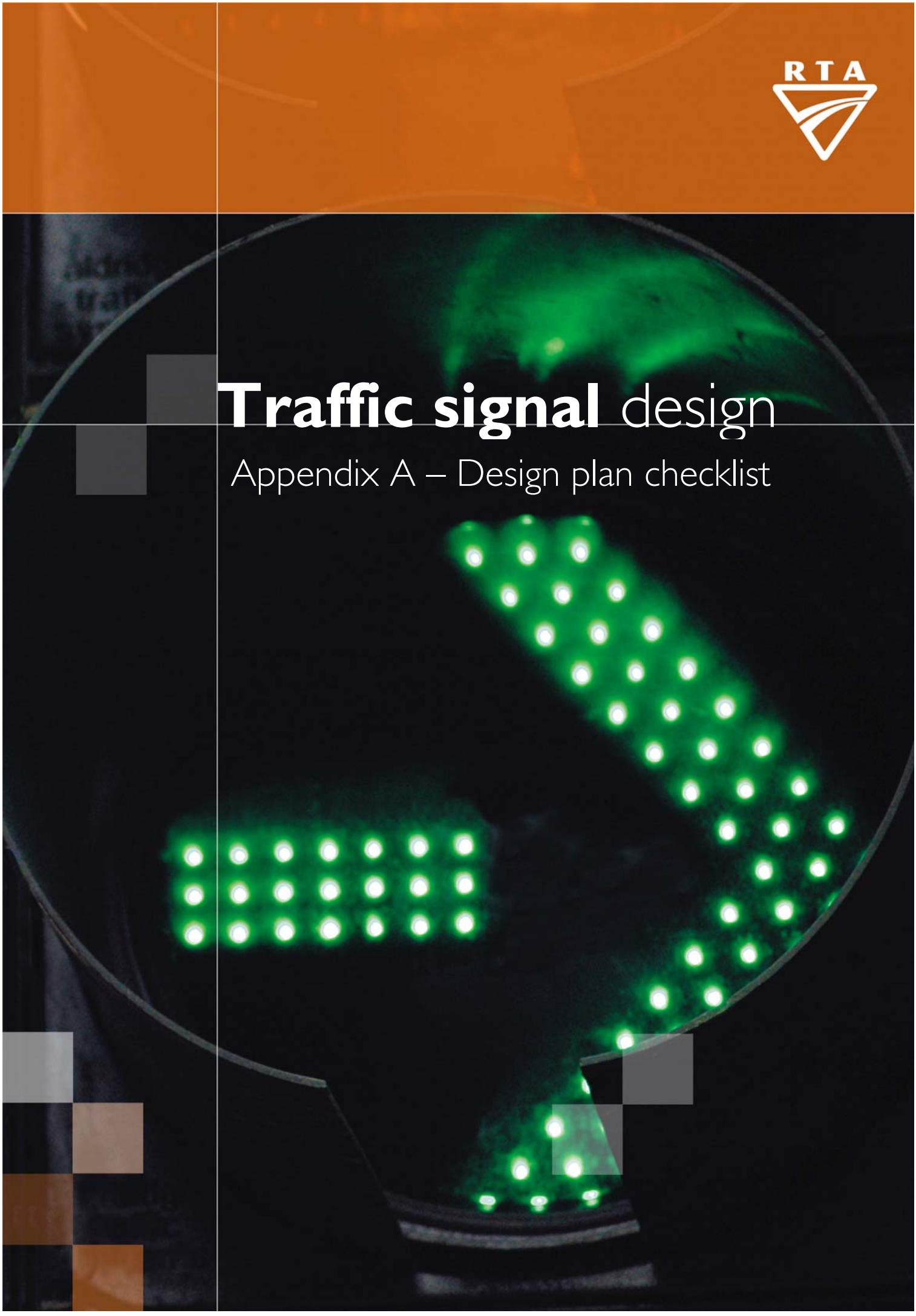

Traffic signal design

Appendix A – Design plan checklist

The traffic signal design guidelines have been developed to assist in designing traffic control signals.

The guidelines are to comprise 16 sections and 5 appendices. These are initially being released individually and in no specific order. The sections which are to be released are as follows:

Part	Title
Section 1	Investigation
Section 2	Warrants
Section 3	Design Process
Section 4	Plan Requirements
Section 5	Geometry
Section 6	Pavement Marking
Section 7	Phasing and Signal Group Display Sequence
Section 8	Lanterns
Section 9	Posts
Section 10	Signs
Section 11	Detectors
Section 12	Controller
Section 13	Provision for Future Facilities
Section 14	Signalised Mid-block Marked Footcrossings
Section 15	Special Situations
Section 16	References
Appendix A	Design Plan Checklist
Appendix B	Traffic Signal Symbols
Appendix C	Location and Function of Lanterns
Appendix D	Location and Dimensions of Components
Appendix E	Left Turn on Red
Appendix F	Level Crossing Interface – Concept of Operations
Appendix G	Level Crossing Interface – Traffic Signal Design Guidance

