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CITY OF OXFORD

Butler County, Ohio

Analysis of Current Fire and Rescue Operations

Project Consulting Team:

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Nathan P. Bromen, EFO
Michael John Cayse

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FOREWORD

Photo #1: Sign Welcoming Residents and Visitors to Oxford

During the months of December, 2003 through March, 2004, the firm of ***Kramer and Associates*** conducted a study regarding the state of fire protection in the City and Township of Oxford in Butler County, Ohio. An analysis was performed to determine the capability of the Oxford Fire Department to deliver necessary fire protection and emergency medical protection to the area served, both now and into the future. (Resumes of Consultants William M. Kramer, Nathan P. Bromen, and Michael Cayse are located in **Appendix 1.**)

Sincere appreciation is extended to the elected officials in the City of Oxford who have shown a keen interest in the Oxford Fire Department, and have exhibited a devotion to public service. It is evident that while they have differing opinions, they all have a sincere desire to provide quality fire and rescue service to the businesses and residents in both the City and Township of Oxford. All members of the City who possess leadership roles in providing fire and emergency medical protection displayed a willingness to reach common ground as they work from different perspectives.

City Manager Jane Howington, Fire Chief Len Endress, and officers in the existing fire department organization all displayed a progressive spirit that will ultimately benefit the residents and corporate citizens of Oxford. Mayor Jerome Conley and Council Members Prudence Dana, Stephen Flee, G. Alan Kyger, Frances Liu, Dave Prows, and Douglas Ross are credited with the supporting a look into the fire service for the City of Oxford. Likewise, Oxford Township officials including Chairman George Simonds and Trustees James McDonough and Joyce Woodruff were helpful and cooperative.

The City of Oxford deserves credit for seeking a neutral opinion regarding the Fire Department and EMS Operations since these are among the most vital and expensive of City services.

Photo # 2: Oxford Municipal Center

A consultant is usually no more intelligent than the client that he or she is serving, but can bring objectivity and non-bias to a jurisdiction that can be quite valuable. It is hoped that this study will provide information that can be used by Oxford officials to create a fire and rescue service commensurate with increasing demands and quality service, which the residents and businesses of Oxford deserve. In its unique position as host to Miami University, the City has unique challenges in providing services to the University community, but corresponding opportunities for enrichment as a University community.

HISTORICAL PERSPECTIVE

The Oxford Fire Department has performed admirably over its history and continues to provide fire protection to the City and Township of Oxford in the face of increasing demands for its service and increasing responses. Both the geographic area and the population of the City have grown. Over time, the Fire Department has undergone various transitions and currently is positioned at a critical crossroad where its future should be planned in advance. It is fortunate to have experience and enthusiasm among fire department members, including both veteran firefighters and younger members, many of them students at Miami University.

The Fire Department will need to continue recruitment to function effectively as a volunteer department. Nationally, volunteer fire department members are becoming increasingly scarce. Oxford should plan now for the day when volunteers will be unable to completely fulfill the fire/rescue needs of the City and Township. This study should provide guidelines for growth, and a blueprint for the future.

Fire protection in general presents an interesting history which is relevant to our study and which can be divided into three eras. The first era ("Era I") dates to the days of Benjamin Franklin, an early leader in the early American Volunteer Fire Service. Early in our history, the US citizenry depended upon fire protection in the form of vehicles such as hand-drawn pumps and hose carts brought to the incident location. In a sense, this form of fire protection has not changed much. Coast-to-coast across North America fire departments, both large and small, back their apparatus into quarters, await the sound of a call, and rush to the scene when an alarm is sounded.

A second era of fire protection ("Era II") is represented by placement of fire suppression systems (sprinklers and alarms) inside of structures themselves. Commercial buildings, factories, hotels, student dormitories and any other buildings which present a potential for large loss or which represent a life hazard in terms of occupancy can be protected with automatic sprinkler systems. These will hold a fire at bay and often will summon fire suppression forces when the water flow in the piping system triggers an automatic alarm. This type of fire protection is immediately deployed and is capable of operating independently of the external protection provided by a fire department.

As part of Era II, smoke alarms, which are mandated in many commercial structures, have become popular in homes and have resulted in the early detection of many fires while in the incipient stage. This has allowed the occupants to take immediate action and is responsible for saving untold numbers of people and many homes from the ravages of fire.

An obvious tradeoff exists between in-house proximate protection, provided by sprinklers and alarms, ("Era II") and the external protection provided by the fire department ("Era I"). Commercial development has occurred over time in the City of Oxford, especially at the University, and many buildings now enjoy Era II internal protection, reducing the demands on firefighting forces.

The third generation of fire protection will consist of a "non-combustible society". ("Era III"). Currently, the technology exists to construct fire-resistant buildings, and to outfit these buildings with non-combustible furnishings. Coupled with this is the ability to treat all fibrous products such as clothing, paper, decorations or anything else that could conceivably be brought into a structure with a fire retardant process. (One such product called "no char ®" has been used to treat all of the barns at the Ohio State Fairgrounds).

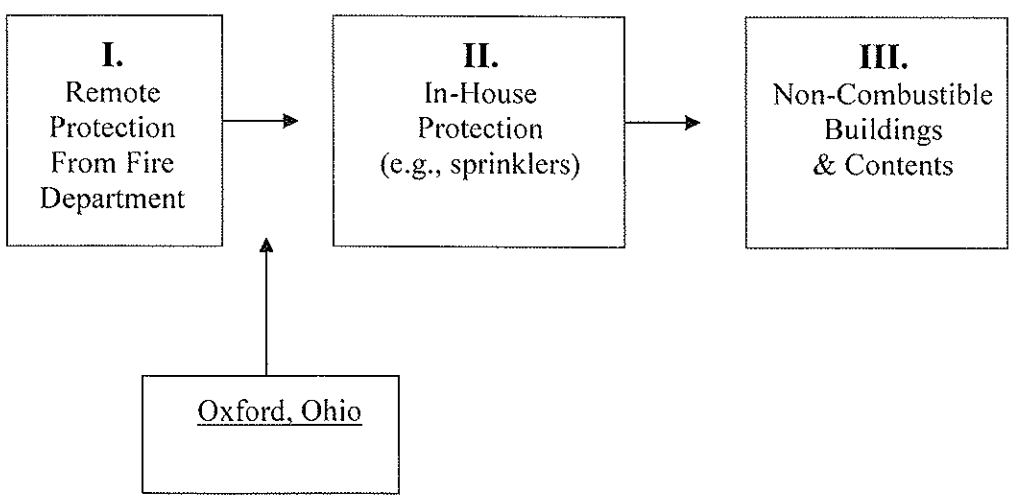
Should we as a society ever agree to make the necessary expenditures to create a non-combustible society, then not only are fire departments from "Era I" rendered less important, but even sprinkler systems and in-house protection from "Era II" will likewise become far less necessary. The "Era III" will not enter into our study or equation since we as a society are not even close to entering a non-combustible age. Overall, however, the historical result of the move toward Era II and III has been fewer fires, and less intense fires.

The history of fire occurrences in the City of Oxford shows that fires have almost always been controlled in the building of origin with the use of sprinkler systems or fire protection delivered by the Fire Department.

Figure 1 shows the three-step historical evolution, and the current positioning of the City of Oxford.

Figure 1

The Three Historical Phases Of Fire Protection



THE OXFORD FIRE DEPARTMENT

History

The City of Oxford, although well protected with a generally low number of overall annual fires, has had significant fires over the years. The Fire Department has battled some historic fires, including the 1972 Masonic Lodge fire that resulted in the death of a Hamilton Deputy Chief, as well as two firefighter disabilities due to a building collapse. There was a well-remembered fire at the White Rabbit building, as well as the Minnis Building fire that housed Bruno's pizza. There reportedly have been four civilian deaths in fires (two on West Withrow, one in a mobile home, and one on Melinda Drive). There are recorded success stories, such as the Sigma Chi house fire, where a student was rescued from the third-floor bath using a thermal imaging camera. Oxford should be proud that they have made a positive difference in the community.

Facilities

Photo #3: Oxford Fire Station, Front View

Oxford is very blessed to have a nice facility in which to house the fire headquarters and the apparatus. This facility is somewhat limited in that it cannot support on-duty staff without renovating the floor plan to include cooking areas, bunk rooms for sleeping accommodations, male and female restrooms, and ADA upgrades like an elevator. This facility has a significant amount of space, but future needs may require significant upgrades. Consideration should be given to prioritizing the need for another station with the costs of an upgrade at this facility.

Photo #4: Oxford Fire Station, Side View

The City of Oxford is well protected by this existing station. As the population in the City of Oxford grows, it should be prepared to add peripheral stations in order to provide adequate fire and rescue service to the growing population.

Photo #5: Oxford Fire Station, Rear View

Apparatus

Oxford has a nice inventory of fire and EMS apparatus. Although not perfect, this equipment will serve Oxford well for many years to come. Care must be given to carefully plan the replacement time of these apparatus, since the rotation schedule must coincide with capital improvement funding plans. Tracking of the hours and mileage on these vehicles is important, although the life expectancy will likely be reached before the corresponding mileage would accrue. A replacement schedule has been provided, not as an exact date when apparatus should be retired, but instead for the purpose of planning approximate replacement dates. Specific circumstances must be weighed prior to any significant investment in rolling stock.

Photo #6: Engine 213

Photo #7: Ambulance 291

Photos of vehicles purchase by the City of Oxford and Oxford Township have been included to identify the scope of the fire division fleet.

Photo #8: Ladder 214 Still Serves Oxford

Photo #9: American La France Reserve Engine 212

Photo #10: Rescue Unit 241

Photo # 11: Tanker Unit 255

Photo #12: Brush Unit 251

Photo #13: Engine 211

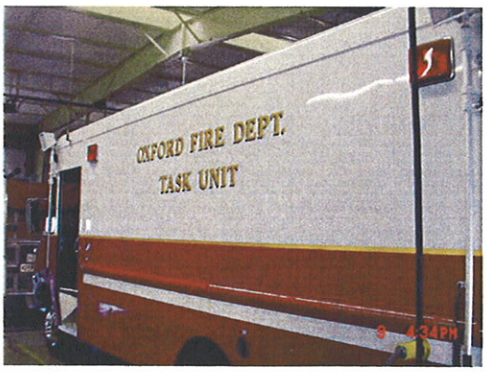


Photo #14: Task Unit 245

Photo #15: Task Unit Interior

A reasonable variety of equipment has been provided to the fire personnel for their benefit in addressing the job-related hazards found within the community. As the fire department transitions from the traditionally limited activities of only fighting fires, into providing Emergency Medical Services, expanding into hazardous materials mitigation, and more recently dealing with technical rescue, specialty equipment will need to be provided if crews are expected to manage these increasing demands.

ORGANIZATIONAL STRUCTURING

The City of Oxford should be proud of many individuals within the Fire Department who show dedication and provide a valuable resource to the City due to the countless hours of volunteered time. Although stretched thin, the personnel in this organization bring skill and enthusiasm to the job and usually are present to deliver quality service. Membership in the Oxford Fire Department has not dramatically changed during the past ten years. The department is authorized to have a staff of 40 personnel, and 39 personnel are currently members. Although there is heavy turnover, recruitment efforts are still currently productive.

An organizational chart representing the structuring of the department is somewhat flat, or linear, at this time but the organizational structure will likely expand in the future to include specific divisions, such as prevention division, training division, maintenance division, etc.

Succession Planning

Chief Len Endress has served in this career for over 34 years and Oxford has sincerely benefited during his management as Fire Chief, particularly because of his dedication, his knowledge of the community, his knowledge the job demands, and his proven leadership to the organization. In his remaining time until retirement, Oxford is encouraged to develop a succession plan so that a smooth transition can be made as new leadership is selected for the organization.

Specific recommendations for the organization include targeted training at every level of the department, including operational, managerial, and leadership preparation. Prior to the transition to a new chief, the department can be more prepared by assuring that lieutenant-level officers have been trained in operational courses like Managing Company Tactical Operations (MCTO) at the Ohio Fire Academy or in an outreach program. Captain-level officers can use both the previously-listed course and management-level training at a course such as the Maryland Fire Rescue Institute's Staff and Command school. Assistant Chiefs can continue to expand their skills in a leadership development course at the Ohio Fire Academy or National Fire Academy. Ultimately, the fire chief candidate who is selected should be familiar with all of the materials covered in these courses.

This will help build the department foundation of knowledge that is needed, as well as create a healthy, competitive environment for the organization. Current officers should have an opportunity to compete in the fire chief process, for both an appreciation of their contributions in the past, as well as to ensure that quality candidates are simply not overlooked. The search for a new chief should also include an external search, in case no internal candidate is qualified or available for the position. Even if an external candidate is selected, internal officers will know they had an opportunity to provide input. Later, as the new chief implements changes, officers who had an opportunity to provide input will not be able to justifiably complain when they previously had a chance to offer solutions.

OXFORD RESPONSE INFORMATION

The Oxford Fire Department stays busy according to a cursory comparison of runs compared to those of similar cities. The department is currently organized well to handle the myriad types of emergencies that the City routinely faces. A conceptual chart for the Oxford Fire/Rescue Department is shown as **Figure 2**. This shows overlap between the EMS and Fire Department functions in graphic fashion.

During the year 2003, the Rescue Squad had made **1330** runs, and the fire department had made **355** runs. According to statistics provided by the Firehouse reporting software at the Fire Department office, mutual aid was needed for **190** Squad runs, or **14.3 %** of the squad call volume. In the Fire Department, mutual aid was needed **8** times for a percentage of **2.3 %** of the fire call volume. These figures and are shown in **Table 1**. In Oxford, the combined fire and life squad organization gains efficiency due to "economy of scale."

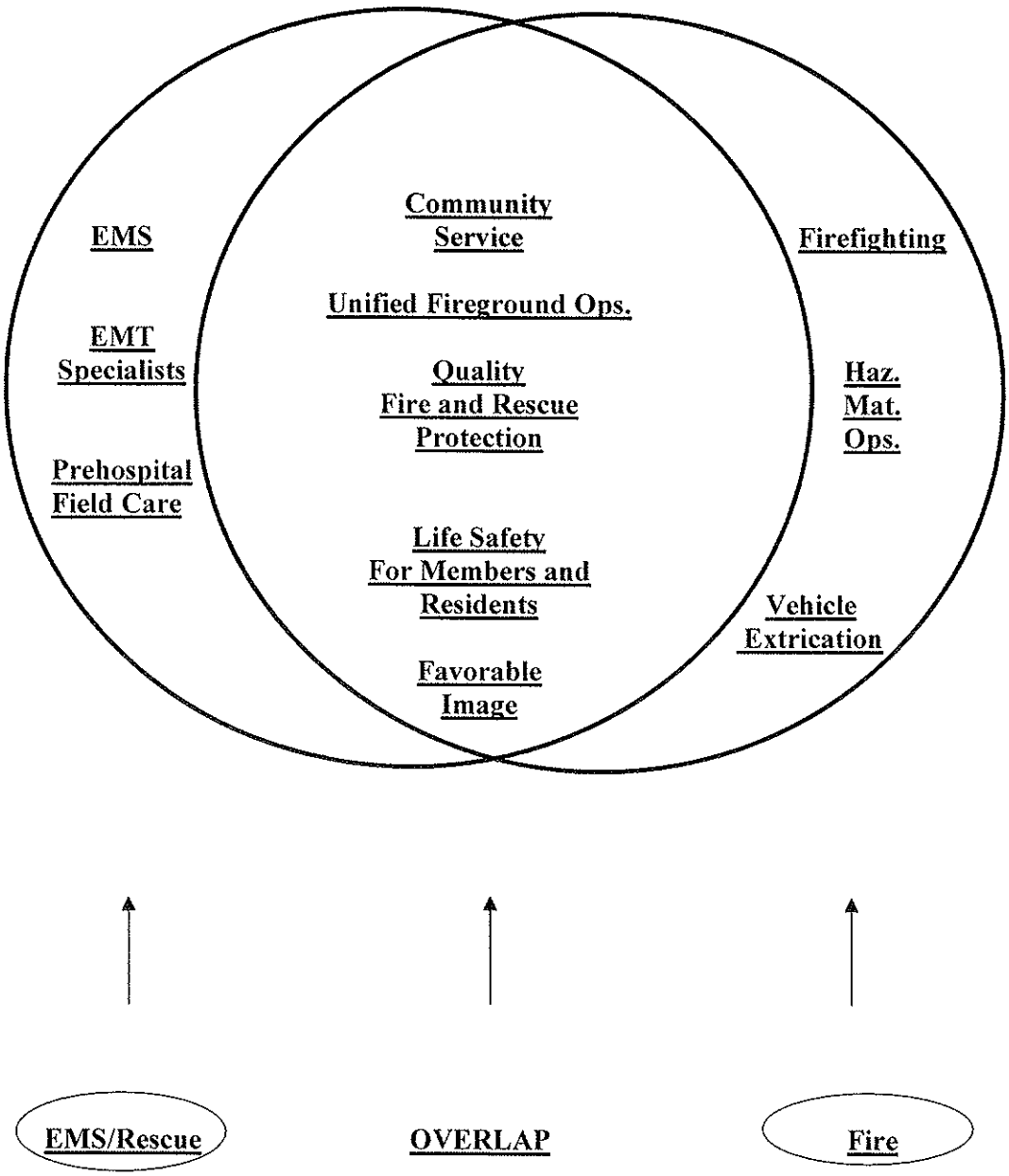
Table 1
2003 RESPONSES IN OXFORD

	Total Runs	*Mutual Aid*	*Percentage Mutual Aid*
Rescue Squad Calls	**1330**	**190**	**14.3 %**
Fire Calls	**355**	**8**	**2.3 %**
Total Calls	**1685**	**198**	**11.8 %**

Photo #16: Emergency Responses in the Oxford Region have Increased

Figure 2

The Rescue/EMS and Fire Operations Overlap



The increasing demands for service placed on the Fire Department and Rescue Squad over time were analyzed. Consistent with national trends, the frequency and severity of actual fires is declining in The City of Oxford, and the number of fire calls (alarms, smoke calls, rescue calls, etc.) has shown only moderate growth. Emergency medical responses are growing more rapidly.

