



Government of South Australia

Department for Transport,
Energy and Infrastructure

Managing Public Use of Freeway Emergency Access Gates and Median Crossovers

Operational Instruction 8.1



TRAFFIC MANAGEMENT Operational Instructions

Managing Public Use of Freeway Emergency Access Gates and Median Crossovers - 8.1

AMENDMENT RECORD

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1. Scope

The aim of this policy is to establish guidelines for controlling public use of emergency access gates and emergency median crossovers on the South Eastern Freeway. It provides for the installation of regulatory signs as well as guidelines for establishing new or assessing the existing emergency access facilities.

2. Objectives

The objectives of the policy is to reduce the risk of accidents occurring on the freeway by preventing or prohibiting the general public from using emergency access gates and crossovers on freeways.

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3. Background

The policy results from concerns raised by the Eastern Region, Metropolitan Region and the South Australian Police. In particular the Police have concerns with the increase in unauthorised use of the emergency median crossovers by private and transport vehicles regularly performing U-turns. The Regions are also concerned with public causing damage to emergency access gates, chains and locks along verge boundary fencelines to gain illegal access onto the freeway.

It has been reported that a number of drivers of both cars and trucks are using the median crossovers and verge access gates as a regular means of gaining access to the freeway. This practice creates a significant hazard to other freeway users as slow moving and turning vehicles movements are introduced into what is expected to be a high speed express route.

Pedestrian gates along the freeway also pose a hazard by allowing pedestrians, cyclists and even animals onto the freeway reserve. Therefore access through these gates should also be controlled.

Many of the access gates and crossovers have been established after the construction of the freeway was complete. They have been installed/developed on an as needed, or as developed through continued use basis, resulting in a rather ad-hoc placement of emergency access facilities.

3.1 Legalities

Currently the Road Traffic Act, 1961 and its Regulations do not prohibit the use of crossovers by the general public. These crossovers are considered to be the same as other median openings and as such can be used to perform U-turns unless prohibited through a regulatory sign.

Performing U-turns (or other turning movements) on the freeway, by crossing the dividing strip between the carriageways is currently prohibited under the Road Traffic Regulations, 1996.

Access to the freeway other than by vehicle along the interchange ramps is prohibited under the Highways Act, 1926 provisions for controlled access roads. Section 30e of the Act prohibits entry or exit from a controlled access road at any place other than a place provided or approved by the Commissioner. It also

prohibits people from constructing their own access points or damaging any existing fences or barriers erected by the Commissioner.

Note: Legal Enforcement

An amendments has been made to the Road Traffic Regulations in order to define a "maintenance" vehicle for the purpose of the Road Traffic Act. This new Regulation was made on 5 February 1998, and will come into operations four months from this date (4 June 1998). Until the Regulation comes into operation the use the word "maintenance" used on the exclusion plate R9-SA54 has no legal definition. This means that it is illegal for road maintenance vehicles to use the gates or crossovers if the regulatory signs are installed prior to this date.

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4. General

4.1 Emergency Access Gates

This size or type of gates to be used is not addressed in this policy.

Although it is necessary for all emergency access gates and emergency crossovers along the freeway to be keyed alike to ensure effective access by all emergency services, nevertheless it is necessary for Departmental Regional staff (responsible for the maintenance management of these emergency access points) to regularly remind all emergency services of their obligation to ensure strict management control with regard to the distribution of emergency access keys, in the interest of the safety of freeway travellers.

4.2 Emergency Median Crossovers

AS1742.8-1990 discourages the use of excess signage or identification at emergency median crossovers, presumably in an effort to play down the existence of crossovers and avoid use by the general public through a lack of awareness of their locations.

However should the use of these median openings become a concern AS1742.8 recommends the use of regulatory signage in the form of a "no U-turn" treatment at the crossovers. This approach is to be followed in this policy.

5. Recommended Actions to Minimise Unauthorised Use

Measures to be taken to discourage and prohibit the public from using emergency access facilities include:

- clearly identifying vehicle access gates to the freeway reserve as for emergency vehicles only.
- providing regulatory signage on emergency access gates to enable policing of unauthorised access to and from the freeway.
- providing regulatory signs to prohibit U-turns at median crossovers by the general public, where necessary.
- undertaking regular road maintenance patrol inspections of emergency access gates including chains, padlocks (or other access closure devices) and

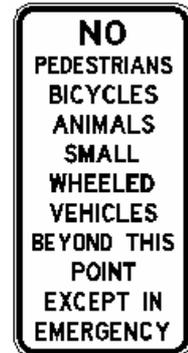
associated signage to ensure that they are adequately performing their function with any necessary repairs undertaken within the time periods specified in the road maintenance contract for the freeway.

