

Chapter 5

Demolition Operations

This chapter implements STANAG 2017 (ENGR), STANAG 2123 (ENGR), QSTAG 508, and QSTAG 743.

Section I. Demolition Plan

5-1. Demolition Obstacles. Although engineers use explosives for quarrying, land clearing, and other projects, their most important military application is creating demolition obstacles. Engineers use demolition obstacles in conjunction with many other types of obstacles, including mines. They also use explosives to destroy materiel and facilities that must be abandoned (denial operations).

5-2. Barriers and Denial Operations. Division or higher-echelon commanders normally direct the use of extensive barriers and denial operations. Commanders must carefully prepare and closely coordinate these operations with all tactical plans. Engineer units provide technical advice and supervision, estimate the resources necessary for obstacle construction, construct barriers or obstacles, and recommend allocation of engineer resources. They usually construct demolition obstacles because they have the special skills and equipment to accomplish these tasks.

5-3. Demolition Planning. Base any demolition project on careful planning and reconnaissance. Use the following factors as a basis for selecting and planning demolition projects:

- Mission.
- Limitations and instructions from higher authority.
- Current tactical and strategic situation and future plans (conditions that indicate the length of time you must delay the enemy, the time available for demolition, and the extent of denial objectives).
- Enemy capabilities and limitations, as well as the effect our denial operations have on enemy forces, strategically and tactically.
- Likelihood that friendly forces may reoccupy the area, requiring obstacle neutralization.
- Economy of effort.
- Time, material, labor, and equipment available.
- Effect on the local population.
- Target protection required.

Section II. Types of Military Demolitions

5-4. Demolition Orders. The authorized commanders use the *Orders for the Demolition* to pass their orders to demolition guards and demolition firing parties. The Orders for the Demolition, as outlined in STANAG 2017 and QSTAG 508, is a standard four-page form used by North Atlantic Treaty Organization (NATO) and ABCA countries. Use this form for preparing all reserved and preliminary demolitions. Page one of the form contains the instructions, duties, and responsibilities of demolition personnel. A sample of the orders is included in the sample target folder in Appendix F (page F-4).

5-5. Preliminary Demolitions.

a. *Purpose.* Provided you have prior authority, detonate a preliminary demolition immediately after preparation. These demolitions present fewer difficulties to both commanders and engineers than do reserved demolitions. Commanders may restrict preliminary demolitions for tactical, political, or geographical reasons.

b. *Advantages.* The advantages of a preliminary demolitions are—

- Engineers normally complete each task and move to the next without having to leave demolition guards or firing parties at the site.
- Preparation efforts are less subject to interference by enemy or friendly troops.
- Elaborate precautions against failure are not required; preliminary demolitions require only single-firing systems.
- Engineers can perform the demolition operations for a particular target in stages rather than all at once.

c. *Progressive Preparation.* When preparation time is limited, engineers prepare the demolition in progressive stages. Doing this gives engineers the ability to create effective obstacles even if preparations must stop at any stage. For example, in the case of a bridge demolition, engineers would make one span the top priority, completely preparing it before continuing with other spans, piers, or abutments. As they complete other stages, engineers incorporate them into the firing system.

5-6. Reserved Demolitions.

a. *Purpose.* The responsible commander must carefully control a reserved demolition target because the target may be a vital part of the tactical or strategic plan or because the demolition will be performed in the face of the enemy.

b. *Considerations.* Occasionally, errors in orders, control, or timing cause serious consequences during demolition operations. In addition, engineers may encounter special problems when dealing with reserved demolition targets:

- Engineers must usually keep traffic lanes open until the last moment. This normally means they cannot use the simplest and quickest demolition techniques to accomplish the mission.

- The demolitions must be weatherproof and protected from traffic vibrations and enemy fire over long periods. Use dual firing systems, and carefully place and protect the demolitions from passing vehicles or pedestrians.
- A guard must remain at the demolition site until the demolitions are fired.

c. *States of Readiness.*

(1) State of Readiness 1 (Safe). The demolition charges are in place and secure. Vertical and horizontal ring mains are installed (Figure 2-33, page 2-27) but are not connected. Charges are primed with detonating-cord knots or wraps to minimize the time necessary to convert the system from State of Readiness 1 to State of Readiness 2. Charges that require blasting caps for priming cannot be primed at State of Readiness 1 nor can branch lines with caps crimped to them be connected to ring mains. Blasting caps and initiation sets are not attached to charges or firing systems.

