



WELLINGTON, NEW ZEALAND

PURSUANT to Section 152 of the Land Transport Act 1998

I, **Paul Swain**, Minister of Transport,

HEREBY make the following ordinary rule:

Land Transport Rule: Setting of Speed Limits 2003

SIGNED AT Wellington

This

25th

day of

February

2003

Paul Swain

Minister of Transport

Land Transport Rule Setting of Speed Limits 2003

Rule 54001

ISSN 1173-1559

ISBN 0-478-20637-2

Published by
Land Transport Safety Authority of New Zealand
PO Box 2840, Wellington, New Zealand

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Wickliffe Limited
PO Box 932, Dunedin, New Zealand

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Land Transport Rule
Setting of Speed Limits 2003

Rule 54001

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Objective of the rule

In 1995, the Government decided that a land transport rule should be made for the setting of speed limits. The rule was intended to address deficiencies in the existing system that resulted from the complex mix of procedures and structures for setting speed limits. These led to the situation where the responsibility for, and ownership of, speed limits was divided between organisations at both central and local government level.

Land Transport Rule: Setting of Speed Limits 2003 establishes procedures whereby road controlling authorities may set enforceable speed limits on roads within their jurisdictions. The purpose of the procedures is to ensure that the risk to public safety is minimised and that the freedom of road users to travel on New Zealand roads at speeds that are reasonable and appropriate is protected through checks and balances on the actions of road controlling authorities. This is achieved through the Director of Land Transport Safety setting standards and auditing and monitoring the application of the rule by road controlling authorities. The power to set a speed limit is limited to road controlling authorities that have power to make bylaws concerning the use of roads under the *Local Government Act 2002* (principally, territorial local authorities and Transit New Zealand); or power to make bylaws under specific legislation (such as some airport authorities).

The objective of the rule is to contribute to a safe and efficient road network by:

- establishing speed limits of 50 km/h in urban traffic areas and 100 km/h on rural roads and motorways;
- authorising road controlling authorities to designate urban traffic areas, to set speed limits other than 50 km/h on urban roads and less than 100 km/h on rural roads, and to set temporary speed limits associated with work on or near the road and for special events; and

- promoting national uniformity in speed limits by requiring road controlling authorities to apply a consistent method to translate national speed limits policy into a safe and appropriate speed limit for any given road.

Prior to consultation on the rule, an industry working group was established to review speed limits policy and the method specified to calculate the appropriate speed limit for a given road. The working group's recommendations were published in February 1995 as *RTS 17: Guidelines for Setting Speed Limits*. The guidelines have been used by road controlling authorities and the LTSA since then to set speed limits and are incorporated into the rule as *Speed Limits New Zealand*. Under the rule, road controlling authorities must apply this method to calculate speed limits either by following the instructions in *Speed Limits New Zealand* or by entering the data into a custom-designed computer program.

It is important to note that the rule changes the procedure under which a speed limit is created, but it does not change the policy and method that dictate the choice of speed limit itself.

Extent of consultation

The consultation process for the proposed rule began formally in January 1997 when the LTSA released the preliminary (red) draft of the rule. The draft rule and disks containing a copy of *Speed Limits New Zealand* in the form of a computer program were sent to 135 organisations and individuals who had either registered an interest in the rule or who were considered likely to be interested in the rule. They included the country's road controlling authorities (mainly, territorial authorities), the Police, Transit New Zealand, Transfund New Zealand, traffic engineering and transportation organisations, and the New Zealand Automobile Association. The LTSA received 34 submissions on the red draft.

The ensuing yellow draft of the rule, which included modifications made as a result of comments received on the red draft, was released for public consultation in December 1997. The availability of the yellow draft rule was publicised in metropolitan and regional newspapers, the *New Zealand Gazette* and *Te Maori News*. The draft rule was sent also to overseas libraries and transport organisations. Forty-seven submissions were received on the yellow draft. Further refinement of the rule followed as a result of this consultation.

Finalisation of the rule was delayed by the need for the LTSA, the Ministry of Transport and the Police to resolve a number of policy issues. Progress on the rule was also affected by the passage of the *Land Transport Act 1998*, which changed the legislative provisions concerning the matters a land transport rule could cover in respect of speed limits.

In March 2002, the LTSA sent a green draft of the rule to all road controlling authorities and groups and individuals who had made submissions on the yellow draft, for their final comments. The purpose of the green draft was to summarise the development of the rule to date, to discuss major issues the proposed rule sought to address and to set out areas where the LTSA sought further information and reaction to help in finalising the rule. *Speed Limits New Zealand* was included as a schedule to the draft rule. Forty-six groups and individuals responded to the green draft.

As a result of these responses, minor changes were made in redrafting the proposed rule before it was submitted to Cabinet, and to the Minister of Transport for signature.

Part 1 Rule requirements

Section 1 Application

1.1 Title of the rule

This rule is *Land Transport Rule: Setting of Speed Limits 2003*.

1.2 Scope of the rule

This rule:

- (a) applies to all roads under the jurisdiction of a road controlling authority that is empowered to set a speed limit in accordance with *sections 5, 6 and 7*; and
- (b) establishes a general speed limit of 50 km/h in designated urban traffic areas and a maximum speed limit of 100 km/h on rural roads and motorways; and
- (c) requires road controlling authorities to designate urban traffic areas and validate speed limits made under another enactment before this rule came into force by making a bylaw in accordance with *section 10*; and
- (d) authorises road controlling authorities to designate urban traffic areas; and
- (e) authorises road controlling authorities to set speed limits other than 50 km/h in urban traffic areas and less than 100 km/h in rural areas in accordance with this rule; and

- (f) requires road controlling authorities to establish and maintain a register of speed limits in accordance with *section 7*; and
- (g) authorises the Director to audit road controlling authorities for compliance with this rule.

1.3 Date when rule comes into force

This rule comes into force on a date to be notified in the *Gazette* by the Minister in accordance with *section 160(3)* of the *Land Transport Act 1998*.

Section 2 General requirements

2.1 Categories of speed limit

This rule provides for the following categories of speed limit:

- (a) an urban speed limit or rural speed limit;
- (b) a permanent speed limit;
- (c) a holiday speed limit;
- (d) a temporary speed limit;
- (e) a variable speed limit;
- (f) a minimum speed limit.

2.2 Range of speed limits

A speed limit that is set in accordance with this rule must be one of the following:

- (a) 20 km/h;
- (b) 30 km/h;
- (c) 40 km/h;
- (d) 50 km/h;
- (e) 60 km/h;
- (f) 70 km/h;

- (g) 80 km/h;
- (h) 100 km/h.

2.3 Urban and rural speed limits

- 2.3(1) The urban speed limit is 50 km/h.
- 2.3(2) The rural speed limit is 100 km/h.
- 2.3(3) Except when a different speed limit is set under this rule or by or under any other enactment:
 - (a) the urban speed limit applies to roads in an area that has been designated as an urban traffic area, in accordance with *section 3* or *section 10*;
 - (b) the rural speed limit applies to motorways and roads in rural areas, (which are generally all areas that are not urban traffic areas).

2.4 Road lengths for speed limits

- 2.4(1) A road for which a speed limit is set under this rule must:
 - (a) be of a reasonable and safe length; and
 - (b) if the speed limit is 50 km/h or more, be equal to or exceed the minimum length in *Table 2.1*, unless this requirement is impractical for that road.

Table 2.1 Road lengths for speed limits

Speed limit (km/h)	Minimum length (m)
50	500
60	500
70	500
80	800
100	2000

2.4(2) In addition to applying to the road for which it has been calculated, a speed limit may apply to short lengths of road adjoining that road, even though those short lengths of road would not comply with *Table 2.1*.

2.4(3) The point at which a speed limit changes must be at, or close to, a point of significant change in the roadside development or the road environment.

2.5 Traffic control devices

Before a speed limit comes into force on a road, a road controlling authority must ensure that all traffic control devices installed on the road are safe, effective and appropriate for the speed limit and comply with requirements for traffic control devices in the *Traffic Regulations 1976* or a land transport rule that replaces the relevant provisions of the *Traffic Regulations 1976*.

2.6 **Role of road controlling authorities in reviewing and setting speed limits**

A road controlling authority, for roads under its jurisdiction:

- (a) must consider the safe and appropriate speed limit for a road with regard to the function, nature and use of the road, its environment, land use patterns and whether the road is in an urban traffic area or a rural area;
- (b) must review speed limits in accordance with this rule;
- (c) must set speed limits in accordance with this rule;
- (d) may set speed limits for designated locations, as specified in *section 4*.

2.7 **Role of Director in changing and approving speed limits**

The Director may:

- (a) change permanent, holiday, variable or minimum speed limits;
- (b) approve speed limits of the following categories, in accordance with *section 6*:
 - (i) variable speed limits; and
 - (ii) minimum speed limits for specified lanes;
- (c) direct that a road controlling authority review or change a speed limit;

- (d) carry out any function necessary to ensure that road controlling authorities comply with this rule when reviewing and setting speed limits.

2.8 When a speed limit is set, approved or changed and when it comes into force

- 2.8(1) Except for a temporary speed limit, a speed limit is set by a road controlling authority when it makes a bylaw setting a speed limit or designating an urban traffic area.
- 2.8(2) Except for a temporary speed limit, a speed limit that is set by a road controlling authority comes into force on the date specified in the bylaw that sets the speed limit.
- 2.8(3) A speed limit is approved or changed by the Director when the Director declares the speed limit by notice in the *Gazette*.
- 2.8(4) A speed limit that is approved or changed by the Director comes into force on the date specified in the *Gazette* notice that approves or changes the speed limit.

Section 3 Review and setting of permanent and holiday speed limits and review and designating of urban traffic areas

3.1 Calculation of speed limits

A road controlling authority must apply *Speed Limits New Zealand* to determine the calculated speed limit when reviewing or setting a permanent or holiday speed limit and when reviewing or designating an urban traffic area, unless the relevant road is in a location to which *section 4*

applies, in which case a road controlling authority may apply *Speed Limits New Zealand*.

3.2 Procedures for reviewing and proposing to set speed limits

Permanent and holiday speed limits

3.2(1) A road controlling authority must review a permanent or holiday speed limit, or propose to set a new speed limit, by determining:

- (a) the calculated speed limit for the relevant road, in accordance with *3.1*; or
- (b) for a road in a designated location, the safe and appropriate speed limit, in accordance with *section 4*.

3.2(2) Unless *section 4* applies, and subject to *3.2(5)*, if the calculated speed limit is the same as the existing speed limit, the road controlling authority must retain the existing speed limit.

3.2(3) Unless *section 4* applies, and subject to *3.2(5)*, if the calculated speed limit differs from the existing speed limit, the road controlling authority must propose to set the calculated speed limit in accordance with *section 7*.

