

A scenic landscape photograph of Morse Lake, showing a large body of water in the foreground, a sandy beach, and forested mountains in the background under a clear sky.

**Morse Lake Pump Plant Project
Status Update**

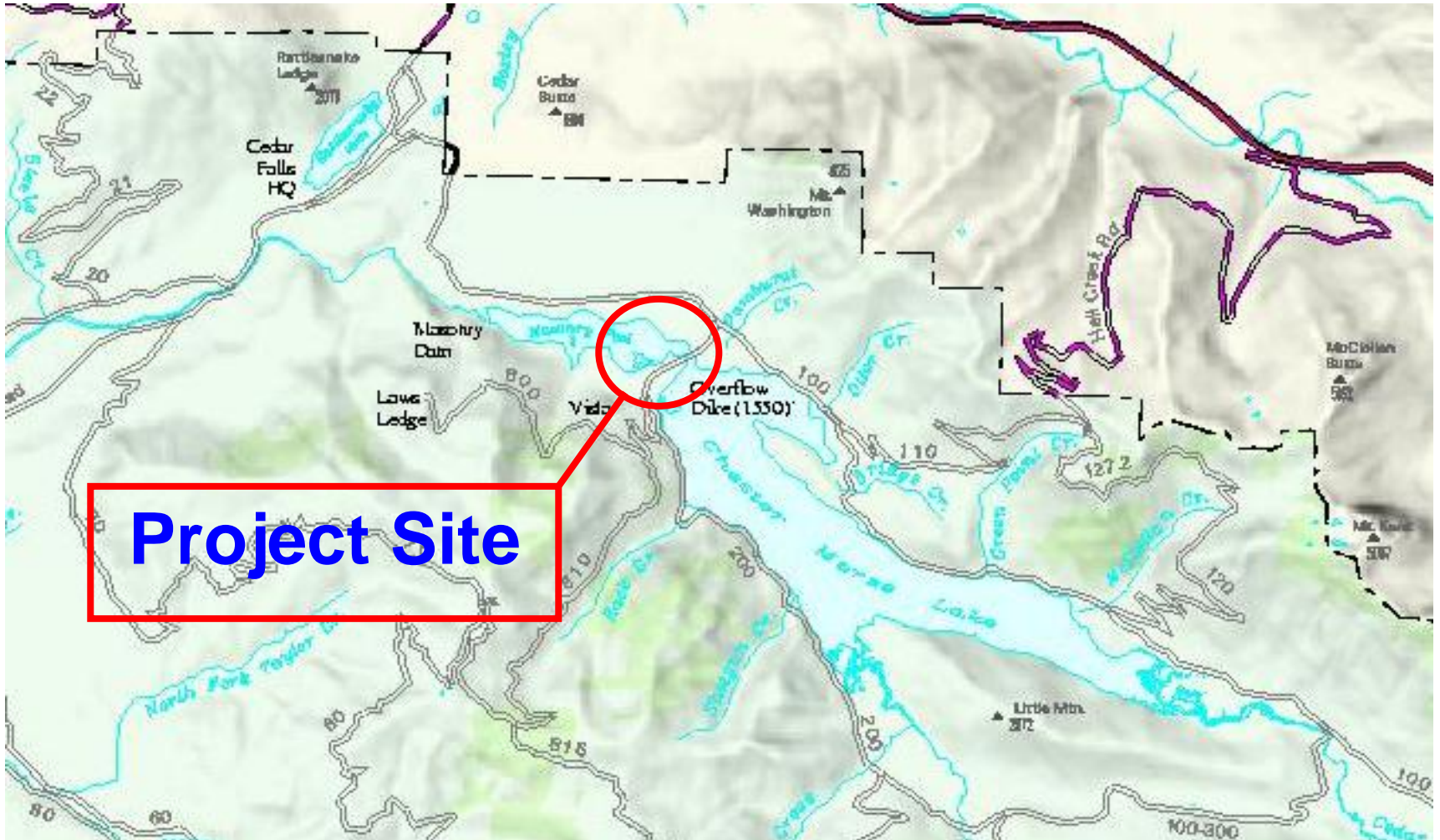
June 5, 2014

Water Operating Board Meeting

Outline

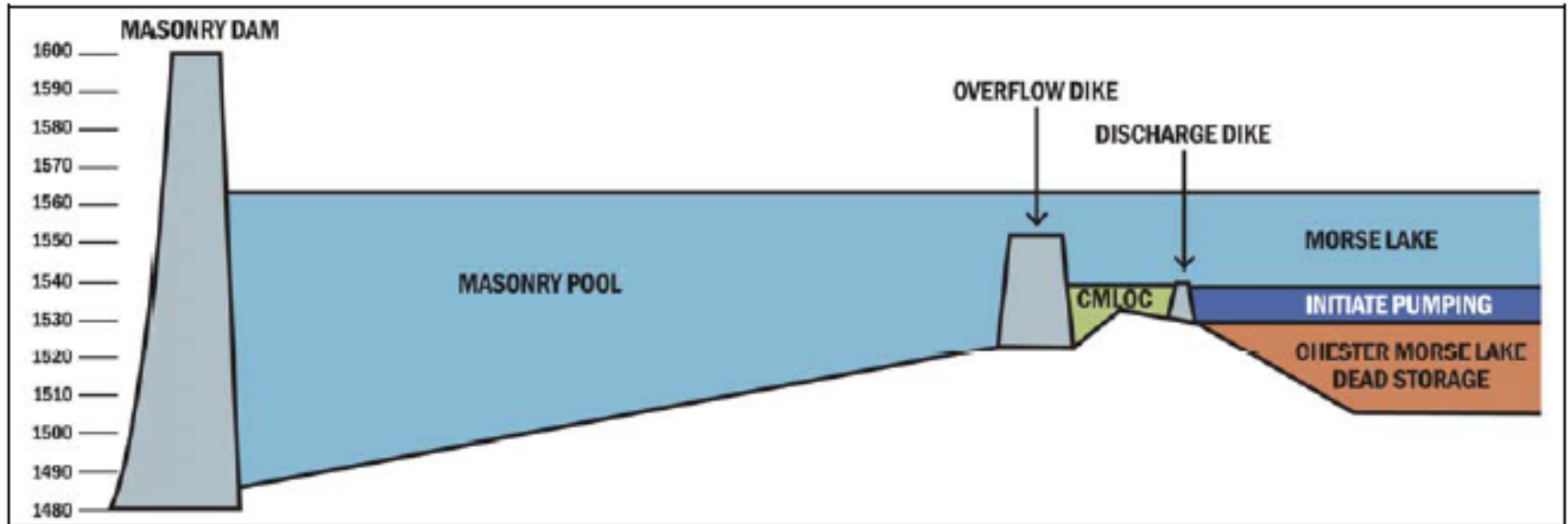
- Project Background
- Project Status
- Project Scope
- Budget and Cash Flow
- Current Risks

