

QPRC



**QUEANBEYAN PALERANG
REGIONAL COUNCIL**

**DEVELOPMENT DESIGN
SPECIFICATION**

D13

VEHICULAR ACCESS DESIGN

VERSION 1 – DECEMBER 2018

HPRM REF

Amendment Record for this Specification Part

This Specification is Council's edition of the AUS-SPEC generic specification part and includes Council's primary amendments.

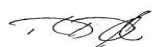
Details are provided below outlining the clauses amended from the Council edition of this AUS-SPEC Specification Part. The clause numbering and context of each clause are preserved. New clauses are added towards the rear of the specification part as special requirements clauses. Project specific additional script is shown in the specification as italic font.

The amendment code indicated below is 'A' for additional script 'M' for modification to script and 'O' for omission of script. An additional code 'P' is included when the amendment is project specific.

Amendment Sequence No.	Key Topic addressed in amendment	Clause No.	Amendment Code	Author Initials	Amendment Date
<i>VERSION 1 AMMENDMENTS</i>					
	Queanbeyan & Palerang DCP, Specifications and RTA standards referenced	D13.03	A	CS	18/04/18
	Table D13.1 – side boundary clearance clarified	D13.04.2	M		
	Prohibited driveway locations amended	D13.04.3	A		
	City Infrastructure Division referenced, "driveway" replaced by "vehicular footpath crossing"	D13.05	M		
	"driveway" replaced by "vehicular footpath crossing"	D13.06	A		
	Large lot residential subdivision referenced	D13.08	M		
	F72 mesh in residential driveways	D13.09	M		
	South Jerrabomberra specifications referenced	D13.10	A		
	Driveway grades for long sections clarified, South Jerrabomberra specifications referenced	D13.11	M		
	Standard Drawings added	D13-A	A		
	Industrial Driveway Requirements added	Table D13.1	A		

VEHICULAR ACCESS DESIGN

Amendment Sequence No.	Key Topic addressed in amendment	Clause No.	Amendment Code	Author Initials	Amendment Date
	Industrial Driveway Requirements added	Table D13.2	A	CS	
	Battle access width amended to 5m	D13.06.2	M		
	Open Concrete Invert consideration added	D13.07.1	A		
	Figure D13.2 Added	D13.07.2	A		
	Industrial driveway mesh requirement revised	D13.09	M		
	Segmental Paving Omitted, alternative treatments added	D13.10	M		

<p>APPROVED FOR USE:</p>  <p>PROGRAM COORDINATOR SUBDIVISION 7/12/ 2018</p>
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**DEVELOPMENT DESIGN SPECIFICATION D13
VEHICULAR ACCESS DESIGN – QUEANBEYAN PALERANG**

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**DEVELOPMENT DESIGN SPECIFICATION D13
VEHICULAR ACCESS DESIGN – QUEANBEYAN PALERANG**

GENERAL

D13.01 SCOPE

1. This specification sets out requirements to be used in the design of vehicular access for application in all types of development, including residential, commercial, industrial and subdivision development.

2. All relevant design principles referenced below must be integrated in the design of vehicular access. The design of vehicular access must be considered in conjunction with the geometric road design and subdivision layout.

Integrated design

D13.02 OBJECTIVES

1. This specification aims to set standards related to the provision of vehicular access to proposed allotments, which are to be safe and convenient, and shall maintain a satisfactory level of service for the user.

Safety

Level of Service

2. This specification also aims to set the minimum design standards required for the provision of vehicular footpath crossings and driveways, located within allotments and Council's Road Reserve.

