



Virginia Department of Fire Programs
Technical Rescue Division
ROPE RESCUER – LEVEL II
Chapter 6 (6.2) NFPA 1006, 2013 edition
ROPE RESCUE TECHNICIAN
Chapter 5 (5.4) NFPA 1670, 2009 edition

Section 1 - ADMINISTRATIVE GUIDELINES

1.1 Course Description:

This program meets or exceeds the requirements for NFPA 1006 *Standard for Technical Rescuer Professional Qualifications*, Chapter 6, Level II. The student will learn to perform at the Technician Level as specified in NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*, Chapter 5.

This 24 hour program includes classroom and practical training including completing an assignment while suspended from a rope rescue system, moving a victim, functioning as a litter tender, selecting and constructing a system, directing a team in the operation of a system in a high angle environment.

1.2 Course Information:

This course meets or exceeds:

NFPA 1006 Standard on Technical Rescuer Professional Qualifications, 2013 edition Chapter 6.2
Rope Rescuer – Level II

NFPA 1670 Standard on Operations and Training for Technical Search and Rescue Incidents 2009 edition; Rope Rescue Technician, Chapter 5.4.

NFPA 1983 Standard for Life Safety Rope and Equipment for Emergency Services, 2006 Edition.

1006 Standard

	<u>Course Correlation</u>
6.2.1 Complete a task while suspended	Session 6,7,8
6.2.2 Move a victim in the high angle environment	Session 7,8
6.2.3 Function as a litter attendant	Session 6,7,8
6.2.4 Direct a team in the removal of a victim	Session 6,7,8
6.2.5 Direct a team in the construction of a high-line	Session 5,6,7,8
6.2.6 Direct a team in the operation of a high-line system	Session 5,6,7,8

1670 Standard

5.4.2 (1) Access a patient using ropes rescue techniques	Session 5,6,7,8
5.4.2 (2) Move rescuer and patient along horizontal path	Session 5,6,7,8
5.4.2 (3) Perform a high angle rescue of a stranded person	Session 5,7,8
5.4.2 (4) Understand and apply the principles of physics	Session 5,6,7,8
5.4.2 (5) Perform high angle rescue using a litter	Session 7,8



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|-----------|---|-----------------|
| 5.4.2 (6) | Move a patient packaged in a litter in a high angle environment | Session 7,8 |
| 5.4.2 (7) | Select, construct, and operate a highline system | Session 5,6,7,8 |
| 5.4.2 (8) | Utilize a highline system to transport rescuers | Session 6,7,8 |
| 5.4.2 (9) | Utilize a litter attended in a highline operation | Session 7,8 |

1.3 Logistical Requirements of Host Jurisdiction

- 1) Classroom facilities
 - a. Suitable size, comfortable and meeting the needs to deliver course lecture.
 - b. Adequate and appropriate restroom facilities (to include training grounds).
 - c. Lighting able to be controlled for projector operation.
 - d. Tables and chairs for 24 students.
 - e. LCD Projector and screen, computer with remote mouse.
 - f. Chalkboard, whiteboard, or easel pad with markers or chalks.
- 2) Two elevated structures suitable for ascending and descending operations with adequate rigging points and safe access to the top of the structures. Rural areas may use natural features (rock faces, outcrops, elevated bridges, etc) with the lead instructor's approval. Structures should be 50-250 feet apart, and above 50 feet in height.
- 3) Suitable location for low level construction and operation of high-lines. Examples are parks with trees 50-100 feet apart and interior locations with columns.
- 4) Local point of contact with knowledge and authorized access of training sites to be used.
- 5) VDFP Rope 2/3 trailer. Trailer must be requested by host jurisdiction for non-funded or reimbursable schools. Funded classes will be provided trailers without an additional request being needed.

