

USACE Baltimore District

Environmental & Munitions Design Center

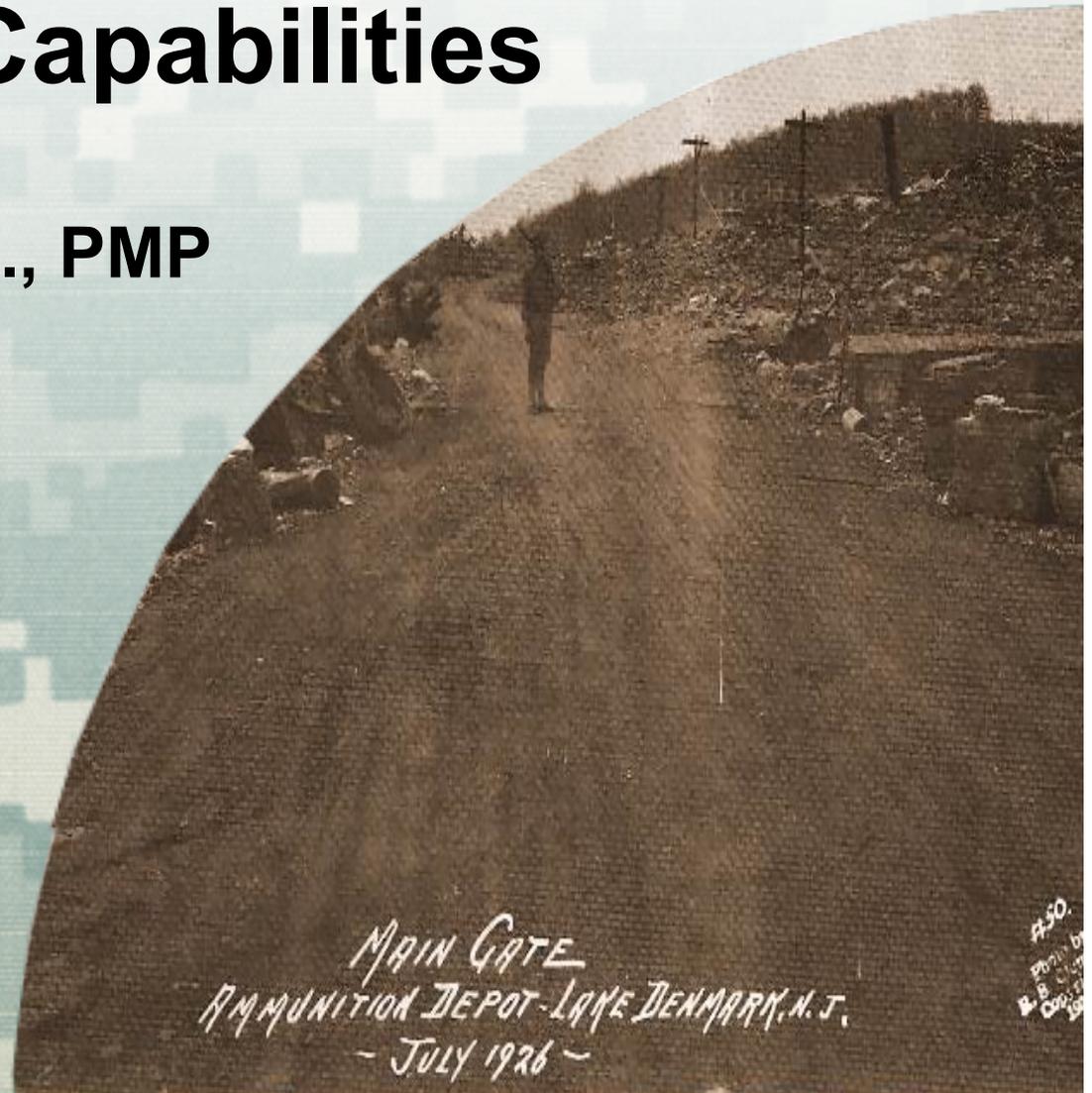
Overview and Capabilities

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Discussion Topics

- How we are organized
- What we do
- Acquisition Approach
- Workload Summary
- Challenges: Innovative Technology and Tech Transfer
- Other Recent Activities



