



**Office of the Auditor General: Audit of Specific
Areas of the Infrastructure Services Department,
Tabled at Audit Committee – December 1, 2016**

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The team responsible for this audit, under the supervision of Sonia Brennan and the direction of Ken Hughes, would like to thank those individuals who contributed to this project, and particularly, those who provided insights and comments as part of this audit.

Original signed by:

Auditor General

Executive Summary

Introduction

The Audit of Specific Areas of the Infrastructure Services Department was approved by Council on March 26, 2014.

Background and Rationale

The Infrastructure Services department (ISD) is responsible for asset management of the City's roads, sidewalks, sewers, watermains, bridges, culverts, buildings, parks and other structures. This includes the design, construction, inspection and administration of the works required for new construction and the rehabilitation and renewal of the City's infrastructure described above and also transit facilities, expansion/modifications of pumping stations, water reservoirs and elevated tanks, sewage and water treatment facilities, stormwater management facilities and solid waste facilities. The current functions of the ISD can be broken down into three branches: Asset Management, Design and Construction and Business and Technical Support.

The Auditor General has completed previous audits related to the ISD and its functions. The two most recent Audits are the Audit of Construction Supervision (ACS) and the Audit of the ISD. This report of the Audit of Specific Areas in the ISD addresses items of concern that were identified in the previous audits and items that have been requested by Council.

Audit Objectives and Scope

The main audit objective was to assess the adequacy and effectiveness of selected aspects of the management control framework within the ISD.

The audit scope comprised four areas specific to the ISD, as well as two areas that are common themes across several audits. The Scope Areas included:

- Completion of Contract Items
- Exercise of Contract Liquidated Damages and Incentive/Disincentive Clauses
- Competitive Process
- Sole Source Limits
- Occupational Health and Safety
- Succession Planning

Findings

The key findings associated with the scope areas are of follows:

1. Completion of Contract Items:

ISD maintains a Project Delivery Manual (PDM), which describes in detail the roles and responsibilities of staff for final approval of contract delivery. The PDM is followed by the Project Managers.

Our review of 20 project files showed that the only items that were not completed were provisional items. Provisional items are identified “in case” they are needed. They are included at the start of the contract so competitive prices are obtained for those, but they are not always required.

In instances where there was a change in the project scope, the work was completed consistent with documented change orders.

2. Exercise of Liquidated Damages:

Of the 20 projects reviewed in this audit, only two were completed late without prior City authorization. In one of the projects, the contractor was able to demonstrate that Substantial Performance had in fact been achieved within the time allotted. In the second project, where the contractor did not complete the work before the Substantial Performance date, the City exercised its right to charge the contractor for liquidated damages. The City recovered its costs resulting from the delay.

3. Competitive Process:

The City of Ottawa posts all bidding opportunities greater than \$100,000 on MERX¹ and the Ottawa Construction Association (OCA)² who both post the opportunities on their websites for viewing by the general public. Bids where the complexity of the requirement necessitates a more formal process, despite the opportunity being valued at less than \$100,000, are also posted on MERX or the OCA’s websites. All bidding opportunities less than \$100,000 are posted on the City’s Ottawa.ca website.

¹ MERX is a Canadian electronic tendering service.

² OCA services Ottawa’s non-residential construction industry and provides access to and information regarding tenders on its website.

Bids are not posted on MERX, OCA, or the City's website in the following cases:

- Emergency procurements,
- Non-competitive (or sole source) procurements that meet pre-established criteria,
- When a Request for Qualifications (RFQ) has been previously posted and thus the resulting bid solicitation is sent only to qualified bidders, or
- On Call-ups under existing Standing Offers (a Standing Offer is established by a competitive proposal process).

It can be beneficial to periodically compare highly used contract item prices through readily available information from other municipalities and independent organizations that compile construction cost data. The audit reviewed the unit prices paid by the City for major contract items (e.g., concrete and asphalt) and compared them to two municipalities. We found that in general, the unit prices paid by the City are comparable to those received in other municipalities with the exception of asphalt which requires further analysis due to:

- two of the five comparable municipalities from Ontario responding to our request for unit price information,
- differences in quantities ordered, and
- differences in the asphalt mixes being compared.

