

## “On the road again” in Onalaska

Washington State Department of Transportation (WSDOT) is responsible for maintaining state highway Route 508 that runs between the small towns of Morton and Onalaska in Washington. The road winds through an area known as Bear Canyon and provides critical access for local residents and businesses. When a large portion of the hillside gave way due to heavy rains, this major thruway became impassible and WSDOT turned to Skyline’s material capabilities to get local residents on the road again.

*Pictured on right: Final phase of repairs after ground stabilization wall is in place.*



Threaded bar for ground anchors



Construction of soldier pile wall



Completed ground stabilization wall

### Problem

Route 508 is a scenic stretch through beautiful woodlands and WSDOT wanted to be sure that this wall would be domestically produced, would be built to last, and would fit into its natural surroundings. With a portion of this road considered unsafe for travel, WSDOT determined that earth stabilization was required to not only address the immediate issue, but to ensure that future failures would not occur. Geo-technical and structural engineers were challenged to meet those design parameters with a cost-effective, high-modulus solution that could be constructed on a fast-track schedule.

### Solution

Soldier beam and lagging walls are very common earth retention structures. They are a standard construction method with relatively low material and installation costs. The original beam design called for 12 x 65 wide flange beams, but availability did not fit this emergency repair response. Skyline

Steel was able to offer a comparable 12 x 74 H-pile section.

This soldier pile wall was not typical: permanent ground anchors were designed into the beam configuration to stabilize the earth underneath the roadway. Skyline was able to reduce the construction schedule and field labor by providing the pipe pocket anchors pre-fabricated into the beams. Our fabrication facility is a stone’s throw from the beam mill. Our convenient location proved to further reduce transportation and handling costs. Lastly, the steel was treated with a weathered coating prior to delivery, extending the service life of the structure.

### Result

As a foundation solutions provider, Skyline Steel worked with the project designers and contractor to provide alternate material options. Skyline’s standard practice of carrying large inventories and readily available material resulted in a domestic alternative that would not

delay this emergency repair. Project partner Mowat Construction turned to Skyline every step of the way—from coating inspectors and welding certifications to shop drawing and revised designs—to ensure WSDOT requirements were satisfied. Skyline’s broad scope of services continues to raise the bar for material providers.

### Project Details

#### Material:

- 50 pieces of 12 x 74 H-pile sections, at 50 to 60 feet in length
- 203 fabricated pipe pockets for wall anchors
- Beam fabrication and coatings supplied and delivered for a turn-key installation

#### Owner:

Washington State  
Department of Transportation

#### General Contractor:

Mowat Construction