

## APPENDIX B

**LONG-RANGE SURVEILLANCE RECONNAISSANCE**

*Surveillance is the primary mission of long-range surveillance teams. However they can conduct limited reconnaissance missions primarily within the human intelligence realm and within the doctrinally stated LRSU operational area. A reconnaissance mission significantly increases a team's vulnerability and, thus, chances of compromise. The mobility of a team is limited to foot movement and with the typical loads that an LRS team carries, the size of the area they can reconnoiter is greatly reduced. Bridge and route reconnaissance with report formats are included in this appendix to provide LRS teams with the information on they need if they are tasked to perform one of these missions. LRS teams are not equipped or staffed for these type missions nor is it their primary function; however, they must be prepared to conduct limited active reconnaissance. Improvements in the areas of rations, water purification, and communication equipment will have a direct affect on these missions in the future.*

**B-1. AREA RECONNAISSANCE**

Area reconnaissance is used to obtain detailed information about all routes, obstacles, and enemy forces in a defined area. The team leader organizes his team to conduct the reconnaissance in one of two ways. Depending on the terrain and time, he may either use single or multiple separate reconnaissance and security elements. (Figure B-1, page B-3.)

a. Reconnaissance and security teams may be employed in any size reconnaissance patrol. When conducting reconnaissance missions in team-size units, the team may be organized in many ways.

(1) One 2- to 3-man reconnaissance and security team conducts the reconnaissance. The remainder of the team stays at the release point and establishes a hide site.

(2) Two reconnaissance and security teams reconnoiter a separate portion of the objective, and then link up at a designated linkup point.

(3) One reconnaissance and security team, with one security team that will follow the reconnaissance and security team (for example, about 50 meters back), acts as a quick-reaction force. The entire team departs the objective area when the reconnaissance is complete.

b. In a reconnaissance and security team, the reconnaissance can be done by one or two individuals; the rest of the element provides security. The team leader controls this movement with arm-and-hand signals. The number of soldiers in a reconnaissance and security team may vary depending on the mission. Usually, three soldiers are required for an adequate

reconnaissance and still provide the required security. The information used may vary according to the terrain. The most important planning consideration is that each member of the reconnaissance and security team knows the sector or area for which he is responsible.

c. Once the team leader organizes his team, the objective is reconnoitered by using one of the following techniques.

(1) *Long-range observation and surveillance.* Long-range observation and surveillance is the observation of an objective from a point (an observation post). It must be far enough from the objective to be outside enemy small-arms weapons range and local security measures. This technique can be used whenever METT-T allows the information to be gathered from a distance. It is the most desirable method for executing an area reconnaissance, because the team does not approach close enough to be detected. Also, this prevents the team's no-fire area from overlapping the objective area. When information cannot be gathered from one observation post, a series of observation posts to be occupied by one reconnaissance team may be used. Observation posts are used that have cover and concealment. They should have a good view of the objective. Routes between and from observation posts to the hide site or release point should have cover and concealment.

(2) *Short-range observation and surveillance.* Short-range observation and surveillance is the observation of an objective from a place that is within the range of enemy small-arms weapons fire and local security measures.

(a) Short-range observation is used when METT-T requires close approach to the objective to gain information.

