Pathfinder Operations

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Department of the Army
Pathfinder Operations

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Preface

This publication provides a foundation for training and employing pathfinder and terminal guidance personnel. The tactics, techniques, and procedures that describe the conduct of the various missions are guides. The pathfinder leader can modify them to suit the particular air assault operation.

This publication applies to the Active Army, the Army National Guard (ARNG), the Army National Guard of the United States (ARNGUS), and the United States Army Reserve (USAR) unless otherwise stated.

The manual includes an extensive glossary of acronyms and terminology peculiar to air assault operations, pathfinder operations, and Army-Air Force air traffic control. Using this glossary will help the reader understand the text.

This publication prescribes DA Form 7461-R, Internal Net Record, and implements the following international agreements:

- QSTAG 585, Marshaling Helicopters in Multinational Land Operations, 23 Apr 81 (see Chapter 4).
- STANAG 2863, Navigational and Communication Capabilities for Helicopters in Multinational Land Operations, 26 Sep 88 (see Chapters 2 and 3).
- STANAG 3117, Aircraft Marshaling Signals, 17 Oct 85 (see Chapters 1 and 2).
- STANAG 3281, Personnel Locator Beacons, 3 Apr 78 (see Chapters 1, 3, and 4).
- STANAG 3570, Drop Zones and Extraction Zones--Criteria and Markings, 26 Mar 86 (see Chapters 2 and 6).
- STANAG 3619, Helipad Marking, 10 Jul 80 (see Chapter 4).

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Unless this publication states otherwise, masculine nouns and pronouns do not refer exclusively to the male gender.
Army pathfinders mainly provide navigational aid and advisory services to military aircraft in areas designated by supported unit commanders. The pathfinders’ secondary missions include providing advice and limited aid to units planning air assault or airdrop operations.

EMPLOYMENT

1-1. The pathfinders provide navigational aid and air traffic advisories for Army aircraft. This occurs at any phase of an air assault or ground operation that requires sustained support by Army aircraft. The commander employs pathfinders on a short-term basis for some missions. He can redeploy the pathfinders after they complete a major troop lift or airdrop.

PRIMARY

1-2. Ideally, the commander assigns a pathfinder team to each combat aviation battalion. This enhances the relationship between aviators and pathfinders, who have to work well together and understand each other to complete a mission successfully. Aviators and pathfinders must maintain a good working relationship, despite the limited number of pathfinder units and the assignment of pathfinder-coded positions to ground units.

1-3. Many units might have no trained pathfinder assets. In this case, higher headquarters must temporarily assign pathfinder assets from an external source to train supported unit personnel and oversee the conduct of pathfinder operations.

1-4. Non-pathfinder-qualified Soldiers receive training from the pathfinders and form a company-level pathfinder team. Once trained, the team provides navigational aid, air traffic advisories, and any other relevant information. Around the clock, the pathfinder team supports any type of air movement or resupply operation conducted by or for the ground unit and supported by an aviation unit.

1-5. Trained, equipped pathfinders select, mark, improve, and control landing sites. Engineers in direct support (DS) of lifted ground units may help pathfinders improve landing zones (LZs). In most situations, pathfinders perform two or more of these jobs at the same time. In each case, they start out by setting up ground-to-air radio communications. Combat lifesaver-qualified and emergency medical technician (EMT)-qualified pathfinders also supplement internal medical support.

SECONDARY

1-6. When not performing duties for supported units, pathfinders remain with their equipment, near and in communication with the supported ground unit command post (CP). While pathfinders await further missions, the parent or supported CP may task them to help control the aviation unit base airfield; to perform minor demolition work; or, in staff sections, to perform map and aerial photographic work. However, before the pathfinders perform secondary missions, they must train and perform routine maintenance on their equipment.
CAPABILITIES

1-7. Appropriately equipped and trained pathfinders—

- Reconnoiter areas selected by supported unit commanders.
- Select helicopter land zones (HLZs) and drop zones (DZs).
- Infiltrate areas of operation by foot, vehicle, watercraft, or air.
- Rappel, fast rope, or parachute from aircraft.
- Prepare HLZs and DZs.
- Establish and operate visual and electronic navigation aids.
- Remove minor obstacles.
- Use ground-to-air (GTA) radio communications to guide pilots and advise them of air traffic within the area of operations (AO).
- Coordinate directly with fire support units and keep pilots informed about friendly mortar and artillery fires.
- Provide technical assistance in assembling supplies, equipment, and troops before loading the aircraft for deployment to HLZs and DZs.
- Advise and provide limited physical assistance in preparing and positioning supplies, equipment, and troops for air movement.
- Conduct limited chemical, biological, radiological, or nuclear (CBRN) monitoring and surveying of designated areas.
- Provide limited weather observations, to include wind velocity and direction, cloud cover, visibility, and approximate cloud ceiling.
- In the absence of a special tactics team (STT), by agreement with the United States Air Force (USAF), operate DZs and airfields for USAF aircraft.
- Survey DZs for use by USAF and Army aircraft. In this situation, pathfinders might require USAF-compatible ultra high frequency (UHF) or very high frequency (VHF) radios. Aviators and pathfinders coordinate to make sure everyone knows the ground marking and radio procedures.

LIMITATIONS

1-8. Pathfinders require augmentation when they guide aircraft or perform other, related primary tasks such as the following:

- Provide security.
- Remove major obstacles.
- Recover and assemble equipment and supplies.
- Operate additional radio nets and telephones.
- Transport equipment.
- Conduct detailed CBRN monitoring and surveying.

EQUIPMENT

1-9. Pathfinders use a variety of equipment. Though the aviation unit standing operating procedures (SOP) may specify the type of equipment pathfinders will use, the mission dictates what specific items of equipment the pathfinders will take on the operation.

NAVIGATION AIDS

1-10. Pathfinders use navigation aids to help aviators find and identify an exact area.