WAIHANGA ARA RAU
Construction and Infrastructure
Workforce Development Council

# TEMPORARY TRAFFIC MANAGEMENT

## PROGRAMME GUIDANCE FOR LEVEL 4 SKILL STANDARDS

VERSION 1 | OCTOBER 2024

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# 1. INTRODUCTION

This *Programme Guidance* contains information and best practice for temporary traffic management (TTM) skill standards. Its purpose is to share useful information and content of the skill standards collected during the skill standard development work completed in 2024.

It may be useful for people involved in training for the TTM industry and includes industry expectations, equity considerations, and te Tiriti o Waitangi requirements that may not be included in other NZQA products.

This *Programme Guidance* explains the role of TTM skill standards as building blocks that lead to the qualifications and credentials specified in the TTM Credentials Framework, (available from Resource Library » Temporary Traffic Management Industry Steering Group (ttm-isg.org), a new training approach developed by industry that will support better management of safety and risk for TTM activities.

Feedback from the TTM industry and providers will ensure the content of this *Programme Guidance* document remains relevant and fit for purpose. Recommendations for improvement can be sent to qualifications@waihangaararau.nz.

# 2. TEMPORARY TRAFFIC MANAGEMENT

The TTM industry has recently transitioned from a compliance model based on the Code of Practice for Temporary Traffic Management (CoPTTM), to a risk-based approach.

The TTM Credentials Framework Working Group (TTMCFWG) developed a TTM Credentials Framework to support the risk-based approach and career pathways within the industry. Industry consultation on this document was conducted in April 2024.

From April 2024 qualifications, micro-credentials, and/or skill standards developed by Waihanga Ara Rau will align with the TTM Credentials Framework. The TTM Credentials Framework Working Group supports the use of the approved micro-credentials and qualification that align with the TTM Credentials Framework.

The information in this document aligns with the risk-based approach and the guidelines provided by the TTMCFWG, WorkSafe New Zealand, and Waka Kotahi NZ Transport Agency:

- WorkSafe New Zealand good practice guidelines: Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs, available from www.worksafe.govt.nz.
- Waka Kotahi NZ Transport Agency Guide to Temporary Traffic Management (NZGTTM), available from www.nzta.govt.nz.

## INDUSTRY INITIATIVES

Organisations that support road safety initiatives are:

- Ministry of Business Innovation and Environment (MBIE).
- Waka Kotahi NZ Transport Agency.
- WorkSafe New Zealand.
- Local Government.
- Road Controlling Authorities (RCAs).
- Transport Authority Organisations (TAOs), (refer to page 24 NZGTTM).
- Civil Contractors New Zealand (CCNZ).

One Network Framework (ONF) is a tool to help establish transport network function and inform decision making and potential interventions for each road and street type, and classifications for different modes of transport (refer to page 11 NZGTTM), available from One Network Framework | Waka Kotahi NZ Transport Agency (nzta.govt.nz).

There are industry groups within the TTM landscape:

- Road Work Safety Governance Group (RWSGG).
- TTM Industry Steering Group (TTMISG) info@ttm-isg.org. This is the main source of information for the TTM industry including newsletters, video clips, resource materials and other communications.

The TTMISG has five working groups:

- Training and competency (credentials framework).
- Communications and engagement.
- Commercial (procurement).
- Assurance.

- Good practice.

Waihanga Ara Rau Construction and Infrastructure Workforce Development Council, facilitate the Civil Advisory Group meeting and also develop workforce development plans with the support of sector reference groups that include current and future workforce needs, guided by and working in partnership with the wider civil sector, available from Strategic Reference Groups: Advice & Counsel for Sectors - Waihanga Ara Rau.

# 3. WHAT IS A SKILL STANDARD?

A skill standard is a specification of skills which includes:

- learning outcomes associated with the skills
- level of performance in those skills
- indicative content to be included in programmes
- guidance to support consistent assessment of learning outcomes (at an organisational and national level).

## USING SKILL STANDARDS

The knowledge and skills in one skill standard may be essential to achieving other skill standards. This *Programme Guidance* recommends the sequence of learning and assessment to take this into account.

For the TTM industry, skill standards can be used in more than one qualification or credential. Ākonga can transfer credit for the achievement of standards between qualifications and credentials.

