

Title: Truck Company Operations

**Date Issued: December 6, 2005
Date Last Revised: NEW
Revision Number: NEW
Total Pages: 19**

Purpose: To provide specific tactical guidelines for the operation of a Truck Company within the Command structure of the department.

Scope: This guideline is designed to act as a procedural and tactical guide for those individuals assigned Truck work at the scene of any emergency. In most cases, scenes, which require specialized Truck Company work, will involve structural firefighting. All employees, whether assigned to or arriving at the scene as part of a designated Truck Company are responsible for being familiar with this guideline.

General: The specific application of Truck Companies in the fire service can be traced back to the first organized fire departments. Firefighters realized that at the scene of a structural fire, if a crew of firefighters were specifically designated to complete important tasks such as forcible entry, ventilation and search and rescue lives could be saved.

210.12.01 Truck Company Operations:

While these tasks have been performed in Winter Park for over 100 years, the department has not, until now, specifically designated a crew of firefighters and a vehicle to Truck Company work.

These guidelines are just that, a guide for firefighters to follow when assigned to, or operating at the scene of, an emergency and tasked with completing Truck Company type work. It is not an end-all to Truck Company assignments. Individuals assigned these tasks need to be self-thinkers, tactically sound and motivated firefighters. Often difficult tasks are required to be completed with limited staffing. Skill, training and experience will help ensure the safety of everyone on the fireground.

210.12.02 Truck Company Functions:

Certain operations, referred to as Truck Company Functions, must be performed simultaneously with the fire attack to insure a coordinated operation and a favorable outcome on the fire ground.

Truck Company functions should include, but not be limited to, the following:

- Ventilation (natural or forced)
- Entry (forcible or otherwise)
- Search and rescue
- Laddering (ground and aerial)
- Set up of Auxiliary scene lighting
- Utility control (electric, gas, water)
- Elevated master streams
- Overhaul, Property conservation
- Victim Extrication

Each fire situation presents unique problems, which seldom allow the use of a completely "canned" approach to Truck Company Operations. This S.O.G. sets forth a standardized approach to assigning responsibility for the completion of specific types of Truck company functions for the most frequently encountered fire situations. This approach will ensure that these vital operations are performed either before, or simultaneously with fire attack operations, even if a Truck company is not on the scene.

210.12.03 Response Modes:

Engine companies, which normally arrive at fires several minutes ahead of first-due Truck Companies or Rescues, must detail a firefighter to perform ventilation, utilities control and exterior search (from windows, doors, or other openings) while the remainder of the first arriving crews initiate the fire attack.

If the first arriving engine company is a staffed with a 3 person crew, outside duties such as stretching lines, forcible entry, and in some cases outside vent and fire attack can be accomplished under the direction of the company officer. In most cases, interior fire operations can only be performed after the arrival of a second unit.

In areas in which a Rescue unit reaches the scene before the Truck Company, the Rescue crew should begin Truck Company functions, reporting progress to the Incident Commander, and thereby informing the responding Truck of the tasks not yet performed.

The arriving Truck crew will then augment the crews already in action, and assume overall control of Truck Company Functions/Sectors. If the Rescue arrives with a 3 person Engine Company, their duties should include:

- Outside vent
- Utilities control
- Exterior search
- Insuring 2 in 2 out rule is maintained

Once additional units arrive on the scene the Rescue may be assigned by command as needed.

In situations in which a Rescue arrives after or with the Truck Company the Rescue Company will be detailed specific Truck assignments to augment the Truck Company, with primary emphasis on outside vent, entry, search, and rescue. **(All interior search teams will consist of 2 person teams)**

It shall be the responsibility of all crews to report their progress to the Incident Commander using brief language such as:

"Rescue 61 to Command, outside vent complete, utilities secured;"

"Truck 61 to Command, second floor search complete, all clear,"

Unless otherwise directed by the IC, all additional Truck companies shall report to a designated staging area. This will ensure that the placement of the any additional Truck Companies will be at the direction of the IC and be to the best advantage of the incident.

210.12.04 Two-Team Concept:

It is the intent of the department to operate a Truck Company with a minimum of three personnel. However, to optimize operations, four firefighters will be assigned to the Truck Company as staffing and funding allow. This allocation of personnel will allow the Truck Company two teams of two firefighters.

