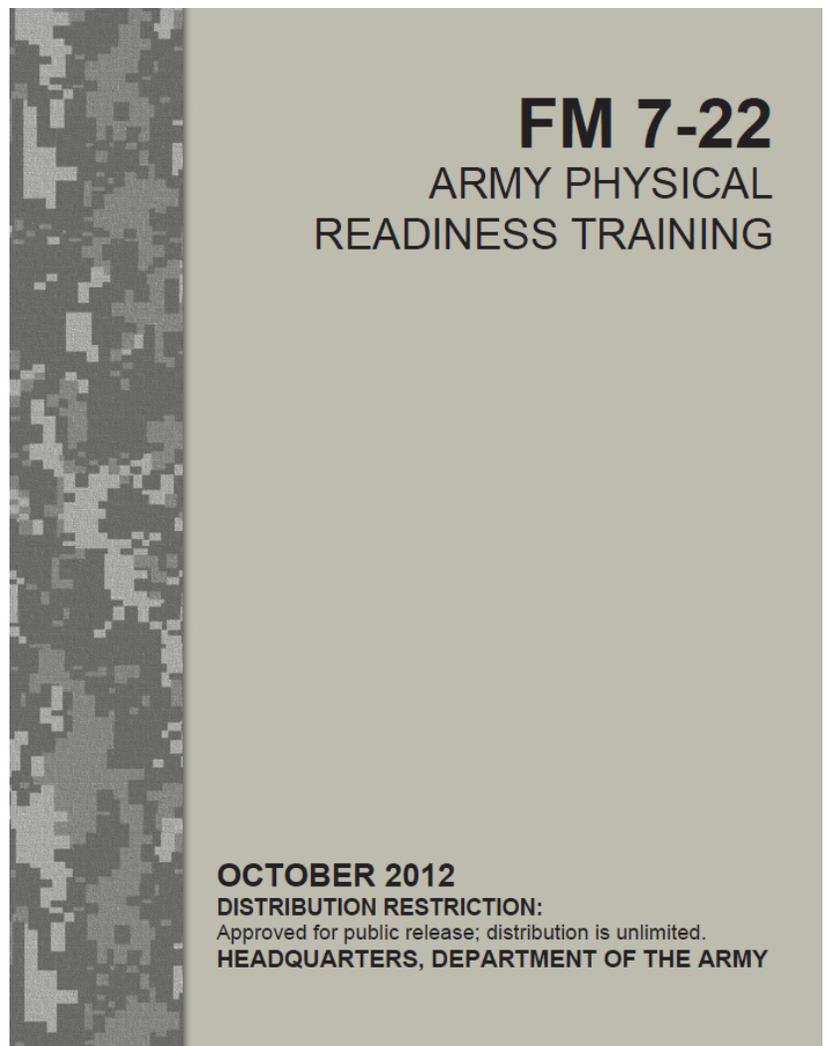


**FM 7-22 ARMY PHYSICAL READINESS TRAINING  
APPENDIX E OBSTICAL NEGOTIATIONS**

For the full FM please visit: <https://armypubs.army.mil>



## Appendix E

### Obstacle Negotiations

Obstacle course running develops physical capacities and fundamental skills and abilities that are important to Soldiers in combat operations (Figure E-1). Soldiers must be able to crawl, creep, climb, walk, run, and jump in order to accomplish certain missions. They must be able to do all these things while carrying full field equipment for long periods of time without exhaustion or injury, even after fatigue has set in. This chapter focuses on obstacle negotiation and obstacle courses used in PRT.

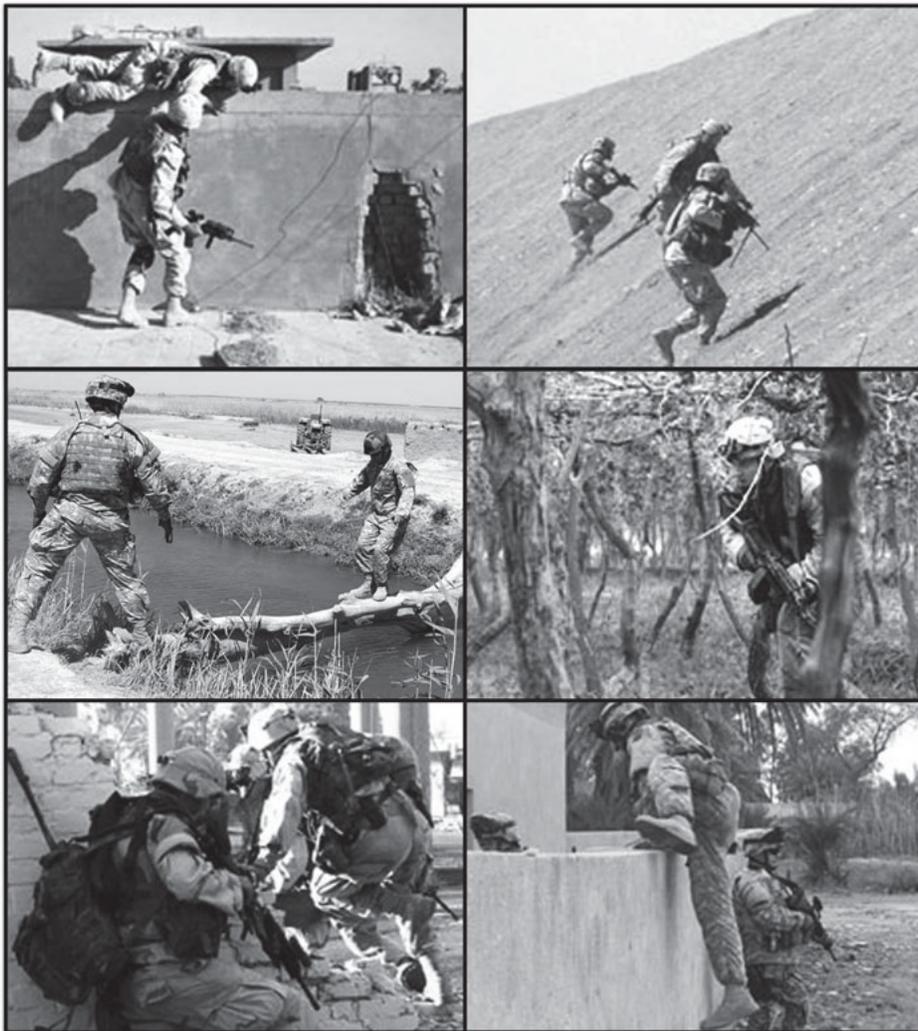


Figure E-1. Obstacles in combat

## OBSTACLE COURSES

E-1. Conditioning and CFOC confidence obstacle courses as prescribed in this chapter must comply with installation safety requirements. Considerable time and effort must be expended to teach Soldiers how to correctly negotiate conditioning and confidence obstacles. Soldiers are required to receive instruction for each obstacle negotiated, have each obstacle demonstrated to standard by a PRT leader or AI, and be allowed to practice obstacle negotiation prior to course negotiation. Soldiers will wear ACUs and boots. Conditioning obstacle courses may be run for time. Confidence obstacle courses incorporate complex obstacles that involve height and will not be run for time.

- Conditioning obstacle course. The CDOC has low obstacles that must be negotiated quickly. Running the course challenges the Soldier's basic motor skills and physical condition. After Soldiers receive instruction and practice negotiation skills, they may run the course against time.
- Confidence obstacle course. The CFOC has higher and more difficult obstacles than the conditioning course. It gives Soldiers confidence in their mental and physical abilities and cultivates their spirit and daring. Soldiers are encouraged but not forced to negotiate each obstacle. Unlike conditioning courses, confidence courses are not run against time.

E-2. Physical readiness training leaders will ensure that AIs are positioned at each conditioning and confidence obstacle to ensure proper negotiation and Soldier safety. Physical readiness training leaders are required to perform risk management procedures as specified by their installation. One of the objectives of PRT is to develop Soldiers who are proficient in military physical skills (running, jumping, climbing, and carrying). Fast and skillful execution of these skills may mean the difference between the success and failure of combat missions.

## RUNNING

E-3. Running is used to develop endurance. Soldiers should be exposed to running in the following situations:

- On roads.
- Over rough ground.
- Up and down hills.
- Across country.
- Over low obstacles.

## JUMPING

E-4. In vertical and long jumping, the takeoff foot is planted firmly. The spring comes from the extension of the take-off foot leg as the other leg reaches for the high or far side of the obstacle (like a ditch). The arms are forcibly raised forward and upward to assist in propelling the body. Landing may be on one or both feet, depending upon the length of the jump. When jumping downward from a height, the jumper should aim his feet at the desired landing spot and jump with the knees slightly bent, feet together, and the trunk inclined slightly forward. As the feet strike the ground, the shock is absorbed by bending the knees into a full squatting position. If the height is too great or the ground too hard to absorb the shock, the jumper should execute a forward or side roll to absorb some of the shock.

## DODGING

E-5. In combat situations it is often necessary to change directions quickly. To dodge while running, the lead foot (the left foot if the direction is to the right; the right foot if the direction is to the left) is firmly planted on the ground. The opposite foot is moved in the new direction. The knees are flexed slightly during the movement and the center of gravity is low. The head and trunk are quickly turned in the new direction at the instant of directional change.

## CLIMBING AND SURMOUNTING

E-6. The Soldier should know how to effectively climb and surmount various types of obstacles.

## **VERTICAL CLIMBING A ROPE OR POLE**

E-7. Whether climbing a rope or pole, the techniques are similar. The hands grasp the rope or pole overhead with the palms toward the face. The body is pulled upward with the arms and shoulders assisted by the feet (which grip and assist by pushing downward). If shoulder-girdle strength and body coordination are not adequate to permit alternating hands, the arms act together in pulling upward. For rope climbing technique, refer to paragraph E-37.

## **CLIMBING OVER A WALL**

E-8. When going over a wall, the body is as close to the top as possible to maintain a low silhouette. (In combat operations, it is important to offer as small a target as possible. When preparing to go over a wall, the rifle is slung across the back so the hands are free.) Chinning and creeping are the most common methods used for surmounting a wall of moderate height.

## **CHINNING**

E-9. Approach the wall at a walk or slow run. Jump upward and grasp the top of the wall and chin upward until it is possible to change into a push-up. Place the chest on the wall and kick vigorously upward and over with both legs. A creeping motion with the toes against the wall will help the upward progress of the chinning and pushing up.

## **CREEPING**

E-10. Approach the wall at either a walk or slow run. Jump upward and grasp the top of the wall. Make contact with both knees and start a creeping motion upward. As the knees reach their limit of upward motion, place both feet against the wall and continue with a walking-creeping motion until one leg can be thrown over the top of the wall. Make sure a creeping walk is used.

## **RUN, JUMP, AND VAULT**

E-11. Approach the wall at a run, jump forward and upward at it, and place one foot against it as high up as possible. Use the foot in contact with the wall to help push the body upward while grasping the top of the wall with the hands. Pull the body up with the arms, assisted by pressure from the foot against the wall, and swing the legs over, propelling the body over the wall.

## **HOOK AND SWING**

E-12. Approach the wall at a run and jump forward and upward. Hook one elbow over the wall, locking the arm in place by pulling up until the top of the wall is underneath the armpit. Grasp the top of the wall with the other hand. Draw the leg that is closer to the wall up toward the abdomen as far as possible. Then swing the outside leg over the wall. The body is carried over with a rolling motion. Soldiers who are unable to draw up the leg as described can use a variation of this leg action. While hanging with both legs fully extended, start a swinging motion with the legs together. When the legs have enough momentum, swing the outside leg over the wall with a vigorous kick; then follow with the body.

## **DROPPING**

E-13. Execute all drops from the wall in the same manner. Place one hand against the far side of the wall while the other hand grasps the top. From this position, roll over the wall and vault away from it with the legs swinging clear. As the body passes over the wall and drops, face the wall. This keeps the rifle and other equipment clear. Balance is maintained by retaining a grasp on the top of the wall as long as possible.

## **CLIMBING LADDERS AND CARGO NETS**

E-14. Rope ladders, stationary vertical ladders, and cargo nets require the same general climbing technique. Grasp the side supports firmly in the hands about shoulder height and place the feet on a rung, which will cause

the body to be extended. To move up, obtain a higher grasp and move the opposite leg up a rung. The body is elevated as the knee straightens.

## **TRAVERSING HORIZONTAL OBJECTS BY HAND**

E-15. Traversing horizontal objects puts stress on the arms and the shoulder-girdle area when the feet are suspended in the air and the arms and shoulders support body weight.

## **TRAVERSING HORIZONTAL ROPES OR PIPES**

E-16. The hands grasp the horizontal support overhead with the palms facing. To propel the body forward, one hand is released and moved forward to secure a new grasp. At the same time, the opposite side of the body is swung forward. The other hand is then released and moved forward as the Soldier continues to move.

## **TRAVERSING HORIZONTAL LADDERS**

E-17. The movement is the same as used in traversing a rope or pipe. The hands, however, are placed on the rungs palms forward. Otherwise, the technique is the same.

## **VAULTING**

E-18. Vaulting is employed to overcome low barriers or fences. The object to be surmounted is approached at an angle. The hand on the side next to the obstacle is placed on top of the obstacle, then with a straight-arm movement the body weight is pushed upward. At the same time, the leg on the side next to the obstacle is thrown upward and over the top, followed by the other leg. In landing, the weight comes down on the leading leg first, followed by regaining the balance on both legs. The free arm serves as a balance. A direct (front) approach can also be used, at which time both legs go over the object together.

## **BALANCING**

E-19. Balancing the body while walking or running on a narrow object, as when crossing obstacles, is a skill that requires practice and confidence. Balance is required in negotiating a log placed across a stream, or in crossing any narrow beam or rail. To perform this skill, place the feet on the object to be crossed, hold the arms to the side at shoulder level, then fix the eyes on the object approximately 5 yards in front of the feet. Walk the object by placing first one foot and then the other in the center of the object, slowly moving forward using the arms to aid in maintaining balance.

## **CRAWLING**

E-20. Crawling in combat situations is a useful skill. Crawling may be in the high or low stance.

### **HIGH CRAWL**

E-21. The Soldier moves on his hands and knees, moving one hand and the opposite knee and then continuing to move the hands in alternation with the knees.

### **LOW CRAWL**

E-22. The Soldier is in the prone position. Pulling with both arms and pushing with one leg, accomplish forward movement. The other leg is dragged behind. The legs are alternated frequently to avoid fatigue.

## **THROWING**

E-23. Throwing may be from the kneeling or standing position. The object to be thrown is held in the throwing hand with the throwing arm is bent at the elbow. The hand is then moved to the rear until it is behind the ear. The body is turned so that the lead foot and balance (other) arm point toward the target. The balance arm is used to sight over and align the throwing hand with the target. When properly aligned, the elbow is move rapidly forward until it is at a point just in front of the body where the arm is straightened and the wrist “snapped.” This

whip motion propels the object to the target. Underhand throws get momentum by the thrower bending his knees and swinging the throwing arm to the rear. As the knees are straightened, the arm is forcefully swung forward from the shoulder and the object is released.