4. Sole Source Limits:

ISD awards approximately \$54 million annually in contracts for professional and consulting services managed by ISD. Over the two year period from 2013 to 2014, ISD awarded a total of \$3.33 million in sole source contracts for engineering services (or 3% of the value of total contracts of the approximate \$108 million over the two-year period). Our review of the rationale provided by ISD to the Supply branch for using a sole source process showed that the City applied the Purchasing By-law appropriately; however, we found that there is a lack of documentation related to the level of scrutiny applied in assessing whether particular procurements involve emergencies or where a pre-selected proponent is deemed to have the required expertise without consideration or investigation of other potential suppliers.

5. Occupational Health and Safety:

A management framework is in place to ensure ISD staff training and awareness for Occupational Health and Safety. In addition ISD has:

- published a Health and Safety Manual,

- maintains an active Health and Safety Committee,
- established training requirements for all its staff above and beyond legislated health and safety awareness training,
- completed a hazard identification and risk assessment (HIRA) for all its activities and staff; and
- actively monitored the successful completion of training for all its employees.

6. Succession Planning:

The City identifies Succession Planning as an element of Workforce Planning, with a specific focus on leadership positions and unique, highly specialized positions. While ISD has identified key roles and potential successors, individual development plans supporting the succession plans are not consistently documented.

Conclusion

The Infrastructure Services department has the appropriate foundation to ensure completion of contract items, the exercising of the City's rights for contracted liquidated damages where appropriate, a competitive process to support achievement of reasonableness of contract prices, and limited use of non-competitive contracts consistent with its by-laws. There is an opportunity to enhance both the level of justification provided by ISD, and the analysis and file documentation by Supply branch, to support and assess the reasonableness, and adherence to the Purchasing By-law of sole source requests for professional engineering contracts.

A management framework is in place to ensure staff training and awareness for Occupational Health and Safety, and a succession plan, with key roles and potential successors for ISD, is in place. However, individual development plans supporting the succession plans are not consistently documented.

Recommendations and Responses

The audit resulted in a number of recommendations, as listed below. Please refer to the attached audit report for additional details.

Recommendation #1

That the City conduct a further review of its unit prices paid for asphalt with comparable municipalities and benchmarked information to validate whether the prices paid by the City for such materials is best price/competitive.

Management response:

Management agrees with this recommendation.

Management will complete a review of unit prices for asphalt with comparable municipalities by the end of Q2 2017.

Recommendation #2

That the City establish a process to enhance the level of justification provided by the Infrastructure Services department when making sole source requests for professional engineering contracts over \$50,000. Consideration should be given to update Supply branch procedures to enhance analysis and file documentation when sole source requests are made.

Management response:

Management agrees with this recommendation.

The Supply branch will update its procedures manual to clarify the information required from Infrastructure Services to support a non-competitive purchase for professional engineering contracts over \$50,000, and how this information is to be documented in the procurement file. This update will be completed by the end of Q2 2017.

Recommendation #3

That Human Resources Services establish a corporate process to monitor the completion of development plans for individuals identified as succession candidates for key positions.

Management response:

Management agrees with this recommendation.

Succession planning is an accountability that Council has given to the City Manager who is reviewing this topic with the Senior Leadership Team (SLT). Human Resources in consultation with the SLT will develop a new approach to the succession planning process, including monitoring the completion of development plans and employee progress, by Q2 2017. Development plans will be completed through a revised PDP process to be implemented by Q4 2017.

In the interim, the current process will continue in which managers and employees are responsible for developing, monitoring progress, and ensuring completion of individual employee development plans, including those of potential successors.

The detailed section of this report is available in English only and may be translated in whole or in part upon request. For more information, please contact Ines Santoro at 613-580-2424, extension 26052.

La section détaillée de ce rapport n'existe qu'en anglais et pourrait être traduite en partie ou en totalité sur demande. Renseignements : Ines Santoro, 613-580-2424, poste 26052.

Detailed Audit Report

Audit of Specific Areas of the Infrastructure Services Department

Introduction

The Audit of Specific Areas of the Infrastructure Services Department was approved by Council on March 26, 2014.

