

Executive Summary

The current arrangement that the City has for its public works services — particularly its road-related public works services — was appropriate to a newly-incorporated city but is proving to be one of diminishing value to Shoreline in the long run.

The current department features sizeable contracts with King County (totaling about \$900,000 per year) for almost all of the services the City receives for road-related public works services. The advantage of this arrangement is that the City gains: 1) ease of contracting — one provider, 2) the depth of the County's extensive public works staffing and inventory of equipment, 3) the experience the County has with Shoreline's infrastructure, and 4) some economies of scale.

The disadvantages outweigh the advantages, however. For its \$900,000 per year the City is receiving an extremely low level of service. The kinds of tasks that are being performed are essentially just holding the infrastructure together but not making headway. In fact, some routine maintenance services that should be performed in order to preserve the life of the infrastructure are not being conducted. Accordingly, the City of Shoreline could not be said to be even trading water with regard to its road maintenance, but gradually falling under the water line. Rather than the City's contract with the County being one that ensures the systems are maintained to some defined Shoreline level of service, the City has been receiving road-related maintenance services that are based only upon the County's general work plan. A customized Shoreline work plan does not exist. Plus, to date the City has not even received the County's general level of service but instead something less than that.

Without question the County has the capacity to provide the service Shoreline prefers, but the City would pay a significant amount for it. Looking to the City's last three years of experience with the County, Shoreline has been:

- Receiving an effort level equivalent to about 7 FTEs per year (\$272,279);
- Paying overhead charges to the County totaling about 56.5 percent of the total cost of service (\$315,501); and
- Paying vehicle and equipment rental charges that are significantly higher than what the City would incur were it to develop its own inventory of vehicles and equipment (\$156,866 per year).

While overhead charges in and of themselves are not surprising — the City of Shoreline has its own internal overhead costs, as do all entities — the percentage charged and the

total amount paid to the County is extremely high. The City could develop alternate means for providing the same services at total costs equal to or less than what the City has been paying since incorporation.

It is in the best interest of the City of Shoreline to begin developing an alternate service delivery system for several key reasons.

- The actual level of service being provided to Shoreline today means that the infrastructure is at risk.
- The County's overhead rates make increased services with the County cost prohibitive.
- The City needs to develop greater in-house capacities so that the City of Shoreline can be responsive to the citizens, and so the City gains increase flexibility of service provision and direct accountability to City administration.
- The City will be in a better position to establish its own level of service and have it performed to its satisfaction if it has greater direct oversight over the work.

The City can provide road-related public works services at the same or less cost than the County on a budget line-item by line-item basis for staffing, materials, equipment rental, vendor contracts, and internal overhead.

However, the level of service has been so low that the City cannot assemble an appropriately-staffed department for less in real dollars. What it can do, however, is develop a department that makes strategic use of direct staffing and contracts with private vendors to provide greatly enhanced service for a modest amount above current expenditures. Doing so will enable the City to satisfy the four objectives that drove this study: 1) increased flexibility of deployment, 2) greater direct accountability, 3) enhanced quality, and 4) most judicious use of funds.

The implementation plan recommended is provided on pages 75 through 91 of the main text. It provides for a three-year phase-in of public works services whereby services incrementally are shifted from King County to a nearly equal distribution of direct City services and private vendor contract. The criteria used for the implementation plan included having those services that are equipment-intensive, rare, or highly specialized to be performed by private vendors; while more routine services that require less unique equipment or specialization would be provided by a core City staff who could perform both road-related and surface water management services.

It appears that the status quo arrangement is not in the best interest of the City of Shoreline. The City can make better applications of its dollars to achieve the service the citizens expected with incorporation and as documented by the pre-incorporation Citizen Transition Plan prepared by the Public Works Subcommittee. Within three years the City can develop in-house capacities that can provide the kind of infrastructure-preserving services the City needs, all under the direct guidance of the City itself.

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Key Assumptions

There are essentially two key assumptions that have driven the approach taken during the development of this study.

The first is that the alternative service delivery options considered in the study should be based, as much as possible, on the current levels of service Shoreline receives today. For the most part, evaluations as to whether the current level is the *best* level for Shoreline are policy discussions that can be held at a subsequent time based upon additional data.

Second, the analysis is not driven simply to assess which are the most economical alternatives. The evaluations consider staff or vendor control, flexibility of service, and quality to be equally important to cost.

Organization of Report

This report is organized into four sections:

- Section I provides background and contextual information about Shoreline's current public works department and contractual relations. It also identifies preferences about how the department should be shaped in the future and areas of concern about the transition.
- Section II provides a detailed review of data supplied to the City by King County in relation to the contracts the City has for road, traffic, and surface water management services. Section II also provides an assessment of the priority of response needed for the multiple tasks undertaken within the City's contracts with King County in order to judge the degree of risk associated with assuming greater direct responsibility for certain public works services.
- Given the intensely data-oriented nature of Section II, Section III provides a narrative summary of Section III and discusses those functions that are being performed and those that are not.
- Section IV provides an implementation plan that is consistent with the desires identified at the end of Section I and correlates to the data in Section II. It also provides financial analyses and comparisons.

Section I: Current Circumstances

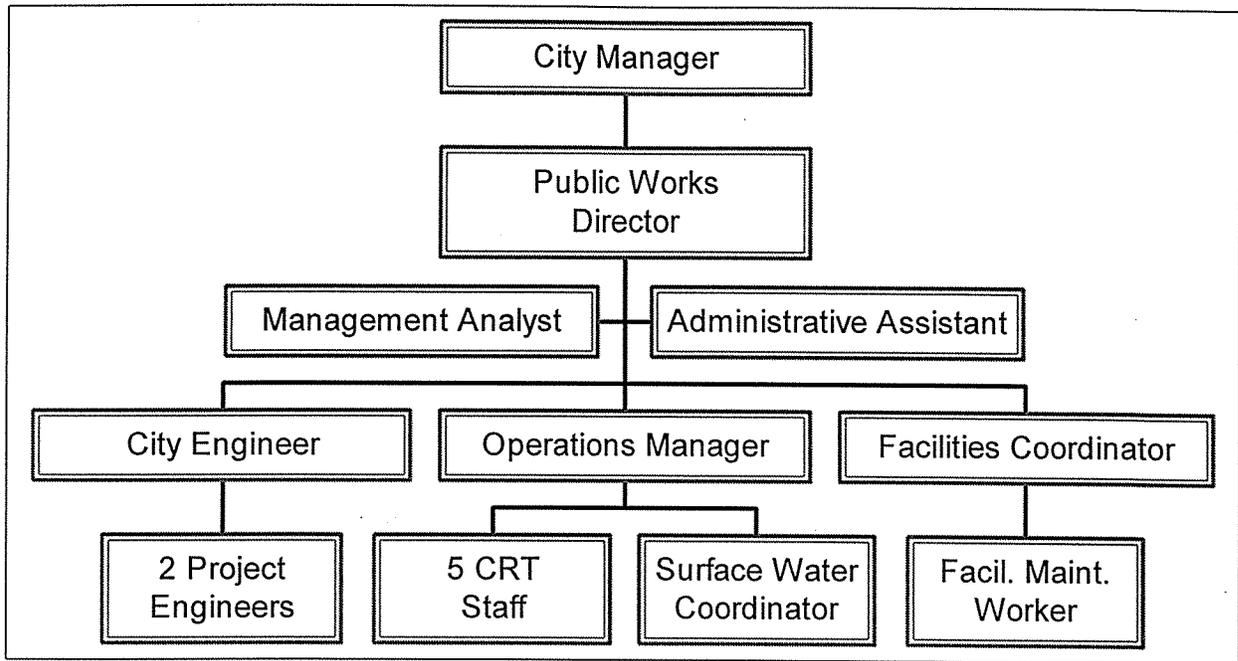
The following pages provide an overview of the City of Shoreline's current public works operation, a review of the City's current contracts with King County, a recapitulation of the information pertaining to public works that was drafted by the post-incorporation transition team, and an identification of issues and concerns that may cause the City to evaluate changes in the way its public works services are being delivered.

Current City of Shoreline Public Works Department

Shoreline's current Public Works Department is scaled appropriately given the City's youth and range of directly-provided services.

At present, the Shoreline Public Works Department provides a limited extent of directly-provided services and a wider range of services that are provided to the City through contractual relationships. This kind of arrangement is not uncommon for a newly incorporated city because the obligations to provide public works services transfer to the new city almost immediately upon incorporation, but the obstacles of creating a public works department — through whatever means — are far more complicated than can be accomplished in the few months given a new city to "put its house in order." Accordingly, Shoreline has followed a traditional path whereby it has taken incremental steps to provide more and more public works services through the City's own staff and resources while simultaneously ensuring that the City's essential public works requirements are attended to through agencies that already are established and able to provide service immediately. A natural part of this incremental buildup of City-provided services, though, is to reflect upon ways of striking the right balance and achieving the right mix of City-provided and vendor-provided services. Now, with three years of experience under its belt, Shoreline is precisely at that point.

Currently, the department is organized into two primary divisions — Engineering and Operations — under the supervision of the Director, as the chart below illustrates. The City also has a facilities maintenance division.



DIVISIONS AND RESPONSIBILITIES

Director's Office

The Director's Office is composed of 3 FTEs and attends to coordination of all of the department's activities with the directives from the City Manager and the City Council; budgeting and accounting responsibilities for the department; capital facilities planning; and coordination with other departments for certain permit issuance, plan review, and other responsibilities. The Director reports to the City Manager and receives support from within his own office from a management analyst and an administrative assistant.

Engineering

The burgeoning Engineering division is lead by the City Engineer and is supported by two Project Engineers. An additional Project Engineer will be hired in 1999.

Responsibilities of the division include supporting the development of the City's capital investment plan, engineering planning and design for certain projects, supervision of contracted engineering services for the design of more complicated projects, some field inspection, and coordination with other City divisions for development plan review and certain permit issuance.

Operations

The Operations Division encompasses the largest number of staff in the department and has a broad scope of responsibilities, which include the Customer Response Team (CRT) and Surface Water Management services.

CUSTOMER RESPONSE TEAM (CRT)

The CRT is perhaps the most “hands on” aspect of the Shoreline Public Works Department. It is a division of 5 FTEs supervised by the Public Works Operations Manager. This division receives many of the telephoned and walk-in “fix it” requests to the City. It then attends to these requests in the most appropriate manner. In some cases, the most appropriate means of fulfilling a citizen’s request is for City staff to refer it to another City department or to a contracted services provider such as the County. CRT staff then follow up to ensure that the item that was referred actually was handled appropriately.

However, the distinctive aspect of CRT is that it attends to the solution of many requests itself. Its general rule of thumb is that if the request can be handled within the limits of “one person/one truck/one hour,” then CRT staff attends to the request. Examples of services provided by the CRT include minor surface water management/flooding issues, limited vegetation control within the public right-of-way, cold-mix patching, some sign repair, some hazardous material removal, and other such services.

SURFACE WATER MANAGEMENT

The City’s surface water management section is evolving, and at this time attends primarily to inspection services. The section has 1 FTE at present. In the near term, it will be developing an action and implementation plan and evaluating the best mix of services between contracted and directly-provided services.

Facilities

The City has 2 FTEs who attends to facilities maintenance for all City office and support space.

CURRENT INVENTORY OF CITY VEHICLES AND EQUIPMENT

The department's inventory of vehicles, equipment, and facilities is in keeping with the limited size of its personnel count. The City maintains a fleet of five utility-oriented vehicles and one passenger sedan. These vehicles are stored on the City Hall campus parking lot, used primarily by the CRT staff but also by other public works personnel, and are maintained by private automobile service companies in Shoreline on regular and as-needed bases.

| | |
|---------------------------------|-----------|
| 2 Ford 1/2-ton pickups | Leased |
| 1 Chevrolet 3/4-ton utility van | Purchased |
| 1 4-by-4 sport utility vehicle | Purchased |
| 1 Chevrolet 1-1/2-ton flat bed | Purchased |
| 1 Ford sedan | Purchased |

The City possesses no pieces of major equipment such as backhoes, asphalt spreaders, lane striping machines, or others.

PUBLIC WORKS FACILITIES

In terms of facilities, the Department occupies three suites of offices in the City Hall Annex totaling 3,763 square feet. Additionally, the City has a public works garage at the City Hall Annex that is 1,184 square feet for minor equipment storage and work space. As mentioned, what rolling stock the City does own is kept in the parking lot of the City Hall. The City also owns a site at Hamlin Park that could be developed in the future for public works operations needs.

A one-page summary showing the Department's current inventory of personnel, equipment, and facilities can be found later in this report on page 81.

Inventory of Public Works Infrastructure

According to information supplied to the City by King County, the City possesses the following inventory of infrastructure. The best way to use the itemization with regard to this study would be to compare the actual accomplishments detailed in Section II below (pages 29 through 66) to the quantity of certain infrastructure listed below. Doing so will give a preliminary indication of the level of service the City realizes now. In the future, based upon policy direction and available budget, the City may want to explore different levels of service.

Table 1: Infrastructure Inventory
Data Supplied by King County via Shoreline

| | |
|-----------------------------------|-----------|
| Interstate streets | 4 miles |
| State route streets | 5 miles |
| Collector streets | 16 miles |
| Minor streets | 14 miles |
| Principal streets | 6 miles |
| Residential streets | 151 miles |
| Bridges | 3 |
| Gravel shoulders | 134 miles |
| Traffic signals | 31 |
| Flashing signals | 16 |
| Signal Loops | 520 |
| Traffic signs | 4,822 |
| Catch basins | 6,000 |
| Headers/trash racks | 2,348 |
| Open ditches | 35 miles |
| Closed ditches | 97 miles |
| Paved ditch and gutter | 5 miles |
| Detention facilities: Residential | 51 |
| Detention facilities: Commercial | 180 |
| Detention facilities: Regional | 23 |
| Street trees | 1,208 |
| Guardrails | 1 mile |

Contractual Relations

Aside from the services identified in the subsection above (pages 12-13), all other public works services in the City are provided by vendors through contractual relationships. Far and away the largest of these relationships is the one the City has with King County for road maintenance, traffic control services, and utility billing.

KING COUNTY

For its public works services, the City has two major contracts with King County for the provision of transportation services, utility billing, and a degree of surface water management service via the transportation contract. The two King County contracts are what we will refer to in this study as the “Transportation” contract and the “Surface Water Management” contract.

Because of the financial commitment the City has in these relationships, it is important for readers to gain a general sense of how the contracts are structured.

Two Divisions in Transportation Contract

What we call the Transportation Contract is separated into two divisions. One of the divisions is “Roads,” and the other is “Traffic.”

The **Roads** division is responsible for those tasks and duties that relate to the maintenance of roadway surfaces (asphalt, concrete, gravel, etc.), right-of-way shoulders, some storm drainage services, some vegetation maintenance within the rights-of-way, street sweeping, and snow and ice control. With the exception of street sweeping and snow and ice control, the Roads division can be thought of as attending to all services “from the lane stripes down.”

The **Traffic** division, then, can be thought of as maintaining those items “from the lane stripes up.” The responsibilities in the Traffic division include signal maintenance, sign maintenance, lane striping, and installation or adjustments to crosswalks or other pavement markings. The Traffic division also performs signal timing analyses and other engineering-related tasks that enhance the performance of traffic flow.

Primarily Utility Billing in Surface Water Management Contract

The second public works contract the City has with the County is for a discrete surface water management service — utility billing. Almost from the time of incorporation onward, the City has chosen to not have King County perform many surface water management services because of the financial disadvantage to the City of doing so. However, the City always has contracted with King County to collect surface water management fees for the City through the County Assessor’s property tax statements. The amount then is remitted to the City. For this service the County charged a one-time set-up fee and then charges less than two dollars per account per year for the utility billing and remitting services.

Aside from utility billing — and aside from surface water management services that are performed by the Roads division — no other surface water management services are performed in the City by the County. The City directs its own surface water management services (see “Surface Water Management” below).

Extensive List of Detailed Task Codes

Common to both components of the Transportation contract — the Roads and Traffic divisions — are an amazingly thorough listing of all tasks that can be or are performed by the two divisions.

Essentially, not only each and every job but each and every *function* has a task code assigned to it. Therefore, some undertakings that one may consider to be one “job” may in the regular reports produced by the County actually entail multiple tasks, each one listed separately with corresponding cost break-downs and units of accomplishment. Further, the task codes are so extensively detailed that there are multiple task codes for functions one may think to be the same work. For example, the County’s procedures list four different task codes for eliminating debris from road surfaces.¹

The advantage of this system of task-coding is that the County can document in fine detail each and every function that has been performed under its contracts with the City at any given point in time, and the City can measure total costs and accomplishments.

The disadvantage, however, is that the task-coding is so detailed as to skirt counter-productivity. Asking basic management- or policy-oriented questions such as “How much does the City spend on sign maintenance?” can result in voluminous detailed reports that can make more complicated what is essentially a simple question. In this way, the extensive task accounting system can result in eroded communication and heightened frustration rather than serve as a useful management tool.

