

Structure Fire Module: NFIRS-3

Objectives

After completing the Structure Fire Module the student will be able to:

1. Describe when the Structure Fire Module is to be used.
 2. Demonstrate how to correctly complete various sections of the Structure Fire Module, given scenarios of hypothetical incidents.
-

Table of Contents

Pretest #3 - Structure Fire Module	3-3
Using the Structure Fire Module	3-4
Section I: Structure Type, Building Status, Building Height, Main Floor Size	3-4
Section J: Fire Origin, Fire Spread, Number of Stories Damaged by Flame	3-6
Section K: Material Contributing Most to Flame Spread	3-7
Section L: Presence of Detectors, Detector Type, Detector Power Supply, Detector Operation, Detector Effectiveness, Detector Failure Reason	3-8
Section M: Presence of Automatic Extinguishing System, Type of Automatic Extinguishing System, Operation of Automatic Extinguishing System, Number of Sprinkler Heads Operating, Reason for Automatic Extinguishing System Failure	3-10
SUMMARY	3-11
EXAMPLE: Residential Fire	3-12
EXERCISE SCENARIO 3-1: Warehouse Fire	3-14
EXERCISE SCENARIO 3-2: Cary Street Fire	3-17
Structure Module Test	3-22

Pretest #3 - Structure Fire Module

1. All structures are buildings.
 - (a) True.
 - (b) False.

2. A Structure Fire Module is required to be completed for a hostile fire confined to a chimney.
 - (a) True.
 - (b) False.

3. The Structure Fire Module is a required NFIRS module if the fire occurs in or on a structure.
 - (a) True.
 - (b) False.

4. All buildings are structures.
 - (a) True.
 - (b) False.

5. A Structure Fire Module should be completed for all building fires that extend beyond a non-combustible container.
 - (a) True.
 - (b) False.

Using the Structure Fire Module

The Structure Fire Module furnishes information regarding the buildings involved in the fire, how the fire started, and detection and suppression equipment present.

The Structure Fire Module (NFIRS-3) should be completed for all structure fires that extend beyond a noncombustible container. A structure is an assembly of materials forming a construction for occupancy or use to serve a specific purpose. This includes, but is not limited to, buildings, open platforms, bridges, roof assemblies over open storage or process areas, tents, air-supported structures, and grandstands. Like the other modules, the Structure Fire Module is divided into sections and further subdivided into blocks. The sections and blocks ask for information on different factors or items involved in the building fire.

Section I: Structure Type, Building Status, Building Height, Main Floor Size

I1	Structure Type ★
	If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form.
1	<input type="checkbox"/> Enclosed building
2	<input type="checkbox"/> Portable/mobile structure
3	<input type="checkbox"/> Open structure
4	<input type="checkbox"/> Air-supported structure
5	<input type="checkbox"/> Tent
6	<input type="checkbox"/> Open platform (e.g., piers)
7	<input type="checkbox"/> Underground structure (work areas)
8	<input type="checkbox"/> Connective structure (e.g., fences)
0	<input type="checkbox"/> Other type of structure

Block I1 records information regarding the type of structure. If the fire is in an enclosed building, complete this entire module. The rest of the module would not be completed if the structure is

- an open structure - such as a bridge;
- an air-supported structure;
- a tent;
- an open platform - such as a pier, dock;
- a connective structure - such as a fence or pipeline; and/or
- an underground structure - such as flood tunnel.

Complete the Structure Fire Module for enclosed buildings. Examples include residential buildings, commercial buildings, subway station, or similar structures. It also must be completed for portable/mobile structures such as job-site trailers, portable offices, or similar structures.

Information about the status of the building is collected in Block I2.

I2	Building Status ☆
1	<input type="checkbox"/> Under construction
2	<input type="checkbox"/> Occupied & operating
3	<input type="checkbox"/> Idle, not routinely used
4	<input type="checkbox"/> Under major renovation
5	<input type="checkbox"/> Vacant and secured
6	<input type="checkbox"/> Vacant and unsecured
7	<input type="checkbox"/> Being demolished
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

Block I2 captures the status of the building involved in the fire.

I3	Building Height ☆
Count the roof as part of the highest story.	
Total number of stories at or above grade	
Total number of stories below grade	

In Block I3 enter the total number of stories at or above grade level, then enter the total number of stories below grade level. Do not count normally inaccessible attics, attics with less than standing height, or the roof as a story. **Both parts of I3 must be completed without regard to how many floors were involved in the fire.**

I4	Main Floor Size ☆	NFIRS-3 Structure Fire
Total square feet		
OR		
Length in feet		
BY		
Width in feet		

Block I4 offers two options for indicating the main floor size. Enter either the number of square feet on the structure's main floor or its length and width in feet.

Section J: Fire Origin, Fire Spread, Number of Stories Damaged by Flame

In Section J you will record data that will help describe where the fire started, whether or not it spread, and the percentage of the structure that was damaged by flame.

J₁ Fire Origin ★

Below grade
 Story of fire origin

Enter the story on which the fire originated in **Block J₁**. This story number is assumed to be at or above grade unless the Below Grade box is marked. Count the ground level as story 1. In case of most residential basements, you would enter “1” for the Story of fire origin and then check the box to indicate it was below grade.

J₂ Fire Spread ★

If fire spread was confined to object of origin, do not check a box (Ref. Block D₃, Fire Module).

2 Confined to room of origin
3 Confined to floor of origin
4 Confined to building of origin
5 Beyond building of origin

Block J₂ captures the extent of fire spread in terms of how far the flame damage extended. The extent of flame damage is the area actually burned or charred and does not include the area receiving only heat, smoke, or water damage. Mark the box best describing the extent of fire spread. If the fire spread was confined to the object of origin (1) and the box in Block D₃ on the Fire Module was marked, do not mark the box here.

J₃ Number of Stories Damaged by Flame

Count the roof as part of the highest story.

Number of stories w/minor damage
 (1 to 24% flame damage)

Number of stories w/significant damage
 (25 to 49% flame damage)

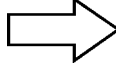
Number of stories w/heavy damage
 (50 to 74% flame damage)

Number of stories w/extreme damage
 (75 to 100% flame damage)

Block J₃ captures the number of stories damaged by flame spread. Flame damage is the area actually burned or charred and does not include areas receiving only heat, smoke, or water damage.

Enter the number of stories damaged by flame according to the indicated criteria. If the roof was the only part of the structure that burned, count it as part of the top story.

Section K: Material Contributing Most to Flame Spread

<p>K Type of Material Contributing Most to Flame Spread</p> <p><input type="checkbox"/> Check if no flame spread OR if same as Material First Ignited (Block D4, Fire Module) OR if unable to determine.</p>		<p>Skip to Section L</p>
--	---	---------------------------------

Section K is completed only if:

1. The flame spread is beyond the object of origin.
2. The material contributing most to the flame spread is **different** from the Item First Ignited (recorded in D₃ of NFIRS-2 - Fire Module).

If either one of these conditions does not apply, mark the box and skip the rest of the section.

In **Block K₁** you will enter the code for the Item Contributing Most to Flame Spread. Fill in this item only if:

1. The flame spread beyond the object of origin.
2. The item contributing most to flame spread is different from the Item First Ignited.

K₁	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 15%;"></td> <td style="width: 85%;"></td> </tr> </table> <p style="text-align: center; font-size: small;">Item contributing most to flame spread</p>		

The codes used in this section are the same as those for the Item First Ignited and are found in the CRG.

You will use **Block K₂** to record the Type of Material Contributing Most to the Flame Spread.

