



2nd Alarm Garden Apartment Fire
May 2, 2009
14147 Castle Blvd
FS15's area



- One injured civilian
- Three injured Fire Fighters
- One Mayday
- Fire on three floors
- Seven apartments involved



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Executive Summary

At 0735 on May 2, 2009, units were dispatched for an apartment fire, reporting fire on the top floor of 14147 Castle Blvd. Units arrived to find a working fire in a four story garden apartment, with one patient in front of the building with moderate burns. Fire was on the fourth floor and had already broken through the roof.

Units made several attempts to knockdown this well developed fire in four apartments and attic area. But after a mayday, three injured fire fighters, and a floor collapse in a bedroom; crews where evacuated and master streams where deployed.

Injuries included:

- 1st and 2nd degree burns to the civilian (face & neck)
- Neck injury to a Fire Fighter
- 1st and 2nd degree burns to a Fire Fighter (hands & arm)
- 1st degree burns to a Fire Fighter (wrist)

All were treated and released, except one Fire Fighter was kept overnight for observation.

The incident required two alarms and specials due to the following:

- Complexity – delay in getting to seat of fire (seven apartments involved)
- Exposures – Potential vertical and lateral spread to adjacent exposures
- Injury – The injury to three fire fighters placed one company OOS and hampered two other units.

At this time the cause is still under investigation. The report will be updated as the information is provided from FEI.

Incident Statistics:

- 114 Personnel including:
 - 11 Engines (45 personnel)
 - 5 Truck Company's (22 personnel)
 - 2 Rescue Squads (11 personnel)
 - 3 BLS Units (6 personnel)
 - 4 ALS Units (8 personnel)
 - 6 Chief Officers (6 personnel)
 - 14 Support (16 personnel)
- \$1,300,000 loss to main structure
- \$300,000 loss to contents
- \$15,000 loss to exposure on Side B



Site Layout & Building Structure

- Fire building identified with black arrow and command post with a yellow dot.
- Three closest fire hydrants are identified with red dots (only three used)
- Ashford at Woodlake apartments which consist of 38 buildings (three & four story garden apartments)



- The complex is broke down into three buildings that are connected or close enough to use the same power feed and utility room for water & gas.
- All of the structures are Type 3 construction with no fixed fire suppression systems.
- The exterior walls are cinder block walls with wood siding (original) and then a second vinyl siding on top with foam insulation in between.
- The roofs of all structures in the complex are pitched and constructed of dimensional lumber in a truss form with a shingle roof.
- There are fire walls between the A & B apartments and the C & D apartments that do not break the roof line.



Post Incident Analysis for 14147 Castle Blvd

- The fire walls between the three buildings do break the roof line and the buildings are offset.



- There are two stairwells in each building, one on side A and one on side C. Both stairwells run from basement to the top floor.
- There is a two hour fire separation enclosure in the form of a lobby for all four apartments on each floor. Each side of this enclosure has a door for each stairwell.
- For the fire building there is a bridge walkway on side A which puts you on floor #2. On side C the entrance is ground level and puts you on the 1st floor.



Fire Code History

- In February 2008 there was a fire in apartment #401 in kitchen and bedroom area. Apartment #301 & #402 were involved but only with smoke or water damage. Cause was electrical in nature.
- All of the past violations found in the FCE file were fire extinguishers, address, or self-closing doors that were malfunctioning.
- At the time of the fire there were no outstanding violations or none noted post fire.

Unit Breakdown

(XXXX signifies no status or bad status)

	<u>Dispatch Time</u>	<u>On Scene Time</u>
<u>Box</u>		
E715	0735	0738
E841	0735	0747
E724	0735	0747
E712	0735	0751
E810	0735	XXXX
T715	0735	0738
T831	0735	0747
RS715	0735	0750
A841	0735	0747
Batt 703	0735	XXXX
Batt 705 (replaced by BC701)	0737	0752
<u>RID</u>		
T712	0737	0744
RS814 (replaced by RS742)	0737	XXXX
M712	0737	0747
SA700	0738	XXXX
<u>2nd Alarm</u>		
HCE111	0740	0754
E716	0740	0751
E718	0740	0754
E811 (replaced by E704)	0747	0803
AT810 (replaced by T701)	0749	0757
AT718	0740	0754
HCM115	0740	0754
CT705	0740	0834
AR733 (replaced by AR716)	0743	0756
CP727	0740	0827



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Unit Breakdown

(XXXX signifies no status or bad status)

	<u>Dispatch Time</u>	<u>On Scene Time</u>
<u>Special Alarms</u>		
A724	0805	0814
M704	0805	0817
E701	0812	0833
E812B	0812	0833
A712	0906	0919
CT740	0944	1035
M715	0940	0951
<u>Chief Officers</u>		
C705C	0757	0757
DC700	0740	0758
BC806	0740	0751
BC704	0740	XXXX
<u>Fire Marshal</u>		
FM2	1005	XXXX
FM67	0840	XXXX
FM55	0742	0802
FM56	0743	0804
FM23	0836	XXXX
FM16	0919	0930
FM50	0814	0938
FM33	1016	1108
FM43	1030	1130



