

2. EXCAVATION AND SUB-GRADE PREPARATION—CONTINUED

2.4. Where in the opinion of Council's nominated officer the subgrade is incapable of withstanding the anticipated loads, a sub-grade base comprising 200mm compacted thickness of rockbase shall be placed prior to the base course. The sub-base shall be compacted to 95% MDD.

3. ASPHALT

3.1. Asphaltic concrete (AC) crossovers shall comprise a compacted subgrade ("Hotmix"), crushed rock base course and AC Seal. The sides of the crossover shall be retained by timber or concrete kerbing as detailed on the drawings.

3.2. The base course shall comprise a layer of sound crushed rock ("rock base") supplied from an approved quarry and compacted to the finished thickness shown on the drawings.

The base shall be placed so as not to disturb the subgrade, then graded to the required shape and levels, compacted to produce a layer of uniform thickness and density. The density shall be not less than 95% MDD.

3.3. The seal coat shall comprise of a minimum 20mm (+5-0) thickness of 5mm nominal mix AC for residential crossovers, and 25mm (+5-0) of 7mm nominal mix ACT for commercial and industrial crossovers. The AC shall be applied over a tack coat of emulsion applied at a rate of 0.8 litres/m². AC shall be applied evenly and rolled with a smooth drum vibrating roller to attain a smooth dense uniform surface.

4. IN-SITU CONCRETE

4.1. An in-situ concrete crossover shall consist of a slab of 100mm thick concrete placed on compact subgrade in accordance with specifications.

4.2. Concrete strength shall be N25 in accordance with Australian Standard 3600.

4. IN-SITU CONCRETE—continued

Maximum aggregate size shall be 20mm and slump shall not exceed 80mm.

4.3. Industrial slabs may be reinforced with F-62 mesh located centrally within the slab thickness.

4.4. Expansion joints shall be placed at the boundaries and between the slab and the kerb (see drawings). The expansion joint shall be the depth of the slab filled with approved rubber plastic foam and sealed with butyl mastic.

4.5. Contraction joints shall consist of 12mm grooves tooled into the surface of the slab at 2.5 metric centres.

4.6. The surface of the slab shall be screeded correct levels, then broom finished to provide dense uniform non-slip surface. The surface should be free of depressions, jointing marked honey-combed sections or dusty sections which may cause excessive wear.

On steep crossovers the Council's Officer must direct that the surface be grooved in order to provide sufficient non-slip properties.

5. BRICK OR BLOCK PAVING

5.1. Paving bricks shall be clay brick or concrete pavers from an approved manufacturer

5.2. Pavers shall be laid on a prepared base comprising of rock base overlaid with a bedding layer of clean course sand, in accordance with the following:

Brick pavers: 75mm minimum thickness on 125mm compacted sub-base

Concrete pavers: 60mm minimum thickness on 150mm compacted sub-base.

Bedding sand to be 25mm thick.

5.3. Pavers shall be laid in a herringbone pattern, stretcher-bond or similar. Where non-interlocking bonds are utilised the crossover must have a concrete kerb (Refer to drawing).

5.4. Brick or block paved crossing places shall be provided with edge restraint as shown on the drawings.



CROSSOVERS



The information within this brochure contains limited information and is intended as a guide only. The Shire of Northam disclaims any liability for damages sustained by any person acting on the basis of this information.

ENQUIRIES AND INFORMATION

For any further information on crossovers you can

Telephone the Works Department on (08) 9621 2263

Write to the CEO at PO Box 613, NORTHAM WA 6401

Visit the Council Offices at 395 Fitzgerald Street Northam.

MAINTENANCE RESPONSIBILITY

Council does not maintain crossovers.

It is the responsibility of the property owner to maintain their crossover.

What is a Cross-Over?

A crossover is the access from the boundary of a property to the road edge. It is within the road reserve and because of this, special conditions apply to crossover construction and maintenance.