"Inside team" will consist of the officer and right jump seat firefighter and will concentrate their efforts on forcing entry opposite the fire for the fire attack team, search for victims, assisting the fire attack crew in locating the fire, ventilating, determining extension, and opening up to cut off that extension.

"Outside team" will consist of the driver and left jump seat firefighter and will concentrate their efforts on outside venting beginning at the main body of the fire and working back toward the point of entry, securing utilities (particularly gas and electric), making a secondary point of entry, roof ventilation, and aerial use if required.

The first arriving Rescue Company should augment Truck Company functions. The rescue will remain as a 2-person team to be used to perform either outside Truck company functions or as an interior search team.

Advantages of the Two-Team System

The "inside/outside" team operation targeted to the Vent-Entry-Search procedure has several advantages. Two rooms may be searched right away, ventilation is provided, and two teams are making the maximum effort to rescue victims.

You would not want to order this operation for a pot on the stove, as it is easy to understand the damage that would occur. But, if you hit a residential situation where victim rescue is needed, this procedure represents a maximum effort by a limited number of personnel.

As more personnel and apparatus arrive, they can supplement the operation and cover every room until you know the building is clear.

210.12.05 Unit Specific Definitions:

Company Officer – Persons designated as being in-charge of the Company. Responsibilities include crew safety, task assignment, and objective completion. Equipment assignment should include, portable radio, hand light, closet-hook and Thermal Imaging Camera TIC.

Engineer / Driver - carries a hand light, radio, six-foot hook, Haligan tool, and may carry an axe and fourteen foot ground ladder as needed.

Forcible Entry - the manual opening of structural spaces to permit search, rescue, and extinguishment.

Hook - a pike pole (in various lengths) used to break glass, pull plaster, screens, blinds, etc.

Left Jump Seat Firefighter - carries a hand light; six or twelve foot hook, a sledgehammer. In addition, they may carry a Haligan or a flat head axe, as needed.

Right Jump Seat Firefighter - carries a hand light, 30" Haligan tool, flat head axe, and a 6-foot hook.

Truck Company- a specifically designated aerial ladder or platform fire apparatus equipped and staffed.

Ventilation - the act of creating or utilizing openings in a structure to allow the escape of the products of combustion and extinguishment or the inflow of fresh air.

210.12.06 Structural Ventilation Guidelines:

Where it will be adequate and safe, horizontal ventilation utilizing natural openings such as doors, windows, exhaust fans, etc. is the fastest and most efficient means of ventilation. When using window openings for ventilation, all glass, screens, curtains, and blinds should be removed to provide maximum air exchange.

When necessary, vertical ventilation should be accomplished promptly, opening directly above the fire and utilizing natural openings such as ventilators and skylights where possible.

If natural openings are inadequate, or not located directly over the fire, efforts should be placed to open the roof area directly over the main body of fire. This action must include the creation of a direct opening to the lowest portions of the structure by pushing down the ceiling(s) below the roof as well.

The "outside team" should determine the location of the fire and begin outside venting at the main body of the fire, working their way back around towards the point of entry made by the fire attack team. This method of ventilation will allow the fire to vent, reducing extension and drawing fresh air in behind the fire attack team. This also makes the interior conditions more tenable for firefighters and any potential victims.

210.12.06 Controlling Electrical Utilities:

Depending upon the type of occupancy, utilities control can be accomplished by one of the following methods:

- Individual breakers.
- Electrical main-disconnect.
- Shunt trips.

The removal of the electrical meter is not an acceptable method of controlling utilities. The utility that provides service to the structure should be notified if assistance is needed.

210.12.07 Operations at Private Dwellings:

The intent of this guideline is to promote coordinated action of the Truck Company and to fully utilize the on-scene personnel and equipment with the ultimate goal of reducing the loss of life and property in private dwelling fires. In addition, this guideline will detail the basic operations, assignment of members and tool complement of Truck Companies operating in private dwellings.

The proper application of the maximum effort rescue technique begins with size-up.

The Company Officer must ask:

- Do the various factors associated with the alarm indicate a rescue potential?

