



# **ROAD MANAGEMENT PLAN**

## **REVIEW REPORT**

**2009**

**Endorsed by Council at its meeting on 30 June 2009**

## **1. INTRODUCTION**

Council at its meeting on 16 December 2008, resolved to commence the review of its Road Management Plan (RMP) and this report is the response to the requirements of the Road Management Act, being the 2009 Road Management Plan Review.

## **2. SCOPE**

The scope of the review includes the whole of the RMP and all the local roads as contained in Council's Road Register, any issues raised by the community over the past two years, the appropriateness of the elements of the RMP, such as the inspection frequencies, intervention levels for repairing defects and response time to assess and repair defects listed the RMP.

## **3 CONSULTATION**

The notice of the review was advertised in accordance with the requirements of the Road Management Act and advertisements were placed in the Government Gazette on 5 February 2009 and The Age on 7 February 2009. To ensure the notice was more widely available to the community, the notice was also advertised in the Monash Journal and the Oakleigh/Waverley Leader on 10 February 2009, posted on Council's web page and an article inserted in the Monash Bulletin dated 24 February 2009.

In addition, thirty one members of the community who had written to Council concerning the condition of the roads and footpaths over the last two years, were also advised in writing of the review and inviting them to comment on the adequacy of the current RMP. Six submissions were received and these are summarised in Appendix 1. Five of the submissions were in direct response to the letters and one was in response to the article in the Monash Bulletin.

## **4. REVIEW OF THE RMP**

### **ELEMENTS OF THE RMP**

The elements, including the inspection frequencies, shown in Appendix 2, and the intervention standards, shown in Appendix 3, were all reviewed for appropriateness of the standards and response times and these are discussed below:

#### **Road Infrastructure**

Road infrastructure is the infrastructure that forms the road or footpath and includes any structures that support the road or footpath pavements.

At the commencement of the review, it was identified that there were elements of road infrastructure that had not been included in the earlier RMP's. These were – retaining walls, constructed to support the road or footpath, and shared pathways.

#### **Retaining walls**

The retaining walls that have been constructed on the road reserve and greater than 1.0m in height (guidance is taken from the Building Code which requires walls greater than 1.0 metre in height, if constructed on a property, to have a building permit) should be included in the RMP. Note - Walls less than 1.0m are considered to be a landscape feature and not road related.

Shared pathways (off the road pavement, but within road reserves)

To avoid confusion as to whether they are included in the footpaths category, it is suggested that a 'shared pathway' is considered the same as a footpath and having the same standards as footpaths. This was a recommendation from Council's Insurers, Civic Mutual Plus.

#### Roadside vegetation

Roadside vegetation is currently listed in the RMP, however, it is not included in the definition of road related infrastructure and therefore should be removed from the RMP.

### **Inspection Frequencies**

The current inspection frequencies, as detailed in Appendix 2, are varied and are based on an assessment of the likelihood and consequence of incidents involving this infrastructure. These are further discussed below:

#### Road pavements

Category 1 roads, for the list of roads see Appendix 4, are inspected on an annual cycle and Category 2 and 3 roads are inspected every three years. There have not been any incidents relating to road pavements or kerb and channel and so the inspection frequency could be extended from one year to two years.

#### Drainage Pits

The drainage inspection referred to in the RMP is part of the overall drainage maintenance program and this component is aimed at protecting the abutting properties and the locations and the frequency of the inspection are regularly reviewed and changed to accommodate circumstances changing in the catchment area or local improvement works. The inspection of the drainage pit for defects is aligned with the kerb and channel or footpath, depending on where the pit is located and responses to the ponding of water on roads is covered in the Drainage section of the RMP. This pit inspection program is not related to the road and should be removed from the RMP.

#### Footpaths

The adequacy of the inspection frequencies of the footpaths was assessed on the reported incidents and number of defects requiring repair. Table 1 below indicates that over the past two years, Category 1 and arterial roads have higher rates of defects and reported incidents than Category 2 and 3 roads.

Table 1

	Average Number of Defects/year/km footpath	Average Number of Incidents/year/km footpath
Arterial roads	1.61	0.14
Category 1 roads	1.52	0.10
Category 2/3 roads	0.82	0.04
Segmental Paving	33.31	1.86*

\*Average number of incidents on the footpaths constructed with the segmental paving is 8 per year.

Arterial Roads – Arterial roads footpaths are inspected every three years and although the number of defects were higher than the Category 1 roads, the rate of reported incidents is

considered to be low. Therefore, based on incidents the current three yearly cycle is considered adequate.

Category 1 Roads – the number of incidents, reports and defects were found to be relatively low indicating that the need to retain the inspection frequency at the one year interval is not needed when compared to the other inspection frequencies. By extending the current inspection frequency, it is unlikely to have an effect on the number of defects or the number of incidents as the asset is unlikely to significantly deteriorate between inspections and so it is felt that the inspection frequency could be extended from annually to every two years.

Category 2 and 3 Roads - the number of defects identified and number of incidents being reported is considered to be low and so the current three yearly cycle is considered appropriate.

