

## Lewis River Fish Passage Subcommittee Meeting

### Agenda

Thursday September 14, 2023

1:00 to 3:00 pm

In-Person: WDFW's Southwest Regional Office  
5525 S 11th St, Ridgefield WA 98642  
and  
Teams

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<b>Introductions, Review Agenda and Approve Meeting Notes</b>	All
<ul style="list-style-type: none"><li>Meeting notes (May, June, and July)</li></ul>	
<b>Elements of Lewis River Future Fish Passage Update</b>	Lesko
<ul style="list-style-type: none"><li>Overview of ACC meeting</li></ul>	
<b>Fish Passage Study and HPP Updates</b>	Karchesky
<b>Fish Passage Design Presentation/Discussion</b>	Hansen/Higa/Karchesky/All
<ul style="list-style-type: none"><li>Re-positioning of Yale FSC barrier/guidance nets</li><li>Yale Upstream Entrance Configuration/Holding</li><li>"No-touch" fish processing configuration of upstream facilities at Yale and Swift No. 1 dams</li></ul>	
<b>Next Steps for Fish Passage Subcommittee</b>	All
<b>Next FPS meeting – October 12<sup>th</sup> Teams</b>	All
<ul style="list-style-type: none"><li>Agenda</li></ul>	
<b>Adjourn</b>	

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Microsoft Teams meeting

[Click here to join the meeting](#)

Or call in (audio only)

[+1 563-275-5003,,970831390#](#)

Phone Conference ID: 970 831 390#

**FINAL Meeting Notes  
Lewis River License Implementation  
ACC Fish Passage Subcommittee Meeting  
September 14, 2023  
2:30 PM – 4:30 PM  
MS Teams Meeting**

Attendees

Christina Donehower – Cowlitz Indian Tribe	Erik Lesko – PacifiCorp
Amanda Farrar – Cowlitz PUD	Melissa Jundt – NOAA
Steve Manlow – LCFRB	Peggy Miller – WDFW
Beth Bendickson – PacifiCorp	Keely Murdoch – Yakama Nation Fisheries
Eric Hansen – PacifiCorp	Bill Sharp – Yakama Nation Fisheries
Nathan Higa – PacifiCorp	Jeffrey Garnett – USFWS
Chris Karchesky – PacifiCorp	

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**Introductions, Review Agenda and Approve Meeting Notes**

Chris Karchesky, PacifiCorp, and Peggy Miller, WDFW, reviewed the meeting agenda. Beth Bendickson, PacifiCorp, will send out the May, June, and July 2023 meeting notes for final 7-day review. If no comments are received, they will be considered final.

**Elements of Lewis River Future Fish Passage Update**

All members present at the September 14, 2023 Aquatic Coordination Committee (ACC) meeting voted unanimously to submit the Elements Document to the Services. The Services weren't sure if they would respond via email or by other means. Jeff Garnett, USFWS, and Melissa Jundt, NOAA, will work with Todd Olson and Erik Lesko, PacifiCorp, on how best to respond.

**Fish Passage Study and Hatchery Preparation Plan Updates**

Fish Passage Study

Karchesky reported that the team was still in the process of compiling the information from the study conducted this spring. He reminded the group that this was the second year of study and this year's study was focused on better understanding fish behavior in the forebay of Yale Dam and in particular the depth in which fish travel. This year's study was also expanded to include not only Coho smolt (like last year), but also juvenile spring Chinook and Steelhead. Karchesky indicated that he had no new information to share at this time and was expecting to see a draft report in October, which will be submitted to the Fish Passage Subcommittee (FPS) group for review.

## Habitat Preparation Plan

Lesko reported that the ACC accepted the Habitat Preparation Plan (HPP) as final, and that per the plan Coho will be moved up to Yale Reservoir.

Miller asked about using HPP fish as study fish to determine if they are making it to the head of the bypass reach. The intent not being to make it part of the HPP but rather to use the fish in a different study. If the group wanted to do something like this then there is an opportunity to define our study questions and bring it to the Aquatic Technical Subgroup (ATS) to prepare a study design. She asked for feedback. Lesko indicated that a PIT tag detection antenna will be placed in the river immediately downstream of the outfall as part of HPP. This will help to monitor fish in that area. Half of the fish transported as part of HPP will be PIT tagged prior to release into the reservoir. If there is something more, it would go to the ATS but be separate from the finalized HPP.

Miller asked if there were any comments. She mentioned some folks had delay concerns, and that the study proposal was conceptual at this point. Jundt, said “maybe” but she needed time to digest the proposal. Miller mentioned she just brought it up as a potential study. Karchesky said the caveat is to think about study design and which fish are being used. Because HPP fish originated from Lewis River Hatchery, they are all considered strays in Yale Reservoir. Whatever behavior they display may or may not be similar to a fish that originated from above Swift Dam – and could likely result in a skewed interpretation of behavior.

Jundt asked about trying to better understand fish behavior at Swift No. 2. Miller added it might be helpful to find out if fish are confused by flow coming out of the powerhouse before moving up into the bypass reach. Karchesky agreed, but said while it is of interest, we are limited at this time because we are working with hatchery fish. Karchesky also reminded the group that as part of the Lewis River Monitoring and Evaluation (M&E) Plan, adult trap efficiency and fish behavior will be evaluated for the new fish passage facility at Yale Dam. Once the facility is up and running, fish behavior will be evaluated through the M&E Plan. Jundt indicated that that data will be helpful in evaluating behavior at Swift No. 2 powerhouse. Miller said we might want more information before the facilities are in place. Karchesky stated that the current location of the passage facility is at the upper most extent of the bypass reach. This allows for fish utilizing the bypass reach as spawning habitat and prevents prematurely capturing fish at Swift No. 2. Jundt added it could inform fish behavior in relation to turbine discharge. If we have fish we can do studies with, it might be opportunistic, although she doesn’t know how it would work as far as PIT tagged fish. Karchesky said it’s worth a future discussion, but as far as the HPP program and using hatchery fish, makes it challenging to do any real behavior work. Lesko stated that the Habitat Preparation Program is described in Section 7.4 of the Settlement Agreement. Our discussion here is related to a different Section that describes studies to inform fish passage design (Section 4.1.1) Studies developed through Section 4.1.1 would ideally be reviewed by the ATS with the intent of moving a recommendation forward to the ACC. Miller agreed but added that the WDFW experts aren’t at the meeting today, so bringing it up at the next meeting or a separate meeting might be a better route. Maybe it’s something that could get implemented next year or is that too late? Jundt asked if the discussion would be moved to the ATS level? Miller hoped we could discuss it in case we did want to do a study, especially if this group thought it was a good idea. We could outline some questions and go back to the ATS to design the study. Jundt added that more work would be needed on it before it goes to the ATS. Karchesky asked Miller if she wanted more information on

