STANDARD PROFESSIONAL SERVICES SPECIFICATION – MANAGEMENT OF STATE HIGHWAY BRIDGES, GEOTECHNICAL STRUCTURES AND OTHER SIGNIFICANT STRUCTURES

14 FEBRUARY 2020

REV 7

This standard specification comprises all standard components of the management of state highway bridges, geotechnical structures and other significant structures for Waka Kotahi NZ Transport Agency. However, only those components specifically requested in the contract scope section are to be undertaken by the Consultant.

1. INTRODUCTION

Essentially, the contract comprises the management of bridges and large culverts, geotechnical structures and other significant structures within the state highway corridors in the contract area. The principal functions include:

- regular inspections of the structures
- structural maintenance activities
- emergency services
- liaison with Network Outcomes Contractors
- managing the posting and rating evaluation of bridges
- liaison with capital projects teams on structure proposals
- maintenance and updating of inventory records
- structure lifecycle management planning.

For the purposes of this specification, 'bridge', 'geotechnical structures' and 'other significant structures' are as defined in NZTA S6: 2020 *Bridges, geotechnical structures and other significant structures inspection policy*.

Appendix A includes a flowchart showing various activities and related interactions between the Consultant, the Network Outcomes Contractor(s) and the Principal for defect identification (inspections), maintenance management and maintenance physical works.

2. STRUCTURE INSPECTIONS

The Consultant shall be responsible for the inspection of all specified structures and for on-site review and reconciliation of structures inspections.

Detailed programming of the inspections is the Consultant's responsibility. However, all inspections shall be completed in accordance with the contract documents.

2.1 Structures inspection policy

All inspections shall be carried out in accordance with specification NZTA S6: 2020 *Bridges, geotechnical structures and other significant structures inspection policy*.

2.2 Schedule of bridges, geotechnical structures and other significant structures

The Principal will supply a schedule of all bridges, geotechnical structures and other significant structures within the contract area to the Consultant. The type and frequency of inspections for each structure will be specified in the contract Scope of Services.

2.3 Inspections

2.3.1 Routine surveillance inspections

Routine surveillance inspections for structures (refer NZTA S6: 2020), will be undertaken by the Network Outcomes Contractor(s), and are not included in this contract. The Consultant shall however liaise with the Network Outcomes Contractor(s) to agree the timing of these inspections.

By agreement between the Principal, the Network Outcomes Contractor(s) and the Consultant a programme of routine surveillance inspections shall be implemented such that every structure is inspected annually by the Network Outcomes Contractor (routine surveillance inspection) or the Consultant (general or principal inspection).

The Network Outcomes Contractor(s) is expected to provide the Consultant with inspection results at least monthly or as they become available, to ensure any potential risks are known.

2.3.2 General inspections

General inspections are defined in NZTA S6: 2020. The programme for general inspections is included in the Scope of Services. It should be noted that a general inspection includes verification of the descriptive data recorded for each structure in the Transport Agency's structures database system (refer section 8.2).

If during a general inspection, structural defects are noted which may affect the load capacity of the structure or its safety, the Consultant shall request from the Principal approval to undertake a principal inspection or special inspection if this is deemed necessary. The Consultant may also request approval for the inspection to be up-rated to a special inspection at the next inspection cycle.

If during an inspection, it is noted that urgent repair or maintenance is required to a structure, this shall be immediately reported to the Principal and approval sought to proceed with the remedial work.

2.3.3 Principal inspections

Principal inspections are defined in NZTA S6: 2020. The programme for principal inspections is included in the Scope of Services.

Some structures may be identified as having specific access requirements or features requiring unusual or specific inspection. This includes structures where predominant river flows preclude pedestrian access from the riverbed for detailed inspections, bridges where the superstructure is too far above the bed to allow detailed inspection from the bed, or other access difficulties where specialist access equipment will be required to achieve a close-quarter inspection. The traffic management associated with such specialist access equipment shall be specifically included in the Consultant's site safety plan.

Structures requiring specialised access machinery or having unusual features to be inspected are identified on the provided schedules together with the relevant details.

Stock underpasses or stock bridges where special agreement from the owner/farmer is required along with specific access requirements, are identified on the provided schedules together with the relevant details.

