Floodplain Statement of Findings
for the
Installation of a Fiber Optic Cable from
U.S. Forest Service-Savannah River Headquarters to the Advanced Tactical Training Area
at the Savannah River Site

Prepared for

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Floodplain Statement of Findings for the Installation of a Fiber Optic Cable from U.S. Forest Service-Savannah River Headquarters to the Advanced Tactical Training Area at the Savannah River Site

1.0 Project Description

The Department of Energy (DOE) prepared the *Floodplain and Wetland Assessment for the Installation of a Fiber Optic Cable from U.S. Forest Service-Savannah River Headquarters to the Advanced Tactical Training Area at the Savannah River Site* (SRNS-RP-2023-00155, Revision 0, March 2023) to evaluate potential impacts to floodplains and wetlands from the installation of a fiber optic cable at the Savannah River Site (SRS) from U.S. Forest Service - Savannah River (USFS-SR) Headquarters (HQ) to the Advanced Tactical Training Area (ATTA).

The proposed action is the installation of fiber optic cable from USFS-SR HQ to ATTA (Figure 1). The installation will occur in shoulders of existing road fills approximately six feet from the road edge using a bulldozer-mounted mole plow to create a narrow slit in the soil. The fiber optic cable reel is attached to the bulldozer; the cable feeds into the mole plow which places the cable in the bottom of the slit. Another piece of heavy equipment (*e.g.*, backhoe) trailing the bulldozer runs over the slit to close it. Minimum installation depth below the ground surface will be approximately 48 inches. The project does not meet the definition of a critical action under 10 CFR 1022.4.

The fiber optic cable installation will begin in the equipment room at 760-1G at USFS-SR HQ to connect to an existing fiber optic network. From USFS-SR, the new fiber optic cable will be installed in the south shoulder of Craig Road to UTR. Directional boring will be used to bore under UTR at the Craig Road bridge to avoid impacts to the UTR streambed. From UTR, the installation will continue along Craig Road until turning left on Eubanks Road (install on east shoulder), then turning right on Cox Bridge Road (install on south shoulder). The route will continue on Cox Bridge Road to TC. Directional boring will be used to bore under TC at the Cox Bridge Road bridge to avoid impacts to the TC streambed. From TC, the installation will continue along Cox Bridge Road, terminating at the ATTA Central Office telecommunications exchange. The length of the installation is approximately 8.5 miles.

Directional boring equipment will be set up on the road shoulder for one to two days at each location, then moved off-site or to an upland laydown yard. The bulldozer, plow, and fiber optic cable reel will remain in place on the road shoulder at the end of each workday, then removed from the site at the completion of the project. Materials and ancillary support equipment will be stored at an upland laydown yard or remain on the road shoulder at the end of the workday.

2.0 Floodplain Location Explanation

Installing fiber optic cable from USFS-SR HQ to ATTA is required for upgrading technological infrastructure. The fiber optic cable installation route is generally west to east, while UTR and TC generally flow north to south. The project cannot be reasonably accomplished without crossing the floodplains of UTR and TC.

3.0 Alternatives Evaluated

The purpose of the proposed action is to install fiber optic cable from USFS-SR HQ to ATTA. The preferred alternative is to install the cable using a bulldozer-mounted mole plow in the shoulder of existing road fill. The no-action alternative is to not install the fiber optic cable. The no-action alternative is infeasible because it fails to meet project objectives. A third alternative consisting of using a trenching machine to excavate a trench for fiber optic cable installation was considered economically infeasible. The trenching machine alternative is slower, thus more expensive. The preferred alternative using the bulldozer-mounted mole plow is at least three times faster than a trenching machine.

The preferred alternative has no effect on floodplains and wetlands. The no-action alternative of not installing the fiber optic cable also has no effect on wetlands but does not meet project objectives. The third alternative, using a trenching machine instead of a bulldozer-mounted mole plow, also would have no effect on floodplains and wetlands. However, the trenching machine alternative was determined to be economically infeasible because it would increase costs by at least a factor of three.

4.0 Statement on Conformance to Applicable Floodplain Protection Standards

The project does not change flood storage volumes or base flood elevations for the UTR and TC floodplains; therefore, the project is considered to conform to applicable floodplain protection standards.

