## FIRSTRESP ONDER'S TOOLBOX

### VEHICLE BORNE IMPROVISED EXPLOSIVE DEVICE (VBIED): PREPAREDNESS, RECOGNITION, AND RESPONSE

Terrorists may pursue efforts to use VBIEDs to conduct mass-casualty attacks in the Homeland. We base this assessment on interest communicated via online platforms and in terrorist publications, as well as on previous VBIED-related incidents and attacks.

VBIEDs are typically constructed using common vehicles found locally, making them inconspicuous and potentially difficult to detect just by observation. VBIEDs have been used effectively overseas, and previous attacks serve as examples of how they might be employed in the West. This product seeks to increase VBIED awareness among first responders to aid in preparedness, recognition, and response.

- A foreign terrorist organization published in 2014, instructions for building and deploying VBIEDs. The magazine specifically encourages targeting mass gatherings and identifies which VBIED is best suited for killing individuals as opposed to destroying structures or facilities. It encourages using VBIED components that do not trigger security tripwires and waiting to construct the device until several hours before the operation so that security is unaware of attack planning.
- Since 2009, there have been 10 incidents demonstrating sustained intent to use VBIEDs in the United States, including the attempted bombing in Times Square, New York, in May 2010 that used a VBIED containing approximately 300 pounds of explosives, as well as a plot emanating from Lubbock, Texas, in 2011 that involved procuring explosive precursors to conduct an attack in New York City. The remaining eight incidents involved undercover investigations where the subjects expressed or demonstrated interest in using VBIEDs to conduct an attack. The following map and descriptions provide further details.



In April, a USPER was taken into custody as he was arming a VBIED at a gate in Fort Riley, Kansas. The perpetrator believed entering the little-used utility gate to Fort Riley would allow him to get into the base undetected so he could detonate the VBIED, killing as many soldiers as possible. Law enforcement had already identified the individual and gave him an inert device.

(2) In December, a USPER was arrested as he attempted to use his airport access badge as part of a plot involving a VBIED at an airport in Wichita, Kansas. The individual had scouted out the airport to determine the time and place for an attack that would kill as many people as possible. Law enforcement had already identified the individual and given him an inert device.

- (3) In September, a USPER was arrested after he attempted to detonate a VBIED in front of a bar in downtown Chicago, Illinois. The individual had drafted a list of approximately 29 potential targets, including military recruiting centers, bars, malls, and tourist attractions in the Chicago area and ultimately targeted a bar. Law enforcement had already identified the individual and given him an inert device.
- (4) In January, a USPER arranged to purchase a VBIED with remote detonation capability and other weapons from an undercover law enforcement agent for the purpose of targeting crowded locations in the Tampa, Florida, area.
- (5) In February, a Saudi citizen was arrested in Lubbock, Texas, in connection with his alleged purchase of chemicals and equipment necessary to construct an IED. The individual had documented a list of steps that included preparing bombs for remote detonation, putting the bombs into cars, and taking them to different places during rush hour in New York City.
- (f) In December, a USPER was arrested after attempting to detonate a VBIED outside a US military recruiting center in Catonsville, Maryland. The USPER was the subject of an undercover investigation in which he was placed in contact with an individual he believed to be associated with foreign terrorists. Law enforcement had already identified the USPER and given him an inert device.
- (7) In November, a USPER was arrested while attempting to detonate a VBIED at the annual Christmas tree lighting ceremony in Portland, Oregon. Before the arrest, he had provided bomb components, detailed diagrams, and the location of the VBIED to individuals he believed were affiliated with a terrorist group. Law enforcement had already identified the USPER and given him an inert device.
- (8) In May 2010, a USPER was arrested while attempting to board a flight to Dubai, UAE, after his attempted VBIED attack on Times Square, New York.
- (1) In September, a USPER was arrested after driving a truck loaded with what he believed to be one ton of explosives to the Paul Findley Federal Building and Courthouse in Springfield, Illinois, and attempting to detonate the device with a cell phone. Law enforcement had already identified the individual and given him an inert device.
- 10 In September, a Jordanian citizen was arrested in an undercover operation when he attempted to detonate a VBIED targeting a 60-story commercial building in Dallas, Texas. The individual delivered the VBIED to a public parking garage under the building, activated a timer, and then tried to detonate the inert device with a cell phone remote control.

#### **SPECIFIC VBIED CONCERNS:**

- a detonation.
- outside of security barriers.
- critical infrastructure.
- larger vehicles.

