Documentation Standards & Engineering / Services HOTO Requirements

Major & Capital Projects Framework

March 2026

Airport Development Group

Contents

Acronyms: **6**

Definitions & Interpretation **6**

Definitions & Interpretation **7**

Introduction **8**

Background & Purpose **8**

Scope **8**

Business Risk Identification **8**

Software Requirement **9**

CAD Applications 9

Software Ownership **9**

CAD System Variables **10**

CAD Drawing Guidelines **11**

Drawing Layering System 12

Annotation 13

Standard Symbols 13

Purging & Audit 14

X-Reference Files **14**

Drafting Standard Compliance **14**

Use of Model Space & Paper Space **15**

Scales **15**

Title Sheets **17**

Title Drawing Files 17

Modifications to Title Sheet 17

Views & Viewports 17
Drawing Titles 18
Drawing Status 18
Consultant & Contractor Logos 19
Drawing Numbering 19
File Naming Conventions 21
Cover Sheet 22
Request for Current Drawings 22
References / XRefs 23
Cross References 25
Attachments 25
Text 25
Size 25
Style 26
Symbols 26
Wblocks & Blocks 26
Hatching 26
Dimensions & Leaders 27
Tying into existing services 27
Approval Initials & Signatures 27
Drawn 27
Checked 27
Certified 28
Approved 28
Dates 28
Revisions 28

Clouds and triangles **28**

Tables **28**

File Accessibility **29**

Transmittals **29**

Stakeholder & Documentation Reviews **29**

Project Planning & Design Phase Submissions **30**

Design Stage **30**

For Tender **30**

Project Delivery Phase **31**

For Construction **31**

As Constructed - Draft **31**

As Constructed - Final **32**

Practical Completion **32**

Obsolescence **33**

Data Ownership & Copyright **33**

ADG Drawings **33**

Shop Drawings **34**

Vendor Drawings **34**

Engineering Detail Survey Standards **35**

Survey Control 35

Data Capture 35

Data Format 37

Accuracy 37

Survey Report 37

Deliverables 37

AutoCAD Data Standards and Formatting **37**

Coordinate System 37
Data Accuracy 37
Topography 37
Data Formatting 37
Hand Over - Take Over Requirements (HOTO) 39
Planning 39
Design And Approvals 39
Construction 40
Commissioning 40
Defects Liability Period 41
Appendix A – Permanent Survey Marker (PSM) Plan 42
APPENDIX B – AUTOCAD DATA FORMAT 43
Document Control 55
Feedback 55

Acronyms:

ADG Airport Development Group

DIA Darwin International Airport

ASA Alice spring airport

TCA Tennant Creek Airport

CAD Computer Aided Design

CTB File extension for AutoCAD plot style table

DWG File extension for AutoCAD drawing

DWT File extension for AutoCAD template

DXF Drawing Interchange Format - DXF is used to exchange CAD drawing data with other software applications

PDF File extension for Adobe portable Document Format file

RVT File extension for Autodesk Revit Files

Definitions & Interpretation

CAD Drawing File	Electronically Saved Drawing Data.
Annotation	Text, dimensions, arrows, symbols, drawing sheet, reference symbols, hatching and the border sheet.
Layer	A Logical grouping of data within a drawing file which can be turned on and off as required.
Layering System	The method established to retrieve specific data from a drawing file.
Block	A named external drawing created from a set of entities that can be inserted and manipulated into the current drawing.
Viewport	Specific viewing window within a drawing.
X-Reference	An external drawing attached to another drawing, which is read transparently without altering its contents.

Definitions & Interpretation

As Constructed	Refers to the comprehensive collection of documents and drawings that accurately record the work completed on site. Equivalent terms may include As-Built, Work -As-Executed or Work-As-Installed
Design Documentation	Refers to documentation and drawings related to the design stage of a project i.e., 30%, 50%, 80%, For Tender.
Drawings	Include plans, site plans, sketches, layouts, elevations, sections, miscellaneous detail drawings 3D models including block and rendered.
Electronic Format	Refers to digital files stored on a multimedia storage device.
External Contractor	The person or entity bound to execute the work under a contract with ADG. The term contractor also applies to subcontractors engaged to carry out work.
Including	Implies 'including but not limited to'.
Must	Refers to a mandatory, non-discretionary action.
Project Manager	Refers to the person responsible for delivering the outcomes of the project and compliance with this standard.

Introduction

The ADG Drafting Standard has been prepared to assist contractors to produce CADD models, documentation and drawings to ADG standards.

Background & Purpose

ADG is required to maintain and retain a complete and current set of drawings relating to the fabric and services of DIA, ASA and TCA and airport precincts.

The ADG standard provides contractors and design consultants with a guide to producing CAD models and drawings for ADG to ensure their creation and amendments are consistent in style and quality.

Contractors and design consultants engaging subcontractors to carry out CAD documentation must include an obligation to comply with this standard as part of the relevant contract and supply this standard and CAD-related files provided by ADG to the subcontractor.

Scope

The ADG Standard:

- Sets out the principles and best practices that apply when creating or amending drawings on behalf of ADG.
- Applies to design, construction, commissioning, operations, maintenance and decommissioning of services within ADG and airport precincts of DIA, ASA, TCA and
- provides guidance on the setup of AutoCAD applications for contractors.

Business Risk Identification

As Constructed drawings that display incorrect information can be hazardous to the health and safety of site visitors and personnel using the facility.

Software Requirement

CAD Applications

ADG uses the following CAD software:

- Autodesk AutoCAD as its primary CAD application.
- Autodesk Revit for 3D BIM modelling.

Variations in terminology between CAD applications will be clarified in this standard. Where both AutoCAD and Revit terms are available, Auto CAD term are the preferred standard for 2Dimenssional drawings and Revit for 3D Modeled drawings.

CAD models, documentations and drawings may be developed in other CAD applications. However, they must be submitted to ADG in either AutoCAD (.dwg) format or Revit (.rvt) format.

Where BIM has been used to develop documents or drawings in relation to the project, the BIM files in .rvt or .ifc format must be included.

CAD data containing time sensitive and functionality limits, software licensing watermarks, passwords, or requirements to purchase additional applications or licenses will not be accepted.

Software Ownership

Contractors submitting drawings to ADG must provide ADG with sufficient intellectual property rights to facilitate the production, amendment, viewing and publication of drawings and models to meet ADG needs.

Contractors must provide satisfactory evidence of their intellectual property rights to ADG upon requests in accordance with the timeframes as outlined in the contract, or if no timeframes are outlined, as soon as practicable after the request.

CAD System Variables

The system variables are set, where possible, in the drawing templates. The contractors must ensure their application(s) adhere to the following.

Measurement	Unit :	1
Master Unit	Millimeters or meters	mm or Mtr.
Length	Type Precision	Decimal 0 for mm 0.0 Two Decimal Places) 1.0 For Meters
Angle	Type: Precision: Direction:	Decimal Degree 0.00 (Two Decimal Places) Anti - Clockwise
Direction	Base Angle:	East 0.00 Degrees
Line scale	Linetype scale factor / Ltscale	1

CAD Drawing Guidelines

Unless stated otherwise in this standard, drawings must be produced in accordance with AS1100 including its parts and amendments.

CAD drawings set-up in a local co-ordinate system must be related back to a world co-ordinate system, which is common to all ADG sites. The person responsible must discuss this with Property Unit and/or CAD Manager before documentation commences.

All overall plans, sections and elevations are to be drawn at 1 AutoCAD unit to 1mm scale with the complete extent of each consultant's work (where applicable) and services clearly defined in their contract document set. The contract document CAD file drawing is to be structured so that data not specifically relating to the consultant's extent of work can be easily removed.

Each CAD drawing file showing building plans is to contain only the plan information for that level. Where any other plan is placed on the drawing sheet representing another level, its full extent must be shown, and it is not to exist on the same layers or in the same file as the main plan.

Where details, sections or elevations exist on the same drawing sheet as the main plan they must not be produced on the same layers or on the same file as the main plan. Text, dimensions, drawing reference symbols, hatching and border sheets are to be on separate layers. Note that all hatching and symbols specific to a building entity should be placed on a specific hatch or symbol layer for that entity. e.g., all blockwork wall hatching is to be placed on a layer blockwork wall hatching.

Drawing must:

- Be produced appropriately using different layers and Block command features in AutoCAD.
- Be uniform, of good quality, clearly presented, logically sequenced, and created using best drafting practices.
- Be sufficiently annotated and dimensioned, and
- Have the supplied title sheet present, as outlined in the section Title Sheets and completed with the appropriate titles and signatures.

Orthographic drawings must be prepared to ensure true horizontal, vertical, perpendicular, and closed geometry.

Line diagrams drawings must be prepared using the *Gridmode* feature, no smaller than 5mm, to ensure line work and symbols are neat, evenly spaces and not overcrowded.

Design drawings must be prepared to achieve a clear representation of design intent, constructability, Operability and highlight any special requirements to ensure the end product is safe, ergonomic and fit for purpose.

As-constructed drawings must be prepared to achieve a clear representation of work completed on site, including its relationship to existing equipment and structures on site.

Drawings that do not comply with the requirements in this standard will be rejected by the project Manager. The contractor must then re-submit the rectified version to the Project Manager for further review.

Drawing Layering System

The intent of the layering system is to have an intelligent naming structure that will allow any item/object to be turned off in AutoCAD and not affect any other information on the drawing.

All data should be differentiated into groups suitable for analysis by Projects team at a later stage with a minimum of reorganisation. Data should be organised into intelligent named layers to facilitate data management.

Each consultant will be responsible for the consistent use of layer names throughout all of their drawing files (only layer names complying with the specification will be approved).

The consultant will be responsible for consistent layer data. Data that is only relevant to each individual layer name should be on that layer.

All properties of drawing entities shall be defined "BYLAYER". In AutoCAD, colours, lineweight and linetypes are to be defined "BYLAYER".

The project layering system implemented will be developed through the following guidelines.

No drawing or drawing reference shall be done on layer 0, this layer is to be kept free.

No drawing or drawing reference shall be done on layer defpoints, other than paperspace viewports.

The layer names will be constructed as follows:

Layer name:

Layer name is to be the descriptive name and not a layer/level number. All layer names are to be representative of the function or element type.

