



February 2020

AVIATION SECURITY

TSA and Airport Stakeholders Have Enhanced Airport Public Area Security, but a Plan Is Needed for Future Collaboration

GAO Highlights

Highlights of [GAO-20-278](#), a report to congressional requesters

Why GAO Did This Study

Threats to public areas of airports have increased in recent years. TSA is responsible for civil aviation security, which includes ensuring the security and safety of aircraft and the traveling public. In November 2013, an armed individual entered the Los Angeles International Airport (LAX) and killed a Transportation Security Officer. Subsequent domestic and international attacks in airport public areas further emphasized the need to better secure these areas. In response, Congress has taken action—including passage of the 2015 Gerardo Hernandez Act and the 2018 TSA Modernization Act—to address incident planning and response at airports and the security of public areas of transportation facilities, including airports.

GAO was asked to assess actions taken to secure the public areas of TSA-regulated airports. This report (1) describes actions TSA has taken in response to the LAX shooting and the Gerardo Hernandez Act, and (2) examines additional actions taken in response to subsequent security incidents and the TSA Modernization Act.

GAO reviewed TSA reports issued after airport attacks; the Gerardo Hernandez Act and TSA Modernization Act; and other TSA documents related to securing public areas. GAO also conducted interviews with and obtained information from TSA and officials from a nongeneralizable sample of 6 TSA-regulated airports, selected based on factors such as size and location.

What GAO Recommends

GAO recommends that TSA develop a plan for future stakeholder engagement on the security of airport public areas. DHS concurred with the recommendation.

View [GAO-20-278](#). For more information, contact William Russell at (202) 512-8777 or RussellW@gao.gov

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What GAO Found

The Transportation Security Administration (TSA) took several actions in response to the 2013 Los Angeles International Airport (LAX) shooting and the Gerardo Hernandez Airport Security Act of 2015. Specifically, TSA took several actions to better address airport security in public areas, including strengthening and mandating active shooter training drills and installing duress alarms at screening checkpoints, among other things. In response to the Act, TSA updated guidance for reporting suspicious behavior and revised directives identifying responsibilities for local law enforcement coverage of passenger screening checkpoints and nearby public areas, among other actions.

In response to subsequent airport public area security incidents, such as those in Fort Lauderdale in 2017 and Brussels and Istanbul in 2016, TSA has taken additional actions. Specifically, TSA issued the Public Area Security National Framework in 2017, in coordination with various aviation security stakeholders. The framework categorized 11 best practices and non-binding recommendations for improving security of public areas, including sharing information and preventing attacks. Aviation security stakeholders have also implemented various actions consistent with these best practices, including establishing airport operations centers and deploying enhanced law enforcement teams to serve as a visible deterrent in airport public areas (see figure). In response to the TSA Modernization Act, TSA established a public area security working group in March 2019 to engage with stakeholders such as airport operators and industry associations and update and validate the best practices cited in the 2017 framework. This group met twice in 2019, but TSA has not outlined specific plans for engaging this group in the future. Developing a plan outlining the roles and responsibilities of the working group members, the mechanisms through which the working group will collaborate, and the frequency of when the working group will meet, would better position TSA to ensure the best practices cited by stakeholders remain relevant and emerging threats are proactively identified.

Enhanced Law Enforcement Teams Patrol Public Areas at the Los Angeles International Airport to Provide a Visible Deterrent



Source: GAO. | GAO-20-278

Contents

| | | |
|-------------|---|----|
| Letter | | 1 |
| | Background | 7 |
| | TSA Took Various Actions to Enhance Public Area Security in Response to the 2013 LAX Shooting and Gerardo Hernandez Act | 17 |
| | TSA and Stakeholders Took Additional Actions to Enhance Airport Public Area Security, but TSA Does Not Have a Plan for Future Stakeholder Collaboration | 23 |
| | Conclusions | 38 |
| | Recommendation for Executive Action | 39 |
| | Agency Comments and Our Evaluation | 39 |
| Appendix I | Comments from the U.S. Department of Homeland Security | 41 |
| Appendix II | GAO Contact and Staff Acknowledgments | 44 |
| Figures | | |
| | Figure 1: Illustration of Public and Security-Restricted Areas at a Commercial Airport in the United States | 9 |
| | Figure 2: Timeline of Attacks in Airport Public Areas, and Actions to Address the Security of Airport Public Areas | 16 |
| | Figure 3: Examples of Transportation Security Administration Duress Alarms Installed at Passenger Screening Checkpoints | 18 |
| | Figure 4: Timeline of Airport Public Area Security Summits and Activities from September 2016 through May 2017 | 24 |
| | Figure 5: Best Practices Outlined in the Transportation Security Administration's 2017 Public Area Security National Framework | 25 |
| | Figure 6: Los Angeles International Airport Response Coordination Center and Incident Management Center Provides Real-Time Coverage of Airport Security-Related Incidents and Flight Operations | 31 |
| | Figure 7: Enhanced Law Enforcement Teams Conduct Patrols around Ticketing Counter Areas to Provide a Visible Deterrent at Los Angeles International Airport, November 2018 | 35 |

| | |
|---|----|
| Figure 8: Law Enforcement Teams Conduct Patrols of the Atrium within the Public Area to Provide a Visible Deterrent from an Elevated Location at Atlanta-Hartsfield International Airport, March 2019 | 36 |
| Figure 9: Broward County Sheriff's Office Explosives Detection Canine during Training Exercise Conducted in the Baggage Claim Area of Fort Lauderdale-Hollywood International Airport, February 2019 | 37 |
| Figure 10: Illustration of Shooter Detection System Similar to Charleston International Airport | 38 |

Abbreviations

| | |
|---------|---|
| AFSD-I | Assistant Federal Security Director for Inspections |
| ASP | Airport Security Program |
| ATSA | Aviation and Transportation Security Act |
| BCAD | Broward County Aviation Department |
| CCTV | Closed Circuit Television |
| CISA | Cybersecurity and Infrastructure Security Agency |
| DHS | Department of Homeland Security |
| FAA | Federal Aviation Administration |
| FBI | Federal Bureau of Investigation |
| FSD | Federal Security Director |
| ICS | Incident Command System |
| I-STEP | Intermodal Security Training and Exercise Program |
| JVA | Joint Vulnerability Assessment |
| LE/FAMS | Law Enforcement/Federal Air Marshal Service |
| NTAS | National Terrorism Advisory System |
| PPE | Policy, Plans, and Engagement |
| SPP | Screening Partnership Program |
| TSA | Transportation Security Administration |
| TSO | Transportation Security Officer |
| TSOC | Transportation Security Operations Center |
| VIPR | Visible Intermodal Prevention and Response |

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February 11, 2020

The Honorable Bennie G. Thompson
Chairman
Committee on Homeland Security
House of Representatives

The Honorable John Katko
House of Representatives

The Honorable Michael T. McCaul
House of Representatives

The Honorable Bonnie Watson Coleman
House of Representatives

Attacks in the public areas of airports in recent years have sparked concern about threats facing these open access high-traffic areas. In general, the public area of an airport includes any space on airport property (such as ticketing areas, baggage claims, restaurants and transit hubs) to which the general public may have free and unrestricted access without being subjected to the screening or other security measures that would permit them entry into a particular area of the airport or to board an aircraft. These locations have been attractive targets for an attack because large clusters of people may gather in these public areas during peak travel times. For example, In November 2013, an armed individual entered the Los Angeles International Airport (LAX) and fired multiple shots while in the public area, killing a Transportation Security Officer (TSO) and injuring two other TSOs and a passenger.¹ This event marked the first time an employee of the Transportation Security Administration (TSA) was killed in the line of duty since the agency was established

¹ Transportation Security Officers (TSOs) are TSA employees who conduct security screening of passengers, accessible property and checked baggage at TSA-regulated airports to prevent the unauthorized carriage of deadly or dangerous objects (i.e., prohibited items) beyond security checkpoints and onto aircraft.

following the terrorist attacks of September 11, 2001.² In January 2017, a gunman opened fire and killed five people inside the baggage claim area of the Fort Lauderdale-Hollywood International Airport (FLL). More recently, in September 2019, a man fired a gun in the baggage claim area of the Portland International Airport (PDX). Also, attacks at foreign airports in March 2016, when bombs were detonated in the departures hall of Brussels International Airport's main terminal prior to the security checkpoint, and in June 2016 when gunmen opened fire and detonated suicide vests in the arrivals hall, departures hall, and parking lot at Istanbul Ataturk Airport, highlight the evolving tactics used to harm people in airport public areas.

Enacted in September 2015, the Gerardo Hernandez Airport Security Act of 2015—named for the deceased TSO from the LAX shooting—directed TSA to, among other things, take actions to address incident response at airports.³ Specifically, the act directed TSA to verify that TSA-regulated (i.e., commercial) airports have plans in place to respond to security incidents including those involving active shooters, acts of terrorism, and incidents that target passenger screening checkpoints. In addition, this act directed TSA to provide annual certification to Congress that screening personnel have participated in practical training exercises for active shooter scenarios. The act also directed TSA to identify best practices that exist across airports for security incident planning, management and training, and establish a mechanism to share such practices with airport operators.⁴ The TSA Modernization Act, enacted in 2018, directed TSA, among other things, to establish a Public Area Security Working Group in coordination with the National Protection and Programs Directorate (since re-designated the Cybersecurity and Infrastructure Security Agency) to promote collaborative engagement

² Pursuant to the Aviation and Transportation Security Act (ATSA), which was signed into law shortly after the terrorist attacks of September 11, 2001, TSA assumed responsibility for security in all modes of transportation, which includes implementing and overseeing security operations with the U.S. civil aviation system. See Pub. L. No. 107-71, 115 Stat. 597 (2001). In general, civil aviation includes all nonmilitary aviation operations, including scheduled and chartered air carrier operations, cargo operations, and general aviation, as well as the airports servicing these operations.

³ See Pub. L. No. 114-50, 129 Stat. 490 (2015). For the purposes of this report “the Gerardo Hernandez Act” is used as an abbreviated version of the Gerardo Hernandez Airport Security Act of 2015.

⁴ The Gerardo Hernandez Act also required TSA to report to Congress on findings from its outreach to airports; including an analysis of the level of preparedness such airports have to respond to security incidents. See Pub. L. No. 114-50, § 3(c), 129 Stat. at 491.

between TSA and public and private stakeholders.⁵ This act also directed TSA to periodically submit information on best practices for protecting public spaces of transportation infrastructure from emerging threats to appropriate transportation security stakeholders.⁶

Although TSA's statutory authorities and responsibilities for civil aviation are broad, resource and other practical constraints, as well as TSA's mission to secure civil aviation without unduly impeding the flow of commerce, have resulted in a regulatory structure largely focused on implementing measures that ensure the security of the aircraft and the traveling public. For example, while TSA exercises more direct operational control over certain aspects of security, such as the screening of passengers and property, it generally has no operational role in securing airport public areas and works collaboratively with airport operators and other stakeholders to respond to any security incidents. Subject to TSA oversight, regulated entities—such as airport and aircraft operators—implement access control measures and, in conjunction with state or local law enforcement agencies, must be capable of responding to an incident at their airport—whether in an airport public area or within an area for which access is controlled (i.e. a security-restricted area).

You asked us to review actions TSA has taken to secure the public areas of commercial airports. This report (1) describes actions TSA has taken to enhance the safety and security of screening personnel and the security of airport public areas in response to the 2013 LAX shooting and the Gerardo Hernandez Act, and (2) examines additional actions TSA and aviation security stakeholders have taken in response to subsequent security incidents and the TSA Modernization Act.

