

Terrorism Planning and Incident Response Considerations for Bridges



With over 600,000 in the US, bridges are a vital component of the US transportation and economic systems. Many bridges are also part of key supply routes for pipelines and utilities. Aging bridges that are not properly maintained may also compound the consequences of an attack. Terrorists have historically plotted against bridges in the West and have included symbolic images of bridges in their media publications and messaging.

- In 2017, a US person who devised a plan with co-conspirators to conduct a terrorist attack in New York pleaded guilty and was sentenced for conspiring and attempting to provide material support to ISIS, among other charges. A port authority policer officer, on consecutive days, observed the individual on foot behaving suspiciously on or around the George Washington Bridge, prompting further inquiry and a subsequent investigation.
- Also in 2017, Italian police arrested four ISIS-inspired individuals who plotted to blow up the Rialto Bridge in Venice, Italy—a foot bridge with heavy pedestrian traffic. The group aspired to kill hundreds of tourists by placing an explosive device under the bridge.
- In 2015, two men were convicted of terrorism-related charges relating to a 2012 plot against a passenger train travelling from New York to Toronto, Canada. During the planning stages of the plot, the culprits surveyed several rail bridges outside of Toronto and considered using various tactics to damage the structure of the bridge, namely jackhammers, torches, or explosives in an effort to derail the train.

SCOPE: This product is intended to provide planning and response considerations specific to physical attacks against bridges, as well as incidents occurring near a bridge which may complicate or hinder an emergency response. It is intended for public safety officials, including first responders, public works personnel, emergency managers, planners, other city officials, and bridge owners and operators, in an effort to encourage understanding, collaboration and implementation of joint protective security processes.

JURISDICTION AND COMMAND CONSIDERATIONS: A bridge may be owned by a federal, state, local, or private entity, therefore, a response to an attack could involve multiple jurisdictions. Due to potential complications that could arise, public safety officials, bridge owners, and operators are encouraged to determine jurisdictional boundaries and responsibilities before an incident and also consider the following:



- Establish mutual aid agreements and coordinated emergency response plans encompassing a unified command and lines of communication with neighboring jurisdictions to allow a more rapid response.



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NOTICE: This product was developed by the Joint Counterterrorism Assessment Team (JCAT), which is a collaboration by NCTC, DHS, the FBI, and state, local, tribal, and territorial government personnel to improve information sharing and enhance public safety. The product is intended to promote coordination among intergovernmental authorities and the private sector in identifying, preventing, and responding to foreign terrorist activities in the US. The product should be considered within the context of existing laws, authorities, agreements, policies or procedures. For additional information contact us at JCAT@NCTC.GOV.

WARNING: This product may contain US person information that has been deemed necessary for the intended recipient to understand, assess, or act on the information provided. It should be handled in accordance with the recipient's intelligence oversight and/or information handling procedures.

FIRST RESPONDER'S TOOLBOX

- Establish common terminology which can provide a clearer line of communication and reduce overall incident response time.
- Maintain an updated list of contacts and resources available for an incident, which may include government representatives, public safety agencies, other community partners, and private sector entities with specialized tools or access.
- Consider traffic flow (ship movement and vehicular traffic), including alternate routes for emergency response vehicles to gain access to the scene of the incident.
- Maintain a profile of bridge ownership, composition, and physical makeup to facilitate a post-incident investigation. For instance, if a bridge's infrastructure includes rail, the National Transportation Safety Board (NTSB) maintains federal authority to investigate related incidents.

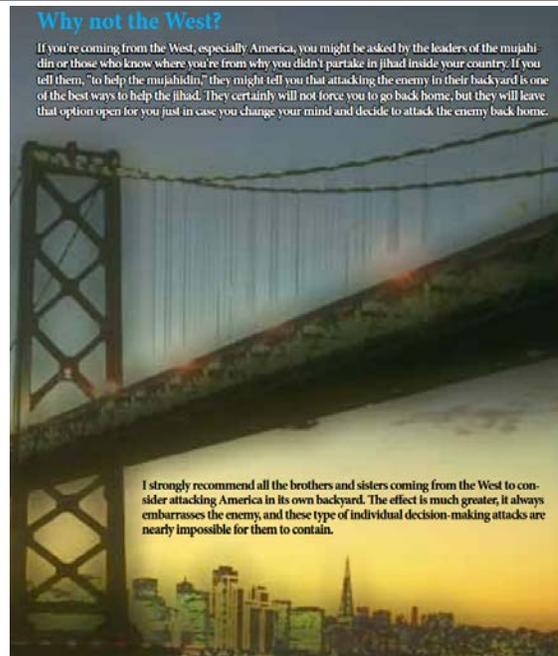
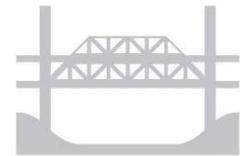


