

**ROTORUA**  
**LAKES COUNCIL**  
Te kaunihera o ngā roto o Rotorua

**ROADING  
MAINTENANCE  
STANDARDS**

**LOCAL ROADS**

**ROTORUA LAKES COUNCIL**

**ROADING MAINTENANCE STANDARDS – LOCAL ROADS**

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## ROTORUA LAKES COUNCIL

### ROADING MAINTENANCE STANDARDS – LOCAL ROADS

#### Introduction

Rotorua Lakes Council is responsible for the local roads within the Rotorua District. It no longer has delegated authority to maintain the State Highway Network. Waikato and Bay of Plenty Regional Councils have various requirements that impact on standards for plant pest control, earthworks and receiving water quality. The NZ Transport Agency provides Government subsidy for the local roads maintenance, and the limitation of available funding provides restrictions on the overall standards.

This standard sets out the maintenance regime for the RLC local roads. It also includes State Highway facilities where they are under the control of the local roads contractor eg urban kerb and channel sweeping, traffic signals and streetlighting.

Road maintenance is an ongoing key operation to ensure that physical communication links are maintained throughout the Rotorua District and that customer levels of service are achieved.

The Customer Levels of Service defined under the One Network Road Classification (ONRC) system are:

- Mobility (travel time reliability, resilience of the route)
- Safety
- Amenity (travel quality and aesthetics)
- Accessibility (land access and road network connectivity)

The standards and inspection procedures set out provide clear statements of how expected levels of services are going to be achieved for the various road classifications.

The Maintenance Standards provide contractors and policy makers with clear statements of the status of various roads and therefore establishes priorities for both urgent repair and maintenance works.

For the purpose of this document, 'Roading' includes all features on the road reserve surface controlled by the Rotorua Lakes Council as follows: Carriageways, Kerbs, Road Drainage facilities, Traffic Control and Management features (Signals, Signs, Markings, Islands), Footpaths, Berms and Verges, Bus Shelters and Seats, Street Name Signs, Parking Meters, Street Lighting and Street and Kerb and Channel Cleaning.

#### Recording of Maintenance

The Rotorua Lakes Council operates the Road Asset Maintenance Management database (RAMM) to record all maintenance inspections and works on the network. All maintenance works shall be recorded in this database.

## SECTION 1

### DESCRIPTION OF CLASSIFICATIONS AND SCHEDULES

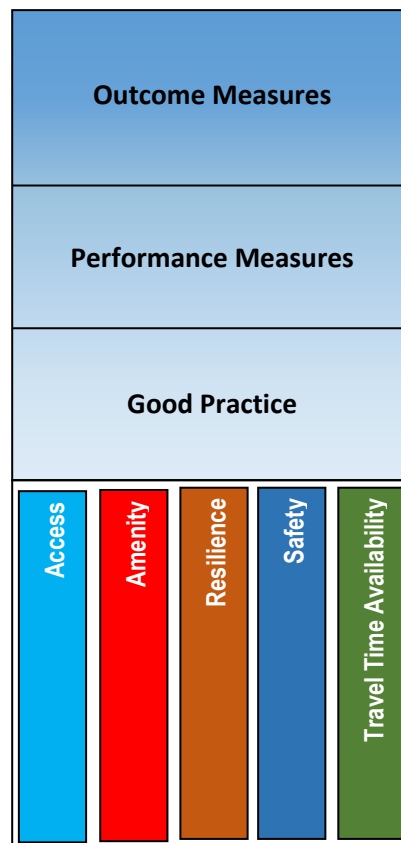
The One Network Road Classification (ONRC) is a classification system, which divides New Zealand's roads into six categories based on how busy they are, whether they connect to important destinations, or are the only route available.

Rotorua Lakes Council local roads are classified into 4 main ONRC categories:

- Arterial
- Primary Collector
- Secondary Collector
- Access (including Low Volume)

Once a road has been classified under the ONRC, it should be maintained to the Customer Level of Service (CLoS) for roads of its type

RCAs will know they are addressing their Customer Levels of Service by using the ONRC Performance Measures.



On State Highways, the local roads contractor maintains all the streetlights, and in the urban area (70km/h or less), the kerb and channel cleaning, cesspit cleaning, and road name signage. All other State Highway maintenance including kerb and channel repairs is separately maintained by NZTA through their Network Outcomes Contract (NOC).

## SECTION 2

### INSPECTION FREQUENCIES

#### 2.1 Contracts

The local network is split into a number of separate maintenance contracts, each with their own inspection and response requirements. These are:

- Rotorua District Local Roding Network Maintenance and Management
- Signs and Street Furniture Maintenance
- Rural Vegetation Control
- Rotorua District Wide Road Marking
- Streetlight Maintenance
- Traffic Signals
- Inner City Operations and Maintenance

Capital replacement and major maintenance one-off items are let as separate contracts.

#### 2.2 Inspections – General

Inspections are to be undertaken to ensure that the minimum levels of service and established standards are maintained throughout the network. Two types of inspections are required at varying intervals.

