

VOLUNTEER FIRE COMPANY NO. 1 OF MIDDLE TOWNSHIP



STANDARD OPERATING GUIDELINES

Cape May Court House (Station 70)
Swainton (Station 71)

Fire District No. 1 of Middle Township

VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

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**VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE**

PROCEDURE:	OPERATIONS	POLICY A-1
TITLE:	Disclaimer and Preface	

DISCLAIMER

Volunteer Fire Company #1 of Middle Township has enacted the following Standard Operating Guidelines (SOG's). The company, its members or other contributors cannot guarantee that adherence to these guidelines by any other fire company or emergency service organization will result in compliance with any laws, regulations or standards.

Volunteer Fire Company #1 of Middle Township cannot guarantee that adherence to these SOG's alone will result in a reduction of occupational injuries, illness or exposures. The guidelines can however, provide part of the framework for an emergency service occupational safety and health program which, when developed comprehensively by and for an individual fire company or emergency service organization, can be designed to achieve this goal.

PREFACE

The following Standard Operating Guidelines were developed to guide members of Volunteer Fire Company #1 of Middle Township in the performance of their duties, on and off the incident scene. They are based on the requirements in NFPA 1500 - Standard on Fire Department Occupational Safety and Health Program, and on appropriate Federal, State and Local laws and regulations.

The SOG's are not part of the department Constitution and By-laws, but may be referred to in them. This is important from a number of reasons. First, the SOG's remain guidelines rather than rigid policies. Second, it allows the SOG's to be recognized as the basis of general rules of conduct expected from all members. Finally, it makes the SOG's the basis of the department's occupational safety and health program.

Any reference to Fire Company, Fire Department or Department in these guides will have the meaning of Volunteer Fire Company #1 of Middle Township

All company members are required to sign a statement documenting they have knowledge of the location where a copy of the Standard Operating Guidelines are located and have read and understand them.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	ADMINISTRATIVE	POLICY A-2
TITLE:	Operating Guides	

PURPOSE: The purpose of this guide is to establish a procedure for generating and implementing Standard Operating Guidelines (SOGs) for Volunteer Fire Company #1 of Middle Township. Volunteer Fire Company #1 of Middle Township will utilize Standard Operating Guides in place of Standard Operating Procedures.

SCOPE: Operating Guides are general sets of written direction that shall be followed as appropriate. They are useful as reference guides and should promote a consistent and healthy atmosphere in which to perform duties. These Standard Operating Guides (SOGs) establish guidelines and since no written document can anticipate every foreseeable situation they shall be implemented in a general sense. Personnel must also rely on their training and experience to make appropriate decisions while performing their duties.

Volunteer Fire Company #1 of Middle Township will establish guidelines in the following categories:

- Administrative (A-#)
- Operation (O-#)
- Special Operation (SO-#)
- Personnel (P-#)

ESTABLISHMENT: SOGs may be established by one the following methods:

The Fire Chief of Volunteer Fire Company #1 of Middle Township may establish a SOG at anytime.

Any Officer or Firefighter of Volunteer Fire Company #1 of Middle Township may generate a SOG. The proposed draft shall be reviewed by the Line Officers and then forwarded to the Chief and Assistant Chief with their recommendations for final approval or disapproval.

New Standard Operating Guidelines (SOGs) shall be publicly announced and conspicuously posted for 30 days prior to adoption.

DISTRIBUTION: All members will have access to the Standard Operating Guidelines (SOGs). Hard copies will be maintained in a binder located in the Radio Room and Fire Company office. All SOGs are available for viewing by the general public. Volunteer Fire Company #1 SOGs are the property of Volunteer Fire Company #1 of Middle Township and may not be copied or redistributed without the approval of the Fire Chief.

NOTICE: Volunteer Fire Company #1 of Middle Township Standard Operating Guidelines (SOGs) are subject to update/change without notice. The Fire Company is responsible for maintaining current SOGs at the location listed above. The reader is responsible for verifying that they have current information.

REVIEW: All Standard Operating Guidelines (SOGs); shall be reviewed on an annual basis by the Chief and Assistant Chief of Volunteer Fire Company #1 of Middle Township.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
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PROCEDURE:	ADMINISTRATIVE	POLICY A-3
TITLE:	Notifications	

PURPOSE: The purpose of this guide is to establish a list of certain situations where specific notifications are required.

REQUIRED NOTIFICATIONS:

The Fire Chief shall be notified as soon as possible if any of the following situations occur:

- Corrective or disciplinary action is taken against any firefighter.
- Major Structural damage due to fire or explosion within the District.
- Equipment damage estimated to be larger than \$250.00.
- Motor vehicle accident involving any Fire District owned vehicle (directly or indirectly) at any time.
- Motor vehicle accident involving any member of the Fire Company in a privately owned vehicle (POV) while responding to an alarm or returning home.
- Any firefighter or civilian injury or illness.

The Bureau of Fire Safety shall be notified if any of the following occur:

- Any fire or explosion within the District that involves loss of life or serious injury.
- Any fire or explosion within the District that causes destruction or damage to property.
- Any firefighter injury, burns or illness due to an alarm.
- Any civilian injury, burns or illness due to an alarm.
- Any Fire Alarm or False Alarm in a Life Hazard Buildings.
- All False Alarms shall be reported to the Fire Bureau.
- Any School related incident.

The Fire District Commission shall be notified by the Fire Chief or designee if any of the following occur within 48 hours:

- Any firefighter illness or injury occurring during an alarm.
- Any firefighter illness or injury requiring transport to hospital emergency room.
- Motor vehicle accident involving any Fire District owned vehicle (directly or indirectly) at any time.
- Motor vehicle accident involving any member of the Fire Company in a privately owned vehicle (POV) while responding to an alarm or returning home.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
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PROCEDURE:	OPERATIONS	POLICY O-1
TITLE:	Alarm Response	

1.1 Initial Page or Alarm (Call Out)

- a) Upon receiving a page tone or alarm, you are to await the dispatcher's verbal message for alarm location, type and/or special announcement.
- b) Should the message require a response, terminate activities as best and safe as possible.
- c) Should you be unable to respond quickly, you should report to the station as soon as possible, provided that your response is sufficiently timely to assist in either the alarm call, or wrap-up of equipment upon the return of the apparatus to the station.

1.2 Leaving Home or Location

- a) Prior to leaving your residence or location upon pager activation, be sure all potential hazards are terminated, such as stoves off, water shut down, etc.
- b) Dress appropriately for weather conditions.
- c) Be sure you have in your possession a valid driver's license and secured the exiting doorway behind you.
- d) Use extreme caution when exiting your driveway or pulling away from the curb, being sure traffic lanes are clear for you to do so. Under no circumstances are you to force your entry into the traffic lane.

1.3 En-Route to the Station

- a) Fire Company members are expected to respond to the station for all calls to assure adequate apparatus manning and response. The only members granted exception to this rule are the Fire Chief and Assistant Fire Chief.
- b) While responding to the Fire House, all laws and rules of the State of New Jersey and/or the Township of Middle, or any other municipality through which a member travels will be adhered to, including New Jersey State Title 39 motor vehicle operating laws. The Fire Company will assume no responsibility for driving negligence on the part of a member responding to the Fire House and will provide no monetary or legal assistance should such negligence result in a citation and/or accident. If you are involved in an accident responding to an alarm you are to remain at the accident scene.

- c) For your own protection, a member involved in an accident while responding to an alarm, will notify the police to investigate and report the accident.
- d) Seat belts shall be worn in accordance with motor vehicle regulations.
- e) The Motor Vehicle and Traffic Laws of the State of New Jersey (Chapter 3, Section 39:3-54) permits the use of blue warning lights by firemen responding to an alarm. Authorized use of blue lights is dependent upon possession of the proper permit and adherence to the applicable law. Members may use blue lights only if they have a valid permit. Applications for blue light permits may be obtained from the Chief of the Company.
- f) Common sense and caution when responding to the station shall be exercised at all times. Special hazards and situations such as adverse road conditions, traffic congestion and type of alarm shall be considered when responding. **Under no circumstances shall blue lights be used for bomb scares, storm stand-bys, special details, meetings and/or drills.**

1.4 At the Station

- a) Extreme caution must be exercised when approaching the station since a conflict may occur with exiting apparatus.
- b) Under no circumstances are you to cross the entrance/exit drives of the station without yielding to the emergency apparatus unless visual contact and directions are clearly given by the apparatus driver.
- c) Parking at the station must be such that no compromise is made to station parking spaces or driveways. You are to properly secure your vehicle and turn off all lights and ignition. Under no circumstances are you to leave your vehicle running or parked in non-designated parking areas.
- d) Should you have responded with a family member who will not be taking the vehicle, they are to proceed to the recreation/dining area of the station and await your return. If the family member is to leave in the vehicle, they are advised to wait until all apparatus has exited the station and response of the members has ceased.

1.5 Response of Fire Bureau Personnel

- a) Upon the occurrence of a fire alarm or false alarm; a response of Fire Bureau personnel may occur to all occupancies, other than owner-occupied detached one and two-family dwellings, unless requested to respond to an owner-occupied detached one and two-family dwelling by the Fire Chief or their duly authorized representative as per Middle Township Ordinance # 1206-05, Section 12(c).
- b) The Fire Bureau shall investigate, or cause to be investigated, every reported fire or explosion occurring within the jurisdiction that involves the loss of life or serious injury or causes destruction or damage to property as per N.J.A.C. 5:71-3.3(a)25 and Middle Township Ordinance # 1206-05, Section 12(a).

- c) Turnout gear shall be carried by Fire Bureau personnel and used as required.
- d) Fire Bureau Personnel shall work with the Middle Township Police and the County Fire Marshal's office according to Fire Bureau Policy.
- e) Response of Fire Bureau Personnel will follow Fire Bureau Policy and the New Jersey Uniform Fire Safety Act.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-2
TITLE:	Apparatus Response	

PURPOSE: The purpose of this Standard Operating Guideline is to define the response protocol of apparatus for various types of fires and/or alarms.

2.1 General Procedures

- a) The first unit to sign on for service will do so to the dispatcher on Middle Township Fire Channel (3), repeating the alarm location and type of call. All subsequent units will sign on for service on “Fire Three,” also repeating the alarm location and type of call.

EXAMPLE: First Unit – F-712 to District 7, 10-8 to 35 Main Street.

Subsequent Units – Repeat above, giving proper unit number.

- b) Minimum staffing of apparatus should be as follows:

Pumper/Ladder: Driver, two firefighters, one officer.

Daytime staffing can be reduced by one firefighter and the officer becomes optional.

- c) All apparatus shall respond in accordance with New Jersey State Title 39 Laws. Responding units must come to a complete stop at all red traffic lights.
- d) Unless response is downgraded by the Incident Commander, apparatus shall respond utilizing all proper audio and visual warning devices.
- e) All apparatus shall continue their response to the fire scene until directed otherwise by the Incident Commander.
- f) In the event an order is issued by the Incident Commander to “respond with caution,” the apparatus shall continue its approach to the fire scene with the normal flow of traffic and without the use of audio warning devices or warning lights. Use of arrow sticks by a traffic advisor will be allowed.
- g) When returning to the fire stations after an alarm, or at any other time the apparatus is traveling the roadways for non-emergency purposes, audio and visual warning devices shall not be used. Use of arrow sticks by a traffic advisor will be allowed.
- h) Fire apparatus shall not exceed posted speed limits at any time.

2.2 Non-Structural Fire

- a) Vehicle Fires – Engine F-712 and F-719 will respond to all vehicle fires. The first due engine (F-712 or F719) will combat the fire. For vehicle fires on the highway F-715 or F716 will act as blockers and protect the crew and engine fighting the fire.
- b) Motor Vehicle Extraction – Engine F-712 and Engine F-719 will respond to all motor vehicle extrications.
- c) Dumpster/Rubbish Fires – Engine F-713 or F719 will respond to all dumpster/rubbish fires.
- d) Brush Fires – Engine F-713 and Engine F-719 will respond to all brush fires. The engine responds to mitigate any problems that could arise with exposure, protection of structures or erroneous dispatch information, also to provide a water supply as required.
- e) General Misc. Fire Alarms – Engine F713 and Engine F719 will respond to all general miscellaneous alarms.
- f) Bomb Scare – All units will remain in quarters for bomb scares. If explosives are found, all units will respond to the scene and remain in a predetermined staging area. In this situation, radios (portable or mobile) will not be used on the fire scene unless instructed by the officer in command.

2.3 Structure Fires

- a) All apparatus will respond to structure fires unless otherwise directed by the officer in command.
- b) Since time is of the essence, firefighters should board the apparatus in a quick and efficient manner, filling up one piece before manning the second. A full engine crew constitutes six (6) members: one (1) officer, four (4) firefighters and (1) operator.

2.4 Out of Town Stand-by

- a) During times of minimum manpower, it is mandatory that proper manning of our district be provided before responding out of town on a stand-by.
- b) All responses to out of town Fire Stations will be under a “proceed with caution” mode.

2.5 Out of Town Assistance

- a) When an apparatus is requested it will respond with a minimum staffing of four firefighters, one officer and one operator.
- b) The response of the brush truck when requested to assist out of the district will be up to the discretion of the officer in charge.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY
TITLE:	Responding to an Alarm	O-3

PURPOSE: The purpose of this Standard Operating Guideline is to define the proper protocol members should follow while boarding and responding with the apparatus or remaining at the station.

3.1 Preparing to Respond

- a) Boarding the apparatus should not be performed unless appropriate fire department approved turnout gear is donned. This includes bunker pants, turnout coat and helmet. Check to be sure both gloves and hood are available, either being worn or located in your pockets.
- b) All drivers shall wear their bunker pants and boots while driving the apparatus to ensure quick and efficient operation as part of an engine crew upon arrival at the fire scene. The crew responsibility for the driver is outlined in the appropriate engine, or rescue company standard operating guideline. The only exception to this procedure is the exclusion of wearing the turnout coat and helmet while driving the apparatus if the driver so desires. If this is the case the driver must still bring his turnout coat and helmet and wear it on the fire ground.
- c) Under no circumstances is the apparatus to be boarded when in motion, or in excess of seating capacity. Riding on the back step is strictly prohibited. All members must be seated and seat belts fastened prior to the apparatus moving.
- d) It is intended to have a company officer respond on each piece of apparatus. If this is not possible, an ex-officer, or senior firefighter shall act as an officer delegate. In the event that two or more company officers respond to the fire station, they should each take command of a separate piece of apparatus. Officers should refrain from both boarding the same piece of equipment.
- e) Firefighters should board the apparatus in a quick and efficient manner, filling up one engine before manning the second engine. The ideal crew size is one (1) officer, four (4) firefighters and one (1) operator.

3.2 Securing the Station

- a) Prior to the last apparatus leaving the station property, a fire officer or designee is to secure the station by lowering all overhead doors and securing all doorways.
- b) Any member remaining at the station is to control building security.

3.3 Remaining Behind

- a) Any member remaining behind during an alarm is to monitor the radio for necessary communications as well as answer any telephone calls for members. The radio room will be manned at all times during an alarm as long as someone is at the station.
- b) Under no circumstances are guests of members to handle radio communications or roll call activities.
- c) Press inquiries or fire scene status reports are to be deferred to either the Public Information Officer delegated by the Fire Chief or the Incident Commander at the fire scene.
- d) It is also the responsibility of the member remaining behind to periodically check on any family member that may be waiting.
- e) To receive full credit for an alarm, all members shall report back to the Fire House for roll call, unless excused by the senior officer completing the attendance report.

3.4 En-Route Activities

- a) While en-route to an alarm location, all personnel shall don air packs and check for proper operation of the air pack and PASS device with the exception of the driver/ operator who shall don an air pack at the scene if conditions require wearing the SCBA (wind, proximity, etc.).
- b) The apparatus Officer shall assist the driver in approaching the scene from a vantage point that does not hamper exiting traffic or additional responding units.
- c) The Officer/ Senior Firefighter will determine crew assignments and priorities based on riding positions to assure that appropriate equipment, tools and hose requirements are satisfied when dismounting the apparatus.

3.5 Initial Approach

- a) Upon approaching the scene, every effort must be taken to observe at least three sides of the structure before returning an initial report and entering the building. Whether or not smoke or fire is seen shall not be a determining factor in proceeding with an initial interior examination.
- b) The last 500 feet of approach must be carefully examined by both the driver and firefighters for hydrant location, people, vehicles and other possible helpful or impeding items.
- c) Air packs, uncharged masks, and PASS devices should be operable at this time, and equipment or hose assignments clear. However, firefighters are to remain on the vehicle until a complete stop is made, and they are ordered off by the apparatus officer.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-4
TITLE:	Arrival at the Scene	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the positioning, size-up and first due activities of the initial arriving units on the fire ground.

4.1 Apparatus Positioning

- a) First arriving units on the scene should try to view three sides of the building as they make their final approach.
- b) Apparatus shall be positioned such that additional responding units can be properly positioned for effective operations, as well as to allow for efficient hose lays. In general, the front of the building shall be left open for the ladder truck.
- c) No vehicle, except the assigned pumper, is to be located within 25 feet of any hydrant, hose, standpipe or sprinkler valve siamese connection.
- d) Under no circumstances are any vehicles to be located within the collapse zone of any involved, or potentially involved structure.
- e) Dead end streets or alleys are to be backed down only as a last resort.
- f) Aerial units are to be positioned for rescue and roof activities, with clear swings for raising, sweeping, and if appropriate, exposure protection. If at all possible, the truck crew should try to operate the ladder off the rear of the aerial. Caution: The ladder shall not be located within 10' of overhead power lines.
- g) Rescue or special services vehicles are to be staged 100 feet away from the fire scene until directed in by command.
- h) Ambulance or other emergency service vehicles are to be backed in as requested by command from an initial staging point. This staging point is to be located so as not to interfere or prevent fire apparatus approach, hose lays, or "lock in" due to inadequate exiting paths because of hose lays.

4.2 Initial Report

- a) The initial report is to be made by the officer in charge of the first due unit when he is in clear sight of the building and has viewed at least two, preferably three sides of the structure. Communication between trucks must indicate that information or instructions have been received.

- b) The initial report is to be made as brief, yet clear, as possible and should state such facts as:
 - Size and Type of Building (if other than apparent)
 - Conditions Found
 - Nothing showing
 - Smoke condition or smoke showing
 - Working fire or fire showing
 - Fire extension observed.
- c) Unknown facts are not to be guessed at, since this information can only be obtained through close examination of the building or input from the property owner or neighboring residents.
- d) The initial report must be terminated with a statement, if appropriate, that there will be an initial entry to investigate.
- e) If immediate attack is to occur, the officer in charge must indicate such, and assume command of the fire. If the officer in charge is the officer from the first arriving engine company, he may choose to transfer command to the next responding officer and enter the building with his crew.
- f) An initial report of “Nothing showing” will automatically enact the proper staging procedure and crew assignments of the responding units.
- g) An example of a proper initial report is as follows:
“Chief on scene, two story multiple family dwelling, nothing showing.”

4.3 Scene Size-Up

- a) An initial size-up should have started at the time the alarm was first transmitted. This initial size-up should include such factors as:
 - Type of Building Construction
 - Occupancy
 - Area
 - Location
 - Water Supply
 - Apparatus Response
 - Street Conditions
 - Weather Conditions
 - Exposures
 - Auxiliary Appliances (Sprinkler/Standpipe Systems)
 - Life Hazard
 - Time of Day
 - Height of Building

- b) Upon approach and arrival, an initial exterior exam of no less than three exposures will occur. Signs of smoke, flame, vapors or other atmospheric disturbances will be immediately reported to the dispatcher and responding units.
- c) Until examination reveals otherwise, the structure will be considered to encompass six exposures, one on each vertical side, one below (floor below, basement or crawlspace), and one above (floor above, attic, cockloft or roof). Should the structure be attached to other buildings, these attached structures will be considered potential exposure fire hazards.
- d) If necessary, a staging area will be selected and reported to dispatch for relay to additional responding apparatus and EMS.
- e) The initial scene size-up will attempt to determine fire spread and potential fuel sources prior to committing personnel. This will prevent the selection of inadequate hose and nozzle sizes to deal with any escalation.
- f) It is imperative to evaluate and determine potential or real victims that have not exited the structure, and request additional support as needed to handle the situation.
- g) Ancillary items such as charged electric lines, active or disrupted water supplies and gas services must also be evaluated during the scene size-up.

4.4 External Activities

- a) Efforts must be made to perform a complete exterior examination of all four vertical exposures as well as clear visual examination of the two horizontal exposures.
- b) Indications of trapped victims (i.e. lights, sounds, etc.) or concealed involvement (i.e. smoke, vapors from eaves) must be immediately reported to the Incident Commander and plans made for further interior examination. If none of the above indicators are present an “all clear” shall be transmitted to the Incident Commander.
- c) Under no circumstances are firefighters to enter a potentially involved structure or adjacent structure without appropriate protective clothing, SCBA, and at least one entry tool.
- d) The apparatus driver is to initiate placement and preparation for hose line lays, being sure to allow for additional apparatus placement and maneuvering.
- e) For additional external activities refer to the appropriate Standard Operating Guideline for Engine, Truck or Rescue Company Operation.

4.5 Internal Activities

- a) Whether the initial investigation and size-up indicate fire activity, or not, does not exempt the requirement for internal examination.
- b) Should evidence of trapped or potentially trapped victims be found, immediate rescue attempts should be made, provided firefighter safety is not compromised.
- c) For additional internal activities refer to the appropriate Standard Operating Guideline for Engine, Truck or Rescue Company Operations.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
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PROCEDURE:	OPERATIONS	POLICY O-5
TITLE:	Staging of Apparatus	

PURPOSE: The purpose of this Standard Operating Guideline is to define the various levels of staging in order to alleviate apparatus congestion problems, and to explain the methods by which staging will be executed.

5.1 Level “1” Staging

- a) Level 1 will automatically apply to all multiple unit responses unless otherwise ordered by the Incident Commander.
- b) This staging procedure will automatically be enacted by the initial report of “Nothing Showing” by the first arriving unit, or as by direct order from the Incident Commander.
- c) The first arriving engine company will respond directly to the scene and operate to best advantage. Anyone not given a specific task shall remain with the apparatus.
- d) The second due Engine Company shall stand-by at the closest hydrant or Siamese connection for protected buildings, and await further instructions.
- e) All other units will stage in their direction of travel, uncommitted, approximately one block from the scene until assigned by the Incident Commander. A position providing a maximum of possible tactical options with regard to access, direction of travel, water supply, etc. should be selected.
- f) Staged units will, in normal response situations, report company designation, standing by and their location (“Engine F7xx arriving at _____ awaiting further instructions”). An acknowledgment is not necessary from either headquarters or the Incident Commander.
- g) If it becomes apparent that the Incident Commander has forgotten the stage company, the company officer shall contact the Incident Commander and re-advise him of their standby status.
- h) Staged companies will stay off the air until orders are received from the Incident Commander unless critical tactical needs are observed.

5.2 Level “2” Staging

- a) Level 2 Staging is used when an on-scene reserve of companies is required. These companies are placed in a staging area at a location designated by the Incident Commander.
- b) When Level 2 Staging is announced, all secondary companies will report to and remain in the staging area. The officer of the first piece of apparatus to arrive at the staging area will assume command of the staging sector unless a reassignment is made by the Incident Commander. The radio designation for the staging sector is “STAGING.” All communications involving the staging of apparatus will be between “STAGING” and the Incident Commander.
- c) The first due engine and truck company will continue with Level 1 Staging unless instructed otherwise.
- d) The staging area designated by the Incident Commander should be away from the command post and the emergency scene in order to provide adequate space for assembly and safe and effective apparatus movement.
- e) When calling for additional resources, the Incident Commander should consider Level 2 Staging at the time of his request. This is more functional than calling for Level 2 Staging while units are en route. The additional units should be dispatched directly to the staging area.
- f) All responding companies to the staging area shall stay off the air, respond directly to the designated staging area, and report in person to the staging officer.
- g) Once in the staging area, all crews shall remain with their apparatus and await further instructions.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-6
TITLE:	Designation of Exposures	

PURPOSE: The purpose of this Standard Operating Guideline is to define a common simple method using alpha/numeric characters to designate exposures on the fireground or emergency scene.

6.1 Exposure Designation Method

- a) There are six primary areas that will be considered exposures, the four vertical sides of the building and the horizontal areas below and above the fire.
- b) The front of the building shall be considered “Side A.” If the building does not have a clear front side, a front shall be designated by the Incident Commander.
- c) Each additional exposure side shall be designated by rotating clockwise from “Side A’ as looking down from above. That is: the left side of the building is “Side B;” the rear is “Side C,” and the right side is “Side D.” Additionally, the floor, basement or crawl space below the fire is considered “Side E,” and the floor, attic, cockloft or roof above the fire is considered “Side F.”

If the fire building is attached at any side by another building, this additional exposure can be further identified using an alpha character in addition to the numeric character assigned. For example, if the fire building is a row of stores in a mall, the first store to the left of the fire store will be “Side B,” the second store to the left of the fire store will be “Exposure B2,” and the third store to the left of the fire store will be “Exposure B3.” Similarly, if the fire occurs on the top floor of a three-story apartment building, the second floor apartment will be considered “Side E,” and the first floor apartment is considered “Side A1.”

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APPROVED BY:	Calvin L. Back	Paul Hand	EFFECTIVE DATE:	5/01/07	# PAGES
TITLE:	Chief	Asst. Chief	LAST REVISION:		1

VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-7
TITLE:	Incident Command System	

PURPOSE: The purpose of this Standard Operating Guideline is to outline and define the necessary positions and operations of the fireground Incident Command System.

7.1 Incident Command System

- a) The Fire Company shall follow the New Jersey State “Fire Service Incident Management System”.
- b) The State Fire Service Incident Management System contained in Chapter 75 of the New Jersey Uniform Fire Code. (N.J.A.C. 5:75-1 and N.J.A.C. 5:75-2)
- c) The Fire Company may also be required to follow the National Incident Management System.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY
TITLE:	Engine Company Operations	O-8

PURPOSE: The purpose of this Standard Operating Guideline is to outline the general first due activities and operations of our engine company when arriving on the fireground.

8.1 Introduction

- a) There are eight basic functions that an engine company is responsible for performing on the fireground. These responsibilities shall include:
- Rescue
 - Water Supply
 - Deployment of Initial Attack Lines
 - Forcible Entry
 - Deployment of Backup Lines
 - Exposure Protection
 - Heavy Stream Development
 - Tactical Use of Protective Systems
 - Overhaul
- b) To most effectively perform these tasks, each engine company will act as one sovereign unit, with each crew member assigned a definitive responsibility.
- c) The method by which engine company members are assigned tasks will be based on the riding position of each firefighter on the apparatus en route to the fire scene.
- d) Each riding position will be assigned a task or group of tasks that will accomplish our engine company goals. The order in which the engine is boarded will therefore play a substantial role in the success of this method.

8.2 General Procedures

- a) The ideal crew for the engine company will be six members: 1 officer, 4 firefighters and 1 operator.
- b) Because each crew member is expected to perform immediately upon the engines arrival on the fire scene, all firefighters will wear turnout gear prior to responding from the station.
- c) Each and every crew member is part of an operating force, and is expected to carry out all operations in a professional manner.
- d) Crews will complete their required tasks efficiently and effectively before continuing on to a secondary responsibility.
- e) All crew officers, acting or delegated, will report the progress of their actions to the appropriate Officer or Incident Commander.
- f) On alarms with an initial report of “nothing showing,” the first due engine crew will stand by at the apparatus until specifically assigned by the Incident Commander or Engine Company Officer.

8.3 Riding Positions

- a) In order to efficiently and effectively assign duties to the engine company, a system consisting of task delegation by riding position will be employed.
- b) Each of the six-seated positions on the apparatus will have a job function associated with it. This does not mean that six members must be present for the engine company to operate effectively. In situations where less than six fire fighters are present, the tasks of the engine company will be divided accordingly.
- c) Due to the diversity of equipment required to perform various tasks on the engine company, the order in which the apparatus is boarded and manned is of utmost importance. The following is a progressive list for Engine F-7xx dictating this order:
 - 1) Driver
 - 2) Officer
 - 3) Nozzleman/Backup – Right Inside Seat
 - 4) Hydrant Man – Right Outside Seat
 - 5) Nozzleman/Backup – Left Inside Seat
 - 6) Hookup Man – Left Outside Seat

FOUR-MAN CREW

Driver, Officer, Nozzleman, Hydrant Man

DRIVER – Locate and plot the quickest and safest route using the station map. Locate the hydrant, water source or staging area. Make all necessary supply line connections to the engine. Supply the necessary flow and pressure for the operation.

OFFICER – Assist the driver in locating the apparatus. Coordinate the assignments and direct the engine company tasks during its tactical operations. Act as the backup man for the nozzleman and assist in advancing the handline. Report the conditions of the interior of the building to the Incident Commander or Sector Officer. Coordinate outside ventilation with the roof company. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

NOZZLEMAN – Advance the handline to control and extinguish the fire. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

HYDRANT MAN – Flush the hydrant when time permits. Make all necessary hydrant connections and charge the hydrant when requested by the Driver. Act as the Outside Vent Man in the absence of a Rescue Truck. Don SCBA and assist in advancing the handline at its point of entry into the building.

FIVE-MAN CREW

Driver, Officer, Nozzleman, Backup Man, Hydrant Man

DRIVER – Locate and plot the quickest and safest route using the station map. Locate the hydrant, water source or staging area. Make all necessary supply line connections to the engine. Supply the necessary flow and pressure for the operation.

