

To: Warden and Members of County Council

From: Director of Public Works

Contract Award – 2022 Road Resurfacing Improvements and Culvert Replacements

RECOMMENDATIONS

- 1. That Oxford County Council award a contract to the low bidder, Coco Paving Inc., in the amount of \$4,602,000 (excluding HST), for the 2022 Road Resurfacing Improvements and Culvert Replacements;**
- 2. And further, that Oxford County Council authorize the Chief Administrative Officer and Director of Public Works to sign all documents related thereto.**

REPORT HIGHLIGHTS

- The purpose of this report is to obtain County Council approval to award the above-noted project for road resurfacing improvements and culvert replacements on various County Roads to Coco Paving Inc., in accordance with the County Purchasing Policy.
- The recommended rehabilitation strategies will help maintain and improve the overall County road network condition rating, renew pavement condition indexes and restore service levels. This work ensures that the County-owned road assets are in a good state of repair in alignment with the County's 2017 *Asset Management Plan* and the 2019 *Transportation Master Plan*.
- Using cold recycled in place (CIP) technology, the 10.5 km of planned road resurfacing is anticipated to reduce greenhouse gas emissions by at least 50% (up to 650 tonnes CO₂e) compared to conventional mill and pave technology.
- The rural/urban storm sewer assets proposed for replacement are required in order to maintain proper drainage function and safety within the road network, as well as to help prevent future unanticipated failures.
- This project is anticipated to begin in May 2022 and is targeted for completion in October 2022.

Implementation Points

Upon County Council approval, a contract will be executed with the low bidder, Coco Paving Inc., prior to proceeding with the work.

During the proposed culvert replacements, road closures on Oxford Road 24 (15th Line to Oxford Road 5) and Oxford Road 20 (Pigram Line to Oxford Road 10) will be required. In both cases, planned detour routes will be put in place and access for local residents, businesses and emergency services will be maintained as required.

As well, lane restrictions will be utilized during storm sewer repairs on Oxford Road 20 (Brownsville Road East/Rolph Street South) during the cold-in-place recycling and asphalt resurfacing work on Oxford Road 27 and during the paving repair on Oxford Road 24 (Hope Street East, Tavistock). Access for local residents, businesses, emergency services and other motorists will be maintained accordingly during this work.

Financial Impact

Culvert replacements along Oxford Road 24 (from 14th Line to Oxford Road 5) are being cost shared (50/50) with the neighbouring municipality – the County of Perth, with the approximate amount of cost recovery from the County of Perth being \$278,264 (excluding HST).

The Tender included provisional items for the use of a material transfer vehicle for both the west and east sections of hot-mix asphalt resurfacing on Oxford Road 27. These provisional items were not included in the contractors' final sub-total of their bid submissions. After review of the provisional pricing submitted by the low bidder, Coco Paving Inc., it is being recommended to proceed with the provisional items and include them in the sub-total to be awarded. The material transfer vehicle is advantageous to the paving operation as it allows the paver to operate continually with less stops, as well as reducing aggregate segregation and temperature differentials within the hot-mix asphalt after being delivered to site.

The recommended award amount includes a contingency of \$200,000, which will be divided amongst both 930099 (Rehab & Resurfacing) and 930199 (Rural Storm Sewer) Capital accounts to assist with unknowns and additional work if required. A portion of this contingency will be available for fluctuation of the AC (Asphalt Cement) price index, which can increase the cost of asphalt price within the contract.

A summary of the financial impact of this contract on the approved Capital budget is presented in Table 1 below.

Table 1: Funding Summary for 2022 Road Resurfacing and Culvert Replacements

2022 Capital Budget Account / Description	Available 2022 Budget	2022 Expenditures (excluding HST)
930099 – Rehab & Resurfacing (Approved Budget: \$5,465,000) (Less other projects: \$1,800,000)	\$3,665,000	\$3,445,521
930199 – Rural Storm Sewer (Approved Budget: \$1,500,000) (Less other projects: \$365,000)	1,135,000	926,480
Contingency	N/A	200,000
Provisional Items Material Transfer Vehicle Oxford Road 27	N/A	30,000
Subtotal	\$4,800,000	\$4,602,001
	Non-Refundable HST (1.76%)	80,995
	2022 Total	\$4,682,996

Communications

The communication strategy for this project will be similar to other County construction projects. The Contractor’s project manager and the County’s project manager will form an open channel of communication and will include other members of the project team as needed. These communications will commence upon approval of this report and will continue for the duration of the project.