2.3.4 Special inspections

Special inspections are defined in NZTA S6: 2020. The programme for special inspections is included in the Scope of Services.

During the contract period, additional structures to those initially specified or programmed may be identified as requiring special inspections. These shall be agreed between the Principal and Consultant.

Bailey bridge foundations, substructure and decking shall be inspected in accordance with section 5.5.

2.4 Inspection reporting

Inspection reports and photographs shall be prepared in accordance with Section 8.1.

If any structure is unable to be inspected as specified and/or exceeds its compliance inspection interval (year), the Principal shall be notified.

2.5 Temporary traffic management (TTM) for structures inspections.

In accordance with NZTA S6:2020 the consultant shall ensure all traffic control and management is carried out in accordance with the *Code of practice for temporary traffic management (CoPTTM)*. Relevant requirements for temporary traffic management are further stated in *Temporary traffic management requirements for controlling risks when working on state highways*.

Civil Contractors New Zealand (CCNZ) in partnership with the Transport Agency and other key stakeholders have developed *Interim temporary traffic management guidance – risk-based assessment* to allow persons conducting a business or undertaking (PCBU) with control and management of a work site to implement a risk-based assessment criterion.

CoPTTM is provided as the best practice guideline for the implementation of TTM controls. Where the minimum TTM controls within *CoPTTM* are selected, the risk assessment criteria detailed in this interim document are to be referenced (or similarly approved) and included in the decision-making process, where required, as additional to protect road workers and road users.

3. ROUTINE MAINTENANCE SERVICES

3.1 General

As a result of undertaking inspections, the Consultant shall identify any routine maintenance required.

Routine maintenance definition: All routine work necessary to maintain the condition and appearance of structures. These works are ‘routine’ in the sense that they do not require design input.

Activities include:

- keeping all components clean
- maintaining protective coated surfaces of components above deck level in good condition
- removing detritus from decks, drainage systems, deck joints, etc
- repairing damaged guardrails and handrails
- maintaining waterway and clearing debris from structure
- maintaining drainage systems, deck joints, bearings, linkages etc, and timber decks in serviceable condition
- removing graffiti
- signs, markers, lighting and deck surfacing.

Unless requested by the Principal, routine maintenance implementation does not form part of this contract and is undertaken by others.

The Consultant shall forward to the Principal and the Network Outcomes Contractor(s) quarterly, a schedule of routine maintenance identified by the Consultant, grouped by network area and priority (as advised by the Principal), including:

- bridge or structure name
- state highway and location reference

- description of maintenance work required
- priority (urgent, high, medium, low)
- any specific comments.

Where previous reports have identified that routine maintenance of structures is required, the verification that such maintenance has been completed shall be made at the time of inspection. At the same time that notification of newly identified routine maintenance items occurs, the Principal shall be notified of any previously identified maintenance that has not been undertaken or completed.

Where requested by the Principal, the Consultant shall prepare an Offer of Service for contract preparation and management for routine maintenance projects.

The Offer of Service shall outline:

- description of problem
- estimated cost
- completion date.

Following the Principal's approval of the Offer of Service, the Consultant shall undertake the contract preparation and management in accordance with the Transport Agency's standard professional services specifications, as agreed with the Principal.

3.2 Liaison meetings

Meetings shall be held on a six-monthly basis (unless otherwise agreed with the Principal) with the Network Outcomes Contractor(s) (in particular the nominated Structures Coordinator(s) for the contractor) and the Maintenance Contract Manager(s) (for the purposes of this clause and the flowchart in appendix A referred to jointly with the Principal) to discuss the management of bridges, geotechnical structures and other significant structures and in particular routine maintenance. The following issues shall be addressed at the meeting:

