

## 10.4 Crossover Subsidies and Specifications

### Legislation

Pursuant to provision of schedule 9.1 of the *Local Government Act 1995*.

### Policy

Subject to prior application and approval by the Shire of East Pilbara, Council will subsidise crossover construction costs to the extent of \$150 per lineal metre for standard Council approved crossing (see below) to a maximum of \$1,200 per crossing.

### Specification

The construction of standard type residential concrete vehicle crossings over reserve nature strips.

#### 1. General

- a. This specification is made pursuant to the provisions of Schedule 9.1 of the *Local Government Act 1995*.
- b. The construction of vehicle crossings shall be executed under the supervision of and to the direction of the Shire Works Supervisors.
- c. All levels for the grading, surface finish, jointing or any other construction requirements shall be as directed by the Shire Works Supervisors.
- d. All materials used in the construction of vehicle crossings 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 Shire Works Supervisors shall be liable to rejection and replacement without payment or compensation being made to the contractor for the supply, delivery, laying, placing, finishing, removal or disposal of anything so rejected as directed by the Shire Works Supervisor.
- e. Protection of works and the public shall be provided by the contractor who shall supply and keep supplied as directed all necessary signs, barricades, road warning lamps, temporary bridges or any other thing necessary or as may be directed by the Shire Works Supervisor and failure so to provide or keep provided may render the contractor liable.
- f. Any damage which may occur to any Council facilities or private property during the course of the works or which may subsequently become evident from the operations thereof shall be the sole responsibility of the contractor who shall be held responsible for the repair, replacement legal claim liability or any other thing which may arise from the carrying out of such works.

#### 2. Construction

##### a. Concrete

Premix concrete shall comply with the requirements of Australian Standard 1379 – 1973. All concrete used in the works shall develop a minimum compressive strength of 20MP at 28 days and shall be composed of a mixture of screenings, sand and cement to give the strength specified with a maximum slip of 90mm.

##### b. Excavation

The excavation for crossing bed shall be taken out to the levels, lines and grades as per the standard design shown on Drawing No.424. Excavation shall be cleanly and efficiently executed, watered and vibrator rolled to give a compaction of 95% of maximum density as determined by modified compaction test under 12A for S.A.A. Standard A89 – 1966 to provide for a sound base free from depressions or any deleterious material to give a minimum of 100mm depth of concrete pavement for residential crossings.

- c. All surplus material resulting from site preparation and construction of the crossover shall become the property of the contractor and shall be removed at the contractor's expense.
- d. Where an existing footpath is laid in the location where a crossing is to be constructed the contractor shall ensure that the space between the existing footpath and crossover is constructed to the footpath specification and to the specified applicable footpath level.

The required work is: -

- Cut the concrete footpath using an approved concrete saw, only at the crack control joint or expansion joints and remove all sections of footpath from the site. He shall then, after crossing construction, relay an in situ concrete footpath according to the specification in Section 4 of this specification.
- If the footpath is in situ concrete and has a thickness of 100mm or more, construct a crossing place either side of the footpath. Confirmation of the thickness should be obtained from the Shire Works Supervisors.

### 3. Placing Concrete

- a. The base shall be thoroughly and evenly moistened, but not saturated, prior to placing concrete.
- b. 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 finish except as authorised by the Shire Works Supervisor.

### 4. Finishing

- a. The finish shall be obtained by screening to correct levels and broom finishing to provide a non-slip, dense surface free of any depressions, 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 Shire Works Supervisors who shall reserve the right to require the removal of or the correction of any surface deficiencies or finish.
- b. Where required and or where directed any portion of the surface may be required to be treated with a multi-grooved tool with grooving to be at 200mm centres worked parallel to the kerb line to minimise the slipping effect.

### A STEEL TROWEL FINISH IS NOT PERMITTED ON A CROSSOVER

### 5. Jointing

Cutting shall form joints across the concrete for its full depth with the edge of a steel trowel. The surface of the concrete over these cuts is then grooved with a special grooving tool at positions indicated on diagram S15.

### 6. Levels

The crossing junction with the kerb face line shall be finished with the following approved levels, or shall be matched to the mountable kerb section, as the existing situation requires. The levels from the road must accommodate any existing or future footpath construction and must not exceed 2% of gradient; any variations to the above must be approved by the Shire Works Supervisor.

## 7. Schedule of Requirements

- a. Depth of concrete – 100mm minimum.
- b. Minimum width at property line 2.75m.
- c. Maximum width at property line – 6.10m.
- d. Approved canite-type material shall be such that when it is subject to compression in hot weather, no bitumen is extruded.

The following materials are approved and the use of any other material requires the approval of the Shire Works Supervisor.

- One expansion joint at property boundary and one either behind mountable kerb or every 4 metres.
  - Non-Porite – Bitumen impregnated canite by the cold solved process (Caneflex).
- e. Length of standard crossing – 6.00m (measured at 90 degrees to kerb line).
  - f. Concrete 20MP at 28 days.
  - g. Surface finishes – broomed – non-slip.
  - h. Where two residential crossings abut one to the other, they may be combined subject to the Shire Engineer's approval and subject to the combined width not exceeding 6.70m.
  - i. Where the combined width would exceed 6.70m a pedestrian refuge of 3m minimum width shall separate the two crossings unless specifically approved by the Shire Works Supervisors.

