

SCREW-IN SOIL NAILING

COST INFORMATION

Commentary

The costs of screw-in soil nails on a highway project are typically captured in the following contract pay items:

- Soil nails measured by the square yard (SY) of area treated or by the lineal foot (LF) of nails installed

Mobilization, quality control and load testing associated with the installation of screw-in soil nails may be measured and paid for separately.

Optionally, wall facing may be used in conjunction with screw-in soil nails, these costs should be estimated separately. Refer to drilled-grouted and hollow bar soil nailing for typical wall facing costs.

Cost Information Summary

The following table lists construction cost items that are associated with screw-in soil nails, along with approximate cost ranges. Cost ranges are based on a single reference from 2009. Readers should carefully examine the project characteristics and constraints and determine to what degree if any these factors may influence the actual cost associated with installing screw-in soil nails.

Pay Item Description	Quantity Range	Unit	Low Unit Price	High Unit Price	Factors Which May Potentially Impact Costs
Screw-in Soil Nails	Greater Than 500	SY	\$360.00	\$675.00	Soil density and stability
Mobilization	1	LS	\$10,000	\$20,000	Equipment mobilized includes drills, compressors, shotcrete mixers and pumps Multiple phases may require multiple mobilizations Mobilizations greater than 500 miles will increase costs
Temporary/Permanent Facing	Greater Than 3,000	SF	\$-	\$-	Use historical unit prices for MSE or shotcrete that are representative of the region, type of work and estimated quantity

Historical Cost Information

Research efforts did not yield any screw-in nailing bid tabulation data from state highway agencies.

SCREW-IN SOIL NAILING

COST INFORMATION

Conceptual Cost Estimating

1. Estimate the area requiring screw-in soil nail treatment
2. Multiply the area of screw-in soil nail treatment by an estimated unit price
3. Add mobilization costs for a screw-in soil nail specialty contractor
4. Optional
 - a. Estimate the area of wall facing
 - b. Multiply the area of wall facing by an estimated unit price
 - c. Add the total cost of wall facing to the cost of shoot-in soil nails and mobilization