4716 Iris Street
November 3, 2011

- 1,200 square foot house
- Three injured Fire Fighters
- One injured civilian
- One civilian fatality
- Heavy fire upon arrival with report of people trapped
- Vent, Enter Search (VES) to remove trapped occupant
- Defensive then offensive then defensive fire attack

Table of Contents

Executive Summary

At 0354 hours on November 3, 2011, units were dispatched for a house on fire. As units responded, ECC updated the event with a report of people trapped inside the house. T725 arrived on the scene, reported "heavy fire" showing and passed command to BC704. After consulting with witnesses and performing a 360 degree scene survey, T725 reported heavy fire showing from sides Alpha (A), Charlie (C) and Delta (D) with one person still inside the structure.

The structure was a 1200 square foot, single story bungalow style house with a full basement with walkout entrance. The fire started on the basement level in quadrant D and extended vertically through an open stairwell to the first floor with heavy smoke conditions throughout.

Command ordered firefighters to knock down the bulk of the fire from side A before entering the structure to attempt a rescue of the trapped occupant. Once inside the structure firefighters encountered a stubborn fire in quadrant D that would re-ignite and impinge upon the interior hallway each time it was darkened down. Firefighters could only advance about 10 feet inside the front door before they were forced to retreat due to high heat, zero visibility, and several obstacles due to the resident's hoarding of personal belongings. Two firefighters sustained minor burns during the retreat. (They would later be transported to MED-STAR and released).

Command ordered defensive operations and was advised by the Rapid Intervention Company (RIC) of an attempted Vent-Enter-Search (VES) of a bedroom on the C/B corner of the structure. Firefighters successfully located and removed the occupant via ground ladders. One firefighter sustained minor lacerations to his hand during the occupant removal (He would later be evaluated and released from FROMS).

Immediately after the occupant was removed, fire conditions inside the bedroom rapidly deteriorated causing firefighters to bail out of a window on side B. Upon receiving this report from the safety officer, command requested ECC to broadcast the evacuation tone and conducted two consecutive Personnel Accountability Reports (PARs) to ensure all personnel were outside of the structure.

Once it was determined that all personnel were outside of the structure, units continued flowing water through all openings from the exterior for about 85 minutes until the fire was declared out.

According to fire investigators, “the fire was accidental in nature and caused by an unknown malfunction or failure within the furnace”. The surviving resident stated that he went to investigate a burning odor and was forced outside due to the heat and smoke.

[*Personnel on the exterior enlarged the window opening with chain saws as personnel on the interior located and removed a large patient wedged between the bed and wall covered with debris.]*

[Immediately after the occupant was removed, fire conditions deteriorated causing personnel to bail out of a delta side window.]

Incident Statistics

82 Personnel including:

- 9 Engines (33 personnel)
- 4 Truck Company's (14 personnel)
- 2 Rescue Squads (9 personnel)
- 3 BLS Units (6 personnel)
- 2 ALS Units (4 personnel)
- 7 Chief Officers (7 personnel)
- 9 Support (9 personnel)

Site & Structure Layout

- 4716 Iris St is indicated by the yellow dot.
- The two closest fire hydrants are identified by the red dots.
- The structure is approximately 1200 square feet and has two levels (first floor and walk out basement).
- The structure was built on an approximately 9000 square foot lot which sloped down grade from side A towards side C.
- The structure has one stairwell in quadrant delta which allows egress between the first floor and the basement.
- The structure has battery powered smoke detectors on both levels.
- The structure has no sprinkler system or any other fire protection system.

Fire Code History

- This home was built in 1964.
- There are no records of any other incidents or violations at this address.

