Staff Report to Council

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Date:	November 22, 2024
To:	Mayor and Council
Name and title:	Blake McIntosh, Director of Civic Operations
Subject:	2024 Road & Sidewalk Capital Projects Review
Attachment(s):	2024 Road & Sidewalk Capital Projects Photos

Recommendation(s):

That Council RECEIVES FOR INFORMATION the report dated November 22, 2024, from the Director of Civic Operations titled "2024 Road and Sidewalk Capital Projects Review".

Purpose:

This report is presented to provide Council with information regarding the 2024 Road and Sidewalk Capital Rehabilitation.

Background:

In its 2024 Capital Budget, City Council approved a road rehabilitation budget of $6,700,000. A budget of $1,500,000 was allocated to sidewalk rehabilitation and $420,000 to new sidewalks. The sidewalk rehabilitation budget supports renewing approximately 2% of the current pedestrian network. The most recent pedestrian network study identifies 32% of the current network to be in fair to very poor condition.

The City of Prince George performs condition assessments on three categories of roadways within the municipal transportation network: arterial, collector and local. These assessments are completed every 3 years to monitor the condition of the City's paved network. Road segments are inspected and assigned a score based on their current condition. These scores assist in prioritizing road renewal and creation of the annual paving rehabilitation program. Once finalized for the upcoming season, various methods of renewal are employed to improve the City's paved road network.

The 2024 Road and Sidewalk Rehabilitation Program was completed using the following rehabilitation methods:

Thin Lift Overlay

This method of road rehabilitation consists of the placement of a 40mm – 50mm layer of asphalt overtop of the existing asphalt with limited remedial work done prior to the new layer being placed. The overlay adds structural strength to the roadway, however reflective cracking will appear through the new lift in a short time period. This method is used in situations where the existing roadway has good structure and only minor surface deficiencies as this application does not address sub-base problems.

Mill and Overlay

This method removes 50mm of existing asphalt which is then replaced with new asphalt. This method allows for the replacement of asphalt without increasing the elevation of the roadway. Milling removes surface deficiencies and is used predominantly in urban situations where curb and gutter are present, and road elevation is critical for drainage considerations. The milled material is used as backfill material in utility service digs in winter conditions, as well as for general fill for other projects that may need a more durable temporary surface such as civic facility parking lots. This method does not address sub-base problems and is dependent upon milling contractor availability.

Curb Relief Mill and Overlay

This method is a variation of Mill and Overlay that involves milling 2.2m of asphalt immediately adjacent to the curb on both sides of the road, at a depth tapering from 50mm – 0mm, but not milling the asphalt from the majority of the roadway. The entire road surface is then paved with 50mm of new asphalt. This method allows for the new asphalt overlay to match the existing curb and gutter elevation, without incurring the cost of a full milling operation. The addition of the asphalt overlay over the existing asphalt adds structural strength to the roadway, however this method is susceptible to reflective cracking if sub-base problems exist.

Sidewalk Full Reconstruction

Full reconstruction is the removal of the existing sidewalk surface and unsuitable soils to a depth of 930mm to allow the import and placement of 750mm SGSB gravels to be used as a subbase. An additional 80mm of crushed gravel is used to prepare the sub grade for the 100mm thick concrete sidewalk.

Sidewalk Reconstruction

Some of the sidewalk rehabilitation projects are completed due to surface distress and operational needs. In some cases, the subbase beneath the existing sidewalk is comprised of suitable gravels. In these cases, the existing hard surface of the sidewalk is removed along with enough soil to allow for the placement of 80mm of crushed gravel and a 100mm thick concrete sidewalk.

In certain instances when completing sidewalk rehabilitation, the City of Prince George takes the opportunity to check and service utility services to adjacent properties. Secondly, there are times where a fire hydrant or streetlight may need to be moved to allow for the construction of sidewalk to meet the most recent standards as determined by the City of Prince George Servicing Bylaw.

Discussion:

2024 Road Rehabilitation Projects

Roads included in the 2024 Road Rehabilitation Program are listed below by the type of surface rehabilitation methods. In 2024 the City of Prince George rehabilitated approximately 52.3 lane kilometers. The total lane-kilometers for each method are provided.

Thin Lift Overlays – 9.79 Lane-Kilometers

ROAD	FROM	TO	LANE-KM
Foothills Blvd	Nechako Bridge	North Nechako Dr	4.24
Estavilla Dr	Highway 97	Knight Cres	1.41
Glendale Dr	Estavilla Dr	Knight Cres	0.81
Shady Ln & Woodhaven Dr	Highway 97	Brentwood Dr	0.61
Alderwood Crt	Shady Ln	End	0.62
Valleyview Dr	Austin Rd E	End	2.10
		TOTAL	**9.79**

Mill & Overlay – 15.86 Lane-Kilometers

ROAD	FROM	TO	LANE-KM
Massey Dr East Bound	Ospika Blvd	Westwood Dr	0.97
Ospika Blvd North Bound	Nicole Ave	Massey Dr	1.83
Westwood Dr	Highway 97 On/Off ramp	Massey Dr	1.35
Ospika Blvd North Bound	Tyner Blvd	Davis Rd	1.71
University Way South Bound	Foothills Blvd	Shane Creek Bridge	4.80
St Lawrence Ave	Southridge Ave	St. Andrew Crt	0.72
Terminal Blvd	Highway 97	End	1.52
Ospika Blvd	15th Ave	Rainbow Dr	2.84
Pacific St & Highway 97	Pacific St	Highway 97	0.12
		TOTAL	**15.86**

