

Fire Protection Privatization: A Cost-Effective Approach to Public Safety

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I. Introduction

As a result of rising costs of providing public services, cutbacks in state and federal funding, and the recession-induced fall in tax revenues, local governments across the country are having to rethink the way they deliver services. The ultimate challenge facing city managers is to reduce spending while maintaining a high quality of service.

Increasingly, to meet this challenge, city managers have found it advantageous to use private sector resources in the provision of public services. Today, state and local governments are applying the concept of privatization not only to the provision of public services, but to the design, building, ownership, financing, and operation of public facilities. David Seader of the International City Management Association (ICMA) has pointed out the important benefits communities are able to secure with this approach:

Privatization opens up a realm of resources for use in cities. It creates an infusion of capital from the private sector and makes available private sector flexibility, innovation, efficiency in management, and a controlling mechanism that is very powerful in this country—the profit motive.¹

By taking advantage of private sector resources and the profit motive, city and state officials are able to ensure that public services like garbage collection, street sweeping, and building maintenance are provided at a high quality and low cost, and be in a position to have new wastewater treatment plants, prisons, and tollways built and operated cost effectively.

This report looks at the experience of fire protection privatization. The report uses two basic methods to accomplish this task. The first is to examine case studies to see how private fire protection services are provided in different contexts—subscription, special districts, municipal contract, and industrial—and why they are successful. This examination will include a look at how one private company provides fire services to half the population of Denmark, while simultaneously providing a number of other emergency services.

The second method is to look at empirical studies which evaluate the comparative performance of private-sector and public-sector fire services. The chief study examined is the University City Science Center's 1989 analysis of the privately operated Scottsdale (Arizona) Fire Department. This comprehensive study compares private- and public-sector performance in terms of cost and quality, and discusses how private-sector fire companies achieve cost savings.

By providing a clear understanding of how private fire companies operate, where they tend to operate successfully, and how they achieve cost savings, this report should aid those communities considering initiating paid-fire services or updating their present services.

II. Scope of Municipal Privatization

“Think about injecting competition into *every* city service. Entrepreneurial governments have discovered that when organizations must compete for funding, they keep their costs down, respond quickly to changing demands and strive mightily to satisfy their customers.” [emphasis in original]

—David Osborne, *“Ten Ways to Turn*

*D.C. Around”*²

Introduction

Privatization, the shifting of functions and responsibilities from the public sector to the private sector, is neither a new nor radical concept for local governments. The wide variety of services and inputs governments depend on to function, in combination with their limited resources, means that local governments have always relied on the private sector for the provision of some services. These services have generally been support-oriented such as, repair and servicing of equipment, provision of office supplies, consulting, and design and construction.

What is new today is the breadth of services cities are now contracting out to the private sector and the rise of new forms of public/private partnerships, for example, build-operate-transfer agreements. Increasing numbers of municipal and state governments are recognizing that privatization is a viable method of controlling costs without sacrificing quality. In many cases, private-sector proficiency means that quality is improved. Just as in the past, economics, not politics, is the practical reason which explains why an increasing number of localities are turning to privatization. Opening up the provision of a public service to competitive contracting allows a local government to secure the performance and cost-saving benefits that come with competition and large-scale production.

Unprecedented fiscal pressures have been the major factor responsible for motivating local officials to search for alternative ways of providing public services more efficiently. An Annual National League of Cities survey found that one in four city governments is facing a budget gap of more than five percent, and that seven out of ten cities are today less able to meet their financial needs than a year ago. According to the NLC report, based on budget data from 525 cities of all sizes, “smaller cities and towns are particularly vulnerable to severe budget imbalances of more than five percent.”³

The serious budget shortfalls facing many local governments can be traced to increased (often federally mandated) responsibilities, diminishing state and federal assistance, general rising costs of municipal services, and finally, a reluctance on the part of local citizens to support higher taxes. In this fiscally constrained climate, the increased experience with competitive contracting is making the concept more accessible and demonstrating its value as an effective budget tool.

In a 1988 report summarizing survey results on alternative service delivery approaches used by local

governments, ICMA observed that “Delivery of public services by resources other than local government employees is no longer a fad.”⁴ It is also no longer an approach used exclusively by conservative Republicans. In Chicago, for example, Democratic Mayor Richard Daley is championing that city's aggressive program of contracting out for services. When Sharon Pratt Dixon, the new mayor of Washington, D.C., asked Daley for his advice, his reply was “to privatize everything you can.”⁵ The recently elected Democratic mayor of Philadelphia, Edward Rendell, campaigned on the merits of privatization. Private toll roads were promoted in California by Republican Gov. George Deukmejian and defended in Virginia by Democratic Gov. Douglas Wilder.

General Trends and Experience

Numerous surveys and reports published recently by independent organizations document the growth of privatization and help to explain its fiscal and operational impact. In addition, numerous studies have analyzed the cost savings that result from competitive contracting, compared public with private provision, and examined the impact privatization has on public employees.

How commonplace is competitive contracting? According to a 1987 report by Deloitte & Touche, a New York City-based accounting/consulting firm, 99 percent of the local governments surveyed contract out at least one service. The most frequently contracted out services are shown in Figure 1. A 1990 study by the Atlanta, Georgia-based Mercer Group also found that virtually all local governments contract out at least one service and that “26 percent or more of the respondents were likely to have contracted janitorial services, solid waste collection, building maintenance, security services, towing services, management and maintenance of parking garages and grounds maintenance.”⁶

While certain services lend themselves to competitive contracting because of the availability of competition and the ease of designing contracts and monitoring performance, according to studies by ICMA and others, there are examples of privatization in virtually every type of municipal service. The Fort Worth City Council recently transferred daily management of the city zoo to a private, nonprofit organization. The Riverside (California) City Council awarded an operations and management contract for the city's downtown convention center. Brown County, Wisconsin privatized administration of its general relief services. According to E.S. Savas, a leading expert on privatization and chairman of the management department at Baruch College, “the average city now contracts out 27 percent of its municipal services in whole or in part to private firms.”⁷

Key to the increasing use of private companies to provide public services has been the success this approach has had in improving the cost-effectiveness of city services. The Deloitte & Touche study, for example, found that 80 percent of their survey's respondents reported savings of 10 to 40 percent through privatization. Noting that financial savings were reported by 100 percent of the participants, and that quality was cited as an important factor by nearly half of its respondents, the 1990 Mercer Group Survey noted that “the results of privatization have been overwhelmingly positive.”⁸

How are cost savings achieved? Competition is the chief source of both quality and efficiency improvements. The ability of local officials to choose among alternative providers for a public service creates powerful incentives for providers to seek out the most effective and least-cost method of organizing work and delivering the service. The threat of losing a contract—losing business and revenues—fosters accountability and serves to keep a contractor focused on providing quality services. On the other hand, when a local government relies on a monopoly service provider, competition is extinguished and consequently, the quality and efficiency-enhancing benefits may be lost.

This result has been borne out by both surveys and empirical studies. A 1989 study by the National Commission for Employment Policy (NCEP) published survey results (summarized in Figure 2) which showed that contractors cut costs primarily through less overhead, better equipment, and higher worker productivity. In support of the Commission's results were the six sources of cost savings identified by the local government respondents of the Mercer Group survey:

- reduced personnel and equipment needs;
- the capacity to pay only for work done;
- more work for the same dollars;
- no start-up costs;
- reduced internal workload; and
- generally fewer service problems.

An important finding of the NCEP study, which reviewed the employment and wage effects for 34 city and county services privatized over the last 10 years, is that the savings privatization generates do not come at the expense of employee wages. An additional concern raised by competitive contracting is its effect on public employment. According to the NCEP study, after privatization, about 7 percent of the public employees were laid off, about the same percent retired, almost 60 percent were hired by the private contractor, and the remainder were placed in other government positions.

The experience of Los Angeles County's privatization program highlights how governments can minimize the impact privatization has on public employees while at the same time generating privatization savings. The county, whose privatization program was recently acclaimed by the Chicago-based Government Finance Officers Association, has achieved an accumulated savings from 1980 to 1990 of some \$247 million and has been able to eliminate or avoid nearly 5,000 budgeted positions with only a small number of layoffs. This has been achieved primarily by contracting at the rate of attrition and by giving preference to contractors who will provide employment to affected workers.⁹

Partly as a result of its proven record in controlling costs and continuing budget pressures, privatization is moving beyond the basic service contracting discussed above and into more complex public/private partnerships involving the building and operating of public facilities like corrections, toll roads, and wastewater treatment plants. What makes these new forms of contracting different and important is that, in addition to securing the normal competitive benefits of the contracting process, they provide an effective means by which the public sector can access private financing and commercial expertise to ensure that new public facilities are promptly built and properly maintained.

According to Charles W. Thomas, professor of criminology and director of the Private Corrections Project at the Center for Studies in Criminology at the University of Florida, there are more than 20,000 privately managed jail and prison beds in the nation. This number is likely to grow significantly since two-thirds of the states are under court order to address over-crowding, and private-sector construction and operation can help states meet their prison needs at a lower cost and without up-front capital expenditures. Corrections Corporation of America, Pricor Inc., the U.S. Corrections Corporation, and Wackenhut Corrections Corporation, are among the leading private firms with experience in successfully constructing and managing prisons.¹⁰

Private toll roads are another example where public/private partnerships have proven an effective mechanism for ensuring that much-needed infrastructure is cost-effectively provided and maintained. Widespread abroad, toll projects are under way or seriously being considered in ten states and Puerto Rico. In addition to addressing deteriorating physical conditions, when combined with congestion pricing, private toll road projects offer an effective means of alleviating rush hour traffic congestion, which 70 percent of all urban Interstates experience.

Finally, as a result of stricter water-quality standards and diminishing federal financial support, an increasing number of local communities are turning to private contractors to operate municipal water and wastewater treatment plants. Largely through operations and maintenance contracts, private engineering/consulting firms today manage over 400 wastewater treatment facilities. Firms like Metcalf & Eddy, Operations Management International, Envirotech Operating Services, and Professional Services Group are able to achieve operating cost savings of between 10 and 20 percent by taking advantage of their accumulated (often international) experience operating multiple plants, technical resources like offsite laboratories and more highly trained personnel, and bulk purchases of materials and supplies.

Conclusion

In sum, the widespread practice of competitive contracting and the documented cost savings achieved through this practice demonstrate the viability of privatization as a serious tool for public managers to maintain essential public services without raising taxes. Competitive contracting works because it harnesses the powerful incentives generated by marketplace competition. Moreover, as noted by privatization expert E. S. Savas, "Privatization not only saves money, it restores government to its fundamental purpose, governing, by relieving it of tasks like collecting trash, repairing streets and mowing grass that a competitive private sector—under public control—does better and more cheaply."¹¹ As indicated by the great variety of services contracted out, the only real limitation to privatization is the availability of willing and experienced private-sector providers.

III. Scope of Private-Sector Fire Protection

Introduction

A key and growing part of the nationwide privatization trend is the increasing use of private-sector companies for the provision of fire prevention and suppression services. The practice sprang up in the sprawling suburban and rural communities of the United States, mostly in the South and the West, and it is in these parts of the country that the private fire-protection industry continues to flourish. (See Table 1 and Table 2). With little or no regional tradition of public-sector fire departments, and no legal requirement that their respective counties provide them with fire protection, these areas have been most receptive to the notion of private-sector fire protection. And since they are young, developing communities, they are ideal markets in which to do business.