Segmental Paving – Segmental paving is predominantly in the High and Medium sensitivity areas, which currently have a monthly inspection and whilst the rate of defects and incidents reported is high compared to the other areas, this frequency of inspection is considered to be at a practicable level and appropriate.

#### Roadside vegetation

Roadside vegetation is not considered to be road related infrastructure and should be removed from the RMP.

Other inspection frequencies are considered adequate.

### **Standards of Maintenance and Repair**

The standards of maintenance and repair have been established taking account of the funds and resources available to undertake this work. The current standards have been assessed and are generally considered suitable. There are however, some changes suggested and these are discussed below -

#### Road Pavements – Sealed

Surface Condition for Category 2 and 3 roads

The current RMP has ‘add to program’ which is not a measurable timeframe, so it is suggested to assign a response time of 2 years, which has been determined as appropriate for this type of asset, taking account of the past performance of road pavements, where these types of changes occur in a relatively slow manner.

#### Cracking

Cracking may reduce the life of the pavement and is a defect related to the asset preservation, but does not present a hazard to motorists and so should be deleted from the RMP. Note - Cracking in pavements will be added to the road maintenance program for crack sealing.

Pavement Failure – Category 2 and 3 roads

The current RMP has ‘add to program’ which is not a measurable timeframe, so it is suggested to assign a response time of 2 years, which has been determined as appropriate for this type of asset, taking account of the past performance of road pavements where these types of changes occur in a relatively slow manner.

The standards for the other pavement defects are considered adequate.

#### Kerb and Channel

Displacement - Category 2 and 3 roads

The current RMP has ‘add to program’ which is not a measurable timeframe, so it is suggested to assign a response time of 2 years, which has been determined as appropriate

for this type of asset, taking account of the past performance of kerb and channel, where these types of changes occur in a relatively slow manner.

#### Cracking

Cracking in kerb and channel is an asset preservation matter and it is not considered to constitute a hazard and so it is suggested it be deleted from the RMP.

#### Ponding of water – Category 2 and 3 roads

This occurs when the kerb and channel settles or moves vertically and the repair is to realign the kerb and channel. The current RMP has ‘add to program’ which is not a measurable timeframe, so it is suggested that a response time of two years would be appropriate when considering the likelihood of change during an inspection frequency and the effect on the user.

#### Table Drains – Scour

The scouring of a table drain is not considered to be a road related hazard. If scouring is severe, this may result in pavement failure, which is then a defect listed elsewhere in the RMP. It is suggested to delete this from the RMP.

#### Footpaths – Concrete

See Appendix 5 for lists of footpaths and sensitivity levels.

Cracking – Condition level 5 in low sensitivity areas (cracks greater than 10mm, resulting in an unstable surface)

The current RMP has ‘add to program’ which is not a measurable timeframe, so it is suggested that a response time of ‘repair within 10 days’ would be appropriate when considering the likelihood of change during an inspection frequency and the effect on the user.

Joint Displacement for Condition Level 4 (displacements greater than 20mm and less than 30mm)

For Condition Level 4 displacements, the current RMP requires an initial repair within five days and then the replacement is to “add to program”. This timeframe is not measurable and needs to have a more measurable response.

The repair is to reduce, or remove, a risk arising from a defect and this has been achieved, through the current RMP, by either highlighting the defect (painting), placing warning sign, or barricading the defect. This arrangement doesn’t necessarily allow the footpath to be kept in use and so it is felt that placing a ramp could be used to return the footpath to a reasonable level of use, in a quicker timeframe with the ramping treatment. It is suggested that the initial treatment to reduce the hazard remains at five days and a treatment to ramp the displacement, to return the footpath to a reasonable level of use, be added.

In establishing reasonable timeframes for this ramping it would be appropriate to have the High and Medium Sensitivity areas be ramped within one month and the Low Sensitivity areas ramped within three months.

Joint Displacement for Condition Levels 5 (displacements greater than 30mm)

For Condition Level 5 displacements the current RMP requires an initial repair within five days and then replacement within nine months. The initial repair method is the same as that for a Condition Level 4 defect. Ramping the footpath, allows the footpath be returned to a reasonable level of use and it is suggested that this treatment be used as an

alternate treatment to replacement to ensure the requirements of the RMP can be achieved. In establishing reasonable timeframes for this ramping, it would be appropriate to have the High and Medium Sensitivity areas be ramped within one month and the Low Sensitivity areas ramped within three months. Replacements will still occur when appropriate, but this provides greater flexibility in managing the footpaths and meeting the RMP requirements.

The standards for the other footpath defects are considered adequate.

#### Roadside Vegetation

This is not considered road infrastructure and so should be deleted from the RMP.

The standards and response time for the other categories of road infrastructure were considered to be adequate. The table showing all of the defects and suggested changes are shown in Appendix 2.

### **5 OTHER**

One of the comments received was to improve the 'readability' of the RMP. This suggestion constitutes an administrative change as it doesn't change any of the standards contained in the RMP and can be undertaken at any time. It is suggested that this be undertaken at the same time as any amendments are made to the RMP.

