LEVEL OF SERVICE POLICY FOR MUNICIPAL HIGHWAYS IN THE UNITED TOWNSHIPS OF HEAD, CLARA & MARIA

POLICY STATEMENT

This policy sets out the minimum standards of maintenance and repair for highways under municipal jurisdiction for the purpose of clause 44 (3) (c) of the *Municipal Act, S.O. 2001, c.25*. The minimum standards of repair set out herein are applicable only in respect of motor vehicles using the highways.

It is the objective of the Township Roads Department to conduct its operational activities in an efficient and effective way, so as to provide year round, safe driving conditions on all highways under its control and jurisdiction. Operations will be consistent with the needs of a low traffic volume rural road system.

Maintenance will be performed, monitored and recorded as detailed in the following guidelines that comprise, with this policy statement and the definitions below, our Level of Service Document.

This document is based on the criteria for Minimum Maintenance Standards as developed by the province in Ontario Regulation 239/02 to provide municipalities with a legal defence against liability from actions arising with regard to levels of care on roads and bridges. Using the chart provided by the province to determine Highway class based on speed limit and average annual daily traffic (AADT) counts, all roads within the municipality are determined to be either class 5 or class 6 roads. (Please see Appendix "A" to this policy for a detailed list)

Since O. Reg. 239/02 does not specify minimum standards for Class 6 roads, this document will set a level of service for roads that will "meet" the minimum maintenance standards as set by the province for that class of road. The minimum maintenance standards for Class 5 roads have been adopted from O. Reg. 239/02.

These guidelines are used to provide guidance for our Roads Department, however; depending on work load and other unknown circumstances, maintenance activities may in some instances occur sooner than the minimum times detailed below and do not change the normal minimum standard.

DEFINITIONS

In this Level of Service Document,

- "as soon as practicable" means as soon as is possible considering lead time to contact the truck driver, for the driver to travel to the location of the truck, for readying the truck, for loading the truck and for traveling to the designated starting point within the municipality. This does not take into account time out for the driver for coffee or any other breaks before beginning work. The lead time begins as soon as any member of staff becomes aware of a fact, not just the employee responsible for call outs.
- "cm" means centimetres; correspondingly "m" means metres and "mm" means milimetres.
- "day" means a 24-hour period;
- "dead end" roads are those that do not have an exit through another intersecting road;
- "motor vehicle" has the same meaning as in subsection 1 (1) of the *Highway Traffic Act*, R.S.O. 1990, except that it does not include a motor assisted bicycle;
- "houses" means the number of permanent year round occupied residences.
- "non-paved surface" means a surface that is not a paved surface, otherwise known as "loose-topped"; for our purposes "non-paved surface" further means gravel surfaced.
- "O. Reg. 239/02" refers to Ontario Regulation 239/02 which lays out the minimum maintenance standards for municipal highways

- “paved surface” means a surface with a wearing layer or layers of asphalt, concrete or asphalt emulsion;
- “roadway” has the same meaning as in subsection 1 (1) of the *Highway Traffic Act*;
- “seasonal highway/road” means those on which no winter maintenance is performed and are not private roads;
- “snow-packed” means the desired state of a highway during the period of winter road maintenance which includes the compacted snow or ice that can accumulate on municipal highways during a number of minor snow events.
- “shoulder” means the portion of a highway that provides lateral support to the roadway and that may accommodate stopped motor vehicles and emergency use;
- “surface” means the top of a roadway or shoulder.
- “winter highway maintenance” occurs from November 15 to and including April 1 of each year.

CLASSIFICATION OF HIGHWAYS

For the purposes of this policy, every highway or part of a highway under the jurisdiction of a municipality in Ontario is classified in Table 1 as a Class 1, Class 2, Class 3, Class 4, Class 5 or Class 6 highway, based on the applicable speed limit and the average annual daily traffic count.

For the purposes of determining the Class of highway, the average annual daily traffic on a highway or part of a highway under municipal jurisdiction shall be determined, by estimating the average daily two-way traffic on the highway or part of the highway in accordance with accepted traffic engineering methods.