OFFICER – Assist the driver in locating the apparatus. Coordinate the assignments and direct the engine company tasks during its tactical operations. Act as the backup man for the nozzleman and assist in advancing the handline. Report the conditions of the interior of the building to the Incident Commander or Sector Officer. Coordinate outside ventilation with the roof company. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

NOZZLEMAN – Advance the handline to control and extinguish the fire. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

BACKUP MAN – Assist the nozzleman in advancing the handline. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

HYDRANT MAN – Flush the hydrant when time permits. Make all necessary hydrant connections and charge the hydrant when requested by the Driver. Act as the Outside Vent Man in the absence of a Rescue Truck. Don SCBA and assist in advancing the handline at its point of entry into the building.

The side of the apparatus that the initial handline is advanced will determine which fire fighter is the nozzleman. The firefighter on the opposite side of the engine will assume the position of the Backup Man.

SIX-MAN CREW

Driver, Officer, Nozzleman, Backup Man, Hydrant Man, Hookup man

DRIVER – Locate and plot the quickest and safest route using the station map. Locate the hydrant, water source or staging area. Make all necessary supply line connections to the engine. Supply the necessary flow and pressure for the operation.

OFFICER – Assist the driver in locating the apparatus. Coordinate the assignments and direct the engine company tasks during its tactical operations. Act as the backup man for the nozzleman and assist in advancing the handline. Report the conditions of the interior of the building to the Incident Commander or Sector Officer. Coordinate outside ventilation with the roof company. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

NOZZLEMAN – Advance the handline to control and extinguish the fire. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

BACKUP MAN – Assist the nozzleman in advancing the handline. Perform interior search and rescue. Provide interior horizontal ventilation where warranted.

HYDRANT MAN – Flush the hydrant when time permits. Make all necessary hydrant connections and charge the hydrant when requested by the Driver. Act as the Outside Vent Man in the absence of a Rescue Truck. Don SCBA and assist in advancing the handline at its point of entry into the building.

HOOKUP MAN – Make all the necessary supply line connections to the engine. Perform forcible entry for the attack crew in the absence of the rescue truck. Don SCBA and assist in advancing the handline at its point of entry into the building.

The side of the apparatus that the initial handline is advanced will determine which fire fighter is the nozzleman. The firefighter on the opposite side of the engine will assume the position of the backup man.

8.4 Securing a Water Supply

- a) The first due engine company is expected to secure its own water supply for fires of such intensity or proportions that cannot be extinguished with booster tank water.
- b) The primary method for an engine company to secure its own permanent water supply will be to forward lay a 4-inch supply line from a hydrant to the fire scene.
- c) Utilizing a 4-inch supply line will be the method of choice for all structural fires.

8.4.1 Wet Hydrant Operations (Municipal and Private) – 4” Supply Hose

- a) If time permits, the hydrant man, with a radio, should flush the hydrant of debris prior to making any connections.
- b) The hydrant valve shall then be connected to the 4-1/2 inch steamer connection on the hydrant and checked for proper position and operation.
- c) If any hydrant caps are frozen onto the discharge connection, give the caps a sharp blow with a hydrant wrench. This will break the caps and leave the threads undamaged.
- d) Care should be exercised to ensure all twists and bends are removed from the hose prior to charging the line.
- e) When requested by the pump operator, the hydrant man shall open the hydrant, proceeding slowly at first to avoid hydraulic shock and unnecessary stressing in the piping, valves and hose. The hydrant shall then be fully opened. Radio contact between the hydrant man and pump operator is of utmost importance during this stage of the operation to ensure the hydrant is not opened before the supply line is properly secured to the engine.
- f) In most cases, connecting an additional engine to the hydrant valve in order to augment system pressure is not necessary when utilizing a 4-inch supply line. For this reason, the second due engine company should anticipate using additional water sources to serve as a backup to the primary water supply.
- g) The fire company shall perform an annual physical inspection of all private (RED) fire hydrants in the district. The annual inspection shall include lubrication of all threads and caps, flowing water from hydrant to assure proper operation and general physical appearance.

8.4.2 Dry Hydrant Operations (Private Standpipes) – 4” Supply Hose

- a) First arriving Engine shall respond to the scene and attack fire from its booster tank or start any other required operation. If first arriving engine is spotted close to a dry hydrant, it should make a direct connection to the hydrant using LDH hose.
- b) A Hydrant Person shall install a 2 ½” gate valve on dry hydrant and make LDH hose connection to dry hydrant steamer connection.
- c) The Hydrant Person when the engine at the scene is ready, completely open the hydrant. Utilize 2 ½” gate valve for additional supply line if required.
- d) Second arriving Engine shall lay a supply line from the dry hydrant to the first arriving engine (if supply line not already established). If supply line is already established, proceed to supply first arriving engine with water from booster tank and additional manpower or as directed by the Incident Commander.

- e) A Tanker (water supply) shall install one or two 2 ½” gate valve(s) on dry hydrant (standpipe) and make LDH hose connection to dry hydrant (standpipe) steamer. Shall bleed off all air in hydrant barrel using the 2 ½” discharge outlet prior to opening hydrant valve. Discharge pressure into the Dry Hydrant (standpipe system) shall not exceed 150 psi. at any time.
- h) Relay Pumping operations may apply (see section 8.4.6)
- i) The fire company shall annually inspect all Dry Hydrants (standpipes) in the district. The annual inspection shall include lubrication of all threads and caps and general physical appearance. Semi-annually the water shall be flushed from the pipes and replaced with new. Records shall be maintained by the fire company.

8.4.3 Dual Pumper (Tandem) Operations

- a) Dual (tandem) pumping is the placing of two engines at the same location (preferably at a hydrant), and connecting both engines intake-to-intake. This operation can be performed where a hydrant is connected to a large main with adequate residual pressure.
- b) The large diameter intake (steamer) of the first engine is actually used as a waterway, channeling excess water to the intake of the second engine.
- c) This procedure is usually performed with the first engine located directly on the hydrant, but may be used anywhere the hydrant and supply line can pass substantially more water than the first engine can discharge. The first engine should be flowing at its maximum capacity before a second engine is used.
- d) Locate the second engine in close proximity to the first engine so they can be connected intake-to-intake.
- e) The engine company officer will make the task assignments based on riding positions.
- f) Place a soft or hard sleeve on the intake of the second engine. An adapter will have to be used to ready the sleeve for the final connection to the first engine.
- g) The hydrant or intake to the first engine should then be shut down slowly, until the hydrant discharge or engine intake pressure is approximately 5 psi. At this point, virtually all of the water that is coming into the engine is being pumped out through discharges.
- h) If the hydrant engine is equipped with a butterfly valve on the intake, which the second engine will take water from, this valve can be closed and step “g” above may be eliminated.
- i) The blind cap can then be removed from the hydrant engine and the sleeve to the second engine connected.

- j) The hydrant or intake valve to the first engine can now be opened to restore full hydrant pressure. All residual water will then flow through the first engine into the second engine.
- k) The second engine can be operated as if it is directly on the hydrant.
- l) To shut down the operation, disengage both pumps prior to shutting down the hydrant.

8.4.4 Drafting Operations

- a) Drafting operations will be performed when there is an absence of a positive pressure water source or secondary water supply.
- b) The officer of the engine company shall delegate tasks for the operation by riding position.
- c) The driver, assisted by the officer, shall position the engine as close to the static water source as safely possible. Ground condition, grade and the ground's ability to support the vehicle shall be given utmost consideration.
- d) Connect the number of hard sleeves necessary to reach the water source. Make sure that soft, pliable gaskets are used. Tighten the couplings to ensure an airtight seal. Check maximum length of hard suction.
- e) Connect the strainer to the end of the hard sleeve and tighten so that an airtight seal is obtained at the coupling. If a pre-piped static water source intake is to be used (such as a dry hydrant or bridge connection), this step may be deleted.
- f) Tie a rope to the strainer. This rope will be used to raise the strainer off the bottom of the water source and will ease the strain on the coupling at the engine connection. If a floating strainer is used, the rope must still be connected to facilitate the handling of the hard sleeve.
- g) Tie a clove hitch and binder (stopper) around the hard sleeve at the point where the hard suction and strainer connect. Place the hitch so that it straddles the legs of the hard sleeve coupling.
- h) Tie a second clove hitch around the female end of the first hard sleeve. The loose end of the rope should now be tied to the pumper, and the sleeve can be raised and lowered using the rope.
- i) Connect the end of the hard suction to the large intake of the engine. Tighten the couplings to ensure an airtight seal. Make all necessary hose connections to the pump discharges.

- j) Lower the strainer and hard sleeve into the water using the rope assembly. If possible, keep the strainer at least 18 inches off the bottom and 18 inches below the surface of the water. If a floating strainer is being used it will adjust automatically. Occasionally, a folding ladder (attic ladder) placed in the water can be used to lend support and assist in positioning the suction hose and strainer.
- k) Close all connections and shut all drain valves to make an airtight seal.
- l) Set the transfer valve to the volume position and engage the pump.
- m) Engage and operate the priming device until the pump is primed. The vacuum reading on the intake gauge should be proportional to the lift, approximately 1 inch for each foot. As an alternative, it may be beneficial to open the tank-to-pump valve immediately prior to this step. Allow the tank water to flow into the pump and down the hard suction into the water source. When the tank water reaches the static water source, shut the tank-to-pump valve. The hard suction and pump should now be completely filled with water, shortening the time to prime the pump.
- n) When primed, there will be a pressure reading on the discharge gauge and water will flow from the priming device. Open one discharge gate slowly, and at the same time, advance the throttle until a steady flow is established. As the discharge is increased, the vacuum reading on the intake gauge will increase to make up for the friction loss in the hard sleeve.
- o) Set the transfer valve and the relief valve as necessary.
- p) To shut down the operation, lower the discharge pressure slowly, close the discharge gate(s), disengage the pump, and open the drains. Opening the drains will cause a loss of vacuum and drop the water from the hard sleeve.
- q) Disconnect the hard sleeve from the apparatus and, using the rope, raise the strainer from the water.
- r) Return all controls and valves to their normal positions.
- s) Drafting operations from installed Dry Hydrants (with static water source) will be performed as noted above with the exception of e,f,g,h,j and q.
- t) The fire company shall annually inspect all installed Dry Hydrants (with static water source) in the district. The annual inspection shall include lubrication of all threads and caps and general physical appearance. Semi-annually the Dry Hydrant shall be back flushed to clear any objects from the strainer. Records shall be maintained by the fire company

8.4.5 Relay Operations

- a) Relay pumping operations shall be used to establish a permanent water supply when the distance from a water source to the fire scene is greater than a conventional hose lay will satisfy an efficient pumping operation.
- b) The officer of the engine company shall delegate tasks for the operation by riding position.
- c) The engines to be used in the relay operation shall be spaced as evenly as possible, with the largest capacity pumper at the water source. Use the chart provided at the end of this section as a guideline.
- d) Open two or three discharge gates on all pumpers, depending if one or two supply lines are being used. One discharge on each engine will be used to release air and build up pressure from the evolution.
- e) On each engine, attach the hose line(s) to the discharge(s) and leave the other discharge uncapped. If the Pump Operator notices a high intake pressure during the evolution, the gate controlling the uncapped discharge should be opened and excess water dumped on the ground.
- f) The pump operator at the water source shall take water into the pump and discharge it so the water starts moving towards the fireground. When starting out, discharge pressure should not exceed 150 psi.
- g) As soon as water reaches the second engine, the pump operator closes the uncapped discharge gate. Water is now being discharged to the next pumper. The engine shall then be placed in pump and the throttle advanced until 150 psi discharge pressure is obtained.
- h) Each successive pump operator in turn duplicates the previous step until the water is delivered to the fireground.
- i) The pump operator at the fire scene then advises all other pump operators of the amount of water needed on the fireground.
- j) The pump operator at the water source shall then calculate the amount of friction loss in the hose between his engine and the next engine downstream for the given flow. Then add 20 psi to this friction loss to obtain the pump discharge pressure. Adjust the throttle accordingly. Caution shall be exercised to ensure the pump discharge pressure does not exceed the rated service pressure of the hose being used in the relay. If this situation exists, additional engines must be put into the relay or the required flow decreased.
- k) Each subsequent pump operator then adjusts his throttle to maintain 20 psi residual pressure on the compound (intake) gauge. Caution shall be exercised to avoid exceeding the discharge pressure limitations explained previously.

- l) The engine at the fire scene will now be discharging its required flow of water when it achieves 20 psi residual pressure on the compound (intake) gauge.
- m) Once water is moving, every effort should be made to keep it moving throughout the relay operation. Nozzles should not be shut off unless absolutely necessary. For a temporary shutdown, the pump operator at the fire scene can dump the excess water on the ground through the uncapped discharge.
- n) Shutting down the relay is done by working from the fireground engine to the water source. The pump operator at the fireground shall notify the engines in the relay, that the relay is shutting down. Pressure on the fireground pump is reduced gradually until the pump can be disengaged.
- o) Each pump operator, in turn, reduces the pressure gradually, disconnects the pump, and opens the uncapped discharge gate to expel excess water until the source engine is reached.

ALTERNATE: Sometimes variables such as different hose diameters or lay lengths between engines, different communication frequencies, or variable water flow at the fire scene make the above relay operating procedures impractical. To overcome these problems, the following alternative procedure may be employed for items j, k, and l.

a-j The pump operator at the water source now adjusts the throttle until the correct operating pressures for the current situation is obtained. Care must be exercised to ensure the pump discharge pressure does not exceed the rated service pressure of the hose being used in the relay. If this situation exists, additional engines must be put into the relay or the required flow lowered.

a-k Each subsequent pump operator then adjusts his discharge pressure to meet the particular situation, without going below 20 psi residual pressure on the compound (intake) gauge. The pump operator can check the hose connected to the pump intake by feel to determine when maximum delivery is reached.

a-l The pump operator at the fire scene adjusts the discharge pressure to supply the lines being used for the fire attack. The operation of adjusting pressure is repeated as often as necessary by each engine in the relay.

8.4.6 Water Shuttle Operations

- a) When a fire is located in a remote area absent of hydrants or static water sources, a water shuttle will have to be placed into operation if relay pumping is not a practical solution.
- b) A water shuttle operation may be performed by engine companies or specially equipped tankers.

- c) As soon as a working fire is confirmed in an area requiring a shuttle operation, mutual aid companies will be called. Presently, all Middle Township Volunteer Fire Companies have nurse tankers. However, a shuttle operation can also be performed with engine/tankers from any adjacent Middle Township Fire Company.
- d) All pumper/tankers not involved in the original shuttle operation shall stage as close to the scene as possible while still maintaining adequate egress for the shuttling apparatus.
- e) The first due engine company shall locate themselves at the fire scene and operate to their best advantage from booster tank water.
- f) The second due engine shall act as a “nurse pumper” and connect to the attack pumper, providing an emergency water source in the event the water shuttle fails to maintain its desired flow.
- g) The engine company crew from the “nurse pumper” shall stretch a suitable supply line from the attack pumper to a point where water shuttle pumper/tankers will discharge their water. This supply line should end with a Siamese or water thief having valves to allow two pumper/tankers to connect to the supply line simultaneously.
- h) Enough supply line should be stretched to provide an adequate area for pumper/tanker maneuvering. However, caution should be exercised to avoid laying excess hose which will take water away from the shuttle operation. Remember – 100 feet of 5-inch hose holds approximately 100 gallons of water and 100 feet of 3-inch hose holds approximately 38 gallons of water.
- i) The first shuttle pumper/tanker shall connect to the Siamese or water thief and pump to the attack pumper. The valves on the Siamese or water thief should be operated to allow water to flow from the pumper/tanker to the attack pumper but be restricted from flowing backwards out the other intakes in the Siamese. A Siamese with a clapper valve is most useful for this operation. Valves on a water thief will have to be operated manually.
- j) A second shuttle pumper/tanker shall connect to the remaining intake on the Siamese or water thief.
- k) As the first pumper/tanker starts to exhaust its supply, the second pumper/tanker begins flowing water. Valves on a water thief must be opened and closed manually to make this a smooth transition. Extreme caution must be exercised to avoid interrupting the water flow.
- l) The first pumper/tanker can then disconnect its hose and proceed to a refilling station while the second pumper/tanker is discharging its supply water.

- m) A third shuttle pumper/tanker, if available, can then take the position vacated by the first pumper/tanker and prepare to discharge its supply as outlined above.
- n) The pumper/tanker shuttle shall continue as outlined above until the fire is extinguished.
- o) When refilling, the closest and most readily available hydrant shall be utilized as a water source. If a hydrant is not available, an additional engine company shall be dispatched to a static water source for pumper/tanker refilling.
- p) If a hydrant can be used, pumper/tankers will be filled utilizing the 4-1/2 inch, or larger, (steamer) hydrant discharge, or a direct tank-fill connection, if equipped. If not, then through the pump via tank fill connection.
- q) The largest capacity tanks should be used for the shuttle pumper/tankers.

8.5 Hose Lay Operations

8.5.1 Forward Lay

- a) Locate the engine at the hydrant to be used for water supply.
- b) The hydrant man, with a portable radio, shall remove the hydrant cap and a sufficient quantity of hose from the apparatus, and rap it once around the hydrant. He shall remove all tools necessary to make a complete connection and operate the hydrant successfully.
- c) The hydrant man shall then notify the driver to proceed to the fire scene.
- d) The engine should proceed to the fire scene at a slow enough pace to avoid putting undue stresses on the hose, yet fast enough that the couplings clear the tailboard when leaving the hose bed.
- e) Once at the fire scene, the driver shall follow the procedures for apparatus placement as outlined in the Standard Operating Procedure.
- f) When the engine is placed at the fire scene, the hook-up man or driver will remove enough hose from the hose bed to reach the pump, break down the supply hose, and make all the necessary connections to the engine.
- g) The driver will then notify the hydrant man to charge the hydrant via the fireground radio.

8.5.2 Reverse Lay

- a) The engine shall be located at the fire scene.
- b) The hydrant man shall then remove enough hose to make the necessary connections, whether this be to another engine, a Siamese connection, or to a handline. All tools necessary to make the connection and operate at the fire must be removed from the apparatus.

- c) If a handline is to be stretched from the hose at the fire scene, the officer and nozzle man/backup man must remove sufficient hose and tools to combat the fire. This may include adapters, reducers, water thieves, gated wyes, pike poles, forcible entry tools, SCBA, etc.
- d) The hydrant man or officer shall then notify the driver to proceed to the hydrant.
- e) The engine should proceed to the hydrant at a slow enough pace to avoid putting undue stresses on the hose, yet fast enough that the couplings clear the tailboard when leaving the hose bed.
- f) Once at the hydrant, the driver shall position the engine to utilize the front suction (if possible).
- g) The hookup man or driver shall remove enough excess hose from the hose bed to reach the pump, break down the supply hose, and make all necessary connections to the engine.
- h) The driver shall then contact the unit operating at the fire scene and determine when the supply line should be charged.

8.6 Apparatus Placement

- a) Many factors dictate how engine companies are positioned on the fireground. To a great extent, the apparatus placement is based on problems uncovered during pre-fire planning.
- b) For narrow or detached buildings, the first due engine company will normally take a position slightly past the front of the fire building. This will allow the engine company officer to view at least three sides of the fire building and leave the front of the structure open for the truck company (aerial).
- c) Wide frontage structures such as warehouses, large stores and factories may be detached, but usually have wide street frontages. In such cases, the first due engine company shall position itself so that the entrance to the building can be used in attacking the fire. Because of the size of the building, it will usually not be possible to view three sides of the structure, and less critical to leave the front entrance area open for the truck company.
- d) Attached buildings such as row stores, garden apartments and town houses present more acute problems. The sides of all but the end buildings are hidden, and first arriving companies have limited view during scene size-up. When the truck company is approaching the fire building from the same direction as the engine, the engine company should position itself slightly past the front of the fire building. When the truck company is approaching from the opposite direction as the engine, the engine company should stop just short of the front of the fire building. This will keep the front clear for truck company operations.

- e) Engine company positioning for structures protected by sprinkler/standpipe systems shall be performed as outlined in the Middle Township Fire Volunteer Company #1 Standard Operating Guideline for Operations in Protected Properties.
- f) Engine assignments are usually based on the proximity of the companies to the fireground, but it is important to realize that they are only a guide for normal operations. No procedure should be used as a substitute for the judgment and initiative of the company officer. If the fire conditions require that the first due engine company take a position at the rear of the building, that is where it should be positioned. The officer in this case should notify secondary responding units of any deviation from assigned positions.

8.7 Advancing Handlines

- a) The advancing of handlines cannot be specified to any detail since location, fire involvement, apparatus positioning and response, as well as manpower will play critical roles. However, general handling and hose lay principles can be adhered to under most situations.

8.7.1 Hose Loads

- a) All 1-3/4 and 2-1/2 inch preconnected handlines will be 150 feet in length when packed on the apparatus.
- b) Preconnected lines shall be flat packed with two pull loops placed in the third length. This will provide the nozzleman with more than 50 feet of hose when taking the nozzle and loops.
- c) Preconnected 2-1/2 inch lines shall have variable nozzles.
- d) The 4-inch supply line shall be flat packed with all couplings placed at the front of the hose load. This will avert problems with couplings “flipping” when being layed out. A hydrant wrench will be attached to the hydrant valve at the end of the 4-inch hose. (Hydrant bag with assorted wrenches.)
- e) The 3-inch supply line shall be flat packed for a straight lay; i.e. start with a male coupling.
- f) If the engine is equipped with dual beds of 3-inch hose, the first bed shall be flat-packed for a straight lay. The hydrant valve, and hydrant wrench shall be attached to the end of the hose. The second 3-inch bed shall be flat-packed for a reverse lay. A ball valve, double female adapter and hydrant wrench shall be attached to the end of the load. In each case, the coupling for the first hose in the hose bed shall be started at the rear of the hose bed, against the center divider, and be partially exposed to facilitate the attachment of the top coupling from the adjacent hose bed.

8.7.2 Size and Flow

- a) The hose pull or handline advance shall be specified by the engine company Officer, and will only be pulled under direct orders.
- b) In general, hose pulls shall be as follows:
 - 1) Leaf, brush or other small confined exterior containers – 1-3/4 inch line or booster line on brush truck. (Same size back-up.)
 - 2) Dumpster, car, trailer, smaller residential dwelling fires – 1-3/4 inch line. (Same size back-up.)
 - 3) Large residential dwelling fire, lumber piles, large shed or garage, industrial or commercial structures – 2-1/2 inch lines.
- c) The flow in the hose shall not exceed capacity of either the hose, pump or crew. This shall be considered for both flow rate & gpm) and nozzle pressure (psi). As a general rule, nozzle flow must be adequate for the intended use (i.e. straight stream, fog, or broken stream).
- d) Master stream appliances and supply lines (2-1/2-inch and larger), shall be charged and pressurized as directed by the engine company officer or pump operator. In general, smooth bore devices shall be operated at 80-psi nozzle pressure while fog nozzles operate at 100 psi.

8.7.3 Manpower Requirements

- a) Manpower requirements for hose lays shall not be less than the minimum specified as follows:
 - Booster line – 1 firefighter
 - 1-1/2 inch to 1-3/4 inch hose – 2 firefighters (Minimum)
 - 2-1/2 inch to 3-inch hose – 3 firefighters (Minimum)
- b) It is not necessary to man supply line hose lays. However, periodic examination of the line is encouraged to assure the fittings are tight and the lines are of generally good integrity.
- c) When a loop is used, it is permissible to reduce the number of firefighters manning the lines.

8.7.4 Routing the Lines

- a) The routing of the lines must be preplanned and allow sufficient hose flexibility for extension or withdrawal.
- b) Pulling adequate hose sections must be assured for full extension into or around the fire area.

- c) Hose lays shall be routed such that potential snagging of the hose or couplings is minimized. Care must be exercised when routing hose lines as following:
- Over or under fences
 - Through self closing doors
 - Across bridges or railroad tracks
 - Through windows
 - Around sharp corners
 - Up and down stairs or ramps
- d) All kinks, sharp bends, angles and “switch backs” must be smoothed out as best practical without compromising either hose extension or withdrawal requirements.
- e) Hose lays over ground cover must consider such objects as trees, shrubs, lawn sprinklers, undisclosed toys, equipment or lawn decorations.
- f) Caution must be exercised when stretching hose lays over abrasive surfaces such as pavement, concrete, stone and gravel.
- g) Hose lays are to be routed as straight and direct as possible for supply lines, keeping as much roadway surface as clear as possible for emergency vehicle traffic.

8.7.5 Line Charging

- a) Lines are not to be charged until ordered by the engine company Officer or nozzleman
- b) In general, handlines should be advanced as far as safely possible before being charged.
- c) Hoseline engine crews should refrain from entering into a fire compartment without a charged hose line.
- d) Once the handline is charged, all air should be bled off at the nozzle prior to operating the line on the fire.

8.7.6 Line Communications

- a) Line communications between the engine company officer or nozzleman and the pump operator shall be kept to a minimum and be as brief and to the point as possible.
- b) Communications between the engine company crew shall take place on the fireground frequency.

- c) The engine company officer shall report the interior conditions and fire suppression activities to the Incident Commander or sector officer in charge of operations.

8.7.7 Backup Lines

- a) Backup lines shall be stretched for all interior structural fire fighting operations, vehicle fires, flammable/combustible gas fires, or any other emergency condition that warrants such action.
- b) Backup lines shall be equal to or larger in size than the primary attack line in which they will be providing protection.
- c) It is preferable to use smooth bore nozzles for backup lines because of the extended reach the solid stream provides. However, fog nozzles should be used for flammable/combustible gas fires and foam application operations.
- d) A backup line does not have to remain dormant when providing protection for an attack line. Frequently, backup lines may be used to assist in the control and extinguishments operations.
- e) If a backup line is not required during interior structural fire fighting operations, the hose may be advanced to the floor above the fire floor. Communications between the attack engine company officer, backup line officer and the Incident Commander is essential so that this determination may be made.

8.7.8 Safety

- a) Hoseline safety is very important both to the engine company fire fighter and other personnel on the fireground. The uncontrolled whipping of a hose has been known to damage and harm equipment and personnel. While some of this is the result of hoseline failure, other causes include:
 - Inappropriate manning
 - Excessive line pressures
 - Sudden nozzle adjustments
 - Sharp hoseline turns
- b) When operating a hoseline without a SCBA and mask, face shields must be fully lowered. Gloves must be worn at all times.
- c) Wrapping of the line around and/or through the legs is strictly prohibited, as well as shouldering a charged hoseline.
- d) If “riding” the hoseline is required, such as when using a portable monitor or “loop,” hands are to be placed as close to the hose coupling as possible. However, hand placement at all times shall be adequate for hose control.

- e) When advancing a handline through a doorway, or similar restricted opening, all members of the hose crew shall be on the same side of the hose. This will reduce the possibility of any member becoming separated and cut off from the remainder of the crew, especially in the event of an emergency exit (i.e building collapse), and will facilitate in advancing the line.
- f) The pump operator will set the pressure/relief governor to correct operating pressure to prevent over pressurization, i.e. water hammer, for all evolutions of the fire scene.

8.8 Exposure Protection

- a) Exposure coverage is generally second only to rescue for tactical priorities in basic fire fighting operations. Structures near a fire building (exterior exposures) and parts of the fire building not yet involved (interior exposures) must be protected to minimize the danger to their occupants as well as to contain the fire.
- b) Attics, cocklofts and basements of attached structures must be examined for fire spread and the need for exposure protection.
- c) Doors and windows in adjacent and attached structures are to remain shut to prevent fire spread. Caution must be exercised to prevent potential radiant or convective fire from occurring by the direct application of water on the exposure.

8.8.1 Interior Exposures

- a) Interior exposure fires require the use of handlines in many positions inside the building to stop the spread of fire. In most cases, the backup line will be used to protect and confine interior exposure fires while the first line is being used to directly attack the main body of the fire.
- b) Handlines must be placed between critical interior exposures and the fire. Critical interior exposures include: rooms/areas adjacent to the fire area, stairways, means of egress corridors, elevator shafts, and other vertical channels.
- c) Most interior exposure fires are not at all obvious. They must be sought and found by fire fighters.
- d) Upon arrival on the fire ground, engine company personnel should be looking for signs that fire has gotten into vertical channels within the building. Smoke or fire showing around roof features such as vent pipes is an obvious sign.
- e) If there is any possibility of a fire in a horizontal or vertical space or shaft, that area must be opened up and inspected visually. If fire exists, streams must be directed into the shaft and the shaft must be ventilated.
- f) Although the opening of concealed spaces and ventilation outlets is rescue company work, engine crews must be on hand to extinguish any uncovered fires.

- g) Because fire in concealed channels are confined to a comparatively small area, 1-3/4 inch lines will be most useful for extinguishment.
- h) In large shafts, such as elevator shafts or stairways, it may be necessary to use 2-1/2 inch hand lines to control the fire.
- i) To attack a fire in a concealed void, an opening should be made in the wall or shaft that is about waist high. This will allow a fire fighter on one knee to easily handle the nozzle and direct the stream up or down the shaft.
- j) It is imperative that at least one stream be directed up into the shaft to control embers, hot gasses and smoke.
- k) Fog nozzle patterns should be adjusted to provide maximum reach and coverage within the shaft partition.

8.8.2 Exterior Exposures

- a) Exterior exposure fires spread outside the building. Factors that must be considered when evaluating the severity of an exterior exposure problem must include the following:
 - Recent weather
 - Present weather, especially wind
 - Spacing construction, design and materials
 - Intensity and size of the fire
 - Location of the fire
 - Availability and combustibility of fuel
 - Number of fire fighters and available equipment
- b) Flying brands and embers carried by convective and wind currents can create serious fire containment problems, especially in lumber yards and open storage areas. If such situations are encountered, an engine company shall be assigned to patrol areas downwind from the fire. If an engine company is not immediately available, the police or other radio equipped township units shall be assigned. Adjacent building roofs should be laddered to adequately monitor for wind carried embers or fire debris.
- c) Radiant heat moves away from the fire building in all directions, unaffected by the wind. Fire streams must be applied directly to the exterior of building affected by radiant heat.
- d) Water curtains placed between the fire and an exposure building shall never be utilized because of their ineffectiveness in mitigating radiant heating. Water itself is transparent and radiant heat will pass through it, heating the exposed structure.
- e) Crews assigned to the interior of an exposure building shall advance uncharged hoselines into the structure. All combustible materials shall be removed from around the windows including curtains, blinds, etc.