K₂	<table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 15%;"></td> <td style="width: 85%;"></td> </tr> </table> <p style="font-size: small;">Type of material contributing most to flame spread</p>			<p>Required only if item contributing code is 00 or <70.</p>

Complete this Block when the code for Type of Material is between 00 and 70. It is not necessary to supply this information when the type of material code is 70 or greater.

Section L: Presence of Detectors, Detector Type, Detector Power Supply, Detector Operation, Detector Effectiveness, Detector Failure Reason

L1	Presence of Detectors ☆	
	(In area of the fire)	
	N <input type="checkbox"/> None Present	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Skip to Section M</div>
	1 <input type="checkbox"/> Present	
	U <input type="checkbox"/> Undetermined	

In **Block L1** you should indicate the existence of detectors within their designed range of the fire. If no detectors were present, mark None Present and skip to Section M.

L2	Detector Type
	1 <input type="checkbox"/> Smoke
	2 <input type="checkbox"/> Heat
	3 <input type="checkbox"/> Combination smoke and heat
	4 <input type="checkbox"/> Sprinkler, water flow detection
	5 <input type="checkbox"/> More than one type present
	0 <input type="checkbox"/> Other
	U <input type="checkbox"/> Undetermined

Use **Block L2** Detector Type to identify the type of detector present in the area of fire origin. This field is **required** if the fire was within the area covered by the detector.

L3	Detector Power Supply
	1 <input type="checkbox"/> Battery only
	2 <input type="checkbox"/> Hardwire only
	3 <input type="checkbox"/> Plug-in
	4 <input type="checkbox"/> Hardwire with battery
	5 <input type="checkbox"/> Plug-in with battery
	6 <input type="checkbox"/> Mechanical
	7 <input type="checkbox"/> Multiple detectors & power supplies
	0 <input type="checkbox"/> Other
	U <input type="checkbox"/> Undetermined

Use **Block L3** to describe the power supply for the detector that was found. This field is **required** if the fire was within the designed range of the detector.

L4		Detector Operation	
1	<input type="checkbox"/>	Fire too small to activate	
2	<input checked="" type="checkbox"/>	Operated	Complete Block L5
3	<input type="checkbox"/>	Failed to operate	Complete Block L6
U	<input type="checkbox"/>	Undetermined	

Block L4 identifies whether or not the detection equipment worked. This field is **required** if the fire was within the designed range of the detector.

If the fire was too small to activate the detection equipment or the detector operation was undetermined then skip to Section M.

When the Operated box (2) is marked, then a box in L5 is marked to indicate the detector’s effectiveness, and Block L6 can be skipped. If the Failed to operate box (3) is marked, then skip to Block L6 to show the reason for detector failure.

L5		Detector Effectiveness	
Required if detector operated.			
1	<input type="checkbox"/>	Alerted occupants, occupants responded	
2	<input type="checkbox"/>	Alerted occupants, occupants failed to respond	
3	<input type="checkbox"/>	There were no occupants	
4	<input type="checkbox"/>	Failed to alert occupants	
U	<input type="checkbox"/>	Undetermined	

In **Block L5** mark the box best describing the effectiveness of the detector. This field is **required** if you checked box (2) in L4 (Operated).

L6		Detector Failure Reason	
Required if detector failed to operate			
1	<input type="checkbox"/>	Power failure, shutoff, or disconnect	
2	<input type="checkbox"/>	Improper installation or placement	
3	<input type="checkbox"/>	Defective	
4	<input type="checkbox"/>	Lack of maintenance, includes not cleaning	
5	<input type="checkbox"/>	Battery missing or disconnected	
6	<input type="checkbox"/>	Battery discharged or dead	
0	<input type="checkbox"/>	Other	
U	<input type="checkbox"/>	Undetermined	

In **Block L6** mark the box that best describes why the detector failed to operate or did not operate properly. This field is **required** if you checked box (3) in Block L4 (Failed to operate).

Section M: Presence of Automatic Extinguishing System, Type of Automatic Extinguishing System, Operation of Automatic Extinguishing System, Number of Sprinkler Heads Operating, Reason for Automatic Extinguishing System Failure

M₁	Presence of Automatic Extinguishing System ★	
	<input type="checkbox"/>	None Present
	<input type="checkbox"/>	Present
	<input type="checkbox"/>	Partial System Present
	<input type="checkbox"/>	Undetermined

Complete rest of Section M

You must mark one of the boxes in **Block M₁**. If no automatic extinguishing system was present, check the None Present box and skip the rest of Section M. Complete the other parts of Section M only if an extinguishing system was present.

M₂	Type of Automatic Extinguishing System	
	Required if fire was within designed range of AES	
	<input type="checkbox"/>	1 Wet-pipe sprinkler
	<input type="checkbox"/>	2 Dry-pipe sprinkler
	<input type="checkbox"/>	3 Other sprinkler system
	<input type="checkbox"/>	4 Dry chemical system
	<input type="checkbox"/>	5 Foam system
	<input type="checkbox"/>	6 Halogen-type system
	<input type="checkbox"/>	7 Carbon dioxide (CO ₂) system
	<input type="checkbox"/>	0 Other special hazard system
	<input type="checkbox"/>	U Undetermined

In **Block M₂** mark the box indicating the type of Automatic Extinguishment System (AES) present. If multiple systems are present, indicate the system designed to protect the area where the fire started. The field is **required** if the fire was within the designated range for the AES.

M₃	Operation of Automatic Extinguishing System	
	Required if fire was within designed range	
	<input type="checkbox"/>	1 Operated/effective (go to M ₄)
	<input type="checkbox"/>	2 Operated/not effective (go to M ₄)
	<input type="checkbox"/>	3 Fire too small to activate
	<input type="checkbox"/>	4 Failed to operate (go to M ₅)
	<input type="checkbox"/>	0 Other
	<input type="checkbox"/>	U Undetermined

In **Block M₃** mark the box that indicates if the AES operated and was or was not effective. Effective does not necessarily mean complete extinguishment, but the system must at least contain and control the fire until the fire department can complete extinguishment.

If boxes 1 or 2 are marked in M₃, use M₄ to record the number of sprinkler heads that operated (regardless of their effectiveness).

M4	<p>Number of Sprinkler Heads Operating</p> <p>Required if system operated</p> <div style="border: 1px solid black; width: 60px; height: 15px; margin: 5px 0;"></div> <p>Number of sprinkler heads operating</p>
-----------	--

In **Block M4** fill in the total number of sprinkler heads that operated during the fire. This field is **required** if the sprinkler system activated.

M5	<p>Reason for Automatic Extinguishing System Failure</p> <p>Required if system failed or not effective</p> <p>1 <input type="checkbox"/> System shut off</p> <p>2 <input type="checkbox"/> Not enough agent discharged</p> <p>3 <input type="checkbox"/> Agent discharged but did not reach fire</p> <p>4 <input type="checkbox"/> Wrong type of system</p> <p>5 <input type="checkbox"/> Fire not in area protected</p> <p>6 <input type="checkbox"/> System components damaged</p> <p>7 <input type="checkbox"/> Lack of maintenance</p> <p>8 <input type="checkbox"/> Manual intervention</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>
-----------	--

In **Block M5** mark the box that describes why the automatic extinguishing system failed to operate or did not operate properly. This field is **required** if the system failed to operate. If you indicated in Block M3 that the system Operated/not effective, box 2, or Failed to operate, box 4, it is required to record the reason for the problem in Block M5.

SUMMARY

The Structure Fire Module is used along with the Fire Module to gather detailed information about larger fire incidents that involve building or portable/mobile structures. Given the information presented, you should know how to document an incident that requires the completion of the Structure Fire Module.

EXAMPLE: Residential Fire

Directions: Read the call information in the example below. Then look at the completed Structure Fire Module form. Look at each section and follow along with the proper use of the information as applicable to the Structure Fire Module.