Initial on Scene Report and Command

- ECC advised just prior to arrival “we are starting the Rapid Intervention Dispatch, we think this is a working fire”
- E715 arrived on the scene and advised “smoke and fire from a end unit apartment, give me a 2nd Alarm”.
- T715 established level 2 command in the attack mode and gave the report of “Side A with a 4 story garden apartment with a fire on the top floor quadrant C & D and fire through the roof.”
- T715 gave a report of people trapped with one patient on side A
- BC701 advised ECC to notify BC806 that both BC701 and BC704 were out of position.
- E724 gave the side C report of “no fire visible from the apartments but there is fire on the roof”.
- K715E arrived on side A and assumed command and established a stationary command post at his unit.
- Battalion 701 arrived and assumed command with K715E and moved the command post to Side A in the Battalion 701 unit.
- CP700 arrived on the scene and command was moved to the command post for the duration of the incident.

Communications

- Communications dispatched the incident on 7A.
- Units responded on 7B.
- Communications assigned the event to incident talk group 7G Incident-20 through 7J Announce-20.
- Most of the communications for the incident was on 7G.
- 7H was used early by command for unit run-downs (No MDC in K715E). The 2nd alarm units responded and were level two staged on 7H. EMS and Rehab were assigned to 7H later in the incident.
- 7I and 7J were never used.
- 7C was used by several units by mistake. Some of these units were responding, others were giving operational messages and there was a Mayday for another unit.
- VRS was not needed, but was activated by BC701.
- 7O was used by command to assist with a PAR check, but not used again until later in the incident during overhaul stage.



On Scene Operations

- The first alarm units followed the SOP for safe fire fighting operations, with a few expectations.
- Initial groups or divisions by Command (K715E):
 - Division 3 (T715 then BC806) with E715, T715, & T831
 - Side C Division (E724) with T701
 - Exposure "B" Division (E716)
 - Rapid Intervention Group (T712) E712, & RS742 & M712
- The initial incident objectives followed the RECEO (Rescue, Exposure, Confinement, Extension, and Overhaul) plan. Due to the amount of fire and the lack of manpower only the first two could be accomplished. Several attempts were made to confine the fire but after a ceiling collapse in the stairwell, a Mayday, and a well developed fire units were evacuated from the structure to regroup.
- Units regrouped and were sent back for a second interior attack & secondary search.
- The following divisions or groups were established after the PAR by Command (BC701 & K715E):
 - Division 2 (BC806) with E810, HCE111, & T831
 - Division 3 (BC704) with E715, E724, E841, & T715
 - Exposure "B" Division (C705C) with E716, E704, and T701
 - Side "C" Division (BC703) with E718 & AT718
 - Search Group (RS715)
 - Safety Group (SA700)
 - Staging Group (HCM115)
 - Rapid Intervention Group (T712) E712, RS742 & M712
 - Rehab (EMS702) A831, M712, & M715
- After the secondary searches were completed and the fire was contained to the original fire building units were pulled out. Master streams from side C were used to darken the fire in the collapse area and quadrant B of the top floor.
- Units were then sent back in for overhaul and salvage work by Command:
 - Division 1 (T701) with E701 & RS715
 - Division 2 (BC806) with E810, HCE111, & T831
 - Division 3 (BC704) with E715, E724, & E841
 - Side "D" Division (C705C) with E716
 - Side "C" Division (BC703) with E718 & AT718
 - Safety Group (SA700)
 - Staging Group (HCM115)
 - Rapid Intervention Group (T712) E712, RS742 & HCM115
 - Rehab (EMS702) A831, A712, CT740, & CT705
 - Basement (T715) with E724 & E704