- f) All interior floors and attic areas in the exposure building must be checked and continually monitored for fire extension.
- g) The structures or materials nearest the fire must be covered, beginning on the leeward (downwind) side first. When the exposures are fairly close to the fire building, the most vulnerable areas are to parts of the exposed building just above the fire.
- h) Once the leeward exposures are protected, other areas threatened by radiant heating must be covered.
- i) Streams used for exposure protection must be of the correct size and type to effectively protect the building. The volume and reach of a particular stream must be considered.
- j) Generally 1-3/4-inch hand lines should be deployed as a minimum. In extreme cases, 2-1/2-inch hand lines, deluge guns or tower ladder streams should be used when large bodies of fire and radiant heat are encountered.
- k) Fog streams, although most effective in cooling exposures, are very susceptible to breakup and reduction of efficiency by winds and thermal currents. Under these adverse conditions, solid stream or smooth bore nozzles must be used.
- l) Exterior exposure protective streams must be placed where they will cover the maximum amount of exposed area. If one stream will not cover the exposure completely, additional streams should be advanced.
- m) The hose line should be positioned so that the exposure is protected while the stream can be operated on the fire nearest the exposure. However, concern for hitting the fire should not be allowed to reduce the effectiveness of the exposure coverage.
- n) The ideal position for an exterior exposure protection line is one that maximizes the reach and effectiveness of the stream while providing the fire fighters some protection from radiant heat.
- o) Fire fighters manning exterior exposure protection lines shall not operate from within the collapse zone of the fire building.

8.9 Extinguishment and Control

- a) Aside from rescue, the first priority of an engine company is to place a hose line or master stream into operation to protect exposures and confine, control and ultimately extinguish the fire.
- b) To satisfy these objectives, the Incident Commander has several operating modes to choose from which directly affect the duties of the engine company. These modes of operation are: Offensive Attack, Defensive Attack and Marginal Attack.

8.9.1 Offensive Attack Mode

- a) During offensive operations, fire conditions will allow an interior attack. In this situation, hand lines are extended into the fire area to support the primary search and control the fire, while related offensive support activities are provided to clear the way for the attack.
- b) A four- to six-man engine company is only capable of efficiently stretching and operating one hand line.
- c) The first hand line will be placed in an advantageous position to aid in the search and rescue operation when there is a high probability of life hazard.
- d) When the eminent life hazard problem has been addressed, the first line will be used to cut off the fire travel into unburned areas and protect interior exposures.
- e) The first line will then concentrate on darkening down and extinguishing the fire.

8.9.2 Defensive Attack Mode

- a) During defensive operations, fire conditions prevent an interior attack. Large exterior fire streams, hand lines or master streams will be utilized.
- b) Large caliber streams shall be placed between the fire and the exposures to prevent fire extension.
- c) Once fire extension and exposure protection have been satisfied, heavy caliber streams may be operated directly on the fire area.
- d) Fire extinguishments during defensive operations may include operating exterior streams around a large or inaccessible fire area that is essentially burning itself out.
- e) During defensive operations, perimeter control becomes critical since fire fighters should not enter the fire area.
- f) A collapse zone, defined as a horizontal distance out from the fire building at least equal to the height of the building, will be established. Under no circumstances shall any member or equipment operate from within the collapse zone.
- g) Buildings constructed with exterior walls of brick or masonry will be monitored for cracking, bulging or general deformity and weakness, by a member from the engine company.

8.9.3 Marginal Attack Mode

- a) A marginal attack mode involves the operating of interior lines while an exterior crew sets up “*but does not operate*” in a defensive mode.

- b) A marginal operation generally occurs near the end of the offensive operations just prior to establishing a defensive attack.
- c) The offensive and defensive modes of operation are mutually exclusive independent events and must never be operated together.
- d) Operating from a marginal attack mode removes the lag time between an offensive and defensive fire attack.
- e) Under marginal conditions, the officer, nozzleman and backup man will operate in the offensive mode while the driver, hydrant man and hookup man prepare the defensive attack mode.

8.9.4 Safety

- a) **Fire extinguishment and control must consider firefighter safety first.** As such, under no circumstances shall a fire fighter be engaged in fire suppression activities without full turnout gear including SCBA and PASS devices.
- b) Fire suppression and control activities shall be conducted under direct control and orders of a line officer ***using no less than two fire fighters***, regardless of the hose line size.
- c) Should any condition, actual or perceived, present itself that a fire fighter feels threatened or unsure of activities, immediate termination and exiting of the attack is to occur.
- d) Fire extinguishment and control activities are not to be continued if air supplies fall to within the “reserve” capacity and audible or other mechanical warning indications are given.
- e) Immediate withdrawal and termination of activities is to occur the moment the emergency evacuation signal is given whether this is by radio transmission, air horn blasts or both.
- f) Offensive and defensive attack modes shall never be operated simultaneously on the same fire.
- g) Caution shall be exercised when operating heavy caliber master streams. Hydraulic demolition of the building and structural collapse may occur.
- h) Under no circumstances shall any fire fighter or apparatus operate from within the collapse zone.
- i) If there are any conditions indicating the possibility of a backdraft, vertical ventilation shall occur prior to any fire department member attempting to enter the building. If vertical ventilation cannot be provided, horizontal ventilation shall be performed as outlined in the Fire Company Standard Operating Procedures.

8.10 Secondary Engine Companies

- a) The second due Engine Company will locate and stand by at an additional hydrant if 4-inch supply line is being used, or remain at the primary source hydrant if a 2-1/2-inch supply line is being used by the first due Engine Company.
- b) The crew from the second due engine company shall ensure that the first due engine has a charged supply line and its handline is in operation. If these two conditions are not met, the second due company shall assist in rectifying the situation and getting them into operation.
- c) The second due Engine Company will be responsible for stretching a second line to backup the first line. If a backup line is not needed on the fire floor, the second line may be advanced to the floor above the fire floor. In most cases, this second line should be stretched from the first due engine.
- d) Communications between the first and second due engine companies, along with the Incident Commander or operations sector officer is essential when positioning the second line.

8.11 Siamese Connection Operations

- a) Protected properties equipped with Siamese connections (Fire Department Connection) shall follow Volunteer Fire Co. #1 Standard Operating Guideline for Operations at Protected Properties.
- b) The engine will reverse lay from the Siamese connection to the hydrant or water source.
- c) If an extremely long hose lay is required, it may be necessary to place a second engine at the Siamese connection to supply adequate pressure to the system.
- d) If 4-inch hose is going to be used, the 4-inch water thief and two 2-1/2 pony hoses shall be used to hookup to the 2-1/2 inch Siamese connections.
- e) If the engine is equipped with two beds of 3-inch hose, both lines shall be deployed in parallel from the Siamese connection to the engine positioned at the hydrant.
- f) If the supply engine is equipped with a single bed of 3-inch hose, the engine shall lay one line while going to the hydrant. After the single line is operating, the second line will be hand-stretched from the engine to the Siamese connection, or deployed by a second engine company.
- g) An engine will supply a minimum of 150-psi at the Siamese connection for buildings up to 10 stories in height. Buildings over 10 stories in height should be pressurized to add 10 psi per story, not to exceed maximum pressure capacity of the hose.

- h) If a building is equipped with separate connections for the sprinkler system and standpipe system, one line shall be placed to each and charged. Once this is complete, a second line can be hand-dragged or deployed by a second engine.
- i) A building equipped with mutually exclusive sprinkler systems without interconnections will require an engine to feed each separate Siamese connection.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-9
TITLE:	Rescue Truck Operations	

Purpose: The purpose of this Standard Operating Guideline is to outline the general first due activities and operations of our Rescue Truck when arriving on the fire ground. In most cases, these duties will be provided by the crew responding on the Aerial Platform (F-714).

9.1 Introduction

- a) There are six (6) basic functions that a rescue company is responsible for performing on the fire ground. These responsibilities include:
- Search
 - Rescue
 - Salvage
 - Overhaul
 - Lighting

9.2 General Procedures

- a) The ideal crew for the rescue company will be four men: 1 driver, 1 officer, and 2 firefighters.
- b) Because each crewmember is expected to perform immediately upon the truck's arrival on the fire scene, all fire fighters will wear full turnout gear prior to responding from the station.
- c) Each and every crewmember is part of an operating force and is expected to carry out all operations in a professional manner.
- d) Crews will complete their required tasks efficiently and effectively before continuing on to a secondary responsibility.
- e) All crew officers, acting or delegated, will report the progress of their actions to the appropriate sector officer or Incident Commander.
- f) The rescue truck will be located for its best possible use at all alarms, strategically placed to take full advantage of the apparatus and equipment.

9.3 Apparatus Placement

9.3.1 General Procedures

- a) The rescue truck will be located for its best possible use at all alarms, strategically placed to take full advantage of the apparatus and equipment.
- b) Once the truck is on the fire scene, it should be advanced in a slow, deliberate approach to the fire building.
- c) The officer in charge should assist the driver with obtaining a good position from which the company can work efficiently. The rescue truck should not be located in a position that will interfere with the operation of other apparatus.
- d) When directed by the Incident Commander to provide lighting, the truck should be placed in a position to best illuminate the fire ground but not obstruct fire ground operations.

9.4 Search and Rescue

9.4.1 Search

- a) Search and Rescue, the main rescue company function, is primarily concerned with the locating and removing of trapped occupants.
- b) This function may be preceded by forcible entry in order to gain access to the building or rooms of the building. The crew may also have to force entry for the engine company so that an aggressive interior fire attack can be performed.
- c) The Search and Rescue will be broken down into two categories:

Primary Search – The initial aggressive search, to be performed quickly, yet thoroughly.

Secondary Search – A second search is to be performed once the fire conditions lessen to permit an extremely thorough search. Nothing will be left unturned. This search should be performed by a fresh crew.

- d) The search should start as close to the seat of the fire as possible, paying special attention to areas likely to have been occupied by victims, and then continue outward and upward into the areas over the fire floor following proper search patterns and procedures.
- e) Probe door areas if you cannot enter a room.
- f) Check behind doors when entering a room.
- g) Always maintain a secondary means of egress for yourself and your search partner.

- h) On buildings with large expanses of open floor areas, such as commercial/industrial buildings and school auditoriums, a lifeline should be used to facilitate your search and means of egress.
- i) During a search the crew should perform horizontal ventilation where required provided a charged hose line is in place to attack the fire and ventilation will not contribute to fire spread.
- j) Temporarily prevent fire extension by closing doors and compartmentalizing the fire area, labeling doors as being searched.
- k) Check for interior and exterior fire extension while completing your search pattern. Report any extension to the Incident Commander or Sector Officer.
- l) Help locate the seat of the fire and report the location to the Incident Commander or Sector Officer.
- m) Should the structure show signs of flashover or backdraft, no rescue effort shall be made unless cleared by the Incident Commander.

9.4.2 Rescue

- a) Rescue recovery is to take place each time a victim is located, with a continued search occurring once the victim is released to a search crew or brought to the structure exterior. Once a victim is found, the universal command “victim” should be used by interior fire fighters to assist in handing off the person. If the victim is obviously deceased, leave the victim in the location found and notify the Incident Commander or sector officer. The Incident Commander will in turn notify the police department. Do not move an obviously dead body until instructed by the police department representative in charge of the investigation.
- b) If fire fighter safety is compromised due to hardship or danger presented during recovery, efforts are to be transferred to additional personnel or terminated.
- c) Triage activities may have to be carried out during recovery operations if multiple victims are located together, or exit activities uncover additional victims.
- d) Under no circumstances is a victim to be left unattended once recovered.
- e) Medical triage or aid is not to be conducted by firefighters, unless they are a qualified EMT.

9.4.3 Safety

- a) Rescue safety is to consider the fire fighter first, since injury to the fire fighter will prevent future rescue activities from proceeding rapidly.

- b) Structural integrity and safety, either in total concept or by room or floor, must be assured prior to initiating rescue activities.
- c) Laddering at a minimum of one location on each floor must be available either before rescue begins or as soon as practical thereafter.
- d) Ventilation should occur in conjunction with rescue activities provided victim recovery is not compromised.
- e) Search and rescue crews shall be made up of at least two fire fighters working on the “Buddy System.”
- f) If in the process of a rescue operation, conditions are revealed that may directly harm the search and rescue crew, immediate withdrawal is to occur.
- g) Some indications that warrant immediate withdrawal include, but are not limited to the following:
 - Gas odors
 - Firearms and ammunition
 - Open floors
 - Unstable walls
 - Arcing electrical wires
 - Excessive cracking

9.5 Salvage

- a) The main objective of salvage is to protect the building and its contents from water damage.
- b) Salvage operations should be started as soon as fire attack begins, or as soon thereafter as possible. The Incident Commander should remain cognizant of this job function and assign it to the rescue company after they have completed their first due tasks, or to a secondary responding unit.
- c) There are two types of salvage operations - those that protect the contents of a building, and those that protect the building itself from structural damage due to the weight of the water.
- d) Building contents should be protected mainly by covering them to keep them from being damaged by water and debris. The flow of excess water should be directed away from stock, furnishings and equipment.
- e) The building should be protected from structural damage by removing water through chutes, drains, toilets, sewer pipes or natural building openings. In extreme cases where a large quantity of water is accumulating, openings in walls may have to be made to save the building from structural collapse.
- f) If while performing salvage operations fire extension is observed, the salvage crew officer shall report this condition to the Incident Commander or Sector Officer.

9.5.1 Safety

- a) The safety of fire fighters engaged in salvage and other operations must be taken into account at all times.
- b) Those involved in salvage work must be cognizant of the fire above and how it might affect their work. They must also be aware of how their work could endanger other fire fighters in and around the building.
- c) Fire fighters performing salvage operations shall wear full turnout gear including SCBA and *work in groups of not less than two*.
- d) Fire fighters performing salvage operations shall be cognizant of electrical hazards associated with pooling water. They shall not enter any area if live electrical appliances or equipment is suspected.

9.6 Overhaul

9.6.1 Manpower Requirements

- a) Fresh fire fighters shall be used for overhaul activities to allow for visual observations of areas by new personnel.
- b) Overhaul crews shall be a minimum of two fire fighters and one officer.

9.6.2 General Procedures

- a) Overhaul operations should start as soon as the fire is under control. Its goal is to ensure all hidden fires are exposed and extinguished.
- b) Any area that could have potentially been involved in fire should be examined.
- c) All baseboards, moldings and pipe recesses in the fire area should be removed and the hidden areas examined.
- d) Examination and investigation of the exposure areas must be performed to ensure that no ignition has occurred.

This includes, but is not limited to:

- Adjacent rooms and enclosed areas
 - Walls, floors and ceilings
 - Cockloft and attics
 - Basement and crawl spaces
- e) Fire discovered in any area during overhaul should be reported to the Incident Commander at once.

- f) Once all areas have been checked and it has been determined no fire extension exists, all interior furnishings should be checked to insure proper extinguishment.
- g) Upon completion of all overhaul operations, the building should be secured as best as possible depending upon the severity of fire damage to the structure.
- h) Salvage and overhaul should wait, if possible, to determine cause and origin of fire.

9.6.3 Safety

- a) Firefighters performing overhaul operations shall wear full turnout gear including SCBA and *work in groups of two or more*.
- b) The safety of fire fighters engaged in overhaul and other operations must be taken into account at all times.
- a) Firefighters engaged in overhaul operations should be aware of the possibility of “flashback” from pockets of fire and combustible gases.

9.7 Cascade System

9.7.1 Refill Operations

- a) Check SCBA bottles to be filled for current hydro date. If date is more than five years old, tag bottle and send it out for hydro testing. (Three years if aluminum or fiber wrap.)
- b) Place bottle in shatter shield and connect to fill line.
- c) Open valve on SCBA bottle fully, noting pressure on gauge.
- d) Close shatter shield.
- e) Open bottle on cascade system. If pressure in the SCBA bottle exceeds the cascade bottle, close the valve and go to the next bottle in the system. Repeat if necessary.
- f) Open valve on fill line slowly.
- g) When SCBA bottle pressure equals the cascade bottle’s pressure, first shut down the fill line valve, then shut down the cascade valve.
- h) Go to the next cascade bottle and repeat steps “e” thru “g” as needed.

- i) When SCBA bottle is full:
 - 1. Shut off fill line.
 - 2. Shut off cascade bottle.
 - 3. Shut off SCBA bottle valve, and open shatter shield.
 - 4. Open fill line and bleed off.
- j) Remove SCBA bottle from fill line, and open shatter shield.
- k) When complete, fill in log with pressures in cascade bottles, date and initial.

9.8 Special Operations

- a) The rescue company can be called to perform many special operations including:

Extrication
 Building collapse
 Trench rescue and confined space rescue
 Flooded basements
 Emergency lighting

- b) During any operation, Fire Company safety procedures will always be followed.
- c) If special equipment is required, the Incident Commander will special-call it at his discretion. It will be the responsibility of the rescue company to stabilize the situation as best they can until the special-called equipment arrives.

Under no circumstance should the rescue company attempt any special operation without the proper equipment or training required to bring it to a successful conclusion.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-10
TITLE:	Ladder Truck Operations	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the general first due activities and operations of our ladder truck when arriving on the fire ground and not operating as an engine company. In most cases, these duties will be provided by the crew responding on Ladder F-714. However, fire fighters on secondary responding engine companies must be prepared to carry out these tasks in the event the ladder is delayed in response or committed to engine company operations.

10.1 Introduction

- a) There are nine (9) basic functions that a ladder company is responsible for performing on the fire ground. These responsibilities may include:

- Forcible Entry
- Search
- Rescue
- Ventilation
- Laddering
- Salvage
- Overhaul
- Elevated Master Streams
- Utilities Control

- b) To most effectively perform these tasks, the ladder company will be divided into two units: the Outside Vent Crew (OV), and Search Crew (SC), each with its own definitive responsibilities.
- c) The method of separating the ladder company will be based on the riding position of each fire fighter on the apparatus en route to the fire scene.
- d) Each riding position will be assigned a task or group of tasks that will accomplish our ladder company goals. The order in which the truck is boarded will therefore play a substantial role in the success of this method.
- e) There are several situations where the ladder company may not be split, and in fact, operate as one complete unit. Some conditions that might warrant this procedure include operations at large commercial/industrial occupancies, schools or special call assignments. In these situations, the Incident Commander will notify the ladder company whether or not they are to disregard their assigned tasks and perform a specific function.

- f) Because optimum conditions and predicted scenarios are impossible under a fire condition, the ladder company will have to remain resilient and able to conform to changing conditions.

10.2 Riding Positions

- a) In order to efficiently and effectively assign duties to the ladder company, a system consisting of task delegation by riding position will be employed.
- b) Each of the six-seated positions on the apparatus will have a job function associated with it. This does not mean that six members must be present for the ladder company to operate effectively. In situations where less than six fire fighters are present, the tasks of the ladder company will be divided accordingly.
- c) Due to the diversity of equipment required to perform various tasks on the ladder company, the order in which the apparatus is boarded and manned is of utmost importance. The following is a progressive list dictating this order:
 - 1) Driver
 - 2) Officer
 - 3) Irons Man – Right Side Outside Seat
 - 4) Vent Man – Right Side Inside Seat
 - 5) Extinguisher Man – Left Side Outside Seat
 - 6) Roof man – Left Side Inside Seat

2-MAN CREW

Driver, Officer

SEARCH CREW

Officer – Assist in performing forcible entry for engine company. Perform primary search and rescue. Report location of the seat of the fire and extension to the Incident Commander and the engine company. Perform interior horizontal ventilation where warranted.

Tools: Hand light, fire ground radio, K-Tool, Halagan bar or closet hook.

Driver – (When F-714 is in ladder operation only). Perform forcible entry for engine company. Conduct the primary search and rescue. Perform interior horizontal ventilation where warranted.

Tools: Irons, Rabbit Tool, fire ground radio, hand light.

or

OUTSIDE VENT CREW

Officer – Secure utilities if able. Report the conditions of the rear of the building to the Incident Commander or Sector Officer. Assist in laddering the building with driver. Set up aerial if required.

Tools: Hand light, fire ground radio, tool kit.

Driver – (When F-714 is in ladder operation only). Perform outside ventilation (horizontal) provided a hose line is in position to start water. Ladder building with officer. Set up aerial if required.

Tools: 6' pike pole (minimum), ladder if required, fire ground radio.

Due to the lack of manpower with a two-man crew, only one of the above functions (outside vent or search) can be performed. It will be up to the discretion of the Incident Commander to determine this task.

3-MAN CREW

Driver, Officer, Irons Man

SEARCH CREW

Officer – Assist irons man in performing forcible entry for engine company. Perform primary search and rescue. Report location of the seat of the fire and extension to the Incident Commander and the engine company. Perform interior horizontal ventilation where warranted.

Tools: Hand light, fire ground radio, K-tool, Halagan bar or closet hook.

Irons Man – Perform forcible entry for engine company. Conduct the primary search and rescue. Perform interior horizontal ventilation when conditions warrant.

Tolls: Irons, fire ground radio, hand light.

OUTSIDE VENT CREW

Driver – (When F-714 is in ladder operation only). Perform outside ventilation (horizontal) provided a hose line is in position to start water. Ladder building when required. Secure utilities if able. Report the conditions of the rear of the building to the Incident Commander or Sector Officer. Set up aerial if required.

Tools: 6' pike pole (minimum), ladder if required, fire ground radio, tool kit.

4-MAN CREW

Driver, Officer, Irons Man, Vent Man

SEARCH CREW

Officer – Assist irons man in performing forcible entry for engine company. Perform primary search and rescue. Report location of the seat of the fire and extension to the Incident Commander and the engine company. Perform interior horizontal ventilation where warranted.

Tools: Hand light, fire ground radio, K-tool, Halagan bar or closet hook.

Irons Man – Perform forcible entry for engine company. Conduct the primary search and rescue. Perform interior horizontal ventilation when conditions warrant.

Tools: Irons, fire ground radio, hand light.

OUTSIDE VENT CREW

Driver – (When F-714 is in ladder operation only). Secure outside utilities if able. Assist in laddering the building with the vent man. Will assume the responsibilities as acting officer of vent crew for roof ventilation if required. Report the conditions of the rear of the building to the Incident Commander or sector officer. Set up aerial if required.

Tools: Tool kit, fire radio ground radio. If vertical ventilation is required, the driver will assist the vent man in carrying the ladder and saw.

Vent Man – Perform outside ventilation (horizontal) provided a hose line is in position to start water. Ladder building when required. Perform roof ventilation with drive if required. Set up aerial if required.

Tools: 6' pike pole (minimum), ladder if required, fire ground radio. If vertical ventilation is required the vent man must also carry the pick head axe and roof rope.

If the ladder is required for exterior rescue or ventilation it will be the responsibility of the outside vent crew to set up and operate the aerial.

5-MAN CREW

Driver, Officer, Irons Man, Vent Man, Extinguisher Man

SEARCH CREW

Officer – Assist irons man in performing forcible entry for engine company. Perform primary search and rescue. Report location of the seat of the fire and extension to the Incident Commander and the engine company. Perform interior horizontal ventilation where warranted.

Tools: Hand light, fire ground radio, K-tool, Halagan bar or closet hook.

Irons Man – Perform forcible entry for engine company. Conduct the primary search and rescue. Perform interior horizontal ventilation when conditions warrant.

Tools: Irons, fire ground radio, hand light.

Extinguisher Man – Assist in forcible entry for the engine company. Conduct the primary search and rescue. Perform interior horizontal ventilation when conditions warrant. Carry the water extinguisher on small fires. *Note – On large scale working fires (commercial/industrial) the water extinguisher may be dropped for a closet hook or forcible entry tool.

Tools: Water extinguisher or closet hook, fire ground radio.

OUTSIDE VENT CREW

Driver – (When F-714 is in ladder operation only). Secure outside utilities if able. Assist in laddering the building with the vent man. Will assume the responsibilities as acting officer of vent crew for roof ventilation if required. Report the conditions of the rear of the building to the Incident Commander or Sector officer. Set up aerial if required.

Tools: Tool kit, fire radio ground radio. If vertical ventilation is required, the driver will assist the Vent Man in carrying the ladder and saw.

Vent Man – Perform outside ventilation (horizontal) provided a hose line is in position to start water. Ladder building when required. Perform roof ventilation with drive if required. Set up aerial if required.

Tools: 6' pike pole (minimum), ladder if required, fire ground radio. If vertical ventilation is required the Vent Man must also carry the pick head axe and roof rope.

If the ladder tower is required for exterior rescue or ventilation it will be the responsibility of the outside vent crew to set up and operate the aerial.

6-MAN CREW

Driver, Officer, Irons man, Vent Man, Extinguisher Man, Roof Man

SEARCH CREW

Officer – Assist irons man in performing forcible entry for engine company. Perform primary search and rescue. Report location of the seat of the fire and extension to the Incident Commander and the engine company. Perform interior horizontal ventilation where warranted.

Tools: Hand light, fire ground radio, K-tool, halagan bar or closet hook.

Irons Man – Perform forcible entry for engine company. Conduct the primary search and rescue. Perform interior horizontal ventilation when conditions warrant.

Tools: Irons, fire ground radio, hand light.

Extinguisher Man – Assist in forcible entry for the engine company. Conduct the primary search and rescue. Perform interior horizontal ventilation when conditions warrant. Carry the water extinguisher on small fires. *Note – On large scale working fires (commercial/industrial) the water extinguisher may be dropped for a closet hook or forcible entry tool.

Tools: Water extinguisher or closet hook, fire ground radio.

OUTSIDE VENT CREW

Driver – (When F-714 is in ladder operation only). Secure outside utilities if able. Assist in laddering the building with the vent man. Will assume the responsibilities as acting officer of vent crew for roof ventilation if required. Report the conditions of the rear of the building to the Incident Commander or sector officer. Set up aerial if required.

Tools: Tool kit, fire radio ground radio. If vertical ventilation is required, the driver will assist the vent man in carrying the ladder and saw.

Vent Man – Perform outside ventilation (horizontal) provided a hose line is in position to start water. Ladder building when required. Perform roof ventilation with drive if required. Set up aerial if required.

Tools: 6' pike pole (minimum), ladder if required, fire ground radio.

Roof Man – Assist the vent man with outside ventilation (horizontal) provided a hose line is in position to start water. Ladder building and perform roof ventilation with the vent man if required. Report roof conditions to incident Commander or sector officer. Set up aerial if required.

Tools: Roof rope, pick head axe, ladder with vent man and driver, if required, fire ground radio.

If the ladder tower is required for exterior rescue or ventilation it will be the responsibility of the outside vent crew to set up and operate the aerial.

10.3 General Procedures

- a) The ladder will be located for its best possible use at all alarms, strategically placed to take full advantage of the apparatus and equipment.
- b) Once the ladder is on the fire scene, it should be advanced in a slow, deliberate approach to the fire building.
- c) The officer in charge should assist the driver with obtaining a good position from which the company can work efficiently.

- d) The ladder must not be committed, that is stopped, the wheels chocked, the outriggers set, or the apparatus blocked in position, until the fire conditions have been observed.
- e) The ladder should avoid a position that blocks the engine companies from a hydrant or Siamese connection.
- f) If the fire building is greater than two stories, or includes multiple attached dwelling units, the engine companies must allow the ladder company to get close enough to the building so the aerial ladder can be positioned effectively and larger ground ladders raised quickly. In these situations the general rule of thumb applied is “the ladder takes the front of the building.”
- g) The most stable and versatile operation of our ladder is 180 degrees off the rear of the unit. When at all possible, attempt to set up the truck to operate off the rear.

10.3.1 Aerial Placement for Rescue

- a) When the victims are at a single window, or at several windows close together, the turntable should be spotted close to the victims.
- b) If the wind is blowing across the side of the building that the victims are located, the turntable should be located upwind from the victims.
- c) If the fire is upwind of the victims, the turntable must be spotted in the best possible position to get to the victims quickly.
- d) When the victims are located at some distance from each other, the turntable should be spotted between them.
- e) In some cases, the aerial can be positioned at the corner of a building to permit coverage of the two sides.

10.3.2 Aerial Placement for Elevated Master Streams

- a) When wind is not a factor, the turntable should be spotted for maximum coverage of the fire area. Usually, this will be at the center of the building or open storage area. If the building is large, the truck should be placed in the middle of the fire area.
- b) If the wind is blowing across the face of the fire building so that nearby structures are exposed, the turntable should be spotted between the fire and the exposures. This will allow the elevated stream to be directed to the fire building and, at the same time, to be in position to cover the exposures and cut off fire extension.
- c) If the wind is blowing during a fire in an open storage area (such as a lumber yard), the turntable should be spotted at the flanks of the fire, between the main body of the fire and exposures. The unit should not be positioned directly in front of the fire.

- d) If horizontal tanks are involved in flammable liquid/gas fires, the turntable should never be spotted in line with either end of the tanks. This is an extremely dangerous position, since the ends of the tank will blow out if the tank explodes.

10.4 Search and Rescue

10.4.1 Search

- a) Search and Rescue, the main ladder company function of the search crew, is primarily concerned with locating and removing trapped occupants.
- b) This function may be preceded by forcible entry in order to gain access to the building or rooms to the building. The crew may also have to force entry for the engine company so that an aggressive interior fire attack can be performed.
- c) The Search and Rescue will be broken down into two categories:

Primary Search – The initial aggressive search, to be performed quickly yet thoroughly.

Secondary Search – A second search is to be performed once the fire conditions lessen to permit an extremely thorough search. Nothing will be left unturned. This search should be performed by a fresh crew.

