

Schedule 12: Service Requirements

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Part 1 – General provisions

1. Interpretation

1.1 General

- (a) The Contractor must:
 - (i) comply with all Service Requirements set out in Parts 2 (Proactive Management) to 4 (Maintenance) of this Schedule 12;
 - (ii) ensure the P2Wk Project meets the Hand Back Requirements set out in Part 5 (Hand Back Requirements) of this Schedule 12 on the Expiry Date or Actual Termination Date.
- (b) Where there is any conflict in a requirement, standard, outcome or measure, between these Service Requirements, the Base Agreement, any other requirement in the Agreement, the RMA Conditions, or any other document specifically relating to the Project, the higher requirement, standard, outcome or measure will apply.
- (c) The Contractor must comply with the requirements of the following when satisfying the Service Requirements:
 - (i) all Laws;
 - (ii) all applicable requirements of the New Zealand Building Code (**NZBC**);
 - (iii) all applicable New Zealand Fire Service Requirements (**NZFS**); and
 - (iv) all applicable AS/NZS standards.
- (d) Except to the extent a Service Requirement directly conflicts (in which case the Service Requirement prevails), the Contractor must comply with the requirements of the following when satisfying each Service Requirement:
 - (i) the Manual of Traffic Signs and Markings;
 - (ii) the Traffic Control Devices Manual;
 - (iii) the National Code of Practice for Utility Operator's Access to Transport Corridors;
 - (iv) AS/NZS 1158 Road Lighting, with a minimum Lighting Category of V3;
 - (v) National Operating Policy for New Zealand Transport Agency - Variable Message Signs;
 - (vi) National Operating Procedures for New Zealand Transport Agency - Variable Message Signs;
 - (vii) CIMS;
 - (viii) the State Highway Control Manual; and
 - (ix) the State Highway Database Operations Manual.

- (e) The obligations in this Schedule 12 apply in respect of the P2Wk Operating Site except to the extent expressly provided otherwise or where the context requires otherwise.

1.2 Definitions

In addition to the definitions set out in clause 1 (Definitions) of the Base Agreement:

ANPR means automatic number plate recognition;

Barriers include all vehicle barrier systems within the P2Wk Project, including

- (a) vehicle safety barriers systems;
- (b) crash cushions;
- (c) terminals;
- (d) transitions;
- (e) guard rails; and
- (f) other structural barriers;

Bridge Data System or **BDS** means the Transport Agency database designed to assist with the effective management of bridge and culvert structures on the State Highway network;

CIMS means the New Zealand Coordinated Incident Management System;

Drainage System means a system within the boundaries of the P2Wk Project Site, and otherwise as required to comply with the RMA Conditions, to control and treat water and to remove water from paved or trafficked surfaces, such as watercourses, drains, debris and erosion control structures, energy dissipation structures, channels, fish passage, kerbs, catchpits and treatment devices and including both man-made and natural systems;

Foam Bitumen Maintenance means pavement rehabilitation by the use of foam stabilisation of a minimum of 100 lane metres (excluding shoulders) but only to the extent PMLH applies to such planned maintenance;

Highway Incident Management Protocol means the highway incident management protocol - Memorandum of Understanding between the New Zealand Fire Service, the National Rural Fire Authority, the Transport Agency, St John, Wellington Free Ambulance and the New Zealand Police (2012);

Incident Response has the meaning given to that term in Schedule 13 (Performance Regime);

LTR: Setting of Speed Limits means the Land Transport Rule: Setting of Speed Limits 2003 (and subsequent amendments);

Lighting means any lighting within the P2Wk Operating Site, including:

- (a) belisha beacons and vertical wig wag signs at school or animal crossings;
- (b) road traffic sign lighting;

- (c) access lighting, including lighting on pedestrian walkways, cycle ways and subway lighting;
- (d) alternate energy sources, including solar panels or wind turbines used for the purpose of road lighting or sign lighting;

National Operating Procedures for New Zealand Transport Agency – Variable Message Signs means the document of the same name which sets out the applicable procedures for the operation of the variable message signs as published by the Transport Agency;

NRM means the National Association of Australian State Roading Authority (NAASRA) roughness meter in counts/km;

Paved Area means any paved area within the P2Wk Project, including:

- (a) the Trafficked Area;
- (b) hard shoulders;
- (c) footways;
- (d) cycle tracks;
- (e) bridle ways;
- (f) paved pedestrian and cyclist areas;
- (g) hard-standing paved areas;
- (h) paved central reserves;
- (i) traffic islands and cross-overs;
- (j) edgings; and
- (k) preformed areas;

Planned Maintenance Lane Hours or **PMLH** means, in respect of any Contract Year, the planned maintenance lane hours established for that Contract Year in accordance with paragraph 28 (Planned Maintenance Lane Hours) and under the applicable Forward Works Plan;

RAMM means road asset and maintenance management;

RAMM Database means the Transport Agency Road Asset and Maintenance Management database;

Relieved Planned Maintenance means pavement rehabilitation of a minimum of 100 meters length excluding shoulders, but only to the extent PMLH applies to such maintenance;

Renew means:

- (a) to rehabilitate the pavement by a structural or functional enhancement, which produces a substantial extension in service life by substantially improving pavement condition and ride quality;
- (b) to reconstruct the pavement by removing and replacing all asphalt and concrete layers, base and subbase layers, in combination with remediation of the subgrade and drainage and any geometric changes,
- (c) replacement of pavement surfacing due to deterioration or to comply with T10 requirements; and
- (d) replacement of assets or components to comply with Service Requirements,

with the level of Renewal to be determined by the assessment of the asset condition, deterioration, service performance, safety and asset critically. **Renewed** and **Renewal** have corresponding meanings;

Road Event Information Management System means the Transport Agency's road event information management system, as updated from time to time, and, as at the Execution Date, means the Traffic Road Event Information System (**TREIS**);

Rolling Length means a continuous length of the Trafficked Area in one direction:

- (a) offset by 20 metres between each 100 metre rolling length; and
- (b) offset by one kilometre between each five kilometre rolling length;

Severe Weather Event means the occurrence of any ice, snow, frost, fog, high or low temperatures, heavy rain, high winds or any other weather event;

Signage means all traffic signage within the P2Wk Project required by this Agreement, the Land Transport Rule: Traffic Control Devices, MOTSAM and the TCD Manual;

Special Event means any event held over a short and defined period that involves a significantly different use of the P2Wk Roads to their ordinary use, including any activity, community event, protest, sporting or cultural event, or other such event;

State Highway Database Operations Manual means the Transport Agency State Highway Database Operations Manual (SM050);

Structure means, when used in this Schedule 12, any civil construction within the P2Wk Operating Site including:

- (a) bridges, including all overbridges, underbridges, stone bridges, footbridges and cycle bridges;
- (b) subways;
- (c) side barriers on bridges;
- (d) retaining walls and reinforced earth structures
- (e) culverts and wing/headwalls;
- (f) buildings;

- (g) fences, wall, screens and environmental barriers;
- (h) gantries, signs, lighting columns or catenaries and CCTV masts;
- (i) cross carriageway ducts;
- (j) ducts through structures;
- (k) technology equipment cabinets; and
- (l) ancillary equipment including hoists, winches and covers,

but excluding any Utilities Infrastructure;

T10 means the Transport Agency standard entitled “T10: skid resistance investigation and treatment selection”;

Trafficked Area means any paved area of the P2Wk Roads used for the passage of vehicles, measured from seal edge to seal edge; and

Traffic Monitoring System means the Transport Agency’s database system used to store traffic data collected on the State Highway network.

Part 2 – Proactive management

2. Asset Management Service Requirements

The Contractor must provide proactive asset management for the P2Wk Project that:

- (a) implements a robust and reliable whole of life management solution for the construction, operation and maintenance of the P2Wk Project to meet the Service Requirements;
- (b) ensures the P2Wk Project's physical assets support the AMM Services at all times;
- (c) ensures that any Defects do not affect the safety of the Users or the integrity of the P2Wk Project and that all faults are rectified in accordance with the Maintenance Management Plan;
- (d) delivers a planned approach for asset replacement and Renewal throughout the Operating Term, taking into account the expected or actual working life of the P2Wk Project, based on quantitative and qualitative conditional assessment and criticality of the asset;
- (e) ensures that systems that enable optimal use of P2Wk Project assets are utilised throughout the Operating Term;
- (f) allows for flexibility and changes in the provision of the AMM Services, the assets and the P2Wk Project;
- (g) incorporates certification to quality standards equivalent to ISO 55000 2014, extending across the quality management system and associated field quality audit processes, including timely, efficient and safe management of Incidents and works on the P2Wk Project;
- (h) measures and provides an accurate account of asset lives (including pavement surfacing) by testing and refining Asset Deterioration Models at least every three years, with modelled asset lives from the Asset Deterioration Model to be within ± 10 per cent of achieved asset lives;
- (i) enables compliance, without limitation to other obligations, with Designation Conditions D71A, D71 and D73;
- (j) maintains the asset condition to no less than the minimum levels stipulated in Appendix C (Asset Condition Register) during the Operating Term, with any failure to meet such asset condition rectified within the response time (where applicable) specified in Appendix C; and
- (k) provides the Transport Agency with access to asset information and inventory, systems and processes, performance results, as-built drawings, asset Owner's manual, asset performance and condition data, historical information, warranties, operations and maintenance manuals, energy usage data, installation and electrical supply and distribution details, delineation and details of monitoring compliance with Consents.

3. Residual life

3.1 Residual life Service Requirements

The Contractor must manage the P2Wk Project:

- (a) to achieve a minimum 13 -15 year residual life for the pavement within the Paved Areas at the Expiry Date, ensuring that:
 - (i) 30 per cent of the pavement has a minimum 13 -14 year residual life;
 - (ii) 30 per cent of the pavement has a minimum 14 -15 year residual life; and
 - (iii) 40 per cent of the pavement has a minimum 15 -16 year residual life;
- (b) to achieve a minimum 8 -10 year residual life for the pavement surfacing within the Paved Areas at the Expiry Date, ensuring that:
 - (i) 30 per cent of the pavement surfacing has a minimum of 8 year residual life;
 - (ii) 30 per cent of the pavement surfacing has a minimum 9 year residual life; and
 - (iii) 40 per cent of the pavement surfacing has a minimum 10 year residual life;
- (c) to achieve a minimum residual life:
 - (i) of 75 per cent of the manufacturer's design life or of 75 years (whichever is the greater) at the Expiry Date for primary elements of bridges and culverts (such as piles, foundations, settlement slabs, piers, abutments, walls, beams, deck slabs, side bridge barriers, fixings for maintenance and service supports and cast in items);
 - (ii) of 50 per cent of the manufacturer's design life or of 30 years (whichever is the greater) at the Expiry Date for secondary elements of bridges, tunnel and culverts (such as access supports, non-cast in items); and
 - (iii) of 50 per cent of the manufacturer's design life or of 20 years (whichever is the greater) at the Expiry Date for replacement elements, expansion joints, bearings, seismic restraints and base isolation hardware on structures;
- (d) to achieve a minimum residual life of 75 per cent of the manufacturer's design life or of 75 years (whichever is the greater) for all other Structures at the Expiry Date;
- (e) to achieve a minimum residual life of 75 per cent of the manufacturer's design life or of 75 years (whichever is the greater) for all structural components of Geotechnical Elements (i.e. components with a design life specified in the Bridge Manual such as soil nails, anchors and geosynthetic reinforcement) at the Expiry Date;
- (f) to achieve a minimum residual life of 75 per cent of the manufacturer's design life or of 75 years (whichever is the greater) for buildings at the Expiry Date;
- (g) to achieve a minimum residual life of 50 per cent of the manufacturer's design life or of 25 years (whichever is the greater) for Barriers at the Expiry Date;
- (h) to achieve a minimum residual life of 50 percent of manufacturer's recommended life or design life (whichever is greater) for luminaires, delineation raised pavement

markers, delineation pavement symbols and water-borne line marking at the Expiry Date; and

- (i) to achieve a minimum residual life of 25 per cent of the manufacturer's design life or of five years (whichever is the greater) for the remaining assets (including ITS) within the P2Wk Project at the Expiry Date.