Table 2 shows the frequency of responses for both the Fire Department and Rescue Squad over the past ten (10) years, and **Figure 3** shows these same statistics graphically.

Table 2
Fire and EMS Responses, Previous Ten Years
The City of Oxford, Ohio

Year	1994	1995	1996	1997	1998
FIRE	217	235	317	301	330
EMS	990	1051	1050	1119	1227

Year	1999	2000	2001	2002	2003
FIRE	355	368	380	382	355
EMS	1219	1227	1273	1281	1330

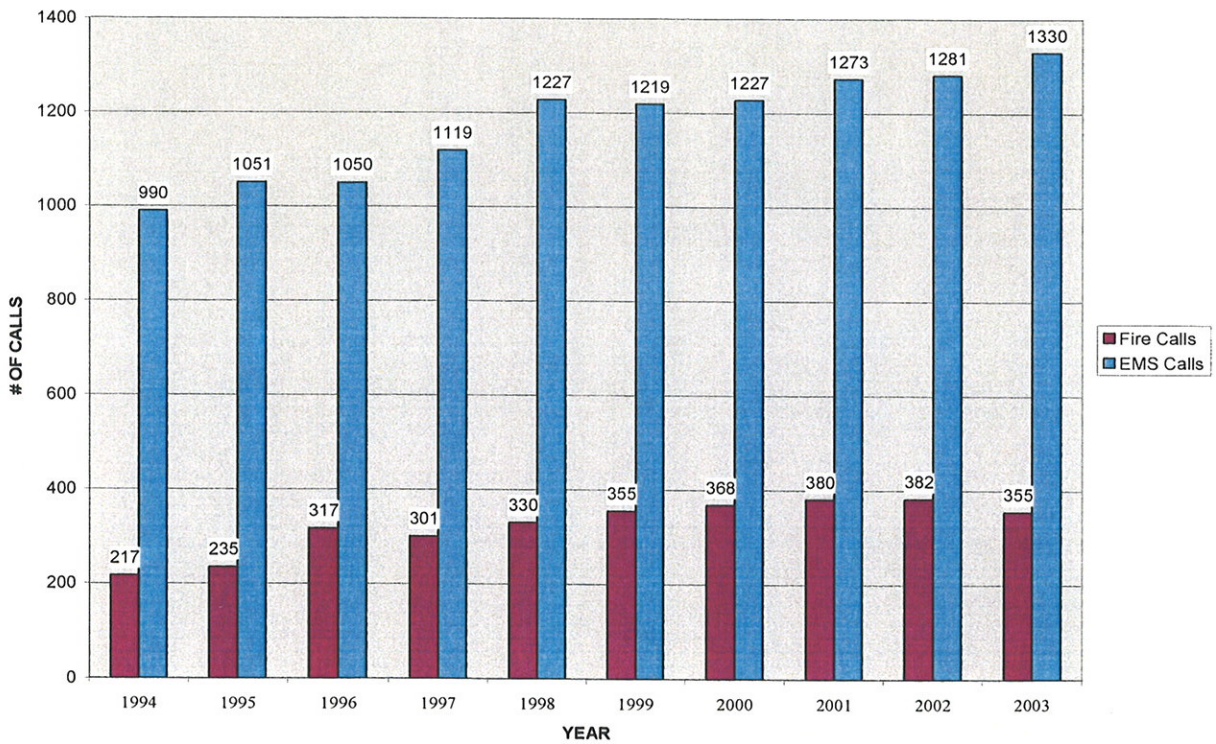


Figure 3: The City of Oxford, Ohio, Fire and EMS Responses, Previous Ten Years

The response data for The City of Oxford shows that it mirrors national trends with a static demand for actual fire protection, and an increasing need for emergency medical services. Future plans for apparatus, staffing, equipment and training should include attention toward this evolving trend.

Fire data was obtained from Oxford's National Fire Incident Reporting Software database, called Firehouse software, and the EMS information was compiled from the Ohio Department of Public Safety's EMS Incident Reporting database. FIPS codes for determining the distribution of calls by geographic area were located at the US Geological Survey's website at http://geonames.usgs.gov/fips55.html.

Dollar Loss Sustained

Oxford fire incident reporting data indicates that the total dollar loss to the community served by the Fire Division was $498,825 in 2003. Although the departments endeavor to keep fire loss at a minimum, this amount in not unusual, and is considered both respectable and normal for a community the size of the greater Oxford area.

Response Time Review

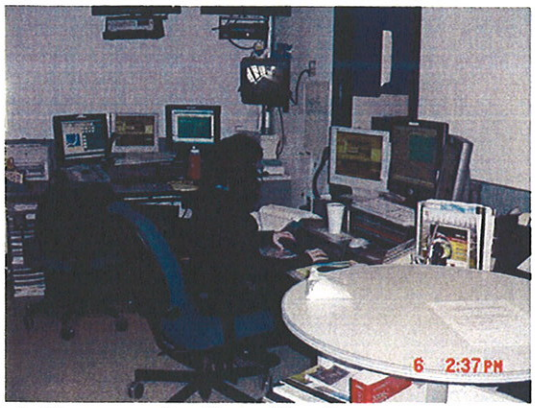
A review of response time data was completed to identify if any improvements were needed for the community being served. While conducting research during this consulting project, the consulting team was on-site during several different occasions when emergency calls were dispatched. Members of the consulting team were very impressed with the quick response time and apparatus deployment within the community. The timeliness and consistency of the on-call staff was excellent for an organization of the size and complexity of Oxford. Although on-station staffing would improve response times, the consultants feel that the service being provided by the personnel from a volunteer/on-call organization is excellent. In fact, it is near the best that can possibly be expected from the existing department structure. Until Oxford chooses to move forward with future plans, they can be assured that, from a response time perspective, the best possible service is being provided to their community within the given framework. We see no reason for this to change, as long as the current consistency and personnel support are maintained into the future. **Overall response times included some non-emergent calls, so times are slightly skewed, and are actually lower.** Oxford Fire Division response times for specific areas in greater Oxford are in **Table 3** as follows:

AREA OF FIRE-RELATED CALL	AVERAGE RESPONSE TIME
District 1 - City of Oxford	00:07:44
District 2 - Miami University	00:05:24
District 3 - Oxford Township	00:08:11
District 4 - Mutual Aid	00:12:12

Table 3: Average Response Time by Community

Approximately 12 trains are reported to cross the road near the station each day, which could cause a justified concern. However, there has only been a reported delay on one occasion, where the backup plan (including supplemental resources) was successful at maintaining a reasonable response time.

Communications

Photos #17/18: Oxford Dispatch Communications Center

The City of Oxford has its own communications dispatch center. Although some efficiencies and economies of scale can be realized in larger centralized systems, such as with Butler County Dispatch, the establishment of this system probably evolved out of the Police Department needs, and the fire department benefited from the relationship. Mr. Matt Franke, dispatch supervisor of the communications center, met with a consulting representative to discuss the communications system and its integration within the fire department. His input was very beneficial to this study.

The first thing identified with the communications center was the healthy availability for redundancy in the system. In the unlikely event that the dispatch center was closed for any reason, alternate 911 Public Safety Answering Points (PSAP) locations are present as a backup dispatch system. This is a critical grading area for the ISO inspector. Although the system has serviced Oxford for a number of years, we learned that Miami University has 12 separate radio systems, alone. Discussion has occurred regarding the possibility of initiating an 800MhZ radio trunking system, which could replace those systems and increase the accessibility of all users to communicate in one format. This can be exceptionally important as Oxford and the University work toward more common grounds.

The Computer Aided Dispatch software package used in the communications center seems to meet the community's needs, while still having capabilities that have yet to been utilized to their full advantage. Careful planning and familiarization with this program could allow for a helpful breakdown of fire and EMS response areas into matching sectors with police patrol beats. This would allow the dispatchers to assign actual apparatus units, as opposed to station responses. This allows for closer tracking of individual resources, which is helpful in multiple-call situations.

This system is also fully capable of supporting Mobile Data Computers (MDC's), which are helpful in relaying not only important response time and address data, but also critical fire pre-planning information. It is our recommendation that at a minimum, a MDC should be installed in the fire chief's vehicle as early as possible to take advantage of the technology that already exists within your system.

MIAMI UNIVERSITY AS A KEY FACTOR

Photo # 19: Miami University Administration Building

Without a doubt, the Oxford Fire Department should be commended for a job well done. Under the leadership of Chief Len Endress, department members provide the important job of fire and life safety, as well as a variety of other emergency response roles to the citizens of the City and Oxford Township. By all indications, this has been done with a very high degree of professionalism and skill.

The Oxford Fire Department, while located in a rural portion of Butler County, is by no means the typical rural fire department. Having the same issues and response problems as a rural fire department may encounter, this department also has to deal with many of the issues of a large metropolitan department. The existence of one of Ohio's finest campuses, Miami University, in the fire department's jurisdiction places a significant burden upon the fire department. With a student population of over sixteen thousand, and the teaching and support staff associated with that to run the campus, it is easy to see that Miami University becomes the largest customer for the Fire Department.

Campuses can put an extreme burden on a fire department. While a college campus can truly be a very positive thing for a community through helping develop their image and sense of pride, they also bring with them a large degree of diversity in the type of problems they must be prepared to handle. Miami University is a large, well-respected college campus. On the campus are chemistry labs, dining halls, concentrated housing, classrooms, old structures, large sporting complexes, indoor arenas, students, and many other hazards including a small but growing airport.

The Oxford Fire Department has dealt very well with these diverse hazards. Their small but dedicated volunteer staff has been diligent in providing the community with a professional level of service. However, with time comes growth and with growth comes needs. The fire department must continue to ensure that it can meet the needs of the City and Township of Oxford, and its largest customer, Miami University.

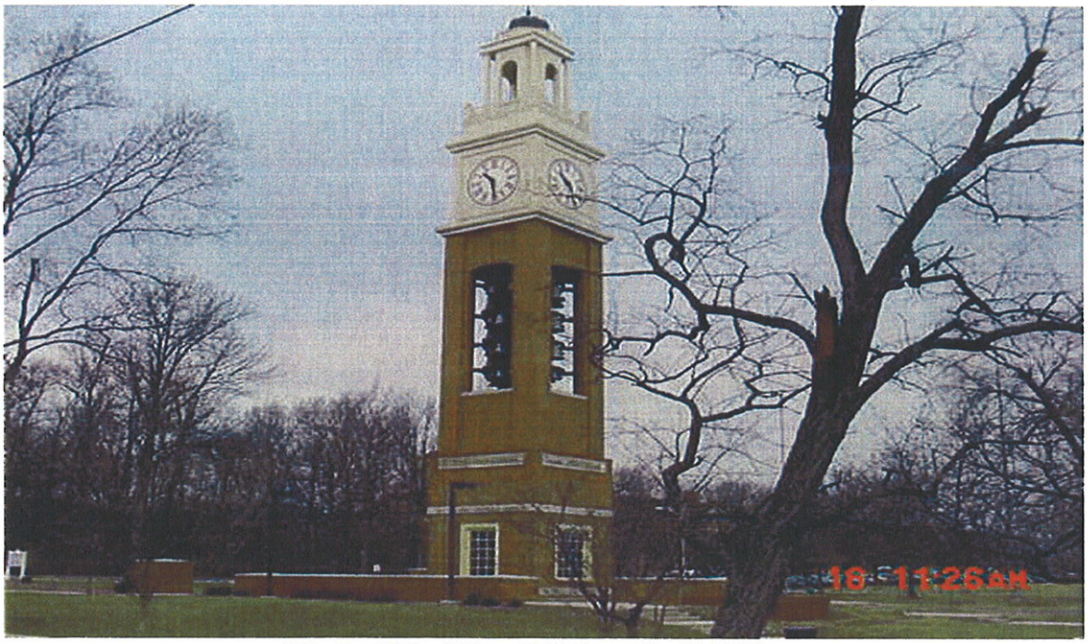


Photo #20: Miami University Bell Tower

Fire Department Services

When assessing needs, we must look at what services are essential for a fire department to provide to its customers. The fire service should not only provide an emergency response role to its community, but also must provide support functions that make the fire department a valuable asset to its community's safety. Some of these roles include that of prevention through periodic fire inspections, plans review, community education, preplanning of hazards, and training of its membership concerning the needs of the department. These are all currently the responsibility of Chief Endress. When these issues concern the campus, he has the support of a very cooperative and knowledgeable staff in the campus fire marshal's office.

Non-Emergency Roles

The campus fire marshal's office handles many of the issues for which a fire department is typically responsible. The campus staff of three handles many of the non-emergency response activities that Chief Endress and the Oxford Fire Department would otherwise manage. Since the University is a state asset, the State of Ohio retains authority over its code enforcement. This is why the campus fire marshal's office exists. The fire marshal's office performs all inspections required on campus, conducts fire hydrant flow tests and surveys, conducts plans reviews for new construction, and participates in new student orientation.

The fact that the campus fire marshal's office handles many of the routine fire prevention duties on campus should not deter the Oxford Fire Department from taking an active role in the same functions. It is, after all, the Oxford Fire Department who should be responding to any and all calls for fires on campus.

The Oxford Fire Department needs to remain aware of all issues concerning fire and life safety matters since its firefighters will be put in danger during responses need to They need to be aware of the capabilities and operation of the fire protection systems in place. Knowledge gained ahead of time, coupled with preplans of system operation and capabilities can go a long way toward preventing loss of property and life.

Photo #21: Miami University Event Coliseum

Campus Buildings/Housing

The relationship between the fire department and the Miami University fire marshal's office has worked out very well. There appears to be excellent communication between the two offices. Chief Endress and the campus fire marshal deserve commendation for this relationship as it truly benefits both parties. The Oxford Fire Department should, however, consider taking an increased presence on the campus. The campus, with the direction of the fire marshal's office, is currently undergoing a multi-million dollar upgrade of its buildings and dormitories to increase fire and life safety. This includes new alarm systems and the addition of sprinklers to the dormitory facilities on campus. This upgrade is planned to take place over a period of several years.

According to the campus fire marshal's office, only one of 37 housing facilities currently has a sprinkler system. In addition, many alarm systems in the University's buildings are very old and are in need of repair or replacement. Upgrading these is no small task, and will require the fire department to remain vigilant as to maintaining their knowledge of how these systems work. They should have input into the design, coverage, and capabilities of these alarm and suppression systems. Once again, the Oxford Fire Department is the emergency responder for fires on campus, and as a result, should have a significant say in the alarm and protection systems present. It is for this reason that the Oxford Fire Department should give consideration to having a person assigned as the liaison between the campus and the fire department on matters of fire protection, fire prevention, fire safety education, as well as all responses within the campus and student matters off campus. In this way, the fire department can be kept aware of the status of building renovations, alarm systems, and code compliance.

It is vital that firefighters know as much information as they possibly can about the buildings to which they respond. Obtaining this information occurs prior to any response through preplanning inspections known as pre-incident surveys. These surveys show firefighters the building layout, water supply locations, accessibility issues, fire suppression design coverage and limitations, alarm panel locations, and specific life safety hazards, plus any other items the fire department wishes to know ahead of time.

Typical information that is minimally covered in preplans is referenced in the *NFPA 1620 Standard: Recommended Practice for Pre-Incident Planning.* Francis L. Branigan, in his book *Building Construction for the Fire Service*, states that "pre-fire planning is the key element for the fire service, and without it, firefighters are just reactionary."[1] Currently, there are no fire department pre-incident surveys of any type for the structures on the campus of Miami University. In addition, the current software used by the Oxford Fire Department for incident reporting has pre-planning capability.

