Contract: NZTA1234
Traffic Services Example

Contract Documents

Schedule of Prices

Contents

The Schedule of Prices includes the following sections:

1 Contractor's Management

Item	Description	Type	Unit	Quantity	Rate	Amount ($)
1	**Contract Works**					
1.1	**Contract Management Review**	M	ea	2		
2	**Contractor's Quality Plan**					
2.1	**Preparation and Management CQP**	M	LS	1		
2.2	**Quality Control Testing**	M			Included in tendered rates	
3	**General Requirements**	M			Included in tendered rates	
4	**Contractor's Programmes**	M			Included in tendered rates	
5	**Contractor's Reports**					
5.1	**Monthly Reports** *(The minimum tendered rate is **$200.00**/Report. The maximum tendered rate is **$300.00**/Report)*	M	ea	36		
5.2	**Final and Maintenance Reports**	M			Included in tendered rates	
6	**Traffic Management**					
6.1	**Preparation of TMP**	M	LS	1		
6.2	**Management of TMP**	M			Included in tendered rates	
6.3	**Traffic Control**					
6.3.1	**Level 1 Traffic Management**	M			Included in tendered rates	
6.4	**Additional Traffic Control**					
6.4.1	**Level 1 Traffic Management**					
6.4.1.1	Shoulder Closure	U	Day	25		
6.4.1.2	Single Lane Closure	U	Day	25		
6.4.1.3	Multi Lane Closure	U	Day	25		
6.4.1.4	Mobile Closure	U	Day	25		

1 Contractor's Management

Item	Description	Type	Unit	Quantity	Rate	Amount ($)
7	**Environmental Management**	M			Included in tendered rates	
8	**Unscheduled Works**					
8.1	**Plant and Equipment**	U				
8.1.1	Single Axle Car Trailer		Hr	50		
8.1.2	Tandem Axle Car Trailer		Hr	10		
8.1.3	Utility		Hr	10		
8.1.4	Post Hole Borer		Hr	15		
8.2	**Materials**					
8.2.1	Materials	U	PS	1	$50,000.00	$50,000.00
8.2.2	Contractor's On-cost to Materials *(The tendered rate must be expressed as a decimal and rounded to two places. The quantity is in dollars ($))*	U	%	50000		
8.3	**Labour**					
8.3.1	Contract Management Personnel	U	Hr	300		
8.3.2	Other Personnel	U	Hr	400		
8.4	**Cost Fluctuations**	U	PS	1	$20,000.00	$20,000.00

Section 1: Total Tender Sum (Transfer to Tender Summary)

2 Level 1 Routine Maintenance

Item	Description	Type	Unit	Quantity	Rate	Amount ($)
9	**Signs**					
9.1	**Hardware Maintenance**					
9.1.1	Routine Maintenance	C	km.mth	10248		
9.1.2	**Cleaning Signs**					
9.1.2.1	Gantry Signs	U	ea	15		
9.1.2.2	Other Signs		Included in tendered rates			
9.1.3	**Hardware Painting**					
9.1.3.1	Posts	U	ea	600		
9.1.3.2	Sight Rails and Sight Rail Posts	U	m	300		
9.1.3.3	Miscellaneous Painting	U	m²	50		
9.2	**Standard and Non-Standard Signs** *(The total is transferred from Standard Signs Schedule)*	U				1
9.3	**Class 1 High Intensity Signs**					
9.3.1	Supply of Signs	U	PS	15000	$1.00	$15,000.00
9.3.2	Percentage Over-rate to Supply of Signs *(The tendered rate must be expressed as a decimal and rounded to two places. The quantity is in dollars ($))*	U	%	15000		
9.4	**Enhanced Class 1 Signs**					
9.4.1	Supply of Signs	U	PS	1	$10,000.00	$10,000.00
9.4.2	Percentage Over-rate to Supply of Signs *(The tendered rate must be expressed as a decimal and rounded to two places. The quantity is in dollars ($))*	U	%	10000		
9.5	**Class 1A Prismatic Signs**					
9.5.1	Supply of Signs	U	PS	1	$15,000.00	$15,000.00
9.5.2	Percentage Over-rate to Supply of Signs *(The tendered rate must be expressed as a decimal and rounded to two places. The quantity is in dollars ($))*	U	%	15000		

2 Level 1 Routine Maintenance

Item	Description	Type	Unit	Quantity	Rate	Amount ($)
9.6	**Non-standard Signs**					
9.6.1	Supply of Signs	U	PS	15000	$1.00	$15,000.00
9.6.2	Percentage Over-rate to Supply of Signs *(The tendered rate must be expressed as a decimal and rounded to two places. The quantity is in dollars ($))*	U	%	15000		
9.7	**Posts** *(The total is transferred from Posts Schedule)*	U			1	
9.8	**Seasonal Signs**	U	ea	10		
9.9	**Refurbish and Reinstall Hardware**					
9.9.1	Posts	U	ea	1000		
9.9.2	Signs	U	ea	600		
9.9.3	Relocate Existing Hardware	U	ea	150		
9.10	**Sight Rails and Sight Rail Posts**					
9.10.1	Single	U	m	60		
9.10.2	Double Laminated	U	m	200		
9.10.3	Triple Laminated	U	m	150		
9.11	**Stock at End of Contract**	U	PS	5000	$1.00	$5,000.00
9.12	**Hardware Inventory**	U	ea	36		
10	**Edge Marker Posts**					
10.1	**Maintenance**					
10.1.1	Maintenance	C	km.mth	10248		
10.1.2	Additional Maintenance	C	/100 EMP	600		
10.2	**Programmed Replacement**					
10.2.1	Posts	U	ea	2000		
10.2.2	Red Bands	U	ea	3000		
10.2.3	**Reflective Strips**					

2 Level 1 Routine Maintenance

Item	Description	Type	Unit	Quantity	Rate	Amount ($)
10.2.3.1	White	U	ea	150		
10.2.3.2	Yellow	U	ea	100		
10.3	**Markings for State Highway Benchmark Sites**					
10.3.1	State Highway Benchmark Site Marker Posts	U	ea	35		
11	**Raised Pavement Markers**					
11.1	**Maintenance**					
11.1.1	Maintenance	C	km.mth	10248		
11.1.2	Additional Maintenance	C	/100 RPM	50		
11.2	**Programmed Replacement**					
11.2.1	Type A RPMs	U	ea	1000		
11.2.2	Type B RPMs	U	ea	250		
12	**Litter**	C	km.mth	10248		
13	**Damage and Hazard Reports**	U	ea	60		
14	**Crash Reports**	U	ea	750		
15	**Unofficial Signs**	U	ea	1200		

Section 2: Total Tender Sum (Transfer to Tender Summary)

3 Tender Summary

Section	Description	Total($)
1	**Contractor's Management (from Section 1)**	_____
2	**Level 1 Routine Maintenance (from Section 2)**	_____

Total Tender Sum (All Sections) (Transfer to Tender Form)	**$**

Tenderer's Signature: _____

Tenderer's Name: _____

Contact Person: _____

Contact Person's Position: _____

Contact Numbers: Phone _____ Fax _____

4 Annual Quantities

The Annual Quantities Schedule sets out for some Schedule Items the indicative number or quantity (as appropriate) that can be expected to be completed on an annual basis.

Level 1 Traffic Management (see Section 2): Schedule of Annual Quantities		
Item	**Description**	**Annual Quantity**
	Consultant to complete	

5 Standard and Non-Standard Signs

Tenderers must complete the Standard and Non-Standard Signs Schedule and transfer the resultant amount to the rate column of Section 2, Schedule Item 9.2.

The rates tendered in this schedule will be used to value all work completed under Schedule Item 9.2.

To complete this schedule, tenderers must:

a) for each item, enter their tendered rate and determine the amount by multiplying the quantity by the rate

b) sum all amounts to determine the total amount and transfer this value to the rate column of Section 2, Schedule Item 9.2.

Level 1 Traffic Management (see Section 2): Standard and Non-Standard Signs Schedule					
Item	**Sign Code and Size**	**Grade**	**Quantity** Consultant to Complete	**Rate ($)**	**Amount ($)**
Regulatory Signs (RG)					
9.2.1	**RG 1 - RG 3**				
9.2.1.1	600	Eng			
9.2.1.2	750	Eng			
9.2.1.3	900	Eng			
9.2.1.4	1200	Eng			
9.2.2	**RG 4A - RG 4B**				
9.2.2.1	750 dia, 800 x 250	Eng			
9.2.2.2	1200 dia, TW/C	Eng			
9.2.3	**RG 5**				
9.2.3.1	675 x 675	Eng			
9.2.3.2	845 x 845	Eng			
9.2.3.3	1015 x 1015	Eng			
9.2.4	**RG 6**				
9.2.4.1	750 x 865	Eng			
9.2.4.2	900 x 1040	Eng			
9.2.4.3	1200 x 1385	Eng			
9.2.5	**RG 6.1, 6.2 & 6.3**				
9.2.5.1	900 x 600	Eng			
9.2.5.2	900 x 800	Eng			
9.2.6	**RG 7, 8 & 9**				
9.2.6.1	400	Eng			
9.2.6.2	600	Eng			
9.2.6.3	750	Eng			
9.2.6.4	900	Eng			
9.2.7	**RG 10, 11, 12, 13,. 15 & 16**				

5 Standard and Non-Standard Signs

Level 1 Traffic Management (see Section 2): Standard and Non-Standard Signs Schedule					
Item	**Sign Code and Size**	**Grade**	**Quantity** Consultant to Complete	**Rate ($)**	**Amount ($)**
9.2.7.1	400	Eng			
9.2.7.2	600	Eng			
9.2.7.3	750	Eng			
9.2.7.4	900	Eng			
9.2.8	**RG 17**				
9.2.8.1	400	Eng			
9.2.8.2	600	Eng			
9.2.8.3	750	Eng			
9.2.8.4	900	Eng			
9.2.8.5	1200	Eng			
9.2.9	**RG 14**				
9.2.9.1	600 x 250	Eng			
9.2.9.2	750 x 300	Eng			
9.2.10	**RG 17.1 – 300 dia x 2 or 300x600**	Eng			
9.2.11	**RG 18 – 900x600**	Eng			
9.2.12	**RG 19.1**				
9.2.12.1	600	Eng			
9.2.12.2	750	Eng			
9.2.12.3	900	Eng			
9.2.13	**RG 19 & RG 21 (Complete)**				
9.2.13.1	600	Eng			
9.2.13.2	750	Eng			
9.2.13.3	900	Eng			
9.2.14	**RG 20 (Complete)**				
9.2.14.1	600	Eng			
9.2.14.2	750	Eng			
9.2.14.3	900	Eng			
9.2.15	**RG 22b – 1650x1000**	Eng			
9.2.16	**RG 23, 24, 25 & 26 – 400**	Eng			
9.2.17	**RG 26.1, 26.2, 26.3, 26.4 – 350x150**	Eng			
9.2.18	**RG 27**				
9.2.18.1	375 x 475	Eng			
9.2.19	**RG 28**				
9.2.19.1	350	Eng			
9.2.19.2	450	Eng			
9.2.19.3	750	Eng			
9.2.20	**RG 29 – 750x900**	Eng			
9.2.21	**RG 30 – 600x600**	Eng			

5 Standard and Non-Standard Signs

Level 1 Traffic Management (see Section 2): Standard and Non-Standard Signs Schedule					
Item	**Sign Code and Size**	**Grade**	**Quantity** Consultant to Complete	**Rate ($)**	**Amount ($)**
9.2.22	**RG 31 (Complete)**				
9.2.22.1	750 x 865	Eng			
9.2.22.2	900 x 1040	Eng			
9.2.22.3	1200 x 1385	Eng			
9.2.23	**RG 32 (Complete)**				
9.2.23.1	675 x 675	Eng			
9.2.23.2	845 x 845	Eng			
9.2.23.3	1015 x 1015	Eng			
9.2.24	**RG 33 (Complete)**	Eng			
Regulatory Heavy Vehicle Signs (RH)					
9.2.25	**RH 1 – 250**	Eng			
9.2.26	**RH 2 – 1200x975**	Eng			
9.2.27	**RH 4**				
9.2.27.1	1000 x 650	Eng			
9.2.27.2	1000 x 775	Eng			
9.2.27.3	1000 x 900	Eng			
9.2.28	**RH 5 - 750x350**	Eng			
9.2.29	**RH 6 - 1000x750**	Eng			
Permanent Warning Signs (PW)					
9.2.30	**PW 1, 2, 3: Diamond Only**				
9.2.30.1	600 x 600	Eng			
9.2.30.2	750 x 750	Eng			
9.2.30.3	900 x 900	Eng			
9.2.30.4	1200 x 1200	Eng			
9.2.31	**PW ##: Diamond Only**				
9.2.31.1	600 x 600	Eng			
9.2.31.2	750 x 750	Eng			
9.2.31.3	900 x 900	Eng			
9.2.32	**PW/A Supplementary Plate**				
9.2.32.1	600 x 250	Eng			
9.2.32.2	750 x 300	Eng			
9.2.32.3	900 x 350	Eng			
9.2.32.4	1600 x 500	Eng			
9.2.33	**PW/D Supplementary Plate**				
9.2.33.1	800 x 250	Eng			
9.2.33.2	1000 x 300	Eng			
9.2.33.3	1200 x 350	Eng			
9.2.34	**PW/E Supplementary Plate**				

5 Standard and Non-Standard Signs

Level 1 Traffic Management (see Section 2): Standard and Non-Standard Signs Schedule					
Item	**Sign Code and Size**	**Grade**	**Quantity** Consultant to Complete	**Rate ($)**	**Amount ($)**
9.2.34.1	950 x 300	Eng			
9.2.35	**PW 14**				
9.2.35.1	14a	Eng			
9.2.35.2	14b	Eng			
9.2.36	**PW 15**				
9.2.36.1	15a	Eng			
9.2.36.2	15b	Eng			
9.2.37	**PW 25**				
9.2.37.1	600 x 400	Eng			
9.2.37.2	750 x 500	Eng			
9.2.37.3	900 x 600	Eng			
9.2.37.4	1200 x 800	Eng			
9.2.38	**PW 26**				
9.2.38.1	800 x 250	Eng			
9.2.38.2	1000 x 300	Eng			
9.2.38.3	1200 x 350	Eng			
9.2.38.4	1600 x 500	Eng			
9.2.39	**PW 46 - 900x600**	Eng			
9.2.40	**PW 66**	Eng			
9.2.40.1	600 x 2350	Eng			
9.2.40.2	900 x 3700	Eng			
9.2.41	**PW67**	Eng			
9.2.41.1	450 x 600	Eng			
9.2.41.2	750 x 900	Eng			
9.2.42	**Chevron Sight Boards**				
9.2.42.1	1200 x 600 (Figure 5.12)	Eng			
9.2.42.2	1600 x 400 (Figure 5.13)	Eng			
9.2.43	**Hazard Markers**				
9.2.43.1	Bridge End Marker Posts (Figure 5.1)	Eng			
9.2.43.2	Hazard Markers (Figure 5.3)	Eng			
General Information Signs (IG)					
9.2.44	**RM 1 & 2 - 390**	Eng			
9.2.45	**IG 6**	Eng			
9.2.45.1	1125 x 1000	Eng			
9.2.45.2	1500 x 1370	Eng			
9.2.46	**IG 4 – IG5**	Eng			
9.2.47	**IG 12**				

5 Standard and Non-Standard Signs

Level 1 Traffic Management (see Section 2): Standard and Non-Standard Signs Schedule					
Item	**Sign Code and Size**	**Grade**	**Quantity** Consultant to Complete	**Rate ($)**	**Amount ($)**
9.2.47.1	Single Sided Single End	Eng			
9.2.47.2	Double Sided Single End	Eng			
9.2.47.3	Double Sided Double End	Eng			
9.2.47.4	Single Sided Double End	Eng			
9.2.48	**IG 13**	Eng			
9.2.49	**IG 14**	Eng			
9.2.50	**IG 8**	Eng			
9.2.51	**IG 9**	Eng			
9.2.52	**IG 10**	Eng			
9.2.53	**LRMS Signs**				
9.2.53.1	LR Sign Type A	Eng			
9.2.53.2	LR Sign Type B	Eng			
9.2.53.3	Bridge structure number signs	Eng			
9.2.53.4	Small culvert markers	-			
9.2.54	**LRMS Reference Station Signs (RS)**				
9.2.54.1	RS	Eng			
9.2.54.2	RS-D	Eng			
9.2.54.3	RS-I	Eng			
9.2.54.4	RS-W	Eng			
9.2.55	**LRMS Ramp Reference Station Signs**				
9.2.55.1	OFF Ramp	Eng			
9.2.55.2	ON Ramp	Eng			
9.2.55.3	Ramp END	Eng			
9.2.56	**LRMS Established Route Position Signs (ERP)**				
9.2.56.1	ERP	Eng			
9.2.56.2	ERP-D	Eng			
9.2.56.3	ERP-I	Eng			
9.2.57	**LRMS Kilometre Marker Post Signs (KMP)**				
9.2.57.1	KMP	Eng			
9.2.57.2	KMP-D	Eng			
9.2.57.3	KMP-I	Eng			
9.2.57.4	KMP-C	Eng			
Total Amount	(Transfer to the rate column of Section 2, Item 9.2)				

6 Posts

Tenderers must complete the Posts Schedule and transfer the results to Section 2, Schedule Item 9.7.

The rates tendered in this schedule will be used to value all work completed under Schedule Item 9.7.

To complete this schedule, tenderers must:

a) for each item, enter their tendered rate and determine the amount by multiplying the quantity by the rate

b) sum all amounts to determine the total amount and transfer this value to the rate column of Section 2, Schedule Item 9.7.

Level 1 Traffic Management (see Section 2): Schedule of Posts				
Item	**Post Type and Size**	**Quantity**	**Rate ($)**	**Amount ($)**
9.7	**Posts**	**Complete**		
9.7.1	**Wooden**			
9.7.1.1	100x100mm			
9.7.1.2	100x150mm			
9.7.1.3	150x 150mm (with 50mm dia holes)			
9.7.1.4	150x 200mm (with 75mm dia holes)			
9.7.1.5	125mm Diameter			
9.7.2	**Steel**			
9.7.2.1	60mm Outer Diameter (3.2 mm wall thickness)			
9.7.2.2	76mm Outer Diameter (3.2 mm wall thickenss)			
9.7.2.3	102mm Outer Diameter			
9.7.2.4	75x50mm Outer Dimension (3mm wall thickenss)			
9.7.2.5	75x75mm Outer Dimension (3mm wall thickenss)			
9.7.3	**Aluminium**			
9.7.3.1	60mm Diameter (maximum wall thickness of 4.7mm)			
9.7.3.2	76mm Diameter (maximum wall thickness of 4.7mm)			
9.7.3.3	89mm Diameter (maximum wall thickness of 4.7mm)			
9.7.3.4	102mm Diameter (maximum wall thickness of 4.7mm)			
9.7.3.5	114mm Diameter (maximum wall thickness of 4.7mm)			
9.7.4	**Self Righting**			
9.7.4.1	825mm High Assemby (surface-mount/in-ground)			
9.7.4.2	1200mm High Assemby (surface-mount/			

6 Posts

Level 1 Traffic Management (see Section 2): Schedule of Posts				
Item	**Post Type and Size**	**Quantity**	**Rate ($)**	**Amount ($)**
	in-ground)			
Total Amount	**(**Transfer to the rate column of Section 2, Item 9.7)			

7 Important Note for Tenderers about Quantities

Tenderers must note:

1. All quantities stated in the Schedule of Prices are for information only. Tenderers:

   a) must expect the stated quantities to vary between various sections of the **network** and throughout the contract period

   b) shall allow in the tendered rates for variations such as location, extend and type of work completed under each Unit Rate and Cyclic Maintenance Items.

2. The Contractor is:

   a) entitled to payment for the quantity of work completed as provided for in the Basis of Payment

   b) is not otherwise entitled to any additional compensation (whether by way of damages or otherwise) for any difference between the actual and scheduled quantities.

Basis of Payment

Contents

Contents

1 Preamble

The following Clauses apply to all Items included in the **Schedule** of Prices.

i. Annual Contract Value

The annual contract value is expected to fall between -15% and +0% of the value stated in Request for Tender, Clause 1.13.

ii. Abbreviations

Units of measurement shown in the *unit column* of the **Schedule** of Prices are abbreviated as follows:

%	=	Percent
/100ea	=	100 each (per 100 additional **potholes**)
EMP	=	Edge Marker Post
RPM	=	Raised **Pavement** Marker
Day	=	Day
ea	=	each
Hr	=	Hour
Km	=	Kilometre
Km.mth	=	Kilometres Monthly
l	=	Litre
LS	=	Lump Sum
LS/mth	=	Lump Sum per Month
LS/Remark	=	Lump Sum per Remark
m	=	Metre
m^2	=	Square Metre
m^3	=	Cubic Metre
t	=	Tonne
kg	=	Kilogram
PS	=	Provisional Sum
$	=	Dollar

iii. Definitions

Task types shown in the *Task column* of the **Schedule** of Prices are abbreviated as follows:

M = Management Task
U = Unit Rate Task
C = Cyclic Maintenance Task

First **Schedule** Part B, clause 1.2 defines each task.

iv. Measurement

Payment for all work completed will be based on the quantities stated on the agreed **Programme**. No payment will be made for any work completed by the Contractor that was:

a) not agreed with the Engineer

b) not on an agreed **Programme**

c) deleted by the Engineer from any **Programme**

d) not fully complete at the time of measurement.

No additional payment will be made for any increase in the extent of work required to complete Task(s) if this happened only because the Task(s) were not completed by the date shown on the agreed **Programme**.

v. Engineer's Assessment and Measurement

If the Engineer's reviews and inspections of the Contract Works show:

a) the quality assurance records are incomplete and/or

b) some aspects of the Contract Works are non-complying, the Engineer may:

- value the works according to General Conditions, Clause 12.1.3
- instruct the Contractor to identify and rectify all non-complying work
- arrange for the work to be completed by any such means the Engineer considers appropriate. If time permits, the Contractor will be advised of the Engineer's intentions and given the opportunity to complete the work within the time frame agreed with the Engineer.

