

Chapter 3

**Department of Transportation
and Infrastructure –
Outsourcing of Highway
Maintenance and
Construction Work**

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Department of Transportation and Infrastructure - Outsourcing of Highway Maintenance and Construction Work

Report of the Auditor General – Volume I, Chapter 3 – June 2019
One-Page Chapter Summary

Why Is This Important?

- In recent years, over \$300 million a year was spent to maintain infrastructure (roads and bridges).
- Around \$200 million a year spent in public construction tenders (outsourced maintenance and construction work).
- Inconsistencies found in how road repair work was done (in-house vs outsourced) throughout the Province.

Overall Conclusions

- In certain cases, decisions to outsource road and bridge maintenance, construction work and related equipment were not based on evidence nor supported by an objective analysis of costs and consequences.
- Instead, the Department relied on subjective judgement when making outsourcing decisions.
- The Department outsourced work at the taxpayer's expense to support the private sector and encourage economic growth.

What We Found

No Framework for Outsourcing Decisions

- Outsourcing is at times necessary and beneficial. For example, when the private sector can do the work faster, better and cheaper.
- Some outsourcing decisions were based on something the Department referred to as “philosophical” decisions in place of evidence-based analysis
- Department's objective included increasing economic development opportunities
- No consistent framework to guide which programs or construction projects to outsource

Programs Knowingly Outsourced at Higher Cost

- Chipseal outsourced at higher cost to taxpayer (estimated \$1.7 million over two years)
- Plough truck build outsourced at 10% premium (\$1 million additional cost to outsource 40 pre-built trucks)
- Government responded to private sector request for additional work which cost taxpayers more

Key Findings and Observations Table

Department of Transportation and Infrastructure - Outsourcing of Highway Maintenance and Construction Work

Paragraph	Key Findings and Observations
	No Framework for Outsourcing Decisions
3.25	<i>No outsourcing policy or decision-making framework</i>
3.26	<i>Opportunity for greater transparency and objectivity</i>
3.28	<i>Department's objective included increasing economic development opportunities</i>
3.30	<i>Some outsourcing decisions were based on what the Department referred to as "philosophical decisions" in place of objective analysis</i>
3.32	<i>Consultant estimated outsourcing savings but not supported by evidence</i>
3.35	<i>Risk of over-dependence on suppliers not assessed when outsourcing</i>
3.40	<i>Data collection and reporting on outsourced work is weak</i>
3.42	<i>Department's listing of awarded contracts is inaccurate</i>
3.43	<i>Poor tracking of construction tender information</i>
	Programs Knowingly Outsourced at Higher Cost
3.48	<i>Chipseal outsourced at higher cost to the taxpayer</i>
3.49	<i>Experts found outsourcing more expensive</i>
3.51	<i>Minister announced intention to outsource although Department knew it was more expensive</i>
3.54	<i>Department did not act immediately to reverse districts doing more expensive outsourced chipseal work</i>
3.59	<i>Initially the Department failed to reinvest in critical equipment</i>
3.63	<i>Plough truck procurement continued to be outsourced despite known higher cost</i>
3.65	<i>Additional cost of \$1 million from outsourcing plough truck builds - equivalent to 4 more plough trucks</i>
3.67	<i>Other indirect savings from building plough trucks in-house</i>
3.70	<i>Government responded to private sector request for additional work which cost the government more</i>
3.71	<i>Department did not follow consultant's advice to bring expensive outsourced work back in-house</i>
3.75	<i>In-house bridge and culvert work allows for faster emergency response</i>

Recommendations and Responses

Recommendation	Department's response	Target date for implementation
We recommend the Department of Transportation and Infrastructure:		
3.34 Develop an evidence based outsourcing policy and a decision-making framework to guide which programs and activities to outsource.	<i>The Department will develop an outsourcing policy and adopt a decision-making framework to demonstrate how decisions respecting outsourcing of programs are reached</i>	November 2019
3.39 Assess the risk of over dependence on a single supplier when making outsourcing decisions.	<i>The Department will ensure that its outsourcing policy and decision-making framework includes a process for managing risk of over dependence on a single supplier.</i>	N/A
3.47 Record, track and regularly report on the extent and composition of outsourced maintenance and construction work.	<i>The Department will review its reporting practices and investigate opportunities to reconfigure financial and management systems to report on outsourcing at the Department level.</i>	November 2019
3.55 Evaluate how road work such as chipsealing is sourced and delivered in all districts following an objective and evidence-based cost benefit analysis.	<i>The Department will ensure that its outsourcing policy and decision-making framework considers jurisdictional factors, including value for money options and allows for program delivery unique to each of its 6 districts.</i>	N/A

Recommendations and Responses (continued)

