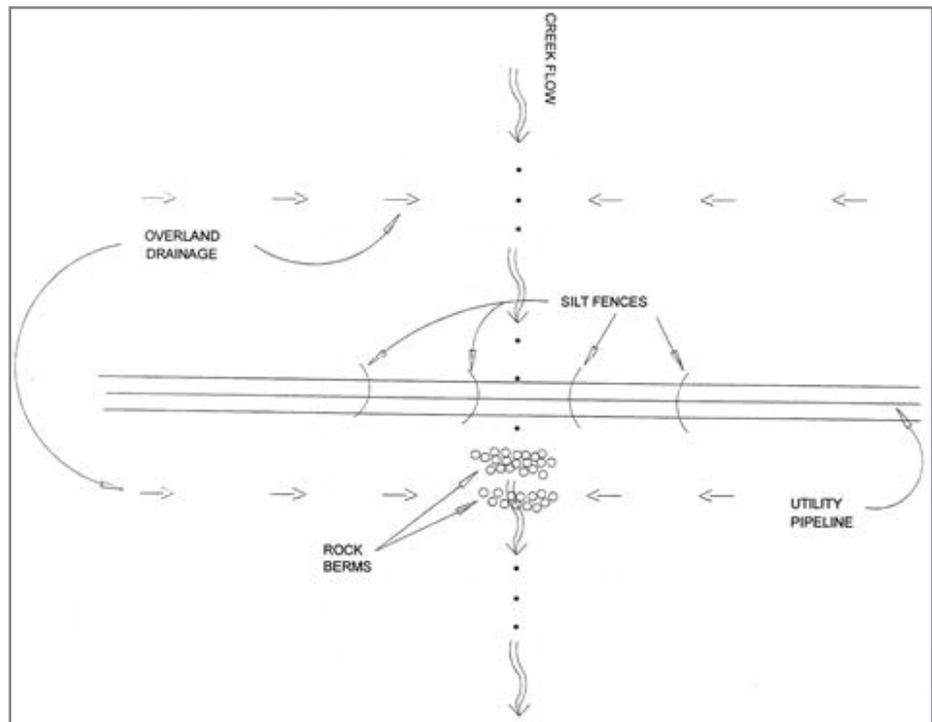


### 3.4 CREEK CROSSINGS

Creek crossings represent particularly important areas to employ effective erosion and sedimentation control. Creek crossings may require compliance with [Section 404 of the Clean Water Act](#). The designer should verify the need for compliance. Guidance on [Nationwide Permits](#) should be reviewed as well as facilitate appropriate design and compliance. Underground utility construction across creeks requires special measures, as detailed below.

1. Unless prior approval is received from the jurisdictional stormwater authority, utility line creek crossings should be made perpendicular to the creek flowline.
2. Every effort should be made to keep the zone of immediate construction free of surface water. For construction in the creek channel, a pipe of adequate size to divert normal stream flow should be provided around the construction area. Diversion may be by pumping or gravity flow using temporary dams.
3. Where water must be pumped from the construction zone, discharges should be in a manner that will not cause scouring or erosion. All discharges shall be on the upstream or upslope side of emplaced erosion control structures. If discharges are necessary in easily erodible areas, a stabilized, energy-dissipating discharge apron shall be constructed of riprap with minimum stone diameter of 6 inches and minimum depth of 12 inches. Size of the apron in linear dimensions shall be approximately 10 times the diameter of the discharge pipe.
4. Before any trenching, install two high service rock berms at 100-ft spacing across the channel (perpendicular to the flowline) downstream of the proposed trench. These berms should be located between 100 and 300 feet downstream of the proposed trench. Lay pipe or other utility line and bury as soon as possible after trenching.
5. After installation is complete (or at the end of work day, if installation cannot be completed by end of day), install silt fencing along trench line on either side of creek at 25-ft intervals, as shown in Figure 3-1.
6. Material excavated from the trench in the creek channel should not be deposited on the channel banks. Excavation should be hauled out of the channel or used in backfill of open trench. No loose excavated material should be left in the channel at the end of a work day
7. A concrete cap should be placed over any buried pipe within the creek, and streambed should be restored to proper grade.
8. Revegetate disturbed areas using appropriate native or adapted grass species applied either with hydromulch at twice the normal application rate or incorporated with erosion protection matting.



**Figure 3-1:** Utility Line Creek Crossing