## **FALLING**

E-24. Injuries may be avoided if Soldiers are taught to fall properly by using body momentum to their advantage instead of resisting it. If enough momentum is present, as in falling while running or in jumping from a height, the Soldier can extend his hands to catch his weight while ducking his head and forward rolling onto his feet. The key to falling without injury from the standing position is relaxation and rolling the body to take the momentum of the fall on the outside of one leg, hip, and buttock.

## **CONDITIONING OBSTACLE COURSES**

E-25. Conditioning obstacle courses are typically not standardized because of varying topographical conditions; however, individual obstacles within the conditioning course are standardized for both construction and negotiation. Commanders should use ingenuity in constructing courses, making good use of streams, hills, trees, rocks, and other natural obstacles. Since conditioning courses are run against time, they should not be made dangerous.

E-26. Conditioning courses should be developed based on the following guidelines:

- Courses should be horseshoe-shaped with route signs and the finish close to the start.
- Total course distance ranges from 300 to 450 yards.
- Courses contain 15 to 25 obstacles placed 20 to 30 yards apart.
- Obstacles are arranged so that those that exercise the same muscle groups are separated and not performed consecutively.
- Obstacles must be solidly built with no sharp points or corners and landing pits filled with sawdust or ground tires.
- Lanes will be wide enough for 6 to 8 Soldiers to run the course at the same time and avoid congestion.
- Courses will be built and marked so Soldiers cannot sidestep the obstacles or detour around them.
- To minimize the possibility of falls and injuries due to fatigue, the last two or three obstacles should not be too difficult or involve high climbing.

## **OBSTACLES FOR JUMPING**

E-27. These types of obstacles include ditches Soldiers can clear with one leap, trenches they can jump in or out of, and hurdles (Figure E-2).



**Figure E-2. Jumping obstacles**

## **OBSTACLES FOR DODGING**

E-28. These obstacles include mazes or lanes for change of direction. The maze is constructed from posts set in the ground at irregular intervals. The spaces between the posts are narrow so Soldiers must pick their way carefully through and around them. Lane guides are built to guide Soldiers in dodging and change of direction (Figure E-3).



**Figure E-3. Dodging obstacles**

## **OBSTACLES FOR VERTICAL CLIMBING AND SURMOUNTING**

E-29. These obstacles (Figure E-4) include climbing ropes 1 ½-inches in diameter (plain or knotted), cargo nets, walls (7 or 8 feet high) or vertical poles (6 to 8 inches in diameter and 15 feet high).



Figure E-4. Climbing obstacles

## OBSTACLES FOR HORIZONTAL TRAVERSING

E-30. These obstacles include ladders, ropes, pipes or beams positioned 8 to 10 feet off the ground. These obstacles may be traversed using the arms only or a combination of arms and legs (Figure E-5).



Figure E-5. Horizontal traversing obstacles

## OBSTACLES FOR CRAWLING

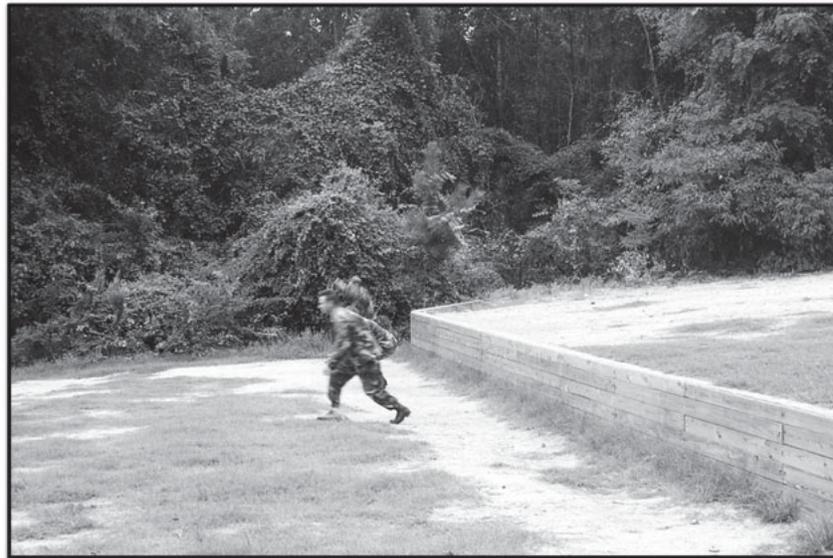
E-31. These obstacles (Figure E-6) include large pipe sections (tunnels 4 feet in diameter and 8 feet long); low rails (8 inch diameter log, 8 feet long, and 2 feet off the ground); and wire (all wire lanes will be 10 feet wide, 30 feet long, and 2 feet off the ground).



**Figure E-6. Crawling obstacles**

## **OBSTACLES FOR VAULTING**

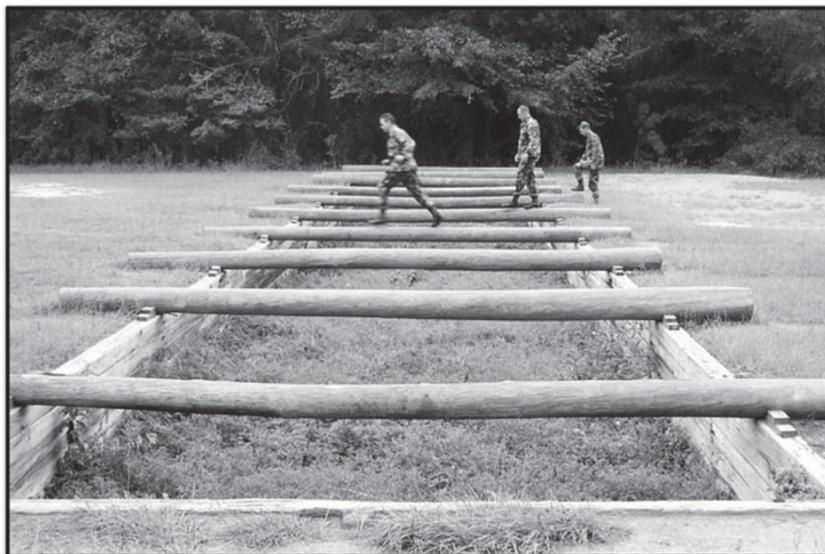
E-32. These obstacles (Figure E-7) include fences or low walls (3 to 3 ½ feet high).



**Figure E-7. Vaulting obstacles**

## **OBSTACLES FOR BALANCING**

E-33. These obstacles (Figure E-8) include beams, logs, or planks that span water obstacles or dry ditches (2 feet deep).



**Figure E-8. Balancing obstacles**

## **NEGOTIATION STANDARDS FOR CONDITIONING COURSES**

E-34. The following paragraphs describe a variety of negotiation standards for successful completion of obstacle courses.

### **LANES TO GUIDE CHANGE OF DIRECTION**

E-35. To successfully negotiate laned obstacles Soldiers must enter and exit the change of direction lanes while running, using the following technique. To change direction while running, plant the lead foot (left foot if the direction is to the right; right foot if the direction is to the left) firmly on the ground. Then, move the opposite foot in the new direction. The knees are flexed slightly and the center of gravity is low. Turn the head and trunk quickly in the new direction at the instant of the directional change.

### **DITCH**

E-36. To successfully negotiate this obstacle the Soldier must jump over the ditch while running and use the following technique. When jumping over a ditch, the takeoff foot is planted firmly and the spring comes from the extension of this leg as the other leg reaches for the opposite side of the ditch. Raise the arms forcibly forward and upward to assist in propelling the body. The landing may be on one or both feet, depending on the length of the jump.

### **CLIMBING ROPE**

E-37. The following technique is used to successfully negotiate this obstacle. To initiate the climbing action, grasp the rope with the hands, palms toward the face. Grapevine the rope by wrapping it around the lower leg, crossing the instep. With the opposite leg, anchor the rope by placing the bottom of the foot on the instep. Stand up pushing down with the legs while reaching overhead grasping the rope at a higher point. Draw the knees toward the chest while allowing the rope to slide between the knees and feet. Repeat the following sequence to continue climbing:

- Anchor the feet.
- Stand up pushing down with the legs.
- Reach overhead and re-grasp the rope.
- Draw the knees toward the chest.
- Re-anchor the feet on a higher point on the rope.
- Repeat sequence until reaching the top of the rope.

## **LOGS**

E-38. To successfully negotiate this obstacle, walk or run the log using the following technique. Place the feet on the log, hold the arms at the sides at shoulder level, and fix the eyes on the log approximately five yards in front of the feet. Walk or run the log by placing first one foot then the other in the center of the log, moving forward using the arms to maintain balance.

## **HORIZONTAL LADDER**

E-39. To successfully negotiate this obstacle, traverse the ladder using the following technique. Grasp the first rung overhead with the palms facing forward and suspend the body. To propel the body forward, release one hand and move forward to secure a new grasp. At the same time, swing the opposite side of the body forward. Release the other hand and move it forward to re-grasp another rung. Continue this technique grasping each and every rung until reaching the last rung. Suspend the body from the last rung, then drop to the ground.

## **ALTERNATE HIGH STEPPING**

E-40. To successfully negotiate this obstacle, enter and exit the maze while running, using the following technique. Run on the balls of the feet and raise the knees up high with each step while crossing over the obstacles and placing each foot in adjacent grid squares.

## **HORIZONTAL ROPE**

E-41. To successfully negotiate this obstacle, traverse the rope using the following technique. Reach up and grasp the rope with both hands and swing the legs up to assume the position used when climbing a vertical rope. Leading with the head, traverse the rope horizontally by pulling with the arms. The feet and legs are used to secure the position on the rope and may also be used to assist in the movement as in the vertical rope climb. To complete negotiation of this obstacle, one hand must touch the post securing the end anchor point.

## **WIRE**

E-42. To successfully negotiate this obstacle, enter and exit using the low crawl technique. Start in the prone position. To move forward, pull with both arms and push with one leg. The other leg is dragged behind. The legs are alternated frequently to avoid fatigue. Continue this technique until the body has cleared the low wire.

## **CARGO NET**

E-43. To successfully negotiate this obstacle, approach the net while running. Leap to grasp the rope rungs overhead and step up on the lower rope rungs. The Soldier may use either of the following methods to climb the cargo net: The first technique performs alternating arm and leg movements (reach up with the right arm to grasp a higher rung while simultaneously stepping up with the left leg). The second technique would be to grasp and step with the same side arm and leg, ascending the rope in a crawling fashion. Continue this technique to the top of the net, then propel the body over the platform and descend the net on the other side using a similar technique.

## **FENCE**

E-44. To successfully negotiate this obstacle, use the vaulting technique. Approach the fence at an angle with the hand on the side, next to the fence, placed on top of the fence. With a straight-arm movement, the Soldier pushes his body weight upward. At the same time, his leg on the side next to the fence is thrown upward and over the top, followed by his other leg. When landing, his weight comes down on his landing leg first, followed by regaining his balance on both legs. His free arm serves to balance him. A direct front approach can also be used, at which time both legs go over the fence together.

## **TRENCH**

E-45. To successfully negotiate this obstacle, use the following technique. Jump downward into the trench, aiming the feet at the desired landing spot with the knees slightly bent, feet slightly apart, and trunk inclined

slightly forward. As the feet strike the ground, the Soldier absorbs the shock by bending his knees to a squatting position. If the height is too great or the ground too hard to absorb the shock, he should land with his feet together and execute a forward or side roll to absorb some of the shock. To exit the trench, he uses one of the following techniques: Approach the trench wall at a run, jump forward and upward at it, and place one foot against the trench wall as high as possible. He uses the foot that is in contact with the wall to help push his body upward while grasping the top of the trench with his hands. He pulls his body up with his arms, assisted by the pressure of his foot against the wall and swings his legs over to propel himself out of the trench. Using the second technique, the Soldier approaches the trench wall at a run and jumps forward and upward. He hooks one elbow over the top of the trench, locking his arm in place by pulling up until the top of the trench is under his armpit. He grasps the top of the trench with his other hand. He draws his leg that is closest to the trench wall up toward his abdomen as far as possible, then swings his outside legs over the top of the trench. His body is then carried over with a rolling motion. Soldiers who are unable to draw up the leg as described can use a variation of this leg action. While hanging with both legs fully extended, he starts a swinging motion with his legs together. When his legs have enough momentum, he swings his outside leg over the trench wall with a vigorous kick, then follows with his body to exit the trench.

## **LOW RAILS**

E-46. To successfully negotiate this obstacle, use the low crawl technique to move under the low rails.

## **PLANKS AND BEAMS**

E-47. To successfully negotiate this obstacle, use the same technique listed to traverse the logs.

## **WALL**

E-48. To successfully negotiate this obstacle, use either of the following techniques to surmount the wall. Run, jump, and vault. When using this method, the Soldier approaches the wall at a run, jumps forward and upward at it, and places one foot against the wall as high as possible. He uses his foot in contact with the wall to help push his body upward while grasping the top of the wall with his hands. He pulls his body up with his arms, assisted by the pressure of his foot against the wall, and swings his legs over to propel himself over the wall. The second technique is the hook and swing. The Soldier approaches the wall at a run and jumps forward and upward. He hooks one elbow over the wall, locks his arm in place by pulling up until the top of the wall is under his armpit. He grasps the top of the wall with his other hand. He draws his leg that is closest to the wall up toward his abdomen as far as possible, then swings the outside leg over the wall. The body is then carried over with a rolling motion. A variation of this leg action can be used by Soldiers who are unable to draw up the leg as described. While hanging with both legs fully extended, he starts a swinging motion with his legs together. When his legs have enough momentum, he swings the outside leg over the wall with a vigorous kick, then follows with his body. To drop from the wall to the ground, he places one hand against the far side of the wall while his other hand grasps the top. From this position, he rolls over the wall and vaults away from it with his legs swinging clear. As his body passes over the wall and drops, he faces the wall. He maintains his balance by retaining his grasp on the top of the wall as long as possible and then dropping to his feet.

## **LOW WALL**

E-49. To successfully negotiate this obstacle, use the vaulting technique. The Soldier must approach the fence at an angle, his hand on the side next to the fence is placed on top of the fence, then with a straight-arm movement, he pushes his body weight upward. At the same time, his leg on the side next to the fence is thrown upward and over the top, followed by his other leg. In landing, his weight comes down on his landing leg first, followed by regaining his balance on both legs. His free arm also serves as a balance. A direct front approach can also be used, at which time both legs go over the fence together.

## **HURDLE**

E-50. To successfully negotiate this obstacle, leap over the hurdle one leg at a time or step on the hurdle with one leg and leap down from the hurdle with the other or both legs to the ground.

**PLATFORM**

E-51. To successfully negotiate this obstacle, the Soldier surmounts the platform by using the support beams to step up and pull himself to the top. When jumping down from the platform to the ground, perform the same technique used for jumping downward from a height, as in negotiating a trench.

**TUNNEL**

E-52. To successfully negotiate this obstacle, two crawling methods may be used; the high crawl and low crawl. The Soldier performs the high crawl technique on his hands and knees. He propels himself forward by moving one hand forward while simultaneously moving his opposite knee forward. He continues moving on his hands and knees in an alternating fashion. The low crawl technique starts in the prone position. To move forward, he pulls with both arms and pushes with one leg. His other leg is dragged behind. Both legs are alternated frequently to avoid fatigue. The Soldier continues this technique until he exits the tunnel.

