

**USACE Portland District (NWP) FFDRWG Update Form
2 December, 2019**

PROJECT INFORMATION

Project Title	Bonneville Second Powerhouse Fish Guidance Efficiency
SCT Reference Number	
Project Manager (PM)	James Adams (NWP, 503-808-4742)
Technical Lead (TL)	Bridget Bell (NWP, 503-808-5106)
Biologist/Coordination	Jon Rerecich (NWP, 503-808-4779)

PROJECT DESCRIPTION

Steel plates were installed in all units in the A and B gatewells to restrict flow. During routine inspections, however, it became apparent that the anchoring system for the steel plates was inadequate. In effect, the nuts and anchoring bolts holding down the plates had come loose, posing the risk that the plates could detach and potentially take out a unit. All flow restriction plates were removed from the units.

A concrete corbel will be installed in the same location as the flow control plates with the design goal to achieve similar gatewell hydraulic conditions as the flow control plates. This new concrete corbel will be designed to meet the flow criteria established and tested for the previous flow restrictor plates to meet the hydraulic and biological goals.

FY 2020 funding should support the modification of two units. Modifications are being planned in Unit 15 with hydraulic testing to follow. Once hydraulic criteria are met, a second unit will be coordinated for construction.

CURRENT SCHEDULE

- Six weeks construction. Mid-March – April.
- Hydraulic testing. May – early June.
- Data processing and preliminary data. July
- FFDRWG discussion of results. July
- Construct in second unit. August – Oct.

PROGRESS AND KEY ISSUES (List)

From March through April, the following units are scheduled out of service:

- U12 4 Year OH (3/2-4/23)
- U14 Quarterly Thrust Collar Inspection (3/4)
- U16 Annual OH (3/9-3/12)
- U15 Quarterly Thrust Collar Inspection (3/16)
- U14 4 Year OH (4/20-6/11)
- U17 Annual OH (4/27-4/30)

Any other unit outages would have to be requested, at least, 3 weeks in advance.

FFDRWG REVIEW NEEDED AT MEETING? (If YES, list discussion topics below)

More detailed discussion to include:

- Construction schedule and unit outages.
- Gatewell hydraulic testing and pressure testing.
- Hydraulic and biological performance.

