ARLINGTON COUNTY

AFTER-ACTION REPORT ON THE RESPONSE TO THE SEPTEMBER 11 TERRORIST ATTACK ON THE PENTAGON

"The whole world wept tears of pride as these men and women unfurled the Stars and Stripes from atop the Pentagon's roof, an image that will be engraved into American memory from this time forward. To each of you, for your courage and professionalism—and for helping to turn Arlington's darkest moment into its finest hour—we thank you."

Jay Fisette
Chairman, Arlington County Board

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INTRODUCTION

ARLINGTON COUNTY AFTER-ACTION REPORT ON THE RESPONSE TO THE SEPTEMBER 11 TERRORIST ATTACK ON THE PENTAGON

This After-Action Report (AAR) describes the activities of Arlington County and the supporting jurisdictions, government agencies, and other organizations in response to the September 11, 2001, terrorist attack on the Pentagon. This incident produced a unique paradigm of response considerations and requirements. It was a major fire and rescue operation within the broader context of a terrorist attack. This terrorist attack occurred in Arlington County, VA, but at a U.S. military facility under the direct control of the Secretary of Defense. The incident response engaged a large number of agencies, organizations, and individuals from all levels of government and the private sector, and it lasted for an extended period.

This AAR conveys the response, rescue, and recovery activities as seen through the eyes of the response community. It is a holistic and comprehensive report, incorporating the views of persons at all levels and from all participating organizations. The information in this AAR was compiled, analyzed, and produced during a 6-month period. The AAR project team conducted 92 separate debriefing sessions and interviewed approximately 475 participants. A total of 550 survey forms were distributed to response community members in Arlington County and neighboring jurisdictions. The information collected yielded more than 2,000 data points that were subsequently integrated into nearly 800 information elements. The project team also reviewed numerous planning documents, mutual-aid agreements, journals, logbooks, and other transaction records. The extensive review of documents and materials supplemented the information received from interviews and survey forms.

The information compiled for this AAR represents the views of many individuals taken at different times during the response. It produced legitimate, but often varying, perspectives. A robust three-tiered validation process was employed to ensure the information conveyed in this AAR is consistent and accurate. Tier-1 validation consisted of project team members conducting detailed technical reviews of the information collected and analyzed by other colleagues. Thus, team members had a professional colleague reviewing their material. Next, each project team member reviewed all the compiled AAR data and met to resolve conflicting information and identify anomalies. Validation interviews were then conducted with key first responders to verify preliminary findings and recommendations. Tier-2 validation engaged a group of senior response community experts in a comprehensive review, followed by debriefings and discussions between the reviewers and key project team members. Finally, senior representatives of key participating organizations reviewed and validated the Tier-3 draft report.

This AAR is organized into four principal annexes and four supporting appendices. **Annex A – Fire Department Operations** includes all aspects of fire, rescue, and Emergency Medical Services (EMS) activities performed by Arlington County, as well as supporting jurisdictions, agencies, and organizations operating under mutual-aid or similar provisions. **Annex B – Hospitals and Clinics** describes the response of

medical treatment centers throughout the Washington Metropolitan Area, including hospitals, urgent care centers, and military health clinics. **Annex C – Law Enforcement** presents the activities of those law enforcement agencies sharing primary jurisdictional responsibilities for this incident, the Arlington County Police Department (ACPD), the Defense Protective Service (DPS), and the Federal Bureau of Investigation (FBI), as well as many other law enforcement organizations that provided response support. **Annex D – Emergency Management and the Emergency Operations Center** presents the activities of the Arlington County government in support of the first responders and citizens of Arlington County.

Each annex is organized somewhat differently, reflecting the nature of its content. The Introduction to each annex explains this organization. However, within the various annex parts or sections, the information is conveyed in a standard format: *observations* describe what transpired; *findings* present what was learned from the perspective of the response participants; *recommendations and lessons learned* describe potential improvements that were naturally derived from the findings.

The remainder of this introduction sets the stage and gives the reader a context for the annexes. It describes **Arlington County, VA,** its form of government, and provisions for emergency management. It also describes the target of the attack, the **Pentagon.** Finally, it describes the events of **September 11, 2001,** and covers selected response efforts with a final **Summary.**

Arlington County, VA

Arlington County, VA, is geographically the smallest county in the United States, according to the National Association of Counties, occupying an area slightly less than 26 square miles. However, it is a bustling, compact, urban residential and business center. This was not always the case. Originally part of Fairfax County, in 1791, the Virginia General Assembly ceded the land that is now Arlington County to the Federal Government as part of the new national capital. It was returned to Virginia and designated Alexandria County in 1847. The county population in 1900 was 6,430. It became Arlington County in 1920. Today, its residential population of 190,000 grows substantially on workdays. Employees report to the many government agencies in Arlington and the private companies that support those agencies. The Pentagon alone has a workforce of more than 23,000 military and civilian personnel. Additionally, approximately 25,000 people visit Arlington's tourist attractions each day, including Arlington National Cemetery, the Iwo Jima Memorial, and the Pentagon. Arlington County is Northern Virginia's gateway to the Nation's capital. Located just across the Potomac River from the District of Columbia, every highway and railway connecting Virginia and the District of Columbia runs through Arlington County. Ronald Reagan Washington National Airport is located in Arlington County. It is the 16th busiest airport in the country, with an average of 47,000 passengers daily.

In 1922, the Virginia Supreme Court of Appeals ruled that Arlington is a contiguous, continuous, and homogenous community and cannot be further subdivided to form a town. In 1930, Arlington became the first county in the United States to adopt the manager form of government by popular vote.

A five-member County Board sets policies and makes all legislative decisions. The members are elected at large for rotating 4-year terms. The County Board selects its chairman annually. In calendar year 2001, Mr. Jay Fisette served as Chairman. Mr. Christopher Zimmerman was Vice Chairman and succeeded Mr. Fisette on January 1, 2002. The other County Board members are Ms. Barbara Favola, Mr. Paul Ferguson, and Mr. Charles Monroe.

Arlington County Board Members Favola, Monroe, Fisette, Zimmerman, and Ferguson.

A County Manager is appointed by the County Board and serves as the chief administrative officer, exercising authority over all government functions except the public schools, which are governed by a Superintendent appointed by the School Board. More than 3,400 Arlington County employees deliver services to county residents and businesses. Citizens advisory groups including commissions, task forces, and ad-hoc committees, focus on specific needs such as the Commission on Aging and the Human Rights Commission.

Mr. Ron Carlee was appointed County Manager in April 2001. However, Mr. Carlee's career with the Arlington County government extends more than 22 years. He previously served in the former Department of Human Services and in other county organizations. He led the county's $20 million year 2000

(Y2K) effort and was thoroughly familiar with Arlington County government operations and the characteristics and needs of Arlington's neighborhoods and citizens well before his current appointment.

County Manager Ron Carlee.

In 1956, Arlington County published a Comprehensive Emergency Management Plan (CEMP) that, with several revisions, continues to serve as the framework for county emergency operations. Arlington County Code designates the County Manager as the Director of Emergency Services. The CEMP establishes an Emergency Management Team, a group of senior managers knowledgeable in field operations who serve as an advisory body to the County Manager for all aspects of preparation, disaster response, and recovery. This core group is chaired by the Assistant County Manager (Mr. John Mausert-Mooney) and includes the Police Chief (Chief Edward Flynn), Fire Chief (Chief Edward Plaugher), Director of Public Works (Mr. Sam Kem), Assistant County Manager for Public Affairs (Mr. Richard Bridges), and School Superintendent (Dr. Robert Smith). The Fire Chief is also appointed as the Arlington County Coordinator of Emergency Services. His designated Deputy Coordinator of Emergency Services, Captain Mark Penn, serves as the staff coordinator for the Emergency Management Team.

Twenty-nine percent of Arlington County's 3,400 employees serve in its public safety organizations, the police department, the sheriff's office, and the fire department, providing a significant level of safety and protection to its citizens.

The 10 fire stations and 10 police beats are strategically located throughout Arlington County, which is also home to important modern medical treatment facilities. (See Figure 1.)

From the moment American Airlines Flight #77 crashed into the Pentagon at 9:38 a.m. on September 11, and for the succeeding 10 days, this was a major fire and rescue incident, the responsibility of the Arlington County Fire Department (ACFD). Chief Plaugher was appointed to his position in December 1993, following 24 years with the Fairfax County Fire and Rescue Department. The ACFD force of 266 career firefighters is organized into 3 shifts with a minimum daytime staff of 67, including 15 paramedics. Last year, the ACFD responded to nearly 24,000 emergency calls.

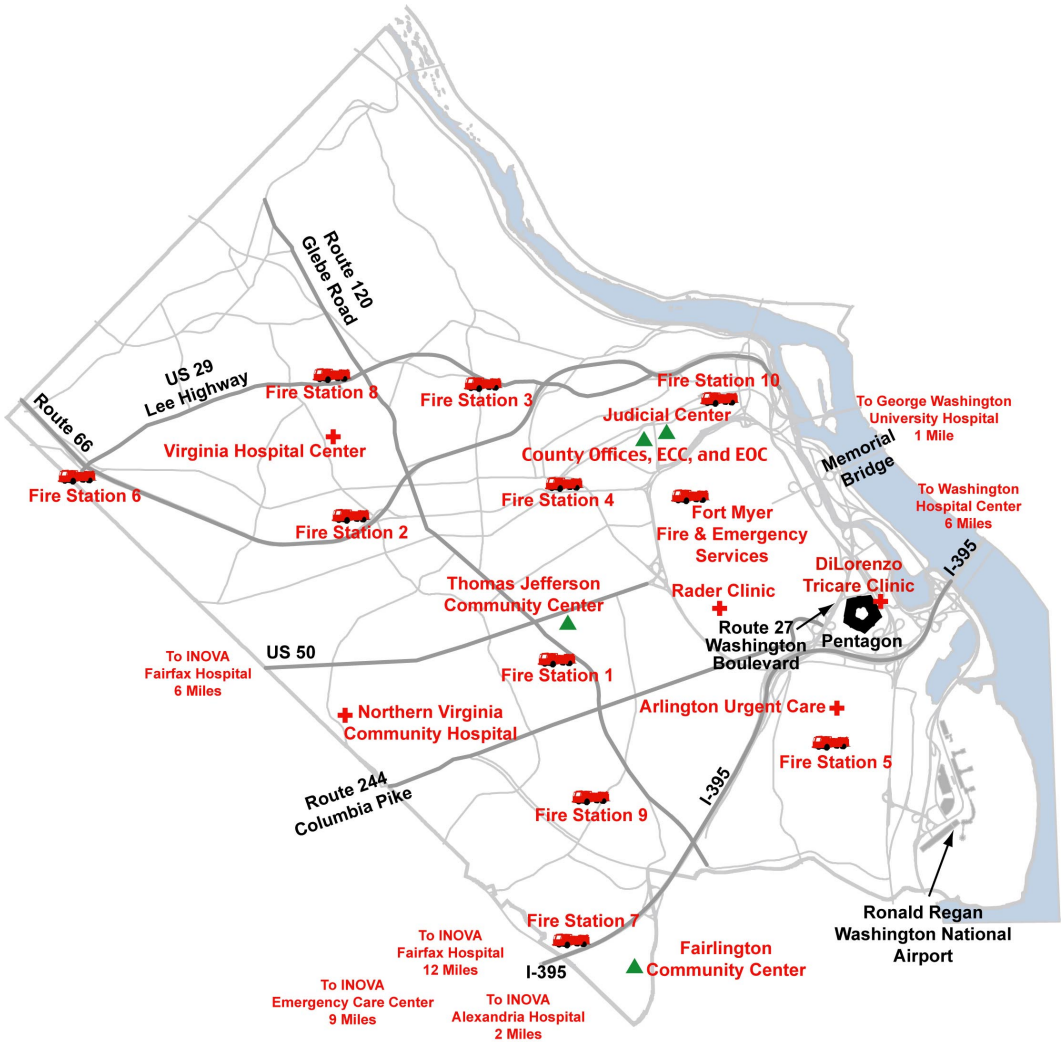


Figure 1. Arlington County government, public safety, and medical facilities.

When Chief Plaugher joined the ACFD more than 8 years ago, he focused on developing a more fully-integrated fire and EMS response capability. Battalion management teams were formed. An EMS captain is assigned to work with each battalion commander and with the fire/EMS officer assigned to each station. Together, they are responsible for all EMS training in the battalion. This guarantees both a better trained EMS force and the availability of two EMS captains at

Fire Chief Plaugher.

all times. Captain Edward Blunt and Captain Alan Dorn were both on duty the morning of September 11.

Following the March 1995 sarin nerve agent attack in a Tokyo subway that killed 12 commuters and injured hundreds more, Chief Plaugher and Assistant Chief for Operations James Schwartz and Assistant Chief for Technical Support John White recognized that America's first responders were not trained or equipped to handle such emergencies. As Chairman of the Washington Metropolitan Area Council of Governments Fire Chiefs Chemical/Biological Committee, Chief Plaugher asked that Council of Governments Chairman Jack Evans send a letter to the President of the United States. The letter described the risk of a terrorist attack and sought assistance in planning and preparing for such an event. As a result, the U.S. Public Health Service (USPHS) invited the Council of Governments to participate in a watershed project to develop the Nation's first locally-based terrorism response team with a hazardous materials (HazMat), medical management, and mass casualty decontamination capability. Chief Plaugher and the ACFD volunteered to work with the USPHS to develop the first prototype capability. This pioneering work produced the framework for the Metropolitan Medical Response System (MMRS) now embraced by more than 100 U.S. metropolitan areas. It was the predecessor to the National Medical Response Team (NMRT), which played an important response role at the Pentagon.

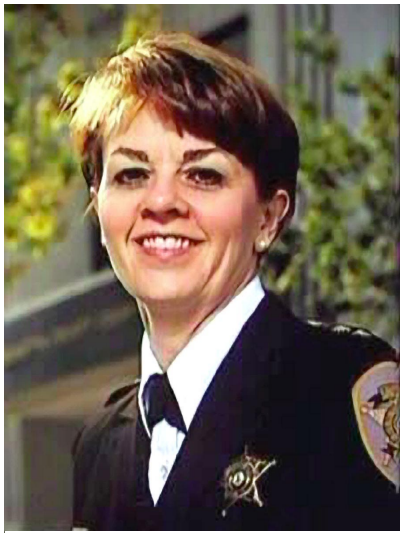
The success of the ACFD response to the terrorist attack on the Pentagon did not happen by chance. The ACFD's preparedness was the result of hard work, sound organization, extensive training, and outstanding leadership. Assistant Chief Schwartz has served in that capacity since 1997. His 18 years of experience with the ACFD and his proven leadership skills served him well when Chief Plaugher designated Chief Schwartz as the ACFD Incident Commander for the 10-day duration of the Pentagon fire and rescue operations. Assistant Chief White's extensive experience as EMS Captain and later as EMS Battalion Chief is reflected in his ability to serve in three critical capacities during the Pentagon response. Chief Schwartz first assigned Chief White as commander of the EMS Branch. Chief White spent 10 years supervising ACFD EMS operations. Next, he was directed to establish the Incident Command System (ICS) Logistics Section with a capability of sustaining fire and rescue operations and supporting the entire response force for 10 days. Once the Logistics Section was fully operational, Chief White became the Incident Command representative at the Joint Operations Center (JOC).

Police Chief Flynn.

Chief Edward Flynn leads the ACPD. Chief Flynn was appointed to his

current position in November 1997 after rising successively through the ranks from patrol officer to department chief while serving in communities in New Jersey and Massachusetts. Founded in 1940 with a force of 9 police officers, the ACPD now has 362 sworn officers and 85 civilian staff members. The ACPD holds the longest standing accreditation in the world from the Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA). It is responsible for all law enforcement and crime prevention services in Arlington County.

Sheriff Beth Arthur is an elected State constitutional officer. First appointed to succeed her predecessor in June 2000, Sheriff Arthur was elected to a 4-year term in November 2001. Sheriff Arthur directs a force of 270 sworn and civilian employees. The sheriff is responsible for managing the Arlington County Detention Center, courthouse security, and serving warrants.



Sheriff Beth Arthur.

The Pentagon

The Pentagon is home to the Nation's defense establishment. Located in Arlington County, VA, it has served for more than 60 years as a symbol of power in defense of freedom. Ironically, the groundbreaking ceremony for construction of the Pentagon took place on September 11, 1941, less than 3 months before the U.S. entry into World War II. Built on a site previously known as Arlington Farms, the five surrounding roadways dictated its pentagonal shape. The Pentagon's placement was personally approved by President Franklin Roosevelt to avoid obstructing the view of the U.S. Capitol from Arlington National Cemetery. The 380,000 tons of sand dredged from the Potomac River produced the reinforced concrete used to construct the building and the 41,492 concrete piles that supported it. This innovative use of concrete saved enough steel to build an additional aircraft carrier for the War Department. Construction of the Pentagon was completed in just 16 months at a cost of $83 million.

The Pentagon is a massive structure. The building covers 29 acres of land, with a floor area of almost 7 million square feet. Almost 18 miles of corridors connect the 5 floors of office space housing some 23,000 employees. The heating and refrigeration plant alone covers a full acre and more than 100,000 miles of telephone cables run through the building. Although the network of corridors, escalators, elevators, and stairwells is designed to speed movement from place to place, to the uninitiated, maneuvering through the Pentagon can be daunting. So much so that a Web site is used to help acquaint newly assigned staff with the intricacies of Pentagon navigation.

Additionally, the Pentagon is a building in transition. An extensive renovation effort began in 1998 and will continue until 2012. Each of the five Wedges

comprising the facility will undergo complete modernization. On September 11, contractors were completing the final work on Wedge One, which was ready for occupancy. (See Figure 2.)

The responsibility for contingency operations at Department of Defense (DoD) facilities in the Washington Metropolitan Area, including the Pentagon, belongs to the Commanding General of the Military District of Washington (MDW), Major General James Jackson.

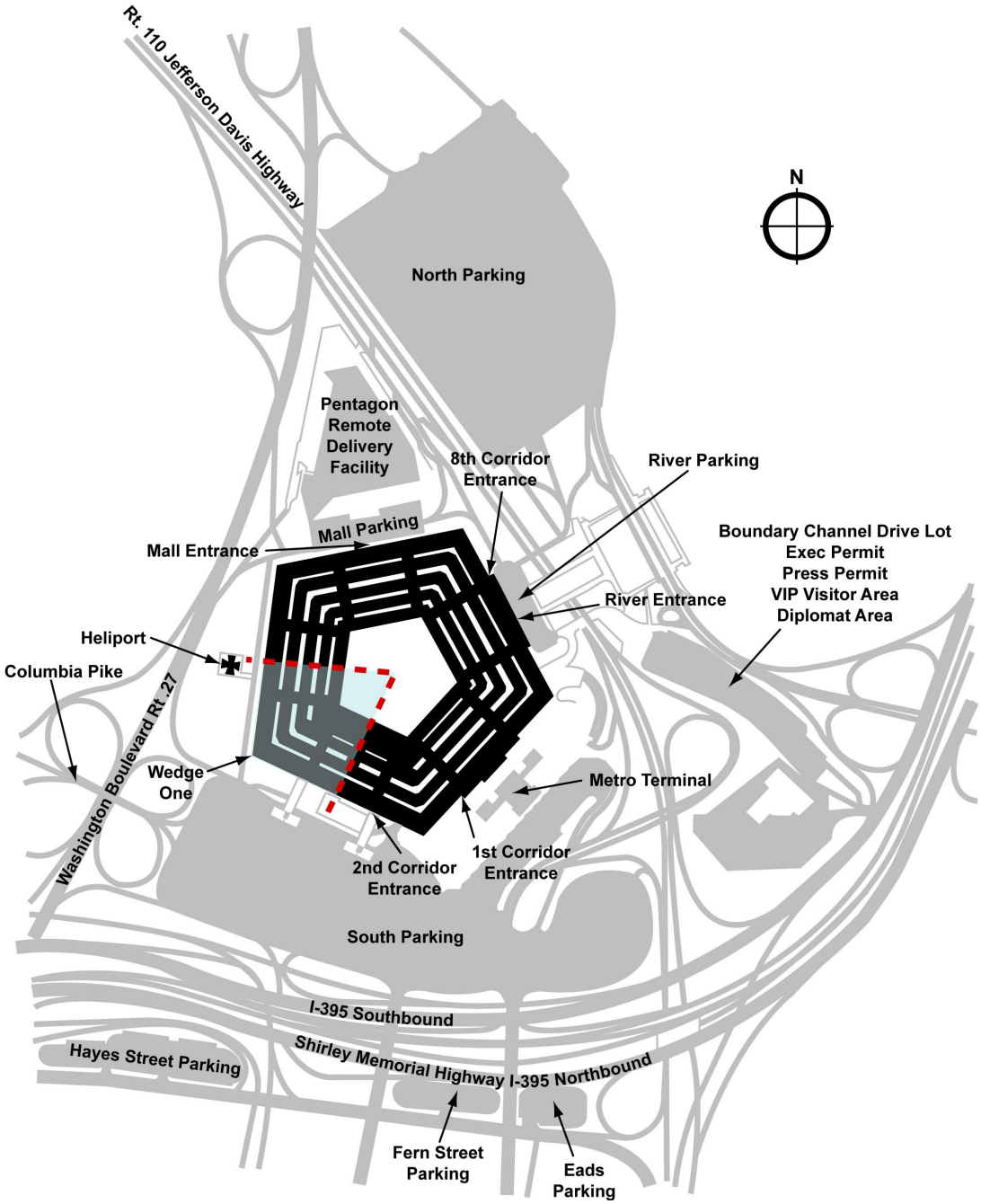


Figure 2. Pentagon ingress and egress and completed Wedge One.

September 11, 2001

On September 11, 2001, the citizens of the Washington Metropolitan Area awoke to a bright, clear morning. By 8:00 a.m., the Tuesday morning commute was well under way. At Washington Dulles International Airport, passengers were boarding American Airlines Flight #77 for the morning departure en route to Los Angeles, CA. The Boeing 757 is a large airliner with a typical transcontinental passenger capacity of 243. Its maximum takeoff weight exceeds 270,000 pounds, including 11,466 gallons of jet fuel. The cruising speed of the Boeing 757 is 475 miles per hour.

At 8:10 a.m., American Airlines Flight #77 took off from Washington Dulles International Airport carrying 58 passengers and a crew of 6. It headed west across Virginia and West Virginia, making an unscheduled left turn at the Ohio-Kentucky border. At 9:03 a.m., air traffic controllers lost contact with the airliner.

At 9:37 a.m., in Arlington County, Captain Steve McCoy and the crew of ACFD Engine 101 were en route to a training session in Crystal City, traveling north on Interstate 395. Their conversation about the World Trade Center attack earlier that morning was interrupted by the sight and sound of a commercial airliner in steep descent, banking sharply to its right before disappearing beyond the horizon. At the same time, ACPD Corporal Barry Foust and Officer Richard Cox, on patrol in south Arlington County, saw a large American Airlines aircraft in a steep dive and on a collision course with the Pentagon.

At 9:38 a.m., American Airlines Flight #77 crashed into the west side of the Pentagon, just beyond the heliport. It was traveling at a speed of about 400 miles per hour, accelerating with close to its full complement of fuel at the time of impact.

The destruction caused by the attack was immediate and catastrophic. The 270,000 pounds of metal and jet fuel hurtling into the solid mass of the Pentagon is the equivalent in weight of a diesel train locomotive, except it is traveling at more than 400 miles per hour. More than 600,000 airframe bolts and rivets and 60 miles of wire were instantly transformed into white-hot shrapnel. The resulting impact, penetration, and burning fuel had catastrophic effects to the five floors and three rings in and around Pentagon Corridors 4 and 5. (See detailed graphics in Appendix 4.)

This act of evil cost the lives of 189 persons in the Pentagon attack, 184 innocent victims, and the 5 terrorist perpetrators of the criminal attack.

Summary

The successful response to the terrorist attack on the Pentagon can be attributed to the efforts of ordinary men and women performing in extraordinary fashion. These efforts are described throughout this AAR.

For example, fire service veterans like Chief Bob Cornwell and Captain Chuck Gibbs imparted to a new generation of firefighters air supply conservation techniques learned during the past three decades. Tactical unit commanders emphasized accountability and watched carefully over those in their charge as they searched vigilantly for surviving victims. Ms. Dodie Gill, Director of Employee Support, and her colleagues were onsite at the Pentagon within 3 hours of the attack, demonstrating that taking care *to* the firefighter is as important as taking care *of* the firefighter. Captain Lewis Cooper and Captain Mike Kilby leveraged the experience of Captain Dean Cox and his Fairfax County Fire and Rescue Department logistics team to create a superb logistics function.

With less than 24 hours on his new job as Emergency Operations Center (EOC) coordinator, Captain Penn integrated the resources of Arlington County in support of the tactical operation at the Pentagon. FBI Supervisory Special Agent (SSA) Jim Rice was undergoing chemotherapy treatments but never missed a moment of his 12-hour evidence recovery shifts. The partnership between the FBI and the ACFD was formed in advance through the initiative of Special Agent Chris Combs; it is a model that every metropolitan area should emulate. Those partnerships forged prior to the heat of battle proved invaluable. Ironically, Special Agent Combs, a former New York firefighter, lost two cousins during the response to the terrorist attacks on the World Trade Center.

An anonymous relay team of drivers transported 70 square feet of medical replacement skin, driving 23 hours nonstop from Texas to Washington Hospital Center because airplanes were grounded. Doctors Marion Jordan and James Jeng of Washington Hospital Center, working 14- to 16-hour shifts, performed 112 skin graft operations on 9 patients in 3 weeks. These and other heroes went quietly about their work with little notice.

Neighboring jurisdictions rushed to the aid of ACFD without hesitation. The first action of Alexandria's Chief Tom Hawkins was to send a battalion chief to Chief Schwartz, the ACFD Incident Commander, to coordinate their support and deliver one simple message, "Anything you need, you've got." That message characterized the attitude of Arlington's partners during the fire and rescue operations.

One can only marvel at the combination of Chief Plaugher's strategic vision, the tactical leadership of Chief Schwartz, the flexibility and breadth of Chief White's capabilities, and the technical competence of the other ACFD chief officers. It is noteworthy that in one of the group debriefing sessions, with no chief officer in the room, a firefighter described, as a major positive finding, the fact that "Our chief officers were extraordinary. They were everywhere, all the time." Given the source, this is a fitting tribute to a gallant group of leaders. Journalist Carol Hymowitz, writing about the events of September 11, observed that "These are the times that make—or break—leaders." Leadership isn't learned in a day; it is learned everyday. Clearly, Arlington County and particularly the ACFD were fortunate to have strong, competent leaders in place on the morning of September 11.

This AAR contains 235 recommendations and lessons learned, each of which must be understood within the context and setting of the Pentagon response. Some specifically apply to a particular response element or activity. Others address overarching issues that apply to Arlington County and other jurisdictions, particularly those in large metropolitan areas. They have not been weighted or prioritized. This is a task best left to those with operational responsibilities and budgetary authority.

The following examples of lessons learned are presented in two categories. The first set of examples describes areas that worked very well and contributed significantly to this successful response. They are models that other jurisdictions should emulate. The second set of examples reflects challenges that were encountered and overcome, which can now be corrected by Arlington County and avoided by others in the future. All the examples summarized here are addressed in greater detail throughout the report.

Capabilities Others Should Emulate

1. ICS and Unified Command: The primary response participants understood the ICS, implemented it effectively, and complied with its provisions. The ACFD, an experienced ICS practitioner, established its command presence literally within minutes of the attack. Other supporting jurisdictions and agencies, with few exceptions, operated seamlessly within the ICS framework. For those organizations and individuals unfamiliar with the ICS and Unified Command, particularly the military, which has its own clearly defined command and control mechanisms, the Incident Commander provided explicit information and guidance early during the response and elicited their full cooperation.

2. Mutual Aid and Outside Support: The management and integration of mutual-aid assets and the coordination and cooperation of agencies at all government echelons, volunteer organizations, and private businesses were outstanding. Public safety organizations and chief administrative officers (CAOs) of nearby jurisdictions lent their support to Arlington County. The response to the Pentagon attack revealed the total scope and magnitude of support available throughout the Washington Metropolitan Area and across the Nation.

3. Arlington County CEMP: The CEMP proved to be what its title implies. It was well thought out, properly maintained, frequently practiced, and effectively implemented. Government leaders were able to quickly marshal the substantial resources of Arlington County in support of the first responders, without interfering with tactical operations. County Board members worked with counterparts in neighboring jurisdictions and elected Federal and State officials to ensure a rapid economic recovery, and they engaged in frequent dialogue with the citizens of Arlington County.

4. Employee Assistance Program (EAP): At the time of the Pentagon attack, Arlington County already had in place an aggressive, well-established EAP offering critical incident stress management (CISM) services to public safety and other county employees. In particular, the ACFD embraced the concept and encouraged all its members to use EAP services. Thus, it is not surprising that

the EAP staff was well-received when they arrived at the incident site within 3 hours of the attack. During the incident response and in followup sessions weeks afterward, the EAP proved invaluable to first responders, their families, and the entire county support network. This is a valuable resource that must be incorporated in response plans.

5. Training, Exercises, and Shared Experiences: The ACFD has long recognized the possibility of a weapons of mass destruction (WMD) terrorist attack in the Washington Metropolitan Area and has pursued an aggressive preparedness program for such an event, including its pioneering work associated with the MMRS. In preparation for anticipated problems associated with the arrival of Y2K, Arlington County government thoroughly exercised the CEMP. In 1998, the FBI Washington Field Office (WFO) established a fire liaison position to work specifically with area fire departments. Washington Metropolitan Area public safety organizations routinely work together on events of national prominence and shared jurisdictional interests, such as presidential inaugural celebrations, Heads of State visits, international conferences such as the periodic International Monetary Fund (IMF) conference, and others. They also regularly participate in frequent training exercises including those hosted by the Pentagon and MDW. All this and more contributed to the successful Pentagon response.

Challenges that Must Be Met

1. Self-Dispatching: Organizations, response units, and individuals proceeding on their own initiative directly to an incident site, without the knowledge and permission of the host jurisdiction and the Incident Commander, complicate the exercise of command, increase the risks faced by bonafide responders, and exacerbate the challenge of accountability. WMD terrorist event response plans should designate preselected and well-marked staging areas. Dispatch instructions should be clear. Law enforcement agencies should be familiar with deployment plans and quickly establish incident site access controls. When identified, self-dispatched resources should be immediately released from the scene, unless incorporated into the Incident Commander's response plan.

2. Fixed and Mobile Command and Control Facilities: Arlington County does not have a facility specifically designed and equipped to support the emergency management functions specified in the CEMP. The conference room currently used as the EOC does not have adequate space and is not configured or properly equipped for that role. The notification and recall capabilities of the Emergency Communications Center are constrained by equipment limitations and there are no protected telephone lines for outside calls when the 9-1-1 lines are saturated. The ACFD does not have a mobile command vehicle and relied on the use of vehicles belonging to other organizations and jurisdictions. The ACPD mobile command unit needs to be replaced or extensively modernized.

3. Communications: Almost all aspects of communications continue to be problematic, from initial notification to tactical operations. Cellular telephones were of little value in the first few hours and cellular priority access service (CPAS) is not provided to emergency responders. Radio channels were initially

oversaturated and interoperability problems among jurisdictions and agencies persist. Even portable radios that are otherwise compatible were sometimes preprogrammed in a fashion that precluded interoperability. Pagers seemed to be the most reliable means of notification when available and used, but most firefighters are not issued pagers. The Arlington County EOC does not have an installed radio capacity and relied on portable radios coincidentally assigned to staff members assigned duties at the EOC.

4. Logistics: Arlington County, like most other jurisdictions, was not logistically prepared for an operation of the duration and magnitude of the Pentagon attack. The ACFD did not have an established logistics function, a centralized supply system, or experience in long-term logistics support. Stock levels of personal protective equipment (PPE), critical high-demand items (such as batteries and breathing apparatus), equipment for reserve vehicles, and medical supplies for EMS units were insufficient for sustained operations. These challenges were overcome at the Pentagon with the aid of the more experienced Fairfax County Fire and Rescue Department logistics staff. A stronger standing capacity, however, is needed for a jurisdiction the size of Arlington County.

5. Hospital Coordination: Communications and coordination were deficient between EMS control at the incident site and area hospitals receiving injured victims. The coordination difficulties were not simple equipment failures. They represent flaws in the system present on September 11. Regional hospital disaster plans no longer require a Clearinghouse Hospital or other designated communications focal point for the dissemination of patient disposition and treatment information. Thus, hospitals first learned of en route victims when contacted by transporting EMS units, and EMS control reconstructed much of the disposition information by contacting hospitals after the fact. Although the number of victims of the Pentagon attack were fewer than many anticipated, they were not insignificant. An incident with more casualties would have seriously strained the system.

In summary, the response to the September 11 terrorist attack on the Pentagon was successful by any measure. Although the tragic loss of life from this horrific event could not be avoided, it was minimized. Had it not been for the heroic actions of the response force and the military and civilian occupants of the Pentagon, clearly the number of victims would have been much higher. Damage, although severe, was constrained in area and the fire was brought quickly under control. The fact that the response force did not suffer a single fatality or serious injury is testimony to the training, professionalism, and leadership of Arlington County and the response community. County Manager Carlee and Chief Plaugher further validated that leadership by requiring that a full and complete AAR be written so recommendations for improvement and lessons learned will be captured.

Although the response to the September 11, 2001, terrorist attack on the Pentagon is commendable, this AAR conveys 235 recommendations and lessons learned for improving response and rescue capabilities to better meet the challenges of this new threat environment. This important information should be

shared with other jurisdictions around the country so the Nation benefits from Arlington County's experience, both in preparing for mass casualty terrorist events and responding to them. Although this AAR is written for Arlington County, it should be read by the entire Nation.

Terrorism in any manifestation is an insidious phenomenon. It strikes without warning, often targeting innocent people. It is not intended to defeat an enemy by overwhelming military force, but to undermine and weaken its resolve. If the terrorists intended to weaken our resolve by attacking the Pentagon, they failed. In the words of Arlington County Manager Carlee, "The cowardly and evil effort to terrorize our community and our country served only to unite us more strongly than ever before."

ANNEX A

INTRODUCTION

This annex describes the activities of the first responders from the Arlington County Fire Department (ACFD) and other supporting jurisdictions and agencies following the September 11, 2001, terrorist attack on the Pentagon.

The ACFD has three operational divisions, each managed by an assistant fire chief, and an Administrative Services Division. The Operations and Emergency Services Division is responsible for implementing the Department's Life Safety, Emergency Medical, and Fire and Environmental Protection functions and for the training associated with those functions. The Technical Services Division is responsible for Apparatus and Equipment (A&E); the Fire Training Academy; Facilities Management; Hazardous Materials (HazMat) regulation and response; Emergency Preparedness; Wellness and Safety; Telecommunications; Logistics; and support for the ACFD's portion of the Metropolitan Medical Response System (MMRS). The Fire Prevention and Community Services Division provides fire safety educational services to civic organizations, school children, businesses, hotels and motels, medical facilities in the county, and to county employees. It also reviews and evaluates building evacuation plans and coordinates various fire safety programs. The Administrative Services Division includes human resource management, ambulance billing and collection services, special projects, and administrative and clerical support services.

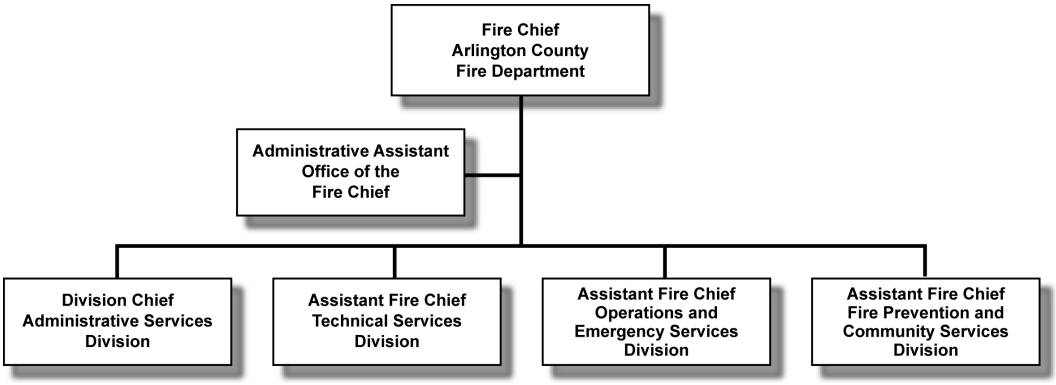


Figure A-1. ACFD organization.

The ACFD is a fully integrated fire and Emergency Medical Services (EMS) response organization. It employs 266 uniformed career firefighters and paramedics and 13 civilian staff members. Its mission is to eliminate threats to the lives, safety, and property of the Arlington community through education, prevention, and effective response to fire, medical, and environmental emergencies. There are 10 fire stations located throughout the county. (See Figure A-2.) During the past year, the ACFD responded to 23,619 emergency calls. Its 60 paramedics are assigned to 5 full-time and 2 peak-time EMS units, and 1 medic-capable engine. The ACFD operates with a minimum emergency medical staffing requirement for each of its 3 shifts of 15

paramedics during the day and 11 at night. Paramedics are able to assess a patient's condition; manage respiratory, cardiac, and trauma emergencies; administer intravenous fluids; use manual defibrillators; administer drugs; and perform other emergency procedures. Emergency medical technicians are called upon to respond to emergencies ranging from childbirth to automobile accidents to violence involving firearms and other weapons, and now terrorism. In addition, all ACFD firefighters are certified emergency medical technician-basic.

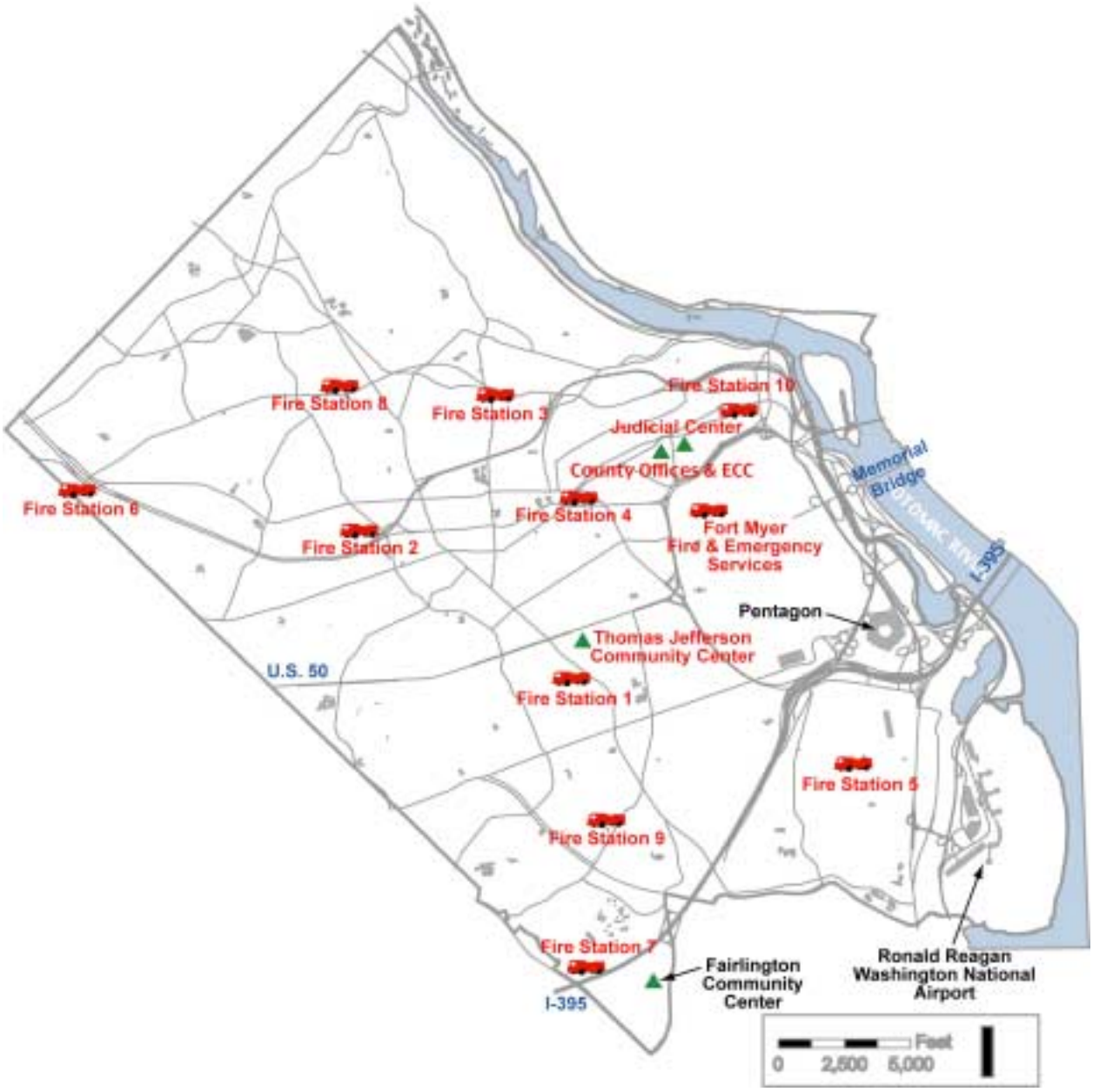


Figure A-2. Arlington County fire stations.

The ACFD is recognized as a highly professional organization and is one of only three fire departments in Virginia to hold a Class 2 Rating from the Insurance Services Organization, lowering insurance costs for homeowners and businesses. This is the highest rating received by Virginia fire departments.

This Fire Department Operations Annex includes information gathered from responders through debriefings, interviews, survey instruments, and by reviewing plans, documents, and transaction records. It is organized into eight sections. Each section describes activities related to a specific functional category. Those categories are: (1) Initial Response; (2) Command, Coordination, and the Incident Command System; (3) Communications; (4) Recall and Staffing; (5) Mutual-Aid and Outside Support; (6) Logistics; (7) Site Safety, Security, and Personnel Accountability; and (8) Planning, Training, and Preparedness.

The information in each of the eight sections is presented in three parts. First, a series of observations describes the nature of activities within the specific functional category, for example, Initial Response. The observations are followed by a set of findings reflecting the information gathered from responders in debriefings, interviews, and survey responses. Finally, each section includes a number of recommendations and lessons learned that are derived from the findings. In all, Annex A includes 111 recommendations and lessons learned.

SECTION 1: INITIAL RESPONSE

Observations

The only thing special about the morning of September 11, 2001, was the spectacular fall weather across the Washington Metropolitan Area. In Arlington County, the 67 firefighters and emergency medical technicians of the fire department's "B" shift were staffing the county's 10 neighborhood fire stations. By 8:30 a.m., training classes at the Arlington County Fire Training Academy were in full swing. Other ACFD personnel were engaged in meetings in the District of Columbia, preparing for the upcoming International Monetary Fund (IMF) conference. Several Arlington County chief officers were at a county-sponsored management class at the Fairlington Community Center. At 8:45 a.m., when American Airlines Flight #11 slammed into the north tower of New York City's World Trade Center, it was abundantly clear this would be a day like no other. At 9:06 a.m., United Airlines Flight #175 crashed into the World Trade Center's south tower, revealing the true nature of this unprecedented horror. A brutal, mind-numbing terrorist attack was under way against the United States.

In Arlington County, Captain Steve McCoy and the crew of Engine 101 were en route to a training session in Crystal City, traveling north on Interstate 395. Their conversation about the World Trade Center attack was interrupted by the sight of a commercial airliner in steep descent, banking sharply to its right before disappearing beyond the horizon. At 9:38 a.m., shortly after American Airlines Flight #77 disappeared from sight, a tremendous explosion preceded a massive plume of smoke and fire. Unable to pinpoint the precise location, Captain McCoy immediately radioed the Arlington County Emergency Communications Center (ECC), reporting an airplane crash in the vicinity of the 14th Street Bridge or in Crystal City. Aware of the World Trade Center attack, Captain McCoy also advised that the Federal Bureau of Investigation (FBI) should be notified, since this was a possible terrorist attack. Hearing the radio message, fire and rescue units from Arlington County and elsewhere began to respond, self-dispatching from stations or diverting from other destinations.

At 9:38 a.m. on September 11, only one fire crew, Foam 161 of the Fort Myer Fire Department, knew the exact location of the crash site. Captain Dennis Gilroy and his team were already on station at the Pentagon when Flight #77 slammed into it, just beyond the heliport. Foam 161 caught fire and suffered a flat tire from flying debris. Firefighters Mark Skipper and Alan Wallace were outside the vehicle at impact and received burns and lacerations. Recovering from the initial shock, they began helping victims climb out of the Pentagon's first floor windows. Captain Gilroy called the Fort Myer Fire Department, reporting for the first time the actual location of the crash.

Fort Myer Foam 161.

Help was already on the way from several directions as units sped toward the source of the smoke plume, not toward a specific street address. ACFD Truck 105 reached the scene first, followed shortly by fire and medical units from several Arlington County stations.

Smoke billows from the Pentagon.

In the meantime, at the FBI Washington Field Office (WFO), Special Agent-in-Charge (SAC) Arthur Eberhart was putting in motion the steps necessary to support New York City. Of WFO's four senior leaders, he was the only one present at headquarters that morning. Upon learning of the World Trade Center crashes, SAC Eberhart activated the WFO Command Center. Members of the WFO National Capital Response Squad (NCRS) were paged and instructed to report immediately to headquarters. Supervisory Special Agent (SSA) Jim Rice, the NCRS leader, was at the FBI WFO Command Center on the telephone with Mr. Larry Cirutti of the Military District of Washington (MDW) at the Pentagon when a monitored District of Columbia police radio transmission reported an explosion at the Pentagon. Mr. Cirutti told SSA Rice a helicopter must have "slid off the helipad" into the building. Special Agent Chris Combs, the NCRS Fire Service Liaison, was teaching a class at the District of Columbia Fire Academy when he received his page. While en route to the WFO Headquarters, he heard a news report of the Pentagon attack and proceeded directly to the Pentagon.

Meanwhile, at the Metropolitan Washington Airports Authority (MWAA) Fire Department at Ronald Reagan Washington National Airport, Captain Michael Defina was investigating an incident at Terminal B when he heard the impact and saw the smoke rising in the distance. He called Fire Communications and was advised of a report of a Boeing 757 crash off the end of Runway 1-19. That was quickly amended, identifying the Pentagon as the crash site. The MWAA contacted the Arlington ECC and was directed to respond to the Pentagon. They did so with substantial resources: a rescue engine, two foam units, two mass casualty units, a mini-pumper, and a command vehicle. Because MWAA has authority to respond automatically to an airplane crash within 5 miles of the airport, two heavy rescue units had already self-dispatched to the Pentagon.

ACFD's Training Officer Captain Chuck Gibbs reached the incident site within the first 3 minutes, followed by Battalion Chief Bob Cornwell, who assumed initial Incident Command responsibilities. Those duties were quickly assumed by Assistant Fire Chief for Operations James Schwartz, who assigned Battalion Chief Cornwell, a 35-year veteran firefighter, to lead fire suppression efforts inside the building. Captain Gibbs commanded the River Division. Special Agent Combs arrived moments after Chief Schwartz. The partnership between Chief Schwartz and Special Agent Combs, who served as FBI agency representative to the Incident Commander, proved invaluable in the days ahead.

ACFD Captain Edward Blunt also arrived at the Pentagon within minutes of the crash and assumed EMS Control. He immediately contacted the ECC. Captain Blunt requested and immediately received a separate EMS operations channel. He also asked for 20 medic units, 2 buses, and a command vehicle (EMS Supervisor Vehicle 112) to support the EMS response. Captain Blunt designated the field adjacent to Washington Boulevard (Route 27) as the treatment area, and asked the Arlington County Police Department (ACPD) patrol units onscene to clear Washington Boulevard to create north and south access for emergency response traffic. Captain Alan Dorn arrived shortly after Captain Blunt, and was

assigned as Triage Officer. Together, Captains Blunt and Dorn began working with military medical personnel who volunteered to help set up triage areas.

Initially, medical units staged in the Pentagon South Parking Lot, adjacent to Route 110, until called forward to the EMS sector on Route 27. By 9:50 a.m., six ACFD EMS units had already arrived at the incident site (M-102, M-104, M-105, M-106, M-109, and M-110). M-101, Engine 103, and an ACFD Reserve Medic Unit quickly joined them. Two additional ACFD Reserve Medic Units (RM-111 and RM-112) arrived next and were directed to provide EMS support at the Pentagon's Center Courtyard.