Firefighters know from experience that without oxygen, death will occur in four to six minutes. This timeframe helps to establish the benchmark of **four-minutes** for the completion of the primary search of the structure.

Upon completion of each search, the crew shall indicate to the IC an "**all clear.**"

If firefighters fail to get to any victims, or they aren't provided with a survivable atmosphere within the four to six minute benchmark their chances of survival are slim.

210.12.08 Venting For Life:

Consider that there are really two kinds of venting available in this situation, venting for life and venting for fire, the two practices are distinctly different. In venting for life, we give up a little time and building for the chance to get to the victims within a four-minute goal. If the decision is made to vent for fire, the IC has chosen to move the fire in a controlled manor to facilitate extinguishment with minimal property loss.

Remember that an Engine Company is on the scene with a charged attack-line seeking out the fire. Although roof ventilation could be indicated, roof venting is seldom required for fire conditions in private dwellings and at least two firefighters may be tied up getting to, and opening the roof.

Company Officers should consider using these two firefighters for a two-sided approach to reaching trapped occupants.

The two-sided approach is based on an "inside team" and "outside team", each with two firefighters.

Both teams are committed to a concept called **V.E.S. (vent-entry-search)**.

The inside team consists of an officer and a firefighter. They're prepared to force entry to any room, locate the fire, and locate victims from the inside. They work in conjunction with the attack crew, but they have a mental commitment to try every approach to interior search and to make every effort to get to that victim.

While working in a coordinated manner with the fire attack crew, the “inside team” may actually enter the structure without a charged hose line specifically assigned to them. This is not to say that the “inside team” can and always will work in areas away from the safety of a hose line, but when lives are at stake, venting the structure for life may require this most dangerous practice.

The “outside team” also consists of two firefighters. They have the primary V.E.S. opportunity because they can easily identify bedroom windows. Again, decisions made by the “outside team” may require they enter the dwelling for rescue purposes without the protection of a charged hose line. This practice is only recommended when a search is required of a single room, which cannot be quickly reached from any other part of the structure.

It remains the policy of this department for firefighters to enter active structural fire situations only with the safety of a charged hose line. However, during the V.E.S. procedure entry without the protection of a charged hose line is approved only in the aforementioned situations.

Depending on the type of construction and the architecture, two firefighters may be placed in an area to perform work from a porch roof. The reasoning for this position is related to the features of a porch roof: It can be quickly reached with a 14' ft. roof ladder and it provides a stable platform for entry into a bedroom. In addition, it provides a temporary evacuation area for victims without having to use other personnel to take them immediately down ground ladders.

The Porch Team

The Porch Roof Team may use the following procedure (2 members) when entering a room.

All glass is removed and the entire window is cleared. As entry is made, the floor and ceiling is checked then the door is immediately closed. This allows the room to ventilate fairly well so a search can begin. If a victim is found they are moved to the porch roof for safety.

If a thorough search is made and nothing is found, carefully inspect the bedroom doorway and hall. If possible, the door is left open and the team should exit through the window. Reopening the bedroom door gives the inside team and the attack crew more ventilation. If the room lights up when you first take out the window, try to sweep below the sill with a tool. A victim may be found and pulled onto the roof.

Other Exterior Efforts

As the porch roof team is engaged in V.E.S. on the second floor the two members of the "outside team" begin other operations. Part of their job is to provide venting for the Engine Company.

This is accomplished through opening one window opposite the hose crew's advance. Then the rescue team picks a bedroom opposite the porch roof operation on the second floor and ladders to search other bedrooms.

It's critical that the team, not ladder over the fire room. If the fire should break through the glass while a firefighter is engaged in V.E.S., they will become trapped as their means of egress may be blocked by flame.

Special Problems

- Open and unenclosed stairway. This is the major weakness from a firefighting and fire protection standpoint.
- Lack of secondary means of egress from upper floors.
- Bedrooms are usually located on upper floors and bedroom doors may be non-existent, removed, poorly fitted, or left open. In a duplex, you should assume bedrooms might exist on both floors.
- Interior access to attic spaces is usually difficult or non-existent. Where access is provided, it may be via a very narrow stair (straight ladder in a closet), scuttle opening over the stair, in a bedroom closet, or a pull down type stair.

