

Security Lessons Learned November 1, 2013

Los Angeles International Airport

All airports should carefully evaluate their security measures against a wide range of potential threat vectors on a regular basis

Objective

Present a case study of Los Angeles World Airport's response to the events of November 1, 2013

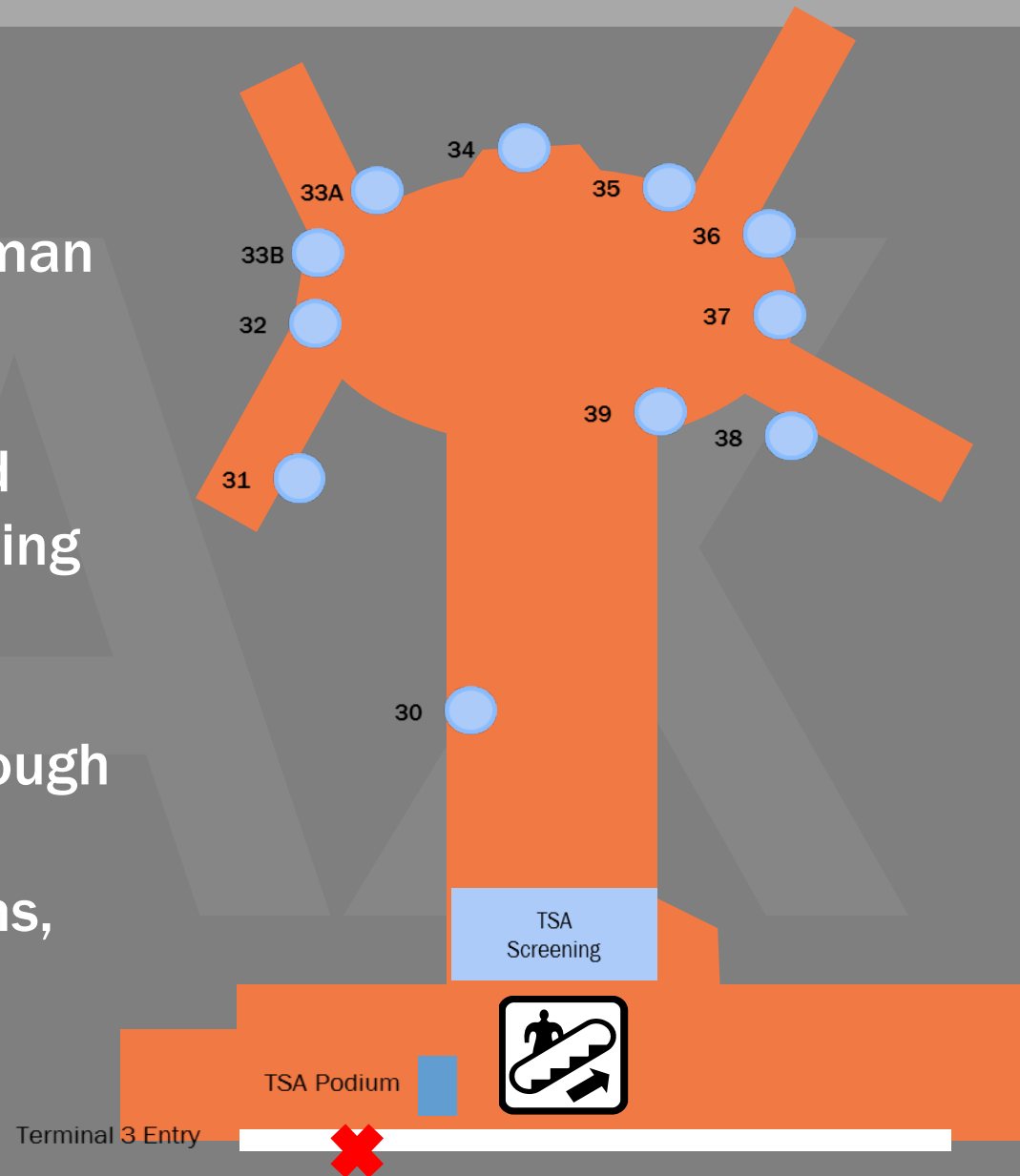
Review the strengths and weaknesses of LAWA's technology security measures.

Provide recommendations for improving security measures at LAX and all Airports.

The Event Timeline

On November 1, 2013, at approximately **9:18 a.m.**, a lone armed gunman entered Terminal 3 at LAX. The gunman approached a TSA Officer and fired at point blank range, killing the Officer within minutes.

