety partners, LAWAPD upgraded its communications platform to a trunk radio system compliant with the DHS SAFECOM and Project 25 (P25) inter-operable digital two-way wireless communications standards as endorsed by the Los Angeles Regional Interoperable Communications System (LA-RICS). The trunk-radio system allows for pooling of the current frequencies owned by LAWA instead of dedicating a single frequency to a single channel. The advantage of this system is that it allows numerous users to create Talk Groups to conduct their business without having to set aside separate frequencies for each user, thereby maximizing capacity. The cost of that investment was about $5.4 million. The new system, though compatible with national and regional standards, meant that LAWA would have improved internal radio communications, but not be interoperable with many of its public safety partners, until they too upgraded to those standards.

On the day of the LAX shooting, more than 20 different agencies responded to the airport in various capacities with very little in the way of interoperable communications. Of special note is that when senior LAPD and LAFD commanders arrived on scene, lacking communications interoperability with LAWAPD, each was unaware of what the others were doing and where exactly the LAWAPD ICP had been established. Initially, communications with other agencies had to be relayed through each organization's own communications center. This was, at least in part, why achieving Unified Command and unity of effort at Terminal 3 was somewhat delayed. Members of the ICP supplemented radio communications with the use of cell phones because they were more effective, though that method would not necessarily have been reliable in a larger regional emergency.

Analysis

The LAPD, Los Angeles Sheriff's Department, and the police departments of the South Bay cities continue to operate on conventional radio systems. As a result, their communications with LAWAPD are limited to a single "Access Channel." This frequency is patched with a LAWAPD trunk talk group for interoperability. Unfortunately, a single point of communication across all of those agencies is not sufficient to manage a large-scale multi-agency event, such as the one on November 1. During that response, multiple channels/talk groups were needed and communications could have been divided based on joint activities and not just agency. Examples of such activities include traffic control, crowd management, perimeter security, and special operations. Being the only agency in the area on a trunk system, LAWAPD is unable to maximize the full capability of its radio technology and integrate with and enable coordination among the regional agencies that may support responses to future incidents at LAX.

Lacking interoperability means that LAWAPD units are also limited in their ability to maintain situational awareness concerning activity within surrounding jurisdictions that may have implications for LAX safety and security or require interagency mutual aid. LAX borders the cities of El Segundo and Inglewood and is within the city limits of Los Angeles. Each of these agencies operates on a separate conventional radio system. If these systems were interoperable, LAWAPD radios could be programed to monitor the activities of the neighboring cities and be aware of calls for service. All LAWAPD radios are programmed with LAPD Pacific Base frequencies and can easily be accessed by LAWAPD officers. However, LAWAPD leadership has expressed concerns about having to switch frequencies in a fast moving event, where it might be safer for a supporting agency not so heavily engaged to switch to an LAWAPD frequency.

LAFD operates on an 800 MHz frequency, which is not compatible with the LAWAPD radio system. However, LAFD vehicles operating at LAX are equipped with UHF radios that can be programmed with LAWAPD frequencies. Currently, LAWAPD has provided a single hand-held radio to each of the LAFD Battalion 4 vehicles serving LAX to allow them access to the LAWAPD trunk radio system. In addition, LAWAPD and LAFD are in discussion to program LAFD UHF mobile radios with LAWAPD trunk talk groups.

There is currently no easy solution to the interoperability dilemma faced by LAWAPD. LAWA has made a significant investment in a radio system that meets current interoperability standards while other regional agencies have not made similar upgrades. The LA-RICS program, after years of delay, is recently gaining momentum but the full build-out of that system is still years away. LAWAPD should continue to engage in the LA-RICS initiative, but short-term improvement may only come from a less-than-optimal set of fixes until more universal regional interoperability is achieved.

Recommendations

Recommendation 5.1: Expand efforts to work with LAPD, LAFD, and other public safety partners through the Los Angeles Regional Interoperable Communication System (LA-RICS) initiative.

In 2009, public agencies in the Los Angeles area entered into a Joint Powers Agreement to establish the LA-RICS. This agreement allowed members to establish a wide-area interoperable public safety communications network and provide for common standards for continually evolving interoperable communications platforms used by more than 80 police and fire agencies in the area. As a collection of agencies similarly grappling with the challenge of interoperability, LAWAPD can benefit from this

association as it negotiates and develops agreements to strengthen interoperability of its communications network with those of their closest mutual aid partners. As a priority, LAWAPD should explore long and short-term technology options to ensure more complete interoperability with LAPD and LAFD.

Recommendation 5.2: Pursue acquisition of a communications van to serve as an interoperability hub in support of incident command post operations and procure a cache of additional LAWAPD radios.

While LAWA has invested deeply in new communications technology, interim solutions must be found and implemented if the current interoperability gap is to be bridged between LAWAPD and its closest mutual aid partners. Increased flexibility in interagency communications can be achieved by acquiring a cache of LAWAPD radios to deploy with the supervisors of mutual aid partners responding to a major LAX emergency. While this will not solve the interoperability problem, it could go a long way to making command and control in a crisis like November 1 somewhat more manageable. LAWAPD should also consider the purchase of a communications van equipped with radio technology compatible with its local, state, and federal partners. That van would serve as a communications hub at an ICP and provide a back-up alternative to the LAWAPD dispatch center, should that center ever be disabled.

Recommendation 5.3: Develop a comprehensive communication plan annex to the LAX Airport Emergency Plan (AEP) that incorporates local law enforcement, fire, and federal agency partners.

As part of LAWA's ongoing AEP annex development, a Communications Annex is already programmed for drafting. That annex must align with and support not only the multi-agency incident command framework outlined in the base AEP, but also the more tailored implementation of the AEP's scenario-based operational annexes that may have their own unique communications requirements. The plan will notionally describe the allocation of communications equipment and spectrum by unit, function, channel/talk group, as well as alternative communications means should the primary assignments be somehow compromised or not available. All communications modes, not just radio, should be considered (e.g., satellite phones, voice-over-IP, etc.). The practice of developing incident specific communications plans as a part of the IAP process should also be reinforced during on-going training and exercises. Communications exercises with LAWAPD mutual aid partners, especially LAPD, are strongly encouraged.

Observation 6: Evolution of Incident Command

Disciplined build-out of the incident command structure and deliberate integration of all response partners is key to achieving unity of command and leveraging the full capability of all available assets.

The response to and recovery from a no-notice incident requires rapidly developing an emergency response organization that integrates the efforts of numerous agencies and jurisdictions, each with different roles, responsibilities, and capabilities. That organization begins with the first arriving public safety official and establishing an ICP. It then continues on through response to recovery and the ultimate return to normal operations. Development of that organization evolves over time and must build the capacity to manage the totality of the event. It must include not just the ICP and first responders at the scene, but also the operations centers and leadership structure that are vital to managing a collective multi-agency response and recovery effort.

In addressing the active shooter incident on November 1, 2013, the participating public safety agencies each made a determined effort to implement incident command practices in the management of response operations. This was particularly true in the ultimate establishment of collaborative and unified joint-agency command and the manner in which resources from various agencies were blended together to form integrated teams to accomplish a variety of operational tasks. Although Unified Command was achieved, it was initially slow to develop, the ICP did not evolve sufficient capacity to accomplish key incident management tasks, and it lacked adequate representation from civilian operations to help focus and address non-security issues. Even though it was ultimately successful due in large part to a terrific spirit of interagency support and cooperation, there is general consensus that, with more robust evolution of incident command, recovery may have been accelerated.

Background

Response to a complex incident requires the coordinated efforts and resources of numerous independent agencies, organizations, and jurisdictions. The Incident Command System, a pillar of the NIMS, provides a standardized incident management approach to unify all response activities within a common organizational structure that is designed to achieve unity of effort and a shared set of incident objectives. ICS is predicated on nine principles that guide its application: unity of command; modular organization; manageable span of control; consolidated incident planning; management by objectives; integrated communications; common terminology; comprehensive resource management; and designated incident facilities (e.g., ICP, staging areas, etc.).

ICS structure is meant to be scalable and flexible. It can be expanded and contracted as needed depending on the nature, scope, and complexity of the situation. The principles of unity, modularity, and span of control are reflected in the five major sections of ICS structure, which include Command, Planning, Operations, Logistics, and Finance and Administration. Although in the early stages of an emergency these functions are typically dominated by public safety leaders, ICS encourages integration of key civilian capabilities and interests as essential to managing the totality of the crisis. The integration of all relevant stakeholders is in keeping with what is called a “whole-community” approach. Emergency response and recovery, especially at an airport, demand such an approach. Civilian emergency management and airport operations counterparts need to be fully embedded in the incident command structure at the outset. If not, the failure to adequately address non-public safety issues and incident objectives (e.g., mass care, disaster recovery, etc.) could compromise the entire operation.

During the initial response to the November 1 incident, responding agencies immediately began to implement ICS and took steps to develop Unified Command. As the active shooter incident began to unfold and tactical teams entered Terminal 3, the LAWAPD Watch Commander obtained the LAWAPD command vehicle and established an ICP outside the terminal. The ICP initially had representation from LAWAPD, LAPD Field Services Branch, and Airport Operations. LAPD resources arriving from offsite established their own ICP, but identified the duplication of effort and relocated to the LAWAPD ICP by 10:05 AM. Similarly, LAFD initially established a separate Fire Command and Staging Area on the upper level on the east end of Terminal 2. The LAFD Incident Commander eventually relocated to LAWAPD ICP. At that point, UC was established with representation from the lead response agencies. The

Unified Command held its first incident objectives meeting at 11:00 AM and efforts were made to organize responding assets into a single ICS structure for the incident.

Analysis

Even though all responding agencies made a strong commitment to implement ICS and a Unified Command approach to managing the incident, there were several areas in which more disciplined application of incident command doctrine and processes would have benefitted overall efforts at response and recovery. These issues relate to the ICS principles described above and include: 1) differences in perspective around the scope and focus of the incident command team (unity of effort); 2) the structure and capability needed to support incident management (scalable organization); and 3) how efforts to achieve objectives would be synchronized (incident action planning).

Unity of Effort –The agencies involved were committed to collaborative decision-making within the Unified Command and Airport Operations was included in all decision-making; however, the intense focus of public safety leadership on the tactical situation tended to narrow their perspective to that aspect of the emergency alone. Such emergencies can place responders under unimaginable stress, often causing them to mentally narrow their focus on doing what they know and migrating toward who they know best.[6] No matter how well meaning the intent toward collaboration, this narrowing actually works against real collaboration and reinforces an organizational bias that can limit how leaders view the scope of the problem and who should be involved to solve it. In this case, the Unified Command saw its role as addressing the shooting and not the larger airport emergency.

On November 1, there were two emergencies, one a result of the other. There was the active shooter event to include residual security concerns and then there was the larger airport-wide disruption. The first of course was of greater priority, but they were interdependent. While airport recovery was high on the minds of the senior leaders in the Unified Command, and it was discussed in the development of incident objectives, this priority did not carry forward into either the build-out of the incident command organization or in deliberate incident action planning. This impacted things like delay in getting mission-essential civilian personnel into the airport to enable recovery, lack of awareness at the ICP about mounting mass care needs, and less than seamless transition between airport-wide security operations and terminal restoration efforts. In addition to simple differences in organizational perspective, Unified Command's lack of awareness and thus attention to non-security priorities was further compounded by the lack of strong and sufficient representation in the ICP by Airport Operations to address these sorts of non-security issues.

Scalable Organization – While Unified Command did assign Section Chiefs for three of the four top-line components within the ICS structure (Operations, Planning, and Logistics), only the Operations Section was further built out and organized into branches with the assignment of resources from the various public safety agencies. With a priority focus on security objectives, neither civilian airport operations nor facilities management was included in the structure of the Operations Branch. Their omission tended to hamper police - civilian coordination on mass care and recovery concerns and unnecessarily limited the Unified Command's access to civilian operational assets should those have been required.

In large multi-agency operations, the Planning Section is essential to maintaining situational awareness, shepherding the incident planning process, drafting the Incident Action Plan (IAP), and forecasting the needs of future operational periods and phases of the response. Likewise, as the scale of an emergency response expands, so do the resources to support it. The Logistics Section provides resources, facilities, services, and material to meet the requirements of the ICS organization, as well as technical support for interoperable communications. Figure 4 provides two examples of how ICS can be adjusted (expanded or contracted) to meet the needs of the response. It also shows the relationship between functions to include the notional build-out of the Planning and Logistics sections. The structure for an incident of the scale of November 1 would normally be closer to the smaller of the two charts, with the exception of the further build-out of the branches under Operations and what should have been the inclusion of airport operations and facilities management resources.

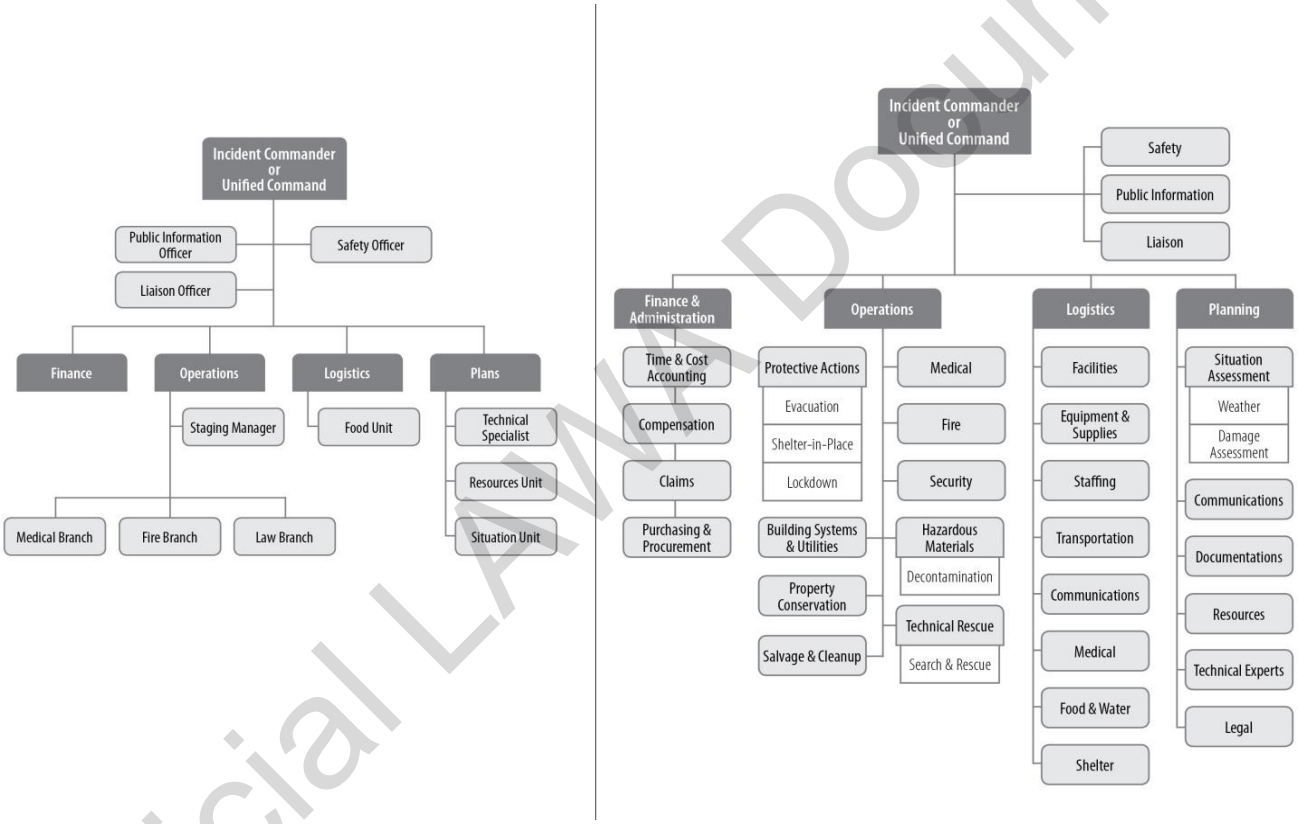

Figure 4: Examples of Differently Scaled ICS Organizational Structures

As the incident on November 1 expanded in scale and complexity, limited staffing and build-out of both the Planning and Logistics Sections created challenges for Unified Command. Rather than fully delegate tactical responsibility for law enforcement and EMS operations to the Operations Section Chief, members of the UC directly engaged in controlling tactical employment of assigned resources. With the Unified Command unable to fully organize ICP functioning, the Planning Section did not evolve and grow as conditions warranted. Thus the Planning Section did not develop full situational awareness of the larger emergency or advance a deliberate process of incident action planning in

anticipation of emerging events on behalf of Unified Command. As a result, Unified Command assumed the planning role in addition to control of tactical operations. This limited its ability to step back and appreciate the extent of the larger emergency or address non-security issues.

Focused on both planning and controlling tactical operations, and lacking the advantage of the fuller situational awareness that the Planning Section should have provided, Unified Command had neither the time nor perspective to better engage on the non-security aspects of the emergency. Moreover, less than full build-out of the Planning Section meant that key tools and artifacts of incident management (e.g., maps, status boards, inventory of resources, etc.) were not available to the Unified Command making the job of command and control in such a situation all that more difficult. Personnel filling key incident command roles were simply not sufficient in number or prepared with the training, equipment, or technology needed to support an incident of this magnitude.

Incident Action Planning – A consolidated planning effort is vital to establishing incident objectives, defining the resources and organization needed to achieve those objectives, and guiding coordinated employment of those resources to accomplish operational tasks. This work is largely accomplished through the Incident Action Planning process, also known as the Planning "P."

As shown in Figure 5, planning activities begin at the initial response and provide an iterative framework where Unified Command assesses incident requirements, develops clear and concise incident objectives, and creates an IAP for the upcoming operational period. The IAP is provided to responding agencies to explain how resources will be organized and managed within a single ICS structure to accomplish operational objectives. Even though the process is structured, it should be considered a mental model that can be accomplished at any level of rigor and in the field without the need for excessive documentation. What is important is that it provides a predictable and dependable cycle of planning and decision-making.