## 8. Footpath Specification

- a. The base of the boxed out excavation shall be compacted to provide even compaction to a depth of 300mm. The area of compaction shall extend 150mm outside the formwork. The compaction shall be not less than 95% of the Modified Maximum Dry Density when tested in accordance with aS1289.5.2- 1993, Methods of Testing Soils for Engineering Purposes – soil Compaction and Density Tests – Determination of the Dry Density/Moisture content Relation of Soil Using Modified Compactive Effort.
- b. Concrete shall comply with requirements of AS1379-1997 Specification and Supply of Concrete. All concrete used in the works shall develop a minimum compressive strength of 20Mpa at 28 days, contain an aggregate size to a maximum of 14mm and have a maximum slump of 90mm at delivery.
- c. Footpath box to be compacted to 95% of maximum density as determined by the modified compaction test.
- d. Footpath to be a minimum depth of 100mm

- e. Concrete to have a 28-day minimum cylinder compressive strength of 20Mpa.
- f. Surface to be traverse broom finish with a smooth edge to all outside edges and joints.
- g. Grooved crack control joints to be at 1.25m centres with a 12mm wide expansion/contraction joint at 5m (every fourth joint). The contraction joint to be filled with 12mm thick bitumen impregnated canite material.
- h. Approved canite-type material shall be such that when it is subject to compression in hot weather, no bitumen is extruded. The following materials are approved and the use of any other material requires the approval of the Shire Works Supervisors.
- i. Normal gradient will be at 2% from kerb line to boundary or as directed by Council Works Supervisor.
- j. Width of footpath will be as per Council policy or as directed by Council Works Supervisor.

Non-Porite – Bitumen impregnated canite by the cold solvent process (Caneflex).

## 9. General

Vehicle crossings shall be not constructed closer than 7.5m to the intersection of property lines at street corners. This measurement is to the straight of the crossing not the wing. Vehicle crossings shall not be constructed closer than 1.0m to the adjacent side boundary.

## 10. Contribution

If it is a first crossing constructed at the premises, Council may contribute towards the cost. Application for a subsidy payment must be made in writing within 6 months of the date it was constructed and must be accompanied by the concrete delivery docket. Council will then inspect the crossing and if it is constructed in accordance with Council's specification, the subsidy payment will be forwarded by post.

### The Construction of Standard Residential Brick Paved Vehicle Crossings

#### 1. General

- a. This specification is made pursuant to the provision of the *Local Government Act 1995*.
- b. The construction of vehicle crossings shall be executed under the supervision of and to the direction of the Works Supervisor or his authorised deputy.
- c. All materials used in the construction of vehicle crossings 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 Shire Engineer shall be liable to rejection and replacement without payment or compensation being made to the contractor for the supply, delivery, laying, placing, finishing, removal or disposal of anything so rejected as directed by the Shire Works Supervisors.
- d. Protection of works and the public shall be provided by the contractor who shall supply and keep supplied as directed, all necessary signs, road warning lamps, temporary bridges or any other thing necessary or as may be directed by the Shire Works Supervisors and failure so to provide or keep provided may render the contractor liable.
- e. Any damage which may occur to any Council facilities or private property during the course of the works or private property during the course of the works or which may subsequently become evident from the operations thereof, shall be the sole responsibility of the contractor who shall be

held responsible for the repair, replacement, legal claim, liability or any other think which may arise from the carrying out of any such works.

## 2. Construction

### a. General

The major brick paving manufacturers have identified the requirements of Local Governments in relation to vehicle crossing places and their brochures covering the specifications for construction and laying of the clay or concrete block medium form the basis of this specification.

### b. Excavation

- All surplus material resulting from site preparation and construction of the crossover shall become the property of the contractor and shall be removed at the contractor's expense.
- Where an existing footpath is laid in the location where a crossing is to be constructed the contractor shall:

*Ensure that the space between the existing footpath and crossover is constructed to the footpath specification and to the specified applicable footpath level.*

The work required is:

Cut the concrete footpath using an approved concrete saw, only at the crack control joints or expansion joints and remove all sections of the footpath from the site. He shall then, after crossing construction, relay an in situ concrete footpath abutting the new vehicle-crossing place.

If the footpath is in situ concrete and has a thickness of 100mm or more, construct a crossing place either side of the footpath. Confirmation of the thickness should be obtained from the Shire Works Supervisors.

### c. Sub-Base Construction

The required compacted thickness of the sub-base layer will depend on the existing ground condition; however, the Schedule of Conditions indicates the minimum requirements.

### d. Edge Restraint

The parameter of all paved areas must be provided with a restraining barrier.

Restraints must be robust enough to withstand vehicle impact and prevent any lateral movement of the bricks as this movement could cause pavement failure.