**CONDUCTING THE CONDITIONING OBSTACLE COURSE**

E-53. Before Soldiers run the CDOC in its entirety, they should be taken to each obstacle and instructed in the proper negotiation techniques previously mentioned. In each case the techniques should be explained in detail with emphasis on avoidance of injury. All Soldiers should be given the opportunity to practice on each obstacle until they become proficient at negotiation. Before the course is run against time, several practice runs should be run at a slower pace. During such practice runs, PRT leaders and AIs observe their performance and make appropriate corrections. Soldiers should never be permitted to run CDOCs for time until they have mastered all obstacles thoroughly. The best method of timing Soldiers on the obstacle course is to have the timer stand at the finish line and call out minutes and seconds as each Soldier crosses the finish line. If Soldiers fail to negotiate an obstacle, a predetermined penalty (5 to 10 seconds) should be assessed.

**CONFIDENCE OBSTACLE COURSES**

E-54. Confidence obstacle courses challenge Soldiers' strength, endurance, and mobility while instilling self-confidence and promoting teamwork. Soldiers do not negotiate these obstacles at high speed or against time. Obstacles vary in difficulty. Some stand very high. Safety nets and crash pads are provided for these high obstacles. Soldiers may skip any obstacle they are unwilling to attempt. PRT leaders and AIs should encourage, but not force Soldiers to attempt every obstacle. Fearful Soldiers should be encouraged to negotiate the easier obstacles before attempting the higher more difficult ones. Some of the higher, more difficult obstacles may be negotiated as a group effort, with stronger Soldiers assisting those unable to negotiate the obstacles by themselves. Gradually, as their confidence and negotiation skills improve, the weaker Soldiers will be able to successfully negotiate all obstacles individually. PRT leaders and AIs should be available to assist Soldiers in proper obstacle negotiation throughout the course. At no time are PRT leaders or AIs to make obstacles more difficult by shaking ropes, rolling logs, and so forth. This practice destroys confidence and greatly jeopardizes safety. Confidence obstacle courses must be constructed according to Folio Number 1, "Training Facilities," Corps of Engineers, Drawing number 28-13-95. Contact the installation Directorate of Public Works for blueprints. The Army's standardized CFOC consists of 22 obstacles that are grouped into color-coded quadrants with five or six obstacles in each. Negotiation becomes more difficult beginning with the black quadrant followed by the blue quadrant, white quadrant, and red quadrant. All Soldiers begin CFOC negotiation in the black quadrant. Soldiers progress to the more difficult quadrants (blue, white, and red) when they become proficient and successfully negotiate obstacles in previous quadrants.

**BLACK QUADRANT**

E-55. The black quadrant consists of the following obstacles.

**HIGH STEP OVER**

E-56. Soldiers step over each bar: they either alternate legs or use the same leg each time while making an effort not to use their hands. (Shorter Soldiers may be required to use hands). Soldiers must be spaced so as to prevent kicking each other.

**LOW WIRE**

E-57. Soldiers move forward on their backs while at the same time raising the wire with their hands so their bodies will clear the wire. They continuing moving forward in this manner until they reach end of the obstacle.

**SWING, STOP, AND JUMP**

E-58. Soldiers gain momentum with a short run, grasp the rope, and swing their bodies forward to the top of the wall. They release the rope while standing on the wall and jump to the ground.

**SIX VAULTS**

E-59. Soldiers vault over each log using one or both hands.

**EASY BALANCER**

E-60. Soldiers walk up one incline log and down the one on the other side to the ground. Running is not encouraged (Figure E-9).

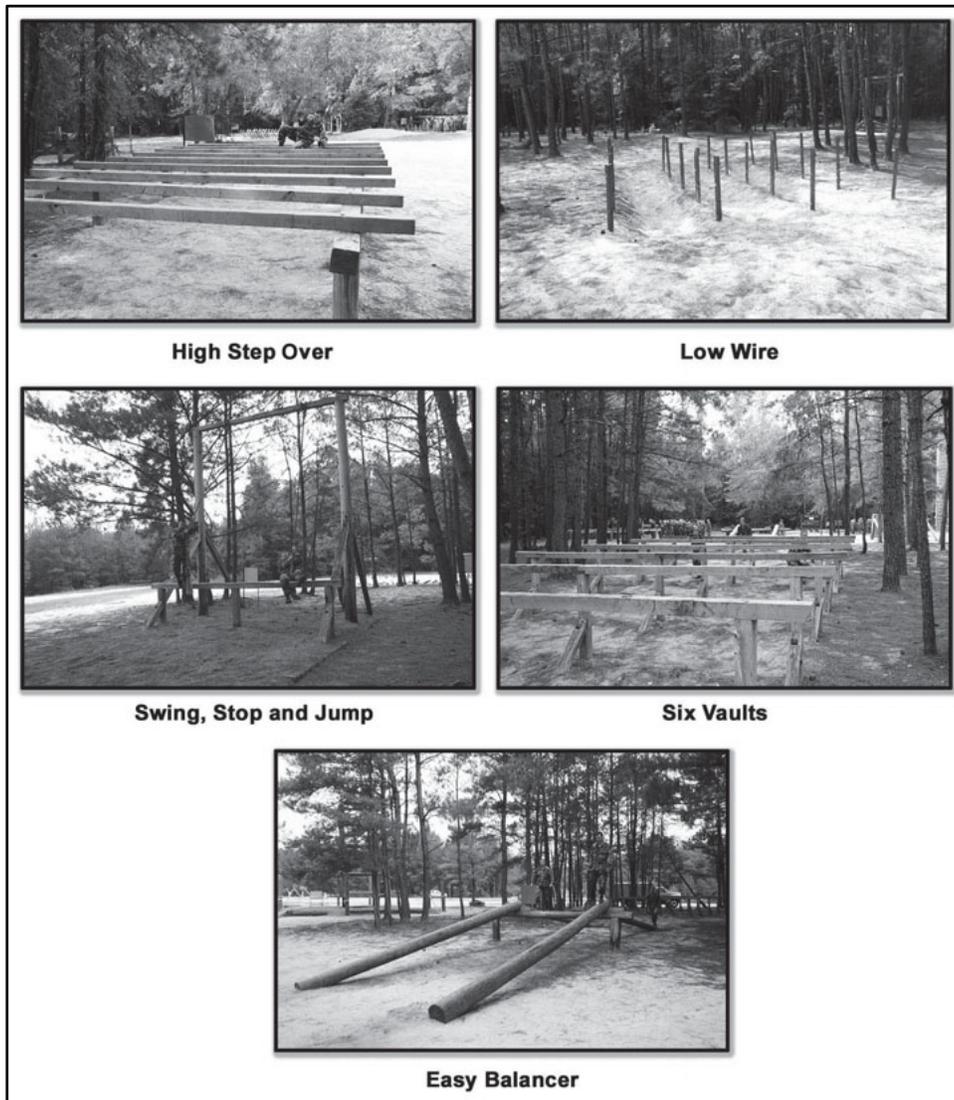


Figure E-9. Black quadrant CFOC

## **BLUE QUADRANT**

E-61. The blue quadrant consists of the following obstacles.

### **BELLY BUSTER**

E-62. Soldiers vault, jump, or climb over a moving log.

### **REVERSE CLIMB**

E-63. Soldiers approach the underside of the climbing ladder, climb up to and over the top of the ladder, then climb down the opposite side.

### **WEAVER**

E-64. Soldiers move from one end of the obstacle to the other by weaving their bodies under one bar and over the next.

### **HIP-HIP**

E-65. Soldiers step over each bar by either alternating legs or using the same leg each time while making an effort not to use their hands.

### **BALANCING LOGS**

E-66. Soldiers walk or run along logs while maintaining their balance.

### **ISLAND HOPPERS**

E-67. Soldiers jump from one log to another until obstacle is negotiated from near to far side (Figure E-10).

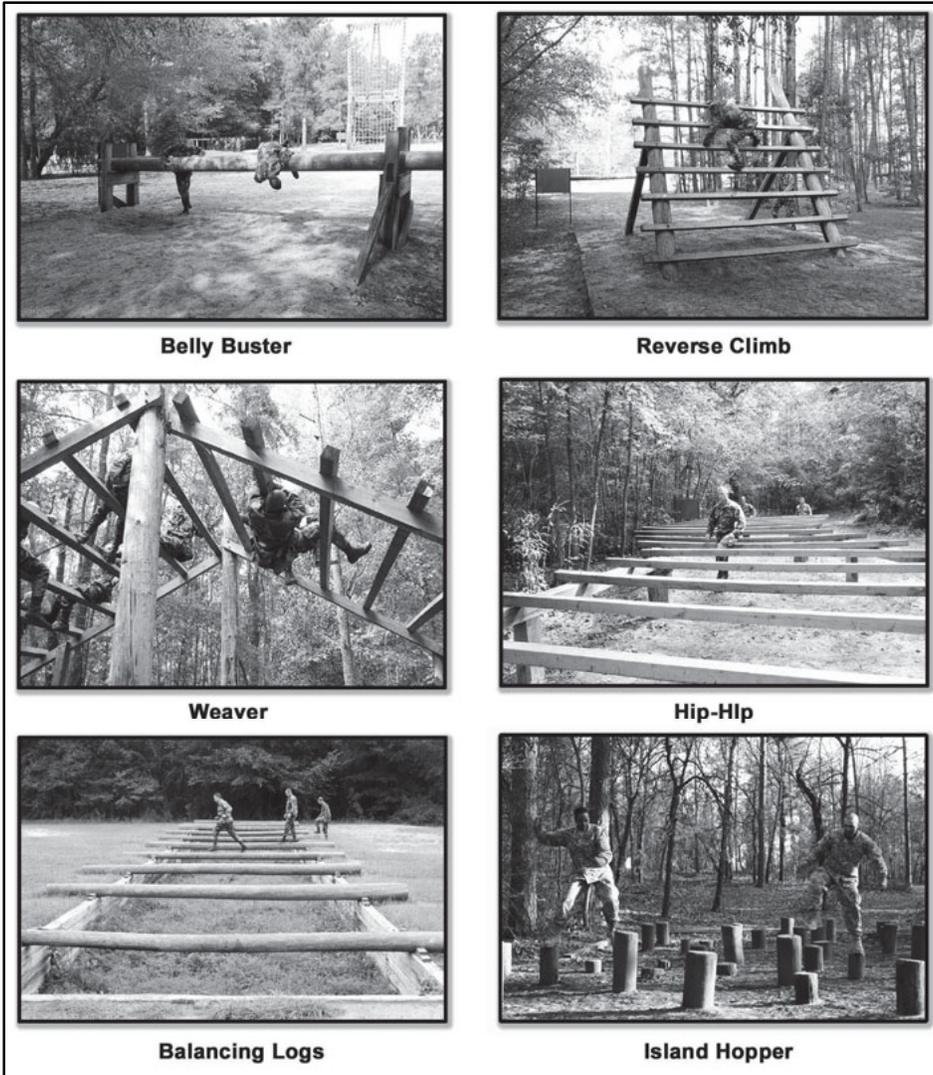


Figure E-10. Blue quadrant CFOC

## WHITE QUADRANT

E-68. The white quadrant consists of the following obstacles.

### TOUGH NUT

E-69. Soldiers step over each “X” in each lane.

### SLIDE FOR LIFE

E-70. Soldiers climb the tower, mount the center of the platform, grasp the rope firmly with their hands, and perform a heel hook. Soldiers begin traversing down the rope by moving hand-over-hand and reaching with the legs. Soldiers brake by use of the hands, legs, and feet. Soldiers traverse the rope to a marked release point. Soldiers dismount the rope by removing their legs from the rope, hanging with their arms fully extended, then drop to the ground landing on their feet. If during negotiation a Soldier’s legs come off the rope, he should attempt to heel hook and lock his legs back on the rope. Soldiers must be instructed on proper technique for landing in the net if they should fall from the obstacle. Soldiers need to draw their knees toward their chest, tuck their chin, then attempt to land on their back or side. Only one Soldier is allowed on the rope at one time. This obstacle is dangerous if the rope is wet. This obstacle requires one instructor on the platform and one instructor at the release point. A safety net will extend from below the platform to the release point.

### LOW BELLY OVER

E-71. Soldiers mount the low log and jump onto the high log, grasping with both hands the high log’s top, keeping the belly area in contact with it. Soldiers swing their legs over the log, then lower themselves to the ground.

### BELLY CRAWL

E-72. Soldiers move forward under the wire on their stomachs to the end of the wire obstacle.

### DIRTY NAME

E-73. Soldiers mount the low log and jump onto the high log. Soldiers swing their legs over the top log, then lower themselves to the ground.

### TARZAN

E-74. Soldiers mount the lowest log and maintain balance while walking the length of it. Soldiers then mount the higher log and maintain balance until they reach the horizontal ladder. Soldiers then step onto the foot blocks and grasp the first rung of the ladder. They begin traversing the ladder by releasing one hand at a time and swinging forward, grasping a more distant rung each time. Upon reaching the last rung, Soldiers hang with their arms fully extended and drop to the ground landing on their feet (Figure E-11).

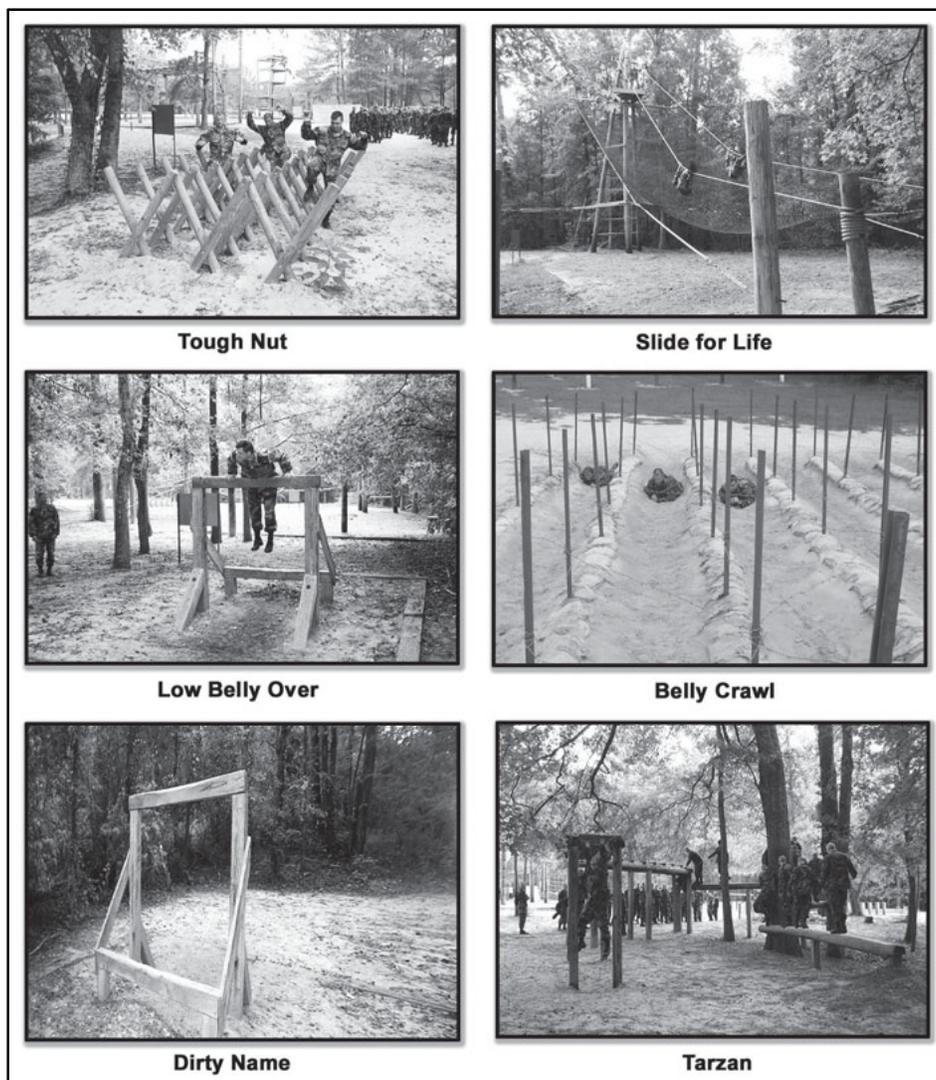


Figure E-11. White quadrant CFOC

## RED QUADRANT

E-75. The red quadrant consists of the following obstacles.