- assessing the condition of access gates and locations of emergency crossovers with the aim of removing or relocating either facility to remove attractive alternative access routes between the freeway and the surrounding area.

Implementation of these actions are discussed in the following sections.

5.1 Regulatory Signs

Regulatory signs are to be installed on all access gates and those median crossovers which are used by the public. Emergency and freeway road maintenance vehicles will be excluded from any regulatory requirements placed on the general public prohibiting the use of access gates and crossovers.



R6-SA101

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5.1.1 Pedestrian Emergency Access Gates

The following sign shall be attached to all pedestrian gates on the side of the gate which faces outside the freeway reserve.

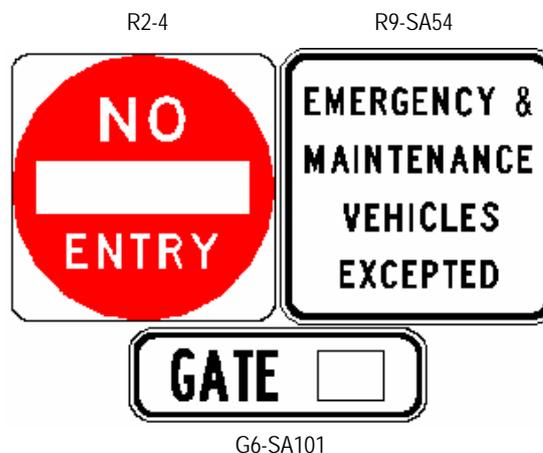
- a R6-SA101 sign complemented by,
- a G6-SA101S sign, with the legend "GATE" and the gate number, to be used primarily for asset management purposes, installed on both sides of the gate.

5.1.2 Vehicle Emergency Access Gates

The following signs shall be attached on both sides of all emergency vehicle access gates along the freeway reserve.

- a R2-4A "no entry" sign complemented by,
- a R9-SA54A, "EMERGENCY & MAINTENANCE VEHICLES EXCEPTED" sign.
- a G6-SA101A sign, with the legend "GATE" and the gate number, to be used primarily for asset management purposes.

The signs shall be arranged as shown below.



5.1.3 Emergency Median Crossovers

Emergency Median Crossovers should be kept as inconspicuous as possible, and a minimal amount of signing should be used at these locations. Where there are no instances of regular public use of the median crossover, it is recommended that only the GE9-23 sign be installed on the left side of the carriageway at a distance of 100 m prior to the crossover.



GE9-23

To further assist drivers of emergency vehicles to locate the crossovers, particularly at night, a guide post with a reflector may be placed at the crossover location as shown in Figure 1. In areas of the freeway where guide posts are used for delineation, dual reflectors may be used on the guide post marking the crossover location. The colour of the reflector facing towards oncoming traffic shall be white.



R9-SA54

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Guide posts used along the freeway shall be a flexible type.

Where unauthorised use of the emergency median crossovers has been reported, either by another authority (SA Police) or the general public, or where the Region is aware of the public use of these facilities, regulatory signs may be installed. The need to install regulatory controls at crossovers should be confirmed in liaison between the Region and the SA Police.

Regulatory signs that shall be used are:

- a R2-5B, No U-Turn sign in conjunction with,
- a R9-SA54B “EMERGENCY & MAINTENANCE VEHICLES EXCEPTED” plate.

These signs shall be placed on the right side of the carriageway, at a distance of 5 m to 15 m prior to the crossover location as shown in Figure 1.