Recommendation	Department’s response	Target date for implementation
We recommend the Department of Transportation and Infrastructure:		
3.62 Include capital investment in critical equipment when planning the most cost-effective manner to deliver road repairs.	<i>Vehicle Management Agency will continue to support the Department’s operational and planning needs through effective fleet management practices.</i>	<i>Immediate</i>
3.68 Source capital equipment through the most cost-effective means as demonstrated by a business case analysis.	<i>In 2019-2020, the Department will fabricate plow trucks and replacement parts at its central repair shop to ensure standardization of the fleet and savings.</i>	<i>Immediate</i>
3.78 Source bridge and culvert replacement work in an evidenced-based, cost-effective and timely manner.	<i>The Department will ensure that its outsourcing policy and decision-making framework applies to delivery of the bridge and culvert capital programs.</i>	<i>N/A</i>

Audit Introduction

3.1 Our provincial highway infrastructure plays a significant role in terms of connecting communities and enabling commerce. Maintained and serviceable roads and bridges are vital.

3.2 The task of maintaining roads and bridges will get harder as our existing network ages and as the prevalence of severe storms and weather events puts added strain on our infrastructure. Considering these challenges, the Department of Transportation and Infrastructure, (the Department or DTI) must operate as efficiently as possible to maximize the effectiveness of every dollar spent.

Why we did this audit

3.3 Over recent years the Department spent over \$300 million per year on capital construction and maintenance. This is done through a combination of an in-house work force and by outsourcing to private contractors. Exhibit 3.1 shows the capital spending on infrastructure for the fiscal years 2013-14 to 2017-18.

Exhibit 3.1 - Capital Spending on Infrastructure

Capital Spending on Infrastructure (\$ millions)					
	2013-14	2014-15	2015-16	2016-17	2017-18
Bridges	\$33.9	\$48.7	\$64.0	\$63.2	\$57.1
Highways	147.7	172.3	227.1	226.2	221.4
Total¹	\$ 181.6	\$ 221.0	\$ 291.1	\$ 289.4	\$ 278.5
1. Does not include Municipal designated highway or Federal-Provincial Cost-Share Programs					

Source: Prepared by AGNB from DTI Annual Reports

3.4 In 2018 we completed follow up work on our 2013 Pre-Mixed Asphalt Procurement report. During that process we found risks related to how certain capital maintenance programs in the Department had been outsourced. An analysis of the asphalt commodity bought by the Department over time showed a significant decrease in recent years. We also noted inconsistencies in who (i.e. outsourced vs. in-house) did road repair work throughout the province. This led us to question why work had been outsourced in some areas and not others and how these decisions were made. More details on our follow-up on asphalt procurement can be found in Appendix III.

3.5 Our office also received a public concern over the processes followed by the Department in deciding what work is tendered (outsourced).

Objective

3.6 The objective of our audit was:

To determine if the decision-making process followed by the Department of Transportation and Infrastructure to outsource capital rehabilitation, maintenance work and related equipment procurement is evidence based.

Scope and Approach

3.7 We examined capital maintenance, construction and related activities on existing road and bridge infrastructure. We also included construction of heavy equipment for winter maintenance.

3.8 Our audit approach encompassed interviews with Department staff and stakeholders external to government. We reviewed Department documentation and reports and conducted analytical procedures on financial reports and tendering information provided by the Department.

3.9 For more information about the scope, approach and period of our audit see Appendix I. The criteria we used can be found in Appendix II.

Conclusions

3.10 We concluded:

- In certain cases, decisions to outsource road and bridge maintenance, construction work and related equipment were not based on evidence nor supported by an objective analysis of costs and consequences. Instead, the Department has focused on economic development and relied on subjective judgement when making outsourcing decisions; and
- The Department outsourced work at the taxpayer's expense to support the private sector and encourage economic growth.

Background Information

- 3.11** “There is an ongoing, world wide trend towards outsourcing¹ highway management and maintenance activities”.²
- 3.12** Events in other jurisdictions (countries and provinces) have highlighted the risks in outsourcing critical construction and maintenance work. When a company goes bankrupt or does not deliver contracted services on time or to appropriate quality, it is the government and residents who suffer.
- 3.13** This risk was highlighted with the recent bankruptcy of Carillion Group of Companies. Carillion was a British multinational company that provided facilities management and construction services in the UK, Canada and the Middle East. It declared itself insolvent on January 15, 2018, which put into question millions of dollars of government contracts for vital services. This included road maintenance (ploughing) in Ontario and Alberta. “Vital public services cannot be outsourced to private contractors, without Government underwriting the risks of collapse”.³
- 3.14** In a separate case, the Ontario Auditor General issued a special report in 2015 on the Ministry of Transportation’s winter highway maintenance. They found a change to how winter maintenance was outsourced in Ontario negatively impacted service levels. “This created significant safety concerns both among the general public and for those delivering emergency services such as the Ontario Provincial Police (OPP)⁴.”
- 3.15** Common reasons cited for outsourcing include inadequate staffing, lack of expertise and the need for specialized equipment. However, reducing costs has often been the overriding objective of outsourcing.

¹ In the context of this report, outsourcing is used to refer to the use of resources not under Department’s direct ownership or management to construct and maintain transportation system facilities or equipment.

