

# ***MODULE 3: DEVELOPING AN INCIDENT ACTION PLAN***

## **OBJECTIVES**

*The students will:*

- 1. Given a structural fire scenario, demonstrate the ability to develop a strategy using the command sequence.*
  - 2. Using the command sequence, demonstrate the ability to select tactics that will achieve a well-defined strategy.*
-



## ACTION PLAN

An Incident Action Plan (IAP) is an organized course of events that addresses all phases of incident control within a specified time. An IAP is necessary to effect successful outcomes in any situation, especially emergency operations, in a timely manner. Furthermore, the IAP must be completed in a timeframe that allows the least amount of negative action to continue.

Incident Action Planning starts with identifying the strategy to achieve a solution to the confronted problems. The strategy should be broad in nature and define what has to be done.

Once the strategy has been defined, the Incident Commander (IC) or the Operations Section Chief needs to select the tactics. Tactics are the operations that need to be completed in order to accomplish the strategy. If the strategy defines where you want to go, then tactics are the signposts along the path to get you there. They provide the answers to the "how" and "where" of the IAP. Tactics are measurable in both time and performance.

The IAP also includes whatever support actions may be necessary to make the plan operable, e.g., water supply, utility control, self-contained breathing apparatus (SCBA) cylinder filling, etc.

Once the IAP is developed, the IC may start issuing directives and committing resources. These directives define objectives that must be completed in order to achieve the IAP goals. IAP's are not necessarily fully complete before orders are given, but sufficient information must be in place for the resources to achieve positive results effectively.

Once the plan is established and resources are committed, it is necessary to assess the effectiveness of the plan. Information must be gathered and analyzed so that necessary modification and updating may be done to improve the effectiveness of the plan, if necessary. This step is part of the continuing size-up process. Ongoing progress reporting by operational or management units allows the IAP to be modified based on current conditions. (A copy of a completed IAP--ICS 201 is included in the Appendix.)

IAP's generally are not written for day-to-day operations. However, on large-scale incidents, such as wildland fires, natural disasters, haz mat spills, etc., there should be a written plan for each operational period that is developed during a Planning meeting.

When only a few units are engaged actively in a simple incident, the IAP is developed in the mind of the IC. The IAP includes the strategy and tactics for the incident as well as the supporting operations that must occur. The IC must ensure that operating resources and managers know the overall strategy. This information normally is conveyed when orders are issued to arriving companies and other officers.

On large, complex incidents of long duration, the IAP must be written down. Naturally, the initial IAP is in the mind of the IC until sufficient staff arrives to create an overall plan and commit it to writing. It is highly advantageous on these types of incidents to have a Planning Meeting headed by the Planning Section Chief. All of the Command Staff and General Staff, as well as others designated by the IC, should attend the Planning Meeting. The plan is developed for the next operational period with input from attendees, and is placed in writing. All the attendees leave the meeting with an understanding of the goals and objectives to be accomplished.

Additional Planning Meetings are scheduled on a frequency dictated by the needs of the incident. Modifications to the plan then are made and distributed.

## NOTE-TAKING GUIDE

### WHAT IS AN INCIDENT ACTION PLAN?

**Definition:** An organized course of action that addresses all phases of incident control within a specified time.

Based on problems identified in size-up.

The action plan is the IC's solution to those problems.

When fully developed and implemented, the action plan will address:

Strategy and tactics comprise the plan.

Personnel safety should be an integral part of the plan.

## NOTE-TAKING GUIDE

Plan should include organizational structure.

## IDENTIFYING A STRATEGY

**Definition: Broad goals. Overall plan used to control the incident.**

Strategy gives direction to get you from where you are to where you want to be.

Strategy may have multiple components in order to gain control of an incident.

## NOTE-TAKING GUIDE

Lloyd Layman's seven factors may be used to assist in the development of a strategy.

Lloyd Layman's seven factors (RECEO VS):

<b>R</b> escue	<b>V</b> entilation
<b>E</b> xposures	<b>S</b> alvage
<b>C</b> onfinement	
<b>E</b> xtinguishment	
<b>O</b> verhaul	

A well-defined strategy gives personnel an understanding of the IC's plan and helps them accomplish it.

Example: Components of strategy.

Only after strategy is developed can the IC begin to formulate an action plan.

Initially, the strategy provides a broad plan of what the IC needs to do at an incident.

## NOTE-TAKING GUIDE

Having a strategy indicates that:

### SELECTING TACTICS

**Definition:** Specific measurable objectives that are necessary for the achievement of the strategies.

Tactics are measurable and can be completed within a reasonable timeframe.

Example: Selecting tactics.

### THE ACTION PLAN

Having developed the strategy and tactics that address the problems identified, the major components of the **plan** are in place.

## NOTE-TAKING GUIDE

Completes the second step in the command sequence.

## SUMMARY

Developing strategy and tactics is the **plan** phase of the command sequence.

Strategy and tactics need to be constantly evaluated to determine their effectiveness.



## WHAT IS AN ACTION PLAN?

"Damn the torpedoes, full speed ahead!" Too often we go charging full speed into a burning building with the sole purpose of putting the "wet stuff on the red stuff." Custer went rushing in at Little Big Horn with the solution before first making an effort to properly identify the extent of the problem and thus created a number of promotional openings within his organization. After we have done an initial size-up and identified the problem, we need to offer a solution in the form of an **action plan** that addresses the problem.

An action plan is defined as an organized course of action that addresses all phases of incident control within a specified time.

The definition emphasizes some key points that go into making up an action plan. The first is an **organized** course of action. There are times when an engine is pulling up to a structure with flames shooting out the windows and it looks as though someone called in a bomb threat. The engine slows to about 5 mph and the crew bails off fighting for control of the nozzle to see who gets to be the first through the front door. This phenomenon is known as the "moth to the flame syndrome." Firefighters see the flame, the eyes glaze over, and the rush is on to squirt the wet stuff, with little thought given to an organized plan of action. The tasks firefighters perform must be organized in order to be effective and to protect personnel safety.

Another point the definition stresses is that the action plan should cover all phases of the emergency. Action planning doesn't stop until the last firefighter leaves the scene. The plan needs to cover the **entire** incident not just the initial assignments.

The third key point in the definition deals with accomplishing the plan **within a specified time**. When firefighters gather to exchange war stories, we hear tales of fires that took thousands of gallons of water and hours to put out. In reality what most probably occurred is the fire ran out of things to burn and went out on its own accord. We always win. The reason we always win is that nothing burns forever. What's important is gaining success before the fire gets tired and goes away. To do this requires a knowledge of how long it takes for firefighters to accomplish their assigned tasks and coordinating those efforts so that they are attained in a specified length of time. When this happens we have a realistic chance of claiming victory while there is still something to save rather than just wearing out the fire to its point of exhaustion.

Other components of an action plan should include an organizational structure that matches the complexity of the incident. Understanding and applying the Incident Command System (ICS) will provide the officer with an organizational framework which will maintain span of control, unity of command, channels of communications, and help protect personnel safety.

When fully developed and implemented, the action plan will have identified the strategy and tactics that address:

What needs to be done.  
How it is to be accomplished.

## **IDENTIFYING A STRATEGY**

Action planning starts with first identifying a strategy. Strategy is defined as the overall plan that will be used to control the incident.

Strategy is broad in nature and defines "what" must be done to provide a solution to the problems identified by the IC. The strategy developed by the IC gives direction to the personnel operating at the incident and lets them know where the IC is heading. In the 1950's, Lloyd Layman listed the seven factors that are still used by officers today to determine priorities and basic strategy. Those factors are:

### **RECEO VS**

<b>R</b> escue	<b>V</b> entilation
<b>E</b> xposures	<b>S</b> alvage
<b>C</b> onfinement	
<b>E</b> xtinguishment	
<b>O</b> verhaul	

The problems presented by the situation often require that more than one factor be addressed to accomplish the IC's initial strategy.

Example:

Conditions: Alarm at 0245 hrs., fire on floor 1 of a 2-story, single-family dwelling of wood frame construction. Victim reported on second floor.

Problems: Rescue of possible victim(s), fire on first floor, and spread of heat, smoke, and fire to second floor, additional damage to structure.

Initial strategy:

Rescue victim on second floor and conduct primary search.

Perform ventilation - (ventilation/rescue/confinement/salvage).

Confine fire to area of origin.

As incident operations progress and the initial strategy is met, the IC adjusts the plan to meet a new set of problems.

Example:

Conduct secondary search (rescue).

Extinguish the fire (extinguishment).

Reduce further property damage (salvage).

Prevent rekindle (overhaul).

In developing the initial strategy, if the IC has identified more problems than there are resources to handle them, the IC must prioritize the order in which those problems are dealt with. An evaluation of available resources needs to be made and a judgment made as to how best to apply them to have the maximum impact. Additional resources should be called for to deal with pressing and anticipated problems identified by the IC.

Having a well-defined strategy gives personnel an understanding of what the IC is trying to accomplish and helps them to understand how they fit into the plan. A poorly defined strategy is one that takes into account only the most obvious reasons a fire department is called to an incident--to put out the fire. The IC must not get tunnel vision and focus solely on the act of "putting the fire out." There are other priorities, including rescue, exposure protection, confinement, ventilation, and salvage. It is easier to coordinate the fireground operations when personnel understand where they are heading and how their efforts will help in getting there.

## **SELECTING TACTICS**

Once the strategy has been defined, then the IC needs to select the tactics. Tactics are defined as the operations that need to be completed in order to accomplish the strategy defined by the IC.

If strategy defines where you want to end up, then tactics are the signposts along the path you follow to get there. They provide the answers to the "how" and "where" of the action plan. They must be measurable so that the IC and those responsible to carry them out can evaluate their operations to determine if the action plan is working or whether modifications need to be made. Based on input the IC receives from those assigned the tactics, decisions will be made on how best to coordinate crews, whether additional resources are needed or others can be released or reassigned, or modifications need to be made to the action plan.