4. Records and data management

4.1 Service Requirements

The Contractor must:

- (a) manage and store in a central repository all of the P2Wk Project plans (including as-built drawings), asset owner's manual, construction and design report, plant manuals and performance records, in a manner that conforms with the requirements of the Public Records Act 2005;
- (b) administer P2Wk Project plans in a portable document file format (including as-built drawings, asset owner's manual) to capture any physical changes occurring on the P2Wk Project Site, during the concession period, including new builds, Renewal, additions, bridge structural data, asset commissions and decommissions and electrical works and provide the Transport Agency with copies of all updated P2Wk Project plans as the plans are updated;
- (c) maintain common standards of layering, symbols and measurement that are compatible with Transport Agency systems;
- (d) ensure suitable document management practices are in place, to store all information relevant to asset management (asset service performance, condition, criticality, deterioration);
- (e) maintain and make available at all times for the Transport Agency all asset and property data relating to the P2Wk Project or the P2Wk Project Site;
- (f) update the RAMM Database at least monthly, and in accordance with the State Highway Database Operations Manual, and must:
 - (i) carry out the functions of the RAMM manager in relation to the P2Wk Project;
 - (ii) take ultimate responsibility for completeness, updating, accuracy and reporting of all RAMM data relating to the P2Wk Project; and
 - (iii) provide, as a minimum, the information required by Appendix A (RAMM Tables);
- (g) operate and maintain the traffic monitoring stations and update the Traffic Monitoring System with all captured data in accordance with the Traffic Monitoring Method;
- (h) ensure that all information recorded in respect of the Predictable Journeys KPIs is recorded and (to the extent required) retained on a standalone server within the Contractor's premises and that this system is established:
 - (i) to dispose of any ANPR data or other private information (including bluetooth MAC addresses) once the system has created a match;

- (ii) to dispose of any ANPR data or other private information (including bluetooth MAC addresses) within 15 minutes of it being recorded, where the system has not created a match;
- (iii) to retain all applicable records for three months (subject to the Contractor meeting its obligations in respect of KPI reporting in accordance with the Base Agreement and Schedule 13 (Performance Regime)); and
- (iv) so as to comply with all applicable Laws relating to privacy of information; and
- (i) provide required information in relation to bridges and culverts to allow the Transport Agency to maintain and update the Bridge Data System in accordance with the Bridge Data System Structural Guide (October 2009).

5. Severe weather

5.1 Service Requirements

The Contractor must:

- (a) proactively manage and maintain the P2Wk Project in relation to all Severe Weather Events to ensure the safety of Users and the integrity of the P2Wk Project; and
- (b) proactively prepare the P2Wk Project in advance of impending Severe Weather Events as soon as practicable, and in any event within 12 hours of the time the Contractor became aware, or should have become aware, of the event.

6. Safety

6.1 Service Requirements

The Contractor must:

- (a) manage the P2Wk Project to foster a safe environment, including:
 - (i) managing traffic safely;
 - (ii) providing Users with realistic perceptions of danger;
 - (iii) providing a consistent, safe and forgiving road environment, with 'no surprises' for Users; and
 - (iv) providing a safe working environment for maintenance and construction activities;
- (b) establish, maintain and implement a safety management strategy, which must include detail of the scope and frequency of safety inspections and demonstrate compliance and outcomes resulting from the safety management strategy;
- (c) embed the Safe System approach;
- (d) manage and maintain the P2Wk Main Alignment to ensure not less than a four star KiwiRAP rating;

- (e) conduct a Road Safety Audit, to be conducted by the Road Safety Audit Team, five years following Service Commencement, and at five yearly intervals thereafter, in accordance with the Road Safety Audit Procedures and must:
 - (i) provide the Transport Agency with a copy of the completed road safety audit report; and
 - (ii) as a minimum, address to the satisfaction of the Transport Agency, all “serious”, “significant” and “moderate” issues identified in the audit report to the extent that they are no longer considered by the Transport Agency to be “serious”, “significant” or “moderate” issues;
- (f) ensure that health and safety is a key focus, adopting a zero-harm approach to health and safety management during provision of the AMM Services; and
- (g) maintain all health and safety information relating to the P2Wk Project on the SafeStat website.

Part 3 – Operation

7. Speed and traffic management

7.1 Service Requirements

The Contractor:

- (a) must, when undertaking activities on the P2Wk Roads, manage traffic flow on the P2Wk Roads to facilitate the safe and efficient movement of traffic on the P2Wk Roads and on adjoining roading networks;
- (b) may review or set temporary speed limits in accordance with the LTR: Setting of Speed Limits and the Code of Practice of Temporary Traffic Management as though the Contractor is the Road Controlling Authority for the P2Wk Roads;
- (c) may not review or set any other speed limits under the LTR: Setting of Speed Limits or any other Law;
- (d) must comply with any variable speed limit approved by the Transport Agency, subject to any conditions specified by the Transport Agency and in accordance with its obligations under this Agreement;
- (e) must, subject to this paragraph 7, comply with the Code of Practice for Temporary Traffic Management in accordance with Appendix B (Code of Practice for Temporary Traffic Management);
- (f) must obtain and implement an approved traffic management plan from the relevant Road Controlling Authority, in accordance with the Code of Practice for Temporary Traffic Management, where any activity will impact on roads adjoining the P2Wk Roads; and
- (g) must not carry out any scheduled maintenance that requires temporary traffic management at any time:
 - (i) between and including the day two Business Days prior to Christmas Day in any year and the Sunday of the second full week following New Year's Day in the next year;
 - (ii) between and including the Business Day prior to a Public Holiday (as defined in Schedule 13 (Performance Regime)) and the Business Day after that Public Holiday;
 - (iii) subject to paragraph (i), on any weekend between and including the weekend prior to the third week of December and the first weekend in February, except where such work is carried out between 8pm and the following 6am. For the purposes of this paragraph **weekend** commences at 5pm on a Friday; or
 - (iv) during any period when, if the scheduled maintenance was undertaken, the level of service on the affected section of the P2Wk Roads would reasonably be expected to be below LOS C.

8. Incidents

8.1 Service Requirements

The Contractor must, subject to paragraph 8.2 (Trigger for Incident Response requirements):

- (a) comply with the Key Road Controlling Authorities Communications Plan;
- (b) provide 24 hour, seven days a week, Incident Response capability;
- (c) notify the Transport Agency and the ATOC immediately following the occurrence of:
 - (i) any Incident involving a Fatality or Serious Injury;
 - (ii) any Incident that will disrupt traffic flow on the P2Wk Roads and may impact adjoining roading networks;
 - (iii) any Incident that will disrupt the provision of the AMM Services;
 - (iv) any Incident or event that may affect the structural integrity of the P2Wk Project;
 - (v) any Severe Weather Event or natural disaster that has disrupted traffic flow on the P2Wk Roads; or
 - (vi) any other Incident that is likely to attract media attention,

(in each case except where the Contractor has been notified of such Incident by the Transport Agency or the ATOC) and provide regular updates to the Transport Agency and the ATOC on the status of the Incident and any action being taken by the Contractor or other parties in relation to the Incident;
- (d) respond to Incidents following notification in accordance with the Key Road Controlling Authorities Communications Plan by commencing its Incident Response at the site of the Incident within the time periods specified in Schedule 13 (Performance Regime);
- (e) manage all Incidents, including providing required temporary traffic management support and assistance to Emergency Services:
 - (i) to facilitate the safe and efficient movement of traffic on the P2Wk Roads and on adjoining roading networks;
 - (ii) in accordance with the Highway Incident Management Protocol and CIMS; and
 - (iii) cooperate with and participate in any 'lessons learnt' audit required by the Transport Agency to improve performance of incident management and provide debrief to the emergency services, ATOC and the Transport Agency;
- (f) ensure the safety of the Users and the integrity of the P2Wk Project following the occurrence of any Incident;
- (g) promptly make safe and rectify or repair any damage to the P2Wk Project following an Incident;

- (h) where geophysical activity, rainfall, rockfall or other such event blocks access to and through the P2Wk Roads (or any part of the P2Wk Roads), restore access for Emergency Services and Users as soon as reasonably practicable;
- (i) clean up and manage any spills, discharges or other contamination following an Incident in accordance with the relevant Consents, the Designation and applicable Laws;
- (j) implement a monitoring and improvement system for the identification of trends relating to Incidents and providing for the targeted improvement of the P2Wk Project in relation to such Incidents, including in response to any reports or recommendations issued by third parties (for example, a Coronial Finding); and
- (k) interface with the ATOC and Emergency Services in relation to the detection, notification and management of all Incidents.

8.2 Trigger for Incident Response requirements

- (a) The Contractor's obligation to respond to any Incident will be triggered:
 - (i) by notification (whether by the Transport Agency, ATOC or Emergency Services) requiring it to attend the site of the Incident and provide its Incident Response; and
 - (ii) where the Incident comprises any Defect in or damage to the P2WK Project, on becoming aware of the same.
- (b) The Contractor will be deemed to have commenced its Incident Response:
 - (i) where the Incident Response requires temporary traffic management, when it commences temporary traffic management at the Incident site in accordance with COPTTM (and, for the purposes of this paragraph, the period within which the Contractor must commence its Incident Response will be triggered on the earlier of:
 - (A) the Contractor becoming aware (acting reasonably and in accordance with Good Industry Practice) that the Incident Response requires temporary traffic management; or
 - (B) ATOC or the Transport Agency notifying the Contractor that the Incident Response requires Temporary Traffic Management (and, if ATOC or the Transport Agency had provided an initial notice relating to the Incident and a second notice stating that the Incident required temporary traffic management, the period for Incident Response with temporary traffic management will be triggered by the second notice); and
 - (ii) in all other cases, where the Contractor Personnel arrive at the Incident site to undertake Incident Response in accordance with this Schedule 12.
- (c) The Contractor is not required, as part of the provision of the AMM Services, to provide first aid or other medical treatment to Users (other than to the extent set out in the Health and Safety Management Plan).
- (d) Schedule 13 (Performance Regime) sets out the consequences of the Contractor failing to meet the timeframes specified for Incident Response as set out in that Schedule.

