



Markosky's structural designs range from simple to complex structures requiring 2D grid analysis and 3D finite element analysis.

KEY STAFF

Matthew Walerysiak, PE, CBSI
Civil Engineering Services
Division Manager
27 years experience

Thomas Anthony, PE (MSCE)
Structures Department
Manager
28 years experience

Francis Strittmatter, PE (BSCE)
Senior Project Manager
21 years experience

Peter Molnar, PE, CBSI
Senior Project Manager
19 years experience



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Markosky provides bridge rehabilitation, bridge replacements, culvert designs, sign structures, and retaining wall designs on large-scale highway projects to local municipal stream crossings. We understand that each project or client may require a different approach and we are agile and experienced enough to provide the appropriate level of detail required for each bridge.

Markosky's engineering professionals have the expertise to provide innovative, cost-effective, sustainable engineering solutions specifically tailored to meet the needs of our clients. Early identification of the optimum structure arrangement and type make the design process more efficient. We have completed projects using conventional design methods, ABC techniques, design-bid-build, and design-build methods.

KEY SERVICES

- Conventional & Accelerated Bridge Construction Designs
- Composite Steel Rolled Beam & Plate Girder Bridges
- Horizontally Curved & Highly Skewed Steel Plate Girder Bridges Using 3D Analysis
- Prestressed Concrete Bridges Including Bulb T-beam, Box Beam, & I-Beams
- Integral Abutment Designs
- Shallow & Deep Foundation Systems
- Reinforced Concrete Retaining Walls
- MSE Retaining Walls & MSE Abutments
- Soldier Pile & Lagging Walls
- Precast & Cast-in-Place Concrete Culverts
- Pedestrian Bridges
- Timber Bridges
- Load Rating & Structural Analysis Including APRAS Loading & 3D Modeling

COLLABORATIVE ENGINEERING

**SR 0028, Section A09 & A10 –
PennDOT District 11-0**
Allegheny County, PA
Contact: Jeff Clatty
(412) 429-4864



- Final Design - 2 Simple Spans / 3-Span Continuous
- Portion of the 31st Street Bridge
 - Deck Design
 - Plate Girder Design
 - Splice Design & Connection Design
 - Bearing Design
- Final Design - Elevated Pedestrian Walk
 - Bridge Deck Superstructure
 - Caisson/Piers
- Final Design – Retaining Walls
 - 4 Soldier Pile & Lagging Walls
 - Tie Back & Non-Tie Back Systems

**Rapid Bridge Replacements –
PennDOT Public-Private
Partnership**
Various Counties, PA
Contact: Kenneth Wright
(412) 497-6080



- Design Squad for Roadway / Bridge
 - 26 Site Locations
 - Accelerated Bridge Construction
 - “Out of the Box” Designs
 - Folded Steel Plate Girders
 - Adjacent Box / Integral Abutments
- APRAS Rating Squad
 - 240 Sites

**Rosepoint Bridge Rehabilitation
SR 422, Section L12 – PennDOT
District 11-0**
Lawrence County, PA
Contact: Jeffery L. Baker
(412) 429-4900



- Rehabilitation of an Existing 3-Span Spandrel Arch Beam Bridge Over Slippery Rock Creek
 - In-Depth Inspection & Arch Analysis
 - Roadway Design & Permitting
 - Structural Analysis & Repair Modeling
 - Structural Detailing
 - Final Contract Documents / Specifications



Our TEAM Approach

- T**ECHNOLOGY Advanced Analytics and Modeling
- E**XPERTISE Experienced and Certified Professionals
- A**GILITY Flexible & Responsive
- M**ANAGEMENT Collaborative Project Management