



TO: Infrastructure, Investment and Development Services Committee

FROM: J. Weston, M.A.Sc., P. Eng., PMP, Director of Engineering

NOTED: R. J. Forward, MBA, M.Sc., P. Eng., General Manager of Infrastructure & Growth Management 
C. Ladd, Chief Administrative Officer 

RE: Sidewalks Proposed for Royal Oak Drive, Forestwood Lane, and Tollendal Mill
(File: W03-BAY)

DATE: April 13, 2016

The purpose of this memo is to provide background and rationale for the need of sidewalks on Royal Oak Drive, Forestwood Lane and Tollendal Mill Road associated with the road reconstruction for the Sanitary Servicing – Royal Oak, Bay, Cottage capital project. This project initially began with adding sanitary servicing to this neighbourhood, and the scope was expanded to urbanizing and reconstructing the roadway assets to best utilize capital spending from a life cycle and asset management perspective.

BACKGROUND

The Engineering Department is preparing detailed designs to introduce sanitary servicing into the subdivision including Royal Oak Drive, Forestwood Lane, Lovers Court and the section of Tollendal Mill Road that fronts the “Royal Oak Drive” subdivision (see attached Project Limits figure).

The project is scheduled to begin construction in 2 phases, with the first phase of bringing servicing through Gables Park from Brennan Avenue. The construction work in the Royal Oak subdivision is in the second phase of construction beginning in 2017 and being completed in 2018.

The current local roads and their assets on Royal Oak Drive, Forestwood Lane, and Lovers Court have reached the end of their life cycle and need to be reconstructed. Approximately 40 percent of the roadways have rollover curb and gutter, and the remaining roadways have gravel shoulders and ditches.

Most of the roadside ditches exhibit poor drainage characteristics, causing sections of ditches to pond. No sidewalks are in the area and the area has a street lighting system that has reached the end of its life cycle and does not meet current illumination standards.

The gravel shoulders continually erode and cause maintenance issues. The roadways and boulevards in this neighbourhood would benefit from a curb & gutter and a storm sewer system to efficiently convey the storm water runoff. A stormwater outfall is in place and was designed and constructed previously to alleviate some drainage problems in the area.

The current design is based on Council’s Motion 13-G-045 dated March 4, 2013 (see attached). With respect to sidewalks, Item 5 in the Motion reads:

“5. That staff be authorized to prepare construction contract drawings, including detailed design drawings for a two lane/8.5 metre wide urbanized roadway including storm sewer, curb and gutters, boulevard works, sidewalks and street lighting (per Staff Report ENG003-13), with a design cost of \$120,000, on Royal Oak Drive, Forestwood Lane, and Lovers Court. That this change in project scope be funded from the Tax Capital Reserve (13-04-0440).”

Staff Report ENG003-13 specifically addresses sidewalks as follows:

“24. The Engineering Department recommends that sidewalks be installed on Royal Oak Drive, Forestwood Lane and on Tollendal Mill Road (north side from Royal Oak Drive westerly to where the sidewalk extends on the north side from Hurst Drive). These proposed sidewalk works are consistent with the Engineering Department’s Design Standards. Road urbanization works are required to allow for the installation of sidewalks, due to the existing rural road section.”

On February 16, 2015, Council adopted Motion 15-G-038, the Infill Sidewalk Policy. In that policy are criteria for including infill sidewalks as part of a road reconstruction project. The Multi-Modal Active Transportation Master Plan identifies the sidewalks proposed for Royal Oak Drive, Forestwood Lane and Tollendal Mill Road as infill sidewalks.

SIDEWALK DESIGN CRITERIA APPLIED TO THIS PROJECT

With respect to Royal Oak Drive, Forestwood Lane, Lovers Court and Tollendal Mill Road, the road classifications are:

1. Tollendal Mill Road – Minor Collector;
2. Royal Oak Drive loop – Local Road;
3. Forestwood Lane – Local Road;
4. Lovers Court – Local Road (short cul-de-sac);

As per the Infill Sidewalk Policy, Lovers Court is a short cul-de-sac with 10 homes and therefore it has been deemed that a sidewalk is not warranted.

With respect to Royal Oak Drive and Forestwood Lane, the criteria elements are as shown in the following table.

CRITERIA	VALUES	
	Royal Oak Drive	Forestwood Lane
The capital cost of the sidewalk is more than 3 times typical costs (including related costs such as property, grading, retaining walls, utility relocations, etc.)	No	No
The sidewalk can be constructed with connectivity such that it can be efficiently maintained	Yes	Yes
There are significant environmental impacts that cannot be mitigated (such as large tree removals or significant vegetation removal that could result in increased erosion, etc.)	No	No
There are other site specific impacts (such as driveway impacts) that cannot be mitigated	No	No
For local streets only, the following criteria will also be used		
Pedestrian count demonstrates that 30 equivalent pedestrians per day use the route	Yes	Yes

Some additional explanation with regard to the individual criteria is as follows:

Capital Cost

The sidewalks on Royal Oak Drive and Forestwood Lane have an average capital cost for constructing sidewalks. On both streets:

- no property is required for the purpose of constructing the sidewalk;
- no special grading needs to be designed to accommodate the sidewalk;
- no retaining walls are required to accommodate sidewalks;
- the sidewalk on Tollendal Mill Road will require a low retaining wall (i.e. no higher than 0.9 m) to mitigate grading issues. The total length of the retaining wall is estimated to be between 50 and 75 m.
- although utilities need to be relocated as part of the project, no utilities need to be relocated to accommodate the sidewalk.