All costs of initiating, managing and completing any such work may be deducted from the Contractor's payments. These costs will be based on the rates stated under Conditions of Contract, First **Schedule**, Clause 6.4.6.

If the remedial work is completed, the Engineer may:

i) reassess and value the work

ii) instruct the Contractor to complete further remedial work.

No additional payment will be made for any increase in the extent of work required to complete Task(s) if this happened only because the Task(s) were not completed by the date shown on the agreed **Programme**.

v.1 Payment Valuation

Further to General Conditions, Clause 12.1, the Engineer's valuation of the Contractor's claims will be based on the inspection and assessment of:

a) a sample or samples of the claimed unit rate tasks to determine unit rate task's compliance

1 Preamble

b) a sample or samples of at least 10% of the **network's** length, selected on a random basis, to determine cyclic maintenance task's compliance.

The Engineer will:

i) invite the Contractor to participate in the sampling, inspection and assessment of the first payment claim

ii) make available all records and documentation that support each claim's valuation.

Any reduction in payment in accordance with these provisions shall be without prejudice to the provisions of Section 14 of the General Conditions.

v.1.1 Sampling

Unit Rate Tasks

The unit rate task sample will include:

a) all unit rate tasks greater than ***20***m² in total area or ***10***m in total length as appropriate

b) all unit rate tasks greater than ***$5,000.00*** in value

c) a random sample of the remaining unit rate tasks so:
- the **total sample size** is at least 10% of the total number of unit rate tasks claimed and
- the **total sample value** is at least 10% of the total value of unit rate tasks claimed.

These inspections will be completed between the date the claim is received and the date the claim is certified for payment.

Cyclic Maintenance

The assessment of cyclic maintenance task compliance will be based on an inspection and assessment of at least 10% of the total length of highway and/or total number of areasinstallations, as appropriate, within the **network** each month.

The Engineer will:

a) split the **network** into discrete kilometre sections and/or areas

b) provide a copy of this list to the Contractor at the start of the contract

c) select on a random basis a sample or samples comprising at least 10% of the total number of sections and/or areas each month.

These inspections will be completed at any time during the period the claim applies to.

1 Preamble

v.1.2 Sample Assessment

Unit Rate Tasks

For each selected task, the Engineer will determine whether it complies with the Contract Documents.

The percentage compliance will be:

a) calculated using the following formula. If the Engineer includes any other unit rate tasks, not selected in the original sample, in the assessment, then the sample size used in the calculation will be the total number of unit rate tasks claimed.

b) expressed as a percentage and rounded to the nearest whole number.

The results will be used to help value the Contractor's claim according to General Conditions, Clause 12.1 Contractor's payment claims.

$$\textit{Unit Rate Compliance (\%)} = \frac{\text{(Total Number of Tasks Inspected - Number of Non-complying Tasks Identified)}}{\text{Total Number of Tasks Inspected}}$$

Cyclic Maintenance Tasks

For each cyclic maintenance task, the Engineer will:

a) inspect each selected section and determine whether it complies with the Contract Documents. If a defect is identified and a response time is:

- stated, the Engineer will re-inspect the section after the specified response time has lapsed. If the defect remains, the section will be non-complying for the month
- not stated, the section will be non-complying for the month

b) advise the Contractor of the location of all defects by **schedule** item, state highway and reference station within 24 hours of the time each defect is identified. The specific route position of the defect will not be stated

c) attach a list detailing the specific location of all non-complying defects to the payment certificate.

The percentage compliance will be:

i) calculated using the following formula. If the Engineer includes any other sections, not selected in the original sample, in the assessment, then the sample size used in the calculation will be the total number of sections within the **network**.

ii) expressed as a percentage, rounded to the nearest whole number.

1 Preamble

Cyclic Assessment (%) = (Total Number of Sections Inspected - Number of Non-complying Sections Identified) / Total Number of Sections Inspected

The percentage compliance will be used to value the Contractor's cyclic maintenance claim according to the following table. If the percentage compliance is less than or equal to 29% the work completed by the Contractor during the month is of no value to the Principal and no payment will be made.

Valuation of Contractor's Monthly Claims	
Percentage Compliance	**Percentage Payment**
≥ 90	100
80 to 89	90
60 to 79	70
30 to 59	40
≤ 29	0

v.1.3 Sample Size

The total sample size will be determined by the discretion of the Engineer, subject to the minimum sample size which must be inspected in respect of each claim.

If the claim valuation process results in:

a) percentage compliance of greater than 95% for 3 or more consecutive months then the Engineer may, in consultation with the Principal, reduce the minimum total sample size used in the assessment to 5%. If the percentage compliance then drops below 95% then the minimum total sample size will revert to 10%

b) percentage compliance of less than 90% the Engineer may, in consultation with the Principal, increase the minimum total sample size used in the assessment to a minimum of 20%. If the percentage compliance increases to greater than or equal to 90% for two consecutive months then the minimum total sample size will revert to 10%.

v.1.4 Defects

The Engineer's discretion inspections may be completed to identify defective work.

All defects identified during the payment valuation process and/or identified and/or reported at other times during the month must be rectified within:

a) the specified response time, or

b) one month if no response time is stated.

vi. Inspections

The tendered rates must include all the Contractor's costs associated with undertaking and completing all routine and joint inspections.

1 Preamble

vii. Stockpile and Disposal Areas

The tendered rates must include all the Contractor's costs associated with the use, management and tidy up of all stockpile and disposal areas (see Maintenance Specification, Section 3 Stockpile and Disposal Areas).

viii. Urgent Work

No additional payment will be made for any work completed as **Urgent Work** (see Maintenance Specification, Section 4).

ix. Renegotiated Rates

If the number and/or extent of **pavement** repairs within a 100m **treatment** length exceed 100m² the Contractor must:

a) complete the work as an area **treatment**

b) renegotiate the rates for the work to reflect the savings associated with completing larger area **treatments** rather than smaller individual repairs.

x. On-site and Off-site Overheads and Profit

The tendered rates must include all the Contractor's costs associated with all on-site and off-site overheads and profit.

xi. Scheduled Quantities

The scheduled quantities stated in the **Schedule** of Prices are for **3** years.

2 Payment

1. Contract Works

The tendered rates must include all the Contractor's costs associated with complying with the Project Specification Section 1, excluding the costs associated with any Contract Management Review, refer Clause 1.1 below.

1.1 Contract Management Review

Schedule Item 1.1 is a Provisional Item only.

Payment will be made for each Contract Management Review undertaken in accordance with Maintenance Specification Section 1.

The tendered rate must:

a) allow for each review to take 2 days to complete

b) fully compensate for completing each review and developing and implementing the Contract Improvement Plan as specified.

2. Contractor's Quality Plan

2.1 Preparation and Management of CQP

Payment of the lump sum (LS) will be made as follows:

a) 50% when the CQP is agreed

b) Equal proportion of the remaining amount annually, for the duration of the contract.

The tendered rate must fully compensate for preparing, accepting, reviewing and updating the CQP in accordance with Maintenance Specification Section 2.

2.2 Quality Control Testing

The tendered rates must include all the Contractor's costs associated with completing all sampling and testing in accordance with Maintenance Specification Section 2.

3. General Requirements

The tendered rates shall include all the Contractor's costs associated with complying with the Maintenance Specification Section 3.

4. Contractor's Programmes

The tendered rates must include all the Contractor's costs associated with complying with the Maintenance Specification Section 4.

2 Payment

5. Contractor's Reports

5.1 Monthly Reports

Payment will be made for each Monthly Report submitted in accordance with Maintenance Specification Section 5.

The tendered unit rate must:

a) fully compensate for preparing and submitting each Monthly Report as specified

b) not be less than nor greater than the values stated in the **Schedule** of Prices.

5.2 Final and Maintenance Reports

The tendered rates must include all the Contractor's costs associated with preparing and submitting the Final and Maintenance Reports in accordance with Maintenance Specification Section 5.

6. Traffic Management

6.1 Preparation of Traffic Management Plan (TMP)

Payment of 100% of the lump sum will be made once the **TMP** has been agreed.

The tendered rate must fully compensate for:

i) preparing, reviewing, updating and acceptance by the Engineer of the **TMP**

ii) preparing site specific **TMP**s which may be required during the contract in accordance with Maintenance Specification Section 6.

6.2 Management of TMP

The tendered rates shall fully compensate for implementing and managing the **TMP** as specified in the Maintenance Specification Section 6. Tendered rates shall be inclusive of the costs associated with implementation and management of the **TMP** during any consecutive or concurrent Separable Portions.

Where existing **TMP**s have been approved (unless there are changes to the Code of Practice of Temporary Traffic Manangement (**COPTTM**) requirements), these approved **TMP**s may be provided if appropriate for specific circumstances to all tenderers as the basis of pricing e.g. complex **temporary traffic management** situations.

Any changes to the **TMP** shall be forwarded to the Engineer.

2 Payment

6.3 Traffic Control

The tendered rates must include all the Contractor's costs associated with providing all traffic control in accordance with Maintenance Specification Section 6.

6.4 Additional Traffic Control

This is a ***Provisional Item*** and only applies to work completed as **Unscheduled Works**.

Payment will be made for each day additional traffic control is provided in accordance with Maintenance Specification Section 6.

The tendered rate must fully compensate for providing all traffic control for each day as specified.

7. Environmental Management

The tendered rates must include all the Contractor's costs associated with developing, implementing, managing and reviewing environmental management measures in accordance with Maintenance Specification Section 7.

8. Unscheduled Works

Schedule Item 8 is a ***Provisional Item*** only.

In general, payment will be made on a lump sum basis for all **Unscheduled Work** completed in accordance with Maintenance Specification Section 8. The tendered plant and labour rates must include all costs associated with supplying traffic management, including hardware, required to complete the work.

If the work is completed on a dayworks basis, priced Daily Job Records (**DJR**) must be completed to support each claim. The **DJR's** must accurately reflect the work completed and:

i) include a description of the work completed, including date(s) completed, location and extent

ii) state the type of equipment, total hours, rate and total value of payment claimed for each type of equipment

iii) state the total labour hours, rate and total value of payment claimed.

In addition, all invoices for materials used must be available for the Engineer's inspection within one month of the time of the **incident**.

8.1 Plant and Equipment

The tendered hourly rate for plant and equipment including the normal number of operators (plant) will be paid for the number of hours each item of plant is used. If the plant is not used efficiently, the Engineer may reduce the hours paid.

2 Payment

The total hours worked is defined when plant:

a) is working with other resources, if appropriate, so the operation is completed with maximum efficiency;

b) is being established or disestablished under its own power to or from the nearest depot, or its previous work site, or the **network's** boundary, whichever is closer (unless it is cheaper to establish or disestablish the plant by other means);

c) is being loaded on to trucks and transporters whether the operator is assisting or not;

d) in any one hour has idle time of less than 10 minutes.

The total hours worked must not include the time when:

a) the plant operator is having breaks or is unavailable

b) the plant is not working, including periods when the plant is broken down, being serviced, fuelled etc., or transported other than under its own power;

c) the plant operator is returning to depots at the end of each day without the plant;

d) in any one hour there is idle time in excess of 10 minutes.

The tendered hourly rate must fully compensate for the plant operator's wages, the Contractor's profit, on-cost, superintendence, all insurances, levies and holidays with pay and allowances, accommodation and travelling costs, and all clerical, office and all other overhead and incidental costs.

8.2 Materials

8.2.1 Materials

The provisional sum for materials provides for paying the net invoiced cost of all materials, delivered to the site and used for constructing the permanent works by dayworks, as authorised by the Engineer.

8.2.2 Contractor's On-cost to Materials

The percentage on-cost to **Schedule** Item 8.2.1 applies to the net invoiced cost of materials and must cover all overhead charges and profits.

8.3 Labour

The tendered hourly rate for labour will be paid for the total hours worked. If the labour is not used efficiently the Engineer may reduce the hours paid in direct proportion to the efficiency with which the labour is used.

The total hours worked is defined as the hours when the labour is working with other resources, if appropriate, so the operation is completed with maximum efficiency.

2 Payment

The tendered hourly rate must fully compensate for:

a) the Contractor's profit, on-cost, superintendence, all insurances, levies and holidays with pay and allowances

b) accommodation and travelling costs, and all clerical, office and all other overhead and incidental costs.

8.4 Cost Fluctuations

The provisional sum allows for the payment of cost fluctuations. Payment will be made according to First **Schedule**, Clause 12.8.2.

9. Signs

9.1 Hardware Maintenance

9.1.1 Routine Maintenance

Payment will be made for each kilometre for each month all signs are maintained in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for identifying and completing all signs maintenance as specified.

The Engineer will measure compliance and determine the value of the Contractor's Payment according to Basis of Payment, Clause (v).

9.1.2 Cleaning Signs

9.1.2.1 Gantry Signs

Payment will be made for each overhead gantry sign cleaned in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for completely cleaning each gantry sign as specified.

9.1.2.2 Other Signs

The tendered rates must include all of the Contractor's costs associated with cleaning all signs, except overhead gantry signs, in accordance with Maintenance Specification Section 9.

2 Payment

9.1.3 Hardware Painting

9.1.3.1 Posts

Payment will be made for each post painted in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for completely preparing and painting of each post as specified.

9.1.3.2 Sight Rails and Sight Rail Posts

Payment will be made on the total length of sight rails painted in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for completely preparing and painting of each sight rail, (including posts), as specified.

9.1.3.3 Miscellaneous Painting

Payment will be made on the total area of painting completed in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for completely preparing and painting of the area as specified.

9.2 Standard and Non-Standard Signs

Payment will be made for each standard and non-standard sign, at the tendered rates as detailed in Section 5 **Schedule** of Prices, **Standard and Non-Standard Signs Schedule**, erected in accordance with Maintenance Specification Section 9.

The tendered rate must fully compensate for supplying and completely erecting, including supplying all fixings of each sign as specified.

9.3 Class 1 High Intensity Signs

9.3.1 Supply of Signs

Payment will be made according to Clause 9.2 above.

2 Payment

9.3.2 Percentage Over-rate to Supply of Signs

Payment of the percentage over-rate will be made in addition to the value of work paid under **Schedule** Item 9.3.1 above. This Item does not apply to those signs that are specified to have a high intensity reflective surface (see **Schedule** of Prices, Standard Signs **Schedule**).

The percentage over-rate must fully compensate for supplying the Standard Sign with the high intensity reflective surface as specified.

9.4 Enhanced Class 1 Signs

9.4.1 Supply of Signs

Payment will be made according to Clause 9.2 above.

9.4.2 Percentage Over-rate to Supply of Signs

Payment of the percent over-rate will be made in addition to the value of work paid under **Schedule** Item 9.4.1 above. This Item does not apply to those signs that are specified to have an Enhanced Class 1 reflective surface (see **Schedule** of Prices, Standard Signs **Schedule**).

The percentage over-rate must fully compensate for supplying each Standard Sign with the Enhanced Class 1 reflective surfacing as specified.

9.5 Class 1A Prismatic Signs

9.5.1 Supply of Signs

Payment will be made according to Clause 9.2 above.

9.5.2 Percentage Over-rate to Supply of Signs

Payment of the percentage over-rate will be made in addition to the value of work paid under **Schedule** Item 9.5.1 above. This Item does not apply to those signs that are specified to have a Class 1A Prismatic reflective surface (see **Schedule** of Prices, Standard Signs **Schedule**).

The percentage over-rate must fully compensate for supplying the Standard Sign with the Class 1A Prismatic reflective surfacing as specified.

9.6 Non-standard Signs

9.6.1 Supply of Signs

Payment will be made as a lump sum on the net invoiced cost of the non-standard sign erected in accordance with Maintenance Specification Section 9.

2 Payment

The payment will be subject to the Contractor demonstrating the non-standard sign was purchased at competitive market rates.

9.6.2 Percentage Over-rate to Supply of Signs

Payment of the percentage over-rate will be made in addition to the value of work paid under **Schedule** Item 9.6.1 above.

The payment will be subject to the Contractor demonstrating the non-standard sign was purchased at competitive market rates.

9.7 Posts

Payment will be made for each post at the tendered rates (as detailed Section 5,in the **Schedule** of Posts) erected in accordance with Maintenance Specification Section 9.

The tendered rate must fully compensate for removing of all existing hardware, if required, supply, including painting, and completely installing the replacement post as specified.

9.8 Seasonal Signs

Payment will be made for the erection, maintenance, removal and storage of each seasonal sign in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for completely erecting and/or removing and storing the seasonal sign, including the supply of all posts and associated hardware, as specified.

9.9 Refurbish and Reinstall Hardware

Payment will be made for each item of hardware refurbished and reinstalled and/or relocated in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for retrieving (if required), refurbishing and completely reinstalling the item of hardware as specified.

9.10 Sight Rails and Sight Rail Posts

Payment will be made on the total length of new sight rail constructed, or length of existing sight rail repaired or replaced in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for completely supplying and constructing the sight rail, including posts and the removal of the **damaged** sightrails, preparing and painting (including post), as specified.

2 Payment

9.11 Stock at End of Contract

Payment will be made:

a) for hardware the Contractor has in stock at the end of the contract. The payment will not exceed the Provisional Sum and must include the transportation of the hardware to the location specified by the Engineer

b) at the rates tendered under **Schedule** Item 9.2.

If the value of stock is greater than the Provisional Sum, only those items of hardware selected by the Engineer will be paid for. No payment will be made for **damaged** or marked hardware.

9.12 Hardware Inventory

Payment will be made when the reviewed and updated Signs **Inventory** is accepted in accordance with Maintenance Specification Section 9.

The tendered unit rate must fully compensate for preparing, if required, reviewing and updating the Signs **Inventory** as specified.

10. Edge Marker Posts

10.1 Maintenance

10.1.1 Maintenance

Payment will be made for each kilometre for each month all edge marker posts (EMP) are maintained in accordance with Maintenance Specification Section 10.

The tendered unit rate must fully compensate for identifying and completely maintaining all EMPs, including the refurbishment and/or supply of all replacement EMPs posts, as specified.

The Engineer will measure compliance and determine the value of the Contractor's Payment according to Basis of Payment, Clause (v).

10.1.2 Additional Maintenance

This is a ***Provisional Item*** and will:

a) ***only apply*** if the number of defective EMPs identified and replaced under Item 10.1.1 exceeds the quantity stated in the **Schedule** of Annual Quantities by more than 15%

b) be determined on an annual basis from the date of occupancy of site.

2 Payment

Payment will be made as a lump sum. This will be calculated by dividing the number of additional EMPs by 100 and multiplying this number by the rate tendered under Item 10.1.2.

The resultant lump sum will fully compensate for all costs associated with identifying and maintaining all additional EMPs during the period.

10.2 Programmed Replacement

Payment will be made on the total number of EMPs upgraded in accordance with Maintenance Specification Section 10.

The tendered unit rate must fully compensate for supplying and completely installing each marker post and/or red band and/or reflectors as specified.

10.3 Markings for State Highway Benchmark Sites

10.3.1 State Highway Benchmark Site Marker Posts

Payment will be made for each state highway benchmark site marker post fully supplied and installed as specified.

11. Raised Pavement Markers

11.1 Maintenance

11.1.1 Maintenance

Payment will be made for each kilometre for each month all RPMs are maintained in accordance with Maintenance Specification Section 11.

The tendered unit rate must fully compensate for identifying and completely maintaining, including supplying and replacing all replacement RPMs as specified.

The Engineer will measure compliance and determine the value of the Contractor's Payment according to Basis of Payment, Clause (v).

11.1.2 Additional Maintenance

This is a ***Provisional Item*** and will:

a) ***only apply*** if the number of defective RPMs identified and replaced under Item 11.1.1 exceeds the quantity stated in the **Schedule** of Annual Quantities by more than 15%

b) be determined on an annual basis from the date of occupancy of site.

2 Payment

Payment will be made as a lump sum calculated by dividing the number of additional RPMs by 100 and multiplying this number by the rate tendered under Item 11.1.2.

The resultant lump sum will fully compensate for all costs associated with identifying and maintaining the additional raised **pavement** markers during the period.

11.2 Programmed Replacement

This is a ***Provisional Item*** only.

Payment will be made for each RPM upgraded in accordance with Maintenance Specification Section 11.

The tendered unit rate must fully compensate for supplying and completely installing each RPM as specified.

12. Litter

Payment will be made for each kilometre for each month where all **litter** is removed in accordance with Maintenance Specification Section 12.

The tendered unit rate must fully compensate for identifying and completely removing all **litter** as specified. The tendered rate shall include for all costs associated with the disposal of litter such as dump fees and permits in accordance with Section 3 Stockpile and Disposal Areas.

The Engineer will measure compliance and determine the value of the Contractor's Payment according to Basis of Payment, Clause (v).

No additional payment will be made if the quantity of **litter** removed exceeds the quantity stated in the **Schedule** of Annual Quantities.

13. Damage and Hazard Reports

Payment will be made each month the Contractor reports adequately to the Engineer observations of any **damage** to roadside facilities observed and on receipt of the monthly summary of observations in accordance with Maintenance Specification Section 13.

The tendered sum must fully compensate for all inspections and submitting reports and observations as specified.

Payment for the erection of any warning devices will be made as unscheduled work as specified in clause 8 provided always that the Contractor notifies the Engineer immediately of the hazard as per clause 13.4.

The Engineer may authorise the Contractor to carry out remedial works to correct ay deficiencies reported. Payment for any remedial works will be made either under an appropriate scheduled item, or under clause 8 as unscheduled work.

2 Payment

14. Crash Reports

14.1 Crash Reports

Payment will be made for each report accepted by the Engineer in accordance with Maintenance Specification Section 14.

