

## Capability Standard – Engineering and Public Works and Debris Management

The Critical Infrastructure Protection (CIP) capability enables public and private entities to identify, assess, prioritize, and protect critical infrastructure and key resources so they can detect, prevent, deter, devalue, and mitigate deliberate efforts to destroy, incapacitate, or exploit the Nation's critical infrastructure and key resources. Structural Damage Assessment is the capability to conduct damage and safety assessments of civil, commercial, and residential infrastructure and to perform structural inspections, and mitigation activities. The capability includes being able to provide contractor management, construction management, cost estimating, technical assistance, and other engineering services to support and manage response and recovery operations.

**Associated Target Capabilities:** [Restoration of Lifelines](#); [Critical Infrastructure Protection](#), [Environmental Health](#); [Structural Damage Assessment](#); [Economic and Community Recovery](#) ). Additional information on building this capability can be found on page 129 (Engineering and Public Works) and page 545 (Structural Damage Assessment and Debris Management) of the U.S Department of Homeland Security's September 2007 document: *Target Capabilities List: A Companion to the National Preparedness Guidelines*.

**Desired Outcomes:** The jurisdiction's risk to, vulnerability of, and consequence of an attack on critical infrastructure are reduced through the identification of critical infrastructure; conduct, documentation, and standardization of risk assessments; prioritization of assets; decisions regarding protective and preventative programs; and implementation of protective and preventative plans. Accurate situation needs and damage assessments occur. The full range of engineering, building inspection, and enforcement services are implemented, managed, and coordinated in a way that maximizes the use of resources, aids emergency response, implements recovery operations, and restores the affected area to pre-event conditions. Mitigation projects to lessen the impact of similar future events are identified and prioritized.

**The jurisdiction has created and maintains an Emergency Operations Plan and a Resource Manual that:**

### Engineering and Public Works

- Addresses actions intended to identify and coordinate the repair/replace/restore public works, utilities, facilities, roads, bridges, and critical infrastructure issues that otherwise can create additional hazards to the local population.
- Identifies and describes the actions that will be taken to determine qualified contractors offering recovery/restoration services.
- Identifies and describes the actions that will be taken to coordinate credentialing protocols so personnel have access to critical sites following an incident.
- Identifies the agencies and the actions they will take to identify, prioritize, and coordinate the work to repair/restore public facilities (utilities, government buildings, parks, etc.).
- Identifies the actions that will be taken by support agencies to assist in the stabilization of an emergency or disaster site (public works to support heavy equipment rescue needs, engineer's office to control or provide access to/from the immediate area, etc.).
- Identifies the agencies and the actions they will take to identify, prioritize, and coordinate the work to repair/restore local roads, bridges, and culverts (along city, county, township, state, US, interstate routes).

- ○ ○ Identifies the agencies and the actions that will be taken to repair/restore local water and waste systems (water/waste treatment plants, sewer/water lines, public/private wells) to include providing temporary water and waste systems until normal operations resume.
- ○ ○ Identifies the agencies and the actions they will take to prioritize and coordinate the repair/restoration of vital services (gas, electric, phone) to include conducting safety inspections before the general public is allowed to return to the impacted area.
- ○ ○ Identifies the agencies and the actions they will take to incorporate and coordinate assistance from state, federal, and private organizations (Ohio Department of Development Building Inspectors/ Contractors, Ohio Historical Preservation office, Federal Highway Administration, private contractors).
- ○ ○ Identifies and describes the likely types of energy and utility problems that will be created as a result of identified hazards (downed power lines, wastewater discharges, ruptured underground storage tanks).
- ○ ○ Identifies and describes the agencies and the actions they will take to identify, prioritize, and coordinate energy and utilities problems that will result from the disaster (shutoff of gas/electric in flooded areas, restoration of critical systems, controlling underground water/gas main breaks).
- ○ ○ Identifies and describes the agencies and the actions they will take to identify, prioritize, and coordinate the removal of debris from roadways to ensure access for local responders (snow/debris removal, stream clearance of debris/ice), including the coordination of road closures and the establishment of alternate access routes.
- ○ ○ Identifies and describes the agencies and the actions they will take to protect affected populations during incidents when there are periods of extreme temperatures and/or shortages of energy and other utilities, and discuss how the jurisdiction will coordinate with utility-providing entities during outages.
- ○ ○ Describes the methods by which the re-establishment of critical human services for children and their families, as well as individuals with disabilities and others with access and functional needs, will be accomplished.