Vehicular Footpath Crossings

D13.03 REFERENCE AND SOURCE DOCUMENTS

(a) Development Control Plans

Queanbeyan Development Control Plan (2012)
Palerang Development Control Plan (2015)

(b) Council Specifications

DEVELOPMENT DESIGN SPECIFICATION D1- Geometric Road Design – QPRC
– Version 1

(c) Australian Standards

AS 2890	- Parking facilities:
AS/NZS 2890.1:2004	- Parking facilities: Off-street car parking.
AS 2890.2:2002	- Off-street parking: Commercial vehicle facilities.
AS/NZS 2890.6:2009	- Off-street parking for people with disabilities

(d) State Authorities

Roads and Traffic Authority NSW
Road Design Guide.
Guide to Traffic Generating Developments – Version 2.2 (Oct 2002)

VEHICULAR ACCESS IN URBAN AREAS

D13.04 VEHICULAR ACCESS

1. Vehicular access from a roadway shall be provided by the developer to each allotment created within a subdivision by the developer. The provision of vehicular access may consist of either a vehicular kerb crossing in barrier type kerb, or modified layback kerb.

Vehicle Kerb Crossings

2. The number of vehicular kerb crossings required to be provided to each allotment in a subdivision is shown in Table D13.1. In urban areas the number of vehicular kerb crossings may be extended to two (2) provided that the combined width of the vehicular kerb crossings does not exceed 7 metres and there is adequate driveway and turning areas within the lot to justify the need for two vehicular crossings.

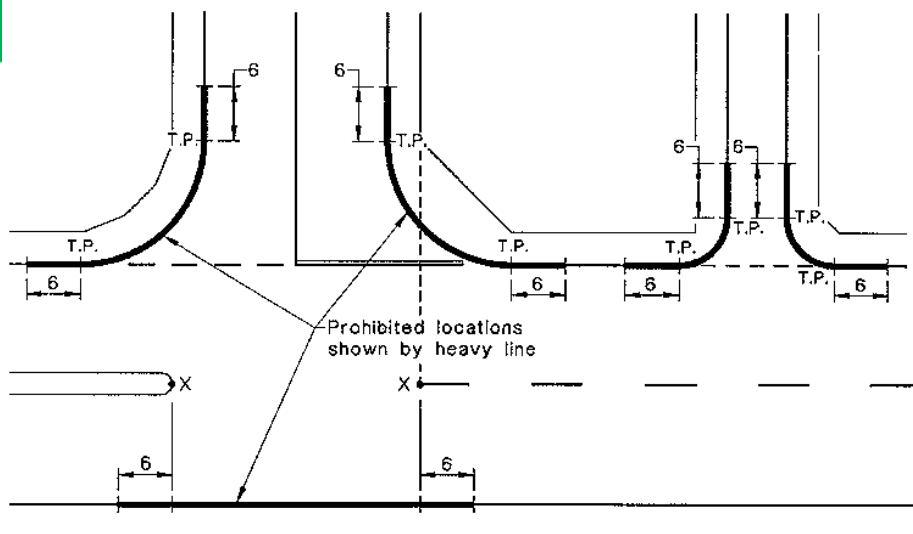
Geometric Design

Table D13.1 Vehicular Access (Crossing) Requirements for Subdivisions

Type of Development	No. of Crossings	Minimum Crossing Width ⁽¹⁾	Maximum Crossing Width ⁽¹⁾	Crossing Type	Minimum Distance from Boundary ⁽²⁾
Residential Modified Layback Kerb	1	3m	6m	VKC	1m ¹⁾
Industrial	1	6m	As required	VKC	2m
Commercial	1	4m	As required	VKC	2m

NOTES:

1. Crossing width does not include the 0.5m wings on either side.
2. Distance is measured from the boundary to the edge of the crossing, but not including the wing.
3. All crossings must be located at least 1m from any electrical, Telstra, post-box installation, stormwater inlet pit, other service or tree within the verge.



DIMENSIONS IN METRES

NOTE: The points marked 'x' are either at the median end on a divided road, or at the intersection of the main road centre-line and the prolongation of the side road property line on an undivided road.

Figure D13.1
Prohibited Locations for Vehicular Access

3. Vehicular access is prohibited from being constructed in the locations shown in bold in Figure D13.1 adjacent the kerb returns of the intersection. Access to commercial properties is also prohibited along the kerb length marked in bold opposite the intersection in Figure D13.1. Access to residential properties is also prohibited along the kerb length marked in bold opposite the intersection in Figure D13.1 where the through street is an Arterial Road, Local Arterial Road or Local Sub-Arterial Road (as defined in Table D1.5).

