

Rope Rescue

(NFPA 1006: Rope Rescue
Awareness/Operations/Technician)

Curriculum Training Standards Guide (2021)



California Department of Forestry and Fire Protection
Office of the State Fire Marshal
State Fire Training

Rope Rescue

Curriculum Training Standards Guide (2021)

Publication Date: February 2024

This CTS guide utilizes the following NFPA standards to provide the qualifications for State Fire Training's Rope Rescue (2021) curriculum:

- NFPA 1006: Technical Rescue Personnel Professional Qualifications (2021)

State Fire Training coordinated the development of this CTS guide. Before its publication, the Statewide Training and Education Advisory Committee (STEAC) and the State Board of Fire Services (SBFS) recommended this CTS guide for adoption by the Office of the State Fire Marshal (OSFM).

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How to Read a CTS Guide

Overview

A curriculum training standard (CTS) guide lists the requisite knowledge, skills, and job performance requirements an individual must complete to become certified in a specific job function.

It also documents and justifies the OSFM-approved revisions to the curriculum's NFPA standard and identifies where each curriculum training standard is taught (course plan), tested (skill sheets), and validated (task book).

Individuals aspiring to meet State Fire Training's curriculum training standards must do so in accordance with the codes, standards, regulations, policies, and standard operating procedures applicable within their own agency or jurisdiction.

Format

Each curriculum training standard is comprised of eight sections.

Section Heading

Training standards are grouped by section headings that describe a general category. For example, the Fire Fighter 1 CTS guide includes the following section headings: NFPA Requirements, Fire Department Communications, Fireground Operations, and Preparedness and Maintenance.

Training Standard Title

The training standard title provides a general description of the performance requirement contained within the individual standard.

Authority

The CTS guide references each individual standard with one or more paragraphs of the corresponding National Fire Protection Association (NFPA) Professional Qualifications. This ensures that each fire service function within California's certification system meets or exceeds NFPA standards.

When California requirements exceed the NFPA standard, the CTS guide cites the Office of the State Fire Marshal as the authority and prints the corresponding information shaded gray.

Job Performance Requirements

This segment includes a written statement that describes a specific job-related task, the items an individual needs to complete the task, and measurable or observable outcomes.

Requisite Knowledge

This segment lists the knowledge that an individual must acquire to accomplish the job performance requirement.

Requisite Skills

This segment lists the skills that an individual must acquire to accomplish the job performance requirement.

Content Modification

This table documents and justifies any revisions to the NFPA standard that the development or validation cadres make during the development of a CTS guide.

Cross Reference

This table documents where each training standard is taught (course plan), tested (skill sheets), and validated (task book).

Rope Rescue

Section 1: Awareness

1-1: Assisting a Team in Operating a Haul Line

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.1.1

Job Performance Requirement

Assist a team in operation of the haul line of a rope mechanical advantage system raising operation, given rescue personnel, an established rope rescue system, a load to be moved, and an anchor system, so that the movement is controlled; a reset is accomplished; the load can be held in place when needed; commands are followed in direction of the operation; and potential problems are identified, communicated, and managed.

Requisite Knowledge

1. Describe principles of mechanical advantage
2. Describe operation of a haul line in a raising operation
3. Describe personnel assignments
4. Describe operational commands

Requisite Skills

1. Recognize operational commands
2. Identify safety concerns during raising operations

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-2	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 36• Skill 37• Skill 39• Skill 40	Rope Rescue Awareness and Operations (2021) Instructor Task Book <ul style="list-style-type: none">JPR 20JPR 31

1-2: Sizing Up a Rope Rescue Incident

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.1.2

Job Performance Requirement

Size up a rope rescue incident, given background information and applicable reference materials, so that the scope of the rescue is determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, primary search parameters are identified, and information required to develop an initial incident action plan is obtained.

Requisite Knowledge

1. Describe types of reference materials and their uses
2. Describe availability and capability of the resources
3. Describe elements of an incident action plan and related information
4. Describe relationship of the size-up to the incident management system
5. Describe information gathering techniques and how that information is used in the size-up process
6. Describe basic search criteria for rope rescue incidents

Requisite Skills

1. Read technical rescue reference materials
2. Gather information
3. Use interview techniques
4. Relay information
5. Use information-gathering sources

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 4-1 Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 4-1	Rope Rescue Awareness and Operations (2021) Skill 7 Rope Rescue Technician (2021) Skill 6	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 7 JPR 31 Rope Rescue Technician (2021) Instructor Task Book JPR 6 JPR 20

1-3: Recognizing Incident Hazards and Initiating Isolation Procedures

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.1.3

Job Performance Requirement

Recognize incident hazards and initiate isolation procedures, given scene control barriers, personal protective equipment (PPE), requisite equipment, and available specialized resources, so that all hazards are identified; resource application fits the operational requirements; hazard isolation is considered; risks to rescuers, bystanders, and victims are minimized; and rescue time constraints are taken into account.

Requisite Knowledge

1. Describe resource capabilities and limitations
2. Describe types and nature of incident hazards
3. Describe equipment types and their use
4. Describe isolation terminology, methods, equipment, and implementation
5. Describe operational requirement concerns
6. Describe common types of rescuer and victim risks
7. Describe risk/benefit analysis methods and practices
8. Describe hazard recognition, isolation methods, and terminology
9. Describe methods for controlling access to the scene
10. Describe types of technical references

Requisite Skills

1. Identify resource capabilities and limitations
2. Identify incident hazards
3. Assess potential hazards to rescuers and bystanders
4. Place scene control barriers
5. Operate control and mitigation equipment

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 4-4 Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 4-2	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 10 Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 7	Rope Rescue Awareness and Operations (2021) Instructor Task Book <ul style="list-style-type: none">JPR 10JPR 31 Rope Rescue Technician (2021) Instructor Task Book <ul style="list-style-type: none">• JPR 7• JPR 20

1-4: Recognizing the Need for Technical Rescue Resources

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.1.4

Job Performance Requirement

Recognize the need for technical rescue resources at an operations- or technician-level incident, given AHJ guidelines, so that the need for additional resources is identified, the response system is initiated, the scene is secured and rendered safe until additional resources arrive, and awareness-level personnel are incorporated into the operational plan.

Requisite Knowledge

1. Describe operational protocols
2. Identify specific planning forms
3. Describe types of incidents common to the AHJ
4. Describe hazards
5. Describe incident support operations and resources
6. Describe safety measures

Requisite Skills

1. Apply operational protocols
2. Select specific planning forms based on the types of incidents
3. Identify and evaluate various types of hazards within the AHJ
4. Request support and resources
5. Determine the required safety measures

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 4-2	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 8	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 8 JPR 31

1-5: Supporting an Operations- or Technician-level Incident

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.1.5

Job Performance Requirement

Support an operations- or technician-level incident, given an incident, an assignment, an incident action plan, and resources from the tool cache, so that the assignment is carried out progress is reported to command, environmental concerns are managed, personnel rehabilitation is facilitated, and the incident action plan is supported.

