Barcaldine Regional Council
71 Ash Street BARCALDINE QLD 4725

URBAN ROAD MAINTENACE LEVEL OF SERVICE MANUAL

Adopted by Council on
Reference No:.....

Contents

1 INTRODUCTION

This document defines the Barcaldine Regional Councils Maintenance Levels of Service for its Urban Roads. It is based upon the best practice methods iterated in the International Infrastructure Management Manual 2006.

Urban Road classification to a specific service hierarchy is based on the roads purpose, characteristics and utilisation. An explanation of the Service Level Hierarchy and Inspection Routines follows the definition of the Urban Roads Service Hierarchy, which forms the basis of the Barcaldine Regional Councils approach to providing appropriate maintenance regime for the Urba roads within the Councils communities.

1.1 Road Service Hierarchy

The Barcaldine Urban Road Hierarchy includes the following types of road:

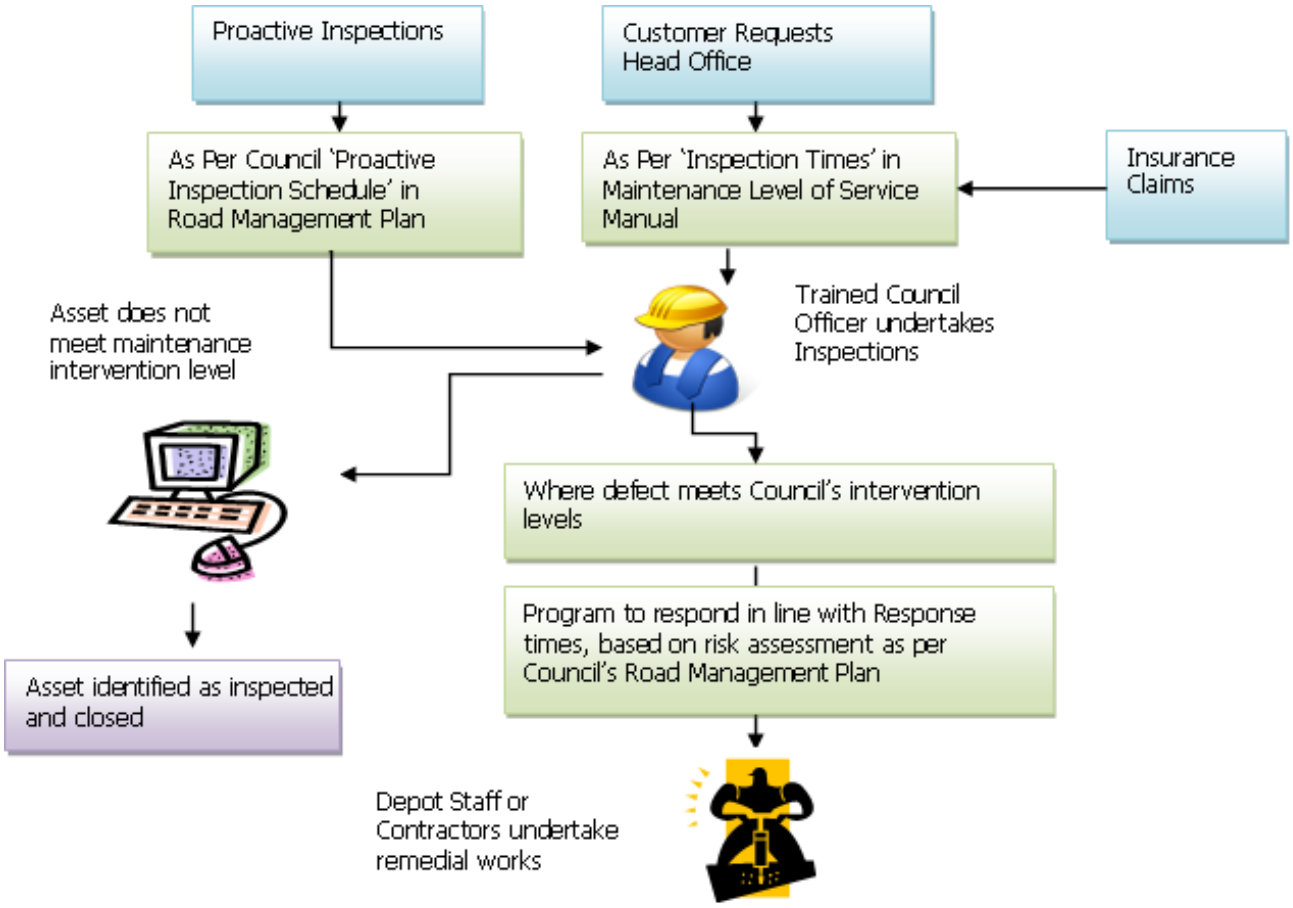
- Urban collectors;
- Urban feeders;
- Urban accesses;
- Industrial collectors;
- Industrial accesses; and
- Aircraft maneuvering areas (AMA)