Background



Morse Lake Pump Plant

Resource Profile

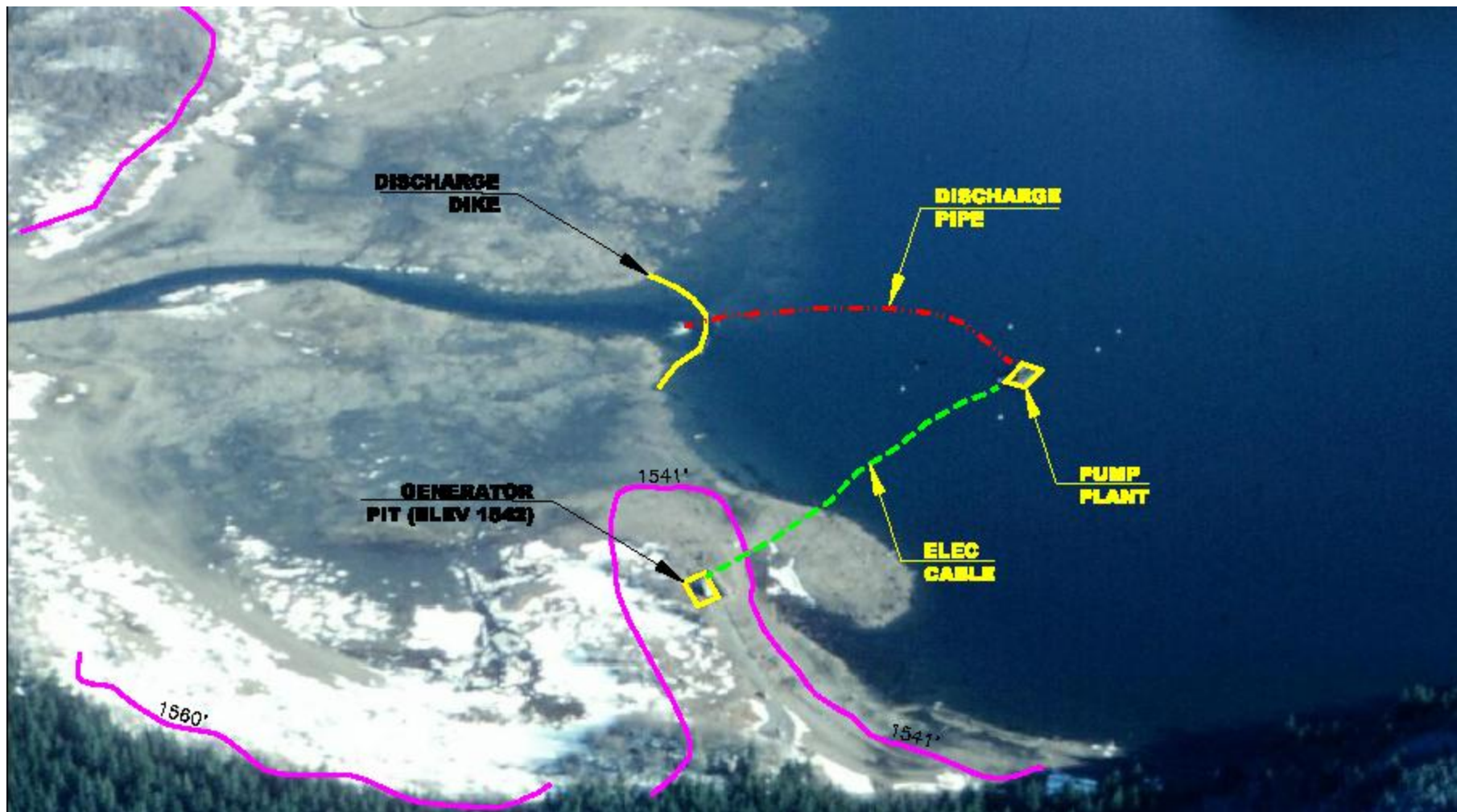


Historic Channel Condition



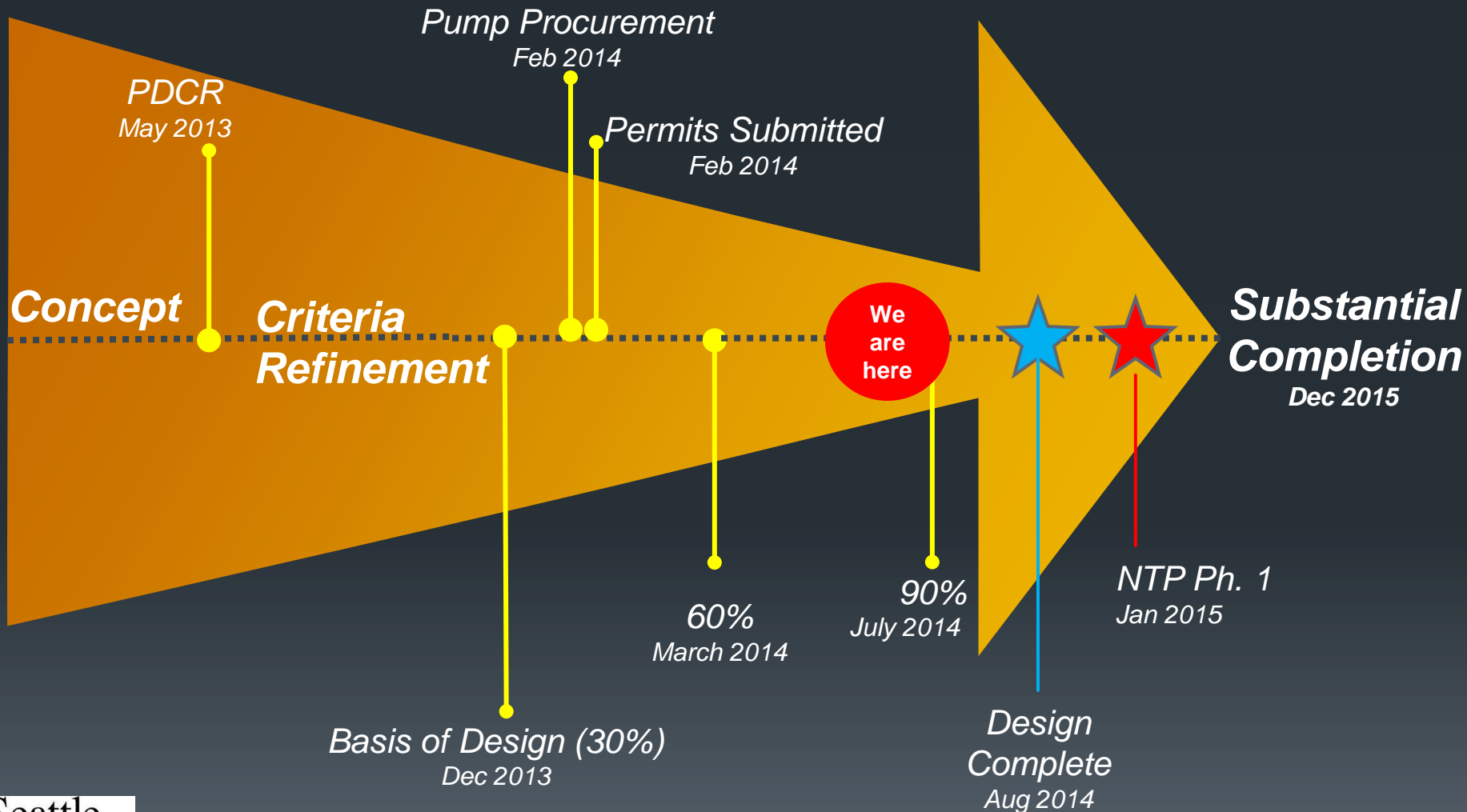
Morse Lake Pump Plant

Existing PP Configuration



