

Firefighter Line of Duty Death

06/28/2015 Incident 15-0061817 06/28/2015 Incident 15-0061833

Introduction of Post Incident Analysis and Background

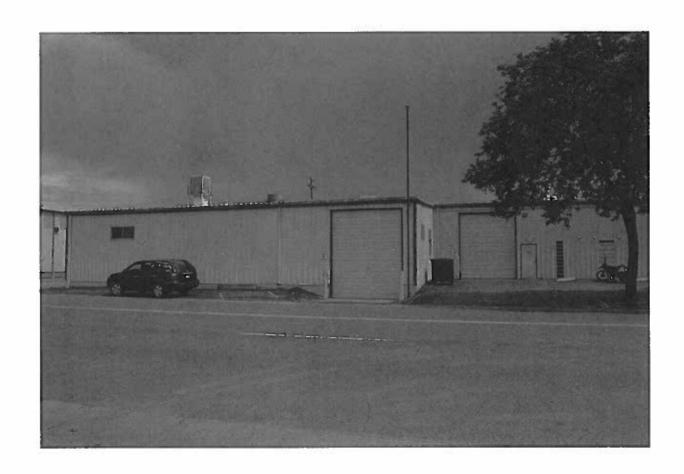
The intent of a Post Incident Analysis (PIA) is to allow the Denver Fire Department to get a clear idea of the effects of their actions on the outcome of an incident. By comparing the expected outcome to the actual consequences, we can make personal and organizational adjustments if appropriate. This will help serve as a catalyst for analyzing the way we do business. Additionally, this provides an enhanced method for personnel throughout our workforce to disseminate critical lessons learned during an incident.

The PIA Team is composed of members of the Denver Fire Department representing all ranks from Assistant Chief to Firefighter. The success of the PIA Team is dependent upon the cooperation of all members associated with an incident and their accurate input. Every reasonable attempt will be made to keep the identity of those members either working on a PIA or those asked for input into a specific PIA confidential. It is only through this confidentiality that open and honest input will be given and the integrity of the process will be maintained. The soul intention of the PIA is to learn from actions taken and improve current strategy and tactics used by the Denver Fire Department. Any significant event can be eligible for investigation by the PIA Committee.

PIA June 28, 2015 Incident 15-0061817

Building Background and Information

The building located at 3860 Blake Street is an L-shaped, vacant warehouse occupancy approximately 60ft X 300ft in size. This location is a high density commercial area that borders Districts 2 and 6. With the recent expansion of Light Rail and the DIA Heavy Rail system running through this area it is currently experiencing a large amount of urban renewal. The building was formerly Car-Go Battery until 2012. In April of 2013 an inspection was performed while the building was vacant. In approximately March of 2014 it was found that a marijuana start-up business was illegally operating in the building. After multiple court summons were issued due to a prohibited change of occupancy (proper permits for new construction and marijuana business conversion were not pulled) it was then closed for business. As part of the sentence, the property was ordered to pull the appropriate building permits to ensure the building was put back to its original use. On October 1st of 2014, a follow up inspection was performed and the building was returned to its original state. During an inspection in March of 2015 the Fire Prevention Division confirmed that it was still in its current vacant state as a warehouse.



Incident Overview

21:29:55

On Sunday June 28th, 2015, at approximately 2130 hrs. Denver Fire Dispatch was notified of a dumpster fire in the area of 39th and Blake Streets.

Dispatcher: Denver Fire Dispatch

911 Call Taker: Transferring 3860 Blake Street

Dispatcher: Thanks, go ahead caller, how can we help you? **Caller:** Yeah, there's a fire...uh...there's a trashcan on fire...

Dispatcher: Ok...

Caller: Outside of a warehouse...uh...looks like the warehouse is actually catching on fire

also, so...

Dispatcher: Oh, really? Okay...so the exact address is 3860?

Caller: Uh...the address on the door says 3860 Blake, that's all I know though...

Dispatcher: And it's uh, like a warehouse looking building, you think?

Caller: Yeah it's a white warehouse...

Dispatcher: And how big is the trashcan, is it like a regular little trashcan or is it kind of a

dumpster size thing?

Caller: No, it's a dumpster size

Dispatcher: Okay...alright...your first name?

Caller: Uh, Raul

Dispatcher: Alright, what's a good phone number for you?