For “dead end” roads, in lieu of a manual 4 hour traffic count, a simple count of the number of permanent year round residences on the road multiplied by 6, for rural areas, will estimate the number of trips each house generates and is an accepted traffic engineering method for rural areas and those with lower volume as most of our roads are. This is the method that the municipality will use to determine AADT for it’s roads.

TABLE 1
CLASSIFICATION OF HIGHWAYS

Posted or Statutory Speed Limit (kilometres per hour)	91 - 100	81 - 90	71 - 80	61 - 70	51 - 60	41 - 50	1 - 40
Average Annual Daily Traffic (number of motor vehicles)	**CLASS of ROAD**						
15,000 or more	1	1	1	2	2	2	2
12,000 - 14,999	1	1	1	2	2	3	3
10,000 - 11,999	1	1	2	2	3	3	3
8,000 - 9,999	1	1	2	3	3	3	3
6,000 - 7,999	1	2	2	3	3	3	3
5,000 - 5,999	1	2	2	3	3	3	3
4,000 - 4,999	1	2	3	3	3	3	4
3,000 - 3,999	1	2	3	3	3	4	4
2,000 - 2,999	1	2	3	3	4	4	4
1,000 - 1,999	1	3	3	3	4	4	5
500 - 999	1	3	4	4	4	4	5
200 - 499	1	3	4	4	5	5	5
50 - 199	1	3	4	5	5	5	5
0 - 49	1	3	6	6	6	6	6

MINIMUM STANDARDS

ROUTINE PATROLLING

The minimum standard for the frequency of routine patrolling of highways is set out in Table 2. Routine patrolling shall be carried out by driving on the highway to check for conditions described in this policy. Routine patrolling is not required between sunset and sunrise.

The "Routine Patrol Record" attached to this Level of Service document as Appendix "B" will be used for routine patrols.

Patrols will take place more frequently during the winter highway maintenance period from November 15 to and including April 1. The "Winter Patrol Form" attached as Appendix "C" will be utilized for winter patrols.

TABLE 2
ROUTINE PATROLLING FREQUENCY

Class of Highway	Routine Patrolling Frequency	Winter Road Patrols
5	once every 30 days	At least twice each week from November 15 to and including April 1
6	once every 30 days	At least twice each week from November 15 to and including April 1

WINTER MAINTENANCE

The Road Department will be responsible for winter road patrols. Our municipality has contracted out our winter road maintenance activities. Our Road Superintendent and our Contractor have the equipment, schedules, manpower and procedures in place to commence winter control operation on the 15th day of November to and including April 1 of each year. Winter control equipment and manpower will be available on a continuous basis, 7 days a week 24 hours a day to respond to any winter event during this period.

There will be no winter maintenance on the following roads or road sections as these roads are considered "seasonal" by the municipality. For all intents and purposes these roads are considered "temporarily closed" and may only be used at the operator's own risk. Notice of the temporary closure of these roads will be posted at the point of temporary closure and on our Township web site.

SEASONAL ROADS
(some part or all of each of these roads are seasonal in nature and are not maintained for their entire length)

