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Northwestern Division

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McNary Dam Levee System (Tri-Cities Levees) Columbia River, Washington

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McNary Dam Levee System (Tri-Cities Levees)

- The McNary levees were constructed in lieu of moving the downtown business areas of Kennewick, Pasco, and Richland Washington.
- The levees were constructed in 1952, prior to the completion of McNary Lock and Dam on the Columbia River in 1953.
- McNary dam reservoir created a 38 mile backwater pool upstream to these cities.

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McNary Lock & Dam
Columbia River
Oregon & Washington

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McNary Dam Levee System (Tri-Cities Levees)

- The Standard Project Flood (SPF) was based on an unregulated flood of record of 840,000 cfs that occurred in 1894.

- That flood plus levee free board was used as the levee design height.

- Urban levees were designed to a height of 8 feet above the SPF and rural levees were designed to a height of 5 feet above the SPF.

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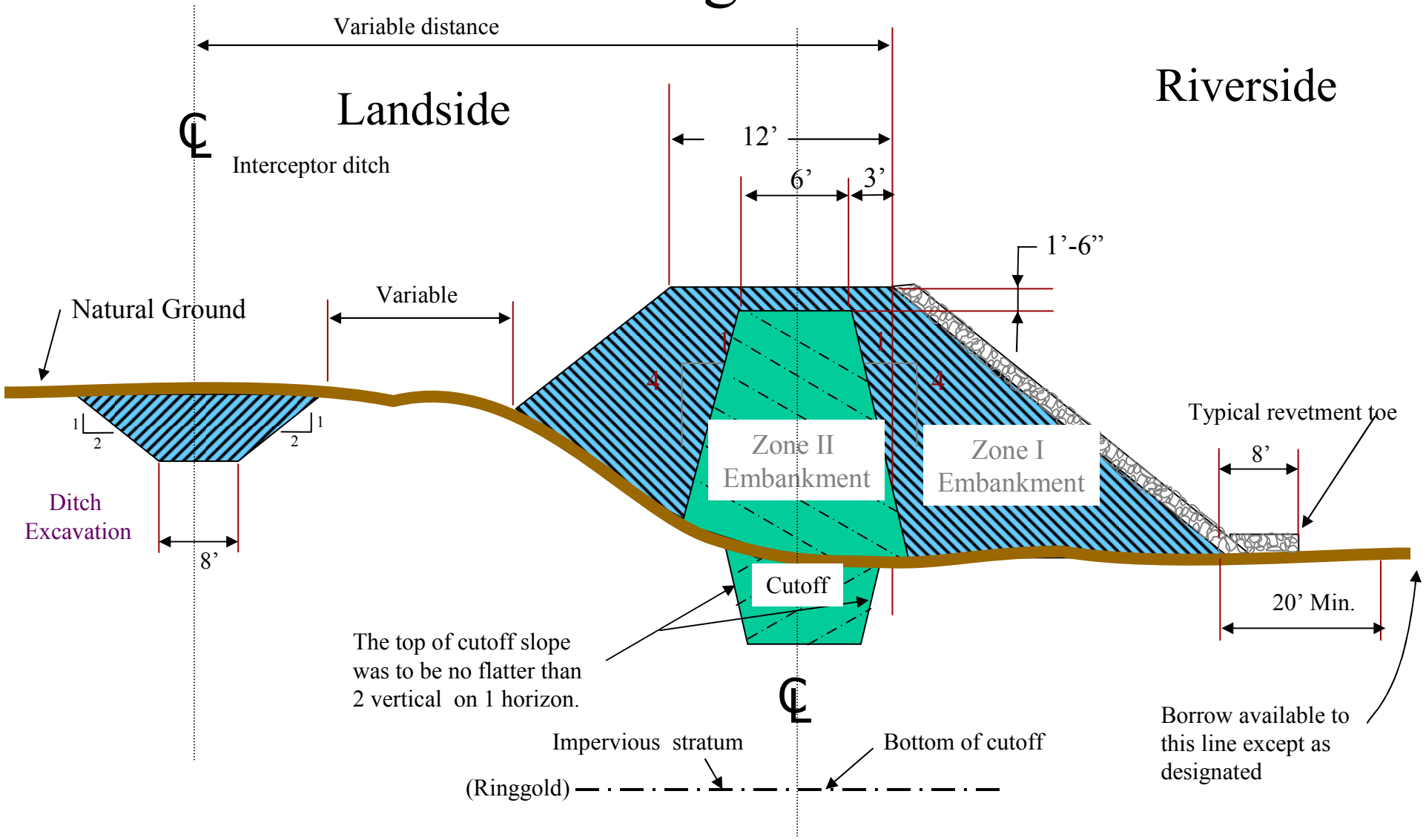
Typical Levee Section with a Foundation Cutoff and Drainage Ditch