Caller: 303-###-####

Dispatcher: So did that building look unoccupied right now then, probably?

Caller: Yeah, there's no one...I can't really tell, there's no one inside, but...there's no cars

outside, everything's shut down, turned off.

Dispatcher: So that dumpster's right in front of that address then, or is it on the side of

the building?

Caller: It's right in front of the address.

Dispatcher: Cool alright, perfect, they're on their way...thanks for the call

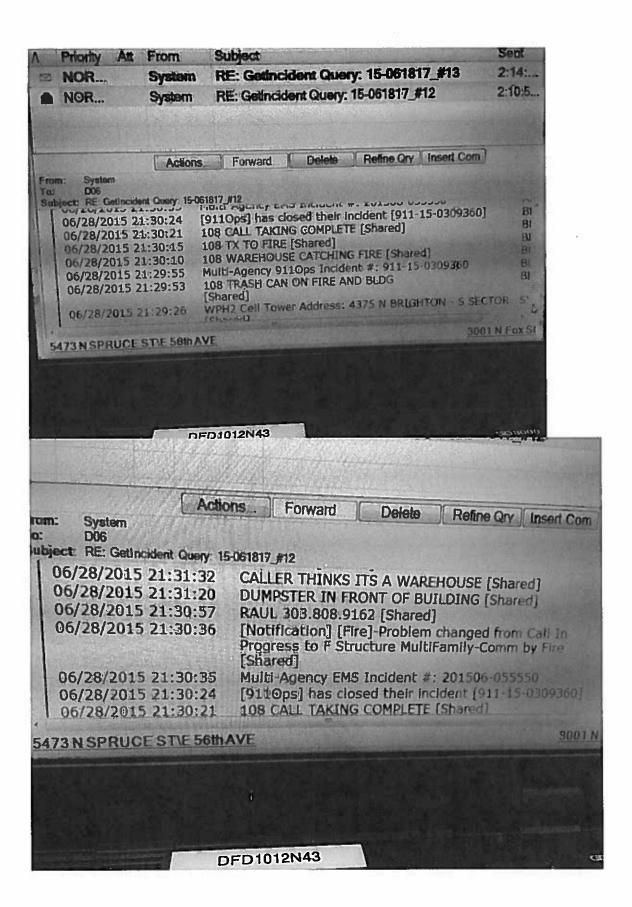
Caller: Alright

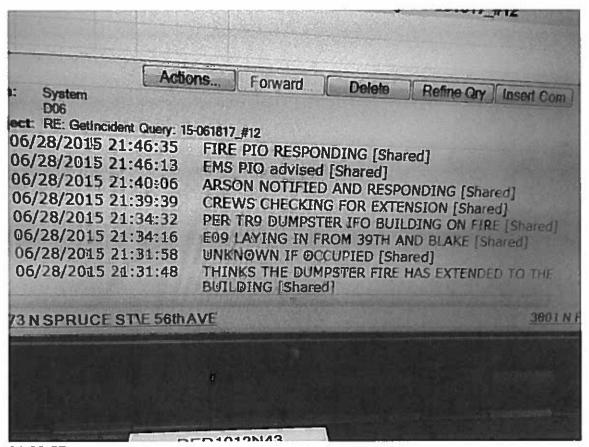
Based on the information given a <u>Multi-Family/Commercial Structure Fire/Group</u> response was made. The assigned tactical channel was District Channel 2.

21:30:59

The Dispatch is as follows: Attention. This will be Map Page Golf (G) 24. Report of a Multi-Family, Commercial Structure Fire. 3860 Blake Street. For Rescue 1, HAMER1, 9's a pair, Engine 3, Engine 10, Truck 4 and Truck 8 as the RIT. Map page Golf 24. Report of a multi-family commercial structure fire. 3860 Blake Street (Transmission was made 2 more times). Engine 6 (E06) on Channel 1 was picking up from a call in the area and asked dispatch to add them to the Group Response. The initial group response for this area was consistent with the first due companies, with no companies responding from out of their first due fire response area. This address is in Station 9's first due fire response district. Station 9 is a double company station housing both an Engine and a Tower.