² *Procurement Models for Road Maintenance*, Tony M Porter BE (Hons), FIPENZ Opus International Consultants Limited, 2005

³ “The Collapse of P3 Giant Carillion and Its Implications”, John Loxley, Canadian Centre for Policy Alternatives-Manitoba, January 2018.

⁴ “Special Report Winter Highway Maintenance” Office of the Auditor General of Ontario, April 2015.

Jurisdictional Comparison

3.16 Exhibit 3.2 shows how winter highway maintenance is performed in selected Canadian jurisdictions.

Exhibit 3.2 - Winter Highway Maintenance in Some Canadian Provinces in 2015

<i>Winter Highway Maintenance in Some Canadian Provinces in 2015</i>	
Province	Delivery Model
Ontario	100% Outsourced
British Columbia	100% Outsourced
Alberta	100% Outsourced
Quebec	80% Outsourced 20% In-house
New Brunswick	8% Outsourced 92% In-house
Manitoba	100% In-house
Saskatchewan	100% In-house

Source: Prepared by Office of the Auditor General of Ontario (adapted by AGNB)

3.17 Ontario, British Columbia, and Alberta also outsource tasks such as:

- bridge maintenance;
- signage; and
- lighting and striping work.

Outsourcing in New Brunswick

3.18 In New Brunswick, the Department outsources around \$200 million annually on highway construction work to the private sector. The majority of winter and summer road maintenance activities are done in-house. However, the Province has three long-term Public-Private Partnership (P3) highway contracts where the maintenance has been outsourced to the P3 partners.

3.19 Exhibits 3.3 & 3.4 show the value and number of tenders awarded by or on behalf of the Department for the fiscal years 2014-15 to 2017-18.

Exhibit 3.3 - Department of Transportation and Infrastructure - Awarded Tenders

Department of Transportation and Infrastructure Awarded Tenders (in millions)				
Fiscal Year	2014-15	2015-16	2016-17	2017-18
Total highway construction tenders awarded by DTI	N/A ¹	\$219	\$172	\$223
Goods and Services tendered on behalf of DTI	\$77	\$252 ²	\$130	\$170
Total tendered	N/A	\$471	\$302	\$393
1 Department data source started in 2015-16.				
2 Includes \$141 million service contract for provincial radio communications system				

Exhibit 3.4 - Number of Tenders Awarded

Number of Tenders Awarded				
Fiscal Year	2014-15	2015-16	2016-17	2017-18
Total highway construction tenders awarded by DTI	N/A ¹	161	142	140
Goods and Services tendered for DTI	699	827	1,102	1,166
Total number of tenders	N/A	988	1,244	1,206
1 Department data source started in 2015-16.				

Source: Tables prepared by AGNB from data obtained from SNB and DTI

- 3.20** Outsourcing and procurement by the Department of Transportation and Infrastructure are done through two different processes and under two separate Acts.
- 3.21** Construction tenders for certain work such as bridge replacement and resurfacing of roads fall under the *Crown Construction Contracts Act*. The Department of Transportation and Infrastructure manages the public tendering processes under this Act.
- 3.22** Tenders for the procurement of goods and services such as asphalt and snow removal are done under the *Procurement Act*. Service New Brunswick issues these tenders on behalf of the Department, through the New Brunswick Opportunities Network.
- 3.23** The majority of highway maintenance (summer and winter) is done by in-house crews. This includes ploughing, patching potholes and road signage.

3.24 Examples of activities that have been outsourced include:

- Paving;
- Grading;
- Striping (line painting); and,
- Brush cutting.

No Framework for Outsourcing Decisions

No outsourcing policy or decision-making framework

3.25 The Department does not have a policy or a decision-making framework to determine which programs and construction tasks it will outsource.

Opportunity for greater transparency and objectivity

3.26 A clear and consistent framework would provide transparency and objectivity to the decision-making process.

3.27 Lack of an outsourcing policy and a decision-making framework could lead to decisions being influenced or perceived to be influenced by other factors such as assisting certain industry groups or regions at the taxpayer's expense.

