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STATE OF NEW JERSEY

FINAL ADMINISTRATIVE
ACTION OF THE
CIVIL SERVICE COMMISSION

In the Matter of Brendan Rhodes,
et al., Second Level Fire Supervisor
Various Jurisdictions

Examination Appeals

CSC Docket No. 2016-4497
2017-0183
2016-4486
2016-4466

ISSUED: **DEC 13 2016** (RE)

Brendan Rhodes, Fire Captain (PM0442U), Carteret; Jason Anzelmo and Kevin Danielson, Fire Captain (PM0443U), Clifton; and Louis Santiago, Fire Captain (PM0461U), Passaic; appeal the correct responses to various questions on their respective promotional examinations. These appeals have been consolidated due to common issues presented by the appellants.

It is noted for the record that this two-part examination consists of a written multiple-choice portion and an oral portion. The written portion of the examination included eight scenarios, each with a description and various accompanying diagrams, and candidates were required to answer questions pertaining to each scenario. The appellants challenge the correct responses to questions 4, 7, 12, 13, 19, 29, 32, 34, 48, 53 and 71. Mr. Anzelmo indicated that he was appealing question 56, but the content of that appeal suggests that he is referring to question 53.

Questions 1 through 10 pertain to the first scenario involving smoke coming from several natural openings on the roof of a 25-foot by 60-foot 3-story townhouse.

Question 4 asks for the most accurate statement with regard to the structure. The keyed response was option c, this structure contains a fire load similar to other residential occupancies. Mr. Rhodes argues for option d, has a common cockloft over all townhouse units. He states that page 405 of *Fire Officer's Handbook of Tactics*, 4th edition, by John Norman indicates that fires in townhouses are to be treated like single family dwellings, and a major concern is a common

cockloft. The appellant states that Norman describes a kitchen fire that quickly traveled to the cockloft and presented challenges.

In reply, townhouses are similar to a traditional one-family private home, but are attached to other homes on each side. Page 405 of *Norman* states that the room size and fire loading are very similar to a more traditional house, but "they typically do not have common cocklofts or crawl spaces, as they are individually owned homes that share common party walls." The kitchen fire described on this page was an example of the problem of poor access for apparatus, and fire extension due to closely spaced buildings. The fire in this kitchen was extending out the window across the combustible wood shingles on a second building, and entering through cockloft vents along the siding. This was not meant to be an example of fire extension in a common cockloft. Page 405 specifically rules out option d as a "most accurate statement," and supports the key. The keyed response is correct.

Question 7 asked for the type(s) of beam(s) supporting the two balconies on the 2nd floor of Unit #14 based upon the floor layouts of this incident. The keyed response was option d, the Side C balcony is cantilevered; the Side A balcony is supported by continuous beams. Mr. Danielson argues for option a, both are supported by cantilevered beams. In support, he states that the diagram had no line delineating the connection to the Side A balcony, or a connection to the front of the building. He maintains that the diagram was ambiguous. In reply, the Side A diagram clearly shows the Side A balcony is within the structural supports of the home over the front door. Diagram 4 also shows the Side A balcony as part of the structure. Diagram 4 clearly shows the Side C balcony jutting away from the structure in a cantilevered fashion. The keyed response is correct.

Questions 11 through 21 pertain to the second scenario involving fire near the back of a tractor trailer repair business.

Question 12 asked which feature is **MOST LIKELY** present based upon the diagrams of this incident, and the keyed response was option c, bow string trusses. Mr. Anzelmo selected option d, laminated trusses. In support, he states that the typical bow string truss does not rest on the ground on each side, but on load-bearing masonry walls. He argues that if the trusses were supported by columns with wood walls continuing to the ground or if the trusses were running from grade to grade on each side, the roof could have been laminated trusses fabricated specifically for this application.

In reply, this scenario indicated that this commercial structure was built in the late 1950s, when laminated trusses were invented, but not universally used. The question asked for the feature that is most likely present, not the construction of the building. The SMEs indicated that, from the fire service perspective, the give-away is the shape of the roof. Whether it is solid wood or laminated trusses

makes no difference. The important point is that the "classic hump" shape indicates a bowstring truss. A bowstring could be laminated, dimensional lumber, or metal. Regardless, the shape in the Side A diagram indicates the most likely presence is a bow string truss. This truss could very well be resting on a wooden wall utilizing metal tie rods to secure the truss the same way a bowstring truss (metal) would be constructed and secured in non-combustible construction. Given the options, the item is correctly keyed.

Question 13 asked which type of building construction is present at this incident, and the keyed response was option a, ordinary. Mr. Anzelmo selected option d, heavy timber, and he argues that page 236 of *Brannigan's Building Construction for the Fire Service, 5th Ed.*, by Francis Brannigan and Glenn Corbett, states "timber trusses that do not support floor loads and are greater than 4" in width and 6" in depth" are considered heavy timber.