To describe the actions taken by TSA in response to the LAX shooting and Gerardo Hernandez Act, we reviewed TSA's 2014 report, "Enhancing TSA Officer Safety and Security: Agency Actions and Path Forward," which summarized findings from TSA's internal review of its policies, procedures and training to identify possible improvements to safety and security for TSA employees. We reviewed requirements included in the Gerardo Hernandez Act, and other TSA security requirements relevant to

⁵ See Pub. L. No. 115-254, div. K, tit. I, §§ 1931-1932, 132 Stat. 3186, 3569-72 (2018). The TSA Modernization Act was enacted as division K, title I of the FAA Reauthorization Act of 2018 on October 5, 2018.

⁶ See id. §§ 1931(c)(2), 1932(a), 132 Stat. at 3570, 3571.

security in airport public areas, including mandates and directives for revised active shooter training for employees and regular testing of duress alarms, in addition to standards and amendments for law enforcement presence at airport security checkpoints. We also reviewed revised active shooter training videos, and a data sample depicting weekly duress alarm testing from TSA's performance management information system. We observed security operations and demonstrations of law enforcement presence at security checkpoints and in airport public areas from airport site visits. We also reviewed TSA's report submitted to Congress to address requirements of the Gerardo Hernandez Security Act.⁷ Further, we interviewed TSA and airport officials located at LAX to obtain additional information on the incident, and the subsequent reviews and report identifying potential improvements to the safety and security of TSOs and security of the airport public area.⁸

To evaluate actions TSA and aviation security stakeholders, including airport and law enforcement officials, have taken in response to other security incidents and the TSA Modernization Act, we analyzed documents related to securing public areas including the "Fort-Lauderdale-Hollywood International Airport Active Shooter Incident and Post Event Response, January 6, 2017 After-Action Report", and the "2017 Public Area Security National Framework". In addition, we analyzed TSA security directives and information circulars addressing public areas of airports, joint vulnerability assessments (JVAs), and JVA Mitigation Action Plans for selected airports.⁹ Further, to assess actions TSA has

⁷ Department of Homeland Security, Transportation Security Administration, *Gerardo Hernandez Airport Security Act of 2015 Interoperability Review* (April 19, 2016). In addition, TSA submitted information in March 2016 that addressed Security Incident Response at Airports and Incident Response for Transportation Systems, and submitted an Interoperability Review and Letter to Congress on the Impact of the Law Enforcement Reimbursement Program in April 2016.

⁸ Unless otherwise stated, references to Transportation Security Officers (TSOs) include screening personnel employed by companies contracting with TSA to provide screening services at airports participating in TSA's Screening Partnership Program. See 49 U.S.C. § 44920.

⁹ Joint Vulnerability Assessments (JVAs) are assessments that teams of TSA special agents and other officials conduct jointly with the Federal Bureau of Investigation (FBI) and, as required by law, are generally conducted every 3 years for airports identified as high risk. See 49 U.S.C. § 44904; Pub. L. No. 104-264, § 310, 110 Stat. 3213, 3253 (1996). Federal security directors (FSD) are responsible for developing a mitigation action plan that identifies specific steps to correct the vulnerabilities identified in the JVA Report, and submit the completed action plan to their respective Regional Director and the Law Enforcement/Federal Air Marshals Security Assessments Section.

put in place to enhance the security of airport public areas in response to requirements of the TSA Modernization Act addressing public areas security across transportation systems, we analyzed the October 2019 document “Protecting Public Areas - Best Practices and Recommendations.”¹⁰ We also interviewed TSA Policy, Plans, and Engagement officials and Department of Homeland Security (DHS) Cybersecurity and Infrastructure Security Agency (CISA) officials to determine what progress has been made in creating a Public Area Security Working Group and sharing best practices with other aviation and surface transportation mode security stakeholders. We compared information collected through our review of the October 2019 best practices and recommendations document and interviews with agency officials with a provision in the TSA Modernization Act for TSA to periodically share best practices for protecting transportation public areas, our prior work on leading practices on collaborative mechanisms related to establishing clear goals and identifying roles and responsibilities, and standards for project management related to developing a plan and time frames.¹¹

To address both objectives, we also interviewed TSA headquarters officials from offices including Law Enforcement/Federal Air Marshals Service; Policy, Plans and Engagement; Requirements and Capabilities Analysis; Security Operations; Strategy, Policy Coordination and Innovation; and Training and Development. Specifically, we interviewed these officials to obtain information on security requirements related to public areas of airports, the status of actions taken after the LAX incident, additional actions taken to address the best practice recommendation identified in the Public Area Security National Framework, and efforts of the working group to update recommendations to improve security in public areas of transportation facilities, consistent with the TSA Modernization Act.

¹⁰ Transportation Security Administration, *Protecting Public Areas: Best Practices and Recommendations* (Arlington, VA: October 2019).

¹¹ GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, [GAO-06-15](#) (Washington, D.C.: Oct. 21, 2005); GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms*, [GAO-12-1022](#) (Washington, D.C.: Sept. 2012); Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Sixth Edition, 2017. PMBOK is a trademark of Project Management Institute, Inc.

We also conducted site visits of six commercial airports from October 2018 to June 2019.¹² During these visits we observed airport security operations and discussed security activities and actions taken to enhance the safety and security of TSOs and the security of public areas of the airports with airport officials, law enforcement officials, TSA federal security directors (FSD) or their representatives, and TSO's.¹³ During our site visits, we also held group discussions with TSOs, and separately, TSO supervisors to discuss any specific concerns they had regarding their safety since the LAX incident and other attacks.¹⁴ In addition, we interviewed, by phone, airport officials from one additional airport, Charleston International Airport in South Carolina, to discuss new technologies designed to enhance public area security. The results of these site visits and interviews cannot be projected to all of the approximately 430 commercial airports in the United States. However, these site visits and interviews provided us with on-site TSA and airport officials' perspectives on actions taken that were intended to strengthen the security of airport public areas. Further, we interviewed officials from four industry associations based on their participation in security summits to collaborate in identifying practices to enhance airport public area

¹² We conducted site visits at the following airports: Fort Lauderdale-Hollywood International Airport, Hartsfield-Jackson Atlanta International Airport, Los Angeles International Airport, Orlando International Airport, Orlando Sanford International Airport, and Ronald Reagan Washington National Airport. We selected these airports for site visits and interviews based on a variety of factors, including airports that have experienced a major security incident in their public areas during the last 5 years; larger (Category X and I) airports with high passenger volume; airports that participate in TSA's Screening Partnership Program (SPP); airports that have recently implemented new technology or infrastructure enhancements related to securing public areas; and the airport's location to provide a diverse geographic representation of airports. TSA classifies the nation's approximately 430 commercial airports into one of five categories (X, I, II, III, and IV) based on various factors, such as the number of take-offs and landings annually, the extent of passenger screening at the airport, and other security considerations. In general, category X airports have the largest number of passenger boardings and category IV airports have the smallest.

¹³ FSDs are the ranking TSA authorities responsible for leading and coordinating TSA security activities at the nation's approximately 430 commercial airports.

¹⁴ We met with approximately 50 TSOs and TSO supervisors with 7 months to 17 years of experience to obtain their perspectives on TSO safety and security. The individuals participating in the group discussions were selected by TSA officials at the airport based on their availability and various levels of job experience.

security, and because of these associations' specialized knowledge and experience with airport security operations.¹⁵

We conducted this performance audit from July 2018 through February 2020 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

Airport Public Areas

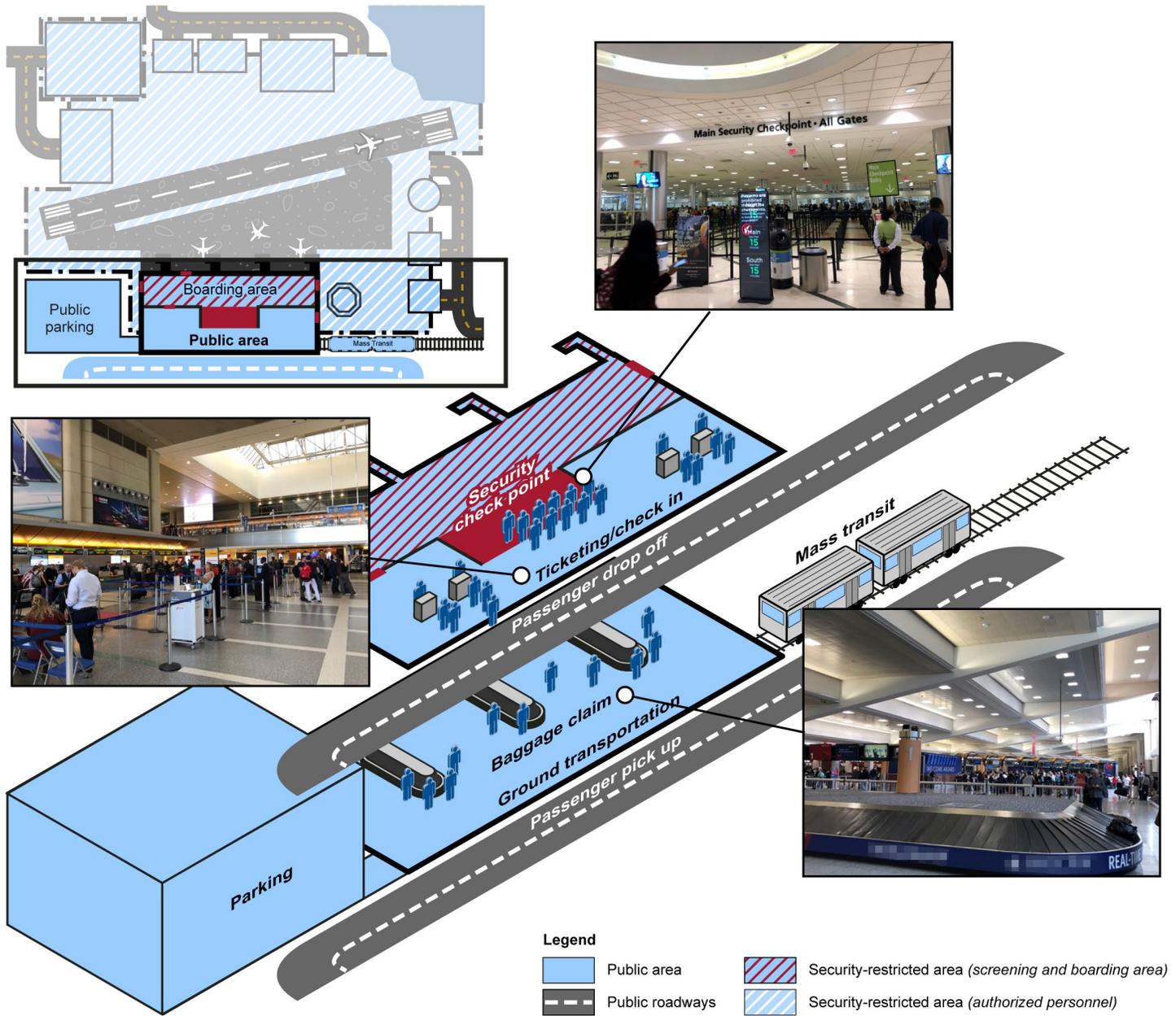
Commercial airports in the United States (i.e., those regulated by TSA) can be generally described as having security-restricted areas and unsecured areas.¹⁶ Security-restricted areas include the area from which screened passengers may board aircraft, as well as areas where access is generally limited to appropriately vetted and credentialed personnel, such as airport and air carrier employees who require access to aircraft or to load and sort baggage. Unsecured areas, or airport public areas, are the areas of the airport that may be accessed by the general public without restrictions (i.e., without passing through security or some other controlled access point), such as ticketing areas, restaurants and shops, baggage claim areas, and areas extending outward from the airport facility to include pathways leading to an airport's terminal and public parking areas. Airport public areas described by TSA officials, airport operators, airport law enforcement and aviation related associations we met with included airport access roads, curbside drop-off/pick-up areas, parking structures, rental car facilities, bus/transit lines leading to the

¹⁵ Industry association officials we met with included the American Association of Airport Executives, Airports Council International-North America, Airport Law Enforcement Agencies Network, and the National Air Carriers Association.

