SAN FRANCISCO FIRE DEPARTMENT
DIVISION OF TRAINING

TRAINING BULLETIN

TRAINING BULLETIN 22 – 02

STANDARDIZED ENGINE COMPANY OPERATIONS

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STANDARDIZED ENGINE COMPANY OPERATIONS

The San Francisco Fire Department has utilized standardized procedures since its inception, and they are the foundation of every professional fire organization. Due to the size of the San Francisco Fire Department, standardized procedures are required to ensure that our Department Mission Statement objectives are achieved efficiently across all Divisions and Battalions, and they define our primary responsibilities when responding to emergency situations.

Standardized engine company operations will help reduce risk to our members by ensuring specific jobs are completed, in a specific order. They will help companies maintain continuity and teamwork at the beginning of an incident and facilitate the completion of those specific engine company tasks that have been proven to save the most lives and property.

It must be understood that no hard and fast rule, tactic, or tool can be applied to every situation. Many variables will dictate the best apparatus placement, hose lead to be deployed and tools to be used. Company officers are tasked with evaluating the best tactics needed to mitigate each situation, including size and location of the fire, the building size and construction, available water supply, width of the street, time of day or night and the arrival time of the next arriving engine company.

The standards stated in this Training Bulletin will supersede any conflicting statements found in current Department Manuals, Training Bulletins or General Orders until they can be updated.

ENGINE COMPANY ASSIGNMENTS AND GENERAL TOOLS

The primary job of an engine company is to contain and control fire to save lives and property. This is ultimately achieved by efficiently leading hose lines to the seat of the fire. To facilitate this, engine companies shall only carry such tools that will allow them to complete this task. Any tools, other than hose and hose appliances, must be for an immediate and known obstacle. Engine companies should not bring additional tools because of guesses or possibilities, as this will only distract crews from accomplishing their primary responsibilities.

Most Engine Company Operations require the use of both hands to advance line, remove kinks and otherwise work towards advancing to the seat of the fire. This being of paramount importance, an unnecessary tool will certainly be placed on the ground causing a hazard should rapid exit be necessary. It may also impede the advancement of hose lines and personnel.

At roll call officers will designate which members will carry the bundle and the extinguisher, and which members will be the nozzle and layout person at working incidents. Engine officers are expected to wear the Officer's Belt. This not only includes proper tools regularly needed, but also helps Chief Officers easily identify officers. Below are those tools to be carried at the most common incidents

- Building Alarms or Full Boxes- Buildings **WITH** Standpipes
    - First Arriving Engine
        - Officer-wye, TIC, Rope bag and Keys, tool if necessary
        - FF #1-1 ¾" Bundle
        - FF#2-Pump Can, or CO2 if a reported electrical fire
    - Second Engine
        - Officer-wye, Rope Bag, TIC
        - FF#1 100' bundle 1 ¾" hose
        - FF#2-100' bundle 1 ¾" hose
    - Third Engine
        - Officer-wye, Rope Bag, TIC
        - FF#1-100' bundle 1 3/4" hose
        - FF#2-100' bundle 1 ¾" hose
- Building Alarms or Full Boxes- Buildings **WITHOUT** Standpipes
    - First Arriving Engine
        - Officer-Rope Bag, TIC, Tool if necessary
        - Pump Can, or CO2 if a reported electrical fire
        - Halligan tool or Pick head axe IF NEEDED
    - Second Engine
        - Officer Wye, Rope Bag, TIC
        - FF#1 100' 13/4" bundle
        - FF#2 100' 1 3/4" bundle
    - Third Engine
        - Wye, Rope Bag, TIC
        - FF#1 100' 1 ¾" bundle
        - FF#2 100' 1 3/4" bundle

It is critical that engine companies be able to make hose leads in narrow hallways, stairwells and through cramped spaces, therefore nothing should be worn that would restrict the profile of the engine firefighter.

AT NO TIME SHOULD A FIREFIGHTER ON AN ENGINE COMPANY WEAR A BELT HOLDING ANY TOOL OR PLACE ANY TOOL IN THE BELT OF THE SCBA.

At working incidents, engine company officers may call for the use of any tool that is required to complete a specific task they are immediately faced with. It should NOT be common practice for engine members to carry forcible entry tools, ceiling hooks, saws etc. Engine crews should focus on making efficient hose leads and request forcible entry and other assistance from the truck as needed. It is the expectation that truck companies will perform forcible entry for the engine crew, therefore truck officers should be assigning a forcible entry person to assist the engine crew as soon as they arrive on scene. Engine companies responding to greater alarms may bring any additional tools as the incident dictates.

Each engine member should carry a spanner and webbing strap in their turnouts. Each engine company shall have in their inventory four combination hose and shoulder straps issued by the Bureau of Equipment.

ENGINE HOSE LOADS

It is imperative that all engine companies be equipped with the same minimum quantity of hose and types of hose loads to facilitate consistency across all Divisions and Battalions. By having a common hose bed arrangement, it is easy for the next arriving company or Chief Officer to look at the hose bed and see what lead has been initiated, ensuring the next proper lead is made.