Training providers and employers will support ākonga (learners) to develop their skills and knowledge in the right sequence. This will help ākonga to apply their knowledge at the level, scope, and complexity required.

- Each skill standard specifies the consent to assess requirements included in the current, or any subsequent version of CMR 0101, available from Search Framework (nzqa.govt.nz).
- These skill standards are listed in the following Directory of Achievement and Skill Standard (DASS) - Domain - Temporary Traffic Management (nzqa.govt.nz).
- These skill standards are aligned to the following NZSCED Code - Classification - 030999 Engineering and Related Technologies>Civil Engineering>Civil Engineering not elsewhere classified.

# 4. SKILL STANDARD LEVELS AND PROGRESSION

The TTM Competency Framework has information relating to the 'layered level of risk responsibility'.

The skills, knowledge, and abilities included in the TTM skill standards align with the requirements of this framework and the New Zealand Qualifications and Credentials Framework (NZQCF). At each level they are current, relevant, and meaningful to industry requirements.

## LEVEL 4 – PERFORMING TTM SPECIALISATIONS UNSUPERVISED

The Level 4 skill standards describe the skill set of someone in a TTM specialisation who performs to industry standards in areas such as temporary traffic management design, TTM supervision, and TTM assurance.

These individuals have the knowledge and skills to manage risk on dynamic worksites. They will ensure the safe implementation, maintenance and uplift of TTM sites.

The TTM Competency Framework describes two streams for Level 4 ākonga:

- TTM delivery.
- TTM specialist.

**Level of supervision**

At Level 4 ākonga will be working unsupervised in their area of specialisation. The person conducting the business or undertaking (PCBU) will ensure a level of supervision appropriate to their role and responsibilities.

Industry describe Level 4 attributes as:

- management of risk in different working conditions
- team leadership
- critical thinking and problem solving.

**Risk awareness - Dynamic Situational Risk Assessment**

Industry describes Level 4 as demonstrating skills in robust risk assessment dynamic evaluation of risk, adapting to changing conditions. This might involve adjusting plans or actions based on weather conditions, equipment status, or other variable factors, always looking for the safest option.

The TTM Credentials Framework has more information on the layered risk responsibility, available from Resource Library » Temporary Traffic Management Industry Steering Group (ttm-isg.org), and how the TTM industry manages risk, backed by recent research. This includes assessing risk in changing situations.

**Learning outcomes**

The learning outcomes for Level 4 skill standards will mainly be achieved in a workplace.

The assessment of Level 4 learning outcomes should focus on the collection of naturally occurring workplace evidence, integrated with relevant workplace policy, process, and procedural documentation.

# 5. CONSIDERATIONS FOR PROGRAMMES IN TTM

This guidance reflects information about the TTM industry collected during the development of the skill standards that may be useful for providers developing programmes.

The capability of all TTM workers can be strengthened through targeted training and assessment that reflects the dynamic TTM working environment.

## PROTECTION FOR VULNERABLE WORKERS

Industry recommends PCBUs provide wrap around support and guidance for TTM personnel and ākonga. This includes supporting ākonga in situations where decisions have the potential to cause harm to fellow workers. For example, accidents, injuries, and near misses can be due to fatigue or inattentiveness from working long hours. It is important for employers to support TTM workers to make responsible decisions about their fitness for work.

Where TTM skill standards, micro-credentials or qualifications are registered on the NZQCF they are quality assured across Aotearoa. Waihanga Ara Rau will moderate assessments and ensure assessors meet requirements. For more information on the delivery and assessment of the skill standards, refer to the current, or any superseded versions of CMR 0101, Criterion 6 Off-site practical or work-based components.

Protecting Vulnerable Road Users in TTM environments Practice Note, available from Protecting Vulnerable Road Users in TTM Environments (nzta.govt.nz).

## RISK ASSESSMENT

The New Zealand Guide to Temporary Traffic Management (refer to pp. 18-22) includes information on the safety of road users within TTM.

Consultation, cooperation, and coordination (the 3 C's) are key to improving sector capability with consideration of the Waka Kotahi NZ Transport Agency wider work-related Road Safety Programme https://www.nzta.govt.nz/safety/partners/working-on-the-road/. All parties are responsible for improving safety among workers, road users, and the TTM zone.

Working with all parties in the planning phase for the risk assessment can reduce conflict on the TTM controls chosen, to ensure the safest option and increase the possibility of innovative solutions.