At 9:50 a.m., the ECC advised Captain Blunt that Virginia Hospital Center - Arlington, Inova Fairfax Hospital, and Washington Hospital Center were prepared to accept as many victims as needed.

The first ACFD personnel had arrived at the Pentagon within 2 minutes of the attack. ACFD and mutual-aid medical personnel began aiding victims immediately. Within 4 minutes of the attack, the ACFD had established its command presence. MWAA fire and medical units were on the scene and the first contingent of the FBI's NCRS had arrived within 5 minutes of impact. Three major Washington Metropolitan Area hospitals were ready to receive injured victims 12 minutes after the attack. By 10:00 a.m. on September 11, most of the ACFD duty shift was engaged at the Pentagon.

Findings

The Pentagon is a highly visible and significant symbolic target, a structural fortress, populated by a large and highly disciplined workforce. Ongoing Pentagon renovation work lowered the number of potential victims. A portion of the impacted area was not yet fully repopulated following recently completed upgrades.

The massive size of the Pentagon and the complexity of its various rings, corridors, and floors compounded the challenge of the response force. First of all, it distorted the perception of the task at hand. It is true that fire damage was contained to a relatively small area, but it was a relatively small area in one of the largest business complexes in the world. This was office space built to accommodate a substantial workforce, with all the accompanying common space, meeting and conference rooms, and other support facilities.

View of external damage.

To those watching on television, or even from the Pentagon's South Parking Lot, the gash created by the Boeing 757 airliner was large, but it affected a specific area of only two of the Pentagon's five Wedges. Neither the depth of the incursion nor the massive devastation inside the building was readily apparent as flames burned behind blast-proof windows. Huge heaps of rubble and burning debris littered with the bodies and body parts of 188 victims covered an area the size of a modern shopping mall. The 189th victim subsequently died at Washington Hospital Center; all other injured victims transported to area hospitals survived. (See Appendix 4, Pentagon Penetration Damage Diagrams.) Flight #77 penetrated the outer wall of the Pentagon's E Ring and the damage extended all the way through the inner wall of the C Ring, a distance of approximately 285 feet.

Penetration through the inner wall of the Pentagon's C Ring.

Several factors conspired favorably to support the firefighters on September 11. First of all, the weather was clear and dry and, for the most part, remained so throughout the next 10 days. Rain or heavy winds would have severely complicated the circumstances.

In addition, as a result of the congruence of scheduled meetings and training activities, the ACFD leadership team was gathered nearby and able to respond quickly. These fortuitous circumstances facilitated the immediate availability of Arlington County's most experienced fire and medical services command personnel. Incident Command was established onsite within minutes of the attack and its authority was never challenged. The preparedness and ability of the ACFD leadership to take charge reflects exceptional training and a remarkable level of competence.

Internal damage to the Pentagon.

Additionally, just 1 minute before the Pentagon crash, in response to a 9-1-1 telephone call at 9:37 a.m., the ECC dispatched several units to an apartment fire at 1003 Wilson Boulevard in Rosslyn. Because it was located in a high-rise building, it was a substantial dispatch involving nine different fire and medical service units. Engine 103 reached the Rosslyn scene first and radioed that the apartment fire was out. Thus, by sheer coincidence, there were a significant number of units already on the road near the Pentagon at the time of the attack.

Furthermore, the fact that so many fire and rescue units from Arlington County and elsewhere self-dispatched immediately to the scene enabled fire suppression to commence without hesitation. This quick response was due in part to

continuous national television and radio news coverage, which augmented the Arlington County ECC's limited notification capabilities.

This rapid response also enabled the early provision of triage and treatment services for victims emerging from the Pentagon. Medical units from the ACFD and other jurisdictions treated and transported patients quickly, saving all viable victims, thanks to the support of military medical staff and the response of area hospitals.

However, some of these apparently favorable factors also had detrimental effects. Although self-dispatching quickened the arrival of a substantial number of fire, rescue, and medical units, many arrived haphazardly. The occupants of those vehicles were singularly intent on saving victims and attacking the fire. Police engaged in area traffic control were understandably reluctant to delay emergency vehicles descending on the scene with lights flashing and sirens blaring.

Deploying EMS units from other jurisdictions, particularly self-dispatched units, found it easy to bypass the staging area and proceed directly to the response site. Some victims flagged down EMS units before they reached the staging area. The crew from one Alexandria unit reported that it independently performed triage and treatment in the Pentagon South Parking Lot to assist five severely burned victims.

As a result, although the ACFD instituted Incident Command procedures very early on, they still faced the monumental challenge of gaining control of the resources already onsite and those arriving minute-by-minute.

Captain Jeff Liebold, working at the Incident Command Post (ICP), was tasked to determine what units were onsite and where they were working. Because radio communications were overloaded and ineffective, Captain Liebold sent two firefighters on foot to record the identification number and location of every piece of equipment on the Pentagon grounds. In the first few hours, foot messengers at times proved to be the most reliable means of communicating.

Additionally, the uncontrolled influx of fire and rescue personnel had important accountability implications. For example, Captain Gibbs established very effective entrance and exit controls at the Pentagon's Corridor 5 entrance, near the impact point. However, firefighters and other personnel came and went from other Pentagon entrances sometimes with little or no control. Thus, had there been a second attack, as occurred at the World Trade Center, it would have been virtually impossible for the Incident Commander to determine quickly who might have been lost.

The unique design of the Pentagon hid from view activities at the Center Courtyard in the middle of the complex. Battalion Chief Jerome Smith was assigned responsibility for fire suppression from the Center Courtyard, with units from the District of Columbia and ACFD. His mission was to prevent the fire from breaching the B Ring. Upon reaching the Center Courtyard, Battalion Chief

Smith found the area in turmoil. More than 400 building occupants crowded the Center Courtyard. Others leapt from the upper floors, as colleagues armed with fire extinguishers attempted to extinguish the flames consuming burning comrades.

EMS was also challenged by the unique design and the sheer size of the Pentagon; therefore, a complete and accurate sizeup of the incident site was not immediately performed. Those engaged in rescue efforts on the impacted west side of the Pentagon had little idea what was taking place at other locations, posing problems in establishing effective EMS Control. Although the central focus was the impact area on the west side of the Pentagon, not all the surviving victims evacuated in that direction. Some surviving victims found private ambulances or other means of transportation to area treatment facilities. Many reported to the DiLorenzo TRICARE Health Clinic (DTHC), located inside the Pentagon, close to the north entrance. The DTHC also set up EMS stations in the Center Courtyard and in the North Parking Lot.

Arlington County EMS unit onsite.

The ACFD EMS Control was not initially aware of the DTHC activities. The DTHC did not transmit patient disposition information to EMS Control. Thus, triage, treatment, and transport activities of the DTHC were not coordinated with EMS Control. Without a communications interface, important information on patient disposition was not captured. Had there been further catastrophe, it would have been next to impossible to ascertain a total victim count and identify Pentagon casualties, including those reporting to the DTHC treatment stations. As a result, records had to be reconstructed after the fact using information collected from hospitals and clinics to supplement information gathered onsite.

Assistant Chief John White arrived at approximately 9:55 a.m., and was directed by Chief Schwartz to command the EMS Branch. Chief Schwartz advised him that Captains Dorn and Blunt were assessing and establishing mass triage sites at the traffic circle area of Washington Boulevard and westbound Columbia Pike. Captain Dorn organized responders and military volunteers, while Captain Blunt performed forward assessment. (See Figure A-3.)

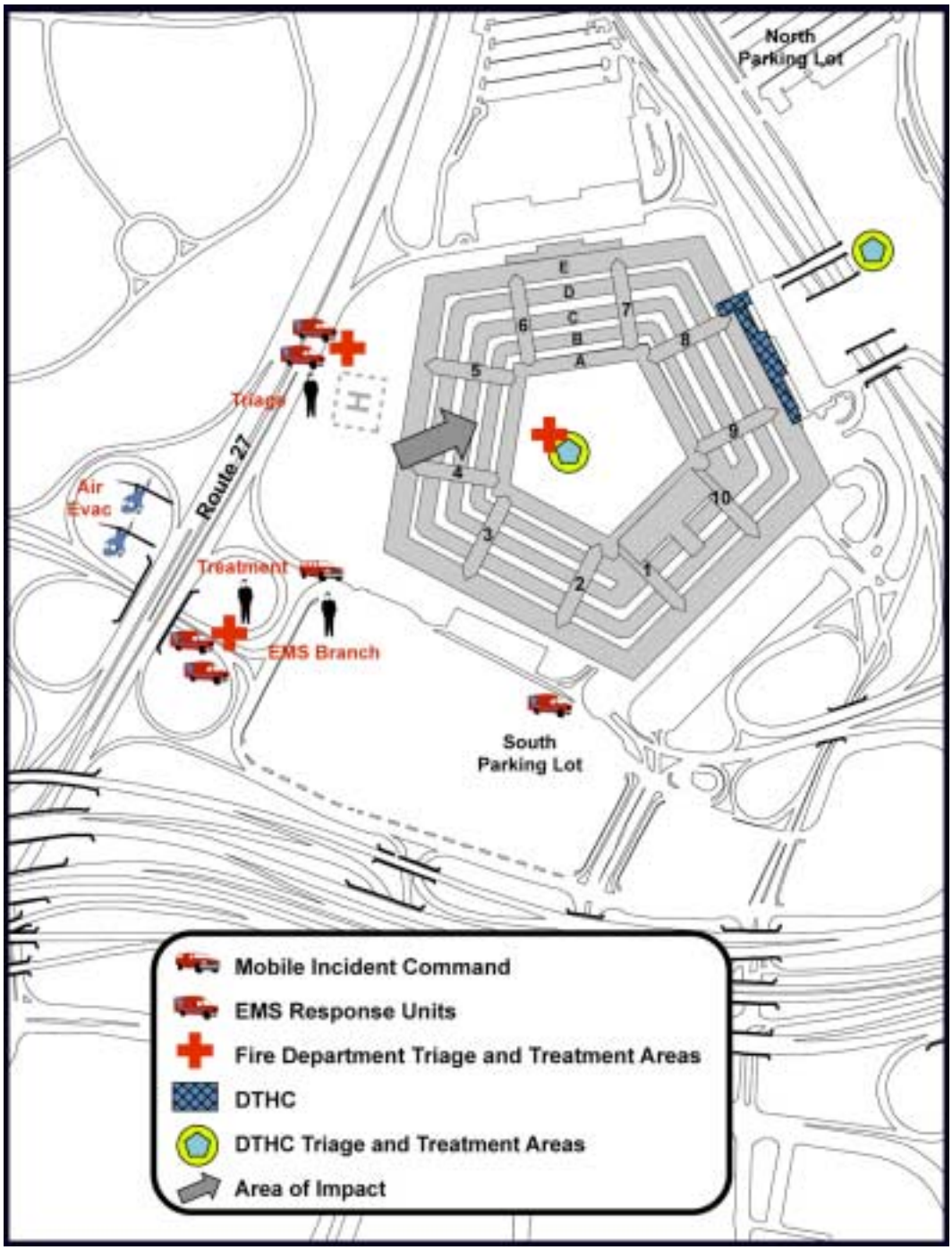


Figure A-3. Initial triage and treatment sites.

Chief White instructed Captain Dorn to continue making preparations for casualties in the designated triage and treatment areas and to use the EMS units located along Route 27. ACFD triage and treatment sectors were established using ACFD assets, mutual-aid responders and military emergency medical technicians, nurses, and physicians. The military participants were receptive to direction and readily deferred to EMS officers. A military nurse equipped with a radio was able to communicate with the Defense Protective Service (DPS) and DTHC aid stations in the Pentagon.

Chief White then met with Captain Blunt along Route 27 adjacent to the Pentagon heliport for a forward assessment report. Chief White asked him for a count of the casualties in his area by triage designators: red (IMMEDIATE: Life Threatening Injury); yellow (DELAYED: Serious, Not Life Threatening); and green (MINOR: Ambulatory).

At approximately 10:15 a.m., Chief Schwartz ordered the immediate evacuation of the incident site. The FBI had warned him that a second hijacked airliner was flying on a course toward the Pentagon and was 20 minutes away. Responders were ordered to take shelter beneath one of the nearby highway overpasses. Chief White instructed Captain Blunt to "load and go," transporting as many patients as possible out of the area. The first wave of patients was en route to area hospitals within 10 minutes of the evacuation notice and all other personnel were relocated to the Columbia Pike underpass at the South Parking Lot. Medivac helicopters that had responded to the Pentagon incident scene were relocated to a safer place.

Evacuation by helicopter.

At the underpass, Chief White, in coordination with EMS officers and military medical volunteers, made plans to reestablish triage in that area. He designated Captain Dorn as Triage Officer, Captain Blunt as Forward Triage Officer, Chief Glen Butler from the MWAA as Treatment Officer, and Firefighter Paramedic David Hehr as Transportation and Disposition Officer. (See Figure A-4.)

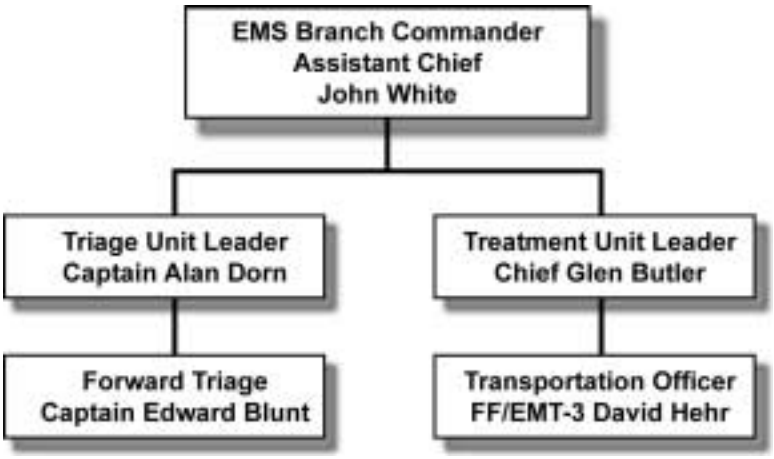


Figure A-4. EMS Branch structure.

Dr. James Vafier, the Alexandria EMS Medical Director, accompanied an EMS unit to the incident site and was assigned a forward assessment role with a position on the sidewalk between Corridors 3 and 4. The plan was for military stretcher-bearers to carry victims extracted by firefighters to Dr. Vafier's position for preliminary assessment. He would then assign them to the appropriate triage and treatment area.

When the all clear was sounded and site evacuation ended, EMS and military responders implemented Chief White's operations plan. (See Figure A-5.)

Instead of the anticipated exodus of Pentagon patients, only 42 injured victims received on-site medical care and were transported to area hospitals. An estimated 100 additional victims were treated for minor injuries.

There are several reasons why the number of victims treated and transported by EMS units was less than anticipated:

- The airliner struck a portion of the Pentagon that had been recently renovated and was not fully occupied, lowering the total number of potential casualties.
- The DTHC inside the Pentagon treated and ordered victims transported both from its facility and from EMS stations set up in the Center Courtyard and near the North Parking Lot.

- The sheer violence of the impact reduced chances of survival. Those who were able to get out did so in the first few minutes.

ACFD EMS units and those of supporting jurisdictions responded quickly and appropriately, treating and, when needed, transporting surviving patients. These rapid and professional actions reduced pain, comforted victims, and saved many lives.

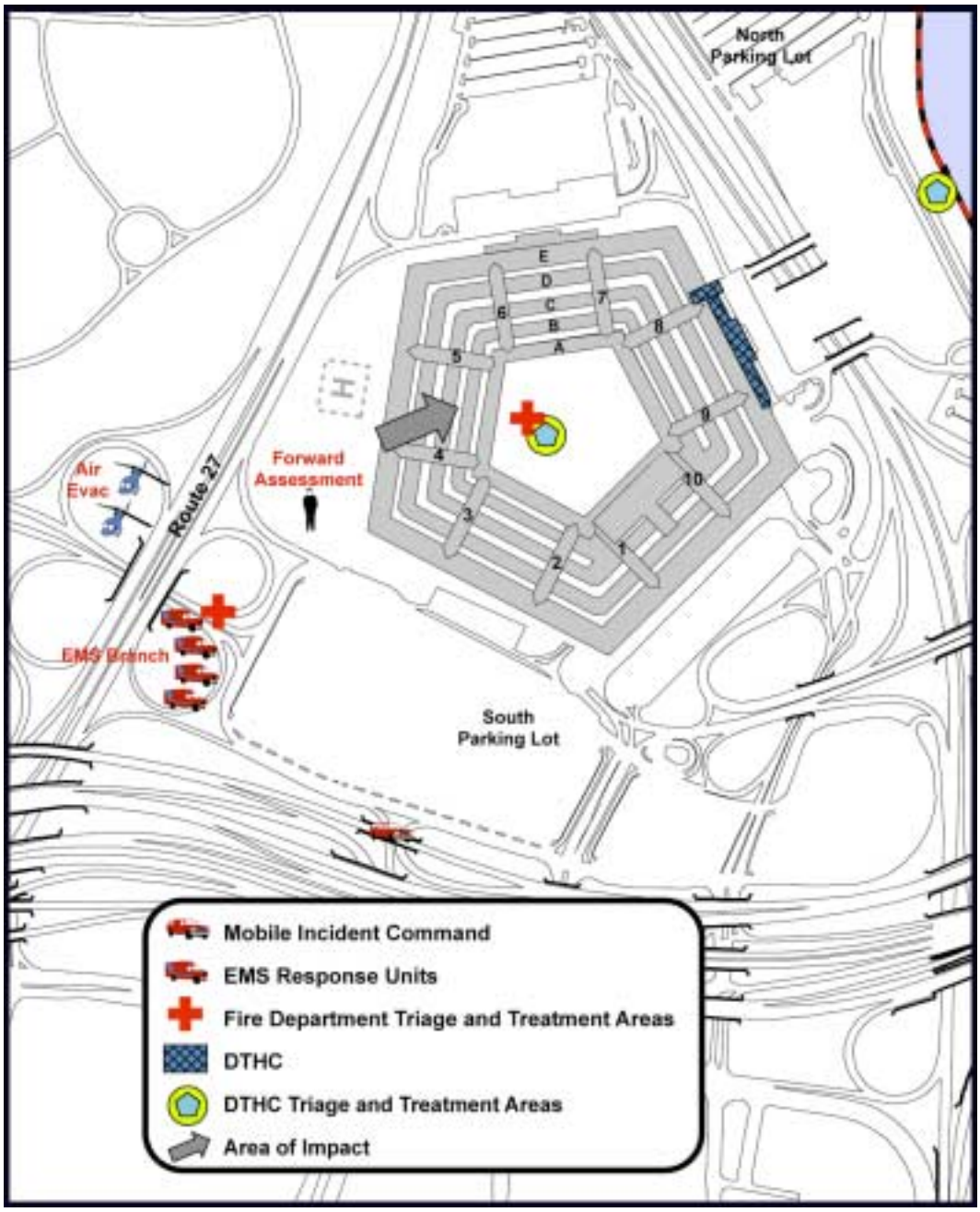


Figure A-5. Post-evacuation triage and treatment sites.

Despite these heroic efforts on the part of Arlington County Fire and EMS personnel, significant shortfalls and challenges emerged from this experience.

During the first 24 hours, it was necessary to evacuate the Pentagon on four separate occasions because of the risk of structural collapse or the threat of additional terrorist attacks. It is difficult to measure the full impact of repeated building evacuations, but it was clearly negative and significant. Each time an evacuation was ordered, firefighters interrupted operations, abandoned equipment, shut off hoses, and ran several hundred yards to protected areas. From there, they had to watch as flames reclaimed the parts of the Pentagon they had just evacuated. On-site emergency medical care of injured victims was also affected and some patients were sent immediately to area hospitals before a complete on-site medical assessment.

The recall of off-duty firefighters and restoration to service of reserve apparatus are subjects covered in detail in Sections 4 and 7 of this report. However, in the context of initial response, it must be noted that the ACFD recall system is seriously flawed. Firefighters returned to work in a timely fashion, but mostly on their own initiative and without clear instructions. Moreover, neither recalled personnel nor reserve apparatus were equipped to sustain the simultaneous engagement of multiple-duty shifts. Replacement personnel often arrived at the incident site without self-contained breathing apparatus (SCBA) and other equipment items.

Some ACFD companies carried only three-person crews. This hampered the speed of initial operations, since companies not engaged in pumping or aerial operations could not be split into 2 two-person teams. Four-person crews would have virtually doubled their capabilities.

Teams of firefighters assigned suppression work on the Pentagon roof had difficulty finding access points from the fifth floor. Neither building engineers nor detailed structural drawings were available to assist them at that location. Captain Robert Swarthout, Incident Safety Officer at the ICP, was in contact with a Pentagon engineer, but that resource was not accessible at the point of fire attack. Firefighters eventually climbed onto a ledge from a fifth-floor window then hoisted themselves onto the roof. Attacking the fire on the roof was particularly difficult. The thick wood-plank inner layer burned out of control, protected by a layer of concrete below and a thick slate roof above. Firefighters cut trenches across the slate roof. It was physically demanding and involved a certain degree of guesswork to breach the roof ahead of a fire that could not be seen. On the second day, September 12, a military representative pointed out to Battalion Chief Randy Gray, the Incident Command Operations Section Chief, the locations of two key communications and operations facilities threatened by the roof fire. The fire was stopped short of those facilities.

Height restrictions limited equipment access along A-E Drive into the Center Courtyard. Eventually, the tiller cab had to be cut off of an ACFD ladder truck so it could support the fire attack from inside the Center Courtyard.

In the area of EMS, patient accountability was deficient because triage tags were not used to document the care and disposition of victims. By not using triage tags, EMS providers were unable to provide accurate progress reports or retain information for legal documentation. EMS data was, for the most part, gathered afterward, in consultation with supporting jurisdictions, area treatment facilities, and the DTHC. It was fortunate that the number of patients was not greater or this would have been a critical deficiency.

Those EMS providers who were flagged down by victims before reaching the treatment sectors often found themselves detached and without support from the EMS Branch, which could have been problematic had there been more casualties.

Communications between EMS Control and DTHC were deficient. Contact should have been established early by DTHC and information exchanged continuously as stipulated in the existing memorandum of understanding (MOU). With the urgency of saving lives in the immediate aftermath of a massive terrorist attack, this did not occur. Many victims requiring medical care, most noticeably those treated at the DTHC and its impromptu EMS stations, were transported by means other than EMS units. Other victims found their own way to care facilities.

Many mutual-aid responders were unfamiliar with the Pentagon. Some did not know how to identify their locations and communicate them accurately to other responders.

The training, discipline, and character of the military personnel working in the Pentagon proved invaluable in many ways. Yet, it also caused unique control problems as service members repeatedly attempted to enter the burning building in search of missing colleagues. In some instances, ACFD personnel had to intervene and reverse the direction of military personnel moving toward the impacted area. The only visible means of protection for some were filter masks obtained from the Pentagon medical clinic.

Despite these difficulties, the initial response to the Pentagon attack was successful. All surviving seriously injured building occupants were rescued and hundreds of additional potential victims escaped safely. Fire suppression in the first 12 hours contained the damage without interrupting the critical worldwide military command and control activities of the Department of Defense (DoD) during a major national security emergency. Despite the magnitude, complexity, and duration of operations, there were no fatalities or serious injuries among fire and rescue personnel. This can be attributed in large part to the skill level in core competencies, professionalism, training, and teamwork of ACFD personnel and their counterparts in supporting jurisdictions.

Nevertheless, important lessons were learned that will better prepare Arlington County and other jurisdictions for future events of similar scope. The ACFD has a standing policy of integrating lessons learned into department plans and procedures. This After-Action Report reflects that policy.

Recommendations and Lessons Learned

The ECC must provide immediate and complete deployment information to emergency response units. Every firefighter and EMS responder should have a pager to receive dispatch notices both on and off shift. (FD-001)

During potential mass casualty events, all involved dispatch centers must make a concerted effort to provide consistent and accurate direction to emergency responders. (FD-002)

Deploying units must strictly adhere to instructions from the ECC until arriving at the incident scene and receiving direction from the Incident Commander. (FD-003)

All building entrances and exits at the incident scene must be secured and entry tightly controlled so personnel accountability is not compromised. (FD-004)

Fire and rescue organizations need interoperable radios with effective channel management and communications discipline. They must also plan on expedient alternative means of communications, including, but not limited to, foot messengers. (FD-005)

The ACFD should review fire apparatus staffing levels to ensure the speed of early search and rescue operations and provide for the safety of the crew. (FD-006)

Fire departments must be equipped for sustained operations. Firefighters should not have to rely solely on breathing apparatus or other items taken from colleagues they replace. Additionally, reserve apparatus should have a full complement of equipment stored and secured so they can be quickly placed into service. (FD-007)

In large incidents, the staging area should be located a moderate distance from the scene to establish and maintain a system of accountability. Suitable staging areas should be identified around the county in advance and clearly identified for incoming emergency services units in plans and by the instructions of dispatchers. Entrance from adjoining streets and highways must be tightly controlled by law enforcement personnel who have received specific guidance from the Incident Commander to direct incoming units. (FD-008)

Those engaged in fire suppression and rescue operations in buildings with a potential for collapse need detailed site plans and drawings as well as access to knowledgeable structural engineers. This information must be accessible to those engaged at the point of attack. (FD-009)

Fire and medical responders should receive a detailed orientation on each critical and unique facility in the jurisdiction and have available site drawings and other graphic aids. (FD-010)

EMS must establish treatment and transport control for the entire perimeter to attain control and accountability in mass casualty events. (FD-011)

When responding to an incident as large as that at the Pentagon, EMS personnel must conduct a thorough scene sizeup. All medical treatment facilities, regardless of the provider, must be integrated into a single EMS structure. (FD-012)

The provisions of the existing emergency medical support agreement between the Pentagon and Arlington County should be reviewed by both parties and validated or modified. Other government sites in Arlington County should be surveyed to determine which ones have medical facilities and the extent of their treatment capabilities. (FD-013)

In any casualty situation, triage tags must be used to provide a record documenting medical treatment, narcotics administered, and patient disposition. Triage tags should be used routinely in EMS medical treatment to reinforce their value. (FD-014)

Communications and coordination specified in plans and support agreements between EMS Control and on-scene medical resources of a critical facility (the DTHC in this instance) need to be followed. (FD-015)

Public safety organizations need to prepare for, and practice in advance, fire and rescue operations for critical or unique facilities within assigned jurisdictions:

- Requirements for site information, specially trained personnel, special equipment, and supplies need to be identified in advance and secured for that site. (FD-016)

- Templates for documenting and controlling information need to be prepared, personnel must be trained, and special equipment purchased if necessary. (FD-017)

- Fire suppression plans must include specific procedures for dealing with potential difficulties arising from the structure itself—such as the visibility problems related to the size and shape of the Pentagon. (FD-018)

Information about additional threats to first responders must be disseminated rapidly and decisions regarding site evacuation made without hesitation. In an incident that is clearly the work of terrorists, every attempt must be made to validate the accuracy of threat reports to avoid unnecessary interruptions to fire suppression and rescue operations and their debilitating physical and mental effects. (FD-019)

Other jurisdictions should emulate the ACFD and integrate significant lessons learned during incident response operations into established fire and rescue plans, training exercises, and mutual-aid agreements. (FD-020)

SECTION 2: COMMAND, COORDINATION, AND THE INCIDENT COMMAND SYSTEM

Observations

In the event of a fire, even one of significant size, the issue of "who's in charge" is usually straightforward. The fire department that owns the jurisdiction owns the scene until the fire is extinguished or brought under control. All other organizations support and are under the tactical control of the fire department's designated Incident Commander. Once the fire is out, command might be transferred to a law enforcement agency if, for example, arson or some other criminal act is suspected. The fire scene would then become a crime scene.

On September 11, terrorists attacked the Pentagon, not an ordinary building. It is a structure of imposing size that houses critical national security functions. To begin with, the Pentagon is situated in Arlington County, VA, but it is a U.S. military facility under direct control of the Secretary of Defense. Building entry is restricted and controlled by its own law enforcement organization, the DPS. The fire station at the Pentagon heliport is operated by the Fort Myer Fire Department.

Another complication was the nature of the attack itself. Following on the heels of the attacks on the World Trade Center in New York, it was clear this was a terrorist action. Under the terms of Presidential Decision Directive (PDD)-39, acts of terrorism are the exclusive domain of the Department of Justice (DOJ) and the FBI. This major fire incident, the jurisdictional responsibility of the ACFD, occurred because of a terrorist attack, thereby rendering the site a crime scene, the responsibility of the FBI. These complex jurisdictional and organizational relationships tested the coordination and relationships of everyone involved.

Thus, the Pentagon attack required a fully coordinated response by the ACFD Incident Commander, the FBI On-Scene Commander, and the Commanding General of the MDW representing the DoD. From the moment Special Agent Combs reported to Chief Schwartz as the FBI representative and initial FBI On-Scene Commander, the collaboration and cooperation between the FBI and ACFD was under way. The FBI carefully respected the command primacy of the ACFD while it retrieved evidence during the 10-day fire and rescue phase. The FBI assumed command of the scene from the ACFD on September 21. The foundation for this relationship had formed long before the attack on the Pentagon. Special Agent Combs, a former New York firefighter, had worked routinely with every Washington Metropolitan Area fire department. He had taught classes at area fire academies and met regularly with the fire community leadership. Similarly, Major General James Jackson of the MDW placed his formidable resources in support of the ACFD Incident Command and the FBI until control was returned to the DoD on September 28.

Long before this event, the ACFD and other area fire departments had embraced the National Interagency Incident Management System (NIIMS) Incident

Command System (ICS). In March 2001, the Washington area Council of Governments adopted the NIIMS ICS model. Thus, there is a common understanding of basic working relationships among local jurisdictions. However, establishing and maintaining command of the response to the Pentagon attack was daunting. There were thousands of people and hundreds of equipment apparatus from more than a dozen different jurisdictions, as well as many Federal, State, and Arlington County government agencies, and scores of volunteer organizations, businesses, and individuals. This understandably challenged the leadership of a fire department that usually directs the efforts of some 260 uniformed personnel. Although the ACFD performed well in responding to the terrorist attack on the Pentagon, the actual experience of coordinating the multifaceted response proved significantly more challenging than previously envisioned.

Findings

When Chief Edward Plaugher first arrived at the Pentagon shortly after the attack, he decided not to personally assume Incident Command, and delegated that task to Chief Schwartz. Chief Plaugher recognized he would be more valuable as a free agent, buffering the command structure from outside distractions, such as the media, and directing his attention to support requiring his personal intervention. This proved to be a fortuitous decision.

A tiered command structure evolved during the first several hours. Chief Schwartz directed fire and rescue operations at the ICP. Around midday, he established an ICS operations section at the Pentagon heliport, from which day-to-day firefighting and rescue efforts were planned and executed. Chief Gray, a second-generation ACFD Firefighter, led the Operations Section supported by Chief Cornwell and Captain Gibbs. Battalion Chief Tom Hurlihy, from the District of Columbia, was later added to the operations team.

At about 1:00 p.m., Chief Schwartz learned that a task force led by Loudoun County Chief Jack Brown had arrived at Fire Station 1. He asked Chief Brown, formerly with the Fairfax County Fire and Rescue Department and a long-time colleague, to report to the ICP and lead the Planning Section. When the Fairfax County Urban Search and Rescue (US&R) Team deployed by the Federal Emergency Management Agency (FEMA) arrived about 2:00 p.m., the Incident Commander recognized that these very special resources would require considerable attention and asked Chief Brown to serve as their liaison. A Logistics Section was added later that day. It ramped up and was fully operational on the morning of September 12. Functional branches were established for fire suppression at the impact area (River Division), the Center Courtyard (A-E Division), and medical treatment (South Parking Lot).

Away from the incident scene, Battalion Chief George Lyon designated Fire Station 1 as a Field Operations Center. It was there that replacement personnel and equipment were organized and dispatched to the Pentagon.

ACFD Incident Command Operations Sector with Chief Randy Gray on the left and Safety Officer Captain Swarthout seated.

The Incident Commander also called for deployment of the Fairfax and Montgomery County US&R teams and two task forces from the National Medical Response Team (NMRT). Chief Plaugher directed Chief Schwartz to increase the number of requested US&R teams to four. US&R teams from Fairfax and Montgomery Counties were first on the scene, followed by teams from Virginia Beach and Tennessee. Later, a replacement US&R team deployed from New Mexico. The MDW Technical Rescue Team (TRT) stationed at Fort Belvoir also deployed.

The ACFD ICS also had to interface with the Arlington County Emergency Operations Center (EOC), located in the county government complex. The EOC is responsible for policy guidance and resource support. EOC personnel and equipment were assembled by 10:30 a.m. and, at 12:30 p.m., County Manager Ron Carlee convened the first Emergency Management Team meeting. (See Figure A-6.)

The FBI deployed both the Joint Terrorism Task Force (JTTF) and the NCRS. Special Agent Combs established the FBI initial command presence with the ACFD Incident Command. The collaboration and cooperation between the FBI and ACFD was remarkable. The FBI Evidence Recovery Team began arriving before 10:00 a.m. and set up in a grassy area a short distance from the heliport. Because of the extremely congested traffic conditions, it took several hours for the entire FBI contingent to negotiate the route from the District of Columbia to the Pentagon.

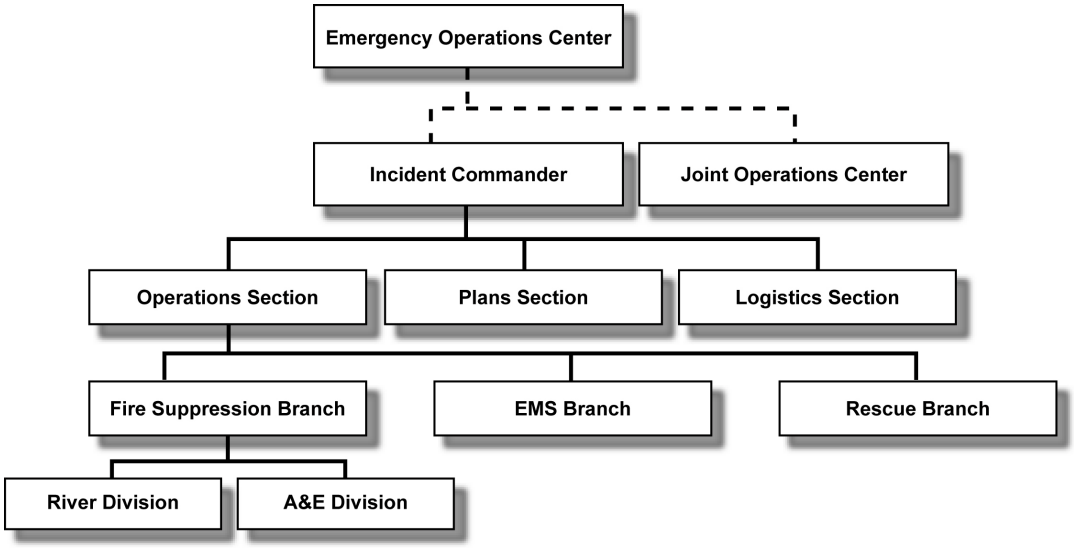


Figure A-6. Initial Incident Command structure.

The FBI had more than one role. It was responsible for the entire crime scene operation, including evidence gathering and body recovery. That operation engaged more than 700 FBI agents at the Pentagon, assisted by hundreds of people from other organizations. It was also responsible for organizing and operating the Federal interagency Joint Operations Center (JOC) as the Federal agency "coordination" center. The FBI was also responsible for investigating the hijacking at Washington Dulles International Airport.

At about noon, ASAC Bob Blecksmith arrived at the Pentagon and took over as the FBI On-Scene Commander. It quickly became apparent the FBI needed more space for its unified Law Enforcement Command Center since the area around the ICP was terribly congested. ASAC Blecksmith also noted Special Agent Combs was extremely knowledgeable about the fire emergency and had an outstanding relationship with Chief Schwartz and other key leaders of the response force. ASAC Blecksmith kept Special Agent Combs with him as an advisor and established the FBI command post at the Virginia State Police Barracks, adjacent to the Navy Annex and overlooking the Pentagon. ASAC Blecksmith and Special Agent Combs spent most of the afternoon preparing to activate the JOC at Fort Myer. Chief Schwartz stayed at the Incident Command beneath the highway overpass at the Pentagon.

This arrangement left the ICP without a full-time senior FBI presence. Administratively, this decision made sense, but it had a significant, though temporary, operational downside.

The ACFD does not have a mobile command center. This presented a persistent challenge throughout the operations. Initially, the Incident Commander operated from the back of a Chevrolet Suburban "command buggy." When advised by Special Agent Combs that a second "hijacked aircraft" was headed toward the Pentagon, Chief Schwartz ordered evacuation and moved the ICP to a position

under a highway overpass. At that new location, the ACPD made available to the ACFD its mobile command post to serve as the ICP. The change in location and vehicle configuration caused some added confusion. Even Chief Plaugher, returning from aerial surveillance of the Pentagon damage, had difficulty finding the ICP.

Given the likelihood of additional evacuations, Chief Schwartz decided to keep the ICP at its new location and establish a forward Operations Section at the heliport. To support the Operations Section, he accepted the Fairfax County Police Department's (FCPD's) offer to use its mobile command unit.

Confusion also existed because some ancillary commanders wore the distinctive blue Incident Command vest. In more than a few incidents, firefighters presumed they were talking with the Incident Commander when they were actually speaking with a branch commander.

ACPD Mobile Command Post.

The Greater Metropolitan Washington Area Mutual-Aid Operation Plan specifies a color-coded identification system for key functions, including command (blue), staging (green), treatment (orange), and public information (white). It also states that flags of the same color should be used to designate the location of that particular function. Most incidents are sufficiently confined that only identification vests are used; thus, the practice of flying location flags is generally ignored. No identifying flags were readily available or flown at the Pentagon.

Some confusion also occurred regarding the designation of the heliport area on the west side of the Pentagon as the "River Division," since the east side of the Pentagon is officially known as the River Entrance. In the hectic early hours of the incident, this site did not lend itself to the typical alphabetical designations. Leaders had to point and use geographic terms to make instructions clear. Near the ICP, there is a large overhead highway exit sign pointing to the "River Entrance." Chief Schwartz looked up and saw that sign, hence the name River Division. This confusion was corrected on September 12, when fire and rescue operations had entered a new phase and sectors were renamed using alphabetical designations. Under this new configuration, the ACFD was assigned Division A in the vicinity of the impact area; the District of Columbia Fire Department (DCFD) was assigned Division B in the Center Courtyard; Alexandria was assigned Division C to the left of the point of impact; and the Fairfax County Fire and Rescue Department was assigned Division D on the right side. Communications interoperability issues largely drove this structure. The new divisions would operate internally on the radio channel of the lead jurisdiction and would also carry an ACFD radio for command communications.

"River Entrance" sign.

A major problem emerged when many units arriving at the Pentagon failed to report to the ICP before positioning their equipment and joining the firefight. For example, between 9:41 a.m. and 9:43 a.m. on September 11, the ECC Administrator, Steve Souder, acting on his own initiative, contacted the Fairfax, Alexandria, and District of Columbia fire departments. He gave them identical instructions: deploy four engines, two trucks, one rescue unit, four EMS units, and a command officer to a staging area short of the Pentagon and hold them there until called forward. Fairfax and Alexandria followed Souder's instructions but the DCFD did not. Instead, they deployed directly to the Pentagon and commenced operations with a contingent of District of Columbia and Maryland units approximately three times larger than Arlington County requested. Some other units from outlying jurisdictions, anxious to join the effort, committed resources without instructions. Many of these units did not coordinate with the

Incident Commander. As a result, Chief Schwartz had to establish the ACFD command presence and, simultaneously, gain control of the freelancing units.

Most jurisdictions controlled and supported their own units, but did so under the umbrella command of the ACFD Incident Commander. This was not the case with the DCFD, which chose to retain jurisdictional independence at the Incident Command level throughout the operation. In many situations, the DCFD performed exceptionally well at the unit level, working side-by-side with firefighters from the ACFD and elsewhere, and taking direction from appropriate functional leaders. Independent operations at the Incident Command level compromise accountability and elevate risk.

The role of the EMS Branch also evolved over the first few hours. Although triage, treatment, and transport requirements were intense at the incident scene during the first hours of the emergency response (See Section 1, Initial Response), after 1:00 p.m. on September 11, ACFD EMS support shifted from treating victims of the attack to providing medical care to the on-scene responders and volunteers.

EMS Control discussions.

At approximately 1:15 p.m., Battalion Chief James Bonzano relieved Chief White and assumed responsibility for the EMS Branch. Chief Bonzano met with all officers assigned to the EMS Branch regarding EMS goals and obtained an assessment of the operation at that time. At approximately 2:00 p.m., another evacuation was ordered requiring displacement and subsequent reoccupation. (See Figure A-7.)

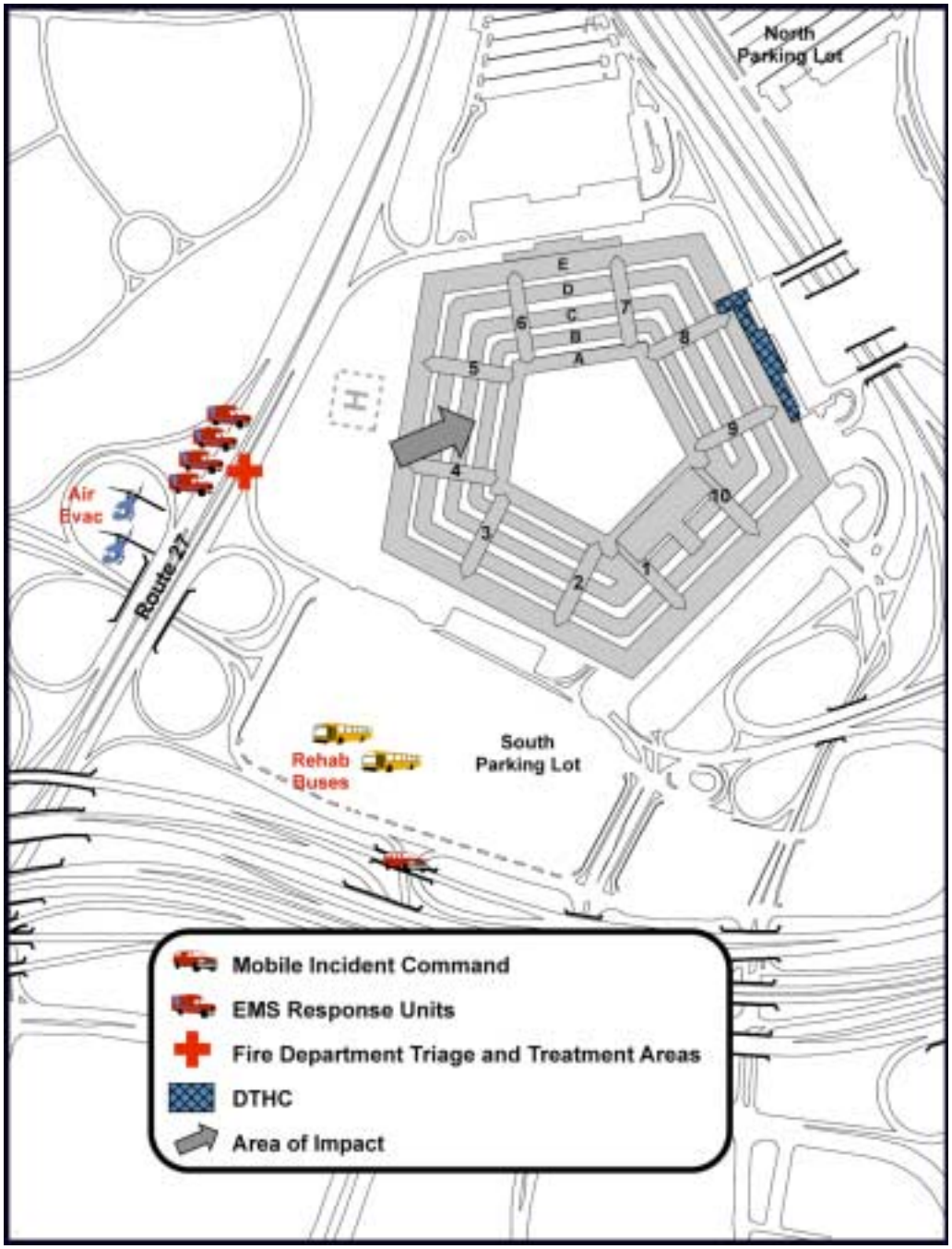


Figure A-7. Final triage, treatment, and rehabilitation locations.

The ACFD EMS stood down as a branch at 5:00 p.m. on September 13, but maintained a presence until the ACFD relinquished control of the incident site to the FBI on September 21.

Chief Schwartz met with Chief John Jester of the DPS at about 2:00 p.m. on September 11, and told him that he needed a large Pentagon meeting room that

evening. Chief Jester arranged for the Secretary of Defense's press briefing room. At 6:00 p.m., the Incident Commander met with representatives of all engaged organizations, including Pentagon renovation contractors. He congratulated them on the work of the first 8 hours and explained that he expected the fire and rescue effort to continue at least another 8 days. Chief Schwartz then explained the purpose, organization and functions of the ICS. He also described the transition from a single command to a wholly Unified Command. While the ACFD would retain final decisionmaking authority, the Unified Command team would include command-level representatives from the ACFD, ACPD, FBI, DoD, FEMA, and the leader of the Incident Support Team (IST). At that meeting, the FBI announced its intentions of opening the JOC at midnight and urged that all parties assign a senior representative to the JOC. Chief Schwartz initially agreed to collocate the ICP with the JOC while the operations section remained at the Pentagon heliport.

Delayed by the installation of computing and communications equipment, the FBI opened the JOC in Building #405 at Fort Myer at 6:00 a.m. on September 12. At the JOC, senior representatives of Federal Departments and agencies with relevant responsibilities typically exchange intelligence information and coordinate policy and interagency activities. Special Agent Paul Garten and Special Agent Jennifer Gant organized and performed duties at the JOC, which proved invaluable throughout the operation. On the morning of September 12, FBI SAC Timothy Bereznay assumed the duties of On-Scene Commander at the JOC.

ACFD Assistant Chief Shawn Kelley was in Alabama on September 11 and drove all day, arriving in Arlington at 12:00 midnight on September 12. He helped with final JOC arrangements and worked there throughout the day representing the ACFD Incident Commander while Chief Schwartz got a short break.

Chief Schwartz subsequently determined that the contrasting missions of the JOC (Policy and Interagency Coordination) and the ICP (Operational Command) could best be accomplished as distinct entities. He relocated the ICP back to the incident site on the morning of September 13. Chief White was assigned as liaison at the JOC and Chief Kelley worked as the night shift Incident Commander.

When Chief Schwartz moved the ICP back to the incident site, he also asked that Special Agent Combs be reassigned as the FBI representative to the Incident Command. After some discussion, Special Agent Combs returned to the ICP, reestablishing the critical face-to-face coordination link between the ACFD and the FBI at the incident site. Although communication between the FBI and ACFD was never completely severed, the value of full-time FBI presence at the ICP cannot be overstated. The combination of Chief White representing the Incident Command at the JOC and Special Agent Combs representing the FBI at the ICP ensured effective continuous communications and coordination.

During the first few days of the fire and rescue effort, shift changes, dismissal instructions, and information management were often problematic and uncoordinated. Some teams worked for hours without relief, while replacements waited for hours to get assignments. This was particularly true of locations that were visually remote, such as the Center Courtyard and the Pentagon roof. For example, when the ACFD TRT was ordered into the Pentagon for a third time on September 11, the unit commander declined, deferring to replacements waiting at the forward staging area. With the approval of the Operations Section Chief, Captain Scott McKay dismissed his team with instructions to return in 12 hours, setting definitive shift hours.

Additionally, dismissal instructions at the end of a work shift were often unclear and sometimes contradictory, and sleeping accommodations not coordinated or efficiently planned. Some fire and rescue personnel were sent to the Thomas Jefferson Community Center for long-term rehabilitation with instructions to stay there overnight. Others were told to return to their stations and remain there, although fill-in units were sleeping on the beds at the station. Still others were sent home. More than 90 percent of ACFD personnel live outside the county, some residing as far away as Stafford County and West Virginia. In many cases, traffic conditions exacerbated by the Pentagon situation added 2 to 3 commuting hours to a 12-hour work shift.

Information management is always an important command function but, during an emergency response of this magnitude, it is absolutely critical.

On one level, response personnel need to be aware of conditions away from the incident scene. In the hectic early hours of the incident response, it was not feasible to share information with responders who were struggling to rescue victims. As a result, rumors prevailed. Many firefighters “heard” Camp David, the Sears Tower in Chicago, and other targets had been struck by terrorists. As time passed and the command structure evolved, information management improved.

