



SUBJECT: Site Engineering resourcing update

TO: Environment, Infrastructure & Community Services Cttee.

FROM: Engineering Services Department

Report Number: ES-04-23

Wards Affected: All

File Numbers: 570.02-1059

Date to Committee: March 2, 2023

Date to Council: March 2, 2023

Recommendation:

Approve eight (8) additional staff positions required by Engineering Services and funded by revenues as identified in engineering services department report ES-04-23.

PURPOSE:

Vision to Focus Alignment:

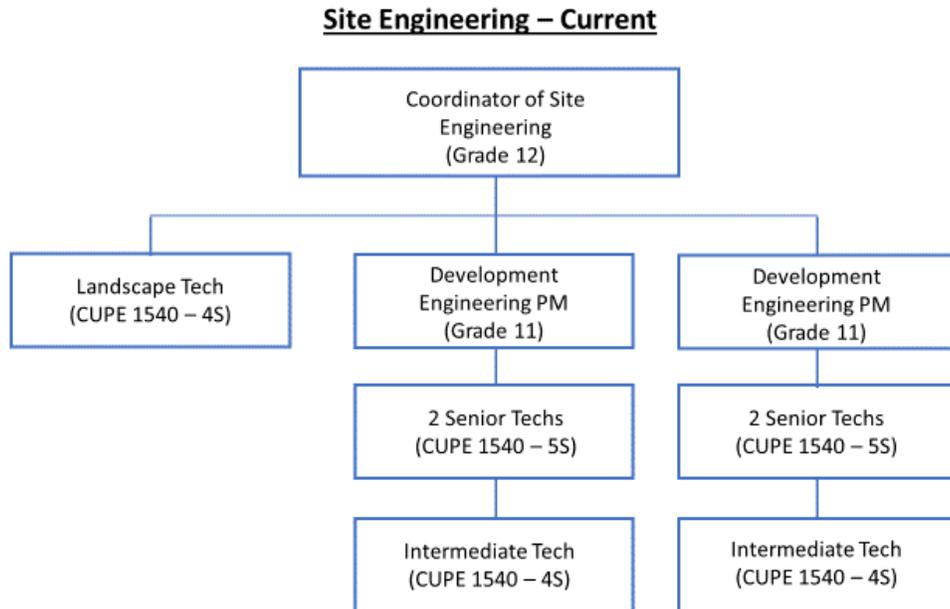
- Increase economic prosperity and community responsive city growth
- Support sustainable infrastructure and a resilient environment
- Deliver customer centric services with a focus on efficiency and technology transformation

Background and Discussion:

On December 8, 2022, EICS-C-05-22: Site Engineering Resourcing Update and Immediate Resource Needs was presented to the Environment, Infrastructure and Community Services Committee as a Motion Memorandum to Direct the Director of Engineering Services to provide a staff report in January 2023 with options and recommendations related to the immediate resource requirements of the Site Engineering section to effectively deliver the fundamental components for timely review and processing of development application approvals. This report is to include, but not be limited to the identification of the resources required to meet Site Engineering's current backlog and projected ongoing high volume of development applications

The Site Engineering (SE) group of the Engineering Services department is currently made up of 10 full-time staff, shown below:

- 1 Coordinator
- 2 Development Engineering Project Managers
- 4 Senior Engineering Technologists
- 2 Intermediate Engineering Technologists
- 1 Landscape Technologist (currently vacant)



The SE group's responsibility is to undertake the technical review of engineering and environmental submissions for the purpose of approving proposed developments. It has been struggling over the last 3 years to keep up with the high volume of development applications being submitted for review. In the last few months of 2022, the backlog continued to increase, resulting in staff falling significantly behind and being under extreme pressure to complete application reviews.

Notwithstanding the addition of 3 new full-time staff in 2022 (included in the complement of 10 staff), our SE team continues to experience an extremely high workload in both volume and complexity of applications received. The added challenge of a general reduction in application quality has resulted in additional technical review time. Over the past year, the Director of Engineering Services has also engaged the services of an external engineering consulting firm to assist with development review. This has helped with the backlog; however, the consultant's review is limited in scope and their work needs to be reviewed by staff before comments are provided to applicants and there remains considerable administrative work by staff for the issuance of approvals.

Applicants are very concerned about the delays in review and approval. For the development industry, time is of the essence.

In 2021, Community Planning provided an updated fee schedule (PL-07-22) that was based on Activity Based Costing where the costs for the staff effort to deliver a service (i.e. official plan amendment, site plan, zoning clearance, etc.), was calculated so that fees may be set to recover those costs through appropriate application fees.