Requisite Knowledge

1. Describe AHJ operational protocols
2. Describe hazard recognition
3. Describe incident management
4. Describe PPE selection
5. Describe resource selection and use
6. Describe scene support requirements

Requisite Skills

1. Apply operational protocols
2. Function within an incident management system
3. Follow and implement an incident action plan
4. Report the task progress status to a supervisor or incident command

Content Modification

Block	Modification	Justification
JPR	Changed "kit" to "cache".	Agencies do not have specific rope rescue tool kits; they assemble tools as needed from their general tool cache.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 4-3	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 9	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 9 JPR 31

Section 2: Operations

2-1: Sizing Up a Rescue Incident

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.1

Job Performance Requirement

Perform size up of a rescue incident, given background information and applicable reference materials, so that the type of rescue is determined, the number of victims is identified, the last reported location of all victims is established, witnesses and reporting parties are identified and interviewed, resource needs are assessed, search parameters are identified, and information required to develop an incident action plan is obtained.

Requisite Knowledge

1. Describe types of reference materials and their uses
2. Describe availability and capability of the resources
3. Describe elements of an incident action plan and related information
4. Describe relationship of size-up to the incident management system
5. Describe information gathering techniques and how that information is used in the size-up process

Requisite Skills

1. Read technical rescue reference materials
2. Gather information
3. Relay information
4. Use information-gathering sources

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 4-1 Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 4-1	Rope Rescue Awareness and Operations (2021) Skill 7 Rope Rescue Technician (2021) Skill 6	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 7 JPR 31 Rope Rescue Technician (2021) Instructor Task Book JPR 6 JPR 20

2-2: Maintaining Hazard-specific PPE

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.2

Job Performance Requirement

Maintain hazard-specific PPE, given clothing or equipment for the protection of the rescuers, inspection procedures, cleaning and sanitation supplies, maintenance logs or records, and such tools and resources as are indicated by the manufacturer's guidelines for assembly or disassembly of components during repair or maintenance, so that damage, defects, and wear are identified and reported or repaired; equipment functions as designed; and preventative maintenance has been performed and documented consistent with the manufacturer's recommendations.

Requisite Knowledge

1. Describe functions, construction, and operation of PPE
2. Describe use of record-keeping systems of the AHJ
3. Describe requirements and procedures for cleaning, sanitizing, and infectious disease control
4. Describe use of provided assembly and disassembly tools
5. Describe manufacturer and department recommendations
6. Describe pre-use inspection procedures
7. Describe ways to determine operational readiness

Requisite Skills

1. Identify wear and damage indicators for PPE
2. Evaluate operational readiness of PPE
3. Complete logs and records
4. Use cleaning equipment supplies and reference materials
5. Select and use tools specific to the task

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 3-1	Rope Rescue Awareness and Operations (2021) Skill 1	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 4 JPR 31

2-3: Maintaining Rescue Equipment

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.3

Job Performance Requirement

Maintain rescue equipment, given maintenance logs and records, tools, and resources as indicated by the manufacturer's guidelines, inspection procedures, equipment replacement protocol, and organizational standard operating procedures, so that the operational status of equipment is verified and documented, all components are checked for operation, deficiencies are repaired or reported as indicated by standard operating procedure, and items subject to replacement protocol are correctly disposed of and changed.

Requisite Knowledge

1. Describe function and operation of rescue equipment
2. Describe use of record-keeping systems
3. Describe manufacturer and organizational care and maintenance requirements
4. Describe selection and use of maintenance tools
5. Describe replacement protocol and procedures
6. Describe disposal methods
7. Describe organizational standard operating procedures

Requisite Skills

1. Identify wear and damage indicators for rescue equipment
2. Evaluate operational readiness of equipment
3. Complete logs and records
4. Select and use maintenance tools

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 3-2 Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 3-1	Rope Rescue Awareness and Operations (2021) N/A Rope Rescue Technician (2021) N/A	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 5 JPR 31 Rope Rescue Technician (2021) Instructor Task Book JPR 4

2-4: Demonstrating Knots, Bends, and Hitches

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.4

Job Performance Requirement

Demonstrate knots, bends, and hitches, given ropes, webbing, and a list of knots used by the agency, so that the knots are dressed, recognizable, and backed up as required.

Requisite Knowledge

1. Describe knot efficiency
2. Describe knot utilization
3. Describe rope construction
4. Define rope terminology

Requisite Skills

1. Tie representative knots, bends, or hitches for the following purposes: end-of-line loop, midline loop, securing rope around desired objects, joining rope or webbing ends together, gripping rope

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none"> • Topic 3-3 	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none"> Skill 2 	Rope Rescue Awareness and Operations (2021) Instructor Task Book <ul style="list-style-type: none"> JPR 6 JPR 31
Rope Rescue Technician (2021) <ul style="list-style-type: none"> • Topic 3-2 	Rope Rescue Technician (2021) <ul style="list-style-type: none"> Skill 3 Skill 4 Skill 5 Skill 6 	
	Rope Rescue Technician (2021) <ul style="list-style-type: none"> Skill 1 Skill 2 Skill 3 Skill 4 Skill 5 	Rope Rescue Technician (2021) Instructor Task Book <ul style="list-style-type: none"> JPR 5 JPR 20

2-5: Constructing a Single-point Anchor System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.5

Job Performance Requirement

Construct a single-point anchor system, given life safety rope and other auxiliary rope rescue equipment, so that the chosen anchor system fits the incident needs, meets or exceeds the expected load, and does not interfere with rescue operations; an efficient anchor point is chosen; the need for redundant anchor points is assessed and used as required; the anchor system is inspected and loaded prior to being placed into service; and the integrity of the system is maintained throughout the operation.

Requisite Knowledge

1. Describe application of knots
2. Describe rigging principles
3. Describe anchor selection criteria
4. Describe system safety check procedures
5. Describe rope construction
6. Describe rope rescue equipment applications and limitations

Requisite Skills

1. Select rope and equipment
2. Tie knots
3. Rig systems
4. Evaluate anchor points for required strength, location, and surface contour
5. Perform a system safety check

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) Topic 3-3 (RK5) <ul style="list-style-type: none">• Topic 5-1 (RK1, RK2, RK3, RK4, RK6, RS1, RS2, RS3, RS4, RS5)	Rope Rescue Awareness and Operations (2021) Skill 12 Skill 13 Skill 14 Skill 15 Skill 16 Skill 17 Skill 18 Skill 19 Skill 20 Skill 21 Skill 22	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 12 JPR 31

2-6: Constructing a Multiple-point Anchor System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.6

Job Performance Requirement

Construct a multiple-point anchor system, given life safety rope and other auxiliary rope rescue equipment, so that the chosen anchor system fits the incident needs, meets or exceeds the expected load, and does not interfere with rescue operations; equipment is visually inspected before being put in service; the integrity of the system is maintained throughout the operation; and the force will be distributed – proportionally or disproportionately – between more than one anchor point.

