AS-CONSTRUCTED DRAWING STANDARDS

DECEMBER 2024



ACKNOWLEDGEMENT OF COUNTRY

The City of Adelaide acknowledges that we are located on the traditional Country of the Kaurna people of the Adelaide Plains and pays respect to Elders past, present and emerging.

We recognise and respect their cultural heritage, beliefs and relationship with the land. We also extend that respect to visitors of other Aboriginal Language Groups and other First Nations.

DOCUMENT PROPERTIES

Contact for enquiries and proposed changes

If you have any questions regarding this document or if you have a suggestion for improvements, please contact:

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Record Details

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Version History

Version	Revision Date	Prepared By	Reviewed By
R-1	31/07/2025	Rasika Krishan & Lachlan Pedder	B Shakya

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Background

As-Constructed drawings are the final drawing set for any infrastructure project, documenting the project's completed state. These drawings should reflect any modifications, deviations or alterations made to the Issue for Construction (IFC) drawings, with any changes clearly indicated.

These drawings must accurately represent all specifications including modifications, dimensions, levels, materials, and locations of installed elements that differ from the IFC version. The Contractor shall verify all As-Constructed levels against 'Issued for Construction' design levels with an engineering survey upon completion of construction. The Contractor shall engage a licenced surveyor to undertake the engineering survey.

As-Constructed drawings must be completed to a high quality, address all the requirements of this document and applicable Works Agreement or Contract and be provided to the reasonable satisfaction of the Council's Representative / Superintendent.

The City of Adelaide (CoA) utilises As-Constructed Drawings as a detailed record of its assets. These drawings are essential for updating Geographical Information Systems (GIS) information, asset registers, determining maintenance requirements and may be required prior to the handover of an asset from the Contractor to Council. Additionally, other As-Constructed Documents, including any supporting materials such as Operating Manuals, warranty information, maintenance manuals, and other relevant materials, is also required as specified in Contract or Work Agreement.

It is Contractor's responsibility to provide As-Constructed drawings within the time specified in the contract. If not specified, As-Constructed drawings must be provided to Council prior to, and as a condition precedent to, the works achieving Practical Completion / Completion. Where works are undertaken under a contract that does not include a Practical Completion / Completion mechanism, the Contractor must provide all As-Constructed drawings before submitting any payment claim after completing all works on site. CoA retain the right to withhold the issue of Practical Completion (PC) certificate until satisfactory As-Constructed documentation is received from the Contractor.

CoA will provide digital copies of the IFC drawings to assist in the development of the As-Constructed Drawings.

Objective

The objective of this document is to clearly outline the requirements for As-Constructed Drawings for projects undertaken by the City of Adelaide, which must be provided by the Contractor. All As-Constructed Drawings produced for a City of Adelaide project or asset must comply with the specification outlined herein.

Scope

This standard outlines how As-Constructed information shall be prepared and the requirements for all City of Adelaide infrastructure projects.

The Contractor must submit:

- As-Constructed drawings in both PDF and AutoCAD formats.
- All manuals, specifications, and supporting documentation for any installed products and materials related to the works. (As specified in Supporting Documents and Materials sections of this document).

Requirements

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As-Constructed drawings shall reflect any changes between the IFC drawings and the As-Constructed conditions. The drawings must be delivered in accordance with project specific contracts, <u>CoA drafting guidelines</u>, general drawing practices as outlined in the AS 1100 series, and industry best practice. As-Constructed drawings must include the following:

- a) A clear indication of the works "As-Constructed."
- b) The location and levels of all services within the limits of the work, clearly marked.
- c) The location of all remaining survey control points, including a coordinate listing.
- d) GPS accuracy of Permanent Survey Marks (PSM), Temporary Bench Marks (TBM), and Permanent Marks (PM).
- e) All adjustments or changes made during construction, highlighting any differences from the final IFC drawings.
- f) As-Constructed drawings shall use the same drawing numbers as the initial design drawings issued 'For Construction' and be revised as necessary to indicate "As-Constructed" status.

As-Constructed information must be progressively documented throughout the contract work and provided to the Superintendent in a neat and clean format.

Final As-Constructed drawings shall include the name of the contractor and be endorsed as correct by a relevant professional from the contractor's side. It is important to ensure that these signatories are licensed and authorised to confirm the accuracy of the drawings in accordance with standards and best practices.

