

Cedar River Gravel Removal Project

November 1990 Flood

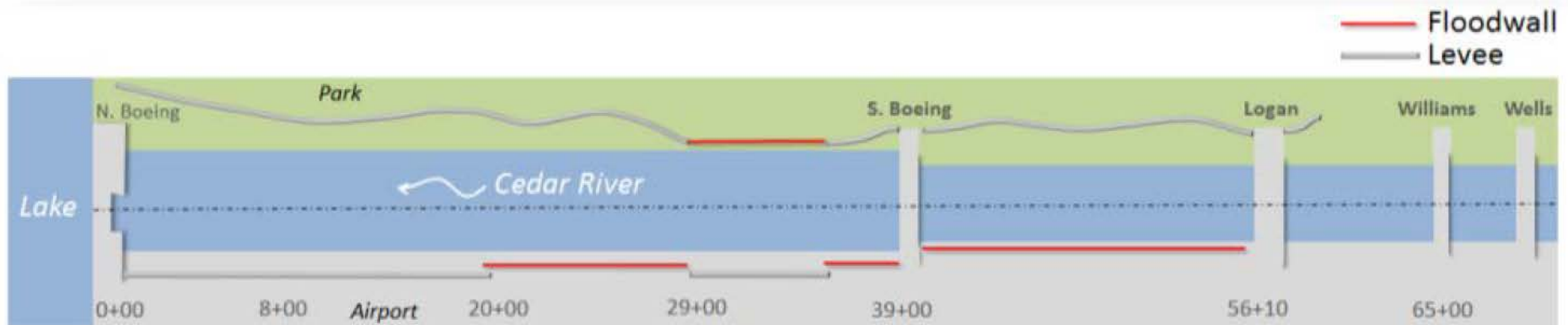
CEDAR RIVER COUNCIL
Meeting
May 24, 2016



PROJECT LOCATION MAP



Project Area



Project Purpose & Benefits

1. To Maintain the flood protection benefits provided by the Cedar River Section 205 Flood Hazard Reduction Project constructed by the Army Corps of Engineers in 1998.
2. Periodic gravel removal was recognized being needed as part of the Corps 1998 project and made a requirement in the Project O&M Manual.
3. Since 1998, gravel has accumulated in the Project area, which reduces the capacity of the river to convey flood flows and reduces flood protection.
4. As part of the 1998 Project, Boeing modified the South Boeing Bridge to allow it to be hydraulically raised during flood events.
5. The Boeing Bridge currently has to be raised during moderate flows (2,200 cfs).
6. This flood season the Boeing Bridge has had to be raised 3 times for a total of 35 days, which prevents their use of Apron D to store up to 7 airplanes for preparation for flight and eventual delivery to their customers.
7. Boeing 737 Production facility produces 42 airplanes per month currently, which is increasing to 47 planes next year and 52 planes in 2018. The facility provides for over 15,000 jobs and supports the regional economy.
8. Sediment is blocking storm systems, which is causing localize flooding.
9. The Gravel Removal Project is needed to maintain flood protection to the Renton Municipal Airport, Boeing 737 Production facility, surrounding commercial, industrial and residential properties, along with the regional Cedar River Trail Park.