Requisite Knowledge

1. Describe relationship of angles to forces created in the rigging of multiple-point anchor systems
2. Describe safety issues in choosing anchor points
3. Describe system safety check methods that allow for visual and physical assessment of system components
4. Describe methods to evaluate the system during operations
5. Describe integrity concerns
6. Describe weight distribution issues and methods
7. Describe knots and applications
8. Describe selection and inspection criteria for hardware and software
9. Identify formulas needed to calculate safety factors for load distribution
10. Describe concepts of static loads versus dynamics loads

Requisite Skills

1. Determine incident needs as related to choosing anchor systems
2. Select effective knots
3. Determine expected loads
4. Evaluate incident operations as related to interference concerns and setup
5. Choose anchor points
6. Perform a system safety check
7. Evaluate system components for compromised integrity

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 5-1	Rope Rescue Awareness and Operations (2021) Skill 12 Skill 13 Skill 14 Skill 15 Skill 16 Skill 17 Skill 18 Skill 19 Skill 20 Skill 21 Skill 22	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 12 JPR 31

2-7: Conducting a System Safety Check

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.7

Job Performance Requirement

Conduct a system safety check, given a rope rescue system and rescue personnel, so that a physical/visual check of the system is made to ensure proper rigging, a load test is performed prior to life-loading the system, and verbal confirmation of these actions is announced and acknowledged before life-loading the rope system.

Requisite Knowledge

1. Describe system safety check procedures
2. Describe construction and operations of rope rescue systems and their individual components
3. Describe use of PPE
4. Describe equipment inspection criteria
5. Describe signs of equipment damage
6. Describe principles of rigging
7. Describe equipment replacement criteria

Requisite Skills

1. Apply and use PPE
2. Inspect rope rescue system components for damage
3. Assess a rope rescue system for configuration
4. Secure equipment components
5. Inspect all rigging
6. Perform a system safety check

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none"> • Topic 4-5 (RK1, RK7) Topic 7-2 (RK2, RK6) Topic 3-1 (RK3) Topic 3-2 (RK4, RK5) Rope Rescue Technician (2021) Topic 4-3	Rope Rescue Awareness and Operations (2021) Skill 11 Rope Rescue Technician (2021) Skill 8	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 11 JPR 31 Rope Rescue Technician (2021) JPR 8 JPR 20

2-8: Placing Edge Protection

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.8

Job Performance Requirement

Place edge protection, given life safety rope or webbing traversing a sharp or abrasive edge, edge protection, and other auxiliary rope rescue equipment, so that the rope or webbing is protected from abrasion or cutting, the rescuer is safe from falling while placing the edge protection, the edge protection is secure, and the rope or webbing is securely placed on the edge protection.

Requisite Knowledge

1. Describe materials and devices that can be used to protect ropes or webbing from sharp or abrasive edges
2. Describe fall protection measures
3. Describe dangers associated with sharp or abrasive edges
4. Describe methods for negotiation of sharp or abrasive edges

Requisite Skills

1. Select protective devices for rope and webbing
2. Protect personnel from falls while working near edges
3. Secure edge protection
4. Secure ropes or webbing in a specific location

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 6-1	Rope Rescue Awareness and Operations (2021) Skill 23	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 13 JPR 31

2-9: Constructing a Belay System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.9

Job Performance Requirement

Construct a system intended to provide belay within a single-tensioned rope system, given life safety rope, anchor systems, PPE, and rope rescue equipment, so that the system is capable of arresting a fall, a fall will not result in system failure, the system is not loaded unless actuated, actuation of the system will not injure or otherwise incapacitate the belay operator, the belay operator is not rigged into the equipment components of the system, and the system is suitable to the site and is connected to an anchor system and the load.

Requisite Knowledge

1. Describe principles of belay systems
2. Describe capabilities and limitations of various devices used to provide belay
3. Describe application of knots
4. Describe rigging principles
5. Describe system safety check procedures

Requisite Skills

1. Select a system
2. Tie knots
3. Perform rigging
4. Attach to anchor system and load
5. Don and use hazard-specific PPE
6. Perform a system safety check

Content Modification

Block	Modification	Justification
JPR	Changed “within a single- or two-tensioned rope system” to “within a single-tensioned rope system”.	You cannot belay a two-tensioned rope system. This part of the task conflicts with the requirements in the standard.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) Topic 7-3 Topic 7-5	Rope Rescue Awareness and Operations (2021) Skill 26 Skill 28	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 16 JPR 18 JPR 31

2-10: Operating a Belay System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.10

Job Performance Requirement

Operate a system intended to provide belay within a single-tensioned rope system during lowering or raising operations, given an operating lowering or raising mechanical advantage system, a specified minimum travel distance for the load, a system, and a load, so that the potential fall factor is minimized, the belay is not actuated during normal lowering or raising operations, the belay system is prepared for actuation at all times during the operation, the load's position is continually monitored, and the belay operator moves rope through the belay device as designed.

Requisite Knowledge

1. Describe application and use of belay devices
2. Describe proper operation of systems in conjunction with normal lowering and raising operations
3. Describe operational commands

Requisite Skills

1. Tend a belay device as designed
2. Tie approved knots
3. Assess system effectiveness
4. Properly attach a rope to a belay device
5. Don and use hazard-specific PPE
6. Perform a system safety check
7. Manage and communicate belay system status effectively

Content Modification

Block	Modification	Justification
JPR	Changed "within a single- or two-tensioned rope system" to "within a single-tensioned rope system".	You cannot belay a two-tensioned rope system. This part of the task conflicts with the requirements in the standard.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) Topic 7-3 <ul style="list-style-type: none">• Topic 7-5	Rope Rescue Awareness and Operations (2021) Skill 26 Skill 28	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 16 JPR 18 JPR 31

2-11: Belaying a Falling Load

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.11

Job Performance Requirement

Belay a falling load in a high-angle environment, given a belay and a failed line creating a dropped load, so that the belay line is not taut until the load is falling, the belay device is actuated when the load falls, the fall is arrested in a manner that minimizes the force transmitted to the load, the belay operator utilizes the belay device as designed, and the belay operator is not injured or otherwise incapacitated during operation of the belay system.