Communication with the public (affected property owners and business owners) will begin when the project approaches initiation stages in the form of typical construction notices delivered by mail and/or hand delivery, when required. Communication will continue throughout the duration of the project as required to keep the affected parties informed and updated on project progress. Additionally, further outreach and promotion of construction activities will include posts to the County website and social media campaigns as needed.

Communication and engagement with affected Area Municipalities took place during the planning stages of this project in which various aspects of this project were discussed, such as proposed detour routes for road closures, upcoming work plans and schedules and possible incorporation of work with infrastructure replacements.







Proposed culvert replacements along Oxford Road 24 (between 14th Line and Oxford Road 5) are within a shared section of road with the County of Perth. Communication took place during the planning stages of this project with Perth County staff regarding the proposed scope of work and estimated cost. The County of Perth agreed in principle with the proposed work and cost

share to complete the required culvert replacements. After the tendering process was completed and bid pricing was known, Perth County staff were informed of the low bidder and bid pricing submitted for the associated works and have agreed to proceed.

Staff will continue to work with key internal stakeholders (County Management staff, Transportation staff, Waste Management staff, and Water/Wastewater staff) and external stakeholders during the execution of this project as required to ensure the appropriate level of communication and outreach is maintained, and further ensuring all parties involved are updated on project status and outcomes as needed.

Parts of Oxford Road 27 resurfacing have been included for a portion of the available Canadian Community-Building Fund. As part of the requirements for this type of funding, mandatory communication activities and promotion are required to help the public recognize the importance of infrastructure funding and its impact to their community; this includes the installation of project-appropriate information signs within the project sites, additional posts on the County website and social media campaigns.

Strategic Plan (2020-2022)

					
WORKS WELL TOGETHER	WELL CONNECTED	SHAPES THE FUTURE	INFORMS & ENGAGES	PERFORMS & DELIVERS	POSITIVE IMPACT
1.i. 1.ii.	2.i.	3.iii.	4.ii.	5.i. 5.ii.	

DISCUSSION

Background

Various County road segments have been selected for the 2022 resurfacing program based on the review of the 2015 *Road Needs Study, Asset Management Plan*, inspection/evaluation of the existing pavement distresses and conditions, as well as from the input and coordination from both Engineering Services and Transportation staff regarding operational issues and field observations.

A number of storm culvert replacements have also been included in 2022 as part of this project. Culvert replacements were identified by completing an inspection and condition assessment of the existing infrastructure along with input and recommendations from Transportation staff. Culverts identified along the selected road segments that were in a poor state of condition or determined to be beyond their useful service life were included for replacement.

A County map identifying the road resurfacing locations and culvert replacements has been included as Attachment 1 to this report. A description and background of the included scope of work for this project is provided below.

Oxford Road 27 (Pigram Line to Hwy 19)

The 2022 Road Resurfacing project involves the resurfacing of Oxford Road 27 (Pigram Line to Highway 19) totalling approximately 10.5 kilometers. Oxford Road 27 is considered a rural road cross-section and acts as an east/west transportation corridor within the County road network. Segments of this road asset are exhibiting signs of pavement deterioration, thus providing a lower level of service and carrying an increased maintenance cost.

In order to renew the pavement condition and extend the road lifecycle, a two stage pavement recycling and resurfacing rehabilitation approach has been selected. The existing pavement structure undergoes CIP (along with the addition of recycled asphalt or corrective aggregates as required to increase pavement structure) and then receives the placement of a new hot-mix asphalt wearing surface. The recycling and resurfacing is a multi step procedure with time interval between operations to afford time for the CIP mat to cure and undergo acceptance of quality assurance testing. This interval can vary depending on the type of added emulsions used during recycling, weather and contractor schedules (typically about two weeks or more). This is the preferred method of renewing the pavement condition rating for high-medium volume rural County road networks which offers a more sustainable and resilient pavement structure.