These are defined in the table below:

Group	Class	Function Description	Local Terminology	Comment
Urban Arterial Roads	7A	Those roads whose main function is to perform as the principal arteries for through traffic and freight movements across urban areas, provide access to major freight terminals between important centres which have significant economic, social, tourism or recreation value	Urban Collector	Regional urban roads or major local government roads.
Urban Arterial Roads	7B	Those roads not being class 7A whose main function is to complete the major road network across the Urban area including commercial and industrial traffic. May form part of regularly spaced road network supplementary to the principal urban road network.	Urban Feeder	Local Government road links with urban areas. Conveys through traffic. Fully sealed.
Urban Arterial Roads	8	Those roads that are neither Class 7A or 7B whose main function serves the purpose of collecting and distributing traffic from local areas to the wider road network. Special provision for those historic roads within established townships. The engineering standard of which may be greater than that required to service the current traffic loads	Urban Access	These Local Government roads provide a link between residential access and a higher class of road within township areas. Formation width may be fully or partially sealed
Industrial Roads	9	Those roads within an industrial estate or area that connect to class 6,7 and 8 roads, often more than once, and whose main function is provide roads of a suitable width and construction standard to provide for heavy and articulated vehicles.	Industrial Collector	These roads should be through roads as often as possible or at least provide for an internal loop design.
Industrial Roads	10	Terminating roads within industrial estates or where regularly use by heavy or articulated vehicles is anticipated. For example – Truck parking bays on the outskirts of town or opposite and adjacent to fuel supply depots and truck stops.	Industrial Access	These roads are the lowest order Industrial road, most often Cul-De-Sac.
Aircraft manoeuvring Area (AMA)	11	Those sealed areas within the boundaries of airports, including runways, taxiways, aprons and access roads.	Runways & Taxiways	These are treated as roads that may be up to 30m wide.

2 ASSET INSPECTIONS

2.1 Inspection Processes



2.2 Urban Road Proactive Inspection Regime

It is not practical nor economically feasible to react to all matters with equal priority; therefore, proactive and remediation work responses and resolution times are derived using risk assessment of the roads within the Councils boundaries in terms of purpose, utilisation, likelihood & consequence of negative events.

The proactive urban road inspection regime is based on two (2) tiers of inspection, these being:

- Tier 1 – Combination of vehicle based inspections during dry / normal weather conditions, supplemented by specific rain event inspections and augmented by Customer Service Requests; and
- Tier 2 – Detailed inspections based on the findings from any of the Tier 1 inspection outcome.

Tier 1 Vehicle Based Inspection Frequency			
Hierarchy	0 Rain / Normal Cond.	11 – 50 mm Rain	>50 mm Rain
Urban and Industrial Collectors	1 Month	When Accessibly Safe	Priority when Accessibly Safe
Urban Feeder	3 Months	Priority when Accessibly Safe	Priority when Accessibly Safe
Urban and industrial Accesses	3 Months	Priority when Accessibly Safe	Priority when Accessibly Safe
Aircraft Manoeuvring Area	6 Months	When Accessibly Safe	When Accessibly Safe

Vehicle based inspections involve driving the road and looking for signs of condition failure in the surface and of the road, along the shoulders of the road (including the kerb & Channel), the entrance to and exit from properties, drainage structures and any other visible deformities within the road pavement as defined in the Road Condition Assessment Manual.

Rain event or Customer Service Request initiated inspections automatically replace the need to undertake the normal dry weather vehicle based inspection.

Routine daily inspections by the airport reporting officers **do not** constitute a Tier 1 inspection.

Annual technical inspection carried out by a CASA registered person is considered a Tier 1 inspection in respect to certified airports.

Tier 1 inspections will be supplemented with Tier 2 spot checks as determined by the Engineering Department and staff availability.

Adverse findings from proactive inspections are to be remediated in accordance with the levels of service defined below.

2.3 Reactive Road Work

The remainder of this manual focuses on Council's response to unscheduled work.

2.1.1 Priority Response Times

PRIORITY SCORE	CONSEQUENTIAL IMPACT
1	**Extreme** impact on community mobility and safety, financial loss through decreased commercial activity and possibility of further damage to the asset
2	**High** impact on community mobility and safety, financial loss through decreased commercial activity and possibility of further damage to the asset
3	**Medium** impact on community mobility and safety, financial loss through decreased commercial activity and possibility of further damage to the asset
4	**Low** impact on community mobility and safety, little or no financial loss through decreased commercial activity.