Page 28 and 29 of the NZGTTM refer to the risk assessment process. Robust risk assessment is key to reducing injuries and harm and this includes residual risk (refer to pp. 38 and 47 NZGTTM), lowest total risk (page 32 NZGTTM) as set out in the WorkSafe New Zealand guideline. There should be no transfer of risk to other groups relevant to each TTM zone, for example, heavy haulage or waste management.

Resources that might be useful for Providers developing resources around risk for Level 4 skill standards:

- Construction Health and Safety New Zealand (CHASNZ) Energy Wheel CHASNZ – Energy Wheel CHASNZ – Energy Wheel.
- Downer Risk Assessment Tool TTM library | NZ Transport Agency Waka Kotahi (nzta.govt.nz).
- NZTA RACI model.

To maintain the health and wellbeing of trainees and promote good workplace health and safety practices, training programmes must integrate safe ways of working relevant to practical tasks in all skill standards.

It is expected that ākonga will perform aspects of each skill standard safely throughout the assessment process to demonstrate competence.

## LITERACY

Literacy skills are intentionally integrated throughout various levels of skill standards to help ākonga meet the daily demands they will encounter in TTM.

At Level 4, literacy and numeracy is focussed on trade specialisation requirements:

- writing workplace documents
- wcommunicating with stakeholders, employers, and industry groups.

## EQUITY AND ACCESS

**Physical nature of the industry**

For those thinking about a career in temporary traffic management, it's important to understand the physically demanding nature of the work. This includes lifting heavy objects, carrying loads, walking, and standing for extended periods, holding focus/attention for long periods of time (relating to stop go), bending, having good vision, and manual dexterity. It also includes a level of communication required when working in a team with responsibility for each other's health and safety, and conflict resolution.

**Supporting ākonga from different pathways**

Ākonga might have experience working in other industries such as roading, roadmarking, bitumen surfacing, or other civil roading roles. TTM workers at Level 4 may want to transfer from onsite work into a specialisation or working offsite in an office.

The definition of 'special needs' from the Convention of the Rights of People with Disabilities, refers to those who have long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others…" (Article 1). It is intended ākonga with disabilities training in the TTM industry are welcomed where suitable roles are available and are provided with relevant support.

**Description of a temporary traffic management 'workplace':**

- where there are changing work conditions
- where ākonga have access to work at the level required by industry, and an awareness of the impact of their work including paying attention to quality outcomes and environmental protection
- where the workplace, the nature of the work, equipment, resources, and the workplace environment, are sufficient to meet industry and ākonga needs
- where the PCBU ensures a safe working environment underpinned by risk assessment procedures and control measures.

**Role specific requirements:**

- many employers will expect workers to have a driver's licence.

## CULTURAL COMPETENCE

Effective interactions with fellow workers and customers are essential for a successful career in TTM. The industry promotes programmes that support ākonga to develop cultural competence, enabling them to be considerate and adaptable when dealing with people from various backgrounds, identities, and cultures.

The assessment environment should be one where:

- **whanaungatanga**, fosters good relationships between stakeholders within the road reserve and in different road environments to support and encourage positive mana enhancing relationships
- **manaakitanga** shows care for workers and their safety, enhances hauora (wellbeing) and respect for all stakeholders, valuing the skills, knowledge, and experience that each ākonga brings with them
- **kotahitanga** focuses on working together towards a common goal to carry out activities where they are completed safely without harm or injury, understanding who you are working with and communicating with relevant stakeholders in temporary traffic management and throughout the assessment process
- **kaitiakitanga** acknowledges any impact from the assessment on the work, the environment, the people, and the places in Aotearoa. It also acknowledges the many tikanga practices that should be respected, applied where appropriate or specified by the ākonga throughout the assessment process, and supported through quality teaching and learning
- **pūkengatanga** pays attention to authentic and contextualised quality practices for traffic management solutions
- **rangatiratanga** provides an assessment environment where ākonga world views and achievement are supported.

The WorkSafe New Zealand good practice guidelines: Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs, available from www.worksafe.govt.nz contain more information (refer to page 136).

## PROGRAMME DELIVERY

Providers are advised to refer to the Waihanga Ara Rau programme endorsement considerations:

- programme content
- equity for ākonga
- programme engagement and consultation
- te ao Māori
- pacific languages and ākonga
- disabled people.