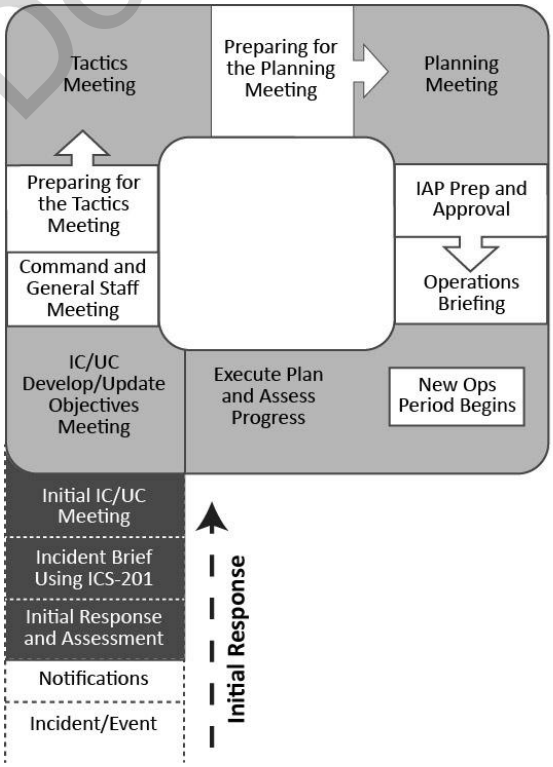

Figure 5: FEMA Planning "P"

Without a robust Planning Section to facilitate this deliberate process, or Logistics Section to anticipate resource needs as inputs to planning, Unified Command needed to spend precious leadership time reconciling and harmonizing incident objectives and associated resourcing strategies. It was also forced to continually troubleshoot and make adjustments – checking, rechecking, making assignments, and then making reassignments – which created confusion among responders. This took away from Unified Command's ability to see the broader emergency unfold and engage, coordinate with, and as needed employ LAWA civilian counter-parts in addressing non-security issues like mass care and the deliberate planning needed for a speedy transition to recovery.

The complexity of conducting multi-agency emergency response and security operations at a major airport like LAX requires rapid and disciplined build-out of ICS structure, full inclusion of all disciplines - public safety and civilian - in that structure, and application of a deliberate and predictable process of planning and decision-making that can effectively drive response and recovery operations.

Recommendations

Recommendation 6.1: Make efforts to address the naturally occurring organizational bias that may inhibit full integration of public safety and civilian operations in unified incident command.

On November 1, the professionalism and spirit of interagency collaboration among all of the agencies involved was the primary factor in what was a remarkably successful response to a very serious threat. Public safety leadership was very mindful of the importance of resolving the security issue as safely and rapidly as possible and included civilian operations in all decision-making. However, a tendency for public safety to see the incident in primarily security terms and a tendency for civilian operations not to fully assume its role with a stronger place in the incident command structure meant that the voice of operations was not as strong as it should have been. Joint civilian-public safety training and exercises would help further strengthen the growing spirit of collaboration even further.

Recommendation 6.2: Expand LAWA's Readiness Assessment and Performance Improvement Drills to train and evaluate staff in executing incident command and the build-out of an ICS organization.

An important opportunity for building greater public safety-civilian operations familiarity is in the newly launched incident command training program – Readiness Assessment and Performance Improvement Drills (RAPID). RAPID is designed to strengthen the skills of LAWA personnel who will fill key incident management roles in an emergency. An important factor on November 1 was a lack of people with the necessary training, equipment, and technology. The capability to "rapidly" establish the logistics of a fully functioning ICP would have better supported the Unified Command and freed leadership to address more strategic concerns. RAPID workshops and exercises should drive joint ICS readiness and stress greater public safety-civilian integration.

Recommendation 6.3: Advance on-going "position-specific" training for police, civilian personnel, and public safety partners to ensure readiness to fulfill key roles in the incident command structure.

Part of creating a robust ICS structure is ensuring enough properly trained and experienced personnel are available to fill key roles during an incident. LAX has created a "tiered" system symbolized by color (similar to the different colored belts that classify Six Sigma) to incentivize staff to improve their emergency management and response abilities. They have also partnered with the City of Los Angeles Department of Emergency Management to provide airport staff with position-specific courses. Position-specific training readies select staff to fill key roles in the ICS structure (e.g., Planning Section Chief, Logistics Section Chief, etc.). Lack of qualified staff to fill these roles was largely the problem that prevented the build-out of the ICS organization. There were a lot of people around to help but not many with the skills and experience to do what was needed on behalf of leadership. Roles like Logistics Chief do not need to be done by a public safety official who might otherwise be better used.

Observation 7: Incident Command Post (ICP) and Supporting Capabilities

The ICP must be secure, well-organized, in reasonable proximity to the emergency, have the staff and technical capability needed to maintain situational awareness, and enable command and control.

The incident on November 1, 2013 is a reminder that what may first begin as a straight forward "call for service" may rapidly escalate into a much greater emergency, particularly at a facility like LAX. Decisions made by the first arriving supervisor concerning the establishment of an ICP could determine how well response operations unfold from there. Moreover, the unique aspects of public safety and emergency management at LAX make it imperative that the airport maintain a robust capability to quickly support an ICP with the equipment, systems, and vehicles necessary to give an incident commander the greatest possible advantage in managing a crisis.

Though Unified Command was established and multi-agency coordination was sufficient to successfully resolve the emergency on November 1, the location of the ICP posed security and operational risks and there were shortfalls in some of the most basic incident management capabilities available to LAWAPD. These factors made the functioning of the ICP less than optimal and placed drag on the ability of the Unified Command to conduct response operations. This in turn had an impact on the speed of recovery.

Background

The Incident Commander or Unified Command needs a physical location from which to establish the ICS organization, direct on-scene tactical operations, conduct incident planning, and communicate with other incident facilities and response assets. The selection of an appropriate ICP location must take into consideration the hazards presented by the incident and/or weather conditions, the technical capabilities required to support operations and interoperable communications, the proximity to the incident site and associated incident facilities, and the anticipated duration of the response.

To meet the needs of a rapidly expanding incident, the ICP must be large enough to accommodate essential staff and equipped to provide the needed technology to facilitate communications and conduct interactive planning activities with other ICS facilities and outside locations. It must also be secure enough to provide an element of safety for ICP staff and near enough to the incident location to be accessible to responders and executive leadership. An ICP may change locations during the event and be located in a vehicle, tent, or building; but wherever it is, it must be functional.

On responding to the shooting on November 1, the LAWAPD Watch Commander followed standard protocol to obtain the LAWAPD command vehicle and travel to the incident location to establish an ICP. The position selected was outside and on the upper roadway adjacent to Terminal 3. Separate ICPs were initially set by LAPD and LAFD, but they were soon abandoned as these agencies transitioned to Unified Command with LAWAPD. In addition to the LAWAPD command vehicle, both LAPD and LAFD brought command vehicles of their own. This assembly of vehicles served as the Unified Command ICP and the location from which LAWAPD, LAPD, LAFD, and Airport Operations would jointly orchestrate response activities for the majority of the incident.

As the Incident Commanders from the responding agencies along with the respective vehicles assembled to organize Unified Command outside Terminal 3, deputy commanders and other support

personnel from each of those agencies also started to coalesce at the ICP location. While Unified Command was taking shape, assignments were made to fill ICS staff positions to include Section Chiefs for Operations, Logistics, and Planning. A Safety Officer, Liaison Officer, and Public Information Officer (PIO) were also appointed.

As the ICP was located outdoors, on an elevated roadway, and in close proximity to the initial shooting location within Terminal 3, it was soon realized that the location posed a potential security and safety risk. In response, LAWAPD positioned two teams of marksman atop parking structures across the terminal roadway as a precaution to counter the threat of additional shooters and protect the ICP.

Analysis

The initial decision to create an ICP outside Terminal 3 was based on a narrow assessment of the incident scope and, while it served its purpose, it proved to be far from ideal. The proximity of the ICP to the active shooter incident caused delay in the establishment of Unified Command, as LAFD was initially reluctant to relocate due to the unresolved security situation. The outdoor location and noise level on a still operating airport also challenged the ability of incident command leadership to simply communicate with the steadily growing crowd people congregating around the center of the ICP. Access to the ICP was not secure and the arrival of individuals not having an incident command role further complicated the ability to maintain a sense of order and discipline in the functioning of the ICP.

Responding command vehicles had only basic supplies and lacked essential resources such as airport plans, map overlays, aerial photos, charts, easels, vests, and other such material needed to meet the needs of Unified Command for organizing assets and prominently displaying this information to others. The LAWAPD command vehicle, though perhaps adequate for smaller emergencies, was not sufficient to facilitate a meeting of the Unified Command and senior members of the staff. Nor does it possess a full suite of communications equipment needed to support multi-agency command and control by the Unified Command team. Despite the technological sophistication of the ARCC, none of that technology was available to the ICP to include CCTV access, nor was the ICP able to directly link to the City EOC. Though the LAPD command vehicle had aerial video downlink capability to receive feeds from LAPD helicopters, LAWAPD does not enjoy that same technological advantage for aerial imagery.

In addition to Unified Command activities, LAWAPD reception and staging of arriving resources and several other response functions were co-located or adjacent to the ICP. The number of personnel, vehicles, and activities moving around or being conducted in close proximity caused confusion and made it difficult for the ICP to operate throughout the incident. Knowing that Unified Command and the ICP had the most up-to-date incident information, numerous other responding agencies, as well as City of Los Angeles officials and airport executive leadership, crowded the ICP in an attempt to gather gain awareness, causing further distraction. Partway through the first operational period, an attempt was made to move the ICP inside the terminal to gain better control and access restrooms and other amenities, but this area also became too overcrowded to provide a more conducive environment.

Unified Command realized early that the Terminal 3 location (whether inside or outside) was not satisfactory, especially with the need to manage wide area security operations and support a continuing investigation, along with the expansion of command structure that those activities would entail. Unified

Command therefore initiated action to relocate the ICP to LAFD's Fire Station 5. However, with the threat situation still unknown, and civilians and officers still potentially in harm's way, the leadership decided not to move prematurely in an effort to maintain continuity. Once the CTA had been cleared and reopened, the ICP was relocated to Fire Station 5 at 6:00 PM. As ICP activities waned, the ICP was moved a final time to the LAWAPD Headquarters building at 7:15 AM on November 2.

Like the need to improve personnel readiness to conduct incident command operations, it is also important to support those personnel with the right incident command facility/location, and with the equipment, systems, and vehicles that will give them greatest advantage in the interest of public safety. LAWAPD and the LAWA Emergency Management Division do not currently possess the basic tools necessary to support multi-agency incident command and efforts must be made to address those gaps.

Recommendations

Recommendation 7.1: Establish and equip Fire Station 5 as a permanent ICP and determine site selection criteria and pre-identify alternatives ICP locations conducive to a range of scenarios.

Equipping Fire Station 5 with basic information technology infrastructure, associated fixtures, and pre-staged equipment will enable it to be used as a permanent ICP location that is secure, climate controlled, and has the necessary amenities to support extended operations. Though some emergencies may require an on-site ICP or at least one closer to the action, alternative ICP locations should also be identified and recorded in the ICS Facilities Annex to the LAX AEP. As part of that effort, a set of ICP site selection criteria should be developed and provided to LAWAPD supervisors so that more informed choices can be made on any ad hoc selection of an ICP should one be required.

Recommendation 7.2: Procure an incident command post vehicle sized and equipped sufficiently to enable multiagency operations and ensure it is compatible with both the DOC and regional partners.

Although Fire Station 5 offers many advantages as a fixed facility, it will not be conducive to supporting all response scenarios LAWA may need to confront. LAWA should consider the procurement of a modern mobile ICP vehicle. This would provide a flexible, secure, temperature-controlled environment for conducting command and control activities, as well as communicating with agency dispatch centers, the DOC, the LAWA Clifton Moore Administration Building (possible location for JIC and Executive Command Group), and LA City and County EOCs.

The vehicle should be equipped with a radio suite sufficient to provide interoperability with surrounding jurisdictions and other local, state and federal partners operating in and around LAX. It should also have on board computer workstations, a mobile data terminal, alternative wireless and mobile SatComm capability, and on-board IT technology to include crisis management system (e.g., WebEOC), GIS mapping, and e-mail connectivity. It should be wholly compatible with LAWA DOC and City of LA City Emergency Management Division systems where practical. Wireless CCTV access from LAWA camera systems and video downlink capability from LAPD helicopters are also suggested.

Observation 8: Department Operations Center

Achieving the DOC's full potential requires synchronizing the ICP/DOC interface, trained staff, and processes to support decision-making and resource management, and senior leadership participation.

The DOC is a physical location from which key incident management activities can be performed. The DOC is intended to support the ICP with information and resources, as well as aid in strategic-level interagency coordination and executive decision-making. As such, the DOC represents one important node in the overall incident management structure of a major emergency. The LAWA DOC is outfitted with various technologies to perform these functions, and its association with the ARCC provides it with access to information and direct communications with a range of airport activities and partners. On November 1, 2013, the DOC played a useful role in managing non-security response issues. However, it was largely ineffective in supporting the ICP or enabling strategic-level awareness and decision-making.

Background

According to FEMA, the core functions of an Emergency Operations Center (EOC) include coordination, communication, resource allocation and tracking, and information collection, analysis and dissemination related to a specific incident. EOCs are generally organized along ICS lines to mirror the structure at an ICP and are configured to expand, as necessary, to support large-scale and/or a multi-agency response. The primary difference between an EOC and an ICP are that the EOC is normally a permanent facility and it does not usually exercise control over response assets in the way an ICP does, although it may.

Role of the Department Operations Center – In most cases, EOCs act as one key part of a larger system of incident management and networked multiagency coordination, with the on-scene ICP at one end and a web of agency, city, county, and/or State operations and communications centers on the other. Most EOCs perform two primary functions:

- Develop, maintain, and share situational awareness, support executive decision-making, facilitate interagency communications and coordination, and provide public information; and
- Assist the ICP and response agencies by acquiring resources, performing overhead tasks better managed away from the incident scene, and coordinating with other partners on issues at the periphery of the emergency and outside the immediate control of the ICP.

To distinguish it from the City of Los Angeles EOC, LAWA maintains a DOC to support response operations at LAX. The functioning and operational rhythms of an ICP and the DOC are and should be interdependent. As such, this relationship must be well synchronized and supported by a continuous exchange of incident management information. Unlike an ICP, which is organized around command and control of incident operations, the DOC is intended to deliver more strategic-level support, to include planning and resource management. Having a broad overview of the emergency, the DOC is also positioned to provide executive staff with a vantage point from which to obtain general situational awareness and to make key policy decisions as needed. Similar to an ICP, the DOC must have the capacity to be scalable and expand and contract as required. The more complex the crisis, the more robust the DOC staffing and structure should be to meet the challenge.

ICP / DOC Relationship – Among the most important functions of the DOC (and thus the ARCC in support of the DOC) are developing and maintaining a common operational picture and support for incident action planning. As discussed previously, a common operational picture (COP) is a single identical depiction of incident-specific information that can be accessed by multiple units. The shared situational awareness the COP provides is then the base from which collaborative planning and coordinated operations occur. That collaboration is dependent on regular and continuous contact between ICP and DOC leadership, to include periodic situation reporting by the ICP Planning Section.

As situation assessment and deliberate planning are performed in the ICP Planning Section, that information should be exchanged with the DOC Planning Section. The DOC Planning Section advises that process with added perspective and situational awareness, works with the ICP to identify resource gaps to be managed in support of ICP planning, and helps to synchronize incident objectives. This exchange then enables Unified Command and LAWA executive leadership to be in harmony and together better develop and manage the achievement of those objectives. Figure 6 represents the synchronous relationship that should exist between the ICP and the DOC.

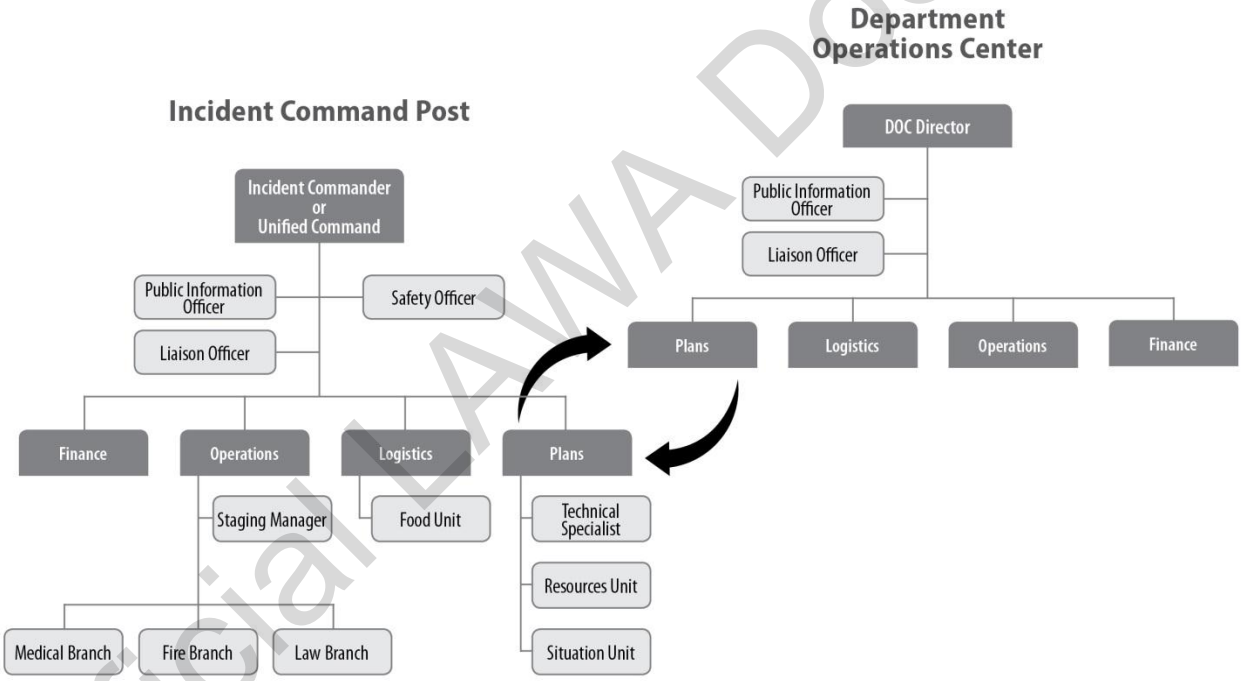

Figure 6: ICP - DOC Synchronization

DOC Mobilization – LAX created both the DOC and ARCC slightly more than three years ago and co-located them in one building with the intent of providing an efficient means of capitalizing on ARCC capability to support incident management while at the same time minimizing the impact to ongoing airport operations. The active shooter incident on November 1, 2013 is the first time the DOC has been activated to Level 3 (high) since opening. During the incident, the DOC was made operational at nearly the same time as the ICP was established. The decision to activate the DOC was prompted by alerts from the LAWAPD Communications Unit and the ARCC/APIIC.

The DOC was initially staffed with 11 personnel and grew to 30 by mid-afternoon on November 1, 2013. It remained open for three operational periods, and demobilized at 6:00 PM. on November 2. The following agencies provided staffing for the DOC during one or more operational periods:

LAWA

- Airport Operations
- Airport Police
- Public Relations
- Facilities Management Group
- Customer Service
- Emergency Management
- Commercial Development Group
- Information Technology Group
- Ground Transportation Group

Partner Agencies

- Transportation Security Administration
- American Red Cross
- LA Co. Department of Mental Health
- Los Angeles Police Department

Key DOC Roles – The focus of key ICS staff positions at the DOC is very similar to that of counterparts in the ICP, with the exception that these roles more typically perform as enablers and facilitators of activity in support of the ICP and executive-level decision-making. The DOC Operations Section Chief is concerned about problem-solving and advising on ICP implementation of strategy and tactics to carry out incident objectives, and may control some operational tasks directly as required. The Planning Section Chief provides the ICP and executive leadership with situational awareness and manages the DOC part of the planning process. The Logistics Section Chief provides the resources and services requested by the ICP. The Finance and Administration Section Chief is responsible for overall management of costs and contracts. As such, in a major event, these roles need to be performed by seasoned staff with the requisite training, skills, and leadership gravitas to be effective in a crisis. On November 1, Airport Operations Managers primarily filled these key positions within the ICS structure.

