

Montgomery County Fire and Rescue Service



Post Incident Analysis – 2037 Lyttonsville Rd

Incident # 12-0008256

January 22, 2012

Prepared by BC Kent Mallalieu

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I. Introduction

At 1930 hrs on Sunday, January 22, 2012, units were dispatched to Box 19-18 for smoke coming from the rear of the townhouse at 2037 Lyttonsville Rd. AT719 arrived to find fire showing from the rear basement level of a four story, wood frame, middle of the row townhouse. AT719 called for a task force and continued to Side Alpha. The fire grew rapidly as other units from the first alarm arrived. By the time BC702 got on the scene, the fire involved the entire back of the structure and flames were shooting over the roof. BC702 assumed command and requested that the second alarm be filled.

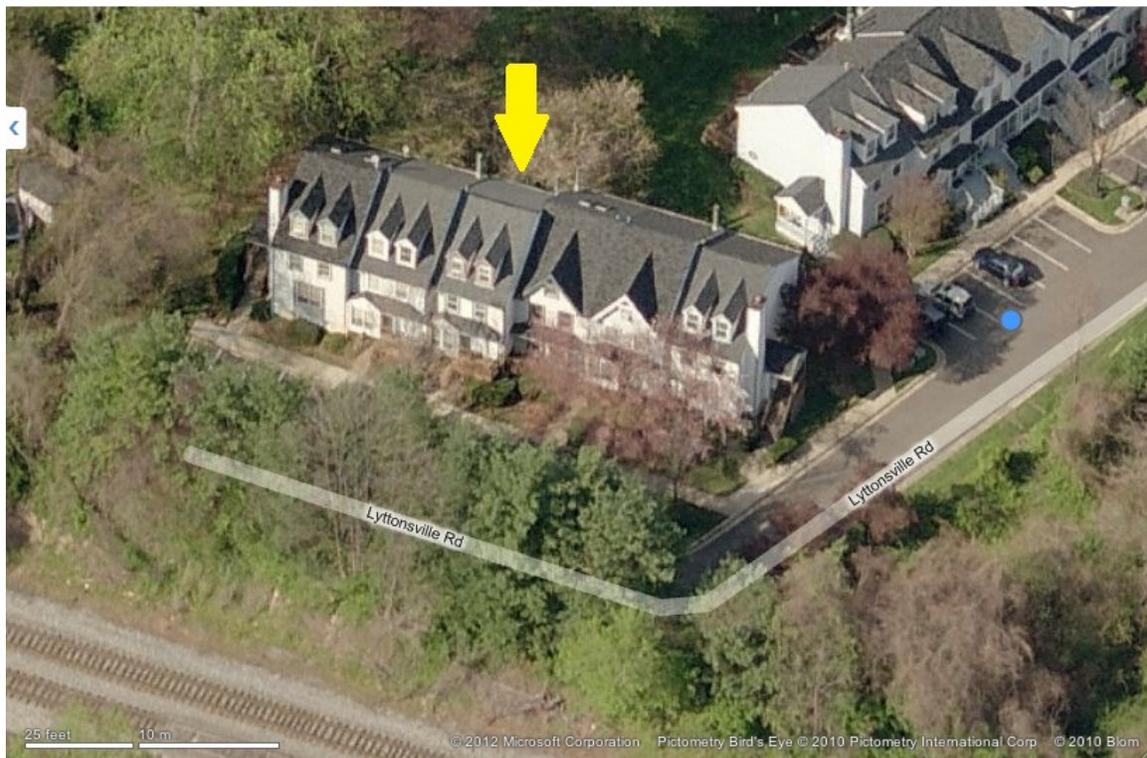
Within minutes units began reporting that the first floor was collapsing into the basement. This eliminated the front door as an entry point. At the same time information was received that the occupant might be trapped. A decision was made to attempt a quick “vent, enter, search” of the few uninvolved rooms on the second floor facing Side Alpha. As AT719’s personnel began to ascend their ground ladders, the first floor flashed and fire venting out the windows made access to the second floor windows impossible. Realizing that there was no chance a trapped occupant could survive the interior conditions, command ordered crews out of the building.

The fire attack transitioned to a defensive operation and units were assigned to the exposures on either side of the fire building. AT719’s platform began master stream operations in conjunction with a number of hand lines. The fire building eventually collapsed as a result of structural damage from the fire and the weight of the water applied by the master stream.

Fire extension into the exposures was relatively minor and was quickly controlled by the units assigned to those areas. The most heavily damage exposure was Exposure Delta.

Crews extinguished the majority of the fire but were unable to access smoldering void spaces in the collapsed debris of the townhouse. As a result, units had to maintain a fire watch overnight to assure that the fire did not regain intensity and spread into the exposures. This problem was eliminated the next morning when heavy equipment was used to pull apart and remove the debris. The fire was confirmed out at that time.

II. Building Structure/Site Layout



2037 Lyttonsville Rd was a middle of the row, lightweight wood frame constructed townhouse. The building was three stories in the front and four stories in the rear with a walk out basement. An elevated deck was attached to the first floor on the Charlie side. The home had functioning smoke detectors that activated for this fire.