Project Schedule & Status

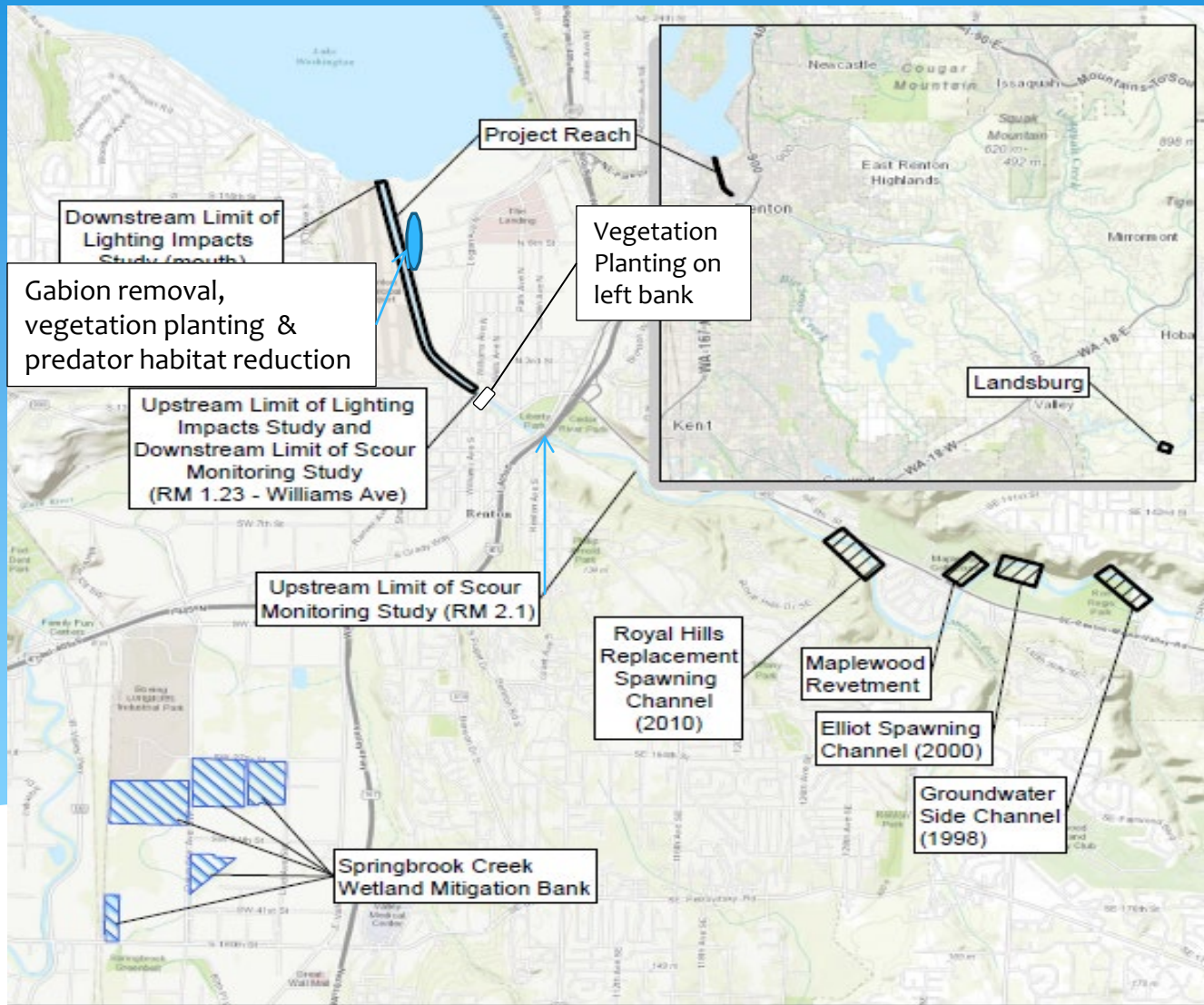
➤ **PROJECT SCHEDULE:**

- * Construction Bid Opening on April 19, 2016. Bid Awarded on May 16, 2016
- * Construction Start – June 2016 (In-water work June 15th – August 31st).
- * Elliot Spawning Channel Inlet Project Construction -July to November 2016
- * Scour monitoring and reporting to be completed in 2018.
- * Light Reduction mitigation and reporting to be completed by June 2017.
- * Annual Vegetation mitigation monitoring, maintenance & reporting completed in 2026.
- * Annual Elliot and Royal Hills Replacement channel spawning surveys.
- * Annual Project area sediment monitoring survey cross-sections.

➤ **PERMIT STATUS:**

- * Permit Application (JARPA) submitted on February 10, 2014.
- * Obtained Corps Dredge Material Suitability Determination in December 2014.
- * Completed SEPA and Shoreline permits(Local Permits) on May 29, 2015.
- * Obtained Ecology 401 Water Quality Certification and CZM consistency on July 8, 2015.
- * Washington State Department of Fish and Wildlife Hydraulic Project Approval Permit – To be issued by March 25, 2016.
- * Army Corps of Engineers 404 Individual Permit – May 20, 2016.