Urban traffic areas

3.2(4) A road controlling authority must review an urban traffic area or propose to designate a new urban traffic area by:

- (a) defining the boundaries of the area to be reviewed or designated as a new urban traffic area; and

- (b) determining the calculated speed limit for existing roads within the defined area in accordance with *3.1*; and
- (c) unless *section 4* applies, and subject to *3.2(5)*, proposing to set the calculated speed limit for existing roads within the defined area in accordance with *section 7*.

Speed limits that differ from the calculated speed limit

3.2(5)

A road controlling authority may propose to set a speed limit that differs from the calculated speed limit, but may set the proposed speed limit, in accordance with *section 7*, only if:

- (a) a speed limit different from the calculated speed limit is the safe and appropriate speed limit for a road with regard to the function, nature and use of the road, its environment, land use patterns and whether the road is in an urban traffic area or a rural area; or
- (b) the proposed speed limit is less than 50 km/h and *3.2(6)* applies.

Speed limits less than 50 km/h

3.2(6)

A road controlling authority may propose to set a speed limit of less than 50 km/h but, unless *section 4* applies, may only set the proposed speed limit if:

- (a) the calculated speed limit for the relevant road is 50 km/h; and
- (b) the proposed speed limit would be likely to increase the safety of pedestrians, cyclists or other road users; and

- (c) safe and appropriate traffic engineering measures are installed so that the measured mean operating speed is within 5 km/h of the proposed speed limit.

Obligation to review speed limits

3.2(7) A road controlling authority must review a speed limit when:

- (a) there is a significant change in the nature, scale or intensity of land use adjacent to a road; or
- (b) there is a significant change in a road, its environment or its use; or
- (c) the road controlling authority receives a written request to do so from the Director.

Discretion to review speed limits

3.2(8) A road controlling authority may review a speed limit if:

- (a) it decides to do so; or
- (b) it receives a written request to do so from a person, organisation or road user group affected by that speed limit, including:
 - (i) a road controlling authority that is responsible for roads that join, or are near, roads under the jurisdiction of the road controlling authority to which the request is directed;
 - (ii) a territorial authority that is affected by the existing speed limit;
 - (iii) the Commissioner.

Transitional review requirements

- 3.2(9) Before reviewing and changing a speed limit saved under *section 4* of the *Transport Amendment Act 1997*, a road controlling authority must comply with *section 10*.
- 3.2(10) A road controlling authority must, before 1 July 2005 or such later date on which *section 52A* of the *Transport Act 1962* is repealed, in accordance with this section, review all speed limits that are limited speed zones and replace them with one of the speed limits in *2.2*.

Section 4 Permanent speed limits for roads in designated locations

4.1 Setting a permanent speed limit for a road in a designated location

- 4.1(1) A road controlling authority must comply with this section when setting a permanent speed limit for a road under its jurisdiction, in a designated location.
- 4.1(2) A designated location is any of the following:
- (a) a car park;
 - (b) an educational or scientific institution;
 - (c) an industrial facility;
 - (d) a health facility;
 - (e) a residential facility;
 - (f) a camping ground;

- (g) a sports facility or other recreational area;
- (h) a botanical garden;
- (i) a port or wharf area;
- (j) an airport;
- (k) a beach;
- (l) a cemetery;
- (m) a facility operated by the New Zealand Defence Force;
- (n) any other location approved by the Director.

4.1(3) A speed limit that is set in accordance with this section must be:

- (a) safe and appropriate for:
 - (i) the numbers and types of road users, including cyclists and pedestrians, that use the road; and
 - (ii) the level of roadside development; and
 - (iii) the condition or class of the road; and
 - (iv) the use to which the road is put; and
 - (v) any other matter relevant to public safety; and
- (b) one of the speed limits in *2.2*.

4.1(4) A road controlling authority must, before setting a speed limit for a road in a designated location, consult with the Director, the Commissioner and other persons who the

road controlling authority considers to be affected by the proposed speed limit and give them a reasonable time to make submissions on the proposal.

- 4.1(5) A road controlling authority must set a speed limit for a road in a designated location by complying with the decision-making procedures and notification procedures, and recording the speed limit in a register of speed limits, in accordance with 7.2 and 7.3 respectively.
- 4.1(6) Before reviewing and changing a speed limit saved under *section 4* of the *Transport Amendment Act 1997* for a road in a designated location, a road controlling authority must comply with *section 10*.

Section 5 **Temporary speed limits**

5.1 **Setting a temporary speed limit**

- 5.1(1) A road controlling authority that is empowered by an enactment to make bylaws:
- (a) may set a temporary speed limit; and
 - (b) must, when setting a temporary speed limit, do so in accordance with this section.
- 5.1(2) A road controlling authority must consider the need to set a temporary speed limit and may set a temporary speed limit if it considers that:
- (a) there is a risk of danger to the public or to a person working on or near a road, or a risk of damage to a road; or
 - (b) it is necessary for the safety of a special event.

- 5.1(3) A temporary speed limit is set by installing signs in accordance with a traffic management plan approved in writing by the road controlling authority.
- 5.1(4) A temporary speed limit:
- (a) applies from the point on the road at which a temporary speed limit sign is installed to the point on the road at which a sign indicates that a different speed limit applies; and
 - (b) applies from the time a temporary speed limit sign is installed; and
 - (c) ceases to apply when the temporary speed limit signs are removed.
- 5.1(5) A person who is authorised to install a temporary speed limit sign in accordance with the traffic management plan in *5.1(3)* may remove a temporary speed limit sign.
- 5.1(6) A person in *5.1(5)* must remove the temporary speed limit signs and equipment used to install or support the signs immediately there is no longer any need for the temporary speed limit.
- 5.1(7) The Director or the Commissioner may, at any time, require the removal of a temporary speed limit and the removal of accompanying signs and equipment used to install or support the signs, if satisfied that:
- (a) the reason for the temporary speed limit no longer applies; or
 - (b) the temporary speed limit is not appropriate in the circumstances for which the speed limit was set.

5.2 Setting a temporary speed limit when there is a risk of danger

5.2(1) A temporary speed limit that is set in accordance with *5.1(2)(a)* must be safe and appropriate for:

- (a) the numbers and types of road users, including cyclists and pedestrians, that use the road; and
- (b) the nature of the construction site or work programme; and
- (c) the nature and level of risk to persons working on or near the road; and
- (d) the nature and level of risk to the public.

5.2(2) A temporary speed limit that is set in accordance with *5.1(2)(a)* must be:

- (a) one of the speed limits in *2.2*; and
- (b) at least 20 km/h less than the permanent speed limit or the prevailing holiday speed limit.

5.3 Setting a temporary speed limit for a special event

5.3(1) A temporary speed limit that is set in accordance with *5.1(2)(b)* for a special event must be safe and appropriate for:

- (a) the numbers and types of road users, including cyclists and pedestrians, that use the road; and
- (b) the nature of the special event.

- 5.3(2) A temporary speed limit that is set in accordance with 5.1(2)(b) for a special event must be:
- (a) one of the speed limits in 2.2, and
 - (b) at least 20 km/h less than the permanent speed limit or the prevailing holiday speed limit.
- 5.3(3) A temporary speed limit that is set in accordance with 5.1(2)(b) for a special event may apply for:
- (a) the period of the special event; or
 - (b) specified times during the period of the special event.

Section 6 Variable and minimum speed limits

6.1 Variable speed limits

- 6.1(1) The Director may, by notice in the *Gazette* and subject to any specified conditions that the Director considers appropriate, approve a variable speed limit.
- 6.1(2) A variable speed limit relates to:
- (a) particular situations or environments for which the safe speed limit may need to vary for different numbers and types of road users; or
 - (b) a road for which the safe speed limit may need to vary in accordance with environmental conditions.
- 6.1(3) A road controlling authority that is empowered by an enactment to make bylaws:

- (a) may set a variable speed limit; and
- (b) must, when setting a variable speed limit, do so in accordance with *section 7* and with any conditions specified by the Director by notice in the *Gazette*.

6.1(4) The Director may, by notice in the *Gazette*, remove a variable speed limit.

6.2 Minimum speed limits

6.2(1) The Director may, by notice in the *Gazette* and subject to any specified conditions that the Director considers appropriate, approve a minimum speed limit for a specified lane on a road, if that speed limit is safe and appropriate for:

- (a) the numbers and types of road users, including cyclists and pedestrians, that use the road; and
- (b) the number of lanes on the road; and
- (c) the condition or class of the road; and
- (d) the use to which the road is put; and
- (e) any other matter relevant to public safety.

6.2(2) A road controlling authority that is empowered by an enactment to make bylaws:

- (a) may set a minimum speed limit; and
- (b) must, when setting a minimum speed limit, do so in accordance with *section 7* and with any conditions specified by the Director by notice in the *Gazette*.

- 6.2(3) The Director may, by notice in the *Gazette*, remove a minimum speed limit.

Section 7 Consultation, decision-making procedures, registration and recording of speed limits

7.1 Consultation

- 7.1(1) Before setting a speed limit, or designating or changing an urban traffic area, a road controlling authority must consult with persons that may be affected by the proposed speed limit, in accordance with this section, unless *section 4*, *section 5* or *section 10* applies.
- 7.1(2) The persons that must be consulted in accordance with *7.1(1)* are:
- (a) road controlling authorities that are responsible for roads that join, or are near, the road on which the speed limit is to be set or changed; and
 - (b) a territorial authority that is affected by the existing or proposed speed limit; and
 - (c) any local community that the road controlling authority considers to be affected by the proposed speed limit; and
 - (d) the Commissioner; and
 - (e) the Chief Executive Officer of the New Zealand Automobile Association Incorporated; and
 - (f) the Chief Executive Officer of the Road Transport Forum New Zealand; and

- (g) any other organisation or road user group that the road controlling authority considers to be affected by the proposed speed limit; and
- (h) the Director.

7.1(3) A road controlling authority must consult by writing to the persons in 7.1(2) advising them of the proposed speed limit and giving them a reasonable time, which must be specified in the letter, to make submissions on the proposal.

Additional information to be provided for particular speed limits

7.1(4) If a proposed speed limit is a holiday speed limit, the road controlling authority must write to those persons in 7.1(2) specifying the periods during which the proposed speed limit is to apply.

7.1(5) If a proposed speed limit is to designate a new urban traffic area or change an existing urban traffic area, the road controlling authority must write to those persons in 7.1(2) specifying relevant details including:

- (a) a description of the proposed area; and
- (b) details of roads with a speed limit other than 50 km/h within a proposed new or extended urban traffic area; and
- (c) details of roads with a speed limit other than 100 km/h within an area that the road controlling authority proposes to change from an urban traffic area to a rural area.

7.1(6) If a proposed speed limit is 50 km/h or more, and the proposed speed limit is not the calculated speed limit, the road controlling authority must provide the Director with

written evidence that the proposed speed limit complies with *3.2(5)*, unless *section 4* applies.

