

2024-309, OCC REPLACE 48-INCH CULVERT ON ROAD TO WATER TOWER
DEPARTMENT OF CORRECTIONS, OLYMPIC CORRECTIONS CENTER
11235 HOH MAINLINE, FORKS, WA 98331

STATEMENT OF QUALIFICATIONS



612 Woodland Square Loop SE,
Suite 100
Lacey, WA 98503
www.kpff.com

December 2, 2024

CONTACT

Matthew Miskovic
360.292.7230
matthew.miskovic@kpff.com

DECEMBER 2, 2024

ATTENTION:

Susan Isham
DOC
11235 Hoh Mainline,
Forks, WA 98331

SUBJECT:

OCC Replace 48-inch Culvert on
Road to Water Tower

CONTACT:

Matthew Miskovic, PE
Project Manager
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DEAR MS. ISHAM AND MEMBERS OF THE SELECTION COMMITTEE:

KPFF Consulting Engineers is pleased to submit the attached Statement of Qualifications for the "OCC replace culvert on Road to Water Tower" project. I believe my prior experience in forestry, with DES/DOC, and with rural fish passage projects will serve you and project stakeholders well.

I am fortunate that much of my professional career has taken place out in the natural environment on the Olympic Peninsula where I love to spend my time. My career in engineering began working for the Department of Natural Resources designing and maintaining roads for timber sales and replacing fish barrier culverts for over 10 years, frequently working with DNR's Olympic Region staff.

Prior to working for KPFF, I also worked as Construction Project Coordinator for the Department of Enterprise Services. Through a variety of projects, I learned the DES/DOC contracting process. I also learned that I had a passion for identifying environmental issues and implementing repairs that will improve conditions for our critical natural resources. That led me to KPFF where I returned to fish passage and the Olympic Peninsula. While the economics of fish passage have changed over the years, I see a lot of similarities between this stream crossing at OCC and many others I have completed in the area.

I understand there can be a smaller scale to rural forestry projects where King County and WSDOT standards don't apply. These types of projects typically involve a small team of field engineers. KPFF uniquely offers survey, stream design, civil, and structural engineering services all under one roof. Our cohesive, in-house team provides efficiency and value to our clients. Our familiarity with each other and understanding of everyone's roles and responsibilities strengthens our team.

This proven team of professionals is knowledgeable and experienced in transportation and fish passage design, topographic survey, hydraulic study and scour evaluation, plan preparation and cost estimating. We are well versed in the DOC design and construction process, WDFW Water Crossing Design Guidelines, and the permitting process.

I will serve as your Project Manager and main point of contact. I am available to commit the energy and attention this project requires to stay on schedule and within budget. I have over two decades of experience managing road construction and fish barrier culvert replacement projects in remote locations such as the Olympic Peninsula. I bring an existing relationship with staff at the DNR, WDFW, and Quinault Indian Nation. This team has recently worked with the Quinault Indian Nation to complete final design of a bridge and a culvert on the Quinault Reservation that will go to construction in 2025.

Thank you for reviewing our qualifications. We are excited about this opportunity to continue working with DOC and project stakeholders. Please contact me directly at (360) 359-3820 or email matthew.miskovic@kpff.com if you have any questions.

Sincerely,

A handwritten signature in blue ink that reads 'Matt Miskovic'.

Matthew Miskovic, PE
Project Manager



STATE OF WASHINGTON
DEPARTMENT OF ENTERPRISE SERVICES

1500 Jefferson St. SE, Olympia, WA 98501
PO Box 41476, Olympia, WA 98504-1476

Consultant Selection Contact Form

Designated Point of Contact for Statement of Qualifications

For Design Bid Build, Design Build, Progressive Design Build, GC/CM & Job Order Contracting
(JOC) Selections

Firm Name: KPFF Consulting Engineers		
Point of Contact Name & Title: Matthew Miskovic, Associate		
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Address: 612 Woodland Square Loop, Suite 100		
City: Lacey	State: WA	Zip: 98503

EXECUTIVE SUMMARY

This project proposes to replace an existing 48-inch diameter steel culvert on DNR property with a structure that will meet the fish passage requirements of the WDFW Water Crossing Design Guidelines (WCDG) and the permanent culvert injunction. The existing culvert has failed, likely due to abrasion from a high bedload transported by the un-named tributary to the Snahapish River. An emergency repair is in place, however, time is of the essence to complete the permanent repair as this road is currently the only access to the water tower that serves the Olympic Corrections Center. The funding for design expires June 30, 2025.