### **6 AMENDMENT PROCESS**

Any amendments that reduce the standards nominated in the RMP are subject to further advertising as required in the Road Management Act. For an amendment to a standard that increases the standard, the Road Management Act allows the Chief Executive Officer to authorise these changes.

### **7 CONCLUSION**

The current RMP is generally considered adequate however there is an opportunity to make some minor amendments as discussed in the report, to better define the standards and ensure that the targets outlined in the RMP are clear.

## SUBMISSIONS

Six submissions were received and are summarised as follows

### Submission No. 1

This submission was received on 24 March 2009 and although this was after the designated closing date of 11 March 2009, was deemed appropriate to include in the Review. The comments included:

- ‘somewhat difficult to absorb and understand’.  
**Response:-** agree that the document could be clearer and administrative changes are proposed to make the RMP more ‘user friendly.’
- ‘a coding system is sorely needed for assets and condition inspections’.  
**Response:-** propose to include ‘condition codes’ in the intervention standards and response table. Council’s Public Liability insurer, Civic Mutual Plus, at a recent audit of the RMP, also recommended this.
- ‘unclear about how one would differentiate between levels of defacement. “Cannot be understood” is perhaps too subjective eg if a sign is defaced by a diagonal slash, the understanding is clear although incorrect.’  
**Response:-** propose to amend the wording for the intervention level to ‘Sign cannot be located, message is not fully visible or misleads’.

### Submission No. 2

The comments in this submission can be summarised as:

- ‘.....the now 20 metre ghost gum in our 2.2 metre wide nature strip. When last inspected, the tree was considered in “good health” although the footpath has had to be replaced at ratepayers expense approximately every three years and our driveway crossover is now cracking. With the continuing drought I believe the City need to inspect its gum trees more frequently.’  
**Response:** - the legal advice received is that ‘vegetation’ is not road infrastructure hence the Road Management Act does not apply, the tree inspections will continue.

### Submission No. 3

The comments in this submission can be summarised as:

- ‘[for low sensitivity footpaths] the sensitivity may be low but these are subject to damage by tree roots lifting slabs, which would not generally occur in high and medium sensitivity footpaths. The sensitivity [inspection] should be reduced to 1 year regardless of the road pavement inspection schedule.’  
**Response:** - an analysis of reports and incidents showed that, on average, there is only one report or incident made per year along any section of the footpath network. A section of the network includes the full road or for the arterial road footpaths, the length between the major intersections and so increasing the frequency of inspection is not considered to be warranted. Currently the road inspection schedule requires one full time inspector. Annual inspections would require an additional two inspectors, which could not be accommodated from the current resources.

- for high and medium sensitivity footpaths leaving a joint displacement of 20 mm for 12 months is a trip hazard. This should be reduced to 3 months to be consistent with asphalt and segmental paving. If frequency of inspection is 1 year, then this trip hazard may exist for 15 months, unless community reports it.'

**Response:-** The Condition Level 3, in High and Medium sensitivity areas has an intervention level, for concrete footpaths, for displacements of 10 to 20mm. From the inspection records, only one defect of this nature was reported in the last two years (the period for which the current RMP applies). The treatment, within 12 months, is to grind the lip, ramp the tripping hazard or replace the bay is considered still appropriate.

#### **Submission No. 4**

The comments in this submission can be summarised as:

- 'I am one that has had two falls, one on a curbing and one on an uneven footpath which were repaired very quickly. Perhaps if people notified Council as they see these problems it might help.'

**Response: -** The current RMP acknowledges that reports from the community are assessed within 5 days and then intervention levels and response times from the RMP apply.

#### **Submission No. 5**

The comments in this submission can be summarised as:

- Re footpaths – segmental paving – joint displacement – No.2 on page 43. Adjacent pavers at differing heights (levels) which appear to be caused by roots from trees growing on the nature strips, which will forever create problems until the roots are cut off from below the paver. Current examples are .....[locations are actually concrete footpaths].

**Response:-** for segmental pavers (and concrete footpaths), tree roots are currently assessed when inspecting the hazard and severed if appropriate before replacing the pavers/concrete. Current nature strip vegetation species are selected considering root characteristics.

- 'Unchecked growth of trees, shrubs etc from properties extending into thoroughfare on footpath.'

**Response:-** Council's Local Law No. 3 applies in this instance. Inspections are carried out by Local Laws Officers and residents advised as necessary. This not considered to be an issue for Road RMPs.

#### **Submission No. 6**

The comments in this submission can be summarised as:

- 'there are some sections of the [footpath] pavement where I walk which are in need of repair,.....there are many of us that walk in the dark thus a problem with the state of some of the worse sections.'

**Response: -** The aim of the current inspection program is to locate defects and respond in accordance with the Road RMP. The adequacy of these programs is discussed in the review report and are considered appropriate.