Mitigation Sites



ELLIOT SPAWNING CHANNEL INLET PROJECT

- * Purpose – Improve flow in the channel and spawning habitat.
- * Project Improvements:
 - * 60'x5'x5' Box Culvert to improve flow into the channel
 - * 23+ Ton of Streambed Spawning Gravel
 - * 5 – Large Woody Material Structures
 - * 6 – Logs with Rootwads
 - * 516 – Live Stake Pacific Willow Plantings
 - * 20 – Trees (Maple, Spruce, Douglas Fir, Red Alder)
 - * 92 – Shrubs (Snowberry (32), Nootka Rose (32), Serviceberry (7), Ninebark (7), Red Flowering Currant (7) and Mock Orange (7))

ELLIOT SPAWNING CHANNEL INLET PROJECT

Hydraulic Performance of Elliot Spawning Channel Inlet:

Month	Mean Monthly Flow (cfs)		Hydraulic Depth (feet)	Avg. Ch. Velocity (fps)
	Cedar River	Elliot Channel		
September	185	2.1	0.6	0.5
October	358	9.9	0.9	1.0
November	830	34.0	1.5	1.8
December	863	35.8	1.5	1.9

- * Depth of flow and volume in the Elliot Spawning Channel is dependent upon flow in the Cedar River
- * Due to dynamic river conditions in this reach of the Cedar River, hydraulic performance could change with time