Unified Command team meetings were scheduled 4 times a day, including the Incident Command staff and liaison personnel from the military, FBI, ACPD, FEMA, and the IST leader representing the US&R teams. Additionally, Incident Command staff meetings, attended by section and branch commanders (e.g., fire suppression, logistics, EMS), took place before each 12-hour shift to review progress, determine specific requirements, and set goals for the next work period. The FBI held intelligence briefings regularly at the JOC.

Of far greater significance is the necessity of having accurate, valid, and timely information about additional potential attacks that pose an immediate threat to the response force. Such information cannot wait for the initial turmoil to subside. On the following four occasions during the first 24 hours, it was necessary to evacuate the Pentagon:

- The first evacuation, only 20 minutes after the crash, was a building evacuation, when Captain Gibbs and Battalion Chief Tim Lasher of the Ronald

Reagan Washington National Airport Fire Department warned of an imminent structural collapse.

- The next three evacuations were full site-clearing evacuations caused by reports of additional threats of hijacked aircraft heading toward the Pentagon.

  - The first of these occurred at about 10:15 a.m. on September 11, when Special Agent Combs told Chief Schwartz another hijacked airliner was flying on a trajectory toward Washington, DC, and was 20 minutes away. Special Agent Combs got this information from the command center at the FBI WFO, which was in direct contact with the Federal Aviation Administration (FAA). Using a radio belonging to an airport firefighter, he confirmed the information directly with the control tower at Ronald Reagan Washington National Airport. The Incident Commander ordered fire and rescue personnel to relocate to the relative safety of a highway overpass. The evacuation required fire and rescue personnel to move in full firefighting gear the equivalent of five football fields.

    Chief Schwartz issued a warning with each flight status update until the last warning when the airliner went below radar coverage in Pennsylvania, an estimated 4 minutes flying time from the Pentagon. Five minutes later, Special Agent Combs told him the airplane had crashed in Pennsylvania and the all clear was sounded. At 10:37 a.m., United Airlines Flight #93 crashed into a field near Shanksville, PA. The heroic actions of doomed passengers had thwarted the terrorist plan.

  - The second and third full site-clearing evacuations were ordered based on reports of unidentified aircraft heading toward the Pentagon. One occurred at about 2:00 p.m. on September 11, and the other around 10:00 a.m. on September 12. In both cases, the Arlington County ECC was notified by the control tower at Ronald Reagan Washington National Airport of "inbound unidentified aircraft." The ECC properly notified the Incident Command of each and Chief Schwartz ordered evacuations. It was later determined the incoming aircraft were "friendly." One carried Attorney General John Ashcroft and the other, FEMA Director Joseph Allbaugh. Operating only on the information that "an unidentified aircraft is 10 minutes out and heading this direction," the Incident Commander had no option but to order full evacuations.

The first of the three full site-clearing evacuations was based on valid threat information originating from the FBI WFO Command Center and based on real-time FAA data. The FBI representative at the Incident Command provided the information directly to Chief Schwartz. The second and third full site-clearing evacuations were based on invalid threat information obtained during the period of time when there was not a senior FBI presence at the ICP. Accurate information should have been available, given the presence of the FBI, FEMA, the military, and the Ronald Reagan Washington National Airport Fire Department. Validated threat information would have prevented the debilitating

effects of two of the three full site-clearing evacuations, which extracted a serious toll in terms of the physical and psychological well-being of responders. These evacuations also interrupted the fire attack and changed on-site medical treatment of injured victims during the crucial early stages. Friendly aircraft, carrying U.S. Government executives and escorted by fighter aircraft, should not have been cause for evacuation.

Managing the flow of external information was also important. Understandably, in the first few hours, the media obtained information from any available source, including passengers in automobiles caught in the I-395 congestion. Thus, there were "eyewitness" accounts of a "small private aircraft" crashing into the Pentagon, and many other erroneous reports. Estimates of "up to 800 fatalities" were based on the potential occupancy of the impact area at the Pentagon, despite the renovation work that left a significant part of the area uninhabited.

Establishing effective media information dissemination took longer than it should have, for a number of reasons. The vacant ACFD Public Information Officer (PIO) position was a contributing factor to the media interface problem. This shortfall was remedied when Chief Plaugher appointed Captain George Williams as PIO on September 12. Another contributing factor was the absence of Mr. Richard Bridges, Arlington County Assistant Manager for Public Affairs, who was in Charlottesville on the morning of September 11. Thus, Chief Plaugher and General Jackson held the first official press conference at 11:00 p.m., on the evening of September 11.

Additionally, when the JOC opened, the FBI Headquarters chose not to activate a Joint Information Center (JIC), which would have served as a focal point for coordinating all interagency media interface. The failure to establish a JIC proved to be an impediment to the presentation of coordinated, factual, and timely public information. There was not a central point of interface between the media and the agencies involved in the response. Each agency dealt separately with the media.

Finally, it is difficult to overstate the value of personal relationships formed and nurtured among key participants long before the Pentagon attack. Chief Plaugher served in the Fairfax County Fire and Rescue Department for 24 years before moving to Arlington. Chief Tom Hawkins of Alexandria spent 15 years with Arlington County. Chief Brown of Loudoun County is a Fairfax alumnus. One of Special Agent Combs' jobs with the FBI NCRS was to establish and maintain close working relationships with the regional fire and rescue departments. His relationship with Chief Schwartz was well-established before September 11. The list of beneficial personal relationships extended throughout the ranks. Firefighters from neighboring jurisdictions had often worked and trained together, which built valuable trust and confidence.

Recommendations and Lessons Learned

Deploying units must strictly adhere to instructions from the ECC until arriving at the incident site and being placed under control of the Incident Commander or Staging Officer. In responding to a catastrophic incident, it is especially important that units deploying from outside the immediate area contact the host jurisdiction dispatch center for information and instructions. (FD-021)

All deployed units, whether or not they have adopted the ICS, must accept the command primacy of the responsible jurisdiction. Units that choose to operate outside a unified structure should be replaced. (FD-022)

To every extent possible, the command structure at the incident site should be preplanned and agreed upon by area responders and public safety organizations. All agencies should adhere to a single command system. The NIIMS ICS was recently adopted by the Washington Metropolitan Area Council of Governments and is a widely accepted model. (FD-023)

In a large-scale incident, it is difficult to distinguish between command echelons; therefore, a new, more precise, identification system should be conceived and adopted by all fire and rescue organizations. If the system described in the Greater Metropolitan Washington Area Operation Plan is deemed adequate, it should be put into regular practice. Location flags should be flown routinely for three-alarm emergencies, possibly augmented by lights of similar color for night operations. (FD-024)

Similarly, there must be only one person with the title of Incident Commander and only one ICP. The ACFD should take the initiative to clarify terminology within the ICS so the Incident Commander is clearly distinguishable from the leaders of supporting organizations. (FD-025)

Standardized NIIMS ICS forms should be available and used for all long-term incidents. (FD-026)

The Incident Commander must be physically present at a location in proximity to the incident and at an ICP that can accommodate the ICS staff functions. (FD-027)

In a terrorist-generated event, a senior FBI presence at the ICP, as a member of the Unified Command team, is essential at all times. (FD-028)

During the response to a terrorist attack, the Incident Commander must have timely access to reliable threat information. It is vital that valid information be made available to avoid the toll of unnecessary evacuations. Providing valid tactical threat information is the responsibility of the FBI and the ACPD. (FD-029)

If a JOC is activated, a JIC should also be activated. Coordinating the flow of information goes hand-in-hand with coordinating operations. (FD-030)

The ACFD needs access to a fully functional state-of-the-art mobile command and communications capability. It should be expandable with compatible tentage, panels, and transportable equipment so it is adaptable to circumstances of different size and duration. (FD-031)

Shift changes and dismissal instructions should be described in the department's standard operating procedures (SOPs) to which changes can be made to accommodate the circumstances of a particular event. (FD-032)

The Arlington County EOC should be exercised periodically with the ICS to improve coordination, communications, and interaction. (FD-033)

Personal and professional relationships that cross organizational and jurisdictional boundaries are important and should be established, reinforced, and nurtured throughout the response community. However, they are not a substitute for good planning. (FD-034)

SECTION 3: COMMUNICATIONS

Observations

On the morning of September 11, communications systems were busy even before American Airlines Flight #77 crashed into the Pentagon. The Nation was already caught up in the terrorist attacks at the World Trade Center in New York. Relatives called family members, business associates called colleagues, neighbors visited with neighbors, all trying to understand the horrendous events depicted by the continuous media coverage. In the moments immediately before impact at the Pentagon, the Arlington County ECC began receiving 9-1-1 calls reporting a low flying airliner that seemed off the normal flight path. When the crash actually occurred at 9:38 a.m., all area communications seemed simultaneously overwhelmed. Firefighters calling the ECC couldn't get through. Relatives of Pentagon workers found cellular and land lines jammed. Emergency traffic flooded radio channels.

The hub of Arlington County public safety communications is the ECC. In 1980, Arlington County consolidated and integrated the police and fire dispatch centers, becoming one of the first jurisdictions in the country to do so. In 1993, the ECC relocated to its present facility on the fifth floor of the Court House Square West Building. (See Figure A-8.)

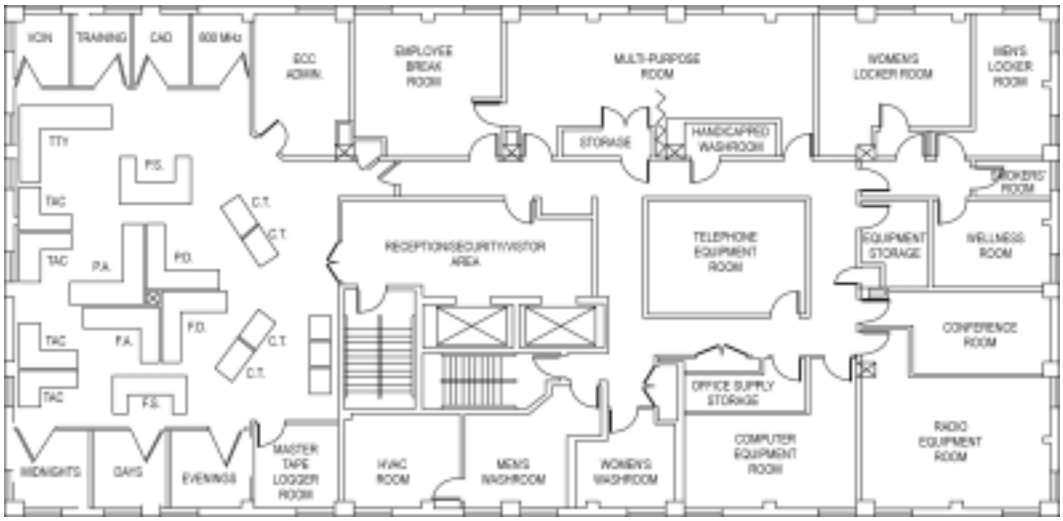


Figure A-8. ECC floor plan.

On the morning of September 11, seven emergency communications specialists, the minimum required staffing level, were on duty at the ECC, having commenced their shift at 7:00 a.m. The tools of their trade included a 15-channel 800 MHz Trunked Radio System, a Computer-Aided Dispatch System, and a new 9-1-1 telephone system. The ECC was equipped with televisions to monitor news and weather channels. On this particular morning, six additional staff members happened to be in the conference room attending a training class.

When the first World Trade Center crash occurred, ECC Administrator Souder invited the six student dispatchers into the dispatch center to follow the news. All were watching the televisions when the second tower was struck, bringing silence to the room. The six student dispatchers left the room quickly, retrieving headsets from their lockers, anticipating there might be more to come.

At 9:38 a.m., a large smoke plume appeared beyond the Rosslyn skyline. Arlington County Police Corporal Barry Foust radioed the ECC that he saw an American Airlines jet crash into the Pentagon. The ECC swung into action.

The ECC redirected units that had been dispatched minutes earlier to a Rosslyn high-rise fire, now reported under control. ECC Administrator Souder alerted the Fairfax, Alexandria, and District of Columbia fire departments, asking that they stage units in preparation for a call for assistance. He also directed that Virginia Hospital Center - Arlington, George Washington University Hospital, Georgetown University Hospital, Washington Hospital Center, MedStar, and Inova Fairfax Hospital be notified by telephone. Mr. Chris Satterfield, a Communications Technician, contacted the Fort Myer Fire Department, but could hear in the background they were already rolling, as a result of a call from Captain Gilroy on station at the Pentagon heliport.

Findings

The 9-1-1 system was overwhelmed. The ECC has eight 9-1-1 emergency lines and an additional eight nonemergency lines. When the emergency lines are all busy, incoming calls automatically rollover to the eight nonemergency lines. When those lines are also fully engaged, the ECC has no capacity for outgoing calls. The staff used personal cellular telephones to call hospitals and MedStar.

Had there not been six additional technicians at the ECC for training, the duty staff could not possibly have handled the volume of emergency traffic in the first few hours after the attack. There are simply not enough call takers in a duty staff of seven persons.

Firefighter Terry Theodore was on light duty on September 11, assigned to a temporary communications technician position at the ECC. Many ACFD EMS and other responders commented on the value of having someone with his operational background and knowledge of fireground and ICS activities at the ECC.

The Arlington County ECC made only one announcement directing EMS responders to use an alternate channel. Repetition of this announcement is essential to ensure newly arriving EMS units understand the operating channels. Because of the failure to repeat this announcement periodically, many units were initially unaware of the assigned EMS radio channel.

The current radio dispatch system is not integrated with other local jurisdictions and does not include location displays. Additionally, the antiquated tape log

system does not provide ready access to dispatch communications data. ECC staff indicated that a truly useful 24-hour dispatch record would take a week or longer to produce.

Most units arriving in the area from outlying jurisdictions did not check in with the ECC before departing or while en route. They proceeded directly to the Pentagon.

Recall notification procedures seemed ad hoc. Recall notices were not prepared in advance and available for public service announcements, as was the case with other Washington area jurisdictions. Emergency notification directories used by the ECC were, in some cases, different than those established by the ACFD. The paging system seems to be the most reliable recall device, but most firefighters are not issued pagers.

Communication at the scene was challenging. Radio traffic overwhelmed the system to the extent that foot messengers became the most reliable means of communicating. Fortunately, there was a growing surplus of people onsite and available to serve in that capacity.

Radio communications inside the Pentagon were, for the most part, impossible. Where line of sight could be achieved, "talk around" was minimally effective.

Initially, as calls jammed local towers, cellular telephones were not useful. No priority was assigned to emergency services. Nextel telephones with the 2-way radio capability were somewhat more reliable.

There was not a Clearinghouse Hospital designated. Thus, EMS Control did not have a single communications point of contact among hospitals and clinics.

Some mutual-aid EMS responders deviated from SOPs by not using the Arlington County radio system despite having the capability. In some cases, portable radios were not preprogrammed to allow interoperability. Others were preprogrammed in a manner that prohibited it.

Fairfax County, Alexandria, and MWAA EMS responders effectively used bullhorns for public announcements such as evacuation instructions at the incident site.

EMS providers stated they monitored radio channels for information but did not rely on radios to transmit information. Ambient noise sometimes made it hard or impossible to talk on the radio. Earpieces might have helped mitigate such distractions.

EMS responders equipped to do so used multiple radios to monitor incident operations on different frequencies. This gave them an understanding of the robust ongoing response activities.

No Arlington County EMS units are equipped with mobile data terminals (MDTs) to transmit information to the ECC in text format. Only Fairfax County units are

so equipped. Many EMS responders believe that MDTs would have substantially augmented the Computer-Aided Dispatch System. With this technology, they could have regularly updated the ECC without further congesting radio traffic.

Some mutual-aid jurisdictions arrived without handheld radios. Others used equipment incompatible with the ACFD or preprogrammed in ways that limited communications. Equipment interoperability continues to be an issue.

Beginning on September 12, the Incident Command Operations Section organized the fire suppression units into four divisions, each led by a chief officer from the preeminent jurisdiction (Division A – Arlington, Division B – the District of Columbia, Division C – Alexandria, and Division D – Fairfax). They were instructed to use the assigned home jurisdiction radio channel for communicating. This facilitated "talk around" within each division. However, in one instance, a DCFD replacement crew worked on one portion of the roof of the Pentagon while an ACFD team worked on a different portion. The two units had no way to communicate with each other in case either team needed help.

The former "Metro Channel" was replaced several months ago, after the District of Columbia acquired the 800 MHz system. The District of Columbia has not yet completed integrating their new system with neighboring jurisdictions' 800 MHz systems. Additionally, the Federal Government and some other jurisdictions do not have access to the 800 MHz system.

Inside the Pentagon, the radio evacuation signal was not sufficiently clear. It was sometimes difficult to distinguish between three short bursts and one long burst amid the noise inside the burning building.

Recommendations and Lessons Learned

A communications mechanism needs to be developed to activate mutual-aid resources. Using strike teams and task forces as described in the Washington Metropolitan Area Council of Governments Mutual Aid Operations Plan may be a useful starting point. (FD-035)

The ECC radio dispatch system should be upgraded and integrated with those of other local jurisdictions and include an automated vehicle locator system. (FD-036)

Nonemergency telephone lines at the ECC need to be set aside so an outside line is always available to the ECC staff. These lines should not be among those to which 9-1-1 calls are forwarded. (FD-037)

The minimum ECC staffing level of seven technicians proved insufficient and should be reviewed to ensure optimal use of communications technicians. (FD-038)

Recall procedures and notification lists at the ECC should be regularly reviewed, updated, and tested. (FD-039)

A modern ECC call recording and storage system would better support review and analysis of operations as well as generate timely and accurate post-emergency data. (FD-040)

In coordination with the Arlington County Office of Public Affairs and the ACFD PIO, procedures should be established to ensure timely public media recall announcements during large-scale emergencies. (FD-041)

All ACFD firefighters and emergency medical technicians should be issued pagers. (FD-042)

Radio channel and talk group allocation for fire and rescue command, operations, and logistics functions should be preplanned, established early, and clearly communicated. (FD-043)

All units arriving in the area from outlying jurisdictions must check in with the ECC before departing home station or while en route, and then report to the Incident Command Staging Officer before positioning their equipment and joining the fight. (FD-044)

Cellular call priority should be given to public safety personnel during an active emergency of this magnitude. If needed, portable cellular towers should be positioned to support emergency responders. (FD-045)

On-site radio evacuation signals must be clear and unmistakable. The inability of response personnel to hear and understand evacuation instructions is a life-threatening deficiency. If necessary, a single signal should sound the evacuation, with voice notification used for all clear. Once on the incident site, supporting agencies should adopt the ICS signaling procedures. (FD-046)

Communications interface with area treatment facilities merits a comprehensive review. Hospitals and other specialized facilities are an integral part of the public safety system. Regional medical and public safety officials should consider reinstating provisions for designating a Clearinghouse Hospital. (FD-047)

There should be a regional review of response plans to identify, institute, and agree on communication channels to be used by all area responders and hospitals to ensure complete communications. (FD-048)

All regional public safety organizations should regularly inspect portable radio devices and ensure they are programmed to allow communications in a mutual-aid environment. (FD-049)

Arlington County should routinely assign at least one firefighter to the ECC to provide insight into fire department operations and the ICS. (FD-050)

One of the recommendations most frequently mentioned by EMS responders was that the ACFD should install MDTs in EMS and other response units. (FD-051)

SECTION 4: RECALL AND STAFFING

Observations

For the most part, members of the ACFD's two off-duty shifts were engaged in personal activities and widely dispersed on the morning of September 11. Fewer than 10 percent actually live in Arlington County. Most reside in outlying communities as far away as Stafford County to the south and Loudoun County to the west. Like most Americans, many became aware of the World Trade Center attack fairly early. Some were watching one of the morning television shows when news came that the first airliner crashed into the World Trade Center at 8:45 a.m. Others learned about the attack from relatives or neighbors and had tuned into the news by the time the second crash occurred at 9:06 a.m.

When the Pentagon attack occurred at 9:38 a.m., many off-duty firefighters reacted automatically and headed for their normal duty stations. Others tried calling the ECC for instructions, but few actually got through. While continuous national and local public news broadcasts aided the awareness process, official notification was more problematic. Emergency traffic jammed radio channels. Cellular telephones were virtually useless during the first few hours. The paging system worked for some, but few firefighters had pagers. Chief Plaugher was in Fairfax when he learned about the World Trade Center attacks and the subsequent attack on the Pentagon. He proceeded directly to the Pentagon, without receiving a page or any other official notification. The Emergency Alert System (EAS) was not activated. Public service announcements on television and radio directing off-duty fire and rescue personnel to report for duty included most area jurisdictions except Arlington County.

The high volume of incoming calls at the ECC presented one of the notification challenges. Because the 9-1-1 telephone lines automatically rollover to the nonemergency lines, at times no lines were available to make outgoing calls. Directed "call-back" confirmation calls acknowledging receipt of pager instructions further compounded the overwhelming telephone traffic.

Despite the challenges of inconsistent formal notification, geographic dispersion of off-duty personnel, and massive traffic congestion throughout the Washington Metropolitan Area on September 11, the full ACFD workforce assembled in a few hours. This self-activated recall is due largely to the training, discipline, and dedication of ACFD personnel. The next challenge was to organize and effectively employ this workforce.

Most returning firefighters went first to their assigned stations to recover personal protective equipment (PPE), then proceeded to Fire Station 1. As people gathered, Battalion Chief Lyon took charge of organizing the replacement personnel and designating Station 1 as a Field Operations Center. Individual accountability tags were used to start forming teams with balanced levels of skill and experience.

By early afternoon, all the ACFD stations were occupied by units from other jurisdictions, which backfilled ACFD units and responded to routine calls throughout the county.

The growing crowd of ACFD firefighters watching the Pentagon fire on television at Station 1 was anxious to engage in the firefight. Periodically, Battalion Chief Lyon would address them and point out this was a long-term operation and there was "plenty of fire for everyone." Nevertheless, firefighters sought ways to get to the incident site quickly. One volunteered to help organize the replacements, ensuring his entire team was on the first bus to the Pentagon. Others attached themselves to key personnel already traveling to and from the Pentagon.

Congestion continued to grow at Station 1 as ACFD volunteer firefighters mingled with their career counterparts. Some firefighters said they had never seen so many volunteers, and wondered aloud if a volunteer firefighter tee shirt was the only required identification. Volunteers should have reported to the ACFD volunteer coordinator or his representative for instructions based on their skills and levels of training. Battalion Chief Lyon designated Station 6 as an additional personnel staging site to relieve some of the congestion at Station 1.

At Stations 1 and 6, teams of personnel were loaded onto buses and transported to the Pentagon. At the Pentagon, the buses stopped just short of the actual operational area. Replacement personnel sometimes stayed at this forward staging area for 2 hours or longer awaiting assignments, watching their colleagues and those from other jurisdictions fight "their" fire.

There were also numerous episodes requiring ACFD staff to take unusual initiative, such as when Firefighter John Delaney, a HazMat Technician, was assigned temporary liaison with the arriving FBI contingent early on September 11. He not only kept them apprised of the firefight, he also helped them begin gathering maps and other materials for the work ahead.

Findings

Arlington County did not have an emergency recall plan in place with associated systems and notification devices. Many county policymakers, agency administrators, public safety officials, and firefighters were never formally notified of the event or given reporting instructions. Had the Pentagon attack occurred at night, on a weekend, or on a holiday, it is certainly debatable whether the workforce could have assembled in a timely manner.

The paging system, when available and used, seemed to be the most reliable notification device. However, most firefighters do not have pagers. All means of communications should be used for recall, including placing public service announcements with local media. In extreme situations, the EAS should be activated and used.

The paging message to members of the NMRT directed personnel not to "call back," but to report directly to the Arlington County Fire Training Academy. Other page and voicemail messages directed a confirmation callback, adding to an already overburdened telephone system.

The ACFD did not have an effective SOP for recalling and assembling off-duty firefighters. Directing returning firefighters to report to Station 1 caused unneeded congestion and turmoil. It would probably have been more efficient to instruct them to report to and remain at home stations awaiting further instructions. Then, as Battalion Chief Lyon received reports from individual stations, he could dispatch the buses to transport replacements to the Pentagon.

Replacement teams often received only perfunctory situation briefings. Some were not briefed at all. Replacement personnel need to understand the current status and objectives of fire and rescue operations, command structure, and location of command and support elements.

Many replacement personnel arrived at the incident site without full equipment, including air bottles and SCBA. Requiring replacements to hunt for equipment after arriving at the fire scene added an unnecessary element to an already complicated situation.

The ACFD, just like other fire departments, does not maintain sufficient stocks of individual and apparatus equipment to simultaneously deploy all shifts and its reserve apparatus. As a result, the ACFD was only able to sustain a major single-shift operation by using recalled off-duty firefighters as replacements and having them share breathing devices, air bottles, radios, flashlights, and other items with those coming off duty. Similarly, reserve fire apparatus were of little value without a complement of equipment.

Coordination of the relief efforts between off-site and on-site leaders was sometimes deficient. Replacement personnel were not given work assignments until long after arriving at the Pentagon. Some units and individuals remained onsite far too long, particularly those working in remote areas. In some cases, replacement teams, deployed at the Pentagon on the evening of September 11, worked for a couple of hours then were ordered to extended rehabilitation at the Thomas Jefferson Community Center, while others, who had been battling the fire all day, remained onsite. In a few cases, individuals left their duty position "when their shift ended," even though no replacement had arrived.

Some NMRT members were already onsite with EMS units when the NMRT was activated. They had to be replaced in their EMS role to join the NMRT. This violated explicit NMRT policy, which specifies that, in such cases, NMRT members remain with the already deployed unit.

A battalion chief from Alexandria led a busload of 24 replacement firefighters to the Pentagon to work the night shift on September 11. He reported their availability to the ICP Operations Section Chief and was instructed to wait in the

holding area. They waited the entire night while firefighters from Loudoun County, VA, were given repeated assignments.

Some organizations, such as the US&R teams, had different shift schedules. Some changed shift at 5 o'clock, some at noon and midnight, others changed at 7 o'clock. A uniform shift change policy would have enhanced continuity of operations.

The ACFD switched its TRT from 12-hour shifts to 12-hours on and 24-hours off, following the US&R model. Most ACFD personnel preferred the 12-hour shift. Alternating day and night shifts after a 24-hour break required significant adjustment.

Overnight accommodations were not planned for ACFD personnel who reside outside the county. Fill-in units occupied beds at the stations. The notion of sleeping on a cot at the Thomas Jefferson Community Center was not appealing.

It was difficult for ACFD fire and rescue personnel to wait on the sidelines while their counterparts from other jurisdictions were busy fighting the Pentagon fire. Under normal conditions, even for a complex incident such as this, the regularly available resources would be the first responders committed. Unfortunately, because so many outside units self-dispatched immediately to the scene, this did not occur.

ACFD personnel exhibited some compelling attributes throughout this ordeal. Discipline distinguished the ACFD workforce. Throughout this endeavor, firefighters were willing to do whatever was needed, regardless of how mundane or hazardous the task.

Recommendations and Lessons Learned

A phased alerting system should be considered for fire and rescue operations of significant magnitude and likely long-term duration, similar to the various military readiness levels. At each specified level, different actions automatically occur, such as personnel assembly, equipment inspections, deployment to forward staging areas, implementing long-term rehabilitation, and contracting for overnight accommodations within reasonable distances from the incident site. The Arlington County Comprehensive Emergency Management Plan (CEMP), which presently alludes to such a system, should be expanded with additional operational detail. A revised system of elevated preparedness levels should be compatible with the system recently announced in Homeland Security Presidential Directive – 3, March 11, 2002. (FD-052)

It is vital that the county's CEMP be comprehensive and include a system for notifying county policymakers and agency administrators as well as public safety officials, firefighters, and other first responders. (FD-053)

The Incident Commander should synchronize shift changes among organizations and jurisdictions with attention given to parity in degree of difficulty and duration of shift assignments to avoid burn out and contribute to morale. (FD-054)

A standard briefing format should be adapted for replacement units and personnel. It should include digital site maps or drawings depicting the locations of key activities, information regarding the current status of fire and rescue operations, the command structure, immediate goals and objectives, and warnings of potential concerns (such as additional terrorist attacks). This information should be regularly updated and shared with the EOC. (FD-055)

Procedures need to be developed and practiced for phasing in replacements, relieving engaged teams, and maintaining overall discipline. No one should leave an assigned position until a replacement is physically present. (FD-056)

The ACFD should review and strengthen the role of volunteer coordinator to ensure personnel capabilities can be properly assessed and the best use of volunteers devised without interfering with the organization and deployment of the career staff. (FD-057)

A cache of critical equipment should be acquired and maintained to sustain long-term operations. This operational shortfall should be studied so that all personnel and shifts asked to respond to an incident are adequately equipped for sustained operations. No one should arrive at the incident site without all necessary items. Personnel should be inspected before leaving home station to ensure they are fully equipped and ready. (FD-058)

A program should be implemented, possibly at the Arlington County Fire Training Academy, to help firefighters recognize the importance of all aspects of fire and rescue efforts, even those remote to the incident site. There are valid reasons why certain resources from other jurisdictions should be engaged at the incident site and not simply used in a backfill role, the US&R teams and special airport crash units are just two examples. The ability to work well together, teamwork, is the attribute that most effectively integrates all available capabilities. (FD-059)

The ACFD needs to review recall and personnel staging procedures. Much of the organizational activity that occurred at Fire Station 1 could have been planned in advance. That experience should now be captured and sound procedures put in place and practiced for the future. (FD-060)

SECTION 5: MUTUAL-AID AND OUTSIDE SUPPORT

Observations

Arlington County has mutual-aid agreements in place with its neighbors to the west, the city of Alexandria and Fairfax County, with the District of Columbia to its east, and with the MWAA Fire Department at Ronald Reagan Washington National Airport. With its Virginia counterparts, Arlington participates in the Northern Virginia Response Agreement (NVRA), which facilitates cross-boundary response. It provides automatic dispatch of up to 20 fire and rescue units based on proximity to the incident, regardless of jurisdiction. Arlington has a mutual-aid agreement developed with the District of Columbia, under the auspices of the regional Council of Governments. Unlike the NVRA, it does not provide automatic dispatch; the party seeking support must request it. A similar MOU exists with the MWAA Fire Department. There is also a Statewide mutual-aid program that enables outlying jurisdictions to provide fill-in support to those engaged in fire and rescue operations. Thus, the Prince William County Department of Fire and Rescue backfilled some Alexandria and Fairfax stations while their units supported Arlington.

Under the terms of mutual-aid agreements, the parties provide personnel and equipment to help one another respond to emergencies beyond the capacity of organic resources. Responding parties are not compensated by the requesting jurisdiction but, under emergency conditions, can be reimbursed by FEMA with funds set aside for that purpose. This network of mutual-aid agreements generally extends between neighboring jurisdictions across the country, literally creating a fire emergency safety net.

Moreover, the firefighting tradition of helping one another extends well beyond the technical boundaries of official documents. If one jurisdiction has a particular capability that can make a unique contribution to the firefighting effort, it is likely to appear on the scene, with details to be worked out later. It is the neighborly thing to do.

Some MWAA fire and rescue units automatically responded to this airliner crash, since it was within a 5-mile radius of the airport. These units included EMS-301, Rescue Engine-335, and Special Emergency Response Vehicle (SERV)-329. MWAA EMS responders arrived at the Pentagon incident site at approximately 9:55 a.m. Other MWAA units responded on request. M-325 arrived from a hospital call at 10:00 a.m., and SERV-362 arrived from Washington Dulles International Airport at 10:45 a.m.

Early on the morning of September 11, a pager message was sent to all Alexandria responders stating the World Trade Center had been attacked. After the Pentagon attack, Alexandria units were dispatched to a staging area south of the Pentagon on the George Washington Parkway, as requested by the Arlington County ECC. Alexandria EMS responders included M-202, M-206, and M-208. While en route to the staging area, they were ordered to proceed directly to the

scene. Dr. Vafier accompanied the EMS response force. As units deployed to the incident scene, one was flagged down by evacuating victims and set up a treatment site at the Pentagon's South Parking Lot.

Fairfax County Fire and Rescue Department EMS responders were initially alerted to the incident by CNN television coverage, and subsequently dispatched by the Fairfax Public Safety Communications Center. As requested by the Arlington County ECC, Fairfax County Fire and Rescue Department units were directed to a staging area in a shopping center at the intersection of Route 50 and Willston Drive. The Fairfax County response included a Medical Task Force comprising EMS-4, M-408, and M-405. Units EMS-4 and M-408 were dispatched from the staging area directly to the Pentagon, and arrived at 10:20 a.m. The third unit, M-405, was ordered to forward stage at Station 10 in Arlington. Upon arrival at 11:00 a.m., the unit treated a Pentagon victim in respiratory arrest, who had been driven there by a coworker. The victim was transported to Virginia Hospital Center - Arlington and M-405 was subsequently assigned to the Pentagon as part of a Suppression Task Force.

The DCFD had legitimate concerns of possible terrorist attacks in its own jurisdiction. Therefore, it activated mutual-aid pacts with Montgomery County and Prince Georges County and was able to deploy substantial resources to the Pentagon while maintaining vigilance throughout the District of Columbia with most of its own resources.

Mutual-aid medical evacuation helicopter support was provided by the U.S. Park Police (USPP), MedStar (Washington Hospital Center), and Inova Fairfax Hospital. The Air Traffic Control Tower at Ronald Reagan Washington National Airport notified the USPP of the incident and helicopter Eagle I was dispatched at approximately 9:43 a.m. Eagle II launched 8 minutes later at 9:51 a.m. MedStar was notified by the Arlington County ECC at approximately 10:06 a.m., and launched one helicopter that arrived onscene at approximately 10:18 a.m. Inova Fairfax Hospital launched helicopter AirCare I at approximately 10:00 a.m., after notification by the Arlington ECC. A second helicopter, AirCare II, was launched at approximately 10:40 a.m. The USPP, MedStar, and AirCare provided a total of five helicopters.

Throughout the fire and rescue phase, mutual-aid companies assigned to ACFD fire stations provided EMS to Arlington County residents. An ACFD officer was assigned to ride with each mutual-aid unit to navigate and ensure continuity of service.

In addition to support from neighboring jurisdictions planned in advance through carefully constructed mutual-aid agreements, help is also available from Federal and State governments. This unique system of handling emergencies has been finely honed over the years. The fundamental principle is that the local jurisdiction retains control, with support available from all other levels of government. In responding to the terrorist attack on the Pentagon, Arlington County was in charge, with the Virginia Department of Emergency Management,

FEMA, FBI, and other Federal agencies poised to help. Similarly, volunteer organizations, particularly the American Red Cross and Salvation Army, responded to Arlington requests for logistical support.

Medical evacuation helicopter.

Support for the Pentagon response was not limited to the immediate geographic area. (See Figure A-9.) It came from Texas, Ohio, Florida, Georgia, North Carolina, Tennessee, New Mexico, and elsewhere, as the country came together in response to the horrific events of September 11.

Figure A-9. Incident response resources support.

This was a fire and rescue incident within the broader context of a terrorist attack. Coordination and collaboration with the FBI was critical to operational success. This relationship began well before September 11, 2001. When Special Agent Combs was assigned to the FBI WFO NCRS in 1998, his duties included Fire Service Liaison. As a former New York firefighter, Special Agent Combs put in place a proactive liaison program, regularly visiting area fire department leaders and teaching courses at area fire academies on terrorism, weapons of mass destruction (WMD), and roles and responsibilities of the FBI. All of this paid handsome dividends on September 11 and the days that followed.

Dr. Marcella Fierro, Chief Medical Examiner for the Commonwealth of Virginia, met with FBI and DoD officials at the JOC on September 12. She informed them that Virginia forensic laboratory and mortuary resources were prepared to go to work in support of the response. The FBI and DoD officials declined the offer, preferring to conduct forensic and mortuary activities at DoD facilities. Dr. Fierro asked for and received a letter from Attorney General Ashcroft relieving the Commonwealth of Virginia of those responsibilities.

The FBI has extensive experience in, and is responsible for, collecting evidence and investigating terrorist acts. It also has extensive experience in crime scene mortuary operations. Under the leadership of FBI Special Agent Tara Bloesch, a temporary morgue was established in the loading dock area of the North Parking Lot. Remains were photographed, labeled, and prepared for transport to Dover Air Force Base (AFB) in Delaware for forensic testing, identification, and processing for burial.

The DoD, a major Arlington County constituent, was the target of the terrorist attack. Understandably, it might have followed its military instincts to seize control of the battle and protect its people and property. Instead, the MDW fully cooperated with the ACFD Incident Command and provided valuable resources. This contributed significantly to the positive outcome of the incident response described throughout this report.

Mutual-aid agreements and other emergency support programs were put in place over the years to help communities protect themselves and each other from the ravages of fire. They have stood the test of time. In this instance, mutual-aid agreements, neighboring jurisdictions, and support from Federal and State programs were essential to the successful ACFD response.

Findings

Most mutual-support arrangements worked well. Units from other Virginia jurisdictions supported the firefight and also provided fill-in units for the 10 ACFD fire stations. The ACFD provided a driver or navigator for each of the fill-in units. Some private ambulance companies also served in a backfill role for mutual-aid units in other jurisdictions already committed to support Arlington County. Because of the Northern Virginia mutual-aid participants, the citizens of Arlington County and other Northern Virginia jurisdictions did not experience a break in emergency support services.

The Alexandria TRT was fully integrated with that of the ACFD, forming a unit of almost 60 personnel who worked in conjunction with the deployed US&R teams at the Pentagon. The Fairfax County Fire and Rescue Department was instrumental in organizing and managing the logistics support for the operation (See Section 6, Logistics), and the FCPD loaned the ACFD its command bus for use at the forward operations. MWAA provided a mobile command bus to support the ICS Logistics Section.

The initial staging of units, as correctly directed by the Arlington ECC based on the “run card” they had, did not consider the provisions of the NVRA. Had it done so, more Alexandria units would have been engaged at the Pentagon. Instead, Alexandria, with equipment located only minutes away, provided rotating busloads of replacement personnel while apparatus from more distant jurisdictions worked onsite.

When Ronald Reagan Washington National Airport lost visibility due to the smoke rising from the Pentagon, USPP helicopter Eagle I assumed responsibility for air traffic control at the incident site. This temporarily left Eagle II as the only available medical evacuation helicopter onsite. When Eagle II departed the Pentagon carrying two severely burned victims, a DC Metropolitan Police Department helicopter assumed responsibility for air space control, replaced Eagle I, and freed it to resume its medical evacuation mission.

The DCFD has very special requirements; it is responsible for a large, densely populated area that is home to the White House, the U.S. Congress, the Supreme Court, the National Archives, every Cabinet-level agency, almost all our national monuments, and countless national treasures and artifacts. Nevertheless, supported jurisdictions rely on the unconditional compliance of mutual-aid partners when called upon for support. Many responders felt mutual-aid support from the DCFD was deficient in two areas:

- First, they deployed directly to the Pentagon, ignoring instructions to stage in the District of Columbia, and did so with more equipment than was requested.

- Second, the consensus of those on the ground is the DCFD retained a degree of independence detrimental to good order and discipline within the ICS structure.

The current mutual-aid arrangements do not constitute a truly comprehensive approach to emergency response across the region. The Potomac River is a jurisdictional boundary, not a geographic barrier substantial enough to contain a massive emergency event to only one side of the river, particularly a terrorist act involving WMD.

In the case of EMS, resources were plentiful, particularly in relation to the low number of surviving victims requiring care. Mutual-aid partners provided all the support requested by Arlington County. The fact that the terrorist attack struck a large military facility ensured the availability of military doctors, nurses, and first aid responders. The medical treatment capability assembled at the incident site within the first few hours exceeded the requirement. Had the airliner struck from a different direction into one or more fully populated Pentagon Wedges, the situation might have been far more challenging and catastrophic.

In addition to the mutual-aid providers requested by Arlington County, other EMS units self-dispatched directly to the incident site. Several private ambulance units also responded on their own initiative, depleting regional contract transport services in an already taxed 9-1-1 system.

Arlington County and other jurisdictions do not have access to a readily deployable cache of mass casualty supplies. EMS units carry a limited amount of medical treatment supplies. As a result, medical supplies were taken from several EMS units to stock treatment sectors, leaving these units ill-equipped to transport patients.

The NMRT, which was used in a HazMat monitoring and decontamination role, not a medical treatment role, brought with it additional medical supplies and equipment. These supplies were appropriated and used by military medical responders.

Arlington County government agencies pulled together to support the ACFD throughout operations. The usual bureaucratic delays disappeared. Procure-

ment actions were expedited. At the urging of Ms. Dodie Gill, Director of Employee Support, the newly hired Risk Manager for Workman's Compensation Insurance set aside the usual red tape. Public works equipment operators passing by regularly gave rides to firefighters entering and exiting the Pentagon. Air-conditioned metro buses were used for short-term rehabilitation. Beginning on September 12, Assistant Manager Bridges and his public affairs staff intervened proactively with the media on behalf of the ACFD.

There was outstanding cooperation among jurisdictions and agencies throughout the operations. Most notable was the relationship with the FBI. From the onset, and at every level, they cooperated in every way possible. The close ties developed prior to this incident were further strengthened and are now manifested in continuing day-to-day working relationships.

Following the Pentagon operations, some responding mutual-aid jurisdictions experienced difficulty getting reimbursed for their costs. Delays stemmed from concerns on the part of FEMA regarding the mutual-aid pacts between those jurisdictions and Arlington County.

There were several incidents in which equipment belonging to the ACFD and some other jurisdictions, including high-end items such as SCBA, reportedly was misappropriated at the incident site. A certain amount of equipment exchange is expected during multijurisdictional operations, and is routinely sorted afterward; but, in this instance, it was reported that this went well beyond normal.

The Arlington County American Red Cross Chapter, a member of the EOC Shelter Task Group, coordinated support from the American Red Cross. At the time of the terrorist attack on the Pentagon, the chapter had 80 trained volunteers. Its own mutual-aid arrangements with other chapters and support from national headquarters produced nearly 1,500 support volunteers in a role much broader than the American Red Cross envisioned. Much of the American Red Cross effort was providing logistics support to the response force, as opposed to the victims.

The restraint shown by military leadership was admirable. Instead of seizing control of the situation to protect Pentagon personnel and property, it deferred appropriately to the ACFD Incident Commander. General Jackson, Commanding General of the MDW, served as a principal source for critical personnel and other resources. He was also the point of contact between the Incident Command and Pentagon leadership. This proved invaluable. He ensured the military leaders were fully aware of the status of the fire and rescue activities at all times, thereby diminishing their consideration of interceding in the situation.

American Red Cross service unit.

Fire and rescue personnel from the ACFD and elsewhere drew constant inspiration from the actions of the young soldiers of Fort Myer's Old Guard, the U.S. Army 3rd Infantry Regiment. In every debriefing, someone expressed admiration for their discipline, teamwork, and willingness to tackle the most difficult, laborious, and onerous tasks. ACFD firefighters retain lasting images of the convoy of commissary shopping carts being pushed down Washington Boulevard from Fort Myer carrying refreshments and other comfort items; of the private tent where military chaplains comforted the families of missing loved ones; of wounded victims helping firefighters save others; of lines of soldiers passing debris from person to person, slowly but steadily removing tons of rubble from the Pentagon; and, the image that will never fade, of soldiers under direction of the FBI reverently removing from the rubble the bodies and body parts of fallen victims.

The outpouring of support from the residents of Arlington County was another source of strength for the firefighters. Neighbors showed up at fire stations, cooked and served dinner, then stayed to clean up. The 9-1-1 calls were less than usual, and sometimes apologetic in tone, as callers seemed hesitant to add further to the fire department's burden. One medical unit reported a late-night neighborhood call that required transporting a resident to Virginia Hospital Center - Arlington. As the ambulance backed out of the driveway and headed toward the hospital, neighbors throughout the block stood on their doorsteps cheering and applauding. Such manifestations of community respect and appreciation are a firefighter's greatest reward.

Recommendations and Lessons Learned

Institute a process for reviewing all current mutual-aid agreements against the experience of the Pentagon attack and possible future incidents and revise them to incorporate findings, minimize future misunderstandings, and increase the area's overall preparedness. (FD-061)

Once executed, responding jurisdictions must strictly adhere to the terms of mutual-aid agreements. These agreements should clearly address command relationships to which both parties agree in advance. (FD-062)

Additionally, mutual-aid agreements should be reviewed with the Virginia Department of Emergency Management and FEMA to ensure responding jurisdictions will be reimbursed in a reasonable fashion. (FD-063)

The ACFD should take the lead in putting in place a regionwide mutual-aid pact that includes all neighboring jurisdictions including the DCFD. The NVRA is a reasonable model to replicate from a total regional perspective. Currently, there are legal constraints that prohibit such a relationship embracing jurisdictions in Northern Virginia, Maryland, and the District of Columbia. The Washington Metropolitan Area Council of Governments should continue its efforts to convince the U.S. Congress to remedy this situation. (FD-064)

It is critical that response units from other locations coordinate with the host jurisdiction dispatch center before deploying to an incident site. A lack of coordination with Arlington County added to the confusion present in the wake of a terrorist attack. Upon arrival, they should immediately report to staging areas for instructions. (FD-065)

Memorandums of agreement with private ambulance services should be established and stipulate that they report only to designated staging areas and strictly adhere to the Incident Command directives. (FD-066)

A readily deployable regional cache of mass casualty medical supplies should be acquired to eliminate the need to strip transport units of patient care supplies. MWAA's SERV-301 serves in this capacity, but it is limited and may not always be available. There needs to be a more robust regional capability. (FD-067)

Joint training and exercise programs should be developed and institutionalized to regularly test mutual-aid arrangements. (FD-068)

Arlington County should review the expanded role of the American Red Cross and ensure the local chapter is properly represented at the EOC. (FD-069)

Local responders should develop relations with other organizations, as was done during the Pentagon response between the ACFD and MDW. (FD-070)

SECTION 6: LOGISTICS

Observations

Logistics is the complex, nitty-gritty business of equipping, supplying, and sustaining fire and rescue operations. It includes providing the daily needs of engaged responders—clothing, shelter, food, health, rest and recuperation, and sanitation—as well as maintaining, repairing, replacing, and refueling equipment and replenishing consumables. Logistics is not a glamorous business; it is working the details. Requirements must be forecast and items procured, delivered, stored, and made available when needed. It incorporates acquisition, shipping, warehousing, inventory control, transportation, and a myriad of other functions. The success of large-scale operations is often determined by the adequacy of the logistical support.

After transferring EMS Control to Battalion Chief Bonzano, Chief Schwartz assigned Chief White the task of organizing logistics support. Chief Schwartz told him to prepare for 10 days of operations. His charge was succinct: "Whatever they need, you get it." Chief White toured the Pentagon's South Parking Lot and chose a site he thought was large enough to serve as the logistics staging area. (See Figure A-10.) He also met with representatives from the American Red Cross and Salvation Army, already on the scene. They agreed to work together to attend to the personal needs of the responders. The American Red Cross also offered Chief White the use of the District of Columbia Chapter's Winnebago to serve as the initial logistics command post.

At the time of the terrorist attack on the Pentagon, the ACFD did not have a logistics officer position or staff function. Captain Lewis Cooper, ACFD A&E Officer, arrived at the Pentagon about 11:00 a.m., after getting two vehicles out of maintenance and a new ambulance into service. His initial concern as A&E Officer was maintaining and refueling all the apparatus arriving onsite and meeting the immediate equipment needs of the firefighters. Around 1:00 p.m., Chief White alerted Captain Cooper that he would be transitioning into the logistics role and should begin thinking about requirements. Later that day, Captain Cooper contacted Mr. Ric Hiller of the Arlington County Office of Support Services and arranged for Mr. Mark Eskridge from the Department of Environmental Services to take charge of the refueling operations onsite. He also asked the Department of Public Works Equipment Division to assign two mechanics to the fire ground around the clock.

By evening on September 11, one of the immediate logistics concerns was obtaining flashlights and batteries. The ACFD and many other jurisdictions were relying exclusively on rechargeable flashlights, with battery power generally good for about 6 hours; it then takes 6 hours to recharge them. This works well under normal conditions, even for a three-alarm fire, but the Pentagon situation was anything but normal. At about 9:50 p.m., 10 minutes before closing time, Captain Cooper contacted the manager of a local Home Depot by cellular telephone and explained the problem. Within 2 hours, a truck arrived with every flashlight and battery Home Depot had in stock.