Background and Context

The Infrastructure Services department (ISD) is responsible for asset management of the City's roads, sidewalks, sewers, watermains, bridges, culverts, buildings, parks and other structures. This includes the design, construction, inspection and administration of the works required for new construction and the rehabilitation and renewal of the City's infrastructure described above and also transit facilities, expansion/modifications of pumping stations, water reservoirs and elevated tanks, sewage and water treatment facilities, stormwater management facilities and solid waste facilities

The current functions of the ISD can be broken down into the following:

- Asset Management – planning of infrastructure works, including renewal and coordination of capital projects identified by client departments
- Design and Construction – Municipal East, West and Buildings and Parks – implementation of renewal work and new infrastructure
- Business and Technical Services – Right Of Way Information and Approvals, Surveys and Mapping, Standards and Contract Services, Quality Assurance, and Business Services

The Auditor General has completed previous audits related to the ISD and its functions. The two most recent audits are the Audit of Construction Supervision (ACS) and the

Audit of the ISD. The Audit of Specific Areas in the ISD addresses items of concern that were identified in the previous audits and items that have been requested by Council.

Audit objectives

The audit objective is to assess the adequacy and effectiveness of selected aspects of the management control framework within the ISD. Detailed audit criteria is summarized in Appendix A.

Audit Scope

The audit scope comprised four areas specific to the ISD, as well as two areas that are common themes across several audits. The scope areas included:

- Completion of Contract Items
- Exercise of Contract Liquidated Damages and Incentive/Disincentive Clauses
- Competitive Process
- Sole Source Limits
- Occupational Health and Safety
- Succession Planning

Although this was an audit specific to ISD, sole source testing involved Supply branch processes and practices. The audit covered the period from January 1, 2013 to December 31, 2014.

ISD professional services sole source contracts awarded under \$50,000, in accordance with Section 22(1)(h) of the City's Purchasing By-law were not included in the testing of sole source contracts.

Audit Approach and Methodology

The audit was designed so that sufficient and appropriate audit procedures were conducted and evidence gathered to provide reasonable assurance of the accuracy of audit findings and conclusions, as they existed at the time of the audit. Audit criteria developed to address the areas of audit scope were based on the policies and practices of the City of Ottawa.

The audit included: review of documentation, examination of policies, procedures, and processes, interviews and inquiries with employees, benchmarking of municipalities, file testing and analytical procedures, in addition to engaging a subject matter expert, to

gain a better understanding of the aspects of the management control framework within the ISD.

Audit Observations and Recommendations

Contract Completion

ISD is ensuring appropriate completion of contract items occurs and is properly documented

The policies and procedures used by ISD to designate the roles and responsibilities for final approval of contract delivery are properly documented in the Project Delivery Manual (PDM)³, which has been in use since 2006 and updated by ISD in May 2013. The Project Manager is responsible for determining whether the contractor has achieved Substantial Performance of the Contract in accordance with the Construction Lien Act and the General Conditions of the Contract. The Contract Administrator determines if the Contract is complete, as defined in the Construction Lien Act and the General Conditions, and is then responsible for issuing the Certificate of Substantial Performance. The Project Manager is responsible for issuing the Final Acceptance Certificate, preparing the Final Payment, preparing the consultant and contractor Performance Appraisals, and conducting the End of Warranty inspection.

According to the PDM, the Contract Administrator prepares the substantial performance documentation and the Project Manager approves it and issues the Certificate of Substantial Performance. Thus during the audit we reviewed project files to verify whether the Certificate of Substantial Performance was completed and appropriately approved. Based on our review we conclude that the Project Managers are following the requirements of the PDM for substantial performance and completion of the projects. The selected 20 projects examined had all been completed; within that sample, 11 were completed with deficiencies, meaning that the respective contractors were required to return on-site. In all 11 instances, the deficiencies were addressed.

Based on our review of the project files we found that for all 20 contracts reviewed all the work required in the contracts was completed, or if not, that there was justification

³ Section 2 of the PDM describes the Project Delivery Phases, which include Phase 5 – Close-out. Details of the requirements for Project Close-out are provided in Section 10 of the PDM.

for the lack of completion of certain items. This results from the fact that contracts include a number of provisional items that are to be used only if they are required. The purpose of including a provisional item in the initial contract is to secure a unit price during tendering, rather than to request a price during construction, when the price would be provided without a competitive process.

Examples of these provisional items include a section titled General, which includes items such as Payment Adjustments for Changes in the Fuel Price Index, Price Adjustment for Performance Graded Asphalt Cement, Closed Circuit Television (CCTV) of Unknown Laterals, and a section titled Labour and Equipment, which includes items such as Unskilled and Skilled Labour, Bulldozer, Dump Truck, Sweeper, and similar items.

The audit found that sometimes work under specific items was not completed as originally intended (e.g., where the actual conditions of the project were not as anticipated and the original requirement no longer applied). When this occurred the items were addressed through a Change Order. In all instances of items deemed not required, there was appropriate and documented justification for the change.

