



FAUQUIER COUNTY

SINGLE FAMILY DWELLINGS FIRE OPERATIONS MANUAL

*Presented by the Fauquier County
Fire Operations Group*

SFM 08/17/08

EFFECTIVE OCTOBER 1ST, 2008

OBJECTIVES

- Describe SFD in NOVA and how it works in Fauquier County.
- Point out construction features and dangers.
- Describe hazards associated with these structures.
- Establish standard tactics to include initial incident command procedures.
- Establish tactics for engines, truck, and rescue companies in these structures
- Reduce loss of life and property in SFD fires

Background

- This manual was used from the NOVA Manual format and adapted to Fauquier County's needs. (Note addendum to front of SFD Manual that we handed out.)
- The manuals intent is to provide knowledge in building construction, apparatus positions/assignments, tactics, and initial command procedures.
- This presentation does not cover all elements in the manual - **PLEASE READ THE MANUAL!**

Definition of SFD

“A detached structure constructed to house one family as a place of residence.”

NOTE: SFD's are not considered townhouses, duplexes, apartments, etc. for this manual-though tactics do not vary substantially.

Types of SFD

- There are 8 main styles of single family dwellings used to describe houses in this manual/region.
- This manual does not describe styles or construction of townhouses, duplex's, piggybacks, apartment's, etc. as they will be covered in a different manual.

Types of SFD

1 - story Rancher
(with an attached garage)



Types of SFD

1-story Rambler

Notice the bump out on the left side, making it a Rambler.



Types of SFD

2-story colonial style
(with a two car attached garage)



Types of SFD

2-story Split Level



Types of SFD

2-story Split Foyer
(NOT Split Level!)



Types of SFD

1-3 Story Unique Design



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Types of SFD

1 ½ story
(Cape Cod Style)



KNEE
WALLS!

Types of SFD

2 Story Balloon Frame

Windows in-line may indicate this style of construction.



Notice long spans and void spaces which allow for fire extension in all directions.

Types of SFD

“McMansion” Style

(Note: Not a style according to manual but will be used in future to describe larger “footprint” houses that exceed 3,000 sq. feet.)



SFD Building Construction

- **Type of construction:** Typically type V wood frame. May be balloon frame also.
- **Roof framing and style:** 2 styles, Conventional (ridge-pole) and lightweight (wood truss). Roof decking generally 4x8 foot sheathing. May be peaked or gable style.

SFD Building Construction

- **Attic Style:** 2 styles, non-finished without a full floor or finished and floored. Space may be used for storage or living areas! May be accessed by pull down stairs or built in stairs.
- **Walls:** Generally 2x4's for framing, sheathing may be insulated material, wood, or other.

SFD Building Construction

- **Floors:** floor beams of 2 types- wood timbers or steel "I" beams, supported by steel columns, masonry walls, or piers to support them.
- **Floor Decking:** 2 types- hardwood boards or plywood sheets. Floor covering varies but may be carpet, tile, vinyl, etc.

SFD Building Construction

- **Basements:** May be on a concrete slab, crawl space, or full basement.
- **Windows:** Double hung most common style, and could be single, double, or triple thickness. Casement windows may exist on older houses (treat like barred windows).

SFD Building Construction

- **Doors:** Exterior doors generally 2 types- solid wood or insulated metal (inward opening).
- Interior doors are commonly hollow-core wood doors (may be inward opening for bathrooms/bedrooms, and outward may be closets or stairs leading to a basement).

SFD Building Construction

- **Garages:** May be attached or detached. NOT required to be fire rated if attached to house.
- **General Features:** Usually the long wall will be the load bearing wall. Chimneys may be masonry or metal (zero-clearance).

Life Hazards

- Most deaths occur in single family dwellings. Potential for trapped occupants exists at all times of the day.
- Most fires in SFD's starts in the vicinity of cooking or heating appliances.
- The possibility exists that the house is not being used as designed (business, etc.)

Fire Hazards

- Considered “low” fire loading which will require a flow rate of 10 gpm per 100 sq. feet ($1\frac{3}{4}$ should be the minimum size handline used).

- Exterior siding (highly combustible) may be found which will add significantly to the fire loading.

Other Hazards

- The potential for collapse exists as a result of fire due to 2 distinct factors: presence of lightweight construction and/or fire attacking the structural components or contents.