## Appendix 2

### *Schedule 4A – Inspection of Road Assets*

Asset	Condition Inspection	Non Routine	Review
<b>Road Pavement</b> <ul style="list-style-type: none"> <li>• <b><u>Category 1</u></b></li> <li>• <b><u>Category 2</u></b></li> <li>• <b><u>Category 3</u></b></li> </ul>	1 Year  3 Years  3 Years	<b><u>For all categories:</u></b>  As reported by the community or observed by staff. Assess within 5 days.	Condition inspections:  Category 1 – proposed to change inspection frequency to 2 years  Category 2 – no change  Category 3 – no change
<b>Kerb and Channel</b>	As per road pavement above	As reported by the community or observed by staff. Assess within 5 days.	No change
<b>Drainage/ Table Drains</b>	Sites selected as listed in Council’s preventative Maintenance Schedule:  1,2,3,6,12 or 24 monthly in accordance with Schedule.  All other pits – 10 years  Locations listed in Council’s Preventative Maintenance Schedule	As reported by the community or observed by staff. Assess within 5 days.	Preventative maintenance inspections – delete  Note - Pits to be inspected at the same frequency as the kerb and channel or, if part of the footpath, the same frequency as the footpath inspection.
<b>Footpaths</b> <ul style="list-style-type: none"> <li>• High Sensitivity –Surface Type 1</li> <li>• High Sensitivity –Surface Type 2</li> <li>• Medium Sensitivity - Surface Type 1</li> <li>• Medium Sensitivity – Surface Type 2</li> <li>• Low Sensitivity - Surface Type 1</li> <li>• Low Sensitivity – Surface Type 2</li> </ul>	1 Month  12 Months  3 Months  1 Year  1 Year  As per road pavement above	As reported by the community or observed by staff. Assess within 5 days.	No change  No change  No change  No change  No change  Category 1 roads - proposed to be changed to 2 yearly. Other roads - no change
<b>Traffic Signs</b>	As per road pavement above	As reported by the community or observed by staff. Assess within 5 days.	No change

<b>Asset</b>	<b>Condition Inspection</b>	<b>Non Routine</b>	<b>Review</b>
<b>Linemarking</b> , includes reflective pavement markers Statutory linemarking (excluding parking bays)	As per road pavement above	As reported by the community or observed by staff.	No change
<b>Traffic Signals</b> <ul style="list-style-type: none"> <li>Council</li> </ul>	In accordance with the Traffic Signal Maintenance agreement with VicRoads	As reported by the community or observed by staff. Assess within 2 days.	No change
<b>Streetlights</b> (Council owned) <ul style="list-style-type: none"> <li>Electrical</li> <li>Structural</li> </ul>	In accordance with maintenance agreements and/or Public Lighting Code, by the relevant Service Authority	As reported by the community or observed by staff. Assess within 5 days.	No change
<b>Bridges</b>	Level 1 – 2 Years (alternate years to Level 2 inspections) Level 2 – 2 Years	As reported by the community or observed by staff. Assess within 5 days.	No change
<b>Road side Vegetation</b> <ul style="list-style-type: none"> <li>Trees within road reserve</li> <li>Landscaped areas</li> </ul>	As per road pavement above  As per road pavement above	As reported by the community or observed by staff. Assess with 5 days As reported by the community or observed by staff. Assess with 5 days	Proposed to delete this asset group
<b>Fencing</b>	As per road pavement above	As reported by the community or observed by staff. Assess with 5 days	No change

## Schedule 4B – Intervention Standards and Management Controls

Defect	Definition	Intervention Standard	Management Control	Response Time	Review
<b>Road Pavements - Sealed</b>					
1. Potholes	Hole in road surface extending into base material	Greater than 300 mm diameter and 50 mm deep	Holes less than 2 sq m – repair, greater than 2 sq m dig out and patch.	Assess – 5 days. Category 1 – repair within 10 days, Category 2/3 – repair within 20 days	No change
2. Surface condition	Deterioration of road surface requiring repair	Defects include polishing, delamination, ravelling, stripping of greater than 50% of surface.	Refer to resheet program for assessment and prioritisation	Category 1 – repair within 12 months. Category 2/3 – list in resheet program	Category 1 - no change Category 2/3 – repair within 2 years
3. Cracking	Partial or complete breaks in the road surface. Isolated or areas of cracks allow water into the pavement	Crack greater than 5 mm wide.	Refer to crackseal program	List in crackseal program	Delete from RMP
4. Pavement Failure	Loss of shape and geometry of road structure such as shoving, wheel ruts, depressions	Depth greater than 50 mm over 3 m length and/or extent of movement is causing vehicles to slow or deviate.	Refer to road reconstruction/rehabilitation program	Category 1 – repair within 20 days, Category 2/3 – list in reconstruction program	Category 1 – No change Category 2/3 – repair within 2 years
5. Slippery materials spilt on pavement traffic lanes	Materials, such as oil, have been spilt on the pavement within traffic lanes	Area affected greater than 1m <sup>2</sup>	If necessary, divert traffic and apply absorbent material	Assess and reduce hazard – within 12 hours.	No change