Example of tactics:

Conditions: Alarm at 0245 hrs., fire on floor 1 of a 2-story, single-family dwelling of wood frame construction. Victim reported on second floor.

Problems: Rescue of possible victim(s), fire on first floor, and spread of heat, smoke and fire to second floor. Additional damage to structure.

Strategy: Rescue, confinement/extinguishment, ventilation.

Tactics: Confine fire to room of origin, protect stairway for rescuers and possible removal of victims, conduct primary search starting with sleeping areas and means of exit, horizontal ventilation, check for extension to second floor.

The tactics in this example address "how" the strategy is to be addressed and "where" they occur. As these tactics are accomplished, additional tactics can be assigned such as conducting secondary search and performing property conservation measures.

## THE ACTION PLAN

Having developed the strategy and tactics that address the problems identified, the major components of the plan are in place. The what and how questions have been answered, priorities have been established, planning has been done prior to actions taken, and the IC is operating in a proactive mode. This completes the second step in the command sequence.

## SUMMARY

By developing the strategy and tactics based on the problems identified in the size-up phase of the command sequence, the IC has the major components of an **action plan** in place. The "what", "how", and "where" questions have been answered and the IC has stayed in the **proactive** mode by identifying the problems, evaluating available resources, establishing priorities, and providing a solution to the problems that set the direction for the firefighters to work toward.

When the IC established the strategy and tactics the initial **plan** phase of the command sequence has been completed.



## Activity 3.1

### Identifying a Strategy

#### Purpose

The purpose of this activity is to demonstrate the ability to develop an initial strategy using the command sequence.

#### Directions

Your group will be assigned a scenario. As a group, you will be given 20 minutes to:

1. Read the information provided for your assigned scenario.
2. Do a mental size-up.
3. Place on an easel pad the problems that are identified.
4. Determine the applicable initial strategies.

Place each strategy at the top of a separate easel pad page.

5. Tape the easel pad to the wall in the RECEO VS priority order.

Scenarios have a Quick Access Prefire Plan and a plot plan.

Save the easel pad sheets used for your group's solution. They will be used for the activities in the following units in this course.

Your group will select a spokesperson to give your group's report when called upon. Group reports are allotted 5 minutes.



### **Activity 3.1 (cont'd)**

#### **Identifying a Strategy**

The problems identified and strategies on the suggested answers are those that are pertinent to the first 2-3 crews that arrive.

#### **Scenario 1 - Two-Story Apartment House**

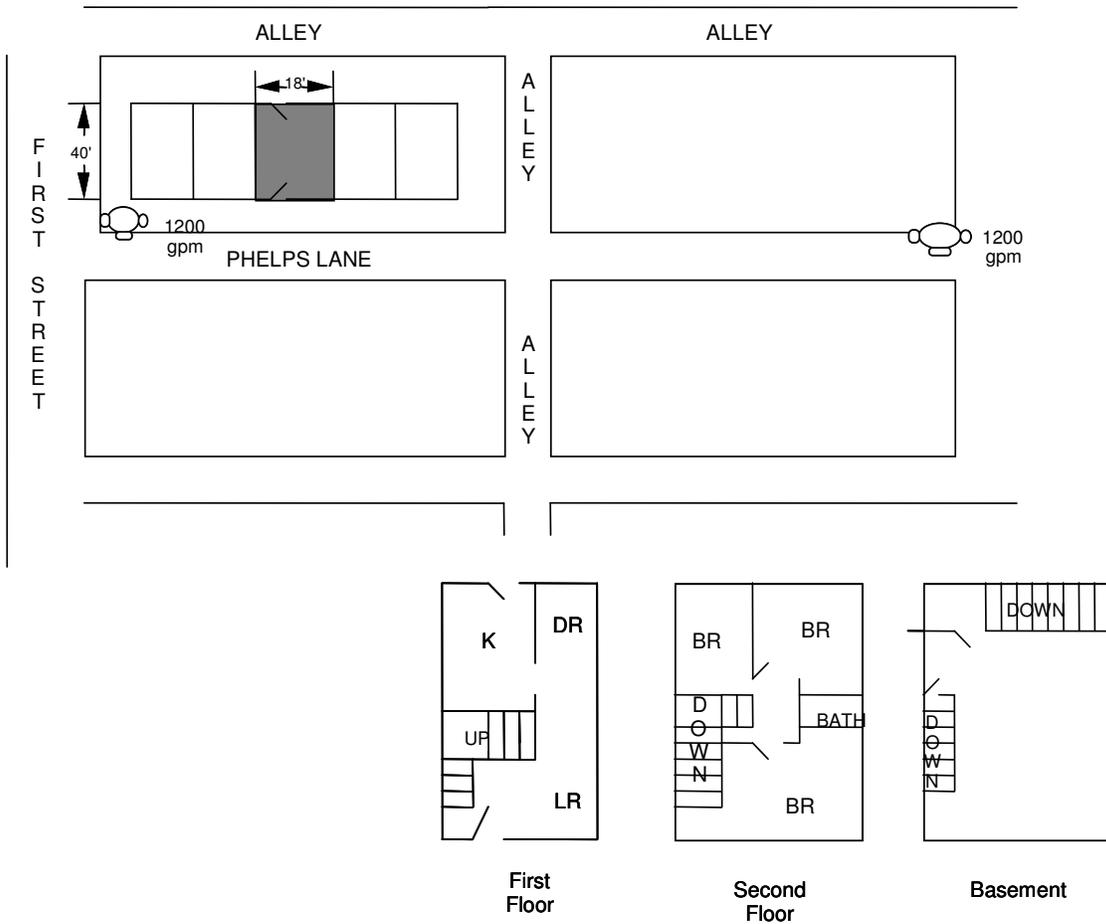
#### **Scenario 2 - Small Shopping Center**

#### **Scenario 3 - Community Bar**

#### **Scenario 4 - Townhouse**

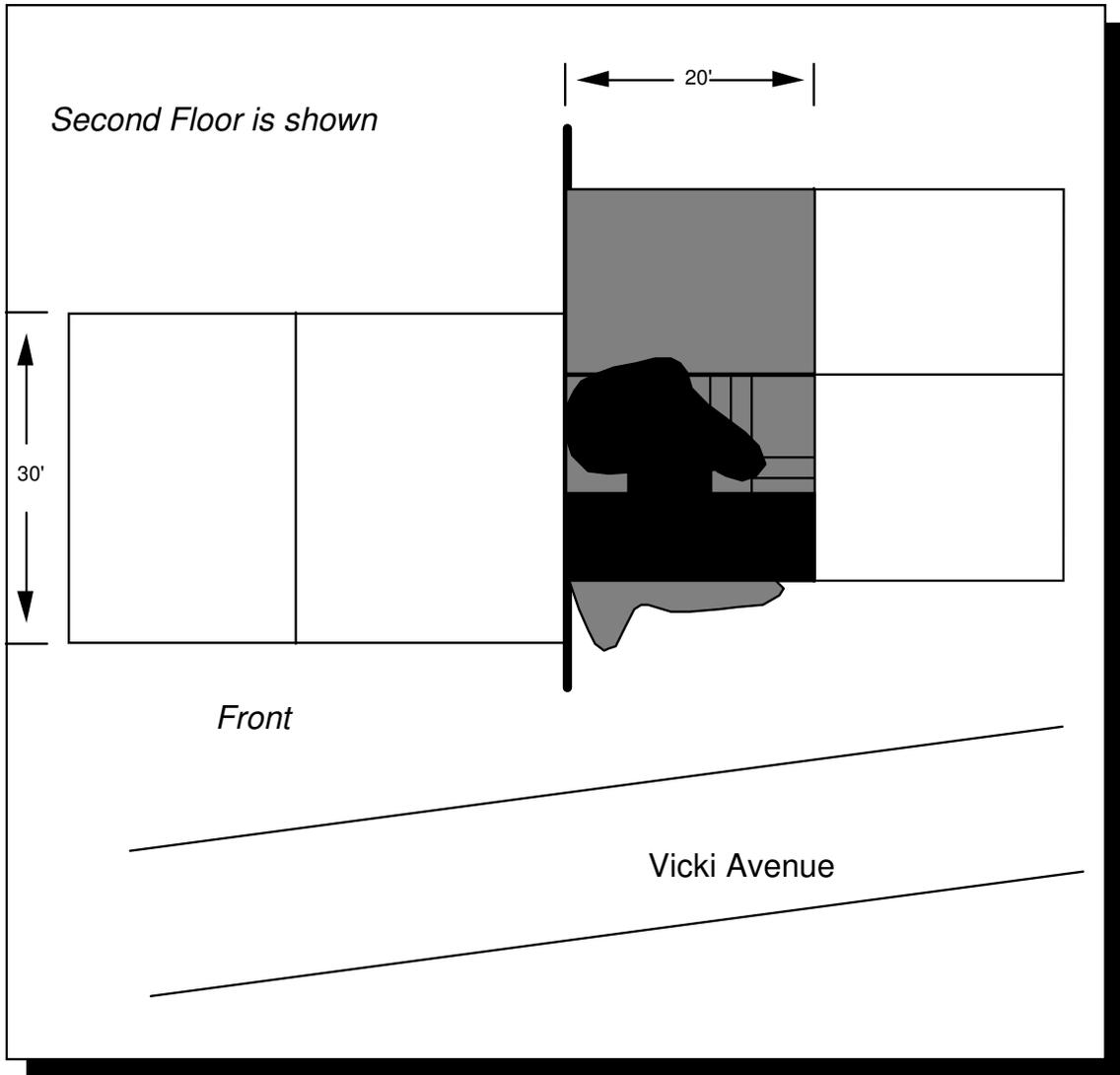
#### **Scenario 5 - Apartments Under Construction**