BASE LAYER NAME	DATA
WALL*	all wall data
FURN*	all furniture data
STAIR*	all stair data

Note: The extension to base layer name of (*) signifies that every object represented on individual layers is named with the base name and an extension. The extension is flexible and must be different for each of the base layer names. Layer names are not to exceed 24 characters.

Annotation

All annotation such as text, hatching, symbols, revision numbers and must be produced on the separate allocated layers.

Sections are to be called up alphabetically and details are to be called up numerically.

Text plotted size should be confined to

Descriptive text, general notes, dimensions, etc. - 2.5mm plotted size

Labels and name of structures - 3.5 mm plotted size

Main titles - 5.0 mm plotted size

Extra large - 7.0mm plotted size

Standard Symbols

All symbols are to conform to the current Australian Drawing Standard recommended symbols. All symbols are to be external blocks, and they are to have their hatching pattern on a specific hatch layer. A legend of symbols should be provided.

Purging & Audit

All CAD files shall be purged of unnecessary data and an audit performed before transferring.

X-Reference Files

Drawing files are to be created working off one drawing base file (i.e., Xref Models) for their extent of work:

- Plans
- Elevations
- Sections

These files will have a different file name with an X placed before the file name e.g., XCB0602AP with no other numbers as they will always stay "live". Xref files will be stored in a folder named Xref_Models. Any drawing files submitted to UTS with active Xrefs must also have a bound copy submitted for approval, (i.e., 2 copies of the same files, 1 copy active and 1 copy bound). Xref drawings are not to be renamed.

Xrefs must be overlayed into the drawing file on a layer named with an X i.e., XCB0602AP and the first 8 characters of the full name. An insertion point of 0,0,0, scale of 1,1,1 and rotation of 0. This must never be altered. Xref files shall be free of any annotation, dimensions and hatching and all data shall be created in Modelspace only.

Drafting Standard Compliance

The draftsperson must check each drawing against the relevant Drafting Standard mentioned above and must assure that the drawing complies with the standard, prior to submission to the project manager.

The authorized person must sign and certify that the drawings are produced with the above-mentioned standards and can submit multiple drawings only:

- In a single discipline, and
- In a single submission.

Use of Model Space & Paper Space

In Auto CAD

- The model space must contain:
  - The design data including Binded Xref files to the drawing.
  - annotations
  - leaders, and
  - dimensions.
- The paper space must contain:
  - The ADG title sheet (as an Xref supplied by the project manager)
  - The title text, and
  - Viewport(s).
  - The layout tabs should be titled similar in name or number marked in the Title sheet.

References/ Xrefs must be Merged / Bound before submission to ADG, as outlined in the section References/ Xrefs.

Scales

Geometry in the model space environment must be drawn at 1:1 scale with the relevant scaled views and scale bars located in the Sheet/ Paper space environment.

Scale factors are detailed in the table below. The scale selected for a drawing or view must be determined by considering the type of information being communicated, clarity of design intent, clarity of annotations and economy of drawing production.

Where drawing contains multiple scales, the scale in the title sheet must be written *"AS SHOWN"* with the individual scales of each view written below each view title.

Where drawings do not confirm to any scale, such as piping and instrumentation diagrams, process flow Diagrams or single Line Diagrams, the scale must be written as *"NTS"* in the title sheet or below the individual view title, as appropriate.

The following table shows the preferred scale factors:

Description	Scale	General Use
Enlargement Ratios	10:1 to 2:1	To clarify the details of small items.
Actual Size 1:1	1:1	To highlight actual size.
Reduction Ratios	1:2 to 1:50 1:50 to 1:200 1:200 to 1:1000	Component and construction details. General Arrangements/ location drawings. Site plans, Locations/ Block plans.
Multiple Scales	As Shown	Actual Scale to be shown under view title.
Not to Scale	NTS	To be shown on the title sheet and/ or under view title.

Title Sheets

Title Drawing Files

Title drawing ADG_A1_L.dwg will be supplied by ADG.

The standard drawing size shall be A1, and all contract drawings shall include the standard UTS titleblocks. This titleblock (A1p-Bord.dwg) will be inserted in paper space on layer PPBORD-SHT at a scale of 1:1 with the bottom left-hand corner at 0,0,0. The titleblock must not be exploded or altered in any way and all title information must be added using the attributes provided or by editing the text, if attributes are not provided. Consultants can include their company logos and other information in the space allocated under consultant on the title block.

A3 sized sheets shall be used only at the direction of the ADG CAD Manager.

Sheet	Size	Dimensions
ADG_A1_L	A1	594x 841mm
APH_A3_L	A3	297x420mm

Project managers must provide the title sheet to the contractors on request. Title sheets for Darwin projects can be accessed by clicking the following link:

X:\DIA (New)\IP - Procedures\IP005 (Templates)

Note: Link for the ASA and TCA will be soon updated.

Modifications to Title Sheet

The title sheet provided must not be resized, redrafted or in any way modified, other than to complete the text fields, position the location of works icon and show the correct north orientation (wherever applicable).

Views & Viewports

In AutoCAD:

- Create a viewport on the viewport layer.
- Open the viewport and move the view to encapsulate the geometry required, and
- Close and lock the viewport.
- Layout tab names should be similar as the drawing numbers provided in the Title sheet and have the same number equivalent to number of drawings.

Drawing Titles

In AutoCAD, the drawing titles must be completed by editing the text.

All sections of the drawing titles must be completed in full.

Drawings with incomplete titles will be rejected by the Project Manager. The contractor must then re-submit the rectified version to the Project Manager for further review.

Drawings must include the Area of work icon to identify the location of the construction works within the ADG precinct. The location must be indicated using the red hatched boundary on the location plan supplied within the title sheet.

Plans must be oriented with site north towards the top, or to the left of the title sheet. The orientation is to be clarified by way of a north arrow on the primary view.

The variation between site north and true north must be indicated on drawings by way of the supplied location plan.

Drawing Status

The following must be used on the title sheet status line:

%	Revision	Details
30%	CONCEPT	Preliminary/Sketch drawings for information.
50%	PRELIMINARY	Preliminary/Sketch drawings for information.
80%	FOR INFORMATION	Design drawings for information and review
100%	FOR TENDER	Detailed design drawings issued for tender purposes.
100%	FOR CONSTRUCTION	Final Design drawings for fabrication, construction, and installation.
100%	SHOP DRAWING	Project drawings supplied by the Fabricator
100%	AS CONSTRUCTED	Drawings updated after construction on site is complete.

Consultant & Contractor Logos

The contractor logo:

- must only be inserted in the space provided on the ADG title sheet for contractor logos
- must not be added by modifying the ADG title sheet Reference/XRef itself
- should preferably be a constructed Block in AutoCAD.
- may be a raster image, provided it is pasted into the CAD file and not referenced.
- text, if not modelled, must be a TrueType font, and
- must be placed on the Layer TBLOCKTEXT.

Drawing Numbering

ADG project drawing numbers are supplied by the Project Manager and are constructed using the format:

(Prefix)(Project No.)-(Asset No.)-(Asset Code)-(Discipline No.)-(Drawing No.)

ADG Overall Project No.	Prefix	-	Asset No.	-	Asset Code	No.	-	Drawing No.
DIA-IT028-AR01-001	DIA	-	IT028	-	AR	01	-	001
ASA-SV039-AR02- 002	ASA	-	SV039	-	AR	02	-	002
TCA-SV001-EL01-012	TCA	-	SV001	-	EL	01	-	012

Note 1:

Prefix is code name allocated for the different airport locations of Darwin International Terminal (DIA), Alice Springs Airport (ASA) and Tennant Creek Airport (TCA)

Note 2:

ADG has denoted different Asset numbers to identify different buildings (including leased, commercial, self-operated), car parks, property locations, services and service areas. An asset code can be obtained by consulting the project manager for working on different areas of the airport precincts of Darwin, Alice Springs and Tennant Creek. In the above example DIA-IT028-AR-1-001, Asset Code IT028 denotes IT stands for *Terminal* and number 028 is denoted to the project of *Terminal Expansion.* Similarly, asset numbers can be generated for different projects.

Project Managers:

List of existing *Asset codes* are accessed by clicking the link:

X:\DIA (New)\A - Drawing Search Methods\Asset Numbers 2017-06-30.xls

New numbers can be generated for new projects if there is not any relevant existing number found for the project. In case of new number is generated, project manager must update the existing list by making changes in the excel file provided with above link.

Asset Code:

It's a code which denotes the different categories of documents and drawings provided for a particular project. For example, asset code AR is used for architecture drawings for any project. A discipline template is provided below to find out different asset codes for different drawing categories.

Numbering must include the asset codes from the table below.

Code	Sections	Code	Sections
AR	Architectural	**EL**	Electrical
AS	All Services	**FR**	Fire
CO	Communications	**FU**	Fuel
CV	Civil	**HY**	Hydraulics
DO	Documents	**ME**	Mechanical
DR	Drainage	**SE**	Sewer
DO	Documents	**ST**	Structural
FU	Fuel	**WA**	Water
		SE	Sewer

The Asset Code and the Discipline number for the document or drawing has to be created by referring the table provided in the link below:

X:\Discipline Template

Project Managers must send the table contents to the contractors.

Drawing number: These numbers are the numbers denoted by the contractors to the set of drawings containing one or multiple files. The drawing numbers should be minimum of three figures.

Contractor project drawings submitted to ADG must use the file naming convention matching the drawing number. Based on the examples above.

Each drawing must represent a **single discipline** and/or **sub-discipline**. Multi-discipline drawings are not permitted unless requested by ADG for the purposes of clash detection. For example, the Electrical discipline has sub-disciplines of lighting and power, and these must be separate drawings. Data information must be part of communication discipline drawings.

If there is an issue with the drawing numbering format, the contractor must immediately contact the Project Manager for clarification.

File Naming Conventions

The file name must not include any prefixes or suffixes denoting status or revision. Revision history will be marked only in the revision column provided in the ADG title sheet.

The status of a drawing submission may be noted in an appropriately named Windows folder, zip file or transmission documentation.