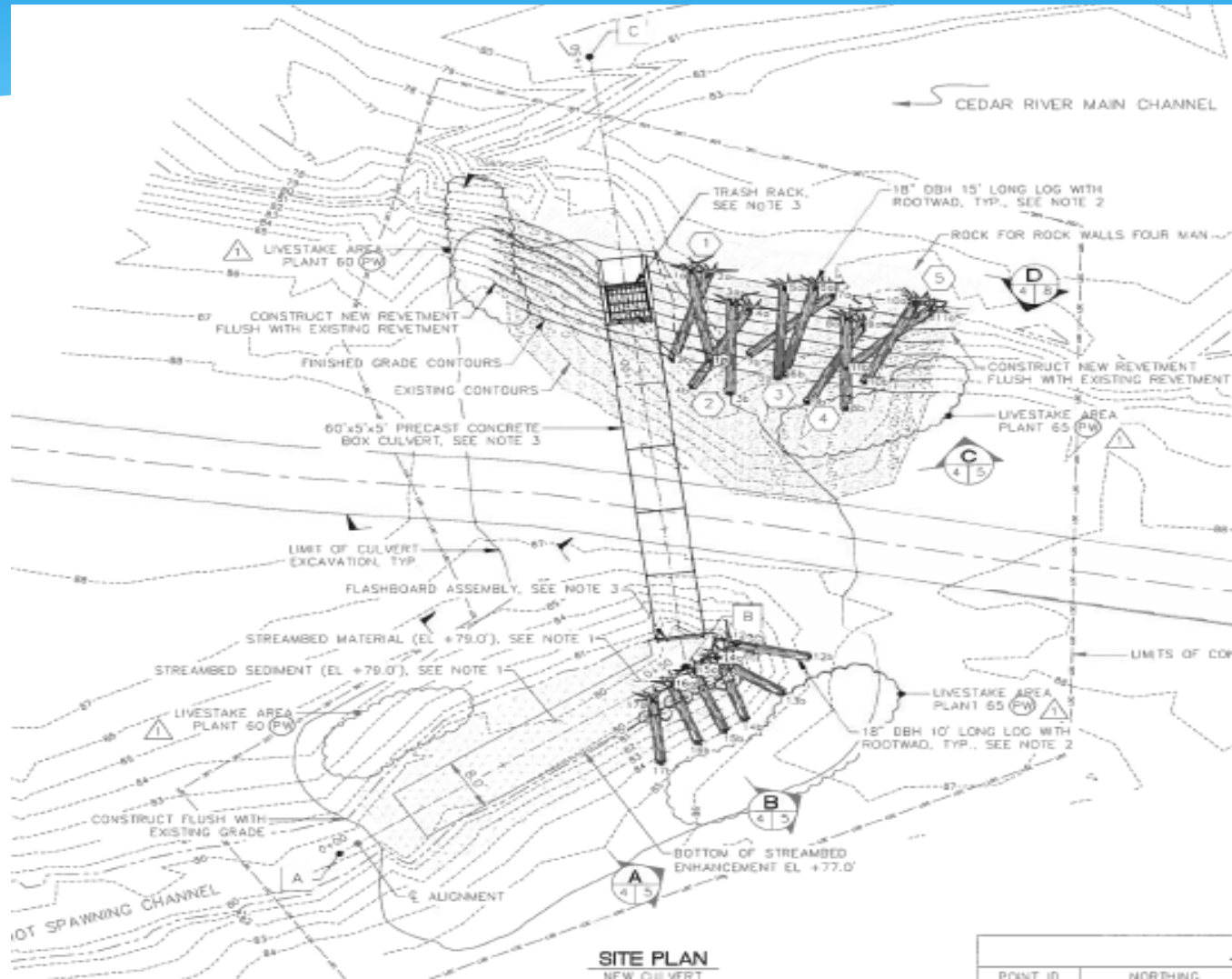
ELLIOT SPAWNING CHANNEL INLET PROJECT

Location Map



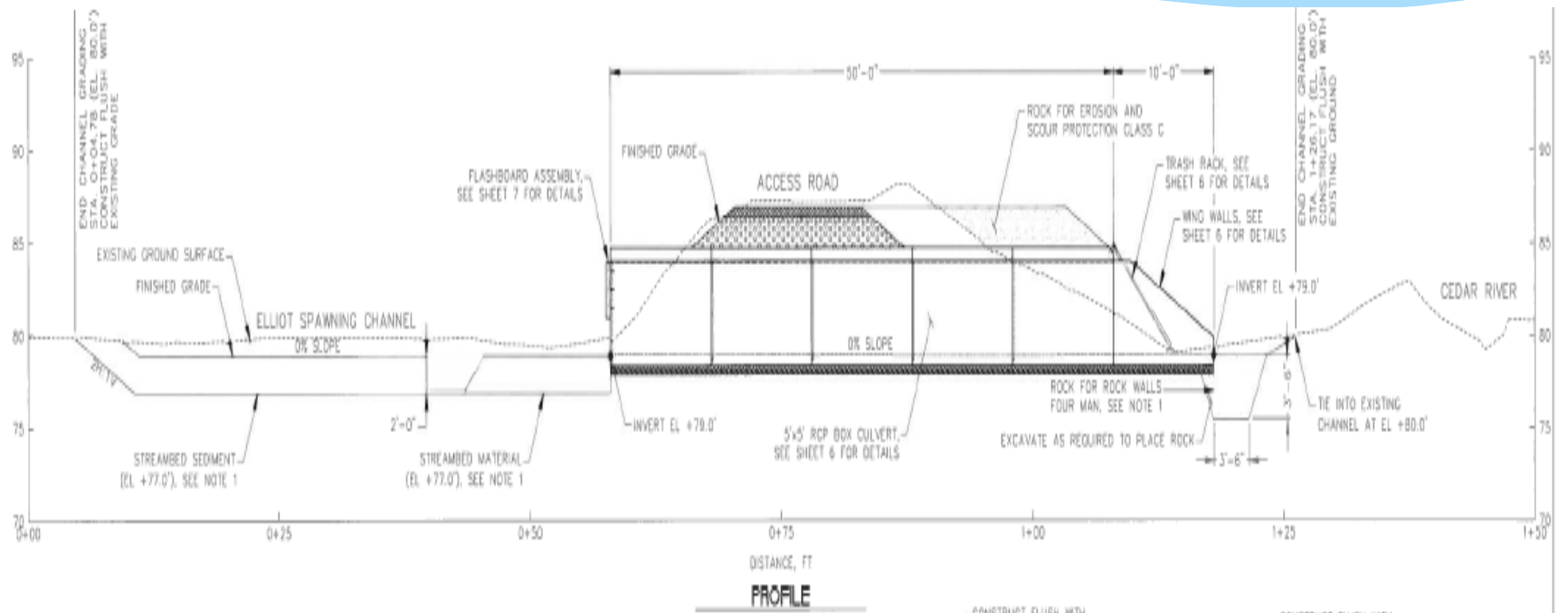
ELLIOT SPAWNING CHANNEL INLET PROJECT

Plan View



ELLIOT SPAWNING CHANNEL INLET PROJECT

PROFILE VIEW



PROJECT COST & BUDGET

Task Number	Cost Task Description	Budget (\$)
1	Project Management	\$ 426,787
2 & 3	Engineering & Design / Environmental Review & Permitting	\$ 1,536,864
4	Outreach and Stakeholder Involvement	\$ 25,588
5	Construction Contract Solicitation and Award	\$ 20,000
6	Construction and Construction Management – Gravel Removal	\$ 8,873,971
7	Construction and Construction Management – Mitigation	\$ 585,061
8	Monitoring , Maintenance and Reporting	\$ 633,000
Subtotal		\$ 12,101,271
10% Contingency		\$ 1,069,860
TOTAL		\$ 13,171,131

Project Budget Funding Sources	Budget (\$)
WLRD – King County Flood Control District	\$ 12,841,929
City of Renton – 2012-2015 KCFCD Subregional Opportunity Fund	\$ 150,000
City of Renton – 2016 KCFCD Subregional Opportunity Fund	\$ 179,202
TOTAL*	\$ 13,171,131

* This figure does not include the \$66,969 of King County staff time to be provided to the Project. The total contribution of the District to the Project is to be \$13,238,100.

