

Item:



Finance, Administration and Audit Committee Report

DATE: Wednesday, June 06, 2018

WARD(S): ALL

TITLE: INTERNAL AUDIT REPORT – WINTER MAINTENANCE AUDIT

FROM:

Kevin Shapiro, Director of Internal Audit

ACTION: FOR INFORMATION

Purpose

To present to the Finance, Administration and Audit Committee the Internal Audit Report on the Audit of Winter Maintenance.

Recommendations

1. That the Internal Audit Report on the Audit of Winter Maintenance be received.

Report Highlights

- When compared to other municipalities, the City of Vaughan provides residents with some of the highest levels of service in winter control.
- The winter road maintenance services agreement contains a comprehensive performance management component, that includes the application of incentives, disincentives and liquidated damages based on contractor performance.
- Improvements are required to ensure risks related to the execution of the City's winter maintenance strategy are efficiently and effectively mitigated.
- Management has developed action plans which will mitigate the identified risks and address the recommendations outlined in the report.
- Internal Audit will follow up with management and report on the status of management action plans at a future committee meeting.

Background

The objective of the audit was to evaluate the adequacy and effectiveness of the internal controls, processes and procedures in place to mitigate the business risks associated with the execution of the City's winter maintenance strategy and programs.

The audit approach included a review of the goals, objectives and oversight of the performance based winter maintenance strategy including, the procurement process, data analyses of transactional and work order data, physical sampling of records, review of City policies and procedures and interviews with staff and management.

The audit scope included winter maintenance related activities that occurred in January 2016 to December 2017.

The audit scope did not include a review of the sidewalk clearing program.

Previous Reports/Authority

Not applicable.

Analysis and Options

The Citizen Satisfaction Survey suggests that an overwhelming majority of the City's residents are satisfied when it comes to winter maintenance services. When compared to other municipalities, the City of Vaughan provides residents with some of the highest levels of service in winter control. Whether it's reducing ice formation on roads, removing snow from roads, paths and sidewalks, or enabling residents to exit their driveways by partially removing windrows, the City aspires to provide a level of service for all its winter programs that will enable residents to travel safely.

The City began its quest for a better Winter Road Maintenance (WRM) contract in 2015, aiming to achieve better service, better value and longer-term predictability of costs. Toward this end, the City reviewed WRM contracts from across the province and country, and held interviews with colleagues at peer municipalities and the Ministry of Transportation. Interviews were also held with WRM vendors and the Ontario Road Builders Association to better understand their cost pressures and risks. This collaborative development process has resulted in a contract that is reflective of industry best practices, lesson's learned, as well as the City of Vaughan's unique needs.

The City has entered into a long-term performance based winter road maintenance services contract with two external contractors. The new performance-based contract is the first of its kind among municipalities in Ontario, and is supported by quality assurance measures that encourage the contractors to deliver on contractual requirements. The agreement represents many significant evolutions that improve upon the City's previous contract and enhance the overall operational performance and citizen experience with respect to winter road maintenance services.

The cost structure of the winter road maintenance services agreement is based on stand-by and operating rates. Stand-by rates are paid per unit of equipment for each day of the winter season. Operating rates are paid per unit of equipment per hour the equipment is operating. As a result, stand-by costs remain constant throughout the contract term and the operating costs vary each year based on the hours of operation required. Operating costs are directly dependent on the severity of the winter season. The City maintains a winterization reserve to mitigate the impact of severe winter seasons on the City's overall financial position.

The City has completed its second successful winter season under an innovative Winter Road Maintenance contract structure, and Transportation Services, Parks and Forestry Operations (TSPFO) has received many calls from peer municipalities seeking to emulate this success. This contract has also received widespread visibility from media exposure through well-known outlets such as CP24 and Global News. Last year, Vaughan received the Ontario Public Works Association's (OPWA) 2017 Award for Technical & Management Innovation, a further testament to the importance and timeliness of this work.

Financial Impact

There are no direct economic impacts associated with this report.

Broader Regional Impacts/Considerations

Not applicable.