Life Hazard

A rapid build-up of heat and smoke in the confined areas of a private dwelling aided by the normally open interior doors is an extreme threat to the occupants. A coordinated effort by the "inside" and "outside teams" to search for and remove all endangered occupants must be the primary consideration of all Truck and Rescue Company operations (especially on upper floors).

In certain areas of the city, buildings that were originally constructed as one and two-family dwellings have been converted into multiple dwellings without appropriate safeguards. Additional families and "ROOMERS" are found living in attic spaces.

210.12.09 General Areas Of Responsibility:

Due to the relatively small height and area of the private dwellings, the first to arrive Truck and Rescue Companies are responsible for, forcible entry, ventilation, and search of both the fire floor and floors above.

First Truck and Rescue Companies To Arrive:

- Rapid comprehensive exterior size-up of fire situation.
- Determine life hazard and rescue as required.
- Vent, entry, and search of all occupied areas of the dwelling either via the interior, or by a combination of an interior/exterior approach.
- Nothing must delay primary search, but an "all clear" of the entire building must be made ASAP, and reported to command.
- The first Truck Company on the scene will institute an "inside/outside team" concept that will attack on different levels of a private dwelling simultaneously.
- When the first Rescue arrives before the first Truck, the rescue crew should initiate "outside" Truck Company functions and serve as the outside "RIT" rapid intervention team for interior fire attack operations.
- When the Rescue arrives at the same time or after the arrival of the Truck Company, the Rescue Company will normally become the RIT and or assist the "outside team."

Truck Company Officer Initial Responsibilities:

- Directly supervise the "inside team."
- Determine the location of the fire, control, ventilation,
- Direct search and rescue.
- Coordination of activities should be accomplished with portable radios.
- When an "outside" operation is not necessary, notify members to prevent unnecessary window damage.

Forcible Entry (Truck Crew right jump)

- Force main entrance to building. This usually presents no problem in private dwellings since the door and lock assembly are generally of light construction.
- Forcing the main entrance provides access to the interior stairs (most of the time) for the protection and control of this vital area.
- If the main stair would not be endangered and the Engine Company extinguishes the fire more readily from the side entrance, then it too shall be used.
- Conduct search of lower floors and ventilate as needed.

Rescue Crew

- Assumes Truck Company outside functions in the absence of a Truck Company.
- In the presence of a Truck company, the Rescue assists the “outside team” as needed.

Additional Considerations of the “Inside Team”

Aggressive leadership by the officer is the most important factor in conducting the inside attack.

The primary consideration of the "inside team" is search and rescue of those occupants who have a chance of survival if immediately removed. Therefore, if the officer and members of the "inside team" are met at the front door by fire, they will not wait to advance in behind the line. Rather, they will seek another means of access into those rooms not yet involved in fire.

The time of the incident plays a key role in search operations. During sleeping hours a heavy emphasis must be placed on bedroom search. Limited time is spent on living room, dining room, and kitchen areas.

Ventilation of lower floor windows should not jeopardize those members operating into upper stories via outside portable ladders.

“Outside Team” (Truck Engineer and Left Jump Seat Firefighter)

Duties – General:

- Ladder the building as necessary.
- Make V.E.S. via upper level window or windows for search and rescue.
- Report the location or extension of fire to IC.
- For upper level operation the aerial device may be used when directed by the Truck officer.
- Control utilities (electricity, gas, water)

Additional Considerations of the “Outside Team”

- Under light smoke and heat conditions a completely interior operation may be feasible. Under any other condition however, utilization of ladders to upper sleeping areas is usually preferable and provides for:
 - A two-sided approach to any potential area of life occupancy on upper floors.
 - Members on ladders are often working in relatively "clean" air until actual entry into rooms.
- Proper positioning of ladders, based on knowledgeable outside size-up, assures putting members into the bedrooms on the upper level. (Inside attempts to locate rooms, doors, etc. is often more difficult due to heat, smoke, and limited visibility).
- Members entering rooms via ladder normally will not be more than ten feet (average room) from the ladder. Chances of getting disoriented or lost are decreased.