Executive Leadership – Integrating executive leadership into the incident management framework is essential to inform response and recovery strategy development and drive key policy decisions. Executive leaders provide overarching guidance, authorize resources, and in many cases grant responders the authority to act on their behalf during an incident response. Based on their executive experience and position, they can provide insight into overarching considerations that might better inform and enable response and recovery operations on the ground. Executive leaders can also streamline interagency coordination on a peer-to-peer basis when problems arise or an impasse needs to be bridged. The best way for senior leaders to fulfill these key roles is to maintain direct association with the activities of the DOC. On November 1, most executives went directly to the ICP and did not maximize the use of the DOC or provide senior-level guidance to or from that facility.

Analysis

On November 1, 2013, the DOC played a valuable role in addressing non-security response issues that were not being addressed by the ICP. However, not having operational assets assigned to it, the DOC became preoccupied with organizing and managing those non-security tasks which overwhelmed its ability to perform its primary mission. With the exception of airport operations liaisons assigned to the

ICP, there was virtually no interface between the DOC and Unified Command leadership at the ICP to coordinate on airport-wide response planning and resource management. Nor did the Unified Command make use of DOC technology or other resources available to it.

ARCC personnel who made up the initial core of DOC staffing did not have the necessary ICS position-specific training to perform key DOC roles, nor were they sufficiently senior enough to wield the authority needed. The DOC never was able to energize an operational rhythm around the Planning "P" cycle and synchronize and integrate with the operational rhythm of the ICP as that facility was similarly challenged. There was no disciplined situation reporting up from the ICP to the DOC and the DOC never produced a common operational picture for the ICP or executive leadership. Absent the benefit of a senior public safety leader in the Operations Section Chief role, the DOC was unable to effectively relate the escalating non-security issues attendant to the larger emergency to the ICP. Nor could it integrate with ICP planning related to CTA clearing operations, perimeter security, or eventual airport recovery.

Perspectives on Role – Throughout the incident, the ICP and DOC did not have a shared understanding of roles and responsibilities, especially for activities related to non-security issues such as passenger assistance, the repopulation of terminals, recovery of facilities, and the resumption of airport operations. The ICP tended to view the DOC as solely focused on civilian aspects of airport operations, rather than supporting the entire breadth of emergency response and recovery. The ICP therefore did not appreciate the overall value of the DOC in providing airport-wide situational awareness or in facilitating integrated public safety-civilian operations planning.

Over time, the DOC continued to lose ground with regard to situational awareness of ICP activities and priorities. The ICP established goals and timelines for reopening the CTA, but did not effectively coordinate all necessary activities with or through the DOC and consequently did not have situational awareness of mission-essential airport and airline operations. Passenger care and recovery objectives assumed for handling by the DOC appeared complementary on the surface, but they could not be carried out independently because they required collaboration with ICP response operations, particularly with response strategies and tactics associated with CTA clearing and perimeter security.

ICP/DOC Interface – The planning processes of both the DOC and the ICP were not robust or synchronized and their respective incident objectives were not jointly developed with the intent to be mutually supporting. While the two entities did communicate via Airport Operations liaisons at the ICP, they failed to harmonize their activities. The DOC staff felt that they lacked good situational awareness of what decisions were being made at the ICP, which led them to take a more passive role as they expected the ICP to push information and assignments to them. The ICP assumed that the DOC was independently handling airport operations related issues, so they did not seek to engage with the DOC or provide information. The assumption at the ICP was that the civilian Airport Operations staff at the ICP were facilitating all of those requirements with the DOC.

Staffing and Personnel Readiness – Most of the personnel who are expected to staff the DOC are new to those roles, as the DOC is only operational during exercises, planned events, or real-world emergencies. Build-out of key ICS staff sections like Planning was limited, due to the unavailability of people who could be pulled from their regular duties and were also familiar with DOC operations. Even though some key DOC positions were filled, these people were often redirected to address "hot"

problems as these cropped up. While LAWA has placed a general priority on training staff on ICS practices, the reality is that only a small percentage of the staff identified to work in the DOC have more than a basic level ICS training. That training is not sufficient to function in key DOC roles. Given these staffing and readiness issues, as the intensity of the incident increased, DOC functioning devolved into largely a process of handling problems on a "first in - first out" basis. Its focus also shifted from the totality of the crisis to performing as a civilian ICP centered on non-security concerns.

When fully established, Unified Command at the ICP consisted primarily of high-ranking leaders from LAWAPD, LAFD, and LAPD (and included a mid-level Airport Operations manager). In contrast, the staffing of key ICS roles in the DOC was comprised of mid-level Airport Operations managers. Although highly dedicated and professional in executing their duties on November 1, these individuals were at a distinct disadvantage in attempting to fulfill their assigned ICS role without the necessary training and authority. They were also faced with addressing issues that may have been better suited to more senior LAWA staff, to include interacting with the FAA on decisions related to air traffic.

Executive Leadership – Even though LAWA executive management was deeply involved in response and recovery efforts on November 1 and 2, they were not provided the full benefit of real-time situational awareness concerning the totality of the emergency as it was unfolding. Nor was there a place for senior management to effectively "plug-in" to the emergency management decision-making process. The ICP was appropriately focused on security priorities and the DOC did not evolve sufficiently to support that level of decision-making. Having a more informed perspective, away from the heat of the action, would have permitted management to anticipate and get ahead of emerging issues and direct refinements in response and recovery objectives, to include the harmonization of security and non-security plans, especially those related to airside operations, mass care and CTA recovery.

LAWA has already made a major investment in DOC/ARCC capabilities and is committed to ongoing training in ICS practices (to include position-specific training for those in line to staff the DOC). These factors, along with the progressive spirit of interagency cooperation evident on November 1, suggests that LAWA is already well positioned to make the improvements needed in DOC functioning, ICP/DOC synchronization, and DOC support to executive leadership that are indicated here.

Recommendations

Recommendation 8.1: Resolve staffing and process constraints that limit the DOC's ability to develop a common operational picture and engage in coordinated incident planning with the ICP.

Despite the unflagging efforts of LAWA personnel and others who provided DOC support on November 1, the complexity and scope of this incident highlighted the need for enhanced capabilities, both in basic processes and the type and level of staff assigned. As previously cited, the DOC/ARCC has no definition of a common operational picture; no procedure for creating and maintaining one; and no means to get that picture to the ICP to help in synchronizing the planning and decision-making activities of the entire incident management team. Moreover, there is little guidance for staff in the drafting of a LAWA-specific IAP and no protocols for how to harmonize DOC planning efforts with those of the ICP, when one is established. A DOC standard operating procedures needs to address these shortfalls.

On November 1, key DOC roles were all filled by Airport Operations Managers. Although Airport Operations Managers are highly capable, these key ICS roles may be better played by more senior individuals with the requisite day-to-day expertise. For example, the Operations Section Chief position on November 1 may have been better addressed by a LAWAPD Assistant Chief and that of Logistics Chief by someone from LAWA Administration. Likewise, the DOC Director role may have been reserved for the Director of Emergency Management. Staffing plans for the DOC should be reviewed and refined accordingly, to include assumptions for around-the-clock staffing in shifts.

Recommendation 8.2: Conduct training and exercises that require competence in the exchange of situational awareness, coordinated planning, and joint decision-making between the ICP and DOC.

There is a tremendous level of investment in technology and information-collection capacity resident in the ARCC and, by default, the DOC. Little if any of that technology mattered to the execution of operations out of the ICP. Having information versus getting that information in a useful form to where it can do the most good to plan and coordinate response operations are two entirely different things. Assuming the assignment of the right people to the right roles in the DOC, the DOC/ARCC needs to practice and hone the skills necessary to provide situational awareness to those in the ICP who need it and in the form that they need it. The DOC planning function needs to likewise train and exercise directly with LAWAPD personnel who may fill the Planning Chief role to work out mutual expectations and synchronize approach. The same holds true for all of the other ICS positions in the DOC. Realistic training and exercises like LAWA's RAPID should provide staff the opportunity to test and evaluate their skills in a controlled environment before a being activated in a real-world event.

Recommendation 8.3: Establish an Executive Command Group of top senior leadership at LAWA and supplement it with senior leaders from other organizations as appropriate to the situation.

LAWA's incident management model needs to incorporate provisions for formal engagement of executive leadership in the process of response and recovery decision-making at a strategic level. An Executive Command Group (ECG) should be formed as a leadership council chaired by the Executive Director or Deputy. It should also include a limited number of other senior executives from across the organization who may also be filling specific incident command roles (e.g., Chief of Airport Police, Director of Emergency Management, etc.). The DOC Director would regularly brief members of the ECG on the status of an emergency. The ECG would be convened only as needed to address high-level matters of policy that may have implications for response or recovery operations but not otherwise involve operational tactics. A decision to close the airport to all aviation traffic might be the level of decision such a group would consider. The ECG should be supported by the DOC and have the capability to convene virtually if necessary. It will thus require reliable communications connectivity. Policy and protocols for the ECG should be codified in the LAX AEP and DOC SOP.

Observation 9: Mutual Aid and Resource Management

A well-structured resource management process supports the ability of incident command at both the ICP and DOC to identify needs and then source, stage, employ, track, and demobilize response assets.

Resource management during an incident response is a process by which resources are acquired and applied to enable specific tactics and strategies associated with incident objectives. Basic resource management practices that begin right at the outset of an incident – such as sourcing, tracking, and staging – ensure that the right resources arrive at the right place, at the right time, and in the right quantities. Resources are divided into two types – Tactical Resources, those used in direct response roles, and Support Resources, those that enable the response, but are not tactically engaged.

In the response to the November 1 active shooter incident, resource management primarily revolved around law enforcement capabilities (Tactical Resources) that arrived, in many cases, as unrequested mutual aid. Though there was a requirement for water and health and comfort items to support passenger assistance efforts (Support Resources), for the most part, these were not significant resource management challenges. However, the management of Tactical Resources in the mutual aid response revealed possible weaknesses in overall resource management capability that merit some examination as these may become more critical under other crisis scenarios.

Background

The resource management process can be separated into two parts: resource planning prior to a crisis and resource management during a response. Resource planning attempts to identify resource requirements under various scenarios and establishes protocols for obtaining additional resources through mutual aid agreements or other means.

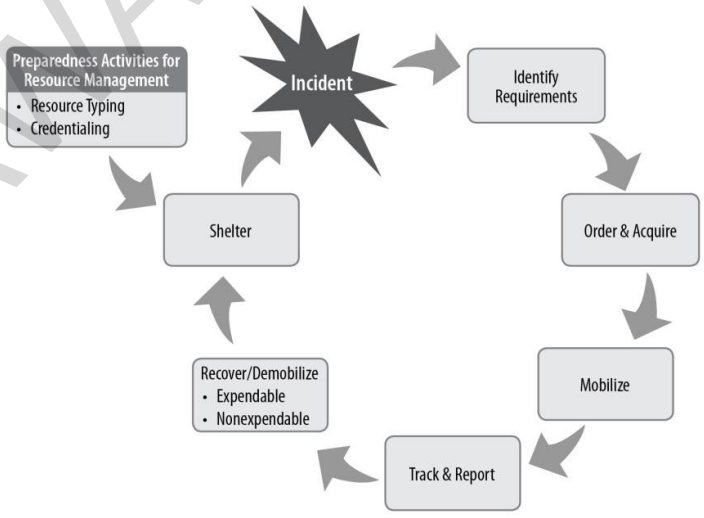

Figure 7: Resource Management Process

During an actual response, as ongoing incident assessment efforts inform priorities and needs, resources are ordered, procured, and tracked using a resource management process or system. Such resources are often obtained through mutual aid and can be in the form of personnel, teams, facilities, equipment, and/or supplies. When no longer needed, resources are demobilized. This ensures that all incident resources are tracked from request to redeployment, as depicted in Figure 7. Like ICS in general, resource management during an incident should be scalable and flexible to meet the changing needs of the incident. Whether a Tactical Resource is acquired via mutual aid or not, this process of accountability and resource management still applies.

As the initial response to the November 1 shooting took shape, additional tactical resources were also needed to: establish perimeter security; manage traffic control; clear and secure the CTA; and provide assistance to airport residents and airline passengers impacted by the event. Each of these missions demanded some level of planning and requirements definition. In addition, the resources ultimately assigned to these missions represented both a capability and an expense that have to be tracked and accounted for. In any emergency response, it is important for the Incident Commander to know what is needed, where it is, and how to get to it. The more effective the resource management process, the faster decisions can be made, response operations can be implemented, and recovery achieved.

As the LAWAPD response to the shooting at Terminal 3 unfolded, both requested and self-deployed police resources either arrived at staging areas hastily assembled near the ICP or self-reported to other locations where they assumed needs existed. Another large influx of police resources occurred when LAPD's Air10 helicopter initiated a "help call" for support once unable to communicate with Unified Command. While Unified Command certainly benefitted from the large influx of police resources available to assist, it struggled to account for, organize, and manage these resources effectively as a part of the overall response. Later in the day, in an effort to assist, LAPD established an off-site staging area for law enforcement assets at the nearby Ahmanson Training Center.

Analysis

The initial response to an active shooter incident is understandably chaotic, however, once an incident management structure is established, normal resource management protocols should be implemented. This allows Unified Command to: 1) account for all resources already on scene; and 2) establish resource management functions within the ICS structure to order, procure, track, and demobilize resources for the remainder of the incident.

Mutual Aid – The immediate response from mutual aid partners during the November 1 incident is a testament to the cooperative spirit and willingness of those jurisdictions to assist LAX at a moment's notice. A Request for Mutual Aid is a well-defined process in LA County. LAWAPD never made an official request for Mutual Aid through the LA County Sheriff's Office, which coordinates mutual aid in the County. Having enough law enforcement resources was never an issue. The response of resources from LAPD was quick and sufficient to manage the incident. In one instance, an LAWAPD Sergeant took personal initiative to contact the South Bay Regional Dispatch and ask for additional help. This was not directed by the Unified Command or really needed. Had the incident been much larger or more significant those resources may have been necessary.

Some initial LAWAPD and LAPD units formed contact teams on arrival to make entry into Terminal 3, while other on- and off-duty responders from LAWAPD and mutual aid partners reported directly to the CTA and the ICP while others reported to pre-designated locations to implement perimeter security and traffic control plans. After establishing Unified Command, one of the first challenges was identifying what mutual aid resources were officially deployed or had self-deployed to the incident, where they were staged or operating, and what additional capabilities or resources were needed to meet incident objectives.

Accountability and Staging – It was difficult for responding agencies to maintain accountability during the initial response, as mutual aid resources did not participate in a unified check-in process on arrival at the scene, some resources had self-deployed, and the lack of interoperable communications between some agencies contributed to confusion and duplication of resource requests. As Unified Command was being established, it required extra effort to go back and reconcile the status of individual agency resources into a common picture of available response capabilities and shortfalls. There was no common view of what resources had deployed, where they were located at the incident, what roles they were performing, and whether additional resources would be needed.

Another challenge for Unified Command was the large numbers of vehicles parked on both upper and lower CTA roadways. Without a pre-designated staging area, resources reported directly to the scene and were quickly assigned responsibilities within terminals and parking structures. Unified Command attempted to get responders to relocate their vehicles to other locations, but in many cases it was unable to determine who the vehicles belonged to, or the location of the operators. As these vehicles were delaying the reopening of the CTA, Unified Command eventually had to resort to towing responders' vehicles out of roadways.

Resource Planning and Tracking - In the absence of built-out ICS structures at the ICP, and the lack of effective communication and planning processes between the ICP and DOC, it is unclear how resource needs were identified, prioritized, and fulfilled across the breadth of the entire incident. The lack of an established planning process between the ICP and DOC meant that resource needs were not systematically assessed to determine shortfalls in capabilities, ways to fill those gaps were not identified, and resources committed to the incident were not tracked. The Planning Section should work with Operations to identify resource requirements for the incident, while an expanded Logistics Section provides resource support to Operations. Without robust capabilities in these areas, resource requests and tracking activities were decentralized which made it difficult for Unified Command to determine whether incident resource needs were being met effectively.

Recommendations

Recommendation 9.1: Refine mutual aid agreements with public safety partners to include guidance on deployment and staging, and conduct periodic training and mobilization drills.

LAX is a complex facility with a layout unfamiliar to many neighboring responders, as well as unique hazards and operating conditions. LAX should conduct familiarization training and incorporate mutual aid partners into mobilization drills tailored to test response activities. LAWA should review and update mutual aid agreements to ensure staging areas are identified and response protocols are clearly stated, as this will improve organization and accountability in the earliest stages of incident response. Staging areas need to identified and recorded in the LAX ICS Facilities Annex to the AEP.

Recommendation 9.2: Establish practices for resource management, asset tracking and control, document in an annex to the LAX AEP and train in the processes and technology.

Resource management during an incident is an iterative process of evaluating and applying resources to achieve incident objectives in accordance with plans, procedures, and agreements developed in advance. In anticipation of similar no-notice or fast-breaking incidents requiring extensive mutual aid

assistance, LAX must develop systems that will allow them to more effectively manage the expected inflow of multi-agency resource support. NFPA 1600, NIMS resource management guidance documents, and the California Standardized Emergency Management System (SEMS) Resource Ordering and Tracking Guide are references available to emergency managers. These guides provide direction on how to codify resource management policies, conduct resource needs assessments, and implement processes to employ, manage, track, and demobilize resources.

Recommendation 9.3: Consider the use of WebEOC and its resource management module for both a virtual means of interagency information sharing and a way to handle requests for support.

Initial response operations are expected to be chaotic, but the use of a Crisis Management System (CMS) can help to capture and report data during an incident and better enable systematic resource management. A system like the resource management module in WebEOC would provide improved visibility of available resources and some automated functionality for the conduct of resource management activities during an incident. WebEOC is the CMS currently employed by the City of Los Angeles and the State of California. Its use at LAX is recommended to provide the airport with regional interoperability. If common systems and practices are widely employed, these systems would better enable interagency resource management, especially in complex emergencies.

Response Operations

The active shooter event at LAX on November 1, 2013 was tragic in its outcome, and the loss of life and physical injuries sustained by the victims were unconscionable. Airport operations were greatly disrupted, most aviation services were suspended, and thousands of people were delayed and otherwise inconvenienced. However, in light of the lethal and uncertain nature of the security threat that emerged, the need to manage the situation with extreme caution, and the overall complexity of the airport environment, it is remarkable that the majority of the LAX CTA returned to normal operations within a matter of hours. Almost as notable was the fact that Terminal 3, the scene of a horrific crime, was also returned to full service the following day on November 2.