Connectivity

The sidewalks on Royal Oak Drive and Forestwood Lane can be constructed with connectivity. Adding the segment of sidewalk on Tollendal Mill Road from Royal Oak Drive westerly completes the connectivity to the existing sidewalk network on both Tollendal Mill Road and Hurst Drive.

Environmental Impacts

The sidewalks on Royal Oak Drive and Forestwood Lane do not cause a significant environmental impact as a result of construction. On Royal Oak Drive, one (1) coniferous (cedar) tree with a 125 mm diameter trunk needs to be removed or spaded and relocated out of the proposed sidewalk alignment. On both streets a number of low lying tree branches need to be trimmed to provide clearance for construction equipment. The one tree removal and branch trimming on several other trees would not be considered significant environmental impacts.

Driveway Impacts

Adding sidewalks within the right-of-way does not cause significant driveway grading impacts.

Pedestrian Count

A pedestrian count was conducted on a Wednesday and a Saturday in December 2015. The pedestrian count shows in excess of 30 equivalent pedestrians per day use Royal Oak Drive and/or Forestwood Lane. The time of year that the counts were conducted would be deemed to be conservative as a greater use would be assumed in warmer months of the year.

CONCLUSIONS

Through the application of the criteria included in the Infill Sidewalk policy for locations as part of a road reconstruction project, the sidewalks on Royal Oak Drive and Forestwood Lane are deemed to be justified. The criteria does not support including sidewalks on Lovers Court. For connectivity, the criteria also supports including a sidewalk on Tollendal Mill Road to connect from Royal Oak Drive westerly to the existing sidewalk extending from Hurst Drive and fronting Gables Park.

Overall, the sidewalks are seen as part of the entire goal of developing a safe, connected and accessible walking environment within the City of Barrie to provide more opportunity for residents to adopt more healthy lifestyles and reduce environmental impacts associated with transportation choices.

For more information regarding this project, please contact Leonard Borgdorff, Senior Project Engineer, at Leonard.Borgdorff@barrie.ca or extension 4493 or Stew Patterson, Manager of Design & Construction, at Stew.Patterson@barrie.ca or extension 4481.



J. Weston, M.A.Sc., P. Eng., PMP
Director of Engineering



TO: Director of Finance – prepare By-law
Director of Engineering – action
Director of Legal Services – action

FROM: Dawn McAlpine, City Clerk

DATE APPROVED
BY COUNCIL: March 4, 2013

13-G-045 SANITARY AND WATER SERVICING AND URBANIZATION FOR THE BAY LANE, COTTAGE LANE AND ROYAL OAK DRIVE AREA (WARD 10)

1. That a by-law be prepared to authorize the recovery of capital costs for the installation of sanitary servicing on Bay Lane, Cottage Lane, Gables Park, Royal Oak Drive, Forestwood Lane, Lovers Court and Tollendal Mill Road, as outlined in Staff Report ENG003-13, through the collection of a per metre frontage charge plus lateral costs for benefiting properties abutting the proposed new sections of sanitary sewer, as provided under Section 326 of the Municipal Act, with the option of payment of the sanitary charges over a 10 year period with interest.
2. That a by-law be prepared to authorize the recovery of capital costs for the installation of water servicing on Bay Lane, Cottage Lane, and Gables Park, as outlined in Staff Report ENG003-13, through the collection of a per metre frontage charge plus lateral costs for benefiting properties abutting the proposed new sections of watermain, as provided under Section 326 of the Municipal Act, with the option of payment of the water charges over a 10 year period interest free.
3. That 101-119 Bay Lane be assessed costs based on its full frontage for sanitary servicing and water servicing and on servicing the 10 houses on the lot with 10 sanitary services and 10 water services.
4. That staff be authorized to prepare construction contract drawings, including detailed design drawings for water servicing (per Staff Report ENG003-13), with a design cost of \$36,000, on Bay Lane, Cottage Lane, Gables Park and utility corridor easements with Bay Lane, Cottage Lane, Gables Park and utility corridor easements to be restored to their original condition and this change in project scope be funded from the Water Reserve Fund (12-05-0580).
5. That staff be authorized to prepare construction contract drawings, including detailed design drawings for a two lane/8.5 metre wide urbanized roadway including storm sewer, curb and gutters, boulevard works, sidewalks and street lighting (per Staff Report ENG003-13), with a design cost of \$120,000, on Royal Oak Drive, Forestwood Lane, and Lovers Court and this change in project scope be funded from the Tax Capital Reserve (13-04-0440).
6. That staff be authorized to prepare construction contract drawings, including detailed design drawings for a sidewalk (per Staff Report ENG003-13), on Tollendal Mill Road extending from Royal Oak Drive westerly to the sidewalk that extends from Hurst Drive on Tollendal Mill Road, with a design cost of \$5,000 and this change in project scope be funded from the Tax Capital Reserve (13-04-0440).

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THE CITY OF BARRIE
ENGINEERING DEPARTMENT

7. That staff in the Legal Services Department be authorized to commence acquisition of any required easements and/or property. (ENG003-13) (File: W03-BAY)

THE CITY OF BARRIE ENGINEERING DEPARTMENT			
	ACTION	INFO	INITIAL
ENGINEER	✓		PK
INSPECTOR	✓		PK
DESIGNER			
PROJECT ENGINEER			
CHIEF			HB
L. Berg		✓	
John R			
FILE# W03-BAY			