



Crossover – Standard Conditions and Specifications

Any questions may be directed to the Shire's Design and Development department on 9729 0300 or alternatively email shire@harvey.wa.gov.au or post to Manager Design and Development, P.O. Box 500, Harvey WA 6220.

Standard conditions for the owner/contractor

General

- i. ALL works within a Shire of Harvey thoroughfare (road reserve, PAW, ROW, park, etc.) require prior approval from the Shire's Manager Design and Development or nominated representative prior to works commencing.
- ii. It is the property owner's responsibility to construct the crossover to meet the Shire's requirements. The property owner must provide the attached standard drawings and specifications to the contractor before construction commences. **Crossovers not constructed to the standards may need to be reconstructed and no contribution will be paid.**
- iii. The applicant is responsible for ensuring the public's safety at all times during the construction of the crossover.
- iv. Commercial and Industrial crossovers are to be designed and constructed based on the principles outlined in the specifications and must suit the loads of the vehicles accessing the property
- v. Edges of the crossover are to be backfilled, level with the existing ground levels and the verge left in a tidy condition prior to final inspection.
- vi. The ongoing maintenance of the crossover is the responsibility of the property owner. The Shire does not accept any costs associated with repairs unless they are the direct result of damages inflicted by the Shire or its contractors.

Location and Dimensions

- i. A crossover **shall not** be constructed closer than 6m from the kerb radius tangent point on a corner lot. This measurement is taken from the straight of the crossover to the start of the kerb arc. Where some lots may not be able to achieve this, a distance as close to 6m as practical may be determined at the sole discretion of the Shire's the Manager Design and Development or nominated.
- ii. Crossovers shall be constructed to avoid any road islands. Approval must first be sought from Manager Design and Development or nominated representative regarding any variation to this.
- iii. Residential crossovers are to be constructed to a minimum width of 2.7m and maximum width of 6m, excluding wings. Commercial and Industrial properties may have a maximum width of up to 12m, to the satisfaction of the Shire's Manager Design and Development or nominated representative of nominated representative. An exception to this requirement may where there is an endorsed Local Development Plan (LDP) for that specific lot.

Where a LDP is not in-place, and the geometry of a site does not permit development of the crossover to meet this requirement, an application for a variation shall be submitted to the Shire. Such applications shall include a site drawing of the proposed solution and evidence of consultation with any affected stakeholders such as adjoining landowners.
- iv. Crossovers are to be constructed a minimum distance of 1.0m from the property's side boundary. Approval shall be sought from the Shire's Manager Design and Development or nominated representative regarding any variation to this requirement.
- v. Where there is no existing footpath, a minimum 1.0m x 1.0m wings must be installed at the kerb (refer to standard drawing)

- vi. Multiple crossovers for residential properties will only be approved where the R-coding is less than R30, and it does not cover greater than 50% of the verge frontage of the property. The total aggregate of multiple crossovers is to be no greater than 9m.
- vii. The crossover must be located so as not to interfere with any public utilities i.e. telecommunication pits, sewer pits, pram ramps or drainage structures. The crossover is to be no closer than 0.5m to power, lights, water utilities, side entry pits and pram ramps; and 2.0m from any verge trees.

Any required relocation or alteration to existing services shall be at the owner's full expense and shall only be undertaken by the relevant responsible authority subject to their approval.
- viii. Crossovers abutting Main Roads i.e. roads under the care, control and management of Main Roads WA require their approval (Ph. 9724 5600).

Levels

- i. As outlined in the attached standard drawings, all proposed crossover and internal driveway levels and gradients shall comply with both the Australian Standard AS/NZS2890.1:2004 and Shire requirements. The required gradients must not be exceeded without prior approval from the Shire's Manager Design and Development or nominated representative.

Verge levels **must not** be altered without prior approval from Shire's Manager Design and Development or nominated representative.

Footpaths

Where residential crossovers are to be constructed across existing footpaths the following requirements shall be adhered to at all times:

- i. Existing path **MUST** remain undisturbed and the driveway constructed to match the existing levels of the path.
- ii. Where the existing footpath requires upgrading, consult with Shire's Manager Design and Development or nominated representative prior to removing path. Reinstate all gaps with concrete, minimum 100mm thick, to provide a smooth transition from the slab footpath to the driveway. Maximum path grade is 1:14.
- iii. Steps and lips in paths are not acceptable.
- iv. Transitions from a crossover to existing footpaths shall be to a maximum grade of 1:14 and ensure that no trip hazards are present.

For commercial or industrial properties, the path will be required to be strengthened to cater for the types of vehicles.

Kerbing

- i. Mountable kerbing must be installed across the crossover entrance for all residential properties.
- ii. When there is an existing barrier or semi-mountable kerb it is to be removed and replaced with a mountable kerb.
- iii. There must be a smooth transition from the existing kerb to the new mountable kerb.
- iv. The road surface in front of the crossover must be cut using a pavement saw to ensure a clean edge seal at the kerb join.

Only flush kerbing is to be used on the verge.