- roles and responsibilities
- routine maintenance
  - the Network Outcomes Contractor will provide a draft schedule of routine maintenance items they have identified. This will include a prioritised work programme and identify whether the items are included in their contract lump sum (risk included) or are outside the lump sum (risk excluded). The Network Outcomes Contractor will provide prices for proposed routine maintenance items not included under the lump sum
  - the Consultant shall provide details of additional routine maintenance items identified during general and principal inspections
  - the Consultant, Network Outcomes Contractor and the Principal shall discuss routine maintenance requirements and agree on the schedule of work
  - the Consultant, Network Outcomes Contractor and the Principal shall discuss any routine maintenance work that is outside the scope of the network outcomes contract that the Network Outcomes Contractor will be asked to undertake as a variation to their network outcomes contract
  - the Consultant, Network Outcomes Contractor and the Principal shall discuss unusual or significant work items and work progress
- structural maintenance
  - the Consultant and the Network Outcomes Contractor shall discuss any structural defects identified by the Network Outcomes Contractor
  - the Consultant shall outline the proposed work programme, noting any work that the Network Outcomes Contractor will be asked to undertake as a variation to their network outcomes contract
  - the Network Outcomes Contractor will provide the Consultant with an update of progress of works
- changes to state highway network
  - the Network Outcomes Contractor will provide the Consultant with maintenance boundary changes and agreements with local authorities affecting structures

- proposed works on existing structures
  - the Network Outcomes Contractor will advise the Consultant of any known and proposed works on existing structures, eg utility installation on bridges, resurfacing of bridge decks, barrier modifications
- emergency response issues
  - both the Network Outcomes Contractor and the Consultant shall advise of any changes to emergency response plans
  - the Network Outcomes Contractor will advise the Consultant of any response issues affecting structures
- new structures proposed on network
  - both the Network Outcomes Contractor and the Consultant shall outline any known or proposed new structures on the highway network regardless of origin
- communications/contacts
  - advise changes of contact details
- routine surveillance inspections
- general, principal and special inspections
- other matters
  - upcoming traffic management requirements and possible conflicts
  - the Network Outcomes Contractor and Consultant will advise each other of any changes to the structural inventories held by them
  - resource consent issues and health and safety issues affecting structures
  - barrier/guardrail maintenance
  - funding matters including when relevant the annual funding request
  - minor improvement works that affect any structure and any peer review requirements
  - any network safety issues relating to structures.

4. STRUCTURAL MAINTENANCE SERVICES

As a result of undertaking inspections, the Consultant shall identify, schedule and prioritise all structural maintenance required. Any structural maintenance requirements identified by the Network Outcomes Contractor (from routine surveillance inspections), will be advised to the Consultant.

Structural maintenance definition: All work necessary to maintain the condition and appearance of structures, or to extend the remaining life of structures, where such work requires design input.

Activities include:

- painting of main structural steel components
- repair or replacement of damaged or deteriorated components such as beams, bearings, deck joints, linkages, decks, etc
- underpinning of foundations
- waterway modifications and protection works.

For other than large projects, and as agreed by the Principal, the Consultant shall prepare an Offer of Service for investigation, design and/or contract preparation and management for structural maintenance projects.

The Offer of Service shall outline:

- description of problem
- nature and extent of investigation and/or design proposed
- estimated cost
- completion date.

Following the Principal's approval of the Offer of Service, the Consultant shall undertake the investigation, and/or design, and/or contract preparation and management in accordance with Transport Agency standard professional services specifications, and current relevant investigation and design standards as agreed with the Principal.

Where the Principal requires such work to be tendered (eg for large projects), the Consultant shall provide all the available information to allow preparation by the Principal, of contract documents for professional service contracts.

The consultant shall be responsible for advising the Transport Agency's national maintenance activity tracker owner of maintenance works that will impact customers such as the freight industry.

5. EMERGENCY SERVICES

5.1 Inspection

The Principal will advise the Consultant whenever an emergency inspection is required to be undertaken. In some situations, this request may be received directly from the Network Outcomes Contractor, in which case the Principal must be advised as soon as possible.

The Consultant shall undertake the inspection as soon as it can be arranged. Any assistance required (eg traffic control), shall be arranged with the Network Outcomes Contractor, via the Principal.

5.2 Emergency action

If the results of any inspection show that emergency action is required to temporarily strengthen a structure or to close a bridge or part or all of a road, or to perform any other work, the Consultant shall communicate immediately with the Network Outcomes Contractor via the Principal, to implement such action.

5.3 Emergency reporting

Immediately following the inspection, the Consultant shall notify the Principal of the action the Consultant recommends.