LARGE LINE

- Each engine company will carry at least 1000 feet of 3" large line.
- The large line will be carried in the hose bed divided into two compartments, with each compartment carrying at least 500 feet.
- Hose is loaded into hose beds in a FLAT LOAD

LARGE LINE-RIGHT COMPARTMENT (officer side)

- Is referred to as the "Attack Side" since the Gorter Shutoff and Wye are loaded last.
- Members will load this compartment starting with the female coupling and ending with the Gorter Shutoff and Wye, as described in the Hose and Hose Appliance Manual.

LARGE LINE-LEFT COMPARTMENT (driver side)

- Is referred to as the "Supply Side" since it ends with an uncontrolled female coupling.
- Will be loaded with a double male fitting loosely connected into the female coupling and be protected by a "Coupling Shield" and large brass spanner.

- Those engine companies that are likely to have a delay in supply shall run with the hydrant jumper siamese pre-connected to the last hose length of the left compartment.

STANDPIPE PRE-CONNECT

- Downtown Engine companies are allowed to run with a 50' 3" preconnected reverse standpipe lead with a double male coupling loosely threaded to the female end.

2 ½" HOSE LINE

The San Francisco Fire Department has adopted the 2 ½" hose line as its largest hand held fire hose.

- Each engine company MUST carry, NO LESS than, 150 feet of 2 ½" hose separated into three 50 foot "High Rise" hose bundles as well as the 2 ½" fitting bag
- Engine Companies may choose to utilize an additional 150 feet of 2 ½" hose pre-connected to a rear outlet of the engine
- Engine companies shall **NEVER** operate a 2 ½" hose line from their tank.
- If an engine company runs with a pre-connected 2 ½" hose line, they **MUST** run with a hydrant jumper siamese pre-connected to the left large line compartment to ensure supply.

SMALL LINE

- Each engine company will carry 550 feet of 1 ¾" hose line.
- Each engine company will have two "Ready Lines" pre-connected into compartments to the left and the right side of the large line hose compartments.
- Each engine company will run with two 100-foot bundles carried in a compartment in the rear of the engine.
    - All 1 ¾" high-rise packs will be loaded with the nozzle visible on the exterior of the completed pack and carried with nozzle in front, not placed in the pocket of the strap.
- All 1 ¾" hose lines will be connected to issued 7/8" tipped smooth bore nozzles.
- Bundles shall be carried on the right shoulder, ready for deployment, not over the top of the SCBA bottle.

READY LINE- RIGHT COMPARTMENT

Each engine company will load the right ready line compartment with 150 feet of 1¾" hose in the "Standard" load as demonstrated in DOT Video Library, "Hose Load-Standard". The standard load offers the greatest versatility for deployment, from fires directly at the front door to fires well inside a structure.

READY LINE- LEFT COMPARTMENT

Each engine company will load the left ready line compartment with 200 feet of 1¾" hose in the "Minuteman" load, as described in the Hose and Hose Appliance Manual. The minuteman load is intended to allow for the longest leads deep into a building by allowing the firefighter to keep as much hose with them as possible.

AT NO TIME SHALL ENGINE COMPANIES ADD LUMBER, OR OTHER DEVICES, TO THE HOSE BED WITH THE INTENT OF ALTERING THE LENGTH OF THE FLAT LOAD BIGHTS.

APPARATUS PLACEMENT

Engine company officers must first direct the placement of the engine based on truck positioning needs. Additional considerations include standpipe inlet location, main building entrance and internal stairwell considerations, collapse potential, personal knowledge of the building and any other obstacles encountered at that moment.

BUILDING ALARMS and FULL BOX

First arriving engine company responsibilities

- Determine positioning needs of the aerial.
- Position in front of the fire building and deploy the necessary attack line or supply the standpipe inlet.
- Secure water supply if operating off tank
- On SOME narrow streets or alleys, it may be necessary to quickly back down the street, drop a large line and wye and lead out, to make room for the truck.

Second arriving engine responsibilities

- WILL ACT AS THE SUPPLY ENGINE AND PROVIDE WATER VOLUME AND PRESSURE TO THE FIRST ARRIVING ENGINE.
- Do not supply only with the tank. Always secure a hydrant. Do not underestimate supply volume needs of the fire.
- If the truck is near, wait and let the truck pass.
- Is NOT the "backup line" for the first engine.
- Confirm there is no fire below the first engine.
- Confirm first hose line is in operation and effective
- Deploy interior hose line to augment ineffective first hose line OR deploy line to contain the spread of fire (floor above, adjacent room, etc).

Third arriving engine responsibilities

- Shall approach and supply from the opposite end on the block from the second arriving engine.
- Shall also act as a supply engine and provide additional water volume and pressure to the first arriving engine.
- If the truck is near, wait and let the truck pass.
- The third arriving engine is not a WILD CARD engine, but should wait for direction from a Chief Officer if a reliable supply is established by the second engine
- Should an arriving company see a condition where their apparatus may need to deviate from this, they shall immediately report the situation to the IC and request permission to proceed to another location.

