Upper Hoh Road mp 3.338 Culvert Replacement

Replacement of the culvert at Upper Hoh Road MP 3.338 was completed in November, 2015. At this location, Upper Hoh Road crosses a ravine carrying an unnamed, non-fish-bearing stream. The culvert is located 30 feet beneath the road embankment. The original culvert was installed approximately 50 years ago, and was severely deteriorated and in danger of collapsing, threatening washout of the road. This section of Upper Hoh Road serves residents, recreational sites for camping, fishing and hunting, and the Olympic National Park Hoh Rainforest. There are no detour routes available.

During the design phase of the project, Public Works considered a number of options for replacement of this culvert, which included conventional open-cut replacement of the culvert by removing and replacing the fill, removing the fill and constructing a bridge, and trenchless options. In order to reduce project costs and minimize traffic impacts, the trenchless option called pipe-ramming was selected. The new culvert, a 5/8-inch wall, 42-inch diameter solid steel pipe was rammed through the road embankment with a powerful pneumatic hammer, engulfing the existing culvert and the soil around it. The steel pipe was successfully rammed 146 feet through the road embankment in 12 days. The material inside the new steel pipe was subsequently removed by running a large auger through the pipe. Remaining work consisted of lining the steel pipe with a galvanized, corrugated metal pipe to reduce flow velocities in the culvert, and cleanup around the culvert inlet and outlet.

The old culvert located beneath the road embankment was severely deteriorated and in danger of collapsing. Inlet shown.

Rognlins, Inc., of Aberdeen, together with their subcontractor Gonzales Boring & Tunneling of North Plains, Oregon, constructed the project for $605,808. The project was funded at 100% by the federal Public Lands Highway Program for the purpose of maintaining access to the Olympic National Park Hoh Rainforest.

Construction crews at work during the pipe ramming phase of the project.

The new culvert will preserve the road integrity at this location far into the future. New inlet with concrete headwall and debris rack shown.