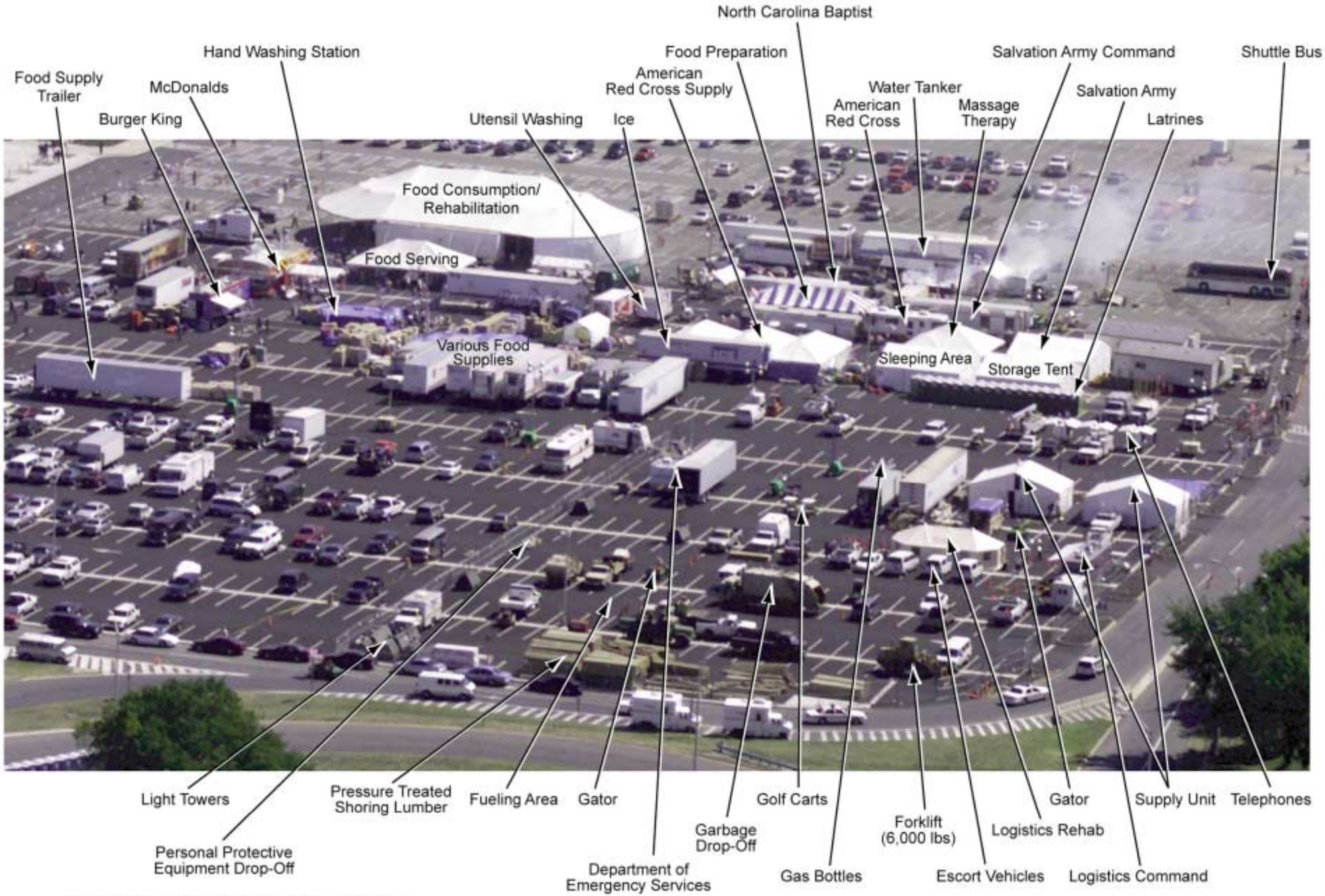


Figure A-10. Pentagon logistics support area.

Knowing the Fairfax County Fire and Rescue Department logistics staff had extensive experience in long-term operations in support of its US&R team, Chief White asked them for assistance. The Fairfax County Fire and Rescue Department had previously provided on-site logistics support to the Fairfax US&R team after the Oklahoma City bombing and during overseas deployments to Turkey, the Philippines, and Africa. Captain Dean Cox, the Fairfax County Fire and Rescue Department Logistics Officer, arrived at the Pentagon on the evening of September 12. He observed the ACFD doing a great job with initial supply requests but they had no experience with the scale of the logistics effort that would confront them during the long haul. He and his team went to work. They literally taught the ACFD how to organize, staff up, and manage long-haul logistics functions, including recording all transactions and preparing the necessary paperwork for future reimbursement by FEMA. The Fairfax County Fire and Rescue Department continued helping throughout the fire and rescue operations, then stayed to support the FBI's criminal investigation.

Logistical support came from many sources and directions. On September 11, the Arlington County EOC arranged for ARAMARK, the food services contractor that supports the county detention facilities, to prepare up to 3,000 meals per day. The volume of contracted food services was significantly reduced as the abundance of other sources grew. On September 12, the North Carolina Baptist Disaster Men's Relief unit, working under the American Red Cross, arrived on the scene and announced that, by dinnertime, all feeding requirements would be met. Their dining services offered a complete range of menu choices and functioned day and night during operations. Over the course of several days, Outback Steakhouse, Burger King, and McDonald's also set up operations onsite as part of the American Red Cross disaster relief mass care support mission under Federal Response Plan Emergency Support Function #6. These American Red Cross-coordinated organizations prepared and fed 187,941 meals at the Pentagon.

Dining facilities.

In addition to feeding the response force, the Arlington Chapter of the American Red Cross, supported by the national headquarters, provided health support and counseling to 15,685 victims, their families, and responders. A total of 1,458 American Red Cross volunteers worked onsite and at local hotels and airports where families and friends of victims and missing workers gathered.

Captain Cooper also asked Arlington County Public Schools for help. They sent Mr. Larry Callan, their electrician. Mr. Callan, one of the unsung heroes of September 11, worked virtually nonstop, stringing lights through the dense smoke so firefighters could search for bodies. He received his reward when the U.S. Air Force sent a convoy of huge generators from Andrews AFB. When no one else knew how to operate these mammoth items, they turned to Mr. Callan. Such a challenge is a school electrician's dream!

The refueling operation was enormous. At its peak, there were more than 500 items that needed regular refueling—fire and rescue vehicles, generators, light towers, cooking stoves, heaters, golf carts and Gators®, and many more. This required truckloads of diesel fuel, gasoline, kerosene, and liquid propane (LP) gas. In the first 24 hours alone, approximately 600 gallons of diesel fuel and gasoline were consumed. Similarly, the resupply activity was enormous. Twelve tractor-trailer loads of lumber for shoring operations, more than 5,000 pairs of gloves, thousands of Tyvek® suits, hundreds of respirators, SCBA, and air bottles were delivered and distributed. Three different vendors serviced more than 100 portable toilets twice daily. All the volunteers and organizations that participated in or supported the fire and rescue operations also needed logistical support. The FBI needed Bobcats® and other heavy equipment; the military needed plastic boxes to safeguard remains and personal effects; and the American Red Cross and Salvation Army needed water, lights, and fuel for cooking stoves.

Local retailers, building suppliers, and companies specializing in firefighting equipment showed up offering to help. Home Depot assigned a senior manager to work onsite at the Pentagon, personally coordinating support as requirements for building materials, equipment, and supplies were generated. Costco delivered a tractor-trailer loaded with ice and cold beverages. Soldiers from Fort Myer organized a convoy of shopping carts filled with supplies from the Post Exchange and the Commissary. Cingular Communications gave away hundreds of cellular telephones to firefighters so they could call loved ones. Verizon also set up a bank of telephones for that purpose. The Firefighters Equipment Manufacturers Association provided direct liaison with its members to expedite shipment of replacement boots and other items.

The John Deere Corporation shipped 12 Gator® all-terrain vehicles from its Virginia manufacturing facility. They literally stopped regular production and built the specialized Gators® for Arlington County. They arrived emblazoned with American flags and a banner signed by each of their assembly line workers. The Gators® were invaluable, supporting the command section, EMS, US&R, the

logistics operation, and many others. When fire and rescue efforts ended, John Deere offered the Gators® to Arlington County for the cost of building them.

John Deere Gator®.

The standard purchasing sequence began when a request arrived at the logistics center. Once approved, it was documented, sent to the Arlington County Resource Management Emergency Task Group (ETG), and the order was placed. When equipment or supplies arrived at the Pentagon North loading dock or the Fern Street receiving area, a member of the logistics staff escorted them to the ordering organization.

Captain Cooper, or one of his two supply officers, Firefighter George Swett (ACFD) and Master Technician Dallas Slemp (Fairfax County Fire and Rescue Department), ordered particularly technical items directly from vendors, then sent a copy of the purchase order to Arlington County. For example, there was an immediate need for 1,200 feet of replacement firehose for hose damaged by vehicle traffic at the Pentagon. Armed with an understanding of the exact specifications, Captain Cooper called Neidner Hose Company in Canada, which was able to reprioritize and ship it overnight.

Ms. Dodie Gill, Director of Employee Support, is responsible for providing critical incident stress management (CISM) services to Arlington County employees. Ms. Gill and her staff were onsite at the Pentagon within 3 hours of the attack offering psychological support and counseling to firefighters and other first responders. She arranged for seated therapeutic massages and chiropractic services that were available during short on-site breaks. She helped first responders contact family members away from the incident site to allay their

concerns. CISM support included visits to firefighters who were treated at area hospitals for dehydration and exhaustion. Ms. Gill helped setup the demobilization site at Thomas Jefferson Middle School. She and her staff met with school and county department staff and provided group debriefings and educational programs. Followup counseling continued for weeks after the incident.

The ACFD leadership has long recognized the value of Arlington County's Employee Assistance Program (EAP) and encouraged its use by firefighters. When the Arlington County EAP was merged with the school system's internal EAP in 1999, developing a comprehensive CISM program for the fire department became a high priority. ACFD managers received advanced CISM training. Mock CIS debriefings were staged once a month. Union relations, substance abuse, diversity issues, sexual harassment, and stress management issues were addressed. The Pentagon incident response clearly shows the benefits of a well-designed CISM program that reflects a true partnership between the ACFD leadership and the EAP staff.

Findings

The ACFD was not well-prepared logistically for a long-term operation. Without a day-to-day logistics function and a centralized supply and storage system, the ACFD staff had little relevant experience in the logistics business as it unfolded on September 11.

The Fairfax County Fire and Rescue Department assisted the ACFD in establishing a logistics function for the long haul, including recording all transactions and preparing required paperwork for future reimbursement by FEMA.

As is the case with almost all fire departments, the ACFD does not maintain sufficient equipment and supplies to engage its entire workforce in an expanded operation such as the one that began on September 11. Its stock levels permit fire and rescue operations engaging the on-duty shift, but not the simultaneous commitment of all three shifts and fully equipped reserve apparatus.

By the time the Logistics Section was fully functional on the morning of September 12, more than 100 purchase requests had already gone directly from operating units to the Resource Management ETG at the EOC, or directly to vendors. This was not surprising since supply requests do not usually go through an ACFD logistics office. However, reconciling invoices from vendors with purchase requests weeks after recovering from an incident is almost impossible.

The EMS response to the Pentagon attack was not severely challenged regarding resources, staffing, or logistics. However, there were instances when pharma-ceuticals and other items were in short supply. For example, EMS providers needed more oxygen cylinders and multilator supply systems, and additional

wheeled gurneys. Had the estimated number of casualties reported by the media actually materialized, the situation would have been dramatically different. EMS units are not routinely stocked to treat mass casualties. They carry limited medical supplies. At present, there are no provisions for a readily available regional source of medical supplies. Fortunately, Virginia Hospital Center - Arlington offered access to its supplies to replenish EMS transport units and medical evacuation helicopters from the USPP, and Inova Fairfax Hospital flew medical supplies to the incident site.

Most vendors performed in extraordinary fashion in support of the ACFD. However, in some instances, trucks arrived carrying materials that had not been ordered but the shipper thought "might be useful." Occasionally, vendors increased the number of items ordered, anticipating future requirements. Six months later, the ACFD was still negotiating the return of unused goods with some vendors.

Communications between the Logistics Center and DPS security guards at the receiving stations were not good. Sometimes, critical shoring materials, fuel resupply trucks, LP gas deliveries, laundry service, and other important deliveries were turned back or put into a queue with normal Pentagon delivery vehicles. The Logistics Center instructed vendors to notify them once their delivery truck was 5 minutes from the Pentagon so one of three standby vehicles could be dispatched to escort them.

All ACFD equipment functioned effectively. The thermal imagers were especially useful. However, reserve apparatus do not carry all the equipment necessary to be fully functional. Reserve vehicles went from station to station scrounging equipment so they could be placed in service. Without equipment, reserve fire and rescue vehicles are of little value except as additional means of transportation.

Stock levels of critical items, such as air bottles, breathing apparatus, radios, radio batteries, and battery chargers were inadequate. Standby contracts were not in place with sufficient suppliers to meet anticipated surge requirements. Contracts existed with current suppliers but, when requirements exceeded their capabilities, additional contracts had to be negotiated with other vendors.

Relief personnel often arrived at the Pentagon from the staging area without all their equipment. Often, the first instructions at the Pentagon were to "go find a Scott," or SCBA, which were often taken from other firefighters coming out of the Pentagon, many of whom were reluctant to surrender them.

SCBA incompatibility among various jurisdictions makes mutual support difficult. The Fort Myer Fire Department used Interspiro facepieces and regulators. Alexandria used Mine Safety Appliances (MSA) facepieces. (Alexandria has subsequently ordered Scott.) The ACFD and others used Scott.

Although a portable air resupply unit was on the scene, firefighters spent a great deal of time hunting for air replenishment sources. The distances firefighters

had to travel from the point of entry to the fire attack location made air management particularly important, turning the supply on and off to conserve air during search and rescue operations. This limitation of readily available air supplies forced firefighters to make decisions on air use that probably put them at increased health risk.

The ACFD mobile resupply vehicle (Service 144) was not stocked with adequate spare parts and replacements for high-demand items, such as radios, radio batteries and battery chargers, lights, air bottles, facepieces, and extra PPE (which was often lost during building evacuations).

Special sites and critical structures frequently require special equipment, as did the Pentagon on September 11. Access along A-E Drive to the Center Courtyard was constrained by building overpasses. To provide a ladder truck to the Center Courtyard, its tiller cab had to be cut off. Additionally, the distances in and around the Pentagon would have been better served if there had been more conveyances such as golf carts and Gators® available earlier. Fire engines and other emergency vehicles were often used simply to move individuals around the incident site.

Transportation was not well-planned or managed during the operational lifecycle. As a result, firefighters often resorted to their own ingenuity to get from home station to staging areas, from staging areas to the incident site, from the incident site to extended rehabilitation, and from rehabilitation back to home station. The Washington Metropolitan Area Transit Authority (WMATA) provided two metro buses with drivers, available 24 hours a day to the ACFD. Bus stops were designated and a schedule announced to transport firefighters between the Pentagon, home stations, the Thomas Jefferson rehabilitation center, and other locations. Metro buses sometimes performed in unintended fashion. Whenever a firefighter showed up, the bus driver would ask where he wanted to go and then depart, often with only one passenger. Additionally, the buses were sometimes diverted for unintended purposes. Buses dispatched to the Arlington County Fire Training Academy were subsequently commandeered for other purposes and not available again for hours.

Initially, logistics support was not readily accessible to the Center Courtyard; firefighters at that location had to fend for themselves for food and other items.

The NMRT functioned effectively in a HazMat monitoring and decontamination role, not a medical treatment role, but brought with it extensive medical supplies and equipment. The NMRT's cache of medical supplies was used to supplement the supplies of military medical responders. However, because the NMRT was initially activated by a local jurisdiction, rather than as a result of a national disaster declaration, the Department of Health and Human Services (HHS) later refused to immediately replenish their depleted stocks. A formal request to activate the NMRT as a Federal resource was submitted late on September 12, which resolved the issue. Conversely, without a request from Arlington County

or elsewhere, the National Pharmaceutical Stockpile of medical supplies arrived unannounced at Andrews AFB, directed as a precaution by the HHS.

It is standard practice for equipment to be moved from one vehicle to another during multijurisdictional fire and rescue operations, with proper ownership sorted afterward. The lack of adequate equipment markings and a tracking system contributed to the loss of a great deal of personal gear and apparatus equipment during the Pentagon operations.

The CISM support provided by Ms. Gill and the EAP staff was outstanding. Short-term rehabilitation at the incident site worked very well. There, firefighters could rest, rehydrate, and recycle back to work. Counseling, chiropractic, and therapeutic massage services were available, as well as assistance in personal and family matters.

However, the rehabilitation organized at the Thomas Jefferson Community Center was probably implemented too soon and not completely thought out. Initially, Arlington County established the Thomas Jefferson Community Center as an emergency shelter for stranded citizens and deploying US&R teams. It had overnight sleeping accommodations, food and drink, medical monitoring, and CISM support. As the requirement for sheltering did not materialize, the county decided to use the facility as a rehabilitation center for first responders. Firefighters would be bused to the community center where they would meet with CISM staff, get food and beverages, and receive medical attention as needed. They would then be transported to home stations. By replacing on-site rehabilitation with the services at the community center, firefighters would be encouraged to leave the incident site to get adequate recuperative care.

This plan fell somewhat short in its execution, probably because it was hastily devised and not fully understood by the firefighters. Hot showers were available, but clean clothes were not; nor was transportation offered from Thomas Jefferson Community Center back to home stations. At the end of the first day, firefighters coming off shift wanted to go directly home (or at least to their home station), clean up, and rest. As a result, rehabilitation was not well used at the community center and it was closed after the first night.

The logistics accomplishments of the ACFD team were outstanding. In the eyes of many responders, the logistics staff members were equally as heroic as their more visible colleagues attacking the Pentagon fire. With the help of their colleagues from the Fairfax County Fire and Rescue Department, they built a team of 20 who worked around the clock to create and manage a system that did not previously exist. If asked, Captain Cooper would likely name Firefighter Matt Herrera as his hero. Firefighter Herrera represented Captain Cooper in meetings and back-briefed him. He let no logistics task go undone, whether assigned or unassigned. Firefighter Herrera and his colleagues were heralded at the debriefings time and again by colleagues who stated with admiration: “Anything we asked for, we got. We didn’t know where it came from, or who got it, but it showed up.”

Recommendations and Lessons Learned

The ACFD needs a full-time logistics officer and staff as well as sufficient central warehousing capacity to meet the requirements of day-to-day business and to plan for and support large-scale operations. Department requests for equipment, supplies, and materials should be regularly routed through logistics before going to the Arlington County Purchasing Office. If these procedures are followed routinely, they will also be practiced during extended operations. (FD-071)

A plan should be implemented for engaging fire and rescue logistics personnel from throughout the region in regular training and information exchanges so they are better prepared for operations of severe magnitude and extended duration. Training should include detailed recordkeeping and documentation to support post-incident reimbursement. The Virginia Public Assistance Office offers a training course in "Disaster Cost Capture." The ACFD was fortunate to have the Fairfax County Fire and Rescue Department available to help them learn on the spot. Others might not be so fortunate. (FD-072)

A cadre of experienced fire department logisticians from throughout the Washington Metropolitan Area should be formed into a regional logistics resource team. Such a team could augment the logistics staff of the responsible jurisdiction in a large and protracted incident. (FD-073)

Equipment and critical supplies should be on hand to support major operations of extended duration. A proper level of PPE and capabilities for sustainment should be acquired for all personnel requested to respond to an incident. (FD-074)

Staffing for the ACFD's Cherrydale Light and Air Unit and the mobile equipment repair and resupply vehicle (Service 144) needs to be studied. These vehicles should carry extra quantities of PPE and critical items such as SCBA, facepieces, air bottles, lights, batteries, and radio battery chargers. (FD-075)

Stock levels for critical items should be reviewed against parameters that include extended operations. Sufficient days of supplies should be on hand to guarantee adequate quantities of material until normal replenishment is achieved. Contracts should be negotiated in advance with current and alternative vendors to ensure priority processing and shipping during operational emergencies. (FD-076)

The ACFD EMS should evaluate the level of supplies carried by EMS units as well as the availability of mass casualty supplies, including oxygen cylinders and multilators, that would be readily deployable. (FD-077)

Site access rules for support vendors must be established early and clearly communicated to all parties. The security staff is charged with minimizing risk by prohibiting the entry of unauthorized personnel. The logistics staff is charged with ensuring the timely delivery of equipment and supplies to the response force. These should never be viewed as competing requirements. (FD-078)

Redundant expertise with equipment and power sources should be planned for so that more than one individual shoulders the responsibility for critical logistic functions, such as lighting. (FD-079)

Reserve apparatus should be outfitted with all the equipment needed to perform expanded operations. Centralized warehousing is needed to store and safeguard reserve equipment when it is not in service. (FD-080)

Procedures for post-incident reconciliation of vendor invoices with purchase requests need to be streamlined and improved wherever possible to accommodate the pressure and chaos accompanying a terrorist incident. (FD-081)

Arrangements should be made with key suppliers to return unused items or acquire them at reduced cost. (FD-082)

Clarification should be sought regarding the resupply of depleted NMRT stocks when those units are activated by a local jurisdiction. The Washington Metropolitan Area is fortunate to have such resources close at hand. Local jurisdictions should be able to employ them when dire circumstances arise but, without timely replacement of NMRT stocks, future missions are jeopardized. Similarly, procedures for deploying the National Pharmaceutical Stockpile should be explored. Nothing should be deployed into a target area that is not coordinated with responsible local officials. (FD-083)

Other jurisdictions throughout the country would do well to emulate the Arlington County EAP model. (FD-084)

Based on the Pentagon experience, a comprehensive support and assistance plan for firefighters and their families should be formalized. It should include on-site support, including rest, therapeutic massage, counseling, family aid, extended rehabilitation, and arrangements for overnight accommodations for fire and rescue personnel, particularly those who reside outside the county. Such a plan could serve as a model for other major metropolitan areas around the country. (FD-085)

The Pentagon is a unique facility within Arlington County and remains a viable terrorist target. With the experience of the September 11 attack, the ACFD should produce a plan for similar long-term events at the Pentagon. Additionally, other Arlington County facilities that might present unusual or difficult circumstances should be surveyed so that, where appropriate, an emergency operations plan can be put in place for each. Special logistical and equipment needs should be identified and provided in advance. (FD-086)

A logistics annex should be prepared as part of a large-scale operations plan. It should designate locations, qualified in advance for various logistics functions, including dining, extended rehabilitation, equipment repair, and maintenance. It should also include a plan to transport firefighters between locations. (FD-087)

SECTION 7: SITE SAFETY, SECURITY, AND PERSONNEL ACCOUNTABILITY

Observations

Firefighting is a risk-filled occupation. Every fire scene is dangerous. Smoke, flames, structural collapse and hazardous fumes, often in combination, confront the courageous men and women of the country's fire and rescue community. They, in turn, rely on good training, special equipment, and each other for their personal well-being. Such is the nature of the business. On September 11, the men and women of the ACFD and their colleagues from supporting jurisdictions encountered a situation at the Pentagon unprecedented in potential danger. This was an overt terrorist attack; the third in a series of such attacks, all launched within an hour, in which hijacked commercial airliners became terrorist weapons. Emergency responders could only anticipate additional attacks.

The Pentagon is not only massive and unique in design, there is also an air of mystery about it. It is a 60-year-old structure of steel, concrete, and other building materials. Emergency responders had good reason for concern; the demolition and abatement of Wedge One during renovation had generated 332 million pounds of debris and 115 million pounds of HazMat. The impact area of American Airlines Flight #77 included part of the newly renovated Wedge One and part of the adjacent and unrenovated Wedge Two.

The Pentagon is the heart of our national defense establishment and cannot be interrupted or shutdown. It houses countless ongoing classified activities and is the hub of exotic communications systems. Some elements in the Pentagon, specifically our Nation's Military Command Center, operated throughout the emergency on September 11, even as the fire raged on the other side of the building. On that evening, the Secretary of Defense announced that the Pentagon would be open for business the next day. This announcement placed additional burdens on the ACFD response force and the FBI Evidence Recovery Team.

It is difficult to imagine how the circumstances could have been more challenging than those prevailing in the first few hours after the attack. Thousands of Pentagon workers attempted to flee the site while hundreds more tried to help trapped colleagues. Drivers and passengers abandoned cars on the traffic-jammed highways surrounding the Pentagon. By mid-afternoon, the total response force onsite had grown to about 3,000 people, military and civilian, professionals and volunteers, representing every level of government jurisdiction. Controlling movement throughout the area was difficult.

Findings

In the first frantic hours of the incident, safety was left largely in the hands of the supervising tactical officers. Initially, circumstances were such that it was virtually impossible to completely control movement throughout the area, or

even know who was where among the growing response force at any given point in time. Fortunately, safety has long been high priority in the ACFD and the other local jurisdictions. Captain Swarthout, the ACFD Safety Officer, had nearly 30 years of experience in the department. He also had well-established working relationships with his Northern Virginia and District of Columbia counterparts. To come away from such an operation without a single fatality or serious injury is not an outcome many would have predicted. It is testimony to the training, discipline, and competence of the response force and those who led it.

The activities of the Incident Command Operations Section and the Fire Suppression Branch located at the Pentagon heliport closest to the point of impact served as a virtual magnet, drawing both workers and bystanders, many without PPE. An ACFD fire marshal, with the help of a DPS officer, roped off the area to restrict access and attempt to preserve the limited workspace for those needing it. ACFD fire marshals are empowered with full law enforcement authority.

Numerous issues impacted site safety and security. At about 9:55 a.m. on September 11, Captain Gibbs, commanding the River Division, was directing the search and rescue efforts of ACFD and Fort Myer firefighters when he observed what appeared to be a slight structural movement at the initial impact area. He ordered everyone out of the building. Within minutes, the upper floors collapsed onto those below. Captain Gibbs' quick and decisive action prevented serious injuries to firefighters in a part of the impact area where there were no surviving victims.

The renovations completed in Wedge One had some important safety implications. The newly renovated space had fewer than the usual occupants. The process of moving about 5,000 workers into Wedge One from Wedge Two would not be completed until October when renovation of Wedge Two would begin. As a result, fewer occupants than usual were at risk on September 11. Additionally, when fire and rescue responders entered the renovated area, even those personnel generally familiar with the Pentagon found themselves in a very different facility, physically and structurally.

Pentagon staff were able to freely enter the Center Courtyard from corridors on the north and east sides of the building. By the time Battalion Chief Smith arrived at the courtyard with his force of ACFD and DCFD responders, a crowd estimated to be 300 to 400 strong had gathered in the 5-acre space. When Battalion Chief Smith heard the first evacuation signal caused by the threat of incoming unidentified aircraft, he realized that circumstances and location made evacuation problematic. Even if that were not the case, the sight of fleeing rescuers would only add to the trauma already experienced by the crowd in the Center Courtyard. He chose not to evacuate.

There were numerous incidents of people moving throughout the area without proper PPE and safety equipment. One busload of Alexandria firefighters arrived without SCBA and attempted to borrow spares from a Fairfax County unit already

onsite. When that was unsuccessful, they proceeded to enter the Pentagon and join the ongoing firefight.

The preferred sequence of search and rescue operations is to shore up one area, search for survivors, clear it of debris, and move to the next area. At the Pentagon, there were many instances of firefighters breaching areas not yet shored up.

Shored up area of Pentagon.

On September 13, Captain Swarthout began holding daily safety meetings attended by representatives of more than 20 organizations. The meetings covered such topics as minimum acceptable levels of personal protection (Tyvek® and respirator), decontamination procedures, personnel accountability, and prohibitions against dangerous practices, such as refueling generators and vehicles while motors are running.

VIP visitors sometimes presented an unnecessary risk. In one case, a senior government official, who happened to be pregnant and wearing high heels, was escorted around the site. Other senior officials, including Major General Jackson and County Manager Carlee, set the example by fully complying with the rules for minimum protective clothing and equipment.

Beginning very early during the fire and rescue response, building occupants began requesting that items be retrieved from Pentagon offices. Some requests

were based on valid reasons of national security. The impact area included both the Navy operations center and the office complex of the National Guard and Army Reserve. It was also the end of the fiscal year and important budget information was in the damaged area. A few building occupants wanted only to retrieve personal effects. A process was established to review every request at the JOC. The Incident Command representative considered the office location from the perspective of structural integrity and safety. If approved, the retrieval would be scheduled for the next work shift. This process demonstrated the value and feasibility of effective coordination between the Incident Command and the JOC.

This was not initially treated as a HazMat emergency. In retrospect, early deployment of one or more HazMat teams might have been in order. If this had been a simple incident of a ruptured aircraft wing spewing jet fuel, a HazMat presence would have been immediate. The combination of the aircraft explosion and fire in a 60-year-old structure certainly presented dangerous and unhealthy conditions.

Air monitoring and decontamination operations began shortly after arrival of the first NMRT Task Force, which set up three medical tents and three decontamination corridors. Additionally, Fairfax County responders were sent to Fairfax County Fire and Rescue Department Station 8 for technical equipment decontamination, medical assessment, and CISM. However, not everyone went through the decontamination process. For example, it was reported that some members of the military pressed into service to aid the FBI in body recovery and debris removal did not go through the decontamination process.

Air monitoring readings were taken by several organizations including the EPA, Federal and State occupational health and safety agencies, NMRT staff, military HazMat teams, and others. The results were sometimes in conflict. Some officials from environmental and health agencies pressed for a strict policy that would guarantee protection under the most severe conditions, including having all responders operate in Tyvek® suits, regardless of their particular assignment. The Incident Commander adopted safety measures designed to achieve a similar outcome without subjecting everyone to the heat stress of Tyvek® suits. These measures included comprehensive personnel decontamination and requiring that every piece of equipment used by the US&R and TRTs be laundered every night.

Although EMS operational areas were established and recognizable, the medical evacuation helicopter landing zone was not well marked. Adequate safety precautions, such as using cones or barriers to mark boundaries and prevent entry, were not employed.

NMRT decontamination corridor.

During the first 2 days, area security was extremely challenging. Police controlled entrances from major roads and highways, but access was granted liberally to those with some claimed involvement in the fire and rescue effort, or continued work inside the Pentagon. It was presumed that individuals moving around in the area had been cleared to do so by some appropriate authority. That was not always the case. Many were well-intentioned people who simply wanted to help. A few were scavengers hunting for souvenirs. As a result, the incident site was overpopulated, adding significantly to safety concerns and increasing the difficulty of accounting accurately for those actually engaged in rescue operations.

Chief Plaugher recognized the serious potential implications of this problem. Early on September 11, he ordered 2,000 feet of chain-link fence to construct an outer perimeter boundary. (See Figure A-11.)

If security was challenging in the early days, it became more structured and systematic by the third day, and in some aspects, burdensome. Everyone entering the fire ground needed a new color-coded identification badge. Because of the limited computers to create badges and lack of a single database, processing added an additional burden to crew relief. Some teams working onsite often waited more than 2 hours for replacements to get properly badged, adding to an already long workday. Plans to process outgoing teams for badges

before they left the site were not well-received. Changing the badge color the next day was viewed by some as an unneeded additional encumbrance.

Figure A-11. Outer perimeter security fence.

Accounting for all personnel at all times is a critical factor in fire and rescue operations. On an operational site as large and complex as the Pentagon, accountability becomes even more challenging, but no less important. At the team level, the ACFD did an exceptional job. Team leaders kept their personnel together, controlled unit movement, and knew where everyone was, at all times.

Similarly at the sector level, accountability was strictly enforced. No one entered the Pentagon's Corridor 5 without Captain Gibbs or Firefighter Keith Young writing down the name of every individual, and his or her team and team leader. Unfortunately, that was not always the case elsewhere. Other building entrances were often unguarded, with teams and individuals entering on their own. Some teams dropped members off and left them at one work location in the Pentagon, planning to pick them up later. The ACFD and teams from other jurisdictions sometimes picked up "strays" along the way, looking after them until they rejoined their home teams. Occasionally, reports of missing teams were passed through the building.

EMS providers operating in the triage and treatment areas created armbands from triage tape to identify the area to which they were assigned. Providers agreed wearing color-coded armbands helped maintain accountability.

At the Incident Command level, accountability was virtually impossible because of the failure of some units to coordinate their actions with Incident Command.

The repeated building evacuations raised accountability issues. In addition to those responders located in the Center Courtyard, those attacking the fire on the roof were also unable to evacuate. When one of the evacuations was signaled, they ran to the edge of the roof, only to discover that the ladder had been retracted to the truck 77 feet below. Some teams, having experienced the rigors of an earlier evacuation, simply chose to stay in the damaged building, assuming a second strike would hit elsewhere.

Due to the number of "freelance" units and individuals onsite, the current accountability system, relying on individual identification (ID) tags, did not work as designed. Had there been a second terrorist attack or a significant and unexpected building collapse, it would have taken a long time to determine who might have been lost.

Recommendations and Lessons Learned

All responding units, including those that self-dispatch, must report to the Incident Command Staging Officer. Failure to do so reduces management control, increases risk, and severely hinders accountability. (FD-088)

The practicability of the current passport accountability system needs to be studied. The ACFD and other regional jurisdictions should consider developing a completely new badging, clearance, and accountability system. Smart cards, barcode readers, and other technologies available today should eliminate the kind of security, access, and accountability problems experienced at the Pentagon. New ID cards should be uniform throughout the region and it should be mandatory that public safety personnel carry them at all times. Special qualifications and skill certification could be coded on the badge. (FD-089)

Effective physical security procedures must be established as soon as possible to control entry into the area. Law enforcement officials at entry points need specific guidance from the Incident Commander defining who gains entry and their reporting instructions for within the fire ground. (FD-090)

Controls must be established both for the perimeter and in proximity of the fire and rescue operations. Roaming from one area to another should not be allowed. Unauthorized personnel should be escorted from the area. (FD-091)

All entrances into the burning building need to be tightly controlled and occupants should be directed or escorted under supervision to safe areas away from the fire incident site. (FD-092)

In a terrorist-initiated event, HazMat units must deploy and begin air monitoring and decontamination operations immediately so there is no gap prior to the response of other environmental, health, and safety organizations. In an era of WMD, decontamination and air quality monitoring capabilities need to be enhanced in county HazMat units. (FD-093)

WMD incident response plans should accommodate the legitimate requirements to retrieve materials from the incident site. The process put in place by the JOC and the Incident Command is a good model. (FD-094)

First response units must expect and plan on having important visitors during serious and protracted incidents. This is particularly true in the Washington Metropolitan Area. It is the legitimate business of responsible elected and appointed officials to represent the interests of their affected constituents. However, VIPs must be respectful of the circumstances and should not interfere with operational requirements. (FD-095)

Site Safety Officers need to be assigned to every shift with the arrival of the first units onscene. (FD-096)

Full briefings by relevant members of Incident Command should be held for each new shift of replacement firefighters as they relieve their predecessors. (FD-097)

The ACFD should consider how to best use its fire marshals during large-scale operations. Their ascribed law enforcement authority, combined with their knowledge of fire and rescue operations, constitutes an important dimension upon which to capitalize. (FD-098)

Landing zones for helicopters must be identified and secured with clearly marked boundaries to prevent them from becoming a safety hazard for helicopter crews, the patients they transport, and responders or bystanders on the ground. (FD-099)

SECTION 8: PLANNING, TRAINING, AND PREPAREDNESS

"Plans are a combination of experience from past incidents and assumptions about future ones. We now have important new experience with which to replace previous assumptions."

James Schwartz
Assistant Chief for Operations
Arlington County Fire Department

Observations

There is an intrinsic relationship between planning, training, and preparedness. The state of preparedness reflects an organization's ability to perform its intended mission. It is determined by the attributes of assigned resources:

- Have plans been written?
- Are these plans complete and up-to-date?
- Are sufficient numbers of people assigned?
- Are they available?
- Have they been adequately trained?
- Have personnel been trained on the plans?
- Have these plans been exercised?
- Has equipment been acquired?
- Is equipment available and operational?

When deficiencies exist in resource attributes, there can be a corresponding degradation in an organization's preparedness that can only be offset by the extraordinary judgments and actions of individuals. Although there were many heroes at the Pentagon on September 11, heroism is not a commodity that can be purchased and warehoused. Preparedness is a direct function of planning and training.

Ideally, organizational preparedness is regularly and systematically measured. Systems can be designed to facilitate this process, helping leaders manage readiness. An organization's state of preparedness can also be later deduced by analyzing its performance. From this perspective, it is clear that, at the time of the Pentagon attack, the state of preparedness of the ACFD was very high. There were no fatalities or serious injuries among the responders. The fire was contained and controlled relatively quickly. The collapse potential was recognized early and precautions were taken. Individuals from different

organizations were able to work together effectively as ad hoc team members. There are numerous incidents in which ACFD personnel demonstrated uncommon initiative in the absence of guidance from more senior authorities. All these are indicators of a high level of individual training, discipline, and professionalism.

Many organizations, including some fire and rescue departments, find it difficult to accept change. Updating equipment is one thing, but fundamental operational change is often hard to achieve. The status quo is like a comfortable old coat, difficult to discard even as it becomes distinctly out of fashion. The ACFD is a refreshing exception. In 1995, under the leadership of Chief Plaugher, Arlington County developed for the Washington Metropolitan Area the Nation's first Metropolitan Medical Strike Team (MMST). The MMST concept and plans have been instrumental in the development of the MMRS, now adopted by more than 100 cities across the Nation. The MMST is the predecessor to the NMRT. As a direct consequence, the ACFD was a better-prepared and more capable response force on the morning of September 11 than might otherwise have been the case.

Regular and frequent participation in exercises and other activities with neighboring jurisdictions had produced sound working relationships that were evident during the Pentagon response. For example, the Arlington and Alexandria TRTs were able to completely integrate their personnel, forming 3 teams of 19 personnel each. Because of the high quality of their work alongside the experienced US&R teams of Fairfax and Montgomery Counties, the combined TRT was assigned to help the Tennessee US&R, which was on its first deployment. Each year, the MDW hosts a major regional tabletop exercise that involves most local public safety organizations and government leaders. Such events help build relationships that are key to successful emergency operations.

The close working relationships of the Virginia jurisdictions were evident throughout. Because of its experience in extended duration operations, Fairfax helped organize and manage the logistics support for the ACFD. Chief Brown of Loudoun County, Chief Chris Leischner of Alexandria, and Chief Tom Owens of Fairfax City all supported Chief Schwartz in the Incident Command Plans Section. The groundwork clearly exists for a broader regional approach to emergency planning and management.

The Pentagon attack was, in many ways, without precedent for the men and women of the ACFD. Only those veterans who had participated in the response to the 1982 Air Florida crash at the 14th Street Bridge could even begin to relate to its scope and magnitude, and that was largely a rescue operation under DCFD jurisdiction. The Pentagon has been in Arlington County, on the banks of the Potomac River, and in the Ronald Reagan Washington National Airport flight path for 58 years. Over the years, accidental aircraft crash landings into the Pentagon have occasionally been simulated. However, the physical affects of the September 11 terrorist attack on the Pentagon by far exceeded what anyone might possibly have imagined.

Findings

The ACFD did not have a fire suppression and rescue plan in place for a Pentagon emergency of this size and duration. Its SOPs were certainly applicable and served well, even in these highly unusual circumstances; however, firefighting operations are almost always relatively brief and highly intense. This event was lengthy, slow-going, and required a more strategic and long-term perspective.

Although there are fairly frequent drills with the Pentagon, many ACFD responders were unfamiliar with the building layout. Pentagon renovation information, such as access points and hose-fitting locations, was regularly disseminated within the ACFD; however, only a handful of firefighters had received a thorough orientation on the renovation project prior to the attack.

In the absence of a Pentagon plan, the ACFD relied primarily on the skills and experience of its members. Battalion Chief Cornwell and Captain Gibbs knew precisely what to do at the point of attack. Battalion Chief Lyon performed in stellar fashion while organizing replacements at Station 1 and, subsequently, supporting Chief Schwartz at the incident scene. These are veterans, uniquely qualified even among their peers. Similarly, ECC Administrator Souder did not need a plan to call forward a specific mix of units from Fairfax, Arlington, and the District of Columbia. Based on years of experience in the fire and rescue service and at the ECC, he anticipated what would be needed and instructed each jurisdiction to plan on that level of commitment for the duration. But ECC Administrator Souder has now departed, moving to a similar position in Montgomery County, MD. Individuals will move on and, over time, experience will erode, unless their experience and knowledge are captured in plans for handling the challenges of large-scale events.

The individual skill levels of ACFD responders reflect the high quality of training offered to the young men and women entering the fire and rescue service.

Prior planning and training allowed responders to effect a large, multijurisdictional response. The ACFD routinely participates in Pentagon mass casualty tabletop exercises such as “Abbottsville” in May 2001, and full-scale exercises such as “Cloudy Office” in 1998. Previous response efforts, training, and joint exercises have improved mutual-aid operations and enhanced mass casualty response.

Dr. Vafier accompanied an EMS response unit to the incident scene. Some responders indicated that one benefit of having a medical director on the scene was the provision of leadership. Dr. Vafier, as a certified advanced trauma life support physician, was able to communicate with other physicians in addition to acting as an EMS advocate. The Arlington County Operational Medical Director, Dr. York Allen, joined Dr. Vafier at the incident site. There were a few instances when military and other medical personnel sought out Dr. Vafier and bypassed

trained EMS providers in positions of authority. However, responders agreed his presence was beneficial from a medical and strategic perspective.

Frequent interaction, including training and exercises, with mutual-aid partners in Alexandria and Fairfax County proved invaluable. Units from these jurisdictions merged seamlessly in a common effort. A similar level of interaction does not routinely occur between Virginia jurisdictions and the DCFD. That failure was also apparent during the Pentagon operations.

Most ACFD officers were familiar with the capabilities of specialized units, such as the NMRT and US&R teams. But, until they arrived and set up for operations, it was impossible to appreciate their true capabilities. Briefings and orientations alone are insufficient.

The ACFD TRT, under the leadership of Chief Lyon, took advantage of the US&R presence to increase its capabilities through the Pentagon experience. The more experienced US&R teams, those from Virginia Beach, Fairfax, and Montgomery County, helped improve the capabilities of teams from New Mexico and Tennessee, each on its first deployment, as well as the TRTs from Arlington and the MDW.

Recommendations and Lessons Learned

The ACFD should capitalize on this experience to cooperatively prepare with DPS and MDW a Pentagon fire and rescue plan. The Pentagon continues to be a potential terrorist target. It is still located along the Ronald Reagan Washington National Airport flight path. It will always be unique, with modernization efforts continuing for many years, compounded by reconstruction of the damaged areas. With full knowledge of what worked well, what can be improved, and what specific information and equipment are required, this is an opportunity to achieve great progress in creating a comprehensive plan for responding to terrorist incidents. (FD-100)

Arlington County should take the initiative to put in place a multifunctional MOU between the ACFD and the Pentagon. There should be little room for disagreement since both parties just experienced what appears to be an appropriate division of labor. Working relationships, developed of necessity and reflecting the good will of the leaders involved, should now be transformed into a formal agreement. (FD-101)

A plan should be drawn up and implemented that perpetuates the contacts Arlington County had with all the disparate organizations that responded to the attack, such as public safety organizations, charitable organizations, military commands, private businesses, political entities, and others. They can be invited to participate in future ACFD exercises and provided periodic capabilities presentations. The total spectrum of support available when a crisis strikes the Washington Metropolitan Area is now clear. They should be made part of a broader ACFD constituency. (FD-102)

Arlington County should identify other unique and critical facilities and unusual sites in the ACFD jurisdiction and develop emergency response plans for them as well. There are government office complexes in Crystal City, the Navy Annex, and Bailey's Crossroads. Typically, government buildings have one characteristic in common—the outside façade remains the same, while the inside changes with every reorganization. Ongoing review of site plans and engineering blueprints must be planned for and accomplished. The high-rise offices of Rosslyn present a different challenge altogether, which needs to be captured in a response plan. (FD-103)

Whenever possible, academic training at the Arlington County Fire Training Academy and elsewhere should incorporate real world experiences drawn from such events as Oklahoma City, the World Trade Center, and the Pentagon. Hypothetical case studies have a continuing role, but reality is a critical test of capability and usually a much more compelling experience for participants. (FD-104)

Additional regionwide training in mass casualty operations and unified Incident Command should be provided. Training initiatives should include all professionals involved in emergency response. (FD-105)

Medical directors and fire department officials should review EMS protocols and SOPs to ensure agreement concerning the role of physicians working alongside EMS providers at an incident site. (FD-106)

Regional response drills should be planned and executed annually. Mutual-aid jurisdictions should be included in response exercises whenever possible. (FD-107)

Alert and notification systems should be regularly and randomly tested to ensure rosters are current and contact numbers are accurate so plans for recalling off-duty EMS staff can be implemented in an emergency. (FD-108)

The ACFD should increase cross-training among compatible skill sets, incorporating specialized equipment and skills required by terrorist threats. This is certainly appropriate for emergency medical technicians and HazMat technicians, but cross-training can probably be extended to many others. (FD-109)

Periodic exchanges should be encouraged between the ACFD EMS and NMRT, and between the ACFD TRT and local area US&R teams, taking advantage of national resources located in the region. (FD-110)

A major joint planning, training, and exercise initiative between the DCFD and the Northern Virginia fire departments should be undertaken. The single area offering the greatest opportunity for dramatic near-term improvement is the relationship between the Northern Virginia fire departments and the DCFD. Working relationships forged through planning, training, and exercises carry over to the fire scene. (FD-111)

ANNEX B

INTRODUCTION

All operational medical treatment components play a critical role in an emergency response to weapons of mass destruction (WMD) terrorist incidents. The Emergency Medical Services (EMS) units focus on the immediate health and medical requirements of terrorist victims. EMS units perform emergency medical triage and treatment at the incident scene and transport victims to definitive treatment facilities. Hospitals implement emergency operating procedures to receive patients for treatment and long-term care. The September 11 terrorist attack on the Pentagon engaged and tested the preparedness of Washington Metropolitan Area hospitals to implement disaster response plans.

On September 11, hospitals throughout the region were alerted to the prospect of mass casualties by television media reports describing the terrorist attacks on the World Trade Center and speculation that the Washington Metropolitan Area might be another terrorist target. With this warning, hospitals activated their disaster plans and implemented other emergency response preparatory actions.

Immediately after the 9:38 a.m. impact of American Airlines Flight #77 on the Pentagon, the Arlington County Emergency Communications Center (ECC) began contacting area hospitals, including Virginia Hospital Center - Arlington, Inova Alexandria Hospital, Inova Fairfax Hospital, Washington Hospital Center, and George Washington University Hospital. The Washington Hospital Center Burn Unit is one of 139 facilities in the Nation designated to receive severe burn victims. In less than an hour, hospitals began receiving victims transported by EMS units. By 2:00 p.m., 106 surviving victims requiring treatment had been transported to hospitals and other treatment facilities. Fifty-seven patients were treated and released. Forty-nine were admitted for further treatment.

The DiLorenzo TRICARE Health Clinic (DTHC) at the Pentagon and Andrew Rader U.S. Army Health Clinic (Rader Clinic) at Fort Myer, VA, also performed an emergency response role. DTHC staff performed triage and treatment in the clinic and at other locations within the Pentagon, including the Center Courtyard. Staff from the Rader Clinic assembled a team of medical care providers, which reported to the Pentagon incident site, while the Rader Clinic also prepared to provide medical treatment to injured victims.

There is general agreement that the hospitals and clinics responded in a commendable manner to the health and medical needs of the victims of the Pentagon attack. Fortunately, the area's hospital capacity and capability for receiving and treating mass casualties greatly exceeded the number of patients actually referred for treatment. However, this terrorist event revealed a number of pertinent recommendations and lessons learned.

This Hospitals and Clinics Annex contains 26 recommendations and lessons learned.

SECTION 1: INITIAL RESPONSE

Observations

Media and television reports on the World Trade Center terrorist attacks, followed by reports suggesting that Washington, DC, and other locations might be targets, provided early warning to area hospitals and clinics of a potential attack. This warning prompted the implementation of hospital disaster plans. Immediately following the attack on the Pentagon at 9:38 a.m. on September 11, area hospitals undertook preparatory actions to receive patients. These hospitals and clinics included Virginia Hospital Center - Arlington, Inova Alexandria Hospital, Inova Fairfax Hospital, DTHC, Rader Clinic, and Arlington Urgent Care. Additionally, Washington Hospital Center and George Washington University Hospital, located in Washington, DC, began preparations to receive patients. (See Figure B-1.)