Environmental & Munitions Design Center (*EMDC*)

- Mission:
 - ▶ Manage & execute HTRW & Military Munitions work
- Customers:
 - ▶ Military
 - Active, BRAC, FUDS
 - ▶ Civil
 - FUSRAP, EPA, IIS
- Technical Roles:
 - ▶ Regional HTRW Design Center
 - ▶ Regional Center of Expertise for Radiological Health Physics
 - ▶ National Military Munitions Design Center



EMDC Organization

Environmental & Munitions Design Center
Mike Rogers, PE (80)

MMDC Program Manager
Travis McCoun, P.G.

Program Support
Christy Pispitsos, PE(7)

Military PM
Emily Schiffmacher, PE
(16)

Civil PM
Sesh Lal, PE
(11)

Environmental &
Explosives Safety
Nancy Hammond, CIH
(9)

Remedial Investigation &
Design
Dennis Powers
(15)

Munitions Safety Office
Paul Greene (11)

Radiological Safety Office
Hans Honerlah (4)



Regional Environmental Support

Baltimore District is one of two HTRW Design Centers in NAD

★ Baltimore, MD

★ Boston, MA



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National Military Munitions Support

Baltimore District is one of five Military Munitions Design Ctrs

- ★ Four conventional:
 - Huntsville, AL
 - Baltimore, MD
 - Omaha, NE
 - South Pacific Div.
- ★ One chemical :
 - Huntsville, AL



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What We Do

- NAB provides M2S2 to a wide array of programs and projects
 - ▶ DERP
 - Active
 - BRAC ER
 - FUDS
 - ▶ OMA EQ
 - ▶ IIS-E
 - ▶ Range Support
 - ▶ Civil Works
 - ▶ Military Construction



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What We Do

- M2S2 Customers
 - ▶ Department of the Army
 - Army Environmental Command
 - National Guard Bureau
 - Installations
 - MILCON
 - ▶ Dept of Air Force
 - ▶ Dept of Navy
 - ▶ DLA
 - ▶ National Park Service
 - ▶ State Agencies
 - ▶ EPA



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What We Do

- M2S2 Services - Cleanup
 - ▶ Design Management / Project Management
 - ▶ Site Investigations
 - ▶ Remedial Investigations/Feasibility Studies
 - ▶ Design of Remedial Actions
 - ▶ Accident Prevention Plans for HTRW and MEC work
 - ▶ Site Safety & Health Plans for HTRW and MEC work
 - ▶ Explosive Safety Submissions/Explosive Site Plans
 - ▶ Management of remedial actions, both construction and operation
 - ▶ MEC Removal Actions
 - ▶ Long term monitoring



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What We Do

- M2S2 Services – Explosive Safety
 - ▶ Construction support (low/high probability)
 - ▶ Anomaly Avoidance/Safety Escort Support
 - ▶ Probability Assessments
 - ▶ Explosive Safety Design
 - ▶ Planning Range Control/Support Services
 - ▶ Beach Replenishment Oversight/Support
 - ▶ Commercial Blasting Oversight/Support
 - ▶ Long Term Management Oversight/Support



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What We Do

- M2S2 Services – Training and Other
 - ▶ MEC Safety Training
 - ▶ Assist with EOD/Bomb Squad coordination
 - ▶ Validation of UXO Tech Credentials
 - ▶ Provide Cost Effective Alternatives



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Acquisition Approach

- Vast majority of projects are executed using Multiple Award Task Order Contracts (MATOCs)
 - ▶ Environmental Service
 - ▶ Environmental Architect-Engineer (AE)



Contract Toolbox



HTRW / MM Architect-Engineer:
8 at \$100-\$150M ~15% SB

General Environmental Services
14 at \$200-\$300M ~60% SB

Military Munitions Services
10 at \$200-\$300M ~40% SB

Radiological Tx & Disposal
3-5 at \$200-\$300 M ~100% SB



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Toolbox Status

- Environmental A/E Services
 - ▶ Remaining Capacity - \$137 M
 - ▶ Ordering Period ends Apr 2018
- General Environmental Services (MAES)
 - ▶ Remaining Capacity ~ \$156 M
 - ▶ Ordering Period ends May 2017
- Military Munitions Services (MAMMS)
 - ▶ Remaining Capacity ~ \$60M
 - ▶ Ordering period ends May 2014
- Radiological Tx & Disposal
 - ▶ Procurement in process



