**CAPITAL PROJECTS AND**

**FACILITIES MANAGEMENT**

**INFRASTRUCTURE**

**OPERATIONS AND MAINTENANCE MANUAL**

**AUGUST 2025 REVISION**

**ELECTRICAL MANUAL**

**Project Name:** i.e. Aconex project name

*Project Description: Provide a brief description of project scope*

|  |  |
| --- | --- |
| UoA Project Number: |  |
| UoA Project Building Name(s):  UoA Building Number(s):  UoA Project Location/Address: |  |
| UoA Project Manager: |  |
| Architect: |  |
| Consultants: |  |
| Head Contractor: |  |
| Practical Completion Date: |  |

**Contents**

[i. Document Guide](#_Toc206163152)

[ii. Document Control Resources](#_Toc206163153)

[iii. Document Approval, Use and Revision History](#_Toc206163154)

[iv. Applicable Manuals](#_Toc206163155)

[v. Description of the Installation](#_Toc206163156)

[vi. Directory of Contacts](#_Toc206163157)

[1.1 Certificates and Forms](#_Toc206163158)

[*1.1 a) Legal Compliance and Statutory Authorities*](#_Toc206163159)

[*1.1 b) Essential Safety Provisions*](#_Toc206163160)

[1.2 Occupational Health & Safety / Hazardous Materials](#_Toc206163161)

[1.3 Technical Literature](#_Toc206163162)

[1.4 Asset Register](#_Toc206163163)

[1.5 Defects Liability Period (DLP) Maintenance Schedule](#_Toc206163164)

[1.6 Commissioning & Testing Data](#_Toc206163165)

[1.7 Warranties](#_Toc206163166)

[1.8 Document Register](#_Toc206163167)

[2.1 Further Information](#_Toc206163168)

[*2.1 a) Specialist Tools & Testing Equipment*](#_Toc206163169)

[*2.1 b) Spares & Consumables*](#_Toc206163170)

[*2.1 c) Imported / Specialist Equipment*](#_Toc206163171)

[*2.1 d) Training Plans & Records*](#_Toc206163172)

[*2.1 e) Other Information*](#_Toc206163173)

1. Document Guide

This template is only to be used for the **Electrical** components of a project, which has **not** been approved as a ‘Small Works’ project.

Should a section not be applicable to this trade discipline, place ‘**Not Applicable**’ in the respective section. Do not delete ‘Not Applicable’ sections.

1. Document Control Resources

Roles and responsibilities – populate according to the O&M Startup Meeting Spreadsheet

Insert **‘Applicable’** or **‘Not Applicable’** for Stakeholders involved in the consolidation/review process.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Company** | **Role** | **Position** | **Name** | **Applicable/**  **Not Applicable** |
| [Head Contractor] | Document Controller | [Title] |  |  |
| [Consultant] | Document Reviewer | [Title] |  |  |
| University of Adelaide | Document Owner/Approver | Director Capital Project Delivery  and Facilities Management |  |  |
| University of Adelaide | Document Reviewer | Project Manager |  |  |
| University of Adelaide | Document Reviewer | Senior Technical Officer |  |  |
| University of Adelaide | Document Reviewer | Facility Manager North Terrace (High Priority) |  |  |
| University of Adelaide | Document Reviewer | Facility Manager North Terrace (Medium Priority) |  |  |
| University of Adelaide | Document Reviewer | Facility Manager North Terrace (Low Priority & Support) |  |  |
| University of Adelaide | Document Reviewer | Facility Manager North Terrace (Soft Services) |  |  |
| University of Adelaide | Document Reviewer | Facility Manager  Roseworthy Campus |  |  |
| University of Adelaide | Document Reviewer | Facility Manager Waite Campus |  |  |
| University of Adelaide | Document Reviewer | Senior Space Data Coordinator |  |  |
| University of Adelaide | Document Reviewer | Maintenance Scheduling Officer |  |  |

1. Document Approval, Use and Revision History

Sample table format as follows, populate with correct dates for each submission:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Version** | **Date** | **Reason** | **Issued to (company)** | **Comments** |
| 1 | YYYY-MM-DD | 50% review | UoA | 50% submission sent to UoA for review |
| 2 | YYYY-MM-DD | 95% review | Consultant | 95% submission sent to Consultant for review |
| 3 | YYYY-MM-DD | 95% review | UoA | 95% submission sent to UoA for review |
| 4 | YYYY-MM-DD | 100% review | Consultant | 100% submission sent to Consultant for review |
| 5 | YYYY-MM-DD | 100% review | UoA | 100% submission sent to UoA for review |
| 6 | YYYY-MM-DD | Issued for Archiving | UoA | Sent to UoA for archiving |