confirming fish ascended the bypass reach? Jundt said she is more concerned about draft tube injury or fish hanging out at the Swift No. 2 Powerhouse. Karchesky asked Jundt if that issue would be more important under a swim through scenario where fish are transitioning through the reservoir rather than a selective scenario where mostly Yale Fish are put into the reservoir? Those fish would be moving into tributary streams and not necessarily getting confused by Swift No. 2 Powerhouse. Lesko reminded the group that the HPP is for nutrient enhancement and gravels moving through, it doesn't speak to behavior work. In 2005, truckloads of Coho were dumped into the upper basin upstream of Swift Dam without any monitoring. The only reason that Coho in Yale are being PIT tagged is to take advantage of PIT tag arrays in Cougar Creek used for bull trout monitoring (Jeremiah Doyle, PacifiCorp). Miller reiterated the intent is not to add onto the HPP study, just to take advantage of fish. Rather, if we think fish are delaying we would need to find more fish to identify their delay. We would be using the fish for dual purposes. Karchesky said we ran into a challenge below Merwin with radio tagging. We couldn't get native fish so we used hatchery fish. Once they went past Lewis River Hatchery, their behavior was really scattered, which makes sense as once they pass the hatchery they are considered strays. The intent of the Adult Trap Efficiency Study outlined in the M&E Plan is to look at things we can modify at the trap (i.e., attraction flow, entrance configuration, etc.) to gain better efficiency. In order to make inference on fish behavior it will be important to use fish known to have originated above Swift Dam. If you are using fish that don't want to be there, it's hard to make a management decision on it. What we want to do is build it up as high in the bypass reach as we can to take full advantage of all the habitat. Jundt expressed concern about the powerhouse and injury and stated the designers did acknowledge it at Swift No. 2. She is not sure of the solution especially at Swift where there are ownership responsibilities. She stated her comments are raw. Miller asked if we could move forward and then have more discussion at the next meeting when both Bryce Glaser and Josua Holowatz, WDFW, would be present. She will relay this information to both of them.

### **Fish Passage Design Presentation/Discussion**

*Yale Downstream Update:* Eric Hansen, PacifiCorp, provided a general update. The design team is looking at ways to lower construction costs from the 30% design level, specifically the collector and its parts and pieces adjacent to the intake. They're double-checking the number of pumps and making other adjustments: fish sorting (how/where) and any nuances to loading fish trucks, and guide net design (location and materials).

*Yale Upstream Update:* Nathan Higa, PacifiCorp, gave a brief update. The 30% designs are under review and being refined to get to the 60% design level. The collection system and water system are in same building. We have essentially cut out the middle man in the ladder and replaced it with a higher lift and expanded entrance pool. We'll still meet all flow and volume requirements along with flexibility to adjust the hydraulic system as needed.

*Swift Upstream Update:* Higa provided a brief update. The design team has refined the water supply system design. It's in combination with the Minimum Discharge Line project and is robust option for both projects. They are working on routing the access road as well as doing some refinements in the sorting area. They are also refining, configuring, and reducing the amount of concrete and steel needed for construction, as that's where the 60% design is heading.

*Presentation:* Karchesky indicated that he wanted to give the FPS a heads up on some changes they could expect from the 30% design to the 60% design. He put together a quick presentation on those changes that he then went over.

Before he went over the changes, he asked the group if December 14, 2023 still works for the 60% Design Presentation. Garnett said he has a potential all-day meeting that same date and wanted to know if we would consider moving it up a week. Karchesky said he would check with the design team, but thought that any earlier than the 14th may be difficult only because there is a lot of material to prepare between now and then, and they will probably need as much time as possible. Miller asked if we could start the 45-day comment period on January 1 or something similar. Karchesky will discuss this with the design team, Olson, and others. Jundt expressed that she would like to have the documents available the day of the design team meeting. Karchesky added that he suspects it will be similar to the 30% design meeting where the materials would be available for download on an FTP site.

Karchesky walked through a slide presentation on moving from 30% to 60% design. It's a high level presentation. Any initial questions or comments folks have would be taken back to the design team. Karchesky will follow-up with folks at the October meeting.

*Yale Downstream Guide/Barrier Net:* Karchesky indicated that this first change was reorientating the Yale Downstream Barrier/Guide net so that fish can use more of the natural shoreline as they enter from the west side of the forebay.

Garnett asked about the east side of the net and why it was reduced. Karchesky said it was for ease of bathymetry and is more symmetrical. We are looking at flow through velocity but it doesn't change much of the orientation. Jundt said she liked that it uses the natural bank more and feels it is an improvement. She agreed with Garnett in that they want to see the hydraulics. She asked if the existing spillway net was in good shape and what are the velocities, as well as what size was the mesh openings (because of bull trout). She doesn't want leaks that would allow small smolts to go through it. Regarding fishing mode of the net, she asked about the percentage of down mode time the spillway net currently experiences. Historic spillway operations would be helpful. Karchesky said the current net is lowered anytime spill exceeds 6,000 cfs. Miller agreed, and said she would like to see how often it would be down (10%, etc.). She is trying to channel potential comments her group would have. Karchesky said he would provide that at the October meeting. Jundt appreciated the slide presentation and said it was beneficial.