The tendered unit rate must fully compensate for identifying the crash, preparing and submitting each report as specified.

15. Unofficial Signs

Payment will be made for each unofficial sign removed and stored in accordance with Maintenance Specification Section 15.

The tendered unit rate must fully compensate for identifying, removing and, if required, completely disposing of each unofficial sign as specified.

Maintenance Specification

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1 Contract Works

1.1 Scope

This Section describes the extent and location of the Contract Works, the Contractor's and Engineer's obligations and describes performance reviews.

1.2 Contract Works' Description

This Contract is for maintaining traffic services within a **network**. This includes all or a combination of the following activities:

a) signs maintenance

b) edge marker post and raised **pavement** marker maintenance

c) associated activities such as **litter**, **damage** and hazard and crash reporting.

The Operational Requirements details the specific requirements that apply to this Contract.

This contract requires a high degree of co-operation between the Contractor and the Engineer. The detailed investigations carried out by the Contractor to facilitate the design of the works may necessitate review of the outputs of the **treatment** selection process. In some cases technical reviews may be necessary to resolve the most effective **treatment** and such reviews may involve the utilisation of external resources. The **treatment** selection and design processes, and roles and responsibilities relating to these, are described in Transit's *State Highway Asset Management Manual*.

1.2.1 Extent

The Contract Works (see General Conditions, Clause 1.2) are described in this Maintenance Specification, summarised in the **Schedule** of Prices and include:

a) implementing a CQP to enable the completion of the Contract Works (see Section 2)

b) providing all labour, plant and materials required to complete the Contract Works.

The Contract Works excludes **programmed maintenance** except as provided in the Contract Documents

1.2.2 Location

The Contract Works are located within the **network** described in Operational Requirements, Clause 2. The **network** includes:

a) all **carriageway**, **bridges** and **other structures**, **stormwater structures**, **roadside furniture** and **road safety barrier** systems, and encompasses the road reserve bound by existing fences or road reserve boundaries

b) all established **rest areas** and roads, **bridges** and **stormwater structures** within these areas.

c) If a local road intersects the state highway at grade, the Contractor must maintain the state highway for a distance of 10 metres from the limit line position or to the end of seal, whichever is the lesser. This maintenance includes:

- Maintenance of regulatory signs associated with the intersection
- Maintenance of raised traffic islands
- Other areas associated with the intersection as outlined in the Operational Requirements.

The Contractor will continue to maintain the **network** through lengths affected by other construction projects, unless directed by the Engineer to stop specific activities.

1.3 Obligations

1.3.1 Contractor's Obligations

The Contractor must:

a) complete the Contract Works to the standards specified in these Contract Documents so the concepts and expectations outlined in the Request for Tender are achieved

b) **programme** and complete all work in accordance with Section 4.

c) establish and maintain appropriate systems to monitor and report against specified performance indicators (see Clause 1.5.3).

d) ensure that sufficient resources are maintained to source the needs of the contract, both for programmed and scheduled works and for **unscheduled works**.

This means the Contractor must:

i) proactively manage this Contract

ii) intervene so all traffic services comply with these Contract Documents at all times

iii) provide appropriate resources to respond to traffic services related **incidents**.

1.3.1.1 Maintenance on State Highway Benchmark and Calibration Sections

State highway benchmark and calibration sections are listed in the Operational Requirements. The maintenance requirements for these sections are tabulated below:

1 Contract Works

Table 1.1: Maintenance on State Highway Benchmark and Calibration Sections			
Section Type	**Obtain Approval Prior to Maintenance work (Yes / No)**	**Maintain to Contract Specification (Yes / No)**	**Maintenance records provision**
Benchmark Section (excluding any calibration length)	No	Yes	Details entered into RAMM database
Calibration Section (Sterilised)	Yes	No (Hazard Removal Only)	Details entered into RAMM and LTPP Site Maintenance Databases
Calibration Section (Non-Sterilised)	Yes	Yes	Details entered into RAMM and LTPP Site Maintenance Databases

Note:

1.3.2 The completed LTPP site maintenance database for each financial year shall be submitted to the Asset Management Team, NZTA National Office, Wellington annually by the end of July.

1.3.3 Engineer's Obligations

The Engineer will complete routine and specific **network** inspections and CQP reviews to:

a) assess the Contractor's progress and performance

b) assess the content and appropriateness of all work included in the Contractor's **Programmes**

c) verify the Contractor's reports

d) certify the Contractor's claims for payment according to the Contract Documents

e) complete performance appraisals.

f) updating of the inventories including measures adopted to ensure the accuracy, validity and completeness of the data presented for updating the Client's databases.

1 Contract Works

1.4 Road Classes

Table 1.2 *Road Classes* shows the classification of each highway road within the **network**.

Table 1.2: Road Classes	
Class	**Type/Volume**
M	Motorways and Expressways
U	Urban State Highways
R1	Greater than or equal to 10,000 vpd
R2	4,000 to 9,999 vpd, Heavy Vehicle and Tourist Routes
R3	1,000 to 3,999 vpd
R4	0 to 999 vpd

1.5 Performance Monitoring

Systems shall be implemented to monitor and report on the performance of the Contract in respect to achievement of performance indicators and compliance with the specified outcomes defined in this contract.

1.5.1 Monitoring by the Engineer

The Principal requires the Engineer to:

a) provide monthly contract progress reports

b) complete performance evaluations. Performance evaluations will be completed to:

7i) assess the Contractor's overall performance

ii) monitor the performance indicators (see Clause 1.5.3)

iii) assess the culture of the contracted parties and the Engineer's performance

iv) determine the Contractor's overall track record score for the Contract.

All parties will meet with an independent party, if required, and complete each appraisal.

v) If provided for in the Contract Documents, the resulting overall performance appraisal score will be used to determine if the Contract will be extended, see First **Schedule**, Clause 1.2.

vi) Where provided for in the Contract Documents, any performance appraisal to determine if the Contract shall be extended to the following Separable Portion shall be undertaken by the Engineer 6 months prior to the specified Separable Portion date.

vii) The Engineer shall advise both the Contractor and Principal, in writing, the resulting overall performance appraisal score.

viii) Each evaluation will be completed using the Performance Evaluation Form (PACE), see Appendix 1.2

ix) The evaluation frequency for this contract is to be determined by the Engineer following contract award. General guidelines indicate that evaluation frequencies are set at monthly intervals throughout the contract period, but shall not be at more than 6 monthly intervals throughout the period of the contract.

c) complete a final contract report and determine the Contractors overall track record score. The performance evaluations will be considered in determining the overall track record score.

1.5.2 Contract Management Review

The purpose of the contract management review (CMR) is to assess the compliance and effectiveness of contract management activities, and the ability of the Contract to achieve specified contract outcomes. The Principal:

a) has developed procedures for the CMR. The CMR will be completed over a two-day period in the Contractor's offices

b) may complete the CMR at least once during the contract period and more frequently if problems are encountered

c) will give 2 weeks notice of the CMR.

The Contractor:

i) must provide a working space and make available contract personnel and records to complete the review

ii) will be provided with a report and, if appropriate, a contract improvement plan. This plan will be used to address areas of non-compliance and to monitor the Contractor's progress and performance.

The results of the review will be included in the Contractors PACE evaluation as well as being included in the assessment of quality (see Clause 1.5.3.3). Evaluations will take into consideration the number and type of non-compliances identified, and the Contractor's ability to meet agreed completion dates in respect to corrective action required in response to the review findings.

1.5.3 Monitoring by the Contractor

Except for the **network** condition monitoring, which shall be monitored by the Engineer, the Contractor must monitor their own performance and in particular the following performance indicators. The updated Performance Indicators must be included in the Monthly Report (see Section 5).

1.5.3.1 Financial Performance

The following financial performance indicators will be measured:

a) Accrued Value of Work versus Budget and Updated Forecast

b) Value of Monthly **Programmes** versus Budget, Forecast and the value certified for payment

c) Value of Outstanding Work and Work In Progress.

The financial performance indicators will be measured for each payment item and the Contract Works (see Sections 4 and 5).

1.5.3.2 Achievement

The following achievement indicators will be measured:

a) the number of tasks completed each month compared to the number of tasks **programmed**

b) the number of faults the Engineer identifies that were not rectified within the specified response times

c) the number of outstanding tasks each month compared to the number of tasks **programmed**.

1.5.3.3 Quality

The following quality indicators will be measured:

a) the number of non-complying tasks compared to the number of tasks **programmed**. The term 'non-complying tasks' is defined as including; repairs outside specification, failure of repair, and complaints; including those identified both internally and externally (e.g. by the Engineer or Public)

b) samples of the Contractor's records, including minutes of meetings etc., that demonstrates the Contractor's procedures for handling quality issues

c) CQP compliance (see Section 2)

d) the number and/or type of Non-Compliances identified in internal contract systems compliance audits, reviews and/or audits by the Engineer (see Clause 1.5.1) and (where appropriate) contract management reviews (see Clause 1.5.2)

e) any other indicators developed during the contract period.

1.5.3.4 Safety (including Traffic Management)

The following safety indicators will be measured:

a) the number of near misses identified

b) the numbers of work site crash/accidents, observed crashes, and/or crash evidence

c) **TMP** compliance (see Section 6)

d) samples of the Contractor's records, including minutes of meetings etc., that demonstrate the Contractor's procedures for handling safety issues

e) any other indicators developed during the contract period.

1 Contract Works

1.6 Contract Completion

Within 7 days of completing each Separable Portion and/or the Contract Works (see First **Schedule**, Clause 10.2.1), the Contractor must:

a) write advising the Engineer that all works are complete and comply with the Contract Documents

b) request the Certificate of Practical Completion for each Separable Portion and/or Contract Works.

1.7 Defects Liability Period

A minimum of two weeks before the **defects liability period** is complete, (see First **Schedule**, Clause 11.1.1) the Contractor must request the Defects Liability Certificate for each Separable Portion and/or the Contract Works.

The Defects Liability Certificate will not be issued until the Contractor has demonstrated the Contract Works comply with the Contract Documents.

2 Contractor's Quality Plan

2.1 Scope

This Section sets out the minimum requirements for the quality assurance of the Contract Works.

The work required must be completed in accordance with Section 1, TNZ Q/3 (Q3), TNZ Q/4 (Q4) and the following requirements.

2.2 Response Times

Table 2.1 states the response times for preparing, submitting, reviewing, updating and accepting the CQP.

Table 2.1: Contract Quality Plan

Activity	Assessment
Draft CQP	Within 3 weeks of the Date of Acceptance of Tender
Final CQP	Within 1 week of the Engineer's review of the draft CQP and before the date of **possession of site**
Pre-commencement Review	A minimum of 72 hours following the Engineer's **notification** of the review
Surveillance Review	A minimum of 24 hours following the Engineer's **notification** of the review
Annual CQP Review	Within 3 weeks of the anniversary of Acceptance of Tender

2.3 Contract Quality Plan

The Contractor must develop the Contract Quality Plan (CQP), and the contract works must be undertaken in accordance with the CQP. The CQP must be based on the Contractor's quality, health and safety and environmental management systems. Nothing in the CQP will take precedence over the requirements of the Contract Documents.

In particular, nothing in the CQP will relieve the Contractor from the performance of the Contractor's obligations under the Contract Documents even though the CQP has been approved by the Principal or the Principal's Agent.

2.3.1 CQP Implementation and Management

The CQP must be implemented and managed so:

a) the Contract Works are identified, **programmed** and completed within the response times specified

b) the Contract Works are completed according to the Contract Documents.

c) the Contract Works are completed so that the Contractor's current processes and standards are reflected

d) the contract personnel schedule is up to date.

2 Contractor's Quality Plan

2.3.2 CQP Acceptance and Reviews

The Contractor is to submit a Contract Quality Plan (CQP) to the Engineer for review.

The Engineer will mutually agree to its content and appropriateness with the Contractor. Once finalised, the Engineer will advise the Contractor of formal acceptance of the CQP.

The Engineer may, from time to time at their discretion, undertake formal or informal reviews of the CQP or parts of the CQP, associated systems and samples of contract records.

2.4 Document Procedures

The CQP must include or reference documented procedures for at least the following:

2.4.1 Contract Quality Plan

Implementing and managing the CQP including:

2.4.1.1 Correspondence

Inwards and outwards correspondence, including the submission of all information to the Engineer.

2.4.1.2 Materials Testing

All permanent traffic signs, frames and fittings shall be obtained from a manufacturer that has in place a quality assurance system that has been certified by a Joint Accreditation System Australia and New Zealand (JAS-ANZ) accredited agency.

The approved quality assurance systems are either:

- AS/NZS ISO 9001 : 2000; or
- Transit New Zealand Quality Standard TQS1 : 2005

The approved quality assurance system shall incorporate the technical requirements of a Transit approved method of compliance with TNZ P/24 e.g. *RSMA Compliance Standard for Traffic Signs*.

The system shall be in place prior to the award of the contract.

The Contractor to nominate the type, number and frequency of all the Contractor's proposed testing of the materials to be included in the Contract Works.

2.4.1.3 Measurement and Testing

The selection, inspection, measurement and testing of random samples of Unit Rate Tasks completed during each month and during the previous six months.

The procedure must detail the:

a) method for selecting the random samples

b) recording of the results and, if required, initiating remedial works.

2.4.1.4 Contract Records

Records compilation and management that demonstrate the materials, work methods and completed works comply with the Contract Documents.

2.4.1.5 Sub-contractor's

Sub-contractors management, including the specific procedures implemented to ensure their compliance with the CQP.

2.4.1.6 Non-complying Work

Identifying, recording and rectifying non-complying work, including procedures for completing remedial work, and reporting to the Engineer (see Clause 1.5.3.3).

2.4.1.7 Auditing the CQP

Auditing the CQP, including frequency of each audit.

2.4.2 Health and Safety

Preparing, implementing and managing a health and safety plan. The plan must consider the Health and Safety Compliance Notice (see Appendix 2.1) and the following:

a) hazard identification and management

b) informing and training of staff

c) crash/accident recording, reporting and investigation systems

d) monitoring the procedures to ensure their compliance with the system and its performance.

2.4.3 Contractor's Programmes

Preparing, implementing and managing the Contractor's **Programmes**' (see Section 4), including, but not limited to:

a) identifying and prioritising all faults for both Unit Rate and Cyclic Maintenance Items

b) the selection of cost effective **treatment** methods

c) intervention strategies for identifying and completing cyclic maintenance works

d) compilation of each **Programme**, and where required, adjusting the content of the **Programme** to meet the programming constraints

e) re-prioritising all tasks so the **Programme** continually addresses the **network's** needs

f) where appropriate, the design of each task. This procedure must address design and construction factors such as subgrade strength, backfill materials, depth and compaction, stabilisation agent, depth and surfacing.

2.4.4 Contractor's Reports

Preparing and submitting the Contractor's Reports (see Section 5).

2.4.5 Traffic Management

Preparing, implementing, reviewing, updating and managing the Contractor's TMP (see Section 6) including, but not limited to:

a) training the Traffic and Safety Manager and assistants

b) procedures for assessing TMP compliance, and developing and implementing appropriate corrective actions

2.4.6 Environmental Management

Undertaking Environmental Management, including the systems, work practices and actions the Contractor will take to:

a) avoid and mitigate social and environmental effects associated with the contract works in accordance with Section 7

b) ensure that all procedural, monitoring and reporting requirements of resource consents, New Zealand Historic Places Trust, archealogical authorities and the HSNO Act 1996 are complied with.

2.4.7 Completion of Work

Completing all work required by these Contract Documents including but not limited to:

a) selecting plant and materials

b) implementing appropriate levels of traffic management

c) establishing controls to ensure the completed works conform to the construction tolerances

d) completing the Contract Works.

2 Contractor's Quality Plan

2.5 Standards and Materials

2.5.1 Relevant Standards and Specifications

All sampling and testing must be undertaken according to the relevant standards and specifications as listed in Appendices 3.2, 3.3 and 3.4.

All materials used in the Contract Works must comply with their respective standard specifications as listed in Appendices 3.2, 3.3 and 3.4.

2.5.2 Materials

All materials must be sampled and tested by an ISO/IEC 17025 accredited testing laboratory accredited for the relevant test. Sampling may be completed by non-laboratory personnel, provided they are registered samplers operating under the direction of the accredited laboratory completing the testing. All handling of hazardous substances, e.g. herbicides, shall be in accordance with the requirements of the Hazardous Substances and New Organisms (HSNO) Act 1996.

2.5.3 Acceptance Testing

The CQP must state the minimum frequency of sampling and testing and the construction tolerances for the Contract Works.

3 General Requirements

3.1 Scope

This Section sets out the general requirements of the Contract Works.

The work required by this Section must be completed in accordance with Sections 1 and 2 and the following requirements.

3.2 Response Times

3.2.1 Contractor's Routine Inspections

The Contractor must complete **cyclic** and **routine inspections**, including, if required, night inspections, at intervals so that all faults are identified, **programmed** and repaired according to the contract documents.

If the Contractor identifies any defect including defective workmanship, which may affect road user safety, the Engineer must be advised within 24 hours.

The Contractor will notify the Engineer immediately of any hazards which may affect road user safety.

3.2.2 Joint Inspections

Joint Inspections will be undertaken within the response times stated in Table 3.1 and in accordance with Section 3.6 Inspections.

Table 3.1: Joint Inspections

Score	Assessment
Initial Joint Inspection	Within 1 week of the date of **possession of site**
Routine Joint Inspections	At regular intervals, as programmed and agreed with the Engineer
Final Joint Inspection	During the last two weeks of the contract and **defects liability period**

3.2.3 Public Complaints

Any work required to correct a deficiency that has originated from a public complaint to the NZTA will be undertaken within the response time for the task required as specified.

This response time will apply whether the work is scheduled or unscheduled and will require the Contractor to adjust their **programme** to achieve remedial work within the specified response time. Where this will result in significant disruption to the **programme**, the Engineer may agree to an extension on this time for specific repairs, but in all circumstances the work must be completed within the minimum time reasonably achievable. The number of time extensions is not expected to be more than 12 per year.

This work will be paid for at **scheduled** or unscheduled tendered rates as appropriate.

3 General Requirements

3.3 Network Information

Appendix 3.1 lists the **Network** Information that will be provided to the Contractor at the initial contract meeting.

3.4 Working Hours

The Contract Work may be completed on any Working Day at any time. However, no work affecting the traffic lanes may be completed during periods of peak traffic flow in urban areas unless otherwise agreed with the Engineer.

a) where traffic lanes will be affected, during periods of peak traffic flow in urban areas unless otherwise agreed with the Engineer

b) during times specified in the Operational Requirements.

However the Contractor will be required to respond to any work falling under the **Incident** Response Section at any time on any day.

The obligations in this contract are to maintain the **network** at all times.

3.5 Communications

3.5.1 Meetings

3.5.1.1 Initial Meeting

Before the date of **possession of site**, the Contractor must contact the Engineer to arrange the initial contract meeting. The meeting will be held at the Engineer's office at an agreed time.

3.5.1.2 Monthly Meeting

Monthly meetings will be held at an agreed time and venue.

3.5.2 Contractor's Communications

The Contractor must maintain:

a) a staffed telephone or cellular phone during normal business hours (8.00am - 5.00pm Monday to Friday)

b) a facsimile machine

c) after-hours contact numbers for key personnel (including, where approved, a pager or answering service).

3 General Requirements

3.5.3 Public Contacts

The Contractor must establish a system for receiving and logging all public contacts. The log must record the substance of the contact, time received and the time and details of actions taken to resolve it as appropriate.

If the Contractor considers that the contact falls outside the scope of this Contract, the matter must be referred to the Engineer within two hours of receiving the contact.

3.5.4 Publicity

The Contractor:

a) may not publish or provide to any third party copies of photographs or other details of the Contract Works without the prior approval of the Engineer

b) must allow access to the site to any person(s) designated by the Engineer to take photographs

c) may display non-illuminated signs attached to their site accommodation giving the name of their firm and contact numbers. No other promotional publicity is permitted.

3.5.5 Network Information Requests

The Contractor must forward all requests for **network** information, including achievement and condition information, received from third parties to the Engineer for action.

3.6 Inspections

3.6.1 Joint Inspections

Joint inspections will be completed at regular intervals during the contract period. The purpose of these inspections is to monitor the:

a) Contractor's progress and performance

b) **network**'s condition while under the Contractor's management.

Joint inspections will also be held within two weeks of the end of the contract and **defects liability periods**. If remedial work is required, this must be completed before the Certificate of Practical Completion and/or Defects Liability Certificate (see Clause 1.6 and 1.7) is issued. A report shall be completed identifying any defect or item requiring attention, noting the agreed action to remedy, with timing. Report to be agreed to and signed by the Contractor and the Engineer.

3.6.2 Engineer's Inspections

The Engineer will complete regular **routine inspections** of the **network** (independent of the Contractor). The purpose of the inspections is to monitor the:

a) Contractor's progress and performance

b) **network** condition.

The Engineer may advise the Contractor of the inspection results.

If the inspection reveals any faults or non-complying tasks, the Contractor must remedy these by the dates agreed with the Engineer so they comply with the Contract Documents.

3.6.3 Handover Inspections

Handover inspections will be held:

a) a minimum of two weeks before the date of **possession of site**

b) within two weeks of the end of the contract period

c) two months before the end of the Period of Defects Liability.

The inspection will involve the Engineer, Contractor and either the current or new contractor as appropriate. The purpose of the inspections is to determine and agree the extent of work required to be completed before the Contractor takes **possession of site** and/or hands the site over at the end of the Contract Period. A report shall be completed identifying any defect or item requiring attention, noting the agreed action to remedy, with timing. Report to be agreed to and signed by the Contractor and the Engineer.

If required, all remedial work must be completed within the agreed time frames and before the Certificate of Practical Completion and/or Defects Liability Certificate are issued.

3.7 Location of Work

The Contractor must measure and report the route position of all works in accordance with the Location Referencing Management System Manual (SM051) to an accuracy of +/- 10m when measured from the nearest reference station or ERP sign.