Curb Relief Mill and Overlay – 26.60 Lane-Kilometers

ROAD	FROM	TO	LANE-KM
Nicholson St South	Massey Dr	End	0.28
Carney St	5th Ave	1st Ave	1.55
Alward St	10th Ave	5th Ave	1.08
Norwood St	17th Ave	20th Ave	0.59
Oak St	17th Ave	20th Ave	0.56
Ferry Ave	Highway 16	Clapperton St	2.45
Vance Rd	Westwood Dr	Highway 16	1.33
Barnes Dr	Davis Rd	Cormack Cres	1.23
Barnes Crt	Barnes Dr	End	0.13

Cormack Cres	Barnes Dr	Barnes Dr	0.44
Dakelh Ti	Domano Blvd	Southridge Ave	2.29
Westgate Ave	Highway 16 Frontage	Chartwell Ave	1.08
Westgate Crt	Westgate Ave	End	0.10
Westgate Pl	Westgate Ave	End	0.10
St. Lawrence Pl	St. Lawrence Ave	End	0.07
St. Dennis Pl	St. Patrick Ave	End	0.58
Santa Fe Rd	Milwaukee Way	End	0.55
Zillmer St	5th Ave	Valley Cres	0.27
Wolverine St	5th Ave	Valley Cres	0.27
Valley Cres	5th Ave	End	0.87
Urquhart Cres	5th Ave	5th Ave	0.78
Quesnel Ave	Ospika Blvd	End	0.19
Clark Cres	Boyd St	Boyd St	1.20
Bellos St	Clark Cres	Clark Cres	0.41
Dupre Ave	Boyd St	End	0.17
Boyd St	Tabor Blvd	1st Ave	0.83
Webber Cres	22nd Ave	22nd Ave	0.83
Rush Pl	Webber Cres	End	0.26
Lancaster Cres	Loyola Dr	Lemoyne Dr	0.73
Leyden Cres	Lancaster Cres	Malaspina Ave	0.22
Loyola Dr	Gladstone Dr	Malaspina Ave	1.26
Quentin Ave	Tabor Blvd	Lacoma St	0.56
Lacoma St	5th Ave	Ness Ave	0.65
Otter Cres	Lacoma St	Lacoma St	0.60
Ness Ave	Tabor Blvd	Lacoma St	0.61
Merton Cres	Ness Ave	Ness Ave	0.57
Punchaw Cres	Ness Ave	Lacoma St	0.61
		TOTAL	**26.60**

2024 Concrete Sidewalk Rehabilitation Projects

Sections and lengths of concrete sidewalk included in the 2024 Sidewalk Rehabilitation program are listed below.

ROAD	FROM	TO	LINEAL METRES
Carney St	15th Ave	Ellison Dr	222
1st Ave	Tabor Blvd	Skinner St	829
Austin Rd West	Crown Dr	3885 Austin Rd W	241
Strathcona Ave	Redwood St	Highway 16	538
2nd Ave	Ontario St	Scotia St	96
2nd Ave	Ottawa St	Toronto St	100
3rd Ave	Toronto St	Kingston St	102
3rd Ave	Queensway	Ontario St	186
		TOTAL	**2314**

2024 Asphalt Sidewalk Rehabilitation Projects

Sections and lengths of asphalt sidewalk included in the 2024 Sidewalk Rehabilitation program are listed below.

ROAD	FROM	TO	LINEAL METRES
Foothills Blvd	5th Ave	Moore's Meadow	1303
Ospika Blvd	Range Rd	Davis Rd	773
Domano Blvd	Malaspina Ave	Gladstone Dr N	1168
		TOTAL	**3244**

2024 New Sidewalk Projects

Sections and lengths of new concrete sidewalk included in the 2024 New Sidewalk program are listed below.

ROAD	FROM	TO	LINEAL METRES
Ospika Blvd North	1281 Ospika Blvd	McGowan Dr	75
Ellison Dr	20th Ave	Carney St	416
Westmount Dr	6926 Westmount	Cathedral Ave	144
Dawson Rd	6398 Dawson Rd	6282 Dawson Rd	164
Chartwell Ave	Westgate Ave	3404 Chartwell	46
		TOTAL	**845**

Strategic Priorities:

Road and Sidewalk rehabilitation is a Council priority identified in the sustainable infrastructure category of Council's Priorities.

Summary and conclusion:

The 2024 Road & Sidewalk Capital Projects Programs consisted of the following surface rehabilitation and new construction:

- 9.79 lane-kms of thin-lift (40-50mm) overlay;
- 15.86 lane-kms of mill and overlay;
- 26.60 lane-kms of curb relief mill and overlay;
- 2314 metres of concrete sidewalk rehabilitation
- 3244 metres of asphalt sidewalk rehabilitation
- 845 metres of new concrete sidewalk

A detailed list of the road projects and type of surface rehabilitation work completed in 2024 is provided. Civic Operations administered the $6,700,000 Road Rehabilitation program, $1,500,000 Sidewalk Rehabilitation program and $420,000 New Sidewalk program to the specifications set out

in the various contracts for each type of surface rehabilitation method to ensure that the City of Prince George received the best value for the expenditures undertaken.

Respectfully submitted:

Blake McIntosh, Director of Civic Operations
Prepared by Joel Thompson, AScT, CPESC, Engineering Technologist

Approved:

Walter Babicz, City Manager

Meeting date: 2024/12/16