APPROVAL PROCESS

1. To construct a crossover within the Northam townsite in the Shire of Northam you are required to complete an application form and contact Council's Technical Officer prior to work commencing on your crossover. Main Roads approval is required for crossovers to Great Eastern highway, Toodyay, York and Goomalling Roads.
2. Your crossover should be constructed by an approved Shire of Northam Contractor at your own cost. Specifications are attached.
3. Residential crossovers may be constructed in asphalt ("Hotmix"), in-situ concrete, clay brick paving, or concrete block paving. Colouring is permitted for full width crossovers and concrete aprons, and these include black, red, tan, brown or chocolate.
4. Approval to construct a crossover will be issued by the Shire of Northam. Redundant crossovers should be removed, and the footpath is required to be re-instated to abut a newly constructed crossover.
5. It is imperative that your contractor contacts authorities including (but not limited to) the Water Corporation, Western Power and Telstra. The Shire of Northam will not be responsible for any damage or interference caused to service authorities installations, cables, etcetera.
6. Completed works should be inspected by Council's Technical Officer prior to you making final payment to the contractor.

VEHICLE CROSSOVER CONSTRUCTION FORMS can be obtained from the Shire of Northam Office or calling (08) 9622 6113.

CONSTRUCTION SUBSIDY

1. Council will provide up to 50% of the total cost of construction of a concrete or brickpave only crossover, to a maximum of \$500. An asphalt crossover is not eligible for Council subsidy.
2. To receive the subsidy, you must present an invoice or receipt for the work, and it will only be paid after work is inspected and approved by Council's Technical Officer.

PLEASE MAKE SURE TO:

1. Contact the Council Offices before you start planning or construction to obtain specifications.
2. Remove any existing crossover (redundant crossover) before starting a new crossover. This must be done at your expense.
3. Check with Council's Parks and Gardens Supervisor for approval before removing any verge trees and major root systems. Any costs incurred in this regard will be the responsibility of the contractor or the applicant.
4. Street trees and drainage side entry pits require a clearance of 1.0 metre and Western Power poles require a clearance of 0.5 metres.
5. If you want to construct a brick paved crossover within a barrier kerbed street, the Shire of Northam requires that a concrete apron is also constructed. Bricks may extend to the rear of existing mountable kerb. Crossovers in a non-kerbed street will require a piped culvert to be constructed with headwalls at your expense.

2. EXCAVATION AND SUB-GRADE PREPARATION

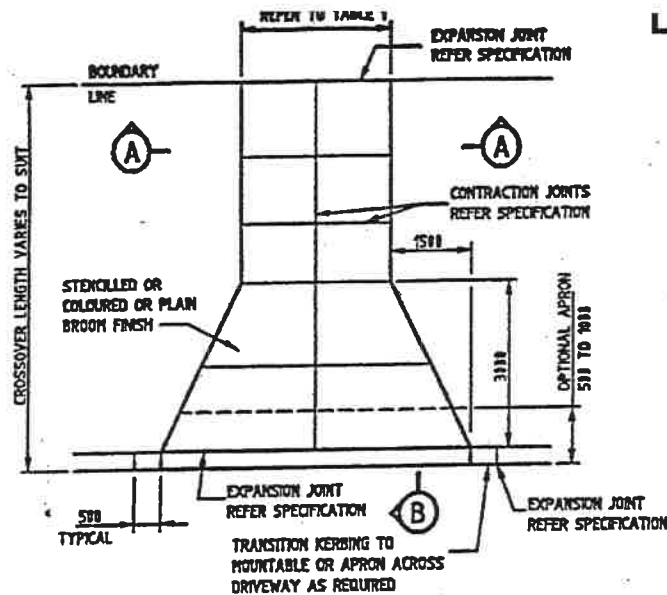
- 2.1. The subject for the crossing place shall be cut to the lines and grades shown on the standard drawings.
- 2.2. All grass, roots, other organic matter, clay or any other matter shall be removed for a depth of not less than 300mm below the finished subgrade level.
- 2.3. the subgrade shall be prepared and compacted so as to achieve a uniform compaction over the whole of the crossing place.