Notwithstanding the resumption of most airport operations on the afternoon of November 1, the response to the incident revealed a number of opportunities for improvement in general emergency preparedness beyond incident command. Those that merit particular attention are addressed in this section of the report. While each emergency is unique, there are a few aspects to response operations that seem common to most. These include: 1) alerting and informing the people impacted; 2) organizing the response and taking steps to isolate and secure the area; 3) implementing actions to address the needs of victims and those displaced; 4) performing activities to stabilize the crisis and provide public safety; and 5) returning things to normal. The observations that follow address each of these in turn.

Observation 10: Public Mass Notification

Developing and integrating a full range of strategies and systems for public alert and mass notification are vital to ensuring awareness, safety, and comfort of those impacted by a crisis.

A major airport like LAX is a tremendously complex and confined environment that includes a network of hundreds of loosely connected yet interdependent entities that interact with and service not only a resident population equal to that of a small city but also thousands of additional travelers and transient visitors. Many of those people may be unfamiliar with the airport, some do not speak English, and some have disabilities or other special needs. Given the airport's compact footprint and often high population density, providing timely alerts and accurate mass notifications of an emergency to those in harm's way is crucial to managing their behavior and minimizing their exposure.

Background

Mass public alerts are best accomplished through the use of an integrated Mass Notification System (MNS) and associated strategy. The goal of any mass notification system is to ensure all persons are informed of an emergency regardless of their location. According to the National Fire Protection Association, there are various types of MNS for communicating directly to targeted individuals and groups that might not be in a contiguous area.[7] These systems include: 1) in-building fire Emergency Voice/Alarm Communications systems; 2) in-building mass notifications (to transmit messages for emergencies other than fires); 3) wide-area mass notifications (for large, contiguous or multiple outdoor areas), and 4) distributed recipient mass notification systems (DRMNS).

On November 1, 2013, approximately 4,500 passengers self-evacuated from Terminals 1, 2, and 3 and more than 20,000 passengers were sheltered in place on aircraft and in terminals. At the time, LAX did not have an MNS available to directly alert people across the airport of the emergency. The majority of the terminals at LAX are leased by airline tenants who control their own public address (PA) systems. Moreover, PA systems in terminals managed by LAWA are not centrally controlled. As a result, no immediate or on-going PA announcements were made to people in the terminals and around the CTA. However, LAX did employ a variety of other methods to provide emergency related information to internal and external audiences:

- LAWAPD Communications radioed police officers who, through direct contact, notified as many members of the public as possible while those officers were responding to the emergency.
- The Airport Police Information and Intelligence Center (APIIC) used the computer-aided notification system Everbridge to alert a select list of LAWAPD, operations, and management executives.
- The ARCC Duty Manager also used the Everbridge system to notify a much broader audience of airport stakeholders to include LAWA staff, the airlines, concessionaires, and other agencies.
- LAWA operations staff, customer service representatives, and other airport personnel on-scene provided direct information to LAX tenants and travelers across the CTA.
- Within minutes of the incident, LAWA Media and Public Relations Division began communicating with the media and general public using the airport's official Twitter account, @LAX_Official.

The @LAX_Official account was designated as the official source of incident information. More than 500 tweets were sent over a 2-day period, along with nearly 400 personal engagements with LAX twitter followers. The LAWA Media and Public Relations Division organized several news conferences, posted regular incident updates to the LAX website, and emailed incident updates to pre-identified external groups including media outlets, airport stakeholders, elected leaders, and community members.

Analysis

LAWA made significant efforts to alert and inform the general public and, specifically, the airport resident and transient populations throughout the entire airport disruption that followed the active shooter event on November 1, 2013. However, lack of well-developed, integrated public alert and mass notification systems and practices left significant gaps in communication vital to the awareness and comfort of those people impacted by the incident. Various LAWA units share the responsibility and accountability for alert and mass notifications. PA systems in the terminals were not designed for use from a central location and were thus not employed by emergency responders. The challenges associated with alert and mass notification mainly fall in three areas: protocols, operations, and systems.

Protocols – On November 1, several different entities within the LAX organization performed various forms of public alerting and communication without a common point of leadership or responsibility. Police, Operations, Customer Service, and Media and Public Relations Division all provided information to LAWA stakeholders and/or the general public. The effort was not centrally coordinated, which resulted in some redundancy of effort and voids in the timely and uniform delivery of vital information to those most impacted by the incident. Moreover, the alert and notification effort was not

connected to operations at the ICP but rather functioned largely apart from it. This limited the incident commander's opportunity to use available public alert and notification assets to fully shape public behavior and help ensure public safety.

Operations – A primary example of the absence of effective alert and notification protocols was the use of the airport's Everbridge system within the LAX ARCC. On notification of the incident, the APIIC, which resides within the ARCC, issued immediate Everbridge notifications to key stakeholders. At 9:25 AM, the APIIC sent a message to the Law Enforcement Notification Group only. A select set of personnel from airport operations, airport police, and LAX executive management received those notifications. At 10:15 AM, the LAWA DOC Director recognized the Everbridge notifications were not sent to all key stakeholders. Although the DOC Director took corrective action, in the heat of DOC activity, those additional notifications did not go out until 10:54 AM, almost an hour and thirty minutes after the initial shooting took place.

Systems – Everbridge is LAWA's primary alert and mass notification system that currently targets airport stakeholders and not the general public. The system possesses the capability to broadcast messages to virtually any communications device including mobile devices and desktop computers. For pre-determined lists, message escalation follows the order of preference designated by the recipient and stops once they confirm receipt. On November 1 and 2, the ARCC issued 45 Everbridge messages. LAWAPD, LAWA DOC, Customer Service, and Media and Public Relations Division also used e-mail and telephone to supplement communications via Everbridge. In addition, the DOC contacted the airlines to convey information to employees and passengers. Despite best efforts, all of these communications were somewhat compromised by lack of timely and accurate information exchange between the DOC and the ICP.

Although PA systems associated with fire protection equipment exist in every terminal, these systems are not integrated in a way that permits central control nor were they accessed and used individually to communicate with people in those terminals. Having a single point of control over the PA systems in the terminals would have provided LAX with a straightforward and conventional means of notifying passengers across the CTA. Current public alert and mass notification technology includes Wireless Emergency Alert (WEA) systems that can target all mobile devices within a given geographic area. LAWA was not aware of and did not request support from the public alerting and mass notification capabilities of the Los Angeles Emergency Management Division; however, as of this writing LAWA, has collaborated with the City of Los Angeles and is now utilizing its WEA system.

Of all the challenges LAWA had to contend with in response to the massive disruption to airport operations on November 1, probably the most significant issue from a public perspective was lack of timely, accurate, and relevant information to those people most directly impacted by the incident. In that case, the consequences were largely anxiety and inconvenience as people coped with the emergency using whatever information they received. In a more complex and threatening situation, gaps in communication to those potentially in harm's way could have more serious outcomes. Although communications efforts on November 1 were extensive, they were not sufficient.

Recommendations

Recommendation 10.1: Fully integrate and exploit the potential of an LAX-wide Mass Notification System, capitalize on existing public address capability, and link these systems back to the LAX DOC.

MNS have evolved significantly over the last decade. Starting in 2007, NFPA[8] began integrating requirements for MNS within building fire emergency voice/alarm communications systems, and commercial applications have been designed to connect numerous facilities to provide for central control from locations such as the ARCC. Since November 1, LAWA has launched an initiative to inventory all PA systems at the airport to assess the feasibility and cost of modifying them to function as an integrated MNS. LAWA has also established procedures to use a WEA system that will provide public alerting to mobile devices across the airport.

Recommendation 10.2: Implement a mass notification strategy that capitalizes on all forms of real-time communication with the public, whether controlled by LAWA, its tenants, or regional partners.

George Moore, author of the NFPA's Designing Mass Notification Systems, notes that, "Mass Notification is more than the use of technology (equipment and systems) to perform effective emergency communications." He suggests that mass notification must be effectively incorporated into the development of emergency response plans. The November 1 incident also indicates that there needs to be a well-integrated strategy and set of protocols that harmonize dissemination of public messaging. That strategy should state who is responsible for the entire system, how it is to be employed, under what circumstances, who is to be alerted, and what messages should be delivered.

Observation 11: Strategic Communications and Joint Information Center

Effective coordination of messaging to influence behavior in support of incident objectives depends on how well agencies manage public information assets within the incident command structure.

In an emergency, clear, accurate, and timely information about the nature of the circumstances, actions being taken in response, and what people can do themselves, can help save lives, lessen anxiety, and change circumstances by informing and influencing attitudes and behavior. The ability to provide accurate, timely, and actionable information during a crisis requires careful planning and redundant forms of communication using available tools including mainstream and Social Media, as well as having the cooperation of those directly involved in managing the crisis to provide insight and perspective. Strategic communication requires unity of effort and close collaboration among all of the agencies involved and full integration in support of the incident command structure.

Background

In recognition of the importance of strategic communications in an emergency response, ICS includes a Public Information Officer (PIO) position to manage this activity. The PIO position may exist at the ICP or at the DOC but most importantly, it must be embedded in and be an integral part of the incident command framework. It must also work in close conjunction with the PIOs of other responding organizations and agencies to ensure effective and consistent messaging. Lack of coordinated and consistent messaging can negatively impact public perceptions of the handling of the incident. At

LAWA, the overarching role of PIO is performed by the Director of Media and Public Relations, while LAWAPD has a full-time PIO that handles messaging for the Division as well as emergency response.

The PIO gathers, verifies, coordinates, and disseminates accurate, accessible, and timely information on the incident's cause, size, and current situation; resources committed; and other matters of general interest for both internal and external use. Standing emergency plans designate one senior LAWA PIO and one LAWAAPD PIO to respond to the ICP during an airport emergency and or incident, including multi-agency responses under Unified Command. To ensure coordination of public information during incidents, the Unified Command may use a JIC to support the gathering, verification, coordination, and dissemination of accurate, accessible, and timely information. The JIC is a central location that facilitates operation of the Joint Information System (JIS). Respective PIOs use a JIS to organize, integrate, and coordinate information to ensure consistent messaging. Although the roles of the PIO and JIC are well understood, LAWA does not yet have fully developed protocols and/or facilities for their employment.

The growing use of smart phone and computer tablets by the public acting as on-the-scene reporters, as well as an escalating use of social media and nearly non-existent news media reporting cycles, make it especially challenging for PIOs to stay "in front of a story." While all information must first be cleared by the Unified Command prior to release by a PIO, misleading and inaccurate information provided to the media by nonofficial sources may be more timely than what PIOs can provide. It is therefore vital that PIOs have firsthand knowledge of unfolding events. This is only possible if they are appropriately positioned in the incident command structure to not only verify reports received from unofficial sources, but also coordinate information with partner organizations and agencies. PIOs and their incident command leadership need to plan for and embrace social media technology as part of pre-incident planning and ensure that their systems and JIC staffing are sufficiently robust to manage the deluge of both traditional media and social networking internet activity that emergency incidents tend to attract.

Analysis

At the early stages of the response to the active shooter incident on November 1, 2013, PIOs from some of the responding agencies deployed to the airport initially in support of their individual organizations. As incident command structure began to evolve, the LAWAPD PIO established herself as the incident PIO at the ICP. However, in reaction to the need to manage a growing media contingent within the secure perimeter of the CTA, the LAWAPD PIO was dispatched from the ICP to relocate this contingent to ensure their safety and act as their immediate LAWA representative. Unfortunately, this need further stretched the PIO resources immediately available to the incident command team. As well, because the location and general arrangement of the ICP was not conducive to establishing a JIC, the function was at first slow to materialize. The LAWA Director for Media and Public Relations quickly stepped in as senior LAWA PIO and began aggressive efforts to assemble an overall picture of events on the ground, coordinate messaging both within LAWA and across responding agencies, and organize and coordinate the efforts of other PIOs. Although the strategic communications campaign was largely successful, challenges related to the location of the JIC, ICP logistics, and incomplete situational awareness limited the ability of the JIC function to fully establish itself and realize its ultimate potential in shaping events.

Initial Formation of the JIC – A LAWA PIO was dispatched to the LAWA DOC to obtain situational awareness and begin utilizing the LAX Emergency Communication Plan. Within several minutes of the incident, another LAWA PIO began disseminating information using the official LAX Twitter account. The LAWAPD PIO was integrated into the larger public information effort, and PIOs from responding agencies were invited into an emerging, though to some extent virtual, JIC function. This included TSA and FBI representation via e-mail and phone-bridge.

JIC Location – Without a suitable place in which to conduct its work, the JIC function was eventually moved inside Terminal 2. Because of this move away from the ICP, the PIOs were not fully integrated into the activities of the incident command team; had difficulty engaging in command briefings; and those PIOs who were able to participate often could not hear the information being conveyed because of the outdoor location of those briefings. Moreover, the JIC function was hampered by the same lack of general situational awareness that plagued both the ICP and the LAWA DOC. These conditions made it challenging for the LAWA PIO to maintain cohesion among the PIOs from the various agencies as needed to support the functioning of the JIC. As a result, some PIO efforts of the responding agencies were not always well coordinated. As time went on, efforts were made to relocate the JIC to Fire Station 5 but this move did not take place until after the CTA had been re-opened to vehicle traffic.

JIC Operations – While largely preoccupied with response and recovery operations, the incident command team relied heavily on the PIOs in the JIC to coordinate, produce, and disseminate public information, which they accomplished successfully through a variety of means under very challenging conditions. That campaign was externally focused and designed for broad consumption. It correctly emphasized getting timely, accurate, and relevant information to a broad external audience. However, the functioning of the JIC was not synchronized with the efforts of the LAWA DOC or Customer Service unit to communicate more specific information to people who had either evacuated terminals or were otherwise sheltering in place in other terminals and aircraft across the airport. A fully coordinated campaign of emergency notification, using all means available, can help shape public behavior in a way that better enables the response and allows those directly affected to take appropriate action that could mitigate the cascading effects or expansion of the emergency.

Recommendations

Recommendation 11.1: Incorporate protocols for a Joint Information Center (JIC) in an annex to the Airport Emergency Plan to include its full integration into the ICS structure during future operations.

The LAWA Media and Public Relations Division has a well-developed public information and emergency response plan, its Director is highly conversant in the JIC concept and its application in incident response operations. However, the LAWA AEP and its suite of response annexes do not adequately address the organization and employment of a JIC and there is no plan for supporting its logistics. That annex should define the structure of the JIC, the expectations of partner agencies, the resources required, and a list of alternative locations for its establishment, along with media briefing and VIP handling locations. It should also outline the linkage between strategic communications and mass notification efforts.

Recommendation 11.2: Implement a Joint Information System to effectively integrate information and ensure consistent messaging across disciplines, public agencies, and private sector partners.

Even in an emergency of limited scope, the JIC function may not enjoy the luxury of having all of the people essential to a strategic communications campaign in one place. Partner PIOs may not be able to access the JIC location or there may be approvals necessary from officials not immediately at hand. The need to rapidly assemble information and formulate public statements as part of a collaborative effort places a premium on having a process that is well organized and supported by information technology. A JIS provides the mechanism to organize, integrate, and coordinate information to ensure timely, accurate, accessible, and consistent messaging across multiple jurisdictions and/or disciplines. It includes the plans, protocols, procedures, and structures used to provide information during a crisis.

Observation 12: Perimeter Security and Access Control

Perimeter security must control access to the emergency while being flexible enough to facilitate entry and circulation of essential resources and the achievement of response and recovery missions.

An important step in response to any emergency, especially one involving an armed threat, is to immediately secure and control access to the area. The LAX roadway and pedestrian network is complex with multiple avenues into and out of the airport and around the CTA. Within minutes of the active shooter incident of November 1, LAWAPD implemented standing plans to secure the CTA and shutdown the approach roadways. Steps were also taken to implement a larger roadway closure and traffic diversion plan to shunt incoming traffic away from the airport. Similarly, access to the Air Operations Area (AOA) was closed. Although these plans were generally well executed, they had the unintended consequence of also impeding the movement of essential non-public safety personnel and restricting the accomplishment of non-security missions in support of the overall operation.

Background

Day-to-day traffic management and perimeter security at LAX is the responsibility of the Traffic and Security Section of LAWAPD. This unit is responsible for the safe and orderly flow of vehicular and pedestrian traffic as well as controlling access to the CTA, the AOA, and various facilities and restricted areas throughout LAX. As first notifications to police across the airport were going out, and as LAWA incident command was initially being established at Terminal 3, LAWA police supervisors were independently assessing courses of action to include perimeter security measures. Radio calls from the ICP were made to close both upper and lower level access to the CTA and to clear the CTA roadway of civilian vehicles. Independent of incident command, the LAWAPD Security Access Control Unit ordered the closing of all security gates accessing the AOA.

While actions to establish perimeter security were taking place and as Unified Command began to coalesce, LAPD and LAWAPD incident commanders jointly agreed to implement the LAPD Operation Nighthawk traffic plan, which rerouted traffic away from the airport. Local jurisdictions adjacent to LAX, including El Segundo and Westchester, also implemented their respective traffic plans. Consistent with Nighthawk, the California Highway Patrol and Cal Trans closed the I-105 and I-405 freeway exits leading into the airport. Through these actions, all traffic to and from the airport was effectively locked down.

Concurrent with the activation of traffic plans and roadway closures, numerous police agencies responded to the "help call" issued by the LAPD Air10 helicopter. These supporting units staged vehicles on both the upper and lower CTA roadways as they awaited direction from incident command. The uncontrolled arrival and parking of so many police vehicles at the CTA later created challenges for movement across the terminal frontages and hindered the recovery of the airport. As the incident command structure formed at Terminal 3, traffic control and perimeter security were assigned to a Traffic Branch in that structure. Heightened access control remained in effect until late in the afternoon of November 1 when the CTA was cleared by law enforcement and considered safe, at which time all access points were reopened.

Analysis

During the uncertain and fluid security situation that emerged on November 1, LAWAPD supervisors took quick and decisive action to rapidly secure the airport perimeter in an effort to control the threat and limit any additional public exposure. These perimeter security measures were implemented concurrent with security operations at Terminal 3 and across the CTA. The incident command structure, though ultimately unified, did not fully mature and did not have the resources or information needed to have complete situational awareness of conditions surrounding the airport. This included incomplete awareness of the restrictive nature of the security cordon, police vehicle crowding across the CTA roadway, and mounting traffic congestion radiating along major arteries near LAX. All of which hampered ingress and circulation across the airport and slowed some response and recovery operations dependent on inbound mission-essential civilian staff and non-public safety resources.