As America's population moves south and west, so does the fire-protection industry go private. Indeed, there are now hundreds of small private fire companies along with seven industry leaders in 14 states, according to the Private Sector Fire Association (PSFA) (See Appendix I).¹² Protecting the families, homes, businesses, and property of more than one million people, these range in size from small-scale mom-and-pop outfits consisting of one truck and two fire fighters, to larger firms equal in size to many public fire departments.

Private-sector companies are involved in every aspect of the fire prevention and suppression business. National parks and forests, airports and nuclear reactors, commercial businesses and industrial firms, rural and residential neighborhoods are served by private fire-protection companies. Private fire companies also operate internationally. Their most recent engagement abroad involved combatting the oil fires in Kuwait that resulted from Iraq's sabotage of the Kuwait oil fields. In fact, private-sector fire companies played a more important and direct role in staving off that environmental disaster than all of the United States armed forces combined.¹³

Many of the founders and presidents of these firms are former public fire-fighters who became convinced they could do a more cost-effective job than the public-sector agencies for which they were working. They had a number of innovative ideas about how a fire department should be run that they wanted to put into practice, but because of the highly traditional nature of the public-sector fire service, had not. When opportunities to establish their own private-sector fire companies presented themselves in other parts of the country, these fire-fighters became entrepreneurs.

Types of Service

The private sector provides fire-protection service in one of two ways: either by contract or subscription. Contract service is offered to local governments or special fire districts; subscription service is offered to residents or property owners.

In the case of contract fire-protection service, the officially designated representatives of a local jurisdiction (usually a town, city, or special tax district) award a private-sector company the right to service that jurisdiction for a specified time period, typically from one to five years. The company is paid a fixed and contractually agreed upon sum, either through the jurisdiction's general tax revenues or through a special fire tax levied by the jurisdiction.

In the case of subscription fire-protection service, individual property owners or residential associations contract directly with a private company for fire-protection service. As in the case of contract fire-protection service, the contract is set for a specified time period, usually one year, and the company is paid a fixed and contractually agreed upon sum, which may vary depending on the value or size of the property in question.

Examples of both types of private fire services abound. For instance, a 1986 survey by Centaur Associates, Inc. for the United States Fire Administration (USFA) and updated by the Reason Foundation in 1992 found 14 communities employing eight private companies for the provision of subscription fire-protection service (See Table 3) and 18 communities employing nine private companies for the provision of contract fire-protection service (See Table 4).¹⁴

One of the most common forms of private fire service is that offered by volunteer departments, which still account for the overwhelming number of fire departments, be they of the public or private sector, in the United States today. Indeed, 90 percent of all fire departments in the United States are composed either entirely or mostly of volunteers. These departments protect 42 percent of the population (See Table 5).

“Most of the volunteers (94 percent) are in departments that protect fewer than 25,000 people, and more than half are located in the small, rural departments that protect fewer than 2,500 people,” notes the National Fire Protection Association.¹⁵ Volunteer fire-protection service thus serves as a preliminary or first-step fire service, to be followed, as the jurisdiction grows in size and population, by some form of paid service.

Savings and Expenditures

Cost-savings from privatization range anywhere from 10 to 50 percent, with most communities falling in the middle of this range.¹⁶ Consider, for example:

- The American Emergency Services Corporation (AESC), which provides fire-protection service to the Elk Grove (Illinois) Rural Fire District, saves the district an estimated \$2 million in department start-up costs and 33 percent in annual operating expenses.¹⁷
- Paramedic Services of Illinois, Inc. (PSI), a private ambulance- and fire-protection service company, is saving Lincolnwood Village, Illinois some \$200,000 in annual fireman-pension costs and between \$300,000 and \$400,000 in annual department operating expenses. The Village's total budget for fire-protection service is approximately \$1.5 million.¹⁸
- Rural/Metro Corporation, which provides fire-protection service to residents of Scottsdale, Arizona at a cost per capita that is nearly half the national average.¹⁹ It has been estimated that a public-sector fire department would increase residents' costs by as much as 75 percent.²⁰
- Southside Fire Department, Inc., which is saving the City of Savannah, Georgia an estimated \$2.5-\$3 million in capital expenses and close to \$1 million in annual operating expenses.²¹

Independent studies confirm these results. In the aforementioned survey done for the United States Fire Administration and updated by the Reason Foundation, for instance, communities served by private-sector subscription companies typically had per-capita rates of expenditure less than the national average (See Table 6). And in those communities that make use of contract fire-protection service, per-capita expenditures for fire protection were found to be less than or equal to the national average (See Table 7).

Not included as savings is the resulting reduction in government administrative and other “overhead” costs. Yet these can be substantial. Payroll costs, for instance, typically account for some 70 percent of a fire department's budget. A private-sector fire company has no choice but to include all payroll costs as part of the expense a municipality must incur when contracting out for service. Government accounting practices, by contrast, enable a public-sector fire department to conceal some of these costs by having them indexed by other departments—the purchasing, accounting, or finance department, for instance.

Providers of subscription fire service also save residents money, and as a result, usually realize very high market penetration rates, typically in the range of 75 to 90 percent. There are good reasons to subscribe. The money spent is less than the amount saved through reduced insurance.

Table 6

It is far less likely that an insurance company will have to pay out damages for a resident who has fire-protection coverage than for one who does not. A resident of unincorporated Richmond Hill, Georgia, for example, who subscribes to fire-protection service offered by the Southside Fire Department can expect to save at least \$400 per year on insurance.²²

Sources of Savings

The private fire-protection companies are able to generate cost savings in a number of ways:

- By spending less on labor and other personnel costs, which typically account for some 70 to 90 percent of a paid department's expenses. This is done mainly by making extensive use of fully trained paid reservists and volunteers. It is also done by paying private firefighters salaries and benefits commensurate with market rates, which are typically less than those earned by public-sector fire-department employees. In addition, private-sector companies often make use of employee-stock-ownership plans, which raise productivity and cut back on pension costs.
- By making productive use of otherwise idle time. When not actually fighting fires, private firefighters are engaged in a number of other necessary and productive endeavors, including building and refurbishing fire apparatus, providing combination fire and security patrols, training industrial fire brigades, operating alarm monitoring and installation services, and sponsoring fire-prevention campaigns and other educational activities (See Table 8).
- By using innovative strategies and technologies to prevent and combat fires. Some of the private-sector companies are now actively encouraging the use of sprinkler systems in residential buildings, for instance, since these have been found to be highly effective in preventing serious fires.

Trends

Private fire companies have been part of American life for at least 45 years; however it is only in the past 12 or so years that the concept has really caught on and spread to enough communities in the United States to gain widespread attention. As *The New York Times* reported back in 1985, "seventy-five communities in more than 14 states, most relatively new cities and suburbs pressed for funds, have hired private companies to provide protection against fires. . . . Most communities that have [done so] did so in the 1980s."²³

This is not surprising. The elimination of federal revenue sharing, increasing numbers of state-mandated programs, and hemorrhaging municipal budgets have placed local governments in a fiscal squeeze. To relieve their growing budgets, municipalities have turned to the private sector for the provision of public services, including fire protection.

Also, the lingering 1990-92 recession is prompting communities to think innovatively about how they provide residents fire-protection service. When, for example, recessionary-induced fiscal difficulties forced the City of Chicago to cut off fire-protection service to the Village of Lincolnwood, Illinois, village officials decided to privatize the service. As noted earlier, this decision is saving Lincolnwood several hundred thousand dollars in annual expenses and village officials say they are pleased with the service provided by the private firm.²⁴

Other communities have been less successful in their attempt to privatize fire-protection service, mainly because of strong opposition from public-sector fire-department unions, which exert great political pressure to thwart privatization. Consider, for instance, the Town of Bearington, Rhode Island, and the City of Alameda, California. Both have been hard-pressed financially by the recession and both are confronted with serious fiscal difficulties. Bearington is a small suburban community (population 16,000, 18-square miles) 10 miles south of Providence; Alameda (population 77,000) is a somewhat larger northern California city on the outskirts of San Francisco.

Bearington's budget is \$12 million; the operating cost of its two-station fire department is more than \$1.5 million, or nearly 13 percent of the town's budget. The average salary (including benefits) of fire-department employees is \$42,000, and the per-capita cost of fire protection is about \$97. The town is now in arbitration with the department's union over a union proposal to reduce, from 25 to 20, the number of years required before employees can retire with an annual pension worth 50 percent of their salary. The fire department is "breaking the town" financially, says Bearington Town Manager Dennis Phelan.²⁵

With a half-million dollar budget deficit in fiscal year 1992, Alameda also faces a fiscal crisis. Fire and police services account for 55 percent of the city's \$35-million budget, says Alameda City Manager Bill Norton; the fire department's operating expenses amount to \$8.5 million annually; the per-capita cost of fire protection is \$110; and the average cost per employee is \$90,426.²⁶

Yet, despite these difficulties, officials in Bearington, Alameda, and other similarly situated towns and municipalities have been discouraged from considering fire-protection privatization and thus have been unable to secure cost savings. The City of Warwick, Rhode Island, for example, forsook an estimated \$1 million in savings when it decided not to consider privatization of its fire department. Strong union opposition playing on the fears of Warwick's large elderly population caused city officials to shelve the idea.²⁷

In many jurisdictions, the intensity of union opposition to privatization has limited, and, in many cases, eliminated, the supply of private fire companies. Indeed, most private fire companies make it a standing policy not to serve a jurisdiction already served by a unionized department. This is done for two reasons:

- to avoid the high cost of obtaining and retaining a contract with municipality under these conditions; and
- to avoid being used as a bargaining chip by municipalities negotiating with their fire-department unions. Warwick, Rhode Island, for instance, extracted a number of concessions from its fire-department union simply by threatening to hire a private-sector fire company.²⁸

The refusal of most private fire companies to serve a unionized jurisdiction results in an artificial shortage of private-sector suppliers and reinforces doubts many officials have about the viability of fire-protection privatization. Nonetheless, the industry continues to grow in developing areas of the country that are without some form of public-sector fire protection. The Village of Lincolnwood, Illinois, a suburban residential community of 12,000 located on the outskirts of Chicago, is a good example.

In 1990, the village decided to contract out with a private company for fire-protection service. This decision was made possible because Lincolnwood had no public-sector fire department of its own and thus no union opposition to its proposal. As a result, a number of private fire-protection companies were willing to submit bids for the contract.

One such company, Paramedic Services of Illinois, Inc. (PSI), already had been providing village residents paramedic service when the village solicited bids for the new contract. Because of its track record as a paramedic-service provider to the village, and because of its track record as a fire-fighter and paramedic-service provider to other nearby suburban communities, PSI was awarded the contract. Consequently, it became, in effect, the village fire department, providing village residents with a wide array of fire-protection services, including combination fire and paramedic patrols, building checks and inspections, and public-education campaigns.

