



MARIANNA FIRE & RESCUE
Physical Ability Entrance Exam
Test Procedures & Rationale



The entry-level firefighter physical ability test (PAT) consists of three (3) events that require candidates to perform simulations of important tasks that are part of the firefighter job. These events require strength, endurance, and coordination. The strategy used to support these events is content validity. Each event is timed and each event is scored pass/fail. Passing scores are set in a manner that is consistent with normal expectations of proficiency within a local entry-level firefighter workforce. Cut-off scores have been determined by using times established by the local firefighter workforce. Job candidates must pass all events to pass the PAT.

Candidates who take the PAT will wear a helmet, gloves, bunker coat, and a self-contained breathing apparatus. This closely corresponds to actual personal protective gear that firefighters must wear on an emergency fire scene. When the test is administered, candidates must walk immediately from one event to the next. The test administrator shows the candidate his/her score on the stopwatch at the conclusion of each event. Event times are verified and documented on the candidate's score sheet.

The events that comprise the physical ability test are described below; they are administered in the order listed.

EVENT #1 CHARGED HOSE PULL

This event simulates the muscular strength necessary to advance a charged hose line. The candidate will pull a charged 1¾-inch hose line a distance of 100 feet. Candidates are shown how to hold the hose. A candidate's score is the time it takes to pull the hose 100 feet. This time is compared to a maximum allowable time (23 seconds). Any time equal to or less than the maximum allowable time results in a "pass" score.

Rationale:

Job analysis results indicate that advancing charged hose lines to fight fire, with or without assistance from other firefighters, is a task that is critical for job performance.

This task is linked to the following physical abilities:

- Ability to use muscular forces to lift, push, drag, carry, or lower objects, materials, and equipment
- Ability to apply muscular force over time or over a number of repetitions
- Ability to withstand overall body fatigue and exhaustion while physically working for periods of time in uncomfortable environmental conditions

- Ability to coordinate movements precisely that involves the arms, legs, and/or body

EVENT #2 HOSE STACKING

This event simulates the muscular strength necessary to perform crucial tasks at fire scenes, as well as at the fire station. The candidate must remove six rolled 50-foot sections of 3" fire hose from a hose rack and place it in two stacks of three sections each on the marked location. Then the candidate must replace the hose in the rack neatly in the upright position from which it was removed. The time is compared to a maximum allowable time (47 seconds). Any time equal to or less than the maximum allowable time results in a "pass" score.

Rationale:

Job analysis results indicate that firefighters are required to stack and un-stack hose at emergencies at the fire station and also lift, load and unload heavy equipment. The hose-stacking task assesses the ability to withstand muscle fatigue while performing work. Opening entrapments or removing debris to gain access to fires or trapped people requires a similar ability.

This task is linked to the following physical abilities:

- Ability to work at heights
- Ability to use muscular forces to lift, push, drag, carry, or lower objects, materials, and equipment
- Ability to apply muscular force quickly to objects and equipment to initiate start action (starting chain saw or K-12 saw)
- Ability to apply muscular force over time or over a number of repetitions
- Ability to withstand overall body fatigue and exhaustion while physically working for periods of time in uncomfortable environmental conditions
- Ability to coordinate movements precisely that involve the arms, legs, and/or body

EVENT #3 FIRE EXTINGUISHING AND RESCUE

This event simulates the strength, endurance, and coordination necessary to perform tasks necessary for fire extinguishing and victim rescue. The five (5) components of the event are: (1) dry hose drag; (2) ascend stairs with high rise hose pack; (3) tool hoist; (4) descend stairs with high rise hose pack; and (5) victim rescue. These components are performed in a timed sequence starting with (1) dry hose drag and ending with (5) dummy drag. Candidates are shown how to drag hoses, carry hose bundles, hoist equipment, and drag victims. The candidate's score is the time it takes to complete the five test components. This time is compared to a maximum allowable time (5 minutes 40 seconds). Any time equal to or less than the maximum allowable time results in a "pass" score.

COMPONENT DETAIL

- 1) The dry hose drag component will require the candidate to drag an uncharged 2 ½-inch hose line a total of 100 feet, return to the starting point, and repeat the task with a second 2 ½-inch hose line
- 2) The second component will require the candidate to ascend an exterior stairway to the fourth floor while carrying a prepared high-rise hose pack. The pack will consist of 100 feet of 1 ¾-inch hose, a nozzle, and a wye appliance
- 3) The tool hoist component will require the candidate to utilize a rope to hoist a rolled 50-foot section of 2 ½-inch hose to the fourth floor
- 4) The fourth component will require the candidate to descend an interior stairway from the fourth floor to the ground while carrying a prepared high-rise hose pack. The pack will consist of 100 feet of 1¾-inch hose, a nozzle, and a wye appliance
- 5) The final component will require the candidate to drag a 160-pound dummy a total of 50 feet using the incline drag technique

Rationale:

Component 1

Job analysis results indicate that dragging or carrying hose from an apparatus to a water source is a task that is critical for job performance

Components 2 & 4

Job analysis results indicate that carrying high rise kits/packs from fire apparatus to fire locations by ascending or descending stairs, fire escapes, or ladders as required to set up supply or attack hose lines is a task that is critical for job performance

Component 3

Job analysis results indicate that utilizing ropes or rigging to hoist and lower tools and equipment is a task that is critical for job performance

Component 5

Job analysis results indicate that dragging or carrying conscious, unconscious, or injured victims down ladders or stairs to remove them from buildings or other entrapments to safety is a task that is critical for job performance

These tasks are linked to the following physical abilities:

- Ability to work at heights

- Ability to use muscular force to lift, push, drag, carry, or lower objects, materials, and equipment
- Ability to apply muscular force over time or over a number of repetitions
- Ability to withstand overall body fatigue and exhaustion while physically working for periods of time in uncomfortable environmental conditions
- Ability to coordinate movements precisely that involves the arms, legs, and/or body
- Ability to perform coordinated, steady, and accurate actions involving wrists, hands, and/or fingers for safe operation of appropriate equipment