

Inquiry – Councillor Z. Jeffries (August 26, 2019) Dust Issues – Beef Research Road

ISSUE

Beef Research Road is a high traffic gravel road located close to a residential neighbourhood. Dust generated from the gravel surface is impacting visibility and safety on Beef Research Road, Central Avenue and Attridge Drive, and air quality for neighbouring residents.

BACKGROUND

The following inquiry was made by Councillor Z. Jeffries at the meeting of City Council held on August 26, 2019:

"Can Administration please report back on how dust issues from Beef Research Road affecting Silverspring can be solved? This could include additional dust mitigation applications or the paving of Beef Research Road. The current level of service of only applying palliation solution twice annually is not sufficient."

Beef Research Road is a gravel road about 2 km in length located on land owned by the University of Saskatchewan. It is adjacent to Central Avenue and Attridge Drive with an approach onto Central Avenue. It provides access to the University of Saskatchewan's Beef Research & Teaching Facility (now closed), adjacent farmland, and Sutherland Off-Leash Recreation Area, one of Saskatoon's most popular Off-Leash Recreation Areas. Current traffic on Beef Research Road is estimated to be about 700 vehicles per day.

An agreement from 2006 gives the City access to the University land to use as a public road, with the responsibility to maintain and repair the road.

Beef Research Road was extended north-south to connect to Central Avenue as part of the North Commuter Parkway project in 2016. Dust and air quality concerns from neighbouring residents increased following the construction of the north-south extension of Beef Research Road.

The University of Saskatchewan, in partnership with the City of Saskatoon, is currently working on a Sector Plan for the future development of the adjoining land. Beef Research Road may not exist once development takes place. Alternate access to Sutherland Off-Leash Recreation Area will need to be provided once new development occurs. The timing of the development of the University of Saskatchewan lands and the changes to Beef Research Road are not known and will be better understood when the Sector Plan is completed.

Beef Research Road is different from other gravel streets in Saskatoon due to the following factors:

- high traffic volumes,
- higher operating speed of vehicles,
- proximity to a residential neighbourhood, and
- dust is causing road safety and air quality concerns.

CURRENT STATUS

The gravel surface of Beef Research Road combined with the high traffic volumes creates a lot of dust. The dust creates safety concerns for drivers, pedestrians, pets and cyclists on Beef Research Road due to reduced visibility. The dust travels to the neighbouring area of Silverspring impacting the air quality and has at times, impacted visibility for drivers along Attridge Drive and Central Avenue.

Both traditional and innovative dust suppressant materials applied to Beef Research Road have not been effective in suppressing the dust. There is no dust suppressant product that will completely eliminate all dust, and the high traffic volumes make it difficult for any dust suppressant materials to perform well. Periods of dry weather conditions in 2019 contributed to the dust issues.

A new product called Green Bond, made from canola oil rather than the traditional salt brine product, is being piloted along Beef Research Road to suppress dust. This product is environmentally friendly as it reuses waste cooking oil and does not add salt to surface water run-off, like traditional dust suppressant does. The pilot study will continue for at least one more year.

DISCUSSION/ANALYSIS

The City of Saskatoon maintains Beef Research Road by applying gravel, blading the road and applying dust suppressant twice a year as outlined in the approved Level of Service for gravel road maintenance in and around Saskatoon. The dust suppressant treatment occurs in the spring and again in the fall. The City of Saskatoon also applies water to the road surface at various times.

Options to reduce the dust generated along Beef Research Road have been reviewed and are provided below:

Option	Description	Cost
1. Increase Level of Service to include more dust suppressant applications	<ul style="list-style-type: none">• This option consists of increasing the number of applications of traditional dust suppressant for Beef Research Road.• It is expected that four applications per year are required to effectively address the concerns with the dust on Beef Research Road.• To ensure consistency, current service level criteria in the Street Cleaning and Sweeping Level of Service would be amended.	<ul style="list-style-type: none">• The estimated incremental cost of two additional applications of traditional dust suppressant is approximately \$34,000 per year.• This cost estimate includes additional materials, equipment and labour to ensure the product performs well.• This option would require additional operating funding under the Street Cleaning and Sweeping service line.

Inquiry – Councillor Z. Jeffries (August 26, 2019) Dust Issues – Beef Research Road

Option-Continued	Description-Continued	Cost-Continued
2. Construct a dust-free surface along entire road	<ul style="list-style-type: none">• This option consists of reconstructing the entire length of Beef Research Road to a dust free surface through the placement of asphalt concrete or other materials.	<ul style="list-style-type: none">• The estimated cost of this option is \$1.5 million of capital funding.
3. Construct a dust-free surface along north-south section of road	<ul style="list-style-type: none">• This option consists of reconstructing the north-south section of Beef Research Road to a dust free surface through the placement of asphalt concrete or other materials. The section is approximately 500 metres long.• The remainder of Beef Research Road would remain as a gravel road. It would not reduce the dust on the remainder of Beef Research Road or along Attridge Drive.• This option would help reduce the dust experienced by the Silverspring residents and the dust along Central Avenue.	<ul style="list-style-type: none">• The estimated cost of this option is \$450,000 of capital funding.

The disadvantages of constructing a dust-free surface on Beef Research Road are the high cost, the road is not on City property, and the investment would be short term due to future development plans of the adjoining land. The University of Saskatchewan does not desire to upgrade the road as development plans do not include a roadway at this location.

Increased dust suppressant could be applied for a number of years before the total cost would be equivalent to the capital cost of constructing a dust free surface.

IMPLICATIONS

The University of Saskatchewan is concerned with the environmental impact of materials used to reduce the dust and environmental impact of future road reclamation as part of future development. The City of Saskatoon will continue its pilot of Green Bond, the more environmentally friendly product, along Beef Research Road to assess if this product can perform as well as the traditional dust palliation products used.

There are no financial, legal or social implications identified.

NEXT STEPS

The Administration will continue with the current maintenance of Beef Research Road by applying dust suppressant twice per year or as directed by City Council.

Report Approval

Written by: Tracy Danielson, Roadways Manager, Roadways, Fleet & Support
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Inquiry – Councillor Z. Jeffries (August 26, 2019) Dust Issues – Beef Research Road

Approved by: Terry Schmidt, General Manager, Transportation & Construction
Department

Admin Report – Inq – C. Jeffries-Aug 26-19 – Dust Issues – Beef Research Road.docx