CORPORATE FACILITIES MEMORANDUM

TO: MAYOR J. LEHMAN AND MEMBERS OF COUNCIL

FROM: R. PEWS, P.ENG., DIRECTOR OF CORPORATE FACILITIES

NOTED: D. MCALPINE, GENERAL MANAGER OF COMMUNITY AND CORPORATE SERVICES

M. PROWSE, CHIEF ADMINISTRATIVE OFFICER

RE: DORIAN PARKER CENTRE PARKING LOT

DATE: DECEMBER 6, 2021

The purpose of this Memorandum is to inform members of Council that on Monday November 29, 2021, General Committee Budget Planning meeting, staff were asked to quickly investigate alternative options for the paving of the Dorian Parker Centre parking lot. In addition to the base scope of work already included in the 2022 Capital Plan, two alternative options are included in this memorandum with high-level budget estimates for each.

Staff noted that the budget prices presented for the two alternative options are necessarily order of magnitude in nature, due to the short investigation time available. Both options will require the completion of geotechnical and hydrogeological reviews to confirm their suitability on the site; and as this lot falls within a source water protection zone, it is possible that additional measures, unknown at this time, may be required to advance either option. Depending on the outcome of more detailed review and design work, it is possible that neither option may be feasible. Should either option be desired and viable, minor funding assistance may be available from the Lake Simcoe Region Conservation Authority (LSRCA) to support its implementation.

The base scope included in the 2022 Capital Plan included wholesale removal and replacement of asphalt parking lot and driveway areas, sidewalks and curbs, including deep subgrade repairs.

Alternate Scope 1 – Wholesale removal and replacement of asphalt parking lot and driveway areas, sidewalks and curbs, including deep subgrade repairs, but with the addition of one or more bioretention cells to accommodate drainage from the lot. A project of this nature recently completed at the Victoria Woods Parking Area on Lillian Crescent was used as the basis of costing for this option. While still using asphalt as the physical parking surface the bio-retention cells introduce the ability to capture and treat the first flush of runoff from the lot. This option, if possible, incurs only a minor increase in operating costs due to maintenance requirements of the cell but allows standard surface maintenance and snow clearing methods to be used. Based on costing received for that project, the introduction of bio-retention cells may be expected to command a 60% premium over the cost of an asphalt lot alone.

Allowing for the fact that a significant amount of work required under this scenario also applies to the base project included in the capital plan, the premium for Alternative Scope 1 is estimated to be $210k, plus an ongoing operating budget increase of $5,000 to cover contracted maintenance costs related to the bio-retention cells and use of de-icer (vs road salt). It should be noted, however, that the actual feasibility of this option is not assured. Due to the number of mature trees surrounding the lot, a detailed survey of the area will be required to ensure that the bio-retention cells can be installed without damaging existing tree roots. For reference, supporting funding in the amount of $35k was received from the LSRCA for the Victoria Woods parking lot refurbishment project.

Alternative Scope #2 – Wholesale removal and replacement of asphalt parking lot and driveway areas, sidewalks and curbs, including deep subgrade repairs, but utilizing permeable pavers in lieu of asphalt. This option would replace the asphalt parking surface with permeable paving stones. Paving stones are more visually appealing, and pervious pavers do allow water infiltration through the stones for improved drainage; however, the material and labour costs are significantly higher for this option than asphalt. Furthermore, the concrete base generally used under pavers on public drive isles to help prevent settling, heaving and future tripping hazards cannot be used under permeable pavers since the concrete layer would prevent infiltration to the soil. Finally, due to their propensity to pitch and settle pavers significantly increase snow clearing costs, especially when subject to heavy loads, and have higher maintenance costs in general than asphalt.

The cost premium to replace the asphalt with permeable pavers is estimated to be approximately $395k, plus an ongoing operating budget increase of $10k to cover increased snow clearing costs and routine paver maintenance/resetting costs.

Should you have any questions regarding these options, please do not hesitate to contact me directly at extension 4710.