Under Investigation

- Both second and third engines shall back down to the first arriving engine and prepare to lead out to the closest hydrant.
- Check into the Incident Commander for assignment

Greater Alarm Companies

- Connect Gleeson Valves to High Pressure Hydrants, utilize for:
    - ❖ Supply of master streams
    - ❖ Shall report in to the IC with Hose and Shoulder straps if a defensive strategy has been announced

Supply companies **MUST** be aware that the first arriving engine may have dropped a hydrant jumper, and **MUST** "take over" the hydrant jumper.

IT IS NEVER ACCEPTABLE FOR FIRST ALARM ENGINE COMPANIES TO POSITION "NOSE TO NOSE" IN FRONT OF A BUILDING.

HOSE LEADS

WATER SUPPLY HOSE LEADS

At most working incidents the first arriving engine company will deploy a hose line supplied by their tank. Situations may require company officers to use alternate options. There are four variations of supply hose leads:

- Straight Lead
    - First arriving engine goes from hydrant to fire.
        - Hydrant jumper or a High Pressure hydrant connection.
    - Used when supply engines are delayed or 2 ½" hose is used.
- Reverse Lead
    - First arriving engine goes from fire to hydrant.
    - Large line and wye and bundles dropped at front door
- Double Hose Line Supply (Most Common)
    - Supply engine backs down and drops two supply lines.

- Single Hose Line Supply
    - Supply engine backs down and drops one supply line.
        - When hydrants are more than 500 feet from the first engine.

FIRE ATTACK HOSE LEADS

The primary objective of the first three engine companies is to lead attack lines with a secure water supply to contain and extinguish the fire. It is NOT the primary role of the second or third hose line to be a BACKUP LINE for the first engine company.

First alarm engine company offensive hose lead priorities

- Deploy hose line between civilians and advancing fire
- Deploy hose lines to suspected seat of fire or to stop upward or lateral extension of fire
    - Confirm no fire in basement, or below companies operating on upper floors
- Engine companies my need to deploy hose lines to augment lines already in operation if additional volume is needed to contain fire

There are four variations of hose leads engine companies can use to attack a fire:

- *Ready Line*
    - Will depend on fire location, stairwell location, length of hallways and engine position away from the point of entry
    - 150'- Generally deployed for fires on the first floor, and second floor rooms towards the "A" side of the building.
    - 200'- Generally deployed for fires on the second floor, and third floor rooms towards the "A" side of the building.
- Extending a ready line lead with additional hose shall not be a planned tactic. The officer shall determine hose lead length and deploy a Large Line lead with a Wye and a bundle (or standpipe lead) if the situation dictates a lead longer than 200 feet.
- *Large Line and Wye*
    - Deployed into non-standpipe buildings where ready lines will not reach, or
    - Used to facilitate additional lines into any structure.

- Generally, the wye will be placed in the central stairwell, on the floor below, or landing below the fire floor.

- The officer shall determine the location of the Wye and ensure that it is placed in the desired position and secured if necessary.

- The large line and wye are not to be placed at the front entrance or walkway of the building, or on the stairs leading up to the building. The wye shall be placed away from the front door, on the sidewalk near the entrance, but not obstructing the entrance.

- *Standpipe*

  - Should usually be led up the center stairwell from the floor below the fire.

  - Can be led from the floor of fire in buildings with long hallways if the lead passes the central stairwell providing protection for egress and conditions allow. Heavy fire involvement or smoke conditions in the hallway requires a lead from the floor below.

1 ¾" BUNDLES SHALL REMAIN ON THE NOZZLE PERSONS SHOULDER DURING DEPLOYMENT. The only exception to this is if heat dictates crawling or if the bundle is led from a position below or behind the wye, whereby the bundle is placed on the ground and the nozzle and female coupling are led to the wye for connection, leaving a large loop of hose line behind.

- *2 ½" Hose*

  - A CONTINUOUS SUPPLY OF WATER MUST BE ESTABLISHED PRIOR TO USE.

  - Can be connected to standpipe outlets in large open floor plan buildings with large fire load such as commercial hi-rises

  - May be used in residential hi rises when confronted with a wind driven fire or other challenging situations

    - Should not be used in buildings with compartmentalized floor plans such as Type 3 residential hotels, Type 5 apartment buildings

  - Can be connected to 3" Attack Line and Gorter shutoff for defensive operations or advanced large fires

It is fully realized that conditions will develop on the fire-ground, where a basic standard operation will not be applicable. Therefore, nothing contained in this document shall be construed as a hindrance to the experience, initiative, and ingenuity of such officers in overcoming the complexities that exist under actual fire-ground conditions.

Remember, the engine company is the "infantry of the fire service". They are the people who put the water on the fire and extinguish it. Everything an engine company does should lead toward the efficient deployment of hose lines and application of water. The faster we put out the fire, the more lives we will save. By following these standardized procedures, engines will once again become much more task focused and efficient. Allow the other personnel and companies on the fireground to perform the other tasks which facilitate quick extinguishment. Uniform practices and hose loads create greater efficiency and teamwork. Stay focused on your job at hand!