Water Supply

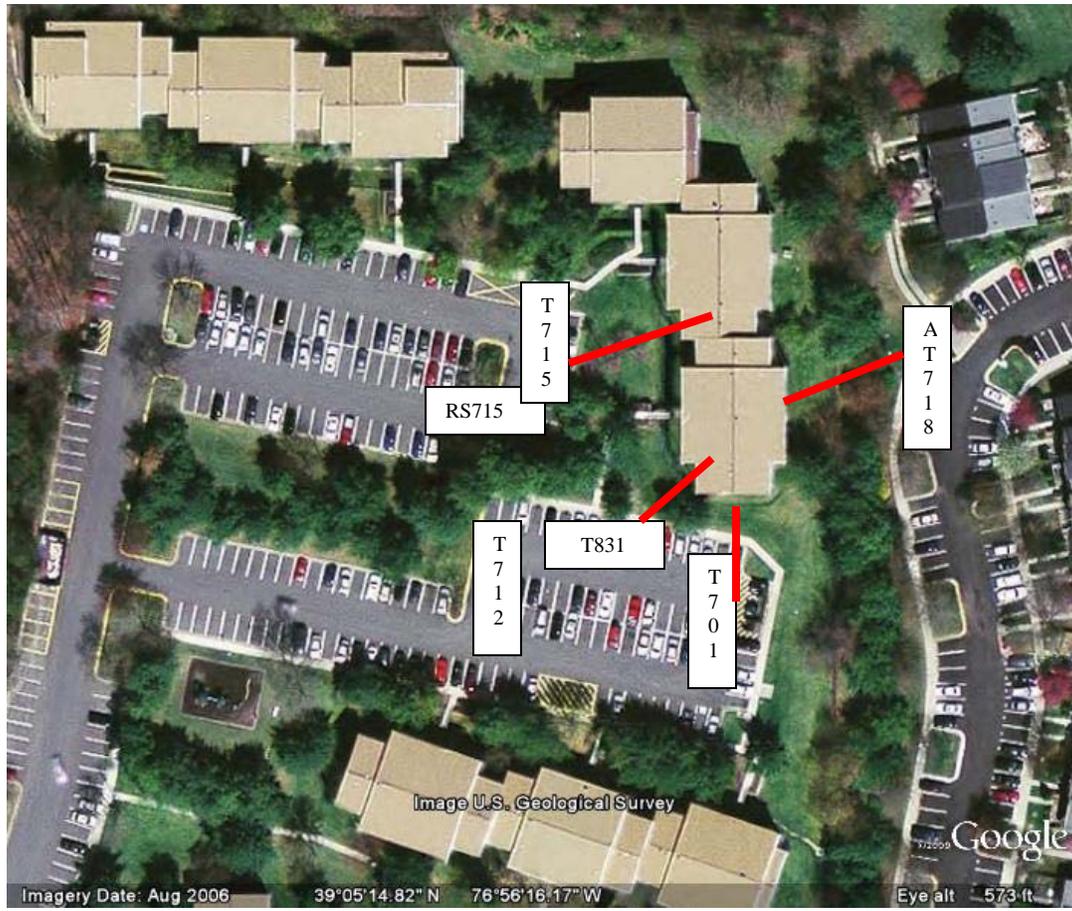
- There were a total of three hydrants on two different water mains used on this fire. The main size is 16" on Castle Blvd and 6" on Aldora Circle.



- 1st due engine (E715) advised en-route that they would be laying a 4" supply line from the hydrant in front of 14159 Castle Blvd and 2nd due engine (E841) acknowledged this message.
- 3rd due engine (E724) advised en-route that they would be laying a 4" supply line from the hydrant in front of 14139 Castle Blvd and 4th due engine (E712) acknowledged this message.
- But 1st due engine arrived on the scene and actually laid out from 14139 Castle Blvd. 2nd due engine arrived on the scene and established their own water supply using their soft sleeve. 3rd due engine arrived and completed 1st due engine's water supply. 4th due engine arrived and parked away from the scene.
- 3rd due engine on the 2nd alarm (E718) established their own water supply through their soft sleeve.



Tactical Positioning



- For a garden apartment complex there was a lot of space available for the 1st alarm units.
- First due truck (T715) took advantage of being one the first arriving units and positioned in an excellent spot. Their positioning allowed them to use their aerial ladder on both the fire building and the exposure “B” building.
- 2nd, 3rd, and 4th due trucks (T831, T712, & T701) all tried to squeeze into an area that one, maybe two trucks only could have covered. The good element of having this many trucks close was the amount of ground ladders used was outstanding.
- 2nd due truck (AT718) took an extra minute and set up on side “C” with an excellent position that covered both the fire building and the exposure “B” building.
- The four engines used for water supply all had good positioning. With the four engines close there was not an issues with the number of attack lines needed for this incident.



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- There was one EMS unit (A831) and one Rescue Squad (RS715) positioned too close to the scene. The area taken by these units should be kept available for trucks or towers.
- Staging area was on Castle Blvd and was not an issue. .

Attack Line Deployment



- There were a total of five hand-lines deployed on this fire with all five flowing water.
- The hand-lines ranged between 1 ¾" & 2" and ranged in length from 200' to 350'.
- E715 (1st Due) deployed a 350' 1 ¾" hand line through side A to the 4th floor. E841 (2nd Due) deployed a 300' 1 ¾" hand line through side A to the 4th floor. E724 (4th Due) deployed a leader line to side C, up a 24' ladder and then to the 4th floor. Two additional hand lines were pulled both through side A to the 2nd and 3rd floor. These lines were a 200' 1 ¾" hand line from E715 and 250' 2" hand line from E841. Having four hand lines deployed through side A, front door, resulted in numerous issues including hose entanglement and burst hose lines.
- E712 (4th Due) assigned to the RIG deployed a 1 ¾" hand line but never used it.