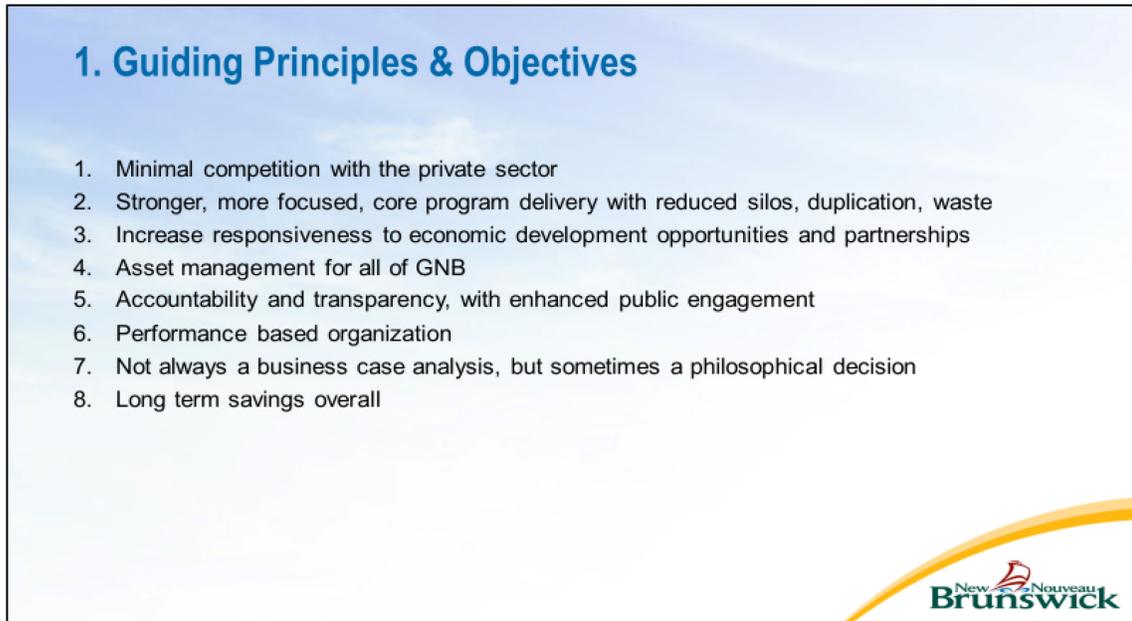
Department's objective included increasing economic development opportunities

3.28 We found the Department made decisions based on fostering economic development and growth of the private sector.

3.29 The Department's 2016-2018 reorganization and improvement initiative, had a list of objectives and guiding principles for the project as shown in Exhibit 3.5 that included:

- “minimal competition with the private sector”;
- “increase responsiveness to economic development opportunities and partnerships”; and
- “not always a business case analysis, but sometimes a philosophical decision”.

Exhibit 3.5 - Guiding Principles and Objectives for DTI reorganization



Source: Department of Transportation and Infrastructure

Some outsourcing decisions were based on what the Department referred to as “philosophical decisions” in place of objective analysis

3.30 We found these principles are not consistent with our expectations of the Department’s approach to efficient, effective and safe infrastructure management. “Philosophical decision making” may not be a suitable criterion for effective asset management as it is loosely defined and subjective. We expected outsourcing decisions to be based on objective analysis of risks and benefits to be achieved such as:

- Overall cost;
- Quality and reliability of service delivery;
- Time to completion;
- Mitigating risk; and,
- Need for specialized equipment.

3.31 Over the past nine years the Department has taken part in several improvement and cost cutting initiatives. They included two business process reviews with the help of external consultants; internal continuous improvement (Six Sigma black belt) initiatives and Department level transformation with guidance and direction from a third party outside consultant. According to the Department these combined initiatives helped the Department reduce over \$40 million in costs from 2011 to 2015 and improved the Department’s overall operating efficiency.

Consultant estimated outsourcing savings but not supported by evidence

3.32 The most recent initiative was a product of the strategic program review conducted across government in 2015-16. One of the options supported by an external consultant's report recommended the Department outsource all routine maintenance activities. The report was prepared with limited contact with the Department. It estimated potential savings of \$11 to \$22 million annually.

3.33 However, this option and the estimated savings were based on experiences reported in other provinces and States. It did not consider efficiency gains already realized by the Department. There was limited evidence specific to the Province to support the estimated savings.

Recommendation

3.34 **We recommend the Department develop an evidence based outsourcing policy and a decision-making framework to guide which programs and activities to outsource.**

Risk of over-dependence on suppliers not assessed when outsourcing

3.35 The Department does not assess the risk of over-dependence on suppliers when making outsourcing decisions.

3.36 Supplier availability can affect the competitiveness and ultimately the cost of outsourcing work.

3.37 We analyzed four years of the Department's construction tender information. Although there was an average of three bids received per tender, some tenders had as many as 12 bids where others had only one. 55 tenders valued at \$46 million in total were awarded where only one bid was received. \$27 million of this went to two companies.

3.38 Supplier availability is a crucial factor for deciding whether to outsource work and where. Outsourcing when there is a low number of suppliers risks conferring natural monopoly powers to the private firms doing the work. It also exposes the Department to a greater risk in the event a single supplier becomes bankrupt or leaves the area.

Recommendation

3.39 **We recommend the Department assess the risk of over dependence on a single supplier when making outsourcing decisions.**

Data collection and reporting on outsourced work is weak

3.40 The data collection, reporting and analysis done by the Department on outsourced construction and maintenance work is weak.

3.41 We requested information on the amount and type of work outsourced by the Department over the last five years. We were informed that such reports are not readily available as the systems are not configured to report on the data in this way.

