

Specifications for the Construction of a Standard Vehicle Crossover

General

- a) This specification is made pursuant to the provisions of Section 357 and Section 358 of the Local Government Act 1995 and as may be amended.
- b) The construction of vehicle crossovers shall be executed under the supervision of and to the direction of the Director of Technical Services or his authorised representative.
- c) All materials used in the construction of vehicle crossovers shall be in accordance with the standard specification of Council and any materials used which are inferior to those specified or as directed by the Director of Technical Services shall be liable to rejection and replacement without any payment of compensation being made to the Contractor for the supply, delivery, laying, placing, finishing, removal or disposal of anything rejected as directed by Director of Technical Services.

Note: The Contractor shall be known as the person responsible for the construction of the vehicle crossover.

- d) Protection of the works and the public shall be provided and maintained by the Contractor who shall supply and keep supplied as directed all the necessary signs, barricades, road warning lamps, temporary bridges or any other thing necessary or as may be directed by the Director of Technical Services to provide for the safety of the public generally and to protect the works from damage for the minimum period of three days following completion of the works and failure to provide or keep provided shall render the contractor liable under Section 377 of the Local Government Act 1995 or as amended. All such protective equipment shall comply with the relevant S.A.A code.
- e) Any damage which may occur to any Council facilities or private property or the vehicle crossover itself during the course of the works or which may subsequently become evident from the operation thereof shall be the sole responsibility of the Contractor who shall be held responsible for the repair, replacement, legal claims, liability or any other thing which may arise from the carrying out of any such works.

Location

- a) The vehicle crossover shall be positioned as directed by the Director of Technical Services. The vehicle crossover shall be located in such a position as to not cause interference with public utilities.
- b) All crossovers shall be at right angles (90 deg) to the carriageway kerb.
- c) Crossovers shall be no closer than 1500mm from the side boundary.
- d) No crossover shall be constructed closer than 6.5m from the property line intersection point at a corner site, nor shall it infringe upon any part of a truncation corner cut off.
- e) Where two residential vehicle crossovers abut one to another, they may be combined, subject to the Director of Technical Services' written approval and subject to the combined width not exceeding 8.0m. The two crossovers shall be separated by a pedestrian refuge of 3.0m minimum width unless specifically approved by the Director of Technical Services.
- f) All commercial vehicle crossovers shall be separated one from another by a pedestrian refuge of 3.0m minimum width except for service stations which shall have a pedestrian refuge of 4.5m minimum width or as designed by the Director of Technical Services.

Alignment and Profile

- a) The turn-out radii shall be not less than 1500mm and no portion of the radius is to extend beyond the frontage limits of the property it serves.
- b) The vehicle crossover finished level at the property line boundary is to be a minimum of 100mm above the crown of the road or 75mm above the top of the kerb. Any variation to these heights to be determined by the Director of Technical Services.
- c) Where kerbing exists, the level of the vehicle crossover, at a distance of 1500mm behind the kerb, shall be at the same level as the top of the kerb, or 125mm above the road gutter whichever is greater.
- d) Where barrier or semi-barrier kerbing is in place at the vehicle crossover, the length of kerbing equal to the appropriate entrance width of the vehicle crossover shall be removed in all cases. The existing in-situ kerbing shall be cut with a concrete cutting saw or existing pre-cast kerbing should be removed without damage to pavement or remaining kerbing.
- e) Where mountable kerbing is in place at the vehicle crossover, the length of kerbing equal to the appropriate entrance width of the vehicle crossover shall be removed only if:
 - i. The mountable kerbing is cracked in one or more places;
 - ii. The average depth between the road surface and the front of the existing kerbing exceeds 25mm, where the final hot mix surface has been place;
 - iii. It is a commercial crossover.