Liquidated Damages and Incentive/Disincentive Clauses

ISD is exercising the City's rights for contracted liquidated damages where appropriate

All the contract documents reviewed included a provision for liquidated damages and in some cases an incentive/disincentive clause. Because the contracts examined were started at different times with different clause requirements, there was variation in the type of clause used.

In 18 of the 20 projects examined the contract work was completed within the original contract completion time or as extended by the City in accordance with the contract.

In two of the 20 projects the contractor exceeded the time allowed for completion, and the City initiated the process to charge liquidated damages in accordance with the contract. In one of these contracts the contractor was able to demonstrate to the satisfaction of the City that the work had, in fact, been substantially completed and it was not necessary to charge liquidated damages. In the second contract it was noted that the City charged the contractor a negotiated amount, with input from Legal Services, as part of the negotiations. Based on the calculations provided by the City, it can be concluded that the City recovered its costs.

Competitive Process

The City regularly uses a competitive process to support achievement of reasonableness of contract prices

Until 2013, the City would post its construction contract bids almost exclusively with the Ottawa Construction Association (OCA). OCA began using a website in 2013 called Link2Build that publishes construction bid opportunities by several construction associations. The 2012 Audit of Construction Supervision noted that the City did not advertise bids in MERX, an electronic tendering service with Canada-wide scope, or other bid advertisement sites with Ontario scope. The issue noted was that although the process was competitive, the bids were receiving only local coverage, and the City may not have been benefitting from its bids being widely known.

This audit line of enquiry originated as a result of the prior Audit of Construction Supervision to test whether the process used by the City produces bids that are competitive in comparison to the experience in other municipalities.

The City's Purchasing By-law governs the policies and procedures used by the City for the purchase of goods and services. The By-law states that the "guiding procurement principle is that purchases be made using a competitive process that is open, transparent and fair to all suppliers." This audit focussed on the processes used by the City to achieve a competitive process on construction contracts, to achieve reasonable contract prices.

According to information provided by the Supply branch, the City now posts, with exceptions listed below, all bidding opportunities greater than \$100,000 on MERX and/or the OCA. Bids where the complexity of the requirement necessitates a formal Request for Tender (RFT) or Request for Proposal (RFP) process despite the opportunity being valued at less than \$100,000 are also posted on MERX or the OCA. All bidding opportunities less than \$100,000 are posted on the City's website, Ottawa.ca. All bids, whether posted in the OCA and MERX or in the City's website, are competitive.

Bids are not posted as above in the following cases:

- Emergency Bids,
- Non-competitive (or sole source) bids that meet pre-established criteria,
- When a Request for Qualifications (RFQ) has been previously posted and thus the resulting bid solicitation is sent only to qualified bidders, or

- On Call-ups under the Standing Offers (the Standing Offer is subject to competitive proposals).

Only a limited number of contracts are awarded under the sole-source provisions of the Purchasing By-law, and these were assessed as part of the Sole-Source Line of Enquiry discussed in below in Sub-section 2.4.

The Unit Prices for major contract items received by the City are generally comparable to those received in other municipalities with the exception of asphalt which may require further analysis.

Unit price information was requested from five municipalities in Ontario, but responses were received from only two of them. The following table summarizes the range of unit prices received from the two municipalities (the City of Cornwall and the City of Mississauga), plus the range of unit prices in the City of Ottawa contracts examined in this audit.

The data is limited in both cases given only two municipalities responded to our requests for comparative information. Further, only one municipality provided quantity information and unit prices for concrete that allowed for more comparative analysis to the City's unit prices. Based on the information received however, it can be concluded that the unit prices incurred by the City for Granular A, Granular B, and concrete are generally comparable.

Prices fluctuate depending on the volume of commodity purchased, with typically lower prices found the greater the quantity purchased. We found that prices incurred by the City for Granular A & B are competitive. The prices incurred for concrete were also competitive on the high end of the price range when compared to benchmarked municipalities (\$1,616/tonne versus \$2,800/tonne), but not the low end (\$1,165/tonne versus \$600/tonne).

The major difficulty in making a valid comparison is that the unit prices are determined by the quantity of materials and the complexity of the concrete structure. With respect to asphalt, the prices being provided in Ottawa are competitive on the low end, but on the high end they are higher than the other municipalities surveyed. With respect to the unit prices for asphalt, it should be noted that the City of Ottawa prices are higher than for the other municipalities surveyed. There is not enough information received from the other municipalities to make a meaningful conclusion.

