

Project Specifications

[Insert project name]

Contract no: [Insert no]

[date]

<<This page is to be deleted prior to documents being finalised for tender.>>

Guidance notes

This template provides the basis for the Specifications that form part of the Construction Contract. The purpose of the template is to provide consistency throughout NZTA's operations.

Format:

- **Black:** Black text is mandatory and may not be changed without approval prior to issue by the NZTA Project Manager, who will consult with the relevant NZTA staff on all changes made.
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1 Contract Works

1.1 Introduction

- 1.1.1 These Specifications describe the Principal's requirements for the construction, completion and correction of defects of the Contract Works.
- 1.1.2 The Contractor shall be responsible for the construction, completion and correction of defects of the Contract Works in line with, and to meet all requirements and provisions of the Contract and these Specifications.
- 1.1.3 Unless otherwise described, all statements refer to the whole of the Contract Works.

1.2 Scope

- 1.2.1 The scope of this Contract is as described below:

<<Guidance Note: It is essential that an accurate and complete description of the scope of the contract is provided. It must define all the features of the contract that are fundamental to the project and cannot be changed by the tenderer or Contractor.>>

Scope means the project's principal purpose(s) & services(s) to users as outlined in the Tender Documents.

This definition is also fundamental in the definition of both a Non-conforming Tender and an Alternative Tender. For this reason it is critical that the Scope be accurately defined.

Provide a succinct description of the principal purpose(s) and service(s) to users. Only include the highest level criteria fundamental to the contract, e.g.:

- A bridge(s) comprising 4 lanes across the ABC River
- Provides a pavement and surfacing system comprising.....
- Provides a water way of
- Pedestrian and cycle way protected from road traffic on north side of bridge

It is important NOT to include features that it may subsequently be agreed can be changed particularly during the tender period as this will create problems as to whether or not it constitutes a Non-conforming Tender and/or an Alternative Tender.>>

- a) [>>>>>>>];
- b) [>>>>>>>]; and
- c) [>>>>>>>].

1.3 Description of the Contract Works

- 1.3.1 The Contract Works shall comprise the works described within the **Contract** and includes without limitation:

- a) [>>>>>>>]
- b) [>>>>>>>]
- c) [>>>>>>>]

<<Guidance Note: Provide a brief and general description of the works in, say, no more than one page providing, for example, such information as>>>:

- [the lengths and numbers of lanes/carriageways, slip roads, shoulders and the like
- the limits of the works in terms of general description, e.g. from a named junction to the named river crossing but not stating definitive chainages, which would have the potential to conflict with the more definitive requirements elsewhere in the documentation
- Describe each of the structures (structural arrangement, articulation, span lengths, foundation types, materials)
- Temporary works required
- Pavement and surfacing (materials, manufacturing and construction processes)
- Utility diversions, modifications or additions including easements
- Landscaping
- Ancillary works
- Any associated road closures, diversions, or associated temporary works
- Accommodation works
- Statutory Approval condition requirements
- Environmental, social, cultural, and heritage features and consideration
- Relationship considerations [eg Iwi, Hapu, HNZPT, councils, stakeholders, etc.]
- Maintenance Responsibilities]

1.3.2 The above list summarises work that is included in the Contract. It is provided for general information only and is not necessarily a complete list of all the requirements.

1.3.3 The Contractor should note that descriptions of general and technical requirements above do not include numerous items of work, particularly minor items.

2 Preliminary and General

2.1 Definitions

2.1.1 All the definitions in the Contract shall apply, plus the following:

- **ARCHAEOLOGICAL SITE** is defined in section 6 of the Heritage New Zealand Pouhere Taonga Act 2014. In terms of this definition, a site could include an object or material. All archaeological sites, whether recorded or not, are protected by this legislation.
- **CUSTOMER** means every person or community affected or influenced by the Contract Works.
- **ENVIRONMENTAL INCIDENT** means:
 - a) an occurrence or set of circumstances, as a consequence of which, pollution (air, water, or land) or an adverse environmental or social or cultural impact has occurred or is occurring. Adverse impact includes accidental discovery, contamination, harm to flora and fauna (either individual species or communities), damage to heritage or cultural values, harm to human health and adverse community impacts; and/or
 - b) an occurrence or set of circumstances as described in 5.21.1 of the of Contract.
- **KOIWI** means human skeletal remains of any race.
- **NZGTTM** means the New Zealand Guide to Temporary Traffic Management.
- **TRMP** means Traffic Risk Management Plan **which is one of the traffic management plans required under the Contract**. The TRMP outlines the site and Contract Works specific identified risks and considerations, an assessment of the risks and considerations, all possible risk control options focussing on the reasonably practicable options, lowest total risk assessment, the selected risk control/s (likely multiple or stacks of risk controls) and a plan for the implementation of the selected risk control/s.
- **STATUTORY APPROVALS** includes but is not limited to resource consents, permits, authorities and designations under the Building Act 1991, Resource Management Act 1991, Heritage New Zealand Pouhere Taonga Act 2014, the Wildlife Act 1953, Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 and other relevant legislation.
- **TAONGA TŪTURU** is subject to the Protected Objects Act 1975 and means an object that:
 - a) relates to Māori culture, history, or society; and
 - b) was or appears to have been:
 - i) manufactured or modified in New Zealand by Māori; or
 - ii) brought into New Zealand by Māori; or
 - iii) used by Māori; and
 - c) is more than 50 years old.

2.2 Standards and Specifications

2.2.1 Subject to the other requirements of the Contract, the Contract Works including the Materials and workmanship shall comply with **the Principal's** Specifications, Notes and Minimum Standards, current on the date tenders closed. Any references to the basis of measurement and payment and maintenance period contained within the **Principal's** Specifications and Notes shall not apply.

- 2.2.2 The Contract Works shall also comply with any standards published, adopted or endorsed by Standards New Zealand that apply to the type and nature of the Contract Works current at the date tenders closed.
- 2.2.3 The Contract Works shall also comply with all National Environmental Standards (NES) and National Policy Statements (NPS) published, adopted, or endorsed that apply to the type and nature of the Contract Works current at the date tenders closed.

2.3 Temporary Works

- 2.3.1 The Contractor shall be solely responsible for the sufficiency, stability and safety of all Temporary Works and their care, in accordance with the Contract.

2.4 Hours of work

<<Guidance Note: Hours of work must be contract specific, prescribe any requirements or restrictions e.g. requirements stipulated by any designation, resource consent conditions or other environmental approval (if any). >>

- 2.4.1 [Unless otherwise approved in writing by the Contract Administrator, no work (except for emergency work authorised in writing by the Contract Administrator and necessary temporary traffic management) shall be permitted between the following periods:
- a) 7:00 p.m. to 7:00 a.m. Monday to Saturday inclusive
 - b) 7:00 p.m. Saturday to 7:00 a.m. Monday
 - c) The hours of darkness, as defined below
 - d) Good Friday to Easter Monday inclusive
 - e) [18] December to 5 January inclusive
 - f) New Zealand Public Holidays
 - g) Half day before and half day after New Zealand Public Holidays.
- 2.4.2 The hours of darkness shall be between 30 minutes before official sunset and 30 minutes after official sunrise, or where there is insufficient light for a person to be clearly visible at 100 metres.
- 2.4.3 Where major sporting or cultural events are expected to generate additional traffic volumes, the Contractor shall co-operate with the Principal, the Contract Administrator and New Zealand Police to ensure traffic flows through the Contract Works].

2.5 Publicity and public relations

- 2.5.1 The Contractor shall not make any public communication or announcement at any time to any third party, including any section of the media, about the Contract or the project without gaining written approval from the Principal beforehand. Media management protocols and the hierarchy of nominated media spokespeople must be included and approved in advance by the Principal as part of the project's Customer and Stakeholder Communications Management Plan (**CSCMP**). If the Principal additionally requests that the Contractor provides information to the media or performs a media spokesperson role they will do so.
- 2.5.2 The Contractor will follow all of the Principal's associated brand, printing, online, website and social media guidelines as outlined in Z/17 Branding and Communications standard, and agree scope and roles actioning these channels with the Principal as part of the development of the CSCMP.

- 2.5.3 When requested, the Contractor shall also prepare for the Principal's approval and action appropriate draft media releases. A media release shall be available for proactive opportunities such as when key milestones are reached (e.g. prior to consultation periods/open days, and starting physical works, where applicable) and at such other times as required by the Principal. The Contractor shall not use the release for the purpose of advertising the Contractor's company or services.
- 2.5.4 The Contractor will allow for a Principal representative to lead all significant events. This will generally be the Director Regional Relationships, General Manager, Transport Services or a National Manager, System Design or Infrastructure Delivery (or their delegate) for all large projects, and complex or sensitive small and medium sized projects.
- 2.5.5 The Contractor may not erect promotional or publicity signage on any part of the Site without gaining written approval of the Principal/Contract Administrator beforehand.
- 2.5.6 If the Contractor wishes to submit an award entry or paper to a conference or similar learned society, the Contractor shall ensure that the draft is provided in advance so the Principal may review and approve it prior to submission.

2.6 Contractor's establishment

- 2.6.1 The Contractor shall arrange for electric power supply for their site offices with the Controlling Electrical Supply Authority. The Contractor shall pay all costs for erecting and removing the supply line and for power used directly to the Controlling Electrical Supply Authority.
- 2.6.2 The Contractor shall make its own arrangements and pay all costs for the supply of water.
- 2.6.3 The Contractor shall provide sanitary facilities, and other buildings for their use. The Contractor shall obtain permits for these facilities and/or buildings from the relevant local authority. All costs shall be at the Contractor's own expense.
- 2.6.4 The Contractor shall provide a telephone and internet connection on site at its own expense.
- 2.6.5 The Contractor is to remove all temporary services for electric power, water, temporary buildings, fencing and barriers on completion of the work at their own cost.
- 2.6.6 Construction information signs shall be installed by the Contractor at its cost at each end of the various sites on the state highway and on entry to the site from side roads (other than no exit side roads). These signs will be placed in clear view of traffic in positions agreed by the Contract Administrator. The format, layout and size of the sign shall be as shown in the NZTA Visual Identity Style Guidelines.
- 2.6.7 The Contractor shall submit a proof of the exact wording and layout of the signs to the Contract Administrator before they are produced.

2.7 Aerial photography

- 2.7.1 <<Guidance Note: Prescribe the specific contract requirements, if any, e.g. video survey of existing roads likely to receive construction traffic, web cam, aerial photography. Contractor must specify the nature and frequency of aerial photography required during construction.>>

2.8 Video recording

- 2.8.1 Before any work begins, the Contractor shall engage a professional video production company to record the condition of the following roads, particularly the pavement surfacing and condition. Two copies shall be submitted to the Contract Administrator.