*Yale Upstream Passage Entrance Configuration:* Karchesky reminded the group that during their earlier discussion around capacity of the Yale Upstream Passage Facility, he indicated that the design team was looking at ways to make the design more efficient and lessen the need for fish to ascend such a tall fish ladder. Karchesky indicated that the design team came up with a way to put everything into a smaller footprint and not change (but in fact increase) the holding capacity. They generally designed a large, single box that houses both auxiliary water supply and the entrance pool and holding pools for fish. Jundt thinks it's a more elegant footprint. The concept is interesting and seems to fit better than the original proposal. The challenges are going to be balancing flows from one side to the other. She would like to see more details (November), but overall, she thinks it's a design improvement.

Higa added that it's lines on paper and the right angles on the paper don't show the structure geometry. The design team is still doing modelling to make sure both sides get the same amount of flow, but once built adjustments and field calibrations will be done to balance the flows out. He noted that it was similar to the Army Corps Columbia River Dam fish ladder entrance. We don't have concerns with sand or gravel as it's not a run of the river facility. Miller asked if another presentation could be given about capacity since the ladder is gone and fish can't hold there.

Garnett added that to his untrained eye, it looks like an improved design (small footprint and more efficient).

*No touch facility:* Karchesky indicated that based on the 30% Design comments, the design team moved from a manual sorting facility concept to a "no-touch" design concept. Karchesky presented the new configuration. There is a small fish separator bar at the top of the fish lock to separate any small size fish initially which we learned about from the Baker Facility. The larger fish would continue to slide down the sorting table to be viewed by an observer before being sorted into holding tanks. Miller asked if there is still room for the ability to put more tanks out if needed to which Karchesky replied, yes, there is. There will be more information in the 60% design. Higa added the design team is building in room for expansion, as needed.

Karchesky said we can revisit these changes later. He asked folks to email him if they have any other comments so we can discuss them in more detail in October.

Miller noted the Yale Reservation Fishing Rule has been released and will go to the media.

#### Next Steps for Fish Passage Subcommittee

Miller said if anyone had any additional study questions or input for the transportation plan, we might want to add it to our list as a potential to work on or plan for in the near future (through the end of the year and into next year).

The group to Karchesky, it sounded like there weren't any concerns with the 30% to 60% design changes. As far as homework items, we'll talk about the existing net when it's lowered and regroup about the upstream behavior study. We are planning a study through the M&E plan. Is there something needed to inform design? It would be good to think about these items and bring them up for discussion at the next meeting. Also, planning for the December design team meeting and its 60% design presentation. The Transport Plan, at least for now, is next year. It is earmarked for 2024. This Plan may be something discussed at the ATS level.

No further items were brought up for consideration.

#### Next Steps

**Next FPS Meeting:** October 12, 2023 (unless otherwise communicated).

The meeting adjourned at 2:38 PM.