Storm-water

Storm-water falling on a driveway within private property shall be retained within that lot by means of soaking and/or storage with a capacity of:

- i. 1m³ per 100m² of impervious surface area – Australind, Binningup, Myalup (i.e. sandy sites);
- ii. 1m³ per 65m² of impervious area – Harvey, Brunswick, Cookernup (i.e. clay sites); or
- iii. 1m³ per 65m² of impervious area – Commercial & Industrial;

Open Drains

- i. No open drainage (including channels and swale drains) within the road reserve is to be backfilled during the construction of a crossover.
- ii. Where a crossover traverses an open drain and is constructed in accordance with the Shire's standard requirements, the contribution available will be as per the Shire's Open Drain Contribution.
- iii. Where a culvert and headwall design is proposed, the size must adequately cater for the flow of water. The Shire's Manager Design and Development or nominated representative will provide assistance with selecting the appropriate pipe size for the drain.
- iv. A Structural Engineer will be required to sign off on the design for the drain crossing, prior to those plans being submitted to the Shire.
- v. Where a crossover traverses a Harvey Water or Water Corporation open drain, the property owner must also seek approval from these authorities prior to construction. Written confirmation of this must be forwarded to Shire's Manager Design and Development.
- vi. Once installed it is the responsibility of the property owner to take undertake regular maintenance to keep drainage pipes clear.
- vii. Due to the large varying drains and environments throughout the Shire, standard drawings are not available. Each crossover must be assessed on a case by case basis.
- viii. Inspections of the crossover and drain crossing may be performed prior, during and post construction. The Shire must be kept updated of the construction schedule through the duration of the project. Failure to do so may result in the requirement for re-construction or ineligibility for crossover contribution.

Street Trees

No street trees shall be removed without prior approval from the Shire's Manager Parks Services.

Storage of Caravans, Boats or Trailers

Ancillary vehicles such as caravans, boats & trailers shall be located entirely within private property.

Specifications - Urban

Concrete

- i. Minimum depth 100mm;
- ii. Strength 32 MPa;
- iii. Compacted bedding sand on a suitable subgrade, 7 blows on penetrometer test;
- iv. 12mm thick expansion joints to be installed at property boundary and along kerb.

Bitumen or Spray Seal

- i. Minimum 150mm compacted gravel base-course on a suitable subgrade, 7 blows on penetrometer test;
- ii. Waterboard gravel retained in kerb or boards;
- iii. Two coat seal;

Note: Not recommended for areas of high vehicle stresses (i.e. heavy turning).

Asphalt

- i. Minimum 150mm compacted gravel base-course on a suitable subgrade, 7 blows on penetrometer test;
- ii. 25mm thick of AC7 asphalt or 30mm thick gravel-pave asphalt on primer seal.

Paving

- i. Minimum 60mm (depth) heavy driveway grade pavers;
- ii. Compacted sand base, minimum 150mm to standard 9 blows on penetrometer test;
- iii. 100mm depth concrete edge retaining for full width of edge bricks/blocks.

Poured Limestone

- i. Minimum depth 125mm;
- ii. Reinforced, Strength 32MPa;
- iii. Compacted sand base to standard 7 blows on penetrometer test.

Specifications - Rural

Any of the following surface types are acceptable:

- ix. Gravel – 150mm thick compacted;
- x. Bitumen or Spray Seal (as per urban specifications);
- xi. Asphalt (as per urban specifications).

Note: Where a crossover is proposed off a sealed road, the crossover shall also be sealed.

If the crossover traverses an open drain and is constructed in accordance with the Shire's standard requirements, the contribution available will be as per the Shire's Open Drain Contribution. If no open drain is present, a standard Urban Contribution will apply.

No contribution will be paid for the construction of crossovers on non-rateable properties.

Specifications – Commercial & Industrial

Concrete

- i. Minimum depth 150mm;
- ii. Strength 32 MPa;
- iii. Compacted bedding sand on a suitable subgrade, 7 blows on penetrometer test;
- iv. 12mm thick expansion joints to be installed at property boundary and along kerb.

Asphalt

- i. Minimum 200mm compacted gravel base-course on a suitable subgrade, 7 blows on penetrometer test;
- ii. 30mm thick of AC10 asphalt.

Paving

- i. 150mm compacted limestone sub-base with 30mm compacted screeding sand;
- ii. 76mm thick clay or concrete pavers;
- iii. 100mm depth concrete edge retaining for full width of edge bricks.

Note: Brick Paving is not acceptable on industrial crossovers with truck movements.

Note: Due to the large scope of businesses and environments standard drawings are not available. Each crossover must be designed and assessed on a case by case basis.

Contribution

If a crossover is constructed in accordance with the standards and specifications outlined in this documents the Shire may contribute the following:

Urban Contribution

\$300.00

Rural Contribution

Delivery of up to 5m³ of gravel.

Open Drain Contribution

Where the crossover traverses an open drain the Shire will contribute **up to** three lengths of single 525mm Class 2 stormwater pipe including transport to site.

If the open drain **necessitates** pipes exceeding this size or a bridge crossing, the Shire will contribute an equivalent to that of three lengths of stormwater pipe 525mm in diameter (\$1,250);

The cost of headwalls, fill material, engineering and construction will be at the expense of the property owner.

Please Note: Payment of a Shire contribution will only be made for the first crossover to be constructed to an allotment. A contribution will not be paid for any crossovers which are additional, replacement or that do not meet the Shire's standard requirements.

Procedure to obtain a Shire contribution

Application:	Works shall NOT commence until approval from the Shire has been granted.
Pre-Pour Inspection:	For Concrete Only. Inspection of prepared crossover site prior to concrete pour. Framework, Expansion Joints & Reinforcing should all be in place.
Final Inspection:	Inspection of post-construction site to confirm compliance. It is important that the edges of the crossover are backfilled level with the existing ground levels and that the verge is in a tidy condition prior to final inspection. Note: Shire Officers require 24 hours' notice prior to conducting an on-site inspection.