21:31:28





21:33:57

Approximately 4 minutes after being dispatched Engine 9 (E9) and Tower 9 (TR9) were first to arrive on scene. TR9 took the direction of travel from the southeast to the northeast from Downing on Blake Street. E9 and TR9 went underneath Blake on 38th and E09 went north on Walnut Street to 40th Avenue, made a left on to 40th Street and then made a left on to Blake Street traveling from the northeast to southeast in order to secure a water supply from 39th and Blake "closest to the building." TR9 went south on Walnut Street then North on Downing and made a right and went Northeast on Blake to the address. Upon arrival companies reported visible flames emitting from the top of the dumpster.

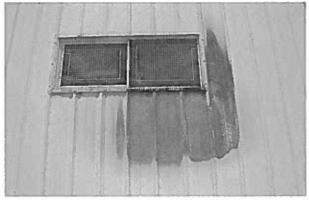
E9: We're laying out from approximately 39th and Blake Street

TR9: 9's a pair on scene. We have a dumpster outside of a warehouse next to a building. This appears only to be a dumpster. We're going to check for extension. All units Level 1 stage at this time. TR9 will be in command.

Dispatch: Tower 9 in command. 21:34.

Command was established. TR9 dismounted the apparatus and immediately pulled the dumpster away from the building using a New York Hook. It was noticed that the warehouse next to the dumpster had charring on the paint where the dumpster was

against the wall. It was further observed that the window directly above the location of the dumpster was still intact.



While responding, E09's Company Officer read their MDT notes and after listening to initial radio reports and observing the scene, decided to lay a single 3" line using the Humat valve from 39th and Blake Streets. Upon arrival E09 observed a 10 yard dumpster on fire against a single story metal building approximately six feet below a window. E09 pulled a red line from the rear of their apparatus and extinguished the main body of fire in the dumpster and searched through the dumpster with pike poles checking for any hot spots.



21:34:40

Engine 3 (E3): on-scene

Command (TR9): Copy that Engine 3. Go ahead and standby for just a minute.

E03, Engine 10 (E10), Tower 4 (T4), Hamer 1 (HM1) all arrived on scene simultaneously.

Engine 10 (E10): Command, Engine 10 as well.

T4: And Truck 4 is on scene

HM1: And HAMER 1

Command (TR9): Copy that all units, go ahead and standby for just a few minutes.

E03 went to work at the Humat on E09's plug. E10 secured a secondary water supply at 37th and Blake Streets.

21:35:11

E03: Engine 9 from Engine 3, we're at your plug.

Chief 2: Tower 9, this is Chief 2. I'm on scene. I'll go ahead and assume command on, uh, Channel 2. You can join your crew. Lieutenant see if you can gain access into the building to verify we have no extension.

TR9: Copy that command.

Command: Truck 4 from command, would you guys get a 360 of the building? Make sure nothing else is going on here.

T4: Copy 360

T4 began a 360 of the warehouse beginning on the A-Alpha side of the building walking towards the (B) Bravo side.

21:35:50

HM1: Hamer 1 Delta to command, we're doing a 360 for ya right now.

Starting their 360 on the (A) Alpha side walking towards the (D) Delta side. Both HM1 and T4 were unable to complete their 360's due to a chain link fence on the (C) Charlie side. While on either side of the fence they confirmed 360 checked clear. HM1 returned to the (A) Alpha side of the building. T4 remained on the (C) Charlie side.

21:36:21

TR9: Command from Truck 9, this looked like it just scorched the outside of the building. I don't see a Knox box or anything. We might have to force a door if we want to get in?



Command: Yes we do want to get in so, force the door and get in.

TR9's crew noticed the paint on the outside of the structure where the dumpster was located had scorch marks and was directly below a window. Sizing up the structure, TR9 had the option of a glass man door or an overhead garage door. TR9 crew members chose the large roll-up door to cause the least amount of property damage and because of its proximity to the exposure. TR9 was able to forcibly pry under the roll-up door using a halligan to raise the door approximately 7'.





21:36:49

Truck 8 (T8): Truck 8 is on scene.

Command: Truck 8 why don't you throw a ladder to that roof there, just above where the fire occurred. Take a look up there for me with some TIC's and see if there's any concerns.

T8: Truck 8 going to the roof copy.