Off-Campus University Housing

Off-campus housing should also be a major portion of Oxford Fire Department's prevention and educational efforts. Of the 16,000 registered students, approximately nine thousand live in off-campus housing. Over the last three years alone, 52 students have died nationwide in off-campus housing fires.[2] This equates to an average fatality frequency rate of one student every three weeks, and justifies that a great amount of effort should be put into addressing this potential problem in Oxford.

Special emphasis toward students who live in off-campus housing should be placed into a joint effort between the Miami University community and the Oxford Fire Department. Currently, the campus fire marshal's office gives fire prevention and safety education to new, incoming students and Resident Advisors. The Oxford Fire Department should take this opportunity to expand off campus education to include returning students and landlords who rent to campus students. Education should include not only the tragic results of fires, but also the fire codes and legal implications for non-compliance of local fire ordinances.

According to statistics provided by the National Fire Prevention Association, the greatest fire hazards exist in off-campus housing. A great deal of national attention has been placed on communities suffering student fire fatalities in the recent past. It is somewhat difficult in the current system of logging emergency calls utilized by the Oxford Fire Department to determine how many of the off-campus calls were student related. It is for this reason that consideration should be given toward changing the system in place to better determine the number of off campus emergency runs that were a direct result of the campus presence.

Statistics from the National Fire Prevention Association show that on average about 1400 - 1700 fires occur each year in the United States in college dormitories, fraternities, and sororities (See Figure 1). The leading cause of these fires was arson, followed by cooking and smoking. Not surprisingly, the most serious, loss of life, fires have occurred in off-campus housing or in fraternity and sorority housing.

Emergency Response Roles

The campus security department also provides emergency medical care at the first responder level, and occasionally at the EMT-A level, for campus medical emergencies. This relationship where the campus security personnel respond and provide initial care has proven to be very beneficial to all parties involved, especially the patient in need of care. Locating the patient early and assessing the medical needs shortens the patient's overall time to definitive care at an emergency facility. This practice should be encouraged to continue as long as simultaneous notification is made to the Oxford Fire Department for dispatching of its personnel.

Photo #22: Miami University Stadium and Sports Complex

Dispatching Concerns

Campus security investigates all alarm drops on campus and simultaneously notifies the fire department when there is a potential for an actual emergency. An Oxford interoffice memorandum dating to 1988 outlines priorities and procedures for different types of events, and according to Chief Endress, has worked very well. This memorandum can be found in **Appendix 2**. Old structures that are densely packed with young students in and of themselves present an elevated potential for fire, so Oxford should make sure the University maintains a policy of notifying the fire department on ***ALL*** calls where there is ***ANY*** possibility of real danger.

Dispatch delay to occupied campus facilities could prove disastrous. Several recent publications have discussed this concern, most recently including Jerry Tracy of *Fire Engineering Magazine*.[3] William Clark in his book, *Firefighting Principles and Practices*, states that a fire doubles in intensity every 30 seconds. [4] This statistic further enforces the need to scrutinize the policy of "investigate first, dispatch later". If reduced state funding patterns continue, it may be increasingly important for Oxford to begin partnering more with the University. **Figures 4 and 5** on the following page show a gradual improvement in campus safety nationwide.

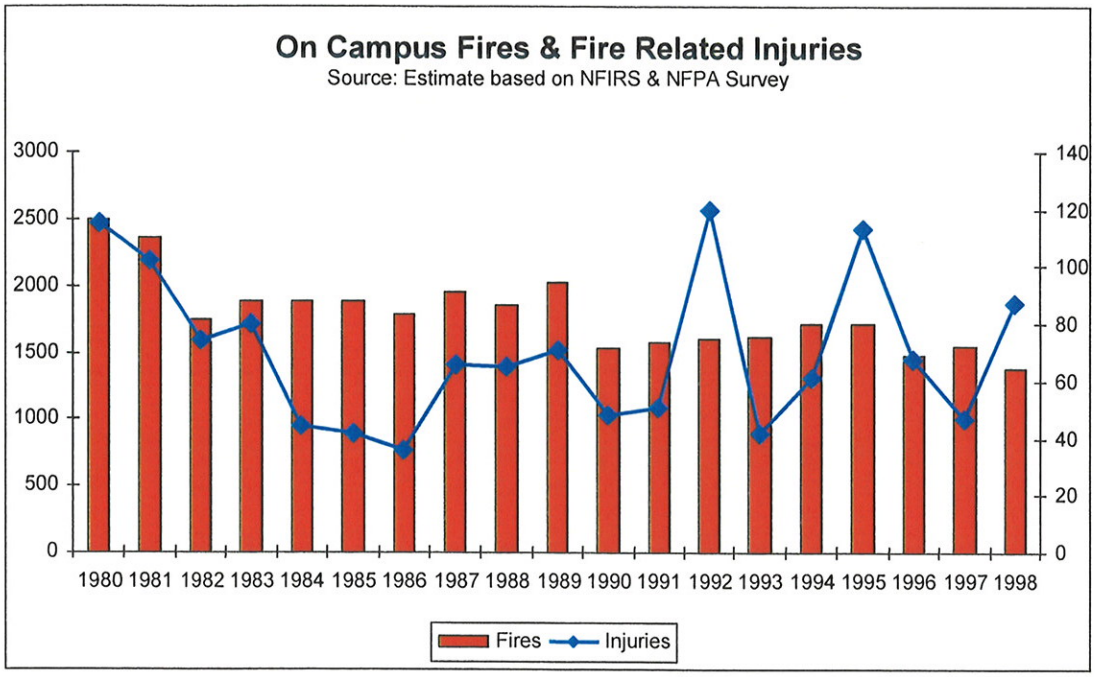


Figure 4: United States Campus Fire and Injury Rates

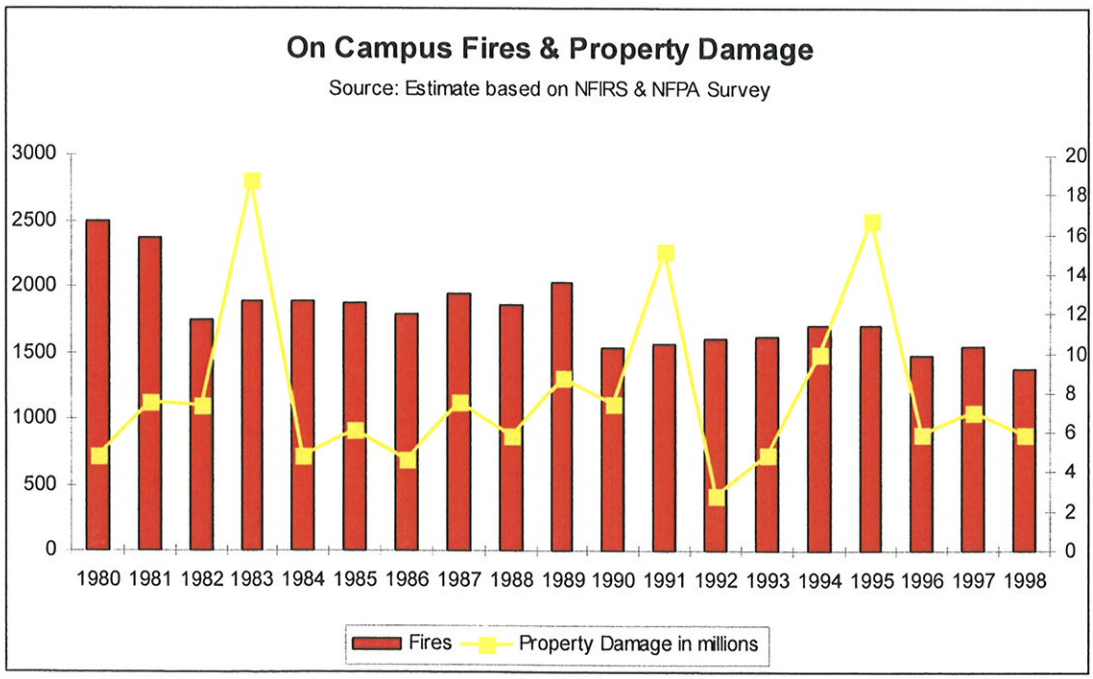


Figure 5: United States Campus Fire and Property Damage Rates

Photo #23: Oxford Safety Smoke House

Oxford Fire Department does seem to have a progressive program for public safety education. This "smoke house" is used for educating the students in the community on fire safety instructions, such as how to escape from a fire in your house, or in a dorm room. Education and technology save lives. Recall how a relatively new tool called a thermal imaging camera helped rescue a student. The Oxford Fire Department has five (5) such cameras.

University-Related Recommendations

As stated above, the Oxford Fire Department should be commended for its high quality of service, and the community it serves should feel very fortunate. It is very evident that a great deal of thought and professionalism is present within the Oxford Fire Department organization. As growth occurs in the Oxford area, more is expected of its city services. The City has commissioned this study to evaluate and to examine its operations and structure for deficiencies or for suggested areas improvement. After interviews with Chief Endress and the campus fire marshal of Miami University, the following recommendations are suggested:

1. In the future, as full-time personnel are added to the department, one new assignment that should be considered is the role of liaison between the Oxford Fire Department and Miami University. This person would deal with matters concerning the school, its structures, the students, and prevention programs related to the University, both on and off campus.

2. Scrutinize the current policy where it calls for "investigate first, dispatch later", to ensure there is no likelihood that an actual emergency will experience any dispatch delay. When in doubt, the policy should be to dispatch fire department crews immediately and simultaneously with the University investigation.

3. Expand current fire safety education efforts on the campus to include students at all levels, from freshman through the senior class. Increase efforts in the off-campus housing fire inspection program to include education, as well as enforcement of fire codes. Include the landlord in all aspects of fire prevention training and inspections.

4. Make changes in fire and EMS data collection procedures to better identify university-related calls, particularly including off-campus incidents.

BALANCING FIRE RESPONSE AND EMERGENCY MEDICAL RESPONSE

Since the Oxford Fire Division provides both fire protection and Emergency Medical Services, personnel are shifted between Fire and EMS responsibilities, depending upon the priorities of the moment. – "First Emergency First."

It is not unusual for The City of Oxford to experience simultaneous emergency medical runs. When this occurs, firefighting resources become depleted in direct proportion to the escalating number of emergencies. Likewise, a serious fire would utilize any on-duty personnel. At that point EMS runs would have to be handled by mutual aid units. For this reason, depth in the volunteer rosters for both fire and squad specialties will remain important.

MUTUAL AID CALLS

Photo #23: Oxford Township Welcome Sign

Photo #24: College Corner Sign

Photo #25: Intersection in College Corner

Photo #26: Neighboring Silo Storage

Photos 23 through 26 depict neighboring communities that provide and rely heavily on mutual aid agreements to share resources. Every community should participate in mutual aid, as the City of Oxford does, so that larger events within your own community can be managed with primary crews, as well as with support from other agencies. Even if the service is not fully reciprocal, the benefit of sharing the resource in a significant time of need should be considered. A Sample Mutual Aid contract is included in **Appendix 3.**

RELEVANT NATIONAL STANDARDS

For fire operations, sufficient personnel must be available in order to provide adequate fire protection to the community. If it can retain a sufficient staff of volunteers, the City of Oxford Fire Department can provide adequate minimum fire protection for the community, and can usually comply with two standards, which although not mandatory, are often used to determine the number of firefighters required at emergency scenes:

- The National Fire Protection Association (NFPA) Standard 1500 recommends that a minimum of four persons be available on the fire scene before structural firefighting commences.

- The Federal Occupational Safety and Health Administration (OSHA) has determined that fire structures meet the definition of an IDLH (Immediately Dangerous To Life and Health) environment and therefore are subject to the "two in, two-out" rule, meaning there must be a minimum two-person rescue team in addition to the crews committed to structural firefighting. The Ohio Fire Chiefs have endorsed this standard.

See **Appendix 4** for relevant passages from NFPA 1500, and for information on the OSHA standard, from the Ohio Fire Chief's Journal. These standards show the number of firefighters necessary just to begin an operation. In a serious fire, the need for personnel escalates quickly.

With all fire and medic units available, the City of Oxford Fire Department can meet the initial standards as outlined above, but must rely on mutual aid, like all agencies its size, to provide additional depth to care for escalating needs at the scene of a major fire or emergency. When personnel are thin, this ability to provide adequate initial fire protection is compromised. Chief Endress has maintained a cordial working relationship with nearby neighboring fire departments, and they can be summoned quickly to bolster The City of Oxford's forces when they are stretched thin. The City of Oxford, in turn, reciprocates whenever called upon.

Additional perspectives on ideal staffing can be found in the Fire Protection handbook published by the National Fire Protection Association (NFPA):

- The NFPA Fire Protection Handbook states that a single-family residential structure fire requires not less than twelve (**12**) firefighters and one chief officer with two engines and one ladder, and a commercial complex such as a dormitory building at Miami University, requires not less than twenty-four (**24**) firefighters and two chief officers with four engines and two ladders on the first alarm.

- In May 2002, the NFPA adopted two new related standards, #1710 and #1720. The former relates to larger full-time fire departments, and the latter refers to primarily volunteer departments such as Oxford. Among other requirements, these standard list "four" (4) persons as the minimum crew size on apparatus. The City of Oxford, like most municipalities, will be unable to comply totally with this standard unless it waited for volunteers to fill an apparatus before responding. This, in turn, would compromise response times for the first units.

A fire/rescue department should strive for quick initial assistance to all residential and commercial areas of the City. A less-touted provision of the expected 1710 and 1720 standards is the requirement for rapid response times. See **Appendix 5** for key passages from NFPA 1710 AND 1720.

This consulting team feels that favorable response times insure more stability than larger crew sizes. Smaller cities such as Oxford can augment responses with AMAR (Automatic Mutual Aid Response) agreements, which summon mutual aid assistance immediately at the report of a fire. Chief Endress and his staff are seeking creative ways to cope with these standards, and similar requirements recommended at a national level, but a combined fire rescue force is needed to ensure optimal compliance in the future.

The International Association of Firefighters (IAFF) and the International Association of Fire Chiefs (IAFC) have collaborated to produce a *NFPA 1710 Implementation Guide.* In this *Guide,* the presidents of the two sponsering organizations signed an introductory letter, which describes the likely course ahead in Oxford: *"For many departments, the road to compliance will be a long one"*

See **Figure 6** below for a summary of *NFPA 1710* highlights.

Figure 6
NFPA Standard 1710 Highlights

- **Four personnel per fire apparatus**
- **First fire unit arrives within 4 minutes 90% of time**
- **Fifteen to seventeen personnel on first alarm within eight minutes**
- **Quality and safety parameters**

House Fire Example

Among the most routine of fires in the City of Oxford would be a single-family dwelling. Staffing needs, including mutual aid, are shown in **Figure 7**.

Figure 7
SINGLE FAMILY RESIDENTIAL HOUSE FIRE

3,000 sq. ft. in kitchen/dining room, 25% involved = 250 gpm water flow

POSITION	ASSIGNMENT	STAFFING
Incident Commander	Coordinates all on scene operations (Company Officers run command until ranking officer arrives)	1
Pump Operator	Maintains water flow to attack crews and radio communications (For safety requirements can not be counted for backup)	1
Ventilation	Removes heat, toxic gases and smoke improving victim survivability and safer environment for fire crews.	2
Primary Search	Rapid discovery and removal from toxic environment insures highest possible chance for victim survivability without brain damage.	2
Fire Attack	Two 1 ¾" Lines @ 125 gpm each for adequate water flow	4
EMS	Renders immediate medical care to rescued victims or injured firefighters	2
SUB TOTAL		**12**
Rapid Intervention Team	(Rescues trapped/injured/lost firefighters)	2*
TOTAL		**14**

***2 Person Minimum**

The above is again, an "IDEAL" staffing configuration. When personnel are scarce, and/or when working fires are contained rapidly, some of these positions can be combined.

Photo #27: Recent House Fire with Limited Damage

ADDING RESOURCES

The elected officials of the City of Oxford have been supportive of the Fire Department and have been willing to fund advancements commensurate with City growth. Based on the regional comparisons earlier in this report, it appears that current resources and expenditures are at least adequate to initiate the hiring of part-time personnel.

Gradual increases in the budget over time seem to have been orderly and methodical, and have been possible due to tax-generated dollars from residents and businesses within the City. Adequate funding will likely be available to provide additional services, including the growth in the Fire Department. Caution, however, is in order.

At times, community leaders will say, "Tell us what we should have for fire and rescue protection, and we will find a way to pay for it." Unfortunately, there is no easy answer, since it is virtually impossible to separate what a community *should have* and what is affordable. It is not feasible to separate a decision regarding the level of fire and rescue protection from economic and financial concerns, since the two are very much interrelated. Once a fundamental level of fire and emergency medical protection is in place, (as is the case in The City of Oxford) each additional fire company or medical unit is of marginally less value than the previously added resource.