- d) The search should start as close to the seat of the fire as possible, paying special attention to areas likely to have been occupied by victim, and then continue outward and upward into the areas over the fire floor following proper search patterns and procedures.
- e) Probe door areas if you cannot enter a room.
- f) Check behind the doors when entering a room.
- g) Always maintain a secondary means of egress for yourself and your search partner.
- h) On buildings with large expanses of open floor areas, such as commercial/industrial buildings and school auditoriums, a lifeline will be used to facilitate your search and means of egress.
- i) During a search, the crew should perform horizontal ventilation where required provided a charged hose line is in place to attack the fire and ventilation will not contribute to fire spread. Vent if ordered by Incident Commander.
- j) Temporarily prevent fire extension by closing doors and compartmentalizing the fire area.
- k) Check for interior and exterior fire extension while completing your search pattern. Report any extension to the Incident Commander or sector officer.

- l) Help locate the seat of the fire and report the location to the Incident commander or sector officer.
- m) Should the structure show signs of flashover or backdraft, no rescue effort shall be made unless cleared by the Incident commander.

10.4.2 Rescue

- a) Rescue recovery is to take place each time a victim is located, with continued search occurring once the victim is released to a search crew or brought to the structure exterior. Once a victim is discovered, interior fire fighters to assist in handing off of the person shall use the universal command **“victim”**. If the victim is obviously deceased, leave the victim in the location found and notify the Incident Commander. The Incident Commander will intern notify the proper authorities. Do not move an obviously deceased victim until instructed to do so by the proper authorities.
- b) If firefighter safety is compromised due to hardship or danger presented during recovery, efforts are to be transferred to additional personnel or terminated.
- c) Triage activities may have to be carried out during recovery operations if multiple victims are located together, or exit activities uncover additional victims.
- d) Under no circumstances is a victim to be left unattended once recovered, unless released to medical services.
- e) Medical triage or aid is not to be conducted by fire fighters, including those qualified as EMTs or paramedics, unless there is an absence of a medical services units on scene.

10.4.3 Safety

- a) Rescue safety is to consider the fire fighter first, since injury to the fire fighter will prevent future rescue activities from proceeding rapidly.
- b) Structural integrity and safety, either in total concept or by room or floor must be assured prior to initiating rescue activities.
- c) Laddering at a minimum of one location on each floor must be available either before rescue begins or as soon as practical thereafter.
- d) Ventilation should occur in conjunction with rescue activities provided victim recovery is not compromised.
- e) Search and rescue crews shall be made up of at least two fire fighters working on the “Buddy System.
- f) If in the process of a rescue operation, conditions are revealed that may directly harm the search and rescue crew, immediate withdrawal is to occur.

- g) Some indications that warrant immediate withdrawal include, but are not limited to the following:

- Gas odors
- Firearms or ammunition
- Open floors
- Unstable walls
- Arcing electrical wires
- Excessive creaking

10.5 Ventilation

10.5.1 General Procedures

- a) Ventilation is a critical support function designed to improve operations whenever it is performed early and effectively.
- b) Proper ventilation will remove the products of incomplete combustion and have the following characteristics:
- Prevents mushrooming
 - Allows forces to gain and maintain entry
 - Increases the safety of internal operations
 - Improves interior visibility
 - Controls heat and smoke damage
- c) Virtually all interior fires require ventilation to remove the products of combustion from the fire area. The Incident commander and sector officers must evaluate fire conditions on a scale from minor to serious and then select the appropriate type of ventilation.
- d) Fire conditions and ventilation are highly interrelated, and they must be balanced. In most cases, minor fires – light duty ventilation; serious fire – heavy duty ventilation will apply.
- e) The timing of ventilation is extremely important and must carefully be coordinated with rescue and fire attack activities. Ideally, horizontal ventilation should occur at, or just ahead of interior crews advancing hose lines. Vertical ventilation, also known as ventilation for life, can occur at any time.
- f) Ventilation timing needs to be coordinated between the outside vent crew and the interior sector officers.
- g) If the outside vent crew suspects a smoldering fire (conditions for a backdraft), vertical ventilation shall be performed before forcible entry is made by the search crew or engine company. This vertical ventilation shall not occur until a charged hose line is in place for initial fire suppression. Horizontal ventilation is not to occur when the involved structure shows signs of backdraft unless vertical ventilation cannot be performed.

10.5.2 Horizontal Ventilation

- a) Unless the fire is in the attic, roof ventilation is rarely necessary in one- and two-family residential dwellings. These structures can usually be ventilated through horizontal ventilation techniques more efficiently.
- b) Horizontal ventilation, one of the quickest ventilation procedures, involves removing or opening existing windows, doors and vents.
- c) When time and fire conditions permit, the windows should simply be opened. Double-hung windows should be opened about two-thirds down from the top and one-third up from the bottom. Under heavy fire and smoke conditions, the windows can simply be broken out and all the glass cleared from around the window frame.
- d) Shades, venetian blinds, screens, storm windows, curtains and other window coverings must be moved or knocked out for effective horizontal ventilation.
- e) Because of the hazards associated with performing horizontal ventilation, the outside vent crew, search crew and engine company must remain in radio contact with each other to ensure proper timing and placement is achieved.
- f) Hose lines and smoke ejectors (in a positive or negative pressure mode) can be used to forcibly assist in the removal of smoke and toxic gasses.

10.5.3 Vertical Ventilation

- a) Vertical ventilation generally involves opening existing vents or cutting roof openings as close as possible to a point over the fire as safety allows
- b) If a smoldering fire is suspected (conditions for a backdraft), vertical ventilation shall be performed prior to forcing entry into the building or performing any horizontal ventilation. Under these conditions, vertical ventilation shall not be performed unless a charged hoseline is in position to attack the resulting fire.
- c) In situations where vertical ventilation is warranted, initial ventilation through natural openings should be attempted to quickly remove the products of combustion. Natural openings include, but are not limited to: windows, skylights, roof hatches, ventilators, penthouses, vent pipes and shafts. Special care should be taken to fully clear or remove opening covers and clear out any obstructions below.
- d) If natural openings are deemed insufficient to adequately ventilate the building, there should be no hesitation to properly cut a vertical ventilation hole.
- e) A single large ventilation hole is more effective than several small ventilation openings. The minimum size for a vertical ventilation opening should be 4 feet by 4 feet square.

- f) All roof boards should be cut through before any of them are pulled up to reduce visibility problems associated with venting smoke and gases.
- g) When pulling up boards, truck crews should have their backs to the wind.
- h) When all boards have been ripped up, the ceiling below should be knocked down with a pike pole or similar tool. The ceiling hole should be made as large as the roof opening.
- i) Under no circumstances should roof operations be performed on truss-constructed buildings unless the fire fighters are suitably tethered and supported independently of the roof (such as to the ladder truck). Vertical ventilation at a truss-constructed building should be performed as a last resort because the subsequent introduction of fire, toxic gases, heat and smoke into the truss area creates an imminent collapse potential.
- j) When cutting vertical ventilation openings, especially on truss-constructed buildings, extreme care should be taken to avoid cutting structural members, roof joists and truss members.
- k) Once a vertical ventilation hole is made, a hand line or master stream should never be placed into the opening while interior operations are being performed.
- l) Once vertical ventilation is complete, all fire fighters should exit the roof area immediately.

10.5.4 Single/ Multiple Family Dwellings

- a) Most single/multiple family residential dwellings units should be ventilated using horizontal ventilation techniques.
- b) The outside vent crew should open windows on the fire floor first, closest to the fire area, and proceed outward and then upward.
- c) Under no circumstances should horizontal ventilation be performed below the fire area, or before a charged hose line is in place to start water.
- d) The search crew should open the other windows to complete the ventilation as they perform their search.
- e) If the fire is located in the attic area, the outside vent crew should attempt horizontal ventilation via attic windows or gable vents. If these openings are deemed inadequate, the outside vent crew must perform vertical ventilation while the engine company attacks the fire from the inside.

EXCEPTION: Attic fires in truss-constructed roofs will be fought from the exterior and collapse will be expected. Vertical ventilation, if necessary, will be performed by aerial device. (No Personnel on Roof)

- f) If a fire is located on the top floor of the building, and horizontal ventilation techniques are inadequate, vertical ventilation may be performed.

EXCEPTION: *If the building roof is of truss-construction, no vertical openings shall be made to emit fire, heat and smoke into the truss area. This action will precipitate collapse of the roof assembly.*

10.5.5 Fire Resistant Structures

- a) Ventilation procedures for fire-resistant structures takes into account low and medium rise fire resistant buildings. This may include schools, office buildings and some apartment buildings. Office buildings of wood construction should be ventilated as multiple family residential dwellings.
- b) Although fire-resistant buildings have construction features to resist fire spread, they tend to result in extremely high temperatures in the immediate area of a fire and very heavy accumulations of smoke and gases. Ventilation is therefore a paramount concern for the ladder company.
- c) The best way to ventilate an occupied fire-resistant structure is through horizontal ventilation.
- d) Unless the fire is on the top floor of the building, the outside vent crew must work inside the structure with the search crew, forcing entrance into the rooms, apartments or offices on each side of the hall or corridor. Once in these rooms, the truck company must chock open the doors and open as many windows as possible in each unit. By opening up units on both sides of the corridor, truck crews can create cross ventilation to clear the structure.
- e) Horizontal ventilation should start on the fire floor first, as close to the seat of the fire as possible, and continue outward then upward until the structure is completely ventilated.
- f) Smoke ejectors or blowers may be used to increase the speed in which cross ventilation is taking place. Place a smoke ejector on the leeward side of the building exhausting out of the window and a second smoke ejector on the windward side of the building blowing into the window. An alternate method would be to create a positive pressure in the hallway with a blower from the stairwell and sequentially open each compartment door and window systematically as the crew proceeds down the corridor.
- g) If the fire is on the top floor, the outside vent crew can perform vertical ventilation by first removing any natural roof openings and then making ventilation holes as needed.
- h) If fire has control of the corridor or hallway, the truck crew should advance along with the engine company on the attack lines and force entry into each unit off the hallway as they proceed.

- i) Unless the building is completely evacuated, the enclosed stairwells, other than those being used for fire fighting, must not be chocked open or used for ventilation. These stairwells might be used as escape routes for victims above the fire floor.

10.5.6 Shopping Centers, Row Stores, Warehouses

- a) Shopping centers, row stores, warehouses and other large one-story structures present a limited problem in terms of vertical fire spread but are extremely vulnerable to horizontal fire extension.
- b) The rescue company shall assume there is no firewall in these type of structures.
- c) The outside vent crew shall ventilate the roof of the building as its first priority.
- d) A natural roof feature should be used for the first roof opening provided it is close enough to the fire area; otherwise, the roof should be cut open as close to the fire area as safe operation will allow.
- e) After one opening has been made over the main body of fire, natural openings can be used to complete the ventilation.
- f) Fire fighters operating on the roof should be extremely conscious of roof conditions and immediately retreat from their position if a weakening roof is suspected. If the roof is spongy or sagging, the steel could be warped and weakened. Although they should open the roof as close to the fire area as possible, endangerment of the crew should be avoided.
- g) Once the roof of the fire building is properly opened, the roofs of attached buildings should be opened through natural roof features. If fire is found in attached exposures, the roof should be opened over the fire area and the Incident Commander notified.
- h) When necessary, or if fire conditions are less severe, a store can be ventilated at ground level through the front display windows and rear doors. Smoke ejectors or blowers can be used to blow air in the windward side and exhaust out the leeward side.
- i) In the case when the shopping center, row store or warehouse has a roof of truss-construction, ventilation will be limited to horizontal methods only. Roof operations will not take place, unless roof operations can be used via F-714 platform.

10.5.7 Basement Fires

- a) Any opening into the basement, such as a door, window, chute cover or sidewalk door can be used for venting.
- b) When possible, the outside vent crew should use ventilation openings opposite those being used for fire attack.

- c) A basement with only one entrance (which is being used for fire attack) and no windows presents a serious venting problem. If the fire is extinguished quickly, venting the first floor may suffice to clear the basement. If not, the first floor should be breached to the basement just inside the first floor windows. These windows should then be opened or knocked out to draw the smoke and gases up from the basement. Smoke ejectors may be placed behind the floor opening and blow the smoke out the opened window.
- d) Positive pressure may be used to clear a basement after the fire has been knocked down by placing a smoke ejector or blower in the basement doorway at the top of the steps. Do not set the blower back to seal off the doorway as in typical positive pressure ventilation. This will allow air to be forced down the steps at the bottom of the door opening and out of the stairwell at the top of the doorway. First floor ventilation should then be performed.
- e) Some vents at the roof level may be used to vent basement fires. Typical boiler and heater chimneys vent from the basement to the roof.

10.5.8 Attic Fires

- a) Most attic fires will be controlled by the outside vent crew cutting a vertical ventilation opening in the roof.
- b) If the roof is of truss-construction, this operation will not be performed unless the fire fighters are tethered from an aerial device.
- c) If a fire is in the attic space of a truss-constructed building, immediate collapse of the roof will be expected. Fire fighters should set up master stream appliances and prepare for defensive operations.
- d) If a trench cut is required to cut off fire extension in an attic fire, at least two crews will be assigned to roof operations to complete the task in a timely and proficient manner.

10.5.9 Safety

- a) All fire fighters involved in ventilation operations will wear full turnout gear including gloves and eye protection.
- b) If ventilation operations will expose the fire fighter to the products of combustion, or if the fire fighter is working above the fire, full SCBA will be worn.
- c) Extreme caution must be displayed when breaking glass as falling debris may cause severe lacerations to personnel on the ground as well as in the building.
- d) When the outside vent crew is breaking windows from the exterior of the building they must be in radio contact with interior crews to avoid injuries.
- e) Ventilation safety is paramount for fire fighter safety, since improper ventilation can aggravate the fire conditions.

- f) During ventilation operations, all fire personnel must be aware of falling debris and venting gases.
- g) “Read the Roof” before the fire – some types are dangerous.
- h) Probe ahead with a tool before stepping on to the roof.
- i) Establish the initial roof position in the safest area and use this area for a possible retreat or refuge.
- j) Always work in pairs during roof operations but keep the number of roof fire fighters to the absolute effective minimum.
- k) When working on the roof, always maintain multiple escape routes.
- l) Constantly monitor roof conditions and check for weakness before walking onto an area.
- m) When walking across a roof, walk only on support members.
- n) Utilize small inspection holes before making large cuts.
- o) Leave the roof as soon as the ventilation job is done.
- p) Work off of roof ladders
- q) Use aerial platform.

10.6 Forcible Entry

10.6.1 General Procedures

- a) Forcible entry is the secondary function of the search crew, but may have to be performed first if forced entry needs to be performed for the engine company or to facilitate search and rescue operations.
- b) The search crew should carry all the required tools necessary once they leave the apparatus. Special attention should be paid to carrying the K-Tool, flat head ax and Halligan tool for all commercial/industrial buildings and the rabbit tool for all multiple family residential dwellings.
- c) Remember the first commandment of forcible entry: “**Try before you pry**”.
- d) When arriving companies find or suspect a smoldering fire (conditions for a backdraft), they must not enter the building until it has been properly ventilated.
- e) If forcible entry is not urgent, look for the least damaging method to gain entry.
- f) When at all possible, the “through the lock” method shall be used when cylinder locks are present.

10.6.2 Safety

- a) When performing forcible entry, full turnout gear shall be worn including gloves and eye protection.
- b) If the forcible entry will expose the fire fighter to the products of combustion, full SCBA shall be worn.
- c) Forcible entry shall not be performed on a structure exhibiting the conditions of a smoldering fire (backdraft) unless the building has been properly ventilated.

10.7 Laddering

10.7.1 Fire Structure and Roof

- a) The fire structure is to be laddered at a minimum of two locations per floor, preferably at opposite ends of the building. This laddering is not to be placed in such fashion as to hamper or prevent the use of exterior doorways.
- b) Should multiple roof landings exist, each landing is to be laddered as best practical to allow for access to all roofs. Caution must be exercised when laddering is necessary over or adjacent to the involved portion of the structure.
- c) When laddering a building to gain access to the roof, the top two to four rungs must be placed above the roof edge to facilitate climbing onto and off of the roof.
- d) The fire fighter(s) assigned roof duties must carry a roof rope with them for hoisting tools, and as a last resort, emergency escape.
- e) Before dismounting a roof ladder, feel with back of hand, and sound the roof surface with a tool to determine soundness of the roof structure.
- f) When the ladder will be used to assist in horizontal ventilation, it shall be placed to the upwind side of the window with the top rung at the same height as the window header.
- g) Roof ladders will be used on all sloped roofs, and flat roofs of unknown integrity.

10.7.2 Means of Egress / Ingress – Rescue

- a) Ground ladders can be used in several ways for a means of egress/ingress and rescue. They may be placed at windows, fire escapes and balconies so victims can climb down or be carried down. They can also be placed between buildings to access adjacent roofs and bridge between windows.
- b) If ground ladders will reach floors being searched for victims, they should be raised as exits for fire fighters on the Search Crew. Laddering at a minimum of one location on each floor must be available either before rescue begins or as soon as practical thereafter.

- c) No matter how the ground ladder is to be used for rescue, the first ladder should be raised to the victim in the most danger.
- d) As a ground ladder is raised for rescue, it must be kept out of reach of people who are to be removed. This is especially necessary when the ladder is being raised past some victims to reach others on the floors above.
- e) When laddering a building to gain access to a window as a means of egress/ingress, the tip or top rung of the ladder should be placed at the bottom or just below the window sill. This will facilitate climbing onto the ladder from the window ledge or into the window from the ladder.
- f) When laddering a building to gain access to a balcony or fire escape as a means of egress/ingress, the ladder should be placed so the tip or top rung is placed two to four rungs above the top rail.

10.7.3 Safety

- a) Crews raising ground ladders should be careful of overhead obstructions, especially electric wires.
- b) Once the ladder is raised, it should be tied to the building or braced by one fire fighter as others climb it.
- c) A ground ladder should not be overloaded. At normal climbing angles fire fighters should be spaced at least 10 feet apart. When carrying hose, fire fighters should be at least 20 feet apart.
- d) Once the ladder has been used to enter a building it should be left in place as an exit.
- e) Laddering safety must be practiced at all times. This includes proper angling, leg locks, hose-lays, tie-ins and ladder loading. Ladders should always be used in accordance with the manufacturers recommendations.
- f) During poor lighting conditions every effort must be made to light ladders, either with the use of apparatus lights, ground lights or hand lights.

10.8 Salvage

10.8.1 General Procedures

- a) The main objective of salvage is to protect the building and its contents from water damage.
- b) Salvage operations should be started as soon as fire attack begins, or as soon thereafter as possible. The Incident Commander should remain cognizant of this job function and assign it to the rescue company after they have completed their first due tasks, or to a secondary responding unit.

- c) There are two types of salvage operations – those that protect the contents of a building, and those that protect the building itself from structural damage due to the weight of the water.
- d) Building contents should be protected, mainly by covering them to keep them from being damaged by water and debris. The flow of excess water should be directed away from stock, furnishings and equipment.
- e) The building should be protected from structural damage by removing water through chutes, drains, toilets, sewer pipes or natural building openings. In extreme cases where a large quantity of water is accumulating, openings in walls may have to be made to save the building from structural collapse.
- f) If while performing salvage operations fire extension is observed, the salvage crew officer shall report this condition to the Incident Commander or Sector Officer.

10.8.2 Safety

- a) The safety of fire fighters engaged in salvage and other operations must be taken into account at all times.
- b) Those involved in salvage work must be cognizant of the fire above and how it might affect their work. They must also be aware of how their work could endanger other fire fighters in and around the building.
- c) Fire fighters performing salvage operations shall wear full turnout gear including SCBA and *work in groups of not less than two*.
- d) Fire fighters performing salvage operations shall be cognizant of electrical hazards associated with pooling water. They shall not enter any area if live electrical appliances or equipment is suspected.

10.9 Overhaul

10.9.1 Manpower Requirements

- a) Fresh fire fighters shall be used for overhaul activities to allow for visual observations of areas by new personnel.
- b) Overhaul crews shall be a minimum of two fire fighters and one officer.

10.9.2 General Procedures

- a) Overhaul operations should start as soon as the fire is under control. Its goal is to ensure all hidden fires are exposed and extinguished.
- b) Any area that could have potentially been involved in fire should be examined.
- c) All baseboards, moldings and pipe recesses in the fire area should be removed and the hidden areas examined.
- d) Examination and investigation of the exposure areas must be performed to ensure that no ignition has occurred. This includes, but is not limited to:
 - Adjacent rooms and enclosed areas
 - Walls, floors and ceilings
 - Cockloft and attics
 - Basements and crawl spaces
- e) Fire discovered in any area during overhaul should be reported to the Incident Commander at once.
- f) Once all areas have been checked and it has been determined no fire extension exists, all interior furnishings should be checked to insure proper extinguishment.
- g) Upon completion of all overhaul operations, the building should be secured as best as possible depending upon the severity of fire damage to the structure.

10.9.3 Safety

- a) Fire fighters performing overhaul operations shall wear full turnout gear including SCBA and **work in groups of two or more.**
- b) The safety of fire fighters engaged in overhaul and other operations must be taken into account at all times.
- c) Fire fighters engaged in overhaul operations should be aware of the possibility of “flashback” from pockets of fire and combustion gases.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-11
TITLE:	Rest and Recovery	

PURPOSE: The purpose of this Standard Operating Guideline is to define the methods for proper rest and recovery activities on the fireground, and to establish guidelines, which encourage each member performing emergency operations to be prepared for, monitor, and treat the fatigue from strenuous physical exertion.

11.1 General

- a) Rest and recovery activities are necessary to provide for continued physical and mental capacities of the fire fighter.
- b) This will allow the fire fighter to work safely, not only for himself, but for the other fire fighters as well.
- c) It is the responsibility of the EMTs and/or the Safety Officer(s) at the scene to make the final determination as to a fire fighter's mental and physical preparedness for continued fire fighting activities.
- d) The Safety Officer, or an EMT, shall oversee all operations at the rest and recovery areas. In the absence of a Safety Officer, the Incident Commander shall appoint a qualified fire fighter to oversee the operations.

11.2 Medical

- a) Should a fire fighter sustain an injury that requires medical care, the Incident Commander and/ or Fire Chief must be notified as soon as possible. The fire fighter will be placed "on leave" until proper clearance to return to active duty is obtained from a qualified physician. A doctor's note explaining the fire fighters ability to resume suppression activities shall be provided to the Chief prior to activation of service.
- b) Medical rest and recovery is not limited to physical injury to the fire fighter, but also addresses mental and psychological conditions as well.
- c) The Safety Officer shall have the final determination with respect to on scene removal of a fire fighter for mental incapacity.

11.3 Resource Sector

- a) A resource sector, at or near the staging area for tankers, is to be established and used by the Incident Commander to draw manpower and assign tasks to fire fighters that are not assigned first due activities on the initial response.
- b) If an engine or truck company has not been assigned an initial task during the onset of a working fire, all fire fighters on these units shall report to the resource sector in full turnout gear, including SCBA, spare cylinders and hand tools.
- c) The officer from the first unit reporting to the resource sector shall be responsible for locating and establishing this manpower staging area.
- d) The resource sector should be identified with an orange traffic cone or flag when available.
- e) The resource sector should be located in the vicinity of the command post, and have enough room to accumulate adequate equipment and crews to handle the incident. Extra salvage covers should be spread to deposit stage equipment upon.
- f) All companies shall remain together in the resource sector to facilitate assignments as operating units. It is the responsibility of each company officer to ensure their crew stays together.
- g) Fire fighters in the resource sector shall remain off the fireground frequency and be prepared to perform various fire fighting tasks when requested.

11.4 Rehabilitation

11.4.1 General Policy

- a) It is the policy of the Middle Township Volunteer Fire Company that no member will be required to continue emergency operations beyond safe levels of physical and mental endurance. This policy is in no way intended to diminish initial fire attack aggressiveness. The intent is to establish a reasonable procedure to lessen the potential injury resulting from extended field operations under adverse conditions.
- b) It is the responsibility of the Incident Commander to make an early determination of situations requiring the implementation of a rehab sector in order to protect the health and safety of operating personnel. The Incident Commander should consider the establishment of a rehab sector at the following emergencies:
 - Where a moderate to long working time is envisioned
 - Where personnel are operating under adverse temperature or weather conditions
 - Where a moderate to large manpower force is indicated
 - Any other incident where the Incident Commander deems it necessary
- c) All fire fighters, including officers, shall report to the rehab sector when requested by the Safety Officer or a company officer.

11.4.2 Elements of the Rehab Sector

- a) The rehab sector shall consist of four main elements: (1) a controlled entrance/exit. (2) a rest and refreshment area, (3) a fire fighter treatment area, and (4) an ambulance staging area.
- b) The controlled entrance/exit area shall contain the record of personnel reporting to/from the rehab and medical evaluation area.
- c) The rest and refreshment area shall provide rest, food, water, and adequate shelter for extreme weather. Resting fire fighters should be kept separate from civilians and the media.
- d) If necessary, the Rehab Sector should be divided to provide a treatment area adjacent to the rest and refreshment area. The treatment area will be utilized for individuals exhibiting signs of stress or extreme fatigue, or those with obvious or suspected injuries requiring medical attention.
- e) Ambulance staging shall provide immediate transport of fire fighters requiring treatment at medical facilities, or civilian victims with fire related injuries.

11.4.3 Rehab Sector Officer Duties

- a) A Rehab Sector shall be set up and monitored by the Safety Officer when directed by the Incident Commander. In the absence of a department Safety Officer, the Incident Commander shall designate an officer or other personnel to direct the Rehab Sector. They shall assume the full duties of the Safety Officer. (EMS could be assigned the primary responsibility for Rehab Sector.)
- b) Unless already designated by the Incident Commander, the Safety Officer will survey the area and select a suitable site. The location shall then be announced over the fire ground frequency. The site should be located in an area outside of the fire ground perimeter or hazard zone, allowing protective equipment and clothing to be safely removed. If possible, the site chosen shall allow adequate access for ambulances, utility vehicles, school busses, etc. The site should be selected for protection from extreme weather. Extremely hot weather requires shaded areas and extremely cold weather requires warm shelter.
- c) An ambulance assigned to the incident shall report to the Safety Officer. Ambulance personnel shall assist the Safety Officer with the medical evaluations, monitoring of vital signs, and necessary treatment.
- d) The Safety Officer shall ensure that all members reporting to the Rehab Sector will be checked in at the designated entrance; where they will be assessed by a member of the rehab team, logged in and assigned to either rest and refreshment or the treatment area. The log will indicate the arrival time of each company/team and the names of individual crew members, their medical evaluation status, the time the crew is ready for reassignment.

- e) The fire fighter's medical condition will be monitored upon entering the rehab sector. After an established period of time, the Safety Officer or his delegate will determine if the fire fighter is physically and mentally fit to return to the fire scene. If they are found to be unfit, a second period of rest will be required with their medical conditions monitored again.
- f) The Safety Officer is responsible for placing crews on the list for reassignment to the Resource Sector as soon as they are able to actively participate in future operations.
- g) The Safety Officer shall update the Incident Commander throughout the operation with pertinent information including the identity of companies in Rehab and the status of injured personnel.

11.4.4 Personnel Reporting to the Rehab Sector

- a) It is the responsibility of every company officer to continually monitor the condition of all crew members for signs of stress or fatigue. When these conditions are noted, the officer shall request reassignment of the company to the Rehab Sector. When assigned, the company officer and entire crew will report to the Safety Officer as a team.
- b) It is the responsibility of the company officer to keep the crew together in the rest and refreshment area.
- c) While assigned to the rest and refreshment area, each crew member shall hydrate and nourish in preparation for reassignment.

11.5 Personnel Rehabilitation

- a) Each member shall be responsible for monitoring their physical condition, maintaining operational readiness and requesting assignment to the Rehab Sector as necessary. Additionally, company officers shall continually observe members of their crew for signs of fatigue and request assignment to rehab as necessary.
- b) In order to maintain operational readiness in cases of sustained incidents and strenuous activity, fire fighters and support personnel must be adequately hydrated, rested and nourished.
- c) The fire company is responsible for providing periods of rest/recovery, a system of monitoring and rehabilitating fire fighters, and a means to nourish fire fighters during campaign incidents.
- d) Effective recognition and rehabilitation of engaged fire fighters before fatigue occurs is the key to maintaining a safe, ready work force.

11.5.1 Preparation for Physical Exertion

- a) Fire fighters shall prepare for emergency operations by maintaining an adequate level of physical strength/stamina, hydration and nourishment.
- b) Fire fighters are required to maintain their physical strength and stamina. Proper conditioning of the muscle and cardiovascular system will provide the required level of ability.
- c) Water is the key element to hydrate fire fighters. Other drinks slow absorption into the system and therefore are less effective in maintaining hydration. Drinks such as coffee, soda and hot chocolate are discouraged for fireground hydration. During sustained incidents, a replenishing fluid such as Gatorade or Excell may assist with electrolyte replacement. If these fluids are used, a 50/50 water-diluted mixture speeds absorption into the body. Fire fighters shall keep in a hydrated state so that their system is never caught dehydrated.
- d) Being ready for sustained physical exertion is the goal of proper nourishment. Using the results of your medical examination, each member should evaluate their diet and follow the recommendations of their physician.

11.5.2 Monitoring Personal Physical Condition

- a) Fire fighters engaged in operations which require strenuous physical exertion should monitor their fatigue level. Be aware that one symptom of fatigue is a lowering of personal perception. Not being aware of your own condition adds emphasis to the duty of the Safety Officer and each crew member to monitor each other for signs of fatigue. Also valuable is a knowledge of your personal stamina. Working up to your normal safe limit should trigger a closer watch of your personal condition.