How to Get Programme Endorsement for NZQF Qualifications - Waihanga Ara Rau.

Providers must ensure there is a workplace training agreement between the ākonga, employer, and provider, with the information required for a safe and supportive learning environment. Assessment for practical elements of skill standards and micro-credentials should take place in the workplace. Where a

skill standard has a knowledge component there may be other modes for delivery, for example online or blended learning.

Additional time should be allocated to embedding the learned knowledge and skills into workplace practice, and where relevant, to record workplace evidence to demonstrate competence.

Training must be overseen and guided by someone who has current industry expertise in the specific areas of temporary traffic management relevant to their training.

The length of the training, learning and assessment described by the skill standard should reflect that 1 credit is equivalent to 10 notional learning hours. This is to ensure the learner has an opportunity to receive training, put that training into practice in the workplace, and be assessed at the level of competence specified in the standard.

## RESOURCES

There are numerous resources available to support the delivery of temporary traffic management training.

The **TTM Industry Steering Group** (TTMISG) produce a newsletter and will be providing links to new information and resources as they become available www.ttm-isg.org.

The **TTM Toolbox** includes components for the design and equipment for TTM with guidance notes, supporting information and resources, available from https://www.nzta.govt.nz/roads-and-rail/new-zealand-guide-to-temporary-traffic-management/the-guide/part-3-the-toolbox/.

It covers the Design Principles - advanced warning, guidance, protection, return to normal. It covers geometric design, design reference material and hyperlinks and traffic impact assessments.

The **TTM Library** has resources for PCBUs that support the training framework, available from TTM library | NZ Transport Agency Waka Kotahi (nzta.govt.nz):

- guidance notes
- TMP examples
- practice notes
- operational practice notes
- administration notes.

**TTM Consult** for examples of best practice and to email Waka Kotahi in relation to TTM. You can email them with questions of comments ttm.consult@nzta.govt.nz.

**TTM Newsletters** are available to stay up to date with resourcing for TTM. The Waka Kotahi website www.nzta.govt.nz has links to subscribe to their newsletters and you can also receive a TTM newsletter by emailing Tom.Kiddle@at.govt.nz, from Auckland Transport.

The Waka Kotahi **New Zealand guide to temporary traffic management (NZGTTM)** outlines how to use a risk-based approach to plan and mitigate the risks to road workers and road users to keep them safe New Zealand guide to temporary traffic management (NZGTTM) | NZ Transport Agency Waka Kotahi (nzta.govt.nz).

WorkSafe New Zealand **Keeping healthy and safe while working on the road or roadside** provide advice for PCBUs on how to keep workers healthy and safe while working on the road or roadside Keeping healthy and safe while working on the road or roadside | WorkSafe.

## PRACTICAL ASSESSMENT

**'A risk-based approach underpins learning and assessment for TTM'.**

It is expected that practical components of the skill standards will be assessed within the road reserve.

- The road reserve is defined as the area of land between the legal boundaries, usually fence line to fence line and including any safety run-off areas, which is dedicated to allowing the passage of road users. The road reserve also includes an air space of six metres directly above the road surface.

All TTM skill standards must be assessed using organisational requirements that include the policy, procedures, and methodologies of the organisation. They include legislative and regulatory requirements that may apply across the organisation or to a specific workplace. This includes an awareness of the responsibilities of the PCBU and the Health and Safety at Work Act 2015.

Learning outcomes described in skill standards are generally related to practical aspects of temporary traffic management (*'the learning outcomes associated with the skills)*.

Where assessment is through performing practical tasks, they will be confirmed by a person who is commercially competent. Alternative assessment formats may be used that reflect the careful and deliberate use of processes and practices described in *Aromatawai and the Principles of Assessment.*

Underpinning knowledge is represented by the indicative content in the skills standard to ensure ākonga have the level of capability required by industry.

**For training and assessment against TTM standards:**

- A registered provider who has consent to assess TTM standards may develop their own learning and assessment resources. The assessment resource must be pre-assessment moderated by Waihanga Ara Rau prior to use.
- A registered provider does not need the assessor approved by Waka Kotahi or Connexis, but any assessor must hold US4098 and the TTM standards they are assessing against.

## 6. SKILL STANDARDS AS "BUILDING BLOCKS"

The skill standards in this *Programme Guidance* serve as components that relate to the credentials they lead to.

