

# Fire Apparatus Driver/Operator – Aerial Apparatus

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## Certification Training Standards Guide August 2015



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

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## Certification Training Standards Guide August 2015

This CTS guide utilizes NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014) to provide the qualifications for State Fire Training's Fire Apparatus Driver/Operator – Aerial Apparatus certification.

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).

**CALIFORNIA  
STATE FIRE**



**TRAINING**

Published by State Fire Training  
1131 S Street, Sacramento, CA 95811  
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Cover photo courtesy of Jonathan Black, Santa Clara County Fire Department

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# State Fire Training

## Mission

To enable the California Fire Service to safely protect life and property through education, training, and certification.

## The California Fire Service Training and Education System

The California Fire Service Training and Education System (CFSTES) was established to provide a single statewide focus for fire service training in California. CFSTES is a composite of all the elements that contribute to the development, delivery, and administration of training for the California fire service. The authority for the central coordination of this effort is vested in the Training Division of the California State Fire Marshal's Office with oversight provided by the State Board of Fire Services.

CFSTES facilitates, coordinates, and assists in the development and implementation of standards and certification for the California fire service. CFSTES:

1. Administers the California Fire Academy System
2. Provides accredited courses leading to certification and approved standardized training programs for local and regional delivery
3. Administers the national accreditation process in California
4. Publishes certification training standards, course plans, and a certification task book for each certified level in the California fire service

CFSTES is a fire service system developed by the fire service, for the fire service. It is only as successful and effective as the people involved in it.

## Acknowledgments

State Fire Training appreciates the hard work and accomplishments of those who built the solid foundation on which this program continues to grow.

State Fire Training gratefully acknowledges the following individuals and organizations for their diligent efforts and contributions that made the development and publication of this document possible.

### CAL FIRE

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## Partners

State Fire Training also extends special acknowledgement and appreciation to the Conference and Training Services Unit with the College of Continuing Education at California State University, Sacramento, for its ongoing meeting logistics and curriculum development support, innovative ideas, and forward-thinking services. This collaboration is made possible through an interagency agreement between CAL FIRE and Sacramento State.

## How to Read a CTS Guide

State Fire Training develops a Certification Training Standards (CTS) Guide for a variety of job functions in the fire service such as firefighter, driver/operator, fire instructor, and company officer. The CTS guide lists the requisite knowledge and skills and the job performance requirements a person is expected to complete in order to become certified in a specific function. CTS guides are appropriate for fire service personnel and individuals in related occupations pursuing State Fire Training certification.

Each CTS guide serves as a foundation for the certification programs recommended for adoption by the Office of the State Fire Marshal. Any certification program must be based on job-related knowledge and measurable performance standards. To master the knowledge and skills needed for specialized operations, individuals will require additional training to augment the performance standards included in the CTS guide.

Within the CTS guide, it is impossible to capture the different policies and procedures of each organization in the California fire service. Individuals aspiring to meet State Fire Training's certification training standards must do so in accordance with the codes, standards, regulations, policies, and standard operating procedures applicable within their own departments or jurisdictions.

### Format

Each certification training standard included in the CTS guide includes the following:

#### Section Heading

The section heading describes a general category for a group of training standards. For example, the Fire Marshal CTS includes the following sections: Administration, Risk Management, Community Relations, Professional Development, Regulatory Programs, Fire and Life Safety, and Investigation. Each section contains one or more individual training standards.

#### Training Standard Title

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

#### Authority

The CTS guide references each 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 in *italics*.

### **Given**

This section lists the objects, equipment, materials, or facilities an individual needs in order to acquire the requisite knowledge and skills or to accomplish the job performance requirement(s) within a training standard.

### **Requisite Knowledge and Skills**

This section lists the knowledge and skills that an individual must acquire in order to accomplish the job performance requirement(s) within a training standard.

This section does not include NFPA requisite knowledge or skills that are too general to teach or that individuals should develop through life experiences. For example, a training standard would not list “communicate orally and in writing” or “ability to relate interpersonally” unless they specifically apply to a job performance requirement about acquiring communication skills or developing interpersonal relationships.

### **Job Performance Requirements**

This section includes one or more written statements that describe a specific job-related task and define measurable or observable outcomes. After an individual completes all coursework and requisite requirements, the certification task book process verifies completion of job performance requirements.

## **Content**

In addition to the individual certification training standards, the CTS guide also includes State Fire Training Revisions and Errata pages.

### **State Fire Training Content**

Located at the back of the CTS guide, this table documents any significant revisions made by State Fire Training to the NFPA standards in the development of this CTS guide. This table is used to justify content additions and advise the course plan development team.

### **Errata**

Located at the back of the CTS guide, this page documents any changes made to the CTS guide outside of the five-year NFPA revision cycle.

