

Appendix B

Riparian Habitat Restoration Conceptual Designs

North Reach Mitigation Bank Riparian Habitat Restoration

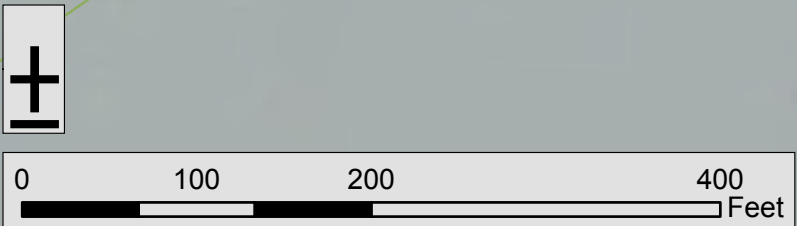


Cost Estimate

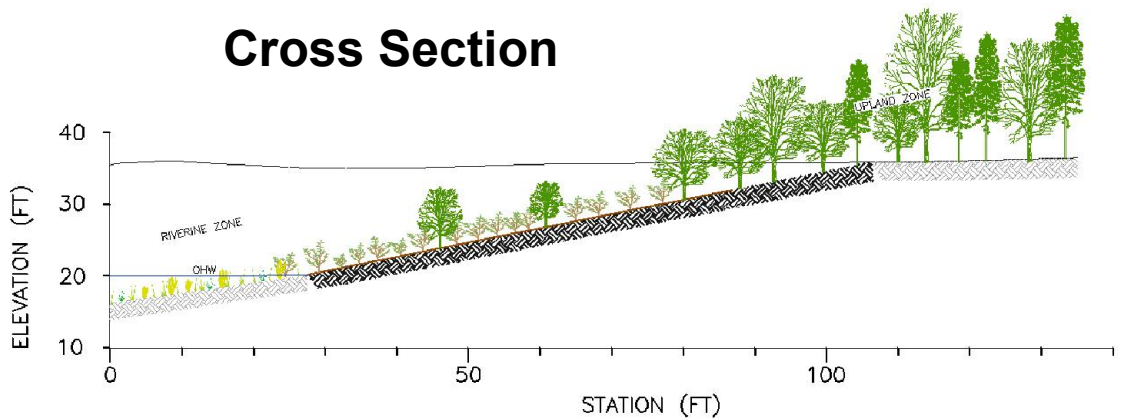
Line Item	Quantity	Units	Unit Cost	Cost
Site Preparation	1	LS	\$ 380,283	\$ 380,283
Demo of Structures	2,905	TN	\$ 200	\$ 580,984
Regrade Banks - Land-Based Excavation	14,637	TN	\$ 35	\$ 512,296
Place Erosion Control Fabric	53,600	SF	\$ 3.50	\$ 187,600
Remove Invasive Vegetation	3.5	AC	\$ 6,000	\$ 21,074
Plant Riparian Vegetation	3.5	AC	\$ 16,000	\$ 56,198
General Markups	1	LS	\$ 2,868,419	\$ 2,868,419
Total Cost (Rounded)				\$ 4,607,000

Legend

- BES Collection System Points
- BES Collection System Lines
- - - - - Cross Section Location
- Excavate
- Remove Paving
- Remove Invasives & Plant Native Riparian Vegetation
- Remove Structure



Cross Section



Legend for Cross Section:

- Ordinary High Water
- Existing Ground
- Proposed Ground
- Riparian-Upland
- Riparian Shrub
- Hydrophytes
- Large Woody Debris

