

WANNEROO

DEVELOPMENT DESIGN
SPECIFICATION

WD12

**ROAD FURNITURE AND
STREET LIGHTING
DESIGN**

**DESIGN SPECIFICATION WD12
ROAD FURNITURE & STREET LIGHTING DESIGN**

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DEVELOPMENT DESIGN SPECIFICATION WD12 ROAD FURNITURE AND LIGHTING DESIGN

GENERAL

WD12.01 SCOPE

1. This specification sets out requirements to be used in the design of various types of roadside furniture and street lighting.

2. All relevant design principles contained in the Australian Standard AS1158 “The Lighting of Urban Roads” referenced below must be integrated in the design of street lighting and associated infrastructure.

Australian Standards

WD12.02 OBJECTIVES

1. This specification aims to set standards and document requirements related to the provision of a variety of roadside furniture including

Safety

- Signs
- Bus Facilities
- Bollards and
- Street Lights

2. Roadside furniture and street lighting facilities must support desired amenity, safety and aesthetic levels for all road reserve users and residents.

Level of Service

WD12.03 REFERENCE AND SOURCE DOCUMENTS

(a) Council Specifications

D1, WD1 - Geometric Road Design

(b) Standard Drawings

- TS 02-2-0 - Bus Shelters – Type 1, Type 2 and Type 3
- TS 02-3-0 - Bus Shelters Layout and Kerb Setbacks
- TS 04-2-0 - Verge Bollards for 60kph Speed Zone
- TS 01-1-0 - Post And Rail / Bollard
- TS 06-1-0 - Street Name Plate for Local Roads
- TS 06-2-0 - Street Name Plate for Primary and District Distributor Roads
- TS 09-4-0 - Dual Use Pathway – Layout for Public Access Ways
- TS 09-5-0 - Access Lane Pathways, Bollards and Reflective Tape
- TS 09-6-0 - Handrail in Median Island, Verge & Public Accessway
- TS 08-1-0 - Guide Posts – Location and Details

(c) Australian Standards

- AS 1158 - The Lighting of Urban Roads and Other Public Thoroughfares
- AS 1742.5-1997 - Manual of uniform traffic control devices - Street name and community facility name signs
- AS 1743-1992 (Amdt 1-1995) - Road signs - Specifications

(d) Other

- AUSTROADS - Guide to Traffic Engineering Practice Part 12 - Roadway Lighting

WD12.04 CONSULTATION

1. The Designer is encouraged to consult with Council, the Developer's Landscape Architects/Designers and relevant authorities prior to and during the preparation of street signage, bollards and street lighting design.

STREET NAME PLATES

WD12.05 LOCATION

1. Street name plates shall be erected at all road junctions and intersections as indicated on approved drawings and in accordance with Engineering Standard Drawing attached to and forming part of this specification. **Intersections**

WD12.06 DIMENSIONS & COLOUR

1. Street name plates shall be in accordance with Council's Standard Drawings attached to and forming part of this specification. **Standard Drawing**

2. Street name plates shall be constructed from non-corrosive extruded aluminium sections not less than 3mm thick. **Thickness**

3. Plates shall have a minimum depth of 150mm (for Local Roads) and 200mm (for Primary & District Distributors). **Depth**

4. Plate colours shall be in accordance with AS 1743 Road Signs Specifications as amended. The Council's standard colour code shall be as specified below : **Colour**

- Lettering : Cast Vinyl – PMS 3298 (Green)
- Background : VIP Diamond Grade – Reflective White.

5. Electronic image of the Council's Logo shall be obtained from the City of Wanneroo. The Logo colour code shall be as specified below using the "Pantone Colour Matching System" : **Council Logo**

- Red : PMS 200
- Green : PMS 3298

6. Plate legend lettering and numerals shall be "Highway Gothic C" Series capitals. For single pole plate mountings, 120 Series B Compressed Capital lettering may be used in order to accommodate long street names onto 1000mm (maximum length) plates. **Lettering**

7. Directional arrows shall be in accordance with Council's Standard Drawing. **Directional**

WD12.07 TOURIST SIGNS

1. Tourist Signs shall be designed in accordance with Australian Standard 1743.

WD12.08 MOUNTING & FIXING

1. Mounting brackets shall be adjustable clamps, fixed to both top and bottom of the plate's extruded section. **Brackets**
2. Brackets shall be suitable for attachment to timber power and light poles or galvanised steel power and light poles or to nominal 57mm OD galvanised steel street name plate poles, whichever may be applicable. **Attachment Method**
3. Plates shall not be drilled for mounting in any way.
4. When the street name plate is attached to the nominal 57mm OD galvanised steel post then the post shall be painted with a single coat of metal primer and a covering coat of high durability gloss yellow exterior paint. **Steel Post**
5. The post shall be set vertically and located on the 2.75m street alignment (boundary offset distance).
6. The lowest part of the street name plate shall be a minimum of 2.5m and a maximum of 3m above verge ground level. **Height above ground**
7. The post shall be set into a concrete footing of sufficient dimension and in such a manner as to ensure rigidity of the post and to prevent rotation. Footing dimensions in accordance with Engineering Standard Drawing ES 06-1 may be used as a guide. **Footing**

WD12.09 STREET TYPE DESIGNATION

The street type designation shall be selected from the following:

Al	Alley	Cs	Circus	Lp	Loop	Rw	Row
Ar	Arcade	Ct	Court	Me	Mews	Sq	Square
Ave	Avenue	Cyd	Courtyard	Pde	Parade	St	Street
Bvd	Boulevard	Dr	Drive	Pl	Place	Tc	Terrace
Cct	Circuit	Es	Esplanade	Pm	Promenade	Trl	Trail
Ch	Chase	Gdn	Gardens	Pwy	Parkway	Val	Vale
Ci	Circle, Circlet	Gr	Grove	Pz	Plaza	Wk	Walk
Cl	Close	Hwy	Highway	Qy	Quay	Wy	Way
Cnr	Corner	Jn	Junction	Ra	Ramble		
Cr	Crescent	Ky	Key	Ri	Rise		
Cro	Cross	La	Lane	Rd	Road		

BOLLARDS AND POST & RAIL FENCING

WD12.10 VERGE BOLLARDS & POSTS and RAILS

1. All bollards and post and rail fencing shall be provided and installed in accordance with Council's Standard Drawings attached to and forming part of this specification.

Bollards and Fence Rails

2. Guide posts shall be located in accordance with the requirements of Australian Standard 1742. Typical placement and design requirements for guideposts used throughout the City is as outlined in Council's Standard Drawing.

Guide Posts

WD12.11 DECORATIVE FURNITURE

1. Developers who want use non-standard street furniture must submit their designs for approval.

Special Approval

2. Designers are encouraged to bring these issues to the attention of Council officers in the earliest stages of the consultation process.

Consultation

3. Designers must consider the costs associated with the ongoing maintenance and replacement (availability) of the furniture. The designer also needs to demonstrate that all legal obligations in respect to safety, both public and workers have been considered and been complied with.

Legal Obligations

WD12.12 PEDESTRIAN HANDRAILS & BOLLARDS

1. Barrier rails placed along dual use path facilities to control access and speed on the approach to road intersections shall be of such design and dimension as outlined in Council's Standard Drawing. Barrier rails shall be 40 mm NB galvanised pipe and shall be placed in a concrete footing, trowelled off flush with the pathway.

Handrails

2. Bollards used in conjunction with footpaths or dual use facilities shall be designed in accordance with Council's Standard Drawing.

Bollards

3. Ramp and Grab rails shall be constructed in accordance with the Main Roads Western Australia Standards.

Ramp & Grab Rails

WD12.13 BUS SHELTERS

1. Bus shelters shall be concrete and meet the design specifications as outlined in Council's Standard Drawings attached to and forming part of these specifications.

Standard Bus Shelter

2. Alternative bus shelter designs will be considered on their individual merit. Concept designs should be submitted as part of the consultative process in the early stages of the design process

STANDARD STREET LIGHTING

WD12.14 GENERAL

1. Standard Street Lighting refers to the use of standard light poles, lamps, luminaires and fittings as generally prescribed and erected by Western Power on the road network throughout Western Australia.

**Western
Power Lights**

2. All street lighting within the City must comply with Western Power Corporation's standards and policies. Developers who wish to use Western Power's range of non-standard or decorative lighting must liaise with the Council and submit concept designs for approval as part of the consultative process in the early stages of the design. The use of non-standard street lighting outside Western Power's selected range will not be considered.

**Non-Standard
Lighting**

3. When considering the use of Western Power's range of non-standard street lighting, Designers will need take into account the existing street lighting standards in the area, type of lighting design, consistency in colour selection and its impact on the amenity.

4. All lighting designs submitted for approval shall be undertaken by a suitably qualified lighting designer or Illumination Engineer

**Qualified
Designer**

WD12.15 OBJECTIVES

1. All designs shall take due account of lighting design principles including aesthetics, economy of installation and operation, suitability of location, co-ordination with other features and services and fitness for purpose.

General

2. Effective Street Lighting Designs should;

- Provide good levels of illumination for vehicular use
- Provide even levels of illumination for pedestrian use
- Highlight hazards
- Minimise nuisance lighting for residents
- Encourage a feeling of safety for pedestrians

**Design
Consideration**

3. All street lighting for public roadways shall comply with the requirements of Australian Standard 1158, "The Lighting of Urban Roads and Other Public Thoroughfares"

**Australian
Standard**

WD12.16 SPECIFIC REQUIREMENTS

1. For specific requirements relating to Street lighting designers should refer to Council's Urban Lighting Handbook.

**Urban Lighting
Handbook**

WD12.17 DOCUMENTATION

1. The following details shall be included with design documents submitted for approval :

- The drawing plans showing roadway layout, street names, lighting types and location conduit/cabling locations and routes, connection points to Western Power's network grid, switch/meter board positions, wiring schematic and other associated information as applicable to the proposed installation.
- Detail plans and specifications shall be provided for all proposed lighting hardware including poles, luminaires, lamp, control gear, foundations, earthing arrangement and mounting details. This information shall clearly show material types, sizes, fixings, luminaire/pole identification number, etc.

2. Operating costs shall be provided with the design proposal (dusk to dawn operation) and are to include all calculations step by step.

- Documents shall include lighting design details that demonstrate and certify compliance with Australian Standard AS1158.1 and other authority requirements as appropriate.
- Design details are to be provided for each area of road or pathway to be illuminated ie. typical straight road sections, intersection, T-junction, roundabouts, etc.

Drawings

Specifications

***Operating
Costs
Estimates***

***Compliance
Certification***