



GRAVEL ROAD IMPROVEMENT POLICY

Policy Number:	OP16
Administered By:	Director of Operations
Approved By:	Chief Administrative Officer
Effective Date:	March 1, 2023

Purpose:

The Town is committed to promoting public safety and providing an adequate transportation network for its residents.

Scope:

The Town recognizes the importance of providing a consistent process in identifying which Gravel Roads require upgrades and contribute to the continuous improvement of operations.

Responsibilities:

The Public Works Foreman and Director of Operations are responsible to ensure improvement priorities are assessed as per the criteria outlined in this policy.

Definitions:

Average Annual Daily Traffic (AADT): the average twenty-four-hour, two-way traffic taken over a minimum of three-day period under normal conditions.

Gravel Road: a road surface that is not paved or surface treated.

Paved Surface: means a surface with a wearing layer or layers of asphalt, concrete or asphalt emulsion.

Surface Width: the horizontal distance measured from top of ditch slope on one side of the road to the top of ditch slope on the opposite side.

Priority Index (PI): means the classification determined by the considerations under this policy. The index classifies upgrading Gravel Roads as high, medium or low priority.

Roadway: the part of the road that is improved, designed, or ordinarily used for the passage of vehicular traffic, inclusive of the shoulder.

Policy:

The Town may upgrade Gravel Road based on the following considerations:

- a) Priority - where the Gravel Road has been allotted as high priority, as determined in accordance with the procedure of this Policy (see below).
- b) Financial - where an analysis of the capital costs, operational costs and the life cycle cost indicate a savings to the Town or where there is a significant saving to the Town by combining/splitting the upgrading of adjacent Roadways.
- c) Condition, Structure and Drainage – where the Roadway has been determined to have sufficient structure and adequate drainage to support the increased traffic flow.

- d) Surface Width – where the Roadway meets the minimum Surface Width standards for Paved Roads in accordance with applicable Town design standards.
- e) Horizontal and Vertical Alignment – where the existing horizontal and vertical alignment of Roadway is compatible with the posted speed limit.
- f) Traffic – where the Gravel Road meets the minimum vehicular volume of 75 AADT and the functional road classification of the Roadway based on its use and purpose.
- g) Traffic Composition – where the Roadway is experiencing high truck volumes and/or high pedestrian vehicle volumes.
- h) Risk Management - where the non-standard condition of the Roadway is correctable by upgrading to a Paved Surface and upgrading is determined to reduce liability issues.
- i) Operational Benefits – where there is a benefit from the reduction of operational and seasonal maintenance activities.
- j) Asset Management - where the Roadway is included in a capital improvement plan as per the Town's asset management program.
- k) Complaints - where a high number of legitimate concerns and complaints from the members of public.

Despite being given a priority rating under this section of the Policy, not all Gravel Roads will be considered for upgrading, unless other conditions as determined in accordance with this Policy are considered.

Upgrading of Gravel Roads shall be subject to funding availability.

Procedure:

Priority Index (PI) for Gravel Roads is identified using the calculation below.

- 1) The following the formula to calculate the Priority Index:

$$PI = TF + FC + MF + DW$$

Legend

PI = Priority Index

TF = Traffic Factor

FC = Functional Classification Factor

MF= Maintenance Factor (Add 5 points for Roadways requiring additional maintenance)

DW = Driveway Factor

The Priority Index determines priority classification.

Priority Index (PI)	
0-5	Low
6-10	Medium
11+	High

2) The Traffic Factor is determined by AADT.

AADT Range	Traffic Factor (TF)
0-60	0
61-100	2
101-200	4
201-300	6
300+	8

3) The Function Classification Factor (FC) is determined by traffic composition.

Classification	Examples	(FC)
Light Traffic	Passenger cars, motorcycles, two axle – 4 tire units	2
Medium Traffic	Buses, two axle – 6 tire units	4
Heavy Traffic	Three axle single units, four or more axle single units or larger	6

4) The Maintenance Factor (MF) refers to maintenance requirements.


Maintenance Type	Maintenance Factor (MF)
Regular grading, reshaping	0
Dust suppression placement	3
Frequent grading, material placement	5

5) The Driveway Factor (DW) is determined by the number of commercial or residential driveways abutting the subject Roadway.

Number of Driveways	Driveway Factor (DW)
0-3	0
4-6	2
7-9	4
10+	6

Further Information:

For further information regarding this Policy, please contact the department identified in the title bar under Administered By.



CAO – Town of Fort Macleod