

CROSSOVER SPECIFICATION - BITUMEN

Specifications for the construction of sprayed bitumen crossings in road reserves from the constructed road to the property boundary

BITUMEN SPECIFICATION

1 Excavation

Excavation for crossing bed shall be taken out to the levels, line and grades as given for the site and all excavation shall be executed cleanly and efficiently to provide for a firm, sound base free of depressions or soft spots or any deleterious materials.

2 The crossing shall be kerbed with heavy duty concrete precast kerbing both sides, placed flush with the crossover surface.

3 Pavement shall be 225mm compacted thickness using suitably graded laterite gravel, water bound and compacted to 95% modified A.A.S.H.O standard.

4 Two (2) coat Bitumen Emulsion Seal – surface to be lightly dampened.

1st Coat Emulsion application rate – 1.4L/m²
 10mm aggregate application rate – 1 t/75m²

2nd Coat Emulsion application rate – L/ m²
 10mm aggregate application rate – 1 t/75 m²

Each coat to be rolled with steel wheeled roller of minimum two (2) tonne capacity – five (5) passes.

Final coat to be rolled with minimum two (2) tonne rubber tyred roller, fifteen (15) passes.

5 Hot Bitumen Seal

Surface to be primed with 50/50 (50% R90 bitumen, 50% kerosene), application rate, 0.5 L/ m².

Primer to be left for a minimum of one (1) hour prior to sealing.

Seal application rate – 1.3 L/ m²
10mm aggregate application rate 1 t/75 m²

Surface to be rolled with minimum two (2) tonne steel wheeled roller, five (5) passes followed by a minimum of two (2) tonne rubber tyred roller fifteen (15) passes.

6 *Return of Kerbing*

The kerbing shall be removed as necessary and neatly joined to the flush kerbing (item 2) with in-situ concrete.

7 *Crossing Splay*

In Streets the wings of the crossing shall be as shown on the plan, a wider splay may be approved.

8 *Dimensions*

8.1 *Residential Crossings*

- a) Minimum width at property line – 3 metres
- b) Maximum width at property line - 6 metres
- c) Where two residential crossing abut one to the other, they may be combined, provided the combined width does not exceed 6 metres.
- d) Where combined width would exceed 6 metres the two crossings should be separated by a pedestrian refuge island of 1.5 metre width unless specifically approved by the Director of Engineering Services.

8.2 *Commercial Crossings*

- a) Minimum width at property line – 3 metres
- b) Maximum width at property line – 9 metres
- c) All crossings shall be separated from the other by a pedestrian refuge island of 3 metre minimum width.

8.3 *Standard Size Crossings*

3 metre width by 6.5 metre vere length plus 1.35m² for each wing, total area 22.2 m² is a standard crossing.

8.4 *Location*

Vehicle crossings, including wings shall not be constructed closer than 6 metres from the property line intersection point at corner sites.

Where there is difficulty I locating a crossing on a property due to potential traffic problems, the Engineering Department should be contacted.

Crossing must be constructed at right angles to the road. In cul-de-sacs and at some other locations, approval may be given for variation of this requirement. See Drawing 08/03/01.

- 9.1 Existing in-situ kerbing should be cut with a concrete cutting saw. Existing precast kerbing should be removed without damage to pavement or remaining kerbing.
- 9.2 Reinstatement must be made to kerbing, concrete paving or bituminous road surfaces damaged during the crossing construction.
- 9.3 The area must be cleared of debris, bitumen and concrete products etc, on completion of works.
- 9.4 The public shall be protected by erection of adequate signs, barricades, flashing warning lamps, temporary bridges or any other necessary safety items.
- 9.5 Any special requirement placed on the construction or location of a crossover by the Director of Engineering Services must be complied with.

CROSSOVER SPECIFICATION - BRICK & BLOCK PAVING

Specifications for the construction of paved vehicle crossings in road reserves from the constructed road to the property boundary

BRICK AND/OR BLOCK PAVING SPECIFICATION

The following specification is for a residential crossover only. Location of the access shall be according to the approved building plans and drawing 08/08/03, unless the Director of Engineering Services prior to construction works commencing agrees to a variation in writing. In the event of a query advice should be sought from the Engineering Department. See drawing 08/03/03.