Department's listing of awarded contracts is inaccurate

3.42 The Department started manually compiling a list of awarded construction contracts in 2016 for reporting to the Minister on total awarded contracts. However, we found the breakdown of the type of work being contracted out was not correct or consistent. While outsourcing data is recorded in the Department's project management and financial accounting systems, they have not been configured to report on Department level outsourcing activities.

Poor tracking of construction tender information

3.43 Construction tender information was not tracked in the same manner as tenders for goods and services.

3.44 Data on public tendering is split between the Department and Service New Brunswick (SNB). SNB only manages the information on the Department's procurement of goods and services but not construction related services.

3.45 Data collection and reporting by SNB is done through the New Brunswick Opportunity Network system. Regular reports are produced on total government spending on goods and services.

3.46 However, these reports do not include the tenders awarded directly by the Department which, as shown in Exhibit 3.3, represent the majority of capital spending.

Recommendation

3.47 **We recommend the Department record, track and regularly report on the extent and composition of outsourced maintenance and construction work.**

Programs Knowingly Outsourced at Higher Cost

Exhibit 3.6 - DTI Chipseal Spreader



Source: Department of Transportation and Infrastructure

Chipseal outsourced at higher cost to the taxpayer

3.48 The Department decided in 2016 to outsource the entire chipseal program despite earlier analysis that it would cost more to outsource. The Minister of Transportation and Infrastructure at the time believed that doing the chipseal through the private sector was the right thing to do⁵.

Experts found outsourcing more expensive

3.49 However, analysis done by the Department before the 2016 decision showed it was more expensive to outsource. This analysis found it was up to 18% cheaper to do the chipseal work in-house.

3.50 In addition, prior to the 2016 decision, an external consultant hired by the Province to assess cost saving opportunities from outsourcing the chipseal program found achieving material savings from outsourcing was questionable. As part of their work, the consultant also validated the analysis done by the Department and confirmed their earlier findings.

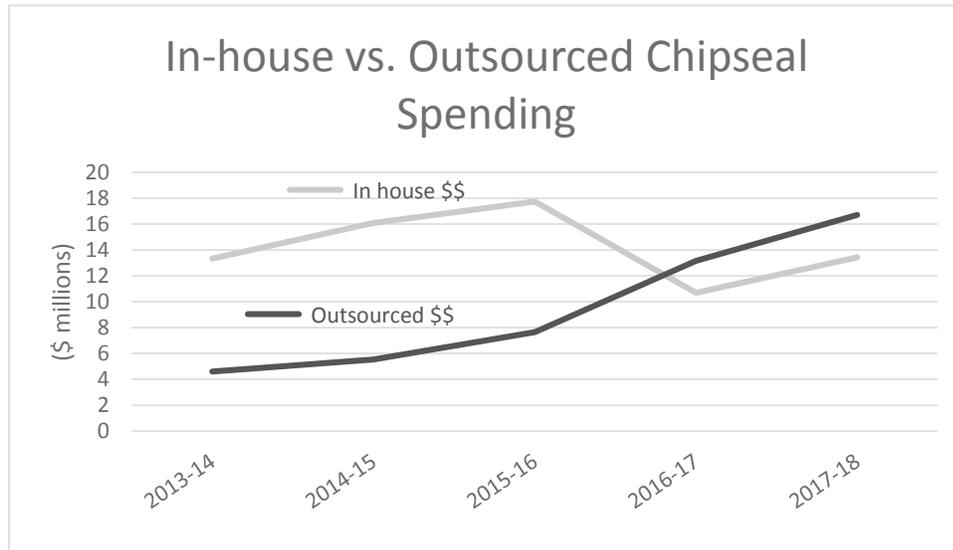
⁵ Transcript Standing Committee on Estimates and Fiscal Policy, February 23, 2016.

Minister announced intention to outsource although Department knew it was more expensive

3.51 Subsequently, as part of the 2016/17 capital budget, the Minister announced the intention that the chipseal program in all districts would be outsourced. This was contrary to the results of the Department's analysis. The process was to be phased in over a two-year period. Prior to this only 20-25% of chipseal work had been typically outsourced.

3.52 Exhibit 3.7 shows a steady increase in the amount of chipseal work outsourced to the private sector over a five-year period from 2013 to 2018. In that period the relative share of work outsourced doubled. It went from 26% (\$4.6 million) in 2013-14 to 55% (\$16.7 million) in 2017-18.

Exhibit 3.7 - Chipseal Spend In-house and Outsourced



Source: Chart created by AGNB with information from DTI

3.53 From the Department's cost comparison analysis, we estimated the incremental increase in chipseal work outsourced in the last two fiscal years (2016-17 and 2017-18) has cost the Province an extra \$1.7 million.

Department did not act immediately to reverse districts doing more expensive outsourced chipseal work

3.54 In 2017 the Department suspended implementation of the plan to outsource the chipseal work in all areas of the Province. However, in districts that had already transitioned to outsourcing, chipseal work was not brought back in-house, as the necessary resources and equipment were no longer available.