A smoke detector in the first-floor hallway alerted the residents of a single-family dwelling of a possible problem. They quickly exited out the front door and reported seeing smoke coming from the basement. Children playing with matches started a fire in a small stack of newspapers that were in the basement of a ranch-style home, 30 feet by 50 feet. Luckily they were uninjured. There was fire damage in the basement and smoke damage on the first floor. The detector was hardwired with a battery backup. There was a residential wet-pipe sprinkler system installed throughout the home. One sprinkler head activated and extinguished the fire.

<p>I1 Structure Type ☆</p> <p>If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form.</p> <p>1 <input checked="" type="checkbox"/> Enclosed building</p> <p>2 <input type="checkbox"/> Portable/mobile structure</p> <p>3 <input type="checkbox"/> Open structure</p> <p>4 <input type="checkbox"/> Air-supported structure</p> <p>5 <input type="checkbox"/> Tent</p> <p>6 <input type="checkbox"/> Open platform (e.g., piers)</p> <p>7 <input type="checkbox"/> Underground structure (work areas)</p> <p>8 <input type="checkbox"/> Connective structure (e.g., fences)</p> <p>0 <input type="checkbox"/> Other type of structure</p>	<p>I2 Building Status ☆</p> <p>1 <input type="checkbox"/> Under construction</p> <p>2 <input checked="" type="checkbox"/> Occupied & operating</p> <p>3 <input type="checkbox"/> Idle, not routinely used</p> <p>4 <input type="checkbox"/> Under major renovation</p> <p>5 <input type="checkbox"/> Vacant and secured</p> <p>6 <input type="checkbox"/> Vacant and unsecured</p> <p>7 <input type="checkbox"/> Being demolished</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>I3 Building Height ☆</p> <p>Count the roof as part of the highest story.</p> <p><u>0</u><u>0</u><u>1</u></p> <p>Total number of stories at or above grade</p> <p><u>0</u><u>1</u></p> <p>Total number of stories below grade</p>	<p>I4 Main Floor Size ☆</p> <p>NFIRS-3 Structure Fire</p> <p>_____, _____, _____</p> <p>Total square feet</p> <p>OR</p> <p><u>0</u> , <u>0</u><u>3</u><u>0</u> BY <u>0</u> , <u>0</u><u>5</u><u>0</u></p> <p>Length in feet Width in feet</p>
--	---	--	---

<p>J1 Fire Origin ☆</p> <p><u>0</u><u>0</u><u>1</u></p> <p>Story of fire origin</p> <p><input checked="" type="checkbox"/> Below grade</p>	<p>J3 Number of Stories Damaged by Flame ☆</p> <p>Count the roof as part of the highest story.</p> <p><u>0</u><u>0</u><u>1</u> Number of stories w/minor damage (1 to 24% flame damage)</p> <p><u>0</u><u>0</u><u>0</u> Number of stories w/significant damage (25 to 49% flame damage)</p> <p><u>0</u><u>0</u><u>0</u> Number of stories w/heavy damage (50 to 74% flame damage)</p> <p><u>0</u><u>0</u><u>0</u> Number of stories w/extreme damage (75 to 100% flame damage)</p>	<p>K Type of Material Contributing Most to Flame Spread ☆</p> <p><input checked="" type="checkbox"/> Check if no flame spread OR if same as Material First Ignited (Block D4, Fire Module) OR if unable to determine. → Skip to Section L</p> <p>K1 _____</p> <p>Item contributing most to flame spread</p> <p>K2 _____</p> <p>Type of material contributing most to flame spread Required only if item contributing code is 00 or <70.</p>
<p>J2 Fire Spread ☆</p> <p>If fire spread was confined to object of origin, do not check a box (Ref. Block D3, Fire Module).</p> <p>2 <input checked="" type="checkbox"/> Confined to room of origin</p> <p>3 <input type="checkbox"/> Confined to floor of origin</p> <p>4 <input type="checkbox"/> Confined to building of origin</p> <p>5 <input type="checkbox"/> Beyond building of origin</p>		

<p>L1 Presence of Detectors ☆</p> <p>(In area of the fire)</p> <p>N <input type="checkbox"/> None Present → Skip to Section M</p> <p>1 <input checked="" type="checkbox"/> Present</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L3 Detector Power Supply ☆</p> <p>1 <input type="checkbox"/> Battery only</p> <p>2 <input type="checkbox"/> Hardwire only</p> <p>3 <input type="checkbox"/> Plug-in</p> <p>4 <input checked="" type="checkbox"/> Hardwire with battery</p> <p>5 <input type="checkbox"/> Plug-in with battery</p> <p>6 <input type="checkbox"/> Mechanical</p> <p>7 <input type="checkbox"/> Multiple detectors & power supplies</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L5 Detector Effectiveness ☆</p> <p>Required if detector operated.</p> <p>1 <input checked="" type="checkbox"/> Alerted occupants, occupants responded</p> <p>2 <input type="checkbox"/> Alerted occupants, occupants failed to respond</p> <p>3 <input type="checkbox"/> There were no occupants</p> <p>4 <input type="checkbox"/> Failed to alert occupants</p> <p>U <input type="checkbox"/> Undetermined</p>
<p>L2 Detector Type ☆</p> <p>1 <input checked="" type="checkbox"/> Smoke</p> <p>2 <input type="checkbox"/> Heat</p> <p>3 <input type="checkbox"/> Combination smoke and heat</p> <p>4 <input type="checkbox"/> Sprinkler, water flow detection</p> <p>5 <input type="checkbox"/> More than one type present</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L4 Detector Operation ☆</p> <p>1 <input type="checkbox"/> Fire too small to activate</p> <p>2 <input checked="" type="checkbox"/> Operated → Complete Block L5</p> <p>3 <input type="checkbox"/> Failed to operate → Complete Block L6</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L6 Detector Failure Reason ☆</p> <p>Required if detector failed to operate</p> <p>1 <input type="checkbox"/> Power failure, shutoff, or disconnect</p> <p>2 <input type="checkbox"/> Improper installation or placement</p> <p>3 <input type="checkbox"/> Defective</p> <p>4 <input type="checkbox"/> Lack of maintenance, includes not cleaning</p> <p>5 <input type="checkbox"/> Battery missing or disconnected</p> <p>6 <input type="checkbox"/> Battery discharged or dead</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>

<p>M1 Presence of Automatic Extinguishing System ☆</p> <p>N <input type="checkbox"/> None Present</p> <p>1 <input checked="" type="checkbox"/> Present</p> <p>2 <input type="checkbox"/> Partial System Present → Complete rest of Section M</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M3 Operation of Automatic Extinguishing System ☆</p> <p>Required if fire was within designed range</p> <p>1 <input checked="" type="checkbox"/> Operated/effective (go to M4)</p> <p>2 <input type="checkbox"/> Operated/not effective (go to M4)</p> <p>3 <input type="checkbox"/> Fire too small to activate</p> <p>4 <input type="checkbox"/> Failed to operate (go to M5)</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M5 Reason for Automatic Extinguishing System Failure ☆</p> <p>Required if system failed or not effective</p> <p>1 <input type="checkbox"/> System shut off</p> <p>2 <input type="checkbox"/> Not enough agent discharged</p> <p>3 <input type="checkbox"/> Agent discharged but did not reach fire</p> <p>4 <input type="checkbox"/> Wrong type of system</p> <p>5 <input type="checkbox"/> Fire not in area protected</p> <p>6 <input type="checkbox"/> System components damaged</p> <p>7 <input type="checkbox"/> Lack of maintenance</p> <p>8 <input type="checkbox"/> Manual intervention</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>
<p>M2 Type of Automatic Extinguishing System ☆</p> <p>Required if fire was within designed range of AES</p> <p>1 <input checked="" type="checkbox"/> Wet-pipe sprinkler</p> <p>2 <input type="checkbox"/> Dry-pipe sprinkler</p> <p>3 <input type="checkbox"/> Other sprinkler system</p> <p>4 <input type="checkbox"/> Dry chemical system</p> <p>5 <input type="checkbox"/> Foam system</p> <p>6 <input type="checkbox"/> Halogen-type system</p> <p>7 <input type="checkbox"/> Carbon dioxide (CO₂) system</p> <p>0 <input type="checkbox"/> Other special hazard system</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M4 Number of Sprinkler Heads Operating ☆</p> <p>Required if system operated</p> <p><u>0</u><u>0</u><u>1</u></p> <p>Number of sprinkler heads operating</p>	

EXERCISE SCENARIO 3-1: Warehouse Fire

Directions: Read the call information in the exercise below. Use the information provided to complete the Structure Fire Module form. Compare your work to the answers provided on the completed Structure Fire Module form. If your answers are different from the ones provided, read over the Structure Fire Module again.