To determine which sections are currently available go to:

www.rta.nsw.gov.au/doingbusinesswithus/downloads/technicalmanuals/trafficsignaldesign_dl1.html

The information contained in the various parts is intended to be used as a guide to good practice. Discretion and judgement should be exercised in the light of the many factors that may influence the design of traffic signals at any particular site. The guidelines make reference, where relevant, to current Australian Standards and are intended to supplement and otherwise assist in their interpretation and application.

Traffic Signal Design

APPENDIX A

DESIGN PLAN CHECKLIST

Special Note:

As of 17 January 2011, the RTA is adopting the Austroads Guides (Guide to Traffic Management) and Australian Standards (AS 1742, 1743 & 2890) as its primary technical references.

An RTA Supplement has been developed for each Part of the Guide to Traffic Management and relevant Australian Standard. The Supplements document any **mandatory** RTA practice and any complementary guidelines which need to be considered.

The RTA Supplements **must** be referred to prior to using any reference material.

This RTA document is a complementary guideline. Therefore if any conflict arises, the RTA Supplements, the Austroads Guides and the Australian Standards are to prevail.

The RTA Supplements are located on the RTA website at www.rta.nsw.gov.au

Roads and Traffic Authority
www.rta.nsw.gov.au

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APPROVED BY:

SIGNED	**SIGNED**
Craig Moran A/General Manager Traffic Management	Steve Levett A/General Manager Safer Roads

AUTHORISED FOR USE BY:

SIGNED

Michael Bushby
Director
Network Management

For policy and technical enquiries regarding these guidelines please contact:

Traffic Management Branch
Email: technical_directions_publication@rta.nsw.gov.au

To access electronic copies of these and other guidelines go to:

www.rta.nsw.gov.au/doingbusinesswithus/downloads/technicalmanuals/technicalmanuals_dl1.html

For the latest amendments (if any) to these guidelines go to:

www.rta.nsw.gov.au/doingbusinesswithus/downloads/technicalmanuals/trafficsignaldesign_dl1.html

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Contents

Amendment record

Please note that the following updates have been made to this document.

Amendment No	Page	Description	Issued	Approved By

DESIGN PLAN CHECKLIST

Evaluation
- ☐ Warrants
- ☐ Flows
- ☐ Delays
- ☐ Queue lengths
- ☐ Accidents
- ☐ Pedestrians
- ☐ Future development
- ☐ Political
- ☐ Alternatives (roundabout, signs, channelisation)

Phasing
- ☐ Recent traffic count
- ☐ Accident correction
- ☐ Pedestrian needs
- ☐ Conflicts
- ☐ Left turn on red
- ☐ Future implications (other sites)
- ☐ Suits controller
- ☐ Bus needs
- ☐ Bicycle needs

Turn bans
- ☐ Alternative routes
- ☐ Effect on other locations
- ☐ Bus route
- ☐ Effect on other users (pedestrians/bicycles)

Simulation
- ☐ Phase/cycle times
- ☐ Delays
- ☐ Queue lengths
- ☐ Blockages
- ☐ Capacity

Title block
- ☐ Registration No.
- ☐ Sheet No.
- ☐ Issue No.
- ☐ Superseded plan or sheet No.
- ☐ Amendment details (for job instruction)
- ☐ File No.
- ☐ LGA, Shire, municipality or city
- ☐ Main Road No. and street names
- ☐ Suburb
- ☐ Region or Division
- ☐ UBD reference
- ☐ Reference plans

Job Instruction details
- ☐ Issue No.
- ☐ Job Instruction No.
- ☐ Amendment details
- ☐ Date
- ☐ Initials

Base plan
- ☐ Kerb lines and/or edge of pavement
- ☐ Gutter crossings
- ☐ Stormwater grates and inlets
- ☐ Property boundaries, fences
- ☐ Footpaths
- ☐ Poles, pillars, pits, public utilities
- ☐ Bus stops, shelters, seats, telephone booths, gardens, garbage bins
- ☐ Awnings
- ☐ Overhead wires
- ☐ Tree trunks and spread of foliage
- ☐ North point
- ☐ Main Road Nos. and street names
- ☐ Approach grades
- ☐ "To" and "From"
- ☐ Date in Service
- ☐ Compare road construction plan
- ☐ Compare old traffic signal plan
- ☐ Transparency for cable installation and duct plan

Locality sketch
- ☐ Orientation
- ☐ North point
- ☐ Other sites
- ☐ ISG coordinates