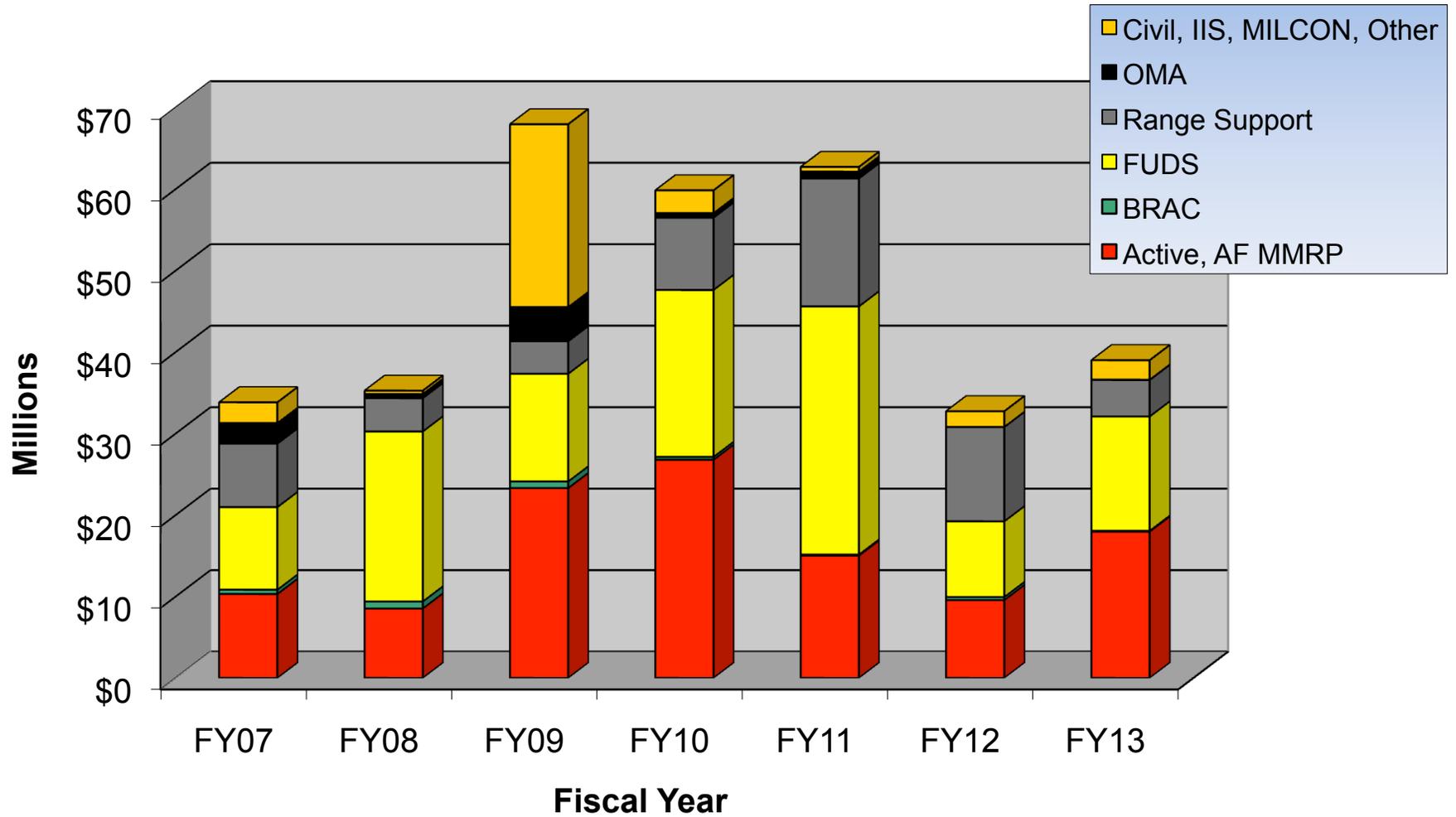
New Munitions Services MATOC Planned

- Multiple Award Military Munitions Services (MAMMS) II
 - ▶ ~\$240 M shared capacity
 - ▶ Will include LB and SB
 - ▶ Projected award Jan 2015
- RFP expected Spring 2014