Post Incident Analysis for 14147 Castle Blvd



MAYDAY and EB Activations

- There was one actual Mayday for an injured Fire Fighter and five false EB activations on this event.
- Mayday call was first initiated on 7C by E715 Left for the injured Fire Fighter from E724.
- Division 3 called out priority message for an injured Fire Fighter on the 4th floor. RIG was activated by command but was met by the group of Fire Fighters assisting the injured Fire Fighter out of the front door on Side A.
- The injured Fire Fighter was working on the 4th floor when the ceiling failed and struck the Fire Fighter on the head. A second Fire Fighter noticed there was issue with the injured Fire Fighter, after the ceiling failed, because the Fire Fighter seemed to be dizzy and stunned. The second Fire Fighter quickly asked for assistance from others around him and started to move the injured Fire Fighter out of the building via the interior stairs.
- 1st EB activation was an accidental status by T712 tiller.
- 2nd EB activation was an accidental status by E715 left.
- 3rd EB activation was an accidental status by T712 tiller (Reset issue).
- 4th EB activation was an accidental status by HCM115.
- 5th and final EB activation was an accidental status by HCM115 (radio issue).



Accountability

- Personal accountability tags (PAT) were collected by command and placed on the PAT board, but never used.
- Daily line-ups for Battalion One and Battalion Four were on hand by command. Both of these documents were up to date and used as needed.
- Personnel numbers were recorded by command for the Prince George's county units, but names were not.
- There was a quick Personnel Accountability Report (PAR) done after the Mayday.
- Another PAR was done at the 35 minute mark. There were two more PAR's done by command after units were evacuated from the building. The IDLH was lifted shortly thereafter so there was no other PAR's executed by command.

Rapid Intervention

- E712 (4th Due) was the Rapid Intervention unit. The Rapid Intervention Group (RIG) was T712, RS742, & M712. E712 was the RIG supervisor.
- The RIG was established on side A of the fire building.
- The RIG was activated during the Mayday by command but quickly recalled when the Mayday was cleared.
- The RIG placed several ladders and prepared the outside of the structure very well.

Crew Integrity

- Crews should remain together during interior operations at structure fires. The bread and butter of being a fire fighter is being an effective member of an organized team. Knowing who you work with, their strengths and potential shortcomings, and how to effectively communicate with each other will afford the best opportunity of maintaining crew integrity throughout any and all operations.



Lessons Learned

Command

- Command officers need driver's 24 hours a day. There are numerous events such as this one where one person command is over-whelmed and playing "catch-up" until help arrives.
- Mobile Data Computers (MDC) must be in all command units and working. The first command officer did not have an MDC and it was very tough to simply get a unit run down.
- Personnel report to their unit officers, unit officers' report to their group leaders or division supervisors, leaders or supervisors report to command.
- Command officers were delayed because of a Metro event in Bethesda and BC701 was coming from DC. It is up to the available command officers to position themselves to cover the county.
- Transfer of command and the location of the command post has to be announced on the radio, preferably on the announce channel.

Communication

- Only two talk groups were used for this event which resulted in heavy communication on these two talk groups. If the command team was expanded the event could have been divided up better.
- The first command unit had one mobile radio and one portable this was not enough.
- The announce talk group was never used. Command should have used this when announcing the Mayday and clearing the Mayday and other tactical or safety messages.
- One of the Divisions was assigned to a unit and then transferred to a Chief Officer. Other units answered up as this division officer. Personnel have to monitor the radio.
- Crews have to know what channel they are supposed to be operating on and monitor their radio. More than once units were operating on 7C instead of 7G.
- Units have to use their proper id name when talking on the radio. 726 or Engine 211 vs E721 is not acceptable.