Recommendation

3.55 We recommend the Department evaluate how road work such as chipsealing is sourced and delivered in all districts following an objective and evidence-based cost benefit analysis.

Exhibit 3.8 - Older chipseal spreader paired with newer DTI truck



Source: Department of Transportation and Infrastructure

3.56 Prior to the decision to outsource the chipseal program, the Department faced an issue with critical equipment in need of replacement. Reinvestment in capital equipment was needed to be able to continue to do the work in-house. For example, the Department's three spreaders and equipment used to lay down the chips needed to be replaced.

3.57 As shown in Exhibit 3.9 the Department presented four options for continuing the chipseal program. Of the options, keeping the status quo, where most of the work was done in-house using old, end of life equipment, was not a viable option.

Exhibit 3.9 - Capital Equipment Options/Chipseal Program

2015-16 Capital Equipment Options/Chipseal Program
Option
Status quo- continue with in-house work with no reinvestment in equipment (not a viable option)
Purchase/lease equipment and continue doing work in-house
Downsize in-house capability and outsource more work
Outsource all

Source: Department of Transportation and Infrastructure

3.58 The analysis done by the Department showed that purchasing or leasing replacement equipment and continuing to do most of the work in-house was the least expensive viable option, but would require a plan to replace the capital equipment over 3 years. The downsizing option involved outsourcing more of the work to reduce in-house crews and free up equipment to use as salvage parts for the remaining two spreaders which would still need to be replaced within a couple of years.

Initially the Department failed to reinvest in critical equipment

3.59 With the government's independent announcement in 2016 to outsource the entire program over two years, no decision was made related to the equipment. In the interim, the Department secured parts and resources freed up from the increase in outsourcing to keep the remaining in-house crews operational.

3.60 However, when the plan to outsource the program was suspended in 2017, the Department began work on tendering for replacement chipseal equipment. The Department took delivery of two new spreaders in the fall of 2018.

3.61 Failure to plan for repair and replacement of critical assets means the Department may not be able to continue to provide programs like chipseal in-house. The Department may have no choice but to outsource regardless of what the evidence may suggest.

Recommendation

3.62 We recommend the Department include capital investment in critical equipment when planning the most cost-effective manner to deliver road repairs.

Plough truck procurement outsourced despite known higher cost

3.63 The Department continued to outsource plough truck procurement after analysis showed it costs more to outsource than build the trucks in-house.

Exhibit 3.10 - VMA heavy equipment shop- trucks assembled



Source: AGNB

3.64 The Department's Vehicle Management Agency (VMA) added 20 new plough trucks in 2016. 10 trucks were purchased already assembled while 10 were built in-house to the same specifications and standards. The Department then compared the costs and benefits of outsourcing against building the trucks in-house. They found buying pre-assembled plough trucks cost roughly 10% or roughly \$25,000 more per truck than building them in-house.

Additional cost of \$1 million from outsourcing plough truck builds - equivalent to 4 more plough trucks

3.65 Despite this analysis, the Department went on to outsource another 30 trucks (see Exhibit 3.12). The total added cost over the three years up to and including fiscal year 2019 was \$1 million, equivalent to the cost of building four more trucks.

Exhibit 3.11 - Plough blade mount fabrication



Source: AGNB

Exhibit 3.12 - Plough Trucks Outsourced

Plough Trucks Outsourced		
Fiscal Year	# trucks outsourced	Cost (\$Millions)
2016/17	10 (1 st order)	\$2.48
2017/18	10	\$2.47
2018/19	20	\$4.87
Total	40	\$9.82
<i>Source: DTI</i>		
<i>Average cost/truck purchased</i>		\$246,000
<i>Average cost/in-house build</i>		\$221,000

Source: AGNB, with data from DTI

3.66 We were informed by VMA management that in the upcoming fiscal year (2019-20) all 37 trucks will be assembled in-house.

Other indirect savings from building plough trucks in-house

3.67 Other benefits associated with building the trucks in-house were identified and include retaining the ability to repair and refurbish the equipment in-house and improved lifecycle management. The Department’s analysis indicated that in-house repairs may be done quicker and cheaper and result in trucks being put back into service sooner. VMA can refurbish truck components such as hydraulic cylinders in-

house, keeping the equipment in service longer at a lower cost.

Exhibit 3.13 - Department shop modifies/ cuts down stock frame. DTI also fabricates and stock piles hydraulic cylinders and other components in-house.



Source: AGNB

Recommendation

3.68 We recommend the Department source capital equipment through the most cost-effective means as demonstrated by a business case analysis.

3.69 The Department was directed to outsource more work to the private sector, particularly large culvert replacement. In certain cases, costs to design and tender the work were significant compared to the cost of the actual work to replace the culvert. This in turn meant outsourcing was more expensive than doing the work in house.