Morse Lake Pump Plant

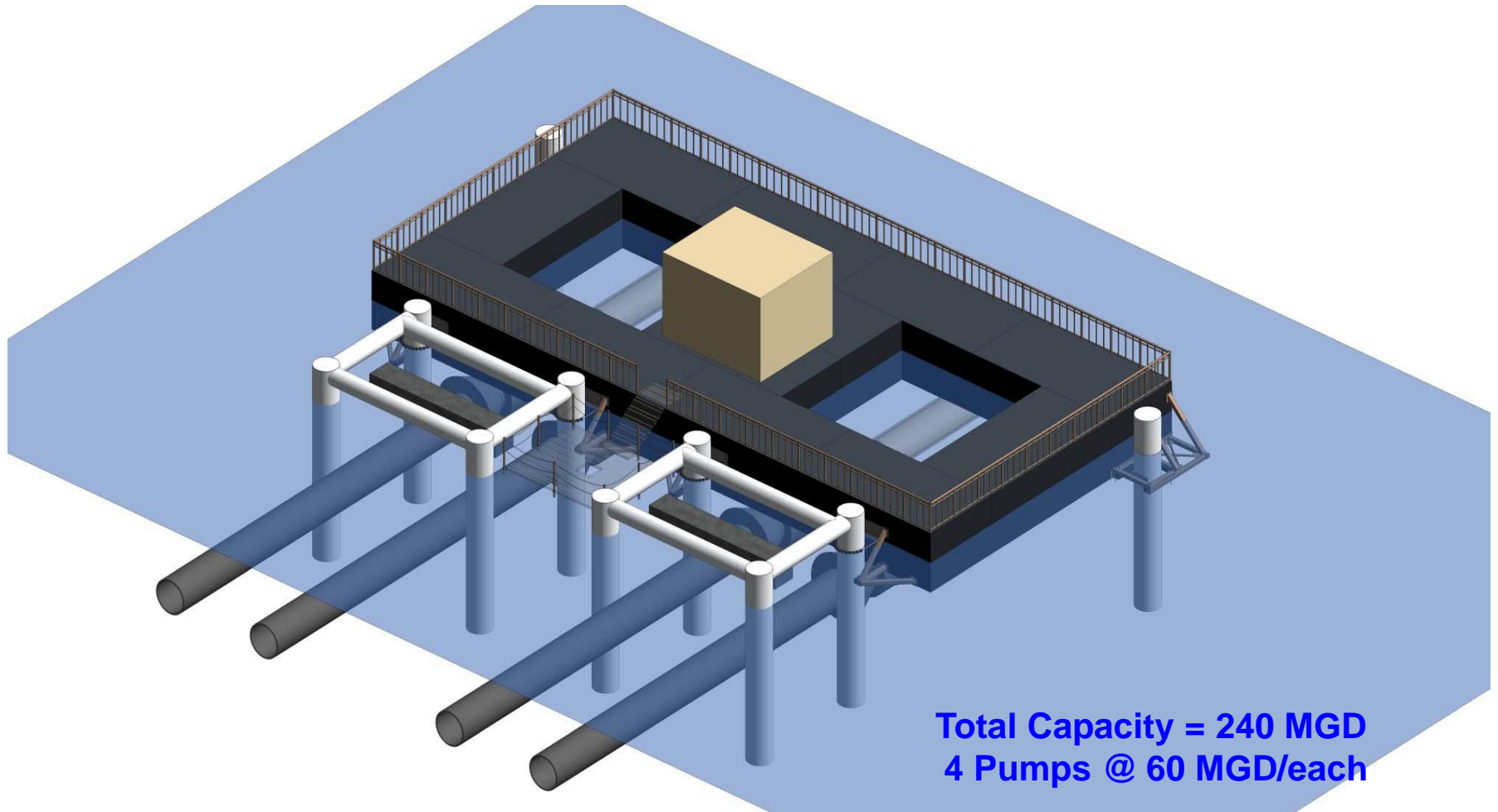
Project Design Status



Project Scope

- Three Key Elements:
 - Replacement Pump Plant
 - Improve Power Supply/Staging
 - Improve/Stabilize Conveyance