- 7.1(7) A road controlling authority must provide the Director with any information requested by the Director that is relevant to a proposed speed limit of less than 50 km/h.
- 7.1(8) When a road controlling authority proposes to set a speed limit under *7.2(1)* by making a bylaw in accordance with any enactment, the consultation required by *7.1* may be carried out at the same time as, or as part of, any consultative procedure in that enactment.

7.2 Decision-making procedures and notification of set speed limits

- 7.2(1) A road controlling authority that is empowered by an enactment to make bylaws must set a speed limit under this rule by making a bylaw in accordance with that enactment, unless *section 5* applies.
- 7.2(2) When deciding to set a speed limit, a road controlling authority must take account of submissions received during consultation on the proposed speed limit.
- 7.2(3) Following review and consultation, if a road controlling authority decides the existing speed limit is not the safe and appropriate speed limit for a particular road, it must set a new speed limit.
- 7.2(4) Except for a temporary speed limit, a road controlling authority must, at least 14 days before a speed limit comes into force, notify the Director and the Commissioner that a speed limit has been set and provide them, in writing, with the following information:
- (a) the locality in which the speed limit applies; and

- (b) the names of the roads or a description of the area to which the speed limit applies; and
- (c) the existing speed limit and the new speed limit; and
- (d) the date on which the new speed limit comes into force; and
- (e) any other details requested by the Director or the Commissioner that are relevant to the speed limit.

7.3 Registration of all speed limits except temporary speed limits

7.3(1) A road controlling authority must establish and maintain a register of speed limits that records all speed limits, except temporary speed limits, for the roads under its jurisdiction, including:

- (a) speed limits set under this rule; and
- (b) urban traffic areas designated under this rule; and
- (c) speed limits saved under *section 4* of the *Transport Amendment Act 1997* that have been validated under this rule in accordance with *section 10*.

7.3(2) Information recorded in the register of speed limits must include:

- (a) a full description of the roads or area to which the speed limit applies, including references to details of maps or other documents as appropriate; and
- (b) the speed limit; and

- (c) for a variable speed limit, the conditions under which the speed limit changes; and
- (d) the date on which the speed limit came into force; and
- (e) a record of the decision-making procedures of the road controlling authority carried out in accordance with 7.2(1); and
- (f) for an urban traffic area in 10.1(1) or a saved speed limit in 10.1(2) that has been designated or validated in accordance with 10.1(3), a reference to the previous enactment under which the speed limit was set.

7.3(3) A road controlling authority must make the register of speed limits available for inspection by members of the public, at reasonable times, on request.

7.3(4) Details of a speed limit that has been superseded by a new speed limit under this rule must be retained on the register of speed limits for at least seven years from the date on which the new speed limit came into force.

7.4 **Records relating to setting of speed limits**

When a road controlling authority sets a speed limit, other than a temporary speed limit, it must retain, for at least seven years from the date on which the new speed limit comes into force, data, correspondence, reports and other records relating to the review, consultation, decision-making procedures and setting of the speed limit, including records relating to the use of *Speed Limits New Zealand*.

Section 8 Signs and road markings

8.1 Requirement to provide signs

- 8.1(1) Except as provided under *8.1(3)*, a road controlling authority must install a speed limit sign on the left-hand side of a road under its jurisdiction at or near, and not more than 20 m from, the point on the road where a speed limit changes.
- 8.1(2) A road controlling authority must, in addition to *8.1(1)*, install:
- (a) a speed limit sign on the right-hand side of the road or on the central median where appropriate, at or near, and no more than 20 m from, the point on the road where a speed limit changes, if the estimated two-way annual average daily traffic at that point exceeds 500 vehicles; and
 - (b) additional speed limit signs where they will easily be seen by road users and to which they may readily react, with at least one sign being installed within each maximum length of road applying to the speed limits in:
 - (i) *Table 8.1* for permanent and holiday speed limits; or
 - (ii) *Table 8.2* for temporary speed limits.
- 8.1(3) A speed limit sign may be installed otherwise than as required by *8.1(1)* if authorised under this rule or other enactment, or when:
- (a) a road user would not easily see, or readily react to, a sign that is installed on the left-hand side of the road; or

- (b) the sign would be more effective if installed above a lane.

Table 8.1 Maximum length of road between repeater signs for permanent and holiday speed limits

Speed limit (km/h)	Maximum length of road between signs (km)
60	2.0
70	2.4
80	2.6

Table 8.2 Maximum length of road between repeater signs for temporary speed limits

Temporary speed limit (km/h)	Maximum length of road between signs (km)
20	0.7
30	1.0
40	1.4
50	1.7
60	2.0
70	2.4
80	2.6

8.2 Specifications for signs

The design, format, shape, colour and size of a speed limit sign must comply with requirements for signs in the *Traffic Regulations 1976* or a land transport rule that

replaces the relevant provisions of the *Traffic Regulations 1976*.

8.3 Specific requirements for permanent and holiday speed limit signs

- 8.3(1) For a new permanent speed limit or a holiday speed limit, the speed limit shown on the associated signs installed by the road controlling authority must not be visible to road users until the speed limit comes into force.
- 8.3(2) A road controlling authority must remove a sign for a holiday speed limit at the end of any period for which the holiday speed limit is in force.
- 8.3(3) A road controlling authority does not have to comply with *8.1(2)(a)* before 1 July 2005 or such later date on which *section 52A* of the *Transport Act 1962* is repealed.
- 8.3(4) A road controlling authority does not have to comply with *8.1(2)(b)(i)* for a 70-km/h speed limit before 1 July 2005 or such later date on which *section 52A* of the *Transport Act 1962* is repealed.

8.4 Specific requirements for signs for variable and minimum speed limits

- 8.4(1) A road controlling authority, when setting a variable or minimum speed limit approved by the Director, must install signs as specified by the Director.
- 8.4(2) For a new variable speed limit or minimum speed limit, the speed limit shown on the associated signs installed by the road controlling authority must not be visible to road users until the speed limit comes into force.

8.5 Road markings

A road controlling authority may, as specified in the *Traffic Regulations 1976*, or in a land transport rule that replaces the relevant provisions of the *Traffic Regulations 1976*, mark on the road surface alongside a speed limit sign the numerals shown on the speed limit sign.

Section 9 Responsibilities, functions and powers

9.1 Responsibilities of road controlling authorities

- 9.1(1) A road controlling authority must comply with this rule when setting a speed limit.
- 9.1(2) A road controlling authority must have audit processes to ensure quality control of its procedures for reviewing and setting speed limits.
- 9.1(3) A road controlling authority must comply with directions given by, and requirements of, the Director under *9.2(2)*, *9.2(3)*, *9.2(6)* or *9.2(7)*, and with requirements of the Commissioner under *9.3*.
- 9.1(4) A road controlling authority is liable for the expenses incurred by the Director under *9.2(4)*.

9.2 Functions and powers of the Director

- 9.2(1) The Director may approve variable and minimum speed limits and change permanent, holiday, variable and minimum speed limits.

- 9.2(2) The Director may audit road controlling authorities for compliance with this rule and may issue directions regarding matters to be addressed in the audit.
- 9.2(3) If the Director considers that a road controlling authority has not complied with this rule in reviewing or setting a speed limit, or that a speed limit set by a road controlling authority does not comply with this rule, the Director may direct the road controlling authority to:
- (a) review or change the speed limit;
 - (b) review or change, in accordance with this rule, the procedures used by the road controlling authority to set speed limits;
 - (c) carry out the instructions in 9.2(3)(a) and 9.2(3)(b) within a stated period.
- 9.2(4) If a road controlling authority does not comply with directions given under 9.2(3), the Director may exercise the appropriate responsibilities of a road controlling authority under this rule and change a speed limit, by notice in the *Gazette*.
- 9.2(5) The Director may, for the purpose of *section 4*, approve a location other than one specified in 4.1(2)(a) to (m).
- 9.2(6) The Director may, at any time, require the removal of a temporary speed limit and the removal of a speed limit sign and equipment used to install or support the sign under 5.1(7).
- 9.2(7) The Director may direct a road controlling authority to install, modify or remove a speed limit sign to comply with this rule.

9.3 Powers of the Commissioner

The Commissioner may, at any time, require the removal of a temporary speed limit and removal of a speed limit sign and equipment used to install or support the sign under *5.1(7)*.

Section 10 Transitional provisions for designating urban traffic areas and validating saved speed limits

10.1 Designating urban traffic areas and validating saved speed limits

- 10.1(1) A road controlling authority must designate an area in which roads are subject to a 50-km/h speed limit, saved under *section 4* of the *Transport Amendment Act 1997*, as an urban traffic area.
- 10.1(2) A road controlling authority must validate all speed limits saved under *section 4* of the *Transport Amendment Act 1997* other than:
- (a) 50-km/h speed limits on roads within a designated urban traffic area in *10.1(1)*; and
 - (b) 100-km/h speed limits on roads within a rural area.
- 10.1(3) A road controlling authority must designate an urban traffic area in *10.1(1)* or validate a saved speed limit in *10.1(2)* by:

- (a) defining the boundaries of, or describing the roads in, an urban traffic area which is subject to a 50-km/h speed limit, or describing the roads or area subject to any other saved speed limit; and
- (b) making a bylaw in accordance with 7.2.

10.1(4)

When notifying the Director and the Commissioner, in accordance with 7.2(4), of a bylaw to designate an urban traffic area in 10.1(1) or to validate a saved speed limit in 10.1(2), a road controlling authority must provide the Director with the following information:

- (a) whether the speed limit was set:
 - (i) under *section 52(1)(a)* of the *Transport Act 1962*, as inserted by *section 8(1)* of the *Transport Amendment Act 1989*, or
 - (ii) by the Minister by notice in the *Gazette*, or
 - (iii) by bylaw made by the road controlling authority; and
- (b) if the speed limit was set by notice in the *Gazette*, the date, issue number and page number of the relevant *Gazette*, and
- (c) if the speed limit was set by a bylaw made by the road controlling authority, a reference to the relevant bylaw.

10.1(5)

If a speed limit saved under *section 4* of the *Transport Amendment Act 1997* applies to roads under the jurisdiction of more than one road controlling authority, each road controlling authority must designate an urban traffic area in 10.1(1) or validate a saved speed limit in 10.1(2) for only those roads under its jurisdiction.

- 10.1(6) Before changing a speed limit saved under *section 4* of the *Transport Amendment Act 1997*, a road controlling authority must:
- (a) comply with the procedures in this section to designate an urban traffic area in *10.1(1)* or validate a saved speed limit in *10.1(2)*; or
 - (b) review the speed limit in accordance with this rule and comply with *10.1(6)(a)* at the same time as changing the speed limit.
- 10.1(7) A road controlling authority must designate urban traffic areas in *10.1(1)* and validate saved speed limits in *10.1(2)* before 1 July 2005 or such later date on which *section 52A* of the *Transport Act 1962* is repealed.
- 10.1(8) Urban traffic areas in *10.1(1)* and saved speed limits in *10.1(2)* that have been designated or validated in accordance with *10.1(3)* are considered to be set under this rule.
- 10.1(9) Before 1 July 2005 or such later date on which *section 52A* of the *Transport Act 1962* is repealed, a road controlling authority must record in the register of speed limits, in accordance with *7.3*, urban traffic areas in *10.1(1)*, and saved speed limits in *10.1(2)*, that have been designated or validated in accordance with *10.1(3)*, but that have not been changed under this rule.