Questions?





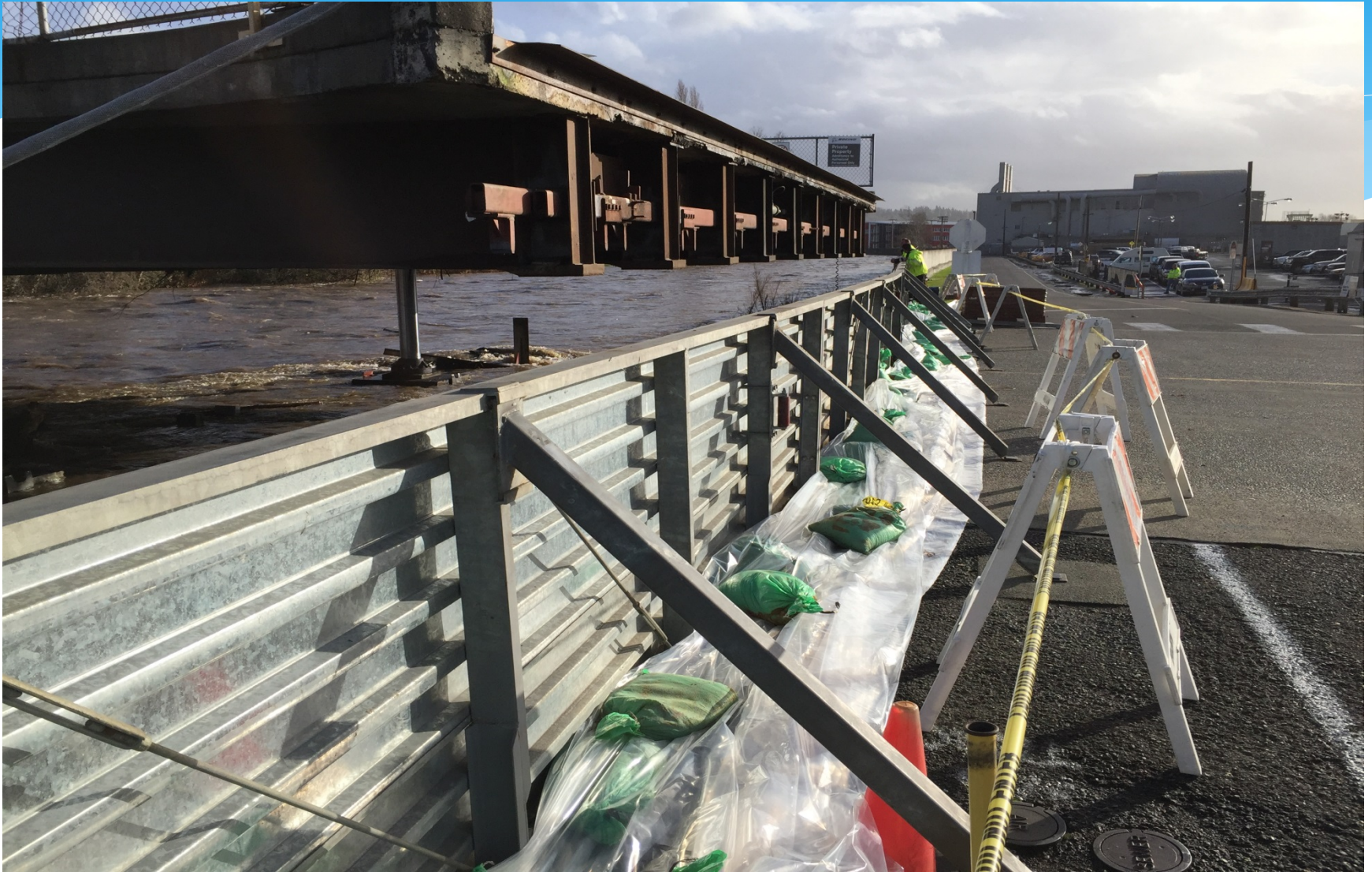
SOUTH BOEING BRIDGE

12/9/16



SOUTH BOEING BRIDGE

12/9/16



SOUTH BOEING BRIDGE

12/9/16