The Reason Foundation's 1992 update of the Centaur Associates, Inc. 1986 survey confirms the fact that the private-sector fire industry continues to grow in developing areas of the country that are without some form of public-sector fire protection. In 1986 Centaur Associates found that Rural/Metro Corporation had contracts with 14 communities in Arizona and served "approximately 7.6 percent of the population."²⁹ Today, however, only six years later, these figures seem quite outdated, with the company operating the equivalent of 19 fire departments nationwide.³⁰

Based in the Southwest, Rural/Metro's success has in part been the result of targeting its business to coincide with the migration of America's population to the South and the West. These areas are characterized as having rapidly growing suburban and rural communities and thus have no real tradition of public-sector fire departments.

IV. Private Fire Protection: Case Studies

Subscription Fire Protection: Chatham County, Georgia³¹

Company: Southside Fire Department (SSFD)

Southside Fire Department (SSFD) provides subscription fire protection service and emergency medical services to most of suburban and rural Chatham County, Georgia. The company was founded in 1961 by a number of volunteer firemen in Chatham County who decided to offer subscription protection service to residents of what is now the Southside section of the City of Savannah (then an unincorporated rural section of the county). The company has since expanded its service area to include most of unincorporated Chatham County. Its General Manager and *defacto* Chief Executive Officer James F. Robertson, is a Savannah-based businessman and entrepreneur.

A related, spin-off firm partially owned by Robertson, Fire Suppression Management Consultants, Inc. (FSMC, Inc.), provides subscription protection service to most of the suburban areas now being built around the City of Richmond Hill in nearby Bryan County, Georgia.

Background

The Southside section of the City of Savannah grew in population and developed commercially throughout the 1960s and 1970s, to the point where it soon became but an extension of the city. It then became a candidate for annexation.

SSFD owned and operated three stations in the district and had been serving the area for nearly 18 years, when, in 1978, Southside was annexed by the city. Not surprisingly (in view of SSFD's investment in the district), the company sought an exclusive "master contract" with Savannah for the provision of fire protection service.

The city was not inclined to accept the company's suggestion; however, unrelated fiscal difficulties and lawsuits proved so costly that ultimately it did: It simply didn't have the money to train and equip additional fire fighters. A two-year contract was signed with SSFD in 1979, and, because of its success, has been renewed ever since.

Southside also provides subscription fire-protection service to much of unincorporated Chatham County, Georgia, where it now holds exclusive rights to four of the 14 county franchises granted for the provision of subscription service.

Description

The Southside Fire Department employs more than 200 fire fighters. Approximately 45 to 50 are employed on a full-time basis; 175 are part-time volunteers. All are state-certified; however, the company's training requirements are more stringent than the state's. The state of Georgia, for instance, requires only 120 hours of training per year for both full- and part-time fire-fighting personnel. SSFD, by contrast, requires 400 hours of training per year for its full-time, paid personnel and 146 hours of training per year for its part-time volunteers.

Prospective SSFD fire fighters are trained in first aid, smoke ventilation, fire suppression, fire prevention, sprinklers, nozzles (water strength, types, and use), "the full gamut," explains General

Manager James F. Robertson. All fire fighters, both full-time, paid personnel and part-time volunteers, must attend both a company-sponsored Rookie School and the Georgia State Fire Academy. SSFD's Rookie School is offered only twice a year, lasts 8 weeks, and consists of some 60 to 80 hours of instruction. The company boasts of having “more state-certified instructors than any other department in Chatham County.”

Similarly, the Georgia State Fire Academy, says Robertson, is “the most modern fire-training facility in the country,” a model for fire-training facilities nationwide. It offers SSFD fire fighters a minimum 60-hour training course, as well as a more advanced regimen of instruction (also 60 hours). Other more specialized training schools are offered by the academy on an ad-hoc basis in conjunction with the company.

SSFD owns and operates a total of 11 stations in the five fire districts that it serves. Three are in the Southside section of Savannah; two are in Wilmington Island; two are in Skidaway; one is in Montgomery; and three are in the Seventh District. Thirty or so fire fighters are usually assigned to each district. More, however, are assigned to Southside since it is a larger district (50 to 55 fire fighters); less are assigned to Montgomery because it is a smaller fire district (approximately 20 fire fighters).

SSFD also owns all of the equipment that it uses, which includes 16 fire engines pumpers, one aerial ladder and aerial scope, five tankers (one of which can supply as much as 5,000 gallons of water), and five rescue vehicles.

To generate business, the company sends out mailings to prospective consumers of subscription service. These are residents and landlords who reside in the unincorporated areas of Chatham County, as well as apartment and condominium associations that represent a multitude of additional area residents. Prospective customers also include commercial businesses and neighborhood malls.

Regardless of their particular status, however, prospective customers are sent a mailing that informs them they are not protected against fire damage—nor are their homes, property and belongings. They are told that the Southside Fire Department can provide them with the protection that they need—and at no net cost to them. In fact, they are told, by subscribing to SSFD for fire protection, they will actually save money, because the savings on insurance that they will realize from doing so will far outweigh the company's charge for service. The subscription rate varies depending on the value of the house.

Results

As indicated by its 75 to 80 percent market penetration rate (about 13,000 subscribers), Southside has been successful at marketing its service.

Residents subscribe because doing so saves them money. The owner of a typical \$100,000 house in Chatham County, for instance, will save about \$300 to \$350 on insurance per year. Since the cost of a subscription (on a \$100,000 home) is only \$113, that means the homeowner will save a net total of

about \$200 to \$250, or 60 to 65 percent on his insurance.

It is not difficult to account for such dramatic cost-savings. Insurance companies base their premiums on a customer's "risk value." A homeowner who does not have fire protection is a greater risk than a homeowner who does. There is a greater likelihood that the insurance company will have to pay out damages for the homeowner who does not have fire protection than there is the possibility that it will have to do so for the homeowner who does have protection. Consequently, the homeowner who does not have fire protection is charged more for insurance than the homeowner who does.

To assess an applicant's risk value, the Insurance Services Office (ISO) relies on a rating that it assigns to each town, city, municipality, or special fire district. The ISO rating ranges from one (least risk value) to ten (highest risk value) and is significantly affected by the quality of service provided by the local fire department. If the applicant has no fire protection he is assigned a ten, and thus pays a relatively high premium for insurance.

According to Robertson, the biggest savings are realized when an applicant's ISO rating changes from ten to six; then they can expect a "60 to 65 percent drop in their insurance costs," he says. Further improvements in their ISO rating, though beneficial, do not result in as much additional savings. In most of the districts that it serves, the Southside Fire Department has an ISO rating of 3. Thus, subscribers usually save a great deal on insurance. Similarly, SSFD's Southside division has an ISO rating of two, which is very good for a major city fire department and the equivalent of the City of Savannah's own in-house fire department.

Reasons for Success

The most important reason for the success of the Southside Fire Department is the market it has tapped into: small but fast-growing suburban areas with little or no tradition of a city or tax-financed fire department. Bryan County, Georgia, for example, is the third-fastest growing county in the state and one of the fastest growing in the United States. By expanding its market, SSFD is able to spread its costs—enabling each customer to contribute to a lower unit cost of fire service.

A similar situation exists in Chatham County, where a growing number of residents (100,000 to date) reside outside of the greater Savannah metropolitan area. A number of these residents reside in districts not served by SSFD; nonetheless a large number do, which means there is great opportunity for the company to grow and expand in Chatham County. Similar opportunities for growth exist in much of Georgia, nearby northern Florida, and the Carolinas.

The company has a strong incentive to cut costs for a number of reasons. First, the savings provided by lower insurance premiums are real but limited. If SSFD charges too much it risks either negating the savings that residents realize when they subscribe, or rendering such savings so small as to be not worth the trouble of securing.

Second, SSFD's contract with Savannah covers only one section (Southside) of the city. The rest of the city is served by the Savannah City Fire Department. Thus, if SSFD does not provide service to

Southside at a cost substantially less than that available from the city's in-house fire department, it runs the risk of losing its exclusive contract with the city. Currently, the city spends an estimated \$881,000 per fire station, says Robertson, while SSFD spends only \$437,000 per fire station.

Similar competitive pressures exist in most districts SSFD services. The possibility that new or existing private fire companies might enter SSFD's market and attract the company's customers or take away potential customers provides the incentive for efficient operation.

Unlike public-sector monopolies, SSFD is run "like a business," says Robertson. He seeks both to cut costs and maximize service. One way he does this is by controlling labor costs. The firm makes extensive use of fully trained volunteers (modeled after the Rural/Metro program), to the point where volunteer fire fighters outnumber paid employees at Southside.

Finally, the company also controls costs when it purchases and acquires equipment. Robertson has set up a depreciation account that provides a ready source of funds for the purchase and acquisition of new equipment. "We equip our trucks 105 percent," he explains. This is done so that the company can obtain the lowest ISO rating possible.

Special District Fire Protection: Elk Grove Rural Fire District

Company: American Emergency Services Corporation (AESC)

American Emergency Services Corporation (AESC) was founded by Gary Jensen in 1978 to provide fire-protection service to the Elk Grove Rural Fire District in Elk Grove, Illinois. A fire-protection engineer and consultant with a degree from the University of Oklahoma, Jensen had nearly 20 years experience as a public-sector fire fighter before founding his own private-sector fire company. He did so when the Mount Prospect Public Fire Department cut off its provision of fire and ambulance protection service to the district.

However, Jensen's decision to found his own private-sector fire company wasn't totally unplanned. It was something he had wanted to do since meeting Louis Witzeman, President of Rural/Metro Corporation, a long-established private-sector fire firm, back in 1961. When the chance to make good on his dream finally presented itself, Jensen seized the opportunity. "I thought the private sector could help improve the [district's] fire service," he explains.³²

Jensen formed his company by borrowing \$75,000, \$33,000 of which was used for three used fire trucks; \$6,000 was spent on a secondhand ambulance. "During his first year," reports *Money* magazine, "just about everything went wrong. His vehicles broke down repeatedly, and late payments to him from the district's treasury frequently caused him to miss meeting his payroll. In fact, Jensen didn't pay himself at all for most of 1979 . . . [AESC] finally turned a modest profit of \$19,000 in 1985."³³

Today, American Emergency Services Corporation continues to provide fire protection service to the Elk Grove Rural Fire District. Indeed, the original contract with the district has been renewed

since it was first initiated in 1979. The provision of ambulance protection service by AESC began in 1980 and, likewise, has continued unabated ever since.

In 1986, AESC was awarded an exclusive contract for protection of Eau Claire County Airport in Wisconsin, with which it has just completed the first year of its second five-year contract. Until 1990, the company was awarded a succession of exclusive one-year contracts with the Elk Grove Rural Fire District; it is now beginning the second year of a three-year contract.

Background

The Elk Grove Rural Fire District was established in the 1940s by residents of an unincorporated area adjacent to O'Hare Airport in the northwest suburbs of Chicago. Neighboring Mount Prospect Public Fire Department had been providing fire and ambulance service protection to the district since 1956. The suburban community began to experience significant growth and development with the commercialization of O'Hare Airport in 1959. Throughout the next 20 years, it continued to grow and prosper until finally, in early 1978, the Village of Mount Prospect informed the district that, effective January 1, 1979, it was cutting off its provision of fire and emergency medical services.

District residents had three options available to them: First, they could seek to annex themselves to Mount Prospect. The second option available to district residents was to set up their own in-house public-sector fire department. The third option was to contract out with a private-sector firm for provision of the service. The Board of Trustees for the district wasn't sure which option it was going to choose when it received a proposal from American Emergency Services Corporation. After much study, and only two weeks before the scheduled cut-off of service, the district signed a one-year contract with AESC.