Standardization and Contract Adjustment

King County contracts with numerous cities for many urban services. To overcome the possible scenario that some cities could feel that the County is “giving a better deal” to one city than another, the County has standardized its urban services contracts, including its Transportation and Surface Water Management contracts. The basic contracts is “boilerplate,” while the attachments or addenda specify any customization an individual city may desire, such as the level of service of a particular task or the inclusion of what the County calls “discretionary services.” Discretionary services for Shoreline include inspection of utility construction work, map updating, updating the road inventory, updating the County’s existing Pavement Management System as it relates to Shoreline, bridge inspection, or special engineering, among others.

Two elements of the basic contracts that are germane to this study concern adjustments to the work plans (see “Non-customized Work Plans” below).

One element (contract section 7.3) states that the City can make small adjustments to the work performed under the contract at any time *provided* that the adjustment in a given year is less than 10 percent of the total

¹ Task codes 220, 224, 263, and 271.

dollar value of the contract for the year. At least 60 days notice must be given by the City.

Another element (contract section 7.2) states that if the City wants to make a “substantial change” to the contract — an adjustment that totals more than 10 percent of the contract’s dollar value — then the City must notify the County by April 1 of the year preceding when the adjustment will take place. A substantial change planned for January 1, 2000, for example, would have to be formally made known to the County by April 1, 1999.

An adjustment or substantial change could be either an addition or a subtraction of services provided by the County.

Non-customized Work Plans

Though we stated immediately above that the attachments or addenda to the County’s basic contracts allow a certain degree of customization, the annual work plan for what generally is to be accomplished under the contract is not customized.

Each year, Shoreline (and each city that contracts with the County) receives the annual work plan for tasks foreseen to be accomplished in the coming year under the Roads and Traffic divisions. These work plan items are distinct from any “discretionary services” the City has opted for (see discussion immediately above).

However, these work plans are not and never have been tailored for Shoreline — nor for any city that contracts with the County. They are generated based upon established, targeted levels of service County-wide. For examples, the County has determined average experiences or targets for the number of potholes repaired per mile per year or the number of catch basins vactored. Shoreline’s work plan, then, is that proportion of the County’s total target as a ratio to the number of road miles or catch basins that are in Shoreline.

This is a logical approach for a jurisdiction to take that has responsibility for about 2,000 square miles, as does King County. It does not, however, factor in special considerations of Shoreline, its own unique infrastructure, local directives, or customized planning.

Accordingly, when Shoreline renews its Transportation contracts each year it is, in a sense, agreeing to accept Shoreline’s proportionate share of the County-wide average levels of service and accomplishment. It is not, however, contracting to receive levels of service or accomplishment that are directly correlated to Shoreline’s unique circumstances. To meet special needs, the City often is required to adjust its contract.

Budget-to-Actual Expenses

King County supplies its work plan and projected costs to Shoreline in advance of the City's budget process so that expected Transportation costs can be factored in. In 1998, the projected costs for Roads and Traffic services totaled \$1,083,613.

Since incorporation, Shoreline's actual expenditures for Transportation services have been less than the budget allotted for the contracted services. While this has had some financial benefits to the City in terms of cash flow, total expenditures, and carry-forward amounts, it is not necessarily the best outcome in terms of the City's ultimate obligation to maintain and preserve the infrastructure it has.

In total, the budget-to-actual expenses for these contracts from January 1, 1996 to September 30, 1998 are as follows.

Table 2: Shoreline Contracts with King County: Budget to Actual

| | 1996 | | 1997 | | YTD 1998 | |
|--------------------|-------------|-----------|-------------|-----------|-------------|-----------|
| | Budget | Actual | Budget | Actual | Budget | Actual |
| Roads ² | \$917,756 | \$631,634 | \$1,000,922 | \$525,965 | \$831,962 | \$600,621 |
| Traffic | \$329,439 | \$240,046 | | \$232,676 | \$251,651 | \$192,900 |
| TOTAL | \$1,247,195 | \$871,680 | | \$758,641 | \$1,083,613 | \$793,521 |

The data above should not be viewed as a demonstration that the City's actual Transportation maintenance needs were less than expected. Instead, it should be viewed in light of the structure of the City's contract.

As stated above, the City's contract provides for the County to offer Shoreline its proportionate share of the County's average or targeted level of service. What is being accomplished, therefore — whether because of County staffing pressures or other workload factors — is a level of service less than the County's own targets. Further, as is detailed in Section III (see page 69), what actually is being accomplished are the more rudimentary services, while a number of services that can lead to prolonged life of the City's infrastructure and reduced liability are not being attend to as diligently as may be necessary.

² Within this line item are certain surface water management-related tasks that are performed by the Roads division. This is important to note for subsequent comparisons later in this study.

Charges Within Contracts

The City's contract and the bills that arise from it account for costs in the following areas.

LABOR

A separate line item is maintained for all labor performed under the contract. What is considered "labor" includes hours of work performed for Shoreline by County salaried staff, hours of work performed for Shoreline by temporary or seasonal workers, and all hours of overtime labor. *It does not* include the personnel benefits associated with any of these categories (for these, see "County Overhead" below).

MATERIALS AND RELATED EXPENSES

The County provides accounting for all expenses it incurs for materials needed to perform tasks under the contracts. For examples, asphalt, replacement street signs, gravel, and all other physical materials are within this line item.

VENDOR SERVICES

Some of the work the County performs under its contracts is sub-contracted or supported by private vendors. For example, the County sometimes uses a private vendor for lane striping. Such services are accounted for under "Vendor Services."

EQUIPMENT RENTAL

This category accounts for all costs the County passes along to the City for the use of its vehicles and equipment. Whenever a pick-up truck, a road grader, a vibratory roller, a vactor, or any vehicle or piece of equipment is used by County staff in connection with Shoreline's contract, the City is billed fixed amounts (usually an hourly rate) to fund the maintenance, repair, wear-and-tear, insurance, and replacement of that vehicle or piece of equipment. This is consistent with what most cities do when they have their own fleet, though in those cases it is an internal budgeting or interfund item.

COUNTY OVERHEAD

A significant line item in the City's contract with the County is overhead. In some cases the County's overhead is shown as more than one line item on its bills — such as "Overhead" and "Burden 3" — but they can be combined to total the full amount Shoreline pays King County for

overhead charges that relate to the support of direct services. The overhead charges are applied only to labor costs, and not to other line items such as materials, vendors, or equipment rental.

Included within the County's overhead charges are:

- Personnel benefits for both direct County employees and part-time/seasonal laborers
- Paid time off (vacation, sick leave, holidays, etc.)
- Administrative Costs
 1. Management
 2. Budget development and monitoring
 3. Auditing Costs
 4. Policy development
 5. Finance
 6. Payroll Processing Costs
 7. Insurance
 8. Legal support
 9. Purchasing
 10. Communications
 11. Information services
 12. Office space and equipment

These overhead costs vary somewhat between the Roads, Traffic and Surface Water Management contracts, but on average have been as follows:

| | Roads/ SWM Average | Traffic Average |
|------------------------------|-----------------------|--------------------|
| Benefits for Full Time Staff | 32.5% | 32.5% |
| Funding for Time Off | 16.5% | 16.5% |
| Benefits for Extra Help | 8% | 8% |
| Benefits for Overtime | 16.5% | 16.5% |
| Administrative Overhead | 65% | 60% |

These costs often amount to the greatest expenses for a task within a contract, usually amounting to more than the cost of direct labor and occasionally exceeding 50 percent of the total cost of the task.

All jurisdictions have overhead costs. The fact that the County assesses them is neither surprising nor incorrect. The total amount, though, is an issue for Shoreline. Because the County is a large organization, its overhead also is large, and under its contracts Shoreline is obligated to pay its share. This is in addition to whatever *internal* overhead the City of

Shoreline has itself in order to monitor its contracts with the County and in addition to the amount the community pays through its general county property tax levy to support County government.

OTHER CONTRACTS

Apart from the major contracts Shoreline has with King County for most public works services, the City also has entered into a limited number of other contracts with private and non-profit vendors for some services that formerly were part of the contracts with the County. These include:

- An agreement with the North Rehabilitation Facility for some vegetation maintenance in medians and along rights-of-way.
- A contract with a private vendor to perform public drainage facility maintenance

Surface Water Management Program

Shoreline already has begun a program of establishing its own surface water management operation, and it is for that reason that the amount the City pays the County for surface water management services is quite low. As noted earlier, about the only surface water management service Shoreline has a contract for with King County is utility billing, plus some surface water management services are performed by the Roads division.

The City's program of transitioning into surface water management services includes primarily inspection services at this time, though planning and management organization issues also are beginning to be addressed. Also as noted above, the City has entered into contracts with private vendors for maintenance services to select public detention facilities.

Pre-incorporation Actions: Citizen Transition Plans

During the period between the Shoreline community's vote to incorporate as a new city and the time the City was incorporated as a legal entity with duly elected officials, there were a series of transition team subcommittees that researched various aspects of new city government. One such committee was the Public Works Subcommittee. The subcommittee was chaired by Bill Monroe and co-chaired by former City Councilor Larry Bingham.

The Public Works Subcommittee explored seven functional areas: roads, water utilities, electrical utility service, solid waste, surface water management, wastewater, and facilities management.

Four of these functional areas go beyond the scope of this study. Those are water utilities, electrical utility service, solid waste, and wastewater services.

Of the services that are most closely connected with this study — roads, surface water management, and facilities — the subcommittee recommended the following.

ROADS

The subcommittee thought it best that the City contract with King County for road services “until a smooth transition can be implemented.”

SURFACE WATER MANAGEMENT

The subcommittee had three recommendations with regard to surface water management:

1. That the City contract with King County for one year, provided that the City “opt out as soon as a smooth transition can be made.”
2. That the City assume the responsibility directly for contracting for all future surface water management capital investment projects “except for the currently [County] fully funded” projects.
3. That the County’s surface water management rate structure be maintained for two years in the City.

FACILITIES

The subcommittee recommended that a Facilities Manager be hired “as soon as the City of Shoreline is incorporated”

What can be observed is that the City already has accomplished several of the subcommittee’s recommendations to date. As noted above, the City is developing and implementing its own surface water management program with its own staff, and the City has a two-person facilities maintenance staff.

One item that still remains to be addressed, though, is the implementation of a City of Shoreline roads division, since now virtually all road services still are provided by the County. Later in this study, an implementation plan is supplied that would enable the City to transition into alternate service delivery means as the subcommittee anticipated.

Desired Outcome — Preferred Future

Stemming from the background information reviewed above and looking to the future of a Shoreline public works department, there are certain features that serve as the framework for the implementation plan discussed in Section IV.

- A goal should be to create a contemporary department that meets or exceeds community expectations; a department that has “the look and feel” of one that has a huge staff but in reality does not.
- An objective should be to have a department that makes strategic use of vendor services so that the City’s capital obligations for specialized vehicles and equipment is minimized.
- An objective should be to make the wisest application of expenditures.
- An objective should be a department that is able to provide enhanced service through increased flexibility, control, and quality.
- An objective should be to establish a customized work plan and prioritization of capital investments.
- An objective should be to continually evaluate services and costs and make future, on-going adjustments as deemed best.
- The City should not seek to assume the provision of utilities or surface water management billing in the foreseeable future.

Known Items of Concern

When this analysis was initiated, several issues were voiced as areas of concern as they related to the City’s thinking about providing more public works services directly or through alternate providers. Below we identify the areas of concern and provide an initial summary response to the ways these concerns could be addressed through the implementation plan that is provided in Section IV.

EMERGENCY RESPONSE AND INCREASED RISK

Were Shoreline to begin assuming greater responsibility for public works functions now provided through contract, the City would increase its liability exposure. Potentially, there would be fewer intermediaries between the City and tasks that needed an immediate or emergency response.

The analysis provided in Section II provides a classification of each task currently performed through the County contracts in terms of their level of priority: 1) periodic tasks, 2) day-to-day tasks, and 3) immediate/emergency tasks (see pages 32 through 36, 49 through 52 and 62). What that exercise shows is that the kinds of activities where the City could experience some increased exposure are essentially in the areas of flooding- or drainage-related events, snow and ice control, and sign and signal failures.

Flooding- and Drainage-related Events

In the City's brief history Shoreline already has experienced serious events related to storm water management through the collapse of the intersection at 175th and 6th N.W. in 1997. Also, the City has experienced some slide and washout events due to extreme storm water conditions.

No city can ever be fully prepared for every such emergency, though Shoreline would want to ensure that it had the means to respond immediately and effectively to a certain degree even if it needed to simultaneously call in additional resources. Were Shoreline to have a well-experienced roads/surface water management crew (an "operations crew") and basic equipment, the City could provide an adequate emergency response to smaller flooding and washout events. Rather than purchase front loaders or backhoes, the City may want to explore a variation of a "mutual aide" agreement with area utility providers, and it should seek to maintain a relationship with King County or perhaps with the City of Seattle for assistance during major flooding or washout events.

Snow and Ice Control

While it is true that King County has an extensive fleet of dump trucks, sanding boxes, and snow blades (and the staff to operate them) during snow storms, it is also true that when Shoreline needs them the whole region usually needs them. Further, our understanding is that such equipment is dispatched to Shoreline from Renton — a significant distance when snowy roads clog the area's major routes.

Again, were the City to have even one properly-sized operations crew and its own small fleet of dump trucks, sanding boxes, and snow blades, the City could provide snow and ice control directly — which would be dispatched from within Shoreline itself rather than a remote location. In terms of fleet expense, the same dump trucks used for roadway patching, surface water management services, and responding to flooding events would be the ones the City would use for snow and ice control.

The City also could make use of its smaller trucks for limited snow and ice control services with the addition of smaller sanding boxes and blades to them.

Sign and Signal Failures

Controlled intersections are vulnerable to many kinds of mishaps, such as signals failing completely or signs being knocked over or vandalized.

While certain sign-related occurrences may require an immediate response, generally it is not a high-tech response. The City's CRT already has experience with meeting emergency sign needs. Were the City to maintain an inventory of the most commonly-used signs and installation equipment, virtually any City crew member could meet an emergency need.

Signals have a great deal more specialization, though. It is for this reason that we are not recommending a change in signal maintenance later in this report until the City is able to replace old signal controllers with standardized new ones and then, perhaps, develop an in-house capacity to maintain them. Alternately, the City could have discussions with neighboring jurisdictions to see if there is an interest in a shared signal maintenance operation.

CAPITAL-INTENSIVE SERVICES

Another concern raised is that most public works services are capital intensive, often requiring expensive, specialized equipment that it may be best not to purchase.

The implementation plan considers this. The kinds of services proposed to be provided by the City directly are those that require the more common pieces of rolling stock and equipment: trucks, vibratory rollers, multi-tasking equipment (with the exception on snow and ice equipment).

Those services that do require more specialized equipment that is used only infrequently are the ones we propose to be provided by vendors (see "Other Providers, page 86). However, the City likely would continually evaluate whether it should begin acquiring some of these pieces of specialized equipment as it weighs the advantages of doing so in relation to enhanced levels of service.

For example, a vactor is an expensive piece of equipment — about \$250,000 to purchase new — and in relation to other vehicles is among the more expensive to operate. Shoreline can have its catch basins vactored to the current level of service through contractual relationships for less money than Shoreline itself could were Shoreline to buy a vactor. But if in the future the City desired to increase service to a more urban standard (the City's average annual accomplishment has been about 900 catch basins

per year out of an inventory of 6,000), then it may prove more cost effective for the City to buy the equipment and provide the service itself. These are the kinds of on-going evaluations the City would need to bear in mind.

LEVELS OF ACCOMPLISHMENT

Questions were raised initially as to the level of accomplishment Shoreline actually has been receiving and whether that level had the City treading water, making progress, or sinking. The data reveals that under any definition or interpretation, the City of Shoreline is definitely losing ground on its transportation infrastructure and must act to correct this situation in the most intelligent way or risk much more significant infrastructure replacement costs in the future than it necessarily needs to.

Based upon the data reviewed in Section II, it would appear that the level of accomplishment the City has been receiving over the last three years is essentially only enough to keep the infrastructure glued together, but not those kinds of accomplishments that ultimately result in preserving or enhancing the life of the infrastructure.

Accordingly, there are some financial implications. Shoreline could create in-house capacities for some services and establish contracts for others so that the total dollar amount would be the same or less than what the City is paying King County (see page 91). But still there would be services that would not be accomplished that relate to infrastructure preservation or enhancement. The data shows that Shoreline could get the same level of accomplishment for fewer dollars. But the issue, though, is that it should not want that; it should want enhanced service.

Shoreline could get all the services it needs — including infrastructure preservation services — from King County. But to do that Shoreline would need to add to its contract and pay even more in overhead than it does now. In the end, Shoreline may end up paying somewhat more in public works services in the future than it does today were it to develop greater in-house capacities, but more of those dollars will be going to accomplishment and more accomplishments will be achieved.

ACTUAL CONDITIONS AND NEEDS

Just as there has not been a customized work plan prepared for Shoreline (see page 18 above), neither has there been completed a conditions assessment of City infrastructure. To date, the City has undertaken capital investment projects that correspond to what the County had planned for the Shoreline area prior to incorporation.

A conditions assessment and/or development of a maintenance management system should be conducted soon by the City that would keep one eye to capital investment projects and the other to routine maintenance tasks. By doing so, the City would end up with both a capital investment list and a customized work plan.