The Consultant shall forward a written report (using the issues / close call / emergency works report template contained within appendix B) outlining the results of the inspection and recommendations for any further investigations, strengthening, repair or other actions required, and the timing of such work.

5.4 Investigations and design

Where further investigations, design or other professional services are required urgently, the Principal will brief the Consultant to undertake such work.

5.5 Bailey bridges

As part of Transport Agency's contingency plans in case of emergency state highway closures, temporary Bailey bridges will be utilised wherever necessary to expedite the re-opening of the highway to traffic. The Transport Agency has in place Bailey bridge services contracts, which include the design, erection, inspection, maintenance and dismantling of Bailey bridge superstructures and bearings.

The Network Outcomes Contractor is responsible for the managing and overseeing of all emergency works in relation to the re-opening of a state highway after closure. Where the closure is due to a bridge failure or other failure, and a Bailey bridge is indicated as an appropriate action, the Network Outcomes Contractor is required to immediately advise the Consultant.

In this situation, the Consultant's responsibilities are as follows:

- to respond immediately, at any time of the day or night
- to make the emergency work a top priority for as long as it takes to re-open the highway
- to liaise at all times with the Network Outcomes Contractor and report regularly on progress

- to immediately visit the site and determine from the conditions and geotechnical information available, the appropriate course of action, ie whether or not to proceed with a Bailey bridge construction
- if a Bailey bridge is deemed appropriate, to notify the Bailey bridge services contractor accordingly
- to arrange for any site information required
- to determine the overall bridge location, alignment and span arrangement
- to liaise with the Bailey bridging services contractor to confirm the proposed bridge layout and obtain relevant Bailey bridge information
- to be responsible for the design of the Bailey bridge foundations and sub-structures
- to supervise foundation and sub-structure construction if requested by the Network Outcomes Contractor
- to arrange and implement an ongoing maintenance and monitoring programme for the bridge foundations, sub-structures and timber decking.

6. CAPITAL PROJECTS

6.1 Capital project involvement

The Consultant shall provide input to capital projects that include structures to ensure that planning, design and construction of those projects produce the best outcomes for the network. The Consultant shall be required to assist the Principal by providing inputs leading to sound asset management decisions, such as operations and maintenance considerations, whole-of-life issues and value-for-money outcomes.

The focus of the Consultant's involvement is to provide recommendations during the pre-design/design phases and in particular for the concept design. The extent of the Consultant's involvement shall be agreed with the Project Manager on a project-by-project basis. This may include liaison with the Network Outcomes Contractor to get the best outcomes for the Transport Agency.

Specifically, the Consultant shall consider:

- conceptual design issues
- safety in design (SiD)
- maintenance in design (MiD)
- 'fitness for purpose'
- 'whole-of-life' cost effectiveness
- 'value-for-money'
- consistency in asset components
- inspection, maintenance and operating issues.

In addition, the Consultant shall be responsible for ensuring all structures data is provided for inclusion in the Transport Agency's structures database and is of appropriate quality.

6.2 Projects requiring input

The Project Manager will advise the Consultant where input is needed to capital projects.

Where the Consultant is aware that a capital project that includes structures is proposed or underway, and that independent review could be beneficial to the Transport Agency, the Project Manager shall be advised.

7. BRIDGE POSTING AND HPMV EVALUATION

The procedures for the posting evaluation of bridges shall comply with the Transport Agency's *Bridge manual* and the following clauses.

7.1 Bridges requiring evaluation for general mass limits (Class 1 loading) and HPMV mass limits

The Consultant shall report to the Principal and recommend as appropriate, a posting evaluation for any bridge where:

- inspection indicates that structural deterioration has occurred
- distress is evident
- the capacity of the bridge to carry normal loading is in doubt
- the bridge operates at a stress level or load factor other than the standard values specified in the *Bridge manual*
- it is proposed to modify a bridge (eg apply an overlay or undertake repairs) and where the modification may affect the load carrying capacity of the bridge
- for any reason the capacity of the bridge to carry normal highway loads requires review.

Where the Principal is aware that modifications or maintenance to any bridge is proposed (eg resurfacing, addition of services) and is being undertaken by others, and may affect the bridge load carrying capacity, the Consultant will be advised.