An effective repair will address the failure mechanism of the existing culvert by providing a natural streambed through the length of a new culvert. The high bedload present in the stream will pass through the natural streambed without abrading the culvert itself and repeating the failure.

KPFF provided a field assessment and feasibility report in June 2024. As part of that field assessment, KPFF met with DOC, DNR, WDFW, The Quinault Nation on site to discuss key design and permitting considerations, including:

- The structure must accommodate a minimum bedwidth of 12 feet and meet the WDFW stream simulation design criteria.
- The stream is generally steep, and the Quinault Indian Nation expects a design that constructs intentional steps and pools in the stream bed, mimicking the natural stream.
- Permitting includes a Forest Practices Hydraulic Project Approval, or FPHPA.
- Downstream, erosion and incision have lowered the elevation of the streambed several feet. This may result in a roughened channel design to construct a steeper stream channel than that found upstream.



Existing Culvert with Temporary Repair

COMPANY INFORMATION



KPFF has an experienced and skilled staff, as well as the resources, to take on projects of all sizes and deliver on the most constrained schedules. Our firm is currently comprised of over 1,300 professionals. Our offices work together in collaborative ways to promote innovation and progress in our practice. We have successfully leveraged our size to accomplish projects of all sizes, budgets, and schedules.

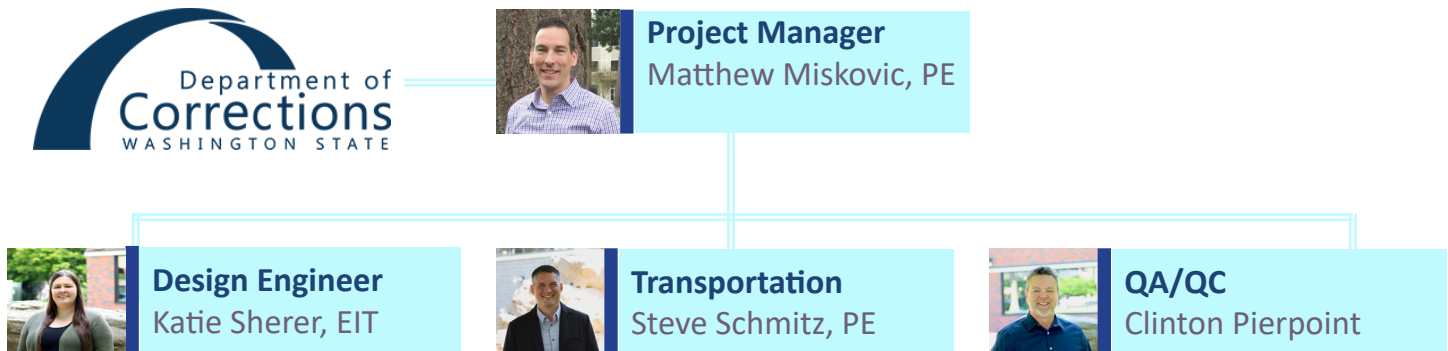
KPFF brings more than great technical qualifications and resources to the table when we join a team; our most valuable attributes are the people who make up our firm. The collective talents and ingenuity of our employees give us the capability to transform problems into solutions and look beyond simple requirements to create opportunities for excellence in design, constructability, and exceeding performance goals. The cornerstone of our philosophy is the freedom of individuals to seek creative and economic solutions for our client's needs, and to participate as a team member in exploring the broader issues involved in projects today.

Founded in Seattle in 1960, KPFF Consulting Engineers has been continuously engaged in the practice of professional engineering for 64-years. KPFF provides civil engineering, structural engineering, stream design and surveying services to government agencies, developers, architects, and contractors for diverse projects. We are experienced professionals in a wide variety of projects, and have achieved many engineering firsts. KPFF has offices in 26 locations across the United States.

The Lacey office opened in 2006 and houses 40 professionals providing civil engineering, stream design and surveying services to multiple State, Federal, and local Agencies.