- General inspections are to be by way of a drive over to identify any deficiencies from the standards in respect to carriageway surface, water channel, signs and traffic aids. Defects will be recorded and repairs programmed using RAMM Contractor.
- Specific inspections as set out as follows.

## 2.3 Inspections – Specific

Contract	Type of Inspection	ONRC Road Classification			ONRC LOS
		<ul style="list-style-type: none"> <li>• Urban Arterial</li> <li>• Urban Primary Collector</li> <li>• Urban Secondary Collector</li> <li>Plus:</li> <li>• High Density</li> <li>• CBD</li> </ul>	<ul style="list-style-type: none"> <li>• Rural Arterial</li> <li>• Rural Primary Collector</li> <li>• Rural Secondary Collector</li> </ul>	<ul style="list-style-type: none"> <li>• Access</li> <li>Plus:</li> <li>• Parks Roads</li> <li>• Service Lanes</li> <li>• Urban Cycle Paths</li> </ul>	
Professional Services Bridges (NZTA Contract)	Structural inspections: <ul style="list-style-type: none"> <li>- Bridges</li> <li>- Retaining walls</li> <li>- Gantry signs</li> </ul>	4 year intervals	4year intervals	4year intervals	Resilience CO-2
Rotorua District Local Roading Network Maintenance and Management	General – sealed roads	Weekly (high density/CBD/urban arterial) otherwise Monthly	monthly	3 monthly	Safety TO-7, TO-10 Amenity TO-2
	ONRC (Safety)	10% / classification	10% / classification	10% / classification (excl. Parks Roads)	Safety TO-1, TO-3, TO-7, T-10
	ONRC (Amenity)	10% / classification	10% / classification	10% / classification (excl. Parks Roads)	Amenity TO-2
	General – daytime	Annual	Annual	Annual	
	General – unsealed roads	NA	NA	Monthly	Safety TO-7
	Cesspits	3 monthly	3 monthly	6 monthly	Safety TO-7
	Bridges – general	6 monthly	6 monthly	6 monthly	Amenity TO-2
	Bridges after major storms/significant crashes	Within 1 day	Within 2 days	Within 3 days	Safety TO-1 Resilience CO-1
	Ice inspection (areas prone to icing)	NA	By 7am	By 7am	Safety TO-7
Stormwater systems including CPs,	Annually (such that	Annually (such that	Annually (such that	Safety TO-7	

Contract	Type of Inspection	ONRC Road Classification			ONRC LOS
		<ul style="list-style-type: none"> <li>• Urban Arterial</li> <li>• Urban Primary Collector</li> <li>• Urban Secondary Collector</li> </ul> Plus: <ul style="list-style-type: none"> <li>• High Density</li> <li>• CBD</li> </ul>	<ul style="list-style-type: none"> <li>• Rural Arterial</li> <li>• Rural Primary Collector</li> <li>• Rural Secondary Collector</li> </ul>	<ul style="list-style-type: none"> <li>• Access Plus:</li> <li>• Parks Roads</li> <li>• Service Lanes</li> <li>• Urban Cycle Paths</li> </ul>	
	culverts and cutouts	<sup>1</sup> / <sub>12</sub> is done monthly)	<sup>1</sup> / <sub>12</sub> is done monthly)	<sup>1</sup> / <sub>12</sub> is done monthly)	
	Flood prone area grates general	3 monthly	3 monthly	3 monthly	Safety TO-7
	Flood prone area grates special	Ahead of storm warnings			Safety TO-7
	Sign Inspections	Weekly (CBD on a Monday)	Fortnightly	Monthly	Safety TO-3
Signs	Night inspections	Weekly including State Highways	Monthly	Weekly for Kuirau Park, Lakefront & Government Gardens otherwise Monthly	Safety TO-5
Streetlights	Streetlight columns – non-destructive cross-sectional testing	Geothermal zone only (yearly)	NA	Geothermal zone only (yearly)	Safety TO-5

## SECTION 3

### RESPONSE TIMES

3. The following are the minimum response times which the Contractor shall comply with.

#### 3.1 Sealed and Unsealed Road Maintenance

##### 3.1.1 Pothole Repairs

From the time the pothole is first seen by or reported to the Contractor, the Contractor shall programme and complete all physical works within the following time frames.

TABLE 3.1.2 : POTHOLE REPAIRS			LOS
ONRC Road Classification	Minimum Response Time		
	Sealed Roads	Unsealed Roads	
Arterial plus High Density/CBD	1 day	N/A	SAFETY TO-7
Primary Collector	2 days	N/A	
Secondary Collector	3 days	7 days	
Access	7 days	7 days	
Other: • Parks Roads Service Lanes, Cycle Paths	7 days	7 days	

##### 3.1.2 First and Second Coat Sealing of Repairs

The Contractor is to complete the sealing of a repair within the following time frames.