Part 2 Definitions

Calculated speed limit	means the speed limit calculated for a particular road by following the procedures set out in <i>Speed Limits New Zealand</i> .
Commissioner	means the Commissioner of Police.
Director	means the Director of Land Transport Safety appointed under <i>section 186</i> of the <i>Land Transport Act 1998</i> .
Holiday speed limit	means a maximum speed limit set under this rule that is in force 24 hours a day for a specified period, or periods.
Limited speed zone	has the same meaning as in <i>regulation 2</i> of the <i>Traffic Regulations 1976</i> .
Mean operating speed	means the mean of motor vehicle speeds measured on a dry road during mid-week, non-congested traffic flows.
Minimum speed limit	means the minimum speed set under this rule, at which a vehicle may legally be operated in a specified lane of a road.
Minister	means the Minister of Transport.
Permanent speed limit	means a maximum speed limit set under this rule, that is in force except when a holiday, variable, minimum or temporary speed limit is in force.
Register of speed limits	means the register established and maintained under <i>7.3</i> .

- Road**
- (a) includes:
 - (i) a street; and
 - (ii) a motorway; and
 - (iii) a beach; and
 - (iv) a place to which the public have access, whether as of right or not; and
 - (v) all bridges, culverts, ferries and fords forming part of a road or street or motorway, or a place referred to in (iv); and
 - (vi) all sites at which vehicles may be weighed for the purposes of the *Land Transport Act 1998* or any other enactment; and
 - (b) includes a section of a road.

Road controlling authority

in relation to a road:

- (a) means the authority, body or person having control of the road; and
- (b) includes a person acting under and within the terms of a delegation or authorisation given by the controlling authority.

Rural area

means a road or a geographical area that is not an urban traffic area, to which the rural speed limit generally applies.

Rural speed limit

means a speed limit of 100 km/h.

(To) set a speed limit

means to establish or change a speed limit or to designate or change an urban traffic area under this rule or under an Act, regulation or bylaw before this rule came into force.

- Special event** means an event held over a short and defined period which would involve a significantly different use of a road to the extent that the permanent speed limit or the prevailing holiday speed limit would not be safe.
- Speed limit** means:
- (a) the maximum speed at which a vehicle may legally be operated on a particular road, but does not mean the maximum permitted operating speed for classes or types of vehicle specified in any Act, regulation or rule;
 - (b) for a minimum speed limit, the minimum speed at which a vehicle may legally be operated in a specified lane of a road;
 - (c) an urban, rural, permanent, holiday, temporary, variable or minimum speed limit.
- Speed Limits New Zealand** means the procedures for calculating speed limits set out in *Schedule 1*.
- Temporary speed limit** means a speed limit that is in force for a period of less than six months and is set under this rule.
- Territorial authority** has the same meaning as in *section 5(1)* of the *Local Government Act 2002*.
- Urban speed limit** means a speed limit of 50 km/h.
- Urban traffic area** means an area designated under this rule that consists of one or more specified roads or a specified geographical area, to which the urban speed limit generally applies.

**Variable speed
limit**

means one of several preset alternative speed limits that may be in force for a particular road depending on the presence of specified conditions at that time, and that is set under this rule.

Schedule 1

Speed Limits New Zealand

**Guidelines for setting speed limits and
procedures for calculating speed limits**

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1.0 Introduction

Land Transport Rule: Setting of Speed Limits 2003 specifies the legal procedure for establishing speed limits on public roads. The rule incorporates *Speed Limits New Zealand* as the procedures for calculating the speed limit, and the Land Transport Safety Authority (LTSA) has developed a computer program to assist with this. *Speed Limits New Zealand (SLNZ)* supersedes *RTS 17 Guidelines for Setting Speed Limits*.

SLNZ specifies the procedures for calculating a permanent or holiday speed limit, and outlines the policy and principles on which the procedures are based. In the event of a contradiction between Part 1 of the rule and *SLNZ*, the provisions of Part 1 of the rule apply.

Instructions for installing and operating the computer program are included with the program.

1.1 Speed limits policy

The objective of speed limits policy is to balance the interests of mobility and safety by ensuring speed limits are safe, appropriate and credible for the level of roadside development and the category of road for which they are set. They must also be nationally consistent.

Road users are more likely to comply with a speed limit if it is consistent with limits on other roads in the network with similar characteristics, and if limits in general reflect the factors that most influence speed choice. The level of roadside development and the function of a road are the primary determinants of the appropriate speed limit. Consistency is an important aspect of road users' perceptions of a reasonable speed limit and will influence their willingness to comply.

Although road geometry is also a factor in determining a speed limit, it is secondary to roadside development. In situations where the road geometry encourages road users

to travel at a higher speed than the speed limit determined by roadside development, engineering techniques should be used to lower vehicle speeds. When a road in a built-up area primarily serves through traffic, engineering techniques and access controls should be used to provide safety at the higher speeds that will prevail.

1.2 Speed limits calculation

Historically, public road speed limits in New Zealand have been 50 km/h, for roads in urban situations and 100 km/h, for roads in rural areas and motorways. The rule does not change this general principle.

The general principle represents a balance between consistency and safety but, in some cases, the choice between 50 or 100 km/h does not allow the appropriate speed limit to be set for a particular section of road. The rule allows speed limits of 20, 30, 40, 60, 70 or 80 km/h to be set on roads where traffic patterns or road or land use make a speed limit other than 50 or 100 km/h appropriate and safe.

The rule requires road controlling authorities to use *SLNZ* to calculate the speed limit for any public road to ensure consistent application of speed limits policy across the public road network.

SLNZ sets out the method for calculating the speed limit for a section of road from the following information:

- the existing speed limit;
- the character of the surrounding land environment (eg, rural, fringe of city, fully developed);
- the function of a road (ie, arterial, collector or local);
- detailed roadside development data (eg, number of houses, shops, schools, etc.);
- the number and nature of side roads;

- carriageway characteristics (eg, median divided, lane width and number of lanes, road geometry, street lighting, footpaths, cycle lanes, parking, setback of fence line from carriageway);
- vehicle, cycle and pedestrian activity;
- crash data;
- speed survey data.

To review and set a speed limit under the rule, the road controlling authority must:

- calculate the speed limit using *SLNZ*;
- consult with people and organisations affected by the speed limit;
- make a bylaw;
- notify the Director and the Commissioner of Police;
- record the details of the speed limit in a register; and
- erect speed limit signs.

1.3 Speed Limits New Zealand (*SLNZ*)

SLNZ is the specified method for calculating a speed limit. The calculations can be done either manually, by following the procedures set out in this document, or by using the computer program. As well as calculating speed limits, the output of the computer program can be used to document the speed limit setting process and to maintain records of speed limits required by the rule.

The LTSA will maintain *SLNZ* to reflect changes in the rule that are brought about by changes in speed limits policy or that affect the method of calculating speed limits.

There will be some rare situations when, because of special features or activities along a road or route, *SLNZ* cannot be used or will not produce a sound result. *SLNZ* must always be used with reference to speed limits policy, and in

conjunction with sound engineering judgement, to determine the appropriate and safe speed limit.

2.0 Speed limits policy

Under the rule, permanent and holiday speed limits may be 20, 30, 40, 50, 60, 70, 80 or 100 km/h. The policy for speed limits is set out below.

2.1 Urban speed limit (50 km/h)

The general urban speed limit is 50 km/h. In an urban traffic area, the urban speed limit indicates that drivers can expect to encounter vehicles that are turning, slowing, stopping or parking, pedestrians, cycles and heavy vehicles.

An urban traffic area is land close to or within a town or city. The land will generally appear fully built-up. Land uses include:

- residential;
- commercial;
- industrial;
- educational;
- recreational.

An urban traffic area also includes partly built-up areas:

- in small towns;
- within a metropolitan area;
- on the fringes of a metropolitan area.

Development on the land will generally be close to the roadside property boundary and there may be provision for parking and loading in front of commercial and industrial development. Sealed footpaths, kerb and channel, and landscaped grass areas between the kerb and the property boundary are typical of urban development. The roadside environment will be fully built-up, although access may be restricted.

Road geometry should not encourage higher speeds. Where road geometry tends to promote higher operating speeds than the level of roadside development warrants, engineering measures should be taken to increase the apparent activity on the road. These include narrowing of traffic lanes; marking cycle lanes and parking lanes; installing kerb extensions at pedestrian crossing points and installing roundabouts. Signal linking can also be used to discourage higher speeds.

2.2 **Rural speed limit (100 km/h)**

The general rural speed limit is 100 km/h.

A rural area is land outside towns and cities. The level of roadside development is at a minimum. Land use includes:

- agriculture;
- market gardening;
- forestry;
- reserves;
- small settlements.

Houses in rural areas will generally be set back some distance from the road. There will be little kerbing and no footpaths unless installed for a specific reason (eg, a school remote from a residential area). Street lighting will generally not be provided but, if present, it will be only at

specific community facilities or used as intersection indicator lighting.

In situations where the safe operating speed is below 100 km/h due to the road geometry or other limitations on the roadway, drivers should be made aware of the need to reduce speed. This can be achieved by means of warning signs, delineation and by the physical nature of the road itself. Using derestriction signs should also be considered as an alternative to using 100-km/h signs. It is not appropriate to install a lower speed limit.

2.3 Arterial route speed limits

Speed limits of 60 and 80 km/h are primarily intended as limits for arterial routes. A 50-, 70- or 100-km/h speed limit may also be appropriate on an arterial route in some circumstances.

The geometric features and general appearance of the road and surrounding development should be consistent along the entire length of the arterial route speed limit.

On a long route (more than 3 km), where the level of development on a short section (less than 1 km) varies from the predominant development along the route, it may be appropriate to install a constant speed limit over the entire route. In this situation it is essential that the specified geometric design criteria are complied with and that traffic responds safely to the posted limit, despite the variation in development.

The minimum recommended length of 1 km for 60- or 80- km/h speed limits on arterial routes, as specified in *Table SLNZ1*, emphasises that these limits are primarily intended for arterial routes that meet consistent standards over a reasonable length of road.

2.4 Speed limits of 20, 30 and 40 km/h

Speed limits of 20, 30 or 40 km/h may be set for local roads or minor collector roads in urban traffic areas where the road is used by motorised traffic and pedestrians or cyclists (eg, shared zones) and a speed limit less than 50 km/h is necessary for safety purposes. Speed limits of 20, 30 or 40 km/h are generally not suitable for roads serving a significant collector or arterial function.