The Sequential Number in file names must be prefixed with '0' (zero) or '00' as required to make 3 figures and ensure alpha-numerical order is maintained in all databases. For example:

Incorrect Numerical Order		Correct Numerical Order	
DIA-IT028-AR01-1.dwg	·	DIA-IT028-AR01-001	·
ASA-SV039-AR01-10.dwg	·	ASA-SV039-AR01-010.dwg	·
-G2B-M2.dwg	·	WM5678-G2B-M010.dwg	·
WM5678-G2B-M300.dwg	·	WM5678-G2B-M040.dwg	·
WM5678-G2B-M40.dwg	·	WM5678-G2B-M300.dwg	·

Each CAD file must:

- contain a single drawing.
- have an individual drawing number.

All CAD files must be saved in Paperspace (tilemode 0) before submitting to ADG

CAD files must not:

- have multiple drawings in the Model space environment.
- have multiple drawings tabulated in the Sheet / Paper space environment.

A drawing series spread over multiple sheets must have unique drawing numbers with a sheet number detailed in the drawing title. For example:

- SHEET 1 OF 2
- SHEET 2 OF 2

Cover Sheet

The first drawing of each discipline series (Cover Sheet) must:

- Clearly show the Project Number, Project Title, and discipline
- Contain a drawing list
- Contain a Legend, and
- A section of General Notes, if applicable.

The Cover Sheet may expand to more than one drawing if required.

Request for Current Drawings

Contractors must:

- Request current Architectural and Service drawings from the ADG Project Manager.
- Not reuse legacy drawings from previous projects.

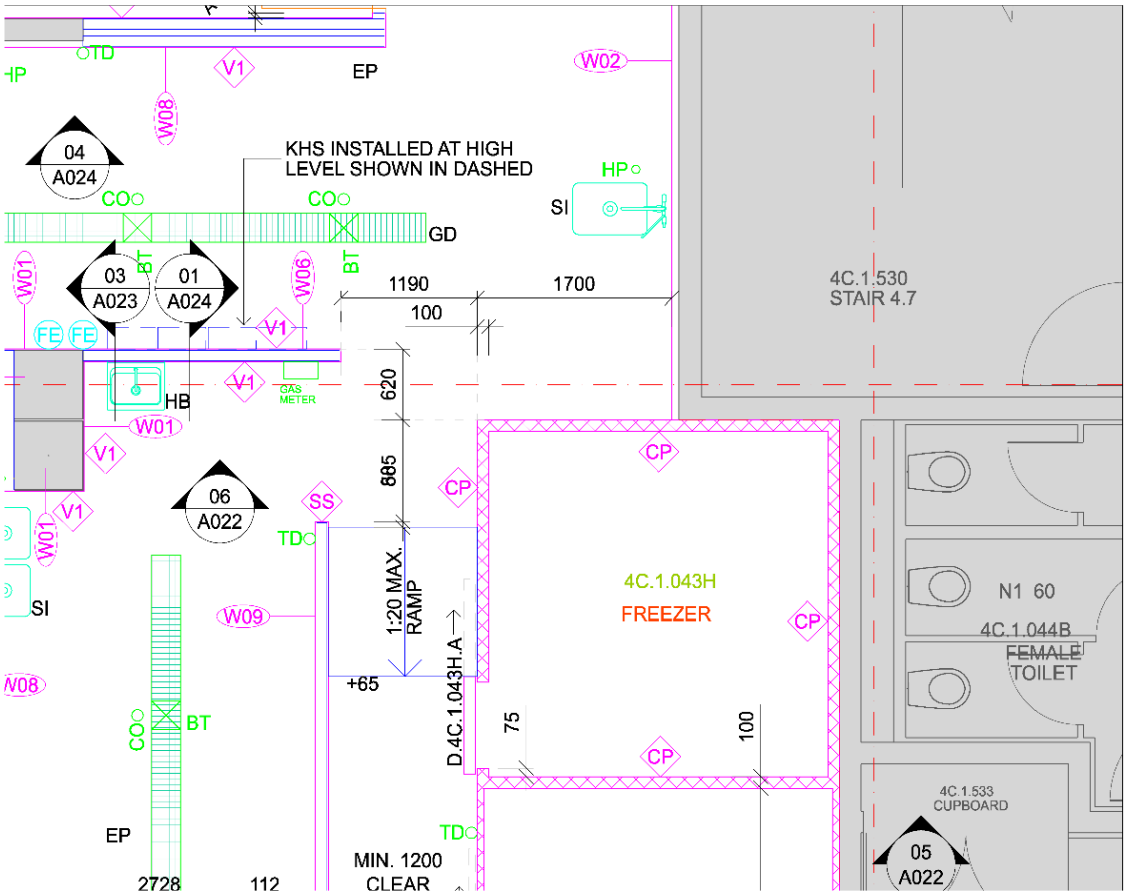
References / XRefs

All Contractor drawings must be coordinated and referenced across the latest drawing revisions specific to the project, prior to submission to ADG.

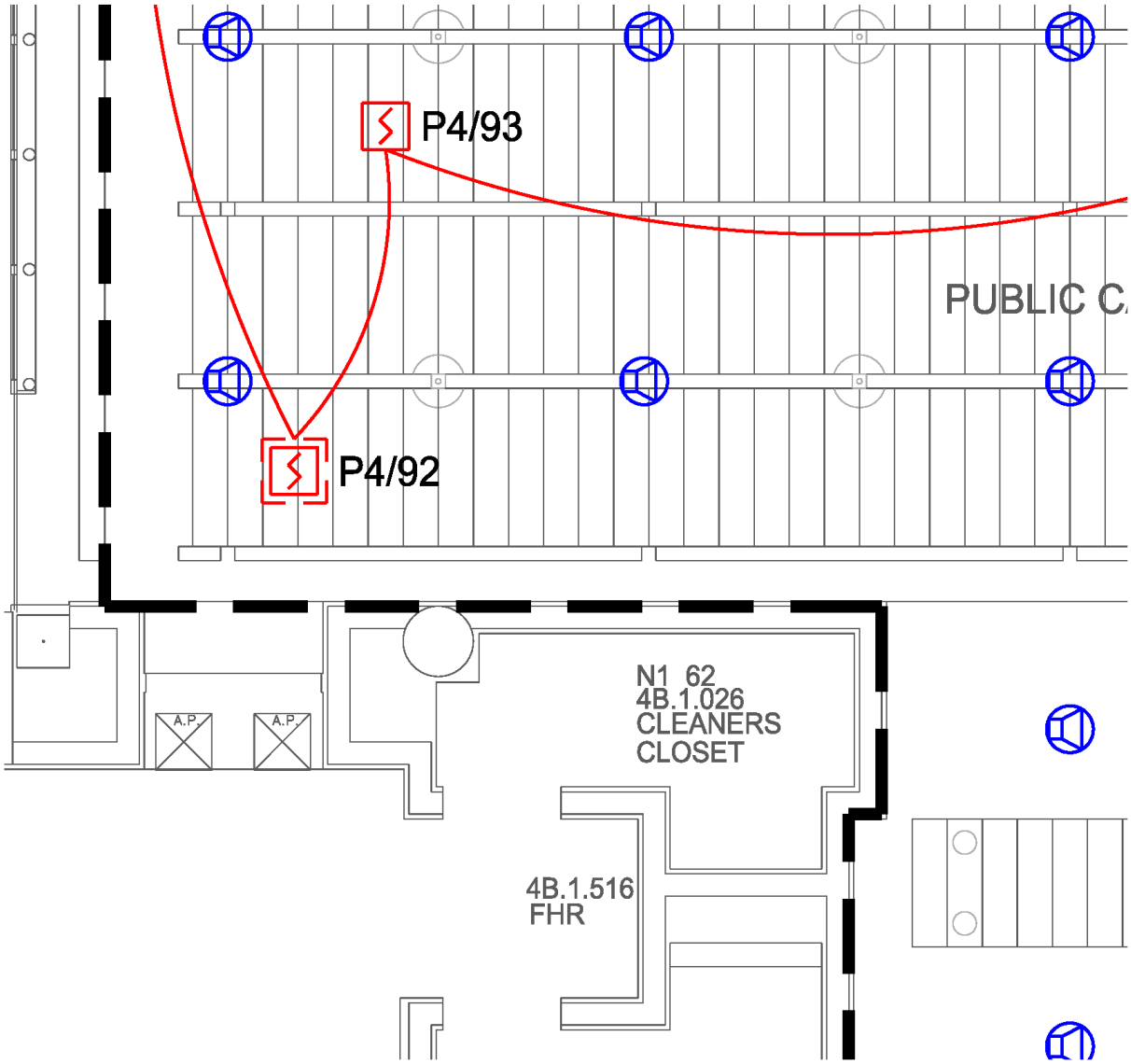
New work on Architectural and Services drawings must be depicted in colour.

All Existing elements on Architectural and Services drawings should be depicted in greyscale.

For the existing Architectural elements use AutoCAD: Colour 251 (RGB 101,101,101). The example below shows new architectural work in colour and existing architectural elements in greyscale.



For the existing Services use AutoCAD: Colour 253 (RGB 153,153,153). The example below shows new services in colour and the existing architectural elements and services in greyscale.



Yellow colour is not legible on printed hard copies and must not be used.

Drawings containing missing references, links, fonts, line styles, shape files or images will be rejected by the Project Manager. The contractor must then re-submit the rectified version to the Project Manager for further review.

References/XRefs may be used during the development of drawings, however they must be Merged Bound without unnecessary information, hidden Levels/Layers, and geometry outside of the view area to be trimmed and deleted from the drawing, prior to submission to ADG.

Cross References

All drawings which are required to be read in conjunction with another drawing shall be cross referenced under a heading of "Referenced Drawing" using the ADG drawing number only.

If amendments are made to existing cross-references, the associated cross-referenced drawing(s) and view(s) must also be amended to reflect the amendment.

Attachments

Images, photographs, and spreadsheets must be copied and pasted directly into the drawing. Linked or referenced files are not permitted.

Text

Text must:

- be created on the appropriate *Layer*.
- have properties set to *By Layer*.

Text must be written in upper case except for units, abbreviations, and signatures.

Example	Text
Millimetres	mm
Number	No.
Signature	J. Smith

Size

To ensure text is legible when printing to A3 reductions, the minimum height for text on A0 title sheets is 2.5mm.