3.8 Existing Services

All **damage** to existing service(s) caused by the Contractor, including traffic detection hardware, private services e.g. domestic water supply, must be immediately reported to the appropriate service authority. The Contractor must meet all costs associated with the repair of the service(s).

If any service requires relocation and/or protection before completing **programmed** work, the Contractor must arrange for this in accordance with Section 8.

3.9 Repair of Damage

It shall be the Contractor's responsibility to protect the road asset, plus **drainage features**, **traffic control devices**, **roadside furniture** and other roading assets during the course of the contract. Any preventable **damage**, as judged by the Engineer, caused to these facilities by the Contractor shall be made good at the Contractor's expense unless agreed with the prior approval of the Engineer.

3 General Requirements

All **damage** must be repaired to the appropriate Transit/NZTA Standards, the satisfaction of the Engineer, and within 24 hours from the time the **damage** occurred or within the timeframe agreed with the Engineer and detailed in the Quality Plan.

3 General Requirements

3.10 Reinstatement of Traffic Control Devices

3.10.1 Pavement Markings and Raised Pavement Markers

When the **treatment** and/or repair is complete, all **pavement** markings shall be reinstated in accordance with Specification TNZ P/22 and raised **pavement** markers shall be reinstated in accordance with TNZ P/14. However, if the marking is less than 150m in length the standards may be relaxed by the following:

- The paint **pavement** marking equipment does not require a TNZ T/8 Certificate and requirements for the **pavement** marking applicator and any attendant vehicles are deleted.
- The Contractor may decide that quality assurance is not required for the placement of raised **pavement** markers or the painted **pavement** markings.
- Deletion of the requirement for a materials diary.

The cost for this reinstatement work shall be covered in Contract rates submitted for all highway operations and maintenance work.

Raised **pavement** markers must not be reinstated on temporary seal coats or first coat seals.

3.10.2 Removal of Existing Pavement Markings

Where **pavement** marking removal is required, the Contractor shall submit to the Engineer for approval the proposed **pavement** marking removal technique, following the principles outlined in the *NZRF Line Removal Guide, Appendix 2 Section 12 NZRF, Health and Environment Guide*.

3.10.3 Edge Marker Posts

Where edge marker posts require temporary removal in order to facilitate work, edge marker posts shall be reinstated prior to the end of each day and before temporary traffic control signs are removed. Edge marker posts shall be replaced in accordance with TNZ P/16 and materials shall comply with TNZ M/14.

Any marker posts **damaged** by the Contractor's operations shall be replaced with a new marker posts at the Contractor's expense, within the timeframe agreed with the Engineer.

3.10.4 Permanent Signs

Where permanent signs require temporary removal in order to facilitate work they shall be:

- replaced with temporary signs prior to removal
- reinstated prior to the end of each day or before temporary traffic control signs are removed
- replaced to the position where they were originally found.

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Any permanent sign **damaged** by the Contractor's operations shall be replaced with new hardware at the Contractor's expense in accordance with the requirements of TNZ P/24, **MOTSAM**, and the *Traffic Control Devices Manual,* within the timeframe agreed with the Engineer.

3.10.5 Vehicle Detection Loops

All existing inductance loops relating to traffic counting, traffic signal control and speed cameras must be protected at all times. The Contractor must liaise with the person responsible for the inductance loops (Traffic Signal Maintenance Contractor / Traffic Counting Contractor / Speed Camera Contractor), where physical work is likely to affect operation.

3.11 Plant and Equipment

All plant and equipment must be selected to minimise **damage** to the **pavement, traffic control devices, roadside facilities** and surrounding area. The Contractor may be instructed to remove any excessively weighted or sized plant which may adversely affect the condition of the **network**.

All plant and equipment must be :

a) registered for normal use on the road

b) operated on surfaced roads so the turning and/or traction of tyres and/or steel blades and buckets does not cause displacement of the surfacing materials.

Tracked machinery must not be operated on any surfaced **pavement** without the Engineer's prior approval.

In addition, the Contractor must ensure

i) the movement of any steel drummed compaction equipment outside the area of the task is minimised

ii) equipment depositing bitumen and emulsion outside the area of the work is removed from site.

If any **damage** to the **network** is caused by the Contractor's operation it must be repaired, at the Contractor's cost, to a standard no worse than that existing before the work began.

3.12 Other Contractors

Contractors may be working within the **network** at various times (see General Conditions, Clause 5.5). This work may include but is not limited to other **routine maintenance** works, **pre-reseal** repairs and associated surfacing works, installation of services.

The presence of other contractors does not relieve the Contractor of their obligations to maintain the **network** according to the Contract Documents, unless the presence of other contractors directly affects the Contract Works.

In this case the Contractor must advise the Engineer within 24 hours.

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3.13 Publications and Standards

In addition to this Specification, the following Transit/NZTA publications and standard specifications also form part of but are not reproduced in the Contract Documents. If there is any ambiguity or contradiction between this Specification and any publication or standard specification, this Specification will take precedence.

Unless otherwise stated:

a) reference to a standard specification refers to the edition listed in Appendix 3.3.

b) it is the Contractor's responsibility to make reference to their own set of these publications.

Revised publications and/or standards may be issued during the contract period. The Engineer reserves the right to negotiate the requirements of these documents as a variation to the Contract.

3.13.1 C Series Specifications

Appendix 3.2 lists the Transit C Series Specifications that apply to this Contract. These are available to download from the NZTA website.

3.13.2 Standard Specifications

Appendix 3.3 lists the Transit/NZTA Standard Specifications that apply to this Contract.

3.13.3 Other Publications

Appendix 3.4 lists the other publications that apply to this Contract.

3.14 Stockpile and Disposal Areas

3.14.1 Principal's Areas

Appendix 3.5 lists the stockpile and disposal areas that may be used by the Contractor. The specific conditions for their use are also referenced.

In general, these areas must be maintained to a condition no worse than that existing at the date of **possession of site**. Unless otherwise approved by the Engineer, all surplus materials shall be removed from stockpile areas and other areas within the road reserve used for storing materials within one month of construction.

3.14.2 Other Areas

The Contractor:

a) is responsible for locating, gaining legal entry to, gaining resource consents or concessions for establishing, maintaining access and **drainage**, controlling work and reinstatement of other stockpile and disposal areas, in accordance with local authority and Department of Conservation requirements

b) must notify the Engineer of the location of all disposal sites and, prior to their use, must submit copies of any resource consent(s) or concessions required for these areas (see Section 7)

c) must provide written evidence that the conditions have been fulfilled.

The Defects Liability Certificate will not be issued until this written evidence is received.

3.14.3 Controlling Areas

Stockpile and disposal areas shall be controlled to prevent the carrying of material onto the seal by vehicle tyres.

3.15 Land Entry Agreements

Appendix 3.6 lists the land entry agreements that have been made for access into adjoining properties to complete **routine maintenance** work, such as **stormwater structure** maintenance.

The Contractor must comply with the specific requirements of each agreement.

3.16 Removal and/or Recycling of Damaged Components

The Contractor is responsible for dismantling and removal from site of all **damaged** or broken components.

However, where possible the Contractor is encouraged to recycle components which may be **damaged** but provide additional life without compromising the level of service required or standards.

3.17 Definitions

In addition to First **Schedule**, Part B, Clause 1.2 Definitions, see Table 3.2 Definitions below, which are included within the Maintenance Specification and provide clarification. Entries in CAPITALS are defined further as a separate definition entry.

Table 3.2: Definitions

Term	Definition
Archaeological site	Archaeological site is defined in section 2 of the Historic Places Act 1993. In terms of this definition a site could include an object or material.
Barrier	See ROAD SAFETY BARRIER.
Batter	The uniform SIDE SLOPE of walls, banks, cuttings, etc. The amount of such slope or rake, usually expressed as a ratio of horizontal to vertical, distinct from grade. In the context of VEGETATION CONTROL, that portion of road reserve (land) between the SURFACE WATER CHANNEL and the legal road boundary, excluding any SIDE DRAINS; sand inclusive of

3 General Requirements

	cuts/fills/embankments or flat/sloping ground. See Diagram 3.1.
Bridge	A bridge is any structure carrying traffic on, under or over the highway, and includes any CULVERT with a waterway area greater than 3.4m^2 It includes but is not limited to CULVERT, stock or traffic underpasses or overbridges and conventional bridges.
Carriageway	The portion of a road or BRIDGE devoted particularly to the use of vehicles, inclusive of SHOULDERS and auxiliary lanes. Divided roads are considered to have two carriageways. See also SEALED CARRIAGEWAY, SEALED SHOULDER, UNSEALED SHOULDER.
Chemical	In the context of VEGETATION CONTROL, any HERBICIDE. In the context of Winter Maintenance, a solid or liquid CHEMICAL DE-ICING agent added to trafficked surfaces to prevent ICE forming on the road surface or to assist with the removal of snow or ICE once formed.
COPTTM	Code of Practice of Temporary Traffic Management.
Culvert	One or more adjacent pipes or enclosed CHANNELS for conveying a watercourse or stream below the formation level of a road up to a maximum size of 3.4 m^2 cross sectional area. A CULVERT marker peg marks its position. See also DRAINAGE SYSTEM, ROUTINE DRAINAGE MAINTENANCE and STORMWATER STRUCTURE.
Cyclic Inspection	A type of ROUTINE INSPECTION, carried out at the specified inspection frequency.
Damage	Any gouging of the PAVEMENT, removal of the seal, removal or harm caused to DRAINAGE FEATURES, TRAFFIC CONTROL DEVICES, ROADSIDE FURNITURE or other road assets so that they no longer meet specification.
Defects Liability Period	The period of a construction contract during which the Contractor is responsible for repairing or rectifying defects that appear in the Works. The period usually commences upon practical completion of the Works and runs for a specified time frame (sometimes also known as the maintenance period.
Detritus	Any collection of fragments or material on the SEALED CARRIAGEWAY surface or in DRAINAGE FEATURES. Detritus includes loose sealing chip, PAVEMENT aggregate, dead animals, SLIPS, deposits of wind blown sand or GRIT, deposits of loose aggregates, fallen leaves and the result of the build up of minor droppings or spillages created from passing traffic or climatic conditions. See also SLIPS. Detritus in the context of DRAINAGE FEATURES may include wood debris, LITTER, and VEGETATION.
DJR	Daily Job Record. A record detailing resource utilisation as illustrated in Appendix 8.1.
Drainage	Natural or artificial means for intercepting and removing surface or subsurface water (usually by gravity). See also DRAINAGE SYSTEM.
Drainage Feature	Any feature that forms part of the DRAINAGE SYSTEM. These include STORMWATER STRUCTURES, SIDE DRAINS, lined and unlined CHANNELS.

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Drainage System	Includes all STORMWATER STRUCTURES, SURFACE WATER CHANNELS, SIDE DRAINS and other features associated with controlling stormwater and runoff from the NETWORK. This includes BRIDGE deck DRAINAGE including CHANNELS and outlets.
Edge Rutting	A defect where ruts appear at the edge of a bituminous surface, usually in the UNSEALED SHOULDER.
Incident	Any event that may affect either: (a) the NETWORK'S safety, use, and integrity and/or (b) road user's safety; and/or (c) any event that results in a spill or discharge (accidental or intentional), that may require the Contractor's action; and the Engineer agrees that it constitutes an incident.
Inventory	A summary of all the items of a particular asset type (e.g. signs or DRAINAGE FEATURES) on a NETWORK, including some information about them, e.g. location, age, size, type.
Litter	Any single item with a dimension greater than 100mm. For example items such as paper, refuse, rubbish, garbage, tyre parts, drink bottles and cans or any item of a like nature.
Maintenance Programme	A PROGRAMME designed to: • Improve the existing condition of the road asset, including PAVEMENTS, surfacings, ROADSIDE FURNITURE • Improve the environment for the public living, working or otherwise using state highways, not only visually, but to make the NETWORK safer. • Meet the above requirements within current financial budgets.
Manhole	See SERVICE HOLE.
MOTSAM	Transit's Manual of Traffic Signs and Markings.
Network	The specific road network, electrical network, DRAINAGE network (or DRAINAGE SYSTEM) included in the contract area. The road network includes the CARRIAGEWAY and may also include TRAFFIC CONTROL DEVICES, ROADSIDE FACILITIES, VERGES, REST AREAS or other road assets. The network includes all CARRIAGEWAYS encompassing the road reserve, bound by existing fences or road reserve boundaries, and all established REST AREAS and roads within these areas.
Non-Standard Sign	All signs which are not STANDARD SIGNS but which have been approved by Transit's Traffic and Safety Manager, e.g. signs from the Location Referencing Management System (LRMS) Manual.
Notification	The time the Contractor was advised of the INCIDENT, defect or emergency by the Engineer, the Contractor's personnel, or a third party (e.g. Police, Principal or a member of the public), including observations

	made during any inspections, or the Contractor becomes, or should have become aware of the INCIDENT through monitoring requirements.
Other Structures	Other structures include but are not limited to tunnels, commercial vehicle compliance stations, stock effluent disposal receptors, truck compounds, control rooms, and river or coastal protection works.
Patrol, Patrolling	(a) In the context of Winter Maintenance, a regular inspection of the highway, initiated during periods when a snow or ICE event can be reasonably expected. Patrolling should as far as possible be carried out by a vehicle especially equipped for the purpose, e.g. a vehicle capable of making some immediate response to hazardous situations encountered, such as the capability of spreading GRIT (or DE-ICING CHEMICAL where specified). See also NETWORK MONITORING. (b) In the context of INCIDENT response proactive mobilisation of the appropriate resources as necessary to ensure the specified levels of service are achieved.
Pavement	The portion of the road, excluding SHOULDERS, that is placed above the design subgrade level for the support of, and to form a running surface for, vehicular traffic. It is supported by the subgrade. See Diagram 3.1.
Possession of Site	In the context of PRE-RESEAL repairs, possession of site is when the Contractor becomes responsible for any outstanding work which has appeared, and any PRE-RESEAL repairs which the maintenance contractor has not completed and all repairs up until sealing for sections scheduled for resealing that year.
Pothole	A hole in the PAVEMENT, frequently round in shape, resulting from loss of PAVEMENT material caused by the action of traffic. As a defect, potholes are defined as: (a) Where surface attrition has occurred in areas of PAVEMENT over an area greater than 70mm in diameter but not exceeding 1m2, and the underlying PAVEMENT is exposed. (This does not include SCABBING and STRIPPING on a chip seal), or, (b) Where the defect exceeds 50mm depth in ASPHALTIC CONCRETE, including porous asphalt and/or surfacing layers.
Pre-reseal	Any activity undertaken in the period up to a year before chipsealing, to prepare the surface for the chipseal, e.g. DIGOUT, CRACK filling, lichen removal.
Programme	A system of projects or services intended to meet a public need or to treat an asset in order to reach a desired level of service.
Programmed Maintenance	A strategy to intervene with, for example, a bulk replacement to reduce or optimise ROUTINE MAINTENANCE needs, e.g. bulk replacement of edge marker posts, a carriageway lighting replacement PROGRAMME. See also ROUTINE MAINTENANCE.

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Refurbished EMPs	A refurbished EMP is defined as an EMP which has been either: • straightened; • cleaned; • reinstalled (i.e. the same post that has been removed or previously removed from another location); or • has had replacement of reflectors and /or red bands
Rest areas	A designated area adjacent to a highway where vehicles can stop temporarily for the rest and relaxation of drivers and passengers.
Road Safety Barrier	(a) A physical BARRIER, including guardrails, designed to resist penetration by and out-of-control vehicle and so far as is practicable, to redirect colliding vehicles back into the travelled path and, (b) a BARRIER meeting the specification requirements of TNZ M/23.
Roadside Facilities	Roadside facilities include but are not limited to: • ROADSIDE FURNITURE • ROAD SAFETY BARRIER systems • lighting columns • fences • REST AREA furniture • pedestrian refuges • pedestrian facilities (e.g. pedestrian lighting, belisha beacons, pedestrian crossing poles) • handrails • CULVERTS • DRAINAGE SYSTEM • BRIDGES • OTHER STRUCTURES • retaining walls • sign support structures • WEIGHPITs and weighstations • other facilities as specified Roadside facilities does not include: • toilet facilities. • other facilities as specified.
Roadside Furniture	These include, edge marker posts, route position pegs, CULVERT marker pegs, subsoil drain markers, benchmark markers, calibration site markers, sightrails, BRIDGE end and hazard markers and signs as specified.
Routine Inspection	An activity carried out as part of ROUTINE MAINTENANCE, e.g. monthly inspection of the NETWORK carried out to create the ROUTINE MAINTENANCE PROGRAMME. See also CYCLIC INSPECTION.
Routine Maintenance	Periodic maintenance as required on an individual item to achieve the service level required, e.g. a dig out in a PAVEMENT, or the replacement of a single light bulb. See also PROGRAMMED MAINTENANCE.

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Scabbing	The progressive loss of chip from a chipseal, often in patches. Can be exacerbated by cold weather and the action of traffic. See also STRIPPING.
Schedule	1. The Schedule of Prices in a contract document. 2. A section of the "Conditions of Contract" (blue section) of standard SOMAC documents, e.g. the "First Schedule". 3. A list of areas or assets included in the contract 4. A list of exclusions from the contract area 5. In the context of a VEGETATION CONTROL contract, the Schedule details the areas, type and control required for the contract.
Sealed Carriageway	That portion of the road PAVEMENT sealed to protect and waterproof the underlying PAVEMENT, (inclusive of SEALED SHOULDERS) and provide a suitable driving surface for vehicles. See Diagram 3.1.
Sealed Shoulder	That portion of the SEALED CARRIAGEWAY beyond the traffic lane, located between the traffic lane edge line and the edge of seal, generally flush and contiguous with the SEALED CARRIAGEWAY. See Diagram 3.1.
Seasonal Sign	Any STANDARD SIGN which is a standard information or regulatory sign and which is erected and removed according to a set operational procedure for a limited part of the year, e.g. a seasonal speed limit change.
Shoulder	This term refers to the general area between the edge of seal and a point 500mm beyond the invert of the SURFACE WATER CHANNEL. See also UNSEALED SHOULDER, SEALED SHOULDER and Diagram 3.1.
Shoulder Hinge Point	In the cross-section of a road, the point at which the SIDE SLOPE would intersect with the UNSEALED SHOULDER, or in the absence of an UNSEALED SHOULDER, the SEALED SHOULDER. See Diagram 3.1.
Side Drain	A longitudinal surface drain or ditch, usually U-shaped and generally located between the SURFACE WATER CHANNEL and the legal road boundary. While it is intended to carry water from the surrounding land, in some situations the side drain may run immediately adjacent to the road PAVEMENT and collect surface water runoff from the road surface and adjacent land. See Diagram 3.1.
Side Slope	That area of road formation, located between the SHOULDER HINGE POINT and the SURFACE WATER CHANNEL, having a gradient steeper than 1:12, but no steeper than 1:5. See Diagram 3.1.
Slips	Slips include collapsing banks and frettings from cuttings and: (a) Are greater than $1m^3$ in volume. (b) Encroach on to the surface of the SEALED CARRIAGEWAY and/or affect the effective operation of existing DRAINAGE FEATURES.

3 General Requirements

Standard Sign	All signs compliant with MOTSAM and the Traffic Control Devices Manual. See also NON-STANDARD SIGNS.
Stormwater Structure	Any structure with a maximum waterway not exceeding 3.4m2. It includes, but is not limited to, CULVERTS, SERVICE HOLES (MANHOLES), sumps, slot drains, catch pits, soak pits, flumes, outlets to subsoil drains, stormwater ponds, outlets to bored horizontal drains, and accessway CULVERTS.
Surface Water Channel	An open drain or ditch formed for the collection and DRAINAGE of water runoff from the road's surface. The width of the CHANNEL shall be a minimum of 1.0 metre (0.5 metre either side of the invert). Also know as a V-shaped CHANNEL. See also SIDE DRAIN and Diagram 3.1.
Taonga	An object that relates to Maori culture, history or society and was, or appears to have been; • Manufactured or modified in New Zealand by Maori • Brought in to New Zealand by Maori • Used by Maori.
Temporary Traffic Management	The process of managing road users through or past a work site in a safe manner with minimal delay and inconvenience.
TMP	Traffic Management Plan
Traffic Control Devices	Any sign, signal, PAVEMENT marking or other installation placed or erected for the purpose of regulating, warning or guiding traffic.
Treatment	Any activity undertaken on the road, such as resurfacing or ROUTINE MAINTENANCE, with the intention of achieving the desired level of service. In the context of winter maintenance, the work required to deal with snow and ICE hazards on the NETWORK in order to ensure the NETWORK meets the required levels of service.
Unofficial Signs	Signs non compliant with MOTSAM and the Traffic Control Devices Manual and which the NZTA has not approved. (See also STANDARD SIGNS, NON-STANDARD SIGNS).
Unscheduled Work	Unscheduled work can be either new or maintenance work required outside standard or programmed activities. See also NEW WORK, URGENT WORK.
Unsealed Shoulder	That portion of the CARRIAGEWAY, located between the edge of seal and the SHOULDER HINGE POINT, having a slope generally no steeper than 1:12, except on curves where the superelevation may increase the slope. See Diagram 3.1.
Urgent Work	Urgent Work is a subset of UNSCHEDULED WORK. Refer to Urgent Work, Section 4, of the Maintenance Specification.
Vegetation	All plant life alive or dead within the NETWORK and including but not limited to grass, weeds, scrub, including PLANT PESTS, shrubs, moss, lichen, trees, overhanging and fallen branches.
Vegetation Control	All work required to control and maintain VEGETATION within the road reserve and other areas specified in the contract documents.