These limits can only be set if the calculated speed limit for the road is 50 km/h and appropriate and safe traffic engineering techniques are applied to ensure that the mean operating speed of motorised traffic is kept to within 5 km/h of the speed limit.

2.5 60-km/h speed limit

A 60-km/h speed limit is an arterial route limit that may apply to roads in urban areas meeting specific design requirements. This speed limit may be appropriate where the roadside is fully developed, if the road geometry and other design features can safely provide for the activity generated by the development, when the traffic is operating at the higher speed.

A 60-km/h limit is only suitable on roads that primarily serve the needs of through traffic, (ie, a high proportion of the traffic should travel along the road for a significant proportion of its length). The road should have consistent geometric features over the whole length of the restriction to reinforce its route function.

Examples of the necessary design features include solid or flush medians, multiple lanes, frontage service roads, well-spaced intersections, restrictions placed on turns at minor intersections, property boundaries set back and linking of signals to discourage higher or lower speeds.

If a proposed 60-km/h speed limit will raise the existing speed limit, the road controlling authority should conduct a safety audit, as recommended in 3.6, to identify any

deficiencies that require attention to provide a safe environment for all road users.

2.6 70-km/h speed limit

A speed limit of 70 km/h is appropriate in areas of intermediate roadside development, such as small country towns, urban fringe areas, short sections of road in partly built-up areas within a large urban traffic area or areas of single-sided development. It may also be used as a buffer between a 100-km/h and a 50-km/h section, but only if there is sufficient roadside development to make the speed limit reasonable and safe.

2.7 80-km/h speed limit

A speed limit of 80 km/h may be installed in the situations described below.

- On lengths of arterial road through rural land within a large urban traffic area. In this situation, there should be good reason to reduce the speed limit from 100 km/h. Examples include high traffic flows (more than 10,000 vehicles a day) with a significant mix of local and through traffic; frequent turning movements; or considerable cycle, school or pedestrian traffic).
- In rural areas where there is significant activity generated by adjacent land uses, for example, rural selling places or 'lifestyle' blocks.
- In small rural settlements where a 70-km/h speed limit is not warranted, but where local residents are obliged to use the road as part of their daily activity, due to the historical development of the area. An example of this would be where a primary school is across the main road, or along the road from the main part of the settlement.

In all circumstances, an 80-km/h speed limit should not be posted over short lengths of road (see *Table SLNZ1*). The

road should have consistent geometric features over the whole length of the speed restriction to reinforce its arterial route aspect.

2.8 Holiday speed limits

A holiday speed limit applies for a specified period or periods during a year. This may be suitable for locations with large differences in the level of roadside activity at different times of the year. An example is a beach resort that is popular in summer, but only sparsely populated for the rest of the year. Typically, when the level of activity is at its highest, a limit of 50 km/h would be appropriate, while for the remainder of the year the level of activity would justify the rural speed limit.

Because this type of speed limit is applied in unusual circumstances, the normal assessment methods are not fully appropriate. *Appendix I* sets out the method for determining a holiday speed limit.

3.0 Procedures for deciding on a speed limit

The posted speed limit must be safe and appropriate for the type and level of development on the adjacent land, and for the function and use of the road. When reviewing an existing speed limit or deciding the appropriate speed limit for a new road, the rule requires the speed limit to be calculated by following the procedures in *SLNZ*. This involves undertaking surveys and applying the procedures specified in this schedule to the survey data.

3.1 Surveys

Two surveys are required:

- a survey of roadside development (the rating survey);
and

- a survey of general road information.

These surveys should be done together in accordance with the instructions in *Section 4.0*. Suitable survey forms are illustrated in *Appendix II* and in the computer program documentation.

For a 60-km/h speed limit, or if there is doubt about traffic complying with any other speed limit, a concealed survey of traffic speeds should be undertaken. Speed surveys should be carried out in accordance with LTSA guidelines on speed survey methods.

3.2 Road environment

Length of restriction

Frequent changes of speed limit along a route should be avoided. Minimum lengths of road for a speed limit must comply with *clause 2.4* of the *Setting of Speed Limits Rule*. *Table SLNZ1* complies with the rule, but specifies longer lengths in some situations as a guide to good practice. Applying these minimum road lengths will avoid having frequent changes in speed limit along a road with varying characteristics. However, these short lengths are not always appropriate, and longer lengths should be applied in some circumstances.

For example, consider a 500-metre section of road that has a calculated speed limit of 70 km/h, with a section of road at either end of it that has a calculated speed limit of 80 km/h. It may be appropriate to extend the 70-km/h section or one of the 80-km/h sections to reduce the number of changes in speed limit along the road. The decision as to which speed limit to extend, if either, will depend on factors such as the type of roadside development, the geometric standards, and the designation and use of the road.

The level of development should be reasonably consistent along the entire length of a speed limit, especially in areas with sparse development. It is not appropriate to install a 500-metre-long, 70-km/h speed restriction in a rural area,

for example, if the only development is located in a 100-metre section of road in the middle of the proposed speed limit. This applies even if the requirement for the average rating is met for the 500-metre length. In these circumstances road users will see no reason for the change in speed limit and compliance will be poor. This will result in a wide variation in operating speeds, which makes judgement of speed and distance difficult for all road users. Such conditions will usually contribute to a reduction in safety, especially for pedestrians and cyclists.

Table SLNZ1 Minimum length of road for a speed limit

Speed limit (km/h)	Nature of road and adjacent speed limits	Minimum length (metres)
50	Urban street, adjacent speed limits 70 km/h or less	500
	Urban fringe, adjacent speed limits greater than 70 km/h	1000
60	Urban arterial route, adjacent speed limits 80 km/h or less	1000
	Other situations	500
70	Partly built up, adjacent speed limits 80 km/h or less	1000
	Other situations	500
80	Arterial route, adjacent speed limits 70 km/h or less	1000
	Other situations	800
100	All situations	2000

Changes in speed limit

Suitable points for changes in speed limit should be ascertained during the rating survey. All boundary points between speed limits must be at, or close to, a point of significant change in the roadside development or the road environment to emphasise the change in speed limit. Appropriate locations include a marked change in the level or type of roadside development, a change in the road geometry, a bridge, a threshold or other feature that affects

speed (eg, a roundabout or a curve). As a guide, the first 200 metres either side of the change in speed limit should meet the appropriate rating for that speed limit. For example, if the proposed speed limit is 50 km/h to the north and 70 km/h to the south of the point where the speed limit changes, the first 200 metres to the north should rate 11 or more and the first 200 metres to the south should rate between 6 and 11.

A threshold treatment may be necessary to reinforce a change in the speed limit where there is no obvious change in the road environment.

When the difference between adjacent speed limits exceeds 30 km/h (for example, a change from 100 km/h to 50 km/h), special treatment may be necessary at the point of change to encourage road users to comply with the reduced speed limit. This may be achieved by installing a threshold or an oversize sign on each side of the road. Alternatively, a buffer zone can provide a transition area, but only when the rating and minimum length criteria are met for the speed limit used in the buffer zone. Whichever treatment is applied, it must be appropriate and encourage a safe response from road users in the transition zone.

Road geometry (60-km/h and 80-km/h arterial route limits)

60-km/h and 80-km/h speed limits are intended primarily for arterial routes.

The road geometry over the length of the route should be consistent, and to an appropriate standard. The geometric features to consider include lane widths, number of lanes, provision of a median, lighting, intersection controls, pedestrian and cycle facilities, signs and markings and the setback of the property boundary from the edge of the roadway. There should be no roadside development features that are inappropriate for the speed limit under consideration.

3.3 Signposting

Signposting must be correct to ensure a speed limit is enforceable and to encourage compliance. The rule requires every road controlling authority to provide, at or near, and no more than 20 metres from, the point on the road where the speed limit changes, a sign to advise drivers of the change in speed limit. The rule allows this small measure of flexibility when erecting the sign to avoid the sign being too close to a driveway, or to a point of restricted visibility. Changes in speed limit are frequently located at a specified distance from a side road. As most road reserves are 20 metres wide, the rule allows 20 metres flexibility in the location of the sign.

Where the operating speeds are high, or the change in speed limit is more than 30 km/h, additional or oversized signs may be appropriate. The *Manual of Traffic Signs and Markings*¹ gives guidance on the sign size appropriate to the location and traffic conditions. Guidance is also given on the lateral placement and visibility requirements. Use of the manual is strongly recommended.

The rule requires repeater signs in all 60-, 70- and 80- km/h speed limit areas as shown in the following table:

Table SLN22 Maximum length of road between repeater signs

Speed limit (km/h)	Maximum length of road between signs (km)
60	2.0
70	2.4
80	2.6

¹ *Manual of Traffic Signs and Markings* prepared and published by Transit New Zealand and the Land Transport Safety Authority. Part I: ISBN 0-478-04112-8, Part II: ISBN 0-478-04116-8.

The rule allows (but does not require) a road controlling authority to mark on the road surface alongside any speed limit sign the numerals shown on the sign.

3.4 Operating speeds

The mean speed and the 85th percentile speed on a road should not be significantly greater than the speeds specified in *Table SLNZ3*. On medium- to high-volume roads the standard deviation becomes important, as a road with a narrow distribution of speeds is less hazardous than one with a wide distribution. If operating speeds exceed the values specified in the table, it is likely that additional measures such as engineering, enforcement, education and publicity will be necessary to reduce speeds.

Table SLNZ3 Mean and 85th percentile operating speeds

Speed limit	Mean speed (km/h)	85 th percentile speed (km/h)
50 km/h	50	60
60 km/h	60	70
70 km/h	70	80
80 km/h	80	90
100 km/h	100	110

3.5 Crashes

Crash rate comparison

When proposing a speed limit for an arterial route, whether the proposal is an increase or reduction in speed limit, the overall injury crash rate for that section of road should be compared with national data. The overall crash rate includes intersection and mid-block crashes.

An examination of crash rates should be undertaken as a before-and-after study considering existing and future crash rates respectively.

The existing crash rate should be below the 85th percentile of the national crash rate for similar roads. If the crash rate exceeds the 85th percentile for similar roads, additional engineering and enforcement, in conjunction with the change in speed limit, will probably be required to reduce it. This is just as important when reducing the speed limit as when increasing it, because it is unlikely that a reduction in speed limit alone will reduce the crash rate.

To protect the safety of the road in the future, there should be no factors that will result in a worse crash rate after the speed limit is changed. The road should be monitored after the new speed limit is applied and any necessary remedial action taken to ensure the two-year average crash rate remains below the crash rate before the new limit was installed. If the crash rate exceeds the 85th percentile for similar roads with the new speed limit, engineering and enforcement action should be undertaken to reduce the crash rate below the 85th percentile.

The LTSA maintains a database of crash rates for arterial roads and some collector roads. This information is available for crash rate analysis. The comparison with similar roads should include as many of the characteristics listed below as possible, depending on the number of roads available with comparable characteristics. If necessary, the characteristics should be modified slightly to obtain a reasonable sample of similar roads, for example, combining roads with 50- and 60-km/h speed limits or roads serving different functions in the road network.