3 SEALED ROADS

3.1 Potholes

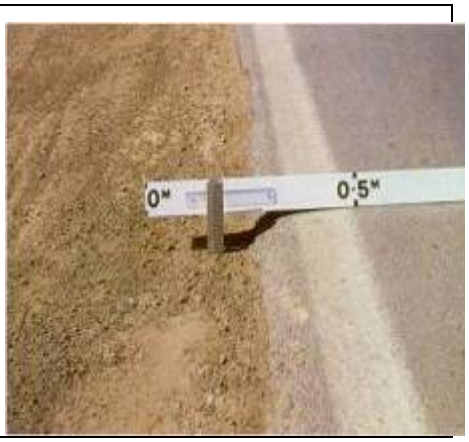
Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Surface patching of potholes in travel way using bituminous material to restore the riding surface to a smooth condition	Pothole Depth > 50mm in depth and/or diameter > 300mm	Collectors	1 day	1 Month	3 Month	6 Month	90%
		Feeders	1 day	1 Month	3 Month	6 Month	90%
		Accesses	1 week	1 Month	3 Month	6 Month	80%
		AMA's	4 hours	1 Week	1 Month	2 Month	100%

3.2 Pavement Failures



Description of Work Activity	Intervention Level	Remedial Response Time (Months)					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
The treatment of small isolated failed pavement areas by replacement with new approved material or by improvement of existing material.	>1m^2 within a road segment area or	Collectors	1 day	1 Month	3 Month	6 Month	90%
		Feeders	1 day	1 Month	3 Month	6 Month	90%
		Accesses	1 week	1 Month	3 Month	6 Month	80%
		AMA's	4 hours	1 Week	1 Month	2 Month	100%

3.3 Edge Breaks & Edge Drop



Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Repair broken edges of seal, to line and level, to maintain correct overall sealed width.	Likely to impede safe access to the shoulder. Loss of pavement width.	Collectors	1 day	1 Month	3 Month	6 Month	90%
		Feeders	1 Week	1 Month	3 Month	6 Month	90%
		Accesses	2 Week	1 Month	3 Month	6 Month	80%
		AMA's	2 Week	1 Month	3 Month	6 Month	100%

3.4 Shoulder Drop Off (combine above)

Description of Work Activity	Intervention Level	Remedial Response Time						
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Priority 4 Score	Performance Indicator Targets
Reinstate shoulder to return the shape to design criteria	50 mm over 50 metres continuous	Collectors	1 Week	1 Month	1 Month	2 Month	3 Month	90%
		Feeders	2 Week	1 Month	1 Month	2 Month	3 Month	90%
		Accesses	2 Weeks	1 Month	2 Month	3 Month	4 Month	80%
		AMA's	2 weeks	1 Month	2 Month	3 Month	4 Month	100%

3.5 Shape loss (Pavement)

Description of Work Activity	Intervention Level	Remedial Response Time						
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Priority 4 Score	Performance Indicator Targets
Reinstate road to return the shape to design criteria	50 mm over 50 metres continuous	Collectors	1 Week	1 Month	1 Month	2 Month	3 Month	90%
		Feeders	2 Week	1 Month	1 Month	2 Month	3 Month	90%
		Accesses	2 Weeks	1 Month	2 Month	3 Month	4 Month	80%
		AMA's	1 weeks	1 Month	1 Month	2 Month	3 Month	100%

3.6 High Grass

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Control grass to service levels	400mm, or 300mm during declared fire period (Sealed roads) Grass cutting to maintain sight distance according to traffic type (unsealed roads)	Collectors	1 Week	2 Month	4 Month	6 Month	90%
		Feeders	1 week	2 Month	4 Month	6 Month	90%
		Accesses	2 weeks	2 Month	4 Month	6 Month	80%
		AMA's	1 weeks	1 Month	2 Month	3 Month	100%

4 UNSEALED ROADS

4.1 Unsealed Road Grading

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Grading of unsealed roads to return the pavement shape to the standards set out it in grading work practice.	Access Road <70% of Average Speed. AMA Visible unevenness	Collectors	N/A	N/A	N/A	N/A	N/A
		Feeders	N/A	N/A	N/A	N/A	N/A
		Accesses	2 weeks	1 Month	4 Month	6 Month	90%
		AMA's	1 Week	1 Month	2 Month	3 Month	100%

4.2 Unsealed Road Potholing

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Pothole patching in road surface using crushed rock or other appropriate material to restore the riding surface to an acceptable ride condition.	<80% of Average speed AMA Visible unevenness	Collectors	N/A	N/A	N/A	N/A	N/A
		Feeders	N/A	N/A	N/A	N/A	N/A
		Accesses	2 Weeks	1 Month	3 Month	6 Month	90%
		AMA's	2 Weeks	1 Month	3 Month	6 Month	90%

4.3 Unsealed Road Sheeting



Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Resheeting of unsealed roads with FCR, or other appropriate materials.	Exposed sub-grade or excessive loose material that is likely to cause a loss of adhesion to the surface - <80% of average speed. AMA Visible assessment.	Collectors	N/A	N/A	N/A	N/A	N/A
		Feeders	N/A	N/A	N/A	N/A	N/A
		Accesses	2 Weeks	1 Month	Offset to next FY Budget	When funds are available	90%
		AMA's	2 Weeks	1 Month	Offset to next FY Budget	When funds are available	90%