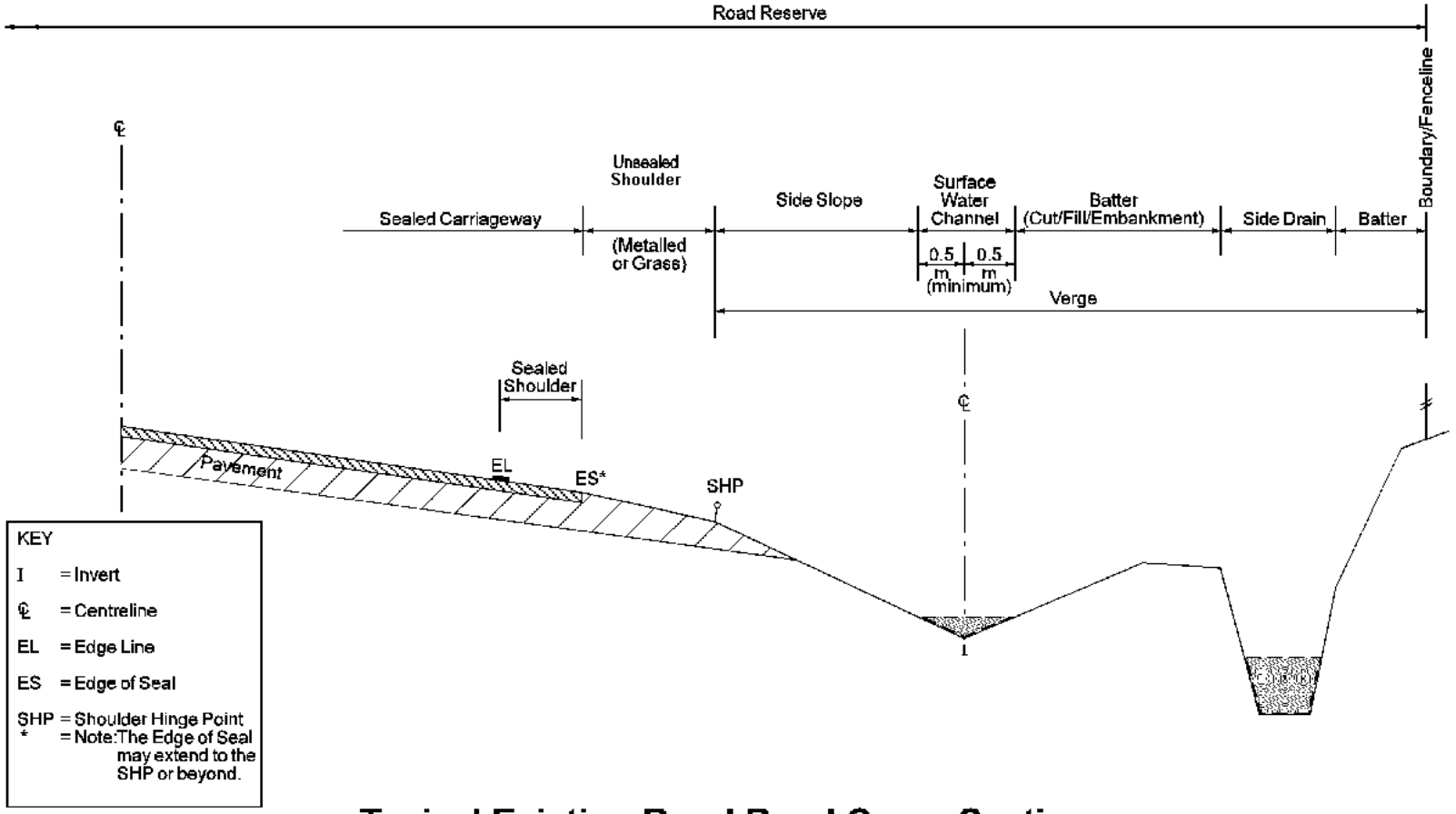
3 General Requirements

Verge	That area of road reserve located between the SHOULDER HINGE POINT and the legal road boundary. See Diagram 3.1.
Weighpit	A slot (pit) on a concrete pad designed to accommodate portable wheel weighing scales that are used to weigh vehicles. The depth of the slot enables the surface of the scales to be at the same level as the surrounding PAVEMENT surface.

3 General Requirements

Diagram 3.1

See Definitions in Table 3.2 for the target gradients of **Unsealed Shoulder** and **Side Slope**.



Typical Existing Rural Road Cross Section

4 Contractor's Programmes

4.1 Scope

This Section sets out the requirements for preparing, accepting, implementing and managing the Contractor's **Programmes**.

The work required by this Section must be completed in accordance with Sections 1 to 3 (inclusive) and the following requirements.

4.2 Response Times

4.2.1 Programmes

Table 4.1 states the response times for preparing, submitting and reviewing the Contractor's **Programmes**.

Table 4.1: Contractor's Programmes

Activity	Response Time
Initial **Programme**	With CQP
Subsequent **Programmes**	Within the Monthly Report
Engineer's Review	Within 1 week of the date of receipt of the **Programme**

4.2.2 Urgent Work

All **Urgent Work** must commence by 8.00am the day following the time of the **notification**.

4.3 Review of Programme

The Engineer will review the **Programme**, within the response times setout in Table 4.1, and mutually agree the content and appropriateness of all proposed work.

4.4 Preparation of Programmes

The Contractor's **Programme** must:

a) be a **programme** of a suitable format

b) take into account the programming constraints

c) include the Projected Monthly Expenditure - see Clause 4.4.2

d) include the **Programmed Maintenance** - see Clause 4.4.3.

The **Programme** must be submitted in hard copy format only.

The Contractor may provide partial **programme** submissions to the Engineer only if prior approval by the Engineer has been sought.

This would permit the Contractor to submit more than one **programme** per month covering an agreed portion of the State Highway **network** at a time, rather than a single monthly **programme** covering the entire **network** within any monthly cycle.

4 Contractor's Programmes

The Engineer's approval for the adoption of partial **programme** submissions would be subject to the Contractor demonstrating an ability to consistently programme the maintenance work effectively and with an error rate well below the 5% threshold.

The Engineer may withdraw approval for the continuance of the partial **programme** submissions at anytime the Contractor fails to maintain the required programming standard.

4.4.1 Programming Constraints

4.4.1.1 Extent of Finance

All **programme**s must be prepared so the value of the Programme approximately equals the value shown on the Contractor's budget forecast for the relevant period (see Clause 4.4.2).

4.4.1.2 Other Constraints

The Operational Requirements section details other programming constraints that apply.

4.4.2 Projected Monthly Expenditure

4.4.2.1 Budget Forecast

The Contractor must provide a budget forecast for each payment item number (see Appendix 4.2) and the Contract Works with their initial **Programme**. The budget forecast must:

a) show the proposed monthly expenditure for each payment item number

b) form the basis of the financial performance indicators evaluation (see Clause 1.5).

4.4.2.2 Projected Monthly Expenditure

The Contractor must provide the Programmed Monthly Expenditure with each subsequent **Programme** and Monthly Report. The Programmed Monthly Expenditure:

a) is a financial statement, in accrual terms, of the past, current and projected financial status of the contract for each month of the contract period

b) must state (for each payment item number and the Contract Works) for each month of the financial year:

- the value of work certified for payment by the Engineer including all retentions
- the value of money that has been withheld and may be returned to the Contractor
- any claims the Contractor may submit, including work that has been completed but to date not claimed
- the estimated value of work to be completed for each month to the end of the financial year

c) must identify any budget surpluses and/or shortfalls. In these cases the Contractor must recommend appropriate transfers or release of surplus monies.

4 Contractor's Programmes

4.4.3 Programmed Maintenance

Programmed Maintenance includes but is not limited to:

(i) Unscheduled work
(ii) Pre-planned installation of new signs
(iii) Pre-planned replacement or refurbishment of deteriorating signs or signs which do not conform to current **MOTSAM** and *Traffic Control Devices Rule* standards
(iv) Pre-planned sightrail maintenance, including construction and/or painting.

The **Programmed Maintenance** does not include reactive works such as **damaged** signs and sightrails which must be maintained within the Response Times outlined in clause 9.4.

The **Programme** must state for each task the:

a) fault and activity codes as defined in the State Highway Database Operation Manual, SM050, Appendix 4

b) proposed method of **treatment** and/or repair and description of the work (referenced to the appropriate Item(s) in the **Schedule** of Prices)

c) unique task number. If a proposed task is deleted from the **Programme**, the task number must not be re assigned to another task

d) location of the work by state highway and route position

e) side of the **carriageway**, and, in multi-laned areas, the lane (e.g. left, centre, right)

f) extent of the work including length, width etc.

g) units of measurement

h) total quantity, tendered rate and total value.

4.5 Management and Implementation of Programme

4.5.1 Responsibilities

4.5.1.1 Contractor's Responsibilities

When agreed, the Contractor must:

a) provide sufficient resources to complete all works by the dates specified in the **Programme**

b) with the Engineer's agreement, adjust the priorities of the work to meet the **network's** needs.

4.5.1.2 Engineer's Responsibilities

If the Engineer's reviews and inspections of the **network** (see Sections 2 and 3) show the Contractor is not managing the **Programme** effectively, the Engineer may re-prioritise the **Programme** and instruct the Contractor accordingly.

4.5.2 Urgent Work

The Engineer may notify the Contractor that a task is to be completed as urgent work if:

a) the safety of the public or private property may be compromised, or

b) it is likely the area of distress may increase or the method of repair change so the cost of the repair increases, or

c) subsequent work may depend on the task's completion, or

d) it originates from a public complaint.

4.5.3 Variation to Method and/or Dimensions of Repair

If variations to the dimensions or proposed method of repair become apparent once the repair is started, the Contractor must:

a) advise the Engineer immediately of the task number and reasons for the variation

b) write, confirming the extent, value and reasons for the additional work.

4.5.4 Outstanding Work, Work in Progress and Non-complying Work

All Outstanding Work, Work in Progress and Non-complying Work must be re-programmed for completion during the current month.

If the cumulative number of Tasks that have not been started (Outstanding Work) is greater than 10% of the total number of tasks in the current **programme** the Engineer reserves the right to have the work completed by another contractor on behalf of and at the cost of the Contractor.

5 Contractor's Reports

5.1 Scope

This Section sets out the requirements for preparing, submitting and accepting all Reports.

All work required by this Section must be completed in accordance with Sections 1 to 4 (inclusive) and the following requirements.

5.2 Response Times

Table 5.1 states the response times for preparing, submitting and reviewing the Contractor's Reports.

Table 5.1: Contractor's Reports

Activity	Response Time
Monthly Report	9:00am on the 3rd calendar day of the month following. (if the 3rd calendar day falls on a weekend or public holiday the report must be received by the Engineer on the 1st working day following)
Assessment Report	Where a joint inspection identifies any defect or item requiring attention this should be documented with an agreed action and timing
Maintenance Report	A minimum of 2 weeks before the due date of the completion of the Period of Defects Liability
Engineer's Review	Within two weeks of the date of receipt of the Report
Final Report	Within one week of the date of issue of the Certificate of Practical Completion
Work Site Crash/Accident Reports	Report to the Engineer within 24 hours (refer clause 5.7), and follow guidelines as set out in **COPTTM** and explanatory note.
Observed Crashes	Report to the Engineer within 24 hours
Crash Evidence	Report to the Engineer within 24 hours

5.3 Reports

In addition to the Reports specified elsewhere in the Contract Documents, the Contractor must compile and submit the Reports listed in table 5.1 above within the response times specified.

A hard copy of all reports must be kept on file for at least 1 year after contract completion.

5.4 Monthly Report

The Monthly Report:

a) will be used by the Engineer to monitor the Contractor's progress and performance

b) must include the:

- Financial Report
- Updated **Programme**
- Summary of Work

- Summary of all Lane Closures and Temporary Speed Restrictions
- Updated Performance Indicators (see Clause 1.5)
- if requested, copies of all site investigation and materials testing data.
- Any discrepancies noted in the preceding month between the Contractor's **inventory** data and the **inventory** data supplied by the Engineer (including but not limited to Highway Information and Route Data Sheets).
- Work Site Crash/Accident Report
- Summary of observed crashes and crash evidence.

5.4.1 Financial Report

The Financial Report must include:

5.4.1.1 Financial Statement

The financial statement must for each month, state for each payment item and for the Contract Works the:

a) ***Annual Contract Value.*** This value will be advised by the Engineer

b) ***Value of Work Completed and Certified to Date***. This is the total value of work completed to date, claimed by the Contractor and certified for payment by the Engineer.

c) ***Value of Outstanding Work***. This is the value of work which was programmed for completion by the end of the month but was not started. This value must include the value of any outstanding work from previous month(s).

d) ***Value of Work in Progress***. This is the total value of work started during the month but either:

- incomplete and/or
- complete but does not comply with the Contract Documents and/or
- complete but not included in the monthly progress claim or certified for payment

This value must also include all monthly progress claims that have been submitted, but have not been certified for payment by the Engineer.

5.4.1.2 Monthly Progress Claim

The Monthly Progress Claim must:

a) be in the format of the **Schedule** of Prices

b) include and separately show the extent and value of all works completed to date, completed under each **Schedule** Item, as well as those completed for the month

c) include all amendments, deductions, additions, emergency and **unscheduled work**s as instructed by the Engineer.

5 Contractor's Reports

The claim shall be submitted in hard copy and electronic form. The electronic form shall be in the format specified in Appendix 5.1.

5.4.1.3 Updated Programmed Monthly Expenditure

In addition to the requirements of Clause 5.4.2, the Programmed Monthly Expenditure must, for each payment item number:

a) be updated to reflect the contract's current financial status

b) include an updated forecast for each month until the end of the financial year.

5.4.2 Updated Programme

The Updated **Programme** must:

a) show actual progress in comparison with the **programme**

b) if progress has fallen behind programme, state the reasons for this and actions taken to make up lost time.

The **programme** shall be submitted in hard copy and electronic form. The electronic form shall be in the format specified in Appendix 5.1.

5.4.3 Summary of Work

The Summary of Work must state the location (see Clause 3.7) and extent of all work completed under Unit Rate and Cyclic Items each month.

For Cyclic Maintenance, this includes information such as the location reference, the date the work was carried out and number of raised **pavement** markers replaced, and the number of new EMPs installed for the month the year and the cumulative total for the contract to date.

This information is also to be collated and reported as a performance indicator (see Clause 1.5.3. 3).

Claims for Additional Maintenance under Basis of Payment 10.1.2 and 11.1.2 will only be considered if the Contractor has accurately reported the summary of work.

5.4.4 Summary of all Lane Closures and Temporary Speed Restrictions

The Summary of all Lane Closures and Temporary Speed Restrictions must state the location, extent of work, dates, times and temporary speed restriction (if applicable) for any work occurring within the road reserve each month. The format shall be agreed by the Engineer.

5 Contractor's Reports

5.5 Final Report

The Final Report must be in the same format as the Monthly Report except that:

a) an updated Projected Monthly Expenditure is not required

b) the Contractor must include a brief description and estimated value of all claims that may be submitted with their Final Claim.

5.6 Maintenance Report

The Maintenance Report must be in the same format as the Final Report and state the location and extent of all non-complying tasks, the extent of all remedial works and the date this work was completed.

5.7 Work Site Crash/Accident Reports

In the event that a crash occurs involving a vehicle travelling through a site, **notification** of the crash is to be given to the Engineer within 24 hours of the crash, in terms set out in **COPTTM** Section A4.2.3, Introduction and General, Contractor Responsibilities "Crashes at Worksites" and explanatory note. **Notification** shall include:

- Full details of the event
- Description of the traffic management operating e.g. Stop/Go, 50km/hr signs.
- Confirmation or otherwise that the site complied in all respects with the traffic management plan and any health and safety plan
- Contractor's assessment of whether there is a possibility that traffic control or work site condition deficiencies may have contributed to the crash.
- Site conditions (e.g. loose chip)
- Any Department of Labour requirements.

For an unoccupied site, the Contractor shall supply as much information as is possible from the above list.

6 Traffic Management

6.1 Scope

This section sets out the minimum requirements for the provision of traffic management. All work required by this Section must be completed in accordance with the *Code of Practice for Temporary Traffic Management in New Zealand (COPTTM)*, and the following requirements.

6.2 Response Times

Table 6.1 states the response times for preparing, submitting and reviewing the TMP.

Table 6.1: Traffic Management Plan (TMP)

Activity	Response Time
Draft Generic **TMP** (for approval)	Within 3 weeks of the Date of Acceptance of Tender or as agreed with the Engineer
Final Generic **TMP**	Within 3 days of the date of the Engineer's review of the draft **TMP** and prior to the date of occupancy of the site
Site Specific **TMP**	In accordance with **COPTTM**
Engineer's Review of the **TMP**	In accordance with **COPTTM**
Annual **TMP** Review	Within 3 weeks of the anniversary of the acceptance of tender

6.3 Traffic Management Plan

6.3.1 Content

The Contractor must develop the TMP. Nothing in the TMP will take precedence over the Contract Documents' requirements.

In particular, nothing in the TMP will relieve the Contractor from the performance of the Contractor's obligations under the Contract Documents even though the TMP has been approved by the Principal or the Principal's Agent.

6.3.2 Implementation and Management of TMP

The Contractor must develop the TMP.

The Contractor must implement and manage the TMP so the Contract Works are completed in accordance with these Contract Documents.

The maximum delay time and queue length permitted is shown in Appendix 6.1

The Contractor shall be responsible for the monitoring of traffic delay.

The Contractor must demonstrate that the capacity of any temporary traffic management configuration can cope with the demand without causing excessive traffic delays.

If delays of greater than 10 minutes are experienced during temporary traffic management, provisions shall be made to communicate to road users the nature of and the expected length of delay.

In particular, nothing in the TMP will relieve the Contractor from the performance of the Contractor's obligations under the Contract Documents even though the Principal or the Principal's Agent has approved the TMP.

6.3.3 Traffic Management Review

The Engineer may review any aspect of the Contractor's operation relevant to traffic management and the Contract Works.

These audits will be undertaken on a random basis without prior notice.

6.3.4 Unusual Traffic Control

If proposed works require traffic control measures not covered by the above requirements, the Contractor must provide site-specific sign layout diagrams and procedures for the Engineer's review and agreement, in accordance with **COPTTM**.

The information must be provided a minimum of one week before the programmed start date of the work.

7 Environmental Management

7.1 Scope

This Section sets out the requirements for avoiding and mitigating any adverse environmental effects associated with the Contract Works.

The work required by this Section must be completed in accordance with Sections 1 to 6 (inclusive) and the following requirements.

7.2 Response Times

The documented procedure for Environmental Management must be provided with the CQP (see Section 2).

7.3 Key Considerations

The procedure for environmental management must include and/or reference, where appropriate, the systems, work practices and actions the Contractor will take to:

a) manage stockpiled material

b) manage stockpile and disposal areas in accordance with Section 3, Stockpile and Disposal Areas

c) transfer and store fuel, waste, oil and hazardous substances

d) control the drift of **chemical** sprays and fertilisers and actions taken if drift occurs

e) avoid erosion to the extent reasonable in the circumstances

f) avoid, to the extent reasonable in the circumstances, adverse effects on areas of significant **vegetation** and indigenous **vegetation**

g) reduce noise and dust, etc. The Contractor must ensure that no hazard, annoyance or **damage** is caused to traffic or property owners through dust from the Contract Works (see General Conditions, Clause 5.7)

h) prevent fuel and oil spills including the emergency response and reporting procedures to be taken if a spill occurs. The Contractor must ensure that spill prevention and emergency response procedures avoid, to the extent reasonable in the circumstances, adverse environmental effects.

i) liaise with all affected organisations, residents, property owners etc.

j) control sediment, runoff and silt. The Contractor must control the runoff by **surface water**, berms, flumes, temporary **culverts**, early establishment of vegetative cover and constructing of silt retention dams or traps. These structures will require maintenance during the Contract

k) manage and reduce waste in accordance with Transit's Environmental Policy Manual

l) assess all operations to promote energy efficiency in accordance with Transit's Environmental Policy Manual

m) ensure the finished surface, including asphaltic joints, is flush with existing **pavement** surfaces and utility covers so as not to create adverse noise and vibration effects

n) report to the Engineer and manage any accidental discovery of any material that could be an archaeological site(s), koiwi (human skeletal remains), or **Taonga.**

7.4 Resource Consents

The Consultant and Contractor shall be responsible for ensuring compliance with all conditions of consents affecting the contract services and meeting all social and environmental requirements.

In pursuance of this aim the Consultant shall:

- Ensure Clients consent compliance management system (CS VUE) is used to manage consents and monitor consent compliance.

Appendix 7.1 lists the resource consents that apply to this Contract. The Operational Requirements detail the specific requirements of these consents.

8 Unscheduled Works

8.1 Scope

This Section sets out the requirements for completing Unscheduled Works. Unscheduled Works may be carried out when there are no other appropriate **Schedule** Items.

All Unscheduled Works shall be considered a variation and valued in accordance with Section 8. No work under this clause shall be completed until discussed and agreed with the Engineer.

The Contractor must complete all work required by this Section in accordance with Sections 1 to 7 (inclusive) and the following requirements.

8.2 Response Times

The Contractor must complete all work required by this Section by the date agreed with the Engineer.

If the work is completed on a dayworks basis, daily job records (**DJRs**) for each event shall be provided to the Engineer within 48 hours of completion of the work.

8.3 Priced Proposals

If requested by the Engineer, the Contractor must submit priced proposals to complete work for which there is no applicable **Schedule** Item or where the extent of the proposed work means that the rates in the **Schedule** of Prices are not applicable.

The priced proposals must include:

a) a description of the proposed work describing the extent and quantities of the work required

b) the proposed completion date

c) a fixed price quote to complete the works

d) a break down of the fixed price if requested by the Engineer.

The value of any priced proposal must be reflected in the updated projected monthly expenditure (see Clause 5.4.1.3 Updated Programmed Monthly Expenditure)

8.4 Completion

Unless otherwise specified all work must be:

a) completed in accordance with the Contract Document's requirements, or

b) if the method is not specified, completed in accordance with accepted industry practices.