Defect	Definition	Intervention Standard	Management Control	Response Time	Review
<b>Road Pavement - Unsealed</b>					
1. Potholes	Hole in road surface extending into base material	Greater than 1000 mm diameter and 150 mm deep	Fill potholes with granular material	Assess – 10 days, Repair within 30_days,	No change
2. Pavement Failure	Loss of shape and geometry of road structure such as, wheel ruts, depressions	Depth greater than 150 mm over 3 m length.	Fill potholes with granular material	Assess – 10 days, Repair within 60 days,	No change
<b>Kerb and Channel</b>					
1. Displacement	Break in bay(s) resulting level difference between sections or change in alignment of K&C along length	Displacement greater than 50 mm	Replace effected length of bays to restore water flow	Category 1 – repair within 12 months. Categories 2/3 – list in Kerb & Channel Replacement Program	Category 1 - No change Category 2/3 - Repair within 2 years
2. Cracking	Break in bay, no level difference	Cracking greater than 20 mm	Replace effected length of bays to restore water flow	All categories – list in Kerb & Channel Replacement Program	Delete from RMP
3. Ponding of water	Section of K&C where water collects and does not drain away.	Ponding of greater than 50 mm	Replace effected length of bays to restore water flow	Category 1 – repair within 12 months. Category 2/3 – list in Kerb & Channel Program	Category 1 - No change Category 2/3 - Repair within 2 years

Defect	Definition	Intervention Standard	Management Control	Response Time	Review
<b>Drainage</b>					
1. Blocked throat	Entry of pit blocked by debris	Blockage causes water to pond across through lanes to a minimum depth of 50 mm	Clear blockage	Category 1 – clear within 10 days. Category 2/3 – clear within 30 days	No change
2. Broken lintel	lintel is broken	Lintels missing or extensively damaged.	Replace lintel	Category 1 - 30 days, Categories 2/3 – 3 months	No change
3. Missing or damaged pit lid	Defect is a safety hazard.	Hole is sufficient for person to be injured	Temporary board cover then replace pit cover or lid, and/or barricade is required	Reduce hazard within 1 working day, replace within 5 days	No change
<b>Table Drains</b>					
1. Water ponding or deflecting out of the drain	Obstruction in drain	Drain cross sectional area reduced by >50% or water diverting out of drain	Clear obstruction	Assess – 5 days, Repair within 60 days	No change
2. Scour	Drain eroded	Scour depth >100 mm	Regrade Drains	Assess – 5 days; repair 90 days	Delete from RMP

Defect	Definition	Intervention Standard	Management Control	Response Time	Review
<b>Footpaths - Concrete</b>					
1. Cracking	Breaks in footpath other than at joints	Condition Level 4 – High & Medium Sensitivity areas; Condition Level – 5 – all areas	Grinding; replacement	Condition level 4 - High & med sensitivity – repair within 10 days Condition level 5 – High & med sensitivity – repair within 5 days. Low sensitivity – list in replacement program	No change Condition level 5 -: High & medium sensitivity – no change Low sensitivity – repair within 10 days
2. Joint displacement	Movement between bays of concrete	Condition Level 3 – High and Medium Sensitivity areas;  Condition Level 4 and 5 – all areas	Grinding, ramping & replacement  Reduce the hazard and schedule for replacement	Within 12 months  Repair within 5 days  Replacement - Level 5 within 9 months, Level 4 add to program	No change  Reduce the hazard -no change  High & medium sensitivity: condition level 4 & 5 – repair within 1 month.  Low sensitivity: condition level 4 & 5 – repair within 3 month.  Replacement: No change
3. Surface condition	Deterioration in footpath surface	Slippery surface, Refer Asset Plan - Pathways	Clean or treat surface	Clean and treat within 10 days,	No change

<b>Footpath - Asphalt</b>					
1. Surface undulations	Movement in the surface of pathway	Differential movement of greater than 50 mm over 1 m straight edge or 20 mm over 100 mm straight edge	Arrange dig out and patch of affected area	High & medium sensitivity – repair within 5 days. Low sensitivity – repair within 3 months	No change
2. Surface condition	Deterioration in footpath surface	Potholes (300 mm diameter, 20 mm depth)	Arrange dig out and patch of affected area	High and medium sensitivity – repair within 10 days. Low sensitivity – repair within 3 months	No change
<b>Footpaths – Segmental Paving</b>					
1. Depressions	Movement in the surface of pathway	Differential movement of greater than 50 mm over 1 m straight edge	Reset area of pavers to achieve continuous surface	High & med sensitivity – repair within 5 days. Low sensitivity – repair within 3 months	No change
2. Joint Displacement	Adjacent pavers are at differing levels	Difference in levels of greater than 10 mm	Reset area of pavers to achieve continuous surface	High & medium sensitivity – repair within 5 days. Low sensitivity – repair within 3 months	No change
3. Missing pavers	Pavers have been removed leaving a space	One or more pavers	Fill the space, arrange for replacement	High & medium sensitivity – repair within 5 days. Low sensitivity – repair within 10 days	No change
<b>Traffic Signs - Safety</b>					
1. Missing	Sign has been removed from fixing point	Sign cannot be located	Replace sign	Statutory - within 5 days, others 30 days	No change
2. Damaged	Sign has been damaged to reduce intent of message	Sign message cannot be understood	Replace sign	Statutory - within 5 days, others 30 days	No change
3. Illegible	Lettering has been altered to reduce intent of message	Sign message cannot be understood	Replace sign	Statutory - within 5 days, others 30 days	No change

