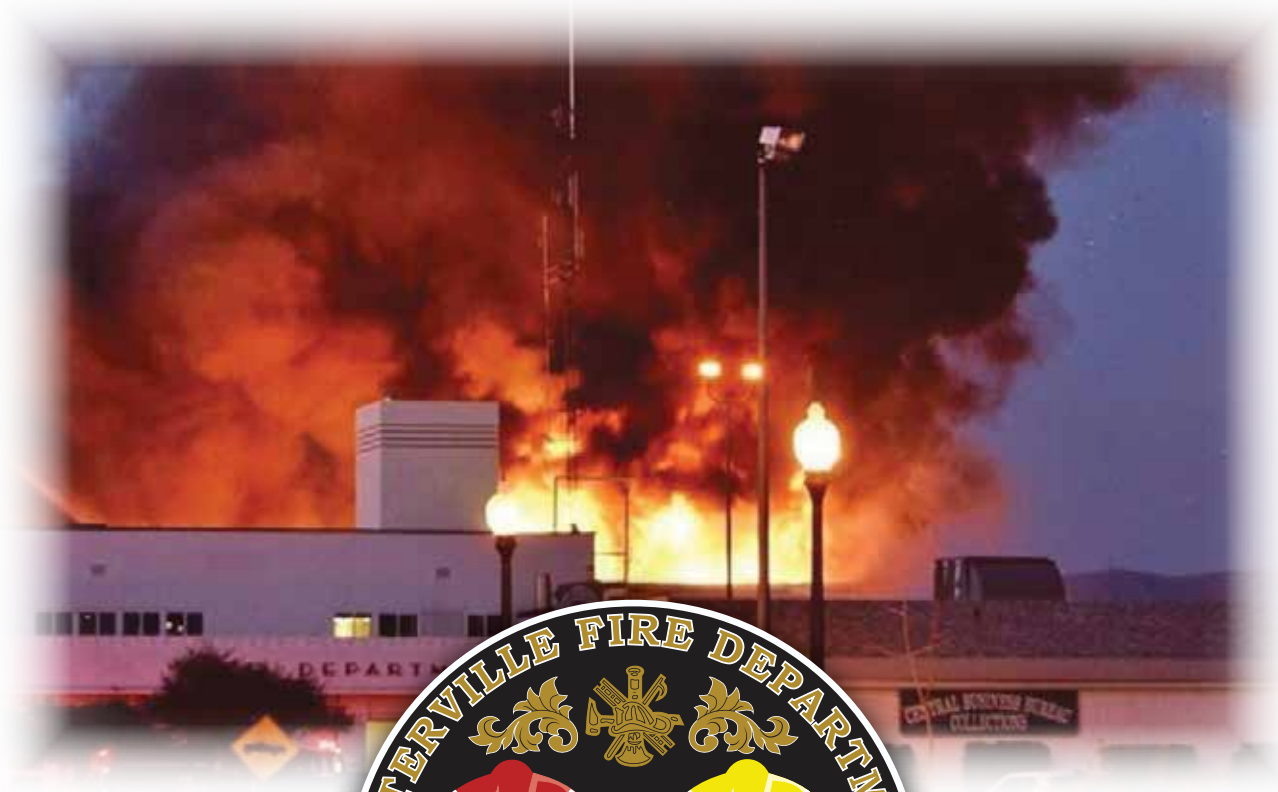


# LIBRARY INCIDENT

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**Multi - Agency Serious Accident Review Team  
S.A.R.T.  
Investigation Report  
Porterville Fire Department**



February 18, 2020  
41 W. Thurman • Porterville, CA  
Incident # 20-820

# Multi – Agency Serious Accident Review Team



## Library Incident Final Report



Porterville Fire Department

February 18, 2020

Incident # 20-820

## Firefighter Patrick Lee Jones

Patrick “Jonesy” Jones was born on March 16th, 1994 and received his last alarm on February 18th, 2020. He was raised in Visalia, CA and graduated from El Diamanté High School. He attended Porterville Community College where he completed the Fire Academy. Patrick was hired with the Porterville Fire Department as a Reserve Firefighter in 2014 and was offered a part-time firefighter position in 2016. He became a full-time firefighter in 2017. Patrick was dedicated to being a firefighter attending numerous training opportunities. Patrick was a loving son, a protective little brother, a doting fiancé, and a loyal friend. He was a lover of all things sports (Chargers and Padres) and animals. He loved every single one of the people he worked with and would have done absolutely anything for them. Patrick’s love for his family was unmatched. Patrick’s vibrant personality and infectious smile ensured that no one he came into contact with was ever a stranger. He loved people and people loved him. Patrick’s impact on those around him and his community are a testament to the kind of person he was.



## Captain Ramon Figueroa

Ramon “Ray” Figueroa was born January 3, 1985 and received his last alarm on February 18, 2020. He was born and raised in Delano, CA. He graduated from Delano High School in 2003. He attended the Porterville College Fire Academy and graduated in 2006. He began his firefighting career by volunteering with the Lindsay Fire Department. In 2007, Ray was hired with the Porterville Fire Department as a Firefighter. He was promoted to Engineer in 2016 and Lieutenant in 2018. In 2019 he was promoted to Captain. Ray spent the last three years as a member of the fire investigation unit. He was known for the love of his job and mentoring his crew. It was common to hear him say, “My men, the mission, then me.” He was a devoted and loving father to his two children, a determined son, a caring brother, and a supportive uncle. He enjoyed many outdoor adventures, watching sports (Raiders and Dodgers), enjoyed offering his handyman skills to others, spending time with his family and creating many lifelong friendships. He was a lifelong learner and strived to leave a legacy of hard work and determination.



## Multi-Agency SART Members

Mike Kraus, Fire Chief, Retired, Modesto Fire Department

Chris Ekk, Deputy Chief, Clovis Fire Department

Cameron Long, Division Chief, Tulare City Fire Department

Jeff Smith, Division Chief, Tulare County Fire Department

Brad Driscoll, Battalion Chief, Fresno Fire Department

Bryan Cogburn, Battalion Chief, Porterville Fire Department

John Pepper Jr, Captain, Fresno Fire Department

Chris Pisani, Captain, Porterville Fire Department

## Documentation

Dumont Printing





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## City of Porterville

Incorporated in 1902, the City of Porterville is a charter city that operates under the Council-Manager form of government. The City Council is comprised of five members who are elected by their respective districts to serve overlapping four-year terms. Porterville is a full service City, providing Fire, Police, Parks and Leisure Services, Planning, Utilities, and Public Works services to the public. The City Manager is appointed by the City Council, serving as the City's Chief Executive Officer, and guides the various City government municipal operations and departments.

With a population exceeding 60,000, Porterville is a growing city in the Southern San Joaquin Valley, located midway between San Francisco and Los Angeles. The city contains a wide range of critical infrastructure including high speed divided and undivided highways, a municipal airport, 25 schools, one college, four nursing homes, one hospital, six hotels, 41 churches, a large number of commercial enterprises, strip malls, superstores as well as a multitude of multifamily and single family dwellings.

## Porterville Fire Department Overview

The Porterville Fire Department is a combination department with 42 career and 15 volunteer firefighters; operating out of three stations to provide structural and wildland firefighting, rescue operations, hazardous materials operations and basic life support services. The minimum daily staffing is 10 line personnel with one shift battalion chief. The first alarm structure fire response consists of two engines, one ladder truck, one patrol, one Battalion Chief and a mutual aid engine from Tulare County Fire Department staffed with one person. This initial alarm brings 12 personnel to an incident. A second alarm request is a voluntary recall of all off-duty Porterville Fire Department personnel and one additional Tulare County Fire engine.

The apparatus fleet includes six engines, one Ladder Truck, one rescue, three patrols, five command vehicles and several other utility support vehicles. In 2019 the department responded to 5,359 incidents, including 369 fires and 100 hazardous materials/condition incidents. The breakdown of fires includes 40 structures, 32 vehicles, 112 vegetation fires and 185 other classified fires.

Additionally, the Porterville Fire Department provides automatic and mutual aid to its neighboring fire departments within Tulare County totaling another 405,348 residents. They also participate in California's Statewide Master Mutual Aid Agreement.



## **Porterville Fire Department Organizational Staffing History**

In 2008, Porterville voters approved Measure H, a one half-cent public safety sales tax increase. With those funds, the Porterville Fire Department increased minimum operations staffing (fire personnel whose main responsibility is to respond to emergency incidents working a 24 hour shift) to seven (7) personnel running out of two (2) stations. At that point in time, operations personnel included firefighters, engineers, lieutenants, and captains. Both lieutenants and captains were considered company officers. Each shift had a lieutenant at one station and a captain at the other station. Captains functioned as the shift commander. The department was also staffed with two administrative (40 hour per week) Battalion Chiefs and three administrative (40 hour per week) Captains. The next few years saw some minor shuffling of responsibilities for the administrative positions, but no changes to the minimum staffing of operations.

In 2015, Porterville Fire Department opened Fire Station 73. To accommodate this addition, the department added an additional company to operations, increasing minimum operations staffing to 10 personnel. The Company Officer role was handled by a Lieutenant at two of the stations, and a Captain at the third station functioning as the shift commander. In order to help pay for this increase in staffing, the department eliminated two administrative Captain positions (the Training Captain and the Prevention Captain). Administrative positions that were kept were one Investigation Captain and two Administrative Battalion Chiefs (generally considered an Operations Battalion Chief and a Prevention Battalion Chief).

The current Fire Chief assumed the position in 2018 and reassigned the responsibilities of the Administrative Captain from Fire Investigations to Training. In this same year, the voters of Porterville approved Measure I, a full-cent general use sales tax increase. The department was still at a minimum staffing of 10 operations personnel, with two (2) Administrative Battalion Chiefs and one (1) Administrative Training Captain. Funds from Measure I were allocated to begin the process of moving to operations shift Battalion Chiefs. A third Battalion Chief was hired in February 2019 (external candidate) and a fourth Battalion Chief was added in August 2019 (internal promotion). Additionally, the fire prevention function was reorganized with the hiring of a civilian Fire Marshal. Around this same time, the Lieutenants were reclassified to Captains, so each Company Officer was a Captain. With the fourth Battalion Chief addition, each shift had a Battalion Chief as a shift commander, and a minimum staffing of 10 personnel, not including the Chief Officer. There was one administrative Battalion Chief and one Administrative Training Captain. This was the organization of the Porterville Fire Department at the time of the Library Incident.



## Acknowledgement of Fire Chief

In the aftermath of the Library Incident, the Fire Chief had the fortitude to request a Serious Accident Review Team (SART) to ensure a complete, impartial investigation of this tragic incident. It was the Chief's interest that the loss of these two firefighters not be in vain, and that any lessons that could be learned from their deaths might prevent future loss of life during fire ground operations. He acknowledged that a SART investigation could be painful in that it continues to discuss and relive the event continuously through the process. However, he recognized that the SART would help in the healing process, not only for the Porterville Fire Department, but for the families of Captain Figueroa and Firefighter Jones, and for the Fire Service as a whole.

## Acknowledgement of crews for efforts during the incident

During the February 18th incident, nearly all members of the Porterville Fire Department responded to the second alarm callback request during the incident. This call back assisted by mutual aid from neighboring agencies, allowed for multiple Rapid Intervention Crews to be lined up to attempt extrication of the downed firefighters. All members present worked to the best of their ability until rescue efforts were suspended due to unsafe fire and building conditions. Due to the condition of the building, Urban Search and Rescue Task Force Team 5 (RTF-5) and Kern County Urban Search and Rescue were requested to assist in locating Firefighter 71.

## Acknowledgement of assisting agencies

For nearly two weeks following the incident, agencies from around the valley graciously offered to cover shifts for the Fire Department to allow members time to grieve, and to spend time with their families. This generosity exceeds anything that could have been anticipated in an incident of this type, and made all the difference in assisting the Department during that most difficult time. The Departments that sent crews to cover, and who provided dedicated service to the community for those weeks include:

- Calfire Tulare Unit
- Calfire Madera – Merced – Mariposa Unit
- Tulare County Fire
- Fresno City Fire
- Fresno County Fire -Calfire Fresno-Kings Unit
- Kern County Fire
- Clovis Fire
- Kings County Fire
- Merced City Fire
- Bakersfield Fire
- Kingsburg Fire
- Selma Fire
- Sanger Fire
- Hanford Fire
- Tulare City Fire



## **Acknowledgement of Chiefs sponsoring Multi-Agency SART Members**

John Binaski, Clovis Fire Chief  
Charlie Norman, Tulare County Fire Chief  
Kerri Donis, Fresno City Fire Chief  
Luis Nevarez, Tulare City Fire Chief

## **Acknowledgement of Supporting Chiefs**

Chief LaPere would like to extend his heartfelt gratitude and thanks to the following Chiefs, who provided support and encouragement during the days and weeks following the Library Incident:

Chief Charlie Norman, Tulare County Fire  
Chief John Binaski, Clovis Fire  
Chief Kerri Donis, Fresno City Fire

## **Acknowledgement of Porterville City Council**

During the SART investigation, members of the team had the opportunity to meet with the Porterville City Council to explain and update them on the process. We would like to extend our gratitude to the Council for their pledged support and dedication in implementing the recommendations in the long road to recovery.

Martha Flores, Mayor  
Monte Reyes, Vice Mayor  
Daniel Penaloza, Council Member  
Virginia Guerrola, Council Member  
Milt Stowe, Council Member

## **Acknowledgment of Porterville City Staff**

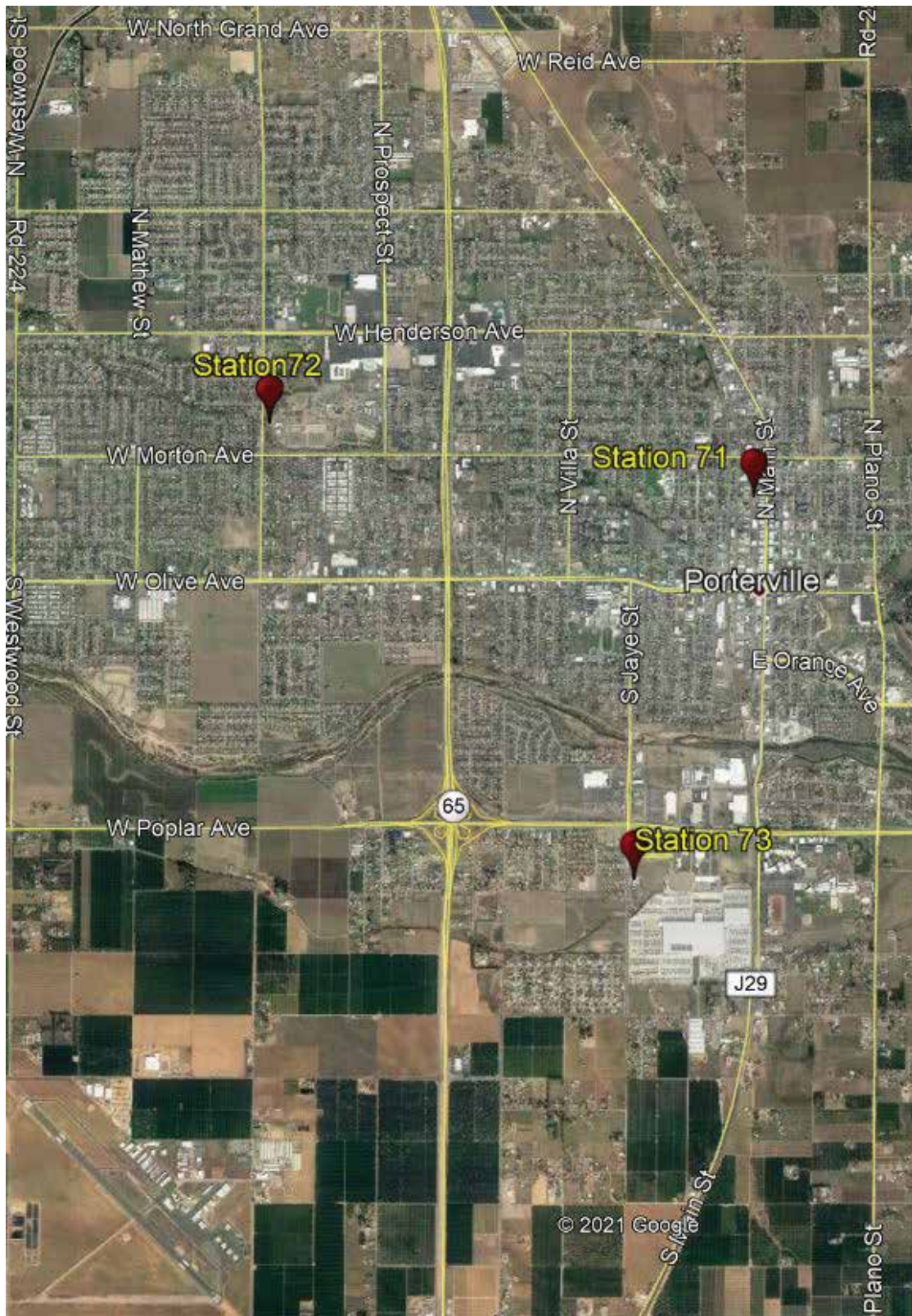
During the incident, in the weeks after, and throughout the SART investigation, several city staff members have been instrumental in assisting the department move forward and assist with the process. We would like to thank them for their hard work and dedication to their fellow coworkers.

John Lollis, City Manager  
Patrice Hildreth, Deputy City Manager  
Erik Kroutil, Police Chief  
Michael Knight, Public Works Director  
Yuliana Andrade, Administrative Services  
Richard Tree, Field Services Manager





### City of Porterville Fire Station Locations











## Summary of recommendations from the National Institute for Occupational Safety and Health Fire Firefighter Fatality Investigation and Prevention Program

During the late 1970s and 1980s, the average number of firefighter fatalities in the United States was 125 deaths per year. The average number of deaths in the 1990s and 2000s saw an average of 100 deaths annually. Due to these high numbers, Congress has provided funding to the National Institute for Occupational Safety and Health (NIOSH) to implement a firefighter safety initiative. The sole purpose of the initiative is to address the problem of firefighter fatalities. With the congressional funding, NIOSH created the Firefighter Fatality Investigation and Prevention Program (FFFIPP). The FFFIPP conducts independent investigations of firefighter line-of-duty deaths (LODD) and offers recommendations to prevent similar deaths in the future.

A recent study by the FFFIPP looked at the LODD's from 2006 to 2014. During the years identified in the study, there were 1,067 recommendations made by the FFFIPP in their investigation reports. Of these, 784 (73%) could be placed in one of 12 categories. The top 10 recommendation categories overall were:

1. **Medical screening** – annual medical screenings for every firefighter to assess fitness for duty.
2. **Fitness and wellness program** – fitness and wellness programs that enable members to develop and maintain a level of health and fitness to safely perform their assigned functions.
3. **Training** – an effectively trained workforce.
4. **Medical clearance** – involves whether the firefighter can perform the essential job tasks without risking their lives, their co-workers' lives, or those of the civilians they are sworn to protect.
5. **Standard Operating Procedures/Standard Operating Guidelines (SOPs/SOGs)** – which are specific directions for common situations fire personnel will face. They provide all members of a fire department with a common set of enforceable rules to be followed by everyone. SOPs/SOGs should be reviewed, evaluated, and updated periodically and all personnel must be aware of, trained in, and observe the fire department's SOPs/SOGs that should guide actions of firefighters in all types of incidents
6. **Incident command** – incident command which has the overall responsibility of managing the response to an incident. The proper utilization and operation of incident command is paramount in keeping personnel safe and resources effectively engaged in the task at hand and includes life safety, incident stabilization, and property conservation.
7. **Strategy and tactics** – includes strategies such as switching from offensive to defensive tactics, continually evaluating risk versus gain during the incident, and using firefighting tactics such as ventilation, water supply, exit routes, safety line use, and searches.
8. **Communications** – encompasses the exchange of information that allows the department to respond appropriately to calls and keep personnel safe on the fireground or incident scene.



9. **Personal protective equipment (PPE)** – is vital to protect firefighters when operating on the job and includes the proper use of self-contained breathing apparatus (SCBA) devices (self-contained underwater breathing apparatus [SCUBA] for those departments with dive teams), personal alert safety system (PASS) devices, proper retirement of firefighter turnout gear and wearing and use of proper PPE at MV incidents (retroreflective vests, red wands, flares, cones, etc.).

10. **Staffing** – staffing which addresses issues of having an adequate number of firefighters, adequate deployment procedures and team continuity.

The intent of the FFFIPP is to influence fire departments and firefighters to critically assess and evaluate situations/circumstances similar to those identified by NIOSH investigations and implement the recommendations offered to prevent additional firefighter fatalities. The high number of medical events with the subsequent recommendations underscore the continued need for better medical screening, implementation of fitness and wellness programs, and medical clearance for duty for personnel of fire departments. Identifying the major traumatic recommendations most frequently made highlights the continued need for fire departments to implement training programs and standard operating procedures, addressing incident command, fire suppression strategy and tactics, communication, motor-vehicle operation, use of PPE, staffing, and rapid intervention teams. These recommendations are present in each one of the findings found within the Findings and Recommendations section of this report. Only through continued vigilance and addressing hazards facing firefighters will we be able to see decreased fatalities to this workforce.









## Executive Summary

On February 18th, 2020, a fire occurred in the City of Porterville Public Library. During the initial minutes of fire department operations, while searching for a reported victim, two members of the first arriving engine company became disoriented and tragically lost their lives in the line of duty.

On April 29th, the Fire Chief issued a Delegation of Authority to a Serious Accident Review Team (SART), authorizing an investigation into the incident. The Chief stated, "It is my hope that the lessons to be learned from this incident might benefit the entire fire service and result in a safer standard of operations for the entire industry."

The SART timeline spanned a nine-month period, utilizing over 1,000 personnel hours. The process included the conducting of interviews, analysis of dispatch audios, CAD information, helmet camera footage, body camera footage, review of policies and procedures, research of laws, mandates, industry standards, and best practices, as well as regular meetings to comprehend, analyze, organize, and assemble the data into report form.

Early in the SART process, the team became aware that a significant number of potential factors were, once again, related to the National Institute of Occupational Safety and Health (NIOSH) Fire Fighter Investigation and Prevention Program (FFFIPP) contributing factors of Firefighter line-of-duty deaths. Consistently the top ten contributing factors, as outlined in their most recent report, are:

1. *Medical screening*
2. *Fitness and wellness program*
3. *Training*
4. *Medical clearance*
5. *Standard Operating Procedures/Standard Operating Guidelines (SOPs/SOGs)*
6. *Incident command*
7. *Strategy and tactics*
8. *Communications*
9. *Personal protective equipment (PPE)*
10. *Staffing*

While each of the previously listed contributing factors are significant, and continue to remain a problem in the fire service, the following were the most prevalent during the Library Incident: *Training, Standard Operating Procedures/Standard Operating Guidelines (SOPs/SOGs), Incident Command, Strategy and Tactics, Communications, and Staffing.*



As the SART began to de-construct this tragedy, it became evident that other indirect factors were at play that all Fire Chiefs and Department Administrators should be perceptive to, so as to avoid long term systemic cultural and operational pitfalls. Vigilance in continual review and comparison to industry standards, policy updates, establishing relevant and realistic training programs, adjusting emergency deployment models, and strategically planning for organizational improvement, are some examples of preventive measures to avoid cultural complacency and creating an operational road map for the future.

This report is not intended to be unduly critical of the Porterville Fire Department or to place blame on any specific person(s). Unfortunately, these issues continue to be far too common across the country to simply focus on one organization. Until all Fire Service leaders begin to resist complacency and implement positive change, we will continue to lose our valiant Firefighters. Additionally, Fire Chiefs must continually educate appointed and elected officials on the importance of sufficient apparatus staffing. To their credit, the Porterville City Council is presently taking action to increase fire department staffing, even prior to the completion of this document.







## Building Construction

### Overview

The structure involved in this incident is an approximately 19,000 square foot, two story, non-residential structure. The occupancy classification of the structure was a mixed use with the majority of the building designated as an A-3 Assembly and also including Educational, Storage, and Business occupancy classifications. Since its original construction date the structure was always utilized as a public library. The original structure was constructed in 1953, with significant additions in 1957 and 1974.

### 1953

Original construction, two story, approximately 4,500 square feet.



