Bridges: From Inception to Inspection

WSP USA (formerly WSP | Parsons Brinckerhoff) has led the development, rehabilitation and inspection of thousands of bridges across the U.S. for more than a century. These structures reliably move automobile and train traffic, often as part of larger road and rail systems. Many are iconic structures that are admired for their monumentality and grace, serving as symbols of their communities. To every bridge project—whether a routine viaduct over a roadway or an awe-inspiring span of a mighty river—WSP brings the same commitment to excellence that has characterized our work on some of the world’s most notable bridges.

Capabilities

Our capabilities are comprehensive, ranging from feasibility studies and environmental permitting, through preliminary and final design, to construction management and inspection. We offer specialized services such as seismic retrofit and rehabilitation design in addition to overall program management on behalf of an owner. Our experience includes steel and concrete bridges, as well as state-of-the-art thermoplastic and fiber-reinforced polymer (FRP) bridges. We have designed and managed the construction of all types of bridges as well as multi-level highway interchanges.

Our assignments range in size and scope from simple studies and assessments to complex multibillion-dollar multidisciplinary efforts—and in every case we are committed to responding to our clients’ needs with cost-effective, sustainable solutions that promote safe and efficient travel.

01 Pearl Harbor Memorial Bridge
New Haven, Connecticut

02 Intercounty Connector
Maryland
From feasibility studies through operations, WSP’s bridge specialists serve clients with an array of services to guide any type of bridge project from conception to completion.

**Our Capabilities**

**Expertise in All Types of Bridges**

**Long-span**
- Cable-stayed
- Suspension
- Arch
- Truss
- Extradosed

**Movable**
- Bascule
- Lift
- Floating
- Swing

**Segmental**
- Concrete, Steel and Composite
- Precast and Cast-in-Place
- Post-Tensioned

**Bridge Asset Management**
- Strategic Planning
- Management and Process Optimization
- Financial and Economic Controls and Forecasting
- Engineering Design, Analysis, Inspection, Testing/Evaluation
- Data Management
- Risk Management
- Bridge Inspections

**Specialty Expertise**
- Accelerated Bridge Construction
- 3D Modeling and Bridge Information Modeling (BrIM)
- Bridge Materials and Service Life Design
- Bridge Research and Specification Development

**Comprehensive Services**

**Planning & Environmental**
- Environmental Impact Statements
- River and Tidal Behavioral Studies
- Traffic and Revenue Studies
  - Conceptual Design
  - 3D Visualization

**Design**
- Preliminary and Detailed Design
- Design-build Documents
- Value Engineering
- Advanced Structural Analysis
- Linear and Non-Linear Analysis
- Post-Tensioned Concrete Analysis
- Failure/Forensic Analysis
- Earthquake Engineering/Seismic Retrofit
- Ship Collision Studies
- Geotechnical and Hydraulic Analyses
- 3D and Bridge Information Modeling (BrIM)
- Third-Party Quality Review

**Program and Construction Management**
- Construction Engineering
- Contract Administration
- Quality Assurance/Quality Control
- Project Controls
- Constructability Review
- Claims Management
- Cost Estimating
- Resident Technical Inspection
- Inspection and Rehabilitation
- Value Engineering

**Inspection, Maintenance and Operations**
- Condition Inspections
- Rating and Evaluation Studies
- Traffic Maintenance Plans
- Design for Emergency Repair
- Design for Rehabilitation
- Preservation Management Plans
- Structural Health Monitoring
- Non-Destructive and Remote Testing and Inspection
- Staged Replacement Plans
Evergreen Point Floating Bridge (SR 520)
Seattle, Washington
Program and Project Management Services; Preliminary Engineering; Construction Oversight

Bayonne Bridge Navigational Clearance Project
Bayonne, New Jersey and Staten Island, New York
Planning, Design and Construction-Phase Services

East Span, San Francisco-Oakland Bay Bridge
San Francisco, California
Civil and Roadway Design

1-4/Selmon Expressway Connector
Tampa, Florida
Designer, Engineer of Record
I-5 Skagit River Bridge Replacement
Mount Vernon, Washington
Design

Verrazano-Narrows Bridge
Brooklyn and Staten Island, New York
Biennial and Special Inspections

John’s Pass Bridge
Madeira Beach, Florida
Environmental, Preliminary and Final Design Services

Veterans Memorial Bridge
Daytona, Florida
Design

Bronx-Whitestone Bridge
Bronx, New York
Biennial and Special Inspections; Feasibility Study; Construction Management

1-5 Skagit River Bridge Replacement
Mount Vernon, Washington
Design
Gilmerton Bridge  
Chesapeake, Virginia  
Construction Engineering and Inspection

Bear Tavern Road and Jacobs Creek Road Bridges  
Mercer County, New Jersey  
Design

Wells Street Bridge Rehabilitation  
Chicago, Illinois  
Construction Engineering

I-95/I-295 North Interchange  
Jacksonville, Florida  
Designer, Engineer of Record

Gilmerton Bridge  
Chesapeake, Virginia  
Construction Engineering and Inspection
WSP has designed some of the most iconic bridges in the United States since the firm's founding in 1885. Many have become household names, well known to generations of travelers. In some cases WSP worked on the original structure as well as a replacement structure several years later, and the firm has worked for many of the same clients for decades.
About WSP USA

WSP USA is the U.S. operating company of WSP, one of the world’s leading engineering and professional services firms. Dedicated to serving local communities, we are engineers, planners, technical experts, strategic advisors and construction management professionals. WSP USA designs lasting solutions in the buildings, transportation, energy, water and environment markets. With more than 7,000 people in 100 offices across the U.S., we partner with our clients to help communities prosper.

www.wsp.com