Section II: Analysis of Public Works Contracts with County

Given the overview information provided in the previous Section that discussed the history, organization, and issues in the Public Works Department, this Section will provide details about the levels of service delivered for each of the major tasks of the Department's responsibility and the costs of those services. The analysis in this Section and Section III then will continue by discussing options for providing these same services differently and project what those costs may be.

Organization of Analysis

For purposes of clarity, we will discuss the services according to the same organization used in the King County contracts. Certainly these major categories of endeavor could be organized differently — and in the future the City of Shoreline could do so. Our intent is to help readers track the data and the analysis more easily between what was presented in Section I and what is discussed below.

Additionally, the data is arrayed and analyzed first on a “priority” basis. That is, all the tasks within the major categories of endeavor are arranged with an indication as to whether that task is a:

PERIODIC TASK, meaning it is one that can be planned for weeks or months in advance;

DAY-TO-DAY TASK, meaning it is a task of sufficient frequency or priority that the City should have some capacity to attend to it on a fairly short notice (either directly or by contract); or an

IMMEDIATE/EMERGENCY TASK, for which time is of the essence for the health and safety of the people of Shoreline.

Within the priority rating for day-to-day and immediate/emergency tasks we provide an additional sorting by skill level. For example, some immediate/emergency tasks may need to be attended to ASAP, but the task may not require much more than a truck, some experience, and two hands. Alternately, some tasks may be highly labor- and equipment-intensive.

A good use of the prioritization matrices that follow would be for readers to begin assessing the level of risk the City could incur by having certain tasks and services performed through alternate means. Clearly time-sensitivity is not the only factor in risk assessment; citizen safety and quality of work, for two examples, are equally important accompanying criteria. But a preliminary, high-level risk assessment of this kind can help decision-makers begin to answer the question as to whether there are significant downsides to altering the means of delivery for certain services. If the downsides are minimal, then the debate can focus on other key evaluative factors; namely cost, quality, control, and flexibility.

Explanation of 'Major Categories of Endeavor'

This section refers to "major categories of endeavor." This is the means we developed to sweep together the voluminous tasks within the County contracts into logical groupings related to a more manageable number of key services. In the Roads division, for example, instead of continually referring to dozens of task codes to chose to group them into six "major categories of endeavor." While we applied reason to the groupings, we acknowledge that they are our own and others — including King County itself — may group tasks differently.

The major categories of endeavor we use in this Section are:

ROADS

- Existing Surface Restoration, Patching, and Overlays
- Vegetation Control
- Shoulder Maintenance
- Bridge Maintenance
- Non-motorized Transportation Services
- Other

TRAFFIC

- Signals, Flashers, and Street Lights
- Signs
- Thermoplastics
- Painting
- Snow & Ice
- Administration and Engineering

SURFACE WATER MANAGEMENT

- All services

Transportation Services

In keeping with the arrangement of the current King County contracts, the discussion of transportation services is divided between two operations: Roads and Traffic. The distinction between these two functions is provided above (see page 16).

ROADS

A definition of the "Roads" services is provided in Section I (see page 16).

Tasks Analyzed on a Priority Basis

The matrix below identifies all of the tasks that King County performs through its Roads Division for itself and the cities that contract with King County. We ourselves have analyzed each of those individual tasks and grouped them into the seven major categories of endeavor outlined above on page 30.

Comprehensive Itemization of “Road” Tasks Within City’s Contract
With Indication of Priority

Existing Surface Restoration, Patching, and Overlays

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|--|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Existing Surface Restoration, Patching, and Overlays</i> | | | | | |
| Roadway/Shoulder Preparation (124) | | | | | X |
| Roadway Pre-level (126) | | | | | X |
| Asphaltic Concrete Paving (127) | | | | | X |
| Shoulder Paving (128) | | | | | X |
| Square-cut Patching (144) | | | | X | X |
| Petrotac Patching (209) | | | | X | X |
| Gravel Surface — New Material (212) | | | | | X |
| Roadway Preparation — Special (213) | | | | | X |
| Petromat Patching (218) | | | | X | |
| Crack Pouring (221) | | | | X | X |
| Gravel Patching (225) | | | | X | X |
| Roadway Pre-level (226) | | | | | X |
| Asphalt Concrete Overlay (227) | | | | | X |
| Seal Coat (228) | | | | | X |
| Remove/Replace PCC Pavement (229) | | | | | X |
| Square-cut Patching (230) | | | | X | X |
| Pothole Patching (231) | | | | X | X |
| Roadway Grading (232) | | | | | X |
| Dust Control (233) | | | | | X |
| Asphalt Concrete Surface Patching (443) | | | | | X |

The matrix above shows that within the “Existing Surfaces” major category of endeavor there appear to be no tasks that require an immediate or emergency response. Roadway patching can be conducted either on a day-to-day or periodic basis, while the remaining tasks can be planned for in advance and performed on a periodic basis either by City forces or through a contractual relationship.

Comprehensive Itemization of "Road" Tasks Within City's Contract
With Indication of Priority

Vegetation Control

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|-----------------------------------|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-Skilled | |
| <i>Vegetation Control</i> | | | | | |
| Contract Tree Maintenance (247) | | | | | X |
| Contract Mowing (252) | | | | X | |
| Slope/Shoulder Mowing (262) | | | | X | |
| Hand Brushing (267) | | | | | X |
| Danger Tree Removal (268) | | X | | | |
| Landscape Maintenance (269) | | | | X | |
| Ornamental Tree Maintenance (281) | | | | | X |
| Tree Trimming (289) | | | | | X |
| Hand Mowing (292) | | | | X | |
| Tansy Ragwort Spraying (295) | | | | | X |

The only task within this major category of endeavor that appears to require an immediate or emergency response is the removal of dangerous trees. In the majority of cases this likely occurs in conjunction with storm events, though certainly limbs can snap or trees fall at any hour or time of year and cause a hazard. However, as discussed above (see page 13), the City's CRT division already has the capacity and experience to remove dangerous trees of lesser to moderate severity, though the City still has need to gain the assistance of other entities or vendors for more complex dangerous tree removal services.

Those tasks that are in the day-to-day category are ones that many jurisdictions and even private businesses contract with private service providers, sometimes as extensions of their landscape maintenance contracts for City parks. The remaining tasks are ones that lend themselves to contracts with private vendors and can be planned for in advance.

Comprehensive Itemization of “Road” Tasks Within City’s Contract
With Indication of Priority

Shoulder Maintenance

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|---|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Shoulder Maintenance</i> | | | | | |
| Shoulder Restoration Construction (070) | | | | | X |
| Shoulder Grading (235) | | | | | X |
| Shoulder Restoration — New Material (236) | | | | | X |
| Shoulder Spraying (287) | | | | | X |
| Roadside Spraying (293) | | | | | X |
| Guardrail Spraying (294) | | | | | X |
| Extending Pavement Edge (483) | | | | | X |

It appears that all of the tasks within this major category of endeavor can be performed on a planned, periodic basis either by City forces or contractual relationships.

Comprehensive Itemization of “Road” Tasks Within City’s Contract
With Indication of Priority

Bridge Maintenance

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|----------------------------------|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Bridge Maintenance</i> | | | | | |
| Bridge Deck Resurfacing (418) | | | | | X |
| Bridge Rail Repair (419) | | | | | X |
| Bridge Debris Removal (420) | | | | | X |
| Bridge Structural Repair (421) | | | | | X |
| Bridge Surface Cleaning (422) | | | | | X |
| Bridge Condition Survey (423) | | | | | X |

As with “Shoulder Maintenance” immediately above, it appears that all “Bridge Maintenance” services can be performed on a planned, periodic basis. Certainly there can be traffic accidents on bridges that may cause need for an immediate repair, though the same can be said of every segment of infrastructure under the City’s jurisdiction. While immediate/emergency bridge repairs are not foreseen, it would be prudent for the City to have a game plan in mind for how it may address the occasional accident on the City’s bridges.

Comprehensive Itemization of "Road" Tasks Within City's Contract
With Indication of Priority

Non-Motorized Transportation Services

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|--|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Non-motorized Transportation Services</i> | | | | | |
| Install Concrete Sidewalks (151) | | | | | X |
| Landscape Restoration (167) | | | | | X |
| Repair Sidewalks/Walkways (251) | | | | | X |

None of the tasks in this major category of endeavor appear to require any type of service beyond those that can be planned for or performed periodically on a non-emergency basis.

Comprehensive Itemization of "Road" Tasks Within City's Contract
With Indication of Priority

Other

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|---|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Other</i> | | | | | |
| Install Fencing (166) | | | | | X |
| Install Median Barrier Walls (188) | | | | | X |
| Debris Sorting (220) | | | | X | |
| Debris Removal (224) | | | | X | |
| Equipment Clean-up (243) | | | | X | |
| Pipe Marking (246) | | | | X | |
| Hazardous Material Clean-up (259) | | X | | | |
| Street Sweeping (260) | | | | | X |
| Street Flushing (261) | | | | | X |
| Litter Pick-up (263) | | | | X | |
| Equipment Transporting (264) | | | | X | |
| Litter Pickup (271) | | | | X | |
| Management (273) | | | X | | |
| Maintenance Requests/Complaint Inv. (274) | | | | X | |
| Road Patrol Inspection (275) | | | X | | |
| Snow/Ice Control — Sand & Salt (280) | | X | | | |
| Training/Safety (285) | | | X | | |
| Install Median Barriers (400) | | | | X | |
| Graffiti Removal (404) | | | | X | |
| Repair Fencing (408) | | | | X | |
| Downtime (409) | | | | | |
| Building Condition Survey (431) | | | | X | |
| Cleaning/Janitorial (432) | | | | X | |
| Maintenance—Yards, Stockpiles, Borrow (433) | | | | X | |
| Building — Electrical Repair (434) | | | X | | |
| Building — Painting (435) | | | | X | |
| Building — Structural (436) | | | X | | |
| Building — Plumbing (437) | | | X | | |
| Carpentry (438) | | | X | | |
| Building Machinery Service (440) | | | X | | |
| Barricading and Traffic Control (441) | | | | X | |
| Equipment Downtime (442) | | | | | |
| Building/Facility Security (482) | | | | X | |

This category accounts for a wide variety of road maintenance services that are either supportive in nature (such as transportation of equipment or shop/yard maintenance) or specialized, such as street sweeping.

Clearly a key emergency/immediate task within this major category of endeavor is snow and ice control. However, since weather is a phenomenon that disregards city limits, usually when one city in the

region needs snow and ice removal every city in the region needs snow and ice removal. Keys to effective response, then, are proximity and speed of response, in addition to the ever-present need to perform the job with quality and attention to liability.

Those tasks that are in the “periodic” column are ones that could lend themselves naturally to contracts, since they can be planned in advance.

The day-to-day tasks appear to be ones that can be performed without an extensive degree of specialized equipment, or ones that depend upon the extent of the facilities maintained by the entity providing the services. Some of these already are being performed through City forces. For example, the City’s CRT staff already attend to certain kinds of hazardous materials clean-ups, such as automobile antifreeze spills on the public rights-of-way.

Summary Review of Tasks Analyzed by Priority

A cursory review of the matrices on the preceding pages shows that the majority of the tasks performed in the Roads Division fall within the “periodic” priority column. For example, one does not wake up one morning and realize that a road overlay absolutely must be completed before the end of the day. Rather, such a project can be on a City-maintained list, planned and budgeted for, and completed according to a predictable schedule. Second, one can glean that all of the “day-to-day” tasks in the Roads Division can be performed by non-skilled labor. This is not to say that the task does not require skill or experience, but rather that it fits within the standard job category of non-skilled labor. Finally, one can see that even for those tasks within the “immediate/emergency” prioritization column that only non-skilled labor is required to perform those tasks.

Using data provided by King County, we then took the analysis one step further by looking at the City of Shoreline’s actual experience over the last three years with regard to the number of days of actual labor dedicated to these seven major categories of endeavor.

Table 3:
Average Annual Days of Labor by Major Category of Endeavor: Roads
Arranged by Priority Codes Noted Above

| Endeavor | Immediate/Emergency | Day-to-Day | Periodic |
|--------------------|----------------------------|-------------------|-----------------|
| Existing Surfaces | -zero- | 156.8 | 130.7 |
| Vegetation | 1.3 days of labor | 152.9 | 86.2 |
| Shoulder | -zero- | -zero- | 302.1 |
| Bridge | -zero- | -zero- | 1.6 |
| Non-motorized | -zero- | -zero- | 0.8 |
| Other ³ | 80.6 days of labor | 76.1 | 103.5 |
| TOTAL | 81.9 days of labor | 385.8 | 624.9 |

For perspective, a theoretical “labor year” — meaning one where an employee works each and every week day except for ten national holidays — equals 250 days. King County’s tracking system is structured so that a task that requires three people a full eight hours, for example, equates to three labor days. To illustrate further, in 1996, the City paid for 190.6 labor days of snow and ice control (an “immediate/emergency” priority), but clearly the City didn’t experience six months of snow and ice.⁴

Because the number of labor days of snow and ice control stands out to readers, it bears slightly more explanation. The City’s only experience with a major snow and ice event was in 1996, which was an occurrence that lasted well over a week. Within the number of labor days are included all crew hours, overtime, and round-the clock service. Therefore, since the event lasted about nine calendar days, the County dedicated crews on a twenty-four hour basis during that time and was required to pay overtime for some staff. All of those costs when rolled together amounted to about 190 “days of labor,” which when looked at over a 2-3/4-year average basis amounts to about 81 days of labor per year for snow and ice control.

Continuing, in a similar way to the days of labor analysis, we then reviewed the City’s average annual actual expenditures in these same categories.

³ Among other tasks, both snow and ice control and street sweeping are accounted for in the “Other” category.

⁴ On average, the City has received 80.6 labor days of snow and ice control.

Table 4:
Average Annual Costs by Major Category of Endeavor: Roads
Arranged by Priority Codes Noted Above

| Endeavor | Immediate/Emergency | Day-to-Day | Periodic |
|--------------------|----------------------------|-------------------|------------------|
| Existing Surfaces | -zero- | \$98,734 | \$6,048 |
| Vegetation | \$3,764 | \$47,356 | \$31,632 |
| Shoulder | -zero- | -zero- | \$142,835 |
| Bridge | -zero- | -zero- | -zero- |
| Non-motorized | -zero- | -zero- | \$280 |
| Other ⁵ | \$43,698 | \$23,250 | \$79,109 |
| TOTAL | \$47,462 | \$169,340 | \$259,904 |

One conclusion that can be drawn from this data, then, is that by far the majority of the tasks performed by the County's Roads Division for Shoreline through the City's contract with the County can be performed on a planned, periodic basis. Further, the greatest dollar amount the City expends for Roads services — about 55 percent — is applied to the kind of services that can be performed on a planned, periodic basis.

Why Other Options Should or Should Not Be Pursued

At this point, it may be useful to raise the question as to why other options should be pursued in the first place. What are the pros and cons of alternate service delivery options and how does one interpret the labor and expense data?

On the first issue, there are a series of pros and cons to continuing the City's current contractual relationship.

ARGUMENTS FOR CONTINUING WITH CURRENT ARRANGEMENTS

- Road maintenance services, whether they are performed on a periodic or emergency basis, often require expensive, specialized equipment and vehicles. The County already has these or has easy access to them, thereby reducing the City's capital outlays.
- The County arguably has the greatest experience maintaining roadways systems if for no other reason than they have the largest inventory of any jurisdiction within King County.

⁵ Among other tasks, both snow and ice control and street sweeping are accounted for in the "Other" category.

- The County has maintained Shoreline’s infrastructure since it was installed and hence has a level of familiarity with its systems that others do not have now.
- Because the County purchases materials in huge volumes, it can procure materials at a cost less than the City may be able to realize.
- By contracting with the County, the City is transferring much of the risk of performance to the County or its vendors.
- By having a single, established contract with the County for Road services, the City’s time for contract negotiation and oversight is greatly reduced than were the City to have a number of contracts with others.

ARGUMENTS FOR EXPLORING OTHER OPTIONS

- A motivating factor for incorporation was to gain greater control over how local dollars are spent and how decisions about the local area are made.
- If the majority of the tasks can be performed on a planned, periodic basis, then arguably the County does not need to be the City’s go-between if the City can develop an in-house capacity to manage such projects and process such contracts.
- By having the County maintain the road system, the City is paying an overhead charge on each and every task ranging up to 130 percent of the cost of the task. This overhead has no measurable benefit to the taxpayers in Shoreline and is money that otherwise could be redirected in largest part to actual improved service and infrastructure.
- The County dispatches much of its crews and equipment from Renton. In the event of an immediate/emergency need, the response time to Shoreline is affected by that distance — for which the City is charged for mobilization or “commute time.”

Average Annual Costs and Accomplishments — Road Services

If alternate service delivery means are to be explored, then it would be useful to focus in with greater magnification on the details of actual activities and cost for the major categories of endeavor.

The tables above (see pages 32 through 36) provide a comprehensive itemization of all the tasks within the major categories of endeavor. For purposes of clarity, we cluster together a number of tasks in the individual analyses that follow.

EXISTING SURFACE RESTORATION, PATCHING, AND OVERLAYS

As the matrix on page 32 demonstrates, none of the tasks within the “Existing Surfaces” category need to be performed on an immediate/emergency basis. Several of them — mostly roadway patching — are performed on a day-to-day basis, though there is some room for contracting even for these depending upon the response time the City would be able to establish with a service provider. The remaining tasks all can be performed on a planned basis, which gives the City some room for designing annual work programs and evaluating best alternatives.