9. Emergency management

9.1 Service Requirements

The Contractor must:

- (a) assist the Transport Agency and be proactive in the development, update and implementation of civil defence emergency management plans with the Auckland Council Civil Defence Emergency Management Group, Ministry of Civil Defence and other relevant Authorities, as required; and
- (b) support and provide assistance to the Transport Agency, the ATOC, adjoining Road Controlling Authorities and Emergency Services in relation to civil defence emergency management and planning, including participation in any emergency field exercise events.

10. Special Events

10.1 Service Requirements

The Contractor must:

- (a) establish and maintain a robust system to ensure that the Contractor is aware of any Special Events and undertakes sufficient preparation in relation to the management of all Special Events;
- (b) notify the Transport Agency and the ATOC as soon as it becomes aware of any Special Events of which the Contractor is aware and the Transport Agency or ATOC are or may not be aware;
- (c) implement a system for processing traffic management applications in relation to Special Events, under which the Contractor must:
 - (i) provide a user-friendly application process, including appropriate guidance for applicants in relation to required approvals, advertising and appropriate traffic management plans;
 - (ii) approve any Special Event that constitutes a Required Closure Instruction (in accordance with Schedule 13 (Performance Regime));
 - (iii) acting reasonably, promptly approve or decline applications for Special Events and notify the Transport Agency and the applicant of the decision (with reasons); and
 - (iv) provide assistance to applicants in relation to the management of approved Special Events including ensuring compliance with the approved traffic management plan;
- (d) proactively manage all Special Events and comply with any directions issued by the Transport Agency to facilitate the safe and efficient movement of traffic on the P2Wk Roads, regardless of whether the Contractor approved the Special Event; and
- (e) interface with Emergency Services, ATOC, adjoining Road Controlling Authorities and other relevant authorities in relation to the management of all Special Events.

11. Intelligent transport

11.1 Service Requirements

The Contractor must:

- (a) provide information to the Transport Agency as required:
 - (i) to ensure that accurate, timely and relevant information that may influence travel behaviours of Users and inform User decision-making is delivered to Users, stakeholders and the local community in an efficient and effective manner (which includes the provision of real-time data captured by the Contractor's Monitoring Technology and Volume Measurement Technology (each as defined in Schedule 13 (Performance Regime)); and
 - (ii) in accordance with the Road Event Information Management System;
- (b) operate and maintain VMS in accordance with:
 - (i) the National Operating Policy for New Zealand Transport Agency - Variable Message Signs; and
 - (ii) the National Operating Procedures for New Zealand Transport Agency - Variable Message Signs;
- (c) comply with any directions given by the Transport Agency in relation to the use of any VMS, including displaying any messages required by the Transport Agency for the required time period;
- (d) ensure that a continuous live connection of the CCTV monitoring video feed of those parts of the P2Wk Roads subject to CCTV monitoring is available to the ATOC;
- (e) maintain the ITS link within the P2Wk Operating Site to at all times meet or exceed the performance standard required under Schedule 13 (Performance Regime);
- (f) ensure the interface between the Contractor and the ATOC (including the link between the Contractor's ITS solution and the ATOC's ICT system) enables the ATOC to provide timely and accurate road and traffic information and manage traffic flows across the state highway network of which the P2Wk Project forms part; and
- (g) establish and maintain operating protocols with the ATOC to ensure effective management and operation of the state highway network at P2Wk Project interfaces, including with respect to communication, integration with the wider Auckland roading network, interface with Emergency Services and contingency and business continuity arrangements.

12. Overweight and overdimension permits

12.1 Service Requirements

The Contractor must:

- (a) provide sufficient information to the Transport Agency to enable the processing of permits in relation to overweight or overdimension motor vehicles;

- (b) maintain the required 'clear envelope' for overdimension motor vehicles and
- (c) provide required assistance for overweight or overdimension motor vehicles on the P2Wk Roads.

13. Utilities

13.1 Service Requirements

The Contractor must:

- (a) manage all utilities and associated infrastructure that form part of the P2Wk Project in a manner that complies with:
 - (i) this Agreement;
 - (ii) all applicable Laws; and
 - (iii) all applicable Consents;
- (b) comply with the requirements set out in any network utility agreements or other agreements with utility providers applicable at any time;
- (c) coordinate, review and manage utility works as the corridor manager for the P2Wk Roads, in accordance with the National Code of Practice for Utility Operators' Access to Transport Corridors, including:
 - (i) receiving managing and evaluating corridor access requests (**CAR**) (using the web-based CAR system);
 - (ii) preparing and submitting the works access permit (**WAP**) or deed of grant (including any appropriate and reasonable conditions for the works, together with reasonable justification) for the Transport Agency to approve or decline (at its discretion);
 - (iii) monitoring the activities of utility operators, and of any contractor carrying out works relating to utilities infrastructure, on the P2Wk Roads to ensure that all works comply with the National Code of Practice for Utility Operators' Access to Transport Corridors and any conditions imposed on the approved CAR;
 - (iv) issuing non-conformance notices and stop work orders;
 - (v) assessing works completion and assessing works during the Operating Term, including inspecting completed works to identify whether:
 - (A) there are any issues with the quality of the road corridor and the standard of reinstatement; or
 - (B) there are any additional actions required to ensure the completed works are of the required standard and comply with the WAP;
 - (vi) returning works completion notices and completion of maintenance notices; and
 - (vii) attending and participating in liaison meetings as required by the Transport Agency;

- (d) comply with any reasonable and local conditions mandated by the Transport Agency under the National Code of Practice for Utility Operators' Access to Transport Corridors; and
- (e) provide to the Transport Agency sufficient information, support and assistance to enable the Transport Agency to comply with its obligations under the National Code of Practice for Utility Operators' Access to Transport Corridors, including performing all obligations in sufficient time to enable the Transport Agency to comply with all timeframes under that code.

Part 4 – Maintenance

14. Drainage

14.1 Service Requirements

The Contractor must:

- (a) manage and maintain the Drainage System:
 - (i) to comply with the RMA Conditions, including without limitation Resource Consent Conditions RC61 – RC68A;
 - (ii) to enhance the longevity of the Paved Area and to ensure the safety of the Users and the integrity of the P2Wk Project;
 - (iii) to remain Fit for the Intended Purposes for the Operating Term and deliver the performance requirements of the Consents;
 - (iv) to, where applicable, facilitate the development of permanent wetland sites (including removal of sediment and cleaning in accordance with Good Industry Practice and to enable the development of a healthy wetland ecosystem);
 - (v) to ensure that the Drainage System, surface water and storm water does not adversely impact the P2Wk Roads or the P2Wk Project Site; and
 - (vi) to prevent flooding and damage on Adjoining Properties, except across agreed flowpaths; and
- (b) ensure that stormwater discharge locations at receiving water courses are maintained in accordance with the RMA Conditions, the requirements of Local Authorities and all other applicable Laws.

15. Fences, Screens and Environmental Barriers

15.1 Service Requirements

The Contractor must maintain all fences, screens, noise barriers and environmental barriers within the P2Wk Project Site, including all walls, stock proofing, rock fences, wildlife fences, pedestrian barriers, noise and pedestrian fences and fences required under the Third Party Property Agreements:

- (a) to be safe and stable;
- (b) to continue to provide noise attenuation for the Operating Term;
- (c) to be free from rust and vegetation; and
- (d) to remain Fit for the Intended Purposes for the Operating Term.

16. Geotechnical Elements

16.1 Service Requirements

The Contractor must maintain all Geotechnical Elements:

- (a) to ensure the safety of the Users and the integrity of the P2Wk Project; and
- (b) to remain Fit for the Intended Purposes for the Operating Term.

17. Lighting

17.1 Service Requirements

The Contractor must:

- (a) ensure that the Lighting does not present a hazard to Users, road workers or third parties;
- (b) ensure that the Lighting complies with Designation Condition D75 and is consistent with the ULDF and any applicable ULDSP;
- (c) ensure all Lighting comprises LED-type luminaries;
- (d) ensure that the Lighting complies with Designation Condition D75;
- (e) ensure that not less than 95 per cent of the Lighting across the P2Wk Project is fully functional at all times;
- (f) ensure that no more than one light at any one interchange is not fully functional at any one time; and
- (g) maintain the Lighting to remain Fit for the Intended Purposes for the Operating Term and to deliver a whole of life value.

18. Paved Areas

18.1 Service Requirements

The Contractor must manage and maintain the Paved Area:

- (a) to provide a safe, smooth and even surface for Users at the design speed limit;
- (b) to remain Fit for the Intended Purposes for the Operating Term;
- (c) to maintain the riding quality of the Paved Area and to ensure there are no trip hazards in any pedestrian area;
- (d) to ensure that any pothole on the trafficked area is made safe within four hours and is repaired within 24 hours of the time the Contractor became aware, or should have become aware, of the pothole;

- (e) to ensure that there is no accumulation of detritus, aggregate or grit on the Paved Area;
- (f) to ensure that, as a minimum:
 - (i) the Trafficked Area meets the pavement skid requirements set out in T10 and amendments to T10 during the Operating Term;
 - (ii) potholes exceeding 50mm in depth or 150mm in diameter or in length do not occur;
 - (iii) there is no more than 500 metres cumulative of low or high shoulder greater than 50mm, not exceeding 10 metre length at any site in any five kilometre Rolling Length;
 - (iv) there are no pavement heaves or shoves with height or depth greater than 30mm within the Paved Area (when measured from peak to trough);
 - (v) the average rut depth in any 100 metre Rolling Length is no more than 15mm in any lane or wheeltrack (when measured from peak to trough);
 - (vi) there is an average NRM value of 55 for asphalt concrete and an average NRM value of 70 for chipseal, in any 100 metre Rolling Length; and
 - (vii) there is no more than 100 metres cumulative of edgebreak, or continuous 10 metres of edgebreak, in any five kilometre Rolling Length; and
- (g) to ensure that, at any time during the five years prior to the Expiry Date:
 - (i) where the total area of completed repairs to, and identified defects of, the Trafficked Areas comprises 15 per cent or more of the Trafficked Area in any 100m Rolling Length, that length of the Trafficked Area will be Renewed to a minimum 15 year design working life over the full width of the length; and
 - (ii) where the total area of completed repairs to, and identified defects of, any other Paved Area comprises 20 per cent or more of that Paved Area, that area will be Renewed to a minimum 15 year design working life over the full width of the length.