Since possible attic occupancy must be considered by the "outside team" visible indications that attic spaces or upper levels are being utilized for living purposes are:

- Adequate height (approximately seven feet).
- Dormer attic areas.
- Windows of fair size and normal appearance.
- Screens and or storm windows.
- Curtains, drapes, Venetian blinds, etc.
- Window air conditioners.

- Door bells, multiple mailboxes.
- Fire escapes

210.12.10 Commercial Structures – Roof Operations:

Fires in commercial structures offer unique challenges to fire crews. Performing ventilation operations in today's structural environment is often dangerous and can be compared to operating on a residential roof structure.

Truck Company officers and Incident Commanders should weigh the benefit of placing a ventilation crew on a commercial roof structure for the purpose of performing ventilation. As with large residential structures, the ends of the building or those natural openings made by air handling units or skylights are easier for creating an opening.

Several important points to consider when deciding where to ventilate include:

- Age of the structure
- Roof composition
- Structural design of the roof
- Time of exposure to fire conditions
- Amount of personnel available
- Gain versus Loss – are lives at stake

210.12.11 Roof Operations:

In order to affect total control of the fire situation, it may become advantageous to ventilate the structure at the roof. No operation is more effective or more dangerous than opening up the roof of a structure. The Truck Company is usually called upon to complete any roof ventilation operations.

Roof operations can be carried out safely if standard operating guidelines are followed. This does not indicate that all roof operations are safe. At times, in order to affect a final positive outcome to a fire situation, the roof must be vented properly. Failure to identify and complete proper roof ventilation can result in a total loss of the structure.

Historically, most roof ventilation operations take place long after other forms of ventilation have been initiated. This is due in large part to the lack of easy access and staffing. Consequently, many roof-venting operations are initiated for property conservation and fire control and not for life saving purposes.

Therefore, fire crews need to be well aware of the risks of roof operations and limit their exposure to any potential unwarranted risk. The value of placing crews on the roof of a fire building must be weighed against the potential loss of life or injury to fire crews. Several variables can assist the Incident Commander when making the decision to initiate roof operations:

- Type of construction
- Duration of fire impingement on structural roof system
- Risk verses gain of exposing crews for property conservation only
- Availability of staffing and equipment to complete task.

If a decision is made to initiate roof operations the following guidelines will serve to help complete the tasks within a margin of safety. However, nothing can replace the knowledge, skills and experience of the Truck Company officer and Incident Commander when making this decision. A good rule of thumb to use is that if the situation looks and feels unsafe, and no lives are at stake, a roof ventilation operation is not your best option. Placing firefighters on any roof should be a strategically calculated decision with a specific goal in mind. Anything less should keep the firefighters on the ground.

Roof Operations:

Once a decision is made to initiate roof operations several other decisions need to be made. Will the operation be performed from ground / roof ladders or will an aerial device be used. The idea should be to always create the best working platform with the most stability for the crew.

It may seem to be overkill to use an aerial ladder on a single story, single family dwelling, however, the aerial may be the safest and most stable platform to perform the operation. The Truck Company officer should not rule out any option to create the safest work environment possible.

General Guidelines for Roof Operations with Lightweight Truss Construction Structures.

Physically opening up the roof is usually not considered an initial operation in single-family dwelling fires. However, later in the operation openings may be created to slow the progress of fire in large dwellings. These openings should be made at the gable ends or from within the structure.

Fire crews should not be placed upon any lightweight truss roof after the structure has been exposed to fire conditions.

Lightweight truss construction in modern single-family dwellings does not support fire conditions. Under heat, the gusset plates come free and the structural integrity of the trusses are lost resulting in failure of the roof.

It will therefore be the policy of the department to not place crews on the roof of a single-family dwelling or any other structure that is designed with lightweight truss construction.

Roof operations should always take place utilizing minimal personnel and from as stable a working platform as possible. This includes the use of safety lines, roof ladders or aerial devices.

210.12.10 Vehicle Placement:

The physical placement of apparatus on the fire ground is critical. No more critical placement is made than that of the first arriving Truck Company. The Truck Company Officer, along with the Incident Commander, must consider the placement of the Truck at the scene a priority.