Waihanga Ara Rau have reviewed and updated the Consent and Moderation Requirements (CMR 0101) for Temporary Traffic Management. The statement '*The applicant organisation must have policies and procedures to ensure assessors assessing unit standards used to obtain temporary traffic management warrants, have Waka Kotahi NZ Transport Agency approval',* will be removed. This will align with Waka Kotahi NZ Transport Agency withdrawing the Code of Practice for Temporary Traffic Management (CoPTTM) and retiring the warrant system by the end of October 2024.

## 7. MICRO-CREDENTIALS

The TTM industry recognises that skills included in the skill standards can be bundled into micro-credentials. This provides additional training options for people working in TTM and can help with employee retention.

Micro-credentials can provide a meaningful learning pathway for ākonga to accumulate relevant skills before committing to a full programme leading to the award of a qualification. A programme leading to a qualification can consist of stacked micro-credentials.

Recognition of Current Competence (RCC) can be recognised with micro-credentials.

Credit recognition transfer (CRT) where credit from formal learning, provided and credentialed by a tertiary Provider, can also be recognised through micro-credentials.

Information on micro-credential support for providers is available from Register Your Micro-Credentials with WDC Approval - Waihanga Ara Rau.

| ID NUMBER | TITLE | CREDITS |
|---|---|---|
| **4922** | Temporary Traffic Management Design (Micro-Credential) | 20 |
| **4923** | Temporary Traffic Management Risk Assessment (Micro-Credential) | 15 |

# 8. DEFINITIONS – LEVEL 4 SKILL STANDARDS

| TERM | MEANING |
|---|---|
| Engineering Principles | Engineering principles refer to:<br>– road geometric design (cornering and space required, sight lines, stopping distances, intersection sight lines), basic traffic variables and relationships, and traffic behaviour.<br>– delay calculations, verge rates, shifting or merging tapers and why they are used, and chicane elements to produce a passive or control measure.<br>– the impact of controls on human behaviour.<br>– Table 1 Common Geometric Dimensions NZGTTM p. 69. |
| Operational practices | Operational practices refer to:<br>- how certain closures (systems of control) function and how they introduce, or limit impact on stakeholders and the implementation, operation, maintenance, and uplift of TTM.<br>- equipment standards and how to apply knowledge of specific good practice for their design or delivery.<br>- how alternating flow is defined in good practice with consideration of organisational practice. |
| Mobile Operation | Mobile operation refers to an activity or work carried out within the road reserve that is not contained within a fixed site. The vehicle(s) associated with the activity travel along the road in the direction of the traffic flow, usually at slower speed or in a different manner, to normal traffic flow on the road. |
| Organisational requirements | Organisational requirements refer to policy, procedures, and methodologies of the organisation. They include legislative and regulatory requirements that may apply across the organisation or to a specific TTM zone. Requirements are documented in the organisational health and safety plans, traffic management plans (TMPs), practice notes, contract work programmes, quality plans, policies, and procedural documents. |
| Road reserve | The area of land between the legal boundaries, usually fence line to fence line and including any safety run-off areas, which is dedicated to allowing the passage of road users. The road reserve also includes an air space of six metres directly above the road surface. |
| Static | TTM zone where traffic management equipment is installed and remains in place for a period of time. |
| Temporary Traffic Management | Control measures that are deployed on a site to mitigate risks to road workers and road users. The control measures are identified via an assessment of risks to road workers and road users, and application of the hierarchy of controls, land transport rules and traffic engineering principles (refer to page 79 NZGTTM). |
| TTM Controls | TTM controls refer to a way of eliminating or minimising risks to health and safety. |
| TTM Equipment | Refers to plant, static equipment, and intelligent transport systems on the road and in the office (refer to page 20 NZGTTM). |

| | |
|---|---|
| | TTM equipment refers to equipment specifically used for TTM, including TTM zone protection, and may include but is not limited to temporary signs, delineation devices, temporary road safety barriers, and rotating flashing beacons.<br>For more detail on geometric design, traffic engineering, and equipment refer to NZGTTM Part 3: The toolbox. |
| Trigger Points | Trigger points are where a person completing an activity is instructed to move to a safe location on the approach of a vehicle, and escape routes for all affected personnel. |
| TTM Zone | Refers to the section of road defined at each end by advance warning and end of works signs or between vehicles in a mobile operation, including the vehicles themselves. |