19. Pavement markings and raised pavement markers

19.1 Service Requirements

The Contractor must manage and maintain pavement markings and raised pavement markers on all Paved Areas:

- (a) to enhance the safety of the P2Wk Roads at the design speed limit and to supplement the Signage;
- (b) to enhance speed management and traffic flow;
- (c) to ensure that there are not more than two consecutive defective or missing raised pavement markers;
- (d) to ensure that there is no more than three defective or missing edge marker posts in any rolling 1000m section if edge marker posts are installed;

- (e) to ensure the width of edgelines and lanelines within the Trafficked Areas are not less than the design width during the Operating Term and at Hand Back;
- (f) to ensure that at least 98 per cent of the total pavement marking within any five kilometre Rolling Length, and 100 per cent of pavement markings on curves, stop and give way pavement markings and pedestrian crossing pavement markings, is compliant with:
 - (i) the Land Transport Rule: Traffic Control Devices 2004 and subsequent amendments;
 - (ii) the Traffic Control Devices Manual; and
 - (iii) the Manual of Traffic Signs and Markings; and
- (g) to remain Fit for the Intended Purposes for the Operating Term,

provided that where the Contractor cannot immediately replace audio tactile profiled roadmarkings for technical reasons (in accordance with Good Industry Practice), the Contractor must take such additional measures as are required to ensure the safety of Users until the markings can be replaced (in accordance with Good Industry Practice).

20. Barriers

20.1 Service Requirements

The Contractor must:

- (a) manage and maintain all road safety Barrier systems to remain Fit for the Intended Purposes for the Operating Term and to function as designed;
- (b) ensure the performance level of all Barriers is a minimum Test Level 4 (as defined in Schedule 11 (Works Requirements)) and as specified in the as-built drawings;
- (c) repair any damaged barrier as soon as practical but no later than 72 hours after becoming aware of the damage to ensure the barrier system functions as designed; and
- (d) manage and maintain all Barriers in accordance with applicable manufacturer's specifications and to a level necessary to preserve crash worthiness.

21. Signage

21.1 Service Requirements

The Contractor must:

- (a) ensure that the P2Wk Project is managed and maintained to provide Users with safe and effective continuous guidance throughout the P2Wk Project in accordance with:
 - (i) the Land Transport Rule: Traffic Control Devices 2004 and subsequent amendments;
 - (ii) the Traffic Control Devices Manual;

- (iii) the Manual of Traffic Signs and Markings; and
 - (iv) the relevant Auckland region policy guidelines,
- as if the Contractor were the Road Controlling Authority;
- (b) manage and maintain all Signage to ensure all Signage is safe, clean, clearly visible and legible and remain Fit for the Intended Purposes for the Operating Term;
 - (c) manage and maintain all Signage in accordance with applicable manufacturer's specifications;
 - (d) ensure that at least 98 per cent of Signage, and 100 per cent of regulatory traffic signage, is compliant with the requirements of paragraph 21.1(a):
 - (i) the Land Transport Rule: Traffic Control Devices 2004 and subsequent amendments;
 - (ii) the Traffic Control Devices Manual; and
 - (iii) the Manual of Traffic Signs and Markings,

(including in relation to visibility and reflectivity requirements) and, where any Signage is defective, damaged, lost missing or otherwise non-compliant, the Contractor must:

 - (iv) with respect to regulatory traffic signage, replace such Signage within 24 hours better being identified; and
 - (v) with respect to any other Signage, replace such Signage as soon as reasonably practicable and without delay;
 - (e) ensure that there are no substantiated User complaints in relation to the visibility of Signage;
 - (f) install, manage and maintain any signage required by the Transport Agency, including signage relating to road safety campaigns or traffic operations (for example, illegal height);
 - (g) not allow any other signage, advertising or promotional material within the P2Wk Project Site, other than signage authorised or required by the Transport Agency or required by Law; and
 - (h) remove all unauthorised signage within 24 hours of the time the Contractor became aware, or should have become aware, of such signage.

22. Vegetation

22.1 Service Requirements

The Contractor must:

- (a) manage and maintain all Vegetation:
 - (i) to ensure the safety of Users and the integrity of the P2Wk Project;

- (ii) to be tidy, presentable and to enhance the public's appreciation of the environment;
 - (iii) to ensure the integrity, stability and operation of the P2Wk Project, including ensuring that there is no plant life on any Paved Area, impact the functionality of any Barrier system, or affecting the visibility of the Barriers;
 - (iv) in accordance with the RMA Conditions, the Third Party Property Agreements and the requirements of Local Authorities; and
 - (v) to ensure compliance with the RMA Conditions, including without limitation Designation Conditions D41, D59, D60, D76 and Resource Consent Conditions RC52 and RC58;
- (b) ensure that the Vegetation does not obstruct the sightlines or the Signage;
 - (c) ensure that the Vegetation does not pose a fire risk;
 - (d) ensure that the Vegetation enhances the public's perception of safety; and
 - (e) manage and remove all pest plants and noxious plants as required by Auckland Council.

23. Structures

23.1 Service Requirements

The Contractor must:

- (a) manage and maintain all Structures to ensure the safety of Users and the integrity of the P2Wk Project;
- (b) manage and maintain all Structures to be Fit for the Intended Purposes;
- (c) provide all structures information for the Transport Agency to manage the BDS and overweight permitting system; and
- (d) carry out inspections of all Structures in a manner consistent with the Transport Agency's Bridges and Other Highway Structures Inspection Policy (Transport Agency S6: 2014).

24. Maintenance and Emergency Services Accessways

24.1 Service Requirements

The Contractor must:

- (a) manage and maintain any Maintenance and Emergency Services Accessways:
 - (i) to be Fit for the Intended Purposes; and
 - (ii) to maintain the riding quality;
- (b) manage and maintain any other access tracks within the P2Wk Project Site; and

- (c) liaise with the utility operators in relation to the maintenance of any utility access tracks.

25. Third Party Property Agreements

25.1 Service Requirements

The Contractor must comply with all maintenance obligations the Transport Agency has agreed under each of the Third Party Property Agreements in accordance with requirements of the relevant Third Party Property Agreement, including as to timing, scheduling and materials. The Contractor must not change any agreement but advise the Transport Agency if any agreement requires amendment.

26. Amenity

26.1 Service Requirements

The Contractor must:

- (a) remove any litter, refuse, debris, detritus, animals and animal remains from the P2Wk Roads and store all dead animals for a period of not less than 14 days to be returned to owner if requested;
- (b) remove all offensive graffiti within 12 hours, any graffiti visible to Users within 48 hours, and all other forms of graffiti within seven days, of the time the Contractor became aware, or should have become aware, of the graffiti;
- (c) ensure the use, appearance, safety, stability, integrity and operation of the P2Wk Project is not affected by graffiti, litter, refuse, debris, detritus or animal remains;
- (d) ensure that Users are satisfied with the appearance of the P2Wk Project and that there are no substantiated User complaints in relation to the appearance of the P2Wk Project Site (including in relation to graffiti, litter, refuse, debris, detritus or animal remains);
- (e) ensure that the appearance of the P2Wk Project enhances the public's perception of safety;
- (f) ensure that the Adjoining Properties are not affected by graffiti, litter, refuse, debris, detritus or animal remains emanating from the P2Wk Project Site;
- (g) implement and maintain the detailed mitigation options, as required by the RMA Conditions; and
- (h) ensure that there are no substantiated User complaints in relation to noise or vibration emanating from the P2Wk Project.

27. Asset Growth

The Contractor must ensure that any new asset constructed or installed during the Operating Term must, without limitation to its other obligations under this Agreement;

- (a) comply with the Works Requirements;

- (b) comply with any approved departures from the Works Requirements;
- (c) comply with any amended versions of specifications and standards referred in the Works Requirements; and
- (d) does not impact the safety of uses and integrity of the P2Wk Project.

28. Planned Maintenance Lane Hours

28.1 Establishment of PMLH

- (a) The Contractor will establish, in respect of each Contract Year, the PMLH in respect of that year (if any) as follows:
 - (i) the PMLH must be specified in the Forward Works Plan for the relevant Contract Year (subject to review by the Transport Agency in accordance with Schedule 8 (Review Procedures));
 - (ii) the Contractor will be entitled to the number of PMLH, in respect of the identified category of planned maintenance, and the relevant Contract Year, set out in Appendix D (and where there is no PMLH specified in Appendix D in respect of that Contract Year, the Contractor will not, subject to the following provisions, be entitled to PMLH in that Contract Year);
 - (iii) the Contractor will be entitled to carry over PMLH that was not used in any Contract Year, to the next or subsequent Contract Years, by adjusting the relevant Forward Works Plan:
 - (A) where the PMLH carried over is no greater than 10 percent of the PMLH to which the Contractor was entitled in the relevant Contract Year; or
 - (B) as otherwise agreed between the Contractor and the Transport Agency; and
 - (iv) the Contractor and the Transport Agency may agree, each acting reasonably, to alterations to the PMLH (including the bringing forward of any PMLH) and, to the extent agreed, any such alterations may be included by the Contractor in the Forward Works Plan for the relevant Contract Year.
- (b) PMLH:
 - (i) can only be utilised in respect of Binary Sections and/or for Foam Bitumen Maintenance at Night (as defined in Schedule 13 (Performance Regime)) on Mondays to Thursdays inclusive, excluding Public Holidays;
 - (ii) can only be used to the extent that, during any PMLH, at least one lane remains available in each direction;
 - (iii) cannot be used in respect of High Volume Days (as defined in Schedule 13 (Performance Regime)); and
 - (iv) can only be used, other than as set out above, at periods of low flow agreed between the parties (acting reasonably).
- (c) PMLH is specific to the identified type of planned maintenance for the relevant PMLH and cannot be used in any other circumstances.

- (d) No more than 500 PMLH may be used in any Contract Year unless expressly agreed in writing by the Transport Agency.

Part 5 – Hand Back Requirements

29. Hand Back Requirements

The Hand Back Requirements are as follows:

- (a) (in respect of hand back of the P2Wk Project on the Expiry Date only) the P2Wk Project meets the residual life requirements set out in paragraph 3 (Residual life) of this Schedule 12;
- (b) the P2Wk Project meets the required standard for the relevant element of the P2Wk Project, as specified in:
 - (i) Part 20 (Handback and disengagement) of the Base Agreement;
 - (ii) the Maintenance Management Plan (including the Asset Condition Register and the Forward Works Plan);
 - (iii) the Handover Package;
 - (iv) this Schedule 12 (Service Requirements); and
 - (v) Schedule 19 (Disengagement);
- (c) the P2Wk Project is clean, tidy and free from rubbish, graffiti, detritus and noxious plants;
- (d) safety Barriers and structures have anti-graffiti coatings on all accessible surfaces;
- (e) except to the extent a higher standard is specified elsewhere within this Agreement:
 - (i) the P2Wk Project meets all minimum requirements set out in Appendix C (Asset Condition Register) (but excluding the columns entitled 'AMM Target LOS' and 'Response Time');
 - (ii) pavement rehabilitation and reconstruction must have at least 3 years of service life after rehabilitation or reconstruction; and
 - (iii) pavement surfacing shall have at least 1 year of service life after resurfacing; and
- (f) the P2Wk Project complies with Designation Conditions D71A to D81 (inclusive) and the Resource Consent Conditions, and Auckland Council certifies the same,

provided that, if the P2Wk Project is terminated prior to Works Completion, the P2Wk Project will be handed back in its then current condition, which condition shall be taken into account to the extent relevant in establishing the Compensation Sum.