The minimum height for text on A1 title sheets is 1.75mm.The general text width to height ratio is reduced as per this table:

Font Height	Font Width
1.75mm	1.65mm
2.50mm	2.40mm
3.50mm	3.40mm
5.00mm	4.90mm
7.00mm	6.90mm

Style

The font used for ADG drawings is TrueType 'Arial'.

The AutoCAD Text Style must be set to 'Standard' with the associated font set to 'Arial'.

Symbols

Within the text editors in AutoCAD, engineering symbols can be added to text using the Unicode input from the keyboard. For example:

Unicode	Result
90%%d	90°
%%c 600	Ø600

Wblocks & Blocks

Blocks must be placed on the appropriate Layer with its properties set to By Layer. An intelligent naming structure shall be used for all Wblocks and blocks used within drawing files.

Symbolic Blocks must be:

- created to Australian Standards where appropriate.
- clearly and concisely named.
- located on the appropriate Layer.
- added to the Legend on the Cover Sheet drawing, and
- Graphical Blocks (e.g., a hand basin, a toilet, or a door) provided they are unmistakeable, are not required to be added to the Legend drawing.

Hatching

Hatching must:

- be created on the appropriate Layer with its properties set to By Layer
- have Associative activated.
- not overlap, and
- be used sparingly, typically but not restricted to, sectional views.
- Exploding hatching is not permitted.

Dimensions & Leaders

Dimensions and leaders must be created on the appropriate Layer with its properties set to by Layer.

- Exploding dimensions or leaders is not permitted.
- Text overrides are permitted to add detail to a dimension. For example:
  - Ø600
  - 1000 Min.

Dimensions must not be modified to falsely display the desired figure. The model must be amended to reflect the dimension required.

Where the model does not fit into the drawing sheet at the required scale, two or more split views should be used with break lines and jogged dimensions.

Tying into existing services

As Constructed drawings must detail, with dimensions, where and how:

- New equipment is located, connected, and controlled in relation to existing equipment and structures.
- New pipe and conduit services:
  - Are connected to, and routed in relation to, existing pipe and conduit services, and
  - Interface with or penetrate existing structures.

Approval Initials & Signatures

This section outlines the representatives responsible for the content of drawings.

Drawn

Drawings must be initialled by the draftsperson.

Checked

Design drawings must be initialled by a person within the Design Agent's organisation who has the relevant professional and technical competencies for verifying the design output and checking the accuracy of the information.

As Constructed drawings must be initialled by a person within (or engaged by) the contractor's organisation that has the relevant professional and technical competencies for checking the accuracy of the information.

Certified

Design drawings must be signed by a Manager within the Design Agent's organisation who has the relevant professional and technical qualifications for verifying the design output and certifying the accuracy of the information.

Constructed drawings must be signed by a manager within (or engaged by) the Design Consultants organisation that has the relevant professional and technical qualifications for certifying the accuracy of the information.

Approved

Design drawings must be signed by the Project Manager responsible for the work, certifying that the drawings may be used for tender and/or construction purposes.

Shop drawings must be signed by the Design Agent, approving the drawing for use.

As Constructed drawings must be signed by the Project Manager responsible for the work to certify the approval.

Dates

Dates must be written in the format: DD/MM/YYYY.

Revisions

Clouds and triangles

Revision clouds and triangles must be used during the Design, Tender and For Construction submissions to highlight design changes between revisions.All drawings after the first release – either Tentative or Approved – must show any amendments by words in the amendment/ revisions block and by an amendment symbol in the body of the drawing.

Revision clouds and triangles must be removed at As Constructed, prior to submission to ADG.

Tables

Revision table entries must be in alpha-numerical order. In cases where the number of revisions exceed the rows provided, older revisions may be removed, provided those revisions have been submitted to previously.

The revision description must briefly list the changes to the drawing, unless the only change is to the status, simply reiterate the drawing status, or as outlined in the section Drawing Status.

The revision details must state:

- revision letter/number
- drafter's initials
- brief description of change/status change, and
- date in the format: DD/MM/YY.

File Accessibility

The contractor must ensure all files are free from computer viruses and are not password protected prior to submission to ADG. To ensure compliance this requires contractors to check subcontractor files.

Transmittals

Project drawings submitted to the Project Manager must be accompanied by a transmittal.

The transmittal must include:

- the ADG project number and project title
- the contractor's name and contact details.
- the date
- details of what drawings are being transmitted, and
- the status and revision number of each drawing.

Stakeholder & Documentation Reviews

The contractor must submit drawings (including original format CAD drawings) in electronic format to the Project Manager for a Stakeholder design and drafting review, as outlined in the submissions below.

Following the Stakeholder and drafting review, the Project Manager will supply the contractor with a collated list of any defects and/or requests for further information, if required.

Project Planning & Design Phase

Submissions

Where separate drawings are supplied to the contractor by a third party, it is the contractor's responsibility to collate that information so that it can be read as one cohesive package.

Subcontractor drawings must comply with this Standard.

This section details the requirements for the provision of project documentation according to the signed contract with ADG. Documents and drawings must be submitted by the contractor for the following project stages and as required by the signed contract:

Design Stage

The first design submission must be prior to the For Tender stage.

The 30%, 50%, 80% drawings requirements of the project include:

- Preliminary / sketch drawings
- Design drawings, and / or
- Developed drawings.

The consultant must supply:

- A CAD set of the drawings, in .dwg format, per discipline (per sub-project if applicable
- A PDF set of the same drawings at scale
- Where BIM has been used to develop any documents or drawings in relation to the project, the BIM files in .ifc or .rvt format must be included.

For Tender

The For Tender drawing requirements of the project include:

- Detailed design drawings complete with sections and details sufficient for the calling of tenders, including as appropriate, coordination and integration of subcontractor's work.
- Detailed design drawings including details of the equipment and fittings requiring bespoke fabrication and/or specialised installation.
- Detailed design drawings including details of the plant, equipment and fittings that must be removed or decommissioned.

The consultant / contractor must supply:

- A CAD set of the drawings, in .dwg format, per discipline (per sub-project if applicable)
- A PDF set of the same drawings

- Where BIM has been used to develop any documents or drawings in relation to the project, the BIM files in .ifc or .rvt format must be included.

Project Delivery Phase

For Construction

The For Construction drawing requirements of the project include:

- Final design drawings complete with sections and details sufficient for the calling of tenders, including as appropriate, coordination and integration of subcontractor's work.
- Final design drawings including details of the equipment and fittings requiring bespoke fabrication and/or specialised installation.
- Final design drawings including details of the plant, equipment and fittings that must be removed or decommissioned.
- Where BIM has been used to develop any documents or drawings in relation to the project, the BIM files in .ifc or .rvt format must be included.

The contractor must supply:

- A CAD set of the drawings, in .dwg format, per discipline (per sub-project if applicable), and
- A PDF set of the same drawings
- Where BIM has been used to develop any documents or drawings in relation to the project, the BIM files in .ifc or .rvt format must be included.

As Constructed - Draft

- The first submission of Draft As-Constructed drawings is received by the Project Manager for review purposes only.
- Drawings contained in the draft submission that do not comply with this Standard will be rejected by the Project Manager. The contractor must then re-submit the rectified version to the Project Manager for further review.
- The contractor must supply:
  - A CAD set of the drawings, in .dwg format, per discipline (per sub-project if applicable), and
  - A PDF set of the same drawings
  - Where BIM has been used to develop any documents or drawings in relation to the project, the BIM files in .ifc or .rvt format must be included.

- A digital PDF set of As Constructed drawings must be included in each to form a complete record of the project for review purposes. The drawing title blocks must be completed and signed by the contractor, certifying that the information shown on the drawings is an accurate record of the As-Constructed status.
- The Project Manager will liaise with ADG Stakeholders to review the draft As-Constructed submission and supply the contractor with a collated list of defects and/or requests for further information, if required.

As Constructed - Final

- Once ADG has accepted the draft As-Constructed submission, the contractor must submit the final As-Constructed drawings to the Project Manager within the agreed timeframe.
- The final updated As-Constructed drawings must include all rectified items identified in the ADG Stakeholders review of the draft submission. All drawings must be in CAD .dwg and .pdf format and submitted within the agreed timeframe.
- A digital PDF set of As Constructed drawings must be included in each submission to form a complete record of the project. The drawing title blocks must be completed and signed by the contractor, certifying that the information shown on the drawings is an accurate record of the As-Constructed status.
- The Project Manager will conduct a final cross-check of the final submission to ensure items identified for rectification have been incorporated.
- If items have not been addressed in their entirety, the Project Manager will organise a meeting with the contractor and the relevant ADG Stakeholders involved in the review to resolve any outstanding issues.
- Items that are identified as still requiring rectification will be referred to the contractor. The contractor must address these issues in their final resubmission.

Practical Completion

- This section details the requirements for the provision of project drawings that must be submitted to the Project Manager at the completion of construction on site.
- Drawings must accurately record the As Constructed details, identifiers and location of building elements, plant and equipment related to the project.
- The As Constructed drawings required for the project must include:
  - ADG numbering convention and sitemap identification.
  - A drawing schedule listing every drawing for each discipline.
  - Plans, elevations, sections, and details
  - Shop/assembly drawings of major plant and equipment (with appropriate

dimensioning to identify elements and locations)
    - Detailed engineering drawings for manufactured items
    - Circuit/wiring diagrams for electrical installations
    - Control and logic diagrams for electrical, electronic, pneumatic, and hydraulic control systems
    - A comprehensive legend representing items and attributes of each drawing, and
    - Drawings dimensioned to show details of the fabrication and installation of services and equipment, including the relationship to building structure and other services, cable/pipe work type and size, and marking details.
    - Any other information that is used to supplement drawings (e.g., door, wall, and window schedules).
- Where BIM has been used to develop any documents or drawings in relation to the project, the BIM files in .ifc or .rvt format must be included.

Obsolescence

- If an individual drawing is made or becomes obsolete, it must be clearly watermarked or stamped with the word '*OBSOLETE*' in bold capital letters, signed by the contractor certifying its obsolescence and submitted to the Project Manager.
- Obsolete drawings will be stored in ADG' drawings management system; therefore, the drawing number of an obsolete drawing must not be reused on another drawing.
- If the project is suspended or cancelled, the contractor must submit a complete set of the most current CAD files in .dwg format to ADG, regardless of their status in accordance with the contract conditions. All BIM documents or drawings in relation to the project must also be included.