¹⁶For purposes of this report, "security-restricted area" is a general term that encompasses areas of a commercial airport, identified in an airport's TSA approved security program, for which access is controlled and limited and includes areas accessible to passengers who have passed through a security checkpoint. See, e.g., 49 U.S.C. §§ 114(e), 44936; 49 C.F.R. pt. 1542. Screening of passengers and property is a function performed by TSA personnel or personnel employed by private sector screening companies at airports participating in TSA's Screening Partnership Program. See 49 U.S.C. §§ 44901, 44920.

airport, main entrances to and lobbies of terminal areas, and the security queue leading to security screening checkpoints. See figure 1 for a general illustration of the public areas of a commercial airport in the United States.

Figure 1: Illustration of Public and Security-Restricted Areas at a Commercial Airport in the United States



Source: GAO. | GAO-20-278

Note: A commercial airport (also referred to as a Transportation Security Administration-regulated airport) is an airport operating in accordance with a Transportation Security Administration-approved security program pursuant to 49 C.F.R. part 1542.

According to aviation security stakeholders, such as airport operators, law enforcement officers, and industry representatives from trade associations, securing airport public areas presents inherent challenges for numerous reasons. They also stated that, in general, airports are designed to support the movement of large numbers of people through the airport's public spaces to the security checkpoint and into the airport sterile area or to aircraft for boarding.¹⁷ TSA officials stated that given the large number of people that pass through airport public areas during peak hours, it can be difficult to monitor these areas for security threats. Additionally, the use of some enhanced security measures and reconfiguring terminals (e.g., metal detectors at entrance doors or the movement of security checkpoints closer to airport entrances or ticket counters) may create additional challenges because such measures could result in long lines and smaller congested spaces that would disrupt service. As a result, airport officials stated that any airport modernization projects, law enforcement actions or technologies introduced to potentially enhance security in the public areas of airports should not disrupt the efficiency of the airport's business operations.

In addition, airport officials and industry representatives stated that each airport is unique in its combination of layout and operations, which may determine the type of security approach and method the airport operator utilizes to enhance the security of the airport's public areas. For example, an airport may have a number of separate terminals, each comprising separate entrances and public areas, creating a security challenge due to the vast area of detached public space. While another airport may have a single main terminal building that includes a hotel, restaurants and shops with two sections (A and B), each maintaining ticket counters and security checkpoints that may require a different security approach due to its unique set of challenges to securing their public areas, such as having large numbers of people congregating in one central location.

TSA, the federal agency with primary responsibility for civil aviation security, implements security measures and imposes security requirements to ensure that access to those areas of the airport that could otherwise permit an individual with ill-intent access to cleared

¹⁷ In general, the sterile area is the portion of an airport that provides passengers access to boarding aircraft and is an area to which access is general controlled through the screening of passengers and property. See 49 C.F.R. § 1540.5. The sterile area falls within the more general "security-restricted areas" description, as that term is used in this report.

passengers and aircraft is controlled. Although TSA's statutory authorities and responsibilities for the civil aviation system are not limited to this purpose, resource and other practical constraints, as well as TSA's mission to secure civil aviation without unduly impeding the flow of commerce, have resulted in a regulatory structure largely focused on implementing measures that ensure the security of the aircraft and the traveling public. As a result, airport operators determine the boundaries for the security-restricted areas of their own airport based on the physical layout of the airport and in accordance with TSA requirements—generally documented through TSA-approved security programs.¹⁸

Roles and Responsibilities of Airport Stakeholders for Securing Public Areas

Securing airport public areas requires a collaborative approach involving airport operators, law enforcement, and TSA officials, among others. A number of aviation stakeholders play an important role in recommending enhancements that impact the security of airport public areas. The roles and responsibilities for each of these aviation stakeholders vary, but together provide a collective approach to securing airport public spaces.

Airport operators. Airport operators are the owners, administrators and managers of an airport with responsibilities to plan, organize, supervise and direct airport operations, and have direct responsibility for implementing security requirements in accordance with their TSA-approved airport security programs.¹⁹ In accordance with its security program, airport operators must, in general, provide for the availability of law enforcement personnel in the number and manner adequate to support its security program for public areas and TSA screening

¹⁸ See 49 C.F.R. pt. 1542. Other TSA-regulated entities, such as air carriers, may have responsibility for and exercise authority over specified security-restricted areas of an airport. See 49 C.F.R. § 1542.111 (authorizing airport operators to enter into exclusive area agreements with air carriers, i.e., U.S. aircraft operators or foreign air carriers with security programs under 49 C.F.R. parts 1544 or 1546, respectively, pursuant to which an air carrier assumes responsibility for specified security measures for all or portions of an airport's security-restricted areas).

¹⁹ See 49 C.F.R. § 1540.5 (defining airport operator as a person that operates an airport servicing air carriers). Airport operators are required to implement TSA-approved airport operator security programs that reflect how an airport operator will implement TSA security requirements at the airport. See 49 C.F.R. pt. 1542.

operations at the airport.²⁰ Although TSA's primary responsibility is to implement and oversee aviation security, incident response at commercial airports is essentially the responsibility of the airport operator in conjunction with state or local law enforcement agencies and TSA collaboratively working to respond to any security incidents.

Law enforcement. Responding to security incidents such as an active shooter situation or any other criminal matter—whether in an airport public area or within a security-restricted area—is generally the responsibility of law enforcement personnel present at or available for response to the airport, in accordance with an airport's security program. For example, officials providing the requisite law enforcement support may be federal, state or local officers, or special airport-authority officers.²¹ While some airport law enforcement officers are stationed at dedicated posts at or near passenger screening checkpoints, officers also routinely patrol areas around the checkpoints, such as ticketing areas, restaurants and shops, and baggage claim, among others.²²

TSA. TSA assumed primary responsibility for implementing and overseeing the security of the nation's civil aviation system following the terrorist attacks of September 11, 2001.²³ As previously stated, TSA primarily fulfills its mission through a regulatory structure largely focused on implementing and enforcing measures that ensure the security of the aircraft and traveling public—such as by controlling access to the security-restricted areas of the airport through the screening of passengers, accessible property, checked baggage, air cargo and mail,

²⁰ See 49 C.F.R. § 1542.215. Most commercial airports discussed in this report operate under “complete” security programs, which contain the most comprehensive security measures. See 49 C.F.R. § 1542.103(a). Although airports operating under “supporting” or “partial” security programs also provide for a law enforcement presence or response capability, the overall security requirements under these programs are generally less comprehensive than under a complete security program. See 49 C.F.R. § 1542.103(b)-(c).

²¹ Law enforcement personnel at commercial airports provide traditional law enforcement services in addition to assisting in the enforcement of federal regulations associated with transportation security at airports. Law enforcement duties may include foot or bike patrol, canine, special investigations, crime prevention, traffic flow management, lost and found, and control and response to airport emergencies, among other duties.

²² All commercial airports have either a fixed-post law enforcement officer presence to respond to security incidents at TSA screening checkpoints, or a defined maximum timeframe for law enforcement response to such incidents, including active shooters, acts of terrorism, and incidents that target passenger screening checkpoints.

²³ See Pub. L. No. 107-71, 115 Stat. 597 (2001); 49 U.S.C. § 114(d)(1).

or ensuring that controlled access points for use by credentialed aviation workers are in place. However, TSA is also responsible for ensuring that airport operators and other aviation stakeholders remain compliant with their TSA-approved airport security programs and other applicable requirements, which it accomplishes by conducting inspections of, for example, an airport operator's perimeter, access control, and other security measures. As circumstances warrant, TSA also issues information circulars to notify regulated entities of security concerns and security directives to augment or supplement requirements implemented through security programs.²⁴ Security directives and guidance issued by TSA related to airport public areas have covered such topics as law enforcement requirements to patrol public areas, law enforcement response times and improved communications systems, among others. Key TSA roles at airports include:

- **Federal Security Directors (FSD).** The ranking TSA authority at airports, the FSD, provides leadership and coordination of TSAs day-to-day security activities, including ensuring airport operator's compliance with their airport security program.
- **Assistant Federal Security Directors for Inspections (AFSD-I).** Each AFSD-I manages a Compliance Hub staffed by Transportation Security Inspectors who ensure regulatory compliance, respond to incidents, and reduce vulnerabilities in collaboration with regulated and non-regulated entities. The area of responsibility of the Compliance Hub may cover one or more FSD areas.
- **Visible Intermodal Prevention and Response (VIPR) Teams.** TSA Law Enforcement Federal Air Marshal Service (LE/FAMS) conducts protection, response, detection and assessment activities in airports and other transportation systems. VIPR teams comprised of TSA and law enforcement, security inspectors, and screening personnel perform various functions that include randomly screening workers, property, and vehicles, as well as patrolling the public areas of airports. According to TSA officials, there are approximately 31 VIPR teams nation-wide providing enhancement to security in airports. Decisions on deployments of VIPR teams are determined by risk associated with the venue, which is either surface transportation venues like passenger rail or bus stations among others, or airports.

²⁴See, e.g., 49 C.F.R. § 1542.303 (authorizing TSA to issue information circulars to notify airport operators of security concerns and security directives to set forth mandatory measures in response to a threat assessment or to a specific threat against civil aviation).

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- **TSOs.** Although TSOs are uniformed security personnel that resemble law enforcement, they are not law enforcement officers. Therefore, TSA relies on the presence of law enforcement at the passenger screening checkpoints to mitigate actual or perceived threats they face and stated that they appreciate the prompt response provided during the LAX shooting incident.

Other aviation stakeholders. Additional aviation stakeholders share responsibility in coordinating input and providing recommendations to strengthen security in airport public areas. Such stakeholders include federal, state and local government officials, airline industry partners, aviation associations, and government agencies such as CISA, Federal Bureau of Investigation (FBI), state and local law enforcement partners, emergency management and fire and rescue officials, airline officials, and association members from Airports Council International-North America, Airport Law Enforcement Agencies Network, and American Association of Airport Executives, among others.