**Lewis River License Implementation  
Fish Passage Subcommittee Meeting  
September 14, 2023**

**Presentation Materials**

# Fish Passage Design Update

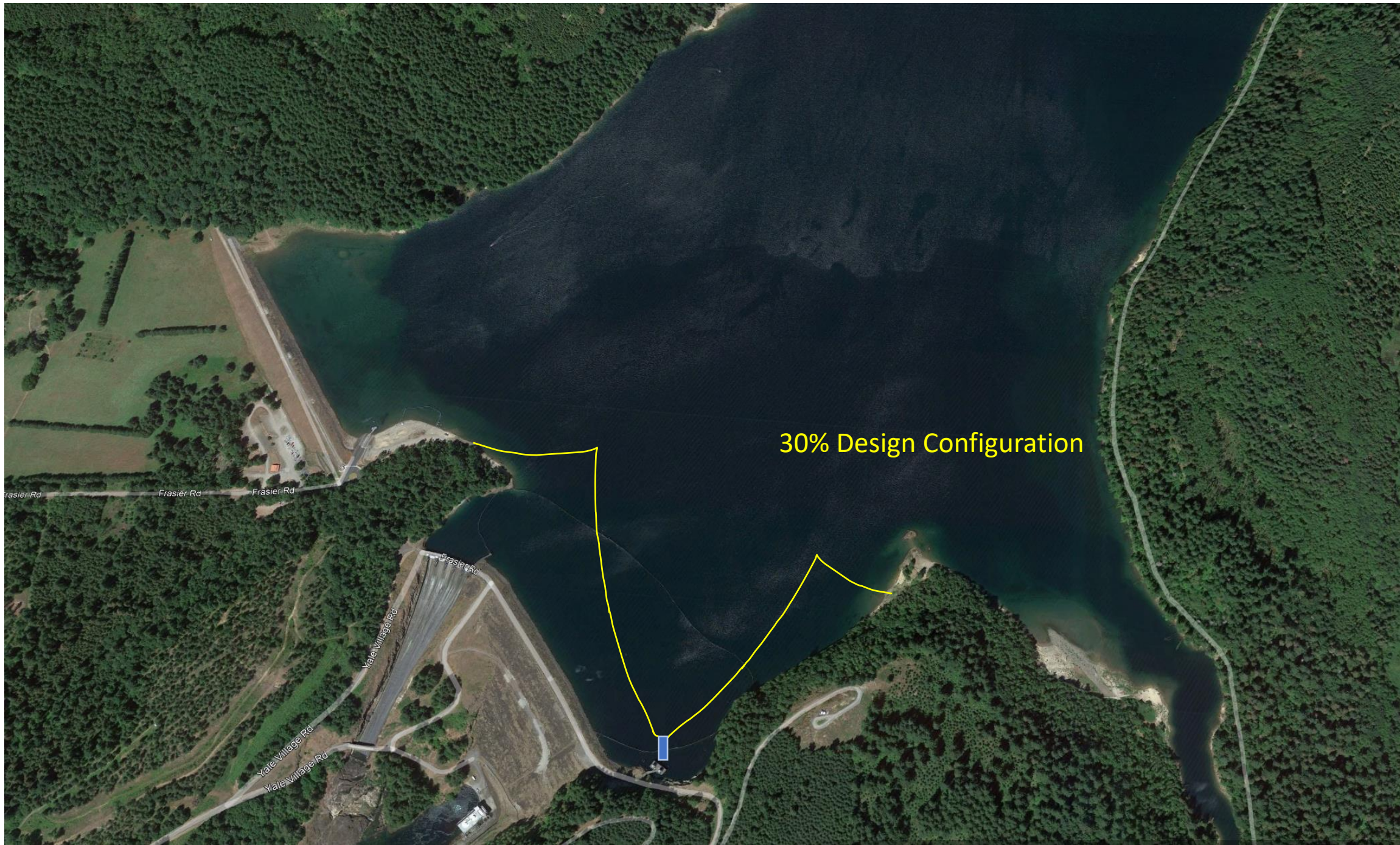
Fish Passage Subgroup meeting 9/14/2023



# Updates

- 60% Design Presentation – December ?, 2023
- Notable updates from the 30% Design:
  - Re-Positioning of Yale FSC Barrier/Guidance Nets
  - Yale Upstream Entrance Configuration/Pre-Sort Pond
  - “No-Touch” Fish Processing Configuration





30% Design Configuration

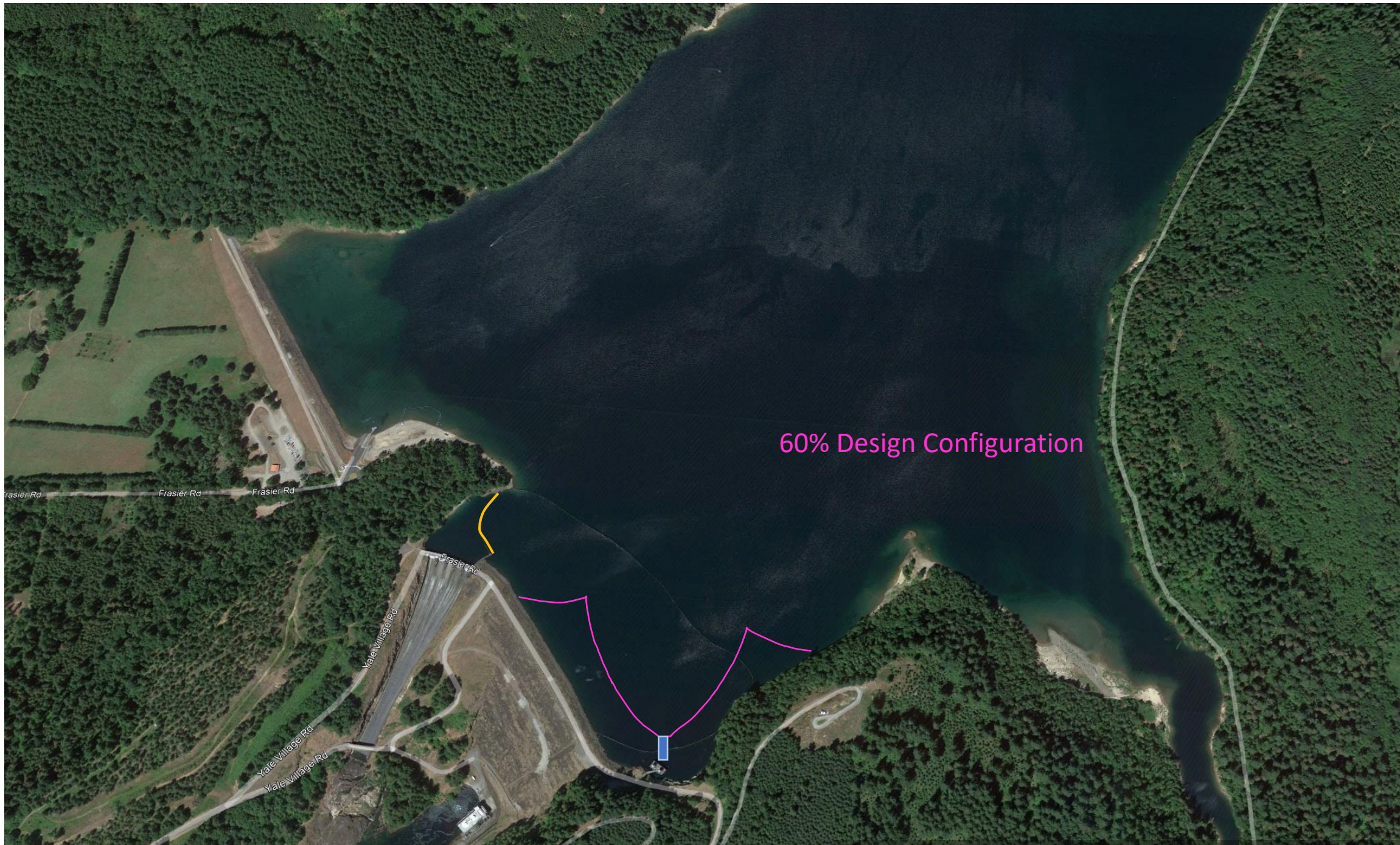
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60% Design Configuration

