



INFORMATIONAL MEMORANDUM

TO: Transportation and Infrastructure Committee
FROM: Henry Hash, Public Works Director *HH*
BY: Ryan Larson, Senior Program Manager
CC: Mayor Ekberg
DATE: February 23, 2018
SUBJECT: Tukwila 205 Levee Certification
Project No. 91341203, Contract No. 14-164
Tukwila Levee Rehabilitation

ISSUE

Provide an update on a US Army Corps (Corps) and King County Flood District (Flood District) project to repair the Tukwila 205 Levee.

BACKGROUND

In January 2016, staff working with the Flood District, submitted a levee rehabilitation request to the Corps. This request listed two areas along the Tukwila 205 Levee where slumping had occurred during earlier flood events. Site 1 is located near the Tukwila 205 Cutoff Levee and is approximately 120 feet in length. Site 2 is adjacent to the Mitchel Moving and Storage building. The Corps reviewed this request and determined that both sites are eligible for repair under the Corps PL-8499 Levee Rehabilitation program.

The Flood District was interested in expanding the Site 2 project to include the area immediately downstream and adjacent to the Segale Properties Corporate Office building. The Corps agreed with the understanding that the Flood District would reimburse the Corps for 100% of costs for the added work. This added area was designated as Site 3.

DISCUSSION

The Site 1 repair is limited and will be repaired within its original footprint without setting the levee back or using a floodwall. Minor plantings will also be done at this location.

The Site 2 repair was originally scoped as a setback levee requiring the purchase of the Gaco Western and Mitchel buildings, demolishing them, and then setting the levee back. The Flood District began negotiating with the two property owners but were unsuccessful in reaching an agreement. The Gaco Western Site has known petroleum contamination that will require remediation and both property owners wanted approximately twice the appraised values of the properties. Condemnation was ruled out by the Flood District due to the added time required and the need for the Corps to construct the project in 2019 or lose the emergency repair funds. Without the necessary property, the only way to repair this reach of the levee is with a floodwall due to the proximity of the existing buildings and limited existing easements.

The Site 3 repair will require the use of a flood wall due to the proximity of the Segale Corporate Office building, impacts to required driveway access, and limited existing easement.

FINANCIAL IMPACT

Repairs conducted under the PL 84-99 program are funded at a 90% Corps to 10% local cost share. The King County Flood Control District will cover the local match for the repair of the levee.

RECOMMENDATION

Informational item only. No action required.

attachments: Levee Rehabilitation Request
Corps Conceptual Plans Sites 1, 2, and 3



LEVEE REHABILITATION REQUEST FORM

U.S. Army Corps of Engineers, Seattle District

Date: January 13, 2016

ATTN: Emergency Management Branch, US Army Corps of Engineers
Ms. Catherine DesJardin
PO Box 3755
Seattle, WA 98124

Dear Ms. DesJardin:

The purpose of this letter is to request Rehabilitation Assistance from the Corps of Engineers under Public Law 84-99 for the repair of the Tukwila 205 Levee. This levee was damaged by flood waters during the December 2015 event. The Tukwila 205 project is Active in the Rehabilitation and Inspection Program. The levee is located on the Green River and there are two areas of the levee that sustained damage.

The first area is slump that is approximately 120 feet in length that begins just upstream of the Tukwila 205 cutoff levee and extends approximately 40 feet downstream into the levee. This damage is located at approximately River Mile 16.7 on the left bank.

The second area of damage is an area of scour that has exposed rock armor. It is located at river mile 15.8 on the left bank and is adjacent to Mitchel moving and Storage.

Public Sponsor Name:	City of Tukwila
Project Identification (Levee name):	Tukwila 205
Sponsor Point of Contact:	Name: Ryan Larson
Address:	6300 Southcenter Blvd, Suite 100 Tukwila, WA
Telephone:	(206) 431-2456
Email address:	ryan.larson@tukwilawa.gov

I further request that the Corps of Engineers take all necessary steps to accomplish the appropriate repairs. It is agreed that the required items of local cooperation will be provided should the levee be eligible for Rehabilitation Assistance under PL 84-99 and the repair work is accomplished by the Corps of Engineers.

