

# CPI Foundation

Increasing Readiness for Our Veterans, Our Infrastructure, Our National Parks



## Project Profile: Battery Chamberlin

**project** Structural Building Repair

**objectives** Military-to-Civilian Career Training, Advanced Technology for Historic Preservation

**team** Active Duty Military Service Members

**completed** Fall 2018 & Spring 2019

**owner** National Park Service

**location** Golden Gate National Recreation Area, San Francisco, California



Before: Deteriorated condition, visitor safety compromised



After: Repairs complete



In Progress: Advanced technology glass fiber composite reinforcing for increased durability



In Progress: concrete placed via pressure pumping

### Project Highlights

- **Outcomes:** Repaired concrete, new drainage system
- **Special Considerations:** Water intrusion due to non-functioning drainage system and vegetation area above caused embedded steel corrosion and concrete deterioration; loss of historic fabric and falling concrete safety hazard in open visitor area; utilized advanced glass fiber composite reinforcing appropriate for conditions and in compliance with historic preservation standards in concrete repair
- **Work Items:** Research historic configuration, assess existing conditions, develop site specific safety plan, selective demolition, erect scaffolding & safety barriers, build formwork, install glass fiber composite reinforcing, mix/place concrete by hand in isolated areas & place concrete with pressure pumping for overall repairs; paint structure to match historic

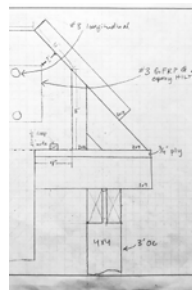
## PROJECT PROFILE details Battery Chamberlin



Concrete carbonation testing



Condition assessment; drawing plans



Formwork drawing by military spouse team member



Composite bars & drainage pipe prior to being embedded in concrete



Work site; Golden Gate Bridge in background



Condition assessment revealed non-functioning drainage pipe



New drainage pipe installed, later embedded in concrete



Ready mix concrete truck arrives at dawn, ahead of high visitor traffic



Concrete from ready mix truck delivered through pump and hoses; all hands on deck to manage hoses heavy with concrete



CPI team member interviewed by press during project

## CPI FOUNDATION PROJECT & TECHNICAL CAPABILITIES

- Expert staff engage hands-on and manage teams of highly qualified and vetted members of our active duty armed forces preparing for transition to civilian careers
- Self-perform concrete, wood, steel, & composite construction as design-build projects coordinated with owners; larger projects include self-performed work in addition to managing consultants & sub-contractors
- Repair, new construction, and historic preservation projects in urban, remote, wilderness, and marine areas include historic structures & site features; visitor & utility facilities; trails; water utility systems; projects that improve access, health, safety, & recreation, including ADA access; roads; bridges; tunnels; and parking lots
- Leader in advancing innovative technological solutions to structural and infrastructure challenges that collectively promote durability, sustainability, and comply with preservation, environmental, & other regulations

The CPI Foundation is a proven public/private partnership program working with the U.S. Departments of Defense and Interior, and with industry companies across the country. The program benefits the United States and its taxpayers by combining the strengths and needs of three national concerns: our military veterans, our infrastructure, and our national parks. Helping avoid potential military-to-civilian transition pitfalls, CPI offers career preparation & placement and hands-on training programs for transitioning active duty service members at all levels from all service branches while completing construction, repair, deferred maintenance, and safety/access projects in national parks and public lands.