The senior (C) and junior (D) members of T8 wearing full PPE and carrying hand tools for ventilation and the Thermal Imaging Camera (TIC), prepared to throw a 28' ladder to the (A) Alpha side of the building. The ladder was thrown directly between the roll up door and the man door closest to the kick-out of the building where the fire had originated. T8 Officer (A) assisted members with their tools and the two firefighters proceeded to deploy the ladder. E3 members assisted with footing the ladder. T8 A ordered his members to sound the roof. T8 C proceeded to climb the ladder to the roof. T8 D then proceeded to climb the ladder with a dry wall hook. With the assistance of T8 C, T8 D Firefighter made the roof and together they began sounding the roof using the drywall hook. T8 A and T8B followed shortly behind. T8 C and T8 D were ordered by the officer to check the soffit and eve for any heat.

HM1 after circumventing the chain link fence on the exterior of the structure completed their full 360.

HM1: Command from HAMER Delta, Rear of the structure checks clear.

Command: Ok message received.

21:38:00

T4 upon completion of 360, forced entry through a man door on the C-Charlie side of the structure using a shove knife. T4 upon entry observed a light haze.

T4: Command, Truck 4, uh, we made entry through the uh, back door here.

Command: Ok, copy that. Thanks.

TR9: And Truck 9, we're in also. We're right next to where the fire was.

TR9 also observed a light haze upon entry.

21:38:21

Chief 4: Command Chief 4 is on scene

Command: Message received. Chief 4 Mark, no need to suit up. I think that this is gonna be uh, a fire that's under control. I just want to verify there's no extension on the inside.

Chief 4: Chief 4 Copy that

Chief 4 dismounted the Chief's vehicle and headed up towards the Command Post and checked in with Command. He then proceeded to investigate the dumpster that had been pulled away from the building.

21:38:55

Amb #55: Ambulance 55 we're staged.

Ambulance #55 staged one warehouse away facing south on Blake Street away from any fire apparatus.

Command: Message received 55. Thanks

21:39:12

TR9 noticing a light haze, made their way to the interior side of the wall adjacent to the burning dumpster. Using their TIC, TR9 checked the opposing wall and found temperatures slightly elevated particularly below the window area. Using the Raytec, members confirmed that the temperature of the wall was slightly elevated.

TR9: Command from TR9 we are directly on the other side of the wall where the dumpster was. We're getting slightly elevated heat readings in here, and a little bit showing up on the thermal, but nothing very much.

Command: Ok standby one.

R1: Rescue is on scene.

R1 while en route used the program Google Earth to get a size up of the structure and saw skylights and other hazards present on the rooftop from aerial photos. R1 has a standard practice of using Google Earth to get aerial layouts of the buildings they are responding to. Many of their fire responses are out of R1's first in inspection district, therefore this assists with their unfamiliarity. Since the Skylights appeared to be clearly visible from the Google Earth photo, Rescue 1 did not communicate this information to crews working on scene.

21:39:49

Command: Truck 9 uh, Lt. just verify for me that there's nothing in, going to be in the wall or any insulation burning or anything burning in, inside there. Let me know if we need to open up and do whatever you got to do. I just want to verify we have absolutely no possibility of extension or rekindle fire.

TR9: Yeah copy that Chief, We're just about to open a small portion of the wall.

TR9 members peeled the metal fascia off of the interior wall of the warehouse and no fire was found to have communicated to the interior of the structure.

Command: Ok message received. Break. Truck 4 are you with them?

T4: Uh, we're just to the North of that area. There's a little smoke over here. We're trying to clear it out.

Command: Ok copy that. Can you complete a primary search of the interior to make sure we just have no life hazards?

T4: That's affirmative.

T4 while performing the primary search discovered the building was further subdivided on the interior by chain link fence. T4 found the power to the exhaust fans located on the roof. T4 powered up the fans and assisted with clearing the residual smoke from the structure. T4 then proceeded to exit the (C)-Charlie side and go around to the roll up door TR9 had opened to avoid the chain link sub-divider on the interior of the structure.

21:40:48

During this timeframe of the incident there appears to be no further working fire that has communicated to the inside of the structure. Command begins putting companies back in service.

Command: Rescue 1 from Command, I'm going to place you guy's in-service on-scene. Engine 06, Engine 10 you guys can go ahead and go in-service. Have you guy's stand-by on-scene until we start picking up some supply line here.

E10, and E06 begin to remove PPE and prepare to assist other companies with their supply line that was still in the street.