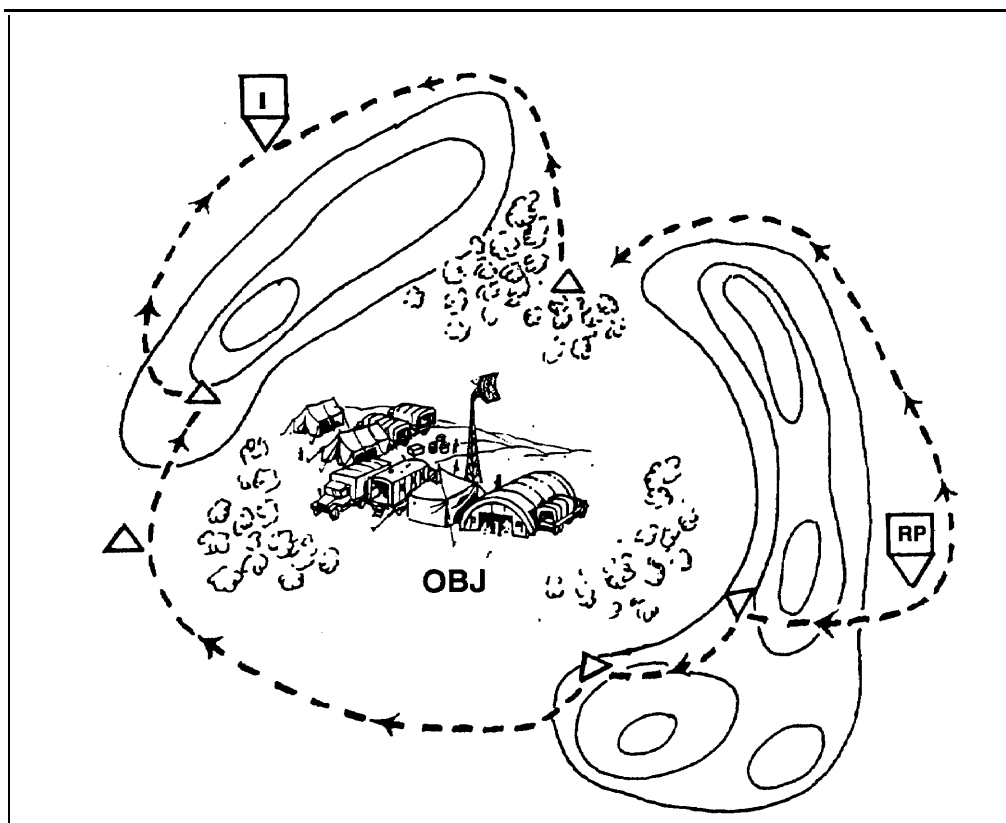
(b) Short-range observation and surveillance may be from observation posts, but usually the reconnaissance teams must move near the objective before they can find a position from which to observe. In some cases, the reconnaissance teams may gather information by listening even though they cannot see the enemy.

(c) Short-range observation increases the chance the team will be detected. The enemy may employ anti-intrusion devices and patrols close to their key installations. Inclement weather may reduce the sounds of the reconnaissance team's movement and limited visibility favors short-range observation. When short-range observation is necessary, the teams use every measure possible (both passive and active) to avoid detection.

d. To reconnoiter a road, the team leader selects multiple vantage points or observation posts along the road. The reconnaissance element, as organized by the team leader, reconnoiters bridges, defiles, bends in the road, and built-up areas. The reconnaissance element reports the condition, trafficability, and

width of the road; evidence of the enemy or obstacles; bridge and ford locations and conditions; and tunnel or underpass locations and dimensions.

e. To reconnoiter a wood line, the reconnaissance element (as organized by the team leader) uses concealed routes and stealth to reach the wood line and avoids contact. It checks for evidence of enemy activity such as tracks, litter, old fighting positions, mines, booby traps, and obstacles. It determines if the woods are trafficable and checks all positions from which the enemy could observe and fire on friendly elements in open areas and reports its findings.



**Figure B-1. Reconnaissance and security elements.**

## **B-2. ZONE RECONNAISSANCE**

A zone reconnaissance is used when the enemy's location is in doubt or if it is best to locate suitable routes or determine conditions of cross-country trafficability. The team obtains detailed information about routes, obstacles, key terrain, and enemy activities in a zone established by lateral boundaries. The team may elect to use the fan method, converging-routes method, or successive-sectors method.

a. **Fan Method.** The team leader selects a series of ORPs throughout the zone. When the team arrives at the first ORP, it halts and establishes security. The team leader confirms the team's location. He then selects reconnaissance routes to and from the ORP. The routes form a fan-shaped pattern around the ORP (Figure B-2). The routes must overlap to ensure that the entire area has been reconnoitered. Once the routes have been selected, the team leader sends out reconnaissance elements. He keeps a small reserve in the ORP. (For example, if the team has three reconnaissance elements, only two are sent out. The other one is kept as a reserve.) The team leader also sends the elements out on an adjacent routes. This prevents the team from making contact in two different directions. After the area (fan) has been reconnoitered, the information is reported. The team then moves to the next ORP. The action is repeated at each successive ORP.