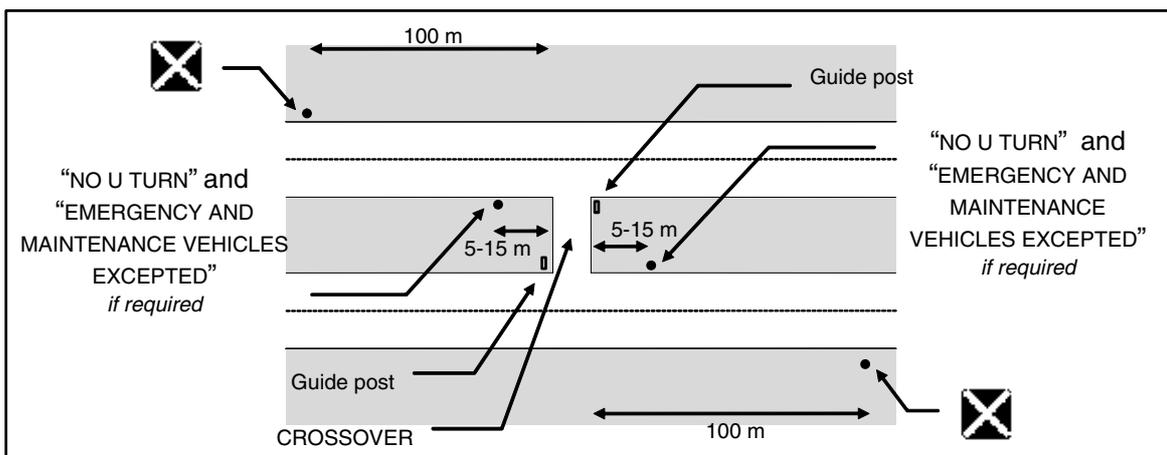


Figure 1: Layout of Crossover Signs

Important: As with all regulatory signs, these sign shall be shown on the appropriate traffic control drawings and shall be approved in the prescribed manner for traffic control devices.

5.2 Condition of Gates and Fences

Gates and fences should be maintained so that;

- the gate provides an effective physical barrier to vehicles and pedestrians attempting to enter or leave the freeway reserve without authorisation.
- damaged gates which allow unrestricted access to the freeway reserve are repaired or replaced as soon as practical.
- the gate is kept locked and gates found unlocked should be closed and secured as soon as practical.

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This policy does not attempt to address the specifics of the maintenance process as the above objectives are reflected and defined in the Maintenance Activity Specification RB, *Boundary Fence Repair*.

Continual removal or vandalism of locks and chains by the public to gain access to the freeway should be investigated by the Region with the aim of determining the reasons for this occurrence. Any re-mediation works or actions will need to address the underlying reason for the unauthorised access, rather than provide a temporary solution at the gate.

5.2.1 Gate Numbering System for Emergency Access Gates

A gate numbering system, primarily for Asset Management purposes, is to be established with the following conventions:

- Numbering will occur in ascending order beginning from RRD 0.0.
- Odd numbers will be assigned to the left side of the carriageway.
- Even numbers will be assigned to the right side of the carriageway.

A single plate, G6-SA101, may be attached below the regulatory signs which will have the legend "GATE XX". Both vehicle and pedestrian access gates will be numbered. The gate number shall correspond to those listed in the supplementary document "Emergency Access Facilities - South Eastern Freeway". A map entitled "South-Eastern Freeway, Emergency Access", has been produced in conjunction with this Operational Instruction showing the location of emergency access gates and crossovers. (At this stage this map is available from Statewide Operational Coordination Group on request).

5.3 Infrastructure Changes to Restrict Unauthorised Use

Instances may arise where access gates and/or median crossings are continuing to be used by the public, irrespective of the regulatory controls which have been put in place. Reasons for this use will be varied, but usually is a result of the access gate and/or crossover locations being convenient for drivers to take short cuts onto and off of the freeway.

In the interest of road user safety the Department's efforts to discourage public use of the emergency access facilities should not be limited to providing regulatory

signs. With continual unauthorised use it may be necessary to consider the removal or relocation of either access gates or crossovers.

Any investigation by a Region into the need to remove, relocate or even establish new alternative facilities, should be undertaken in consultation with the local emergency services and possibly Council. Council involvement would be important if changes to access gate locations are being considered.

The following sections provide some guidelines for consideration when seeking a solution to unauthorised use by changing the location of existing emergency access facilities.

5.3.1 Location and Condition of Median Crossovers

The following guidelines shall be taken into consideration when:

- a) assessing the need to retain an existing median crossover where unauthorised use has become a problem
- b) evaluating the need for a new median crossover.
- c) assessing the condition and suitability of an existing crossover.