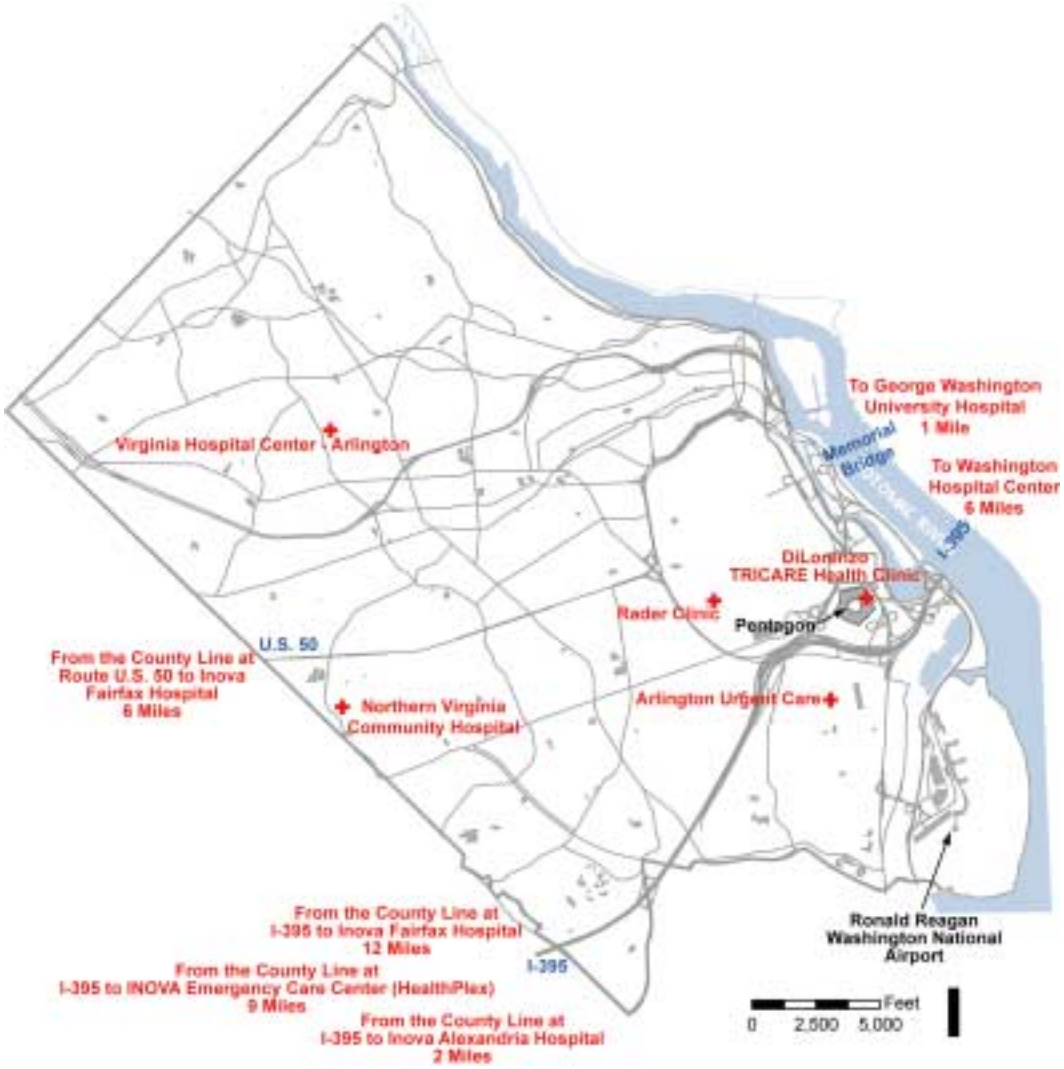


Figure B-1. Area hospitals, clinics, and treatment facilities.

Although some hospitals and clinics reported they were not officially notified by the Arlington County ECC, all of them did learn of the attack from a variety of sources. Upon learning of the attack, all area hospitals began preparing to receive victims.

- Virginia Hospital Center - Arlington immediately implemented its disaster plan upon receipt of a telephone call from an Arlington EMS Supervisor en route to the Pentagon.

- Inova Alexandria Hospital received emergency notification via a call from the Alexandria dispatch center and implemented its disaster plan. All operating rooms (ORs) were made ready. Emergency room (ER) patients were moved to a secondary treatment area, freeing up the primary ER space. Inova Alexandria Hospital also relocated or discharged 75 patients to provide bed space for anticipated mass casualties.

- Inova Fairfax Hospital activated its disaster plan following reports of the World Trade Center attacks. Subsequently, the hospital received emergency notification of a missing airliner from the Washington Dulles International Airport Tower. They canceled elective surgeries until 6:00 p.m. and made eight trauma teams available within 20 minutes. The regular ER was relocated to an alternate site and nearly 100 nurses and doctors were prepared to respond in the event of an attack in the Washington Metropolitan Area.

- George Washington University Hospital learned first from an employee watching television reports. George Washington University Hospital was unsuccessful in confirming reports through the District of Columbia Hospital Association Hospital Mutual Aid Radio System. The hospital prepared to receive patients from the Pentagon attack while considering response requirements related to the potential for additional attacks in the District of Columbia. George Washington University Hospital suspended elective surgeries and implemented its disaster plan, mindful of requirements that could emerge related to additional attacks.

- Washington Hospital Center received notification through the Ronald Reagan Washington National Airport Tower CRASHNET. Concurrently, Dr. Marion Jordan, the Burn Center Director, was watching television news reports describing the attack on the Pentagon. Washington Hospital Center implemented its emergency management plan. The hospital Emergency Operations Center (EOC) was activated. Clinic appointments and all elective admissions and procedures were canceled. Hospital discharges and transfers were expedited. The trauma center, burn unit, and emergency department mustered to receive mass casualties. By midday, 19 intensive care unit (ICU) beds and 136 floor beds were available.

- When the attack occurred, DTHC staff at the Pentagon was advised to evacuate. Major Lorie Brown, Chief Nurse, formed medical teams and prepared to receive patients. Two five-person medical teams, under the direction of Captain Jennifer Glidewell, were sent to the Pentagon Center Courtyard at Corridor 5 to perform triage and treatment for patients who would be

evacuated through the tunnel at Corridors 1 and 2. A 10-person medical team worked at the DTHC providing triage, urgent, acute, and primary care. Other volunteers were organized into augmentation medical teams. DTHC medical teams offered triage and treatment near the Pentagon Officers Athletic Center (POAC) for patients evacuating along Corridor 8.

Major Brown, assisted by other DTHC staff members, coordinated emergency medical response actions at a number of locations, including the Pentagon Center Courtyard, the DTHC, the site near the POAC, as well as locations requested by the Defense Protective Service (DPS) on various floors of Corridors 3 and 4 and Corridors 5 and 6. (See Figure B-2.)

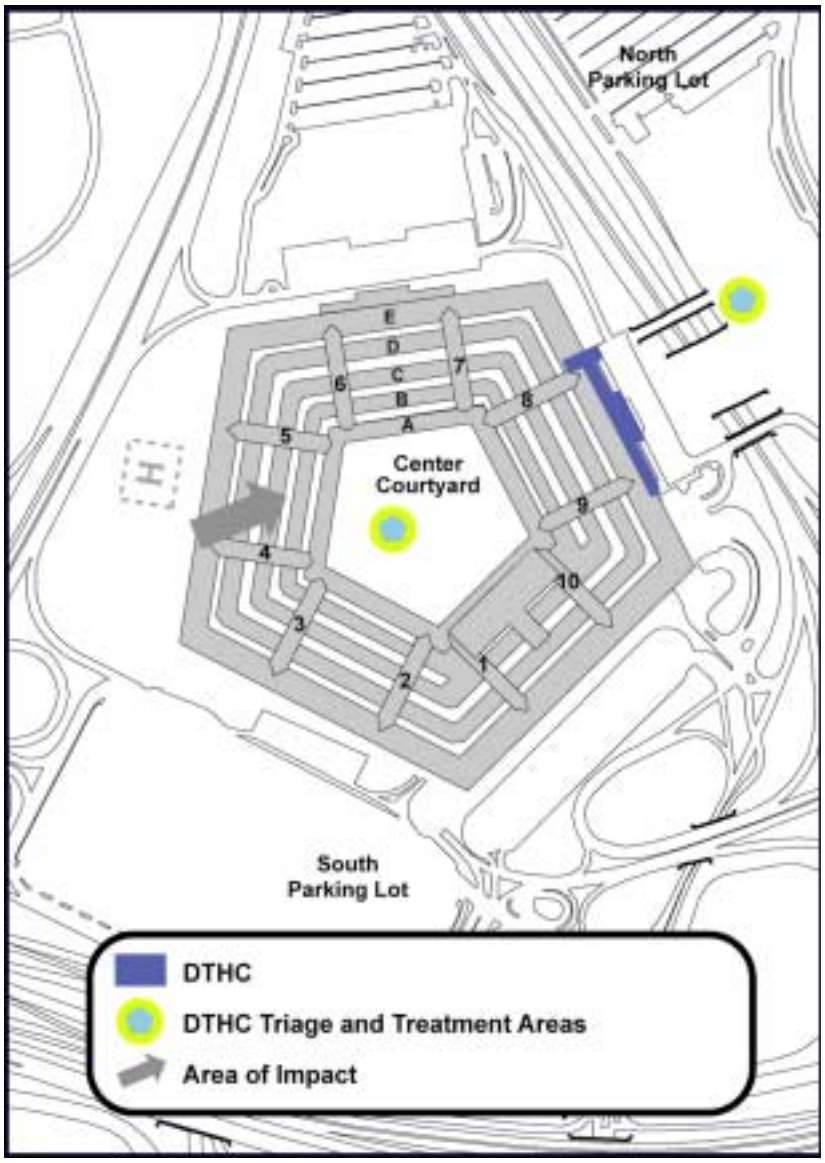


Figure B-2. DTHC triage and treatment areas.

DTHC Commander, Colonel James Geiling, M.D., was at Walter Reed Army Medical Center when the Pentagon terrorist attack occurred. He was delayed for nearly 5 hours by traffic congestion, security, and closed bridges across the Potomac River. Colonel Geiling finally reached the Pentagon at approximately 2:00 p.m. He assumed command of the DTHC medical response and began preparing for clinic operations the following day.

- Because they are located close to the Pentagon, staff members at the Rader Clinic and Arlington Urgent Care heard the airliner and explosion, and felt the airliner's impact. A "Code Yellow" (mass casualty situation) was immediately called at the Rader Clinic following an announcement on television that all Federal buildings were to be evacuated because of the terrorist threat. The building was evacuated and cleared within minutes by staff members. Simultaneously, Colonel John Roser, M.D., Commander of the Rader Clinic, assembled a medical team of five physicians and a physician's assistant, and proceeded on foot toward the Pentagon. An 11-person team of combat medics assembled and deployed to the crash site in 2 patient transport vehicles, picking up Colonel Roser's team on the way. Upon arrival at the Pentagon, all Rader Clinic response personnel divided into triage and treatment teams under the control of the ACFD EMS officers, and provided treatment for victims emerging from the crash site.

  At the Rader Clinic, the staff initiated Code Yellow actions. Lieutenant Colonel Lorraine Jennings, Deputy Commander for Nursing and Primary Care, assumed control. A personnel pool was formed. Three triage areas staffed by clinic medics were set up in the adjoining parking lot. An EOC was established in the clinic headquarters.

- Arlington Urgent Care clinic, located near the Pentagon, was virtually on the scene at the time of the airplane crash. As staff members watched television reports of the terrorist incidents at the World Trade Center, they heard the airliner overhead. Staff members reported they heard and felt the explosion resulting from the airliner's impact. The staff immediately reacted by calming hysteria, taking safety precautions, and preparing medical treatment supplies (i.e., setting up intravenous lines, preparing irrigation fluids, and assembling bandages). Director Debra Lutjen, Registered Nurse, placed calls to assemble off-duty staff, then awaited the imminent arrival of injured victims.

Findings

Hospitals and clinics executed response activities according to preestablished disaster plans.

For the first few hours, there was little information relayed from the scene to the hospitals about patient flow. Some hospital representatives expressed their general impression that patients were being transported from the scene in a disorganized or unplanned manner.

Traffic congestion and bridge closings hampered the return of off-duty staff and those on business at remote locations.

Coordination between DTHC staff and EMS Control was inadequate. DTHC staff was in critical need of patient transport units near the POAC, on the north side of the Pentagon. Because of the lack of communication with EMS responders, only 2 private ambulances were available to transport approximately 40 seriously injured patients from that side of the Pentagon. As a result, clinic staff recruited volunteers and transported victims in privately owned vehicles. The urgency of the situation overshadowed liability issues.

Recommendations and Lessons Learned

During potential mass casualty events, all involved definitive care facilities must make a concerted effort to communicate with one another. Regional disaster plans and procedures must be reviewed and exercised. They should include communications protocols to ensure all parties can exchange information. (HC-001)

Communications must be established between EMS Control and definitive medical treatment facilities to provide timely and accurate information regarding the medical condition and disposition of patients. (HC-002)

Future planning efforts must include the integration of clinics into disaster response operations, even if only to share information. (HC-003)

Consideration must be given to unexpected traffic bottlenecks and impediments arising from regional evacuations, security closings, and their potential for disrupting emergency medical response. (HC-004)

SECTION 2: COMMUNICATIONS

Observations

On September 11, the hospital community experienced mixed results regarding communications requirements and capabilities. The Arlington County ECC was inundated with radio traffic and 9-1-1 calls within moments of the Pentagon attack. Attempts to alert area hospitals of the impending influx of patients were hampered by the volume of emergency traffic. ECC Communications Technicians used personal cellular telephones in some cases, dialing repeatedly until they were able to get through. In the District of Columbia, Washington Hospital Center kept up-to-date by monitoring dispatch messages transmitted on Arlington County ECC radio communications. George Washington University Hospital experienced difficulty in contacting the District of Columbia Hospital Association's Hospital Mutual Aid System by radio.

Although communications between the hospitals and Incident Command regarding the types of injuries and estimated casualty counts were inadequate, communications between hospitals and incoming EMS units were clear and accurate regarding specific patients and their injuries.

The DTHC at the Pentagon is required by its emergency response plan to establish communications with the Arlington County ECC. However, this coordination did not occur. The Rader Clinic identified a need for an emergency communications capability between the clinic, response teams, and ambulances.

Arlington Urgent Care does not have an emergency radio communications capability and relies exclusively on landlines and cellular telephones. Communication with EMS units and hospitals is severely limited.

Findings

Current regional medical disaster plans do not designate a Clearinghouse Hospital to coordinate communications on behalf of the medical community during a mass casualty incident. That was previously the role assigned to Inova Fairfax Hospital. Representatives stated they were familiar with previous plans and procedures to establish a coordinated communications center. Current plans no longer call for establishing a coordinated communications center. This thwarted the flow of reliable information regarding the types of injuries and estimated casualty counts.

Media reports regarding the overall situation and specific events at the Pentagon were a prime source of information for hospitals and clinic staffs. In some respects, this information compensated for the lack of information flowing to them directly from the scene. After the initial deluge of patients, hospitals anticipated a continuous stream of victims arriving within the following hours. The lack of medical patient information from authorities at the incident site frustrated efforts to plan ahead.

Internal communications within each hospital and clinic were generally adequate.

EMS transportation units communicated patient information to destination hospitals while en route. These communications were effective.

Recommendations and Lessons Learned

Appropriate changes should be made to plans, including defining standards for measurement, to ensure performance will be improved for the next potential mass casualty event. Plans should be reviewed and exercised annually. (HC-005)

A regional-level review should be conducted to systematically improve readiness for mass casualty events. (HC-006)

A true regional communications system, encompassing all Washington Metropolitan Area hospitals, is essential for adequate response to mass casualty medical emergencies and should be established. (HC-007)

Procedures must be put in place so EMS officials at the incident site provide hospitals complete, timely, accurate, and coordinated patient treatment and disposition information. (HC-008)

Radio communications must be quickly established between EMS Control and medical facilities located onsite at critical and unique facilities in the jurisdiction that are also scenes of mass casualty emergencies. (HC-009)

Exercises should be conducted to reaffirm and practice communications plans, systems, and responsibilities. These exercises should include radio communications and coordination, testing pager systems, and telephonic staff recall. (HC-010)

A regional medical disaster plan should include the designation of a Clearinghouse Hospital to coordinate communication between the incident site and supporting medical treatment centers. (HC-011)

SECTION 3: DISASTER OPERATIONS

Observations

Regional hospitals reported that their internal Incident Command System (ICS) worked well. Implementation of hospital Emergency ICS and disaster plans at each hospital provided responsive and effective command, control, and coordination. However, external coordination with on-scene EMS Control was not well-executed.

Most area hospitals and clinics have plans for handling a variety of emergencies, including mass casualty events; however, some do not have such plans. For example, the Arlington Urgent Care disaster plan focuses on an internal disaster, such as a fire in a treatment room. Consequently, a modification to its disaster plan is in order.

Military medical volunteers onscene at the Pentagon were unfamiliar with the ICS and, initially, tended to operate unilaterally. Staff from the military medical clinics, DTHC, and Rader Clinic, adapted more readily to the ICS support role and accepted guidance and direction from ACFD EMS Officers.

Area hospitals had adequate numbers of medical professionals to meet the mass casualty requirements resulting from the Pentagon attack. Hospitals canceled routine services, rescheduled elective surgical procedures, expedited discharges and transfers, and freed medical staff to respond to the anticipated requirements. The number of casualties received at the hospitals did not exceed hospital staff capability. However, road closures and traffic congestion delayed the arrival of recalled off-duty medical staff members.

The DTHC and Rader Clinic are not staffed at levels to support mass casualty management. These clinics used qualified volunteers to augment their military medical staff and assist on September 11, and plan to do so for other extreme situations.

Arlington Urgent Care initiated a staff recall as they responded to the medical needs of the first 10 walk-in patients suffering from injuries incurred at the Pentagon. Staff members experienced delays in reporting due to road closures.

Medical supplies and other resources were, for the most part, adequate to respond to requirements generated by the Pentagon attack. However, Washington Hospital Center needed additional medical replacement skin to treat burn patients.

Virginia Hospital Center - Arlington provided medical supplies for EMS operations at the Pentagon, replenishing items on transport and treatment vehicles.

Arlington Urgent Care acquired additional supplies of Sylvadine®, a burn medication, by making an emergency purchase at a nearby Costco pharmacy.

Hospitals indicated more planning and coordination is necessary regarding the request, receipt, and distribution of Federal resources, including the various task forces available to the area.

The number of victims first anticipated did not materialize. The number of casualties did not place an overwhelming strain on existing hospital resources.

At Virginia Hospital Center - Arlington, maintaining effective physical security was problematic. The ER entrance also serves as one of the main entrances to the hospital. Increased patient traffic caused by the Pentagon attack created an added burden for the security staff. Additionally, a suspicious package was found near the entrance that required law enforcement intervention, further slowing operations. By noon on September 11, Virginia Hospital Center - Arlington had instituted a badge system to help with access control.

Other hospitals suggested that day-to-day hospital security forces do not have the resources to adequately respond to their disaster plan security requirements. Hospitals should be identified as a critical resource and receive additional security support from public safety agencies.

The DTHC and Rader Clinic did not experience internal security problems. The DTHC indicated site security at the Pentagon was lax during the first 12 hours.

Findings

Washington Metropolitan Area hospitals found that their respective internal ICS and disaster plans provided the command, control, and coordination mechanisms required to operate in a responsive and effective manner on September 11.

ICSs worked well internally for area hospitals, but were not coordinated with the on-scene Incident Command. Current area plans do not call for establishing a command hospital or a regional medical communications coordination center. This resulted in serious gaps in the flow of information. Such provisions would have assisted greatly in matching medical resources with evolving requirements.

Because the attack occurred on a weekday morning, hospital staffing levels were adequate, particularly when coupled with the fact that many routine services were canceled to prepare for emergency response activities. Some facilities reported that, by the afternoon of September 11, the volume of community donations and number of volunteers overwhelmed them.

Road closures and traffic congestion frequently delayed the return of off-duty hospital and clinic staff.

The security staff at Virginia Hospital Center - Arlington had difficulty controlling access at the emergency entrance. In a full mass casualty event, security forces at area hospitals do not have the resources to manage patient traffic.

Hospital representatives see a need for coordination in providing urgently needed medical resources, such as the medical replacement skin required by Washington Hospital Center.

Current disaster response plans do not include area clinics as treatment resources.

Recommendations and Lessons Learned

Every area hospital should assess its readiness and performance during the Pentagon attack, identify areas in which there are deficiencies, and formulate and implement a plan for rectifying them. ICS, staffing, logistics, and security should each be subjected to the rigor of this review. (HC-012)

In mass casualty situations, a Clearinghouse Hospital should be designated or some other provision made to coordinate between the on-site EMS Control and area treatment facilities. (HC-013)

All hospitals and clinics should have contingency plans for internal and external events. Clinics should also be included in area disaster response plans. (HC-014)

A central location or a single coordinator should be identified to receive and manage donations and coordinate hospital volunteer help. (HC-015)

Area hospitals should anticipate future mass casualty events and research information required for the request, receipt, and distribution of Federal medical resources. This information should be documented, placed in the Emergency Operations Plan, and systematically updated. Sharing this information will improve the area's overall readiness for the next mass casualty event. (HC-016)

Plans should include the provision of public safety agency support to augment hospital security and, if needed, expedite the transport of medical resources. (HC-017)

Deployment of Federal medical stockpiles needs to be coordinated with local EOCs and area medical providers. (HC-018)

SECTION 4: PATIENT CARE

Observations

In a mass casualty terrorist incident, a hospital's usually fast-paced ER activities are greatly accelerated, and the number of patients significantly increases. Patients are systematically received, triaged, stabilized through emergency treatment, and processed for surgery or specialized medical procedures, all within minutes. A hospital's highly trained and skilled ER staff is augmented to provide additional mass casualty response capacity. The goal is to save lives and reduce the traumatic effects of the mass casualty incident through the timely provision of definitive medical care.

On September 11, each area hospital took immediate actions, received patients, and responded to the health and medical needs of the injured victims of the terrorist attack on the Pentagon.

- Virginia Hospital Center - Arlington received 44 patients transported by EMS units or self-referred. The patients suffered from burns, respiratory problems (smoke inhalation), and orthopedic trauma injuries. Twenty-six patients were treated and released. Eighteen patients were admitted, nine of whom were treated in the ICU. Two ICU burn patients were transferred within 48 hours to Washington Hospital Center.

- Inova Alexandria Hospital received 23 patients, most transported by EMS units. The patients suffered from respiratory problems (smoke inhalation), trauma, head injuries, and other minor injuries. Four patients were treated and released. Nineteen patients were admitted for further treatment and observation.

- Inova Fairfax Hospital received one patient, referred by INOVA Emergency Care Center (HealthPlex) in Springfield, VA. This woman suffered only minor injuries, but was pregnant. As a precaution, she was treated and transferred to Inova Fairfax Hospital for observation and subsequently released.

- EMS units transported six patients to Northern Virginia Community Hospital in Arlington County. These patients suffered minor orthopedic injuries, and were treated and released.

- INOVA Emergency Care Center (HealthPlex) received three patients via EMS units. The patients had minor injuries. Two were treated and released. One was referred to Inova Fairfax Hospital.

- George Washington University Hospital received three patients by self-referral. The patients had minor injuries and were treated and released. Traffic congestion and bridge closings across the Potomac River limited access to George Washington University Hospital.

- Washington Hospital Center received 13 patients by air medical evacuation, from EMS units, and 2 by transfer from Virginia Hospital Center - Arlington on September 11 and 12. These patients suffered from severe burns, smoke inhalation, shock, and minor injuries. Five patients were treated and released. Ten patients were admitted, of which nine were placed in the Burn ICU. The hospital had not previously received that many major burn patients at one time.

Dr. Jordan, Washington Hospital Center Burn Center Director, aware that surgical requirements for skin replacement would quickly deplete available skin resources, issued an urgent request for additional medical replacement skin. A call to the skin bank at the University of Texas Southwestern Medical Center (TSMC) in Dallas requested shipment of all available medical replacement skin. With commercial aircraft grounded throughout the United States, TSMC packed 70-square feet of skin on dry ice, placed it in travel containers, and staff members drove nonstop in a van, arriving at Washington Hospital Center 23 hours and 12 minutes later. A Cincinnati, OH, skin bank provided 30 more square feet in 12 hours. Another skin bank in Dayton, OH, delivered more skin to Wright-Patterson Air Force Base (AFB), requesting an urgent delivery to Washington Hospital Center. The skin was required to stabilize burn wounds, until surgeons could graft the patients' own skin, taken from other locations that were not burned. The rapid actions taken by these hospitals were extraordinary, reducing the suffering of burn victims and saving lives.

Dr. Jordan and his associate, Dr. James Jeng, were the principal surgeons. Working 12- to 16-hour shifts for 3 weeks, they performed more than 112 surgeries on the 9 victims in the Burn ICU. More than 700 units of blood were required from the Washington Hospital Center Blood Bank. One of the nine died, having suffered smoke inhalation and severe burns on more than 60 percent of her body.

- Arlington Urgent Care received 10 patients. EMS delivered one patient; another patient was self-referred; and eight others arrived in two minibuses. The patients had minor burns, lacerations, and orthopedic injuries. Seven patients were treated and released. Two patients were transferred to Virginia Hospital Center - Arlington via EMS, and one patient to Walter Reed Army Medical Center.

  Dr. Olympia Dallas of Arlington Urgent Care responded immediately to the staff recall. Because of traffic delays and closed streets, it took nearly 2 hours to reach the facility. Arlington Urgent Care treated 20 patients, 10 directly injured in the Pentagon attack. More than 100 other Pentagon occupants visited the facility, just 2 blocks away, to use telephones, calm nerves, and monitor the television coverage of the Pentagon attack.

- The Rader Clinic received five patients by 1:15 p.m. One patient had become short of breath in the adjacent commissary parking lot. The other four had moderate to minor injuries sustained in the Pentagon attack. One, suffering a head injury, was transferred immediately to Virginia Hospital Center - Arlington. The other three patients were treated and released.

- The DTHC operated in an EMS mode, providing emergency medical treatment at the clinic, at triage and treatment sites at the Center Courtyard, and close to the North Parking Lot. Eight patients were treated in the clinic. Fifteen patients in the Center Courtyard were evacuated to Virginia Hospital Center - Arlington. Approximately 40 patients, 20 walking wounded, and 20 moderate-to-severely injured were located at the triage and treatment site by the North Parking Lot.

Overall, 106 patients were received for medical treatment by area hospitals, care centers, and clinics. Fifty-seven patients were treated and released. Forty-nine patients were admitted to hospitals for treatment. The prompt and professional definitive medical treatment saved lives and reduced the traumatic effects of this terrorist act. The fact that only one patient died is a tribute to the hospitals, doctors, nurses, and medical staff engaged in the response to this incident. (See Figure B-3.)

Facility	Victim Disposition		
	Patients Received	Treated / Released	Admitted
Virginia Hospital Center - Arlington	44	26	18* *2 Transfer to Washington Hospital Center
Inova Alexandria Hospital	23	4	19
Inova Fairfax Hospital		1* *Transfer from HealthPlex	
Northern Virginia Community Hospital	6	6	
INOVA Emergency Care Center (HealthPlex)	3	2* *1 Transfer to Inova Fairfax Hospital	
George Washington University Hospital	3	3	
Washington Hospital Center	13	5	8* *2 Transfer From Virginia Hospital Center - Arlington
Arlington Urgent Care	10	7	3* *2 Transfer to Virginia Hospital Center - Arlington, 1 Transfer to Walter Reed Army Medical Center
Andrew Rader U.S. Army Health Clinic	4	3	1* *Transfer to Virginia Hospital Center - Arlington
Totals	**106**	**57**	**49**

Figure B-3. Victim disposition.

Findings

Area hospitals were fully capable of treating the casualties they received. However, mass casualties numbering in the hundreds would have challenged the capacity of local treatment facilities, particularly regarding availability of medical replacement skin and burn beds.

Hospital representatives are familiar with medical and pharmaceutical supplies and vendors, and are able to obtain supplies on short notice.

Arlington Urgent Care staff treated many victims, but only three patients required subsequent transport to a definitive care facility. The staff indicated

they would have transferred patients earlier if they had known area hospitals were not inundated with victims.

Hospitals made inquiries independent of one another to inventory the region's capacity to treat burn victims.

Recommendations and Lessons Learned

Immediate efforts must be undertaken to evaluate the regional capacity to treat burn victims, including addressing regional shortages of burn beds. This process should identify deficiencies, implement remedies, and streamline procedures to continuously improve the treatment of burn victims. (HC-019)

Area hospitals should be aware of the resources available from military sources. (HC-020)

Plans and policies must be coordinated on a national, regional, and local level to allow the most expeditious transport of necessary resources during emergency conditions. (HC-021)

Regional mass casualty response plans should include area clinics and urgent care centers, which should also be included in exercises. (HC-022)

SECTION 5: PLANNING, TRAINING, AND PREPAREDNESS

Observations

The successful medical response of area hospitals and clinics is based on well-prepared disaster plans and trained medical staff to implement them. This high level of preparedness is achieved through planning, training, and exercises.

Findings

DTHC participation in an Arlington County EMS tabletop exercise with Arlington County EMS in May 2001 helped response preparation for the Pentagon attack. The scenario in that tabletop exercise featured a commuter airplane crashing into the Pentagon. Additionally, Major Brown and other DTHC staff had recently conducted a detailed disaster plan review. The familiarity with its content helped adapt the DTHC disaster plan to this situation.

During response activities, the Rader Clinic staff discovered there had not been prior coordination with Henderson Hall (U.S. Marine Corps Headquarters) to permit emergency vehicular traffic along its road network.

The Rader Clinic did not integrate dental clinic staff into its response organization. Clinic staff members are familiar with medical terminology, sensitive to patient treatment, and can probably be incorporated into emergency operations more easily than volunteers with nonmedical skill sets.

Hospitals and clinics were unable to quickly evaluate the capabilities of volunteers to determine how best to use their skill sets.

Recommendations and Lessons Learned

Hospital and clinic representatives should review and update current disaster response plans to incorporate lessons learned from the Pentagon terrorist attack and institute a process for performing such reviews and updates regularly. (HC-023)

Training in mass casualty operations and in the ICS should be regularly offered to hospital and clinic staff throughout the Washington Metropolitan Area. (HC-024)

Standards should be established to quickly evaluate and classify volunteers wanting to help in emergency situations. (HC-025)

Regional mass casualty response exercises involving all area hospitals and clinics should be held annually. (HC-026)

ANNEX C

INTRODUCTION

The terrorist attack on the Pentagon, September 11, 2001, presented a unique convergence of law enforcement responsibilities belonging to different organizations. The Pentagon and its surrounding grounds are bound on all sides by the Arlington County Police Department's (ACPD's) 4th District. Thus, the area surrounding the Pentagon is the responsibility of Arlington County. However, the Pentagon is a Department of Defense (DoD) facility under direct control of the Secretary of Defense. The Defense Protective Service (DPS), a Federal law enforcement agency, has exclusive jurisdiction at the Pentagon. It is not uncommon for neighboring law enforcement jurisdictions to exercise concurrent jurisdiction in certain locations. This is not the case at the Pentagon. ACPD authority stops at the perimeter, where DPS assumes control. Moreover, because this was a terrorist attack, the Pentagon and its surrounding grounds were immediately rendered a Federal crime scene, the exclusive domain of the Federal Bureau of Investigation (FBI) under the terms of Presidential Decision Directive (PDD)-39. Many additional law enforcement agencies participated in the response to the attack on the Pentagon, including the Arlington County Sheriff's Office (ACSO), the Virginia State Police, mutual-aid police departments and sheriff's offices from neighboring jurisdictions, the Treasury Department's Bureau of Alcohol, Tobacco and Firearms (BATF), military police from the Military District of Washington (MDW), the U.S. Capital Police, the U.S. Park Police, the DC Metropolitan Police Department, the U.S. Secret Service (USSS), the EPA Criminal Investigation Division (CID), the U.S. Air Force Office of Special Investigations (OSI), the National Transportation Safety Board (NTSB), and numerous others referred to throughout this report. But they did so in support of the ACPD, the DPS, and the FBI. More than 2,000 law enforcement officers, agents, and supervisors were committed to the Pentagon response. Part I, Arlington County Law Enforcement, describes the activities of the ACPD and the ACSO in response to the September 11 terrorist attack on the Pentagon. Part II of this annex describes the activities of the DPS. Part III addresses FBI operations.

The Arlington County Police Department (ACPD) was founded on February 1, 1940, and has expanded from its original 9 members to a current authorized strength of 362 full-time sworn officers and 85 civilian staff members. It provides law enforcement services to Arlington County's urban residential and business communities in an area of approximately 26 square miles, located across the Potomac River from Washington, DC. The county's residential population of 190,000 increases substantially during the workday with the influx of commuters, tourists, employees of local businesses and Federal Government agencies with offices in Arlington, as well as travelers traversing the county. All roads and rail routes from Virginia directly into the District of Columbia pass through Arlington County. The ACPD, under the leadership of Chief Edward Flynn, provides 24-hour protection using 3 shifts to patrol 10 police beats located within 4 districts that follow the natural boundaries within Arlington County. A captain, who reports to the deputy chief of operations, commands each police district. The ACPD has adopted a community-based, problem-oriented policing strategy, commonly known as

"community policing." Community policing engages 211 officers and supervisors assigned to the 4 districts. (See Figure C-1.) These officers are responsible for that area 24 hours a day, 7 days a week. They are part of the community they serve. The ACPD has the longest standing accreditation in the world from the Commission on Accreditation for Law Enforcement Agencies, Inc. (CALEA).

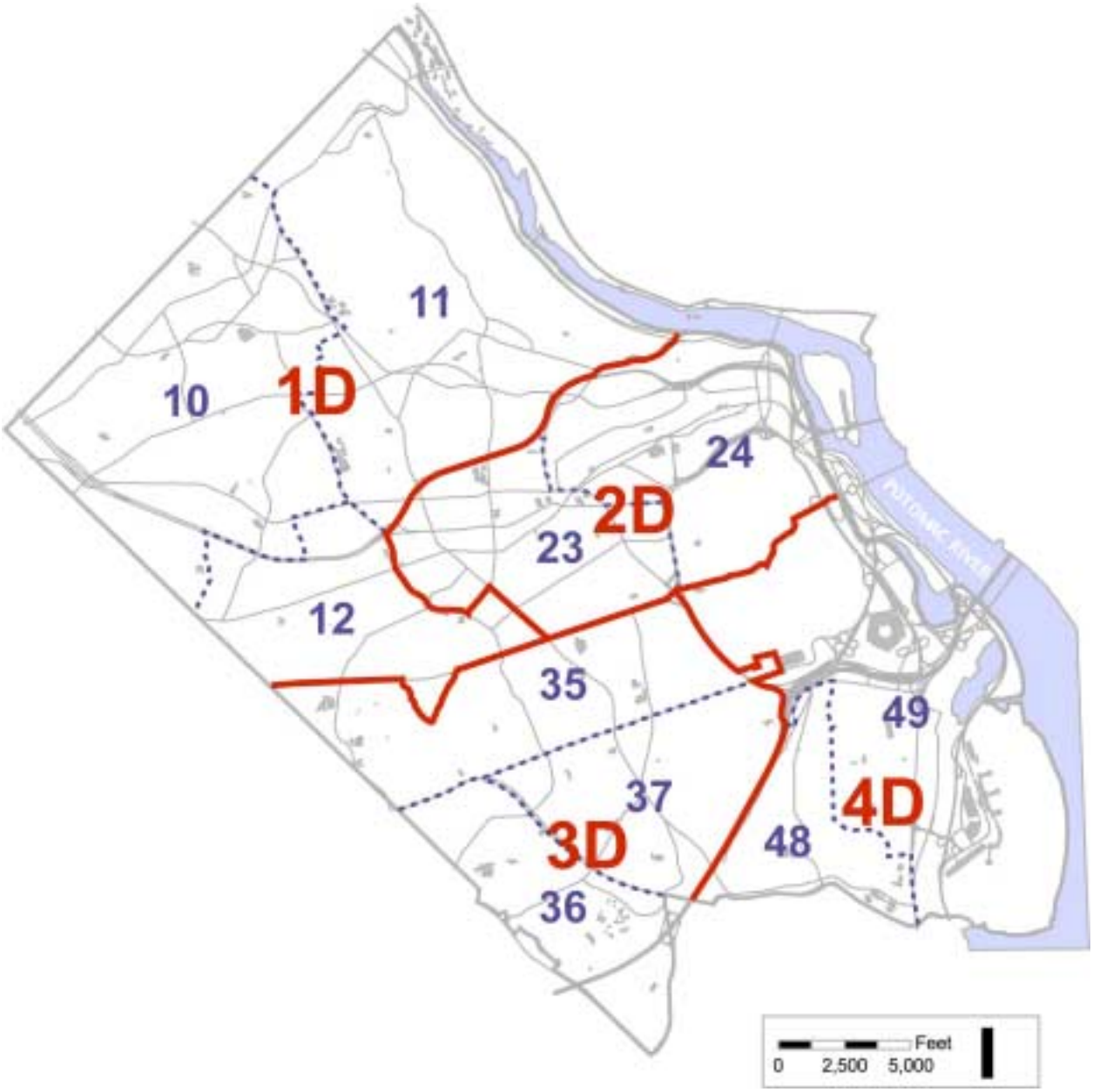


Figure C-1. ACPD districts and precincts.

The Arlington County Sheriff's Office (ACSO) is the oldest county law enforcement agency, dating back to the colonial period. The ACSO is a nationally accredited agency with 270 sworn deputies and civilian staff led by elected Sheriff Beth Arthur. Its principal functions are to support the county judiciary system and manage the correctional facility, which has an average daily population of 500 inmates.

The Defense Protective Service (DPS) is the law enforcement agency responsible for the Pentagon and 24 additional off-site DoD locations in the Washington Metropolitan Area. It provides a full range of law enforcement and security services. DPS Headquarters is located inside the Pentagon, which is served by 303 personnel and supervisors under the leadership of Chief John Jester. All 251 armed officers of the Law Enforcement Division are graduates of the Federal Law Enforcement Training Center at Glynco, GA. The Law Enforcement Division Operational Services Branch provides around-the-clock police services and includes a Special Operation Detachment consisting of the Emergency Services Team, the Protective Services Unit, and a K-9 Unit with explosive detection capabilities. The Law Enforcement Division also manages more than 400 contract guards that staff their off-site facilities. The 51-person Security Services Division is the nonsworn (unarmed) part of the DPS. Securing the Nation's military headquarters and the classified material stored there is a unique responsibility of the DPS.

The Federal Bureau of Investigation (FBI) is the principal investigative arm of the U.S. Department of Justice (DOJ). The FBI has investigative jurisdiction over violations of more than 200 categories of Federal crimes, including threats involving weapons of mass destruction (WMD), sabotage, and hostage taking. Its 11,000 special agents and 16,000 professional support staff are assigned to 56 field offices, 4 specialized field installations, 400 smaller offices throughout the country, and 40 legal attaché posts overseas. Although its geographic area of responsibility is the smallest of all the FBI field offices, the Washington Field Office (WFO) is the FBI's second largest in terms of staffing, comprising 657 agents and 650 professional support staff. Because of the special requirements of the Nation's capital and the size of the WFO, it is lead by FBI Assistant Director in Charge (ADIC) Van A. Harp. Three Special Agents-in-Charge (SACs) direct the WFO's Administrative and Technical, Criminal Investigations, and National Security Sections. The WFO organization includes the FBI's Joint Terrorism Task Force (JTTF) and the National Capital Response Squad (NCRS). Two FBI Rapid Deployment Teams are also located in the Washington Metropolitan Area with equipment and supplies stored for immediate response to missions overseas.

The information contained in this annex was accumulated through a series of debriefings and interviews with law enforcement personnel, use of a widely distributed survey instrument, and by reviewing plans, standard operating procedures (SOPs), and a variety of operational documents.

This annex includes three parts that describe activities performed in response to the September 11 terrorist attack on the Pentagon by the principal law enforcement

agencies, the ACPD, the DPS, and the FBI. The sections within each part address the following functional areas: (1) Initial Response; (2) Command, Communications, and the Incident Command System (ICS); and (3) Operations. Each section begins with observations about the events that occurred within the specific functional area. These observations are followed by a set of findings, which reflect the information gathered from the law enforcement officials after the response ended. The sections conclude with 74 recommendations and lessons learned derived from the findings.

PART I

ARLINGTON COUNTY LAW ENFORCEMENT

SECTION 1: INITIAL RESPONSE

Observations

On September 11, 2001, at approximately 9:37 a.m., ACPD Corporal Barry Foust and Officer Richard Cox, on patrol in south Arlington County, saw a large American Airlines aircraft in steep descent on a collision course with the Pentagon. They immediately radioed the Arlington County Emergency Communications Center (ECC). ACPD Headquarters issued a simultaneous page to all members of the ACPD with instructions to report for duty. Two-way pagers are standard issue only for the Emergency Response Team, hostage negotiators, members of the Special Weapons and Tactics (SWAT) team, and several command officials. One-way pagers are issued to most of the remaining sworn officers. Media reports of the attack alerted those who did not receive the pager message. The law enforcement response to the incident was immediate, with the on-duty shift engaged in minutes and most ACPD officers arriving on the scene within the first 3 hours. Several ACPD senior officers were out of the county when the incident occurred. Chief Flynn was attending a conference in Atlantic City, NJ, where he was the featured speaker on the subject of racial profiling. Deputy Chief Holl was at a Virginia Police Corps meeting in Richmond, VA. Both Chief Flynn and Deputy Chief Holl immediately began driving back to Arlington. Deputy Chief John Haas was in Miami, FL, participating in a police chief's assessment program and unable to arrange immediate transportation back to Arlington. This delay turned out to be fortuitous. When Deputy Chief Haas reported for duty on Monday, September 17, he brought fresh leadership to a command section that had been continuously engaged for nearly a week.

The Pentagon on fire.

Lieutenant Robert Medarios was the first ACPD command-level official to arrive on the scene; he assumed command of the ACPD response. Lieutenant Medarios quickly reached an agreement with a DPS official that the ACPD would assume responsibility for the outer perimeter. This was an important decision because the DPS exercises exclusive Federal legislative jurisdiction at the Pentagon and its surrounding grounds. In these instances, the Federal Government acquires all the authority usually reserved by the State.

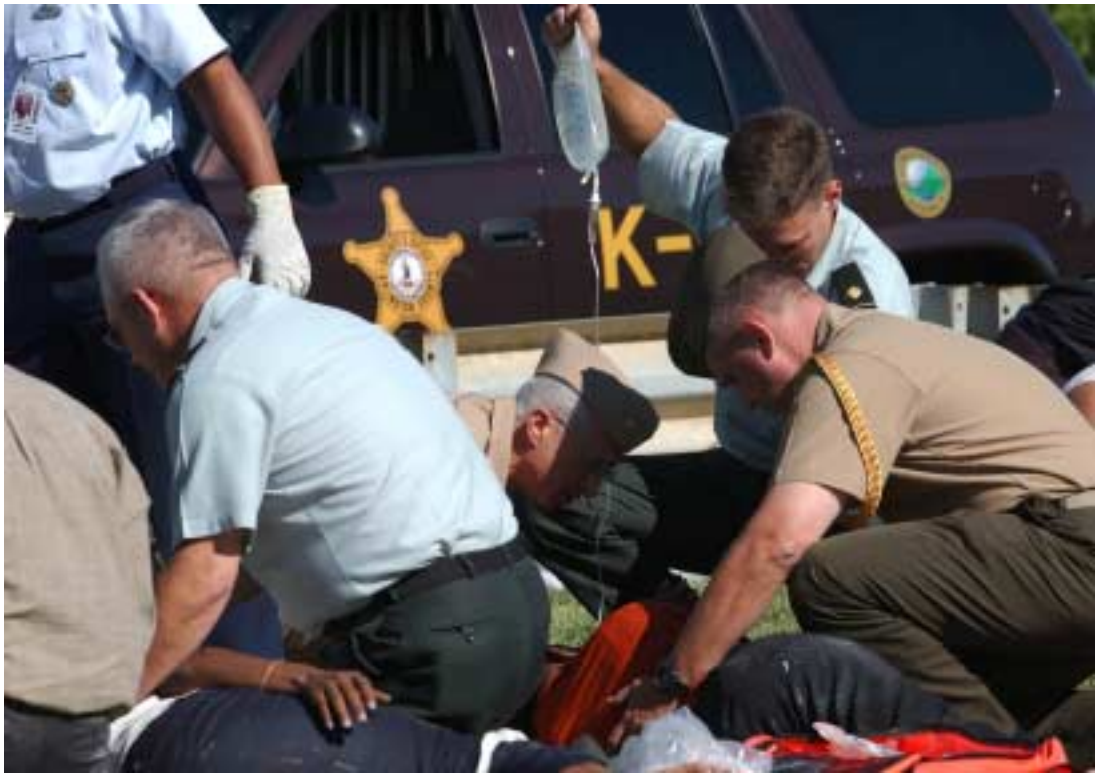
Lieutenant Medairos, Lieutenant Brian Berke, and Sergeant Jim Daly quickly assessed the road network conditions and identified 27 intersections that required immediate police posting. Sergeant Daly began organizing the staging area at Fire Station 5 and the adjacent park. The parking lot and adjacent field were cordoned off and guards posted around the perimeter. By 11:00 a.m., more than 100 law enforcement personnel had reported to the staging area representing the ACPD, ACSO, Fairfax County Police Department, Alexandria Police Department, Arlington County Park Rangers, and the Immigration and Naturalization Service (INS). Officers were assigned to a particular post for 2 or 3 hours, given an hour of relief, then assigned to a different post to minimize boredom.

Many ACPD officers attempting to reach the Pentagon, including detectives who were responding from headquarters, found themselves fully engaged in rerouting traffic and clearing a path for fire, rescue, and medical units. Although they had difficulty reaching their intended destination, these officers knew precisely what needed to be done and acted on their own initiative, radioing to ACPD Head-quarters their respective locations and activities. Detectives from the ACPD Vice Control Section assumed general patrol of the county away from the incident site to augment remaining officers in the event of a major criminal incident.

At ACPD Headquarters, Captain Rich Alt, Captain Mary Gavin, Lieutenant Karen Hechenroder and Administrative Assistant Barbara Scott began organizing the department-wide response. The roll call room is a natural meeting place in the police department for gathering and distributing information. It became the home of the ACPD ICS staffing command for the duration of operations. Officers were being deployed throughout the county and information had to be gathered regarding their locations and times of arrival so replacements could be scheduled and relief coordinated.

The ACSO also immediately responded to the attack. Sheriff Beth Arthur and Chief Deputy Sheriff Mike Raffo were watching the World Trade Center attacks on television when they were notified that an airliner crashed into the Pentagon. They immediately headed to the Arlington County Emergency Operations Center (EOC). ACSO recall procedures were implemented and an Incident Command Post (ICP) was set up on the first floor of the courthouse building. The ICP was subsequently relocated to a large conference room in the Arlington County Detention Facility.

Some deputies not already on assignment rushed to the Pentagon, arriving in time to help rescue a few of the victims. Other deputies began directing traffic, as roadways became jammed.



ACSO and Pentagon military personnel assist injured victims.

One of the first actions taken by the ACSO was closing the courts and evacuating the judges and staff. This action was in consultation with the Arlington County judges who approved the closure. This decision freed up approximately 20 deputies who were then able to assist with the response to the attack on the Pentagon.

Findings

ACPD pager notification was not completely successful. Many police officers received several pages; others did not receive a single page. Some reported receiving the page up to 6 hours after it was sent, others could not understand the page they received.

Although traffic congestion during the first hour of the incident posed problems for officers arriving in private vehicles, the response by department personnel was generally quick and effective.

The Virginia State Police performed in extraordinary fashion. From the onset of the incident, the Virginia State Police took complete responsibility for all the exit ramps from Interstate Highway 395, manning 10 critical traffic posts. They also attended every ACPD command briefing.

Before ACPD personnel were able to arrive at the incident scene and report for duty, many officers immediately provided traffic and crowd control in Crystal City and at congested street intersections leading away from the Pentagon. The training, policies, and procedures of the ACPD enable routine delegation of authority to the lowest levels. Police force empowerment is regularly practiced by the ACPD. There is no single agency decision point restricting the actions of officers responding to an emergency. ACPD officers responded as they determined the need, then radioed headquarters their location and the functions they were performing. This helped restore order and expeditiously reduce congestion, but it added to the ACPD staffing management challenge. It was not always clear where officers were located during the tumultuous early hours.

There was no plan or memorandum of agreement (MOA) in place between the Pentagon and Arlington County for evacuation procedures or securing the perimeter of the Pentagon. Experience gained while working together during large-scale events, such as the Marine Corps Marathon, helped facilitate coordination and communications between the two organizations.

View of the Pentagon, from the south side of the Navy Annex, as workers evacuate.

