



DEVELOPMENT AND INFRASTRUCTURE SERVICES – ENGINEERING SERVICES
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**DEVELOPMENT AND INFRASTRUCTURE SERVICES - ENGINEERING SERVICES
INFORMATION REPORT ES 2016-55**

TO: Mayor Van Bynen and Members of Council

COPY: R.N. Shelton, P.Eng., Chief Administrative Officer
P. Noehammer, P.Eng., Commissioner, Infrastructure and Development Services
I. McDougall, Commissioner, Community Services
E. Armchuk, Commissioner, Corporate Services
Members of OLT

SUBJECT: Improvements in Performance, Workmanship and Quality by the Town's Contractors and Consultants

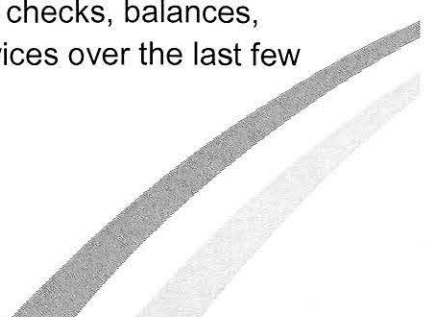
ORIGIN: Director, Engineering Services

PREAMBLE

In accordance with the Procedure By-law, any Member of Council may request this Information Report be placed on an upcoming Committee of the Whole agenda for discussion.

BACKGROUND / COMMENTS

We have been hearing through our own Council Members, through the media and throughout the Province that there is concern regarding the quality of materials and services provided by construction contractors and engineering consultants working on behalf of the public sector. In an effort to address this concern, the Town of Newmarket's Engineering Services Department has been implementing more stringent controls, checks and balances that are resulting in better quality of materials and improved efficiencies, performance and workmanship from our contractors and consultants. The following list provides examples of eighteen (18) new checks, balances, challenges and quality control measures implemented by Engineering Services over the last few years to improve performance by the Town's contractors and consultants.

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1. Not always awarding a contract to the lowest bidder. The Town has a responsibility to obtain quality goods and services at the lowest possible cost. However, choosing the lowest bidder for capital construction contracts without consideration to risk and past performance of a proponent is no longer an option. In accordance with our procurement procedures, staff now includes contractor evaluations. In cases where it can be proven that a particular low bidder has not performed well on previous contracts (either with Newmarket or with other public entities), Engineering Services does not recommend an award to the lowest bidder. However, in order to avoid legal complications and additional costs, there must be documented proof of past performance issues that supports any refusal by the Town to award a contract to the lowest bidder. In cases where there is no documented proof, other measures are now being taken to ensure quality, as shown below.
2. Reference checks: A very rigorous process of verifying references of potential contractors and consultants is now standard practice. Staff is obtaining a larger number of references to review past performance of low bidders in other municipalities and is conducting rigorous checks of all references before recommending an award. Any concern raised sparks the need for an interview, as described in “3”, below.
3. Face-to-face interviews: Where there is any concern about performance, staff now sets up a face-to-face meeting with the contractor or consultant prior to any recommendation for award. The purpose of the meeting is to interview the potential supplier about past projects, to clarify concerns, to find out and document how the contractor proposes to address any issues and to clearly enunciate the Town’s expectations and the consequences for non-performance. If staff is not satisfied with the responses of the bidder, an award will not be recommended and another bidder will be considered. Bidders are advised that unacceptable performance on a contract will result in their company being barred from working with the Town for a minimum period of 2 years, unless they can prove to the Town that acceptable changes have been made to address all concerns.
4. Ongoing evaluation of contractors and consultants during construction: Engineering Services staff is making use of consultant and contractor evaluation tools more proactively and more frequently to rectify performance issues as they arise. Rather than filling out evaluation forms upon completion of a project, staff now fills them out regularly throughout the project. These forms are officially filed, without delay, with our procurement office and they are shared with the contractor so that he/she can address the issues immediately. The filed forms serve as official documentation to provide proof of past performance for consideration if the same contractor or consultant bids on future projects with the Town. Evaluation forms stay in the vendor’s file for several years. To date, our experience has shown that contractors improve their performance promptly when a form is filed. (Staff also fills out evaluation forms to recognize good performance in order to encourage contractors and consultants to continue to excel.)