Floating Pump Plant



Morse Lake Pump Plant

Floating Pump Plant

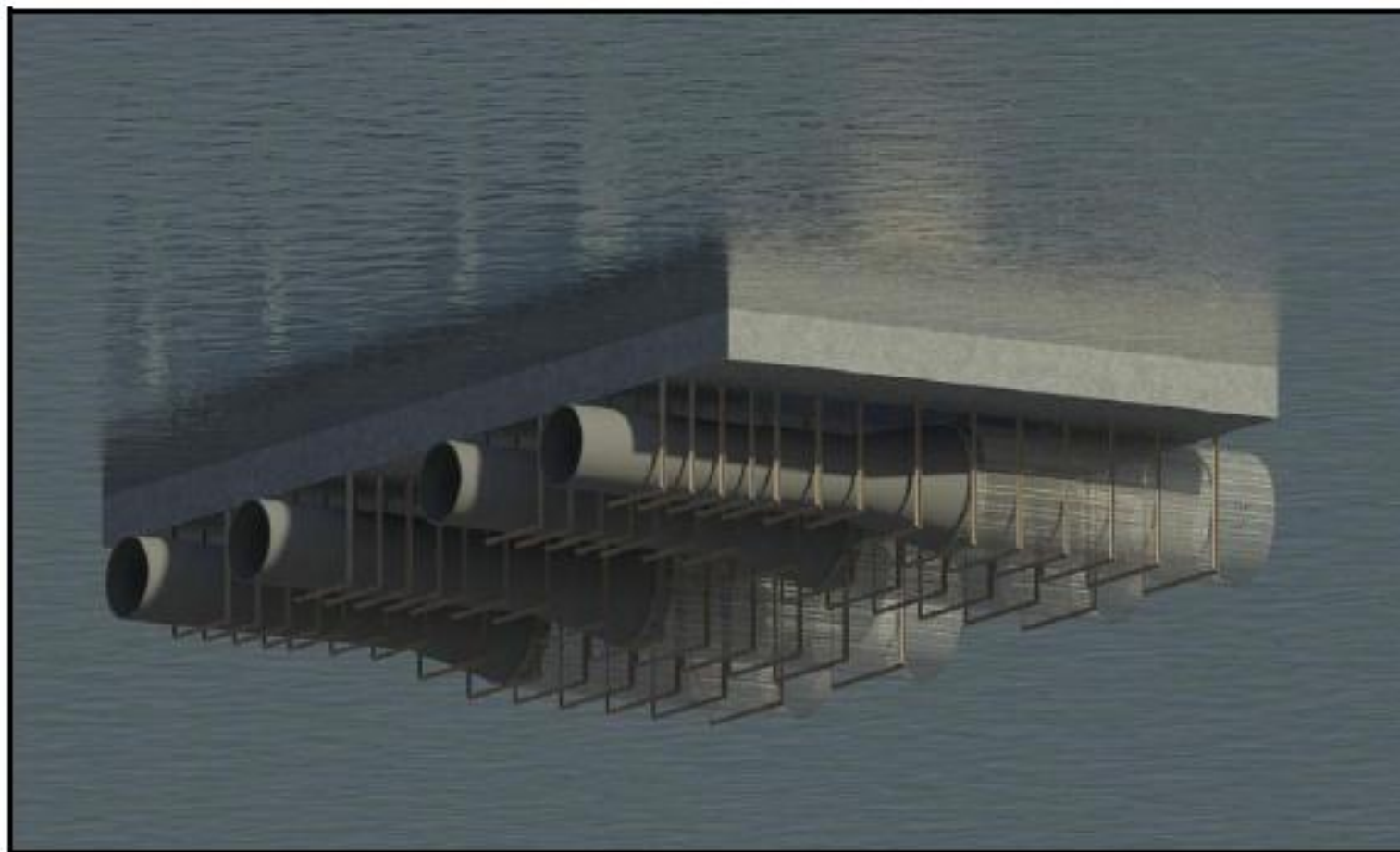
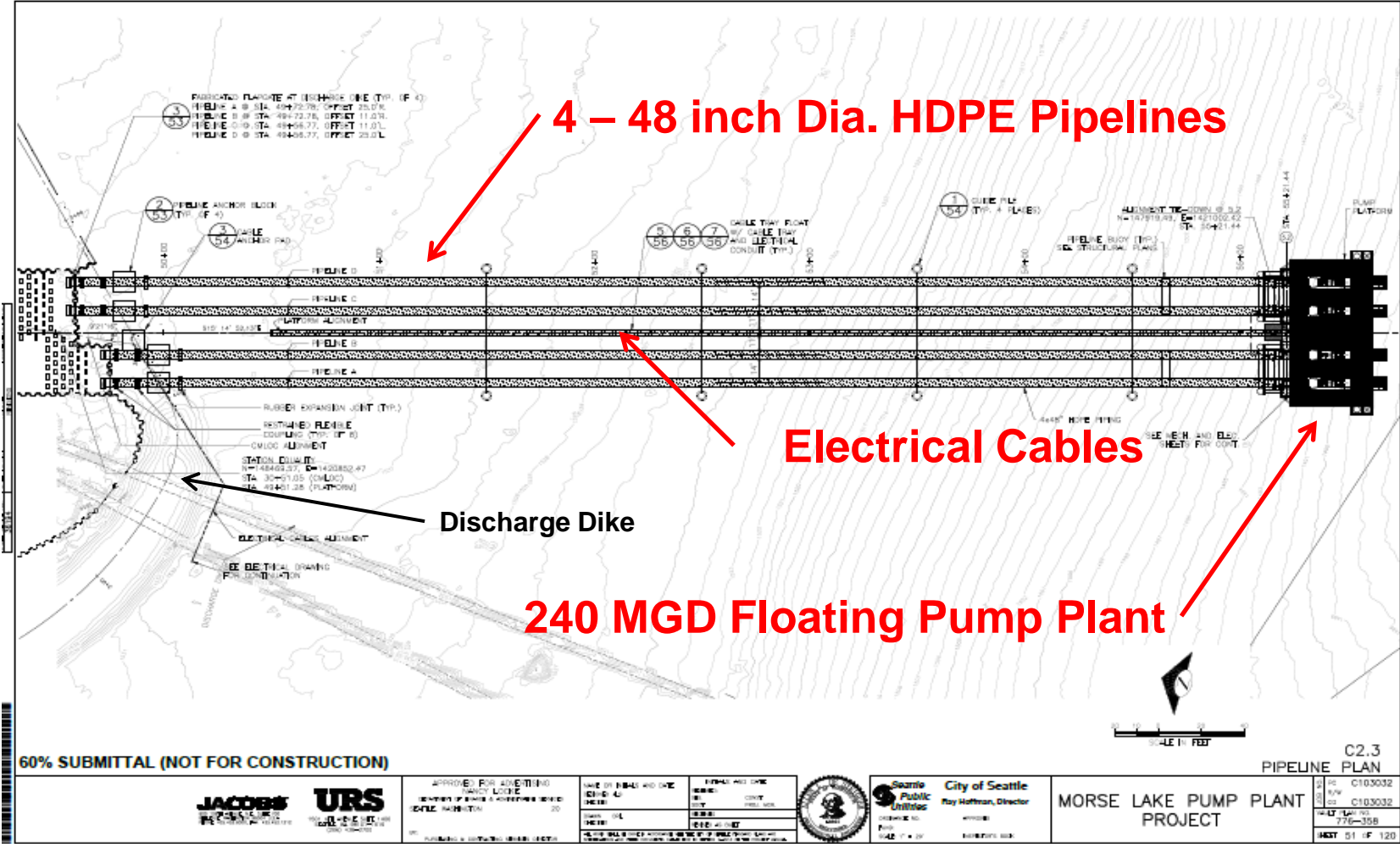