Cellular telephones are standard issue for ACPD personnel in the rank of captain and above. However, the cellular telephone systems were overloaded and ineffective during the first few hours of response. In the area surrounding the incident, Nextel's Direct Connect feature worked well for those personnel so equipped.

There are no parking spaces designated for personal vehicles of ACPD police officers near ACPD Headquarters. This delayed reporting for duty. The shortage

of available parking spaces impacts all county agencies during a staff recall. A portion of 14th Street was cleared of parked cars and made one way to improve access for mutual-aid units.

Arlington County Court House, where both the ACPD and ACSO are headquartered.

The parking lot near the county government complex on Adams Street used for official vehicles was not secured or regularly patrolled.

ACPD policy requires that plainclothes officers have access to police uniforms, which are important in situations requiring quick recognition of law enforcement authority. Some plainclothes officers reporting to the headquarters did not have uniforms and wore their badges on their outer garments for recognition.

During the initial hours of the response, there was no systematic method for recording when ACPD officers reported for duty, the hours they worked, what posts were staffed, and end-of-shift checkout times. Sergeant Jane Morris began accumulating information within the first 30 minutes, but the situation was fluid and dynamic. On September 12, Sergeant Morris, assisted by Ms. Tamekah Johnson and Ms. Rosemary Sejas, reconstructed time and attendance records from the previous day.

In retrospect, the initial response by ACPD and mutual-aid personnel produced a surplus of officers for the immediate law enforcement requirements. This was not readily apparent at the time, as it was impossible to grasp the scope of the evolving response effort. If the requirements had been known, some officers could have been sent home with instructions to rest and report back for a later shift.

Recall procedures had limited success. The ACSO instituted a "phone tree" notification system of call back to recall personnel. Many deputies reported to work on their own initiative upon learning about the incident on television or radio. Everyone that could report for duty did so. Many encountered, and were slowed by, traffic gridlock.

The ACSO was the only Arlington County public safety organization to issue a public service announcement to local radio and television stations requesting that all ACSO personnel report to work. Prescripted force mobilization messages for other Arlington County public service agencies were not available or issued.

The ACSO immediately assumed a heightened emergency status. The ICP was established on the first floor of the headquarters building. Sheriff Arthur ordered an immediate lockdown of the county detention facility. Perimeter security around the courthouse and detention facility was implemented.

ACSO road units responded immediately in various ways, such as assisting in victim rescue, closing streets, and securing county buildings.

Like other responding agencies, ACSO officials quickly discovered that cellular and landline telephones were ineffective early in the response. ACSO handheld radios are outdated and incapable of monitoring the channels or talk groups of other county departments.

Recommendations and Lessons Learned

The ACPD should thoroughly test the current pager system not only to determine the extent of operator error and technical deficiencies experienced during the September 11 simultaneous notification, but also to recommend and implement corrective actions. (LE-001)

Public service announcements recalling police officers and other critical personnel should be prepared in advance, coordinated with the Arlington County Assistant Manager of Public Affairs, Richard Bridges, and pre-positioned with area media outlets. (LE-002)

The ACPD should develop an MOA with the DPS and MDW for emergency law enforcement support at the Pentagon and possibly at other military facilities in Arlington County. The experience gained during the Pentagon response can serve as a guide for such an agreement. (LE-003)

Arlington County needs to press the case for granting public safety officials cellular priority access service (CPAS) during an emergency. The ACPD should also consider the merits of expanding the department's use of the Nextel Direct Connect two-way feature and two-way pagers. (LE-004)

Arlington County should identify a centrally located site that can serve as a satellite parking area. Buses would then be able to shuttle police officers and other county staff to and from headquarters. (LE-005)

ACPD officers assigned to plainclothes duties are required to keep a complete uniform at headquarters for emergencies that require immediate recognition of police authority. This policy should be strictly enforced. (LE-006)

The ACSO should replace its telephone notification "phone tree" with a pager notification system. (LE-007)

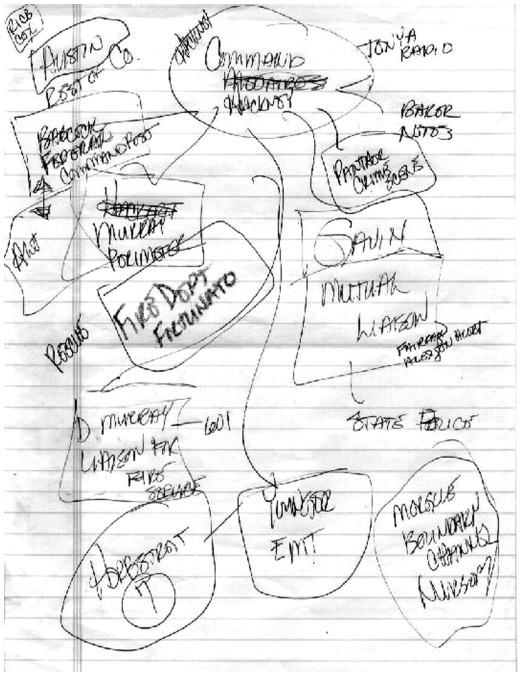
ACSO mobile radios should be replaced with modern devices compatible with those of other county departments and regional public safety organizations. (LE-008)

SECTION 2: COMMAND, COMMUNICATIONS, AND THE INCIDENT COMMAND SYSTEM

Observations

The ACPD previously adopted the ICS as the appropriate response structure for large-scale incidents. Moreover, less than 2 weeks prior to the terrorist attack on the Pentagon, all ACPD command officers participated in routine recurring ICS training. This is important for two reasons. First, law enforcement situations are typically fluid and dynamic, thus the implementation of ICS must be flexible and adaptable. Second, most of the ACPD senior leadership was away from Arlington County on the morning of September 11. As Chief Flynn raced south from the conference in New Jersey, he knew that, in his absence and the absence of Deputy Chiefs Holl and Haas, the officers of the department were trained and prepared to rise to the occasion. His confidence proved justified.

Shortly after Lieutenant Medarios assumed initial command at the incident site on September 11, Captain Rebecca Hackney arrived and took over as Incident Commander. Captain Hackney sketched the initial ACPD ICS assignments on a notepad. Acting Chief James Younger arrived, reviewed Captain Hackney's ICS assignments, then directed Captain Daniel Murray to be ACPD liaison to the ACFD ICP and Captain David Herbstreit to liaison with the FBI. By telephone, he spoke with Deputy Chief Holl, who was returning from Richmond, and requested that he respond directly to the incident site. Deputy Chief Holl arrived at about noon and took over as the ACPD Incident Commander. Deputy Chief Younger reported to the Arlington County EOC, as requested by the County Manager.



ACPD Captain Hackney's first sketch of ICS assignments.

The ACPD loaned its mobile command post to the Arlington County Fire Department (ACFD) to serve as the initial ICP. The ACFD does not have a similar capability. Deputy Chief Holl worked out of the Watch Commander's Ford Expedition. The ACPD formulated a plan to screen pedestrian and vehicular traffic and assign ACPD representatives to the ACFD ICP, the FBI Command Post, EMS Control, the Arlington County EOC, and the ECC. Captain Murray reported to the ACFD ICP and told Chief Edward Plaugher he would remain with the ACFD throughout the fire and rescue operations.

Recognizing that minute-to-minute activities would be all consuming, early in the afternoon of September 11, Deputy Chief Holl assigned Lieutenant Steve

Broadhurst to forecast the issues that would confront the department during the next 6 to 12 hours. Captain Roy Austin was assigned responsibility for department routine operations away from the incident site.

At about 10:15 a.m., ACFD Chief James Schwartz ordered a site-clearing evacuation because of the report of a second hijacked aircraft heading toward the Washington Metropolitan Area. The ACPD ICP moved to an area beneath the I-395 overpass at Hayes Street and set up near the ACFD ICP to facilitate communications and coordination.

Deputy Chief Holl modified the initial ACPD operations plan, adding countersniper overwatch, SWAT support for the ICP and DPS, FBI evidence recovery support, and ACPD employee health and safety. He also established ICS functional activities, some of which were unique to this incident, such as morgue, hotel security, and credentials. (See Figure C-2.)

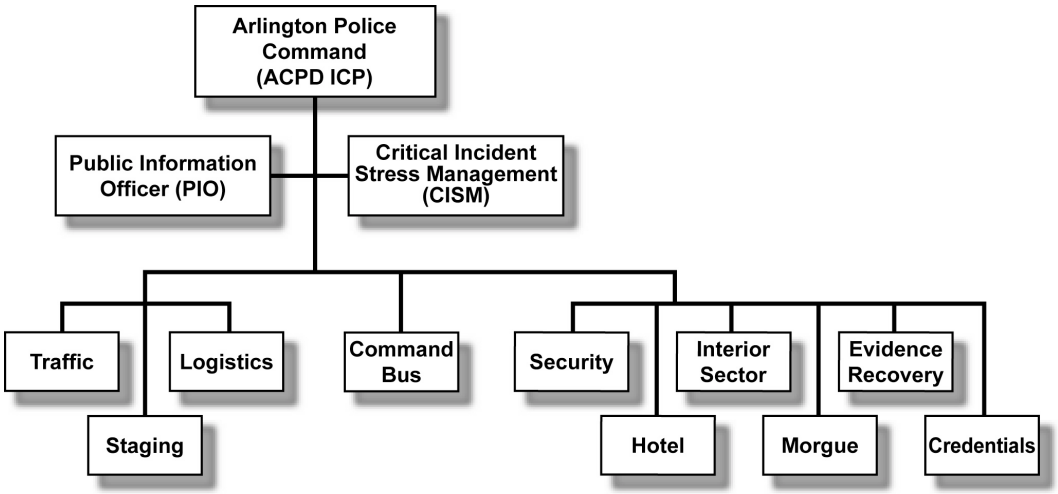


Figure C-2. ACPD ICS Organization Chart.

The nature of the Pentagon response operations demonstrated the importance of flexibility in the ACPD ICS implementation. The ACPD had to manage the on-site incident response and, at the same time, direct routine police patrols throughout the county. ACPD officers volunteered for assignments at the Pentagon, as long as the dates and times did not conflict with their other duties. A volunteer sign-up board was maintained at the roll call room. These assignments were for 12-hour shifts supporting the FBI evidence recovery effort; providing security for sensitive functions, such as the FBI's temporary morgue; working at the ACPD ICP; staffing the incident site access points; providing on-site vendor escort; and similar assignments. ACPD volunteers and mutual-aid officers reported to the staging area at Fire Station 5 for details about their assignment and orientation before deploying to the Pentagon. Staging was a 24-hour operation with five ACPD supervisors rotating 12-hour shifts. Routine county police patrols were managed from ACPD Headquarters. Officers reported to roll call before and after their 10-hour patrol shift. At roll call, officers were briefed and given any special

instructions, particularly related to the threat of potential followup terrorist actions. All of this activity was directed by the ICS staffing command, with two commanders, one administrative assistant, and two student aides assigned to this function.

The ACSO ICP was up and running within 30 minutes of the Pentagon attack. Three section supervisors assumed responsibility for managing the ICP, organizing staffing and resources, and establishing security in and around the courthouse and detention facility. An immediate lockdown of the detention facility was ordered and perimeter security established around the courthouse and detention facility.

Findings

On September 11, many ACPD officers acted on their own initiative clearing congested traffic, opening routes for emergency vehicles, and restoring a semblance of order to a scene that, in some cases, bordered on chaos.

The ACPD Mobile Command Post, on loan to the ACFD to serve as the initial ICP, is too small and lacks the modern technology for an incident as large and complex as that at the Pentagon.

Given the proximity of the ACPD Command Post, the ACFD Incident Commander did not activate an ICS Law Enforcement Branch within the Operations Section. Given the complex jurisdictional arrangements, it would probably have been helpful to have such a branch led by a DPS command officer assisted by an ACPD command officer.

Command post briefing by Deputy Chief Holl.

The Watch Commander's vehicle served marginally as the interim ACPD ICP, but it is too small and is not equipped for extended operations in this role. Had the weather been inclement, command operations would have functioned without mobile shelter. The mobile command post was returned to the ACPD on the third day of the response, after a better-equipped Fairfax County Police Department mobile command unit was made available to the ACFD.

Captain Hackney's quick action in developing a plan for initial ICS assignments ensured a well-organized police response from the early minutes of the incident. When Deputy Chief Holl arrived and took over command, the ACPD was fully deployed and functioning in its planned ICS structure. The ICS added organization and clarified responsibilities.

Because of the several ACPD sector leaders and ICS functional activity supervisors, some officers reportedly received guidance from more than one source, which they sometimes viewed as confusing and even contradictory.

On Day 4 of the response operations, Chief Flynn and Deputy Chief Holl recognized the need to establish an unplanned ICS function, which they designated as "Diplomacy." This activity can best be described as a combination of community relations, protocol, and interagency courtesy. Visiting chiefs of mutual-aid departments and other law enforcement organizations were met, briefed on response operations, and escorted throughout the site. After the incident stabilized, guided bus tours were organized for county employees supporting the first responders so they could appreciate the full magnitude of the incident. When crowds of spectators, some of whom were family members of missing victims, began to gather on a site overlooking the Pentagon, the ACPD provided security and ensured their comfort. Diplomacy became a very important ICS function.

Some law enforcement officers from nonmutual-aid jurisdictions arrived at the incident site offering assistance. Arlington County had not requested their help and their presence could have created personal accountability as well as jurisdictional and legal problems.

Initially, ACPD command meetings were conducted every 2 hours. As time passed and police operations became more routine, these meetings occurred less frequently, eventually occurring at ACPD Headquarters at 5:00 p.m. each evening.

The ACPD does not have an MOA or similar understanding with the MDW or DPS regarding the provision of emergency law enforcement at the Pentagon. The division of responsibility on September 11 was based solely on the initial verbal agreement between ACPD Lieutenant Medarios and a DPS official.

ACPD officers volunteering to work at the incident site reported to the staging area at Fire Station 5, where they received assignments and special instructions. Officers scheduled for routine patrol throughout the county attended roll call at ACPD Headquarters at the beginning and end of each 10-hour shift. At roll call, officers received all the information needed to perform assigned duties. Many of

these officers reported they would have liked to have been given additional information about ongoing response activities. This was addressed later in the week by issuing department-wide voicemail messages.

The ACPD communications network established for this incident used 5 of the 14 available radio channels. Each sector (i.e., Evidence Recovery, Perimeter Security, Motors, and Special Weapons and Tactics) had a dedicated channel. The sectors shared a common command channel. Once radio discipline was restored and the initial volume of traffic subsided, the ACPD radio system worked well.

All ACPD officers are issued a portable radio. Spare ACPD radios were provided to officers from responding mutual-aid jurisdictions. "RIBS," Radio-in-a-Box System, was deployed to the ACPD ICP. This mobile radio has a power supply that plugs into an electric outlet and is used as a portable base station.

The Arlington County ECC had available a new radio interoperability system designated "AGILE" (Advanced Generation of Interoperability for Law Enforcement). This new system evolved from a test program conducted in Alexandria beginning in 1998. AGILE permits law enforcement agencies using different radio frequencies to communicate with each other. It was not deployed during the Pentagon response because there had not been sufficient operator training.

Incident status briefing at ACPD Headquarters. (Chief Flynn on the right.)

Sustaining continuous communications was a challenge. Over time, radios failed because the battery life is relatively short. The ACPD bus driver who transported

mutual-aid officers to their posts was given the additional assignment of replenishing radios and batteries.

Some deploying mutual-aid police brought their own portable radios, which could be reprogrammed by the operator to the appropriate ACPD channel. However, some jurisdictions, including Fairfax County, require a trained technician to reprogram radio channels. During the first 3 days of operations, there were numerous instances when mutual-aid officers on post did not have radio communications with either the ACPD or the ACFD.

Cellular telephone connections were impossible in the first few hours. Additional temporary cellular sites were activated by the evening of September 11 and cellular telephone communications were more effective.

As soon as it became apparent that the response to the attack on the Pentagon would be protracted, the ACSO ICP was relocated to a conference room in the detention facility building. The conference room is large enough to accommodate the ICP and has facilities appropriate for a large-scale incident.

Although the Arlington County Comprehensive Emergency Management Plan (CEMP) does not assign tasks to the ACSO, Sheriff Arthur and Chief Deputy Raffo reported to the Arlington County EOC to see how the ACSO might be most useful during the incident response. An ACSO presence remained at the EOC during operations coordinating numerous support requests and performing many useful services.

Chief Flynn briefs the media.

Recommendations and Lessons Learned

The ACPD should recommend, in incidents not commanded by law enforcement organizations, a Law Enforcement Branch be established within the ICS Operations Section. (LE-009)

The ACPD Mobile Command Post should be modernized with new computing and communications equipment and up-to-date command center software, and enlarged. (LE-010)

Records of events should be maintained, including the names of command post visitors. Standard ICS forms are available for use or to serve as models to create ACPD management aids. (LE-011)

A pocketsize field operations guide including instructions for establishing law enforcement ICS functions should be issued to all command officers and supervisors. (LE-012)

To minimize confusion, lines of authority and the guidance given to ACPD and mutual-aid officers need to be absolutely clear. (LE-013)

Unless specifically requested by the host county, other jurisdictions should not dispatch public safety units to the scene of a WMD attack. Under no circumstances should "freelance" law enforcement officers be allowed access to the incident site or permitted to operate in the local jurisdiction. (LE-014)

Based on the experience of responding to the terrorist attack on the Pentagon, the ACPD should review its current staffing and equipment levels and make adjustments to accommodate WMD events of extended duration and expanded operational requirements. (LE-015)

Other jurisdictions should consider defining an ICS function similar to that designated by the ACPD as "Diplomacy." In a major incident response, how you interact with organizations and individuals is critical to a successful response and to maintaining productive relationships during and after the incident. (LE-016)

Public safety organizations in high-priority locations, such as the Washington Metropolitan Area, must be staffed and equipped for sustained operations. (LE-017)

Using the ACPD bus driver to replenish radios and batteries was a handy expedient, but a fully equipped logistics support vehicle is probably a better alternative. (LE-018)

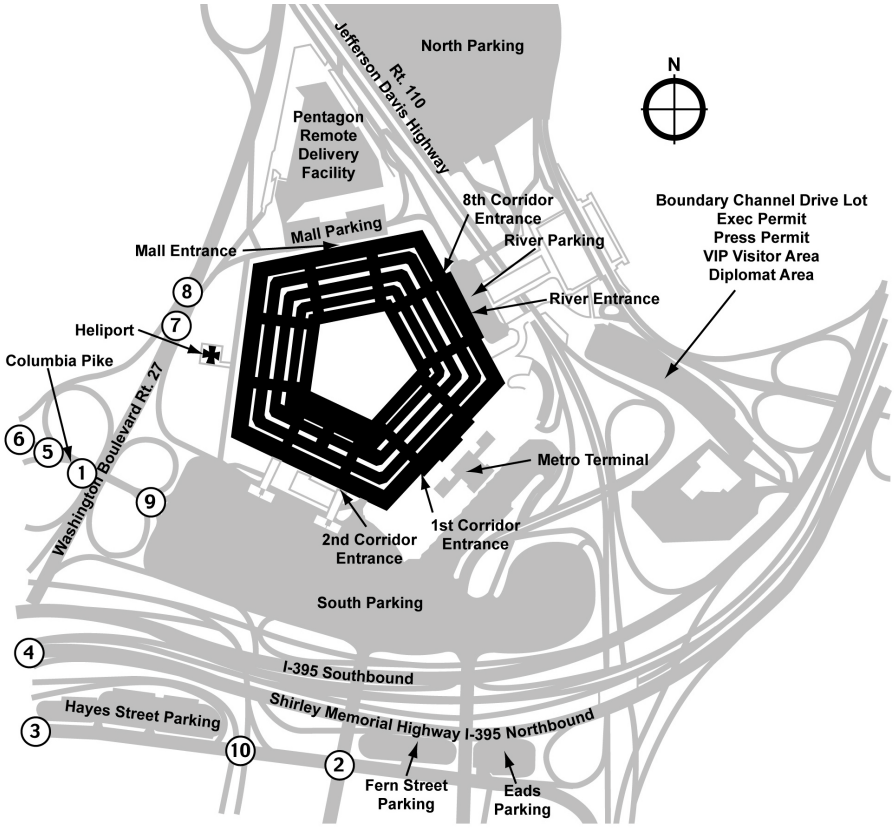
A comprehensive regional assessment of communications interoperability is in order. WMD events do not recognize jurisdictional boundaries. All jurisdictions must be prepared to operate in a mutual-aid environment. (LE-019)

The Arlington County CEMP should be amended to provide for the presence of an ACSO representative consistent with assigned responsibilities. (LE-020)

SECTION 3: OPERATIONS

Observations

The challenge confronting Arlington County law enforcement agencies in the aftermath of the September 11 terrorist attack on the Pentagon was formidable. First of all, routine requirements did not vanish. Arlington neighborhoods still had to be protected and emergency calls had to be answered. Nearly 60 percent of the 362 ACPD uniformed officers and supervisors are regularly committed to the community policing program. For example, during the early hours of the incident, two automobile accident fatalities occurred in the county, requiring notification of next of kin. In addition, the Pentagon response created many additional police requirements. As an example, perimeter security was provided at 10 posts around the Pentagon with 31 officers. (See Figure C-3.)



1 Washington Boulevard (southbound) left ramp to Pentagon (authorized vehicles only)
2 Army-Navy Drive at S. Fern Street (ONLY EMERGENCY VEHICLES into South Parking)
3 Army-Navy Drive at S. Joyce Street (northbound S. Joyce Street CLOSED to all vehicular traffic)
4 Northbound I-395 at Route 27 (Exit 8B) (authorized vehicles only)
5 S. Joyce Street/CITGO Station (MEDIA Control) (keep media away from Landing Zone and Washington Boulevard)
6 Eastbound Columbia Pike at S. Joyce Street (Columbia Pike CLOSED east of S. Joyce Street) (authorized emergency vehicles only)
7 Eastbound Washington Boulevard at crash site (control access to crash site)
8 Westbound Washington Boulevard at crash site/Columbia Pike (keep pedestrians and unauthorized personnel west of Washington Boulevard)
9 South Parking ramp to eastbound Washington Boulevard (ramp from South Parking CLOSED) (authorized emergency vehicles only)
10 Ramp from Army-Navy Drive/S. Hayes Street to I-395 S (roving patrol to keep pedestrians and stopped vehicles off ramps)

Figure C-3. ACPD posts at entry points to the Pentagon.

Sixty officers and supervisors volunteered to support the FBI's evidence recovery efforts. Others provided security at two local hotels, one housing Urban Search and Rescue (US&R) team members and the other housing families of victims. ACPD personnel were assigned to the Arlington County EOC, the JOC, and as representatives at the ACFD ICP. The ACPD Property Office stayed open 24 hours a day. Captain Mary Garvin and Lieutenant Karen Herchenroder managed the ACPD staffing function, another around-the-clock operation.

Approximately 1 week into the incident response, military reservists were called to active duty. The ACPD staffing command identified 14 ACPD personnel with military reserve status and recommended the disposition of each of them based on the needs of the department and relevant military reserve units.

ACPD policies were adapted to meet the circumstances of the occasion. Some were official and formally announced: leave was canceled until October 1; outside training was canceled; all officers were reminded to carry pagers and check voicemail twice daily; mourning bands for badges were authorized until October 1. Other policies were implemented more subtly. The ACPD strove to maintain an appearance of normalcy throughout the county. Thus, mutual-aid officers were used extensively on stationary posts at the Pentagon, freeing ACPD officers to maintain routine patrol duty. ACPD officers, with prior department approval, are authorized to accept private employment while off duty for up to 30 hours each week, with the understanding that they are always subject to recall. Off-duty employment generally consists of providing such uniformed services as security at athletic or cultural events and similar activities. These are high visibility activities to which the public is accustomed. The ACPD decided not to cancel off-duty employment as long as it did not conflict with duty assignments during the response.

Mutual-aid agreements with nearby jurisdictions enabled the ACPD and ACSO to meet all obligations. Arlington County participates in the Northern Virginia Law Enforcement Mutual-Aid Agreement of May 1, 1991. Police departments from Alexandria, Fairfax County, Fairfax City, Falls Church, Loudoun County, Manassas, Prince William County, and George Mason University provided mutual-aid support to the ACPD. Deputy sheriffs from the city of Alexandria and Fairfax, Fauquier, and Prince William Counties reinforced the ACSO under the terms of the Northern Virginia Sheriff's Mutual-Aid Agreement. Greenbelt and Prince Georges County, MD, and Washington, DC, also dispatched police units to Arlington County. Altogether, more than 300 mutual-aid police officers and sheriff deputies were engaged in the law enforcement response, along with 200 military police from the MDW.

To assist in staging law enforcement personnel, the ACPD arranged with the ACFD to stage personnel at Fire Station 5. It is close to the Pentagon and collocated with a community center with rooms available for officers to rest between assignments. All ACPD and mutual-aid officers volunteering for duty at the Pentagon reported to the staging area to receive instructions before proceeding to the incident site.

During the first few days of the response, there were numerous reports of bomb threats and other suspicious circumstances. On one occasion, three suspicious persons were apprehended in the staging area used by the national and local media support equipment and vehicles. The three subjects were questioned and eventually released. The following morning, the ACPD and mutual-aid SWAT teams were ordered to take positions on the roof of the Navy Annex and on the north and south roof segments at the Pentagon. These positions offered a vantage overlooking the impact site, the principal response area, and the surrounding area. The ACPD and DPS SWAT team members walked patrols together throughout the incident site.

Performing site security.

The enthusiastic support and demonstrations of appreciation by Arlington County residents were heartening. Volunteers came forward with every imaginable form of support, such as food, blankets, refreshments, and offers of help. Banners and placards across the county proclaimed the pride of Arlington citizens in their police officers, sheriff deputies, and firefighters.

Recognizing that many Americans are called upon to make sacrifices when the Nation's security is threatened, the ACPD found a way to express its gratitude to others traveling in harm's way. Early in the response, an ACPD police officer at the incident site had acquired an American flag. Captain Tom Panther, with the help of a cooperative Verizon employee and his "cherry picker," hung the flag from the highway overpass above the ACPD ICP. When the fire and rescue phase of the operation was phasing down, the ACPD decided it would be appropriate if their "battle flag" could continue its service in the war against terrorism. Captain Panther's neighbor is a U.S. Navy officer assigned to the Pentagon. With his help, FedEx delivered the flag to Norfolk, VA, on Friday, September 21. On October 21, it flew from the mast of the

USS *Enterprise* flying the ACPD ICP Flag.

USS *Enterprise* as air strikes were launched against al Qaeda forces in Afghanistan. When the USS *Enterprise* returned to homeport, Captain James Winnefeld, U.S. Navy, visited the ACPD and returned the flag, which now rests in a place of honor in ACPD Headquarters.

Eighty percent of the ACSO deputies are assigned to 12-hour shifts at the detention facility. Most of the others support the county judiciary offices, providing courtroom security, serving subpoenas, and performing similar tasks. The ACSO achieved some initial temporary relief when Arlington County judges accepted its recommendation to order the courts closed on September 12, freeing up 20 deputies. However, requirements to secure county buildings, including the EOC, provide transportation and escort for county officials, deliver meals to responders at remote locations, and assign representatives to the EOC, JOC, and other locations quickly consumed these additional resources.

Findings

There is no current, comprehensive, and coordinated Washington Metropolitan Area regional evacuation plan. In addition, actions taken by one jurisdiction that impact others are not always coordinated. For example, in this incident, closing Federal Departments and agencies on the afternoon of September 11 was not coordinated with the Virginia State Police or Virginia Department of Transportation (VDOT). ACPD Chief Flynn has raised concern that, without proper coordination, one jurisdiction might easily direct evacuating traffic into another jurisdiction's roadblocks.

Control of site access was a monumental challenge. Access control had been a problem following the bombing of the Alfred P. Murrah Federal Building in Oklahoma City and law enforcement authorities instituted a color-coded wristband identification system. Having read about this in an after-action report after the 1996 incident, the ACPD ordered 2,000 wristbands, which were stored in the mobile command unit. On the afternoon of the second day of the Pentagon response, Chief Flynn gave the red, yellow, blue, and green wristbands to the DPS. The complete supply was gone within a period of 2 hours. Beginning on the third day, the DPS made its badging system available to produce identifying credentials, but it was inadequate for a task of this magnitude. Finally, the FBI asked the USSS for help. The USSS trained members of the WMD Army Band to operate its five badge-making workstations and an effective system was implemented.

The fact that the ACPD and ACSO have separate mutual-aid agreements caused some coordination problems. Law enforcement jurisdictional authority outside the Pentagon grounds clearly belonged to the ACPD; however, in some instances, mutual-aid sheriff's units requested by the ACSO reported for duty at the ACPD staging area without prior coordination. Had they been requested to support ACSO operations, there would not have been a problem. However, without prior coordination, the ACPD had to find assignments for these units.

ACPD managed its mutual-aid assets judiciously. Wherever possible, mutual-aid personnel were assigned to stationary posts, including Pentagon access points,

freeing ACPD officers to patrol familiar routes. Chief Flynn chose to delay some offers of assistance from nearby jurisdictions, bringing them in as replacements during the second and third week of operations.

The Staffing Command at ACPD Headquarters was the focal point for mutual-aid support planning and coordination. Offers of support from mutual-aid departments were considered from the perspective of specific staffing requirements: how much help was needed, when, and for how long. Chief Flynn reviewed most of the requests to ensure mutual-aid partners were properly integrated into the operation. Confirmation of the support requested was very specific: "Six officers for 12-hour shifts, from 6:00 a.m. until 6:00 p.m., September 17, 18, and 19." As this process became relatively routine, mutual-aid officers reported directly to staging at Fire Station 5 before beginning their assignments. Some individual officers from other jurisdictions called offering to help without the approval of their department; in other cases, mutual-aid units wanted to bring others with them. These offers were refused. Such ad-hoc practices complicate insurance liability, workman's compensation, overtime payment, and other issues.

Keeping track of the locations of ACPD police vehicles was problematic during the first 24 hours. On occasion, officers scheduled to use a particular vehicle discovered it had been commandeered for a different task. An automatic vehicle locator (AVL) system would have prevented this problem.

As time progressed, the ACPD increasingly used mutual-aid officers on the Pentagon perimeter, releasing its own officers to patrol the county. This made sense in view of the community policing program and familiarity with the Arlington County roadways and neighborhoods.

Shift arrangements were not standardized. The ACPD assumed 12-hour shifts at the incident site for those volunteering to support FBI evidence recovery operations but retained 10-hour shifts throughout the rest of the county. This complicated the staffing function since all overtime hours (the 12-hour shifts) had to be staffed with volunteers. The shift duration for mutual-aid units supporting the ACPD varied depending on their assignment. The ACSO adopted a 12-hour shift for all its personnel.

Time and attendance records after September 11 were meticulously kept. Sergeant Morris personally collected all overtime sheets every day and double-checked all attendance records. It was not until the second week of the response that the ACPD learned that FEMA also required a description of the duties performed by each officer during the recorded time period. Sergeant Morris and the administrative staff had to recreate all of this information.

ACPD leaders took exceptional care to protect the well-being of its officers. They provided extensive critical incident stress management (CISM) and insisted officers take sufficient time off. CISM intervention is designed to reduce the impact of stressful events and accelerate recovery for those directly and indirectly involved. The ACPD senior leaders, however, did not always follow these same prudent policies. Fortunately, several ACPD command officers and

other key personnel, including Deputy Chief Haas, were on vacation or business travel on September 11. Their subsequent return to duty provided a wave of fresh leaders to replace those who had been overcommitted since Day 1. After the incident, ACPD leaders recognized the need for additional training to help supervisors recognize quickly and respond to the signs of fatigue and stress among the staff.

Downsizing and phasing out of mutual-aid and volunteer support requires a significant degree of political sensitivity. It is important that the help of volunteers and other supporting agencies is recognized. A concerted effort was made by ACPD supervisors at the staging area to recognize the important contributions of those volunteering to work at the incident site.

The ACPD did not have sufficient personnel to respond to the many calls from Arlington businesses seeking police security protection. Most of these requests were unrealistic, reflecting the initial concerns of businesses in the first several hours after the Pentagon attack. Auxiliary officers, such as school crossing guards and special event traffic control, as well as police recruits in training, were pressed into service to augment the ACPD wherever practical and prudent.

VDOT closed the northbound lanes of I-395 and the Virginia State Police guarded the I-395 exit ramps. High Occupancy Vehicle (HOV) lanes were reserved for emergency vehicles. The ACPD created six pedestrian and vehicle access points onto the incident site. Specific categories of vehicles were assigned different entrances; for example, emergency vehicles were directed through one gate, while supply vehicles were sent to another.

The DPS was fully engaged in and around the Pentagon and unable to help staff the entry gates onto the site. This placed the burden on the Virginia State Police, ACPD and mutual-aid officers, who did not have jurisdictional authority inside the perimeter to determine whether vehicular and pedestrian traffic should be permitted onto the Pentagon grounds. There was seldom advance notice of delivery vehicles carrying supplies and other critical items. It often took several calls to verify legitimate visitors and give them accurate directions or arrange for escorts. Beginning on September 12, the ACSO assigned three vehicles to the ACFD Logistics Section to escort vendors from the entry point to the incident site delivery location.

Even as the pace became more orderly following the first hectic days, emergency vehicles sometimes operated at unsafe speeds while entering the Pentagon grounds. An ACPD safety officer was assigned to monitor this and other safety factors beginning on September 13. All ACPD supervisors were also reminded of the dangerous conditions. Safety was regularly discussed at ACPD command briefings.

The ACPD provided three 20-person teams that worked a 12-hour shift on alternating days supporting the FBI's evidence recovery sifting operation in the North Parking Lot. This was physically exhausting work that was also psychologically stressful. These officers raked through the debris searching for evidence, body parts of victims, and classified materials.

The ACPD has traditionally been equipped with personal protective equipment (PPE) better suited for crowd control at a political rally than a WMD terrorist event. In preparation for the upcoming International Monetary Fund (IMF) conference, additional chem/bio filters had been issued for all ACPD officers' respirators. The teams supporting the FBI were issued latex over-boots, protective overalls, respirators, safety glasses, head covers, and heavy leather gloves worn over latex gloves.

The stress caused by this evil event extended not just to the first responders, but to their families as well. Although Arlington County's exceptional Employee Assistance Program (EAP) was enormously successful, Sergeant Regina Heising and Emergency Communications Technician Nan Holl suggested and helped plan a special CISM program for ACPD personnel and their families. The Arlington County CISM staff conducted this program at Fire Station 5 on September 23. Babysitting services were provided and counselors spoke with officers and their families. The ACPD extended an invitation to the ACSO and their families to join in the program. The event included a bus tour of the incident site. It was extremely beneficial and well received by the participants. The Reverend Larry Tingle, the ACPD chaplain, participated in the family support program and also visited with officers at the staging area throughout the incident response.

VIP visitors, including President Bush, Defense Secretary Rumsfeld, and several delegations of U.S. Congress members, visited the Pentagon during the first week of the response. In each case, the ACPD and Virginia State Police provided motor escorts within the county and on the Pentagon grounds.

President Bush and Defense Secretary Rumsfeld visit the impact area.

In the absence of a JIC, Arlington County Assistant Manager for Public Affairs Dick Bridges held daily press conferences. Because of the nature of the event, there was continuing media interest in law enforcement activities at the incident scene, over and above the periodic briefings by the Attorney General and the FBI Director. The ACPD helped fill this void by providing regular vignettes about day-to-day police activities at the Pentagon. On one occasion, they provided the ECC tape of the initial call by ACPD Corporal Foust reporting the crash of Flight #77. On another day, the ACPD introduced a cadaver dog with lacerated feet injured during search and rescue efforts. This filled a small but important public information void. The day following the story about the injured dog, a case of 50 "doggie booties" was delivered to the staging area at Station 5.

Managing donated goods and services was an unanticipated challenge. Private companies, charitable organizations, and citizens of Arlington and elsewhere

wanted to contribute goods, services, and money to the response effort. Fire Station 5, a highly visible public safety facility with a great deal of response related activity, became a natural depository for donated materials. Lieutenant Paul Larsen and his colleagues managing the staging activities found themselves acting as supply agents, receiving and storing boxes of underwear, 1,000 donated pillows, a delicatessen worth of food items, and that case of doggie booties. This was a countywide phenomenon and must be dealt with comprehensively by Arlington County. Citizen participation must be encouraged, appreciated, and properly channeled.

After the end of the response operations, the ACPD made a special effort to thank those organizations and agencies that provided support, sending letters of appreciation to vendors and individual citizens who provided goods or services.

Beginning on Day 4, the ACPD assigned an officer to record activities that can be used in the next CALEA accreditation assessment. The experience gained during the Pentagon response covered many assessment standards, including jurisdiction and mutual aid; operational readiness; EAP; special purpose vehicles; unusual occurrences; media; communications; and collection and preservation of evidence.

Many county employees and volunteers were assigned to support the programs implemented for family members of missing victims at an Arlington hotel. They were told to park their automobiles in a regularly restricted area and that parking violation tickets would not be issued. Not all members of the ACPD were informed of this policy and several tickets were issued and later forgiven.

Expressions of public gratitude continued long after the response ended. Requests for ACPD "heroes" to attend and be recognized at public gatherings continued for months after the incident response. At some point, these well-intended gestures become almost divisive, as others in the department who did everything asked of them, and often much more, go unnoticed.

The Arlington County CEMP does not provide ACSO presence at the EOC. However, Sheriff Arthur and Chief Deputy Sheriff Raffo immediately reported to the EOC to offer ACSO assistance. An ACSO representative remained at the EOC during operations. They provided emergency vehicles to transport county officials throughout the area and escort supply trucks to the Pentagon. Because of the demands on Assistant Manager Bridges, he was assigned a full-time deputy and an ACSO vehicle.

The ACSO does not have the resources for intense operations of protracted duration. Off-duty personnel can augment on-duty staff, but only in an overtime capacity.

On the afternoon of September 11, the Arlington County Emergency Management Team at the EOC requested that the ACSO arrange for its vendor, ARAMARK, to provide 1,000 hot meals for responders at the Pentagon. ARAMARK prepares meals for inmates and ACSO staff at the county detention facility. Usually, when the EOC is activated, ARAMARK provides about 30 meals

to the Emergency Management Team and supporting county employees. A second order for 1,000 meals was placed at 7:00 p.m. that evening, as well as an order for 3,000 snack bags. ARAMARK staff from the Alexandria and Fairfax County correction facilities helped fill these requests from the kitchen at the Verizon building in Arlington.

Recommendations and Lessons Learned

Arlington County should work with neighboring jurisdictions and other emergency response agencies and volunteer organizations to implement a uniform identification system. Such a system should be in place and used routinely but should provide a starting point to rapidly expand the credentials process during a large-scale emergency. (LE-021)

Shift duration for emergency response operations should be standardized and uniform for all law enforcement personnel. It appears that a 12-hour shift is best suited for protracted operations. It has the advantage of placing all personnel into a single resource pool. Days off should be factored into the schedule from the start. (LE-022)

The ACPD should acquire an AVL system to track the locations of its patrol fleet. (LE-023)

It is important to develop a plan early regarding how, when, and where to use mutual aid and to request such aid in specific detail to avoid confusion and misunderstanding. (LE-024)

When other agencies request law enforcement support, such as closing a particular road or clearing a parking area, it is important to record the details of the request and the person making it to ensure it is legitimate and based on proper authority. (LE-025)

The public needs a place to visit to feel part of the incident response. Determine an appropriate location considering safety, security, and area traffic. Sensitize police officers to the tremendous impact of such horrendous incidents on the entire community. (LE-026)

Agencies engaged in extended response operations should expect participants to become fatigued. Train supervisors to recognize the early signs of fatigue and act quickly to provide relief, recognizing the reluctance of participants to leave the job. (LE-027)

Law enforcement agencies working with responsible government officials should follow the example of the ACPD and Arlington County public affairs and help the media find good stories that exemplify the work of all parties engaged in the response. (LE-028)

Law enforcement agencies should include nonsworn employees and personnel from supporting government agencies in briefings or tours of the incident site.

Their support and understanding are important to a successful response and recovery. (LE-029)

Requests for continuing public recognition following a major incident response should be referred to the appropriate local government official, in this case the Arlington County Assistant Manager for Public Affairs. That official can determine whether or not and in what manner to comply with the request. (LE-030)

The ACPD should work jointly with the DPS to prepare the entry points established on the Pentagon perimeter for use during future emergencies. Such preparations might include permanent shelters for law enforcement personnel and electronic connectivity for telephones and computers. The ACPD, DPS, and the ACFD Logistics Officer should collaborate on a system to inform entry point security officers about schedules for anticipated deliveries. (LE-031)

Maximum safe speed limits should be posted and strictly enforced on incident site grounds to avoid placing at risk responders helping others in jeopardy. The Incident Commander should establish these safeguards in conjunction with the Operations Section Law Enforcement Branch and the Incident Safety Officer. (LE-032)

CISM proved to be a valuable part of the public safety response operations. Too often, individuals in high-risk occupations fail to acknowledge their own mortality and the legitimate need for psychological as well as physical renewal. Arlington County government needs to continue incorporating CISM into all activities so its services are fully appreciated and sought when crises occur. Senior leaders are not immune from the stress-induced damages of WMD incidents and should ensure they protect and rehabilitate themselves as well as those entrusted to their care. (LE-033)

As in this incident, in future extended response operations, Arlington County should establish a citizens' "hotline" to receive and coordinate offers to donate goods and services. An improved database should be developed to track offers of support and manage the process. (LE-034)

The Arlington County CEMP should be revised based on experience gained during the Pentagon attack. Workspace should be provided for the ACSO consistent with responsibilities included in the CEMP. (LE-035)

The ACPD and ACSO should review standard PPE and upgrade it to meet the protection requirements appropriate for activities identified in the CEMP. Recommended PPE for law enforcement officers is specified in a November 1999 report issued under the auspices of the Chemical Warfare Improvement Response Program (CWIRP). (LE-036)

PART II

DEFENSE PROTECTIVE SERVICE

SECTION 1: INITIAL RESPONSE

Observations

The DPS is the law enforcement agency responsible for the Pentagon and 24 additional off-site DoD locations in the Washington Metropolitan Area. It provides a full range of law enforcement and security services. DPS Headquarters is located inside the Pentagon, which is served by 303 officers and supervisors under the leadership of Chief Jester. All 251 armed officers of the Law Enforcement Division are graduates of the Federal Law Enforcement Training Center at Glynco, GA. The Law Enforcement Division Operational Services Branch provides around-the-clock police services and includes a Special Operation Detachment consisting of the Emergency Services Team, the Protective Services Unit, and a K-9 Unit with explosive detection capabilities. The Law Enforcement Division also manages more than 400 contract guards that staff their off-site facilities. The 51-person Security Services Division is the non-sworn (unarmed) part of the DPS responsible for administrative matters, transportation and equipment, and court liaison.

On the morning of September 11, 2001, Chief Jester was in his Pentagon office watching television reports of the first World Trade Center attack. When the second World Trade Center attack occurred, he immediately increased the DPS security level and ordered additional outside patrols. Shortly after issuing these orders, he felt the building shake and saw smoke from his office window. He immediately went to the DPS Communications Center for a damage assessment, but the closed circuit television security camera nearest to the point of impact had been destroyed by the crash.

DPS Chief John Jester.

The DPS response was almost instantaneous as some officers witnessed the crash and went immediately into action. They helped injured victims find their way out of the building, activated fire alarms throughout the Pentagon, guided building evacuation, and helped seal off and secure the impact area. Even though smoke filtered into the DPS Communications Center within the first hour after the attack, DPS staff made the necessary notifications, contacting the Arlington County ECC, FBI, ACPD, and MDW. They also began recalling off-duty officers.

Findings

The first actions by DPS officers were fighting the fire, helping injured victims to safety, directing building evacuation, and securing the incident site. DPS personnel collected as many fire extinguishers as possible and attempted to put out fires. Others ran through the corridors and hallways activating fire alarms and helping occupants evacuate the building. Initially, all building occupants were directed to exit through the north side of the Pentagon. Still other DPS officers set up a perimeter around A-E Drive and the crash site to keep people away from those areas.

Evacuation.

By agreement with the DPS, the ACPD secured the outer perimeter around the Pentagon, established traffic control, and closed access roads. The DPS secured the building, staffed all entrances, and guarded high-risk areas, such as the Secretary of Defense's office complex. Chief Jester indicated there was instant trust among emergency response agencies since they have worked together on many incidents and special events in the past.

Many military personnel working in the Pentagon wanted to help the DPS officers and other responders immediately after the attack. They were neither equipped nor trained to do so and, in most instances, could best help by evacuating the premises themselves.

The Pentagon evacuation plan requires that every office publish and prominently display primary and alternative building evacuation routes and assembly areas. Although evacuation drills are scheduled quarterly, participation is encouraged but not mandated.

Most building occupants realized this evacuation was real. However, there were instances where personnel were unfamiliar with evacuation routes and became confused. Some personnel, working in secure areas on sensitive issues, had to be convinced of the seriousness of the events for them to evacuate. Because of the size and design of the Pentagon, building occupants working in offices on the opposite end from the crash site were not immediately aware of the attack.

DPS officer on security patrol.

Armed DPS officers are not permitted to carry weapons while off duty. The area where weapons were stored was damaged in the attack, making the retrieval of those weapons difficult. Weapons are needed in the performance of their duties, including providing armed escorts for transporting classified materials.

During the first 2 hours of the incident, traffic congestion and closed roadways made it difficult for recalled DPS personnel to reach the Pentagon.

Twelve-hour shifts were immediately established for all DPS personnel.

DPS Deputy Chief John Pugrud went to the ACPD commander at the ACPD auxiliary command post in the Center Courtyard and offered the support of eight DPS Security Services personnel.

Recommendations and Lessons Learned

Evacuation drills should be conducted monthly and should be mandatory for all Pentagon occupants. The Pentagon will always be an attractive target to terrorists. Officials cannot afford to rule out the possibility of another attack. (LE-037)

The weapons policy for armed DPS officers should be reviewed. An alternative weapons storage site should be explored. In addition, the legal and policy implications of allowing DPS officers to carry their weapons while off duty warrants review. (LE-038)

The DPS should conduct regular tabletop exercises with area law enforcement and fire and rescue agencies at the Pentagon and other facilities protected by the DPS. Tours and orientations should be regularly presented to the ACFD and other area public safety agencies. (LE-039)

SECTION 2: COMMAND, COMMUNICATIONS, AND THE INCIDENT COMMAND SYSTEM

Observations

The DPS operates under the ICS for emergency response. Chief Jester served as the DPS Incident Commander for the Pentagon response, establishing the DPS Communications Center as the ICP. An auxiliary DPS command post was established in the Center Courtyard where DPS Security Services supported the ACFD.

The DPS established immediate contact with the ACFD Incident Commander and the FBI On-Scene Commander. Direct and continuous coordination with the FBI was essential so evidence recovery efforts also contributed to the process of gathering DoD classified documents, materials, and storage containers mixed in the rubble. At shift changeover, DPS Security Services personnel coordinated with the incoming and outgoing FBI Evidence Recovery Team leaders at the FBI ICP and at the North Parking Lot area evidence collection site. This continuous coordination reduced and resolved problems and precluded misunderstandings. These critical communications ensured the FBI understood the valid mission of DPS Security Services and was able to help in the effort. DPS Security Services personnel worked diligently to secure classified materials, but did not hinder the rescue, recovery, and crime scene operations.

Findings

Interacting with military personnel was occasionally frustrating because they were unfamiliar with the ICS.

DPS representatives attended FBI shift-change briefings, ACFD Unified Command team meetings, and worked at the JOC after it opened on September 12.

The initial building evacuation was accomplished in less than 1 hour. The public address (PA) system “Giant Voice” was used with a prerecorded message modified to convey specific instructions regarding this event; for example, building occupants were instructed to exit on the north side of the Pentagon. This recording continuously repeated throughout Wedges 3, 4, and 5 of the Pentagon. Because of the ongoing renovation work, the PA system was not functioning in Wedges 1 and 2 where the impact occurred.

Because the DPS did not have handheld bullhorns, officers had to knock on doors and enter offices to ensure all personnel got out safely.

The parking lots were evacuated quickly. Amazingly, only three vehicles had to be towed.

The DPS backup communications system is located at the Navy Annex, Federal Office Building 2 (FOB2), next to the Virginia State Police barracks overlooking the Pentagon. Had it been necessary to relocate the DPS Communications Center to this site, communications would have been interrupted for

approximately 45 minutes. The backup communications system has never been tested.