The Consultant shall obtain the agreement of the Principal before undertaking any evaluation.

7.2 Posting reports for general mass limits (Class 1 loading)

The results of the evaluation shall be forwarded to the Principal. Where a posting (decreased allowable mass load limit) is recommended, or where the bridge does not comply with the requirements of the *Bridge manual*, the report shall include:

- an engineer's certificate
- the recommended posting (gross weight, axle weight and speed limit)
- the number of vehicles per day affected by the restriction
- the availability of alternative routes
- the level of stress used
- the predicted mode of failure
- justification for a more rigorous analysis, where this may produce an increased bridge capacity
- recommended action (eg replacement, strengthening, or leave as-is), and timing of such action
- the method and rough order cost estimate of strengthening (if applicable).

7.3 Annual notification of load and speed restrictions on bridges

The Heavy Motor Vehicle Regulations 1974 require the Transport Agency to publish bridge load and speed restrictions annually when they are below general access requirements. The Consultant shall advertise any state highway bridge load and speed restrictions in accordance with the regulations and forward a copy of the advertisements with a summary table to the Principal. The annual notification of restrictions shall be advertised prior to 1 October every year.

7.4 Posting evaluations for high productivity motor vehicles (HPMVs)

The Principal will advise the consultant of any bridges requiring posting evaluations for high productivity motor vehicles (HPMVs).

8. REPORT FORMATS AND INVENTORY MAINTENANCE

8.1 Structure inspection reports

Inspection reports shall be prepared for each structure in accordance with NZTA S6: 2020. Any component requiring specific maintenance or monitoring shall be photographed for the inspection report.

The inspection report is the primary means of communicating the condition of each structure, and all key issues associated with the structure.

Each report and recommendations must be sent to the Principal and uploaded to the Transport Agency's *Highway structures information management system* (HSIMS). Each report shall be in pdf format and include the following information:

- appropriate report pro forma from NZTA S6: 2020
- photos of any defects identified with a marking code '2' (monitor), 'R' (routine maintenance) or 'S' (structural maintenance).

The Consultant shall record any hidden features or areas which could not be inspected and why in the inspection report. The Consultant shall provide details of the work required to access the hidden features or areas and the associated costs.

The Consultant shall ensure that the inspection report is updated as required, to reflect changes in the structure condition, recommendations for future action, or any other issues that need to be communicated to the Principal or other consultants. This must include all recommendations relating to the future monitoring, maintenance, repair, or replacement of the structure.

Photographs shall be taken in high-resolution digital format capable of being printed up to A4 size without loss of resolution. The photos shall be provided in .jpg or .jpeg format.

8.2 *Highway structures information management system* (HSIMS) – data maintenance

The Transport Agency operates the web-based *Highways structures information management system* (HSIMS), which includes an inventory of all state highway bridges, large culverts and other significant structures.

The Consultant shall be responsible for ensuring the descriptive and structural data held in HSIMS is up to date and accurate. Subsequent to structure inspections, any changes required to the data shall be updated by the consultant and noted and advised to the Principal in the monthly reports.

Bridge structure detail (BSD) sheets for new or replacement structures, will in general, be provided by the consultant separately engaged for design and project documentation (D&PD), or by the contractor's designer for design and construct (D&C) or alliance type contacts, for each structure, unless advised otherwise by the Principal. The Principal will arrange for completed detail sheets to be forwarded directly to the Consultant for review and input of the data into HSIMS.

The BSD sheets, codes and definitions are described in the Transport Agency's *OPermit bridge structural data guide*. All BSD sheets for new and replacement structures shall be reviewed by the Consultant for compliance with the *OPermit bridge structural data guide* prior to the data being inputted into HSIMS.

Where the Consultant is aware that a new or replacement structure is in use and HSIMS has not been modified, the Principal shall be immediately advised.

Management and operation of the HSIMS system is not included in this contract.

8.3 As-built drawings

The Consultant is responsible for maintaining complete and accurate structure as-built drawings within HSIMS.

During the structure inspections, any changes required to the as-built drawings or any missing drawings shall be noted and advised in the monthly reports.