Conclusion

Improvements are required to ensure risks related to the execution of the City's winter maintenance strategy are efficiently and effectively mitigated. The following opportunities were identified:

- Conducting a risk based evaluation of the City's winter maintenance strategy and programs to determine whether the existing service levels are deriving any additional benefits considering the incremental costs and potentially adverse environmental impacts.
- Completing a review of winter maintenance strategies and budgets to ensure alignment with Council directives and historical and anticipated spending.
- Enhancing the inspection process to verify the quality and completeness of contractor work to ensure it meets the contracted or legislated specifications.
- Improving monitoring and oversight activities over several processes including material inventory and usage, contract administration, work order administration, and record retention.

Internal Audit will follow up on the status of outstanding Management Action Plans related to this audit and will report the status to the Finance, Administration and Audit Committee.

For more information, please contact: Kevin Shapiro, Director of Internal Audit, ext. 8293

Attachments

1. Internal Audit Report – Winter Maintenance Audit

Prepared by

Kevin Shapiro, Director of Internal Audit, ext. 8293



INTERNAL AUDIT REPORT

Winter Maintenance Audit

May 2018

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CONCLUSION AND SUMMARY

Improvements are required to ensure risks related to the execution of the City's winter maintenance strategy are efficiently and effectively mitigated. The following opportunities were identified:

- Conducting a risk based evaluation of the City's winter maintenance strategy and programs to determine whether the existing service levels are deriving any additional benefits considering the incremental costs and potentially adverse environmental impacts.
- Completing a review of winter maintenance strategies and budgets to ensure alignment with Council directives and historical and anticipated spending.
- Enhancing the inspection process to verify the quality and completeness of contractor work to ensure it meets the contracted or legislated specifications.
- Improving monitoring and oversight activities over several processes including material inventory and usage, contract administration, work order administration, and record retention.

In comparison to other municipalities and the province's Minimum Maintenance Standards (MMS), the City provides its residents with one of the highest levels of winter maintenance services. Currently, the City does not have any mechanisms in place to determine whether this strategy is deriving any incremental benefits considering the associated higher costs and potentially adverse environmental impact.

A risk based strategy evaluation, in combination with a more thorough analysis of the winter maintenance strategies deployed by other municipalities, would help develop criteria that would evaluate the risks to achieving several of the City's winter maintenance objectives, including health & safety, traffic flow, cost containment and environmental impact. This would better inform decision making with respect to the strategy on a going forward basis.

Historically, some of the costs associated with these higher service levels have not been adequately reflected in the winter maintenance budget. This, and other related factors, have contributed to the depletion of the City's winter maintenance reserves. As part of the risk based strategy evaluation, opportunities exist to revisit the City's winter maintenance budgeting practices.

The City has established an inspection process to monitor the contractors' performance and provide corresponding incentives and disincentives based on that performance. Opportunities exist to enhance the process to ensure inspection samples are risk based, communicated only after the winter event has been declared over, providing greater management oversight to ensure the completeness of the inspection samples and quality review over the inspection videos. Ensuring the inspection process is operating appropriately reduces the operational risk of winter maintenance work not being effectively executed while mitigating the financial risks associated with the administration of an incentive and disincentive based winter maintenance program.

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Management oversight is an important element of the City's overall governance framework. As the City continues to grow, management will need to continually assess whether the City has the right tools, resources and controls in place to mitigate the most crucial risks facing the organization. There are increased operational, financial, liability and reputational risks to the City when management oversight is absent or focused on activities that are not crucial to meeting the City's organizational objectives. For winter maintenance, this includes enhancing processes and use of resources to support effective supervision over inventory management, contract and work order administration and record retention processes.

As part of the audit, a review of the procurement process for awarding the winter road maintenance services agreement was conducted. No issues were noted.

Internal Audit will follow up on the status of outstanding Management Action Plans related to this audit and will report the status to the Finance, Administration and Audit Committee.

BACKGROUND

The Citizen Satisfaction Survey suggests that an overwhelming majority of the City's residents are satisfied when it comes to winter maintenance services. When compared to other municipalities, the City of Vaughan provides residents with some of the highest levels of service in winter control. Whether it's reducing ice formation on roads, removing snow from roads, paths and sidewalks, or enabling residents to exit their driveways by partially removing windrows, the City aspires to provide a level of service for all its winter programs that will enable residents to travel safely.

