JNU Pt. Stephens Culvert & Drainage Analysis

Summary of PER Plans September 20, 2024

Survey and ROW Mapping

ROW Base mapping and topographic survey was provided by DOT&PF and shown on the plans. All proposed work is contained within the existing ROW. Culvert 2, CU2 on Pt. Stephens Spur Road has a proposed apron at the outlet (See Sheet F2) that abuts the ROW line. We believe it can be constructed from fully within the ROW.

Known Environmental Boundaries

Historic Boundaries

A proposed preliminary APE is shown with a minimum 10' work space beyond proposed cut and fill lines. This is a minimum APE. After PER review, discussion should happen to see whether it changes impact to straight line the APE or make it coincident with ROW lines to simplify understanding in the field. There are no known historic resources in the project vicinity. The project activity may be eligible under Tier 2 of the 106 Programmatic Agreement with SHPO and will be confirmed after PER review.

Section 4(f) Resource

Favorite Channel Beach access trail is anticipated to be a Section 4(f) resource since it accesses a public recreation area. It is within the project area near CU 2 (Sheets A3 & F2). The access extends from ROW onto a City & Borough of Juneau (CBJ) owned parcel adjacent. We believe the trail access can be fully maintained during construction and this commitment can be a contract requirement.

Wetlands/Waters of the US

DOT&PF furnished available information and no known wetlands or waterbodies are in the project vicinity.

Bald Eagle Nests

Known nests were provided by DOT&PF at the following coordinates near, but outside project extents, so they are not shown on plans:

Nest 1: 58.4050°, -134.7588°

Nest 2: 58.4085°, -134.7635°

Anadromous Streams

Not applicable.

Contaminated Sites

Not applicable

PER Plan Requirements

Index and Title Sheet, Typical Sections, Plan Sheets depicting construction limits (see APE) as well as cross sections are included.

Traffic Maintenance

Sheets F1 and F2 depict theoretical diversion profile grades to ensure the pipes can be constructed half-width and maintain one lane of traffic. The specifications will require minimum grades for the half-width condition and a diversion typical section is included.

The pipes are anticipated to be constructed half-width as noted, as there are no alternate routes for area residents to use, and ROW constraints restrict widened embankment diversions around the new culvert installations. Traffic volumes are extremely low and sight distance is adequate at all locations for traffic to yield to oncoming in a one lane condition if left overnight. Area neighborhood notification during design and immediately prior to construction is anticipated to provide area residents information on what to expect during construction and be notified of contractor's schedule. This work is expected to progress quickly and can be contractually required to with interim completion dates, and/or contract completion timeframes after NTP (e.g., 45 days and by October 31, 2026).

Hydraulics and Hydrology

H&H Summary Recommendations are provided under separate attachment as the basis of culvert sizing and apron design. None of the culverts are in proposed fish streams and do not require fish passage design.

Material Sites and Staging Areas

Material sites and staging areas are anticipated to be contractor furnished.

Utility Coordination

Known utilities are shown. CBJ water line was located horizontally, and elevations were provided at valve bolt locations. Water line depths are assumed and shown in profile views on sheets F1 and F2. **The PER plans need to be provided to CBJ as further utility coordination** will be necessary to determine if more exact depths are needed and to understand CBJ's expectations for working in vicinity of the utility during construction. Based on what is shown, existing and proposed culvert at CU2 location may be in close proximity to the water line.

Engineer's Estimate

The Engineer's Estimate is provided. A 10% contingency has been applied to the total project estimate of $475,385.23, which includes the current ICAP rate and 20% CENG cost. Construction staff may advise a higher cost for administering a smaller project. Some items have recent historic bid prices for reasonable comparison (reference Jordan Creek Culverts project.) In general, unit costs are higher due to lower quantities. Options to reduce cost include using 1.5" of HMA instead of 2" (still an improvement over existing chip seal) and only providing pavement patches at the culverts, rather than continuous pavement replacement from CU1 on Pt. Stephens Road to CU3 on Pt. Stephens Spur.