Requisite Knowledge

1. Describe application and use of belay devices
2. Describe effective emergency operation of belay devices to arrest falls
3. Describe use of PPE
4. Describe operating procedures

Requisite Skills

1. Operate a belay system as designed
2. Tie approved knots
3. Use hazard-specific PPE
4. Recognize and arrest a falling load
5. Communicate belay system actuation

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 3-1 (RK3)• Topic 7-3 (RK1)• Topic 7-4 (RK2, RK4)	Rope Rescue Awareness and Operations (2021) Skill 27	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 17 JPR 31

2-12: Constructing a Fixed Rope System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.12

Job Performance Requirement

Construct a fixed rope system, given an anchor system, a life safety rope, and rope rescue equipment, so that the system constructed can accommodate the load, is efficient, and is connected to an anchor system and the load, and a system safety check is performed and the results meet the incident requirements for descending or ascending operations.

Requisite Knowledge

1. Describe knot selection
2. Describe calculating expected loads
3. Describe incident evaluation operations are related to interference concerns and set up
4. Describe rigging principles
5. Describe system safety check procedures
6. Describe methods of evaluating system components for compromised integrity

Requisite Skills

1. Select effective knots
2. Calculate expected loads
3. Use rigging principles
4. Evaluate incident operations as related to interference concerns and setup
5. Perform a system safety check
6. Evaluate system components for compromised integrity

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 7-2	Rope Rescue Awareness and Operations (2021) Skill 25	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 15 JPR 31

2-13: Constructing a Lowering System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.13

Job Performance Requirement

Construct a lowering system, given an anchor system, life safety rope(s), a descent control device, and auxiliary rope rescue equipment, so that the system can accommodate the load, is efficient, is capable of controlling the descent, is capable of holding the load in place or lowering with minimal effort over the required distance, and is connected to an anchor system and the load.

Requisite Knowledge

1. Describe capabilities and limitations of various descent control devices
2. Describe capabilities and limitations of various lowering systems
3. Describe application of knots
4. Describe rigging principles
5. Describe system safety check procedures

Requisite Skills

1. Tie knots
2. Perform rigging
3. Attach to descent control device
4. Anchor system and load
5. Perform a system safety check

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-1	Rope Rescue Awareness and Operations (2021) Skill 29 Skill 30 Skill 31 Skill 32 Skill 33 Skill 34 Skill 35	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 19 JPR 31

2-14: Directing a Lowering Operation

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.14

Job Performance Requirement

Direct a lowering operation in a high-angle environment, given rescue personnel, an established lowering system, a specified minimum travel distance for the load, and a load to be moved, 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.

Requisite Knowledge

1. Describe application and use of descent control devices
2. Describe capabilities and limitations of various lowering systems in a high-angle environment
3. Describe operation of lowering systems in a high-angle environment
4. Describe personnel assignments
5. Describe operational commands

Requisite Skills

1. Direct personnel
2. Use operational commands
3. Analyze system efficiency
4. Manage movement of the load in a high-angle environment
5. Identify safety concerns in a high-angle environment
6. Perform a system safety check

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-1	Rope Rescue Awareness and Operations (2021) Skill 29 Skill 30 Skill 31 Skill 32 Skill 33 Skill 34 Skill 35	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 19 JPR 31

2-15: Constructing a Simple Rope Mechanical Advantage System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.15

Job Performance Requirement

Construct a simple rope mechanical advantage system, given life safety rope, carabiners, pulleys, rope grab devices, and auxiliary rope rescue equipment, so that the system constructed can accommodate the load, is efficient, and is connected to an anchor system and the load.

Requisite Knowledge

1. Describe principles of mechanical advantage
2. Describe capabilities and limitations of various simple rope mechanical advantage systems
3. Describe application of knots
4. Describe rigging principles
5. Describe system safety check procedures

Requisite Skills

1. Select rope and equipment
2. Tie knots
3. Choose and rig systems
4. Attach the mechanical advantage system to the anchor system and load
5. Perform a system safety check

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-2	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 20 JPR 31

2-16: Directing the Operation of a Simple Rope Mechanical Advantage System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.16

Job Performance Requirement

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

Requisite Knowledge

1. Describe principles of mechanical advantage
2. Describe capabilities and limitations of various simple rope mechanical advantage systems and high-angle raising operations
3. Describe correct operation of simple rope mechanical advantage systems
4. Describe personnel assignments
5. Describe operational commands

Requisite Skills

1. Direct personnel effectively
2. Use operational commands
3. Analyze system efficiency
4. Identify safety concerns
5. Perform a system safety check

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-2	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">Skill 36Skill 37Skill 38Skill 39Skill 40Skill 41• Skill 42	Rope Rescue Awareness and Operations (2021) Instructor Task Book <ul style="list-style-type: none">JPR 20JPR 31

2-17: Constructing a Compound Rope Mechanical Advantage System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.17

Job Performance Requirement

Construct a compound rope mechanical advantage system, given a load, an anchor system, life safety rope, carabiners, pulleys, rope grab devices, and rope rescue equipment, 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.

Requisite Knowledge

1. Describe determination of incident needs as related to choosing compound rope systems
2. Describe elements of efficient design for compound rope systems
3. Describe knot selection
4. Describe methods for reducing excessive force to system components
5. Describe evaluation of incident operations as related to interference concerns and setups
6. Describe rope commands
7. Describe rigging principles
8. Describe system safety check procedures
9. Describe methods of evaluating system components for compromised integrity

Requisite Skills

1. Determine incident needs as related to choosing compound rope systems
2. Select effective knots
3. Calculate expected loads
4. Evaluate incident operations as related to interference concerns and setups
5. Perform a system safety check
6. Evaluate system components for compromised integrity

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-3	Rope Rescue Awareness and Operations (2021) Skill 43 Skill 44 Skill 45	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 21 JPR 31

2-18: Directing the Operation of a Compound Rope Mechanical Advantage System

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.18

Job Performance Requirement

Direct the operation of a compound rope mechanical advantage system in a high-angle environment, given a rope rescue system incorporating a compound rope mechanical advantage system, a load to be moved, and a specified minimum travel distance for the load, 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; operating commands are clearly communicated; and potential problems are identified, communicated, and managed.

Requisite Knowledge

1. Describe methods to determine incident needs
2. Describe types of interference concerns
3. Describe rope commands
4. Describe system safety check protocol
5. Describe procedures for continued evaluation of system components for compromised integrity
6. Describe common personnel assignments and duties
7. Describe common commands
8. Describe methods for controlling a load's movement
9. Describe system stress issues during operations
10. Describe management methods for common problems

Requisite Skills

1. Determine incident needs
2. Evaluate incident operations as related to interference concerns
3. Complete a system safety check
4. Continually evaluate system components for compromised integrity
5. Direct personnel effectively
6. Communicate commands
7. Analyze system efficiency
8. Manage load movement
9. Identify concerns

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-3	Rope Rescue Awareness and Operations (2021) Skill 43 Skill 44 Skill 45	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 21 JPR 31

2-19: Constructing, Operating, and Directing the Operation of a Complex Rope Mechanical Advantage System

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Construct, operate, and direct the operation of a complex rope mechanical advantage system, given a load, an anchor system, life safety rope, carabiners, pulleys, rope grab devices, rope rescue equipment, rescue personnel, a load, and a specified minimum travel distance for the load to be moved, 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; the system is connected to an anchor system and the load; 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.