Appendix A: RAMM Tables

RAMM Table Name
Carriageway
Carriageway Surfacing
Drainage
Features
Footpaths
Forward Works Programme
ITS
Maintenance Costs
Markings
Other Structures
Pavement Layer
Pavement Test Pits
Railings
Retaining Walls
Signs
Streetlights
Surface Water Channel
All condition related tables
Traffic and Loading

Appendix B: Code of Practice for Temporary Traffic Management

1. General

1.1 Contractor responsibility

The Contractor is responsible for ensuring that all temporary traffic management measures within the P2Wk Project are in accordance with the Code of Practice for Temporary Traffic Management.

1.2 Road Controlling Authority powers

During the Operating Term, the Contractor is responsible for the following powers and responsibilities of a Road Controlling Authority under the Code of Practice for Temporary Traffic Management:

- (a) ensuring that all temporary traffic management measures are in accordance with COPTTM;
- (b) ensuring that any unsatisfactory temporary traffic management is rectified immediately and that any contractual arrangements allow for immediate rectification;
- (c) specifically, under Section A - Introduction and general:
 - (i) notifying a contractor or those responsible for the temporary traffic management as to the level of traffic management to be used for various sections of the P2Wk Roads;
 - (ii) appointing a Traffic Management Coordinator and notifying the contact details;
 - (iii) providing traffic volume data, upon request and where available, to assist traffic management planning;
 - (iv) authorising temporary speed and parking restrictions and the use of other regulatory signs;
 - (v) subject to paragraph 7 (Speed and traffic management) of this Schedule 12, authorising and setting conditions for work and other activities on the P2Wk Roads;
 - (vi) approving traffic management plans in accordance with COPTTM (but, for the avoidance of doubt, not including approving engineering exception decisions);
 - (vii) ensuring there is adequate monitoring and audit of all traffic management within the Road Controlling Authority's network by monitoring documentation and worksite activities to ensure compliance with COPTTM;
 - (viii) identifying (or requiring a contractor/consultant to identify) the scope of disruption likely to be caused to road users by the proposed works;
 - (ix) showing (or requiring a contractor/consultant to show) that it is possible to construct the proposed design, including any required temporary traffic measures; and
- (d) specifically, under Section B - Equipment:

- (i) approving an alternative RD6L twin disc (RG-17.1) where an RD6L (RG-17) sign on the centre line of a two-way two-lane road is likely to pose a hazard due to insufficient lane widths;
 - (ii) approving or requiring a “Works End / Thank You” sign combination;
 - (iii) approving the use of portable traffic signals; and
 - (iv) approving manual control of approaches; and
- (e) specifically, under Section C - Static operations:
- (i) approving the altering, covering or replacement of signs;
 - (ii) authorising the setting of a temporary speed limit for a worksite;
 - (iii) authorising the approval of a working space that exceeds one kilometre in length for shoulder and lane closures;
 - (iv) authorising the lane(s) to be closed on roads with three or more lanes in one direction;
 - (v) authorising trimming of vegetation and movement of traffic signs to ensure adequate visibility where a shoulder is used as a temporary lane;
 - (vi) authorising a reduction in the 600 metre requirement for passing lane / passing bay closure principles;
 - (vii) authorising an exemption from the requirement to use manual traffic controllers or portable traffic signals to manage traffic on a two-way two-lane road reduced to one lane;
 - (viii) authorising the parking of plant where it is not possible to park at least five metres outside the edgeline and on the same side of the road as the working space; and
 - (ix) managing traffic queues, including determining the appropriate action where delays of more than 15 minutes are likely.

1.3 Public notification

Notwithstanding any delegation of powers or any rights available under the Code of Practice for Temporary Traffic Management, any public notification of temporary traffic management relating to the P2Wk Roads must be approved by the Transport Agency in accordance with Schedule 20 (Communication).

2. Delegation

2.1 Contractor delegation

- (a) The Contractor may, with the prior approval of the Transport Agency, delegate any of its powers under this Appendix B (in accordance with the Code of Practice for Temporary Traffic Management).
- (b) The Contractor shall provide to the Transport Agency a full and accurate record of any delegation and shall notify the Transport Agency when the record is updated.

- (c) Notwithstanding any delegation under this paragraph 2, the Contractor is responsible for the actions and omissions of any person acting under such delegation and remains responsible for ensuring that all temporary traffic management measures are in accordance with the Code of Practice for Temporary Traffic Management.

2.2 Retention of powers and responsibilities

Any power or responsibility of a Road Controlling Authority under the Code of Practice of Temporary Traffic Management that has not been delegated to the Contractor under this Schedule 12 or otherwise in accordance with this Agreement (including any Confirmed Change) will remain with the Transport Agency, to be exercised at its discretion.

3. Compliance

3.1 Transport Agency monitoring

Notwithstanding any delegation of powers, the Transport Agency may monitor the Contractor's compliance with the Code of Practice for Temporary Traffic Management in accordance with clause 20 (Monitoring of AMM Services) of the Base Agreement or the Code of Practice for Temporary Traffic Management.

3.2 Issue of stop work notice

- (a) The Contractor must issue a stop work notice to any organisation or individual who causes, or allows an activity to occur on a road that does not comply with the principles of COPTTM.
- (b) Notwithstanding paragraph 3.2(a), the Transport Agency may also issue a stop work notice to any organisation or individual who causes, or allows an activity to occur on a road that does not comply with the principles of COPTTM.
- (c) In the event that the activity was in fact in compliance with an approved traffic management plan or an agreed variation to that plan, any payment for losses arising out a stop work notice required under COPTTM will be the responsibility of the Contractor.

4. Lane closures

Notwithstanding any authority delegated to the Contractor under this Appendix B relating to closures, any relief for closures will be determined in accordance with Schedule 13 (Performance Regime).

Appendix C: Asset Condition Register

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
1.	STRUCTURAL SYSTEM	METALWORK STRUCTURAL	Surface Condition	Y/N	No loss of section thickness	No defects	N/A
2.	STRUCTURAL SYSTEM	METALWORK STRUCTURAL	Surface Condition	Y/N	If a section is designed to sacrificially corrode, then loss of section within defined design limits is deemed acceptable	No defects	N/A
3.	STRUCTURAL SYSTEM	METALWORK STRUCTURAL	Surface Condition	Y/N	No signs of rusting or damage to structural steel	No signs of rusting or damage to structural steel	1 month
4.	STRUCTURAL SYSTEM	METALWORK STRUCTURAL	Surface Condition	Y/N	No signs of rusting or damage to bolts, nuts or rivets	No signs of rusting or damage to bolts, nuts or rivets	1 month
5.	STRUCTURAL SYSTEM	METALWORK STRUCTURAL	Surface Condition	Y/N	No corrosion or damage of weld runs	No corrosion or damage of weld runs	1 month
6.	STRUCTURAL SYSTEM	METALWORK NON STRUCTURAL	Surface Condition	Y/N	Minor Rusting (surface / general corrosion)	Minor Rusting (surface / general corrosion)	1 month
7.	STRUCTURAL SYSTEM	METALWORK NON STRUCTURAL	Surface Condition	%	Minor loss of section thickness (penetration less than 5% of section)	Minor loss of section thickness (penetration less than 5% of section)	1 month
8.	STRUCTURAL SYSTEM	METALWORK NON STRUCTURAL	Surface Condition	Y/N	Minor corrosion of nuts, washers and non-structural bolts	Minor corrosion of nuts, washers and non-structural bolts	1 month
9.	STRUCTURAL SYSTEM	METALWORK NON STRUCTURAL	Surface Condition	Y/N	Slight corrosion of weld runs	Slight corrosion of weld runs	1 month
10.	STRUCTURAL	METALWORK NON	Surface	Y/N	No pitting or perforation. No surface	No pitting or perforation.	1 month

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
	SYSTEM	STRUCTURAL	Condition		impact damage	No surface impact damage	
11.	STRUCTURAL SYSTEM	REINFORCED CONCRETE, PRESTRESSED CONCRETE & FILLER JOIST	Surface Condition	Y/N	Minor surface weathering and staining, leaching and rust	Minor surface weathering and staining, leaching and rust	1 month
12.	STRUCTURAL SYSTEM	REINFORCED CONCRETE, PRESTRESSED CONCRETE & FILLER JOIST	Spalling	Y/N	No spalling present	No spalling present	3 months for minor spalling where the defect has no safety concerns and/or can be programmed with a normal maintenance closure
							1 month for major spalling where there is a potential safety issue and /or requires lane closure
13.	STRUCTURAL SYSTEM	REINFORCED CONCRETE, PRESTRESSED CONCRETE & FILLER JOIST	Cracking	Y/N	Hairline cracks, difficult to detect visually	No cracking affecting structural integrity	3 months
14.	STRUCTURAL SYSTEM	REINFORCED CONCRETE, PRESTRESSED CONCRETE & FILLER JOIST	Damage	Y/N	No signs of damage to prestressing	No signs of damage to prestressing	1 month to complete engineers inspection and provide remedial report Rectification within times specified in remedial report, to be no later than 6 months after damage initially identified.

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
15.	STRUCTURAL SYSTEM	REINFORCED CONCRETE, PRESTRESSED CONCRETE & FILLER JOIST	Delamination	Y/N	No signs of delamination	No signs of delamination	3 months for minor faults where the defect has no safety concerns and/or can be programmed with a normal maintenance closure
							1 month for major faults where there is a potential safety issue and /or requires lane closure
16.	STRUCTURAL SYSTEM	MASS CONCRETE	Surface weathering	Y/N	Minor surface weathering present	Minor surface weathering present	3 months
17.	STRUCTURAL SYSTEM	MASS CONCRETE	Pointing	Y/N	Pointing sound	Pointing sound	3 months
18.	STRUCTURAL SYSTEM	MASS CONCRETE	Cracking	Y/N	No cracks	No cracking affecting structural integrity	3 months
19.	STRUCTURAL SYSTEM	MASS CONCRETE	Masonry blocks	Y/N	No bricks / masonry blocks missing	No bricks / masonry blocks missing	3 months for isolated items less than 0.5% of structure
							1 month where loss is greater than 0.5% of structure
20.	STRUCTURAL SYSTEM	MASS CONCRETE	Displacement	Y/N	No bulging, leaning or displacement	No bulging, leaning or displacement	1 month to complete engineers inspection and provide remedial report. Rectification within times specified in remedial report, to be no later than 6 months after damage