TABLE 3.1.2 : FIRST AND SECOND COAT SEALING				LOS
ONRC Road Classification	First Coat	Second Coat		
		Minimum	Maximum	
Arterial, plus High Density/CBD	3 days	1 month	2 months	SAFETY TO-7
Primary Collector	4 days	1 month	2 months	
Secondary Collector	5 days	1 month	2 months	
Access	6 days	1 month	2 months	
Other: • Parks, Service Lanes, Cycle Paths	6 days	1 month	2 month	



### 3.1.3 Pavement Markings and Raised Pavement Markers

Where disturbed by the Contractor's operations, the Contractor shall reinstate all pavement markings and raised pavement markers within 48 hours of completion of the first coat and/or second coat seal and before removal of temporary signage.

### 3.1.4 Kerb, Channel and Carriageway Cleaning

From the time the fault is first seen by or reported to the Contractor, the Contractor shall programme and complete all physical works within the following response times stated in Table 3.1.4, below.

TABLE 3.1.4 : KERB, CHANNEL & CARRIAGEWAY CLEANING		LOS
ONRC Road Classification	Minimum Response Time	
Arterial plus High Density/CBD	1 day	AMENITY TO-2
Primary Collector	3 days	
Secondary Collector	5 days	
Access	7 days	
Other:	7 days	
<ul style="list-style-type: none"> <li>• Parks, Service Lanes, Cycle Paths</li> </ul>	7 days	

### 3.1.5 Stormwater Systems

From the time the fault or blockage is first seen by or reported to the Contractor, the Contractor shall programme and complete all physical works within the following response times.

TABLE 3.1.5: STORMWATER SYSTEMS			LOS
ONRC Road Classification	Minimum Response Time		
	Faults	Blockages	
Arterial plus High Density/CBD	1 week	1 day	SAFETY TO-4, TO-7
Primary Collector	2 weeks	1 day	
Secondary Collector	2 weeks	1 day	
Access	2 weeks	1 day	
Other:	2 weeks	1 day	
<ul style="list-style-type: none"> <li>• Parks, Service Lanes, Cycle Paths</li> </ul>	2 weeks	1 day	

### 3.1.6 Emergency Works, Pavement Bleeding, Frost & Ice Gritting, and Urgent Works

The Contractor shall mobilise, establish all resources on site and commence work within the response times stated in the Table below, from the time of receiving notification.

TABLE 3.1.6: EMERGENCY WORKS, PAVEMENT BLEEDING, FROST AND ICE GRITTING, AND URGENT WORKS			LOS
ONRC Road Classification	Minimum Response Time		
	Emergency Works	Urgent Works	
Arterial (Urban) plus High Density	Between 8.00am and 5.00pm, mobilise within 10 minutes, establish and commence work on site within 30 minutes. Between 5.00pm and 8.00am, mobilise within 30 minutes, establish and commence work on site within 1 hour.	By 8.00am of the first working day following the time of the Engineer's Instruction	SAFETY TO-4
Primary Collector	Mobilise within 30 minutes, establish and commence work on site within 1 hour		
Secondary Collector	Mobilise within 30 minutes, establish and commence work on site within 1 hour		
Access	Mobilise within 30 minutes, establish and commence work on site within 1 hour		
Other: <ul style="list-style-type: none"> <li>Parks, Service Lanes, Cycle Paths</li> </ul>	Mobilise within 1 hour, establish and commence work on site within 2 hours.		

The term "time of receiving notification" is defined as the time the Contractor is advised of the event by either the Engineer or a third party (e.g. Police, Principal, or member of the public).

3.1.7 Unsealed Pavement

From the time the fault is first seen by or reported to the Contractor, the Contractor shall programme and complete all physical works required within the following response times.

TABLE 3.1.7 : MAINTENANCE OF UNSEALED PAVEMENTS - SURFACE AND SHAPE RESTORATION		LOS
ONRC Road Classification	Minimum Response Time	
Arterial plus High Density/CBD	N/A	SAFETY TO-7
Primary Collector	N/A	
Secondary Collector	N/A	
Access	5 days	
Other:	5 days	
<ul style="list-style-type: none"> <li>• Parks, Service Lanes, Cycle Paths</li> </ul>	5 days	

3.2 **Traffic Signals**

Emergency faults (priority fault) shall be attended at site within 20 minutes of the fault being reported to the Contractor. All faults except the following shall be defined as emergency faults:

- Pedestrian lamp replacement
- Pedestrian call box faults
- Pedestrian lantern damage
- Backing Board damage

The response to all non-priority calls is to be as prompt as is reasonably practical and shall not exceed 24 hours.

Where the correction of a fault requires the cutting in of a new detector loop in the carriageway the Contractor shall ensure that this work is carried out within 48 hours of the fault being identified.

Where faults occur during the hours of darkness, repairs should be carried out immediately. Where this is technically impractical or in the case of minor faults, repairs should be carried out at first light or before morning peak traffic.