Requisite Knowledge

1. Describe the purpose of a complex rope mechanical advantage system
2. Describe types of complex rope mechanical advantage systems
3. Describe various complex rope mechanical advantage systems
4. Describe how to construct complex rope mechanical advantage systems
5. Identify safety concerns
6. Describe how to operate compound rope mechanical advantage systems
7. Describe how to direct the operation of a compound rope mechanical advantage system

Requisite Skills

1. Construct, operate, and direct the operation of a complex rope mechanical advantage system

Content Modification

Block	Modification	Justification
CTS	Added a new certification training standard.	NFPA does not cover complex rope mechanical advantage systems, but they are common in California.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-4	Rope Rescue Awareness and Operations (2021) Skill 46 Skill 47 Skill 48	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 22 JPR 31

2-20: Constructing, Operating, and Directing the Operation of Ladder Rescue Systems

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Construct, operate, and direct the operation of ladder systems, given fire service ladders and rope rescue equipment, so that the system constructed accommodates the load; operational interference is factored and minimized; the system is efficient; a system safety check is completed; 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.

Requisite Knowledge

1. Describe the purpose of a ladder system
2. Identify ladder systems
3. Describe ladder systems
4. Describe how to construct a moving ladder system
5. Describe how to construct a ladder slide system
6. Describe how to construct a ladder A-frame system
7. Describe how to operate ladder systems
8. Identify safety considerations
9. Describe how to direct the operation of a ladder system
10. Explain safety considerations for ladder rescue systems

Requisite Skills

1. Construct, operate, and direct the operation of ladder rescue systems

Content Modification

Block	Modification	Justification
CTS	Added a new certification training standard.	NFPA does not cover ladder systems, but they are common in California.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-5	Rope Rescue Awareness and Operations (2021) Skill 49 Skill 50 Skill 51 Skill 52 Skill 53 Skill 54	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 23 JPR 31

2-21: Negotiating an Edge in a High-angle Environment

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.19

Job Performance Requirement

Negotiate an edge while attached to a rope rescue system during a high-angle lowering and raising operation, given a rope rescue system, a specified minimum travel distance for the rescuer, life safety harnesses, an edge to negotiate during the lower and raise, and specialized equipment necessary for the environment, so that risk to the rescuer is minimized, the means of attachment to the rope rescue system is secure, and all projections and edges are negotiated while minimizing risks to the rescuer or equipment.

Requisite Knowledge

1. Describe techniques and practices for negotiating existing projections and edges along the travel path while suspended from operating rope-based lowering and raising mechanical advantage systems
2. Describe common hazards imposed by those projections and edges

Requisite Skills

1. Select and use rescuer harness and PPE for common environments
2. Attach the life safety harness to the rope rescue system
3. Maneuver across existing projections and an edge along the travel path
4. Evaluate surroundings for potential hazards

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 9-1	Rope Rescue Awareness and Operations (2021) Skill 55	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 24 JPR 31

2-22: Negotiating an Edge in a Low-angle Environment

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Negotiate an edge while attached to a rope rescue system during a low-angle lowering and raising operation, given a rope rescue system, a specified minimum travel distance for the rescuer, life safety harnesses, an edge to negotiate during the lower and raise, and specialized equipment necessary for the environment, so that risk to the rescuer is minimized, the means of attachment to the rope rescue system is secure, and all projections and edges are negotiated while minimizing risks to the rescuer or equipment.

Requisite Knowledge

1. Describe techniques and practices for negotiating existing projections and edges along the travel path while attached to an operating rope-based lowering and raising mechanical advantage systems
2. Describe common hazards imposed by those projections and edges

Requisite Skills

1. Select and use rescuer harness and PPE for common environments
2. Attach the life safety harness to the rope rescue system
3. Maneuver across existing projections and an edge along the travel path
4. Evaluate surroundings for potential hazards

Content Modification

Block	Modification	Justification
CTS	Added new standard.	Individuals need to be able to negotiate an edge in a low-angle environment to carry out many rope rescue skills.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 9-1	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 55	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 24 JPR 31

2-23: Preparing for Victim Transfer

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.20

Job Performance Requirement

Prepare for transfer of victims, given diagnostic and packaging equipment and an actual or simulated EMS agency, so that rescuers and victims are protected from hazards, victim injuries or illnesses are managed, and victims are delivered to the EMS provider with information regarding the history of the rescue activity and victim conditions.

Requisite Knowledge

1. Describe victim and scene assessment methods
2. Describe victim treatment, immobilization, and packaging methods
3. Describe medical information management
4. Describe communication methods

Requisite Skills

1. Use victim immobilization, packaging, and treatment methods appropriate to the situation
2. Provide victim transfer reports, both verbally and in written format

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 9-2	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 56• Skill 57• Skill 58	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 25 JPR 31

2-24: Directing a Litter-lowering and Litter-raising Operation

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.21

Job Performance Requirement

Direct a litter-lowering and litter-raising operation in a low-angle environment, given rescue personnel, litter tender(s), an established lowering/mechanical advantage system, a specified minimum travel distance for the load, and a victim packaged in a litter to be moved, so that the litter is attached to the lowering/raising and belay systems; movement is controlled; litter tender(s) are used to manage the litter during the lower and raise; the litter 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.

Requisite Knowledge

1. Describe application and use of lowering and mechanical advantage system in the low-angle environment
2. Describe capabilities and limitations of various lowering and mechanical advantage systems in a low-angle environment
3. Describe litter tender functions and limitations in the low-angle environment
4. Describe management of a litter in a low-angle environment during raises and lowers
5. Describe personnel assignments
6. Describe operational commands

Requisite Skills

1. Direct personnel
2. Use operational commands
3. Analyze system efficiency
4. Manage movement of the litter in a low-angle environment
5. Identify safety concerns in a low-angle environment
6. Perform a system safety check

Content Modification

Block	Modification	Justification
RK4	Changed "high-angle" to "low-angle".	This appears to be an error. The JPR only discusses low-angle environments.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 9-3 (RK3, RK4, RK5, RK6) Topic 8-1 (RK1, RK2)	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 59• Skill 60	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 26 JPR 31

2-25: Operating as a Litter Tender

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.22

Job Performance Requirement

Operate as a litter tender in a low-angle lowering or raising operation, given a rope rescue system, a specified minimum travel distance for the litter tender, life safety harnesses, litters, bridles, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized, the means of attachment to the rope rescue system is secure, and the terrain is negotiated while minimizing risks to equipment or persons.