Government responded to private sector request for additional work which cost the government more

Department did not follow consultant’s advice to bring expensive outsourced work back in-house

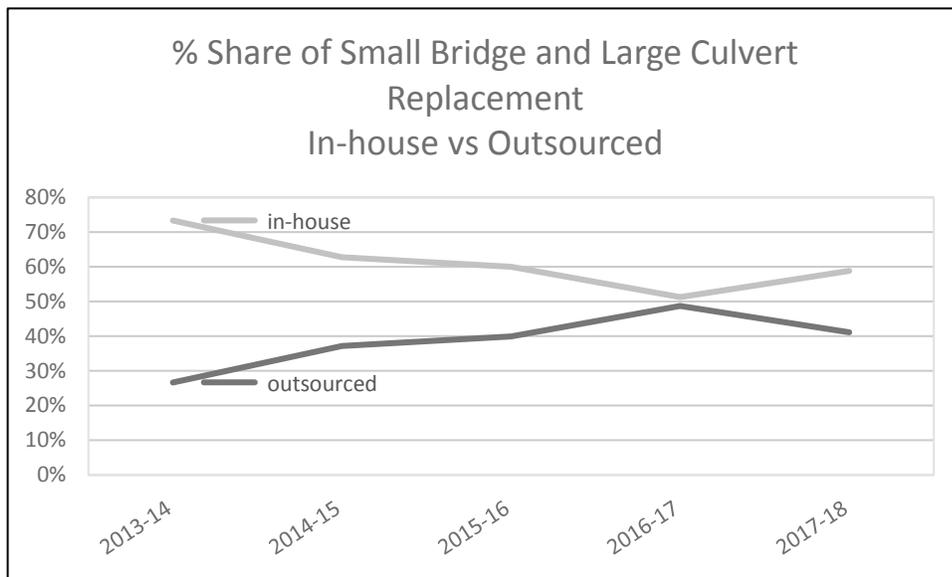
3.70 As shown in Exhibit 3.14, the share of work that went out to contract increased over a four-year period. Internal Department documents indicated the private sector had asked that more work be given to them.

3.71 Consultants hired by the Department advised bringing more small bridge work in-house but we were informed by the Department this was not immediately pursued because of the government’s viewpoint to support outsourcing.

3.72 Large culvert and small bridge work has been outsourced in the past to help balance in-house capacity. More work would be outsourced in years where in-house crews were already at capacity doing other road repair work or in situations where structures needed to be replaced because of flooding or other emergencies.

3.73 In the normal course of business, the decision to outsource is typically done on a project by project basis as part of the annual capital planning and budgeting cycle. The factors impacting the decision are availability of in-house crews to do the work and the complexity and estimated cost of the job.

Exhibit 3.14 - % Share of Small Bridge and Large Culvert Replacement In-house vs Outsourced



Source: Chart prepared by AGNB from Oracle financial data

3.74 Exhibit 3.15 shows capital spending on replacing large culverts and small bridges more than doubled since 2013. This is encouraging given the poor condition of the Province's bridges and large number of older bridges in need of capital maintenance shown in our 2013 report on provincial bridges.

Exhibit 3.15 - Capital spending on small bridges and large culverts

Capital spend on small bridges and large culverts (\$ millions)					
	2013-14	2014-15	2015-16	2016-17	2017-18
Bridge	\$ 5.6	\$ 5.0	\$ 7.8	\$ 13	\$ 13
Culvert	1.6	1.6	1.8	3.5	4.4
Grand Total	\$ 7.2	\$ 6.6	\$ 9.6	\$ 16.5	\$ 17.6

Source: Table prepared by AGNB from information supplied by the Department

In-house bridge and culvert work allows for faster emergency response

3.75 It is critical to keep the capability to do some small bridge and large culvert replacement work in-house. This way the Department can respond quickly to emergency situations to repair or replace a bridge or culvert. It will also help ensure bid competitiveness for projects that are outsourced.

3.76 There have been occasions when a tender was cancelled due to lack of competitiveness of the bids received. In-house crews then did the work. There have also been instances where tendered work ended up being done in-house to expedite completion of the task.

3.77 Outsourcing work is at times necessary and beneficial. For instance, when many structures require repairs at the same time or when a project requires specialized expertise and planning. Outsourcing can help get greater value from infrastructure spending when work can be done faster, better, cheaper by the private sector. However, it is important for the Department to follow an objective, transparent and evidence-based approach to balancing in-house and outsourced highway maintenance and construction work.

Recommendation

3.78 We recommend the Department source bridge and culvert replacement work in an evidenced-based, cost effective and timely manner.

Appendix I - About the Audit

This independent assurance report was prepared by the Office of the Auditor General of New Brunswick on the Department of Transportation and Infrastructure's outsourcing of capital rehabilitation, maintenance work and related equipment procurement. Our responsibility was to provide objective information, advice, and assurance to assist the Legislature in its scrutiny of the government's management of resources and programs, and to conclude on whether the Department's outsourcing of construction and maintenance work complies in all significant respects with the applicable criteria.