### INCLINING WALL

E-76. Soldiers approach the underside of the wall, jump up and grasp the top, and pull themselves over the top. Soldiers slide or jump down the incline to the ground.

### SKYSCRAPER

E-77. A team of Soldiers (4+) jumps or climbs to the first floor and either climb the corner posts or help one another to higher floors. All climbing from the second to the fourth floor is accomplished only on sides containing safety nets. Crash pads are positioned on the non-climbing sides of the obstacle. The top of the obstacle is off limits and will not be negotiated. Only one team should be on the obstacle at a given time. Soldiers descend from floor to floor individually or as a team. They should not jump to the ground from above the first floor and must be instructed on proper technique for landing in the net if they should fall from the obstacle. Soldiers need to draw their knees towards their chest, tuck their chin, and attempt to land on their back or side.

### **CONFIDENCE CLIMB**

E-78. Soldiers climb the vertical ladder to the second rung from the top, climb over the rung, and descend the other side. Only one Soldier is allowed on the obstacle at a time. An instructor is harnessed in at the top of the obstacle to assist Soldiers with obstacle negotiation. Soldiers must be instructed on proper technique for landing on the crash pad if they should fall from the obstacle. They must draw their knees toward their chest, tuck their chin, and attempt to land on their back or side. Pads will be placed at the base of the obstacle on both climbing sides.

### **BELLY ROBBER**

E-79. Soldiers step on the lower log and assume a prone position on the horizontal logs. They crawl over the logs to the opposite end of the obstacle. Rope gaskets must be attached to the ends of the logs to keep the hands from being pinched and to ensure logs cannot fall from the perpendicular cradle.

### **TOUGH ONE**

E-80. Soldiers climb the cargo net up and over at the low end of the obstacle (13 feet). They move across the top of the logs, climb the ladder, and go over the log at the high end (33 feet). An instructor is harnessed in at the high end of the obstacle to assist climbers with obstacle negotiation. Soldiers then climb down the cargo net to the ground. The net will extend from below the log walk. Crash pads are positioned at the base of each cargo net. Soldiers must be instructed on proper technique for landing in the net if they should fall from the obstacle. They must draw their knees towards their chest, tuck their chin, and attempt to land on their back or side (Figure E-12).

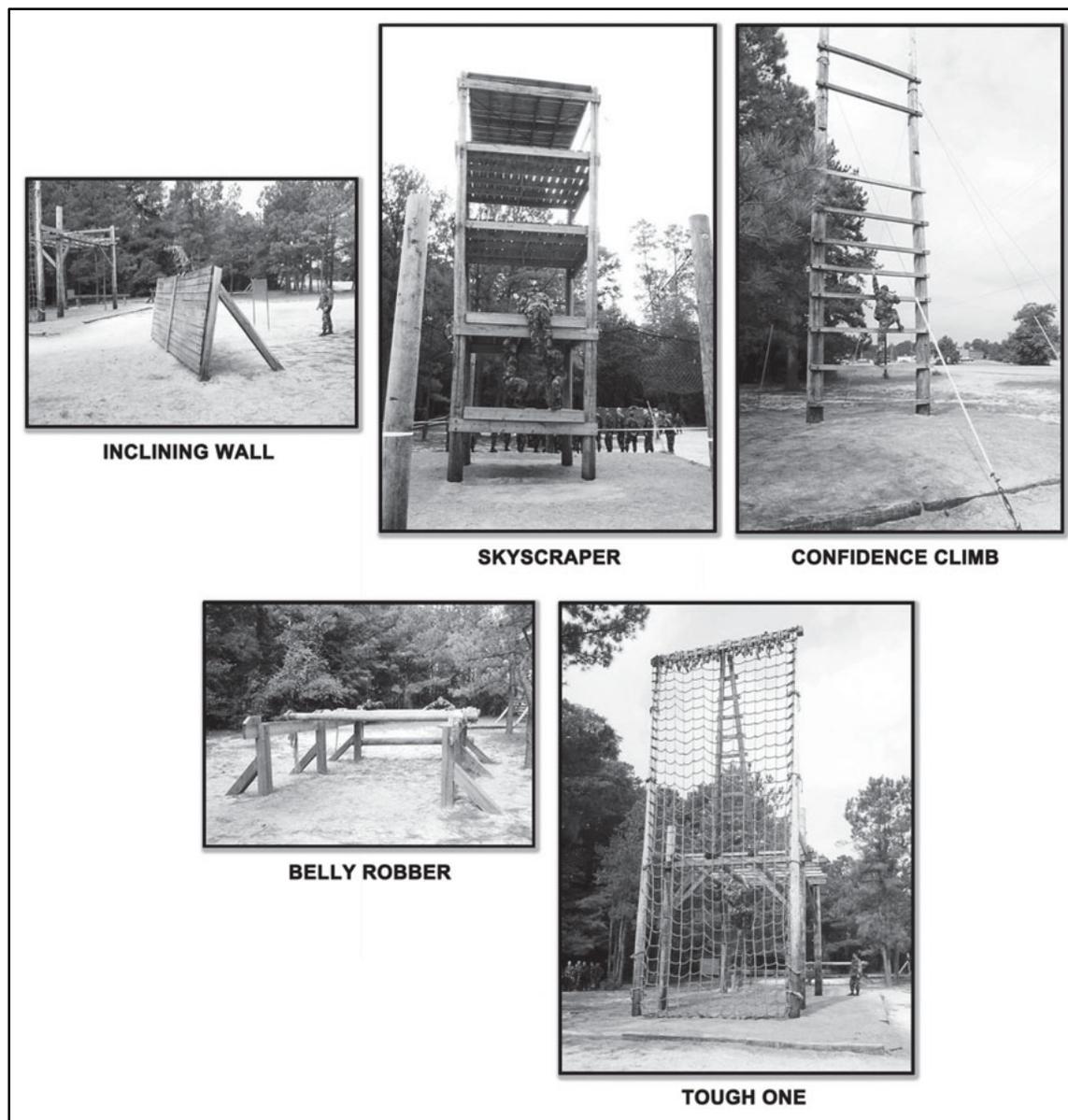


Figure E-12. Red quadrant CFOC

## CONFIDENCE OBSTACLE COURSE CONSTRUCTION AND SAFETY

E-81. The following paragraphs discuss course sketches that describe in detail CFOC construction and safety requirements.

### COURSE SKETCHES

E-82. The following course sketches supplement the Department of the Army Engineer Drawings 28-13-95, Confidence Course Layout Plan. They serve as the minimum construction/safety standards for CFOCs.

E-83. Criteria for safety and structural inspections are specified in the obstacle risk assessment and according to the material manufacturer's directions. Re-inspection must include a review of the risk assessment, an analysis and assessment of accidents/injuries sustained since the obstacle was put into (or back into) service, following repairs, major renovations, or modifications.

E-84. CFOC safety precautions include:

- Inspection of structural integrity and safety devices prior to use.
- Current risk assessment updated prior to each day's training and updated as conditions change.
- Instructor training and certification on operation of obstacles prior to conduct of course.
- Preparation exercises before commencing course and recovery exercises upon completion.
- Muscular strength/muscle failure physical training that should not be conducted within 12 hours prior to the CFOC.
- Landing/fall areas under obstacles raked and refilled as needed before each use.
- Puddles of water under obstacles filled to preclude a false sense of security.
- Training that is postponed/modified when obstacles are slippery due to inclement weather.
- Instructors who instruct and demonstrate obstacle negotiation before allowing Soldiers to negotiate the CFOC.
- A sign posted at each obstacle detailing exact procedures to be used for proper negotiation.
- A maintenance and inspection log that is maintained for each CFOC. The log should include:
  - A detailed checklist for course and obstacle inspection.
  - A record of all course inspections and maintenance deficiencies.
  - A list of any uncorrected deficiencies remaining on the course and countermeasures in place.

E-85. Detailed obstacle illustrations are provided for:

- Tough One.
- Slide for Life.
- Confidence Climb.
- Skyscraper.
- Belly Robber.
- Tarzan.
- Low Belly Over.
- Dirty Name.
- Tough Nut.
- Belly Crawl.
- Inclining Wall.
- High Step Over.
- Swing, Stop, and Jump.
- Six Vaults.
- Easy Balancer.
- Belly Buster.
- Low Wire.
- Hip-Hip.
- Reverse Climb.
- Weaver.
- Balancing Logs.
- Island Hopper.

E-86. Safety equipment (nets, pads, ground covering) must be procured from reliable sources, inspected and tested frequently, and replaced before failure/deterioration. Figures E-13 through E-34 display differing obstacle constructions in use today.

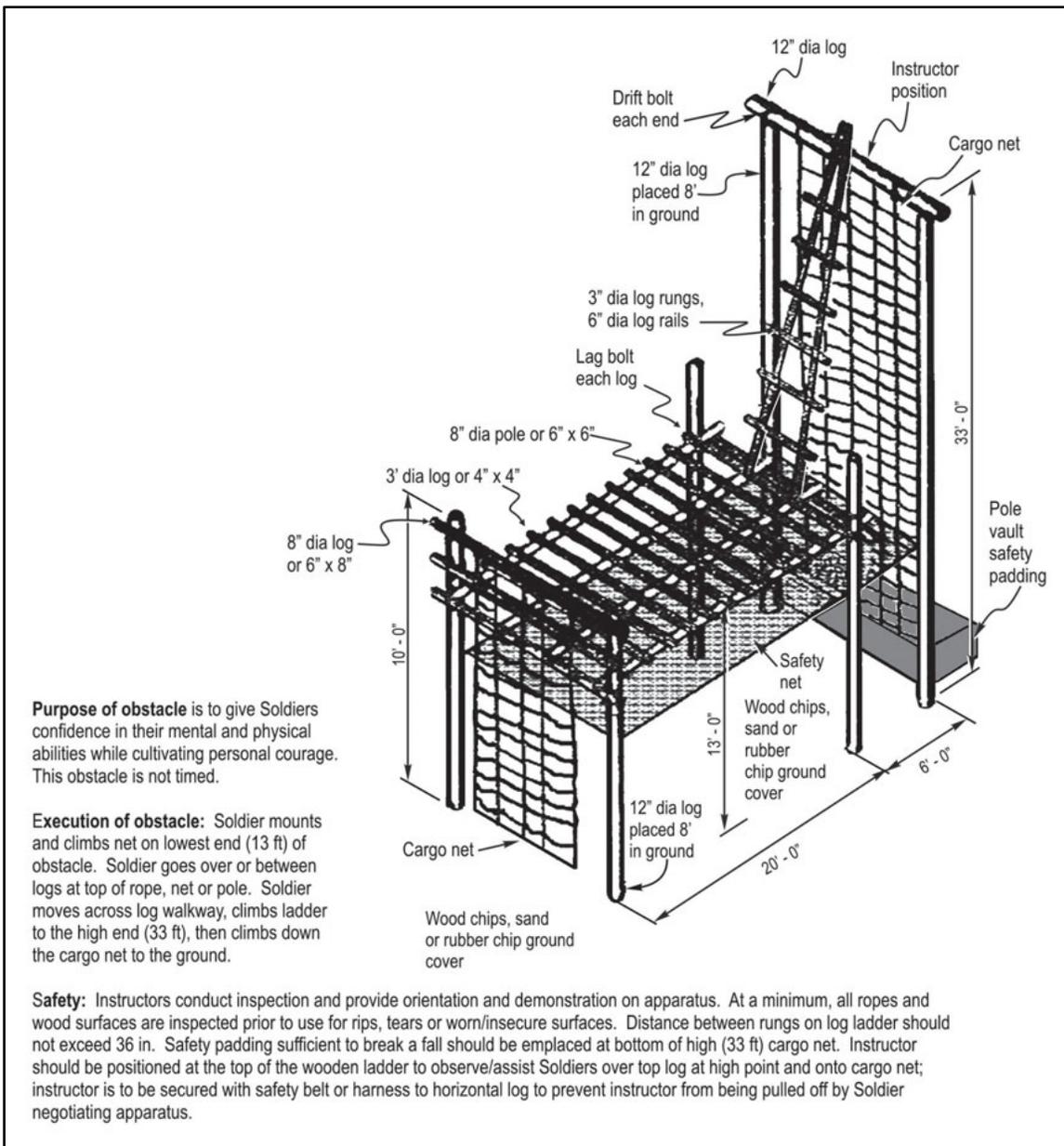


Figure E-13. Tough one (course sketch)