1 *Excavation*

Excavation for the crossing bed shall be taken out to the levels line and grades as required for the site. All excavation shall be executed cleanly and efficiently to provide for a firm, sound base free from depressions, soft spots or any deleterious materials.

2 *Base Course*

The base course material shall consist of either crushed limestone or crushed rock with a maximum practical size of 50mm. Alternatively, laterite gravel may be used to give a compacted thickness of not less than 100mm at a minimum of 95% MMD. The base course must extend not less than 100mm past the edge restraint foundation.

3 *Edge Restraint*

An edge restraint shall be provided. A 150 x 150 mm concrete foundation strip to the perimeter of the crossover. The restraint may be formed from paving bricks / blocks or precast / insitu concrete to finish flush with the adjoining verge and crossover. Ensure there is no trip hazard created.

The restraint shall be haunched up using a graded sharp sand / cement mix of ratio 1:4 on the outer perimeter at an angle of 45 degrees allowing a distance for the adjacent verge treatment to abut the restraint. The haunching up shall be placed in such a manner as to create adhesion to the concrete foundation in order to provide adequate lateral resistance.

4 *Kerbing*

All kerbing to the crossover frontage shall be removed and reformed as per drawing 08/03/03 unless otherwise agreed by the Director of Engineering Services

5 *Bedding Layer*

Shall be a well-graded, sharp sand (river sand or metal dust) passing a 5mm sieve and free from deleterious materials or impurities. This sand should have uniform moisture content at the time of placing. Do not use brickies sand.

The bedding layer shall be a minimum of 30mm loose screeded thickness, to provide a compacted layer of not less than 20mm and not exceeding 50mm in thickness. Place in two layers compacting each with several passes of a plate compactor and screed off to give the required level. The use of screeding rails or tubes is recommended for this task.

6 *Paving Units*

Units can be either brick or block but must not be less than 60mm in thickness for a domestic drive. It is recommended that a herringbone pattern be adopted for vehicle pavements when using brick pavers. The paving units shall be layed onto the freshly screeded bed with a gap of approximately 2 mm between units (some units may have built in spacers).

Any part bricks shall be cut neatly with a bolster, hydraulic guillotine or masonry saw. When the work area is complete, the units must be compacted immediately to the compressed level using a plate compactor. Several passes will be necessary in order to achieve the required result. If the units are delicate and chip easily a hard rubber base plate should be attached to the plate compactor base.

Joints in the paving shall be filled with fine sand, which is to be brushed in to the joints. It is important that both units and sand are very dry when this operation is carried out. Excess sand can be removed when all joints are filled.

7 *Culvert*

In the case of the crossover traversing a watercourse or table drain a culvert under the access will be required. If this is the case further advice shall be sought from the Engineering Services Department.

8 *Completion*

Upon completion of the works, all surplus materials shall be removed and debris cleared away. The Engineering Services Department must be contacted in order that a final inspection may be carried out.

CROSSOVER SPECIFICATION - CONCRETE

Specifications for the construction of concrete vehicle crossings in road reserves from the constructed road to the property boundary

CONCRETE SPECIFICATION

1 Concrete

All concrete used in the works shall develop a *minimum compressive strength of 25 MPA at 28 days* and shall be composed of a mixture of crushed metal screenings, sand and cement to give the strength specified *with a maximum slump of 50mm*.

2 Excavation

The excavation for crossing bed shall be taken out to the levels, line and grades as given for the site and all excavation shall be executed cleanly and efficiently to provide for a firm, sound base free of depressions or soft spots or any deleterious materials to give a *minimum of 100mm depth of concrete pavement for residential crossings* and a *minimum depth of 150mm for commercial crossings*. See drawing 08/03/02.

3 Placing Concrete

The base shall be thoroughly and evenly compacted and then evenly moistened with water (not saturated) immediately prior to placing of concrete.