Figure Pump Platform Configuration , Below-Water View

Morse Lake Pump Plant



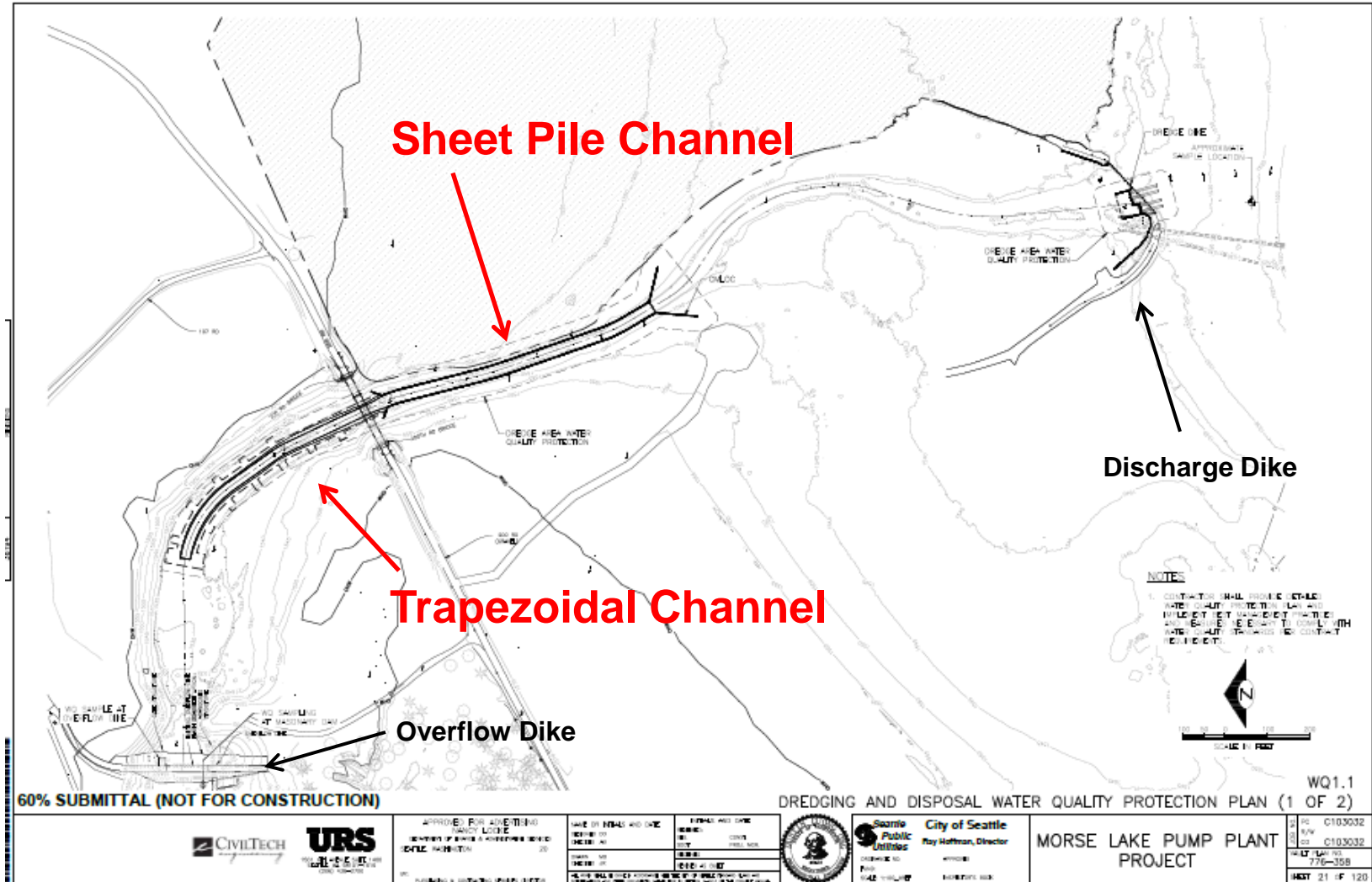
Pipeline Conveyance



Morse Lake Pump Plant



Channel Conveyance





Conveyance

