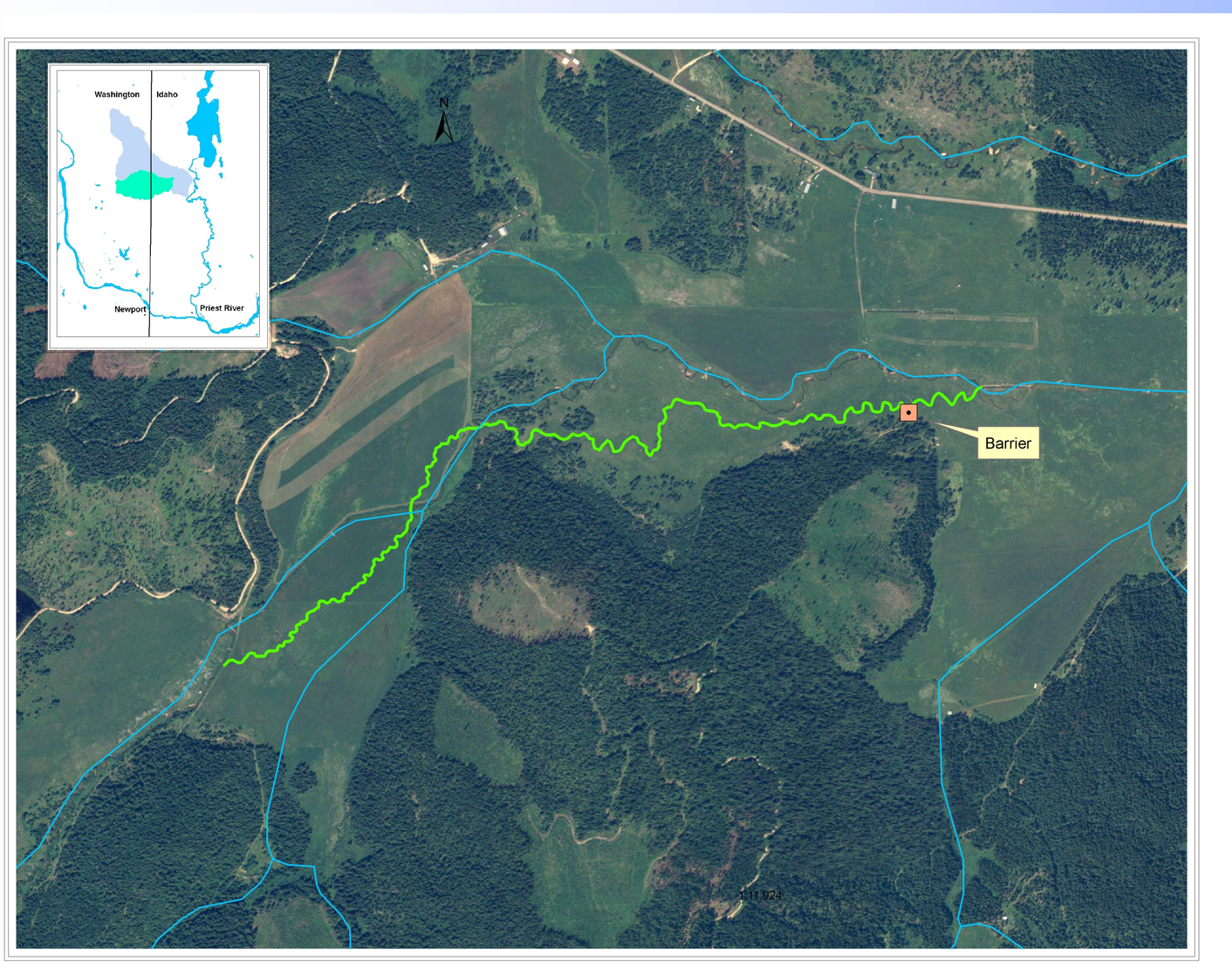
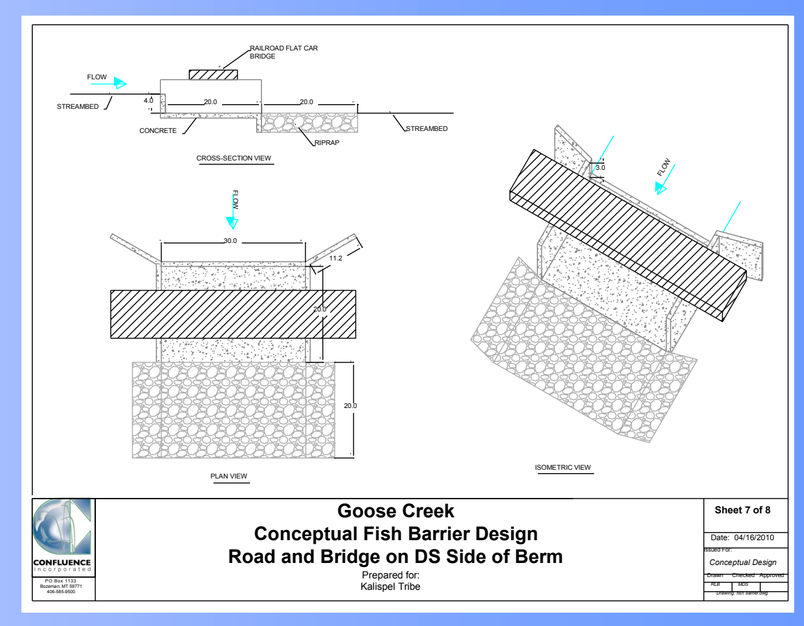
# Goose Creek Channel Reconstruction