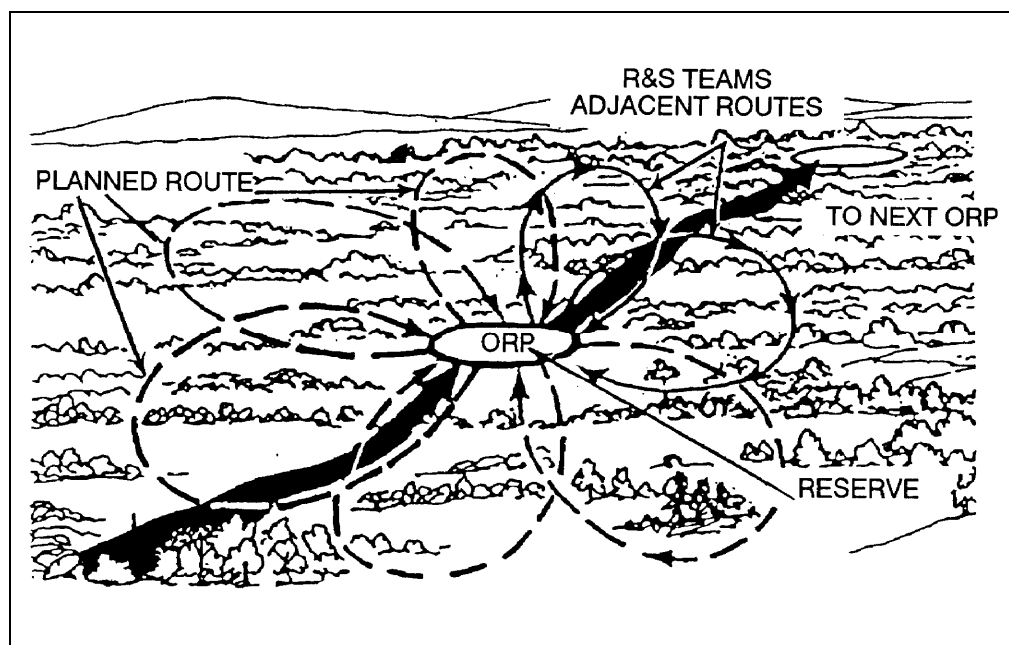
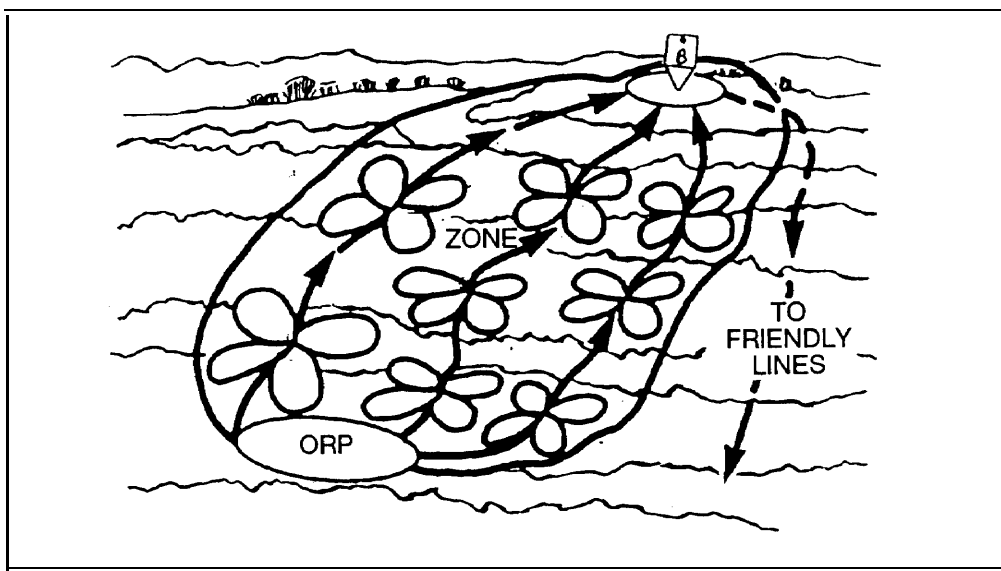