Unit Breakdown

(XXXX signifies no status or bad status)

	Dispatch Time	On Scene Time
Box		
PE721	0354	0404
PE725	0354	0406
PE723	0354	0403
PE718	0354	0402
PE703	0354	0401
T725	0354	0400
AT723	0354	0400
RS703	0354	0402
A721	0354	0404
RID		
AT718	0356	0400
RS742	0356	0403
M725	0356	0402
CT705	0402	0440
AR716	0402	0422
Task Force		
E705B	0402	0414
E740	0402	0413
AT703	0402	0409

(XXXX signifies no status or bad status)

	Dispatch Time	On Scene Time
Additional		
M723	0408	0418
A725	0429	0437
M723	0408	0418
A723	0429	0446
PE724	0451	0455
E726	0451	0458
U121	0653	0657
EMS700	0401	0411
SA700	0359	0415
Chief Officers		
BC704	0354	0401
BC703	0354	0406
U2	XXXX	XXXX
C705C	0357	0401
C703G	0420	0420
C703B	0400	0400
DC700	XXXX	XXXX
Fire Marshals		
FM52	0420	0440
FM55	0653	0653
FM57	0420	0440
FM58	0523	0523

(XXXX signifies no status or bad status)

Communications

- First alarm units were dispatched on 7A to respond on 7C.
- Task Force and additional units were dispatched on 7A to respond on 7D.
- Most of the tactical communications for the incident was on 7C.
- Rehab was assigned to 7D.

Initial on Scene Report and Command

- T725 arrived on scene, took a lap and reported heavy fire showing from sides A, C and D with one burned and one trapped and passed command.
- BC704 arrived on scene, assumed command, requested a task force and an additional medic unit; the Rapid Intervention Dispatch (RID) was already responding.
- Command assigned PE721 as Division A to knock down the bulk of the fire prior to entering structure.
- First patient is transported to MED-STAR.
- C705C assigned Division 1 to make entry with PE721, PE725 and T725 to extinguish remaining fire and attempt the rescue.
- Firefighters encountered heavy fire extending from the basement via the open stairwell. This fire impinged upon the only hallway leading to the bedrooms and would reignite each time it was extinguished.
- Units could not advance farther than 10 feet inside of the door due to high heat and personal belongings. Therefore units retreated to side A.
- RIC reports heavy fire showing on side C from basement and first floor windows.
- Command orders defensive operations.
- Units on side C request and successfully complete VES to remove the occupant.
- Personnel bailed out a bedroom window on side D.
- Safety reports the house is untenable.
- Command requests evacuation tones, orders exterior operation and conducts back-to-back PARs.
- Second occupant is transported to Shady Grove Adventist Hospital.
- Defensive operations continue for the next 85 minutes.

Initial On-Scene Operations

- The initial incident objective was Rescue since there was a report of one trapped. Followed by extinguishment and overhaul as the attempt to confine this fire was unsuccessful and there were no exposures to protect.
- The mode of attack switched from defensive to offensive back to defensive as firefighters tried to initially knock down the fire from the exterior, and then make an interior attack to protect the search only to be forced back out due to fire conditions.
- The following divisions or groups were established:

