

ID: CIP 302

Name: Kruger Creek Ann Court Bank Stabilization & Wetland Enhancement

Study Area: Bull Mountain

Location: SW 124th Avenue and SW Ann Court

## Problem Summary

The lower reaches of Kruger Creek suffer from erosion due to fast, high flows streaming down Bull Mountain.

Kruger Creek crosses under SW 124th Avenue in the Jack Park Greenway. The culvert is being damaged by erosion at the upstream end. The City's effort to reduce erosion by adding rock has not stopped the damage.

As in much of Kruger Creek, the creek

banks are vertical and high, separating the channel from its floodplain. Erosion is threatening to undermine the driveway of a private home next to the greenway.

## Project Description

This City is in the process of completing the culvert replacement portion of this project.

The project will replace the damaged culvert with a larger fish-passable culvert under SW 124th Avenue.

Upstream of the crossing, a new pre-settling basin above the storm system outfall will help remove sediment. A new retaining wall will protect the private driveway from being undermined.

Downstream of the crossing, the project will create more storage in the existing wetland, which will slow flows during

storms, protect the downstream channel from erosion, and enhance water quality.

A new pre-settling basin and outfall scour protection at the downstream end of the new culvert also will protect the channel and banks from erosion and sedimentation.

The benefits of this project include:

- Reduce channel erosion and bank instability
- Enhance wetland habitat
- Improve water quality
- Protect private property



## Cost Estimate

### Design & Permitting

Design (@ 25% of Construction)	\$105,000
Permitting, Basic + Enhanced	\$25,000
Project Administration (@ 15% Construction)	\$60,000
<b>Total Design &amp; Permitting</b>	<b>\$190,000</b>

### Construction

Tool Kit	Qty	Unit	Unit Price	Amount
Aboveground Storage	11,823	CF	\$3.50	\$42,000
Outfall Scour Protection	1	EA	\$5,100	\$6,000
Retaining Wall, Gabions up to 10 FT	408	SF	\$50	\$21,000
Pre-settling Basin, Manhole	2	EA	\$6,000	\$12,000
Storm Sewer Pipe, 48-in Diameter	140	FT	\$350	\$49,000
<b>Subtotal</b>				<b>\$130,000</b>

### Construction Administration

Mobilization (@ 10% of Construction)	\$45,000
Erosion & Sediment Control (@ 2% of Construction)	\$8,000
Temporary Water Management, Medium	\$25,000
Construction Contingency (@ 50% of Construction)	\$205,000
<b>Subtotal</b>	<b>\$283,000</b>

**Total Construction \$413,000**

### Other Implementation

Easement or Property Acquisition	\$0
Environmental Mitigation	\$25,000
<b>Total Other Implementation</b>	<b>\$25,000</b>

**Total Project Cost (Rounded) \$650,000**

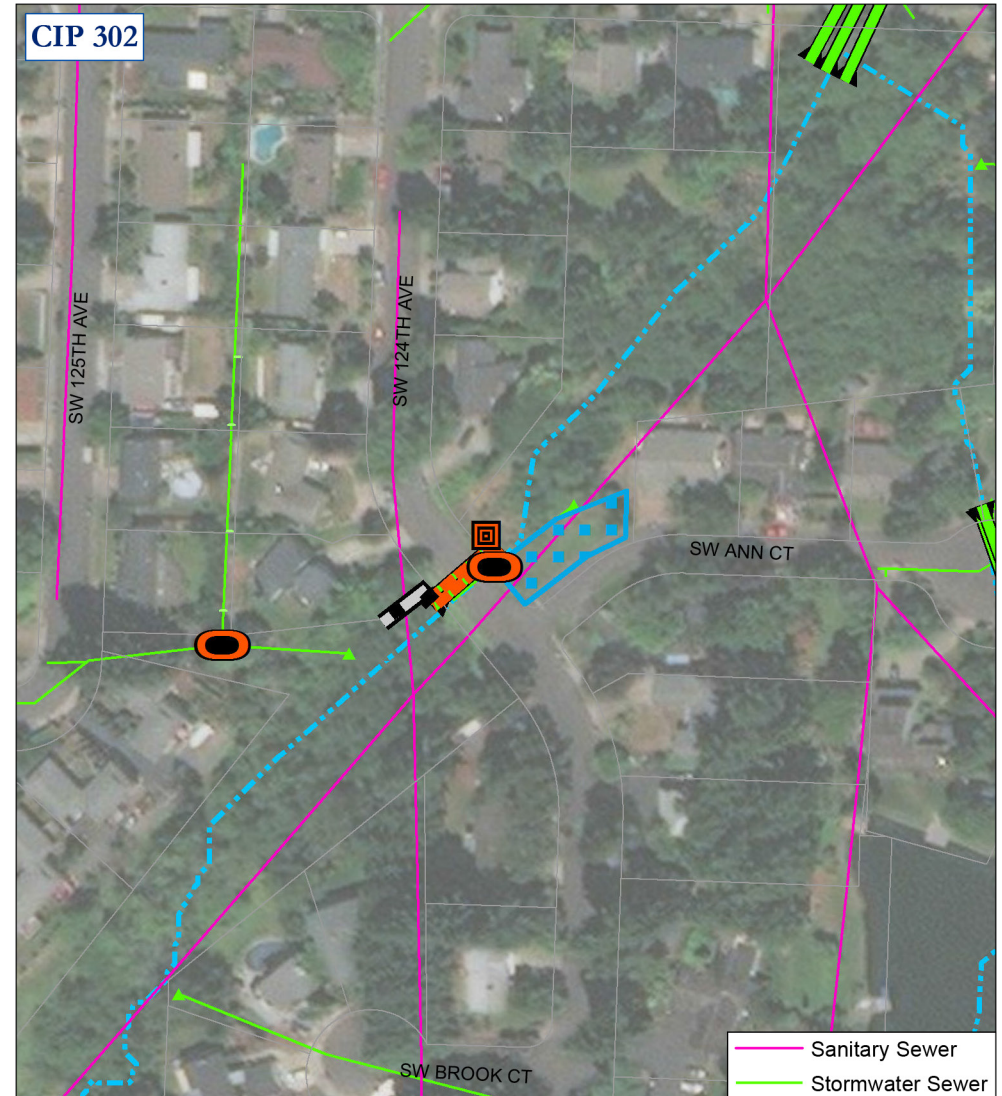
### Funding Source






Part of this project is already in process. It is funded by the Stormwater Fund.

### Annual Operation & Maintenance

Operation and maintenance costs will be budgeted within the following programs:

- Proposed culvert assessment and maintenance program
- Proposed greenway O&M program



-  1, Above Ground Storage
-  8, Outfall Scour Protection
-  10, Retaining Wall
-  12, Settling Basin
-  13, Storm Sewer Pipe