Concrete shall be evenly placed to the depth specified and shovelled into position continuously and spaded especially at all edges to give maximum density. There shall be no break in operations from time of placing to finishing.

4 Finishing

The finish shall be obtained by screeding to correct levels and *wood floating* to provide a non-slip, dense surface free of any depressions, float marks, jointing marks, honeycomb sections, or accumulation of fine dusty accretions liable to cause excessive surface wear. The final surface finish shall be to the entire satisfaction of the Director of Engineering Services who shall reserve the right to require the removal of or the correction of any surface deficiencies or finish.

Where required, due to grade, and or where directed, any portion of the surface may be required to be treated with a multi grooved grooving tool with grooving to be at 225mm centres worked parallel to the kerb line to minimise any slipping effect.

**STEEL TROWEL FINISH IS NOT PERMITTED ON
ANY SURFACE OF A VEHICLE CROSSING**

Jointing

Joints shall be made in the form of plain dummy construction joints with an approved jointing tool as follows:

- 5.1 In line with and parallel to:
 - a) The property line junction;
 - b) The edge of footpath construction or future footpath line, both back and front edge line of path;
 - c) The kerb line face across the crossing.
- 5.2 The centre of the crossing at 90° to the street kerblines and at not more than 2.0 m apart.
- 5.3 An approved edging tool to be used on all sides (edges).
- 5.4 All dummy joints shall only be cut to the *depth* of the grooving tool, a minimum of 10 mm.

6**Return of Kerbing**

The kerbing shall match the existing kerb and be returned to the kerb line at each side of the crossing. The kerbing shall be constructed so as to be monolithic with the crossing.

7**Curing of Concrete**

The crossing shall be cured by wetting the surface after it has hardened for a period of 24 hours.

8**Crossing Splay**

In residential streets, the wings of the crossing shall be as shown on the plan. A wider splay may be approved on application.

9**Dimensions****9.1 Residential Crossings**

- a) Minimum width at property line - 3m
- b) Maximum width at property line - 6m
- c) Where two residential crossings abut one another, they may be combined providing the combined width does not exceed 6m.
- d) Where the combined width would exceed 6.0m, the two crossings should be separated by a pedestrian refuge island of 1.5m width unless approved by the Director of Engineering Services.

9.2 Commercial Crossings

- a) Minimum width at property line – 3m
- b) Maximum width at property line – 9m
- c) All crossings shall be separated one from the other by a pedestrian refuse island of 3m minimum width.

9.3 Standard Size Crossings

3m width by 6.5m verge length plus 1.35m² for each wing, total area 22.2 m², is a standard crossing.

9.4 Location

Vehicle crossings, including wings, shall not be constructed closer than 6m from the property line intersection point at corner sites.

Where there is difficulty in locating a crossing on a property due to potential traffic problems, the Engineering Section should be contacted.

Crossing must be constructed at right angles to the road. In cul-de-sacs, and at some other locations, approval may be given for variation of this requirement.

10 General

- 10.1 Existing in-situ kerbing should be cut with a concrete cutting saw or existing precast kerbing should be removed without damage to pavement or remaining kerbing.
- 10.2 Reinstatement must be made to kerbing, concrete paving or bituminous road surfaces damaged during the crossing construction. Any concrete must be totally removed from the road surface.
- 10.3 The area must be cleared of debris, bitumen and concrete products etc. on completion of works.
- 10.4 The public shall be protected by erection of adequate signs, barricades, flashing warning lamps, temporary bridges or any other necessary safety items.
- 10.5 Any special requirement placed on the construction or location of a crossover by the Director of Engineering Services must be complied with.
- 10.6 Adequate measures must be taken to avoid damage to services and other infrastructure prior to commencement.

SHIRE OF NORTHAMPTON**CROSSOVER APPLICATION**

LOT NO: _____

HOUSE NO: _____

STREET: _____

LOCALITY: _____

OWNERS NAME: _____

TELEPHONE NO: _____

POSTAL ADDRESS: _____

Dear Sir/Madam

I intend to construct a crossover to the above Lot.