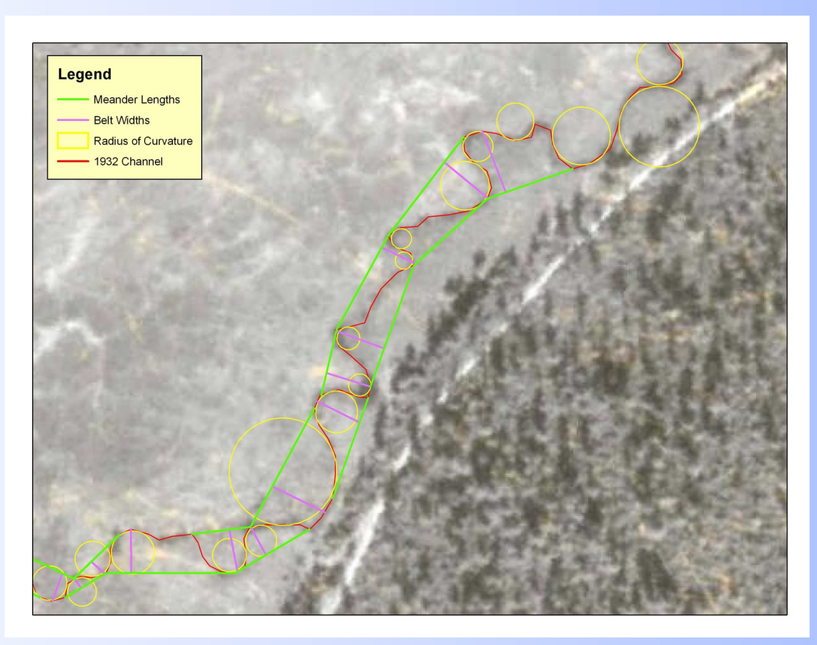



Goose Creek channel reconstruction project. Due to the magnitude of the project area, the Goose Creek restoration plan has been broken into five phases, each of which can be accomplished in a calendar year based on constructability.

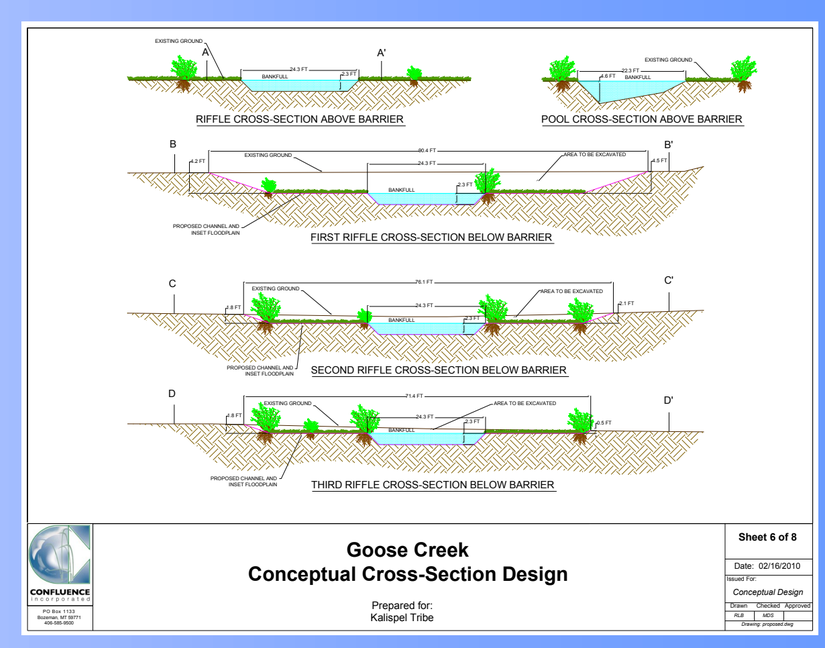



Following an analysis of various options for constructing a barrier, the most appropriate location for installing a passage barrier within Tribal property lies near the existing culvert and stream crossing where the valley wall meets the edge of the meadow. The barrier must prevent fish passage at regular flooding events as well as large flood events (100-yr return interval) to meet the project goals. Given the flat nature of the meadow, this can be achieved by constructing a low berm across the valley perpendicular to the barrier which will contain the 100-year event while maintaining the passage barrier. The fish passage barrier will be installed to provide a 4' drop in elevation in the channel bed.