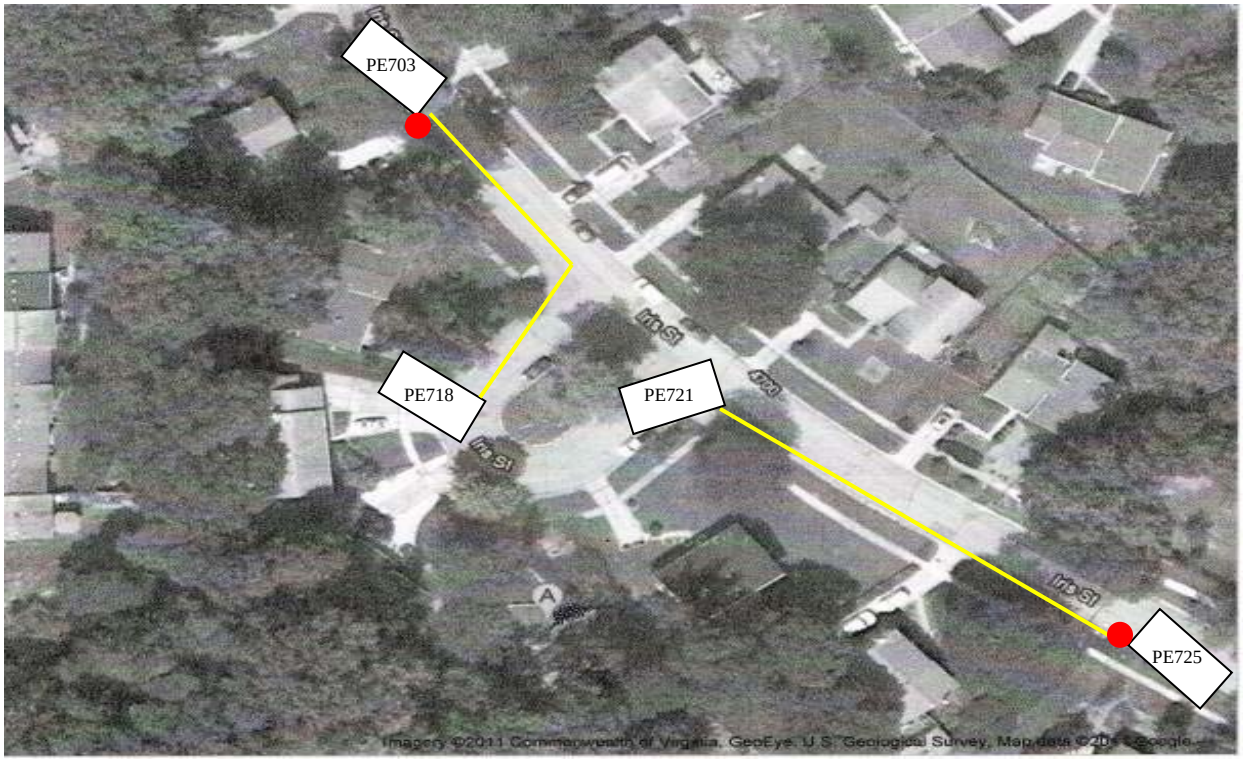
    - Division 1: PE721* , PE725 and T725 transitioned to Division A with C705C* later adding RS703 and PE740

- Basement Division; E718* , PE703 and AT723 transitioned to Division C with C703B* later adding PE724, E705B, RS742 and AT718
- Search Group: RS703*
- Safety Group: BC703*
- Rapid Intervention Group: PE723*, T718 , RS742 and M703
- Rehab: EMS BC703G*, A723, A725, AR716 and CT705

(* = Supervisor)

Water Supply

- PE721 (1st Due) laid 400' of 4" supply line from the hydrant in front of 4708 Iris Street which was picked up by PE725 (2nd Due).
- PE718 (4th Due) laid 300" of 4" supply line from the hydrant in front of 4724 Iris Street which was picked up by PE703 (5th Due).



Tactical Positioning

- All units were positioned appropriately based on the limitations presented by the cul-de-sac.
- There was no apparatus access to side C. However personnel were close enough to stretch attack lines and carry ground ladders to the rear.
- A staging area was never established as all additional units were requested to come directly to the incident scene.

Initial Attack Attack line Deployment

- PE721 (1st Due) pulled a 200' 1 ¾" attack line (class A foam) from PE721 to side A to darken down visible fire from the exterior prior to making entry on the first floor.
- PE725 (2nd Due) pulled a 300' 2" attack line (class A foam) from PE721 to side A as a back-up line on the first floor.
- PE723 (3rd Due –RIC) pulled a 200' 2" attack line (class A foam) from PE721 to side A as the RIC line.
- PE718 (4th Due) pulled a 300' 2" attack line (class A foam) from PE718 to side C
- Eventually there were three attack lines and a "blitz fire" flowing on sides A and D and 4 attack lines including a 2 ½" with a 1 ¼" tip flowing on sides C and B (all water only).
- 420 GPM was the needed fire flow for this fire. At the height of the fire there were two 2 ½", two 2", and one 1 ¾" attack lines in service or 1300 GPM. The high fire load, the obstacles blocking fire streams and the inability to gain access of more than 10 feet inside the structure hampered the fire attack.

Accountability

- Personal accountability tags (PAT) were used but not collected by command.
- Daily line-ups for Battalions 3 and 4 were on hand at the command post but not used.
- There were two consecutive PARs conducted after the evacuation tone was sounded at 12 minutes and 30 seconds after dispatch. (The second PAR was conducted immediately following the first due to the confusion and delay of unit responses).