Prohibited Locations

4. Where vehicular access is provided through an opening in a retaining wall, the access opening shall be a minimum 4 metres wide, and the access shall be regraded to the finish levels of the future vehicular footpath crossing and driveway for a minimum distance of 8 metres. The cutting and filling associated shall not encroach on any adjoining allotment, public reserve or public pathway.

Retaining Walls

D13.05 VEHICULAR FOOTPATH CROSSINGS AND DRIVEWAYS

1. A vehicular footpath crossing and driveway is required to be constructed with each dwelling or development on an individual allotment. Where a development is situated on two or more allotments the number of vehicular footpath crossings shall be determined by Council at the Development Application stage.

2. The vehicular footpath crossing extends from the kerb and gutter to the property boundary. It is the responsibility of the property owner to construct and maintain the vehicular footpath crossing in a safe condition. Vehicular footpath crossing in urban areas shall be constructed of concrete only. Driveways in urban areas shall be constructed of concrete or other approved material where applicable only.

Owner's Responsibility

	Number	Minimum Width	Maximum Width	Minimum Distance from Side Boundary
Residential (single street frontage)				
street frontage <15m	1 max	3m	6m	1m
street frontage >15m, <30m	2 max	3m each	Combined 7m	1m
street frontage >30m	2 max	3m each	Combined 8m	1m
Residential (dual street frontage - 1 per frontage)	2 max	3m each	Combined 10m	1m
Industrial	As required (1 min)	6m	As required	2m
Commercial (including unit developments)	As required (1 min)	4m	As required	2m

Table D13.2 Vehicular Footpath Crossing Requirements for Developments

3. The minimum and maximum width of vehicular footpath crossings, and number of vehicular footpath crossings permitted to a development, shall be in accordance with Table D13.2. The width of all vehicular footpath crossings shall be equal at the boundary line and the kerb line, ie edges of the vehicular footpath crossings shall be parallel.

Width

4. Prior to the construction of a vehicular footpath crossings, property line levels are required to be obtained from Council's City Infrastructure Group. Generally, the gradient of a driveway over the verge shall be 4%.

Property Line Levels

5. The gradients of residential driveways within an allotment shall not exceed the following:

Driveway Gradients

1(V):5(H), ie 20% for driveways which fall towards the property boundary.

1(V):6(H), ie 16% for driveways which fall away from the property boundary.

Grade changes greater than 12.5% algebraically require the introduction of transitions between the adjoining grades. The minimum length of the transition shall be 1.5m and the recommended transition grade is 10%. The design of transitions shall be in accordance with AS/NZS 2890.1- Off street car parking.

6. Gradients of driveways in industrial and commercial developments shall satisfy the requirements of AS2890.2 - *Commercial vehicle facilities*.

7. Driveways shall be constructed perpendicular to the kerb line and the boundary line. In areas such as Cul de Sac heads, the driveway shall be located to minimise the splay required, which shall not exceed 0.5 metres.

Maximum Splay

8. Consideration must be given to driveway gradients when designing subdivisions in steep areas. The subdivision design must enable driveways to be constructed to each allotment in accordance with the gradient requirements above.

Subdivision Design

D13.06 COMMON DRIVEWAYS

1. Where battle-axe allotments are incorporated into a subdivision, the common driveway located in the battle-axe handles shall be provided by the Developer. With the exception of the vehicular footpath crossings within the verge, common driveways shall be located wholly within private property.

2. The number of allotments gaining access from a common driveway within properties shall not be greater than two (2). Common driveways serving two allotments shall be not less than 5m wide, centrally located within a 7 m wide access corridor and must extend from the vehicular kerb crossing for the full length of the access handle. The access corridor shall be registered as two adjacent battleaxe handles each 3.5 m wide with reciprocal rights of way created.

Design

3. Driveways on single allotments with a battle axe handle shall not be less than 3 m wide located within a 4 m access handle and must extend for the full length of the access handle and must incorporate a vehicular footpath crossing.

