

CHAPTER 5

Blasting

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<http://www.dot.ca.gov/hq/maint/manual/maintman.htm>

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5.01 Introduction

5.01.01 Chapter Content and Resources

This chapter contains information relevant to explosives used for blasting operations performed by the Department of Transportation (Caltrans).

All explosives are dangerous and must be handled and used with extreme care. The term "explosives" is defined as any chemical compound, mixture, or device, which is to function by explosion (i.e., with substantially instantaneous release of gas and heat). The term "explosives" shall include, but not be limited to, blasting agents, blasting caps, electric blasting caps, detonating fuse, and projectiles. The handling and moving of explosives and the mixing of blasting agents shall be performed exclusively by experienced personnel. Dynamite, nitroglycerine, or black powder shall not be used by Caltrans employees because of the extreme hazard involved.

Blasting work shall neither be permitted nor required unless by a competent blaster with a valid California Blaster's License and a Caltrans Blaster's Certificate for the work to be performed. A licensed blaster will be physically on the job site during any blasting operations. Blasting operations shall be under the direct control of the licensed blaster at all times. All licensed blasters shall attend annual training to maintain their proficiency and certification for the work to be performed.

Supervisors and licensed blasters shall be furnished copies of the Caltrans Maintenance Blasters Manual and the Construction and General Industrial Safety Orders of the Division of Industrial Relations (CAL/OSHA), referring to "Explosives." They should also be furnished copies of State and Federal regulations and local ordinances applying to the use, handling, and storage of explosives. They shall periodically review the Caltrans Maintenance Blasters Manual and the Construction and General Industrial Safety Orders to assure that all applicable regulations are being followed.

For resource references related to this chapter, please see the following:

California Highway Patrol Explosives Materials Shipments: Routes, Safe Stopping Places, and Safe Parking Places: [HPH 84.3 \(ca.gov\)](#)

Caltrans Maintenance Blasters Manual: [Courses & Resources](#) | [Maintenance \(ca.gov\)](#)

Cal/OSHA Title 8 of the California Code of Regulations (CCR), Subchapter 7, Group 18 "Explosive Materials": [General Industry Safety Orders, Group 18. Explosives and Pyrotechnics \(ca.gov\)](#)

Code of Federal Regulations Title 27, Chapter 2, Subchapter C, Part 555 – Commerce in Explosives: [eCFR :: 27 CFR Part 555 -- Commerce in Explosives](#)

5.01.02 Definitions

Cal/OSHA – Division of Occupational Safety and Health (DOSH), also referred to as Cal/OSHA.

5.01.03 References and Hyperlinks

There are hyperlink resource materials identified within this chapter. If any hyperlink is not accessible, please notify the appropriate personnel to inquire about that resource or reference.

5.01.04 Chapter Contact

This chapter of the Maintenance Manual is maintained by Division of Maintenance, Office of Emergency Operations and Recovery.

5.02 Avalanche Control

Various explosive projectiles, as well as ordinary explosives, are used to control avalanches. As with ordinary blasting, the operation shall be under the direct control of the licensed blaster at all times. For additional information, refer to Volume 1, Chapter R of the Maintenance Manual.

5.03 Permit to Possess Explosives

No person shall store, handle, or transport explosives or blasting agents except under a valid permit issued by the applicable Federal, State, or Local Agency. Application for a permit shall be made to the appropriate issuing authority in the jurisdiction in the area of activity, i.e., Chief of Police or Sheriff.