As-built drawings for new or replacement structures, will in general, be provided by the consultant separately engaged for design and project documentation (D&PD), or by the contractor's designer for design and construct (D&C) or alliance type contacts, for each structure, unless advised otherwise by the Principal. The Principal will arrange for completed as-built drawings to be forwarded directly to the Consultant for overview, prior to recording in HSIMS. Where the Consultant is aware that a new or replacement structure is in use and the as-built drawings have not been submitted, the Principal shall be immediately advised.

As-built drawings shall be completed in accordance with NZTA PSG/9: 2016 *Delivery of as-built documentation.*

8.4 Photographs

The Transport Agency maintains a photographic inventory of all structures (including waterways, approaches, general structural view, and structure details).

After principal inspections, or any significant works to the structure, updated general photos (eg increasing & decreasing direction, both elevations of a bridge, upstream & downstream photos, elevation of a retaining structure) shall be uploaded and stored in HSIMS.

Elevation photos in HSIMS only need to be updated where a significant change has occurred or where the current pictures in HSIMS are no longer representative.

8.5 Structure records

The Consultant is responsible for maintaining complete records of significant and relevant information pertaining to the operation, maintenance and future management of structures within HSIMS. It is not intended that correspondence that is not directly relevant to the future structure management should be recorded by the Consultant.

Records shall include (but not be limited to) the following:

- Resource Management Act conditions
- heritage listings
- adjacent landowner correspondence
- relevant general correspondence
- agreements
- reports and other documents
- operational limitations/conditions
- technical information such as geotechnical data, hydrological records, loading evaluations, structural capacity outcomes.

The Consultant will either receive information directly or will be provided with information for recording by the Principal. Where the Consultant is aware that relevant information is available but is not held by the Consultant, the Principal shall be immediately advised.

9. OVERWEIGHT PERMIT SYSTEM

9.1 Bridges requiring overweight rating evaluation

The Consultant shall obtain the agreement of the Principal before any overweight rating evaluation is undertaken. The procedures for the rating evaluation shall comply with the Transport Agency's *Bridge manual*.

Any bridge where the capacity to carry overweight loads is considered by the Consultant to require review, shall be identified and reported to the Principal. Where the Principal is aware that modifications or maintenance to any bridge is proposed (eg resurfacing, addition of services) and is being undertaken by others, and may affect the bridge load carrying capacity, the Consultant will be advised.

9.2 *Highway Structures Information Management System* (HSIMS) – structural data maintenance

The Transport Agency operates a computerised permit issuing system for the processing of state highway overweight permit applications (OPermit). This system uses bridge structural data held in HSIMS (see 8.2).

It is of prime importance to the Transport Agency that the Consultant maintains the HSIMS structural data in an accurate and up-to-date condition. This shall include, but not be limited to, the preparation or revision of data for all noted inconsistencies and for all modifications (including new structures) carried out within the contract area.

Management and operation of the HSIMS system is not included in this contract.

9.3 Overweight permit technical support

Overweight permit applications are processed by the Principal, using the computerised system.

The Consultant shall be required to provide the Principal with technical advice on computer output and approval of overweight applications. Supervision of the movement of overweight vehicles is not included within this contract.

The overweight permit system is also used to process HPMV applications. The consultant shall be required to provide the Principal with technical advice on computer output and approvals for some of these HPMV applications.

10. GENERAL REPORTING

10.1 Consultant's monthly report

Further to the requirements set out in the contract management specification and the contract Scope of Services, the consultant's monthly report shall include description of the following items:

- progress of inspections
- routine maintenance items identified
- progress of structural maintenance professional services
- recommended structural maintenance works for urgent consideration
- progress reports on physical works contracts
- posting or rating analyses undertaken
- HPMV analysis outcomes
- HSIMS updates (descriptive and structural)
- overweight permit technical support
- emergency works or close calls (using the issues / close call / emergency works report template contained within appendix B)
- any additional information considered pertinent by the Consultant
- any outstanding issues.

This information shall be formatted such that the information is separable, where requested by the Principal, for network areas.

10.2 Handover report

The Consultant shall, unless directed otherwise, prepare a handover report on completion of the contract, at the time specified in the contract deliverables. The report shall summarise previous reports and unresolved issues and shall include all data and deliverables that may not have been previously forwarded, or which are required by the succeeding consultant.