The CIP method is expected to reduce new materials production and transport as well as existing unrecycled materials disposal, resulting in reduced greenhouse gas (GHG) emissions of at least 50% when compared with a mill and pave (conventional method). Considering the multiple, project specific, varying factors of influence (region, distance to the site, the efficiency of equipment, etc.) utilizing available studies to provide an accurate comparison would not be possible. However, applying assumptions based on a 2007 MTO study, GHG emission offsetting of up to 650 tCO₂e can be anticipated by utilizing the CIP method for the 10.5 km of road resurfacing works versus the conventional mill and pave method.

As part of the recycling and resurfacing strategy to renew the pavement condition and service level provided, other improvements are being incorporated into the scope of work, including new granular shoulders and new pavement markings.

Storm Infrastructure, Culvert Replacements (Oxford Road 20 & 24)

As part of this contract, a combined total of 29 storm culvert replacements were included along various County road segments including Oxford Road 20 and Oxford Road 24. Oxford Road 20 has a total of 12 proposed culvert replacements to be completed, while Oxford Road 24 (shared section with County of Perth) has a total of 17 proposed culvert replacements.

As mentioned previously, culvert replacements were identified and selected after evaluation of the current culvert conditions were considered, in addition to recommendations from Engineering and Transportation staff. Most of the culvert locations proposed for replacement in 2022 are along road segments that have been selected for upcoming road resurfacing plans.

Replacement of underground infrastructure in the years leading up to and ahead of planned road resurfacing programs is the preferred method for culvert replacements and has proven to be beneficial to overall project outcomes. Furthermore, this method ensures any possible settlement concerns are addressed and corrected in the year(s) prior to road resurfacing work. This process reduces the overall construction duration at each location and impact to road users each year, as the length of disruption is shortened and spread out over multiple years.

Other Work, Asphalt Repair & Storm Sewer

As part of this contract, a small asphalt repair on Oxford Road 24 (Hope Street East, Tavistock) will be undertaken. This work includes cold-milling of existing surface asphalt full road width and re-paving with new hot-mix asphalt. This work was included to correct existing asphalt settlements on Hope Street from a large sewer crossing and previous service installations.

Also included are storm sewer repairs on Oxford Road 20 (Brownsville Road East, Brownsville) at the intersection of Rolph Street South. This work includes removal and capping of an existing abandoned storm sewer lead and the removal and replacement of a failing section of storm sewer service. These repairs will eliminate the drainage concerns at the intersection.

Comments

A prequalification process was completed ahead of the tendering stage of this project in December 2021. Staff reviewed the prequalification submissions and recommended that eight Contractors be pre-qualified and invited to submit bids on this Tender opportunity. The evaluation of submissions was based on a number of factors including Contractors' previous project experience with similar projects of scope and size, overall management team background and experience managing projects of this scale.

As this project has the possible risks that would be associated with any construction project of this scale and scope, the successful Contractor is also required to secure construction bonds and insurance to mitigate risks related to the exposure of financial loss.

After the prequalification process was completed and the Contractors that were eligible to move forward were selected, the project was tendered through a competitive bidding process, which opened on February 22, 2022. The tendering process closed on March 15, 2022 at 2 p.m. and five bids were received, with bid amounts outlined in Table 2 below, including contingency and provisional items.

Table 2: Summary of Bid Submissions

General Contractor	Bid Amount (excluding HST)
1. Coco Paving Inc.	\$4,602,000
2. Permanent Paving Ltd.	\$4,634,873
3. J-AAR Excavation Ltd.	\$4,899,963
4. Dufferin Construction Company	\$5,410,242
5. Brantco Construction	\$6,619,510

Staff reviewed the bid submissions and have confirmed that the low bid received from Coco Paving Inc., in the amount of \$4,602,000 (excluding HST), represents good value for the work.

Should the contract not be awarded and the work does not proceed, the condition of the County's affected assets will continue to deteriorate.

Conclusions

Review of the competitive bid submissions confirm that it is appropriate to award the 2022 Road Resurfacing projects to the low bidder, Coco Paving Inc. of Tecumseh, Ontario.

SIGNATURES

Report Author:

Original signed by:

Alex Brown, C. Tech
Senior Coordinator of Construction

Departmental Approval:

Original signed by:

David Simpson, P.Eng., PMP
Director of Public Works

Approved for submission:

Original signed by:

Michael Duben, B.A., LL.B.
Chief Administrative Officer

ATTACHMENT

Attachment 1: 2022 Road Resurfacing and Culvert Replacement Map