Requisite Knowledge

1. Describe task-specific selection criteria for life safety harnesses
2. Describe PPE selection criteria
3. Describe variations in litter design and intended purpose
4. Describe low-angle litter attachment principles
5. Describe techniques and practices for low-angle environments
6. Describe common hazards imposed by the terrain

Requisite Skills

1. Select and use rescuer harnesses and PPE for common environments
2. Attach the life safety harness to the rope rescue system
3. Maneuver across the terrain
4. Manage the litter while suspended from the rope rescue system
5. Evaluate surroundings for potential hazards

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 9-4	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 61• Skill 62	Rope Rescue Awareness and Operations (2021) Instructor Task Book <ul style="list-style-type: none">JPR 27JPR 31

2-26: Directing a Litter-lowering or Raising Operation

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.23

Job Performance Requirement

Direct a litter-lowering or litter-raising operation in a high-angle environment, given rescue personnel, an established lowering/mechanical advantage system, a specified minimum travel distance for the litter, a victim packaged in a litter to be moved, and means for negotiating edges and projections along the travel path, so that the litter is attached to the lowering/raising and belay systems; an edge is negotiated during a lower and raise; tag lines are used to manage the litter during the lower and raise; the litter can be held in place when needed; operation methods to 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.

Requisite Knowledge

1. Describe application and use of lowering and mechanical advantage system in the high-angle environment
2. Describe capabilities and limitations of various lowering and mechanical advantage systems in a high-angle environment
3. Describe use of tag lines for management of litter position during high-angle lowers and raises
4. Describe personnel assignments
5. Describe operational commands

Requisite Skills

1. Direct personnel
2. Use operational commands
3. Analyze system efficiency
4. Manage movement of the litter in a high-angle environment
5. Identify safety concerns in a high-angle environment
6. Perform a system safety check

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 8-1 (RK1, RK2)• Topic 9-5 (RK3, RK4, RK5)	Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Skill 63• Skill 64	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 28 JPR 31

2-27: Terminating a Technical Rescue Operation

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.2.24

Job Performance Requirement

Terminate a technical rescue operation, given an incident scenario, assigned resources, and site safety data, so that rescuer risk and site safety are managed, scene security is maintained and custody transferred to a responsible party, personnel and resources are returned to a state of readiness, record keeping and documentation occur, and post event analysis is conducted.

Requisite Knowledge

1. Describe Incident Command functions and resources
2. Describe hazard identification and risk management strategies
3. Describe logistics and resource management
4. Describe personnel accountability systems
5. Describe AHJ-specific procedures or protocols related to personnel rehab

Requisite Skills

1. Recognize hazards
2. Analyze risk
3. Use site control equipment and methods
4. Use data collection and management systems
5. Use asset and personnel tracking systems

Content Modification

Block	Modification	Justification
RS2	Changed "risk analysis" to "Analyze risk".	Grammar adjustment.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 10-1	Rope Rescue Awareness and Operations (2021) Skill 67	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 30 JPR 31

Section 3: Technician

3-1: Construct, Operate, and Direct the Operation of a High-Directional

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Construct, operate, and direct the operation of a natural, structural, or artificial high-directional, given a scenario, a rope rescue system, and materials from within the AHJ, so that the system constructed accommodates the load; operational interference is factored and minimized; the system is efficient; a system safety check is completed; 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.

Requisite Knowledge

1. Describe the purpose of a high directional
2. Describe types of and uses for high-directionals
3. Describe how to construct a high directional
4. Describe how to operate a high directional
5. Identify the type of high-directional needed for different scenarios

Requisite Skills

1. Construct, operate, and direct the operation of a high-directional

Content Modification

Block	Modification	Justification
CTS	Added a new certification training standard.	NFPA does not address high directionals but many AHJs in California have structures that require them for rescue operations.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 5-2	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 13• Skill 14• Skill 15	Rope Rescue Technician (2021) Instructor Task Book <ul style="list-style-type: none">JPR 10JPR 20

3-2: Directing a Team to Remove a Victim from a Feature

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.1

Job Performance Requirement

Direct a team in the operation of a rope rescue system to remove a victim stranded on or clinging to a natural or manmade feature in a high-angle environment, given a victim stranded on or clinging to a feature and a means of removal of the victim to the ground or other safe area, so that risks to victims and rescuers are minimized, injury to the victim is minimized, the means of attachment to the rope rescue system is maintained, the victim is removed and brought to a safe area for transfer to EMS.

Requisite Knowledge

1. Describe techniques and systems for safe transfer of stranded victims from a natural or manmade feature
2. Describe various techniques for handling stranded victims without inducing a fall

Requisite Skills

1. Select and construct systems for rapid removal of stranded victims from natural or manmade features
2. Manage operation of the selected system
3. Determine condition of the stranded victim
4. Reduce hazards for rescuers and victims
5. Determine specialized equipment needs for victim movement

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 7-2	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 25	Rope Rescue Technician (2021) Instructor Task Book JPR 16 JPR 20

3-3: Directing a Team to Remove a Victim Suspended from Rope or Webbing

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.2

Job Performance Requirement

Direct a team in the operation of a rope rescue system to remove a victim suspended from rope or webbing in a high-angle environment, given a victim suspended by a harness attached to anchored rope or webbing, systems for removal of the victim from the rope or webbing, and a means of removal of the victim to the ground or other safe area, so that risks to victims and rescuers are minimized, injury to the victim is minimized, the means of attachment to the rope rescue system is maintained, the victim is removed from the rope or webbing, and the victim is brought to a safe area for transfer to EMS.

Requisite Knowledge

1. Describe techniques and systems for safe transfer of suspended victims from an existing anchored rope or webbing rescue system
2. Describe various techniques for handling suspended victims
3. Describe principles of suspension-induced injuries

Requisite Skills

1. Select and construct systems for rapid removal of victims from lanyards or rope or webbing
2. Manage operation of the selected system
3. Determine condition of the suspended victim
4. Reduce hazards for rescuers and victims
5. Determine specialized equipment needs for victim movement

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 7-3	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 26	Rope Rescue Technician (2021) Instructor Task Book JPR 17 JPR 20

3-4: Transferring a Suspended Victim to a Separate Rope Rescue System while Suspended

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.3

Job Performance Requirement

While suspended from a rope rescue system, perform the transfer of a victim suspended from rope or webbing in a high-angle environment to a separate rope rescue lowering or mechanical advantage system, given a rope rescue system, a specified minimum travel distance for the victim, victim transfer systems, and specialized equipment necessary for the environment, so that risks to victims and rescuers are minimized, undesirable victim movement during the transfer is minimized, the means of attachment to the rope rescue system is maintained, the victim is removed from the static line and lowered or raised to a stable surface, victim positioning is managed to reduce adverse effects associated with suspension-induced injuries, selected specialized equipment facilitates efficient victim movement, and the victim can be transported to the local EMS provider.