# 9. LEGISLATION, STANDARDS, GOOD PRACTICE, AND BEST PRACTICE GUIDELINES

**Legislation** accessed at legislation.govt.nz.

- Health and Safety at Work Act 2015
- Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
- Local Government Act 2002
- Land Transport Act 1998
- Land Transport Management Act 2003
- Railways Act 2005: Part 3 Rail corridor
- Land Transport (Road User) Rule 2004
- Land Transport Rule: Setting of Speed Limits 2022
- Land Transport Rule: Traffic Control Devices 2004
- Land Transport Rule: Work Time and Logbooks 2007
- Civil Defence Emergency Act
- Fire and Emergency Act 2013
- Policing Act 2018
- Utilities Access Act 2010.

**Codes of Practice**

- National Code of Practice for Utility Operators Access to transport corridors, available from National Code | NZUAG.

**Best practice and good practice guidelines**

- WorkSafe New Zealand good practice guidelines: Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs, and
- Waka Kotahi NZ Transport Agency Guide to Temporary Traffic Management, available from www.nzta.govt.nz.
- ISO 31000: Risk Management – Guidelines, available from www.iso.org.
- Waka Kotahi Traffic control devices manual, available from https://www.nzta.govt.nz/resources/traffic-control-devices-manual/. Refer to NZGTTM Part 1 Why we implement TTM
- Good Practice Guidelines: Excavation Safety, available from www.worksafe.govt.nz.

# APPENDIX A-SKILL STANDARD SUPPORT INFORMATION

The Level 4-unit standards 33252, 33253, and 33254, will gradually be developed into skill standards.

Domain - Temporary Traffic Management (nzqa.govt.nz).

| ID NUMBER | TITLE | CREDITS |
|---|---|---|
| **M01** | Monitor, manage, and maintain temporary traffic management controls for an activity | 10 |
| **MS01** | Supervise a mobile operation on the road reserve | 5 |
| **TTMKN** | Explain the requirements for the temporary traffic management (TTM) system | 15 |
| **33252** | Describe the principles and process for managing risk for an activity requiring temporary traffic management | 5 |
| **33253** | Complete a risk assessment for an activity requiring temporary traffic management | 10 |
| **33254** | Develop a traffic management plan for an activity and consult with relevant stakeholders | 20 |

Additional standards 26786 *Describe quality assurance requirements, and monitor and record quality assurance on an infrastructure worksite* (Level 4) (Credits 10 ) and xxxxx *Lead a team to achieve and objective* can be delivered in a TTM context.

## TTMKN – EXPLAIN THE REQUIREMENTS FOR TEMPORARY TRAFFIC MANAGEMENT SYSTEM AND CONTROLS

TTM Knowledge involves learning the ins and outs of traffic management. It focuses on understanding how different safety tools, also known as 'controls', work together to keep everyone safe. While this skill standard does not involve 'hands on' work or managing people, it's all about ensuring the deep understanding of the controls and how they are used. This solid understanding of controls helps make traffic management work smoother and safer.

**Target ākonga**

This Level 4 skill standard, along with competencies in risk assessment is the entry point to the TTM specialisations, for example, TTM Design, TTM Corridor Management, TTM Assurance. It will also support skill standards for TTM Mobile Supervision and TTM Monitoring.

**Practical assessment**

While this is a knowledge skill standard, a recommendation would be an assessment tool that gave learners the opportunity to demonstrate their knowledge using a practical task.

**Workplace evidence**

Evidence for this skill standard will be based on the New Zealand Guide to Temporary Traffic Management and the WorkSafe New Zealand good practice guidelines Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs.

There is also information available on the websites identified on page 11 of this document.

## ADDITIONAL INDICATIVE CONTENT

**Requirements when altering the normal operating conditions of the road TTM system Part 2 NZGTTM.**

- The TTM Framework - NZGTTM P.20). The core elements for a successful TTM system:
  - people (leadership, training, R&R),
  - processes (operational practice, good practice, engineering principles associated to TTM (e.g. basis of dimensions, sign configuration, etc.),
  - equipment design, construction, specifications, and standards. Examples could be size shape and weight of cone, how cones are put together, and installed to create a system of controls.
  - contracts (contract specifications, roles & responsibilities).