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NAD MMDC Workload Summary



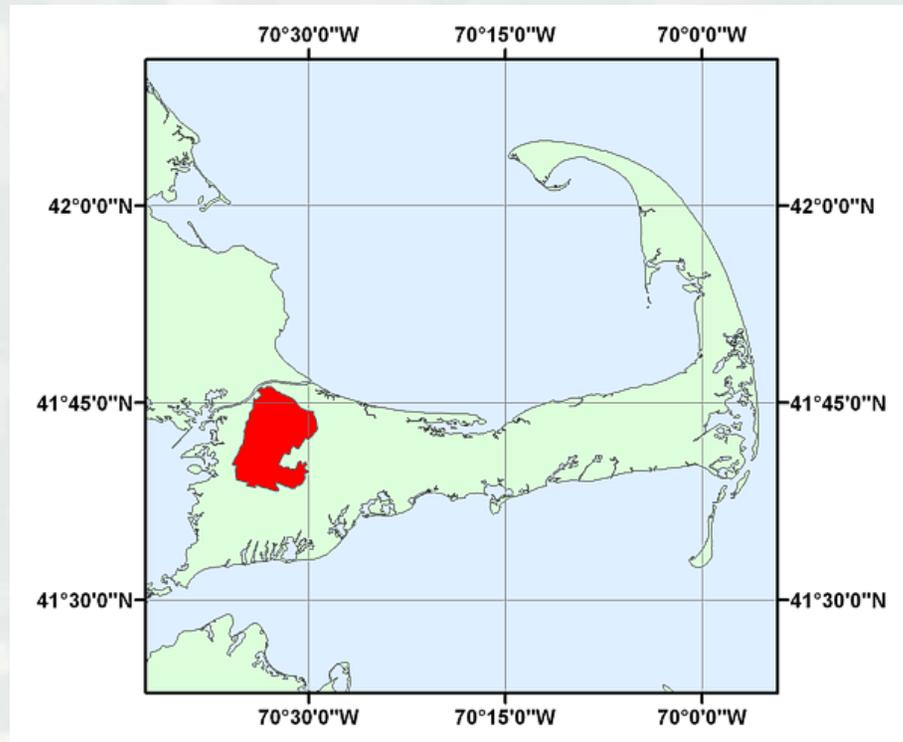
Innovative Technology and Technology Transfer

- Tighter budgets—need more innovative approaches to accomplish objectives economically
- Examples:
 - ▶ Buried Explosion Module at Massachusetts Military Reservation (MMR – Camp Edwards)
 - ▶ Munitions Classification – Central Impact Area, MMR



Massachusetts Military Reservation

- Active National Guard range located above a sole-source aquifer on Cape Cod, Massachusetts
- EPA Administrative order to remove 95% of UXO in order to limit contamination of the aquifer from leaching high explosive



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Metal Mapper Use at MMR



- Baltimore & Huntsville supporting New England District (NAE)
- Mapping 8 acres of central impact area
- Target of Interest (TOI) list provided to NAE and on-site OE contractor conducts removal operations
- Cleanup of Central Impact Area is underway!



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METAL MAPPER



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METAL MAPPER



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Buried Explosion Module (BEM)

■ Background:

- ▶ Department of Defense Explosives Safety Board (DDESB) approved engineering control that is calculated as a precision safety tool
- ▶ Primary function is to prevent fragmentation from traveling great distances when a site cannot sustain an MFD/HFD exclusion area
- ▶ Exclusion area can be minimized to zero feet

■ Application at MMR:

- ▶ Control the spread of residual explosives contamination (99%) compared with Blow-In-Place (BIP)
- ▶ Reduce noise
- ▶ Achieves project objectives at >90% reduction in cost versus blow in place or use of Controlled Detonation Chamber



