



US 41 Retaining Wall

Fox Valley, Wisconsin



Reinforced soil retaining walls, commonly known as Mechanically Stabilized Earth (MSE), represent an innovative method of resolving challenging infrastructure problems. Instead of regarding soil as a mass to be contained by force, the earth itself is reinforced to become an integral part of the structure. The walls behave as gravity structures and provide structural flexibility, as welded wire mats placed within layers of compacted backfill are incorporated to provide the necessary tensile strength to maintain support. The resulting structure is strong and resilient. Hot-dip galvanized (HDG) wire ensures this strength is maintained for 75+ years.

When the customer requires long life expectancy, galvanizing is the hands-down choice to ensure the wall will last for generations. Because maintenance of these walls would be expensive (if not impossible), the specifier needed a proven coating to deliver years of maintenance-free protection – HDG provides that confidence.

For tax payers, the low upfront costs of HDG will provide positive returns for many years to come – this is incredibly important for the long term fiscal status of our infrastructure. Another cost benefit is the maintenance-free nature of hot-dip galvanized steel. Because the steel will last 75 years or more with no maintenance, no money is wasted on upkeep. On top of that, zinc is infinitely recyclable and a common element in the earth's soils, and so is a natural solution. As a result, no harm will occur to the land or water streams, and there will be no worries about costly disposal in 100+ years.

On this project, logistics and material handling were key to the success of the project. The wall design called for long wire wall panels. Long panels such as these are difficult to handle and subject to bending. Additionally, the panels and backing mats needed to be choreographed to reach the job site in precise order – construction crews do not wait for anyone, and any delay would have brought the project to a halt, causing enormous back charges. The quick turnaround time provided by the galvanizing process was critical. Close communication between the designer, fabricator, truck lines, and galvanizer were necessary to accomplish the effective execution of the plan.

Similar to galvanized rebar, HDG welded wire for retaining walls proves the economic value to the tax payer. As our infrastructure shows rapid decay, the taxpayers want longer solutions with no environmental impact. HDG is a perfect fit. This project is an excellent example of the cost effective, flexible, environmentally-safe benefits of HDG. 🚧

Galvanizer

Valmont Coatings - Salina Galvanizing

Specifier

Knox County

Owner

Hifiker Retaining Walls

bridge & highway