**Activity 3.1 (cont'd)**  
**Example Scenario**  
**Plot Plan/Floor Plan**



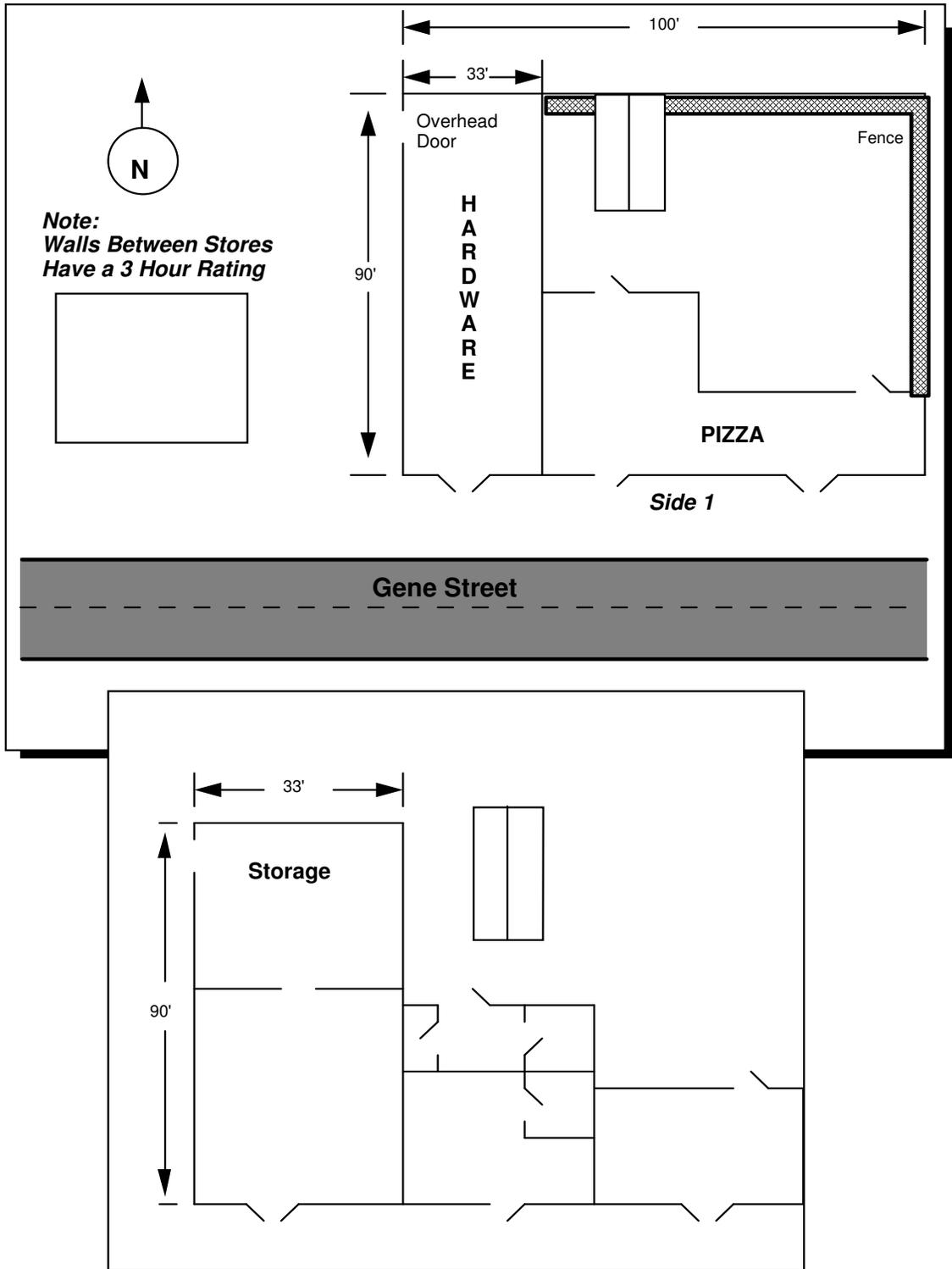
<b>Activity 3.1 (cont'd)</b> <b>Example Scenario</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>100-108 Phelps Lane</i>																	
<b>Building Description:</b> <i>40' x 18', 2-story, ordinary (masonry wood-joint), common attic</i>  <b>Roof Construction:</b> <i>Ridge pole and rafter, 1" x 6" sheathing</i>  <b>Floor Construction:</b> <i>Beam and rafter, sheathing, hardwood floor</i>																	
<b>Occupancy Type:</b> <i>Townhouse</i>	<b>Initial Resources Required:</b> <i>2E, 1T, 1C 13 personnel</i>																
<b>Hazards to Personnel:</b> <i>None out of ordinary</i>																	
<b>Location of Water Supply:</b> <i>Phelps Lane &amp; 1st Street</i>	<b>Available Flow:</b> <i>1,200 gpm</i>																
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="padding: 5px;">Estimated Fire Flow</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"><b>Level of Involvement</b></td> <td style="padding: 5px; text-align: center;"><i>25%</i></td> <td style="padding: 5px; text-align: center;"><i>50%</i></td> <td style="padding: 5px; text-align: center;"><i>75%</i></td> <td style="padding: 5px; text-align: center;"><i>100%</i></td> </tr> <tr> <td style="padding: 5px;"><b>Estimated Fire Flow</b></td> <td style="padding: 5px; text-align: center;"><i>100</i></td> <td style="padding: 5px; text-align: center;"><i>200</i></td> <td style="padding: 5px; text-align: center;"><i>300</i></td> <td style="padding: 5px; text-align: center;"><i>420</i></td> </tr> </tbody> </table>			Estimated Fire Flow					<b>Level of Involvement</b>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	<b>Estimated Fire Flow</b>	<i>100</i>	<i>200</i>	<i>300</i>	<i>420</i>
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<b>Estimated Fire Flow</b>	<i>100</i>	<i>200</i>	<i>300</i>	<i>420</i>													
<i>Fire flow based on 1st floor of home with 2 exterior and 1 interior exposures</i>																	
<b>Fire Behavior Prediction:</b> <i>Rapid horizontal and vertical spread</i>																	
<b>Predicted Strategies:</b> <i>Rescue, ventilation, exposures, confinement, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>No more than usual for a dwelling</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

**Activity 3.1 (cont'd)**  
**Plot Plan/Floor Plan**  
**Scenario 1**



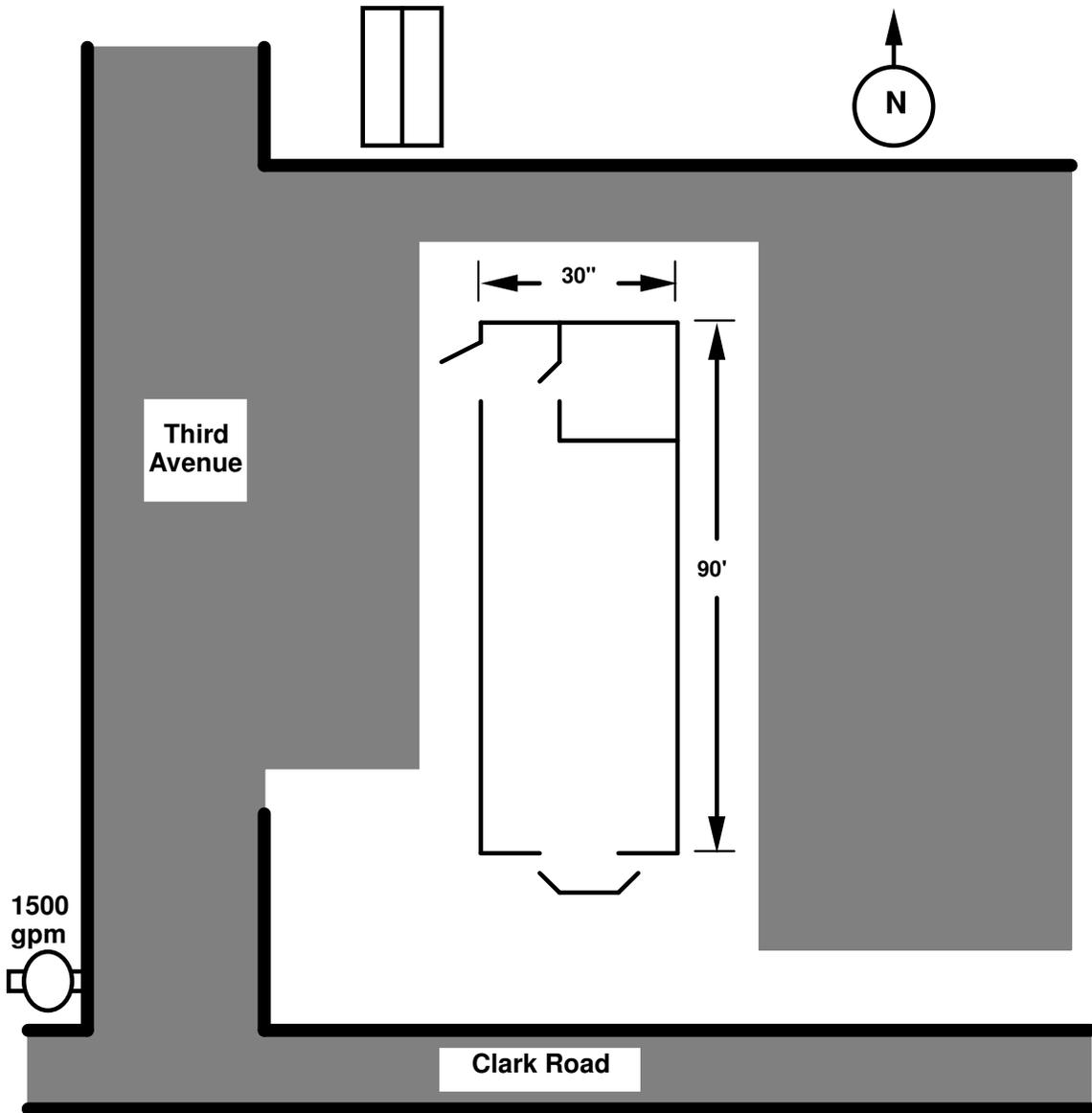
<b>Activity 3.1 (cont'd)</b> <b>Scenario 1</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>475 Vicki Avenue</i>																	
<b>Building Description:</b> <i>20' x 30', 2-story, wood frame</i> <b>Roof Construction:</b> <i>Wood truss, gusset plate assembly</i> <b>Floor Construction:</b> <i>Parallel chord wood truss covered with plywood</i>																	
<b>Occupancy Type:</b> <i>Apartment</i>	<b>Initial Resources Required:</b> <i>Determined by class</i>																
<b>Hazards to Personnel:</b> <i>None more than usual for a dwelling</i>																	
<b>Location of Water Supply:</b> <i>Determined by class</i>	<b>Available Flow:</b> <i>Determined by class</i>																
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td></td> <th colspan="4">Estimated Fire Flow</th> </tr> <tr> <th>Level of Involvement</th> <td style="text-align: center;"><i>25%</i></td> <td style="text-align: center;"><i>50%</i></td> <td style="text-align: center;"><i>75%</i></td> <td style="text-align: center;"><i>100%</i></td> </tr> <tr> <th>Estimated Fire Flow</th> <td style="text-align: center;"><i>150</i></td> <td style="text-align: center;"><i>300</i></td> <td style="text-align: center;"><i>450</i></td> <td style="text-align: center;"><i>600</i></td> </tr> </table>				Estimated Fire Flow				Level of Involvement	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	Estimated Fire Flow	<i>150</i>	<i>300</i>	<i>450</i>	<i>600</i>
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Estimated Fire Flow	<i>150</i>	<i>300</i>	<i>450</i>	<i>600</i>													
<i>Fire flow based on 2 floors and 2 exterior exposures</i>																	
<b>Fire Behavior Prediction:</b> <i>Fast horizontal and vertical spread</i>																	
<b>Predicted Strategies:</b> <i>Rescue, ventilation, confinement, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>Early collapse of floor and roof assemblies</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