The table below summarizes average annual accomplishments and costs for the tasks in the “Existing Surfaces” category.

Table 5: Accomplishments and Costs — Existing Surfaces

| Tasks | Average Annual Accompl. | Average Annual Costs | | | | | |
|-------------------|-------------------------|----------------------|------------------|----------------|-----------------|-----------------|------------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Road Prep. | 17 | \$139 | -zero- | -zero- | \$100 | \$169 | \$408 |
| Patching | 5,004 tons | \$31,858 | \$13,423 | \$2,778 | \$13,832 | \$36,843 | \$98,734 |
| Crack Pour. | N/A | \$166 | -zero- | -zero- | \$20 | \$190 | \$376 |
| Seal Coat. | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Overlays & Paving | 8 tons | \$335 | \$248 | -zero- | \$151 | \$375 | \$1,109 |
| Gravel | N/A | \$1,798 | \$33 | -zero- | \$306 | \$2,018 | \$4,155 |
| Grading | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Dust Cntrl | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| TOTALS | | \$34,296 | \$13,704 | \$2,778 | \$14,409 | \$39,595 | \$104,782 |

Average County Overhead for Major Category of Endeavor: 60.1 percent

The data show plainly that the majority of the City’s dollars for existing surfaces — a little over 94 percent — is used for patching existing roads. Of the \$61,891 the City has spent on average over the last three years on direct expenses for patching (labor, materials, vendor services, and equipment rental), about another 60 percent has been applied for County overhead expenses, yielding a total average annual cost of \$98,734.

Looked at another way, the dollar amount the City paid on average for labor for patching its streets (\$31,858) is a little over half of what the City would pay for one part-time employee for salary and benefits. Given that the City has 292 miles of streets (excluding Interstate 5), this suggests either that there is not a great demand for roadway patching in Shoreline, or that less is being accomplished that needs dictate.

The management issue for this matter is whether to increase the amount of accomplishment (if necessary) with the County and continue to pay roughly 60 percent overhead on the increased service, or to look for ways to apply the same level of resources (or perhaps more) and get a higher level of accomplishment.

VEGETATION CONTROL

Perhaps with the single exception of removing dangerous trees from the public right-of-way (for which the City's CRT has some capacities), all of the services in this major category of endeavor can be accomplished on a planned basis. Granted, the table on page 33 shows some of these tasks as "day-to-day," but they are routine, regularly-scheduled day-to-day tasks. A homeowner's lawn may need to be mown weekly, but the homeowner can agree in January to have the lawn mown by a professional landscaper for the coming year.

It should be emphasized that this major category of endeavor does not include any landscape maintenance in parks in Shoreline. It is only for the vegetation within the public rights-of-way.

Table 6: Accomplishments and Costs — Vegetation Control

| Tasks | Average Annual Accompl. | Average Annual Costs | | | | | |
|---------------|--------------------------|----------------------|------------------|----------------|-----------------|-----------------|-----------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Mowing | 209 pass miles | \$18,187 | \$143 | \$217 | \$8,335 | \$19,888 | \$46,770 |
| Tree Maint. | 137 trees | \$1,849 | \$15 | \$139 | \$198 | \$1,868 | \$4,069 |
| Spraying | 72.6 miles | \$2,114 | -zero- | \$642 | \$442 | \$2,397 | \$5,595 |
| Landscape | 2,727 yards ² | \$263 | \$35 | \$18 | \$33 | \$237 | \$586 |
| Hand Brush | 534 hours | \$9,135 | \$121 | \$302 | \$2,518 | \$9,892 | \$21,968 |
| Danger tree | About 3 trees | \$227 | -zero- | \$3,229 | \$84 | \$224 | \$3,764 |
| TOTALS | | \$31,775 | \$314 | \$4,547 | \$11,610 | \$34,506 | \$82,752 |

Average County Overhead for Major Category of Endeavor: 71.6 percent

Given the fact that all almost all of this work can be contracted for in advance, and given that the City already has other contractual relationships for parks maintenance, this appears to be a category where the City could explore other service delivery means and do so with very little risk. The City would be wise, however, to develop a plan and a capacity for removing trees damaged by storm or other circumstance that cause them to endanger the public or obstruct traffic/pedestrian flow.

SHOULDER MAINTENANCE

All of the activities in this category can be planned for in advance. With a fairly limited amount of staff work, the City could either use the existing level of service or establish the City’s preferred level of service for shoulder maintenance and undertake a competitive bidding process for annual activities in this category.

The City has 134 miles of gravel shoulders. The level of service the City has been receiving on average is 9.3 miles per year.

Table 7: Accomplishments and Costs — Shoulder Maintenance

| Tasks | Average Annual Accompl. | Average Annual Costs | | | | | |
|---------------|-------------------------|----------------------|------------------|--------------|---------------|-----------------|------------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Construct. | N/A | \$23,625 | \$5,043 | -zero- | \$13,837 | \$27,906 | \$70,411 |
| Grading | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Restore | 48,866 linear feet | \$23,906 | \$3,880 | \$791 | \$16,027 | \$27,820 | \$72,424 |
| TOTALS | | \$47,531 | \$8,923 | \$791 | 29,864 | \$55,726 | \$142,835 |

Average County Overhead for Major Category of Endeavor: 64.0 percent

By way of explanation, though the County has a separate task code for “grading,” the table shows a “zero” in that row in the table because grading services are conducted as part of “restoration.”

The importance of maintaining gravel shoulders is several fold. A key reason is that failure to maintain gravel shoulders ultimately can result in the roadway surface eroding because the gravel begins to work its way under the asphalt and deteriorate the road surface. This is called a “raveled edge.” Once the roadway edge has been “raveled,” the likelihood that further damage to the remaining portion of the street will deteriorate more rapidly is increased. From the raveled edge cracks, potholes, and other destruction can occur faster.

Other outcomes of a poorly maintained shoulder as increased flooding issues, inferior walking surfaces (since the gravel shoulder often serves as a de facto “sidewalk,” and simply a bad city image.

BRIDGE MAINTENANCE

The City has not been receiving bridge maintenance services.

Table 8: Accomplishments and Costs — Bridge Maintenance

| Tasks | Average Annual Accompl. | Average Annual Costs | | | | | |
|-------------|-------------------------|----------------------|------------------|---------|-------------|-----------------|--------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Survey | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Cleaning | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Rail Rep'r | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Struc Rep'r | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Resurfacing | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| TOTALS | | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |

Average County Overhead for Major Category of Endeavor: N/A

The City has three bridges that are its jurisdiction. At the least, jurisdictions are federally obligated to inspect bridges every two years to ensure they are still sound for the loads they are designed to carry. Repairs may be rare, but regular maintenance of drains, deck cleaning, etc. should be performed.

NON-MOTORIZED TRANSPORTATION SERVICES

Though the City has a very low inventory of public sidewalks, arguably less than the bare minimum has been accomplished to maintain and improve the ones that do exist. On average, the City has been expending less than \$300 per year on non-motorized infrastructure. Looking to the “labor” column in the table below, actual average annual costs equate to about four hours of work per year. What work has been accomplished has been attended by a 79.5 percent overhead charge.

As the matrix on page 35 shows, all tasks for non-motorized transportation services can be performed on a planned, periodic basis.

Table 9: Accomplishments and Costs — Non-motorized Transportation Services

| Tasks | Average Annual Accompl. | Average Annual Costs | | | | | |
|-----------|-------------------------|----------------------|------------------|---------|-------------|-----------------|--------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Install | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Landscape | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Repair | N/A | \$103 | \$37 | -zero- | \$16 | \$124 | \$280 |
| TOTALS | | \$103 | \$37 | -zero- | \$16 | \$124 | \$280 |

Average County Overhead for Major Category of Endeavor: 79.5 percent

Given that next to nothing is being accomplished in this major category of endeavor, even if the City explored other service delivery options it would be facing increase costs. Deciding whether to expend more on the maintenance and improvement of the City's non-motorized network in light of other financial priorities is an issue that goes beyond the scope of this study but should be at least noted. Integrally tied to this policy issue is whether the City wants to increase its inventory of sidewalks through its capital investment program or other means.

OTHER

Expenditures within this major category of endeavor largely include support services such as maintaining County yards and stores, debris handling, and some management. The City spends relatively little on these items.

The exception is that this category also includes street sweeping and snow and ice control. These two items alone account for 83 percent of this major category of endeavor.

Table 10: Accomplishments and Costs — Other

| Tasks | Average Annual Accompl. | Costs | | | | | TOTAL |
|---------------|-------------------------|-----------------|------------------|-----------------|-----------------|-----------------|------------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | |
| Str. Sweep. | 1,405 lane miles | \$16,057 | \$158 | \$13,460 | \$30,656 | \$18,313 | \$78,644 |
| Snow/Ice | 1,789 lane miles | \$14,780 | \$3,501 | \$61 | \$10,500 | \$13,793 | \$42,635 |
| Debris | 6,656 pounds | \$1,340 | \$71 | -zero- | \$395 | \$1,369 | \$3,175 |
| Graffiti | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Medians | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Traf. Confl. | 40 | \$163 | \$331 | -zero- | \$20 | \$152 | \$666 |
| Pipe Mark | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Haz Mat | 763 square yards | \$243 | \$508 | -zero- | \$58 | \$254 | \$1,063 |
| Fencing | N/A | \$149 | \$109 | \$23 | \$11 | \$173 | \$465 |
| Cust. Resp. | 493 actions | \$3,694 | -zero- | -zero- | \$651 | \$2,309 | \$6,654 |
| SUBTOTALS | | \$36,426 | \$4,678 | \$13,544 | \$42,291 | \$36,363 | \$133,302 |
| Managemt | 165 hours | \$4,836 | \$236 | -zero- | \$834 | \$5,691 | \$11,597 |
| Fac. Maint | Varies | \$270 | \$151 | -zero- | \$155 | \$311 | \$887 |
| Misc. Eqpt | Varies | \$73 | \$31 | -zero- | \$1 | \$81 | \$186 |
| Downtime | 2 hours | \$39 | -zero- | -zero- | -zero- | \$46 | \$85 |
| SUBTOTALS | | \$5,218 | \$418 | -zero- | \$990 | \$6,129 | \$12,755 |
| TOTALS | | \$41,644 | \$5,096 | \$13,544 | \$43,281 | \$42,492 | \$146,057 |

Average County Overhead for Major Category of Endeavor: 41.0 or 50.7 percent

The amount Shoreline pays for overhead in this major category of endeavor could be looked at in two ways. One is simple: use the amount shown in the “totals” column for overhead (\$42,492). This yields an overhead rate of forty-one percent.

Then again, some of the line items in this major category of endeavor — management, facility maintenance, etc. — are precisely the sorts of items that should already be included in the amount Shoreline is paying for overhead for each and every line item in its contract. Accordingly, in the table above we have subtotaled those items in this major category of endeavor that arguably should be overhead. This adds to \$12,755 on average per year. When this is added to the amount Shoreline pays for overhead for the services in the top half of the table above (\$36,363), then total overhead for this category is about 51 percent.

Summary — Roads Division

The table below provides a consolidated snapshot of the days of labor and costs reviewed on the preceding pages for the Roads Division.

Table 11: Actual Average Annual Experience
Roads

| | Days of Labor | Direct Service Costs | | | | | Overhead | TOTAL |
|-------|---------------|----------------------|-----------|----------|----------|-----------|-----------|-----------|
| | | Labor | Materials | Equipm't | Vendor | Subtotal | | |
| Roads | 1,093 | \$155,349 | \$28,074 | \$99,180 | \$21,660 | \$304,263 | \$172,443 | \$476,706 |

Average County Overhead for Roads Division: 56.7 percent

The data in the table above demonstrates several key measurements that provide a more comprehensive understanding of the level of service Shoreline has been receiving for its road maintenance services:

- The City has been receiving an average annual Days of Labor service equivalent to about 4.4 FTEs.
- On average, these employees appear to have been compensated about \$37,000 per year *excluding* benefits.
- The cost of direct services — labor, materials, equipment rental, and vendor services — totals about \$304,000 per year.
- The County’s overhead rate is about 57 percent.
- Within the Overhead rate are employee benefits expenses. Assuming benefits equivalent to 32 percent of salary (actual County rate), the amount of general County overhead would be \$122,732.

- Assuming the same \$37,000 per year level of compensation but the City's actual 28 percent amount for benefits, the County's \$122,732 general overhead rate is equivalent to 2.6 FTEs.
- Therefore, assuming all other costs were equal — materials, vendor contracts, equipment rental — the City could achieve compensation for 7 FTEs by combining the amounts it spends on labor and overhead. This could equate to 1,750 (theoretical) Days of Labor.

TRAFFIC DIVISION

As mentioned above on page 16, the “Traffic” division attends to those responsibilities on the public roads that are “from the asphalt up.” This includes signs, signals, striping, land buttons, and those items that control traffic flow.

Tasks Analyzed on a Priority Basis

Just as was done for the Roads Division above (see pages 32 through 36), we listed and sorted the tasks performed in the Traffic division based upon the priority or immediacy of those tasks. We grouped tasks in the Traffic division into six major categories of endeavor:

- Signals, Flashers, and Street Lights
- Signs
- Thermoplastics
- Painting
- Snow and Ice (minor services billed separately from the Roads division)
- Administrative and Engineering

As we noted for the Roads division, these groupings were our own design and others — including King County itself — may choose to group these individual tasks differently. Again, the purpose is to add some clarity to the plethora of individual tasks tracked by the King County system.

Comprehensive Itemization of "Traffic" Tasks Within City's Contract
With Indication of Priority

Signals, Flashers, and Street Lights

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|--|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Signals, Flashers, and Street Lights</i> | | | | | |
| Signals (code 155) ⁶ | | | | | X |
| Lamp Replacement (215) | X | | X | | |
| Emergency Lamp Replacement | X | | | | |
| Signal Head Replacement | | | | | X |
| Signal Interconnection Maint. | | | | | X |
| Signal Bench Test | | | | | X |
| Opticom Test | | | | | X |
| Install Pedestrian Signal | | | | | X |
| Loop Sealing | | | | | X |
| Loop Resawing | | | | | X |
| Loop Splicing | | | | | X |
| Controller Repair | X | | X | | |
| Controller Replacement | | | | | X |
| Timing | | | | | X |
| Flasher Devises (code 168) | | | | | X |
| Flasher Preventative Maintenance | | | | | X |
| Street Light Repair | | | | | X |
| Street Light Relamping | | | X | | |
| Inspection | | | | X | |

There appear to be only two kinds of tasks within the "Signals" major category of endeavor that occasionally require an immediate or emergency response: signal lamp replacement and signal controller repairs. As a practical matter, most — but certainly not all — intersection signals have two lanterns per direction so that if one bulb burns out the signal still is operable and "readable" to motorists until the burned-out bulb can be replaced. In such cases the lamp can be replaced the next day without serious liability implications. However, in those cases where only one lantern per direction exists, a burned-out bulb needs an immediate/emergency response.⁷ Occasionally the devises controlling the activity of traffic signals (controllers) needs an immediate/emergency repair when the equipment fails or, on rare occasions, is hit by a vehicle.

⁶ This task refers to work performed by the County prior to or following the installation of a new signal. By State statute, all new signals must be subject to public bidding procedures and installed by a private contractor.

⁷ The County began reporting "Emergency Lamp Replacement" as a new category beginning in 1998. Prior to that time, all replacements were simply reported as "Lamp Replacements." It appears that in 1998 most lamp replacements were reported as "Emergency Lamp Replacements."

Most other tasks relating to signal maintenance can be performed on a planned basis or regular day-to-day attendance. The planning period is perhaps shorter for signal maintenance than, say, roadway overlays. While new signal installations can be planned far in advance based upon extensive engineering, a planned program of controller maintenance would be more akin to the kind of planning required for landscape maintenance (see page 42).

Comprehensive Itemization of "Traffic" Tasks Within City's Contract
With Indication of Priority

Signs

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|------------------------------|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Signs</i> | | | | | |
| Installation — Ground | | | | | X |
| Installation — Overhead | | | | | X |
| Washing and Brushing | | | | | X |
| Sign Maintenance | | | | X | |
| Vandalism and Damage Repair | | X | | X | |
| Removal | | | | | X |
| Guidepost Repair/Replacement | | | | X | |
| Inspection | | | | X | |

In terms of the prioritization of tasks, the risks associated with sign maintenance are primarily from signs being knocked down by vehicles or other forces, or from signs being stolen or otherwise vandalized. There could also be an immediate/emergency need to place temporary signs at intersections where signals have failed or during power outages.

Because of the number of signs (the City's current inventory totals some 4,800 signs), some level of work needs to be performed regularly throughout the week. The remaining tasks in this major category of endeavor can be performed on a planned, periodic basis, through as noted above for signals the planning may be shorter than for other public works services.

Comprehensive Itemization of "Traffic" Tasks Within City's Contract
With Indication of Priority

Thermoplastics

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|------------------------------|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Thermoplastics</i> | | | | | |
| Crosswalks | | | | | X |
| Stop Bars | | | | | X |
| Buttons | | | | | X |
| Pavement Marking | | | | | X |

This major category of endeavor encompasses activities such as the installation of "rubberized" roadway markings such as crosswalks, turn arrows, stop bars, etc.; and lane buttons or "turtles."