A fire occurred on the fifth floor of an eight-story, vacant and secured warehouse. The 200-foot by 100-foot fifth floor was damaged by the fire. The sixth story was damaged by smoke. The warehouse was protected by a wet-pipe sprinkler system. Smoke detectors were hardwired through the main power box on the building's north end. Power to the warehouse was knocked out by an electrical storm moving through the area. Because it was after eight in the evening, no one was in the building to notice that the power was off or that a fire had started near where welders had been working on storage racks. Fortunately, two sprinkler heads activated and quickly extinguished the fire.

<p>I1 Structure Type ☆</p> <p>If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form.</p> <p>1 <input type="checkbox"/> Enclosed building</p> <p>2 <input type="checkbox"/> Portable/mobile structure</p> <p>3 <input type="checkbox"/> Open structure</p> <p>4 <input type="checkbox"/> Air-supported structure</p> <p>5 <input type="checkbox"/> Tent</p> <p>6 <input type="checkbox"/> Open platform (e.g., piers)</p> <p>7 <input type="checkbox"/> Underground structure (work areas)</p> <p>8 <input type="checkbox"/> Connective structure (e.g., fences)</p> <p>0 <input type="checkbox"/> Other type of structure</p>	<p>I2 Building Status ☆</p> <p>1 <input type="checkbox"/> Under construction</p> <p>2 <input type="checkbox"/> Occupied & operating</p> <p>3 <input type="checkbox"/> Idle, not routinely used</p> <p>4 <input type="checkbox"/> Under major renovation</p> <p>5 <input type="checkbox"/> Vacant and secured</p> <p>6 <input type="checkbox"/> Vacant and unsecured</p> <p>7 <input type="checkbox"/> Being demolished</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>I3 Building Height ☆</p> <p>Count the roof as part of the highest story.</p> <p><input type="text"/> <input type="text"/> <input type="text"/></p> <p>Total number of stories at or above grade</p> <p><input type="text"/> <input type="text"/> <input type="text"/></p> <p>Total number of stories below grade</p>	<p>I4 Main Floor Size ☆</p> <p><input type="text"/> , <input type="text"/> , <input type="text"/></p> <p>Total square feet</p> <p>OR</p> <p><input type="text"/> , <input type="text"/> BY <input type="text"/> , <input type="text"/></p> <p>Length in feet Width in feet</p>	<p>NFIRS-3 Structure Fire</p>
---	--	--	--	--

<p>J1 Fire Origin ☆</p> <p><input type="text"/> <input type="checkbox"/> Below grade</p> <p>Story of fire origin</p>	<p>J3 Number of Stories Damaged by Flame ☆</p> <p>Count the roof as part of the highest story.</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Number of stories w/minor damage (1 to 24% flame damage)</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Number of stories w/significant damage (25 to 49% flame damage)</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Number of stories w/heavy damage (50 to 74% flame damage)</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Number of stories w/extreme damage (75 to 100% flame damage)</p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p>	<p>K Type of Material Contributing Most to Flame Spread ☆</p> <p><input type="checkbox"/> Check if no flame spread OR if same as Material First Ignited (Block D4, Fire Module) OR if unable to determine. ➔ Skip to Section L</p> <p>K1 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Item contributing most to flame spread</p> <p>K2 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Type of material contributing most to flame spread Required only if item contributing code is 00 or <70.</p>
---	--	--

<p>L1 Presence of Detectors ☆</p> <p>(In area of the fire)</p> <p>N <input type="checkbox"/> None Present ➔ Skip to Section M</p> <p>1 <input type="checkbox"/> Present</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L3 Detector Power Supply ☆</p> <p>1 <input type="checkbox"/> Battery only</p> <p>2 <input type="checkbox"/> Hardwire only</p> <p>3 <input type="checkbox"/> Plug-in</p> <p>4 <input type="checkbox"/> Hardwire with battery</p> <p>5 <input type="checkbox"/> Plug-in with battery</p> <p>6 <input type="checkbox"/> Mechanical</p> <p>7 <input type="checkbox"/> Multiple detectors & power supplies</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L5 Detector Effectiveness ☆</p> <p>Required if detector operated.</p> <p>1 <input type="checkbox"/> Alerted occupants, occupants responded</p> <p>2 <input type="checkbox"/> Alerted occupants, occupants failed to respond</p> <p>3 <input type="checkbox"/> There were no occupants</p> <p>4 <input type="checkbox"/> Failed to alert occupants</p> <p>U <input type="checkbox"/> Undetermined</p>
<p>L2 Detector Type ☆</p> <p>1 <input type="checkbox"/> Smoke</p> <p>2 <input type="checkbox"/> Heat</p> <p>3 <input type="checkbox"/> Combination smoke and heat</p> <p>4 <input type="checkbox"/> Sprinkler, water flow detection</p> <p>5 <input type="checkbox"/> More than one type present</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L4 Detector Operation ☆</p> <p>1 <input type="checkbox"/> Fire too small to activate</p> <p>2 <input type="checkbox"/> Operated ➔ Complete Block L5</p> <p>3 <input type="checkbox"/> Failed to operate ➔ Complete Block L6</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L6 Detector Failure Reason ☆</p> <p>Required if detector failed to operate</p> <p>1 <input type="checkbox"/> Power failure, shutoff, or disconnect</p> <p>2 <input type="checkbox"/> Improper installation or placement</p> <p>3 <input type="checkbox"/> Defective</p> <p>4 <input type="checkbox"/> Lack of maintenance, includes not cleaning</p> <p>5 <input type="checkbox"/> Battery missing or disconnected</p> <p>6 <input type="checkbox"/> Battery discharged or dead</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>