The City began its quest for a better Winter Road Maintenance (WRM) contract in 2015, aiming to achieve better service, better value and longer-term predictability of costs. Toward this end, the City reviewed WRM contracts from across the province and country, and held interviews with colleagues at peer municipalities and the Ministry of Transportation. Interviews were also held with WRM vendors and the Ontario Road Builders Association to better understand their cost pressures and risks. This collaborative development process has resulted in a contract that is reflective of industry best practices, lesson's learned, as well as the City of Vaughan's unique needs.

The City has entered into a long-term performance based winter road maintenance services contract with two external contractors. The new performance-based contract is the first of its kind among municipalities in Ontario, and is supported by quality assurance measures that encourage the contractors to deliver on contractual requirements. The agreement represents many significant evolutions that improve upon the City's previous contract and enhance the overall operational performance and citizen experience with respect to winter road maintenance services, including:

- Contractors are responsible for resolving resident complaints after snow events. This provides a natural incentive to contractors to achieve quality service the first time, and thus avoid resident complaints and deficiencies.

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- To support customer response, the new contract includes 18 contractor-provided Customer Service Representatives (CSR). This service was not included in previous contracts.
- The contract contains a comprehensive performance management component, that includes the application of incentives, disincentives and liquidated damages based on contractor performance.
- The contract includes a defined list of equipment and a requirement for the contractors to purchase new equipment to fulfill this contract.

The cost structure of the winter road maintenance services agreement is based on stand-by and operating rates. Stand-by rates are paid per unit of equipment for each day of the winter season. Operating rates are paid per unit of equipment per hour the equipment is operating. As a result, stand-by costs remain constant throughout the contract term and the operating costs vary each year based on the hours of operation required. Operating costs are directly dependent on the severity of the winter season. The City maintains a winterization reserve to mitigate the impact of severe winter seasons on the City's overall financial position.

The City has completed its second successful winter season under an innovative Winter Road Maintenance contract structure, and Transportation Services, Parks and Forestry Operations (TSPFO) has received many calls from peer municipalities seeking to emulate this success. This contract has also received widespread visibility from media exposure through well-known outlets such as CP24 and Global News. Last year, Vaughan received the Ontario Public Works Association's (OPWA) 2017 Award for Technical & Management Innovation, a further testament to the importance and timeliness of this work.

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OBJECTIVES AND SCOPE

The objective of the audit was to evaluate the adequacy and effectiveness of the internal controls, processes and procedures in place to mitigate the business risks associated with the execution of the City's winter maintenance strategy and programs.

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Author: Mike Petrilli, CPA, CGA, CIA

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DETAILED REPORT

1. Reevaluate the City's Winter Maintenance Strategy and Service Standards

Ontario Regulation 239/02 sets out the Minimum Maintenance Standards (MMS) for Municipal Highways and, among other items, defines when a road can be deemed to be in a state of repair with respect to snow accumulation (section 4(2)) and ice formation (section 5(3)). The regulation requires municipalities to reduce the snow to a depth less than or equal to the depth set out in the snow depth chart below. The City is responsible for approximately 2,084 kilometers of road. Class 4 and 5 represent 88% of the City's road network. The City also provides windrow clearing and is the only municipality to publish a standard for providing salting for Class 6 roads.

The City provides its residents with one of the highest levels of service with respect to clearing and salting its roads and ensuring that ice formation on roads is addressed as expeditiously as possible. TSPFO benchmarked Vaughan's standards against the MMS and several neighbouring municipalities. In most cases, municipalities strive to exceed the MMS.

Level of Service Commitment: Pavement Condition									
Class ¹	Snow Depth (cm)	MMS	Vaughan Lane Kms/ Standard		Toronto	Richmond Hill	Markham	Brampton	Newmarket
2 (e.g. Centre St)	5.0	Min (3m, lane width)	26	Bare	Bare	No Class 2 Roads	Bare	Bare	No Class 2 Roads
3 (e.g. Willis Rd)	8.0	Min (3m, lane width)	201	Bare	Centre bare	Centre bare	Bare	Bare	Safe and Passable
4 (e.g. Avro Rd)	8.0	5m total	867	Bare	Safe and Passable ²	Safe and Passable	Safe and Passable	Safe and Passable	Safe and Passable
5 (e.g. Railway St)	10.0	5m total	974	Bare	Safe and Passable	Safe and Passable	Safe and Passable	Safe and Passable	Safe and Passable
6 (e.g. Cousin's Lane)	NA	No standard	16	Clear	No Standard	No Standard	No Standard	No Standard	No Standard