Post Incident Analysis for 14147 Castle Blvd

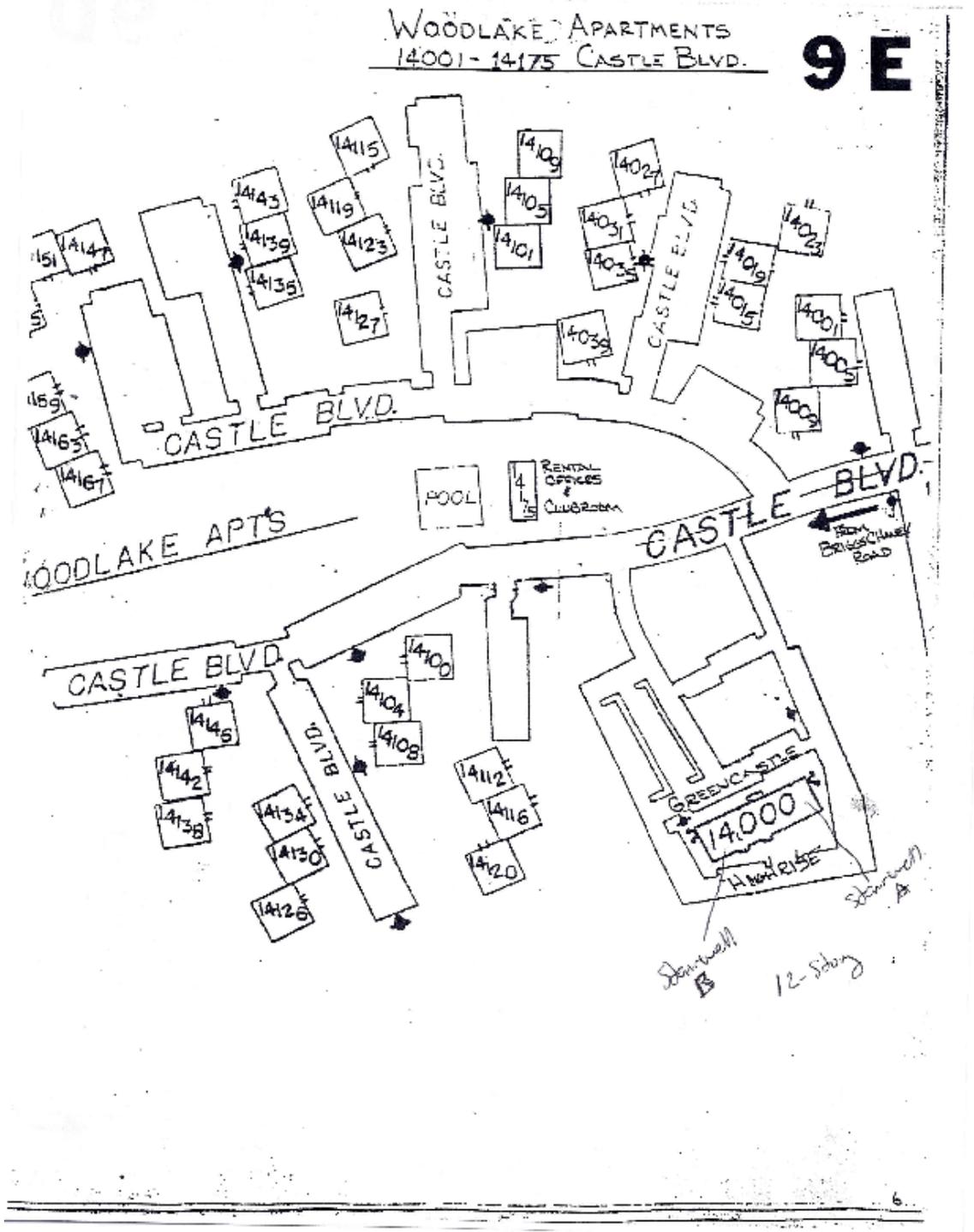
Operations

- Personnel and units assigned to the same group or division have to work together to accomplish the group or division goals. These goals have to be prioritized by the supervisor or leader.
- Crew integrity must be maintained throughout the event by the unit officer. This means reporting to their assignment together, rehab together, etc...
- One of safety officer's responsibilities on a fire ground is to monitor operations and address safety issues through command. The safety officer reported to the fire floor and gave orders to personnel instead of their supervisors or leaders. The orders were also operational related items instead of safety issues.
- Units were sent to Rehab and did not report or reported much later. Rehab is for the Fire Fighters well being, when told to report to Rehab the entire unit must report to Rehab, get checked, and hydrate as needed.
- Hand-line management was an issue through the front door. Crews tried to place four hand-lines in service in the same area. There should be a maximum of two hand-lines in one area, door, or stairwell.
- Personnel working around the fire building must be protected by PPE. This means PPE must be worn when placing ladders, deploying hoses, or racking out windows.



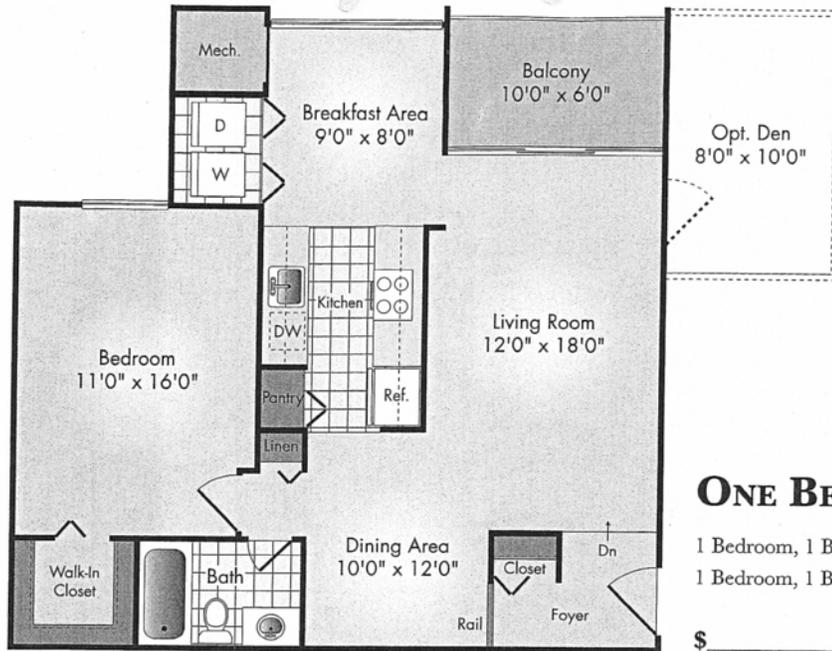
Post Incident Analysis for 14147 Castle Blvd