If the Contractor's proposal is accepted, the work must be included into the current **Programme**.

9 Signs

9.1 Scope

This Section sets out the requirements for maintaining signs. This includes, but is not limited to:

a) **Standard Signs** as defined in **MOTSAM** and the *Traffic Control Devices Rule***.**

b) sight rails, **bridge** name signs, **bridge** structure number signs, reference station signs, established route position signs, kilometre marker posts, and **culvert** markers.

c) **Non-Standard Signs**

d) Those listed in **schedule** 5 and the Operaterational Requirements (OR) section.

The work required by this Section excludes constructing gantries and overhead signs, maintaining privately owned signs (e.g.. heritage trails) and signs owned and maintained by local authorities.

9.2 Definitions

Terms defined in Table 3.2 Definitions appear in **bold**.

9.3 Cyclic Inspections

The Contractor shall inspect all roads within the Contract area at least at the frequency listed in Table 9.1

Table 9.1: Inspection Frequency	
Class	**Inspection Frequency**
M	Daily
U and R1	Every 2 Days
R2	Every 3 Days
R3	Weekly
R4	Weekly

9.4 Response Times

9.4.1 Standard Signs

Table 9.2 states the response times for **routine maintenance**, including the repair or reinstatement or replacement or refurbishment, of all **standard signs** and installation of new **standard signs**. The response times apply from time of **notification**.

Table 9.2: Installation and Maintenance of Standard Signs		
Class	**Response Time for Regulatory and Warning Signs**	**Response Time for Information Signs**
All Classes	24 Hours	7 Days

9 Signs

9.4.2 Non-Standard Signs

The Contractor shall submit a priced proposal for approval to the Engineer, for the supply, installation, or maintenance of all **non-standard signs** within the maximum response time listed in table 9.3.

Table 9.3: Installation and Maintenance of Non-Standard Signs	
Activity	**Response Time**
Submit priced proposal for supply, repair, reinstatement, replacement, refurbishment, or installation of **non-standard sign**	Within 3 days from **notification**
Completion of supply, repair, reinstatement, replacement, refurbishment, or installation of **non-standard sign**	Within 3 weeks of Engineer's approval or as agreed with the Engineer.

9.5 Inspections

9.5.1

All inspections must be completed within the time specified in table 9.1 to identify and repair defective signs. A sign is defective when it:

a) is missing

b) does not comply with TNZ P/24.

One night inspection must be completed every six months, using the Night Inspections Form (Appendix 9.3). The Contractor must complete and submit the Six Monthly Night Inspection Report by 20 September and 20 March each year.

Both Daytime and Night time Inspection Reports must record the location and type of defective signs and be submitted to the Engineer in both hard copy and electronic formats. The electronic format shall be as agreed with the Engineer.

9.5.2 Hardware Inventory

The updated Hardware **Inventory** must be provided by 20 March of each year.

9.6 Specific Requirements

9.6.1 Materials

All components and manufacturing methods shall be in accordance with TNZ P/24.

9.6.1.1 Principal's Logo

The Principal's logo shall in accordance with **MOTSAM** and the State Highway Control Manual.

9.6.1.2 Sight Rails and Sight Rail Posts

Timber sight rails shall conform to NZS 3640 : 2003, Specification of the Minimum Requirements by the New Zealand Timber Preservation Council, treated for hazard class H3.2.

Timber sight rail posts shall comply with TNZ P/24.

The timber finish may be gauged, dressed, or rough sawn, and shall be prepared, primed and painted with high gloss white paint according to the paint manufacturer's recommendations for exterior use.

9.6.2 Hardware Installation

9.6.2.1 General

All hardware must be installed in accordance with:

- TNZ P/24, Clause 11, Installation,
- Transit's SM051 State Highway Distance Marking Manual,
- and/or as otherwise directed by the Engineer.

If applicable, the alignment and level of replacement items must tie in with existing items and must appear by eye to be a straight or a true curve, as appropriate.

All areas surrounding new or replacement posts must be reinstated to a neat and tidy condition.

9.6.2.2 Signs Report

The Contractor must complete the Signs Report (see Appendix 9.2) for each new or relocated sign. A photo shall be appended to each Signs Report showing the entire front of the sign. The location of the sign stated on the form must be accurate to ±10m of the actual route position of the sign.

The Signs Report for each month shall be collated and submitted with the Contractor's Monthly Report (see Section 5).

9.6.2.3 Installation of New or Replacement Hardware

All new or replacement hardware must:

a) be firmly installed in a vertical position

b) be securely fixed to posts according to the manufacturer's specifications. The Contractor must not fix signs to posts by bolting through the face of the sign

c) must not be fixed to other structures such as lighting columns, unless checks have been made to ensure that the performance of the fixing system is not affected and approval from the asset owner has been given.

d) comply with TNZ P/24, Clause 8, Strength and Rigidity, and Clause 9, Impact Performance Requirements for Sign Supports.

9.6.2.4 Hardware Retrieval, Refurbishment and Reinstallation

If existing hardware is missing, the Contractor must inspect the area immediately surrounding the missing hardware's location. If the missing item is found in an accessible location and is reusable, the Contractor must retrieve, clean or refurbish (as appropriate) and reinstall it in its correct location in compliance with TNZ P/24.

Alternatively take any salvageable hardware away for refurbishment and later use elsewhere. In this situation, this will not be considered a replacement sign, rather it is a re-installation.

The hardware must be refurbished so from a distance of 20 metres it appears the same in all respects as a new item of hardware and is in compliance with TNZ P/24.

9.6.2.5 Hardware Relocation

Where the sign is not correctly located, the existing hardware must be taken away, cleaned, refurbished, if required, and relocated in accordance with TNZ P/24 or as agreed with the Engineer.

9.6.2.6 Seasonal Signs

The Contractor shall erected and remove seasonal signs according to operational requirements.

9.6.3 Hardware Maintenance

9.6.3.1 General

The Contractor must maintain all existing hardware in accordance with this specification.

The Contractor shall notify the Engineer of any signs observed that are not included in the current **inventory,** recommend a maintenance programme for these, and record these signs within the current **inventory** (see **Programmed Maintenance** of Hardware).

The Engineer shall be notified in writing within 24 hours of first observing any non-conformances.

Signs shall be cleaned in accordance with TNZ P/24, Clause 12, Maintenance. An acceptable method for cleaning signs is stated in the current *RSMA Compliance Standard for Traffic Signs*.

Graffiti **damaged** hardware must be cleaned with a non-abrasive cleaning agent or solvent. The cleaning agent or solvent must be approved by the reflective sheeting manufacturer and applied according to the solvent manufacturer's specifications.

The cost of replacing hardware which has been **damaged** due to the use of an inappropriate solvent, making the reflective sheeting manufacturer's warranty void, must be borne by the Contractor.

High pressure cleaning systems which may **damage** the hardware must not be used.

9.6.3.2 Routine Maintenance of Hardware

Routine maintenance must be completed within the specified response times in Tables 9.2 and 9.3. **Routine maintenance** includes but is not limited to:

a) straightening and realigning hardware in accordance with **MOTSAM**

b) notify the Engineer of fading or loss of reflectivity

c) minor repairs to the hardware and posts where they are damaged such that the sign cannot be read e.g. replacing and tightening hardware fixings, replacing broken posts or missing items.

d) reinstalling hardware that is missing, damaged or insecurely attached.

e) cleaning dirty signs that cannot be read (including the removal of stickers, graffiti and advertising signs).

f) repairing broken sightrails.

g) removal of stickers, graffiti and advertising signs from sightrails.

h) notify the Engineer of any **vegetation** obscuring signs.

9.6.3.3 Programmed Maintenance of Hardware

The Contractor must programme maintenance for all existing hardware so that signs are free of defect and comply with TNZ P/24. Replacement signs and regulatory signs must comply with TNZ P/24 at all times.

The Contractor must photograph all **damaged** hardware **programmed** for replacement. The photographs must clearly show:

- the location (by route position) and side of highway; and
- the extent of the **damage**.

Programmed Maintenance includes but is not limited to:

a) straightening and realigning, and minor repairs to the hardware and posts such as replacing and tightening hardware fixings.

b) reinstalling existing hardware that has been incorrectly positioned

c) Spot or full post painting when 50% of post has lost paint

d) cleaning the hardware and/or posts (including the removal of stickers, graffiti and advertising signs)

e) Signs Damaged but still delivers message, programme for repair

f) replacement of sign hardware where stickers, graffiti removal or other damage has reduced the night time reflectivity of the sign so minimum reflectivity requirements are not met.

g) checking all slip base posts at least 6 monthly. This work includes:

- checking that all bolts, washers and shims are in place;
- replacing missing or corroded items;
- Checking, where applicable, all bolts are tightened to the appropriate torque.

h) Repaint when sightrail is over 50% discoloured or does not provide contrast required.

9.6.3.4 Painting of Posts

Existing posts must be maintained so all posts are free of dirt, grime, stickers, graffiti and flaking and/or heavily oxidised paint at all times.

If required, in order to achieve the above performance criteria, the posts must be repainted. Painting must include, but is not limited to, cleaning, surface preparation, bare timber priming and total repainting with one coat of white high gloss paint recommended for exterior use. All preparation, priming and painting must be according to the paint manufacturer's recommendations.

9.6.4 Stockholding

9.6.4.1 Minimum Stockholding

The Contractor must maintain sufficient quantities of materials and hardware to be able to meet the response times specified. Appendix 9.1 lists the minimum stock holding the Contractor must have.

9.6.4.2 Stock Supplied by the Principal

The Principal may provide the Contractor with stock purchased from the previous contractor. Any hardware provided by the Principal must be incorporated in the works at the earliest opportunity.

The Contractor must:

a) note that the type and quantity of the hardware provided by the Principal under this Clause may not be known or available at the beginning of the Contract

b) ensure they hold sufficient stock to meet the response times specified.

9.6.4.3 Stock at End of Contract

At the end of the contract, the Principal may purchase unused stock held by the Contractor. Any stock:

a) purchased must be delivered by the Contractor to the location nominated by the Engineer within one week of being requested to do so

b) over and above that purchased by the Principal must remain the responsibility of the Contractor.

9 Signs

9.6.5 Sight Rails and Sight Rail Posts

9.6.6 Routine Maintenance of Sight Rails and Sight Rail Posts

The Contractor must maintain all sight rails so they are free of grime, stickers, graffiti and flaking and/or heavily oxidised paint at all times and dirt is removed whenever the contrast between the sight rail and the surrounding environment is not clearly visible.

If required, in order to achieve the above performance criteria, the sight rails, including all posts, must be repainted. Painting must include, but is not limited to, cleaning, surface preparation, bare timber priming and total repainting with high gloss white paint according to the paint manufacturer's recommendations for exterior use.

The timber sight rail shall be rectangular with call dimensions, as defined in NZS 3601, of 200 mm x 25 mm.

Galvanised fittings shall be used.

Some sections of W Section guardrails acting as sight rails may be scheduled by the Engineer and will require maintenance painting.

9.6.6.1 Sight Rail Construction

Sight rails must be constructed at the locations agreed with the Engineer.

9.6.7 Inventory of Sign Hardware

The Contractor must either compile or review and update an **inventory** of sign hardware within the **network**.

The Contractor will be given a copy of the current **inventory** at the initial site meeting.

The updated **inventory** must be provided using the form in Appendix 9.2 Signs Report.

In addition, the **inventory** must record the location and type of all slip base posts within the **network**. The information recorded must include the type of post/column, base details, number and size of bolts and bolt torque.

The Contractor must update and maintain the **inventory** to correct all errors and omissions, and include any signs installed, removed, relocated or altered under this contract. This work includes identifying and reporting hardware that exists within the **network** but is not included in the current **inventory**.

The **inventory** must be provided in both an electronic and hard copy format. The electronic format must be agreed with the Engineer.

9 Signs

9.7 Performance Criteria

The performance criteria of the Contractor during the Contract period will be measured by the following criteria:

a) Inspections are completed within the specified frequencies and inspection reports for each month shall be collated and submitted with the Contractor's Monthly Report.

b) That all routine maintenance activities are carried out in accordance with the specification and within the specified response times.

c) That all **programmed maintenance** activities are carried out in accordance with this specification and within the timeframe in the agreed programme.

10 Edge Marker Posts

10.1 Scope

This Section sets out the requirements for maintenance of edge marker posts (EMP) including:

- Inspections;
- maintenance work;
- reporting; and
- supply of materials in accordance with this section.

The objective is to respond to defective EMPs in accordance with the Cyclic Inspection and Response Times outlined in the sections below.
An EMP is defective when it:

- is missing. An EMP may be missing because it has been physically knocked over or removed, or because it is not located as specified in **MOTSAM** (e.g. offset from edge of seal with 4 consecutive EMPs visible)
- is not clearly visible at night from a distance of at least 160m with headlights on full beam.
- has incomplete or **damaged** reflectors and/or red band.
- is out of tolerance vertically (greater than 5^{o} off vertical).
- is out of position and/or greater than 10^{o} twist from the specified direction.
- is not free of dirt and grime (from 200 mm above ground level) such that it is not clearly visible to the extent that it provides the contrast as intended. An inspection distance of 50m during daylight may be appropriate to evaluate this.

The work required by this Section must be completed in accordance with TNZ P/16 and the following requirements.

10.2 Definitions

Terms defined in Table 3.2 Definitions appear in **bold**.

10.3 Cyclic Inspections

The Contractor shall inspect all roads within the Contract area at least at the frequency listed in Table 10.1.

Table 10.1: Inspection Frequency

Class	Inspection Frequency
M	Daily
U and R1	Every 2 Days
R2	Every 3 Days
R3	Weekly
R4	Weekly

10 Edge Marker Posts

10.3.1 Night Inspections

One night inspection must be completed every six months, using the Night Inspections Form (Appendix 10.1). The Contractor must complete and submit the Six Monthly Night Inspection Report by 20 September and 20 March each year.

10.4 Response Times

Table 10.2 states the response times for completing EMP **routine maintenance**. The response times apply from the time of **notification**.

Table 10.2: Edge Marker Post Maintenance

Class	Response Time
M	2 Days
U and R1	3 Days
R2	3 Days
R3	4 Days
R4	6 Days

10.5 Specific Requirements

The refurbishment of EMP**s** is included in the monthly lump sum. New EMPs (the replacement quantities under Basis of Payment Item 10.1.1) relate only to EMPs damaged beyond repair, which have been removed from site and wholly replaced with new EMPs. **Refurbished EMPs** shall be reported separately to new EMPs in the monthly Summary of Work.

Any Additional Maintenance or Programmed Replacement shall be considered a variation and valued in accordance with the tendered rates. No Additional Maintenance or Programmed Replacement shall commence until discussed and agreed with the Engineer.

The Engineer may require the Contractor to collect all **damaged** EMPs and bring them to a central location, so that the Engineer may inspect them to determine the cause of **damage**.

Any costs associated with retaining and stockpiling EMPs for later inspection by the Engineer will be included under **schedule** item 10.1.1 for EMP Maintenance.

10.5.1 Routine Maintenance Requirements

All defective marker posts shall be maintained as required, within the response times specified for **routine maintenance** (Table 10.2).

10.5.2 Programmed Maintenance Requirements

Any planned bulk replacement programme for sections of the existing EMP system shall be as agreed with the Engineer.

10 Edge Marker Posts

10.5.3 Installation of EMPs

10.5.3.1 Materials

All materials must comply with TNZ Specification M/14. "Type approved" posts are as listed in M/14 notes.

Longer posts than the standard shall be used where this is necessary to maintain the requirements of height above the seal edge and minimum embedment depth, or where greater embedment is necessary to give posts stability due to wind or other conditions.

10.5.3.2 EMP Placement

The installation shall be in accordance with TNZ Specification P/16.

All replacement EMPs must be installed according to **MOTSAM**.

10.6 Signing of State Highway Benchmark and Calibration Sections

State Highway benchmark and calibration sections are listed in the Operational Requirements. The signing requirements for these sections are tabulated below:

Section Type	Length	Marker Posts	Site Identification Signs
Benchmark Section	1000m	Pale Blue post with BM number in black text	N/A
Calibration Section (Sterilised)	300m	Red post with CS number in black text	Standard sign "Calibration Section next 300m". An approved technical specification for these signs is available from the Asset Management Team at the NZTA National Office, Wellington
Calibration Section (Non-Sterilised)	300m	Pale Blue post with CAL number in black text	

The Contractor shall maintain the signs and posts of the state highway benchmark and calibration sites in accordance with the Contract Document.

Signs and marker posts are to be positioned to the left of the start and end of the section in the direction of travel.

Each state highway benchmark and calibration site marker and sign is to be erected as far as practicable from the edge of the running lane (minimum 2.0m), away from any vegetation or drainage channels and in line with the start and end of the state highway calibration section.

10 Edge Marker Posts

10.7 Performance Criteria

The performance of the Contractor will be measured by the following criteria:

a) Inspections are completed within the specified frequencies and inspection reports for each month shall be collated and submitted with the Contractor's Monthly Report.

b) That all routine maintenance activities are carried out in accordance with the specification and within the specified response times.

c) That all **programmed maintenance** activities are carried out in accordance with this specification and within the timeframe in the agreed programme.

11 Raised Pavement Markers

11.1 Scope

This Section sets out the requirements for the maintenance of raised **pavement** markers (RPM) including.

- inspections;
- maintenance work;
- reporting; and
- supply of materials in accordance with this section.

The work required by this Section must be completed in accordance with TNZ P/14 and the following requirements.

11.2 Definitions

Terms defined in Table 3.2 Definitions appear in **bold**.

11.3 Cyclic Inspections

The Contractor shall inspect all roads within the Contract area at least at the frequency listed in Table 11.1.

Table 11.1: Inspection Frequency

Class	Inspection Frequency
M	Daily
U and R1	Every 2 Days
R2	Every 3 Days
R3	Weekly
R4	Weekly

11.3.1 Night Inspections

One night inspection must be completed every six months, using the Night Inspections Form (Appendix 11.1). The Contractor must complete and submit the Six Monthly Night Inspection Report by 20 September and 20 March each year.

11.4 Response Times

Table 11.2 states the response times for identifying and completing all raised **pavement** marker maintenance work. The response times apply from the time of **notification** of the defective RPM.

11 Raised Pavement Markers

Table 11.2: Raised Pavement Marker Maintenance		
Class	Response Time	
	Single Defective	2 or More Consecutive Defective
M	2 Weeks	1 Week
U and R1	1 Month	2 Weeks
R2	6 Weeks	3 Weeks
R3	2 Months	1 Month
R4	3 Months	6 Weeks

11.5 Specific Requirements

11.5.1 General

Inspections must be completed (within the response times stated above) to identify and replace defective RPMs.

An RPM is defective when:

a) it is missing

b) it is ineffective

- is not clearly visible at night from a distance of at least 160m with headlights on full beam.
- has incomplete or **damaged** reflectors
- out of position or otherwise out of tolerance as defined in P/14.

The Night Inspection Report must record the location and type of defective RPM and be submitted in both hard and electronic formats. The electronic format must be in a format agreed with the Engineer.

11.5.2 Routine Maintenance Requirements

All defective RPMs shall be maintained as required, within the response times specified for **routine maintenance** (Table 11.2).

11.5.3 Programmed Maintenance Requirements

Any planned bulk replacement programme for sections of the existing RPM system shall be as agreed with the Engineer.

11.5.4 Installation of RPMs

11.5.4.1 Materials

All materials must comply with TNZ M/12. "Type approved" RPMs are as listed in M/12 notes.

11.5.4.2 RPM Placement

All new and replacement RPMs must be installed according to **MOTSAM** and TNZ P/14. The CQP (see Section 2) must detail the method of installation, type of RPMs and adhesive.

11 Raised Pavement Markers

11.5.4.3 RPM Contract Diary

The Contractor must maintain the required contract Diary in accordance with TNZ P/14, Clause 13.

11.6 Performance Criteria

The performance of the Contractor will be measured by the following criteria:

a Inspections are completed within the specified frequencies and inspection reports for each month shall be collated and submitted with the Contractor's Monthly Report.

b) That all routine maintenance activities are carried out in accordance with the specification and within the specified response times.

c) That all **programmed maintenance** activities are carried out in accordance with this specification and within the timeframe in the agreed programme

12 Litter

12.1 Scope

The Section sets out the requirements for **Litter** removal. **Litter** does not include removing **Detritus** from the **network**

For dead animal removal and **detritus** please refer to HM 20 **Detritus** and **Slip** Removal.

12.2 Definition

Terms defined in Table 3.2 Definitions appear in **bold**.

12.3 Cyclic Inspections

The Contractor shall inspect all roads within the Contract area at least at the frequency listed in Table 12.1.

Table 12.1: Inspection Frequency	
Class	**Inspection Frequency**
M	Daily
U and R1	Every 2 Days
R2	Every 3 Days
R3	Weekly
R4	Weekly

12.4 Response Times

Table 12.2 states the response times for removing all **litter**. The response times apply from the time of **notification**.

Table 12.2: Litter Removal	
Class	**Response Time**
M	2 Days
U and R1	3 Days
R2	3 Days
R3	4 Days
R4	6 Days

12.5 Specific Requirements

Any 1 km continuous section of the **network** must be cleared of **litter** when there are more than 10 significant items of litter visible from the inspection vehicle travelling at the normal road operating speed.

The Contractor shall ensure that rubbish bins are not overflowing, missing or **damaged** within the **network** and are attended to in accordance with the response times.

This includes removing **litter** from roadside reserves, **rest areas**, other designated areas and rubbish bins. Appendix 12.1 lists these areas.

12 Litter

Rubbish clearance operations shall be suitably timed to avoid the build up of any rubbish outside of rubbish bins and decomposing matter unpleasant to users.

It is the Contractor's responsibility to make arrangements for disposal of all **litter** collected. **Litter** collected must be disposed of at approved disposal areas in accordance with Section 3 Stockpile and Disposal Areas.