Guidelines for Crossovers:

- Emergency median crossovers do not need to be sealed but shall provide an all weather trafficable surface for emergency vehicles (heavy vehicles). Where the crossover is not in a safe and trafficable condition, the emergency marker signs should be removed until the surface is returned to a reasonable state.
- The width of the crossover needs to be suitable for a single emergency vehicle (ie, single fire unit). Generally a width of 3 m to 4 m will be sufficient. If in the opinion of the Region, widening and sealing of the crossover apron is required for maintenance purposes the area treated should be kept to a minimum. Deceleration lanes should not be provided.
- Unless there is a need (established in liaison with Emergency Services or, dictated by road alignment limitations) for a crossover within 2 km of an interchange consideration should be given to removing these crossovers.
- A minimum spacing of 5 km should be maintained between median crossovers, to ensure that emergency vehicles have an opportunity to cross the dividing strip with no more than 4 to 5 minutes travel.
- Closely spaced crossovers (those spaced less than 1.5 km apart) suggests a level of redundancy, in which case one of the crossovers could be removed. The redundancy of crossovers should be established by the Region in consultation with the local emergency services.
- If a median crossover is removed, landscaping should be carried out to prevent vehicles from easily crossing the median. For example, the establishment of a shallow drain, undulations, or planting of vegetation may be sufficient to deter motorists cutting across the median. Selection of an appropriate treatment will be the Region's responsibility, in conjunction with other relevant Departmental Sections (ie, Road and Landscape Design). Care must be taken to avoid introducing a potential hazard to errant vehicles.

- Closure of median crossovers with the use of rigid barriers (ie, gates) shall not be undertaken due to the introduction of potentially significant hazards to errant vehicles.
- Other frangible or flexible type barriers (ie, flexible guideposts) should be avoided for all but short term closures due to dangerous surface conditions of the crossover. There is a risk of causing damage to emergency vehicles by requiring them to negotiate flexible barriers and as such they shall not be considered as a long term solution. The long term effectiveness of a flexible barrier would diminish as unauthorised users became aware of their frangible nature. It would also lead to an increase in maintenance effort to maintain such a barrier.

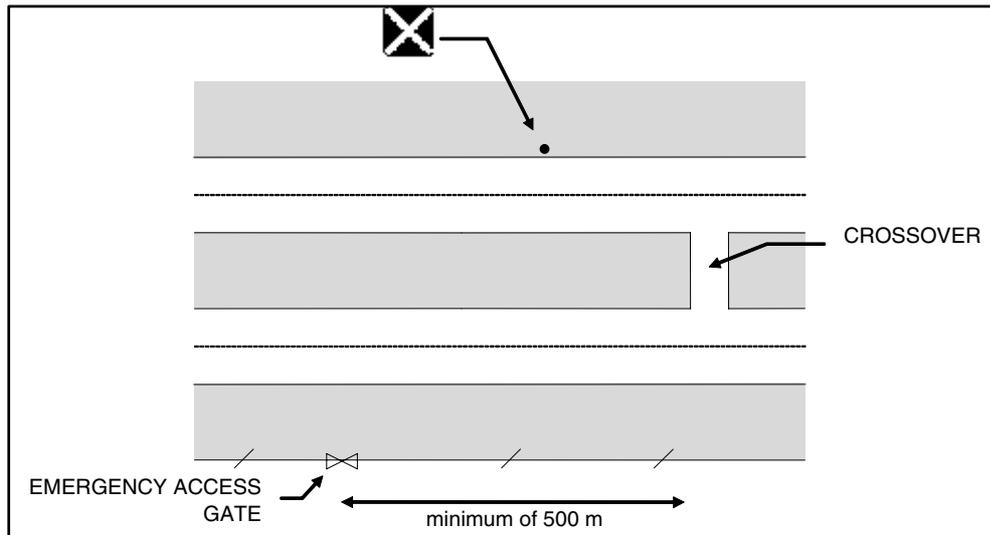
5.3.2 Relative Location of Emergency Access Gates and Crossovers

The situation where an access gate and median crossover are in alignment, or are in close proximity, provides an attractive and convenient alternative access to the freeway for some members of the public. Where this occurs and there is evidence that these facilities are being used by the public, consideration should be given to relocating or removing either the crossover or the gate.

The existing access gates, to a large extent, have been located to take advantage of the nearby local road network or provide a key access location to recreation parks. Therefore it will generally be preferable to consider relocation or removal of crossovers in preference to the access gates. However, this should be determined by the Region in liaison with emergency services and Council. If relocation is being considered the preferred arrangement of gate and median crossover is a staggered arrangement. The strategic value of the access to emergency services will need to be established before determining the actual arrangement of the stagger. The preferred arrangement is be as shown in Figure 2, which attempts to prevent unauthorised vehicles from entering the freeway and making right turns.