In the City of Oxford, the first life squad was added early, creating a giant step forward and a virtual infinite difference between "No Life Squad service," and "Life Squad service." A second squad improved response time for some portions of the City and provided "depth" for additional responses. The third squad, in like manner, is valuable, but not as valuable as the second. The fourth would be of marginally less value than the third, and so forth. The same logic could be employed to analyze the value of additional fire stations, or firefighting units.

The level of fire and rescue protection must include "affordability." An extreme example is found on some Native-American Indian Reservations here in the U.S.A. Fire protection consists of several lengths of rotting hose connected to water mains, in the hope that someone will put the hose to use in the event of a fire. They simply cannot afford anything more.

Another example of the interrelationship between budgeting and fire protection can be found in Norwood, Ohio. When a Chevrolet Camaro Plant closed in the City of Norwood, it suddenly had one fire station, when once it had three. The citizens of Norwood saw an across-the-board reduction in all governmental services. At some point, fiscal responsibility imposes a level of fire and emergency medical protection that should not be exceeded.

With fire and rescue protection, it is very easy to make decisions based on emotional arguments such as: "if the fire station saves one life, it will be worth it." It may very well not be worth it if neglected streets (poor signaling, rough pavement, etc.) cause two or more traffic fatalities, or if an under-funded police agency leads to more deaths from violent crime. All governmental services must be kept in a balance by City officials.

Even if one could guarantee that one *could* save a life by adding a fire or rescue unit, most members of society would still want to weight this option against a "quality of life" factor. People *want* aesthetic beauty (parks, for example), and conveniences such as transportation. People are as a society, willing to incur some risks to have this quality of life. Limited tax dollars need to be balanced among safety services and other city needs, especially in light of the fact that some public funds might be expended better elsewhere. The City of Oxford appears to have a good mix and balance of governmental services, which should continue.

If the City of Oxford Council members were to introduce a plan that would eliminate 100% of all highway fatalities in The City of Oxford, it would certainly be more than "saving one life". Therefore, should it be adopted? The solution would be to have no vehicle travel more than 10 miles per hour on any road in the City. Oxford residents would likely find this unacceptable. Society members are generally daring and are willing to incur safety risks including occasional accidental fatalities in exchange for mobility in life and aesthetic beauty in our surroundings. Accordingly citizens are usually willing to spend only limited dollars for fire and rescue protection.

If we were to put a fire station and a medic unit on every street in a city would it save one life? No doubt it would, but the price would be unpaved roads, a complete lack of any other basic services, and a populace taxed into poverty. Ultimately there comes a decision point where "*the right level of fire and rescue protection*" must logically include the cost, and the effect on other government services. There is no equation that will dictate the proper number of fire and rescue units, and fire stations unless leaders are also willing to factor in the monetary cost of providing these.

Since the quantity and quality of fire protection and emergency medical service remain, then a subjective rather than an objective study, how does a jurisdiction determine what is best for its own citizens? That is, how much should be spent to maintain a balance between adequate fire protection, and adequate attention to other services provided by the community? One technique is to compare the City with similar communities nationwide, as was done earlier in this study.

NATIONAL STAFFING TRENDS

Occasionally, Fire Engineering, one of the most respected periodicals in the firefighting profession, assembles valuable statistical data on fire departments in the North Central Region. This includes seven states including Ohio. Key excerpts from the most recent edition of this publication, entitled **"Fire Engineering – *Directory of Municipal Fire Departments,"*** are included with permission in **Appendix 6**. Among the information provided are the following statistics:

- Trends in fire departments
- Members per 1000 population
- Full-time paid personnel, on-duty
- Minimum staffing requirements
- Minimum crew per apparatus

Also, additional tables provide salary and benefit information. According to the ***Fire Engineering*** Report, one statistic that has remained rather constant is the average number of fire department members per 1000 population. As per Figure 1 in the ***Fire Engineering*** Report, the number of firefighters per 1000 has consistently remained at about 1.6 since 1984.

Using 10,000 as the base population for Oxford, the number of full-time firefighters would be 1.6 x 10 =16. A close approximation of an on-duty force would by this number divided by 4, or 4. Almost all fire departments today provide both fire protection and emergency medical services, so that this average would include personnel for both of these functions. A large industrial or commercial tax base would be needed to keep 4 firefighter/EMT's or, possibly in the future, Firefighter/Paramedics on duty around the clock, and Oxford does not have it. Some key part-time positions, however, could and should be filled. We will discuss this in greater detail later in the report.

Because these overall national averages include the largest and most affluent cities, the Consultants further analyzed fire departments in jurisdictions close in size to Oxford. Based on the statistical information provided by Gregory J. Wilkens, Butler County Engineer, the population of Oxford is 24,133 as shown in **Table 4.** It will soon approach 30,000

Table 4 – Population of Oxford

Oxford City:	*21,943*
Oxford Township:	*2008*
College Corner:	*182*
Total:	*24,133*

All reporting fire departments from the ***Fire Engineering*** report with populations in the range of 25,000 to 30,000 are shown over the next three pages in **Table 5.**

TABLE 5
NORTH CENTRAL REGION

Communities, With Populations
25,000 – 30,000

COMMUNITIES IN ILLINOIS	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Batavia	26,000	30	Comb.	10	44	2
Burbank	28,000	4.5	Comb.	10	50	2
Carbondale	27,033	12	Paid	8	22	2
Carpentersville	30,000	10	Comb.	13	5	2
Collinsville	30,000	26	Paid	8	6	2
Dolton	25,000	25	Paid	14	36	2
Frankfort Fire Prof. Dist.	30,000	48	Comb.	11	44	2
Glenside Fire Prof. Dist.	28,000	36	Comb.	5	24	1
Gurnee	30,000	31	Comb.	10	50	1
Harvey	29.000	10	Comb.	17	33	4
Kankakee	27,600	12	Paid	17	28	5
Maywood	30,000	2.2	Paid	4	39	2
Mundelein	25,000	9.4	Comb.	6	30	1
Niles	28,263	6.2	Paid	13	38	2
Worth Maine Fire Prof. Dist.	28,000	3.4	Comb.	9	25	1
Norwood Park Fire Prof. Dist.	25,000	4.5	Comb.	6	18	1
O'Fallon	30,000	46	Vol.	8	27	3
Oak Forest	26,000	5	Comb.	8	47	2
Oswego Fire Prof. Dist.	25,000	66	Comb.	6	40	1
Plainfield Fire Prof. Dist.	30,000	65	Comb.	9	61	2
Sublette Fire Prof. Dist.	25,000	64	Vol.	6	31	1
Wilmette	26,700	5.4	Paid	11	33	2

COMMUNITIES IN INDIANA	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Gaston Vol. FD	25,000	100	Vol.	4	18	1
Harrison Twp. Vo. FD	25,000	24	Vol.	7	15	1
Hobart	28,000	30	Paid	12	42	4
Merrilleville Vol. FD	30,000	40	Vol.	8	45	1
New Haven-Adams Township	30,000	70	Comb.	16	90	3
Osolo Twp. FD	25,000	25	Comb.	10	27	1
Plainfield	30,000	40	Comb.	15	50	2
Portage	30,000	25	Paid	10	31	2
Ross Twp	28.000	41	Vol.	15	160	4
Schererville Vo. FD	25,000	15	Comb.	14	50	4
Wabash Twp.	25.000	4.7	Paid	8	42	2
West Lafayette	26,600	4.7	Paid	11	21	2
White River Twp.	30,000	18	Comb.	9	50	2

COMMUNITIES IN IOWA	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Ankeny	25,000	50	Comb.	11	50	1
Fort Dodge	28.000	23	Paid	8	29	1
Marshalltown	27,500	24	Paid	10	22	1
Mason City	30,000	56	Paid	13	34	1

COMMUNITIES IN OHIO	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Alliance FD	25,000	8	Paid	14	18	2
Ashland	26,500	60	Comb.	15	62	1
Athens	30,080	30	Paid	6	19	2
Barberton	27,000	30	Paid	12	33	2
Hudson	25,000	25	Comb.	8	31	1
Independence	30,000	7	Comb.	5	25	1
New Philadelphia	25,000	35	Paid	4	15	1
North Royalton	28.000	22	Comb.	5	30	1
Sandusky	29,800	13	Paid	17	40	3
Truro Township	30,000	12	Paid	5	40	1
Urbana	30,000	100	Paid	5	18	1
Zanesville	28,600	13.2	Paid	5	42	3

COMMUNITIES IN MICHIGAN	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Burton	28,000	23.5	Comb.	16	48	3
Chesterfield Twp.	30.000	28	Comb.	8	49	2
Commerce Twp.	25,000	30	Comb.	12	39	3
Davison Area	30,000	72	Vol.	9	30	1
Ferndale	28,000	4	Paid	10	34	2
Muskegon Charter Township	29,200	64	Comb.	5	41	2
Orion Township	28,000	55	Comb.	16	60	4

COMMUNITIES IN MINNESOTA	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Brooklyn Center	29,000	9	Vol.	8	40	2
Elk River	25,000	87	Vol.	7	35	1
Excelsior	25,000	14	Paid	8	40	1
Fridley	28,500	11	Comb.	5	33	3
Winoua	25,400	14	Comb.	9	42	2
Woodbury	27,000	36	Vol.	17	70	3

COMMUNITIES IN WISCONSIN	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Caledonia	25,000	49	Comb.	8	23	2
Menomonee Falls	28,000	34	Comb.	20	106	4
Menomonee FD	30,000	155	Comb.	8	38	1
Mount Pleasant	25,000	36	Paid	13	70	3

North Central Region	POP	Sq. Miles Area	Type Of Dept.	Number of Officers	FF / EMS Personnel	Number of Stations
Average	27,629	32.65	*See Breakdown	9.85	39.4	1.97

*Types of Departments in North Central Region

FULL PAID	25	36.8%
COMBINATION	33	48.5%
VOLUNTEER	10	14.7%
TOTAL	**68**	**100%**

Our **Table 5** reveals several interesting statistics:

- The average number of Officers in these departments is 9.85.
- The average number of firefighters in these departments is 39.4.
- The total uniformed personnel averages 49.25.
- The ratio of officers to firefighters is 1:4.

Since the Oxford Fire Department provides service in the areas of fire suppression, fire prevention, emergency medical services, hazardous materials mitigation, and technical rescue, it would be expected to rank favorably. Oxford is compared to the regional average in **Table 6**. One apparent deficiency is a lack of officer strength in Oxford compared to fire department staffing. (1:6.5 vs. 1:4)

TABLE 6
Oxford Compared to North Central Average

	NORTH CENTRAL REGIONAL AVERAGE	Oxford Ohio
Population	27,629	24,000
Number of Stations	1.97	1
Number of Officers	9.85	6
Number of Firefighters	39.4	33
Total Uniformed Personnel	49.25	39
Ratio of Officers to FFs	1:4	1:6.5

As shown in **Table 5**, most communities the size of Oxford have begun to pay for on-duty personnel to staff fire and EMS units. Only 10 of 68 remain purely volunteer. Fully-paid departments normally provide 24-hour coverage, while part-paid or combination departments likely use on-duty staff for the hours when volunteers are scarce, and runs would otherwise not be made due to unavailable volunteers. Ensured coverage and quick response result from on-duty personnel.

Many smaller cities, villages, and townships in Ohio have begun to place persons on duty in their stations during critical daytime hours. A few, like Monroe, now have firefighter/paramedics on duty for 24-hour coverage, seven days a week. Chief Len Endress feels that the fire department would benefit from some paid personnel. Oxford is at the stage where this should be considered.

Here is the dilemma for Oxford, just as for many other communities who are first facing the major expense for on-duty fire rescue personnel: ***"Should we upgrade from EMT (Emergency Medical Technicians) to Paramedic service with our first on-duty employees?"*** While the marginal cost of a firefighter/Paramedic is not much greater than a firefighter/EMT, the nearby hospital makes Paramedics less necessary than they might be in other communities more remote form a medical facility.

Photo #28: McCullough-Hyde Memorial Hospital in Oxford

There are advantages to paramedic services, such as the advanced skills used to treat patients, including advanced airway techniques,intravenous access for medication administration, cardiac monitoring and ECG interpretation. There are also disadvantages, including unnecessary delays in the field, high start-up costs for equipment and medications, exceptionally high certification costs (up to $5,000 per student), loss of certified employees to other full-time departments, and a need to have a high volume of calls in order to maintain proficiency in treatment. This would be further complicated by frequent turnover of staff, such as college students. In a community such as Oxford, where rapid transport and definitive care are accessible, the disadvantages outweigh the benefits because the hospital is within reach in only a few minutes. Also, some former paramedic skills can now be administered by advanced EMTs (For example, early defibrillation for shocking the heart into survivable rhythms.)

Since in Oxford the fire and rescue services are combined into one organization, there is a great efficiency in having on-duty personnel who can provide fire OR rescue service – ***"first emergency first."*** Oxford's total budget for fire and rescue could likely soon place three personnel on duty during crucial hours and then the benefits of the dual-trained firefighter-EMT make sense. If the City can afford four personnel, so much the better as they gain depth in fire and/or EMS delivery capability.

Recruiting part-time Firefighter EMTs could become more difficult in the future. **Table 7** outlines a disturbing statistical trend regarding the available number of EMT's in the four-county region that includes Butler, Clermont, Hamilton, and Warren Counties. According to this analysis from the Ohio Department of Public Safety EMT database, this four-year analysis by ZIP Code identifies a trend of declining EMT's available in the region. Although not all ZIP Codes were identified, and shifting economic incentives may drive the relocation of EMT's into higher paying areas, the overall trend is still significant. Further detail is available from an Applied Research Project from the National Fire Academy's Executive Fire Officer's Program, entitled Quantifying the Shrinking Part-time Staffing Pool in Southwest Ohio, written by Nathan Bromen of this consulting team.

County	Basic		Intermediate		Paramedic		Total	
	January, 2001	January, 2004	January, 2001	January, 2004	January, 2001	January, 2004	January, 2001	January, 2004
Butler County	**654**	**551**	**112**	**76**	**313**	**304**	**1079**	**931**
Clermont County	574	267	194	77	245	201	1013	545
Hamilton County	1687	1814	126	72	717	772	2530	2654
Warren County	265	299	34	33	135	184	434	516
Total:	**3180**	**2931**	**466**	**258**	**1410**	**1461**	**5056**	**4646**

Table 7: Declining Number of Available EMTs in Ohio Counties

When depth and/or additional resources are needed for major or simultaneous emergencies, neighboring fire departments and rescue squads are available, and are quickly summoned. The City of Oxford, in turn, provides back up assistance to other Fire and EMS Departments on a regular basis. Later in this report, we will show that the location of the existing fire station is well suited to the community, and will show how future growth may eventually dictate outlying station(s).

Oxford Officials have been charged with the responsibility of providing an adequate number of on-duty firefighter/EMT's – and an adequate number of volunteers, but just what constitutes "adequate"? **Table 8** summarizes relevant data from this study:

Table 8
On-duty Personnel Comparisons

Minimum needed for Residential Fire per NFPA Handbook	**12**
Number needed for Residential Fire Including 2-person exterior rescue team per our Figure 4	**12 + 2 (14)**
North Central Cities similar in population to The City of Oxford; paid depts.: (16 ÷ 4)	**4**
The City of Oxford ANTICIPATED (Including EMT Personnel) ***During crucial hours**	**3 to 4***

The cost of paid firefighters is high, even for part-time personnel without pension contributions and benefits, and the cost will grow higher in the future. Both the City administration and fire/rescue officials are committed to eventually adding personnel. While it is true that volunteers are usually available for fire and rescue calls, this cannot be guaranteed to last into the future. For depth, Oxford relies on the neighboring fire agencies, and assists them in return.

Many departments, called "combination" departments, add part-time personnel as an interim measure until the costs of full-time personnel can be managed. The choice to staff with part-time personnel should be approached cautiously. There are many documented challenges with part-time employees, which are not always represented in the apparent cost-savings from having employees with little or no fringe benefit costs. These challenges are outlined in another applied research project entitled *Understanding the Part-time Staffing Issues in the Fire Service*, which was completed by Nathan Bromen as part of the Executive Fire Officer Program at the National Fire Academy, out lines these issues. It can be secured from the Learning Resource Center's website for additional information.

One of the primary issues with a part-time staffing system is the inability to meet the dynamic training needs in a department with complex scheduling issues. Training nights with mandatory attendance become more difficult to meet with people on fixed schedules. In fact, maintaining an adequate training regimen for Oxford's firefighters will continue to be one of the biggest challenges for the department into the future.

Oxford is like many other communities who search for creative, alternative ways to save tax dollars. Because Oxford benefits from the influx of the Miami University students into the region, the local student pool is available and could be used as an expanded staffing resource if Oxford considered an in-house internship program. Oxford's already has participation from local students in their organization, but more students could be attracted if Oxford implemented such a program. As a part of their studies, students could live at the fire station, thus lowering their living accommodation costs, while Oxford could have a base level of scheduled staffing hours in return with no need for paying an hourly rate to participants.

