

MNDOT I-494 CORRIDOR

EROSION CONTROL

HIGHWAY INFRASTRUCTURE

SLOPE STABILIZATION

STABILIZING SLOPES ALONG A LIVE FREEWAY

THE CHALLENGE

Reconstruction along the MnDOT I-494 corridor between Richfield and Bloomington required erosion control solutions capable of performing under demanding, high-traffic conditions. Crews reshaped interchanges, rebuilt embankments, and stabilized steep slopes near wetlands, residential areas, and active travel lanes, all while maintaining strict environmental compliance. Tight construction windows, aggressive grading schedules, and exposed soils vulnerable to stormwater and freeze-thaw cycles left little margin for failure.

Site conditions added further complexity. Slopes commonly reached 3:1 and tightened to 2:1 in some areas, with compacted clay loam and urban fill soils that retained moisture during wet periods but shed runoff rapidly during intense storms. Constant wind shear from passing traffic and roadway splash-over increased erosion risk, while staging areas were constrained by barriers, pavement edges, and sensitive wetlands. The project demanded an erosion control system that could install quickly, perform immediately, and maintain compliance throughout the construction season.



HIGH-STRENGTH BLANKET DELIVERS STABILITY



THE SOLUTION

To address these conditions, the project team selected the Ero-Guard EG-2X-NN erosion control blanket for slope stabilization and turf establishment. The blanket's curled excelsior fibers and double jute netting formed a dense, interlocked matrix designed to resist runoff, wind, and traffic-induced forces. Its MnDOT Category 25 designation confirmed suitability for high-stress turf establishment, while the biodegradable design provided long-term performance without environmental impact.

Crews installed the blanket under active freeway conditions, fine-grading slopes, applying seed, and unrolling the material downslope with a six-inch anchor trench at the crest. Overlaps ensured continuous coverage, and dense staple patterns secured the blanket near pavement edges, culverts, and high-exposure zones. Temporary wind barriers and daily inspections helped crews maintain stability throughout installation and early growth stages.

THE RESULTS

Despite heavy summer storms and constant traffic exposure, the EG-2X-NN blanket held firmly in place, preventing rill formation and sediment movement across even the steepest slopes. Vegetation established uniformly within weeks, and slopes remained stable through seasonal transitions without corrective work. The project maintained full regulatory compliance, avoided delays, and demonstrated the value of high-performance erosion control systems in complex highway reconstruction environments.



From slope stabilization on major infrastructure projects to advanced stormwater systems on complex energy sites, our track record reflects our role as a reliable, forward-thinking environmental partner.

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