Price differences for asphalt may be due to differences in quantities ordered as well as differences in the asphalt mixes being compared. These differences existed for the results highlighted in the chart below.

Table 1 – Unit Price Comparison

Unit Prices	Unit	Other Municipalities		City of Ottawa	
		Low	High	Low	High
Asphalt ⁴	tonne	\$82.00	\$124.50	\$61.50	\$205.00
Granular A ⁵	tonne	\$11.55	\$55.00	\$10.75	\$45.00
Granular B ⁶	tonne	\$10.00	\$52.00	\$8.50	\$42.00
Concrete	m3	\$600.00	\$2,800.00	\$1,165.00	\$1,616.00

Recommendation 1

That the City conduct a further review of its unit prices paid for asphalt with comparable municipalities and benchmarked information to validate whether the prices paid by the City for such materials is best price/competitive.

Management Response:

Management agrees with this recommendation.

Management will complete a review of unit prices for asphalt with comparable municipalities by the end of Q2 2017.

⁴ Unit prices where quantities of Asphalt purchased were less than 150 tonnes were excluded for comparative purposes.

⁵ Granular is a mixture of sand and crushed gravel, crushed rock, blast furnace slag or nickel slag, reclaimed Portland cement concrete, reclaimed asphalt pavement (RAP), crushed post-consumer glass, and/or crushed ceramic material, produced within specific gradation bands.

⁶ See footnote 5

Sole Source Contracts

The City used sole source contracts on a limited basis and followed its by-laws appropriately when it awarded sole source contracts

The sole source thresholds are defined explicitly in the Purchasing By-law, in the following sections:

- Section 17 – Purchases Not Exceeding \$15,000
- Section 22 – Non-Competitive Purchases.

This element of the audit scope focused on professional engineering contracts awarded under the terms of Sections 17(3) and 22(1).

The thresholds in both sections have been approved by Council. With respect to Section 17(3), the corresponding Director is authorized to directly select a supplier to provide professional services without obtaining quotes where the total cost of the professional services is not over \$15,000.

In Section 22(1), the Purchasing By-law provides the following circumstances under which the requirement for competitive ISD bid solicitations for goods, services and construction may be waived under joint authority of the ISD Director and Supply branch and replaced by negotiations:

- a. Where competition is precluded due to the application of any Act or legislation or because of the existence of patent rights, copyrights, technical secrets or controls of raw material,
- b. Where due to abnormal market conditions, the goods, services or construction required are in short supply,
- c. Where only one source of supply would be acceptable and cost effective,
- d. Where there is an absence of competition for technical or other reasons and the goods, services or construction can only be supplied by a particular supplier and no alternative exists,
- e. Where the nature of the requirement is such that it would not be in the public interest to solicit competitive bids as in the case of security or confidentiality matters,

- f. Where in the event of a “Special Circumstance⁷” as defined by the Purchasing By-law, a requirement exists, or
- g. Where the possibility of a follow-on contract was identified in the original bid solicitation.
- h. Where the total estimated project cost for professional services does not exceed \$50,000
- i. Where the requirement is for a utility for which there exists a monopoly.

In the period under review, the City awarded approximately \$54 million annually in contracts for professional and consulting services managed by ISD. From 2013 to 2014, the City awarded 42 sole source contracts for professional engineering services managed by ISD, for a total of \$3.33 million (or 3% of the value of total contracts of the approximate \$108 million over the two-year period). Of these, 28 were new contracts and the remainder were amendments to prior contracts.

The 42 sole source contracts identified the following:

- 11 contracts for \$1.64 million were awarded under Section 22(1)(c) of the Purchasing By-law (only one source of supply would be acceptable and cost effective).
- 8 contracts for \$1.09 million were awarded under Section 22(1)(d) of the Purchasing By-law (where there is an absence of competition for technical or other reasons, and the goods, services or construction can only be supplied by a particular supplier and no alternative exists).
- 23 contracts for \$597,000 were awarded under Section 22(1)(h) of the Purchasing By-law (total estimated project cost does not exceed \$50,000 for professional services).