Requisite Knowledge

1. Describe task-specific selection criteria for victim transfer systems
2. Describe various physical and psychological victim management techniques
3. Describe PPE selection criteria
4. Describe design characteristics and intended purposes of various transfer systems
5. Describe rigging principles
6. Describe cause and effects of suspension-induced injuries
7. Describe methods to minimize common environmental hazards
8. Describe hazards created in high-angle environments

Requisite Skills

1. Choose victim transfer systems
2. Select and use PPE appropriate to the conditions
3. Perform a transfer of the victim from a static line to the lowering or mechanical advantage system
4. Reduce hazards for rescuers and victims
5. Determine specialized equipment needs for victim movement

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 7-3	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 26	Rope Rescue Technician (2021) Instructor Task Book JPR 17 JPR 20

3-5: Rescuing a Victim Using a Litter Tender

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.4

Job Performance Requirement

Perform the activities of a litter tender in a high-angle raising or lowering operation, given a rope rescue system, a specified minimum travel distance for the litter tender, life safety harnesses, litters, bridles, and specified equipment necessary for the environment, so that the risks to victims and rescuers are minimized, the means of attachment to the rope rescue system is secure, and the travel path is negotiated while minimizing risks to equipment or persons.

Requisite Knowledge

1. Describe task-specific criteria for life safety harnesses
2. Describe PPE selection criteria
3. Describe variations in litter design and intended purpose
4. Describe high-angle litter attachment principles
5. Describe techniques and practices for high-angle environments
6. Describe common hazards imposed by the various structures and terrain

Requisite Skills

1. Select and use rescuer harnesses and PPE for common environments
2. Attach the life safety harness to the rope rescue system
3. Maneuver the litter past obstacles or natural structural features
4. Manage the litter while attached to the rope rescue system
5. Evaluate surroundings for potential hazards

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 7-4	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 26	Rope Rescue Technician (2021) Instructor Task Book JPR 18 JPR 20

3-6: Constructing a Rope Rescue System to Move a Suspended Load Along a Horizontal Path

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.5

Job Performance Requirement

Participate as a member of a team in the construction of a rope rescue system intended to move a suspended rescue load along a horizontal and vertical path to avoid an obstacle, given rescue personnel, life safety rope, rope rescue equipment, and a suitable anchor capable of supporting the load, so that personnel assignments are made and clearly communicated, the system constructed can accommodate the load, tension applied within the system will not exceed the rated capacity of any of its components' parts, a system safety check is performed, movement on the load is efficient, and loads can be held in place or moved with minimal effort over the required distance.

Requisite Knowledge

1. Describe determination of incident needs as related to operation of a system
2. Describe capabilities and limitations of various systems (including capacity ratings)
3. Describe methods for limiting excessive force to system components
4. Describe incident site evaluation as related to interference concerns and obstacle negotiation
5. Describe rigging principles
6. Describe system safety check protocol
7. Describe common personnel assignments and duties
8. Describe common and critical operational commands
9. Describe common problems and ways to minimize these problems during construction

Requisite Skills

1. Determine incident needs as related to construction of a system
2. Evaluate an incident site as related to interference concerns and setup
3. Identify the obstacles or voids to be negotiated
4. Select a system for defined task
5. Perform system safety checks
6. Use rigging principles that will limit excessive force to system components
7. Communicate with personnel effectively

Content Modification

Block	Modification	Justification
JPR	Added “and vertical”.	The system needs to be able to support both types of movement to complete rescue operations.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 7-5	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 28• Skill 29• Skill 30	Rope Rescue Technician (2021) Instructor Task Book JPR 19 JPR 20

3-7: Directing a Team to Move a Suspended Load Along a Horizontal Path

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.6

Job Performance Requirement

Direct a team in the operation of a rope system to move a suspended rescue load along a horizontal **and vertical** path, given rescue personnel, an established system, a target for the load, a load to be moved, and PPE, so that the movement is controlled; the load is held in place when needed; operating methods do not stress the system to the point of failure; personnel assignments are made; tasks are communicated; and potential problems are identified, communicated, and managed.

Requisite Knowledge

1. Describe determination of incident needs as related to operation of a system
2. Describe capabilities and limitations of various systems
3. Describe incident site evaluation as related to interference concerns and obstacle negotiation
4. Describe system safety check protocol
5. Describe procedures to evaluate system components for compromised integrity
6. Describe common personnel assignment and duties
7. Describe common and critical operational commands
8. Describe common problems and ways to minimize these problems
9. Describe ways to increase the efficiency of load movement

Requisite Skills

1. Determine incident needs
2. Complete a system safety check
3. Evaluate system components for compromised integrity
4. Select personnel
5. Communicate with personnel effectively
6. Manage movement of the load
7. Evaluate for any potential problems

Content Modification

Block	Modification	Justification
JPR	Added “and vertical”.	The system needs to be able to support both types of movement to complete rescue operations.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 7-5	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 28• Skill 29• Skill 30	Rope Rescue Technician (2021) Instructor Task Book JPR 19 JPR 20

3-8: Climbing and Traversing Natural Features or Manmade Structures

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.7

Job Performance Requirement

Climb and traverse natural features or man-made structures that require the use of climbing aids, positioning equipment, or fall protection systems to prevent the fall or unwanted movement of the rescuer, given the equipment used by the agency, and a task that reflects the anticipated rescue environment, so that the objective is achieved, the rescuer can perform the required tasks, and fall protection is maintained.

Requisite Knowledge

1. Describe application and limitations of climbing, positioning, and fall protection systems
2. Describe equipment commensurate with the organization's needs

Requisite Skills

1. Climb vertical or near-vertical paths using the surfaces provided by the environment or climbing aids used by the agency
2. Use positioning equipment to support the weight of the rescuer in a vertical or near-vertical environment permitting the rescuer to perform a task

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 6-4	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 22• Skill 23• Skill 24	Rope Rescue Technician (2021) Instructor Task Book JPR 14 JPR 20

3-9: Interacting with a Person at Height in Crisis

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.8

Job Performance Requirement

Interact with a person at height who is in an emotional or psychological crisis, given an environment consistent with the mission of the agency, the policies and procedures of the organization, and a person in a crisis scenario, so that the condition is recognized and communicated to the team, the rescuer is prevented from harm, and the actions of the rescuer do not escalate the incident.