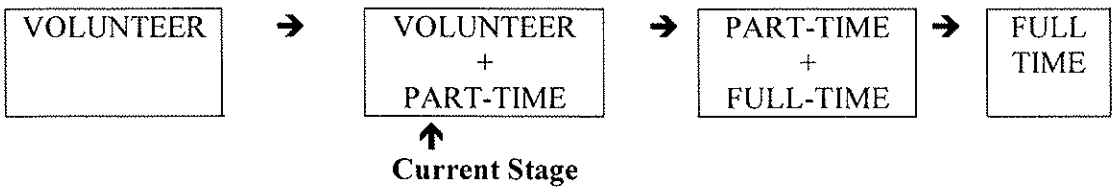
This would certainly be a helpful program for the students, as well as a transitional program for the fire department since the department needs time to make preparations to add more staff over the forthcoming years. Oxford would benefit from "in-house" staffing, without the added costs normally incurred from adding personnel. It is important to note that this program could only be successful if the fire station(s) had accommodations for overnight crews with individual sleeping rooms. An important point to note is that these students are now on campus for twelve months each year, with the exception of a few short breaks. This allows continuous coverage, and more consistency in the personnel pool.

Some colleges with ambulance service provide a tuition remission benefit for their student employees. The Miami University staff conducts a fair number of fire-related services, and they may look for creative ways to continue services using cost-effective approaches as they are impacted by state funding reductions. They may be open to discussions about shared services and student benefits, which may help the fire department attract more employees.

Fire Chief Steve Ashbrock of the Maderia-Indian Hill Fire Department in suburban Cincinnati has completed a study, which shows that the fire service in suburban Ohio is in a transformation model as shown in **Figure 8**. The current positioning of greater Oxford is shown in the model.

Figure 8

EVOLUTION OF FIRE SERVICE IN OXFORD AREA



OBJECTIVE STAFFING STANDARD

As Fire Department and City officials deliberate on proper fire and EMS protection levels, they often want to find some *measurable* quantitative standard that can be applied in their communities. An example, which could be applied in Oxford, would be:

> *"We want every residence and business establishment inside The City of Oxford to be within 4 minutes of a responding engine company with a cross-trained fire/medic crew, and within 4 minutes of a transporting emergency medical unit."*

Utilizing time distance analysis and geographic projections the City of Oxford could determine where the fire stations would have to be added in the future to produce such a result. These station locations could be coupled with desired strength levels on units to provide the "right-size" Department. Even in this case, however, the standard breaks down as soon as one company is already busy on one emergency when a second emergency occurs in the same area necessitating a more lengthy response from another unit, possibly a mutual aid unit. Hence, the decision regarding quantity of fire Department companies and emergency medical service units remains fairly subjective despite the best efforts at quantifying it.

The City of Oxford seems to be able to afford on-duty staffing. The countervailing forces of competing municipal services have been balanced. Now, if the City prepares to add resources to the Fire Department, there is an opportunity to re-evaluate government services to ensure that they are adequate to meet expanding service demands. One helpful technique to determine whether or not to expand the use of general fund monies for fire services (beyond both historical levels and beyond new funding provided by any new tax levy) is shown in **Figure 9**.

Figure 9
More $ for Protection? -The Decision Chain

1. Is the tax base and population in The City of Oxford growing significantly?

   If so, OK

   If not

2. Can the City draw upon surplus funds or a reserve to pay for additional fire and rescue protection?

   If so

   If not

3. Should the City draw upon surplus funds or a reserve to pay for additional fire and rescue protection?

   If so, OK

3. Can priorities be shifted and funds be diverted from other City projects, programs, or governmental units to provide resources desired for additional fire and rescue protection?

   If so

   If not

4. Should priorities be shifted and funds diverted from other City projects, programs, or governmental units to provide financial resources desired for additional fire and rescue protection?

   If so, OK

   If not,

5. It would appear that additional expenditures for fire and rescue protection would not be a fiscally sound investment for the City of Oxford. It must stay within the current budget, or expand ***if*** voters approve a new levy.

FIRE STATION LOCATION

The existing location of the City of Oxford's fire station is strategic enough so that response times for a first arriving unit will usually be acceptable. Heavy traffic at times seems to be the most serious obstacle to response times, especially along State Route 27. As growth in the community expands to the west and northwest, Oxford may consider a second station. This may become more important if the airport further expands its operation.

A dispersed fire department, which allows at least one unit to be on the scene quickly to effect some life saving or fire control action, is deemed appropriate. Often, even if a fire cannot be extinguished with a small crew, it can be held at bay and its spread prevented with a small team pending the arrival of other staffed City of Oxford or mutual aid fire units.

Photo #29: Oxford Fire Headquarters

Photo #30: Headquarters Sign

While there are efficiencies in maintaining fewer facilities, this small marginal gain is dramatically outweighed by the inefficiency in centralizing personnel so that response times are compromised throughout the City. The results of **Table 5** indicate that the City of Oxford has approximately one less station than the regional average of 2 stations for similar sized communities.

A pertinent map of Oxford is found on the following page. While response times are generally favorable throughout the City, this is a measure of the first arriving vehicle and does not measure the adequacy of the number of personnel who arrive.

Since the City of Oxford is not expecting significant growth geographically, there is no immediate need to add stations now, even though a review of **Table 5** earlier in this report shows that most communities similar in size to Oxford have two stations. The map on the next page shows the existing Oxford station with the surrounding area enclosed in a 1.5 mile radius. (A guideline that the ISO recommends for engine response)The map shows that most of the City *does* fall within the favorable response zones from the existing configuration. Also shown is a potential second station on the Airport. This would speed response to the west where most future growth will occur, will provide protection to the airport, and will provide stations both east and west of the active rail line.

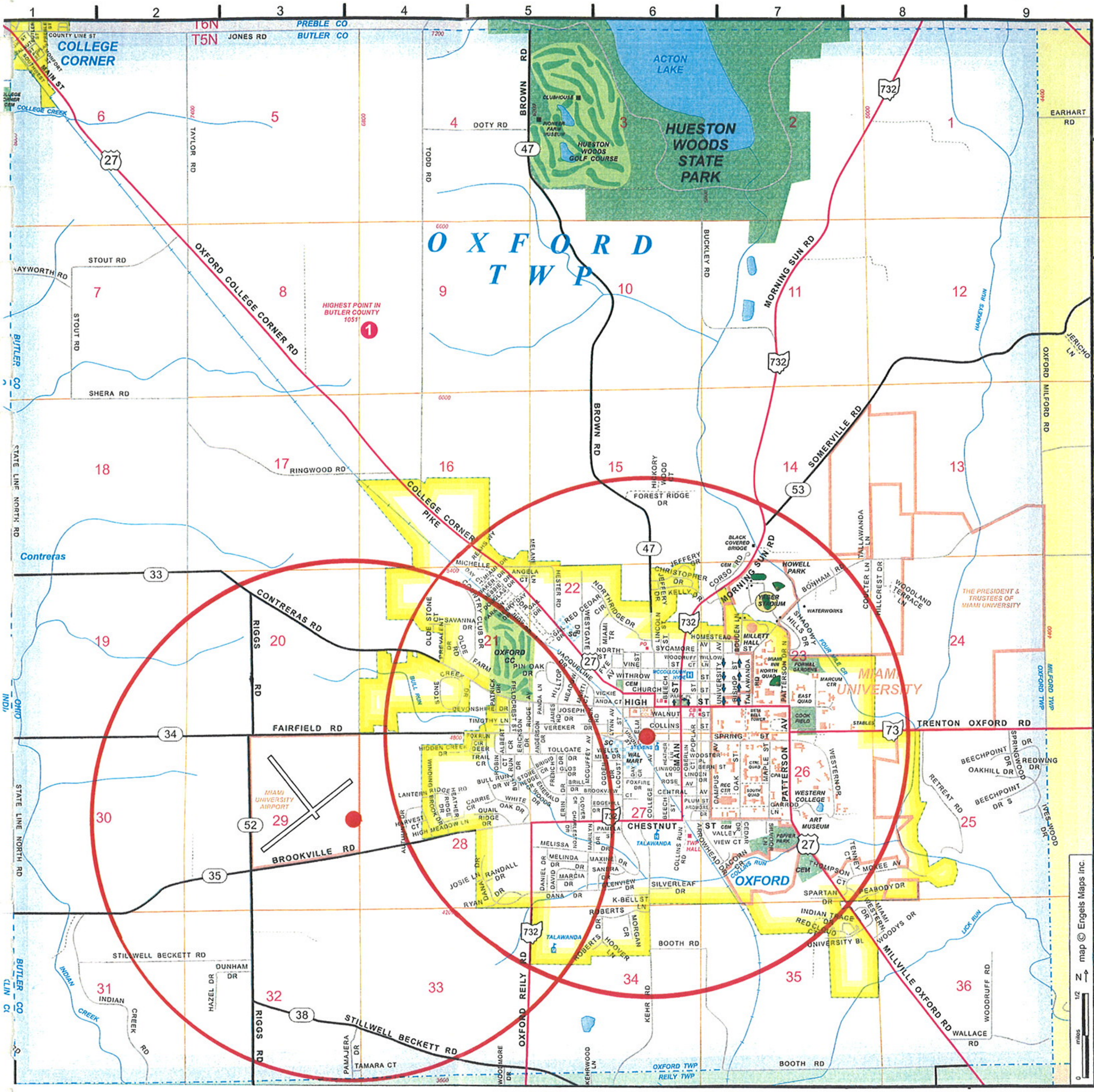

T6N
T5N
PREBLE CO
BUTLER CO
JONES RD
COLLEGE CORNER
COUNTY LINE ST
MAIN ST
COLLEGE CREEK
ACTON LAKE
HUESTON WOODS STATE PARK
HUESTON WOODS GOLF COURSE
CLUBHOUSE
PIONEER FARM MUSEUM
DOTY RD
BROWN RD
EARHART RD
TAYLOR RD
TODD RD
OXFORD TWP
OXFORD COLLEGE CORNER RD
STOUT RD
HAYWORTH RD
HIGHEST POINT IN BUTLER COUNTY 1051'
BUCKLEY RD
MORNING SUN RD
BUTLER CO
SHERA RD
JERICHO LN
OXFORD MILFORD RD
SOMERVILLE RD
STATE LINE NORTH RD
RINGWOOD RD
FOREST RIDGE DR
COLLEGE CORNER PIKE
Contreras
CONTRERAS RD
RIGGS RD
FAIRFIELD RD
TRENTON OXFORD RD
MIAMI UNIVERSITY
MIAMI UNIVERSITY AIRPORT
OXFORD CC
HOWELL PARK
THE PRESIDENT & TRUSTEES OF MIAMI UNIVERSITY
BROOKVILLE RD
CHESTNUT ST
HIGH ST
SPRING ST
WESTERN COLLEGE
ART MUSEUM
OXFORD
TALAWANDA
OXFORD REILY RD
BOOTH RD
STILLWELL BECKETT RD
DUNHAM DR
INDIAN CREEK RD
MILLVILLE OXFORD RD
WALLACE RD
WOODRUFF RD
LICK RUN
OXFORD TWP
REILY TWP
OHIO
INDI.
map © Engels Maps Inc.
miles

Photo #31: Miami University Airport Sign

In the event that the airport expands, particularly to a level of scheduling daily flights, the FAA would require trained and certified personnel at an on-site facility. These FAA requirements are outlined in **Appendix 7**. The airport currently has JP5 jet fuel on site, and if the airport becomes indexed (or has scheduled daily flights) the FAA will require mandatory on-site staffing. As the growth of the community continues to expand toward the west and northwest, Oxford should consider a future station at the airport site.

Photo 32: Miami University Airport Hanger

The Consultants conducted a field study of Oxford, including street and traffic patterns, and found that the City is readily navigable except when a train has the community cut in half. Train activity is reported to occur on about 12 occasions per day. This creates a barrier in many places going from East to West, or West to East. Fire station planning must account for the active rail line, along with access points and crossovers. A derailment, especially one involving hazardous materials, could put the Department out of business at a time when they are sorely needed. The consultants believe that this is only a remote possibility and is insufficient in itself to justify moving the central station.

Photo #33: Old Horse Drawn Steamer Engine

Fire Station Field Study

The Consultants visited the Oxford fire station and found that it did meet many of the standards for use, safety, and training for its current use, but would eventually need modification for overnight accommodation needs. As with many fire departments, the City of Oxford has grown as a Department that will soon be utilizing increasing numbers of on-duty personnel. Although these personnel may be initially added during targeted, peak call times, the City will eventually need to have some 24-hour personnel, and they will need 24-hour accommodations.

One item that is worth serious consideration by the City Council is the installation of a vehicle exhaust system. Most of the exhaust fumes from the apparatus stays in the bay or can drift into the fire headquarters area. Benzene, a known carcinogen, is a by-product of diesel fuel combustion. Most departments are realizing that they must do something to control these known hazards produced by diesel emissions. Exhaust system hoses can be easily installed, even in existing facilities. In particular, work areas that are exposed to exhaust fumes should be strongly considered. In addition, turnout gear and other assets can become contaminated or damaged by excessive exhaust fumes.

Photo #34: Fire Gear Storage Area in Apparatus Bay

Photo#35: Commercial Gear Washer and Household Linen Washer

Eventually a station(s) may need to be added to serve the perimeter, but the sparse population in the Township area indicates that this need is not imminent. For future reference, we can show mathematically how *inexpensive* the facilities are compared to the personnel on duty. If the facilities are conducive to training, provide comfortable living standards, and improve morale, then a better-trained, more highly-motivated employee is on duty. This dimension of quality can then be multiplied across all members using the improved facilities.

In departments with paid personnel, when the cost of a station is plotted next to the cost of the personnel who will staff that station over its lifetime, the investment of the building becomes relatively insignificant. We could estimate that a new fire station is likely to cost about $1.4 million.

While a structure may seem to be a major investment, if the building will last 50 years the cost per year on a simplified straight-line basis is figured as follows:

Building: 1.4 million ÷ 50 = $28,000 per year

This building will conservatively house an average crew of five persons, for 40 hours a week, earning an average of $20 per hour *over the next 50 years*.

Salaries: 5 x 40 x 52 x 20 = $208,000 per year

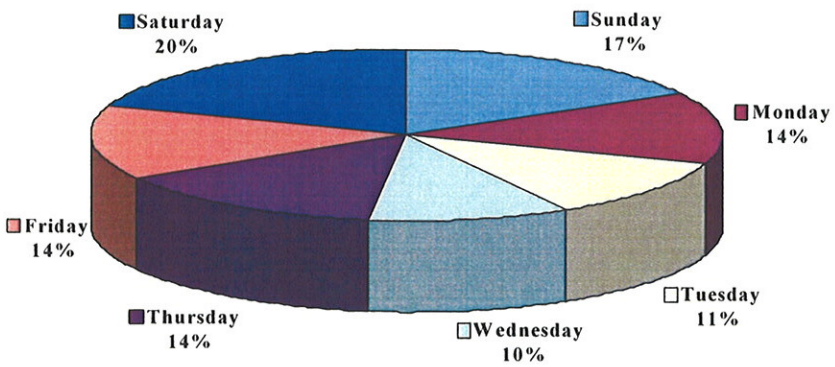
In actuality, the station could have three to five persons eventually around the clock, plus a paid chief for an even greater expense, but even this conservative figure shows why, as this station continues its life cycle over 50 years, its cost is dwarfed by personnel costs that would continue to accelerate. Hence, it makes no sense to cut corners on construction, or accept a substandard location for a new station.

Because site selection represents an investment far greater than the real estate and building, selecting a site is an important investment, especially if a non-optimal location results in higher response times.

