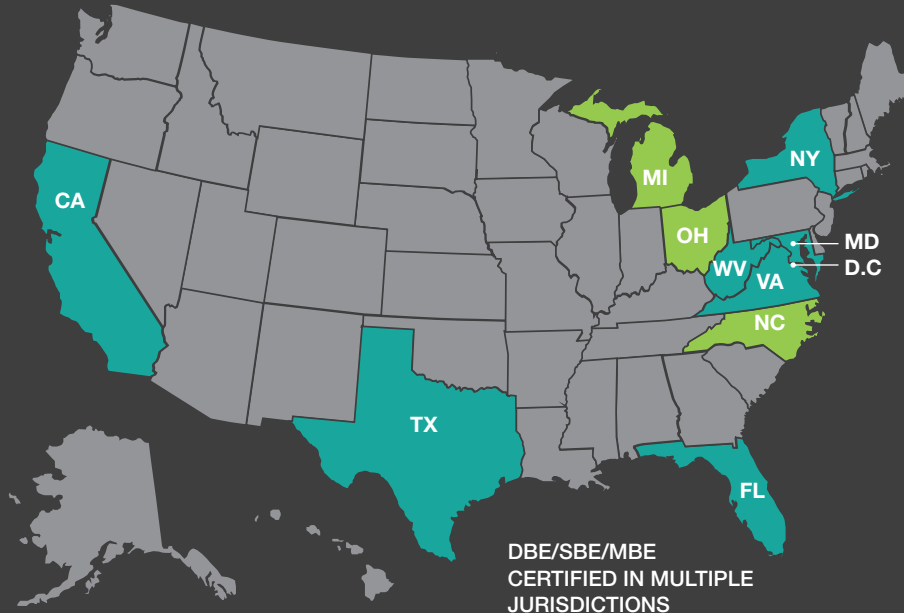


# Delivering Optimal Engineering Solutions through Global Experience



## WHERE WE ARE ACTIVE...

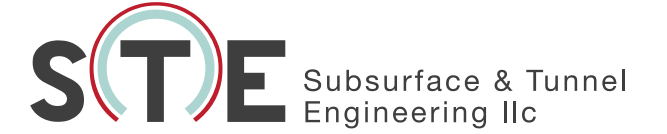


COMPANY REGISTRATION + PE LICENSE  
PE LICENSE

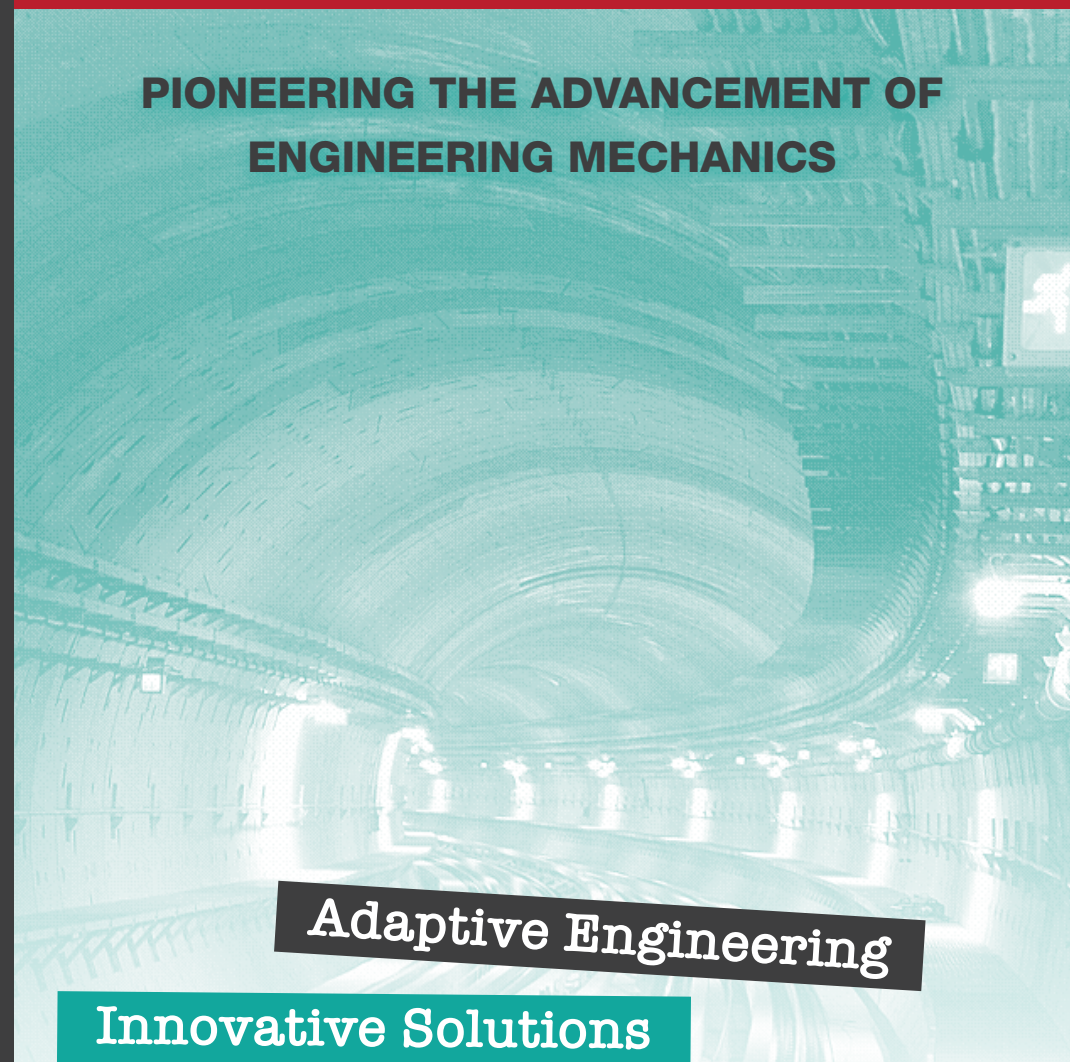
Other state registration/PE License can be obtained, as necessary.