SHIRE OF NORTHAM SPECIFICATIONS FOR STANDARD VEHICLE CROSSOVERS

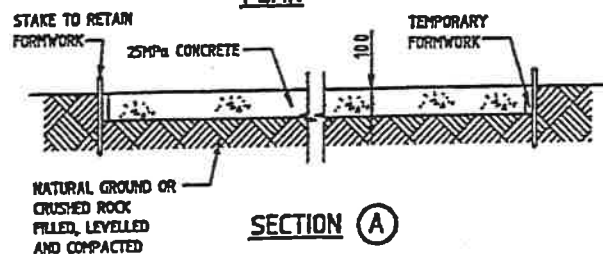
I. GENERAL

- 1.1. This specification is made pursuant to the Shire of Northam Policy relating to Vehicular Crossings;
- 1.2. Vehicle Crossovers shall be constructed under the supervision of, and to the direction of, the Councils nominated Officer;
- 1.3. Protection of the works and the public shall be the responsibility of the owner who shall supply and install all necessary warning signs, barriers, lights, temporary bridges or any other thing necessary or as may be directed by Council's Technical Officer. Failure to do so shall constitute an offence under Section 377 of the Local Government Act.
- 1.4. Any damage which may occur to Council's facilities or to private property during the course of the works or arising from them shall be the sole responsibility of the owner, who shall be held responsible for the replacement or report of such property, and for any other claim or liability arising out of the works.
- 1.5. Crossover abutting an open drain will require a piped culvert and headwalls as part of the works. The owner shall contact Council's Technical Officer to determine the size of pipe. All pipes and headwalls shall be precast concrete from an approved supplier and be a minimum of 225mm in diameter.
- 1.6. **Council installs Piped Crossovers:**
Council supplies a subsidy of 50% for a first piped crossover (\$1,100)

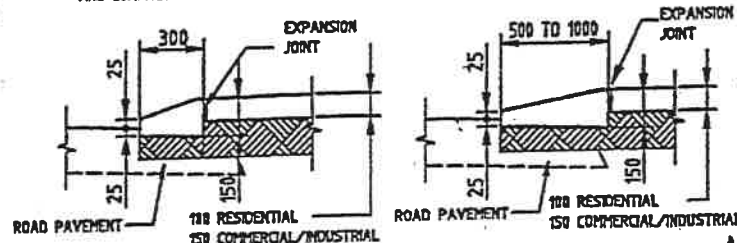
Additional crossovers required will be installed at full cost to the owner.



PLAN



SECTION A



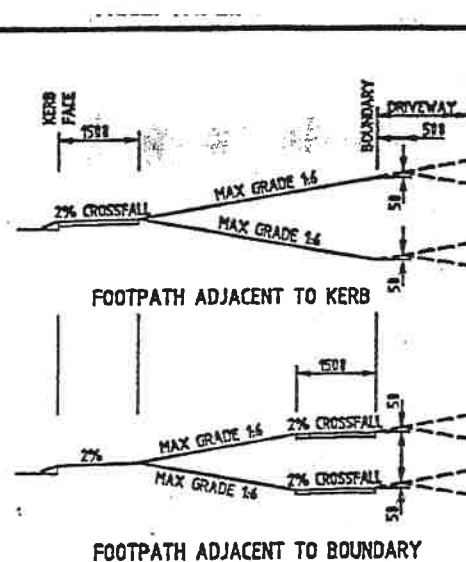
MOUNTABLE KERBING OPTION

SECTION B

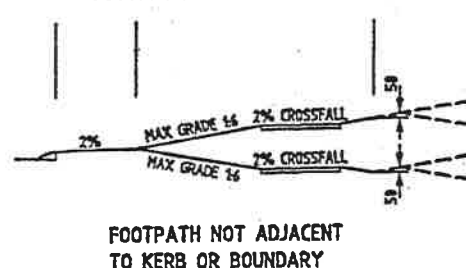
CONCRETE APRON OPTION

CONCRETE CROSSOVER DETAIL

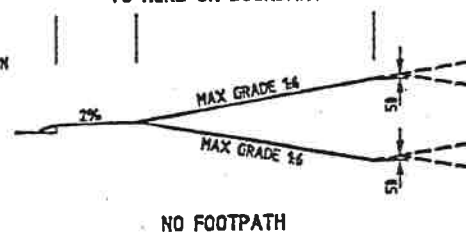
- SEE REVERSE FOR SPECIFICATIONS
- CROSSOVER MUST BE INSPECTED PRIOR TO CONSTRUCTION



