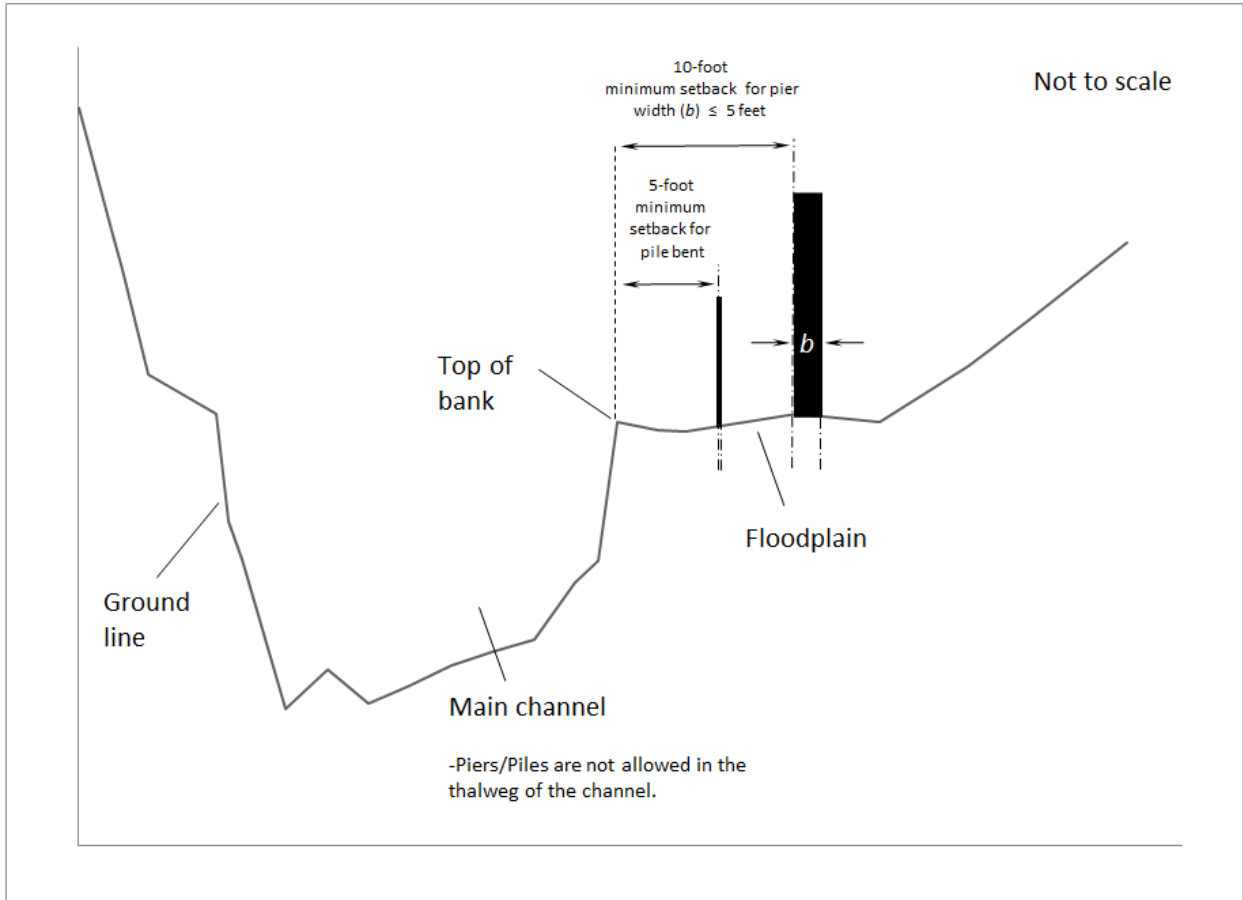


**Figure 1.** Illustration showing minimum abutment setback distances in reference to (1) the channel bank and (2) the projection of the spill-through abutment slope that provides a minimum 10-foot distance from any point on the channel bank or bed.



**Figure 2.** Illustration showing minimum setback distances for pile bents and piers located on the floodplain in reference to the channel bank.

**Table 1.** Minimum substructure setback distance from the top of the channel banks for substructures located on the floodplain above ground (Figure 5).

Substructure Type	Substructure Width ( <i>b</i> ) Above Ground (feet)	Substructure Location	Setback Distance from Top-of-Bank to Face of Substructure (feet)
Piers, such as drilled shafts or piers requiring excavation	$b \leq 5$	Floodplain	10
Piers, such as drilled shafts or piers requiring excavation	$b > 5$	Floodplain	7.5
Pile bent	$b \leq 2$	Floodplain	5