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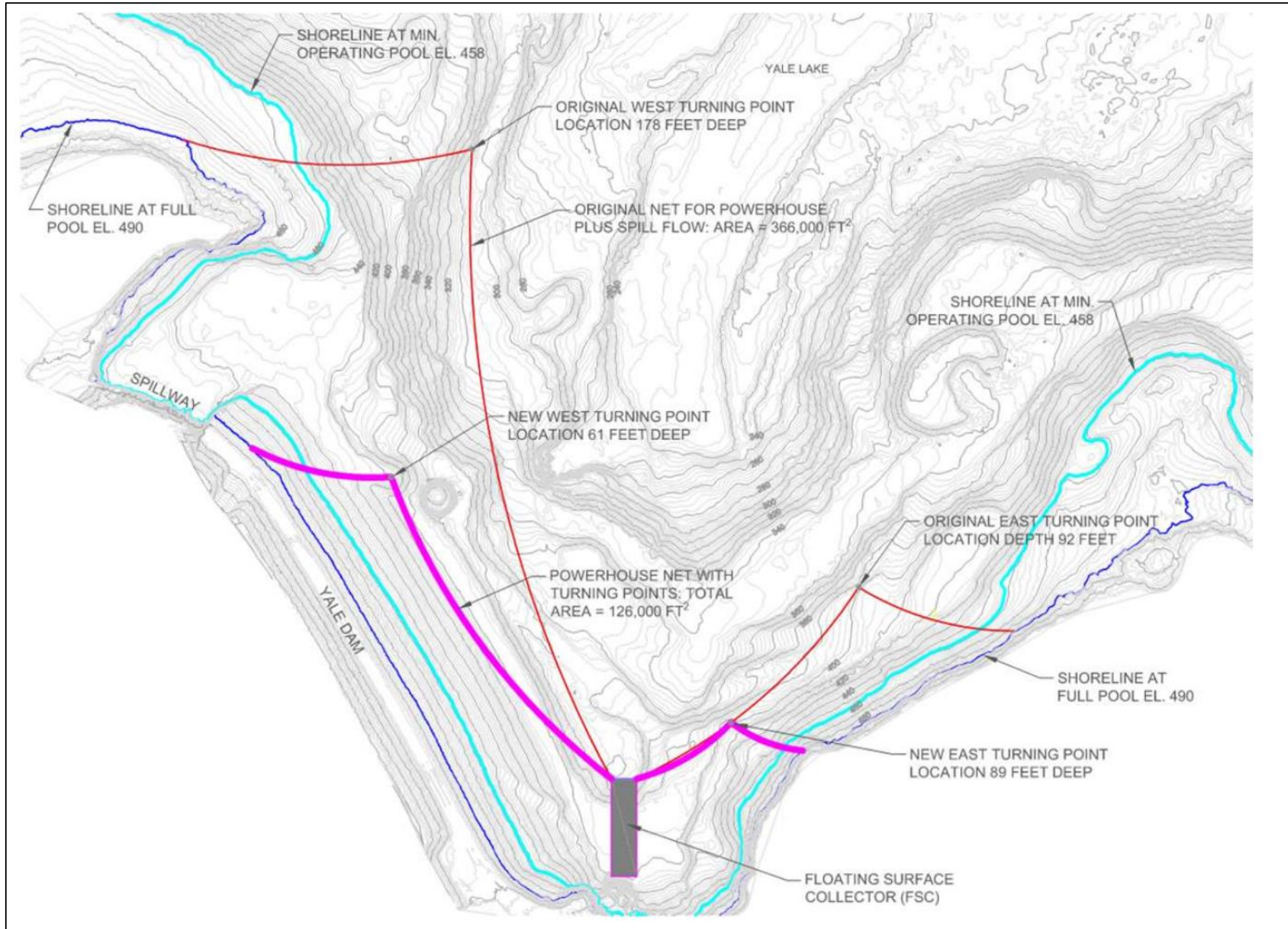
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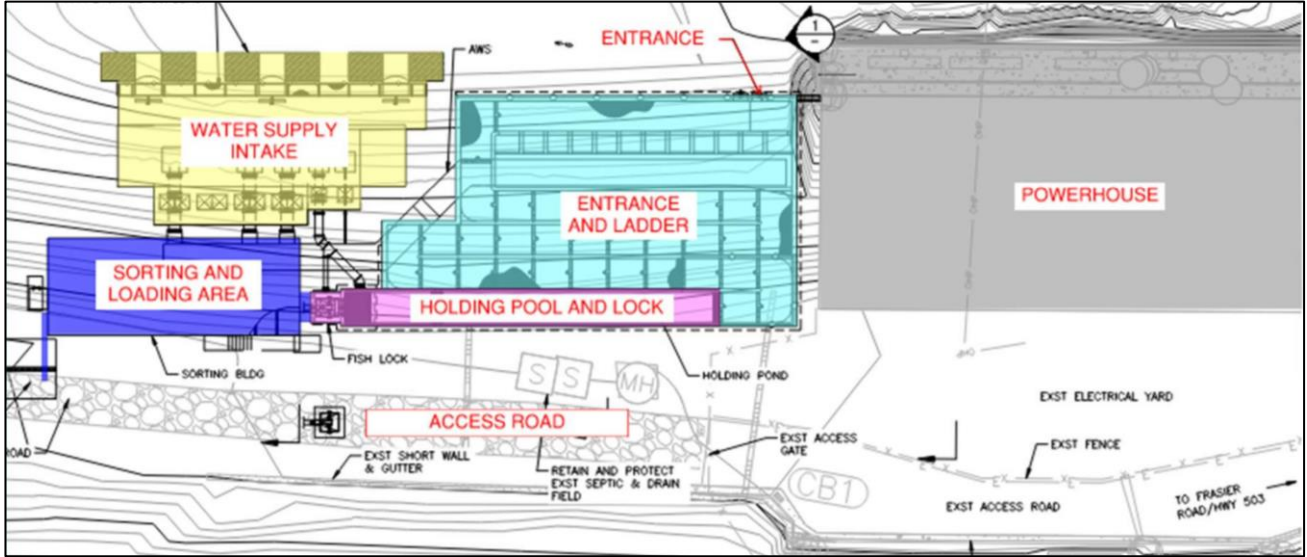


