

MINISTERIAL BRIEFING NOTE

Subject	Centralised procurement of speed signs and proposed static variable speed limit sign designs.
Date	11 September 2024
Briefing number	BRI-3150

Contact(s) for telephone discussion (if required)				
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Richard Forgan	Group General Manager System Leadership	-	s 9(2)(a)	✓

Action taken by Office of the Minister

- Noted
- Seen by Minister
- Agreed
- Feedback provided
- Forwarded to
- Needs change [please specify]
- Withdrawn
- Overtaken by events

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11 September 2024

Hon Simeon Brown – Minister of Transport

Centralised procurement of speed signs and proposed static variable speed limit sign designs

Purpose

1. This briefing outlines findings from the New Zealand Transport Agency Waka Kotahi (NZTA) assessment of the feasibility of centralised procurement of speed limit signs.
2. The briefing also responds to your request for advice on more cost-effective school static variable speed limit signs.

Centralised procurement of speed signs

3. The soon-to-be-finalised Land Transport Rule: Setting of Speed Limits 2024 (the new Speed Rule) will require road controlling authorities to reverse speed limit reductions on certain roads by 1 July 2025.
4. Reversing speed limit reductions under the new Speed Rule will mean speed signs will also need to change. Changes to speed signs will come with costs such as procuring new signs, installation, temporary traffic management, and project management. For speed changes where replacement signs will be the same size as current signs, and speed change points on roads remain the same, it is likely only the signs would need replacing. Other parts of the sign's infrastructure, such as the pole, sockets and strapping, should be able to be re-used.
5. The Government Policy Statement on land transport 2024 (GPS 2024) notes the NZTA will consider possible centralised procurement for speed signs on behalf of other road controlling authorities.

Procurement of traffic signs is normally bundled with other maintenance activities

6. Road controlling authorities do not generally procure signs directly from sign manufacturers. Most road controlling authorities enter bundled contract arrangements for boundary-to-boundary road maintenance activities (including bitumen activities, signs, road marking, and vegetation control). These are normally long-term service maintenance contracts (e.g. five- to seven-year period)¹ and are awarded in a competitive environment. For signage, bundled contracts include damage replacement, new installation, and maintenance.
7. Bundled contracts may have some cross-subsidisation across activities, meaning margins on sign prices may differ than if independently negotiated. Some of the main contracted service providers have their own vertically integrated sign businesses. Service providers base their

¹ Some contracts are slightly less bundled and can cover two- to five-year service specialist contracts.

investment return on agreed annual quantity and total set-up costs. However, total contract price must represent best value for money across the total bundle.

8. All road controlling authorities are required to seek value for money in every activity NZTA co-funds; outsource procurement activities for efficiency²; encourage a healthy, competitive supplier market; and conduct delivery effectiveness reviews under section 17A of the *Local Government Act 2002*. In most cases, delivery effectiveness reviews recommend bundled models to lower administrative burden and reduce supplier overhead costs. The generally low value nature of these individual activities means signage is usually part of volume-based pricing maintenance contracts. Once a contract is awarded, it is relatively easy to scope changes or additions, if needed. When the *Land Transport Rule: Setting of Speed Limits 2022* came into force, procurement and installation of new signs were made within existing contracts.
9. Local and regional councils are partially reimbursed from the National Land Transport Fund for costs incurred against these activities at a Funding Assistance Rate calculated separately for each organisation, e.g. 51 percent for Auckland Transport.

NZTA procurement arrangements

10. NZTA currently has 16 Network Outcome Contracts (NOC) that provide for signage maintenance across different regions (not necessarily aligned with local government areas). NZTA does not use a single, standardised NOC. This means NZTA's NOCs vary, where some can have additional works added easily while others may require further price negotiation. For example, further price negotiations may be required if there are new signage pricings or depending on arrangements with each NOC. Where NZTA believes pricing is unreasonable, it investigates competitive sourcing options.
11. Funding of new signs on a new or improved state highways falls within the State Highway Improvements Activity Class. Replacement of existing signs is funded through the State Highway Operations Activity Class.

s 9(2)(j)

