



TECHNICAL SPECIFICATION NO	Technical Specification TS-OPS 3655
TECHNICAL SPECIFICATION	Road Development Specification
RESPONSIBLE DIRECTORATE	INFRASTRUCTURE
DIRECTOR INFRASTRUCTURE APPROVAL	Date: May 2016
REVIEWED/MODIFIED	Date: October 2018
REVIEW DUE	Date: October 2020
LEGISLATION	N/A
RELATED POLICIES	CP-OPS 3655 Road Development
RELATED ORGANISATIONAL DIRECTIVES	None

OBJECTIVES:

The primary objective is to provide clear guidance for the design of safe, efficient and effective roads and road systems for the Shire;

DEFINITIONS:

“**Council**” means the Council of the Shire of Wyndham East Kimberley (Local Government Act 1995).

“**Council’s Engineer**” means an engineer employed by the Shire or firm of Consulting Engineers, or their representatives, appointed by Council from time to time to act on its behalf.

“**Highway**” means Victoria Highway or Great Northern Highway within the Shire.

“**Road**” means the road reserve, inclusive of pavement, shoulders, drains, bridges, fords and verges.

“**Shire**” means the Shire of Wyndham East Kimberley.

“**Street**” shall have the same meaning as the definition of the term contained in the Local Government Act 1995 which reads:

“Street” includes a highway and a thoroughfare which the public are allowed to use and includes every part of the highway or thoroughfare, and other things including bridges and culverts, appurtenant to it.”

The meaning of all the other terms not specifically defined in this policy shall be the same as the definitions contained in the *Local Government Act 1995*.



SPECIFICATION:

All Road works are to be carried out in accordance with this specification, the Shire Policy CP-OPS 3655 – Road Construction Specification, best accepted engineering practice and to the complete satisfaction of the Shire.

Road Widths & Pavement

Urban Residential

- a) Urban access street pavements shall be sealed with a minimum width of 7.2 metres between kerbs within a 20 metre road reserve.
- b) All urban Roads (roads within a town site) shall be sealed and include kerb and channel to both sides of the road.
- c) The diameter between kerbs for a cul-de-sac shall be a minimum of 18.0 metres.
- d) Reinforced concrete shared footpaths on at least one side of the road connecting to existing footpaths.

Industrial, Commercial and Thorough fares

- a) Pavements shall be subject to a seal width of 7.2 metres between kerbs.
- b) All Roads shall include kerb and channel to both sides of the road.
- c) The diameter between kerbs for a cul-de-sac shall be a minimum of 18.0 metres.
- d) Reinforced concrete shared footpaths on at least one side of the road connecting to existing footpaths.

Rural Industrial, Commercial and Thorough fares

- a) Pavements shall be subject to a carriageway width of 7.2 metres plus 0.5 metres sealed shoulders plus 0.5 metres unsealed shoulders in addition to the 7.2 metres carriageway.
- b) All Rural Roads (roads not within a town site) shall as a minimum be formed with drainage to both sides of the road and have constructed embayments required for any public transport stops, stipulated by the Shire.
- c) Unsealed formed gravel footpath to one side of the road connecting to existing footpaths where possible.

Rural Residential

- a) Pavements shall be subject to a seal width of 7.2 metres between kerbs.
- b) Where there are no kerbs, the pavement shall be subject to a seal width of 7.2 metres plus 0.5 metre sealed shoulders plus 0.5 metres unsealed shoulders in addition to the 7.2 metres carriageway and have constructed embayments required for any public transport stops, stipulated by the Shire.
- c) All Rural Roads (roads not within a town site) shall as a minimum be formed with drainage to both sides of the road.
- d) Unsealed formed gravel footpath to one side of the road connecting to existing footpaths where possible.



Gravel Roads

- a) 9.2 metre gravel formation with 7.2 metre running surface and 1.0 metres shoulders with drains with adequate offshoot drains as stipulated by the Shire.
- b) All Rural Roads (roads not within a town site) shall as a minimum be formed with drainage to both sides of the road.

All road reserve widths are subject to the lands topography, the existing and proposed vegetation and site specific analysis to ensure the road reserve width proposed is sufficient and able to incorporate drainage infrastructure.

Any Geotechnical Report must include existing or proposed service locations to verge and reserves including depth and orientation.

Where roadside drainage flows at a rate exceeding 1 metre per second in an unlined drain or 2 metres per second in a lined drain, a Shire approved treatment is to be employed to restrict flows to below these limits.

Road Design

All Roads should be designed generally in accordance with the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines together with the relevant Austroads and ARRB guidelines and publications which include:

- a) Guide to Road Design – Parts 1 to 8 (Austroads);
- b) Turning Path Templates (Austroads);
- c) Guide to Road Safety – Parts 1 to 9 (Austroads);
- d) Guide to Traffic Management – Parts 1 to 13 (Austroads);
- e) Guide to Pavement Technology – Parts 1 to 10 (Austroads); and
- f) Sealed Local Roads Manual (ARRB).
- g) Main Roads Western Australia Standards and Technical supplements and guides to the design and construction of roads and bridges and associated environmental aspects including the Main Roads Western Australia Supplement to Austroads Guide to Road Design.