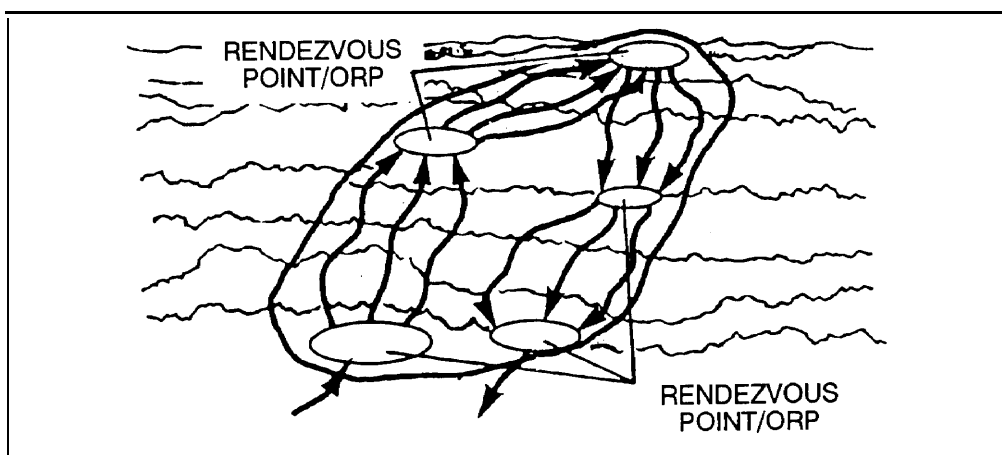
Figure B-2. Fan method.

b. **Converging-Routes Method.** The team leader selects an ORP, reconnaissance routes through the zone, and then a linkup point. A subelement is sent out on each route. The team leader normally moves with the center element. The subunits normally reconnoiter their routes by using the fan method. The entire team links up at the linkup point at the designated time. (Figure B-3.)



**Figure B-3. Converging-routes method.**

**c. Successive-Sector Method.** This method is a continuation of the converging-routes method. The team leader selects an ORP, a series of reconnaissance routes, and linkup points. The actions of the team from each ORP to each linkup point are the same as in the converging-routes method. (Each linkup point becomes the ORP for the next phase.) When the team links up, the team leader again designates reconnaissance routes, a linkup time, and the next linkup point. This action continues until the entire zone has been reconnoitered. (Figure B-4.) Once the reconnaissance is completed, the team returns to friendly lines.



**Figure B-4. Successive-sector method.**

### **B-3. ROUTE RECONNAISSANCE**

Route reconnaissance obtains information about enemy activity, obstacles, route conditions, and critical terrain features along a specific route. It is unlikely that a team will be able to obtain precise measurements of road curves, widths, heights of underpasses, and dimensions of tunnels. If possible, they report types of vehicles that are using the roads and entering or exiting the tunnels. Intelligence can then estimate widths, weight limits of roads, heights, and widths of tunnels and heights of underpasses. Figure B-5 illustrates the information a team is required to report on a route reconnaissance. Figure B-6, page B-8, shows various report formats. (All report formats in this manual are in FM 5-36.) Possible information requirements for an LRS route reconnaissance include—

- The available space in which a force can maneuver without being forced to bunch up due to obstacles (reported in meters). The size of trees and the density of forests are reported due to the effect on vehicle movement.
- The location of all obstacles and the location of available bypass.
- Any enemy forces that can influence movement along the route.
- The observation and fields of fire along the route and adjacent terrain.
- The locations along the route that provide good cover and concealment.
- Trafficability along the route.
- Landing and pickup zones along the route.
- Any bridges by construction and type, estimated dimensions of the bridge, and any vehicles crossing the bridge. This will enable intelligence to estimate load classification.