The following figures will be used for discussion at FFDRWG -

GFI: SOW Figures

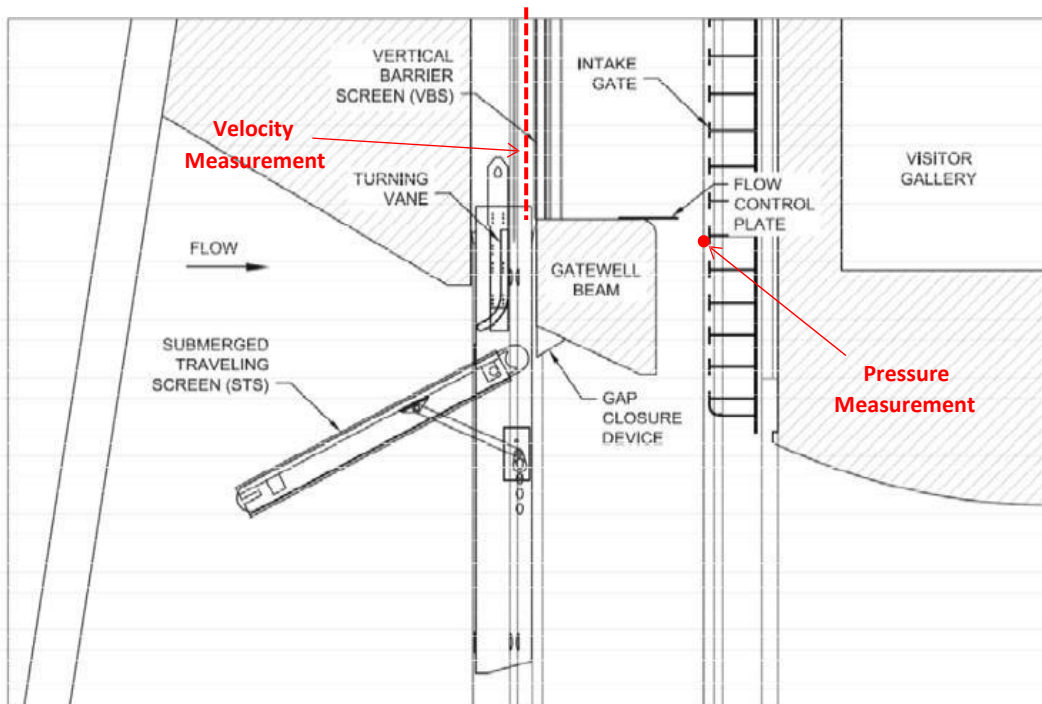


Figure 1: Locations of Velocity and Pressure Measurements

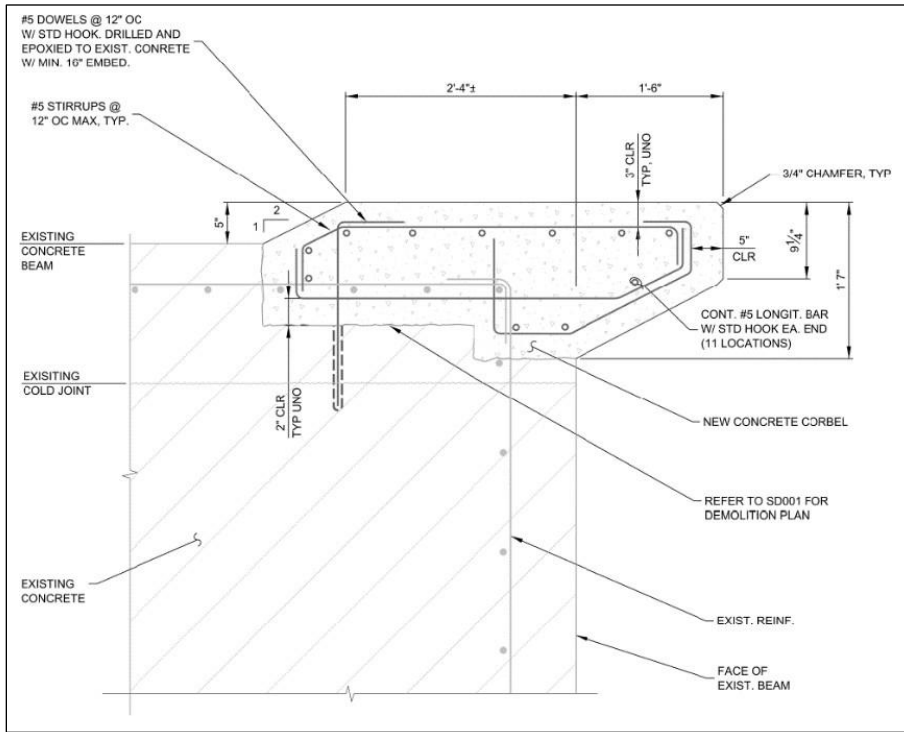


Figure 2: Concrete Corbel Replacing Original Flow Control Plate, Slot A Dimensions