#### **Key SAFETY Considerations**

- explosives and some precursor materials detonate.
- detonate under the proper conditions.
- potentially ignite because of static electricity.



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• VBIEDs can be effective weapons because of the amount of explosives employed, the relative ease of placing the device close to the target(s) without arousing suspicion, and the potential to inflict mass casualties and significant structural damage.

• Because of inherent differences in population density, concentration of buildings, and geographic distances, metropolitan, suburban, and rural areas require varying resources and time to conduct mandatory and preferred evacuations or implement shelter-in-place options. Incident commanders will need to consider additional resources to account for potential blast and fragmentary injuries, secondary structure damage, and automobile fires as the result of

• Increasing the evacuation distance from the VBIED threat location improves survivability, because blast pressure associated with detonation decreases significantly over large distances. • Government, public safety, public utility and other official-use, service, or industry vehicles typically have unencumbered access to secure areas, a fact that terrorists may attempt to exploit. Although the theft of an in-service vehicle may have been reported, perpetrators may also use repurposed or counterfeit vehicles with less scrutiny. This underscores the importance of screening all vehicles at checkpoints; limiting vehicle access to create natural standoff distances; and scrutinizing parking areas, dropoff/pickup areas, general traffic, and the areas

 Similar to tactics used in the attempted smuggling of narcotics, VBIED components and devices may be hidden within specialized compartments or void spaces in a vehicle or within or under items that may seem to have an innocuous, legitimate purpose. Finding them may require enhanced methods beyond a cursory visual inspection.

 The outward blast and fragmentation in all directions from a VBIED detonation has the potential to impact low-flying aircraft or damage underground structural elements and

• Although they potentially carry less explosive material, devices incorporating two- or three-wheeled vehicles provide an even higher level of versatility when compared to car and truck VBIEDs, because they are cheaper, offer increased maneuverability, and can be used to exploit gaps in standoff or physical-security barriers designed to prevent access to

 Preferred evacuation distances can be used to establish exclusion/post-blast evidence collection zones as an incident evolves from the life-saving stage to investigation.

• As a general rule, unless there is a very robust structure between people and the VBIED, there is a very significant chance that they will be injured or killed by fragments coming off of a detonation. The safe distance calculations are based on thermal (short-range), blast (medium-range), and fragmentation (long-range) effects. The terms "improvised" or "homemade" do not mean "less lethal." Homemade explosives are typically less stable than commercial or military explosives and should be treated with the utmost caution. Changes in ambient temperature, friction, static electricity, or impact can make improvised

• Commercially available explosive precursors are almost always hazardous and can be caustic, flammable, or energetic. If a material is labeled hazardous, presume it can

• Nearby radio and cell phone transmissions—including taking and sending pictures—have the potential to influence firing switches, and any powder with fine particulate matter can

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10 JULY 2018 AUTHORED BY NCTC, FBI, DHS

### FIRST**RESPODERSTODBOX**

### VEHICLE BORNE IMPROVISED EXPLOSIVE DEVICE (VBIED): PREPAREDNESS, RECOGNITION, AND RESPONSE (continued)

#### VBIED PRE-INCIDENT BEHAVIORS AND INDICATORS:

VBIEDs offer maximum damage over other types of IEDs because of the amount of explosives they can contain. A VBIED attack can rapidly deplete first responder resources, tax command structures, and overwhelm emergency medical services. Effective suspicious activity reporting by alert bystanders, security personnel, or first responders can be part of an effective mitigation strategy. In cases of specific threats, coordination with the Intelligence Community and federal law enforcement will allow the development of adaptive indicators for countering the threat.

The following behaviors and indicators may be innocuous or constitutionally protected activities and should be evaluated while considering the totality of the circumstances, additional indicators, or observed behaviors reasonably indicative of terrorism.