Description

Under the terms of the agreement between the Board of Trustees of the Elk Grove Rural Fire District and American Emergency Services Corporation, the firm has responsibility for furnishing fire protection service "in accordance with the standards of the National Fire Protection Association, the Insurance Services Office of Illinois, and the Illinois Department of Public Health." AESC agrees to employ a minimum of six full-time fire fighters and 15 part-time and paid-on-call personnel, all of whom must be "trained and certified in accordance with the standards established by the State of Illinois Division of Personnel Standards and Education and the National Fire Protection Association."

Also included in the contract is a provision requiring AESC to "provide emergency ambulance and paramedic services consisting of a complete Advanced Cardiac Life Support System, manned by at least two certified paramedics twenty-four hours per day." The company agrees to "purchase or lease one Mobile Intensive Care vehicle; one Telemetry Radio; one Life Pak, and all other necessary medical equipment and supplies required by the Northwest Community Hospital System and the State of Illinois, Department of Public Health, to equip its mobile unit."

Company personnel are trained in-house by AESC state-certified training officers. Two hours of an

employee's standard 24-hour shift are devoted to training, and it takes nearly six months of disciplined drill before an employee is permitted to fight fires. A written state test must be passed before the designation is official. Paid on-call reservists drill regularly (twice a week), and, together with their full-time counterparts, attend specialized fire training schools and University of Illinois short courses.³⁴ All new employees are cross-trained as paramedics at nearby colleges and universities.

The one fire station used by AESC was provided by the district, which owns the facility. All equipment used at the station, however, is purchased and owned by AESC, though occasionally the company is able to make special contractual provision for purchase or upgrade of much-needed new equipment. In its most recent contract with the district, for instance, AESC was able to obtain special district appropriations for purchase of a new primary pumper, which, when it is bought, will be added to AESC's stable. In accordance with the contract, AESC now has three pumpers, two [Advanced Life Support] Ambulances, one tanker, and a command vehicle.

In addition to providing fire and emergency medical services, AESC also provides district residents with a comprehensive public education program, in which the importance of smoke detectors and voluntary home inspections are emphasized. CPR training is offered and basic fire prevention and suppression measures are taught.

AESC also prepares "pre-fire plans" for all commercial, industrial, institutional and multi-family residential occupancies. These are based on routine inspections performed by the company and are intended "to develop, in advance, the information necessary for positive and effective fire control operations. Each plan is based on an actual survey of the occupancy and [contains] information relative to construction, hazards, water supply and built-in protection."

An indemnity clause protecting the district from any liability, including legal fees, is written into the agreement. AESC agrees to provide automobile and general liability insurance, "including physical damage, with limits of not less than \$1 million per person and per occurrence, plus excess or 'umbrella' coverage of an additional \$1 million." The firm further agrees to provide equipment insurance and contractual liability coverage, as well as employee health and accident insurance, employee life insurance, workers' compensation, and employer's liability insurance.

AESC's initial contract with the district was valued at more than \$550,000; today, it is in excess of \$800,000. All increases in AESC's budget over the years have been cost-of-living increases, says Jensen, usually in the range of four to five percent. The additional monies expended for fire and emergency services have been used mostly to keep up with rising pay and benefit scales, though the company has, on occasion, made special contractual provision for purchase or upgrade of much-needed new equipment.

To monitor AESC's performance, the District Board of Trustees requires the company to submit a monthly activity report, in which it must list all emergency responses, major fires and other incidents resulting in serious personal injury or significant damage. AESC is also required to prepare an annual budget, in which it must specify all of its various expenses. This holds the firm strictly accountable for any misuse of taxpayer funds.

Results

District residents appear pleased with the service thus far provided. They say that, in marked contrast to the service provided them by the Mount Prospect Public Fire Department, they are no longer treated as a neglected and unwelcome stepchild. Mount Prospect “just didn't care,” explains George Taylor, manager of a 160-family mobile home park in the district, lifelong resident since he was 12 years old, and member of the Board of Trustees. “We weren't a priority.” But AESC: “These guys want us here; they want us as customers. They're more than happy to [provide us with service].”³⁵

And, unlike the Mount Prospect Public Fire Department, which, because of the distance of the village from the district, often took considerable time in responding to calls, AESC is there at the site of an emergency “in a split second”; they waste no time. AESC employees are “very conscientious,” says Taylor. “They will extend themselves” and “go above and beyond the call of duty.” The service is “as good as it's going to get,” he adds—“and I don't think it can get any better.”³⁶

But while the quality of service provided is certainly high, the cost of doing so is not. Former Board of Trustee member Jim Sheldon estimates that by contracting out with AESC, the district saved more than \$2 million in start-up costs.³⁷ Alexander Magnus, another former member of the District Board of Trustees, estimates that Elk Grove is spending, “at most, about two-thirds of what other municipalities are paying for the same level of service.”³⁸ A 1981 study done by Gage-Babcock and Associates supports this judgement. And although its figures are now dated, its general analysis and conclusion is still applicable. Explains Gage-Babcock and Associates:

Although Elk Grove Township does not have the economies of scale encountered with Rural/Metro, its still supports the hypothesis that a private profit-making firm will provide service at a lower cost than a public supplier.³⁹

Reasons for Success

There are a number of reasons for the cost savings achieved by the contract; but the most important reason is that AESC has been able to control labor costs, which usually account for some 90 percent of a typical department's budget. Indeed, the firm employs more part-time, on-call fighters who get paid only when actually training (typically four hours a week) and responding to emergencies than it does full-time employees.

Under this approach, labor-cost saving is substantial, and is essentially the difference between paying a part-time employee \$20 per week and a full-time employee \$20,000 or more per year—a figure that does not include AESC-provided benefits such as health insurance. The on-call, part-time fire fighters are all trained to the same standards as the full-time fire fighters and are equipped with pagers; thus, they are prepared to respond to an emergency call immediately.

Full-time employees at AESC, moreover, work more hours (either a 56- or 72-hour shift per week) than their public-sector counterparts. “Compared to municipal employees earning similar wages,” says Jensen, “this difference alone would generate savings of 20 to 30 percent.”⁴⁰

A wage differential is also at work, with AESC employees averaging somewhat lower salaries than their public-sector counterparts in neighboring departments. It is not so great a difference, however, as to discourage potential applicants: The company says it is regularly inundated with many more applications for work than there are positions available.⁴¹

The fact that most AESC employees (and all new employees) are cross-trained as paramedics also allows the firm to cut costs. Instead of having to hire two different sets of personnel to provide two services (fire and emergency medical protection), AESC can instead have the same set of personnel that provides the one service provide the second service as well—and at no additional cost.

When the full-time fire fighters are not actively training or responding to emergencies, they are engaged in a number of other necessary and productive endeavors: “building and refurbishing fire apparatus, providing combination fire and security patrols, training industrial fire brigades both in and out of the department service area, operating alarm monitoring and installation services, and servicing private vehicle fleets.”⁴²

In this way, the company also sharply cuts back on capital expenses. “Due to the extremely short start-up time when services began in 1979,” explains Jensen, “the company purchased whatever used equipment was on the market.” This equipment was refurbished by on-duty personnel and then sold at a profit as apparatus was upgraded. These profits were distributed among the personnel who performed the work.

Twelve years after it first opened its doors and began doing business, American Emergency Services Corporation continues to shun the purchase of expensive, top-of-the-line fire-fighting equipment, choosing instead to rely on the skill and ingenuity of its employees.

The company does not appear to have suffered from doing so. Fire damage to the district has been minimal, usually less than \$100,000 per year, and almost always the result of unforeseen accidents and/or arson. Moreover, according to Jensen, “90 percent of the damage is caused by 5 percent of the fires.”

In view of the company's successful effort to provide the district with effective fire and emergency protection service, AESC's exclusive contract has been renewed since it was first initiated in 1979.

Municipal Contract Fire Protection: Scottsdale, Arizona

Company: Rural/Metro Corporation

Rural/Metro Corporation is the largest and most successful private-sector fire and emergency services company in the United States, serving more than five million people in 50 communities in five states, and responding to over 300,000 calls for assistance each year. The firm boasts of operating the equivalent of 19 fire departments and 15 ambulance companies, and has been widely

acclaimed as a national leader in the provision of fire prevention and suppression services.⁴³

Rural/Metro offers both contract and subscription fire protection service; operates a wildland fire division; offers fire and safety services to private-sector companies; and provides specialized training in the handling of hazardous materials and the manning of industrial fire brigades. The company also manages and operates emergency medical and ambulance transportation services, communications dispatch centers, fleet maintenance operations and a variety of related activities.⁴⁴

Background

Based in Scottsdale, Arizona, a suburban city just outside of Phoenix, Rural/Metro Corporation was founded in 1948 by a twenty-one-year-old journalist and new homeowner, Louis A. Witzeman. At the time, Witzeman didn't have any grandiose plans or ambitions to build a large, nationally recognized private-sector fire firm. He had other, more pressing and immediate concerns to deal with—fire protection for his home and family.

Simply put, fire protection wasn't an option for the residents of unincorporated Phoenix in Maricopa County. After watching a neighbor's house burn down because it was outside the city limits of Phoenix, Witzeman decided to take matters into his own hands. Since neither the county or city government would provide him and his family with fire protection, he decided do so himself. “There was no master plan in forming the company,” he explains. “I simply needed fire protection and was determined to get it.”⁴⁵

With \$900 of his own money and \$10 apiece from 1,000 of his neighbors, Witzeman succeeded, providing subscription fire protection service to residents of unincorporated Phoenix in Maricopa County.⁴⁶ Rural/Metro grossed \$30,000 in its first year of operation.

When a rapidly growing community within the unincorporated area incorporated four years later (1952), and began looking into establishing its own in-house fire department, Witzeman took the opportunity to propose what, at the time, was a novel and unusual arrangement: an exclusive “master contract” with a private company (Rural/Metro) for the provision of fire protection service. The new city, Scottsdale, signed on to Witzeman's proposal and has renewed its contract with the firm ever since.

While Rural/Metro now has many successful operations nationwide, its crown jewel is still Scottsdale, where the company continues to grow. Indeed, the success of its operations there made possible the expansion of service to other communities in Arizona and throughout the United States. Today, it is the city's second largest nationally headquartered company and the source of employment for over 125 city residents.

Description

The agreement worked out between the City of Scottsdale and Rural/Metro Corporation (most recently amended in July of 1991) is one of the most comprehensive and demanding privatization agreements that exist. It includes, for example, provisions specifying response time requirements,

response time definition, response time liabilities, response time penalties, and—because sometimes, rules *must* be broken—exception report logs. Consider, for instance, the latter provision:

Rural/Metro shall keep exception report logs, recording each and every call that exceeds the response time set forth in Appendix `J', detailing the specifics of the call, recording all dispatch and other pertinent dispatch related times, and giving detailed explanations as to why the response time failed to meet the criteria set forth in Appendix `J'. These exception reports shall be forwarded to the Contract Administrator as part of the `monthly reports'.