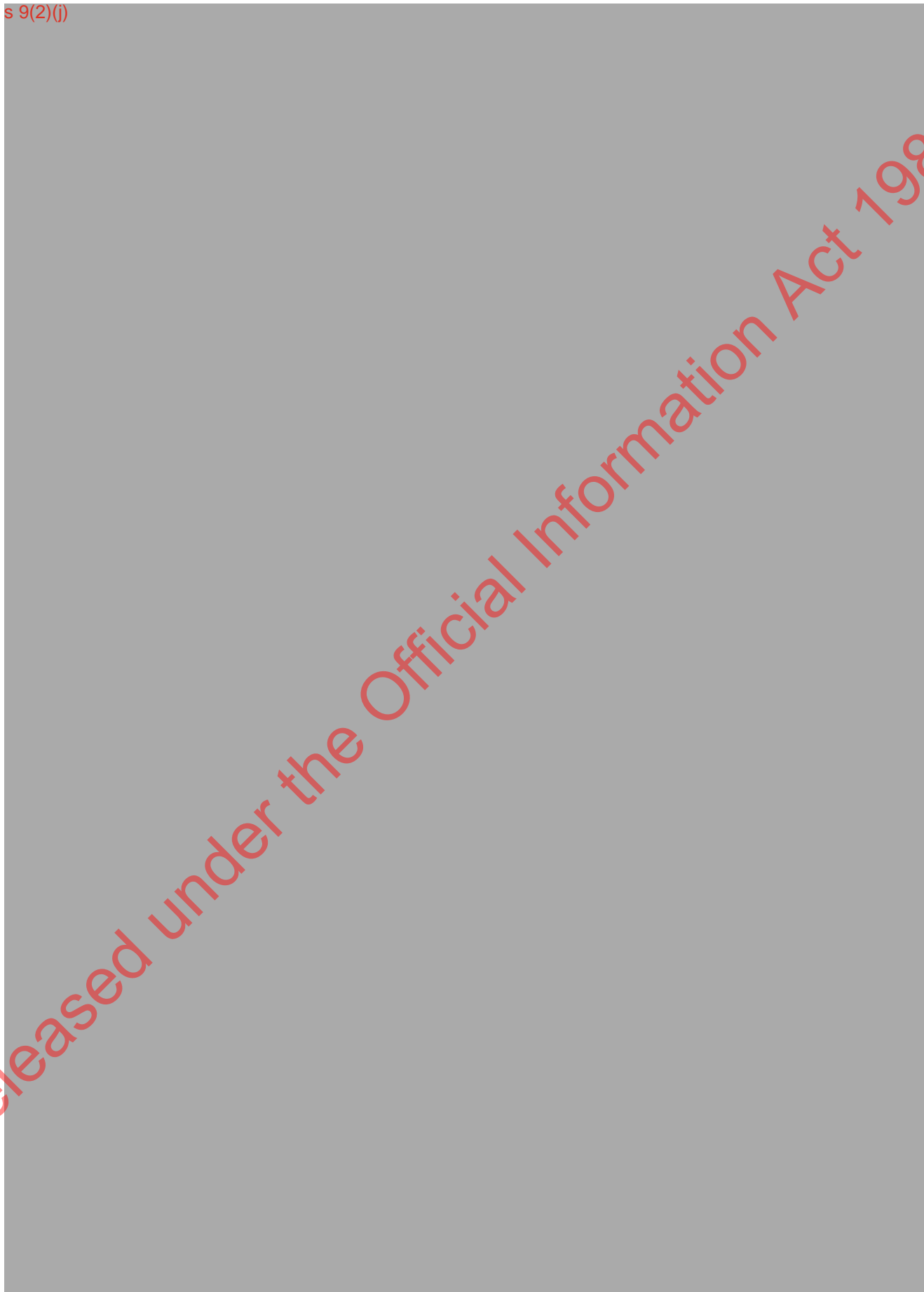
² Section 25 of the *Land Transport Management Act 2003*.

s 9(2)(j)

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Table 1 - Options for Signage Procurement

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Proposed static variable speed limit sign designs

