

STATE OF OREGON
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED PROJECT
GRADING, DRAINAGE, STRUCTURES, & PAVING
SANDY CREEK RD AT MILE POINT 2.70
COUNTY ROAD 89
COOS COUNTY
MAY 2024

SANDY CREEK – EMERGENCY RELIEF PROJECT MP 2.70

Project Introduction

The Oregon Department of Transportation proposes to replace the existing 5 foot wide by 40 feet long culvert with a single span bridge. The project is located on Sandy Creek Road southeast of the City of Remote (Attachment A). The bridge is funded through the Federal Highway Administration (FHWA) Emergency Relief program with Oregon Department of Transportation (ODOT) administering the funds. The project occurs on County Right of Way. The project is expected to go to bid in March 2024 and construction is expected to begin in June 2024.

Project Background

The Unnamed Tributary (UNT) is a tributary of Sandy Creek, which flows into the Middle Fork Coquille River. During a flood event in 2018, the existing culvert was overtopped, damaging Sandy Creek Road. An emergency repair that lowered the roadway and placed large riprap along the downstream side of the road failed in January 2021. The culvert collapsed and riprap fell into the stream at the downstream end of the culvert, blocking flow (see Attachment B Photographs).

Proposed Design

The existing damaged 5-foot diameter CMP culvert will be replaced with a 32-foot long and 28-foot-wide single span concrete slab bridge, supported on a geosynthetic reinforced abutment (GRS). The road and bridge will be elevated approximately 4 feet above existing grade. Vertical clearance between the Ordinary High Water elevation and the low chord of the bridge will be 10 feet. Creating the clearance under the bridge, along with the depth of the slabs, will require the road elevation to be raised at the bridge and tapered back to the existing road grade for more than 120 feet on each side of the bridge. The bridge approach and guardrail will require a wider roadway on each side of the bridge, extending approximately 24 feet on each side of the bridge center. The bridge will span more than 2.5 times the active channel width. Design plans are provided in Attachment C.

Stream restoration will occur over approximately 200 feet of stream reach which includes upstream, downstream, and beneath the proposed new bridge, after removal of the culvert. The 200 foot reach will be excavated in a roughened fashion to improve habitat complexity. The Active Channel Width (ACW) was assessed at 11 feet and will be maintained in the reach of stream to be restored. Bed material will be mechanically placed during construction. Type 1 fish rocks will be used in the channel construction. Most boulders will be placed in a boulder weir pattern within a 200 foot reach downstream and upstream of the crossing to dissipate flows and create microhabitats to enhance migration of adult and juvenile anadromous salmonids. A low flow channel of 4 feet will also be constructed in the new channel. Additional details are presented below in Section B of the JPA and Attachment C.

The replacement structure triggers the requirement to comply with Oregon's Fish Passage law. A HEC-RAS model output was used to verify that the project will fulfill the fish passage requirements in ODFW's fish passage guidelines (OAR 635-412-0035). A stream simulation approach was used to satisfy the fish passage criteria; the stream simulation option is assumed to be preferred for the design alternatives for this culvert replacement.

Construction of the new structure will occur while a traffic detour is in place on the upstream side of the structure. The traffic detour will include temporary fill within the channel while the new structure is being constructed. When the new structure is complete, and can carry traffic, the temporary detour will be removed, and the new channel will be constructed.



Sandy Creek Rd at Mile Post 2.70

Background: OSIP Imagery, 2022

-  Study Area
-  Ordinary High Water (OHW)
-  Culvert
-  Edge of Roadway

Figure 3
Aerial Photograph





Photo 7: View looking upstream from the downstream side of the partially blocked culvert.



Photo 8: Stream conditions immediately downstream of the culvert. Large rock was used to stabilize roadway after culvert collapsed.