**Activity 3.1 (cont'd)**  
**Scenario 2**  
**Plot Plan/Floor Plan**



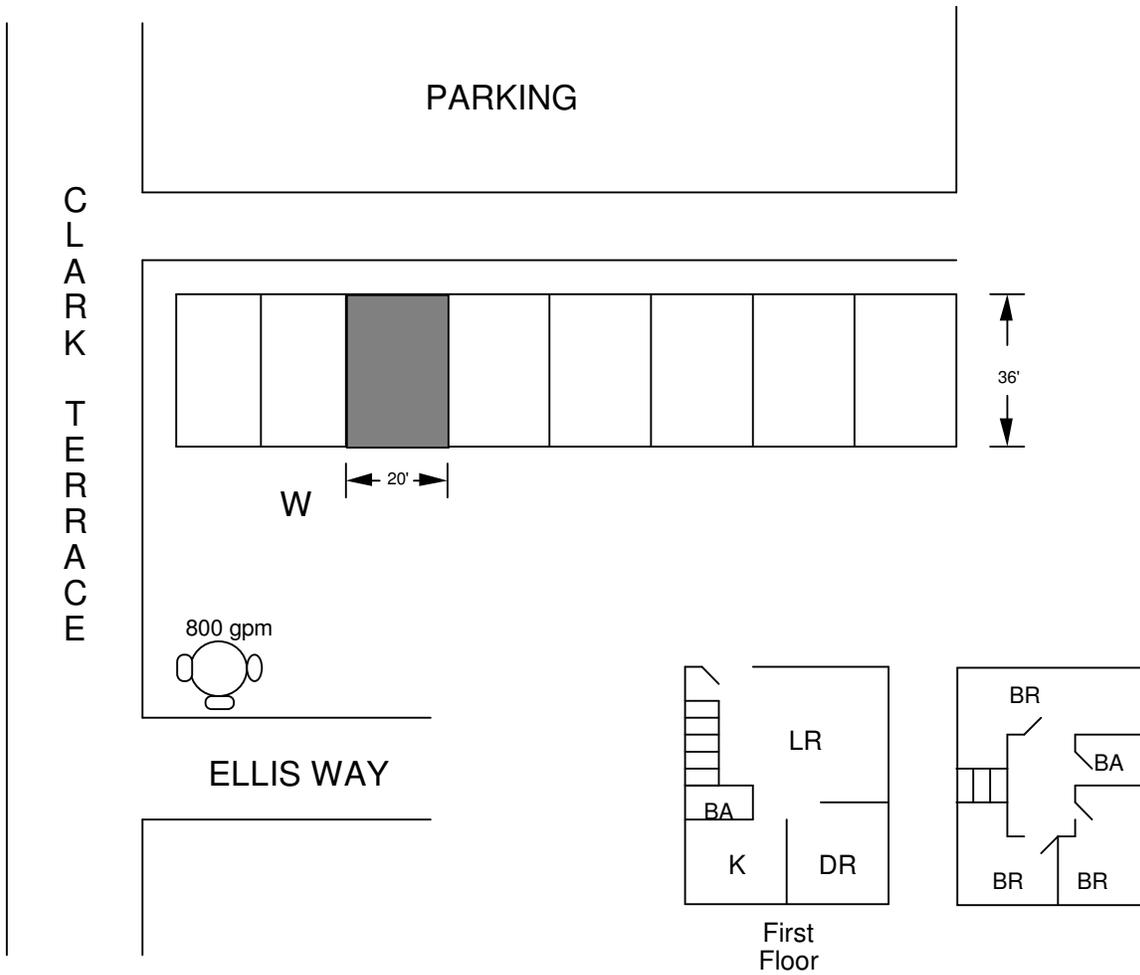
<b>Activity 3.1 (cont'd)</b> <b>Scenario 2</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>1020 Gene Street</i>																	
<b>Building Description:</b> <i>2, 1-story, ordinary construction; largest fire area 33' x 90' firewall between occupancies</i>																	
<b>Roof Construction:</b> <i>Wooden 2" x 10" rafters, plywood, composition roof covering</i>																	
<b>Floor Construction:</b> <i>Concrete slab</i>																	
<b>Occupancy Type:</b> <i>Retail stores</i>	<b>Initial Resources Required:</b> <i>Determined by class</i>																
<b>Hazards to Personnel:</b> <i>Pesticides, flammable/combustible liquids</i>																	
<b>Location of Water Supply:</b> <i>Determined by class</i>	<b>Available Flow:</b> <i>Determined by class</i>																
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	Estimated Fire Flow																
Level of Involvement	25%	50%	75%	100%													
Estimated Fire Flow	375	750	1,125	1,500													
<b>Fire Behavior Prediction:</b> <i>Rapid horizontal spread within one occupancy</i>																	
<b>Predicted Strategies:</b> <i>Confinement, ventilation, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>Poor rear access, limited horizontal ventilation</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

Activity 3.1 (cont'd)  
Scenario 3  
Plot Plan/Floor Plan



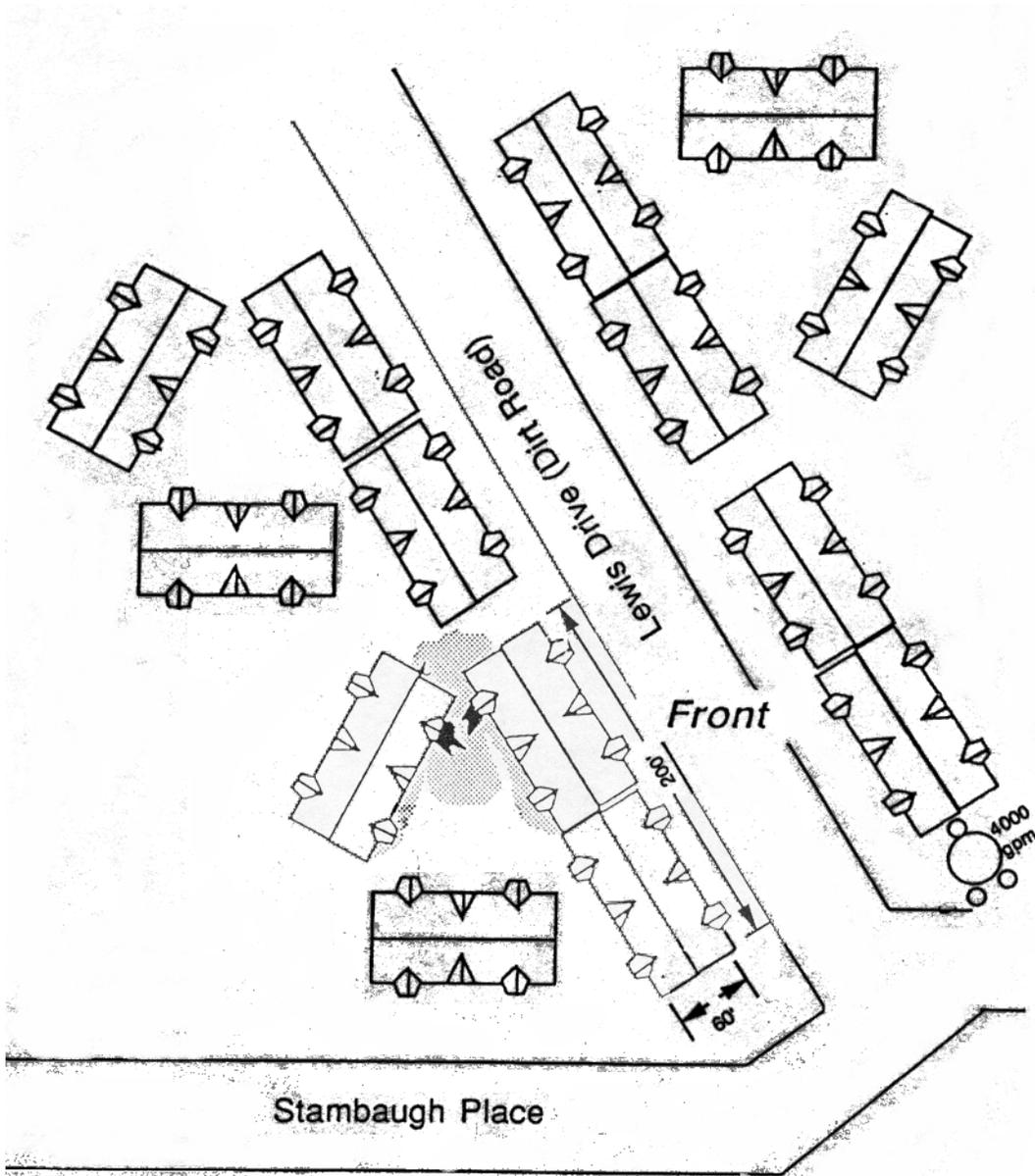
<b>Activity 3.1 (cont'd)</b> <b>Scenario 3</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>1590 Clark Road</i>																	
<b>Building Description:</b> <i>30' x 90', 1-story, ordinary construction with basement</i> <b>Roof Construction:</b> <i>2" x 10" rafters, plywood, composition covering</i> <b>Floor Construction:</b> <i>2" x 10" rafters, sheathing and hardwood flooring</i>																	
<b>Occupancy Type:</b> <i>Bar and Lounge</i>	<b>Initial Resources Required:</b> <i>Determined by class</i>																
<b>Hazards to Personnel:</b> <i>None more than usual</i>																	
<b>Location of Water Supply:</b> <i>Corner of Clark Road and Third Ave.</i>	<b>Available Flow:</b> <i>1,500 gpm</i>																
<table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td></td> <th colspan="4">Estimated Fire Flow</th> </tr> <tr> <th style="text-align: left;">Level of Involvement</th> <td style="text-align: center;"><i>25%</i></td> <td style="text-align: center;"><i>50%</i></td> <td style="text-align: center;"><i>75%</i></td> <td style="text-align: center;"><i>100%</i></td> </tr> <tr> <th style="text-align: left;">Estimated Fire Flow</th> <td style="text-align: center;"><i>225</i></td> <td style="text-align: center;"><i>450</i></td> <td style="text-align: center;"><i>675</i></td> <td style="text-align: center;"><i>900</i></td> </tr> </table>				Estimated Fire Flow				Level of Involvement	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	Estimated Fire Flow	<i>225</i>	<i>450</i>	<i>675</i>	<i>900</i>
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<b>Fire Behavior Prediction:</b> <i>Rapid horizontal fire spread</i>																	
<b>Predicted Strategies:</b> <i>Confinement, ventilation, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>Interference by patrons</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