Cellular and landline telephone communications were virtually unreliable or inaccessible during the first few hours of the response. However, as time progressed, cellular telephone communications were helpful as the volume of radio traffic continued at a higher than normal level. On the afternoon of September 11, Verizon technicians and the USSS technical staff installed portable cellular towers onsite at the Pentagon. This significantly increased cellular telephone access. A cache of cellular telephones was also provided by both organizations.

The DPS issued new cellular telephones to the on-duty shift and distributed the new telephone numbers to the ACFD Incident Commander, the FBI, and other response organizations. When the shift change occurred, new telephones were issued to the replacement personnel. As a result, a second telephone directory had to be distributed with new numbers for each DPS position. Incumbent officers should have surrendered the cellular telephones to their replacements, avoiding the need to distribute a second telephone number directory.

DPS Security Services Division personnel do not have assigned radios. Thus, they were initially unable to communicate by radio with DPS law enforcement officers. This lack of communication was debilitating because Security Services personnel are not armed and require a DPS law enforcement escort when transporting classified materials. Portable communications would have enhanced operations for DPS Security Services, allowing communications with the DPS Incident Commander and accelerating requests for armed escorts. The DPS acquired additional portable radios and issued them to Security Services.

Recommendations and Lessons Learned

The DPS should offer to Pentagon building occupants a regular orientation or videotape describing the ICS and how it functions. This initiative should be undertaken in coordination with the ACFD and MDW so it is also available to other DoD sites. (LE-040)

As the Pentagon renovation work continues over the next decade, the DPS should consider expedient alternatives to disseminate emergency information in those Wedges undergoing construction. There are always large numbers of contractors and construction workers in those areas and, depending on the renovation status, others might also be occupying some of the space. (LE-041)

The DPS should procure bullhorns or other portable PA devices to augment the central system. (LE-042)

The backup communications system should be regularly tested, including relocating the DPS Communications Center staff. (LE-043)

Cellular telephones should be assigned to specific positions and passed along by each officer performing those duties so there is only one telephone directory. (LE-044)

All DPS personnel should have access to portable radios. (LE-045)

SECTION 3: OPERATIONS

Observations

The DPS has substantial capabilities and its personnel have extensive training and responsibilities. Officers of the DPS Law Enforcement Division are trained at the Federal Law Enforcement Training Center in Glynco, GA. They receive the same training as other Federal officers, including USSS and Immigration and INS officers. The 251 Law Enforcement Division officers patrol the Pentagon grounds, screen mail and courier packages, guard entrances and sensitive areas, respond to bomb threats, and manage the 400-person contract guard force that works at other DoD facilities in the area. The unarmed Security Services Division staff is certified in all aspects of physical and technical security. The 51 members of the DPS Security Services Division maintain alarm systems at the Pentagon and at the residences of the Secretary and Deputy Secretary of Defense. They also install and maintain electronic security, access control, and intrusion detection systems at the Pentagon, and operate the Pentagon employee and visitor pass systems. The Locksmith Branch is responsible for 3,500 Pentagon safes. The DPS has formidable capabilities to meet important responsibilities.

The duties performed in the aftermath of the terrorist attack on the Pentagon included many that were well outside the DPS charter. Acting in defense of the facility it is sworn to protect, DPS officers did whatever was required without question. No job was too demeaning or outside a DPS officer's scope of responsibility. Like other Pentagon response force organizations, the DPS stepped up to the challenge of the moment and performed admirably.

DPS assisting ACFD and Pentagon contractors.

DPS personnel provided a great deal of support to other responders. They identified specific locations, facilities, and materials so the FBI could establish its temporary morgue at the North Parking Lot area loading dock. The DPS also provided access to its warehouse on Eads Street near the Pentagon to store personal effects and crime scene evidence. The DPS delivered site maps, building diagrams, and floor plans to the Incident Commander and arranged for use of Pentagon facilities, such as conference and briefing rooms when needed.

Findings

Mandatory 12-hour shifts were instituted for all DPS personnel shortly after the incident occurred. Twelve-hour shifts simplified and helped organize staffing. However, because of the shortage of personnel, the DPS was unable to perform some important functions. For example, it would have been beneficial if a DPS officer was assigned to help the ACPD and Virginia State Police at each of the six entry gates onto the site. There simply were not enough personnel to meet all requirements.

DPS officers were organized into squads during the response with each squad supervised by a sergeant. The sergeant was responsible for safety and break schedules for the squad.

DPS contract security guards assigned to off-site facilities cannot be used to augment DPS personnel during emergencies. They are hired for specific assignments and the contractor is not obligated to maintain a reserve force. The DPS does not have a mechanism in place to hire additional temporary security guards during a crisis.

DPS personnel performed many nontraditional and unexpected assignments as part of the response effort. Classified materials had to be gathered and secured. The contents of storage containers found in the damaged area of the Pentagon had to be inventoried and secured. Safes in damaged offices had to be opened and the contents verified. Security support was required at locations in addition to the usual DPS patrol areas and Pentagon entrances, such as the sifting site and temporary morgue.

Opening safes to verify contents and determine ownership was problematic. Blast and heat from the crash damaged combination locks and fused safe doors shut. In many instances, name plates and identifying information usually found on the outside of a safe had been destroyed. The DPS purchased two devices known as “Jaws of Life,” which allowed them to open about 250 safes. In some cases, custodial information required to be stored inside the safe was missing or not current. There was no master roster of personnel assigned responsibility for the many classified containers. The DPS had to contact Pentagon security managers to make decisions regarding the disposition of classified materials.

A collection point vehicle for storing classified materials and storage containers was initially located on the outside of the perimeter on Route 27. It was

eventually moved inside the perimeter, which mitigated concerns about its security and prevention of unauthorized access.

Because DPS Security Services personnel are unarmed, an armed escort was requested each time classified materials were transported to the collection point. This was a 24-hour a day operation. Personnel from the 310th Military Intelligence Battalion at Fort Meade, MD, assisted the DPS in this operation.

DPS personnel are not issued PPE. The FBI provided gloves, Tyvek® suits, and rubber boots to DPS officers working in hazardous areas.

Security had to be established on each floor of the Pentagon to keep personnel away from the impact area. Keeping personnel from returning to their offices in restricted areas was a difficult challenge. This was complicated by the fact that, in some instances, there was little or no visible damage but the areas contained hazardous materials (HazMat) in the form of asbestos, mold, and lead from paint.

Military personnel relieved the DPS of some of its security functions after the fifth day, providing the DPS a chance to restaff and realign priorities. Those who replaced DPS officers inside the Pentagon had even greater difficulty preventing higher-ranking military officers from retrieving items from their offices. Eventually, plywood walls were constructed to seal off these restricted areas.

The DPS produced a list of points of contact for the FBI to assist in retrieving classified documents, materials, and storage containers and answer questions regarding breached security areas.

Eventually, a strict approval process was established by the JOC in coordination with the Incident Commander, FBI, and MDW and procedures were implemented for retrieving important items from the damaged area.

To help visitors and vendors negotiate the area around the Pentagon, the DPS prepared a large site locator board that displayed the location of every agency represented at the incident site. The board was posted at Gate 3 and proved very helpful. (See Figure C-4.)

Because site access became such a critical issue for the FBI, the DPS provided its portable badging system to produce credentials for approved personnel. The DPS system proved inadequate for such a massive task. Therefore, the DPS pass office supervisor, in coordination with the FBI, contacted the USSS for assistance. The USSS brought six portable badging machines to the site, instructed U.S. Army Band members from Fort Myer how to operate them, and performed this function throughout the remainder of the incident response.

CISM personnel were available for DPS personnel throughout the incident response and remained available for followup. Participation in the program is not mandatory. Additionally, Lockheed Martin provided an air-conditioned trailer located at Gate 3 for rest and rehabilitation.

Figure C-4. Locations of agencies, organizations, and operational sites.

The DPS was able to draw on the experience of previous interaction with many of the responding agencies. The USSS, DC Metropolitan Police Department, Virginia State Police, ACPD, and MDW frequently work together when dignitaries visit the Pentagon. Events such as the annual Marine Corps Marathon engage most area law enforcement and Emergency Medical Services (EMS) agencies. Area fire, rescue, medical, and law enforcement agencies regularly participate together in tabletop and full-scale exercises. Chief Jester attributes the high degree of trust and cooperation to these experiences and others like them.

Recommendations and Lessons Learned

The DPS needs to evaluate the disposition of its officers throughout the 2-week incident response and crime scene investigation. It is possible that some functions can be met by other organizations through preestablished mutual agreements, freeing DPS staff for more critical tasks, such as helping with entry gate access control. (LE-046)

The DPS should consider negotiating a standby contract with one or more private security firms to backfill some routine DPS functions during emergency operations. (LE-047)

The DPS should consider establishing a reserve force that can be activated under emergency conditions. (LE-048)

The nontraditional duties performed by the DPS need to be recorded and incorporated into plans for possible future WMD events. Such items as the Jaws of Life devices should be procured, along with some minimum configuration of PPE and other items that proved helpful, and should be stored for quick retrieval. (LE-049)

The DPS should meet with Pentagon custodians of classified materials and review requirements for marking classified material storage containers. Such containers must be regularly inspected to ensure inventories of contents are current and contain all required information. (LE-050)

A collection point for classified materials recovered during a major event, such as the Pentagon attack, need to be planned for in advance. It should be located a safe distance from the building in a location that it is not likely to be exposed to the same risk, and in an area that can be readily secured. (LE-051)

Contaminated or otherwise high-risk areas at an incident site must be sealed off and secured quickly, and building occupants should be informed not to attempt to reenter those areas. The procedures established by the JOC for retrieving items from damaged areas need to be documented and promulgated in operations plans of all the responding organizations. (LE-052)

DPS personnel should receive regular orientations on CISM resources and should be encouraged to take advantage of such services. Supervisors should stress the value of CISM. (LE-053)

The DPS should continue to schedule regular tabletop exercises, such as "Abbottsville," and host full-scale WMD exercises such as "Cloudy Office." (LE-054)

PART III

FEDERAL BUREAU OF INVESTIGATION

SECTION 1: INITIAL RESPONSE

Observations

Of the four senior leaders, only SAC Arthur Eberhart, in charge of the Administrative and Technical Division, was present at the FBI WFO on the morning of September 11. ADIC Harp was in South Carolina. SAC Timothy Bereznay was appointed to the position of National Security SAC, but had not yet reported to the WFO. SAC Ellen Knowlton, who headed the Criminal Investigative Division had recently been reassigned to FBI Headquarters. When the second airliner hit the World Trade Center, SAC Eberhart activated the WFO Command Center and began making plans to support New York City. SAC Eberhart ordered the notification and recall of the NCRS. Special Agent Christopher Combs of the NCRS was teaching a class at the District of Columbia Fire Academy when he received the page from the WFO Command Center.

At about 9:20 a.m., the WFO Command Center was notified that American Airlines Flight #77 had been hijacked shortly after takeoff from Washington Dulles International Airport. SAC Eberhart dispatched a team of 50 agents to investigate the Dulles hijacking and provide additional security to prevent another. He sent a second team to Ronald Reagan Washington National Airport as a precautionary step. At the WFO Command Center, Supervisory Special Agent (SSA) Jim Rice was on the telephone with the Pentagon when Flight #77 crashed into the building.

En route to the WFO after picking up fresh clothes for the anticipated New York deployment, Special Agent Combs was monitoring the DC Metropolitan Police Department radio frequency and heard a report of an explosion at the Pentagon. He immediately changed direction and headed to the Pentagon. Within minutes of the attack, he was at the Pentagon meeting with Assistant Chief Schwartz, the ACFD Incident Commander. As the NCRS Fire and Rescue Liaison, Special Agent Combs knew Chief Schwartz and most of the other area fire and rescue leaders.

The FBI NCRS and JTTF were dispatched to the Pentagon, with the Crime Scene Team onsite 30 minutes after the attack. Special Agent John Adams began organizing the FBI Evidence Recovery Team on a grassy site about 30 yards from the ACFD ICP. Special Agent Combs set up the FBI Command Post adjacent to the ACFD ICP. FBI agents began searching for aircraft parts and other evidence on the Pentagon grounds, being careful not to interfere with fire and rescue efforts.

Evidence collection.

At about 10:15 a.m. on September 11, the WFO Command Center was notified by the Federal Aviation Administration (FAA) that another airliner, United Airlines Flight #93, was hijacked after taking off from Newark, NJ, and was flying on a course from western Pennsylvania toward the Washington Metropolitan Area. The FAA estimated it would reach Washington, DC, in 20 minutes. The Command Center relayed the information to Special Agent Combs at the ACFD ICP who alerted Chief Schwartz. Special Agent Combs located a Washington Metropolitan Airports Authority (WMAA) firefighter equipped with a radio and confirmed the information about Flight #93. Chief Schwartz ordered a complete area evacuation, directing the response force to relative safety beneath nearby highway overpasses. Special Agent Combs stayed at Chief Schwartz' side, giving him updates as the FAA tracked the course of Flight #93. The last update came when the airliner was 4 minutes away from the Pentagon. Five minutes later, Special Agent Combs reported to Chief Schwartz that Flight #93 had crashed into Camp David in Maryland. In fact, it crashed in a field near Shanksville, PA. Chief Schwartz sounded the all clear.

The WFO Command Center is capable of supporting large-scale emergencies and special events. As the response to the attack on the Pentagon took shape, FBI command personnel at the WFO focused on conducting hijacking investigations; preventing additional terrorist attacks; determining who was responsible for the attacks that had occurred; increasing protection levels for FBI Director Robert Mueller and Attorney General John Ashcroft; responding to additional threat reports; and executing continuity of government plans.

Findings

Notification and recall procedures are not usually a problem for the FBI. However, on September 11, there were serious difficulties getting FBI personnel from Washington, DC, across the Potomac River bridges to the Pentagon. In many instances, FBI agents responding from Quantico, VA, 35 miles away, arrived sooner than those did from just across the Potomac River in Washington, DC.

Usually, additional FBI personnel would immediately be flown into the Washington Metropolitan Area to help with the investigation. However, on September 11, getting additional and critical FBI personnel to the Washington Metropolitan Area was problematic. All aircraft were grounded and airports across the Nation were closed. The FBI had to obtain special FAA permission to send an aircraft to South Carolina and bring WFO ADIC Harp back to Washington, DC.

Because of the large volume of reports received at the WFO Command Center, many of which containing conflicting information, it was difficult to comprehend the scope and magnitude of the events unfolding on September 11, 2001. The FBI was confronted with several simultaneous emergency situations. An airliner had been hijacked after departing Washington Dulles International Airport. That incident had to be investigated and other hijackings had to be prevented. The terrorist attack on the Pentagon required full mobilization to conduct the crime scene investigation, collect evidence and recover bodies of victims, and establish and manage a JOC. At the same time, the WFO had to provide security for FBI Headquarters and the DOJ, and investigate bomb threats and other reported incidents in the Nation's capital. There was great concern that additional "terrorist sleeper-cells" might become active and perpetrate further attacks.

With one forward command post already in operation at Washington Dulles International Airport, the FBI WFO was challenged to deploy sufficient numbers of experienced senior managers and supervisors to the Pentagon in the first hours after the attack. SAC Eberhart and SSA Rice were fully occupied at the WFO Command Center. On September 11, Assistant Special Agent-in-Charge (ASAC) Robert Blecksmith, who reached the Pentagon at midday, was the senior FBI agent at the scene. He immediately requested additional supervisor-level agents with terrorist response experience.

On the afternoon of September 11, the FBI established a command post at the Virginia State Police Barracks adjacent to the Navy Annex, where ASAC Blecksmith had relocated the FBI Unified Command Post.

The WFO has extensive experience working with other Washington Metropolitan Area response organizations. The annual State of the Union Presidential Address, Inauguration ceremonies, international conferences such as the International Monetary Fund meetings, visiting heads of State, and similar events engage law enforcement agencies from all area jurisdictions. Multiagency terrorism training exercises, such as Top Officials (TOPOFF), also provide valuable experience upon which to draw in an emergency.

Recommendations and Lessons Learned

Because of the dependence on bridges for vehicular mobility from the District of Columbia to Virginia, FBI helicopters should be assigned to the WFO to airlift critical personnel and resources. (LE-055)

The WFO should review current staffing levels to ensure it has adequate senior leadership and sufficient experienced managers so response capabilities to multiple simultaneous incidents are not at risk. (LE-056)

The FBI WFO should engage all its senior leadership in joint terrorist response exercises. The WFO should also exercise the next management level to serve in positions usually filled by the senior leaders in the event those leaders are not available. (LE-057)

WFO should evaluate the computing and communications capabilities and staffing levels of the Command Center to ensure it can support multiple simultaneous events for an extended time. The mobile command vehicle also needs modernization. (LE-058)

The benefits of the NCRS fire and rescue liaison function were evident in this incident. The FBI staff onsite understood the ACFD ICS and the ACFD knew what to expect from the FBI. The WFO should consider expanding this outreach program to other response organizations. It should also be implemented in every FBI field office in metropolitan areas. (LE-059)

The WFO should continue to participate in and even plan major terrorist training exercises involving the Washington Metropolitan Area response community. (LE-060)

SECTION 2: COMMAND, COMMUNICATIONS, AND THE INCIDENT COMMAND SYSTEM

Observations

The FBI had many responsibilities in the wake of the September 11 terrorist attack on the Pentagon. Because of the nature of the event, the FBI had to establish control of the crime scene and begin collecting evidence. However, although the FBI was responsible for the crime scene, it was not responsible for the fire and rescue incident that took precedent on that day. That role belonged to the ACFD. Assistant Chief Schwartz was the designated Incident Commander and would remain so until fire and rescue operations were completed and the site turned over to the FBI on September 21. Throughout the fire and rescue phase, the FBI supported the ACFD and worked in conjunction with search and rescue units while collecting evidence and recovering the remains of victims. Additionally, in accordance with the Interagency Domestic Terrorism Concept of Operations Plan (CONPLAN), the FBI was responsible for activating a JOC to coordinate the activities of the responding Federal Departments and agencies.

The FBI began meeting its responsibility to the ACFD by assigning Special Agent Combs as agency representative to the Incident Commander. Special Agent Combs is the NCRS Fire and Rescue Liaison and already had close working relations with leaders throughout the Washington Metropolitan Area public safety community.

The FBI on-scene criminal investigation got under way immediately, as Special Agent Adams, a member of the NCRS Evidence Recovery Team, organized the crime scene investigation. He established a Logistics Branch, an Evidence and Body Recovery Branch, and a Temporary Morgue Branch. Special Agent Adams also directed initial evidence collection on the Pentagon grounds, avoiding interference with fire and rescue activities.

Shortly after noon on September 11, ASAC Blecksmith arrived at the Pentagon, along with SSAs Rick McFeely and John Kerr. ASAC Blecksmith was the senior FBI official at the Pentagon on September 11. He concentrated his efforts that afternoon and evening on locating and equipping the JOC.

On the afternoon of September 14, SAC Eberhart was finally free of duties at the WFO Command Center and took command of the FBI crime scene investigation at the Pentagon. Although SAC Bereznay was in charge at the Fort Myer JOC, it was 3 days into the event before an FBI SAC was available to take command of operations onsite at the Pentagon. At a brief 7:00 a.m. ceremony on September 21, Chief Schwartz passed responsibility for Incident Command to SAC Eberhart. The fire and rescue phase was complete. The Pentagon was now a crime scene—the sole domain of the FBI. One week later, on September 28, 2001, SAC Eberhart returned control of the Pentagon to Major General James Jackson, representing the DoD.

Instructing evidence collection sweep.

Findings

Special Agent Combs has worked closely with ACFD firefighters and the fire departments of other local jurisdictions since assuming his position with the NCRS in 1998. He is intimately familiar with the ICS and well-known by ACFD Chief Plaugher and Assistant Chief Schwartz.

ASAC Blecksmith capitalized on Special Agent Combs' knowledge and relationships, keeping him closeby as he began organizing the FBI presence and establishing a JOC. Because the area immediately around the ACFD was crowded and offered little in the way of support facilities, ASAC Blecksmith decided to relocate and establish a Unified Command at the Virginia State Police Barracks located adjacent to the Navy Annex overlooking the Pentagon. From that location, ASAC Blecksmith, along with Special Agent Combs and others, made plans to activate the JOC at nearby Fort Myer.

During this period, at the ACFD ICP, Chief Schwartz did not have an FBI representative at his side. Special Agent Adams periodically checked in at the ICP from the nearby Evidence Recovery Team Command Post, as did SSA Jim Rice after he took over the criminal investigation operation on the morning of September 12. The FBI Mobile Command Post deployed to the Pentagon and was positioned close to the ACFD Operations Section near the heliport. Special Agent Combs was eventually reassigned to the ICP on September 13, restoring person-to-person communications between the Incident Commander and the FBI.

On the afternoon of September 11, Dr. Marcella Fierro, the Virginia Chief Medical Examiner, met with ASAC Blecksmith and asserted the responsibility of her office regarding the autopsies of victims of the terrorist attack. The FBI felt strongly that the Armed Forces Institute of Pathology (AFIP), with which the FBI has long-standing working relations, should perform the autopsies. Dr. Fierro requested and received a letter from Attorney General Ashcroft transferring responsibility for the medical examinations to the FBI.

At about 5:00 p.m., the FBI settled on Building 405 at Fort Myer as the site for the JOC. A Fort Myer community center, the building was previously surveyed to determine its suitability to house a command center. Special Agent Paul Garten and Special Agent Jennifer Gant helped organize the JOC workspace and SSA David Raymond, Technical Security Section, oversaw the installation of the electronic infrastructure for the agency representatives who would staff the JOC beginning the next morning.

At about 7:00 p.m., Chief Schwartz held a meeting in the Secretary of Defense's media center in which he briefed all participating agencies in the ICS structure. A meeting followed this, at 8:00 p.m., involving a smaller number of key agencies to discuss the need to implement a true Unified Command. At the end of this meeting, the FBI announced that the JOC would be activated at 6:00 a.m. on September 12, and all agencies should assign a senior representative with decisionmaking authority to the JOC.

Chief Schwartz decided to relocate Incident Command to the JOC. He spent much of the remainder of that night and most of the next day at the JOC, but concluded that the Incident Commander's operational mission could best be met by relocating back to the incident site, which he did on the morning of September 13. He also asked that Special Agent Combs be reinstated as the FBI representative to the Incident Commander. Assistant Chief John White remained at the JOC as Chief Schwartz's representative.

When the JOC opened at 6:00 a.m. on September 12, there was considerable confusion. For many of the 26 JOC agency representatives, this was uncharted territory; it was on-the-job training. Many other agencies were unfamiliar with the operation and functions of the JOC. The FBI provided logistical and administrative support and staffed the intelligence desk.

SAC Bereznay, in his first assignment since his transfer to the WFO from FBI Headquarters, became the senior FBI official on the ground. The FBI did not activate a JIC in conjunction with the JOC. The DOJ had already announced that official comments about the World Trade Center or Pentagon attacks would only come from the office of the Attorney General. Because of the failure to establish a JIC, there was no single point of interface between participating Federal agencies and the media.

A total of 26 Federal, State, and county entities sent representatives to the JOC; however, neither the Department of Energy (DOE) nor the Department of Health and Human Services (HHS) were present. Both are members of the Concept of Operations (CONOPS) "Big Six" (i.e., the FBI, Federal Emergency Management

Agency [FEMA], HHS, DOE, DoD, and Environmental Protection Agency [EPA]). In addition, based on the nature of the terrorist attack, the Department of Transportation (DOT) or the FAA should have also had a JOC representative. On two occasions, information about unidentified aircraft approaching the Pentagon was transmitted directly from the control tower at Ronald Reagan Washington National Airport to the Arlington County ECC, which passed it on immediately to the Incident Commander. Chief Schwartz had no choice; in each case, he ordered a site-clearing evacuation. As it turned out, these were government aircraft escorted by jet fighters carrying senior government officials back to Washington, DC. These evacuations could have been avoided. They occurred when an FBI representative was not physically located with the Incident Commander. Unlike the earlier evacuation spurred by the hijacking of United Airlines Flight #93, the information given to Chief Schwartz did not come through the FBI and had not been verified by the FAA. An FAA representative was apparently present at the FBI Washington Metropolitan Area Strategic Information and Operations Center (SIOC), but that was of no consequence as events played out at the Pentagon.

Recommendations and Lessons Learned

During the response to a terrorist event such as the Pentagon attack, the FBI must maintain a continuous command-level physical presence with the Incident Commander. The FBI agency representative to the Incident Commander is a principal point of direct contact that must not be severed, even temporarily. He or she must be able to communicate with the FBI Command Post, in this case the WFO, and, if needed, the FBI SIOC so validated threat information is available to the Incident Commander. During a fire and rescue incident, the Incident Commander needs to be at the incident site directing operations. The FBI must also be there. (LE-061)

The FBI should survey government sites throughout the Washington Metropolitan Area and identify other facilities suitable to serve as a JOC or in other critical support roles, such as staging personnel or equipment. Building 405 at Fort Myer worked well housing the JOC and was previously surveyed for that purpose. One or two alternatives should be identified in other locations. (LE-062)

If a JOC is established, a JIC should also be activated. The participating response organizations need to speak with a single voice and media representatives must know where to acquire accurate coordinated information. That is the function of the JIC. (LE-063)

All organizations with positions in the JOC at all levels of government should designate in advance their representative, including a backup. Designated representatives should receive training and participate in periodic JOC exercises. They should have enough seniority to have decisionmaking authority. Other agencies not specified in the CONOPS but with particular domain expertise and authority, such as the FAA in this case, should be asked to send a representative to the JOC. (LE-064)

The WFO should plan ways to augment its senior leadership to effectively manage multiple simultaneous events. During the response to the terrorist attack on the Pentagon, it would have been desirable to have a SAC, or another senior person, at the WFO, the JOC, and the incident site. It took 3 days before such arrangements were in place. The FBI should consider forming a cadre of SACs trained and experienced in terrorist WMD incidents that can quickly deploy and augment local field office staff when needed. (LE-065)

SECTION 3: OPERATIONS

Observations

The FBI began collecting evidence immediately after arriving at the Pentagon incident site on September 11. As fire and rescue efforts proceeded, FBI activity involving evidence recovery and removal of bodies and body parts became a 24-hour operation. Special Agent Adams directed this phase of the criminal investigation during the day shift, with Special Agent Thomas O'Connor taking over at night. The FBI worked closely with FEMA US&R teams and the fire department Technical Rescue Teams (TRTs). Special Agent Adams and Special Agent O'Connor attended the preshift briefings by the US&R Incident Support Team (IST) coordinator. US&R and TRT members would first shore up an area to ensure it was reasonably safe, then begin hunting through the debris, searching primarily for surviving victims buried in the rubble.

FBI and US&R.

As they encountered bodies, parts of bodies, and other evidence linked to the crime, they called forward the FBI contingent assigned to each team. Each item was photographed, numbered, and tagged. This information, along with a diagram showing where the evidence was found, was given to one of the soldiers from the Army's Old Guard, the 3rd Infantry Regiment from Fort Myer, VA, who transported the human remains to the FBI's temporary morgue at the North Parking Lot loading dock. Sixty soldiers supported the FBI on each 12-hour shift.

Remains recovery.

SSA Jim Rice assigned Special Agent Tara Bloesch to set up and manage the temporary morgue. Special Agent Bloesch had previous experience establishing morgue operations during FBI overseas operations in Kosovo and other overseas locations. She determined that the North Parking Lot loading dock was a suitable site. The doors remained closed except when receiving remains, and a large tarp was hung to safeguard the privacy of the morgue. The DPS, the FBI Critical Incident Response Group (CIRG), the ACPD SWAT team, the U.S. Marshals Service, and military police from MDW provided security at different times throughout the operation.

At the morgue, remains were photographed and labeled, and a record was prepared before they were released for transport. Twice each day, refrigerated trucks provided by the military carried remains to Davidson Army Airfield at Fort Belvoir, VA, where Army helicopters flew them to the AFIP at Dover Air Force Base (AFB), DE. FBI agents rode in the trucks, participated in the escort, and accompanied the remains during the flight to preserve the chain of custody. The Virginia State Police escorted the trucks to Fort Belvoir.

Because of the volume of debris inside the Pentagon, front-end loaders were used to load the debris in dump trucks, which carried the debris to a sifting operation in the North Parking Lot. Special Agent Samuel Simon and Special Agent Jeffrey Bedford ran the 2 shifts of the 24-hour a day sifting operation, which was extremely labor intensive. Volunteers from the FBI, Drug Enforcement Agency (DEA), EPA, BATF, Arlington County and mutual-aid law enforcement agencies, MDW, and others worked around the clock with 200 or more persons on each shift. BATF heavy equipment operators spread rubble from inside the Pentagon. Metropolitan Police Department cadaver dogs worked

through the debris, then volunteers carefully raked the area searching for body parts, personal effects, evidence, and classified documents. Papers of any type were turned over to the DPS to determine if they contained classified materials and, if so, to safeguard them. The sifting operation produced about 70 percent of the body parts processed at the morgue.

Remains and evidence sifting operation.

Findings

Only one of four senior WFO leaders was present at headquarters on the morning of September 11. Fortunately, SAC Eberhart had a great deal of related experience. He served as ASAC in New York when TWA Flight #800 crashed on July 17,1996. He also led the WFO Evidence Recovery Team to Kosovo during the war crimes investigation. More than 700 agents participated in the FBI operations at the Pentagon, deploying from Baltimore, MD; Richmond, Norfolk, and Quantico, VA; Charlotte, NC; Columbia, SC; Atlanta, GA; Los Angeles, CA;

and Philadelphia, PA. Supervisors are part of the responding FBI teams; nevertheless, with several concurrent incidents to deal with, the WFO was stretched thin during this period. SAC Eberhart was unable to deploy to the incident site until the afternoon of September 14. Although there were an ample number of FBI agents at the crime scene, experienced FBI supervisors were in short supply.

The FBI WFO had previously worked with the FEMA US&R teams and was familiar with their capabilities and methods of operating. The US&R teams used spray paint to mark the status of areas on panels and columns as they worked. The FBI adopted these markings as part of its recordkeeping. They served as a grid for identifying where evidence and remains were found.

US&R shoring and marking system.

The IST coordinator provided the FBI Evidence Recovery Team a US&R radio. This proved extremely helpful in summoning FBI assistance whenever US&R teams digging through rubble came across evidence or victim remains.

The EPA CID provided significant support to the FBI at the incident site. EPA CID personnel conducted evidence searches, performed facepiece fit-tests, helped in evidence recovery and sifting operations, and provided safety oversight.

The U.S. Air Force (USAF) OSI operated adjacent to the FBI and worked closely with them throughout the crime scene investigation. USAF OSI was particularly valuable in retrieving highly sensitive classified materials from the Pentagon.

The BATF deployed both the southeast and northeast National Response Teams (NRTs) to the Washington Metropolitan Area. These 30-person teams comprise veteran agents with expertise in forensics, fire and blast origin, explosives detection, fire protection, and other relevant areas. Some team members are qualified heavy equipment operators. Teams also include technical, legal, and intelligence advisors. By September 13, the BATF had 47 persons onsite at the Pentagon.

The success of the FBI operations at the Pentagon depended on harmonious working relationships with the ACFD Incident Commander, military leaders, DPS, and other law enforcement agencies. The BATF provided valuable assistance to the FBI operations, but working relations between the FBI and BATF were sometimes strained. The BATF usually works in an independent role and does not generally operate in support of other law enforcement organizations.

Relations between the FBI, the ACFD, and the entire Washington Metropolitan Area fire and rescue community were outstanding, thanks largely to the work of Special Agent Combs. The FBI understood the ICS, and the fire community knew what to expect from the FBI.

Holding a small but official ceremony marking the change of Incident Commander responsibilities was important. It was clear to everyone that the ACFD was in charge during the 10-day fire and rescue phase and equally clear that the FBI was in charge beginning on September 21.

Controlling access to the crime scene was a challenge. A second mesh fence was erected to create an inner perimeter, separating the fire and rescue site and crime scene from the larger response assembly and support area. (See Figure C-5.) An attempt at issuing identification (ID) badges using the DPS system proved cumbersome and inadequate. The process took too long, delaying shift changes inordinately. At the request of the FBI, the USSS deployed five portable units and trained U.S. Army Band members to produce ID badges for authorized responders.

Figure C-5. Inner and outer perimeters.

After the ACFD relinquished control of the incident site to the FBI, questions arose concerning continuing support for the responders. The ACFD had provided the bulk of logistics supplies to all the response organizations beginning on September 11. The ACFD would subsequently be reimbursed by FEMA for the costs incurred. The FBI and other government organizations are not reimbursed for such costs. In this case, the ACFD left a logistics presence in place and continued supporting the FBI.

Pentagon renovation contractors Facchina and PENREN construction companies provided Bobcats®, front-end loaders, and other heavy equipment along with operators to the FBI. The BATF also provided equipment operators.

Heavy equipment.

Military personnel from the MDW were invaluable throughout evidence and body recovery operations. Not only were they available in large numbers and in highly disciplined formations, they were physically fit young infantrymen able to withstand the rigors of this challenging work.

The evidence and body recovery work was both physically and psychologically challenging. Working in the temporary morgue was particularly stressful. CISM support was available day and night. It proved both popular and valuable. Special Agent Bloesch made it clear that anyone working in the morgue could ask to be replaced at any time with no questions asked.

The FBI's temporary morgue and the North Parking Lot sifting operations attracted many visitors. Often, hosting visitors in sensitive areas is inappropriate, even when they are senior government officials.

There was no consensus regarding minimum required PPE during the criminal investigation phase. The FBI generally tried to comply with guidance and direction from the EPA, but some felt it was incompatible with the strenuous nature of the work when the threat of fire was minimal.

Some FBI responders felt, as time progressed and regulatory agencies such as the Occupational Safety and Health Administration (OSHA) were increasingly involved, they tended to apply standards more appropriate to an industrial operation rather than a crime scene.

Because two FBI overseas Rapid Deployment Teams are based in the Washington Metropolitan Area, the WFO had access to their cache of deployable equipment, which included Tyvek® suits, respirators, and other safety items.

Recommendations and Lessons Learned

The FBI needs to assess the realistic span of control and possibly adjust the number of senior leaders at large field offices. The WFO is the second largest in the Nation, with 657 agents and another 650 professional support staff. It is authorized a total of 1 ADIC, 3 SACs, 7 ASACs, and 56 SSAs. Only one ASAC was at the incident site beginning on the afternoon of the first day. A second ASAC, Doug Marshall, reported to the JOC for night shift beginning on the third day. The current ratio of supervisors to special agents may be adequate for traditional FBI investigative work; however, WMD incidents require more intense supervision. (LE-066)

The FBI WFO should initiate a program to train and exercise with area US&R teams and fire and rescue TRTs. FBI field offices in Memphis, TN, and Albuquerque, NM, where US&R teams are also located, should institute a similar program. (LE-067)

The WFO should host a roundtable discussion about the Pentagon response involving all participating law enforcement agencies. Such an event will help build on the bonds forged during the response and help reduce or preclude future misunderstandings. (LE-068)

An efficient system that can be readily implemented to produce incident site access badges needs to be developed to achieve control of the crime scene without impeding response operations. (LE-069)

In future WMD incidents, the transfer of logistics and other support functions concurrent with the end of fire and rescue operations should be planned early and carefully executed. (LE-070)

The WFO has a robust liaison program with the fire and rescue community. It should reach out in similar fashion to the MDW and DPS to strengthen those relationships as well. (LE-071)

CISM capabilities and the resources to deliver them need to be recognized in plans, understood by responders, and delivered both during the event and afterward in followup sessions. (LE-072)

Occasionally, it is appropriate for senior government officials to visit sensitive facilities such as the FBI's temporary morgue, even if only to check on the well-being of the staff working there. However, these visits must be carefully controlled and absolutely necessary. (LE-073)

The FBI WFO should conduct discussions with the EPA, OSHA, HHS, fire department, and other appropriate parties to better understand the levels of protection recommended under different circumstances. Based on these discussions, deployable caches of supplies and equipment can be acquired in the event that those belonging to the two Rapid Deployment Teams are unavailable. (LE-074)

ANNEX D

INTRODUCTION

"Remember those who died and those who grieve their loss. Remember our flags, flying from the Pentagon, from the remains of the World Trade Center, and in front yards across America—for they symbolize the soul of a nation united. Remember who we are—take pride in who we are. We are Arlingtonians, and we are Americans—today, and for all days."

Jay Fisette
Chairman
Arlington County Board

Arlington County has a full-service urban government, with its 3,400 employees providing comprehensive public services. In addition to fire, Emergency Medical Services (EMS), and police services discussed extensively in this report, Arlington County operates a water distribution system, sanitary sewer system and wastewater treatment plant, provides solid waste and recycling curbside collection, and is only one of two counties in Virginia to maintain its own roadways. It has the only comprehensive human services department in Virginia, operates 8 libraries, 13 community centers, maintains more than 1,100 acres of parks, and all the support services necessary for this urban center.

For Northern Virginia and much of the country, Arlington County is the gateway to the Nation's capital. Every highway and railway from Virginia into the District of Columbia passes through Arlington County. Ronald Reagan Washington National Airport is in Arlington County, which is also home to many Federal Government institutions including Fort Myer, Henderson Hall, the Defense Intelligence Agency (DIA), the Defense Information Systems Agency (DISA), and the Defense Advanced Research Projects Agency (DARPA). Tourists flock to Arlington County to visit the Iwo Jima Memorial and Arlington National Cemetery, and to tour the Pentagon. Planning for the safety and well-being of its citizens is a fundamental government responsibility everywhere and at all levels. Because of these special conditions, Arlington County's elected and appointed officials place substantial emphasis on emergency preparedness and management.

This annex describes how Arlington County's emergency management and Emergency Operations Center (EOC) functioned in the aftermath of the September 11 terrorist attack on the Pentagon. It is organized into a set of observations that describe the way Arlington County plans to manage emergencies. This is followed by a section of findings that reflect what participants reported actually occurred. Finally, there are 24 recommendations and lessons learned that are deduced from the findings.

Observations

Arlington County Code designates the County Manager, Mr. Ron Carlee, as the Director of Emergency Services. The Comprehensive Emergency Management

Plan (CEMP), first published in 1956 and frequently revised, serves as the basis for Arlington County emergency operations.

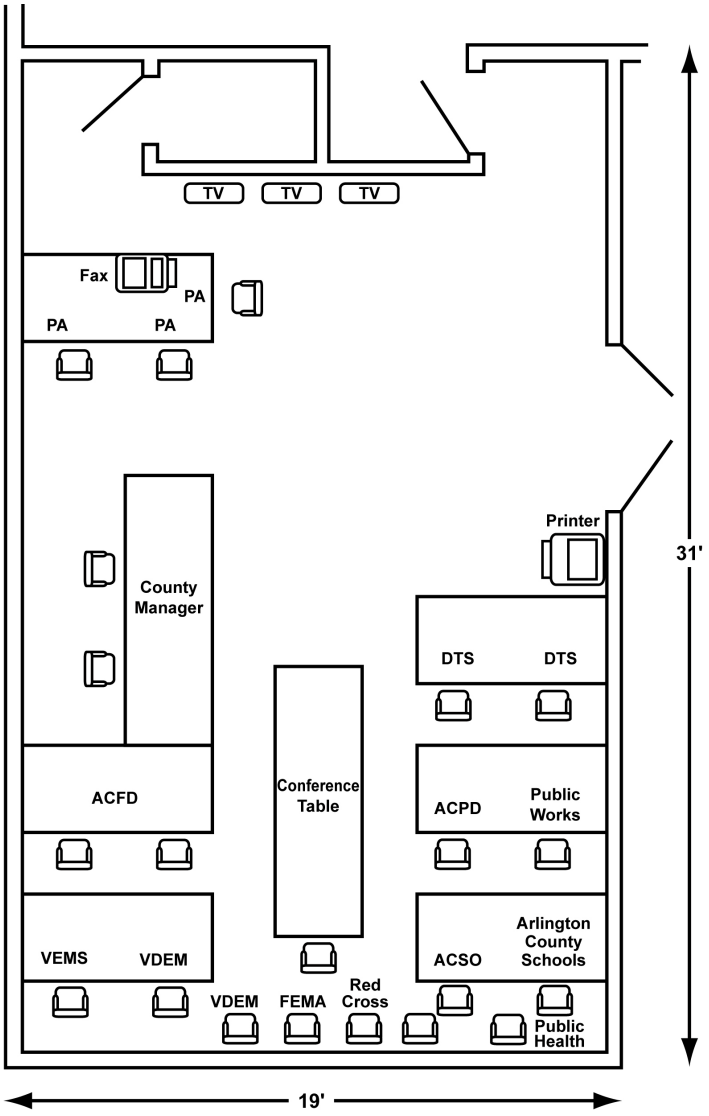
The CEMP establishes an Emergency Management Team, a group of senior managers knowledgeable in field operations who serve as an advisory body to the County Manager for all aspects of preparation, disaster response, and recovery. This core group is chaired by the Assistant County Manager (Mr. John Mausert-Mooney) and includes the Police Chief (Chief Edward Flynn), Fire Chief (Chief Edward Plaugher), Director of Public Works (Mr. Sam Kem), Arlington County Assistant Manager for Public Affairs (Mr. Richard Bridges), and the School Superintendent (Dr. Robert Smith). The Fire Chief is also appointed as the Arlington County Coordinator of Emergency Services. His designated Deputy Coordinator of Emergency Services (Captain Mark Penn) serves as the staff coordinator for the Emergency Management Team.

When an emergency occurs, the Emergency Management Team meets in the Emergency Operations Center (EOC) once it is activated. Communications, computing, and other Emergency Management Team equipment and supplies are stored in closets adjacent to the workspace, located on the ground floor of the Courthouse Square West Building at 1400 North Uhle Street. The Department of Technology Services (DTS) provides computer and telecommunications support to set up and operate the EOC. (See Figure D-1.)

The CEMP also establishes a standing Emergency Planning Team (EPT) chaired by the Director of Support Services (Mr. Henry Leavitt), with senior staff members from the police, fire, and public works departments and from public health, schools, environmental services, parks recreation and community resources, and technology services. The EPT is responsible for maintaining the CEMP, planning training for the Emergency Management Team and Emergency Task Groups (ETGs), and, during an emergency, anticipating and planning for future requirements. The Deputy Coordinator of Emergency Services, Captain Penn, is also the staff coordinator for the EPT.

Six ETGs are established by the CEMP with members from various county departments and offices, as well as outside agencies where appropriate. The ETGs have functional areas of responsibility, including Shelter and Evacuation, Employee Support, Recovery, Resource Management, Communications, and Traffic and Routing (T&R). A lead agency is responsible for each ETG.

The emergency operating provisions that were in place in Arlington County prior to September 11 were periodically tested and proved sufficient for managing past emergencies. However, those emergencies were of limited scope and duration, and most often weather-related. Arlington County had never played host to an emergency declared by the President of the United States, let alone one in response to a deadly overt terrorist attack. The attack on the Pentagon claimed the lives of 189 people. It also had an immediate and substantial economic impact on the county with the interruption of important transportation links, the closing of Ronald Reagan Washington National Airport and all its related retail enterprises, and the temporary cessation of tourist and business trade critical to the county's thriving hospitality industry.



ACFD = Arlington County Fire Department
ACPD = Arlington County Police Department
ACSO = Arlington County Sheriff's Office
DTS = Department of Technology Services
FEMA = Federal Emergency Management Agency
PA = Public Affairs
VDEM = Virginia Department of Emergency Management
VEMS = Commonwealth of Virginia Department of Health Office of Emergency Medical Services

Figure D-1. EOC floor plan.

In early September 2001, Captain Penn, a 27-year veteran of the Arlington County Fire Department (ACFD) and the son of a former Alexandria Fire Chief, was placed on medical light duty. He surrendered his command position and, on September 10, assumed his new duties as Deputy Coordinator of Emergency Services. The next morning, in the office of Assistant Chief John White, Captain Penn watched televised reports of the World Trade Center terrorist attacks unfold. While heading back toward his office at Fire Station 4 on Hudson Street, he heard Captain Steve McCoy's radio report of a commercial airliner crashing near the 14th Street Bridge, the result of a possible terrorist attack. Captain

Penn decided to divert directly to the EOC to carry out the duties of his new, "less stressful" position.

County Manager Carlee was addressing a leadership conference attended by approximately 100 county managers and supervisors early on the morning of September 11. He had completed his remarks and communicated with the Arlington County Emergency Communications Center (ECC) regarding the World Trade Center when news of the Pentagon attack was broadcast. Public safety personnel attending the conference immediately departed, heading toward the Pentagon. County Manager Carlee accompanied EMS Battalion Chief Ray Blankenship but diverted directly to the county's EOC to lead the emergency operations.

As is the case with most geographically small jurisdictions, the facility designated as Arlington County's EOC is used during daily business operations as a conference room. Lead Emergency Management Team agencies maintain critical supplies, information files, and laptop computers in containers stored in adjacent closet space.

Captain Penn arrived at the EOC at about 9:40 a.m. and discovered that the room was already open. Mr. Dave Alberts and Ms. Patricia Nye from the Office of Support Services (OSS) were setting up tables and arranging furniture as staff from the DTS connected telephones and cables for television monitors and computers. At the time of the Pentagon attack, the laptop computers had been temporarily assigned to support a countywide capital improvement task force working in the same building. They were quickly recovered and installed for their primary functions.

The EOC was officially activated based on a directive from Mr. John Mausert-Mooney via page to EOC members at 9:48 a.m. County Manager Carlee arrived at 10:00 a.m. and began assessing the status of events and personnel resources. He ensured out-of-town personnel were recalled and began consultations with the County Board.

Ms. Cindi Causey, Regional Director of the Virginia Department of Emergency Management (VDEM), arrived at the EOC at about 10:15 a.m. and proved to be a highly valuable resource, particularly since it was Captain Penn's first day as Deputy Coordinator of Emergency Services. During County Manager Carlee's preliminary situation assessment, she suggested that the county consider declaring a state of emergency, which was signed by County Manager Carlee at 11:39 a.m. and subsequently confirmed by the County Board. Prior to the 2:00 p.m. Emergency Management Team meeting, it was received by the State, and Governor James Gilmore had also issued a declaration of a state of emergency in Arlington County. A Presidential Emergency Declaration was signed on the morning of September 13.

As part of the Washington Council of Governments, a conference call was scheduled for 6:00 p.m. on Tuesday night for all the Chief Administrative Officers (CAOs) in the region, who meet monthly as an ongoing committee of the Council of Governments structure. The CAO conference was not part of an existing

emergency plan except for snow emergencies. The September 11 call was organized on an ad-hoc basis by the Chair of the CAO's committee, Anthony Griffin, County Executive of Fairfax County. In this conference call, which County Manager Carlee took on his cellular telephone at the Police Command Post at the Pentagon, the CAOs shared information from the day. The CAOs quickly came to the conclusion that all local governments should have a unified message for operations the next day. Two school systems had already declared they would be closed on September 12; consequently, to the disappointment of some school superintendents who were included in the call, it was agreed all school systems would be closed. None of the area local governments had declared closings and there was a strong sense among the CAOs that local governments should be open; however, it was not known what President Bush would say later that night. Thus, a preliminary plan was reached pending a subsequent call after the President addressed the Nation. The subsequent call, at 9:30 p.m., confirmed the group's earlier intention to keep area governments open.

Since September 11, to facilitate communications, the regional CAOs have implemented a new pager notification and conferencing system that can be activated by any CAO and result in a conference call in as little as 30 minutes.

Findings

Arlington County Manager Carlee performed in extraordinary fashion in his capacity as Director of Emergency Services. He and Emergency Management Team members did not interfere with site operational matters, however, they actively and energetically directed the county's overall response. County personnel from all agencies were deployed to support emerging operations as circumstances dictated.

County Manager Carlee conducts status review.

The County Board's role in a disaster is not operational. It is responsible for providing oversight and accountability of its professional administrators and, based on its knowledge, reassuring the public. The County Board also plays a critical role in intergovernment relations when resources and coordination are needed beyond normal mutual-aid agreements. Beyond the immediacy of a disaster, the County Board is responsible for policy review and development. On September 11, County Board members reported to their county government offices to be available for consultation. County Board Chairman Jay Fisette began receiving regular briefings from County Manager Carlee. At 3:30 p.m., the County Board formally convened to receive a briefing from County Manager Carlee and ratify the emergency declaration he had issued earlier in the day. Chairman Fisette also led a public briefing that was shown over the county cable television system. County Manager Carlee, Chief Plaugher, and Chief Flynn participated in this first formal communication to the Arlington public. Chairman Fisette was regularly briefed by County Manager Carlee, with voicemail updates sent to all County Board members. A formal meeting of the County Board occurred on September 22. Chairman Fisette also frequently appeared before the national media near the Pentagon and met with visiting dignitaries who came to observe the Pentagon response activities.