The gunman then walked through the concourse shooting and wounding several other victims, including two TSOs and one passenger.



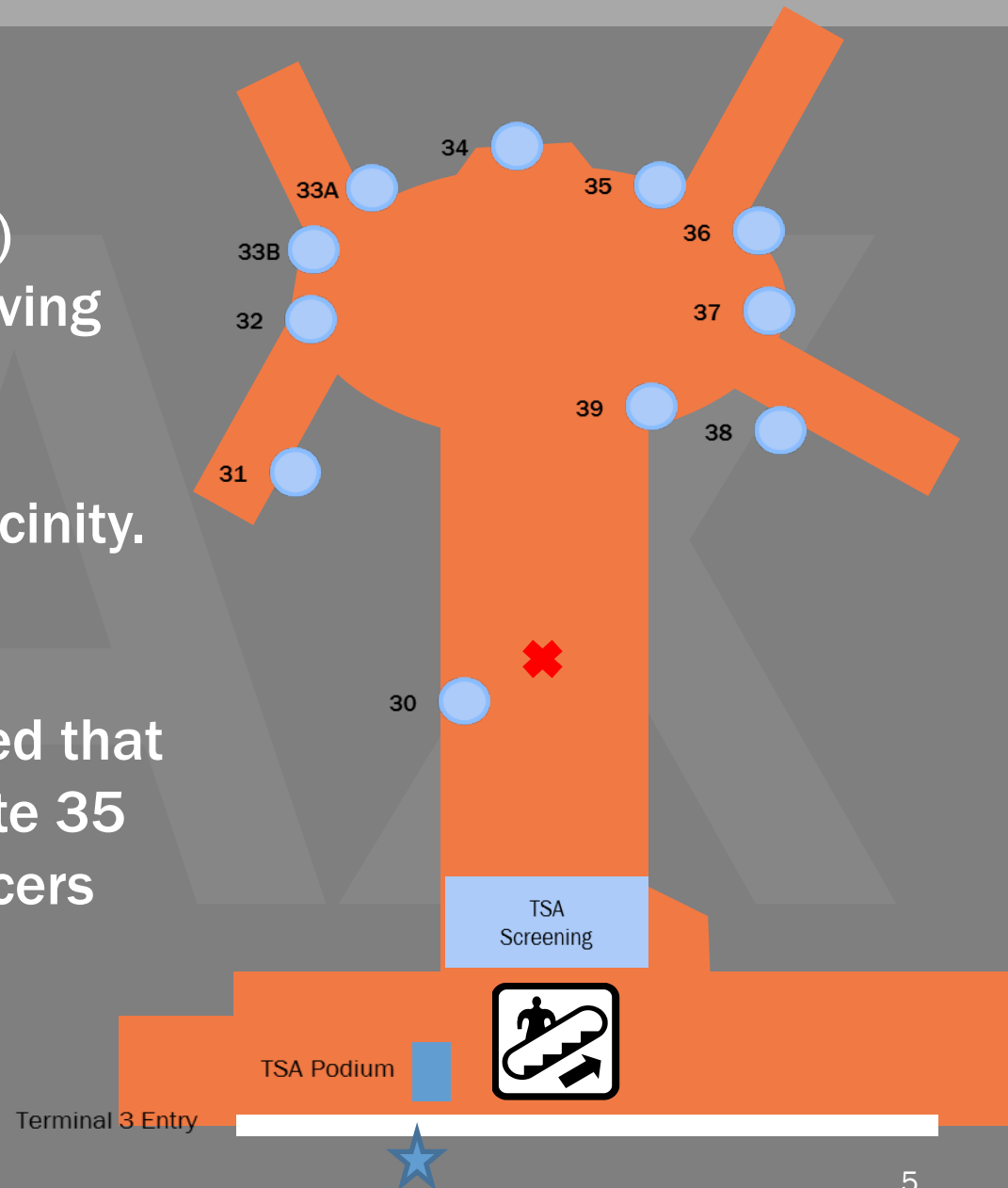
The Event Timeline

At 9:20 a.m.

Airport Police and the LA Police Department (LAPD) dispatch centers began receiving calls about the shooting and immediately broadcast notifications to units in the vicinity.

At 9:24 a.m.

Airport Police officers reported that the suspect was down at Gate 35 and, thirty seconds later, officers had the suspect in custody.