The following information shall be included on the plans to capture the extent of construction work (but not limited to):

- The extents of all construction works, including drainage lines and pits, roads, footpaths, subsoil drainage, line marking, redundant asset removals or grouting.
- Pavement details, including finished surface level, crown, and grade changes.
- Concrete structures.
- Stormwater drainage infrastructure (both surface and underground).
- Line marking and signage.
- Lighting and Electrical reticulation.
 - Include accurate details of underground services, such as trench or bore depths, updated legends, and any site adjustments made during construction.
 - Ensure pole and asset locations are updated to reflect as-built conditions.
- Verify all changes are spatially correct to prevent discrepancies in asset positioning, quantity tracking, and unit rate/project cost accuracy.
- Provide final dimensions, levels, alignments, and as-built survey data as applicable.
- Existing survey and design information from the original design drawings, such as Temporary Bench Marks (TBMs), borehole locations, street names, cadastral boundaries, and ownership details.
- Point data, including eastings, northings, and invert levels for new pipe and pit installations, as well as details of top of the pit, invert of pipes, pit depth, pit type, lid type, pipe material, and length.
- Eastings, northings, and Reduced Levels (RLs) of the Permanent Marks (PMs) used to calibrate the survey.
- The expected accuracy of the survey results.
- Road names.
- A north point and scale bar.
- The name and company of the surveyor, the council project number, and project details in the title block.
- Any additional information obtained during construction, such as verification of the location, size, type, and level of existing services, or the location of additional services not shown on the design drawings or survey.
- Other infrastructure as required by local service authorities.

Each drawing shall be marked 'AS CONSTRUCTED', dated, and signed off by a licensed surveyor or qualified engineer. All survey work must comply with Appendix A: CoA Survey Criteria. Specific requirements for As-Constructed drawings and records

may also be included in other sections of the specification or project contract documentation.

All survey data must adhere to the GDA 2020 (depending on the original survey) and elevations must be to the Australian Height Datum (AHD).

Submission requirement

The contractor shall provide As-Constructed drawings as follows:

CAD Format Drawings (.dwg)

- Must include all alterations from design plans.
- o Files should be compatible with the current/latest version of AutoCAD.

PDF Format

- Paper size shall specify with scale size.
- Supporting Documentation (as specified in work agreements or Contract).

As-Constructed drawings shall be scaled with corresponding paper size, in colour, and marked up according to the requirements of the CoA Survey Criteria and CoA Drafting Guidelines. Files should be named according to their drawing and revision numbers. All supporting documentation must be provided in a suitable file format.

All submitted files must not be locked or password-protected in any way. Submission can be done via shared link, CD-ROM, DVD, or USB memory card media. If submitted via physical media, they shall:

- Be compliant with ISO 9660.
- Include a Table of Contents (full index of all drawings) detailing the content of the disc.
- Be labelled with the contractor's name, contract number, project name and description, road name and section, date, and description of content.

CAD Format Drawings Requirements:

- All alterations from the design plans, as noted on hard copy plans, must be included.
- Files must not be locked or password-protected in any way.
- Files must be compatible with the latest version of AutoCAD.
- The existing CAD layer configuration must remain unchanged, and As-Constructed information shall be integrated into new layers.

Upon request, the Council will provide a secure link for the contractor to upload documents and materials. In accordance with the Council's firewall policy, links from external parties will not be accepted.

Supporting Documents and Materials

The contractor may be required to provide the City of Adelaide with relevant supporting documents and materials related to the As-Constructed drawings. The details of these requirements will be outlined in the applicable Works Agreement, Contract, or specifications. These may include:

- Product Information
- Operating Manuals
- Certifications (for instance, Electrical or Plumbing Certificates of Compliance)
- Warranty information
- Test results
- Asset photos (including night photos where required)
 Asset Photos shall name similar to the asset identification on the AsConstruction drawing so that it is identifiable (as bellow)

Asset Type	Asset Name on AsCon	Image Name
Light Pole	LP1	LP1.jpg
Light Pole	LP2	LP2.jpg
Bollard	BOL1	BOL1.jpg
Bollard	BOL2	BOL2.jpg
Bollard	BOL3	BOL3.jpg

- Maintenance manuals/information
- CCTV Inspection data (Stormwater projects only)
- Electrical testing information
- · Other relevant information

Other handover requirement are outlined in the document 'Project Documentation Handover Requirements'.

Reference Documents:

- A CoA Survey Guidelines
- B CoA Drafting Guidelines (Construction standards & guidelines | City of Adelaide)
- C Project Documentation Handover Requirements