(2) State of Readiness 2 (Armed). All vertical and horizontal ring mains are connected. Blasting caps are inappropriate charges and initiation sets are connected to ring mains. All charges and firing systems are complete and ready for detonation. The demolition is ready for immediate firing.

d. *Responsibilities.*

(1) Authorized Commanders. These commanders have overall responsibility for the operational plan. At any stage of the operation, they may delegate responsibilities. For example, when authorized commanders withdraw through other units' intermediate positions, they normally pass control to the commanders holding the intermediate positions. The commanders holding the intermediate positions then become the authorized commanders. Authorized commanders—

- Designate demolition targets as reserved targets.
- Order the demolition guard, detailing the strength and composition of the guard party.
- Specify the state of readiness and order changes to the state of readiness, if necessary.
- Give the orders to fire demolitions.
- May give the demolition guard or the firing-party commander the authority, in case of imminent capture, to fire the demolition on his own initiative.
- Destroy captured or abandoned explosives and demolition materials to prevent them from falling into enemy hands. Commanders should carefully select the demolition site and consider all safety precautions necessary when destroying abandoned demolitions. Chapter 6, Section IV (page 6-13), covers procedures and methods for destroying explosives.
- Issue the written instructions (demolition orders) to the unit providing the demolition guard and firing party.
- Notify all headquarters of any delegation of authority or reclassification of any demolition from a reserved to a preliminary status.
- Establish effective channels for communicating firing orders and readiness states to demolition guard commanders or firing-party commanders.

(2) Demolition Guard Commanders. These commanders are normally the infantry or armor task-force commanders who control the target area. These commanders—

- Command all troops and firing parties at reserved demolitions.
- Provide protection for reserved demolitions, firing parties, and targets.
- Control all traffic over or through targets.
- Pass written state-of-readiness orders to commanders of demolition firing parties, including changes to these orders.
- Keep authorized commanders informed of the status of preparations, targets, and operational situations at sites.
- Pass written firing orders to demolition firing-party commanders to fire demolitions.
- Report results of demolitions to authorized commanders.
- Maintain succession (chain of command) lists for appointment to demolition guard commander and demolition firing-party commander.

(3) Firing-Party Commanders. These commanders are normally officers or noncommissioned officers (NCOs) from the engineer unit that prepared the demolitions. They supervise the preparing, charging, and firing of the demolition. Firing-party commanders—

- Maintain the state of readiness specified by authorized commanders and advise demolition guard commanders of the time requirements for changing states of readiness and completing obstacles.
- Fire demolitions when ordered by the authorized commander, and ensure demolitions are successful and complete.
- Report the results of demolitions to demolition guard commanders or, if none, to the authorized commanders.
- Report the results of demolitions up the engineer chain of command and complete Section 5, pages 33 through 36, of the obstacle folder, if issued.
- Maintain succession (chain of command) lists for appointment as demolition firing-party commander should the initial commander become injured.

e. Command and Control of Reserved Demolitions.

(1) Command Post. Ideally, the demolition guard commander should place his command post where he can best control the defense of the demolition target from the friendly side. This location may conflict with the requirements of the demolition firing point, which should be close to or collocated with the command post. Usually, some compromise is necessary.

(2) Firing Point. The firing point is normally as close to the target as safety allows. The firing point must protect the firing party from the effects of blast and falling debris and be positioned so that the demolition firing-party commander is—

- Easily accessible to the demolition guard commander for receiving orders.
- In close contact with the firing party.
- Able to see the entire target.

(3) **Alternate Positions.** The demolition guard commander should designate an alternate command post and firing point, if possible. The firing party should be able to fire the demolitions from either the primary or alternate firing points.

(4) **Check Point.** When units are withdrawing from an enemy advance, identification can be a problem. Withdrawing troops are responsible for identifying themselves to the demolition guard. The demolition guard must always establish and operate a check point. The demolition guard commander may use military police to perform this duty. Good communication is essential between the check point and the demolition guard commander. Each unit withdrawing through the demolition target should send a liaison officer to the checkpoint, well in advance of the withdrawing unit's arrival.

(5) **Refugee Control Points.** The demolition guard commander may need to establish and operate a refugee control point for civilian traffic. He should place a check point on the enemy bank and a release point on the friendly bank to control refugees. The commander may use military or local police to operate the control points. The personnel operating the check points should halt refugees off the route and then escort them, in groups, across the target to the release point. Refugees must not interfere with the movement of withdrawing forces or demolition preparations.