- Concrete slab
- CMU block exterior walls
- Light steel trusses
- Composition roof





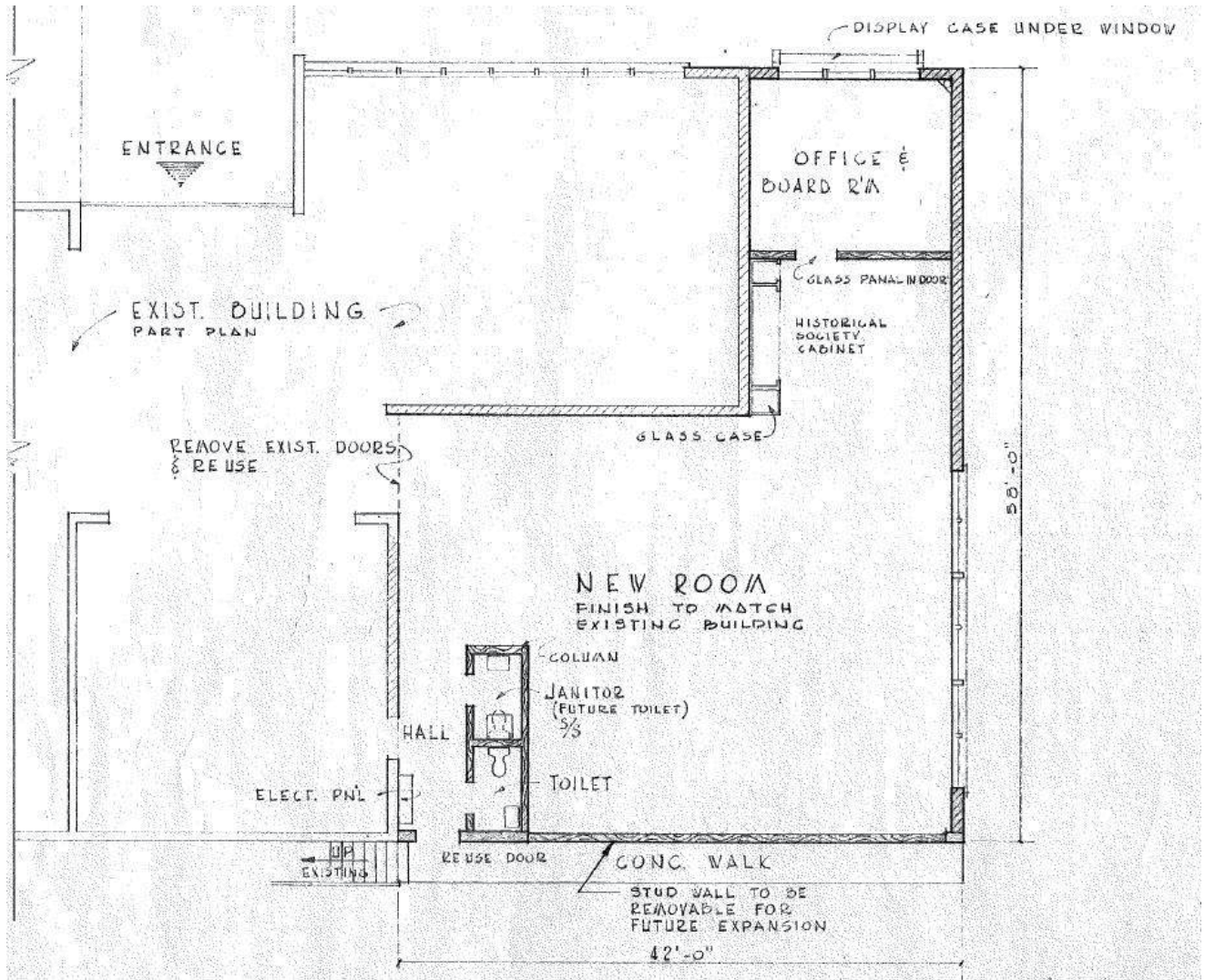
### 1957

First major addition, single story, approximately 1,600 square feet.

- Concrete slab
- CMU block exterior walls (2x4 stud wall, cement plaster exterior, south facing, later opened to the 1974 two-story addition)
- Wood truss framing with plywood sheathing
- Composition roof







### 1974

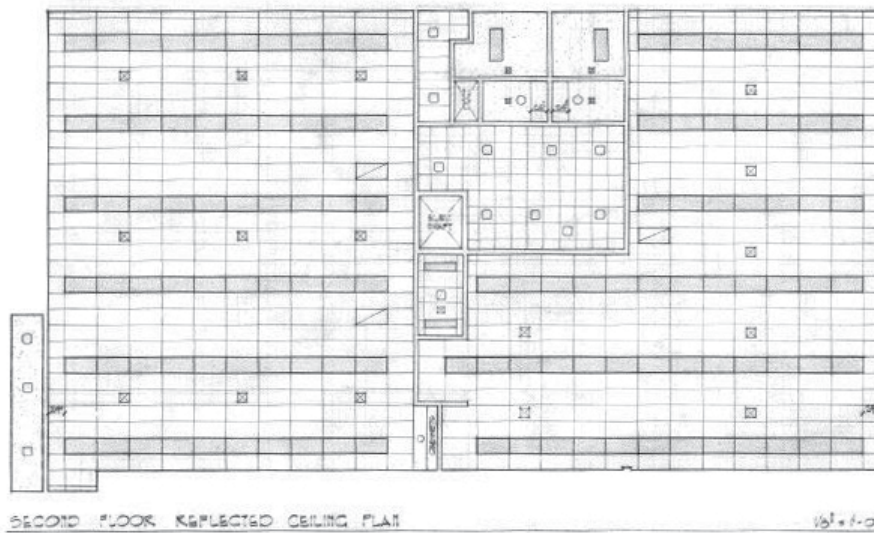
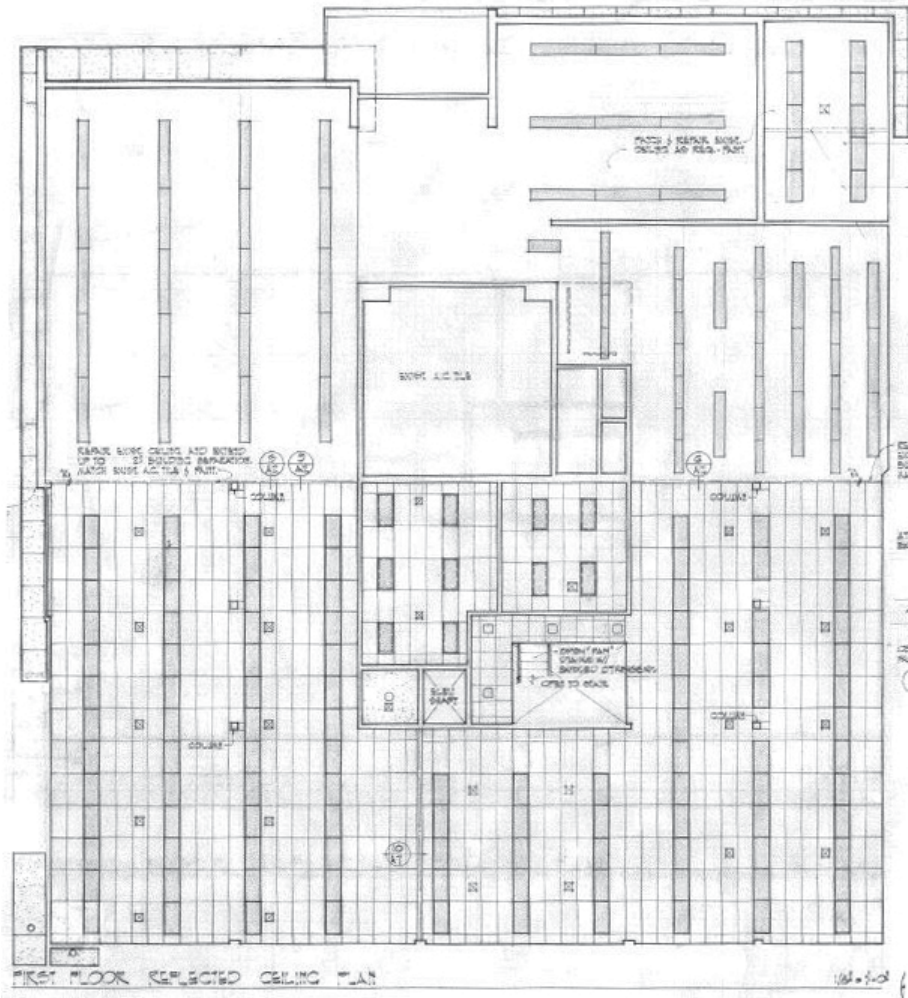
Second major addition, two story, approximately 12,200 Square feet (6,100 sq. ft. per floor).

- Concrete slab
- Concrete block exterior walls
- Steel Beams
- Light steel trusses
- Composition roof









This colored diagram represents the Porterville Library's three phases of major construction.





## Site Information

The Porterville Public Library was directly north of Porterville Fire Station 71, the two structures were on the same parcel. To the east of the Library was the Porterville City Hall. This building is directly across N. Division St. which functions as more of an alley between the two buildings. The Porterville Police Department is northwest of the library. Directly to the north of the library, across W. Thurman Ave. is a large parking lot serving Bank of America to the east. To the west, there is a building containing several small businesses and a two-story residential structure that is no longer used for residential purposes.



**Fire Department Pre-Plan**

Below you will find the Porterville Public Library Pre-fire Plan which is kept in a binder on each fire engine to be used in emergency situations. This plan is periodically updated to ensure that all information is correct.

The first page lists the business name and address along with emergency contact information. It has a small overview map showing the location and how it relates to the surrounding area. The map provides the street names and the location of the closest hydrants along with their water capabilities in gallons per minute(GPM). It has a small amount of construction information with the estimated square footage of the building and the type of construction and materials used for the roof, walls, and floor. It also lists the initial fire attack water flow and total flow needed for a fire in gallons per minute. The pre plan lists any known special conditions or hazards.

<b>Name</b> PORTERVILLE PUBLIC LIBRARY		<b>FMZ</b> F-9	PORTERVILLE FIRE DEPARTMENT 
<b>Address</b> 41 WEST THURMAN		<b>Ph.#</b> 784-0177	
		<b>Knox Box</b> - NO	<b>Date</b> 02/14 <b>By</b> [REDACTED]

<b>Type of Business</b> LIBRARY				<b>Area And Water Supply</b> 1607 GPM	
<b>Fire Control System</b> NONE				2104 GPM      1663 GPM THURMAN	
1.	THURMAN AND HOCKETT	1663	GPM #	338	
2.	THURMAN AND MAIN	1607	GPM #	123	
3.	THURMAN AND "D" STREET	1960	GPM #	339	
4.	HOCKETT AND CLEVELAND	2104	GPM #	862	
<b>Initial Attack F.F.</b> 460 GPM		<b>Business Owner</b>			
<b>Total F.F.</b> 3,000 GPM		CITY OF PORTERVILLE 782-7426			
<b>CONSTRUCTION INFORMATION</b>					
<b>Ht.</b>	<b>Lth.</b>	<b>Wth.</b>	<b>Sq. Ft.</b>	<b>Emergency Contacts</b>	
20'	123'	110'	27,601	#1 [REDACTED]	
<b>Const. Type II</b>				#2 [REDACTED]	
<b>Roof</b> BUILT UP TAR					
<b>Exterior Wall</b> BLOCK					
<b>Floor</b> CONCRETE					
<b>Special Conditions and Hazards</b>					
MAIN ELECTRICAL AND ROOF ACCESS IS IN THE ROOM WEST OF THE MENS RESTROOM UPSTAIRS MARKED "EMPLOYEES ONLY"					
FILE NAME: PORTERVILLE PUBLIC LIBRARY # 1					

(Personal information redacted from image. Drawing not to scale)




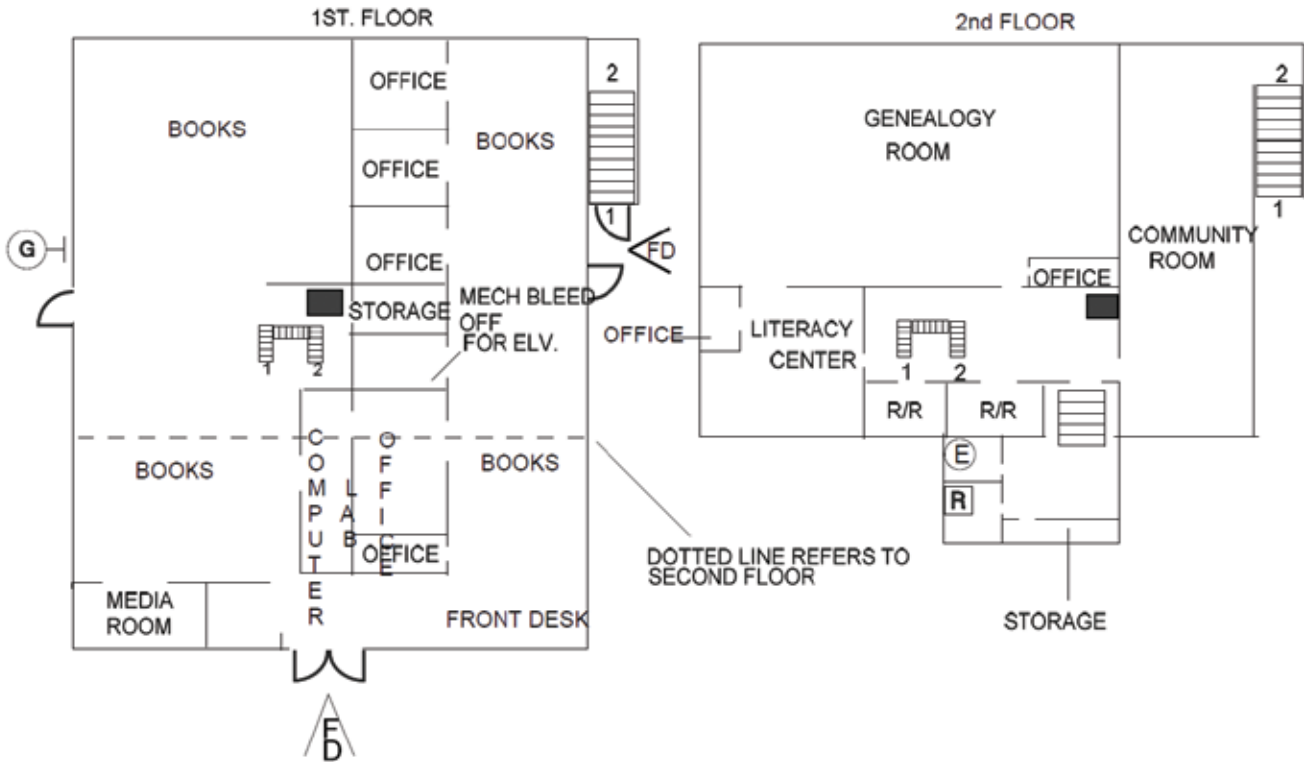


# BUILDING CONSTRUCTION

The second page is a detailed map of the interior. This map shows the room layout, doorways, hallways, stairwells, and elevators. It also shows the location of utilities such as gas and electric and fire department access.

Name	PORTERVILLE PUBLIC LIBRARY	FMZ	F-9
Address	41 W. Thurman	Knox Box	NO

PORTERVILLE  
 FIRE DEPARTMENT  
 Date: 04/19 Name: [REDACTED]

FILE NAME: PORTERVILLE PUBLIC LIBRARY 2

(Personal information redacted from image. Drawing not to scale.)







## Incident Overview

The information used in the Incident Overview and timeline was gathered through analysis of the dispatch audio (Police and Fire), CAD information, helmet camera footage, body-camera footage and interviews. Due to the multiple sources utilized all times are approximate.

At **1616** hours on February 18th, 2020, Porterville Police/Fire Dispatchers received calls about a commercial structure fire at 41 W. Thurman Ave., Porterville, CA (Porterville Public Library).

At **1616** the dispatch center dispatched Engines 71 and 72, Truck 73, and Battalion Chief 77 to 41 W. Thurman Ave. (Screenshot Photo 1)

**1617** – 1st Porterville Police Department (PPD) Officer arrived on scene. He went inside the library and confirmed that the 1st floor was clear and that no occupants were inside the first floor. (Screenshot Photo 2)

**1618** – Engine 71 with a crew of three (Captain, Engineer and Firefighter) was first on scene. Captain 71 advised incoming units that they had heavy smoke coming from the alpha side of the building (Thurman Ave). Dispatch advised Captain 71 that they received reports that the fire was located in the back of the building. The crew of Engine 71 deployed a 150ft preconnected 1 ¾" hoseline to the front door (alpha side).

**1618** – Battalion Chief 70 (Administrative Battalion Chief, B-70) responded to the incident from his office (next door to the library), reported heavy smoke coming from the library and requested a working fire assignment (a pre-set checklist for dispatch to have PPD set up traffic control, notify SoCal Gas Utility, Southern California Edison Electrical Utility and a priority 2 ambulance to stage at the fire). (Screenshot Photo 3)

**1618** – 1st PPD Officer advises B-70 that "there's nobody else in there".

**1618** – B-70 directs Captain 71 to initiate fire attack.(Screenshot Photo 4)

**1618** – A bystander contacts a 2nd PPD Officer at the incident and states that there is a woman upstairs with a walker on the second floor.

**1619** – While preparing to initiate fire attack, Captain 71 and Firefighter 71 received a report from the 2nd PPD Officer that a woman with a walker was still inside on the second floor. They make entry into the library, through the alpha-side (Thurman Ave.) without a hoseline or tagline to search for the victim. Their decision to search for victims was not communicated to B-70 or any of the responding resources. (Screenshot Photo 5)

**1619** – B-70 directed Truck 73 to come in from Hockett St. (delta side) and establish a water supply; B-70 then established Library Command.

**1620** – 3rd PPD Officer confirmed that she searched the 2nd floor and the woman with the walker is out of the building; PPD Officer immediately advised Engineer 71.



## INCIDENT OVERVIEW

**1621** – Battalion Chief 77 (Shift Battalion Chief, B-77) arrived on scene and confirmed heavy smoke and fire inside the library, requested that all radio traffic be on Channel 2 (per department policy all units working on an incident with more than two units will operate on Channel 2). (Screenshot Photo 6)

**1621** – B-77 directed Truck 73 to initiate fire attack through the window on the delta side while he went to confirm a plan with Engine 71. Truck 73 established a 4" supply from the hydrant located on the corner of Cleveland Ave and Hockett Ave., and applied water from the exterior to the delta side with two 1 ¾" hoselines.

**1621** – Engine 72 arrived on scene, no assignment given over the radio.

**1621** – B-77 assumed command from B-70 and initiated a "Second Alarm". A second alarm consists of calling back off-duty personnel to respond to the incident, as well as an additional mutual aid engine and Battalion Chief from Tulare County Fire Department. (Screenshot Photo 7)

**1621** – B-77 meets face-to-face with Engineer 71, unknown what was discussed (no audio).

**1623** – B-77 attempted radio contact with Captain 71 on Channel 2 to confirm that he was inside the structure; Captain 71 did not answer. Engineer 71 confirmed that Captain 71 and Firefighter 71 were inside the structure. B-77 then asked Captain 71 for a CAN (Conditions, Actions, Needs) report. (Screenshot Photo 8,9)

**1624** – Captain 71 made radio contact with B-77 on Channel 1. B-77 asked for a CAN report as soon as possible. Captain 71 told B-77 that they cleared division 2, the banquet area (community room), and were moving back to division 1 to continue their search. Captain 71 stated that they received a report of a lady in a wheelchair inside. Captain 71 asked B-77 if he could determine if she got out and to let them know. B-77 stated that he believed she was out but would confirm. B-77 asked Captain 71 to take radio traffic to Channel 2 if possible. Per policy, all units should have been on Channel 2 upon their arrival. (Screenshot Photo 10, 11)

**1626** – B-77 attempted to contact Captain 71 on Channel 2, Captain 71 responded but B-77 did not acknowledge him.

**1626** – Captain 73 would like to ladder the roof and B-77 advised him he was planning on switching to a defensive strategy. B-77 then declared a defensive strategy to all units on scene until they could get control of the fire. (Screenshot Photo 12, 13)

**1627** – B-77 attempted to contact Captain 71 on Channel 1, Captain 71 did not respond.

**1627** – B-77 attempted to contact Captain 71 on Channel 2, Captain 71 responded but B-77 did not acknowledge him.

**1627** – B-77 again attempted to contact Captain 71 on Channel 2, Captain 71 responded but B-77 did not acknowledge him.

**1628** – Captain 73 contacted B-77 and asked what B-77 thought about vertically ventilating the structure. B-77 advised Captain 73 that he could get an assessment of the roof once they had good knockdown of the fire. (Screenshot Photo 14)



**1628** – B-77 attempted to contact Captain 71 on Channel 2, Captain 71 did not respond.

**1628** – Captain 73 advised B-77 that they had good knockdown on the Delta side and would be attempting to gain access to the roof.

**1631** – B-77 directed Training 70 (Training Captain) to form a Rapid Intervention Crew (RIC) to locate Captain 71. (Screenshot Photo 15)

**1632** – Chief 70 (Fire Chief, C-70) arrived at the incident. Goes to the front of the library to meet with B-77.

**1632** Captain 71 declared “Mayday, mayday, mayday Channel 1.” B-77 asked for the location of the mayday. Captain 71 said, “we came up the stairwell. We thought we were in the banquet room, trying to locate the stairwell. We’re running low on air.” B-77 advised Captain 71 that he is going to send in two to locate them. Captain 71 repeated that they were low on air (low air alarm sounding in background) and were activating their PASS (Personal Alert Safety System) device.

**1634** – B-77 requested all units to hold traffic on Channel 1. C-70 states, “Halt all traffic on Channel 1. We have a mayday. We’re going to be running that mayday on Channel 1. Switch everything to Channel 2”.

**1635** – C-70 assumed command and B-77 runs the mayday. C-70 assigned Tactical Channel 3 as the incident tactical radio channel. (Screenshot Photo 16)

**1636** – B-70 assigned himself as Division Delta and had a crew of three (led by Captain 73) heading up the delta stairwell to check for Captain 71 and Firefighter 71.

**1637** – B-70 checked with Captain 73 on their status. Captain 73 advised him that they were on the 2nd floor in the banquet room still searching. B-70 advised Captain 73 to not go past the landing and to go back to the landing at the top of the stairs on the delta side.

**1637** – C-70 established a staging area next to Engine 71.

**1638** – TRN-70 (RIC) updated that he made it the second floor stairwell. He could hear the PASS alarms and attempts to locate them. Advised that there was no fire, but no visibility. (Screenshot Photo 17)

**1640** – RIC located Captain 71 in the bathroom and requested additional manpower. They were able to partially extract Captain 71 before running low on air. They pass the extrication off to a second RIC team. (Screenshot Photo 18)

**1650** – Captain 71 was extricated from the building and transported by ambulance to Sierra View District Hospital, where he is pronounced deceased.

Several more RIC teams entered the library in an effort to locate Firefighter 71 but were unable to due to low visibility and building collapse. All rescue efforts were suspended and a defensive fire attack resumed. All Porterville Fire Department personnel were relieved of their assignments by neighboring agencies through mutual aid and command was transferred to Tulare County Fire Department. Urban Search and Rescue Task Force 5 (USAR RTF-5) and the Kern County Urban Search and Rescue team were requested to assist in searching for missing Firefighter 71.



## INCIDENT OVERVIEW

USAR teams formed-up in the early morning hours of Feb 19th and searched for Firefighter 71 in a coordinated effort with the Tulare/Kings County Fire Investigation Strike Team. Just before midnight, USAR members located Firefighter 71, deceased inside of the Library. In the early morning hours of February 20th, Firefighter 71 was removed from the Library by the USAR team along with members of the Porterville Fire Department. As he was removed from the building, firefighters lined the street and saluted him as his body was transported to the Coroners Office. The Coroner's Report later listed the cause of death as asphyxiation and smoke inhalation, for both Captain Figueroa and Firefighter Jones.

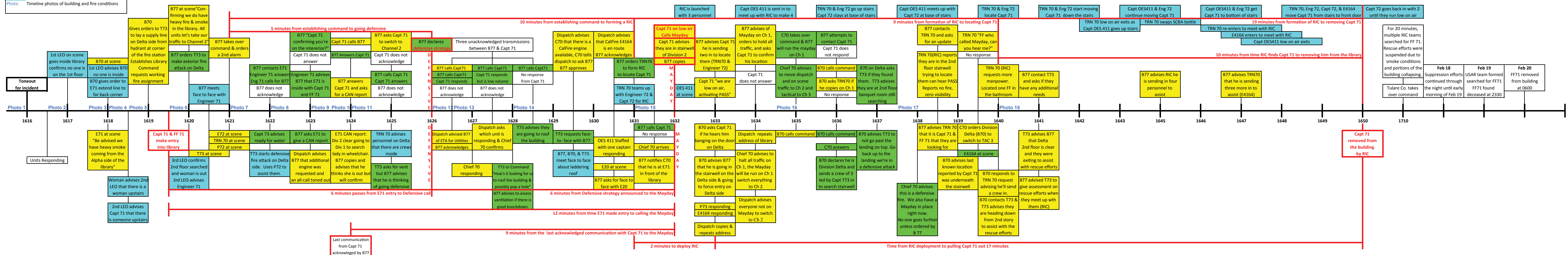
Fire Agencies from the surrounding counties covered Porterville Fire Stations for the next two weeks to allow PFD members time to mourn the loss of their brothers.