All work in this audit was performed to a reasonable level of assurance in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3001 – Direct Engagements set out by the Chartered Professional Accountants of Canada (CPA Canada) in the CPA Canada Handbook – Assurance.

AGNB applies Canadian Standard on Quality Control 1 and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

In conducting the audit work, we have complied with the independence and other ethical requirements of the Rules of Professional Conduct of Chartered Professional Accountants of New Brunswick and the Code Professional Conduct of the Office of the Auditor General of New Brunswick. Both the Rules of Professional Conduct and the Code are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behaviour.

In accordance with our regular audit process, we obtained the following from management:

- confirmation of management's responsibility for the subject under audit;
- acknowledgement of the suitability of the criteria used in the audit;
- confirmation that all known information that has been requested, or that could affect the findings or audit conclusion, has been provided; and
- confirmation that the findings in this report are factually based.

Period covered by the audit:

The audit covered the period between April 1, 2013 and December 31, 2018. This is the period to which the audit conclusion applies. However, to gain a more complete understanding of the subject matter of the audit, we also examined certain matters that preceded the starting date of the audit.

Date of the report:

We obtained sufficient and appropriate audit evidence on which to base our conclusion on May 31, 2019, in Fredericton, New Brunswick.

Appendix II – Audit Objective and Criteria

Objective

To determine if the decision-making process followed by the Department of Transportation and Infrastructure to outsource capital rehabilitation, maintenance work and related equipment procurement is evidence-based.

We used the following criteria:

- | | |
|--------------------|---|
| Criterion 1 | The Department should have a strategy, framework or policy in place for outsourcing. |
| Criterion 2 | The Department should decide what tasks to outsource following an analysis of risk, cost, level of service required. |
| Criterion 3 | The Department should monitor results of decisions to outsource to ensure continued best value to taxpayer, mitigation of risks to service delivery and quality of service. |

Appendix III – Asphalt Procurement Follow-up

Introduction

3.79 The 2013 Auditor General’s Report included a report on the Department of Transportation and Infrastructure’s procurement of pre-mixed asphalt.

3.80 The objective of our work was to determine if the Department’s exempt purchases of pre-mixed asphalt are being made with due regard for economy and transparency.

3.81 We originally chose to audit asphalt procurement because it was done under an exemption in the *Procurement Act*. This means the Department was not required to follow the Act when buying asphalt. It was the single largest category of exempt purchases made under the Department’s procurement exemption in 2012 at \$10.5 million. Because of this and concerns raised by the public and private sector we believed there was a risk for non-transparent business practices.

3.82 However, we decided to defer completion of our work to allow the Department the opportunity to complete a process improvement project and make other procedural changes to the asphalt procurement process.

Asphalt Procurement no Longer Exempt

3.83 In 2018, we honoured our commitment to follow up and found asphalt is no longer procured under the exemption in the *Procurement Act*. Starting in 2017, tenders for asphalt are issued each year through the New Brunswick Opportunities Network (NBON), the government’s procurement portal for purchasing goods and services.

3.84 Eliminating the use of the exemption was done to keep New Brunswick compliant with trade agreement obligations, specifically: the Canadian Free Trade Agreement (CFTA) and the Canada-European Union Comprehensive Economic Trade Agreement (CETA).

Conclusion

3.85 We concluded given changes to the asphalt procurement processes the risks are now in line with typical government procurement of goods and services. Consequently, we decided not to pursue this work any further.

Process improvement

3.86 We followed up on the status of the process improvement project for asphalt leveling. This was an initiative looking at all the component costs in doing this type of road repair work, the biggest of which was asphalt procurement. The aim of the project was to *“Gain an understanding of the factors that have the greatest impact on production cost and quality variation, then implement standard leveling practices, eliminate/minimize the impact of constraints, reduce production cost, and improve quality”*⁶.

3.87 According to the Department, completion of the project resulted in productivity improvements and a better understanding of the cost variations found in leveling work across the province. This led to more efficient use of resources and better decision making.

Revised asphalt procurement process description since 2017

3.88 Starting in 2017 an open tender was published on NBON. A letter was also sent by the Department to all known suppliers in the province notifying them of the new process and the need to formally submit a bid through NBON prior to the tender close.

3.89 At the close of the tender period all bids are publicly opened by procurement staff at Service New Brunswick. The bids received after the close are not accepted.

3.90 Procurement staff summarize the bid results and send them to the Department. The Department reviews the results to determine if there are any areas in the province not represented by a supplier. The Department then approves the bids received and SNB awards contracts of supply to all successful bidders, which provides a list of purchase orders for suppliers and an initial unit price. The list is provided to

⁶ “Department of Transportation and Infrastructure Pre-mixed Asphalt Procurement”, Auditor General of New Brunswick, Chapter 7, 2013

the Department who distribute it to each district office to buy asphalt as needed during the year.

3.91 The unit price is adjusted throughout the season depending on changes to asphalt binder price index. This allows for changes in the price of the binder which comes from crude oil.