The key to making the correct decision on Truck placement is considering all the potential situations the Truck and its' equipment could be used in. Three main considerations are:

- Victim rescue
- Fire control
- Ventilation

All units assigned to an alarm are in one of five modes:

- Responding
- Staged
- Operating
- Parked
- Returning to Quarters

It is important for the Truck Company Officer to consider the importance of their vehicles placement when approaching the scene and when moving from a staged placement to an operational position.

The Truck Company, when dispatched, should evaluate if they will in fact be the first fire unit to arrive at the scene. This can be determined through listening to the assignment, or by contacting the first due Engine Company.

It is more important for the Truck Company to have what is referred to as the “front” of the building. Even if the Truck Company initiates a fire attack.

Based on the response assignment, if the Truck Company arrives first by a significant amount of time (one-two minutes) they are to take up a position of best advantage for both fire attack and ladder placement. This may include the laying of supply lines and advancing of attack lines.

If the Truck Company Officer finds that the Truck and crew are committed to fire suppression activities upon arrival and they are unable to complete their Truck Company objectives, an additional Truck should be dispatched to the incident.

A coordinated response into the scene is critical for proper apparatus placement. If the Truck Company Officer is unsure of the placement or the

route of any incoming Engine Companies, they should communicate with each of the arriving units.

If requested, the Truck Company may be assigned water supply responsibilities. This may include laying supply lines or pumping hydrants. While this would not be to the best advantage of the Truck, providing a water supply is not outside the Trucks abilities.

Staging

The Truck Company should consider their staging options at ALL incidents. Rushing in to the scene and placing the apparatus in the wrong location could cause problems further on in the incident.

Engine Company Placement

Engine Company Officers should leave the front of the structure open for the placement of the Truck. It is to the Engines best advantage to see as many sides of a building before coming to a stop. Pulling past the structure provides a view of three sides of the building and leaves the front open for the Truck.

Gaining the Best Advantage:

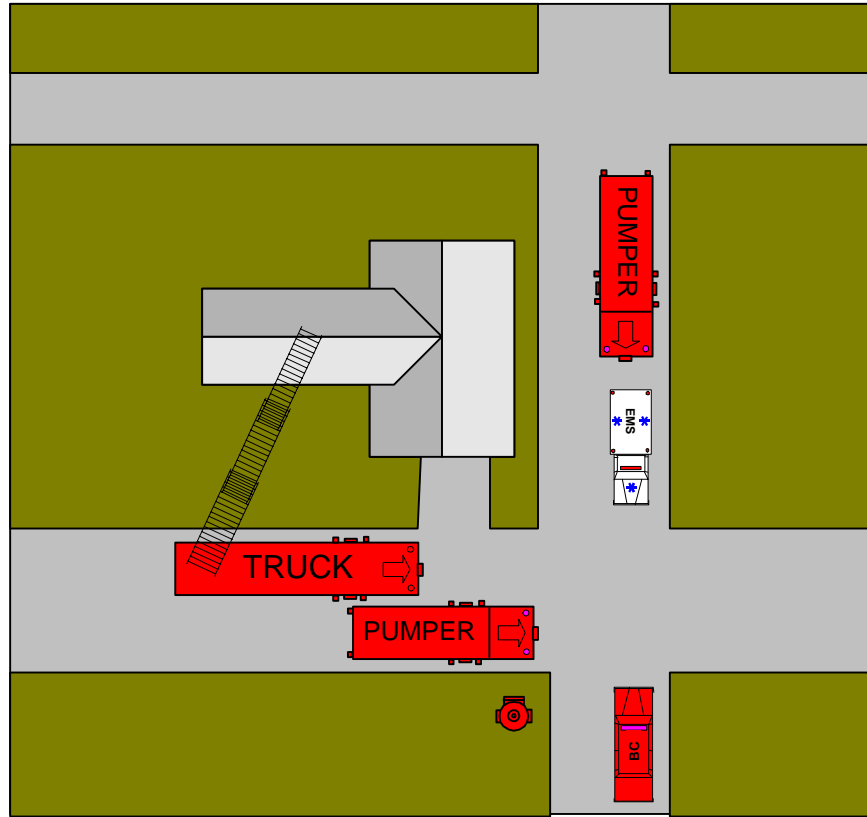
Positioning the Truck should take best advantage of the elevated access based on the type of aerial device involved.