Activity 3.1 (cont'd)  
Scenario 4  
Plot Plan/Floor Plan



<b>Activity 3.1 (cont'd)</b> <b>Scenario 4</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>600-614 Clark Terrace</i>																	
<b>Building Description:</b> <i>20' x 36', 2-story, wood frame</i>  <b>Roof Construction:</b> <i>2" x 4", nailed, wood truss, common attic</i>  <b>Floor Construction:</b> <i>1st floor--concrete slab, 2nd floor--platform, 2" x 8" rafters, plywood sheathing</i>																	
<b>Occupancy Type:</b> <i>Townhouse</i>	<b>Initial Resources Required:</b> <i>Determined by class</i>																
<b>Hazards to Personnel:</b> <i>None more than normal for a dwelling</i>																	
<b>Location of Water Supply:</b> <i>Clark Terrace and Ellis Way</i>	<b>Available Flow:</b> <i>800 gpm</i>																
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tr> <td></td> <th colspan="4">Estimated Fire Flow</th> </tr> <tr> <th>Level of Involvement</th> <td>25%</td> <td>50%</td> <td>75%</td> <td>100%</td> </tr> <tr> <th>Estimated Fire Flow</th> <td>100</td> <td>200</td> <td>300</td> <td>420</td> </tr> </table> <p><i>Fire flow based on 1st floor of 1 house with 2 exterior and 1 interior exposures</i></p>				Estimated Fire Flow				Level of Involvement	25%	50%	75%	100%	Estimated Fire Flow	100	200	300	420
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<b>Predicted Strategies:</b> <i>Rescue, exposures, ventilation, confinement, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>Limited access, limited egress, common attic</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

Activity 3.1 (cont'd)  
Scenario 5  
Plot Plan/Floor Plan



**Activity 3.1 (cont'd)  
Scenario 5  
Quick Access Prefire Plan**

**Building Address:** *Lewis Drive and Stambaugh Place*

**Building Description:** *60' x 200', 3-story, wood frame (under construction)*

**Roof Construction:** *2" x 4" gusset plate wood truss, plywood sheathing*

**Floor Construction:** *1st floor--concrete slab, 2nd/3rd floor--parallel chord wood truss, plywood sheathing*

**Occupancy Type:**  
*Unoccupied apartments*

**Initial Resources Required:**  
*Determined by class*

**Hazards to Personnel:**  
*Radiant heat, early collapse, rapid fire spread--no drywall on walls*

**Location of Water Supply:**  
*Lewis Drive and Stambaugh Place*

**Available Flow:**  
*4,000 gpm*

	<b>Estimated Fire Flow</b>			
<b>Level of Involvement</b>	<i>5%</i>	<i>10%</i>	<i>25%</i>	<i>100%</i>
<b>Estimated Fire Flow</b>	<i>750</i>	<i>1,500</i>	<i>3,750</i>	<i>15,000</i>

*Fire flow on entire open 3-story building with exposure*

**Fire Behavior Prediction:**  
*Rapid horizontal and vertical spread*

**Predicted Strategies:**  
*Exposures, confinement, extinguishment*

**Problems Anticipated:**  
*Limited access, unfinished roads*

**Standpipe:**  
*None*

**Sprinklers:**  
*None*

**Fire Detection:**  
*None*



## Activity 3.2

### Selecting Tactics

#### Purpose

The purpose of this activity is to use the command sequence and demonstrate the ability to select tactics that will achieve a well-defined strategy.

#### Directions

Your group will be assigned a scenario. As a group, you will be given 20 minutes to:

1. Come to a consensus on tactics for each strategy.
2. Write the tactics under the appropriate strategy.
3. Leave the easel pads on the wall.

Your group will select a spokesperson to give your group report. This will be a person who has not given a report on this unit.