MMR BEM



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MMR BEM



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MMR BEM

BEM Post Demo



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Other Recent Activities

- Construction Support
 - Can be used effectively to reduce unnecessary exposure to explosive safety hazards
 - Huge Cost Avoidance Benefits!
- Examples:
 - ▶ Beach Replenishment
 - ▶ Gilmerton Bridge
 - ▶ Ballistic Evaluation Center



Beach Replenishment Support

- Support Provided to USACE Districts working from Virginia to New York
 - ▶ OESS Provide Onsite Support and 24/7 Response Capability
 - ▶ 21 Projects Supported in 2013
 - ▶ Continuous QA of Equipment, Screens and Site Operations
 - ▶ Final QA of Placed Material



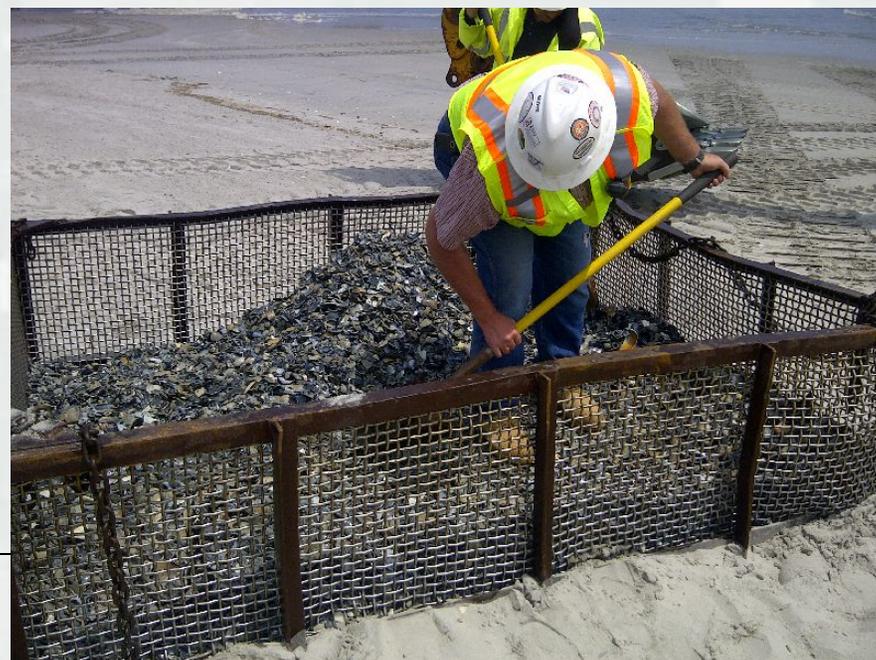
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Beach Replenishment



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Beach Replenishment

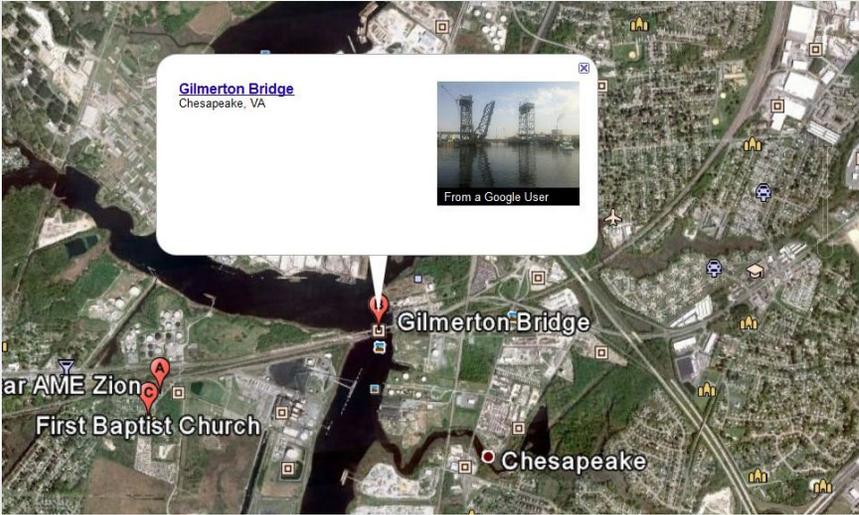


Gilmerton Bridge

- VA DOT \$150 M Bridge Replacement Project
 - ▶ Munitions Discovered During Demolition of Former Bridge Counterweights
 - ▶ EOD could not support, recommended USACE
 - ▶ NAB Provided Safety Support by OESS
- A Total of 393 Items Recovered/Inspected and reclassified as MDAS