The cause of the fire was determined to be an intentionally set fire and two juvenile males have been charged with the crime. At the time of this report, the outcome is still currently being determined by the judicial system.





**LEGEND**  
 Channel 1 radio traffic (Dispatch & Mayday)  
 Channel 2 radio traffic (Tactical/Operations)  
 Video footage or interview findings  
 Photo Timeline photos of building and fire conditions



Timeline Photo 2 – Inside First Floor – Fire Located in Charlie/Delta Corner



Timeline Photo 4 – Alpha Side



Timeline Photo 8 – Delta Side



Timeline Photo 11 – Delta Side



Timeline Photo 15 – Alpha Side







**INCIDENT OVERVIEW**



*Timeline Photo 1 – Alpha/Delta Corner*



*Timeline Photo 2 – Inside First Floor – Fire Located in Charlie/Delta Corner*



**INCIDENT OVERVIEW**



*Timeline Photo 3 – Alpha Side*



*Timeline Photo 4 – Alpha Side*





**INCIDENT OVERVIEW**



*Timeline Photo 5 – Delta Side*



*Timeline Photo 6 – Alpha Side*



**INCIDENT OVERVIEW**



*Timeline Photo 7 – Delta Side*



*Timeline Photo 8 – Delta Side*





**INCIDENT OVERVIEW**



*Timeline Photo 9 – Delta Side*



*Timeline Photo 10 – Alpha/Bravo Corner*



**INCIDENT OVERVIEW**



*Timeline Photo 11 – Delta Side*



*Timeline Photo 12 – Delta Side*







DPTAST

Timeline Photo 13 – Alpha/Bravo Corner



Timeline Photo 14 – Alpha Side



**INCIDENT OVERVIEW**



*Timeline Photo 15 – Alpha Side*



*Timeline Photo 16 – Alpha Side*







Timeline Photo 17 – Alpha Side



Timeline Photo 18 – Alpha Side











## Findings and Recommendations

The below findings and discussion points were measured against Porterville Fire Department's command, rapid intervention and other applicable policies at the time of the Library Incident. Those policies are attached in the appendix as a reference for the reader. Other events referenced were based on audio and visual recordings of the incident as well as interviews with personnel who were on scene. Recommendations were based on industry standards and best practices in the fire service.

While compiling the findings and discussions below, the SART spent a great deal of time discussing the issues of apparent freelancing that occurred during the Library Fire. As the reader reviews this document, it is necessary to understand that during this incident, on-scene command overhead was a new concept for Porterville Fire Department (PFD). Approximately six months prior to the incident, Porterville Fire Department added shift battalion chiefs to their daily staffing. The culture of the organization was rooted in "independent action" utilizing captains and engine company crews to provide task and tactical-based decisions and actions on the fire ground. While reading this report you may interpret some actions to be freelancing on the fire ground but, it is important to understand this culture before indicting individuals.

### FINDINGS

#### 1: Establishing Command and Arrival Report

**Finding:** The arrival report, command declaration and transfer of command was inadequate based on what Engine 71 (E-71) saw upon arrival.

**Discussion:** E-71 was the first unit to arrive on scene and gave a brief report on conditions which included the following, "be advised we do have heavy smoke coming from the alpha side of the library." Subsequently, Battalion Chief 70 (B-70) arrived on scene and reported, "heavy smoke coming out of the front of the library," B-70 then requested a working fire assignment and established command of the incident as Library Command. Battalion Chief 77 (B-77) arrived at the scene after B-70 and reported "confirming we do have heavy fire and smoke in the library. All units, let's go ahead and take our traffic to Channel 2." B-77 then took over command of the incident and requested a second alarm.

Porterville's Command Procedures indicate that the first arriving company or chief officer will be assumed as command, shall perform an arrival report, and choose the appropriate command option (Investigation Mode, Fast Attack Mode, or Command Mode). Porterville Fire Department's Arrival Report guidelines consist of requesting additional resources, announcing their command mode, and providing a brief description of actions taken (e.g., pulling hoselines for an offensive attack, exposure protection, establishing an Incident Command Post (ICP).

- When E-71 arrived at scene, the company officer did not request additional resources, announce which mode he was operating in, nor did he give a description of actions being taken.



## FINDINGS AND RECOMMENDATIONS

- When B-70 arrived after E-71 he assumed command, but he did not request additional resources or provide a brief description of actions taken or strategy (offensive or defensive). Although B-70 requested a working fire assignment, that did not provide additional firefighting resources.
- When B-77 arrived after B-70, he took over command of the incident but did not give a brief description of any of the actions taken or strategy. Although B-77 requested a second alarm, this only provided one additional engine and the calling back of all off-duty personnel.

Neither a command mode nor a brief description of actions or overall strategy was declared on the fire ground by the first officers on scene, which is outlined in Porterville Fire Department's policy. In video evidence, Captain 71 attempted to transmit a message after a police officer advised him of a woman on the second floor. The message was not transmitted over the radio and it was not audible on the video. Additionally, although a working fire assignment and a second alarm were requested, the only firefighting resources that this resulted in was a duty chief being paged out, an all-call to call back off-duty personnel, and one additional engine. For an incident of this magnitude, a third alarm as defined in Porterville Fire Department's guidelines, should have been requested. A third alarm would have dispatched a second additional engine (in addition to the additional engine in the second alarm), an additional battalion chief, and one additional ladder truck.

### Recommendations:

- Adopt Command Guidelines as defined in FIRESCOPE ICS-500 Structure Fire Operations
- Provide command training to all company and chief officers regarding initial actions, establishing command, and arrival reports.
- Explore automatic and mutual aid agreements with surrounding departments to redefine second and third alarm requests to provide adequate resources.

**References:** FIRESCOPE ICS-500, NFPA 1561, NFPA 1500

### NIOSH 10: #3-Training, #6-Incident Command, #8-Communications

## 2: Initial Command Options, Continuing Command Actions and Incident Command Options

**Finding:** At no time was continual size up completed based on incident priorities: (Life Safety, Incident Stabilization, Property Conservation) by Command. Arrival reports from E-71, B-70, and B-77 did not provide information defined in PFD policy.

**Discussion:** Porterville's Command Procedure states the Incident Commander (IC) is responsible, based on judgement, for the following actions:

- Transmit an Arrival Report
- Evaluate the situation by performing a (continual) size up
- Perform a proper risk assessment based on the incident priorities



- Develop and communicate a plan
- Assign resources as required

No initial incident action plan was discussed between any units on scene or via the radio. Further, no plan was written by the IC on a mobile command board as IC was mobile with a portable radio directly in front of the structure (alpha side). A continuous risk assessment was not done by the incident commander as a search team was inside (Engine 71) and other resources were unaware of the search team inside and were applying master streams and hose streams from the exterior.

- No mode was announced over the radio
- Offensive or defensive strategy was not announced over the radio
- Multiple resources thought they were in a defensive mode

### **Recommendations:**

- Incident Commanders should utilize the following incident priorities which will dictate strategic and operational objectives:
  - Life Safety
  - Incident stabilization
  - Property conservation
  - Environment protection
- An Incident Action Plan (IAP) should be developed and implemented by the first arriving company officer.
- Utilize CAN (Conditions, Actions, Needs) reports from tactical group supervisors to assist the Incident Commander with resource allocation based on priority as well as continual evaluation of strategic and tactical objectives.
- Company and Chief Officers should continuously train on high-risk/time-compressed events where management and assessment of risk is critical to personnel safety and incident stabilization.
- An Incident Safety Officer is recommended for emergency incidents to assist the Incident Commander when significant risk is present due to the nature of the incident. The Safety Officer shall have the expertise to evaluate hazards and provide direction with respect to the overall safety of personnel.
- Adopt command guidelines as defined in FIRESCOPE ICS-500 Structure Fire Operations
- Train Company and Chief Officers on adopted command guidelines
- Train members on IAFC Rules of Engagement for Structural Firefighting
- Provide training to personnel on rules of engagement



## FINDINGS AND RECOMMENDATIONS

- Utilize as well as provide training on tactical priorities and strategic objectives. Specifically SLICERS and RECEO-VS.
- Identify and train personnel to NFPA Safety Officer standards to assume the role as Safety Officer on incidents.
- Create policies and procedures for Incident Safety Officers.

**References:** FIRESCOPE ICS-500, NFPA 1561, NFPA 1710, NFPA 1500

**NIOSH 10:#3-Training, #5-Standard Operating Guide/Procedure, #6- Incident Command, #7-Strategies and Tactics**

### 3: Follow Up Radio Report:

**Finding:** Initial incident information was not transmitted in a timely manner to all personnel at the incident and incident personnel were not aware of the situation and tactics of E-71 personnel.

**Discussion:** There were a few instances where credible information regarding a potential rescue (lady in a wheelchair/walker) was given to Captain 71 as well as the Incident Commander from bystanders and law enforcement officer's (LEO) at different times. However, there was no initial radio traffic from Captain 71 to the IC (B-70), nor was there any radio traffic indicating that Captain 71 and Firefighter 71 were deploying for a focused search on the second floor. Additionally, there was no radio traffic from the Incident Commander (B-77) to the other resources at the scene or the dispatch channel that there was a potential victim inside. Confusion on scene with what tactical channel fire ground units were on (many units on channel-2 which is a repeated tactical channel, and other units, including E-71 remained on channel-1).

Porterville's command policy states that "Credible information given by the occupants or bystanders" and "Confirm life safety status, and status of primary search" shall be reported in a follow up radio report. As outlined in FIRESCOPE ICS-500, "One of the Incident Commander's primary duties is to determine the life safety profile of the incident and apply the most appropriate level of risk to first responders. The Incident Commander should integrate principles of risk management into the functions of command. Risk management involves the identification and evaluation of risk, and the prioritization of actions followed by coordinated application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities."

### Recommendations:

- Develop a communication policy and address communication plans during high risk/low frequency events (rescue/mayday/etc) where everyone on the fire ground is aware of what each unit is doing. These types of scenarios should be vetted through an aggressive training program to expose and correct critical communication gaps.
- Develop policies and procedures regarding incident communications to identify channels for dispatch and incident operations.



- Provide training to dispatch personnel regarding incident communications policies and procedures.
- Collaborate with dispatch to determine their roles and responsibilities regarding incident communications.
- Create common incident communications policies and procedures with dispatch regarding dispatches roles and responsibilities.

**References:** FIRESCOPE ICS-500, NFPA 1500

**NIOSH 10: #3-Training, #8-Communications**

#### 4: Transfer of Command

**Finding:** A formal transfer of command did not occur between B-70 and B-77.

**Discussion:** B-70 assumed command of the Library Incident at 1618. At 1620 B-77 arrived at the scene and gave an additional report of conditions on channel 1. He then orders all units on the Library Fire to switch to channel 2 (Tactical). Immediately following these orders, B-70 advised Porterville dispatch to start utilities (gas, water, electric companies) to the fire. At 1621 B-77 ordered Truck 73 (T-73) to catch a hydrant and attack the fire through the window. B-77 advised that he was going to confirm E-71 was at scene, then subsequently assumed command. No formal transfer of command took place according to B-77 in a later interview. No information was passed between E-71 and B-70, nor between B-70 and B-77.

Fire Departments should follow accepted industry standards for transferring command. One example of an accepted industry standard is the FIRESCOPE ICS-500 document. Pre-established checklists or command boards can assist Incident Commanders with meeting this need. The following information from FIRESCOPE ICS-500 should be covered during a transfer of command:

- *The person being relieved will brief the officer assuming command, indicating at least the following:*
  - *Situation status*
  - *Incident objectives and priorities (Incident Action Plan)*
  - *Current organization*
  - *Resource assignments*
  - *Resources enroute and/or ordered*
  - *Communications plan*
  - *Prognosis, concerns and related issues*

Each of these items can also be tracked using the ICS-201 Incident Command Briefing Form.

#### **Recommendations:**

- Adopt Command Guidelines in FIRESCOPE ICS-500.



## FINDINGS AND RECOMMENDATIONS

- Provide training to Company and Chief Officers regarding transfer of command.
- Adopt command board/checklists to assist incident commanders.

**References:** FIRESCOPE ICS-500, NFPA 1561

**NIOSH 10:#3-Training, #5-Standard Operating Guide/Procedure, #6-Incident Command, #8-Communications**

### 5: Incident Communications

**Finding:** There were multiple occasions where units were on scene operating on two different frequencies. At one point, B-77 arrives on scene with E-71 and B-70 already on scene, announced that all “units switch to Porterville Channel 2.”

**Discussion:** Porterville’s command policy states: *“For routine emergencies (medical aids, traffic accidents, public assistance, etc.), those that require two or fewer apparatus (not including the BC vehicle), personnel should continue to utilize Porterville Dispatch for on-scene communications; however, they **may** move communications to Porterville Channel-2 (PVL-2) at any time, if the incident warrants the need.”*

Had B-77 and B-70 completed a proper transfer of command, B-77 would have realized the communication gaps with the crew of E-71. Additionally, Incident Commanders must verify that all resources on scene are aware of the communications plan. This could have been accomplished via a life safety tone through dispatch and check-backs if necessary.

Many of the personnel at the scene who were later interviewed stated that it was “implied” that resources would switch to Porterville Channel 2 on working fire assignments. Departments should also allow for alternate means of communications via a frequency guide policy to allow for a proper communication plan for expanding incidents. This could include: command channels and alternate tactical frequencies. This information should also be shared and utilized with surrounding mutual and automatic aid cooperators.

#### **Recommendations:**

- A formal transfer of command should take place between the Incident Commanders (See Finding #4, Transfer of Command).
- Department policies should reflect a specific communications plan while operating on or in emergency and non-emergency incidents.

**References:** NFPA 1500

**NIOSH 10: #3-Training ,#8-Communications**





## 6: Radio Use and Discipline

**Finding:** Several members reported utilizing the scan feature on their radios in fear of missing radio traffic.

**Discussion:** Operational and tactical radio traffic was broadcasted on both Channel 1 and Channel 2. PFD members stated they were confused on which channel to monitor. Members reported manually changing channels and utilizing the scan feature during tactical operations to communicate information. At the time of the incident not all members had radios issued to them. Several PFD members reported broken and missing radios. Both Captain 71 and Firefighter 71 were found with radios.

### Recommendations:

- Provide portable radio training to all line personnel with emphasis on functions, limitations and importance of its use and hold personnel accountable for proficiency in radio use.
- Review and revise PFD Policy 714 to include the proper use of command and tac channels during emergency incidents

**References:** NFPA 1802, PFD Policy 714

**NIOSH 10: #3-Training , #8-Communications**

## 7: Dispatcher Training

**Finding:** PFD telecommunications dispatchers did not have a sufficient requisite knowledge of fire service terminology, resources and operational procedures.

**Discussion:** Through the interview process it was discovered that telecommunications dispatchers had minimal training in dispatching fire resources. The only formal training described was in their initial dispatching course that entailed only a few hours. PFD did not have any formal training with dispatch.

### Recommendations:

- Train Fire Dispatchers to NFPA 1061 and ICS 910 standards.

**References:** NFPA 1061, ICS 910

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines**

## 8: Dispatch Communications

**Finding:** An individual Dispatcher was not solely dedicated to the Library Incident. The Dispatcher was also answering phone calls and managing Animal Control traffic during the Library incident. A second Dispatcher was also on duty but was committed to Porterville Police radio traffic.



## FINDINGS AND RECOMMENDATIONS

**Discussion:** The issue of communication capabilities and/or failures is cited by the National Institute for Occupational Safety and Health (NIOSH) as one of the top reasons for firefighter fatalities. The importance of an assigned Telecommunicator/Dispatcher for specific incidents is a critical factor in incident scene safety.

During the Library Incident, it was identified through interviews that a Telecommunicator/Dispatcher was not solely dedicated to the incident and was still responsible for answering phones and Animal Control traffic. A dispatcher who is simultaneously processing incoming 911 calls and monitoring multiple fire channels related to one incident is unable to monitor and process all incoming pertinent incident safety radio traffic.

### Recommendations:

- Establish Standard Operating Procedure (SOP) to identify the circumstances under which a Telecommunicator/Dispatcher will be assigned to an incident in accordance with NFPA 1221.
- PFD should have a dedicated Telecommunicator/Dispatcher to manage all PFD related traffic.

**References:** NFPA 1221

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #8-Communications, #10-Staffing**

## 9: Incident Command System (ICS) Assignments

**Finding:** Besides the Incident Commander, the only other formal ICS designated group or division was "Division Delta," however, Division D was self-assigned.

**Discussion:** Throughout the incident, fire suppression resources were communicating to each other by unit identifier only. Additionally, as units arrived on scene, there was no formal check in process. Prior to the mayday, resources were arriving on scene and going right to work, working independently of the Incident Commander's knowledge, or being instructed by resources already at scene to come work for them.

Porterville's incident command procedures discuss tactical priorities and strategic objectives, but does not outline what a command structure layout should consist of. Not using proper ICS/NIMS compliant terminology only enhances poor accountability and resource management for the Incident Commander in rapidly expanding/complex incidents. At a minimum, departments should follow standard Incident Command System terminology regardless of the frequency of occurrence. Departments should also train on complex incidents utilizing proper ICS nomenclature. Additionally, proper accountability and check in procedures should be implemented as outlined in the "Common Responsibilities" section in the FIRESCOPE ICS 420-1 (Field Operations Guide); and "General Considerations" in FIRESCOPE ICS-500.

### Recommendations:

- Follow standard Incident Command System terminology regardless of the frequency of occurrence.



- Train on complex incidents utilizing proper ICS nomenclature.
- Accountability and check in procedures should be implemented as outlined in the “Common Responsibilities” section in the FIREScope ICS 420-1 (Field Operations Guide); and “General Considerations” in FIREScope ICS-500

**References:** FIREScope ICS-500, NFPA 1500, NFPA 1561

## **NIOSH 10: #3-Training, #5-Standard Operating Procedure/Guidelines, #6-Incident Command**

### **10: Establishing a Rapid Intervention Crew (RIC)**

**Finding:** The Incident Commander was aware that personnel were working inside the structure. A RIC crew and/or RIC group was/were not established until after personnel were missing or contact was lost. Personnel assigned to RIC were not aware of the location of personnel working inside the structure.

**Discussion:** When E-71 arrived at the incident, they made entry based on information that they were faced with a rescue situation. Standard practice allows for entry in this situation without an RIC in place. While Captain 71 and Firefighter 71 were inside, information was made available to scene personnel that indicated that the rescue situation was mitigated because the person that was believed to be inside was actually outside and accounted for. At this point, if RIC was not available, interior personnel should have been pulled out of the building. RIC was not established and both 71 personnel were allowed to stay inside. These factors are further addressed in FIREScope ICS 910 page 7 as follows:

Initial attack operations shall be organized to ensure that if, upon arrival at the emergency scene, initial attack personnel find an imminent life-threatening situation where immediate action could prevent the loss of life or serious injury, such action shall be permitted with less than four personnel. No exception shall be permitted when there is no possibility to save lives (NFPA 1500 8.8.2.10 – 8.8.2.10.2, 2013 ed.)

Furthermore, NFPA 1561-2020 – 8.8 states, “The IC shall designate and assign a rapid intervention crew/company (RIC) to initiate the immediate rescue of injured, lost or trapped responders.” Additionally, NFPA 1710-2020 – 5.2.4.1.1 states that the following shall be deployed at a single-family dwelling, considered to be the minimum deployment standard by 1710:

- At a minimum, an initial rapid intervention crew (IRIC) assembled from the initial attack crew and, as the initial alarm response arrives, a full and sustained rapid intervention crew (RIC) established (4 personnel).

FIREScope ICS 910 page 7 contains the following passage regarding RIC members:



## FINDINGS AND RECOMMENDATIONS

- In the initial stages of an incident where only one team is operating in the hazardous area at a working structure fire, a minimum of four individuals is required, consisting of two individuals working as a team in the hazard area and two individuals present outside this hazard area for assistance or rescue at emergency operations where entry into the danger area is required. The standby members shall be responsible for maintaining a constant awareness of the number and identity of members operating in the hazardous area, their location, their function and time of entry. The standby members shall remain in radio, visual, voice or signal line communications with the team (NFPA 1500 8.8.2-8.8.2.3, 2013 ed.).

A review of available industry standards show that iRIC shall be in place before personnel engage in interior firefighting operations. If a rescue situation is encountered, personnel can make entry to mitigate the life safety situation. As soon as the life safety situation is mitigated, a minimum of iRIC must be in place for personnel to continue to work in an IDLH environment. If iRIC is not available, all firefighting operations shall be made from outside the IDLH environment.

### Recommendation:

- Implement a comprehensive RIC policy, meeting industry standards, during firefighting operations within an Immediately Dangerous to Life and Health (IDLH) environment.

**References:** NFPA 1500, NFPA 1561, NFPA 1710, FIRESCOPE ICS 910

**NIOSH 10: #3-Training ,#6-Incident Command, #7-Strategies and Tactics**

## 11: Mayday/Rapid Intervention Procedures

**Finding:** Incident personnel did not follow established PFD policy and recommended industry standards for Rapid Intervention procedures and mayday practices.

**Discussion:** B- 77 realized that Captain 71 and FireFighter 71 were inside the Library, and gave verbal instructions to Porterville's Training Officer (Training 70) to begin to set up a RIC. Training 70 began looking for personnel not assigned to suppression activities to help form up RIC. He found Captain 72 and Engineer 72 and verbally told them both to assist him with forming up RIC. They began collecting their RIC tool cache when at 1631, 8 minutes after B-77 confirmed that Captain 71 and Firefighter 71 were inside, and 5 minutes after B-77 declared a "defensive" fire, Captain 71 issued his mayday on Porterville Channel 1.

Captain 71 then stated, *"We're on Division 2. We came up the stairwell. We thought we were in the banquet room, trying to locate the stairwell. We're running low on air."*



Training 70 mentioned in a later interview that he was very familiar with the layout of the library as he grew up in Porterville and had been there quite a bit. According to all RIC members, visibility on the first and second floor was near zero, but heat conditions were not extreme and all members could stand and walk. The crew tried using their Thermal Imaging Camera (TIC) to orient and travel, but it was ineffective. Training 70 knew how to orient and travel to the stairwell and led the crew in the general direction. A swing of New York Hook clinked the stairwell by Engineer 72, which was how the crew found the stairwell. Training 70 mentioned he could hear the Personal Alert Safety System (PASS) coming from the 2nd floor.

At the top of the stairwell, Training 70 could hear the PASS getting louder, and called for Engineer 72. Engineer 72 was at the middle return of the stairwell, calling for Captain 72. At some point, Engineer 72 made it to the top of the stairwell and Training 70 proceeded directly in front. Training 70 assumed someone was in the men's bathroom, directly in front of the top of the staircase. Eventually, the RIC extricated Captain 71 from the bathroom, down the stairs and through the Alpha side.

Porterville has a Rapid Intervention/2 in 2 out procedure. The policy addresses scenarios where the RIC and IRIC should be mobilized and job functions identified, only if there is no confirmed rescue. The policy also discusses staying on a channel and moving fireground traffic to another tactical channel, while a "Rescue Branch Director" should be activated to coordinate rescue, as well as any fire activities in support of the rescue effort. RIC was established spontaneously without any formal planning process. RIC Group Supervisor was directed to get personnel to form a RIC and find Captain 71 and Firefighter 71. Interviews indicated that not all members were aware who the RIC leader was. The RIC leader was not aware of at least one person that was assigned to them. The initial RIC group consisted of four personnel. During their search efforts, two members progressed to Division 2 (leader plus one) and two members missed the stairs and continued on Division 1. RIC leader thought all RIC members were behind him during his ascent to Division 2.

### Recommendations:

- Train Incident Commanders that a Rapid Intervention Crew/Team should be established as soon as possible in any high hazard operation including rescue mode.
- Coordinate with automatic and mutual aid departments to create common mayday and firefighter emergency policies and guidelines.
- Provide California State Fire Training Firefighter Survival for all personnel.
- Provide Command and Control of RIC for Company and Chief Officers.
- Adopt Emergency Alert procedures in FIRESCOPE ICS 500
- Implement Emergency Alert Tones procedures in cooperation with dispatch.
- Train all fire and dispatch personnel on the use of emergency alert tones. NFPA 1561

**References:** FIRESCOPE ICS-500, NFPA 1500, NFPA 1561

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #8-Communications**



### 12: RIC Accountability

**Finding:** There was no accountability of personnel assigned to RIC. RIC members did not know who was on the RIC team. RIC members did not know who the RIC leader was. The RIC leader did not know which members were assigned to him. The RIC leader did not know that two of the four members had split and were on Div 1.