Table 2.8: Required video survey

Road	Extent of video survey
[Describe or name road]	<<E.g. whole length of road, or between specific chainages, or as detailed on a drawing, provide reference number>>

2.9 Site surveillance camera

- 2.9.1 The Contractor shall, supply all plant, equipment and materials necessary for a camera(s) at the site. This shall be at the Contractor's expense, and will include the ongoing charges for operation, maintenance and security of all camera(s).
- 2.9.2 The camera(s) shall be installed before any clearing work begins, and shall remain in operation until Practical Completion. The Contract Administrator must agree to the positioning of the camera(s) before it is installed. <<state no. of cameras and proposed locations>>
- 2.9.3 The purpose of the cameras is to enable the site office to monitor works from the office compound, the Principal to view the works from their offices, and to monitor traffic congestion on the live roads, specifically at the intersections. The Contractor shall maintain a secure website displaying real time images from each camera(s). Furthermore the Contractor shall, upon request for the Contract Administrator, provide historical data received on any of the camera(s) up to [2] months prior to the date of the request.
- 2.9.4 The minimum installation requirements are:
- 240V AC at the top of the pole. This will require a mains isolation switch at the base of the pole, or in a utility shed.
 - The mains cable shall be run in 20 mm conduit and be terminated with a female ferrule at the top, ready to accept a 20mm betaflex. A 2m tail shall be left at the top of the pole.
 - A flat plate, with two protruding studs shall be attached to the top of the pole at 90 degrees to the direction of the camera. For example, the plate should be mounted to the side of the pole and not to the face pointing towards the site to be viewed.
 - The pole shall be rigid enough to prevent camera sway, with the camera mounted high enough above the ground to prevent vandalism or theft.
 - A PSTN phone line terminated in a standard RJ11 phone jack shall be provided at the top of the pole.
- 2.9.5 The minimum camera requirements are:
- Axis 200+ camera, internal toroidal transformer and fujinon lens or similar.
 - Temperature controlled environmental housing.
 - Internal USB 56K modem and system configuration/programming
 - Varifocal lens, 5-82mm manually adjustable.
 - The camera(s) shall provide images at a minimum of 2 megapixels quality and 16 bits colour.
 - All images shall be refreshed every 2 minutes.

- 2.9.6 The Principal will consider other equivalent cameras. The above specification is the minimum standard acceptable for use on this Contract.

2.10 Utility services

- 2.10.1 The Drawings show the positions of existing utility services as obtained from each service authority during the design period, which may now be outdated. The plan positions of services are indicative only and no information is provided as to depth or details of the service. There may be other services not shown on the plans. The Contractor should note that some services may have been relocated prior to commencement.
- 2.10.2 The Contractor shall be responsible for updating the service plans and locating all services prior to construction.
- 2.10.3 [The Contractor is responsible for the management of all service relocations required for the project. The Contractor shall ensure that services are laid parallel to the roadways, as close to the boundary as possible and not less than [2.0m] from the edge of seal. All crossings shall be at right angles to the road centreline and ducted. Ducts shall extend out from the edge of seal for a minimum of [2.0m]].

2.11 Archaeological Sites (Archaeological Discovery Procedures)

- 2.11.1 The Contractor is responsible for ensuring that Archaeological Sites as indicated in the Contract are avoided and an appropriate authority has been granted by Heritage NZ Pouhere Taonga before the Contract Works commence. Many of the earthworks on capital projects and for network maintenance have the potential to impact on insitu archaeological features that are invisible and below ground. Surveys of Archaeological Sites are incomplete throughout NZ and have limited predictive value. Following an assessment by an archaeologist, earthworks may require an archaeological authority granted by Heritage NZ Pouhere Taonga. This includes earthworks related to geotechnical, site enabling, construction, landscaping, culvert and vegetation clearance, trenching, signage and artworks.
- 2.11.2 If an archaeological authority has been granted then work shall comply with all conditions, including the discovery of Kōiwi and Taonga Tūturu. These conditions identify how the site is to be set aside and secured, key parties to be notified and procedures to agree the recommencement of works. The Contractor shall also be responsible for observing the tikanga and cultural protocols agreed with local iwi/hapu in conjunction with the Principal's Project Manager.
- 2.11.3 If any material that could be archaeological in nature is discovered when the relevant Contract Works are not covered by an archaeological authority, then the Contractor shall follow the procedures described in the Principal's minimum standard P45 **Heritage Specification for Land Transport Infrastructure**. In addition the Contractor shall be responsible for observing the tikanga and cultural protocols agreed with iwi/hapu in conjunction with the Principal's Project Manager.

2.12 Emissions Trading Scheme deforestation reporting

<<Guidance Note: This section is to be used for projects involving at least one hectare of trees. Please consult with the Emissions Trading Scheme team to determine appropriate compliance requirements.>>

- 2.12.1 The Contractor is responsible for accurately recording the species of trees cleared within any area of forest land that has been identified within the Principal's Emissions Trading Scheme forestry assessment reports. The Contractor's accurate record of the tree species cleared shall be submitted to the Principal as part of its Emissions Trading Scheme reporting requirements.

- 2.12.2 The Contractor shall map the area of trees cleared within any area of forest land that has been identified within the Principal's Emissions Trading Scheme forestry assessment reports.

2.13 Precondition survey

- 2.13.1 A precondition survey of the Principal's and other public / private assets within the extent of the Site and immediately beyond the outside area of the construction activities shall be undertaken in conjunction with the Contract Administrator prior to the Contractor taking possession of the Site. This shall include an invitation for the relevant stakeholders to accompany the Contractor during this inspection. The Contractor shall allow for all costs, fees, levies and expenses that are associated with completing the condition survey including reporting, defect monitoring, the installation and monitoring of additional tell-tale strips and increasing the monitoring frequency if this is deemed necessary by the Contract Administrator. The Contractor will prepare and submit the precondition survey report to the Contract Administrator for approval prior to the Contractor being entitled to possession of the Site under 5.5 of the Contract.

- 2.13.2 A precondition survey and report is to include, but is not limited to [structures, pavements and surfacings, services, paved area, fences, gates and farm paddocks] condition generally within 10 metres of the extent of excavations, structural works or any laydown areas carried out by the Contractor on the Site and is specifically to include a survey of the State Highway [1] pavement and surfacings, culverts and other structures and assets. The survey shall include photographs / sketches and notes on any defects identified at the time of the inspection, together with the following: <<include if structures are in the vicinity of the works>>

- a) Full details and identification of all defects existing at the time of the inspection such as crack location and widths, spalling, exposed concrete, joint conditions, gaps, untrue walls, sagging rooflines etc;
- b) Photographic and sketch drawing evidence of all structural defects existing at the time of the inspection
- c) Causative interpretation of all structural defects existing at the time of the inspection. The report and interpretation shall include due consideration of the existing ground and the nature of adjacent construction.

Where appropriate, the Contractor shall install "tell-tale strips" across all significant cracks and defects during the initial inspection. All movement or breakage of the tell-tale strips shall be reported by the Contractor to the Contract Administrator within 24 hours of the observation being made.

2.14 Project Management Board (PMB)

<<Guidance Note: PMBs will be mandatory on contracts over \$20M or used for contracts considered high risk at the discretion of the Project Manager>>

- 2.14.1 The purpose of the Project Management Board (PMB) is to manage the successful delivery of the Contract Works by establishing good working relationships between the Principal, the Contractor and the Contract Administrator through a mutually agreed strategy of commitment, co-operation and communication with the objective to deliver a superior product that will exceed stakeholder expectations and enhance the reputations of all involved.
- 2.14.2 The PMB is required to give effective governance to the project and provide strategic direction within the requirements of the Contract through effective leadership. The intention is to monitor the "health" of the Contract and to take the necessary steps to ensure:
- a) That overall performance is in accordance with the Contract;
 - b) The goals of the partnering charter (refer to 2.14.6 below) are followed;

- c) That risks are under appropriate management to ensure the obligations of the Contract are met.
- 2.14.3 The PMB may instruct an independent third party to review aspects of the project, where it is considered that this could resolve undesirable trends or further enhance performance.
 - 2.14.4 The PMB shall comprise of [two] senior members of the Principal, [one] senior member from each of the Contractor and the Contract Administrator. An independent PMB member may be co-opted at the discretion of the founding PMB members where this is deemed to enhance the overall performance of the project.
 - 2.14.5 Each participating organisation shall notify the other parties of the name of their PMB member within 14 days of contract award.
 - 2.14.6 The PMB members will be required to attend the inception partnering meeting where a partnering charter and action plan will be developed. The PMB will be responsible for ensuring ongoing monitoring of the Charter and implementation of the action plan.
 - 2.14.7 Meetings of the PMB shall initially be scheduled every other month, or at other agreed frequencies. Unscheduled meetings to address specific issues may be called by any PMB member with 7 days' notice.
 - 2.14.8 The role of PMB Chairperson shall be rotated through all members. Meetings are to be attended by all members of the PMB and a member of the site management team, rotated through all members.
 - 2.14.9 The site management team will consist of the Principal's Project Manager, the Contractor's Representative and the Contract Administrator.
 - 2.14.10 In addition to the progress reports referred to in clause 6 of this Specification, progress reports shall be prepared by the site management team and represent the consensus view of the site management team. Progress reports shall be forwarded to the PMB 7 days ahead of any scheduled meeting.
 - 2.14.11 Such progress reports shall be concise and cover details as requested by the PMB. Details may include issues such as:
 - a) Appropriate risk and risk treatment reporting
 - b) Construction progress
 - c) Quality performance results
 - d) Cost control and reporting procedures
 - e) Health, safety and wellbeing performance monitoring and assurance
 - f) Resource consent risks and other environmental, social, cultural, and heritage
 - g) Traffic management
 - h) Stakeholder management
 - i) Opportunities
 - j) Communication
 - k) Maintenance operations under PSE/15
 - l) Other activities relevant to the successful delivery of the project.
 - 2.14.12 The PMB will be empowered to consider the reports submitted and call for the site management team to ensure that the project proceeds in accordance with industry best practice.

2.15 Partnering

<< Guidance Note: Develop project specific requirements. >>

2.16 Risk management

- 2.16.1 The Contractor shall liaise with **the Principal** to conduct risk management in accordance with the Principal's Minimum Standard Z/44 – Risk Management.

<<Guidance note: Develop project specific requirements>>

- 2.16.2 A register of risks identified to date is included in Appendix [VII]. << Guidance Note: Develop project specific requirements. >>

2.17 Performance evaluation

- 2.17.1 The Contractor shall participate in the [monthly] evaluation of the Contractor's performance on this Contract, in accordance with the Principal's Minimum Standard **Z/12 – Supplier performance evaluation framework**.

2.18 Contract management reviews

- 2.18.1 The Principal engages an independent party to systematically and objectively examine its supplier's compliance with formal contracts requirements, the specified quality requirements and approved quality plans. This examination may also include records of reviews and audits required under the Contract.
- 2.18.2 The Contractor shall participate in any such reviews of the Contract and shall make available all facilities, documentation, records and personnel, including those of Subcontractors, that are reasonably required to undertake the review.

2.19 Post construction value review

- 2.19.1 The Contractor shall work with the Contract Administrator to establish the project value-for-money **within one month of the Final Account being finalised**. This shall include providing the following project cost information, and may include further analysis agreed between the Contract Administrator and the Contractor.

Table 2.19: Project cost information					
ITEM	DESCRIPTION	QTY	UNIT	COMPOSITE RATE	AMOUNT
1	Development (Non Construction Costs)¹				
1.1	Investigation and reporting		%		
1.2	Detailed Design		%		
1.3	MS&QA		%		
Development Total (subtotal)					
2	Construction				

2.1	Environmental Management and Monitoring		km		
2.2	Earthworks		m3		
2.3	Ground Improvements		km		
2.4	Drainage and Stormwater		km		
2.5	Pavement and Surfacing		m2		
2.6	Bridge (s)		m2		
2.7	Noise Mitigation		km		
2.8	Retaining Walls		m2		
2.8	Traffic Services		km		
2.10	Service Relocations		km		
2.11	Urban Design and Landscaping		km		
2.12	Traffic management		%		
Construction excluding P&G (subtotal)					
2.12	Preliminaries and General		%		
Construction Costs including P&G Total					
3	Extraordinary Project Costs				
3.1	Abnormal costs (to be detailed in full)		%		
Extraordinary Project Costs (subTotal)					
Project Total (this amount is Final Account value for Contract)					

¹ Development costs exclude land purchase. This information to be obtained from the Principal's Property Team.