#### **VEHICLE SPECIFIC:**

- (A) Vehicles unusually or illegally parked or unusual vehicles parked in authorized areas
- **(B)** Missing, mismatched, or expired license plates, registration stickers, or inspection decals
- (C) Missing or altered vehicle identification number (VIN)
- (D) Vehicle is laden beyond normal capacity, in weight or amount of cargo
- (E) Cargo is concealed or obscured (by a tarp, blanket, or illegally tinted windows)
- (F) Interior parts are missing
- (F) Interior appears tampered with or unusually altered (misaligned panels, missing screws or fasteners, and missing or ill-fitting seats)
- (F) Interior or exterior equipped with nonstandard items (wires, rocker switches, batteries, antennae, or other electronic devices)
- **(b)** Aftermarket products, which may be used to conceal VBIED or related component(s)

#### **OTHER VBIED-RELATED:**

- Multiple calls to 911 regarding a vehicle or its location
- Bomb K-9, metering, or visual inspection alerts while a vehicle is parked or during screening
- Distinct odors emanating from a vehicle. including overwhelming gasoline, diesel, kerosene odors and any odors of propane, acids or industrial chemicals
- Vehicle type, make, size, style, or condition is inconsistent with jurisdiction, season, weather, or use
- Vehicle is abandoned in a crowded area or making illegal, unsafe, or otherwise unusual maneuvers
- Driver appears overly anxious
- Driver is observed taking extreme care in opening or closing vehicle's doors, trunk, or hood
- Driver hastily transfers from one vehicle to another
- More cellular phones than the number of occupants in the vehicle
- Smoke emissions inconsistent with typical indicators of vehicle malfunction
- Area or vehicle seemingly under surveillance

# VAN. 4.000 lbs



**TRUCK, 10,000 lbs** 





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EVACUATION DISTANCES BASED ON EXPLOSIVE CAPACITY

The examples below depict varying vehicles and the explosive capacities of VBIEDs incorporating them. However, in 2013, authorities in Afghanistan intercepted a VBIED packed with more than 60,000 pounds of explosives. To compare the potential impact, the VBIED that detonated outside the Alfred P. Murrah Federal Building in Oklahoma City, Oklahoma, contained approximately 4,000 pounds of a TNT equivalent and caused significant damage for 3 square miles. The number of blocks for MANDATORY and PREFERRED evacuation distances depicted in the graphic are based upon an average of 400 feet per city block. First responders and public safety personnel are reminded that block size can vary by jurisdiction and that the destructive blast range will vary according to VBIED construction and environmental and terrain conditions. First responders should always follow departmental policies and procedures if a VBIED is suspected.





Motorcycle, 50 lbs

Car, 500 lbs 320 ft, (<1 block) +1,900 ft, (<5 blo

SUV, 1,000 lbs



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# FIRST**RESPONDERS**TOOLBOX

### VBIED: PREPAREDNESS, RECOGNITION, AND RESPONSE APPENDIX

| DUTY CHECKLIST  | FACILITY PROTECTION CHECKLIST  |  |  |  |  |
|---|--|--|--|--|--|
| Inform public safety personnel and the general public about indicators and evacuation procedures<br>(pedestrian, vehicular).                      | Communicate with private sector and nontraditional partners, such as public works, Department of Transportation, code enforcement agencies, construction |  |  |  |  |
| Stay abreast of current VBIED trends and tactics by reviewing all-source reporting on US Government   | companies, and vendors.  |  |  |  |  |
| Internet-based information sharing systems, and update mitigation strategies as needed.   | Consider that a VBIED may be only one component or aspect of a complex attack.   |  |  |  |  |
| Educate 911 operators and call-takers to ask follow-up questions; ensure call-takers are aware of pertinent bomb threat questions and procedures. | Engage with private security personnel for awareness of standard practices and identification of gaps and vulnerabilities.                               |  |  |  |  |
| Consider response differences between parked and moving VBIEDs (using vehicle blocking, spike strips,   | Conduct counter-surveillance.  |  |  |  |  |
| dump trucks, or larger commercial or industrial vehicles).  | Install protective vehicle mitigation barriers (bollards, planters, serpentine drives).  |  |  |  |  |
| Evaluate standoff distances, and ensure all responders are using the same standards.  | Develop a suspicious activity or tip-line reporting policy, system, and procedures.  |  |  |  |  |
| Design and implement training consistent with response actions.   | Train facility occupants, staff, and security personnel in reporting and response  |  |  |  |  |
| Develop, implement, and update procedures as necessary, and follow mutual aid agreements and  | procedures and expectations.   |  |  |  |  |
| memorandums of understanding.   | Implement standoff distance, with vehicle checkpoints at appropriate distances   |  |  |  |  |
| Review and understand the impacts to infrastructure (power, gas, water, waste water, communications,  | from the facility.   |  |  |  |  |
| health care, and transportation).   | Designate entrances and exits for commercial and private vehicles.   |  |  |  |  |
| Provide and refresh tripwire indicators for private sector partners as needed.  | Identify utility shutoffs (gas, propane, electric, water).   |  |  |  |  |
| Be mindful of potential physical impediments to an emergency response (secondary devices or electronic jamming).                                  | <ul> <li>Maintain facility access lists, and document commercial or industrial vehicle<br/>deliveries, repairs, and associated work.</li> </ul>          |  |  |  |  |
| Implement suspicious activity training, processes, and reporting procedures.  |  |  |  |  |  |
|   |  |  |  |  |  |

