

FLAGSTAFF COUNTY POLICY

Title: Roads Policy	Policy: PW 003
Section: Public Works	

ACCOUNTABILITY TO VISION STATEMENT

A safe and well managed road network is key to the long term economic prosperity of the County and to its future.

POLICY STATEMENT

Flagstaff County will have a rural road network system categorized and prioritized into five road classifications. The classification system will provide an efficient road network system that acts as a feeder system to the provincial highway network and the local communities within Flagstaff County.

In conjunction with the rural road network system, a long-term Road Construction Program will be established using the Evaluation Criteria and Weighting System (Schedule B) that support a life cycle approach to asset management. A minimum rating of 2.5 will be required for consideration of a road to be reconstructed.

Evaluation criteria to be used:

1. Current Design and Construction Standard – Schedule A
2. Road maintenance – frequency of grading and gravelling
3. Safety implication – site lines, grade width, side and back slopes
4. Average annual daily traffic counts (AADT)
5. Traffic type
6. Water drainage
7. Traffic Generators and Continuity

Implementation will be done through the annual business plan and budget.

DEFINITIONS

Road Surface Types:

Paved: Asphalt concrete pavement.	- 20 year life cycle
Oil Based: A petroleum based product surface.	- 5-7 year life cycle
Gravelled: A loose aggregate surface.	- 2-8 year life cycle
Water Based: Water soluble based dust suppressant product surface.	- 1 year life cycle

Road Classifications:

Arterial:	Dust Free 8 meter width
Collector:	Gravel 8 meter width
Local:	Gravel 8 meter width
Rural Residential:	Gravel 8 meter width
Field Access:	Gravel 7 - 8 meter width

** The width of a road may be increased to accommodate traffic type, volume of traffic, or level of safety upon approval of County Council.

Council Approved: June 18, 2018	Resolution No. FC20180613.1011
Reference:	

Administrative Responsibility:	Review Cycle:	Next Review Date:
Public Works Superintendent	Every 3 years	2021

Schedule A - Design and Construction Specifications

	Arterial	Collector	Local	Rural Residential	Field Access
Design Speed (km/hr)	110	110	90	70	70
Cautionary Signage (safety)	As required (i.e. at curves)				
Minimum Horizontal Curve Radius (m)	600	600	340	190	190
Maximum Horizontal Gradient (%)					
• Permanent	5	5	7 – 9	9 – 12	9 – 12
• Temporary/Detour			n/a	13	13
Vertical Alignment (K)					
• Crest – passing	585	585	410	245	245
• Crest – stopping	100	100	55	22	22
• Sag – minimum	60	60	40	25	25
Drainage Provisions	As required to drain sub-grade and maintain natural drainage patterns				
Soil Conservation - Disturbance	Disturbance resulting from construction must be minimized (i.e. soil horizon removed/replaced in lifts)				
Cross Sectional Elements (m)					
• Lane Width	3.5	3.5	3.5	3.5	3.5
• Shoulder	0.5	0.5	0.5	0.5	n/a
• Finished Running Surface	8.0	8.0	8.0	8.0	7.0 – 8.0
• Ditch	2.5 – 3.5	2.5 – 3.5	2.5 – 3.5	As required	
• Side Slope (max. H:V, m)	4:1	4:1	4:1	3:1	3:1
• Back Slope (max. H:V, m)	3:1	3:1	3:1 to 6:1		
• Thickness of (mm):					
o Crush	300	300	300	50	50
o Sub-grade (clay)	600	600 min.	600 min.	300 min.	300 min.
Right-of-Way Width (m)	30	30	20	20	20
Materials/Compaction	100%	100%	98%	95%	95%

Schedule B - Evaluation Criteria and Weighting System

1. Current Design and Construction Standard

Geometrics: Surface Width	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 3%

Geometrics: Vertical Sags/Crests	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 3%

Geometrics: Horizontal Alignment	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 3%

Geometrics: Sideslopes	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 1%

Geometrics: Backslopes	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 1%

Geometrics: Grade Height	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 3%

Geometrics: Percent Grade	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 1%

2. Road Maintenance

Structure: Road Surface Drainage	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 1%

Structure: Condition	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 3%

3. Safety Implications

Safety	Rating
No safety issues	1
Minor safety issues	3
Major safety issues	5

WEIGHTING = 3%

Brushing	Rating
No brushing required	1
Moderate brushing required	3
Severe brushing required	5

WEIGHTING = 1%

4. Average Annual Daily Traffic

Traffic Count	Rating
0-25	1
26-50	2
51-100	3
101-200	4
> 200	5

WEIGHTING = 30%

5. Traffic Type

Percentage of Trucks	Rating
0.0 - 5.0%	1
5.1 - 10.0%	2
10.1 - 15.0%	3
15.1 - 20.0%	4
>20.0%	5

WEIGHTING = 10%

6. Water Drainage

Ditch Drainage	Rating
Standards met for entire section	1
Standards met for 75% of section	2
Standards met for 50% of section	3
Standards met for 25% of section	4
No standards met	5

WEIGHTING = 2%

7. Traffic Generators and Continuity

Proximity to Parallel Highway	Rating
<= 3.2 km (2 miles) from Hwy or S.H.	1
> 3.2 km (2 mi.) and <= 6.4 km (4 mi.) from Hwy or S.H.	2
> 6.4 km (4 mi.) and <= 9.6 km (6 mi.) from Hwy or S.H.	3
> 9.6 km (6 mi.) and <= 16.0 km (10 mi.) from Hwy or S.H.	4
> 16.0 km (10 miles) from Hwy or S.H.	5

WEIGHTING = 5%

Industry and Commodity Mixture	Rating
Serves local traffic with no industrial significance	1
Serves local area and industry but no specific industry	2
Low importance to specific local industry	3
High importance to specific local industry	4
Important to numerous local industries	5

WEIGHTING = 10%

Local Significance	Rating
Light agricultural use	1
Country residential use	2
Tourism route	3
Industrial/Intensive Agricultural use	4
Trade route	5

WEIGHTING = 10%

Trip Distance	Rating
Local Traffic Only	1
Through Traffic	3
Through Traffic with stop	5

WEIGHTING = 4%

Continuity	Rating
Short, Discontinuous	1
Local Continuity Only	2
Municipal Continuity	3
Regional Continuity (serves adjoining municipalities)	4
Provincial Continuity	5

WEIGHTING = 5%