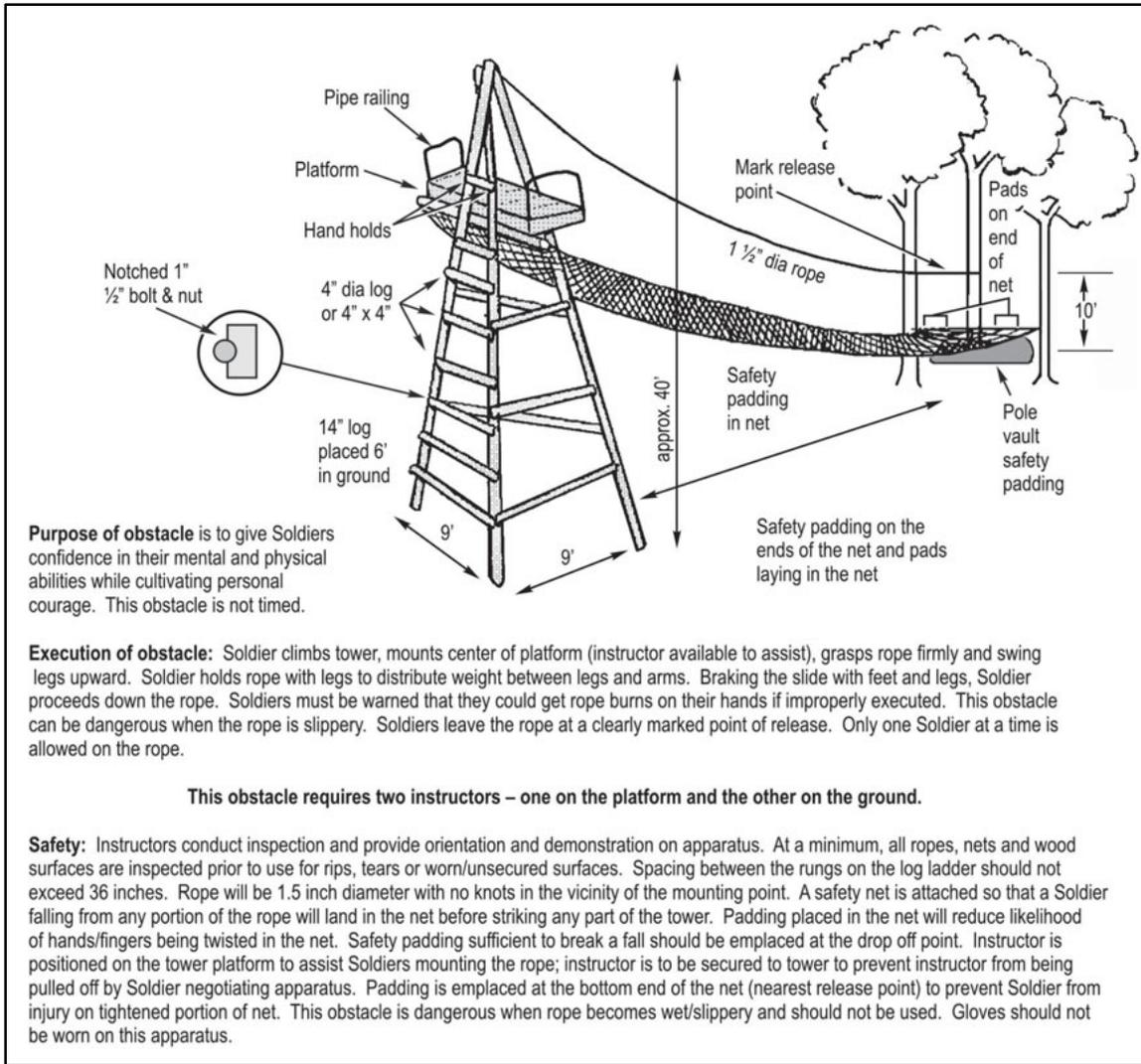


Figure E-14. Slide for life (course sketch)

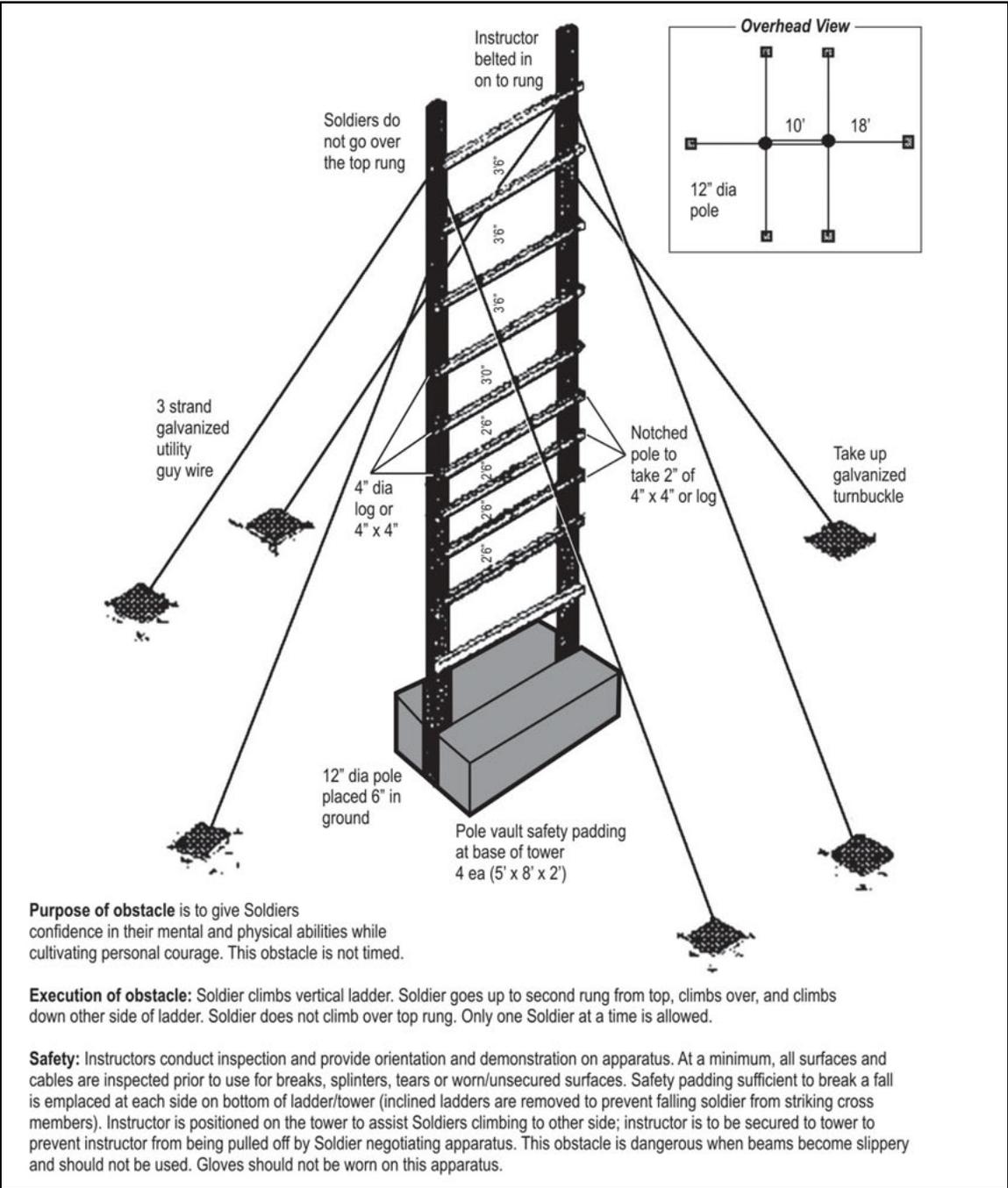


Figure E-15. Confidence climb (course sketch)

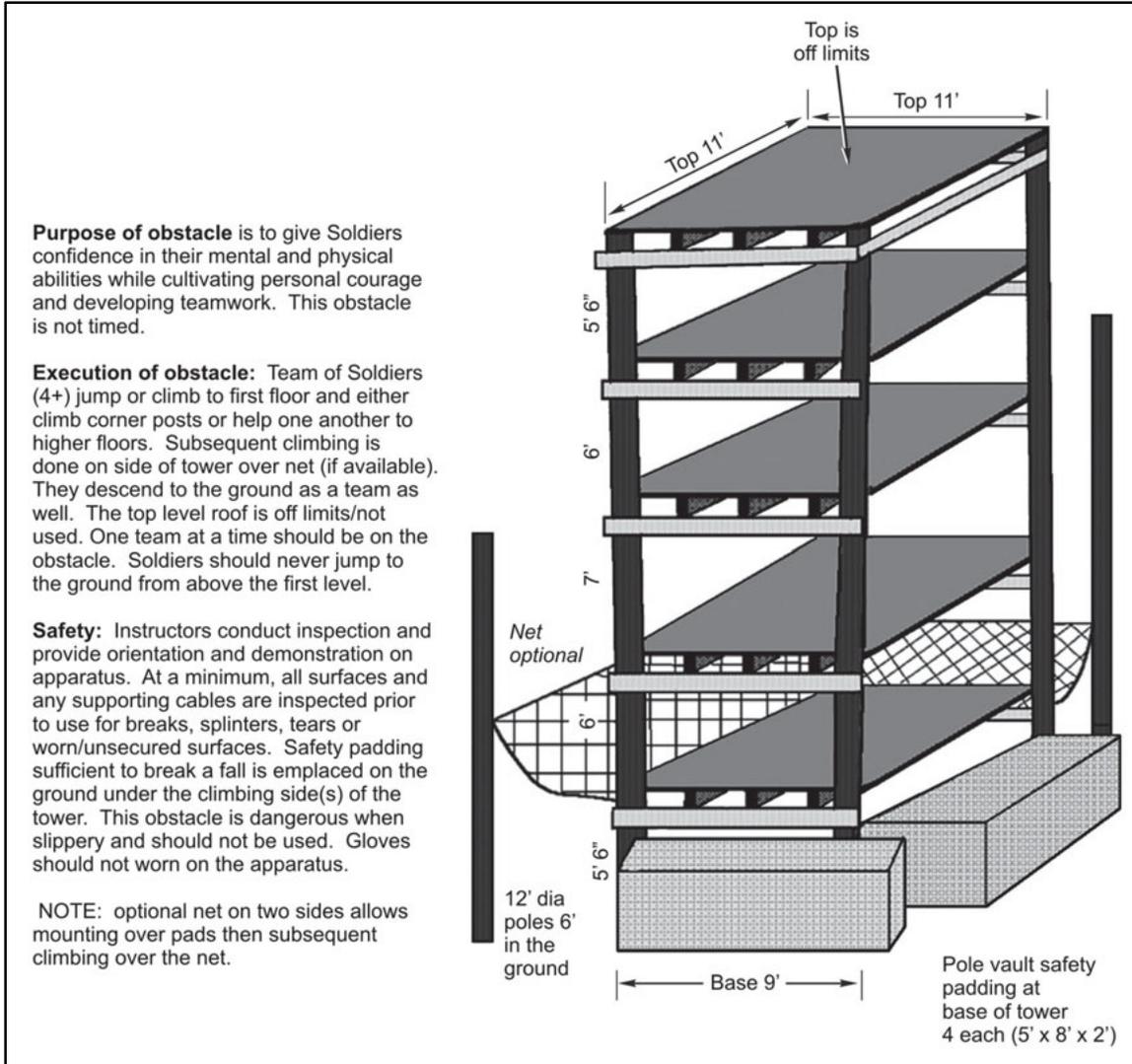


Figure E-16. Skyscraper (course sketch)

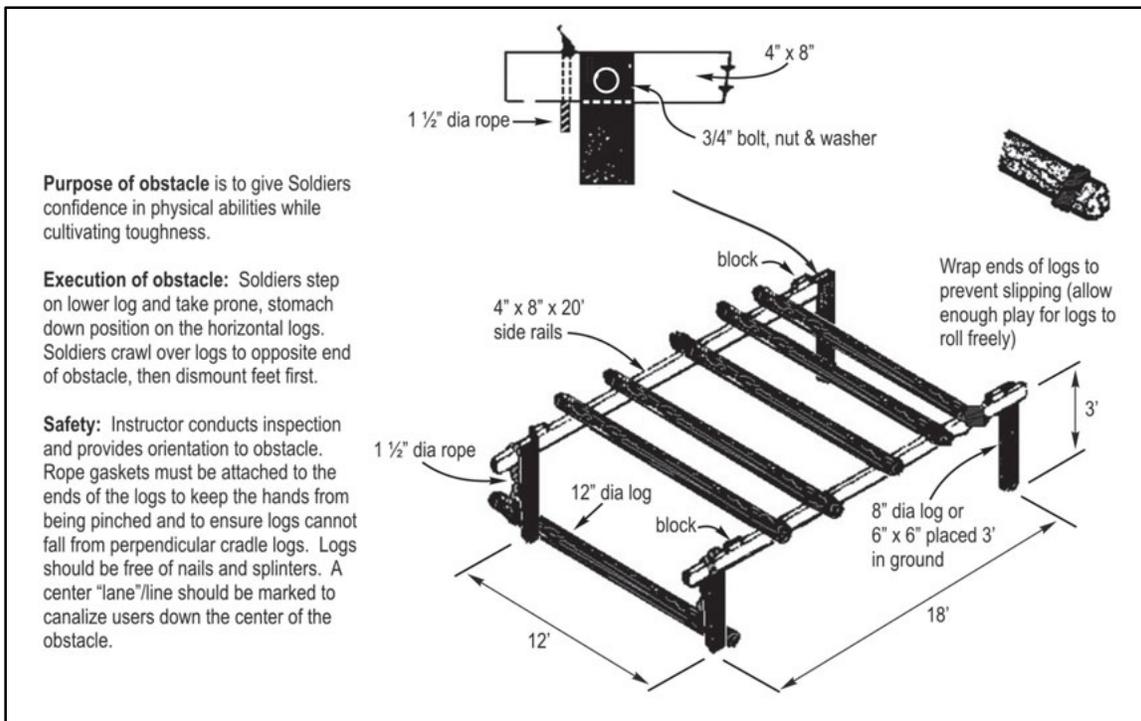


Figure E-17. Belly robber (course sketch)

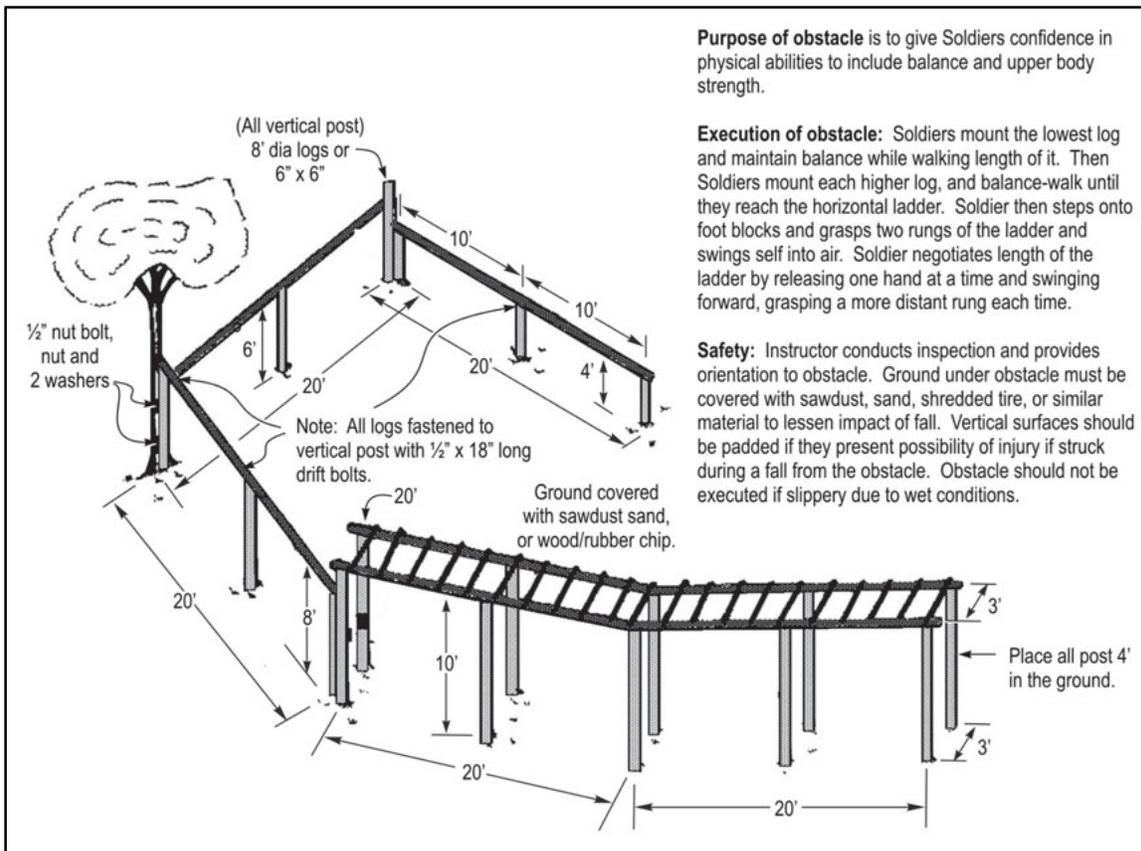


Figure E-18. Tarzan (course sketch)

