

# Project Risk Management – Tunnel & Underground

SERVICES / TUNNEL AND UNDERGROUND



Port of Miami Tunnel Project



DC Water Clean Rivers Project

© COURTESY OF DC WATER

DAM AND LEVEE  
GEOPROFESSIONAL  
STRUCTURES AND FACILITIES  
TUNNEL AND UNDERGROUND  
WATER SUPPLY, CONVEYANCE,  
AND DISTRIBUTION  
CONSTRUCTION PHASE SERVICES  
ENVIRONMENTAL  
INFRASTRUCTURE MONITORING  
SERVICES (IMS)  
RISK

Schnabel Engineering DC, Inc. is an affiliate of Schnabel Engineering, Inc.

Engineering services in the following states are performed by Schnabel's respective affiliated entity: Michigan: Schnabel Engineering of Michigan, Inc.; New York/Connecticut: Schnabel Engineering of New York; North Carolina: Schnabel Engineering South, P.C.

Proactive risk management is the most effective approach to successful project execution. Comprehensive programs are flexible and scalable and include program development, oversight, and implementation; risk register development; qualitative risk analysis; mitigation measure tracking and verification; probabilistic, quantitative analyses of cost and schedule impacts; and budget and schedule contingency analysis.

We begin by organizing and facilitating a stakeholders' workshop to establish clear lines of communication and collaboratively develop the risk management plan. We conduct others periodically during the project's life cycle. Schnabel works with you and will scale our approach to meet the unique needs of your project.

First, we brainstorm to capture all of the project risks and organize activities into project life-cycle sections, called the Risk Breakdown Structure. Second, the risks are qualitatively rated by evaluating and combining each risk's relative likelihood of occurrence and severity of consequence. Third, we use the risk ratings as a prioritization tool to develop and assign mitigation actions. Fourth, we repeat this process at various project milestones as necessary.

# Project Risk Management – Tunnel & Underground

---

SERVICES / TUNNEL AND UNDERGROUND

This process helps create a risk register—a living document that records risks, risk ratings, mitigation actions, etc. We use it to quantify the cost or schedule impact of each risk by assigning a probability of occurrence and a range of cost or schedule consequences. Results from simulations that randomly select risks and their associated consequences are compiled into a cumulative distribution curve, displaying confidence intervals of risk exposure in terms of cost or finish date, making it a powerful decision-making tool.