**Discussion:** RIC was established on the fly without a formal planning process. The RIC team leader was directed to get personnel to form a RIC and find Captain and FF 71. Interviews indicated that not all members were aware who the RIC leader was. The RIC leader was not aware of at least one person that was assigned to them. The initial RIC team consisted of four personnel. During their search efforts, two members progressed to Division 2 (Leader plus one) and two members missed the stairs and continued on Division 1. The RIC leader thought all RIC members were behind him and transitioned to Division 2.

#### **Recommendation:**

- RIC members should be assigned before they are needed so that crew continuity, planning, and accountability can take place.
- When a RIC deployment occurs, the RIC leader should initiate a quick planning process and briefing.
- Accountability within the RIC shall occur at both the crew and command level. Neither occurred during the Library Incident deployment.

**References:** NFPA 1561, NFPA 1500

**NIOSH 10: #3-Training, #5-Strategies and Tactics, #8-Communications**

### 13: Large Area Search/RIC Techniques

**Finding:** Large area search bags were not available at the time of the incident. A 75' Utility rope was utilized by RIC members later in the incident during the search for the missing firefighters. Rules of Air Management (ROAM) techniques were not utilized. Searching with a hoseline was not utilized. Large area search techniques were not utilized. A RIC pack was not utilized on Captain 71.

**Discussion:** Captain 71 and Firefighter 71, after being informed of a possible rescue, performed a "dry" search without a hose or rope line. Captain 71 and Firefighter 71 made entry into the building from the alpha side, traveled along the Bravo wall, ascended the stairs to the second story, and performed a primary search of the second floor for the reported missing person.

A "dry" search, without a hoseline can be performed after a risk vs. benefit analysis has been performed, taking into account the reported victim location, fire location, smoke conditions, building construction, fuel load, and survivability profile. At approximately 12 minutes after arrival the first mayday was announced from Captain 71, an audible low air alarm could be heard in the background.





RIC teams were formed with members from various companies. RIC members had difficulty locating Captain 71 and Firefighter 71 due to smoke conditions, lack of hose line and/or rope line leading to their location. During the search/rescue various RIC members ran low on air and some became lost/disoriented. It took several attempts by different RIC members/teams to locate and extricate Captain 71.

When Capt. 71 was found a RIC pack or spare self contained breathing apparatus (SCBA) was not utilized to provide air. Firefighter 71 could not be found by RIC members. The ultimate decision was made, due to fire conditions and building collapse, to evacuate the building and transition into a defensive mode.

**Recommendations:**

- PFD members complete CA State Fire Training Firefighter survival course or equivalent.
- PFD members complete CA State Fire Training Rapid Intervention Crew Operations course or equivalent.
- PFD members obtain and train with equipment related to the topic of large area search related to NFPA 1407.
- ROAM training required.
- Continued annual training on the above topics is recommended.
- Consider Op area RIC policy.

**References:** NFPA 1407, NFPA 1710, NFPA 1720

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #7-Strategies and Tactics**

**14: Accountability**

**Finding:** Personnel accountability reports (PAR) were not conducted on the incident until after change in command to Battalion Chief 78 and approximately 1:45 hours into the incident, even after multiple trigger points per policy were passed (change in modes, mayday, time). PFD policy states a PAR after the first 10 minutes and after major instances/change of strategy. No PAR was conducted at time intervals or after defensive fire was announced.

**Discussion:** This SART referred to internal PFD policies and industry standard documents during the discussion of these findings. PFD *Policy 304: Fire Ground Accountability* states:

304.3 Responsibilities

- Supervisors should implement sufficient tracking methods for personnel
- All members are responsible for participating in the accountability system, including checking in at approved locations.

304.4 Reporting



## FINDINGS AND RECOMMENDATIONS

- Ongoing, routine tactical accountability should be accomplished through periodic reporting CAN report.

### 304.5 PAR

- PAR should be conducted in the first 10 minutes and every 20 minutes thereafter.
- PAR should be conducted after changes of conditions such as increase in fire conditions, evacuation of an area.

When reviewing industry standards, the SART reviewed FIREScope ICS 910 which states the following:

- P.3, f. Supervisors shall conduct, on a regular and routine basis, an accountability check of their assigned personnel. This should include a PAR when specific tasks are completed or, at a minimum, at the end of an operational period. The accountability check(s) and the results of those checks shall be documented on a Unit/Activity Log (ICS Form 214) or similar tool.
- P.6 Incident Clock: The fire department communications center shall start an incident clock when the first arriving unit is on-scene of a working structure fire or hazardous materials incident, or when other conditions appear to be time sensitive or dangerous (NFPA 1500.) The dispatch center shall notify the IC at every 10-minute increment with the time that resources have been on the incident until the fire is knocked down, or the incident becomes static (NFPA 1500 8.2.4.1, 2013ed NFPA 1500 8.2.5.1 2018 ed.).

### Recommendation

- Implement the use of an incident clock as defined by NFPA 1500
- Implement emergency traffic procedures when strategy is changed.
- Implement PAR check procedures after change of modes.
- Adopt operational retreat guidelines evacuation signal as defined in FIREScope ICS 500 and NFPA 1561
- Modify existing policy to ensure PAR checks more frequently than 20 minutes after first PAR.

**References:** FIREScope ICS 500, FIREScope ICS 910, NFPA 1500, NFPA 1561, OSHA: Title 29 CFR 1910, PFD Policy 304

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #7-Strategies and Tactics**



## 15: Resource Check-in Procedures

**Finding:** There was not an established process for resources to check-in at the incident during the early stages. Patrol 72 (P-72) arrived at scene and was assigned by Truck 73 (T-73) on the Delta side. P-72 did not have a Captain assigned to the unit and did not check in with command upon arrival. P-72 was not assigned to Delta by the IC. Resources that checked in with B-70 (i.e.:E-71) did not have their check-in information passed to B-77 when he assumed command.

**Discussion:** This SART referred to internal PFD policies and industry standard documents during the discussion of these findings. PFD *Policy 304: Fire Ground Accountability* states:

### 304.3 Responsibilities

- Supervisors should implement sufficient tracking methods for personnel
- All members are responsible for participating in the accountability system, including checking in at approved locations.

When reviewing industry standards, the SART reviewed FIREScope ICS 910 which states the following:

- P.3: During an incident, all supervisory personnel will check in with the manager to which they are assigned.
- P.3: Upon arrival on-scene, each resource shall check in for assignment

Additionally, the SART reviewed FIREScope ICS 500 which states the following:

- P.13: The person being relieved of command should review the tactical worksheet (ICS 201 {or other standardized format as chosen by PFD}) with the officer assuming command. This sheet provides the most effective framework for command transfer as it outlines the location and status of personnel and resources in a standard form that should be well known to all members.

### Recommendation:

- Implement a formal check-in procedure utilizing a standardized form of record-keeping.
- Ensure check-in information is passed during the Transfer of Command process.

**References:** NFPA 1561, FIREScope ICS 910

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #8-Communications**

## 16: Apparatus Staging

**Findings:** Staging was not established per FIREScope and PFD Policy 318. Apparatus did not stage and wait for directions from IC.

**Discussion:** Staging allows resources to be readily available for assignment (within 3 min.) while still allowing Incident Commanders time to deploy resources consistent with ongoing goals/objectives.



## FINDINGS AND RECOMMENDATIONS

### Recommendations:

- Evaluate, update and train on PFD policy 318 and ICS 500 in regards to staging.

**References:** PFD 318, ICS 500

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6- Incident Command**

### 17: Resource Tracking Procedures

**Finding:** There was not a process implemented to track resources during the early stages of the incident.

**Discussion:** PFD personnel did not use a standardized means of tracking resource check-in or assignments during this incident. PFD personnel did not utilize a standardized means of tracking resource check-in or assignments generally for previous incidents. Some form of a standardized command board would have met these needs.

PFD personnel did not use a standardized means of personnel accountability during this incident. PFD personnel did not utilize a standardized means of personnel accountability generally for previous incidents. Some form of a standardized accountability tracking board would have met these needs. The organization's culture must embrace the understanding that a firefighter's failure to adhere to standard accountability practices places them, and all on-scene personnel, in heightened danger. Pre-written agency policies and standard operating guidelines related to responder emergencies are an integral part of an accountability system.

*PFD Policy 304: Fire Ground Accountability states:*

#### 304.3 Responsibilities

- Supervisors should implement sufficient tracking methods for personnel.
- All members are responsible for participating in the accountability system, including checking in at approved locations.

**FIRESCOPE ICS 910:**

- P.3 a.a.a.: The IC is responsible to ensure that the status, location, and functions of each resource are constantly tracked throughout the incident.
- P.4 c: All personnel on the scene will be tracked through the Command Post with the ICS position, assignment, and resource identifier. Each resource shall have a list of assigned personnel available.
- P.4 d: As the incident increases in complexity, the accountability system shall increase accordingly.



- P.4 a.: Functional accountability shall be used for complex incidents. This requires enhanced scene accountability whereby an IC and/or designee formally tracks the status, locations, and assignments of all resources/personnel. Functional accountability shall be documented using an appropriate tracking system such as recording assignments on an Incident Briefing Form (ICS Form 201).
- P.5: There must be an Incident Management Accountability System in place. The task can be accomplished by the officer in charge or delegated to an individual in more complex incidents.
- P.5: Accountability procedures must be followed and must track individuals regardless of their location or assignment on the incident.

### NFPA 1561-2020

- 4.6.1: The organization shall develop and routinely use a system to maintain accountability for all resources assigned to the incident with special emphasis on the accountability of personnel.
- 4.6.3: The system shall include a specific means to identify and keep track of responders entering and leaving hazardous areas, especially where special protective equipment is required.
- 8.5: The IC shall initiate an accountability system that includes functional and geographical assignments at the beginning of operations and that system shall be maintained throughout operations.

### Recommendations:

- Train PFD members on ICS 910 P.4, 2
- Train PFD members on ICS 910 P.5, 3

**References:** NFPA 1500, NFPA 1561, FIRESCOPE ICS 910

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #8-Communications**

## 18: Conditions, Actions, Needs (CAN) Reports

**Finding:** CAN (Conditions, Actions, Needs) reports were not used consistently by resources assigned to the incident.

**Discussion:** One CAN report was provided by Captain 71 according to reviewed audio recordings. Some CAN information was given over the radio by RIC, but not in a full format. FIRESCOPE ICS 500 (p.25) states the following:

- Through the chain of command, each Division/Group Supervisor will keep the IC informed of conditions, actions, and needs (CAN) through regular progress reports. These progress reports are also called CAN reports.





## FINDINGS AND RECOMMENDATIONS

### Recommendation:

- Incorporate CAN training in all fireground tactics training, with special focus on providing the correct information in a succinct verbal package while engaged in firefighting operations.

**References:** FIRESCOPE ICS-500

**NIOSH 10: #3-Training, #6-Incident Command, #7-Strategies and Tactics, #8-Communications**

### 19: Evacuation Signals

**Finding:** No evacuation signals were used during the incident at points where change in strategy occurred without positive confirmation from crews working interior. Dispatch was not aware of the meaning of “Emergency Traffic.”

**Discussion:** NFPA 1561: 4.6.12 tells us that the accountability system shall include an SOP for the evacuation of responders from an area where an imminent hazard condition is found to exist. According to FIRESCOPE 910 p.8: The EVACUATION SIGNAL will consist of repeated short blasts of the air horn for approximately 10 seconds, followed by 10 seconds of silence. This sequence of air horn blasts for 10 seconds, followed by a 10-second period of silence will be done three times; total air horn evacuation signal including periods of silence will last 50 seconds. This should be done in conjunction with the radio announcement of “EMERGENCY TRAFFIC,” with direction for emergency scene personnel to evacuate the hazard area. Per FIRESCOPE 910 p. 6: “Emergency Traffic,” shall be used as a designator to clear the radio traffic for an emergency affecting the incident and can be declared by any member who becomes aware of an emergency affecting the incident. When a member declares “EMERGENCY TRAFFIC” that person shall use clear text to identify the type of emergency, change in conditions, or tactical operations.

### Recommendations:

- Adopt procedures in FIRESCOPE ICS-910 regarding evacuation signals.
- Ensure that dispatch personnel are aware of the Emergency Traffic process and the possibility of corresponding resource needs.

**References:** NFPA 1561, ICS-910

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #8-Communications**

### 20: Incident Safety Officer

**Finding:** A safety officer was not assigned in the initial stages of the incident.

**Discussion:** NFPA 1521-2020 Section 5.3 specifically covers incident safety officer recommendations for Fire Suppression Operations. Some highlights include:



- 5.3.1 – Determine incident environmental and operational factors and confirm the establishment of RIC and evaluate the need to increase RIC capability, given an incident or planned event that includes one or more IDLH elements, responders engaged in tactical operations, a pre-assigned RIC, and an Incident Action Plan (IAP), so that a recommendation is offered to the IC.
- 5.3.2 – Communicate fire behavior, building access/egress issues, collapse, and hazardous energy issues to established RICs, given an incident or planned event, so that RIC team leaders are aware of the observations and concerns of the Incident Safety Officer .
- 1561-2020 – 5.9.6.2 – SOPs shall define criteria for the response or appointment of a safety officer.
- 1561-2020 – 8.13.1 – The IC shall appoint an Incident Safety Officer at all applicable emergency incidents.
- 1561-2020 – 8.13.2(1) – The safety officer must be assigned as early in the incident as possible.

### 1521-2020 Annex E

- E.3.1 – The fire department shall have a predesignated incident safety officer system to ensure that a separate Incident Safety Officer, independent of the IC is appointed and responds automatically to predesignated incidents.
- E.3.2 – If the predesignated Incident Safety Officer is not available, the IC shall appoint an Incident Safety Officer

Additionally, NFPA 1710-2020 has the following to say regarding the assignment of an Incident Safety Officer:

- 5.2.2.3 – An Incident Safety Officer shall be deployed upon confirmation of a structure fire, at special operation incidents, or when significant risk is present to the member due to the nature of an incident.

### **Recommendations:**

- PFD should create a system to ensure that an Incident Safety Officer-qualified person responds to any working Fire Suppression Operations incident. 1561-2020 5.1.1 states that an Incident Safety Officer-qualified person meets the requirements of Fire Officer Level 1 as specified in NFPA 1021, and the Job Performance Requirements (JPR's) in 1521-2020 Sections 5.2-5.7.
- Due to PFD's size and staffing levels, the SART makes the recommendation that PFD works with op area cooperators to allow for Incident Safety Officers through mutual aid if necessary.

**References:** NFPA 1521, NFPA 1561, NFPA 1710

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #10-Staffing**



## FINDINGS AND RECOMMENDATIONS

### 21: Calculation of fire flows, hose line selection/placement and tactics.

**Finding:** Initial hose line selection and use was not adequate for the size of the structure, volume of fire, and did not meet PFD Library pre-plan. Initial hose line placement did not provide quick water on the fire or a sufficient amount of water onto the base of the fire.

**Discussion:** E-71, the first arriving apparatus deployed one 150', 1 3/4" pre-connected hoseline with the capability of flowing 125 gallons per minute (GPM). This initial line was not utilized by Captain 71 or Firefighter 71 but was utilized several minutes later into the incident by Engineer 71 at the Alpha side entry, after Engineer 71 secured a water supply.

At approximately eight minutes after E-71 arrival, a 3" attack line flowing 350 GPM was utilized on the Delta side by T-73. Captain 71 and Firefighter 71 after being informed of a possible rescue, performed a "dry" search without a hose or rope line. T-73 members put several hoselines into operation from the exterior including the 3" attack line after securing their own water supply, unaware E-71 members were inside performing a search.

Engineer 71 and Engineer 73 both reported leaving the pump panel unattended to complete various tasks and/or assignments for extended periods of time. Leaving pump panels unattended for extended periods of time should be avoided especially with members interior.

PFD Public Library pre-plan states the initial attack GPM should be 460 GPM. The initial 150' 1 3/4" preconnected line did not meet this standard and lacked length to reach the main body of fire or to be very beneficial to assist with search. Quick water on the main body of fire with the appropriate GPM and hoseline length may have stopped/limited growth of the fire and improved conditions for a primary search.

T-73 on the Delta side and resources on the Alpha side flowed continuous water from the exterior in an indirect attack with Captain 71 and Firefighter 71 performing a search on the interior. According to the Underwriters Laboratory, "there must be no life hazard within the fire compartment. The term life hazard includes both occupants and fire department members. The application of the indirect method of attack rapidly destroys the thermal balance of the fire compartment, making it an environment both untenable and unsurvivable." Initial hose line selection, deployment and use are preferably utilized to place quick water on the body of the fire in an effort to reduce/stop fire growth to improve interior conditions. Proper GPM was eventually established by T-73 (and resources on alpha) but the hose streams were used indirectly from the exterior while E-71 members were interior. T-73 (and resources on alpha), due to a lack of communication did not know E-71 members were in a rescue mode and believed they were in a defensive mode on the exterior.

#### Recommendations:

- Adopt NFPA standard 1410 which recommends a minimum of 300 GPM shared between the first and second hoselines at a fire and utilize established fire flows per pre-plan (PFD library pre-plan had initial fire flows at 460 GPM).



- Provide training on the use of water application, pattern and GPM, into a compartment or structure. The survivability profile and application of water applied will have an impact on the desired outcome of cooling and controlling fire behavior, and how it reacts when performing coordinated ventilation tactics.
- Evaluate current hose and nozzles standards and compare to industry standards. Consider assigning firefighter positions to assist with hose handling within a structure.
- Implement a continuing education program that consists of updates on fire behavior, building construction, ventilation profile, and an NFPA 1403 compliant live fire program within the overall training plan.
- Recognize Underwriter's Laboratory (UL), National Institute of Standards and Technology (NIST), Firefighter Safety Research Institute (FSRI) and NFPA standards, on an ongoing basis.

**References:** NFPA 1142, NFPA 1710, NFPA 1410, NFA calculating fire flows, PFD Public Library pre-plan, UL: Impact of Fire Attack Utilizing Interior and Exterior Streams on Firefighter Safety and Occupant Survival: Full Scale Experiments, NIST 1661, Fire Engineering's Handbook for FF 1 & 2

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #7-Strategies and Tactics**

**22: Assignment of Truck Companies or Second Resource**

**Finding:** T-73 took action on the "D" Delta side of the building appropriate for a defensive fire.

**Discussion:** The second arriving resource (T-73) took initial action to deploy lines and secure a water supply on the "D" Delta side of the structure while Captain 71 and Firefighter 71 were advancing into the building on the "A" Alpha side. Although this may have been an appropriate action/assignment for a defensive fire, it was not the appropriate action/assignment for a second-in unit during offensive fire attack or rescue. If the second-in unit was a truck company an appropriate assignment would have supported an ongoing rescue/fire attack with personnel, forcible entry to support rescue/fire attack or coordinated ventilation to support rescue/fire attack.

**Recommendations:**

- First-In Company or Chief Officer needs to confirm the operational mode of the incident to all arriving units.
- Upon arrival the first-In Chief Officer needs to confirm operational mode with all units.
- Train Company Officers and Battalion Chiefs on ICS 500.

**References:** ICS 500

**NIOSH 10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #7-Strategies and Tactics**



### 23: Residential vs. Commercial firefighting Tactics

**Findings:** Initial objectives, strategies, and tactics employed in the PFD Library Fire were more appropriate for a residential structure fire than a commercial structure fire.

**Discussion:** The initial Incident Life Priority determined by E71, was due to reports of a victim trapped, which led them into a Rescue Mode of operation. A search of a commercial structure is very different from a residence. The square footage and contents in a commercial structure can cause firefighters to become disoriented. Tag lines and/or hose lines are needed for orientation in rapid egress situations. Completing a primary search can be difficult on only one bottle of air. Commercial structures typically have less emergency egress points than residential structures. Firefighters not monitoring air consumption, orientation, and egress points can easily become trapped inside a commercial structure.

The same size fire can appear different from the exterior of a commercial vs. residential structure. The spread of fire in a residential structure may be limited by internal walls and ceilings. Smoke in residential structures rapidly builds then escapes to the exterior. Smoke and fire in commercial structures can continue to build and spread rapidly without showing major signs from an exterior view.

Ventilation of a residential structure is far more effective and less arduous than commercial structures. Performing ventilation of a commercial structure often requires multiple companies, numerous ventilation openings and more complex strategies.

Collapse zones were not recognized and apparatus was placed within the collapse zone.

#### **Recommendations:**

- Provide PFD members with training on firefighting strategies and tactics on commercial structure fires to include but not limited to: commercial ventilation, large area search techniques, reading smoke, collapse zones of commercial structures, commercial building construction, commercial fire tactics (large hose line fire attack).
- Consider an Operational area policy on commercial structure fires.
- Consider policies/procedures relating to searching commercial structures with suspected trapped occupants.

**References:** NFPA 1407, NFPA 1410

**NIOSH-10: #3-Training, #5-Standard Operating Procedures/Guidelines, #7-Strategies and Tactics, #10-Staffing**





## 24: Coordinated Commercial Ventilation

**Findings:** There was no coordinated aggressive commercial ventilation to support rescue, fire attack or RIC operations

**Discussion:** During the Library Incident there was no coordinated commercial ventilation to support firefighting tactics until an attempt late in the incident. A coordinated ventilation plan to support rescue, fire attack and/or RIC should be developed early in the incident by the Incident Commander. This plan needs to be communicated to crews who are performing tactical assignments. This ensures a coordinated effort supported by appropriate ventilation to safely achieve tactical goals. Larger structures or complex ventilation operations may necessitate a Ventilation Group or Roof Division.

**Recommendations:**

- Provide PFD members training on coordinated ventilation techniques
- Consider policies/procedures relating to the appropriate ventilation techniques to support tactical fireground assignments

**References:** NFPA 1710, ICS 500

**NIOSH-10: #3-Training, #5-Standard Operating Procedures/Guidelines, #6-Incident Command, #7-Strategies and Tactics, #10-Staffing**

## 25: Coordinated Fire Attack

**Findings:** There was no coordinated aggressive fire attack to support rescue or RIC operations

**Discussion:** During the Library Incident there was no coordinated interior fire attack to support on ongoing rescue or RIC deployment. A coordinated interior fire attack plan to support rescue and/or RIC should be developed by the Incident Commander if resources are committed to rescue or RIC. This plan needs to be communicated to crews who are performing tactical assignments. This ensures a coordinated effort supported by appropriate fire attack to safely achieve tactical goals. Larger structures or complex operations may necessitate a Fire Attack Group.

**Recommendations:**

- Provide PFD members training on coordinated interior fire attack techniques.
- Consider policies/procedures relating to the appropriate interior fire attack techniques to support tactical fireground assignments.

**References:** NFPA 1710, ICS 500

**NIOSH-10: #3-Training, #7-Strategies and Tactics**



### 26: Staffing/Effective Firefighting Force

**Findings:** The PFD did not meet the minimum staffing levels as outlined by National Fire Protection Association (NFPA) 1710.

**Discussion:** Minimum daily staffing response to a working fire for PFD is 11 shift personnel and one firefighter from Tulare County Fire through automatic aid. The total number of firefighters at the scene in the first ten minutes is 12, which is four personnel short of the NFPA standard. NFPA, in Standard 1710, states that a minimum of four personnel should staff each engine or truck company. It also states that for a low hazard structure (average residential fire), an effective firefighting force of 16 personnel should be on the scene in the first ten minutes of the incident, and 28 personnel in that time frame for a medium hazard structure (average commercial fire), which fits the description of the Porterville Library. This situation is compounded by the fact that surrounding mutual and automatic aid fire agencies are seriously understaffed and cannot physically supply sufficient personnel in a timely manner to augment the PFD. This does not allow the PFD to fill all the vital roles identified in NFPA 1710 to complete an effective firefighting force.

PFD has 0.55 firefighters per 1000 people in the City of Porterville. California average is 0.81 firefighters per 1000 residents with the national average at 1.5 per 1000 residents.

PFD's minimum staffing is two stations staffed with three person engine companies and one station with four personnel where the crew is split crew (two person staffed engine, two person staffed patrol)

It is the SART's professional opinion that a fire chief cannot effectively oversee the administrative duties and the emergency operations duties of a fire department concurrently. Industry best practices for medium sized cities such as Porterville dictate that a 40 hour supervisory position be inserted below the Fire Chief in the chain of command and above the shift Battalion Chiefs, for purposes of overseeing the fire suppression responsibilities of a fire department.

#### **Recommendations:**

- Increase minimum staffing levels to meet NFPA 1710 minimum of effective firefighting force.
- Add a 40 hour chief officer position to oversee the emergency operations division of the department.
- Evaluate and update auto and mutual aid agreements to increase the number of firefighters in the first alarm.