**Activity 3.2 (cont'd)**

**Selecting Tactics**

**Scenario 1 - Two-Story Apartment House**

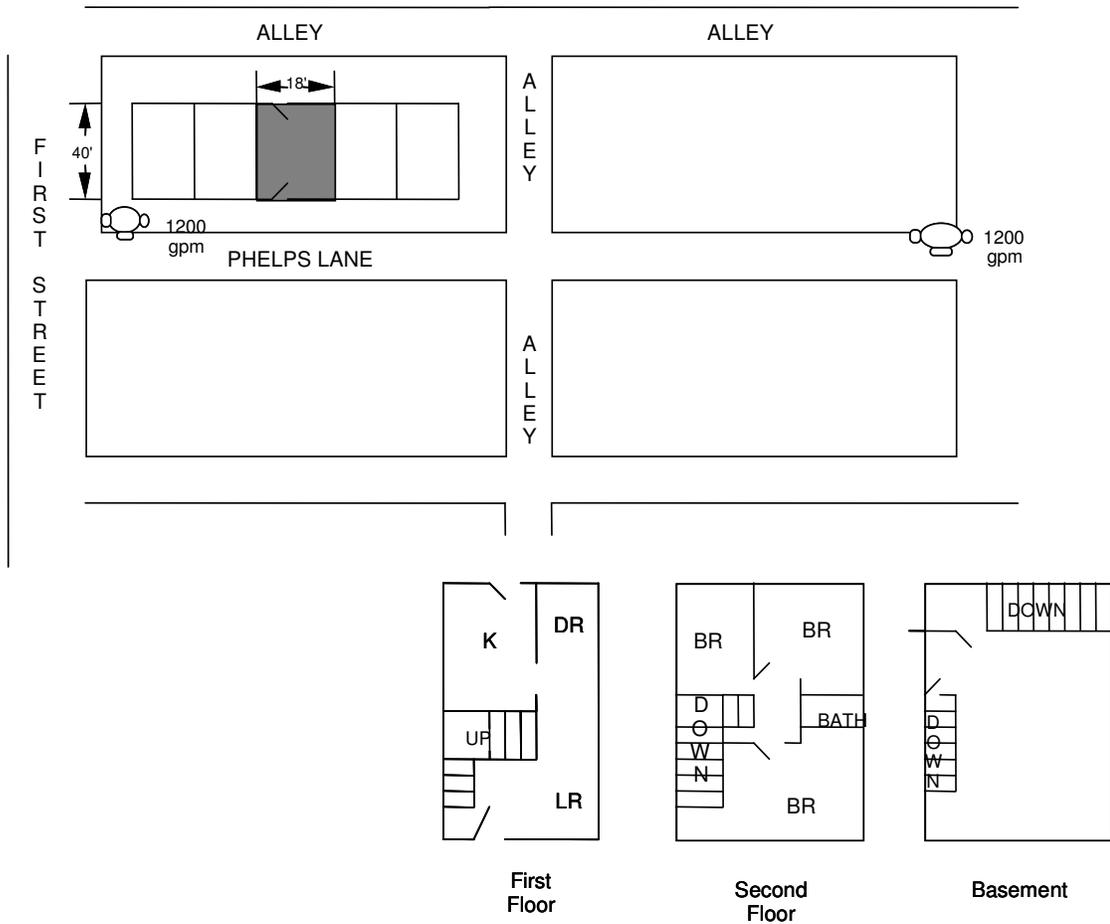
**Scenario 2 - Small Shopping Center**

**Scenario 3 - Community Bar**

**Scenario 4 - Townhouse**

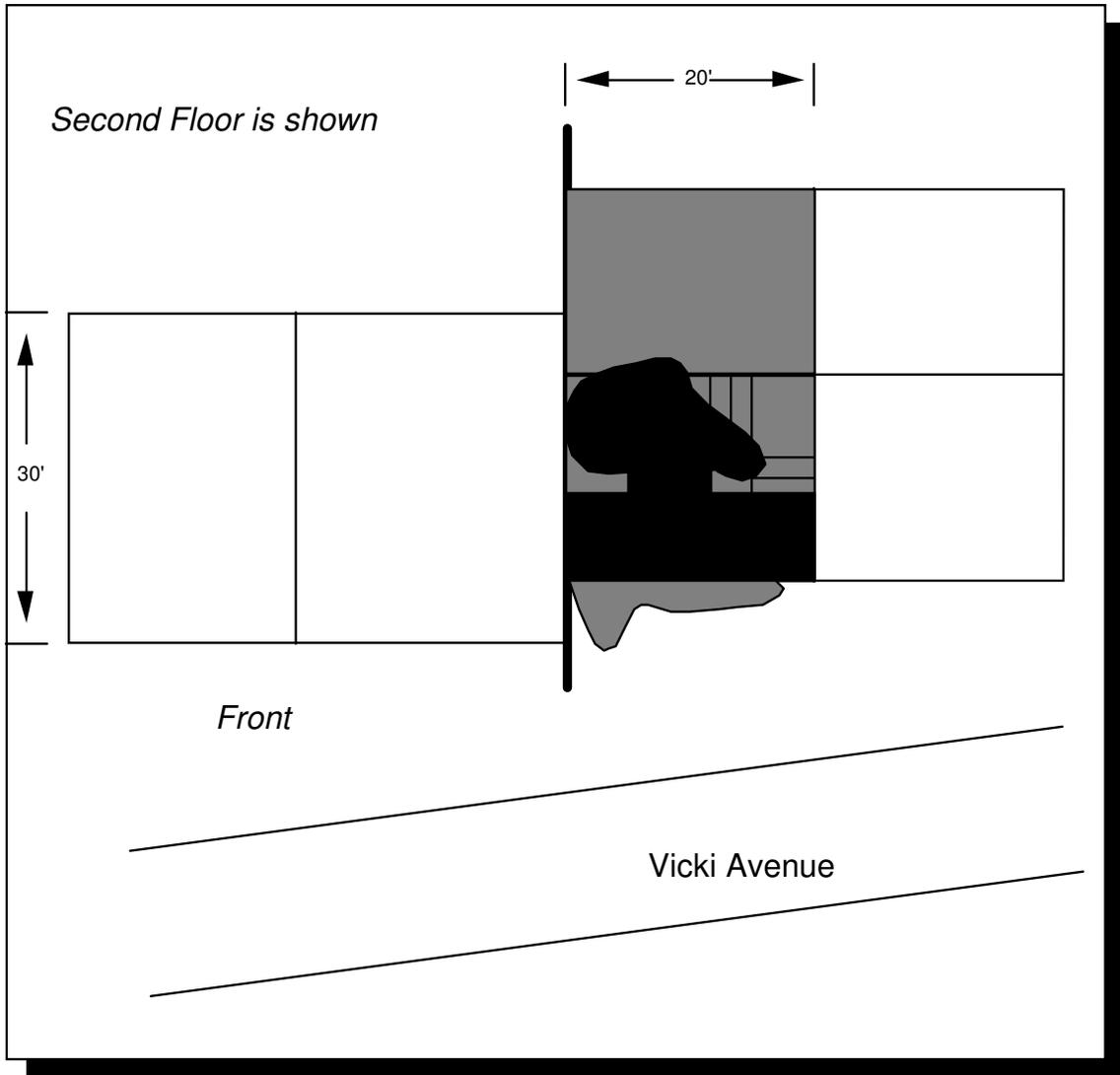
**Scenario 5 - Apartments Under Construction**

**Activity 3.2 (cont'd)**  
**Example Scenario**  
**Plot Plan/Floor Plan**



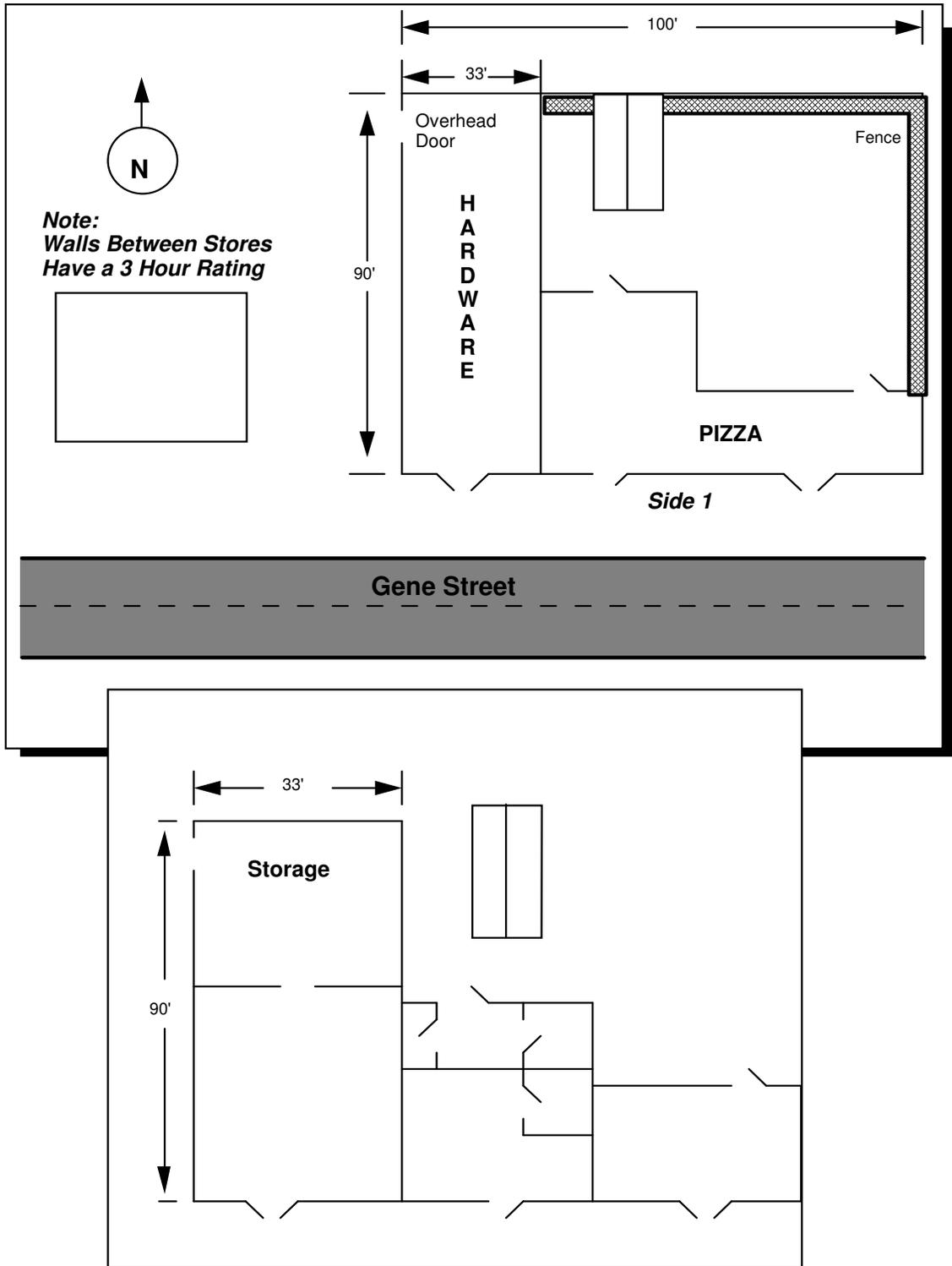
<b>Activity 3.2 (cont'd)</b> <b>Example Scenario</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>100-108 Phelps Lane</i>																	
<b>Building Description:</b> <i>40' x 18', 2-story, ordinary (masonry wood-joist), common attic</i> <b>Roof Construction:</b> <i>Ridge pole and rafter, 1" x 6" sheathing</i> <b>Floor Construction:</b> <i>Beam and rafter, sheathing, hardwood floor</i>																	
<b>Occupancy Type:</b> <i>Townhouse</i>	<b>Initial Resources Required:</b> <i>2E, 1T, 1C 13 personnel</i>																
<b>Hazards to Personnel:</b> <i>None out of ordinary</i>																	
<b>Location of Water Supply:</b> <i>Phelps Lane &amp; 1st Street</i>	<b>Available Flow:</b> <i>1,200 gpm</i>																
<table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="padding: 5px;">Estimated Fire Flow</th> </tr> </thead> <tbody> <tr> <td style="padding: 5px;"><b>Level of Involvement</b></td> <td style="padding: 5px; text-align: center;"><i>25%</i></td> <td style="padding: 5px; text-align: center;"><i>50%</i></td> <td style="padding: 5px; text-align: center;"><i>75%</i></td> <td style="padding: 5px; text-align: center;"><i>100%</i></td> </tr> <tr> <td style="padding: 5px;"><b>Estimated Fire Flow</b></td> <td style="padding: 5px; text-align: center;"><i>100</i></td> <td style="padding: 5px; text-align: center;"><i>200</i></td> <td style="padding: 5px; text-align: center;"><i>300</i></td> <td style="padding: 5px; text-align: center;"><i>420</i></td> </tr> </tbody> </table>			Estimated Fire Flow					<b>Level of Involvement</b>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	<b>Estimated Fire Flow</b>	<i>100</i>	<i>200</i>	<i>300</i>	<i>420</i>
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<b>Level of Involvement</b>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>													
<b>Estimated Fire Flow</b>	<i>100</i>	<i>200</i>	<i>300</i>	<i>420</i>													
<i>Fire flow based on 1st floor of home with 2 exterior and 1 interior exposures</i>																	
<b>Fire Behavior Prediction:</b> <i>Rapid horizontal and vertical spread</i>																	
<b>Predicted Strategies:</b> <i>Rescue, ventilation, exposures, confinement, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>No more than usual for a dwelling</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