11.5.3 Treating Fatigue

- a) The treatment for fatigue is rest until recovery. Personnel requiring extended rest should report to the Rehab Sector. To effectively treat fatigue, the Rehab Sector should provide the necessary environment which enables fire fighters to remove their helmet, hood, gloves and turnout coat.
- b) In all cases, the objective evaluation of a fire fighter's fatigue level shall be the guiding criteria for assignment to the Rehab Sector. Rest should be not less than ten minutes and may exceed an hour as determined by the Safety Officer. In extreme cases, fire fighters may be sent to the treatment area of the Rehab Sector or even transported to a medical facility.

11.5.4 Hydration

- a) Working crew members are recommended to consume a minimum of one liter of water per hour.

- b) Members assigned to the Rehab Sector shall be responsible for replacing fluids lost during the preceding physical exertion. Fire fighters are required to replace body fluids following a guideline of eight ounces of water for each bottle of air consumed.
- c) In cases when SCBA is not being utilized, work equivalent to one air bottle consumed would require eight ounces of water to adequately hydrate.

11.5.5 Nourishment

- a) The fire company shall provide nourishment when extended operations cross over normal meal times or in cases where companies are engaged for four or more hours.
- b) Nourishment shall be geared towards energy replacing foods such as apples, oranges, bananas, wheat-bread sandwiches, etc. Fast foods such as McDonalds, Wendy's and Burger King should be avoided due to high fat and salt content.
- c) Because of the various types, tastes, and specific desires for nourishment, the Incident Commander or Safety Officer shall send for food based on the weather, time, type and projected length of the incident.

11.6 Release

- a) The release of fire fighters from the rehab sector will be authorized by the medical personnel; coordinated with the approval of the Incident Commander or Safety Officer.
- b) A fire fighter does not have a say in his release from the rehab sector. Many times exhaustion and fatigue can impair your judgment, which could result in premature release. If a fire fighter leaves the rehab sector, without being officially released, the Incident Commander or Safety Officer shall be notified.
- c) Upon release from the rehab sector, the fire fighter shall report to the resource sector for reassignment of fire fighting tasks.
- d) Limited work restrictions may be placed on the fire fighter to achieve continued performance in a safe manner without further jeopardizing his well-being.

11.7 Recall

- a) Fire fighters may be recalled into the rehab sector at any time medical personnel or the Safety Officer deems it necessary. Factors that may influence this decision include: decrease performance, injury, emotional distress, or any other factor which may indicate less than adequate performance for the duties at hand.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY
TITLE:	Investigation, Alarms and Reports	O-12

PURPOSE: The purpose of this Standard Operating Guideline is to outline the criteria for fire investigations (cause and origin), alarm activation investigation, alarm requirements and reports.

12.1 Investigations

- a. Fire investigations shall be conducted on all incidents as to cause and origin. The Incident Commander on minor incidents as to cause and origin may conduct fire investigations, fill out required reports and forwarded to The Fire Bureau.
- b. In accordance with the New Jersey State Uniform Fire Safety Act, the Fire Official shall investigate, or cause to be investigated, every reported fire or explosion occurring within the jurisdiction that involves the loss of life or serious injury or causes destruction or damage to property.
- c. Such investigation shall be initiated immediately upon the occurrence of such fire or explosion; and if appears that such an occurrence is of a suspicious nature, the Fire Official shall take charge immediately of the physical evidence relating to the cause or origin of such fire or explosion, take means to prevent access by any person or persons to such building, structure or premises until such persons designated by law to pursue investigations into such matters become involved and shall further cooperate with such authorities in the collection of evidence and prosecution of the case.
- d. Any incident found to be of unknown or suspicious origin shall be referred to the Fire Bureau. The Fire Bureau shall take charge of the scene and shall contact the Middle Township Police Department. If deemed necessary, the County Fire Marshal shall be notified.
- e. The Chief or other superior fire officer shall have sole authority within fire lines established by the Chief or other superior fire officer with respect to all firefighting operations relating to the protection of lives and property endangered by such fire. This authority shall terminate at such time as he shall declare the fire out. At that time he will stand by to render assistance to Fire Bureau, Township Police, Fire Marshal or any other authority having jurisdiction requiring it.
- f. All fire company personnel must assist in observations and reporting of any information they feel helpful in this regard. Complete cooperation shall be provided.

12.2 Alarms

- a. Upon the occurrence of a fire alarm or false alarm; a response of the Fire Bureau may occur to all occupancies, other than owner-occupied detached one and two-family dwellings; unless requested to respond to an owner-occupied detached one and two-family dwelling by the Fire Chief or their duly authorized representative.
- b. The Fire Company shall report all false alarms to the Fire Bureau which shall investigate and determine the cause of the false alarm. The Fire Bureau shall maintain a list of all false alarms. Said list shall identify the locations of the false alarms and the number of false alarms at the location during the calendar year.
- c. As used in this section, “false alarm” shall mean the transmission either directly or indirectly of any fire alarm, smoke alarm, fire sprinkler water flow alarm, or carbon monoxide alarm that was not caused by a fire, a smoke condition or such other condition that is beyond the control of the owner, that causes a response of the Fire Company

12.3 Documentation

- a. Documentation at a fire scene or company run (alarm) shall include the full completion of the run and incident report by the Officer in Charge.
- b. Documentation at a fire scene may include video, photography, audio recording, sketching and note taking. The Fire Bureau will be responsible for these tasks.
- c. It is also conceivable that sampling of material or debris will be required, therefore care should be taken during the overhaul of the scene. The Officer in Charge shall be aware that as overhaul operations begin the fire has been declared out. Evidence gathering will be undertaken by the Fire Bureau, or those designated by law to do so.

12.4 Forms

- a. All field reports and incident reports of an incident will be taken by the Incident Commander and a copy given to the Fire Bureau for filing with the New Jersey Division of Fire Safety.
- b. All field reports are to be completed in their entirety with the necessary information being obtained while on the fire scene from all parties involved.
- c. The Fire Bureau shall be the central point for the collection and distribution of all incident, casualty and investigation reports generated.

12.5 Scene Security

- a. Scene security is the responsibility of the Incident Commander who shall keep all unauthorized persons from the scene.
- b. The scene shall be turned over to the Fire Bureau when the fire is declared out so that they may comply with the New Jersey Fire Safety Act.
- c. When the fire is declared out, the fire company may be called upon for support activities which they shall comply with.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-13
TITLE:	Medical and Emergency Care	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the medical and emergency care provided by medical services personnel, or in their absence, qualified fire fighters. Medical care takes precedence over fire fighting activities.

13.1 Response Requirements

- a) An emergency medical unit shall be dispatched, or requested, for all responses to structural fire, extrications and vehicle accidents (vehicles, boat or aircraft).
- b) The Safety Officer (or his designee) shall be assigned to the medical unit to assist in providing any necessary personal data on fire fighters or intimate knowledge as to victim injury or potential condition as observed during rescue efforts.
- c) For large-scale incidents, a member from the medical service unit shall report to the command post and act as the Medical Sector Officer for the Incident Commander.
- d) The Safety Officer shall direct the medical service unit when setting up the rehab sector. Medical service personnel shall be used to monitor fire fighter fatigue and condition.

13.2 Follow-up

- a) All injured fire fighters are required to undergo a follow-up examination prior to return to active duty, and are to submit an appropriate physician's release form.
- b) The Safety Officer and Fire Chief will review and make the final determination as to the extent of active duty, or limitations to active duty, of any returning fire fighter.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-14
TITLE:	Returning to the Station	

PURPOSE: The purpose of this Standard Operating Guideline is to define the return protocol and subsequent in-house activities for apparatus going out of service after an alarm, fire call or drill

14.1 General Procedures

- a) All apparatus shall return to the stations with warning lights off except for the rear warning lights and associated flashers.
- b) All apparatus shall proceed in accordance with New Jersey Title 39 Motor Vehicle Laws at all times.
- c) All fire fighters shall be in full turnout gear, seated and secured while the apparatus is in motion.
- d) All members shall return to their respective stations unless excused by the Station Officer or Incident Commander.

14.2 In Quarters

- a) Once in quarters, all apparatus shall be properly checked and the driver's logs completed.
- b) All equipment shall be cleaned, checked and secured in its proper place.
- c) All SCBA shall be properly checked after each run, regardless if they were donned and operated or not.
- d) If the apparatus is dirty, it shall be washed with soap and water by all members present.
- e) All apparatus will be immediately fueled if below $\frac{3}{4}$ of a tank.
- f) All necessary steps should be taken to ensure that the apparatus is ready for service before the members are released and roll call is taken.

- g) All injuries shall be reported to the Fire Chief, Officer in Charge and Safety Officer. The extent of these injuries and the person(s) injured shall be included in the fire report. In addition, an accident/ injury report must be filed by the Safety Officer within 24 hours of the accident/injury.
- h) The ranking line officer is to initiate roll call. Once roll call is completed, in full, the officer shall sign, and place the roll call sheet in the radio room.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-15
TITLE:	Radio and Communications	

PURPOSE: The purpose of this Standard Operating Guideline is to outline basic radio procedures en route and on the fire ground. Fire ground radio identification, as well as fire ground radio procedures, will be standardized. Care and maintenance will be outlined to ensure optimum performance.

15.1 Radio Etiquette

- a) The use of suggestive or foul language shall not occur under any circumstances.
- b) Transmission over other parties is not to occur and adequate time is to be allowed for a response prior to any re-broadcast.
- c) The use of the radio for non-essential side talk is prohibited.
- d) Transmissions directly related to “emergency building evacuation” or any other critical safety related order takes precedence over all other transmissions.

15.2 Responding to Alarms

- a) First unit in service will call in on Fire Dispatch and change to Fire 3, or designated fire ground channel. All other units will report into service on the fire ground channel to first responding unit.
- b) Fire Department units approaching the same intersections will give their location prior to entering the intersection.
- c) The first fire department unit on the scene shall give a brief initial report appraising the size and type of building and conditions found.
- d) In the event of heavy radio transmissions on Fire 1, Fire 2 should be used. In addition, Command may advise responding units to utilize Fire 2 and Fire 3 for various reasons.

15.3 Fire Ground Radio Operations

- a) The fire ground channel will be used by all personnel operating on the fire ground unless specifically instructed otherwise by the Incident Commander or Radio Communications Officer.
- b) Fire fighters who are not assigned a radio call number will use their function or riding position designation as identification on the fire ground.

EXAMPLE: "F713 nozzle to F713 Driver."

- c) All radio transmissions will be brief and to the point.
- d) In the event an urgent message must be given, the word "URGENT" will be used during the initial transmission. All units operating on this channel will cease transmissions until the message has been completed and acknowledged.

EXAMPLE: "Roof to Chief 710, URGENT."

- e) In the event a member becomes severely endangered, they will transmit a "MAYDAY" message giving their location and situation. All units operating on the fire ground will cease radio transmissions and units will be assigned to a rescue mission.
- f) Exercise caution to avoid keying the radio in close proximity to another radio. Interference will occur.

15.4 Fire Ground Radios

- a) Members should always try to wear radios in radio pocket on turnout coats for added protection to the units.
- b) Drivers will be responsible for ensuring that each fire ground radio is properly secured in their respective location after each use. Any deficiencies found with the units shall be noted on the driver's sheet.

15.5 Portable Radio Maintenance

- a) Upon returning from an alarm, each radio on the unit will be checked to ensure that it has a charged battery, and is on the correct channel.
- b) Portable radios will be charged when the transmit light blinks or fails to illuminate.

- c) If the radio is weak, but not yet completely drained, it can be left on with the squelch in the noise position until the battery is discharged.
- d) If a battery is replaced, the date shall be written on the battery prior to its installation.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-16
TITLE:	Emergency Building Evacuation	

PURPOSE: The purpose of this Standard Operating Guideline is to identify the proper methods to use when evacuating a building or unsafe area under emergency conditions.

16.1 General

- a) The emergency evacuation of a structure will take place when the Incident Commander or Safety Officer suspects ongoing interior operations may cause injury or death to fire fighters.
- b) Once the emergency building evacuation signal is delivered, all fire fighters will retreat from the structure or unsafe area immediately, and report to their Officer for a head count and roll call before resuming fire fighting operations.
- c) Once the roll call is taken, all Company Officers will report “all clear” or “fire fighters missing” to the Incident Commander. Any report of fire fighters missing should include their last known location and assignment.
- d) The emergency building evacuation will encompass a two-part signaling procedure. Identification of only one signal by a fire fighter is sufficient to immediately evacuate the building or hazardous area. Two signals will be used to take advantage of the safety in repetition.
- e) Using the **“Mayday”** code on the radio, the Incident Commander or Safety Officer will inform all personnel to evacuate the building or area.
- f) The apparatus drivers will then blow their air horns in the following sequence to alert any fire fighters that did not hear the radio transmission of the impending danger:
 - 1 Blow the air horns on all apparatus for one sustained blast lasting approximately 60 seconds.
 - 2 Silence for approximately 5 seconds.
 - 3 Blow the air horns on all apparatus intermittently for approximately 60 seconds.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-17
TITLE:	Occupational Safety and Health Program	

PURPOSE: The purpose of this Standard Operating Guideline is to outline a health and safety program to be followed by all members and define the responsibilities of the Fire Department Safety officer.

17.1 NFPA 1500 2-2.1 Policy

- a) The following Standard Operating Guidelines contain excerpts from NFPA 1500.
- b) It is the policy of the Volunteer Fire Company #1 of Middle Township to provide and to operate with the highest possible levels of safety and health for all members. The prevention and reduction of accidents, injuries and occupational illnesses are the goals of the Fire Company, and shall be of primary consideration at all times. This concern for safety and health applies to all fire fighters in the Fire Company, and to any other persons who may be involved in the Fire Company.
- c) The Fire Company shall adopt an official written departmental occupational safety and health policy that identifies specific goals and objectives for the prevention and elimination of accidents and occupational injuries, illnesses and fatalities. It shall be the policy of the Fire Company to seek and to provide an occupational health and safety program for its members that comply with this standard.
- d) The Fire Company shall be responsible for compliance with all applicable laws and legal requirements with respect to member safety and health that they are aware of.
- e) The Fire Company shall establish and enforce rules, regulations and standard operating procedures to reach certain objectives of NFPA 1500 standard.
- f) Each individual member of the Fire Company shall cooperate, participate and comply with the provisions of the Occupational Safety and Health Program.

17.2 Personal Protective Equipment

- a) The Fire Company shall provide each fire fighter with appropriate protective clothing, and protective equipment to provide protection from the hazards of the work environment to which the fire fighter is or may be exposed. Such protective clothing and protective equipment shall be suitable for the tasks that the fire fighter is expected to perform in that environment.
- b) Protective clothing and protective equipment shall be used whenever the fire fighter is exposed or potentially exposed to the hazards for which it is provided.
- c) Protective clothing and protective equipment shall be used and maintained in accordance with manufacturers instructions. A maintenance and inspection program shall be established for protective clothing and protective equipment. Specific responsibilities shall be assigned for inspection and maintenance.
- d) All members who may be engaged in or exposed to the hazards of structural fire fighting shall be provided with both protective coats and protective trousers that meet the requirements of NFPA 1971. An overlap of not less than 8-inches (203mm) of protective coat and protective trousers shall be required.
- e) All fire fighters who may be engaged in/or exposed to the hazards of structural fire fighting shall be provided with helmets that meet the requirements of NFPA 1972.
- f) All fire fighters who may be engaged in/or exposed to the hazards of structural fire fighting shall be provided with gloves that meet the requirements of NFPA 1973.
- g) All fire fighters who may be engaged in/or exposed to the hazards of structural fire fighting shall be provided with footwear that meet the requirements of NFPA 1974.
- h) All fire fighters who may be engaged in/or exposed to the hazards of structural fire fighting shall be provided with approved protective hoods, or a combination of ear flaps and collar that provide protection for the ears and neck, and interface with the SCBA face piece, protective coat and helmet.
- i) The Fire Company shall require all members to wear all protective clothing specified in this section at all times when involved in/or exposed to the hazards of fire fighting.

17.3 Self Contained Breathing Apparatus

- a) Self Contained Breathing Apparatus (SCBA) shall be provided for and shall be used only by qualified SCBA personnel working in areas where:
 - 1 The atmosphere is hazardous
 - 2 The atmosphere is suspected of being hazardous
 - 3 The atmosphere may rapidly become hazardous
- b) In addition to the above, all personnel working below ground level or inside confined spaces shall be provided with SCBA and shall use the SCBA unless the safety of the atmosphere can be established by testing and continuous monitoring.
- c) SCBA of the open circuit design shall be positive pressure, and shall meet the requirements of NFPA 1981. Closed circuit type SCBA shall be NIOSH/MSHA approved with a minimum service duration of 30 minutes, and shall operate in the positive pressure mode only.
- d) SCBA cylinders shall be emptied per the instructions of the manufacturer if not utilized with a three-month period.
- e) SCBA shall be hydrostatically tested within the periods specified by the manufacturer and the applicable governmental agencies.
- f) All SCBA shall be inspected, used, and maintained as specified in ANSI Z88.5 or recommended by the manufacturer.
- g) Fire fighters using SCBA shall operate in teams of two or more and be in communication with each other through visual, audible, physical, safety guide rope, electronic, or other means to coordinate their activities, and shall be in close proximity to each other to provide assistance in case of an emergency.
- h) When fire fighters are involved in operations that require the use of SCBA or other respiratory protective equipment, at least one fire fighter shall be assigned to remain outside the area where respiratory protection is required. This fire fighter shall be responsible for maintaining a constant awareness of the number and identity of the personnel using SCBA, their location, function, and time of entry. Fire fighters with SCBA shall be available for rescue.
- i) Beards or facial hair that contact or interfere with the face piece seal shall be prohibited for fire fighters required to use SCBA. If eyeglasses are worn, the fire fighters shall use frames that do not pass through the seal area of the face piece.

17.4 Personal Alert Safety System (PASS)

- a) Each fire fighter using SCBA and involved in rescue, fire fighting or other hazardous duties shall be provided with and shall use a PASS device. Each PASS device shall be tested at least weekly, and prior to each use, and shall be maintained in accordance with the manufacturer's instructions.

- b) All PASS devices used by the Fire Department shall meet the requirements of NFPA 1982 standard on Personal Alert Safety Systems for fire fighters.

17.5 Personal Accountability and Identification

- a) To track fire fighter location and responsibility on the fire ground, Volunteer Fire Company #1 of Middle Township will utilize a personal accountability and identification system (PAI).
- b) The PAI system will utilize a plastic tag attached to the helmet. The system will be completed with several tag boards used to group the name tags when removed from the helmet.
- c) When a fire fighter boards the apparatus for an alarm, he shall remove the name tag from his helmet and place it on a hook located on the apparatus he responded on. The driver of the apparatus will collect the tags and keep them with him at the pump panel, or turn them over to the officer in charge if so requested.
- d) Once the fire fighter's assignment has been completed, their name tags shall be retrieved from the driver or line officer of the truck they responded on.

17.6 Emergency Vehicle Response

- a) Drivers of fire Department vehicles shall have a valid New Jersey driver's license. The vehicle shall be operated in compliance with all traffic laws.
- b) Drivers of Fire Department vehicles shall be directly responsible for safe and prudent operation under all conditions. When the driver is under the direct supervision of a Fire Department line officer, that officer shall also assume the responsibility for the actions of the driver.
- c) Drivers shall not move Fire Department vehicles until all persons on the vehicle are seated and secured with seat belts or safety harnesses in approved positions.
- d) All persons riding on the apparatus shall be seated and secured by seat belts or safety harnesses any time the vehicle is in motion. Riding on the tailboard (backstep), or other exposed position, shall be specifically prohibited. Standing while riding the apparatus shall be specifically prohibited.
- e) Any accident involving our vehicles **directly** or **in-directly** during an emergency or non-emergency response, no matter how minor, must be reported to the Fire Chief, Assistant Chief or Officer in Charge immediately. The driver of the vehicle involved in an accident must undergo a breathalyzer and drug test within four hours of the accident. The test is to be given by the professional medical group under contract to the Fire District. The Fire Districts insurance company must be notified and a complete accident report must be filled out.

17.7 Fire Department Safety Officer

- a) The Fire Chief shall appoint a designated Fire Company Safety Officer. This officer shall comply with the requirements of NFPA 1501 Standard for Fire Company Safety Officer(s).
- b) In the absence of the Safety Officer, alternate personnel shall be assigned to perform the duties and responsibilities of this position that require immediate attention by the Incident Commander.
- c) The Safety Officer shall report directly to the Fire Chief or Incident Commander.
- d) The Safety Officer shall have the responsibility to identify and cause correction of health and safety hazards.
- e) The Safety Officer shall have the authority to cause immediate correction of situations that create an imminent hazard to personnel.
- f) At an emergency incident, when activities are judged by the Safety Officer to be unsafe and to involve imminent hazard, the Safety Officer shall have the authority to alter, suspend or terminate those activities. The Safety Officer shall immediately inform the Incident Commander of any actions taken to correct imminent hazards at an emergency scene.
- g) When non-imminent hazards are identified, the Safety Officer shall develop actions to correct the situation within the administrative process of the Fire Company. The Safety Officer shall have the authority to bring notice of such hazards to whoever in the Fire Company has the ability to cause correction.
- h) The Safety Officer shall respond to emergency incidents that involve a high risk to personnel. The Fire Chief shall define criteria for the response of the Safety Officer.
- i) At the scene of high risk incidents, the Safety Officer shall identify and mitigate safety hazards in accordance with the provisions of Chapter 6 of NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.
- j) The functions of the Safety Officer at a high risk incident shall be integrated within the command structure and the Safety Officer shall report to the Incident Commander. When necessary, the Safety Officer shall have the authority and responsibility specified previously.
- k) The Safety Officer shall routinely observe operations at the scene of emergency incidents to insure that safety regulations are being followed. When necessary, the Safety Officer shall recommend corrective actions to the Incident Commander of Chief.

- l) The Safety Officer shall be involved in the process of post-incident critiques in order to review the safety factors involved in emergency incidents.
- m) The Safety Officer shall provide the Chief or Incident Commander with a safety/injury report for all injuries involving training, fire calls or any other Fire Department activities. In addition, copies of the injury reports shall be given to the Commissioners of Fire District 1 within 24 hours.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	OPERATIONS	POLICY O-18
TITLE:	Infectious Disease Protection Program	

PURPOSE: The purpose of this Standard Operating Guideline is to provide guidelines for controlling infectious diseases while engaged in emergency operations and to outline the necessary procedures to follow when personnel are exposed to an infectious disease.

18.1 General Policy

- a) It is the policy of Volunteer Fire Company #1 of Middle Township and the Commissioners of Fire District #1 to protect personnel who may be at risk of exposure and contact of infectious diseases while engaged in operations.
- b) The Fire District shall be responsible for providing immunization to Hepatitis B, maintaining a supply of protective equipment (i.e. latex gloves, masks and eye protection), providing a record system for documenting exposures and follow-up medical attention after infectious disease exposures as per requirements of the Ryan White Act.
- c) Fire Company personnel shall be responsible for wearing/using the appropriate protective equipment in the prescribed manner and following this Standard Operating Procedure in strict accordance. Under no circumstances shall any aspect of personal safety be sacrificed in order to increase the speed of emergency operations. Participation in emergency operations shall not commence until involved personnel have donned all necessary protective equipment.

18.2 Specific Protective Procedures

- a) The use of protective equipment shall be in strict accordance with these Standard Operating Procedures unless modified by a qualified medical attendant.
- b) Mouth to mouth resuscitation is strictly prohibited. Personnel must utilize a pocket mask or bag valve mask when ventilating a patient.
- c) It is suggested that personnel form good self-protection habits. Use of latex gloves is required whenever personnel have patient contact. Fire gloves used for fire fighting operations are not a substitute for latex gloves.

- d) The use of a face mask and eye protection are required whenever invasive procedures (intubation, field delivery, arterial bleeding situations) are encountered, or anytime blood splatter is likely. If a mask and eye protection are required by an invasive procedure, gloves must be worn. Eye protection is defined as District supplied goggles, sunglasses or prescription.
- e) Patients identified as carriers of AIDS, Hepatitis B, or other infectious diseases should be covered with a mask (oxygen or protective) in order to control exposure at the source.
- f) All members participating in operations which may expose them to infectious disease, shall participate in the Hepatitis B immunization program or sign a waiver form prior to handling such emergency situations.
- g) Personnel must wash their hands after each incident requiring patient contact. Gloves are not a substitute for washed hands. Gloves prevent gross soiling of the hands, while washing removes organisms from the hands.
- h) Broken skin should be covered prior to answering an alarm. Bacteria and viruses cannot penetrate skin. There must be a break in the skin to permit entry through the skin.
- i) Clean body fluid spills as soon as possible. Personnel should wear gloves and soak up the spill with disposable towels. Cleanse the area with a fresh solution of bleach and water at a dilution ratio of 1:10.
- j) Reusable equipment used on a patient, or tools contaminated at the incident scene, should be sterilized in a fresh bleach solution (1:10) for at least five minutes. Personnel should wear gloves while performing this operation.

18.3 Exposure Procedures

- a) Any personnel who suspects that they have been exposed should contact the Safety Officer or Incident Commander as soon as possible. After determining the severity of the exposure, the Safety Officer or Incident Commander may initiate a testing procedure. Even in the absence of an IV, the law may allow for the testing of a patient whenever emergency response personnel have been seriously exposed.
- b) The exposed employee must advise the Safety Officer who will in turn notify the Fire Chief who will notify the Commissioners. The Safety Officer shall then complete a State Incident Exposure Report of the accident or injury.

Testing and follow-up procedures, as designated by the Physician Advisor, are meant to ensure confidentiality of the exposed party and the patient. Notification of exposure shall follow the chain of command. An Officer shall be designated by the Fire Chief to coordinate testing.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-1
TITLE:	Motor Vehicle Accidents	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the Fire Department's operations at motor vehicle accidents.

1.1 MOTOR VEHICLE ACCIDENTS

- a) Apparatus shall approach the accident scene carefully, with special attention to such hazards as downed wires, fuel spills, displaced victims or the presence of hazardous materials.
- b) The Fire Company Incident Commander shall report to the ranking EMS member and ask if special assistance will be required.
- c) All motor vehicles involved in the accident shall be secured against unwanted movement or airbag deployment, if possible.
- d) If victims are trapped or rescuers are working in affected vehicles, a hose line shall be stretched, charged and manned to provide protection.
- e) Any liquid spilled from the vehicles shall be contained or absorbed, never washed away with water.
- f) Vehicle batteries should be disconnected when this procedure can be accomplished safely and without disturbing an occupied vehicle.
- g) Every effort should be made to make the accident scene as safe as possible. This may include proper apparatus positioning (may require apparatus to be moved at request of police), lighting, traffic control, crowd control, etc.
- h) All fire fighters shall wear full turnout gear including eye protection during extrication procedures and operate under the guidelines set forth in the Standard Operating Guideline for Occupational Safety and health Program.
- i) If the motor vehicles involved in the accident are on fire, the Fire Company Standard Operating Guideline for Vehicle Fires must be followed in addition to this procedure.
- j) In the event the Fire Company arrives on the scene prior to the rescue squad, first aid that is within the operational training capacity of the members on hand shall be administered to the victims.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-2
TITLE:	Hazardous Materials Incidents	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the first due activities and support functions while responding to and operations at hazardous materials incidents.

2.1 General Procedures

- a) Upon receiving an alarm for a Hazardous Materials Incident, try to establish the name of the material involved, the state or form of the material (solid, liquid or gas) and if the release is in the form of a vapor cloud, fumes or spill.
- b) Try to establish the exact location of the incident, if it is on the roadway, blocking entrance to the Haz-Mat area, blocking the gate to a plant, etc.
- c) Plan your response route so that the apparatus approaches from the upwind direction only. Taking notice of the wind direction by observing the flag at the firehouse can prove helpful.

2.2 Route to the Incident

- a) Use the Hazardous Materials Emergency Response Guidebook published by the United States Department of Transportation, or other similar book if carried on the apparatus to determine the properties of the material and emergency procedure to follow. Special attention should be paid to the following:
 - Toxic effects of the material
 - Symptoms of exposure
 - Reactions with other chemicals (water reactive)
 - Health effects (skin exposure/breathing vapors)
 - “What to do first” information

2.3 Arrival on Scene

- a) From a distance, and upwind from the incident scene, look for placards on the vehicle(s) or buildings/ property involved in the incident.
- b) Take special precautions to ensure no open flames or sources of ignition are used at the scene.

- c) Try to find the driver of the vehicle or plant personnel on scene to gather information on the material in question.
- d) If available, request copies of the Material Safety Data Sheets (MSDS).
- e) If you are unsure of the type of material involved in the incident, stay back and survey the situation slowly and carefully prior to committing yourself.
- f) If a spill or wet areas are observed, stay back and plan an approach from the uphill side.
- g) If a vapor release is suspected, stay well away and upwind from the area. Keep in mind that an invisible vapor cloud is usually much larger than a visible vapor cloud.
- h) The Incident Commander shall determine if a response by the CBRNE Team, Cape May County Haz-Mat Units, Middle Township Police or any other special unit should be notified. Generally, they should be called out for all incidents other than minor gasoline and diesel spills.
- i) A formal Incident Command System, including a Command Post and Staging Area well away and upwind from the incident shall be established.
- j) The second due engine shall stand by at a hydrant and establish a water supply if required.
- k) If there is no visible sign of a product release, look at the spectators or local personnel to spot any people that are ill or unconscious. If people are down, keep all personnel away from the scene until the exact situation is known, the product is determined, and units can take the necessary measures to adequately protect themselves.
- l) Establish control points for ingress and egress into the incident area.
- m) If the material or product is known and will not harm fire fighters without fully encapsulated suits, two fire fighters wearing full turnout gear, including SCBA, shall approach and survey the incident area. Only intrinsically safe radios, explosion proof lights and an explosion meter shall be used if available.
- n) If the exact type of material involved in the incident cannot be determined, it shall be treated as highly toxic, violently reactive and explosive. The CBRNE Team, Cape May County Haz-Mat Units, Middle Township Police or any other special unit will then be called and the Fire Company will operate as their support unit.
- o) If evacuation is considered, mutual aid companies will be needed and should be sent to the Staging Area.