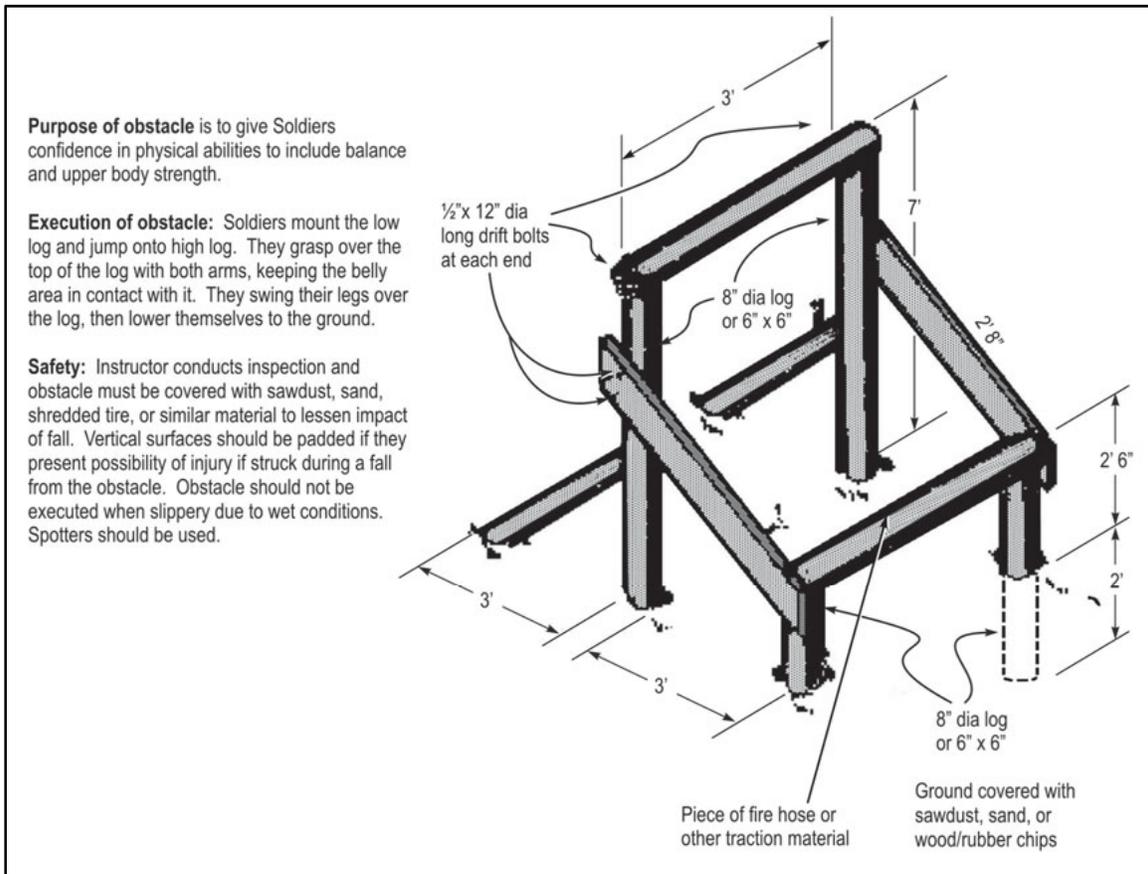


Figure E-19. Low belly over (course sketch)

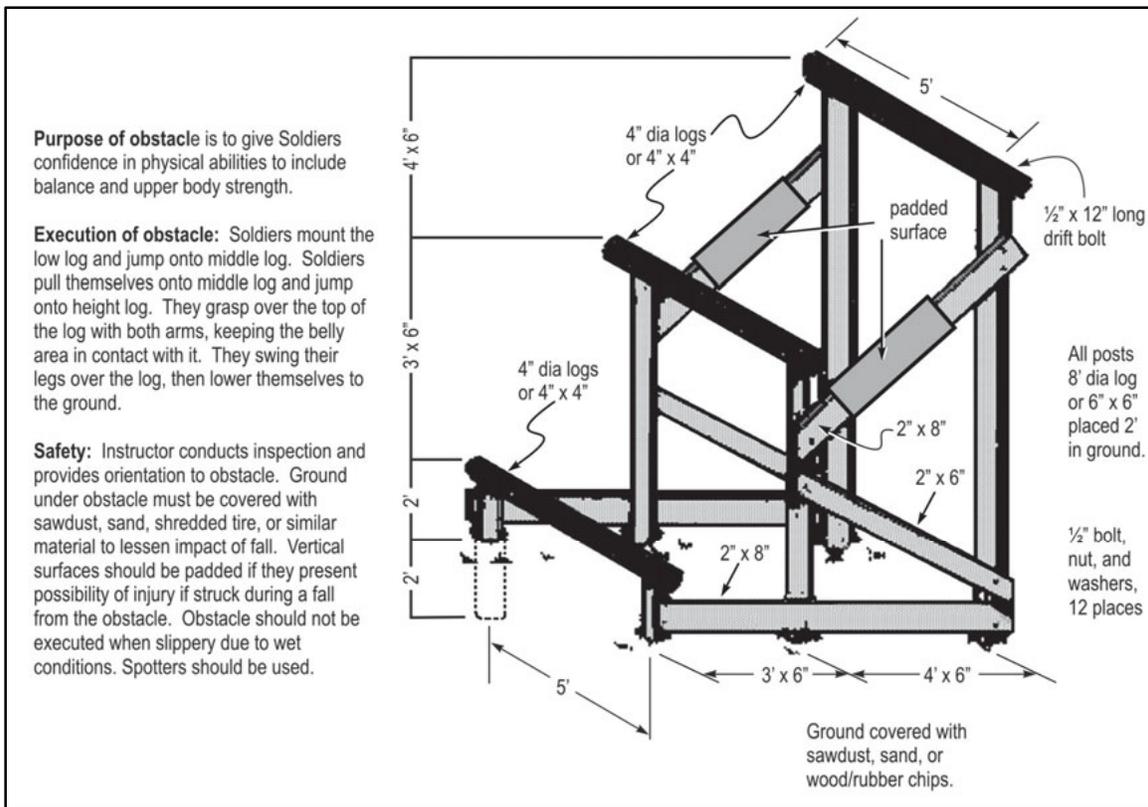


Figure E-20. Dirty name (course sketch)

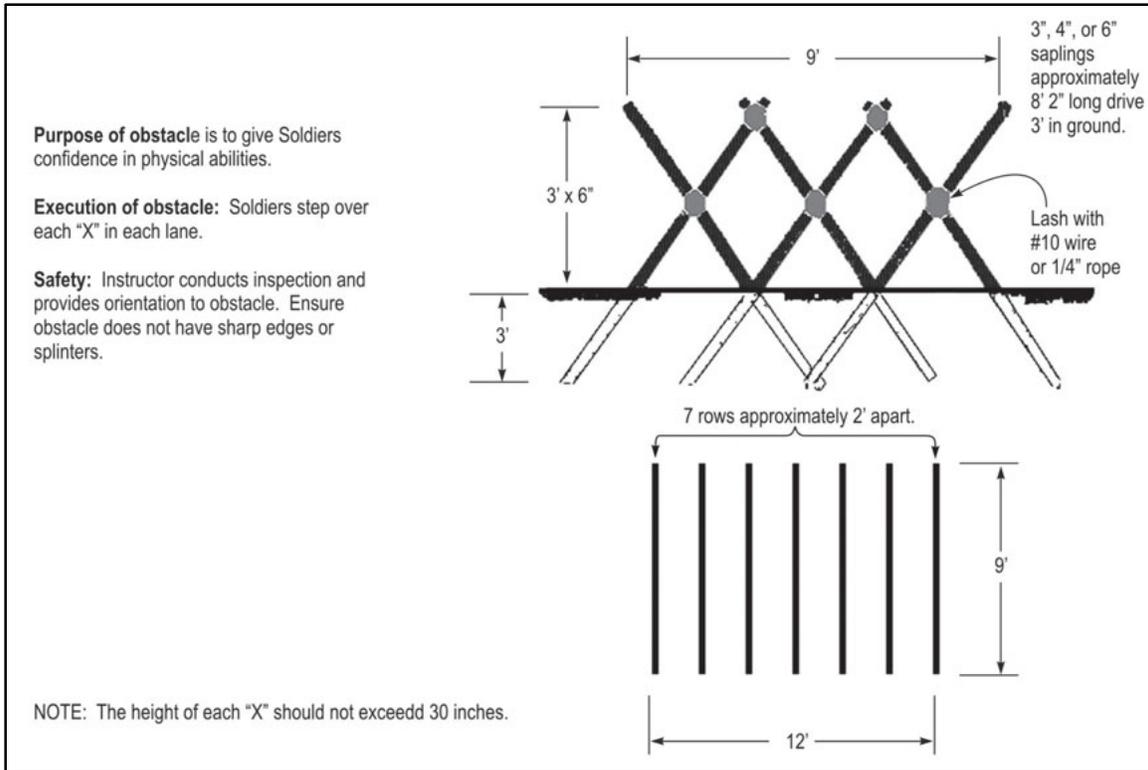


Figure E-21. Tough nut (course sketch)

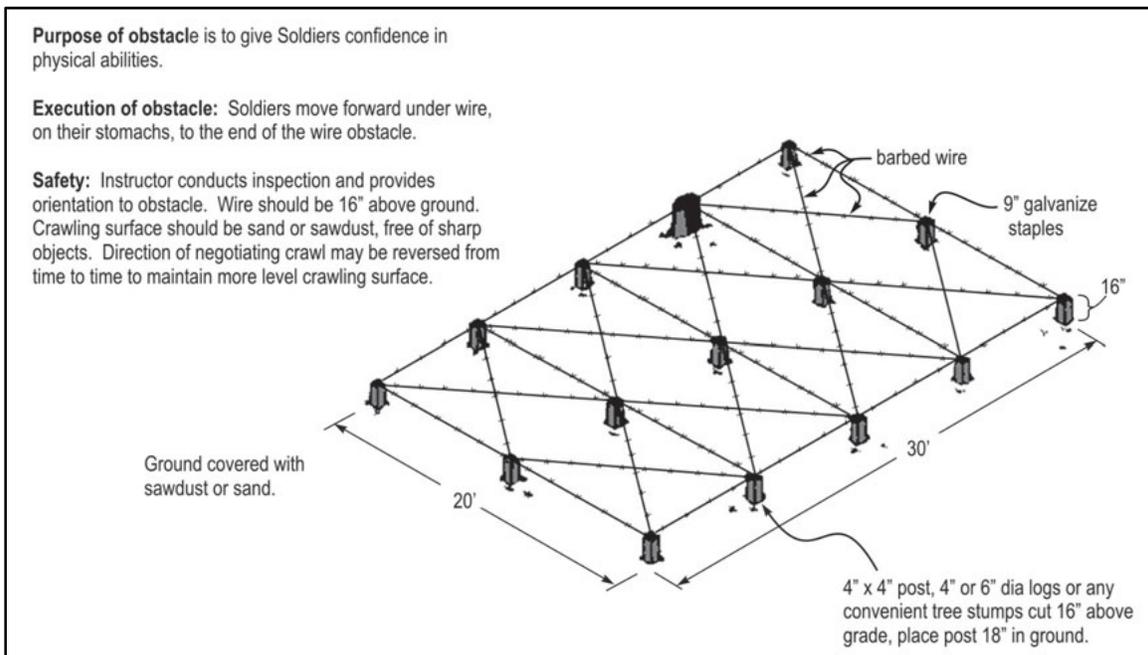


Figure E-22. Belly crawl (course sketch)

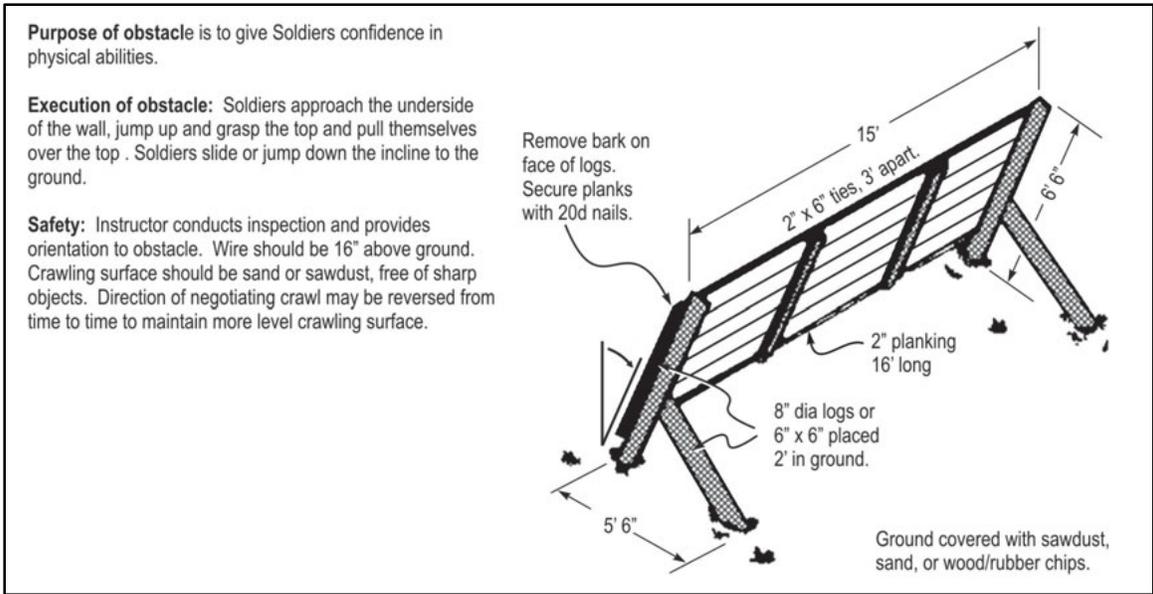


Figure E-23. Inclining wall (course sketch)