11. LIFECYCLE MANAGEMENT PLANNING

The consultant is generally responsible for developing and implementing lifecycle management plans that ensure appropriate structure performance and appropriate condition are maintained at the least whole of life cost. In addition, it is the consultant's responsibility to continuously manage structure risk across the network.

The consultant shall prepare lifecycle management plans for all network structures every three years to support the three-year funding request. The plan shall be prepared in accordance with the detailed instructions that will be provided at the time. These instructions will include a template that will cover in summary, the inventory, asset condition, asset performance, risk and forecast maintenance and renewals.

Individual structure management plans shall be prepared for significant structures with significant structural or other issues warranting specific investigations, monitoring and management. The development of such plans shall be recommended to the Principal for approval.

12. FUNDING REQUESTS

12.1 Annual funding request

12.1.1 Preliminary funding request

The Consultant shall forward to the Principal within the time specified in the contract documents, a preliminary funding request for structures maintenance and component replacement activities for the following financial year (1 July - 30 June). The preliminary funding request shall be based on known maintenance requirements, whether currently programmed or as a result of current inspections, and an assessment of likely needs based on knowledge of the bridge stock and other significant structures.

The preliminary funding request will be reviewed by the Principal and will be used to develop the state highway funding request. It is recognised that the proposed work programme may change as a result of ongoing inspections, changing priorities and final funding allocation.

The funding request shall be developed in accordance with the *State highway annual plan instructions manual* (SM018) and shall include works justification reporting and input to documents such as network statements as required.

12.1.2 Structures RAPT review

Review and prioritisation team (RAPT) reviews will require the Consultant to attend a review of the preliminary funding request. These reviews are carried out to consider and tension, as appropriate, the works programme annually.

12.1.3 Final funding request

The Consultant shall forward to the Principal within the time specified in the contract documents, a final funding request for the following financial year. The final funding request shall update the preliminary funding request subsequent to the structures RAPT review and the completion of any further inspections or investigations. This request (once approved), shall itemise the structures maintenance and component replacement work to be carried out in the following financial year.

12.1.4 Final allocation advice

The Principal will advise the Consultant of:

- the final maintenance and component replacement funding allocation
- the approved works
- the extent of work, if any, the Consultant is required to undertake in the following financial year.

12.2 Three-year NLTP funding request

The Consultant shall develop a three-year funding request for structures maintenance and component replacement in accordance with the Transport Agency's requirements, when required for the National Land Transport Programme (NLTP) cycle. The funding requests shall be based on the consultant's knowledge of