Airport Public Area Security Incidents, Subsequent Actions and Reports

- On November 1, 2013, Gerardo I. Hernandez, a TSO, was shot and killed at a podium located at the base of an escalator which led to the upstairs security checkpoint at LAX, which TSA deemed a part of the checkpoint area, as he checked passengers' identification and travel documents. According to TSA officials, as passengers and TSOs located upstairs heard the sound of gunshots, they realized there was an active shooter situation and began to run and hide in shops and restaurants. The shooter proceeded upstairs into the security-restricted area and fired additional shots injuring two TSOs and a passenger. Airport police officers responded within 90 seconds and apprehended the shooter within 4 minutes, who, according to law enforcement officials, was specifically targeting TSA employees. As a result, TSA issued an after action report on March 26, 2014, and identified numerous recommendations to enhance the safety and security of TSOs and the screening checkpoint area, such as improving the visibility of law enforcement officers, active-shooter training, and communications systems.
- On September 24, 2015, the Gerardo Hernandez Act was enacted into law and directed TSA to, as appropriate, conduct outreach to all commercial airports in the United States to ensure they have plans in place to respond to, among other things, active shooter attacks and

incidents targeting passenger screening checkpoints, and to report to Congress on the findings from its outreach.²⁵

- On March 22, 2016, suicide bombers using explosives in suitcases killed 16 people and injured more than 200 inside the main terminal area of the Brussels Zaventem International Airport in Belgium. The attack was followed by the June 28, 2016 Istanbul Ataturk International Airport attack in Turkey, where suicide attackers used guns and bombs to kill 46 and injured more than 230 people inside public areas of the airport, including the security checkpoint and parking areas.
- On January 6, 2017, a passenger obtained a handgun from his checked baggage upon landing at the airport and shot and killed five people and injured six others in the baggage claim area at FLL. Travelers rushed out of the terminal and also ran into security-restricted areas while law enforcement officers responded to the scene. The shooting event ended in less than 80 seconds when the shooter surrendered to law enforcement officers. Approximately 90 minutes after the shooting, speculation of additional gunshots in the airport caused panic and led to an uncontrolled self-evacuation of passengers, and others throughout the airport. Law enforcement and emergency personnel from surrounding areas quickly responded, causing traffic congestion and blocking all airport roadways. As a result, the Broward County Aviation Department (BCAD) issued an after action report on August 15, 2017, to identify coordination challenges airport officials and law enforcement personnel experienced in response to the active shooter incident, and recommended preparedness and response training and exercises among other things.
- Enacted on October 5, 2018, as part of the Federal Aviation Administration (FAA) Reauthorization Act of 2018, the TSA Modernization Act required, among other things, that TSA and CISA establish a public area security working group and identify and share

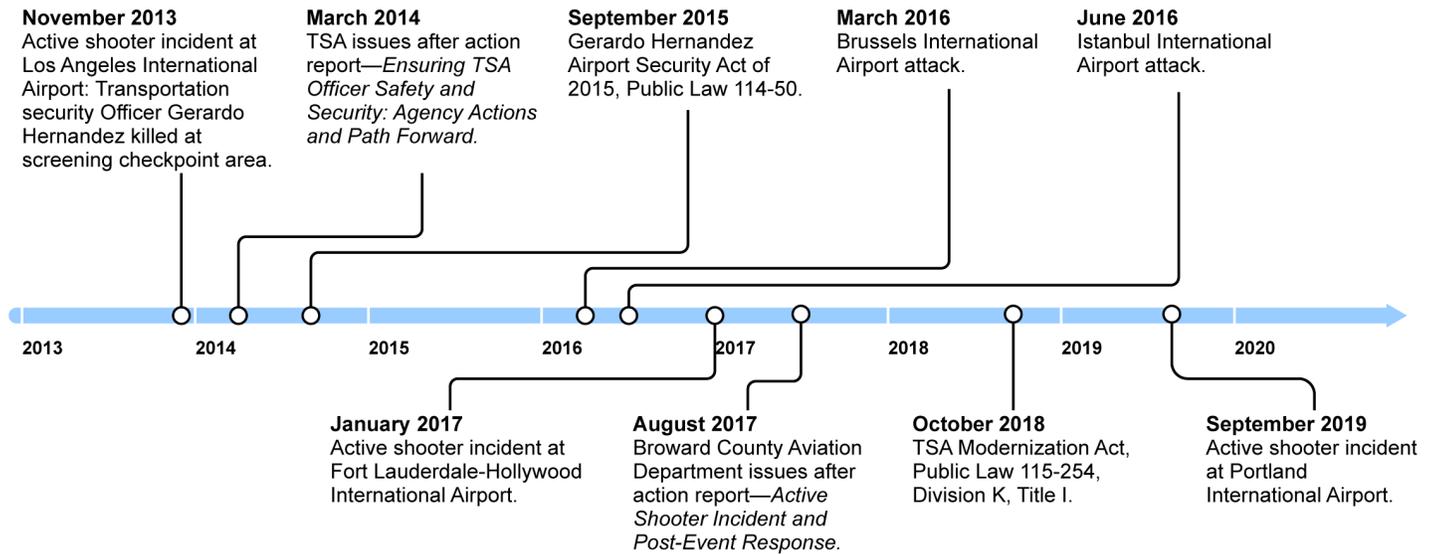
²⁵ See Pub. L. No. 114-50, § 3, 129 Stat. at 490-91 (requiring TSA to report, not later than 180 days after enactment, to the Committee on Homeland Security of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate).

best practices to secure aviation and other public areas of transportation facilities.²⁶

- On September 27, 2019 a man fired a gun outside of the baggage claim area of the Portland International Airport in Oregon and was injured in a struggle with police officers.

See figure 2 for a timeline of these events and response efforts to enhance the security of public areas.

Figure 2: Timeline of Attacks in Airport Public Areas, and Actions to Address the Security of Airport Public Areas



Source: GAO analysis of Transportation Security Administration (TSA) documentation and enacted legislation. | GAO-20-278

²⁶ See Pub. L. No. 115-254, div. K, tit. I, §§ 1931-1932, 132 Stat. at 3569-72. Pursuant to the Cybersecurity and Infrastructure Security Agency Act of 2018, DHS's National Protection and Programs Directorate was redesignated the Cybersecurity and Infrastructure Security Agency (CISA). See Pub. L. No. 115-278, § 2(a), 132 Stat. 4168, 4169 (2018); 6 U.S.C. § 652. CISA is responsible for protecting the Nation's critical infrastructure from physical and cyber threats.

TSA Took Various Actions to Enhance Public Area Security in Response to the 2013 LAX Shooting and Gerardo Hernandez Act

In response to the November 2013 shooting at LAX, TSA took various actions to improve security in airport public areas. In March 2014, TSA issued an after-action report on the shooting. TSA officials at LAX stated that confusion about where to run, hide and respond; delayed and inaccurate communications; and the lack of law enforcement visibility were safety concerns that needed to be addressed. As a result, TSA identified short term actions and proposals for increasing airport public area security and enhancing the safety of TSA employees at airports. These include (1) strengthening and mandating active shooter training for TSA employees, (2) installing duress alarms at screening checkpoints, and (3) adopting recommended standards for law enforcement presence at checkpoints, as described below.

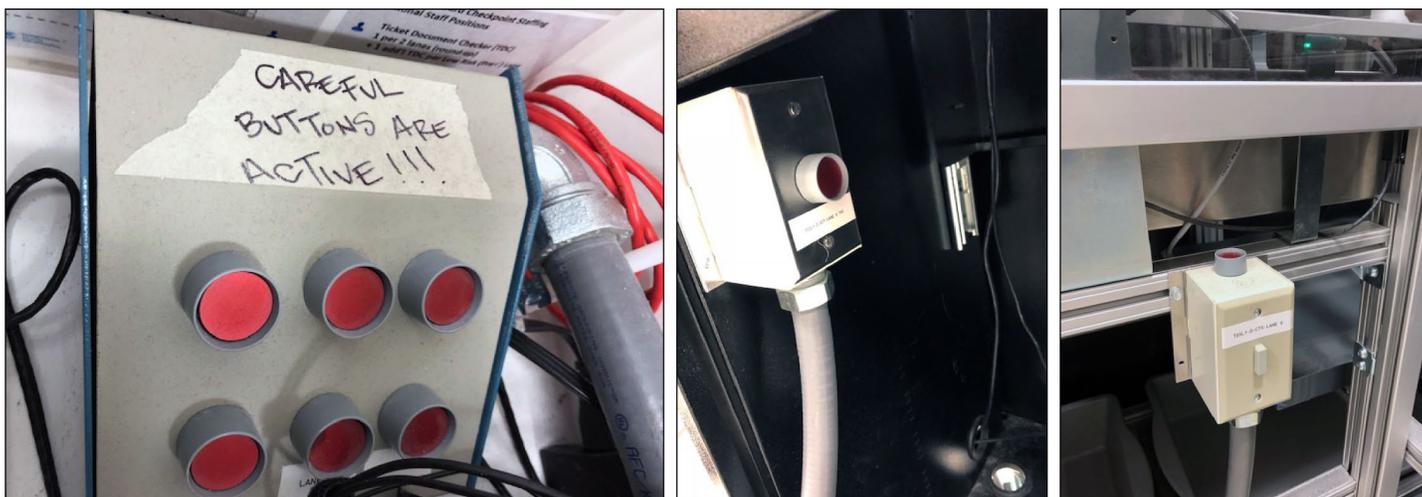
Active shooter training. In its after-action report, TSA stated that although it provided optional active shooter training courses available online to employees prior to the 2013 shooting, employees were not required to complete the training and could have been unaware of steps to take during a shooting event. According to TSA officials, adequate training and preparation for how to best respond to security incidents, such as an active shooter situation, are important in order to minimize casualties. After its review of the 2013 LAX shooting, on December 19, 2013, TSA mandated that TSA employees complete the training. In addition, TSA later revised the active shooter training to include various training exercises and threat scenarios, according to LAX officials. TSA noted in its after-action report that the active shooter training scenarios and exercises are intended to allow law enforcement officers to practice reacting to a specific incident and immediately assess the appropriateness of their reactions. All of the six airport operators we interviewed stated that active shooter training and frequent drills are important because they instill instinctive reactions and standard communications and procedures in employees during a crisis situation. In addition, airport officials at all six of the airports we visited agreed with the importance of active shooter training to familiarize employees with the steps to take or escape routes to use during an attack. In its after-action report, TSA also noted actions taken to ensure active shooter tactical response plans to reinforce emergency procedures, and conducting emergency evacuation drills twice a year.²⁷ Airport officials at all of the six

²⁷ Airport Tactical Response Plans are to be consistent with a national format and include the designation of possible evacuation routes from specific areas (screening checkpoints, baggage screening areas, and office/break/training rooms) and establishment of rendezvous points.

airports we visited noted the importance of these drills and stated that they have incorporated the drills into their emergency plans and procedures.

Duress alarms. TSA reported that installing duress alarms at screening checkpoint areas would improve communications from TSOs to law enforcement through use of a silent alarm. To enhance emergency response equipment and technology, TSA mandated regular testing of duress alarms, recommended linking closed circuit television (CCTV) cameras to duress alarms, and recommended enhanced use of local airport emergency alert notification systems. TSA also identified the need for FAMS notifications in the event of a security emergency, because previously FAMS did not receive automatic notification of an active shooter incident occurring. Duress alarms are installed at each checkpoint, and when pushed, provide TSOs with a method to notify law enforcement of dangerous situations at or around the checkpoint area. TSOs we met with at five of the six airports we visited discussed a number of situations where travelers have been unruly, threatening, and sometimes physical prior to undergoing or during security screening at the checkpoint. In instances of hostility or threats of attack, TSOs highlighted the importance of having operational duress alarms to help improve the safety and security of the public area and the checkpoint (see figure 3).

Figure 3: Examples of Transportation Security Administration Duress Alarms Installed at Passenger Screening Checkpoints



Source: GAO. | GAO-20-278

After the LAX incident, TSA conducted an assessment of all existing alarms and found that some airport checkpoints lacked alarms and some alarms were not fully functional. As a corrective action, TSA issued an operational directive to mandate weekly testing of duress alarms at commercial airports nationwide. In addition, not all airports had duress alarms as a notification capability prior to the LAX incident. As such, TSA subsequently planned to take action to install duress alarms at all airports nationwide. Officials at all of the six airports we visited confirmed the use and weekly testing of duress alarms. Representatives of all four industry associations we contacted stated that the installation of duress alarms in all airports was a useful practice. TSA's review also recommended linking duress alarms to CCTV cameras to focus camera footage on the area where the duress alarm is activated. All of the six airports we visited have completed or plan to complete linking the alarms to the cameras.