Data Ownership & Copyright

- The contractor must comply with copyright and data ownership requirements as outlined in the contract.

ADG Drawings

- The information contained within ADG drawings, models, documents, calculations, information, instructions and associated electronic files must not be copied or used for any purpose without the written permission of ADG.
- Regarding gifted assets, the contractor must ensure that ADG is entitled to have free use and ownership of Design and As-Constructed drawings and models it has submitted for a project.

Shop Drawings

- The information contained within Shop drawings, models, documents, calculations, information, instructions and associated electronic files must not be copied or used for any purpose without the written permission of ADG.
- Shop drawings must:
  - Conform to the requirements of this Standard and conditions stipulated in the applicable contract, and
  - Be submitted to ADG for approval prior to the commencement of materials being ordered, fabricated and/or assembled.

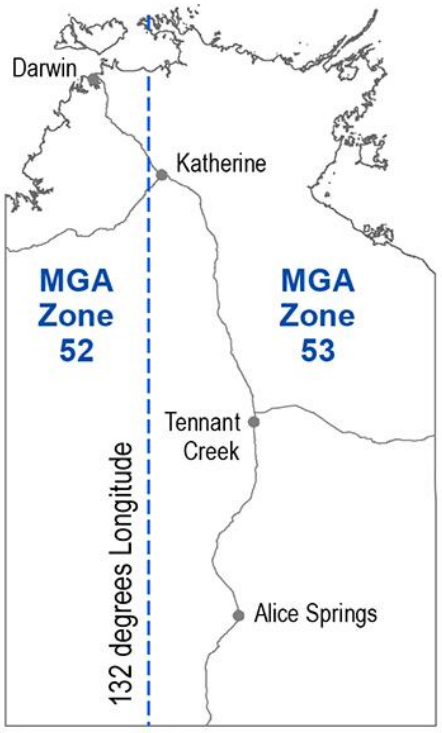
Vendor Drawings

- Vendor drawings must comply with this Standard as far as possible, except to the extent that to do so would breach intellectual property rights held in those drawings.
- The contractor must ensure that ADG has sufficient intellectual property rights to store, copy and use vendor drawings, models, maps, documents, calculations, information, and instructions for its own internal use as it requires.

Detail Survey Standards

Co-ordinate System

Geocentric Datum of Australia 2020 (GDA20) Map Grid of Australia (MGA) Zone 52 coordinates. Unit of measure is to be in metres.



Survey Control

Initial setup position for survey to be established using a minimum of 3 control points. Permanent Survey Marks (PSMs) have been established within the Darwin International Airport (DIA) to be used as control points.

Refer APPENDIX A – PERMANENT SURVEY MARKER (PSM) PLAN.

Data Capture

- Include all significant infrastructure and asset features external to building outlines.
- Where applicable ground survey of the natural or formed surface.
- All features to be correctly strung.
- Pipe sizes and material to be recorded for the pipework of the reticulated services (Drainage, Sewer and Water)
- Invert Levels (ILs) are to be recorded for reticulation services (Drainage, Electrical, Sewer and Water)

Features shall be classified in the following:

Airfield	Aboveground features including pavement features and line marking for runways and taxiways and associated infrastructure lighting, hook arrestors, marker gables, tie downs. Underground features including light cabling.
Communications	Aboveground features including pits and cable markers. Underground features including cable routes.
Drainage	Aboveground features including pits, culverts, headwalls, open lined and unlined drains sumps and traps. Underground features including pipes (noting pipe sizes, material and ILs)
Electrical	Aboveground features including cables, pits, earthing, lighting, marker cables, substations, switchboards and transformers. Underground features including cable routes.
Fuel	Aboveground features including bowsers, earth point, emergency stop, hydrants, pits, tanks and valves. Underground features including pipes and tanks.
Gas	Aboveground features including pipes and tanks. Underground features including pipes.
Property	Features including cadastral boundaries, easements and lease boundaries.
Road	Features including carparks, kerbs (back, top, invert) paths, rail barriers, sealed and unsealed features, signs and tracks.
Security	Aboveground features including cables and manholes. Underground features including cable routes.
Sewerage	Aboveground features including inspection openings, pipes, markers, pump stations, septic tanks, valves and vents. Underground features including pipes (noting pipe sizes and their invert levels), rising mains (noting pipe sizes and their invert levels), pump stations and septic tanks.
Structural	Features including building outlines (external walls) and where extruding, associated building pads and rooflines. Awnings, bollards, bridges, decking, fencing, gates, bins, rack, railings, ramps, seats, sheds, steps, verandas.
Survey	Features including PSMs, benchmarks, pegs and pickets.
Topographic	Contours, depressions and embankments, top and bottom of banks, rock and stockpiles.
Traffic	Parking meters, signs, ticket dispensers.
Unknown	Manholes, pipes and pits.
Vegetation	Garden beds, lawns, shrubs, trees (only significant trees where trunk diameters are > 0.4m, their truck diameter and spread).
Natural Water features	Water course, swamp, top of bank.
Water	Aboveground features including bores, hose box reels, hydrants, irrigation, markers, meters, pipes, pits, stop cocks, tanks, taps and valves. Underground features including pipes (noting pipe sizes and their invert levels) and tanks.

Data Format

Digital data to be collected in AutoCAD format compatible with that outlined in APPENDIX B – AUTOCAD DATA FORMAT.

Accuracy

All surveys to have a horizontal and vertical accuracy of ± 0.05m.

Survey Report

Contractor is to supply a survey report documenting:

- Instruments used
- Coordinate System & PSMs used
- Spatial accuracies achieved
- If any, noting any discrepancies
- Brief summary of infrastructure captured
- Survey report and signed off by senior surveyor

Deliverables

- AutoCAD dataset containing all surveyed features, the data is to be reduced and provided as per the specification in the following Section.
- A survey report

AutoCAD Data Standards and Formatting

Coordinate System

Geocentric Datum of Australia 2020 (GDA20) Map Grid of Australia (MGA) Zone 52 coordinates. Unit of measure is to be in metres.

Data Accuracy

Horizontal and vertical accuracy of ±0.05m.

Topography

- Data joins to existing features, no overshoots or undershoots.
- No zero length entities
- No duplicates
- Lines and arcs are to be converted to polylines and 3D polylines

Data Formatting

- 3D data of all above and underground features (point, polylines and polygons) to be provided, this includes blocks and symbols.
- Outline of features (pits, cabinets, structures) are to be strung into 3D polylines in the reflective layer with either an identifying block or identifying text in the centre.

- Underground infrastructure (Cables, Conduits, Pipes) is to be strung into 3D polylines in the reflective layer, including any directional change with identifying text (Ø, material) in the centre.
- Drainage and Sewerage infrastructure is to include surface features of pits and manholes. Underground pipes are to have identifying text including invert levels and size recorded.
- All linework are to be polylines with the following properties:

Colour	ByLayer
Line type	ByLayer
Line type scale	1
Plot style	ByColor
Line weight	ByLayer
Transparency	ByLayer
Thickness	0
Line type generation	Enabled

- All text associated with features are to be stored within the corresponding classification _TEXT layer (e.g. Water pipe diameters and invert levels stored within the WS_TEXT layer).
- Data to be categorised as per that outlined in APPENDIX B – AUTOCAD DATA FORMAT.
- All symbols shall be blocks inserted on the correct layer at a scale of 1. Predefined symbols are outlined in APPENDIX B – AUTOCAD DATA FORMAT and are supplied in the AutoCAD template file.

ADG have developed a template CAD file containing the layering convention and symbols as specified, refer Template_Survey.dwt.

Hand Over - Take Over Requirements (HOTO)

Planning

Aspect	Who	When
Site selection conditions and constraints (supporting infrastructures, tie ins etc)		
Environmental requirements considered and mitigated		
Energy and Sustainable design considerations		
Concept Design		
Planning approval granted		

Design And Approvals

Aspect	Who	When
Design Specifications / Standards		
Design Documentation		
HOTO Documentation prepared		
WHS Planning and Procedures		
Site Induction package		
Asset Classifications		
Request for TechOne Asset ID's		
Defects Liability Period planned		
Environmental baseline surveys (if required)		
Environmental Management Plan (EMP) submitted and approved (if required)		
Building Approvals		
Airport Regulator Approvals		
EPA Approvals (if required)		

Construction

Aspect	Who	When
CEMP signed off		
Geotech undertaken and signed off		
Site Inspection by DIA personnel		
Certification of Construction forms or equivalent Certification of Design and Certifiers Decision Notes		
Building Certification where relevant		

Commissioning

Aspect	Who	When
Monitoring program by DIA personnel		
Commissioning conducted per Specifications and contractors ITPs. Results provided		
Commissioning and Handover Plan submitted, reviewed and approved		
Building Certificates / Occupational Approvals		
Licencing in place / where relevant		
Notice of Completion		
O & M documentation completed		
Certificate of Occupancy		
Users Guide		
Incident reporting / post activity report		
Any specific requirements for building or land management		
All as-constructed drawing received		
TechOne Asset forms completed		
As-constructed site survey completed / detail survey		
Manufacturers' warranties provided		

Aspect	Who	When
Any maintenance tools, instruments, equipment access codes and schedule of spare parts supplied		

Defects Liability Period

Aspect	Who	When
DLP start date DLP end date		
DLP Management Procedure in place		
Register of outstanding defects, rectification schedule, person responsible & close-outs		