The thorough and precise nature of the agreement is intended to ensure that Scottsdale taxpayers get their money's worth from Rural/Metro. The contract is valued at more than \$5 million and a strict system of accountability is built into the agreement. There are nearly a dozen different monthly reports, for instance, that “must be completed and submitted to the City's Contract Administrator within 15 days after the end of each month.” Among the various reports required of Rural/Metro:

- Total number of incidents responded to in the city by service type and dollar loss;
 - Fire cause analysis report of structure fires;
- Report of monthly fire prevention activities;

- Report of estimated water usage for training, fire suppression activities and fire prevention.

An annual report must also be filed with the City's Contract Administrator, and, according to the agreement, “shall include, but not be limited to a description of the prior fiscal year's performance as it relates to incident volume, prevention activities, public education activities, and service level accomplishments. In addition, the report shall outline the future fiscal year's goals and objectives as it relates to fire operations, fire prevention, public education, and emergency medical services.”

By the terms of its agreement with the City of Scottsdale, Rural/Metro is also required to “maintain an accounting system that complies with generally accepted accounting principles. The city or its agents may, at their expense, and with ten working days notice, inspect and audit the books of Rural/Metro as they pertain to this agreement. . . . Other reports may be requested as deemed appropriate by the needs of the city.”

Minimum staffing levels are set for each of the seven stations in the city and a minimum provision of equipment to be assigned to each station is also established. (The stations are owned by the city. Some of the fire and emergency medical equipment is owned by the city; some is owned by Rural/Metro.) Station 12, for instance, must have at least one “engine with a minimum 1250 GPM pump,” one “crash truck having a minimum 1,000 GPM foam pump,” one “reserve crash truck, using dry chemical/foam,” one “hazardous materials van,” and one “tanker with a minimum 750 GPM pump and a 2500 gallon tank.”

In the event of an actual fire, a fire captain and three fire fighters are to be assigned to the engine;

one fire fighter is to be assigned to the crash truck; another is to be assigned to the reserve crash truck; and both the hazardous materials van and the tanker are to be left unmanned. If, due to the severity of the fire, it is determined that the latter two pieces of equipment are needed, on-call, paid reservists (auxiliary fire fighters) can be called upon. Rural/Metro makes extensive use of these part-time, auxiliary fire fighters; indeed, they play a critical and crucial role in complementing the company's full-time force.

Eighty-eight fire fighters are employed on a full-time basis in Scottsdale; 70 others are employed part-time. All are trained at levels consistent with the standards set by both the Arizona State Fire Marshal's Office and the National Fire Protection Association. The company agrees to provide a "minimum of 240 hours of training each year of service to all full-time fire fighters . . . and a minimum of 72 hours of training per year [or eight hours per month] for all reserves and Fire Support fire fighters." All full-time fire fighters, moreover, must hold the "Fire fighter II level of certification, State Emergency Medical Technician certification, and EMT-D certification when working in the primary service area."

In fact, using its innovative combination of full- and part-time fire fighters, Rural/Metro averages 23 fire fighters on every Scottsdale fire call.

Special contractual provision is made for administrative personnel such as a fire chief, fire marshal, and fire protection engineer; however, while the company is urged to "keep these positions staffed," it is not required to "constant man" them, with the exception of district fire chief, a position that must be "constant manned" 24 hours a day. Rural/Metro must maintain a minimum of "four crews with a minimum of nine personnel per crew," each of which must be on call 24 hours per day. Minimum personnel for EMS calls are also established and vary depending on station.

An indemnity clause is written into the agreement that protects both Rural/Metro and the City of Scottsdale "from all losses, claims, suits, demands, expenses, subrogations, attorneys fees or actions of any kind and nature resulting from personal injury to any person (including death) or damage to any property, arising or alleged to have arisen [because of negligence on the part of either one of them]." Rural/Metro, moreover, is required to carry \$5 million worth of ambulance medical malpractice, automobile, and comprehensive general liability insurance, as well as \$1 million worth of worker's compensation and employer's liability insurance.

In addition to providing fire and emergency medical services, Rural/Metro also enforces the city fire code, and ensures that new construction is in compliance with city fire ordinances. Before the owner of a new building can be granted a Certificate of Occupancy by the city, his building must first be thoroughly inspected by Rural/Metro. All new fire protection systems, including hydrants, sprinkler systems, alarm systems, halon systems, etc. are examined and tested by the firm.

Rural/Metro also conducts an extensive public education campaign that includes Fire Prevention Week activities, a Junior Fire Setter Program, and a "Learn Not to Burn" program in the public schools. The firm provides CPR courses to Scottsdale residents and area businesses alike, and has as its goal the training of 5,000 persons annually. Every year a detailed public education plan is submitted to the city.

Results

Witzeman retired in 1978, but before doing so, sold the company to his employees via an Employee Stock Ownership Plan (ESOP). “We believe that employee-owners make better employees,” explains Robert T. Edwards, Vice President of Fire Operations for Rural/Metro.⁴⁷ The company has matched words with action, contributing, in just these past two years alone, some \$5 million worth of stock to its 1,800 employees.⁴⁸

The investment has proved worthwhile: Stock that ten years ago was valued at only \$10 a share is now valued at \$173 a share; and “company revenues have grown over the past 10 years from \$6 million to more than \$65 million annually. Revenues for the current fiscal year (1991–92) are estimated at over \$70 million.”⁴⁹

The company's financial success is a reflection of its success in preventing and combatting fires. Indeed, with an annual per-capita fire loss of only \$5.77, Rural/Metro has one of the lowest per-capita fire loss rates in the nation—75 percent lower, in fact, than the national average (\$23.45).⁵⁰ And the cost to the taxpayers is 49 percent lower than the national average.⁵¹ The company has been studied and examined by numerous independent groups, and all have said the same thing about the firm: Rural/Metro is one of the nation's most successful and effective fire departments—in either the public or private sector.⁵²

The most recent such study (discussed in section VI of this report) was done in 1990 by University City Science Center of Herndon, Virginia, and came in response to charges from opponents of Rural/Metro that the city was not getting its money's worth from the private-sector company. Quite the contrary, concluded University City Science Center, which conducted an in-depth, five-month study of the firm. Rural/Metro's “model prevention and inspection program,” it said, “provides citizens with a higher degree of safety than [that which is] available in most communities. . . . It has one of the lowest structure fire rates and fire dollar loss rates in the valley. At the same time the costs for services are low compared to other communities.”⁵³

Scottsdale boasts an ISO rating of 4, which compares favorably with the rating given to nearby communities.

Reasons for Success

There are a number of reasons for Rural/Metro's success, the most important being the innovative nature of its service. The firm is on the cutting edge of the fire prevention and suppression business, making full use of some of the most innovative technologies and strategies available.

Most recently, Rural/Metro pioneered the use of sprinkler systems to contain the spread of fires. A series of studies commissioned by the company found that sprinkler systems are 96.8 percent effective in either completely extinguishing a fire or keeping it in check. Indeed, there has never been a recorded case of a multiple fire death in a sprinklered residence.⁵⁴ “A sprinkler system equates to having a 24-hour fire fighter in every room of every building,” explains Robert T. Edwards, Rural/Metro's vice president of fire operations.⁵⁵

As a result of the company's pioneering work, the City of Scottsdale amended its sprinkler ordinance to include all new residential units. To date, the new ordinance has saved at least five lives and more than \$300 million in property damage. It also has saved the city some \$7.5 million on its master building plan for northeast Scottsdale, the primary area of growth in the city. That translates to 23 percent of the project's total cost.⁵⁶

Rural/Metro also pioneered the use of part-time, auxiliary fire fighters, who now comprise nearly 50 percent of its force. The use of such personnel has allowed the company substantially to reduce its total labor costs, and thus has enabled it to charge considerably less for fire and emergency medical service protection than neighboring public-sector departments. Indeed, the firm actually has fewer full-time fire fighters per capita than most other departments in its region. Yet, because of its use of auxiliary fire fighters, it is often able to respond to fires with more manpower. Savings are realized because reservists are paid “only when they respond to calls and attend training sessions.”⁵⁷

Even the arrangement by which the company makes use of its part-time, auxiliary fire fighters is innovative and results in additional cost-savings. Of Rural/Metro's 70 part-time employees, 40 are fire-support personnel; 30 are reserve personnel. Because the fire-support personnel are city employees, their response to an emergency is guaranteed; and Rural/Metro doesn't have to pay them. They already receive a city paycheck. And even though the reserve personnel are a bit more costly, they too are important; for they constitute a ready and prospective force of future full-time fire fighters waiting (and training) in the wings.⁵⁸

The growth and dynamics of the Scottsdale market are also important reasons for Rural/Metro's success. Unincorporated Phoenix offered the distinct advantage of being a rapidly growing area that did not have a means to provide fire protection. Indeed, that was the market Witzeman tapped into when he founded his company back in 1948; and it is the market that provided Rural/Metro with opportunities for growth. Scottsdale is no longer a sparsely populated suburb of Phoenix, but a thriving metropolitan community in its own right, one whose population has swelled from 2,000 residents in 1950 to more than 125,000 residents today.

Moreover, because Rural/Metro has a large customer base—in Arizona alone, the firm serves more

than a dozen communities comprising some 20 percent of the state's population—it can make extensive use of economies of large scale production. Consequently, the company's Scottsdale division does not assume the total cost of equipment and administrative overhead. To the contrary: overhead and equipment costs are apportioned among Rural/Metro's various company departments, especially those in Arizona. This results in additional savings to Scottsdale taxpayers.

But the chief reason for the company's success is its ability to be flexible and innovative in its provision of fire protection service. In this business, explains Edwards, “you can't rest on your laurels. To provide top performance, you must always be looking to further improve your services.”⁵⁹

Industrial Fire Protection: Austin Straubel Field (Airport), Green Bay, Wisconsin

Company: JJ Security, Inc.

JJ Security, Inc. is one of several firms nationwide that specialize in the provision of aircraft rescue and fire-fighting services (ARFF). Founded in 1972 by businessman (now company President and CEO) Norman M. Watermolen, JJ Security boasts of being the “first company in the United States to provide contract crash/rescue services to a commercial airport.” It provides employment for more than 800 people, mostly retired Air Force veterans with actual combat and crash/rescue experience, and does business in 15 states.

A full-service security company, JJ provides, in addition to ARFF services, security patrols, runway, ramp and perimeter inspections, basic equipment maintenance, fire alarm and extinguisher inspections, air mask maintenance and repair, as well as instructing airport personnel in fire safety, CPR and first aid. The company now has ARFF contracts with seven different airports: Austin Straubel Field (Airport) in Green Bay, Wisconsin; Outagamie County Airport in Appleton, Wisconsin; Kalamazoo County Airport in Kalamazoo, Michigan; Lafayette, Louisiana Regional Airport; Ardmore Airpark in Ardmore, Oklahoma; Medford Airport in Medford, Oregon; and, Burbank-Glendale-Pasadena Airport in Burbank, California.

The contract with Burbank Glendale-Pasadena Airport is the firm's largest and most recent contract, valued at nearly \$1 million and entered into in November 1991. JJ's contract with Austin Straubel Field Airport in Green Bay, Wisconsin, however, was the company's first. Indeed, it is the contract that established JJ's reputation in the aircraft rescue and fire-fighting business and thus made possible all of the company's six subsequent contracts.