I hereby certify that the right-of-way which is required for any authorized repair work is presently available, and this letter constitutes permission for the Government and its agents to enter and use said right-of-way in undertaking authorized repair work. We are requesting U.S. Army Corps of Engineers (ACOE) assistance under Public Law 84-99 Program in implementing a repair project at these locations.

Sincerely,

Ryan Larson, P.E.
Senior Program Manager

Enclosure: Flood Protection Facility Inspection form
Site photos

Flood Protection Facility Inspection

River*: GREEN

Facility Name*: TUKWICA 205

Inspection Start and End Date*: DEC 30, 2015

Inspection Type*: Post Flood Routine

Inspection Duration*: (e.g., .5, 2, 4, 25) 2 hrs.

Is Partial Inspection? Yes No

Partial Inspection from* D/S RM*: 12.45 U/S RM*: 16.7

***Required Fields**

Inspector(s)*: TOM BEAD, RYAN LARSON

Flow Type*: Above OHW OHW Low (toe visible) Flood

Flow in cfs: 11650

Inspection Mode*: Boat Land

Is Damage Apparent? Same Bank Opposite Bank

Equipment? ArcPad 10 Garmin Trimble No Equipment

Notes: DROVE CREST OF 205 AND RETURNED FOR ACROSS-CHANNEL OBSERVATIONS AT CUTOFF LEVEE AND AT MITCHELL MOVING & STORAGE.

***Required Fields for Damages**

Type	RM*	Coordinates (X/Y)	Length	Width	Depth	Description	Severity* (H/M/L)	Photo
<input checked="" type="checkbox"/> Note	14.2					HOME DEPOT PATROL CONCERNS HAD ARISEN BECAUSE TREES ON BANK ARE NOT ALL VERTICAL, NO SIGN OF SLUMPING OR SIMILAR.	L	#10-#13
<input checked="" type="checkbox"/> Note	15.8		60			MITCHELL MOVING & STORAGE SECUR HAS EXPOSED ROCK ARMOR, NO SIGN OF ARMOR LOSS.	M	#1-#9
<input checked="" type="checkbox"/> Note	16.7		100			CUTOFF LEVEE. SLUMP BEGAN IN UNPROTECTED BANK UPSTREAM OF CUTOFF, HAS GROWN AND APPEARS NOW TO INVOLVE 205 LEVEE.		
<input type="checkbox"/> Note								
<input type="checkbox"/> Note								