Rapid Intervention

- PE723 was the RIC.
- The Rapid Intervention Group (RIG) was established on side A of the structure.
- The RIG consisted of PE723, RS742, AT718 and M723. PE723's officer became the RIG supervisor.

Crew Integrity

- Unit officers must ensure crew integrity. The PAR was complicated and delayed because some unit officers were unsure of the location of their crew members.
- Division/Group supervisors must maintain crew integrity and accountability of all personnel assigned to their division/group. On several occasions there were personnel assigned to one division/group working in another division/group.

Lessons Learned

Command

- Command officers need to clearly communicate action plans early in the incident. On this incident units were operating for several minutes without clear direction.
- Transitions from offensive to defensive fire attack must be clearly announced. The fire attack strategy changed three times during this event and personnel operated as if they were unsure which mode they were in.
- All tasks assigned or distributed face-to-face at the command post should be announced over the radio.
- Whenever the order is given to sound the evacuation tone it should be accompanied by an order for all drivers to sound their air horns. This provides a better opportunity for all on the fire ground to be alerted to the immediate need to evacuate the structure.
- Command officers need drivers or aides. A lone incident commander can become overwhelmed with the simultaneous critical actions needed to be addressed on an event like this one.

Communication

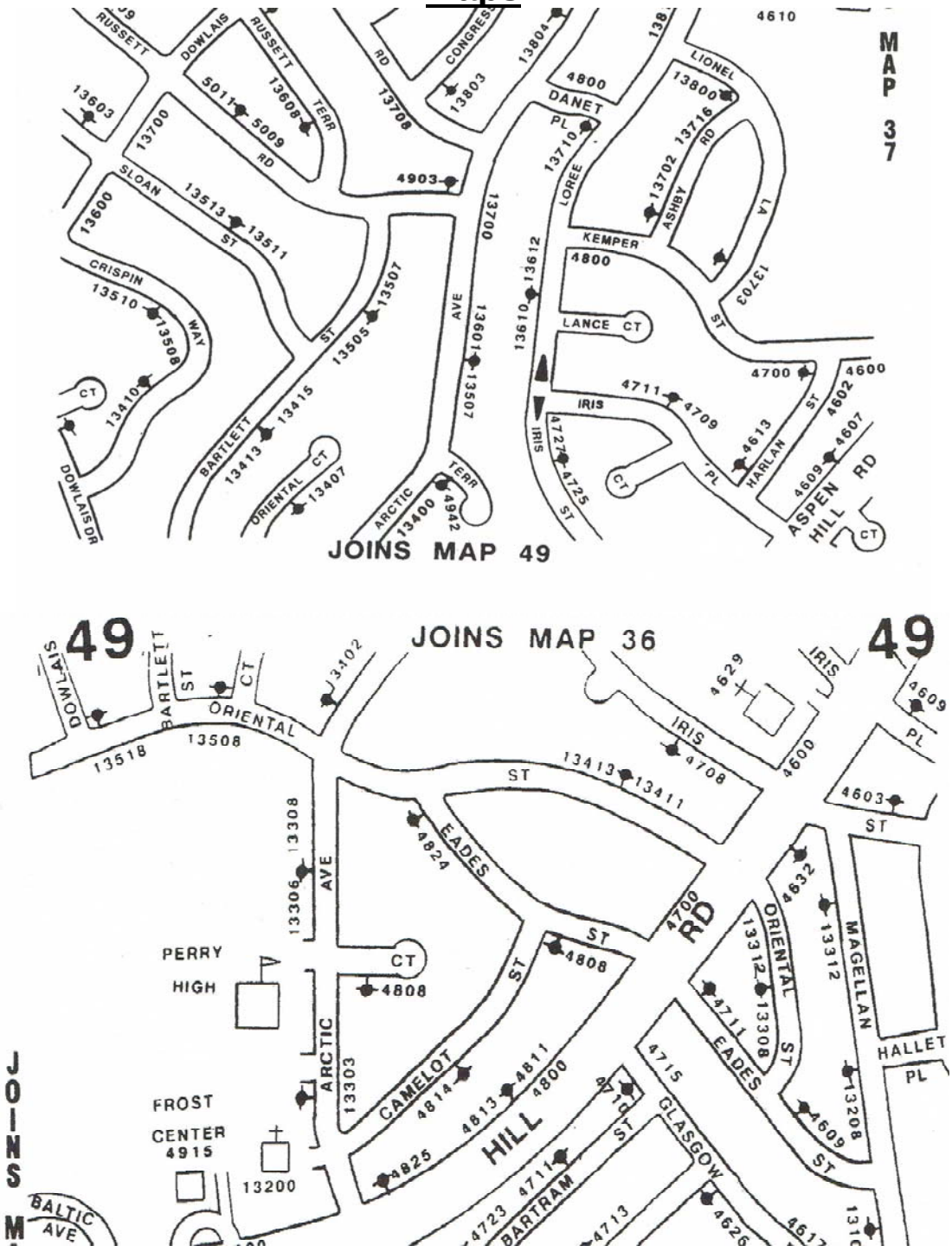
- ECC transmitted the notification of “people trapped” by Mobile Data Computers (MDCs). This information should always be broadcasted verbally over the radio and acknowledged by the first due unit officer.
- The announce talk group was never used. Command should have used the announce talk group to announce the evacuation order as well as other tactical or safety messages.