Movement diagrams
- ☐ Movements
- ☐ Approach numbers
- ☐ Phase labels
- ☐ Future phasing
- ☐ Normal and alternative sequence

Medians
- ☐ Alignment
- ☐ Length
- ☐ Width at post
- ☐ Nose radius
- ☐ Widths for pedestrian/bicycle movements
- ☐ Width for pedestrian/bicycle storage
- ☐ Minimum length of nose

- ☐ Turning paths (clearance width for opposed turns)
- ☐ Setting out dimensions

Islands

- ☐ Turning paths
- ☐ Offsets
- ☐ Clearance for posts
- ☐ Pedestrian/bicycle storage and passage
- ☐ Barrier kerb (type 6 post or mast arm)
- ☐ Setting out dimensions

Marked foot crossings

- ☐ Warrants (flows, schools, shops)
- ☐ Clearance from vehicular conflict
- ☐ Width (flows, platoons)
- ☐ Length (two-stage - corner island or mid-block staggered)
- ☐ Angle
- ☐ Pedestrian crossings (zebra)
- ☐ Setting out dimensions

Stop lines

- ☐ Distance apart (clearance times)
- ☐ Clearance from marked foot crossing
- ☐ Clearance from vehicular conflict
- ☐ Distance to starter lantern
- ☐ Angle
- ☐ Setting out dimensions
- ☐ Bicycle storage area

Pavement marking

- ☐ Lane lines (approach, departure, width, length)
- ☐ Barrier lines
- ☐ Continuity lines
- ☐ Edge lines
- ☐ Turn lines
- ☐ Painted islands and medians
- ☐ Chevrons
- ☐ Arrows
- ☐ Bicycle pavement markings

Lanterns

- ☐ Number per approach
- ☐ Obstructions (trees, poles)
- ☐ Sight distance (curve, crest)
- ☐ Size
- ☐ Phase label or signal group number
- ☐ Identification of signal groups for lamp monitoring
- ☐ Visors (type, length, cut-off angle, trains)
- ☐ Louvres (horizontal or vertical)
- ☐ Special mounting height
- ☐ Special mounting straps or brackets
- ☐ Pedestrian lanterns
- ☐ Bus lanterns
- ☐ Bicycle lanterns
- ☐ Tram lanterns
- ☐ Special signal group display sequence table or signal group/phase chart or sequence table

Posts

- ☐ Position (stop line, marked foot crossing, clearance from kerb)
- ☐ Height (awning, overhead wires)
- ☐ Numbering
- ☐ Type (need for mast arm or type 6)
- ☐ Special footing
- ☐ Post chart (reconstruction)
- ☐ Concurrence for joint use of poles
- ☐ Setting out dimensions

Signs

- ☐ No right turn
- ☐ No left turn
- ☐ No U-Turn
- ☐ No entry
- ☐ One-way streets
- ☐ Left turn on red
- ☐ Turn left at any time with care
- ☐ Give way to pedestrians
- ☐ Turn bans
- ☐ Special stop signs
- ☐ Stop here on red signal
- ☐ Scramble crossing
- ☐ Signs on type 6 posts and mast arms

Vehicle detectors

- ☐ Type (stop line, queue, advance, violation, special counting, microwave)
- ☐ Phase label
- ☐ Lane label
- ☐ Numbering
- ☐ Orientation
- ☐ Width
- ☐ Distance from stop line
- ☐ Detector Specification Schedule
- ☐ Logic special notes

Pedestrian push-button detectors

- ☐ Orientation
- ☐ Audio-tactile (one per post)
- ☐ Phase label
- ☐ Numbering

Controller

- ☐ Supply
- ☐ Type (ground-mounted or post-mounted)
- ☐ View of approaches
- ☐ Access for maintenance
- ☐ Safe from accidents
- ☐ Noise (residential)
- ☐ Above flood level
- ☐ Telecom access for SCATS
- ☐ Clear of future roadworks
- ☐ Clear of high voltage earthed situations
- ☐ Not obstructing road reserve

Special facilities

- ☐ Emergency service (fire/ambulance) facilities
- ☐ Railway level crossing
- ☐ Bicycles/cycleways
- ☐ Buses
- ☐ Transitways
- ☐ Trams

Notes

- ☐ Reference to road construction plans
- ☐ Reference to other sheets
- ☐ Adjustment to kerbs, medians, islands
- ☐ Pavement improvement or resheeting
- ☐ Construction of kerb ramps
- ☐ Special post details
- ☐ Special lantern details
- ☐ Asterisk for lamp monitoring
- ☐ Location of audio-tactile push buttons
- ☐ Location of special stop signs
- ☐ Coordination details
- ☐ Arterial
- ☐ Provision for future facilities

For further enquiries
www.rta.nsw.gov.au
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