

FEDERAL RESILIENCE

Identifying, managing and mitigating risk to our nation's buildings, facilities, infrastructure and installations

Michael Baker

INTERNATIONAL



SUPPORTING FEDERAL RESILIENCE PRIORITIES

Federal agencies are facing a broader range of natural and man-made threats and hazards to mission-critical assets. Our dedicated team of federal planners, designers, architects, engineers, and scientists is committed to ensuring mission readiness and assurance by identifying, managing, and mitigating risks to federal buildings, facilities, infrastructure, and installations.

We leverage advanced technology and modernization strategies to enhance efficiency and cost-effectiveness in our solutions. By assessing risks, developing and implementing adaptation and mitigation strategies, and engineering and designing solutions to effectively manage those risks, we create greater value for our clients and positively impact our communities. This strengthens the connections between defense installations and the communities upon which they depend.

Whether our team is conducting vulnerability assessments, designing high-performance buildings, or master planning innovative energy solutions, we are here to support and advance your mission priorities.



Hurricane Florence Recovery Railroad Trestle Replacements

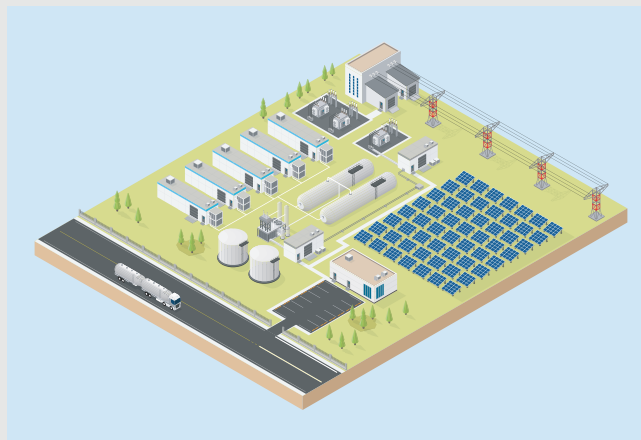
Camp Lejeune, Jacksonville, North Carolina

Michael Baker provided services for the design-build replacement of three bridges damaged during Hurricane Florence, including the 66-year-old Onslow Beach Bridge, a critical link between Onslow Beach and Camp Lejeune. The replacement included a resilient single-leaf bascule bridge on a new alignment to withstand extreme weather. Our role included permitting, environmental studies and regulatory compliance to minimize environmental impact and streamline permit approvals.

Planning and Design Integrator

Tyndall Air Force Base, Panama City, Florida

Michael Baker is providing planning and design integration services for the Hurricane Michael reconstruction. Responsibilities include oversight and integration of the program by ensuring a comprehensive, consistent, cybersecure and integrated reconstruction process. Tyndall is reshaping the base into an efficient and innovative installation of the future, a model of resilience and advanced technology.



Energy Resilience Conservation Investment Program (ERCIP) Smart Microgrid

Mountain View, California

As the managing partner of a joint venture, Michael Baker is providing microgrid and distributed energy planning, design and project management services for military installations globally. One project includes the development of a smart microgrid for the U.S. Army Reserve 63rd Readiness Division Headquarters. Our team is providing field investigations, utility coordination, cybersecurity technical reviews, fire protection engineering and design, construction schedules and cost estimates.

We Make a Difference



Navy Gateway Inns and Suites Naval Station

Newport, Rhode Island

Michael Baker is the designer of record for this new 103,831-square-foot, first-of-its-kind hotel for the Navy. The project established a signature image for future facilities and included 194 guest rooms, six guest suites, front- and back-of-house areas, site development, utility infrastructure, landscaping, parking and anti-terrorism/force protection measures. It was designed to achieve LEED® Silver certification.

Coastal Resilience Planning Study

Naval Weapons Station (NWS) Earle/ Monmouth County, New Jersey

This project continued the work for Joint Land Use Study for NWS Earle. Planning included a strategic community-based, data-driven process to identify sites and projects that support new coastal resilience measures to reduce flood risk and enhance ecosystem values and recreational benefits. Also, a site prioritization framework, select site concept plans and funding sources supporting implementation were developed.

RARITAN/SANDY HOOK BAY COASTAL RESILIENCE PLANNING STUDY



Emergency Generator Commissioning

Naval Medical Center San Diego, California

Michael Baker provided comprehensive commissioning services for the replacement of emergency generators and upgrades to the existing electrical infrastructure to support new automatic transfer switches and controls. This project was essential for the cogeneration plant and associated generator room, located at the heart of the hospital campus. The improvements ensured that critical patient care areas were provided with constant and reliable power.

CAPABILITIES

- Applied Technology & Data Analytics
- Architecture
- Building Engineering
- Coastal Engineering
- Communities & Urban Environments
- Construction Management
- Cyber Resilient Buildings & Infrastructure
- Disaster & Emergency Services
- Energy Infrastructure & Security
- Engineering & Design Services
- Federal Buildings, Infrastructure & Installations
- Flood Resilience
- Grant & Financial Services
- Nature-Based Solutions
- Organizations & Operations
- Planning Services
- Rating & Reporting Systems
- Transportation Infrastructure
- Water Resource Security & Management

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Cogeneration Facility Commissioning

Yokota Air Base, Fussa, Japan

To reduce utility costs, enhance power reliability and ensure operational continuity over 25 years, we commissioned a 10MW combined heat and power cogeneration plant with microgrid controls that support a selected group of 400 buildings. Our team performed functional acceptance testing on lighting systems, mechanical systems, and digital controls. We also upgraded the control systems for multiple boiler plants; specified upgrades to high-efficiency lighting, plumbing fixtures, and HVAC controls for 9.5M square feet of improved space within 450 buildings.

Installation Resilience Plan

Fort Carson and Piñon Canyon Maneuver Site, Colorado

Michael Baker assisted Headquarters Installation Management Command with the creation of a Pilot Installation Resilience Plan. Hazards, including flooding, severe hailstorms and wildfires, have impacted the installations. The project included an assessment of long-term projections related to specific hazards and assessed the relative risk levels. We also provided a roadmap of specific solutions, including cost estimates and pathways for implementation.



Photo courtesy of Colorado Springs Firefighters.



Electrical Grid Resilience Analysis and Feasibility Studies

Marine Corps Base Camp Pendleton, San Diego, California

Michael Baker conducted electrical grid resilience analysis and feasibility studies for multiple locations to facilitate the addition of onsite generation and off-grid power systems, known as nano-grids. The nano-grid systems stand alone and integrate with the base-wide microgrid. Functions of the nano-grids include backup power, grid-firming, and demand response, all with a return on investment that diesel generators cannot offer.