PROJECT TEAM

KPFF has put together a highly capable team that is available to provide the necessary level of support to the Department of Corrections and we are committed to the success of the project.



Matthew Miskovic, PE Project Manager, Fish Passage Design Engineer

Education: BS, Forest Engineering, Oregon State University

Matthew has over 20 years of professional experience in design and project management of fish passage culvert and restoration projects that includes lead design and construction administration of over 60 structures that are in compliance with the requirements of the permanent culvert injunction. His experience includes field assessment, geomorphic analysis, hydrologic and hydraulic modeling, alternatives analysis, cost estimation, specification writing, plan preparation, transportation system planning and design, and construction oversight.

Registration:

PE: WA # 44712,
WSDOT FP Cert. FPT22-26678;
WSDOT HRM Cert. 191167;
Assoc. DBIA

Matthew has extensive experience with the WDFW Water Crossing Design Guidelines, US Forest Service Aquatic Organism Passage Stream Simulation Design Guide, FHWA Culvert Design for Aquatic Organism Passage as well as the WSDOT Hydraulic Manual and various other FHWA design processes. Matthew's fish passage structure design work routinely provides hydrologic and hydraulic modeling, structure sizing, stream channel restoration, embankment stabilization utilizing bioengineering techniques, placement of large woody material, stream-bed material design, zero-rise analysis and backwater analysis.

Relevant Project Experience:

- Olympic Corrections Center Tributary to Snahapish River Feasibility Study
- Clallam Bay Corrections Center Culvert Replacement
- Thurston County, Fish Passage Design On-Call
- Coast Salmon Foundation, Fish Passage Design On-Call
- WDFW Forest Engineering On-Call
- Jefferson County, Thorndyke Creek Fish Passage Culvert Replacement
- WSDOT Padden Creek Fish Passage Design-Build
- Pacific Coast Salmon Coalition, Goodman Creek LWM Placement
- Woodinville Duvall Road Tuck Creek Culvert Replacement
- Coal Creek Bridge Replacement



Katie Sherer, EIT Design Engineer

Education: BS, Ecological Engineering, Oregon State University

Registration: Engineer in Training in Washington, WSDOT FP Certification # FPT22-39456

Katie is a design engineer with experience in fish passage culvert and restoration projects. She has served as a lead designer on various projects, being involved in all technical aspects including report writing, specifications, cost estimations, hydrologic analysis, hydraulic modeling using HEC-RAS, and zero-rise analysis. In addition, she also has experience applying GIS, Autodesk CAD software, and MicroStation to better support design. Katie is knowledgeable about various guidelines and manuals such as WDFW Water Crossing Design Guidelines, the WSDOT Hydraulics Manual, and NOAA Fisheries Guidelines for Salmonid Stream Crossings. The knowledge and experience Katie brings allows for a more direct path for the project through the design phase and into construction.



Steve Schmitz, PE Transportation Engineer

Education: BS, Civil Engineering, Washington State University

Registration: PE in Washington, #48228

Steve is a professional engineer with almost 2 decades of experience designing and managing civil engineering and construction projects. Steve's understanding of multi-disciplinary work, regulatory process, attention to detail, constructability, clear communication, and engaging demeanor make him the ideal team member. His experience with projects goes beyond just the technical skills needed to design an effective project. He understands how to integrate these projects into sites by avoiding and/or mitigating impacts to users and critical areas. Working with stakeholders, Steve is able to work through the issues that many see as encumbrances and works towards a consensus that supports the project's goals.



Clinton Pierpoint QA/QC

Education: Civil Engineering Studies, Washington State University

Clint has 30 years of experience with civil engineering design and management. He has in-depth experience with all elements of planning, design, and construction of site development and utilities projects. Clint brings specialized experience with projects of this nature with his knowledge of water and sewer design, including working with municipalities and commercial systems. Clint has extensive experience with pavement rehabilitation and replacement projects throughout the State of Washington, specifically in Eastern Washington.

OLYMPIC CORRECTIONS CENTER TRIBUTARY TO SNAHAPISH RIVER FEASIBILITY STUDY, JEFFERSON COUNTY

KPFF provided a field assessment of the stream and led an interdisciplinary team meeting including staff from DOC, DNR, WDFW, and the Quinault Indian Nation to ensure the project objectives were understood and stakeholder needs were known for the Department of Corrections.