Work in other areas, which may from time to time require removal of **litter**, shall be directed by the Engineer and paid for under dayworks rates.

12.6 Performance Criteria

The performance of the Contractor will be measured by the following criteria:

a) Inspections are completed within the specified frequencies and inspection reports for each month shall be collated and submitted with the Contractor's Monthly Report.

b) That all routine maintenance activities are carried out in accordance with the specification and within the specified response times.

c) That the **network** retains a tidy appearance.

13 Damage and Hazard Reports

13.1 Scope

This section sets out the requirements for inspecting the **network** and the following:

- maintenance needs arising from **damage** or deterioration rendering a **roadside facility** defective or ineffective;
- identifying and assessing hazards or potential hazards to road users;
- erecting hazard warning devices if necessary**.**

As part of the inspection process, the Contractor will observe the condition of **roadside facilities** directly associated with scheduled works under the contract, and report any obvious **damage** and hazards to the Engineer.

13.2 Definition

Terms defined in Table 3.2 Definitions appear in **bold.**.

13.3 Cyclic Inspections

The Contractor shall inspect all roads within the Contract area at least at the frequency listed in Table 13.1.

Table 13.1: Inspection Frequency

Class	Inspection Frequency
M	Daily
U and R1	Every 2 Days
R2	Every 3 Days
R3	Weekly
R4	Weekly

Where the hazard or potential hazard to road users requires urgent attention, the Contractor shall notify the Engineer immediately.

13.4 Response Times

Table 13.2 states the response times for completing and submitting **Damage** and Hazard Identification Reports. The response times apply from the time of **notification**.

Table 13.2: Damage and Hazard Indentification Reports

Class	Response Time
All Classes	24 hours

Where the hazard or potential hazard to road users requires urgent attention, the Contractor shall notify the Engineer immediately.

13 Damage and Hazard Reports

13.5 Specific Requirements

13.5.1 Inspections

The Contractor's **cyclic inspection** of the **network** shall include all **roadside facilities** as specified.

It is expected that the majority of **cyclic inspection** requirements will be carried out from the vehicle travelling at a speed necessary to check for work requirements on scheduled works. Inspection of some **roadside facilities** may require getting out of the inspection vehicle.

13.5.2 Damage to Roadside Facilities

Roadside facilities requiring routine and detailed inspection for damage, includes any non structural facility within the road reserve that is maintained or managed by the Principal. These facilities include, but are not limited to:

- **rest area** furniture
- **road safety barriers**
- **bridges** and **other structures**
- **culverts**
- retaining walls
- sign support structures
- fences
- pedestrian refuges
- pedestrian facilities
- handrails.

Cyclic inspections are to identify any obvious deficiencies to **roadside facilities** that will generally be the result of vehicle or weather event **damage**, or wilful **damage** by the public. For example:

- **damaged road safety barriers**
- decay or vandalism of **rest area** furniture
- **damaged drainage features**
- **damage** to overhead structures, including lighting columns, gantries etc.
- broken or **damaged bridge** components
- debris buildup at **bridges** and **culverts**
- significant or accelerated erosion at **bridges** and **culverts.**

It is expected that the Contractor and the Engineer will discuss periodically the coverage of the inspection of **roadside facilities** to ensure that the Contractor is focussed on the right things. The Engineer may nominate specific components on specific facilities that require inspection. The Contractor will be given coaching by the Engineer on how to complete inspections where this is considered necessary.

13 Damage and Hazard Reports

Where the **damage** may be hazardous to road users the Contractor shall notify the Engineer immediately, and follow the procedures specified in clause 13.5.5.

13.5.3 Damage Reports

The Contractor shall provide **damage** reports as included in Appendix 13.1.

The **damage** report shall include the following information:

- Details of item **damaged** e.g. type of **road safety barriers**, terminal ends (BCT, X350, Texas Twist, etc.)
- sufficient photographs to identify and confirm the extent of the **damage**
- the nature of any repairs required
- the need for any further action required to make the **network** safe until repairs can be completed.

Further to the above reporting requirements, the Contractor shall also submit a Monthly **Damage** Summary Report (Appendix 13.2), including all **damage** identified during that month, as part of the Contractor's monthly report.

Where the **damage** may be hazardous to road users the Contractor shall submit a Hazard Identification Report as specified in clause 13.5.6.

Where there is evidence that the **damage** has been caused by a crash, the Contractor is expected to make some cursory enquiries to ascertain the circumstances and shall follow procedures specified in section 14 Crash Reports.

13.5.4 Hazard Identification

The Contractor shall notify the Engineer of any hazard or potential hazard to road users identified during **network** inspections.

Hazards or potential hazards may include, but are not limited to:

- **bridge** deck and expansion joint defects
- loose **manhole** covers
- overhanging trees and branches
- deteriorating **pavements**/surfacing
- pavement and/or surfacing defects compromising the safety of road users
- railway crossings and/or surfacing defects compromising the safety of road users
- cables and/or surfacing defects compromising the safety of road users
- power / telephone lines

13.5.5 Warning and Management of Hazards

Where the hazard or potential hazard to road users requires urgent attention, the Contractor shall notify the Engineer immediately.

13 Damage and Hazard Reports

The Contractor shall carry out immediately any work necessary to warn road users of any hazard. The Contractor may be required to carry out the following:

a) erect hazard warning signs in accordance with **COPTTM**.
b) erect hazard warning barricades, such as dayglow mesh to indicate gaps in any **road safety barriers**, e.g. guardrails, **bridge** handrails, etc.
c) temporary installation or attachment of additional delineator devices to ensure nighttime visibility.
d) temporarily secure any loose fittings
e) complete any temporary repair work.

The Contractor shall carry sufficient temporary traffic management warning signage in inspection vehicles at all times. As a minimum the Contractor shall carry:

a) two TW-5A signs
b) six 900 mm cones
c) a portion of dayglow hazard mesh.

Where temporary warning equipment has been installed to protect road users from a hazard, the Contractor shall report to the Engineer verbally as soon as possible on that day, detailing the location and type of hazard.

If the hazard is the responsibility of another contractor to manage, the Engineer shall notify the Contractor when the hazard has been attended to, or when a more permanent warning system has been put in place by another contractor. The Contractor may then retrieve his temporary traffic equipment.

13.5.6 Hazard Identification Reports

The Contractor is to report on all hazards or potential hazards noted during **routine inspections**, using the Hazard Identification Report Form included in Appendix 13.3. The Contractor shall include sufficient photographs to show the nature and extent of the hazard and submit it within 24 hours.

Further to the above reporting requirements, as part of the Contractor's monthly report, the Contractor shall also submit a Monthly Hazard Summary Report (Appendix 13.4), including all hazards identified during that month.

13.6 Performance Criteria

The performance of the Contractor during the Contract Period will be measured by the following criteria:

a) Inspections are completed within the specified frequencies and all reports are provided within the specified response time, and collated and submitted with the Contractor's Monthly Report.

b) That all warning and hazard management activities are carried out in accordance with the specification and within the specified response times.

14 Crash Reports

14.1 Scope

This Section sets out the requirements for Crash Reporting.

14.2 Definition

Terms defined in Table 3.2 Definitions appear in **bold**.

14.3 Response Times

All Crash Reports must be submitted with the Monthly Report (see Section 5).

14.4 Specific Requirements

14.4.1 Reporting

The Contractor shall:

a) report all known crashes that have occurred within the **network**, indicating the crashes known to have been attended by police.

b) submit a crash report using the form included in Appendix 14.1 for each crash identified, including all photgraphs;

c) note on the crash report if there are any environmental concerns as a result of the crash e.g. oil spills not properly cleared, litter not removed, etc.

d) if there is any **damage** to **roadside facilities**, refer to Section 13 and complete a **Damage** Report Form (Appendix 13.1);

e) if any hazard to road users can be identified, refer to Section 13 and complete a Hazard Identification Report Form (Appendix 13.3).

All sections of the reports must be completed and numbered consecutively. If information is unknown, the Contractor must state this on the form.

14.5 Performance Criteria

The performance of the Contractor during the contract period will be measured by the following criteria:

a) That all work is carried out in accordance with this specification and within the response times stated.

b) Crash reports are completed for known crashes and submitted with the Contractor's Monthly Report.

15 Unofficial Signs

15.1 Scope

This Section sets out the requirements for removing **unofficial signs**.

15.2 Definitions

Terms defined in Table 3.2 Definitions appear in **bold**.

15.3 Response Times

The Contractor must remove all **unofficial signs** on the first **routine inspection** following the Engineer's instruction.

15.4 Removal, Storage and Disposal of Signs

15.4.1 Removal

The Contractor must:

a) remove all **unofficial signs** including all associated posts and fill post holes

b) take due care during the operation and not enter private property to remove the signs.

If the Contractor is confronted by the owner or any other person who tries to prevent removal of the sign, work must cease and the Engineer must be notified within 24 hours of the **incident**.

15.4.2 Storage

All **unofficial signs** must be stored in a secure area until claimed by the owner, or for a minimum period of 1 month, whichever is the shorter.

If the sign remains unclaimed, the Contractor must dispose of it in an appropriate, environmentally responsible manner, or as agreed with the Engineer.

15.4.3 Reporting

The Contractor must advise, in the Monthly Report, of all **unofficial signs** that have been removed, stored, returned to the owner or disposed of, and any new **unofficial signs** observed by the Contractor.

15.5 Performance Criteria

The performance of the Contractor will be measured by the following criteria:

a) That all work is carried out in accordance with this specification.

b) That remedial work is undertaken within the response times specified and with the minimum inconvenience to the travelling public.

Appendices

Contents

Contents

1 1.1 Location of Network

1 1.2 Performance Evaluation of Contractor (PACE)

Contract Title:	Traffic Services Example		
Contract Number:	NZTA1234	**Appraisal Date:**	
Contract Value:		**Region Office:**	
Contractor:		**Appraisal By:**	
Contractors Manager:			
Work Activity:		**Work Activity either:** Bridge Maintenance, Highway Lighting, Highway Operations and Maintenance, Minor Works, Pavement Marking, Resurfacing, Traffic Services, Vegetation Control	
Evaluation Status:		**Evaluation status either:** interim, final or contract extension	

Criteria	**Grade**						
	Weakness →						**Strength**
Management (20%)							
Skill level and competency	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Risk Management	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Responsiveness	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Quality Assurance	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Production (45%)							
Contractors Programmes	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Ability to meet Programme	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Achieves the specified standard	**N/A**	**0**	**2**	**4**	**6**	**8**	**10**
Defect Management System	**N/A**	**0**	**2**	**4**	**6**	**8**	**10**
Achievement	**N/A**	**0**	**2**	**4**	**6**	**8**	**10**
Network Condition	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Health and Safety (20%)							
Safe Work Practices	**N/A**	**0**	**2**	**4**	**6**	**8**	**10**
Traffic management Control	**N/A**	**0**	**2**	**4**	**6**	**8**	**10**
Administration (15%)							
Financial	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Handling of Variations	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
Reporting	**N/A**	**0**	**1**	**2**	**3**	**4**	**5**
		0	**20**	**40**	**60**	**80**	**100**

Overall % Ratings

Overall Rating ☐ %

(please tick one)

Unacceptable Performance	<36%	☐
Below Average	36-47%	☐
Average	48-57%	☐
Above Average	58-72%	☐
Good	73-87%	☐
Excellent	88-100%	☐

Brief Comment:

Signatures:

(NZTA Representative) *(Suppliers Representative)*

1 1.3 Visual Assessment Scorecard

Monthly Visual Assessment Scorecard

Consultant _____ **Month / Year** _____

Contractor _____

	Visual				Comfort				Safety			
Component	Feature	Network %	Score	Result	Feature	Network %	Score	Result	Feature	Network %	Score	Result
Rest Area Access	Condition	**100**							Definition	**100**		
Bridges	Detritus - general	**100**										
	Deck Joints	**100**										
Barrier Systems	Guardrail	**100**							Guardrail	**100**		
Lined Channels	Detritus	**100**							Blocked Channels	**100**		
Intersections	Detritus	**100**							Crash (2)	**100**		
Water Tables	Condition	**100**										
Pavement Surface	Condition	**100**			Ride	**100**			Texture	**100**		
Shoulders	Condition	**100**							Edge rutting	**100**		
Contractors Pavement Remarking (Maintenance Work)	Condition	**100**							Night/wet (1)	**100**		
	Quality	**100**										
Unsealed Pavement SH38	Condition	**100**			Ride	**100**			Rideability	**100**		
Resurfacing	Loose Chip	**100**							Loose Chip (2) (3)	**100**		
	Scabbing	**100**							Scabbing (2) (3)	**100**		
Pavement	Condition	**100**			Ride	**100**			Repairs Outstanding	**100**		
									Potholes Unrepaired	**100**		
Subtotal												
Weighting				**50**				**20**				**30**

TOTAL VISUAL SCORE _____

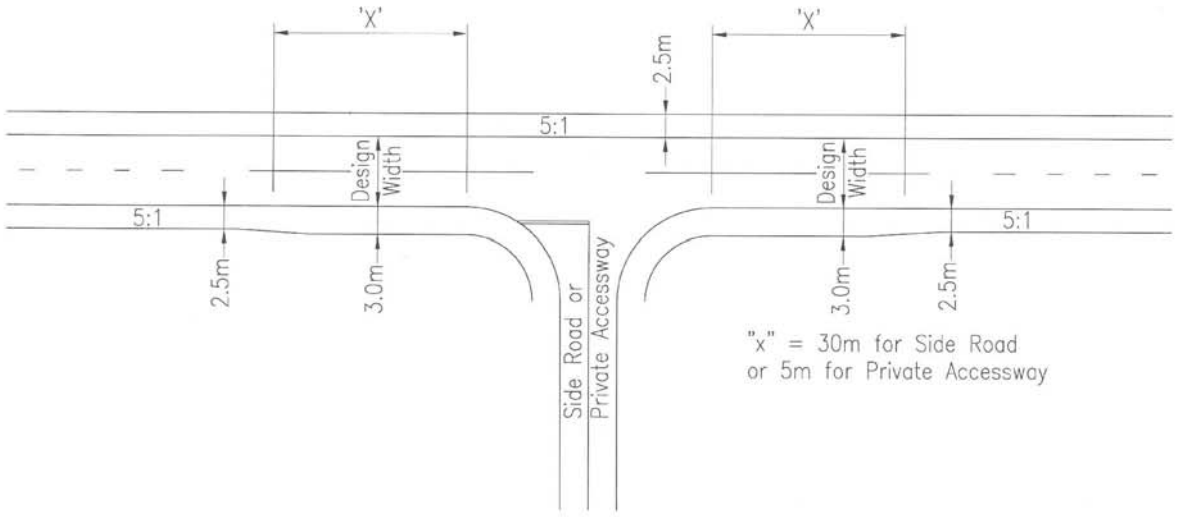
1 = Poor 2 = Needs Attention 3 = Average 4 = Good 5 = Excellent

(1) Sourced from daytime or nighttime survey

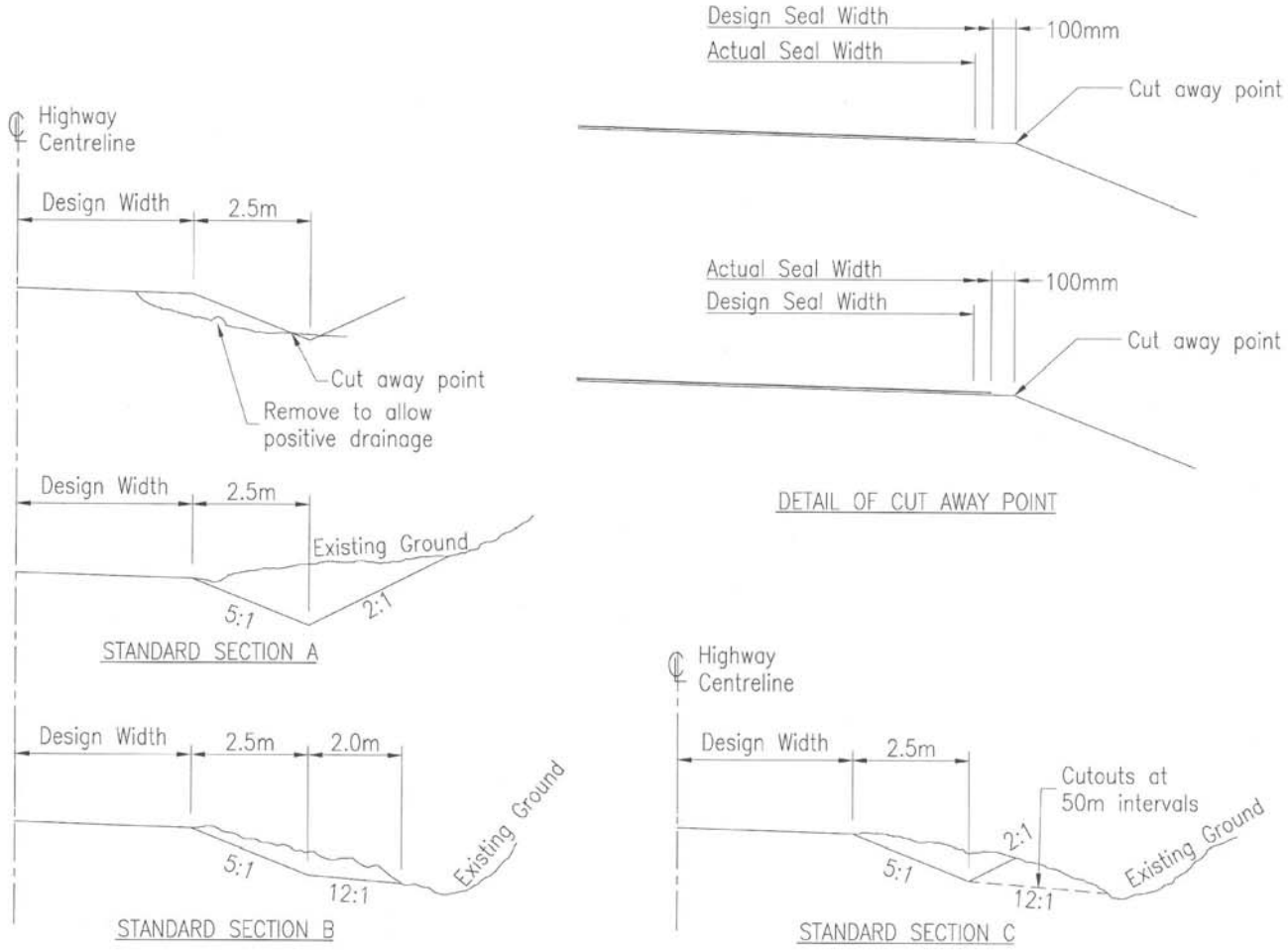
(2) Sourced from CAS and Unreported Crash summary deficiencies

(3) Only assessed during Resurfacing Construction season. Otherwise default score 3

1 1.4 Typical Cross Section for Drainage Maintenance

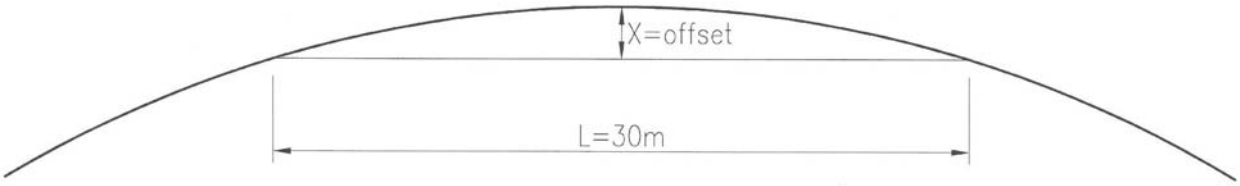


PLAN AT SIDE ROAD
OR PRIVATE ACCESSWAY



TYPICAL CROSS SECTIONS

1 1.5 Curve Radius Assessment

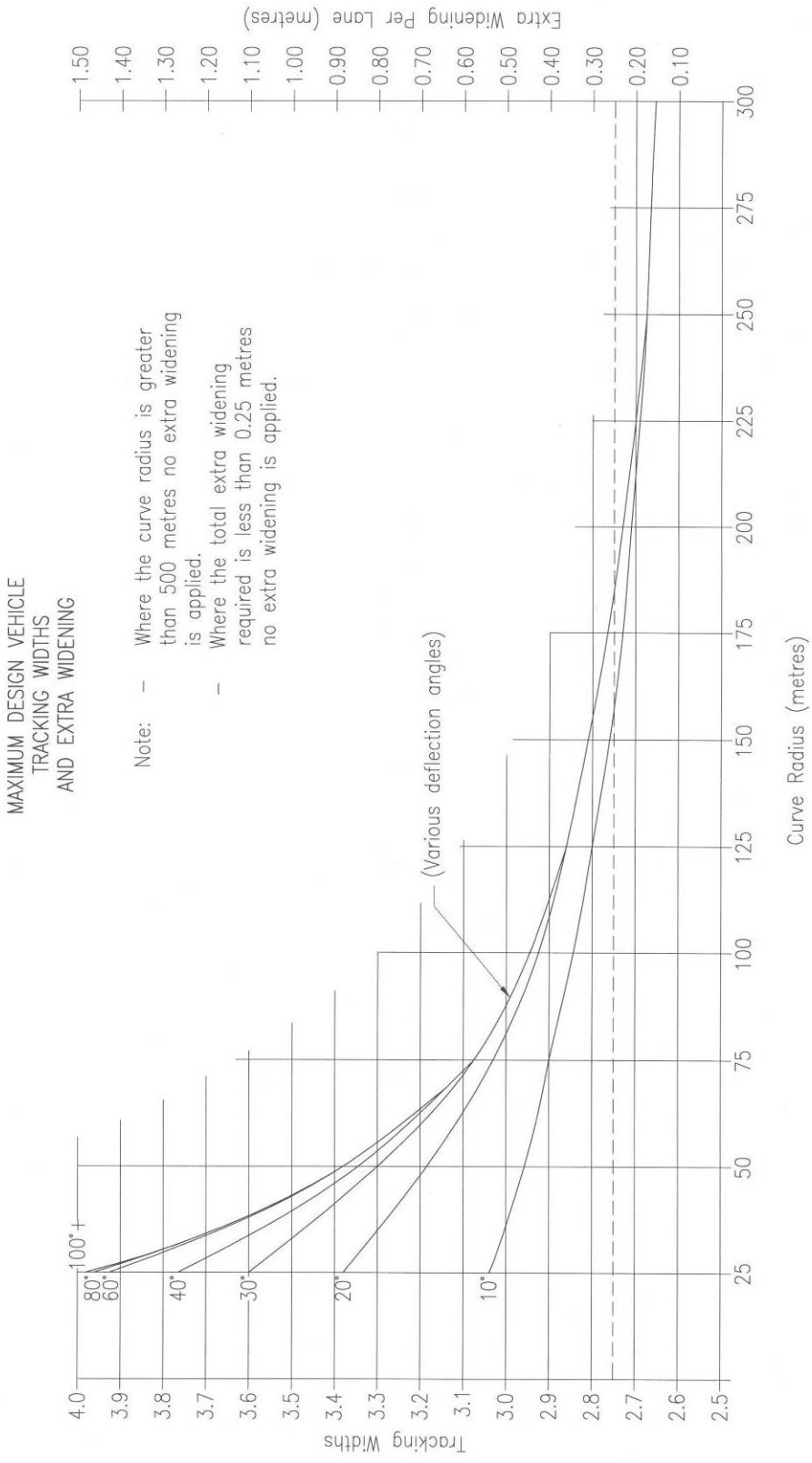


$$\text{Radius } (R) = \frac{L^2+4X^2}{8X}$$

Examples:
When X=190mm, R=600m.
When X=800mm, R=140m.

