# ROPE OPERATIONS

## RECERTIFICATION TASK BOOK

JANUARY 1, 2022

# Rope Operations

## INTRODUCTION

This task book is the evaluation tool used to validate the member's proficiency in the skills required to complete the Rope Operations recertification program. The National Fire Protection Agency (NFPA) 1006: *Technical Rescue Professional Qualifications* (2013 Edition) standard has specified Job Performance Requirements (JPRs) required by individuals to comply with Chapter 6. JPRs provide an individual completing a task with the necessary data to determine when the task is finished and indicate how well the individual performed.

## INITIAL STATE CERTIFICATION PREREQUISITES

All rules relating to the Rope Operations certification can be found in the Joint Committee on Administrative Rules (JCAR) Section 141.367.

1. Current certification as Basic Operations Firefighter.
2. Complete a Rope Operations course (minimum of 40 hours).
3. Passage of the State Written and Practical Examinations.

## RECERTIFICATION PROCESS

The complete recertification process can be found in JCAR Section 141.390 Recertifications.

## REFERENCE LIST

Below is a list of some texts that may be used for reference and/or training.

- High Angle Rope Rescue Techniques, Levels I & II, Fourth Edition. 2016. Tom Vines & Steve Hudson. Jones & Bartlett Learning.
- On Rope, Second Edition. 1997. Bruce Smith & Allen Padgett. National Speleological Society.
- The Ashley Book of Knots. 1944. Clifford W. Ashley. Doubleday & Company.
- Engineering Practical Rope Rescue Systems. 2000. Michael G. Brown. Delmar Cengage Learning.
- Rope Rescue Manual, Fifth Edition. 2017. CMC Rescue.
- Manual of U.S. Cave Rescue Techniques. Third Edition. 2015. Anmar Mirza. National Speleological Society.

# Rope Operations

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| **Name** | |
| | First, Middle, Last |
| **Address** | |
| | Street, City, State, Zip |
| **Phone** | |
| **Email Address** | |
| **Driver's License #** | |
| **Department Affiliation** | |
| By my signature as employing Fire Chief, I attest and affirm this individual is an employee of my fire department meeting specifications in 50 Illinois Compiled Statutes (ILCS) 740/2, Illinois Fire Protection Training Act. I attest that this applicant has exhibited experience, and documentation exists supporting the appropriate Illinois Administrative Code. All recertification requirements for this individual have been met, applicable practical skill evolutions have been successfully accomplished, and training records exist substantiating this documentation and are available for review by the Division of Personnel Standards and Education. | |
| **Fire Chief** | |

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| **Initial Certification Date** | |
| **Task Book Started** | |
| **Task Book Completed** | |
| **Recertification Date** | |

# Rope Operations

PROFICIENCY LOG SHEET

| 6.1 | Rope Operations | | | | Officer Initials |
|---|---|---|---|---|---|
| 6.1.1 | Date | | Comments | | |
| 6.1.2 | Date | | Comments | | |
| 6.1.3 | Date | | Comments | | |
| 6.1.4 | Date | | Comments | | |
| 6.1.5 | Date | | Comments | | |
| 6.1.6 | Date | | Comments | | |
| 6.1.7 | Date | | Comments | | |
| 6.1.8 | Date | | Comments | | |

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|---|---|---|---|
| Fire Chief/Training Officer Signature | Date | Applicant Signature | Date |

| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.1 | **TASK:** Direct a team. |

**PERFORMANCE OUTCOME:** The operations level responder shall direct a team in the operation of a simple rope mechanical advantage system in a high-angle raising operation, so that the movement is controlled, a reset is accomplished, the load can be held in place when needed, operating methods to not stress the system to the point of failure, commands are used to direct the operation, and potential problems are identified, communicated, and managed.

**CONDITIONS:** The applicant will complete all elements.

**EQUIPMENT REQUIRED:** Given rescue personnel, an established rope rescue system incorporating a simple rope mechanical advantage system, a specified minimum travel distance for the load, a load to be moved, and an anchor system.

