
MINISTRY OF TRANSPORTATION

4.14—Provincial Highway Maintenance

(Follow-up to VFM Section 3.14, 1999 Annual Report)

BACKGROUND

The Ministry of Transportation's goal is to foster a positive business climate supported by a safe, efficient, and accessible transportation network. The Ministry sets minimum road safety and maintenance standards, establishes and enforces user safety regulations, and sets policies for the use of the provincial highways network. The Ministry is also responsible for the maintenance and repair of provincial highways. It performs routine highway-maintenance services to protect existing roads from untimely deterioration and to ensure highways are safe and usable. These services include such activities as culvert cleaning, pothole repair, crack filling, guiderail replacement, snow plowing, and salting.

In 1999, the provincial network consisted of 2,350 bridges and the equivalent of approximately 22,500 kilometres of two-lane highways. The estimated replacement value of this network was \$27 billion. In the 1998/99 fiscal year, the Ministry spent \$235 million on highway maintenance, which included both payments to contractors and the cost of ministry internal operations then remaining. By March 31, 1999, approximately 30% of the provincial highways system had been outsourced. Since our 1999 audit, the Ministry has completed the outsourcing of the maintenance function for its entire highway network.

In 1999, we concluded that the Ministry did not have sufficient procedures to measure and report on program effectiveness. We found that the highway system had not improved appreciably since 1992, when we reported that a lack of timely maintenance contributed to a decline in the proportion of roads in good condition from 60% in 1979 to 40% in 1991. In 1998, only 44% of the province's highways were in good condition.

We also concluded that the Ministry had not achieved the estimated 5% savings on the outsourcing contracts we reviewed, which covered about 20% of the province's highway system. The Ministry had also engaged contractors to perform preservation management work without tender and offered these contractors surplus ministry vehicles and equipment without going through the required public auction. In addition, ministry procedures were not adequate to ensure compliance with legislation, policies, and contractual terms and conditions as maintenance co-ordinators stated that patrol areas were too large and there were insufficient staff to adequately monitor the work of contractors.

Accordingly, we made a number of recommendations to the Ministry, and the Ministry made certain commitments to take corrective action.

CURRENT STATUS OF RECOMMENDATIONS

Based on information received from the Ministry of Transportation, some action has been taken on most of the recommendations we made in our 1999 report. The current status of each of our recommendations is outlined below.

MEASURING AND REPORTING PROGRAM EFFECTIVENESS

Effectiveness Measures

Recommendation

To ensure that the highway maintenance program is effective in meeting its stated objectives, the Ministry should:

- *implement and monitor performance measures for highway safety improvements and both winter and summer maintenance activities; and*
- *gather the necessary information to determine whether its maintenance activities are cost effective in preserving and prolonging the life of the provincial highways.*

Current Status

The Ministry informed us that it has continued to gather data and to monitor winter performance measures. The Ministry established a performance target for the 1998/99 fiscal year of 90% of all highways to achieve bare pavement after a winter storm within standard time frames for each class of highway. The Ministry indicated that it achieved a performance level of 93.6% for 1998/99 and 95.6% for 1999/2000. As of June 2001, data for the 2000/01 fiscal year was still being collected.

The Ministry still has not developed performance measures for summer maintenance activities. However, we were informed that this is being considered as part of the Ministry's new Asset Management Business Framework. One objective of the framework is to ensure that the Ministry has a systematic decision-making process for operating, maintaining, and expanding the highway network, from planning through to implementation. This framework is also expected to integrate engineering services and infrastructure management systems with economic, financial, and best business practices and then build these into the existing business cycle.

The Ministry indicated that it is working together with the Ministry of Finance on the Asset Management Business Framework, which is scheduled to be implemented in the 2002/03 fiscal year.

DUE REGARD FOR ECONOMY AND EFFICIENCY

Alternative Service-delivery Option

Recommendation

To ensure that the maximum benefits are realized from the outsourcing initiative, the Ministry should evaluate each contract to determine which outsourcing method provides the taxpayer with the greatest actual savings and revise the implementation strategy where necessary.

Current Status

The Ministry agrees that it is important to realize the maximum benefits from the outsourcing initiative and has decided to continue with the blended approach of using Area Maintenance Contracts and Managed Outsourcing. In this regard, the Ministry indicated that this approach

would “provide the best opportunity to maintain competition, develop the industry and achieve savings.” In addition, the Ministry intends to monitor the contracting market to determine which contract method is most cost effective as each contract is completed and subsequently retendered.

Potential Outsourcing Savings

Recommendation

To ensure that the outsourcing initiative actually results in better value for money for the taxpayer, the Ministry should:

- *reassess the estimated savings for the contracts awarded prior to renewal and modify its service delivery approach accordingly; and*
- *review its business case methodology for service delivery to ensure that outsourcing is in fact beneficial to the taxpayer.*

Current Status

In response to questions from the Standing Committee on Public Accounts (PAC) about the savings achieved from outsourcing highway maintenance, the Ministry reported to PAC in May 2001 the results of the work of consultants that the Ministry identified as an “independent auditor.” Key results of the consultants’ work regarding outsourcing savings that were presented to PAC included savings of 5.7%, or over \$11 million. These savings were reportedly achieved in the maintenance program for the 1999/2000 fiscal year as compared to the 1998/99 fiscal year.