1.4 Required Student Materials/Equipment/Uniforms

- 1) PPE
 - a. NFPA rated fire helmet or technical rescue helmet
 - b. Boots with adequate ankle protection.
 - c. Gloves – tight fitting gloves which allow manual dexterity. Firefighting gloves are not acceptable.
 - d. Eye protection
 - e. Each student is required to provide a NFPA rated Class 2/Class 3 rescue harness certified per manufactures recommendations. Each harness will be inspected and approved by the VDFP Instructional Staff prior to use.
 - f. Long pants (no loose fitting clothing while loaded on rope)

1.5 Course Pre-requisites (based on VDFP operational regulations, NFPA 1500 *Standard on Fire Department Occupational Safety and Health Program*, NFPA 1006 *Standard on Technical Rescuer*)



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Professional Qualifications, 2008 edition, and *NFPA 1670 Standard on Operations and Training for Technical Search and Rescue Incidents* 2009 edition)

- 1) Students **MUST** be 18 years of age.
- 2) Successful completion of Virginia Department of Fire Programs *Rope Rescue Level I (Rope Rescue Operations)* program.
- 3) Students must be a member in good standing with a recognized fire, EMS, or emergency services agency/department to apply to attend.
- 4) Students shall be psychologically, physically, and medically capable to perform assigned duties and functions at technical search and rescue incidents and to perform training exercises in accordance with of NFPA 1500 *Standard on Fire Department Occupational Safety and Health Program*, Chapter 10-Medical and Physical Requirements.

Technical rescue is psychologically and physically demanding work. Students must be capable of lifting heavy loads, working at various elevations and operating in potentially hazardous environments.

1.6 Course Registrations

- 1) All students must be pre-registered in VDFP's Fire Service Training Records System (FSTRS) before being allowed to participate in the class.
- 2) Students will be required to sign a Virginia Department of Fire Programs *Notice of Acknowledgement* form verifying the students meets the course pre-requisites.
- 3) No unregistered students (walk-ins) will be allowed.
- 4) Class size is limited to 24 students.

1.7 Course Curriculum/Outline

Rope Rescuer Level II (Technician Level)	24 hour program
1) Welcome/Introduction/Paperwork	1 hour lecture
2) Review Rope Rescue Level I	1 hour lecture
A. NFPA standards	
B. Rigging theory	
C. Lower systems	
D. Belay systems	
E. Mechanical advantage systems	
F. Patient packaging	
3) High-line Construction and Operation Lecture	2 hour lecture
A. Accessing system needs	



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- B. Principles of physics
 - C. Safety considerations
 - D. Types of high-lines
 - i. Horizontal
 - ii. Angled
 - E. System components
 - i. Anchor systems
 - 1. Anchor selection
 - 2. Anchor attachment
 - 3. Change of direction
 - 4. Critical angles
 - ii. Main line
 - 1. Single line
 - 2. Dual line
 - iii. Horizontal control line
 - iv. Vertical control line
 - v. Main line carriage
- 4) Low Level High-line Construction and Operation 4 hours skill
- i. Determine incident needs
 - ii. Anchor systems
 - 1. Anchor selection
 - 2. Anchor attachment
 - 3. Change of direction
 - 4. Critical angles
 - iii. Main line
 - 1. Single line
 - 2. Dual line
 - iv. Horizontal control lines
 - v. Vertical control line
 - vi. Main line carriage
 - vii. Patient, rescuer, and litter movement
- 5) Angled High-Line Construction and Operation 8 hours skill
- i. Determine incident needs
 - ii. Anchor systems
 - 1. Anchor selection
 - 2. Anchor attachment
 - 3. Change of direction
 - 4. Critical angles



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- iii. Main line
 - 1. Single line
 - 2. Dual line
- iv. Horizontal control lines
- v. Vertical control line
- vi. Main line carriage
- vii. Patient, rescuer, and litter movement

6) Horizontal High-Line Construction and Operation 8 hours skill

- i. Determine incident needs
- ii. Anchor systems
 - 1. Anchor selection
 - 2. Anchor attachment
 - 3. Change of direction
 - 4. Critical angles
- iii. Main line
 - 1. Single line
 - 2. Dual line
- iv. Horizontal control lines
- v. Vertical control line
- vi. Main line carriage
- vii. Patient, rescuer, and litter movement

1.8 Reference Material and Supplemental Information

CMC Rope Rescue Manual, Third edition, Frank, CMC 1998
Engineering Practical Rope Rescue Systems, Brown, Delmar, 2000
Rope Levels I and II, Matthews, Delmar, 2009

1.9 Course Completion Requirements for Students:

- 1) Students are required to attend 100% of the classroom and practical sessions.
- 2) Successful completion of all required skills as indicated in the course outline.
- 3) Students are required to successfully complete a “Skills Check-Off” sheet. Each skill is pass/fail, with two opportunities to complete each skill.