Image from a terrorist publication calling for attacks in the West

COLLABORATION CONSIDERATIONS: The following may provide opportunities for multi-jurisdictional partners to coordinate and collaborate before an incident:

- **Assessments:** Stakeholders may consider conducting risk or vulnerability assessments, such as DHS's Enhanced Critical Infrastructure Protection (ECIP) Security Survey and Site Assistance Visits (SAVs), which can assist public safety officials, critical infrastructure owners, and operators in identifying and prioritizing critical bridges and potentially cost-effective security strategies for preventing or mitigating an attack. Additional information can be obtained through the local DHS Protective Security Advisor or IPAssessments@hq.dhs.gov.
- **Exercises:** Public safety officials, bridge owners, operators, and other agencies, such as public works, utilities, and transportation departments are encouraged to routinely conduct cross-jurisdictional, multi-agency, and interdisciplinary counterterrorism exercises to identify and address potential gaps and vulnerabilities. The Sector Specific Tabletop Exercise Program allows critical infrastructure partners to develop exercises for sectors or facilities of interest. Users are able to tailor exercise templates to the communities' specific needs in order to assess, develop, and update plans, programs, policies, and procedures within an incident management's functional area. For more information, contact DHS Infrastructure Protection Exercise Team at SOPD.Exercise@hq.dhs.gov.
- **Information Sharing:** Maintain situational awareness of current or emerging threats and communicate potential changes in the threat environment— including suspicious activity— with appropriate agencies, such as the state and major urban area fusion center or the Joint Terrorism Task Force.



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- **Walk-throughs:** Public safety officials, bridge owners, and operators are encouraged to routinely conduct site walk-throughs and provide safety overviews, specifically with bridge inspectors or engineers to identify structural deficiencies, and make inspection documents available to public safety officials, including first responders, emergency management personnel or other planners. Access to these documents may be critical in particular for structures which are difficult to access or require specialized training or tools.

RESPONSE CONSIDERATIONS: Timely and effective incident responses rely on pre-incident coordination and collaboration. Emergency response agencies are encouraged to consider both tactical and strategic operational requirements; whereas, a response to a bridge incident may necessitate access to personnel or resources that may not be routinely employed.



- Response may require the use of non-traditional or specialty resources such as structural engineers, heavy equipment, steel workers, search cameras, and urban search-and-rescue teams. Other equipment for structural support, extraction, and victim transportation may include, but is not limited to, helicopters, water vessels, and oversized construction equipment, and may require assistance and agreements with public or private entities. Maintaining accurate partner contact information, establishing Memoranda of Understanding, and early identification of staging areas for equipment and personnel can ensure availability of resources and access to restricted areas.
- Hazardous materials may be transported over bridges via vehicle, rail, utilities, or pipelines and may be released during an incident—particularly one that disrupts structural integrity. Identification of bridges that may pose additional infrastructure concerns is critical to ensure safe response conditions and mitigate further problems.
- Structural instability and/or collapse can hinder access to victims and create additional casualties, with secondary collapse concerns. Damage assessment by structural engineers can allow for quicker structural stability verification, thereby facilitating response. Additionally, it is key to establish partnerships with public works and private entities that can provide structural support equipment.
- Victims may be located at either end, below or on various levels of a bridge. Emergency response vehicles, equipment or other resources may be required at more than one location, which may be difficult or dangerous to access.
- Nearby fire suppression systems may be limited or nonexistent. Standpipes may be affixed to the bridge or nearby. Ensuring these devices are accessible to firefighters may hasten fire suppression efforts. Additionally, fire-boat water-cannons, may not be adequate to reach the height of the bridge.
- Consider cascading consequences that may occur at and beyond the immediate incident and response, as loss of structural integrity may impact below waterways, roadways, or highways with debris or hazardous materials.
- Bridges may have characteristics limiting emergency response access—such as long and narrow roadways without passable shoulders, heavy traffic, limited access points above or below the bridge platform, or no vehicle access, such as rail bridges, or toll bridge operator facilities. These factors



may impact emergency response and impede equipment or vehicle access. Furthermore, routes to nearby hospitals may be limited or eliminated, potentially causing significant delays in medical treatment of victims. Planning should consider these variables to identify ingress and egress routes, alternate routes and transportation methods, and potential staging areas.

PHYSICAL SECURITY CONSIDERATIONS: With the diversity of bridges across the US, including fixed and operational bridges spanning a variety of environments and crossings, departments are encouraged to conduct routine threat, risk, and vulnerability assessments, and update these assessments as deemed necessary. Governmental, public and private sector partnerships, and information sharing is critical to understanding and awareness of the immediate environment, surroundings, and key access points. Critical areas which may require access during an emergency include hatches, ladders, elevators, catwalks, and restricted corridors.