**Linemarking**

1. Loss of integrity	Paint has faded or been eroded	Less than 50% of paint remaining	Add to line marking program	Statutory – within 12 months	No change
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**Traffic Signals**

1. Signals not operating of confusing	Signals not operating in accordance with normal sequence	Reactive	Repair signals	Assess – same day For minor repair – 2 days For major repairs – as programmed	No change
2. Lantern Failure	Lamp not illuminating	Reactive	Replace damaged or defective hardware	Low Level - 2 days High Level – 7 days	No change
3. Collision damage	Physical damage to hardware	Reactive	Replace or repair damaged hardware	Assess – same day Repairs – as programmed	No change

**Street Lights**

1. Lamp not operating	Lamps are not operating	Reactive	Report to Power Company responsible for the area	10 days	No change
2. Support pole damaged	Support pole and/or brackets damaged	Reactive	Remove hazard; program repairs	Reduce hazard within one working day, replace within 90 days	No change.

<b>Bridges</b>					
1. Loss of structural integrity	Structural members damaged	As per the VicRoads Bridge Inspection Manual	Undertake repair of defects	Assess – 5 days, Minor Repairs – 90 days Major Repairs – refer to Capital Works program	No change  No change
<b>Roadside Vegetation</b>					
1. Restriction of sight standards	Trees, shrubs or grasses that restrict the design sight distance at intersections or restrict viewing of safety signs	When sight distance is less than design requirements	Prune vegetation	Assess – 5 days, further works - 45 Days	Delete from RMP
2. Clearance over road pavements and shoulders	Vegetation intruding over roads from the back of kerb	4.5m height clearance over pavement and the trafficable portion of shoulders	Prune vegetation	Assess – 5 days. Category 1 – 45 days. Category 2/3 – 60 days (see note 20)	Delete from RMP
3. Clearance over footpaths or shared paths	Vegetation which overhangs footpaths or shared paths	3.0m height clearance over path	Prune vegetation	Assess – 5 days, further works - 45 Days-	Delete from RMP
<b>Fencing</b>					
1. Damage to guardrail/ fence	Physical damage to fence/ guardrail structure	Structure no longer performs design function or poses hazard to road users	Reduce/ remove hazard, program repairs	Reduce hazard within 2 working day, arrange repairs within 90 days	No change

## CATEGORY 1 ROADS

Map No.	Nominated Road	From	To
5	Westlands Rd	High Street Rd	Capital Av
6	Batesford Rd	Warrigal Rd	Power Av
7	Alexander St	Hamilton Pl	Stephenson Rd
7	Hamilton Pl	Railway Station	Alexander St
7	Hamilton Pl	Alexander St	Stephensons Rd
7	Hamilton Walk	Winboure Rd	Hamilton Place
7	Winbourne Rd	Alexander St	Stephensons Rd
8	Stephensons Rd (Service Rd)	Waimarie Dve	The Highway
8	The Highway	Stephensons Rd	Gallery Place
8	Waimarie Dve	Stephensons Rd	Gallery Place
9	Coleman Pde	Blackburn Rd	Springvale Rd
9	Glendale St	Coleman Pde	Montclair Av
9	Kingsway	O'Sullivan Rd	Springvale Rd
9	Montclair Av	Glendale St	Kingsway
9	O'Sullivan Rd	Snedden Dv	Springvale Rd
9	Railway Pde Nth	Euneva Av	Springvale Rd
9	Snedden Dv	O'Sullivan Rd	High Street Rd
10	Gallaghers Rd	High Street Rd	Waverley Rd
14	Hardner Rd	Stephensons Rd	Forster Rd
14	Ricketts Rd	Blackburn Rd	Forster Rd
16	Lum Rd	Waverley Rd	Ferntree Gully Rd
16	ViewMount Rd	Waverley Rd	Ferntree Gully Rd
16	Watsons Rd	Waverley Rd	Ferntree Gully Rd
18	Carlisle Cr	Kangaroo Rd	Warrigal Rd
18	Kangaroo Rd	Poath Rd	Warrigal Rd
18	Neerim Rd	Princes Hwy	Poath Rd
18	Poath Rd	Princes Hwy	North Rd
18	Warrigal Rd	Kangaroo Rd	Willesden Rd
19	Atherton Rd	Warrigal Rd	Princes Hwy
19	Atkinson St	Princes Hwy	Atherton Rd
19	Burlington St	Hanover St	Huntingdale Rd
19	Chapman St	Drummond St	Palmerston Gv
19	Chester St	Warrigal Rd	Hanover St
19	Drummond St	Atherton Rd	Palmerston Gv
19	Eaton Mall	Atherton Rd	Oakleigh Central
19	Golf Links Rd	Princess St	North Rd
19	Hanover St	Atherton Rd	Princess St
19	Haughton Rd	Warrigal Rd	Moroney St
19	Jones St	Atherton Rd	Chester St
19	Palmerston Gv	Atherton Rd	Chapman St
19	Portman St	Warrigal Rd	Hanover St
19	Station St	Atherton Rd	Portman St
21	Gardiner Rd	Ferntree Gully Rd	Bayview Av
21	Normanby Rd	Gardiner Rd	Blackburn Rd
22	Duerdin St	Nantilla Rd	Blackburn Rd
22	Dunlop Rd	Nantilla Rd	Springvale Rd
23	Brandon Park Dve	Ferntree Gully Rd	Lum Rd
23	Lum Rd	Ferntree Gully Rd	Brandon Park Dve
23	Magid Av	Springvale Rd	Brandon Park Dve
24	Brandon Park Dve	Lum Rd	Wellington Rd