Length

VEHICULAR ACCESS IN RURAL / LARGE LOT RESIDENTIAL

D13.07 VEHICULAR ACCESS

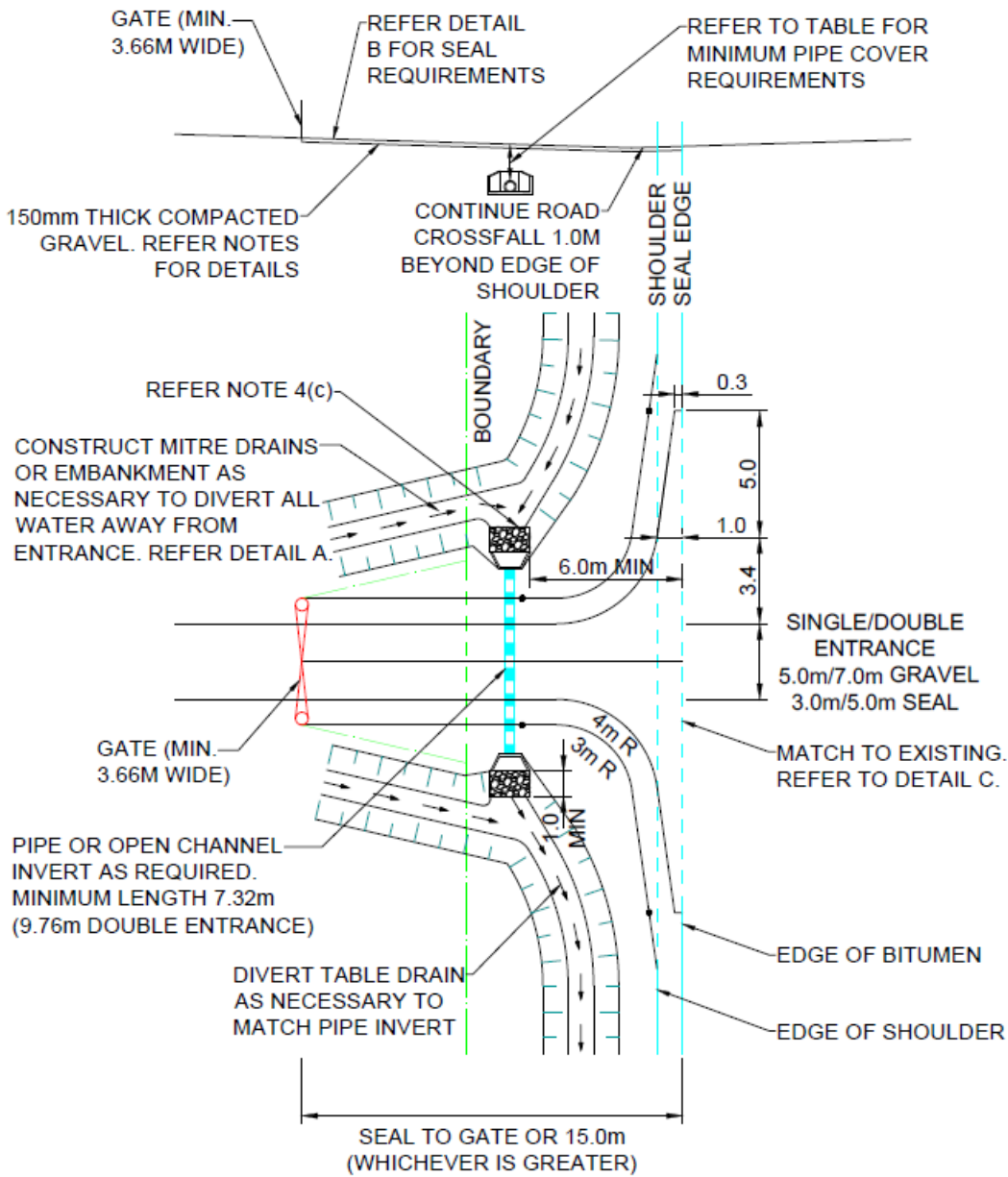
1. Rural road or large lot residential vehicular access shall be provided by a minimum 375mm diameter Class 4 reinforced concrete pipe culvert with stone pitched headwalls, located in the table drain. Construction of open concrete invert will be considered by Council on a case by case basis. The vehicular access must only be positioned where stopping sight distance is available, and must maintain a minimum of 1 metre clearance from the headwall to the prolongation of an adjoining property boundary.