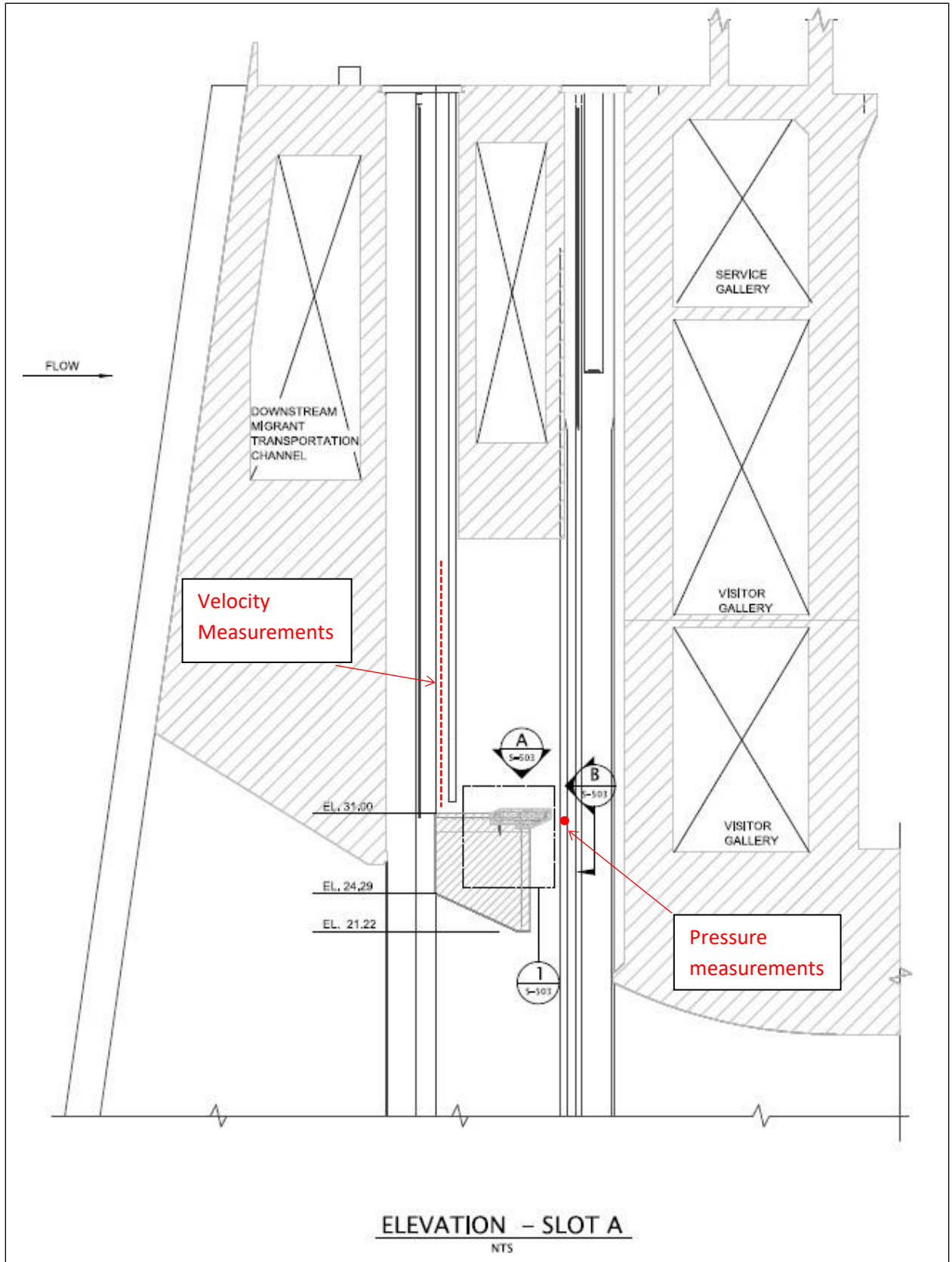


Figure 3: General Section View of Turbine Intake with Measurement Locations

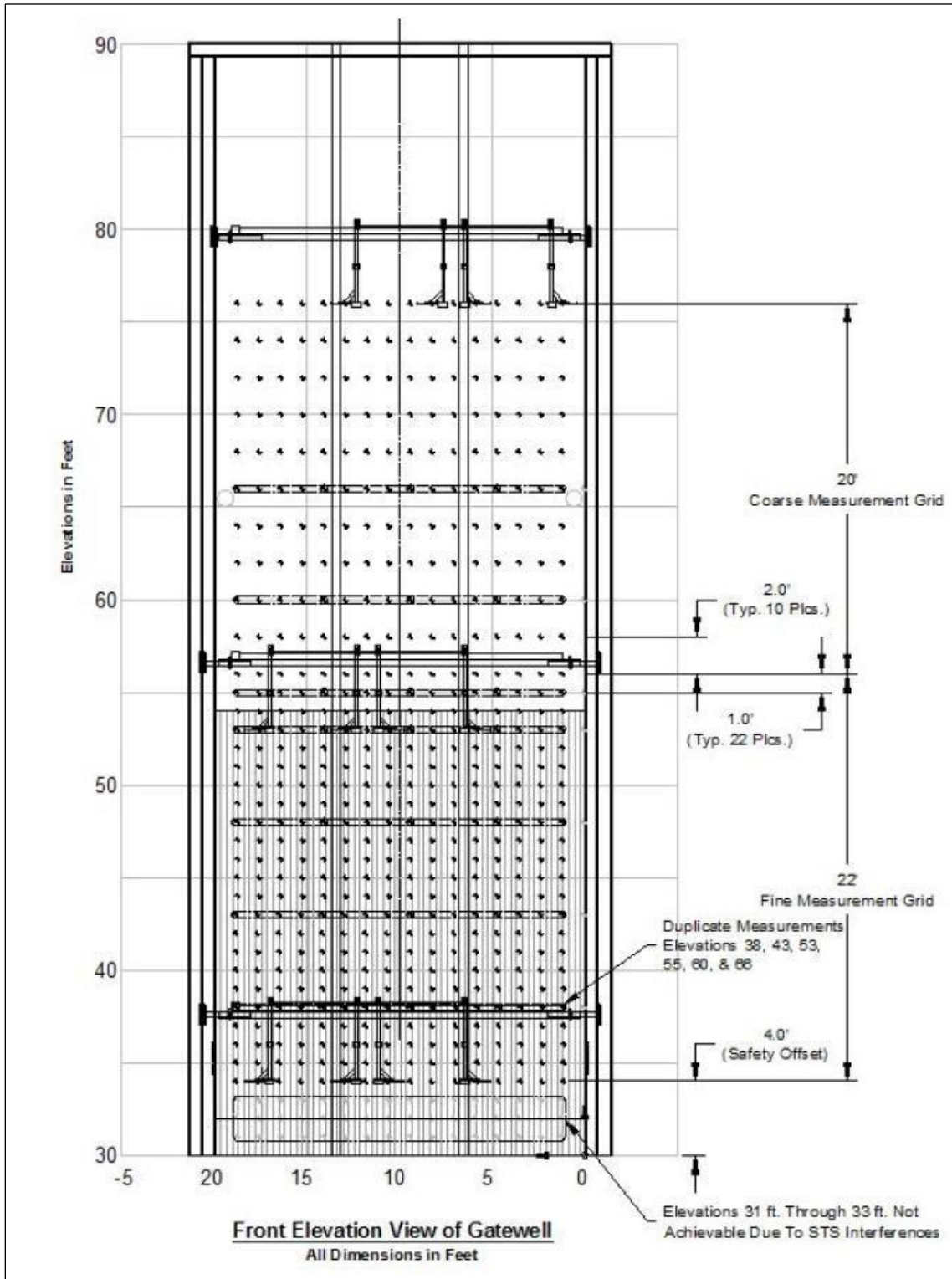