The Event Timeline

Once Terminal 3 was secured at approximately **9:45 a.m.**, emphasis transitioned to police clearing operations across the rest of the LAX Central Terminal Area (CTA).

At the same time, Airport Operations focused on passenger assistance and care for approximately 4,500 passengers who self-evacuated from three terminals and the additional 20,000 passengers who were sheltered in place in LAX's 6 other terminals and on aircraft



The Event Timeline

By **2:00 p.m.**, airline employees and flight crews were allowed to enter the CTA and prepare for normal operations.

At **4:00 p.m.**, all screening checkpoints, except for terminal 3, were reactivated and the CTA was re-opened for vehicle traffic at **6:51 p.m.**



The Event Timeline

LAWA personnel were allowed to re-enter Terminal 3 at approximately **9:00 a.m. on November 2** after police and FBI forensics were complete. Terminal 3 re-opened at **1:05 p.m. on November 2**.



The Event Timeline and Impact



Event	Event Time	Elapsed Time from Shooting
TSO Officer Shot at Base of T3 Escalator	09:20:00	
APD Receives Call from AirServ Employee	09:20:59	<i>59s</i>
APD Broadcasts Shooter in Terminal 3	09:21:22	<i>1m 22s</i>
APD Confront Suspect	09:22:31	<i>2m 31s</i>
APD takes down shooter	09:24:08	<i>4m 8s</i>

170,000 passengers impacted

1,370 flights impacted

Technology Lessons Learned

AIRPORT SELF-ASSESSMENT CONDUCTED AFTER EVENT

- Honest and Transparent formal **After Action Report**
- Board of Airport Commissioners Hearing
- City Council Hearing
- Community Meetings
- Airport Stakeholders Meeting
- State Assembly Hearing
- Congressional Hearing



Technology Lessons Learned



SEVEN AREAS OF REVIEW

- Video Surveillance
- Automatic Alert Systems
- Mass External Communications
- Internal and Radio Communications
- Audio and Visual Paging
- 911 Calls
- Situational Awareness Management Software

Video Surveillance

CURRENT STATUS AT LAX

- NICE Digital video management and video storage
- Approximately 800 new digital cameras
- New camera positions



Video Surveillance

ANALYSIS DURING EVENT

- CCTV Performed well – good angles
- Good quality images – lighting appropriate
- Video recording and retrieval capabilities strong
- Video analytics – None
- Camera Coverage – not 100 percent



Video Surveillance

LAX MOVING FORWARD

- Review camera coverage, recording conditions
- Explore video analytics
- Comprehensive testing
- Combine multiple systems
- Transition to all digital cameras
- Add more Hi-Def cameras

Video Surveillance

RECOMMENDATIONS FOR AIRPORTS

- ✓ Analyze number and placement of cameras as the physical security layout changes
- ✓ Identify threat vectors
- ✓ 100% coverage
- ✓ Video analytics
- ✓ 100% operational cameras at all times
- ✓ Video retention
- ✓ Integrate with access control & other monitoring systems
- ✓ CCTV component redundancy



Automatic Alert Systems



CURRENT STATUS AT LAX

Duress Buttons & Microphones with integration to CCTV

- 231
- Security Check Points, Parking Structures
- Child Care Center, Police Security Booths
- Transition from Analog to IP
- Direct reporting to Computer Aided Dispatch (CAD) System; in the future ARCC and CAD

Customs and Border Protection Duress Buttons

- CBP Interview rooms

Automatic Alert Systems



CURRENT STATUS AT LAWA

Emergency Phones with Integration to CCTV

- Parking Lots

LAX Ring Down Phones

- Security Check Points - Airport Ops Center - FAA Tower
- Defibrillators
- Elevators

TSA Ring Down Lines

- TSA owned system not managed by LAWA – Cisco VoIP

Automatic Alert Systems

ANALYSIS DURING EVENT

- Ring-down line picked up but caller evacuated before they could give their location
- LAX Viper telephone system database over 99% complete but the 1% missing included the one phone in question
- Some of the duress buttons at the SSCP were inoperable and not reported to be repaired
- TSA Ring-down lines address in database is not actual location

Automatic Alert Systems

LAX MOVING FORWARD

- Establish daily testing protocol
- IT and Law Enforcement must communicate continually
- The Airport and TSA must continually talk
- Test, test and test again
- Identify all phones and ensure that the phone company and/or database application has all proper addresses