Other aspects to be considered include the design of roads to minimise environmental impacts, designing road grades as close to existing contours as practicable and the provision of adequate lot access.

Verges shall have sufficient width for the provision of trunk and reticulation services and Property connections, and shall be a minimum width of 5.0 metres unless approved otherwise by the Shire CEO.

The minimum design speed for access roads shall be 60km/h, collector roads 70 km/h and arterial roads 90km/h.

Road signage denoting aspects of road design are to be incorporated where applicable to indicate changes in road alignments or junctions e.g.: “T”, “Floodways”, “S” for sharp turns, “Crest”, Street Names, “No Through Road” for cul-de-sac configuration etc.



The preliminary design and final design drawings for all Roads must be prepared by a qualified Civil Engineer or suitably qualified or experienced person (as approved by the Shire). Design drawings and specifications should be to the extent and in accordance with that recommended in this Technical Specification.

Road Access

Every lot is entitled to one access where it adjoins a public road, provided that:

- a) Access is to be located considering vehicular safety factors, to the satisfaction of the Shire's CPOPS-3655 Crossover Subsidy Policy;
- b) Access to the Highway is to be to the satisfaction of Main Roads Western Australia;
- c) Where the property has two road frontages, access is to be to the road of lesser importance as determined by the Council's Engineer; and
- d) Only one access to each property is permitted unless otherwise approved by the Shire.

Roads shall be designed to enable access to lots at an absolute maximum grade of 16%. All crossovers to lots are to be constructed in accordance with the Shire's specifications. It is recommended that contact be made with the Shire in respect to crossover design and construction standards, and requirements.

Road Upgrading

Council may request contributions for construction to upgrade existing roads as a condition of approval of adjoining applications for:

- a) Subdivisions, when any additional lots are created; and
- b) Development, other than single dwellings and outbuildings.

If the proposed subdivision or development is located on an unsealed road, Council may determine that the developer shall contribute towards road construction or upgrade to connect the development to the nearest sealed road in the immediate locality including services and drainage.

Construction Standards

All construction works shall be carried out in accordance with the approved engineering drawings and specifications, and shall be subject to inspection at various stages of the works by the Shire. Final approval of the road works shall only be given when the whole of the works have been constructed to the true meaning and intent of the approved engineering drawings and specifications and to the satisfaction of the Shire.

Geotechnical Report

For the construction of new roads, a geotechnical report is required to determine "best practice" for aspects of subdivision drainage plans and outcomes. Rural Residential drainage design is the responsibility of the developer and must be designed and constructed in an accepted engineering manner with Shire approved outcomes. A geotechnical report should be considered prior to preparation of subdivision engineering drawings.

Clearing & Stripping



The clearing and stripping of land for roads shall only be to the minimum extents necessary to accommodate the proposed road works and public utility services.

Adequate precautions must be taken to ensure that no damage occurs to trees, vegetation, fences, services and other installations outside the designated areas of the road works. Any survey pegs or marks which are disturbed shall be reinstated by a licensed land surveyor.

Earthworks

Earthworks shall be performed in a safe manner at all times. Material may be obtained from borrow pits within road reserves with the prior permission from the Shire and no surplus material shall be disposed of in road reserves.

All fill used in earthworks shall be clean, granular material obtained from general and road works excavations and shall not be contaminated with roots or other impurities. The fill shall be placed in even layers not greater than 300mm thick and each layer shall be compacted to at least 95% of the modified maximum dry density (MMDD) of the material when tested in accordance with AS 1289.

Traffic control devices, sign posts, guide posts, street nameplates, guide signs and warning signs shall be provided by the contractor in accordance with AS 1742 unless otherwise approved by the Shire.

Roadworks

Roadworks shall comply with the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines subject to the approval of the Shire.

Kerbing

Kerbing shall be keyed kerbing, and shall satisfy the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines, and shall be to the satisfaction of the Shire.

Drainage

Drainage shall satisfy the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines unless the Shire approves otherwise.

Footpaths

The Shire requires concrete pathways which shall be reinforced with SL72 reinforcement mesh, and shall satisfy the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines.

Where Asphalt pathways are proposed they shall satisfy the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines to the satisfaction of the Shire.

Streetscapes and Public Open Spaces



Streetscapes and public open spaces shall satisfy the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines, and where alternatives are proposed they shall be subject to the approval of the Shire.

Street Lighting

Street Lighting is a requirement at intersections, roundabouts and cul-de-sac heads.

A street lighting design plan is required as part of any subdivision submission, and shall comply with the Institution of Public Works Engineering Australia (WA Division Inc) Subdivisional Guidelines, for Shire approval.

EXPLANATORY NOTES:

The Road Construction Specification Policy is intended to give direction for construction standards.

Fees and Charges for roads shall be in accordance with the Shire's adopted Schedule of Rates for the current financial year.

APPLICATION/S:

This policy applies all Council managed property within the Shire of Wyndham East.