CONTACT Mohamed Younis, Principal, Subsurface & Tunnel Engineering LLC  
Ph (301) 685.5321 • Fax (301) 684-6312 • info@steng-llc.com



## PIONEERING THE ADVANCEMENT OF ENGINEERING MECHANICS



Adaptive Engineering

Innovative Solutions

Achieve Project Objectives

**S****T****E** is a multi-disciplinary engineering firm that specializes in the management, planning, design and construction of complex transportation, water, wastewater, and mining projects.

**Our philosophy** is to deliver integrated and adaptive engineering solutions to our clients to meet program and project objectives.

**1** Specializing in Heavy Civil and Underground Construction

**2** Assisting clients achieve success across 5 continents for over 30 years

**3** Experience coupled with Engineering Theory to solve complex problems

**4** Innovative and Adaptive Solutions

# What we do...

## BY SECTOR

### Client / Prime Consultant Services

- Geotechnical investigation & assessment
- Preparation of Geotechnical Data Report (GDR), and Baseline Report (GBR)
- Construction support/field supervision
- Preliminary & Alternative design
- Detailed/Final Design
- Contract Document Preparation (Design-Bid-Build, Design-Build, PPP)
- Contract procurement support
- Independent review
- Claim Support Services & Expert Witness

### Contractor Services

- Value Engineering & Alternative Design
- Pre-bid design & support
- Geotechnical assessment
- Groundwater control
- Support of excavation
- Shaft lining design (temporary and final lining)
- Tunnel face pressure and advance rate analyses
- Tunnel temporary support design
- Rock tunnel excavation and support analysis/design
- Tunnel final lining design
- Precast segmental lining design
- Numerical modeling (geomechanical and structural analysis)
- Construction impact assessment and protection of existing structure
- Submittal preparation
- Claim Support Services & Expert Witness

### Other Contractor Services

- Temporary Works | Formwork Design
- Shoring | Cofferdams
- Crane Stability | Lift & Rigging Plans
- Steel & Precast Concrete Erection

## BY DISCIPLINE

### Geotechnical Engineering

- Geotechnical analysis
- Groundwater control
- Ground improvement
- Preparation of Geotechnical Data Report (GDR) & Baseline Report (GBR)

### Structural Engineering

- Tunnel concrete lining design
- Segmental lining design
- Steel liner plate lining design
- Pipe jacking design
- Shaft/excavation support
- Structural component design

### Numerical Analysis

- Geomechanical numerical modeling (2D and 3D)

### Tunnel Design/Rehabilitation

- Tunnel analysis & design
- Tunnel face pressure analysis
- Tunnel Inspection/Rehabilitation
- NATM
- Rock tunnel advance rate
- Rock tunnel excavation sequence and initial support

### Support of Excavation

- Solider pile and lagging
- Deep soil mixing walls
- Cement bentonite walls
- Sheetpiling
- Diaphragm wall
- Rock shaft support system
- Groundwater control
- Shaft/Station box excavation sequence, initial and final lining design

### Trenchless Technology

- Microtunneling, pilot tube, HDD, jack and bore
- Jacking forces estimation and backstop
- Trenchless technique alternative analysis and recommendations

### Protection of Existing Structures

- Condition Survey / Evaluation
- Construction impact assessment and analysis
- Mitigation recommendations and design

### Construction Management

- Scheduling
- Submittal reviews
- Construction monitoring services
- Change and Claims review and support

TRANSPORTATION

WATER & WASTEWATER

MINING

Soft Ground & Rock Tunneling | NATM | Trenchless Technology | Shafts