<< Guidance Note: This information is required to establish whether contracts offer NZTA value for money. The items in the table above MUST NOT BE AMENDED by the those preparing the project specific documentation. >>

3 Contract Plan

3.1 General

- 3.1.1 The Contractor shall prepare an all-encompassing Contract Plan (CP) to meet all requirements of the Contract. The CP shall clearly demonstrate an organisation level based, accredited, integrated working system and strategic-level framework for the management, planning and execution of the Contract Works.
- 3.1.2 Such details shall include:
- a) Contract name, specified objectives and outcomes
 - b) Policy statements on health, safety and wellbeing, quality and risk management
 - c) Policy statements on customer and stakeholder communication, environmental and social management, consent compliance management and Māori engagement.
 - d) Contract team organisation and Key Personnel
 - e) Contractor and Subcontractor work management systems, specifically for communication, information transfer and lessons learnt migration
 - f) Succession planning for the Key Personnel outlined in the Tender.
 - g) Project objectives, targets and performance measurement and monitoring.
- 3.1.3 The CP shall include the following management plans:
- a) Health, Safety and Wellbeing Management Plan (HSWMP) (which is the Site-specific safety plan referenced in the Contract)
 - b) Quality Management Plan (QMP)
 - c) Risk Management Plan (RMP)
 - d) Customer and Stakeholder Communication Management Plan (CSCMP)
 - e) Environmental Management Plan (EMP)
 - f) Traffic Risk Management Plan (TRMP) (which is the traffic management plan referenced in the Contract)
 - g) Close-out and Handover Management Plan
- 3.1.4 The Contractor's CP, and associated HSMP, QMP and RMP shall be in place prior to physical works commencing on site. Ongoing review by both the Contractor and Contract Administrator shall not prevent the plans becoming operative.
- 3.1.5 The quality file (including the agreed Inspection and Testing Schedule, refer to *NZTA Z08: Standard for Inspection, Sampling and Testing*) shall be in place prior to any Contract Works commencing on Site, in accordance with the QMP.
- 3.1.6 The EMP and CSCMP shall be in place within [two weeks] of physical works commencing on Site. Ongoing review by both the Contractor and Contract Administrator shall not prevent the plans becoming operative.
- 3.1.7 Should the Contractor fail to meet these management plan timing requirements, all work on site must stop, and only recommence with the Contract Administrator's approval.

- 3.1.8 The Contractor shall regularly review the appropriateness of all Management Plans and maintain an up to date copy on the quality file at all times. Notification of all changes shall be continuously documented at the front of each management plan.

3.2 Contractor's Personnel

- 3.2.1 The Contractor's CP shall include the details of the following key personnel who are to be employed on the Contract Works:

Contract Director	Senior Representative from the Contractor's organisation. Responsible for the overall management of the Contract Works. Typically not based on Site.
Contractor's Representative	Refer 5.3 of the Contract. The Contractor's Representative is responsible for the day to day management of the contract, preparing and then ensuring the effective maintenance and operation of the Contract Plan (CP).
Engagement and Communications Manager	Should ideally be able to work independently without commercial conflicts within the project. Has the delegated authority to lead the Contractor's delivery of the CSCMP and to authorise actions required to enable the Contractor to deliver the contract and manage the works effectively, for all parties. Is responsible for reporting to the Principal's nominated Engagement & Communications team representative on all community and stakeholder plans and issues, and must follow all best practise guidelines supplied by the Principal.
Quality Manager	Should ideally be able to work independently without commercial conflicts within the project. Has the delegated authority to lead the Contractor's delivery of the QMP and to authorise actions required to enable the Contractor to deliver quality across the contract. Works with managers in other areas to ensure all areas of quality. Has the ability to action a stop works in the event a potential quality issue arises.
Environmental Manager	Should ideally be able to work independently without commercial conflicts within the project. Responsible for ensuring compliance with the Contractor's Environmental Management Plan (EMP) and compliance with all relevant Resource Management Act obligations. This includes ensuring compliance with all conditions relating to Statutory Approvals and maintaining up to date records compliance in CSVUE. The Environmental Manager is also responsible for reporting to the Principal and liaising with Regional and District Councils in respect of social and environmental matters. This includes ensuring compliance with all conditions relating to environmental monitoring, and responsibly managing Environmental Incidents.
Health, Safety and Wellbeing Manager	Should be able to work independently without commercial conflicts within the project. Has the delegated authority to lead the Contractor's delivery of the HSWMP, and to authorise actions required to enable the Contractor to deliver the expected health, safety and wellbeing outcomes in the Contract.
Risk Manager	Should be able to work independently without commercial conflicts within the project. Has the delegated authority to lead the Contractor's delivery of the RMP and to authorise actions required to enable the Contractor to deliver the Contract and manage risk effectively, for all parties.
Fire Safety Officer	Responsible for control of all fire hazards.
Traffic Manager	Responsible for ensuring all personnel, plant, vehicle and traffic movements and controls comply with the contract requirements and the Contractor's Traffic Risk Management Plan.
STMS	Refer NZGTTM

IANZ Laboratory and Signatory

Contractor's appointed service provider responsible for undertaking the field and laboratory testing required by the Project Specification.

Emergency Works

Three people who will arrange for any emergency works to make the site safe.

3.3 Quality Management

- 3.3.1 The Contractor must have a project specific Quality Management Plan (QMP) that covers quality assurance and control minimum requirements as defined in the [Principal's Z01-E – Construction Contract Quality Management Specification](#).
- 3.3.2 Inspections, sampling and testing of the Contract Works including Materials used shall be in accordance with the Contract specific schedule based upon the Principal's Minimum Standard Z/8. [The Principal shall be deemed the "customer" when the Contractor engages an inspection and testing laboratory.](#)
- 3.3.3 The Contractor shall require that all its Subcontractors and suppliers shall prepare, maintain and operate for the term of the Contract a Quality Management System consistent with that of the Contractor.
- 3.3.4 The Contractor shall remain responsible for the performance of all its Subcontractors, suppliers and design consultants.

3.4 Risk Management Plan

- 3.4.1 The purpose of the Contractor's Risk Management Plan is to describe how risk management within the Contract will satisfy the requirements of the Principal's Minimum Standard Z/44 Risk Management; to describe the practices, procedures, controls and reporting processes for the management of risk; and to demonstrate that risk will be effectively managed.
- 3.4.2 The Contractor's Contract-specific Activity Risk File shall include:
 - a) Risk Management Plan
 - b) Contractor's [risk adjusted](#) programme of works (with regular updates)
 - c) Risk analysis data
 - d) Contract close out risk report.
- 3.4.3 A current, digital copy of the Contractor's Activity Risk File shall be maintained on the quality file (refer [\[2.3\]](#))

4 Contractor's Programme

4.1 Contract Programme

- 4.1.1 The Contractor shall submit to the Contract Administrator an appropriately detailed risk-adjusted programme for approval, **in accordance with the Z03 Physical Works Schedule Framework and Principal's Minimum Standard Z/44 – Risk Management**. The programme shall comply with the requirements of the Contract and show how the key aspects of the Contract Works will be programmed, resourced, and co-ordinated to meet the Due Date(s) for Completion.
- 4.1.2 The programme shall be shown in **logic-linked** Gantt Chart form. It shall show all activities and dependencies, and clearly identify the critical path, including which activities impact this. The programme shall flag all programming constraints and milestones and shall be updated at least monthly, **in accordance with the Z03 Physical Works Schedule Framework requirements**. A digital copy of the current risk-adjusted programme shall be maintained on the Contractor's quality file (refer [2.3]).
- 4.1.3 The programme will be on industry-accepted software such as MS Project or Primavera. If software other than MS Project is used, the Contractor shall: supply and install a licensed copy of the software on the Contract Administrator's computer; and provide training to a representative of the Principal and the Contract Administrator from a certified facility, on the use of the software.
- 4.1.4 The Contractor shall liaise with the **Principal** to ensure alignment between the Contractor's programme and the **Principal's Risk Adjusted Programme** at all times.

<<Guidance Note: The optional clauses above should only be used on major projects.>>

4.2 Programming Constraints

- 4.2.1 Weather, seasonal and environmental factors will be familiar constraints for an experienced Contractor when programming, planning, organising its resources and executing the Contract Works. In addition to these usual constraints the Contractor is required to allow for the project specific programming constraints detailed below. The Contractor is required to meet these and still meet the Due Date for Completion of **the Contract Works** and any Separable Portions. Unusual constraints include but are not limited to:
- a) Cultural Ceremonies: The Contractor's programme shall identify known cultural ceremonies anticipated to require observation and/or participation by the project before, during and following construction. The Contractor may be required to attend such ceremonies. Where the possibility of changes to time allowed for cultural ceremonies exists, this should be recorded in the project risk register and managed accordingly;
 - b) Compliance with Statutory Conditions: The Contractor's programme shall provide for compliance with all relevant, statutory requirements and approvals granted to the Principal or Contractor, or transferred to the Contractor for the Contract Works. The Contractor shall be solely responsible for checking all conditions for the Contract Works and assessing the implications of such conditions on its construction programme and methodology. Where the possibility of changes to time allowed for compliance with statutory requirements exists, this should be recorded in the project risk register and managed accordingly;
 - c) Archaeological Lead in times: The Contractor shall ensure an appropriate entry exists in the project risk register where there is evidence to suggest additional cost or programme delay relating to the approvals process (including for geotechnical investigations/testing) discovery, inspection and/or removal of archaeological artefacts is a risk.

- d) **Property:** The Contractor's programme shall allow for compliance with all conditions in Sale and Purchase Agreements and Land Entry Agreements, including all accommodation works. The Contractor shall be solely responsible for checking all conditions for the works and assessing the implications of such conditions on its construction programme and methodology;
- e) **Winter Working:** The Contractor's programme shall allow for all road surfacing and pavement construction be completed outside the Winter Period defined in the Contract.
- f) **Ecological Lead Times:** The programme shall comply with relevant conditions and requirements of Statutory Approvals, and all District and Regional Council requirements. The Contractor shall be solely responsible for checking all relevant work activities and assessing the implications of such requirements and conditions on its construction programme and methodology. The Contractor must make allowances for potential delays caused by expected occurrences, such as inclement weather, that may delay ecological technical assessments. Where the possibility of changes to duration or timing of compliance with statutory requirements exists, this should be recorded in the project risk register and managed accordingly.