**CATEGORY 1 ROADS (cont)**

<b>Map No.</b>	<b>Nominated Road</b>	<b>From</b>	<b>To</b>
24	Grandview Av	Jells Rd	Marykirk Dve
25	Golf Rd	North Rd	Beryl Av
26	Carinish Rd	Milgate St	Clayton Rd
26	Carinish Rd	Madeleine Rd	Clayton Rd
26	Cooke St	Dunstan St	Centre Rd
26	Dunstan St	Clayton Rd	Cooke St
26	Haughton Rd	Valley St	Clayton Rd
26	Haughton Rd	Nicholson Ct	Clayton Rd
26	Milgate St	North Rd	Carinish Rd
26	Valley St	Huntingdale Rd	Haughton Rd
27	Carinish Rd	Clayton Rd	Mary St
27	Haughton Rd	Clayton Rd	Thomas St
27	McNaughton Rd	Princes Hwy	Centre Rd
29	Wanda St	Wellington Rd	Police Rd
30	Hansworth St	Police Rd	Abbeydale Ct
31	Haverbrack Dve	Wellington Rd	Police Rd

All other roads are Category 2 or 3 roads.

**Schedule of Footpaths of High and Medium Sensitivity  
(High Sensitivity Sites in Bold)**

<b>Map No.</b>	<b>Site Description</b>	<b>Street Name</b>	<b>From</b>	<b>To</b>	<b>Sensitivity</b>	<b>Surface Type</b>
1	Ashwood Shopping Centre	Warrigal Rd	Douglas St	High St Rd	Medium	1
	Yertchuk Av Shops	Yertchuk Av	Arthur St	No 22 Yertchuk Av	Medium	1
2	Barlyn Rd Shops	Barlyn Rd	Huntingdale Rd	ROW	Medium	2
	Andrew St Shops	Andrew St	Highbury Rd	ROW	Medium	1
3	Leeds Rd Shops	High St Rd	Leeds Rd	ROW	Medium	2
	Tally Ho Shops	Blackburn Rd	Lucerne St	ROW	Medium	2
	Syndal Shopping Centre	High St Rd	Larch Crs	Blackburn Road	Medium	1
		Blackburn Rd	No 185	High Street Road	Medium	1
4	Willow Avenue Shops	Willow Ave	Medina Rd	ROW	Medium	1
6	Holmesglen Shops	Warrigal Rd	Rail Line	Batesford Rd	Medium	1
	Batesford Road Shops	Batesford Rd	Margot St	Power Ave	Medium	1
	Cleveland St Shops	Cleveland St	High St Rd	Mavron St	Medium	1
	Jordanville Shops	Huntingdale Rd	Railway Pde Sth	ROW	Medium	2
7	Waverley Rd Shops	Huntingdale Rd	No 414	Waverley Rd	Medium	2
	<b>Mt Waverley Shopping Centre</b>	Alexander St	Full length		High	1
		Hamilton Pl	Full length		High	1
		Winbourne Rd	Alexander St	Stephensons Rd	High	1
		Virginia St	Alexander St	Stephensons Rd	High	1
Wadham Parade Shopping Centre	Wadham Pde	Miller Cres	No 45 Wadham Pde	Medium	2	
8	<b>Mt Waverley Shopping Centre</b>	Stephensons Rd	Railway Line	No 318 Stephensons Rd	High	1
	Syndal Shopping Centre	Blackburn Rd	High St Rd	Price Av	Medium	2
9	Syndal Shopping Centre	Blackburn Rd	High St Rd	No 260A Blackburn Rd	Medium	1
	Glen Waverley North Shops	High St Rd	No 676 High Street Rd	No 706 High Street Rd	Medium	1