Responding to allegations of anti-Muslim and anti-Middle Eastern activities in other communities, the County Board organized a forum on tolerance that was conducted on September 24. Also cablecast to the Arlington community, Chairman Fisette led a panel discussion involving nine distinguished citizens, promoting understanding and tolerance. As a diverse community with people from virtually every culture, this panel presentation was important in reinforcing the community's values during the crisis. The 90-minute tape was repeatedly broadcast on Arlington Channel 31 between October 2 and December 31, 2001.

The County Board's role became more critical regarding the closure of Ronald Reagan Washington National Airport. Although closed initially for security reasons, like all airports in the United States, it was not permitted to reopen on September 13 when the others did. Chairman Fisette took the lead in creating a coalition among Washington Metropolitan Area governments, partnering with Virginia's Governor and its congressional delegation to reopen the airport.

Finally, the County Board organized the Arlington Day of remembrance and appreciation on October 7. The event drew several thousand residents to remember those who died and to applaud the efforts of all those individuals, organizations, and communities that joined together in response and recovery efforts.

Arlington County Appreciation Day.

The Arlington County EOC performs several critical emergency support functions. It is the focal point of all county-directed resource support for field operations and coordination among responding parties. At the EOC, Arlington County officials continuously assess the impact of the event on the community and implement mitigating actions as appropriate. They also communicate information to the County Board and the public.

During the response to the September 11 terrorist attack on the Pentagon, the EOC operations proved to be flexible and effective. Representatives from important organizations, including the VDEM, Federal Emergency Management Agency (FEMA), and American Red Cross were able to confer face-to-face with each other and with Arlington County officials from all key government agencies. County Manager Carlee held regularly scheduled meetings to share status information, assess support needs and the resources available to meet them, project future requirements, and establish a time for the next meeting. At the beginning of each day, objectives were set to guide the work efforts of the Emergency Management Team and supporting staff and agencies. (See Figure D-2.)

The atmosphere throughout EOC operations was one of camaraderie and a shared sense of purpose. No ego trips, game-playing, or power grabs occurred. Everyone pitched in to help wherever help was needed, regardless of position or rank. Despite the severity of the incident and urgency of the initial response, an air of patience and calm prevailed.

While the Arlington County Government can be justifiably proud of its role in support of the first responders and citizens, this event also provided an opportunity to discover areas that need improvement.

ARLINGTON COUNTY
EMERGENCY OPERATIONS CENTER

September 17, 2001

OBJECTIVES FOR DAY 7

1. Continue to provide support for field operations with supplies, resources, and personal support.
2. Continue development of family support system.
3. Reinforce interagency relationships.
4. Continue development of community events.
5. Work with Congressman Jim Moran on short- and long-term policy and funding issues.
6. Strengthen long-term public information capacity.
7. Develop support strategy for business community.
8. Develop ongoing operations plan for OAR, CC, and OSS.
9. Develop county short- and long-term security plans.

Figure D-2. Objectives for Day 7.

Transactions between the ACFD Incident Command System (ICS) and the Arlington County EOC Emergency Management Team required some effort. This role is one familiar to all ACFD participants. By the nature of their profession, firefighters understand emergency operations. For the Arlington County Emergency Management Team, the ICS is less familiar territory. It takes time to fuse these two essential management activities so they function effectively and efficiently. Part of the difficulty is that the emergency management structure defined in the CEMP bears no relationship to the ICS structure in place at the incident site. Incident Command Post (ICP) staff cannot pick up a telephone and call a direct counterpart at the EOC. For example, the ICS Logistics Section does not have a counterpart at the EOC. Depending on the nature of logistics support required, the Incident Command Logistics staff may need to contact any of several EOC representatives or ETGs.

The space designated for the EOC is inadequate to serve as a management facility for an emergency of the scope and magnitude of the Pentagon attack, or another situation of similar breadth and duration. It was overcrowded and uncomfortable. It does not have adequate and appropriate space for meals and food storage. There are no provisions for private meetings. There is not sufficient room for core Emergency Management Team members, press and VIP briefings, county leadership meetings, and adjoining areas for the ETGs. Arlington County does not have a full-time, well-designed and equipped EOC.

The last full activation of the EOC was in preparation for the anticipated problems associated with the arrival of the year 2000 (Y2K). As a result, although many county officials had EOC identification (ID) badges, they had long since expired. A current ID system was not in place.

Although the Emergency Management Team and other staff members were paged, many had already left their offices in a nearby building and reported to the EOC on their own initiative. However, outside agencies should have been

contacted immediately. For example, the Arlington County Chapter of the American Red Cross is a member of the Shelter and Evacuation ETG. They are also part of the ACFD pager network. As events at the Pentagon were reported on television, Ms. Susan Aahrus, the Chapter Chief Operating Officer, repeatedly called the ECC and asked if American Red Cross assistance was needed. The American Red Cross was asked to supply cots for a planned shelter at the Thomas Jefferson Community Center, but was not otherwise engaged until its national headquarters instructed the Arlington chapter at midday that the Department of Defense (DoD) wanted on-site support. They initially responded with two Disaster Action Teams, consisting of two American Red Cross vans, 12 volunteers, and canteen supplies, such as refreshments and sundries. In the succeeding weeks, the American Red Cross provided nearly 1,500 volunteers at the Pentagon and at area hotels where relatives of victims were located. (See Annex A – Fire Department Operations, Section 6, Logistics).

Computing and communications technology to support the EOC is also seriously deficient. Information sharing, collaboration, and coordination almost exclusively depend on face-to-face interaction. The EOC is equipped with laptop computers and associated peripherals, as well as telephones and televisions used to monitor news and weather. It does not have any installed radio communications. Without an installed radio capacity, the Incident Commander can only communicate with the EOC through its staff members, some of whom are issued portable radios. A more reliable contact with field response forces is needed. The telephone system was also inadequate. Numbers would ring busy with no rollover.

At about 12:00 noon on September 11, County Manager Carlee directed the Arlington County Sheriff's Office (ACSO) to secure the county headquarters building. Sheriff's deputies were posted at the entrance with instructions to prevent public entry. This caused some confusion, as county employees returning from lunch were not allowed into the building. At the time, employees did not carry Arlington County identity badges. This left some departments short-handed.

Ms. Meg Falk from the Office of the Assistant Secretary of Defense for Military Community and Family Affairs called Assistant County Manager Mausert-Mooney seeking help in finding a location to establish a Family Assistance Center. DoD required 200 to 300 parking spaces, computers, 30 telephone lines, rooms for individual counseling and a large meeting room that would accommodate at least 200 people. Working with Mr. Terry Holzheimer and other members of the Department of Economic Development staff, space was acquired at the Crystal City Sheraton Hotel.

At 3:15 a.m. on September 12, the Incident Commander telephoned Assistant County Manager Mausert-Mooney who was filling in for County Manager Carlee at the EOC. Chief Schwartz reported that the Urban Search & Rescue (US&R) teams wanted authorization to use a wrecking ball commencing at daybreak to demolish the structurally damaged sections of the Pentagon. This would speed search and rescue efforts, safeguard the safety of the responders, and would not

result in additional deaths of victims since the initial impact, fire, smoke, and earlier collapse had killed all occupants not already rescued. Of course, no one could guarantee there were no trapped victims who could be killed as a result of the demolition. Assistant County Manager Mausert-Mooney agreed with Chief Schwartz recommendation to allow the demolition, but only with assurances that all possible life-detection activities had been taken, and that General Jackson, Chief Plaugher, and the FBI On-Scene Commander concur. Within an hour, Chief Schwartz called back and stated all of those conditions had been satisfied. Assistant County Manager Mausert-Mooney called County Manager Carlee at home and he also concurred with the decision. Ultimately, the US&R teams chose not to use this approach.

Unlike the Emergency Management Team, the ETGs do not have prearranged workspace. When activated, each lead agency must identify suitable workspace and assemble the task group members, who bring with them all necessary equipment and supplies. There are no communications mechanisms or protocols among the various ETGs and between them and the EOC. The primary forum for information exchange is the series of meetings called by County Manager Carlee. These took place at 12:45 p.m., 2:00 p.m., 3:30 p.m., and 7:30 p.m. on September 11. On subsequent days, a schedule was set each morning based on the status of operations.

County Manager Carlee holding Emergency Management Team meeting.

Library Director Ann Friedman leads the Communications ETG. This unusual relationship is based on the unique structure in Arlington, where the library has broad-based responsibility for providing information to the public, including managing the county's Web site and government access cable television channel.

The Communications ETG works closely with Assistant Manager Bridges, who is an Emergency Management Team member and works at the EOC.

International news press flocked to the Pentagon, taking over a gasoline station with a clear view of the attack site. Though this was an international story about an attack on a Federal facility, the Federal Government did not step forward to handle the growing media presence, nor was there Federal support to establish a Joint Information Center (JIC). Thus, it fell to Arlington County to manage the international press while trying to communicate with its own population. Mr. Bridges took the lead on the former through regularly scheduled press briefings and Ms. Friedman took the lead on the latter. The Arlington efforts with the international media filled a critical gap and improved the coordination and quality of international news coverage.

Chief Schwartz answers questions during a joint press conference on September 14.

Communications with Arlington's public is a significant challenge under normal circumstances and was even more challenging during the events of September 11. Outside the Washington Metropolitan Area, Arlington would be a major city in its own right. It would have one or more television stations and a daily newspaper. As a relatively small jurisdiction in a very large metropolitan area, Arlington receives modest press coverage compared with much larger, and frequently more controversial, jurisdictions. Adding to the challenge on September 11, many people outside Arlington were not even aware the Pentagon and Ronald Reagan Washington National Airport are in Arlington County rather than Washington, DC. High-profile politicians throughout the region rushed to be interviewed by the media, leaving Arlingtonians with a dearth of information about the local situation.

Meeting the information needs of Arlington County residents required creative solutions. The Arlington County Web site was converted to a virtual newspaper with a special section covering information about the emergency. Much of the same information was transcribed and scrolled on the county cable television channel, which also broadcast information about related services available to Arlingtonians. The telephone information line was transformed into a 24-hour service, and a new 24-hour mental health hotline was established. Communications channels with Arlington businesses were established through the economic development office. Efforts to communicate with Arlingtonians were creative and reasonably successful; however, they were ad hoc and not as timely as they could have been.

Additionally, there was a need for the EOC and the ICP to keep abreast of events around the country and around the world. Arlington County was intensely focused on its immediate response needs and did not have a system to monitor external events that might impact the Arlington effort.

Another challenge that fell to the Communications ETG was that of managing volunteers and donations. This is an element not addressed in Arlington's CEMP. County officials were unprepared for the outpouring of support from around the country and the generosity of its citizens. People wanted to help in any way possible. With hundreds of calls on Arlington's information telephone line, there was no plan in place to manage these offers of help. An ad-hoc database was developed to collect information about people with specific skills or who wished to donate funds or materials and supplies; however, many people simply wanted to support their firefighters, emergency medical technicians, and police officers. With no other way to channel their energies, many prepared homemade meals and treats, which they delivered to the nearest public safety facility or incident site. These items cause a dilemma since they can neither be refused nor consumed. It is important to convey to the public that packaged food is the most helpful and safest contribution in an emergency.

It is also important to offer creative channels to engage the public. Late in the emergency, Arlingtonians were invited to local recreation centers to discuss their experiences and prepare expressions of support for rescue workers and victims. A similar activity was critically needed, but not recognized, in the first 48 hours of the event. People want to give and be part of the relief effort and meaningful opportunities must be made available to them.

The Shelter and Evacuation ETG made plans to establish the Thomas Jefferson Community Center as a shelter for up to 1,000 persons, including stranded travelers, county employees, and US&R teams deployed into the county. By evening, arrangements had been made to feed and shelter up to 300 people at Thomas Jefferson Community Center; however, the requirement did not materialize and it was closed the next morning.

The T&R ETG was challenged from the beginning. Arlington County police were wholly absorbed in traffic direction and control. They had neither the time nor the means to share real time information with county traffic engineers. Initially, there was no police or sheriff's department representative at the T&R ETG. In

the absence of strategically positioned closed circuit television traffic monitors, the T&R ETG sent engineers out into the streets to observe and collect information.

Coordination of public transportation was also challenging. The flow of traffic was disrupted on I-395, Route 110, and Washington Boulevard. The Pentagon attack coincided with the morning driver shift change. The closing of Federal Government agencies on September 11 was not coordinated with neighboring jurisdictions and all appropriate transportation authorities, including the Virginia Department of Transportation (VDOT), Washington Metropolitan Area Transit Authority (WMATA), and District of Columbia. On the morning of September 12, high occupancy vehicle (HOV) exits on I-395 in Arlington County were closed, requiring bus drivers to proceed into the District of Columbia and turn around. With Ronald Reagan Washington National Airport closed, area hotels were filled with stranded travelers who needed transportation to Washington Dulles International Airport or Baltimore Washington International (BWI) Airport. The Pentagon bus and metro stops were also closed. The Pentagon normally serves as the major bus transfer point for all of Northern Virginia. By September 12, the county had established an alternative Pentagon bus facility in Pentagon City and an Arlington-Dulles shuttle was put in place.

Pentagon traffic congestion.

The Resource Management ETG is responsible for acquiring supplies, equipment, and other materials to support county emergency operations. This was a critical function and one that was performed exceptionally, although many obstacles were encountered. County procurement agents are not generally familiar with the technical specifications of firefighting equipment and supplies. To assist them, the ACFD assigned a firefighter to Resource Management to provide

"technical advice." This ad-hoc adjustment should be formally incorporated into the CEMP.

For the first 3 days, the Resource Management ETG operated without computers. Automated data records would have been particularly helpful in reconstructing the procurement process for subsequent reimbursement. Additionally, Internet access would have enhanced the search for suppliers.

The Resource Management ETG accepts and expeditiously processes legitimate requests from any county organization or staff element engaged in emergency operations. However, in this instance, the Incident Commander established a Logistics Section to which all support requests were to be submitted before going forward to the Resource Management ETG. Because the ACFD does not usually have a centralized supply function, it took awhile to establish the proper flow for procurement transactions. About 100 procurement requests were sent directly to the Resource Management ETG without review by Logistics Section staff. As a result, there were no on-site order records, making accountability difficult. Vendors arrived with supplies the Logistics Section was not expecting. In a similar vein, the Resource Management staff was not always notified when deliveries were completed so transactions could be properly closed out.

Chief Plaugher discussing Pentagon logistics requirements.

Because of the strict security requirements, all deliveries to the incident site had to be screened by the ACPD and Defense Protective Service (DPS) to ensure there was no "Trojan Horse" and to confirm the order. By the third day, procedures were developed in coordination with the Resource Management ETG and the EOC. Each delivery was sent to the Pentagon receiving dock for inspection by the DPS. It would probably have been helpful if this process

occurred away from the incident site, possibly at the Arlington County Trade Center warehouse.

Members of the Resource Management ETG worked tirelessly to meet the critical needs of the response force. They purchased more than 70,000 board feet of lumber for shoring operations and spent nearly $200,000 on special protection equipment for the Technical Rescue Team (TRT) members engaged in those operations. There were 4,250 Tyvek® suits purchased for the responders and more than $30,000 was spent on respirators. Arlington County spent nearly $60,000 to rent and service 62 portable toilets, in addition to those already onsite and rented by other organizations. Refueling operations managed by Arlington County onsite consumed 16,000 gallons of gasoline and diesel fuel in the first 10 days.

Many vendors assisted in the procurement of the needed materials and supplies. Home Depot sent a senior manager to the Resource Management ETG location and to the logistics area at the incident site. Many vendors provided extraordinary support to the Resource Management ETG including United Rentals, Long Fence, Safeco, Sunbelt Rental, Don's Johns, Maryland Fire Equipment Company, and several others.

Arlington County Procurement Officer George Barak worked tirelessly as a member of the Resource Management ETG. On one Saturday, his wife accompanied him to the EOC and together they staffed the Resource Management ETG function. During this period, Mr. Barak celebrated the 20th anniversary of his immigration to the United States. He commented to County Manager Carlee that he hoped his work during the response "at least partially repaid" all he had received from America.

The Recovery ETG was activated on September 12. Its initial task was to work with the FEMA Disaster Field Office, which would occupy some 20,000 square feet of rented office space to complete its work during the weeks immediately following the attack. The Recovery ETG would guide county efforts to document all the costs associated with the emergency response and recovery. Since the declarations covered Arlington County only, the county served as the "applicant" for reimbursement purposes, and the Recovery ETG coordinated numerous briefings of those in neighboring jurisdictions who were responsible for collecting cost information for their public safety and other employees who provided support in the response. Fortuitously, members of the Recovery ETG had recently attended a "Disaster Cost Capture" class conducted by the VDEM Public Assistance Office.

The Recovery ETG was also responsible for assessing the economic impact of the emergency, which, in this case, was particularly substantial. The decision to delay indefinitely the reopening of Ronald Reagan Washington National Airport had a significant impact on the regional and local economy. The airport averaged 42,000 passengers a day, annually generating $5.7 billion in direct and indirect business. Nearly 17,000 persons were employed at the airport at the time of the attack, and another 70,000 workers in the hospitality and tourism industries rely on it. To respond to the business community's need for

information and support, the county and the Chamber of Commerce created a business recovery center. Businesses were called and received broadcast e-mails with information on changes in traffic patterns, airport and airline information, mental health assistance for employees, central point for donations and volunteers, and school information. Department of Economic Development staff coordinated information on tax relief and employment assistance, and worked closely with the Small Business Development Center at George Mason University and the Virginia Employment Commission.

To respond to the growing needs of secondary victims, a coalition of Arlington nonprofit groups, the Coalition of Arlington Agencies for Response and Recovery (CAAR) came together under the umbrella of the Arlington United Way and the Arlington Community Foundation. Initially, these service providers saw the purpose of the group as one of information sharing. They soon realized they would be providing assistance—financial, crisis counseling, and information—for some time. The Recovery ETG has participated in this effort since its inception, and is continuing to work with the group to launch a community-based recovery task force, which is consistent with the model promoted by the State.

The Recovery ETG was not activated early enough in the response and, therefore, could not ensure all material and labor costs were accurately captured. Its role also needs to be broadened to reflect additional responsibilities including economic impact analysis, coordination of cost recovery efforts, liaison to community-based groups such as CAAR, and possibly management of donations.

The Employee Support ETG was immediately activated with initial emphasis on providing critical incident stress management (CISM) support to first responders. Ms. Dodie Gill, Director of Employee Support, and members of the county Employee Assistance Program (EAP) staff were at the incident site within 3 hours of the attack. The EAP function is staffed with Arlington County school system employees. The support provided onsite proved extremely valuable and was greatly appreciated by first responders. This support included contracted chiropractic services and seated therapeutic massages, individual counseling, assistance in contacting family members, and help managing personal affairs.

As time progressed, support was extended to other employee groups and family members. A special day-long program was organized for the Arlington County Police Department (ACPD) and families of Arlington County police officers. Babysitting services were provided, individual and group counseling was offered, and bus tours of the incident site were conducted. Group briefings were also presented to employees of the school system, and programs were developed to help students and their families cope with this event.

The Employee Support ETG coordinated broadcast voicemail messages to provide information to all county employees. These messages were well-received but should have been initiated earlier in the event and transmitted more frequently.

Because of concerns about foodborne illnesses, environmental health inspectors from the Arlington County Environmental Health Bureau inspected donated food

items at the incident site. This requirement is not currently recognized in the CEMP.

Several Arlington County offices and departments were challenged to find adequate numbers of qualified staff to function effectively around the clock for several days. There were plenty of people willing to work. The issue was planning for the long term and providing adequate training and orientation for relief personnel. These same organizations had to support emergency operations while day-to-day county business continued largely without pause. In several instances, normal business functions were also taxed, such as the sudden increase in employment assistance driven by the collateral effects of the Pentagon attack.

Recommendations and Lessons Learned

Many of the difficulties encountered by Arlington County government can be resolved by constructing and equipping a modern EOC. It should be of sufficient size and design to concurrently support the various activities that comprise the emergency management function. Centralized core workspace should be set aside for the Emergency Management Team and related staff. Contiguous work areas should be available for the ETGs where appropriate and for other ad-hoc work groups. A formal executive briefing room should be incorporated into the EOC design. The Arlington County ECC should be an integral part of the EOC, and a core staff should maintain and operate the EOC on a full-time basis. (EM-001)

A new EOC should be electronically equipped with communications and computing devices that are fully integrated. Emergency management software packages are available from several vendors that support the full spectrum of EOC functions, including rostering, automated notification, operations checklists and journals, action tracking, and report generation. Consideration should be given to Web-based systems that do not require buying "seat-licenses." Information from the EOC would then be accessible to anyone on the Local Area Network or with a dial-up connection. This will allow the county leadership to access the information from their offices, homes, or other locations if they are traveling. Such systems can be customized so appropriate information is available to the press, neighboring jurisdictions, and other government agencies. (EM-002)

The county should explore more effective use of targeted e-mail, reverse 9-1-1, and emerging technologies to transmit critical information to its own residents and businesses. (EM-003)

Policies must be established early and clearly communicated regarding both emergency and routine county operations. Such policies should specify what county employees are required to staff continuing functions and the hours of operations. They should provide for effective 24-hour staffing of the EOC Emergency Management Team "chairs" as well as the EPT and ETGs. (EM-004)

An EOC ID system should be established to ensure key officials and support staff have current ID badges. (EM-005)

To facilitate communications and coordination, an EOC representative should attend the Incident Command/Unified Command team and Incident Command staff changeover meetings. (EM-006)

Closed circuit television cameras should be installed at strategic locations throughout the county so traffic flow can be monitored from the EOC. (EM-007)

The work of the Employee Support ETG and EAP staff must be closely coordinated to ensure efforts are not duplicated and services provided to county employees are comprehensive. (EM-008)

An EOC equipment inventory should be maintained and records of any equipment loaned to other government entities kept so they can be quickly recovered. (EM-009)

Emergency contact lists must be updated and should include all supporting organizations, even those that are not part of the county government. (EM-010)

Arlington should consider an amendment to its CEMP to develop explicit plans for the receipt, tracking, and management of donations and volunteers. (EM-011)

Arlington County should review its current emergency management structure. It is possible that a different structure can better support a protracted ICS response operation. One of the most common EOC organizational schemes is the National Interagency Incident Management System (NIIMS) ICS, which allows seamless integration between the EOC and the field ICS. Another popular model is based on FEMA Emergency Support Functions (ESFs). This model is best suited when the primary role of the EOC is to provide resource support to the field ICS. (EM-012)

A more comprehensive, tested communications plan should be developed. The public needs to know in advance of an emergency where it can get Arlington-specific information. Strategies employed on an ad-hoc basis during September 11 should be further developed, formalized, tested, and communicated to the public. This includes the conversion of the county's Web site to an emergency information system with a staffing plan to support it; the more extensive use of the cable channel in emergency mode; and a systematic approach for communicating quickly with the Arlington business community. (EM-013)

Arlington County should consider establishing, away from the incident site, a pre-delivery screening location for supplies and equipment. (EM-014)

The CEMP should be revised to provide technical representation at the Resource Management ETG to aid in the procurement of special equipment to support fire, rescue, and law enforcement agencies. (EM-015)

The CEMP should include provisions for establishing a central receiving and inspection point for all donated items. (EM-016)

The Recovery ETG needs to be activated early in the response to ensure all material and labor costs are accurately captured. Its role needs to be broadened to reflect additional responsibilities including economic impact analysis, coordination of cost recovery efforts, liaison to community-based groups such as CAAR, and possibly management of donations. (EM-017)

The ACSO is not normally assigned space in the EOC but performed many valuable functions by its addition to the EOC during this incident. Workspace should be set aside for a Sheriff's Office representative to perform required duties consistent with the CEMP. (EM-018)

Support from the Arlington County American Red Cross Chapter extended well beyond the work of the Shelter and Evacuation ETG. Most of their activity was providing logistical support to the response force. As a result of September 11, the number of trained volunteers has grown from 80 to more than 300. Assigned space in the EOC would enable the county to make even better use of American Red Cross resources. (EM-019)

Regular emergency management training and cross-training should be mandated for managers and senior staff members. Key personnel should be familiar with the mechanisms for declaring a state of emergency, activating the Emergency Alert System (EAS), properly and accurately documenting operating costs, and all the other details associated with effective emergency operations. (EM-020)

Arlington County should determine key disciplines and specific skills needed in an emergency and participate with neighboring jurisdictions in a mutual-aid system, including media affairs and procurement. This would help ensure appropriate staffing for an extended event such as the Pentagon response. (EM-021)

The emergency preparedness levels specified in the CEMP should be revised so they are compatible with those recently published in Homeland Security Presidential Directive - 3, March 11, 2002. The new preparedness levels should include specific actions automatically taken at each level. (EM-022)

The CEMP should be revised to clearly define the roles of elected officials, including County Board members, during an emergency. Such an initiative should reflect the proper roles of elected officials and appointed management staff. Tabletop exercises focusing on scenario-driven policy issues might be incorporated into county emergency exercises so County Board members are better informed and can be more proactively engaged in the emergency management process. (EM-023)

Disaster response plans should include provisions for comprehensive CISM support for responders, their families, and members of the affected community. Other jurisdictions throughout the country should consider using an EAP similar to that used in Arlington County. (EM-024)

APPENDICES

APPENDIX 1
24-HOUR TIMELINE

September 11

8:10 a.m.	American Airlines Flight #77 departs Washington Dulles International Airport
9:20 a.m.	FBI WFO is notified that American Airlines Flight #77 has been hijacked
9:38 a.m.	American Airlines Flight #77, carrying 58 passengers and a crew of 6, crashes into the Pentagon
9:40 a.m.	Captain Chuck Gibbs arrives at the Pentagon
9:40 a.m.	Captain Mark Penn arrives at Arlington County EOC
9:41 a.m.	Battalion Chief Bob Cornwell arrives at the Pentagon and assumes Incident Command
9:41 a.m.	ACFD Truck 105 arrives at the Pentagon
9:42 a.m.	ACFD Captain Edward Blunt arrives at the Pentagon and establishes EMS Control
9:43 a.m.	MWAA first responders arrive at the Pentagon
9:48 a.m.	Assistant Chief James Schwartz arrives and assumes Incident Command
9:49 a.m.	FBI Special Agent Chris Combs arrives and is FBI representative to Incident Command
9:50 a.m.	Chief Schwartz establishes Fire Suppression Branch, River Division, EMS Division, and A-E Division
9:50 a.m.	Three area hospitals are prepared to receive patients
9:55 a.m.	Assistant Chief John White arrives and is assigned EMS Branch Commander
9:55 a.m.	Captain Gibbs evacuates impact area
9:57 a.m.	Structural collapse in impact area
10:15 a.m.	Chief Schwartz orders full evacuation because of warning of approaching hijacked aircraft
10:25 a.m.	Seriously injured victims are evacuated by EMS units and Medivac helicopters
10:30 a.m.	Arlington County EOC is operational
10:37 a.m.	United Airlines Flight #93 crashes 80 miles south of Pittsburgh, PA

10:38 a.m.	Chief Schwartz sounds the all-clear, ending the evacuation
11:30 a.m.	Chief Schwartz establishes the ICS Operations Section at the Pentagon Heliport; Battalion Chief Randy Gray is Operations Chief
11:39 a.m.	Arlington County issues emergency declaration; ratified by County Board at 3:30 p.m.
12:30 p.m.	County Manager Ron Carlee holds first Emergency Management Team meeting at the EOC
1:00 p.m.	Loudoun Task Force, led by Chief Jack Brown, arrives at Fire Station 1
1:10 p.m.	Chief Schwartz assigns Chief Brown as head of Plans Section
1:15 p.m.	Chief Schwartz asks DPS Chief John Jester to arrange Pentagon space for a multiagency meeting at 6:00 p.m.
1:30 p.m.	Chief Schwartz directs Chief White to establish a Logistics Section
2:00 p.m.	Fairfax US&R Team arrives
2:00 p.m.	Second threat of unidentified aircraft causes full evacuation
6:30 p.m.	Agency representatives meet with Chief Schwartz to discuss ICS and phasing into a Unified Command team
7:00 p.m.	Conference call among regional county administrative officers determines school and county openings for September 12
8:00 p.m.	FBI announces that the JOC will be activated at Fort Myer at midnight
11:00 p.m.	Chief Edward Plaugher and Major General James Jackson hold first joint press conference

September 12

12:00 a.m.	Chief Schwartz moves Incident Command to the JOC
6:00 a.m.	The JOC opens in Building 405 at Fort Myer
6:00 a.m.	Incident Command Logistics Section is fully operational
10:00 a.m.	Third threat of unidentified aircraft causes full site evacuation

APPENDIX 2
ACRONYM LIST

ACFD	Arlington County Fire Department
ACPD	Arlington County Police Department
ACSO	Arlington County Sheriff's Office
ADIC	Assistant Director in Charge
A&E	Apparatus and Equipment
AFB	Air Force Base
AFIP	Armed Forces Institute of Pathology
AGILE	Advanced Generation of Interoperability for Law Enforcement
ALS	Advanced Life Support
ASAC	Assistant Special Agent-in-Charge
AVL	Automatic Vehicle Locator
BATF	Bureau of Alcohol, Tobacco and Firearms
BLS	Basic Life Support
CAAR	Coalition of Arlington Agencies for Response and Recovery
CALEA	Commission on Accreditation for Law Enforcement Agencies, Inc.
CAO	Chief Administrative Officer
CC	Community Corrections
CEMP	Comprehensive Emergency Management Plan
CID	Criminal Investigation Division
CIRG	Critical Incident Response Group
CISD	Critical Incident Stress Debriefing
CISM	Critical Incident Stress Management
CONOPS	Concept of Operations
CONPLAN	Concept of Operations Plan
CPAS	Cellular Priority Access Service
CWIRP	Chemical Warfare Improvement Response Program
DARPA	Defense Advanced Research Projects Agency
DCFD	District of Columbia Fire Department
DEA	Drug Enforcement Agency
DIA	Defense Intelligence Agency
DISA	Defense Information Systems Agency
DoD	Department of Defense
DOE	Department of Energy
DOJ	Department of Justice

DOT	Department of Transportation
DPP	Domestic Preparedness Program
DPS	Defense Protective Service
DTHC	DiLorenzo TRICARE Health Clinic
DTS	Department of Technology Services
EAP	Employee Assistance Program
EAS	Emergency Alert System
ECC	Emergency Communications Center
ED	Emergency Department
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPT	Emergency Planning Team
ER	Emergency Room
ESF	Emergency Support Function
ETG	Emergency Task Group
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FCFRD	Fairfax County Fire and Rescue Department
FCPD	Fairfax County Police Department
FEMA	Federal Emergency Management Agency
HazMat	Hazardous Materials
HHS	Department of Health and Human Services
HOV	High Occupancy Vehicle
ICP	Incident Command Post
ICS	Incident Command System
ID	Identification
IMF	International Monetary Fund
INS	Immigration and Naturalization Service
IST	Incident Support Team
JIC	Joint Information Center
JOC	Joint Operations Center
JTTF	Joint Terrorism Task Force
LP	Liquid Propane
MDT	Mobile Data Terminal
MDW	Military District of Washington
MMRS	Metropolitan Medical Response System

MMST	Metropolitan Medical Strike Team
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MSA	Mine Safety Appliance
MWAA	Metropolitan Washington Airports Authority
NCRS	National Capital Response Squad
NIIMS	National Interagency Incident Management System
NMRT	National Medical Response Team
NPS	National Pharmaceutical Stockpile
NRT	National Response Team
NTSB	National Transportation Safety Board
NVRA	Northern Virginia Response Agreement
OAR	Office of Air and Radiation
OR	Operating Room
OSHA	Occupational Safety and Health Administration
OSI	Office of Special Investigations
OSS	Office of Support Services
PA	Public Address
PDD	Presidential Decision Directive
PIO	Public Information Officer
POAC	Pentagon Officers Athletic Center
PPE	Personal Protective Equipment
PSCC	Public Safety Communications Center
SAC	Special Agent-in-Charge
SCBA	Self-Contained Breathing Apparatus
SERV	Special Emergency Response Vehicle
SIOC	Strategic Information Operations Center
SOP	Standard Operating Procedure
SSA	Supervisory Special Agent
SWAT	Special Weapons and Tactics
TOPOFF	Top Officials
TRT	Technical Rescue Team
TSMC	Texas Southwestern Medical Center
USAF	U.S. Air Force
USPHS	U.S. Public Health Service
USPP	U.S. Park Police
US&R	Urban Search and Rescue
USSS	U.S. Secret Service

VDEM	Virginia Department of Emergency Management
VDOT	Virginia Department of Transportation
WFO	Washington Field Office
WMATA	Washington Metropolitan Area Transit Authority
WMD	Weapons of Mass Destruction

APPENDIX 3
DATA REFERENCE DIRECTORY

I – BIBLIOGRAPHY

Regional Agreements

Northern Virginia Emergency Services Mutual Response Memorandum of Agreement (known as the NOVA Agreement)

Memorandum of Understanding to Provide Regional Fire Protection Services Between the City of Alexandria, Fairfax County, VA, and Arlington County, VA, December 12, 1975

Metropolitan Washington Council of Governments Mutual Aid Agreement for Fire and/or Rescue Service, February 2, 1973

Greater Metropolitan Washington Area Mutual Aid Operational Plan

Memorandum of Agreement Between the Department of Defense and Arlington County for Provision of Emergency Medical Services and Fire Protection to the Pentagon and Federal Office Building #2

Memorandum of Understanding Between DiLorenzo TRICARE Health Clinic, Defense Protective Service, and Arlington County Fire Department, July 1999

Arlington County Fire Department and Metropolitan Washington Airports Authority Fire and Rescue Department Memorandum of Understanding, October 30, 1995

Agreement Between the District of Columbia and Arlington County, VA, for the Coordinated Purpose of Fire Rescue and Emergency Services to Certain Areas Within or Near the Banks of the Potomac River (Described in Arlington County Fire Department Standard Operating Procedure “Fire 11”)

Northern Virginia Regional Trauma Triage Plan, February 2, 1999

Northern Virginia Law Enforcement Mutual Aid Agreement

Northern Virginia Sheriffs’ Mutual Aid Agreement

Arlington County Plans and Standard Operating Procedures

Arlington County Comprehensive Emergency Management Plan

Arlington County Fire Department Standard Operating Procedures, http://www.co.arlington.va.us/fire/edu/about/sop.htm

Arlington County Police Department Procedures: Incident Command System, 570.01, and Disaster Plan, PRO96-76

Virginia Agreements

Virginia Statewide Mutual Aid Compact
(Also Statewide Mutual Aid for Emergency Management Model Authorizing Resolution, Sample Event Agreement, and Commonwealth of Virginia Statewide Mutual Aid Guidebook)
http://www.vdem.state.va.us/library/mutualaid/statemaid.cfm

Other Information

Emergency Communications Center journal excerpts

Arlington County Emergency Operations Center Event Tracking System Activity Report, September 11, 2001, to September 12, 2001, and September 13, 2001, to September 27, 2001

Pentagon Joint Operations Center notes

Arlington County Sheriff's Office: Operational Debriefing on Pentagon Incident, October 12, 2001

Alexandria Fire Department Incident Critique, Pentagon Incident, September 11, 2001

Andrew Rader U.S. Army Health Clinic: After-Action Report, Pentagon Aircraft Crash Response

Fairfax County Fire and Rescue Department: Review of Fairfax County Operations at the Pentagon

Bureau of Alcohol, Tobacco and Firearms: After-Action Report – NRT-01-29, Pentagon, Arlington, VA

Public Safety Wireless Network Program: Answering the Call: Communications Lessons Learned from the Pentagon Attack

Arlington County Police Department: Command Post Notes, Tuesday, September 11, 2001 (1915 to 2140 hours)

Pentagon Building Security and Emergency Procedures Guide (Defense Protective Service)

Pentagon Evacuation Planning Guide (Defense Protective Service, August 2001)

II – GROUP DEBRIEFINGS

Arlington County Government: 14 Participants

Arlington County Fire Department: 12 Groups (204 participants)

Mutual Aid Emergency Medical Services, Hospital and Clinics: 7 Groups

Law Enforcement Agencies: 10 Groups (Arlington County Police Department, 75 participants)

III – INDIVIDUAL INTERVIEWS

Arlington County Government: County Manager Ron Carlee, Assistant Manager John Mausert-Mooney, Assistant Manager for Public Affairs Richard Bridges, Ms. Dodie Gill, Director of Employee Support; County Board Members Barbara Favola, Paul Ferguson, Jay Fisette, Charles Monroe, and Christopher Zimmerman.

Arlington County Fire Department: Chief Edward Plaugher, Assistant Chief James Schwartz, Assistant Chief John White, Assistant Chief Shawn Kelley; Battalion Chiefs Ray Blankenship, James Bonzono, Randy Gray; Captains Lewis Cooper, Chuck Gibbs, Steve McCoy, Mark Penn, and Robert Swarthout.

Arlington County Police Department: Chief Edward Flynn, Deputy Chief Stephen Holl, Captain Mary Gavin, Captain Rebecca Hackney, Captain Tom Panther, Captain Bonnie Court, Lieutenant Karen Herchenroder, Lieutenant Paul Larson, and Lieutenant Matt Smith.

Arlington County Sheriff's Office: Sheriff Beth Arthur, Chief Deputy Sheriff Mike Raffo.

Defense Protective Service: Chief John Jester, Deputy Chief John Pugrud.

Federal Bureau of Investigation: Special Agent-in-Charge Arthur Eberhart, Assistant Special Agent-in-Charge Bob Blecksmith, Supervisory Special Agent James Rice, Special Agents Christopher Combs, John Adams, Paul Garten, Jennifer Gant, Tara Bloesch, Dan Reilly, Tim O'Connor.

Alexandria Fire Department: Chief Tom Hawkins, Assistant Chief James Gower, Assistant Chief Vincent Whitmore.

Fairfax County Fire and Rescue Department: Deputy Chief Clark Martin, Deputy Chief Glen Benarick.

Hospitals and Clinics: Inova Alexandria Hospital—Dr. James Vafier, Dr. Martin Brown, Ms. Colleen Mahoney, Ms. Kathleen Thomas; Virginia Hospital Center - Arlington—Dr. Sverha; Washington Hospital Center—Ms. Katie Hollowed; Department of Defense—Lieutenant Arrington, Sergeant Major McGuire, Dr. Marzouk, Dr. Ensign, Major Lorie Brown, Lieutenant Colonel Bitterman.

Others: Emergency Communications Center Steve Souder, Chris Satterfield, Virginia Department of Emergency Management Ms. Cindi Causey, Virginia Medical Examiner Dr. Marcella Fierro, Military District of Washington Major General James Jackson, Metropolitan Washington Airports Authority Ronald Reagan Washington National Airport Fire Department Battalion Chief Tim Lasher and Captain Michael Defina, Fort Myer Fire Department Captain Dennis Gilroy, American Red Cross Arlington County Ms. Susan Aarhus, Virginia Registrar Ms. Deborah Bowser, Department of Health and Human Services Office of

Emergency Preparedness Rock Cornish, Bureau of Alcohol, Tobacco and Fire Arms Special Agent-in-Charge Michael Bouchard.

APPENDIX 4
PENTAGON PENETRATION DAMAGE DIAGRAMS

Punch Out

General Area C

General Area D

General Area E

224 Feet Approximate

NAVY SPECIAL USE

AR11

AR11

CORRIDOR 5

CORRIDOR 4

NORTH SIDE — SOUTH SIDE

494 Feet Approximate

LEGEND:

DAMAGED COLUMNS –

MISSING COLUMNS –

INTERIOR DAMAGE –

COLLAPSED DAMAGE –

FIRE DAMAGE –

CORRIDORS –

NORTH

0 10 20 30 40 50

Approximate Scale in Feet

HELIPORT SIDE

PENTAGON

FIRST FLOOR - WEST

FEDERAL BUREAU OF INVESTIGATION
EVIDENCE RESPONSE TEAM

NORTH SIDE — SOUTH SIDE

General Area C

General Area D

General Area E

224 Feet Approximate

CORRIDOR 5

CORRIDOR 4

494 Feet Approximate

LEGEND:

DAMAGED COLUMNS –

MISSING COLUMNS –

INTERIOR DAMAGE –

COLLAPSED DAMAGE –

FIRE DAMAGE –

CORRIDORS –

NORTH

0 10 20 30 40 50

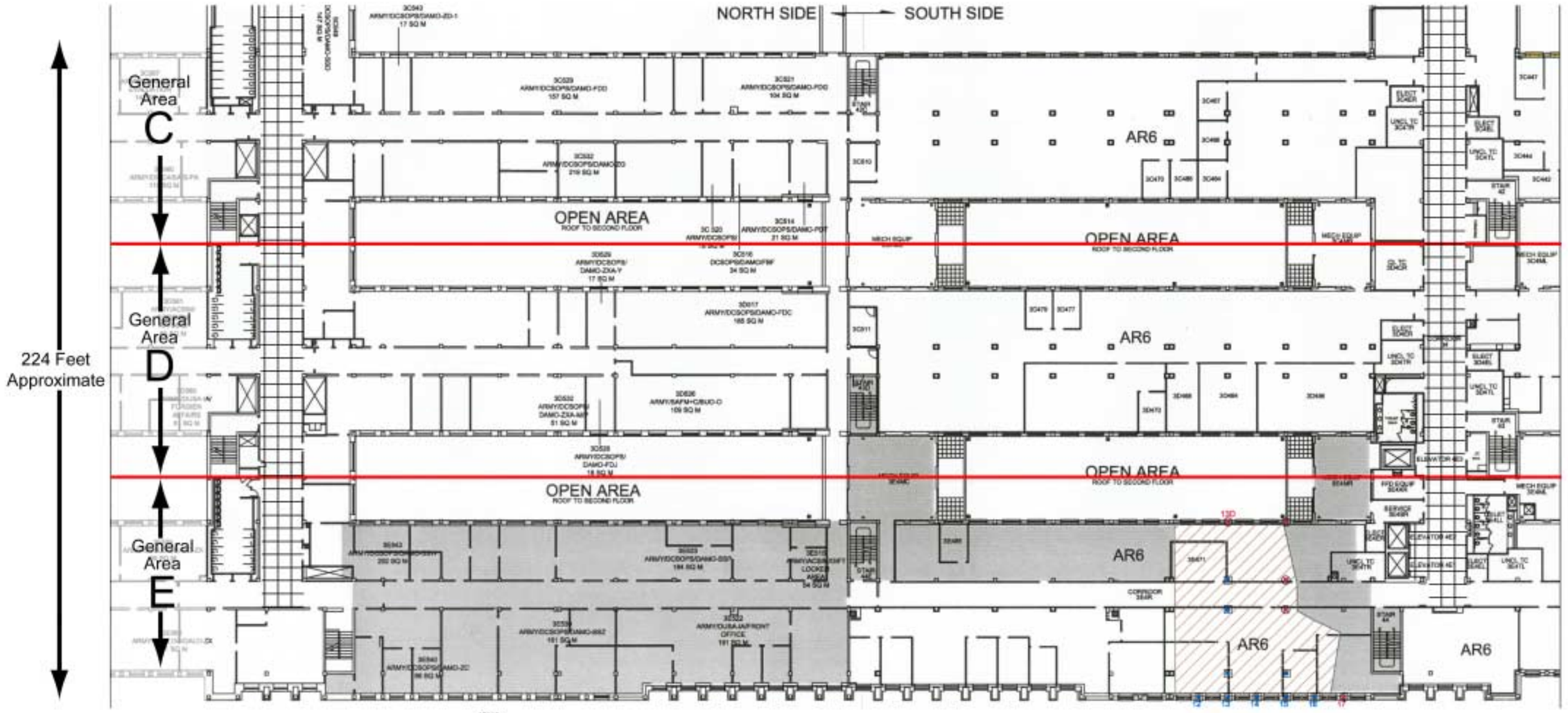
Approximate Scale in Feet

HELIPORT SIDE

PENTAGON

SECOND FLOOR - WEST

FEDERAL BUREAU OF INVESTIGATION
EVIDENCE RESPONSE TEAM



LEGEND:
- DAMAGED COLUMNS –
- MISSING COLUMNS –
- INTERIOR DAMAGE –
- COLLAPSED DAMAGE –
- FIRE DAMAGE –
- CORRIDORS –

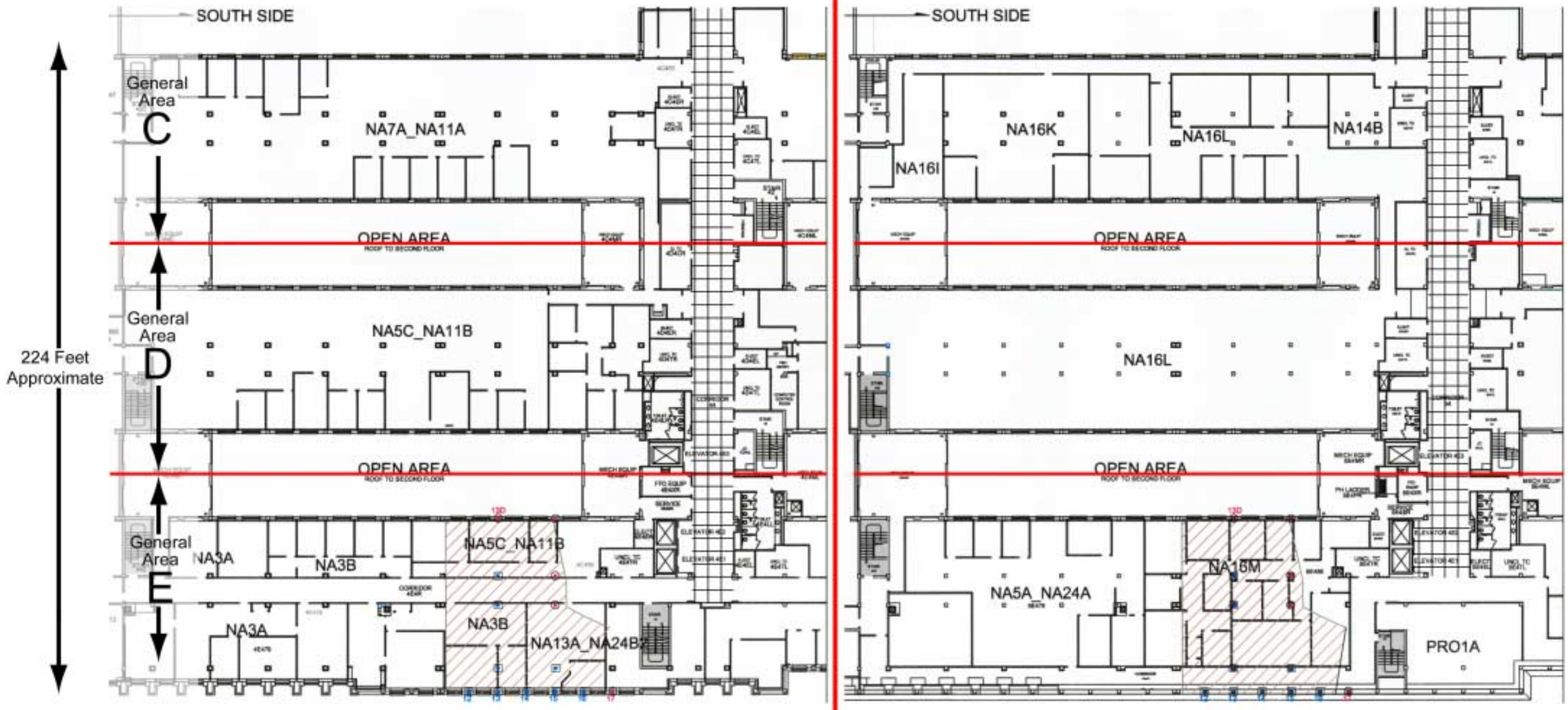
NORTH

0 10 20 30 40 50
Approximate Scale in Feet

HELIPORT SIDE

PENTAGON
THIRD FLOOR - WEST

FEDERAL BUREAU OF INVESTIGATION
EVIDENCE RESPONSE TEAM



LEGEND:
- DAMAGED COLUMNS –
- MISSING COLUMNS –
- INTERIOR DAMAGE –
- COLLAPSED DAMAGE –
- FIRE DAMAGE –
- CORRIDORS –

HELIPORT SIDE

PENTAGON

FOURTH FLOOR - WEST

FEDERAL BUREAU OF INVESTIGATION
EVIDENCE RESPONSE TEAM

HELIPORT SIDE

PENTAGON

FIFTH FLOOR - WEST

FEDERAL BUREAU OF INVESTIGATION
EVIDENCE RESPONSE TEAM


QUIT HELL!!!
WE ARE AMERICA
WE ARE FREE
WE ARE NOT AFRAID
GOD BLESS AMERICA
FBI