The fire started in the basement in the rear of the structure and quickly spread through the walls and up the outside rear into the attic. The lightweight members likely contributed to the rapid loss of structural integrity.

Access to the front of the structure for both engine and aerial operations was good. The rear of the structure was inaccessible to apparatus but attack lines and ladders were carried to that area. Access issues did not substantially impact the incident.



III. Fire Code History

These townhomes are private residences and as such were never inspected after completion of construction.

IV. Communications

- A) **Did the dispatcher verbally provide all information available at the time of dispatch?** – Yes
- B) **Was the fire ground channel adequate?** – The fire ground suffered from digital distortion of transmissions on 7C and 7D. Activation of the VRS reduced this distortion somewhat but did not eliminate the problem. Units having trouble contacting command utilized 7O.
- C) **Were the proper communications procedures followed?** – Yes
- D) **Were there problems communicating with mutual aid companies?** – No

E) Was the communication network controlled to reduce confusion? - Yes

F) Did units, divisions, groups, branches, and Montgomery communicate effectively? - Yes

G) Was there effective radio discipline? – For the most part yes, although radio discipline remains an area where we could always improve. Most units directed their communications through the appropriate division or group leader.

H) Did the incident commander provide timely updates to ECC? - Yes

V. Pre-emergency Planning

No pre-emergency planning had been done for this location other than an overhead site map which showed hydrant locations and building addresses.

VI. On Scene Operations

A) Structural Integrity - By the time the first arriving companies did their circle checks the first floor was already beginning to collapse into the basement. This prevented the crews from being able to pursue an interior attack even though they were making good progress with the water they were applying from the outside. The fire continued its rapid spread resulting in collapse of the rear deck. At 1942 hrs, BC701 notified command that the building was beyond saving, with the “first floor in the basement and fire through the roof”. The townhouse collapsed completely 15 minutes later from degradation of structural members and the weight of water applied by hose streams.

B) Command Identified? - Command was initially established by AT719’s officer, although he did not say in what mode. Command was assumed by BC702 when he arrived on the scene.

C) Command post established with green light? –When BC702 assumed command he announced on the tactical channel that the stationary command post would be the BC702 vehicle located off Side Charlie. The vehicle’s green command light was utilized throughout the incident. The location of the command post offered a reasonable view of Side Charlie.

D) Size up decisions by command – AT719’s officer provided a good on scene report which contained the type and height of the structure, its location in the row, a description of what was evident, the hydrant location for the first engine, and who the “two out” would be. He established command but did not say in what mode. He followed up with a partial circle check (limited by the size of the townhouse row) and announced to

incoming units that they had a basement fire. Units then attempted an interior attack but were quickly forced to go defensive.

E) Additional resources requested in a timely manner? – Yes. BC701 requested the RID while still en route at 1933 hrs. AT719 (as command) requested a Task Force at 1935 hrs. BC702 requested the filling of the 2nd Alarm upon his arrival at 1937 hrs.

F) Strategy/Action Plan –The initial command was in an offensive mode focusing on rescue and extinguishment. Conditions quickly forced command to transition to a defensive mode, which was communicated, and the focus changed to exposure protection, confinement, and extinguishment. The action plan was continuously evaluated, updated, and communicated as conditions improved or degraded in different divisions.

G) Were tactics executed? – Personnel executed the necessary tactics safely and without issue.

H) Training needs identified? – No training needs were identified.

I) Was the SOP utilized? – The SOP for Safe Structural Firefighting Operations was followed throughout this incident and was adequate for the size and scope of this incident.

J) Offensive/defensive decision by command – This incident began in an offensive mode reinforced by the report of a trapped occupant. As the fire grew and structural integrity declined, command transitioned to a defensive mode.

K) How was risk analysis applied to this incident? –This incident presented a possible trapped occupant, rapidly changing conditions, and significant risk to the exposures. The fire involved the rear of the structure, but for a short time, the front of the house appeared tenable. Command supported an aggressive search and fire attack with crews at considerable risk in the hope of making a rescue and/or gaining control of the fire. When fire conditions prevented the search, and it became clear that no interior operation would be successful, command ordered a defensive operation and focused on the exposures from a point of relative safety.

L) Were divisions and groups utilized appropriately? - The fire ground was broken down into the following divisions and functional groups early in the incident: Side Alpha, Side Charlie, Exposure Delta, Exposure Bravo, RIG, Staging, and Rehab. There was some confusion for a brief period in that the division officer for Side Alpha thought he was responsible for the personnel assigned to the exposures. This was cleared up quickly and there were no other issues related to the divisions or groups.

M) Apparatus Positioning - Apparatus positioning on this incident was very good especially considering that this was a tight, dead-end style street. Positioning of the aerials was notable in that both AT719 and T716 were able to use elevated streams as

needed. The first and second engines had clear access to Side Alpha and the other engines took positions off the Delta end of the townhouse row.

N) Attack line selection and positioning – Each of the engines pulled an attack line in preparation for an interior attack or exposure protection. The most frequently pulled lines were the 2 inch rear attack lines. Several crews deployed 2 ½ inch Blitz lines as well.