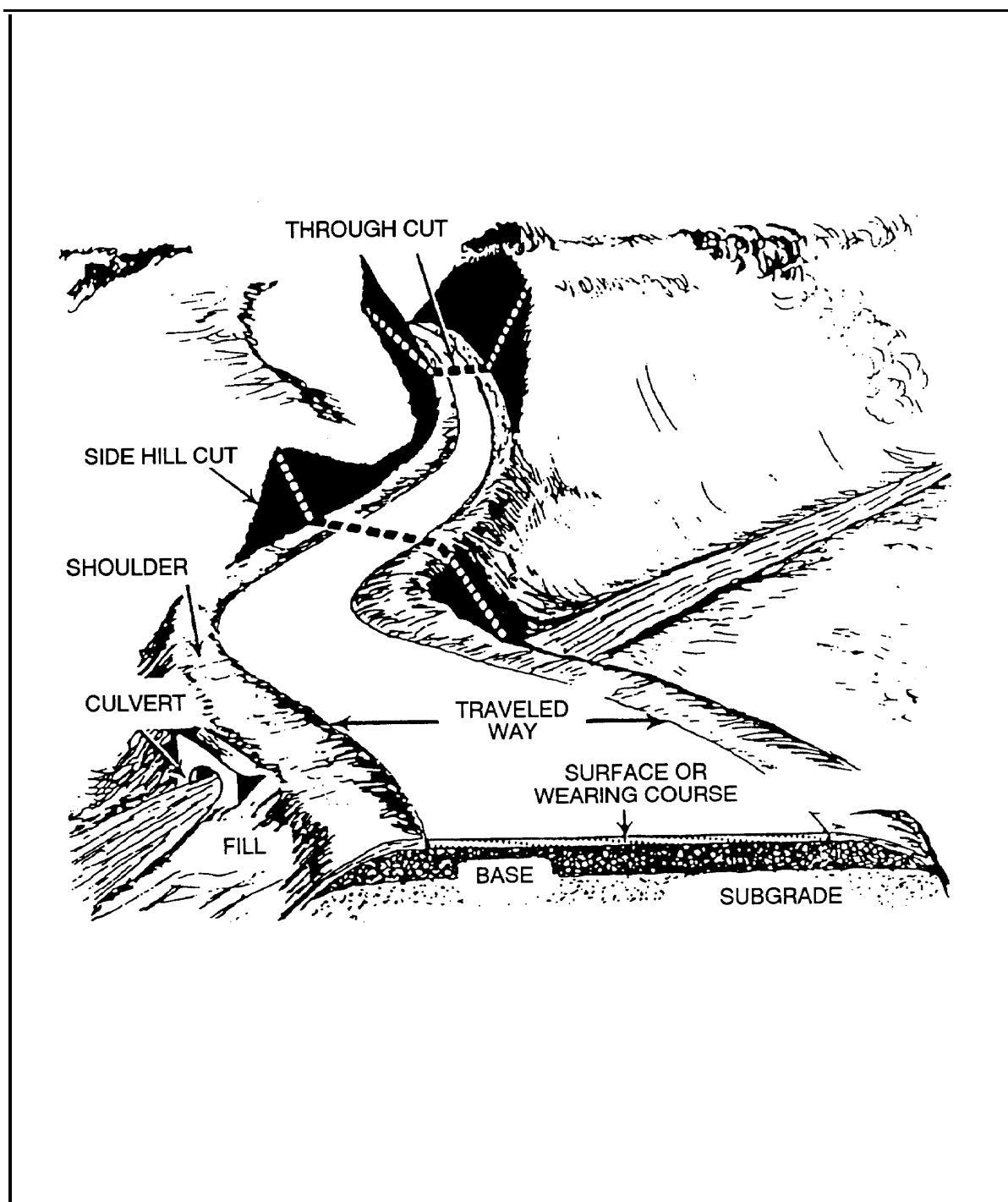


Figure B-5. Route reconnaissance information.