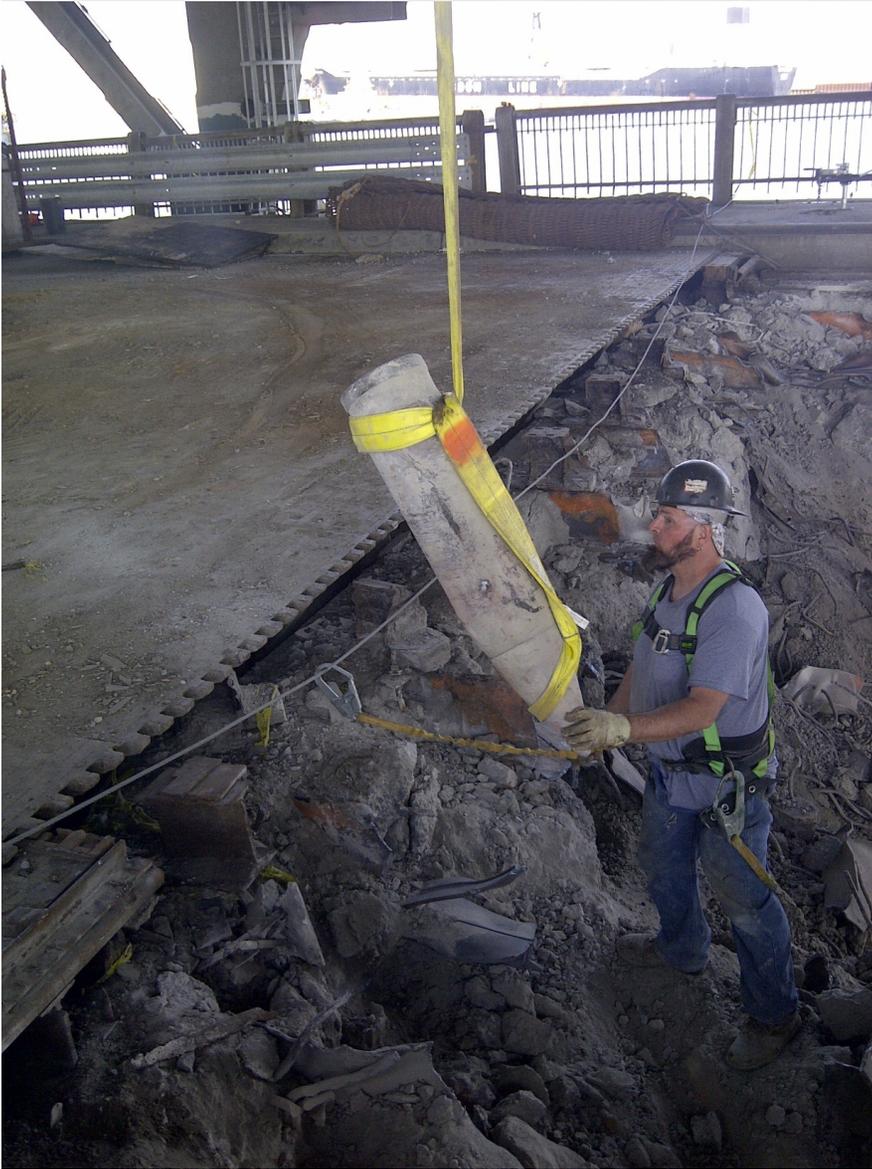


Gilmerton Bridge



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Gilmerton Bridge



Ballistic Evaluation Center (BEC) Construction Support

- BEC Construction \$30 M Effort at Picatinny Arsenal NJ
 - ▶ NAN MILCON construction project
 - ▶ NAB Conducted Removal Action on Construction Footprint
 - ▶ NAB asked to provide MEC Construction Support After Numerous Contractors Struggled
- Over 1,000 Items Awaiting Demil and Final MDAS Verification



Ballistic Evaluation Center (BEC) Construction Support



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