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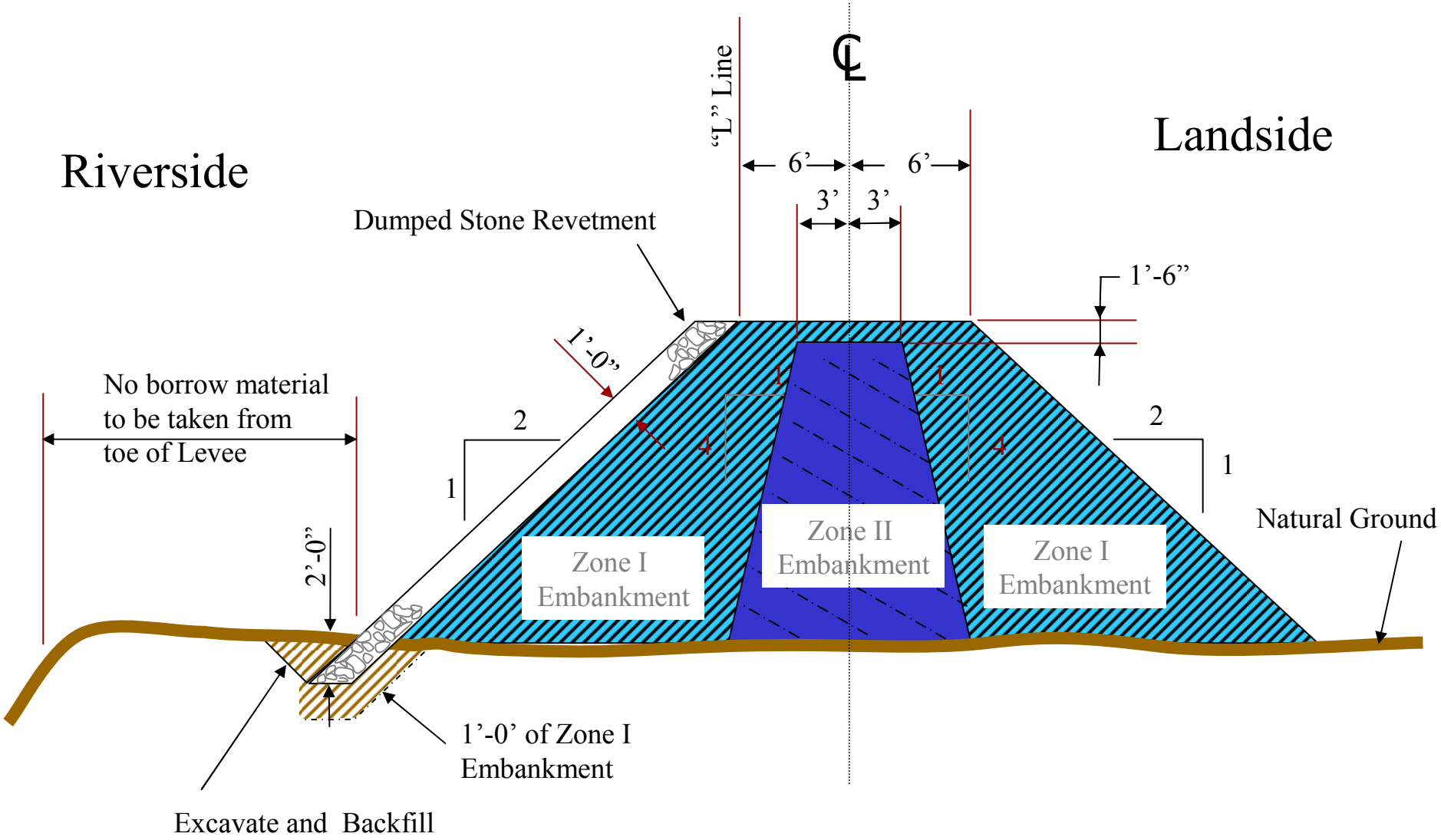
Typical Levee Section Without a Cutoff



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Tri-Cities Levees Construction – 1952

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Tri-Cities Levees Construction – 1952

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McNary Dam Levee System (Tri-Cities Levees)

- On going since 1984 the old North Pacific Division completed a Final Report dated June 1991 entitled “Review of Flood Control, Columbia River Basin; Columbia River and Tributaries Study CRT -63”.
- This study was to consider the impacts of the present upstream reservoir storages has had in lowering water surface elevations during major floods.
- The study was also a recommendation in the Northwest Power Planning Council Fish and Wildlife Program due to ESA issues.