- Portable radio technology issues prevented some units from transmitting messages.
- Facepiece mounted voice amplifiers should be assigned to all unit officers. The unit officers speaking through voice amplifiers were significantly more legible than those speaking without voice amplifiers.
- Several critical messages from command were not acknowledged by the intended unit officer. Personnel must monitor their radios and respond to all messages directed towards them. At a minimum advise command to "standby" if you are currently overwhelmed.
- Several units were "bidding" on calls throughout the initial minutes of the incident. Some of these transmissions covered critical messages to/from the incident commander causing confusion at the command post and on the incident scene.

Operations

- All orders issued by command should be followed. Any wanted deviation should be requested by personnel to command. However, the final decision rests with command.
- When selecting initial attack lines, more emphasis should be placed on fire conditions than building type.
- Unit officers assigned to the same divisions/groups should quickly communicate their understanding of the objectives with each other in an attempt to "get on the same page" prior to taking any action. This would eliminate the possibility of duplicating or opposing efforts.
- Crew integrity must be ensured by the unit officer or division/group supervisor throughout the incident. The practice of the driver or any other individual working alone in an Immediately Dangerous to Life or Health (IDLH) atmosphere must stop. On this event the PAR was significantly delayed as personnel had to be located by their respective supervisors.
- Attack lines should not be flowed into the structure while interior firefighting is in progress. Personnel reported that each time they extinguished the fire extending up the stairwell from the basement, it would re-ignite. Later it was discovered that an attack line was being flowed into the basement windows in the same quadrant.

Preplan or Maps



Injuries (attachment from Safety Office)

FF XXX and Captain XXX both sustained minor burns during firefighting activities. In both cases there were no PPE failures; the affected gear performed to TPP standards. Below please find the safety officer's statement reference both injuries:

FF XXX sustained 2nd degree burns to his ears. In his witness statement he states that while making an aggressive attack on the first floor in an attempt to locate a victim he began to feel a burning sensation on his left ear. Although he felt this burning sensation he and his crew continued to press forward trying to provide protection for the other firefighters in the house and to try and protect the victim they were looking for. His SCBA face piece, hood and helmet were inspected on the scene. No damage was noted to his face piece or helmet, or hood. His hood was impounded and condemned due to the nature of his injury. During my interview on the scene he stated that his hood was in place and his ear flaps on his helmet were down. He sustained no other burn injuries. We believe his hood and helmet performed as designed and his injuries are consistent with steam burns as witnessed in similar circumstances.

Captain XXX sustained a 2nd degree burn to his left hand. During my interview with him he indicated that while attempting to locate and rescue one of the victims he lost his balance near a stair rail. When he reached out to grab the rail with his left hand he felt the heat of the rail almost instantly. His gloves were impounded and inspected on the scene. His gloves were condemned by this office due to the nature of injury. He sustained no other burn injuries. We believe that his gloves performed as designed and this burn injury is consistent with compression burns as witnessed in similar circumstances.