5 Contractor's Reports

5.1 Progress reporting

- 5.1.1 All reports shall be completed to a quality and standard appropriate for the project and to the satisfaction of the Contract Administrator.
- 5.1.2 Weekly progress reports shall be prepared by the Contractor and one copy submitted to the Contract Administrator. The weekly reports shall be submitted for each completed or partially completed week. Reporting shall continue until the Contractor has completed all work that is known to be outstanding at the date stated in the Practical Completion Certificate. Each report shall include:
- Summary of locations and description of work activity carried out during the previous week, including an estimate of the progress achieved on major work items;
 - Issues or exceptions to accepted practice requiring follow-up by the Contract Administrator or their representatives including any traffic, health, safety **and wellbeing** or environmental events, **near misses, hazards/concerns** or unplanned diversions and delays;
 - Forward Weekly Programme, **with reference to the Contractor's risk adjusted programme**;
 - Notification of Non-Conformance, response and remedial action(s), in accordance with the QMP
 - Any other information agreed between the Contractor and Contract Administrator.
- 5.1.3 Monthly progress reports shall be prepared by the Contractor and an electronic copy submitted to the Contract Administrator. The monthly reports shall be submitted for each completed or partially completed month. Reporting shall continue until the Contractor has completed all work that is known to be outstanding at the date stated in the Practical Completion Certificate. Each report shall include:
- Current Contractor's **risk adjusted** programme with agreed changes from baseline identified, together with detailed descriptions of progress, details of any events or circumstances that may jeopardise the contract's completion, and measures being (or to be) adopted to overcome delays;
 - Financial management, including a monthly progress claim, and a schedule showing the status of all claims (extra contractual or variations) which the Contractor considers to be (or may be) a Variation. The format of the schedule is to be agreed between the Contractor and the Contract Administrator and shall include a forecast of the final Contract Price;
 - Risk management activity in respect of Contractor-owned project risks to facilitate the Contract Administrator's risk management reporting requirements, which as a minimum shall include:
 - A list of extreme level **and HSW critical** risks with treatment progress update;
 - A brief report detailing the past month's risk management activity, to include: risks identified, impacted, closed or where there has been a change in risk level (current or target);
 - Notification of the current risk management activity to the Principal and Contract Administrator.
 - Earned value progress compared with forecast, integrating programme and cost performance;**
<<Guidance Note: Earned Value Management should only be used on major projects. >>
 - Photographs showing the status of construction and progress on the Site;
 - Problems encountered during construction at the Site;

- g) Reporting on quality metrics as defined and agreed in the QMP.
- h) Monthly Consent, Social and Environmental Report (including details of any monitoring, any non-compliances, abatement notices or enforcement action, and measures taken);
- i) Comment on activities relating to environmental aspects and public relations;
- j) Health, safety and wellbeing contract-specific performance monitoring and assurance reporting of leading and lagging indicators.
 At a minimum, this report will cover:
 - A summary of health, safety, and wellbeing statistics.
 - Details of any events, including worksite crashes, reported hazards, improvement actions, assurance and audit findings, and other significant events or points of interest, such as near misses.
 This is in addition to the monthly HSW data submitted in the centralised contractor reporting portal.
- k) A rolling cashflow forecast versus base line cashflow (established at the outset of the contract) for the Contract;
- l) A schedule of significant off-site manufactured Materials, including the name of the manufacturer, manufacture location, percentage progress, and the actual or expected dates manufacture will begin, shipment and arrival at Site;
- m) Evidence of the Contractor's records for personnel and Plant on Site and available during the period;
- n) Weather records, in particular, the amount of rainfall recorded at the Site for each day of the reporting period;
- o) Updated correspondence register;
- p) Pre and post construction as-built surveys carried out, Asset and Work Manager (AWM) updates, HSIMS updates, and other necessary asset data updates;
- q) Copies of quality assurance documents, test results and certificates of Materials where required by the Contract Administrator;
- r) Landowner issues;
- s) Any maintenance works performed and maintenance reports;
- t) Any opportunities to enhance the longer-term operability and maintainability of the assets; and
- u) [Any additional information either required by the Contract and/or the Contract Administrator as part of the monthly report.]

5.2 Meetings

- 5.2.1 **Contract Weekly Meetings:** The Contractor's Representative shall meet with the Contract Administrator to review progress and discuss general matters relating to the Contract Works once in any seven day period, unless otherwise agreed by the Contract Administrator. The meeting shall be held at the Contractor's Site office and be chaired by the Contract Administrator. Other Contractor's staff, Subcontractors and Contract Administrator's staff shall attend as appropriate.
- 5.2.2 **Contract Monthly Meetings:** A separate monthly meeting shall take place between the Contractor's Representative and Contract Administrator, at [Location, e.g.: the Contractors site office]. This meeting will have a formal agenda prepared by the Contract Administrator, and discuss contractual and other management issues, and if needed receive, discuss and respond to "exception" reports

from the Contractor's Quality Manager and Environmental Manager following the separate Quality and Environmental Management meetings (refer [5.2.3 and 5.2.4]). Exception reporting to the Contract Monthly Meetings shall describe non-conformances, remedial actions, and/or exceptions to accepted practice, and clearly signal any action required by the Contract Administrator and Principal.

- 5.2.3 **Quality Management Meetings:** A separate monthly meeting shall take place in accordance with the Principal's Minimum Standard Z/1, at [Location, e.g.: the Contractors site office].
- 5.2.4 **Environmental Management Meetings:** Separate meetings when required by the Principal shall be held to discuss environmental and statutory compliance considerations (including compliance with the EMP, the project's resource consent conditions) between the Environmental Manager, Principal, Contract Administrator and the Environmental Regulating Authority (ERA) at [Location, e.g.: the Contractors site office]. The frequency of these meetings shall be in line with the Contractor's Environmental Management Plan agreed with the ERA.
- 5.2.5 **Property Meetings:** The Contract shall make provision for a [two] hour monthly Land Use meeting at [Location, e.g.: the Contractor's site office]. Attendees are to include the Contractor, the Principal's Project Manager, the Principal's Property team or their appointed property consultant, and on occasion the Principal's Network Manager and the Principal's Consents and Approvals planner.

5.3 Construction report

- 5.3.1 A construction report for the Contract Works shall be prepared by the Contractor's Representative and an electronic copy submitted to the Contract Administrator. A construction report is required for each Separable Portion

The construction report shall:

- Be in the same format as the monthly report;
- Advise the Contract Administrator of the estimated value of any claims which may be submitted with the Contractor's Final Payment Claim including compliance with the EMP and the project's resource consent conditions;
- Include evidence of fulfilment of all relevant resource consent and other Statutory Approval obligations;
- Be submitted attached to a completed and certified Producer Statement (PS3) for each separable portion and structure for which a specific building consent is in operation (refer Clause [8.3]).

5.4 Reporting deliverables

- 5.4.1 The following schedule lists the contract documents' required reporting and the due date for submission.

Table 5.4: Reporting Schedule	
REPORT	DUE DATE
Weekly Progress Reports	10.00 am Tuesday following previous week
Monthly Contract Reports	10.00 am 3rd Calendar day of following month
Monthly Environmental Compliance Report	10.00 am 3rd Calendar day of following month
Monthly Site Safety Report	10.00 am 3rd Calendar day of following month

Table 5.4: Reporting Schedule	
REPORT	DUE DATE
Monthly Health and Safety Report	10:00 am 9th Calendar day of following month
Project Management Board Report	7 days before the PMB meeting
Construction Report	Within 10 Working Days of date of issue of the Practical Completion Certificate
Updating of Principal's Asset Register	By the 5 th Calendar day (or next working day) of the following month
[Others]	

6 Health, Safety and Wellbeing

6.1 Health, Safety and Wellbeing

- 6.1.1 The Contractor must implement systems and processes that meet the requirements of the Health and Safety at Work Act 2015, its regulations, supporting codes of practice, New Zealand Guide to Traffic Management (NZGTTM) and any guidance material that represents industry good practice. Without limiting the foregoing, the Contractor must:
- eliminate risks to health, safety and wellbeing, so far as is reasonably practicable, and if it is not reasonably practicable to eliminate risks to health, safety and wellbeing, the Contractor must minimise those risks so far as is reasonably practicable; and
 - follow the hierarchy of control measures set out in Section 6 of the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 where it is not reasonably practicable to eliminate risks to health, safety and wellbeing.
- 6.1.2 The Contractor must comply with the provisions outlined in the Principal's Health, Safety and Wellbeing - Contractor Expectations, and the other contract specific requirements as set out below. The latest version of the Principal's Health, Safety and Wellbeing - Contractor Expectations document can be accessed from the Principal's Highways Information Portal at <https://www.nzta.govt.nz/resources/contractor-health-and-safety-expectations/>
- 6.1.3 The Contractor must work collaboratively with all relevant stakeholders, including the Principal, to manage overlapping HSW duties. This includes:
- specifying the health, safety and wellbeing management system to be used;
 - identifying who is responsible for taking an HSW action;
 - identifying who must have input into the way an action is undertaken;
 - identifying who must be informed of any action being taken;
 - agreeing and documenting the outcome in the Health, Safety and Wellbeing Management Plan (HSWMP) or as a separate supporting document referenced in the HSWMP; and
 - ensuing ongoing review of these arrangements across the life of the Contract.
- 6.1.4 The Contractor must comply with all health, safety and wellbeing requirements of the Principal, and any other relevant asset owner or authority (e.g. Auckland Transport, Councils, KiwiRail, Watercare and other utility owners). Meeting these requirements will not relieve the Contractor of any of its responsibilities to comply with the Health and Safety at Work Act 2015. .
- 6.1.5 The Contractor must include Health and Safety by Design as outlined in the Principal's Safety by Design Minimum Standard. The latest version of this document can be accessed from the Principal's Highways Information Portal at <https://www.nzta.govt.nz/resources/contractor-health-and-safety-expectations/>
- 6.1.6 As far as reasonably practical, the Contractor must ensure the risks to road users, workers and others are managed for all works. Priority must be given to higher-level controls (elimination, substitution, isolation, and engineering), over lower-level administrative and personal protective equipment (PPE) controls.
- The Contractor must have systems and processes to:
- identify hazards
 - assess risks

- c) implement appropriate control measures following the hierarchy of controls
- d) monitor the effectiveness of controls
- e) notify relevant regulators of work as required by HSWA.

Additionally, the Contractor must:

- f) include details of hazards, risks, and controls in contract-specific HSW management plans (HSWMP)
- g) maintain an up-to-date contract-specific hazard and risk register to inform safe work practices
- h) document additional details in HSWMPs for critical risks and the controls implemented to manage them.

6.1.7 The Contractor shall provide event notification, reporting and investigation as outlined in the Principal's Contractor Expectations: Minimum health, safety and wellbeing requirements document.

The Contractor must have systems and processes to:

- a) effectively manage HSW events and minimise risks
- b) proactively monitor leading indicators to identify and address potential risks early
- c) regularly report on HSW performance using both leading and lagging indicators
- d) comply with the Principal's centralised monitoring and reporting requirements.

6.1.8 The Client will monitor and obtain oversight to the Contract Works.

- a) The Contractor will allow the Principal, Contract Administrator or independent third party/auditor to conduct a site inspection and/or Audit as required.
- b) During this time the contractor will provide unrestricted access to the Site, documentation and people upon request.

This shall extend to all Subcontractors and their employees under supervision of the Contractor in the performances of the Contract Works.

6.1.9 The Contractor must ensure workers receive appropriate information, instruction, and supervision based on their experience, skill, maturity, the nature of the work, critical risks, and control measures prior to commencing the Contract Works. This ensures all workers, including subcontractors and temporary workers, are trained and competent to work safely and effectively in accordance with the Principal's Health, Safety and Wellbeing - Contractor Expectations.

6.1.10 The Contractor's senior management is required to engage in ongoing professional development to enhance their competency in health, safety, and wellbeing project leadership.

7 Traffic Management

7.1 General

- 7.1.1 The Contractor shall ensure that disruptions to road users and third parties during construction are minimised without compromising the requirements of the Health and Safety at Work Act 2015, its regulations and supporting codes of practice. The Contractor shall ensure that they provide an appropriate alternative for all vehicular and pedestrian traffic for any existing roads, footpaths, accesses and premises adjacent to and affected by the Contract Works.
- 7.1.2 Traffic management (including cyclist and pedestrian traffic) shall be designed and implemented by the Contractor in accordance with NZGTTM.

7.2 Traffic Risk Management Plan

- 7.2.1 The Contractor shall provide the Traffic Risk Management Plan (TRMP) to the Contract Administrator (being the traffic management plan required under the Contract)
- 7.2.2 The Contractor shall nominate, and provide the CV of, an appropriately competent and experienced temporary traffic management professional to oversee the design and implementation of the Contractor's TRMP.

7.3 Construction zone

- 7.3.1 The Contractor should apply to the Principal through the Contract Administrator for declaration of a Construction Zone. Any declaration of a Construction Zone will be at the sole discretion of the Principal.