<p>M1 Presence of Automatic Extinguishing System ☆</p> <p>N <input type="checkbox"/> None Present</p> <p>1 <input type="checkbox"/> Present</p> <p>2 <input type="checkbox"/> Partial System Present ➔ Complete rest of Section M</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M3 Operation of Automatic Extinguishing System ☆</p> <p>Required if fire was within designed range</p> <p>1 <input type="checkbox"/> Operated/effective (go to M4)</p> <p>2 <input type="checkbox"/> Operated/not effective (go to M4)</p> <p>3 <input type="checkbox"/> Fire too small to activate</p> <p>4 <input type="checkbox"/> Failed to operate (go to M5)</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M5 Reason for Automatic Extinguishing System Failure ☆</p> <p>Required if system failed or not effective</p> <p>1 <input type="checkbox"/> System shut off</p> <p>2 <input type="checkbox"/> Not enough agent discharged</p> <p>3 <input type="checkbox"/> Agent discharged but did not reach fire</p> <p>4 <input type="checkbox"/> Wrong type of system</p> <p>5 <input type="checkbox"/> Fire not in area protected</p> <p>6 <input type="checkbox"/> System components damaged</p> <p>7 <input type="checkbox"/> Lack of maintenance</p> <p>8 <input type="checkbox"/> Manual intervention</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>
<p>M2 Type of Automatic Extinguishing System ☆</p> <p>Required if fire was within designed range of AES</p> <p>1 <input type="checkbox"/> Wet-pipe sprinkler</p> <p>2 <input type="checkbox"/> Dry-pipe sprinkler</p> <p>3 <input type="checkbox"/> Other sprinkler system</p> <p>4 <input type="checkbox"/> Dry chemical system</p> <p>5 <input type="checkbox"/> Foam system</p> <p>6 <input type="checkbox"/> Halogen-type system</p> <p>7 <input type="checkbox"/> Carbon dioxide (CO₂) system</p> <p>0 <input type="checkbox"/> Other special hazard system</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M4 Number of Sprinkler Heads Operating ☆</p> <p>Required if system operated</p> <p><input type="text"/> <input type="text"/> <input type="text"/></p> <p>Number of sprinkler heads operating</p>	

I1 Structure Type ☆ If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form. <ul style="list-style-type: none"> 1 <input checked="" type="checkbox"/> Enclosed building 2 <input type="checkbox"/> Portable/mobile structure 3 <input type="checkbox"/> Open structure 4 <input type="checkbox"/> Air-supported structure 5 <input type="checkbox"/> Tent 6 <input type="checkbox"/> Open platform (e.g., piers) 7 <input type="checkbox"/> Underground structure (work areas) 8 <input type="checkbox"/> Connective structure (e.g., fences) 0 <input type="checkbox"/> Other type of structure 	I2 Building Status ☆ <ul style="list-style-type: none"> 1 <input type="checkbox"/> Under construction 2 <input type="checkbox"/> Occupied & operating 3 <input type="checkbox"/> Idle, not routinely used 4 <input type="checkbox"/> Under major renovation 5 <input checked="" type="checkbox"/> Vacant and secured 6 <input type="checkbox"/> Vacant and unsecured 7 <input type="checkbox"/> Being demolished 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined 	I3 Building Height ☆ Count the roof as part of the highest story. <div style="margin-top: 5px;"> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="8"/> </div> Total number of stories at or above grade <div style="margin-top: 10px;"> <input type="text" value="0"/> <input type="text" value="0"/> </div> Total number of stories below grade	I4 Main Floor Size ☆ Total square feet <div style="margin-top: 5px;"> <input type="text" value=""/> , <input type="text" value=""/> , <input type="text" value=""/> </div> OR <div style="margin-top: 5px;"> <input type="text" value="0"/> , <input type="text" value="2,0"/> <input type="text" value="0"/> BY <input type="text" value="0"/> , <input type="text" value="1,0"/> <input type="text" value="0"/> </div> Length in feet Width in feet	NFIRS-3 Structure Fire
--	---	---	--	---------------------------------------

J1 Fire Origin ☆ <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="5"/> Story of fire origin <input type="checkbox"/> Below grade	J3 Number of Stories Damaged by Flame ☆ Count the roof as part of the highest story. <ul style="list-style-type: none"> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="1"/> Number of stories w/minor damage (1 to 24% flame damage) <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> Number of stories w/significant damage (25 to 49% flame damage) <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> Number of stories w/heavy damage (50 to 74% flame damage) <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="0"/> Number of stories w/extreme damage (75 to 100% flame damage) 	K Type of Material Contributing Most to Flame Spread ☆ <p><input checked="" type="checkbox"/> Check if no flame spread OR if same as Material First Ignited (Block D4, Fire Module) OR if unable to determine. ➔ Skip to Section L</p> K1 <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> Item contributing most to flame spread K2 <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> <input type="text" value=""/> Type of material contributing most to flame spread Required only if item contributing code is 00 or <70.
--	---	--

L1 Presence of Detectors ☆ (In area of the fire) <ul style="list-style-type: none"> N <input type="checkbox"/> None Present ➔ Skip to Section M 1 <input checked="" type="checkbox"/> Present U <input type="checkbox"/> Undetermined 	L3 Detector Power Supply ☆ <ul style="list-style-type: none"> 1 <input type="checkbox"/> Battery only 2 <input checked="" type="checkbox"/> Hardwire only 3 <input type="checkbox"/> Plug-in 4 <input type="checkbox"/> Hardwire with battery 5 <input type="checkbox"/> Plug-in with battery 6 <input type="checkbox"/> Mechanical 7 <input type="checkbox"/> Multiple detectors & power supplies 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined 	L5 Detector Effectiveness ☆ Required if detector operated. <ul style="list-style-type: none"> 1 <input type="checkbox"/> Alerted occupants, occupants responded 2 <input type="checkbox"/> Alerted occupants, occupants failed to respond 3 <input checked="" type="checkbox"/> There were no occupants 4 <input type="checkbox"/> Failed to alert occupants U <input type="checkbox"/> Undetermined
L2 Detector Type ☆ <ul style="list-style-type: none"> 1 <input checked="" type="checkbox"/> Smoke 2 <input type="checkbox"/> Heat 3 <input type="checkbox"/> Combination smoke and heat 4 <input type="checkbox"/> Sprinkler, water flow detection 5 <input type="checkbox"/> More than one type present 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined 	L4 Detector Operation ☆ <ul style="list-style-type: none"> 1 <input type="checkbox"/> Fire too small to activate 2 <input type="checkbox"/> Operated ➔ Complete Block L5 3 <input checked="" type="checkbox"/> Failed to operate ➔ Complete Block L6 U <input type="checkbox"/> Undetermined 	L6 Detector Failure Reason ☆ Required if detector failed to operate <ul style="list-style-type: none"> 1 <input checked="" type="checkbox"/> Power failure, shutoff, or disconnect 2 <input type="checkbox"/> Improper installation or placement 3 <input type="checkbox"/> Defective 4 <input type="checkbox"/> Lack of maintenance, includes not cleaning 5 <input type="checkbox"/> Battery missing or disconnected 6 <input type="checkbox"/> Battery discharged or dead 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined

M1 Presence of Automatic Extinguishing System ☆ <ul style="list-style-type: none"> N <input type="checkbox"/> None Present 1 <input checked="" type="checkbox"/> Present 2 <input type="checkbox"/> Partial System Present ➔ Complete rest of Section M U <input type="checkbox"/> Undetermined 	M3 Operation of Automatic Extinguishing System ☆ Required if fire was within designed range <ul style="list-style-type: none"> 1 <input checked="" type="checkbox"/> Operated/effective (go to M4) 2 <input type="checkbox"/> Operated/not effective (go to M4) 3 <input type="checkbox"/> Fire too small to activate 4 <input type="checkbox"/> Failed to operate (go to M5) 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined 	M5 Reason for Automatic Extinguishing System Failure ☆ Required if system failed or not effective <ul style="list-style-type: none"> 1 <input type="checkbox"/> System shut off 2 <input type="checkbox"/> Not enough agent discharged 3 <input type="checkbox"/> Agent discharged but did not reach fire 4 <input type="checkbox"/> Wrong type of system 5 <input type="checkbox"/> Fire not in area protected 6 <input type="checkbox"/> System components damaged 7 <input type="checkbox"/> Lack of maintenance 8 <input type="checkbox"/> Manual intervention 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined
M2 Type of Automatic Extinguishing System ☆ Required if fire was within designed range of AES <ul style="list-style-type: none"> 1 <input checked="" type="checkbox"/> Wet-pipe sprinkler 2 <input type="checkbox"/> Dry-pipe sprinkler 3 <input type="checkbox"/> Other sprinkler system 4 <input type="checkbox"/> Dry chemical system 5 <input type="checkbox"/> Foam system 6 <input type="checkbox"/> Halogen-type system 7 <input type="checkbox"/> Carbon dioxide (CO₂) system 0 <input type="checkbox"/> Other special hazard system U <input type="checkbox"/> Undetermined 	M4 Number of Sprinkler Heads Operating ☆ Required if system operated <div style="margin-top: 5px;"> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="2"/> </div> Number of sprinkler heads operating	

EXERCISE SCENARIO 3-2: Cary Street Fire

Directions: Read the call information in the exercise below. Use the information provided to complete the entire Structure Fire Module form and the other required forms. Compare your work to the answers provided in Appendix A. If your answers are different from the ones provided, read over the Structure Fire Module again.