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McNary Dam Levee System (Tri-Cities Levees)

- A Reconnaissance Report, driven by local and congressional interest, was completed in May 1992 by the District. This report was to see if there was any federal interest in lowering and/or beautifying the levees.
- Although the study provided a new regulated Standard Project Flood (SPF) of 512,000 cfs, above the Snake River showing that some of the levees were constructed with as much as 10 to 12 feet of freeboard, it also showed that there was no federal interest in lowering or beautifying them.

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McNary Dam Levee System (Tri-Cities Levees)

- From 1992 to 2004, local stakeholders looked for ways to get the levees lowered with federal funding.
  - A coordination group called the Tri-Cities Rivershore Enhancement Council (TREC) was formed.
  - local governments continued to lobby their congressional for legislative action.
  - As a group they were successful in getting verbiage in the Water Resource Development Act of 1996 “WRDA 96”.
  - WRDA 96 language required the District to turn over the lands but the District was to keep the operation & maintenance responsibilities. The locals found out that they had to fund some of the transfer costs including addressing Cultural Resources and opted out.

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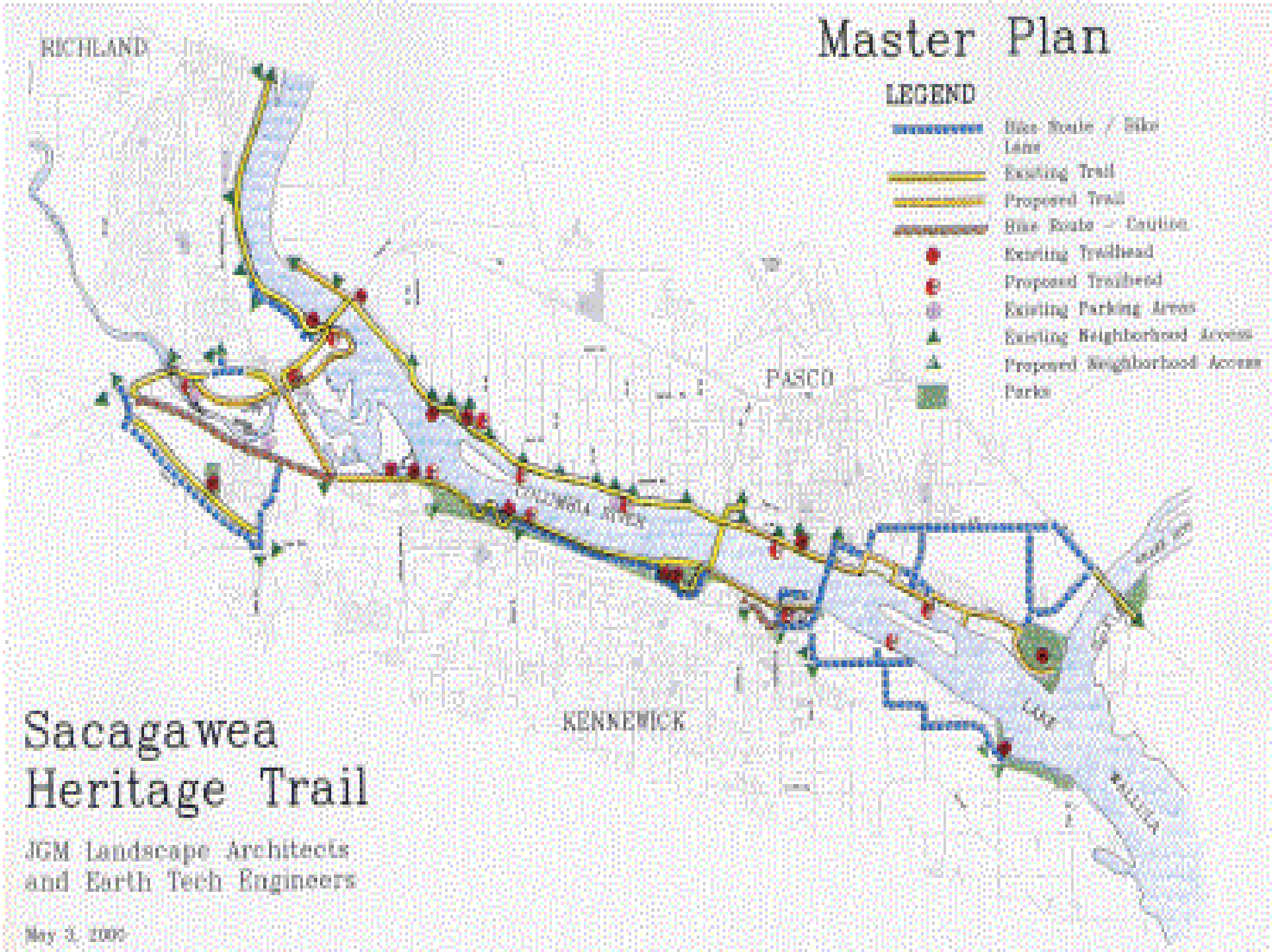
McNary Dam Levee System
Tri-Cities Levees