5.0 Description of Minimization of Potential Floodplain Harm

The floodplains associated with the project are owned by DOE-SR, are undeveloped, and are uninhabited by people. The project, which does not change base flood elevations or flood storage volumes, is not anticipated to cause floodplain harm.

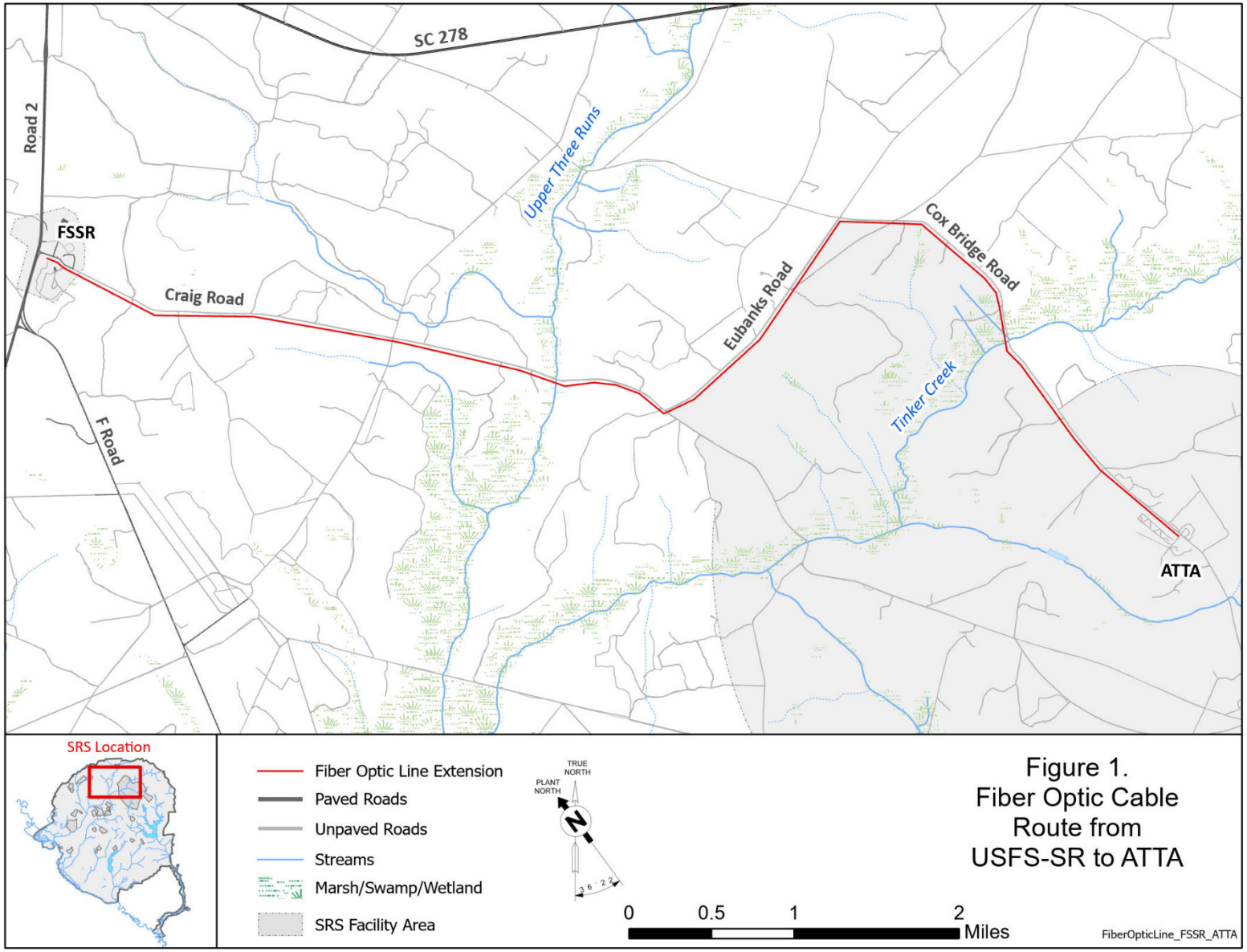

Figure 1. Fiber Optic Cable Route from USFS-SR to ATTA