Pipe Culvert and Headwall

2. A driveway shall be constructed from the edge of the roadway to the property boundary of each allotment created by the subdivision developer. The crossing shall be a bituminous sealed flexible pavement with a minimum thickness of 150mm and 14mm/7mm double C240 bitumen with dimensions in accordance with Figure D13.2 below.

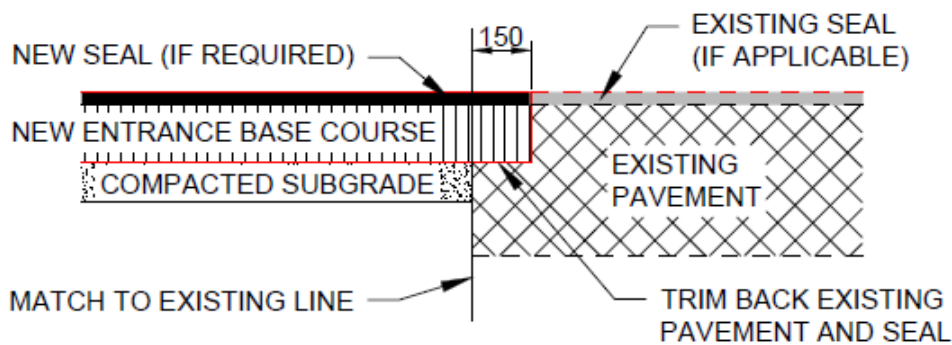
Bituminous Seal

PIPE CLASS REQUIREMENTS	
MINIMUM PIPE SIZE	REINFORCED CONCRETE PIPE
375mmØ	RRJ CLASS 4



PLAN AND SECTION

Figure D13.2: Rural & Large Lot Residential Entrance Detail



DETAIL - PAVEMENT INTERFACE

D13.08 DRIVEWAYS

1. Driveways in rural and large lot residential areas shall be constructed using concrete or bituminous sealed flexible pavement with a minimum thickness of 150mm. **Materials**
2. The gradient of driveways in rural areas shall be in accordance with the requirements for driveway gradients for urban areas specified in this SPECIFICATION. **Gradients**
3. Common driveways in large lot residential areas are not permitted, but driveways should be grouped to reduce the number of access locations. **Common Driveways**

MATERIALS

D13.09 CONCRETE

1. Urban driveways constructed using concrete shall be constructed to the following nominal thicknesses and standards: **Standards**
 - Residential -100mm thickness, reinforced with one layer of F72 mesh.
 - Large Lot Residential -100mm thickness, reinforced with one layer of F72 mesh.
 - Commercial -150mm thickness, reinforced with one layer of F72 mesh.
 - Industrial -200mm thickness, reinforced with two layers of F72 mesh.
2. Minimum strength of Concrete used in the construction of vehicular footpath crossings shall be 20 MPa at 28 days. Concrete used shall be ready-mixed concrete in accordance with AS 1379.
3. The preparation and placement of the work shall be in accordance with Specification for MINOR CONCRETE WORKS where applicable. **Specification**

D13.10 ALTERNATIVE TREATMENTS

1. Alternative treatments maybe approved on a case by case basis provided that satisfactory performance criteria is achieved. **Alternative treatments**

2. Heritage treatments required by QPRC shall be designed and constructed as specified. To maintain appropriate historical aesthetics with proposed developments in identified heritage areas the driveway cross-over shall be finished in either brick, clay pavers, stone flagging, crushed rock, cobbles stones.

Heritage treatments

DOCUMENTATION

D13.11 DRIVEWAY LONGSECTIONS

1. A driveway longsection is required to be submitted to Council for assessment at the Development Application stage for all driveways which require the provision of transitions, ie:

- Residential driveways with grades in excess of 12%; and
- Commercial/Industrial Driveways with grades in excess of 8% when used by Heavy Rigid Vehicles, and 6% when used by Articulated Vehicles.

