

ID: CIP 502

Name: Red Rock Creek Daylighting & Riparian Restoration

Study Area: Red Rock Creek

Location: West of SW 72nd Avenue and South of Hwy 99

Problem Summary

Red Rock Creek is highly developed and has few stormwater detention facilities. Urban runoff is delivered very quickly to the creek and causes erosion.

The creek runs through a narrow riparian corridor between commercial parking lots before entering a 300-ft pipe under the movie theater parking lot and access road. Upstream, the creek is very steep.

The creek is confined and rises quickly during storms. The channel is eroding down and forming steep banks (incising).

Project Description

The project will widen the riparian corridor and floodplain and will slow flows downstream of SW 72nd Avenue.

A series of structural grade controls will supplement or replace the existing rock grade control in the channel. These will form a series of step pools to slow flows.

Downstream, the 300-ft storm pipe will be removed. An open channel and floodplain will be excavated and reconstructed. Native vegetation will be replanted.

Removing the storm pipe will require

The City previously constructed a rock grade control to protect the sanitary sewer by reducing incision and preventing future bank failures. The grade control has no prevented formation of knickpoints, where the channel elevation drops suddenly. The knickpoints indicate that incision continues.

Commercial sites in Tigard Triangle may have limited space for meeting new stormwater requirements when they redevelop.

coordinating with the property owner and reconfiguring access to the theater. These actions may support redevelopment of the site. The project does not include access reconfiguration.

A public greenway trail will be established along the corridor.

The benefits of this project include:

- Stabilize creek channel
- Improve habitat for wildlife
- Reduce velocity of flows downstream
- Reduce downstream erosion and sedimentation
- Support redevelopment and recreation



Cost Estimate

Design & Permitting

Design (@ 15% of Construction)	\$440,000
Permitting, Basic + Enhanced	\$65,000
Project Administration (@ 10% Construction)	\$295,000
Total Design & Permitting	\$800,000

Construction

Tool Kit	Qty	Unit	Unit Price	Amount
Open Channel Excavation	28,700	CY	\$35	\$1,005,000
Structural Grade Control	1,216	FT	\$270	\$329,000
Vegetation Restoration, Greenway	28,700	SF	\$1.50	\$44,000
Subtotal				\$1,378,000

Construction Administration

Mobilization (@ 10% of Construction)	\$295,000
Erosion & Sediment Control (@ 2% of Construction)	\$59,000
Temporary Water Management, Medium	\$25,000
Construction Contingency (@ 40% of Construction)	\$1,170,000
Subtotal	\$1,549,000

Total Construction \$2,927,000

Other Implementation

Easement or Property Acquisition	\$15,000
Environmental Mitigation	\$290,000
Total Other Implementation	\$305,000

Total Project Cost (Rounded) \$4,050,000

Funding Source

Stormwater Fund
Sanitary Sewer Fund
Private-Public Partnership

Annual Operation & Maintenance

Operation and maintenance costs will be budgeted within the proposed greenway O&M program.