In 2023 and the foreseeable future, this is expected to be an extremely demanding time for the City. New Provincial legislation introduced under Bill 23 and Bill 109, will have significant impacts on the City's ability to process applications in a timely manner with full cost recovery from the development industry. We expect this will lead to more challenges with development review.

The table below shows a quick comparison of the review hours required and number of applications over the past 3 years.

Year	No. of Applications	Total Staff Hours Required
2020	462	21,317
2021	600	24,495
2022	525	22,312

With our current staff complement, it's estimated that the SE group will be able to deliver approximately 51% of the typical annual workload. From the 10 SE positions listed, 9 positions are dedicated to development application review and approvals which amounts to approximately 11,395 hours of available review time each year. Please note the spreadsheet does not account for any backlog of work, which now is considerable.

Strategy/process

Summary of Typical Application Annual Workload

- Preconsultations = 78
- Site Plans = 40
- Minor Variances and Consents = 140
- Official Plan and Zoning By-law Amendments = 11
- Subdivisions = 3
- Grading and Drainage Clearance Certificates = 170 (down from 262 due to process improvements)

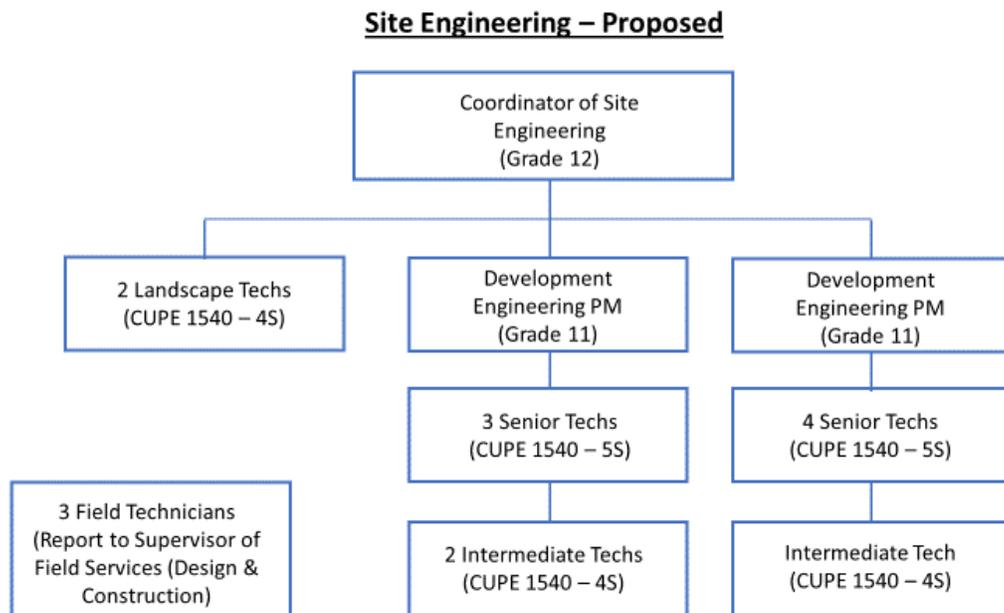
Total number of applications = 442 (down from 534 due to process improvements)

Total required hours = 22,180 hours (including review, field work, meetings, inspections and complaint investigations)

This summary is based on reviewing the 3-year average for volume and type of development applications in comparison with the 7-year average. In this analysis, Bill 109 pressures to deliver development application approvals faster has not been considered, while recent process improvements for the Grading and Drainage Clearance Certificate approvals have been included.

In order to meet the projected demand for application approvals, the following positions would need to be added to the Engineering Services Department. These positions are based on the different application types and levels of experience needed for review and approvals.

- Engineering Services:
 - (3) Senior Engineering Technologists
 - (1) Intermediate Engineering Technologist
 - (1) Landscape Technologist
 - (3) Field Technicians



Options Considered

Option 1: Additional applications reviewed by Consultants

Since the beginning of 2022, staff have been utilizing a consultant to assist with development application review. The scope of review services is limited to the design of servicing, grading and drainage. Upon completion of their review, City staff are required to review the consultant's comments to ensure consistency with City standards and commenting protocols. "Other application reports" such as environmental, acoustic, lighting and groundwater continue to be reviewed by City engineering staff.

Although retaining the services of a consultant does speed up the overall application review process, it is not a full-service review and staff are still required to address the "other application reports" as well as prepare development agreements and the related financial schedules. This was found to be an inefficient use of internal resources.

Combined with the fact that this development application review work is carried out by unionized staff and the consultant costs were 3 times that of our internal costs, the use of a consultant is not a suitable long-term solution.