**References:** NFPA 1710, Industry Best Practices

#### **NIOSH 10: #10-Staffing**



## 27: Training Program

**Finding:** The Porterville Fire Department does not have a structured, comprehensive training program.

**Discussion:** Over the years, the Porterville Fire Department has not consistently placed a high priority on the training of its personnel. Fortunately, under the present fire administration that has begun to improve. Many improvements have been implemented or are in development, such as an increased training budget, a dedicated training officer with administrative support, a recruit academy with task books, rank specific task books, the referencing of NFPA 1410, and the lessening of routine duties of the fire companies to provide them more time to dedicate to training. While the present administration clearly supports the concept of training, years of neglect have made the process of improvement a slow progression.

Presently, the training oversight responsibilities are carried out by one Fire Captain. A sole fire captain should realistically be able to effectively oversee the training responsibilities of a department this size, however, it is currently a difficult task due to the lack of a structured program to effectively operate within. While efforts have been and continue to be underway to establish a comprehensive training program, it has not currently been achieved.

A training facility, with classrooms and a tower does currently exist, however, it is not utilized to its full potential. The majority of current PFD training is computer based. Hands-on and multi-company training sessions, including command/control and fire ground operations, are infrequent. Computer based training does have its place and is an efficient method of accomplishing strictly cognitive oriented goals. It keeps the company in quarters, improving their availability to answer calls. However, it is no replacement for multi-company, muscle memory building, realistic, simulated training that includes not only engine and truck companies, but all Chief Officers that may respond to an emergency.

A high priority should be placed upon the implementation of the recommendations listed below. However, it is important to state that much of the work has already been done by other fire departments in the Central Valley. Several of them have been contacted and are willing to assist the Porterville Fire Department as needed.

### **Recommendation:**

Develop a formal, comprehensive, documented Training Program, including, but not limited to:

- Training Program mission statement or statement of purpose
- Training Program vision statement and associated strategic plan to assist in attaining the vision.
- Current Index of Training Mandates/Industry Standards/Best Practices, including the respective originating agencies, required frequencies, and minimum hours
- Delivery Types and Formats (Initial and Continuing Education):
  - Computer, Classroom, Manipulative
  - Individual Level
  - Basic Skills Level



## FINDINGS AND RECOMMENDATIONS

- Rank Specific
- Company Level
- Multi-Company Level
- Rank Specific Level
- Special Operations Level
- Repository of current lesson plans with associated references
- Qualified subject matter expert instructors/cadres (Internal/External)
- Current library of available reference materials
- Training documentation policy
- Career development/succession guides
- Annual/Biennial training calendar
- Monthly training hours audit and follow-up
- Countywide cooperation and coordination
- Annual program evaluation process
- Annual needs assessment process

**References:** Insurance Services Office (ISO) Section 570; National Fire Protection Association (NFPA) 1041, 1401, 1402, 1410, 1710; Industry Best Practices (Cities of Clovis, Fresno, and Modesto Fire Departments)

### **NIOSH 10: #10-Staffing**











## Summary of recommendations from the National Institute for Occupational Safety and Health Fire Fighter Fatality Investigation and Prevention Program, 2006–2014

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### ABSTRACT

**Introduction:** The NIOSH Fire Fighter Fatality Investigation and Prevention Program (FFFIPP) conducts independent investigations of selected fire fighter line-of-duty deaths (LODD) and offers recommendations to prevent similar deaths. The purpose of the current study was to provide information on more recent FFFIPP recommendations and to determine if recommendations have changed over time. **Methods:** Fatality investigations completed from 2006 to 2014 were selected for this study with recommendations being assigned into twelve major categories when possible. The most frequently occurring recommendations were then rank ordered overall and then by medical and traumatic fire fighter LODD. **Results:** There were 1,067 total recommendations made in the published fire fighter investigative reports for both medical and trauma-related fire fighter fatalities for the period 2006–2014. Of these, 784 (73%) could be placed within one of the 12 categories noted previously. The top 10 recommendation categories overall were: 1. Medical screening, 2. Fitness and wellness program, 3. Training, 4. Medical clearance, 5. Standard Operating Procedures/Standard Operating Guidelines (SOPs/SOGs), 6. Incident command, 7. Strategy and tactics, 8. Communications, 9. Personal protective equipment and 10. Staffing. **Conclusions:** The leading recommendations from the NIOSH FFFIPP medical investigations between 2006 and 2014 did not change compared to those made between 1998 and 2005, with the exception of the addition of “medical clearance for duty”. There were changes for the traumatic injury leading recommendations for 2006–2014, with the major change being “training”, which was the leading FFFIPP recommendation for traumatic injuries for this time period. **Practical applications:** The intent of the FFFIPP is to influence fire departments and fire fighters to critically assess and evaluate situations/circumstances similar to those identified by NIOSH investigations and implement the recommendations offered to prevent additional fire fighter fatalities.

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### 1. Introduction

During the late 1970's and 1980's, fire fighter fatalities averaged over 125 deaths per year (NFPA, 2017). Only in the 1990's and later did fire fighter fatalities begin to sporadically fall below 100 deaths annually (NFPA, 2017; USFA, 2015). Due in part to these high numbers of fatalities, Congress, in 1998, provided funding to the National Institute for Occupational Safety and Health (NIOSH) to implement a fire fighter safety initiative. This initiative was to address the national problem of work-related fire fighter fatalities that were due to the high-risk situations encountered at incident scenes.

With this funding, NIOSH created the Fire Fighter Fatality Investigation and Prevention Program (FFFIPP). The FFFIPP conducts

independent investigations of selected fire fighter line-of-duty deaths and offers recommendations to prevent similar deaths. The FFFIPP is a public health program and does not enforce compliance with state or federal occupational safety and health standards, nor does it determine fault or place blame on fire departments or fire fighters. The sole purpose for conducting the fire fighter fatality investigations is to determine the cause(s) or reason(s) for the fatality(ies) and offer recommendations to prevent similar incidents (NIOSH, 2017a).

Incidents selected for investigation are identified by using the FFFIPP Prioritization Guideline decision flow chart (NIOSH, 2009). Investigation priorities are useful in order to maintain focus of the program and target investigations on the most important issues of the fire service. Investigation priorities are periodically revised in response to changing or emerging hazards and/or in response to fire service stakeholder input. Investigations are voluntary and include record reviews (law enforcement, medical examiner, fire fighter training requirements, departmental policy and procedures, building construction information, and

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apparatus or vehicle maintenance/inspection records), incident site inspection, and, if appropriate, inspection of turnout gear and self-contained breathing apparatus. Interviews are conducted with fire department members and other on-scene witnesses. This information results in a FFFIPP published investigation report describing the events leading to the fatality, and recommendations to prevent incidents of a similar nature. Since the program's inception, approximately 40% of fire fighter deaths (both trauma and medical) have been investigated.

A prior effort to summarize recommendations from NIOSH fire fighter fatality investigations was reported in a NIOSH numbered publication covering the years 1998–2005. This report looked at the top 10 recommendations over this eight-year period (Ridenour et al., 2008). From 1998 through 2005, the FFFIPP identified 863 fire fighters who died in the line of duty, excluding the 343 fatalities in the World Trade Center tragedy in 2001. The FFFIPP investigated 335 of the fatal incidents that resulted in 372 (43%) fire fighter fatalities. The investigations encompassed a variety of circumstances such as cardiovascular-related deaths, motor-vehicle incidents, structure fires, diving incidents, and electrocutions. Fatalities were investigated in career, volunteer, and combination departments in both urban and rural settings in the United States. The leading recommendations reflect the types of incidents investigated and may not apply to all the fire fighter deaths during that time. For the investigations conducted by NIOSH, the leading causes of death included sudden cardiac events (143), motor-vehicle incidents (58), asphyxiation (57), non-motor vehicle trauma (26), burns (24), drowning (8), other medical conditions (7), electrocution (6), heat stress (2), sarcoidosis – cardiac involvement (2), and other traumatic injury (2).

For these fatalities, most of the recommendations for medical-related fatalities addressed: (a) annual medical screenings for every fire fighter to assess fitness for duty and (b) fitness and wellness programs that enable members to develop and maintain a level of health and fitness to safely perform their assigned functions. For the trauma-related fatalities, the leading recommendations addressed: (a) standard operating procedures/standard operating guidelines (SOPs/SOGs) which are specific directions for common situations fire personnel will face. They provide all members of a fire department with a common set of enforceable rules to be followed by everyone. SOPs/SOGs should be reviewed, evaluated, and updated periodically and all personnel must be aware of, trained in, and observe the fire department's SOPs/SOGs that should guide actions of fire fighters in all types of incidents; (b) communications which encompasses the exchange of information that allows the department to respond appropriately to calls and keep personnel safe on the fireground or incident scene; (c) incident command which has the overall responsibility of managing the response to an incident. The proper utilization and operation of incident command is paramount in keeping personnel safe and resources effectively engaged in the task at hand and includes life safety, incident stabilization, and property conservation; (d) motor vehicle (MV) recommendations addressing vehicle operators and passengers (fire service vehicles and privately owned vehicles responding to an incident) along with personnel working at MV incident scenes and generally encompass prudent driving, seat belt use, vehicle maintenance and operator training; (e) personal protective equipment (PPE) is vital to protect fire fighters when operating on the job and includes the proper use of self-contained breathing apparatus (SCBA) devices (self-contained underwater breathing apparatus [SCUBA] for those departments with dive teams), personal alert safety system (PASS) devices, proper retirement of fire fighter turnout gear and wearing and use of proper PPE at MV incidents (retroreflective vests, red wands, flares, cones, etc.); (f) strategies and tactics which includes strategies such as switching from offensive to defensive tactics, continually evaluating risk versus gain during the incident, and using firefighting tactics such as ventilation, water supply, exit routes, safety line use, and searches; (g) rapid intervention teams (RITs) who are a dedicated crew of fire fighters assigned for rapid deployment to rescue lost or trapped members; and (h) staffing which addresses issues of

having an adequate number of fire fighters, adequate deployment procedures and team continuity (Ridenour, et al., 2008).

Another study (Kunadharaju, Smith, and Dejoy, 2011) analyzed NIOSH fire fighter fatality investigation reports from 2004 to 2009. The FFFIPP reports for this time period produced a total of 1,167 recommendations. Thirty-five high frequency recommendations were derived from the total set: 6 related to medical fatalities and 29 to injury-related or trauma fatalities. The researchers mapped these high frequency recommendations onto the major operational components of firefighting using a fishbone or cause–effect diagram. Over 70% of the 30 fire fighter organizational recommendations were categorized within personnel and incident command. Root cause techniques suggested four higher order causes: under-resourcing, inadequate preparation for/anticipation of adverse events during operations, incomplete adoption of incident command procedures, and sub-optimal personnel readiness. This methodology of identifying high frequency recommendations, mapping them onto the major operational firefighting components and applying root cause techniques is another way in which to utilize the recommendations from the FFFIPP reports.

The purpose of the current study was to provide information on more recent FFFIPP recommendations and to determine if recommendations have changed over time.

## 2. Methods

Fatality investigations completed from 2006 through 2014 were selected for this study. Incident dates covered by the investigations ranged from May 2004 through November 2014.

A database of information included in FFFIPP reports has been maintained by the NIOSH Division of Safety Research (DSR) since 2009. Recommendations from FFFIPP reports were assigned into major categories within the database (Table 1). Other variables of interest were captured, including fire department characteristics, event characteristics, victim information, and information on contributing factors. The 2009–2014 NIOSH database of FFFIPP investigation report recommendations were analyzed along with the information from the publically available NIOSH FFFIPP website (NIOSH, 2017b, 2017c). Reports were categorized and analyzed by: medical or traumatic fatality; type of fire department – volunteer, career or combination (e.g., both career and volunteer fire fighters); cause and nature of death; and state of occurrence. Since data for the time period 2006–2008 were not in the NIOSH DSR database, FFFIPP investigative reports were reviewed by two independent coders and the recommendations were assigned to the major categories identified in Table 1.

NIOSH investigated 40% of the fatal fire fighter incidents for 2006–2014 which means the types of incidents investigated may not be representative of all fire fighter line-of-duty-deaths during this time period, especially since investigations are prioritized using the FFFIPP Prioritization Guideline decision flow chart. For the trauma-related investigations, the top level priority is an incident incurring multiple fatalities followed by structure fires and motor-vehicle incidents; since these are priorities for investigation, they likely would have impacted the

**Table 1**  
FFFIPP report recommendation categories.

1. Fitness and wellness program
2. Medical screening
3. Medical clearance
4. SOPs/SOGs
5. Communications
6. Incident command
7. Motor vehicle
8. Personal protective equipment
9. Strategy and tactics
10. Rapid intervention team
11. Staffing
12. Training



type of recommendations made. For example, since investigation of structure fires has priority over motor-vehicle incidents, recommendations addressing fire suppression strategy and tactics are more likely to be found in the database than those addressing motor-vehicle operation.

Medical clearance is an additional recommendation from the medical-related investigation reports in this analysis and involves whether the fire fighter can perform the essential job tasks without risking their lives, their co-workers' lives, or those of the civilians they are sworn to protect. Training was listed as one of the recommendation elements in 2009 in the NIOSH DSR database in order to capture the required training that is needed for firefighting duties; for the 1998–2005 analysis, training was grouped together with SOPs as a recommendation element.

### 3. Results

Between 2006 and 2014, there were 742 fire fighter line-of-duty deaths (NFPA, 2017). During the same time period, NIOSH initiated 282 fire fighter investigations with 279 investigations (99%) completed and 3 reports pending (NIOSH, 2017b, 2017c). These 279 completed investigations captured 306 (41%) of the 742 fatalities reported by NFPA. The fatalities were categorized by the Nature and Cause of the event (Table 2). The Nature of injury or medical event identifies the principal physical characteristic(s) of the injury or medical event while the Cause of injury or medical event is the term that is used to describe what caused the injury. For Nature, the leading events were: (a) heart-related events (126), followed by; (b) internal trauma events (47); (c) Other Non-medical (36); (d) asphyxiation (34); (e) burns (24); and (f) crushed events (22). The (a) Cause of the fatality was also categorized with the leading cause of death being medical events (134), followed by; (b) motor vehicle events (38), including vehicle collision/rollover and struck by vehicle; (c) caught/trapped (30); (d) Other (29); (e) collapse (23); and (f) becoming lost or disoriented (17) [Table 2]. Some of the largest identified areas within the Other categories were "smoke inhalation" (18) and blunt force trauma (14). Totals in the text may be more than what is listed in Table 2 because the "Other" categories (Other Medical, Other Non-Medical, and Other) had descriptions which, in some instances, allowed inclusion into more specific categories. These investigations also identified 220 non-fatal injuries that required hospital treatment incurred by other on-duty fire fighters at the same events where a fatality occurred (NIOSH, 2017b).

Investigations were conducted in 43 different states. The seven states where investigations were not conducted included Delaware, Hawaii, Maine, Montana, Nebraska, Oregon, and Wyoming. For those states where an investigation occurred, 7 had 10 or more investigations:

Texas, New York, Pennsylvania, California, Illinois, North Carolina, and Ohio.

The NIOSH fire fighter investigations were closely apportioned between medical and trauma fatalities at 138 and 125, respectively. The investigations were also closely divided between volunteer fire departments (38%) and career fire departments (44%), with 41 (16%) being combination departments and 5 (2%) being an "Other" category (fire academy, inmate, paid on-call, federal wildland, or full/part-time). All "Other" cases that were investigated were medical. There were trauma fatalities in the "Other" category, but due to the FFFIPP Prioritization Guideline decision flow chart, none were selected for investigation. When categorized by "medical" or "trauma" fatality investigation, the percent distribution remained similar (Table 3).

The most common traumatic fatality events investigated were motor vehicles (23%), which included vehicle collision/rollover (13%) and struck by vehicle (10%). The second leading cause was caught/trapped (16%), followed by structure collapse (13%), and lost/disoriented (10%). These four categories accounted for 58% of the trauma investigations and 63% of the investigated trauma fatalities. For medical fatality investigations, 89% were cardiovascular related.

There were 1,067 total recommendations made in the published fire fighter investigative reports for both medical and trauma-related fire fighter fatalities for the period 2006–2014. Of these, 784 (73%) could be placed within 1 of the 12 categories from Table 1. The top 10 recommendation categories overall were:

1. Medical screening.
2. Fitness and wellness program.
3. Training.
4. Medical clearance.
5. Standard Operating Procedures/Standard Operating Guidelines (SOPs/SOGs).
6. Incident command.
7. Strategy and tactics.
8. Communications.
9. Personal protective equipment.
10. Staffing.

In reviewing the recommendations by type of fatal event (i.e., medical vs. trauma), the leading recommendation categories for medical fatalities were (Table 4):

1. Medical screening.
2. Fitness and wellness.
3. Medical clearance for duty.

The leading recommendation categories for both medical and traumatic injury investigations were compared between the years 1998–2005 and 2006–2014. For 2006–2014 traumatic fatalities, the leading recommendation categories were (Table 4):

1. Training.
2. Standard operating procedures.
3. Incident command.
4. Strategy and tactics.

**Table 3**  
Distribution of fire fighter investigations by fatality type and fire department type.

Fatality type	Fire department type				Total
	Volunteer (%) <sup>a</sup>	Paid/career (%) <sup>a</sup>	Combination (%) <sup>a</sup>	Other (%) <sup>a</sup>	
Trauma	50 (19%)	55 (21%)	20 (8%)	–	125
Medical	51 (19%)	61 (23%)	21 (8%)	5 (2%)	138
Total	101	116	41	5	263

<sup>a</sup> Percentages are of total investigations and percentages are rounded to the nearest whole number.

**Table 2**  
Frequency of Nature and Cause of FFFIPP fatalities, 2006–2014.

Nature of fatality	Count	Cause of fatality	Count
Coronary heart disease	106	Medical event triggered by physical exertion	134
Cardiac conduction problem	5	Medical event NOT triggered by physical exertion	
Heart valve abnormality	3	Vehicle collision/rollover (MVA)	21
Cardiomyopathy	8	Struck by vehicle	17
Aortic aneurysm	1	Lost/disoriented	17
Hyperthermia	3	Caught/trapped	30
Other medical	17	Collapse	23
Internal trauma	47	Struck by (Other)	10
Asphyxiation	34	Fall	13
Burns	24	Electrocution	5
Crushed	22	Drowning	2
Other non-medical	36	Other	29
Unknown	1	Unknown	5
Total	306	Total	306



**Table 4**  
Rank order comparison of leading FFFIPP recommendations for 1998–2005 and 2006–2014.

Recommendation	1998–2005	2006–2014
<b>Medical fatalities</b>		
Medical screening	1	1
Fitness and wellness	2	2
Medical clearance for duty		3
<b>Traumatic fatalities</b>		
Training		1
Standard operating procedures	1	2
Incident command	3	3
Strategy and tactics	6	4
Communication	2	5
Motor vehicles	4	6 (tied)
Personal protective equipment	5	6 (tied)
Staffing	8	8
Rapid intervention team	7	9

5. Communication.
6. Motor vehicles (tied).
7. Personal protective equipment (tied).

#### 4. Discussion

Sudden cardiac deaths were the largest share of deaths among on duty fire fighters for every year of this study except 2013, when it was “internal trauma/crushing” (Fahy, Leblanc, and Molis, 2015). Even though there has recently been a downturn in the number of sudden cardiac deaths among on-duty fire fighters, it has continued to account for the largest share of fire fighter fatalities, highlighting the need for adoption of medical-related recommendations (Kales, Soteriades, Christoudias, and Christiani, 2003; Proudfoot, Hales, Truttman, and Gugliolmo, 2006; NIOSH, 2007; Smith, Barr, and Kales, 2013; Staley, Weiner, and Linnan, 2011). It's not surprising that for the cardiovascular-related fatality investigations the recommendations encompass medical aspects (Kales, Soteriades, Christophi, and Christiani, 2007; Farioli et al., 2013).

Fitness and wellness programs attempt to reduce modifiable coronary risk factors while individualized programs for high-risk workers appear to be the most promising (Ridenour et al., 2008; Soteriades, Smith, Tsismenakis, Baur, and Kales, 2011). Medical clearance procedures recognize the strenuous and physically demanding aspects of being a fire fighter and attempts to lessen the risk for those who work in this challenging environment by having a medical professional periodically assess the fire fighter's health. Medical screening involves medical testing to find undiagnosed medical conditions such as hypertension (measure blood pressure), heart disease (exercise stress tests, electrocardiograms, etc.) and cancer tests (e.g., blood in stool for colon cancer, mammograms for breast cancer, PAP smears for cervical cancer, etc.). Medical screening can be used to assess applicants prior to joining the fire service and also as an ongoing process once in the fire service. Medical clearance involves having a medical professional determine whether the fire fighter can perform the essential job tasks without risking the lives of themselves, their co-workers, or the civilians that fire fighters have sworn to protect.

The traumatic injury fatalities have multiple causes and thus are dispersed among several different areas as indicated by the nature of injury, cause of injury, and the resulting recommendations. For the 1998–2005 analysis, training was grouped together with SOPs as a recommendation element. In 2009, training was recognized as one of the recommendation elements in the NIOSH DSR database in order to capture the required training that is needed for firefighting duties; for 2006–2008, the FFFIPP investigative reports were reviewed by two independent coders and the recommendations were assigned to the major categories identified in Table 1, of which “training” was one.

The top three leading recommendations made by traumatic FFFIPP reports for 2006–2014 were “training” followed by SOPs/SOGs with incident command third; for 1998–2005 the leading recommendation was SOPs, which would've included training followed by communication and then incident command recommendations. It could be that by grouping “training” and “SOP” together in the earlier analysis, it was masking the effect that training had as a recommendation but that can't be known for certain unless a reanalysis is done. For 2006–2014 compared to 1998–2005, communication moved three places (lower) in the rankings; everything else that changed moved by two places except PPE which changed by one place (Table 4).

#### 5. Conclusion

The medical investigations accounted for a slight majority of the FFFIPP investigations. The leading recommendations from the NIOSH FFFIPP medical investigations between 2006 and 2014 did not change compared to those made between 1998 and 2005, with the exception of the addition of “medical clearance for duty.” There were changes for the traumatic injury leading recommendations for 2006–2014, with the major change being “training,” which was treated as a separate recommendation from 2006 forward and being identified as the leading FFFIPP recommendation for traumatic injuries for this time period. Strategy and tactics moved upward two places and motor vehicles and rapid intervention team recommendations moved downward two places. Communication recommendations moved downward three places for 2006–2014 compared to 1998–2005; staffing recommendations remained the same.

The intent of the FFFIPP is to influence fire departments and fire fighters to critically assess and evaluate situations/circumstances similar to those identified by NIOSH investigations and implement the recommendations offered to prevent additional fire fighter fatalities. The high number of medical events with the subsequent recommendations underscore the continued need for better medical screening, implementation of fitness and wellness programs, and medical clearance for duty for personnel of fire departments. Identifying the major traumatic recommendations most frequently made highlights the continued need for fire departments to implement training programs and standard operating procedures addressing incident command, fire suppression strategy and tactics, communication, motor-vehicle operation, use of PPE, staffing, and rapid intervention teams. Only through continued vigilance and addressing hazards facing fire fighters will we be able to see decreased fatalities to this workforce.

#### Declarations of interest

None.

#### References

- Fahy, R. F., Leblanc, P. R., & Molis, J. L. (2015). *Fire fighter fatalities in the United States-2014*. National Fire Protection Association, Fire Analysis and Research Division.
- Farioli, A., Yang, J., Teeham, D., Baur, D., Smith, D., & Kales, S. (2013). Duty-related risk of sudden cardiac death among young US firefighters. *Occupational Medicine (London)*, 64(6), 428–435.
- Kales, S. N., Soteriades, E. S., Christophi, C. A., & Christiani, D. C. (2007). Emergency duties and deaths from heart disease among fire fighters in the United States. *The New England Journal of Medicine*, 356, 1207–1215.
- Kales, S. N., Soteriades, E. S., Christoudias, S. G., & Christiani, D. C. (2003). Firefighters and on-duty deaths from coronary heart disease: A case control study. *Environmental Health*, 6(2), 1–14.
- Kunadharaju, K., Smith, T. D., & Dejoy, D. M. (2011). Line-of-duty deaths among U.S. fire fighters: An analysis of fatality investigations. *Accident: Analysis and Prevention*, 43(3), 1171–1180. <https://doi.org/10.1016/j.aap.2010.12.030>.
- NFPA (2017). Fire fighter deaths. <http://www.nfpa.org/news-and-research/fire-statistics-and-reports/fire-statistics/the-fire-service/fatalities-and-injuries/firefighter-deaths>. Accessed date: 8 January 2018 Last updated June 2017.
- NIOSH (2007). Preventing Fire Fighter fatalities due to Heart attacks and Other Sudden Cardiovascular events. DHHS (NIOSH) Publication no. 2007-133. <https://www.cdc.gov/niosh/docs/2007-133/pdfs/2007-133.pdf>. Accessed date: 9 January 2018.