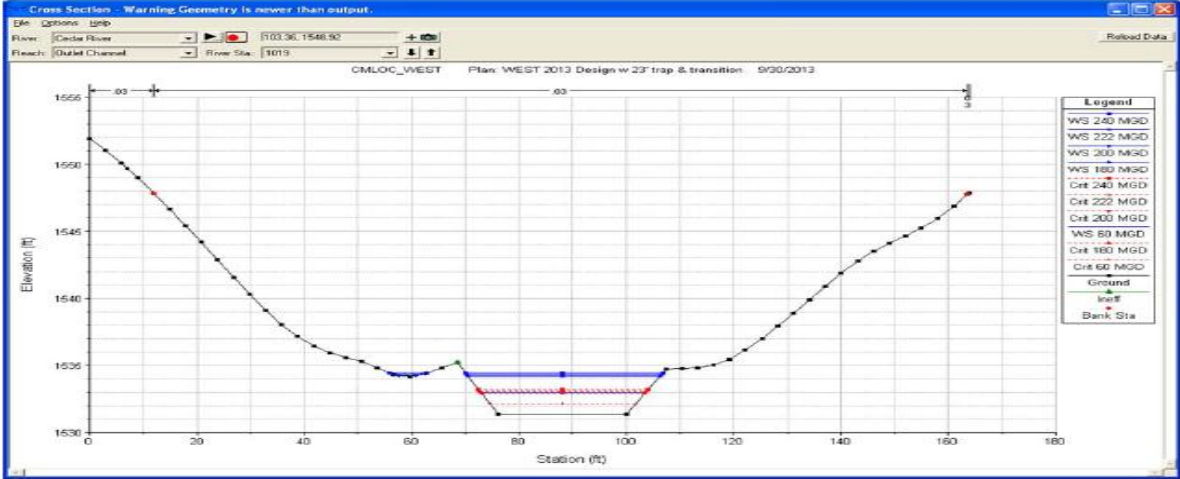


Figure 6-9 Typical Trapezoidal Cross Section with 23-Foot Bottom Width & 2:1 Side Slope

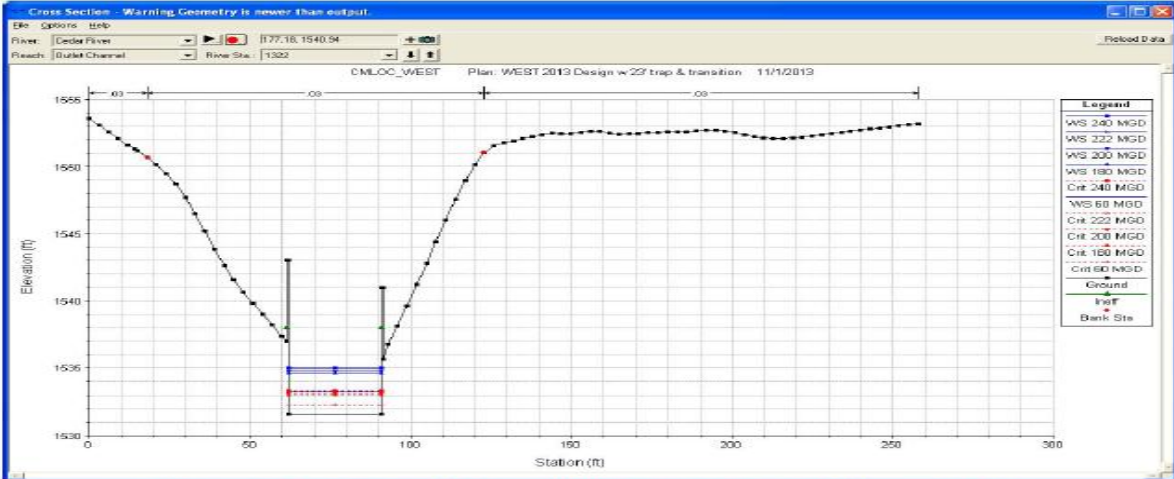
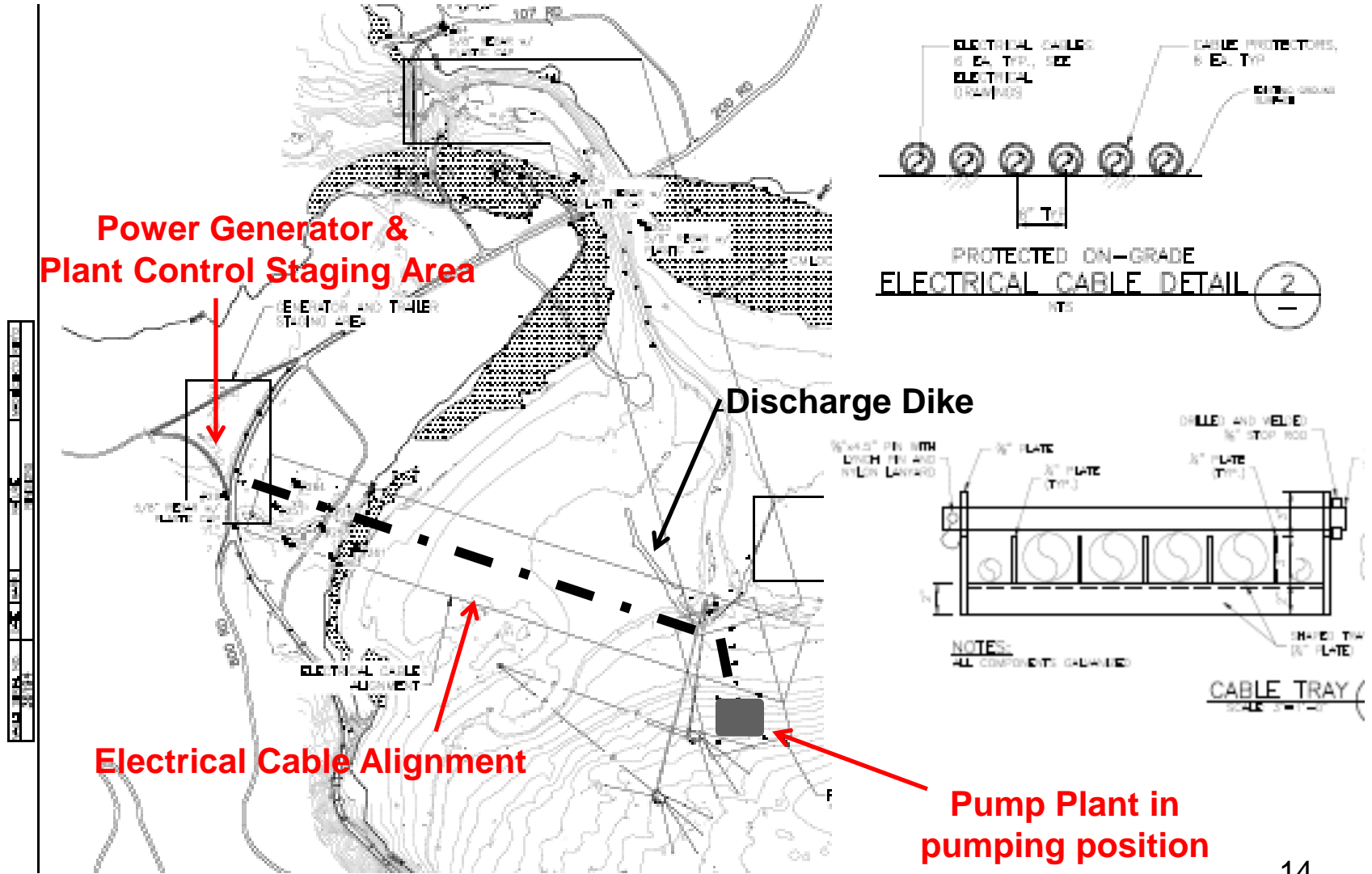