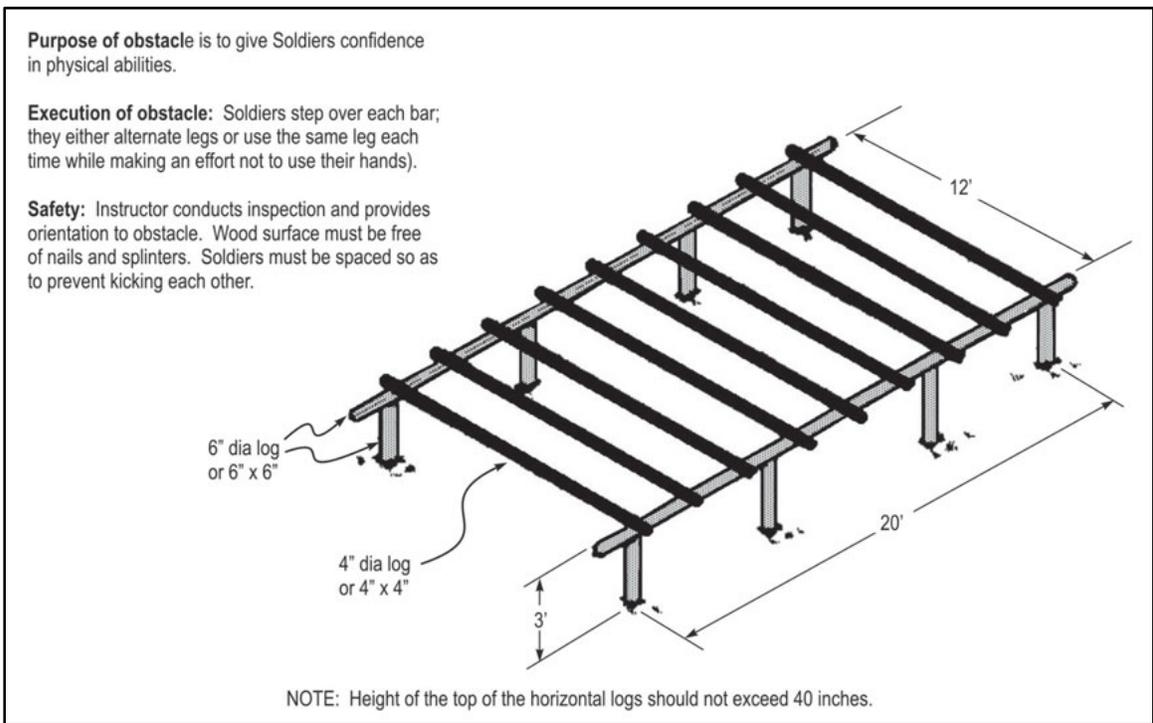


Figure E-24. High step over (course sketch)

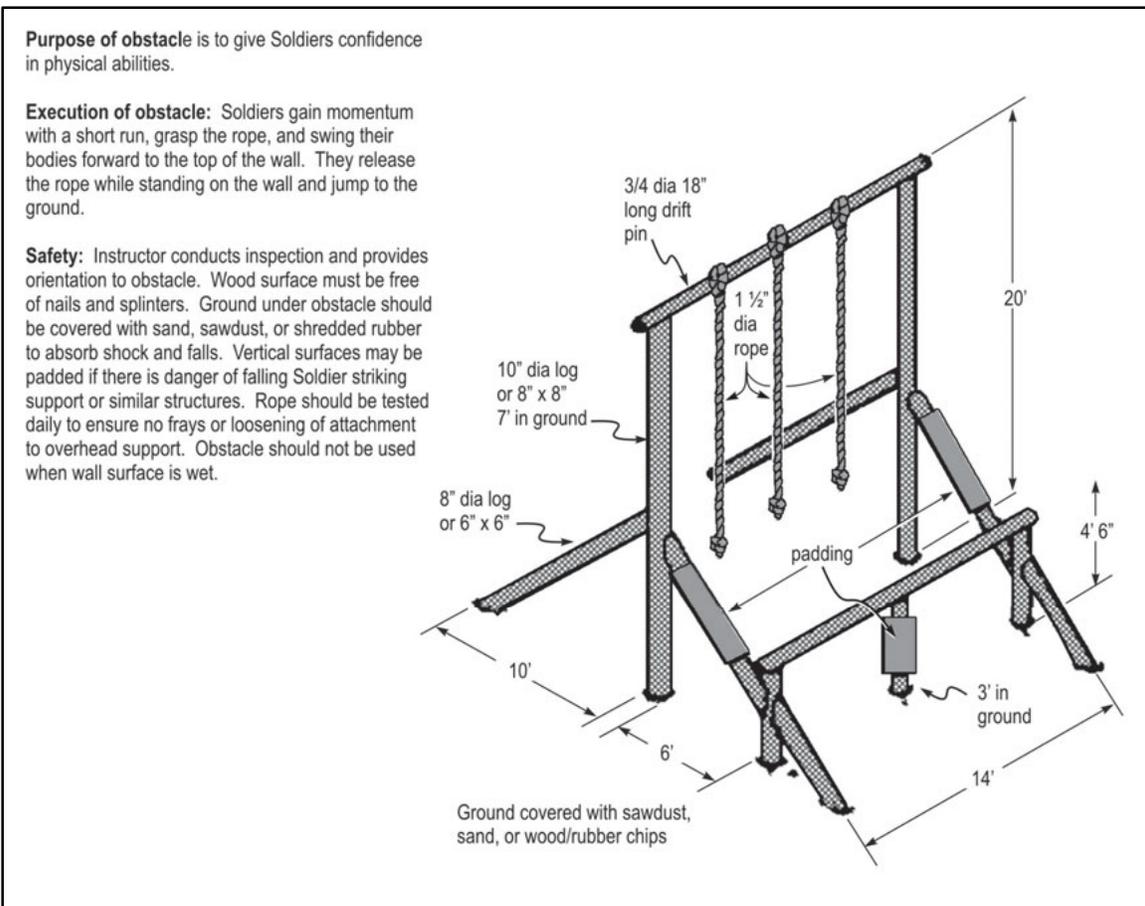


Figure E-25. Swing, stop, and jump (course sketch)

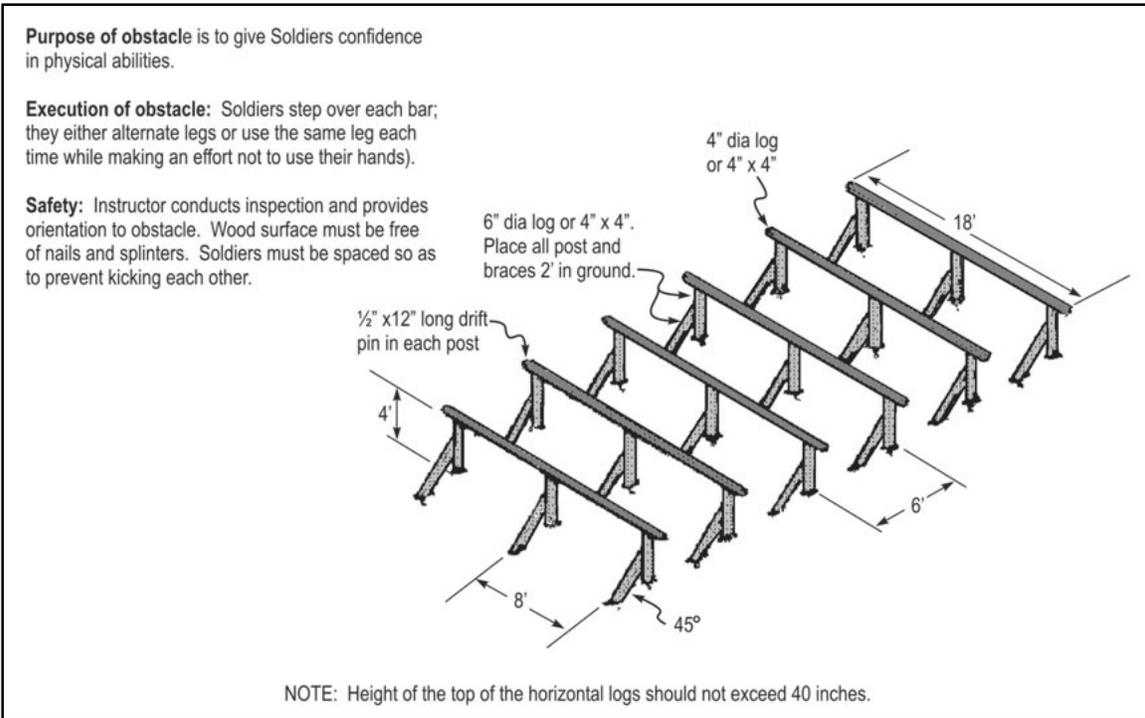


Figure E-26. Six vaults (course sketch)

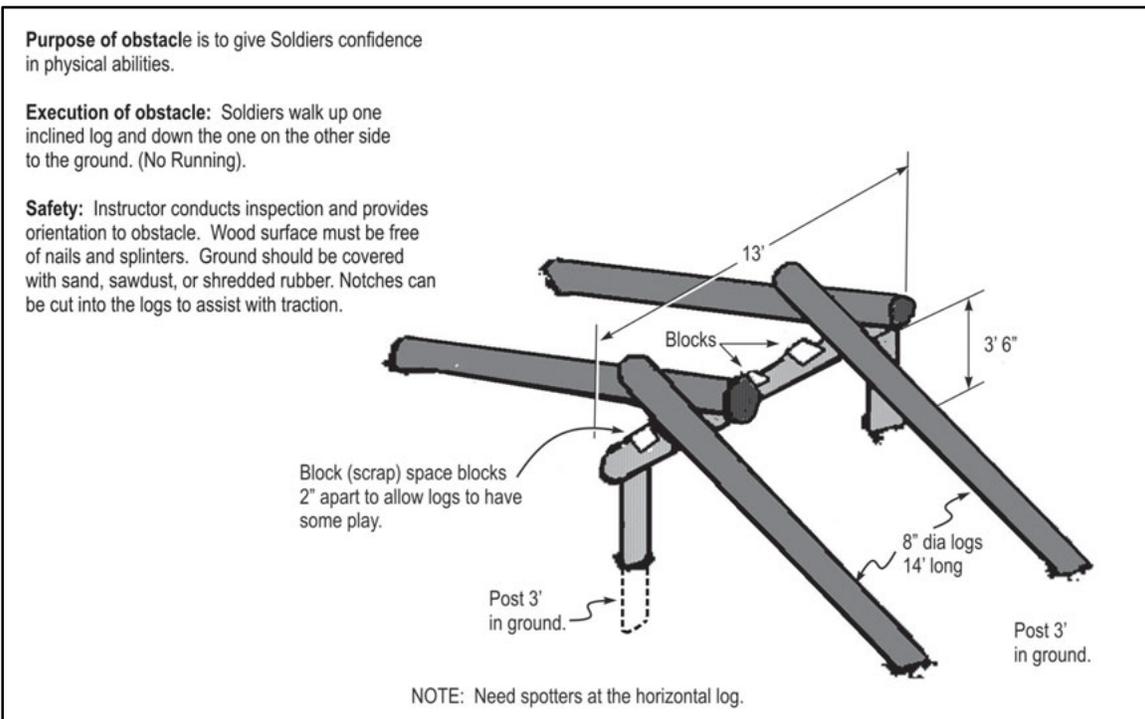


Figure E-27. Easy balancer (course sketch)

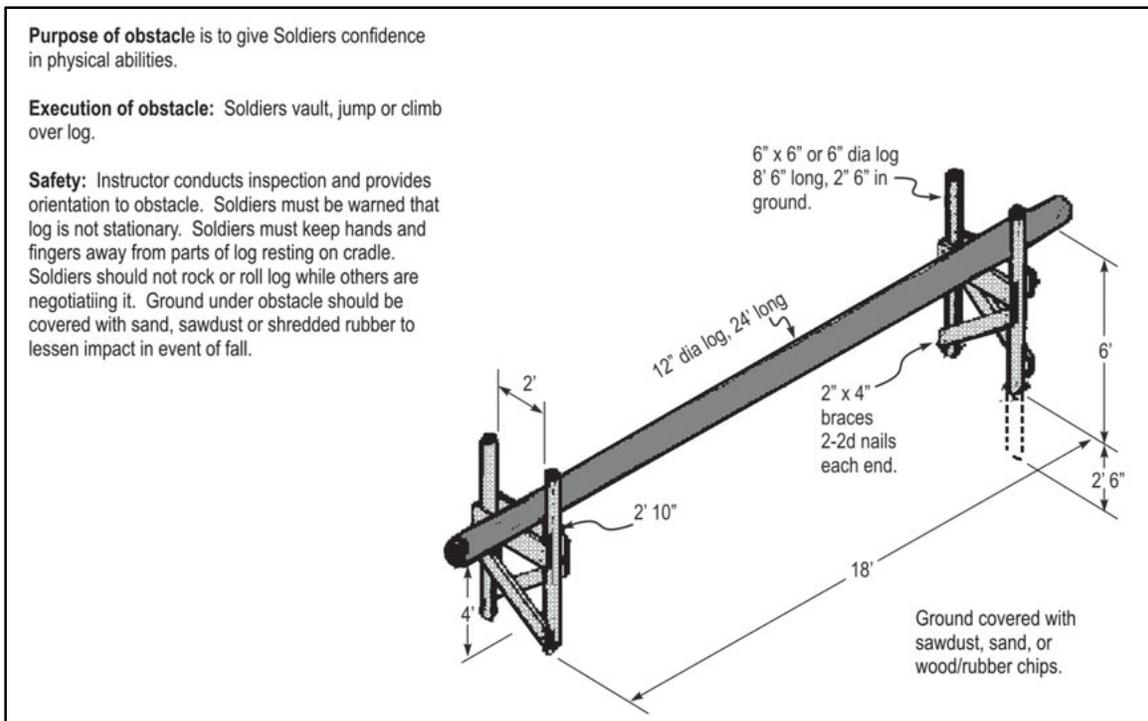


Figure E-28. Belly buster (course sketch)

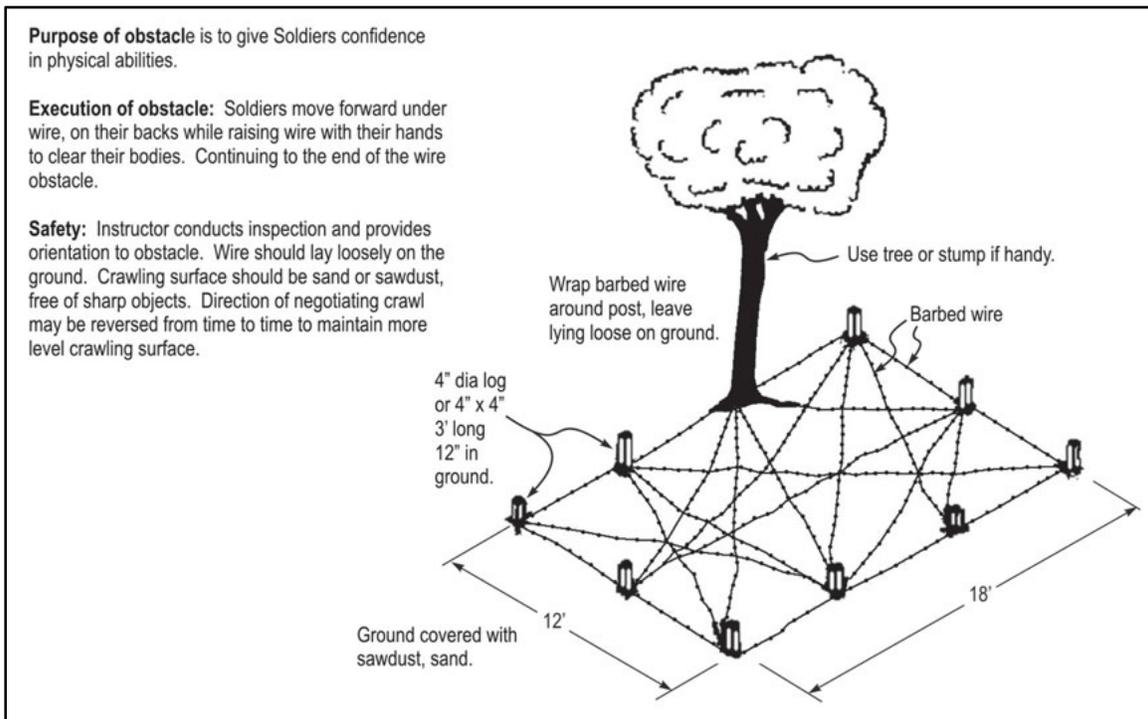


Figure E-29. Low wire (course sketch)