Design Criteria

A waiver from design criteria is assumed for this project. No useful information would be obtained from completing a design criteria sheet since roadway geometric features will not be altered.

Summary of Potential Categorical Exclusion Impacts

CE Resource Category	Possible Impact	Possible Mitigation/Permitting
ROW	Potential Temporary Construction Easements (TCEs) may be needed	Correspondence and coordination with ROW team and project staff. See recommendation above, we believe improvements can be constructed entirely within ROW
Social/Neighborhood Cohesion	Temporary impacts to neighborhood cohesion due to	Access to residential properties would be maintained, see Traffic Maintenance above.

	temporary delays/detours during construction.	
Travel patterns/accessibility	No impacts anticipated.	
Access control	No impacts anticipated.	
School boundaries	No impacts anticipated	
Elderly, disabled	No impacts anticipated	
Alaska Native/Tribal entities	Sealaska Heritage, Central Council of the Tlingit & Haida Indian Tribes of Alaska, Goldbelt Incorporated, Huna Totem Corporation.	Project could qualify for PA based on proposed project activities. Include in scoping and Section 106 consultation for these other consulting parties if PA does not fit.
Economic	No impacts anticipated	
Land Use/Transportation Plans	Project consistent with CBJ Comprehensive Plan (2013).	
Historic Properties	The Alaska Historic Resource Survey (AHRS) database indicates resources ~1,800 ft. away from the proposed project area.	Section 106 consultation, if required will include known resources, but they are not expected to be within proposed APE.
Wetlands & Water Bodies	The National Wetland Inventory (NWI) database shows that wetlands surround the Tee Harbor coast areas, no wetlands in the proposed project area. Water bodies: Tee Creek is located ~1 mile away from the project area. Tee Harbor located outside of Pt. Stephens Rd. Lena Creek is located ~0.87 miles away from the project area.	Potential wetland survey needed to confirm. Information available at this time indicates no jurisdictional wetlands.
Fish	No anadromous streams are present in the proposed project area.	Early coordination with ADF&G on 06/28/2024 determined no residential fish are present. No habitat are needed for anticipated project activities.
Wildlife	The historic eagle nest database shows the presence of eagle nests surrounding Pt. Stephens Road area.	2019 USFWS MOA for bald eagles in SE AK for typical construction activities for DOT&PF.

		It is not anticipated this project will require a permit but they will be obtained if necessary.
Invasive Species	The Alaska Exotic Plants Information Clearinghouse (AKEPIC) database shows the presence of invasive species on Pt. Stephens Rd.	Invasive species survey needed prior to construction. Site visit confirmed presence of site visit. BMPs would be included via contract special provisions, and adequate disposal would be required.
Hazardous Waste	No impacts anticipated. No contaminated sites listed on the DEC Contaminated Sites database within ~1,500 ft. of proposed project area.	
Air Quality	No impacts anticipated.	
Floodplain	No impacts anticipated. Project is adjacent to Flood Zone VE but elevations should not result in an impact. This will be evaluated during PER review.	
Noise	Not a Type 1 project, no impacts anticipated.	
Water Quality	No long-term water quality impacts are anticipated.	BMPs would be required. Project area is anticipated to be under one acre
Construction	Temporary impacts are anticipated during construction, such as traffic patterns and water quality.	Traffic control plan would address anticipated impacts. Access to residential properties would be maintained. Appropriate BMPs during construction would be required per the ESCP.
Section 4(f)/6(f)	Section 4(f) resources are located within and near the proposed project area.	Consult with Statewide Environmental Office on resources.
23 CFR 771.117(b)(2): Is there substantial controversy on environmental grounds?	No	
23 CFR 771.117(b)(3): Significant impacts on Section 4(f) or Section 106 properties?	No	
23 CFR 771.117(b)(4): Are there inconsistencies with Federal, State or local laws?	No	