7.4 Specific Site Requirements

- 7.4.1 The Contractor shall follow the NZGTTM to develop the Site and Contract Works specific requirements. The site-specific requirements shall cover:
- a) safety for all types of road workers
 - b) safety for all types of road users
 - c) transport system disruption minimisation
 - d) installation, maintenance, and uplift of all temporary and permanent risk management controls both on the affected route and any detours established.
- 7.4.2 The Contractor is to make themselves sufficiently familiar with the site and local roading network. The Schedule of Specific Job Requirements for Traffic Management and Safety is included in Appendix [III].

<<Guidance Note Specific Job Requirements for Traffic Management and Safety (risks and considerations) may include:

- a) Nature and scale of the Contract Works
 - i) construction site
 - ii) duration
 - iii) on/off site traffic

b) Outcomes and constraints

- i) consent conditions
- ii) maximum traffic delay expectations
- iii) maximum impacts to public transport, walking and cycling routes
- iv) project specific safety outcomes
- v) unacceptable controls (e.g. no alternative routes for detour available)
- vi) parties with access affected
- vii) parties to notify of TTM activities
- viii) any requirement to remove TTM when workers are not present

c) Road/roadside conditions and topography (e.g. road/ berm width undulations, flats, ditches, water hazards, vegetation, structures, housing, businesses)

d) Road users:

- i) nature and volumes of traffic including factors effecting traffic volumes (e.g. peak times)
- ii) pedestrians, cyclists, animals etc.>>

7.4.3 The Contractor will implement a systematic regime of assurance including monitoring, inspections, audits, assessments and testing to evaluate, benchmark and report on the effectiveness of risk-based solutions related to planning, implementation, maintenance and de-establishment of temporary traffic management.

7.4.4 Where the duration of any work is extends beyond that originally envisaged, the Contractor will be responsible for reassessing risk as appropriate and obtaining extensions to Temporary Speed limits.

7.5 Road opening

7.5.1 Prior to opening the road for use by the general travelling public, a pre-opening safety review will be undertaken by the Contract Administrator and the Principal's Road Safety Audit team, to approve the removal of any temporary works, speed limits and traffic management.

7.5.2 Prior to the issue of the Practical Completion Certificate, a post construction safety audit must be completed by the Contract Administrator and the Principal's Road Safety Audit team. The Contractor must endeavour to complete work instructed as a consequence of a post construction safety audit as soon as possible. Any instructed work associated with an identified serious or significant audit classification is to be rectified within 10 Working Days of receipt of the instruction. Where any such work cannot be completed within the 10 Working Days, the Contractor must immediately seek agreement from the Contract Administrator for the timing of this work. Where work cannot be completed within 10 Working Days then consideration must be given to completing appropriate temporary mitigation works until the work is undertaken.

8 Statutory approvals and compliance management

8.1 Designations and Consents

- 8.1.1 The Contractor will be required to implement a process for ongoing liaison with the Principal's planning specialists to discuss and confirm the consenting strategy, obtain approvals and manage compliance. Formal delegation for lodging statutory approvals sits with the Principal's planning specialists.
- 8.1.2 The Principal will remain responsible for all fees and charges for the designation and outline plans.
- 8.1.3 The Principal has obtained Consents as follows. Approvals may be required under the RMA, Heritage NZ Act, Wildlife Act, and other Environmental Legislation. Copies of such Consents are included in Appendix I):
- a) [list consents obtained here]
 - b) [list consents obtained here]
- 8.1.4 The Contractor may be required to obtain additional statutory approvals or variations to the existing approvals described above as required to proceed with the project. <<Guidance Note: If the Contractor is required to obtain Consents (refer 5.14 of Schedule 1 of the Contract) this 8.1.4 should be revised to list out those consents>>:
- a) [list consents to be obtained here]
 - b) [list consents to be obtained here]
- 8.1.5 The Contractor shall be responsible for ensuring compliance with all district and regional plans and observing all conditions and requirements of all Consents, from the start of the Contract until the end of the Defects Notification Period.
- 8.1.6 The Contractor will have responsibility to maintain up to date records of compliance with all Consents, including maintaining compliance records in CSVUE, the Principal's compliance management system.
- 8.1.7 The Principal will remain responsible for annual administration charges and all monitoring fees and charges for the Consents listed in 8.1.3 above.
- 8.1.8 The Contractor shall pay all costs associated with all other Consents and other approvals required under other legislation (e.g. Wildlife Act, Heritage New Zealand Pouhere Taonga Act 2014) required to construct the Contract Works or made necessary by its construction activities. The Contractor shall provide copies of all such Consents to the Contract Administrator. Applications for such Consents shall be subject to the Contract Administrator's review and must be signed off by the Consents and Approvals Group prior to being lodged.
- 8.1.9 Under the RMA the Contractor is required to obtain authorisation to carry out the following activities unless covered by the Consents: <<Guidance Note: Add any further project specific details>>
- a) dam a river or stream;
 - b) divert natural water;
 - c) take natural water;
 - d) discharge natural water;
 - e) discharge waste to natural water;
 - f) use natural water;

- g) dumping of waste;
- h) take soil or river aggregates for earthworks or pavement/surfacing construction.

8.2 Building consents

- 8.2.1 The Principal has obtained the following building consents or waivers, copies of which are included in Appendix [I]:
- a) [list consents to be obtained here]
 - b) [list consents to be obtained here]
- 8.2.2 The Contractor is responsible for obtaining the following building consents and the payment of all associated building consent fees:
- a) [list consents to be obtained here]
 - b) [list consents to be obtained here]
- 8.2.3 The Contractor shall be responsible for observing all conditions and requirements of the building consents.
- 8.2.4 Prior to opening the structure for public use the Contractor shall provide a Certificate of Public Use in accordance with the Building Act 2004.
- 8.2.5 Prior to Practical Completion, the Contractor shall supply to the Contract Administrator a PS3 Producer Statement – Construction and Code Compliance Certificate for each structure for which building consent was issued.

8.3 Compliance record keeping

- 8.3.1 The contractor is responsible for maintaining accurate and up to date records of statutory compliance in the Principal's consent compliance management database CSVUE until the completion of the Defects Notification Period.

8.4 Contractor's obligations

- 8.4.1 The Contractor shall obtain any compliance certification required for carrying out the Contract Works and submit to the Contract Administrator before Practical Completion.

9 Environmental management

9.1 Contractor's Environmental Management Plan

9.1.1 The Contractor shall prepare, maintain and implement an Environmental Management Plan (EMP) in accordance with P47: **Environmental Social and Cultural Management during Construction**, the guidance referenced therein, and relevant requirements of Consents, bylaws, Acts and regulations.

9.1.2 The various sites contained in this Contract are regarded as environmentally sensitive and the Contractor shall ensure all works are programmed, constructed and maintained so as to minimise the impacts on the surrounding environment.

9.1.3 The EMP shall as a minimum address:

- a) Dust control;
- b) Sediment and stormwater control;
- c) Construction noise control;
- d) Vibration control;
- e) Ecological management
- f) Pest management (plant and/or animal pests)
- g) Heritage management including built and archaeological
- h) **P45 Heritage Specification for Land Transport Infrastructure** (for areas where no archaeological authority is required);
- i) Any other measures necessary to meet all conditions laid down within the project Specification and all conditions associated with any Statutory Approvals, including designation and resource consent conditions.

<< Guidance Note: Consider all relevant construction effects that are not included above - refer Z/19 – SM030.>>

9.1.4 As a part of the EMP the Contractor shall put in place induction, education, and monitoring and reporting systems to ensure relevant staff and Subcontractors understand and comply with all Consent conditions, the EMP and all requirements of the Contract. The Contractor shall regularly re-evaluate the EMP and provide for regular retraining and re-education to meet differing site demands.

9.1.5 Before beginning the Contract Work on the Site, the Contractor must ensure that the appropriate environmental safety measures are constructed and operational. Further, the Contractor must have in place all contingency and emergency plans and procedures before starting the Contract Works.

9.1.6 The Contractor shall report immediately to the Contract Administrator all incidents with possible significant effects or outcomes. All other incidents shall be reported on the daily report and summarised on the weekly report.

9.2 Environmental audit

9.2.1 The Contractor shall allow the Principal or the Contract Administrator access to the Site, to conduct a site inspection and Audit on a monthly basis. During this time the Contractor will provide unrestricted access to any documentation or people.

9.2.2 The Contractor shall establish and maintain a documented system of checks and audits to ensure that the work is being performed in accordance with the environmental requirements applicable to

the work and shall provide the Contract Administrator with access to the documentation upon reasonable request.

9.3 Dust suppression plan

- 9.3.1 The Contractor shall prepare a Dust Suppression Plan (DSP) in accordance with Erosion and sediment control guidelines for state highway infrastructure.

9.4 Erosion and sediment control

- 9.4.1 A Sediment Control and Site Management Plan shall be prepared as an input to the EMP. This plan shall feed into the Contractor's drainage construction programme and Earthworks Management Plan and be prepared before the Contractor starts any of the activities authorised by the Consents. The inputs shall as a minimum include the following:

- a) Detailed site erosion and sedimentation control methods to be used;
- b) Proposed locations of cut-off drains, silt traps, silt fences, hay bale filters, sediment control ponds and other mechanisms or techniques;
- c) Expected efficiency of sediment control facilities and design criteria to be used;
- d) A plan that shows the areas where material is to be cut and filled and their quantities;
- e) Sediment control methods at each fill placement site;
- f) Locations of waterways;
- g) Site stormwater control and disposal;
- h) Contingency provisions for extreme weather events;
- i) Methods of vegetation removal, storage and disposal;
- j) Progressive rehabilitation of site throughout the contract and at completion of works, including maintenance of the site until vegetation is sufficiently established to minimise erosion;
- k) Monitoring to be carried out during the construction works and rehabilitation of the site;
- l) Procedures and timing of the reviews of the management plan;
- m) Reporting procedures;
- n) Site rehabilitation including soil conditioning and re-sowing techniques, and tree and shrub planting;

- 9.4.2 The required outcomes are as per the Consent conditions, and shall include but not be limited to:

- a) All controls in place, inspected and approved by the Contractor's soil conservator before the start of works in any area and at any changes of conditions in any area;
- b) All site staff understanding and complying with all applicable Consent conditions;
- c) Diversion of all clean water run-off via a stabilised system;
- d) All stormwater run-off contaminated by construction activities being treated in appropriate stormwater settling facilities prior to being discharged into any waterway;
- e) Progressive rehabilitation wherever possible;
- f) All stream, watercourse, or open drain diversions being completed as far as practicable before water is diverted into the new channel;
- g) Minimising disturbances of sediments and vegetation in all waterways;

- h) Machinery not entering the existing waterways or discharging contaminants into them;
- i) Entrapped fish being captured and relocated to permanent flowing water;
- j) Ensuring the required notices of proposed work, diversions and inspections are undertaken;

- 9.4.3 The Consent conditions detail specific requirements, with which the designs and plans submitted by the Contractor shall fully comply. The designs and plans shall be sufficient to enable sediments to be contained from the start of the contract period until the end of the Defects Notification Period.
- 9.4.4 The Contractor shall maintain all these works to achieve the required outcomes until the end of the Defects Notification Period. Within one month of the end of the Defects Notification Period, all silt ponds and silt build-ups shall be desludged or cleared and inspected before final approval and handover to the Principal for ongoing management.
- 9.4.5 All machinery and plant shall be operated in a manner that ensures spillage of fuel, oil and similar contaminants are prevented during refuelling, machinery servicing and maintenance. Refuelling and lubrication activities shall be carried out so that any spillage can be contained and not enter any stream, tributary or wetland.
- 9.4.6 In addition to proactive measures to prevent spills and reduce the consequences of any spills, the Contractor shall prepare a Contingency Plan For Hydrocarbon Spills.
- 9.4.7 The Contractor shall take all steps necessary to prevent construction vehicles from depositing mud and other debris on the surface of adjacent roads or footways when entering and leaving the Site. The Contractor shall quickly remove any materials so deposited. Construction vehicles should be washed before entering onto the state highway in order to satisfy this requirement.