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | Movement is controlled. | ☐ | ☐ |
| 2 | A reset is accomplished. | ☐ | ☐ |
| 3 | The load can be held in place when needed. | ☐ | ☐ |
| 4 | Operating methods to not stress the system to the point of failure. | ☐ | ☐ |
| 5 | Commands are used to direct the operation. | ☐ | ☐ |
| 6 | Potential problems are identified, communicated, and managed. | ☐ | ☐ |

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| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.2 | **TASK:** Direct a lowering operation. |
| **PERFORMANCE OUTCOME:** The operations level responder shall direct a lowering operation in a high-angle environment, so that the movement is controlled, the load can be held in place when needed, operating methods do not stress the system to the point of failure, rope commands are used to direct the operation, and potential problems are identified, communicated, and managed. | |
| **CONDITIONS:** The applicant will complete all elements. | |
| **EQUIPMENT REQUIRED:** Given rescue personnel, an established lowering system, a specified minimum travel distance for the load, and a load to be moved. | |

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | The movement is controlled. | ☐ | ☐ |
| 2 | The load can be held in place when needed. | ☐ | ☐ |
| 3 | Operating methods do not stress the system to the point of failure. | ☐ | ☐ |
| 4 | Rope commands are used to direct the operation. | ☐ | ☐ |
| 5 | Potential problems are identified, communicated, and managed. | ☐ | ☐ |

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| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.3 | **TASK:** Construct a multiple-point anchor system. |
| **PERFORMANCE OUTCOME:** The operations level responder shall construct a multiple-point anchor system, so that the chosen anchor system fits the incident needs, the system strength meets or exceeds the expected load and does not interfere with rescue operations, equipment is visually inspected prior to being put in service, the nearest anchor point that will support the load is chosen, the anchor system is system safety checked prior to being placed into service, the integrity of the system is maintained throughout the operation, and weight will be distributed between more than one anchor point. | |
| **CONDITIONS:** The applicant will complete all elements. | |
| **EQUIPMENT REQUIRED:** Given life safety rope and other auxiliary rope rescue equipment. | |

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | The chosen anchor system fits the incident needs. | ☐ | ☐ |
| 2 | The system strength meets or exceeds the expected load and does not interfere with rescue operations. | ☐ | ☐ |
| 3 | Equipment is visually inspected prior to being put in service. | ☐ | ☐ |
| 4 | The nearest anchor point that will support the load is chosen. | ☐ | ☐ |
| 5 | The anchor system is system safety checked prior to being placed into service. | ☐ | ☐ |
| 6 | The integrity of the system is maintained throughout the operation. | ☐ | ☐ |
| 7 | Weight will be distributed between more than one anchor point. | ☐ | ☐ |

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| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.4 | **TASK:** Construct a compound rope mechanical advantage system. |
| **PERFORMANCE OUTCOME:** The operations level responder shall construct a compound rope mechanical advantage system, so that the system constructed accommodates the load and reduces the force required to lift the load, operational interference is factored and minimized, the system is efficient, a system safety check is completed, and the system is connected to an anchor system and the load. | |
| **CONDITIONS:** The applicant will complete all elements. | |
| **EQUIPMENT REQUIRED:** Given a load, an anchor system, life safety rope, carabiners, pulleys, rope grab devices, and rope rescue equipment. | |

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | The system constructed accommodates the load and reduces the force required to lift the load. | ☐ | ☐ |
| 2 | Operational interference is factored and minimized. | ☐ | ☐ |
| 3 | The system is efficient. | ☐ | ☐ |
| 4 | A system safety check is completed. | ☐ | ☐ |
| 5 | The system is connected to an anchor system and the load. | ☐ | ☐ |

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| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.5 | **TASK:** Construct a fixed rope system. |
| **PERFORMANCE OUTCOME:** The operations level responder shall construct a fixed rope system, so that the system constructed can accommodate the load, is efficient, is connected to an anchor system and the load, a system safety check is performed, and the results meet the incident requirements for descending or ascending operations. | |
| **CONDITIONS:** The applicant will complete all elements. | |
| **EQUIPMENT REQUIRED:** Given an anchor system, a life safety rope, and rope rescue equipment. | |

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | The system constructed can accommodate the load. | ☐ | ☐ |
| 2 | The system is efficient. | ☐ | ☐ |
| 3 | The system is connected to an anchor system and the load. | ☐ | ☐ |
| 4 | A system safety check is performed. | ☐ | ☐ |
| 5 | The results meet the incident requirements for descending or ascending operations | ☐ | ☐ |

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| Instructor/Rope Operations Signature | Date | Applicant Signature | Date |

# Rope Operations

| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.6 | **TASK:** Direct the operation of a compound rope mechanical advantage system. |

**PERFORMANCE OUTCOME:** The operations level responder shall direct the operation of a compound rope mechanical advantage system in a high-angle environment, so that a system safety check is performed; a reset is accomplished, and the movement is controlled; the load can be held in place when needed; operating methods do not stress the system to the point of failure; operational commands are clearly communicated; and potential problems are identified, communicated, and managed.