5 ROAD ANCILLARY

5.1 Off Road Drains

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Cleaning, re-grading and minor reshaping of surface drains to maintain adequate drainage. Includes table drains, verge drains, storm water drains and out-fall drains.	Minimal Ponding in drains, Free flowing, no obvious pavement failure due to excess moisture, invert of drain min 300mm below crown or 100mm for AMAs	Collectors	1 week	2 Month	4 Month	6 Month	90%
		Feeders	1 week	2 Month	4 Month	6 Month	90%
		Accesses	2 weeks	2 Month	4 Month	6 Month	90%
		AMA's	2 weeks	2 Month	4 Month	6 Month	90%

5.2 Culverts / Drains

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Cleaning, re-grading or replacing the drainage structure and / or headwall.	Ponding in Inlet and / or outlet structure >50mm displacement in centre of drain by more than 30% of cross sectional area	Collectors	2 Weeks	1 Month	Offset to next FY Budget	When funds are available	90%
		Feeders	2 Weeks	1 Month	Offset to next FY Budget	When funds are available	80%
		Accesses	2 Weeks	2 Month	Offset to next FY Budget	When funds are available	70%
		AMA's	2 Weeks	1 Month	Offset to next FY Budget	When funds are available	90%

5.3 Regularltory Signs Maintenance

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Repair or replace damaged Regulatory or Parking sign.	Illegible or misaligned or damaged. Lost / broken runway markers	Collectors	1 week	1 Month	N/A	N/A	90%
		Feeders	1 week	2 Month	N/A	N/A	80%
		Accesses	1 week	3 month	N/A	N/A	80%
		AMA's	1 week	1 month	N/A	N/A	100%

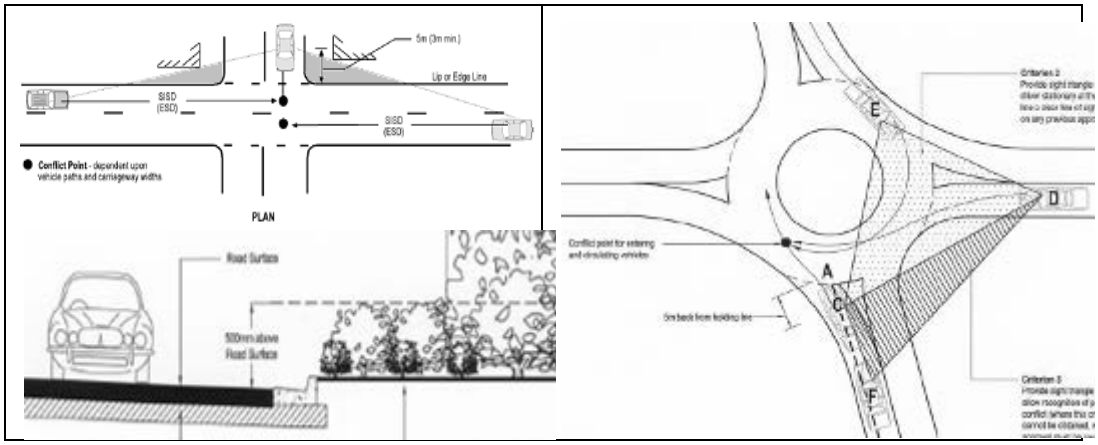
5.4 Associated On-Road Road Structure (Grids, etc.)

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspec & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Remedial works to return Road, and grid, culvert or bridge to an appropriate standard	Deformed sections, of road resulting from structural damage to grids, culverts and bridges, including entries and exits from the assets	Collectors	1 day	14 Days	1 Month	As Applicable	90%
		Feeders	1 day	14 Days	2 Month	As Applicable	90%
		Accesses	1 day	1 Month	3 Month	As Applicable	80%
		AMA's	N/A	N/A	N/A	N/A	N/A

5.5 Associated Off-Road Road Structure (Barriers, Fences, Information Signs, etc)

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Remedial works to return guard rail (including pedestrian fencing & bridge rails) back to original condition.	Deformed sections, loose fittings, misaligned/damaged posts, damaged end units, overgrown with vegetation, defective delineation.	Collectors	1 day	1 Month	6 Month	9 Month	90%
		Feeders	1 day	1 Month	6 Month	9 Month	80%
		Accesses	2 days	3 Month	6 Month	9 Month	70%
		AMA's	1 day	3 Month	6 Month	9 Month	100%

5.6 Roadside Vegetation



Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Refer to Explanatory Notes in Council's Road Management Plan.	Objective of vegetation control is to ensure a clear path for commercial traffic utilising the road pavement. To minimise site distance problems around corners and obstruction of signs.	Collectors	1 week	1 Month	6 Month	9 Month	90%
		Feeders	1 week	1 Month	6 Month	9 Month	90%
		Accesses	1 week	1 Month	6 Month	9 Month	90%
		AMA's	1 week	1 Month	6 Month	9 Month	80%

Note:With regards to Certified and Registered airports, annual inspections are undertaken to determine whether any vegetation has encroached into the Obstical Limitation Surface.

