

ROAD DESIGN PRESENTATION STANDARDS

DP016 - DRAINAGE LONG SECTION

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DEPARTMENT OF
PLANNING, TRANSPORT
AND INFRASTRUCTURE



Government of South Australia
Department of Planning,
Transport and Infrastructure

Document Amendment Record

Rev	Change Description	Date	Author	Checked	Authorised
1	Initial Issue	29 July 2009			Noel O'Callaghan
2	General review of text and example drawings	23 December 2011	Natasha Stone Alison Freer	Jeremy Champion	Noel O'Callaghan

Document Management

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To be read in conjunction with CAD Manual & Presentation Guidelines DP001
(Master Specification PC-EDM7)

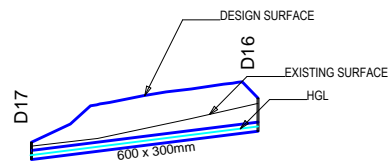
DP016 DRAINAGE LONG SECTION

1 Purpose

- 1.1 The 'Drainage Longitudinal Section' drawing is used to show the drainage design details in a sectional view.
- 1.2 For examples of this standard see attached drawings.

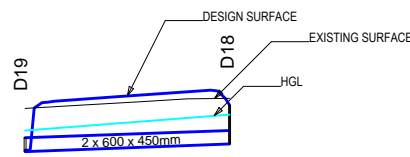
2 Content

- 2.1 Layers to be shown as per the DPTI Layer Matrix (DP001)
- 2.2 The following CAD entities are required:
 - a) All information in DP001 – General Requirements.
- 2.3 Lines shall be shown indicating the following:
 - a) Existing & design surfaces.
 - b) Datum level
 - c) Outline of new drains.
 - d) Outline of existing drains where connections are made.
 - e) Hydraulic Grade Line or Headwater Level.
 - f) New and existing drainage structures outlined.
 - g) Existing underground services drawn to scale
- 2.4 Text shall be shown identifying the following:
 - a) Drainage structure ID
 - b) Section annotation referencing drain identifier and approximate plan location.
 - c) Datum R.L
 - d) Existing underground services annotation ,size & type, and with 'critical level' for clearance (where depth is unknown or interpolated, this shall be stated)
 - e) Pipe size
 - f) Actual Flows in Cumecs
 - g) Grades in %
 - h) Hydraulic Grade Line levels
 - i) Invert Level
 - j) Design Surface levels
 - k) Chainage



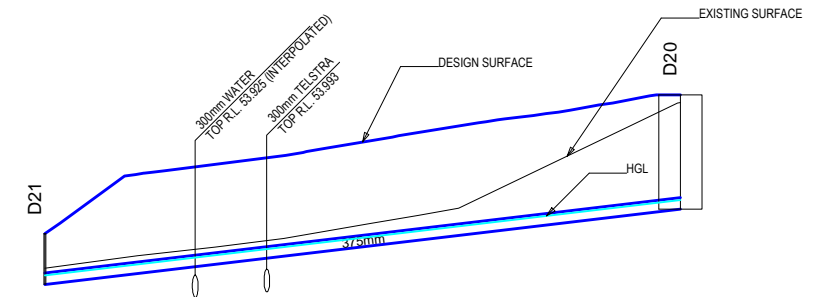
DATUM = 37.500	
ACTUAL FLOW	Q20 = 0.07 Cumecs
GRADES	3.17%
HGL	38.03
INVERT LEVEL	37.97 38.03
DESIGN SURFACE	38.20 38.79 38.35 38.41
CHAINAGE	0.00 12.00

D10A



DATUM = 40.500	
ACTUAL FLOW	Q5 = 0.74 Cumecs
GRADES	0.92%
HGL	41.28
INVERT LEVEL	41.00 41.28
DESIGN SURFACE	41.02 41.62 41.10 41.49
CHAINAGE	0.00 10.80

D109



DATUM = 53.500	
ACTUAL FLOW	Q5 = 0.06 Cumecs
GRADES	2.97%
HGL	53.80 53.92
INVERT LEVEL	53.80 53.92
DESIGN SURFACE	54.47 56.31 54.80 54.92
CHAINAGE	0.00 33.62

D108

NOTES:

1. THE SERVICES INFORMATION INDICATED ON THIS DRAWING IS BASED ON FIELD OBSERVATIONS AND DETAILS PROVIDED BY SERVICE AUTHORITIES. DPTI, ITS SERVANTS OR AGENTS SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE CAUSED BY THE USE OF THIS SERVICES INFORMATION. THIS DESIGN MAY INCLUDE THE POSSIBILITY OF SERVICE CONFLICT AND / OR ENCROACHMENT WITHIN SAFETY CLEARANCES REQUIRING ASSESSMENT AND APPROVAL BY THE OFFICE OF TECHNICAL REGULATOR AND SERVICES AUTHORITIES. IF DURING CONSTRUCTION IT IS FOUND TO BE WITHIN 2 METRES OF ETSA SERVICES, FURTHER INFORMATION TO BE SOUGHT (BEFORE WORK CONTINUES).
2. A SERVICE REDUCED LEVEL (R.L.) HAS BEEN PROVIDED WHERE THE SERVICE HAS BEEN DEPTED. WHEN PROVIDED AT OTHER LOCATIONS SERVICE R.L.'s ARE INDICATED AS INTERPOLATED.
3. THE DESIGN AVERAGE RECURRENCE INTERVAL (ARI) FOR DRAINAGE OF ROAD PAVEMENT IS 5 YEARS.
4. THE AVERAGE RECURRENCE INTERVAL (ARI) DRAINAGE DESIGN FLOW 'Q' IN CUBIC METRES PER SECOND IS SHOWN ADJACENT TO THE HYDRAULIC GRADE LINE AS A VALUE ONLY. AT CRITICAL LOCATIONS REQUIRING DEVIATION FROM THE STANDARD, THE DESIGN STANDARD AND FLOW ARE SHOWN E.G. Q10 = 0.5.

No.	AMENDMENT DESCRIPTION	BY	CHECK	ACCEPTANCE	DATE

100 MILLIMETRES ON ORIGINAL DRAWING

ALL DIMENSIONS ARE IN METRES UNLESS SHOWN OTHERWISE

Government of South Australia
Department of Planning, Transport and Infrastructure

PROJECT No.: 14669	FILE No.: 07/04422
DESIGN No.: 20070652	SURVEY No.: 20070774
PROJECT START ROAD RUNNING DISTANCE: MCA1; CH 0000 = 54.89 km	
PROJECT END ROAD RUNNING DISTANCE: MCA1; CH 4560 = 59.45 km	
SCALES: H 4 0 2 4 6 8 V 1 0 0.5 1 1.5 2	

**ROAD No. 7200
STURT HIGHWAY
SEPPELTSFIELD ROAD - GREENOCK ROAD
D10A, D109, D108
DRAINAGE LONGITUDINAL SECTIONS**

DESIGNED: ANC	DRAFTED: AEF	ACCEPTED FOR USE: A.SMITH	ACCEPTANCE FORM KNET No.: 12345678	DRAWING No.: 5933	SHEET No.: 312	AMEND No.: 0
CHECKED: DSNE	CHECKED: NKS	TITLE: MANAGER	DATE: 30/02/2010	UNCONTROLLED COPY WHEN PRINTED		

CAD FILE NAME: DP016 EXAMPLE.TDWG