ROAD NAME	*# OF PERMANENT HOMES ON THIS ROAD*	*# of cottages (only permanent homes used in calculatios)*	*AADT* **(if higher than 49 – go to class 5)**	*SPEED LIMIT*	*CLASS*	*DISTANCE MAINTAINED*	*DISTANCE PLOWED*
Ashport Road	*7*	*4*	*42*	*50 km/h*	*6*	*2.5 km*	*1.3 km*
Francoeur Road	*2*	*4*	*12*	*50 km/h*	*6*	*2.3 km*	*0.4 km*
Mackey Boat ramp	*0*		*0*	*50 km/h*	*S*	*0.2 km*	*NONE*
Mackey Creek Road	*12*	*6*	*72*	*50 km/h*	*5*	*10.9 km*	*2.5 km*
Jennings Road	*6*	*3*	*36*	*50 km/h*	*6*	*4.5 km*	*To Boy Scout Trail*
Plain's Camp Road	*0*	*2*	*0*	*50 km/h*	*S*	*Minimal maintenance only*	*NONE*
Kenny Road	*0*	*1*	*0*	*50 km/h*	*6*	*1.8 km*	*0.7 km*
Township Hall Road	*1*	*0*	*6*	*50 km/h*	*6*	*0.3 km*	*0.3 km*
Buckshot Road	*0*	*1*	*0*	*50 km/h*	*S*	*Minimal maintenance only*	*NONE*
Adelard Road	*0*	*2*	*0*	*50 km/h*	*S*	*Minimal maintenance only for 4.0 km*	*NONE*
Bissett Creek Road	*0*	*Not our road*	*0*	*50 km/h*	*AFA road*		*0.7 to dump*
Brent Road	*1*	*Not our road*	*6*	*50 km/h*	*AFA road*		*1.1 km To dump*

During winter operations a number of minor snow events may result in non-paved surfaces becoming snow-packed. Once this compacted snow accumulates it is considered part of the road for the application of our Level of Service and is the desired condition. During periods of thaw, appropriate remedial action would be required as the depth of the compacted snow base becomes unstable. This remedial action may include plowing, salting and sanding, as determined, to break up the base and remove it from the traveled sections of the road. It will be the duty of the Road Superintendent to determine best treatment methods and contact our contractor for implementation.

SNOW ACCUMULATION
The minimum standard for clearing snow accumulation is,

- while the snow continues to accumulate, to deploy resources to clear the snow as soon as practicable after becoming aware of the fact that the snow accumulation on a roadway is greater than the depth set out in Table 3 and;
- after the snow accumulation has ended and after becoming aware that the snow accumulation is greater than the depth set out in Table 3, to clear the snow accumulation in accordance with the time set out in the Table.

The snow accumulation must be cleared to a depth less than or equal to the depth set out in the Table. The snow accumulation must be cleared from the roadway to within a distance of 0.6 metres inside the outer edges of the roadway.

This section does not apply to that portion of the roadway designated for parking; and only applies to a municipality during the season when the municipality performs winter highway maintenance. In this section, “snow accumulation” means the natural accumulation of new fallen snow or wind-blown snow that covers more than half a lane width of a roadway.

TABLE 3
SNOW ACCUMULATION

Class of Highway	Depth	Time	Desired Road Condition
5	10 cm	24 hours	Snow-packed or bare
6	10 cm	24 hours	Snow-packed or bare

ICY ROADWAYS

The minimum standard for treating icy roadways is to deploy resources to treat an icy roadway as soon as practicable after becoming aware of the condition; and to treat the icy roadway within the time set out in Table 4 after becoming aware of the condition.

It is acceptable to “spot” treat only those sections that are in fact icy. The entire road does not require the same treatment, however; the treatment that is applied and the locations are required to be documented each and every time this treatment method is used.

This section only applies to the municipality during the season when the municipality performs winter highway maintenance.

TABLE 4
ICY ROADWAYS

Class of Highway	Time	Desired Surface Condition
5	16 hours	Snow-packed or bare
6	16 hours	Snow-packed or bare

POTHOLES

If a pothole exceeds both the surface area and depth set out in Table 5 or 6, as the case may be, the minimum standard is to repair the pothole within the time set out in Table 5 or 6, as appropriate, after becoming aware of the fact. A pothole shall be deemed to be repaired if its surface area or depth is less than or equal to that set out in Table 5 or 6, as appropriate.