# Fire Apparatus Driver/Operator – Aerial Apparatus

## Section 1: Preventive Maintenance

### 1-1: Perform and Document Routine Tests, Inspections, and Servicing Functions Unique to Aerial Apparatus

#### Authority

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 6.1.1

Office of the State Fire Marshal

#### Given

1. Aerial apparatus
2. *Tools and equipment*
3. *Maintenance and inspection forms*
4. *Manufacturer's specifications and requirements*
5. Policies and procedures of the jurisdiction

#### Requisite Knowledge and Skills

1. *Recognize* manufacturer specifications and requirements
2. *Review* policies and procedures of the jurisdiction, *including documentation requirements*
3. Use *tools and equipment*
4. Recognize system problems and out-of-service criteria
5. Correct any deficiency noted according to policies and procedures *and/or manufacturer specifications and requirements*

#### Job Performance Requirements

Perform and document routine tests, inspections, and servicing functions on the systems and components unique to an aerial apparatus to verify their operational status.

## Section 2: Operations

### 2-1: Maneuver and Position an Aerial Apparatus

#### Authority

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 6.2.1

Office of the State Fire Marshal

#### Given

1. Aerial apparatus
2. Incident location
3. Situation description
4. Assignment

#### Requisite Knowledge and Skills

1. *Explain* capabilities and limitations of aerial devices related to reach, tip load, angle of inclination, and angle from chassis axis
2. *Discuss the* effects of topography, ground, and weather conditions on deployment
3. *Describe* uses for an aerial device
4. Determine a correct position for the *aerial* apparatus
5. Maneuver *the aerial* apparatus into *the correct* position
6. Avoid obstacles to operations

#### Job Performance Requirements

Maneuver and position an aerial apparatus for correct aerial device deployment.

## **2-2: Stabilize an Aerial Apparatus**

### **Authority**

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 6.2.2

### **Given**

1. Positioned *aerial apparatus*
2. Manufacturer's specifications *and requirements*

### **Requisite Knowledge and Skills**

1. *Describe* aerial apparatus hydraulic systems
2. *Explain* manufacturer's specifications *and* requirements for stabilization
3. *Discuss the* effects of topography and ground conditions on stabilization
4. Transfer power from the aerial apparatus engine to the hydraulic system
5. Operate aerial apparatus stabilization devices.

### **Job Performance Requirements**

Stabilize an aerial apparatus and transfer power to the aerial device hydraulic system in order to deploy the aerial device.

## **2-3: Maneuver and Position an Aerial Device from Each Control Station**

### **Authority**

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 6.2.3

Office of the State Fire Marshal

### **Given**

1. *Stabilized aerial apparatus*
2. Incident location
3. Situation description
4. Assignment

### **Requisite Knowledge and Skills**

1. *Explain* aerial device hydraulic systems
2. *Explain* hydraulic pressure relief systems
3. *Identify* gauges and controls
4. *Describe* cable systems
5. *Discuss* communications systems
6. *Explain* electrical systems
7. *Explain* locking systems
8. *Discuss* platform stabilization
9. *Explain* aerial device safety systems
10. *Explain* system overrides and the hazards of using overrides
11. *Explain* safe operational limitations of the given aerial device
12. *Explain* safety procedures specific to the device
13. *Discuss* operations near electrical hazards and overhead obstructions
14. Raise, rotate, extend, position to a specified location and lock
15. Unlock, retract, rotate, lower, and bed the aerial device

### **Job Performance Requirements**

Maneuver and position the aerial device from each control station to accomplish the assignment.

## **2-4: Lower an Aerial Device using the Emergency Operating System**

### **Authority**

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 6.2.4

### **Given**

1. Deployed aerial device

### **Requisite Knowledge and Skills**

1. *Describe* emergency operating systems
2. *Explain* manual rotation and lowering systems
3. *Explain* aerial device safety systems
4. *Explain* system overrides and the hazards of using overrides
5. *Explain* safe operational limitations of the given aerial device
6. *Explain* safety procedures specific to manual overrides
7. Unlock, retract, rotate lower, and bed the aerial device using the emergency operating system

### **Job Performance Requirements**

Lower an aerial device using the emergency operating system to its bedded position.

## **2-5: Deploy and Operate an Elevated Master Stream**

### **Authority**

NFPA 1002 Standard for Fire Apparatus Driver/Operator Professional Qualifications (2014)

- Paragraph 6.2.5

Office of the State Fire Marshal

### **Given**

1. *Stabilized* aerial device
2. Master stream device
3. A desired flow

### **Requisite Knowledge and Skills**

1. *Explain* nozzle reaction
2. *Explain* range of operation
3. *Discuss* weight limitations
4. Connect a water supply to a master stream device
5. Control an elevated nozzle manually or remotely

### **Job Performance Requirements**

Deploy and operate an elevated master stream so the stream is effective and the aerial and master stream devices are operated correctly.

## State Fire Training Content

### Code Key

**Blocks**

- G = Given
- RKS = Requisite Knowledge and Skills
- JPR = Job Performance Requirements
- NCTS = New certification training standard

### Certification: Fire Apparatus Driver/Operator – Aerial Apparatus

CTS	Block	Addition	Justification	Source/ Reference
1-1	G	Tools and equipment	Needed to perform the JPR	N/A
1-1	G	Maintenance and inspection forms	Needed to perform the JPR	N/A
2-3	G	Stabilized aerial apparatus	Needed to perform the JPR	N/A