Section III. Demolition Reconnaissance

5-7. Reconnaissance Orders. Thorough reconnaissance is necessary before planning a demolition operation. Reconnaissance provides detailed information in all areas related to the project. Prior to conducting any reconnaissance, the reconnaissance-party commander must receive clear objectives. The reconnaissance order specifies these objectives. This information helps the reconnaissance party to determine the best method of destroying the target and to estimate the preparation time required. For example, if the reconnaissance party knows that manpower and time are limited but explosives are plentiful, they may design demolitions requiring few men and little time but large quantities of explosives. These orders should detail the reconnaissance party to determine the following:

- Location and nature of the target.
- Purpose of the demolition operation (for example, to delay an enemy infantry battalion for three hours).
- Proposed classification of the demolition (reserved or preliminary).
- Type of firing system desired (dual or single).
- Economy of effort (whether the demolition must be completed in one stage or multiple stages).
- Utility of the target during demolition operations (whether the target must remain open to traffic during demolition preparations).
- Amount of time allowed or expected between preparation and execution of the demolition operation.
- Amount of time allowed for changing the state of readiness (Safe to Armed).
- Labor and equipment available for preparing the demolitions.

- Types and quantities of explosives available.

5-8. Reconnaissance Record. The reconnaissance party reports the results of their reconnaissance on DA Form 2203-R. Use the form with appropriate sketches, to record and report the reconnaissance of military demolition projects. Appendix F contains a sample of DA Form 2203-R (Figure F-2, pages F-38 through F-42) and instructions to complete it. For sketches, use available paper and attach to the completed DA Form 2203-R.

a. *Purpose.* When time and conditions permit, use this report as the source document for preparing the obstacle folder. If the obstacle folder is not available, use this report in its place. In certain instances the report may require a security classification.

b. *Information Required.* DA Form 2203-R should contain the following:

- A bill of explosives that shows the quantities and types required.
- A list of all equipment, including transportation, required for the demolition operation.
- An estimate of time and labor required for preparing the demolitions and placing the charges.
- A time and labor estimate for arming and firing the charges.
- A time, labor, and equipment estimate to complete any required bypass. Specify the bypass location and method. Include details for any supplementary obstacles required.
- A situation sketch showing the relative position of the target, terrain features, and coordinates of the target.
- A list of all unusual site characteristics. Indicate the location of these unusual characteristics on the situation sketch.
- Plan and elevation (side-view) sketches of the target, showing overall dimensions, lines of cut, and demolition chambers.
- Plan and elevation sketches of each member targeted, detailing dimensions, chambers, quantity of explosives, lines of cut, charge locations, and priming and initiation methods.
- A sketch showing firing circuits and firing points.

Section IV. Obstacle Folder

5-9. Purpose. The obstacle folder, as outlined in STANAG 2123 and QSTAG 743, provides all of the information necessary to complete a specific demolition operation. NATO and ABCA personnel use this booklet to collect information and to conduct demolition operations. The responsible commander should prepare an obstacle folder during peacetime for all preplanned targets to allow for efficient demolition operations. Prepare obstacle folders for reserved and preliminary demolitions. The obstacle folder is not normally used in tactical situations because the detailed information in the obstacle folder, including multiple languages, is not easily completed under field or tactical conditions. A sample obstacle folder is included in the sample target folder in Appendix F (page F-4).

5-10. Language. Since not all NATO and ABCA personnel speak the same language, obstacle folders must be multilingual. The preparing unit may speak a different language than the unit

actually conducting the demolition operation. Therefore, it is essential to prepare the obstacle folder in more than one language. However, prepare map notes, plans, sketches, and so forth, in one language, and provide translations for the other languages in the available space. Use the following guidelines when determining the languages necessary in an obstacle folder:

- Languages of the units involved in the demolitions.
- Language of the host nation.
- One of the two official NATO languages (English or French).

5-11. Contents. The obstacle folder contains six parts for recording information. Additional information may be noted in the appropriate place within the obstacle folder and then inserted as an additional page immediately following the notation (for example, “see page 4a”). The six parts of the obstacle folder are—

- Location of target (pages 1-5).
- Supply of explosives and equipment (pages 6-17).
- Orders for preparing and firing (pages 18-28).
- Hand-over and take-over instructions (pages 29-32).
- Demolition report (pages 33-37).
- Official signature (page 38).

5-12. Special Instructions. The list of explosives, stores, and mines required (paragraph 2d, pages 14 and 16 of the obstacle folder) does not cover every possible situation. However, it does indicate a logical order for recording or determining the required materials. Mark only the materials required for your particular target. The transport team leader uses the first list. For major operations, note the size, composition, and mission of the various work parties participating in paragraph 3a, subparagraph 5. Paragraph 3a, subparagraph 6 concerns only nuisance or protective mine fields laid to protect the demolition target and does not apply to tactical (barrier) mine fields. Complete paragraph 5 of the Demolition Report upon completion of the demolition. The firing party commander may detach the first copy of the demolition report (pages 33-37) and forward it to a higher-echelon engineer headquarters.