Northeastern University, Kostas Research Institute, Cold Spray Laboratory

Burlington, MA

Project Contacts: Greggrey Cohen, Daniel Cook

Northeastern University wanted to construct a cold spray laboratory for metal and plastics coating and repair at Kostas Research Institute. They needed to know if the existing structure could...

Services: Structural Design

Markets: Education - College & Prep

Keywords: Adaptive Reuse, Equipment, Laboratory, Machines and Equipment, Metal-Steel, Performance-based, Research/Development

House of the Future

Anaheim, CA

Project Contacts: Mehdi Zarghamee

In 1954, the Monsanto Chemical Company provided funding to Massachusetts Institute of Technology’s Plastics Research Laboratory to develop a futuristic house made of plastics. One goal was to...

Services: Materials Design, Structural Design

Markets: Cultural

Keywords: Exhibitions/Park Pavilions, Laboratory Testing and Analysis, Materials Analysis, Plastic/Composite, Research/Development, Signature Project, Thermal
**Skewed Culvert**

Boston, MA  
**Project Contacts:** Jesse Beaver, Andrew Sarawit  

With limited guidance in existing design standards, the culvert manufacturer was struggling to efficiently design headwalls for their metal culverts skewed relative to the road. SGH implemented a...  

**Services:** Structural Design  
**Markets:** Water/Wastewater  
**Keywords:** Analytical Studies, Culverts and Storm Drains, Metal, Research/Development

**Applied Technology Council, ATC-58 Project**

San Francisco, CA  
**Project Contacts:** Ronald Hamburger  

In the mid-1990s, the Federal Emergency Management Agency (FEMA) supported a joint effort of the Applied Technology Council (ATC), American Society of Civil Engineers, and Building Seismic Safety...  

**Services:** Structural Design, Structural Investigation  
**Markets:** Government  
**Keywords:** Analytical Studies, Performance-based, Research/Development, Seismic Analyses, Seismic Engineering and Retrofit

**St. Paul's School**

Concord, NH  
**Project Contacts:** Jason Der Ananian  

During winter seasons, St. Paul’s School struggled to maintain daily temperatures with overnight mechanical setbacks in their 1936 schoolhouse. Window air leakage leading to occupant thermal...  

**Services:** Building Enclosure Investigation  
**Markets:** Education - K-12
U.S. Border Crossing Stations

San Ysidro, CA

Project Contacts: Ronald Hamburger

With more than 100,000 people crossing daily, San Ysidro is one of the busiest Land Port of Entries. This project reconfigures the port to reduce northbound wait times and improve U.S. Customs...

Services: Structural Design
Markets: Science & Defense
Keywords: Blast Analysis & Resistance, Finite Element Analysis, Metal-Steel, Research/Development, Walls

Galvanic Testing of Materials

Waltham, MA

Project Contacts: Jeffry Ceruti

Contact between dissimilar metals can lead to accelerated deterioration due to galvanic corrosion. Standard sample Galvanic Series charts (e.g., ASTM G82) provide general guidelines for...

Services: Materials Investigation
Markets: Other
Keywords: Corrosion, Laboratory Testing and Analysis, Material-Related, Materials Analysis, Metal, Research/Development, Roofing
Crash Performance for Lightweight, High Speed Trains

Washington, DC

The high speed train industry relies on relatively lightweight equipment to conserve energy and to minimize the effects on infrastructure and rolling stock design. Recent crashworthiness...

Services: Structural Design
Keywords: Analytical Studies, Finite Element Analysis, Research/Development

Vanadium Technology Program, Long-Span Trusses

San Francisco, CA

Project Contacts: Ronald Hamburger

Over ten years, SGH researched innovative uses of High Strength Low Alloy Vanadium (HSLA-V) steels in a variety of structural applications under the Vanadium Technology Program, an initiative...

Services: Materials Investigation, Structural Investigation
Markets: Science & Defense
Keywords: Analytical Studies, Collapse, Fire, Fire Engineering, Fire Protection, Long-Span Structure, Metal, Metal-Steel, Research/Development

Development of Locomotive Crashworthy Components

MA

Train collisions involving locomotives can result in serious damage and occupant injury due to the larger size and stiffness of the locomotive. In an effort to improve safety for rail passengers...

Services: Materials Investigation, Structural Investigation
Keywords: Analytical Studies, Engineering Mechanics, Field Testing, Laboratory Testing and Analysis, Materials Analysis, Materials Testing for Design, Research/Development
**Water Research Foundation, Prestressed Concrete Cylinder Pipe Condition Assessment**

**United States**

**Project Contacts:** Rasko Ojdrovic

Prestressed concrete cylinder pipe (PCCP) have been used for water transmission systems for more than sixty-five years. Therefore, utilities need effective means to identify distressed or...

**Services:** Structural Investigation

**Markets:** Water/Wastewater

**Keywords:** Codes & Standards, Condition Assessment, Deterioration, PCCP, Pipe, Pipeline, Research/Development

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**StormTech, Inc., Stormwater Chambers**

**Wethersfield, CT**

**Project Contacts:** Jesse Beaver, Phillip Sharff

StormTech manufactures underground molded polypropylene chambers for stormwater retention systems. With no design standards available for these structures, StormTech asked SGH to assess the...

**Services:** Materials Design, Structural Investigation

**Markets:** Water/Wastewater

**Keywords:** Civil: On-Site Stormwater Management, Culverts and Storm Drains, Materials Analysis, Materials Testing for Design, Plastic/Composite, Research/Development, Storm Drains