



Consultant/Developer Specifications for the  
Delivery of Digital Data to  
Asset Managers and Owners

**Version 5 FINAL**

**4<sup>th</sup> September 2023**

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## EXECUTIVE SUMMARY

# Introduction

## A-SPEC Updates

**A-SPEC** is the acronym for the program involved in developing specifications for the delivery of newly constructed assets as Digital Data in a GIS ready format to Asset Owners and Managers in Local Governments, Utilities and Water Authorities around the world.

This document represents a consolidated view of the changes that have occurred in the specifications managed under the A-SPEC initiative.

## A-SPEC Standard

A-SPEC currently comprises of twelve (12) specialised specifications; **B-Spec** (Buildings), **D-Spec** (Stormwater Drainage & Telecommunications-Optical Fibre). (please note that the Telecommunications & Optical Fibre specifications will become T-Spec), **O-Spec** (Open Spaces), **R-Spec** (Roads), **S-Spec** (Wastewater) and **W-Spec** (Water).

The specifications have been created to enable organisations to utilise the specifications that are most relevant to their requirements in accordance with the following two specific instances.

1. New assets
  - Created from subdivision developments, capital works programs, including renewal and rehabilitation works or community projects.
2. Existing assets
  - Projects initiated for backlog data capture programs
  - Field capture activities to confirm where existing assets are and their characteristics
  - Field capture activities to identify assets not previously captured

The versions are aligned and differentiated through the naming convention used for each.

- For new assets, the term 'DDS' is incorporated in the name. For example, 'D-Spec DDS - Version 9.0.6 Final.pdf'.
- For existing assets, the term 'Existing' is incorporated in the name. For example 'D-Spec Existing - Version 1.0.6 Final.pdf'.

This document has been created with a consolidated list of the key changes that have occurred in all the specifications. For specific detail such as data types or validation rules please refer to each specification.

Please note: The tables in this document may be updated from time to time until the release date so please do not hesitate to contact GISSA International on +61 3 9877 6972 or refer to the website on [www.a-specstandards.com.au](http://www.a-specstandards.com.au).

## Version Control and Changes in Documents

The version of this release of the **A-SPEC Specifications** will be known as **Version 5** and will contain the specifications listed in the Current column. Each update to this document will be incremented by +1.

**Table 1 - Suite of Specifications linked to this release**

Valid from 4 September 2023	
A-SPEC Version 5	A-SPEC DDS – Introduction and Overview V5 Final 20230904
	B-Spec DDS – Version 2.0.6 Final Draft 20230904-v5 B-Spec - Existing - Version 1.0.6 FINAL 20230904-V5
	D-Spec DDS - Version 9.0.6 Final 20230904-v5 D-Spec - Existing - Version 1.0.6 FINAL 20230904-v5
	O-Spec DDS – Version 3.0.6 Final 20230904-v5 O-Spec - Existing - Version 1.0.6 FINAL 20230904-V5
	R-Spec DDS – Version 3.0.6 Final 20230904-v5 R-Spec - Existing - Version 1.0.6 FINAL 20230904-v5
	S-Spec DDS – Version 2.0.6 Final Draft 20230904-v5 S-Spec - Existing - Version 1.0.6 FINAL 20230904-v5
	W-Spec DDS – Version 2.0.6 Final Draft 20230904-v5 W-Spec - Existing - Version 1.0.6 FINAL 20230904-v5

## Roll Out of New Versions

The A-SPEC Community advocates that all users of the specifications take on a 6 month phase in period for the adoption of a published new release.

Once a new version has been published and the phase in period is completed,

- a. the previous older version will no longer be supported.
- b. The date on each document will reflect the release date

## Confirmation of Changes

GISSA has taken every endeavour to ensure that what is in this document is synchronised with the detail in each specification. Each consultant should satisfy themselves that all changes are aligned between this document and the specifications.

## New Asset Types and their Relevant Specifications

Table 2 below lists all the new asset types that can be found in the A-SPEC standard Specifications.

Please note this list is not expected to alter for this release.

**Table 2 - New Asset Types**

New Asset Type	Specification to Refer to
Hardstands	R
Marine Safety & Assist Facility	O
Platforms	W
Poles	O
Stairs	B

## New Attributes, Relevant Table and Specification

Table 3 below lists all the asset types that can be found in the A-SPEC standard Specifications.

**Table 3 - New Attributes**

New Attribute	Table	Specification to Refer to
AOW_ID	All Asset tables	ALL SPECIFICATIONS
Member EPSPG	Area of Work Extent	ALL SPECIFICATIONS
Cladding Roof_Mat	Building Footprint	B
Floor_Ht	Building Floor Plan	B
No_U_WC No_U_DA No_U_SF	Public Toilets	B
Joint_Mtd	Pipe	D
Acces_Mtd Lid_Mat	Pit	D
Erosion	Head / End Walls	D
Unique_ID	Head / End Walls Property Connection	D
Const_Type	Bore/Ground Water	O
Hierarchy	Open Spaces	O
Pole_ID	Lighting	R
Unique_ID	Road Reserve	R
Net_Only	Surface (Seal) Centreline	R
Grate Grt_Mod Grt_Manf Grt_Warty Grt_Mat	Trees	R
Water_Type	Wastewater Pipe	S
Unique_ID	Property Connections	S
Joint_Mtd	Wastewater Valves	S
Joint_Mtd	Wastewater Fittings	S
Joint_Mtd	Meter	W
Joint_Mtd	Valve	W
Joint_Mtd	Fitting	W

## New CODE LISTS Relevant Table and Specification

Table 4 below lists all the asset types that can be found in the A-SPEC standard Specifications.