Mountable road kerbs provide adequate restraint on the crossover road interface. The remaining sides must be supported with barriers – e.g. concrete, grouted brick.

Visible edge restraints shall be installed to the contour of the surrounding pavements without restricting the flow of storm water from the brick pavement.

### e. Bedding Sand

The bedding material needs to be well-graded sand. Bricklayers sand and single sized dune sands are not suitable. The sand shall be non-plastic and free from deleterious materials such as stones,

tree roots, clay lumps and excessive organic material.

At the time of placing, the sand should have uniform moisture content. The sand must be screened slightly ahead of laying and protected from the compaction. The pre- compacted depth should be 20 – 40 mm.

f. Laying Patterns

As per Schedule of Requirements Herringbone or other as approved by Council Staff.

g. Laying of Bricks

Bricks shall be placed on the bedding sand by hand with 2-4 mm gaps between adjacent bricks. All full bricks shall be laid first. Closure bricks shall be cut with a saw and fitted subsequently. Spaces of less than 20% of brick size shall be in-filled to the supplier recommendation.

h. Compaction and Joint Filling

The units should be immediately compacted and brought to level by not less than three passes of the vibrating plate compactor. The plate should have sufficient area to simultaneously cover 12 units. To prevent damage to bricks, sheets of plywood of minimum thickness of 12mm shall be laid on the bricks to prevent the compactor coming in contact with the paved surface.

As soon as possible after compaction, sand or joint filling should be broomed over the pavement and into the joints. Excess sand should be removed as soon as joints are filled.

- i. Ideally the sand used for joint filling should be finer than the bedding layer with a nominal maximum particle size of 2mm. Sand used for joint filling should be free from salts or contaminants likely to cause efflorescence. However, the use of brick layers sand or the addition of a small amount of silty material to the joint filling sand can be of considerable benefit in reducing water penetration in the early life of the pavement.

j. Levels

The crossing junction with the kerb face shall be matched to mountable kerb or concrete section, as the existing situation requires: The levels from the road must accommodate any existing or future footpath construction and must not exceed 2% gradient. Any variations to the above must be approved by the Shire Works Supervisor.

## Schedule of Requirements

- i. Minimum width at property line 2.76m
- ii. Maximum width at property line 6.10m Rectangular Interlocking Units Units (Interlock Wall Sides)
- iii. Minimum Thickness 75mm 60mm
- iv. Sub-Base 100mm crushed 75mm compacted rock base
- v. Sand Bed 20-40mm thick
- vi. Brick-Laying Pattern - Herringbone

vii. Edge Restraints to the satisfaction of the Shire Engineer

PLEASE NOTE: Council will not accept liability for replacing any paving bricks located within the road reserve, which are subsequently damaged through works undertaken therein.

## General

Vehicle crossings shall not be constructed closer than 7.5m to the intersection of property lines at street corners. This measurement is to the straight of the crossing not the wing. Vehicle crossings shall not be constructed closer than 1.0m to the adjacent side boundary.

## Contribution

If it is a first crossing constructed to the premises, Council may contribute towards the cost. Application for subsidy payment must be made in writing within 6 months of the date it was constructed and must be accompanied by the brick delivery docket. Council will then inspect the crossing and if it is not constructed in accordance with Council's specification, the subsidy payment will be forwarded by post.

## The Construction of Standard Industrial Vehicle Crossings

### 1. Levels

The crossing junction with the kerb face line shall be finished with the following approved levels, or shall be matched to the mountable kerb section, as the existing situation requires. The levels from the road must accommodate any existing or future footpath construction and must not exceed 2% of gradient; any variations to the above must be approved by the Shire Works Supervisor.

### 2. Construction

Construction to be either:

- a. Concrete 200mm thick 20Mpa premixed concrete re-enforced with F62 or heavier mesh, with a wood non-skid finish and a canite or approved equivalent expansion material at kerb line (and at property line if abutting concrete).
- b. Asphalt minimum 25mm thick over minimum 150mm thick compacted base. Edges to be contained with flush kerbing.

### 3. General

- a. All crossovers require Council notification of concrete/asphalt placement date to assist inspection of base/levels etc.
- b. No mountable kerbing to be removed – any kerbing removed will be re-instated by Council at property owners expense.
- c. Concrete/asphalt/mesh delivery dockets are to be presented at time of subsidy application.
- d. Crossover subsidy only to apply to crossovers constructed to those specifications. Subsidy payment application to be made no later than 6 months from time of construction.
- e. Cross over construction on verge to be contained within projected property side boundaries.

## Authorisation Details

<b>References:</b>	<i>Local Government Act 1995</i>		
<b>Authorised by:</b>	Council		
<b>Date:</b>	22 August 2008	<b>Item No.</b>	10.4.2
<b>Review/Amendment Date</b>		<b>Item No.</b>	
<b>Next Review</b>			
<b>Responsible Directorate</b>	Infrastructure Services		
<b>Responsible Officer</b>	Manager Operations		
<b>File No.</b>			