3.3 **Streetlighting**

Where a streetlight is not working, the Contractor shall complete maintenance work resulting from public service requests, notification from the Engineer or as a result of any routine inspections within the following response times:

ONRC Road Classification	Minimum Response Time	LOS
State Highways	2 working days	SAFETY TO-3, TO-5 AMENITY TO-2 ACCESSABILITY TO-1
Arterial plus High Density/CBD	2 working days	
Primary Collector	4 working days	
Secondary Collector	4 working days	
Access	4 working days	
Two or more consecutive lights (any location)	1 working day	
Other: • Parks Roads, Energy Events Centre	4 working days	

If the light cannot be repaired because of a network cable fault, the network cable owner shall be advised within 12 hours.

### 3.4 Signs

The following response times shall apply for the erection of new signs or from the time of notification of damage to the repair of existing signs:

URBAN AREA MINIMUM RESPONSE TIMES IN WORKING DAYS					LOS
Item	Arterial plus High Density/CBD		Primary Collector Secondary Collector Access plus Cycleway Signage		
	Erect New/Re place	Maintain /Repair Existing	Erect New/Re place	Maintain /Repair Existing	
Regulation & Permanent Warning Signs & Pedestrian Crossings	5	1	5	1	SAFETY TO-6 TO-9 TO-10
Chevrons & Sight Rails	10	3	10	5	
Edge Marker Posts & Bridge End Markers & Hazard Markers	10	3	10	5	
Street Names, Tourist Information & Local Information Signs	15	3	15	3	ACCESSIBILITY TO-1

RURAL AREA MINIMUM RESPONSE TIMES IN WORKING DAYS					LOS
Item	Arterials, Primary Collector, Secondary Collector		Access plus Cycleway Signage		
	Erect New/Replace	Maintain/Repair Existing	Erect New/Replace	Maintain/Repair Existing	
Regulation & Permanent Warning Signs	10	1	5	2	SAFETY To-6 To-9 To-10
Guardrails	As advised	1 mth	As advised	1 mth	
Chevrons & Sight Rails and	20	2	20	2	
Edge Marker Posts & Bridge End Markers & Hazard Markers	20	5	20	10	
Street Names, Tourist Information & Local Information Signs	15	5	15	5	ACCESSIBILITY TO-1

## SECTION 4

### MAINTENANCE STANDARDS – SEALED ROADS

All road markings are to be reinstated within two weeks of the repair being completed.

#### 4.1 Potholes

- Repair within response time. (this may be a temporary repair)
- There is no flushing or bleeding failure, or scabbing of the final surfacing of the repair.
- The finished surface will be flush with the surrounding pavement surface.
- Life of the permanent repairs – five years.

**SAFETY  
TO-7**

#### 4.2 Sealed Digout Repair or Stabilisation

- The completed repair shall generally follow the existing road gradient and crossfall.
- There is no flushing, bleeding or scabbing failure of the final surface of the repair.
- There shall be a smooth transition to the existing with no sharp ramping.
- Repair designed and constructed to ensure that a 10 year life can be expected.
- Chip seal repairs shall be second coated within the response times listed.
- Repair shall not pond water.

#### 4.3 Sealed Pavement – Repair of Surface Defects

(Crack sealing, scabbing, stripping, permanent repair of bleeding and resealing)

- Repair shall have a minimum life of two years.
- Repair shall be a smooth transition to the existing adjacent surface.

#### 4.4 Kerb, Channel and Carriageway Cleaning including Surface Water Channels

##### a. Frequency

CBD cleaning – daily

Remainder – kerb and channel sweeping:

- |  |                   |
|--|-------------------|
| – Urban Arterial                               | Monthly           |
| – Industrial areas                             | Fortnightly       |
| – Urban Primary Collector and shopping centres | Monthly           |
| – Urban State Highways                         | Monthly           |
| – Urban Secondary Collector                    | Six monthly       |
| – Urban Access settlements                     | Six monthly Rural |
| – Parks  | Six monthly       |
| – Additional leaf prone areas                  | 3 extra per annum |
| – Nominated high-use areas                     | Weekly            |

**AMENITY  
TO-2**

Sump cleaning – suck out

- State Highway – Rotorua urban (70km/h or less)  
(205) Annually
- Urban area (2000) Annually
- Rural settlements (200) Annually

**SAFETY  
TO-7**

**AMENITY  
TO-2**

b. Standards

- Width of sweep – 2m minimum from the face of the kerb
- Urban shopping centre abutting local road – extend sweep to 150m from the end of the shops both sides of the local road
- Urban Sealed Roads  
There shall be no readily visible detritus, refuse or litter on sealed surfaces. Detritus, refuse or litter shall be removed from all kerb and channels, concrete dish channels, and surface water channels, such that ponding due to build up does not exceed 10mm depth above the channel invert.
- Rural Sealed Roads  
There shall be no readily visible detritus (other than leaf fall) on sealed surfaces, or unsealed shoulders. Detritus shall be removed from all kerb and channels, concrete dish channels and surface water channels, such that no ponding occurs. In unsealed surface water channels, growing vegetation that does not impede normal water flow shall not be removed.
- Cesspits Urban and Rural  
Cesspits are to be maintained such that at no time:
  - More than 25% of the grate or backdrop is covered or blocked.
- Vegetation Control in Kerb and Channel: Rural and Urban  
The Contractor shall keep the kerb and channel including medians and traffic island kerbs free of all vegetation growth except where the medians and islands are maintained gardens or lawns.
- Unsealed Roads  
There shall be no readily visible detritus (other than leaf fall) on unsealed surfaces.  
Detritus shall be removed from all surface water channels, such that no ponding occurs.