Maps or Preplans





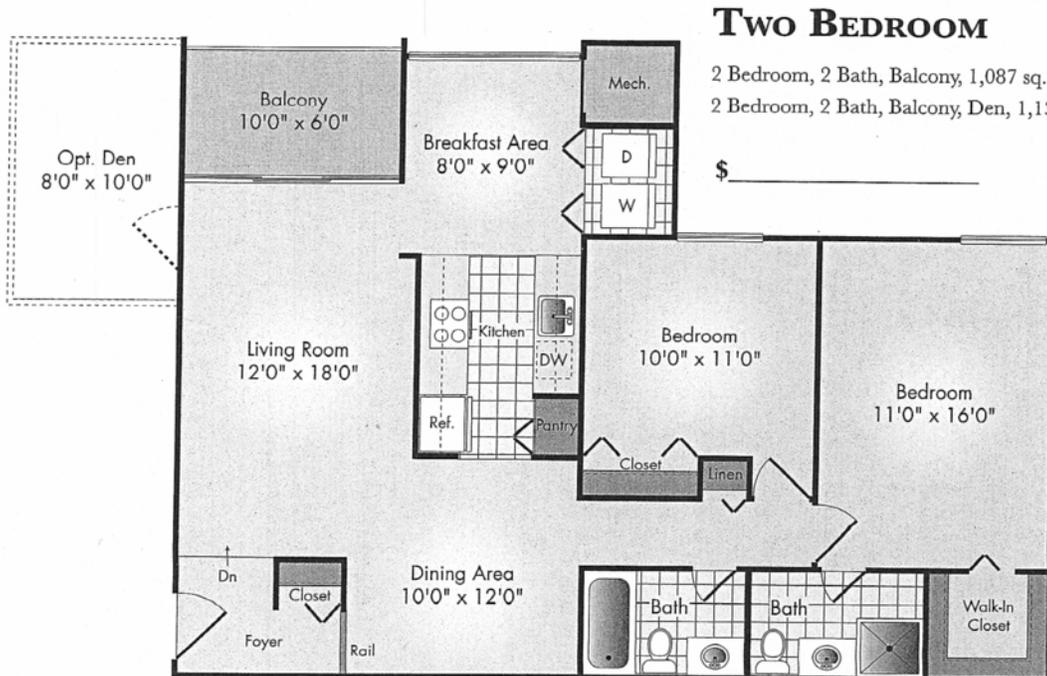
Post Incident Analysis for 14147 Castle Blvd