¹ Ontario Regulation 239/02 sets out the Minimum Maintenance Standards for road classes 1 to 5. The classification is based on the speed limit applicable to it and the average annual daily traffic. The City of Vaughan is not responsible for any Class 1 roads. Class 6 signifies laneways, which represents 16 lane kms in Vaughan.

² Safe and Passable generally means that the street may still be snow packed, at least one travel lane is accessible for a vehicle at driving speeds below the normal posted speed limits.

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In 2012, the City moved to a more environmentally friendly salting product called Thawrox. The manufacturer claims that Thawrox can reduce corrosion by up to 50%, and that the amount required for de-icing is 20% less than road salt. However, the City has not fully tested the manufacturer's claim.

Levels of service vary among municipalities. This drives different de-icing agent consumption as can be seen in the table below. TSPFO's benchmarking shows that Vaughan uses significantly more tons per km of Thawrox than comparable municipalities use of either salt or Thawrox.

Municipality	De-Icing Agent	2016 (Tons)	Lane Kms	Tons/Lane Km
Vaughan	Thawrox	45,000	2,084	22
Toronto	Salt	88,140	14,800	6
Richmond Hill	Salt, Thawrox	9,000	1,432	6
Markham	Salt	29,000	2,189	13

TSPFO consumes significant quantities of de-icing product to melt the snow, minimizing the need to plow. This facilitates the achievement of the City's bare pavement service standard.

Further, the City provides the de-icing products and spread rates to the contractors depending on the type of event. The higher the spread rate the higher the consumption of deicing product used by the contractors. Vaughan's spread rates settings are higher than those of neighbouring municipalities, even in cases where they are not using a treated salt product, such as Thawrox.

The 2016 budget of \$2.1M represents 23,000 tons of salt purchases. However, the City's historical average usage over the past ten years has been 34,000 tons (requiring a budget of over \$3M). In 2016, approximately 45,000 tons of Tharox was used in Vaughan. This, and other related factors have contributed to the depletion of the City's winter maintenance reserves.

The environmental impact must also be considered when using salt and/or treated salt products. The biggest concern with these materials is how it may impact the City's roads and storm water infrastructure and water quality and when these products end up in streams and groundwater.

Salting materials also speeds up the corrosion of concrete. Salt corrosion has been cited as a contributing factor in the degradation of bridges in Quebec and is one reason for the crumbling state of Toronto's Gardiner expressway³.

³ As per Carl Kuhnke, transportation and infrastructure expert with the University of Saskatchewan and Executive Director of the Intelligent Transportation Systems Society of Canada (ITS Canada).

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Although the service level commitments and standards in Vaughan surpass the MMS and levels of other GTA municipalities, it is uncertain if the City is deriving any significant benefits given the incremental cost and potentially adverse environmental impact.

Recommendations

We recommend that management:

- Conduct a risk based evaluation of the City's winter maintenance strategy and programs to determine whether the existing service levels are deriving any additional benefits (i.e. health and safety, easing traffic congestion, etc.) considering the incremental costs and potentially adverse environmental impacts.
- Complete a review of winter maintenance strategies and budgets to ensure alignment with Council directives and historical and anticipated spending.

Management Action Plan

Management agrees with the recommendations.

Management will conduct a study to evaluate the current Council approved service levels and overall winter maintenance strategy and programs. The study will include a risk based assessment of the current service levels and the benefits to the City. Management will further evaluate the existing service levels costs and benefits, environmental impacts and compare the winter maintenance services delivered by the City to those of other peer cities. Consulting services will be required to complete this work. A budget request for this work will be submitted for Council consideration as part of the 2019 budget.

The objective of the study includes the identification of best practices in establishing service standards which may provide opportunities for the City to improve the efficiency, economy, and service provision of the winter maintenance program while ensuring that roadway safety is not compromised (Q2 2020).