9.5 Construction Noise Management Plan

- 9.5.1 The Construction Noise Management Plan (NMP) shall be prepared as an input to the EMP. The NMP shall aim to minimise any adverse effects from noise during construction, and shall include:
- a) The implementation of the principles contained in NZS 6803 and the Consents during the construction of the realigned highway and local roads;
 - b) Means to ensure that the Consent condition requirements are achieved.

9.6 Vibration Management Plan

- 9.6.1 The Vibration Management Plan (VMP) shall be prepared as an input to the EMP. The VMP shall aim to minimise any adverse effects from vibration during construction and shall satisfy all Consent conditions. The VMP shall be prepared before the Contractor starts any of the activities authorised by the Consents. The inputs shall as a minimum include the following:
- a) Maximum permitted ground vibration levels;
 - b) The times at which particular construction activities may take place;
 - c) Communication requirements with owners and occupiers of adjacent buildings;
 - d) Details of pre-construction trials;
 - e) Details and frequency of condition surveys;
 - f) Location, type and monitoring frequency of vibration monitoring equipment;
 - g) Construction methodologies for minimising the impact of vibration;

Procedures for maximum permitted ground vibration levels being exceeded or justifiable complaints being received.

9.7 Sustainability Rating Scheme requirements

<<Guidance Note – confirm whether the project is required to complete a Sustainability Rating certification in accordance with P49 Sustainability rating scheme application during tender and delivery of capital works projects. An Infrastructure Sustainability rating is generally required for projects over \$500m (excluding emergency works). Departures from the policy must be approved. If not relevant, delete Section 9.7>>>

- 9.7.1 The Contractor shall prepare a Sustainability Rating Scheme implementation plan following the requirements set out in P49 Sustainability rating scheme application during tender and delivery of capital works projects.
- 9.7.2 The Contractor shall achieve, as a minimum, a bronze award level certification under the Infrastructure Sustainability Council (ISC) Rating Scheme following the responsibilities and minimum requirements specified in P49 Sustainability rating scheme application during tender and delivery of capital works projects.

9.8 Resource efficiency and waste management

- 9.8.1 The Contractor shall prepare and implement a Resource Efficiency and Waste Management Plan in accordance with NZ Transport Agency P48: Specification for resource efficiency for infrastructure delivery and in general accordance with the NZ Transport Agency Resource efficiency guideline for infrastructure delivery and maintenance.
- 9.8.2 The Contractor shall report on a monthly-basis movements of materials in accordance with Appendix G of NZ Transport Agency Resource efficiency guideline for infrastructure delivery and maintenance. Reporting shall include any materials and movements and information required for Principal's reporting under the Waste Minimisation (Information Requirements) Regulations 2021 and Waste Minimisation (Calculation and Payment of Waste Disposal Levy) Regulations 2009.

10 Customer and stakeholder management

10.1 General

- 10.1.1 The Principal has a customer first philosophy and seeks to apply this across all levels of its business. More specifically, as it relates to its customers use and interaction with the state highway network, the Principal recognises key customer first values which are grouped as:
- a) Safer Systems Approach
 - b) Efficient and reliable journeys
 - c) Social and environmental responsibility.
- 10.1.2 The Contractor is expected to embrace these values in consideration of all road and multi-modal user groups, key stakeholders of the Principal, and adjacent neighbours, communities and environments. More particularly, the Contractor shall recognise that their staff and actions, together with those of their Subcontractors, can directly influence the public perception of the Principal, and the effective realisation of its customer values.

10.2 Contractor's Customer and Stakeholder Communication Management Plan

- 10.2.1 The Contractor's CSCMP shall outline how the Contractor will fulfil the Principal's expectations in regard to community engagement and communication, stakeholder engagement and communication, Māori engagement and communication, and liaison with the Principal's Property Team and their Agents. The CSCMP shall include as a minimum:

a) **Customer and worker safety**

Where Contractor H&S and TTM risk management processes identify and require communication activities (risk controls) for this project, the Contractor shall describe the communication activities (risk controls) to be applied to ensure customer and worker safety is not compromised.

[This may include:

- Use of barriers/sight screens;
- Use of advance Variable Message Signs;
- Worksite planning and methods to reduce exposure to roadside hazards either pre-existing or created as part of the temporary works.]
- Other practises.]

<<Guidance Note: Insert any matters required to be specifically identified to tenderers, or specifically required to be addressed by the Contractor in the course of undertaking the Contract Works>>

b) **Minimising travel delay and disruption (Journey Management)**

Where additional to requirements set out under section [1.7] of this project Specification, the Contractor shall identify potential causes for traffic delay and disruption, and demonstrate how the sequencing of works has maximised opportunities and minimised disruption for the travelling public across all modes, whilst maintaining safety and applying the NZGTTM. Where ongoing or significant disruption cannot be avoided, the Contractor shall describe those

measures to inform or otherwise customer expectations. This may include describing to customers how work has been planned to minimise disruption, including the temporary traffic management approach.

[

<<Guidance Note: Insert any matters required to be specifically identified to tenderers, or specifically required to be addressed by the Contractor in the course of undertaking the Contract Works>>

c) **Ride discomfort and nuisance**

The Contractor shall consider potential causes for ride discomfort and nuisance for all road and multi-modal users and neighbours, and describe methods to avoid or minimise those situations.

[This may include:

- Temporary or failed surfacing that could lead to vehicle damage or increased vehicle wear and tear;
- Situations of general nuisance (e.g. bitumen splashes on vehicles, detritus on walkways).]

<<Guidance Note: Insert any matters required to be specifically identified to tenderers, or specifically required to be addressed by the Contractor in the course of undertaking the Contract Works>>

d) **Communication, engagement and customer relations**

In addition to the requirements of section [1.13] of this project Specification, the Contractor shall identify communications and interactions necessary to ensure road and multi-modal user, neighbour and community consultation needs are met. Reference shall be made to the standards in the Z/17 Branding and Communications Standard and the six principles set out within the State Highway Public Engagement Guidelines (2016) Such consultation needs will generally be of an informative/advisory nature, to inform the wider community of the Contract Works, to inform road and multi-modal users of potential traffic flow delays and advise of alternate travel choices, and to inform project neighbours where activities associated with the Contract Works will have a more direct affect on the use and enjoyment of adjacent property. In some instances however, the consent conditions or related EMP plans may dictate a higher level of consultation/involvement in decision-making by the public and these must be adhered to.

The Contractor shall provide reasonable notice to adjacent residents or commercial premises at least 5 Working Days in advance, with follow up in the immediate 24 hours in advance, of any activity that affects access to their property, or may cause disturbance to the normal enjoyment or use of their property; this notice will be by formal mailbox drop notification or via subscription email distribution list.

All customer and stakeholder engagement plans and activities relating to the project must be reported by the Contractor through to the Principal's nominated Engagement & Communications team representative. The draft CSCMP must be reviewed and approved by this representative and the [Principal/Contract Administrator] as part of its development and the Contractor must also provide the administration resource required to regularly update customer and stakeholder interactions into the Principal's instance of the Consultation Manager database. This reporting is obligatory throughout the project process.

[This may include:

- The Contractor shall prepare a quarterly newsletter advising the intended progress of the Contract Works. The Contractor shall submit the initial draft newsletter to the [Principal/Contract Administrator] and the Principal's Engagement & Communications team representative within 20 Working Days of Acceptance of Tender, and every three months thereafter. Once the [Principal/Contract Administrator] has accepted the newsletter, copies shall be distributed by the Contractor to residents and commercial premises adjoining the Site, territorial local authorities and other stakeholders, the Principal and the Contract Administrator; with decisions about the types of publication format eg digital or printed to be confirmed during the development and approval of the CSCMP;
- The Contractor shall provide input to the Principal's quarterly newsletter, as and when required;
- The Contractor shall observe any cultural protocols, particularly when engaging with Maori, when undertaking work of a culturally sensitive nature;
- Public notification of upcoming detours;
- Public advice of traffic conditions;
- Providing the Principal's Engagement & Communications team with positive stories and content for wider official communications channels of the Principal such as social media, website, video or other publications, with decisions about the types of publication formats to be confirmed during the development and approval of the CSCMP;
- Providing/supporting associated Principal official events such as sod turnings, Ministerial events or openings, as required and on request of the Principal;
- Providing/supporting reporting for the Principal's Traffic Road Event Information System.]

<<Guidance Note: Insert any matters required to be specifically identified to tenderers, or specifically required to be addressed by the Contractor in the course of undertaking the Contract Works>>

e) **Māori Engagement**

Māori are recognized as the Treaty Partner by the Principal and must be involved in any decisions affecting Māori interests. Reference shall be made to the Principal's Māori Strategy Te Ara Kotahi and the CSCMP must be developed in accordance with this strategy. Contractor shall identify provisions for Māori engagement, including provisions for cultural mitigation and specific actions to be taken to ensure Māori engagement both before and during the project.

[This may include:

- Utilisation of iwi advisory services
- Notification mechanisms
- Regular engagement and event-specific consultations
- Incorporation of Te Reo Māori into both internal and external channels and publications
- Implementation of a bilingual signage policy
- Development of clear communication protocols and points of contact
- Utilisation of Māori businesses and workforce].

<<Guidance Note: Insert any matters required to be specifically identified to tenderers, or specifically required to be addressed by the Contractor in the course of undertaking the Contract Works>>

f) **Compliance with Environmental Management Plans**

Except where otherwise required under this project Specification, the Contractor shall consider potential adverse social or environmental effects created as a consequence of the Contractor's temporary works, and describe those methods to be applied to ensure the adjacent social interests or environment is not compromised. This plan must be developed in accordance with/consideration to the EMP. The Contractor shall note that the Principal has MoUs with several stakeholders including DoC and HNZPT – regular updates are provided in conjunction with the Principal's project consenting and environmental specialists.

[This may include specifying how the Contractor will engage and communicate on EMP issues such as:

- Control of dust spread onto sensitive environments (natural or agricultural);
- Quality and control of stormwater flow off-site and onto adjacent property;
- Noise control and effect on occupiers of adjacent property;
- Vibration control and effect on occupiers and buildings on adjacent property;
- Heritage management plans for land and/or buildings, including effects on adjacent property;
- Protocols for discovery of matters of a historic or cultural nature;
- Containment and removal of toxic materials, debris and waste;
- Process for demonstration, and ownership, of damage to adjacent property.]

<<Guidance Note: Insert any matters required to be specifically identified to tenderers, or specifically required to be addressed by the Contractor in the course of undertaking the Contract Works>>

11 Site information

11.1 Site limits

- 11.1.1 The Site limits are shown on Drawing No's [Drawing Numbers]. The land within the Site limits has been designated and appropriately consented for state highway construction. The land is either owned by the Crown, which is referred to as the Principal's Land, or is land for which the Principal has gained the temporary use of for the Contract Works from the owner or occupier. Copies of any agreement(s) or licence(s) for the land use shall be included in Appendix [X].

11.2 Property

- 11.2.1 Available property information, property project close out and legal survey is provided in Appendix [X]. The Contractor shall be responsible that all actions with regard to property, including land made available by the Principal, Fencing, and Utilities, are undertaken in accordance with the Principal's property specifications.