Automatic Alert Systems

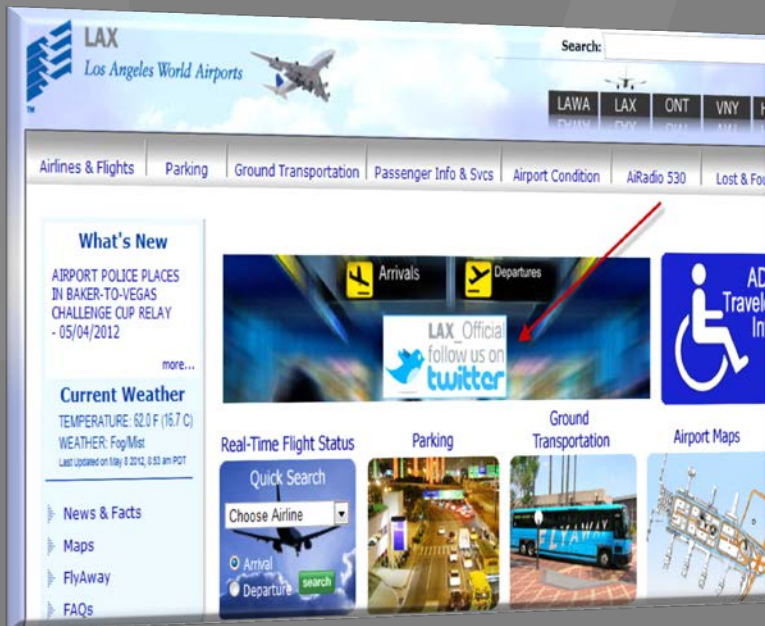
RECOMMENDATIONS FOR AIRPORTS

- ✓ Standardize
- ✓ Check all sensors
- ✓ Ensure all Ring-down lines have the proper location
- ✓ Ensure CAD is in sync with all systems
- ✓ Management awareness
- ✓ Ensure users know when and how to use, and how to report problems
- ✓ Help Desk phone number at each device
- ✓ Redundancy for CAD

Mass Communications

CURRENT STATUS AT LAX

- Everbridge Mass Notification System - currently focused on LAWA personnel
- Social Media – Facebook, Twitter very active at LAX
- No community alert system
- LAWA Website



ANALYSIS DURING EVENT

- First Everbridge message sent 1 hour 9 minutes after event
- Executive staff not notified
- Twitter feed was extremely useful
- LAWA Website 550,000 views to the website in first 3 hours following incident – did not crash but slowed to a crawl
- In 3 days over 500 tweets by LAX Media Relations
- First tweet by LAX MR - Re-tweeted 1,300 times
- 262 million potential impressions – 11/1 and 11/2
- 30,000 twitter followers added
- Direct conversations 388
- E-mail sent to 107 Executives, 462 Media Outlets, 139 Emergency Response PIO's, 125 LAX Stakeholders/Elected Officials/Community, 229 LAX Station Managers, 37 Airline PR Representatives, 11 LAX Gateway Hotels

Mass Communications

CELEBRITY TWITTER EFFECT



7,826,333 FOLLOWERS



1,441,396 FOLLOWERS



LAX MOVING FORWARD

- Review Everbridge message lists
- Expansion of mailing groups
- Develop protocol for initial notification
- Stress test all LAWA websites
- Create an LAX Dark Site
- Expand social media capabilities
- Analyze use of various Wireless and Wired emergency notification systems
- Testing – City/Counties Alert LA (landlines)
- Sign up with Wireless Emergency Alerts (WEA)

RECOMMENDATIONS FOR AIRPORTS

- ✓ Review how you communicate with all of your stakeholders:
 - Executive Staff
 - Tenants, Airlines
 - Surrounding Community
 - Media
 - Government Administrators
 - Airport Staff
 - Concessionaires
 - Community At-Large
 - National Interests
- ✓ Survey the Wireless and Wired means of communication you have available
- ✓ Develop mass communication system service for critical executives
- ✓ Develop data analytics for social media

Internal and Radio Communications



CURRENT STATUS AT LAX

- Trunked digital radio system (Motorola)
- Used by Airport Police and Airport Operations
- Airport Police uses a digital conventional system
- LA Fire uses a combination of radios
- LAWA executives primarily use phone and e-mail

ANALYSIS DURING EVENT

- Interoperability was a challenge
- Dead spots in some terminals for radio and cell coverage