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
							initially identified.
21.	STRUCTURAL SYSTEM	METALWORK STRUCTURAL	Paintwork / Protective Coating	Y/N	Finishing coat sound, slight weathering with at least 15 years to first maintenance remaining	Finishing coat sound, slight weathering with at least 15 years to first maintenance remaining	3 months
22.	STRUCTURAL SYSTEM	METALWORK NON STRUCTURAL	Paintwork / Protective Coating	Y/N	Spot chips and cracks of finishing coat. Undercoat/substrate exposed but sound	Spot chips and cracks of finishing coat. Undercoat/substrate exposed but sound	3 months
23.	STRUCTURAL SYSTEM	BRIDGE VEGETATION	Vegetation	Y/N	Slight to no vegetation present	Slight to no vegetation present	3 months
24.	STRUCTURAL SYSTEM	FOUNDATIONS	Settlement	Y/N	No visible settlement of structure	No visible settlement of structure	Response time will depend on actual event. Actions to take include: 1. Inspect and make safe 2. Investigate and design solution 3. Implement solution no later than 6 months after damage initially identified
25.	STRUCTURAL SYSTEM	FOUNDATIONS	Differential Movement	Y/N	No visible differential movement of structure	No visible differential movement of structure	
26.	STRUCTURAL SYSTEM	FOUNDATIONS	Sliding	Y/N	No visible sliding of structure	No visible sliding of structure	
27.	STRUCTURAL SYSTEM	FOUNDATIONS	Rotation	Y/N	No visible rotation of structure	No visible rotation of structure	
28.	STRUCTURAL SYSTEM	FOUNDATIONS	Scour	Y/N	Minor scouring	Minor scouring not impacting structural integrity	3 months
29.	STRUCTURAL SYSTEM	FOUNDATIONS	Foundation Fault	Y/N	Substructure appears unaffected by foundation faults	Substructure appears unaffected by foundation faults	Treat as 24-27
30.	STRUCTURAL	BRIDGE ANCHORS	Accessibility	Y/N	All anchors must be able to be accessed,	N/A	N/A

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
	SYSTEM				inspected and maintained		
31.	STRUCTURAL SYSTEM	BRIDGE ANCHORS	Performance	Y/N	Zero failure of bridge anchors	N/A	N/A
32.	STRUCTURAL SYSTEM	BRIDGE ANCHORS	Corrosion	Y/N	No corrosion of anchor heads	N/A	N/A
33.	STRUCTURAL SYSTEM	BRIDGE ANCHORS	Life	Y/N	Not less than 100 year design life at the start of the Operating Term	N/A	N/A
34.	STRUCTURAL SYSTEM	INVERT AND WATERWAY	Scour	Y/N	Minor Scouring	Minor scouring not affecting structural integrity	3 months
						Scouring affecting structural integrity	1 month
35.	STRUCTURAL SYSTEM	INVERT AND WATERWAY	Vegetation / Silting	Y/N	Vegetation growth, trapped debris and silting causing slight disruption to flow	Vegetation growth, trapped debris and silting causing slight disruption to flow	1 months
36.	STRUCTURAL SYSTEM	DRAINAGE	Condition	Y/N	In sound condition and fully functional	In sound condition and fully functional	1 month
37.	STRUCTURAL SYSTEM	DRAINAGE	Staining	Y/N	Drainage issue causing minor staining	Drainage issue causing minor staining	1 month
38.	STRUCTURAL SYSTEM	DRAINAGE	Structural Damage	Y/N	No structural damage present	No structural damage present	1 month
39.	STRUCTURAL SYSTEM	DRAINAGE	Blockage	Y/N	No blockage of weep holes or outlets	No blockage of weep holes or outlets	1 month
40.	STRUCTURAL SYSTEM	SURFACING	Condition	Y/N	No crazing, tracking, fretting or longitudinal reflective cracking	N/A	N/A

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
41.	CIVIL SYSTEM	RIGID PAVEMENT (BITUMINOUS COMPOSITE)	Cracking	% / 100m Rolling Length	No more than 8% of a 100m Rolling Length is cracked	N/A	N/A
42.	CIVIL SYSTEM	RIGID PAVEMENT (BITUMINOUS COMPOSITE)	Potholes	mm	Pothole diameter is no more than 150mm	N/A	N/A
43.	CIVIL SYSTEM	RIGID PAVEMENT (BITUMINOUS COMPOSITE) INCLUDING BRIDGE DECKS	Deformation	mm	No more than 25mm of joint deformation allowed	N/A	N/A
44.	CIVIL SYSTEM	RIGID PAVEMENT (BITUMINOUS COMPOSITE) INCLUDING BRIDGE DECKS	NAASRA Roughness - asphaltic concrete	c/km/100m Rolling Length	Roughness for asphaltic surface is no more than 55 counts per km per 100m Rolling Length	N/A	N/A
45.	CIVIL SYSTEM	RIGID PAVEMENT (BITUMINOUS COMPOSITE) INCLUDING BRIDGE DECKS	NAASRA Roughness - chipseal	c/km/100m Rolling Length	Roughness for chipseal surface is no more than 70 counts per km per 100m Rolling Length	N/A	N/A
46.	CIVIL SYSTEM	RIGID PAVEMENT (BITUMINOUS COMPOSITE)	Movement	mm	No more than 25mm joint or slab movement allowed	N/A	N/A
47.	STRUCTURAL SYSTEM	BURIED JOINT	Condition	Y/N	Reasonably sound (no minor surface cracks present)	N/A	N/A
48.	STRUCTURAL SYSTEM	ASPHALTIC PLUG	Debonding	Y/N	Minor debonding present between plug and road	N/A	N/A
49.	STRUCTURAL	ASPHALTIC PLUG	Binder /	Y/N	Slight loss of surface binder and	N/A	N/A

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
	SYSTEM		Aggregate		aggregate		
50.	STRUCTURAL SYSTEM	ASPHALTIC PLUG	Binder Tracking	Y/N	Minor tracking and flow of binder	N/A	N/A
51.	STRUCTURAL SYSTEM	NOSING	Cracking	Y/N	Minor cracking along nosing	N/A	N/A
52.	STRUCTURAL SYSTEM	ELASTOMERIC AND OTHERS	Wear	Y/N	Minor signs of wear present	N/A	N/A
53.	STRUCTURAL SYSTEM	ELASTOMERIC AND OTHERS	Strip Sealant	Y/N	Strip sealant sound	N/A	N/A
54.	STRUCTURAL SYSTEM	ELASTOMERIC AND OTHERS	Road Surface Adjacent to Joint	Y/N	Sound road surface adjacent to joint	N/A	N/A
55.	STRUCTURAL SYSTEM	ELASTOMERIC AND OTHERS	Fixings	Y/N	Sound fixings	N/A	N/A
56.	STRUCTURAL SYSTEM	ELASTOMERIC AND OTHERS	Sealant	Y/N	Sealant for induced crack is sound	N/A	N/A
57.	STRUCTURAL SYSTEM	EMBANKMENT	Subsidence / Deformation	Y/N	Minor subsidence or deformation	Minor subsidence or deformation	1 month to complete engineers inspection and provide remedial report. Rectification within times specified in remedial report, to be no later than 6 months after damage initially identified.
58.	STRUCTURAL SYSTEM	BEARINGS	Weathering	Y/N	Negligible rusting. Minor weathering	Negligible rusting. Minor weathering	1 month
59.	STRUCTURAL SYSTEM	BEARINGS	Position	Y/N	Correct position (no offset)	Correct position (no offset)	3 months

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
60.	STRUCTURAL SYSTEM	BEARINGS	Position	Y/N	Sliding bearing is in the correct position	Sliding bearing is in the correct position	3 months
61.	STRUCTURAL SYSTEM	BEARINGS	Crazing	Y/N	No crazing present	No crazing present	3 months
62.	STRUCTURAL SYSTEM	BEARINGS	Condition	Y/N	Sliding plate sound	Sliding plate sound	3 months
63.	STRUCTURAL SYSTEM	BEARINGS	Condition	Y/N	Bearings sound	Bearings sound	3 months
64.	STRUCTURAL SYSTEM	IMPACT DAMAGE	Condition	Y/N	Slight surface scoring, minor displacement of elements e.g. marking and chipping of beam faces	Slight surface scoring, minor displacement of elements e.g. marking and chipping of beam faces	1 month
65.	CIVIL SYSTEM	BUILDINGS	Structural integrity	Y/N	No structural issues including weathertightness	No defects	N/A
66.	CIVIL SYSTEM	BUILDINGS	Corrosion	% AREA	Less than 30% of metal work area is corroded	No defects	N/A
67.	CIVIL SYSTEM	BUILDINGS	External cladding repair	Y/N	External cladding does not need more than minor cleaning, repair or refurbishment	No defects	N/A
68.	CIVIL SYSTEM	BUILDINGS	Internal surfacing repair	Y/N	Interior surfacing does not need more than minor repair or refurbishment	No defects	N/A
69.	CIVIL SYSTEM	EDGE MARKER POSTS	Missing / Damaged	Number	No more than 1 consecutive marker post missing or damaged	No more than 1 consecutive marker post missing or damaged	2 weeks
70.	CIVIL SYSTEM	EDGE MARKER POSTS	Dirty, discoloured or defaced	Number	No more than 1 consecutive marker post dirty, discoloured or defaced.	No more than 1 consecutive marker post dirty, discoloured or	2 weeks

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
						defaced.	
71.	CIVIL SYSTEM	EDGE MARKER POSTS	Night visibility	Number	At least 3 marker posts visible at any point in time when viewed from the centre of the lane at night, with head lights on dipped beam, where road geometry permits a line of sight	At least 3 marker posts visible at any point in time when viewed from the centre of the lane at night, with head lights on dipped beam, where road geometry permits a line of sight	2 weeks
72.	CIVIL SYSTEM	FENCES, GATES, NOISE WALLS	Structural integrity - Steel and concrete	Y/N	Good structural condition: No corroded metal that affects function or structural integrity. No rotten or missing panels/posts. No cracking or spalling of brickwork or concrete that affects the function. Fences are stock proof. No vandalism or minor accident damage that affects the safety or workings of the structure. Vegetation does not impact on operation	Good structural condition: No corroded metal that affects function or structural integrity. No rotten or missing panels/posts. No cracking or spalling of brickwork or concrete that affects the function. Fences are stock proof. No vandalism or minor accident damage that affects the safety or workings of the structure. Vegetation does not impact on operation	1 month 24 hours where the fence is damaged to the extent that stock can enter the expressway corridor

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
73.	CIVIL SYSTEM	FENCES, GATES, NOISE WALLS	Protective coating	Y/N	Fencing, gates and noise walls that have been painted to preserve the material from decay or corrosion may not have significant paint imperfections or significant loss of paint	Fencing, gates and noise walls that have been painted to preserve the material from decay or corrosion may not have significant paint imperfections or significant loss of paint	1 month
74.	CIVIL SYSTEM	FENCES, GATES, NOISE WALLS	Corrosion	%	No more than 5% of Panel (mesh) is corroded, and no loss of noise attenuation.	No more than 5% of Panel (mesh) is corroded, and no loss of noise attenuation.	1 month
75.	CIVIL SYSTEM	FENCES, GATES, NOISE WALLS	Structural integrity - wooded posts	Y/N	Wooden fence, posts and barriers are structurally sound (e.g. not rotten or broken) and are functioning as intended	Wooden fence, posts and barriers are structurally sound (e.g. not rotten or broken) and are functioning as intended	1 month
							7 days if there is a risk of the fence falling onto the expressway
76.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	Cracking	%/ 100m Rolling Length	No more than 10% of a 100m Rolling Length is cracked	No more than 10% of a 100m Rolling Length is cracked	6 month
77.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	Pothole	mm	Pothole diameter is no more than 150mm	Pothole diameter is no more than 150mm – no defects	N/A
						Potholes >75mm in dia - <2 defects per 1km	24hrs
78.	CIVIL SYSTEM	SURFACING	Delamination / Scabbing	%/ 100m Rolling Length	No more than 10% of a 100m Rolling Length has asphalt delamination or chipseal scabbing	No defects	N/A