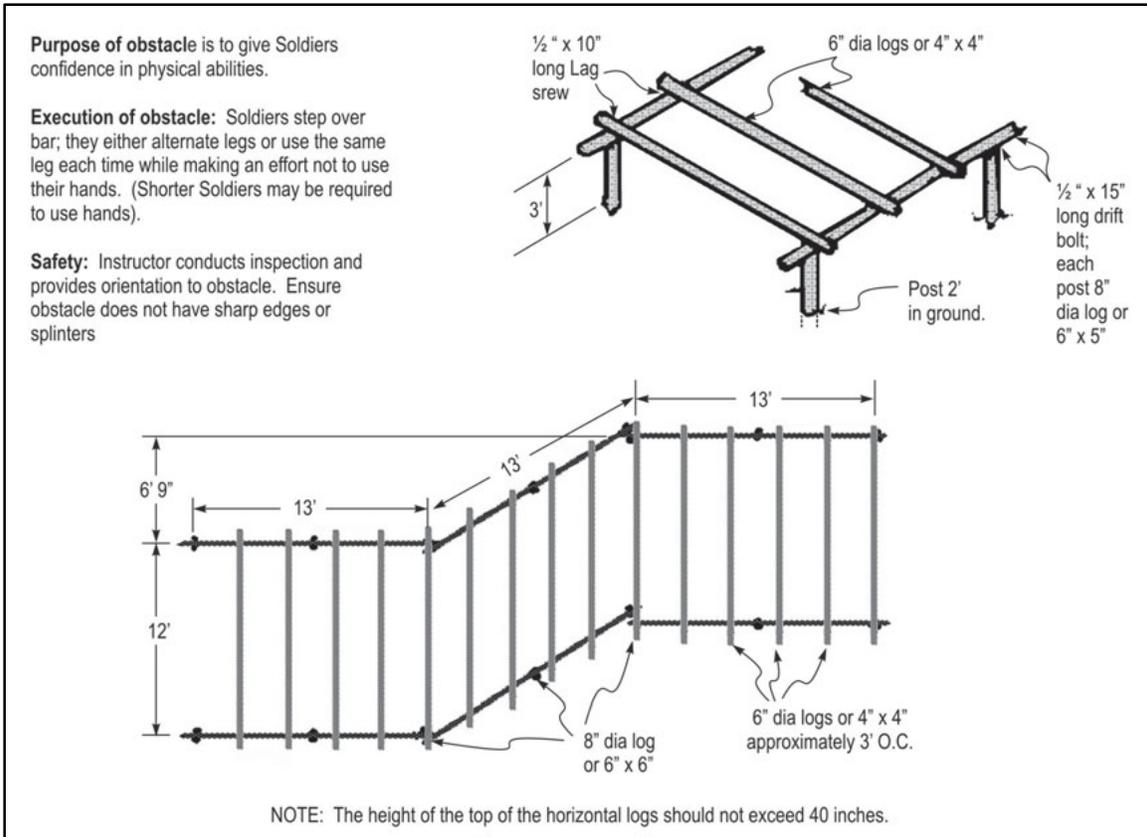


Figure E-30. Hip-hip (course sketch)

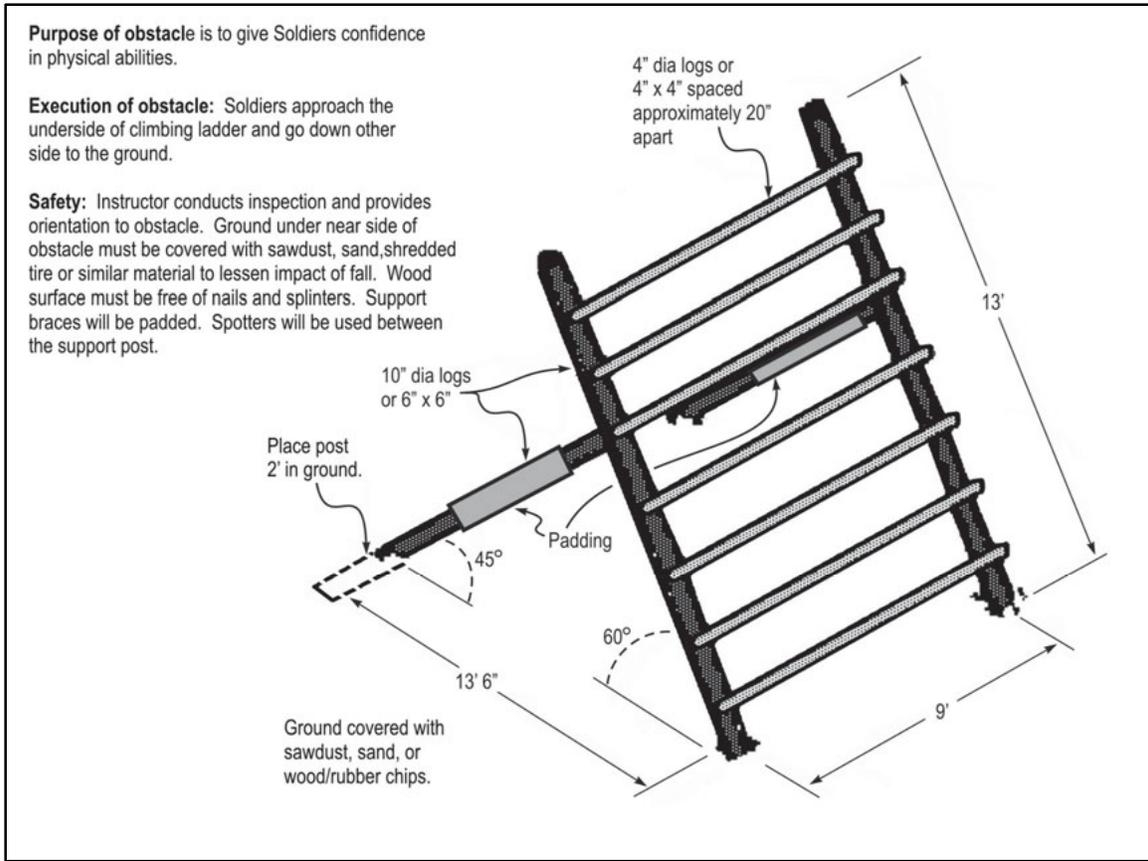


Figure E-31. Reverse climb (course sketch)

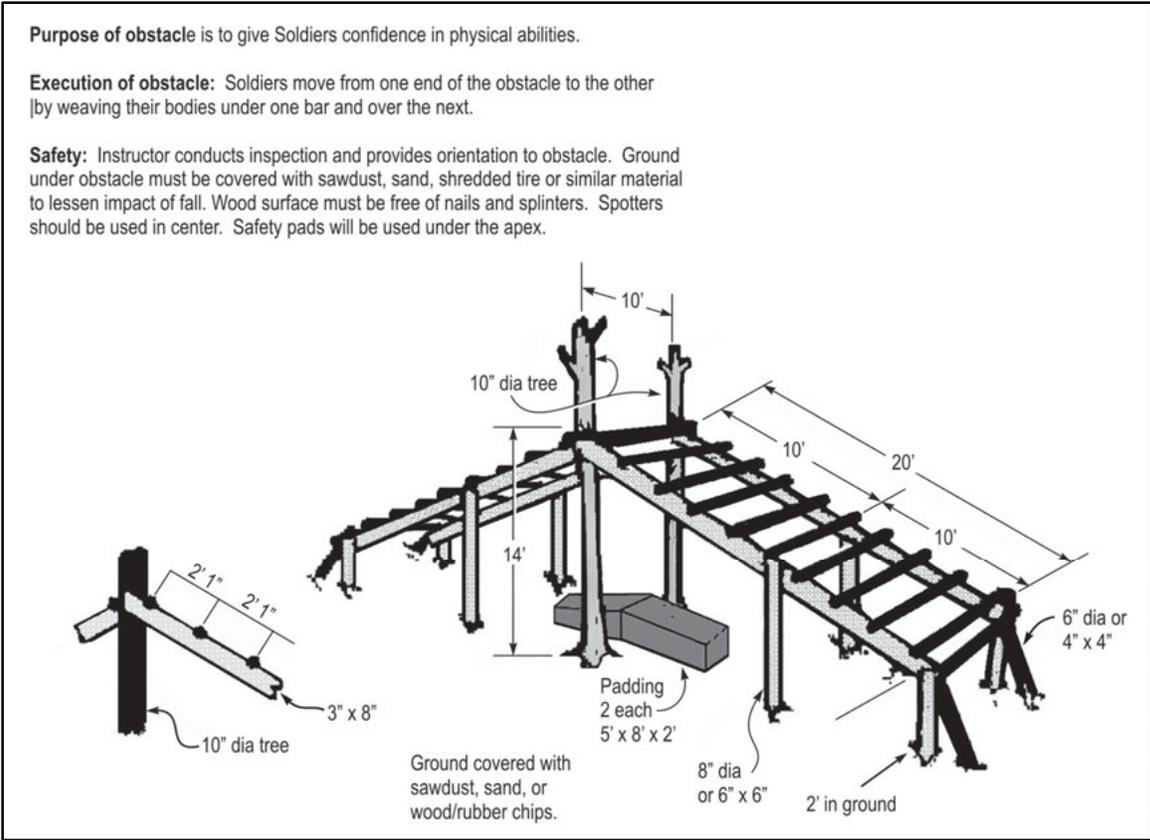


Figure E-32. Weaver (course sketch)

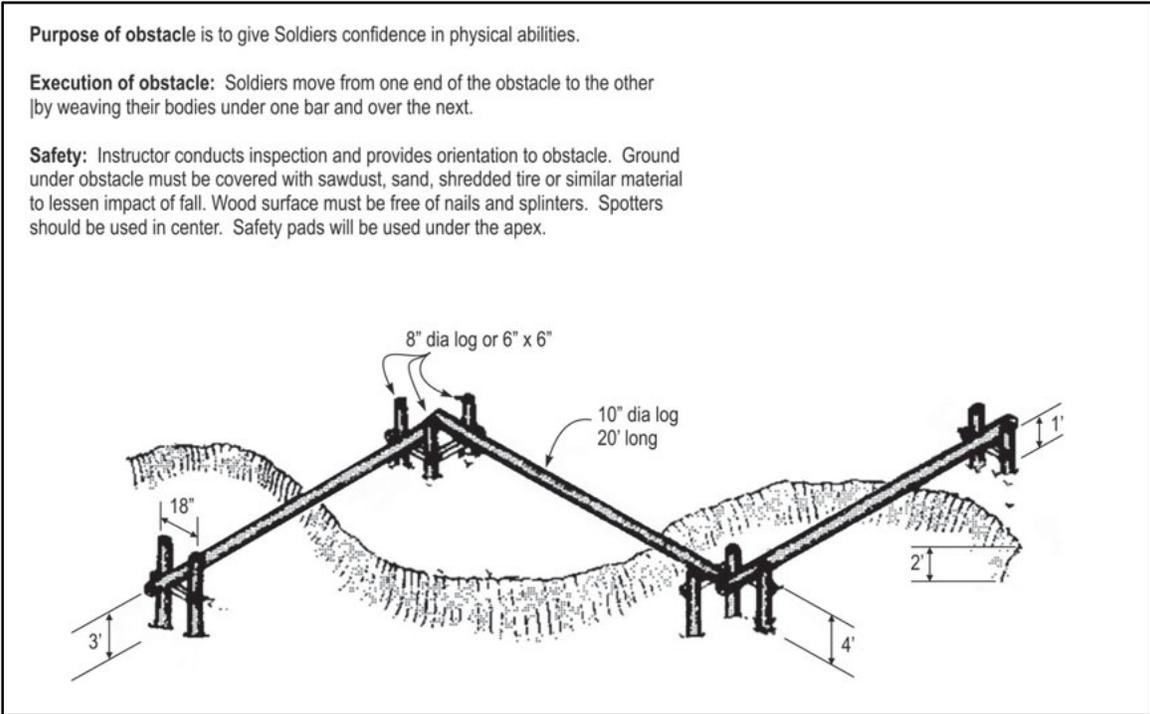
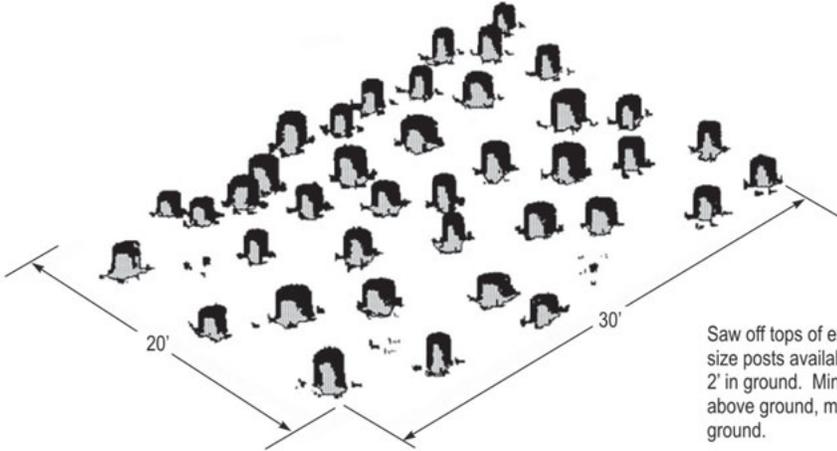


Figure E-33. Balancing logs (course sketch)

**Purpose of obstacle** is to give Soldiers confidence in physical abilities.

**Execution of obstacle:** Soldiers jump from one log to another until obstacle is negotiated from near to far side.

**Safety:** Instructor conducts inspection and provides orientation to obstacle. Wood surface must be free of sharp edges and should not be slippery) it may be necessary to rough up tops of logs/stumps to ensure traction or use 1-inch nails driven into the toos).



Saw off tops of existing stumps or use any size posts available 8" dia or larger. Place 2' in ground. Minimum height of stump 6" above ground, maximum height 26" above ground.

Figure E-34. Island hopper (course sketch)