Fire and Rescue Departments of Northern Virginia

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Senior Operations Chiefs Committee

INFORMATIONAL BULLETIN

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SUBJECT: **Document to Provide Clarity on the use of RECEO VS and SLICER RS**

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Information developed through scientific evaluation has lead the fire service to new and progressive approaches to suppressing fires. Recently, the acronym SLICE RS has gained national attention. In an effort to keep the Northern Virginia Regional Fire Departments well informed on recent advances in the industry, this bulletin is to provide clarity on the use of SLICE RS in conjunction with RECEO VS.

In 1953, Lloyd Layman published the book 'Fire Fighting Tactics' which offered his detailed synopsis of the basic divisions of firefighting tactics that firefighters could apply to the "most complicated situations" they would mitigate. This synopsis became the acronym that has been a guiding force in our firefighting tactics at structure fires and is recounted in various fire service textbooks: RECEO - VS.

The basic divisions of firefighting tactics first consisted of 'size up', which enabled the officer to determine the appropriate course of action based upon an initial mental evaluation. The **sequential** order of the firefighting tactics that Lloyd Layman offered is expressed in the historical acronym that is still utilized today. This bulleted list is verbatim from Lloyd Layman's text and clearly defines the purpose and intention of his division of firefighting tactics:

- **R**escue – Remove human beings (or valued livestock) from the involved building and convey to a place of safety.
- **E**xposures – Actions required preventing a fire from extending to uninvolved buildings or separate units.
- **C**onfinement – Actions required preventing the fire from extending into uninvolved sections of the building.
- **E**xtinguishment – Actions required in attacking and extinguishing the main body of the fire.
- **O**verhaul – Actions required to complete extinguishment of any remaining fire, preventing rekindling, and to place the building in a safe condition.

- **V**entilation – Actions required displacing a heated and contaminated atmosphere by replacing with air from the outside atmosphere.

- **S**alvage – Actions required protecting buildings and contents from preventable damage due to water.

Over the course of time, the fire service has evolved this list to adapt to our ever changing firefighting environment. This evolution has led to fewer adherences to the strict sequential order of the tactics. Realistically, it became more of a checklist of objectives to complete that will bring an incident to closure, oftentimes, in varying order.

An example of this may occur when an Engine Company arrives at a working fire with reports of people trapped and makes the tactical decision to deploy water quickly on the seat of the fire instead of initially focusing on the tactic of a primary search. This tactical deviation would address the Rescue by implementing Extinguishment first, as it is understood through experience that putting the fire out may be the greatest lifesaving tactic we can employ.

The example stated above is just one of many examples at fire incidents in which Lloyd Layman's acronym may be modified. RECEO – VS, in today's fire environment, still has its place with Command Officers using it as an objective list to be completed prior to the termination of an incident. However, it no longer serves as a mandated chronological template the company officer operating in a fire attack mode must use in a sequential order.

This knowledge must be coupled with empirical data recently offered from Underwriters Laboratory (UL) and National Institute of Standards and Technology (NIST). There is a strong need for the fire service to conduct a considerable evaluation of this material and its associated impact on our tactics. The fire service knows that our fires are absolutely behaving differently than fires experienced in 1953. These factors include the modern home furnishings, home layout and size, and construction features such as energy efficient measures.

These factors have led to the creation of a new tactical decision-making model for fire department personnel who are initially operating at a fire and must make tactical decisions in the modern firefighting environment.

SLICE-RS is a recently introduced tactical decision model that incorporates the proven methodology learned from Lloyd Layman and pairs it with the vitally important data from UL and NIST in an attempt to provide a comprehensive tactical checklist for initially arriving officers operating in a fire attack mode (*).

- **S**ize up – A tactical plan for a fire must be developed, communicated and implemented. First arriving officers/incident commanders are responsible for obtaining a 360 degree view of the structure involved.

- **L**ocate the fire - The location and extent of the fire in the building must be determined and communicated. Officers should use all means available to make this determination. Thermal Imagers can prove valuable during the initial 360 degree lap of the structure. The location of the fire and current conditions will dictate the best location to attack the fire.