Future Scheduling

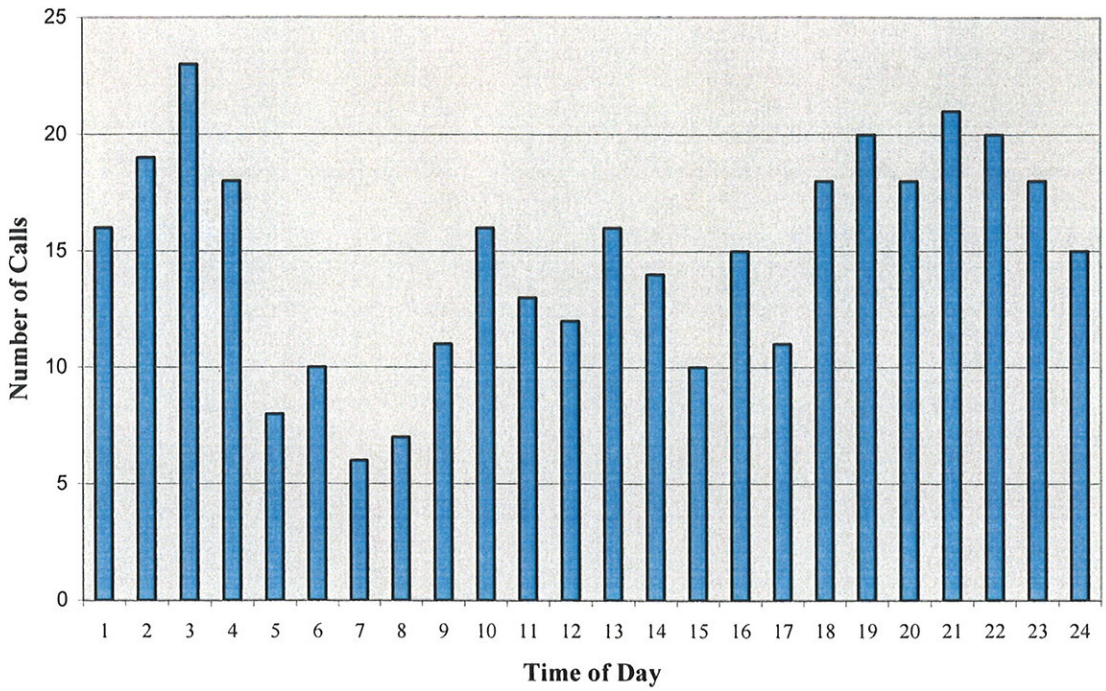
Once a fire station is in place, the personnel who staff it become a much greater investment than the building itself. Around-the-clock staffing, seven days a week, is most often used by most moderately sized departments with an established building base in the area served by a fire station. On-duty coverage is usually needed for the calls that occur during the week, but this may vary in departments with more volunteer personnel. **Figure 10** shows the breakdown of Oxford fire calls by the day of the week.

Figure 10: Fire Calls by Day of Week



Other departments also try to maximize their cost savings by staffing to meet their call patterns. One example of a creative venture that could be planned for is the concept of "Variable Staffing, based on Time of Day." **Figure 11** showsOxford fire calls by hour of day.

Figure 11: Fire Calls by Hour of Day



An informal analysis of responses by the consultants showed that Oxford Fire Division is not quite like most other departments, which are usually busy during the corresponding hours of the day when the people are active. Oxford is somewhat unusual in that the distribution of calls throughout each day is spread relatively evenly into the night, probably due to the activity of the Miami University students. **Figure 11** shows that the call distribution is almost an opposite reflection to calls in other bedroom communities. Because there is a stronger balance of calls over the full day and into the night, this consulting team recommends that Oxford, in the future, consider on-duty scheduling on a 24-hour basis in light of both volunteer availability, and service demand.

Full-time fire departments have traditionally kept the same number of people on the job 24 hours a day, around the clock. This has not only made the administrative act of scheduling easier, but has made the schedule attractive to firefighters who are willing to work longer hours in a week than the average worker. The traditional *24-hours on and 48-hours off* has resulted in a schedule often seen as an attractive to prospective firefighters. On the other hand, a tremendous benefit has accrued to municipalities who permit this schedule in that the firefighters will work 48 or 56 hours as opposed to 40 hours accumulated in a normal 8-hour per day work week.

FUNDING THE FUTURE

As Oxford prepares to add firefighters, the actual costs of these additional personnel need to be calculated, both for the present, and projected into the future. Allowances must be made for inevitable pay raises and employment costs. Since full-time personnel require salaries, employer pension contributions, and benefits such as health care, their cost to the community is high. It is much more affordable to hire part-time personnel to fill only the time slots really needed.

Let's compare two extremes for the City of Oxford and show how the costs would vary. If the City were to hire enough persons to staff four on duty full-time, this would require about 16 personnel. (Four working every third day, and four to take vacations, sick time, holidays, and earned days off). **Table 9** shows that if the total annual cost of one firefighter is $40,000 these costs rapidly multiply to $640,000 per year. If, however, Oxford were to hire enough part-time personnel so that four would be on duty during a crucial 8-hour period, Monday through Friday (with volunteers continuing to cover weekends), and the part time wage were $10 per hour, **Table 10** shows that theses costs are about $83,200 annually.

Table 9

Costs for full-time positions:

Number of positions	Annual cost	Total persons needed	Total 2004 Annual Dollars
1	$40,000	4	$160,000
2	$80,000	8	$320,000
3	$120,000	12	$480,000
4	$160,000	16	$640,000

Table 10

Costs for part-time positions:

Number of positions	Eight-hour day (8 x $10)	Days in a year (52 weeks x 5 days)	Total 2004 Annual Dollars
1	$80	260	$20,800
2	$160	260	$41,600
3	$240	260	$62,400
4	$320	260	$83,200

THE CINCINNATI ENQUIRER

LATE NEWS/SPORTS **50 CENTS**

FRIDAY, SEPTEMBER 20, 2002

Cost of benefits shoots up

Workers can expect some big changes

By Tim Bonfield
The Cincinnati Enquirer

After two straight years of double-digit increases in employee benefit costs, employers nationwide can expect another increase of about 15 percent in 2003, a health benefits expert predicted this week.

If such large increases continue, employers will be forced to make dramatic changes in health insurance coverage. And in this weakened economy, any new hit to the bottom line could mean less money for raises and capital investment.

If the costs continue to rise, employers who paid about $5,500 per employee this year face paying more than $11,000 per employee five years from now, said Linda Cushman Ruth, senior health care strategist for Hewitt Associates, a national health benefits consulting company.

"We really do have a catastrophe on our hands. There is no way employers can continue to handle these increases," she said.

Costs for employers are going up for several reasons. Hospitals that can't hire enough nurses and doctors who say their reimbursement is too low are demanding better contracts. New drugs and medical technology are driving up health expenses. Meanwhile, America's aging and increasingly obese population is gradually demanding more and more health care.

"This is unsustainable. Something has to happen," said Sharron DiMario, executive director of the Employer Health Care Alliance.

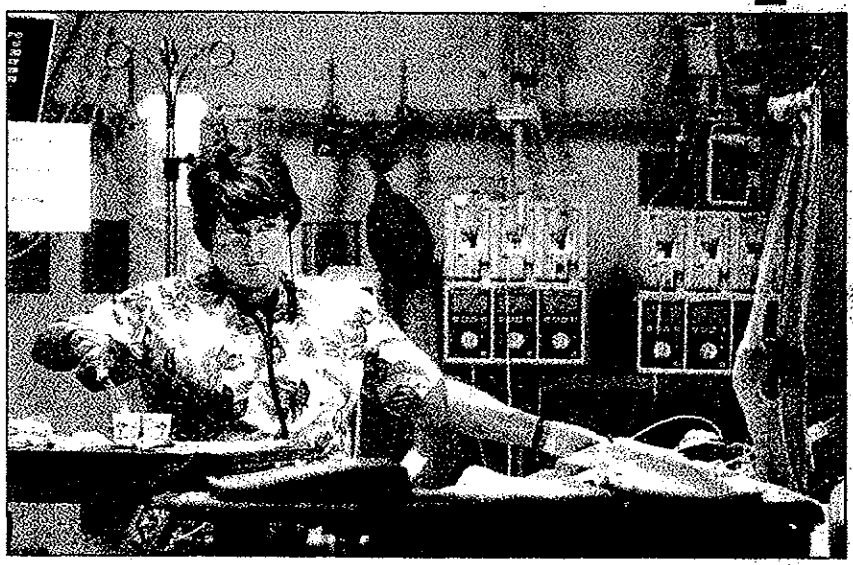
As employers look for ways to cut health-benefit costs, employees face a wide range of potential changes. Some could hit as soon as next year; others may take several years.

Many will see increases in payroll deductions for health coverage. Many also will see their health plans tinker with prescription drug coverage, such as requiring higher co-payments for more expensive drugs and changing which drugs are covered.

Some plans may require, not just encourage, employees to use generics or mail-order services to get drug coverage.

And in cases where many medications could be used to treat an illness, a few

See **HEALTH,** Page **A7**

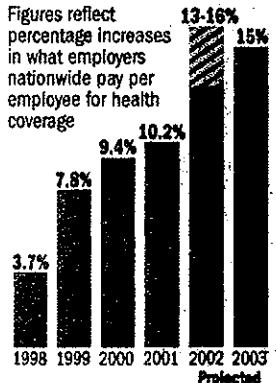


Enquirer file/BRANDI STAFFORD

Rebecca Lee, a nurse at University Hospital in Cincinnati, treats a trauma patient in a typically very expensive place in health care: the intensive care unit.

Soaring health benefit costs

Figures reflect percentage increases in what employers nationwide pay per employee for health coverage



Source: Hewitt Associates

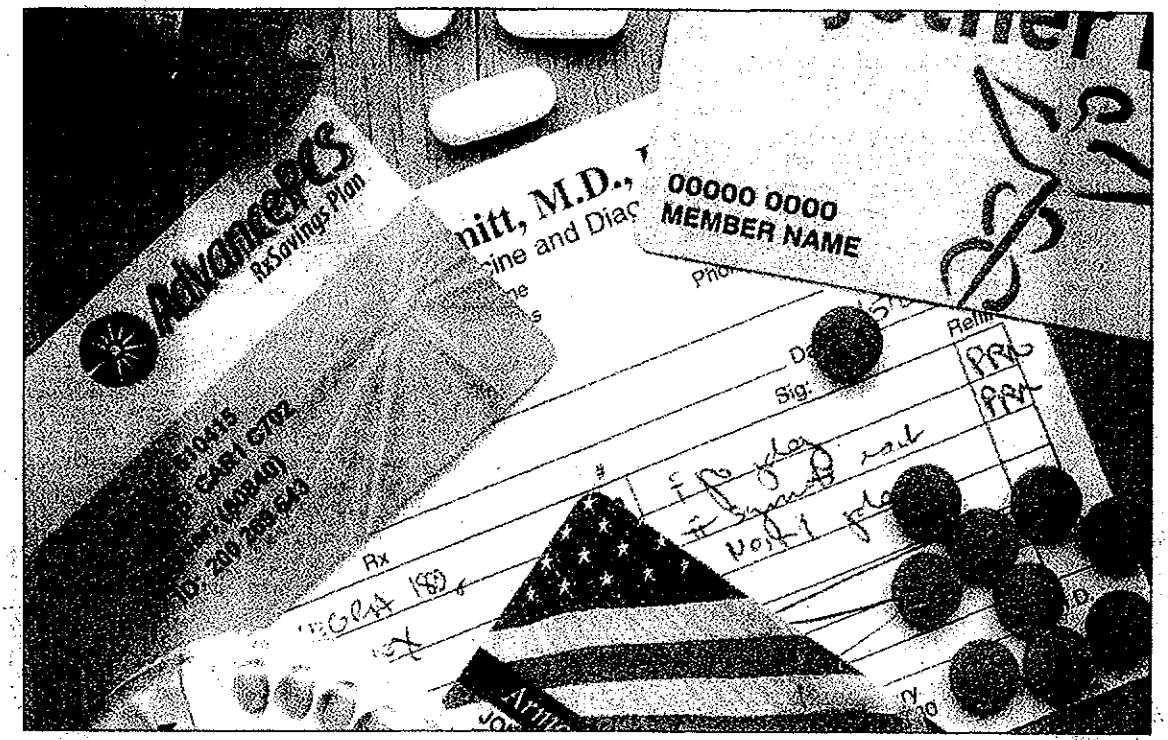
The Cincinnati Enquirer/ M. ROYER

Personnel costs continue to escalate over time, especially for full-time personnel. One key component of the compensation package is health care, the cost of which has risen considerably in recent years and is expected to rise even more quickly in the future. A news article from the *Cincinnati Enquirer*, reproduced on the following two pages, says of the rising costs, ***"We have a catastrophe."*** Oxford should appreciate the value provided by the volunteers who are paid a mere $10 per call.

Because attracting part-time employees is becoming more challenging, the City may wish to consider a supplemental benefit package for part-time personnel, which in contrast to the full-time costs of health insurance and pension contribution, is not very costly. VFIS offers group packages with coverage for professional liability, errors and omissions, vehicle fleet insurance, life insurance, and disability supplements.

In the long term, Oxford may experience difficulty in recruiting personnel, due to a shift toward higher housing costs in the area.

Health shock | 'We ... have a catastrophe'



Enquirer file

With managed care no longer a "silver bullet," consumers of prescription drugs and other health goods and services can expect new strategies to pay for rising costs, health-care professionals predict.

From Page **A1**

plans may start requiring enrollees to try using a cheaper drug before agreeing to cover a more expensive one.

There will be more serious talk about medical savings accounts and disease-management programs.

Eventually, the multitiered coverage that already requires higher co-payments for expensive medications may be extended to apply to doctors and hospitals.

These concepts may sound foreign to some, but the common thread is a growing expectation from employers that employees become more involved in deciding how much coverage they need and paying for the consequences.

"There's an entitlement mentality about health care. Consumers feel like it's not their job to deal with this," Ms. Ruth said.

Ms. Ruth was one of four health care and economics experts who spoke at the Drake Center in Hartwell on Wednesday at the annual "Four Forces Forecast."

More than 140 area health-care industry and business leaders gathered for the event, which was sponsored by the Greater Cincinnati Health Council, Employer Health Care Alliance and the Cincinnati Alliance for Healthcare Marketing.

Hewitt's prediction of employer health benefit costs was based on national survey information gathered from large employers.

Hewitt plans to release details about individual markets – including Cincinnati – in October.

Area employers say coping with such increases won't be pleasant for anybody.

A slowing economy has cut into demand for forklifts, dock equipment and other materials-handling equipment distributed by OKI Systems, which has eight locations in Ohio, Kentucky and Indiana.

"Our business is about 25 percent off from a year ago. So it is very hard to absorb these increases," said Jerry Schneider, the company's vice president of human resources. "It's not so drastic that we have to drop coverage, but it cuts into our ability to give raises and invest in new equipment."

A decade ago, employers turned to HMOs and other types of managed-care plans to offset years of rising costs.

Those types of plans were controversial in their own right. But this time, HMOs won't be the answer, Ms. Ruth said.

"Managed care has truly run its course," Ms. Ruth said. "There really is no silver bullet anymore."

In Cincinnati, Humana Health Plan of Ohio Inc., has sold its new consumer-centric health plans to about a dozen companies.

On Thursday, Anthem Blue Cross and Blue Shield announced it would begin selling a product called Anthem By Design to Ohio employers with fewer than 300 employees.

Anthem's plan offers a "core" of basic benefits, then allows employees to "buy up" to get enhanced benefits or lower deductibles.

So far, sales have been slow, said Larry Savage, president and CEO of Humana's Ohio office. Many employers have been hanging back, waiting to see how the new-style plans work out.

"It has started to take root a little. Every payer is starting to think about these things," Mr. Savage said.

"The whole idea is to get consumers re-engaged in the process."

E-mail tbonfield@enquirer.com

TERRITORY RESPONSE AND GROWTH

Photo #36: Oxford's Local Industry, The Square D Company

Oxford does have a balanced base of residential and light commercial. There are, however, only a few industries, such as The Square D Company, in the area. Growth is occurring, although it is slow and usually is residential in nature. Some growth is

Photo #37: New Hotels are Being Constructed in the Area

occurring in the hotel market, which brings in extra tax revenue for the City. These local hotels continue to pop up as more people stay in the area for sporting events, parent weekends at the University, etc. More people are also visiting the region to enjoy the area park system. The following article also indicates that Wal-Mart is expanding in the northwest area of the City, which is an indicator that future growth is expected.

THE CINCINNATI ENQUIRER

BUSINESS

SATURDAY, FEBRUARY 7, 2004

Wal-Mart plans Oxford megastore

By Jon Gambrell
Enquirer contributor

OXFORD – This college town soon could become the home of a Wal-Mart Supercenter.

City officials said the retail giant has proposed a combination grocery and department store for College Corner Pike near Todd Road, in the northwest outskirts of Oxford.

"There's not too much unexpected about this," said city planner Daniel Johnson. "City Council voted to rezone this area last year. Everyone should have expected something was in the works."

Oxford joins Lebanon, Milford, Alexandria, Deerfield Township, Harrison and Fort Wright as municipalities where Wal-Mart is either building or planning grocery and department store combinations. Some residents worry such superstores will bring increased traffic and noise, and force local businesses to close.

Two Wal-Mart Supercenters already are operating in Greater Cincinnati – in Aurora and Dry Ridge.

Johnson said the supercen-

See **STORE:**, Page **D2**

Store: Retailer targets Oxford

From Page **D1**

ter, which would include a gas station, would need roughly 30 acres.

Using the city's long-term comprehensive plan as a base, he said the supercenter could draw more businesses to the area, which holds Oxford's Square D plant and is surrounded by farmland.

"If Wal-Mart goes out there, the whole area will be under more pressure for development," Johnson said.

The college town has one Kroger store and a Wal-Mart, both along Locust Street near a cluster of shopping centers.

John Biggio, a regional manager of community affairs for Wal-Mart, said the corporation looked forward to offering an alternative for grocery shopping.

"We've been in Oxford for almost 10 years," he said. "We've seen our customer base grow and it was hard to ignore there are needs the current discount store doesn't provide."