21:42:17

After the T8 A and B made their way to the roof, all 4 members as ordered by their officer, sounded the roof and walked along the edge making their way towards the (B) Bravo side of the structure. T8 crew members at the Alpha/Bravo intersect of the building used the TIC to check for any residual heat. Both the T8 A and B surveyed the roof from this vantage point to get dimensions and a basic layout of the structure. No visible hazards were scene. T8 C and D firefighters proceeded to check the affected area with the TIC for any heat. All readings were negative. Both T8 A and B then began to walk towards the peak of the roof.

Command: Truck 8 uh, Bravo Command. John can you give me a rough idea of the dimensions from up there?

T8 B walked further up towards the peak of the roof checking for dimensions. After conversing with the Officer both members concluded 300ft X 60ft.

Truck 8 Bravo: I'd say approximately 300 by 60. Appears rectangle except for this little notch you see here where the dumpster was.

T8 A then began to make his way back to the check on T8 C and D firefighters.

Command: I didn't quite catch all of that. Did you say 300 by 60? And I missed the rest of it.

Truck 8 Bravo: Yeah, confirmed. 300 by 60 and uh, pretty much rectangular except for the little notch right here where the dumpster was.

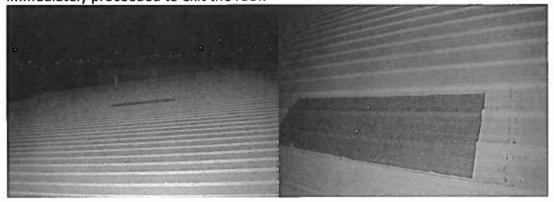
Command: Ok, perfect. Thank you

Truck 8 Alpha: And command. Truck 8. No hot spots on the roof...

At this time T8 Alpha heard a large thud and turned to look and saw that Truck 8 Bravo was no longer on the roof

Truck 8 Alpha: ... and we have a firefighter down, Chief. Firefighter went through the roof.

T8 members went to the hole in the roof and tried to see if they could assist their Engineer. It was observed that T8 B had fallen to the concrete floor below. They then immediately proceeded to exit the roof.





Command: Ok. Message received. Break. EMS can you come up to the front of the building? I have a firefighter that fell through the roof here.

It was at this time that T4 and TR9 crews heard a loud cracking noise and saw an object fall from the ceiling to the floor. Initially it was dark inside the building and it was unclear as to what fell. Both companies upon closer investigation observed a downed firefighter. T4 crew members were closer in proximity and immediately began C-spine precautions and a Head to Toe Trauma Assessment.

Chief 4 was standing near the roll up door and also heard a loud noise inside the building. Upon further investigation Chief 4 saw a firefighter laying approximately 20 feet inside the building. After seeing the downed firefighter Chief 4 looked to the left and saw a DHH Paramedic Unit. Chief 4 proceeded to wave the Ambulance in and followed them into the building. It was observed by Chief 4 that T4 was performing EMS on T8 B. Chief 4 confirmed which crew member was on the ground with attending firefighters and relayed to Command.

E10 picking up supply line approximately 10 feet from the rollup door also heard the sound and observed something hitting the ground followed by T8's radio transmission. E10 Officer instructed the E10 Engineer to grab the medical bags and backboard.

E06 dismounted their rig to go assist with the downed firefighter. Upon arrival E06 members saw multiple Firefighters and DHH Paramedics assisting Engineer Whelan.

Chief 4: We got a paramedic supervisor inside. I'll guide the paramedics in. We've got guys running to him.

Command: Ok, message received. Mark, take a look and see what you need there.

Chief 4: Copy that

AMB #55 was on scene and saw T8 B fall from the roof to the ground from the exterior of the structure and immediately converged on the immediate scene. The Attending Medic started ALS while the Driving Medic called for an additional Ambulance Unit to be dispatched Code 10.

EMS #32 Command monitoring the Tactical Channel heard the transmission and immediately responded Code 10. DHH Ambulance #55 requested a second ambulance code 10 on Amb OPS. After hearing the firefighter down transmission Amb #36 monitoring Amb OPS and Dist Channel 2 went Code 08 in service and responded 10 from DHMC (Post#5). Paramedic Dispatch then assigned Amb #36 as the second ambulance (Amb #36 was staffed with 2 Paramedics, one Paramedic an experienced veteran of the DFD).