Brick/Block Construction

a) Preparation

The existing ground shall be boxed out and shaped to the required dimensions and levels. Compaction of the sub-grade shall be carried out using overlapping passes of a vibrating plate compactor. The excavation shall be made to provide a firm base, free from depressions or soft spots or any deleterious material.

b) Edge Restraint

A firm edge restraint preventing lateral movement of paving units at the edges is required. The edge restraint must be in the form of pre-cast or in-situ concrete, or a timber strip.

c) Sand Bedding

The bedding material must be a well graded concreting bricklayer's sand which when compacted will have a uniform thickness of 50mm

d) Bricks/Blocks Construction – Residential

All paving bricks/blocks used should have a minimum thickness of 65mm and be full depth homogenous units of solid construction or alternatively be of non-solid construction with a minimum characteristic breaking load of 5kn. Bricks/blocks used shall be full depth units of solid construction. i.e. no block "splits".

e) Bricks/Block Construction – Commercial

Commercial vehicle crossovers should have a minimum thickness of 80mm high performance pavers laid in a herringbone pattern on a 150mm compacted bed of gravel, limestone or road base, with a 20mm layer of sand and then the pavers.

f) Laying of Bricks/Blocks

Paving bricks/blocks should be placed with 2mm-4mm gaps between adjacent units, maintaining correct jointing alignment but without pre-compaction of the sand bedding layer. Gaps at the pavement edge adjacent to the edge restraints are to be neatly filled by cutting bricks/blocks to size with a guillotine or bolster for concrete units, or a diamond saw for clay bricks/blocks.

g) Compaction and Joint Filling

After laying, the paving units are to be immediately compacted and brought to level by three passes of a vibrating plate compactor. Prior to compaction the sand for joint filling is to be broomed over the surface and into the joints. Excess sand is to be removed. (Washed single sized sand is required).

h) Kerbing

When in-situ mountable kerbing is provided paving bricks/blocks are to be laid level with the top of such kerb.

Concrete Construction

a) Preparation

The existing ground shall be boxed out and shaped to the required dimensions and levels. Compaction of the sub-grade shall be carried out using overlapping passes of a vibrating plate compactor. The excavation shall be made to provide a firm base, free from depressions or soft spots or any deleterious material.

b) Steel Reinforcement

- i. Residential vehicle crossovers – F42 steel mesh
- ii. Commercial vehicle crossovers – F62 steel mesh

c) Concrete

All concrete used in works shall develop a minimum compressive strength of 20Mpa at 28 days and shall be composed of a mixture of screenings, sand and cement with a maximum slump of 80mm. Please note: minimum allowable aggregate size for crossovers is 10mm. All concrete shall have an approved high early strength additive to give rapid hardening where directed by the Director of Technical Services.

d) Excavation

The excavation for the crossover bed shall be taken out to the lines, levels and grad set by the Director of Technical Services and all the excavation shall be executed cleanly and efficiently to provide for a consolidated sound base free from depressions and/or any deleterious material to give a minimum 100mm depth of concrete pavement for residential vehicle crossovers or a minimum depth of 150mm for commercial vehicle crossovers.

e) Placing Concrete

The base shall be thoroughly and evenly moistened prior to placing concrete. Concrete shall be evenly placed to a depth specified and shovelled into position continuously and spaded especially at all edges to give maximum density. No break in operations shall be permitted from time of placing to finishing except as authorised by the Director of Technical Services.

Note: The Contractor shall notify the Director of Technical Services 24 hours before pouring of concrete. No concrete is to be poured until the excavation has been inspected and approved.

f) Finishing

The finishing shall be obtained by screeding to the correct levels and broom or wood float finished to match any existing concrete finish and to provide a no-slip dense surface free of any depressions, marks, honeycomb sections or accumulation of fine dust accretions liable to cause excessive wear. The final surface finish shall be to the entire satisfaction of the Director of Technical Services who shall reserve the right to require the removal of or the correction of any surface deficiencies or finish.

Note: A street trowel finish is not permitted on any surface of a vehicle crossover.

g) Jointing

Construction joints shall be made in the form of plain dummy joints and finished with an approved jointing tool and in the positions as shown on the plan. The distance whether laterally or longitudinally between contraction joints shall not exceed 2m. Expansion joints shall be full depth joints 14mm wide and shall be filled with bitumen impregnate caneite or similar approved material and located at the property line and at junctions where kerbing has been removed.

h) Tolerances

Thickness	100mm + 25mm
Width	+/- 10mm
Surface	+ 5mm
Alignment	+50mm

Construction – Other Materials

Construction of crossovers from other materials shall only be considered for commercial properties.

Opening for Traffic

The crossover can be opened for traffic:

- i. Brick Paving – as soon as the concrete forming the edge restraints is set.
- ii. Concrete – after 24 hours.