Access Control – While crucial to public safety and initial stabilization of the situation, the inflexibility and slowness to incrementally relax the posture of perimeter security at key access points once the immediate threat was resolved became a major source of frustration and a significant contributor to less than optimal service to stranded passengers. This inflexibility negatively affected the mobilization of mission-essential personnel and tended to compound pedestrian and vehicle traffic congestion around the airport. Police officers from other jurisdictions assigned to manage perimeter checkpoints were not familiar with LAX operations or access protocols and refused entry to many badged employees and responders from civilian agencies. Moreover, in the absence of instructions to the contrary, guards at AOA entry gates in one instance denied access to airport operations personnel responding to the needs of people who had been displaced because of prior terminal evacuations.

Situational Awareness – During the initial hours of the response, the ICP was largely unaware of mounting access issues. Moreover, because there was no special guidance provided to police officers at perimeter security posts on rules for access control and no means to adjudicate their authenticity or operational need, people were either turned away or had to obtain an escort on their own. This included civilian responders from the Department on Disabilities and the Red Cross. TSA security officers, pilots and flight attendants, aircraft mechanics, ground crews, and contract staff were also denied access. The inability to gain entry by the people needed to staff the terminals and service the aircraft only added to crowding issues across the CTA and the tremendous frustration of passengers held on board aircraft for as many as six hours. Even the LAWA Executive Director and Director for Media and Public Relations (performing remotely as the LAWA PIO) were denied access for a time.

Airport Recovery – The lethal nature of the threat situation clearly warranted the aggressive perimeter control measures initially implemented. However, once the initial danger was resolved and the general security situation in the CTA cleared, managed entry of mission-essential personnel should have been given earlier consideration. The airport's ability to systematically recover in stages, and in so doing help alleviate some of the pressing consequences of the emergency, is greatly dependent on help from a range of key civilian personal. Leaders in the Unified Command were very much focused on the safe return of the airport to normal operations as soon as practical. Nonetheless, lack of broader situational awareness and absence of a clear appreciation for the problems created by an inflexible security cordon delayed airport recovery and exacerbated the conditions experienced by airport residents and travelers. There is consensus that the CTA could have been restored earlier.

Recommendations

Recommendation 12.1: Refine perimeter security and access control plans to simultaneously isolate the emergency and provide safe marshaling and passage of mission-essential personnel.

Police perimeter control and traffic diversion plans were, in large measure, effectively implemented on November 1. Lessons learned revolve around the need to incorporate in those law enforcement plans emphasis on access rules for security checkpoints and briefing checkpoint personnel; methods for adjudicating credentials and mission-essential status of persons attempting to gain entry; and more robust command/control and situational awareness of perimeter security assets out of the ICP or alternatively the LAWA DOC. Guidelines for controlling arriving mutual aid units and diverting those units to staging should also be addressed.

Recommendation 12.2: Identify and implement marshaling areas and control points to adjudicate access credentials and to organize the secure and timely movement of mission-essential personnel.

One of the annexes to the LAX AEP under development is focused on plotting ICS facilities to include things like alternative ICP locations and resource staging areas. As a part of developing that annex, perimeter checkpoints should also be plotted along with marshaling areas for mission-essential personnel and control points where access credentials can be adjudicated as needed to ensure the integrity of the security cordon and speedy resolution of access issues. Resource requirements to staff these sites should also be planned. Airport tenants with mission-essential roles should be familiarized with these locations in advance and employing these marshaling and control points should be practiced in airport exercises.

Recommendation 12.3: Ensure the incident command organization provides for close cooperation between police security operations and civilian operations functions to enable timely recovery.

Emergency response and recovery, especially at an airport, require a whole-community approach. Public safety and civilian emergency management and airport operations counterparts need to be fully cognizant of the operational concerns of the other and these concerns need to be blended into incident command objectives at the outset. Airport operations staff need to be fully embedded in the incident command structure and adequately represent strategies to facilitate airport recovery to the Unified Command. Collaboration between public safety and airport operations needs to include the identification of mission-critical airport and airline personnel and their organized and safe passage.

Observation 13: Evacuation and Shelter-in-Place

Terminal evacuations must be enabled by effective public communications, personnel trained to guide and assist evacuee behavior, and rapid mobilization of additional help to ensure public safety.

NFPA 1600 Standard on Disaster/Emergency Management and Business Continuity Programs states, "Protective actions for life safety include evacuation, shelter-in-place, and lockdown and depend upon the nature and location of the threat or hazard."[9] From an incident management standpoint, triggering any of these protective actions initiates a continuum of care in which responsibility is not complete until the people among the impacted population safely depart the airport property or are otherwise in secure hands. Implementing protective actions at an airport the size of LAX takes prior planning, coordination, and trained personnel to include those within the resident population. Airports are a particular challenge in comparison to other large facilities in that most people, when the daily population is at its peak, are transients who do not know the airport well, if at all, and must be guided or even assisted in any directed or spontaneous evacuation.

Background

On November 1, 2013, as the assailant made his way down Terminal 3, TSA agents, passengers, concessionaires, and airline staff fled in the general direction of the gate area, with some taking shelter in the terminal but most initiating a spontaneous evacuation out of the building. People exited the terminal by whatever means possible, some through emergency exits onto the AOA adjacent to the terminal and others back into the CTA. The evacuation of Terminal 3 also triggered the spontaneous evacuations of Terminals 1 and 2. Airfield bus operators transported the evacuees to the Tom Bradley International Terminal for temporary sheltering in accordance with the LAX Evacuation and Repopulation Plan. Others either loitered in the CTA or exited the airport on their own. Approximately 4,500 passengers self-evacuated from Terminals 1, 2, and 3 and more than 20,000 passengers were sheltered in place on aircraft, and in terminals.

The evacuations of Terminal 1, 2, and 3, coupled with the initially uncertain circumstances surrounding the emerging security threat, prompted LAWAPD officers to direct the people they encountered in other terminals to shelter in place until their safety could be assured. Other than those initial contacts by individual officers, it is not evident that an actual airport-wide directive to shelter-in-place was issued. Nor is it clear that if such a directive were issued, how and by whom it would be relayed. Some in LAWA management believe that many passengers and airport workers did not necessarily shelter-in-place, but rather were simply taken to inaction based on a lack of information and the visual and audible cues from the unfolding response across the CTA.

Analysis

The spontaneous and unassisted evacuation of multiple terminals created cascading effects across the airport and complicated essential airport operations and incident management. The LAX Terminal Evacuation and Repopulation Plan details provisions for an uncontrolled (spontaneous) evacuation following, or in conjunction with, a dangerous incident. However, airport operations, the ICP, and the LAWA ARCC/DOC were ill prepared to manage the near-simultaneous evacuation of multiple terminals and the balance of the CTA population sheltering-in-place.

LAWA personnel who attempted to help manage the flood of evacuees were overwhelmed, too few in number, and had minimal guidance from the ARCC/DOC. It was also clear that most airport residents were unfamiliar with the evacuation plan, were of limited assistance in guiding evacuees, and either preceded or evacuated right alongside the airline passengers. With a focus on the uncertain security situation in Terminal 3, the extent of multi-terminal evacuations had not been fully communicated to the ICP. Lack of an integrated airport-wide mass notification system hampered the airport's ability to provide information and direction to evacuees and those sheltering-in-place.

Day-to-day communications between the LAWA ARCC and the various terminals typically occurs through a variety of channels, to include customer service representatives, airline station managers, and the TSA and CBP supervisors. While these channels suffice for relatively routine matters, they proved entirely insufficient and undependable during the confusion of three terminal evacuations that occurred on November 1. Lack of dependable communications into the terminals and the limited presence of LAWA staff on-scene hampered the ARCC's, and thus the DOC's, ability to provide broad situational awareness, not only during these evacuations but also throughout the entire life-cycle of this incident.

LAX terminal evacuation plans contain the basic concepts needed to facilitate evacuations, but fail to identify and address key "pinch-points" such as a lack of integrated alerting and mass notification capability and assumptions regarding mobilizing and organizing staff resources needed to marshal and safeguard evacuees. Although initial marshaling of those who evacuated from the terminals onto the AOA was well executed with good inter-unit collaboration, those resources were quickly overwhelmed. The DOC was too far removed and lacked sufficient situational awareness to influence events. Because the ICP was preoccupied with the security situation, it too did not have either the situational awareness or the immediate ability to mobilize assets in response. Moreover, there was no clear understanding as to which of the two entities - the ICP or the ARCC/DOC - should have assumed operational control.

Although it is preferred that terminal evacuations be guided by trained and knowledgeable LAWA personnel, this is often impractical, especially in the case of a spontaneous evacuation. Instead, terminal residents must be trained in evacuation procedures and by their actions guide airport visitors. Using Floor Wardens for this purpose is also recommended. Floor Wardens are resident volunteers trained in marshaling and guiding fellow evacuees in the event of a fire or other emergency. During interviews with LAWA staff, it became clear the airport Floor Warden program previously in place had fallen into disuse and associated training for airport residents had not been recently refreshed.

Recommendations

Recommendation 13.1: Train LAWA and tenant personnel in shelter-in-place and evacuation procedures to ensure the safety of evacuees, particularly those with disabilities or special needs.

LAWA airport operations and emergency management leadership realized the gaps that exist in their current evacuation plans and have already initiated improvement efforts accordingly. The Floor Warden program, which will identify and train volunteer resident personnel in each of the terminals to assist with the evacuation process, is being revitalized and a training schedule advanced. LAWA has also formed a new program called the Airport Response Team (ART) consisting of LAWA staff volunteers. These volunteers are trained to aid travelers and airport residents during emergencies and will provide information and comfort items. The ART program will also place significant emphasis on assisting members of special needs populations.

Recommendation 13.2: Support ongoing awareness of emergency evacuation and sheltering procedures through a sustained information campaign to include public address announcements.

Most people at the airport on any given day are travelers who do not know the airport environment well, if at all, and who must be guided or even assisted in any directed or spontaneous evacuation. Signage, way-finding, and routine public messaging are important strategies to improve the readiness of the airport population for any potential emergency. LAWA, under sponsorship of the Airport Emergency Management Working Group (AEMWG), has designed a robust public awareness campaign that leverages visual and audible cues to orient travelers to their environment and provide them with basic personal safety information. Once implemented, the campaign will link to pre-scripted emergency public announcements in the terminals to provide travelers with specific directions to follow in an emergency.

Recommendation 13.3: Plan for rapid mobilization of LAWA police or civilian staff to any shelter-in-place or evacuation location to enable safe containment or evacuee marshalling and transport.

The active shooter incident demonstrated the importance of maintaining the ability to mobilize LAWA civilian employees as needed to assist with a variety of non-risky, though nonetheless important, emergency response related tasks. Depending on the extent of an emergency, the numbers could be significant and require careful planning and management. From providing aid to terminal evacuees to staffing shelter-in-place locations, there are personnel requirements contained within the AEP and its associated annexes that have yet to be fully assessed. As part of the capabilities gap analysis of the AEP annexes now under way, planning factors should be developed and used to guide the use of the LAX Terminal Evacuation and Repopulation Plan and other emergency response plans as appropriate.

Observation 14: Transportation Services

Pre-planning and central management of transportation services within the ICS framework are vital to supporting needs like evacuation, sheltering, movement of key personnel, and/or aircraft deplaning.

Centrally managed transportation services, both for moving incident responders and mission-essential airport workers, are a critical resource during an incident. In an emergency, a range of vehicles may be

required to carry out rescue operations, transport personnel, and haul supplies and debris. These services should be organized and directed from a single point within the ICS structure to ensure unity of command and effort. When leveraged properly, transportation services can be a significant enabler to accomplishing key incident command objectives.

Background

At the onset of the active shooter incident on November 1, the ARCC Duty Manager and Airfield Bus Operations leveraged the use of LAWA buses to gather and transport displaced passengers and employees from Terminals 1, 2, and 3 onto the AOA; provide a safety barrier from the danger of ongoing airfield operations; and transport them to a safe location away from the immediate incident. Buses were used again later by incident command for the managed transportation of TSA personnel and other mission-essential tenant employees, from staging areas to the CTA, to help advance the reactivation of terminal operations as part of overall incident recovery. Buses were also used to transport passengers from the CTA area to Lot C where they could solicit off-site transportation through a variety of commercial transportation operators.

Analysis

Throughout the incident, there were challenges to incident management and ongoing airport operations that were or could have been addressed by employing centrally managed transportation services. These included: passengers needing transportation to temporary shelter locations; deployment of police officers from off-airport staging to support CTA security operations; movement of mission-essential airport workers to assist in airport recovery; and aircraft deplaning operations and subsequent movement of passengers to the terminal area from airside parking ramps.

The tight security cordon placed around the airport made it difficult for civilian responders, LAWA staff, and mission-essential airport workers to gain access to the facility without the benefit of an arranged escort or some other form of managed and secure transportation. These personnel were important to response and recovery operations and their delay only served to worsen an already difficult situation for those impacted on the airport. The inability to deploy civilian staff needed to support terminal and aircraft operations hindered aircraft arrival and departure operations causing lengthy “hold on boards” and tarmac delays. Consequently, about 20,000 people were either confined in terminals or on waiting aircraft from 30 minutes up to 6 hours.

As described, LAWA did organize some transportation services during the incident. However, lack of a ready plan, absence of pre-arranged agreements with transportation providers, and no central management of transportation services from either the ICP or the LAWA DOC limited the options available to employ transportation assets as a ready enabler to response and recovery operations. It appears that management of transportation requests was largely done through the DOC via its interface with ground transportation services or coordination with the City EOC. A number of requests for support were sent to both the ICP and the DOC, which led to duplication of effort. Lack of a process and a transportation management function in the incident command structure meant that requests were not prioritized and were handled on a first-in / first-out basis. Lack of pre-identified staging areas, access points, and travel routes further complicated the transportation management challenge.

Recommendations

Recommendation 14.1: Account for organizing and managing transportation services in pre-event planning and ensure proper inclusion of this activity within the ICS structure.

Transportation services are an important consideration throughout the lifecycle of any emergency. LAWA should ensure that this consideration is appropriately recognized in the AEP and its associated annexes and that those plans include transportation management as a specific part of the incident command structure, both at the ICP and the LAWA DOC. Staging areas, access points and travel routes should be outlined in the AEP annex dealing with incident command system facilities. Potential transportation requirements should be evaluated as part of the capability gap analysis now underway and an inventory of the LAWA vehicle fleet should be kept in the ARCC/DOC.

Recommendation 14.2: Negotiate agreements with other transportation agencies and commercial providers to ensure these resources can be mobilized in an emergency to provide support.

LAWA is encouraged to work with the City of Los Angeles Emergency Management Division as it considers its own emergency transportation management needs and leverages similar planning and standing agreements already in place by that agency. This would include any existing agreements with the Los Angeles County Metropolitan Transportation Authority for emergency bus service. LAWA routinely interacts with numerous transportation providers on a daily basis and should consider developing "on-call" agreements with those providers to assist LAX if needed. Protocols for managing transportation services should be described and associated authorities for triggering standing interagency agreements or commercial contracts defined in the AEP.

Observation 15: Passenger Assistance and Mass Care

Response plans must provide for mobilization of care for persons displaced by an emergency and with special needs, to include basic health and comfort, family reunification, and interim sheltering.

U.S. DOT FAA Circular 150/5200-31C, Change 1 defines mass care as "the actions that are taken to protect evacuees and other disaster victims from the effects of the disaster." [10] More importantly, it advises airports that mass care activities include providing temporary shelter, food, medical care, clothing, and essential life support needs to those people who have been displaced in an emergency. Although the incident on November 1 was not of the extent that persons impacted required this level of support, it is also clear that people adversely affected by an airport incident of even modest duration may require a minimum of comfort items that equate to good customer care, such as:

- Reasonable climate control
- Water
- Comfortable seating
- Male and female restrooms
- Charging stations for phones and electronic devices
- Assistance with luggage and belongings

- Actionable incident and flight information

The active shooter incident in Terminal 3 prompted the evacuation and/or displacement of thousands of passengers and the virtual confinement of thousands of others. As the incident unfolded, many of the evacuated passengers were transported to temporary holding areas, others were held on buses, and most sheltered in place in aircraft, and other terminals. The LAX Terminal Evacuation and Repopulation Plan provides guidance for the care of displaced passengers and others affected by an incident, and that plan was executed on November 1. That plan was not sufficient to address the airport-wide passenger assistance or mass care needs experienced on November 1.

Background

Although a lack of access to the airport due to the security cordon hampered some efforts at passenger assistance, at LAWA's request, the American Red Cross (ARC) delivered over 5,000 bottles of water, meals and snacks, cots, and personal hygiene kits to people in the terminals. In addition, a number of airlines provided whatever water and snacks were on hand. At the height of the incident, efforts were also made by airport operations and LAFD to distribute water to people around the CTA. The DOC activated a memorandum of understanding (MOU) with Reliant Immediate Care, a 24/7 urgent care clinic in the vicinity of the airport to address medical needs. Reliant was already serving as an ad hoc holding area for senior citizens and persons with disabilities until terminal repopulation began. Reliant provided food and water, filled prescriptions, and monitored the medical condition of evacuees. In TBIT, 20 Reliant attendants were on duty and worked continuously for about 10 hours providing individualized support, including addressing the needs of about 100 people confined to wheelchairs.

In accordance with the LAX Evacuation and Repopulation Plan, Parking Lot C was identified as a staging area and as a location for the reunification of passengers with local contacts or who could otherwise arrange for their own transportation off the airport. Initially, there were no shelter or passenger care amenities at that location, but by the afternoon, some food, water, and portable toilets were provided. Airport operations staff at Parking Lot C also provided evacuees with information concerning rental car operators, hotels, and taxis. As a result, many passengers were able to arrange for their own transportation and lodging if needed. Another 70 to 100 passengers remained in Parking Lot C until terminal operations were reestablished and they could continue on to their travel destinations.

Anticipating the need for overnight sheltering, the DOC coordinated with the City of Los Angeles Emergency Management Division's EOC to procure shelters for a possible 300-400 displaced passengers. By midafternoon on the day of the incident, two shelter sites were activated off of airport property: the Westchester Recreation Center at 7000 West Manchester Avenue (3 miles from LAX) and the Westwood Recreation Center at 1350 South Sepulveda Boulevard (12 miles from LAX). Later that evening, as the incident stabilized and needs for overnight facilities were better assessed, the DOC informed the City of Los Angeles EOC that the mass sheltering centers were not needed.

Analysis

The events of November 1 demonstrated that there are some important gaps in the LAX Terminal Evacuation and Repopulation Plan. Those include the need to anticipate and support simultaneous evacuation of multiple terminals, coupled with the potential for the shelter-in-place of passengers and

airport workers across the entire CTA for an extended period. The plan also did not sufficiently address incident command and control, nor did it adequately identify the personnel and logistics support needed to manage related customer care operations. Most importantly, there was some confusion over which entity – the ICP or the DOC – should have provided operational control over incident-related passenger assistance and mass care activities. Given these factors, there were shortfalls in providing needed passenger assistance and mass care support to those impacted by the emergency.