The feasibility study utilized preliminary field measurements and hydraulic analysis to advance a feasible alternative and provide the report on a short timeline, prior to the end of the state's fiscal year.

KPFF provided an overview of the site hydrology, preliminary hydraulic analysis, structure alternatives, the preferred alternative, construction considerations, and a summary of environmental permitting and stakeholder coordination.

While the contributing drainage area above this road crossing is small at less than a tenth of a square mile, it is less than a mile from the Snahapish River which has a documented presence of coho salmon.



THORNDYKE ROAD MP 4.71 CULVERT REPLACEMENT, JEFFERSON COUNTY

This project for Jefferson County was completed in two phases. The first phase was alternatives analysis, preliminary design and grant funding application. The second phase was final design and construction, completed in 2022. The project is located on Thorndyke Creek and replaced a fish barrier culvert with a buried bridge providing fish passage.

KPFF worked extensively with Jefferson County, WDFW Biologists, the WDFW Technical Review Team, and local Tribes to ensure the proposed 35-foot buried bridge met stakeholder objectives, which included design of large woody material and an off-channel habitat area to provide velocity refuge during high flows. KPFF was engaged with the Brian Abbott Fish Barrier Removal Board throughout the project design to facilitate funding the design and construction of the project. Construction support was provided by KPFF.



The design team proposed constructing a temporary bypass road around the construction site, which was approved by stakeholders. KPFF developed the mitigation and planting plan for the increased disturbed area which included planting larger trees in a high density to kick start the riparian revegetation.

ANTON & CEDAR CREEK CULVERT REPLACEMENTS, CLALLAM COUNTY, 2020-PRESENT

KPFF provided prime project management, survey, civil design, fish passage design, and stakeholder coordination for two culverts on Bear Creek Road in Clallam County Washington. Preliminary design was completed under a contract with the Coast Salmon Foundation. The Wild Salmon Center secured federal funding for the final design which has been completed and includes NMFS stream design criteria and federal construction contract requirements.

Site challenges included private property ownership, multiple utilities, and designing a bypass road for residential traffic to pass uninterrupted during construction. KPFF led several coordination meetings with multiple project stakeholders including Trout Unlimited, Wild Salmon Center, Coast Salmon Foundation, WDFW, NMFS, County Staff, and Tribes.



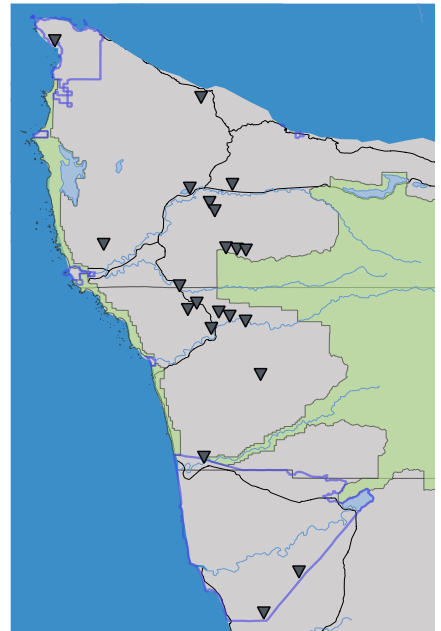
The project was successfully constructed in 2024.

OLYMPIC PENINSULA FISH PASSAGE DESIGN ON-CALL

Working with the Coast Salmon Foundation (CSF), KPFF has provided preliminary and final designs for replacement of over ten fish barriers on the Olympic Peninsula. CSF has funded projects to 30%, and partners the Wild Salmon Center and Trout Unlimited have sponsored the final design and construction. KPFF has been involved early, providing prime project management and grant application support for the RCO Brian Abbott Fish Barrier Removal Board and NOAA grants (Bipartisan Infrastructure Bill).

KPFF has led site visits, design review meetings and progress meetings including staff from CSF, WSC, TU, Tribes, Counties, WDFW, RCO, NOAA, and the design team. KPFF has worked diligently to understand and incorporate stakeholder priorities. These projects have included representatives from the Quinault Indian Nation, Quileute Tribe, and Hoh Tribe.