The proposed crossover will be _____ metres wide and constructed from Concrete/Hot Mix Sprayed Bitumen/Brick Paving/Gravel* (underline applicable material)

I understand that the crossover is to be constructed to comply with the latest Shire of Northampton Specifications and must be completed within six months of this application in order to receive a Subsidy.

I declare that I am the owner of the property as stated in the application and that I have not made a previous claim for a crossover at this address.

The subsidy payment (if applicable) is to be paid to the account as detailed below by Electronic Transfer.

(PLEASE PRINT CLEARLY)

NAME: _____

BANK: _____

BRANCH NAME: _____

BSB NO: _____

ACCOUNT NO: _____

Remittance Advice Required: YES/NO (Please circle option)

SIGNATURE OF APPLICANT: _____ DATE: _____

OFFICE USE ONLY

POST CONSTRUCTION SITE INSPECTION BY _____ DATE _____

PASSED: YES/NO DUE TO _____

AUTHORISED FOR SUBSIDY PAYMENT

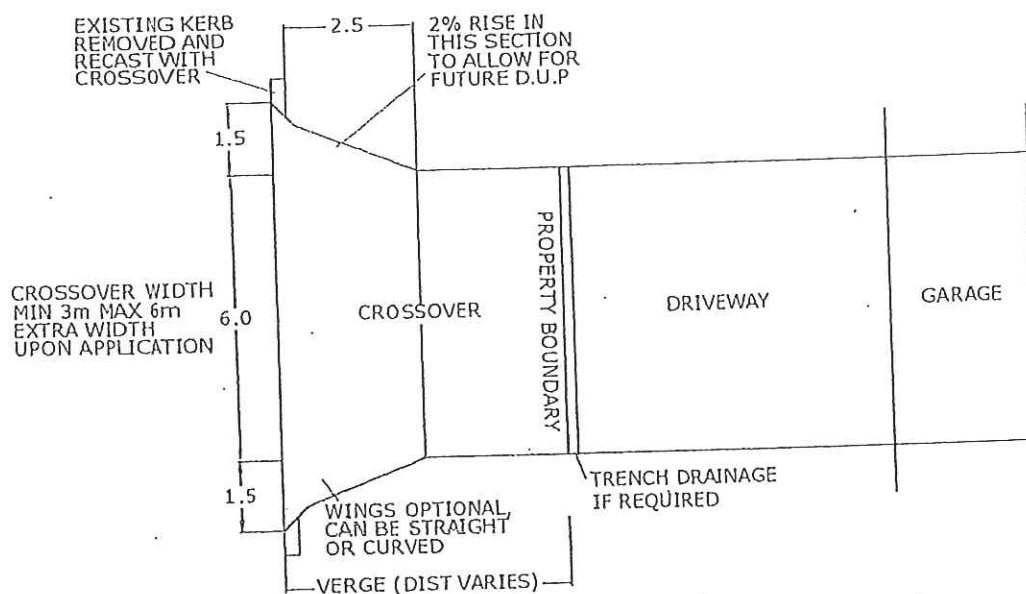
SUBSIDY: _____

SIGNED: _____

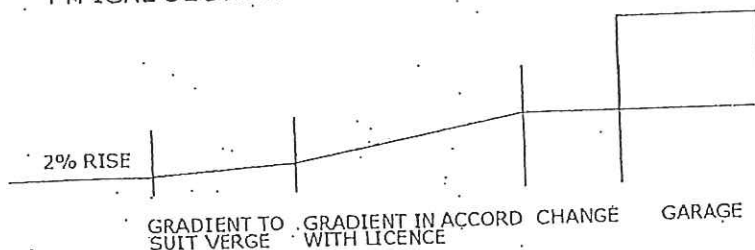
SUBSIDY PAID: AMOUNT: _____ DATE: _____

SIGNED: _____

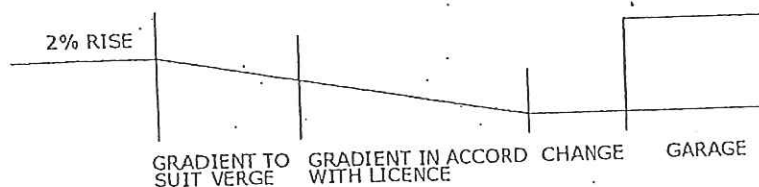
TYPICAL PLAN - CROSSOVER



TYPICAL SECTION - PROPERTY HIGHER THAN ROAD LEVEL



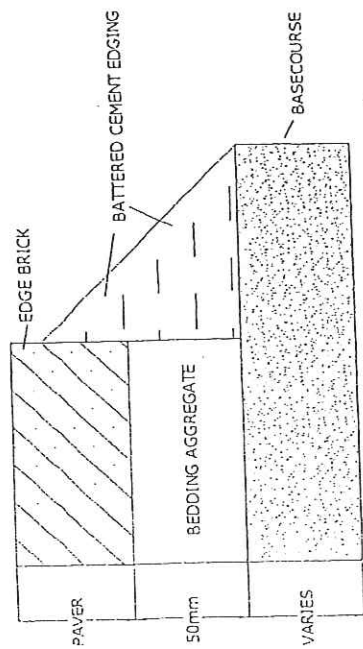
TYPICAL SECTION - PROPERTY LOWER THAN ROAD LEVEL



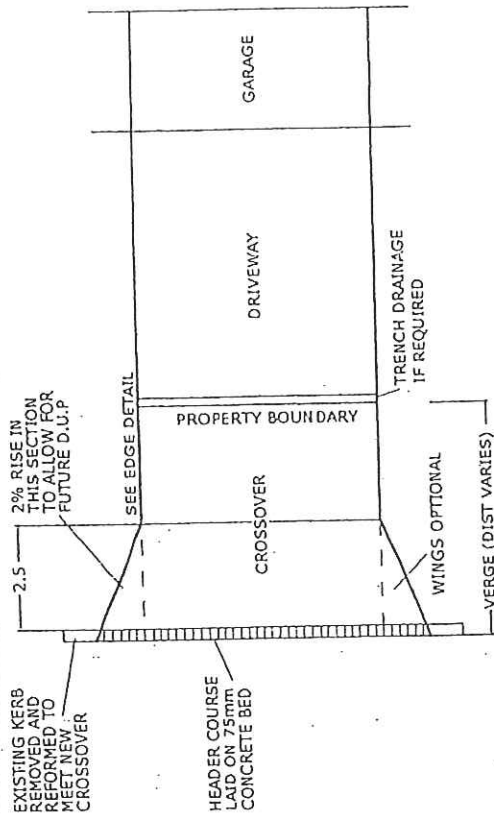
PLEASE NOTE :

1. VERGES MUST BE FLUSH WITH YOUR DRIVEWAY
2. NO PART OF CROSSOVER TO EXTEND INTO FRONTAGE OF ADJACENT LOTS
3. CONCRETE FINISH TO BE 'BROOMED, 'NON SLIP'
4. DO NOT DISTURB ROAD DRAINAGE