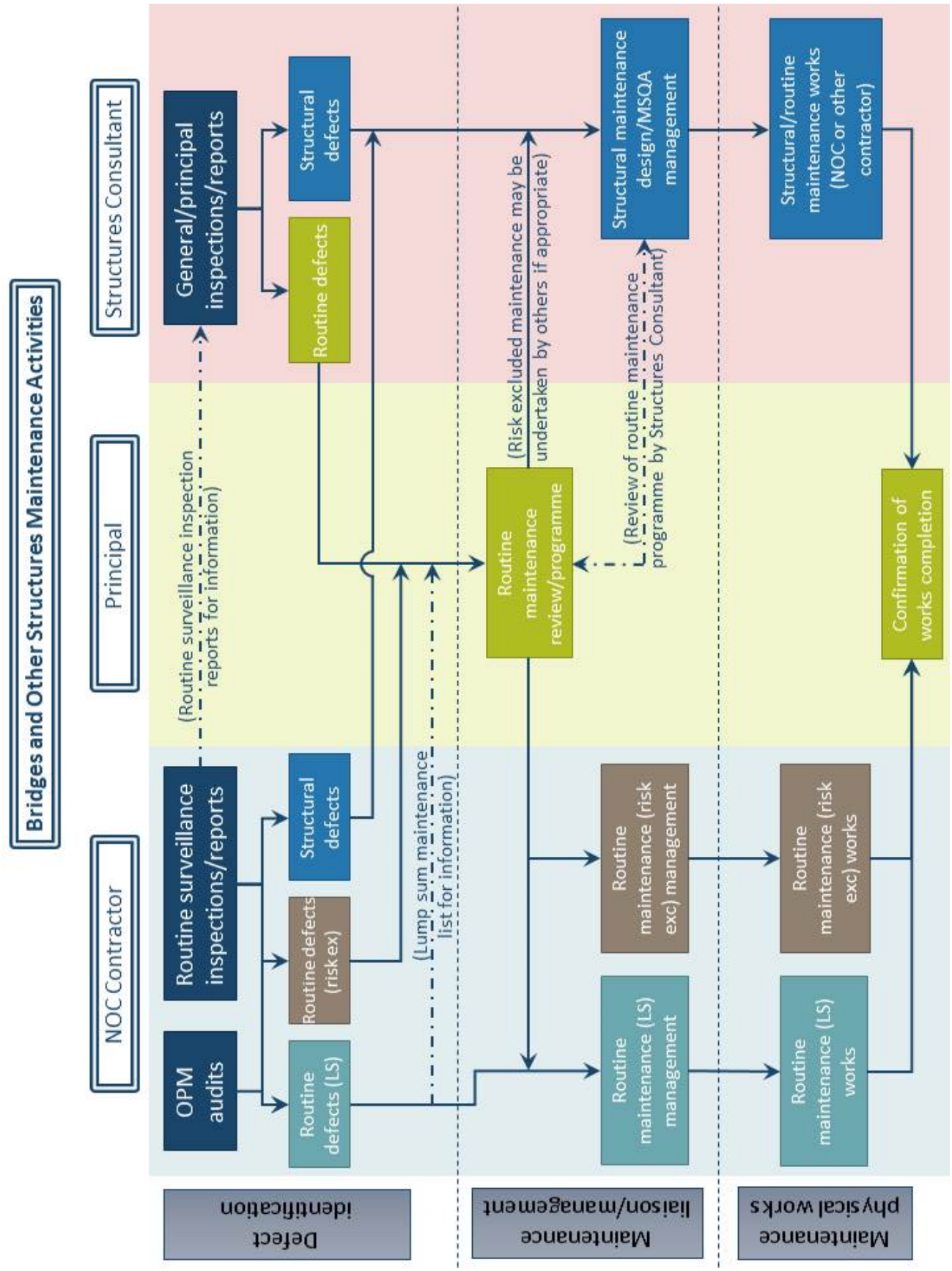
the structures, and the network issues affecting structural performance as captured in the life cycle management plans.

The funding request shall be developed in accordance with the *State highway annual plan instructions manual* (SM018).

12.3 Financial management

The Consultant shall manage the expenditure of the budget to ensure cost-effective solutions, through setting and maintaining cash flow forecasts, completing the monthly accrual reports and advising the Principal of the implications of any variations of the end-of-year budgeted expenditure. Adjustments to funding allocations and/or renewals schedules in maintenance, operations and renewals projects shall be undertaken in accordance with the Transport Agency's *Annual plan adjustment instructions*.

APPENDIX A – BRIDGE AND OTHER SIGNIFICANT STRUCTURES MAINTENANCE ACTIVITIES FLOWCHART



APPENDIX B – ISSUES / CLOSE CALL / EMERGENCY WORKS REPORT

NZ TRANSPORT AGENCY		Issues / Close Call / Emergency Works Report		Consultant LOGO		
Network Area:		Asset Name:		Highway:	BSN:	RP:
Asset Type:		Primary Material: Secondary Material:		Incident Date		
Last General Inspection		Year of Construction		Owner: NZ Transport Agency		
Last Principal Inspection		One Network Road Classification (ONRC)		RCA: NZ Transport Agency		
Last Special Inspection		Vehicles Per Day				
		% Heavy Vehicles				

Incident		
Issue Details	Response	Cause
		Lesson Learned

Report questions		Description
Root cause of incident		Add description
Incident reported by		Add description
Structures Management Consultant informed	Yes / No	Add description
Was the cause of the incident predictable / detectable	Yes / No	Add description
Property / Vehicle damage	Yes / No	Add description
Fatalities or injuries	Yes / No	Add description
Restrictions to the network	Yes / No	Add description

Images (Min 4no.)

Prepared by:		Signature:		Date:	