| ON-SCENE CHECKLIST   |   |  |  |  |
|--|---|--|--|--|
| COMMAND AND CONTROL  |   | COMMUNICATIONS   | MEDICAL  | SCENE PRESERVATION   |
| <ul> <li>Determine where, how, and when to approach a scene<br/>and where to stage resources.</li> <li>Secure the scene and perimeter.</li> <li>Organize the multiagency response (federal, state,<br/>and local).</li> <li>Set up staging areas for the unified command post<br/>(UCP), police, fire, emergency medical services,<br/>and media.</li> <li>Set up and staff the UCP.</li> <li>Consider the risk of over-convergence.</li> <li>Evaluate the potential for complex, coordinated, and<br/>secondary attacks.</li> <li>Take precautionary measures to protect against potential<br/>secondary attacks, which can differ from the primary<br/>attack method.</li> <li>Establish blast, damage, and debris zones.</li> <li>Provide access for additional emergency responders.</li> <li>Determine whether the scene is unstable or hazardous.</li> <li>Look for structural instability.</li> </ul> | <ul> <li>Maintain access to and control of public utilities.</li> <li>Manage bystanders attempting to assist.</li> <li>Be aware of the potential for secondary explosions or collapses.</li> <li>Manage the arrival of media and victims' friends and family.</li> <li>Determine evacuation routes.</li> <li>Consider disruptions to public transit.</li> <li>Control access to and routes in and out of the area.</li> <li>Ensure standoff checkpoints do not create unwanted congestion.</li> <li>Set airspace restrictions, including those for media, unmanned aerial systems, and private aircraft.</li> <li>Ensure the continuity of operations for first responders and critical infrastructure.</li> <li>Establish perimeters for suspect escape prevention and containment.</li> <li>Evaluate the effects on evacuation or shelter-in-place structures.</li> </ul> | <ul> <li>Prepare for 911 overload, including calls that provide seemingly conflicting information.</li> <li>Create a multiagency interoperable communication plan.</li> <li>Create line-of-sight communication plans for the vicinity of the VBIED.</li> <li>Create communications plans if systems are overwhelmed by usage or damage, or if primary communications are jammed.</li> <li>Consider that communication infrastructure may be damaged during the attack.</li> <li>Create a public information plan, including announcing public transit disruptions and vetting to eliminate duplicate or erroneous information on public and social media outlets.</li> </ul> | <ul> <li>Prepare to treat mass casualties and traumatic injuries.</li> <li>Set up casualty collection points and triage and treatment areas.</li> <li>Prepare to evacuate victims, including by nontraditional means (police, taxi, privately owned vehicles).</li> <li>Consider self-evacuation of injured personnel.</li> <li>Consider the surge of victims to area hospitals.</li> <li>Track victims during the incident and after.</li> <li>Look out for delayed-effect injuries, including blast lung and blast abdominal injuries.</li> <li>Be careful with hazardous materials and decontamination.</li> <li>Provide post-incident stress treatment for first responders and those involved in the incident.</li> </ul> | <ul> <li>Coordinate closely among agencies (federal, state, local, and private).</li> <li>Prevent crime scene contamination and evidence removal.</li> <li>Search for widely dispersed evidence in the response area.</li> <li>Create an exclusion/ post-blast collection evidence zone.</li> <li>Collect videos from closed-circuit devices, dashboard cameras, bystanders, and social media</li> </ul> |