Non-competitive contract award requests come from ISD to Supply branch, typically on an Estimated – Spending Plan Authority (E-SPA) document. This document describes the nature of work ISD would like to carry out, the approvals required, and if applicable, the sole source rationale. Justification for a sole source contract is prepared by the ISD Director and must receive approval from Supply branch. The supplier is proposed by the

⁷ “Special Circumstance” means a) an event that is exceptional or could not be foreseen and is a threat to the health, safety or welfare of the public, or b) an event that could cause loss or damage to public or other property or c) an event that has disrupted essential services that need to be re-established without delay

ISD Director. The Supply branch then reviews the sole source rationale provided to ensure it is in accordance with the Purchasing By-law and documents the sole source rationale, along with their approval, on a Contract Approval Request form. If more information is required by Supply they will obtain further justification from ISD either by phone or email.

The City provided the support in each case where Sections 22(1)(c) and 22(1)(d) were applied. Of these contracts, 42 sole source contracts were identified, 15 were selected for further testing to assess the reasonableness of the sole source rationale provided.

Given the Supply branch must review all sole source rationale provided by ISD to ensure compliance with the Purchasing By-law, we expected to see documentation in the file describing the process and analysis conducted by Supply branch prior to providing their approval. Based on a review of the purchasing file documentation it was difficult to conclude whether the rationale provided by ISD (e.g. urgent request and/or absence of competition for technical reasons) was further scrutinized and assessed for reasonableness.

For example four of the 15 contracts selected, totalling \$711,466, were awarded sole source to one vendor during the period in scope for professional services given the vendor had expertise in construction scheduling, risk and claims. Our review of purchasing files did not provide evidence to substantiate that other firms were considered; however, all files provided a comparison of quoted prices to quoted prices on standing offers for similar services to ensure prices demonstrated fair market value. All files had the appropriate level of approval. On January 1, 2015 the City approved a refresh of an existing standing offer professional construction services to include such services through a competitive process.

In addition several of the sampled contracts were sole sourced based on justification that the requirement was urgent and/or that there was an absence of competition for technical reasons. The Purchasing By-law does not provide guidance or criteria for what constitutes an urgent request or how determination is made that there is an absence of competition; however, neither do other municipalities benchmarked (as listed in the table below). Nonetheless we would have expected to see further analysis or details in purchasing files to verify that a request was indeed urgent or that no other vendor could provide like services.

Recommendation 2

That the City establish a process to enhance the level of justification provided by the Infrastructure Services department when making sole source requests for professional engineering contracts over \$50,000. Consideration should be given to update Supply branch procedures to enhance analysis and file documentation when sole source requests are made.

Management Response:

Management agrees with this recommendation.

The Supply branch will update its procedures manual to clarify the information required from Infrastructure Services to support a non-competitive purchase for professional engineering contracts over \$50,000, and how this information is to be documented in the procurement file. This update will be completed by the end of Q2 2017.

For comparative purposes, the audit further examined the purchasing policies for assigning engineering and consulting services in other municipalities. The City's circumstances under which the requirement for competitive bid solicitations for goods, services and construction may be waived are similar to those used by comparative municipalities. In fact, we found that comparative municipalities provided more circumstances where the requirement for competitive bid solicitations could be waived and thus the City's circumstances available for sole source justification were more prudent.

The ISD Director and Supply branch may jointly award a non-competitive contract emanating from negotiations provided that funds are available, the contract does not exceed \$100,000, and both the ISD Director and Supply branch are satisfied the contract represents fair value. Non-competitive awards greater than \$100,000 require approval from the Deputy City Manager and Supply branch.

The dollar limits for sole sourcing are comparable, however, the City of London requires City Council approval for sole source contracts greater than \$50,000 and both the City of London and City of Mississauga require Council approval for sole source contracts greater than \$100,000. The comparable dollar limits for direct assignment are outlined in Table 2:

Table 2 – Direct Assignment Dollar Limit Comparison

Municipality	Approval Required (Less than \$50,000)	Approval Required (\$50,000-\$100,000)	Approval Required (>\$100,000)
City of Ottawa	Departmental Director and Supply branch	Departmental Director and Supply branch	Deputy City Manager and Supply branch
City of Toronto	Division Head	Division Head and Office of Chief Purchasing Official	Division Head and Office of Chief Purchasing Official ⁸
City of Mississauga	Department Director and Purchasing Manager	Department Head, and Purchasing Agent	Council, upon recommendation of Department Head, and Purchasing Agent
City of London	Managing Director and Manager of Purchasing and Supply	Committee and City Council approval	Committee and City Council approval

Occupational Health and Safety

A management framework is in place to ensure staff training and awareness for Occupational Health and Safety

ISD has a Health and Safety Manual, provided to all ISD staff, that identifies health and safety responsibilities for ISD management and staff. The manual is tailored to ISD and also includes information on the Ontario Occupational Health and Safety Act and the City’s Health and Safety Policy. It includes a description of accident incident reporting requirements.

