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Context

## Purpose of this Document

This Concept of Operations includes the approach, strategy and design of the business functions to be performed for intelligent traffic management at. The intelligent traffic management business function involves a combination of the following – all of which are covered in this document:

1. **Operational Objectives** – outlines the objective of performing traffic management on the road network. These objectives also define reasonable limits of traffic management capability, given the congestion, security and safety risks incumbent on a road network.
2. **Context and Constraints** – Types of roads, types of situations and types of signs.
3. **Traffic Management Techniques** – there are a number of industry standard techniques for performing traffic management. This document outlines which are relevant to this business.
4. **Control Philosophy** – How the function of traffic management is to be organised and controlled within the business.
5. **Key Systems** – Systems that the end users are aware of and use to perform the traffic management function in the business.
6. **End Users** – People who are performing the traffic management function in the business. This entire document is written from the perspective of the end user. Any technical details not relevant to the end user will be found in the relevant Functional Performance Specification (E)

## Scope of Operations

In term of statutory obligations, intelligent traffic management as defined by this document covers responding to the situation on the roadway. In order to respond to situations, operators must understand the situation. This concept of operations excludes understanding the situation on the roadway – which is the focus of other concepts of operations.

Figure 1 – Scope of this Concept of Operations in terms of Operational Obligations

In terms of signage, intelligent traffic management as defined by this document covers the operation of all electronic road signage. It excludes sign design, placement and maintenance. It also excludes all considerations for static signage.

In terms of the other ITS subsystems, intelligent traffic management covers all subsystems that communicate with drivers – but only to the extent that an integrated traffic response is required. This includes the operation of tunnel emergency response systems, radio rebroadcast and PA systems for the purposes of traffic management and incident response only. For example, it excludes operational concepts for air monitoring and pollution control in the ventilation system, but includes the need for operators to conduct such functions as part of a traffic plan.

Figure 2 – Scope of this Concept of Operations in terms of Signage Management

Figure 3 – Scope of this Concept of Operations in terms of All Subsystems

## Compliance Framework

Figure 4- Compliance Overview

There are a number of regulations, standards and commercial obligations that form the foundation for this concept of operations. Not all applicable references are included, but the following are particularly relevant to the traffic management function design presented in this document:

1. **Legislation** – Various national and state legislation acts apply to operators and users of roadways. For example, drivers are legal obligated to follow the direction of speeds signs.
2. **Commercial Obligations** – These typically include operational deeds and documents such as Project Scope & Technical Requirements – outlines road configuration, service levels including response to incidents, response to requests from law enforcements, specific requirements for traffic management and instructions on working with emergency services.
3. **Technical Authorities and Documents** – All road authorities in Australia refer to the AustRoads Guide to Traffic Management which in turn refers to Australian Standard AS1742. For example, the CityLink PST&R Part K section [2.1] refers to the VicRoads Technical Standards, which refers to Aust Roads Guide to Traffic Management.Each road authority publishes a supplements to this guide who describes local variances and waivers.

The compliance obligation for each respective asset is summarised *Appendix A – Compliance Hierarchy* and *Appendix B – Operating Objective* Variances.

# Traffic Management Mission and Operational Objectives

## Primary Operational Mission

In order to achieve traffic management operational objectives, traffic operators perform the following tasks everyday:

1. **Implement Traffic Plans** – implementing appropriate traffic management plans in responses to roadway situations – congestion, incidents, weather conditions, motorist behaviour. Traffic management plans involve settings for roadside electronic signs that govern:
   1. Speed – the maximum speed vehicles are legally obligated to travel on the roadway
   2. Lane availability – the lane in which vehicles are permitted to travel
   3. Messaging – warning messages for drivers
   4. Access – controlling access to the roadway using barriers and ramp
   5. Tunnel environment – traffic plans responding to tunnel situations often include control of ventilation, fire protection, lighting and evacuation passages.
2. **Attend Incidents** – manage the dispatch and control of situation response vehicles, emergency services and any other authorities attending situations on the roadway. Under contracts with state authorities, are required to attend incidents within clearly specified time frames. So this actively has a directly correlating operating objective.
3. **Governance of Operator Actions** – the operator’s response to road situation is often the subject of review – whether it is by a coroner investigating an accident or a process improvement team seeking to improve operations. Policies, procedures and Australian standards all govern operator actions. In terms of this concept of operations, this means all operators’ actions are formerly recorded in a traffic management and incident log.

Beyond this scope of operations, operators need to understand the situation roadway in order to conduct traffic management. The mission of monitoring and detecting the roadway is covered by other concepts of operations.