Option 2: Reassign Engineering Technologist field work to Field Technicians

It is becoming extremely difficult to attract and retain technical staff, especially for the Senior Engineering Technologist position, which is currently responsible for both technical review and field work.

To assist with managing the department workload, staff have strategically looked to areas where we can align similar skillsets and training across different roles to deliver work more efficiently. Reassigning the Engineering Technologist field work to the Field Technician frees up working hours for the Engineering Technologist to complete technical reviews. At the same time, the Field Technicians will be more readily available to complete field work, compliance inspections and complaint investigations, given that they primarily work in the field.

In addition to this benefit of aligning field work, staff were directed to report back to Council regarding staffing resources necessary to ensure effective implementation and enforcement of the construction and mobility management guidelines (CMMP) for low rise residential development, including the Grading and Drainage Clearance Certificate (SD-09-20). While these additional field technicians won't be specifically aligned with CMMP needs for low rise infill development, they will add capacity and the ability to support it. A future report will be forthcoming to Council on the bylaw changes needed to allow the enforcement and effective implementation of the CMMP.

Aligning similar skillsets to deliver similar work has been successful in the delivery of the capital program during the peaks and valleys associated with the construction season.

If in the event of a downturn in development, the Field Technicians work assignments would be reprioritized from private development projects to assisting with the capital program delivery without an impact on the department operating budget.

Option 3: Develop Efficiencies in the Review Processes

Through participation in the Streamlined Development Application Fund (SDAF) project, as well as internal self-assessment, our engineering review processes are being examined closely to improve the efficiency of review services.

This review includes:

- **OPA/ZBA Comments** – For many years, Engineering (as well as other Departments) has been asked to deliver detailed engineering comments for OPA/ZBA land use planning application matters, instead of only as part of the Site Plan application review. There are both pros and cons to this strategy. Recently, Engineering staff have been working with the Legal Department to streamline comments and approvals for OPA/ZBA applications, which should result in fewer required Engineering staff participations in OLT appeals of this nature.
- **Site Plan Conditions** – Similar to above, for many years, Engineering (as well as other Departments) has been delivering conditions of approval for site plan application matters, which are not supported by legislation (i.e. Planning Act) or municipal by-law (i.e. CMMP), in an effort to benefit the public and aid applicants. Again, there are both pros and cons to this strategy. Recently, in response to Bill 109 and Bill 23, Engineering staff have been working with the Legal Department to streamline conditions of approval for Site Plan applications, which should result in fewer required Engineering staff participations in OLT appeals of this nature.
- **Grading & Drainage Clearance Certificates (GDCC)** – The GDCC by-law was enacted in 2018 and was intended to widen the scope of engineering review for projects on low-density residential lands requiring a building permit. Recently, through SDAF, staff have been working to streamline not only the application, review and approval process for GDCC works, but also auditing the scope of engineering reviews. In 2022, several types of reviews (i.e. second story additions only) became exempt from GDCC reviews.

- **Auditing and Refining Info for Applicants** – Engineering is working to provide better information to the public for a variety of applications (i.e. design guidelines and standard drawings, GDCC requirements and FAQs, permit applications). Recently, through SDAF, staff have been working to improve the quality of GDCC-related information available for applicants and this GDCC work continues. Similar refinement is necessary for engineering development application reviews and permit application requirements and processing. If applicants are provided with better information, then the quality of development and permit applications should improve.
- **Review checklists and supporting tools** – Engineering is working to establish/refine checklists for engineering reviews (i.e. OPA/ZBA, Site Plans, Subdivisions, Committee of Adjustment, engineering permits, etc.). Checklists should help staff with reviews and the delivery of more consistent comments across applications to applicants. A benefit for staff would be simple reminders of what to look for and an organized way to record comments for future reference. A benefit for applicants would be receiving similar comments from different review staff and from application to application.
- **By-law Updates** – Engineering is working to review, audit and update by-laws that are outdated. Outdated by-laws can lead to confusion if permits are required or if enforcement is necessary, but the by-law is outdated and/or the requirements are unclear. Aligning the application processes and/or compliance enforcement provisions within similar by-laws (i.e. GDCC, Site Alteration, Storm Discharge and Municipal Consent) would provide efficiencies.

This review, audit and process improvement takes staff time and effort to implement but will benefit staff and applicants in the long run.

Financial Matters:

Total Financial Impact

The total cost for these eight (8) positions would be \$ 935,822.

Source of Funding

Funding for Engineering Services staff positions would be from the Operating Budget and supported by revenues from development application fees. The recent development fee review that was done by Watson & Associates (Report PL-07-22) established new application fees to cover current development service costs.