11.3 Access to the Site

- 11.3.1 Site access from public roads shall be professionally designed with appropriate controls in place to ensure that traffic safety is not compromised and delays are within contract requirements. Direct access to public roads from multiple locations along the site frontage will not be permitted.
- 11.3.2 The Contractor shall meet the requirements of the relevant road controlling authority for the use of any public road access whether or not defined in Section [3.2.1] above.
- 11.3.3 The Contractor shall erect appropriate signs to show accesses and restricted routes. Before the signs are erected, the Contractor shall submit the signage details in writing to the Contract Administrator and the relevant road controlling authority for approval.
- 11.3.4 At the cessation of work on any day and before darkness, the Contractor shall completely barricade all entrances to the Site to prevent traffic access.
- 11.3.5 Unless otherwise approved in writing by the Contract Administrator, the Contractor shall not gain entry to the Site via private land. It is unlikely that the Contract Administrator's approval will be given unless the Contractor has obtained written consent to enter the property from the landowner and occupier. Access to the private land from the public road shall be to the satisfaction of the relevant road controlling authority. The Contractor shall be fully responsible for negotiating, paying for, and bearing all costs for these accesses and for any matters arising with parties who consider themselves to be affected. The Contractor shall assess the potential environmental impacts of this access and obtain all necessary permissions, licences and consents for the required use. The Contractor shall obtain written confirmation from the landowner that all matters relating to the Contractor's use of private land have been satisfactorily resolved upon completion of the Contractor's use of the private land.

11.4 Accommodation works

- 11.4.1 The Contractor shall provide all accommodation works that have been agreed with various landowners and occupiers as detailed in Appendix [II].

11.5 Public and private roads and accesses

- 11.5.1 The Contractor shall retain all public and private roads and accesses affected by the Contract Works until suitable alternative access is provided.

11.6 Survey information

- 11.6.1 The Contractor shall be responsible for ensuring all existing survey marks within the scope of the Contract Works are located and provision made for ensuring they remain undisturbed prior to work commencing and during the Contract Works. The Contractor shall advise the Contract Administrator of any marks not already relocated that will be affected by the Contract Work. Following the approval of the Contract Administrator the Contractor shall contact Land Information New Zealand to obtain approval for relocation or replacement of those marks. The Contractor should make due allowance for any costs associated with the maintenance, protection or relocation of the existing survey marks and/or delays that may occur as a result.
- 11.6.2 The survey projection and datum are:
- Coordinate Projection: [NZTM (on NZGD2000)]
- Levels: [Moturiki Vertical Datum 1953]
- 11.6.3 Contract specific requirements for survey are described in Section [XX].

11.7 Geotechnical information

- 11.7.1 Available geotechnical information is provided in Appendix [IV]. The Contractor shall be responsible for making their own interpretation of this information and any supplementary site investigation information provided by the Principal and shall be deemed to have satisfied themselves as to the nature of the ground and subsoil prior to submitting their tender.

12 Information and as-built submission and Completion Records

12.1 Introduction

- 12.1.1 In addition to any other requirement of this Contract, the Contractor shall supply to the Principal the as-built Drawings, Construction Report and other data outlined in this section.
- 12.1.2 The information required shall cover all the Contract Works except the Temporary Works.
- 12.1.3 The draft as-built drawings must be submitted to the Contract Administrator throughout the duration of the Contract Works. The Contractor shall submit the draft Construction Report at Practical Completion. The Contractor shall submit the final as-built drawings and final Construction Report at the end of the Defects Notification Period. When accepted by the Contract Administrator, the Contractor shall also provide digital copies of the accepted as-built drawings.
- 12.1.4 All information handed over that relates to a specific geolocation must be packaged for handover in accordance with the WBS geolocation that they relate to, to ensure future discoverability and linkage to the Principal's Geospatial systems.
- 12.1.5 The Contractor must ensure final as-built PDFs are packaged for upload to the Principals ECM (Electronic content management) system.
- 12.1.6 The Contractor must ensure that any CAD and spatial files are packaged for upload to the Principals ArcGIS (Geospatial system).
- 12.1.7 The Contractor must ensure all their document control processes facilitate handover of information in a well-designed handover folder structure/s for each phase, with documentation/files separated out from the handover of GIS files and databases.
- 12.1.8 The Contractor must ensure documentation and records being handed over to the Principal are
- simple and easy to upload to the Principal ECM digital system (lift and shift) as a complete structure for each stage of handover, with the ability to search by topic, section, asset, and location.
 - not handed over via unstructured transmittals
 - do not result in loss of contextual information when moved to Principal systems.
- 12.1.9 The Contractor must not submit final submission documentation/files folder structure for upload to Principal ECM on memory sticks.
- 12.1.10 It is not acceptable for the Contractor to expect the Principal to manually drag and drop unstructured transmittals and content from Contractor systems over to Principal systems.
- 12.1.11 The Contractor must upload documentation/files directly to the Principal ECM or discuss migration /handover methods with the Principal Information Management team.
- 12.1.12 The Contractor must ensure the handover documentation/file folder structure for upload to Principal ECM does not contain any of the following
- duplicate files,
 - design models and geospatial files such as aerial survey imagery, point cloud files, lidar or mobile scanning files (this must go directly to Client/Principal GIS system)
 - files with extensions such as: .sid, .aux, .cpg, .dxf, .ovr, .pri, .sbn, .shp, .shx, .shz, .dbf, (files with these extensions must be uploaded to the Client/Principals GIS system)

- d) CCTV and safety camera footage (these must be provided separately)
- e) drone and site survey footage (these must be uploaded to the Principal's ArcGIS, unless it is part of quality files related to a WBS geolocation.)
- f) video files, such as training videos, comms and marketing, internal briefings, meeting and event recordings, fault, and issue recordings.
- g) Large files over 250 GB. The Contractor must ensure these are provided separately.
- h) zip files - as these can cause technical and error issues, and are not resource effective for unzipping by the Principal, and zips limit searchability of information by users. Zips must be unzipped prior to hand over and the information must be converted into open formats at handover by the Contractor so that it can be opened and be readable by the Principal.
- i) Executable files. Discuss with the Principal the intent for submitting these the Principal.
- j) chrome extensions in place of actual file formats.
- k) databases such as access databases, or files with extensions for databases. Submission of these must be in a separate structure or discussed with the Principal Information Management and Data teams.

12.1.13 The Contractor must ensure the final submission documentation/file folder structure for upload to Principal ECM is in line with the following requirements

- a) The overall path, once extracted, including the nested folders, and file name - must be no more than 256 characters in length. This should be calculated from the very first folder, through to the last folder, inclusive of the (receiving) site name. All sub folder names, the file name, any spaces and the \ separator (which is visible in the URL) are included in this count.
- b) Folders must not be nested more than 4 to 5 layers deep.
- c) Special characters are not allowed in file names such as ~, # " * : < > ? / \ |

12.1.14 The Contractor must ensure appropriate registers and naming convention guidance accompany handover documentation to the Principal. Naming conventions must include the WBS and geolocation where applicable.

12.1.15 Unless stated otherwise by the Principal, the Contractor must ensure that hyperlinks are not used in registers, indexes or document lists being handed over to the Principal.

12.1.16 The Contractor must ensure that any references to documentation and records from indexes, registers, lists handed over, are by reference to

- a) the actual document/record name,
- b) or via a unique identifier (GUID (Globally Unique Identifier)) associated to the documents,

12.1.17 Where accompanying metadata is used to add context to files, this must be provided in reference spreadsheets.

12.2 Completion Records

12.2.1 For all structures, relevant Consents and certifications shall be provided at Practical Completion, including:

- Building consents and code compliance certificates (where applicable)
- Design, design review, construction and construction review certificates where required

12.2.2 For all assets agreed with the Principal, the asset owner information required by the Principal's minimum standard Z/15 - Asset owner's manual (AOM) and professional services guideline PSG/15 - Asset owner's manual shall be provided at Practical Completion. This includes:

- a) As-built construction drawings must be sorted into the WBS geolocation that they relate to (drawings related to the areas between Reference stations must be grouped accordingly) at handover.
- b) Design details and specifications of any proprietary structure or systems provided
- c) Material warranties.
- d) Maintenance requirements
 - Comment on any construction outcomes that will impact on future maintenance, e.g.
 - i) The challenging sections of subgrade that were encountered during construction, how these were dealt with and what impact this may have on maintenance.
 - ii) Type of sealing – first coat, second coat or asphalt and what are the maintenance expectations as a result of the type of seal used.
 - iii) The location of services in relation to structures that may require excavation as part of maintenance.
 - iv) Long term maintenance/replacement responsibilities for boundary fences.
 - v) Agreements with local authorities on maintenance/ownership of peripheral assets.
 - vi) Landscape, urban design, and artwork maintenance expectations.
 - vii) Appropriate care and maintenance of heritage buildings/structures, Archaeological Sites and sites of significance to Maori
 - viii) Presence of materials hazardous to health or local ecology including lead, asbestos, other hazardous chemicals.
 - ix) Any mitigations employed and residual risks remaining from the Safety-in-Design process.
- e) Resource consents and conditions, including completed compliance documentation and close out of all CSVUE requirements for the works.

12.2.3 Safety in Design information including records of residual risks for 'bridges', 'geotechnical structures' and 'other significant highway structures' as defined in the Principal's S6, the following information shall be provided at Practical Completion (note this incorporates the requirements of Z/15 and PSG/15):

- Bridge structural input forms (applies to 'bridges' only)
- Descriptive input forms
- Significant structure asset management information
- Design statements (where required by section 2 and Appendix I)
- Significant structure supplementary as-built records must be sorted into the WBS geolocation group that they relate to (drawings related to the areas between Reference stations must be grouped accordingly) at handover.
- Significant geotechnical structures including their geolocation and form in PDF and shape file format with associated maintenance requirements for their design working life, as well as a schedule of location and type of installed geotechnical instrumentation with summary of readings from installation to decommission or end of contract.

12.2.4 Electrical network connections including streetlights must be identified on as-built drawings with general specifications included (as a side note if appropriate). Submission of documentation must be supported at that time by a producer statement completed by the manufacturer and installer. The following is required:

- For street lighting an approved design and a certified pdf as-built plan showing street light position
- Sign off from the Design Engineer that the installation has been built in accordance with an approved design.
- The Electrical Safety Certificate, Record of Inspection and Certificates of Compliance for individual Street Lights and or assets with electrical network connections. This will include information relating to Installation Control Point (ICP) and the name of any nominated electricity retailer.
- AWM data.
- Certificate of Completion and record of Inspection for the electrical work from the Electrical Network Contractor.

12.2.5 Delivery of handover documentation (i.e. timing) shall comply with project-specific requirements but in all cases must occur prior to practical completion.

12.3 As-built drawings

<< Guidance Note: Detail any as-built requirements beyond those to be delivered under the Professional Services Contract >>

- 12.3.1 As-built drawings shall consist of the construction drawings, updated to reflect all significant as-built variations, including defects and their rectification.
- 12.3.2 The draft as-builts and all associated files shall be provided throughout the duration of the project, and also prior to Practical Completion, for verification by the Contract Administrator. Final as-built Drawings, as accepted and certified by the Contract Administrator, shall be delivered, at the time prescribed in the Contract, in the following formats, and in accordance with the WBS geolocation that they relate to (drawings related to the areas between Reference stations must be grouped accordingly).
- a) one complete set of AutoCAD (or equivalent vector drawing software as agreed by the Principal) files including all associated files.
 - b) one complete set of un-editable Adobe PDF files exported from the CAD as-built drawings. This shall serve as a read-only set for viewing, downloading and printing by users of the Principal's system. The first drawings/s shall be a full drawing list and shall be denoted as such.
- 12.3.3 The as-built drawings shall be prepared in accordance with the Principal's professional services guideline PSG/9 - Delivery of as-built documentation, and certified as being a correct record by the contractor and construction reviewer.