2.4 Emergency Incident Operations

- a) An Incident Command System shall be implemented at all hazardous material incidents. Operations shall be directed by a designated Incident Commander, and follow these Standard Operating Guidelines.
- b) Ignition sources should be eliminated whenever possible at incidents involving releases, or probable releases of ignitable materials. Whenever possible, electrical devices within the hot zone should be certified as intrinsically safe by recognized organizations.
- c) It is imperative that each member of the Fire Company operate within his/her training level for hazardous material incidents under the guidelines set forth by the State of New Jersey. These guidelines are as follows:

Level 1 Awareness

1. Recognize the presence of hazardous materials in an emergency.
2. Identify the hazardous material and determine basis response information.
3. Realize the need for additional resources and make the proper notifications
4. Initiate scene management (Incident Command System), isolate immediate site, deny entry, evacuate.

Level 1 Operational

1. Know the basic hazard and risk assessment techniques.
2. The ability to select and use proper personal protective equipment provided to the first responder by the authority having jurisdiction for use in their normal response activities.
3. Perform basic hazardous materials control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available.
4. Perform basic decontamination procedures.

No Formal Training

1. **Any member that does not have formal hazardous material training shall not respond on the apparatus to hazardous material incidents.**

2.5 Safety Officer

- a) A Safety Officer shall be designated by and report to the Incident Commander.
- b) The Safety Officer shall provide the Incident Commander with recommendations on the establishment of the control zones at each emergency incident, based on the identification and evaluation of the hazards.
- c) The Safety Officer shall maintain control and security of entry and exit of all personnel between the various zones.

- d) The Safety Officer is responsible for implementing the safety plan.
- e) The Safety Officer shall make the final decision on entry/no entry, corrective actions, respiratory and personal protective clothing, monitoring and sampling methods, and when personnel should be withdrawn or evacuated.
- f) The Safety Officer shall ensure that the proper decontamination procedures are in place before entry.
- g) The Safety Officer shall monitor and maintain communications between the entry personnel and him/her self, and with the Incident Commander.
- h) The Safety Officer shall ensure that a backup team wearing the appropriate level of personal protective equipment is ready at all times during entry team operations.
- i) The Safety Officer shall ensure that all other elements of safety are in place and that emergency medical services with transport capabilities are available.
- j) The Safety Officer shall ensure that all pertinent information is gathered and recorded. Pertinent documents, manifests and reports should be collected and safeguarded.
- k) The Safety Officer shall keep an Incident Site Log for future reference. This Incident Site Log should contain the following information as a minimum:
 - Location
 - Date
 - Name, description, source, quantity, and cause of the release.
 - Weather conditions
 - Name and job assignments for all personnel involved
 - Injuries to personnel and public
 - Corrective action taken
 - Chronological recording of events
 - Entry and exit times of the entry personnel
 - Method of recording exposure of personnel to hazardous materials
 - Resource personnel data

2.6 Control Zones

- a) Control zones shall be established at all incidents involving hazardous materials.
- b) A Hot Zone shall be established in the area immediately surrounding a hazardous materials incident, which extends far enough to prevent adverse effects from hazardous materials releases to personnel outside the zone.

- c) A Warm Zone shall be established in the area where personnel and equipment decontamination and hot zone support takes place. It includes control points for the access corridor and thus assists in reducing the spread of contamination.
- d) A Cold Zone shall be established in the area where the command post and such other support functions as are deemed necessary to control the incident.

2.7 Communications

- a) When personal protective clothing or remote operations inhibit communications, an effective means of communications, such as radios, should be established.
- b) The frequencies employed in these radios should be “dedicated” and not used or shared with other local agencies.
- c) Communications should be supplemented by a prearranged set of hand signals and handlight signals to be used when primary communication methods fail. Handlights employed for this purpose should be in accordance with NFPA 70, National Electric Code, for use in hazardous environments.

2.8 Decontamination

- a) Before personal protective equipment is removed it should be decontaminated. During doffing of personal protective equipment, the clothing should be removed in a manner such that the outside surfaces do not touch or make contact with the wearer. A log of personal protective equipment used during the incident should be maintained.
- b) Decontamination consists of removing the contaminants by chemical or physical processes. The conservative action is always to assume contamination has occurred and to implement a thorough, technically sound decontamination procedure until it is determined or judged to be unnecessary.
- c) Outer clothing should be decontaminated prior to removal. The outer articles of clothing, after removal, should be placed in plastic bags for later additional decontamination, cleaning and/or inspection. In some cases, they may have to be over-packed into containers for proper disposal. Water or other solutions used for washing or rinsing may have to be contained, collected, containerized, and analyzed prior to disposal.
- d) Initial procedures should be upgraded or downgraded as additional information is obtained concerning the type of hazardous materials involved, the degree of hazard, and the probability of exposure or response personnel.
- e) Using solutions containing chemicals to alter or change contaminants to less hazardous materials should only be done after consultation with persons experienced and familiar with the hazards involved. The use of detergent-water washing solutions is more prevalent, but its effectiveness against certain contaminants may be low. It is less risky however than using chemical solutions.

- f) Many types of equipment are very difficult to decontaminate and may have to be discarded as hazardous wastes. Whenever possible, other pieces of small equipment should be disposable or made of nonporous material. Monitoring instruments and some types of sampling equipment can be placed in plastic bags (with only the detecting element exposed) to minimize potential contamination problems.
- g) Large items of equipment, such as vehicles and trucks, should be subject to decontamination by high pressure water washes, steam, or special solutions. Water or other solutions used for washing or rinsing may have to be contained, collected, containerized, and analyzed prior to disposal. Consultation with appropriate sources should be utilized to determine proper decontamination procedures.
- h) Personnel assigned to a decontamination team should wear an appropriate level of personal protective equipment and may require decontamination themselves.

2.9 Diesel/Gasoline Spills

- a) Apparatus arriving on scene shall park uphill of the spill area.
- b) The roadway or spill site should be closed if moving vehicles may come in contact with the fuel or its vapors.
- c) Dike all catch basins and sewer lines with dirt, speedy dry or similar material. Once this is complete, the absorbent material may be applied to the spill. Under no circumstances shall the spilled product be washed away with a hoseline.
- d) For large spill areas, especially if pooling liquid is present, the first due engine will establish a water supply, advance a handline and apply a foam blanket. At no time should anybody be allowed in the foam blanket.
- e) The second due engine company shall stage at the hydrant or tanker staging area, and await further instructions. If needed, this crew can be utilized to advance a second line to backup and protect the primary foam line in operation.
- f) In all cases, fire fighters will be in full turnout gear with SCBA unless released by the Incident Commander and Safety officer.
- g) The Middle Township Public Works Department shall be called out to spread sand on small spills.
- h) The Cape May County Haz-Mat unit, Middle Township Police Department or any other required special unit required will be called out for all large spills.

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**VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE**

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-3
TITLE:	Vehicle Fires	

PURPOSE: The purpose of this Standard Operating Guideline is to outline Volunteer Fire Company #1 of Middle Township operations at vehicle fires. This may include cars, trucks, tractors, motorcycles, boats, buses, etc.

3.1 General

- a) Apparatus shall approach the fire scene carefully, with special attention to fuel spills, wind direction, presence of hazardous materials and any other hazardous condition associated with vehicle fires.
- b) The officer of the first arriving engine company shall take note of wind direction and road grade, and assist the engine driver in locating the apparatus at least 75 to 150 feet upwind and uphill from the vehicle whenever possible.
- c) On working vehicle fires, the first due engine company shall stretch a handline to control and extinguish the fire. The minimum size handline shall be 1-3/4 unless otherwise ordered by the Incident Commander.
- d) Priority shall be given to protect exposures from fire at all times.
- e) The second arriving engine company shall establish a water supply for the first due engine and commit its crew to advancing a second handline off the first due engine if required. This water supply may include the booster tank of the second engine at the discretion of the Incident Commander. If there is a delay in the response of the second due engine company, the crew from the first due engine may have to secure their own permanent water supply and advance the second handline themselves (if required).
- f) The fuel tanks of all vehicles involved should be cooled by water spray when flame impingement or heat transfer warrants.
- g) The vehicles involved shall be secured against unwanted movement.
- h) All fire fighters involved in extinguishing operations shall wear full turnout gear including SCBA.
- i) All areas of the vehicle should be checked and inspected including the tank.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-4
TITLE:	Ground Cover / Brush Fires	

PURPOSE: The purpose of this Standard Operating Guideline is to define the first and second due engine companies and brush fire unit activities for ground cover/brush fires.

4.1 General Procedures

- a) Upon arrival on the fire ground, the officer of the first unit will perform an initial size up of the fire. Special consideration must be given to the size of the fire, fuel load and type (light, medium or heavy), weather conditions, terrain, topography and accessibility for incoming units. If appropriate, notify State Forest Fire Service.
- b) The first due brush truck will enter the off road fire area under the direction of the Incident Commander.
- c) The driver of the first due engine shall locate and establish a water source for brush truck refilling if required.
- d) Priority shall be given to protect structures from exposures to fire. If a structure is threatened by impinging fire or embers, the officer of the first due engine company shall redirect his crew for exposure and structure protection.
- e) All additional responding units shall follow the Volunteer Fire Company #1 of Middle Township written Standard Operating Guides for Level 1 Staging.
- f) If the second brush truck is required, the second due engine company and brush truck shall follow the procedures previously established for the first due companies.
- g) If assistance is required from multiple outside departments, the Incident Commander shall establish a staging area as outlined in the Middle Township Volunteer Fire Company written Standard Operating Guidelines for Level 2 Staging.

4.2 Fire Attack

- a) Priority shall be given to protect structures from exposure to fire at all times.
- b) Fire attack shall be made with the appropriate size hoseline.
- c) Direct fire attack shall be made from the flanks of the fire, preferably from the burned out area upwind from the head. One to two brush trucks shall work in tandem, on the hot flank and another brush truck on the cold flank. The brush trucks should work together, gradually approaching and pinching the head.

- d) Indirect fire attack, if requested by the Incident Commander, shall require the units to drop back from the head of the fire and establish fire lines and breaks. Clear paths shall be made to stop the spread of the fire. When at all possible, natural firebreaks such as roads, streams, pipeline paths, etc., shall be utilized. Areas adjacent to the firebreaks can be wet down with a water spray or foam.
- e) An anchor point must be established and at least two escape routes planned at all times.
- f) Under no circumstances shall any unit or fire fighter try to control the head of a brush fire from the downwind side.

4.3 Safety

- a) When moving through brush, members should raise a tool or arm in front of their face to avoid injury from shrubbery.
- b) Face shields or goggles shall be in the down position at all times.
- c) Members walking behind others should space themselves at least 10 feet apart to avoid injury from whipping branches.
- d) Full department approved turnout gear shall be worn at all times during fire control and extinguishments operations. If there is any suspicion of hazardous materials, or if anything other than naturally occurring brush, trees and foliage is burning, SCBA shall be worn to complete the protective envelope.
- e) Members should use extreme caution when entering cat-tails, pine barrens and brush over their heads.
- f) After exiting the brush or wooded area, each member shall perform a self-examination for ticks or other parasites.

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**VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE**

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-5
TITLE:	Rubbish / Trash Fires	

PURPOSE: The purpose of this Standard Operating Guideline is to define the first and second due engine company activities for rubbish fires.

5.1 General Procedures

- a) Upon arrival on the fire ground, the Incident Commander shall determine the type and extent of the material burning and establish apparatus requirements.
- b) The officer of the first arriving engine company shall take note of wind direction and assist the engine driver in locating the apparatus at least 75 to 150 feet upwind of the fire.
- c) The first due engine company shall stretch a handline to control and extinguish the fire. The minimum size handline shall be 1-3/4 unless otherwise ordered by the Incident Commander.
- d) Priority shall be given to protect exposures from fire at all times.
- e) The second arriving engine company shall establish a secondary water supply for the first due engine if required, and commit its crew to overhauling the burning material.
- f) Enough products shall be removed from enclosed containers to establish that the fire is completely extinguished.

5.2 Safety

- a) Full fire company approved turnout gear including SCBA shall be worn at all times during fire extinguishment and overhaul operations.
- b) If any explosives, hazardous materials, medical waste, unmarked gas cylinders, or any other materials not normally occurring as products of general rubbish are found, units shall immediately retreat from the area and follow the proper Standard Operating Guideline for the situation at hand.
- c) Members shall exercise extreme caution when extinguishing large dumpster/compactor fires because serious or fatal crushing injuries can occur. Before approaching and operating at a large dumpster/compactor fire, the company officer shall ensure that all power to the unit has been shut off and locked out and any hydraulic systems are de-activated. If you are not sure that these precautions have been completed, do not enter the compactor area.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-6
TITLE:	Bomb / Explosive Threats	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the Fire Department's response and operations at bomb scares and explosive threats.

6.1 General Procedures

- a) Upon dispatch for a bomb threat, the Fire Company members shall report to the station and stand by for further orders or direction from the Officer in Command.
- b) Response to the station shall be without blue lights or any other warning device and in the normal flow of traffic. New Jersey State Title 39 Motor Vehicle Laws shall be followed in strict accordance.
- c) In the event that a bomb or explosive device is found, the Fire Company shall respond, when requested by the authority having jurisdiction, with a full structural fire response and stand by in a staging area at least 1000 feet from the location.
- d) The staging area shall be established and coordinated as outlined in Volunteer Fire Company #1 Middle Township's Standard Operating Guideline for Level 2 Staging.
- e) Under no circumstance shall the Fire Company members participate in searching for any explosive device.
- f) If an explosive device is found the Fire Company shall standby in the staging area until released by the authority having jurisdiction.
- g) If possible, radio transmissions should be avoided at the scene or staging area.
- h) If a bomb or explosive device should detonate, the Fire Company shall respond as a structural fire assignment to the scene. Under no circumstance shall fire personnel shall enter the area or building until it has been secured by the authority having jurisdiction and the Incident Commander or officer in charge has been notified.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-7
TITLE:	High Rise Procedure	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the fire command and first due activities at high rise structures. High-rise structures are considered any building three or more stories high.

7.1 Fire Department Command and Control

- a) The High Rise Procedure will involve multiple levels of operations, including a Lobby Command Post (Incident Command), a Forward Command Post (Operations Sector), Forward Staging Area (Resource and Rehab), and Level 2 Staging Area.

7.1.1 Lobby Command Post

- a) The Lobby Command Post (Incident Command) will be established at the Fire Control Center if the building is so equipped. From this central control point the Incident Commander can communicate with those working at each of the other operational points, and will usually be able to control the building air handling systems and monitor elevator location.
- b) The Lobby Command Post will serve as the central marshalling point for other support services such as EMS, Building Reps., Police and other outside agencies.
- c) The Incident Commander in Lobby Command will receive reports from his various Sector Officers including Operations, Resource, Rehab and Staging. From this information he shall formulate the overall strategy to control the incident.

7.1.2 Forward Command Post

- a) A Forward Command Post (Operations Sector) will be established one floor below the fire floor. If the fire is located on the first floor, the Forward Command Post may have to be located at or near Lobby Command.
- b) The Incident Commander in Lobby Command may act as the Operations Sector Officer for small-scale incidents.

- c) Fire fighting forces shall report directly to the Operations Officer in the Forward Command Post who will in turn report the progress, location and conditions of the fire to the Incident Commander.
- d) The Operations Officer will be responsible for directing the fire attack and rescue while overseeing the tactical operations of his subordinate companies.

7.1.3 Forward Staging Area

- a) The forward Staging Area will allow for the controlled use of resources close to the area of fire attack.
- b) The Forward Staging Area will be established two to three floors below the fire fighting operation, and be used for the resting and recuperation of the fire fighters. Both our Resource and Rehab Sectors will be located in the Forward Staging Area.
- c) Sufficient quantities of manpower, SCBA, spare cylinders, high-rise packs, hose, tools and equipment shall be accumulated in the Forward Staging Area.
- d) The officer or senior fire fighter assigned to the Forward Staging Area shall report directly to the Incident Commander in Lobby Command.
- e) A Rehab Sector shall be established within the Forward Staging Area to provide a remote location for the rehabilitation, rest and recovery of expended fire fighters.
- f) The Rehab Sector shall be located in an area that will provide a safe controlled environment free of the products of combustion.
- g) Water, oxygen and medical support services will be provided in the Rehab Sector.
- h) A Safety Officer in command of the Rehab Sector will report directly to the Forward Staging Area Officer.

7.1.4 Staging Sector

- a) A Staging Area will be established as outlined in the Volunteer Fire Company #1 of Middle Township Standard Operating Guideline for Level 2 Staging.
- b) This Staging Sector will be established in an area far enough from the building to mitigate any hazardous conditions, which may result from falling debris.
- c) All secondary units responding to replace first due units on multiple alarm fires will be staged in this area.
- d) A Staging Officer will be assigned to this sector and coordinate manpower and equipment requirements with the Incident Commander in Lobby Command.

7.2 Officer Staffing

a) In order to allow for effective supervision and coordination of the fire fighting forces, several Chief Officers will be required for operations in high-rise buildings.

b) A Chief Officer should be considered in each of the following locations:

Lobby Command (2)	Incident Commander and Chief to assist in planning and logistics
Forward Command Post	Fire Fighting Operations Officer
Forward Staging Area	Chief or Line Officer
Rehab Sector	Safety Officer
Level 2 Staging Area	Chief or Line Officer

c) Chief Officers from outside companies should be utilized during mutual aid assignments.

d) In addition, Chief Officers or senior fire company officers should be located in the following areas:

One or more on the fire floor, depending on the number of fire fronts

One or more above the fire floor(s).

7.3 First Due Operations

a) Upon arrival on the fire ground, the first due unit shall assume Incident Command, enter the building through the main entrance and report to the on duty building manager or security officer.

b) After consulting with the building manager, the Incident Commander shall then make the following determinations:

- 1 Is there an actual fire?
- 2 Location of the fire including floor number and extent.
- 3 Accountability of life hazard.
- 4 Will rescue be required?
- 5 Actual and potential for fire extension.
- 6 Does the building have a Fire Control Center?

c) The Incident commander shall request a marked up set of building plans as well as the pass keys and elevator override keys from the building manager. He shall then make the following determinations.

- 1 Actual and potential conditions for fire spread.
- 2 Determine the best method and location for fire attack.

- d) If a working fire is suspected, the Incident Commander shall transmit a second alarm for a working fire, and the Fire Company Standard Operating Guideline for High Rise Structures will be enacted.
- e) For all working fires, Stations 70 and 71 will be requested to respond to the Level 2 Staging Area with the following apparatus:

- Two engines
- One ladder truck
- Two rescue trucks

The Assisting Fire Department shall be requested to move up one engine to Station 70. General alarms will be run for all fire calls in the Fire District.

7.3.1 Engine Company Operations

- a) The first due engine company shall respond to the main entrance of the fire building.
- b) The officer and at least two fire fighters wearing full SCBA shall then report to the Incident Commander in Lobby Command and determine the location of the fire and position for initial attack. This engine company crew must carry a high rise pack with at least 100 feet of hose, a bundle of enough spare hose to reach the fire, the irons (Halligan Tool and flat-head ax), a Hydra-Ram Tool, and one spare SCBA cylinder for each man.
- c) Manpower permitting, the minimum size handline for High Rise Operations in residential occupancies shall be 1-3/4" while 2-1/2" handlines should be used in commercial/industrial and office buildings.
- d) The elevators may be used by crews to ascend two to three floors below the fire floor if the elevator is equipped with a Fire Department Manual Over-ride, the exact fire floor is known, and proper safety practices are observed. This includes a visual check of the elevator shaft for fire and smoke. If possible, elevator banks that do not go completely to the fire floor should be used.
- e) If the location of the fire is unknown, the initial attack crew should ascend the attack stairwell and perform a floor-by-floor search for the fire. Once located, the position shall be relayed back to the Incident Commander.
- f) Once on the fire floor the officer of the initial attack crew shall verify the exact location of the fire and determine the distance for the dry stretch from the standpipe. The stairwell door should then be chocked open to avoid interference with the hose stretch and the line advanced from within the stairwell on the fire floor to control and extinguish the fire. One radio-equipped fire fighter shall remain at the standpipe outlet to charge the line and regulate pressure for the attack crew.

- g) The driver from the first due engine company shall locate, enact and supply the proper fire department connection as outlined in the Fire Company Standard Operating Guideline for Operations at Protected Properties.
- h) The second due engine company shall proceed to the main entrance of the building. The officer and all fire fighters (except the driver) wearing full SCBA shall report to the Incident Commander in Lobby Command and determine the location of the fire and the position for a backup line. Generally, the backup line should be advanced from the same stairwell as the attack line. This engine company crew must carry a high rise pack with at least 150 feet of hose, a bundle of enough spare hose to reach the fire, a smooth bore and fog nozzle, Irons (Halligan Tool and flat-head axe), a Hydra-Ram Tool and one spare cylinder for each man.
- i) If the backup line is not needed to support the initial attack, it may be redirected to the floor above the fire floor. The Incident Commander shall be kept informed of any operational changes and re-deployment of fire fighting forces.
- j) The driver of the second due engine company shall start removing equipment from the apparatus to be located in the Forward Staging Area, and place it in a temporary lobby equipment pool. This shall include all SCBA, spare cylinders, high rise packs, hand tools and smoke ejectors. The driver shall then position the apparatus at the next closest hydrant. The purpose of this engine will be to provide a secondary water supply if needed.
- k) The third due engine company shall position the apparatus near the main entrance of the fire building. An area shall be chosen so as not to impede the ingress of future fire apparatus or rescue squad units. The Officer and all fire fighters (except the driver) wearing full SCBA shall report to and establish a Forward Staging Area if not already instituted by a secondary Chief Officer.
- l) One fire fighter from the third due engine company shall locate and gain entry to the riser room and ensure the fire pump is operating properly and the control valves are in the full open position. He shall remain in this position until released by the Incident Commander.
- m) The driver of the third due engine shall assist his company in removing equipment from the apparatus to be located in the Forward Staging Area. This shall include all SCBA, spare cylinders, high rise packs, hand tools and smoke ejectors.

7.3.2 Truck Company Operations

- a) The first due truck company shall respond to the front of the fire building. Extreme caution shall be exercised to avoid prematurely committing the truck before its exact requirements are determined.
- b) The Outside Vent Crew (OV) and Search Crew (SC) shall operate as one unit, and perform either Search and Rescue or Ventilation as outlined by the Incident Commander. These duties are outlined in the applicable section of the Middle Township Volunteer Fire Company Standard Operating Guideline for Truck Company Operations.

- c) If the truck company is assigned to Search and Rescue, the crew, wearing full SCBA, shall report to the Incident Commander in Lobby Command and determine the location of the fire and requirements for a primary search and evacuation.
- d) The Search Crew shall commence their search and rescue operations on the fire floor first, as close to the seat of the fire as fire fighter safety will allow, and continue outward until the fire floor is completely covered.
- e) Any evacuating residents shall be directed to exit the building from stairwells away from the point of fire attack and/or ventilation. Under no circumstances shall fleeing residents be instructed to use the elevators.
- f) After an area is searched, some type of physical indicator shall be used to alert other search and rescue teams the area is clear. A physical indicator may include an "X" marked on the bottom of the door, a door tag, or other item hanging from the hallway doorknob. The Search crew shall also radio the Operations Sector Officer in the Forward Command Post and provide him with a status update when each particular area is found clear.
- g) If the truck company is assigned to Ventilation, the crew, wearing full SCBA, shall report to the Incident Commander in Lobby Command and determine the location of the fire and requirements and location for ventilation.
- h) Ventilation will be preempted by exterior rescue operations when warranted by residents appearing at windows upon the tower ladder arrival on the fire ground.
- i) Vertical ventilation of serious high rise fires is required to remove the large amounts of pent up smoke and toxic gases.
- j) In most high-rise buildings, a stairshaft with a roof hatch or bulkhead (penthouse), will be utilized as the vertical duct or "chimney" to the atmosphere. In Many buildings only one stairshaft pierces the roof. It is Imperative, therefore, that prefire planning identify this staircase for use in ventilation.
- k) Once a stairshaft is being used for ventilation, it can no longer be used for fire fighting and rescue operations. These stairshafts shall be identified and the Incident Commander, and in turn, the Operations Sector Officer notified.
- l) Before the doorways on the fire floors are opened and stairshaft is ventilated, this stairshaft door or roof hatch must be opened. If the stairshaft is equipped with a bulkhead door, it is preferable to remove the door from the hinges to ensure it will not close during ventilation operations. If this is not possible, the door or hatch shall be blocked open in a very secure manner.
- m) Timing and coordination of tactics are extremely important. Ventilation up the one stairshaft that pierces the roof must necessarily be delayed until all occupants above the fire floor are either evacuated or warned to stay out of the chimney effect that will be created, and fire fighters are known to be in a safe position.

- n) Usually, the common horizontal or cross-ventilation procedure is impossible in newer high-rise buildings because the windows cannot be opened. Forced ventilation up a stairshaft, across a smoke-filled floor, and out through the roof by way of another stairshaft will be the usual ventilation tactic in sealed buildings. As in the previous case, the truck crew officer assigned to ventilation shall notify the Incident Commander and Operations Sector Officer which stairshafts will be used for this operation.
- o) Positive pressure fans can be placed at the base of the attack stairway (fresh air side) and at the entrance to the fire floor to create this forced ventilation. In addition, a smoke ejector can be placed at the top of the outlet staircase exhausting to the atmosphere.
- p) Many modern high-rise buildings are equipped with pressurized smoke towers. Pressurization of these stairways is generally accomplished by utilizing a supply fan at the base of the stairway and a slightly smaller exhaust fan at the top of the stair tower. Because the supply fan is slightly larger than the exhaust fan, a positive pressure is created in the stairshaft as the air currents move up and out of the top of the building.
- q) The positive pressure created in modern smoke towers will not allow the stairshaft to be used for vertical ventilation unless the controls are manually operated by the fire department.
- r) The truck company assigned to ventilation will have two options when ventilating buildings with pressurized smoke towers. First, they may shut down the entire pressurization system so the stairshaft can be used as a ventilating chimney. This method is described above for a standard stairshaft. Second, the stairway air supply fan at the base of the smoke tower may be shut down separately, the doors blocked open, and exhaust fan left on at the top of the shaft to aid in developing ventilation currents.
- s) If the building is constructed with a vestibule or atrium, this area may be used for the vertical chimney. Extreme caution must be exercised when using this method to avoid exposing potential victims to smoke and fire gases.
- t) The vestibule or atrium may be equipped with an exhaust system to evacuate smoke from the area. If this is not sufficient, a fire fighter will have to ventilate the atrium at the roof level.
- u) In each case, the doors to the stairs, vestibule or atrium on the fire floor must be securely blocked open to allow for the escape of smoke and toxic gases into the “chimney.”
- v) Fire fighters should refrain from breaking out windows for horizontal ventilation on high-rise buildings. The flying glass presents a tremendous hazard for fire fighters and people in the street below.

7.4 Secondary Responding Units

- a) All secondary responding units from the Volunteer Fire Company #1 of Middle Township and/or outside companies shall respond to the Level 2 Staging designated by the Incident Commander.
- b) The officer of the first piece of apparatus to arrive at the staging area will assume command of the staging sector unless reassignment is made by the Incident Commander. The radio designation for the staging sector is “STAGING.” All communications involving the staging of apparatus will be between “STAGING” and the Incident Commander.
- c) All responding companies to the staging area shall stay off the air, respond directly to the designated staging area, and report in person to the staging officer.
- d) Once in the staging area, all crews shall remain with their apparatus and await further instructions.

7.5 Rescue Squads (EMS) and First Aid Units

- a) The Rescue Squad shall respond and stage their ambulance in an area near the maintenance to the high-rise building. An area shall be used that will not inhibit the fire fighting operations. Fire apparatus shall be kept clear of this area to allow for the expedient egress of the primary staged ambulance. The senior officer or crewmember shall then report to the Incident Commander in the Lobby Command Post.
- b) In the event of a working fire, a second rescue squad vehicle shall respond to the location described above and assist the fire company Safety Officer in establishing a rehab sector as outlined in the Fire Company Standard Operating Guideline for Rest and Recovery.
- c) Any additional responding Rescue Squad or First Aid Units shall respond to the Level 2 Staging Area and report to the Staging Officer until deployed by the Incident Commander.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-8
TITLE:	Key Boxes (KNOX Box)	

PURPOSE: The purpose of this Standard Operating Guideline is to define the basic requirements of having a key box and using the master key in the Key Box System.

8.0 REQUIREMENTS

- a) In buildings equipped with or required to be equipped with fire detection or fire suppression systems or equipment, the Fire Official shall require a key box to be purchased and installed at the expense of the owner or occupant of the structure, in an accessible location to be approved by the Fire Official. The Fire Company may ask the Fire Official to require a Key Box at other than required locations after an excessive number of false alarms.
- b) The key box shall be of a type approved by the Fire Official and shall be installed in a manner approved by the Fire Official.
- c) The key box shall contain the following items:
 - 1. Updated keys necessary for access to all portions of the premises.
 - 2. Keys to fire alarm control panels, keys necessary to operate or service fire alarm control panels and keys necessary to operate or service fire protection systems.
 - 3. Electronic entry cards.
 - 4. Elevator and emergency information (if required by Fire Official).
 - 5. Any other pertinent information, which may be needed in an emergency or as required by the Fire Official.

8.1 MASTER KEY USE

- a) Access to key boxes shall be available only to authorized personnel and only by the master key.
- b) The master key shall be locked up in a self-contained unit that secures the master key in the emergency vehicle shall be inaccessible until authorized personnel enter their pin code into a decoder permitting access to the master key.
- c) Authorized personnel will fill out a key release form no later than the next business day after key release and submit same to the Fire Official.
- d) By the close of business on the next business day following the opening of a key box, the Fire Official, or his designee, shall verify the replacement of all items to the key box with the owner or occupant of the premises.