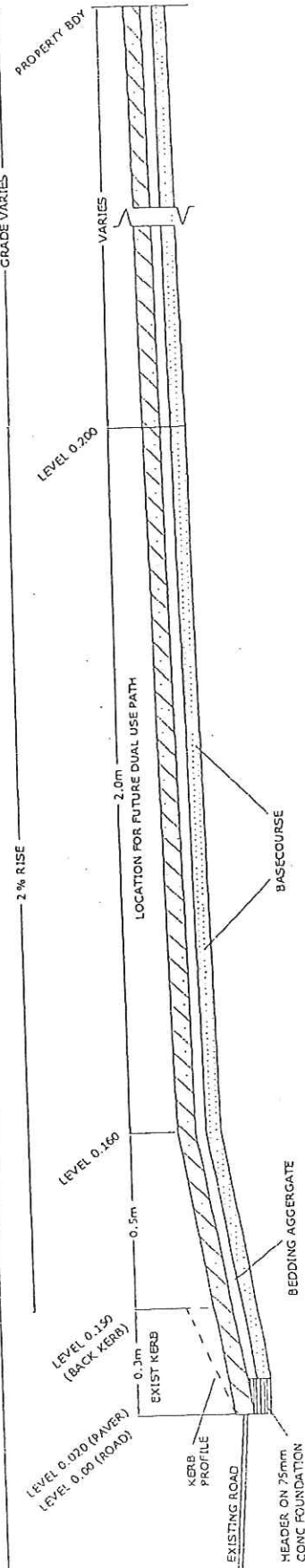
DRAWN BY L.E	CHECKED BY	APPROVED BY DATE	FILENAME	DATE	SCALE N.T.S	
CROSSOVER DETAILS			08/03/01			
			EDITION	SHEET		