If Wal-Mart receives permission to build, it would vacate its current location and work to put a "good tenant" in its place, Biggio said.

The corporation is tentatively scheduled to present its plans to Oxford's planning commission March 9.

If the commission accepts Wal-Mart's proposal, the plans would then be passed on to City Council for final approval.

Biggio stressed that Oxford, home to Miami University, had a lot of niche markets for a small business to survive, even with the addition of a supercenter.

"Oxford is unique due to the small merchants," he said. "But if you look around, few retailers would directly compete with Wal-Mart."

At Oxford Natural Foods, a small organic and natural food grocer on College Corner Pike, 23-year-old manager Nathaniel Walmsley said a Wal-Mart Supercenter could possibly increase the amount of business the store sees.

"We're out on the slow end of town," he said. "We haven't grown or expanded, we're a mom-and-pop kind of store. With the traffic flow ... it could an increase our business."

Photo #38: Entrance to Hueston Woods

Photo #39: Hueston Woods Lodge

OXFORD FIRE DEPARTMENT BUDGET

Appendix 8 includes the approved fire division budgets for 2003 and 2004, as well as the 1995 budget for comparison. Overall, this year's budget is conservative in nature, and it appears that the fire department has accomplished a great deal on limited funding. Spending patterns indicate a prudent approach with a high benefit to cost ratio for purchases. Quite honestly, the consultants were surprised that a fire department operation the size and complexity of that in Oxford was able to continue in the manner it has with such a conservative budget. Because of advances in equipment, continually increasing maintenance costs, and the somewhat rapid consumption of fire-related supplies and equipment, caution is extended to the City to be aware that funding pattern requirements will not likely be maintained in this manner for extended time periods. In addition, because spending patterns are conservative, caution should be exercised not remove excess funding from areas where a conservative approach has been used and an excess remains. Removing excess funds from a budget can cause a tendency to spend all budgeted resources in order to assure equal funding in subsequent budget cycles.

AVAILABLE GRANT FUNDING

There are numerous sources of grant funding that are available to fire departments in Ohio. After inquiring about previous efforts to secure these grants, it is clear that Chief Endress has been quite in tune with the grant availability, and in fact, he was seen at a grant briefing session during the compilation of this study. Oxford can likely qualify for the following grants, although they are awarded based upon competitive application:

NEW FEDERAL SAFER ACT - $7 BILLION IN PERSONNEL FUNDING
FEDERAL FIRE ACT – SPECIFIC EQUIPMENT AND PROGRAMS
OHIO EMS GRANT – EQUIPMENT AND TRAINING
OHIO FIRE TRAINING GRANT – FIRE-RELATED TRAINING
OHIO VOLUNTEER FIRE EQUIPMENT GRANT – NEED-BASED
OHIO EMA WMD TRAINING FUNDS
OHIO EMA WMD EQUIPMENT FUNDS

Oxford has already been the recipient of several of these grants, and efforts to secure additional funds are already in progress.

EMS INSURANCE BILLING

One primary method of creating additional revenue that is used by most cities in America, is EMS insurance billing. Although insurance billing had been somewhat controversial in the past due to concerns from the public, particularly their perception of "double billing" for a service that they perceived had already been paid for by taxes, research and new information actually shows otherwise. See **Appendix 9** for a relevant article on the pros and cons of EMS billing.

First, the issue of "double billing" must be visited. Insurance companies are already charging employer health plans for ambulance services. The revenue is factored into the health premiums passed on to the insured. If your community is not capturing these dollars as a medical provider, the insurance companies are directly profiting by your lack of collections. In most circumstances, the patient has had very little or no co-payment for the services provided. In fact, services are not being "double billed." Taxes do pay for the apparatus and medical equipment purchases, but EMS insurance revenue covers the services provided, such as a user's fee. This approach is becoming much more popular in communities, as taxes pay for soccer fields at recreational parks, while the players chip in a user's fee for maintenance of the fields. This keeps the taxes to a minimum for those who could potentially need the service, while passing on the direct service cost to the insurers of those who do use the service.

Photo #40: Emergency Ambulance Response from Quarters

Even with that information, a second aspect should be given stronger consideration. In July, 2001, the Ohio Office of the Inspector General issued several related opinions, (included in **Appendix 10**) which in effect, allow the taxes paid by a citizen to be counted toward the co-payment of the insurance charge for covered services. This means little or no out-of-pocket expense for the citizens. This was previously the primary hurdle that community leaders faced when considering whether or not to charge residents for ambulance transport services. Now that this hurdle has been removed, a very high percentage of citizens would have zero out-of-pocket expense for these services, while the transport provider (the City of Oxford Fire Department) could be the recipient of a substantial revenue stream. Since this opinion was issued, most departments in Ohio are participating, or considering the transition in the near future. This is particularly true when the current and potential call volumes are considered.

Photo #41: Medicount Management Headquarters

Recovering a high percentage of the claims that are billed can make this option as effective as possible. Typically, a target range for EMS insurance billing collections is 80-90 percent. Medicount Management, Inc., is located in the Village of Evendale, Ohio, and can provide helpful tips toward improving this percentage, such as changing the billing language on notices, as well as improving accuracy of run sheet information. There are other companies in Ohio, but this company typically charges a 10% surcharge to fully manage your account, answer questions from the public and insurance companies, as well as handle your licensing application and all submissions to the insurance companies. This cost can be reduced to only 8% if at least 70% of the hospital patient information sheets are attached to your submitted EMS runs sheets.

Most college students are also covered by either the University's health plan or their parents' insurance policy. Sherri Hardewig is the President of Medicount Management and either she or Tim Newcomb can be reached to provide more specific information regarding estimations of revenue from EMS insurance billing.

Medicount Management: (513) 772-4465

FACTORS OF THE "STATUS QUO"

1. ***Political and Administrative Support*** – The City Manager and elected officials were given an opportunity to contribute to this study. They expressed support for the grass-roots work performed by the fire/rescue/EMS service and appeared open minded in their support for any future progressive changes.

2. ***Dedicated Personnel*** – The Consultants had an opportunity to personally discuss issues with members serving at all levels in the Oxford Fire Department. There is a pride in the organization. They are dedicated members, anxious to provide quality work in the fire and EMS service delivery areas. The attitudes were upbeat, and most members held a positive outlook for the future. Currently, a lack of depth in experience among fire department members could be improved over time.

3. ***Specialization*** – Just as professional football teams have separate crews to handle defense, offense, and "special teams" functions, Oxford enjoys personnel who are focused on specialty functions, fire or rescue. A minor drawback would occur when members training and focus would have to encompass two primary missions, but it is felt by the consulting team that this would be more than offset by the versatility gained by more dual-trained personnel.

4. ***Constructive Chief***– The consultants met with Chief Len Endress on several occasions in order to obtain input regarding his position on current and future affairs in Oxford. There was a professional attitude that can be used as an asset by the Administration as the Fire Department moves into the future. Since he is nearing the time when retirement is an option, the City can begin to think about a fruitful replacement process.

5. ***A Quality Equipment Fleet*** –Although not perfect, the vehicles and equipment in both the fire department and rescue squad are well maintained and reliable. Oxford has planned well and has been able to invest wisely for fire apparatus and ambulances across time, maintaining a relatively modern force. The combined investment made by both the City and the Township of Oxford provides a versatile fleet suitable for the services demands in the Oxford area.

6. ***Community Support*** - As in most communities, the Fire and EMS services are respected by the public. The consultants interviewed corporate leaders and residents and students whose lives and property are protected in The City of Oxford. There was overall confidence and satisfaction in both fire and EMS operations in Oxford.

7. ***Personal Protective Equipment*** – The members of the Fire Department have adequate personal protection (Gloves, eye protection, etc.) for EMS duties, and also have adequate turnout gear and self-contained breathing apparatus for fire suppression duties. A sense of security and self worth among individual members has resulted from these investments.

8. ***Anticipation of growing pains, and the need to acquire a vision for the future*** – As the mission of a fire department expands, now including a role as guardian of Homeland Security and first response for domestic terrorism, members belong to a larger more dynamic entity. This creates more training demands, but members eventually should find that the broader organizational mission provides more career diversity and social enrichment.

9. ***Individual Training Sessions*** - *Individual Training Sessions* leave something to be desired in the eyes of many of the rank and file. Most firefighters and EMT's are anxious to participate in training if quality outlines are available and the instructors are prepared to put on a first-class program. New opportunities for cross training in new subjects will provide a chance for new energy.

10. ***Need for improved Standard Operating Procedures or Guidelines*** - To gain uniformity in tactical operations at emergency scenes, and to facilitate administrative operations, guidelines or procedures are needed in both areas. The Department can choose to call these Standard Operating Procedures, (often frowned upon by attorneys that do not like to provide ammunition to the opposition when things do not go "according to procedure", and fire fighting or emergency medical operations incur litigation). They can also be called Standard Operating Guidelines (not liked by some Chiefs whose officers and members can deviate stating that "these are only guidelines".) Several Fire Departments have tried to get the strength of both by calling them "Standard Procedural Guidelines" (SPG's). A cross-sectional committee comprised of rank, genders, and occupational specialties should be involved in the drafting of procedures so that the majority of people subject to the adopted procedures or guidelines will have had a stake in their formulation.

11. ***Facilities*** - While the Fire Station carries a proud history and tradition, it will need to eventually be modified to accommodate future 24-hour staffing, or have an additional station facility built. As Oxford prepares to utilize on-duty crews, updates will be needed for cooking and overnight lodging. More detailed information on fire station needs are provided elsewhere in this report.

12. ***Internal Communication*** - Every organization large and small can use an improvement in communication. Currently, there seems to be some communication deficiencies within the Fire Department, and between the Department and City of Oxford. These are not serious, but can be identified and can be improved upon.

13. ***Grant funding for Fire and EMS*** - The Oxford Fire Department has been successful with grants, but may consider becoming more aggressive in obtaining state and federal funds since many grant opportunities are targeted to smaller departments such as Oxford. Many opportunities are available for obtaining outside funding to enhance the equipment and services delivered in Oxford. Information on available grants is provided elsewhere in this report.

14. ***Competition for scarce resources*** – We have previously discussed what occurs if the City must choose between funding fire or EMS personnel. Directly or indirectly, these funds come from the members in the community who pay taxes and user fees. This dilemma is resolved if dual-trained personnel can be hired.

EXCELLENCE CHECKLIST

This report has already referenced several of the key NFPA (National Fire Protection Agency) standards and showed their relevance to staffing issues in the City of Oxford. Since the NFPA is a non-profit information collection center and internationally respected authority for the fire protection industry, it can provide useful guidelines for organizations wishing to improve themselves.

In terms of the future, one of the most comprehensive standards is NFPA Standard 1201, *Developing Fire Protection Services for the Public.*

This Standard, which was introduced in the year 2000, is an excellent checklist for fire agencies that want to plan ahead. This standard will be helpful to Oxford officials as they look ahead and ensure that they are "covering all the bases."

Table 11 below shows key component sections of NFPA Standard 1201 and demonstrates its comprehensive scope.

Table 11

KEY SECTIONS OF NFPA STANDARD 1201

- Purpose of a Fire Department
- Governmental Responsibilities
- Strategic (Master) Planning
- Organizational Structure of the Fire Department
- Financial Management and Budgeting
- Human Resource Management
- Training
- Organization for Fire Suppression
- Emergency Scene Management
- Emergency Medical Systems
- Community Relations
- Public Fire Safety Education
- Code Enforcement
- Fire Investigation
- Communications
- Equipment and Buildings
- Management of Water for Fire Protection
- Hazardous Materials
- Major Emergency Management
- Management Reports and Records

INSURANCE SERVICES OFFICE (ISO)

Nationally, the frequency and severity of fires are declining. Although fire suppression services are, in terms of total responses, becoming less frequent, they remain the most important services delivered by the fire department when fires do occur.

The City of Oxford has an above-average ability to control fire, as indicated by its favorable rating from the Insurance Services Office (ISO). This agency, which is administered under a coalition of the large insurance carriers throughout North America, performs audits of fire service delivery capabilities in communities on a regular basis.

Although *State Farm* and some other large insurance companies have discontinued using ISO ratings in favor of a "zip code based" rating system, the ISO rating scale remains the most widely accepted objective measure of fire protection.

The ISO conducts a thorough site visit to the community and analyzes fire stations, staffing levels, fire apparatus, equipment carried on apparatus, training records, water supply, and all the other component parts that affect the quality of fire service delivery. A ratings schedule has been prepared evaluating fire departments on a scale of 1 (the very best) to 10 (the most deficient). The City of Oxford is rated a 4, rather favorable. Oxford Township is rated is 4/9, which indicates a 4 in areas with hydrants, and 9 in areas without a water supply. The consulting team believes that a combination of some on-duty personnel and some training enhancements will allow the department to move to a Class 3, making the City of Oxford more attractive to industrial / commercial properties due to potential insurance savings. Residential areas with a 1-6 rating share the same lower premiums, so substantial savings are not noted with improvements to residential classifications.

Harry Hickey, Ph.D., a fire protection engineer from the University of Maryland, has published a 244-page manual listing a complex array of formulas and equations, which are used when ISO evaluates a jurisdiction for fire protection. An analysis of this manual was conducted to determine if the use of cross-trained personnel to man squads (taking the first of either emergency, depending upon which comes first), would hinder the chance to gain a favorable Class 3 ISO rating.

Based on an analysis by this Consulting team, it appears that the effects are minimal, and will be more than offset because of the usual availability of these personnel to handle fire emergencies. **Appendix 11** contains the latest ISO Report for the City of Oxford, and a checklist that can be used by the Fire Department to ensure that it will retain or improve its favorable ranking in the future.

One interesting factor is that the ISO would like to see each location within the urban area within a mile and a half of each engine company, and two and one-half miles from each ladder company. Earlier in this report, a map showed approximations of the mile-and-a-half distances drawn around the existing Oxford fire station, and a proposed second station to the west.

ACCREDITATION

Much attention has been paid in recent years to the process of Accreditation. While the ISO rating measures the fire suppression capabilities of a fire department, the independent accrediting process measures the overall capabilities of the fire department to function and deliver necessary services. The International Association of Fire Chiefs (IAFC) endorsed the development of a voluntary fire service accreditation program in 1987 and in 1988 signed a memorandum with the International City/County Management Association (ICMA) to develop the process. According to the ICMA, *"This commitment was made realizing that governmental fire services and state and local governments must define how communities should evaluate their risks and allocate their resources based upon the missions and objectives of their emergency service organizations."*
Source: ICMA Website, December, 2003

Photo #42: Engine 211, Standing By to Serve the Community

Both the IAFC and the ICMA joined forces to produce a cross-sectional commission including agency heads representing fire departments of various sizes, and executive officers from government, the insurance industry, and labor. Fire departments of various sizes throughout Ohio have become accredited, have formally applied for accreditation, or have registered their intent to apply, as shown in **Table 12.** (Registration is automatic if a fee is paid, and this entitles a department to receive pertinent information.). The complete packet of information on accreditation is provided in **Appendix 12.**

Table 12

ICMA ACCREDITATION IN OHIO

Accredited:		**Registered:**	
Shaker Heights		Beachwood	Cuyahoga Falls
Toledo		Bowling Green	Dayton
		Centerville	Washington Twp., Dublin
Applicants:		Cincinnati	Heath-Boeing
Union Township		Colerain Twp., Cinti.	Middletown
		Sycamore Twp.,	Napolean
		Cinti.	Sidney
		Columbus	Westlake

Photo #43: Tanker 271 Responding to a Working Fire

STRATEGIC MASTER PLANNING

The only way that either the City of Oxford or its Fire Department will be able to effectively meet the challenges of the future is to prepare, in advance, for whatever eventualities might occur. Planning can be done on a daily basis, a weekly basis, a monthly basis, a yearly basis, or a multi-year basis.

The Fire Chief's Handbook provides concise directions on how to prepare for the future:

> "Looking ahead and creating a scheme or method to attain a particular goal or objective is called *planning.* Before any endeavor can be launched, a plan of action must be developed. In the management arena, planning precedes the other four management functions since it is an integral part of each function.
>
> Planning as a function of management affects every level of the organization, from first-line supervisors to top-level commanders. Properly prepared plans assure us of the most successful outcome of any activity, whether it be the daily duties of a firefighting unit or the long-range plans of an entire department." [Source: *Fire Chief's Handbook*, Ch. 6, pp. 230-231.]

The Handbook goes on to state that for planning to be effective, it must neither be done in a vacuum nor be rigid. Planning in a vacuum is planning without taking into consideration the needs of the community, its citizens, the members of the department, and the department itself. Effective planning would involve balancing fire and EMS operations within the department and balancing all of the fire department operations with other city services. The flexibility of a plan lies in having alternatives or fallback solutions to problems that may arise after the fact.