It appears that all of this work can be performed on a periodic basis.

Comprehensive Itemization of "Traffic" Tasks Within City's Contract
With Indication of Priority

Painting

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|------------------------|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Painting</i> | | | | | |
| Lane striping | | | | | X |
| Arrows/Legends | | | | | X |
| Curb Painting | | | | | X |
| Paint Line Removal | | | | | X |

This category includes all painting activities on roadway surfaces, most especially lane striping. All of these tasks can be planned for in advance and performed periodically through contract. Our understanding is that King County itself routinely contracts lane striping to a private vendor, as do most cities.

Comprehensive Itemization of "Traffic" Tasks Within City's Contract
With Indication of Priority

Snow & Ice

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|------------------------------------|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Snow and Ice Removal</i> | | | | | |
| Sand and Salt Spreading | | X | | | |

The County's tracking system attributes only a small amount of snow and ice control services to the Traffic division, though the majority is within the Roads division (see page 36). An explanation is not readily available as to why this accounting occurs.

Comprehensive Itemization of "Traffic" Tasks Within City's Contract
With Indication of Priority

Administration and Engineering

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|--|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Administration and Engineering</i> | | | | | |
| Planning | | | | | X |
| Traffic Analysis | | | X | | X |
| System Analysis | | | X | | X |
| Traffic investigation | | | | | |
| Engineering Layout | | | X | | X |
| Utility locating | X | | X | | |

Summary Review of Tasks Analyzed by Priority

In comparison to the Roads division, the Traffic division appears to have a greater requirement for services performed on a day-to-day and immediate basis — vandalized sign replacements, signal controller work, etc. However, much of its requires mainly personnel with the appropriate experience and expertise but not heavy investments in rolling stock and capital equipment. Most signal maintenance would require the City to have access to a bucket truck (which also could be used for some vegetation maintenance) and a supply of parts. This latter point is not insignificant, particularly given the fact that Shoreline has a wide variety of signal controllers that use different parts. Replacing these controllers to a "City standard," however, could be addressed through the capital investment plan.

Again, using King County data we reviewed Shoreline’s actual experience over the last three years with regard to the number of days of actual labor dedicated to these seven major categories of endeavor.

Table 12:
Average Annual Days of Labor by Major Category of Endeavor: Traffic
Arranged by Priority Codes Noted Above

| Endeavor | Immediate/Emergency | Day-to-Day | Periodic |
|-----------------|----------------------------|-------------------|-----------------|
| Signals, etc. | 2.0 ⁸ | 41.5 | 25.5 |
| Signs | 7.0 ⁹ | 102.3 | 33.0 |
| Thermoplastics | -zero- | -zero- | 33.9 |
| Painting | -zero- | -zero- | 28.9 |
| Snow & Ice | N/A | -zero- | -zero- |
| Admin./Eng. | -zero- | 25.2 | -zero- |
| TOTAL | 9.0 | 169.0 | 121.3 |

Whereas the experience of the Roads division is that the majority of the time is spent on periodic tasks, the situation for the Traffic division is that the majority of the time — 57 percent — is dedicated to day-to-day services. Forty percent is dedicated to periodic task.

In total, 299 Days of Labor were dedicated to Traffic services. By employing the “theoretical labor year” discussed above (see page 38), this equates to 1.2 FTEs.

A review of the City’s average annual expenses for the Traffic division follows.

⁸ Assumed 10% of actual average expense for controller repair.

⁹ Assumed 10% of amount dedicated for vandalism and damage repair.

Table 13:
Average Annual Costs by Major Category of Endeavor: Traffic
Arranged by Priority Codes Noted Above

| Endeavor | Immediate/Emergency | Day-to-Day | Periodic |
|-----------------|----------------------------|-------------------|-----------------|
| Signals, etc. | \$1,500 | \$32,981 | \$11,346 |
| Signs | \$3,100 | \$45,940 | \$16,884 |
| Thermoplastics | -zero- | -zero- | \$16,607 |
| Painting | -zero- | -zero- | \$40,381 |
| Snow & Ice | \$642 ¹⁰ | -zero- | -zero- |
| Admin./Eng. | -zero- | \$8,858 | -zero- |
| TOTAL | \$5,242 | \$87,779 | \$85,218 |

In terms of actual average annual expenditures, though the majority of the work in the Traffic division is performed on a day-to-day basis, almost equal dollar amounts are expended for day-to-day and periodic services. The amount of money spent on immediate/emergency services in the Signals and Signs major category of endeavor is approximate (10 percent of the total for those categories).

Why Other Options Should or Should Not Be Pursued

As was done for the Roads division analysis, the following points present both sides of the argument as to whether other options should be pursued for services in the Traffic division.

ARGUMENTS FOR CONTINUING WITH CURRENT ARRANGEMENTS

- Signal and Sign maintenance responsibilities come with a fair amount of risk to be performed well and accurately. At present, a proportion of that risk is carried by the County.
- Signal maintenance requires specialized equipment, vehicles, and specially-trained personnel.
- Signal and Sign services are twenty-four hour, seven-day-per-week services that can require more immediate responses than other Road services. The County has the staffing and equipment resources to meet these needs, while at present the City does not.

ARGUMENTS FOR EXPLORING OTHER OPTIONS

- Two of the major categories of endeavor in Traffic — thermoplastics and painting — can be planned on an annual basis and performed by

¹⁰ A significant amount more is spent on snow and ice control in the Roads division. See page 45.

private contractors. Were the City to execute the specifications and contracts directly, it would avoid “the middle man” for the projects.

- The City already is planning to add to its engineering staff, lessening the need to rely on the County for these services and increasing the capacity for the City to engineer its own Traffic solutions.
- Were the City to explore developing in-house road maintenance capacities, it also could address snow and ice control services through the addition of snow blades for trucks and enhanced training for staff. Having an in-house capacity would also address the need to have a more localized presence to meet City demand at times when regional snow storms place demands throughout the region.
- While sign maintenance necessitates some measure of work to be performed routinely if not daily, the work is not sophisticated and usually does not require much in the way of specialized equipment.
- Signal maintenance does require specialized equipment and skills, but they are not so rare that Shoreline could not acquire them.

Average Annual Costs and Accomplishments — Traffic Services

The following pages provide greater detail about actual costs and accomplishments for the services within the Traffic division. Though some tasks have been clustered together in the tables below, the full range of tasks is provided in the tables on pages 49 through 52.

Table 14: Accomplishments and Costs — Signals, Flashers, and Street Lights

| Tasks | Average Annual Accomp. | Average Annual Costs | | | | | TOTAL |
|---------------------------|------------------------|----------------------|------------------|----------------|----------------|-----------------|-----------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | |
| Replace Lamps | 596 lamps | \$6,724 | \$1,249 | -zero- | \$1,491 | \$7,293 | \$16,757 |
| Routine Maint. | 181 tasks | \$10,828 | \$2,288 | \$36 | \$1,784 | \$11,796 | \$26,732 |
| Contrlr Repair | 53 controllers | \$5,598 | \$13,901 | -zero- | \$676 | \$5,485 | \$25,660 |
| Contrlr Replce | 4 controllers | \$365 | \$2,213 | -zero- | \$47 | \$396 | \$3,021 |
| Loop Splicing | 14 loops | \$1,692 | \$333 | \$291 | \$441 | \$1,925 | \$4,682 |
| Post New Sgnl | | \$2,247 | \$2,313 | \$720 | \$379 | \$2,362 | \$8,021 |
| Other Signal | | \$599 | \$39 | \$101 | \$91 | \$609 | \$1,439 |
| Opticom Test | 11 signals | \$640 | \$185 | -zero- | \$68 | \$783 | \$1,676 |
| Street Lights | 5 lights | \$654 | \$290 | \$206 | \$129 | \$691 | \$1,970 |
| Sys Analy & Signal Timing | 41 hours | \$2,260 | -zero- | -zero- | \$296 | \$2,608 | \$5,164 |
| TOTALS | | \$31,607 | \$22,811 | \$1,354 | \$5,402 | \$33,948 | \$95,122 |

Average County Overhead for Major Category of Endeavor: 55.5 percent

Looking to the average annual accomplishments for those services related to the maintenance of the signals — lamp replacement, routine maintenance, controller repair and replacement — it appears that a steady amount of work is performed throughout the year to keep these systems operating. While some loop splicing is being performed, the City has not received any prevention-oriented services in loop sealing or (apparently) in maintenance and adjustments to the signal interconnection system. On average, about a week's worth of one person's time per year has been dedicated to analyzing the traffic signal system and making timing adjustments.

Table 15: Accomplishments and Costs — Signs

| Tasks | Average Annual Accomp. | Average Annual Costs | | | | | |
|---------------|------------------------|----------------------|------------------|---------|-------------|-----------------|----------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Install | 142 signs | \$3,241 | \$4,083 | \$744 | \$659 | \$1,873 | \$10,600 |
| Maintain | 830 signs | \$9,352 | \$3,875 | -zero- | \$2,396 | \$10,460 | \$26,083 |
| Washing | 270 signs | \$2,061 | -zero- | -zero- | \$6,062 | \$2,280 | \$10,403 |
| Vandalism | 776 signs | \$11,231 | \$6,040 | -zero- | \$2,847 | \$10,961 | \$31,079 |
| Remove | 25 signs | \$146 | -zero- | -zero- | \$46 | \$159 | \$351 |
| TOTALS | | \$26,031 | \$13,998 | \$744 | \$12,010 | \$25,733 | \$78,516 |

Average County Overhead for Major Category of Endeavor: 48.8 percent

As with signals, a steady dedication of effort appears to have been applied in Shoreline throughout the last three years. It is questionable whether as much vandalism has been occurring to the City’s signs as shown in the chart above, or whether that is the task code to which workers assign a variety of sign repairs. At first glance, it appears that the City’s actual experience with labor and overhead costs in comparison to average annual accomplishments suggests it to be a task the City could assume without significant staffing increases.

Table 16: Accomplishments and Costs — Thermoplastics

| Tasks | Average Annual Accomp. | Average Annual Costs | | | | | |
|---------------|------------------------|----------------------|------------------|---------|-------------|-----------------|----------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Installation | 4,137 square feet | \$2,800 | \$1,955 | -zero- | \$1,243 | \$2,585 | \$8,583 |
| Buttons | 4,413 buttons | \$1,924 | \$3,893 | -zero- | \$323 | \$1,884 | \$8,024 |
| TOTALS | | \$4,724 | \$5,848 | -zero- | \$1,566 | \$4,469 | \$16,607 |

Average County Overhead for Major Category of Endeavor: 36.8 percent

Though the chart above shows that County staff itself performs tasks associated with thermoplastics, these tasks can be performed on a planned, periodic basis and can be performed by a private vendor. The decision would be whether the City could obtain the same level of service for the same or lower costs.

Table 17: Accomplishments and Costs — Painting

| Tasks | Average Annual Accomp. | Average Annual Costs | | | | | |
|---------------|------------------------|----------------------|------------------|---------------|----------------|-----------------|-----------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Lane Stripe | 224 stripe miles | \$4,061 | \$25,548 | -zero- | \$3,415 | \$4,684 | \$37,708 |
| Other Paint | 33 square feet | \$761 | \$526 | -zero- | \$339 | \$796 | \$2,422 |
| Markings | 65 square feet | \$107 | -zero- | -zero- | \$42 | \$102 | \$251 |
| Removals | 131 square feet | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| TOTALS | | \$4,929 | \$26,074 | -zero- | \$3,796 | \$5,582 | \$40,381 |

Average County Overhead for Major Category of Endeavor: 16.0 percent

As with thermoplastics above, these services can be performed on a planned, periodic basis by private vendors. The same service-for-cost analysis would need to be performed.

Table 18: Accomplishments and Costs — Snow and Ice Removal

| Tasks | Average Annual Accomp. | Average Annual Costs | | | | | |
|---------------|------------------------|----------------------|------------------|---------------|--------------|-----------------|--------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Snow/Ice | N/A | \$206 | -zero- | -zero- | \$197 | \$239 | \$642 |
| TOTALS | | \$206 | -zero- | -zero- | \$197 | \$239 | \$642 |

Average County Overhead for Major Category of Endeavor: 59.3 percent

The majority of the accomplishments associated with snow and ice removal are reported in the Roads division (see page 45).

Table 19: Accomplishments and Costs — Administration and Engineering

| Tasks | Average Annual Accomp. | Average Annual Costs | | | | | |
|---------------|------------------------|----------------------|------------------|---------------|--------------|-----------------|----------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Managem't | 15 hours | \$429 | -zero- | -zero- | \$43 | \$471 | \$943 |
| Util. Locate | 27 locations | \$983 | \$1 | -zero- | \$134 | \$1,097 | \$2,215 |
| Complaint | 3 actions | \$269 | -zero- | -zero- | \$56 | \$271 | \$596 |
| Traf. Invest | N/A | \$1,896 | -zero- | -zero- | \$215 | \$2,152 | \$4,263 |
| Planning | 9 hours | \$328 | -zero- | -zero- | \$28 | \$371 | \$727 |
| Other | N/A | \$31 | \$37 | -zero- | \$10 | \$36 | \$114 |
| TOTALS | | \$3,936 | \$38 | -zero- | \$486 | \$4,398 | \$8,858 |

Average County Overhead for Major Category of Endeavor: 98.6 percent

As noted earlier, many of these tasks increasingly can be performed by the City's expanded engineering staff, and complaint investigations already are a key responsibility of the City's CRT. To assume all these tasks, the City would need to develop in-house capabilities for utility locating.

Summary — Traffic Division

The table below provides a consolidated snapshot of the days of labor and costs review on the preceding pages or the Traffic division.

Table 20: Actual Average Annual Experience
Traffic

| | Days of Labor | Direct Service Costs | | | | | Overhead | TOTAL |
|---------|---------------|----------------------|-----------|----------|---------|------------------|-----------------|------------------|
| | | Labor | Materials | Equipm't | Vendor | Subtotal | | |
| Traffic | 299 | \$71,433 | \$68,769 | \$23,457 | \$2,098 | \$165,757 | \$74,369 | \$240,126 |

Average County Overhead for Traffic Division: 44.9 percent

The data in the table above demonstrates several key measurements that provide a more comprehensive understanding of the level of services Shoreline has been receiving for its traffic services:

- The City has been receiving an average annual Days of Labor service equivalent to about 1.2 FTEs.
- On average, these employees appear to have been compensated about \$60,000 per year *excluding* benefits.
- The cost of direct services — labor, materials, equipment rental, and vendor services — totals about \$166,000 per year.

- The County's overhead rate is about 45 percent; less for this division than the Roads division (see page 46).
- Within the Overhead rate are employee benefits expenses. Assuming benefits equal to 32 percent of salary (actual County experience), the amount of general County overhead would be \$51,510.
- Assuming the same \$60,000 per year level of compensation but the City's actual 28 percent amount for benefits, the County's \$51,510 general overhead rate is equivalent to 0.7 FTE.
- Therefore, assuming all other costs were equal — materials, vendor contracts, equipment rental — the City could achieve compensation for roughly 2.0 FTEs by combining the amounts it spends on labor and overhead. This could equate to 500 (theoretical) Days of Labor.

A critical point about this division, as with the Roads division, is that almost all of the services have been reactive rather than proactive. For example, preventative maintenance tasks such as signal loop sealing and maintenance (the City has about 520 signal loops at its 31 signalized intersections; see page 15) is not being performed in the City. In the future, then, the City will be facing large replacement costs for signal infrastructure that was maintained only on a reactive rather than preventative basis.

Surface Water Management Services

The tasks considered in the following pages are those that are preformed by the Roads division but are directly attributable and billable to surface water management. Accordingly, these in a sense are extracts of elements within the Roads division contract.

Tasks Analyzed on a Priority Basis

All of the tasks are reviewed in a single matrix below for the purposes of assessing priority needs.

Comprehensive Itemization of “SWM” Tasks Within City’s Contract
With Indication of Priority

Surface Water Management Services

| | Immediate/Emergency | | Day-to-Day | | Periodic |
|--|---------------------|-------------|------------|-------------|----------|
| | Skilled | Non-skilled | Skilled | Non-skilled | |
| <i>Water Runoff and Slope Control</i> | | | | | |
| Install Rock Retaining Walls (132) | | | | | X |
| Install Gabion Retaining Walls (136) | | | | | X |
| Install Drainage Pipe (140) | | | | | X |
| Install Rip Rap (141) | | | | | X |
| Ditch Excavation (142) | | | | X | |
| Curb Installation — PCC (147) | | | | | X |
| Install Catch Basins—Type II (162) | | | | | X |
| Install Catch Basins — Type I (163) | | | | | X |
| Install Miscellaneous Retaining Walls (170) | | | | | X |
| Curb & Gutter Replace/Repair (217) | | | | | X |
| Hand Ditching (234) | | | | X | |
| Replace/Repair Drainage Pipe (240) | | X | | X | X |
| Clean Catch Basins/Manholes — Vactor (241) | | | | | X |
| Blade Ditching/Shoulder Pulling (242) | | | | | X |
| Cleaning Enclosed Drainage Systems (244) | | | | | X |
| Hand Cleaning Drainage Systems (245) | | | | | X |
| Drainage Preparation (249) | | | | | X |
| Repair/Replace Rock Retaining Walls (250) | | | | | X |
| Repair Catch Basins/Manholes—I&II (253) | | X | | | X |
| Rep/Repair Culvert Header/Trash Racks (254) | | X | | | X |
| Repair Miscellaneous Retaining Walls (270) | | | | | X |
| Slide Removal (272) | | X | | | |
| Bucket Ditching (288) | | | | | X |
| Replace Catch Basins/Manholes — I&II (291) | | X | | | X |
| Erosion Control — Rip Rap (402) | | | | | X |
| Replace Catch Basin/Manhole Lids—I&II (405) | | X | | | X |
| Repair/Replace Gabion Retaining Walls (406) | | X | | | X |
| Washout Repair (410) | | X | | | |
| Sandbagging (412) | | X | | | |
| Clean Bridge Drains (424) | | | | | X |
| Silt Removal (439) | | | | | X |
| Bridge — Erosion Control (445) | | | | | X |
| Clean Bridge Deck (446) | | | | | X |
| Ditchmaster Ditch Cleaning (484) | | | | | X |

A preliminary point to be made with regard to this information is that these are only the surface water management related services that are being performed by the Roads division within the framework of the Roads contract. These services are “billable” to surface water management fees. The City also is performing other services (see page 22 above).