Law enforcement presence. Following the LAX shooting, TSA officials, and TSO screeners, wanted to ensure adequate law enforcement presence at the checkpoints. In response to the review of the shooting incident, TSA recommended enhancing law enforcement presence by providing a visible deterrence and establishing quicker incident response times at security checkpoints. In an effort to address the concerns of visibility and responsiveness, TSA recommended standards for law enforcement presence at checkpoints and ticket counters during peak travel times and incorporation of a maximum allowable response time for law enforcement to arrive at an airport checkpoint when notified of a security incident.²⁸ Prior to the LAX shooting, airport operators were required to comply with existing airport security program requirements to provide adequate law enforcement presence to ensure passenger safety, including responding to threats at security checkpoints. However, when TSA conducted a review of all airport security programs, they found that although most airports specified maximum response times to

²⁸ All commercial airports have either a fixed-post law enforcement officer presence to respond to security incidents at TSA screening checkpoints, or a defined maximum timeframe for law enforcement response to such incidents, including active shooters, acts of terrorism, and incidents that target passenger screening checkpoints, known as flexible response. TSA has ensured explicit incorporation of maximum response times in all airport security programs utilizing flexible response options (i.e., airport security programs that do not employ a fixed-post law enforcement officer presence). A security directive also states that response to incidents at the passenger and baggage screening checkpoints must be in a period of time mutually agreed upon by the FSD and airport operator. According to TSA officials, a previous TSA National Amendment to all airport security programs for law enforcement response times includes various ranges based on airport categories.

checkpoints, 71 airports that maintained flexible law enforcement coverage did not list a required response time in their security programs. As a result, TSA required all airports to clearly include a maximum allowable law enforcement response time in all security programs. Officials for the five airports we visited with the highest passenger volumes stated they comply with the response time requirement listed in their security program while officials from a smaller airport we met with told us they include a longer maximum response time as a requirement in their security program.

While recommended standards for law enforcement presence and maximum response times are required in airport security programs, nearly all 50 TSOs and TSO supervisors at the six airports we visited expressed concerns for safety and security while conducting screening operations in the passenger checkpoint areas. Many of these TSOs and supervisors said they feel vulnerable to both physical and verbal attacks, and public misperceptions of their overall roles and responsibilities. The majority of TSOs also noted concerns about adequate law enforcement presence and attentiveness in the checkpoint areas and because they are sometimes harassed for conducting their screening duties. While many of the TSOs stated they sometimes feel their concerns are not always met with action, such as supervisors intervening or calling upon law enforcement for assistance, they said they appreciate law enforcement's response to the LAX shootings and value building relationships with law enforcement present at the checkpoint. All TSOs we interviewed expressed interest in continuing to provide feedback to TSA headquarters and offering suggestions for improving their safety.

In addition to actions taken in response to the after-action report for the LAX shooting, TSA took other actions consistent with the Gerardo Hernandez Act. As previously mentioned, the act directed TSA to, as appropriate, conduct outreach to all commercial airports in the United States to ensure they have plans in place to respond to, among other things, active shooter attacks and incidents targeting passenger screening checkpoints, and to report to Congress on the findings from its outreach. In response to the Gerardo Hernandez Act, TSA conducted outreach to all commercial airports and analysis of each airport's preparedness to respond to security events. TSA determined that all of the airports had plans in place to respond to security incidents in the public areas of airports including active shooters, acts of terrorism, and

incidents that target passenger screening checkpoints.²⁹ TSA also determined that all commercial airports had met TSA regulatory requirements related to security incident response planning.³⁰

After the LAX shooting and subsequent review, TSA issued an Operations Directive in August 2014, about one year before enactment of the Gerardo Hernandez Act, detailing specific guidance and TSA employee procedures for responding to an active shooter incident.³¹ Upon reviewing the act, TSA concluded that the procedures outlined in its directive were consistent with requirements and that no further action was required. For example, TSA had provided guidance for its personnel to mentally prepare themselves in advance for an active shooter incident by predetermining an escape route that offers concealment or cover. TSA guidance had also encouraged employees to use the mantra of “Run, Hide, Fight” during active shooter incidents.

Furthermore, over the next few years, TSA released a new training video, issued revised operational guidance, and nation-wide update concerning security measures.

- In January 2015, TSA released a new active shooter training video, “Active Shooter Incident Response Training” for active shooter incidents specifically depicting an airport environment. The interactive training video was filmed at Indianapolis airport with support and

²⁹ TSA officials stated that plans and procedures implemented to prepare for security incidents and enhance situational awareness in the public areas of airports include enhancing security public awareness campaigns, incorporating active shooter response procedures into safety briefings, and incorporating active shooter response scenarios into drills, among others. In addition, the best practices shared include maintaining open lines of communication with law enforcement, increasing VIPR team deployments, and enhancing interoperable communications among first responders including law enforcement, fire/rescue, and medical personnel.

³⁰TSA officials stated that elements of airport incident response strategies may vary because TSA regulations and requirements do not prescribe how such strategies are to be developed and implemented. Each airport security program and plan is drafted by the specific airport operator and responds to the airport’s needs and security requirements. TSA, however, approves the airport security program and ensures that it satisfies applicable TSA requirements, including elements concerning incident response. TSA stated that they will continue to consider other appropriate changes to incident response strategies in further discussions with airports, other aviation security stakeholders, the Federal Aviation Administration, and other appropriate agencies.

³¹The operations directive applies to all commercial airports at which duress alarms are operating in screening areas.

participation from local airport officials, law enforcement officers, and TSA personnel.

- TSA released the training video with a required completion date of March 31, 2015, and mandated that this be completed as an annual training requirement for all TSA personnel. In July 2016, TSA also issued revised operational guidance for reporting aviation security incidents to the Transportation Security Operations Center, including security breaches and suspicious activities, among others.³²
- In November 2017, TSA issued a national update to airport security programs for law enforcement coverage of certain airport public areas under the National Terrorism Advisory System.³³

These documents include guidance and procedures that align with requirements of the Gerardo Hernandez Act for verifying that plans exist, and for identifying and sharing best practices, across airports to respond to security incidents inside the airport perimeter, including active shooters, acts of terrorism, and incidents that target passenger screening checkpoints.

More recent actions have also been taken that correspond with requirements of the Gerardo Hernandez Act to have plans to respond to active shooter attacks and incidents targeting passenger screening checkpoints. Specifically, in March 2018, TSA issued a revised security directive to enhance security of airport public areas by identifying responsibilities for local law enforcement coverage of airport public areas, including the passenger screening checkpoints and nearby public areas. Also, in August 2018, TSA issued an information circular describing best practices identified by airport operators to mitigate against insider threats,

³² TSAs Transportation Security Operations Center (TSOC) serves as TSAs coordination center for transportation security incidents and operations. TSOC uses Web-Based Emergency Operations Center incident management system to perform incident management, coordination, and situational awareness functions for all modes of transportation.

³³ Since 2011, DHS has used the National Terrorism Advisory System (NTAS) to communicate information about terrorist threats by providing timely, detailed information to the public, government agencies, and airports, among others. NTAS consists of two types of advisories—bulletins and alerts. DHS added bulletins to the advisory system to communicate current developments or general trends regarding threats of terrorism and issues alerts (either “elevated” or “imminent”) when specific, credible information about the nature, location, or mode of the threat is available.

including practices related to conducting vulnerability assessments, and escort procedures, among others.

TSA and Stakeholders Took Additional Actions to Enhance Airport Public Area Security, but TSA Does Not Have a Plan for Future Stakeholder Collaboration

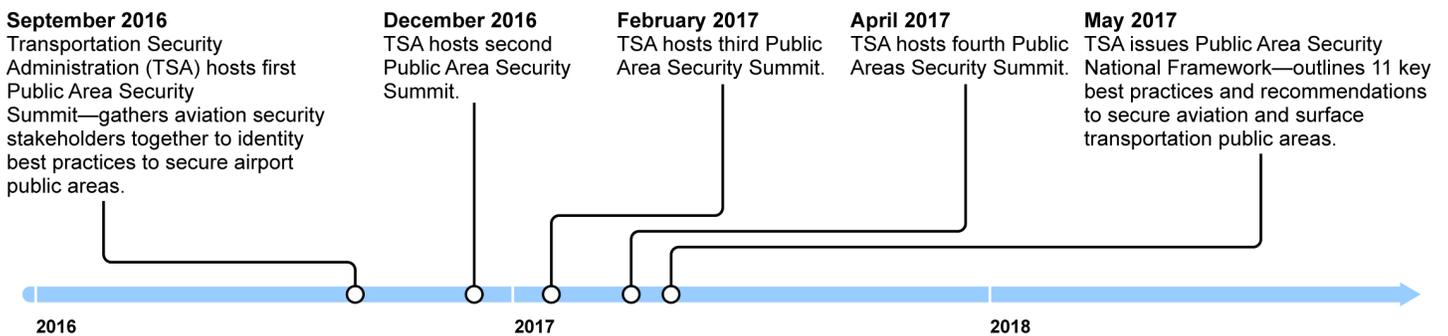
TSA Issued a National Framework in 2017, Among Other Actions, to Enhance Airport Public Area Security

In response to other security incidents in airport public areas, TSA has taken additional actions to enhance security. Specifically, in 2017, TSA issued the *Public Area Security National Framework* (Public Area Framework). TSA developed the framework following a series of security summits that gathered stakeholders together to identify ways to mitigate threats against aviation and surface transportation public areas. Between September 2016 and April 2017, TSA and the DHS Office of Infrastructure Protection (now within CISA) co-hosted four public area security summits (see fig. 4). According to TSA officials, the summits leveraged an entire network of transportation and security officials—including industry, government, academic, international, and public stakeholders—to develop a set of best practices and recommendations that could help deter nefarious actors in the transportation environment. As a result of these summits, in May 2017, TSA published the Public Area Framework, which established best practices and recommendations for protecting public areas from harmful attacks.³⁴ TSA officials described the summits as opportunities for stakeholders to generate meaningful dialogue and exchange ideas as opposed to developing a formal strategy or prescriptive action plan with an implementation time frame. Moreover, this official added that the framework was “intended to be a toolkit for stakeholders, designed by stakeholders.” Industry stakeholders and

³⁴ TSA, *Public Area Security National Framework* (Arlington, VA: May 2017).

airport officials we interviewed reported that the security summits were beneficial for gathering key stakeholders together to determine a variety of measures to enhance security of airport public areas, some of which had already been implemented at certain airports.