The addition of a Maintenance Decision Support System (MDSS), which is to aid in optimizing winter maintenance decisions, will be reviewed to determine its suitability for the City's operations. This new tool will help to better assess present road and weather conditions, predict changes in road conditions after application of the recommended maintenance treatments, suggest optimal maintenance strategies, evaluate the effectiveness of the maintenance treatments, and improve the ability to forecast road conditions as weather conditions change (Q4 2018).

Results of the approved winter maintenance strategy and historical weather trends will support future budgets submissions as they incorporate any changes in the service levels. These strategies will also aim to reestablish the winter reserve (Q1 2020).

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2. Enhance Controls Over Inventory Management

It is the City's responsibility to provide Thawrox, sand and direct liquid application material to the City's winter maintenance contractors. The City procures these items from a 3rd party vendor through a cooperative agreement involving the City and other York Region municipalities.

Prior to the start of the winter season, these vendors deliver these materials to the City's work yards. Then as needed, City staff load the materials into the winter maintenance contractors' service equipment. The City uses estimated bucket-fulls to determine the amount of Thawrox provided to the contractors. City staff verify that the contractors' service equipment has been calibrated to dispense Thawrox at the spread rates established by the City.

The City does not have weigh scales at the yards to accurately verify the quantity of Thawrox that has been delivered and subsequently provided to the winter maintenance contractors. Delivery trucks are selected randomly to be weighed off-site to confirm the actual weight. Since the received and expedited amounts are based on estimates, it becomes difficult to manage the precise amount of inventory received at the yards, provided to the contractors and the specific amount of Thawrox remaining in inventory.

The effective management of inventory reduces the risk of financial loss, allows for better inventory planning and budgeting and helps ensure that that ice formation on roads is addressed efficiently and expeditiously, while limiting the environmental impact.

Recommendations

We recommend that management:

- Develop a Thawrox management program that integrates inventory management with budgeting, procurement, utilization and data analytics to improve oversight over the City's winter maintenance program.
- Investigate the feasibility of investing in and installing weigh scale technology to better manage the City's Thawrox inventory.

Management Action Plan

Management agrees with the recommendations.

Management will update the Thawrox management plan setting out a procedural business framework to ensure the City's continuous oversight of this program to improve upon the usage of Thawrox in winter maintenance operations. This will include the development of an emergency management plan to address potential Thawrox supply shortages and optimization of Thawrox storage (Q4 2018).

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A multi-year testing plan to measure the effectiveness of lower Thawrox application rates has been developed. Updates to the winter maintenance program will include lessons learned from the testing program (Q4 2018).

The procurement of axle and loader weigh scales is ongoing. Standard Operating Procedures will be developed that clearly define expected practices for weight scale usage and all applicable staff will be trained on proper use of the equipment (Q4 2018).

Through the liquidated damages criteria of the winter maintenance contract, staff are diligently monitoring the spread rates of all hired equipment and apply penalties for any vehicle with spread rates either above or below set targets. Assessments are made for each event independently to be sensitive to individual actions and ensure that errors are detected and addressed immediately. The due diligence to the compliance to targeted spread rates has already resulted in an average reduction in Thawrox application of approximately 20% since the inception of this contract.

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3. *Improve the Quality Assurance Program*

The City has implemented a Quality Assurance System (QAS) to monitor the contractors' performance and provide corresponding incentives and disincentives based on that performance. The purpose of the program is to assure that the quality requirements of the winter maintenance program are planned and executed appropriately throughout the duration of the agreement.

At the end of each winter event, the City inspects the contractors work on a sample basis to verify conformance with the contractual requirements. Upon completion of the inspections, the City converts the inspection score out of twenty to a percentage, which corresponds to either an incentive or a disincentive.

The following was noted:

- Inspection samples, that were predetermined at the beginning of each season, were not risk based and are not stored in a secure location. In addition, the process to distribute the sample has not been clearly established.
- The audit noted several examples of inspections taking place prior to the winter event being declared over. Based on the early inspection, the contractor was able to rectify the deficiencies and were subsequently awarded a performance payment based on the reinspection of the same roads. This practice can potentially undermine the objectives of the QAS program and poses several risks, including:
 - Ineffective use of City resources.
 - Interaction between City inspectors and the contractors which may inappropriately influence the incentive score.
- The correct number of roads were not always inspected.
- Inspection video and audio quality was inconsistent.