AIRFIELD REPORT		TERRAIN REPORT FORMAT	
LETTER DESIGNATION	EXPLANATION	LETTER DESIGNATION	EXPLANATION
A B C D E F G H I J K L	Map sheet(s). Date and time of collection of information. Location (grid references). Number of runways (length and width). Orientation of runways. Type and surface of runways. Condition of the runways. Hangars and bulk fuel storage facilities, including condition. Parking area for the aircraft. Maintenance facilities. Access by road. Any other information such as type of aircraft that could use the airfield.	A B C D E F G	Map sheet(s) and grid references. Shape of the ground (flat, rolling, hilly, mountainous). Cross-county movement. Vegetation. Concealment. Land use. Suitability of the soil for digging.
Report airfields by serial number. The appropriate letter designation must precede each category of information reported.		Report terrain areas by serial number. The appropriate letter designation must precede each category of information reported.	
FERRY SITE REPORT FORMAT		BRIDGE SITE REPORT	
LETTER DESIGNATION	EXPLANATION	LETTER DESIGNATION	EXPLANATION
A B C D E F G H I J K	Map sheet(s). Date and time information was collected. Location (UTM grid reference). Military load classification of approaches. Possibilities of concealment and cover. Width of water obstacle. Depth of water at the banks, to include tidal information. Stream velocity. Slope on bank approaches and bank conditions. Holding areas for road and water transport. Additional information such as maximum number of rafts the site can accommodate. Work required in man-hours for preparation and existing stream-crossing equipment.	A B C D E F G H I J K L M	Map sheet(s). Date and time of collection of information. Location (grid references). Width of gap at bank seats. Width at water level. Rise and fall of water level and change in wet gap width. Velocity of current. Nature of bottom. Height of near bank above water level. Height of far bank above water level. Safe bearing pressure of soil. Description of work required on approaches, near and far banks. Possible local areas for concealing bridging equipment.
Report ferries by serial number. The appropriate letter designation must precede each category of information reported.		Report bridge sites by serial number. The appropriate letter designation must precede each category of information reported.	

Figure B-6. Route reconnaissance reports.



FORD REPORT FORMAT		TUNNEL REPORT FORMAT	
LETTER DESIGNATION	EXPLANATION	LETTER DESIGNATION	EXPLANATION
A	Map sheet(s).	A	Map sheet(s).
B	Date and time information was collected.	B	Date and time information was collected.
C	Location (UTM grid coordinates and ford type).	C	Location (UTM grid coordinates).
D	Minimum width.	D	Length.
E	Maximum depth.	E	Width.
F	Stream velocity.		
G	Type of bottom.		
H	Maximum percent of slope on bank exits.		
I	Military load classification.		
J	Other information.		
Report fords by serial number. The appropriate letter designation must precede each category of information reported.			
<p align="center"><b>ENEMY MINEFIELD AND OR UNIDENTIFIED MINEFIELD NOT LAID BY REPORTING UNIT REPORT</b></p>			
LETTER DESIGNATION	EXPLANATION		
A	Map sheet(s).		
B	Date and time information was collected.		
C	Type of minefield (antitank, antipersonnel, or mixed).		
D	Grid references or minefield extremities, if known.		
E	Depth of minefield.		
f	Enemy weapons or surveillance bearing on the minefield, if any.		
G	Estimated time required to clear minefield.		
H	Estimated material and equipment required to clear minefield.		
I	Routes for bypassing the minefield, if any.		
J-Y	Grid references of lanes (entry, exit) and width of lanes in meters.		
Z	Any other information such as types of mines used, new mines, or types of booby traps.		

Figure B-6. Route reconnaissance reports (continued).

### B-3. BRIDGE RECONNAISSANCE

Bridge reconnaissance is not a separate category of reconnaissance, but may be a necessary part of area, zone, or route reconnaissance. Procedures are taken to provide dimensional data to analyze the bridge structure for repairs, demolition, or military load classification. It is not likely that a team will be able to obtain precise measurements. If possible, they report the type and number of vehicles crossing bridge. Intelligence can estimate the weight limit, height, and weight of bridge. (See Figures B-7 and B-8.) (See FM 5-36 for more information.)