Based on a review of meeting minutes, we were able to confirm that ISD has an established Health and Safety Committee that meets quarterly to address ISD requirements, including staff training requirements and workplace inspections. Apart from legislated health and safety awareness training that all employees must take, ISD has established additional training requirements for its staff. This is tracked and monitored for all ISD staff, and reported to the Health and Safety Committee. Based on

⁸ Purchases over \$500,000 require Committee/Council approval

Audit of Specific Areas of the Infrastructure Services Department

interviews conducted and a review of communications provided, we confirmed that staff members are informed what training they are required to attend and when it is scheduled. Health and Safety training has included such topics as: Emergency Aid CPR, Asbestos, Basics of Fall Training, Confined Space, Trenching and Shoring, and Roadway Safety. At the time of the audit, 95% of ISD supervisors and staff had completed their mandatory Health and Safety Awareness training.

Health and Safety information is available online via the City intranet, Ozone. As well, the Health and Safety Committee minutes are posted in ISD offices, as is the Health and Safety policy and other notifications. Staff interviewed as part of the audit displayed a high degree of awareness of the ISD health and safety program and requirements.

ISD has undertaken a hazard identification and risk assessment (HIRA) for all its activities and staff. The next step in that process will be to identify risk mitigation actions for risks that are assessed as high or medium-high exposure, based on defined risk criteria provided by the Employee Health Safety and Wellness branch (EHSWB) within the Human Resources (HR) department as part of the HIRA process. The intent is to commence that work in the fall of 2016.

The HR department, as part of the City's attendance management program, provides quarterly reporting to all departments on average staff absenteeism, which ISD monitors. ISD, as identified in the November 2015 OAG Annual Report (Audit of Infrastructure Services – Administrative Management), take significantly fewer sick days, on average, than other City employees. ISD average sick leave per employee dropped 0.5 days per employee year over year for the period January – September 2015.

Succession Planning

While ISD has identified key roles and potential successors, individual development plans supporting the succession plans are not consistently documented.

The City identifies Succession Planning as an element of Workforce Planning, with a specific focus on leadership positions and unique, highly specialized positions. The intent is to identify and develop employees to ensure the City has a pool of qualified candidates ready to fill key positions.

The succession management program, which was formally introduced in 2013, is described in the Succession Management Guide (the Guide). The program is coordinated by the HR department, with management in each department responsible

for ensuring the succession management program is in place. The plans are reviewed annually in consultation with HR.

ISD has identified its key positions, and is tracking those positions and potential successors on a summary spreadsheet, as outlined in the Guide. The document identifies the key positions, position level, potential successor(s) and the readiness of each successor to fulfil the position. ISD has identified one or more potential successors for each key position within ISD.

For each individual identified as a potential successor, the intent is that their manager uses the annual Performance Development Program (PDP) to work with the individual to create development plans. The goal is to identify and document development opportunities and activities (e.g., training, acting assignments, job rotation, etc.) in the employee's Individual Contribution Achievement (ICA), to enable the individual to continue their development and improve qualifications. A review of a sample of ICA's for potential successors for key positions within ISD employees indicates that development plans are not always addressed and documented within the ICA.

Recommendation 3

That Human Resources Services establish a corporate process to monitor the completion of development plans for individuals identified as succession candidates for key positions.

Management Response:

Management agrees with this recommendation.

Succession planning is an accountability that Council has given to the City Manager who is reviewing this topic with the Senior Leadership Team (SLT). Human Resources in consultation with the SLT will develop a new approach to the succession planning process, including monitoring the completion of development plans and employee progress, by Q2 2017. Development plans will be completed through a revised PDP process to be implemented by Q4 2017.

In the interim, the current process will continue in which managers and employees are responsible for developing, monitoring progress, and ensuring completion of individual employee development plans, including those of potential successors.

Conclusion

The Infrastructure Services department has the appropriate foundation to ensure completion of contract items, the exercising of the City's rights for contracted liquidated damages where appropriate, a competitive process to support achievement of reasonableness of contract prices, and limited use of non-competitive contracts consistent with its by-laws. There is an opportunity to enhance both the level of justification provided by ISD, and the analysis and file documentation by Supply branch, to support and assess the reasonableness, and adherence to the Purchasing By-law of sole source requests for professional engineering contracts.