TSPFO has drafted two Standard Operating Procedures to provide clarification and step-by-step guidelines for conducting the inspections and record maintenance protocol. However, they have not yet been approved or communicated to staff.

Ensuring that the QAS is operating appropriately reduces the operational risk of winter maintenance work not being effectively executed while mitigating the financial risks associated with the administration of an incentive and disincentive based winter maintenance program.

Recommendations

We recommend that management:

- Enhance the QAS process to verify the quality and completeness of contractor work to ensure it meets the contracted or legislated specifications. This should include:

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- Developing a risk based approach to generating the inspection samples.
- Communicating the inspection sites only to those responsible for performing inspections and only after the winter event has been officially declared over.
- Approving and communicating the roles, responsibilities and accountability of all City staff involved in the inspection process.
- Verifying that the inspection videos are of acceptable quality.

Management Action Plan

Management agrees with the recommendations.

Management has already implemented enhanced procedures related to the deployment of Inspectors to inspect the work completed by the contractors, including:

- The event sample inspection forms are centrally stored in the administrative offices of TSPFO.
- Event sample inspection forms and envelopes have been stamped with a seal to control access.
- Forms are distributed by administration staff and security staff outside business hours, while the opening of the sample envelope is witnessed.
- Inspectors enter a communication blackout period from the end of the event to the completion of the inspection.
- GPS capabilities are being deployed to ensure compliance with inspection requirements.
- Night capable cameras have been installed in the inspection vehicles and inspection videos are now being centrally stored and retained.
- Information and documentation is verified and completed by the District Supervisors and by administration staff. The files are stored centrally in hardcopy and electronic format.

TSPFO has created flow charts as a guide for staff to outline the winter operations program and to clarify roles and responsibilities. Training events have been held to train staff on these procedures and related standard operating procedures are being developed (Q2 2018).

Management will develop a risk-based inspection sampling approach taking into consideration the distribution of road classes in the City. The goal is to maintain compliance with the

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contractual requirements, while making the sample as representative as possible of the quality of work completed throughout the City (Q4 2018).

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4. Provide Greater Oversight over Contract Administration

The Winter Road Maintenance Services Program Manual is a key component of the performance based winter maintenance contract. The manual outlines the general provisions of the contract. The contractor's roles have been defined as those of performance and delivery, while the City has the responsibility of monitoring and evaluating for contract compliance. The audit noted several instances where enhanced management oversight is required. This includes:

- Securing the inspection tender deposit for each unit of service equipment.
- Acquiring appropriate invoicing documentation for duties that are not associated with a specific winter event.
- Ensuring compliance to the insurance provisions in the contract related to naming all the insurable parties.
- Receiving and analyzing insurance claims data from the contractor and the City's Risk Management department.
- Receiving, reviewing and monitoring the contractors' business continuity plans, monthly journal logs and service equipment operators' qualifications, such as the current drivers' abstracts and the contractors' commercial vehicle operator's registration.
- Generating GPS readings to verify that the equipment is in working order and on site.

Enhanced oversight over contract administration will mitigate the risk of financial, operational and reputational risk that is often associated with non-compliance to contract provisions.

Recommendations

We recommend that management:

- Develop a detailed SOP framework to help simplify performance management and contract administration.
- Provided additional training to administrative and operational staff regarding the winter maintenance contract requirements. Upon delivery of the training, a process to monitor and measure compliance should be developed, instituted and enforced.

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Management Action Plan

Management agrees with the recommendations.

Management will develop the following Standard Operating Procedures to provide detailed contract management guidelines for staff (Q3 2018):

- Inspection Protocol
- Document Management
- Mobilization
- Financial Management
- Event Management (Winter)

A contract management and monitoring training program will be developed and delivered prior to the start of the next winter season (Q3 2018).

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5. Enhance Monitoring and Oversight Over Work Order Administration

The work order system is used to capture and track information associated with reported deficiencies related to the winter maintenance program. Work orders can originate from multiple sources including residents, staff and Council.