- Bridge owners and operators may consider incorporating physical security features, including traffic and pedestrian cameras, increased illumination, restricted access to critical areas, and barriers for bridge piers and pedestrian and bicycle pathways.
- As structurally deficient bridges are updated or replaced, public safety personnel—to include emergency managers, planners, and others—are encouraged to work closely with engineers and inspectors during the planning stages to contribute security and emergency response considerations.

POSSIBLE INDICATORS OF ATTACK: Physical attack tactics against bridges may include but are not limited to, explosives, arson, and sabotage to destroy the structural integrity. A cyber-attack may also be a possible tactic—though less likely to be immediately observed by first responders.

The following observable indicators specific to bridges may create some degree of suspicion of criminal activity. Any determination of possible illicit intent should be supported by additional facts that justify reasonable suspicion. While one activity may be insignificant on its own, the indicators should be looked at under the totality of the circumstance. Any indicators creating a strong suspicion of violence when observed in combination with other suspicious behaviors may constitute a basis for reporting.

- Unauthorized persons inside restricted areas or areas not normally accessed by the public.
- Evidence of tampering, cutting, or other signs of damage to the structure or its components.
- Unattended or abandoned bags, packages, containers, or other items.
- Surveillance of the bridge or its components either in person or remotely—for example, by using unmanned aircraft systems—without a reasonable explanation.
- Vehicles or water vessels loitering or illegally parked near bridges or critical components.

Training public-safety officials, owners and operators, and other non-traditional partners—such as public works, transportation, emergency management personnel and toll or bridge operators—on



potential indicators of terrorism and suspicious activity can increase awareness and improve cross-jurisdictional information sharing efforts.

ADDITIONAL RESOURCES: The following resources may provide additional tools to enhance preparedness in prevention, protection, response, and recovery:



- **National Incident Management System** guides all levels of government, nongovernment organizations, and the private sector to work together to prevent, protect against, mitigate and respond to, and recover from incidents. <https://www.fema.gov/national-incident-management-system>
- **Transportation Security Administration Office of Security Policy and Industry Engagement's Surface Division Bridge and Tunnel Vulnerability Assessments** were completed in partnership with federal agencies and state and local engineers and may be provided to individuals with the appropriate clearance and need to know. Contact your state's Homeland Security Advisor Office, Department of Transportation, or Protective Security Advisor for more information.
- **US Department of Transportation, Status of the Nation's Highways, Bridges and Transit Report to Congress** outlines the physical conditions, operational performance, and financing mechanisms of highways, bridges, and transit systems based on both their current state and their projected future state under a set of alternative future investment scenarios. <https://www.transit.dot.gov/research-innovation/status-nations-highways-bridges-and-transit-condition-and-performance>
- **DHS Critical Infrastructure Threat Information Sharing Framework: A Reference Guide for the Critical Infrastructure Community** is a resource to assist critical infrastructure owners and operators—as well as public and private sector partners—in finding additional resources, and in what circumstances to receive and report threat information. <https://www.dhs.gov/sites/default/files/publications/ci-threat-information-sharing-framework-508.pdf>
- **Recommendations for Bridge and Tunnel Security** provides policies and actions to reduce the probability of catastrophic structural damage that could result in substantial human casualties, economic losses, and socio-political change. <https://www.fhwa.dot.gov/bridge/security/brp.pdf>
- **Bridge Security Design Manual** provides information for structural engineers, planners, owners and operators, as well as others, to incorporate effective strategies in bridge projects and make highway systems resilient against terrorist attacks. It is intended to be a resource tool for broad audiences to better understand security, and as a reference tool for bridge designers. <https://www.fhwa.dot.gov/bridge/security/hif17032.pdf>
- **National Bridge Inventory (NBI)** is a database of the nation's bridges including a state-by-state summary analysis of the number, location, and condition of highway bridges. <https://www.fhwa.dot.gov/bridge/nbi.cfm>
- **Nationwide Suspicious Activity Reporting (SAR) Initiative** provides training to assist partners and other professionals in identifying and reporting suspicious activity and other critical activities associated with homeland security. <https://nsi.ncirc.gov/>





PRODUCT FEEDBACK FORM

(U) JCAT MISSION: To improve information sharing and enhance public safety. In coordination with the FBI and DHS, collaborate with other members of the IC to research, produce, and disseminate counterterrorism (CT) intelligence products for federal, state, local, tribal and territorial government agencies and the private sector. Advocate for the CT intelligence requirements and needs of these partners throughout the IC.

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ADDITIONAL COMMENTS, SUGGESTIONS, OR QUESTIONS. HOW DOES JCAT MAKE PRODUCTS BETTER?

WHAT TOPICS DO YOU RECOMMEND?