The alternative stagger may be required if the location of gate and crossover has a strategic value to emergency services for entry to, or exit from the freeway.

The distance separating the crossover and access gate should be great enough to deter drivers from travelling against the flow of traffic or from accelerating and slowing in a short space of time to reach a median crossover from an access gate. It is recommended that a minimum distance of 500 m be used.



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Figure 2: Preferred stagger of access gate and crossover

6. References

AS1742.2-1996, "Manual of Uniform Traffic Control Devices, Part 2: Traffic control devices for general use".

AS1742.8-1990, "Manual of Uniform Traffic Control Devices, Part 8: Freeways".

Appendix A : South Eastern Freeway

This appendix is recorded locations of emergency access gates and median crossovers for RN4500, South Eastern Freeway.

This data is correct as of 15 December 1998.

a) Recorded Emergency Access Gates Locations – Left Carriageway (RN4500)

Road Running Distance	Gate Number	Description
	1	
	3	Entrance to Crafers Depot – Construction
9.9	5	Epiphany Place
10.5	7	Fairview Road
11.2	9	Stirling East
11.4	11	Footway, Achland Ave
11.6	13	Ackland Ave
12.4	15	Telstra compound
12.4	17	Telstra compound, Old Mount Barker Road
12.5	19	ped. Only, North corner Stirling East bridge
13.3	21	Nara Road
14.4	23	Golflinks Road
14.7	25	Mt George Cons. Park
14.8	27	Mt George Cons. Park
15.4	29	ped. Only
15.7	31	Fox Hill Road
18.2	33	Onkaparinga Road
20.1	35	ped. Only, Taminga Road
22.7	37	Auricht Road
25.1	39	Nixon Road (CFS)
26.2	41	Totness Park
36.2	43	Petwood Road
43.3	45	
57.6	47	railway line

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Note: Gate numbers 1 and 3 have been intentionally left unallocated in order to accommodate any additional gates introduced as part of the construction of the new section of Freeway.

b) Recorded Emergency Access Gates Locations – Right Carriageway (RN4500)

Road Running Distance	Gate Number	Description
	2	
	4	
9.7	6	vehicle/maintenance access
10.6	8	pedestrian gate only, Howard Drive
10.7	10	pedestrian gate only, Howard Drive
11.3	12	Braemer Tce, Stirling entry ramp
14.6	14	Arbury Park Road
16.2	16	Pedestrian gate, . only
17.3	18	Onkaparinga Road, Bridgewater Rail line
18.0	20	Pedestrian gate, Onkaparinga Road
18.3	22	Cichon Road
20.5	24	Pedestrian gate, River Road
20.6	26	Pedestrian gate, River Road
22.1	28	Pedestrian gate, Pine Ave
22.2	30	Pedestrian gate, Pine Ave
22.9	32	Paechtown Road (CFS)
25.0	34	Paechtown Road (CFS)
26.4	36	Totness Park
28.2	38	Childs Road
31.2	40	Baldhills Road
33.8	42	Cattle Route Road
34.5	44	stockpile site
35.8	46	vehicle gate
40.10	48	Cattle Route Road
59.20	50	access through culverts

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Note: Gate numbers 2 and 4 have been intentionally left unallocated in order to accommodate any additional gates introduced as part of the construction of the new section of Freeway.

c) Recorded Crossover and Interchange Locations (RN 4500)

Road Running Distance	Feature
8.10	Start Freeway
11.50	Stirling Interchange
12.50	Crossover
14.50	Crossover
15.00	Crossover
16.00	Bridgewater Interchange)
17.50	Crossover
19.30	Crossover
20.40	Crossover
22.90	Crossover
25.00	Crossover
27.40	Mt Barker Interchange
28.00	Crossover
30.90	Crossover
36.10	Crossover
40.70	Crossover
43.20	Crossover
48.00	Callington Interchange
48.70	Crossover
50.40	Crossover
51.90	Crossover
52.00	Crossover
53.50	Crossover
57.10	Crossover
57.60	Crossover
58.80	Crossover
60.40	Crossover
62.70	Crossover
64.20	Crossover
65.50	Crossover
66.30	Whitehill Interchange
68.40	Crossover
70.50	Crossover
71.80	Swanport Interchange
73.00	End Freeway