General

Reinstatement of Footpaths

Where concrete in-situ paths are removed to permit the construction of a crossover, they shall be cut with a concrete saw and if necessary, removed to the contraction or expansion joint nearest to the crossover. The footpath shall be "tied" into the crossover by filling with concrete to a minimum thickness of 100mm. The reinstated footpath and the vehicle crossover shall be separated by an expansion joint as specified.

Reinstatement of Verge

It shall be the Contractor's responsibility to backfill any excavation or depression in the adjacent verge with clean sand free of any stone or other deleterious material.

Contractor's Responsibilities

The Contractor shall be responsible for, but not limited to, the following:

- i. Removal and disposal of all surplus material from the site of the works and leaving the site in a clean, tidy and safe condition at all times.
- ii. Removal of formwork without damage to concrete or pavement or existing kerbing.
- iii. The repair to any damage to public utilities, services or any other thing damaged during the course of the works.
- iv. Liaison with ratepayers to provide access and notification of intention to commence works.
- v. The protection of concrete surface from rain, pedestrian and vehicular traffic etc
- vi. To give at least 23 hours notice to the Technical Services Department so that a formwork inspection can be done.

Completion

- i. On completion the site is to be left in a clean, tidy condition to the satisfaction of the Director of Technical Services.
- ii. Reinstatement must be made to kerbing, footpaths or bituminous road surfaces damaged during the crossover construction. Any concrete must be removed from the road surface.
- iii. The area must be cleared of debris, bitumen and concrete products, etc on completion of the works.
- iv. Any special requirements placed on the construction or location of a crossover by the Director of Technical Services or authorised deputy must be adhered to.

Council Contribution

- a) On completion of a crossover, a written application on the appropriate form should be made to the Shire of Murray for a contribution and a final inspection. A delivery docket or supply docket stating strength and quantity of materials used must be attached to the application. The contribution of Council shall be 50% of a standard single vehicle crossover constructed in concrete. The subsidy will only be made to vehicle crossovers that conform to Council's specifications or are previously approved, in writing, otherwise.
- b) This application should be made as soon as possible after construction of the crossover.
- c) Only one crossover per lot will be contributed to by Council.
- d) Where crossovers are constructed all repairs and maintenance shall be the responsibility of the property owner excluding reinstatement after any road upgrading by Council.

If your vehicle crossover cannot meet these specifications please contact the Technical Services Department on 9531 7762 to discuss alternatives **before construction**.

NOTES

1. ALL CROSSOVERS MUST BE CONSTRUCTED AS SHOWN. A 100mm THICK POLYETHYLENE FOAM PACKER SHALL BE POSITIONED IN EACH EXPANSION JOINT.
2. 50mm CONTRACTION JOINTS TO BE PROVIDED AT A MAXIMUM SPACING OF 1.50m.
3. WHERE MOUNTABLE KERB EXIST'S A 12mm EXPANSION JOINT IS TO BE PROVIDED BETWEEN THE BACK OF KERB AND THE CROSSOVER.
4. CONCRETE CROSSOVER TO HAVE A BROOM FINISH WITH EXPANSION JOINTS RECESSED AND LIGHTER KERS TO HAVE SMOOTH FINISH.
5. PRIVATELY CONSTRUCTED CONCRETE CROSSOVERS MUST BE INSPECTED ¹⁾ PRIOR TO POURING CONCRETE, ²⁾ PRIOR TO LAYING BRICKS BUT PRIOR TO LAYING BRICKS.
6. ALL MEASUREMENTS IN MILLIMETRES.
7. SHOULD ANY TREE, POWER POLE, STREETLIGHT POLE, SIGN, PT. MANHOLE OR OTHER OBSTACLE BE ENCOUNTERED DURING CONSTRUCTION OF THE CROSSING THE APPLICANT SHALL BE LIABLE FOR THE COSTS ASSOCIATED WITH THE REMOVAL OR ALTERATION OF SAME.
8. TRENCH GRATING SHALL BE CONSTRUCTED BY THE APPLICANT IF CONSIDERED NECESSARY TO CUT OFF WATER ENTERING THE PROPERTY, OR TO PREVENT ROAD FROM INTRUSIVE VEHICLES.
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CROSSOVER SPECIFICATIONS FOR MOUNTABLE KERBED ROADS

CROSSOVER SPECIFICATIONS FOR BARRIER OR SEMI-MOUNTABLE KERBED ROADS

CROSSOVER SPECIFICATIONS FOR UNKERBED ROADS

RURAL CROSSOVER