21:43:38

TR9: Command from Truck 9, regarding the inside of the building, the building is cooling quickly. The fire's out. We checked the hole.

Chief 4: Truck 8 Bravo. Truck 8 Bravo fell through the roof.

Command: Ok message received

The Attending Paramedic noticed that the downed Firefighter was in the fetal position lying on his right side on the concrete floor. The Attending Paramedic observed one Firefighter performing C-Spine Precautions, while another was performing a Head to Toe Assessment. The Attending Paramedic tasked the Firefighters with removing T8 B's bunker gear and asked the Firefighter holding C-spine if T8 B was "awake and breathing?" At that point it was reported that he was breathing and unconscious. While attending to him, T8 B's SCBA was first removed then his bunker pants. His left arm was then removed from his bunker coat. Due to the severity of the injury to his right arm it was deemed necessary to cut his bunker coat off to check for further injury. At some point it was noted that T8 B regained consciousness. He was then immediately packaged for quick transport. (It was observed that it took 2 different sets of trauma shears to remove the right sleeve of Engineer Whelan's bunker coat.)

Chief 4: And Command from Chief 4 I'll guide the paramedics in. They're, they're coming up in their ambulance now. We got the wheels coming in.

During this time the Driver Paramedic from Amb#55 notified paramedic dispatch of a Code 10 Trauma Return. The Driver Paramedic then handed the Pram and a Backboard to one of the Firefighters standing by so that T8 B could be moved to the Ambulance. While T8 B was packaged for transport, the Driver Paramedic performed the setup procedures for a Code 10 Trauma Return. The Ambulance was then restaged facing North on Blake Street to facilitate quick egress. The Paramedics were then ordered to back the Ambulance up the driveway to the opening of the warehouse rollup door by (Chief 4). T8 B was quickly loaded for transport and T8 (A) Alpha and E06 (C) Charlie were assigned to ride in with Amb#55 to DHMC.

Command: Ok, Companies that haven't been assigned in there, go back to your rigs and stay put.

Command: Engine 6 and Engine 10, guys go back to your rigs and stay put I'll assign you if we need you.

Members of both E06 and E10 returned to their rigs to stage. E06 Charlie stayed and assisted DHH Paramedics with transport to the hospital.

Amb#36: Command from Ambulance #36

Command: Go Ahead

Amb#36: Yeah, Chief, I'm going to be the second ambulance coming in. Where do you want us to spot?

Command: Ok, if we, we already have an ambulance here uh, I think we're just gonna have uh, one injury at this time. So if you guys just want to spot at 38th and Blake, that'd be great.

Amb#36: Ok, that ambulance requested a second one so we'll spot at 38th and Blake.

Command: K, message received. Break. Engine 10 from command

E10: Go ahead

Command: Cap, grab your crew and get back to your rig for me please

Command: Chief 4 from Command, you need any other assistance in there?

Chief 4: No, I got plenty I'm trying to clear people back. I got the paramedic supervisor in here, plenty of crews and the paramedics getting the ambulance close. And, we got wheels in here. They'll have him out in a minute.

21:45:56

Multiple members working inside of the warehouse were concerned with additional members falling through the roof and injuring themselves or personnel operating inside.

Chief 4: Hey Dave, is everybody off the roof? Just so that we're good in here.

Command: Truck 8 from command, did you guys clear the roof?

Command: Truck 8 Alpha from command?

T8- Standing by

Command: Have you guys cleared the roof?

T8- I cleared off and it looks like we got Charlie and Delta down.

Command: Ok. Confirm for me that you and Charlie and Delta are down on the ground.

T8 (C)- Chief, Truck 8 Charlie. Charlie and Delta are down.

Chief 4: Command from Chief 4, uh just to update you, it was Truck 8 Bravo. Fell probably 25 feet down onto the floor. Uh, this warehouse is pretty empty where he fell so he went all the way from the roof to the floor. Didn't hit anything else. So about 25 foot fall.

Command: Ok, copy that. Mark, can you make your way over to the car and face to face with me?

Chief 4: Yeah, I'm heading that way now.

21:47:06

Command: Engine 3 from command, you guys can start breaking down on that hydrant and 6's and 10's will assist you with picking up that supply line.

E03: Engine 3 Copy

21:48:44

Command: Truck 4 from Command, Lt. let me know on the primary search of the building please.

