

c. **Bridging.** Rope bridges are employed in mountainous terrain to bridge linear obstacles such as streams or rivers where the force of flowing water may be too great or temperatures are too cold to conduct a wet crossing.

(1) **Construction.** The rope bridge is constructed using static ropes. The max span that can be bridged is half the length of the rope for a dry crossing, three-fourths for a wet crossing. The ropes are anchored with an anchor knot on the far side of the obstacle, and tied off at the near end with a transport-tightening system. Rope bridge planning considerations follow:

- Does the installation allow you to bypass the obstacle?
- (Tactical) Can you secure the installation from construction through negotiation to disassembly?
- Is it in the most suitable location such as a bend in the river? Is it easily secured?
- Does it have near and far side anchors?
- Does it have good loading and off loading platforms?

(2) **Equipment (1 Rope Bridge).**

- One sling rope per Ranger.
- One steel locking carabiner.
- Two steel ovals.
- Two 120 foot static ropes.

(3) **Construction Steps.** The first Ranger swims the rope to the far side and ties a tensionless anchor (Figure 9-4), between knee and chest level, with at least 6 to 8 wraps. The BTC ties a transport-tightening system (Figure 9-20) to the near side anchor point. Then, he ties a Figure 8 slipknot and incorporates a locking half hitch around the adjustable bight. Insert two steel oval carabiners into the bight so the gates are opposite and opposed. The rope is then routed around the near side anchor point at waist level and dropped into the steel oval carabiners.

(a) A three Ranger pulling team moves forward from the platoon. No more than three are used to tighten the rope. Using more can cause over tightening of the rope, bringing it near failure.

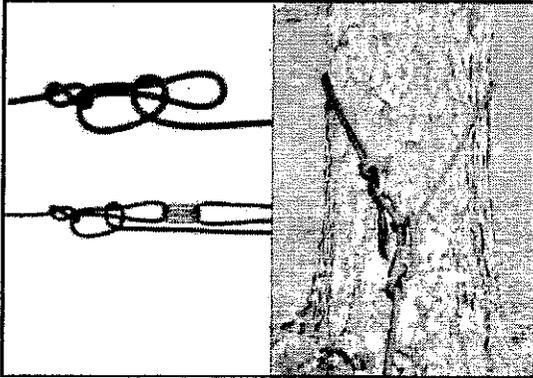
(b) Once the rope bridge is tight enough, the bridge team secures the transport tightening system (Figure 9-20) using two half hitches, without losing more than 4 inches of tension.

(c) Personnel cross using either the *Commando Crawl* (Figure 9-21), *Rappel Seat* (Figure 9-22), or *Monkey Crawl* (Figure 9-23) method.

Figure 9-4. TENSIONLESS NATURAL ANCHOR



Figure 9-20. TRANSPORT-TIGHTENING SYSTEM



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Figure 9-21. COMMANDO CRAWL METHOD



Figure 9-22. RAPPEL SEAT (TYROLEAN TRAVERSE) METHOD

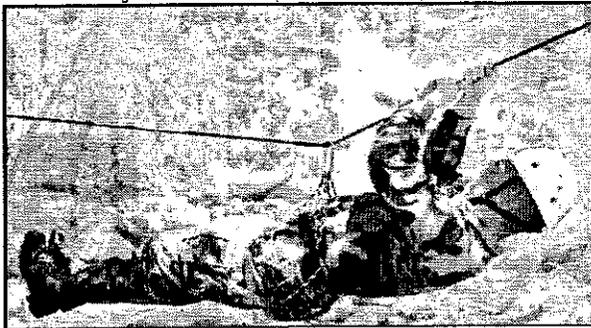


Figure 9-23. MONKEY CRAWL METHOD



(4) **Bridge Recovery.** Once all except two troops have crossed the rope bridge, the bridge team commander (BTC) chooses either the wet or dry method to dismantle the rope bridge. If the BTC chooses the dry method, he should have anchored his tightening system with the transport knot.

- (a) The BTC back stacks all of the slack coming out of the transport knot, lies a fixed loop, and places a carabiner into the fixed loop.
- (b) The next to last Ranger to cross should attach the carabiner to his rappel seat or harness, and then move across the bridge using the Tyrolean traverse method.
- (c) The BTC removes all knots from the system. The far side remains anchored. The rope should now only pass around the near side anchor.
- (d) A three-Ranger pull team, assembled on the far side, takes the end brought across by the next to last Ranger, pulls and holds the rope tight again.
- (e) The BTC attaches himself to the rope bridge and moves across.
- (f) Once across, the BTC breaks down the far side anchor, removes the knots, and then pulls the rope across. If it is a wet crossing, any method can be used to anchor the tightening system.
- (g) All personnel cross except the BTC or the strongest swimmer.
- (h) The BTC then removes all knots from the system.
- (i) The BTC ties a fixed loop, inserts a carabiner, and attaches it to his rappel seat or harness. He then manages the rope as the slack is pulled to the far side.
- (j) The BTC then moves across the obstacle while being belayed from the far side.

d. **Suspension Traverse.** The suspension traverse is used to move personnel and equipment over rivers, ravines, and chasms, or up or down a vertical obstacle. By combining the transport-tightening system used during the rope bridge, an A Frame used for the vertical haul Line (Figure 9-24), and belay techniques device, units can make a suspension traverse (Figure 9-25 and