Background

JJ Security, Inc. had been in the security business for nearly three years when, in the fall of 1974, it was approached by the management of Austin Straubel Field and asked to consider submitting a proposal for the provision of ARFF and other security-related services. Nearby municipal fire and police departments, JJ was told, had been providing these services to the airport, but new and more stringent Federal Aviation Administration (FAA) standards now rendered their services inadequate. JJ submitted a proposal, was awarded an exclusive one-year contract effective January 1, 1975, and has served the airport ever since. It is now near completion of its latest three-year contract with the airport and is in the midst of negotiating yet another three-year agreement with airport management.

Owned and operated by Brown County, Wisconsin, Austin Traubel Field is a small commercial airport encompassing only three and a half square miles; on any given day, not more than 400 planes traverse its premises. Thus, it rates only a “B” on the ARFF Index. An airport's ARFF index, reports *Airport Services Management* magazine, “is determined by a combination of two factors: 1) length of aircraft serving the airport; and 2) average number of daily departures of air carrier aircraft in a single index group, calculated during the busiest three months of the previous year.”⁶⁰ Six indexes, ranging from “A” to “X,” are possible, an “A” rating being assigned to the smallest of airports; an “X” rating being assigned to the largest of airports.

Despite its relatively small size, Austin Traubel Field fulfills an important commercial role for the people of the state of Wisconsin. A number of the state's largest commercial carriers, including Northwest, United Express, and Air Wisconsin, do business with the airport. Annually, some 900,000 planes traverse airport premises, bringing with them an estimated \$250-\$300 million worth of business—business that would otherwise be lost to the surrounding community. In a much more direct sense, more than 750 airport employees owe their jobs and livelihoods to the success of Austin Traubel Field; and the airport has been officially designated an FAA Automated Flight Service Station (AFSS)—the only one of its kind in Wisconsin.

Description

Under the terms of the agreement worked out between Brown County and JJ Security, Inc., the firm has responsibility for insuring that the airport is in full compliance with Federal Aviation Regulations (FAR) Part 139 and FAR Part 107, “and any other fire or security regulations that may be imposed on Austin Straubel Field by the Federal Aviation Administration or other federal or state agencies.” FAR Parts 139 and 107 lay down very specific safety criteria that all airports must comply with. For instance, reports *Airport Services Management*, “all [airport] rescue and fire-fighting personnel [must] participate in at least one live fire drill every 12 months”; and “the first ARFF vehicle to respond to the midpoint of the farthest runway [must do so] within three minutes and the remaining vehicles [must] respond within four minutes,” to cite just a couple of the FAA's safety requirements.⁶¹

JJ is required to train and assign at least nine fully qualified full-time personnel, and also to complement the existing municipal emergency medical service by providing first response, first aid, and medical treatment for emergencies at the airport. The agreement additionally mandates that all nine JJ employees be trained and equipped in the use of firearms, deputized by the Brown County

Sheriff, and thus licensed to carry out the duties and responsibilities of a law-enforcement officer when working on airport premises. All services, moreover, must be provided on a 24-hour basis.

An indemnity clause protecting the county from “any and all liabilities, demands, claims, suits, losses, damages, causes of action, fines, or judgements” is written into the agreement. JJ agrees to carry a minimum of \$5 million worth of Comprehensive General Liability insurance, as well as \$1 million worth of Comprehensive Automobile Liability insurance; all nine JJ employees must be furnished with worker's compensation and employer's liability insurance; and, to underscore Brown County's concern that it not be liable for any damage done by JJ, the county itself must be listed as one of the insured.

A minimum of three fire fighters/security officers work any one eight-hour shift. All are “retired Air Force veterans with actual combat and crash/rescue experience.” Thus, they are already familiar with air rescue and fire-fighting techniques and are usually in excellent physical condition. They are required to undergo some 400 hours of police-science training and instruction, usually at nearby Northeast Wisconsin Technical College or Fox Valley Technical College. This enables them to carry out their responsibilities (which include the use of police firearms) as newly deputized law-enforcement officers. Any additional training that they might need is provided by JJ Security, and it is usually intended to familiarize the new employees with fire-fighting equipment and techniques unique to Austin Straubel Field.

In 1991, Chief Jerry Rynerson was named Public Safety Director at Austin Straubel Field. An Air Force veteran with more than 20 years' experience in the provision of ARFF services, Rynerson has responsibility for managing JJ's day-to-day activities at the airport. His responsibilities include:

- supervising the shift crews in the “care and maintenance of equipment, standby details, fire prevention, safety and security inspections, and other assignments”;
- instructing and training public safety personnel;
- developing “standard operating procedures governing response to, and operations at, fire fighting, crash landing, rescue incidents, medical emergencies, and law enforcement incidents”;
- developing and updating “mutual aid plans for public safety operations with local officials”; and
- directing “the surveillance of all buildings and other facilities.”

Rynerson's position is a contractually mandated full-time position. In addition to his normal forty-hour workweek, Rynerson fills in for fire fighters/security officers when they are taking vacation and other approved absences.

The Public Safety Director must have at least ten years' fire fighting experience, including five years' experience with Airport Rescue, Fire Fighting Security services and five years of supervisory experience. He must “have knowledge of Federal, State and local laws, regulations, and procedures governing airport security and ARFF measures, including but not limited to law enforcement, riot

control, traffic control, explosives, first aid and maintenance of fire fighting equipment.” He also must “hold Red Cross Advanced First Aid Instructor Certification to provide medical first aid training,” as well as “Fire Fighter Instructor Certification.”

Also mandated under the terms of the contract between Brown County and JJ Security, Inc. is the designation of one of the officers on duty as “shift captain.” To be so designated, an officer must have:

- at least five years fire fighting experience with Airport Rescue, Fire Fighting Security (ARFFS) services;
- knowledge of the basic regulations related to fire combat and lifesaving procedures and knowledge of the equipment, materials and vehicles required for airport fire fighting and lifesaving; and
- First Responder requirements as in FAR 139 and received Red Cross Advanced First training by Contractor personnel or by Red Cross within six months of start date and be recertified on an annual basis.

JJ employees are responsible for maintenance and operation of the million dollars or so worth of equipment that Austin Straubel Field has purchased for fire and security protection. This includes two large fire trucks, valued at nearly \$400,000 each; a quick response vehicle, and a patrol vehicle. The fire fighters/security officers are also responsible for operating the pumps, booms, nozzles and other fire-fighting equipment provided them by the airport. Additional responsibilities include inspecting airport aprons, taxiways, runways, buildings, and other structures for the identification and elimination of safety hazards; maintaining control of traffic and crowds; and instructing airport personnel in fire safety, CPR, and first aid.

Results

Austin Straubel Field's experience with private-sector fire and security protection service has been positive; indeed, Airport Director Donald Hoeft estimates that by contracting out with JJ for fire and security protection services, Brown County is saving more than \$300,000, or nearly 50 percent in annual operating expenses.⁶² (The company's present contract with the county is valued at a little more than \$300,000.) In the entire 16-year period since JJ assumed responsibility for the service, not one single fire has occurred; and thus, no fire damage has been reported.⁶³ Austin Straubel Field, says airport management, is being provided first-rate fire and security protection service in the most efficient and cost-effective manner possible.

Reasons for Success

There are two chief reasons for JJ's ability to provide cost-effective services. First, the dual nature of the contract allows the same personnel to provide both fire and security protection service. This is something the public sector would never allow, says Hoeft. “The local unions would have had to combine personnel from both agencies in order to meet both [ARFF] and law enforcement requirements. But contract services is a whole new ball game. The airport simply wrote its dual-role requirements into the contract, and it was up to a vendor to fulfill them.”⁶⁴

“The airport recognized [ARFF] personnel as a large asset for the airport. So we turned it into a public safety department.” Now, reports *Airport Services Management*, “the fire fighters are all emergency medical technicians, fully trained in CPR, and can act as ‘first responders’ in terminal medical emergencies.” According to Hoeft, “Having that capability on the airport is now an FAA requirement. We’ve had that for several years.”⁶⁵

“And being a smaller airport we don’t have the budgetary allowance for a large staff. So we use our [ARFF] personnel for traffic and crowd control, security, fueler inspections and other self-inspection portions of airport operations. We were able to do that because of the contract. If we’d had to negotiate through a union contract, adding extra responsibilities or duties would have been virtually impossible,” he said.⁶⁶

The second reason for the cost savings generated by the contract is that salaries and benefits are lower in the private sector than they are in the public sector. When the contract was initially bid in 1975, for instance, “county bids were 20 to 30 percent higher,” says Hoeft—“primarily because of higher union pay scales.”⁶⁷ However, despite the fact that they are paid less than their private-sector counterparts, JJ employees have a stronger sense of morale and camaraderie, reports *Airport Services Management*, largely because they are more intimately involved in the day-to-day operations of the airport.⁶⁸ The fact that most employees are recipients of sizeable military retirement pensions helps to alleviate any concerns they might otherwise have about reduced salaries and benefits.

For all these reasons, Austin Straubel Field’s contract with JJ Security, Inc. has been renewed since it was first initiated in 1975.

V. Private Fire Service Lessons from Denmark

“Falck’s concept—to be the nation’s [Denmark’s] rescue service—requires that equipment as well as product range are currently adapted to the changing demands and needs caused by developments in society.” [Falck 1989 Annual Report]⁶⁹

Background

For almost a century, the Falck organization, a private company, has been providing successfully a range of fire, emergency, and related services to individuals and local communities in Denmark. Today, almost half of Denmark, which is roughly twice the size of Massachusetts and has a population of around 5 million, receives its fire protection service from Falcks Redningskorps (Falck Rescue Corps Ltd.). As a result of years of steady expansion, today Falck is the world’s largest private fire protection company.

Founded in 1906 in Copenhagen as a salvage company, Falck began its first motorized ambulance operation in 1908 and in 1922 opened its first fire station. Helped in part by the 1926 Fire Service Act, which required municipalities to have motorized fire brigades, the company expanded its

operations from its rural customer base into provincial towns and cities. Key to Falck's longevity has been its foresight and ability to continually look for opportunities to expand the kinds of emergency assistance services it offered.

In 1988 Falck changed ownership from being family-controlled to being owned by seven of the largest insurance companies in Denmark. Today, structured under the holding company, Falck Holding, there are eight separate integrated companies providing, both nationwide and internationally, a full spectrum of emergency-related services—fire fighting, fire loss prevention and fire salvage, road and air rescue, ambulance, automobile road service, transportation of patients, and security guard and surveillance. Outside Denmark, Falck is in a joint venture with the French company Sanitra to provide fire loss prevention, fire salvage, and corrosion fighting in France; has a tow-truck business established in the former East Germany; and has recently established an ambulance service in Budapest, Hungary.

Compared to how fire services are typically delivered in the United States, two things about the Falck organization stand out. First, not a government entity, Falck's survival has depended on its ability to consistently provide quality services at low cost. Professor Ole P. Kristensen at the University of Denmark has noted that “The [Falck's] innovativeness was more or less forced upon Falck to enable the company to survive.”⁷⁰ Secondly, instead of being trained to provide one service, Falck's personnel are cross trained to provide a number of services. The flexibility, economizing, and experience offered by this approach are key to explaining Falck's reputation for being a low-cost, innovative fire and emergency service company.