Road characteristics for comparison of similar roads:

- speed limit (existing and proposed speed limits respectively for before-and-after comparisons);
- type of development along the road (residential, industrial or commercial);
- engineering features (solid median or undivided); and
- function of the road (arterial, collector).

The crash rate comparison is important for proposed speed limits on arterial routes and is recommended practice for all speed limit proposals.

Special crash-type analysis

On arterial routes, when a change in speed limit is proposed, crashes should be analysed to identify crash-types that may be affected by a different speed limit. Data should be analysed for the last two years with particular attention paid to pedestrian, cycle, turning and crossing crashes as the types most likely to be affected by a change in speed limit. Special crash-types should be monitored after the new speed limit is installed, and any necessary remedial action taken to ensure the two-year average crash rate does not increase for any of the identified crash-types.

Special crash-type analysis is important for proposed speed limits on arterial routes and is recommended practice for all speed limit proposals.

3.6 Safety audit

Road controlling authorities are responsible for providing a safe environment for all road users on their roads. This is reflected in *clause 2.5* of the *Setting of Speed Limits Rule*, which requires road controlling authorities to ensure all traffic control devices are safe, effective and appropriate to a new speed limit before it is applied. To ensure this condition of the rule is complied with, a safety audit, appropriate to the location and function of the road, should be conducted. This is particularly important when it is proposed to raise the existing speed limit. Suitable procedures and checklists are provided in Transit New Zealand's *Safety Audit Policy and Procedures*² or the Austroads *Road Safety Audit*³ guidelines.

² *Safety Audit Policy and Procedures*, August 1993. Published by Transit New Zealand as a guideline document. ISBN 0-478-04113-6.

³ *Road Safety Audit*, 2nd Edition 2002. Published by Austroads as a joint Standards Australia and Standards New Zealand handbook, HB43:2001. ISBN 0 85588 589 0.

3.7 Documentation

Good documentation of the speed limit setting procedures must be kept. This allows the speed limit setting process to be audited. It also allows the traffic enforcement agency to provide the courts with full documentation to support a prosecution if this is necessary. Good documentation provides an historical record of the speed limit, which will simplify future reviews of it.

The following information should be retained for all speed limits:

- rating diagrams and general survey information forms;
- plans that show the previous and current restricted areas;
- results of any surveys or studies undertaken in setting or monitoring the speed limit including speed surveys, crash studies and safety audits; and
- correspondence relevant to the speed limit.

The rule requires a register recording all speed limits, other than temporary speed limits, to be kept for the roads under a road controlling authority's control. The register must be available for public inspection. For details, refer to the LTSA guidelines on keeping a speed limits register.

3.8 Monitoring and review

Regular reviews of speed limits should be carried out to ensure they keep pace with changes in the level of development on adjacent land, the use of the road or road geometry. This will ensure a consistent standard is maintained throughout the country. The location, condition and visibility of the signs should also be monitored.

Monitoring should cover six main areas:

- roadside development;
- road environment;

- operating speeds;
- crashes;
- signposting;
- documentation.

4.0 The decision-making process – calculating the speed limit

A rating diagram must be prepared for each section of road under consideration. A general information form must be completed for all arterial and major collector roads and should also be completed for a minor collector or local road if it is the only road being reviewed or if there are matters requiring special consideration for setting the speed limit. The survey forms in *Appendix II* are designed for this purpose. A4-size survey form templates in Microsoft Word format are available from the LTSA.

The following information should be recorded on the survey forms:

- all roadside developments and all side roads intersecting with the road under review;
- roadway features including footpaths, cycle facilities, traffic control devices, curves, thresholds, and crests;
- appropriate speed limit change points;
- all matters that may be of significance to a speed limit.

The survey should extend at least 200 metres in each direction beyond the section of road under consideration. This is to ensure the appropriate boundary point between speed limits is identified and features that may influence sign location are included.

The survey data is used to calculate the average rating, which is then used as an input to a flow chart to determine the appropriate speed limit for the section of road. The average rating has two components, the development

rating and the roadway rating. These are described in the following sections.

4.1 Development rating

Different types of development are allocated the rating values as shown in *Table SLNZ4*. The ratings are based on the expected number of vehicle, pedestrian and cycle movements generated each day. For example, a house is allocated one rating unit and a large shop is given four rating units.

Development ratings are allocated for the road being surveyed (frontage development) and for the first 500 metres of side roads (side road development). For each 100-metre section of road, the development rating sub-total is the sum of the frontage and the side road development ratings. The total development rating is calculated by adding the 100-metre sub-totals for the length of road being assessed for a speed limit.

Frontage development

Table SLNZ4 Frontage development rating units

Development type	Frontage development	Rating units
A	Property or access point (Note 1) with 1 or 2 dwellings (Note 2); church; small hall; playground; beach; sports ground; camping ground; holiday cabins; cycle path or pedestrian way that intersects with the roadway	1
B	Property or access point (Note 1) with 3 or 4 dwellings (Note 2); business or office with fewer than ten employees; small shop; large hall; cinema; small public swimming pool	2
C	Property or access point (Note 1) with 5 or more dwellings (Note 2); business or office with 10 to 30 employees; general store; takeaway shop; bank; service station; cinema complex; hotel; restaurant; large swimming pool	3
D	Business or office with more than 30 employees; large shop; post office; hospital; tertiary education establishment	4
E	Access point (Note 1) serving two or more developments	1 to 4 (Note 3)
F	Primary school or kindergarten	1 for every 15 pupils
G	Secondary school	1 for every 30 pupils

Note 1. An access point includes a private driveway and a public entrance or exit.

Note 2. A dwelling includes a house, a home unit in a block, a semi-detached home unit and a motel unit. Each unit in a block of units counts as one dwelling.

Note 3. When two or more developments other than dwellings, or if dwellings and other developments share a common access point or service road, the correct rating is the greatest of:

- (1) the rating for a development type A, B or C according to the number of dwellings served by the access point; or
- (2) the highest rating for any one development, other than dwellings, served by the access point; or
- (3) the rating determined by treating the access point as a side road and allocating the rating specified in *Table SLNZ5*.

Multiple access points

In most situations where a single development or a small group of developments has more than one access point on

the same road, the development should be rated once only and additional access points ignored. Developments with separate entrance and exit points should also be treated as having only one access point. Examples include service stations, motels, schools and a small group of shops with off-street parking.

However, where a large group of developments, such as a shopping mall or a service road, share more than one access point, it is appropriate to assign a rating to each of them. In these situations a proportional number of the developments should be allocated to each access point, and each one rated as a development type E as described in *Table SLNZ4*.

Separate ratings may be assigned to each access point when there are at least four individual developments or one type D development (as described in *Table SLNZ4*) for each access point. These conditions ensure that the sum of the access point ratings does not exceed the sum of the ratings for the individual developments in the group.

Side road development

The side road development rating is calculated by applying the rating values specified in *Table SLNZ4* to the development on the first 500 metres of a side road and then using *Table SLNZ5* to determine the side road rating. Please note that a school or kindergarten on a side road is rated differently from normal. For each school or kindergarten fronting the first 500 metres of a side road, use half the normal frontage rating (from *Table SLNZ4*) to determine the side road rating from *Table SLNZ5*. If a school or kindergarten is between 500 and 1000 metres from the road being surveyed, use a quarter of the normal frontage development rating.

For example, a side road with seven driveways to single houses and a primary school with 240 pupils within the first 500 metres has a frontage development rating (R) of $7+ (16 \div 2) = 15$. By using the value $R=15$ in *Table SLNZ5*, the side road development rating is '2', if traffic flow on the side road is less than 4000 vehicles a day and

'3', if traffic flow on the side road is 4000 vehicles a day or more.

Note that a cross intersection is treated as two side roads.

Table SLNZ5 Side road development rating units

Traffic flow on side road (V = vehicles per day)	Side road development rating units according to the frontage development rating (R) on the first 500 m of the side road		
	R < 8	8 ≤ R < 20	R ≥ 20
V < 4000	1	2	3
V ≥ 4000	2	3	4

4.2

Roadway rating

The roadway rating is calculated by adding together the ratings relating to a number of roadway activities – pedestrians, cyclists, parking, geometry, traffic control and use of the road. Different ratings apply, depending on the frequency of activities, the closeness of the activity to through traffic etc. *Tables SLNZ6 to SLNZ11* show the ratings that apply according to the nature and use of the road. Note that where usage or provision of facilities is different on each side of the road, the rating is the average of the ratings for each side.

Roadway ratings are allocated for each 100-metre section of road and the sub-total is the sum of the ratings for each roadway activity per 100-metre section. The total roadway rating is calculated by adding the 100-metre sub-totals for the length of road being assessed for a speed limit.

The total roadway rating for the length of road under consideration must not exceed the total development rating. (See *4.3 Average rating* for what to do if the roadway rating exceeds the development rating.)

Table SLNZ6 Roadway rating – pedestrians

Pedestrian facilities	Pedestrian volume less than 200 per day	Pedestrian volume 200 per day or more
Footpaths behind grass berms or no pedestrian access	0	0
Footpaths adjacent to roadway	0	1
No footpath but useable shoulder	1	2
Pedestrians must walk on roadway	1	3

Table SLNZ7 Roadway rating – cyclists

Cycle facilities	Cycle volume less than 200 per day	Cycle volume 200 per day or more
Cycleway behind berms or fence or no cycle access	0	0
Wide road, cycles clear of moving traffic	0	1
Narrow road, cycles impede moving traffic	1	2

Table SLNZ8 Roadway rating – parking

Parking facilities	Normally two parked vehicles or fewer per 100 metres	Frequent parking on both sides, long duration	Frequent parking on both sides, short duration
Vehicles can park 2 metres from moving traffic	0	0	1
Vehicles park close to moving traffic but do not obstruct it	1	2	3
Parked vehicles obstruct moving traffic, ie, remaining traffic lane 3 metres or less	2	3	4

Table SLNZ9 Roadway rating – geometry

Type of roadway	Alignment		
	Open visibility	Average visibility	Limited visibility
Divided carriageway (solid median or barrier) or one way	0	0	0
4 or more lanes (flush median or undivided)	0	1	1
2 or 3 lanes (flush median or undivided)	0	1	2
1 lane (two way)	3	4	5

Table SLNZ10 Roadway rating – traffic control

Traffic control (Applying to traffic on the road surveyed)	Rating units
Pedestrian crossing	3
'Stop' control	3
'Give Way' control	2
Traffic signals	2
Railway level crossing	1
Traffic islands	1

Table SLNZ11 Roadway rating – use

Type of development	Status of road		
	Local road	Collector road	Arterial road
Residential	2	1	0
Industrial	1	0	0
Commercial	0	0	0
Rural residential	1	0	0
Rural	0	0	0

4.3 Average rating

The average rating is calculated by adding together the total development and roadway rating for the length of road being assessed and then dividing by the number of 100-metre sections of road. However, the total roadway rating must not exceed the total development rating for the length of road being assessed. If the total roadway rating is higher, it must be reduced to that of the development rating.