8.2 KEY RELEASE ACCOUNTABILITY

- a) A self-contained Key Secure unit that locks up a master key will have audit trail capability for downloading key release data to a computer.
- b) This information shall be downloaded monthly and kept on file by the Fire Official.
- c) The Key Box Coordinator and Fire Official shall compare the audit information with the key release forms submitted by the Fire Company monthly.
- d) Any discrepancy in Master Key Usage shall be reported to the Fire Company or the Fire Commission or both or any other Authority Having Jurisdiction as determined by the Key Box Coordinator or Fire Official as appropriate.

8.3 PIN CODES

- a) The Chief and Assistant Chief will submit a list to the Key Box Coordinator of Fire Company personnel that will need PIN Codes
- b) The Key Box Coordinator shall then issue PIN Codes to designated Fire Company personnel after they have read, understood and signed the requirements of the Key Box System.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-9
TITLE:	Operations at Protected Properties	

PURPOSE: The purpose of this Standard Operating Guideline is to define the first due activities and operations of the Fire Company in structures containing fire protection and suppression systems.

9.1 Fire Alarm Protected Properties

The Incident Commander or his delegate shall locate the annunciator panel after gaining entry and determine the location, type and extent of the fire. From this information he shall make the appropriate assignments to responding apparatus.

A thorough search and inspection of the areas indicated by the annunciator panel shall be conducted **regardless of the presence of visible fire.**

If the occupancy is locked and exterior observations fail to indicate the presence of a fire, the Incident Commander shall use the Key Box system if present and contact the building owner/ manager. If no Key Box present the Incident Commander shall instruct headquarters to contact the building owner or manager and request they immediately open the building for the Fire Company (within 30 minutes).

If headquarters fails in their attempt to make contact, or a representative of the owner/ company cannot respond in a reasonable time period within 30 minutes), forcible entry may be performed to gain access to the property. Care should be taken to minimize the damage when forcing entrance.

If external observations indicate a possible fire condition, the Fire Company shall immediately force entry and follow the proper Fire Company Standard Operating Guide.

After forcing entry (if required) for any reason and upon completion of Fire Company activities, the Fire Company prior to departure will turn the premises over to:

1. Owner
2. Owners designated representative
3. Middle Township Police
4. Fire Police

9.2 Sprinkler Protected Properties

- a) The first due company shall take a position to its best advantage and stretch the appropriate size handline to control and extinguish the fire. They shall follow the Volunteer Fire Company #1 of Middle Township Standard Operating Guideline for Engine Company Operations.

- b) The second due engine company shall locate, establish and supply the Fire Company connection for all working fires. Once this operation is completed, a fire fighter from the engine, equipped with a portable radio, shall locate and gain entry to the riser room and/or control valve. This fire fighter shall ensure the valve stays in the open position until otherwise ordered by the Incident Commander.
- c) All other units shall follow the Volunteer Fire Company #1 of Middle Township Standard Operating Guideline for Level 1 Staging until otherwise instructed by the Incident Commander.

9.3 Standpipe or Combination System Protected Properties

- a) The first due engine company shall locate, establish and supply the Fire Company connection for all working fires.
- b) The first due engine crew shall carry the high rise pack, including enough spare hose to reach any area of the fire floor, and proceed to the standpipe to be used for fire attack.
- c) Hose crews shall remove the buildings standpipe hose and pressure reducer (if equipped) before attaching any Fire Company hose lines.
- d) The initial attack shall be made from the closest, safest standpipe to the fire area.
- e) A fire fighter from the second due engine company, equipped with a portable radio, shall locate and gain entry to the riser room and/or control valve. This fire fighter shall ensure the valve stays in the open position until otherwise ordered by the Incident Commander.
- f) All other units shall follow the Volunteer Fire Company #1 of Middle Township Standard Operating Guideline for Level 1 Staging until otherwise instructed by the Incident Commander.

9.4 If the Officer in Charge determines a Fire Watch is required for a building, the Fire Watch Policy of the Bureau of Fire Safety shall be followed.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-10
TITLE:	Utility Emergencies	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the proper response protocol and activities of the Volunteer Fire Company #1 of Middle Township during electric and gas utility emergencies. This may include wires down, arching wires, transformer fires, smell of gas, gas leaks, gas fires, etc.

10.1 Electric Utility Emergencies

- a) Apparatus shall respond to electric utility emergencies in accordance with the Volunteer Fire Company #1 of Middle Township Standard Operating Guideline for Non-Structural Fires.
- b) Apparatus shall approach the scene carefully, with special attention to such hazards as downed wires, displaced transformers and broken or weakened electric poles.
- c) The Incident Commander shall assess the situation and determine the apparatus requirements, disregarding any unnecessary units. He shall then inform headquarters of the exact conditions present.
- d) If Possible, ascertain the proper pole identification number and relay this information to headquarters with directions to notify the proper utility company (South Jersey Gas Co., Atlantic City Electric Co., Verizon, Comcast).
- e) If required, the first and second due engine companies may be positioned to block or divert traffic around the emergency scene.
- f) All committed units shall remain on scene until released by the electric company or police department.
- g) Under no circumstances shall any fire company member attempt to remove an electric line or appurtenance. All downed wires will be assumed to be energized.
- h) Under no circumstances shall any fire company member contact a transformer or transformer oil. Any transformer oil, spilled or in its enclosed container, shall be assumed to contain PCB's and treated as a hazardous material.
- i) Fire Company handlines shall not be directed onto live electrical wires or equipment.

- j) If victims are trapped in vehicles covered by downed wires, instruct the occupants to remain in the vehicle until the electric company has shut down the power.
- k) Fire Company members shall use extreme caution to avoid contacting any vehicle, structure or material that may be energized as a result of the utility emergency.

10.2 Gas Utility Emergencies

- a) Apparatus shall respond to gas utility emergencies in accordance with the Volunteer Fire Company #1 of Middle Township Stand Operating Guideline for Structure Fires.
- b) Apparatus shall approach the scene carefully, with special attention to the gas vapor clouds and wind direction.
- c) The officer of the engine shall take note of wind direction and assist the driver in locating the apparatus upwind from the incident. All apparatus shall stage at least one block from the incident until assigned by the Incident Commander.
- d) Apparatus shall never enter or pass through the gas vapor cloud under any circumstances.
- e) Electrical devices and radios shall not be used at natural gas emergencies unless they are listed as intrinsically safe by a recognized authority (UL or NEMA).
- f) The Incident Commander shall assess the situation and determine apparatus requirements, disregarding any unnecessary units. He shall then inform Headquarters of the exact condition present.
- g) If the incident involves a natural gas pipeline, meter set or service, the appropriate gas company shall be notified.

10.2.1 Escaping Gas Outside A Building

If un-ignited gas is escaping from the ground, an excavation or from an open pipe outside a building, notify the gas company immediately.

A safe area surrounding the location should be cleared, roped or barricaded.

Extinguish all open flames. Prohibit smoking.

Check surrounding buildings, cellars in particular, for any presence of gas odors. Use the combustible gas meter, if available to determine the percent lower explosive limit of any accumulations. Never occupy an area within 10% of the lower explosive limit.

Restrict or re-route all traffic until gas company personnel can bring the gas flow under control.

10.2.2 Burning Gas Out of Doors

- a) The best method of controlling an outdoor gas fire is to shut off the gas flow. In most cases, the fire fighter should not attempt to put out the fire while gas is still escaping.
- b) A safe area surrounding the location should be cleared, roped or barricaded.
- c) Spray the surrounding combustibles if there is danger of ignition. A permanent water supply will have to be utilized if extended operations are anticipated.
- d) If it is necessary to extinguish the gas flame before the gas flow can be stopped, attempt to use dry chemicals at the base of the flame and wet the surrounding area with water to prevent re-ignition.
- e) Notify the gas company immediately whenever gas is burning.
- f) Valves on mains in the street will be operated by gas company personnel only. Curb cocks on gas services may be closed by trained fire fighters. Once a valve or curb cock has been turned off, it should only be turned on by gas company personnel.
- g) Dual water fog streams in an interlocking pattern shall be used if protection of fire fighters is required to attempt to close a gas cock. The minimum size handline used shall be 1-3/4 inch. 2-1/2 inch lines shall be used for all high-pressure gas leaks emitting significant volumes of gas.

10.2.3 Escaping Gas in Buildings

- a) When escaping gas is found in buildings, notify the gas company immediately.
- b) Ventilate the building by opening the doors and windows. Only intrinsically safe explosion proof fans may be used inside the building to mechanically ventilate. Positive pressure ventilation fans may be used outside the building if deemed safe by the Incident Commander. Remember that natural gas is lighter than air and will rise when escaping. Use of the combustible gas meter will assist in determining the percentage of the lower explosive limit for the gas/air mixture. Extreme caution shall be used when operating within the explosive range, or when ventilating from above the explosive limit.
- c) Do not turn electrical switches or appliances on or off.
- d) Clear the building of all occupants immediately.
- e) The Incident Commander shall determine if the supply of gas can be safely shut off in the building, at the appliance or at the meter set which is equipped with gas cocks or valves. Only spark proof tools shall be used when shutting off cocks or valves in the affected area. Never turn gas cocks or valves on once they have been shut off.

- f) If the natural gas leak involves an appliance, an engine or truck company shall be dispatched to shut down the individual fuel line to the appliance as long as their safety will not be compromised. The property owner will then be responsible for notifying an appliance serviceman.

10.2.4 Escaping Gas Burning in Buildings

- a) When gas is burning in buildings, notify the gas company immediately.
- b) The Incident Commander shall determine if the gas can be shut off inside the building, or at the meter, which are equipped with cocks and may be shut off with a wrench. Only spark proof tools shall be used within the affected area. Never turn a gas cock or valve on again once it has been shut off.
- c) Dual water fog streams in an interlocking pattern shall be used if protection of fire fighters is required to attempt to close a gas cock. The minimum size handline used shall be 1-3/4 inch. 2-1/2 inch lines shall be used for all high-pressure gas leaks emitting significant volumes of gas.
- d) If the gas supply cannot be safely shut off, keep the surrounding combustibles wetted with water streams until the gas company emergency crews can control the flowing gas.

10.2.5 Gas in Manholes, Vaults and Sewers

- a) If gas is detected in a manhole, vault or sewer, contact the gas company immediately to assist in the identification of the type of gas involved, such as gasoline vapors, sewer gas, cable-burnout gases, etc., and to trace its source.
- d) Do not attempt to extinguish flames if the gas becomes ignited unless a serious life hazard is present.
- e) Spray burning or combustible materials, if any, surrounding the vault.
- f) Rope off or barricade a safe area surrounding the vault. Keep bystanders away. Prohibit smoking and open flame, sparks and heat sources in the area.
- g) Always test the atmosphere of a manhole, vault or sewer, first with a gas detector and then for oxygen deficiency. Purge with blower, unless there is fire present, before anyone enters the structure.
- h) Do not enter manholes, vaults or sewers if dangerous concentrations of gases or vapors are known or suspected to be present.
- i) Do not enter manholes, vaults or sewers if dangerous concentrations of gases or vapors are known or suspected to be present.

- j) Temporarily vent a manhole by removing the cover and the covers on either side until you reach manholes free of gas. Precaution should be taken to prevent a spark. Wet manhole covers and rims before removing the covers.
- k) When the fire fighters are required to enter manholes, vaults or sewers for rescue operations, the following safety precautions should be followed.

All personnel should use SCBA and have a safety harness and lifeline attached to them

Personnel shall operate in pairs.

A stand-by group similarly equipped should be maintained at the scene prepared to immediately be put into service.

Charged hose lines equipped with fog nozzles should be placed on stand-by at the scene.

- l) Check basements of adjoining buildings for any evidence of gas seeping therein. If found, ventilate by opening windows and doors. Shut off open flame devices but do not operate electrical switches or appliances. If natural gas is involved, handle the situation as outlined for escaping gas in buildings.

10.3 Safety

- a) Full turnout gear shall be worn for all utility emergencies in accordance with the Volunteer Fire Company #1 of Middle Township Standard Operating Guideline for Occupational Safety and Health Program.
- b) SCBA shall be worn for all natural gas utility emergencies.
- c) Never ring doorbells, operate electrical switches or use the telephone in areas where the presence of un-ignited combustible gas is suspected.
- d) Never allow open flames, smoking, or spark producing devices in either open or closed areas – if the presence of un-ignited combustible gas is suspected.
- e) Be cautiously aware that natural gas in its purest form is odorless, tasteless and colorless. The smell associated with natural gas is an odorant added by the pipeline and distribution companies. It is not toxic but can and will cause asphyxiation and smothering by displacing oxygen in the air. Self-contained breathing apparatus shall be work in all areas suspected of containing gas.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-11
TITLE:	Fire Fighting Operations Near High Voltage Power Lines	

PURPOSE: The purpose of this Standard Operating Guideline is to define special tactical operations when fighting fires near high voltage electric utility tower lines.

11.1 Operations if Excess of 75 Feet Horizontal from a Power Line

- a) Fire fighting operations 75 feet beyond the edge of the overhead outer phase electric line require no unusual tactics.
- b) Fire fighting tactics should consider the tower lines to be an exposure needing protection when threatened by fire.
- c) When possible, establish a control line to prevent the spread of fire to the area within 75 feet of and parallel to the edge of the overhead outer phase electric wire.

11.2 Operations Within 75 Feet Horizontal from a Tower Line

- a) If a grass or brush fire has extended to the area within 75 feet of the outer overhead electric phase wire or under the lines, fire fighting tactics and techniques must anticipate and consider the personnel hazard associated with high voltage electric lines of 138 kilovolts (KV) or greater.
- b) Heavy smoke plumes on tower lines may cause a phase to ground short.
- c) As the fire and heavy smoke moving towards the tower line reach within 75 feet of the outside phase electric line, a direct attack must be abandoned.
- d) At that point, make a size-up to determine where to establish a new control line. This should anticipate the rate of flame spread so that crews working within 75 feet of the tower lines can remain at least 75 feet from heavy smoke generated at the head of the fire when it passes through the electric lines.
- e) Spot fires, which may occur within the area under the tower lines, do not generate enough smoke to create an electric safety hazard. Fire fighters should be able to work safely under the tower lines when spot fires are controlled quickly and are at least 75 feet from the main smoke plume passing through the tower lines.
- f) Small burning trees under the tower or steel pole lines which exceed the height of a man present a real threat of creating a phase to ground short. A 75-foot minimum clearance should be maintained between these trees and fire fighting operations.

- g) When fighting a fire near high voltage tower or steel pole lines, the following precautions must be adhered to:
- Never direct a hose stream at wires or raise the hose stream above the height of a man.
 - Never direct a hose stream into the heavy plume of smoke that is within 75 feet of the outside phase wire.
 - Never direct a hose stream at burning trees under the power lines.

11.3 Fire Apparatus Under Tower or Steel Pole Lines

- a) Tower and steel pole lines are constructed in accordance with state and county regulations, which often impose restrictions on access to tower lines. It is often impossible to move vehicles directly from one tower to the next.
- b) Tower lines normally have vehicles access from public roads leading to the towers, but may not have vehicle access from tower to tower. After any unit gains access to tower lines, the Incident Commander shall notify the appropriate power company, through the dispatcher, and advise them of the exact location.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY S0-12
TITLE:	Building Collapse	

PURPOSE: The purpose of this Standard Operating Guideline is to outline the primary stages of rescue operations for fire company activities on the scene of a building collapse.

12.1 General Procedures

- a) Rescue procedures at a building collapse will require multiple stages of operation in order to efficiently control the scene and locate/extricate possible victims in a timely manner.
- b) An Incident Command System (ICS) shall be established to facilitate the control of the rescue operation. The collapse area shall be broken down into individual sectors to ensure complete efficiency and rescue personnel accountability. An Information Sector Officer shall be assigned to assist in polling the public and gathering information regarding the location of possible victims through reconnaissance operations.
- c) A Medical Sector shall be established, including a triage area, for treatment and transport of any victims found.

12.2 Scene Stabilization

- a) The first priority for companies operating at the scene of a building collapse is scene stabilization. This must include ensuring all utilities are located and shut off and potential for further collapse is mitigated.
- b) Gas, electric and water utility companies should immediately be called to the scene.
- c) If required, heavy equipment such as wheel loaders and/or backhoes must be requested from the Township or suitable contractors as soon as possible. In addition, mutual aid heavy rescue companies must be requested when the situation warrants.
- d) If natural or other flammable gas is being expelled into the atmosphere, an engine company shall set up protective fog streams to dissipate the vapors. Extreme caution must be exercised to avoid flooding the collapse area, causing an unstable environment and drowning possible victims.

12.3 Rescue of Surface Victims

- a) The first rescue operational stage after the collapse scene is secured will be to extricate surface victims lying on or partly exposed from the rubble.
- b) Caution must be exercised when extricating partially exposed victims to avoid compounding their injuries.
- c) Rescue recovery is to take place each time a victim is located, with continued search occurring once the victim is released to the medical sector.
- d) Triage recovery may have to be carried out during recovery operations if multiple victims are located together, or removal activities uncover additional victims.
- e) Under no circumstances is a victim to be left unattended once recovered.

12.4 Search of Void Areas

- a) Once all surface victims have been removed, companies shall concentrate their search efforts on rescue and extrication of victims from possible void areas. Void areas may be formed when floors and walls collapse in various lean-to arrangements. Because a lean-to provides a sheltered area of refuge for a victim, there is a strong possibility of finding people that are in relatively good condition.
- b) A brief moment of complete silence on the fire ground may assist rescue operations in locating trapped occupants shouting for help.

12.5 Select Debris Removal

- a) Once select debris removal is complete, the final stage of the rescue operation is general debris removal.
- b) Select debris removal shall concentrate on areas likely to have been occupied by victims prior to the building collapse. This information may be determined by polling the public, information reconnaissance, or physical parameters such as the time of day, day of the week, type of building, etc. Generally, hand removal should be used and only assisted by heavy equipment.

12.6 General Debris Removal

- a) Once select debris removal is complete, the final stage of the rescue operation is general debris removal.
- b) During general debris removal the likelihood for finding survivable victims is small. No item shall be left unturned. Heavy equipment can be used to assist in the debris removal.

12.7 Safety

Caution must be exercised to reduce the possibility of further collapse by improper debris removal.

- a) Open flame and heat sources shall not be used in the vicinity of escaping flammable gas or liquids. This includes the use of saws producing sparks, torches and exothermic cutting tools.
- b) Air quality and combustion readings shall be taken periodically throughout the incident, and before any void area is entered without self contained breathing apparatus (SCBA),
- c) All void areas shall be adequately shored prior to being entered by rescue personnel.
- d) If fire fighter safety is compromised due to hardship or danger presented during the recovery, efforts are to be transferred to additional personnel or terminated.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-13
TITLE:	MEDIVAC Operations	

PURPOSE: The purpose of this Standard Operating Guideline is to define the actions and response protocol of the Fire Department when dispatched to Medivac helicopter landings.

13.1 Helicopter Dispatch

- a) Once the need for a helicopter is determined, the appropriate Jemstar Communications Center shall be contacted. This request shall be made through the Police Dispatcher using the following numbers:

North: 1-800-332-4356

South: 1-800-544-4356

- b) The Jemstar Communications Center should be provided with the following information at the time of notification:

Communications Center's name and call back number

County and municipality name

Nature of the incident

Location of the incident / with cross streets

Local weather conditions

Requesting unit number or name

VHF communications frequency

Name or number of the Landing Zone Coordinator

Number of patients

Approximate age and sex of patients (if possible)

Type and extent of injuries (if possible)

Vital signs (if possible)

Nearest landing site to the incident

Nearby landmarks such as radio or water towers

13.2 Helicopter Communications

- a) North STAR and South STAR can communicate with ground units on new Jersey Fire Net (154.265 MHz), JEMS3 (155.280 MHz), JEMS2 (155.340 MHz), or SPEN-4 (153.785 MHz).
- b) In the event these frequencies are not available at the scene, other VHF frequencies can be tuned in by the helicopter, provided all communications are operated in the carrier squelch mode.
- c) Whenever a request is made for the helicopter, the calling party should be prepared to identify the UHF/VHF landing zone frequency and radio call sign of the Landing Zone Coordinator (LZC).
- d) Communications from the helicopters to the ground will be established as soon as the aircraft is in range.
- e) Communications between NJ State Police helicopters and the North STAR and South STAR Communications Centers will be on the State Police 800 MHz trunked communications system.

13.3 Radio/Landing Procedure

- a) In all cases, radio transmissions should be brief and to the point.
- b) Communications from the helicopter to the ground will be established as soon as the aircraft is in range.
- c) Once the helicopter has arrived over the landing zone, it is essential that all medical information be held until the aircraft is on the ground so that full attention can be devoted to landing the helicopter safely.
- d) In the interest of safety, there should only be one designated person on the ground who communicates with the helicopter during its landing zone approach for landing instructions. This person will be known as the Landing Zone Coordinator (LZC).
- e) The helicopter will circle overhead a number of times as the pilot orients himself to the landing site. During this time, any helpful information the LZC can provide to assist in landing, such as the identification of wires or other instructions, should be relayed to the pilot.
- f) Once the pilot is satisfied that the area is suitable for landing, he will notify the Landing Zone Coordinator that the aircraft is beginning its approach.

- g) When it is time for the aircraft to depart, the pilot will again establish communications with ground personnel so that any necessary instructions can be relayed.

13.4 Establishing a Landing Site

- a) The ideal landing site is a level 110-foot by 110-foot (or larger) grass or hard surface. This area should be free of debris such as gravel, litter, or snow that might become airborne by the rotor wash.
- b) The area selected should be one that is close to the accident site but does not jeopardize safety. Provide for an approach, which is free of obstructions such as trees, powerlines or light standards.
- c) Secure the perimeter of the landing site so that pedestrian or vehicular traffic will not enter the area.
- d) Keep all personnel at least 100 feet away from the perimeter of the landing zone. This includes fire fighters, police, first aid squad members and apparatus.
- e) Mark the four corners of the landing zone with the LZ light kit. During daylight hours mark the area with auxiliary lights whose beams are facing downward. Never shine lights at the helicopter as you may temporarily blind the pilot.
- f) Notify the pilot of all obstructions in the vicinity of the landing zone.
- g) Notify the pilot of the existence of any significant ground slope, ground conditions or uneven terrain.
- h) Select a site that is firm and dry. The helicopter's wheels will sink in very soft or muddy ground.
- i) All fire apparatus must be kept at least 100 feet from the landing zone. All flashing lights, (i.e. strobes), will be turned off, to avoid blinding helicopter personnel.
- j) The Fire Chief or Incident Commander will act as the Landing Zone Coordinator. In the absence of a fire department unit, a police official shall assume the responsibility of the LZC.
- k) The first due engine company has the responsibility of establishing the landing zone site in a location designated by the Landing Zone Coordinator.
- l) After establishing the landing zone, the crew from the first due engine company shall stand-by in full turnout gear, including SCCBA, in the event there is a crash or fire. The company shall remain at least 100 feet from the perimeter of the landing zone.
- m) The crew from the second due engine company shall stand-by at a hydrant or water source in the event a supply line must be stretched to the first due engine company.

- n) All additional responding units shall stage Level 2 at a sight designated by the Incident Commander.
- o) Be aware that if the pilot is uncomfortable with the landing site, an alternate site will be needed.
- p) In the event of a crash or fire, no fire company personnel shall approach the aircraft until the rotor blades have completely stopped rotating. Approach shall then be made under extreme caution.

13.5 Helicopter Stand-By

- a) When there is a reason to believe that an on scene flight may be needed, response time can be significantly reduced by requesting stand-by status of the helicopter.
- b) A request of helicopter stand-by should be made through the Police dispatch using the following numbers:

North: 1-800-332-4356

South: 1-800-544-4356

- c) The Jemstar Communications Center should be provided with the following information:

Communications Center Name and call back number

County and Municipality Name

Nature and location of the incident

Communications Frequency

- d) If it is determined the helicopter is not needed, it is important that the Jemstar Communications Center be notified as soon as possible to cancel the stand-by request.
- e) It should be noted that stand-by alerts do not take priority over a request for immediate response from another caller.

13.6 Safety

- a) Helicopter safety practices should be adhered to whether or not the aircraft's engines are running. Good safety practices are best developed if they are practiced at all times.
- b) Full turnout gear including helmets with eye shields in the down position shall be worn while the helicopter is landing, taking off, and at other times when the blades are turning.
- c) Personnel at the landing site should assemble in one place within the pilot's view.

- d) All personnel shall stay at least 100 feet from the perimeter of the helicopter-landing zone. Do not approach the aircraft until its rotor blades have stopped.
- e) Only approach the helicopter when instructed to do so by a flight crew member.
- f) No vehicle such as an ambulance, fire apparatus or police car is to be driven within 100 feet of the helicopter.
- g) Only approach the helicopter at a 30 to 45 degree angle from the front of the aircraft. The main rotor dips to its lowest point at the very front of the helicopter.
- h) Never approach or depart the helicopter from the uphill side when the aircraft is landed on or near a slope.
- i) Never go to the rear of the helicopter. The tail rotor is nearly invisible when turning.
- j) Never raise your hands above shoulder height, such as in the impulse when carrying an I.V. bag. Serious injury will result from any contact with the main rotor blades. Even when the main rotor is stopped, serious damage could result if a blade is struck by something hard such as an I.V. pole.
- k) Secure all loose objects, including sheets, pillows, mattresses, and even personal items such as hats, stethoscopes, or long hair.
- l) Do not run, and be particularly careful when the landing surface is wet.
- m) If you are at the landing site when the helicopter takes off, stay within the pilot's view, and as far away from the aircraft as possible.
- n) Smoking is prohibited within 100 feet of the helicopter.
- o) Do not assist the flight crew in loading the patient or transporting the patient unless requested to do so by a flight crewmember. All fire fighters must wear proper blood born protection equipment (i.e. latex gloves), when assisting EMS/medics.
- p) Doors of the aircraft are to be opened and closed by flight crewmembers only.
- q) Crowds must be kept back at least 100 feet from the aircraft at all times.
- r) Never shine lights toward the helicopter when it is landing or taking off. This may temporarily blind the pilot. This includes motion picture lights and flash bulbs.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

	ADMINISTRATIVE	POLICY
TITLE:	CWP Emergency Response	SO-14

COORDINATED WORKER PROTECTION EMERGENCY RESPONSE PLAN

Scope

Emergency Responders from this Fire Company will adhere to the content of this guide and the Coordinated Worker Protection Emergency Response Plan when responding to hazardous materials incidents under the scope of the Public Employees Occupational Safety and Health Standard, 29 CFR 1910.120.

The highest ranking Fire Company officer will ensure that the provisions of this Coordinated Worker Protection Emergency Response Plan are followed by all responding personnel.

Although many responders perform different levels of activities during hazardous materials incidents, (e.g. notification, defensive and/or offensive), the basic provisions of this guide will apply to all personnel.

14.1 Operational Protocol

- a) During a hazardous materials incident, members from the Fire Company may take only defensive actions throughout the incident response effort. Members of the company will only take those defensive actions that are consistent with their level of training under the New Jersey Hazardous Materials Emergency Response Training Program.
- b) Provisions that apply to all personnel are those that allow the taking defensive actions without actually trying to terminate the release or other cold/support zone activities as designated.
- c) Pre-Emergency Planning and with Outside Parties:
 - 1. Upon detection of a release, the following agency(s) will be notified to respond to the incident via direction of the Middle Township Dispatchers and/or Cape May County Communications Center, based on merits of dispatch information or Command at the scene.

a.	<u>Responding Department:</u>	<u>Contact via:</u>
	Middle Township Fire	911
	Middle Township Police	911
	Emergency Medical Services	911
	Middle Township OEM	911/ Dispatch
	County Health Department	911/ Dispatch
	County OEM	911/ Dispatch
	NJDEP Hotline	292-7172

2. A description of this notification procedure is the following:
 - a. If the Fire Company witnesses and/or discovers a hazardous materials release Dispatch will be notified via the appropriate radio network. Information regarding the identity of the material shall be made upwind, uphill and from an appropriate distance utilizing binoculars and the DOT NAERG, (If unknown use Guide 111). Relay appropriate information to Dispatch, establish command and initiate defensive measures when appropriate. Ensure response from Middle Township OEM and operate to best advantage until arrival of Middle Township OEM, County Health /or their agents.
3. The following procedures will be used to initiate hazardous materials response by personnel listed above:
 - a. Telephone contact/confirmation
 - b. Radio contact to Dispatch via appropriate radio Frequency.
 - c. The person initially notified, within this company, of the release will then notify Dispatch who will in turn initiate the response and notify the appropriate authorities.
 - d. Establish Command Post as described under IMS.

14.2 Chain of Command

- a. In the event of a hazardous materials incident, the following responding personnel and alternates are responsible for the functions as indicated below:

1. Incident Commander -	Chief or Senior Fire Officer.
2. Police Liaison -	Highest ranking Police Officer in place at CP and/or EOC
3. Evacuation Officer -	As assigned by the IC/UC.
4. Scene Security -	As assigned by the IC/UC.
5. Safety Official -	Departmental Safety Officer or a designee.
6. Fire Bureau -	As required by IC/UC
7. Entry Team -	County DOH and/or designee.
7. Back-up/Rescue -	County DOH and/or designee.
8. Support Personnel -	As assigned by IC/UC.
9. EMS Officer -	EMS personnel as assigned by the IC/UC.
10. PIO -	As assigned by the IC/UC.

11. Other - The IC/UC may expand and/or combine functions at his/her discretion based on needs of the incident.

- b. The following sources for initial information are to be used by the IC/UC or designee regarding the initiation of the Incident Action Plan:
1. Department of Transportation North American Emergency Response Guide 1996 (Utilize ERG 111 if unknown or as intelligence develops).
 2. Material Safety Data Sheets.
 3. Transportation via Driver/Operator.
 4. Site employees
 5. Fire Bureau records
 6. National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards.