In our case, the Truck is a mid-mount aerial. Getting the Truck placed at the scene to where the base of the aerial ladder is at a front corner, or at the best corner, will allow for the ladder to shoot two sides of the building without re-locating. This is vital when victim rescues are required on two sides of the structure.

The Truck Company Officer must be ready to make these split second decisions in order to place the Truck to the best advantage for the expected operation.

210.12.13 Apparatus Placement Examples:

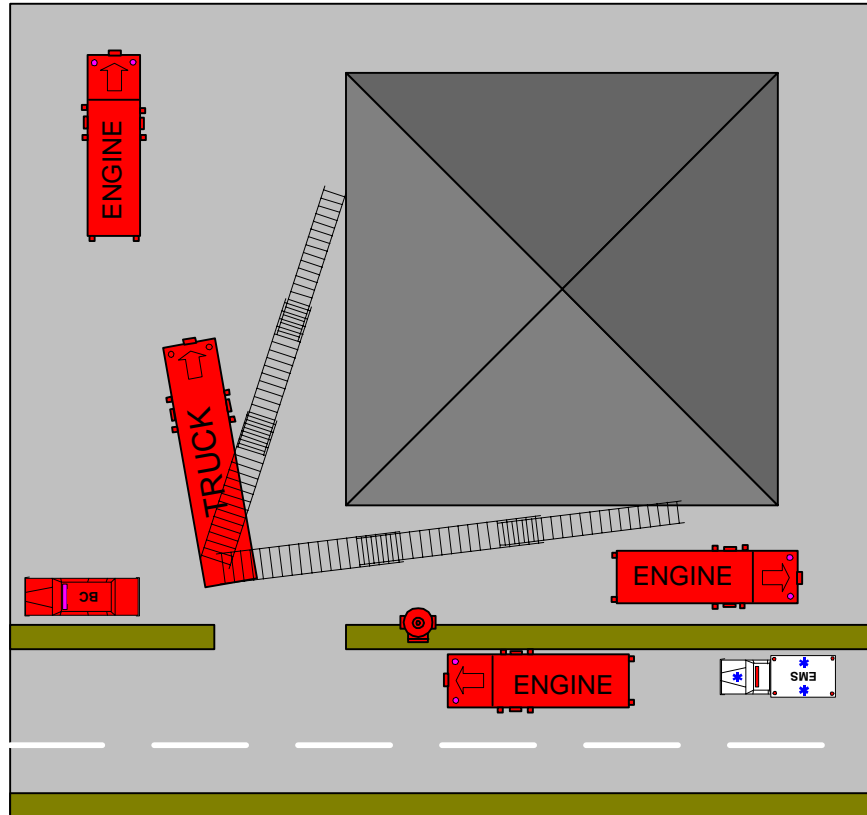
Truck Placement for Single Family Dwelling



Example 210.12.1

Obviously all single-family dwellings are not the same. Truck placement will depend on access to the front of the building. The point of Example 210.12.1 is to stress the need for the Truck Company to have access at the front, even if the building is on a two-lane, residential street.

Truck Placement for Commercial Structures "Scrubbing" Two Walls



Example 210.12.2

Example 210.12.2 demonstrates the that if the Truck is placed at the corner of a commercial structure, they will have the best advantage for not only victim rescue but for master stream placement should the attack go defensive.

210.12.12 Summary:

The fire ground operations of a Truck Company are many. This guideline has only served to outline several commonly accepted operations for personnel at structural fires.

Personnel assigned to “Truck” work, whether they physically responded to the scene on a Truck or not are responsible for a number of important, basic functions.

- Forcible Entry
- Search and Rescue
- Ventilation of the Structure
- Rapid Intervention Team for firefighter rescue as assigned
- Salvage and Overhaul of affected fire areas
- Elevated rescue of victims

While others may actually perform these functions on the scene, it should be considered the responsibility of the Company Officer assigned to the Truck Company and the Incident Commander to see that these objectives are completed.

The Truck Company will be asked to perform a wide-range of special, and not so special, duties. It is the responsibility of the Truck Company Officer and their crew to use their knowledge, skills and abilities to complete all tasks safely with minimal risk to firefighters.