The Public Works Administration Team and Access Vaughan is responsible for maintaining the work order information related to these deficiencies in the JDE system on behalf of the TSPFO. This includes notifying staff of new deficiencies, creating new work orders, updating existing work orders and closing work orders.

We identified the following:

- Some deficiencies are being reported directly to the TSPFO operations team, bypassing the work order administrative process. This practice can potentially undermine the objectives of the winter maintenance program and poses several risks, including:
 - Inefficient and ineffective deployment of resources.
 - Perception of favoritism.
 - Incomplete data capture.
- Data integrity issues, caused by free form fields in the work order system.
- Work order files are not always up-dated on timely basis.
- There is no formal data analysis, monitoring and reporting on work order data.

Recommendations

In 2014, Internal Audit conducted a Road Operations Audit and TSPFO staff acknowledged that opportunities existed to improve the effectiveness of the work order management processes. Action plans to address those recommendations are still ongoing, and upon complete implementation, will help ensure completeness and accuracy of the system data and thereby increasing management's ability to determine compliance to contracted or legislated specifications. It will also assist with performance tracking, budgeting and project prioritization.

In addition, we recommend that management ensures that existing protocols be followed so that all requests to correct deficiencies are managed through the approved work order administration process.

Management Action Plan

Management agrees with the recommendations.

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Citizens and staff concerns are placed in the work order system for tracking purposes. Efforts have been made to ensure that all concerns flow through Access Vaughan and the new after-hours call center.

Training is being provided at the beginning of each Fall to various City stakeholders regarding the protocols in addressing citizen and staff concerns (Q2 2018).

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6. *Improvements are Required in the Records Management Process*

An effective records management policy allows the administrators of the winter maintenance program to identify documents and files that serve a business purpose, which records can and should be disposed of, and which records should be retained due to their enduring value.

The following was noted:

- Files are not always created for a winter event and when they are created, the retention of documents such as emails, work orders and weather reports are inconsistent.
- There were eleven inspection packages that could not be located.
- Dashcam recordings of quality assurance inspections are stored on the hard drives of multiple computers and a standard naming convention has not been established.
- Fleet activity reports are not constantly being produced and retained.
- File storage and retention periods have not been defined.

Although TSPFO has drafted an SOP outlining the records management process, it has not yet been approved or communicated to staff.

Inadequate records management increases the risk of data/document loss, being unable to defend claims and financial loss.

Recommendations

We recommend that management:

- Finalize, approve and communicate the draft SOP outlining the requirements for central storage, retention period of records and accountability for records management.
- Ensure the record retention practices are in line with the City's Records Retention By-law and accompanying Records Retention Schedule.

Management Action Plan

Management agrees with the recommendations.

Management will approve and communicate the draft SOP outlining the requirements for central storage, retention period of records and accountability for records management (Q2 2018).

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TSPFO is using a Secure Zone to leverage SharePoint functionality and a centralized hardcopy storage has been implemented in compliance with the City's record retention bylaw and schedule.

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7. Optimization of the Procurement Process

The City used a pre-qualification process to identify contractors capable of completing the work associated with a long-term, performance based winter road maintenance contract. All pre-qualified bidders were asked to submit a bid for the winter road maintenance contract. Interested, pre-qualified contractors could submit a Bid for Part A (located east of Highway 400) or Part B (located west of Highway 400) or both Part A and B. No single contractor would be eligible to be awarded both parts.

Part A was awarded first. The contractor who was awarded Part A also bid on Part B. Upon being awarded Part A, their financial bid for Part B was withdrawn.

Although this was compliant with the procurement approach taken on this project, from a value for money perspective, it may have been beneficial to open all bids for both parts at the same time. This would have given the City the visibility to all the financial submissions in order for the City to make the most favorable financial decision. As a result, there is a risk that the City is paying either more or less over the course of the contract term than if both parts A and B had been analyzed and awarded at the same time.

Recommendations

We recommend that management structure future tender proposals in a manner that gives the City visibility to all the financial submissions. This would allow management to have all the information it would need to ensure that it is making most favorable financial decision.

Management Action Plan

Management agrees with the recommendations and will work with Procurement, Finance and Legal Services on future tenders to ensure visibility on all financial submissions (complete).