A management framework is in place to ensure staff training and awareness for Occupational Health and Safety, and a succession plan, with key roles and potential successors for ISD, is in place. However, individual development plans supporting the succession plans are not consistently documented.

Appendix A: Audit Criteria

The Audit Scope comprised four areas specific to the ISD, as well as two areas that are common themes across several audits. The following table summarizes the audit criteria.

Audit Criteria

Scope Area	Audit Criteria
Completion of Contract Items	<p>Roles and responsibilities for ensuring satisfactory completion of all contract items are documented.</p> <p>Approval of satisfactory completion of contract is documented and maintained.</p>
Exercising of Contract Liquidated Damages and Incentive/Penalty Clauses	<p>Contracts include clear definition of incentives and penalties.</p> <p>Approval of achievement of incentives or triggering of penalties is documented and maintained.</p>
Competitive process to support achievement of reasonableness of contract prices	<p>There is a documented policy or process established that defines competitive procurement requirements.</p> <p>Procurements are conducted consistent with policy requirements.</p>
Sole source limits used in procurement of consulting engineer contracts	<p>The City has defined clear monetary thresholds for which there must be a competitive procurement process.</p> <p>The established thresholds have been reviewed and approved by executive management within the City.</p> <p>The thresholds established are consistent with other municipalities or jurisdictions.</p>
Occupational Health and Safety	<p>Documented policies, procedures, guidelines, and plans exist to address Occupational Health and Safety requirements in ISD. The above are readily available for reference, and include the accident / incident reporting requirements.</p> <p>Occupational Health and Safety Awareness training is provided to all employees on a regular and timely basis.</p> <p>Safety hazard identification and risk assessment are conducted in the workplace. Employees know how to report safety hazards in the workplace.</p>

Scope Area	Audit Criteria
Succession Planning	Documented procedures and plans exist to ensure succession planning is an active consideration

Appendix B: Project Files Reviewed

The following table lists the selected projects that were reviewed based on the Audit Procedures.

Project Files Reviewed

Project Description	Construction Contract No.	Budget (\$000s)
Village of Osgoode Sidewalk and Drainage, Nixon Dr. (Osgoode Main St. to Duffy)	ISB07-5069	\$1,100
Signature Ridge Pumping Station	ISD13-5072	\$2,959
King George St. & Quill St. (King George to Prince Albert)	ISD10-5147	\$6,340
Orleans/Cumberland Collector Pumping Station	ISB09-2017	\$21,130
Elgin Street at Isabella Street Combined Sewer Replacement	ISD12-3004	\$2,550
Bearbrook Rd. Slope Stabilization & Culvert Rehabilitation	ISD12-5105	\$2,703
March Rd. and Upper Dwyer Hill Rd. (Traffic Control & Intersection Modifications)	ISD13-5034	\$2,530
PROGRAM: West End Flood Mitigation Phase I – Glen Cairn Stormwater Management Pond	ISD11-3045	\$9,000
Hunt Club Rd. Corridor Noise Fence Retrofit/Replacement	ISD12-5112	\$13,000
Hazeldean Rd Watermain Upgrade - (Castlefrank to Kincardine)	ISD12-3002	\$6,500
Jockvale Rd. Widening (Jockvale to Cambrian) & Cambrian Rd. Reconstruction (Jockvale to Greenbank) incl. new Monaghans Bridges Jockvale Rd. SB and NB	ISD11-5181	\$23,975
Craig Bridge - Craig's Side Rd O/P Carp River	ISD12-7103	\$1,160
Gladstone (Bank - Cartier)	ISD13-5116	\$10,980
Bridge Culvert SN117600	ISD13-7077	\$3,200
Watts Creek Relief Sewer Chamber - Gate Replacement	ISD13-2031	\$1,800

Project Description	Construction Contract No.	Budget (\$000s)
Bayswater Place and Irving Place Reconstruction	ISD13-5038	\$4,700
Van Vliet Roadway Extension	ISD13-5023	\$1,500
Greenbank Road Noise Barrier	ISD13-5147	\$1,200
Trenchless Rehabilitation of Three Culverts on OR174 (Blair Road to Montreal Road)	ISD14-7030	\$864
Quigley Rd / 174 intersection improvements	ISD14-5080	\$900