5.7 Debris / Animals

Description of Work Activity	Intervention Level	Remedial Response Time					
		Hierarchy	T2 Inspect & Make Safe	Priority 1 Score	Priority 2 Score	Priority 3 Score	Performance Indicator Targets
Refer to Explanatory Notes in Council's Road Management Plan.	When debris or animals observed.	Collectors	6 Hours	1 Day	7 Days	N/A	70%
		Feeders	6 Hours	1 Day	7 Days	N/A	70%
		Accesses	6 Hours	1 Day	7 Days	N/A	70%
		AMA's	1 Hour	1 Hour	N/A	N/A	100%

A Priority 1 Score is for a Horse, Cow Tree or anything else of similar or larger size on the road.

A Priority 2 Score is for a Kangaroo and other equivalent animal on the road.

APPENDIX A

URBAN ROAD CLASSES

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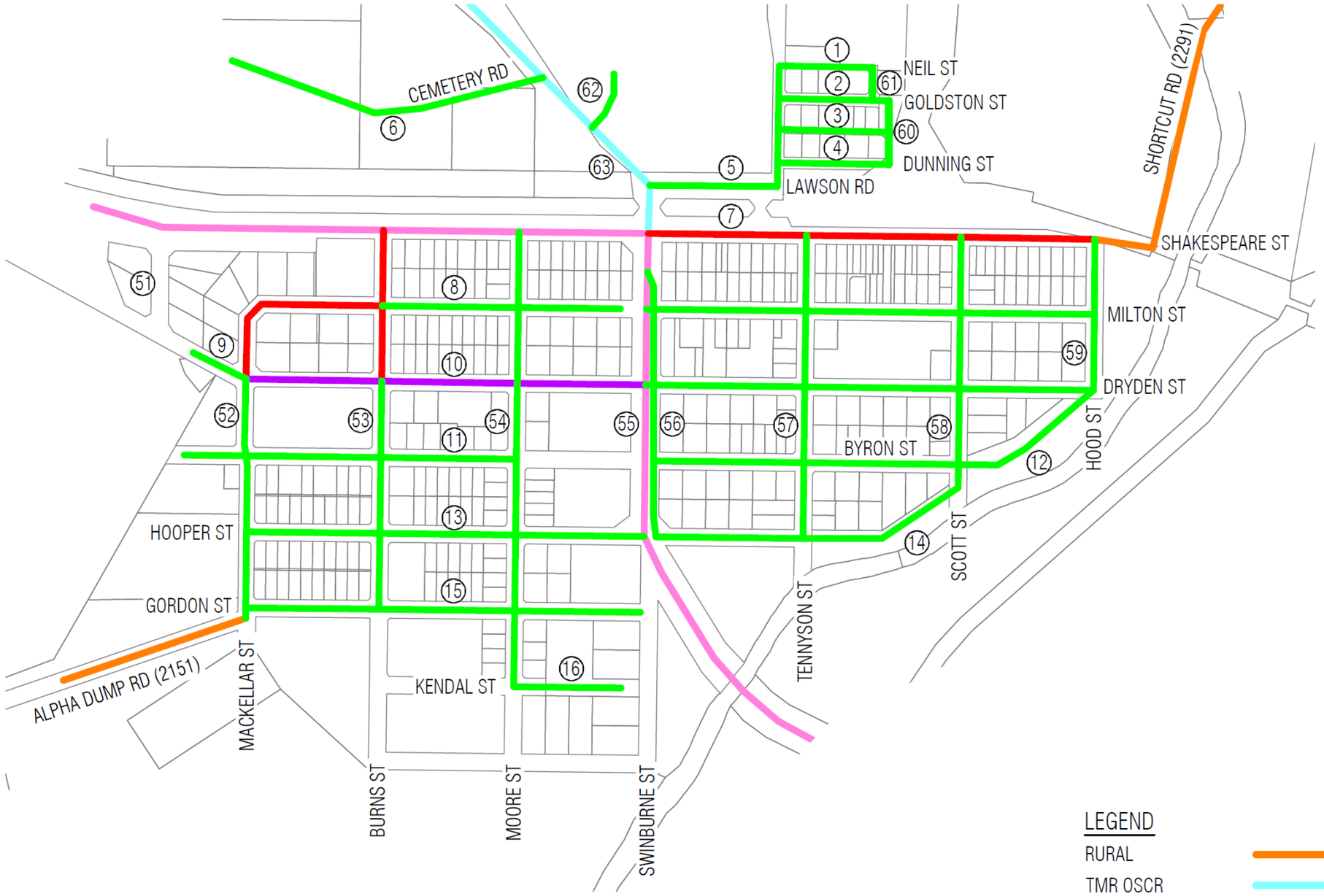
GBA



