

percent. The next year, 1985-86, the budget was increased by 1.1 percent. During 1986-87 the budget was increased by five percent and the next year by 4.7 percent. In 1988-89 the budget was not increased and in 1989-90 the budget was increased by 1.6 percent. The average increase in seven years has been 2.9 percent. It is likely that had the city operated the equipment maintenance garage, the budget increases would have been far greater. The contractor's most recent budget (1989-90), is still less than the budget proposed by the department of public works bid proposed in 1983.

The contractor buys parts from the same vendors that supplied the city with parts. However, the contractor has more freedom to negotiate better prices.

Conclusions

Contracting for equipment maintenance services has, in general, exceeded expectations. Some of the factors that indicate the satisfaction with the contractor include:

- Costs to the city's user groups are down;
- The equipment maintenance facility is clean and is well kept. The internal layout of the facility has been changed to make it more efficient;
- The management of equipment maintenance is professional and competent;
- The attitudes of the employees have improved due to better training and the availability of modern tools and diagnostic devices;
- The parts inventory is under control;
- About two-years after initiation of the contract, the contractor's preventive maintenance program began to provide noticeable increases in vehicle reliability;
- Equipment is lasting longer and needs to be replaced less frequently. This is particularly noticed in equipment with harsh duty cycles, like the city's garbage packers;
- Downtime is less than the contractor's target level of four percent;
- Repeat repairs are very low. In a typical recent month they were at 0.6 percent of the total maintenance work flow; and
- The number of complaints by user groups has diminished down to almost none.

Seven years of experience indicate there are two key factors that lead to good performance by the contractor. Other public agencies that are contemplating contracting for any type should endeavor to select a contractor with the following two attributes:

- Select a contractor that is financially sound. The contractor should have the financial capability to allow the on-site manager to gather the resources necessary to complete a job correctly; and
- It is important to select contractor with on-site management that is flexible, cooperative and able to work with city and its many departments. Because of the importance of the on-site manager, the public agency should reserve the right to interview the manager and see the company's policy on the authority granted to the on-site manager.

SERVICES OFFERED BY MAINTENANCE CONTRACTORS

Noble Beardsley, *Managed Logistics Systems*

Managed Logistics Systems (MLS) started providing contract fleet management and maintenance services to municipalities in 1978. The City of Gainesville, Florida, was its first contract. Since 1978, MLS contracts have grown to 23 in number across the country. The company currently has contracts with counties, cities, the federal government, public utilities, and one private firm.

A maintenance service contractor can offer a variety of services including all normal maintenance shop activities. The most important service a maintenance contractor provides, however, is "managed maintenance." Minimizing the resources consumed by maintenance is the key to efficient maintenance. Resource controls include monitoring purchase of parts, tires, and fluids, monitoring maintenance technicians' time, and creating an efficient layout and utilization of shop space. Managed maintenance controls the allocation and use of all maintenance resources.

One of the primary difference between an in-house maintenance organization and a maintenance contractor is the difference in missions that the two groups carry out. The main mission of an agency that operates equipment is to conduct the work accomplished by the equipment--equipment maintenance is secondary. For example, a state highway agency's mission is to maintain, construct, and operate roads and not to maintain the equipment used to perform that mission. Therefore, equipment maintenance tends to be a secondary responsibility. For the maintenance contractor, however, equipment maintenance is the primary mission and the primary point of management focus.

Because the contractor's focus is equipment maintenance, incentives, training, management systems, and support systems, all aim to promote and enhance the

efficiency of the maintenance function. In addition, because the maintenance contractor focuses only on equipment maintenance, maintenance employees that excel in their work may be promoted within the maintenance field and into the contractor's management ranks. Maintenance employees within an agency tend to be denied this career path and remain in maintenance. Because the main mission of the agency is not maintenance, promotion through the ranks of the agency is likely to require a broadening of the employees background.

Approaches to Organizing Contractor Management

There are several approaches a contractor may take in managing maintenance for an organization. These range from providing complete maintenance services to providing only a maintenance manager. The complete maintenance services would involve providing employees, maintenance materials, and management; similar to MLSs agreement with the City of Des Moines. Providing only management would involve the contractor's employee managing the agencies staff, equipment, and facilities.

Contracting for a manager only has the added advantage of diminishing resistance by employees and their union. The employees or their union may resist the change in employer when contracting for complete maintenance management services. By contracting for maintenance management services only, however, the agency can still receive the benefits of the contractor's management procedures such as computerized management systems and shop operating procedures.

Summary of Advantages

There are several advantages to using contractors, including the following points.

- The contractor's primary mission is to manage maintenance resources in the most efficient manner possible. Public agencies that use equipment generally do so to achieve other objectives (i.e., maintain streets roads, maintain drainage, construct facilities). The public agency is likely to concentrate more control in other areas related to their primary mission. As a result, public management of equipment maintenance is likely to be more re-active while maintenance contractors are likely to be pro-active.
- The contractor has more flexibility in hiring, promoting, and employee reward practices than most public agencies. Therefore, the contractor has greater flexibility to hire and retain the best employees.
- Because the contractor can specialize in equipment maintenance, the contractor has more opportunity to develop specialized knowledge of the equipment industry and equipment technology. Specialization is likely to provide better and more up-to-date services.
- The contractor can develop specialized skills and knowledge in maintenance management because the contractor can spread the cost of the specialized talent across several clients. Where any single organization, may not have the necessary flow of work to warrant the same degree of specialization.