Company Organization and Cost-Reducing Practices⁷¹

In 1991, the Falck Group had 7,500 employees, putting the company among Denmark's 20 largest companies in terms of personnel, and a vehicle fleet of 3,500. Of this total, the majority were employed by Falcks Redningskorps in rescue-related work. In addition, to its approximately 2,000 full-time fire fighters, the company employs 1,700 part-time fire fighters. For 1989, the Falck Group had an income of 1.9 billion Danish crowns (approximately \$275 million). The company is presently branching into the provision of preventive and remedial environmental services and as mentioned above, is expanding its operations into Germany, Hungary, and France.

Falck has 134 stations throughout Denmark all open 24-hours a day. From 106 of these stations, Falcks Redningskorps provides fire services to approximately 2.3 million of the country's inhabitants through contracts with 173 of the total 275 municipalities. The remainder of the country is served by municipal fire departments and a few volunteer fire departments. The company also provides ambulance services to the entire country except for the central part of Copenhagen and Roskilde, where municipal services are provided. Falck responds to about 30,000 fire calls per year and derives 70 percent of its income from fire protection services. According to Kristensen, Falck obtains about 45 percent of its revenue from the public sector and 55 percent from the private sector.

Like Danish municipal fire departments, Falck's fire brigades operate under strict national regulations which specify, for example, specific equipment and personnel levels. Danish law also requires that a publicly employed fire chief be assigned to each local fire department that relies on

private contractors for its service, to ensure that all regulations are met.

As documented in Professor Ole Kristensen's study summarized in section VI, Falck's fire protection services cost only one-third as much as similar quality public fire service. The above description of Falck's extensive, and highly integrated organization, provides credibility to the factors Kristensen identifies as contributing to Falck's cost advantage over public provision of service—economies of scale, joint production of a number of different services, and competition.

The Falck Group's nationwide, and in some instances, international, operations give the organization a tremendous opportunity to significantly lower the unit costs of its service. The tendency of unit costs to fall as output levels increase is well established and has been described as the learning or experience curve. In the case of fire services, countrywide provision of the service allows Falck to rapidly gain experience from a wide range of situations and utilize this knowledge to quickly improve services and control costs.

In addition to the significant opportunities for cost reduction that come with large-scale provision of a service, Falck benefits by having a highly integrated organization which lends itself to joint production of services. For example, all Falck rescuers are trained to do all aspects of the services rendered by Falck and to do job rotation on a shift basis. Rescue crews, for example, are educated and trained for multiple jobs. Not only do they have the expertise to fight fires and work on ambulance crews, but they are qualified to assist stranded drivers.

The value of a versatile workforce is especially important in emergency-related services where there is often considerable dead time in between service calls. Instead of having its workforce and equipment idle during these down times, Falck's structure of shared tasks and cross-trained personnel, ensures high productivity of the company's resources. Moreover, as Kristensen pointed out, "Because of its many functions besides fire protection, almost all of its fire stations are manned around the clock."⁷² The ability to perform a variety of jobs also gives members of its workforce greater job satisfaction.

Finally, the overlapping structure of Falck's different service groups facilitates efficiency-enhancing coordination between groups as ideas and experiences can be more readily and rapidly exchanged. Falck's separate companies that use, build, service, and sell rescue and fire-fighting vehicles and equipment, for example, are in a particularly good position to transfer ideas so that new equipment and vehicles are constantly being adjusted to more effectively and efficiently accomplish their tasks.

As pointed out by Kristensen, the force which encourages Falck to constantly look for ways to expand its services, reduce its costs, and improve the quality of services, is competition. The ability of alternative service providers to step in and take away Falck's customers is what drives Falck to be a dynamic and flexible organization. Rarely facing competition and even more rarely capable of providing services beyond a given political boundary, municipal fire departments cannot be expected to operate as efficiently and innovatively as private fire and emergency companies.

In the Adam Smith Institute's 1989 report, *The Burning Question*, which examined British fire service, Michael Simmonds noted that while fire services in both the United Kingdom and Denmark were the responsibility of the local government but regulated by central government, the overall cost

of Denmark's service was considerably lower than the U.K.'s. Citing the figures presented below on fire cost as a percentage of gross domestic product, Simmonds suggested that the competitive pressure provided by Falck is a major factor in Denmark's ability to provide low-cost fire service.⁷³

**Expenditures for Fire Protection
Percent of GDP (1984)**

Denmark	0.09
Holland	0.14
Norway	0.15
Canada	0.19
New Zealand	0.19
Finland	0.22
United Kingdom	0.23
Sweden	0.27
United States	0.28
Japan	0.35

[World Fire Statistics Centre, Geneva]

Summary: What the United States Can Learn From Denmark

There are three basic lessons Denmark is able to offer the United States: (1) competition is a necessary condition to securing low-cost quality services, (2) private companies facing competitive pressures have a strong incentive to search for cost-effective ways of delivering quality fire protection services, and (3) freedom to expand outside political boundaries significantly enhances the ability of private fire companies to reduce costs and innovate. In large measure, these have been the ingredients of the Falck organization's success which have contributed to its distinction of being the world's largest fire protection company.

VI. Review of Empirical Studies on Private Fire Service

One or several examples of success do not prove that an innovation such as private fire service is generally cost-effective. To answer that question requires turning to empirical studies which examine systematically the performance of private fire services compared to publicly provided fire services. There have been a number of independent, formal analyses of private fire service over the past two decades. This section discusses the most recent detailed study and summarizes the results of the earlier studies.

University City Science Center 1989 Management Study of Scottsdale Fire Department

In July 1989, the City of Scottsdale, Arizona selected the University City Science Center (UCSC), a Herndon, Virginia-based independent management and technical consulting team, to determine if the citizens of Scottsdale were receiving appropriate levels of emergency care and cost-effective services from the private-sector fire and emergency medical providers.

The study, which was conducted by a team of public management, fire, emergency medical, and life-safety specialists, is the most recent and comprehensive examination of private fire service.⁷⁴ The study presents detailed knowledge on the organization and performance of Scottsdale's fire service in addition to a comparative analysis of the Scottsdale Fire Department with nine surrounding public fire departments (in Arizona, Texas, and California) of similar population and area size.

In 1989, the Rural/Metro-Scottsdale Fire Department was composed of 7 fire stations with 18 major pieces of emergency apparatus and was responsible for a land area covering approximately 183 square miles and a population of 131,000. The Department was described as a "combined" department of full-time paid career and part-time paid personnel. In addition to the 86 full-time equivalent fire fighters and fire officers, there were 40 city employees who made up the Fire Support Program and 30 Fire Reserves who are analogous to part-time entry employees.

To determine the level of risk and fire service effectiveness in Scottsdale, UCSC collected three sets of standard safety-related statistics both for Scottsdale and nine surrounding communities. In terms of the first measure, the number of structure fires per 1,000 population among the survey, Scottsdale had the lowest rate at 1.1 fires per 1,000 population (39 percent below the average of the surveyed cities). In terms of dollar loss from fires, at \$13 per capita, Scottsdale was 41 percent below the average. Finally, at 2.3 civilian fire deaths per 100,000 population, Scottsdale was 15 percent below the average for the surveyed cities in terms of the number of deaths from fires.

To determine how cost-effectively Scottsdale's Fire Department services are provided, UCSC analyzed the Department's expenditures and compared them with those of the surrounding public fire departments. For the year 1989-90, the total cost of Scottsdale's fire service was over \$5.1 million. As indicated in Table 9, at \$39.18, or 46 percent below the average, Scottsdale had the lowest per capita costs of fire service among the surveyed cities. Scottsdale's cost per fire fighter was calculated to be \$60,214, which was slightly above \$57,756, the average of the surveyed cities.

In its overall assessment of Rural/Metro's operations UCSC identified a number of unique management practices that set Scottsdale's Fire Department apart from public fire departments and help explain Rural/Metro's ability to provide quality fire and emergency services at low cost. These efficiency-enhancing practices include: (1) the distinctive approach to managing manpower, (2) proactive fire prevention program, and (3) use of innovative fire-fighting equipment.

Given the labor-intensive nature of fire services, Rural/Metro's practice of having part-time fire fighters work alongside career professionals plays an important role in allowing the Fire Department to effectively respond to major emergencies at a relatively low cost. The part-time Fire Support and Reserves, who are fully trained in accordance with National Fire Protection Association Standards, provide an important back-up capacity to the Department. As the UCSC study notes, "By using trained reserves on a part-time basis, Rural/Metro is able to match daily variations in the number of career fire fighters available more closely to staff needs."⁷⁵

Critical to how Rural/Metro secures labor and cost-saving benefits is the multi-task orientation of the Fire Department's workforce where personnel are cross-trained to perform a variety of duties. For example, fire suppression personnel do not only fight fires but are actively involved in the fire prevention program. As a result of the greater awareness to hazards in the community, fire suppression personnel become more effective fire fighters. The added flexibility this practice brings also enhances the Department's ability to respond rapidly to emergencies.

In addition to the Department's cost-effective management of personnel, another reason why the UCSC refers to Scottsdale's Fire Department as "a model prevention and inspections program,"⁷⁶ is the city's and the private fire department's "joint history of pro-active fire prevention efforts."⁷⁷ As an example of the significant emphasis the Department places on fire loss management, the UCSC report points out that in 1985, the city adopted the most comprehensive fire sprinkler ordinance in the United States.

Finally, the UCSC report notes Rural/Metro's history of constantly searching for better procedures and equipment for delivering fire protection services. The company has introduced, for example, "the mini-quick attack pumper, the tandem pumper with a removable self-propelled portable Class A pump, the remote controlled/self-propelled nozzle, the use of 4-inch diameter supply hose. . . ."⁷⁸ In assessing the merits of city ownership of equipment versus Rural/Metro ownership, the study finds that the ability of Rural/Metro to more quickly and inexpensively procure equipment argues in favor of continuing the practice of allowing Rural/Metro to purchase all capital assets other than fire stations.

In recognizing that the effectiveness of an organization depends on its personnel, Rural/Metro has "brought management and administrative responsibility to the lowest possible level in the Department"⁷⁹ and established the following incentive and recognition programs:

- Educational incentive program;
- Merit pay system;
- Conscientious and Responsible Effort (CARE) award;
- Employee Stock Ownership Program;
- Cost-saving suggestion incentive program.

To strengthen Scottsdale's fire and emergency medical operations, particularly in order to meet the expected population increases, the UCSC's report made a number of recommendations with respect

to increasing staff levels, adding (and relocating) fire stations, upgrading emergency medical certification levels, and improving personnel compensation programs. The report concluded that Scottsdale fire and emergency medical services “are performing well and are providing citizens with a good level of care” and went on to note that “the [Scottsdale] Fire Department is one of the best departments that we have had an opportunity to review.”⁸⁰

In March 1990, the International Association of Fire Fighters (IAFF) released a report critical of the Science Center's study. Entitled, *Analysis of Fire Protection and EMS Delivery: Scottsdale, Arizona*,⁸¹ the report claimed that the UCSC study failed to address two points in its terms of reference: (1) recommended performance standards for emergency response time and level of service, and (2) priority ranking of recommendations with the estimated costs. The IAFF report also criticized the Science Center's study for failing to compare all the service delivery options (municipal provision, for example) available to the City of Scottsdale. The IAFF claimed that, contrary to the UCSC study, the present service by Rural/Metro meets neither the Valley (Phoenix, Tempe, and Glendale) standard nor the recommendations of the National Fire Protection Association.