TOWN OF ALPHA

PREFIX: 91

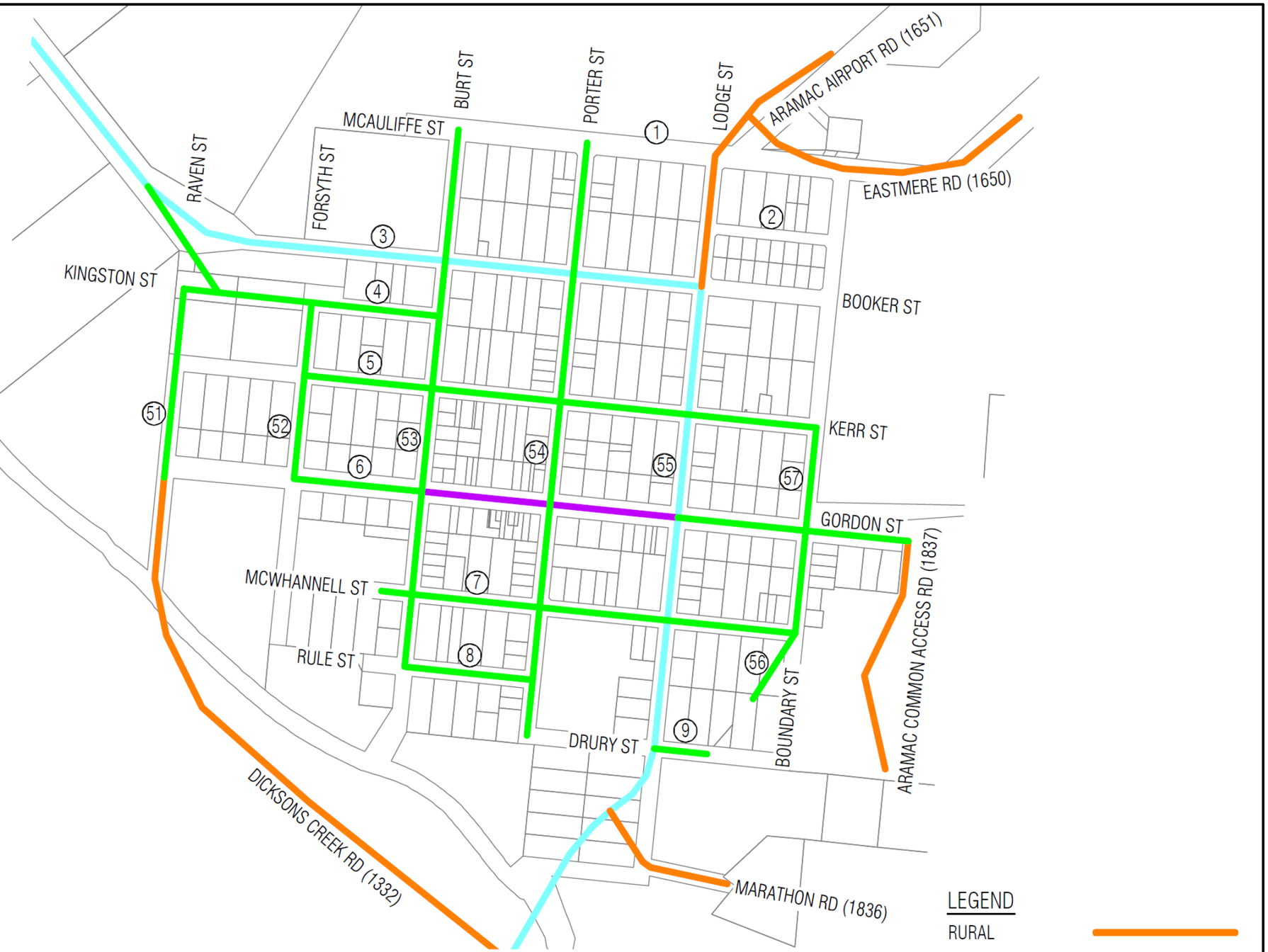
SCALE: 1:10000

LEGEND

- RURAL
- TMR OSCR
- TMR STATE HIGHWAY
- INDUSTRIAL FEEDER
- URBAN FEEDER
- URBAN ACCESS

GBA: 2013-013-05

GBA



TOWN OF ARAMAC

PREFIX: 92

SCALE 1:10000

LEGEND

- RURAL
- TMR OSCR
- URBAN FEEDER
- URBAN COLLECTOR
- URBAN ACCESS

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GBA: 2013-013-02

GBA

BRAISIDE RD (1892)
HAWTHORN RD
WHITEWOOD DR
REDWOOD DR (1891)
CHESTNUT ST
MYRTLE ST
BIRCH ST
BRIGALOW ST
WATTLE ST
PINE RD
PLANE ST
CYPRESS ST
POPLAR ST
BANKSIA ST
OAK ST
WILGA ST
ASH ST
ELM ST
YEW ST
FIR ST
GIDYEA ST
ACACIA ST
