Backgrounder: Hot In-Place Recycling (HIR) contract with Road Surface Recycling Ltd. (RSR)

All City Road contracts include two distinct forms of testing to ensure compliance with specifications. Quality Control (QC) testing is performed by the contractor during the progress of the work, and Quality Assurance (QA) testing is performed by the City through a third-party testing company, normally as the work is being completed.

Test results are a matter of public record. Results are normally shared between the City and the contractor to ensure the work is progressing satisfactorily and that payments are made for work performed.

The contract with RSR resulted from a June 2021 competitive bid process worth \$1.8M. Like all of the municipality's competitive bid processes, this contract included specifications the selected bidder committed to meet. One of the three locations selected as part of this contract was the Kingsway from Second Ave to the Highway 17 bypass.

HIR is a method of paving that rehabilitates deteriorated asphalt pavements with the promise of minimizing the use of new materials. The process generally consists of four steps:

- 1. Softening the existing asphalt pavement surface with heat.
- 2. Mechanically removing the surface material.
- 3. Mixing the material with products that allow it to be reapplied, creating a recycled mix.
- 4. Placing the recycled mix on the pavement surface to bring the asphalt material back to its original condition and meet the requirements of newly placed asphalt.

Mixing the recycled road material with new products and applying them makes a new road surface that is similar to any hot asphalt surface and extends the life cycle of the roadway.

The contract specifications required that the HIR material meet the Ontario Provincial Standard Specifications (OPSS), which is a typical requirement for road surfacing contracts. The OPSS describe construction, equipment and material requirements. Contractors performing paving operations, including hot mix asphalt or recycled asphalt, on any road in Greater Sudbury must follow these specifications, and all asphalt is subject to thorough testing as outlined in the OPSS.

On this contract, issues of non-conformance to the OPSS began on June 20, 2023 – the contractor's first day of work. Staff identified these issues to the contractor and the issues continued during the following days of paving operations. As the contractor was unable to improve their processes to meet the OPSS, the work was stopped by the City until third-party material testing could be completed.

Asphalt quality testing is a complex process that requires expert analysis and review. The City engaged a third-party consultant with a certified laboratory to carry out the material testing, to review the results of the QC and QA testing and to provide the City with a report of the findings.

A third-party report has been received summarizing all available QC and QA testing for the HIR contract. It provides summary comparisons to the contract specifications, and a third-party expert opinion on the potential consequences of deviations from the specifications. The full report is available here: HIR Recycling Contract Report

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