The majority of the project sites are county roads. Two sites are on the Moclips Highway under BIA jurisdiction, and two sites are on Quinault forest roads. On the Quinault sites, KPFF assessed the nearby transportation network and found that with minimal road maintenance and reconstruction, two fish passage barriers could be permanently removed, at substantial savings to the Tribe.



PROJECTS INCLUDE:

- Two Trout Creek – Preliminary Design of a bridge on Oil City Road at MP 0.51
- Anton & Cedar Creek – Construction of 2 multi-plate box culverts on Bear Creek Road.
- Elk Creek – Final Design of a multi-plate arch culvert on Moclips Highway.
- Tributary to Hell Roaring Creek – Final Design of a concrete box culvert on Upper Hoh Road
- Dowans Creek – Preliminary Design of a crossing on a private driveway (underway)
- Tributary to Moclips River – Design of 2 culvert removals and associated stream restoration
- Snell Creek – Preliminary Design on Upper Hoh Road (underway)
- Lindner Creek – Preliminary Design of a concrete bridge on the Upper Hoh Road (underway)
- Quandary Creek – Final Design of a concrete bridge on East Lake Pleasant Road (underway)
- Tributary to Red Creek – Final Design of a bridge on Moclips Highway (underway)
- Tributary to Dickey River – Preliminary Design of a multi-plate arch culvert on Mina Smith Road (underway)
- Wa’atch Creek – Design of a bridge on Cape Flattery Road
- Tributary to Bogachiel River – Design of a bridge on Undi Road

JBLM MCCHORD RUNWAY CULVERT REPLACEMENTS, TACOMA WA

KPFF was part of a team awarded to complete the design-bid-build of an emergency culvert replacement at the McCord Airfield. KPFF provided civil and structural engineering services for the replacement of the corrugated metal culvert with a concrete structure. Also responsible for engineering a 1,800 ft. long coffer dam and pump system, allowing fish to continuously flow through naturally.



REFERENCES

OCC SNAHAPISH RIVER FEASIBILITY STUDY

ED WINKLEY

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THORNDYKE

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ANTON & CEDAR CREEK

BETSY KRIER

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CSF FISH PASSAGE ON-CALL

MARA ZIMMERMAN

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KICK-OFF MEETING & SITE ASSESSMENT

After notice-to-proceed, KPFF will develop a critical path schedule for the project that includes design milestones, review periods, review meetings, permitting, advertisement and bidding, material procurement, and construction. For projects with tight time lines, it's important to establish a schedule early and receive buy in from stakeholders. Throughout the project, the project schedule will be revisited and adjusted as needed to complete the project on time.

KPFF will schedule a kick-off meeting with DOC and project stakeholders including representatives from DNR, WDFW, and the Quinault Indian Nation. The purpose of this meeting is to discuss the project scope, objectives, priorities, stakeholder preferences, establish clear expectations and line of communication, schedule requirements, and a work plan. It has been our experience that various project owners and stakeholders frequently have different expectations regarding level of habitat restoration required and it's important to hear from everyone and establish common objectives early for the team. KPFF will build on these existing relationships and previous site assessment to ensure stakeholder concurrence on key design parameters such as bankfull width and channel morphology to move efficiently through design.

SITE SURVEY

While preliminary field measurements were taken during the feasibility study, a topographic survey including an inventory of trees affected by the project will be required for final design. The topographic survey will ensure the designs accuracy and fit to existing field conditions, reducing the potential for costly change orders during construction. To reduce costs when working in a large area such as this, we can supplement survey with LiDAR topography as needed for additional modeling. Stakeholders such as the Quinault Indian Nation will expect a high quality design based on good field data.

KPFF's in-house survey crews can provide the control and topographic survey required to develop the project base maps. We schedule survey as early as possible to provide our team with the data required for analysis and design without delay. One benefit of having in-house survey crews is being able to identify priority projects and schedule them accordingly.



KPFF's survey crews are experienced with fish passage design and hydraulic modeling data requirements. They know the importance of collecting site features used in design such as the longitudinal profile of the stream – including features such as steps, pools, riffles, and large woody material (LWM); stream channel cross sections; ordinary high-water mark, channel banks, and site drainage patterns. Our fish passage design engineers accompany our surveyors to the sites to identify and discuss important site features and ensure all the necessary data is collected the first time. We believe this longstanding side-by-side working relationship that our fish passage designers have with our surveyors benefits our clients by providing a smooth transfer of all the data necessary to complete design. It also eliminates common survey issues on these types of projects such as a lack of adequate longitudinal profile length, lack of detail required for longitudinal profile analysis, and inadequate topography for hydraulic modeling or roadway design.