We reviewed the report prepared by the consultants and obtained information from the report’s authors in answer to a number of questions. The consultants informed us that they had been engaged as consultants, not as an “independent auditor” and that the scope and extent of the work performed by them was determined by the terms of their consulting engagement with the Ministry. The consultants’ report does not provide the necessary audit assurance to demonstrate the savings actually achieved from outsourcing because sufficient analysis was not done to verify the savings. For example, almost half of the reported \$11 million in savings to the maintenance program was due to an adjustment for inflationary pressures that was uniformly applied to expenditures for the 1998/99 fiscal year without regard to which of the expenditures may have been subject to lower inflationary pressures.

We therefore concluded that the consultants’ work cited by the Ministry does not sufficiently support the Ministry’s claims of actual savings achieved from outsourcing. It is also unlikely that the consultants’ report can be used to support the achievement of the 5% savings target set by the Management Board of Cabinet. In addition, we noted that the consultants observed that several cost estimates for the pilot contract were based on historical information that was not kept by the Ministry and could not be verified by the consultant. We were particularly concerned about the fact that all highway maintenance activity was irreversibly outsourced without first evaluating the results of outsourcing in the pilot district in order to make a business case for further outsourcing.

It would be more beneficial for the Ministry to establish and apply procedures for contract management and service quality monitoring and other necessary processes to ensure that maintenance operations are carried out cost effectively, in compliance with ministry goals and expectations, and in accordance with Management Board of Cabinet directives. The Ministry

advised us that it is committed to developing and implementing these procedures and practices and that it considers the consultants' report as very useful in this regard.

Maintenance Information System

Recommendation

To ensure that the District Direct Input System provides accurate and complete information for management decision-making, the Ministry should establish procedures, such as periodic on-site verification by existing employees, to obtain the necessary assurance that information submitted by contractors is reliable.

Current Status

The Ministry informed us that it has made changes to the District Direct Input System, which is now called the Maintenance Management Information System. Maintenance co-ordinators are now required to verify the information entered into the system by the contractors by comparing it to supporting documentation and field activities prior to submitting it to the Ministry's database. Information to be verified includes the type of work, materials used, equipment deployed, and labour hours.

We were informed that in May 2001 the Ministry started implementing enhancements to the system software by including a two-level electronic data review and approval process to help ensure the validity of the information.

Highway Transfers

Recommendation

To maximize the benefits of the outsourcing initiative, the Ministry should consider not exercising the two-year option on the pilot area maintenance contract and either retender or switch to an alternative delivery method that is more cost effective.

Current Status

We noted in our 1999 Annual Report that the pilot contract included a stipulation that, if the number of kilometres of highway the contractor was to maintain decreased, the Ministry would pay the contractor only 20% of the costs associated with the maintenance of those kilometres. The number of kilometres did decrease as the Ministry transferred 425 kilometres of highway in the pilot area to local municipalities. We stated in our report that "the contractor contends that the 20% payment is insufficient and there is a risk that the Ministry may eventually have to pay more."

The transfer of highways during the original contract term resulted in a dispute between the contractor and the Ministry over contract payments. We were informed that the contractor would only accept a settlement on the condition that the contract be extended. The Ministry agreed to pay the contractor over \$1 million to settle the dispute and extended the contract for two years effective April 1, 2000.

A review carried out by a consultant on the Ministry's decision to extend the contract concluded that the economic justification for continuing with the contract was difficult to assess. While determining a benchmark against which to compare the estimated costs of the extension, the consultant could not easily find documentation supporting the estimates, and the support for some

cost estimates no longer exists (for example, as previously noted, several cost estimates were based on historical information that was not kept by the Ministry and could not be verified by the consultant). In those cases, the consultant reviewed research on comparable costs and verified the reasonableness of the Ministry's estimates; however, the consultant could not attest to the accuracy of those estimates.

Maintenance of a Competitive Industry

Recommendation

The Ministry should review its current tendering practices to ensure that excessive costs are not incurred in future highway maintenance. In addition, in areas where no savings would result from outsourcing, the Ministry should implement the most cost-effective method of service delivery.

Current Status

As indicated under the Alternative Service Delivery Option section above, the Ministry decided to continue with the blended approach of using area maintenance contracts and managed outsourcing. The Ministry indicated that, as of October 2000, the maintenance of all of the 22,471 kilometres of two-lane equivalent highways in the provincial network had been outsourced. Of this amount, 13,134 kilometres (58.4%) were under area maintenance contracts, and 9,337 kilometres (41.6%) were under managed-outsourcing arrangements.