ONE BEDROOM

1 Bedroom, 1 Bath, Balcony, 812 sq. ft.
1 Bedroom, 1 Bath, Balcony, Den, 905 sq. ft.

\$ _____



TWO BEDROOM

2 Bedroom, 2 Bath, Balcony, 1,087 sq. ft.
2 Bedroom, 2 Bath, Balcony, Den, 1,130 sq. ft.

\$ _____

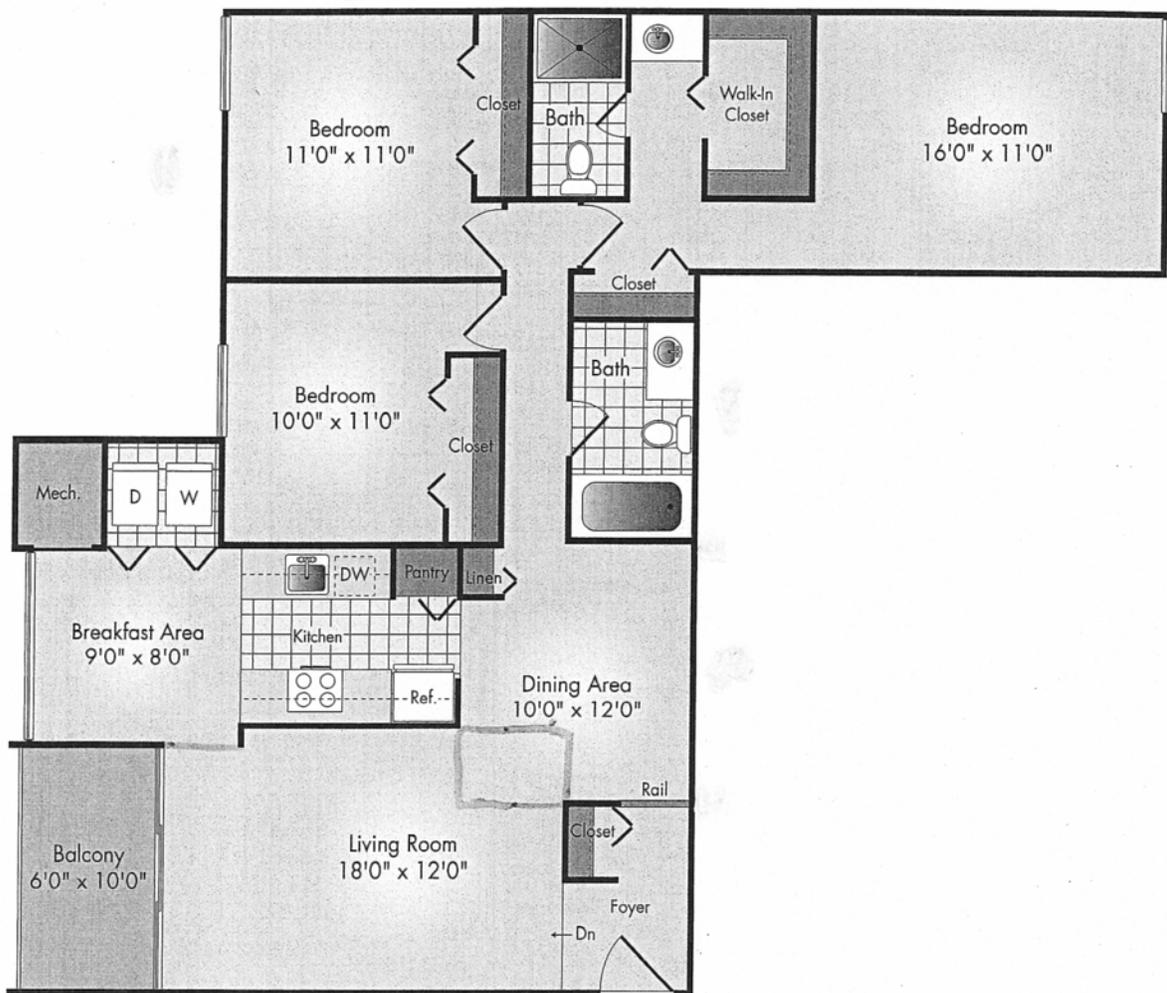


Post Incident Analysis for 14147 Castle Blvd

THREE BEDROOM

3 Bedroom, 2 Bath, Balcony, 1,330 sq. ft.

\$ _____





Communications Input (The following section has been added at the request of the communications officer)

INTENT

This report hopes to:

1. Provide a basic description of events (ECC specific)
2. Provide insight into the decisions that were made and to the extent possible, why they were made
3. Provide a framework for positive growth aimed at improving future decision making

BASIC DESCRIPTION OF EVENTS

Early Saturday morning on May 2, 2009, the ECC began receiving phone calls reporting a fire at 14147 Castle Blvd. It was clear from the nature of the phone calls that the incident would be a working fire. ECC notified E715, the first due engine, that they would be sending the rapid intervention dispatch (RID) and shortly thereafter E715 checked on the scene with a working fire and made a request for a second alarm. The fire was held at two alarms with some special calls made to fill the staging area.

OUTLINE OF ISSUES

This incident was marked, from the ECC perspective, by certain important events:

1. There was a Mayday called on 7C when the incident was assigned to 7G.
2. ECC did not respond appropriately to the Mayday
3. There were numerous EB activations to which ECC did respond appropriately
4. Resources were summoned to the incident without the knowledge of command
5. ECC continued to refer to the staging area manager as command. There is only one "command" per incident. The tactical talkgroup operator could have gently corrected this bad behavior
6. There was no coordination between command and staging, especially after an out of county medic unit assumed the staging area manager role
7. No one noticed that while command has asked for additional ALS, "staging" was an ALS unit that could have been used for providing care to the injured firefighters and staging



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8. ECC queried multiple units to advise them that they were sending the RID. It is not necessary to do this. If ECC believes they have a working incident they are obligated to send the RID and they do not need permission to do so.

WHAT HAPPENED AT THE ECC

With the exception of the glaring and potentially catastrophic error outlined above, the ECC performed well during this incident. The supervisor followed procedure by recalling personnel to the operations floor.

The tactical talk group operator managed both 7G and 7H*; he read the list of units to command with a smooth and even tone at a speed that facilitated transcription. When it was necessary the operator broke in on the tactical talk group radio traffic in an appropriate fashion.