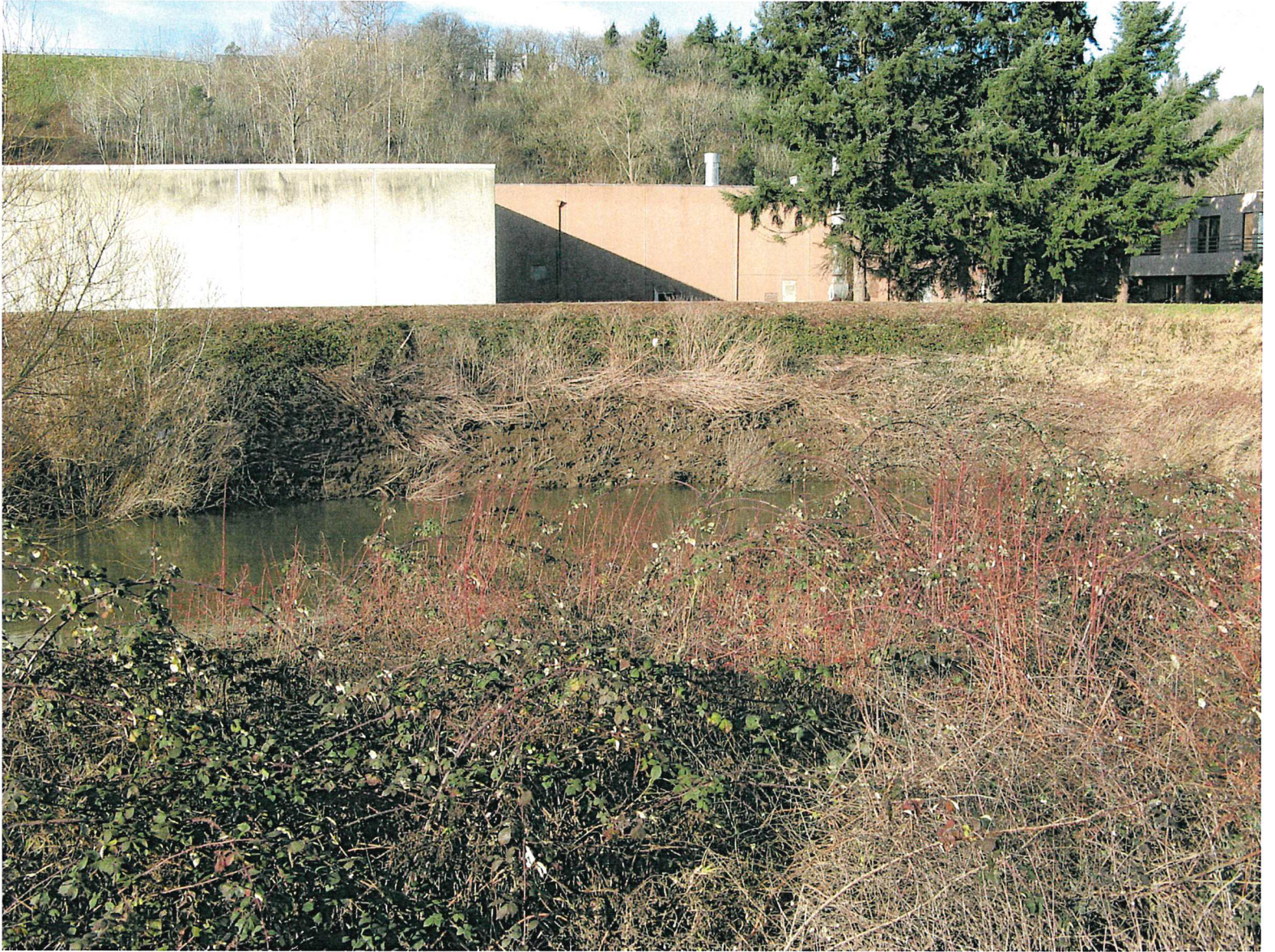
Follow-up needed by Engineer Geologist Ecologist Maintenance