What emerges from the matrix above is that surface water management services seem fairly divided between tasks that can be performed on a planned, periodic basis and those that must be performed on an immediate/emergency one. In general, tasks that are related to cleaning, maintaining, and improving the systems can be planned, while attending to flooding, washout, and slope stabilization during storm events require immediate response. The immediate tasks are not necessarily complex but often require expensive rolling stock equipment. Some of this equipment is the same as can be used for Roads division services, while others are specialized. The specialized equipment could be borrowed or rented.

Over the last three years, the City's actual experiences with these services has been as follows.

Table 21:
Average Annual Days of Labor by Major Category of Endeavor: SWM
Arranged by Priority Codes Noted Above

| Endeavor | Immediate/Emergency | Day-to-Day | Periodic |
|-----------------|----------------------------|-------------------|-----------------|
| Slide Removal | 2.2 | -zero- | -zero- |
| Washout | 29.6 | -zero- | -zero- |
| Sandbagging | 2.0 | -zero- | -zero- |
| All Other | -zero- | -zero- | 319.8 |
| | 33.8 days of labor | -zero- | 319.8 |

In total, the City has been receiving an average of 353.6 Days of Labor of those services in the Roads division that are attributable and billable to Surface Water Management. This equates to about 1.4 FTEs. Roughly 10 percent of the time over the last three years has been spent on immediate/emergency tasks, which includes the major intersection event the City experienced in 1997.

Table 22:
Average Annual Costs by Major Category of Endeavor: SWM
Arranged by Priority Codes Noted Above

| Endeavor | Immediate/Emergency | Day-to-Day | Periodic |
|-----------------|----------------------------|-------------------|------------------|
| Slide Removal | \$865 | -zero- | -zero- |
| Washout | \$12,420 | -zero- | -zero- |
| Sandbagging | \$1,040 | -zero- | -zero- |
| All Other | -zero- | -zero- | \$132,195 |
| TOTAL | \$14,325 | -zero- | \$132,195 |

Costs are almost an exact replica of labor for surface water management tasks, with roughly 10 percent of the City's average annual expenditures being for immediate/emergency tasks.

Why Other Options Should or Should Not Be Pursued

Of all the public works services considered in this report, the City already has been quite aggressive in having these services performed in other ways. Perhaps the key motivating factor is the County's overhead rate for these tasks and the fact that the County's SWM division was acting primarily as a coordinator of effort that was actually being performed by the Roads division anyway. The City removed the "middle man" for the services, though it has the County continue to collect surface water management fees through property tax statements. The City also has contracted with other vendors for some services such as detention pond maintenance.

The chief risk of taking on these services is the ability to respond in the event of flooding — but then again that is the purpose of collecting fees and having a surface water management capacity. Arguably, with a strategic use of contracted or directly-provided services during the "dry" months, the City's flooding risks should be somewhat reduced. However, Shoreline will have many years of investment ahead of it to correct and replace the City's inadequate infrastructure.

Average Annual Costs and Accomplishments — Surface Water Management

The table below provides a comprehensive itemization of all the tasks within the Surface Water management major category of endeavor.

Table 23: Accomplishments and Costs — Water Runoff and Slope

| Tasks | Average Annual Accompl. | Average Annual Costs | | | | | |
|--------------|-------------------------|----------------------|------------------|--------------|-----------------|-----------------|------------------|
| | | Labor | Materials/ Other | Vendors | Equip. Rent | County Overhead | TOTAL |
| Prep. | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Mech. Dit. | 8,802 linear feet | \$11,470 | \$53 | \$25 | \$5,476 | \$13,149 | \$30,173 |
| Hand Dit. | 403 linear feet | \$1,961 | -zero- | -zero- | \$285 | \$1,967 | \$4,213 |
| Walls | 100 tons | \$1,725 | \$842 | \$93 | \$808 | \$1,985 | \$5,453 |
| Pipes | 13,927 linear feet | \$6,929 | \$3,172 | \$492 | \$3,174 | \$8,167 | \$21,934 |
| Curb New | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| Curb Rep'r | N/A | \$35 | \$141 | -zero- | -zero- | \$61 | \$237 |
| CB New | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| CB Rep'r | 87 catch basins | \$8,067 | \$7,693 | \$23 | \$2,501 | \$25,664 | \$43,948 |
| Vactoring | 897 catch basins | \$11,263 | \$166 | -zero- | \$16,335 | \$13,932 | \$41,696 |
| Slide Rmvl | 1,035 cubic yards | \$4,047 | -zero- | \$31 | \$1,650 | \$3,764 | \$9,492 |
| Sandbags | -zero- | -zero- | \$3 | -zero- | -zero- | -zero- | \$3 |
| Bridge | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- | -zero- |
| TOTAL | | \$45,497 | \$12,070 | \$664 | \$30,229 | \$68,689 | \$157,149 |

Average County Overhead for Major Category of Endeavor: 77.6 percent

Not surprisingly, the majority of the time and dollars expended in this major category of endeavor are for maintaining ditches and pipes. These services, which account for \$98,016 of the budget or 62.4 percent, are ones that can be performed on a planned basis either by City staff or vendors.¹¹ Vactoring requires expensive machinery and experienced staffing, but there are options for accomplishing these services. Vactors can be rented by the day, week, or month for which there are contracts maintained by the State of Washington and available to local jurisdictions. Also, there are private companies that provide vactoring services to local jurisdictions and commercial property owners.

Yet another point on vactoring is that the average annual level of actual accomplishment has been about 900 catch basins per year, even though the City's inventory is about 6,000 (see page 15). While the City could not justify purchasing and operating its own vactor for this level of accomplishment, a larger question is whether the City is realizing the level of accomplishment it should. If the City sought to achieve a higher level of service, it may need to reexamine whether at the higher level it would prove more economical to bring that service in-house.

Catch basin maintenance and repair services account for another 28 percent (\$41,696) of the average annual expense.

¹¹ Included are mechanical ditching, hand ditching, pipes, and vactoring.

Summary — Surface Water Management Division

The table below provides a consolidated snapshot of the days of labor and costs reviewed on the preceding pages for the Roads Division.

Table 24: Actual Average Annual Experience
Surface Water Management

| | Days of Labor | Direct Service Costs | | | | | Overhead | TOTAL |
|---------|---------------|----------------------|-----------|----------|--------|----------|----------|-----------|
| | | Labor | Materials | Equipm't | Vendor | Subtotal | | |
| Traffic | 353.6 | \$45,497 | \$12,070 | \$30,229 | \$664 | \$88,460 | \$68,689 | \$157,149 |

Average County Overhead for Roads SWM Services: 77.6 percent

The data in the table above demonstrates several key measurements that provide a more comprehensive understanding of the level of services Shoreline has been receiving for surface water management services provided by the Roads division.

- The City has been receiving an average annual Days of Labor service equivalent to about 1.4 FTEs.
- On average, these employees appear to have been compensated about \$32,000 per year *excluding* benefits.
- The cost of direct services—labor, materials, equipment rental, and vendor services—totals about \$88,000 per year.
- The County’s overhead rate is 77.6 percent.
- Within the overhead rate are employee benefits expenses. Assuming benefits equivalent to 32 percent of salary (actual County experience), the amount of general County overhead would be \$53,901.
- Assuming the same \$32,000 per year level of compensation but the City’s actual 28 percent amount for benefits, the County’s \$53,901 general overhead rate is equivalent to 1.3 FTEs.
- Therefore, assuming all other costs were equal—materials, vendor contracts, equipment rental—the City could achieve compensation for 2.7 FTEs by combining the amounts it spends on labor and overhead. This could equate to 675 (theoretical) Days of Labor.

Section III: Summary Analysis of Current Circumstances

The purpose of this Section is to condense the charts, graphs, and lists that were provided in the previous Section into a more readable synopsis.

Current Arrangement Yields Depth of Service

Shoreline's current contract with the County gives the City an advantage of having access to a much broader spectrum of expertise and equipment than certainly the City has now or could amass in the near future. Further, the City is able to tap into those resources on an as-needed basis. The very strength of the kind of contract that the City has is that while a certain service or piece of rolling stock may not be needed every week, when it is needed it is readily available to the City; usually at no special cost beyond the City's existing contractual relationship.

On an annual basis, the City spends about \$900,000 on transportation and surface water management services. Yet it is gaining the depth and strength of a department that is considerably larger. In a sense, the City is "renting" the talents of a large, full-service public works department but only to the extent that it needs those services. This reduces the City's direct personnel and capital expenditures, and has enabled the City to enjoy a seamless delivery of service in these areas since incorporation.

Actual Effort in Shoreline Fairly Low — Essentially 'The Basics' Only

However, based upon the data that has been collected by the County and provided to the City over the last three years, the actual expenditures of time and materials in the City has been somewhat minimal. The systems are being "held together," so to speak, but the kinds of day-to-day services that should be undertaken in order to preserve the life of the systems are not always being performed.

As the data in the previous Section shows, the number of "labor days" the City is realizing from its Roads division, for example, is equivalent to 4.4 full-time employees.¹² This is less than the road crew staffing of the City of East Wenatchee (population 5,245;

¹² These are "theoretical" full-time employees, meaning vacation, illness, and other time away is not included.

2.2 square miles). In addition to this the City is receiving surface water management-related services through the Roads division that adds another 1.2 FTEs. Accordingly, the City is receiving total roadway services — road maintenance and surface water management — of about 5.6 FTEs. This is equivalent to about one County crew: 1 crew leader, 1 truck driver, 1 equipment operator, and 2.6 crew workers. For this the City has paid on average about \$650,000 per year,¹³ including materials, equipment rental, and vendor contracts.

In addition to this, the City is receiving the services of about 1.2 FTEs for Traffic services — signals, signs, land striping, etc. For this the City pays another \$160,000 per year including labor, materials, equipment rental, and vendor contracts.

Comparison of ‘Theoretical’ to Actual Employees

In many places in this study we have referred to “theoretical” FTEs. As noted earlier, a “theoretical FTE or a theoretical Labor Year is one whereby a presumed employee works every business day (excluding 10 national holidays) but does not take any vacation, sick leave, or other time away. This equates to 250 theoretical Days of Labor per year.

In reality, workers of course *do* take time off for vacations, illness, special training, or other reasons. For comparison purposes, we assumed: 13 days of vacation, 4 days of illness, 2 days of special training, and 2 unspecified absences. This equates to 229 days of labor for a typical actual employee. In order for Shoreline to make a realistic staffing comparison, then, the City would need to have 7.6 FTEs to perform the work the City has been received on average to date.

Table 25: Staffing Comparison: County to Shoreline
Roads, Traffic, and SWM Services Combined

| | What County Provides | What Shoreline Would Require |
|---------------------|----------------------|------------------------------|
| Total Days of Labor | 1,745.6 | 1,745.6 |
| Days per Employee | 250 | 229 |
| Total FTEs | 7.0 | 7.6 |

There are two corollary points to be noted about these staffing comparisons:

1. The County’s 7.0 FTE are not necessarily the *same* FTEs. The County’s depth of staffing enables it to send the best person for the job from its extensive staff.
2. The City’s staffing *would* be the same staff, placing upon the City an obligation to recruit aggressively for multi-experienced personnel.

¹³ This amount excludes Traffic services.

Actual Accomplishments

However, it cannot be overlooked that these 7.0 County FTEs are still providing only 7.0 FTEs worth of labor, regardless of how many individuals it represents. Accordingly, only a limited range of services are being performed in Shoreline and a host of things that are not, such as:

| <u>What is Being Performed</u> | <u>What is Not</u> |
|--------------------------------|----------------------------------|
| Roadway Patching | Crack Pouring |
| Ditch Maintenance | Seal Coating |
| Some Vactoring | Extensive Overlays |
| Some Shoulder Maintenance | Curb Maintenance |
| Street Sweeping | Comprehensive Vegetation Control |
| Signal Maintenance | Bridge Maintenance |
| SWM Utility Billing | Sidewalk Maintenance |
| Sign Maintenance | Tree Maintenance |
| Lane Striping | Signal Controller Modernization |
| Some ad hoc Vegetation Work | Loop Sealing |
| Some Pump Maintenance | Data Management |
| Detention Inspection | Comprehensive Vactoring |
| Public Detention Maintenance | Comprehensive Shoulder Maint. |

The kinds of services that are being performed tend to be those that keep the infrastructure systems operating at a basic level, but not those kinds of services that ultimately preserve the length of service of the infrastructure or improve the quality of the systems.

For example, the City's level of service has been to have about 900 catch basins vacted every year. But the City's inventory includes about 6,000 catch basins. This means the City's level of service is to have all its catch basins vacted about once every seven years, while in many City's it is the norm to have them all cleaned once every year. Doing this kind of vactoring, which can be performed by vendors on a planned basis, can reduce the City's occurrences of flooding.

Of the services that are being performed, the entities responsible implementing them — either directly or through others — is as follows:

| By City of Shoreline | By King County |
|------------------------------|-----------------------------------|
| Some Cold Patching | Most Roadway Patching |
| Some Hand Ditching | Most Ditch Maintenance |
| Grass Median/ROW Mowing | Vactoring |
| Public Detention Maintenance | Gravel Shoulder Maintenance |
| Some ad hoc Vegetation Work | Street Sweeping |
| Detention Inspection | Signal Maintenance |
| | Sign Maintenance |
| | Lane Striping |
| | SWM Utility Billing |
| | Some SWM Pump Station Maintenance |
| | Snow and Ice Control |

The Cost of the County's Depth of Service — Overhead

While the County does provide the City with a depth of staffing, equipment, and services, it cannot be denied that that depth comes at a price.

Table 26: Actual Average Annual Experience
Roads, Traffic, and Surface Water Management

| | Days of Labor | Direct Service Costs | | | | | Overhead | TOTAL |
|---------------|----------------|----------------------|------------------|------------------|-----------------|------------------|------------------|------------------|
| | | Labor | Materials | Equipm't | Vendor | Subtotal | | |
| Roads | 1,093 | \$155,349 | \$28,074 | \$99,180 | \$21,660 | \$304,263 | \$172,443 | \$476,706 |
| Traffic | 299 | \$71,433 | \$68,769 | \$27,457 | \$2,098 | \$165,757 | \$74,369 | \$240,126 |
| SWM | 353.6 | \$45,497 | \$12,070 | \$30,229 | \$664 | \$88,460 | \$68,689 | \$157,149 |
| TOTALS | 1,745.6 | \$272,279 | \$108,913 | \$156,866 | \$24,422 | \$558,480 | \$315,501 | \$873,981 |

Average Annual County Overhead: 56.5 percent

The table above rolls together the tabulations provided in Section II (see pages 29 through 66). What the data shows is that while the City is paying \$272,279 for direct labor, it also is paying \$315,510 in overhead charges. Again, a portion of this amount — presumed to be 32 percent of salary—is used to pay personnel benefits. But even by subtracting this amount (\$76,238) the amount of County “general” overhead is \$239,263, or 88 percent of what the City of Shoreline pays for direct labor. By tallying the information provided in the bullets on pages 46, 59, and 66, one can see that while Shoreline is realizing 7.0 FTE’s worth of direct public works labor, it is paying an amount equal to 12.28 FTEs.

Table 27: Direct and “Overhead” Staffing Comparison: County to Shoreline
Roads, Traffic, and SWM Services Combined

| | What the County Provides | What Shoreline Would Need |
|--------------------------|--------------------------|---------------------------|
| Total Days of Labor | 1,745.6 | 1,745.6 |
| Total FTEs to Accomplish | 7.0 | 7.6 |
| Roads “Overhead” FTEs | 2.73 | ? |
| Traffic “Overhead” FTEs | 0.7 | ? |
| SWM “Overhead” FTEs | 1.85 | ? |
| TOTAL | 12.28 FTEs | 7.6 plus ? |

The table above shows that the amount paid to the County in general overhead is equivalent to another 5.28 employees over and above the number of employees providing direct service. As a practical matter, the overhead amount is not necessarily being dedicated exclusively to staffing. Some of the overhead amount likely is going to minor capital items, office space rentals, technical supplies, utilities, and other items. This is just the same as the City of Shoreline would experience were it to have a larger public works staff. A complete itemization of County overhead costs is provided above (see page 20).