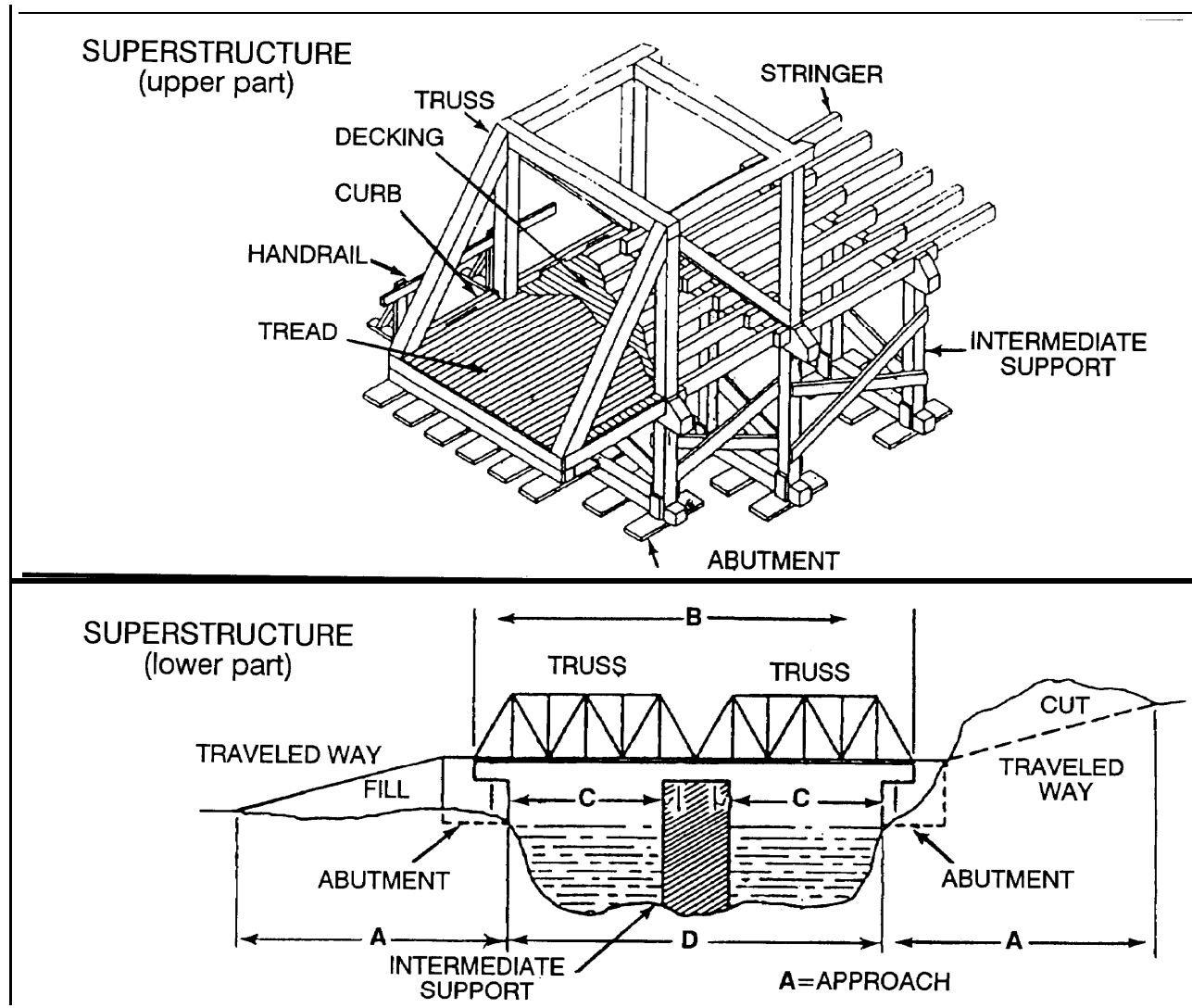


Figure B-7. Bridge parts.