It appears that passenger assistance and mass care objectives were never fully integrated into incident objectives at the ICP or the DOC, nor were the incident command structures at either entity built-out sufficiently to address the management of these activities. Lacking full situational awareness, the ICP was not able to appreciate the magnitude of passenger assistance and mass care challenge. Having slightly better awareness than the ICP, the DOC recognized these emerging requirements, but having control over few operational assets, was unable to provide the staff and resources needed to fully address them. Although the DOC arranged sheltering, of the thousands of passengers transported to the TBIT, only 33 stated a need for overnight sheltering. Rather than transport this small number to a shelter off airport grounds, airport operations staff at TBIT worked with the DOC to arrange for cots, food, water, and hygiene kits. The ARC delivered these items to the TBIT Special Events Lounge where these people spent the night.

Recommendations

Recommendation 15.1: Conduct joint planning with the Red Cross to assess potential needs and develop strategies for delivering passenger assistance and mass care under a range of scenarios.

Passenger assistance and mass care requirements can vary from minor comfort items to overnight lodging to specialized assistance for the functional and access needs populations. To best determine these requirements across a variety of emergency scenarios, it is recommended that LAWA partner in its planning with the ARC. Responding to more than 70,000 disasters across the country every year, no organization better understands providing mass care better than the ARC. LAWA should also consult with the City of Los Angeles Department on Disability and the City's Emergency Management Department for additional advice and to harmonize planning efforts. It is further suggested that the LAX Terminal Evacuation and Repopulation Plan be retitled, revised, and expanded to encompass a broader focus on general passenger assistance and mass care concerns.

Recommendation 15.2: Estimate logistics requirements related to providing passenger assistance and mass care support and decide on the best ways to ensure immediate access to those resources.

Concurrent with the planning work recommended above, LAWA should assess the logistics associated with providing passenger assistance and mass care services to passengers and airport employees in the event of an extended emergency. The needs generated by the November 1, 2013 incident should be considered as a baseline for that analysis. Once those needs are determined, LAWA should decide what resources must be kept on-hand, what resources should be procured as needed, and what resources can be readily obtained with the help of the City's Emergency Management Department. Protocols for managing passenger assistance and mass care resources and the associated authorities for triggering procurement of additional resources should be defined in the AEP.

Recommendation 15.3: Update existing plans and conduct training as required to provide effective passenger assistance and mass care to access and functional needs populations in an emergency.

LAWA has a well-established program to address the requirements of the access and functional needs populations at its airports and these issues are clearly a priority for airport management. Federal and State laws require that children and adults with disabilities have equal opportunity to access emergency programs and services. LAWA has been very proactive in integrating access and functional needs requirements into its revision of the AEP and the development of new AEP annexes. Given the challenges associated with the general delivery of passenger assistance and mass care cited above, some needs on November 1 may have gone unmet. However, on that day, the LAWA Coordinator for Disabled Services in concert with the City's Department on Disability worked tirelessly with the ICP and DOC to address access and functional needs concerns and search out and assist members of those populations where they could. The lessons learned from that experience should be factored into future planning, training, and exercises.

Observation 16: Security Clearing Operations

Conducting wide-area security operations requires careful planning, organization, and harmonization with civilian counterparts to both ensure public safety and speed facility repopulation and recovery.

On the day of the active shooter incident, security-clearing operations were initiated immediately following the apprehension of the shooting suspect and continued until the mid-afternoon. The whole time, the incident command team placed considerable emphasis on two distinct priorities: 1) protecting the people at the airport from any further security threat; and 2) verifying the general safety of the airport to facilitate restoration of operations as quickly as the security situation would allow.

Conducting security operations to sweep and verify the safety of CTA was no small task. The airport complex spans more than 3,425 acres. Within that area, the CTA contains nine passenger terminals connected in a U-shape. It has parking structures at its core that are ringed by a two-level roadway dividing arrival and departure activities at the terminal frontages. The parking structures within the CTA contain nearly 8,000 parking stalls. In addition to the CTA parking area, LAX has a capacity of over 4,500 parking stalls in an economy lot outside the CTA. All of the terminals and parking structures in the CTA had to be swept by police with explosive detection K-9 teams before the all-clear could be sounded. That call was made at about 2:30 PM, five hours after the shooting.

Background

Within the operations section of the UC, a special operations group was established and organized to conduct CTA security clearing operations. These clearing operations occurred in two distinct segments: clearing areas directly associated with the shooting and the securing of Terminal 3; and the subsequent actions to ensure that the entire terminal area was safe and could be readied for reactivation and repopulation. As the shooting scene was secured, LAWAPD and LAPD commanders worked together to assemble and deploy strike teams to search Terminal 3 for additional shooters, possible Improvised Explosive Devices (IEDs), and survivors who had not evacuated the terminal.

Police teams cleared passengers, concessionaires, and LAWA employees who had taken shelter in Terminal 3 restrooms, restaurants, stores, and gate areas. They also found and immediately extricated several shooting victims and directed other passengers to temporary holding locations. Terminal 3 was fully cleared by 10:00 AM, one half hour after the initial shooting. At that time, the terminal was secured for law enforcement-only access to preserve the crime scene and facilitate the investigation. With Terminal 3 fully secured, emphasis transitioned to clearing operations across the rest of the CTA. As fresh police resources arrived, they were paired with LAWAPD officers in additional strike teams and dispatched to conduct clearing operations across the other terminals and parking structures.

As the incident unfolded, sporadic reports of potential suspects, suspicious behavior, and possible IEDs all required immediate police response and resolution. These calls only added to the challenge of the deliberate and painstaking sweep and clearing operations being conducted for each terminal and parking structure. The latter included the simultaneous search for the vehicle in which the suspect arrived and its driver whose whereabouts were for a time still unknown. As evidence of the concern for potential IEDs, police strike teams included 27 K-9 units from various agencies which were essential to clearing luggage left behind by passengers who self-evacuated from Terminals 1, 2, and 3. Security clearing operations were completed, and all terminals and parking structures (with the exception of Terminal 3) were reopened by late afternoon on November 1, 2013.

Analysis

While security sweeps were executed by police teams with tremendous diligence, the full scope and complexity of the operation was beyond initial estimation and clearing operations took longer than initially thought. None of the agencies involved had ever had to sweep and clear such an enormous facility, most of it still heavily populated with passengers and airport workers. This was done while also cautiously searching for what could have been additional armed threats or explosives. Adding to the challenges of scope and complexity, the ICP's control of clearing operations underway were hampered by several additional factors. These included: 1) the less than full build-out of incident command structure to include a robust planning section; 2) a lack of interoperable radio communications to facilitate coordination with non-LAWAPD police teams and resources; and 3) gaps in ICP situational awareness of the status of ongoing clearing operations.

Planning – There are two areas of focus for a planning section in the incident command structure. One is to monitor the evolving situation and help the incident command team maintain situational awareness as needed to exercise command and control. The other is to look forward into the next operational period, and based on the incident commander's intent, to formulate an IAP. That plan should define objectives, how those will be achieved, and the command structure needed. Although a planning section was established, the dynamic nature of ICP activity and the absence of additional staff with the right training and experience prevented the planning section from fully supporting the organization of the clearing operation and monitoring its progress.

Communications – The ICP's ability to monitor clearing operations was handicapped by the lack of both interoperable radio communications and an incident communications plan as part of the IAP. Effective communications are essential to situational awareness and, in this case, the lack thereof made it challenging for the ICP to coordinate clearing operations across multiple agencies, track what

was cleared and what remained, and to redirect assets as needed. Some teams had been ordered to search different areas by different supervisors and in other cases teams were ordered to search the same areas multiple times. These conditions made it difficult to predict when clearing operations would be completed and in turn delayed the restoration of terminal operations.

Despite the challenges involved, security clearing of the CTA was a substantial accomplishment by all of the police agencies involved. It was a unique demonstration of highly collaborative police operations organized and conducted in a very compressed time frame. The lessons learned should be documented by LAWAPD and offered for study by other police agencies that are concerned about similar threats.

Recommendations

Recommendation 16.1: Document the CTA security clearing operation, develop planning factors for estimating resources and time to complete clearing tasks, and apply these to future incident planning.

The CTA clearing operation conducted on November 1 provides LAWAPD with a set of valuable planning factors that can now be used as a baseline for any future response of a similar nature. For example, it is now known how many officers, organized into how many teams, and with what resources, are needed to clear individual terminals and the entire CTA in what time. With that information, more accurate estimates of both time and labor can be calculated and better predictions provided for a return to normalcy as a way to facilitate parallel planning for the recovery of airport operations. These planning factors might also be used to strategize how to evolve clearing operations in stages, and by closer coordination with airport operations, advance a more rapid "rolling recovery" of the CTA.

Recommendation 16.2: Develop tools and methods to facilitate tactical planning, track the progress of operations, and share situational awareness to strengthen coordination among those involved.

Developing situational awareness and managing tactical operations at the ICP on November 1 would have greatly benefited from a set of simple tools and methods to support overall command and control. These tools should be used to orient responders to the airport layout, record the status and emerging details of the incident, and depict deployment of resources in a way that would provide all involved within a unified picture of the situation. Tools such as command boards, schematics of terminal footprints, and map overlays all tailored and prepackaged for easy use in the field can go a long way to making the ICP more effective. Ready duplicates of some of these tools for use by counterparts from other agencies would help ensure all are literally on the same page. Compatible approaches would also improve the ICP /DOC interface and the more structured exchange of incident related information to the advantage of both.

Observation 17: Transition to and Hand-off for Recovery

Recovery objectives must be addressed as early as possible in incident planning to ensure effective synchronization of public safety requirements with the time-phased resumption of facility operations.

It is a basic principle that planning for disaster recovery must begin early in the response phase and be based on assumptions prepared during pre-disaster preparedness efforts. For that reason, recovery objectives are normally included in the IAP initially developed to guide response operations. This is so all responding members understand that, beyond the priority of saving lives and attending to the needs of survivors, the ultimate goal is a return to normalcy as quickly and as cost-effectively as possible. Actions taken in the response phase can have major influence on the pace and direction of recovery. On November 1, 2013, a lack of readiness and differences in perception of role, between police and airport operations and between the ICP and the LAWA DOC, served to slow response planning and the synchronization of effort needed for a more speedy recovery. Once recovery began, the ICP did not shift its focus and there was not a transfer of command that would permit airport operations to capitalize on the structure and resources in place.

Background

Whether at the ICP or at the DOC, the planning section plays a key role in leading the IAP process by identifying barriers, examining possible courses of action, and drafting suggested incident objectives based on information gathered and synthesized by the section's situation unit. Objectives are updated for each subsequent operational period, which is normally 12 hours but could be shorter or longer depending on the nature of the emergency. In the development of recovery objectives, there must be a symbiotic relationship between the planning section in the ICP and the planning section in the DOC so the perspectives of both entities are harmonized and integrated to achieve unity of purpose across the incident command structure. It matters little if early recovery planning is primarily accomplished in one place or the other, just so long as it is accomplished and recovery objectives are effectively synchronized in an integrated IAP at both levels.

On November 1, airport operations representatives assigned to the ICP provided subject matter expertise and served as primary points of contact between the ICP and DOC. These individuals made liaison with the DOC within the first hour, exchanged critical incident information, and made ongoing efforts to bridge the operations of two entities. The airport operations representatives at the ICP focused on passenger care, terminal repopulation, and airport recovery issues and noted that recovery objectives were discussed during the first ICP planning meeting, which occurred within 30-45 minutes of the shooting. The DOC similarly held planning meetings to identify priorities and establish incident objectives complementary to those of the ICP.

While CTA security clearing operations were still being conducted, airport operations personnel in the ICP worked directly with the DOC to establish LAWA-staffed Terminal Incident Recovery Centers (TIRCs) in Terminals 1 and 2 and the TBIT. Once the police signaled that the security clearing of the CTA was concluded and the all-clear was given, the CTA roadways were reopened to commercial traffic at approximately 2:30 PM. Airport workers and flight crews were then allowed entrance and the

repopulation of Terminals 1 and 2 began. By 6:30 PM, all terminals (except Terminal 3) were functional. The recovery and repopulation of Terminal 3 occurred on the morning of November 2.

Analysis

The planning sections in both the ICP and the DOC were not fully developed and lacked trained and experienced planning staff. As a result, neither entity developed much in the way of an IAP beyond incident objectives. Moreover, routine contact between the ICP and the DOC was accomplished through airport operations personnel at the ICP and not between the respective planning sections or command staff. Although the ICP structure was not fully built-out, it at least had the benefit of senior leadership. The DOC not only lacked sufficiently trained staff, but also had no senior leadership from the response organizations integrated into the command and general staff positions within its structure.

The LAWAPD incident commander stated that he had no direct communication with the DOC manager throughout the entire incident and had little awareness as to what the DOC was doing. The DOC manager stated that he likewise had little knowledge of what the ICP was doing, except for what was being relayed to him from the airport operations liaisons on-scene. In this environment, there was little capacity or opportunity to develop robust and unified recovery objectives, embed them within an integrated IAP, and synchronize CTA security clearing operations and terminal recovery and repopulation efforts. Had there been more executive-level representation from the responding organizations, especially police, in the DOC and had the DOC and ICP planning sections been better staffed, there would have likely been a more seamless and timely recovery.

As security operations largely concluded at approximately 2:30 PM when the CTA roadway was reopened, the center of gravity of the incident shifted more fully in the direction of recovery. However, the ICP did not then redirect its energy toward facilitating the recovery effort, which went on largely outside its purview. Nor was there a transfer of incident command to airport operations for that purpose. Instead, with the level of the crisis greatly diminished, the ICP gradually dissolved.

Although efforts were made by the DOC and airport operations staff to implement TIRCs to smooth the way for terminal recovery, LAWA civilian staff assigned as TIRC leaders were inundated with unrelated recovery tasks that pulled them away from their TIRC and its purpose. As a result, the TIRC effort was not well supported and met with minimal success in the opinion of those staff. Had the ICP shifted its focus to managing recovery and had authority been transferred to airport operations, the structure and resources of the incident command team may have been applied to supporting the TIRC mission and facilitating other remaining recovery activities.

Recommendations

Recommendation 17.1: Establish a recovery planning focus within the planning section of the DOC to think ahead and assess the impacts, anticipate requirements, and do early planning for recovery.

The planning section is a powerful tool at the disposal of incident command leadership, whether at the ICP or in the operations center. The planning section has the freedom to stay somewhat detached from the immediate crisis and focus on the future by anticipating requirements, identifying possible challenges, formulating incident objectives, and developing courses of action for consideration and implementation. As recovery planning at the ICP may often be impractical, the LAWA DOC should take

up this activity in an emergency. Consideration should be given to the subject matter expertise that may be needed to facilitate recovery planning and the Planning Section Chief should be prepared to call on variety of disciplines for assistance, such as operations, customer service, engineering, maintenance, information technology, ground transportation, and any others as required.

Recommendation 17.2: Incorporate robust recovery objectives in the Incident Action Plan early in the response and plan for transition to recovery, to include the transfer of incident command as needed.

Regardless as to where recovery planning is performed, there should be a strong and ongoing connection between the ICP and the DOC to ensure recovery objectives are synchronized with response operations and are firmly embedded into the IAP and an early stage. This helps the incident command better anticipate the transition to recovery and ensure that there is no loss of momentum in the return to normalcy. As the transition to recovery approaches, consideration should also be given to the possible need to implement a transfer of command. The idea here is to maintain the incident command structure and resources established for the response as a way to bridge into recovery and allow the best-qualified person (or team of people) to assume responsibility.

Emergency Preparedness

Similar to the discussion of Public Safety issues and implications for overall security at LAX, a review of the active shooter incident of November 1, 2013 provides a lens through which to consider the general administration of the LAWA emergency management program. Like security, there is no single model for an emergency management program that can be uniformly applied. Each program must be tailored to suit the nature of the entity it serves, the profile of risks that entity is likely to confront, and the mission, authorities, responsibilities, structure, and resources of its parent organization. There are, however, well-established and nationally recognized standards to gauge the maturity and guide the development of any program. This section applies elements of a few of those standards to the LAWA emergency management program to identify possible opportunities for improvement. Many of the issues outlined throughout this report have their roots in the current state of maturity of that program.

LAWA Emergency Management Division

The LAWA Emergency Management Division reports to the Office of the Deputy Executive Director for Operations and Emergency Management, who in turn reports to the Executive Director. That placement provides the Executive Director with visibility over emergency management programs at the same level of oversight as that of Airport Police and other major components of the organization. The Director for Emergency Management has two units reporting to him. One is the Training unit, which includes all training for operations personnel at LAWA. The other is the Emergency Management unit, which currently has four fulltime positions in its structure two of which are vacant. The four fulltime positions do not include the Director of the unit.

The stated mission of the LAWA Emergency Management unit is: *"Developing excellence in emergency management through preparedness, mitigation, response, recovery, and partnerships in the unique regional and global environment of aviation."* While preparedness, mitigation, response, and recovery are typical core functions of emergency management, the reference to partnerships signifies the reality that, perhaps more than most programs, emergency management is a responsibility that is shared across the LAWA enterprise. It is also dependent on the participation and contributions of public safety agencies and private sector stakeholders both resident at LAWA airports and elsewhere in the region.

Originally set within LAWA Airport Operations, after September 11, 2001, the emergency management function was transferred to LAWAPD and following a later reorganization was transferred back to Operations in 2009. It has since had a succession of leadership on almost a two-year cycle. However, in June 2011, LAWA implemented reforms and has made steady progress in improving stewardship of the program, training, and the development of a suite of new response plans. Given a revitalization effort just begun in late 2011, it is still in the early stages of its maturity. With consistent executive support and investment of essential financial and staff resources, it is on a path to achieving full capability. The prudent use of national standards and best practices can point the way toward continued improvement.

National Standards and Best Practices

There are three primary sources of information to consider in assessing the state of maturity of the LAWA emergency management program. The first is policy guidance from FEMA on the execution of emergency management functions to include the NPS and NIMS. In addition, the two nationally recognized standards for the administration of emergency management programs are: the National Fire Protection Association's NFPA 1600 – Standard on Disaster/ Emergency Management and Business Continuity Programs; and the Emergency Management Accreditation Program (EMAP).

FEMA National Guidance – The NPS establishes the basic process model for preparedness: assessing risk; building and sustaining capabilities; planning and training; validating plans through exercises and actual events. The NPS was established to harmonize preparedness planning across jurisdictions to foster better whole-community integration. NIMS provides a single consistent nationwide approach to the actual management of emergencies. Like the NPS, NIMS fosters collaboration across agencies as essential to an effective disaster response, regardless of the nature, size, or complexity of the event. The NIMS is applicable at all levels of government and across all functional disciplines. At the core of NIMS is the ICS, which is addressed in previous sections of this report.