TABLE 5
POTHOLES ON NON-PAVED SURFACE OF ROADWAY

Class of Highway	Surface Area	Depth	Time
5	1500 cm^2	12 cm	30 days
6	1500 cm^2	12 cm	30 days

TABLE 6
POTHOLES ON PAVED OR NON-PAVED SURFACE OF SHOULDER

Class of Highway	Surface Area	Depth	Time
5	1500 cm^2	12 cm	60 days
6	1500 cm^2	12 cm	60 days

SHOULDER DROP-OFFS
If a shoulder drop-off is deeper, for a continuous distance of 20 metres or more, than the depth set out in Table 7, the minimum standard is to repair the shoulder drop-off within the time set out in the Table after becoming aware of the fact. A shoulder drop-off shall be deemed to be repaired if its depth is less than or equal to that set out in the Table.

In this section, "shoulder drop-off" means the vertical differential, where the paved surface of the roadway is higher than the surface of the shoulder, between the paved surface of the roadway and the paved or non-paved surface of the shoulder.

As we currently do not have paved highway surfaces other than entrances off Highway 17, this section will apply to those entrances.

TABLE 7
SHOULDER DROP-OFFS

Class of Highway	Depth	Time
5	8 cm	30 days
6	8 cm	30 days

CRACKS
We do not have paved surfaces on our roadways that we are responsible for. The corresponding section of O. Reg. 239/02 does not apply in our municipality.

DEBRIS
If there is debris on a roadway, the minimum standard is to deploy resources, as soon as practicable after becoming aware of the fact, to remove the debris.

In this section, "debris" means any material or object on a roadway that is not an integral part of the roadway or has not been intentionally placed on the roadway by a municipality, and that is reasonably likely to cause damage to a motor vehicle or to injure a person in a motor vehicle. It could mean garbage, garbage bags, tires, or other large quantities of litter.

LUMINAIRES
We do not have luminaires on our roadways that we are responsible for. The corresponding section of O. Reg. 239/02 does not apply in our municipality.

SIGNS
If any sign of a type listed below is illegible, improperly oriented or missing, the minimum standard is to deploy resources as soon as practicable after becoming aware of the fact to repair or replace the sign. This section applies to the following types of signs:

1. Checkerboard.
2. Curve sign with advisory speed tab.
3. Do not enter.

4. One Way.
5. School Zone Speed Limit.
6. Stop.
7. Stop Ahead.
8. Stop Ahead, New.
9. Traffic Signal Ahead, New.
10. Two-Way Traffic Ahead.
11. Wrong Way.
12. Yield.
13. Yield Ahead.
14. Yield Ahead, New.

REGULATORY OR WARNING SIGNS
If a regulatory or warning sign other than a sign listed above is illegible, improperly oriented or missing, the minimum standard is to repair or replace the sign within the time set out in Table 8 after becoming aware of the fact.

In this section, "regulatory sign" has the same meaning as in the Manual of Uniform Traffic Control Devices published in 1985 by the Ministry of Transportation; "warning sign" has the same meaning as in the Manual of Uniform Traffic Control Devices published in 1985 by the Ministry of Transportation.

TABLE 8
REGULATORY AND WARNING SIGNS

Class of Highway	Time
5	30 days
6	30 days

TRAFFIC CONTROL SIGNAL SYSTEMS
We do not have traffic control signal systems on our roadways that we are responsible for. The corresponding section of O. Reg. 239/02 does not apply in our municipality.

BRIDGE DECK SPALLS
In this section, "bridge deck spall" means a cavity left by one or more fragments detaching from the paved surface of the roadway or shoulder of a bridge. We do not have bridge deck spalls on our roadways that we are responsible for. All bridges are the responsibility of the County. We do not have paved road surfaces. The corresponding section of O. Reg. 239/02 does not apply in our municipality.

SURFACE DISCONTINUITIES
In this section, "surface discontinuity" means a vertical discontinuity creating a step formation at joints or cracks in the paved surface of the roadway, including bridge deck joints, expansion joints and approach slabs to a bridge. We do not have paved surfaces or bridges within our road system that we are responsible for. The corresponding section of O. Reg. 239/02 does not apply in our municipality.