T4: Ok, we uh, we ceased the primary search when he fell through Command: Ok, message received. Break. Rescue 1?

R1: Rescue standing by.

Command: Matt, I'm going to have guys go back out of service. Get into the building and complete the primary search for me and make sure there's nothing else going on inside the building, any smoke make sure there's no people in there.

R1: Copy, Sir. Primary

21:49:43

Amb#36: And command from Ambulance number 36, we're off the ticket

Ambulance #36 returned back in service.

Command: Ok. Copy that. Copy and thanks.

21:51:57

T09- Command from Truck 9, temperatures on the interior are continuing to drop

Command: Ok, message received, and Lt. you said you did open up an inspection hole and it was negative right?

T09: That is affirmative, Sir.

Command: Ok, copy that. In your travels on the inside, and Rescue 1 as well, if you guys see a telephone number for an emergency contact, let me know.

R1: Rescue, Wilco

21:53:06

Command: Engine 10 from Command, Cap, you still on scene?

E10: Yes, sir. Loading hose

Command: Ok, copy that. I see you're in service, as soon as you're done with that I'll go ahead and have you return. Thanks.

E10: Copy

R1: Command from Rescue 1 primary is negative. Primary is negative

Command: Ok, copy that. Matt, any smoke condition at all in the building?

R1: Negative

Command: Ok. Let me know if you find an emergency contact number for a property rep

R1: Wilco

21:55:43

Command: *HAMER 1 from Command?*

HM1: HAMER 1

Command: You guys are clear to go in service and return

HM1: Copy, we're helping uh, pick up a few items real quick, uh. It'll be a few minutes

but, copy

Command: Copy that. Break. Engine 3 from Command?

E03: Engine 3 bye.

Command: Ken as soon as you're all picked up you guys can go ahead and go in service and return.

E03: Copy

At this point of the incident, a secondary search was completed. With the exception of 9's a pair, companies were picked up by Command and returning to service. 9's a pair remained on scene and completed post incident overhaul. Dispatch sent The Command Staff Page informing them of a Firefighter injury. Scene was turned over to Arson 4 and Arson 9 for their investigation. Blake Street Command was terminated.

Synopsis

- Report of a structure fire in a Multi-Family/Commercial building
- First arriving companies (TR9, E9) reported dumpster on fire outside of warehouse next to building.
- First in truck officer (TR9) assumed command Level I staged all companies.
- First in Engine company (E9) secured water supply, pulled redline and extinguished dumpster with the assistance of TR9 crew removing dumpster from side of building.
- Chain link fence on the exterior of the structure created difficulty with completion of the 360
- Forcible Entry was required by companies to make interior
- Chain link fence further subdivided the interior of the structure making access difficult for crews
- Companies saw light haze of smoke after forcing entry into the structure
- Companies working on interior assigned search and rescue for victims and fire extension
- Visibility was low on the interior due to the of time of day
- Conditions did not warrant SCBA usage on the interior
- Crews sent to the roof to confirm size of building and check for vertical extension
- Firefighter went through a skylight on the roof while completing roof assignment

Observations

1. Observation: Communication of Safety Issues

Reference: Current Denver Fire Department Safety Reporting

Analysis: During the course of this inquiry, the committee became aware of a similar incident that occurred in 2012. This information was not disseminated throughout the department.

Recommendation: All members should be empowered and educated on how to submit safety concerns and near misses through their chain of command.

2. Observation: Group response to a Multi-Family/Commercial Structure Fire.

Reference: DFD Dispatch

Analysis: This response code is correct by current dispatch standards, however this coding can be misleading to members listening to the radio or viewing dispatch notes on the MDT. The current SOG response model for a Commercial Structure Fire is attached in the Appendix.

Recommendation: When dispatching, the coding should accurately reflect the type of incident crews are responding to (i.e. Apartment Fire, Hospital Fire, Auto Body Shop on fire).

3. Observation: Dissemination of building hazard information

Reference: Denver Fire Department Operations

Analysis: Building had been renovated from a Car-Go Battery Center to a marijuana business. Multiple court summons were issued due to a prohibited change of occupancy (proper permits for new construction for a marijuana conversion were not pulled). As part of the sentence, the property was ordered to pull the appropriate building permits to ensure the building was returned to its original occupancy classification. On October 1, 2014 a follow up inspection was done and the building was deemed to be converted back correctly. The building was re-inspected in March of 2015 and is currently unoccupied and returned to its original occupancy.