(b) CALCULATION OF CURVE RADIUS (R)

1 1.6 Additional Widening Graph



2 2.1 Health and Safety Compliance

Health and Safety Compliance Notice

2.1.1. This notice aims to:

- foster a responsible attitude towards occupational health and safety on the part of all Contractors (including subcontractors) and their employees (**personnel**) undertaking work for the Principal (NZTA);
- ensure compliance with relevant worksite safety laws especially the Health and Safety in Employment Act 1992 (as amended from time to time), its regulations and any relevant health and safety codes of practice and guidelines issued by the Department of Labour.

2.1.2 The nature of the work undertaken on behalf of the Principal means that Contractors may frequently be exposed to hazardous situations which require systems and procedures to eliminate, isolate or minimise the risk of harm to personnel and/or motorists.

2.1.3 All Contractors must observe the provisions of the Health and Safety in Employment Act 1992, its regulations and any relevant codes of practice and guidelines issued by the Department of Labour in accordance with the Act. Contractors must ensure:

a. all practicable steps are taken to provide a safe working environment and facilities for all personnel (both in terms of the physical work environment and "non-physical" factors such as stress and fatigue);

b. Work procedures do not lead to personnel being exposed to hazards in and around the place of work;

c. procedures are developed for effectively managing emergencies that may arise at the place of work. This should include both health and safety and environmental contingency plan development;

d. appropriate steps are taken for systematically identifying existing and potential new hazards and subsequently reassessing those hazards;

e. all practicable steps for controlling hazards are taken using the eliminate, isolate and minimisation hierarchy (including the assessment, control, monitoring and review of existing and any new hazards);

f. adequate information, training, competency and supervision processes are in place to ensure that personnel are able to work safely – this should include all work process, plant, equipment, and materials and, where appropriate, consideration given to those personnel to whom English is a second language. Training and competency records must be maintained;

g. all workplace accidents and incidents are reported, recorded and investigated to determine root causes with effective corrective and preventative actions being implemented and monitored;

2 2.1 Health and Safety Compliance

h. all Department of Labour requirements for “serious harm” injuries are reported within the regulated timeframes – these must also be reported to the Principal’s Contract Representative;

i. the Principal’s Contract Representative is advised of any prohibition, improvement or infringement notices issued by the Department of Labour.

2.1.4 If it is impracticable to eliminate or isolate significant hazards minimisation controls must be implemented such as:

- protective equipment and clothing
- safety equipment
- signage
- inspections, checks, audits and reviews

2.1.5 Contractors must ensure they comply with the NZTA’s Code of Practice for Temporary Traffic Management.

2.1.6 Where required by the Principal, the Contractor must develop and submit a Contract Health & Safety Management Plan, Traffic Management Plan and Environmental Management Plan for the contract / project works.

2.1.7 Further health and safety information is available from:

- The Engineer
- Department of Labour Workplace Health & Safety Division

3 3.1 Network Information

It is the Contractor's responsibility to ensure the most up to date information is obtained throughout the contract period.

The following **Network Information** will be given to the Contractor at the initial meeting:

3 3.2 C Series Specifications

There are no C Series Specifications that apply to this Contract.

3 3.3 Standard Specifications

The following Standard Specifications apply to this Contract:

- TNZ M/12:1998 Raised Pavement Markers
- TNZ M/14:2005 Edge Marker Posts
- TNZ M/17P:1989 W-Section Bridge Guardrail
- TNZ M/23:2006 Road Safety Barrier Systems
- TNZ P/14:1995 Installation of Raised Pavement Markers
- TNZ P/16:1993 Installation of Edge Marker Posts
- TNZ P/24:2003 Performance Based Specification for Traffic Signs
- TNZ Q/3:1995 Normal QA Level Contracts
- TNZ Q/4:1995 High QA Level Contracts
- TNZ T/4:1981 Description of Test Locations on Highways
- TNZ C/26:2003 Cleaning and Recoating of Steelwork Coated with Lead Based Paint

3 3.4 Other Publications

The following publications apply to this Contract:

- RSMA Compliance Standard for Traffic Signs
- TNZ / LTSA Manual of Traffic Signs and Markings - Part 1: Traffic Signs (MOTSAM-Part1)
- TNZ / LTSA Manual of Traffic Signs and Markings - Part 2: Markings (MOTSAM-Part2)
- TNZ Code of Practice for Temporary Traffic Management (COPTTM)
- TNZ State Highway Location Referencing Management System (LRMS) Manual, SM051
- NZTA State Highway Database Operation Manual, SM050
- TNZ Environmental Policy Manual SP/M/021
- Transit's Planning Policy Manual
- Transit's Maori Policy
- Land Transport Rule: Traffic Control Devices 2004

3 3.5 Stockpile and Disposal Areas

Schedule of Stockpile Sites				
Location				Name
SH	RS	RP	Side	

Schedule of Disposal Areas				
Location				Name
SH	RS	RP	Side	

3 3.6 Land Entry Agreements

Schedule of Land Entry Agreements				
Location				Owners Name, Contact Number and Agreement Reference
SH	RS	RP	Side	

4 4.1 Electronic Format

Contractor's Programme – Electronic Format		
Field Name	**Size**	**Description and Format of Field**
The submitted file shall be in DBF format		

4 4.2 Item Numbers and Budgets

The following table states the:

- Payment Item Number
- estimated budget. The actual budget will be advised prior to the date of possession of site and update annually
- the Scheduled Items that will be coded to each Payment Item Number.

Item Numbers and Budget			
Item Number	**Description**	**Annual Estimated Budget ($)**	**Schedule Items**
104567	Cyclic Maintenance	$100,000.00	9 9 12 13 14
104783	Management	$20,000.00	1 2 3 4 5 6 7
104792	Miscellaneous Works	$50,000.00	8
104231	Traffic Services	$150,000.00	9 10 10.3 15

5 5.1 Electronic Format

Contractor's Monthly Claim – Electronic Format		
Field Name	**Size**	**Description and Format of Field**
The submitted file shall be in DBF format		

5 5.2 Monthly Management Report

For Month: **Contract No.:**

Contractor: **Completed by:** **Date:**

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
A. Programme Achievement												
Total Number of Tasks Programmed												
Total Number of Tasks Achieved												
B Contract Specific Achievements												
Volume of Detritus Removed (m^3)												
Number of EMP's Replaced												
Number of RMP's Replaced												
Number of Potholes Filled												
Number of Stormwater Structures Checked												
Number of Tasks Outstanding (Total)												
Number of Tasks Not Completed Within Specified Response Times												
C Quality												
Number of Non-Complying Tasks												
Number of CQP Audits / Reviews												
Number of Non-Compliances Identified												
Number of Non-Compliances Outstanding												
D Financial	***Refer to Monthly Claim & Financial Report***											
E Safety												
Number of Workplace Accidents												
Number of Near Misses Identified												
Number of TMP Audit Non-Compliances												
F Network Condition	***Based on Information Provided by Engineer - Contractor to Comment***											
Notes / Comments: i.e achievements, issues (if any), trends.												
G. General Comments	***Activity / Actions Planned for Next Month***											
Attachments : (List, if any)												

6 6.1 Schedule for Traffic Management & Safety

Specific Job Requirements for Traffic Management and Safety

Contract No: ***NZTA1234***

Contract Name: ***Traffic Services Example***

(Clause numbers are those from the Specification)

A OPERATIONAL REQUIREMENTS

1. Hours of Work

The Contractor shall programme work such that contract activities affecting traffic flow are not carried out on-site between the hours specified in the Operational Requirements Section.

No work other than emergency or maintenance work shall be undertaken on weekends without prior approval of the Engineer.

2. Project Specific Conditions

a) maintain two way traffic at all times on all Class R1 and R2 highways
b) advise all affected local authorities of all work programmed within urban areas a minimum of 4 weeks before the programmed date of the resurfacing work.
c) not work in urban areas during peak traffic flows.

3. Excessive Traffic Delays

The steps outlined in the Traffic Management Plan to deal with excessive traffic delays shall be implemented once traffic delays exceed: ***10 minutes***.

The Contractor shall be responsible for the monitoring of traffic delay.

4. Road Controlling Authority Approval at Single Lane Operations

Approval of the RCA is not required in advance if traffic is restricted to single lane operation.

5. Advice to Other Parties

Public Notification.
Required within urban areas.

Newspapers to advertise in.
Waikato times and appropriate local newspapers.

Parties with Access Affected
The Contractor must advise all authorities, adjoining businesses and occupants within residential areas, as appropriate, of the extent and expected duration of all resurfacing work. The advice must

be provided in writing at least 7 days before the programmed resurfacing date and verbally the day before the work starts.

6. Condition of Road Surface

Not Applicable

7. Basis of Payment

Payment shall be in accordance with Basis of Payment, Clause 6.

8. Positive Traffic Management - Specific Requirements

The Contractor must provide positive traffic control according to COPTTM.

9. Pilot Vehicle Exemption

None.

7 7.1 Resource Consents

Schedule of Resource Consents						
Location						Consent Number and Description
SH	From RS	From RP	To RS	To RP	Side	

8 8.1 Daily Job Record

Contract Number: NZTA1234

Contract Name: Maintenance

Daily Job Record (DJR)

Location: _____

Date: _____ Start Time: _____ Finish Time: _____

Description:

_____

_____

Item	Comments	Hours	Rate	Total
PLANT				
			Sub Total Plant	
MATERIALS / SUB-CONTRACTORS				
			Sub Total Materials / Sub-contractors	
			Materials / Sub-contractors on Cost	
LABOUR				
			Sub Total Labour	
			TOTAL	

9 9.1 Minimum Stockholding

Minimum Stockholding				
Type	**Description**	**Grade**	**Size (mm)**	**Minimum Stock** Consultant to Complete
RG1-50	Speed Limit 50km/h	HI	750	
RG1-50	Speed Limit 50km/h	HI	900	
RG1-60	Speed Limit 60km/h	HI	750	
RG1-60	Speed Limit 60km/h	HI	900	
RG1-70	Speed Limit 70km/h	HI	750	
RG1-70	Speed Limit 70km/h	HI	900	
RG1-80	Speed Limit 80km/h	HI	750	
RG1-80	Speed Limit 80km/h	HI	900	
RG2	Speed Limit 10km/h	HI	750	
RG2	Speed Limit 100km/h	HI	900	
RG2.1	Speed Limit De-restriction	HI	750	
RG2.1	Speed Limit De-restriction	HI	900	
RG5	Stop	HI	675	
RG5	Stop	HI	845	
RG6	Give Way	HI	750 x 865	
RG6	Give Way	HI	900 x 1040	
RG15	No U Turn	HI	750	
RG15	No U Turn	HI	900	
RG17	Keep Left - Single Disc	HI	600	
RG17	Keep Left - Single Disc	HI	750	
RG17	Keep Left - Single Disc	HI	900	
RG17.1	Keep Left - Twin Disc	HI	600	
RG17.1	Keep Left - Twin Disc	HI	750	
PW67	Single Chevron (Mini)	HI	750 x 900	
PW17	Curve Warning 15 to 90 degrees	Eng	900 x 900	
PW17	Curve Warning 90 to 120 degrees	Eng	900 x 900	
PW25-65	Curve Advisory Speed 65 km/h	Eng	900 x 600	
PW25-75	Curve Advisory Speed 75 km/h	Eng	900 x 600	
PW25-85	Curve Advisory Speed 85 km/h	Eng	900 x 600	
PW30	Pedestrian Crossing	Eng	900 x 900	
PW-41	Slippery Surface (diamond only)	Eng	900 x 900	
PW-42	Falling Debris	Eng	900 x 900	

* For posts refer to Schedule of Prices 6, Schedule of Posts

9 9.2 Signs Report

SH		RS		RP		**ADD/AMEND** *Circle One*
Road ID			Road Name		
Sign Type			Direction	Incr Decr Both N/A	
Sign Width			Sign Height		
Side	L C R		Offset (from CL)		
Legend Text					
Reverse Side					
Indicating Direction	L R C NA	(the direction indicated by the sign, eg LH curve)			
Legend Material	NR EG HI WOA PRIS UN		Frame	Y N	
Background Material	NR EG HI WOA PRIS UN				
Legend Colour	RE BR BU BK WH YE GR UP UN				
Background Colour	RE BR BU BK WH YE GR UP UN				
Support Type	BR BU GT OB SL TR TS UT WA PO OT				
Bracket Type	CS RS SB T1 T2 TB TS WS OT				
Substrate (Sign Material)	AL PL ST TI OT				
Date Installed/Removed					
Relocated from:	SH		RS		RP	

Comments:

Asset Number		Date	
Post Type	W AF ST AL		
Shear Base Mechanism	Yes No If Yes: Does it require a torque check?		
Inventory Updated		RAMM Updated	

Material Codes	**NR** Non-reflective, **EG** Engineering Grade, **HI** Class 1 High Intensity, **WOA** Class 1 WOA, **PRIS** Class 1A Primatic, **UN** Unknown
Colour Codes	**RE** Red, **BR** Brown, **BU** Blue, **BK** Black, **WH** White, **YE** Yellow, **GR** Green, **UP** Unpainted, **UN** Unknown
Support Codes	**BR** Bridge End, **BU** Building, **GT** Gantry, **OB** Overbridge, **SL** Street Light Pole, **TR** Tree, **TS** Traffic Signal Pole, **UT** Utility Pole, **WA** Wall, **PO** Post, **OT** Other, **W** Wooden, **AF** Aluminium Fluted
Bracket Codes	**CS** Coach Screw, **RS** RTS Street Name Bracket, **SB** Signfix Street Name Bracket, **T1** RTL TD1 63mm, **T2** RTL TD1 63mm, **TD2** 63mm, **TB** Through Bolt, **TS** Tek Screw, **WS** Wood Screw, **OT** Other
Substrate Codes	**AL** Aluminium, **PL** Plastic, **ST** Steel, **TI** Timber, **OT** Other

9 9.3 Signs Night Inspections

SIGNS - Night Inspections

Date: _____ Name: _____

CONTRACT :
SH:
Weather Conditions:

				SIGN DETAILS			Missing ✓ x	Sign Damaged ✓ x	Support Pole Damaged ✓ x	Needs Relocating ✓ x	5 % Off Vertical or Twisted ✓ x	Insecure ✓ x	P24 - Non Compliant (see specification) ✓ x	Brackets/Bolts Missing ✓ x	Needs Cleaning /Graffiti ✓ x	Flaking /Oxidised Paint or medium ✓ x	Obscured ✓ x	COMMENTS	PROPOSED FIX
RS	RP	Left Right Centre	Incr Decr	Sign Type	Size	Reflective													See below codes

1. New standard sign required **2. New non-standard sign required** **3. Requires repair** **4. Requires reinstatement** **5. Requires replacement** **6. Requires refurbishment** **7. Requires vegetation control**

10 10.1 Edge Marker Post Night Inspections

EMP's - Night Inspections **Date:** _____ Name: _____

CONTRACT :

SH:

Weather Conditions:

				Missing ✓ x	Needs Relocating (refer MOTSAM positioning) ✓ x	10% Off Vertical or Twisted ✓ x	Damaged Post ✓ x	Damaged Yellow or white Reflector ✓ x	Not Visible (160m on full beam. Requires cleaning) ✓ x	Not visible (obscured by vegetation) ✓ x	Non compliant height ✓ x	COMMENTS	PROPOSED FIX
RS	RP	Left Right Centre	Incr Decr										See below codes

1. New EMP required **2. Requires reinstatement (reflector only)** **3. Requires repositioning** **4. Requires cleaning** **5. Requires vegetation control**

11 11.1 Raised Pavement Marker Night Inspections

RRPM's - Night Inspections

Date: _____ **Name:** _____

CONTRACT :

SH:

Weather Conditions:

				Missing ✓ x	Damaged and needs replacing ✓ x	Not visible (160m on full beam) and needs replacing ✓ x	Needs Cleaning/Grime/Detritus ✓ x	Other fault	COMMENTS	PROPOSED FIX
RS	RP	Left Right Centre	Incr Decr						Note type: Mono/Bi White, Mono/Bi Yellow, White/Yellow, Red	See below codes

1. New RRPM required **2. Requires cleaning**

Note: where significant lengths (> 1.0km) of RRPM's are in marginal or non compliant condition, then lengths should be noted and tasked for bulk replacement.

12 12.1 Litter Removal

Schedule of Rest Areas and Designated Sites for Litter Removal				
Location				Description of Area
SH	RS	RP	Side	

13 13.1 Damage Report

Damage Report Form

Part A: General Site Details **Report No._____**

A. 1	Location: SH_____ RP_____/_____LHS/RHS
A. 2	Locality Description: _____
A. 3	Date and Time of Contractor's Inspection: _____

Part B: Damage Details

Part C: Photograph(s) of Site

Accident Report Completed: Yes/No. If "No" why not? _____

Signed:_____(Contractor) Date: _____/_____ /_____

13 13.2 Monthly Damage Summary Report

SH	RS	RP	Date/Time Inspected	Type of Facility	Nature and Extent of Damage (Provide specific details of extent e.g. number of **damaged** rails, posts etc)	Reported to Engineer Date/Time	Warning Erected Y/N	Crash Report Attached Y/N

13 13.3 Hazard Identification Report

Hazard Identification Report Form

Part A: General Site Details **Report No. _____**

A. 1	Location: SH_____ RP_____/_____LHS/RHS
A. 2	Locality Description: _____
A. 3	Date and Time of Contractor's Inspection:

Part B: Details of Hazard

Part C: Photograph(s)

Signed:_____(Contractor) Date: _____/_____ /_____

13 13.4 Monthly Hazard Summary Report

Monthly Hazard Summary Report

Monthly Report Date: _____
Monthly Report No. _____

SH	RS	RP	Side	Hazard Details	Report No.

Signed:_____(Contractor) Date: _____/_____ /_____

14 14.1 Crash Report Form

Traffic Crash Reporting Form

Location

Local Authority: _____

Road: SH _____ RP _____

Place: At / or _____ m/km_____ **N/S/E/W** of

_____

_____ (side road / feature)

Injury

Worst Injury

Serious / Minor / None / Unknown

When Crash Occurred

Date _____/_____ / _____

Time _____ am / pm

Day Su/Mo/Tu/We/Th/Fr/Sa

What Happened e.g. Car north Red Street hit truck going west on Lilac Terrace. Or: Van west on State Highway 73 lost control on right hand bend.

_____

_____

_____

Codes (office use only)

Object	Mvmt	V1	NSEW	Street
_____				

Reported by _____

Non Vehicle Factors

	Fac1	Fac2	Fac3
	_____	_____	_____

Driver/vehicle Factors

	_____	_____	_____

Conditions (please enter / circle)

Speed Limit	(km/hr) _____
Curve Advisory Speed	_____/ NA
Road Type	1 way / 2 way
Curvature	Straight / Easy / Moderate / Severe
Surface	Sealed / Unsealed
	Wet / Dry / Icy
Light	Bright Sun / Overcast / Twilight / Dark
Lighting	On / Off / None / Unknown
Number of Lanes	_____

Paint Markings	Pedestrian Xing / Raised Island / Painted Island / No Passing Line / Centreline / Nil
Road Feature	Bridge / Motorway / Rail Xing
	Flat / Hill
Junction	Driveway / Roundabout/ Cross / Tee / Y / More than 4 legs
Control	Traffic Signals / Stop / Give Way / Uncontrolled School Patrol
Weather	Fine / Mist / Light Rain / Heavy rain / Snow Frost / Strong Wind

14 14.1 Crash Report Form

Traffic Crash Reporting Form

Diagram

Diagram

Was any damage sustained by guardrails, signs, bridges etc ?

Please identify _____

Driver and Vehicle details (if known)

Name _____ M / F Age _____ Vehicle Reg Numb

Address _____

Police Attendance

Did a Police Officer attend the crash ? Yes / No

Notified by (May be left anonymous)

Name _____

Contact Phone/Address _____

Return to the Engineer

Your assistance will potentially help to improve Road Safety.

Asset Manager, Road Controlling Authoring Name

THE END