There appeared to be no problem with the dispatch of the second alarm, despite multiple mutual aide companies that were unable to respond for whatever reason.

When the evacuation tones were sounded on 7G they were also sounded on 7H but there was no verbal notification that an evacuation or a Mayday was taking place. This is not a good thing. When an evacuation is ordered that message should be transmitted over the entire incident talk block.

When the Mayday was sounded on 7C, CAD 86 overheard that traffic on his deselect speaker. It just so happens that the operator at CAD86 was not on another call or monitoring another talk group. In short, it was blind luck that the Mayday was heard. The ECC reaction to this Mayday was, inappropriate at best. When a unit comes up on ANY talkgroup with emergency traffic, especially a SIGNAL3, or Mayday that person owns whatever talkgroup they come up on, and the ECC must adjust to this. The person calling the Mayday must NEVER be asked to switch talk groups even if they come up on 7A.

It is easy to point blame, and as a support section, the blame is ours alone to bear for this portion of the incident. However, it is important to also ask why this happened. The statements provided by the participants did not explore the "why" but there are some parallels between this incident and others like it. First of all the tactical talkgroup operator was monitoring multiple talkgroups and had to switch incident talk blocks to speak with the person calling Mayday. There is a limit to the amount of information that a single person, including a tactical talkgroup operator, can absorb, manage, and respond to appropriately.

**At one point the tactical talkgroup operator also switched to 7-charlie with the mayday unit.*



DISCUSSION OF KEY POINTS

- The ECC, much like field units, experiences overload when exposed to critical events. While personnel were recalled to the operations floor that takes time, while the incident continues to grow exponentially. This overload quickly leads to task saturation.
- When a critical event occurs the tactical talkgroup operator must focus on the assigned tactical talkgroup and not split their attention between that primary talk group and subordinate talk groups in the incident talk block.
- This fire reinforces the need for all ECC personnel to engage in peripheral listening, while recognizing that peripheral listening is another way of saying multi-tasking. It is recognized that a tactical talk group operator should limit the amount of multi-tasking, so as to pay proper attention to the incident. If the CAD 86 had not been listening peripherally the Mayday would have been missed.
- Likewise a certain portion of the communications mishap has to be owned by the field. It is critical that personnel pay attention to the assigned tactical talk group and not assume that the incident will be assigned to 7C.
- Once the Mayday occurs that becomes the operational priority at the ECC until it is resolved. As many personnel as necessary must be assigned to support that operation, even if it causes a resource deficit with answering 911 calls or handling other ECC business.

IMPROVING DECISION MAKING

In order to improve these decision-making processes ECC personnel must be exposed to a more rigorous training regimen. Currently ECC personnel are not afforded any in-service hours, and no other training opportunities. Appropriate reaction to critical events can be taught but not via paper tests or tutorials.

There is precious little time during an ECC workday to conduct training with more than one or two personnel at a time. Obviously there is some down time and shift supervisors are encouraged to use a greater percentage of that down time for the conduct of drills and simulations. However, the greater good would be met funding simulations, preferably in conjunction with actual field units on exercises.

Maydays and METRO calls (are complicated and historically been low-frequency events. However, recent trends indicate an increase in the frequency of both.



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The ECC cannot develop the needed proficiency with these tasks without have some ability to conduct realistic training.

RADIO ISSUES

There was one Mayday call and that came from T715 on 7C. There was no EB activation associated with that Mayday call. There were at least five other EB calls, two from the same Howard County unit and two from T712. Neither of those units was experiencing an actual emergency and there is no explanation as to why their buttons were activated.

It stands to reason that whenever there are a large number of people operating on a fire ground there are going to be some EB activations. The likelihood of those activations is dependent (*anecdotally*) on the number of personnel operating, the way they carry their radio, and their training level. More people means increased chance of an inadvertent hit. Carrying the radio exposed increases the likelihood of EB activation but also increases the likelihood of radio failure, and personnel knowing the difference between, “emergency” and “emegncy recvd” is critical in preventing secondary and tertiary activations.

Once again the radios, mostly carried exterior leather harnesses, became water logged and were unable to transmit or receive. This complicated the ability of command to communicate with interior units.

RECOMMENDATIONS

1. The ECC Section Chief ensure proper corrective action is taken, reference the inappropriate management of the Mayday
2. That incident commanders be made aware that in the early stage of an incident the ECC can only monitor one talk group and that will be the assigned tactical talk group, the lead talk group in the incident talk block
3. That ECC personnel are provided with increased training opportunities to included realistic simulations
4. That the radio experts in concert with management develop a series of best practices with regards to how radios are carried/protected
5. That radio training be included in the annual recertification process to ensure familiarity with its function/capabilities/limits
6. That management consider a requirement for an in-county unit to manage the staging area
7. That management reinforces that only command can call for additional resources