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
79.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	Heaving/shoving	mm (depth/height)	No heaving or shoving greater than 50mm in height or depth	No defects	N/A
80.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	Edge drop/lift	Total length of edge drop (m) /5km Rolling Length	No more than 500m length of edge drop/lift per 5km Rolling Length. Definition: Edge drop/lift is 50mm (low or high) for a continuous 10m length	N/A	N/A
81.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	Edge break	m length	No more than 10m length of continuous edge break which extends more than 50mm transversely into carriageway	No more than 10m length of continuous edge break which extends more than 50mm transversely into carriageway	2 weeks
82.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	Edge break	m/5km Rolling Length	No more than 100 m of edge break within 5km Rolling Length	N/A	N/A
83.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	Rutting	mm/5km Rolling Length	No more than 50m of rutting, exceeding 15mm depth, per lane per 5km rolling length. Both wheel paths will be measured in each lane (for the avoidance of doubt, rutting in each wheel path will be considered separately when calculating the combined total linear metres of rutting in any lane).	At handback – no defects Concession period – fix rutting if it becomes a safety issue	6 months
84.	CIVIL SYSTEM	FLEXIBLE PAVEMENT SURFACING	SCRIM ESC	ESC value against Site category	SCRIM ESC is greater than 0.3	SCRIM ESC is greater than 0.3	12 months

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
85.	CIVIL SYSTEM	FLEXIBLE PAVEMENT SURFACING	SCRIM ESC	ESC value against Site category	SCRIM ESC is less than 0.1 below the SCRIM site category minimum value.	SCRIM ESC is less than 0.1 below the SCRIM site category minimum value.	2 months for Priority A sites
							12 months for other sites
86.	CIVIL SYSTEM	FLEXIBLE PAVEMENT SURFACING	Macrotexture Rural	mm/100m Rolling Length	Texture is greater than 0.7 mm per 100m Rolling Length for Rural sections	Texture is greater than 0.7 mm per 100m Rolling Length for Rural sections	12 months
87.	CIVIL SYSTEM	FLEXIBLE PAVEMENT SURFACING	Macrotexture Urban	mm/100m Rolling Length	Texture is greater than 0.5 mm per 100m Rolling Length for Urban sections	N/A	N/A
88.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	NAASRA Roughness - Chipseal	c/km/100m Rolling Length	Roughness for chipseal surface is no more than 70 counts per km per 100m Rolling Length	N/A	N/A
89.	CIVIL SYSTEM	FLEXIBLE PAVEMENT	NAASRA Roughness - Asphaltic Concrete	c/km/100m Rolling Length	Roughness for asphaltic surface is no more than 55 counts per km per 100m Rolling Length	Roughness for asphaltic surface is no more than 55 counts per km per 100m Rolling Length – excluding bridge joints	N/A
90.	CIVIL SYSTEM	FLEXIBLE PAVEMENT (APPLICABLE 5 YEARS PRIOR TO HAND BACK)	Trafficked area (including shoulders) defect extent	%/100m Rolling Length	5 years prior to hand back, patching or defect extent in the trafficked area in any 100m Rolling Length, is no more than 10%	No defects	N/A
91.	CIVIL SYSTEM	FLEXIBLE PAVEMENT (APPLICABLE 5 YEARS PRIOR TO HAND BACK)	Paved area (trafficked and not trafficked, e.g. cycleways, pathways, etc.) defect extent	%/100m Rolling Length	5 years prior to hand back, patching or defect extent in the paved area in any 100m Rolling Length, is no more than 15%	No defects	N/A

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
92.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Trafficked area (including shoulders) defect extent	%/100m rolling	5 years prior to hand back, patching or defect extent in the trafficked area in any 100m rolling length, is no more than 20%	N/A	N/A
93.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Paved area (trafficked and not trafficked, e.g. cycleways, pathways, etc.) defect extent	%/100m rolling	5 years prior to hand back, patching or defect extent in paved area in any 100m rolling length, is no more than 20%	N/A	N/A
94.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Pothole	mm	Pothole diameter is no more than 100mm	N/A	N/A
95.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Ponding	mm	Standing water is no more than 20mm deep	N/A	N/A
96.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Depressions	mm	Small areas of depressions are no more than 20mm in depth	N/A	N/A
97.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Vegetation	Y/N	No vegetation encroachment within 3.0m height and width (edge to edge) of path / track	N/A	N/A
98.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Visual loss of texture	%/100m rolling	No more than 10% visual loss of texture per 100m rolling length due to wearing of screed for cycle facilities	N/A	N/A
99.	CIVIL SYSTEM	SEALED FOOTPATH & CYCLETRACKS	Cracking	%/100m rolling	No more than 10% cracking per 100m rolling length	N/A	N/A
100.	CIVIL SYSTEM	UNSEALED ROAD ACCESS TRACK	Accessibility	Y/N	Track is accessible by four wheel drive or heavy duty vehicles at all times	N/A	N/A
101.	CIVIL SYSTEM	GATES	Function	Y/N	Gate is operating as per its intended purpose (freely opens, closes, locks)	Gate is operating as per its intended purpose (freely	1 week

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
						opens, closes, locks)	
102	GEOTECHNICAL	SETTLEMENT PLATES	Fit for intended purpose	Y/N	All Settlement Plates operating as intended	All Settlement Plates operating as intended	3 months
103	GEOTECHNICAL	VERTICAL INCLINOMETERS	Fit for intended purpose	Y/N	All Vertical Inclinometers operating as intended	All Vertical Inclinometers operating as intended	3 months
104	GEOTECHNICAL	VIBRATING WIRE PIEZOMETERS	Fit for intended purpose	Y/N	All Vibrating Wire Piezometers are fully functional	All Vibrating Wire Piezometers are fully functional	3 months
105	GEOTECHNICAL	EXTENSOMETERS	Fit for intended purpose	Y/N	All Extensometers are fully functional	All Extensometers are fully functional	3 months
106	GEOTECHNICAL	SURVEY MARKERS	Missing	Y/N	No missing Survey Markers	No missing Survey Markers	3 months
107	GEOTECHNICAL	STANDPIPE PIEZOMETERS	Fit for intended purpose	Y/N	All Standpipe Piezometers are fully functional	All Standpipe Piezometers are fully functional	3 months
108	GEOTECHNICAL	SEISMIC MONITORING ACCELEROMETERS	Fit for intended purpose	Y/N	All Seismic Monitoring Accelerometers are fully functional	All Seismic Monitoring Accelerometers are fully functional	3 months
109	GEOTECHNICAL	SHOTCRETE	Cracking	Y/N	No cracks causing loss of structural integrity or loss of water tightness	No cracks causing loss of structural integrity or loss of water tightness	3 months
110	GEOTECHNICAL	ROCKFALL MESH	Corrosion	Y/N	Corrosions / rusting visible over no more than 5% of the affected system	Corrosions / rusting visible over no more than 5% of the affected system	3 months
111	GEOTECHNICAL	ROCK BOLTS	Corrosion	Y/N	No failing rock bolts	No failing rock bolts	3 months
112	GEOTECHNICAL	SLOPES	Overhanging obstacle	Y/N	Slopes must be free of protrudence, e.g. overhanging trees, overgrown	No defects	N/A

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
					vegetation, overhanging rocks etc		
113	GEOTECHNICAL	SLOPES	Stripped	% area/km	No more than 10% of the area per km of slope is stripped (e.g. vegetation, topsoil etc.)	No more than 5% of the area per km of slope is stripped (e.g. vegetation, topsoil etc.)	3 months
114	GEOTECHNICAL	DRAINAGE	Functional	Y/N	All geotechnical drainage elements are functional. Pipes/ drains are clear of debris & rubbish with no silt build-up	All geotechnical drainage outlet pipes are functional. Pipes/ drains are clear of debris & rubbish with no silt build-up	1 week
115	CIVIL SYSTEM	KERBS EDGINGS AND PREFORMED CHANNELS (INCL. KERB & GUTTER)	Vertical alignment	mm	Vertical misalignment is less than 30mm	No defects	N/A
116	CIVIL SYSTEM	KERBS EDGINGS AND PREFORMED CHANNELS (INCL. KERB & GUTTER)	Horizontal misalignment	mm	Horizontal misalignment is less than 50mm	No defects	N/A
117	CIVIL SYSTEM	KERBS EDGINGS AND PREFORMED CHANNELS (INCL. KERB & GUTTER)	Physical damage	Y/N	Minor physical damage not impacting on the performance of the asset, i.e., no loose or broken concrete, undermined sections or deep cracks	Minor physical damage not impacting on the performance of the asset, i.e., no loose or broken concrete, undermined sections or deep cracks	3 month
118	CIVIL SYSTEM	KERBS EDGINGS AND PREFORMED CHANNELS (INCL. KERB & GUTTER)	Ponding	Y/N	Minor water ponding due to misalignment	Minor water ponding due to misalignment	3 months

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
119	CIVIL SYSTEM	LANDSCAPING, VEGETATION & WEED CONTROL	Pest / undesirable / noxious	Y/N	No pest, undesirable or noxious vegetation allowed, as defined in the district plan or by Local Authorities	No pest, undesirable or noxious vegetation allowed, as defined in the district plan or by Local Authorities	6 months. Plan to spray in advance of seeding
120	CIVIL SYSTEM	LANDSCAPING, VEGETATION & WEED CONTROL	Dead	% AREA	No more than 5% area of dead vegetation	No defects	N/A
121	CIVIL SYSTEM	LANDSCAPING, VEGETATION & WEED CONTROL	Obstructing	Y/N	No vegetation obstructing signs, intersection and edge zone sight distance or barrier delineation	No defects	N/A
122	CIVIL SYSTEM	LANDSCAPING, VEGETATION & WEED CONTROL	Hazard	Y/N	No trees posing threat to safety of road users, pedestrians or any fire hazard	No defects	N/A
123	CIVIL SYSTEM	LANDSCAPING, VEGETATION & WEED CONTROL	Structural integrity	Y/N	No vegetation impacting on the barrier system structural integrity	No defects	N/A
124	CIVIL SYSTEM	RETAINING WALLS	Displacement	Y/N	No bulging, leaning or visible displacement	No bulging, leaning or visible displacement	1 month to complete engineers inspection and provide remedial report. Rectification within times specified in remedial report, to be no later than 6 months after damage initially identified.
125	CIVIL SYSTEM	RETAINING WALLS	Corrosion / Rusting	% FACE AREA	Visible corrosion / rusting of no more than 5% of face area	Visible corrosion / rusting of no more than 5% of face area	1 month
126	CIVIL SYSTEM	RETAINING WALLS	Structural cross section	Y/N	No loss of structural cross section	No loss of structural cross section	1 month

