

Meeting Date: May 6, 2024
Department: Engineering & Public Works
Report No.: EPW-2024-35
Submitted by: Walter Easter, Manager of Public Works
Approved by: Trisha McKibbin, Chief Administrative Officer

SUBJECT: 2024 Hard Surface Road Recommendations

RECOMMENDATION: THAT: Council receive report EPW-2024-35 titled “2024 Hard Surface Road Recommendations” for information, and further;

THAT: Council direct staff to proceed with tendering the 2024 tar and chip program for Amiens Road, Walkers Drive, and Parkhouse Drive, and further;

THAT: Council direct staff to proceed with tendering the 2024 asphalt program for Westgate Ave, Park Street, and Lamore Crescent.

BACKGROUND:

In 2021 the Municipality participated in a Middlesex Municipal Joint Road Assessment Program that involved most of the lower tier municipalities within Middlesex County, and including the County. From the program, Strathroy-Caradoc obtained the Pavement Condition Index's (PCI). The PCI is an unbiased data driven process that supports Staff's decision matrix of selecting roads for upgrade and determining when roads need to be rehabilitated.

Tar & Chip

The importance of maintaining the existing tar and chip roads is essential for the Municipality. The current state of tar and chip roads is setting the Municipality up to perform double treatment applications year after year. Double treatment applications ultimately cuts the total kilometer length in half as we need to place two layers instead of one. The double treatment application consists of a 3/8" chip base layer and a 1/4" chip top layer which is used on roads that have extended past their life span. This application is typically used to eliminate wheel ruts as well as under or over exaggerated crown on the roadways.

Single and double treatment tar and chip applications is a cost-effective method of improving rural roads throughout the Municipality. In addition to being cost-effective, the application of tar and chip can be completed relatively quickly compared to other methods which minimizes the disruption to traffic.

The Municipality has approximately 150 kilometers of tar and chip roads, primarily in our rural community. Industry standard for resurfacing tar and chip is every 5 to 7 years. This eliminates the need for double treatment applications and only requires the placement of a single treatment application, saving costs.

At the current rate, the Municipality is not keeping up with maintenance on the current tar and chip roads. Converting gravel roads to tar and chip adds to the challenge of performing scheduled resurfacing maintenance on existing roads which leads to performing double treatment applications each year. Additionally, the existing gravel roads in the Municipality do not have the adequate drainage tile installed which can lead to structural road base concerns if tar and chip is applied without the proper sub base work completed before hand. Therefore, Staff do not recommend converting any gravel roads to tar and chip.

Asphalt

Asphalt resurfacing is an annual capital project to upgrade deteriorating roads due to regular wear and tear, weather conditions, and increased traffic volumes in our growing municipality.

The focus for selecting hard surface road upgrades are:

- PCI score
- Existing curb and gutter
- Age of assets (watermain, sanitary sewer, storm sewer)

As part of the selection process, Staff take into consideration potential candidates for road reconstruction and do not want to resurface roads that will be reconstructed soon. By placing new asphalt on one of these roads to only rip it in the next 5 to 10 years is not recommended. Asphalt has a 20 year life span and in certain cases, lasts longer than that.

COMMENTS:

Using the PCI data and visual inspections, Staff recommend the roads below for tar and chip in 2024:

1) Amiens Rd – Hickory Dr to 430m N of Olde Dr (6.5km) – PCI 75

- Recommendation: Double Treatment – Pulverize + 3/8" base + 1/4" top
 - Traffic Counts on Amiens Road (24 hours):
 - Hickory Dr to Glengyle Dr = 392

- Glengyle Drive to Skinner Drive = 2,058
- Skinner Drive to Scotchmere Drive = 870
- Scotchmere Drive to Union Drive = 832
- Union Drive to Olde Drive = 694

2) Parkhouse Dr from Christina Rd to Rougham Rd (2.5km) – PCI 51

- Recommendation: Double Treatment – Pulverize + 3/8" base + 1/4" top
 - Traffic Counts on Parkhouse Drive (24 hours) = 813

3) Walkers Dr from Sutherland Rd to McEvoy Rd (5km) – PCI 68

- Recommendation: Single Treatment – 1/4" top
 - Traffic Counts on Walkers Drive (24 hours):
 - Sutherland Rd to Adelaide Rd = 711
 - Adelaide Rd to Saxton Rd = 890
 - Saxton Rd to McEvoy Rd = 353

For tar and chip, this annual tender is issued using pre-supplied gravel (chips) crushed and washed ahead of time. This material is delivered prior to the tar and chip application and loaded by Staff to the awarded contractor’s hauling trucks. On top of supplying the gravel (chips), Staff perform grading on the selected roads to reduce cost.

Asphalt

Based on the information above for selecting asphalt candidates, the following roads are recommended for resurfacing:

- 1) Westgate Ave from Spence Dr to Park St – 470 meters – PCI 51**
- 2) Park St from Metcalfe St W to Southfield Dr – 320 meters – PCI 54**
- 3) Lamore Cres off of Riverview Drive – 200 meters – PCI 47**

Works included in the 2024 asphalt resurfacing will be:

- Removal and disposal of existing asphalt
- Fine grading granular base material
- Adjustment of existing maintenance holes frame and covers
- Curb repairs
- Milling at tie-in locations
- Placement of base asphalt and top coat asphalt

CONSULTATION:

This report was reviewed in consultation with:

- Chief Administrative Officer
- Director of Finance/Treasurer
- Public Works Operators

FINANCIAL IMPLICATIONS:

The projects will be funded from the 2024 approved capital budget of \$700,000 for tar and chip and \$575,000 for asphalt.

STRATEGIC PLAN ALIGNMENT:

This matter is in accord with the following strategic priorities:

The continued focus on timely infrastructure upgrades supports the Corporate Mission for local infrastructure by effective, financially responsible and well-maintained infrastructure networks.

ATTACHMENTS:

None.