**Activity 3.2 (cont'd)**  
**Plot Plan/Floor Plan**  
**Scenario 1**



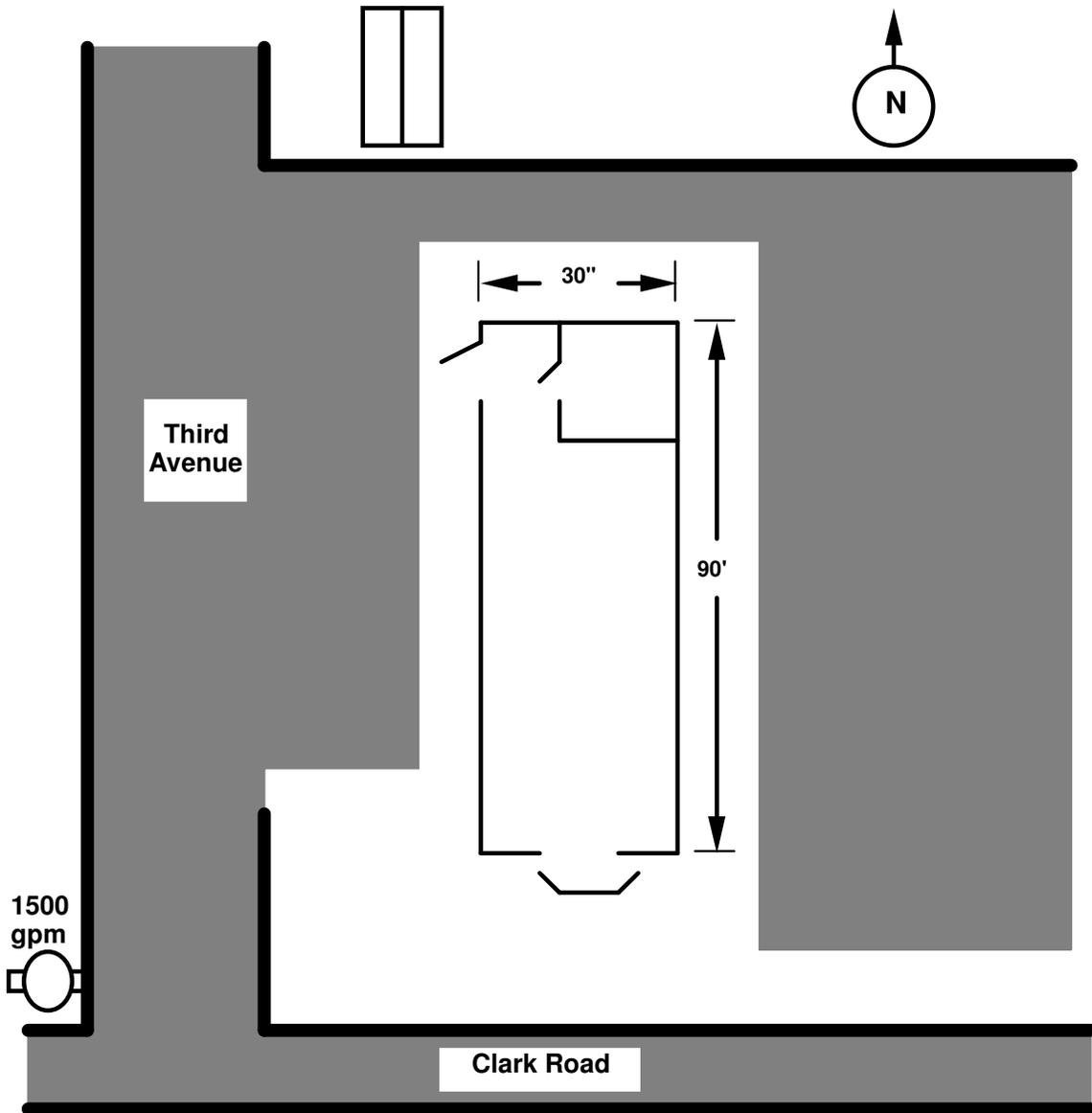
<b>Activity 3.2 (cont'd)</b> <b>Scenario 1</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>475 Vicki Avenue</i>																	
<b>Building Description:</b> <i>20' x 30', 2-story, wood frame</i> <b>Roof Construction:</b> <i>Wood truss, gusset plate assembly</i> <b>Floor Construction:</b> <i>Parallel chord wood truss covered with plywood</i>																	
<b>Occupancy Type:</b> <i>Apartment</i>	<b>Initial Resources Required:</b> <i>Determined by class</i>																
<b>Hazards to Personnel:</b> <i>None more than usual for a dwelling</i>																	
<b>Location of Water Supply:</b> <i>Determined by class</i>	<b>Available Flow:</b> <i>Determined by class</i>																
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <tr> <td></td> <th colspan="4" style="text-align: center;">Estimated Fire Flow</th> </tr> <tr> <th style="text-align: left;">Level of Involvement</th> <td style="text-align: center;">25%</td> <td style="text-align: center;">50%</td> <td style="text-align: center;">75%</td> <td style="text-align: center;">100%</td> </tr> <tr> <th style="text-align: left;">Estimated Fire Flow</th> <td style="text-align: center;">150</td> <td style="text-align: center;">300</td> <td style="text-align: center;">450</td> <td style="text-align: center;">600</td> </tr> </table>				Estimated Fire Flow				Level of Involvement	25%	50%	75%	100%	Estimated Fire Flow	150	300	450	600
	Estimated Fire Flow																
Level of Involvement	25%	50%	75%	100%													
Estimated Fire Flow	150	300	450	600													
<i>Fire flow based on 2 floors and 2 exterior exposures</i>																	
<b>Fire Behavior Prediction:</b> <i>Fast horizontal and vertical spread</i>																	
<b>Predicted Strategies:</b> <i>Rescue, ventilation, confinement, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>Early collapse of floor and roof assemblies</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

**Activity 3.2 (cont'd)**  
**Scenario 2**  
**Plot Plan/Floor Plan**



<b>Activity 3.2 (cont'd)</b> <b>Scenario 2</b> <b>Quick Access Prefire Plan</b>																	
<b>Building Address:</b> <i>1020 Gene Street</i>																	
<b>Building Description:</b> <i>2, 1-story, ordinary construction; largest fire area 33' x 90' firewall between occupancies</i>																	
<b>Roof Construction:</b> <i>Wooden 2" x 10" rafters, plywood, composition roof covering</i>																	
<b>Floor Construction:</b> <i>Concrete slab</i>																	
<b>Occupancy Type:</b> <i>Retail stores</i>	<b>Initial Resources Required:</b> <i>Determined by class</i>																
<b>Hazards to Personnel:</b> <i>Pesticides, flammable/combustible liquids</i>																	
<b>Location of Water Supply:</b> <i>Determined by class</i>	<b>Available Flow:</b> <i>Determined by class</i>																
<table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <tr> <td></td> <td colspan="4"><b>Estimated Fire Flow</b></td> </tr> <tr> <td><b>Level of Involvement</b></td> <td><i>25%</i></td> <td><i>50%</i></td> <td><i>75%</i></td> <td><i>100%</i></td> </tr> <tr> <td><b>Estimated Fire Flow</b></td> <td><i>375</i></td> <td><i>750</i></td> <td><i>1,125</i></td> <td><i>1,500</i></td> </tr> </table> <p><i>Fire flow of largest fire area--hardware store and 2 exposures</i></p>				<b>Estimated Fire Flow</b>				<b>Level of Involvement</b>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>	<b>Estimated Fire Flow</b>	<i>375</i>	<i>750</i>	<i>1,125</i>	<i>1,500</i>
	<b>Estimated Fire Flow</b>																
<b>Level of Involvement</b>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>													
<b>Estimated Fire Flow</b>	<i>375</i>	<i>750</i>	<i>1,125</i>	<i>1,500</i>													
<b>Fire Behavior Prediction:</b> <i>Rapid horizontal spread within one occupancy</i>																	
<b>Predicted Strategies:</b> <i>Confinement, ventilation, extinguishment</i>																	
<b>Problems Anticipated:</b> <i>Poor rear access, limited horizontal ventilation</i>																	
<b>Standpipe:</b> <i>None</i>	<b>Sprinklers:</b> <i>None</i>	<b>Fire Detection:</b> <i>None</i>															

Activity 3.2 (cont'd)  
Scenario 3  
Plot Plan/Floor Plan



**Activity 3.2 (cont'd)  
Scenario 3  
Quick Access Prefire Plan**

**Building Address:** *1590 Clark Road*

**Building Description:** *30' x 90', 1-story, ordinary construction with basement*

**Roof Construction:** *2" x 10" rafters, plywood, composition covering*

**Floor Construction:** *2" x 10" rafters, sheathing and hardwood flooring*

**Occupancy Type:**  
*Bar and Lounge*

**Initial Resources Required:**  
*Determined by class*

**Hazards to Personnel:**  
*None more than usual*

**Location of Water Supply:**  
*Corner of Clark Road and Third Ave.*

**Available Flow:**  
*1,500 gpm*

	Estimated Fire Flow			
<b>Level of Involvement</b>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>
<b>Estimated Fire Flow</b>	<i>225</i>	<i>450</i>	<i>675</i>	<i>900</i>