2. Driveway longsections for common driveways to be constructed by the subdivision developer shall be required at the construction certificate stage.

Common Driveways

3. For driveways connecting to a road with a longitudinal gradient in excess of 5%, the driveway longsection shall be taken along the worst case edge of the driveway. For driveways connecting to a road with a longitudinal gradient in excess of 12%, the driveway longsection shall be taken along both edges of the driveway. In all other cases the longsection shall be taken along the centreline of the driveway.

Road Longsection

4. Driveway longsections shall be drawn to a reduction ratio of 1:50 on the horizontal and vertical axis. In certain circumstances Council may require the submission of cross sections to ensure that an adequate standard of vehicle access is being provided. All Drawings shall be in accordance with the minimum drafting requirements in the Specification for QUALITY ASSURANCE REQUIREMENTS FOR DESIGN – QUEANBEYAN PALERANG– VERSION

Reduction Ratio

5. Driveway longsections shall be drawn from the road carriageway, ie kerb and gutter, to the nominated parking area/s within the property.

SPECIAL REQUIREMENTS

D13.12 RESERVED

**ANNEXURE D13-A
STANDARD DRAWINGS**

The following ACT Territory & Municipal Services (TAMS) standard drawings and former Palerang Council standard drawings, as amended by Queanbeyan Palerang Regional Council (QPRC), are deemed to comply for the purposes of this specification.

DRAWING NUMBER	DATE / REVISION	TITLE	QPRC AMENDMENT / COMMENT
DS3 ROAD DESIGN			
DS3-01	Aug 02	Kerb & Gutter Standard Details – Sheet 1	Adopted by QCC.
DS3-02	Aug 02	Kerb & Gutter Standard Details – Sheet 2	Adopted by QCC.
DS5 DRIVEWAYS			
DS5-01	Oct 09	Domestic Driveways	Driveways shall be provided with both edges perpendicular to the property boundary from the lot frontage to the kerb unless otherwise approved by QCC. Grade across footway shall be 4% unless otherwise approved by QCC.
DS5-02	Oct 09	Heavy Duty Driveways	Driveway Type HD1 shall be provided with both edges perpendicular to the property boundary from the lot frontage to the kerb unless otherwise approved by QCC. Driveway Type HDR not used. Driveway Type HD2 used for commercial and industrial driveways only
DS7 BRIDGES AND ASSOCIATED STRUCTURES			
DS7-01	Aug 02	Gravity Retaining Walls – Stone & Clay Brick	Maximum retaining wall height 1200mm. Walls higher than 900mm to be provided with a handrail.
DS7-02	Aug 02	Reinforced Concrete Block Walls up to 2100	Maximum retaining wall height 1200mm. Walls higher than 900mm shall be provided with a handrail.
DS7-03	Aug 02	Stone Pitched Retaining Walls	Maximum retaining wall height 1200mm. Walls higher than 900mm shall be provided with a handrail.
DS7-04	Aug 02	Retaining Walls – General Notes	Adopted by QCC.
FORMER PALERANG STANDARD DRAWINGS			
PAL-SD-101	Jan 12	Type A and Type C Rural Entrances	Adopted by QPRC
PAL-SD-104	Jan 12	Single Lot Residential Footway Crossing Upright Kerb	Sand or gravel compacted on suitable subgrade, 100mm thick concrete acceptable for residential driveways
PAL-SD-107	Jan 12	Single Lot Residential Footway Crossing Modified Layback Kerb	Sand or gravel compacted on suitable subgrade, 100mm thick concrete acceptable for residential driveways
PAL-SD-109	Jan 12	Single Lot Residential Driveway Details	5% max verge cross gradient
PAL-SD-111	Jan 12	Typical Driveway Cross Sections	100mm concrete thickness for residential driveways acceptable

VEHICULAR ACCESS DESIGN – QUEANBEYAN PALERANG