# Yale Barrier/Guide Net Alignment





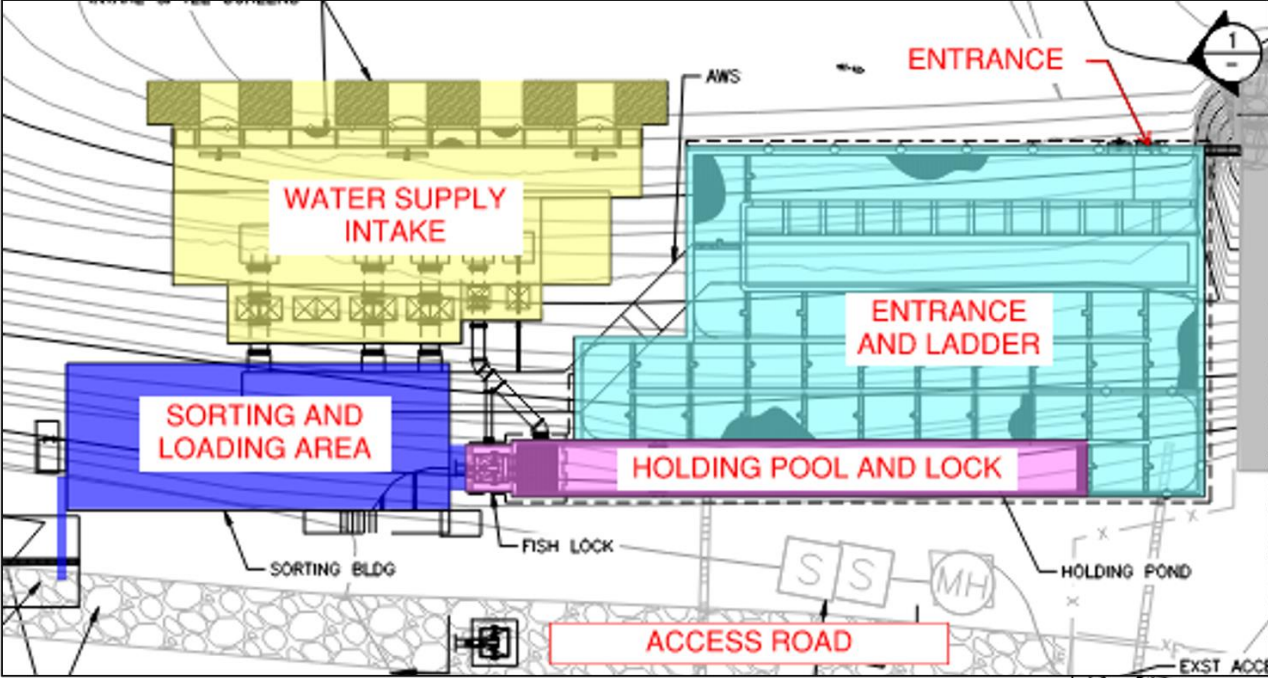
# Yale Upstream Passage



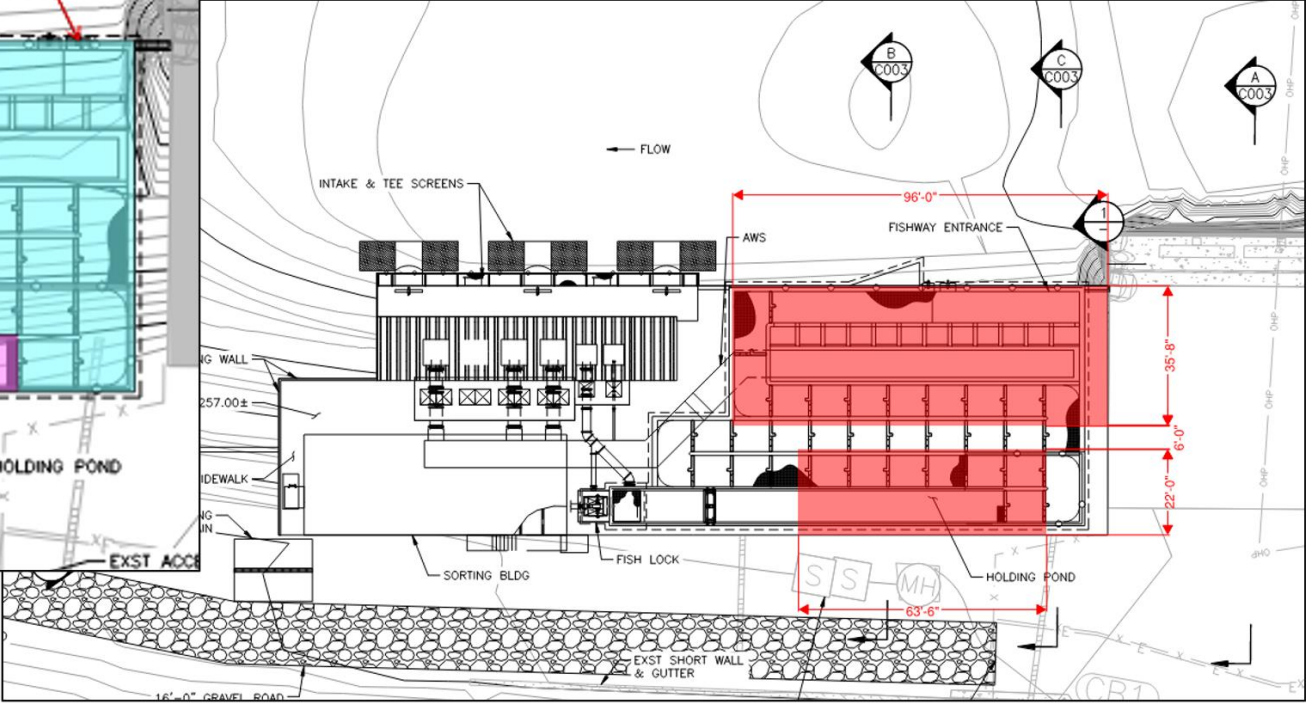
30% Design