Recommendation: There is significant information collected, both by Fire Prevention Division and Operation companies, through inspections and pre-plans that is not supplied to all department members responding to incidents. Information should still be available with significant hazards incorporated for fast and easy retrieval (i.e. Target Hazards, Construction Concerns, Access Issues and Changes to Fire the Code).

4. Observation: Lack of Critical Information on Mobile Data Terminals (MDT)

Reference: DFD Operations Members

Analysis: The ability of the MDT to pull up all target information while responding. This should include any photos, Google Earth aerial information and current pertinent notes.

Recommendation: Ability to access Google Earth or aerial photos. A formal process to submit information to be added to address notes (i.e. information to

be permanently attached to the address that automatically generates in the dispatch notes similar to the caution notes generated by DHH or DPD).

5. Observation: Review 2111.01, 2113.05, 2113.04 of the Denver Fire Department Operational Directives

Reference: Denver Fire SOG's

Analysis: These Operational Directives should include tactics on roofs (i.e. Steel Roofs, Roofs with Skylights and Roofs with Corrugated Fiberglass Panels). Recommendation: All members should review Fire Ops Memo 025-2015 and the associated PowerPoint. Regularly scheduled review of SOG's to address changes in industry standards, new technology, improvements to strategies and tactics.

6. Observation: Thermal Imaging Camera (TIC) usage.

Reference: Fire Ops Memo 025-2015

Analysis: It is imperative to understand the limitations of a TIC. While a TIC can identify heat signature or extension of fire, it *may or may not* identify other potential hazards associated with fire ground operations (i.e. Building Construction, Hazardous Materials).

Recommendation: In service training from TIC representative on capabilities of product. It is recommended that refresher training be provided annually on the TIC.

7. Observation: Absence of a dedicated Safety Officer

Reference: NFPA 1521 Standard for Safety Officers

Analysis: All incidents necessitate the need for a designated Safety Officer. Currently the Denver Fire Department does not have a dedicated Safety Officer, nor is a Safety Officer dispatched to emergency scenes.

Recommendation: The Denver Fire Department should implement a full time, 24 hour staffed Safety Officer position and policy.

8. Observation: Lack of real time information relayed while responding

Reference: DFD Dispatch

Analysis: The initial dispatch was for a Multi-Family Commercial Structure Fire. Prior to the arrival of the first in crews, there were no additional updates given on the tactical channel to inform incoming units that this was a dumpster on fire next to a warehouse. However, en route this information was updated on the MDT's. This information could be especially beneficial to Assistant Chiefs responding to incidents.

Recommendation: Information updates should be broadcast over the air to responding units.

9. Observation: No Placarding for Buildings with Safety Hazards

Reference: Various state fire codes

Analysis: Some state laws require placarding of all buildings that feature floor, roof truss construction, and skylights which enables the incident commanders (ICs) to choose the proper firefighting mode and protect the rest of the operating forces.

Recommendation: Amend city fire code to include or seek voluntary compliance of Safety Hazard Placarding on buildings that have existing hazards.

10. Observation: RIT Team Discipline

Reference: DFD RIT SOG Guideline 2110.01

Analysis: Strong consideration should be given to maintaining a RIT team while

members are working in an operational environment.

Recommendation: All members review RIT SOG Guideline 2110.01. If an

incident commander chooses to use a RIT for another task, they must designate

another RIT to take their place.

11. Observation: Difficulty Removing Bunker Gear with Trauma Shears

Reference: DFD 707

Analysis: Department addressed the aforementioned item by issuing the Raptor

Leatherman scissor.

Recommendation: Training on the use of Raptor Leatherman.

12. Observation: More Incumbent Training Needed

Reference: Current Staffing DFD

Analysis: It is important to have an Officer solely dedicated to the Safety and Training Division for Incumbent trainings. It is imperative for this position to stay current on:

- New strategies and tactics
- Near misses/fatalities
- New technology/techniques
- Operational Training

This training will be situational based fire operations training to continue with skills building.

Recommendation: With increases in call volume, staffing and response area, the Denver Fire Department should increase the permanent staffing within the Safety and Training Division.

If you are interested in joining the Post Incident Analysis please respond to DFD.PIA@Denvergov.org