The first way to begin planning is to start with a goal statement and then list the steps necessary to accomplish the goal. Plans can be long, intermediate, or short-range. Short-range plans are the mostspecific and should contain the following information:

- List of tasks to be accomplished
- The people and/or units and their alternatives, that accomplish the tasks
- The resources that will be required, such as materials and equipment
- Time frames and deadlines
- Control and reporting systems

Intermediate plans will be more vague than short-range plans. Intermediate two to three-year plans must allow for changes in personnel, shortfalls in the budget, or changes in department philosophy. Long-range plans of more than three years might be only a broad goal statement. As the time to begin implementing long-range planning nears, development of the plan becomes more and more specific. Component parts of long-range goals become short-range objectives. Common time frames are labeled as follows:

- Short-range ---------- One Year
- Intermediate Range ---------- 2 to 3 years
- Long-range ---------- 3 to 20 years

It is recommended that the fire department look ahead to future challenges. Based on the changing needs of the fire rescue service, short-range, medium-range, and long-range plans can be formulated. The fire department can ensure that it is addressing the issues in advance, rather than reacting to them as they occur. Regardless of the types of problems, complexity of the issues, or nature of the new challenges, the fire department can always be assured that it will be ahead of the game, and be in a pro-active, rather than a reactive, stance if it involves itself in an objective based planning process.

While many fire departments claim to plan, these planning efforts tend to be sporadic and at times non-productive because they lack one of the three primary ingredients, which include:

- **Participation**
- **Objectives**
- **Review**

The reason each of these is important in the future planning process is that the absence of any one will virtually ensure inadequate planning, and will virtually assure that any planning process undertaken remains incomplete. The three components are described as follows:

1. Participation: This simply means that those most closely affected by future decisions should be involved in formulating the plan that will affect them directly. A participatory process ensures that many minds will be brought to bear on critical issues as they are discussed, anticipated, and planned for. Likewise, it will ensure that a "buy-in" will likely occur among key elements in the fire department, officers of all ranks, and rank-and-file members, if they helped formulate the plans. As a minimum, it is recommended that any future planning process include representatives of:

- Chief Officers
- EMS Leadership
- City Officials
- Officers of all Ranks
- Rank-and-File Firefighting Personnel
- City leadership

2. Objectives: The converting of ideas into objectives is accomplished simply by breaking these ideas into component pieces, by putting target dates on them, and by putting someone in charge of the achievement of these objectives. This is a break-through process, which takes "nice ideas" and converts them into achievable results.

3. Review: If a grandiose scheme of planning for the future is undertaken, and if key members participate in the formulation of meaningful objectives, there is no guarantee that anything will happen, or any goals will be met unless there is an accountability session, or review process where actual results are measured against the objectives set. This can occur quarterly, on an annual management plan, or yearly on a longer-range plan. Regardless, it is a key component of a planning process required to take concepts and convert them into reality.

Participatory Management

While it could be argued that participatory management could undermine the authority of the administrative staff, studies by this Consultant have indicated that just the opposite will occur.

Now and continuing into the future, employees are far less willing to follow blind allegiance and are far more desirous of contributing to managerial decision-making. Management philosophers have pointed out that there are two types of authority that administrative leaders, such as fire chiefs and fire officers, possess as follows:

1. Position Authority
2. Acceptance Authority

The first type of authority is that which comes with the bestowing of a title, the awarding of additional bugles on the collar, and the painting of titles on the office doors. There is a certain authority that goes with an administrative office of authority such as that of "Fire Chief", "Shift-Commander", "Fire Captain", etc., but this is only part of the authority needed to manage employees.

Effective leaders must also have "acceptance authority." That means that they must be respected and accepted by the rank and file before their leadership is effective. The simple bestowing of a title or rank is no longer sufficient. Based on this premise, a Fire Chief who allows, in good faith, his or her subordinates to contribute to decision-making or planning will gain this critical "acceptance" factor and will, in fact, strengthen his or her authority base. A simple mathematical equation will show why this is so:

$$TA = PA + AA$$

Total Authority = Position Authority + Acceptance Authority

If a leader allows subordinates to contribute to the planning or decision-making process for the organization, the right-hand component of this equation AA (Acceptance Authority) increases. If that is the case, simple algebra will show that that because the right-hand side of the equation increases, the left-hand, TA (Total Authority) factor increases accordingly. Hence, one of the keystone principles in planning for the future is participation by the members of the organization who will be most directly affected by the planning process.

Mark Wallace summarized the key components to keeping a department healthy and happy in his book, *Fire Department Strategic Planning – Creating Future Excellence*, when he described how departments must keep open communications, recognize the interdependence of personnel, use problem-centered work, use management by objectives, use effective decision making, allow each person a piece of the action, encourage individual growth, allow differences to be discussed openly, and to always strive for new ideas.

A real-life example that can be considered for Oxford could be the adoption of an improved smoke detector program. Yes, most departments have a smoke detector program, but there is one continuing problem that never seems to be addressed. Over

50% of the detectors purchased by homeowners, as well as those that have been given out by departments across the Country, are continually being found after fires with no working battery. A new program that calls for smoke detectors with 10-year lithium batteries could be implemented in Oxford. This would be a great opportunity for input from personnel, empowerment by the fire administration, and a public relations benefit to the department. All of these pluses still do not include the true benefit of a safer community for the residents of Oxford!

PLAN 2004 EXAMPLE

Let's consider a list of objectives established in a participatory fashion for the Deerfield Township Fire Department in Warren County, Ohio.

Beginning in October of 2003, the Fire Chief of this department had three consecutive retreat sessions where all members of the fire department were invited to contribute ideas, suggestions, and recommended goals for the fire department. All of the grass roots input from these three retreat sessions were collected, and massaged by the staff of chief officers in this department. From this, a list of 27 key objectives was established for the year 2004.

This "Master Plan 2004" includes goals that were broken down into component parts. Time lines were established and individuals who were responsible for their achievement were identified. While the nature and types of objectives will vary from one fire department to another, this process, which holds persons responsible and pegs their actions to target dates, is virtually assured of achieving progress toward the desired goals.

Figure 11 shows a 2004 status chart used to track the progress of objectives. The color-coding scheme is as follows:

1. Red – Behind schedule
2. Yellow – Close or not applicable
3. Green – On schedule

As the chart shows, most of these ambitious fire department goals are being achieved. One can only speculate about how many of these positive achievements would not have materialized in the absence of the annual plan, mapped out in advance.

Master Plan 2004

Deerfield Township Fire Rescue

On Schedule — Close or N/A — Behind Schedule

Goal	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan. 2003
1. Conduct Master Planning for 2004	Plan in Place					3-shift Update Review 6/30						Survey Membership by 12/10/03 3-Shift Planning by 12/20/03 Develop Plan 12/31/03	
2. Involve Chief Off. in reg./nat'l. fire services initiatives			1. Deputy Chief recognized for EFO Program 2. Batt. Chief's choose Regional/National initiative			Fire Chief to attend Nat'l. Fire Academy FESHE Conference						Batt. Chiefs complete initiative by 12/31/04	
3. Improve overall marketing & public relations	Chief in PR release ea mo	Press release each month	1. Relationship w/Local Cable access facility 2. Expand Safety Town Project (2-per Mo.)										
4. New concrete apron @ 56, Blacktop sealer @ 58								1. Replace Concrete apron @ 56 2. Seal Blacktop @ 58					
5. Install water softeners at Hqts, 57, & 58						1. Install Softener at 57 by 6/30/04 2. Install Softener at 58 by 6/30/04			Install Softener at Hqts. by 9/30/04				
6. Secure Design & Construction for 57 & 59							1. Renovation Floor Plan for 57 by 7/31 2. Preliminary Design for 59 by 7/31						
7. Install Trng. Simulators at Sta. 56						Install 2-section Trng. Trailer by 6/30				Install Simulators & Maze by 10/31			
8. Appliance Maintenance Program / System Repairs				Obtain HVAC Contracts for Repairs by 4/30					Obtain Maintenance Contract for HVAC Units by 9/30				
9. Landscaping Maint. Service at all facilities				Invest in landscaping work at all facilities									
10. Turnout Gear Replacement			Purchase Qty. Authorized by Grant per Grant Timeline									Purchase Approx 12 sets turnout gear by 12/04	
11. Review Supplemental Revenue Sources		Implement EMS Billing for all by 2/28			Investigate Billing for Auto accidents by 5/31								
12. Replacement of two (2) Staff Vehicles			Replace Mechanics Pick up by 3/31	Replace Chiefs car by 4/30	Reassign station Vehicles by 5/30				Dispose of excess vehicle by 9/30				
13. Improve Fitness Program	Investigate best Option for Compliance with OAC		Implement Baseline Program by 3/31			Present Westchester Program at Offices Meeting by 6/30							
14. Improve internal communications within DTFRD	1. Insure data is same at all locations by 1/31 2. Insure Computer access by 1/31		E-Mail Trng.			1. Publish Minutes of All Mtgs Throughout Year 2. E-Mail Trng.			1. Install in Apparatus bays & use Electronic Billboard 2. E-Mail Trng.			E-Mail Trng.	
15. Improve overall records management	Continue Computer Trng. for FRMS Throughout Year		Acquire Visio data from WC GIS	QI Program for Fire Incidents Review by 4/30									
16. Assure proper level of service to all Deerfield Twp.					1. Review Interstate Response by 5/30 2. Review Response policy for split crews at 58 by 5/30								
17. Improve Primary unit Response time	Conduct Statistical Analyses ea. Qtr. To verify response times			Identify attainable response time std. for crews to respond		Implement QI improvement plan to reduce response time by 6/30							
18. Improve Markings & Identification of Fleet vehicles					Magnetic plates for M58 by 5/31	Identifier plates for Squads by 6/30	Deerfield Decals on Roof of Squads	Roof of eng. 57 painted by 8/31					
19. Conduct monthly skill evaluations of all personnel	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	1. EMS Skills 2. Fire Skills	
20. Improve Fire Hydrant Status	Contact WC (Ea. Mo.) to verify hydrant Maint.	Create Hydrant Numbering System by 2/28		Identify Public & Private Hydrants by 4/30									
21. Maintain a vigorous Fire Co. Inspection Program	Assign Inspections by 15th of ea Mo.	56, 57, 58 Assignments 2/04 thru 1/05		56, 57, 58 Assignments	56, 57, 58 Assignments	56, 57, 58 Assignments	56, 57, 58 Assignments	56, 57, 58 Assignments	56, 57, 58 Assignments	56, 57, 58 Assignments	56, 57, 58 Assignments	56, 57, 58 Assignments	
22. Personnel Reorganization & Consistency	1. Rotate Batt. Chiefs by 1/31 2. Relocate crew members to balance shifts by 1/31 3. Mtg. & Document to identify areas needing consistency												
23. Emphasis on Fire Incident Planning for Major Bldgs.	Ea sta to Complete Thorough Preplan ea Mo. Assign preplan to ea sta., Complete draft & return ea Mo.										Acquire Digital Camcorder by 11/30		
24. Improve inoculation status of our personnel.	Manage all issues related to infection control ea. Mo.					Plan to catch up all needed shots by 6/30			Implement & Complete plan to update all personnel by 9/30				
25. Complete Annual Testing of Ladders, Pumps & Hose						Complete Ladder Testing by 6/30				Complete all Pump Tests by 10/31 Complete all Hose Tests by 10/31			
26. Build a set of Maps for all adjoining Mutual Aid Co's.			Inventory Existing to Determine Needs by 3/31				Distribute High-priority updates by 7/31					Obtain additional up-dates by 12/31	
27. Produce a new policy to reduce disruptive call-offs			Study Problem, Identify Improvements by 3/1 Prepare New Revised Policy by 3/15 Present New Policy by March Officers Mtg. Adjust as necessary after Officer input & implement by 3/30										

Responsibility:

Name	Items	Name	Items
Brock	14	Jennings	3,4,5,9,10,21,& 24
Bromen	1,2,3,5,6,11,12,15,& 27	Koch	2,14,17,24,& 27
Cardwell	2,3,7,14,16,17,19,22,& 27	Kramer	1,2,3,11,12,14,& 22
Creager	6,15,23,& 26	McElroy	15,19,& 25
Donaldson	4,9,19,& 21	Richey	8,& 18
Fliehman	19	Strausbaugh	26
Frazee	3	Trapp	13
Gooden	5,9,20,21,& 25	Waldbillig	2,3,13,15,16,17,22,& 27
Hanifen	13,& 20	Wehmeyer	20,21,& 23
Hines	15,19,& 25	Wyrick	12,18,& 25
Jenkins	15,19,25		

While Plan 2003 represents an annual plan, several of the objectives contain component parts of a multi-year plan. Objective # 6 addresses a new fire station which will take several years to fund, plan and construct. While this is a longer-range objective, the first steps were scheduled in the year 2002 plan, and the next phases were planned in 2003. Now the next piece is planned for 2004. In this way, longer-range goals and objectives designed to meet future needs over a multi-year period can be incorporated into an annual plan by including component parts of the longer-range objectives.

Since Oxford is at a pivotal point in terms of defining the future of fire and rescue protection for the City, it might find the planning techniques presented in this section helpful.

Five to Ten-year Model

It is the goal of Kramer and Associates to provide the outline for a five to ten-year strategic plan in this report that the Oxford Fire Department can follow as a "roadmap" for continuing to ensure their success into the future. Oxford is a beautiful area, and careful planning is essential to maintaining the existing quality of life in the community. Because the community growth and dynamics may change the future outlook and services needed by the community, it is probably not practical to project further than a five to ten-year period.

Photo # 44: The Scenic Bridge

Oxford has completed considerable planning to date, and several recent plans across the many City departments all have an impact into the Fire Department planning and the services that will be offered to the community.

SPECIFIC RECOMMENDATIONS

Oxford is to be commended for its quality service to the community. In order to continue that service into the future, Oxford should consider the following specific recommendations:

The department should begin to incorporate the components of an officer succession plan, so that plans for advancement at all levels, not just that of fire chief, are in place for the future stability of the department. The Department should immediately begin an expansion of its training program to include officer development.

As Oxford continues to move forward, and Chief Endress eventually considers retirement, the City of Oxford should then implement a competitive process for securing a replacement fire chief. Candidates should have a balance of fire, EMS, and prevention knowledge, coupled with an understanding of special operations. The City should identify if truly qualified candidates are available from within the department, and/or if an outside search should also be considered.

A significant recommendation for the Fire Division is to strategically partner more closely with Miami University, and prepare to assume more of the direct service roles that have been outlined earlier in this report.

As we enter the age of electronic information, the need to access that data becomes critical. Installation of mobile data computers will facilitate the access of this information, which can relay detailed information about the hazards and facilities to which the department is responding. At minimum, the fire chief's vehicle should be equipped.

Photo #45: Chief's Staff Car, Car 281

Communications is an essential part of a successful fire department operation. An integrated radio system that allows all users to communicate will enhance the operations of all departments. The City should proceed with its plans to establish an 800MHz radio system for all City, and possibly University users. Additional CAD items discussed earlier in this report should also be considered.

The City of Oxford should consider the resources that are allocated to the fire department, and plan for a gradual staffing expansion over the next few years, as funding permits. This staffing could start with the addition of one full-time position as outlined earlier in the report, with consideration to adding part-time staff during critical staffing periods.

The Fire Department should continue to aggressively pursue all available grant funding in order to maximize the resources the City currently provides.

The City should immediately implement a soft-bill approach to EMS insurance billing so that resources, which are already identified through existing channels, can be captured.

The City should consider the timing of adding another fire station to thewest ern area of the community, which may be dictated by the potential expansion at the University Airport.

As the volunteer and part-time staffing pools in the region dwindle, Oxford should consider supplemental benefits for part-time employees in order to retain and attract quality employees. These "package" benefits are available from fire-supported agencies, such as VFIS, and can meet specific needs that are target for the volunteer, part-time, and even career fire service.

CONCLUSION

The City of Oxford can be proud of the fine fire and rescue personnel who have served the City for years. The City Council, City Administration, and leaders in the current fire department are commended for their efforts in planning for a strong force. All deserve credit for seeking neutral outside input that will strengthen their ability to provide service in the future.

The consulting team agrees that Oxford is at a pivotal point in its history when it must prepare for a different future. The volunteers who have so admirably served the community for years will become increasingly more difficult to recruit and retain. New challenges face the Emergency Services, and the City of Oxford will feel the effects of a more dangerous world, either directly or indirectly.

The firm of **Kramer and Associates** has been asked to review fire protection in communities of many different sizes and in many diverse geographical locations. It can be said that the fire and rescue protection in the City of Oxford ranks well when compared with that provided in similar-sized jurisdictions, but can be improved.

The City of Oxford and its fire and rescue services can look confidently toward the future, and the citizens and businesses within the community can be assured that quality fire protection and quality pre-hospital emergency medical care will be there for them. It is hoped that the suggestions and recommendations contained in this study will contribute to the ability of the fire department to build on the strength of the past and create an enviable record of service for the future.

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