- Local stakeholders then tried to achieve levee lowering via the Corps Continuing Authority Program (CAP), looking at a General Investigation study as well as several 1135 studies. When the sponsor saw how much this would cost, they opted not to pursue this route.
- The locals began working with the District on how to change the Corps Standard Parks and Recreation Lease into a Non-standard Parks and Recreation Lease.
- The locals were finally successful with the lease culminating with the District Commander and other local dignitaries formally signing the lease at a ceremony in 2004.


Master Plan
LEGEND
Bike Route / Bike Lane
Existing Trail
Proposed Trail
Bike Route - Caution
Existing Trailhead
Proposed Trailhead
Existing Parking Areas
Existing Neighborhood Access
Proposed Neighborhood Access
Parks
RICHLAND
PASCO
KENNEWICK
Sacagawea Heritage Trail
JGM Landscape Architects and Earth Tech Engineers
May 3, 2005

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Sacagawea Heritage Trail Levee 12-1

The City of Pasco through a Parks and Recreation lease was allowed to lower portions of Levee 12-1 (6400 lf) approximately 6 feet, including Pump Plant 12-1 and 12-1A piping and filling in some of the levee drainage ditch by installing a 78-inch perforated drainage pipe to provide better access to the levee. They also constructed a paved trail, along with some benches and landscape improvements for approximately $1.4 million in 2004/2005. They were also required to install a new 200 hp pump in pump plant 12-1A to mitigate loss of flood storage.

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Levee 12-1

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Levee 12-1

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Levee 12-1

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Levee 12-1

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Levee 12-1

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Levee 12-1

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Lowered Levee 12-1

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Levee 12-1A Pump Plant and Piping

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Levee 12-1A Pump Plant and Piping

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Levee 12-1 Levee Access from Rivershore Park

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Levee 12-1 Levee Access from Rivershore Park

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Levee 12-1
Eyebrow Planter

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Levee 12-1 Landscape Irrigation Valve

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Levee 12-1
Pump Plant 12-1A

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Levee 12-1/Pump Plant
12-1A New 200 hp Pump

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Levee 12-1 Road 25
Levee Access

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Levee 12-1

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Sacagawea Heritage Trail Levee 5D

The City of Kennewick through their Parks and Recreation Lease was allowed to lower portions of Levee 5D approximately 6 feet (7900 lf), including lowering Pump Plant 5D piping and filling in the upstream portion of the levee's drainage ditch by installing a 42-inch perforated drainage pipe. They constructed a paved trail on top of the levee, along with other amenities such as benches and covered picnic tables along with landscape improvements for approximately $1.7 million in 2004/2005.

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Levee 5D

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Levee 5D Drainage Ditch

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Levee 5D

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Levee 5D

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Levee 5D Drainage Ditch

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Levee 5D Drainage Ditch

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Levee 5D Pump Plant Piping

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Levee 5D Pump Plant Piping

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Levee 5D New Irrigation for Landscaping

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Levee 5D New Irrigation for Landscaping

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Lowered Levee 5D

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Levee 5D Pump Plant 5D

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Levee 5D Landscaping

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Levee 5D Landscaping sign for Irrigation

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Levee 5D Landscaping

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Levee 5D Drainage Ditch

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Levee 5D
Surface Drainage Ditch

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Levee 5D
Surface Drainage Ditch

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McNary Dam Levee System Tri-Cities Levees Sacagawea Heritage Trail

This is a success story of how the Walla Walla District helped two communities, located across the Columbia River from each other, find a way to lower existing flood control levees, allowing the general public access to and use of the riverfront and still maintain the protective function of the levees.

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QUESTIONS