**4.5 Depressions**

Depressions shall not be greater than 30mm measured with a 3 metre straight edge, or 50mm when measured with a 10 metre line, measured along the road.

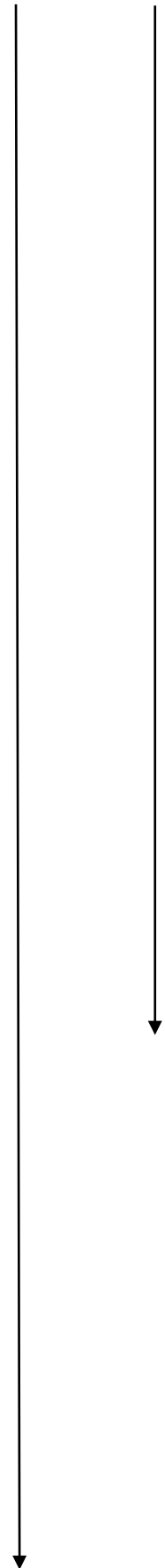
**4.6 Shoving or Heaving**

Shoving or heaves shall not be greater than 25mm high when measured against the surrounding surface profile over a 3 metre length.

**4.7 Flushed Surfaces**

Remedial works shall be deemed to be required:

- a) Where bleeding has occurred and/or where gritting operations have been required to avoid binder pick-up, or



- b) Where binder rise caused by traffic has produced texture depth, by sand circle, of 350mm or more. **SAFETY TO -7**

Restoration shall be made when the various surface defects exceed the following limits:

- (i) Where a continuous fatting area exceeds a length of 10 metres on curves or on the approaches to or within intersections, OR 15 metres on straights.
- (ii) Where gritting operations have been required over an aggregated area of more than 200 square metres per 1 kilometre of road.
- (iii) Where sand circle tests as above indicate an aggregated area of more than 400 square metres per 1 kilometre of road surface.
- (iv) In the case of sharp curves (radius of 150 metres or less) or hazardous locations, the limits shall be reduced to half those indicated in (ii) and (iii) above.

Restoration to meet the above standards shall be carried out as follows although this may be waived in urban areas where traffic speeds are lower.

Prior to resealing works but in any case within two years of the above conditions occurring.

#### **4.8 Edge Breaks – Rural**

Edge break shall not exceed 150mm as measured from the nominal edge line of seal.

Note: Since edge break is likely to be a progressive pavement defect encroaching further into the sealed surface if unattended, the length of time the edge break may be allowed to remain will be determined by the condition of the shoulders and the rate of deterioration under traffic.

Repairs of edge breaks will need to be carried out at a frequency which ensures that the above dimensional standard is not exceeded.

#### **4.9 Skid Resistance Management (for safety)**

- Rural Arterial, Primary and Secondary Collector shall be SCRIM tested once every 2 years so that half are tested each year.
- Results shall be checked against TNZ specification T10 to see if the investigation levels are exceeded.
- Where there is a crash record and SCRIM records indicate investigation is required, sites will be recommended for resealing.

#### **4.10 Unsealed Shoulders Adjacent Sealed Roads**

Due to the nature of the soils, the maintenance of unsealed shoulders is generally not carried out in the Rotorua District.

Unsealed shoulder maintenance will only be required where:

- water is ponding on the carriageway or the shoulder adjacent to the sealed carriageway.



- water is flowing along the carriageway due to high shoulder – ensure that at all times water travelling down the seal edge can enter the culvert inlets or cut-off drains.
- vehicle movements on the unsealed shoulder damage the shoulder or edge rutting exceeds 50mm in depth.
- flanking is necessary (mainly carried out prior to yearly reseals).
- surface water channel is damaged.
- where flanking is required the material for 1m adjacent to the edge of the seal shall be removed to fall away from the edge of seal between 5% and 6% and finished with adjacent ground so that it is mowable. All material cut off shall be removed.

**SAFETY  
TO -7**



## SECTION 5

### MAINTENANCE STANDARDS – UNSEALED ROADS

#### 5.1 Metal Supply

A permanent record shall be recorded in RAMM Contractor of the volumes of metal applied to each section of road.