**Fire Behavior Prediction:**  
*Rapid horizontal fire spread*

**Predicted Strategies:**  
*Confinement, ventilation, extinguishment*

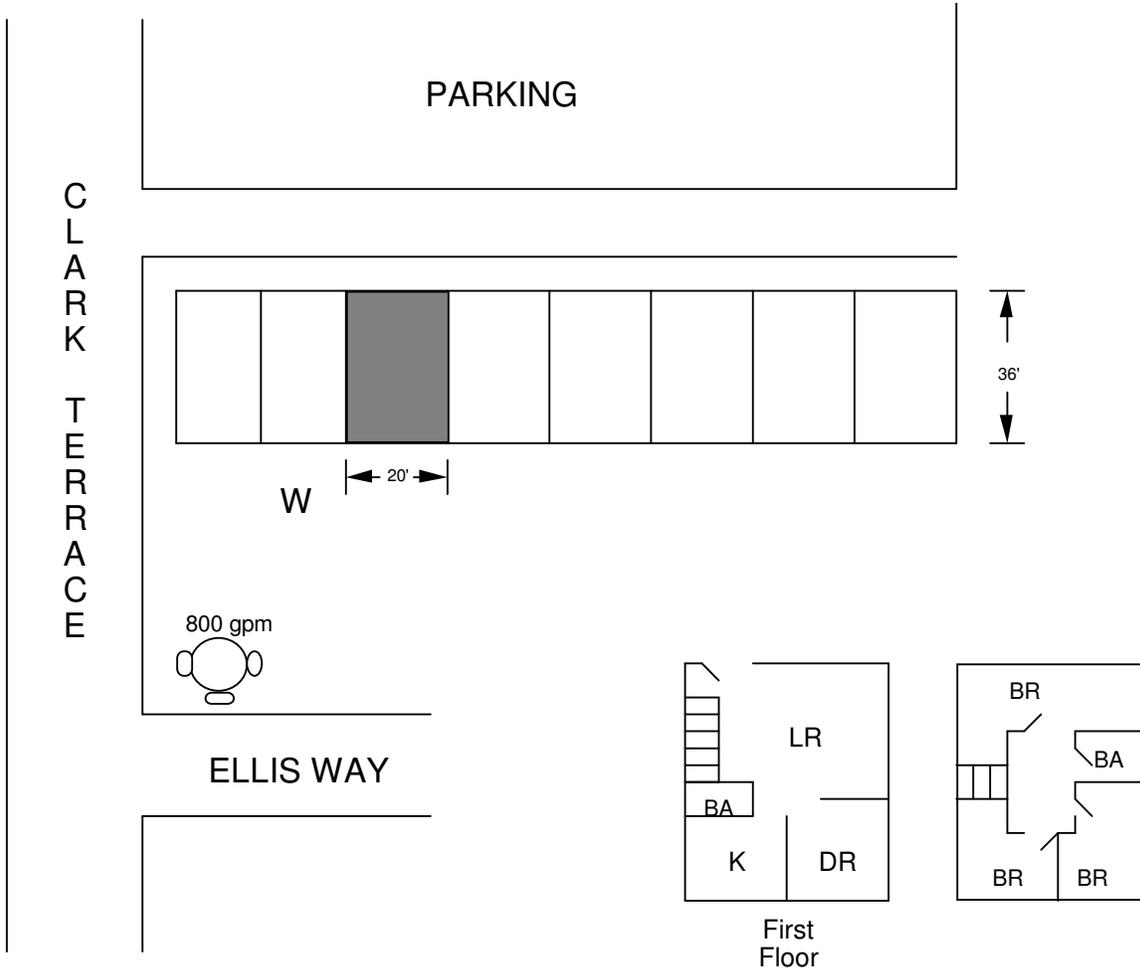
**Problems Anticipated:**  
*Interference by patrons*

**Standpipe:**  
*None*

**Sprinklers:**  
*None*

**Fire Detection:**  
*None*

**Activity 3.2 (cont'd)**  
**Scenario 4**  
**Plot Plan/Floor Plan**



**Activity 3.2 (cont'd)  
Scenario 4  
Quick Access Prefire Plan**

**Building Address:** *600-614 Clark Terrace*

**Building Description:** *20' x 36', 2-story, wood frame*

**Roof Construction:** *2" x 4", nailed, wood truss, common attic*

**Floor Construction:** *1st floor--concrete slab, 2nd floor--platform, 2" x 8" rafters, plywood sheathing*

**Occupancy Type:**  
*Townhouse*

**Initial Resources Required:**  
*Determined by class*

**Hazards to Personnel:**  
*None more than normal for a dwelling*

**Location of Water Supply:**  
*Clark Terrace and Ellis Way*

**Available Flow:**  
*800 gpm*

	Estimated Fire Flow			
<b>Level of Involvement</b>	<i>25%</i>	<i>50%</i>	<i>75%</i>	<i>100%</i>
<b>Estimated Fire Flow</b>	<i>100</i>	<i>200</i>	<i>300</i>	<i>420</i>

*Fire flow based on 1st floor of 1 house with 2 exterior and 1 interior exposures*

**Fire Behavior Prediction:**  
*Rapid horizontal and vertical spread*

**Predicted Strategies:**  
*Rescue, exposures, ventilation, confinement, extinguishment*

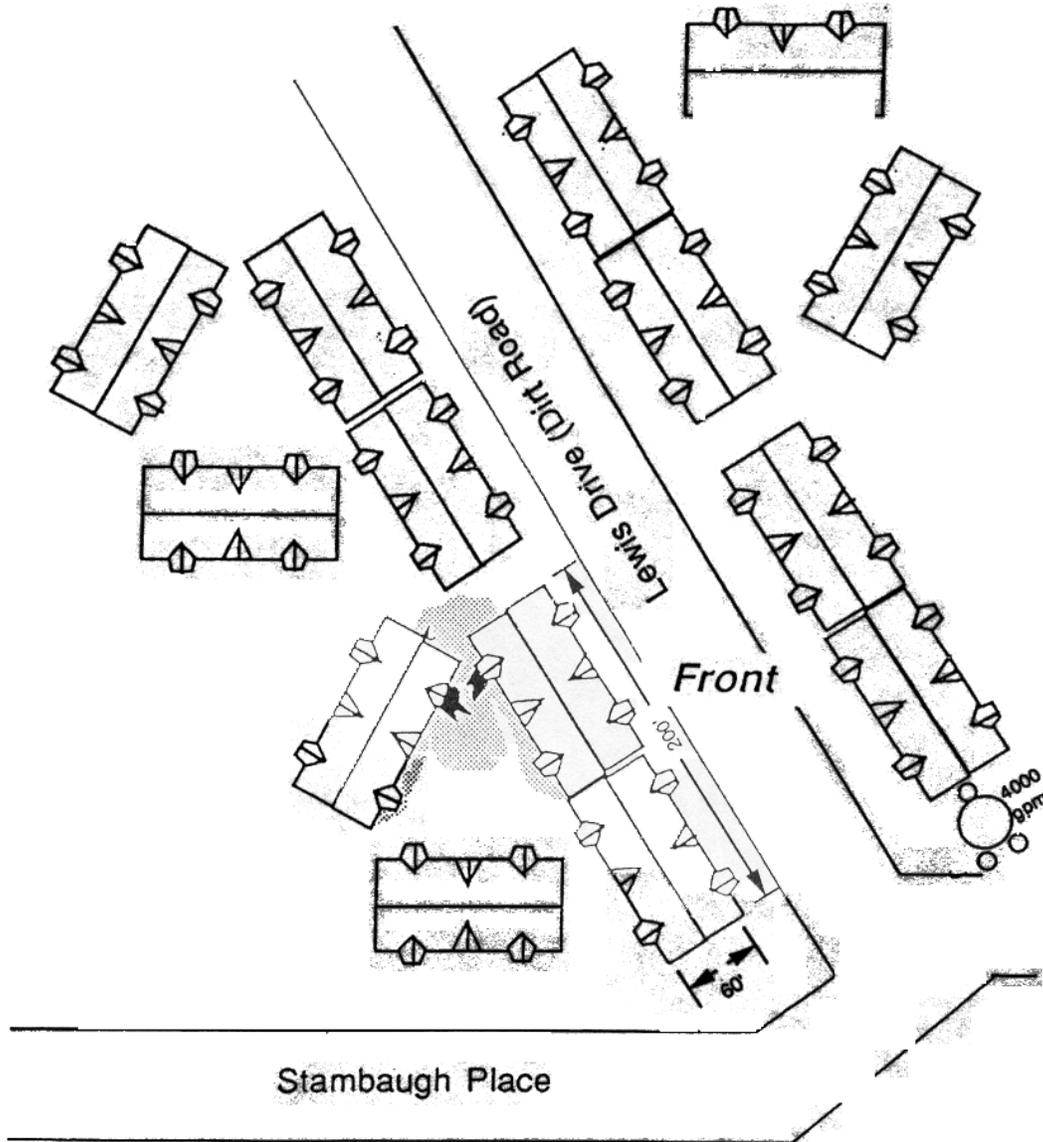
**Problems Anticipated:**  
*Limited access, limited egress, common attic*

**Standpipe:**  
*None*

**Sprinklers:**  
*None*

**Fire Detection:**  
*None*

Activity 3.2 (cont'd)  
Scenario 5  
Plot Plan/Floor Plan



**Activity 3.2 (cont'd)**  
**Scenario 5**  
**Quick Access Prefire Plan**

**Building Address:** *Lewis Drive and Stambaugh Place*

**Building Description:** *60' x 200', 3-story, wood frame (under construction)*

**Roof Construction:** *2" x 4" gusset plate wood truss, plywood sheathing*

**Floor Construction:** *1st floor--concrete slab, 2nd/3rd floor--parallel chord wood truss, plywood sheathing*

**Occupancy Type:**  
*Unoccupied apartments*

**Initial Resources Required:**  
*Determined by class*

**Hazards to Personnel:**  
*Radiant heat, early collapse, rapid fire spread--no drywall on walls*

**Location of Water Supply:**  
*Lewis Drive and Stambaugh Place*

**Available Flow:**  
*4,000 gpm*

	<b>Estimated Fire Flow</b>			
<b>Level of Involvement</b>	<i>5%</i>	<i>10%</i>	<i>25%</i>	<i>100%</i>
<b>Estimated Fire Flow</b>	<i>750</i>	<i>1,500</i>	<i>3,750</i>	<i>15,000</i>

*Fire flow on entire open 3-story building with exposure*

**Fire Behavior Prediction:**  
*Rapid horizontal and vertical spread*

**Predicted Strategies:**  
*Exposures, confinement, extinguishment*

**Problems Anticipated:**  
*Limited access, unfinished roads*

**Standpipe:**  
*None*

**Sprinklers:**  
*None*

**Fire Detection:**  
*None*