5. Physically inspecting construction sites more often: Engineering Services staff now physically attends and inspects construction sites more often than in the past, instead of simply relying on the consultant's field staff. Daily unannounced visits by the Town's Capital Projects Engineers compel contractors and consultants to be more vigilant and consistent in their performance and quality control.
6. Improved "Inspection Report Forms": Staff has developed a specialized "Inspection Report" form for daily diaries chronicling activity on the construction site. For example, all daily forms will now indicate who from the Contractor's and Consultant's forces is on site at any given time, what types and quantities of materials were installed during that day, what construction equipment is on site, what tests were conducted on materials, and the measured quantity of work completed that day (e.g.: how many metres of pipe were laid, how many tonnes of granulars were placed, etc.). This allows more control on deliverables from the consultant and also provides better documentation to justify quantities that are reported for payment on invoices and certificates.
7. Dealing with Engineering Consultant performance issues immediately: Unsatisfactory performance by engineering consultants on a capital construction site is addressed immediately. Engineering Staff now challenges consulting engineers more proactively, thereby ensuring that the Town's best interests are being maintained on our construction projects. Mediocre performance by consultants is unacceptable and as soon as field or design staff is deemed to be performing at a less than satisfactory level, the situation is escalated to the consultant's senior management and demands are made that the non-performing field personnel improve immediately or be replaced with more appropriate staff.
8. Non-payment for unsatisfactory works: Engineering Services is now withholding payment for work by consultants or contractors that is deemed to be sub-standard. Payments for sub-standard workmanship or materials are withheld until the work is rectified or the sub-standard materials are replaced to the satisfaction of the Engineering Department.
9. Contacting bonding companies to report poor performance: Traditionally, contacting a contractor's bonding company was only done where there may have been a gross default by the contractor in meeting contractual obligations. However, in recent years, Engineering Services has been contacting bonding companies to report a contractor who is performing poorly on a Town project. Most bonding companies will contact the contractor directly to find out their client's side of the story after being contacted by the Town. Although there is no penalty to the contractor by the bonding company, the mere fact that the bonding company is aware of the performance concerns has invariably resulted in a significant and immediate improvement in the contractor's performance. This measure is only taken in cases where the contractor ignores orders after being advised both verbally and in writing that he/she must improve performance.

10. Bonus Clause for exceeding expectations: Contracts that are time-sensitive or construction works that will have a significant negative impact on local residents now contain a “Bonus Clause” that motivates contractors to bring the work to completion more quickly without compromising quality. Such clauses provide a modest financial incentive to encourage contractors to employ measures such as extended work shifts or more efficient work procedures to complete a project by a certain date without any unnecessary delays. In the past, the Town has seen examples of construction projects that were delayed by a contractor who removes crews from the Town’s projects to go to work in another municipality while our projects remain unfinished for extended periods of time. The Bonus Clause discourages this from happening.
11. Enforcing Liquidated Damages on late projects: In the past, the Town was lenient in applying the liquidated damages (LD) clauses in contracts. LD clauses specify penalties for missing targeted completion dates. The penalties can range from \$500 to over \$2,000 for each working day past the targeted completion date. The fine must be established based on the Town’s actual costs for each day in excess of the expected contract end date. Examples of the Town’s costs are additional time for our own staff and additional charges by our consultants. The Town now applies and collects the LD’s more proactively. This has the effect of compelling contractors to finish the Town’s works in a timely way.
12. Clearer Requests for Proposals (RFP’s): All RFP’s by Engineering Services are now more detailed in scope so that expectations are clearer and more defined for proponents. Another new feature of RFP’s is to specify more clearly what constitutes non-performance and the penalties and consequences associated with it.
13. Clear interim milestones for design: Engineering Services has now established clear milestone dates and expected deliverables for 30, 60 and 90 percent design milestones by engineering consultants. This includes tasks, design details and deliverables that need to be completed on a schedule that is established when the consultant is given a new design assignment. Town staff actively reviews the consultants’ drawings at each of the milestones and any errors or omissions on the drawings are red-lined for correction way in advance of receiving the tender-ready design sets. This has had the effect of ensuring clear expectations during the tendering period and it has resulted in fewer addenda and corrections after the tender is issued, thereby improving costs and efficiency.
14. New “Contract Administration Procedures” for consultants: Capital Projects staff has raised the bar on expectations from our consultants, who now have to conform to higher standards through a document outlining new contract administration procedures. The document provides guidelines and expectations so that there is no confusion as to the duties and responsibilities of the consultant.