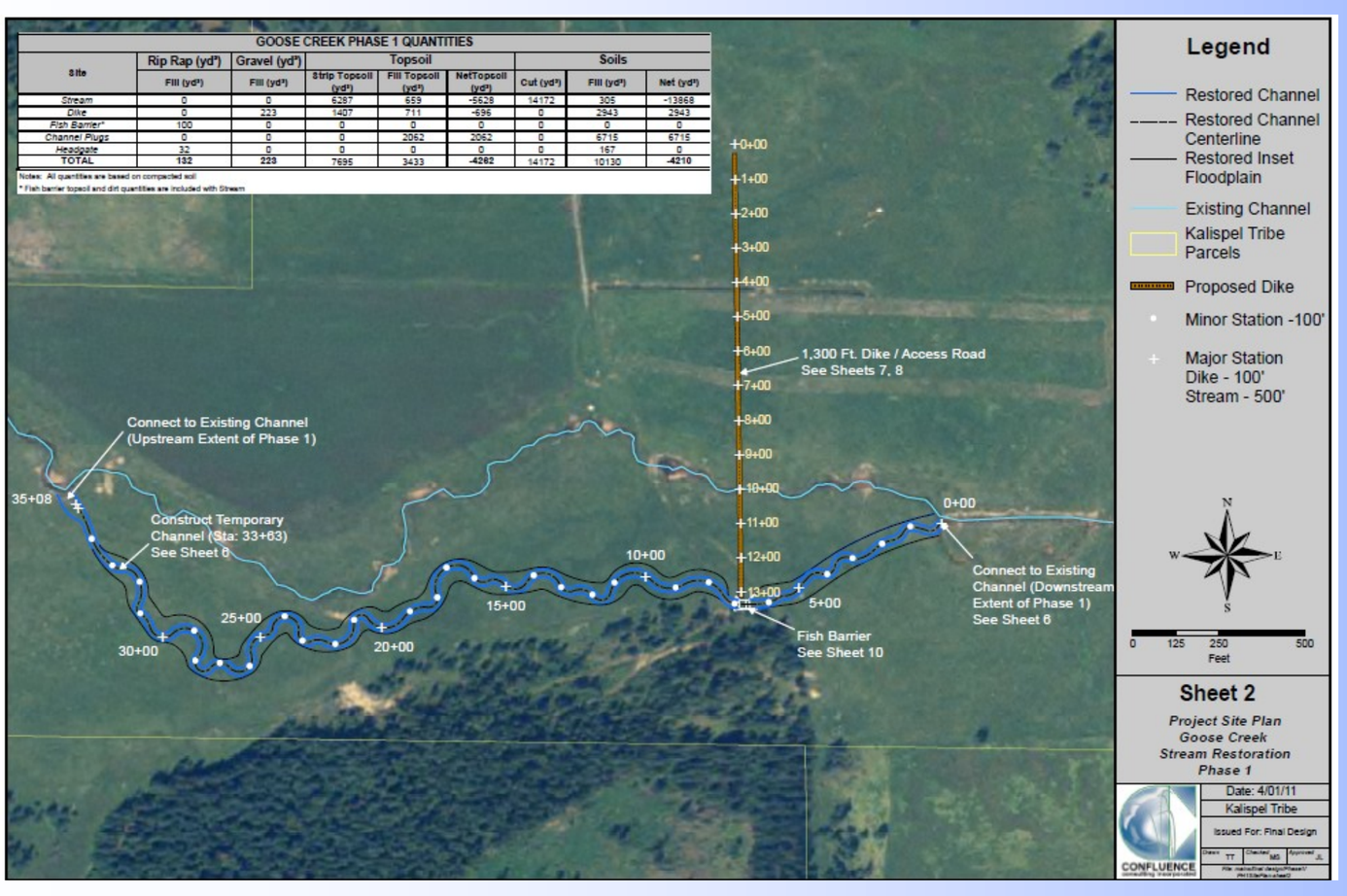
The proposed planform design for Goose Creek includes parameters of sinuosity (ratio of channel length to valley distance), and bendway shape (meander length, radius of curvature, belt width). These parameters have been developed for Goose Creek based on measurements of historic conditions, measurements of reference conditions, an understanding of existing topography, and the integration of a fish passage barrier into the design.




Planform dimensions digitized from 1932 aerials




Relocating the channel to its historic elevation is possible by placing a plug across the existing channel that diverts flow into a newly constructed channel course. Using the meadow topography as a generalized elevation of the new floodplain, the new channel can be constructed at a proper sinuosity, gradient, and dimension to provide suitable riffle and pool habitat features. Following channel excavation, riparian revegetation and recovery will provide a suitable, well vegetated corridor along the new channel




Once barrier construction has been completed, the Tribe will then pursue Phase I channel reconstruction (3,170 feet) and Dike/Access Road construction.

Kalispel natural resources