If development slows within the City of Burlington, we have the ability to utilize the new field staff in the delivery of construction (Capital Program, Utilities, External Agencies) within our road right of way with funding and external revenue outside of the Operating Budget. If revenues are not achieved to recover these costs, a draw from the corresponding stabilization reserve funds would be required. The reserve fund balances for the related development application fees are as follows:

- Planning Fee Stabilization Reserve Fund - \$3,470,464
- Engineering Fee Stabilization Reserve Fund - \$370,717

Other Resource Impacts

There will be an impact on Human Resource staff availability and ability to fill these new positions that are currently outside of the Engineering department allotment. This impact should be significantly reduced as we currently have vacancies in similar previously approved positions that are in the process of being backfilled.

During this review it was identified that while this addresses the ability of SE to complete the application review in a timely manner, there may continue to be a delay in the Forestry Section's ability to complete any reviews where there are tree impacts. At the time of this report, those impacts are unknown and should be considered in a future report.

Climate Implications

Not Applicable

Engagement Matters:

Not Applicable

Conclusion:

The proposed additional staff resources will allow for the Site Engineering section to effectively deliver a timely review and processing of development application approvals.

Staff have looked at process improvements and efficiencies as outlined in the above options to ensure the minimum number of staff resources needed to deliver the projected application volume and deal with the current backlog.

Respectfully submitted,

Scott Hamilton, P.Eng.

Director of Engineering Services

905-335-7600 ext. 7812

Appendices:

- A. Appendix 1: Current Staff for Required Hours
- B. Appendix 2: Required Staff for Required Hours

Report Approval:

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Counsel.

Appendix 1: Current Staff for Required Hours

CURRENT STAFF FOR REQUIRED HOURS (incl. ENGINEERING FIELD WORK)

# of PMs	2	>>>>	PM Hrs / Person	Total PM Hrs	PM Staff Support Hrs	OLT	Other	Continuous Improvement	PM Avail. Review Hrs	11,819	PM & SR Required Review Hours
	PM Review %		75%	1,540	3,080	770	630	156	104	1,420	7,140
# of SRs	4	>>>>	SR Hrs / Person	Total SR Hrs	SR Staff Support Hrs	OLT	Other	Continuous Improvement	SR Avail. Review Hrs		
	SR Review %		100%	1,540	6,160	N/A	0	232	208	5,720	
# of LAs	1	>>>>	LA Hrs / Person	Total LA Hours	LA Staff Support Hrs	OLT	Other	Continuous Improvement	LA Avail. Review Hrs	3,043	Required Review Hours
	LA Review %		100%	1,582	1,582	N/A	140	37	52	1,353	1,353
# of INTs	2	>>>>	INT Hrs / Person	Total INT Hours	INT Staff Support Hrs	OLT	Other	Continuous Improvement	INT Avail. Review Hrs	7,318	Required Review Hours
	INT Review %		100%	1,561	3,122	N/A	0	116	104	2,902	2,902
										22,180	TOTAL Required Review Hours
										11,395	TOTAL Available Review Hours
										51%	% of Work Delivered

Appendix 2: Required Staff for Required Hours

REQUIRED STAFF FOR REQUIRED HOURS (w/o ENGINEERING FIELD WORK)

# of PMs	2	>>>>	PM Hrs / Person	Total PM Hrs	PM Staff Support Hrs	OLT	Other	Continuous Improvement	PM Avail. Review Hrs	10,071	PM & SR Required Review Hours
	PM Review %		65%	1,540	3,080	1,078	630	156	104	1,112	11,122
# of SRs	7	>>>>	SR Hrs / Person	Total SR Hrs	SR Staff Support Hrs	OLT	Other	Continuous Improvement	SR Avail. Review Hrs		
	SR Review %		100%	1,540	10,780	N/A	0	406	364	10,010	
# of LAs	2	>>>>	LA Hrs / Person	Total LA Hours	LA Staff Support Hrs	OLT	Other	Continuous Improvement	LA Avail. Review Hrs	3,043	Required Review Hours
	LA Review %		100%	1,582	3,164	N/A	140	74	104	2,846	2,846
# of INTs	3	>>>>	INT Hrs / Person	Total INT Hours	INT Staff Support Hrs	OLT	Other	Continuous Improvement	INT Avail. Review Hrs	6,290	Required Review Hours
	INT Review %		100%	1,561	4,683	N/A	0	174	156	4,353	4,353
										19,404	TOTAL Required Review Hours
										18,321	TOTAL Available Review Hours
										94%	% of Work Delivered