HYDROLOGY & HYDRAULIC ANALYSIS

KPFF will perform a limited hydraulic study that will provide site hydrology and hydraulic information from a 1-D hydraulic model that will be used to establish flood flows and a design elevation for the fish passage flow, 100-year flood flow, and 500-year flood flow for scour analysis. KPFF will also perform the scour analysis that will affect stream bed material size and depth, and potentially the structure size. This information will inform the structure design and ensure compliance with WDFW Water Crossing Design Guidelines. The effects of climate change will also be incorporated into the sites hydrology and hydraulic modeling.

PLANS, SPECIFICATIONS & COST ESTIMATE

For expedience, we propose a combined schematic design/design development phase, followed by 90%, and Final Construction Documents. Each design phase will include complete submittals and the opportunity for review and comment, following the standard DOC design process. KPFF will host a review meeting that includes project stakeholders at each design phase.

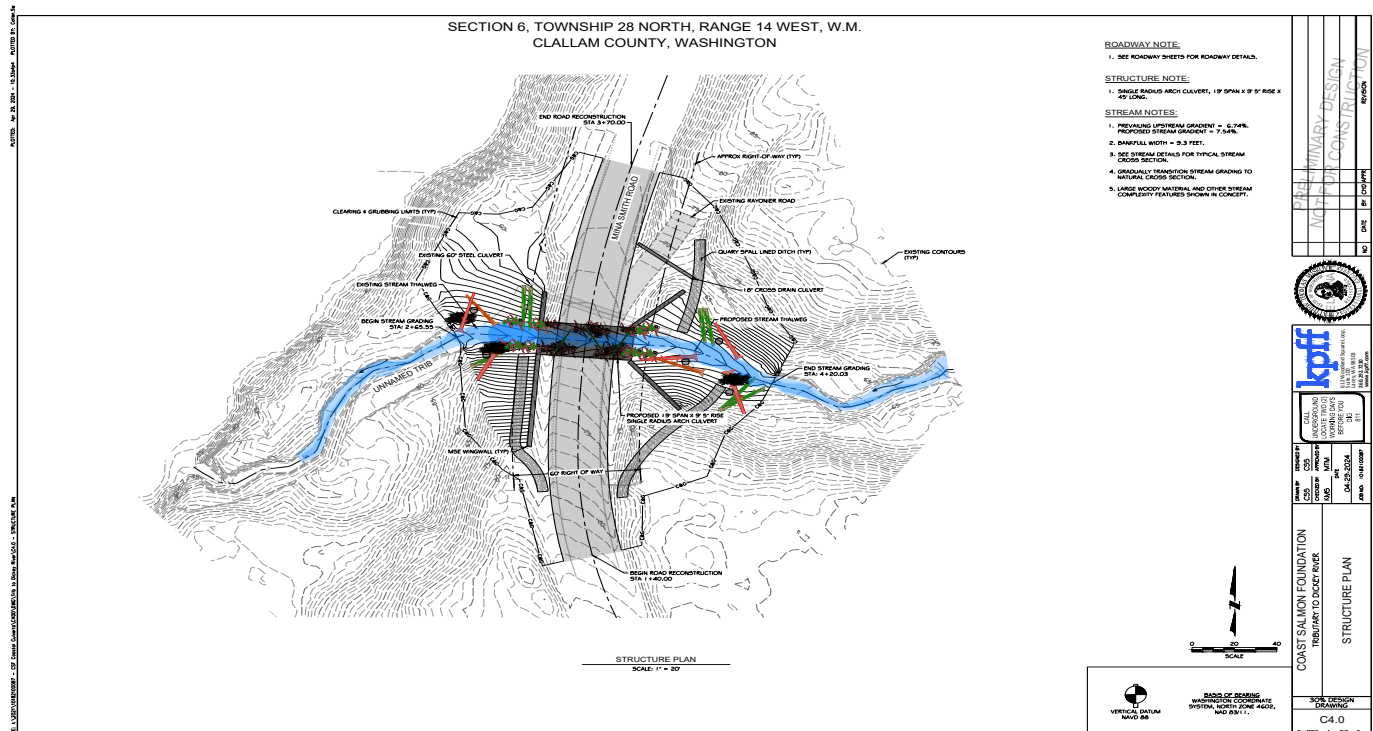
KPFF will prepare a package for bidding that includes plans, specifications, and a cost estimate (PS&E) for the site. The design will meet all requirements of the Permanent Culvert Injunction, WDFW Water Crossing Design Guidelines and AASHTO requirements.