Creation of a safe work area to facilitate construction, maintenance and other activities which occur on or near a road. Traffic Management Plan (TMP) and breaking down the control selected to manage risk, how a 'closure' could be designed and/or delivered to affect a physical control on the road. Use of signs, delineation and other devices/equipment combined to become an engineered system of control.

- Legislation requirements, summary in NZGTTM pages 7-13. Acts, council by laws, regulations eg land transport rules, 3 Cs, consult, cooperate, and coordinate.
- Operational roles and responsibilities and the Health and Safety at Work Act 2015. TTM responsibilities model p. 24 NZGTTM and using a responsible, accountable, consulted, and informed matrix (RACI). Organisational responsibilities, TTM planning process(es), TTM implementation, maintenance, and uplift, quality assurance, emergency response.

**TTM operational practice and engineering principles:**

- Engineering principles relevant to TTM used in traffic theory concepts.
- The function, impact, installation, operation, maintenance, and uplift of TTM controls.
- Operational practices relevant to TTM.
- Regulatory, contractual, organisational, processes, TTM documentation and reporting throughout the process (work scoping through delivery and completion).

Completing on-site records including organisational procedures, role, and level of responsibility. Examples are rail permits, work access permits, sign on sheets, deep excavation documentation, BeforeUDig, hot work permits, risk assessment, TMP, reporting procedures for emergency response to an incident or accident, who to report to, who is responsible, organisational procedures. Capturing the operational decisions and activities as a critical record for accident an injury, near miss, (refer to pp. 38, 39, 44, 48, 50 NZGTTM). Common geometric dimensions NZGTTM Table 1, p. 69.

## MS01 – SUPERVISE A MOBILE OPERATION ON THE ROAD RESERVE

A framework for operational practice will be developed by the TTM industry steering group with expectations it will cover mobile operations (refer to page 39 NZGTTM).

A mobile operation is an activity, or work carried out within the road reserve, and where the needs of the activity vary from normal traffic conditions.

TTM mobile operations are also used to install and uplift direction and protection devices within the road reserve.

**Target ākonga**

This is a skill standard for individuals who supervise mobile TTM operations. They manage the risk and supervise the deployment of personnel and equipment to deliver safe mobile worksites.

It is for individuals in charge of a mobile operation, or working solo doing mobile activities such as:

- type A roadmarking
- pavement testing
- mowing
- weed spraying
- shoulder grading
- pavement sweeping, litter, and debris removal
- cyclic Maintenance Driver (Solo)
- grader / Sweeper Driver (Solo).

**Practical Assessment**

It is expected assessment will be carried out for a mobile operation that is not the setting up of a static site. This requires additional training that is outside the scope of this standard.

**Workplace Evidence**

Examples of workplace evidence that could be used for this skill standard are the risk assessment, TMP, and organisational requirements.

## ADDITIONAL INDICATIVE CONTENT

**Pre-site planning:**

- Analysis and adjustment of TMPs and risk assessments for mobile operations.

Reading, following, and checking the TMP before pulling out onto the road reserve. Review and adjustment of the risk assessment, vehicles, signage, positioning of vehicle, works, plant, and equipment.

- Hierarchy of controls, common hazards, TTM controls, management onsite and ensuring a safe mobile operation.
- Pre-site briefings and roles and responsibilities.

Role of the mobile supervisor, authorities, disestablishing site, coordinating shared responsibility for checking safe reopening of the road, assembly points.

**Mobile operations:**

- On-site safety briefings, consulting and communicating with the mobile operations personnel.

TMP and on-site risk assessment updates. Communicating and co-ordinating site mobile operations, moving on to the carriageway, team supervision, maintaining standards and taking corrective action,

supervising safe positioning of vehicles, responding to common issues for mobile operations. Sun strike, glare, wet or slippery roads, operating near or on corners and the brow of a hill impatient road users, dangerous overtaking, visibility, road constraints, lack of parking shoulder for advanced warning vehicles, dealing with situations that can cause harm.

- Carriageway, and footpaths drivable before leaving, and safe for public and road users, exiting carriageway safely and in a safe order, rejoining traffic, electronic and manual signage vs beacons, remove and decommission signs, return to normal speed limit.
- Follow up procedures, post-operational recording and reporting documentation.

Site records (trends, changing on site conditions, analytics, risk frequency, road user behaviour) and reviewing the operation for lessons learned and actions to take.