Comparison of County and City Overhead Charges

Some of the area’s larger cities have in fact determined what their internal overhead rate is. These cities often have made these calculations because of the accounting needs to charge certain General Fund expenses to Utility Funds (or vice versa) and/or because the Councils or budgetary staff of those cities prefer to keep track of internal overhead expenses for other reasons.

It is unrealistic to think that were the City of Shoreline to increase its staffing in its public works department that it would not have increased internal overhead charges just as the County does. Expanding the public works department would place added demands on the finance, human resources, city manager, and city clerk services (to name a few), require additional office space and furnishings, greater utility expenses, more office supplies, etc.

The difference, though, is that Shoreline is a significantly smaller organization than King County. While it may have similar overhead needs, there are fewer “heads” to layer increase costs “over.” Further, the City of Shoreline would experience only a marginal cost increase because the City already has the basic staffing and overhead infrastructure in place, it simply would need to increase that base.

Shoreline City staff have developed an estimate of the City's marginal overhead increases were the City to expand the public works department according to the plan in Section IV.

The itemization above on page 21 shows the elements that are included in the County's overhead charges. Of those, the City of Shoreline already provides these same kinds of services for itself: payroll processing, auditing, and the twelve kinds of administrative costs identified on page 21. According to a previous study the City had performed regarding overhead, the City pays about \$343,000 in general City overhead to itself for the City's current staffing and operations.

By comparison, the amount the City pays to King County is general overhead — excluding personnel benefits — totals about \$240,000 for the contracted public works services. This assumes \$76,238 for personnel benefits subtracted from the total overhead amount of \$315,501.¹⁴

Were the City to increase its public works staff according to the plan provided in Section IV of this report, the *marginal* increase to the City of Shoreline's overhead is projected by City staff to be about \$125,000. This means that the internal City overhead of \$343,000 the City experiences now would be increased to about \$468,000 per year because of the added City public works staff. But by doing so, the City would no longer need to pay the \$240,000 it pays now in County overhead, resulting in a savings to the City in general overhead expenses of about \$115,000 per year.

Table 28: Theoretical Comparison of Costs
Shoreline to County

| | Shoreline | County Contracts | TOTAL |
|---------------------------------------|-----------|---------------------|------------------|
| Total Overhead Expended Now | \$343,000 | \$240,000 | \$583,000 |
| Marginal Increase if Plan Implemented | \$125,000 | -0- | \$125,000 |
| Annual Reduction if Plan Implemented | -0- | (\$240,000) | (\$240,000) |
| Total Overhead | \$468,000 | -0- | \$468,000 |
| Savings | | | \$115,000 |

Readers should note that what Shoreline pays today in total overhead is actually the combination of what it pays internally (\$343,000) plus what it pays to the County (\$240,000). In total, Shoreline pays \$583,000. Under the new arrangement, the City would pay about \$468,000, an annual savings of \$115,000.

¹⁴ The \$76,238 for benefits is 28 percent of the amount paid for labor: \$272,279.

Equipment Rental

While a great deal of the preceding analysis has focused on staffing, equipment is also another critical area to note. Were the City to explore providing more services directly, it would need to acquire not only more staffing but also the rolling stock and equipment to enable them to perform their jobs.

On average, the County has charged the City about \$157,000 per year equipment rental. Within this amount includes “rental” of the piece of equipment or rolling stock itself plus the proportionate share of the maintenance and repairs associated with that equipment. Were the City to acquire more equipment and rolling stock, it would likely do precisely the same thing.

Jurisdictions can have different amortization schedules for equipment and vehicles, and the kind of vehicle it is also dictates amortization. Police cars often are replaced on a 2 or 3 year basis, while some fire and public works vehicles are replaced on a much less frequent schedule. Accordingly to the Washington State Auditor’s office, a seven-year amortization schedule is not unusual for public works vehicles.

Accordingly, were the City to use a seven year amortization schedule for public works vehicles, the amount it has been paying to the County for equipment rental yields \$1,099,000 for vehicle rental/depreciation, gas and oil, and maintenance and repair. If one were to assume maintenance costs of 15 percent for maintenance and operation (meaning about \$300 per month for a ½-ton pick-up and about \$750 per month for a dump truck — which would be exceedingly generous)¹⁵, then over seven years the City is paying at least \$934,000 for the purchase and/or replacement of County vehicles and equipment. For this amount the City could acquire a very extensive fleet to meet most of its public works requirements.

Actual equipment maintenance costs based upon Shoreline’s experience are provided below (see page 78).

Granted, with an increased fleet the City would incur increased insurance costs, liability, storage or garaging needs, staff training, and other costs associated with operating a vehicle fleet. However, the fleet acquired would be wholly the City’s; readily accessible, able to meet the certain kinds of immediate/emergency priorities, and available to the City 24 hours per day.

¹⁵ More precise fleet maintenance costs developed by the City are discussed in Section IV.

Section IV: Implementation Plan

The following pages present one possible implementation/action plan the City could explore for developing a greater in-house capacity for public works services and making an arguably more strategic application of its public works dollars.

Vision

Given all of the information provided to this point, and the goal and objectives outlined in Section I (see page 23), the vision for the new Shoreline Public Works Department could be:

*To make the most intelligent application of limited dollars
through a strategic mix of City and contracted services
so that the Shoreline Public Works Department has the accomplishments and quality
of a department several times its staffing.*

Summary of Key Action for Next Three Years

Up front, it is essential to note that a few major tasks would need to be accomplished in the very near term, or in some cases during the development of the expanded department, to ensure an effective operation and cost control.

- We have stated previously that Shoreline does not have a “customized” work plan for its transportation maintenance services. One of the first tasks of the Road Coordinator we project to hire in 1999 (see below) would be to undertake the immediate development of such a customized plan. This will require a comprehensive survey of City infrastructure and comparisons to the most appropriate practices. It also should result in a “punch list” of items that need immediate maintenance attention.
- Related to the first item — indeed an outgrowth of it — is the development of an infrastructure assessment. Also as mentioned earlier in this study, the City continues to work from a capital improvement project list that was developed by King County prior to incorporation. The City must develop its own list based upon its own standards, priorities, and policy direction.

- In the near term, the City should examine how best to increase its inventory of vehicles and equipment, either through leases, purchases, short-term financing, or other means.

Projected Salary and Benefits Costs

Throughout the balance of this Section we will be discussing possible staff additions to the City's Public Works Department. To gain a sense of the salary implications, the table below lists the kinds of job classifications considered in the Implementation Plan and the presumed costs for benefits. Benefits were assumed at 28 percent of salary.

The source for the salary information is the *1998 Washington City and County Employee Salary and Benefit Survey*, prepared by the Association of Washington Cities. The salary figures are the average of all Washington cities that participated in the survey and have a population greater than 50,000 persons.

1998 Salary and Benefits Costs for Future Shoreline Budgeting
Based Upon A.W.C. Salary Survey

| Job | 1998 Salary | Benefits | TOTAL |
|---|-------------|----------|----------|
| Roads Coordinator | \$61,260 | \$17,153 | \$78,413 |
| Contracting Administrator ¹⁶ | \$56,448 | \$15,805 | \$72,253 |
| Field Supervisor | \$49,188 | \$13,773 | \$62,961 |
| Maintenance Worker III | \$37,728 | \$10,564 | \$48,292 |
| Maintenance Worker I | \$36,156 | \$10,124 | \$46,280 |

By comparison, and using the same source of information, King County's average salaries for similar positions are as follows. As with the data in the table above, we assumed 32 percent of salary for benefits expenses, which is the County's actual experience. The 1998 salaries below are the average of actual salaries within the job category.

1998 King County Salary and Benefits Costs Averages
Based upon A.W.C. Salary Survey

| Job | 1998 Salary | Benefits | TOTAL |
|---------------------------|-------------|----------|-----------|
| Road Superintendent | \$92,436 | \$29,580 | \$122,016 |
| Contracting Administrator | \$50,418 | \$16,134 | \$66,552 |
| Field Supervisor | \$50,706 | \$16,226 | \$66,932 |
| Heavy Equipment Operator | \$40,008 | \$12,803 | \$52,811 |
| Maintenance Worker | \$38,109 | \$12,195 | \$50,304 |

¹⁶ For budgeting purposes, we used salary information for a senior planner position.

To illustrate further, later in the implementation plan that follows we assume the creation of a operations crew that attends to a range of both road and surface water management tasks (see page 84). Disregarding administration and other support positions for this illustration only, the “crew” would be composed of a field supervisor, 2 Maintenance Worker III’s, and 3 Maintenance Worker I’s. Comparing 1998 King County to 1998 projected Shoreline personnel expenses, then, a Shoreline operations crew would cost \$25,081 less than actual average King County salaries and benefits.

Comparison of Personnel Costs for One Operations Crew
1998 Salaries and Benefits per Tables Above

| Job | King County | Shoreline |
|----------------------------|------------------|------------------|
| Field Supervisor | \$66,932 | \$62,961 |
| Maintenance Worker III (2) | \$105,622 | \$96,584 |
| Maintenance Worker I (3) | \$150,912 | \$138,840 |
| TOTALS | \$323,466 | \$298,385 |

Cost Advantage to Shoreline: \$25,081 (7.6%)

While the projected savings are not substantial, the table above does provide a sense of scale as to whether City staffing would cost less or more than staffing through the County.

Projected Vehicle and Equipment Costs

Also in the implementation plan that follows some projections are made about additional vehicles and equipment that would be required to assume greater direct responsibilities for certain public works functions. The table below lists approximate costs and sales tax expenses for the kinds of vehicles and equipment considered in the implementation plan.

The primary source for this data is the State of Washington’s Department of General Administration’s “Fax on Demand” most recent procurement schedule.

1999 Approximate Costs of Certain Vehicles and Equipment

| Item | Per Unit Cost | Sales Tax | TOTAL |
|-------------------|---------------|-----------|----------|
| ½-ton Pickup | \$19,845 | \$1,707 | \$21,552 |
| ¾-ton Pickup | \$23,416 | \$2,014 | \$25,430 |
| Crew Cab Pickup | \$22,156 | \$1,905 | \$24,061 |
| 5-yard Dump Truck | \$44,970 | \$3,867 | \$48,837 |
| Backhoe | \$45,000 | \$3,870 | \$48,870 |
| Snow Blade | \$9,995 | \$860 | \$10,855 |
| Sanding Box | \$6,940 | \$597 | \$7,537 |
| Utility Trailer | \$15,000 | \$1,290 | \$16,290 |

Projected Vehicle and Equipment Maintenance and Replacement

As the City considers adding a more extensive fleet of vehicles and equipment, it will face a one-time significant cost in getting the fleet purchased and then immediately beginning to fund the fleet's replacement.

Typically, a jurisdiction will have a fleet replacement schedule that amortizes the replacement cost of the vehicle and then assesses that in its "rental charges" accordingly. Alternatives to this would be to lease the vehicles or to buy them initially on a contract and then renew the contract for the purchase of a new vehicle.

Were Shoreline to use the method whereby it purchased the vehicles with cash and then immediately began funding replacement, the City would have a much larger initial cost for its fleet than it would in subsequent years. This is normal, but readers should be aware that starting the fleet will be somewhat costly, but in the end the City will have much more reasonable on-going and replacement costs.

Additionally, the City obviously will incur greater maintenance costs than it is paying currently for the small fleet the City maintains now (see page 14). Shoreline staff have estimated monthly maintenance costs for three types of vehicles based upon projections from the City's actual experiences.

| | |
|-------------|-----------------|
| Light Duty | \$75 per month |
| Normal Duty | \$150 per month |
| Heavy Duty | \$300 per month |

"Light duty" refers to air compressors, utility trailers, and such equipment. "Normal duty" refers to vehicles such as sedans and pick-ups. "Heavy Duty" would be vehicles such as dump trucks and backhoes.

These estimated monthly costs include insurance, fuel, oil, tires, and regular service. The estimates do not include replacement costs, which would be added according to the City's amortization schedule.

Projected Space Needs

Clearly more staff will require more office and working space for that staff.

The City has developed an inventory and projection about space requirements for various categories of City staff. For the kinds of staff considered in this implementation plan, the standard space requirements are:

| Position | Similar to | Space Per | # Planned | TOTAL |
|-------------------|--------------------|-----------|-----------|------------|
| Roads Coordinator | Project Engineer | 120 | 1 | 120 |
| Contract Admin. | Project Engineer | 120 | 1 | 120 |
| Field Supervisor | Build. Inspector | 80 | 1 | 80 |
| Maint. Worker III | CRT Representative | 80 | 2 | 160 |
| Maint. Worker I | CRT Representative | 80 | 4 | 320 |
| TOTAL | | | | 800 |

Labor Union Issues

With the addition of public works field operations staff, the City very likely will face the introduction of labor unions, which to date the City has not had. Accordingly, the City will incur a cost to negotiate the first contract, then will have on-going expenses with contract matters that emerge during the term of the contract and contract renegotiation.

For budgeting purposes, we factored in \$25,000 for the initial labor contract, and \$2,000 per year thereafter for non-renegotiation matters.

Three-year Implementation Plan

In the following pages we outline a three-year implementation plan for creating an enhanced Shoreline Public Works Department that offers more directly-provided services and makes greater use of contracts with private vendor.

The material begins with a snapshot of the current department. Then, for each subsequent, year we include the major implementation tasks to be accomplished in the year; summaries of staffing, space, and equipment implications; and a snapshot of the department as it would look at the end of that year (which can be compared to the snapshot of the current situation on page 81).

The implementation plan generally used the following criteria for determining whether a service should be provided directly by Shoreline or continue to be contracted either with the County or another vendor:

- Tasks that could be accomplished on a planned, periodic basis generally were seen as good candidates for contracting, since the City could develop specifications, open the work for competitive bidding, and choose the lowest responsible bidder
- Tasks that required unique, specialized equipment generally were kept as contracted services, thus lowering the City's capital costs.
- Tasks that were more day-to-day and required only moderate equipment needs were seen as good candidates for the City to provide directly.
- Immediate/emergency priority tasks that required only moderate equipment needs also were seen as good candidates for Shoreline to provide directly.

The overriding point to the implementation plan is that it is presumed services would continually be evaluated as to whether they were good candidates for Shoreline to assume. For example, the City can not justify adding a signal maintenance shop at this time, but in the future as the City replaces and standardizes signal controllers it may want to explore providing this service in conjunction with neighboring cities on a cost-sharing basis.

Current

| <i>Distribution of Tasks or Responsibilities</i> | | | | |
|---|---|--|-------------|-------------------|
| <u>King County</u> | <u>Other Providers</u> | <u>Shoreline</u> | | |
| <ul style="list-style-type: none"> • Road Patching • Road Paving • Grading • ± Vegetation Cntrl • Spraying • ± Dangerous Trees • Shoulder Maint. • Bridge Maint. • Snow & Ice Cntrl • Street Sweeping • Signs • Signals • Thermoplastics • Painting • Vactoring • Curb & Gutter • Drainage Pipes • Catch Basins, MHs • Slides & Washouts • Ditching • Retaining Walls • Utility Billing | <ul style="list-style-type: none"> • ± Vegetation Cntrl • ± Dangerous Trees | <ul style="list-style-type: none"> • Contract Oversight • Customer Requests • ± Cold Patching • ± Brush Removal • ± Dangerous Trees • ± Sign Maintenance • ± Hand Ditching • ± Catch Basins • ± Environ. Education • ± Hazardous Materials | | |
| <i>Shoreline Public Works Staffing</i> | | | | |
| <u>Administration</u> | <u>Engineering</u> | <u>CRT</u> | <u>SWM</u> | <u>Operations</u> |
| Director Managem't Analyst Admin. Support | City Engineer 2 Project Engineers | 5 FTEs | Coordinator | Operations Mgr. |
| <i>Vehicles and Equipment</i> | | | | |
| ½-ton Pickup ½-ton Pickup 4x4 Sport Utility | Sedan ¾-ton Utility Van | 1.5-ton flatbed | | |
| <i>Space Requirements</i> | | | | |
| <u>Office</u> | <u>Shop/Storage</u> | <u>Yard</u> | | |
| 3,763 square feet | 1,184 square feet | None Developed | | |

Actions to be Accomplished by End of Year One

By end of Year One of plan:

- Establish sign maintenance shop (storing prefabricated signs and equipment)
- Secure additional shop/storage space
- Hire Roads Coordinator
- Hire Maintenance Worker I (Signs)
- Hire general Maintenance Worker I (October)
- Hire Contracting Administrator (latter half of year)
- Remove all vegetation control and tree services from County contract effective in 1999 (less than 10% adjustment)
- Enter into private vendors for all vegetation control and tree services (including dangerous trees)
- Formally notify County by April 1, 1999 that the following services will be removed from County contract on January 1, 2000: sign maintenance, thermoplastics, painting, ditching, and street sweeping.
- Add ¾-ton pickup to fleet (shared, but used mostly by signs-related maintenance worker)