In order to control costs throughout the design, KPFF will develop and maintain cost estimates to keep the project within funding constraints. Cost estimates are broken down by WSDOT standard bid items utilizing recent bid prices in the area and costs are projected out to the anticipated construction year. KPFF will also contact material suppliers to acquire budget quotes for structures and will utilize our contacts with local county engineering staff and contractors to verify costs. Our vast experience with different structure types and network of vendors and contractors allows us to develop and evaluate cost saving alternatives.

QA/QC

KPFF is very familiar with the DES/DOC project manual and will ensure accurate plans and technical specifications through a rigorous QA/QC process. Each submittal will undergo a two-part review. First, a technical review by a senior stream and transportation engineer. Secondly, by Clint Pierpoint, our project manager most experienced with DOC projects throughout the state. We find this second review by someone with “fresh eyes” on the project offers a critical look at all project elements that will reduce the potential for delays during bidding and costly change orders during construction.

PLAN SHEET	Combined SD/DD	90% Preliminary Design	Construction Documents
Cover Page & Vicinity Map	●	●	●
Project Team & Notes	●	●	●
Survey/Existing Conditions	●	●	●
Site Prep & Demolition Plan	●	●	●
TESC Plan & Notes	●	●	●
TESC Details	●	●	●
Right-of-Way & TCE Plan	●	●	●
Project Horizontal Control Plan	●	●	●
Temporary Stream Diversion Plan	●	●	●
Roadway Plan & Profile	●	●	●
Roadway Typical Section	●	●	●
Roadway Details	●	●	●
Utility Relocation Plan	●	●	●
Stream Plan & Profile	●	●	●
Structure Cross Section	●	●	●
Typical Stream Cross Sections	●	●	●
Stream Habitat Details	●	●	●
Planting Plan	●	●	●
Planting Details	●	●	●
Cost Estimate	●	●	●
Design Report	●	●	●



PERMITTING

KPFF will prepare a draft Forest Practices Hydraulic Project Application (FPHA) for DOC and DNR review prior to submittal. KPFF will provide coordination with WDFW, DNR Forest Practices, and the Quinault Indian Nation during the permitting process. KPFF has a longstanding relationships with each of the parties involved in this project. We engage WDFW, DNR, and Tribes early in the process to incorporate feedback and prevent setbacks.

Final permit applications are typically submitted after the DD design phase, to ensure the design is developed enough that permits can be obtained early and prevent delay of the construction contract advertisement.



BID SUPPORT & CONSTRUCTION OVERSIGHT

KPFF knows that time is of the essence during bidding and construction. We have an office wide understanding from the top down that bidding and construction issues are priority and need to be handled quickly to avoid costly change orders and project delays. We use our wide network of staff to resolve issues quickly, while meeting other deliverables.

After advertisement, KPFF will host a pre-bid meeting with DOC, DNR, and interested contractors. Once a contract is executed, KPFF will review submittals and Requests for Information (RFI's) timely. Our approach to construction support consists of teaming with the contractor for a successful project. We put our decades of experience on fish passage construction sites to work to anticipate common pitfalls and prevent them from affecting project budget or schedule.



STATEMENT OF CAPACITY

The KPFF team employs a deep bench of professionals passionate about fish passage and river restoration available to perform the work within the time allotted. We will staff this project appropriately to meet milestone deadlines. We often draw upon our resources in our various offices and even across companies to deliver successful projects to our clients. This experience and familiarity, not just within our own company, allows for a smooth transition of information and deliverables. This team will be assigned to the project for the duration of the project. No key members will be substituted or removed from the team without discussing changes with DES/DOC.