Appendix A – Permanent Survey Marker (PSM) Plan

APPENDIX B – AUTOCAD DATA FORMAT

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
AI	**AIRFIELD**			
AC_PLANT	AIR CONDITIONER PLANT	AC_PLANT	CONTINUOUS	221
AI_CHAINAGE	RUNWAY CHAINAGES	TEXT	CONTINUOUS	30
AI_CRITICAL_AREA	CRITICAL / SENSATIVE AREA	HATCH(DOTS 100)	CONTINUOUS	30
AI_GATE_CRASH	CRASH GATES (WITH LABEL)	AI_GATE_CRASH	CONTINUOUS	30
AI_HELIPAD	HELIPAD LINE MARKINGS	PLINE	CONTINUOUS	30
AI_HOOK_ARRESTOR	ARRESTOR HOOK	PLINE	CONTINUOUS	30
AI_LIGHT	AIRFIELD LIGHTING	AI_LI	CONTINUOUS	31
AI_LIGHT_FHB	HIGH INTENSITY BIDIRECTIONAL LIGHT	AI_LI_FHB	CONTINUOUS	31
AI_LIGHT_FHU	HIGH INTENSITY UNIDIRECTIONAL LIGHT	AI_LI_FHU	CONTINUOUS	31
AI_LIGHT_LIOBS	OBSTRUCTION LIGHT	AI_LIOBS	CONTINUOUS	31
AI_LIGHT_VASIS	TVASIS LIGHT	AI_VASIS	CONTINUOUS	31
AI_LIGHT_CABLE	AIRFIELD LIGHT CABLING	PLINE	EL_LI_WIRING	31
AI_LIGHT_MH	AIRFIELD LIGHTING MANHOLE	AI_TRANS	CONTINUOUS	31
AI_LIGHT_TRANS	AIRFIELD LIGHTING TRANSFORMER	AI_TRANS	CONTINUOUS	31
AI_LINE_APRON_EDGE	AIRFIELD LINE MARKING	PLINE	AS IS	AS IS
AI_LINE_EQUIP_CLEAR	AIRFIELD LINE MARKING	PLINE	AI_DASHED_1	YELLOW
AI_LINE_EQUIP_STORE	AIRFIELD LINE MARKING	PLINE	CONTINUOUS	YELLOW
AI_LINE_HOLD	LINE MARKING (HOLDING POINT)	PLINE	CONTINUOUS	YELLOW
AI_LINE_JET_SEAL	AIRFIELD LINE MARKING	PLINE	CONTINUOUS	YELLOW
AI_LINE_KEYBOARDS	LINE MARKING (RUNWAY KEYBOARDS)	PLINE	CONTINUOUS	YELLOW
AI_LINE_LEAD_IN	AIRFIELD LINE MARKING	PLINE	AS IS	AS IS
AI_LINE_LEAD_OUT	AIRFIELD LINE MARKING	PLINE	AS IS	AS IS
AI_LINE_MARKING	AIRFIELD LINE MARKING	PLINE	DASHEDX2	YELLOW
AI_LINE_PUSH_BACK	AIRFIELD LINE MARKING	PLINE	AI_DASHED_1	YELLOW
AI_LINE_RUNWAY_CL	RUNWAY CENTRE LINE	PLINE	AS IS	AS IS
AI_LINE_TAXI_CL	TAXIWAY CENTRE LINES	PLINE	AS IS	AS IS
AI_LINE_TEXT	AIRFIELD LINE MARKING TEXT	TEXT	AS IS	AS IS
AI_LINE_TOUCH_DOWN	LINE MARKING (TOUCH DOWN POINTS)	PLINE	CONTINUOUS	YELLOW

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
AI_LINE_TUG	AIRFIELD LINE MARKING	PLINE	CONTINUOUS	YELLOW
AI_LINE_WALKWAYS	LINE MARKING (PEDESTRIAN WALKWAYS)	PLINE	AI_DASHED	YELLOW
AI_MARKER_GABLE	AIRFIELD LINE MARKING	PLINE	CONTINUOUS	30
AI_PAVE	SEALED RUNWAYS, TAXIWAYS AND APRONS	PLINE	CONTINUOUS	30
AI_PAVE_HI_ST	RUNWAYS, TAXIWAYS AND APRONS HIGH STRENGTH	PLINE	CONTINUOUS	30
AI_PAVE_SHOULDER	RUNWAYS, TAXIWAYS AND APRONS SHOULDER	PLINE	DASHED	30
AI_PT_TIE_DOWN	TIE DOWN POINT	AI_PTTIE	CONTINUOUS	30
AI_REF	AIRFIELD REFERENCE POINT	AI_PTREF	CONTINUOUS	30
AI_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	30
AI_RUNWAY_EDGE	EDGE OF RUNWAYS	PLINE	CONTINUOUS	30
AI_SIGN	AIRFIELD SIGNAGE	PLINE	CONTINUOUS	30
AI_TAXIWAY_EDGE	EDGE OF TAXIWAYS	PLINE	CONTINUOUS	30
AI_TEXT	TEXT AND LABELS	TEXT	CONTINUOUS	30
AI_WDSOCK_L	WINDSOCK LIGHTED	AI_WDSL	CONTINUOUS	30
AI_WDSOCK_UL	WINDSOCK UNLIT	AI_WDSU	CONTINUOUS	30
CM	**COMMUNICATION**			
CM_ASSET	PIT LABELS ETC	TEXT	CONTINUOUS	3
CM_CABLE_AG	CABLE AG	PLINE	CM_CABLE_AG	3
CM_CABLE_UG	CABLE UG	PLINE	CM_CABLE_UG	3
CM_CABLE_UG_ABD	CABLE UG ABD	PLINE	CM_CABLE_UG_AB	9
CM_CONDUIT_UG	CONDUITS	TE_CABLE_UG	CONTINUOUS	3
CM_JUNC_BOX_PIT	JUNCTION BOX/PIT	CM_PIT	CONTINUOUS	3
CM_MARKER_CABLE	CABLE MARKER	CM_MK	CONTINUOUS	3
CM_MH	MANHOLE	CM_MH	CONTINUOUS	3
CM_MISC	MISCELLANEOUS	CM_MS	CONTINUOUS	3
CM_PILLAR	PILLAR	CM_PILL	CONTINUOUS	3
CM_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	3
CM_SAT_DISH	SATELLITE DISH	CM_SDISH	CONTINUOUS	3
CM_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	3
DR	**DRAINAGE**			

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
DR_CULVERT	CULVERT	PLINE	DASHED	5
DR_DNPIPE	DOWNPIPE	DR_DPDRN	CONTINUOUS	5
DR_GRATED_LINED	GRATED LINED DRAIN	PLINE	DR_GRATE_LINED	5
DR_HEADWALL	HEADWALL	PLINE/DR_HEDWL	CONTINUOUS	5
DR_MH	MANHOLE	DR_MH	CONTINUOUS	5
DR_MISC	MISCELLANEOUS	DR_MS	CONTINUOUS	5
DR_OP_LINED	OPEN LINED DRAIN	PLINE	CONTINUOUS	5
DR_OP_UNLINED	OPEN UNLINED DRAIN	PLINE	DR_SURFACE	5
DR_PIPE_AG	PIPE ABOVE GROUND	PLINE/DR_AG	DR_PIPE_AG	5
DR_PIPE_UG	PIPE UNDER GROUND	PLINE/DR_UG	DR_PIPE_UG	5
DR_PIPE_UG_ABD	ABANDONED PIPE UNDER GROUND	PLINE	DR_PIPE_UG_AB	9
DR_PUMP_SW	STORMWATER PUMP	DR_PMPSW	CONTINUOUS	5
DR_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	5
DR_ROCK_BREACHIN	ROCK LINED OPEN DRAIN	PLINE	CONTINUOUS	5
DR_SUMP	SUMP	DR_SUMPS	CONTINUOUS	5
DR_SUMP_DOUBLE	SUMP SIDE ENTRY - DOUBLE	DR_SUMPD	CONTINUOUS	5
DR_SUMP_GRATED	SUMP GRATED (Hatch scale 2.5)	DR_GRATE	CONTINUOUS	5
DR_SUMP_MULT	SUMP SIDE ENTRY - MULTI	DR_SUMPM	CONTINUOUS	5
DR_SUMP_SINGLE	SUMP SIDE ENTRY - SINGLE	DR_SUMPS	CONTINUOUS	5
DR_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	5
DR_TRAP_DISCON	TRAP DISCONNECTOR	DR_TRPDI	CONTINUOUS	5
DR_TRAP_FLAME	FLAME TRAP	DR_TRPFL	CONTINUOUS	5
DR_TRAP_GREASE	TRAP GREASE	DR_TRPGR	CONTINUOUS	5
DR_TRAP_GROSS_INT	TRAP GROSS INTERCEPTOR	DR_TRPGI	CONTINUOUS	5
DR_TRAP_GULLY	TRAP GULLY	DR_TRPGU	CONTINUOUS	5
DR_TRAP_INTERCEPT	TRAP INTERCEPTOR	DR_TRPIN	CONTINUOUS	5
EL	**ELECTRICITY**			
EL_CABLE_AG	CABLE ABOVE GROUND	PLINE/EL_AG	EL_CABLE_AG	1
EL_CABLE_BOX_PILL	CABLE BOX / PILLAR	EL_PILL	CONTINUOUS	1
EL_CABLE_HV_AG	HIGH VOLTAGE CABLE ABOVE GROUND	PLINE	EL_CABLE_HV_AG	242