Internal and Radio Communications

LAX MOVING FORWARD

- Program LAPD digital radios to add LAWA Trunked channels
- Provide LAFD with LAWA digital Trunked radios
- Work with all nearby LE jurisdictions
- Upgrade CAD with latest software
- Develop a Distributed Antenna System (DAS)
- Continue to ensure that wireless communications are effective everywhere on campus



RECOMMENDATIONS FOR AIRPORTS

- ✓ Review all local and surrounding LE radio capabilities
- ✓ Assess interoperability
- ✓ Assess radio and cell coverage
- ✓ Provide for a common operating picture on a unified platform
 - Aggregate CAD, radio, Automatic License Plate Readers, video management systems
- ✓ Provide streaming live video from CCTV to airport police and other LE jurisdictions over mobile devices
- ✓ Redundancy

Audio and Visual Paging

CURRENT STATUS AT LAX

- LAWA does not have a unified, airport-wide paging system
- Emergency curbside paging
- Limited visual paging – International terminal only

ANALYSIS DURING EVENT

- Major issue during the incident as LAWA was unable to communicate with:
 - passengers who self-evacuated or who were sheltered in place
 - tenants, concession employees
 - visually and hearing impaired passengers

Audio and Visual Paging

LAX MOVING FORWARD

- Add visual paging (Completed at all SSCP December 2014)
 - ARCC can send emergency paging messaging to different terminals
- Connect disparate audio systems in all LAX terminals
- Enforce the paging standard



Audio and Visual Paging

RECOMMENDATIONS FOR AIRPORTS

- ✓ Do everything better than LAX
- ✓ Review zone coverage of all paging systems
- ✓ Ensure that sufficient visual paging is available in all areas of the terminal
- ✓ Take control of all EVIDS during an emergency



911 Calls

CURRENT STATUS AT LAX

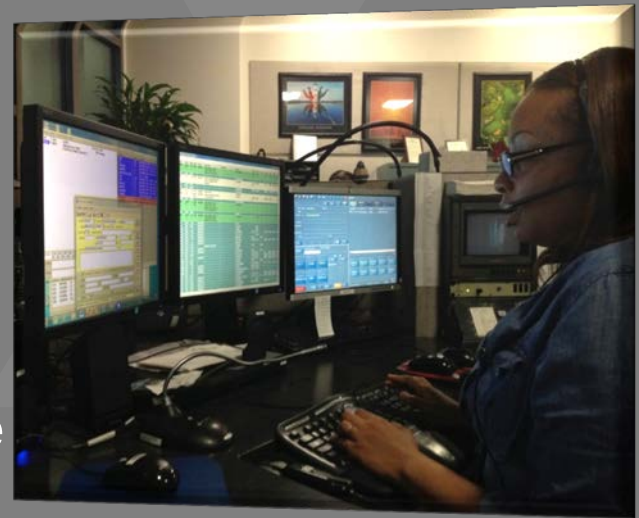
- 911 calls go to LAPD
- Wireless calls go to California Highway Patrol

ANALYSIS DURING EVENT

- Calls received by LAPD were redirected to Airport Police resulting in a delay in notification and delay in response

LAX MOVING FORWARD

- Complete steps to have local 911 calls go directly to LAX (PSAP)
- Police Notification Initiative – publicize the Airport Police Emergency phone line to all tenants and employees at LAX



911 Calls

RECOMMENDATIONS FOR AIRPORTS

- ✓ Understand the 911 process for your airport
- ✓ Look into txt to 911 if available in your area
- ✓ Incorporating video and photo messaging in emergency response systems is growing



Situational Awareness Management Software



CURRENT STATUS AT LAX

- LAWA uses NICE SAMS
- Integrated with GIS and mobile device reporting

ANALYSIS DURING EVENT

- The duty manager did not use the Active Shooter Standard Operating Procedure (SOP)
- A direct cause as to why the Everbridge notice took over an hour to be sent

LAX MOVING FORWARD

- Strict enforcement that all SAMS SOPs are mandatory
- Develop simpler SOPs
- Practice SOPs during Operations Trunk Top and Table Top Drills

Situational Awareness Management Software



AIRPORT RECOMMENDATIONS

- ✓ Look into adopting SAMS software
- ✓ Ensure all SOPs are adopted with significant employee input
- ✓ Make use of automated SOPs mandatory
- ✓ Redundancy for critical facilities – Op center



Is your technology ready to support a Major Incident at your airport?