The Alberta Fire Department (FDID #92188) received a call for a reported house fire at 5 East Cary Street, Brunswick, Virginia 23351, on May 1, 2005. The dispatcher assigned the incident (#5433) to Engine 1, Engine 2, and Truck 1 from Shift A. The units received the alarm at 12:53 p.m. and arrived at the scene at 1:05 p.m. Each unit was staffed with four firefighters.

The owner of the single-family dwelling, Mrs. Christy Gordon, said that she was warming her lunch on the stove when the grease from the pan began to burn. The gas stove was a Whirlpool, Model RF330PXVN, Serial Number F925888840, Year 2000. The fire spread from the pan to the curtains. She had fallen asleep upstairs and was alerted when the hardwired smoke detector activated. The flame damage was confined to the kitchen. The 2,000-square-foot, two-story home was filled with smoke in the other rooms. She called 911. The firefighters extinguished the fire and removed smoke from the other rooms. The fire was brought under control at 1:25 p.m. There was \$24,000 fire loss to property and \$9,600 content loss. The value of the property was \$161,000 and the content value was \$80,400. The last unit cleared the scene at 2:40 p.m. FF1 Adam C. Wallner, Badge No. 224, completed the report after returning to Station No. 2. Captain Tonya S. Gordon, Badge No. 105, was the officer in charge. The incident was in Census Tract 5011-12, District A12.

A FDID State Incident Date Station Incident Number Exposure Delete Change No Activity **NFIRS-1 Basic**

B Location Type Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires. Census Tract _____

Street address
 Intersection
 In front of
 Rear of
 Adjacent to
 Directions
 US National Grid

Number/Milepost Prefix Street or Highway Street Type Suffix
 Apt./Suite/Room City State ZIP Code
 Cross Street, Directions or National Grid, as applicable

C Incident Type Incident Type _____

E1 Dates and Times Midnight is 0000
 Month Day Year Hour Min
 Check boxes if dates are the same as Alarm Date.
 Alarm ARRIVAL required, unless canceled or did not arrive
 Arrival CONTROLLED optional, except for wildland fires
 Controlled LAST UNIT CLEARED, required except for wildland fires
 Last Unit Cleared

E2 Shifts and Alarms Local Option
 Shift or Platoon Alarms District

D Aid Given or Received None

1 Mutual aid received
 2 Auto. aid received
 3 Mutual aid given
 4 Auto. aid given
 5 Other aid given

Their FDID Their State
 Their Incident Number

E3 Special Studies Local Option
 Special Study ID# Special Study Value

F Actions Taken

Primary Action Taken (1)
 Additional Action Taken (2)
 Additional Action Taken (3)

G1 Resources Check this box and skip this block if an Apparatus or Personnel Module is used.

Apparatus Personnel
 Suppression
 EMS
 Other
 Check box if resource counts include aid received resources.

G2 Estimated Dollar Losses and Values

LOSSES: Required for all fires if known. Optional for non-fires. None

Property \$ _____, _____, _____
 Contents \$ _____, _____, _____
 PRE-INCIDENT VALUE: Optional
 Property \$ _____, _____, _____
 Contents \$ _____, _____, _____

Completed Modules

Fire-2
 Structure Fire-3
 Civilian Fire Cas.-4
 Fire Service Cas.-5
 EMS-6
 HazMat-7
 Wildland Fire-8
 Apparatus-9
 Personnel-10
 Arson-11

H1 Casualties None

Deaths Injuries
 Fire Service
 Civilian

H2 Detector Required for confined fires.
 1 Detector alerted occupants
 2 Detector did not alert them
 U Unknown

H3 Hazardous Materials Release None

1 Natural gas: slow leak, no evacuation or HazMat actions
 2 Propane gas: <21-lb tank (as in home BBQ grill)
 3 Gasoline: vehicle fuel tank or portable container
 4 Kerosene: fuel burning equipment or portable storage
 5 Diesel fuel/fuel oil: vehicle fuel tank or portable storage
 6 Household solvents: home/office spill, cleanup only
 7 Motor oil: from engine or portable container
 8 Paint: from paint cans totaling <55 gallons
 0 Other: special HazMat actions required or spill > 55 gal (Please complete the HazMat form.)

I Mixed Use Property Not mixed

10 Assembly use
 20 Education use
 33 Medical use
 40 Residential use
 51 Row of stores
 53 Enclosed mall
 58 Business & residential
 59 Office use
 60 Industrial use
 63 Military use
 65 Farm use
 00 Other mixed use

J Property Use None

Structures
 131 Church, place of worship
 161 Restaurant or cafeteria
 162 Bar/tavern or nightclub
 213 Elementary school, kindergarten
 215 High school, junior high
 241 College, adult education
 311 Nursing home
 331 Hospital

Outside
 124 Playground or park
 655 Crops or orchard
 669 Forest (timberland)
 807 Outdoor storage area
 919 Dump or sanitary landfill
 931 Open land or field

341 Clinic, clinic-type infirmary
 342 Doctor/dentist office
 361 Prison or jail, not juvenile
 419 1- or 2-family dwelling
 429 Multifamily dwelling
 439 Rooming/boarded house
 449 Commercial hotel or motel
 459 Residential, board and care
 464 Dormitory/barracks
 519 Food and beverage sales

936 Vacant lot
 938 Graded/cared for plot of land
 946 Lake, river, stream
 951 Railroad right-of-way
 960 Other street
 961 Highway/divided highway
 962 Residential street/driveway

539 Household goods, sales, repairs
 571 Gas or service station
 579 Motor vehicle/boat sales/repairs
 599 Business office
 615 Electric-generating plant
 629 Laboratory/science laboratory
 700 Manufacturing plant
 819 Livestock/poultry storage (barn)
 882 Non-residential parking garage
 891 Warehouse

981 Construction site
 984 Industrial plant yard

Look up and enter a Property Use code and description only if you have NOT checked a Property Use box.

Property Use _____
 Code _____
 Property Use Description

K1 Person/Entity Involved

Local Option Business Name (if applicable) _____ Area Code _____ Phone Number _____

Check this box if same address as incident Location (Section B). Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name _____ MI _____ Last Name _____ Suffix _____

Number _____ Prefix _____ Street or Highway _____ Street Type _____ Suffix _____

Post Office Box _____ Apt./Suite/Room _____ City _____

State _____ ZIP Code _____

More people involved? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary.

K2 Owner

Local Option Same as person involved? Then check this box and skip the rest of this block.

Business Name (if applicable) _____ Area Code _____ Phone Number _____

Check this box if same address as incident Location (Section B). Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name _____ MI _____ Last Name _____ Suffix _____

Number _____ Prefix _____ Street or Highway _____ Street Type _____ Suffix _____

Post Office Box _____ Apt./Suite/Room _____ City _____

State _____ ZIP Code _____


L Remarks:

Local Option _____

Fire Module Required?