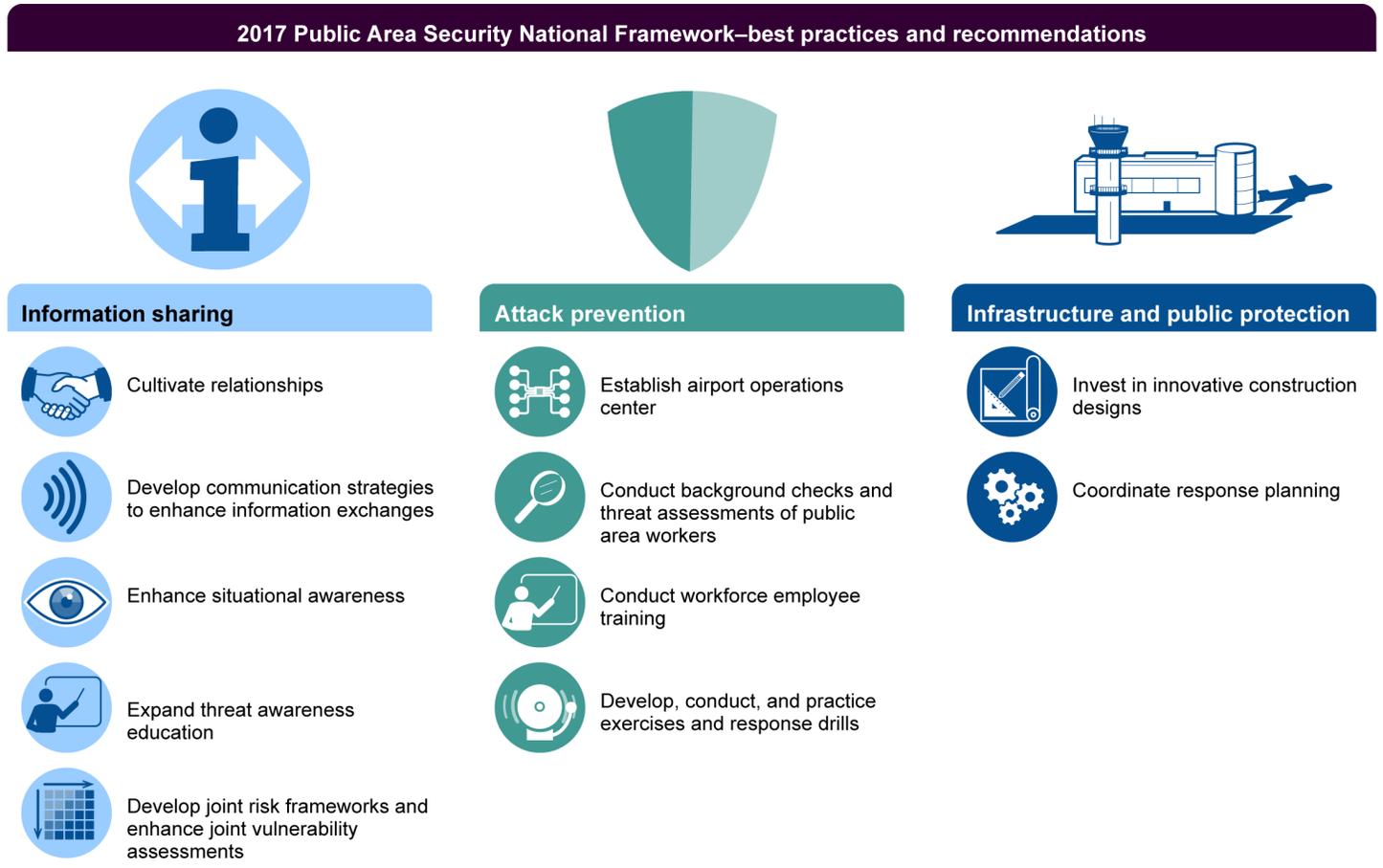
Figure 4: Timeline of Airport Public Area Security Summits and Activities from September 2016 through May 2017



Source: GAO analysis of TSA information. | GAO-20-278

The Public Area Framework categorized 11 best practices across three key areas: sharing information, preventing attacks, and securing public infrastructure (see fig. 5). According to TSA officials, the report was intended to be a framework, which consisted of non-binding best practices developed by and used for aviation and surface transportation security stakeholders to implement public area security improvements in their respective operating environments.

Figure 5: Best Practices Outlined in the Transportation Security Administration’s 2017 Public Area Security National Framework



Source: TSA. | GAO-20-278

During our interviews with 10 sets of airport stakeholders—consisting of airport operators and law enforcement officials from six airports and industry representatives from four aviation trade associations—we found that all 10 stakeholder groups reported that the resulting best practices were useful in increasing their awareness of the various ways in which airports can enhance the security of their public areas. For example, airport operators at Los Angeles International Airport (LAX) and Hartsfield-Jackson International Airport (ATL) and law enforcement officials at Fort Lauderdale-Hollywood International Airport (FLL) stated that establishing an airport operations center, one of the best practices recommended in the framework, provides real-time monitoring capabilities of security-related events throughout the airport and the ability

to communicate more effectively in the event of an emergency. Similarly, representatives of industry trade associations, such as Airports Council International-North America and American Association of Airport Executives, stated that enhanced law enforcement patrols throughout public areas provide a visible deterrent against potential attacks during peak travel times while also ensuring adequate resources are available to respond quickly to potential threats. As recommended in the framework, strategies to deploy law enforcement patrols are one of the most basic forms of deterring, detecting and defeating potential attacks and a part of coordinating response planning. Several stakeholder groups also added that while the framework was useful in formally documenting industry agreed upon best practices and recommendations, many of the practices, including the use of airport emergency operations centers and enhanced law enforcement patrols were already being implemented locally by various airport operators nationwide.

In addition to issuing the Public Area Framework, TSA took additional actions in recent years in response to other security incidents in airport public areas led by TSA's Policy, Plans, and Engagement (PPE) office, which was also responsible for engaging airport and surface transportation stakeholders in developing the 2017 Public Area Framework recommendations. Specifically, the TSA Modernization Act, enacted in October 2018, required TSA, in coordination with CISA, to establish a public area security working group to promote collaboration between TSA and public and private stakeholders to develop non-binding recommendations for enhancing security in public areas of transportation facilities.³⁵ The act also requires TSA to periodically share best practices developed by TSA and transportation stakeholders related to protecting public spaces of transportation infrastructure from emerging threats with transportation security stakeholders.³⁶

³⁵ See Pub. L. No. 115-254, § 1931(b), 132 Stat. at 3569-70 (providing further that not later than 1 year after the working group is established, TSA is to submit a report to the Committees on Commerce, Science, and Transportation and Homeland Security and Governmental Affairs of the Senate and to the Committee on Homeland Security of the House of Representatives a report covering the preceding 12 months on the organization of the working group, the activities of participation in the working group, the findings and any recommendations of the working group).

³⁶ See Pub. L. No. 115-254, § 1932(a), 132 Stat. at 3571. See also Pub. L. No. 115-254, § 1931(c)(2), 132 Stat. at 3570 (providing that, not later than 1 year after the date of enactment (enacted October 5, 2018), and periodically thereafter, the DHS Secretary shall publish and disseminate, as appropriate, current best practices for protecting and enhancing the resilience of public areas of transportation facilities).

According to TSA officials we interviewed, PPE established the public area security working group in March 2019 to engage with stakeholders and update the original best practices that were developed in the 2017 Public Area Framework. TSA conducted two conference calls—March 2019 and June 2019—with the working group members to update, discuss, and validate the existing best practices. The working group consists of security stakeholders from both aviation and surface transportation modes and includes several of the same stakeholders who participated in the 2017 public area security summits to develop the 2017 Public Area Framework and associated recommended best practices.³⁷ For the working group, TSA PPE officials reported that TSA selected a subset of stakeholders who were highly engaged and participatory during their prior security summits and who provided the most input during focus group discussions.

According to TSA officials, many of the stakeholders previously involved in the development of the Public Area Framework—including several industry associations representing aviation and surface transportation stakeholders—are aware of ongoing issues and emerging threats. For example, while engaging with TSA during the March 2019 and June 2019 conference calls, industry stakeholders identified ways for enhancing the security of airport public areas by 1) utilizing various technologies, such as public address notification systems throughout airports, to better communicate instructions during and after security incidents occur in the public area, and 2) establishing clearer guidance and protocols for resuming business operations after a security incident, such as rescreening passengers and positively identifying lost baggage in the terminal area. Moreover, stakeholders cited the growing concerns about the emergence of unmanned aircraft systems, such as drones, which pose risks to securing airport public areas.

³⁷ TSA invited the following aviation and surface transportation stakeholders to participate in the conference calls: Airlines for America, National Air Carrier Association, Air Line Pilots Association, Coalition of Airline Pilots Associations, Cargo Airline Association, Airports Council International–North America, American Association of Airport Executives, Airport Law Enforcement Agencies Network, Aircraft Owners and Pilots Association, Chair and Vice Chair of the Aviation Security Advisory Committee, American Public Transportation Association, Amtrak, Los Angeles Metro, Metropolitan Atlanta Rapid Transit Authority, New York Metropolitan Transportation Authority, King County Metro, Washington Metropolitan Area Transit Authority, Greater Cleveland Regional Transit Authority, New Jersey Transit, Maryland Transit Administration, American Bus Association, and Greyhound.

In late October 2019, in accordance with the TSA Modernization Act, TSA issued a report listing best practices and recommendations to secure transportation public areas.³⁸ This report summarizes the working group's effort to review and update prior best practices cited in the 2017 Public Area Framework as well as identify current challenges. For example, the updated report provides specific tools and resources for enhancing situational awareness, such as resource guides providing informational materials, fact sheets, research reports, and online training videos. Specifically, one of the resource guides highlights security of soft targets and crowded places—sports venues, shopping areas, schools, and transportation systems—as locations that are easily accessible to large numbers of people that have limited security measures in place making them vulnerable to attack. For example, the guide describes how TSA focuses its effort on securing aviation and high-risk locations by deploying law enforcement and canine teams to serve as a visible deterrent. Other resources include a fact sheet regarding challenges posed by unmanned aircraft systems and a research report regarding mass attacks in public spaces, among others. Moreover, the updated report highlights the benefits of an airport operations center, including enhanced communication capabilities and situational awareness.

TSA Does Not Have a Fully Developed Plan for Future Stakeholder Collaboration on Best Practices for Airport Public Area Security

Although TSA and stakeholders have taken actions in response to other security incidents in airport public areas, TSA has not fully developed a plan for future engagement with stakeholders to update security best practices and ensure they are current, relevant, and reflective of any new transportation security advancements or new and emerging threats. According to the October 2019 updated report, TSA intends to engage with stakeholders on a periodic basis to affirm partnerships. However, TSA has not yet clearly defined roles and responsibilities for stakeholders or how frequently to engage with them, such as on a quarterly, semi-annual, or annual basis.

The TSA Modernization Act requires TSA to periodically share best practices for protecting transportation public areas.³⁹ Additionally, both the 2017 Public Area Framework and updated report from the working

³⁸ TSA, *Protecting Public Areas: Best Practices and Recommendations* (Arlington, VA: October 2019).

³⁹ See Pub. L. No. 115-254, div. K, tit. I, § 1932(a), 132 Stat. at 3571. See also Pub. L. No. 115-254, § 1931(c)(2), 132 Stat. at 3570.

group emphasize the importance of continuing partnerships efforts and identifying solutions to improve public area security.⁴⁰ For example, the working group's updated report issued in October 2019, in accordance with the TSA Modernization Act, highlighted TSA's role to build upon the work already accomplished in developing the Public Area Framework's best practices and recommendations.

Additionally, our prior work has identified leading practices that can help sustain collaboration, such as developing a plan identifying roles and responsibilities for parties included in the collaborative effort. Further, standards for project management call for developing a plan with specific actions and time frames.⁴¹

TSA officials stated that they expect to better determine future plans for stakeholder engagement sometime after TSA issues its mandated report on the public area security working group to Congress in March 2020. However, TSA officials told us they currently have no specific plans outlined regarding the process or frequency with which they will engage stakeholders in the future on public area security best practices. By developing a plan that outlines the roles and responsibilities of the working group members, the mechanisms through which the working group will collaborate, and the frequency of when the working group will meet, TSA would be better positioned to ensure the best practices cited by aviation and surface transportation stakeholders remain relevant and emerging threats are proactively identified.