Requisite Knowledge

1. Identify indicators of a person in emotional crisis
2. Identify typical triggers that can cause individuals to become agitated or anxious
3. Describe methods of interacting to prevent harm to the rescuer and the subject
4. Describe best practices to de-escalate incidents involving persons in crisis

Requisite Skills

1. Use methods of approach that minimize the risk to the rescuer from subjects whose psychological or emotional state is unknown
2. Use interview techniques that provide insight to the motives and state of mind of the subject
3. Communicate and interact with the subject in a manner that does not escalate the incident

Content Modification

Block	Modification	Justification
RS1	Added "use".	NFPA did not provide a verb.
RS2	Added "use".	NFPA did not provide a verb.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 7-1	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill N/A	Rope Rescue Technician (2021) Instructor Task Book JPR 15

3-10: Ascending a Fixed Rope

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.9

Job Performance Requirement

Ascend a fixed rope in a high-angle environment, 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 PPE, 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.

Requisite Knowledge

1. Describe task-specific selection criteria for life safety harnesses and systems for ascending a fixed rope
2. Describe PPE selection criteria
3. Describe design and intended purpose of ascent control devices utilized
4. Describe rigging principles
5. Describe techniques for high-angle environments
6. Describe converting ascending systems to descending systems
7. Describe common hazards posed by maneuvering and harnessing

Requisite Skills

1. Select and use rescuer harness, a system for ascending a fixed rope, and PPE for common environments
2. Attach the life safety harness to the rope rescue system
3. Configure ascent control devices to form a system for ascending a fixed rope
4. Make connections to the ascending system
5. Maneuver around existing environment and system-specific obstacles
6. Convert the ascending system to a descending system while suspended from the fixed rope
7. Evaluate surroundings for protentional hazards

Content Modification

Block	Modification	Justification

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 6-2	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 19• Skill 20• Skill 21	Rope Rescue Technician (2021) Instructor Task Book JPR 12 JPR 20

3-11: Descending a Fixed Rope

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.10

Job Performance Requirement

Descend a fixed rope in a high-angle environment, given an anchored fixed-rope system, a specified minimum travel distance for the rescuer, a system to allow descent of a fixed rope, a belay system, a life safety harness worn by the person descending, and PPE, so that the person descending is attached to the fixed rope in a manner that will not allow him 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.

Requisite Knowledge

1. Describe task-specific selection criteria for life safety harnesses and systems for descending a fixed rope
2. Describe PPE selection criteria
3. Describe design, intended purpose, and operation of descent control devices utilized
4. Describe safe rigging principles
5. Describe techniques for high-angle environments
6. Describe converting ascending systems to descending systems
7. Describe common hazards posed by maneuvering and harnessing

Requisite Skills

1. Select and use rescuer harnesses, a system for descending a fixed rope, and PPE for common environments
2. Attach the life safety harness to the rope rescue system
3. Attach descent control device to the rope and life safety harness
4. Operate the descent control device
5. Maneuver around existing environment and system-specific obstacles
6. Evaluate surroundings for protentional hazards

Content Modification

Block	Modification	Justification
RK3	Changed "Make attachment of the" to "Attach".	Changed to simplify grammar and align with other skills.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Awareness and Operations (2021) <ul style="list-style-type: none">• Topic 9-6 Rope Rescue Technician (2021) Topic 6-1	Rope Rescue Awareness and Operations (2021) Skill 65 Skill 66 Rope Rescue Technician (2021) Skill 16 Skill 17 Skill 18	Rope Rescue Awareness and Operations (2021) Instructor Task Book JPR 29 JPR 31 Rope Rescue Technician (2021) Instructor Task Book JPR 11 JPR 20

3-12: Escaping from a Jammed or Malfunctioning Device

Authority

1. NFPA 1006: Standard for Technical Rescue Personnel Professional Qualifications (2021)
 - Paragraph 5.3.11

Job Performance Requirement

Demonstrate the ability to escape from a jammed or malfunctioning device during a fixed-rope descent in a high-angle environment, given an anchored fixed-rope system with a simulated malfunctioning descent control device, a system to allow escape from the malfunctioning device, a belay system, a life safety harness worn by the person descending, and PPE, so that the person descending is attached to the fixed rope in a manner that will not allow him or her to fall, the person descending is attached to the rope by means of a descent control device, the means for escape will allow the rescuer to escape either upward or downward from the malfunctioning descent control device, injury potential to the rescuer is minimized, the system will not be stressed to the point of failure, and the system is suitable for the site, and the objective is reached.

Requisite Knowledge

1. Describe task-specific selection criteria for escape equipment and methods used for escape from a malfunctioning descent control device
2. Describe PPE selection criteria
3. Describe design, intended purpose, and operation of escape systems utilized
4. Describe safe rigging principles
5. Describe techniques for high-angle environments
6. Describe converting ascending systems to descending systems
7. Describe common hazards posed by maneuvering and harnessing

Requisite Skills

1. Select and use rescuer harnesses, a system for escaping a malfunctioning descent control device, and PPE for common environments
2. Attach the life safety harness to the rope rescue system
3. Attach descent control device to the rope and life safety harness
4. Attach and operate the escape system to remove the rescuer from the malfunctioning descent control device while maintaining patent attachment to the fixed rope and belay
5. Use the escape system to maneuver upward or downward from the malfunctioning descent control device
6. Evaluate surroundings for protentional hazards

Content Modification

Block	Modification	Justification
RK3	Changed "Make attachment of the" to "Attach".	Changed to simplify grammar and align with other skills.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 6-3	Rope Rescue Technician (2021) <ul style="list-style-type: none">• N/A	Rope Rescue Technician (2021) Instructor Task Book JPR 13

3-13: Constructing Tensioned Anchor Systems

Authority

1. Office of the State Fire Marshal

Job Performance Requirement

Construct single-point and multiple-point anchor systems, given life safety rope and other auxiliary rope rescue equipment, so that the chosen anchor system fits the incident needs, distributes force, meets or exceeds the expected load, and does not interfere with rescue operations; an efficient anchor point is chosen; the need for redundant anchor points is assessed and used as required; the anchor system is inspected and loaded prior to being placed into service; and the integrity of the system is maintained throughout the operation.

Requisite Knowledge

1. Describe anchor selection criteria
2. Describe weight distribution issues and methods
3. Describe load types
4. Describe formulas to calculate load distribution
5. Describe how to construct anchor slings
6. Describe types and uses of tensioned anchor systems
7. Describe application of knots, bends, and hitches
8. Describe system safety check procedures

Requisite Skills

1. Construct tensioned anchors

Content Modification

Block	Modification	Justification
CTS	Added a new certification training standard.	NFPA doesn't address tensioned anchor systems but they are a critical component of rope rescue.

Cross Reference

Course Plan	Training Record	Task Book
Rope Rescue Technician (2021) <ul style="list-style-type: none">• Topic 5-1	Rope Rescue Technician (2021) <ul style="list-style-type: none">• Skill 9• Skill 10• Skill 11• Skill 12	Rope Rescue Technician (2021) Instructor Task Book JPR 9 JPR 20