Figure 6-10 Typical Sheet Pile Cross Section (29 Feet Wide)

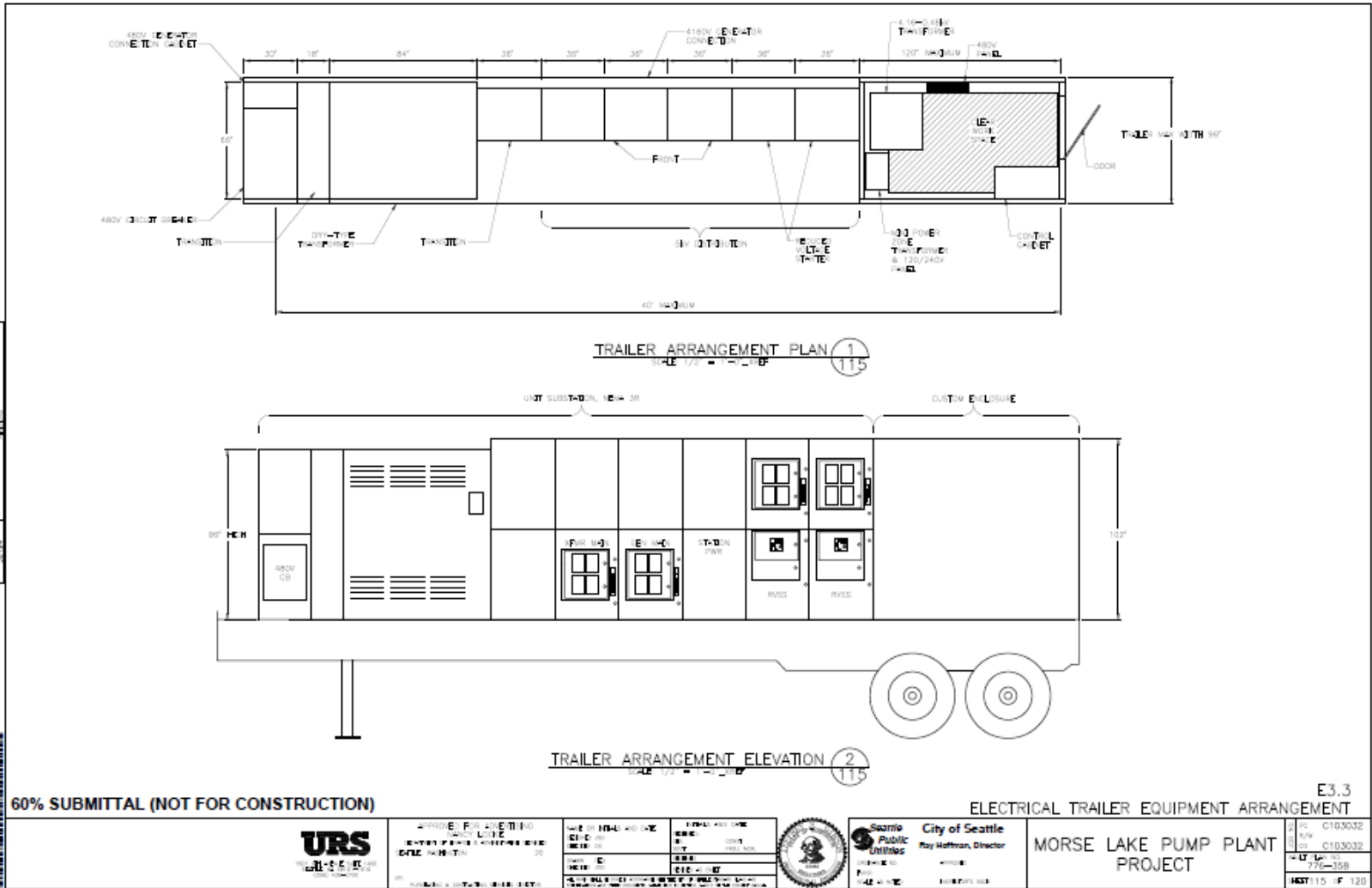
Power Supply Improvements



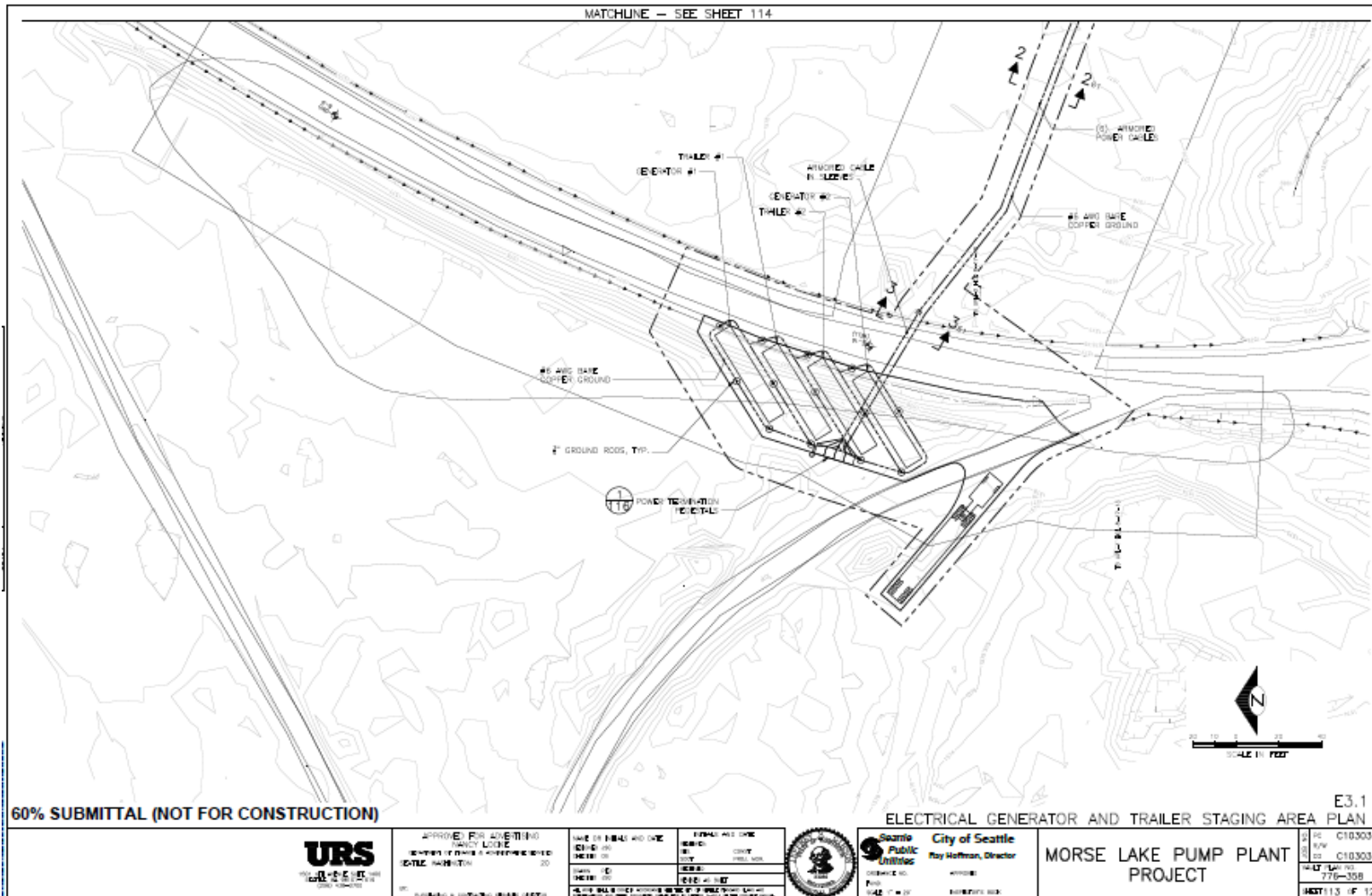
Morse Lake Pump Plant



Power Supply Improvements

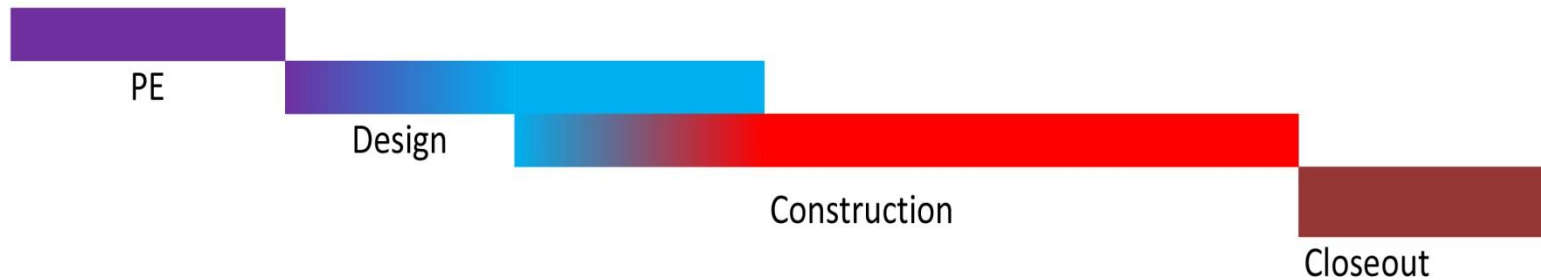


Power Supply Improvements



Budget/Cash Flow

2012	2013	2014	2015	2016	2017	Project Costs
\$818,391	\$2,309,973	\$2,570,913	\$9,054,097	\$18,231,719	\$5,496,409	\$38,481,502



Primary Project Improvements

- Decreased mobilization time
 - Reduced from ~74 days (current) to ~15 days (proposed)
 - Reduced power requirement increases rental generator availability
 - In-house mobilization
- Durable design is safer for operations
 - Minimal diver involvement (self-leveling pile moorage)
- Improved discharge dike & channel conditions ensures flow for people and fish

Current Project Risks

- Permits and Approvals (early engagement)
 - Tribal Interests
 - USACE, WDFW, WDOE
 - DOH
- Managing Tight Construction Windows
- Weather, Fire Danger, Use of Ex. PPs
- Managing Security and WQ Concerns

Questions?