**CONDITIONS:** The applicant will complete all elements.

**EQUIPMENT REQUIRED:** Given a rope rescue system incorporating a compound rope mechanical advantage system and a load to be moved, and a specified minimum travel distance for the load.

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | A system safety check is performed. | ☐ | ☐ |
| 2 | A reset is accomplished. | ☐ | ☐ |
| 3 | Movement is controlled. | ☐ | ☐ |
| 4 | The load can be held in place when needed. | ☐ | ☐ |
| 5 | Operating methods do not stress the system to the point of failure. | ☐ | ☐ |
| 6 | Operational commands are clearly communicated. | ☐ | ☐ |
| 7 | Potential problems are identified, communicated, and managed. | ☐ | ☐ |

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| Instructor/Rope Operations Signature | Date | Applicant Signature | Date |

| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.7 | **TASK:** Ascend a fixed rope in a high-angle environment. |

**PERFORMANCE OUTCOME:** The operations level responder shall ascend a fixed rope in a high-angle environment, so that the person ascending is secured to the fixed rope in a manner that will not allow him or her to fall; the person ascending is attached to the rope by means of an ascent control device(s) with at least two points of contact; injury to the person ascending is minimized; the person ascending can stop at any point on the fixed rope and rest suspended by his or her harness; the system will not be stressed to the point of failure; the person ascending can convert his or her ascending system to a descending system; obstacles are negotiated; the system is suitable for the site; and the objective is reached.

**CONDITIONS:** The applicant will complete all elements.

**EQUIPMENT REQUIRED:** Given an anchored fixed rope system, a specified minimum distance for the rescuer, a system to allow ascent of a fixed rope, a structure, a belay system, a life safety harness worn by the person ascending, and personal protective equipment.

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | The person ascending is secured to the fixed rope in a manner that will not allow him or her to fall. | ☐ | ☐ |
| 2 | The person ascending is attached to the rope by means of an ascent control device(s) with at least two points of contact. | ☐ | ☐ |
| 3 | Injury to the person ascending is minimized. | ☐ | ☐ |
| 4 | The person ascending can stop at any point on the fixed rope and rest suspended by his or her harness. | ☐ | ☐ |
| 5 | The system will not be stressed to the point of failure. | ☐ | ☐ |
| 6 | The person ascending can convert his or her ascending system to a descending system. | ☐ | ☐ |
| 7 | The system is suitable for the site. | ☐ | ☐ |
| 8 | The objective is reached. | ☐ | ☐ |

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| Instructor/Rope Operations Signature | Date | Applicant Signature | Date |

| JOB PERFORMANCE REQUIREMENT | |
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| **STANDARD:** 6.1.8 | **TASK:** Descend a fixed rope in a high-angle environment. |

**PERFORMANCE OUTCOME:** The operations level responder shall descend a fixed rope in a high-angle environment, so that the person descending is attached to the fixed rope in a manner that will not allow hm or her to fall; the person descending is attached to the rope by means of a descent control device; the speed of descent is controlled; injury to the person descending is minimized; the person descending can stop at any point on the fixed rope and rest suspended by his or her harness; the system will not be stressed to the point of failure; the system is suitable for the site; and the objective is reached.

**CONDITIONS:** The applicant will complete all elements.

**EQUIPMENT REQUIRED:** Given an anchored fixed-rope system, a specified minimum travel distance for the rescuer, as system to allow descent of a fixed rope, a belay system, a life safety harness worn by the person descending, and personal protective equipment.

| Step | Skill | Experience | Training |
|---|---|---|---|
| 1 | The person descending is attached to the fixed rope in a manner that will not allow hm or her to fall. | ☐ | ☐ |
| 2 | The person descending is attached to the rope by means of a descent control device. | ☐ | ☐ |
| 3 | The speed of descent is controlled. | ☐ | ☐ |
| 4 | Injury to the person descending is minimized. | ☐ | ☐ |
| 5 | The person descending can stop at any point on the fixed rope and rest suspended by his or her harness. | ☐ | ☐ |
| 6 | The system will not be stressed to the point of failure. | ☐ | ☐ |
| 7 | The system is suitable for the site. | ☐ | ☐ |
| 8 | The objective is reached. | ☐ | ☐ |

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| Instructor/Rope Operations Signature | Date | Applicant Signature | Date |