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
EL_CABLE_HV_UG	HIGH VOLTAGE CABLE UNDER GROUND	PLINE	EL_CABLE_HV_UG	242
EL_CABLE_LV_AG	LOW VOLTAGE CABLE ABOVE GROUND	PLINE	EL_CABLE_LV_AG	1
EL_CABLE_LV_UG	LOW VOLTAGE CABLE UNDER GROUND	PLINE	EL_CABLE_LV_UG	1
EL_CABLE_UG	CABLE UNDER GROUND	PLINE/EL_UG	EL_CABLE_UG	1
EL_CABLE_UG_ABD	ABANDONED CABLE UNDER GROUND	PLINE	EL_CABLE_UG_AB	1
EL_EARTH_HV	HIGH VOLTAGE EARTH GRID	PLINE	CENTER	242
EL_EARTH_POINT	EARTH STAKE	EL_EARTH	CONTINUOUS	1
EL_LIGHT_FLOOD	FLOOD LIGHT	EL_LIFLD	CONTINUOUS	1
EL_LIGHT_PEDESTAL	LIGHT PEDESTAL	EL_LIPDT	CONTINUOUS	1
EL_LIGHT_POLE	LIGHT POLE	EL_LIPOL	CONTINUOUS	1
EL_MARKER_CABLE	CABLE MARKER	EL_MK	CONTINUOUS	1
EL_MH	MANHOLE	EL_MH	CONTINUOUS	1
EL_MH_HV	HIGH VOLTAGE MANHOLE	EL_MH_HT	CONTINUOUS	242
EL_MISC	MISCELLANEOUS	EL_MS	CONTINUOUS	1
EL_OUTLET	OUTLET	EL_OUTLT	CONTINUOUS	1
EL_PIT_HV	HIGH VOLTAGE PIT AND MANHOLE	EL_PITHV	CONTINUOUS	242
EL_PIT_LV	LOW VOLTAGE PIT AND MANHOLE	EL_PITLV	CONTINUOUS	1
EL_POLE	POLE	EL_POLE	CONTINUOUS	1
EL_POLE_W_LIGHT	POLE WITH LIGHT	EL_PLWLI	CONTINUOUS	1
EL_POWER_FUSE_BRD	POWER/FUSE BOARD	EL_F_BOX	CONTINUOUS	1
EL_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	1
EL_SUBSTN_AG	SUBSTATION ABOVE GROUND	EL_SUBST	CONTINUOUS	1
EL_SUBSTN_HV	HIGH VOLTAGE SUBSTATION	EL_SUBHT	CONTINUOUS	242
EL_SUBSTN_OH	SUBSTATION OVERHEAD	EL_SUBOH	CONTINUOUS	1
EL_SUBSTN_UG	SUBSTATION UNDER GROUND	PLINE/EL_SUBST	DASHED	1
EL_SWBRD	SWITCHBOARD	EL_SWBRD	CONTINUOUS	1
EL_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	1
EL_TRANSF_ON_GRND	TRANSFORMER ON GROUND	EL_TRANS	CONTINUOUS	1
FU	**FUEL**			
FU_EARTH_POINT	EARTH POINT	FU_EARTH	CONTINUOUS	6

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
FU_EMERG_STOP	EMERGENCY STOP SWITCH	FU_EMSW	CONTINUOUS	6
FU_HYDRANT	HYDRANT	FU_HYD	CONTINUOUS	6
FU_MH_PIT_EDGE	MH, PIT EXTENTS	PLINE	CONTINUOUS	6
FU_MISC	MISCELLANEOUS	FU_MS	CONTINUOUS	6
FU_PIPE_AG	PIPE ABOVE GROUND	PLINE	FU_PIPE_AG	6
FU_PIPE_UG	PIPE UNDER GROUND	PLINE	FU_PIPE_UG	6
FU_PIPE_UG_ABD	ABANDONED PIPE UNDER GROUND	PLINE	FU_PIPE_UG_AB	9
FU_PIT	FUEL PIT	PLINE/FU_PIT	CONTINUOUS	6
FU_PT_FILL	FILLING POINT	FU_PTFIL	CONTINUOUS	6
FU_PUMP_BOWSER	PUMP/BOWSER	FU_PMPBW	CONTINUOUS	6
FU_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	6
FU_TANK_AG	TANK ABOVE GROUND	FU_TNKAG	CONTINUOUS	6
FU_TANK_UG	TANK UNDER GROUND	PLINE/FU_TNKUG	DASHED	6
FU_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	6
FU_VALVE	FUEL VALVES	FU_VLV	CONTINUOUS	6
FU_VALVE_REFLUX	REFLUX VALVE	FU_VLVRF	CONTINUOUS	6
FU_VALVE_SCOUR	SCOUR VALVE	FU_VLVSR	CONTINUOUS	6
FU_VALVE_STOP	STOP VALVE	FU_VLVSA	CONTINUOUS	6
FU_VENT	VENT	FU_VENT	CONTINUOUS	6
GA	**GAS**			
GA_MISC	MISCELLANEOUS	GA_MS	CONTINUOUS	8
GA_PIPE_AG	PIPE ABOVE GROUND	PLINE	GA_PIPE_AG	8
GA_PIPE_UG	PIPE UNDER GROUND	PLINE	GA_PIPE_UG	8
GA_TANK_LPG	LPG TANK	GA_TKLPG	CONTINUOUS	8
GA_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	8
PR	**PROPERTY**			
PR_CADASTRAL	PROPERTY BOUNDARY	PLINE	ACAD_ISO11W100	11
PR_CONSERVATION	CONSERVATION AREA	PLINE	CONTINUOUS	11
PR_EASEMENT_BDY	EASEMENT	PLINE	DASHEDX2	11
PR_JOINT_USER_DEED	COMMON AREA WITH C'WEALTH	PLINE	ACAD_ISO11W100	

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
PR_LEASE_BDY	LEASE BOUNDARY	PLINE	CONTINUOUS	11
PR_PRO_LEASE_BDY	PROPOSED LEASE BOUNDARY	PLINE	CONTINUOUS	11
RD	**ROAD**			
RD_CARPARK	CARPARK	PLINE	CONTINUOUS	7
RD_CROWN	CROWN	PLINE	CENTER	7
RD_DRIVEWAY	DRIVEWAY	PLINE	CONTINUOUS	7
RD_GUIDE_POST	GUIDE POST	RD_GPOST	CONTINUOUS	7
RD_KERB	KERB ONLY	PLINE	CONTINUOUS	7
RD_KERB_BACK	BACK OF KERB	PLINE	CONTINUOUS	7
RD_KERB_CROSSING	CROSSING KERB	PLINE	DASHED	7
RD_KERB_FRONT	FRONT OF KERB	PLINE	CONTINUOUS	7
RD_KERB_INVERT	INVERT OF KERB	PLINE	CONTINUOUS	7
RD_KERB_LIP	LIP OF KERB	PLINE	CONTINUOUS	7
RD_KERB_MOUNT	MOUNTABLE KERB	PLINE	CONTINUOUS	7
RD_KERB_STD	STANDARD KERB	PLINE	CONTINUOUS	7
RD_KERB_TOP	TOP OF KERB	PLINE	CONTINUOUS	7
RD_LINE_MARKING	LINE MARKING	PLINE	DASHED	8
RD_MISC	MISCELLANEOUS	RD_MS	CONTINUOUS	7
RD_PATH	PATH	PLINE	CONTINUOUS	7
RD_PED_CROSSING	PEDESTRIAN CROSSING	PLINE	DASHED	7
RD_RAIL_BARRIER	GUARDRAIL / BARRIER	PLINE	DASHDOT	7
RD_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	7
RD_SEALED	SEALED ROAD	PLINE	CONTINUOUS	7
RD_SHOULDER	SHOULDER	PLINE	DASHED	7
RD_SIGN	ROAD SIGNS	TR_SIGN	CONTINUOUS	7
RD_SPEED_HUMP	SPEED HUMPS	PLINE	CONTINUOUS	8
RD_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	7
RD_TRACK	TRACK	PLINE	DASHED	7
RD_UNSEALED	UNSEALED ROAD	PLINE	DASHED	7
SC	**SECURITY**			

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
SC_CABLE_AG	CABLE ABOVE GROUND	PLINE	SC_CABLE_AG	40
SC_CABLE_UG	CABLE UNDER GROUND	PLINE	SC_CABLE_UG	40
SC_MH	MANHOLE	SC_MH	CONTINUOUS	40
SC_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	40
SC_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	40
SE	**SEWERAGE**			
SE_INSP_OPEN	INSPECTION OPENING	SE_INSPE	CONTINUOUS	42
SE_MH	MANHOLE	SE_MH	CONTINUOUS	42
SE_PIPE_MARKER	SEWER PIPE LOCATION	SE_MK	CONTINUOUS	42
SE_MISC	MISCELLANEOUS	SE_MS	CONTINUOUS	42
SE_OUTFALL	OUTFALL	SE_OUTFL	CONTINUOUS	42
SE_PIPE_AG	PIPE ABOVE GROUND	PLINE	SE_PIPE_AG	42
SE_PIPE_RIS_MAIN_AG	RISING MAIN ABOVE GROUND	PLINE	SE_RISNG_MAIN_AG	64
SE_PIPE_RIS_MAIN_UG	RISING MAIN UNDER GROUND	PLINE	SE_RISNG_MAIN_UG	64
SE_PIPE_UG	PIPE UNDER GROUND	PLINE	SE_PIPE_UG	42
SE_PIPE_UG_ABD	ABANDONED PIPE UNDER GROUND	PLINE	SE_PIPE_UG_AB	9
SE_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	42
SE_STN_PUMP_AG	PUMP STATION ABOVE GROUND	SE_STNPA	CONTINUOUS	42
SE_STN_PUMP_UG	PUMP STATION UNDER GROUND	SE_STNPU	DASHED	42
SE_TANK_SEPTIC	SEPTIC TANK	SE_TKSEP	CONTINUOUS	42
SE_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	42
SE_VALVE	RISING MAIN VALVE	SE_VLV	CONTINUOUS	42
SE_VALVE_SCOUR	RISING MAIN SCOUR VALVE	SE_VLVSR	CONTINUOUS	42
SE_VALVE_SCOUR_NOTINUSE	RISING MAIN SCOUR VALVE (NOT IN USE)	SE_VLV	CONTINUOUS	9
SE_VALVE_STOP_PIT	RISING MAIN STOP PIT	SE_PIT	CONTINUOUS	42
SE_VENT	VENT	SE_VENT	CONTINUOUS	42
ST	**STRUCTURE**			
ST_ASSET_NO	ASSET NUMBER	TEXT	CONTINUOUS	7
ST_AWNING	AWNING/COVERED WAYS	PLINE	CONTINUOUS	7
ST_BOLLARD	BOLLARD	ST_BOLRD	CONTINUOUS	7