University of Portland Triangle Park

North Reach Mitigation Bank Riparian Habitat Restoration



Cost Estimate

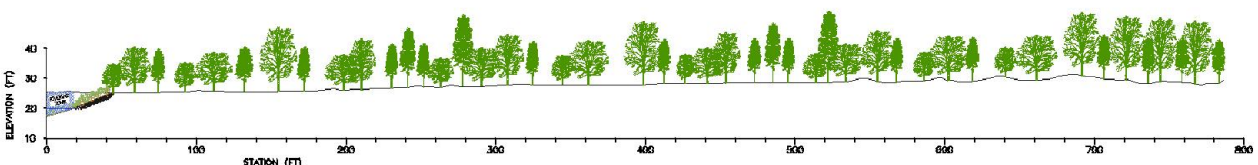
Line Item	Quantity	Units	Unit Cost	Cost
Site Preparation	1	LS	\$ 494,223	\$ 494,223
Demo of Structures	3,455	TN	\$ 200	\$ 690,989
Regrade Banks - Land-Based Excavation	14,667	TN	\$ 35	\$ 513,333
Place Erosion Control Fabric	71,400	SF	\$ 3.50	\$ 249,900
Remove Invasive Vegetation	14.1	AC	\$ 6,000	\$ 84,780
Plant Riparian Vegetation	14.1	AC	\$ 16,000	\$ 226,079
General Markups	1	LS	\$ 3,727,852	\$ 3,727,852
Total Cost (Rounded)				\$ 5,988,000

Legend

- BES Collection System Points
- BES Collection System Lines
- Water Lines
- Major Gas Lines
- - - Cross Section Location
- Remove Paving
- Excavate
- Remove Invasives & Plant Native Riparian Vegetation



Cross Section



- Ordinary High Water
- Existing Ground
- Proposed Ground
- Riparian-Upland
- Riparian Shrub
- Hydrophytes
- Large Woody Debris

Willamette Cove

North Reach Mitigation Bank Riparian Habitat Restoration



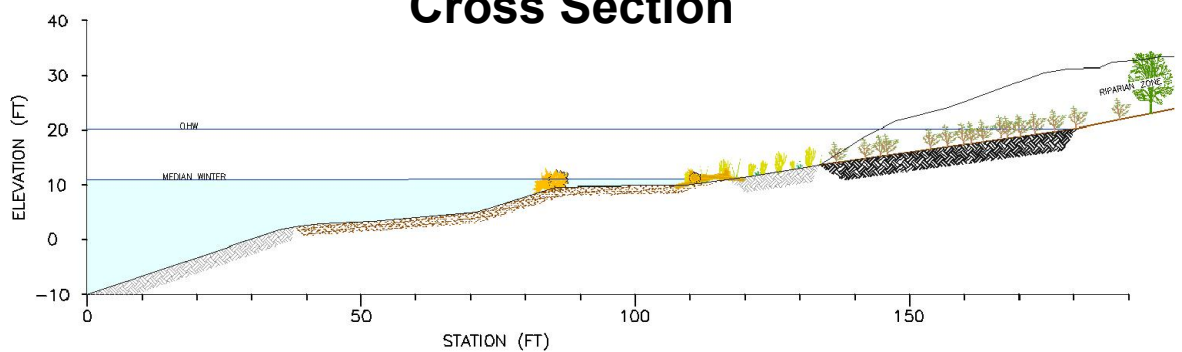
Cost Estimate

Line Item	Quantity	Units	Unit Cost	Cost
Site Preparation	1	LS	\$ 2,122,057	\$ 2,122,057
Demo of Structures	606	TN	\$ 200	\$ 121,260
Regrade Banks - Land-Based Excavation	182,921	TN	\$ 35	\$ 6,402,252
Place Erosion Control Fabric	263,066	SF	\$ 3.50	\$ 920,731
Remove Invasive Vegetation	6.1	AC	\$ 6,000	\$ 36,690
Plant Riparian Vegetation	6.1	AC	\$ 16,000	\$ 97,840
General Markups	1	LS	\$ 16,006,370	\$ 16,006,370
Total Cost (Rounded)				\$ 25,708,000



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Cross Section



- Ordinary High Water
- Existing Ground
- Proposed Ground
- Riparian-Upland
- Riparian Shrub
- Hydrophytes
- Large Woody Debris