## MO1 – MONITOR , MANAGE, AND MAINTAIN TEMPORARY TRAFFIC MANAGEMENT CONTROLS FOR AN ACTIVITY

This skill standard assumes the handover to the TTM Monitor by the site supervisor, the TMP, and the risk assessment meet industry standards.

This is a skill standard for individuals who maintain a pre-stablished site. It is intended for low risk sites and includes elements of risk verification, monitoring and quality assurance and changing site conditions for the activity and the environment.

This standard refers to the ongoing identification of changing site conditions and updating of onsite records by the person with responsibility for monitoring the site. There will be standards developed that include inspection and audit skills which is out of the scope of this skill standard.

Depending on the risk environment, examples could include:

- shoulder closures
- trucks access to building sites
- low risk lane closure.

This skill standard requires ākonga to recognise hazards in the immediate environment or task. Frontline workers should be trained to identify and report potentially unsafe conditions or activities. They should be able to explain how each risk can cause harm, showing an understanding of industry terminology including consequences and likelihood.

**Target ākonga**

This is an entry point skill standard intended for individuals assisting with installing, operating, maintaining, or uplifting TTM. It's designed for those who contribute to a team's performance but does not cover supervision of the operation.

**Practical Assessment**

It is expected ākonga will safely demonstrate practical TTM tasks that are required in their day- to-day work (for example install and uplift signs, install and uplift cones around a working space and in the centre of 2 lanes, participating in alternating flow operation, under supervision). They will need to complete these

tasks working around or on a work vehicle. It is recommended the assessment will also include discussion on tasks completed when undertaking their work.

**Workplace Evidence**

Examples of workplace evidence that could be used for this skill standard are the risk assessment, TMP, and organisational requirements.

## ADDITIONAL INDICATIVE CONTENT

**Site briefings and inductions:**

- Verification of the risk assessment and new risk.

For more information on briefings please refer to WorkSafe good practice guidelines: Keeping healthy and safe while working on the road or roadside. Guidance for PCBUs section on Inductions, 29.0.

- Site and situational awareness, risk identification, actioning responses to risk onsite.

Communication methods and skills to relay information to keep people safe. This includes using active listening skills, operation of Radio Transmission (RT) including recharging. Communicating with other workers and the supervisor. Relaying information during static operations to keep people safe, using active listening skills. Participate in the toolbox meeting.

- Checking TMP is still fit for purpose for the activity and the environment.

Common onsite risks prevalent in the TTM industry and how they cause harm. This includes consequences and likelihood (refer to Plan, Do, Act, Check, Cycle page 28 NZGTTM). Common TTM language and terms, exclusion zones that must be clear of personnel, vehicles, and equipment. Other exclusion zones, exclusion zones during set-up and uplift of TTM equipment (directly in front of the work vehicle, behind and on the back of the work vehicle if there is no shadow vehicle in place, and, unprotected in the live lane.

**Monitor the TTM controls:**

- Monitoring the process for identifying changing site conditions.
- Phasing the work, regular checks of the site by the TTM monitor.
- Organisational requirements for the escalation of issues or changing site conditions to a supervisor.
- Emergency response procedures.

Safe practices when assisting with temporary traffic management within the road reserve. This includes safely installing, operating, maintaining, and uplifting TTM equipment in the live lane (refer to Part 3 Toolbox Page 74 NZGTTM). Performing tasks safely following organisational procedures, raising issues, and following escalation procedures. Components of advanced warning, direction and protection, and end of works requirements under TTM. Components of a worksite, who is in charge at a worksite (including emergency response), working on a TTM vehicle. Managing risk when working with TTM equipment (refer to Part 3 Toolbox Page 74 NZGTTM). Where to install equipment in relation to a work vehicle. Being a spotter for a TTM activity, cone threshold, taper, cones alongside the working space.

**Manage TTM controls:**

- Contingency planning.

Safe practices around approaching traffic and vehicle movements and vulnerable road users. This includes vehicle movements at a worksite within the road reserve using safe practices. Stop go, a paddle, a road closure, explaining the control measures adequately. Stopping traffic, using stop go paddles or other devices such portable traffic signals. Vehicles, TTM equipment, and communication equipment checks including compliance with manufacturer's requirements and relevant legislation.

**Maintain on-site records.**

- Completing paperwork.
- Reading a TMP.