Aviation Stakeholders, Including Airport Operators, Have Taken Actions to Enhance Airport Public Area Security

Aviation stakeholders—consisting of airport operators, law enforcement officials, airline representatives, among others—have taken a series of actions in response to security incidents that followed the 2013 LAX shooting, consistent with the best practices outlined in TSA's Public Area Framework. On the basis of our observations and interviews at six airports, we found that aviation stakeholders have taken actions consistent with the best practices identified in the 2017 Public Area Framework—including those related to attack prevention and information sharing—and engaged with industry association representatives to better

⁴⁰ TSA, *Public Area Security National Framework* (Arlington, VA: May 2017) and *Protecting Public Areas: Best Practices and Recommendations* (Arlington, VA: October 2019).

⁴¹ Project Management Institute, Inc., *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Sixth Edition, 2017.

understand key efforts involved in securing airport public areas. Collectively, these efforts represent a series of actions taken by stakeholders in response to the 2013 LAX shooting, the 2017 FLL active shooter incident, or a combination of TSA requirements to enhance their security posture in securing airport public areas.

Attack Prevention: Establish Airport Operations Center. One of the practices cited in the framework under preventing attacks in airport public areas is establishing an airport operations center, which calls for a unified command center to respond to airport security incidents.⁴² As cited in the Fort Lauderdale after action report, airport operators and law enforcement personnel experienced coordination challenges in responding to the active shooter incident because of inadequate communication capabilities, including interoperable communications and lack of a dedicated space to coordinate and deploy resources, among others things.⁴³ Three of the airports we visited—Los Angeles, Atlanta, and Fort Lauderdale—had a dedicated airport operations center in place. During our site visit to Los Angeles, we toured the Airport Response Coordination Center which provides 24/7 response coordination capabilities between LAX airport operators and federal, state, and local law enforcement personnel (see fig. 6). LAX security officials told us that the coordination center provides real-time situational awareness of security-related incidents across the entire airport through monitoring closed-circuit television, as well as direct communications with federal and local law enforcement partners. Moreover, LAX security officials

⁴² According to the Public Area Framework, an airport operations center is intended to be a unified command center designed to provide a collaborative shared space for all transportation stakeholders—including airport operators, law enforcement personnel, and TSA officials, among others—to improve communications and situational awareness, expedite response times during security incidents, and in general, promote unity of mission.

⁴³ Broward County Department of Aviation, *Fort Lauderdale-Hollywood International Airport After-Action Report: Active Shooter Incident and Post-Event Response January 6, 2017* (Dania Beach, FL: August 2017). According to the report, airport operators, law enforcement officers, and security stakeholders collectively evaluated and assessed strategic and tactical operations, and identified issues and challenges specific to this event. The after-action report acknowledged the need for improvements and airport security officials identified three fundamental areas for safeguarding airport public areas. This includes: 1) coordination with all airport stakeholders, 2) completion of enhanced active shooter training for all airport employees, and 3) engaging with the public—including airport concessionaires, representatives from rental car companies, and ground transportation crews, among others—to continue educating others about the DHS “See Something, Say Something” campaign. Security officials also emphasized the importance of incorporating an Incident Command System (ICS) in all emergency training drills.

reported that the coordination center also houses the Incident Management Center which is activated as an emergency command center designed to integrate resources for all airport divisions and law enforcement agencies in response to a major security incident.⁴⁴ Similarly, Atlanta and Fort Lauderdale had dedicated airport operations centers, including a comparable Incident Management Center, equipped with dedicated work stations, designated color-coded vests, secure video teleconference capabilities, and a mobile command center.

Figure 6: Los Angeles International Airport Response Coordination Center and Incident Management Center Provides Real-Time Coverage of Airport Security-Related Incidents and Flight Operations



Source: GAO. | GAO-20-278

Attack Prevention: Develop, Conduct, and Practice Exercises and Response Drills. The Public Area Framework also contained a recommendation that transportation stakeholders develop and conduct exercises and response drills to prepare for real-world incidents and identify potential obstacles to responding effectively. These collaborative engagements are intended to help develop strategies for incident

⁴⁴ Unlike traditional airport response centers, the Incident Management Center provides enhanced capabilities, technologies, and co-located physical space for airport leadership and security stakeholders with key information in real-time to make informed and timely decision regarding security incidents. In accordance with federal guidance for emergency responders, airport operations centers use color-coded vests—such as yellow and red vests to indicate technical specialists and operations staff, respectively—to designate key roles and responsibilities in an emergency response situation.

management, such as resuming airport business operations—including evacuating civilians during a law enforcement response, securing and returning abandoned luggage, and rescreening passengers, among other tasks—and identify areas requiring additional coordination. For example, in August 2017, as a follow-up to the framework, the summit commissioned a new working group to specifically address incident response, recovery, and reconstitution. Specifically, the Intermodal Security Training and Exercise Program (I-STEP) developed and conducted a tabletop exercise focused on “Resumption of Trade” following an incident. The exercise was designed for aviation stakeholders—airport operators, law enforcement officials, and airline representatives, among others—to discuss, identify, and improve collective capabilities in responding to physical security incidents at airports and facilitating the orderly re-establishment of airport operations.⁴⁵ The exercise assessed stakeholders’ ability to quickly and accurately 1) communicate critical information during and after a security incident in an airport public area, 2) evacuate passengers, employees, and vendors after a security incident, and 3) restore airport operations following a security incident.⁴⁶ These training goals stemmed from the lessons learned from the 2017 FLL shooting as well as stakeholders’ discussions during the summits around developing best practices.

According to airport operators at Ronald Reagan Washington National Airport (DCA), I-STEP was well received by airport security stakeholders because it was an event that incorporated several key stakeholders’ perspectives at one time and presented an opportunity for constructive viewpoints to be shared. As a result of the I-STEP training exercise, TSA issued an after action report identifying strengths and lessons learned in resuming airport operations, and highlighted areas for improvement including 1) better coordination to ensure all airport vendors and stakeholders receive standardized active shooter training and 2) consideration of the impacts and risks associated with plainclothes law

⁴⁵ TSA, *After Action Report: Intermodal Security Training and Exercise Program (I-STEP) Resumption of Trade Tabletop Exercise* (Arlington, VA: August 9, 2017).

⁴⁶ I-STEP took place at TSA headquarters and included approximately 50 aviation security stakeholders including TSA, FBI, the Department of Transportation, airline security officials, and industry association representatives. The 1-day training exercise consisted of three modules—beginning of an active shooter situation, law enforcement response, and airport recovery operations—and calls for stakeholders to identify strengths and areas for improvement. TSA collected stakeholders’ summary responses and shared them with all participants.

enforcement and lawfully-armed individuals responding to an active shooter incident, among others. Airport stakeholders we met with at DCA also shared examples of locally sponsored training exercises. For example, airport officials stated that table top exercises—discussions amongst emergency response personnel regarding the various roles and responsibilities during an airport emergency response situation—are frequently held at DCA and most focus on the need for better communication. DCA officials added that quarterly training drills are hosted for nearby county law enforcement and fire department officials to better familiarize themselves with DCA airport operations, layout, and prestaging areas.

Information Sharing: Enhance Situational Awareness. Airport operators we met with also shared their experiences with implementing best practices and recommendations cited in the Public Area Framework to enhance situational awareness and expand threat awareness education. For example, during our site visit to FLL, one senior airport security official shared examples of actions undertaken in response to the FLL after-action report to enhance workforce employee training and threat awareness education. This included the development of an active shooter training program required for all airport workers, such as airport concessionaires and rental car operators;⁴⁷ and enhancing the airport’s credentialing program to better distinguish certain workers requiring access to the secure area, and validate that active shooter training has been completed.⁴⁸ Similar to FLL, according to the Public Area Framework, Boston’s Logan International Airport and ATL have implemented vetting programs that include the issuance of identification cards for airport workers on the public side of airports. According to aviation stakeholders, issuing public side credentials allow the airport to have better awareness of who is working within their environment, thereby enhancing overall situational awareness within airport public areas, a practice recommended in the Public Area Framework.

⁴⁷ The active shooter training program at FLL is airport-specific and teaches airport workers—concessionaires, representatives from car rental companies and ground transportation services, among others—what to do in an event, how to react, where to go, and how to be better prepared for an emergency evacuation.

⁴⁸ According to a senior FLL security official, the enhanced credentials have a revised layout—including portrait-style photograph credentials for individuals with access to secure areas, such as airline officials, law enforcement personnel, and concessionaires, among others and landscape-style photograph credentials for workers without access to secure areas, such as ground transportation team members, rental car company representatives, and landscaping crew members, among others.

Airport Operators Deployed Enhanced Law Enforcement Patrols and Installed an Active Shooter Detection System, Among Other Efforts, to Enhance Airport Public Security

Airports we met with have also taken actions that are generally consistent with its three main categories, including infrastructure and public protection. For example, in an effort to enhance the security of airport public areas, several airport operators and law enforcement officers we met told us that they regularly deployed enhanced law enforcement teams to patrol public spaces, including ticketing counters and baggage claim areas, among others. These specialized law enforcement teams—equipped with assault rifles, body armor, and canine teams—patrol airport public areas to provide a visible deterrent against criminal or terrorist activities and provide immediate law enforcement response capabilities. While these enhanced law enforcement teams were initially deployed in response to the LAX shooting, LAX security officials we met with stated that their continued presence in the public areas provides a strong deterrent. During a site visit to LAX, we observed two sets of tactical law enforcement teams patrol the Bradley International Terminal and American Airlines ticketing counter areas. One of the patrol teams included an explosives-detection canine and his handler (see fig. 7).

Figure 7: Enhanced Law Enforcement Teams Conduct Patrols around Ticketing Counter Areas to Provide a Visible Deterrent at Los Angeles International Airport, November 2018



Source: GAO. | GAO-20-278

These enhanced law enforcement teams also conduct training exercises to detect explosives that may be hidden throughout airport public areas, such as large atriums and baggage claim areas. These efforts are consistent with TSA airport security requirements and guidance provided in TSA's Law Enforcement Reimbursement Program.⁴⁹ For example, during the site visit to ATL, we observed Atlanta Police Department tactical law enforcement response teams patrol the large atrium meeting area—consisting of restaurants and shops—from an elevated position (see fig. 8). Similarly, during a site visit to FLL, we observed the Broward County Sheriff's Office deploy an enhanced law enforcement team with an explosives-detection canine succeed in identifying hidden explosive

⁴⁹ The TSA Law Enforcement Reimbursement Program provides partial reimbursement to approximately 325 airports to offset the allowable costs of carrying out aviation law enforcement responsibilities in support of passenger screening activities.