NFPA 1600 – NFPA 1600 was first introduced in 1995 and has been updated to reflect the latest best practice in the organization and administration of both emergency management and business continuity programs. It has also been adopted as one of three standards approved under the FEMA Private Sector Preparedness Accreditation Program (PS-Prep). The most recent edition of NFPA 1600 includes contributions from FEMA, the National Emergency Management Association (NEMA), the International Association of Emergency Managers (IAEM), the Association of Contingency Planners, and the Disaster Recovery Institute International. NFPA-1600 takes a "total approach" to common program elements, techniques, and processes to include management, planning, implementation, training and exercises, and program maintenance and improvement.[11]

EMAP – The EMAP standard is an accreditation process focused at local and state emergency management programs. Applicants engage in self-critique and incremental improvement typically culminating in a formal assessment by EMAP evaluators. The process is voluntary, scalable, and can be applied by any public sector organization, whether seeking accreditation or not. Given that the standard represents nationally recognized minimum performance criteria, it can also be applied as a tool for strategic improvement in the administration of emergency management programs. EMAP has been approved by the American National Standards Institute and endorsed by NEMA, IAEM, the Council of State Governments, and the National Association of Counties. EMAP criteria fall into two broad categories. The first deals with program management, emphasizing general administration, coordination, and stakeholder involvement. The second spans criteria in fifteen different aspects of emergency management, ranging from risk assessment through crisis communications.[12]

Not all of the guidance in the resources outlined above will apply or map perfectly to the LAWA emergency management program. Nonetheless, taken together, they do provide a benchmark from which to consider the current level of performance and program maturity and suggest areas needing development, support, and/or additional improvement.

Observation 18: Governance and Administration

The Emergency Management Division must have a clear charter, be empowered to drive cross-cutting programs, be resourced sufficiently to fulfill its mission, and be in a state of continuous improvement.

LAWA began a deliberate effort to "reset" its emergency management program in late 2011. The agency implemented basic ICS training, acquired consultant assistance to develop an expanded suite of emergency response plans, and hired new leadership to better organize the program and advance the reforms already begun. Although reform is still in its early stages and will take time to mature, the observations on emergency management operations contained in the previous sections of this report suggest that there are both strengths and weaknesses in the program that should be further explored. Gaps in response capabilities evident during the active shooter incident of November 1, 2013 have a direct link to effectiveness of the overall emergency management program and its governance.

Background

Emergency management is both a professional discipline and crosscutting program. As professionals in the discipline, emergency managers fill a unique role among their public safety counterparts in police, fire fighting, and emergency medical services in that they typically do not have direct control over the resources (e.g., public safety or public works) that are essential in responding to a crisis. In fact, the word "management" is a misnomer as it implies control when the emergency manager largely facilitates the activities of the other disciplines. FEMA defines the role as that of a leader who is also an alliance builder, communicator, planner, administrator, coordinator, educator, and problem solver.

NFPA 1600 describes emergency management as *"an ongoing process to prevent, mitigate, prepare for, respond to, maintain continuity during, and to recover from, an incident that threatens life, property, operations, or the environment."* The EMAP standard defines emergency management more broadly as providing *"the coordination of prevention, mitigation, preparedness, response and recovery activities for all hazards and that encompasses all organizations, agencies, departments, and individuals having responsibilities for these activities."* Emergency management is thus a cross-cutting program that sets the framework for coordinated multi-agency preparedness, response, and recovery operations. A few of these will be performed by the emergency management organization itself while the majority will be performed by others. To establish this framework, emergency management must have the mandate, trained people, essential resources, and the plans, policies, and procedures needed to fulfill its mission. Two key elements of effective emergency management are governance and administration.

Governance – Both NFPA 1600 and the EMAP standard address the topics of program charter, executive support, and program leadership in slightly different though consistent ways. Those are adapted here under the heading of governance. The most fundamental requirement for governance is a clear statement of corporate policy for the emergency management program. That statement must provide emphatic and unambiguous guidance to all members of the larger organization concerning the importance of the program, its vision and mission, and the roles, responsibilities, and authorities of its members, not just the emergency management function alone. There must also be an emergency management director who is placed high enough in the structure to wield suitable

authority and has the visible support of executive leadership. With that support, the director must be empowered to work with and obtain cooperation from across the rest of the organization.

Administration – Given the crosscutting nature of the program, an emergency management director should be assisted in its administration by an advisory committee made up of key stakeholders. That committee would provide input and/or assist in preparing, developing, implementing, evaluating, and maintaining the program. A multi-year plan that defines goals, objectives, and costs for the program should be prepared through coordinating with these stakeholders. This collaboration is essential to winning management support for the personnel and financial resources needed to mitigate the risk of those threats and hazards the organization has identified of most concern.

NFPA 1600 and EMAP address the need to take a risk-based approach to advancing emergency management programs and likewise stress the need to implement a process of continuous review and improvement in the programs themselves. Consistent with the basic concepts outlined in the NPS, emergency management programs should be guided by a cyclical assessment of "all-hazard" risks to the entity or jurisdiction its serves to drive its preparedness, mitigation, response, and recovery planning efforts. This will in turn drive plans for its own development and renewal. Administration of these programs should thus include methods to regularly evaluate its policies, plans, procedures, and capabilities. Those evaluations should be conducted on a regular basis and/or when a risk assessment is performed or real-world events suggest review is needed. An ongoing process for tracking the implementation of improvement actions is therefore also required.

Analysis

Maturation of any emergency management program takes time, often many years. It requires dedicated executive attention, precious resources, and participation of many players from across a locale, all who have other fulltime responsibilities. Some of the most significant players are in the uniformed public safety agencies or other departments where competition and organizational culture can interfere with getting cooperation. Once organized, emergency management programs take much persistence to maintain. Leaders come and go, priorities change, and even well-established programs can decline and falter. The LAWA Emergency Management Division should be viewed as being on the early part of its maturity curve. It is incumbent upon LAWA to respond to the experience of November 1 as an important opportunity to fuel its steady climb up that curve.

Mission and Mandate – The mission of the LAWA emergency management program is not well-defined or widely understood across the agency, or perhaps even respected by the stakeholders it must engage with and from whom it must win support and cooperation. While there was a launch memo issued to LAWA staff and external agency participants, it was not robust enough or sufficiently directive to clearly define what the emergency management program is, state why it is important, or outline the roles, responsibilities and authorities of either the Emergency Management Division or other leaders and functions across the organization that are key to its implementation. There has also been some resistance to program initiatives within the organization. Cooperation and progress has been largely achieved through force of will by the Deputy Executive Director for Operations and Emergency Management and the Director of Emergency Management, who are strongly committed to the success of the program.

Resources – The LAWA Emergency Management Division does not appear to be appropriately organized, sufficiently staffed, or adequately resourced to fulfill the responsibilities associated with administering a comprehensive emergency management program at a major international airport. Nor does it seem to fully integrate with and benefit from the expertise, capabilities, and resources of the Los Angeles Emergency Management Division. LAWA emergency management staff, already too few in number, lack the training and depth of professional experience necessary to perform essential responsibilities, thus creating an overreliance on outside consultants. Though its people should be an essential integrating element of any major crisis, the LAWA Emergency Management Division also does not have the vehicles, communications equipment, or other associated tools necessary to enable it to respond rapidly, maintain situational awareness, and play a meaningful coordinating role.

Program Management – To its credit, LAWA has in place two inter-disciplinary advisory committees: The Airport Emergency Management Committee (AEMC) and the Airport Emergency Management Working Group (AEMWG). The AEMC consists of senior executives and public safety officials and provides general direction for various initiatives being advanced by either the LAWA Emergency Management Division or the AEMWG. The AEMWG has broader participation and consists of working-level staff and subcommittees. These committees have helped to advance LAWA's comprehensive response planning effort and are already working on improvement actions from the November 1 active shooter incident. Unfortunately, this work is being accomplished without benefit of an overall program management plan or associated goals, objectives, and performance metrics.

Program Development – Without firmly establishing a mission, vision, and management plan, LAWA may expend considerable effort and expense though still not achieve an emergency management program that effectively develops and integrates the crosscutting capabilities needed to effectively respond to a major crisis. Conversations with LAWA staff and review of various planning documents and staff briefings indicate that during the last two years, LAWA made a significant good faith effort to train staff in basic incident command practices as a way to inculcate an emergency management mindset into the broader organization. Following that training, it hired a consultant to conduct a very comprehensive response planning initiative to develop 19 annexes to its base Airport Emergency Plan (AEP). However, while the AEP, which is mandated by the FAA, was also recently revised, that effort was completed without the same rigor as the annexes. Staff regarded the AEP as simply a regulatory requirement and anticipated the annexes would be the primary reference.

Spanning two years, work to develop the suite of annexes to the AEP consumed an inordinate amount of staff time and attention across the entire organization. Given the diversity of stakeholders across the Los Angeles area and the potential for a variety of competing perspectives on airport emergency management, the consultant was asked to create a framework for annex development that reflected that diversity. The effort to reach consensuses from and the committed participation of more than 15 different agencies took considerable time and effort on the part of LAWA staff. This appears to have been at the expense of the more deliberate and systematic development of the other fundamental building blocks of a sound emergency management program, such as those outlined in the NFPA 1600 and EMAP Standard. Although both the training and annex development work are important aspects of the program, the lack of a policy statement, management plan, and the right number of people

with the requisite skills and resources hampers a more logical process of program development. Even though tabletop exercises were conducted to validate the plans with the planning team, as of November 1, incident command capability to implement those plans had not been fully tested in an exercise and the harmonious interagency relationships so vital to effective disaster response were not refined. A bad plan implemented well is far better than a perfect plan not implemented at all. While the LAWA Emergency Management team suggested interim AEMC adoption followed by capability analysis and drills, a few members of the AEMC insisted on further analysis and refinement prior to final annex adoption. This has significantly slowed the process.

As demonstrated by the observations made in previous sections of this report, despite laudable efforts expended in base-line training of staff and AEP and annex development, there are still opportunities to improve areas such as incident command operations, resource management, interoperable communications, ARCC/DOC functioning, and public alert and warning. The need to address these core functions of emergency management would seem to indicate that LAWA may need to realign priorities to adopt a more long-term and deliberate approach. That will require a multi-year plan, the continued dedication of resources, and the patience to recognize that it all can't be done at once.

Recommendations

Recommendation 18.1: Issue a strong policy statement that formally establishes the emergency management program, key roles and responsibilities, and the structure of program governance.

Although the LAWA emergency management program enjoys strong support from executive leadership, the program's importance may not in all cases be well understood or fully respected by those in the organization who must contribute time and resources in a collaborative effort to achieve its aims. A strong statement of executive policy must be issued that clearly articulates its importance, the mission and vision of the program, and the roles, responsibilities, and authorities of those key to its success.

Recommendation 18.2: Prepare a plan to guide emergency management program development, obtain broad consensus on its objectives, priorities, metrics, and funding needs, and implement.

LAWA should organize a subcommittee of the AEMC to review the current maturity of the agency's emergency management program. The subcommittee should use NFPA 1600 and the EMAP standard, as well as lessons learned from the November 1 incident, as guides. LAWA should also benchmark best practices from other airport emergency management programs and in so doing establish a network of experts for continued professional exchange. In line with the policy statement and the results of the review and benchmarking cited above, LAWA should develop and obtain broad consensus on a multi-year management plan and budget to guide staged long-term development of the program.

Recommendation 18.3: Ensure the Emergency Management Division is staffed and resourced, and has the proficiency needed to execute both its day-to-day role and perform in crisis situations.

A staffing study and job analysis should be performed to assess the LAWA Emergency Management Division relative to its mission, core functions, and workload. This must include development of job descriptions and performance criteria for each position and a comparison of the results against the

training, skills, and experience of its current members. Performance goals, based on the management plan recommended above, should be developed as part of the performance appraisal process. LAWA has already identified deficiencies in vehicles and associated equipment and those requirements are now in the procurement cycle.

Observation 19: Risk Management and Preparedness

Risk assessment is core to emergency management and sets a baseline for all risk mitigation and response and recovery planning, which in turn drives development of all preparedness capabilities.

Whether in security or emergency management, more of something is not necessarily better. What is important is the prudent application of the right resources, against the right priorities, and implemented in the right way to manage risk. Although risk management is still in the early stages of adoption by public agencies, its application is accelerating due largely to national policies that have emerged after 9/11 and Hurricane Katrina and the ongoing development of risk practices. This observation deals with the opportunity to capitalize on that trend and better harmonize risk assessment efforts across LAWA, adopt a LAWA-specific risk management program, and apply it in a way that best informs priority setting and budgeting for risk mitigation, to include improvements in preparedness and especially response planning. It is possible that gaps in capabilities evident during the incident on November 1, 2013 could have been identified and resolved through a more integrated risk assessment and planning process.

Background

Over the last decade, preparedness planning has evolved to address all threats and all hazards and take a multi-disciplinary approach to risk assessment and risk mitigation. There are not enough resources to eliminate risk but risk exposure can be assessed and, through priority setting, planning, and investment, can be minimized and managed. Beyond facilitating responses to disasters, emergency management programs are increasingly focused on efforts to identify and mitigate risks beforehand to lessen potential consequences through things like citizen awareness, physical hardening, and/or improvements across the full range of response and recovery capabilities. Essential preparedness efforts to mitigate risk include advance planning, related training, and exercises aimed at effective response operations.

A number of different risk assessments have been conducted at LAX for a variety of purposes and from varying perspectives. In addition, emergency management staff has compiled a hazard vulnerability assessment as a preamble to the response operations planning effort now underway. As of the writing of this report, the LAX Airport Emergency Plan (AEP) has been updated, the 19 annexes are in the final production stages, and the AEMC policy group's final approval is scheduled for April 17th with training to begin in May. Appropriately, those plans make assumptions concerning how the agency and its public safety and airport partners will respond to a particular set of emergencies and identifies the capabilities and resources needed to successfully manage them. A capabilities gap analysis was not conducted coincident with the development of these plans, although that process is now underway.

The NFPA 1600 and EMAP Standard emphasize the close and interdependent relationships between threat / hazard identification and risk assessment, preparedness planning and capabilities gap analysis, and risk mitigation programs. That set of relationships plays out in a continuous cycle such as the one

described in FEMA's NPS and the DHS risk management framework. Despite positive trends in their evolution and use, risk assessment concepts and terminology vary widely, as do approaches to the integration of risk assessment results with planning and mitigation programs. The following summarizes some of the basic ideas as a frame of reference for the analysis that follows.

Risk Assessment – Risk has often been defined most simply as the product of the consequence and likelihood of a disruptive event or hazard. When considering more complex risks like those related to manmade events such as terrorism, the process becomes a bit more intricate and includes the added need to in some way include a characterization of the threat. Whatever the methodology, risk assessment generally involves: 1) evaluating the criticality or relative importance of the entities being protected; 2) defining the threats or hazards that apply; 3) assessing the vulnerabilities and capability gaps; 4) estimating the impact or consequence of a disruptive event; 5) determining the likelihood the disruptive event will occur; and 6) calculating the resultant risk. Those vulnerabilities and capability gaps of concern can then be ranked in priority order and strategies to mitigate those risks considered.

Risk Management – A risk assessment sets a baseline from which mitigation measures can be applied and overall risk reduced. Some assessments may focus on only a single threat or facility while others address a range of hazards or facilities. Whatever the scope, there is likely never enough funding to address all vulnerabilities and so trade-offs need to be made. By developing a menu of mitigation options and estimating their risk reduction potential and cost, planners can suggest combinations of options that will return the greatest risk reduction benefit for the funding available. The choices are presented to leadership who decides on priorities and how much risk reduction it can afford and then selects options to fund. If this process is consistently repeated, the organization moves from single "one-off" assessment to an ongoing cycle of risk management. The key point is that assessments alone have limited value if they do not lead to the managed and cost-effective reduction of risk.

Risk-based Planning – National policy and best practice from FEMA and both NAFPA 1600 and the EMAP Standard recommend risk assessment as the prerequisite step in preparedness planning. That step should address all significant threats and hazards to the jurisdiction to include, manmade (e.g., terrorism or other violent attacks); natural events (e.g., storms and earthquakes), and technological (e.g., an energy disruption), along with the interdependencies and cascading effects of those risks. It should consider a range of impacts on people, facilities and systems, and should assess the adequacy of existing prevention, protection, response, and recovery strategies in place. As risks and the options to mitigate related vulnerabilities and capability gaps are identified, this information is factored into the organization's management plan and its plans for security and disaster response operations.

Planning for Response Operations – Emergency management planning processes should be formal, documented, and involve a range of stakeholders to provide diversity of perspective and facilitate community buy-in to the adoption of those plans. Standing committees are a best practice and are strongly encouraged as plans are in a constant state of updating and refinement. Moreover, as gaps are identified, these committees provide a platform for corrective action and can guide related training and exercises. The work of a planning committee should be informed by an all-hazards risk assessment. Based on that assessment, a concept for response operations is then formulated, the capabilities needed are assessed, and gaps are identified in those capabilities. More refined strategies

for response are then prepared, initiatives to address the gaps are surfaced to management, priorities are set and resourced, and the final plan is trained to and exercised.

Analysis

LAWA has made great progress in response operations planning and training, however significant work still remains. The process is firmly established, there is whole-community engagement through an emergency management committee structure, and the effort has been well supported by consultants. Moreover, vulnerability and risk assessments have been conducted that provide insight into strengths and weaknesses in security and emergency response capabilities. However, though the assessments are valuable, there has been no consistent approach to harmonizing them, there is no means to integrate security and non-security risk as a baseline for decision-making, and follow-up appears to be on a case-by-case basis rather than part of a unified risk management program.

Recent Assessments – There have been a series of recent vulnerability or risk assessments and related studies of LAX either by various outside agencies or internal staff. Each has been different in purpose, scope, approach, and the community of stakeholders involved. These include:

- 2004 RAND Near-Term Options for Improving Security at Los Angeles International Airport
- 2011 The Los Angeles International Airport Peer Review Study
- 2011 DHS Office of Infrastructure Protection Site Assistance Visit
- 2011 Report of the Mayor's Blue Ribbon Panel on Airport Security
- 2013 TSA/FBI Joint Vulnerability Assessment
- 2014 LAWA Emergency Management Division Hazard Vulnerability Assessments

Notwithstanding the prior assessments listed above, there is no central tracking or oversight for the resolution of vulnerability and risk assessment results having implications for LAWA's security and emergency management programs. Threats and hazards to LAX are not consolidated in a single overall risk profile for annual or biennial executive review, and the approval of risk mitigation measures for funding are done incrementally rather than as part of an integrated and prioritized set of risk-based options for decision-making. The latter is essential to any program of risk management. An integrated approach is also important if risk assessments are to be an effective first step in emergency response planning and preparedness training and exercises.

Planning Governance – The process for response plan development at LAWA is highly evolved and has outstanding representation from a broad cross-section of internal and external stakeholders. Both staff-level participation in developing the plans and executive level guidance and oversight are strong and show significant leadership commitment. The inclusive whole-community approach adopted to develop LAWA response plans is consistent with best practice and has helped to form stronger collaboration among key stakeholder groups. Planning support and oversight is provided by two standing emergency management committees: the AEMC and AEMWG.

