FIRESIDE TRAINING, LLC

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"EMPOWERING INITIATIVE THROUGH COMPETENCY"

Coordinating Ventilation: Supporting Extinguishment & Survivability

BY NICHOLAS PAPA

Course Description:

Ventilation can make or break the outcome of a fire. Achieving the desired effect requires the knowledge of how the tactic works and the precautions that must be taken. This program breaks down ventilation, detailing its relationship with fire dynamics, firefighting operations, and most importantly, victim survivability, to identify how it can be leveraged to positively influence the fireground. By coupling past experiences with the latest research and data, the common pitfalls and misconceptions are addressed to reduce potential errors and avoidable losses. A set of guiding principles and practices is provided to establish an operational baseline. The framework is universal and can be applied to any environment – from rural to urban communities. With a practical understanding of ventilation and the means for its execution, participants can more consistently make the right call for *their* fireground.

Learning Objectives:

Participants will develop a functional understanding of how ventilation works, its strategic and tactical impact on the fireground, and the means for its execution. By fusing the 'art' of firefighting with the 'science' of fire dynamics, participants will enhance their ability to accurately read the conditions, anticipate the progression, identify the needs, and, ultimately, to execute the tactics that will yield the best possible outcome.

Purpose:

Even with the best intentions, ventilation can have negative consequences *if* certain variables are not accounted for. This fact can often be linked to a misinterpretation as to how ventilation works and the effect it has on the fireground. This program intends to rectify the issue by providing participants with a practical understanding of ventilation. With this mental skillset, participants will have the capacity to critically evaluate their surroundings, apply the appropriate tactics, and achieve the desired effect. The purpose of this course is to provide participants with an operational framework to streamline the decision-making process and enhance their likelihood of success when engaging in ventilation operations.

Methodology:

The presentation leads off with a call to duty by reminding participants that their actions determine the fate of an incident. The human element of ventilation is then examined, identifying the behaviors and mindsets which prompt operational failures and their consequences. The history behind why this educational deficiency exists is provided, as well as how we can overcome it moving forward. The program proceeds with an overview of fire dynamics to explain fire development and spread, the movement of air and the byproducts of combustion, and the nuances of today's fire environment. This information lays the groundwork for demonstrating the nature of ventilation and the effect it has on our operations, as well as victim survivability. An operational framework is then provided to optimize decision-making and the ventilation tactics selected, ensuring the best possible outcome is achieved. Each component of the program is thoroughly supported by personal experiences, case studies, as well as research and survey data.

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Target Audience:

This course is directed towards those at the tactical level, who are tasked with performing or requesting ventilation—firefighters and company officers—by providing them with the essential knowledge to effectively and efficiently function in that capacity. It is equally beneficial, however, to those directing the operations—chief officers/incident commanders—by detailing the strategic impact of ventilation on the incident as a whole. The information is delivered in a comprehensive, yet simplistic manner, making it suitable for all levels – from entry level firefighter to the most senior officer.

Genesis:

While attending a fire dynamics lecture following my promotion to lieutenant, I realized how little attention was previously given to the science and mechanics behind the tactics I had been trained to employ, specifically ventilation. I began reflecting on my past experiences, particularly as a new ladder company firefighter, and recognized some of the issues and close calls I had incurred were directly caused by the ventilation operations I was involved in. Although the actions taken were well-intentioned and based off of concepts I had been taught in basic training, they resulted poorly. While I was skilled in the practical aspect of ventilation, it became clear I, like many others, was lacking in the mental component. Because I did not truly understand how ventilation worked and the impact it was having, I failed to realize the implications of my actions. I then immersed myself in the study of the tactic. The journey brought me to serve as a technical panelist for the FSRI research project, *The Study on Coordinated Fire Attack in Acquired Structures*. After returning to an engine company as an officer, I then became the individual responsible for requesting and confirming ventilation - placing me on the receiving end. This gave me a much more well-rounded appreciation and a greater understanding of how it is successfully coordinated to support fireground operations and the preservation of life and property. In turn, I developed and refined a program, which I have presented across the country, that provides participants with a practical understanding of ventilation to improve their fireground performance, and to prevent them from having to learn those same lessons the hard way.

Instructor Background:

Nicholas Papa is a second-generation firefighter with 21 years of experience in the fire service. He is a captain with the New Britain (CT) Fire Department, where he has served for 17 years, presently the Drillmaster of the Training Division. His previous assignment, where he spent 7 years, was as the senior lieutenant of Engine Company 1, the city's busiest fire-duty unit. He was the co-founder of the department's fire academy, and the lead instructor for the inaugural recruit class. Nick entered the fire service in 2003, volunteering for the neighboring suburb of Newington until his appointment to the NBFD. He is a contributor to Fire Engineering and the author of the best-selling book, *Coordinating Ventilation: Supporting Extinguishment & Survivability*. Nick is a FDIC International advisory board member and has been a classroom instructor since 2017. He also served as a technical panelist for the FSRI research project, "*The Study on Coordinated Fire Attack in Acquired Structures*." Nick is also the founder of the fire service training and consulting organization, *Fireside Training, LLC.*