**Table 4 - New CODE LISTS**

New CODE LISTS	CODES	TABLE	Specification to Refer to
EPSP	28349 28350 28351 28352 28353 28354 28355 28356 28357 7849 7850 7851 7852 7853 7854 7855 7856 7857 SeeComment		ALL SPECIFICATIONS
Cladding	AL BRK CONC GLASS SeeComment METAL STNE TIMBR VINYL	BUILDING FOOTPRINT	B
Baluster, Rail and Stair Material	AL CONC RC SSTEEL STEEL TIMBER WI See Comment	STAIRS	B
Feature Type	BUILDING TANK TOWER SeeComment	STAIRS	B
Rail Type	BLASTR CONTHR DBLR NA POST SeeComment	STAIRS	B
Stair Purpose	EMR FES GEN MAINTAIN RESTRICTED ROOF_ACC	STAIRS	B

New CODE LISTS	CODES	TABLE	Specification to Refer to
	SeeComment		
Stair Types	CURVED LADDER LADDER_C LSHAPE STRAIGHT_L SPIRAL STRAIGHT USHAPE WINDER 2Q_WIN SeeComment	STAIRS	B
Stringer Types	CANT_STR CB_STR CR_OS_DBL CR_CS_DBL OR_OS_DBL CR_OS_CS SeeComment	STAIRS	B
Access Point Access Method	MONLAD NLS NOACCESS STDLAD STIRON SeeComment	PITS	D
Pit Lid Material	CA CONC FIBRE PVC STEEL SeeComment	PITS	D
Jointing Method	BFJ BWJ CWJ EFJ NONE MCJ	PIPE	D
Finishing Material (as per R-Spec)	CONCR GAL GLZ LAM PLAS PNT POLISH STEEL STGLASS TILE SeeComment	POLES	O
Foundation Type (as per R-Spec)	INDF MFOUND PILE SeeComment STRF	POLES	O
Marine Safety and Assist Facility Type	MBUOY NAVAID RESE RESC	MARINE SAFETY AND ASSIST FACILITY	O

New CODE LISTS	CODES	TABLE	Specification to Refer to
	SeeComment		
Marine Safety and Assist Facility Material	CONC METAL SeeComment SSTEEL	MARINE SAFETY AND ASSIST FACILITY	O
Open Space Hierarchy	CPARK DPARK NPARK PPARK SeeComment	OPEN SPACE	O
Pole/Post Material (as per R-Spec)	AL IRON NA PCM SSTEEL STEEL TMBR WOOD SeeComment	POLES	O
Pole/Post Type (as per R-Spec)	CANT CMPST FLGP PEDST SNG TOW SeeComment	POLES	O
Road Barrier Restraint Type (as per R-Spec)	CANT CSTEM FACE GRAVITY PILE SeeComment	POLES	O
Road Barrier Tie System Type (as per R-Spec)	ANCH DEAD PIN NA SeeComment	POLES	O
Well Construction Method	DRILLED DRIVEN DUG SeeComment	BORE/GROUND WATER	O
HARDSTAND TYPE	AIRPLANE CARWASH CRANE PLANT SeeComment STORAGE VEHICLE WHEELWASH	TREES	
TREE GRATE MATERIAL	AL CONC IRON NA SSTEEL STEEL STNE SeeComment	TREES	



New CODE LISTS	CODES	TABLE	Specification to Refer to
Water Type	ROOFW WASTEW SeeComment	GRAVITY WASTEWATER PIPE	S
Rail Material (as per R-Spec)	AL BRASS NA SeeComment SSTEEL STEEL WI WOOD	PLATFORM	W
Rail Type (as per R-Spec)	BLSTR CONTHR DBLR NA SeeComment	PLATFORM	W
Surface Material (as per R-Spec)	ASC CONC METAL TMBR SeeComment	PLATFORM	W

## New Attribute Tables and Specification

Table 5 below lists the new attribute tables created with basic attributes so data can be processed and linked to the Area of Works.

**Table 5 - New Attributes**

New Attribute Tables	Specification to Refer to
Conveyance Paths Electrical Lines Fire Protection Lines Fixtures & Fittings Lines Floor Plan Lines HVAC Lines HVAC Mechanical Systems Plumbing Lines	B
Abutments	R
Road Reserve	R
Traffic Management Device (Polylines)	R
Vehicle Crossing	R
Pits/Access Points (polygons)	S

## Removed Attributes Relevant Table and Specification

Table 6 below lists all the asset types that can be found in the A-SPEC standard Specifications.

**Table 6 – Removed Attributes**

Removed Attributes	Table	Specification to Refer to
Currency Unit_Cost Unit_Ref	Building Footprint Building Space Building Floor Plan	B
Currency Unit_Cost Unit_Ref	Property Connections	D
Base_RL Acces_Diam	Pits	D
Currency Map_Ref Unit_Cost Unit_Ref	Open Spaces	O
Manufact Model_No	Playgrounds	O
Currency Unit_Cost Unit_Ref	Parking	R
Currency Unit_Cost Unit_Ref	Pathway Centreline	R
Currency Unit_Cost Unit_Ref	Surface(Seal) centreline	R
Acces_Diam Base_RL	Pits /Access Points	S
Currency Unit_Cost Unit_Ref	Property Connections	S
Currency Unit_Cost Unit_Ref	Pump Station Site	S