Map No.	Site Description	Street Name	From	To	Sensitivity	Surface Type
	<b>Glen Waverley Shopping Centre</b>	Kingsway	Bogong Av	O'Sullivan Rd	High	1
		Snedden Dve	O'Sullivan Rd	High St Rd	High	1
		O'Sullivan Rd	Kingsway	Springvale Rd	High	1
		Railway Pde-North	Euneva Av	Springvale Rd	High	1
		Coleman Pde	Myrtle St	Springvale Rd	High	1
		Bogong Av	Kingsway	Myrtle St	High	1
		Montclair Av	Myrtle St	Kingsway	High	1
		High Street Rd	Springvale Rd	Snedden Dv	High	1
		Springvale Rd	High St Rd	Kingsway	High	1
	Glen Waverley South Shops	Springvale Rd	Richard St	Waverley Rd	Medium	2
10	Kerrie Rd Shops	Kerrie Rd	High St Rd	ROW	Medium	2
11	Dominion Ave Shops	Waverley Rd	Dominion Ave	ROW	Medium	2
13	Stanley Avenue Shops	Stanley Avenue	Ian Gve	ROW	Medium	2
	Bellerive Ave Shops	Bellerive Ave	Stephensons Rd	ROW	Medium	2
14	Pinewood Shopping Centre	Centreway	Pinewood Dve	No 27 Centreway	Medium	1
		Centreway	No 47 Centreway	Blackburn Rd	Medium	1
		Blackburn Rd	No 425 Blackburn Rd	Centreway	Medium	1
15	Glenwood Ave Shops	Glenwood Ave	Waverley Rd	Juniper Ave	Medium	2
18	Hughesdale Shopping Centre (East side)	Poath Rd	Paget St	Arthur St	Medium	1
19	Warrigal Rd Shops	Warrigal Rd	North Rd	No 170	Medium	2
	<b>Oakleigh Shopping Centre</b>	Drummond St	Logie St	Atherton Rd	High	2
		Atherton Rd	Warrigal Rd	Drummond St	High	2
		Atherton Rd	Drummond St	Palmerston Grove	High	1
		Atherton Rd	Palmerston Gve	Clyde Street	High	2
		Hanover St	Atherton Rd	Burlington St	High	1
		Chester St	Jones St	Hanover St	High	1
Portman St	Jones St	Hanover St	High	1		

Map No.	Site Description	Street Name	From	To	Sensitivity	Surface Type
		Jones St	Atherton Rd	Chester St	High	2
		Station St	Atherton Rd	Portman St	High	2
		Eaton Mall	Full Length	Full Length	High	1
	Huntingdale Rd Shops	Huntingdale Rd	Croft St	North Rd	Medium	1
20	Huntingdale Rd Shops	Huntingdale Rd	Hargreaves St	North Rd	Medium	1
	East Oakleigh Shopping Centre (State Street)	Huntingdale Rd	No 184 Huntingdale Rd	Princes Hwy	Medium	2
	Berrima Street Shopping Centre	Berrima St	No 9 Berrima St	No 23 Berrima St	Medium	2
21	Shopping Centre	Princes Highway	Clayton Rd	Glenbrook Av	Medium	2
22	Westerfield Drive Shops	Westerfield Dv	Samada St	No 49 Westerfield Dv	Medium	2
23	Brandon Park Shopping Centre	Springvale Rd	Ferntree Gully Rd	Magid Av	Medium	2
		Ferntree Gully Rd	Springvale Rd	Brandon Park Dv	Medium	2
		Magid Av	Springvale Rd	Brandon Park Dv	Medium	2
		Brandon Park Dv	Springvale Rd	Magid Av	Medium	2
	Lum Road Shopping Centre	Lum Rd	No 200 Brandon Park Dv	No 212 Brandon Park Dv	Medium	2
	Shopping Centre	Clunies Ross Dv	No 39 Clunies Ross Dv	Monash Dv	Medium	2
26	<b>Clayton Shopping Centre</b>	Clayton Rd	Centre Rd	No 299 Clayton Rd	High	1
		Cooke St	Centre Rd	Dunstan St	High	2
		Dunstan St	Cooke St	Clayton Rd	High	2
		Carinish Rd	Madeleine Rd	Clayton Rd	High	2
27	<b>Clayton Shopping Centre</b>	Clayton Rd	Centre Rd	Carinish Rd	High	1
		Haughton Rd	Clayton Rd	Thomas St	High	2
		Carinish Rd	Clayton Rd	Mary St	High	2
	Shopping Centre	Centre Rd	No 1459 Centre Rd	No 1485 Centre Rd	Medium	2
	Shopping Centre	Clayton Rd	No 162 Clayton Rd	No 176 Clayton Rd	Medium	2
28	Gateway Shopping Centre	Springvale Rd	Princes Hwy	Wilma Av	Medium	1

<b>Map No.</b>	<b>Site Description</b>	<b>Street Name</b>	<b>From</b>	<b>To</b>	<b>Sensitivity</b>	<b>Surface Type</b>
29	Mackie Rd Shops	Mackie Rd	No 71 Mackie Rd	No 81 Mackie Rd	Medium	2
	Dunoon Crt Shops	Dunoon Crt	Full length	Full length	Medium	2
	Wanda St Shops	Wanda St	No 26 Wanda St	No 50 Wanda St	Medium	2
30	Shopping Centre	Hansworth St	No 114 Hansworth St	No 122 Hansworth St	Medium	2
	Waverley Gardens Shopping Centre	Police Rd	Hansworth St	Jacksons Rd	Medium	2
		Hansworth St (west side)	Police Rd	Opp Locarno Ct	Medium	2