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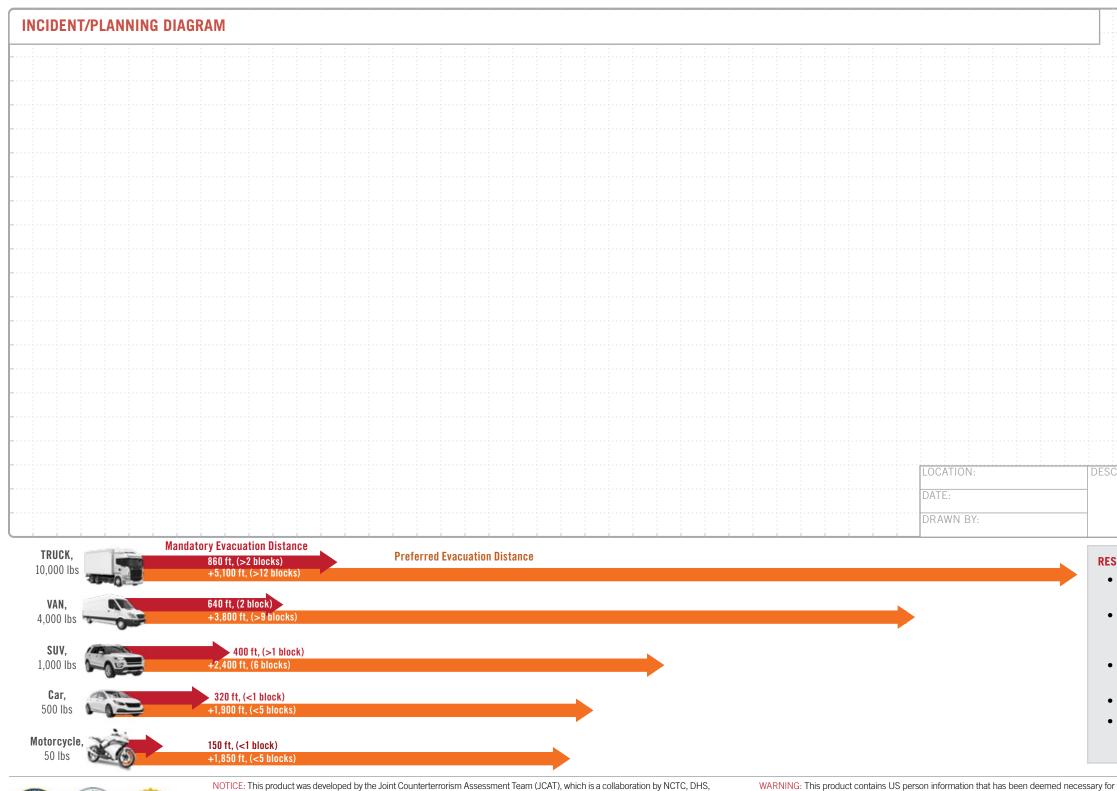
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| SPECIAL EVENTS CHECKLIST   |
|--|
| Pre-stage resources (medical, emergency, rescue), and<br>consider multiple staging locations for larger events.    |
| Designate separate entrances and exits for staff, first responders, and deliveries.                                |
| Maintain access lists and establish a vetting system for<br>deliveries and personnel, and screen away from crowds. |
| Develop a general public suspicious activity or tip-line<br>reporting system.                                      |
| Post informational flyers throughout the event.  |
| Plan delivery hours around events to minimize<br>crowd exposure.   |
| Establish layered security, including outside of the event footprint, chokepoints, and ingress/egress routes.      |
| Use social media outlets to monitor suspicious activity or trends related to the event or attendees.               |
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### VBIED: PREPAREDNESS, RECOGNITION, AND RESPONSE APPENDIX (continued)





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| OURCES:<br>FBI—TERRORIST EXPLOSIVE DEVICE ANALYTICAL CENTER:<br>tedac@ic.fbi.gov<br>FBI/DHS—BOMB THREAT STAND-OFF DISTANCES: https://<br>tripwire.gov/IED/resources/docs/DHS-D0J%20Bomb%20<br>Threat%20Stand-off%20Card.pdf |      |  |  |  |  |  |  |  |  |      |      |
| DHS—OFFICE FOR BOMBING PREVENTION: https://www.dhs.<br>gov/obp  |      |  |  |  |  |  |  |  |  |      |      |
| DHS—TRIPWIRE: https://tripwire.dhs.gov  |      |  |  |  |  |  |  |  |  |      |      |
| DHS—"WHAT TO DO—BOMB THREAT": https://www.dhs.gov/<br>what-to-do-bomb-threat  |      |  |  |  |  |  |  |  |  |      |      |
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# **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.



ADDITIONAL COMMENTS, SUGGESTIONS, OR QUESTIONS.

WHAT TOPICS DO YOU RECOMMEND?