#### 5.2 Camber

**SAFETY  
TO-7**

Roads will generally be crowned about the centreline

Limiting Values:                      Minimum side slope 4%  
   Maximum side slope 6%

#### 5.3 Superelevation

Limiting Values:                      Maximum Superelevation of 12%

#### 5.4 Running Metal (Dressing Material)

Maximum                                  1 stone deep AP40  
Minimum                                  No bony or bare patches after grading

Metal shall be free from sharp points that result in punctures. This requirement results in the metal being double crushed at the quarry or rolled after application.

#### 5.5 Surface Defects

The following aspects detail the maximum dimensions of allowable surface defects:

- a) Potholes 200mm dia. by 50mm deep
- b) Corrugations no more than 2 at 50mm deep
- c) Scours 3 metres long by 50mm deep
- d) Longitudinal rutting 10 metres long by 50mm deep
- e) Loose windrows of aggregate between wheel tracks shall not exceed 75mm in height.
- f) Bony Surface: No embedded stone shall protrude more than 50mm above the surface.
- g) Deep Loose Surface: Maximum – 75mm deep over 3 metres of traffic lane.

## SECTION 6

### DRAINAGE FACILITIES STANDARDS

#### 6.1 Culvert Inlet and Outlets

Are to be clear of vegetation and debris so as to ensure free inflow and outflow of water.

#### 6.2 Stormwater Systems

Maintenance of the stormwater system shall be considered non-complying if any of the following criteria are exceeded.

- (i) Cesspits/Sump Detritus in the silt chamber is less than 150mm below the pipe outlet, and/or greater than 25% of the grate or backdrop area is covered with detritus.
- (ii) Soakholes Greater than 50% of the volume of the soakhole filled with detritus.
- (iii) Culverts, Piped Greater than 25% of the depth of the culvert of pipe inlet, drain is filled with detritus.
- (iv) Cut Out Drains Water must be able to freely flow off the carriageway into the cut out and beyond, and not continue to flow past the cut out.
- (v) The Remaining Storm Water System Greater than 50% of the waterway area is filled with detritus.

#### 6.3 Kerb and Channel, Concrete Watertables and Sealed Dish Watertables

All of these are to be kept free of vegetation and detritus so as to not cause any ponding of water on carriageways or ponding greater than 10mm above the channel invert.

#### 6.4 Drainage Structures (Manholes and Cesspits)

The structural integrity of these structures is to be maintained.

**SAFETY  
TO - 7**



**AMENITY  
TO - 2**



## SECTION 7

### AIDS TO TRAFFIC MOVEMENT

#### 7.1 Pavement Marking

Accessibility  
TO-1

- a) An annual inspection of all marking shall be undertaken and include a night inspection of all Arterial, Primary Collector and Secondary Collectors.
- b) Where reflectivity is poor or markings are worn they shall be re-marked.
- c) Unless marking visibility and reflectivity is deemed acceptable by the Engineer, re-marking will be carried out as follows:

RE-MARKING FREQUENCY (MINIMUM)		
ONRC CLASSIFICATION	URBAN	RURAL
High Density/CBD (excluding car parks)	Annually	NA
Arterial	Annually	Annually
Primary Collector	Annually	Annually
Secondary Collector	Annually	Bi-Annually
Access	Bi-Annually	Bi-Annually
Service Lanes (no stopping lines)	Bi-Annually	NA
Parks Roads	3-Yearly	3-Yearly
Parks Carparks	3-Yearly	3-Yearly
Cycle Paths	Bi-Annually	NA
ITEMS:		
• Regulatory (yellows) – no stopping, no passing	Annually	Annually
• Compulsory Stop intersections	Annually	Annually
• Give Way intersections & triangles	Annually	Annually
• Pedestrian crossings & diamonds & limit lines	Annually	Annually
• Share with care crossings	Annually	Annually
• Reseal & rehab sites (previous year)	Annually	Annually
• On-road car parks	Bi-Annually	Bi-Annually
• On-road cycle lanes & symbols	Annually	Annually

#### 7.2 Edge Marker Posts and Bridge End Markers

SAFETY  
TO - 1

Edge Marker Posts are to be established and maintained in accordance with the NZTA Standard layout on all unkerbed roads carrying more than 750 vpd (vehicles per day) and roads forming a route between roads with EMPs. Isolated use of edge markers is also used on some less travelled roads to highlight deceptive curves. In the rural areas with narrow pavements, marker posts are the preferred operation for traffic safety.

### 7.3 Centreline Marking and Side Road Control

- a) All roads shall have centreline, edgeline and other markings as per MOTSAM Part 2 Traffic Volume requirements. Additional edgelines may be marked in fog prone areas.
- b) All cross roads shall be controlled (either Stop or Give Way)
- c) All side roads off routes carrying more than 500 vpd to be controlled (Stop or Give Way).

ACCESSIBILITY  
TO-1

### 7.4 Signs (Regulatory and Warning)

Signs reported damaged are to be repaired in within the response times set out in section 3. of these standards. Each sign to be cleaned once per year.