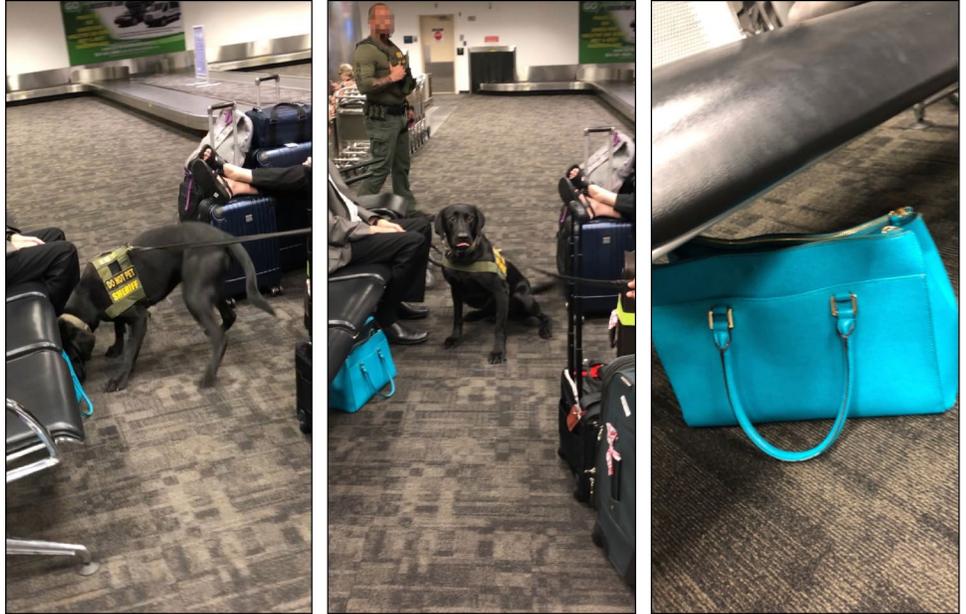
materials inside a handbag during a training exercise in the baggage claim area, the exact location of the January 2017 active shooter attack (see fig. 9).

Figure 8: Law Enforcement Teams Conduct Patrols of the Atrium within the Public Area to Provide a Visible Deterrent from an Elevated Location at Atlanta-Hartsfield International Airport, March 2019



Source: GAO. | GAO-20-278

Figure 9: Broward County Sheriff's Office Explosives Detection Canine during Training Exercise Conducted in the Baggage Claim Area of Fort Lauderdale-Hollywood International Airport, February 2019

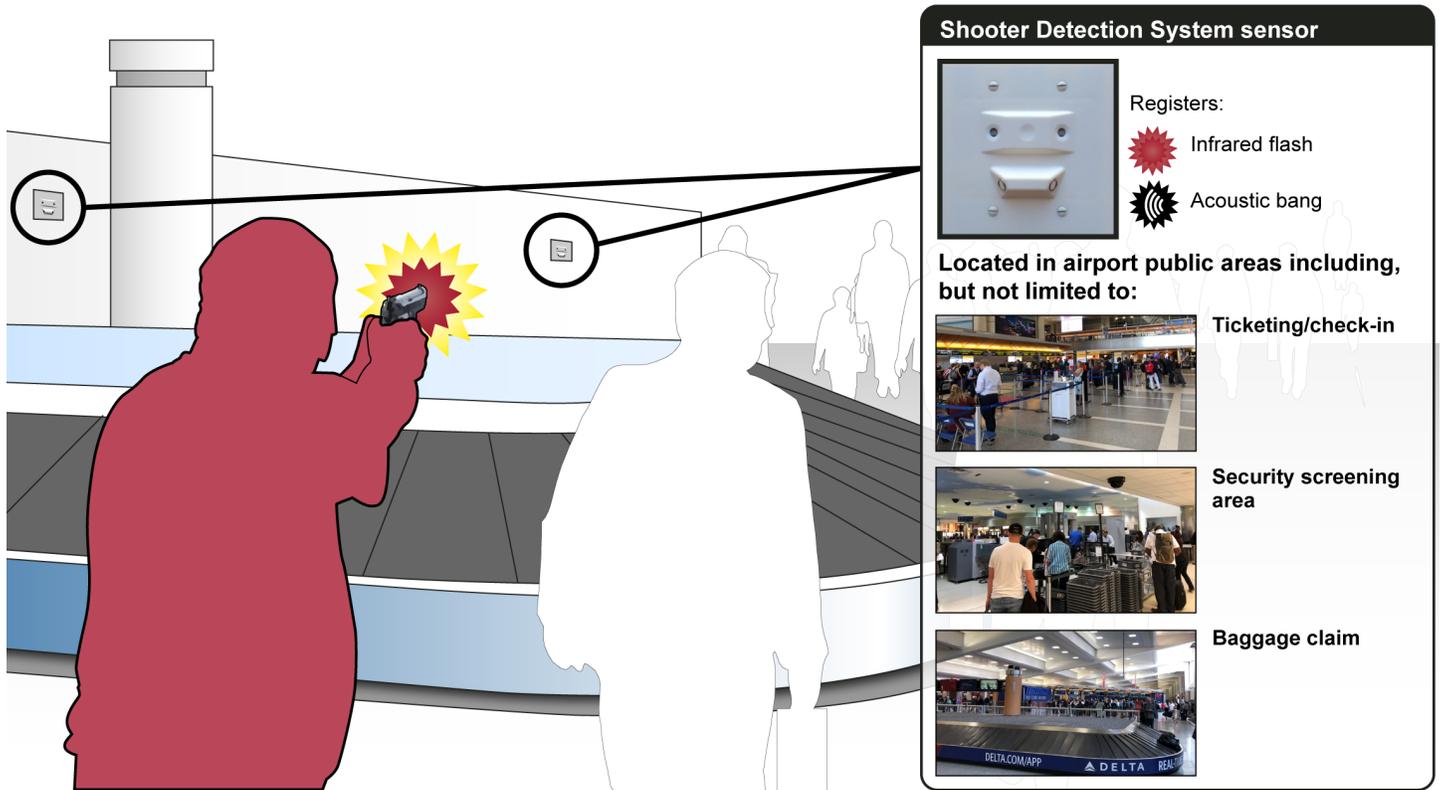


Source: GAO. | GAO-20-278

Note: Test materials were hidden inside the handbag depicted.

In addition, Charleston International (CHS) airport deployed an active shooter detection system to enhance the security of airport public areas. The Shooter Detection System is a network of sensors placed throughout airport public areas that identify acoustic gunshot signatures and track the movements of a potential active shooter in real time through security camera footage (see fig. 10). According to senior CHS airport officials, the 2015 Emanuel African Methodist Episcopal Church shooting in Charleston that claimed the lives of nine area residents, significantly influenced the airport's decision to search for active shooter technologies. Charleston County Aviation Authority and senior CHS airport officials reported that the detection system became operational in December 2018.

Figure 10: Illustration of Shooter Detection System Similar to Charleston International Airport



Source: GAO analysis of Shooter Detection Systems. | GAO-20-278

Aviation industry stakeholders, such as those from Airports Council International-North America and American Association of Airport Executives, plan to further research technologies to enhance the security of airport public areas. While CHS is the first U.S. commercial airport to install an active shooter detection system in ticketing counter and baggage claim areas, aviation industry officials stated that several airports nationwide are considering installing similar systems.

Conclusions

Attacks in the public areas of both domestic and foreign airports—including Los Angeles, Fort Lauderdale, Brussels, and Istanbul—have prompted TSA and aviation security stakeholders’ efforts to enhance the security of airport public areas. In accordance with the October 2018 TSA Modernization Act, TSA established a public area security working group to build upon the best practices and recommendations previously cited by

stakeholders in the 2017 Public Area Framework. The actions taken by TSA and aviation security stakeholders represent a collective effort to enhance the security of airport public areas. Similarly, airport security stakeholders we interviewed took actions consistent with the best practices identified in the 2017 Public Area Framework, such as establishing a unified airport operations center, deploying enhanced law enforcement teams, and using technologies to identify the whereabouts of an active shooter, among others. However, TSA has not fully developed a plan that outlines the roles and responsibilities of the working group members, collaboration mechanisms amongst the working group, and frequency in which the working group will meet. By developing such a plan, TSA would be better positioned to ensure that the working group is proactively meeting to identify and share emerging threats and best practices, instead of reconvening in the aftermath of another security incident involving an airport public area.

Recommendation for Executive Action

The Administrator of TSA should develop a plan outlining roles and responsibilities for members of the Public Area Security Working Group, the mechanisms for collaborating, and the frequency of the working group meetings.

Agency Comments and Our Evaluation

We provided a draft of this report to DHS for review and comment. DHS provided written comments, which are reproduced in appendix I. DHS concurred with our recommendation and described actions to address it, such as developing Public Area Security Working Group guidelines to include roles and responsibilities, mechanisms of collaboration, and frequency of working group meetings by June 30, 2020. These efforts, if fully implemented, should address the intent of the recommendation. DHS also provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Acting Secretary of the Department of Homeland Security, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-8777 or russellw@gao.gov. Contact points for our Office of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report are listed in appendix II.



W. William Russell
Acting Director, Homeland Security and Justice

Appendix I: Comments from the U.S. Department of Homeland Security

U.S. Department of Homeland Security
Washington, DC 20528



**Homeland
Security**

January 27, 2020

Mr. W. William Russell
Acting Director, Homeland Security and Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Re: Management Response to Draft Report GAO 20-278, "AVIATION SECURITY: TSA and Airport Stakeholders Have Enhanced Airport Public Area Security, but a Plan is Needed for Future Collaboration"

Dear Mr. Russell:

Thank you for the opportunity to review and comment on this draft report. The U.S. Department of Homeland Security (DHS) appreciates the U.S. Government Accountability Office's (GAO) work in planning and conducting its review and issuing this report.

The Department is pleased to note GAO's recognition of the Transportation Security Administration's (TSA) actions to improve public area security in the aftermath of the shooting of TSA Transportation Security Officer Gerardo I. Hernandez at Los Angeles International Airport on November 1, 2013. TSA took further actions in response to airport security incidents at Fort Lauderdale, Florida, in 2017, and Brussels and Istanbul in 2016, which were discussed in the Public Area Security National Framework dated May 2017. DHS remains committed to working with stakeholders to share information, prevent attacks, and protect infrastructure from emerging threats to public spaces of transportation venues.

The draft GAO report contains one recommendation, with which the Department concurs. Attached find our detailed response to the recommendation. DHS previously submitted technical comments under a separate cover.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,



JIM H. CRUMPACKER, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

Attachment

**Attachment: Management Response to Recommendation
Contained in GAO-20-278**

GAO recommended that the Administrator of TSA:

Recommendation 1: Develop a plan outlining roles and responsibilities for members of the Public Area Security Working Group, the mechanisms for collaborating, and the frequency of the working group meetings.

Response: Concur. Consistent with the requirements of the 2018 TSA Modernization Act, Section 1931(b), TSA's Operations Support/Policy, Plans and Engagement (PPE) staff will collaborate with the Public Area Security Working Group to develop non-binding recommendations and best practices for enhancing security in public areas. Working group meetings will be held every two years, unless events dictate that engagement should occur more frequently, in which case TSA will increase the frequency of meetings.

In collaboration with the members of the Public Area Security Working Group, PPE will establish working group guidelines to meet the requirements of Section 1931(b) and satisfy the intent of the GAO recommendation. The primary roles and responsibilities of the working group will be to ensure that the best practices remain relevant, and to advise the TSA of any new suggestions for consideration. The Protecting Public Areas Best Practices Recommendations will be updated as necessary to include new recommendations and/or mitigation measures. TSA will document these guidelines in a formal memorandum to relevant government agencies, industry organizations, and other stakeholders. Estimated Completion Date: June 30, 2020.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

William Russell (202) 512-8777 or RussellW@gao.gov.

Staff Acknowledgments

In addition to the contact named above, Christopher Ferencik (Assistant Director), Katrina Taylor (Analyst-in-Charge), Pamela Davidson, Josh Diosomito, Eric Hauswirth, Thomas Lombardi, Herbert Tinsley, and Adam Vogt made significant contributions to this report.

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