

Policy: **Fireground Factors**

Purpose: To provide personnel with a list of factors to consider in the evaluation of tactical situations.

Scope: All NPPFD personnel

Fireground factors offer a standard list of basic items Command must consider in the evaluation of tactical situations. This list should provide Command with a "checklist" of the basic items that are involved in size-up, decision-making, initiating action, review and revision on the fireground.

The effective Command Officer can only deal with a limited number of factors of any kind on the fireground. Within the framework of that limitation, the identification of critical factors is extremely important. All the factors are not critical in any one tactical situation. Command must identify the critical fireground factors that are significant in each tactical situation. The list of factors offers a framework for that process.

Many times we begin operations before adequately considering the critical fireground factors. Size-up is a conscious process involving the very rapid but deliberate consideration of the critical factors and the development of a rational plan of attack based on those conditions. Attack is many times an instinctive action-oriented process that involves taking the shortest and quickest route directly to the fire. Action feels good in fireground situations while thinking delays action. Beware of non-thinking attack situations and non-thinking attackers.

Fireground factors represent an array of items that are dynamic during the entire fireground process. The relative importance of each factor necessarily changes throughout that time frame. Command must continually deal with these changes and base decisions on factor information that is timely and current. Beware of developing an initial plan of attack and sticking to that same initial plan throughout the fire, even though conditions continue to change. Effective fire operations require attack plan revisions that continually reconsider fireground factors based upon information feedback.

In critical fire situations, Command may develop an initial plan and initiate an attack based on an incomplete evaluation of fireground factors. In such cases, efforts must continue throughout the operation to improve the information on which those decisions are based. Command will seldom operate with complete information during initial operations.

The effective management of each fireground factor requires Command to apply a somewhat different form of information management (visual, recon, preplan) to each factor. This is particularly true between the major categories of factors. Command must deal with each factor in the most effective manner.

Most tactical situations represent a complex problem with regard to how Command deals with fireground factor information. There are factors that can be determined from a command position on the outside of the structure and other factors that can only be determined from other operating positions, both outside and inside the structure. Fireground intelligence available to Command is developed utilizing an overlapping variety of information management factors and forms. These forms of information management revolve around the three basic information factors:

- Visual Factors - These factors include those obvious to visual observation and those absorbed subconsciously. This visual information is categorized as the type that can normally be gained by actually looking at a tactical situation from the outside. This form of intelligence involves the perceptive capability of Command.
- Reconnaissance Factors - These factors include information that is not visually available to Command from a position on the outside of a tactical situation and must be gained by actually sending someone to check-out, go-see, look-up, research, advise, call, go-find, etc. This generally involves Command making a specific assignment and then receiving an information-oriented report.
- Preplanning and Familiarity Factors - These factors include the intelligence that is gained from formal pre-fire planning, and general informal familiarization activities. Such intelligence increases the information initially available to Command from the OUTSIDE of a tactical situation. This information provides Command with intelligence that would otherwise have to come from a Reconnaissance report or might not be available.

The following are fireground factors that should be evaluated by Command as they pertain to each tactical situation. They can be obtained by using the above information management factors.

BUILDING

- Size
- Roof type (Bow string, bar joist, etc.), and condition
- Interior arrangement/access (stairs, halls, elevators)
- Construction type
- Age
- Condition - faults/weaknesses
- Value
- Compartmentation/separation
- Vertical-horizontal openings, shafts, channels
- Outside openings - doors and windows/degree of security
- Utility characteristics (hazards/controls)

- Concealed spaces/attic characteristics
- Exterior access
- Effect the fire has had on the structure (at this point)
- Time projection on continuing fire effect on building

FIRE

- Size
- Extent (% of structure involved)
- Location
- Stage (inception -- flashover)
- Direction of travel (most dangerous)
- Time of involvement
- Type of amount of material involved - structure/interior, finish/contents/ everything
- Type and amount of material left to burn
- Products of combustion liberation

OCCUPANCY

- Specific occupancy
- Type-group (business, mercantile, public assembly, institutional, residential, hazardous, industrial, storage, school)
- Value characteristics associated with occupancy
- Fire load (size, nature)
- Status (open, closed, occupied, vacant, abandoned, under construction)
- Occupancy associated characteristics/hazards
- Type of contents (based on occupancy)
- Time - as it affects occupancy use
- Property conservation profile/susceptibility of contents to damage/need for salvage

LIFE HAZARD

- Number of occupants
- Location of occupants (in relation to the fire)
- Condition of occupants (by virtue of fire exposure)
- Incapacity's of occupant
- Commitment required for search and rescue (men, equipment, and command)
- Fire control required for search and rescue
- Needs for EMS
- Time estimate of fire effect on victims
- Exposure of spectators/control of spectators
- Hazards to fire personnel
- Access rescue forces have to victims

- Characteristics of escape routes/avenues of escape (type, safety, fire conditions, etc.)

ARRANGEMENT

- Access, arrangement, and distance of external exposure
- Combustibility of exposures
- Access, arrangement, and nature of internal exposures
- Severity and urgency of exposures (fire effect)
- Value of exposures
- Most dangerous direction - avenue of spread
- Time estimate of fire effect on exposures (internal and external)
- Obstructions to operations
- Capability/limitations on apparatus movement and use

RESOURCES

- Personnel and equipment on scene
- Personnel and equipment responding
- Personnel and equipment available in Reserve or in Staging
- Estimate of response time additional resources
- Condition of personnel
- Capability and willingness of personnel
- Capability of command personnel
- Availability of hydrants
- Supplemental water sources
- Adequacy of water supply
- Built-in private fire protection (sprinkler, standpipe, alarms)
- Outside agency resource and response time

OTHER FACTORS/CONDITIONS

- Time of day/night
- Day of week
- Season
- Special hazards by virtue of holidays and special events
- Weather (wind, rain, heat, cold, humid, visibility)
- Traffic conditions
- Social conditions (strike, riot, mob, rock festival)

Tactical priorities identify the three separate tactical functions that must be completed in order to stabilize any fire situation - these priorities also establish the order in which these basic fireground functions must be performed.

These functions should be regarded as separate, yet interrelated, activities that must be dealt with in order. Command cannot proceed on to the next priority until the current function objective has been completed.

Basic tactical priorities are as follows:

- #1 - Rescue
- #2 - Fire Control
- #3 - Property Conservation

Rescue - The activities required to protect occupants, remove those who are threatened and to treat the injured.

Fire Control - The activities required to stop the forward progress of the fire and to bring the fire under control.

Property Conservation - The activities required to stop or reduce additional loss to property.

The objectives of each priority are reflected in the following benchmarks of completion:

- #1 - Rescue - primary search (all clear)
- #2 - Fire Control - under control
- #3 - Property Conservation - loss stopped

All three tactical priorities require somewhat different tactical approaches from both a command and an operational standpoint.

While Command must satisfy the objective of each function in its priority order, Command must, in many cases, overlap and "mix" the activities of each to achieve the current benchmark. Notable examples are the frequent need to achieve interior tenability with active/extensive fire control efforts before getting on with primary search, or the need to initiate salvage operations while active fire control efforts are being extended.

By the Order of: _____
Fire Chief

Date: _____