In reply, there is no indication in the scenario of the dimensions of the trusses, but this building was indicated to be 40 feet by 80 feet, and was built in the late 1950s. The Side A and C walls are constructed of concrete block. The roof and Side B and D walls are constructed of wood with a rubber membrane roof and exterior covered in stucco. The SMEs indicate that a building that is only 40' wide is typically too narrow for heavy timber. The appellant assumes that the building contains 4x6' dimensional lumber, but there is no evidence of heavy timber. Heavy timber requires massive support columns, and as evidenced by the floor layout, this building has no support columns. The best answer is ordinary construction due to Side A and C walls being constructed of concrete block and the Side B and D walls being constructed of wood. This question is correctly keyed.

Question 19 asked what the collapse zone should be at **LEAST** equal to if establishing a collapse zone on Side A, an end wall that could have hip rafters resting on the truss and bearing on the wall. The keyed response was option c, two-and-a-half times the height of the wall. Mr. Rhodes argues for option d, twice the height of the wall. In support, he states that page 554 of *Norman* states that two-and-a-half times the height of the wall is a safe distance, that one-and-a-half times the height of the wall is incorrect, and that two-and-a-half times the height of the wall was not a given option.

In reply, the appellant argues against option a, one-and-a-half times the height of the wall, which was not the keyed response. He is simply incorrect. Two-and-a-half times the height of the wall was a given option, and *Norman* supports the key, not the appellant's choice.

Questions 22 through 31 pertain to the third scenario involving smoke venting from the duct work of the roof of a bar and restaurant.

Question 29 indicates that the candidate gave a first status report to dispatch at this incident 5 minutes ago. It asked when the next status report should take place, and the keyed response was option d, in 5 to 10 minutes. The appellants selected option b, in 15 minutes. In support, they argue that a progress report should be given every 10 to 15 minutes; and that page 109 of *Fundamentals of Firefighting*, 4th edition,¹ states that regular reports should be given every 10 to 20 minutes; and there is a 20 minute rule mentioned in *Norman*.²

In reply, page 3 of the Model Fire Department Communication Sample Standard Operating Guideline (SOG) states that, throughout a working fire the Incident Commander (IC) shall provide the Dispatcher with a narrative on operations in progress, control, and extinguishment of the fire. Periodic updates should be given on the status of the incident at least every 10 to 15 minutes. This agrees with the appellants' argument that a progress report should be given every 10 to 15 minutes, and supports the key. The reference to the text *Fundamentals of Firefighting*, 4th edition, cannot be confirmed as a copy of the pertinent portion of the text was not provided. Also, no page number was provided for a 20 minute rule regarding status reports in *Norman*; however, pages 18 and 19 of *Norman* state that progress reports continue every 10 minutes for the first hour of the incident. *Norman* does discuss a 20 minute rule, also called the air bottle rule. This is an antiquated rule that pertains to when the IC gives orders to leave a burning building. It is antiquated as it does not pertain to lightweight construction or take into consideration that many departments have shifted from 30-minute to 45-minute air cylinders. This is not pertinent to the question. The keyed response is correct.

Questions 32 through 40 pertain to the fourth scenario involving smoke rising from the HVAC units on a commercial building.

Question 32 indicates that the candidate is heading west and approaching the scene from the east. It asks for the **BEST** location for the command post at this incident, and the keyed response was option a, at the Side A/B corner. Mr. Danielson argues for option d, in the parking lot. In support, he states that he has the best view from the parking lot, and it is safer out of the street. In reply, the scenario indicates that the wind is blowing from east to west at 6 mph, and the parking lot is on the west side of the building. The parking lot is not the best location as it is directly downwind of the fire and provides only a view of one side of the building. Further, the side A/B corner is in a more protected location and provides the best two-sided view of the building. The keyed response will not be changed.

¹ This text was not on the booklist and no copy of this reference was provided.

² No page number given.

Question 34 asks who is **LEAST APPROPRIATE** to be a member of your RIC at this incident, and the keyed response is option a, rookie or probationary firefighters. Mr. Danielson selected option c, recalled members from other shifts who are on-scene. He argues that there could be a rookie among the recalled firefighters, they may be delayed, and there could be freelancing. He believes that the key implies that a Fire Officer cannot lead a rookie firefighter. He concludes that the question is bad and should be tossed out. In reply, the appellant's arguments are farcical. He is stating that the possibility of a rookie among the recalled members from other shifts who are on-scene is worse than actual rookie or probationary firefighters. The recalled members are on-scene, and the appellant is stating that they could be delayed. He argues that because they are recalled, they are more subject to freelancing. The most absurd argument is that he believes that because these are the least appropriate RIC members, there must be an implication that a Fire Officer cannot lead a rookie. The question is satisfactory, the keyed response is correct, and the question will not be omitted.