Accomplishments by End of Implementation Year One

| | |
|-------------------------------|---|
| Formal Notification to County | Sign Maintenance Thermoplastics Painting Ditching Street Sweeping |
| Other County Notification | Changes Less Than 10%: Vegetation Control Tree Services |
| Service Changes for 1999 | Vegetation Control Tree Maintenance |
| Staffing Additions | Project Engineer (Planned) Street Superintendent Maint. Worker I (Signs) Contracting Administrator Maintenance Worker I |
| Vehicle/Equipment Additions | ¾-ton Pickup |
| Space Implications | 240 sq. ft. Office Space Create Sign Shop (1,050 sq.ft.) |

End of Year One of Implementation Plan

| <i>Distribution of Tasks or Responsibilities</i> | | | | |
|--|---|--|-------------|--|
| <u>King County</u> | <u>Other Providers</u> | <u>Shoreline</u> | | |
| <ul style="list-style-type: none"> • Road Patching • Road Paving • Grading • Shoulder Maint. • Roadside Spraying • Bridge Maint. • Snow & Ice Cntrl • Street Sweeping • Signals • Thermoplastics • Painting • Vactoring • Curb & Gutter • Drainage Pipes • Catch Basins, MHs • Slides & Washouts • Ditching • Retaining Walls • ± Debris Removal • Utility Billing • ± Hazardous Mtrls. | <ul style="list-style-type: none"> • Vegetation Cntrl • Tree Maintenance • ± Dangerous Trees | <ul style="list-style-type: none"> • Contract Oversight • Customer Requests • Sign Maintenance • ± Cold Patching • ± Brush Removal • ± Dangerous Trees • ± Sign Maintenance • ± Hand Ditching • ± Catch Basins • ± Environ. Education • ± Hazardous Materials • ± Debris Removal | | |
| <i>Shoreline Public Works Staffing</i> | | | | |
| <u>Administration</u> | <u>Engineering</u> | <u>CRT</u> | <u>SWM</u> | <u>Operations</u> |
| Director Managem't Analyst Contracting Admin. Admin. Support | City Engineer Project Engineer Project Engineer | 5 FTEs | Coordinator | Operations Mgr. Roads Coord. Worker I (signs) Maint. Worker I |
| <i>Vehicles and Equipment</i> | | | | |
| ½-ton Pickup ½-ton Pickup ¾-ton Pickup 4x4 Sport Utility | Sedan ¾-ton Utility Van | 1.5-ton FB Dump | | |
| <i>Space Requirements</i> | | | | |
| <u>Office</u> | <u>Shop/Storage</u> | <u>Yard</u> | | |
| Add 240 sq. ft. New Total = 4,003 | Add Sign Shop (1,050 sq ft) New Total = 2,234 | None Developed | | |

Actions to be Accomplished by End of Year Two

- Enter into private vendor contracts for: thermoplastics, painting, ditching, and street sweeping.
- Formally notify County by April 1, 2000 that the following services will be removed from County contract on January 1, 2001: road patching, grading, shoulder maintenance, snow & ice control, curb & gutter, vactoring, drainage pipes, catch basins and manholes, retaining walls, bridge maintenance.
- Hire Field Supervisor (latter half of year)
- Hire two Maintenance Worker III's (about October 1, 2000)
- Hire two Maintenance Worker I's (about October 1, 2000)
- Procure two 5-yard dump trucks
- Procure field supporting equipment
- Procure Crew Cab Pickup
- Procure ½-ton Pickup
- Procure Backhoe

Accomplishments by End of Implementation Year Two

| | |
|-------------------------------|---|
| Formal Notification to County | Roadway Patching Grading Shoulder Maintenance Snow & Ice Control Curb & Gutter Vactoring Drainage Pipes Catch Basins, M.H.s Retaining Walls Bridge Maintenance |
| Service Changes for 2000 | Sign Maintenance Thermoplastics Painting Vactoring Ditching Street Sweeping |
| Staffing Additions | Field Supervisor 2 Maintenance Worker III's 2 Maintenance Worker I's |
| Vehicle/Equipment Additions | 2 5-yard Dump Trucks Crew Cab Pickup ½-ton Pickup 2 Utility Trailers Snow Blows, Blades Ice Sanding Boxes Backhoe |
| Space Implications | 80 square feet office 1,800 shop space (w/offices) |

End of Year Two of Implementation Plan

| <i>Distribution of Tasks or Responsibilities</i> | | | | |
|---|---|--|---|--|
| <u>King County</u> | <u>Other Providers</u> | <u>Shoreline</u> | | |
| <ul style="list-style-type: none"> • Road Patching • Road Paving • Grading • Shoulder Maint. • Roadside Spraying • Bridge Maint. • Snow & Ice Cntrl • Street Sweeping • Signals • Curb & Gutter • Drainage Pipes • Catch Basins, MHs • Slides & Washouts • Retaining Walls • Utility Billing • ± Hazardous Mtrls. | <ul style="list-style-type: none"> • Vegetation Cntrl • Tree Maintenance • ± Dangerous Trees • Thermoplastics • Painting • Ditching | <ul style="list-style-type: none"> • Contract Oversight • Customer Requests • Sign Maintenance • ± Cold Patching • ± Brush Removal • ± Dangerous Trees • ± Hand Ditching • ± Catch Basins • ± Environ. Education • ± Hazardous Materials | | |
| <i>Shoreline Public Works Staffing</i> | | | | |
| <u>Administration</u> | <u>Engineering</u> | <u>CRT</u> | <u>SWM</u> | <u>Operations</u> |
| Director Managem't Analyst Contracting Admin. Admin. Support | City Engineer Project Engineer Project Engineer | 5 FTEs | Coordinator | Operations Mgr. Roads Coord. Field Super Mnt Wrkr III (2) Mnt Worker I (3) Worker I (Signs) |
| <i>Vehicles and Equipment</i> | | | | |
| ½-ton Pickup ½-ton Pickup ¾-ton Pickup ½-ton Pickup Crew Cab P.U. 4x4 Sport Utility | Sedan ¾-ton Utility Van | 1.5-ton FB Dump 5-yd Dump Truck 5-yd Dump Truck | Snow Plows Snow Blades Sanding Boxes Backhoe Utility Trailers | |
| <i>Space Requirements</i> | | | | |
| <u>Office</u> | <u>Shop/Storage</u> | <u>Yard</u> | | |
| Add 80 sq. ft. New total = 4,083 | Add Shop 1,800 sq. ft. New Total = 4,034 | Developed w/Shop (Hamlin Site) | | |

Actions to be Accomplished by End of Year Three

- Assume fully responsibility for: road patching, grading, shoulder maintenance, snow & ice control, curb & gutter, vactoring, drainage pipes, catch basins and manholes, retaining walls, bridge maintenance
- Retain contract with King County for: signal maintenance, slides and washout response, roadside spraying, utility billing, and some hazardous material clean-up
- Ensure City has contractual relationships for fleet maintenance
- Continually monitor performance

Accomplishments by End of Implementation Year Three

| | |
|-----------------------------|---|
| County Notification | -0- |
| Service Changes | Road Patching Grading Shoulder Maintenance Snow & Ice Control Curb & Gutter Vactoring Drainage Pipes Catch Basins & MHs Retaining Walls Bridge Maintenance |
| Staffing Additions | -0- |
| Vehicle/Equipment Additions | -0- |
| Space Implications | -0- |

End of Year Three of Implementation Plan

| <i>Distribution of Tasks or Responsibilities</i> | | | | |
|--|---|---|---|--|
| <u>King County</u> | <u>Other Providers</u> | <u>Shoreline</u> | | |
| <ul style="list-style-type: none"> • Signals • Roadside Spraying • Slides & Washouts • Utility Billing • ± Hazardous Mtrls. | <ul style="list-style-type: none"> • Vegetation Cntrl • Tree Maintenance • Thermoplastics • Painting • Vactoring • Ditch Maintenance • Street Sweeping • Bridge Maintenance • Retaining Walls • ± Grading • ± Shoulder Maintenance | <ul style="list-style-type: none"> • Contract Oversight • Customer Requests • Cold Patching • Brush Removal • Dangerous Trees • Sign Maintenance • Road Patching • Curb & Gutter • Drainage Pipes • Snow & Ice • Hazardous Materials • Catch Basins • ± Grading • ± Shoulder Maintenance • ± Hand Ditching • ± Environ. Education | | |
| <i>Shoreline Public Works Staffing</i> | | | | |
| <u>Administration</u> | <u>Engineering</u> | <u>CRT</u> | <u>SWM</u> | <u>Operations</u> |
| Director Managem't Analyst Admin. Support Contract Admin. Contracting Asst. Admin Support | City Engineer Project Engineer Project Engineer | 5 FTEs | Coordinator | Operations Mgr. Street Super Filed Super. Mnt Workr III (2) Mnt Worker I (3) Worker I (Signs) |
| <i>Vehicles and Equipment</i> | | | | |
| ½-ton Pickup ½-ton Pickup ¾-ton Pickup ¾-ton Pickup ½-ton Pickup Crew Cab Pickup 4x4 Sport Utility | Sedan ¾-ton Utility Van | 1.5-ton FB Dump 5-yd Dump Truck 5-yd Dump Truck | Snow Plows Snow Blades Sanding Boxes Backhoe Utility Trailers | |
| <i>Space Requirements</i> | | | | |
| <u>Office</u> | <u>Shop</u> | <u>Yard</u> | | |
| 4,083 square feet | Total = 4,034 square feet | Developed | | |

Financial Implications of Plan

In light of all of the information provided so far, the projected cost comparison of continuing with the City of Shoreline's current arrangements versus implementing the plan outlined immediately above shows the following.

Table 29: Cost Comparison of Current to Recommended Actions
Showing Marginal Costs to Shoreline

| | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------------------------------|------------------|------------------|--------------------|--------------------|--------------------|
| Current Contracts | \$877,981 | \$913,100 | \$949,624 | \$987,609 | \$1,027,113 |
| Recommendation | | | | | |
| County Contracts ¹⁷ | \$877,981 | \$833,957 | \$536,868 | \$116,290 | \$120,942 |
| Shoreline Costs | | | | | |
| Labor | -0- | \$83,626 | \$347,355 | \$505,121 | \$525,326 |
| Materials, etc. | -0- | -0- | \$15,140 | \$47,163 | \$49,049 |
| Vendors | -0- | \$59,429 | \$179,264 | \$300,395 | \$346,989 |
| Equipment | -0- | \$2,716 | \$20,885 | \$67,245 | \$67,245 |
| City overhead | -0- | \$13,650 | \$62,463 | \$94,489 | \$98,269 |
| Subtotal | -0- | \$159,421 | \$625,107 | \$984,413 | \$1,055,878 |
| Total Annual Cost | \$877,981 | \$993,378 | \$1,161,975 | \$1,130,702 | \$1,201,820 |
| Difference w/o Start-up | | \$80,278 | \$212,351 | \$143,093 | \$183,706 |
| Start-up Costs | | \$96,080 | \$531,487 | -0- | -0- |
| Total Difference | | \$176,358 | \$743,838 | \$143,093 | \$183,706 |

For the data in the data above, the following assumptions were made in addition to the ones identified earlier in the text of the report:

- Inflation for both the County contract and City expenses was assumed at 4.0 percent.
- In year 1999, the Roads Coordinator was assumed to be hired July 1 and the Sign Worker (Maintenance Worker I) and the general Maintenance Worker I were assumed to be hired October 1. For start-up costs, \$15,000 was included to equip the sign shop (no sign fabrication included) plus the projected one ½-ton pickup.
- In year 2000, additional staffing includes the Field Supervisor (6 months), the 2 Maintenance Worker III's (3 months), and the 2 other Maintenance Worker I's (3 months).
- In year 2001, no additional staffing nor equipment beyond what had been added in previous years is assumed.

¹⁷ County costs in this table exclude utility billing services.

There are several points to note about the cost differences:

- First, the City would experience significant, one-time start-up costs for equipment and work space, and brief periods during the transition when the City would have both direct staffing and contracted services with the County that would be scheduled to be curtailed in the subsequent year. This appears unavoidable.
- While the total cost difference is higher, the level of service also would be higher. As noted, the current County contracts total about 7 FTEs for direct service plus “overhead” employees. The implementation plan gives the City an additional 9 FTEs plus “overhead” employees and existing public works staff. Part of this can be explained by the fact that usually it takes six persons to have an adequately-staffed operations crew (not including upper supervisory staff). But to create a six-person crew, the City would gain 1,374 days of labor (see page 68). This already is greater than the number of labor days the City now experiences through its road contract (see page 46).
- The contracting division contemplated in the implementation plan would administer contracts totaling \$300,000 (year 2001) under the current level of service. The City could evaluate whether or not to increase the amount of service it receives through these contracts.

Elaboration of Cost Comparisons — Enhanced Services

An aim in this report has been to try and provide an “apples-to-apples” comparison of the level of service the City has been experiencing for the last few years against the costs of creating a Shoreline “hybrid” department. Unfortunately, the level of service that Shoreline has been receiving has been of a sufficiently low level that an apples-to-apples comparison could be misleading; it might suggest that the City could perform the functions with a low staffing, when in fact it would need its own minimally-sized crew in order to perform at least the basic level of service.

Accordingly, rather than look only to a per capita comparison, readers may want to note the following three points:

1. The implementation plan calls for the addition of a full-time City of Shoreline Roads Coordinator. This administrative position is a necessary part of the staffing Shoreline would require in order to compile work plans, oversee roads operations, and coordinate with City administration and other departments. The City does not have a position like this at this time whose job is dedicated full time to roads supervision. Accordingly, this is a service enhancement that goes beyond the strict apples-to-apples comparison yet is indispensable. The annual cost for this position with salary, benefits, and City overhead would be \$96,169 in year 2000 dollars (by which time the position will be fully “ramped-up”).
2. The implementation plan calls for a Contracting Administrator to develop and process the numerous contracts for vendor services that fall in the “Other Providers” column

in the implementation plan (see page 87). This, too, would be a service enhancement. Shoreline is receiving the services in the "Other Providers" column through King County now. The implementation plan calls for them to continue to be provided at the same level but through other means. This will require an enhanced level of supervision to ensure the City is getting the best service and the services it contracts for. The annual cost for this position with salary, benefits, and City overhead would be \$89,506 in year 2000 dollars (by which time the position will be fully "ramped-up").

3. Finally, the true apples-to-apples comparison would make a discount for the hours of labor that are in the "Other Providers" column shown on page 87. That is, the City of Shoreline has been receiving services totaling about 7 FTEs for all services. Under the implementation plan, half of these would be provided for under private vendors. Of the services that remain in the "Shoreline" column (page 87), the average annual amount of annual labor the County has been providing equals about half of the number of total labor days — or about 3-1/2 FTEs. However, the City of Shoreline could not perform all of those services with only 3-1/2 FTEs, so it must hire about 7. Given that, the City actually will have double the staffing level dedicated to those services in the Shoreline column that to date have been provided by King County. The value of this enhanced staffing including salary, benefits, City overhead equals about \$200,000 in year 2000 dollars. This does not even factor in the time Shoreline is paying for but "losing" in King County travel time from Renton of other public work sites.

Therefore:

1. The City of Shoreline can create a public works department comparable to its current experience through a combination of private vendor contracts, increased directly-provided City services, and minimal contracting with King County,
2. The cost of doing so will be about \$143,000 more per year (year 2001) than what the City pays today (see table, page 88), but
3. The City's necessary staffing level actually will provide not an apples-to-apples level of service but an enhanced level of service over what the City experiences today.

In theoretical terms only, then, based upon the information provided above in this subsection, the City of Shoreline could pay only \$776,300 per year for the same level of service, but the recommended implementation plan will add \$385,675 worth of service enhancements.

Table 30: Theoretical Cost of Service Comparison
All Dollars From Year 2000 Projections
See Table 29 Page 88

| | |
|--|------------------|
| Cost of Recommended Implementation Plan | \$1,161,075 |
| Cost of Roads Coordinator — Enhancement | \$96,169 |
| Cost of Contracting Administrator—Enhancement | \$89,506 |
| Cost of Appropriate City Crew—Enhancement | \$200,000 |
| Value of Enhancements | \$385,675 |
| Cost of “Apples-to-Apples” Level of Service | |
| Recommendation | \$1,161,975 |
| Less Value of Enhancements | (\$385,675) |
| Theoretical Shoreline Total Costs | \$776,300 |
| Were City to Continue with County Contracts | \$949,624 |
| Theoretical Savings | \$173,324 |

The table above demonstrates that were Shoreline to provide the purest match to the number of labor days or levels of accomplishment the City has been receiving, the City could provide a mix of private vendor contracts and very small staffing and realize annual savings of about \$173,000 per year. The actual staffing needed to accomplish the work plan will require more resources than what the table immediately above suggests. However, the table does reinforce the point that the current arrangement with King County is costing the City more on a per accomplishment basis than the City could achieve through other means.

Other On-going Considerations

The implementation plan offers but one possible scenario for transitioning services. The City could develop its own alternatives that employ a different mix of contracted and directly-provided services.

Regardless, the City would be well advised to continue to analyze its service mix over time and change it as is seen best at the time. Examples that have been noted above include a periodic evaluation of vactoring should be conducted to test whether the level of service seems accurate, and if not whether increased service would suggest greater financial return by bringing the service in-house — perhaps offset through contracting with other, smaller cities. Similarly, street sweeping and signal maintenance are likely candidates for on-going evaluation to test service versus costs in the long term.