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
ST_BRIDGE	BRIDGE	PLINE	CONTINUOUS	7
ST_BUILDING	BUILDING	PLINE (0.5 WIDE)	CONTINUOUS	7
ST_BUILDING_UG	UNDERGROUND STRUCTURE	PLINE	DASHED	7
ST_CARPORT	CARPORT	PLINE	CONTINUOUS	7
ST_COLUMN_SUPPORT	COLUMN / SUPPORT	PLINE/ST_CLMSP	CONTINUOUS	7
ST_CONC	CONCRETE	PLINE	CONTINUOUS	7
ST_EDGING	CHANGE OF SURFACE	PLINE	CONTINUOUS	7
ST_FENCE	FENCE	PLINE	ST_FENCE	7
ST_FENCE_POST	FENCE POST	ST_FNCEP	CONTINUOUS	7
ST_FLAG_POLE	FLAG POLE	ST_POLFL	CONTINUOUS	7
ST_GATE	GATE	ST_GATE	CONTINUOUS	7
ST_GATE_BOOM	GATE BOOM	ST_GATEB	CONTINUOUS	7
ST_GATE_CRASH	CRASH GATE	ST_GATEC	CONTINUOUS	7
ST_LITTERBIN	LITTER BIN	ST_LIBIN	CONTINUOUS	7
ST_MAST_PYLON	MAST / PYLON	ST_MSTPL	CONTINUOUS	7
ST_MISC	MISCELLANEOUS	ST_MS	CONTINUOUS	7
ST_MONUMENT	MONUMENT	ST_MONUM	CONTINUOUS	7
ST_PATIO_DECK	PATIO / DECK	PLINE	CONTINUOUS	7
ST_PAVEMENT	PAVEMENT	PLINE	CONTINUOUS	7
ST_PERGOLA	PERGOLA	PLINE	CONTINUOUS	7
ST_PLAT_PLINTH_EDGE	PLATFORM, PLINTH AND EDGE OF CONCRETE	PLINE	DASHED	7
ST_PLAYGROUND	PLAYGROUND	PLINE	CONTINUOUS	7
ST_RACK	RACK	PLINE	CONTINUOUS	7
ST_RAILING	RAILING	PLINE	ST_RAILING	7
ST_RAMP	RAMP	PLINE	CONTINUOUS	7
ST_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	7
ST_ROOFLINE_EAVES	ROOF LINE / EAVES	PLINE	DASHED	7
ST_SEAT	SEAT	ST_SEAT	CONTINUOUS	7
ST_SHADE_CLOTH	SHADE CLOTH SHELTERS	PLINE	CONTINUOUS	7
ST_SHED	SHED	PLINE	CONTINUOUS	7

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
ST_SIGN	HOARDING / SIGN	ST_SIGNH	CONTINUOUS	7
ST_SPORT_FACILITY	SPORT FACILITY	PLINE	CONTINUOUS	83
ST_STEPS	STEPS	PLINE	CONTINUOUS	7
ST_SWIM_POOL	SWIMMING POOLS	PLINE	CONTINUOUS	121
ST_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	7
ST_VERANDAH	VERANDAH	PLINE	CONTINUOUS	7
ST_WALL	WALL	PLINE	ST_WALL	7
ST_WALL_RET	RETAINING WALL	PLINE	ST_WALL_RET	7
SU	**SURVEY**			
SU_BENCHMARK	SURVEY BENCHMARK	SU_BNCMK	CONTINUOUS	1
SU_CONC_BLOCK	SURVEY CONCRETE BLOCK	SU_CNCBL	CONTINUOUS	1
SU_COOR_REF_MARK	COORDINATED REFERENCE MAR	SU_CRFMK	CONTINUOUS	1
SU_DHW	DRILLHOLE/DRILLHOLE AND WING	SU_DHW	CONTINUOUS	1
SU_MISC	SURVEY MISCELLANEOUS	SU_MS	CONTINUOUS	1
SU_PEG	SURVEY PEG POST	SU_PEG	CONTINUOUS	1
SU_PIPE	SPIKE/PIN/PIPE	SU_PIPE	CONTINUOUS	1
SU_PSM	PERMANENT SURVEY MARK	SU_PSM	CONTINUOUS	1
SU_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	1
SU_STAR_PICKET	SURVEY STEEL ROD	CIRCLE	CONTINUOUS	1
SU_TEXT	SURVEY TEXT	TEXT	CONTINUOUS	1
TO	**TOPOGRAPHIC**			
TO_BANK_BOTTOM	BANK BOTTOM	PLINE	DASHED	8
TO_BANK_TOP	BANK TOP	PLINE	TO_BANK_TOP_2	8
TO_CONT_LABEL	CONTOUR VALUES	TEXT	DASHED	44
TO_CONT_MAJ	PRIMARY CONTOURS 1M INTERVALS	PLINE	CONTINUOUS	44
TO_CONT_MIN	SECONDARY CONTOURS	PLINE	CONTINUOUS	43
TO_DEPRESSION	DEPRESSION	PLINE	DASHED	8
TO_EMBANKMENT	EMBANKMENT	PLINE	TO_EMBANKMENT_2	8
TO_NAT_SURFACE	NATURAL SURFACE	TO_NATSF	CONTINUOUS	8
TO_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	8

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
TO_ROCK	ROCK	PLINE	HIDDEN	8
TO_ROCK_AREA	ROCKY AREA	PLINE	HIDDEN	8
TO_STOCKPILE	STOCKPILE	PLINE	DASHED	8
TR	**TRAFFIC**			
TR_PARK_METER	PARKING METER	TR_METER	CONTINUOUS	30
TR_PARK_SIGN	PARKING SIGN	TR_PARKS	CONTINUOUS	30
TR_PARK_TICK_DISP	PARKING TICKET DISPENSER	TR_TCKTD	CONTINUOUS	30
TR_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	30
TR_SIGN	TRAFFIC SIGN	TR_SIGN	CONTINUOUS	30
TR_ST_NAME_SIGN	STREET NAME SIGN	TR_STRTS	CONTINUOUS	30
TR_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	30
UN	**UNKNOWN**			
UN_MH	MANHOLE	UN_MH	CONTINUOUS	40
UN_MISC	MISCELLANEOUS	UN_MS	CONTINUOUS	40
UN_PIT	PIT	PLINE/UN_PIT	DASHED	40
UN_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	40
UN_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	40
VE	**VEGETATION**			
VE_CULTIVATION	CULTIVATION	PLINE	CONTINUOUS	103
VE_GARDEN_BED	GARDEN BED	PLINE	CONTINUOUS	103
VE_HEDGE	GARDEN HEDGE	PLINE	CONTINUOUS	103
VE_LAWN	LAWN	PLINE	CONTINUOUS	103
VE_MISC	MISCELLANEOUS	VE_MS	CONTINUOUS	103
VE_SHRUB	SHRUB	VE_SHRUB	CONTINUOUS	103
VE_STUMP	STUMP	VE_STUMP	CONTINUOUS	103
VE_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	103
VE_TREE	TREE	VE_TREE	CONTINUOUS	103
VE_TREE_MULT	TREE MULTI TRUNK	VE_TREEM	CONTINUOUS	103
WF	**WATER FEATURES**			
WF_MISC	MISCELLANEOUS	WF_MS	CONTINUOUS	141

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
WF_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	141
WF_SWAMP	SWAMP	PLINE	DASHED	141
WF_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	141
WF_TOP_BANK	TOP BANK WATER COURSE	PLINE	WF_BNK_TOP_CORS	141
WF_WATER_LEVEL	WATER LEVEL	WF_WLVL	CONTINUOUS	141
WF_WATERCOURSE	WATER COURSE	PLINE	WF_WATERCOURSE	141
WS	**WATER SUPPLY**			
WS_BORE_WELL	BORE / WELL	WS_BORE	CONTINUOUS	4
WS_HOSE_BOX_REEL	HOSE BOX / REEL	WS_HOSEB	CONTINUOUS	4
WS_HYD_BOOSTER	HYDRANT BOOSTER	WS_HYBS	CONTINUOUS	4
WS_HYD_GROUND	HYDRANT GROUND	WS_HYDRT	CONTINUOUS	4
WS_HYD_PILLAR	HYDRANT PILLAR	WS_HYDRT	CONTINUOUS	4
WS_LABEL	LABELS/IDENTIFICATION	TEXT	CONTINUOUS	4
WS_IR_PIPE_UG	PIPE UNDER GROUND	PLINE	IR_PIPE_UG	121
WS_IR_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	121
WS_IR_SPRINKLER	SPRINKLER	IR_SPRKL	CONTINUOUS	121
WS_MARKER_HYD	HYDRANT MARKER	WS_MKHYD	CONTINUOUS	4
WS_METER	WATER METER	WS_METER	CONTINUOUS	4
WS_MH	MANHOLE	WS_MH	CONTINUOUS	4
WS_MISC	MISCELLANEOUS	WS_MS	CONTINUOUS	4
WS_PIPE_AG	PIPE ABOVE GROUND	PLINE	WS_PIPE_AG	4
WS_PIPE_UG	PIPE UNDER GROUND	PLINE	WS_PIPE_UG	4
WS_PIPE_UG_ABD	ABANDONED PIPE UNDER GROUND	PLINE	WS_PIPE_UG_AB	9
WS_PIT	PIT	WS_PIT	CONTINUOUS	4
WS_RL	RL'S (SPOT HEIGHTS)	TEXT	CONTINUOUS	4
WS_STANDPIPE	STANDPIPE	WS_STNDP	CONTINUOUS	4
WS_STN_PUMP	PUMP STATION	WS_STNPM	CONTINUOUS	4
WS_STOP_COCK	STOP COCK	WS_STOPC	CONTINUOUS	4
WS_TANK_AG	TANK ABOVE GROUND	WS_TKAG	CONTINUOUS	4
WS_TANK_UG	TANK UNDER GROUND	PLINE/WS_TKUG	DASHED	4

LAYER	DESCRIPTION	SYMBOL	LINETYPE	COLOUR
WS_TAP	TAP	WS_TAP	CONTINUOUS	4
WS_TEXT	TEXT/NOTES	TEXT	CONTINUOUS	4
WS_VALVE_AIR	AIR VALVE	WS_VLVAR	CONTINUOUS	4
WS_VALVE_SCOUR	SCOUR VALVE	WS_VLVSR	CONTINUOUS	4
WS_VALVE_STOP	STOP / SLUICE VALVE	WS_VLVST	CONTINUOUS	4
WS_VALVE_STOP_PIT	STOP VALVE PIT	WS_PIT	CONTINUOUS	4

Document Control

Airport Development Group – Documentation Standards

Author: Sumit Sharma

Document Owner: CADD Operator

Plan Rev No.	Date	Comments	Prepared by	Reviewed and Approved By
0.1	27/4/2023	Draft	Sumit Sharma	William Bligh
1	23/05/2023	Rev 1	Sumit Sharma	William Bligh
2	13/03/2026	Rev 2	Melissa Luxton	William Bligh

Feedback

To assist ADG to maintain a workable Standard, ADG appreciates and values any feedback from users of this Standard. Please provide written feedback to ADG Project Manager.