Questions 41 through 51 pertain to the fifth scenario involving thick black smoke coming from the roof of the Mini Mart located in a strip mall.

Question 48 indicates that during firefighting operations a crew member encounters a NFPA 704 placard. It states that the box with the number 3 in it has a blue background. It asks what this tells you about the contents of this building, and the keyed response was option b, extremely hazardous to health, but areas may be entered with extreme care. Full protective clothing including SCBA should be provided. Mr. Santiago argues that the correct response is option d, it contains material that is hazardous to health, but areas may be entered freely with full face mask and SCBA that provides eye protection. In support, he argues that page 34 of Norman indicates that the blue 3 indicates a presence of a serious health hazard, and should prompt an extremely cautious approach. He argues that there is a difference between "serious health hazard" and "extremely hazardous" as indicated in the keyed response. In reply, Mr. Santiago is arguing that his selection, "hazardous to health," is preferable to "extremely hazardous to health," since Norman refers to this as a "serious health hazard." Nevertheless, page 176 of *Hazardous Materials – Managing the Incident*, 4th edition, by Gregory G. Noll, Michael S. Hildebrand and James Yvora, states that these are materials extremely hazardous to health, but areas may be entered with extreme care. Full protective clothing including SCBA, coat, pants, gloves, boots, and bands around legs arms, and waist should be provided, and no skin surface should be exposed. Since this text is a more comprehensive source regarding NFPA 704 placards, this reference is superior to Norman, which focuses on Fire Officer tactics rather than hazardous materials. Option d is an indication of a level 2 hazard, does not call for full protective gear, and would expose the firefighter to hazardous materials. The keyed response is correct.

Questions 52 through 60 pertain to the sixth scenario involving an activated fire alarm of a three-story structure containing apartments and commercial occupancies on the ground floor.

Question 53 asks which walls should you expect to be NON-load-bearing in this building, and the keyed response was option b, sides A and C. The appellants argue for option c, sides B and D. In support, they argue that page 207 of *Collapse of Burning Buildings*, 2nd edition, by Vincent Dunn, states that bearing walls are usually the ones with the longest dimension, and sides A and C are longer than sides B and D. Also, they maintain that the wood roof and residential over commercial occupancy supports that sides B and D are non-load-bearing. They argue that you cannot tell from the exterior. They also maintain that the distance from sides B and D is shorter than that from sides A and C.

In reply, page 207 of *Dunn* states that "in flat-roofed wood buildings, the bearing walls are usually the walls with the greatest dimension: the non-load-bearing walls have the shortest dimension." The scenario describes this building as a brick and wood joist constructed building that was built in the early 1950s. The diagrams show that sides A and D are fully bricked. Thus, this is not just a wood building, but is of ordinary construction. Further, page 245 of *Brannigan's Building Construction for the Fire Service*, 5th Ed., by Francis Brannigan and Glenn Corbett, states that, "Bearing and nonbearing walls use similar construction materials and are often identical in appearance. In the typical downtown business or commercial building, the side walls are the bearing walls, whereas the front and back walls are non-bearing." As such, non-bearing walls would be the front (side A) and rear (side C) walls. Further, this is commercial space, and there are two inside walls that run from side A to side C, parallel to sides B and D, which could bear the load. No interior walls run from side B to side D, parallel to the sides A and C walls. The building is not a long narrow building; it is 70 feet by 80 feet, and the difference between the sides is only 10 feet. Support columns would have been shown in the floor layout diagram if the building required them, and the floor layouts in these diagrams do not show support columns. Wood beam floors are satisfactory for buildings up to a practical limit of 25 feet in width, but this building is much larger than that in both directions. In order for the appellant to be correct, many support columns would be needed between sides A and C for several stretches of floor joists that are clearly much longer than 25 feet. Also, there are many walls, some load bearing, between sides B and D that floor joists would rest on, making the building not require structural support columns. The keyed response will not be changed.

Questions 71 through 75 pertain to the eighth scenario involving heavy smoke blowing over an apartment building from the rear of the structure.

Question 71 asks how many stories tall is this building, and the keyed response was b, 2. Mr. Danielson argues for option d, 3, stating that the lowest

level of the building had large windows, and the basement should be counted as a story. In reply, a basement does not count as a story, and having a basement be occupied does not change this. The keyed response is the best response.

CONCLUSION

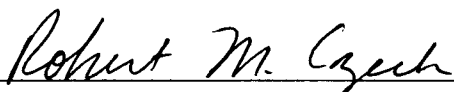
A thorough review of appellants' submissions and the test materials reveals that the appellants' examination scores are amply supported by the record, and the appellants have failed to meet their burden of proof in this matter.

ORDER

Therefore, it is ordered that these appeals be denied.

This is the final administrative determination in this matter. Any further review should be pursued in a judicial forum.

DECISION RENDERED BY THE
CIVIL SERVICE COMMISSION ON
THE 7th DAY OF DECEMBER, 2016



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