NZTA has developed new static variable speed limit sign designs

25. The *Land Transport Rule: Traffic Control Devices 2004* provides specifications for all road signs. This includes specifications for a static variable school speed limit sign. This sign is currently only able to be used on no exit, give-way and stop sign-controlled side roads.
26. NZTA has been working with the Ministry of Transport on developing new static variable school speed limit signs, reflecting your intention to enable static signs to be used on any roads outside a school. The initial sign designs provided to the Ministry of Transport were larger than existing signage, to meet minimum legibility requirements in the *Land Transport Rule: Traffic Control Devices 2004*.
27. NZTA has developed two more possible static variable speed limit sign specifications (proposed sign designs) for roads outside schools, as requested in your meeting with Transport Officials on 19 August 2024. We understand you are interested in more cost-effective and smaller sizing specifications for these signs.
28. The proposed sign designs, and the existing static variable speed sign, are shown in Appendix 2. Of the proposed sign designs:
 - a) version A could be used in speed environments where operating speeds are less than 60km/h,
 - b) version B could be used in speed environments where operating speeds are 60km/h or more.
29. The proposed sign designs retain the required variable speed limit information, while making the supplementary 'Kura/School' component of the existing sign optional. If there are other signs in the surrounding area indicating a school's presence, then the combination of both the 'speed' and 'Kura/School elements' may not be necessary on one sign. It will still be an option for road controlling authorities to use a supplementary sign noting 'Kura/School' under the speed sign if they choose.
30. Making the supplementary sign component optional allows the proposed sign designs to be smaller than the signs previously provided. Compared to the previous proposed sign designs, the version A sign is 59 percent smaller, and the version B sign is 65 per cent smaller. We have also taken the opportunity with these proposed sign designs to:

- a) ensure the minimum widths align with standard aluminium sheeting widths used by sign manufacturers – this will be positively received by sign manufacturers and could potentially reduce costs via less wasted aluminium sheeting,
 - b) enlarge the size of the speed roundel to make better use of new additional width,
 - c) improve the alignment of applicable times and days the speed limit will apply, enhancing readability for this section when compared to the current school static variable sign.
31. We also note the proposed sign designs are minimum specifications, so road controlling authorities are still able to install larger signs if they choose to. Road controlling authorities are expected to use “sound engineering judgment” in choosing signs, and so may decide to install signs with larger specifications than the minimums in the *Land Transport Rule: Traffic Control Devices 2004*.

Potential risks with sign legibility in different speed environments

32. Clause 3.1 of the *Land Transport Rule: Traffic Control Devices 2004* specifies general safety requirements for signs, specifically, the need to be visible and legible to road users. School static variable speed limit signs contain more information for road users to read, understand, and respond to than other speed limit signs, making legibility particularly important. Sign placement, font size and the surrounding speed environment are all important factors to consider in sign design, to ensure sufficient visibility and legibility. If a sign is not considered to be legible, this can have implications for enforcement.
33. From a user behaviour perspective, signs are designed to reduce the mental load on road users as much as possible. This is particularly crucial in relation to the time needed to look at a sign – for example, too much sign information to process can lead to distraction. While the proposed sign designs may still increase risks relating to legibility and road user mental load, road controlling authorities could consider the following options to potentially mitigate these risks:
- a) using round numbers, for example “8.30 - 9.00am” instead of “8.25 - 8.55am”,
 - b) having a consistent window of time the variable speed limit applies for the morning and afternoon, for example 30 minutes in the morning and 30 minutes in the afternoon,
 - c) where possible, adopting consistent variable speed limit times of operation between schools in the same area (we note this is dependent on the individual school times currently in place).

Next steps if you agree to these new sign designs

34. Under the new Speed Rule, if new school static variable speed signs are required for schools, consequential amendments to the *Land Transport Rule: Traffic Control Devices 2004* will be required. These amendments are needed to both enable new sign designs and allow greater static variable speed sign use around schools.
35. If you agree to the adoption of version A and B, we will work with the Ministry of Transport to progress amendments to the *Land Transport Rule: Traffic Control Devices 2004* and gazetting of the new signs. If no changes are made to the proposed sign designs for version A and B, we recommend same day gazetting of both the new Speed Rule and the consequential amendments to the *Land Transport Rule: Traffic Control Devices 2004*. New signs could then be available on the date the new Speed Rule comes into force.
36. Any significant changes to proposed sign designs would need to be made quickly to be available on the date the new Speed Rule comes into force. This is due to time needed for sign specifications to be designed and uploaded to the Traffic Control Devices specifications website. Any new signs will ‘go live’ on this website when the new Speed Rule and the consequential amendments to the *Land Transport Rule: Traffic Control Devices 2004* come into force.

It is recommended that you:

1. **Note** the contents of this briefing.

2. s 9(2)(j)

Yes / No

3.

Yes / No

4. **Agree** to amend the *Land Transport Rule: Traffic Control Devices 2004* to include school static variable speed signs version A and version B provided in Appendix 2.