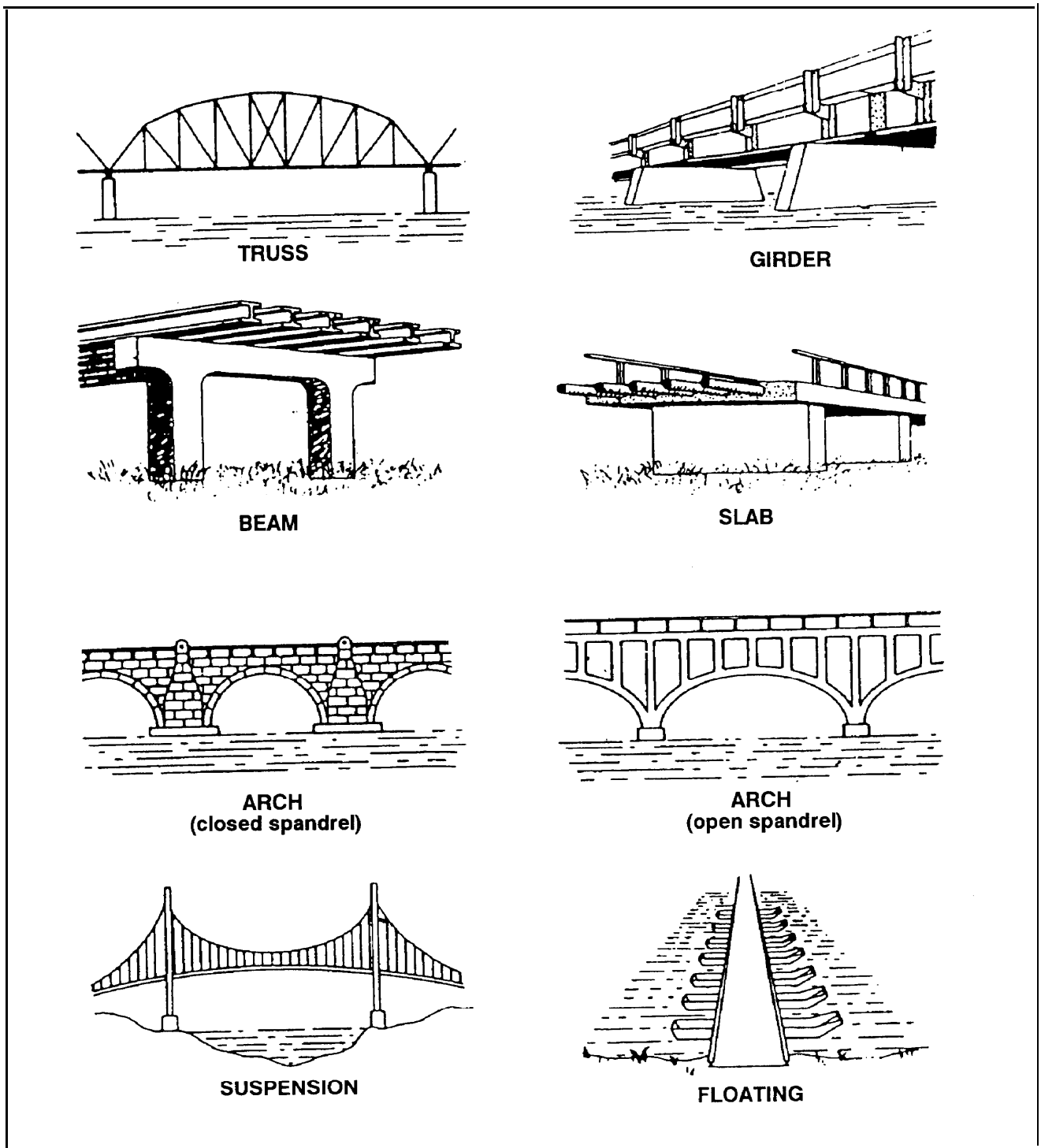


Figure B-8. Typical bridge spans.