FOOTPATH ADJACENT TO BOUNDARY



FOOTPATH NOT ADJACENT TO KERB OR BOUNDARY



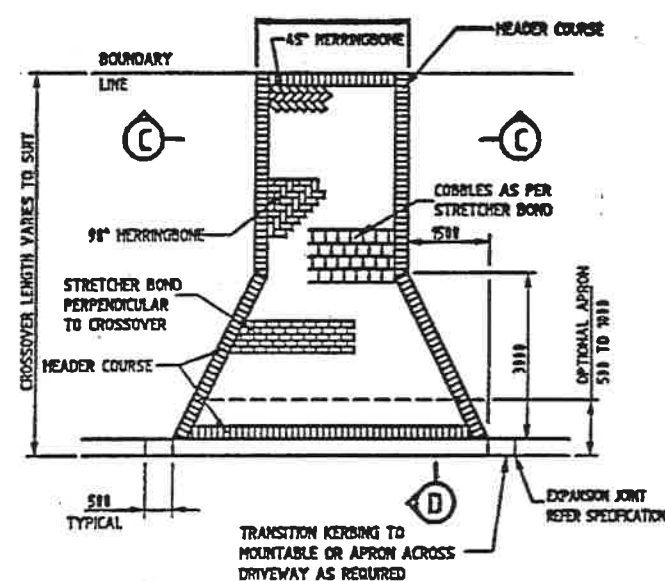
NO FOOTPATH

ALL DIMENSIONS ARE IN MILLIMETRES

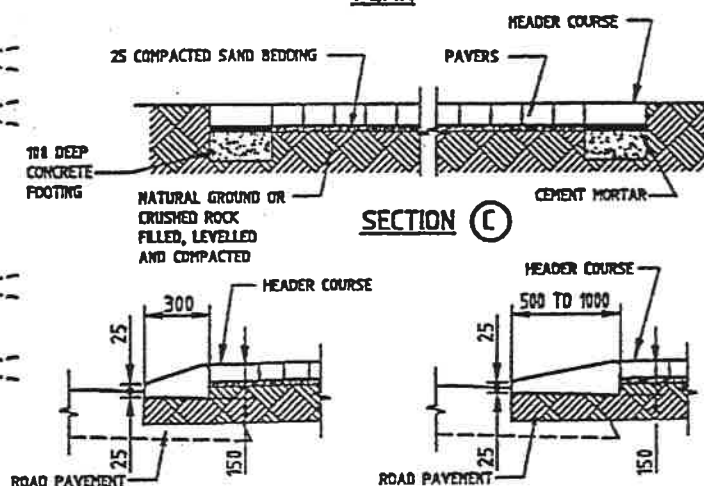
TABLE 1

CROSSOVER CLASS	MIN WIDTH AT BOUNDARY	MAX WIDTH AT BOUNDARY	MIN PAVEMENT DEPTH	MIN CONCRETE DEPTH
RESIDENTIAL	2800	5500	200	100
INDUSTRIAL/COMMERCIAL	2800	7500 *	300	150 - F62 REQ

* WIDTH < 7500 SUBJECT TO COUNCIL APPROVAL



PLAN



SECTION C

MOUNTABLE KERBING OPTION

CONCRETE APRON OPTION

SECTION D

BRICK PAVED CROSSOVER DETAIL

TOWN OF NORTHAM

APPROVED
DATE 14/10/98

ENGINEERING SERVICES

APPLICATION FOR VEHICLE CROSSOVER CONSTRUCTION

This application ***MUST*** be submitted and approved before construction can begin.

CROSSOVER LOCATION	STREET NUMBER		LOT NUMBER		STREET NAME SUBURB
APPLICANT(s) NAME					
ADDRESS					
TELEPHONE				MOBILE	
FACSIMILE				EMAIL	

BUILDING APPROVAL	LICENCE NUMBER		APPLICATION NUMBER	
-------------------	----------------	--	--------------------	--

CROSSOVER LOCATION	Enclose a site diagram showing the position of the crossover.
--------------------	---

TYPE OF CONSTRUCTION – PLEASE SPECIFY			
CONCRETE	BRICK PAVING	*ASPHALT	OTHER PLEASE SPECIFY

**Please note that Asphalt is not subject to a Council subsidy*

ACCEPTANCE

I hereby accept the conditions as set out in the Shire of Northam Policy relating to Crossovers.

Council must be advised before any works are commenced so that arrangements can be made for inspection by Council's nominated officer. Council will provide up to 50% of the total cost of construction of a concrete or brickpaving crossover to a maximum of \$600, excludes Asphalt.

On approval and completion of the works please supply a receipt for labour/materials for any rebate applicable. Please note that no payment will be processed without a receipt supplied.

Signature:..... Date:.....

OFFICE USE ONLY

INSPECTED BY -		DATE	
APPROVED FOR PAYMENT	<input type="checkbox"/> YES <input type="checkbox"/> NO	SIGN	
AMOUNT APPROVED	\$	GL CODE - 1123822020	