BOREE ST
BAUHINIA ST
FIG LN
GREVILLEA LN
GUM ST
CEDAR ST
PLUMB RD
LANCEWOOD DR (1991)
LEOPARDWOOD RD
BOTTLEBRUSH AVE
JACARANDA RD
BEEFWOOD RD
MIMOSA RD
YARRAN RD
CORKWOOD RD
COOLIBAH ST
BOX ST
WILLOW ST
BEECH ST
MAPLE ST
PINE ST
GARDENIA ST
MYALL ST
IRONWOOD DR (1519)
PELTOPHORUM DR
NEEDLEWOOD RD
IRONWOOD DR
MALLEE RD
MULGA RD
MELALEUCA RD
POINCIANA ST

TOWN OF BARCALDINE

PREFIX: 93

SCALE: 1:12500

LEGEND

- RURAL
- TMR OSCR
- TMR STATE HIGHWAY
- TMR NATIONAL HIGHWAY
- INDUSTRIAL FEEDER
- URBAN FEEDER
- URBAN ACCESS

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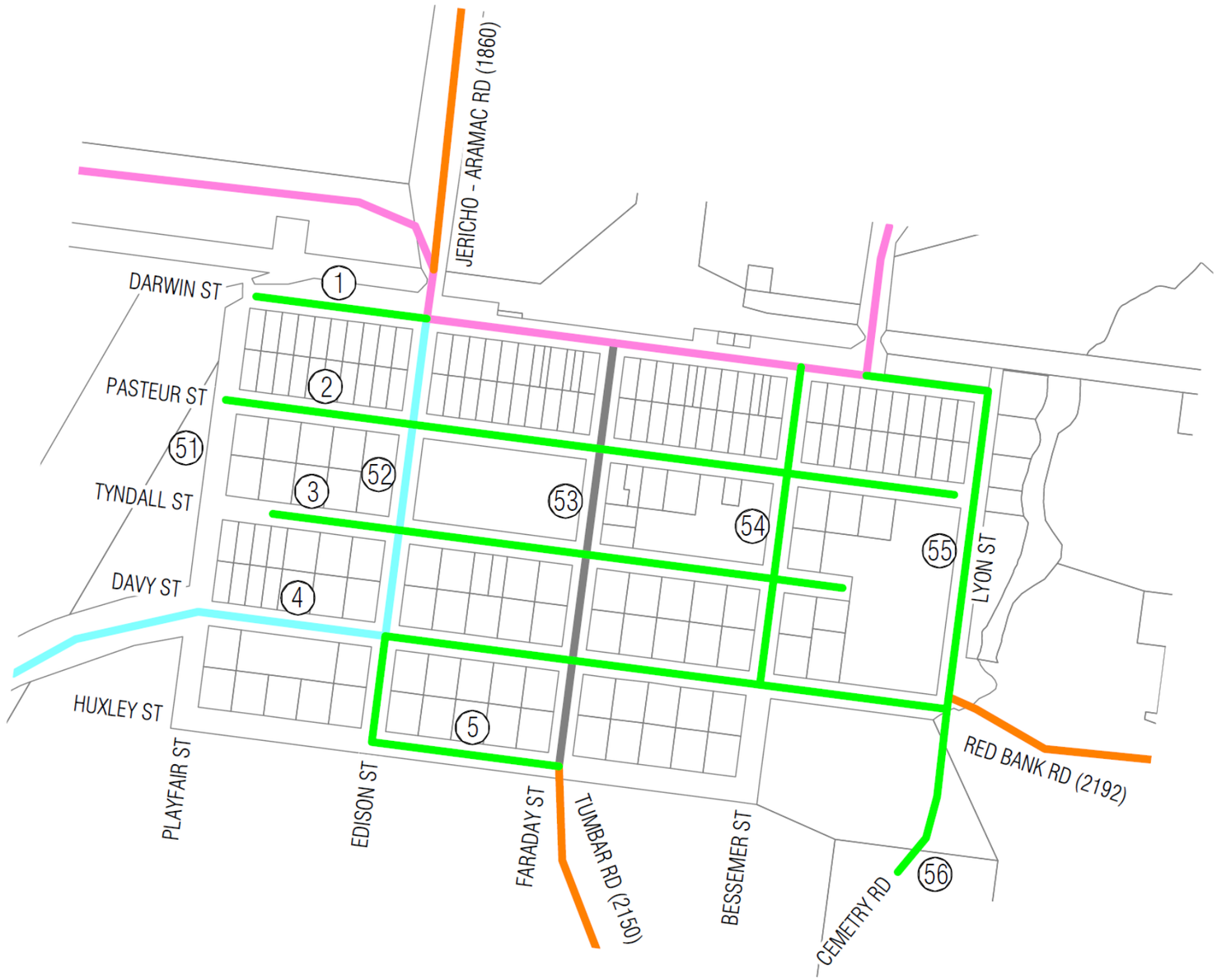
GBA: 2013-013-03

