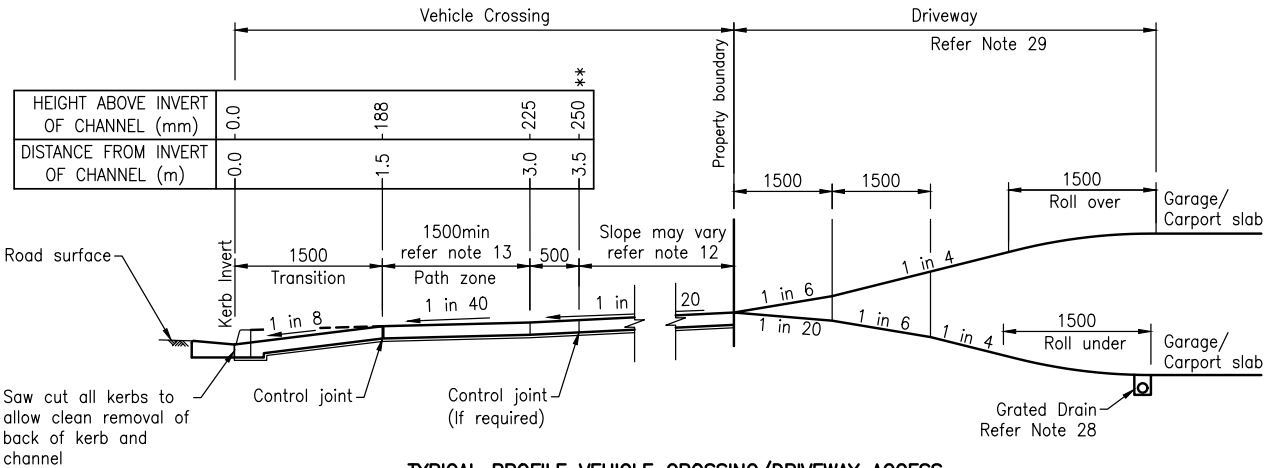


**BREAKOUT TYPE
SECTION A**

Refer drawing
RS-049

NOTE:

- All appropriate permits must be obtained from relevant council, specifying crossing type, construction materials, location, levels, surface finishes and dimensions, prior to any excavation.
- Alternative materials for construction, other than reinforced concrete, refer to relevant council for approval.
- Crossing to be constructed square to the street alignment, wholly contained within the site frontage from invert of channel to property boundary.
- One access to be constructed per allotment unless otherwise approved by relevant Council.
- To reduce impact on available street parking, consideration is to be given to visitor's and neighbouring property's parking needs when selecting a crossing location.
- Crossing to be located clear of existing gully pits. where this cannot be achieved, the gully pit and pipework may be relocated at the property owner's expense, subject to approval of the relevant council.
- Crossing to be located clear of all service authority's fittings, manholes and pits. Subject to relevant Council approval, where this cannot be achieved, existing service pits are to be contained within the area of new driveway, pit surface to match approved driveway finished levels.
- Kerb adaptors and associated roofwater drainage to be located clear of crossings.
- Council will not relocate traffic islands or provide breaks in traffic islands to allow driveway access.
- For water sensitive urban design verges, the crossing is subject to relevant council design and approval.
- **Crossing must achieve a high point of 250mm above invert of kerb to ensure stormwater is contained within the road reserve as per requirement of Q.U.D.M. (Queensland Urban Drainage manual). This constraint may be varied upon the approval of the relevant Council.
- Under special circumstances Council may approve a rising grade of 1:6 max or falling grade of 1:20 min. Longitudinal grades along property boundary must allow for free drainage and pedestrian safety.
- Path zone width may vary to match existing concrete pathways and verge profiles. Path earthworks adjoining concrete must be well compacted.
- Earthworks cut and fill batters from edge of crossing or path to natural surface to be maximum grade at 1 in 10 and fully turfed prior to council inspection.
- Existing path to be longitudinally transitioned to new crossing at a maximum grade of 1 in 10.
- Plain concrete surfaces to be heavy broom finished.
- Decorative surfaces are subject to relevant council approval, where approved, to have a 5mm max depth variation in the finished surface profile. Exposed aggregate finish subject to relevant council approval due to environmental reasons.
- Expansion joints to be 10mm thick full depth closed cell cross linked polyethylene foam (85 - 150 kg/m), or 8.5mm thick bitumen impregnated compressed granulated corkboard, installation to manufacturers' instructions. Seal surface of joint with a suitable polyurethane sealant.



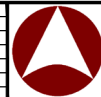
**TYPICAL PROFILE VEHICLE CROSSING/DRIVEWAY ACCESS
SECTION B**

Refer drawing
RS-049

- Concrete surface tolerance to be, +5mm^{-0mm} over 3 metre sections.
- Concrete to be minimum grade N32 in accordance with AS 1379 and AS 3600.
- Concrete construction to comply with the requirements of AS 3600, concrete code.
- Reinforcement fabric to AS 4671-2001 steel reinforcing materials, 50 top and edge cover, lap fabric 250.
- Control joints are to be sealed with a low modulus self priming sealant to the manufacturers specification. refer RS-065.
- Formwork and reinforcement shall be in place and inspected and approved by the relevant council prior to placement of concrete.
- Maintenance of the crossings are the responsibility of the property owner.
- Drawing to be read in conjunction with RS-049.
- Cross fall of existing pavement adjacent to the crossing to be checked. If cross fall exceeds 3%, relevant Council will decide if crossing needs to be re-designed to ensure satisfactory clearance for vehicles.
- Construct grated drain to prevent water entering garage/carport slab.
- Driveways to be constructed in accordance with Queensland Development Code NMP 1.1 - Driveways (However, drawings RS-049 and RS-050 take precedence in the extent of any inconsistency).
- All surfaces subject to pedestrian traffic (including vehicle crossings) will meet the minimum pendulum or ramp recommendations contained in Table 3B of Australian Standard Handbook HB 198.2014 - Guide to the specification and testing of slip resistance of Pedestrian Surfaces. Compliance with the recommendations to be verified by testing to either AS/NZS 4586:2013 - Slip Resistance Classification of New Pedestrian Surface Materials or, AS/NZS 4663:2013 - Slip Resistance measurement of existing Pedestrian Surfaces as appropriate. In both instances compliance to be demonstrated by applying Clause 5.3 - Means of Demonstrating Compliance of AS/NZS 4586:2013 - Slip Resistance Classification of New Pedestrian Surface materials. In general, the classification of a surfacing material or finish to be made on a worst case basis as determined by pendulum testing using both the Four S (Slider 96) and TRL (Slider 55) rubber sliders. Where additional test results are available (Oil-Wet Ramp, W/Barefoot Ramp) they will be taken into consideration. Only those test reports/certificates produced by an appropriately NATA accredited laboratory will be deemed acceptable for consideration.
- All Dimensions are in millimetres unless shown otherwise.

These drawings have been developed in consultation between the participating Councils.
BEFORE USE, the user shall confirm that the drawing has been adopted by the appropriate Council.

Rev.	DATE	REVISIONS
IG	10/17	Review
F	06/16	Review
E	06/14	Review
D	10/12	Review
C	06/10	Review
B	06/09	Review



**INSTITUTE OF PUBLIC WORKS ENGINEERING AUSTRALASIA
STANDARD DRAWINGS**

**VEHICLE CROSSINGS
RESIDENTIAL DRIVEWAYS
PLAN 2 OF 2**

RS-050

G
E
D
C
B
Rv