

JOINT RESPONSE AGREEMENT MODEL STANDARD OPERATING GUIDELINE

SUBJECT:	STRUCTURAL FIRE ATTACK FIREGROUND FACTORS	PAGE(S):	3
REVISED:			

**STRUCTURAL FIRE ATTACK
Fireground Factors**

**October 8, 2009
Page 1 of 3**

This guideline provides a standard framework of the basic factors the Incident Commander should consider in the evaluation of tactical situations.

It also provides the Incident Commander with a checklist of the basic items that are involved in size-up, decision-making, initiating action, and review/revision on the fireground.

It is the responsibility of ALL firefighters to clearly understand what they are preparing to do. The only way that can be accomplished is by the firefighters understanding the situation in which they are about to embark. This is termed situational awareness. Many fireground factors are as important to firefighters as they are to the command staff. Upon arrival, firefighters should exit the apparatus and take a moment to observe the scene. Factors such as smoke, construction type, and the location of entrances and exits all contribute to scene size-up.

Incident Commanders should avoid beginning operations before adequately considering all fireground factors. Size-up is a conscious process involving the very rapid, but deliberate consideration of critical factors and the development of a rational plan of attack based on those conditions.

Fireground factors represent many items that are dynamic throughout the entire fireground process. As these factors change throughout the incident, the Incident Commander is expected to deal with these changes and make sound decisions based on up-to-date information. Incident Commanders should be careful to avoid developing a plan and sticking to it, even when the fireground factors may have changed.

In critical situations, the Incident Commander may develop an initial plan and initiate fire attack based on an incomplete evaluation of the fireground factors. In these cases, it is important for the Incident Commander to remember that updated information should be obtained as soon as possible so additional operations can be further directed.

The Incident Commander can obtain information about fireground factors using three different methods:

1. **VISUAL FACTORS** - Information obtained through visual observation from the outside
2. **RECONNAISSANCE FACTORS** - Information that is not visually available to the Incident Commander from the command position outside the hazard zone. This information is obtained by sending someone to investigate areas of the incident that cannot be seen by the Incident Commander.
3. **PREINCIDENT ANALYSIS FACTORS** - Information gained from formal pre-fire planning and by general information that the Incident Commander would have prior to an incident.

BASIC FIREGROUND FACTORS AN INCIDENT COMMANDER SHOULD

CONSIDER: --- **Building Factors:**

- Construction type and building size
- Interior arrangement/access to stairs, halls, and elevators
- Age
- Condition (faults/weaknesses)
- Outside opening doors and windows/degree of security
- Utility characteristics hazards/controls
- Concealed space/attic characteristics
- Exterior access
 - ❖ **Fire Factors:**
- Extent/percent of structure involved
- Location
- Stage
- Direction of travel
- Time of involvement
- Type of material involved
- Amount of material involved
- Type and amount of material left to burn
- Products of combustion
 - ❖ **Occupancy Factors:**
- Specific occupancy
- Type of business (mercantile, public assembly, etc.)
 - ❖ **Value Characteristics Associated With Occupancy:**
- Fire load size/nature
- Status of building (vacant, occupied, under construction, etc.)
- Time as it affects occupancy use

❖ **Life Hazards:**

- Hazards to fire personnel and access for firefighters to perform search/rescue
- Location, condition, time estimate of fire effect on occupants
- Personnel commitment/fire control required for search and rescue
- Exposure and control of spectators

❖ **Arrangement Factors:**

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

❖ **Resource Factors:**

- Resources on scene
- Resources responding
- Resources available in reserve
- Estimate of response time for resources
- Capability and willingness of personnel
- Capability of overall resources
- Number and location of hydrants
- Supplemental water sources
- Adequacy of water sources
- Built-in fire protection sprinklers, standpipes, and alarm systems
- Outside agency resource and response time

❖ **Other Factors:**

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