### 7.5 Types of Signs and Aids

The types of signs and aids covered are:

- 7.5.1 Regulatory Signs - Signs conveying instructions on the use of road or street.
- 7.5.2 Warning Signs - Signs advising drivers of hazards on or near the roadway
- 7.5.3 Pedestrian Signs - Signs conveying information to pedestrians
- 7.5.4 Edge Markers - Posts or other structures indicating the edge of the roadway
- 7.5.5 Hazard Markers - Bridge end marker plates and other hazard markers
- 7.5.6 Parking Signs - Signs conveying stopping or parking restrictions.
- 7.5.7 Information Signs - Signs relaying information to road users and the public
- 7.5.8 Tourist Information Signs - Signs pointing out areas of interest to tourists

SAFETY  
TO-3  
  
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### 7.6 Description of Signs and Aids

All signs and aids shall be in accordance with the Fourth Schedule of Traffic Control Devices Rule 2004 and its amendments and shall be erected in accordance with Transit NZ "Manual of Traffic Signs and Markings" (MOTSAM)

### 7.7 Warning Signs, Chevron Boards and Obstruction Markers

Numerous such signs to assist motorists identification of hazards are in place and are to be maintained in good order (including reflectivity). Inspections are to be as detailed in Section 2.

SAFETY  
TO - 3, TO - 5

### 7.8 Traffic Signals

- a) Electrical maintenance is to be undertaken in accordance with a separate contract.
- b) Quarterly checks are to be made of each intersection on time settings, lamp operations and both vehicle and pedestrian detectors.
- c) Six monthly checks are to be made for lantern cleanliness and reflector damage.

**7.9 Traffic Islands**

All such islands are to be kept tidy. Grass on islands shall be maintained to a height no longer than 100mm. Where they are planted, there shall be six monthly inspections to ensure that there is no obstruction to visibility.

**Safety  
TO-3**



**7.10 Electronic Signs**

School zone signs and driver feedback signs shall be monitored so that any faults are reported and can be rectified as soon as practicable.

**TO-5**



## SECTION 8

### STRUCTURES

		<b>MOBILITY (RESILIENCE)</b>	
		<b>CO-1</b>	<b>CO-2</b>
8.1	For the purpose of this Section, structures include any bridge or culvert with a waterway area greater than 3.4m <sup>2</sup> , stock underpasses and retaining walls.		
8.2	<b>Inspections</b>  Routine maintenance inspections, Level 1 for bridges, stock underpasses and major culverts shall be carried out at six monthly intervals plus after major storms.  Detailed structural inspections: Retaining walls – professional services – every four years Bridges – professional service – every four years		
8.3	Any faults identified as a result of level 1 maintenance inspections shall be rectified within one month except waterway obstructions which shall be removed within two days.		
8.4	A list of all structures and the work carried out on them shall be maintained in the RAMM database.		

## SECTION 9

### URBAN BERMS

#### 9.1 General

Berms in the urban area are generally the location of the majority of urban services (Telecom, power, natural gas, water supply and sometimes stormwater and sewers), footpaths, vehicle crossings, street trees, signs, lighting columns, litter bins, bus shelters etc. These berms are generally grassed.

The following aspects are to be maintained to the described standards. Pedestrian accessways are included in this category.

#### 9.2 Grass Verges

These are generally maintained by the adjoining property owners. Rotorua Lakes Council will assist in achieving verges that can be easily mown and will ensure that reinstatement following installation of underground services is to a reasonable standard. (not bowling green).

Trimming of grass from edges of footpaths and kerbs will be carried out where required.

**AMENITY  
TO - 2**



#### 9.3 Footpaths and Shared Paths

Are to be safe for all types of pedestrian traffic including wheel chairs, push chairs etc. Special attention is to be paid to the ramps at pram crossings in the kerb.

Shared paths shall be maintained free of debris.

3m hard-stand shared paths shall be swept as required and at suitable intervals.

Footpaths and shared paths shall be kept clear of encroaching vegetation. Any reports of glass shall be removed within a 24hr response time.

**SAFETY  
TO - 8**



#### 9.4 Vehicle Crossings

Are to comply with Rotorua Lakes Council's Civil Engineering Industry Standards or RITS if superseded.

#### 9.5 Street Trees

These are the responsibility of Rotorua Lakes Council's Parks Department. Any over hanging limbs obstructing footpaths or road carriageways are to be reported to this Department by written memo.

Over hanging trees from private property obstructing the footpaths or intersection visibility is to be reported to the Roading Department for action.

**SAFETY  
TO - 10**





**SECTION 10**  
**SHOULDERS – RURAL**

**10.1 General**

**SAFETY  
TO -10**

Shoulders contain and provide lateral support for the structural pavement. They provide additional width for use in emergency and for stopping clear of the traffic lanes.