Check the box that applies and then complete the Fire Module based on Incident Type, as follows:

<input type="checkbox"/> Buildings 111	Complete Fire & Structure Modules
<input type="checkbox"/> Special structure 112	Complete Fire Module & Section I, Structure Module
<input type="checkbox"/> Confined 113-118	Basic Module Only
<input type="checkbox"/> Mobile property 120-123	Complete Fire Module
<input type="checkbox"/> Vehicle 130-138	Complete Fire Module
<input type="checkbox"/> Vegetation 140-143	Complete Fire or Wildland Module
<input type="checkbox"/> Outside rubbish fire 150-155	Basic Module Only
<input type="checkbox"/> Special outside fire 160	Complete Fire or Wildland Module
<input type="checkbox"/> Special outside fire 161-163	Complete Fire Module
<input type="checkbox"/> Crop fire 170-173	Complete Fire or Wildland Module

 **ITEMS WITH A ★ MUST ALWAYS BE COMPLETED!**

More remarks? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary.

M Authorization

Officer in charge ID _____ Signature _____ Position or rank _____ Assignment _____ Month _____ Day _____ Year _____

Member making report ID _____ Signature _____ Position or rank _____ Assignment _____ Month _____ Day _____ Year _____

Check box if same as Officer in charge.

A <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="text-align: center;"> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> </div> <div style="text-align: center;"> <p>FDID <input type="checkbox"/> State <input type="checkbox"/> Incident Date <input type="checkbox"/> Station <input type="checkbox"/> Incident Number <input type="checkbox"/> Exposure <input type="checkbox"/></p> </div> <div style="text-align: right;"> <input type="checkbox"/> Delete <input type="checkbox"/> Change </div> </div> <div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content;"> NFIRS-2 Fire </div>		
B Property Details <p>B1 <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input type="checkbox"/> Not Residential Estimated number of residential living units in building of origin <i>whether or not all units became involved</i></p> <p>B2 <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input type="checkbox"/> Buildings not involved Number of buildings involved</p> <p>B3 <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input type="checkbox"/> None Acres burned (outside fires) <input type="checkbox"/> Less than one acre</p>	C On-Site Materials or Products <input type="checkbox"/> None <p>Complete if there were any significant amounts of commercial, industrial, energy, or agricultural products or materials on the property, <i>whether or not they became involved</i></p> <p>Enter up to three codes. Check one box for each code entered.</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> On-site material (1)</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> On-site material (2)</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> On-site material (3)</p> <p>On-Site Materials Storage Use</p> <p>1 <input type="checkbox"/> Bulk storage or warehousing 2 <input type="checkbox"/> Processing or manufacturing 3 <input type="checkbox"/> Packaged goods for sale 4 <input type="checkbox"/> Repair or service U <input type="checkbox"/> Undetermined</p> <p>1 <input type="checkbox"/> Bulk storage or warehousing 2 <input type="checkbox"/> Processing or manufacturing 3 <input type="checkbox"/> Packaged goods for sale 4 <input type="checkbox"/> Repair or service U <input type="checkbox"/> Undetermined</p> <p>1 <input type="checkbox"/> Bulk storage or warehousing 2 <input type="checkbox"/> Processing or manufacturing 3 <input type="checkbox"/> Packaged goods for sale 4 <input type="checkbox"/> Repair or service U <input type="checkbox"/> Undetermined</p>	
D Ignition <p>D1 <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input type="checkbox"/> Area of fire origin</p> <p>D2 <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input type="checkbox"/> Heat source</p> <p>D3 <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input type="checkbox"/> Item first ignited <input type="checkbox"/> Check box if fire spread was confined to object of origin.</p> <p>D4 <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> <input type="checkbox"/> Type of material first ignited <small>Required only if item first ignited code is 00 or <70</small></p>	E1 Cause of Ignition <input type="checkbox"/> None <p><input type="checkbox"/> Check box if this is an exposure report. ➔ Skip to Section G</p> <p>1 <input type="checkbox"/> Intentional 2 <input type="checkbox"/> Unintentional 3 <input type="checkbox"/> Failure of equipment or heat source 4 <input type="checkbox"/> Act of nature 5 <input type="checkbox"/> Cause under investigation U <input type="checkbox"/> Cause undetermined after investigation</p> <p>E2 Factors Contributing to Ignition <input type="checkbox"/> None</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Factor contributing to ignition (1)</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Factor contributing to ignition (2)</p>	E3 Human Factors Contributing to Ignition <input type="checkbox"/> None <p>Check all applicable boxes</p> <p>1 <input type="checkbox"/> Asleep 2 <input type="checkbox"/> Possibly impaired by alcohol or drugs 3 <input type="checkbox"/> Unattended person 4 <input type="checkbox"/> Possibly mentally disabled 5 <input type="checkbox"/> Physically disabled 6 <input type="checkbox"/> Multiple persons involved</p> <p>7 <input type="checkbox"/> Age was a factor</p> <p>Estimated age of person involved <input style="width: 50px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/></p> <p>1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female</p>
F1 Equipment Involved in Ignition <p><input type="checkbox"/> None ➔ If equipment was not involved, skip to Section G</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Equipment Involved</p> <p>Brand <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/></p> <p>Model <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/></p> <p>Serial # <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/></p> <p>Year <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/></p>	F2 Equipment Power Source <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Equipment Power Source</p> <p>F3 Equipment Portability</p> <p>1 <input type="checkbox"/> Portable 2 <input type="checkbox"/> Stationary</p> <p><small>Portable equipment normally can be moved by one or two persons, is designed to be used in multiple locations, and requires no tools to install.</small></p>	G Fire Suppression Factors <input type="checkbox"/> None <p>Enter up to three codes.</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Fire suppression factor (1)</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Fire suppression factor (2)</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Fire suppression factor (3)</p>
H1 Mobile Property Involved <input type="checkbox"/> None <p>1 <input type="checkbox"/> Not involved in ignition, but burned 2 <input type="checkbox"/> Involved in ignition, but did not burn 3 <input type="checkbox"/> Involved in ignition and burned</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Mobile property model</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> License Plate Number <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> State <input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> VIN</p>	H2 Mobile Property Type and Make <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Mobile property type</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Mobile property make</p> <p><input style="width: 100px; border-bottom: 1px solid black; margin-bottom: 5px;" type="text"/> Year</p>	Local Use <p><input type="checkbox"/> Pre-Fire Plan Available <small>Some of the information presented in this report may be based upon reports from other agencies.</small></p> <p><input type="checkbox"/> Arson report attached <input type="checkbox"/> Police report attached <input type="checkbox"/> Coroner report attached <input type="checkbox"/> Other reports attached</p>
Structure fire? Please be sure to complete the Structure Fire form (NFIRS-3).		
<small>NFIRS-2 Revision 01/01/05</small>		

<p>I1 Structure Type ☆</p> <p>If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form.</p> <p>1 <input type="checkbox"/> Enclosed building</p> <p>2 <input type="checkbox"/> Portable/mobile structure</p> <p>3 <input type="checkbox"/> Open structure</p> <p>4 <input type="checkbox"/> Air-supported structure</p> <p>5 <input type="checkbox"/> Tent</p> <p>6 <input type="checkbox"/> Open platform (e.g., piers)</p> <p>7 <input type="checkbox"/> Underground structure (work areas)</p> <p>8 <input type="checkbox"/> Connective structure (e.g., fences)</p> <p>0 <input type="checkbox"/> Other type of structure</p>	<p>I2 Building Status ☆</p> <p>1 <input type="checkbox"/> Under construction</p> <p>2 <input type="checkbox"/> Occupied & operating</p> <p>3 <input type="checkbox"/> Idle, not routinely used</p> <p>4 <input type="checkbox"/> Under major renovation</p> <p>5 <input type="checkbox"/> Vacant and secured</p> <p>6 <input type="checkbox"/> Vacant and unsecured</p> <p>7 <input type="checkbox"/> Being demolished</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>I3 Building Height ☆</p> <p>Count the roof as part of the highest story.</p> <p>_____</p> <p>Total number of stories at or above grade</p> <p>_____</p> <p>Total number of stories below grade</p>	<p>I4 Main Floor Size ☆</p> <p>_____, _____, _____</p> <p>Total square feet</p> <p style="text-align: center;">OR</p> <p>_____, _____ BY _____, _____</p> <p>Length in feet Width in feet</p>	<p>NFIRS-3 Structure Fire</p>
---	--	--	--	--