In a June 1990 report⁸² prepared for the City of Scottsdale, the University City Science Center responded to the IAFF criticisms. The Science Center noted that it submitted a list of performance measures including recommended response times to the City on January 4, 1990, and that total costs (not direct costs) for implementing recommendations were contained in Chapter 10 of its 1989 report. The Science Center also provided evidence showing Scottsdale to have more advanced life support units and ambulances than Tempe and Glendale, cities with similar populations.

Finally, the Science Center pointed out that its 1989 report did provide an analysis of a proposal to convert Scottsdale's private fire department to a municipal fire department. The June 1990 UCSC response notes that “Adoption of the Valley operating procedures would lead to a substantial increase in costs without commensurate service improvements.”⁸³

Ahlbrandt 1973 Study of Municipal Fire Service

One of the earliest empirical studies of the provision of fire services by a private company was carried out by economist Roger Ahlbrandt, Jr. His study was originally published in 1973 by the Los Angeles-based Sage Publications⁸⁴ and also in abbreviated form the same year by the economic journal *Public Choice*.⁸⁵

Ahlbrandt compared the costs of Scottsdale, Arizona's (population 66,800, 1970) private fire protection company with the *estimated* costs a public fire protection provider would incur in providing the equivalent service. Using Data from 44 communities for the year 1970, Ahlbrandt calculated that the *estimated* 1970 cost for public fire provision for Scottsdale was \$7.10 per capita or \$475,000 (total cost). The actual cost of Scottsdale's private fire protection in 1970 was \$3.78 per capita or \$252,000 (total cost). Ahlbrandt attributed the difference of \$3.32 per capita, or \$223,000 [total cost] to savings provided by competition.⁸⁶

Ahlbrandt also noted that, in contrast to public fire departments, private fire departments are: (1) less

exposed to political influences, (2) easier to negotiate with, (3) have an incentive to develop detailed cost information that is useful for city managers, and (4) capable of tailoring services (through contractual arrangements) to the needs of a specific community.

Institute for Local Self-Government 1977 Study on Civilians in Public Safety Services

In a September 1977 report, “Civilians in Public Safety Services,” the now-defunct Berkeley, California-based Institute for Local Self Government examined whether in the case of fire services, utilizing low-cost, non-uniformed “civilian” personnel in place of uniformed government employees, in selected tasks, could yield important productivity benefits.⁸⁷

To assess the level of fire protection services offered by nonpublic sector employees, the Institute analyzed the quality and cost of Scottsdale's all-civilian force and compared it with data from three other Arizona cities—Tempe, Glendale, and Mesa—which made use of traditional delivery of fire services. In terms of four out of the five quality of services measures examined, Scottsdale's private fire fighters outperformed the three public fire departments.

In its analysis of cost of fire service, the Institute notes that in “comparing the four cities, the most impressive finding is that the cost of fire service in Scottsdale is about half the cost of services in other cities” and that this “is true for both the total operating budget [\$329,295] and the per capita [\$6.87] fire department expenditures.”⁸⁸ Finally, the Institute found that with twice the land area of the other cities, Scottsdale had the best average response time.

The Institute traced the source of Scottsdale's significant cost savings to the private company's management of its personnel: full-time staff work longer hours and are supplemented by part-time volunteers. As a result, Scottsdale's Fire Department employed about half the number of full-time personnel employed by the three other Arizona cities. The Institute concluded that the high quality and low cost of Scottsdale's total civilian fire service demonstrated the validity of the concept of civilianization: “Whether the particular service is provided by a private contractor, Rural/Metro, or public civilian employees, there is no function that necessitates reliance on sworn personnel.”⁸⁹

Kristensen 1983 Study on Private Danish Fire Services

In a 1983 study published in the journal *Urban Studies*, Ole P. Kristensen, a professor at the Institute of Political Science, University of Aarhus, Denmark, examined whether public officials could take advantage of competitive forces and control cost by removing the provision of governmental service from public institutions and contracting it out to private companies. Kristensen analyzed 241 Danish municipalities which had either private or publicly provided fire service.

The chief finding of Kristensen's analysis was that there was a substantial cost difference in favor of private production of fire service. In terms of per capita costs, private fire services cost only one-third as much as publicly provided fire services. Kristensen identified three reasons why private provision of fire services was more cost efficient than public provision: (1) private Danish fire companies reduce their fire service costs through joint production of a number of different services

such as ambulance and car-towing services, (2) competition from alternative sources of supply, and (3) the separation of government regulation of the service with government service provision.

Kristensen's study of Danish fire protection services is especially important because it offers empirical evidence that the cost savings achieved by private fire fighters in the United States is not unique to the United States, but a direct result of the competitive provision of the service.

Hilke 1986 Study on Fiscal Impact of Volunteer Fire Fighters

In an article published in the *Municipal Finance Journal*, John C. Hilke, a staff economist with the Federal Trade Commission, examined how the availability of volunteer fire fighters affects local government finance.⁹⁰ The study was based on data from 48 cities (29 in upstate New York and 19 in Pennsylvania) with populations between 10,000 and 50,000. Of the 48 cities, 25 used paid fire fighters exclusively, 11 relied entirely on volunteers, and 11 had a mix of paid and volunteer staff.

Hilke's analysis found that “the use of voluntary fire-fighting units reduced local-government expenditures for fire-fighting activities” and that “these savings in the fire-fighting budget are not simply reallocated to other programs, but are reflected in lower spending and lower taxes in these cities.”⁹¹ Thus, according to Hilke, the transfer of government functions, like fire fighting, to voluntary organizations enables taxpayers an opportunity to achieve real budgetary savings.

Summary

Taken together, the five independent studies discussed above examine the cost and performance of private fire protection services over a number of years (1973–1989) and in two different countries. In all five studies, private fire protection services were found to provide similar, if not better-quality service, at a lower cost than publicly provided service. In most instances, the cost differential between privately and publicly provided service was significant.

The factors commonly cited to explain the private sector's comparative cost and performance advantage in providing fire services were a private company's ability to (1) achieve an efficient scale of operation, (2) employ personnel efficiently, and (3) use innovative equipment and procedures. In each case examined, the source of these cost-reducing factors was competition.

VII. Summary and Conclusions

The preceding sections have reviewed an important but little-known innovation in public service delivery: the private-sector fire industry. Fire protection is provided by private firms in half of Denmark, much of Arizona, and a growing number of communities in Tennessee, Georgia, Oregon, and a number of other states.

The evidence summarized in this report makes it clear that private fire firms have figured out how to provide quality fire protection at lower cost than the typical public-sector municipal fire department. Several factors stand out as the principal reasons.

Fire protection is inherently labor-intensive, but at the same time it is characterized by long periods of time during which no calls for service take place. In effect, customers must pay for the *availability* of qualified fire fighters. The key innovations which the private sector has developed to deal with these problems are:

- the use of a mixed force of full-time and reservist fire fighters (so that fewer full-time salaries need to be paid);
- cross-training and multiple-service provision, so that the same emergency-services personnel, equipment, and stations can provide more than one type of service, thereby spreading out the costs among all the offered services; and
- a pro-active fire prevention strategy that is aimed at minimizing fire loss through the use of technology (sprinklers, for example) and information (public education and safety promotion, for example).

This model is developed to the greatest extent in Denmark, where the private fire provider is also the country's principal provider of emergency road service, ambulance service, and other forms of rescue services. But it is also evident in the U.S. firms' typical involvement in emergency medical services (and sometimes other services as well).

Private fire firms are also able to take advantage of economies of scale. This is especially relevant to small communities (under 50,000 population) for whom the high fixed costs of a fire department can be especially burdensome. When a private fire company serves several neighboring communities, and/or provides several different emergency services, no one community bears all of the overhead costs. The firm might be able to share a fire station with its EMS operations, for example, or to serve two communities from an appropriately located station. Costs of corporate management, personnel department, and other headquarters functions are allocated proportionally to the different communities being served. Costly specialized apparatus that is needed only occasionally in any one jurisdiction might be shared among several contracting towns.

Underlying these factors is the essential driving force of competition. The corporate culture of a private provider of municipal services (not merely fire protection) is different from that of a municipal agency. The management of a profit-seeking firm is rewarded based on whether the firm can make a profit providing the service in question. It does this by figuring out the combination of people, equipment, and systems that will get the job done effectively at least cost. The management knows that if it fails to do so, it may lose the business to another firm that has mastered this entrepreneurial function.

By contrast, the managers of a municipal department are typically compensated based on the size of their budget and the number of employees in their department. In most cases, they face no threat of losing their business to any competitor, no matter what the level of performance or efficiency of the department. In effect, they have a monopoly on the function in question. And this results in their incentives as managers being quite different from those of managers in competitive situations. This

is not a function of the character or good intention of the managers in each case; it is simply a matter of dramatically different incentives.

The evidence for the cost-effectiveness of private fire protection is similar to the evidence gathered in numerous studies of other fields of public services: refuse collection, bus service, street maintenance, facility management, etc. In all of those areas, and many others, the past decade has brought about a strong movement toward private contracting, as noted in Section I. For the most part, however, there has been no shift toward private contracting of fire service in cities with well-established municipal fire departments. The fire service is one of the most tradition-minded of all public services. It is also heavily unionized, and fire-fighters' unions have strongly resisted attempts to contract out existing fire department services to private firms.

As noted in Section II, the principal growth in private fire service has been in communities without pre-existing full-time paid municipal fire departments. This appears to be the area of greatest potential for continued growth of the industry. Specific communities which should consider private fire protection include:

- *Rural and semi-rural areas lacking fire protection.* In such cases, subscription fire service generally makes good economic sense.
- *Small towns with volunteer fire departments seeking to upgrade the level of fire service.* In this case, a municipal contract with a private firm can provide for cost-effective improvement.
- *Newly incorporated towns, cities, and fire districts seeking organized fire protection.* In these cases, a private contract can be a more cost-effective alternative than starting their own full-time fire department.
- *Planned communities.* The community association can contract with a private firm for fire protection, as it contracts with other firms for such services as security and landscape maintenance.

During the 1990s, demographers expect the principal growth to occur in America's suburbs. Much of this growth will take the form of rural areas becoming semi-suburban, small towns near major metropolitan areas becoming larger, and new developments and communities becoming organized, whether as community associations, special districts, or incorporated towns or cities. All of these are potential markets for private fire service. And since the regions of the United States with the greatest expected growth are the South and the West—where private fire protection is already best established—the prospects look bright for continued growth of this relatively new industry.

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Where Ahlbrandt's model found that all (estimated coefficients) variables were statistically significant in explaining cost of fire protection, Sack's model with Connecticut data found only three. Of these three—population, number of full-time firefighters, and fire insurance rates—Sacks found fire insurance rates to have the opposite relationship established by Ahlbrandt. Sacks concluded that while Ahlbrandt's conclusion that privately run fire departments are more efficient than those run by local governments "may be correct," the different statistical results found using data from Connecticut communities suggest that Ahlbrandt's "results do not provide solid ground on which to base far-reaching conclusions about the relative efficiency of private firms."

87. The Institute is interesting not only because of its early identification of a problem that is today affecting most local governments, but that it was composed of ex-local government officials dedicated to "research and education to promote and strengthen the institutions and processes of local self government."
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