MINIMUM STANDARDS FOR CATEGORIES NOT INCLUDED IN O. REG. 239/02

TREES
This section applies to the mitigation of a tree-fall on a roadway. A tree-fall on a roadway may occur if the following conditions are present:

1. The tree appears dead as evidenced by no leaves during normal in-leaf season, and the tree must be on the right-of-way (R.O.W.).

2. The entire tree or a significant portion of the tree must appear dead, and the tree must be on the R.O.W.
3. The trunk of the tree must be greater than 0.3m in diameter, and the tree must be on the R.O.W.
4. There must be a significant likelihood of the tree falling on the roadway, if it falls.

After becoming aware of the fact that one or more of the conditions noted above exist the level of service is to secure the tree from falling on a roadway within the lag time as shown in Table 9.

TABLE 9
TREES

Class of Highway	Time
5	6 months
6	6 months

FLOODING
A flood condition exists where water, flowing or standing, covers more than half a lane width of highway. Where floods exceed the depth of (100 mm. or 10 cm.), a response is required. Flood conditions on roadways should have warning signs posted as a response. Further, where the roadway is not closed, it should be monitored at reasonable intervals during the flood. The time for responding should be no more than 12 hours after becoming aware of the condition. Flood mitigation, while in a flood condition, is at the discretion of the road authority. Repeat flooding within a two week period is considered a single occurrence. Where the maximum frequency is exceeded the zone should be posted to advise of the potential hazard.

TABLE 10
FLOODING

Class of Highway	Acceptable Depth	Depth at which action is required	Maximum Frequency
5	10 cm	10 cm	Once in 1 month
6	10 cm	20 cm	Once in 1 month

Where the maximum frequency per month is exceeded and where flooding occurs more frequently than once every two years, remedial action is required.

DUST
Where dust caused by traffic on a loose top road surface impacts on reasonable vehicle safety, relative to the ambient condition of the road, that condition should not occur for more than 2 months of the year. This policy does not apply where the condition occurs over a distance of less than 100m. This standard does not apply to shoulders but to the travelled portion of the road.

Dust suppression will be applied in accordance with the guidelines of the Ontario Ministry of Environment and Ministry of Transporation. Dust abatement to address other criteria such as field crops, and air quality are not addressed in this policy.

CLEARANCES
Vertical and horizontal clearances recognize setback of obstacles that may cause damage when struck, or may impair visibility related to safety of motorists travelling along our highways. (e.g. Rock outcroppings, earth, guy cables, utility posts, abutments, structures, hydrants, trees, brush). Such

obstacles may be localized or general in nature. Non-woody vegetation may encroach on the clearance zone. Safety devices, regulatory signs and entrances are not considered encroachments.

Each substandard condition should be posted or guided with an appropriate warning or device (e.g. hazard marker, warning sign, guide rail, attenuation device). Maximum grass/brush encroachment is .5m. Maximum lag time for removing the substandard condition is:

- Temporary object - 2 years;
- Structures - on reconstruction;
- Utilities - on replacement.

Desirable vertical clearance for all municipal roads is 4.5 m.

TABLE 11
CLEARANCES

Class of Highway	Vertical Overhanging Minimum	Grass/Brush Encroachment	Horizontal Minimum
5	4.5 m	0.5 m	5 m
6	4.5 m	0.5 m	5 m

Clearances are measured vertically from the crown of the road and horizontally from the centerline of the road.

OTHER SAFETY DEVICES

This section applies to delineator, chevron, flashers, vehicle attenuation devices such as guide rails or inertial barriers and other such safety devices.

TABLE 12
OTHER SAFETY DEVICES

Class of Highway	Maximum Repair Lag Time	Maximum Restoration Lag Time
5	1 year	5 years
6	1 year	5 years

If other safety devices are damaged, illegible, improperly oriented or missing, the minimum standard is to repair or replace the device within the maximum response time of 1 year, after becoming aware of the fact.

Where other safety devices are found to be deficient either by deteriorating beyond their effective usefulness or by not being in compliance with current standards, the minimum level of service is to replace that device within the maximum restoration time of 5 years.