<p>Comments and Notes:</p>          
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**Debris Management**

- ○ ○ Identifies the agencies and the actions they will take to coordinate the debris collection and removal process (gather and recycle materials, establish temporary storage sites, sort/haul debris).
- ○ ○ Identifies the agencies and the actions they will take to communicate debris management instructions to the general public (separating/sorting debris, scheduled pickup times, drop-off sites for different materials), including actions to issue updated information.
- ○ ○ Identifies the agencies and the actions they will take to ensure the safety of those involved in debris operations and how their actions are compliant with applicable federal, state and local safety standards.

- Identifies the agencies and the actions they will take to assess and resolve potential health-related debris management issues (mosquito/fly infestation, hazardous and infectious waste).
- Identifies critical locations (water and wastewater facilities) that need to be cleared of debris immediately to provide effective emergency services.
- Identifies the agencies and the actions they will take to address environmental requirements for managing solid waste, hazardous waste, construction and demolition debris, infectious waste and radiological waste.
- Identifies the agencies and the actions they will take to handle and process unique debris types, including final landfill sites for specific categories, such as white metals (household appliances), woody/agricultural debris, tires, vehicles, mobile homes, food, dead animals, and human remains.
- Identifies the agencies and the actions they will take to inspect and dispose of contaminated food supplies (from restaurants, grocery stores).
- Identifies the agencies that will provide technical assistance for the debris removal process (Ohio EPA, U.S. EPA, Ohio Dept. of Health, Ohio Dept. of Agriculture, Solid Waste Management Districts, local and surrounding county health departments).
- Identifies the agencies (local building inspectors, private contractors, Department of Commerce inspectors, etc.) and the actions they will take to condemn, demolish, and dispose of structures that present a public safety hazard.
- Identifies potential Debris Management Sites (DMS) or Temporary Debris Storage and Reduction Sites (TDSR), disposal facilities, and plans for staffing, operating, managing and monitoring.
- Identifies the agencies and the actions they will take to clear, collect, dispose and recycle, reduce (grind, chip, incinerate, etc.) debris.
- Identifies the agencies and the actions they will take to obtain regulatory permits and other authorizations for debris operations.
- Identifies the agencies and the actions they will take for contracting and procurement of debris management resources.
- Describes the authority and actions for private property debris removal.

Comments and Notes:

**A fully-functioning Engineering Services and Public Works and Debris Management capability should address the following measures:**

- The jurisdiction has established and maintains engineering services and public works functions in plans, procedures and guidelines.
- The jurisdiction has designated an engineering service/utility coordinator.
- The jurisdiction's plans, procedures and guidelines effectively address the following:
  - Debris removal program.

- Emergency repairs, closures & restoration of transportation infrastructure
  - Emergency repairs, closures & restoration of utility systems & infrastructure
  - Emergency damage survey methods for transportation and utility systems, including hazardous materials/waste generation, disposal collection, distribution and storage sites
  - Identification and development of debris collection, sorting, disposal routes and sites
  - Emergency demolition or stabilization of houses, building and other structures
  - Damage assessment
  - Flood control
- The jurisdiction has developed resource agreements and/or written mutual aid agreements with other government agencies and neighboring jurisdictions.
  - The jurisdiction has developed resource agreements and/or written mutual aid agreements with business/industry and contractors.

Comments and Notes:
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## Capability Assessment - Engineering and Public Works and Debris Management

- 1 2 3 4 5      The jurisdiction has engaged an integrated team to develop this capability.
- 1 2 3 4 5      The jurisdiction has developed an integrated plan for this capability.
- 1 2 3 4 5      The jurisdiction has identified the hazards/threats that would necessitate the application of this capability.
- 1 2 3 4 5      The jurisdiction's local responders have the necessary training to effectively carry out this capability.
- 1 2 3 4 5      The jurisdiction has access to the necessary resources to effectively carry out this capability (either local or identified through MOUs).
- 1 2 3 4 5      The jurisdiction's local responders have received the necessary training to be able to carry out this capability.
- 1 2 3 4 5      The jurisdiction's local responders have the expertise to carry out this capability.

1 2 3 4 5      The jurisdiction has tested this capability within the last year through exercise or activation.

**Scale Key:**

- 1- The jurisdiction has not started to develop this measure.
- 2- The jurisdiction has started to develop this measure, but we are not far along in the process.
- 3- The jurisdiction has developed this measure, but it needs to be improved.
- 4- The jurisdiction has fully developed this measure.
- 5- The jurisdiction has fully developed and tested this measure.