- NIOSH (2009). Fire Fighter Fatality Investigation and Prevention Program: Fire Fighter Fatality Investigation and Prevention Program Prioritization Guideline – 2009. [http://www.cdc.gov/niosh/fire/pdfs/FFFIP\\_DecisionChart.pdf](http://www.cdc.gov/niosh/fire/pdfs/FFFIP_DecisionChart.pdf), Accessed date: 5 April 2018 Page last reviewed April 3, 2018.
- NIOSH (2017a). Fire Fighter Fatality Investigation and Prevention Program. <https://www.cdc.gov/niosh/fire/abouttheprogram/abouttheprogram.html>, Accessed date: 5 April 2018 Page last reviewed April 3, 2018.
- NIOSH (2017b). Fire Fighter Fatality Investigation and Prevention Program. Fire Fighter Fatality Investigation reports: List of all Fire Fighter Fatality Investigation Reports. [https://www.cdc.gov/NIOSH-fire-fighter-face/Default.cshml?state=ALL&Incident\\_Year=ALL&Submit=Submit](https://www.cdc.gov/NIOSH-fire-fighter-face/Default.cshml?state=ALL&Incident_Year=ALL&Submit=Submit), Accessed date: 5 April 2018 Page last reviewed April 3, 2018.
- NIOSH (2017c). Fire Fighter Fatality Investigation and Prevention Program: Pending Investigations/reports. <https://www.cdc.gov/niosh/fire/investigations/pendinginvestigations/pendingfire.html>, Accessed date: 5 April 2018 Page last reviewed April 3, 2018.
- Proudfoot, S., Hales, T., Truttman, T., & Guglielmo, C. (2006). Fatalities among volunteer and career firefighters—United States, 1994–2004. *Morbidity and Mortality Weekly Report*, 55(16), 453–455.
- Ridenour, M., Noe, R. S., Proudfoot, S. L., Jackson, J. S., Hales, T. R., & Baldwin, T. N. (2008). Leading recommendations for preventing fire fighter fatalities, 1998–2005. CDC/DHHS. DHHS publication number 2009–100. Morgantown (WV): National Institute for Occupational Safety and Health (US)<https://www.cdc.gov/niosh/docs/2009-100/pdfs/2009-100.pdf> Accessed 1/12/2018.
- Smith, D., Barr, D., & Kales, S. (2013). Extreme sacrifice: Sudden cardiac death in the US Fire Service. *Extreme Physiology & Medicine*, 2(6), 1–9.
- Soteriades, E., Smith, D., Tsismenakis, A., Baur, D., & Kales, S. (2011). Cardiovascular disease in US firefighters: A systematic review. *Cardiology in Review*, 19(4), 202–215.
- Staley, J. A., Weiner, B., & Linnan, L. (2011). Fire fighter fitness, coronary heart disease, and sudden cardiac death risk. *American Journal of Health Behavior*, 35(5), 603–617.
- U.S. Fire Administration (2015). Firefighter Fatalities in the United States in 2014. August 2015. [https://www.usfa.fema.gov/downloads/pdf/publications/ff\\_fat14.pdf](https://www.usfa.fema.gov/downloads/pdf/publications/ff_fat14.pdf), Accessed date: 16 January 2018.

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## NIOSH 10 Recommendation

### Finding 1: Establishing Command and Arrival Report

- 3,6,8 1 Adopt Command Guidelines as defined in FIRESCOPE ICS-500 Structure Fire Operations
- 2 Provide command training to all company and chief officers regarding initial actions, establishing command, and arrival reports.
- 3 Explore automatic and mutual aid agreements with surrounding departments to redefine second and third alarm requests to provide adequate resources.

### Finding 2: Initial Command Options, Continuing Command Actions and Incident Command Options

- 3,5,6,7 4 Incident Commanders should utilize the following incident priorities which will dictate strategic and operational objectives:
  - Life Safety*
  - Incident stabilization*
  - Property conservation*
  - Environment protection*
- 5 An incident action plan (IAP) should be developed and implemented by the first arriving company officer.
- 6 Utilize CAN (Conditions, Actions, Needs) reports from tactical group supervisors to assist the Incident Commander with resource allocation based on priority as well as continual evaluation of strategic and tactical objectives.
- 7 Company and Chief Officers should continuously train on high risk/time compressed events where management and assessment of risk is critical to personnel safety and incident stabilization.
- 8 A Incident Safety Officer is recommended for emergency incidents to assist the Incident Commander when significant risk is present due to the nature of the incident. The ISO shall have the expertise to evaluate hazards and provide direction with respect to the overall safety of personnel.
- 9 Adopt Command Guidelines as defined in FIRESCOPE ICS-500 Structure Fire Operations
- 10 Train Company and Chief Officers on adopted command guidelines
- 11 Adopt Rules of Engagement
- 12 Provide training to personnel on Rules of Engagement
- 13 Identify and train personnel to NFPA safety officer standards to assume the role as safety officer on incidents.
- 14 Create policies and procedures for Incident Safety Officers.



**Finding 3: Follow Up Radio Report**

- 3,8 15 Develop a communication policy and address communication plans during high risk/ low frequency events (rescue/mayday/etc) where everyone on the fire ground is aware of what each unit is doing. These types of scenarios should be vetted through an aggressive training program to expose and correct critical communication gaps.
- 16 Develop policies and procedures regarding incident communications to identify channels for dispatch and incident operations.
- 17 Provide training to dispatch personnel regarding incident communications policies and procedures.
- 18 Collaborate with dispatch to determine their roles and responsibilities regarding incident communications.
- 19 Create common incident communications policies and procedures with dispatch regarding dispatches roles and responsibilities.

**Finding 4: Transfer of Command**

- 3,5,6,8 20 Adopt Command Guidelines in FIRESCOPE ICS-500.
- 21 Provide training to Company and Chief Officers regarding transfer of command.
- 22 Adopt command board/checklists to assist incident commanders.

**Finding 5: Incident Communications**

- 3,8 23 A formal transfer of command should take place between the Incident Commanders (See part IV). Had Battalion 77 and Battalion 70 completed a proper transfer of command, Battalion 77 would have realized the communication gaps with the crew of Engine 71. Additionally, Incident Commanders must verify that all resources on scene are aware of the communications plan. This could have been accomplished via a life safety tone through dispatch and check-backs if necessary.
- 24 Department Policies should reflect a specific communications plan while operating on or in emergency and non-emergency incidents. Many of the personnel at the scene who were later interviewed stated that it was “implied” that resources would switch to Porterville Channel 2 on working fire assignments. Departments should also allow for alternate means of communications via a frequency guide policy to allow for a proper communication plan for expanding incidents. This could include: Command channels and alternate tactical frequencies. This information should also be shared and utilized with surrounding mutual and automatic aid cooperators.

**Finding 6: Radio Use and Discipline**

- 3,8 25 Provide portable radio training to all line personnel with emphasis on functions, limitations and importance of its use and hold personnel accountable for proficiency in radio use.
- 26 Review and revise PFD 714 to include the proper use of command and tac channels during emergency incidents



**Finding 7: Dispatcher Training**

- 27 Train Fire Dispatchers to NFPA 1061 and ICS 910 standards.

**Finding 8: Dispatch Communications**

- 3,5,8,10 28 Establish SOP to identify the circumstances under which a telecommunicator/Dispatcher will be assigned to an incident in accordance with NFPA 1221.
- 29 PFD should have a dedicated Telecommunicator/Dispatcher to manage all PFD related traffic.

**Finding 9: ICS Assignments**

- 3,5,6 30 Follow standard Incident Command System terminology regardless of the frequency of occurrence.
- 31 Train on complex incidents utilizing proper ICS nomenclature.
- 32 Accountability and check in procedures should be implemented as outlined in the "Common Responsibilities" section in the FIRESCOPE ICS 420-1 (Field Operations Guide); and "General Considerations" in FIRESCOPE ICS-500

**Finding 10: Establish a Rapid Intervention Crew (RIC)**

- 3,6,7 33 Implement a comprehensive RIC policy that ensures industry standards are met while firefighting operations are taking place within an IDLH environment.

**Finding 11: Mayday/ Rapid Intervention Procedures**

- 3,5,8 34 Train Incident Commanders that at no point operating in a rescue mode or other high hazard operations preclude the incident commander from establishing a Rapid Intervention Crew/Team.
- 35 Coordinate with automatic and mutual aid departments to create common mayday and firefighter emergency policies and guidelines.
- 36 Provide Ca. State Fire Training Firefighter Survival training for all personnel.
- 37 Provide Command and Control of RIC for command staff and captains.
- 38 Adopt Emergency Alert procedures in FIRESCOPE ICS 500
- 39 Implement Emergency Alert Tones procedures in cooperation with dispatch.
- 40 Train all fire and dispatch personnel on the use of emergency alert tones. NFPA 1561 §6.3

**Finding 12: RIC Accountability**

- 3,5,8 41 RIC members should be assigned before they are needed so that crew continuity, planning, and accountability can take place.
- 42 When a RIC deployment occurs, the RIC leader should initiate a quick planning process and briefing.
- 43 Accountability within the RIC shall occur at both the crew and command level. Neither occurred during the Library Incident deployment.



**Finding 13: Large Area Search/RIC Techniques**

- 3,5,7 44 PFD members complete CA State Fire Training Firefighter Survival course or equivalent.
- 45 PFD members complete CA State Fire Training Rapid Intervention Crew Operations course or equivalent.
- 46 PFD members obtain and train with equipment related to the topic of large area search related to NFPA 1407.
- 47 ROAM training required.
- 48 Continued annual training on the above topics is recommended.
- 49 Consider Op area RIC policy.

**Finding 14: Accountability**

- 3,5,6,7 50 Implement the use of an incident clock as defined by NFPA 1500 §8.2.5
- 51 Implement emergency traffic procedures when strategy is changed.
- 52 Implement PAR check procedures after change of modes.
- 53 Adopt operational retreat guidelines evacuation signal as defined in FIRESCOPE ICS 500 and NFPA 1561 §4.6
- 54 Modify existing policy to ensure PAR checks more frequently than 20 minutes after first PAR.

**Finding 15: Resource Check-In Procedures**

- 3,5,6,8 55 Implement a formal check-in procedure utilizing a standardized form of record-keeping. Ensure check-in information is passed during the Transfer of Command process.

**Finding 16: Apparatus Staging**

- 3,5,6 56 Evaluate, update and train on PFD policy 318 and ICS 500 in regards to staging.

**Finding 17: Resource Tracking Procedures**

- 3,5,6,8 57 ICS 910 P.4, 2: Pre-written agency policies and standard operating guidelines related to responder emergencies are an integral part of an accountability system. These policies and guidelines, when properly applied at an incident or event, result in solid rescue and recovery plans that are specific to the emergency environment and the specific risks faced by responders.
- 58 ICS 910 P.5, 3: The organization's culture must encompass the understanding that a firefighter's failure to adhere to standard accountability practices places them, and all on scene personnel, in increased danger.

**Finding 18: Condition, Actions, Needs (CAN) Report**

- 3,6,7,8 59 Incorporate CAN training in all fireground tactics training, with special focus on providing the correct information in a succinct verbal package while engaged in firefighting operations.



**Finding 19: Evacuation Signals**

- 3,5,6,8 60 Adopt procedures in FIRESCOPE ICS-910 regarding evacuation signals.
- 61 Ensure that dispatch personnel are aware of the Emergency Traffic process and the possibility of corresponding resource needs.

**Finding 20: Incident Safety Officer**

- 3,5,6,10 62 PFD should create a system to ensure that an ISO-qualified person responds to any working Fire Suppression Operations incident. 1561-2020 5.1.1 states that an ISO-qualified person meets the requirements of Fire Officer Level 1 as specified in NFPA 1021, and the JPR's in 1521-2020 Sections 5.2-5.7.
- 63 Due to PFD's size and staffing levels, the SART makes the recommendation that PFD works with op area cooperators to allow for ISO's through mutual aid if necessary.

**Finding 21: Calculation of Fire Flows, Hoseline Selection/Placement and Tactics**

- 3,5,6,7 64 Adopt NFPA standard 1410 which recommends a minimum of 300 gpm shared between the first and second hoselines at a fire and utilize established fire flows per pre-plan
- 65 Provide training on the use of water application, pattern and gpm, into a compartment or structure. The survivability profile and application of water applied will have an impact on the desired outcome of cooling and controlling fire behavior, and how it reacts when performing coordinated ventilation tactics .
- 66 Evaluate current hose and nozzles standards and compare to industry standards. Consider assigning firefighter positions to assist with hose handling within a structure.
- 67 Implement a continuing education program that consists of updates on fire behavior, building construction, ventilation profile, and an NFPA 1403 compliant live fire program within the overall training plan.
- 68 Recognize Underwriter's Laboratory (UL), National Institute of Standards and Technology (NIST), Firefighter Safety Research Institute (FSRI) and NFPA standards, on an ongoing basis.

**Finding 22: Assignment of Truck Companies or Second Resource**

- 3,5,6,7 69 First-In Company Officer and/or Incident Commander needs to confirm the operational mode of the incident to all arriving units
- 70 Upon arrival the First-In Battalion Chief needs to confirm all units understand the operational mode of the incident
- 71 Train company officers and battalion chiefs on ICS-500

**Finding 23: Residential vs. Commercial Firefighting Tactics**

- 3,5,7,10 72 Provide PFD members with training on firefighting strategies and tactics on commercial structure fires to include but not limited to: commercial ventilation, large area search techniques, reading smoke, collapse zones of commercial structures, commercial building construction, commercial fire tactics (large hose line fire attack).





- 73 Consider an Op. area policy on commercial structure fires.
- 74 Consider policies/procedures relating to searching commercial structures with suspected trapped occupants.

**Finding 24: Coordinated Commerical Ventilation**

- 3,5,6,7,10 75 Provide PFD members training on coordinated ventilation techniques
- 76 Consider policies/procedures relating to the appropriate ventilation techniques to support tactical fireground assignments

**Finding 25: Coordinated Fire Attack**

- 3,7 77 Provide PFD members training on coordinated interior fire attack techniques.
- 78 Consider policies/procedures relating to the appropriate interior fire attack techniques to support tactical fireground assignments.

**Finding 26: Staffing/Effective Firefighting Force**

- 10 79 Increase staffing minimum staffing levels to meet NFPA 1710 minimum of effective firefighting force.
- 80 Adding a 40 hour chief officer position to oversee the emergency operations division of the department.
- 81 Evaluate and update auto and mutual aid agreements to increase the number of firefighters in the first alarm.



**Finding 27: Training Program**

- 10 82 Training Program mission statement or statement of purpose
- 83 Training Program vision statement and associated strategic plan to assist in attaining the vision.
- 84 Current Index of Training Mandates/Industry Standards/Best Practices, including the respective originating agencies, required frequencies, and minimum hours
- 85 Delivery Types and Formats (Initial and Continuing Education)
  - Computer, Classroom, Manipulative*
  - Individual Level*
  - Basic Skills Level*
  - Rank Specific*
  - Company Level*
  - Multi-Company Level*
  - Rank Specific Level*
  - Special Operations Level*
- 86 Repository of current lesson plans with associated references
- 87 Qualified subject matter expert instructors/cadres (Internal/External)
- 88 Current library of available reference materials
- 89 Training documentation policy
- 90 Career development/succession guides
  - 91 Annual/Biennial training calendar
  - 92 Monthly training hours audit and follow-up
  - 93 Countywide cooperation and coordination
  - 94 Annual program evaluation process
  - 95 Annual needs assessment process



## Training

### **Finding:**

The Porterville Fire Department does not have a structured, comprehensive training program.

### **Discussion:**

Historically, it appears that the Porterville Fire Department has not consistently placed a high priority on the training of its personnel. Fortunately, under the present fire administration, that has begun to improve. Many improvements have been implemented, or are in development, such as an increased training budget, a dedicated training officer and administrative support, a rookie academy and task book, rank specific task books, referencing NFPA 1410, and the lessening of routine duties to allow fire companies more time to dedicate to training. While the present administration clearly supports the concept of training, years of neglect have made the process of improvement a slow progression.

Presently, the training oversight responsibilities are carried out by one fire captain. One fire captain should realistically be able to effectively oversee the training responsibilities of a department this size, however, it is currently a difficult task due to the lack of a structured program to effectively operate within. While efforts have and continue to be underway to establish a comprehensive training program, it has not currently been achieved.

A training facility, with classrooms and a tower does exist, however, it is not utilized to its full potential. The majority of training is computer based. Hands-on and multiple company training sessions, including command and fire ground operations, are infrequent. Computer based training does have its place. It is an efficient method of accomplishing strictly cognitive oriented goals, and it keeps the company in quarters, improving their availability to answer calls. However, it is no replacement for multi-company, muscle memory building, realistic, simulated training that includes not only engine and truck companies, but all chief officers that may respond to an emergency.

A high priority should be placed upon the implementation of the recommendations listed below. However, it is important to state that much of the work has already been done by other fire departments in the Central Valley. Several of them have been contacted and are willing to assist the Porterville Fire Department as needed.

### **Recommendations:**

Develop a formal, comprehensive, documented Training Program, including, but not limited to:

(Several of these recommendations are being developed or are in the process of being implemented)

Training Program mission statement or statement of purpose

Training Program vision statement and associated strategic plan to assist in attaining the vision.



Current Index of Training Mandates/Industry Standards/Best Practices, including the respective originating agencies, required frequencies, and minimum hours

Delivery Types and Formats (Initial and Continuing Education)

Computer, Classroom, Manipulative

Individual Level

Basic Skills Level

Rank Specific

Company Level

Multi-Company Level

Rank Specific Level

Special Operations Level

Repository of current lesson plans with associated references

Qualified subject matter expert instructors/cadres (Internal/External)

Current library of available reference materials

Training documentation policy

Career development/succession guides

Annual program evaluation process

Annual needs assessment process

Annual/Biennial training calendar

Monthly training hours audit and follow-up

Countywide cooperation and coordination

**Reference:**

Industry Best Practices (Cities of Clovis, Fresno, and Modesto Fire Departments)

Insurance Services Office (ISO) Section 570

National Fire Protection Association (NFPA) 1041, 1401, 1402, 1410



**Fire Department****Dave LaPere**  
Fire Chief

April 29, 2020

Mike Kraus  
Fire Chief, Modesto City Fire (Ret.)Sent via email to [mike\\_kraus@me.com](mailto:mike_kraus@me.com)

This letter serves to authorize the Serious Accident Report Team (SART) to investigate the Library Incident, which occurred on February 18, 2020.

I understand that this investigation applies to all aspects of the Library Incident, including Fire Department activities, Dispatch, and other relevant Departments and Agencies. I further understand that the SART's investigation may result in recommendations for policy changes, best practices, and possibly findings related to this incident. I also authorize the team to interview all Porterville City employees involved in the incident, and will arrange to have letters of immunity prepared to assist in a more candid and detailed level of disclosure.

It is my hope that the lessons to be learned from this incident might benefit the entire fire service and result in a safer standard of operations for the entire industry.

Sincerely,

Dave LaPere  
Fire Chief

40 W. Cleveland Avenue, Porterville, CA 93257 (559) 782-7526 / FAX (559) 791-7834



July 21, 2020

David LaPere  
Fire Chief  
City of Porterville  
40 W. Cleveland Ave.  
Porterville, CA 93257

Chief LaPere,

At the request of City Manager John Lollis, the Library Incident Serious Accident Review Team (SART), has composed this letter in reference to the anticipated recommendations of increased fire department staffing in the final report.

At this point in the review process, we believe the lack of sufficient firefighting personnel assembled on the scene of the Library Incident in a timely manner, may have contributed to the outcome. The National Fire Protection Association (NFPA), in Standard 1710, states that a minimum of 4 personnel should staff each engine or truck company. It also states that for a low hazard structure (average residential fire), an effective firefighting force of 15 personnel should be on the scene in the first 10 minutes of the incident, and 28 personnel in that time frame for a medium hazard structure (average commercial fire), which fits the description of the Porterville Library. This situation is compounded by the fact that surrounding mutual and automatic aid fire agencies are seriously understaffed and cannot physically supply sufficient personnel in a timely manner to augment the PFD.

Additionally, it is the SART's professional opinion that a fire chief cannot effectively oversee the administrative duties and the emergency operations duties of a fire department concurrently. Industry best practices for medium sized cities such as Porterville dictate that a 40 hour supervisory position be inserted below the fire chief in the chain of command and above the shift battalion chiefs, for purposes of overseeing the fire suppression responsibilities of a fire department.

The SART members fully understand and appreciate the budgetary constraints, as well as the strategic and master planning processes that local governments must work through to continually improve their respective public safety agencies. Having stated this, we as a body, recommend as a starting point moving towards increasing the constant staffing of each on-duty fire company to the level of 4 personnel. In addition, we recommend adding a 40 hour chief officer position to oversee the emergency operations division of the department.

Thank you for your continued support and do not hesitate to contact me with any questions or needed clarification.