Figure 4: Approximate Velocity Measurement Locations

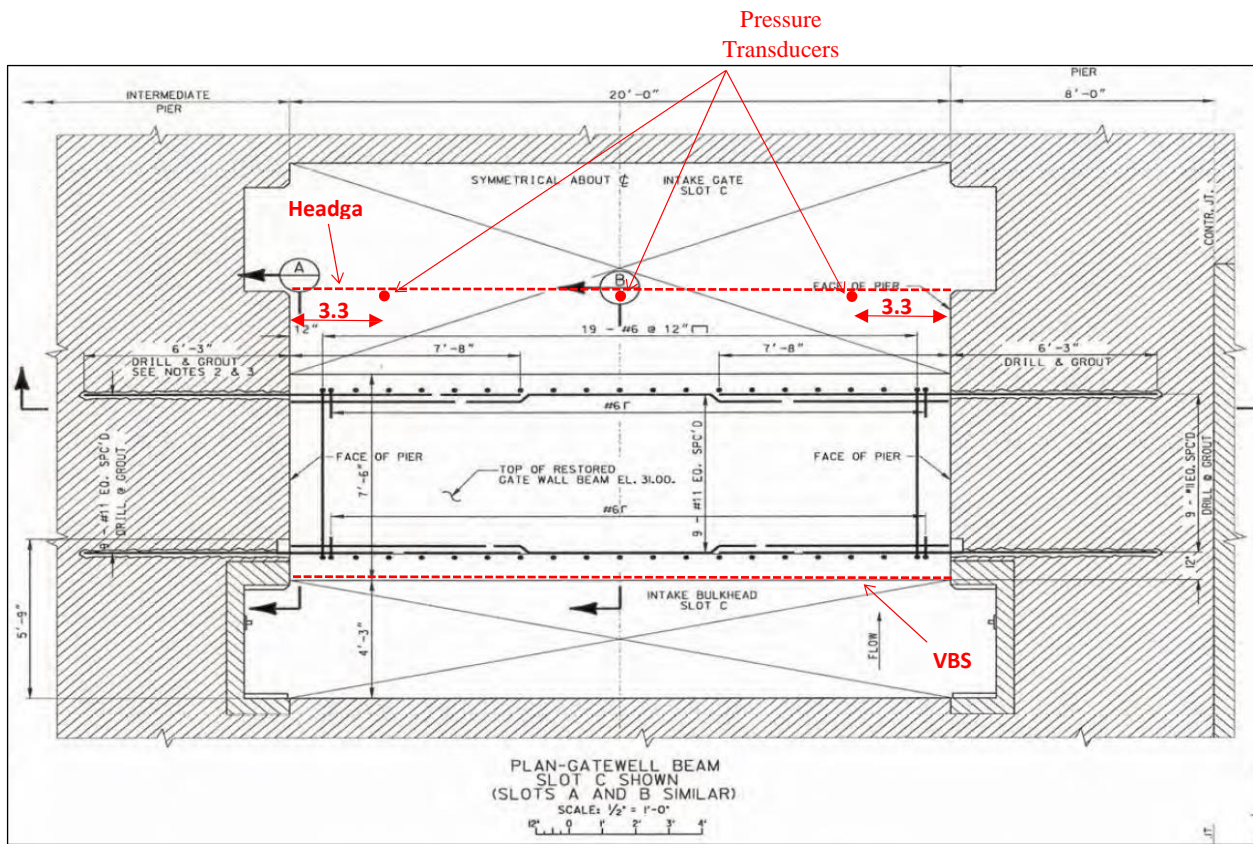


Figure 5: Plan View of Gatewell Beam and Apron. Location of Pressure Transducers