GBA



TOWN OF JERICHO

PREFIX: 94

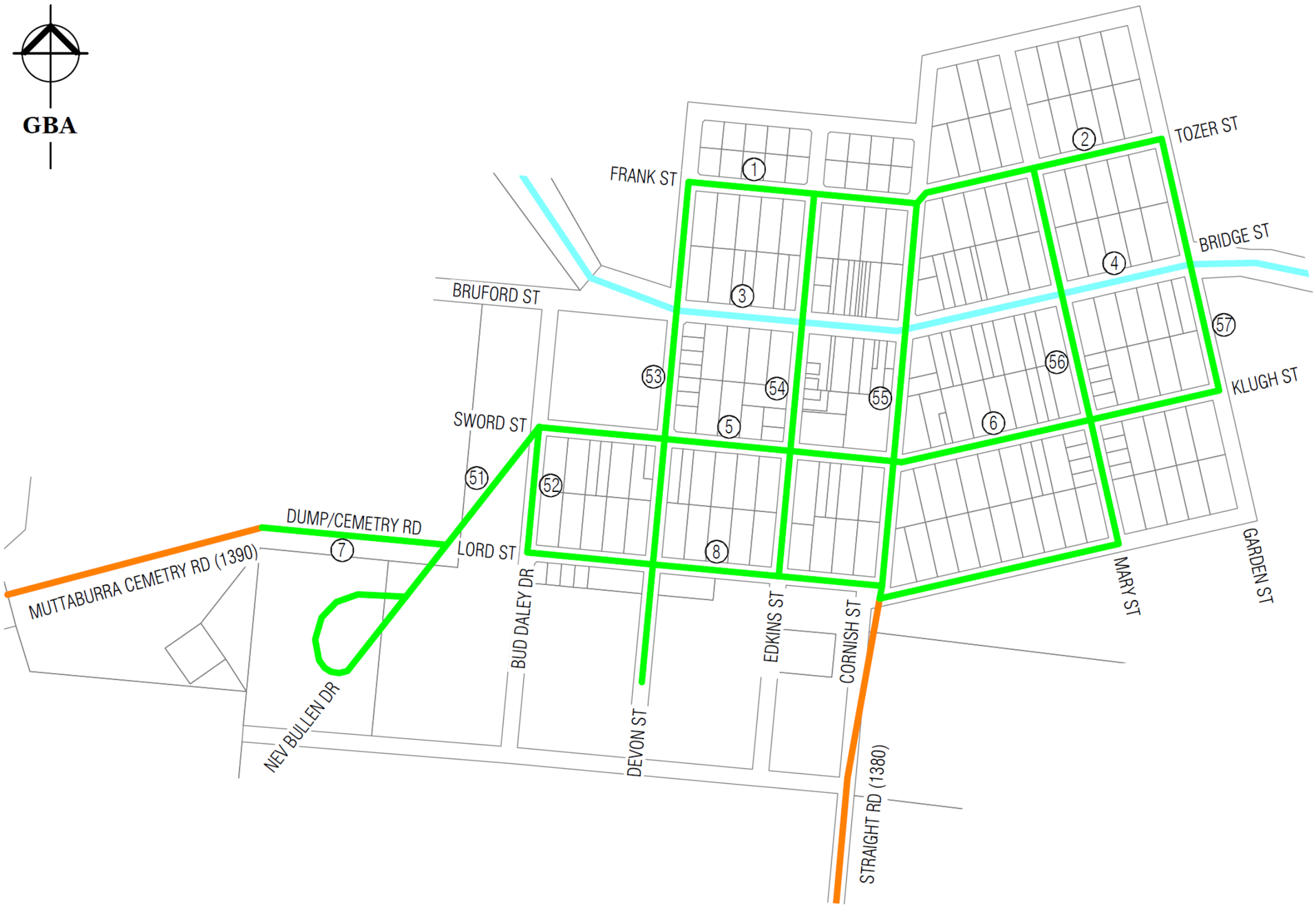
SCALE: 1:8000

LEGEND

- RURAL
- TMR OSCR
- TMR STATE HIGHWAY
- URBAN COLLECTOR
- URBAN ACCESS

GBA: 2013-013-04

GBA



TOWN OF MUTTABURRA

PREFIX: 95

SCALE: 1:10000

LEGEND

- RURAL
- TMR OSCR
- URBAN ACCESS

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