When using the computer program, enter the number of each type of development and roadway feature onto the screen. The program applies the appropriate rating units and adds and divides the figures to calculate the average rating. If necessary, the program automatically reduces the roadway rating to that of the development rating so the total rating never exceeds twice the development rating. If you choose not to use the computer program, you must apply the correct rating figures according to *Tables SLNZ4* to *SLNZ11* and calculate the average rating value manually.

When the average rating has been determined, the speed limit flow charts shown in *Figures SLNZ1* to *SLNZ4* can be used to determine the calculated speed limit.

4.4 Speed limit flow charts

Figure SLNZ1 shows different surrounding land environments and how they relate to the flow charts for the rural, in-between or urban locations. The process of determining the appropriate speed limit according to the character of the road and the average rating is detailed in *Figures SLNZ2, 3* and *4*. Choose the appropriate flow chart and follow it through to select the speed limit.

For a limited access arterial road, such as a motorway or expressway, in either an urban or rural location use the in-between flow chart shown in *Figure SLNZ3*.

Table SLNZ12 Speed limit flow chart summary table

Average rating (R)	Speed limit (km/h)		
	Rural location	In-between location	Urban location
$R \geq 11$	Note 1	50	50
$R \geq 11$ with engineering to control mean speed within 5 km/h of the limit	Note 1	Note 2	20, 30 or 40
$R \geq 11$ with specific urban arterial features	Note 1	60	60
$11 > R \geq 6$	70	70	70
$6 > R \geq 3$	80	80	80
$R < 3$	100	100	Note 1

Note 1. The average rating and level of development is not consistent with the location of this road. Please refer to *Figure SLNZ1* and select the appropriate location according to the surrounding land environment.

Note 2. 20-, 30- or 40-km/h speed limits should only be installed on local roads or minor collector roads in urban traffic areas.

Figure SLNZ1 Rural/In-between/Urban

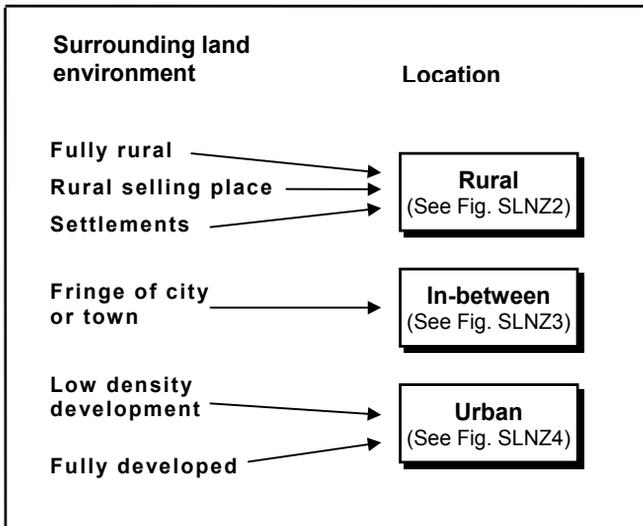
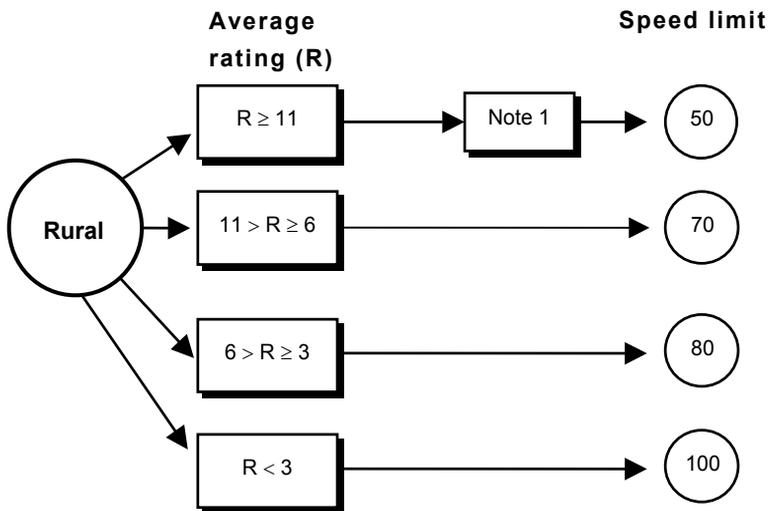


Figure SLNZ2 Speed Limit Flow Chart – Rural



Note 1. The level of development is not consistent with the location of this road. Please check you have used the correct flow chart for the location (see Fig. SLNZ1).

Figure SLNZ3 Speed Limit Flow Chart – In-Between

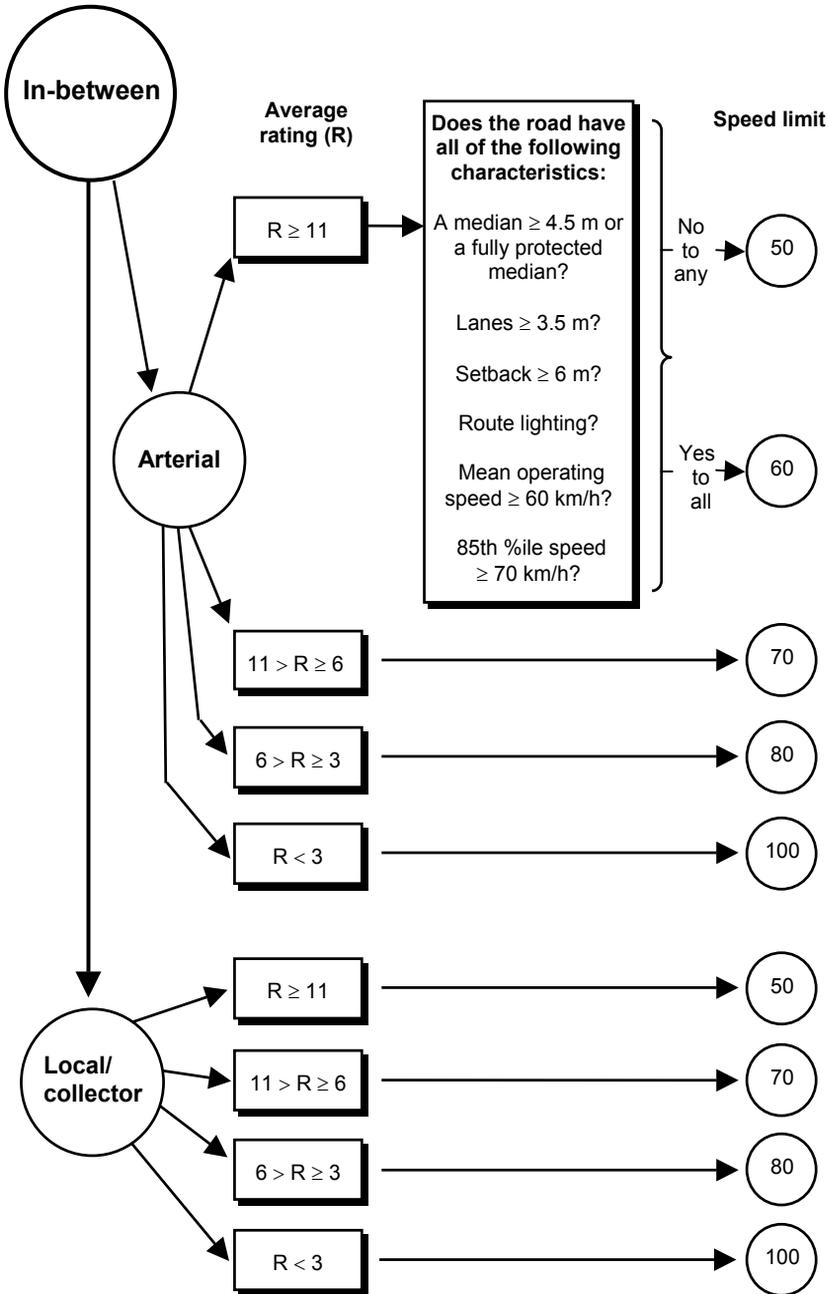
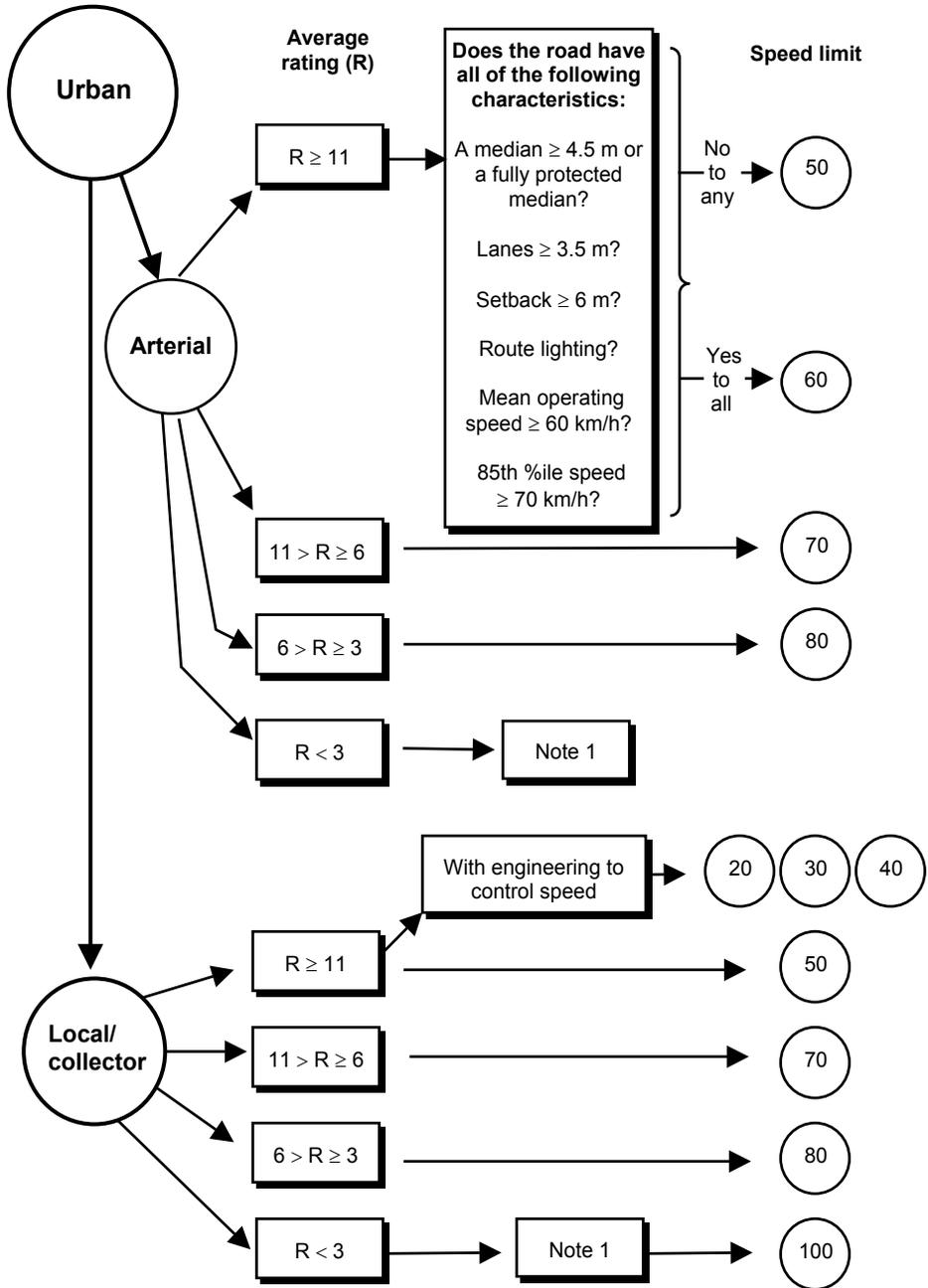


Figure SLNZ4 Speed Limit Flow Chart – Urban



Note 1: The level of development is not consistent with the location of this road. Please check you have used the correct flow chart for the location (see Fig. SLNZ1).