# Yale Upstream Passage



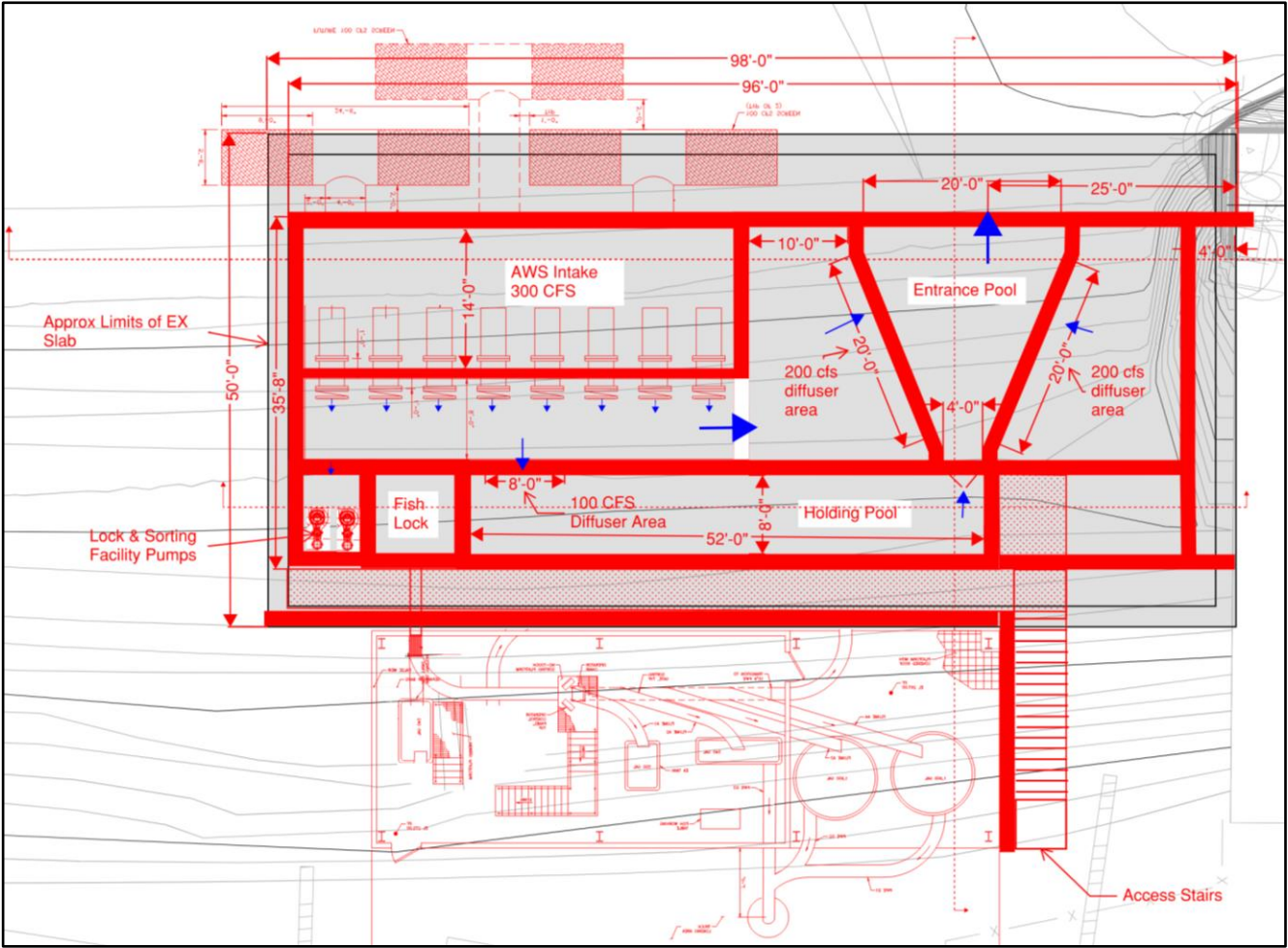
30% Design



Proposed Design

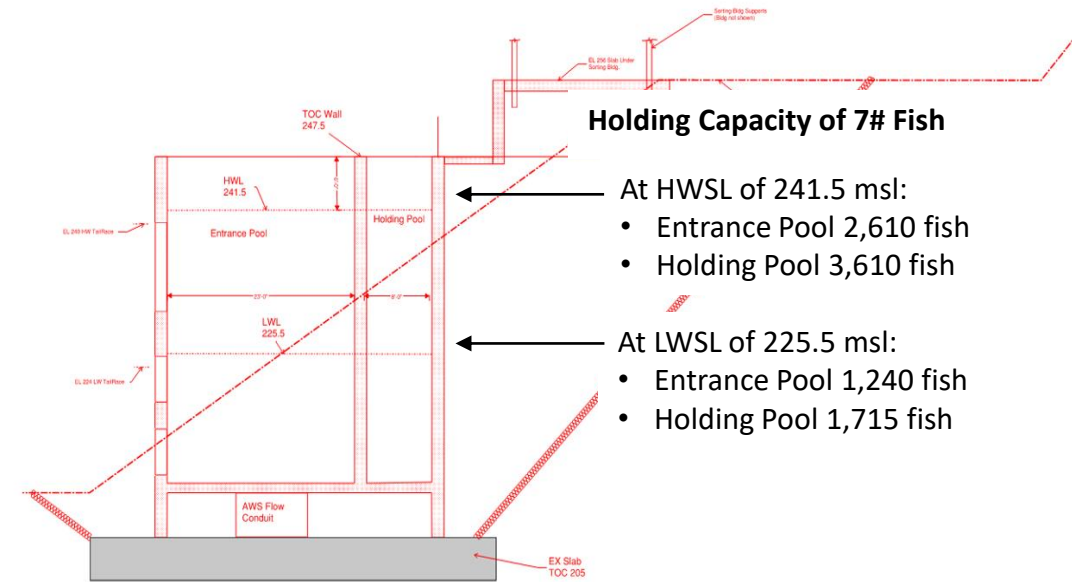