- Airport Emergency Management Committee (AEMC) – Made up of 24 executives from all LAWA divisions as well as key leaders from City departments and federal agencies, this committee provides senior-level direction to the planning effort and final approval of completed plans.

- Airport Emergency Management Working Group (AEMWG) – This working committee consists of about 35 core members and includes discipline-specific subject matter experts and supervisory level decision-makers from multiple LAWA divisions and external departments and agencies.

Plan Development – LAWA emergency management planning follows a deliberate eight-step process conducted by the AEMWG and facilitated / supported by the LAWA Emergency Management Division. That process includes: 1) information gathering and scope definition; 2) work group assignments; 3) initial draft development and interim AEMWG approval; 4) a planning workshop and plan refinement; 5) production of a final draft plan; 6) AEMC review and approval; 7) training to familiarize responders with the plan; and 8) formal activation of the final plan. As well-structured as the process is, aside from its selection of threat and hazard scenarios, it does not include a means to identify and resolve vulnerabilities, risks, or related gaps in capabilities. The need for a tactical EMS capability to support a Rescue Task Force is an example of a gap that surfaced during the active shooter incident of November 1, 2013 that would be of the kind identified and resolved during the planning process.

It should be noted that, of the 19 AEP annexes originally commissioned for development in 2012, only 13 have been completed and have provisional approval, while another 6 are still in development scheduled for completion by March 30, 2014. Although the draft Active Shooter Annex was originally prepared in March 2013, it had not been promulgated beforehand due to competing authorities at the AEMC and thus was not used in the response to the November 1 incident. While collaboration and consensus are very important in a governance structure like the City of Los Angeles and LAWA, it is imperative that the relevant stakeholders commit to timely response and support their representatives, or LAWA must develop an alternative methodology to drive decision-making to completion in order to move forward. As is often said… *"Perfect is the enemy of the good."*

In addition to the pending status of annex development, there are a set of outdated response plans maintained independently in a LAWAPD Airport Emergency Operations Plan (AEOP) that include both security and non-security guidance to the Police Division. As such, there is overlap between the AEOP and the AEP and its annexes. That overlap should be resolved and the security aspects of the AEOP incorporated into other LAWA security plans as appropriate to eliminate redundancy, which can inherently breed conflict. Given LAWA emergency management staff's lack of familiarity with perimeter security strategies employed on November 1, continued cross-training in all response plans along with joint incident command practices is warranted.

Preparedness Training and Exercises – LAWA began training its staff in the NIMS and ICS in 2011. This not only includes training in basic NIMS and ICS fundamentals but also more advanced training in multi-agency incident command operations at the Texas A&M Emergency Services Training Institute (ESTI), a DHS chartered center of excellence for emergency services training for first responders across the country. Beyond the full-scale exercises mandated by the FAA, LAWA has also implemented innovative approaches to tabletops and mini-exercises that reinforce classroom -based ICS instruction and permit testing of planning assumptions. LAWA Readiness Assessment and Performance Improvement Drills (RAPID) provide a low-cost and effective way to practice ICS and strengthen inter-unit collaboration. Extending this concept to more senior response leadership, to include LAWA's public safety partners and airport stakeholders would yield even greater value.

Recommendations

Recommendation 19.1: Adopt unified risk management to consolidate assessment results and array mitigation options in a way that supports Department-wide priority setting and decision-making.

LAWA has had the benefit of a number of vulnerability and risk assessments, security studies, and hazard impact analyses all of which provide significant information to inform risk mitigation planning. Its challenge is to now integrate that information and manage it. The process must orient leadership to the agency's overall risk profile across all threats and hazards, present options for investment in risk reduction in a way that supports priority setting and informed decision-making, then monitors and tracks implementation of those initiatives to ensure overall risk mitigation aims are achieved. The risk management process should span both security and emergency management, incorporate the benefit of assessments by others, and firmly integrate security and emergency response planning. Supplementing LAWA Emergency Management staff with staff from partner agencies could help augment the skill shortage within LAWA and reinforce the broad commitment the program needs.

Recommendation 19.2: Bring the base Airport Emergency Plan update to a close, complete work on response annexes still pending, and resolve any outstanding issues that inhibit their adoption.

A large amount of time and resources have been devoted to developing the AEP and its suite of scenario-based and functional annexes over a two year period. That effort has been at the expense of other equally fundamental aspects of emergency preparedness, to include response capability development. Work on the annexes should be brought to a close as soon as practical and the focus of the AEMC and AEMWG should turn to testing and validating the base AEP and its finalization. Validating the annexes could follow in stages and be integrated into ongoing training and exercises. The focus of the AEMC and AEMWG could then shift to mitigating gaps in general preparedness, response capabilities, and multi-agency incident command.

Recommendation 19.3: Reinforce the program of incident command training already established, emphasizing joint training and exercises with LAWA public safety partners and airport stakeholders.

Advance planning is basic to emergency preparedness. The capability to rapidly and seamlessly implement multi-agency incident command and execute well-coordinated response operations jointly across LAWA and with its public safety partners is even more so. LAWA's efforts to train Police and key civilian staff in incident command practices are laudable and must continue to mature. As outlined in observations elsewhere in this report, LAWA's training and exercise program must place significant emphasis on building the capacity to execute unified ICP and DOC operations, as well as strengthen inter-unit and interagency coordination in implementing response strategies. Like its planning efforts, LAWA must take a whole-community approach to response training and exercises. Such improvements will take time and so a phased multi-year training and exercise plan is suggested.

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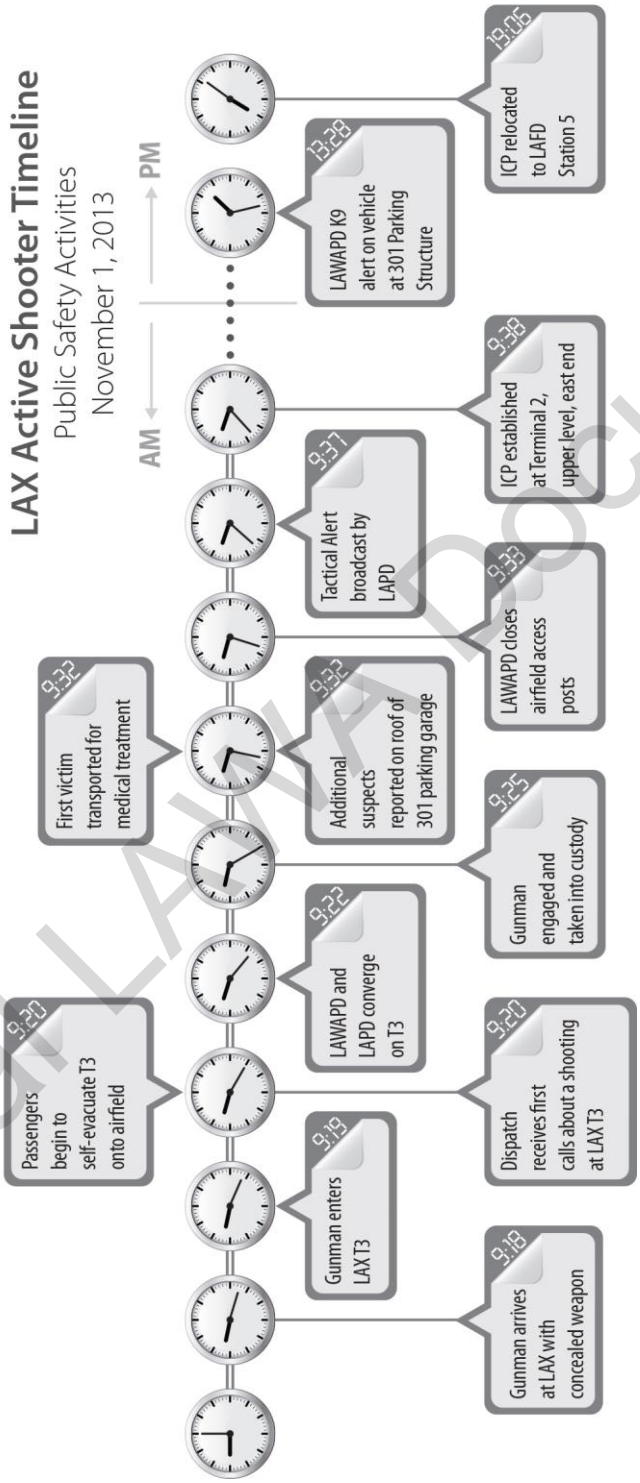
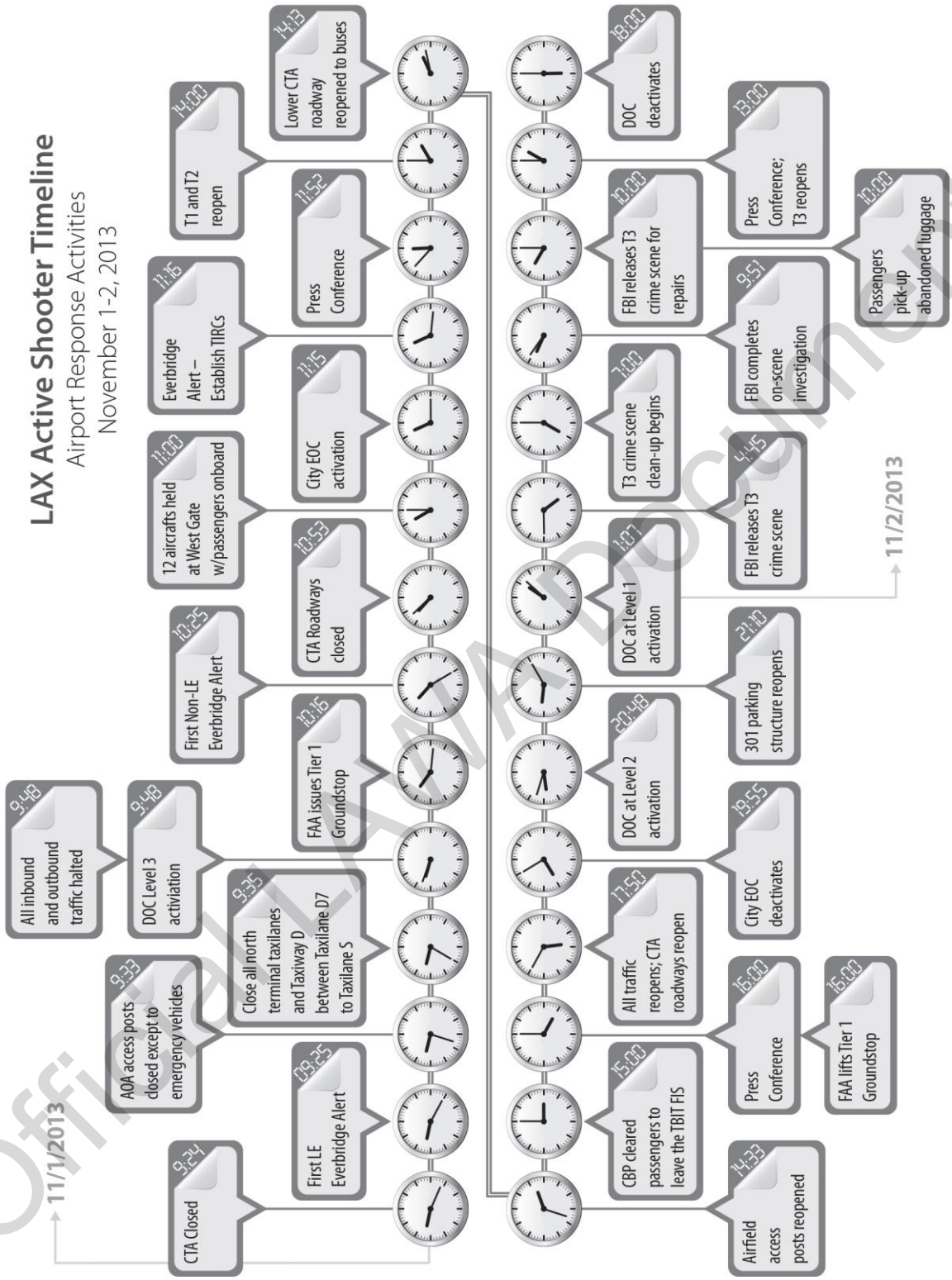
Appendix A: Acronyms

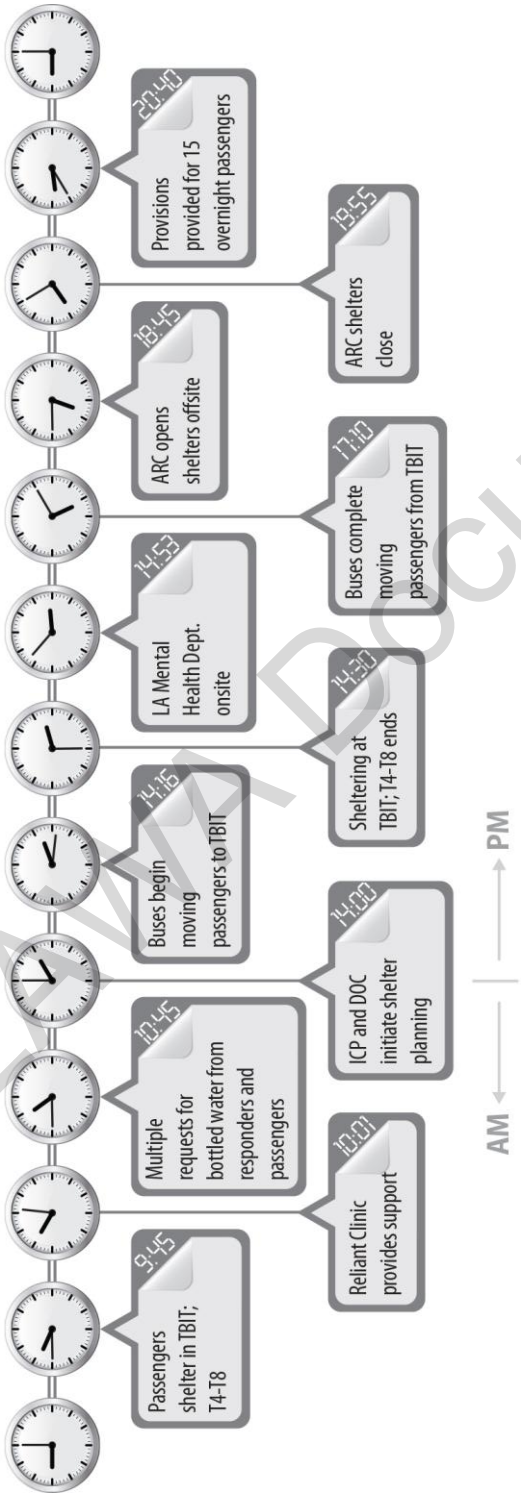
Acronym	Definition
AAR	After Action Report
AEMWG	Airport Emergency Management Working Group
AEP	Airport Emergency Plan
AOA	Airfield Operating Area
APIIC	Airport Police Information and Intelligence Center
ARC	American Red Cross
ARCC	Airport Response Coordination Center
ART	Airport Response Team
CBP	Customs and Border Protection
CHP	California Highway Patrol
COP	Common Operating Picture
CCTV	Closed Circuit Television
CTA	Central Terminal Area
DOC	Department Operations Center
DOD	Department of Disabilities
DOT	U.S. Department of Transportation
DRMNS	Distributed Receipt Mass Notification System
ECG	Executive Command Group
EMAP	Emergency Management Accreditation Program
EMD	Emergency Management Division
EMS	Emergency Medical Services
EOC	Emergency Operations Center
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
IAP	Incident Action Plan
ICP	Incident Command Post
IC	Incident Command
ICS	Incident Command System
IED	Improvised Explosive Device
IPAWS	Integrated Public Alert and Warning System
JCTAWS	Joint Counterterrorism Awareness Workshop Series
JIC	Joint Information Center

JIS	Joint Information System
LAFD	Los Angeles Fire Department
LAPD	Los Angeles Police Department
LA-RICS	Los Angeles Regional Interoperable Communications System
LASD	Los Angeles Sheriff's Department
LAWA	Los Angeles World Airports
LAWAPD	Los Angeles World Airports Police Department
LAX	Los Angeles International Airport
LE	Law Enforcement
MATAC	Multi-Assault Counter-Terrorism Action Capabilities
MNS	Mass Notification System
MOU	Memorandum of Understanding
NFPA	National Fire Protection Association
NIMS	National Incident Management System
NPS	National Preparedness System
NTSB	National Transportation Safety Board
PA	Public Address
PIO	Public Information Officer
PSAP	Public Safety Answering Point
RAMS	Random Action Measures
RAPID	Readiness Assessment and Performance Improvement Drill
SOP	Standard Operating Procedures
TBIT	Tom Bradley International Terminal
TEMS	Tactical Emergency Medical Support
TIRC	Terminal Incident Recovery Center
TSA	Transportation Security Administration
UC	Unified Command
UNICEF	United Nations Children's Fund
WEA	Wireless Emergency Alert

Appendix B: **Timelines**







Appendix C: Fact Sheet

Los Angeles World Airports

November 1, 2013 Active Shooter Incident
Los Angeles International Airport
Fact Sheet

- **Flight Operations:**

  1,550 Scheduled – 1212 operated

  - 86 Diverted
  - 252 Cancelled
  - 74 Delayed
  - Flights held on board
    16 > 30 minutes
    3 > 3 hours
    2 > 4 hours
    1 > 6 hours
  - International Flights
    All arrived – None Diverted

- **Passenger Care: Between 8 am and 9:25 am**

  23,000 Passengers at LAX

  12 Shelter / evacuation sites

  16,000 bottles of water distributed

  36 airfield bus trips to transport Passengers from Terminals 1,2,3

  Reliant Medical Center - 400 PAX attended to

  LA Co Mental Health / LA City Department of Disabilities / Red Cross
  - Provided water and snacks
  - Supported 33 Passenger in shelters with cots and blankets
  - Counseling 9 days post-event

- **Public Communication**

  25 Everbridge messages

  6 Stakeholders' Conference calls

  4 News Conferences

  506 Tweets = 261,805,059 Potential Impressions

  388 direct conversations with Twitter followers

  16 "LAX Condition" News Updates

  LAX Website 550,000 views in first 3-hours of incident

ENDNOTES

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[6] Joseph W. Pfeifer, "Crisis Leadership: The Art of Adapting to Extreme Events" PCL Discussion Paper, Harvard Kennedy School, Program on Crisis Leadership (March 2013)

[7] National Fire Protection Association, *National Fire Alarm and Signaling Code Handbook*, Richard J. Roux, 2012

[8] Ibid.

[9] National Fire Protection Association, *NFPA 1600 – Standard on Disaster/ Emergency Management and Business Continuity Programs, 2013 Edition* (December 2012)

[10] U.S. DOT FAA Circular 150/5200-31C, Change 1, 5/01/2010, Airport Emergency Plan

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[12] Emergency Management Accreditation Program, *Emergency Management Standard* (September 2010)