Yes / No



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Richard Forgan
Group General Manager System Leadership

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Hon Simeon Brown, Minister of Transport
Date: 2024

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Appendix 1: Regulatory Information on New Zealand Road Signage

Numbers and types of road signs in New Zealand

1. There are over 500 general types of signs provided for (coded) in the 1st schedule of the Land Transport Rule: Traffic Control Devices 2004.
2. Coded speed signs include 15 static speed signs, 3 electronic variable speed signs and 1 static variable speed sign. This excludes temporary traffic management speed reduction signs.
3. However, these numbers do not represent the number of possible variants of speed signs. For example, there is one coded standard speed sign that can display variations of speed numerals from 10 km/h up to 90km/h. If a road controlling authority chooses, each variation can be produced larger than the minimum specified size if all dimensions are increased proportionately. Other speed signs come with several options within one coded sign.
4. Variable speed signs currently on the network are a mixture of static variable, full matrix Light-emitting Diode (LED), punched set LED, a mixture of matrix and punched LED, and prismatic signs.
5. Some signs are made up of multiple components with each component having potentially 20-30 element choices, equating to hundreds of possible options for those coded signs.
6. Currently, there are 9,736 static speed signs and 106 electronic speed signs on the State highway network.

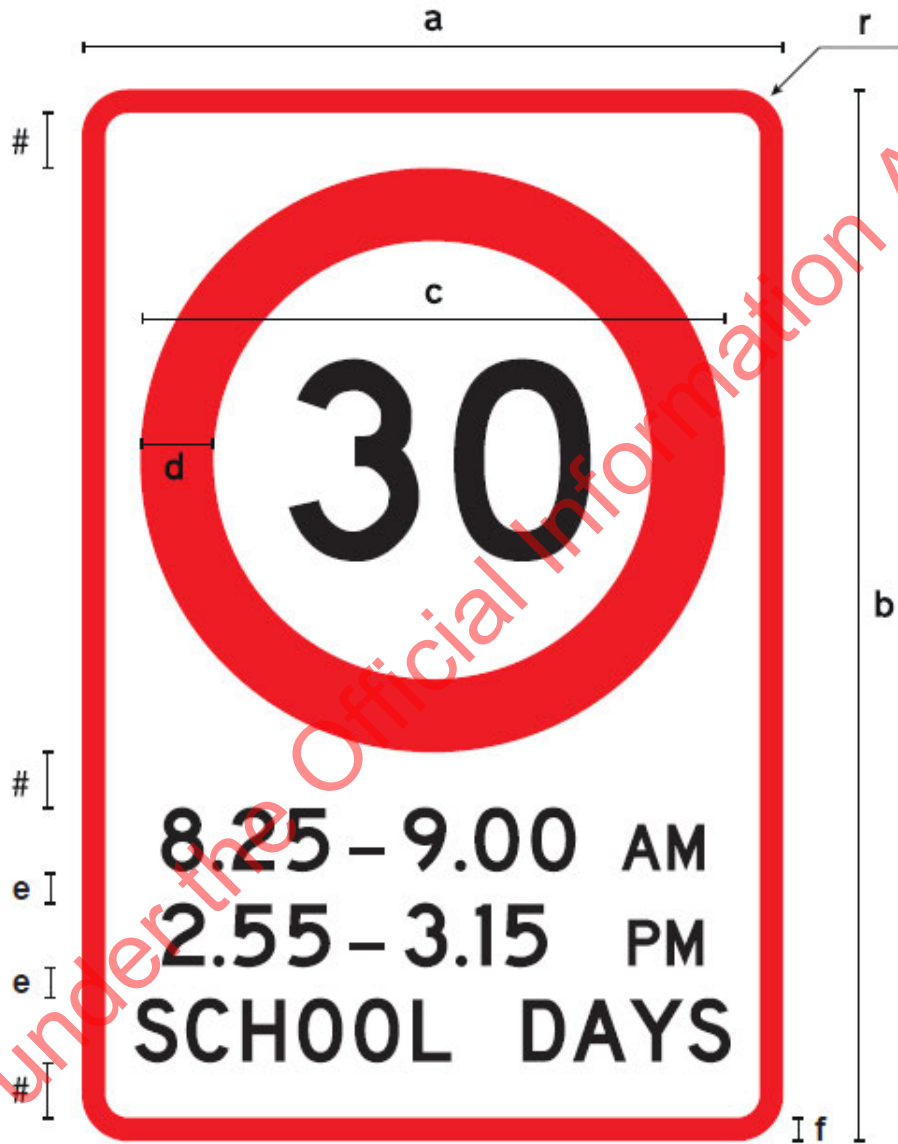
Signage installation

7. There are many different sign fixing systems and methods. For example, signs can be installed on power poles and road controlling authorities have their own preferred fixing systems. These systems and methods are often detailed in standard specifications developed by road controlling authorities³.
8. Sign installation requirements are also set out in government issued guidance, namely:
 - a. *NZTA P24:2020 Specification for Permanent Traffic Signs* provides specifications for the manufacture of traffic signs and their supports,
 - b. clause 7.2 of the *Traffic Control Devices Manual: General requirements for signs*.