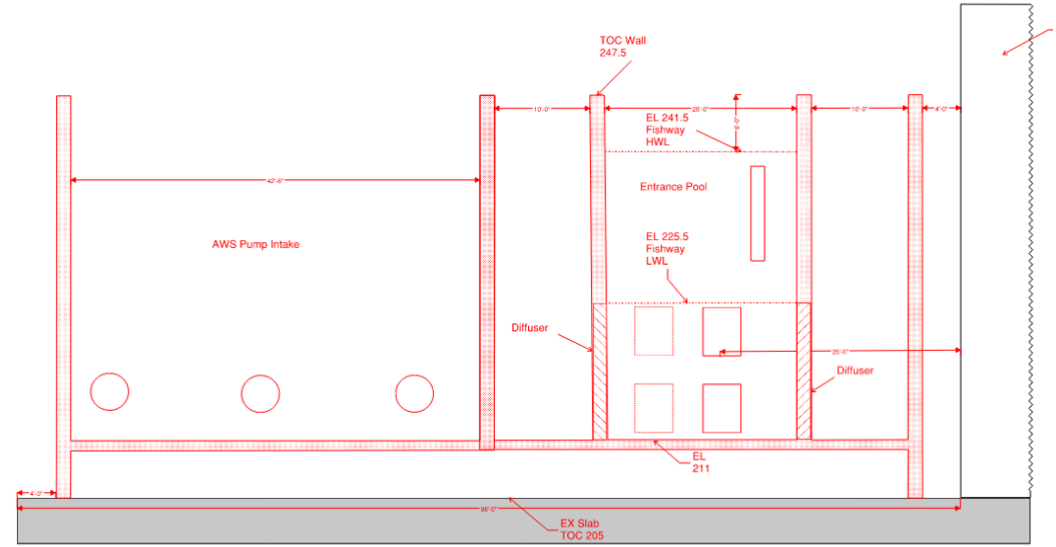
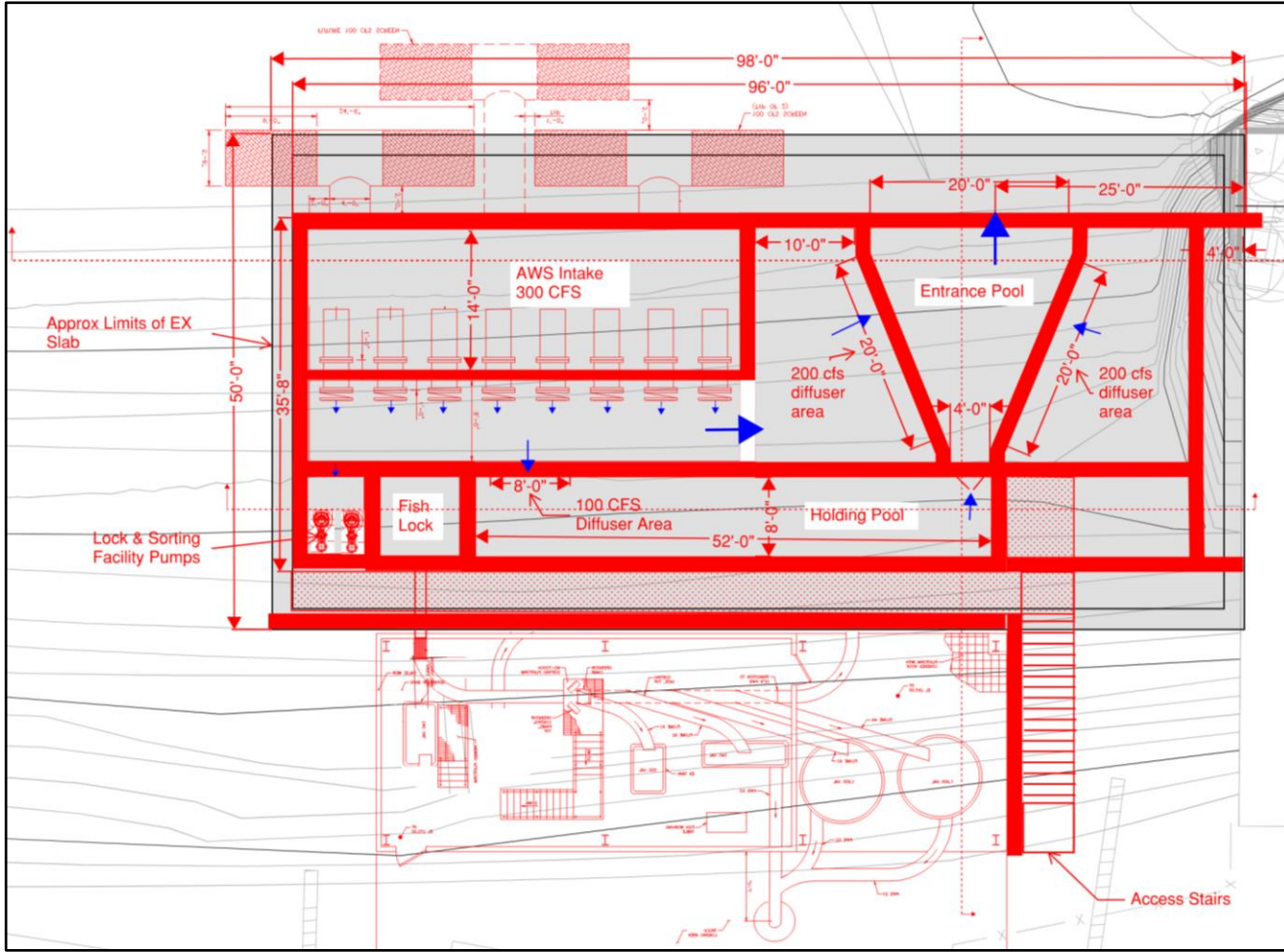


# Yale Upstream Passage





# Yale Upstream Passage





# Sorting Building Layout – “No Touch”