12.4 Highway Structures Information Management System (HSIMS) input forms

- 12.4.1 The Contractor shall use the Principal's certified Highway Structures Information Management System (HSIMS) Input Forms for bridges, geotechnical and other significant structures to provide project update data to the Contract Administrator a minimum of two months prior to Practical

Completion and/or opening of the asset to traffic loading. This information will include Bridge Structural Data (BSD) forms which are used to provide vehicle permitting information in OPermit.

12.5 Updating of Principal's Asset Register

12.5.1 The Contractor shall use the Principal's certified AWM forms for works completed by the Contractor in that month, to provide project update data to the Contract Administrator for updating the Principal's Asset Register by the 5th calendar day (or next working day) of the following month.

12.5.2 The Contractor shall be diligent in obtaining asset register information about activities being undertaken for that month and pursuing the supply of the necessary information to update Principal's Asset Register monthly.

12.6 Construction report

12.6.1 The Contractor shall provide a Construction Report identifying the actual types of Materials and methods of construction used throughout the Contract Works. The intent of the Construction Report is to compile background information for the project and intellectual property associated with the construction to ensure the smooth and efficient uptake of maintenance works and operation covering all facets of the project. The Construction Report shall:

- a) Explain the problems and defects encountered during the construction of the Contract Works, and how these were overcome or put right;
- b) Comment on the remedial and corrective actions taken;
- c) Include a complete record of all laboratory (and other relevant testing) information for construction and materials used in the Contract Works;
- d) Include mill certificates for all reinforcing steel, pre-stressing strand and structural steel used in the Contract Works
- e) Include copies of all pile installation records, including as a minimum the following:
 - i) Contract and structure name.
 - ii) Pile number, location, pile type, and pile dimensions.
 - iii) Where drilled, the driller's record, showing date and time of drilling, the type of materials encountered, and the depths at which the materials were encountered.
 - iv) Where driven, the pile driving records information throughout the driving compared against the investigation data and plotted for each pile in a group.
 - v) Where piles have been lengthened or shortened, all relevant information including off-cut length or extension length, the reason for the change and on what authority the change was made, shall all be included.
 - vi) Expected and actual (as assessed on site) rock levels.
 - vii) The expected and actual constructed founding levels.
 - viii) Casing finished levels (top and bottom) and total length.
 - ix) Water levels inside the pile (noting level of casing at time of reading)
 - x) Confirmation of cleaning of pile base, including the recorded depth of the shaft at the end of drilling and immediately prior to placing concrete.
 - xi) Reinforcement checklist.
 - xii) The level of the top of the reinforcement cage before and after pouring.

- xiii) Concreting records, including the total volume of concrete placed, the volume supplied with each truck, slump measurements and number of cube or cylinder samples taken, time of batching, and concrete placing start and completion times.
- xiv) Depth to top of concrete for each truck placed, and depth of tremie tube (if appropriate).
- xv) Actual constructed elevation of the top of the pile.
- xvi) Cross-reference proving bores (if appropriate).
- xvii) The Contractor's signature verifying that all work has been completed satisfactorily.
- f) Post-tensioning or pre-stressing records (if appropriate), including the following as a minimum:
 - i) Type of equipment and tensioning system.
 - ii) Unit identification.
 - iii) Tendon number and identification.
 - iv) Observed tendon extension, pull-in and slip at transfer for each tendon.
 - v) Observed jack force immediately prior to transfer.
 - vi) Measured duct friction values.
 - vii) Copy of stressing calculations.
 - viii) Records of concrete strength at transfer.
 - ix) Jack calibration certification.
- g) As-built survey along the bridge deck centreline, providing co-ordinates and levels of the deck surface, at maximum 10 metre intervals, certified by a Registered Surveyor;

<<Consider addition / deletion of requirements in this section, in order to tailor it to a specific project. If matters above are clearly not relevant they need not be reported on.>>

12.7 Data sheets

- 12.7.1 The Contractor shall provide to the Contract Administrator data sheets for each Contractor-supplied design and construct item of mechanical or electrical equipment and for all process units, instruments, valves and other like items for which detailed information may be necessary for their successful operation and maintenance.

12.8 Asset and Work Manager (AWM) inspections and database

- 12.8.1 The Contractor shall provide all AWM asset information to the Principal in accordance with the Principal's State Highways Database and Operations (SHDOM) manual.
- 12.8.2 The Contractor will ensure:
- a) The asset information is validated by a Level 1 AWM accredited person;
 - b) The asset information is audited/validated against existing business rules; and
 - c) Evidence of validation will be provided to the Principal's Maintenance Contract Manager upon request.
- 12.8.3 The validation will be in accordance with the Principal's current Asset Breakdown Structure and consistent with the Principal's Asset Management data standards.
- 12.8.4 The Contractor will provide the asset information to the Principal prior to the commencement of the Defects Notification Period.

- 12.8.5 The Contractor will provide to **the Principal** the digital as-builts (current state) a minimum of one month prior to road opening as an input for updating the Location Reference Management System (LRMS) network model.

13 Maintenance requirements

13.1 Maintenance responsibilities

13.1.1 The Contractor shall be responsible for the following highway maintenance activities:

- a) From Possession of Site until Practical Completion: All maintenance activities for the new and existing highway within the zone of the works as outlined below: <<Guidance Note: refer to PSF/15 in SM030 to populate the table in discussion with the NZTA Maintenance Contract Manager>>

Table: 13.1: Maintenance responsibilities during construction

Activity	Contract ownership	Special instructions
Customer database	Contractor	Maintain register of complaints as part of broader customer management process
Incident response management		
Serious / fatal crash causing network issues	NOC	Operation of SH network and issues with crashes etc needs to be managed by the NOC.
Weather damages to the network	Contractor	Rain events or quality issues leading to damage is the responsibility of the Contractor. Contractor responsible for interfacing with [WTOC] in relation to weather related issues
[Other]		
Maintenance		
Sealed pavement maintenance	Contractor (within work Site)	Contractor to advise NOC / Principal's MCM of work Site limits in order that NOC can defer their routine maintenance. Contractor responsible for repairing any pavement damage within site (SM032 A7: Section 6.1.1)
Drainage maintenance	Contractor (within work Site)	Contractor to advise NOC / Principal's MCM of work Site limits in order that NOC can defer their routine maintenance. Contractor responsible for maintaining culverts and other drainage structures (SM031: A7: Section 6.2.1)
[Other]		

- b) From Practical Completion until end of the Defects Notification Period: All maintenance activities for new, upgraded, or altered state highways within the zone of the works as specified in the following the Principal's routine maintenance standard specifications:

<<Guidance Note: refer to PSF/15 in SM030 to populate the table in discussion with the NZTA Maintenance Contract Manager>>

Table: 13.2: Maintenance responsibilities during DNP		
Activity	Contract ownership	Special instructions
Raised Pavement Markers	Contractor	Standard Specification: C-Series: TNZ/P14 SMO32 (SOMAC): TS11
Litter	Contractor	Standard Specification: SMO32 (SOMAC): TS12
Damage and Hazard Reports	Contractor	Standard Specification: SMO32 (SOMAC): TS13
Crash Reports	Contractor	Standard Specification: SMO32 (SOMAC): TS14
Unofficial Signs	Contractor	Standard Specification: SMO32 (SOMAC): T15
Vegetation Control	Contractor	Standard Specification: SMO32 (SOMAC): T16
Pavement Marking	Contractor	Standard Specification C-Series: P/22 SMO32 (SOMAC): PM9
Pavement Marking	Contractor	Standard Specification C-Series: P/20 SMO32 (SOMAC): PM10
Highway Lighting	Contractor	Standard Specifications: C-Series: C/24 SMO32 (SOMAC): HL9
Traffic Signals	Contractor	Standard Specifications: C-Series: C/25 SMO32 (SOMAC): T9
ATMS Maintenance	Contractor	

13.1.2 If the Contractor fails to complete the maintenance works within an appropriate response time, the Principal shall be entitled, after giving the Contractor reasonable notice, to employ others to carry out such maintenance works. The Principal shall be entitled to recover the cost of such works from the Contractor.

13.1.3 [Add additional requirements here where necessary]

13.1.4 Nothing in this section shall relieve the Contractor of its obligations in respect of:

- a) construction activities after Practical Completion, including any second coat surfacing; and

- b) defects liability.

14 Technical requirements

14.1 Roughness

- 14.1.1 The longitudinal smoothness shall comply with the requirements of this Section [14.1].
- 14.1.2 On completion of surfacing and placement of pavement markings and raised pavement markers, the Contractor shall carry out surface roughness measurements in accordance with the Principal's Technical Memorandum TM7003 (TM7003).
- 14.1.3 The roughness shall be measured in the wheel paths of all lanes surfaced under the Contract in both directions. Readings relating to pavement lengths less than [xxm] at the end of the lane shall be disregarded. For acceptance testing the roughness will be measured after completion of the surfacing but it is strongly recommended that the Contractor also carry out roughness testing before application of the final surfacing as a guide. <<Guidance Note: Pavement lengths to be determined in consultation with the Principal's Pavement & Surfacing team>>
- 14.1.4 The criteria for acceptance shall be in accordance with Section 2. Roughness Requirements the Principal's TM7003 and in addition No [xxm] reading in any lane shall exceed [100] NAASRA counts/km.
- 14.1.5 If the acceptance criteria are not achieved, the Contractor must, at its expense, remedy the issue to the satisfaction of the Contract Administrator.

14.2 Skid resistance

- 14.2.1 The surfacing shall meet the requirements specified in the Principal's Specification T10 Skid Resistance Deficiency Investigation and Treatment Selection, and any other subsequent amendments.

14.3 Graffiti guard

- 14.3.1 Permanent (not sacrificial) anti-graffiti coatings shall be applied to the exposed faces of all concrete surfaces including barriers, piers and abutments. The coatings shall have a design life of not less than 10 years. The coating shall be either on the Principal's list of prequalified formulations or prequalified by the Contractor for inclusion on the list.
- 14.3.2 Anti-graffiti coatings shall be applied in accordance with the manufacturers written instructions
- 14.3.3 The Contractor shall maintain the structure free of graffiti until handover to the Principal. Graffiti removal on protected surfaces shall be undertaken in accordance with the manufacturer's instructions.

14.4 Prestressing

- 14.4.1 [Specify acceptance criteria].

14.5 Concrete

- 14.5.1 [Specify acceptance criteria].

14.6 Guardrail certification

- 14.6.1 [Specify acceptance criteria].

14.7 Torqueing of light columns bases

14.7.1 [Specify acceptance criteria].

14.8 Practical Completion

14.8.1 The Practical Completion Certificate will not be issued until the acceptance criteria have been achieved.

15 [Section Title]

15.1 [Title]

15.1.1

<<Guidance Note: Insert project-specific sections. Examples include Earthworks, Pavement and Surfacing, Social, environmental and cultural management, Stormwater Structures, Traffic Signals, Traffic Signs, Urban Design, etc>>

16 [Section Title]

16.1 [Title]

16.1.1

<<Guidance Note: Insert project-specific sections. Examples include Earthworks, Pavement and Surfacing, Social, environmental and cultural management, Stormwater Structures, Traffic Signals, Traffic Signs, Urban Design, etc>>

Appendices

Appendix I: Statutory requirements

Appendix II: Accommodation works

Appendix III: Schedule of specific job requirements for traffic management and safety

Appendix IV: Geotechnical information

Appendix V: Known hazards and risks identified to date

Appendix VI: Heritage specification for land transport infrastructure [Specification P45]

Appendix VII: Testing schedule

Appendix VIII: Insurance certificates

Appendix IX: Property information, property project close out and legal survey