Sincerely,

Michael Kraus,  
Library Incident SART Chair





CA-PVL-0000820

Library

IAP



February 19, 2020  
0600-0600



INCIDENT OBJECTIVES (ICS 202)

<b>1. Incident Name:</b> Library	<b>2. Operational Period:</b> Date From: 02/19/2020 Time From: 0600 hrs	Date To: 2/19/2020 Time To: 1800 hrs															
<b>3. Objective(s):</b>  <u>Control Objectives</u> <ul style="list-style-type: none"> <li>Keep fire contained to the building of origin.</li> <li>Provide for scene security and preservation of evidence.</li> <li>Conduct secondary search as conditions allow.</li> </ul>																	
<b>4. Operational Period Command Emphasis:</b> <ol style="list-style-type: none"> <li>1. Maintain Accountability of assigned members.</li> <li>2. Maintain Hydration.</li> <li>3. Ensure PPE is worn when appropriate.</li> </ol>																	
<b>6. Incident Action Plan</b> (the items checked below are included in this Incident Action Plan): <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"><input checked="" type="checkbox"/> ICS 203</td> <td style="width: 33%;"><input type="checkbox"/> ICS 207</td> <td style="width: 33%;"><u>Other Attachments:</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> ICS 204</td> <td><input type="checkbox"/> ICS 208</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input checked="" type="checkbox"/> ICS 205</td> <td><input type="checkbox"/> Map/Chart</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input type="checkbox"/> ICS 205A</td> <td><input type="checkbox"/> Weather Forcast/Tides/Currents</td> <td><input type="checkbox"/> _____</td> </tr> <tr> <td><input checked="" type="checkbox"/> ICS 206</td> <td></td> <td><input type="checkbox"/> _____</td> </tr> </table>			<input checked="" type="checkbox"/> ICS 203	<input type="checkbox"/> ICS 207	<u>Other Attachments:</u>	<input checked="" type="checkbox"/> ICS 204	<input type="checkbox"/> ICS 208	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> ICS 205	<input type="checkbox"/> Map/Chart	<input type="checkbox"/> _____	<input type="checkbox"/> ICS 205A	<input type="checkbox"/> Weather Forcast/Tides/Currents	<input type="checkbox"/> _____	<input checked="" type="checkbox"/> ICS 206		<input type="checkbox"/> _____
<input checked="" type="checkbox"/> ICS 203	<input type="checkbox"/> ICS 207	<u>Other Attachments:</u>															
<input checked="" type="checkbox"/> ICS 204	<input type="checkbox"/> ICS 208	<input type="checkbox"/> _____															
<input checked="" type="checkbox"/> ICS 205	<input type="checkbox"/> Map/Chart	<input type="checkbox"/> _____															
<input type="checkbox"/> ICS 205A	<input type="checkbox"/> Weather Forcast/Tides/Currents	<input type="checkbox"/> _____															
<input checked="" type="checkbox"/> ICS 206		<input type="checkbox"/> _____															
<b>7. Prepared by:</b> Name: Andy Turner      Position/Title: PSC      Signature: _____																	
<b>8. Approved by Incident Commander:</b> Name: _____ Pete Marquez _____      Signature: _____																	
ICS 202	IAP Page _____	Date/Time: _____															



ORGANIZATION ASSIGNMENT LIST (ICS 203)

<b>1. Incident Name:</b> Library		<b>2. Operational Period:</b> Date From: 02/19/20 Time From: 0600		Date To: 02/19/20 Time To: 1800	
<b>3. Incident Commander(s) and Command Staff:</b>			<b>7. Operations Section:</b>		
IC/UCs	Pete Marquez 559-967-3442		Chief	Brian Duffy	559-731-8676
			Deputy		
Deputy			Staging Area		
Safety Officer	Jeff Smith 559-731-5073		<b>Branch</b>		
Public Info. Officer	Joanne Bear 559-731-8245		Branch Director		
Liaison Officer			Deputy		
<b>4. Agency/Organization Representatives:</b>			Division/Group	A	Jesse Renteria
Agency/Organization	Name		Division/Group	B	Jason Elizondo
Public Works	Mike Night 559-359-0681		Division/Group	D	Mark Fleming
Porterville PD	Mark Azebedo		Division/Group		
Porterville FD	Brian Cogburn		Division/Group		
CALFIRE	Gratian Bidart 559-358-7101		<b>Branch</b>		
			Branch Director	J o e R o s a	Law Branch
			Deputy	559-731-8782	
<b>5. Planning Section:</b>			Division/Group		
Chief	Andy Turner 559-358-7112		Division/Group		
Deputy			Division/Group		
Resources Unit			Division/Group		
Situation Unit			Division/Group		
Documentation Unit			<b>Branch</b>		
Demobilization Unit			Branch Director		
Technical Specialists			Deputy		
			Division/Group		
			Division/Group		
			Division/Group		
<b>6. Logistics Section:</b>			Division/Group		
Chief	Bob Macauly 530-870-7453		Division/Group		
Deputy			<b>Air Operations Branch</b>		
<b>Support Branch</b>			Air Ops Branch Dir.		
Director					
Supply Unit					
Facilities Unit			<b>8. Finance/Administration Section:</b>		
Ground Support Unit			Chief		
<b>Service Branch</b>			Deputy		
Director			Time Unit		
Communications Unit			Procurement Unit		
Medical Unit			Comp/Claims Unit		
Food Unit			Cost Unit		
<b>9. Prepared by:</b> Name: Andy Turner		Position/Title: PSC3		Signature: _____	
ICS 203	IAP Page _____	Date/Time: _____			













**ASSIGNMENT LIST (ICS 204)**

<b>1. Incident Name:</b> Library		<b>2. Operational Period:</b> Date From: 02/19/2020      Date To: 02/20/2020 Time From: 0600                      Time To: 0600		<b>3. Division:</b> C/D
<b>4. Operations Personnel:</b> Name _____ Contact Number(s) _____				
Operations Section Chief: Derek Steidley		559-471-8611		
Branch Director: _____				
Division/Group Supervisor: Mark Flemming		559-731-8674		
<b>5. Resources Assigned:</b>			Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information	
Resource Identifier	Leader	# of Persons		Contact (e.g., phone, pager, radio frequency, etc.)
BFD USAR 11		5		
KRN-USAR 61		5		
<b>6. Work Assignments:</b> Continue to suppress hot spots and flare ups. Preserve scene evidence. Overhaul as investigators and conditions allow.				
<b>7. Special Instructions:</b> LA-25 assigned to logistics, all divisions, for rehab.				
<b>8. Communications</b> (radio and/or phone contact numbers needed for this assignment):				
Command	/ TLC-2	RX 193.9050	TX 158.9250 Tone 3 131.8	
Tactical	/ VFIRE 25	RX 154.2875	TX 154.2875	
Emergency Tactical	/ VFIRE 21	RX 154.2800	TX 154.2800	
	/			
<b>9. Prepared by:</b> Name: Turner		Position/Title: Plans	Signature: _____	
ICS 204	IAP Page _____	Date/Time: 02/18/20 - 2300		





<b>SAFETY MESSAGE</b>			
1. INCIDENT NAME: Library	2. DATE PREPARED: February 18th 2020	3. TIME PREPARED: 20:15	
4. PREPARED BY: Riggi - TLC	5. LEADER NAME: Russell - TLC	6. OPERATIONAL PERIOD: Feb 19th 06:00 to 18:00	
<h1>SAFETY MESSAGE</h1>			
<i>Brief EVERYONE EVERYDAY on Hazourdous Conditions or Hazards...</i>			
<ul style="list-style-type: none"> <li>• LOOK UP There are numerous unstable walls and roof components</li> <li>LOOK DOWN Beware of pooling water, wet surfaces, and loose footing.</li> </ul> <p>Be aware of hydration and nutrition, 2 water to 1 gatorade, HYDRATE, time to think = time to drink.</p> <ul style="list-style-type: none"> <li>• Interior operations are to be slow and methodical, safety first. Wear proper PPE at all times, SCBA's shall be donned as required, unless Safety Officer advises different.</li> </ul> <p>All crews be mindful of USAR team and their location when in operation.</p> <p>Communication is vital, work with crew leader for direction.</p> <ul style="list-style-type: none"> <li>• Maintain situational awareness. Do not allow yourself to be in a position where fire &amp; smoke can entrap you.</li> <li>• Remain mindful of what is going on around you as many hazards still exist!!</li> <li>• Report any medical emergency, injury and mental health issues to your supervisor. Follow chain of command.</li> </ul>			
<h2><b><i>SLOW DOWN!!</i></b></h2> <h2><b><i>Do Not Become Complacent</i></b></h2>			
PAGE 1			





INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

<b>1. Incident Name:</b> Library		<b>2. Date/Time Prepared:</b> Date: 02/18/20 Time: 2200			<b>3. Operational Period:</b> Date From: 02/19/2020 Time From: 0600 Date To: 02/19/2020 Time To: 1800					
<b>4. Basic Radio Channel Use:</b>										
Zone Grp. #	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone /NAC	TX Freq N or W	TX Tone/ AC	Mode (A, D, or M)	Remarks
		Command	TLC-2		153.9050		158.9250	3		
		Tactical	VFIRE 25		154.2875		154.2875			
		IWI Tactical	VFIRE 21		154.2800		154.2800			Emergency Use
		USAR TAC	VFIRE 22							
		LAW TAC	VFIRE 26							
<b>5. Special Instructions:</b> VFIRE 21 use for declared IWI										
<b>6. Prepared by (Communications Unit Leader):</b> Name: Turner				Date/Time: 02/19/20				Signature: _____		
ICS 205		IAP Page _____								



<b>MEDICAL PLAN</b>	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED	4. OPERATIONAL PERIOD				
	Library	02/19/2020	2230	0600-1800				
<b>5. INCIDENT MEDICAL AID STATION</b>								
MEDICAL AID STATIONS	LOCATION			PARAMEDICS				
				YES	NO			
	Staging/ICP			<input checked="" type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
<b>6. TRANSPORTATION</b>								
A. AMBULANCE SERVICES								
NAME	ADDRESS		PHONE	PARAMEDICS				
				YES	NO			
Imperial	22 North Cottage, Porterville		(559) 784-8500	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
B. INCIDENT AMBULANCES								
NAME	LOCATION			PARAMEDICS				
				YES	NO			
	Same			<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
				<input type="checkbox"/>	<input type="checkbox"/>			
<b>7. HOSPITALS</b>								
NAME	ADDRESS	TRAVEL TIME		PHONE	HELIPAD		BURN CENTER	
		AIR	GRND		YES	NO	YES	NO
Sierra View	465 W. Putnam Porterville	<input type="checkbox"/>	<input checked="" type="checkbox"/>	559-784-8885	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Kaweah Delta District Hosp.	400 W Mineral King Ave, Visalia	<input type="checkbox"/>	<input checked="" type="checkbox"/>	559-624-2000	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Regional Medical Center	445 S. Cedar Ave. Fresno	<input checked="" type="checkbox"/>	<input type="checkbox"/>	559 453-4561	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>8. MEDICAL EMERGENCY PROCEDURES</b>								
<ol style="list-style-type: none"> <li>Determine nature of the emergency</li> <li>If medical, determine if it is life threatening.</li> <li>If the injury is life threatening, clear the command channel for emergency traffic only.</li> <li>Identify the on-scene contact by position and last name.</li> <li>Ensure the DIVS is contacted immediately.</li> <li>Identify number of injured, patient assessments, and location.</li> <li>Identify/activate on-scene medical personnel.</li> <li>Identify required method of transport.</li> <li>Determine if additional resources are needed.</li> </ol>								
9. PREPARED BY (MEDICAL UNIT LEADER)				10. REVIEWED BY (SAFETY OFFICER)				

ICS 206

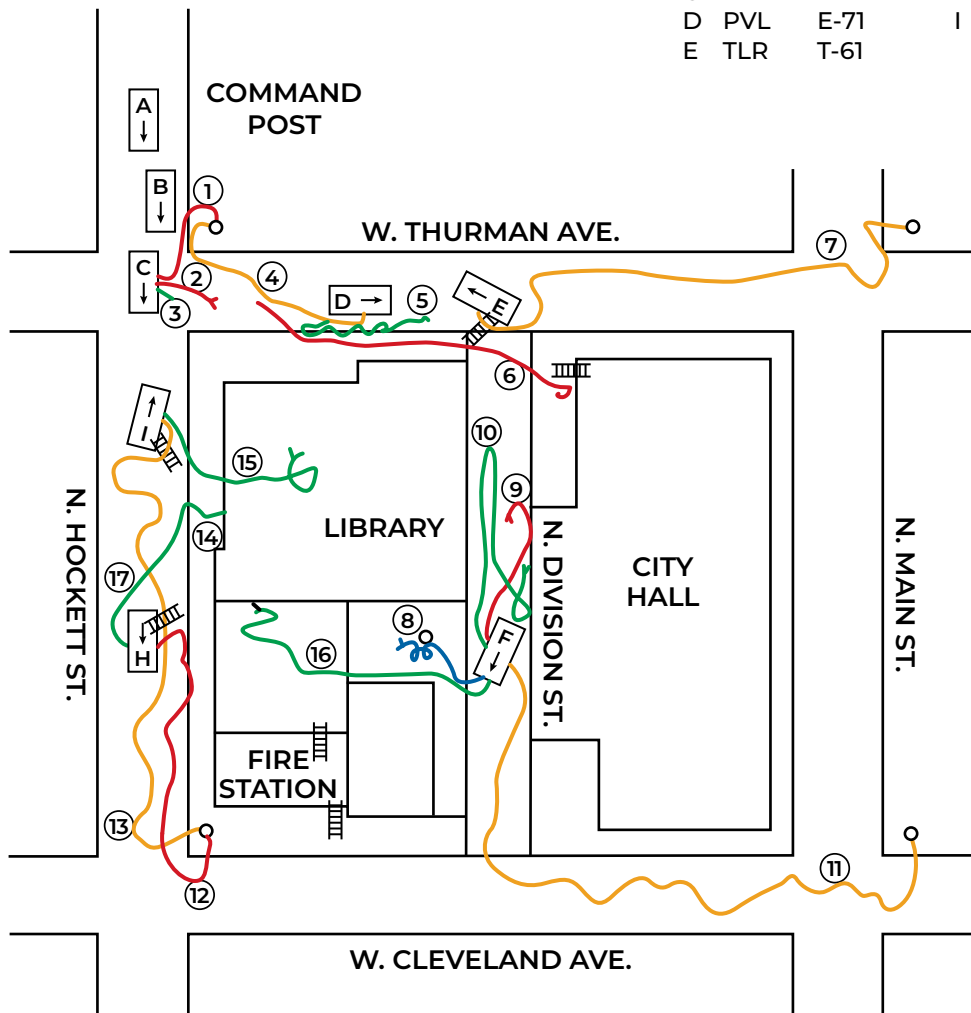


# APPENDIX E



## APPARATUS

A	TCFD	E-19	F	PVL	E-73
B	OES	411	G	PVL	E-271
C	PVL	E-72	H	TLC	T-11
D	PVL	E-71	I	PVL	T-73
E	TLR	T-61			



## HOSE

- #1 50' x 3" supply to hydrant
- #2 75' x 3" to blitz monitor (initial deployment to NW corner of City Hall)
- #3 15' x 1¾" open butt line (line moved to #14 location after mayday)
- #4 100' x 4" supply to hydrant for E-71
- #5 150' x 1¾" with Elkhart SM-20FG nozzle
- #6 200' x 3" initial blitz monitor position (open butt)
- #7 300' x 4" supply to hydrant for T-61 (reduced to 2½" port)
- #8 1" reel line (approx. 50')
- #9 100' x 3" TFT break away nozzle
- #10 200' x 1¾" with Elkhart SM-20FG nozzle
- #11 350' x 4" supply to hydrant for E-73
- #12 150' x 3" supply to hydrant for T-11
- #13 250' x 4" supply to hydrant for T-73
- #14 50' x 1¾" (hose from #3) moved post mayday, nozzle/hose burned upstairs
- #15 150' x 1¾" with Elkhart SM-20FG, initial attack line
- #16 150' x 1¾" with Elkhart SM-20FG nozzle
- #17 150' x 1¾" with Elkhart SM-20FG nozzle

\*NOT TO SCALE





Policy  
**304**Porterville Fire Department  
Fire Services Manual

## Fire Ground Accountability

### 304.1 PURPOSE AND SCOPE

The purpose of this policy is to increase firefighter safety by establishing accountability systems for keeping track of all personnel operating at the scene of an emergency incident.

#### 304.1.1 DEFINITIONS

Definitions related to this policy include:

**Personnel Accountability Report (PAR)** - A roll call of all operations members assigned to an incident at specified times; a PAR is designed to account for each member's location and activity and to verify their safety.

### 304.2 POLICY

It is the policy of this department that supervisors periodically account for members working under their direction at emergency incidents and that all members participate in accountability systems.

### 304.3 RESPONSIBILITIES

A personnel accountability system should be used primarily to track personnel, not resources. However, on small incidents one individual may be responsible for tracking both personnel and resources.

A written personnel accountability system, such as the Incident Command System (ICS) Form I-201 for Incident Commanders, and a status board should be maintained. Individual crew names must be posted in a conspicuous location in the cab of department vehicles.

Supervisors are responsible for tracking all personnel on emergency incidents. Personnel should be accounted for from the time of dispatch to the time of demobilization.

Supervisors should implement sufficient tracking methods for personnel at the individual, company, division, group and unit levels to account for personnel during all phases and at all locations of an incident, including travel between locations and assignments.

The Incident Commander should designate an accountability officer to monitor who is in charge of each area; what crews are assigned to each area; where each area is located; and the area assignment.

Area supervisors should be assigned to keep track of all crews assigned to their area. Company officers should know the location and assignment of each firefighter in their crew.

All members are responsible for participating in the accountability system, including checking in at approved locations, including members who arrive on-scene individually or in privately-owned vehicles.

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*Fire Ground Accountability*

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**304.4 REPORTING**

Ongoing, routine tactical accountability should be accomplished through periodic reporting or visual observation. This can be accomplished through concise reports that include conditions, actions and needs, also called a CAN report. Members should also make the following reports:

- Emergency situations
- Inability to meet objective with revised timeline and/or resource requests
- Notification of completed actions

**304.4.1 PERSONNEL ACCOUNTABILITY REPORTS (PAR)**

A PAR should be conducted within the first 10 minutes of an incident and every 20 minutes thereafter for personnel at the scene. In addition, PARs should be conducted after any change in conditions that may alter or affect firefighter safety, such as an increase in fire conditions or after ordering an emergency evacuation of an area.

A PAR should be conducted for each division, group and organizational element where operations personnel are working. If any person involved in the operation is unaccounted for, emergency procedures should be initiated.

The Incident Commander may discontinue regular PARs when incident stabilization is achieved and hazards are sufficiently reduced.



Policy  
**306**

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## Rapid Intervention/Two-In Two-Out

### 306.1 PURPOSE AND SCOPE

The purpose of this policy is to increase firefighter safety by implementing procedures for safeguarding and rescuing firefighters while operating in environments that are immediately dangerous to life and health (IDLH).

This policy applies to all members assigned to an incident and is designed to ensure immediate assistance for members who become lost, trapped or injured by adhering to the two-in/two-out standard and designating rapid intervention groups (RIG) (29 CFR 1910.134(g)(4)).

#### 306.1.1 DEFINITIONS

Definitions related to this policy include:

**Immediately dangerous to life and health (IDLH)** - An atmospheric concentration of any toxic, corrosive or asphyxiant substance that to an unprotected person poses an immediate threat to life, would cause irreversible adverse health effects or would impair an individual's ability to escape from a hazardous area. Interior atmospheric conditions at structure fires beyond the incipient stage are considered IDLH, as are a variety of rescue types.

**Initial rapid intervention group (IRIG)** - A group of at least two members located outside the IDLH atmosphere to initially monitor and provide emergency rescue for responders until a larger, more formalized rapid intervention group (RIG) is created. One of the two members may be assigned to an additional role, as long as the individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any firefighter at the incident. An IRIG is also known as two-in/two-out.

**Rapid intervention group (RIG)** - A formalized designated group of individuals or companies whose sole function is to prepare, monitor and provide for effective emergency rescue of responders in IDLH atmospheres.

### 306.2 POLICY

It is the policy of the Porterville Fire Department to ensure that adequate personnel are on scene before interior operations begin in any IDLH environment. However, nothing in this policy is meant to preclude firefighters from performing emergency rescue activities before an entire team has assembled.

### 306.3 PRE-DEPLOYMENT

Prior to initiating any fire attack in any IDLH environment with no confirmed rescue in progress, members should ensure that there are sufficient resources on-scene to establish two-in/two-out procedures (29 CFR 1910.134(g)(4)).

- (a) Members should ensure that at least two firefighters using self-contained breathing apparatus (SCBA) enter the IDLH environment and remain in voice or visual contact with one another at all times.

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### Rapid Intervention/Two-In Two-Out

- (b) At least two additional firefighters should be located outside the IDLH environment.
  - 1. One of the two outside firefighters may be assigned to an additional role so long as the individual is able to perform assistance or rescue activities without jeopardizing the safety or health of any firefighter working at the incident.

#### **306.4 INITIAL DEPLOYMENT**

A written personnel accountability system will be maintained whenever companies are operating at IDLH incidents. Individual crew names will be posted in a conspicuous location in the cab of department vehicles.

During the initial phase of an incident, confirmed rescues should take priority. When a confirmed rescue is in progress during the initial phase of an incident, emergency rescue activities may be performed before a designated IRIG has assembled.

All members operating in IDLH environments should be tracked and accounted for at all times, except when it would preclude firefighters from performing emergency rescue activities during the initial phase of the incident.

#### **306.5 RIG DUTIES**

The RIG should be assembled from resources at the scene, whose sole function is to prepare for, monitor and provide effective emergency rescue for responders.

- (a) To the extent possible, visual, voice and signal line communication should be maintained between those working in the IDLH environment and the RIG outside the IDLH environment.
- (b) RIG members should not be involved in any other duties that divert attention or resources away from their primary mission of responder rescue.
  - 1. Acceptable duties may include identifying and preparing access and emergency rescue egress points from affected areas, the pre-positioning of exterior ladders, forcible entry and other rescue equipment as needed at strategic locations.
- (c) Additional companies may be assigned to the RIG as conditions warrant. For large incidents with multiple points of entry, multiple RIGs should be considered.

#### **306.6 EMERGENCY DEPLOYMENT OF A RIG**

When a firefighter-down or firefighter-missing broadcast is transmitted, all non-emergency radio traffic should be cleared from the radio channels that the missing or trapped firefighter is using. Non-affected personnel should switch to other tactical frequencies. At least two individuals should be dedicated solely to monitoring the tactical channel. One person should be responsible for gathering information on the identity, location and condition of trapped or missing firefighter, while the second person should communicate and offer support on the tactical channel.

For an emergency deployment of a RIG, a Rescue Branch Director position should be activated to coordinate the rescue as well as any fire activities in support of the rescue effort. Other divisions

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### Rapid Intervention/Two-In Two-Out

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and groups may support the Rescue Branch Director's efforts by diverting fire spread through horizontal or vertical ventilation to draw fire away from the affected rescue areas and by placing hose streams to check fire spread and protect rescue efforts.

The RIG supervisor should notify the Rescue Branch Director before making entry for emergency rescue. The Rescue Branch Director should provide any assistance that is appropriate to the situation. Additional resources should be ordered as needed, including additional RIGs, medical treatment and transportation groups or other organizational elements.

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## Staging

### 318.1 PURPOSE AND SCOPE

An incident scene can quickly become congested with emergency equipment if the equipment is not managed effectively. The purpose of this policy is to provide guidelines for staging at emergency incidents.

### 318.2 POLICY

It is the policy of the Porterville Fire Department to safely stage resources at emergency incidents.

### 318.3 RESOURCE STAGING

Staging areas are locations designated within the incident area to temporarily position resources that are available for assignment. Resource staging at emergency incidents will be conducted using the procedures, guidelines and positions identified in the Department's Incident Command System (ICS) program.

Generally the Incident Commander should identify a staging officer to maintain the staging area in an orderly condition and to demobilize at the conclusion of the incident, including making reasonable efforts to return the property to its original condition at the conclusion of the incident.

#### 318.3.1 REGULAR STAGING

When establishing a staging location and conducting staging activities Porterville Fire Department personnel should consider the following:

- (a) During initial attack operations or on smaller, short-term incidents, identifying and selecting the staging location may be based primarily on placing incoming resources in a safe location while providing for their rapid deployment as needed.
- (b) During extended attack operations, the Incident Commander should establish a central staging area early and place an officer in charge of staging. A radio designation of #staging# should be utilized. Additional location factors should be considered when identifying and establishing staging areas:
  1. **Private property** - Whenever practicable, staging areas should be established using public property as opposed to private property. If it is necessary to utilize private property, the incident management team should attempt to contact the property owner and obtain permission to utilize the property.
  2. **School property** - Whenever practicable, the incident management team should contact the school administration or property manager for permission to use the property, prior to establishing a staging area. If school property is utilized, the staging area should be configured to create the least possible disruption to scheduled school activities, including traffic flow in and around the school and the orderly movement of vehicles carrying students. When school property is used for staging purposes,





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### *Staging*

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the local media should be notified. The notification should emphasize that the school property is being used to support an incident occurring away from the school and that the school is not involved in the emergency.

3. **Church property** - Whenever practicable, the incident management team should contact the church administration or property manager for permission to use the property prior to establishing a staging area. If church property is utilized, the staging area should be configured to create the least possible disruption to scheduled church activities, including traffic flow in and around the property.
4. **Commercial property** - Whenever practicable, the incident management team should contact the owner or property manager for permission to use the property prior to establishing a staging area. If commercial property is utilized, the staging area should be configured to create the least possible disruption to normal business, including traffic flow in and around the property.
5. **Major transportation infrastructure** - Whenever practicable, consideration should be given to avoiding disruption of major transportation infrastructure, including freeways and main traffic arteries, airports, train facilities and transit centers.
6. **Election polling facility** - In the event that an incident requiring a staging area occurs on a scheduled public election day, the staging area should not directly impact any public polling facility or inhibit the normal flow of traffic in or around a public polling facility. If a negative impact to a public polling facility is unavoidable, the appropriate election official should be immediately notified of the circumstances of the disruption.

#### **318.4 STAGE-AWAY OPTION**

The stage-away option should be used in any incident where there may be a violent encounter. A violent encounter should be anticipated in, but not limited to, the following categories of calls for service:

- Shootings or shots-fired calls
- Stabbings
- Civil disturbance calls
- Calls involving criminal gang activity
- Attempted suicide calls
- Domestic disputes, including family fights
- Unknown assault calls
- Bomb incidents

It is the policy of the Porterville Fire Department to use a non-standard and defensive response profile when responding to calls for service involving known or suspected violent subjects. When

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responding to calls involving known or suspected violent subjects, department members should take the following actions:

- (a) Whenever possible, the the Dispatch Center should determine if violent subjects are involved in any call for service, and if so, include that information in the initial dispatch. The responding units should be advised to stage away from the scene. At any time the the Dispatch Center or any of the responding crews receive additional information indicating that violent subjects are at the scene of a call, the response should be upgraded to a stage-away incident.
- (b) The Unit Leader of the first-in responding unit will identify a staging point for all responding units. The staging point should be located two or more blocks away from the incident scene, out of direct line of sight of the incident, and should not require that the responding units drive by the incident to reach the staging point. The Unit Leader should also confirm with the the Dispatch Center that law enforcement is responding to the incident.
- (c) All responding units should acknowledge the call to stage-away and confirm the staging location via radio while en route to the incident. All units should avoid driving by or through the line of sight of the incident until it is determined to be safe to enter the scene.
- (d) All units should report "on-scene staging" upon arrival at the staging point.
- (e) All units should remain staged away from the incident scene until notified that law enforcement has determined that the scene is safe to enter or until reliable information is received confirming that no violent subjects remain at the scene.

In the event that the first-in unit arrives at an incident scene and encounters unanticipated violence or violent subjects, the Captain or Unit Leader of that crew should immediately notify the the Dispatch Center of the circumstances and request law enforcement support. All other responding units should be directed to stage-away unless members of the first-in unit determine it is safe for additional personnel to respond directly to the scene.