Glossary

- Arterial road** An arterial road is one that primarily serves the function of carrying through traffic. It is a major road in the roading hierarchy for the area and carries the highest volume of traffic. (See also collector road and local road.)
- Collector road** A collector road serves the function of collecting and distributing traffic in the network. It interfaces between arterial and local roads and carries moderate traffic volumes compared to the other classes of road. (See also arterial road and local road.)
- Fully protected median** A fully protected median is one that is wide enough to provide a safe area, clear of straight through traffic, for vehicles waiting to turn or cross the median. This usually requires a median width of at least 4.5 metres at the points where traffic turns or crosses.
- Local road** A local road serves the primary function of providing access to property. It is the lowest classification in the network and carries less traffic than the other classes of road in the area. (See also arterial road and collector road.)
- Setback** The setback is the distance from the property boundary to the nearest edge of a through traffic lane.
- 85th percentile (85th %ile)** The 85th percentile is the value at which 85% of the sample is included. Only 15% of the sample will exceed the 85th percentile. In speed sample analysis, 85% of the vehicles surveyed will travel at or below the 85th percentile speed. For crash rate comparisons, 85% of roads included in the sample of similar roads will have a crash rate equal to or less than the 85th percentile crash rate.

Appendix I

Holiday speed limits

1. Background

At some locations, traffic conditions require road users, in the interests of safety, to moderate their speed more during holiday periods than at other times. This creates a case for lower speed limits during the holiday periods to assist road users in their choice of speed.

2. Period of application

To maintain a reasonable level of national uniformity, the period during which the lower speed restriction applies will normally be as described below.

- Remote beach and lake resorts justify the application of a lower holiday speed limit during the peak summer holiday season only. This period was traditionally from 20 December to 10 February. However, since the introduction of the four-term school year, this peak holiday time now ends earlier, and a more appropriate period would be from 20 December to 31 January. These dates should apply to all new holiday speed limits or whenever an existing holiday speed limit is reviewed. A holiday speed limit may also apply from the Thursday before Easter until the Tuesday after Easter.
- Summer resorts close to cities and large towns may generate heavy weekend traffic from early December until Easter, in addition to holiday traffic. In such cases, a holiday speed limit may be necessary from 1 December until the Tuesday after Easter, with 70, 80, or 100 km/h, as appropriate, for the remainder of the year.

It is sometimes reasonable to depart from the dates mentioned above if, for example, the location is a popular winter holiday resort or to obtain a reasonably uniform period of application throughout a particular region.

If the holiday speed limit applies to an arterial road, the effect on through traffic must be considered and the period of application should be kept to a minimum.

3. Holiday speed limit

The road must be surveyed during the period the holiday limit will apply. Each bach, house or other dwelling (including a tent or caravan) is rated as one unit. A higher than normal roadway rating is acceptable, but must not exceed two thirds of the total rating. The operating speed of the traffic should be measured during the period of the proposed holiday speed limit and comply with *section 3.4* of this schedule. *Table SLNZ13* shows the necessary rating for a 50-, 70- or 80-km/h holiday speed limit.

Table SLNZ13 Average rating for holiday speed limits

Average rating (R)	Speed limit
$R \geq 9$	50 km/h
$9 > R \geq 6$	70 km/h
$6 > R \geq 3$	80 km/h

A 20-, 30-, 40- or 60-km/h speed limit will not usually be appropriate for a holiday speed limit due to the special engineering features required. However, if a 20-, 30-, 40- or 60-km/h speed limit is being considered for a holiday speed limit, it must comply with the requirements set out in the rule and the standard procedures in *sections 1-4* of this schedule, except for the rating. The normal rating for a 20-, 30-, 40- and 60-km/h speed limit is the same as for a 50-km/h limit, so an average rating of 9 or more is acceptable, as shown for a 50-km/h holiday speed limit in *Table SLNZ13*.

The normal off-season speed limit should be calculated using the standard rating criteria, counting permanently occupied residences only (ie, exclude holiday dwellings and camp sites that are not occupied all year round).

Information that should be documented for a holiday speed limit includes:

- whether the area or road involved forms part of a through route, and why special attention is needed (eg, a main road divides the beach from all the houses);
- results of speed surveys conducted during the holiday period;
- traffic and pedestrian counts and records of crashes or traffic problems that occur during the holiday period;
- reasons for large numbers of people during the holiday period if this is not apparent in the rating diagram (for example, motels, camping grounds or recreational facilities may be located on side roads and generate large numbers of pedestrian movements in what appears an undeveloped area);
- the period over which the holiday speed limit is warranted.

4. Signposting and notification

It is essential that the signs are changed at the beginning and end of the holiday periods. It is also recommended that the changes in speed limits are publicised.

GENERAL INFORMATION FORM

Instructions: Circle the answer, tick the box, describe or fill-in data as appropriate

Road controlling authority _____ **at** _____

Road _____ **from** _____ **to** _____

Surveyed by _____ **Date** ____/____/____

1. The surrounding land environment is: Fully developed urban
 Low density urban Urban fringe Rural settlement
 Rural selling place Fully rural Holiday resort
2. The classification of this section of road is: Arterial Collector
 Local
3. What is the length of road under consideration? _____ m
4. What is the current speed limit on the road? _____ km/h
5. What are the speed limits on the adjoining road sections? _____ km/h,
 _____ km/h
6. Are there any features that would provide suitable change points between limits?
Yes / No Describe: _____
7. Is the road divided by a solid or flush median? **Yes / No**
 Solid Flush
 Note: a median should extend for at least 500 metres.
8. How wide is the median? _____ m
9. Does the median provide sufficient width and turn slots to provide adequate protection for turning and crossing vehicles? **Yes / No**
10. How many lanes? _____ What is the typical lane width? _____ m
 Note: count only the number of through lanes normally used by drivers.
11. Note any special lanes, eg, cycle lanes: _____

continued

12. What is the setback of the through traffic lanes to the property boundary?
_____ m

Note: If the development is similar on both sides of the road, use the lower value. If development is not balanced, use the setback on the more-developed side.

13. Is there a consistent standard of street lighting? **Yes / No**

14. What is the mean speed _____ km/h and 85th percentile speed _____ km/h for free-running vehicles on this section of road.

15. Examine crash data for the section of road for the previous two years. Note any changes that have occurred that may affect crashes.

Number of injury crashes/100 million vehicle km (two-year average):__

List any special crash types _____

16. Are there any special traffic conditions or roadside developments that may affect speeds, or require special consideration? Describe:_____

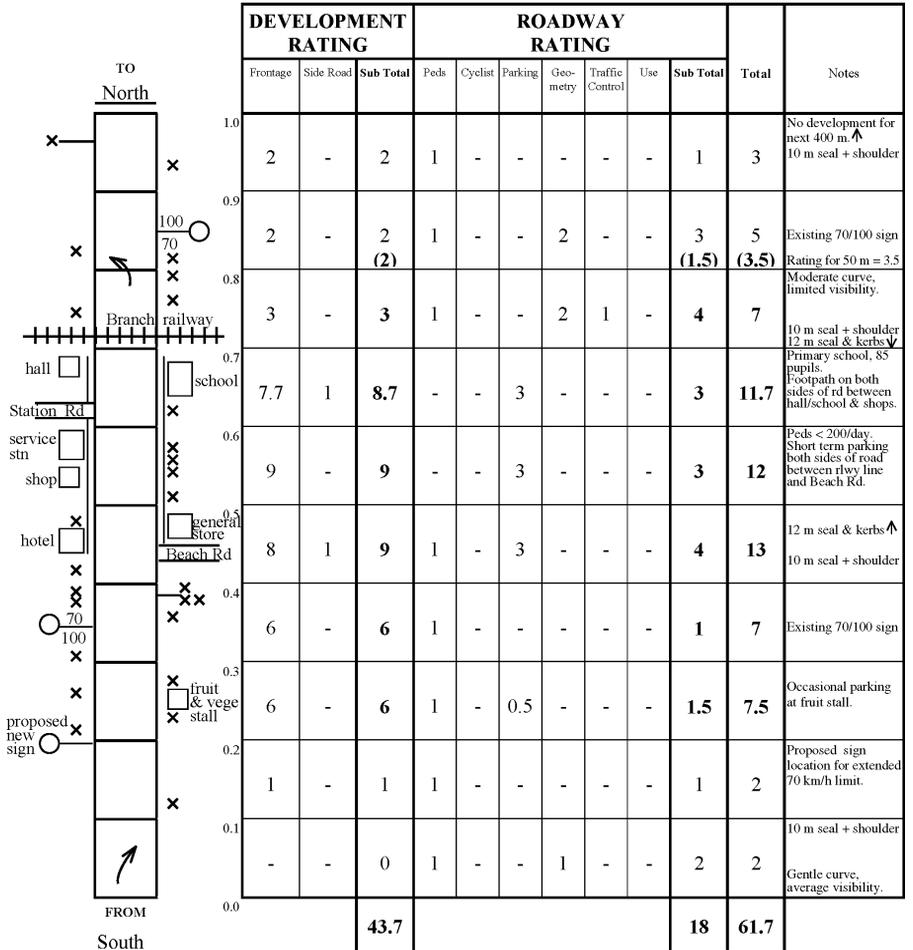
Example of Completed Rating Diagram

SPEED LIMIT SURVEY FORM (RATING DIAGRAM)

ROAD CONTROLLING AUTHORITY Sunny District Council **AT** Gladville

ROAD River Rd **FROM** South **TO** North

SURVEYED BY Eric Jones **DATE** 2 / 10 / 2002



Average rating between new sign at 0.2 km and existing sign at 0.85 km equals $61.7 \div 6.5 = 9.5$