EDGE DETAIL

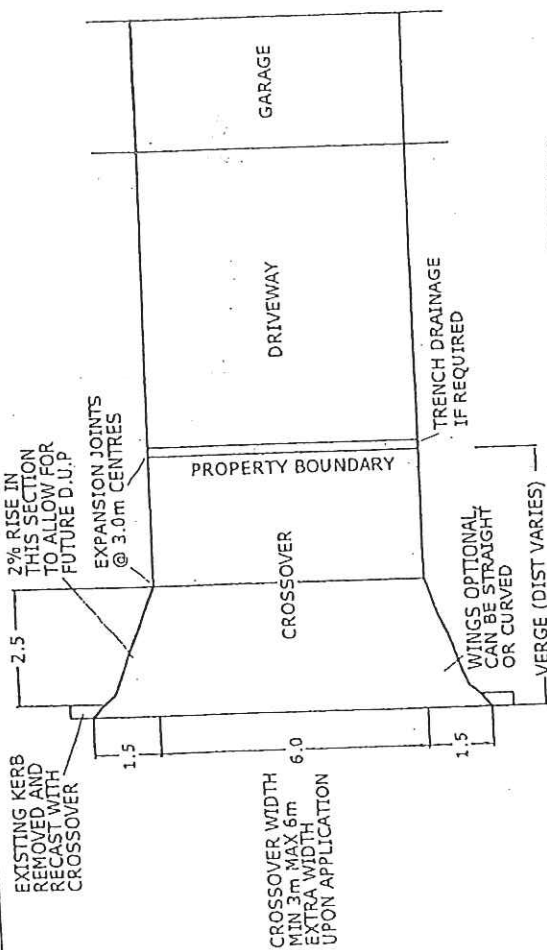


TYPICAL PLAN - BRICK PAVED CROSSOVER

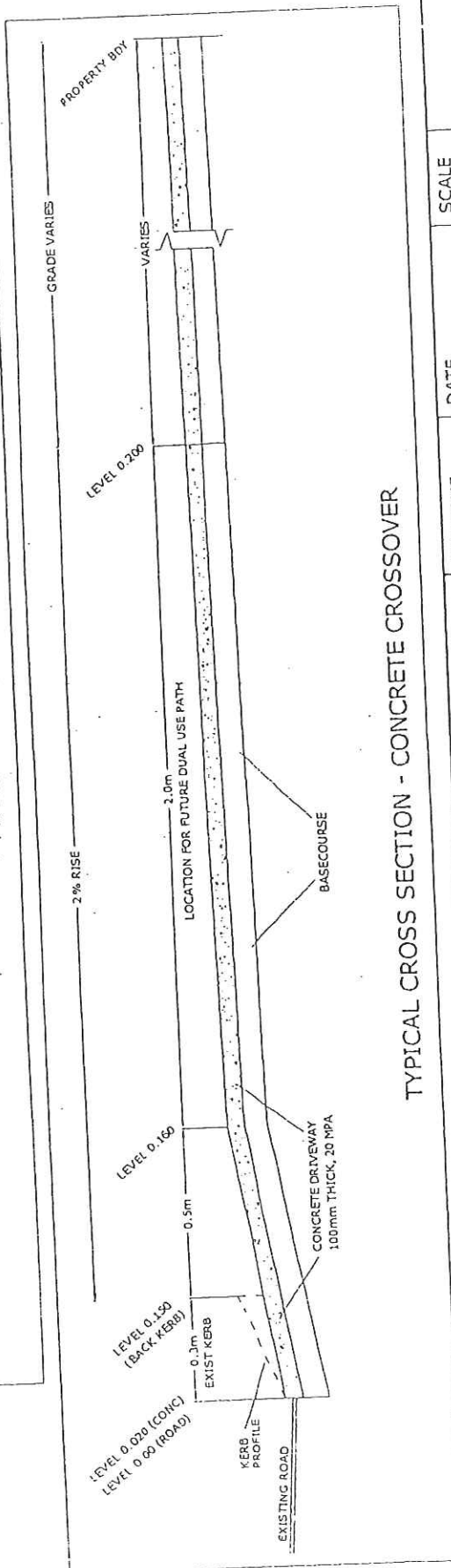


TYPICAL CROSS SECTION - BRICK PAVED CROSSOVER

DRAWN BY L.E	CHECKED BY	APPROVED BY DATE	FILENAME	DATE	SCALE N.T.S
BRICK PAVED CROSSOVER DETAILS					08/03/03
					EDITION SHEET