Policy

**714**

## Porterville Fire Department

Fire Services Manual

## Communications Operations

### 714.1 PURPOSE AND SCOPE

The purpose of this policy is to establish standards for two-way radio communications during routine, local emergency, regional emergency and mutual aid events. The basic function of the communications system is to satisfy the immediate information needs of the Department in the course of its activities. Standards of performance are necessary if the system is to remain functional during emergencies.

#### 714.1.1 FCC COMPLIANCE

All Porterville Fire Department radio operations shall be conducted in accordance with the Federal Communications Commission (FCC) procedures and guidelines.

### 714.2 POLICY

The Porterville Fire Department will provide access to a two-way radio communication system to facilitate a more efficient response to emergency situations. The communication system is intended for official job-related communications between fire apparatus and the Dispatch Center. Fire apparatus and members shall be equipped with the appropriate types of two-way radios, personal communication devices and/or satellite paging system for the jurisdiction, type of work anticipated and local and regional interagency/multi-agency incidents.

### 714.3 COMMUNICATIONS LOG

It shall be the responsibility of the dispatchers in the Dispatch Center to record all relevant information on an incident. Dispatchers shall attempt to elicit as much information as possible to enhance the safety of the firefighters who are responding and assist in anticipating conditions that may be encountered at the scene. Desirable information includes, but is not limited to, the following:

- Location of incident reported
- Type of incident reported
- Date and time the report was received
- Name and address of the reporting party, if possible
- Incident number
- Time of dispatch
- Apparatus dispatched to the incident, including member identification numbers
- Time of apparatus arrival
- Requests from members during the incident
- Time the apparatus returned to service

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- Disposition or status of the reported incident.

**714.4 RADIO COMMUNICATIONS**

Operations are more efficient and member safety is enhanced when dispatchers, supervisors and fellow members know the status of other companies, including their locations and the nature of the incidents to which they are assigned. Most critical incident communication should occur verbally, over the radio, for this reason.

**714.4.1 APPARATUS IDENTIFICATION**

Apparatus radio identification systems shall be based on the type of apparatus and the station responsibility/jurisdiction. Members should use the entire call sign when initiating communication with a dispatcher. The use of a call sign allows for a brief pause so that the dispatcher can acknowledge the appropriate company. Members initiating communication with other agencies shall use their entire call sign. This requirement does not apply to continuing conversation between the mobile unit and dispatcher once the mobile unit has been properly identified.

**714.4.2 RADIO TESTING**

Members assigned to an apparatus for a shift should check for radio functionality at the beginning of each shift to ensure that the mobile and portable radios are working as designed. Functionality tests can include cycling the radio off/on, observing the radio display and taking note of the audible radio self test. The transmit and receive functions can be tested any time other functional tests are inconclusive.

Radios that are inoperable or malfunctioning shall be placed out-of-service, an appropriate repair tag completed and the radio or apparatus placed in the area specified by the apparatus and equipment maintenance officer.





## Porterville Fire Department - Training Division Incident Command Procedures

### **Purpose**

The purpose of this document is to describe the procedures for establishing Incident Command, as well as provide guidelines for effective control of City of Porterville Fire Department units and personnel at emergency incidents. The goal is to assign command duties to one individual at all times during an incident, and assure a clearly identified Incident Commander (IC).

### **Procedure**

The term *Incident Command* in this procedure refers to both the person and the function. As the identity of the IC changes, the responsibility and function shifts through transfer of command procedures. These procedures shall accomplish the following:

- Ensure that command is established as early as possible in the incident.
- Provide coordination among resources through the use of standardized command modes.
- Assign Incident Command responsibility based upon the arrival sequence of members, companies and officers.
- Provide for the orderly transfer of command.

### **Establishing Command**

The first arriving officer (Battalion Chief, Captain, Lieutenant, or any individual acting in one of these capacities) at the incident will perform an Arrival Report and choose the appropriate command option (Investigation Mode, Fast Attack Mode, or Command Mode) depending on the situation. The first arriving officer will be assumed as command, regardless of what mode option they choose, until it is transferred to another officer (see Fast-Attack section of this policy) or the first arriving BC at scene.





## Porterville Fire Department - Training Division Incident Command Procedures

### **Arrival Report**

The first arriving officer activates the command process by transmitting an **Arrival Radio Report**. This report should be concise, not lasting more than 30 seconds, and consist of the following:

- Unit designator of the unit arriving on the scene.
- Confirmation of the incident location and conditions.
- Life hazard and exposures.
- A brief description of the building.
- Request for additional resources or cancel units en route.
- Command mode (Investigating, Fast Attack, or Command).
- Brief description of action taken (i.e. pulling hoselines for an offensive attack, exposure protection, establishing an ICP).

\*This Arrival Report process can be simplified by following the **4W's** or **BLOERs** acronyms\*

### **4W's**

- **WHAT** do I have? – Brief description of what you see; building size and occupancy, fire conditions, etc.
- **WHERE** is it going? – Is the fire or hazard or threatening an exposure?
- **WHO** do I need? – Do I need to request more resources or cancel resources that are en route?
- **WHAT** am I going to do? - Brief description of actions you (your crew) are going to take.

### **BLOERs**

- **B** – Building description
- **L** – Location and conditions of fire
- **O** – Occupied or not
- **E** – Exposures
- **R** – Resources needed







## Porterville Fire Department - Training Division Incident Command Procedures

### **Arrival Report (cont.)**

#### **Examples:**

- “Porterville, Engine 71 is on scene of a dumpster fire with no exposures. Engine 71 can handle. We will be attacking the fire.”
- “Porterville, Engine 73 is on scene at Porterville Family Apartments, nothing showing, we will be investigating.”
- “Porterville, Engine 71 is on scene of a well-involved vehicle fire with a residential structure that is being threatened. Start one additional engine to the scene for assistance with fire attack and exposure protection. E71 will be in Fast Attack.”
- “Porterville, Engine 72 is on scene of a single story, single family structure. Flames are visible through the windows on the A-side of the structure, no exposure threat at this time. Continue all inbound units. Engine 72 will be deploying a hose-line for an offensive, interior fire attack. The next engine on scene will be assigned water supply. Engine 72 will be in Fast Attack. Take all radio traffic to Porterville Channel 2”
- “Porterville, Battalion 71 is on scene of an approximate 100’ x 150’ warehouse that is well-involved with fire, with no exposures. This will be the Plano Incident, Battalion 71 will be Plano Command. Start a Working Fire Assignment, as well as a Second Alarm. First arriving engine I want you to...”

### **Initial Command Actions**





## Porterville Fire Department - Training Division Incident Command Procedures

The IC is responsible, based on judgement, for the following actions as required by the situation:

- Transmit an Arrival Report.
- Evaluate the situation by performing a (continual) Size-Up, including a 360 assessment.
- Perform a proper risk assessment based on the incident priorities.
- Develop and communicate a plan.
- Assign resources as required.

### **Follow-Up Radio Report**

This report will include any information that was garnered during the 360 assessment (or other means) that was not provided in the arrival report.

- Credible information given by occupants or bystanders.
- Confirm life safety status, and status of primary search.
- Update on fire/smoke location and conditions.
- Flow Path (if determined, will be found during the SLICE-RS sequence).
- If utilities were secured during the 360.
  - \* Remember to not become task oriented during this process. If utilities are not easily identified and/or not easily secured, assign this task to an available person or crew.
- Confirm assignments and/or deploy resources.
- Any other pertinent information.

### **Continuing Command Actions**

- Provide continuing overall incident command and management within the framework of the City of Porterville Fire Department procedures.
- Organize resources and maintain an appropriate span of control (3-7).
- Give assignments based on the strategy (Offensive or Defensive), incident priorities (Life Safety, Incident Stabilization, Property Conservation), and Tactical Objectives (RECEO-VS).
- Request additional resources as needed.
- Utilize ICS 201 form and other tools appropriate for the incident.
- Request a **Working Fire Assignment**, and a **Second** and/or a **Third alarm** if needed.

### **Working Fire Assignment / Second and Third Alarm**





## Porterville Fire Department - Training Division Incident Command Procedures

To help facilitate a reduction in the task saturation that occurs to Incident Commanders on the scene of a structure fire or a similar, more involved incident, a **Working Fire Assignment** may be requested by the officer in command of the scene. When a Working Fire Assignment is requested by the Incident Commander, the dispatcher will contact:

- The Porterville Police Department for traffic and crowd control.
- A Priority 3 (Code 2) ALS Ambulance to standby
- The company in charge of Electrical Utilities
- The company in charge of Natural Gas Utilities
- An Emergency Contact for the property, if applicable
- A Duty Chief (will need to be paged out, if one has not been paged out already through the initial dispatch.)

If an incident grows too large for the resources that are currently on scene, or if upon initial arrival, an officer makes the determination that the incident warrants an immediate dispatch of additional resources, a **Second** and/or a **Third Alarm** may be requested. It is to be noted that if a Third alarm is requested, this request will INCLUDE the resources of a Second Alarm. Depicted below is the list of resources that will be dispatched in the Second and Third Alarm. You will notice that the call back of off-duty personnel is now referred to as an **“All Call”**. This takes the place of what was referred to as a General Alarm.

When a **Second** and **Third** alarm is requested, the following resources will be dispatched:

- |                     |   |  |
|---------------------|---|--|
| <b>Second Alarm</b> | - | <b>“All Call”</b> (all call-back of personnel) +<br>1 additional <b>Engine</b> (dispatch will request through FireComm)  |
| <b>Third Alarm</b>  | - | 1 additional <b>Engine</b> (dispatch will request through FireComm) +<br>1 additional <b>Battalion Chief</b> (dispatch will request through FireComm) +<br>1 additional <b>Ladder Truck</b> (dispatch will request through FireComm) |

### Working Fire Assignment / Second and Third Alarm (Cont.)





## Porterville Fire Department - Training Division Incident Command Procedures

Individual resource requests aside from the resources included in the Second and Third Alarms may be made at any time throughout the incident. These requests may include additional engines, trucks, patrols, and specialty equipment such as a bulldozer or a backhoe.

Examples of what this radio traffic would sound like for these requests as a Battalion Chief arrives at the scene of a structure fire and assumes command, (after an engine and Company has already arrived and performed an arrival report), is as shown below:

- **Battalion 71:** “Porterville, Battalion 71 is on scene at 776 N. Jaye Street. This will be the Jaye street incident, Battalion 71 is assuming Jaye Street Command. The Command Post will be located across the street from the scene. Start me a **Working Fire Assignment.**”
- **Dispatch:** “Battalion 71, Porterville, copy you at scene, assuming Jaye Street Command, Command Post is across the street, starting you a **Working Fire Assignment.**”
- **Battalion 72:** “Porterville, Battalion 72, the fire has grown larger than our current on-scene resources are able to handle, start a **Second Alarm.**”
- **Dispatch:** “Battalion 72, Porterville, copy, starting you a **Second Alarm.**”
- **Battalion 71:** “Porterville, Battalion 71 is on scene at Zalud Park. We have heavy flooding that is threatening multiple nearby structures. I’m requesting an **“All Call”** of personnel for assistance with flood protection and would also request a Vacuum Truck from Field Services.”
- **Dispatch:** “Battalion 71, Porterville, copies your request for an **“All-Call”** of personnel and a Vacuum Truck from Field Services.”

### Incident Command Options





## Porterville Fire Department - Training Division Incident Command Procedures

The first arriving officer must decide on the appropriate command option, one that best fits the needs of the incident. The officer establishing command of an incident has a choice of command options and degrees of personal involvement in incident tasks; however, they continue to be responsible for the command functions. In all cases, the initiative and judgement of the officer are of great importance. The command options identified are not strict rules, but guidelines to assist the IC in their planning. The command options will fall into one of three modes listed below.

**Investigative Mode (Nothing Showing)** – Applied to a situation requiring further investigation of conditions or circumstances by the first arriving fire unit. The second-due engine should stand by at a water supply. Typically, the officer and crew will investigate the report while utilizing a portable radio to communicate with dispatch and incoming units as needed. The officer may switch to another mode based upon their findings. When the initial arriving unit transmits that they have “nothing showing, we will be investigating”, all responding units shall reduce to CODE-2.

**Fast Attack Mode** – This mode is applied when immediate action by the entire company is needed to stabilize the situation, or prevent life loss or injury. This mode requires the first arriving company officer to be actively involved in suppression or rescue activities. Preferably, the first arriving officer will pass command to the first-due BC upon their arrival, however command may be passed to the next company officer to arrive at scene.

This mode should only last for a short duration of time and will end with one of the following:

- The situation is stabilized.
- Command is passed to the first-due BC upon their arrival.
- When the first arriving company officer is engaged in rescue activities, command will be passed to the next arriving officer (BC or Company Officer).

**Command Mode** – Many incidents, by virtue of their size, complexity, or potential for rapid expansion, require immediate formal command. In such cases, the first arriving company officer will initially assume an exterior, safe, and effective command position and maintain that position until relieved by the first-due BC.

### Transfer of Command





## Porterville Fire Department - Training Division Incident Command Procedures

The first officer to arrive at the incident will assume and retain command until relieved according to the following guidelines:

- The BC will assume command from a company officer when they arrive at the incident. Transfer of command procedures will be followed to the best of their ability and driven by the incident demands.
- In the event that the first arriving company officer is engaged in a rescue situation, command will be assumed and transferred to the next arriving officer. This may be a Lieutenant, Captain, or a BC.
- Arriving officers who are assuming Command will communicate with the officer being relieved by radio or preferably face-to-face.
- When possible, the officer being relieved will brief the officer assuming IC on the following:
  - Situation status
  - Effectiveness of actions taken
  - Incident plan and objectives (Incident Action Plan)
  - Resource assignments
  - Resources en route and/or ordered
  - Appraisal of need for additional resources
  - Concerns and related issues

The response and arrival of a BC at the incident strengthens the overall command function. The DC will exercise their command prerogatives in a manner that will ensure a smooth transition and effective on-going command of an incident.

### **Staging Personnel**

Unless otherwise stated by the IC, all unassigned personnel on-scene shall stage at the front bumper of the first arriving apparatus.

### **Incident Communications**







## Porterville Fire Department - Training Division Incident Command Procedures

When responding to emergency incidents within the city, units will communicate with each other and Porterville Dispatch via our Dispatch channel, Porterville Channel-1 (PVL-1). For routine emergencies (medical aids, traffic accidents, public assistance, etc.), those that require two or fewer apparatus (not including the BC vehicle), personnel should continue to utilize Porterville Dispatch for on-scene communications; however they may move communications to Porterville Channel-2 (PVL-2) at any time, if the incident warrants the need. While communicating at structure fires and other incidents that require three or more units (not including the BC vehicle), personnel will utilize PVL-2. For example, a structure fire, the first arriving unit shall give an arrival report and make the command to take traffic to Porterville Channel-2 (PVL-2), immediately after. This will ensure that all inbound units, as well as any units already on scene, will be on the same channel to ensure that no pertinent radio traffic is missed.

Radio traffic during emergency incidents should be clear, concise and limited to essential information only. Essential information is information that addresses firefighter safety and incident priorities. Personnel at emergency incidents should be cognizant of crews assigned to fire attack and/or those performing assignments with higher risk factors, and consider their communications as essential.

### **Tactical Priorities and Strategic Objectives**

Scientific studies conducted by the International Society of Fire Service Instructors and Underwriters Laboratories have shown that structure fires today are more volatile than in years past due to an increase in synthetics used in furnishings, lightweight building construction and energy efficient features in structures. These new fuels and construction techniques have challenged the fire service to reevaluate how we extinguish structure fires.

The acronym **SLICERS** was created to guide initial engine company operations. It is effective as an initial attack sequence for the initial arriving officer to determine tactical priorities.

**RECEO-VS** is an effective acronym to use for overall strategic objectives guiding the incident.

**SLICERS**





## Porterville Fire Department - Training Division Incident Command Procedures

The first five actions are sequential:

**Size up:** Consists of three components. The first component is all of the information the Incident Commander had prior to the incident (weather conditions, staffing, pre-fire plan information, etc.) The second component is the information garnered conducting a 360. These may include type of occupancy, visual smoke and fire, reports of victims, etc. The final component recognizes that size up is a continuous process throughout the incident.

**Locate the fire:** The location of the fire, as well as the location of super-heated gasses produced by the fire, need to be determined.

**Identify and control flow path:** If a flow path is identified, attempt to control it by controlling the door or window. Forcible entry openings should be considered as ventilation. Simply opening the door can cause increases in temperatures inside the fire building. If a flow path is not present, don't create one until resources are properly positioned.

**Cool the space from safest location:** (*Aka. Hit it Hard from the Yard, Softening the Target*) Early application of water is important to reduce the thermal threat to firefighters. Water has shown to improve the conditions to the fire building for the occupants and firefighters. Given the information from the size-up, location of fire and flow path, a decision is made on where and how to cool the super-heated area of the building. The water may be applied from the exterior if appropriate, or interior application may be needed to cool the heated compartments (large building, attic fires).

**Extinguish the fire:** Completely extinguish the fire with direct water application.

The final two actions are actions of opportunity and can be taken at any point during operations:

**Rescue:** At any time in an incident, personnel may have an opportunity to remove trapped or endangered occupants. A challenge often seen with departments operating with limited staffing may be arriving on scene with active fire and a known rescue situation and the need to make a decision on which tactic is a priority; protect the occupants, remove them from the structure, or knock down the fire threat to remove the hazard. An option to use in this scenario could be to utilize the pump operator to reduce the thermal threat, while the officer and firefighter work to remove the trapped occupants based on a Vent-Enter-Isolate-Search technique. In order to do this, a window is assessed based on possible location of victims, smoke conditions, etc. The window is ventilated by forcible entry the firefighter enters the room and immediately closes the room door to isolate and control the flow path and conduct a search.





## Porterville Fire Department - Training Division Incident Command Procedures

**Salvage:** Personnel should use compartmentalization to control fire spread and smoke when possible. Proper water application and removal of property from the structure also increases salvage.

### **RECEO-VS**

RECEO-VS continues to be effective from a command perspective to recall incident priorities after the initial engine company's actions to ensure rescue has been made, exposures managed, and extinguishment taken place. The ventilation and rescue components can be accomplished at any time that a need or opportunity arises.

**Rescue:** Human life is the most important consideration at an incident. Tactics such as extinguishment, Vent-Enter-Isolate-Search, door control may be tactics employed towards protecting people.

**Exposure Protection:** Preventing a fire from spreading to uninvolved buildings or separate units. After determining that no people are inside a fire building, initial efforts may be the protection of nearby buildings.

**Confinement:** Preventing the fire from extending to uninvolved portions of the building. A common example is a strip mall with a common attic. Tactics must be employed to stop the fire from spreading throughout the building via the attic or other corridors of travel.

**Extinguishment:** This is simply putting water on the fire. The proper method of extinguishment is incident driven. The size of the fire; the site type and age of the construction; the contents of the occupancy must all be considered when determining the tactics for extinguishment.

**Overhaul:** Ensuring that the fire is completely out is the purpose of overhaul. This is a dangerous aspect of the incident. Personnel are more relaxed, tired and perhaps less alert. Danger of collapse is an issue during the overhaul portion of the incident. Dangerous gasses are still present and personnel may be tempted to remove their breathing apparatus. Also, if an investigator has been requested for the incident, it is imperative the overhaul process is coordinated with the investigator so that important evidence is not destroyed.

**Ventilation:** Ventilation may need to occur at any time in the incident, for different reasons and may utilize different tactics.





## Porterville Fire Department - Training Division Incident Command Procedures

**Salvage:** After the preservation of life, the conservation of property is one of the most important tenets of the fire service--yet often overlooked. Salvage operation include, but are not limited to, the removal of property from the structure and the protection of property from water damage. Prior to leaving the incident, crews should consider actions that can be taken to protect the property from weather and intruders.

### Emergency Alert Tones

While working at an emergency incident, any time a hazard is found that can directly affect the safety of the personnel on the scene, such as power lines down, the incident commander shall notify dispatch to activate the **Emergency Alert Tones**. Dispatch will then activate the tones, followed by the message broadcast by the incident commander. An example of what this radio traffic would sound like for this request as would be as follows:

- **Battalion 72:** "Porterville, Battalion 72, activate the Emergency Alert Tones."
- **Dispatch:** "Porterville copies, activating the Emergency Alert Tones."

#### **\*Emergency Alert Tones Activated\***

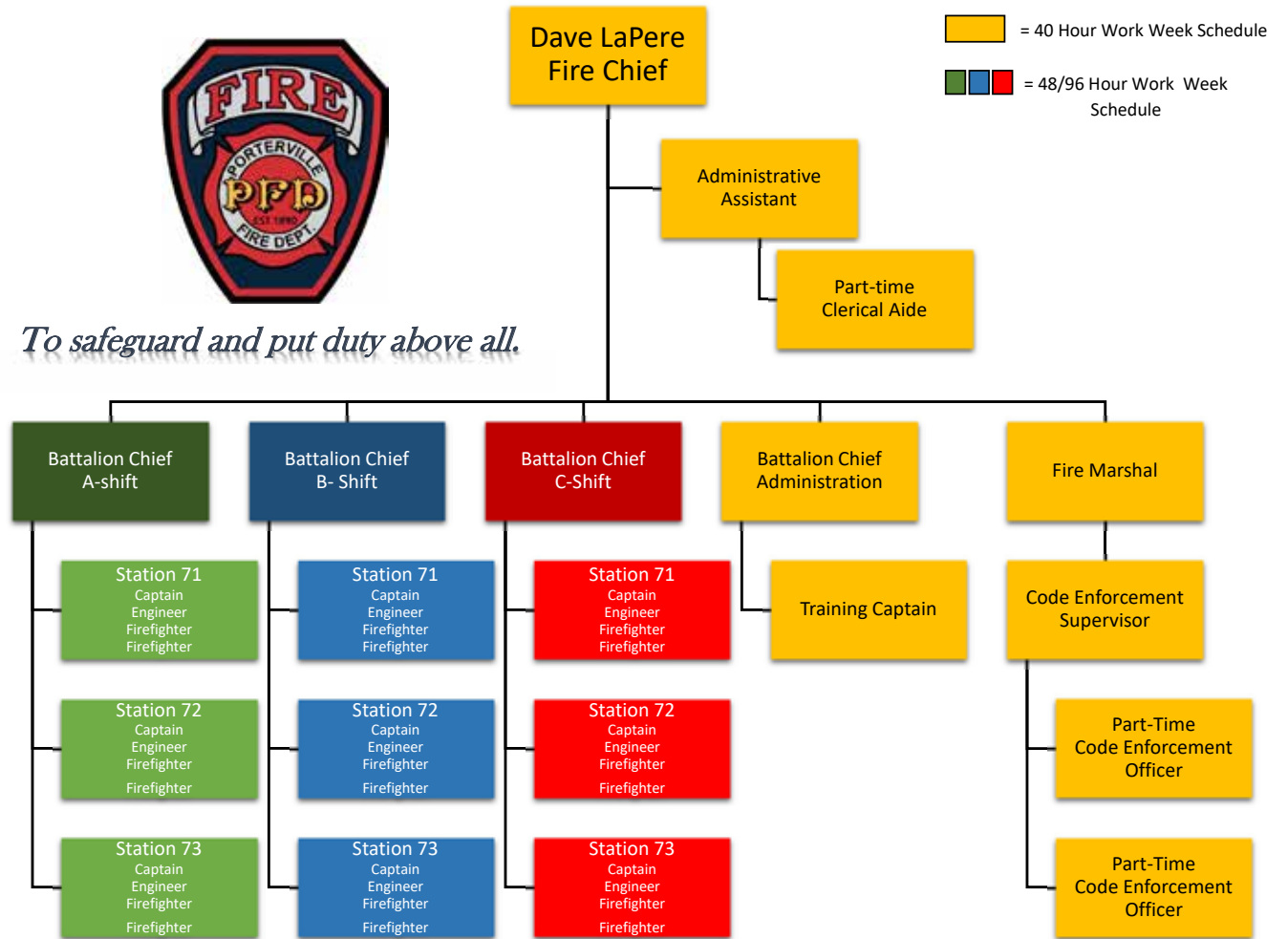
- **Battalion 72:** "Battalion 72, to all units on scene, we have power lines down on the Charlie/Delta corner of the building. Repeating, power lines down on the Charlie/Delta corner of the building."
- **Engine71:** "Engine 71 copies, power lines down on the Charlie/Delta corner of the building"
- **Engine72:** "Engine 72 copies, power lines down, Charlie/Delta corner"
- **Engine73:** "Engine 73 copies, power lines down, Charlie/Delta corner "
- **Engine20:** "Engine 20 copies, power lines down, Charlie/Delta corner"



# Organizational Chart



*To safeguard and put duty above all.*









APPENDIX H





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Porterville, CA