Appendix 2: Alternative School Static Variable Speed Limit Sign Designs and Existing Static Variable Speed Limit Sign

School Static Variable Speed Sign - Version A

Minimum specifications for speed environments where operating speeds are less than 60km/h (key measurements in millimetres):



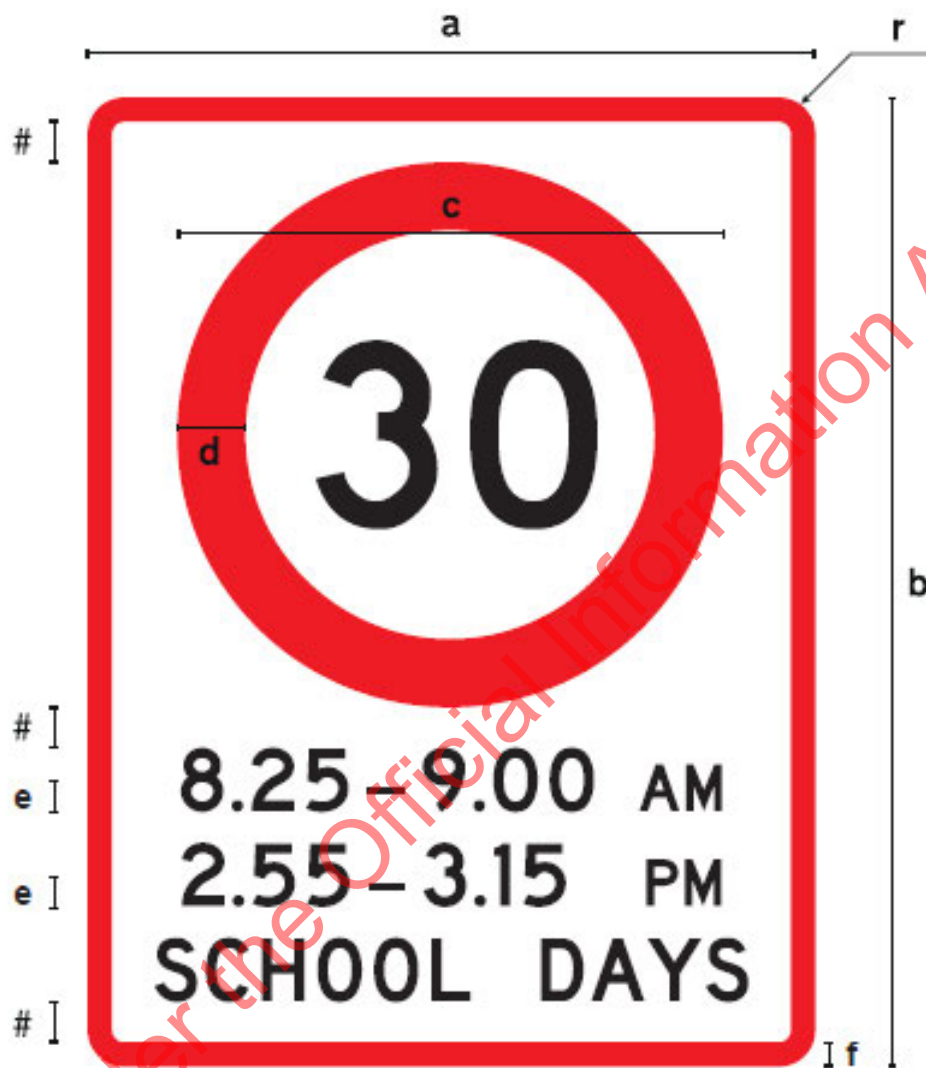
Series D 80 / 60

- a = 900
- b = 1350
- c = 750
- d = 94
- e = 40
- f = 30
- r = 60

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School Static Variable Speed Sign – Version B

Minimum specifications for speed environments where operating speeds are 60km/h or more (key measurements in millimetres):



Series D 105 / 75

a = 1200
 b = 1600
 c = 900
 d = 112
 e = 53
 f = 40
 r = 60