Fire Operations

■ Strategic Factors

- Life Safety
- Incident Stabilization
- Property Conservation
- RECEO
- 2 in/2 out (Remember OSHA/VOSHA says this is the law!!)

Resources

- 4 Engine Companies
- 1 Special Service Company (Truck or Rescue Company)
- 1 EMS Transport Unit
- 1 Battalion Supervisor/Command Officer
- If non-hydrant area, 5th Engine and 3 Tankers will be added.

FIRST ENGINE

- Position Side A (fire side), short or past the structure leaving room for Special Services.
- Supply Lines/Water Supply Info.
- On-scene report followed by a size-up/situational report to include a command decision (transfer or retain)
- Initial attack line



SECOND ENGINE

- Water supply for first engine
- Backup line/line above
- Officer may need to assume command
- If rural water, ensure fill site/water supply.

THIRD ENGINE

- Position for second water supply
 - Forward lay or reverse lay (must announce)
- Check side Charlie
- Check for extension
- Exposure line
- If Rural water, Officer may need to be the Water Supply Officer at Dump site.
- Dump water into system if Rural water ops.



FOURTH ENGINE

- RIT
- Driver to supply third engine if possible/needed.
- If rural water, dump water into system.
- Crew may assist with “outside” duties such as ladders and utilities.

Fifth Engine (NON-Hydrant Area)

- Assumes the fill site role unless otherwise directed by the Incident Commander/Command Officer.



Tanker (NON-Hydrant Area)

- Drop applicable equipment at dump site/fill site (such as porta-tanks, adapters, etc.)
- Dump water into system
- Maintain water supply shuttle unless otherwise directed by the Water Supply Officer.

Special Service (Truck Company or Rescue Squad)

- Truck Company Side Alpha (Rescue Squad shall position out of the way leaving room for a truck company if needed).
- Force Entry, Search, & Vent.
- Ladders, Vent, & Utilities.



The Rescue shall position to allow rapid access to the structure while maintaining access and egress to the incident for additional resources!

EMS UNIT

- Position for rapid egress
- Aide Station/Rehab
- If trained and equipped, may be used for suppression efforts (IC should ensure they are replaced with another unit)



Battalion Supervisor/Command Officer

- Assume command (or aid current IC)
- Ensure accountability
- Track resources and assignments
- Overall safety of the incident (consider assigning a Safety Officer)

Engine Company Tactics

■ Water Supply

- Forward/Reverse Lay
- Split Lay
- Own Water (hydrant)

■ Water Supply plan must be announced (ie. Using a hydrant or Rural Water Supply).

Engine Company Tactics

■ On-Scene Report

- Unit ID (confirmation of address if readily available).
- Type of structure
- What is evident
- Water Supply Plan (if not previously reported)



On-Scene Report Example

- "Fauquier, Engine 10 is on the scene of a 2 story, Split Level House, smoke showing from side Alpha and Bravo, we have our own water supply".

Note: This report is only an initial report, a size-up will be given through the situation report!

Engine Company Tactics

- Size-Up and Situation Report
 - View all sides
- Note location, Extent of fire/smoke
- Tactics to implement if different than initial actions described earlier.
- Give initial unit actions/location.
- Additional resources needed?
- Command Statement
 - (Transfer or retain?)



Size-Up/Situational Report Example

- "Engine 10 to Fauquier, confirming we do have a 2 story split level house with smoke showing from sides Alpha and Bravo, entering side Alpha for fire attack with a crew of 2, with an 1 ¾ handline, advise the Battalion I need to transfer command as soon as possible"

Note: No other resources are needed (such as a 2nd alarm), and it is the understanding that the other incoming units will take their assigned positions/assignments!!

Engine Company Tactics

- **Initial line-** First Engine
- **Back-up line-** Second Engine (assists First Engine with handline if needed).
- **Line above the fire-** Protecting for search/extension.
- **Basement Fires-** Through outside basement entrance if possible, and line at top of steps to hold. May have to attack using interior stairs.
- **Garage Fires-** Line for garage, and a line for the house.
- **Attic Fires-** Soffit sweeps, access issues.

Truck/Rescue Company Tactics

- Positioning (Rescue Squad...)
- Initial Actions
 - Forcible Entry
 - Rescue and Primary Search
 - Ventilation
 - Ladder Deployment



- Questions?
- Comments?
- Concerns?

- EFFECTIVE OCTOBER 1ST, 2008!

- Thank you for your attention.