<p>J1 Fire Origin ☆</p> <p>_____ <input type="checkbox"/> Below grade</p> <p>Story of fire origin</p>	<p>J3 Number of Stories Damaged by Flame</p> <p>Count the roof as part of the highest story.</p> <p>_____</p> <p>Number of stories w/minor damage (1 to 24% flame damage)</p> <p>_____</p> <p>Number of stories w/significant damage (25 to 49% flame damage)</p> <p>_____</p> <p>Number of stories w/heavy damage (50 to 74% flame damage)</p> <p>_____</p> <p>Number of stories w/extreme damage (75 to 100% flame damage)</p>	<p>K Type of Material Contributing Most to Flame Spread</p> <p><input type="checkbox"/> Check if no flame spread OR if same as Material First Ignited (Block D4, Fire Module) OR if unable to determine. → Skip to Section L</p> <p>K1 _____</p> <p>Item contributing most to flame spread</p> <p>K2 _____</p> <p>Type of material contributing most to flame spread Required only if item contributing code is 00 or <70.</p>
<p>J2 Fire Spread ☆</p> <p>If fire spread was confined to object of origin, do not check a box (Ref. Block D3, Fire Module).</p> <p>2 <input type="checkbox"/> Confined to room of origin</p> <p>3 <input type="checkbox"/> Confined to floor of origin</p> <p>4 <input type="checkbox"/> Confined to building of origin</p> <p>5 <input type="checkbox"/> Beyond building of origin</p>		

<p>L1 Presence of Detectors ☆</p> <p>(In area of the fire)</p> <p>N <input type="checkbox"/> None Present → Skip to Section M</p> <p>1 <input type="checkbox"/> Present</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L3 Detector Power Supply</p> <p>1 <input type="checkbox"/> Battery only</p> <p>2 <input type="checkbox"/> Hardwire only</p> <p>3 <input type="checkbox"/> Plug-in</p> <p>4 <input type="checkbox"/> Hardwire with battery</p> <p>5 <input type="checkbox"/> Plug-in with battery</p> <p>6 <input type="checkbox"/> Mechanical</p> <p>7 <input type="checkbox"/> Multiple detectors & power supplies</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L5 Detector Effectiveness</p> <p>Required if detector operated.</p> <p>1 <input type="checkbox"/> Alerted occupants, occupants responded</p> <p>2 <input type="checkbox"/> Alerted occupants, occupants failed to respond</p> <p>3 <input type="checkbox"/> There were no occupants</p> <p>4 <input type="checkbox"/> Failed to alert occupants</p> <p>U <input type="checkbox"/> Undetermined</p>
<p>L2 Detector Type</p> <p>1 <input type="checkbox"/> Smoke</p> <p>2 <input type="checkbox"/> Heat</p> <p>3 <input type="checkbox"/> Combination smoke and heat</p> <p>4 <input type="checkbox"/> Sprinkler, water flow detection</p> <p>5 <input type="checkbox"/> More than one type present</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L4 Detector Operation</p> <p>1 <input type="checkbox"/> Fire too small to activate</p> <p>2 <input type="checkbox"/> Operated → Complete Block L5</p> <p>3 <input type="checkbox"/> Failed to operate → Complete Block L6</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>L6 Detector Failure Reason</p> <p>Required if detector failed to operate</p> <p>1 <input type="checkbox"/> Power failure, shutoff, or disconnect</p> <p>2 <input type="checkbox"/> Improper installation or placement</p> <p>3 <input type="checkbox"/> Defective</p> <p>4 <input type="checkbox"/> Lack of maintenance, includes not cleaning</p> <p>5 <input type="checkbox"/> Battery missing or disconnected</p> <p>6 <input type="checkbox"/> Battery discharged or dead</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>

<p>M1 Presence of Automatic Extinguishing System ☆</p> <p>N <input type="checkbox"/> None Present</p> <p>1 <input type="checkbox"/> Present</p> <p>2 <input type="checkbox"/> Partial System Present → Complete rest of Section M</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M3 Operation of Automatic Extinguishing System</p> <p>Required if fire was within designed range</p> <p>1 <input type="checkbox"/> Operated/effective (go to M4)</p> <p>2 <input type="checkbox"/> Operated/not effective (go to M4)</p> <p>3 <input type="checkbox"/> Fire too small to activate</p> <p>4 <input type="checkbox"/> Failed to operate (go to M5)</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M5 Reason for Automatic Extinguishing System Failure</p> <p>Required if system failed or not effective</p> <p>1 <input type="checkbox"/> System shut off</p> <p>2 <input type="checkbox"/> Not enough agent discharged</p> <p>3 <input type="checkbox"/> Agent discharged but did not reach fire</p> <p>4 <input type="checkbox"/> Wrong type of system</p> <p>5 <input type="checkbox"/> Fire not in area protected</p> <p>6 <input type="checkbox"/> System components damaged</p> <p>7 <input type="checkbox"/> Lack of maintenance</p> <p>8 <input type="checkbox"/> Manual intervention</p> <p>0 <input type="checkbox"/> Other</p> <p>U <input type="checkbox"/> Undetermined</p>
<p>M2 Type of Automatic Extinguishing System</p> <p>Required if fire was within designed range of AES</p> <p>1 <input type="checkbox"/> Wet-pipe sprinkler</p> <p>2 <input type="checkbox"/> Dry-pipe sprinkler</p> <p>3 <input type="checkbox"/> Other sprinkler system</p> <p>4 <input type="checkbox"/> Dry chemical system</p> <p>5 <input type="checkbox"/> Foam system</p> <p>6 <input type="checkbox"/> Halogen-type system</p> <p>7 <input type="checkbox"/> Carbon dioxide (CO₂) system</p> <p>0 <input type="checkbox"/> Other special hazard system</p> <p>U <input type="checkbox"/> Undetermined</p>	<p>M4 Number of Sprinkler Heads Operating</p> <p>Required if system operated</p> <p>_____</p> <p>Number of sprinkler heads operating</p>	

Structure Module Test

1. What is the building height of a house with two stories, full unfinished attic (two rooms), and a full basement?
 - (a) Two stories.
 - (b) Three stories.
 - (c) Four stories.
 - (d) Two stories above grade; one story below grade.

2. The main floor size of a building is calculated by
 - (a) Multiplying the number of stories by the building length.
 - (b) Multiplying the building width by the building height.
 - (c) Multiplying the building height by the building width divided by the building length.
 - (d) Multiplying the building length by the building width.

3. Battery and hardwire are examples of this data element.
 - (a) Equipment Involved in Ignition.
 - (b) Detector Operation.
 - (c) Detector Power Supply.
 - (d) Detector Type.

4. Under construction and being demolished are examples of these data element.
 - (a) Actions taken.
 - (b) Building status.
 - (c) Structure type.
 - (d) Cause of ignition.

5. A fire on a pier needs these modules.
 - (a) Basic and Fire.
 - (b) Basic, Fire, and only Structure Type on the Structure Module.
 - (c) Basic, Fire, and Structure.
 - (d) Basic.