15. New “Supplemental Conditions” for contractors: Staff in Engineering Services has developed and adopted standards that guide the contractor in completing infrastructure works. These standards meet or exceed the Ontario Provincial Standards (OPS), thereby giving staff more control in ensuring quality materials and workmanship.
16. New “Materials Testing and Sampling Guidelines”: Engineering Services is in the process of finalizing a document outlining the Town’s requirements to ensure quality control of materials being used on our capital construction sites. For example, staff is specifying the frequency and type of testing for items such as concrete, granular materials, asphalt, and many other materials. Staff is also recommending random sampling and testing of materials directly from delivery trucks as they haul materials onto the construction site.
17. Controlling and monitoring claims for extras: Engineering Services has established a strict policy to control claims for extras. Contractors and consultants are now advised very clearly, in advance, that change orders which result in extra costs will not be accepted without having been submitted in writing as soon as the need arises. The Town will no longer accept claims that are presented “after the fact”. This new procedure is already resulting in better cost control and more efficient scheduling. It also eliminates frivolous claims and has significantly reduced the number costly changes being requested by contractors. Another positive outcome is that there are now fewer cases reaching arbitration.
18. Internal technical and cost audits of construction projects: A “post-mortem” is now conducted at the end of every capital construction project. Staff schedules a meeting, along with consultants if required, to discuss what went well and what improvements could have been made and what lessons were learned during the entire project. The purpose is to develop and continue refining a series of best practices that can be used on all of our capital projects.

EARLY RESULTS WITH THE NEW CONTROLS, CHECKS AND BALANCES:

Since implementing the measures listed in this report, staff has already seen significant improvements in the quality, workmanship, performance, materials and scheduling of Town projects. Examples of some of the 2016 projects that have resulted in better performance by contractors and consultants and fewer overall complaints are:

- Arnold Crescent Road Reconstruction
- Forest Glen LID Demonstration Road Reconstruction Project
- Fairy Lake East Parking Addition
- Tom Taylor Trail Under the Keith Bridge
- Water Street Pedestrian Crossing Island

Despite all of the new measures that staff has implemented, there will still be occasional projects where unexpected difficulties may arise with a contractor and/or consultant. However, overall, the results have been very positive and the level of performance by our contractors and consultants continues to improve.

AREAS OF CONSIDERATION FOR FURTHER IMPROVEMENT

Staff is currently considering ways to further safeguard the Town's best interests on future capital works. One area that is being explored is having the Town conduct our own field investigations and contract inspection to ensure quality materials and services on site instead of relying on consultants. Staff is in the process of developing a business study to determine if substantial improvements in contractor performance, along with significant cost savings, could be achieved by supplying these services with in-house Town staff.

BUSINESS PLAN AND STRATEGIC PLAN LINKAGES

- Well Equipped and Managed...through efficient management of capital projects.
- Well Planned and Connected...through improved communication.
- Well Respected... through managed partnerships and cooperation with stakeholders.

CONSULTATION

There was no consultation required in the preparation of this report.

HUMAN RESOURCE CONSIDERATIONS

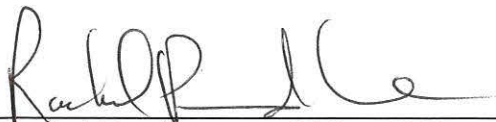
There is no impact on current staffing levels.

BUDGET IMPACT (OPERATING & CAPITAL BUDGETS)

This report does not recommend any initiatives that would have an impact on current and future operating or Capital budgets.

CONTACT

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