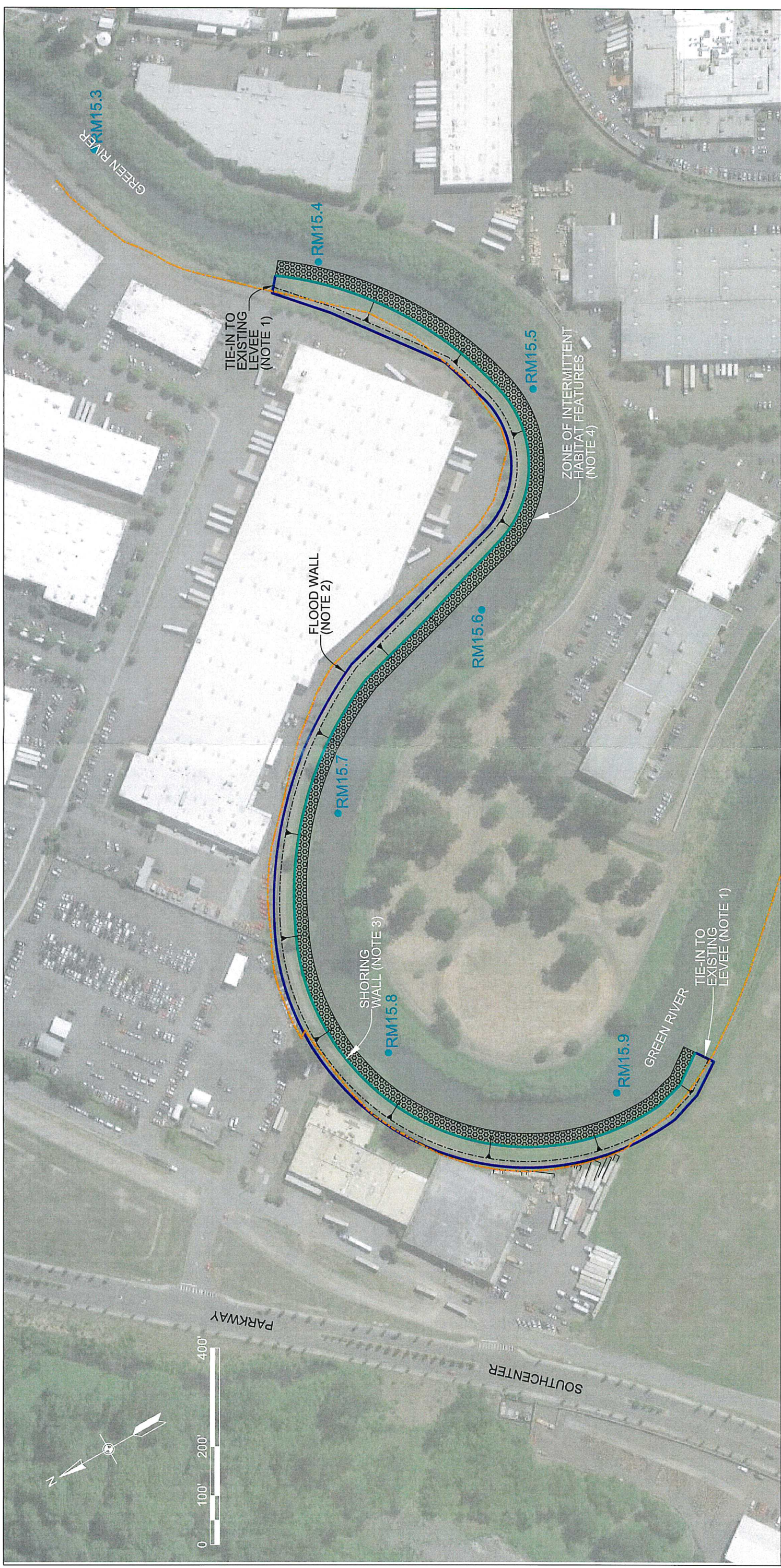
Notify Basin Supervisor RECOMMEND CONSULT W/ USACOE RE PL84-99 REHAB.





Visible arc of tension cracks without visible displacement





TUKWILA LEVEE REHABILITATION CONCEPTUAL PLAN - SITES 2 & 3

SCALE 1" = 200'

1

NOTES:

1. EXTENTS OF REHABILITATION TO BE FINALIZED DURING ENGINEERING & DESIGN DEVELOPMENT.
2. FLOOD WALL COMPRISED OF A CONCRETE WALL FOUNDED ON A SEEPAGE CONTROL SHEET PILE WALL.
3. SHORING WALL COMPRISED OF A SHEET PILE WALL TO BE INSTALLED TO FACILITATE CONSTRUCTION OF HABITAT FEATURES.
4. HABITAT FEATURES TO INCLUDE A COMBINATION OF ENGINEERED LOG JAMS (ELJ), LARGE WOODY DEBRIS (LWD), AND PLANTINGS (ALDERS, MAPLES, SHRUBS, WILLOWS, ETC.). LOCATIONS OF PLANTINGS TO BE DETERMINED BASED ON STAKEHOLDER INPUT.
5. EASEMENTS TO BE VERIFIED WITH GROUND SURVEY.

- LEGEND:**
- APPROXIMATE EASEMENTS (NOTE 5)
 - FLOOD WALL (NOTE 2)
 - SHORING WALL (NOTE 3)
 - HABITAT ZONE (NOTE 4)