14.3 Training

- a. All responding personnel shall have been trained or demonstrated competency appropriate to their level of activity in accordance with 29 CFR 1910.120. (A listing of such personnel will be available for review upon request).
- b. All personnel described above will receive annual refresher training or demonstrate competency at their appropriate training level.
- c. No responding personnel will engage in response activities beyond their respective level of training or equipment available. No member of the company will perform any activity designed to take an offensive posture, placing them, their PPE or, departmental equipment in contact with released chemical.

14.4 Communications

- a. The IC/UC is responsible for establishing and maintaining communication procedures during the hazardous materials incident for this Fire Company.
- b. Responding personnel from this company will follow communication procedures contained in Section (II) of the Coordinated Worker Protection Emergency Response Plan.
- c. The following is a description of any additional communication procedures utilized by this company during a hazardous materials incident.
- d. The Police Liaison shall remain at the CP and direct PD activities from that locale.

- e. The Law Enforcement Annex Coordinator shall report to the EOC when activated.

14.5 Emergency Recognition and Prevention

- a. The IC/UC will assure that emergency responders from the company are notified of the identity, associated health hazards, physical and chemical properties, etc., of the released substance prior to each hazardous materials response/entry. This will be accomplished using pre-entry briefings with all responding personnel using the appropriate references outlined in section (III) (C) in the Coordinated Worker Protection Emergency Response Plan.

14.6 Safe Distances and Places of Refuge

- a. Depending on the incident, should the company be first to arrive at the hazardous materials incident scene, the IC/UC will be responsible for establishing command centers, work zones, staging areas, safe distances and places of refuge for responding personnel from the company during each hazardous materials incident. Responding personnel will be informed of these zones at the onset of each hazardous materials incident.
- b. These zones will be clearly marked utilizing methods described in Section (IV) of the Coordinated Worker Protection Plan and using the following resources available to this department:
 - 1. Traffic Cones
 - 2. Barricade Tape
 - 3. Tarps
 - 4. Maps
 - 5. Flags

14.7 Site Security and Control

- a. Should the company be the first to arrive at the hazardous materials scene, the IC/UC will be responsible for limiting and controlling the number of personnel, (depending on training level, appropriate PPE and/or equipment), entering each zone, (e.g. cold, warm and/or hot), from the company, using the following equipment which is available at this department:
 - 1. Traffic Cones
 - 2. Barricade Tape
 - 3. Tarps
 - 4. Maps
 - 5. Flags

- b. A primary area of responsibility for the company is to limit access of unauthorized personnel while increasing egress of emergency response agencies to the scene, CP, staging area, etc.

14.8 PPE, and Emergency Equipment

- a. The IC/UC will be responsible for ensuring that responding personnel, from this company, are provided with and use PPE and respiratory protection as described on Section (VI) of the Coordinated Worker Protection Emergency Response Plan.
- b. During each hazardous materials incident, the following PPE, respiratory protection and emergency equipment is available for use:

<u>PPE</u>	<u>Located</u>
Structural Fire-Fighting Gear	Issued to all responding personnel
PASS Alarms, if available	Issued to all responding personnel, if available
Accountability Tags	Issued to all responding personnel
Chemical Protective Clothing	Health Department
Decontamination Equipment	Health Department
Containment Supplies	Health Department
Termination Equipment Kits	Health Department
Monitoring Equipment	Health Department
Positive-Pressure SCBA	All responding Apparatus
In-Line Positive-Pressure SCBA	County/ Fire Company
Confined Space Rescue Equip.	Fire Company

14.9 Emergency Alerting and Response Procedures

- a. In the event of an emergency during the hazardous materials incident, responding personnel of the company will follow emergency alerting procedures contained in SECTION (VII) of the Coordinated Worker Protection Emergency Response Plan.

14.10 Evacuation Routes and Procedures for Responding Personnel

- a. If this company is the first to arrive at a hazardous materials incident, the IC/UC will be responsible for establishing evacuation routes and evacuation notification procedures at the onset of the response for appropriate exiting of emergency responders. Alternate routes, should normal exiting routes become blocked, will also be established.

14.11 Emergency Medical Treatment

- a. If the company is the first to arrive at a hazardous materials incident scene, EMS must be set-up prior to any containment, confinement, or diversion is attempted.

14.12 Decontamination

- a. All responders will be properly decontaminated upon exiting the hot/exclusion zone as described in Section (X) of the Coordinated Worker Protection Emergency Response Plan. The following disposable outer garments are available at this company and will be used, where feasible, to reduce contamination of PPE and increase the effectiveness of decontamination procedures:
 - 1. Disposable Tyvek/Saranex
 - 2. Disposable Gloves
 - 3. Disposable Boot/ Covers

14.13 Critique of Response and Follow-up/ Review

- a. Following each incident the Fire Company IC and the Emergency Management Coordinator will assemble all responding personnel to review and critique all response activities that occurred. Documentation regarding the critique and follow-up procedures will be maintained by the Chief of the Company.
- b. The Responding Department Appendix will be updated and modified regularly based on the following conditions:
 - 1. New hazardous substances are produced or that can be encountered.
 - 2. Personnel roles, training levels and functions are changed.
 - 3. Outside party responsibilities are changed.
 - 4. Based on findings of critiques.
 - 5. At the discretion of the Chief and OEM/EMC.
 - 6. Annually reviewed at a minimum.

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VOLUNTEER FIRE COMPANY #1 of Middle Township
STANDARD OPERATING GUIDE

PROCEDURE:	SPECIAL OPERATIONS	POLICY SO-15
TITLE:	Apparatus Driver / Operators Training	

PURPOSE

The purpose of this Guide is to acknowledge the “STANDARD FOR FIRE APPARATUS DRIVER / OPERATOR” of Fire District #1 of Middle Township & Volunteer Fire Company No. 1 of Middle Township, Stations 70 & 71. This Standard adopted in January 1995 by the Board of Fire Commissioners, Fire District #1 of Middle Township directs how all Fire Apparatus Driver/ Operators are to be trained and the qualifications required.

The intent of the Standard for Fire Apparatus Driver/ Operator is to develop performance standards in such a clear and concise manner that they can be used to determine without doubt that any person so measured does truly possess the skills to be a fire apparatus driver/ operator.

Volunteer Fire Company #1 of Middle Township has enacted this Standard Operating Guideline to comply with the Standard as adopted by the Fire District Commission noted above. The fire company and its members guarantee that adherence to this guideline will be complied with at all times. The fire company and its members understand that this guide may not be altered unless it is to increase the requirements higher than those enacted by the above Fire Commission.

NOTICE: An asterisk (*) following the number or letter designating a paragraph indicates explanatory material on that paragraph in Appendix A.

Part 1

Administration

1-1 Scope

This standard identifies the levels of competence required of the fire apparatus driver/ operator.

1-2 Purpose

The purpose of this standard is to specify, in terms of performance objectives, the minimum requirements of competence required for service as a fire apparatus driver/ operator.

It is not the intent of this standard to restrict the Fire Company from exceeding these minimum requirements.

This standard shall cover the requirements for driver/ operators of fire department pumpers, mobile water supply (exceeding 1000 gal.) and aerial -equipped apparatus.

It is not the intent of this standard to restrict driver/operators to this function only. While not functioning as a driver/operator; all driver/ operators shall perform their primary duty of firefighter as directed by the Authority Having Jurisdiction.

It is not the intent of this standard to be the Standard Operating Procedures (SOP) for fire apparatus on the fire ground. The SOP shall be written as a separate Standard as determined by the Authority Having Jurisdiction.

1-3 General

1-3.1 The fire apparatus driver/operator shall be legally licensed in the State of New Jersey.

1-3.2* The fire apparatus driver/operator shall be subject to periodic evaluations, by the authority having jurisdiction consisting of:

- (a) Periodic Medical Evaluation, to determine physical ability adequate for performance of duties as an operator of fire department vehicles.
- (b) Periodic Driving Record Review to determine ability for performance of duties as an operator of fire department vehicles.

1-3.3 All fire fighters who drive fire department vehicles or apparatus under emergency response conditions shall meet the objectives specified in Chapter 2 of this standard.

1-3.4 It is not the intent of this Standard to have an effect or render invalid any rank, qualification or appointment acquired prior to the adoption of this Standard. An incumbent of a position established prior to adoption of this Standard shall be considered qualified and eligible in accordance with this Standard. Through training all driver/ operators shall be up to the Standard.

1-3.5 The Fire District **recommends**, but **does not require**, that the fire fighter shall also meet the requirements of Fire Fighter II before being certified as a fire apparatus driven operator.

The Fire District **requires** that in order to be certified as a driven operator the following requirements must be met:

1. The fire fighter shall have been an active member of Volunteer Fire Company No. 1 of Middle Township or another bona fide volunteer or paid fire company for a period of two (2) years. During this two (2) year period, the fire fighter shall have participated in basic hose, nozzle, and ladder operations in actual fire emergencies.

2. The fire fighter shall have successfully completed Firefighter I or be “grandfathered” at the Firefighter I level in accordance with New Jersey policy.
 3. The driver/ operator designee shall serve a minimum six-month training period under the supervision of an experienced driver/ operator designated by the Chief of the Fire Company. A new member who has served as a driver operator in another fire company may be required to serve a training period as designated by the Chief in order to be qualified in this fire company’s standard operating procedures.
 4. The driver/ operator must complete the Fire Service Defensive Driving course! and periodic update course under the instruction of State Certified Instructors provided by the Fire District.
 5. The driver/ operator must complete the New Jersey State Fire College Pump Operations course within two (2) years of having been certified as a driver/ operator.
 6. The Chief of the Fire Company is responsible for the selection and assigning of all driver/ operators.
- 1-3.6 The fire fighter shall meet all the requirements of Chapters 1 and 2 of this standard before being certified as a fire apparatus driver/operator, under Chapter 3&4.
- 1-3.7 The fire apparatus driver/operator who is required to operate an apparatus equipped with an aerial device shall also meet the requirements of Chapter 4 of this standard.
- 1-3.7 This Standard was extracted from NFPA 1002 and any reference may be made there.
- 1-3.9 Each of the performance objectives for the fire apparatus driver/operator shall meet the following criteria: each objective shall be performed swiftly, safely, with competence, and in its entirety.
- 1-3.10 It is not required for the objectives to be mastered in the order they appear. The training program shall establish the instructional priority and the training program content to prepare individuals to meet the performance objectives of this standard.
- 1-3.11 Performance objectives for qualifications covered by this standard shall be evaluated by individuals from the Authority Having Jurisdiction.
- 1-3.12 Performance of objectives for qualification, when the word “demonstrate” is used in this standard, shall require that actual performance and operation be accomplished unless otherwise indicated within the specific objective. Simulation, explanation, and illustration may be substituted when actual operation is not feasible.

1-4 Definitions

Aerial Apparatus - A piece of fire apparatus with a permanently mounted, power-operate elevating device.

Approved - Acceptable to the “authority having jurisdiction”.

Authority Having Jurisdiction - The “authority having jurisdiction” is the organization, company, office or individual responsible for “approving” equipment, personnel, an installation or a procedure.

Demonstrate - To show by actual use.

Explain - To define by providing the disclosure of underlying meaning through the application of special knowledge or insight.

Fire Apparatus - Fire vehicles used for fire department operations which, in this standard also include fire department pumpers, mobile water supply apparatus, and aerial apparatus.

Fire Apparatus Driver/Operator - The Fire Fighter who has demonstrated the knowledge to perform the objectives specified in 1-3.3 of this standard.

Fire Department - The organization that provides fire rescue, fire suppression, and fire prevention services, or any other function at the direction of the “authority having jurisdiction”.

Fire Department Pumper - A piece of apparatus with a permanently mounted fire pump that has a rated discharge capacity of 250 gpm or greater.

Fire Department Vehicle - Any motorized vehicle assigned to the fire department.

Fire Fighter II - The member of a fire department who has fulfilled the requirements of Fire Fighter II.

Fire Pump - Any pump mounted permanently on a piece of fire apparatus, with a rated discharge capacity of 250 gallons per minute or greater.

Identify - To physically select, indicate, or explain verbally or in writing, using standard terms recognized by the fire service.

Mobile water supply apparatus - A piece of fire apparatus whose primary purpose is to transport water in a tank with 1000 gallon or greater capacity. It shall include a pump.

Objective - A goal achieved through the attainment of a skill knowledge, or both, which can be observed or measured.

Qualified - Having satisfactorily completed the requirements of the objectives.

Safely - To perform the objective without injury to self or to others, or damage to fire department vehicles and equipment.

Shall - Indicates a mandatory requirement.

Swiftly - The time, as determined by the authority having jurisdiction, that it takes a qualified fire apparatus driver/operator to perform the objective satisfactorily.

With Competence - Possessing knowledge, skills, and judgment needed to perform the indicated objective satisfactorily or safely.

Part 2

Basic Driver/Operator Requirements

2-1 Preventive Maintenance

2-1.1* The fire apparatus driver/operator shall demonstrate the performance of routine tests, inspections, and servicing functions required to assure the operational status of fire department vehicles, including:

- (a) battery check
- (b) braking system
- (c) coolant system
- (d) electrical system
- (e) fueling
- (f) hydraulic fluids
- (g) lubrication
- (h) oil levels
- (i) tire care
- (j) steering system
- (k) tools, appliances, and equipment

2-1.2 The fire apparatus driver/operator shall demonstrate, the recording and reporting, as specified by the authority having jurisdiction, of all servicing functions.

2.2 Driving/ Operating

2.2.1 The fire apparatus driver/operator shall identify all applicable state and local laws of the authority having jurisdiction, including rules and regulations governing the safe driving and operating of fire department vehicles.

2-2.2 The fire apparatus driver/operator, given a fire department vehicle, shall identify all automotive gauges and demonstrate their use.

2.2.3* The fire apparatus driver/operator, given a fire department vehicle shall demonstrate the following driving skills:

- (a) serpentine
- (b) alley dock
- (c) opposite alley pull in
- (d) diminishing clearance
- (e) straight line
- (f) turn around
- (g) lane change
- (h) stopping procedures
- (i) parking procedures

2.2.4* The fire apparatus driver/ operator shall identify and demonstrate the theory and principles of defensive driving techniques, both emergency and non-emergency.

2-2.5 The fire apparatus driver/ operator shall, according to the authority having jurisdiction, identify all applicable state and local laws, including rules and regulations, governing the safe driving and operation of all fire department vehicles of the authority having jurisdiction, on emergency response.

2-2.6 The fire apparatus driver/ operator, under emergency conditions, shall demonstrate the legal and safe driving, positioning, and operating of assigned fire, department vehicles of the authority having jurisdiction.

2-2.7 The fire apparatus driver/ operator shall describe the safety precautions necessary when driving during adverse environmental conditions.

2-2.8 The fire apparatus driven operator shall describe the effects on vehicle control of (a) breaking reaction time, (b) load control factors, (c) general steering reactions, along with (d) take a general knowledge test on the air brake system of trucks.

Part 3

Apparatus Equipped with a Fire Pump

3-1 General

3-1.1 The fire apparatus driver/ operator shall demonstrate the performance of routine test, inspections, and servicing functions required to assure the operational status of fire department pumpers, including:

- (a) battery check
- (b) booster tank level (if applicable)
- (c) braking system
- (d) coolant system
- (e) electrical system
- (f) hydraulic fluids
- (g) fueling

- (h) lubrication
 - (i) oil levels
 - (j) pumping systems
 - (k) steering systems
 - (l) tire care
 - (m) tools, appliances, and equipment
- 3-1.2 The fire apparatus driver/operator shall identify the operation principles of single - stage and multiple - stage centrifugal fire pumps.
- 3-1.3 The fire apparatus driver/ operator, given pump models or diagrams, shall identify the major components and trace the flow of water through single -stage and multiple -stage centrifical pumps.
- 3-1.4 The fire apparatus driven operator shall identify the percentages of rated capacity, rated pressures, and the capacity in gallons per minute (gpm) at the rated pressures a fire department pumper is designed to deliver.
- 3-1.5 The fire apparatus driver/ operator, given a fire department pumper and the necessary equipment, shall demonstrate an annual pumper service test.
- 3-1.6 The fire apparatus driver/ operator shall identify the following conditions that may result in possible pumper apparatus damage or unsafe operation, and identify corrective measurers:
- (a) cavitation
 - (b) leaking fuel, oil, or water
 - (c) overheating
 - (d) unusual noises
 - (e) vibrations
 - (f) water hammer.
- 3-1.7 The fire apparatus driver/ operator, given a fire department pumper, shall demonstrate the following driving test:
- (a) serpentine
 - (b) alley dock
 - (c) opposite alley pull in
 - (d) diminishing clearance
 - (e) straight line
 - (f) turn around
 - (g) lane change
 - (h) stopping procedures

3-2 Water Supply

- 3-2.1 The fire apparatus driver/ operator shall identify incrustation, and sedimentation, and their effects on the carrying capacities of water mains.

- 3-2.2 The fire apparatus driver/ operator shall identify the types of hydrants used within the jurisdiction, including descriptions of:
- (a) connecting size and type of thread of discharge openings
 - (b) construction and operation of drain valve
 - (c) direction of operation of the main valve
- 3-2.3 The fire apparatus driver/ operator shall identify the available fire flows in various areas specified by the authority having jurisdiction.
- 3-2.4 The fire apparatus driver/ operator shall identify problems related to flows from dead - end water mains.
- 3-2.5 The fire apparatus driver/ operator shall identify at least two causes of increased resistance or friction loss with water flowing in water mains.
- 3-2.6 The fire apparatus driver/ operator shall identify who is responsible for water system maintenance, use, and testing.
- 3-2.6 The fire apparatus driver/ operator shall identify three alternative emergency water supply sources.
- 3-2.7 The fire apparatus driver/ operator shall identify the components of mobile water supply operations.

3-3 Sprinklers and Standpipes

- 3-3.1 The fire apparatus driver/ operator, given a check valve on the fire department connection to an automatic sprinkler system, shall demonstrate the direction of flow through the valve.
- 3-3.2 The fire apparatus driver/ operator will explain the method specified by the authority having jurisdiction for augmenting water supplies to sprinkler systems.
- 3-3.3 The fire apparatus driver/ operator shall identify the number of sprinkler heads that can be adequately supplied by fire department pumpers.
- 3-3.4 The fire apparatus driver/ operator, given specific information of a sprinkler system or dry standpipe system, shall calculate the pump discharge pressure, and procedures to adequately supply water to that system.

3-4 Hydraulic Calculations

- 3-4.1 The fire apparatus driver/ operator shall explain the principles of friction loss as they relate to:
- (a) internal diameter of hose
 - (b) length of hose line
 - (c) manner in which hose lines are laid
 - (d) physical condition of hose
 - (e) pressure

- (f) use of appliances
 - (g) use of multiple hose lines
 - (h) use of various nozzles
 - (i) velocity of flow
- 3-4.2 The fire apparatus driver/ operator shall identify the following types of fluid pressure encountered in the fire service:
- (a) flow pressure
 - (b) normal operating pressure
 - (c) residual pressure
 - (d) static pressure.
- 3-4.3 The fire apparatus driven operator shall identify the following terms that relate to the basic principles of fire service hydraulics:
- (a) atmospheric pressure
 - (b) capacity
 - (c) displacement
 - (d) flow (gpm)
 - (e) friction loss
 - (f) hydrant pressure
 - (g) nozzle reaction
 - (h) pounds per square inch (psi)
 - (i) pump discharge pressure
 - (j) vacuum
 - (k) velocity
 - (l) water hammer.
- 3-4.4 The fire apparatus driven operator shall demonstrate the use of basic mathematical calculations as required to solve fire department pumper hydraulics problems.
- 3-4.5 Reserved
- 3-4.6 The fire apparatus driver/ operator, given a series of fireground situations and using the written formulas specified by the authority having jurisdiction, shall determine:
- (a) nozzle or pump discharge pressures when the length and size of hose, and size of nozzle are given.
 - (b) water flow in gallons per minute (gpm) when the diameter of the orifice and pressure at the orifice are given.
 - (c) friction loss in the supply and attack lines, used by the authority having jurisdiction, when the gpm flow is given.
 - (d) friction loss in Siamese lines when size of hose and gpm flow are given.

- (e) friction loss in wyed lines when size of hose and gpm flow are given.
 - (f) friction loss in multiple lines when the size of hose and gpm flow are given.
 - (g) an estimated remaining available volume from a hydrant while pumping a given volume.
- 3-4.7 The fire apparatus driver/ operator, given a fireground situation, shall demonstrate by explaining, the reaction of hand and master streams at various pressures.
- 3-4.8 The fire apparatus driven operator, given a fireground situation, shall mentally calculate correct pump discharge pressure, gpm, friction loss, and nozzle pressure, using formulas specified by the authority having jurisdiction.
- 3-4.8 The fire apparatus driver/ operator, given the necessary information, shall compute the maximum lift of a fire department pumper.

3-5 Apparatus Systems

- 3-5.1 The fire apparatus driver/ operator shall identify two methods of power transfer from the vehicle engine to the pump.
- 3-5.2 The fire apparatus driver/ operator shall identify the theory and principles of pumper priming systems.
- 3-5.2 The fire apparatus driver/ operator shall identify the theory and principles of pumper pressure relief systems and pressure control governors.
- 3-5.4 The fire apparatus driver/ operator, given a fire department pumper, shall identify all pump gauges and demonstrate their use.
- 3-5.5 The fire apparatus driver/ operator shall identify the auxiliary cooling systems and explain their function.

3-6 Operations

- 3-6.1 The fire apparatus driver/ operator, given a fire department pumper used by the authority having jurisdiction, shall demonstrate the method(s) of power transfer from vehicle engine to the pump
- 3.6.2 The fire apparatus driver/ operator, given a fire department pumper shall produce effective hand and master streams specified by the authority having jurisdiction.
- 3.6.3 The fire apparatus driven operator, given a fire department pumper, shall draft water, and demonstrate a systems check when the pumper will not draft.
- 3-6.4 The fire apparatus driver/ operator, shall demonstrate the operations of the different types of fire department pumpers used by the authority having jurisdiction.

- 3-6.5 The fire apparatus driver/ operator, given a fire department pumper, shall properly position, set up the apparatus, and perform the following operations:
- (a) pump at maximum rated capacity from a hydrant
 - (b) pump at maximum delivery rate from the apparatus water tank
 - (c) pump at maximum rated capacity from draft
 - (d) pump in a relay operation
- 3-6.6 The fire apparatus driver/ operator, given a fire department pumper and a simulated fire scene, shall demonstrate proper maneuvering and positioning of the apparatus to function from the given source of water.
- 3-6.7 The fire apparatus driver/ operator, given a fire department pumper with a multiple - stage pump, shall demonstrate the operation of the volume/ pressure transfer valve under actual pumping conditions.
- 3-6.8 The fire apparatus driver/ operator, given a fire department pumper, shall locate, identify, and demonstrate the operation of all equipment carried on or attached to that pumper.
- 3-6.9 The fire apparatus driver/ operator shall identify the characteristics and limitations of hard and soft pumper supply hose.
- 3-6.10 The fire apparatus driver/ operator, given a selection of nozzles and tips, shall identify the type, design, operation, nozzle pressure, and flow in gpm for proper operation of each.
- 3-6.11 The fire apparatus driver/ operator, given a fire department pumper, shall demonstrate the operation of the pumper pressure relief system, or the pressure control governor, or both.
- 3-6.12 The fire apparatus driver/ operator, given a fire department pumper, shall demonstrate the operation of the auxiliary cooling system.
- 3-6.13 The fire apparatus driver/ operator, given a series of fireground situations, shall identify the capabilities and limitations of the water supply operation.

Part 4

Apparatus Equipped with an Aerial Device

4-1 General

- 4-1.1 The fire apparatus driven operator shall demonstrate the performance of routine test, inspections, and servicing functions required to assure the operational status of fire department aerial ladder apparatus, including:
- (a) battery check
 - (b) booster tank level (if applicable)
 - (c) braking system

- (d) cable systems
- (e) coolant system
- (f) electrical system
- (g) fueling
- (h) hydraulic systems
- (i) lubrication
- (j) stabilizing systems
- (k) steering systems
- (l) oil levels (engine and hydraulic)
- (m) tire care
- (n) tools, appliances, and equipment

4-1.2 The fire apparatus driven operator shall identify the following conditions indicating possible aerial apparatus malfunction(s) and identify corrective measures for overcoming the malfunction(s):

- (a) leaking fuel, motor oil, hydraulic fluid, or water
- (b) overheating
- (c) unusual noises
- (d) vibrations.

4-1.3 The fire apparatus driver/ operator shall identify the factors affecting the effective range of elevated master streams.

4-1.4 The fire apparatus driver/ operator shall identify the causes and hazards of nozzle reaction of elevated master streams.

4-1.5 The fire apparatus driver/ operator shall identify the aerial device test and shall explain the test procedures according to the aerial manufacturer and NFPA 1904.

4-1.6 The fire apparatus driver/ operator; given an aerial apparatus, shall demonstrate the following driving tests:

- (a) serpentine
- (b) alley dock
- (c) opposite alley pull in
- (d) diminishing clearance
- (e) straight line
- (f) turn around
- (g) lane change
- (h) stopping procedures
- (i) parking procedures.

4-2 Apparatus Systems

4-2.1 The fire apparatus driver/ operator, given an aerial apparatus, shall identify all gauges and demonstrate their use.

4-2.2 The fire apparatus driver/ operator, given an aerial apparatus, shall identify the principles of that aerial apparatus hydraulic pressure relief system.

4-2.3 The fire apparatus driver/ operator shall identify and demonstrate the operating procedures of aerial apparatus in use by the authority having jurisdiction, in the following areas:

- (a) cable systems (if applicable)
- (b) communication systems.
- (c) electrical systems
- (d) emergency operating systems
- (e) hydraulic systems
- (f) locking devices
- (g) manual systems
- (h) stabilizing systems

4-2.4 The fire apparatus driver/ operator, given an aerial apparatus, shall identify the safety systems for the aerial device as specified by the manufacturer.

4-3 Operations

4-3.1 The fire apparatus driven operator shall demonstrate safe operational limitations of aerial ladder apparatus, in use by the authority having jurisdiction, in the following areas:

- (a) angle of inclination
- (b) ground conditions
- (c) master stream
- (d) reach
- (e) weather conditions
- (f) weight load limits
- (g) working height.

4-3.2 The fire apparatus driver/ operator shall demonstrate all safety procedures for any given operation involving an aerial apparatus specified by the authority having jurisdiction.

4-3.3 The fire apparatus driver/ operator, given an aerial apparatus in use by the authority having jurisdiction and a simulated emergency scene, shall demonstrate proper maneuvering and positioning of the apparatus for emergency operations.

4-3.4 The fire apparatus driver/ operator, given an aerial ladder apparatus and, a simulated emergency scene with the apparatus properly positioned, shall demonstrate the applicable procedures for stabilizing the apparatus in the following areas:

- (a) breaking
- (b) outriggers or ground jacks
- (c) wheel chocks

4-3.5 The fire apparatus driver/ operator, given an aerial apparatus and a simulated emergency scene with the apparatus properly positioned, shall demonstrate operating the aerial device in:

- (a) raising
- (b) lowering
- (c) extending
- (d) retracting
- (e) locking
- (f) unlocking
- (g) rotating
- (h) placing to roof
- (i) positioning to window

- 4-3.6 The fire apparatus driver/ operator, given an aerial apparatus, shall demonstrate the emergency operating procedures necessary to control the aerial device following equipment or power failure.
- 4-3.7 The fire apparatus driver, given an aerial apparatus, shall demonstrate the method of transfer from the vehicle to the hydraulic or power take - off system for operation of the device.
- 4-3.8*** The fire apparatus driver/ operator, given an aerial apparatus, shall demonstrate the proper application of lifting and positioning equipment using the aerial device.
- 4-3.9 The fire apparatus driver/ operator, given an aerial apparatus, shall locate, identify and demonstrate the operation of all equipment carried on or attached to that aerial apparatus.

Appendix A

- A-1-3.2 Although the frequency of the medical/ driving record review evaluations are not specified, it is recommended that they be given on at least an annual basis.
- A-2-1.1 These objectives are for general knowledge. Routine tests, inspections, and service functions will be preformed by the person designated by the authority having jurisdiction.
- A-2-2.3
- (a) **Serpentine** - The serpentine exercise measures a driver's ability to steer the apparatus in close limits without stopping.
 - (b) **Alley Dock** - The alley dock exercise measures a drivers ability to drive past a simulated dock or stall and then back the apparatus into the space provided and stop smoothly.
 - (c) **Opposite Alley** - The opposite alley exercise measures a driver's ability to steer the apparatus within close limits.
 - (d) **Diminishing Clearance** - This driving exercise measures a driver's ability to steer the apparatus in a straight line, to judge distances from wheel to object, and to stop at a finish line.
 - (e) **Straight Line** - The straight-line exercise further measures a driver's ability to travel continuously in one direction without weaving.
 - (f) **Turning Around** - Fire apparatus, particularly fire department pumpers, often need to turn around to complete an operation.

- (g) **Lane Change** - In the lane change exercise, the driver's ability to change lanes while moving at a constant speed is tested.
- (h) **Stopping Procedures** - Used to determine if the driver preceding at a constant speed can stop the apparatus at a given point.
- (i) **Parking Procedures** - Done properly and safely.

A-2-2.4 The fire apparatus driver/ operator shall attend the Defensive Driving Course before attempting any on road operation of Fire Department Vehicles; as provided by the Authority having Jurisdiction

A-4-3.8 The fire apparatus driven operator should be familiar with properly and safely securing any equipment to be raised using the aerial device, and should be knowledgeable of the manufacturer's load stress recommendations.



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