The object of shoulder maintenance is to ensure that shoulders perform these functions adequately. Shoulders should permit use in emergency for stopping without danger to the road user, and be seen to be free of any danger so that they may be used with reasonable confidence. This requires that they be visibly clean, clear of obstruction or malformation, visibly free of risk in their use and consistent in the standard offered for each significant length of road. Shoulders should not obstruct the free flow of surface water from the sealed surface. Shoulders on sealed roads may be of two types:

- a) Metalled
- b) Grassed

Metal shoulders where practical, shall be maintained as follows:

Arterial, Primary and Secondary Collectors – 1.5m in width  
Access – 1.0m in width

**10.2 Fencing Encroachments and Private Pipelines**

Encroachments of Road Boundary Fences and services are permitted subject to that encroachment not interfering with the safety of the road or the ability to maintain it and its water tables, culverts etc. Written applications to the Rotorua Lakes Council are required and, if approved, a permit will be issued.

Generally the minimum off-set from the edge of seal to a fence shall be 3.0m on rural local roads although this may vary on embankments, in cuttings and around the inside of corners where sightlines are required.



## SECTION 11

### VEGETATION CONTROL – RURAL

#### 11.1 Grass Cutting

Vegetation control is recognised as a major factor in road safety by providing adequate sightlines at intersections and entranceways, around the inside of corners, and to signs, hazards and edgemarkers. There are two separate treatments both cutting vegetation to 2m off the edge of seal or metal on unsealed roads.

- One cut per annum  
The road berms are cut to 50mm minimum 100mm maximum vegetation height between the 15 October and the following 15 February. When the regrowth reaches 700mm high, the grass is then sprayed to knock it back.
- Mow only  
On tourist routes and in the Lakes A area, Council will determine special rural and rural residential roads where the vegetation is maintained to below 300mm by mow only with no spraying except for marker posts and plant pests.

#### 11.2 High Cut of Banks

Vegetation overhanging the road up to 6m above the pavement shall be removed such that a clear corridor is maintained at least 2m outside the edge of the pavement.

For rural road maintenance purposes, the Rotorua District is divided into 12 rural zones. In order to maintain this corridor, high cut will be programmed to allow for the equivalent of 4 rural zones to be covered per annum.

SAFETY  
TO – 3

TO - 10

## SECTION 12

### SPECIAL MAINTENANCE ARRANGEMENTS WITH ADJOINING LOCAL AUTHORITIES

#### 12.1 Agreement between the Rotorua Lakes Council and Western Bay District Council

A Boundary Roads Agreement has been made between the two Councils for the maintenance of portions of Pongakawa Valley Road, Manawahe Road and Rotoehu Road. This deed sets out the responsibilities for maintenance on sections of the roads adjoining the local body boundaries. A copy of the Deed is attached.

There are no other maintenance agreements on boundary roads with other local authorities.

## SECTION 13

### REFERENCES

#### 13.1 One Network Road Classification (ONRC) Performance Measures

The ONRC Performance Measures are maintained and updated by the Road Efficiency Group (REG)

<b>SAFETY</b>	<b>Customer Outcome Performance Measures</b>
CO-1	Customer Outcome 1: the number of fatal and serious injuries on the network
CO-2	Customer Outcome 2: collective risk (fatal and serious injury rate per kilometre)
CO-3	Customer Outcome 1: personal risk (fatal and serious injury rate per kilometre)
<b>SAFETY</b>	<b>Technical Outcome Performance Measures</b>
TO-1	Technical Output 1: permanent hazards
TO-2	Technical Output 2: temporary hazards
TO-3	Technical Output 3: sight distances
TO-4	Technical Output 4: loss of control on wet roads
TO-5	Technical Output 5: loss of driver control at night
TO-6	Technical Output 6: intersections
TO-7	Technical Output 7: hazardous faults
TO-8	Technical Output 8: cycle path faults
TO-9	Technical Output 9: vulnerable users
TO-10	Technical Output 10: roadside obstructions
<b>RESILIENCE</b>	<b>Customer Outcome Performance Measures</b>
CO-1	Customer Outcome 1: the number of journeys impacted by planned events
CO-2	Customer Outcome 2: the number of instances where road access is lost
<b>AMENITY</b>	<b>Customer Outcome Performance Measures</b>
CO-1	Customer Outcome 1: smooth Travel Exposure (STE)
CO-2	Customer Outcome 2: peak roughness
<b>AMENITY</b>	<b>Technical Outcome Performance Measures</b>
TO-1	Technical Output 1: roughness of the road (median and average)
TO-2	Technical Output 2: aesthetic faults
<b>ACCESSIBILITY</b>	<b>Customer Outcome Performance Measures</b>
CO-1	Customer Outcome 1: proportion of network not available to Class 1 heavy vehicles and 50MAX vehicles
<b>ACCESSIBILITY</b>	<b>Technical Outcome Performance Measures</b>
TO-1	Technical Output 1: accessibility
<b>TRAVEL TIME RELIABILITY</b>	<b>Customer Outcome Performance Measures</b>
CO-1	Customer Outcome 1: throughput at indicator sites