O) Ventilations operations – The fire had self-vented in the rear of the structure prior to fire department arrival. AT719's crew ventilated the first and second floor windows of the fire building on Side Alpha. T716's crew ventilated some of the windows in Exposure Delta.

P) Salvage operations – Salvage operations were conducted in both exposures and involved moving or covering belongings and furniture.

Q) Night time interior lighting – Lighting to the exposures was provided by AT719

R) Mutual aid companies used effectively? – Yes. Several units from Prince Georges County responded on this incident and were utilized for a number of tasks.

S) Water supply adequate? – Water supply was adequate for this incident with primary and secondary supplies established. There were no issues with the execution of the water supply plan.

VII. Staging

The staging area, identified by BC701 while he was responding, was the 1900 block of Lyttonville Rd. This section of Lyttonville Rd runs directly off the 8600 block of 16th Street, and is one block from the fire scene. It is a long, fairly wide, low traffic roadway which worked well as the staging area. Units from the second alarm as well as support units were directed there and told to utilize 7D. DC700, assisting in the command post, took care of all communications related to 7D.

Command identified BC884 as the staging officer and directed him to maintain at least three units in the staging area at all times. This caused the later dispatches of PE712, E720, and PE721.

VIII. Support Functions

A rehab area was established in an unused area of the lower parking lot of 1900 Lyttonville Rd. The rehab area was overseen by EMS700 and M701 and contained Canteen 705, Air 716, and a Ride-On bus requested by command. Personnel leaving the fire work area were directed to rehab where their vital signs were checked and they were rehydrated.

PEPCO and Washington Gas were called to the scene. The representative from PEPCO found that the pole fuse for the whole townhouse row had blown prior to his arrival which rendered the townhouses powerless. Washington Gas confirmed that there was no gas in the townhouses.

The Red Cross was requested to assist residents displaced by the fire. They were directed to the Ride-On bus where the residents had been corralled.

IX. Safety Group

Upon arrival, the officer from AT719 established command and assigned E754 as the two out. BC701 (still en route) requested the RID. This brought AT718, RS814, and M742B to the scene. The RIG was established on Side Alpha.

Safety 700 was assigned the ISSO position upon his arrival (1939 hrs).

E754 was taken from the RIG early in the incident to assist in cutting off extension in Exposure Delta. At the time this decision was made the incident was in a defensive mode and no personnel were working in an IDLH. There was also a pressing need to get attack lines in the exposures and adequate resources to do so had not yet arrived.

The RIG remained on Side Alpha while units operated in the exposures. A second alarm engine was added to the RIG to replace E754. The RIG was disbanded during overhaul when it was determined that an IDLH no longer existed.

No fire and rescue personnel were injured on this incident.

X. Accountability

Accountability on the fire ground was maintained by the assignment of personnel to groups and divisions and through the use of Personal Accountability Reports (PARs). The supervisors for the various groups and divisions were polled frequently for updates on conditions and the need for additional resources or relief.

ECC provided Incident Duration Reminders, the first of which came 21 minutes into the incident. PARs were then conducted. Supervisors responded to the PARs in a timely fashion.

The incident was continuously monitored and controlled by command. At all times command monitored 7C, 7D, and 7O.

XI. Investigations

The cause of the fire remains under investigation and it is currently listed as “undetermined”. The collapse of the structure and the hazards associated with the debris from the collapse hindered the investigators ability to determine cause and origin.



The fire spread throughout this structure very quickly. What contributed to the spread is hard to determine due to the collapse. The overall fuel load inside the townhome cannot be established. As noted previously, the home utilized lightweight construction materials and vinyl siding. The lightweight floor trusses were undoubtedly a factor in the early loss of the first floor and the eventual collapse of the building.

XII. Lessons Learned

In the latter stage of this fire, a division officer decided to breach the firewalls of the Bravo and Delta exposures to extinguish fires burning in the void spaces of the collapsed townhouse. Doing so provided minimal access to the voids in question, but substantially increased the risk to the exposures on either side. These breaches were part of the reason for maintaining a fire watch overnight. Firewalls are meant to provide protection to surrounding structures or other areas of a building. They should not be breached for extinguishment purposes unless no other options are available.

XIII. Overall Analysis

This incident went well despite a number of challenges and a rapidly growing body of fire. The department's emphasis last fall on risk assessment and tactics for today's construction and fire loads clearly paid off. Unit officers and command completed an appropriate risk benefit analysis before choosing the strategy and tactics applied. Apparatus positioning was good given the tight confines of the street. Personnel executed basic skills competently and quickly. While the original structure could not be saved, our personnel kept the damage to the exposures to a minimum.

XIV. Units Dispatched

1st Alarm (1930 hrs)	RID (1934 hrs)	TF (1936 hrs)	2nd Alarm (1941 hrs)
PE719	AT718	E705B	PE718
PE701	RS814	PE707	PE725
E754	M742B	T834	PE706
E702		AR716	T801
PE716		CT705	A702
AT719	SA700		CP727
T716	EMS700		
RS741B	DC700		PE712 (2004 hrs)
M701			E720 (20:04 hrs)
BC701			PE721 (20:11 hrs)
BC702			