The Ministry indicated that the current outsourcing arrangements are competitive, involving a large number of contractors of varying sizes that are well distributed geographically. For instance, there are nine area maintenance contractors, as well as a number of smaller contractors that the Ministry hires under its managed-outsourcing program. However, we noted that one of the nine contractors maintained 37% of the roads under area maintenance contracts, with the remaining eight contractors individually maintaining a considerably smaller percentage of the roads.

As we noted in our 1999 Annual Report, the Ministry still has not established an upper limit on the amount of work that any one contractor could obtain. Without such a policy in place, the Ministry runs the risk that, for the second round of competition, smaller companies may not be able to adequately compete. This could result in an inadequately competitive market and an escalation of costs to maintain service levels.

Preservation Management

Recommendation

To ensure that value for money is obtained, the Ministry should award preservation management contracts through a competitive acquisition process as required by Management Board of Cabinet directives.

Current Status

Subsequent to our audit, the Ministry sought advice from the Secretary of the Management Board of Cabinet regarding its process of awarding preservation management contracts. For work estimated to be less than \$100,000, the Ministry's practice was to approach the contractor for a price before considering an open competitive process. This price would then be compared

to ministry estimates, and if it was considered reasonable, the work would be granted to the existing contractor. The Secretary replied that “the corporate procurement directives require that supplies and services be acquired on a competitive and transparent basis. They do not preclude Ministries from using the type of process you [the Ministry] have described provided that all elements of the process are disclosed to all proponents in the initial RFP [Request for Proposal].”

As a result, the Ministry continued to follow the practice described above. However, the Ministry engaged a consultant to review a sample of preservation management contracts for documentation, consistency, and compliance with ministry standards. The consultant indicated that there were a number of areas in the process of awarding the contracts that required improvements and made recommendations to strengthen ministry procedures. We understand that the Ministry is taking action on the consultant’s recommendations.

Surplus Assets

Recommendation

To ensure that the Ministry optimizes its returns on the sale of surplus assets by allowing all potential buyers an equal opportunity to purchase surplus vehicles and equipment, the Ministry should dispose of surplus assets through public auction as required by the Management Board of Cabinet directives and ministry policy.

Current Status

Subsequent to our audit, the Ministry also sought advice from the Secretary of the Management Board of Cabinet on the issue of the disposal of surplus assets. The Secretary replied that the procurement directive requires that all arrangements for the disposal of supplies or equipment by sale must be equitable to potential buyers, avoid conflicts of interest by excluding government employees as buyers, and optimize the returns to government. In this context, the disposal of surplus assets as part of a larger, transparent, and competitive tendering process is consistent with the obligations of the procurement directive. The Ministry informed us that since the completion of outsourcing, all surplus assets were being disposed of through public auction.

COMPLIANCE WITH POLICIES, PROCEDURES, AND CONTRACT TERMS

Monitoring of Maintenance Services

Recommendation

In order to fulfill its obligations under the Public Transportation and Highway Improvement Act, the Ministry should establish procedures to ensure that:

- *the monitoring function is effectively carried out;*
- *maintenance co-ordinators maintain sufficiently detailed records of their monitoring efforts; and*
- *penalties are assessed where warranted according to the terms of the maintenance contracts.*

Current Status

The Ministry informed us that it has developed and distributed a Monitoring Manual for Area Maintenance Contracts that contains detailed procedures with respect to communication with the contractor, documentation to be maintained by the contract administrators, reporting requirements for non-compliance of contract terms, and contract-performance reporting. In addition, to complement this manual, a Maintenance Operations Contract Administration Guideline and Protocol was developed and has been in place since 1999. The guideline and protocol detail the approach to be taken by contract administrators when contractors violate the terms of maintenance contracts.

Specific monitoring procedures initiated by the Ministry include a pilot project during the 2000/01 fiscal year using Global Positioning System technology to track the location of the contractor's snow plows and other equipment and ministry patrol trucks. In addition, the Ministry installed sensors on vehicles to track and record information such as speed, direction of the snow plow, and the rate at which salt and sand are being spread on the pavement. The Ministry intends to expand this project during the winter of 2001/02.

Contract Performance Evaluation

Recommendation

To ensure that only competent contractors are selected and that the best value for the funds expended is received, the Ministry should formally evaluate all contractors upon completion of maintenance service contracts and before awarding subsequent contracts. In addition, the Ministry should develop a system to allow regions to share information regarding a contractor's past performance.

Current Status

The Ministry informed us that it issued a policy in December 2000 that clarified and formalized the requirement to prepare an evaluation at the completion of a maintenance contract and on an annual basis for long-term contracts. This evaluation is to assess key components of the contractor's performance, from adherence to contract specifications to environmental compliance. The reports are to be used to provide a critique to the contractor and to assist the Ministry in awarding subsequent contracts.

A central registry has been developed and is administered by the Qualification Control Section of the Construction and Operations Branch. The registry gathers the performance evaluations completed for all maintenance contractors and provides information upon request to District Offices to help them make hiring decisions.

The Ministry also indicated that a more comprehensive contractor Performance Rating System is being developed that will link a contractor's performance history to its ability to secure future work with the Ministry. A working model is expected to be completed by the fall of 2001 for subsequent implementation.