- **I**dentify the flow path - Identify the presence and/or location of the flow path. Flow path evaluations should include openings acting as intakes and discharges as well as smoke indicators of color, volume and velocity of the flow path. Efforts should be taken to control ventilation and the flow path to protect potential building occupants and limit fire growth. If a flow path is visible, consider closing doors and windows to limit air flow. When closing doors and windows, firefighters should be aware of any potential rescues readily accessible via doors/windows. This would be the opportunity for the officers to identify areas available for V.E.I.S. (Vent Enter Isolate Search)

- **C**ool the space from the safest location - Given information obtained during the size up, locating the fire and identifying the flow path, the officer will determine if high heat/untenable conditions exist inside the structure. When these conditions are present, the officer will determine the safest and most direct way to apply water to the superheated space, or directly on the fire when available. The primary goal in this step is to reduce the thermal threat to firefighters and potential occupants as soon as reasonably possible.
    - ***NOTE*** - This does not mean every fire must be hit from the exterior prior to entry. Rather it means that the officer must make an educated and informed decision on the quickest and most efficient deployment of water to the seat of the fire with the greatest outcome.

- **E**xtinguish the fire - Once the thermal threats have been controlled, the fire should be extinguished in the most direct manner possible. This may mean hitting the fire from the exterior initially with a short blast of water to knock down or "reset" the fire, followed by the rapid deployment of a hose line to the seat of the fire via the interior to fully extinguish the fire.

Actions of Opportunity – Can be employed at any time.

- **R**escue - The officer should consider the potential for rescues at all times. Firefighters should be prepared to remove occupants. It should be reinforced that many times the best action the initial units can take is to suppress the fire. The first arriving officer must make a rapid and informed choice on the priority and sequence of suppression activities verses occupant removal. **As life safety (L.I.P.) is the highest tactical priority, rescue shall always take precedence.** The incident commander must determine the best course of action to ensure the best outcome for occupants based on the conditions at that time.

- **S**alvage - Firefighters should use compartmentalization to control fire spread and smoke whenever possible and protect occupant's possessions in the best available means once fire has been extinguished.

(*Information obtained from ISFSI - http://www.isfsi.org/Resources/PressReleases/sampleslicrs.aspx)

VENTILATION: Noticeably absent from this tactical list is ventilation. Perhaps at no other time in our fire service has ventilation played such a critical role in successful operations. Fire department personnel should manage, and control the openings (doors, windows) to the structure to limit fire growth and spread and to control the flow path of inlet air and fire gases during tactical operations.

All ventilation must be coordinated with suppression activities. Uncontrolled ventilation allows additional oxygen into the structure which may result in a rapid increase in the size and hazards associated with a quickly expanding fire, due to increased heat release rates. Ventilation occurs with many of our actions, even if it is not intended, such as when we perform forcible entry. This action is necessary to gain access to the seat of the fire but without the proper application of water this form of ventilation can be detrimental to life safety, incident stabilization, and property conservation.

To be successful in our future operations we must be vigilant in our observation of past practices and exercise careful deliberation when evaluation new practices and information. As such, the NOVA region will adapt the following into our tactical operations:

- **SLICE – RS:** Will be the recommended model utilized by the initial arriving officer operating at structure fires to provide a tactical decision making model for their initial actions. An example will be demonstrated below:

    - You are the first arriving engine officer at a house fire. The officer will perform a size up of the incident which is comprised of his knowledge of the area, pertinent information provided by dispatch and potential occupants, and lastly, during the course of his 360 degree lap. During the 360 degree lap, the officer (along with all of the personnel operating at the incident) will observe the location of the fire. Additionally, once the fire is located, the flow path must be identified as it will determine the safest path to the seat of the fire. Lastly, the officer will cool the environment from the safest position and advance to the seat of the fire to extinguish the fire.

    - **NOTE**: **At any time during this tactical decision making model the officer denotes a rescue must be performed; he can communicate this information to the truck, rescue, another engine company**, **or any member of his crew to perform the task.**

    - This same notification can be applied when the officer identifies areas to perform salvage.

- **RECEO-VS:** Will be utilized by the incident commander, including the initial incident commander, operating a structure fire to provide a comprehensive tactical list of objectives that must be completed prior to terminating an incident. While the strict adherence to the sequential order may not occur, the completion of each task is pivotal to the overall goal of Life Safety, Incident Stabilization, and Property Conservation (L.I.P.). During the course of an incident, the incident commander will ensure all portions of RECEO-VS are evaluated and completed as needed. Note the following example:

    - You as the incident commander will request horizontal and vertical ventilation to commence once the fire has been confined and extinguishment underway. You shall ensure that ventilation efforts are coordinated with the interior companies. This action will assist in the removal of the toxic environment to bring the incident to closure and termination of incident command structure.