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
127	CIVIL SYSTEM	RETAINING WALLS	Condition	Y/N	No visible distress / structural damage present. No rotten, missing or damaged panels / posts	No visible distress / structural damage present. No rotten, missing or damaged panels / posts	1 month
128	CIVIL SYSTEM	RETAINING WALLS	Cracking	Y/N	No cracking causing loss of structural integrity	No cracking causing loss of structural integrity	1 month
129	CIVIL SYSTEM	ROAD MARKINGS	Retro reflectivity	mcd/m2/lx	Retro reflection is at least 150 mcd/m2/lx	Retro reflection is at least 150 but <170 mcd/m2/lx	1 month
130	CIVIL SYSTEM	ROAD MARKINGS	Retro reflectivity (wet)	mcd/m2/lx	Retro reflection when damp is at least 80mcd/ms/lx	Retro reflection when damp is at least 80mcd/ms/lx	1 month
131	CIVIL SYSTEM	ROAD MARKINGS	Visibility	%/5km Rolling Length	At least 98 % of marking material is visible for marking within 5km Rolling Length	At least 98 % of marking material is visible for marking within 5km Rolling Length	1 month
132	CIVIL SYSTEM	ROAD MARKINGS	Visibility	% of marking	100% of the marking material is visible for marking on curves (tangent points), stop & give way and pedestrian crossing marking	100% of the marking material is visible for marking on curves (tangent points), stop & give way and pedestrian crossing marking	1 month
133	CIVIL SYSTEM	RPM & RRPMS	Consecutive missing / defective	number	No more than 2 consecutive RPM or RRPMS are missing or defective	No more than 2 consecutive RPM or RRPMS are missing or defective	2 weeks
134	CIVIL SYSTEM	SAFETY BARRIERS	Spalling / corrosion	% AREA	No more than 10% of barrier area has concrete spalling and/or corrosion	No defects	N/A
135	CIVIL SYSTEM	SAFETY BARRIERS	Misalignment	Y/N	Alignment must be as per manufacturer's specification	Alignment must be as per manufacturer's	48 hours if barrier is ineffective or hazardous

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
						specification	1 month for non-hazardous defects
136	CIVIL SYSTEM	SAFETY BARRIERS / TERMINAL ENDS	Structural integrity	Y/N	Good structural condition: No corroded metal that affects the function or structural integrity. No vandalism or minor accident damage that affects the safety or workings of the structure	Good structural condition: No corroded metal that affects the function or structural integrity. No vandalism or minor accident damage that affects the safety or workings of the structure	48 hours if barrier is ineffective or hazardous
							1 month for non-hazardous defects
137	CIVIL SYSTEM	SAFETY BARRIERS / TERMINAL ENDS	Tensioning / Missing bolts & fixings	Y/N	The safety barrier must be tensioned and must fully comply with the specification TM28B. The safety barrier is not loose or is not missing bolts or fixings	No defects	N/A
138	CIVIL SYSTEM	SIGNS AND TRAFFIC DEVICES	Legibility	Y/N	No missing letters or illegible signs	No missing letters or illegible signs	1 week
139	CIVIL SYSTEM	SIGNS AND TRAFFIC DEVICES	Visibility	Y/N	All signs must be visible and legible from a distance of 160m at night when viewed using dipped headlight	All signs must be visible and legible from a distance of 160m at night when viewed using dipped headlight	1 week
140	CIVIL SYSTEM	SIGNS AND TRAFFIC DEVICES	Alignment to vertical	degrees	Signposts are leaning at no more than 20 degrees from the vertical and are stable	No defects	N/A
141	CIVIL SYSTEM	SIGNS AND TRAFFIC DEVICES	Fixings	Y/N	Sign fixings are not loose or insecure	Sign fixings are not loose or insecure	1 week

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
142	CIVIL SYSTEM	SIGNS AND TRAFFIC DEVICES	Pole / post surface corrosion	% AREA	No more than 20% of area is corroded	No defects	N/A
143	CIVIL SYSTEM	SIGNS AND TRAFFIC DEVICES	Cleanliness	%	No more than 80% of the sign face is dirty	No defects	N/A
144	CIVIL SYSTEM	SIGNS AND TRAFFIC DEVICES	Physical damage	Y/N	No significant membrane damage, severe bends or distortions. Not structurally compromised	No significant membrane damage, severe bends or distortions. Not structurally compromised	1 week
145	ENVIRONMENTAL SYSTEM	WEATHER MONITORING DEVICES	Functioning	Y/N	Weather monitoring devices are functioning and calibrated as per manufacturers requirements	N/A	N/A
146	HYDRAULIC SYSTEM	CATCH PIT, MANHOLE, COVER, GRATE, LID, CABLE PIT	Level differential	mm	Differential level between cover/grate/lid and abutting pavement is no more than 20mm	Differential level between cover/grate/lid and abutting pavement is no more than 20mm	3 months
147	HYDRAULIC SYSTEM	CATCH PIT, MANHOLE, COVER, GRATE, LID, CABLE PIT	Structural integrity	Y/N	Structural integrity is not compromised due to cracking	Structural integrity is not compromised due to cracking	7 days if in carriageway or shoulder, 3 months elsewhere
148	HYDRAULIC SYSTEM	CATCH PIT, MANHOLE, COVER, GRATE, LID, CABLE PIT	Physical damage	Y/N	No physical damage to concrete (e.g. spalling exposing reinforcing steel)	No physical damage to concrete (e.g. spalling exposing reinforcing steel)	7 days if in carriageway or shoulder, 3 months elsewhere
149	HYDRAULIC SYSTEM	CATCH PIT, MANHOLE, COVER, GRATE, LID, CABLE PIT	Missing	Y/N	No cover, grate or lid missing	No cover, grate or lid missing	4hrs if in carriageway/ shoulder, 24 hours elsewhere

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
150	HYDRAULIC SYSTEM	CATCH PIT, MANHOLE, COVER, GRATE, LID, CABLE PIT	Blockage, access & locating	Y/N	Minor loose material, debris and/or vegetation covering pit/ cover/ grate/ lid not impeding free flow, access or preventing location of the asset	Minor loose material, debris and/or vegetation covering pit/ cover/ grate/ lid not impeding free flow, access or preventing location of the asset	1 month
151	HYDRAULIC SYSTEM	TABLE DRAINS, OPEN DRAINS AND PREFORMED CHANNELS	Scour depth	Y/N	Scour depth must not be more than 10% of the drain per 100m length exceeding 20 mm deep	Scour depth must not be more than 10% of the drain per 100m length exceeding 20 mm deep	1 month
152	HYDRAULIC SYSTEM	TABLE DRAINS, OPEN DRAINS AND PREFORMED CHANNELS	Ponding	Y/N	No ponding onto road surface causing a potential hazard	No defects	N/A
153	HYDRAULIC SYSTEM	TABLE DRAINS, OPEN DRAINS AND PREFORMED CHANNELS	Flooding	Y/N	No flooding on adjoining properties	No flooding on adjoining properties	4 hrs response is required if a residential or commercial property is flooded.
							1 month
154	HYDRAULIC SYSTEM	UNDERGROUND DRAINAGE (CULVERTS)	Blocked	%	No more than 20% of cross sectional area is blocked or flooded	No more than 20% of cross sectional area is blocked or flooded	1 month
155	HYDRAULIC SYSTEM	UNDERGROUND DRAINAGE (PIPES, WEEPHOLES, SUBSOIL DRAINAGE, INLETS/OUTLETS)	Blocked	Y/N	No isolated blockage that could allow water to pond or flow onto the carriageway or undermine the asset integrity	No isolated blockage that could allow water to pond or flow onto the carriageway or undermine the asset integrity	1 month
156	HYDRAULIC SYSTEM	UNDERGROUND DRAINAGE	Structural condition	Y/N	Good structural condition (including erosion): No corroded material,	Good structural condition (including erosion): No	1 month to complete engineer's inspection and

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
		(CULVERTS, PIPES, INLETS/OUTLETS)			misaligned joint or cracking that affects function or structural integrity	corroded material, misaligned joint or cracking that affects function or structural integrity	provide remedial report. Rectification within times specified in remedial report, to be no later than 6 months after damage initially identified.
157	MANAGEMENT SYSTEM	PLANT MANAGEMENT	Availability	%	100% availability required. No physical deterioration of workstation, server and/or communications network that affects availability	N/A	N/A
158	MANAGEMENT SYSTEM	PLANT MANAGEMENT	Availability	%	100% availability required. No software failures or operation of PMCS is not significantly affected	N/A	N/A
159	MANAGEMENT SYSTEM	VARIABLE MESSAGE SIGNS	Structural Condition	%	No visible corrosion in structural elements, no more than 95% of structural integrity compromised or requiring immediate repair work and presenting no danger to road users	No visible corrosion in structural elements, no more than 95% of structural integrity compromised or requiring immediate repair work and presenting no danger to road users	1 month
160	MANAGEMENT SYSTEM	VARIABLE MESSAGE SIGNS	Availability	%	At least 99% availability required. No significant defects with VMS messaging/display. Technology elements are not showing signs of wear and tear and are still delivering intended function	At least 99% availability required. No significant defects with VMS messaging/display. Technology elements are not showing signs of wear and tear and are still delivering intended function	48 Hours. If deemed critical by either party then supplement with trailer mounted units within 4 hours of advice.
161	MANAGEMENT SYSTEM	CLOSED CIRCUIT TELEVISION CAMERAS (FIXED, PTZ), ENFORCEMENT	Availability	%	System availability of at least 99%	System availability of at least 99%	48hrs If deemed critical by either party then supplement with trailer

	Type	Asset Element	Monitoring Parameter	Unit	Minimum acceptable asset condition	AMM Target LOS	Response time
		CAMERAS, CONTROLLERS, MONITOR AND CCTV CONTROL CABINETS					mounted units within 4 hours of advice.
162	MANAGEMENT SYSTEM	RADAR	Availability	%	System availability of at least 99%	Not Applicable	N/A
163	MECHANICAL AND ELECTRICAL SYSTEM	STREET, BRIDGE, SIGN AND EXTERNAL BUILDING LIGHTING	Functional	%	At least 95% of lighting is fully functional as intended	At least 95% of lighting is fully functional as intended	48hrs
164	MECHANICAL AND ELECTRICAL SYSTEM	STREET LIGHTING	Functional	number	No more than 1 street light at any interchange is not fully functional as intended	No more than 1 street light at any interchange is not fully functional at any one time	48hrs

Appendix D: Planned Maintenance Lane Hours

Table 1 – Binary Section PMLH by Contract Year (commencing from the start of the January following the Service Commencement Date)

C. Year	Ramps	Roundabout	Northern Tie-ins	Total Hours
6			100	100
8	20	60		80
10	20	20	20	60
14	150		150	300
16	20	100		120
24	30	100	90	220

Table 2 – Foam Bitumen PMLH by Contract Year (commencing from the start of the January following the Service Commencement Date)

C. Year	Northbound	Southbound	Total Hours
10	40	40	80
11	40	40	80
12	40	40	80
23	200	200	400
24	200	200	400
25	200	200	400