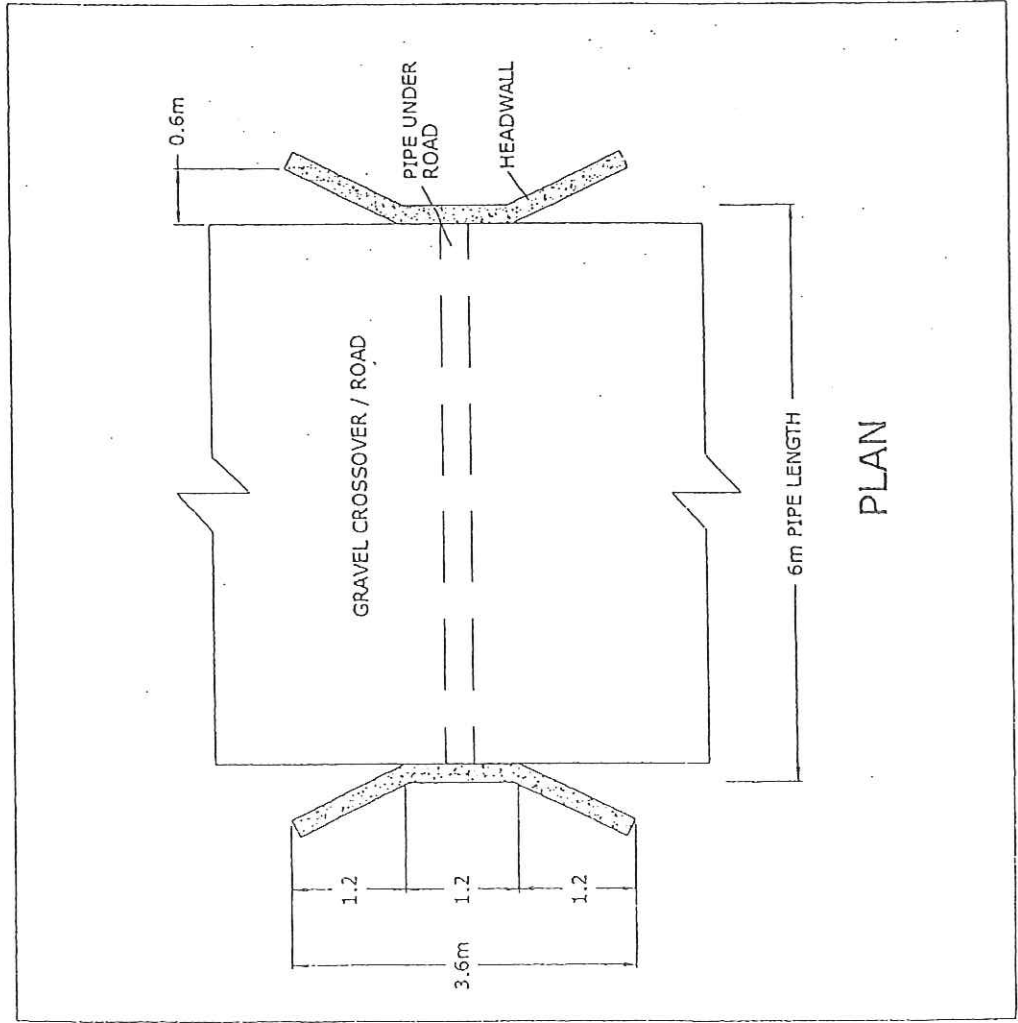


TYPICAL PLAN - CROSSOVER

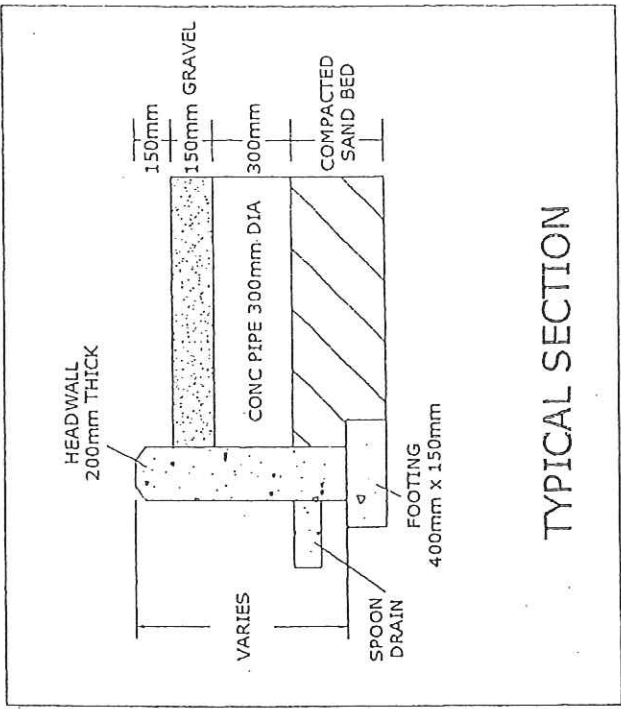


TYPICAL CROSS SECTION - CONCRETE CROSSOVER

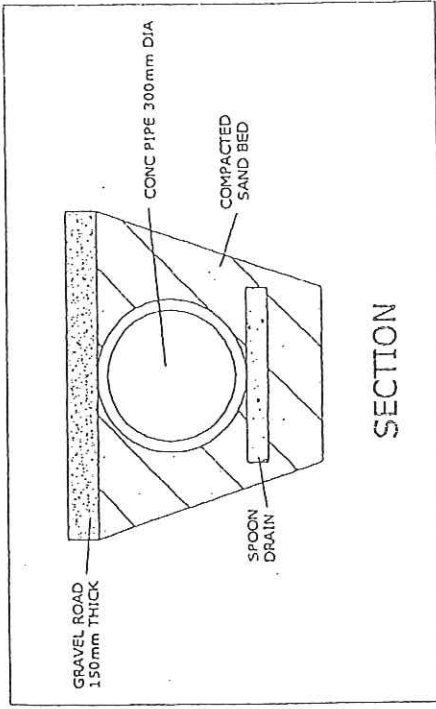
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L.E					N.T.S
CONCRETE CROSSOVER DETAILS					EDITION
08/03/02					SHEET



PLAN



TYPICAL SECTION



SECTION

DRAWN BY L.E	CHECKED BY	APPROVED BY DATE	FILENAME	DATE	SCALE N.T.S
CULVERTED CROSSOVER DETAILS			08/03/04		
			EDITION	SHEET	