1. Applicable Manuals

Please state which manuals will be submitted for thisproject by stating **‘Applicable’** or **‘Not Applicable’. Refer to O&M Manual Startup Meeting Spreadsheet.**

|  |  |
| --- | --- |
| **Manual Type** | **Applicable/Not Applicable** |
| Architectural Manual |  |
| Audio Visual Manual |  |
| Communications Manual |  |
| Electrical Manual |  |
| Fire Manual |  |
| Hydraulic Manual |  |
| Mechanical Manual |  |
| Security Manual |  |
| Structural Manual |  |
| Combined Site, Urban, Structural & Open Spaces Manual |  |

1. Description of the Installation

Provide a full description of the project including but not limited to the following:

1. Overall scope of works
2. Project Specific Location (Campus / Building / Floor / Room)
3. Listing of the applicable trade disciplines
4. Project stages / Separable portions (if any)
5. Project commencement and completion dates
6. Any work which may have been completed by others (i.e. works completed by others and not the Contractor)
7. Directory of Contacts

Provide in table format a combined contact list which includes Head Contractor, Consultants, UoA Project Manager and Trade Contractors.

Table format as follows, populate as applicable:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Trade Discipline** | **Company Name** | **Contact Name (Representative)** | **Contact Number (Representative)** | **Company Address** | **Company Email Address** |
| Head Contractor |  |  |  |  |  |
| Consultant |  |  |  |  |  |
| UoA Project Manager |  |  |  |  |  |
| Electrical Contractor |  |  |  |  |  |
| Other Contractors as necessary (add rows) |  |  |  |  |  |
| Etc. |  |  |  |  |  |

Please ensure that the electrical contractor listed above is a university-nominated supplier, as per the RFT documentation.

## Certificates and Forms

This section is separated into (2) subsections as follows:

1. Legal Compliance and Statutory Authorities
2. Essential Safety Provisions

## *a) Legal Compliance and Statutory Authorities*

Provide signed copies of all Legal Compliance and Statutory Certification, referring to the table below.

Please state below if a specific certification is **‘Applicable’** or **‘Not Applicable’** for this project, insert documents after table.

|  |  |
| --- | --- |
| **Legal Compliance and Statutory Authorities Certification Type** | **Applicable / Not Applicable** |
| Development Approval |  |
| Certificate of Occupancy [Schedule 19 of the Development Act 1993 and Development Regulations 2008] |  |
| Builder’s Statement [Schedule 19A of the Development Act 1993 and Development Regulations 2008]; |  |
| Departures Schedule |  |
| Certificate of Practical Completion |  |

Note:

1. Where applicable, include copies of certificates in order as listed above.
2. Refer to SA Development Act and Ministers Specification for further information.

## *b) Essential Safety Provisions*

Provide signed copies of all Essential Safety Provisions certificates and forms, referring to the table below.

Please state below if a specific certification is **‘Applicable’** or **‘Not Applicable’** for this project, insert documents after table.

|  |  |  |
| --- | --- | --- |
| **Essential Safety Provisions Certification Type** | **Applicable / Not Applicable** | **Date Lodged with Council (if applicable)** |
| Schedule of Essential Safety Provisions [Form 1, Schedule 16 of the Development Regulations] |  |  |
| Certificate of compliance with Essential Safety Provisions [Form 2, Schedule 16 of the Development Regulations] **or** UoA Statement of Compliance of ESPs if DA is not applicable |  |  |
| Certificates of compliance (eCOC’s provided via the Office of the Technical Regulator) |  |  |
| Alternative Solutions |  |  |
| SAMFS Approval |  |  |

Note:

1. Where applicable, include copies of certificates in the order listed above.
2. Refer to SA Development Act and Ministers Specification for further information.
3. Refer to Minister’s Specification SA76 for further information.

## Occupational Health & Safety / Hazardous Materials

The Contractor is to provide the documents listed in the table below.

Please state below if a specific document is **‘Applicable’** or **‘Not Applicable’** for this project, then insert documents after table.

|  |  |
| --- | --- |
| **Document Type** | **Applicable/Not Applicable** |
| Safety in Design Register |  |
| Safety in Construction (Risk Assessment) Register |  |
| Asbestos Clearance Certificates |  |
| Proof of Hazardous Material Removal / Remediation |  |
| Safe Operating Procedures (SOP) that have been developed during the project delivery process (to be produced by Faculties) |  |

Note:

1. Insert the applicable documents in the order listed above.

## Technical Literature

The Contractor is to provide the technical literature documents for the products, finishes, and equipment supplied as part of the project, including but not limited to the following:

1. User Guides
2. Care & Maintenance Instructions
3. Installation, Dismantling & Performance Data
4. Operating Instructions

Populate the table below accordingly, then insert the matching documents after the table.

|  |  |  |
| --- | --- | --- |
| **Trade Discipline / Product / Equipment** | **Supplier / Provider** | **Product Brochure Title** |
|  |  |  |
|  |  |  |
|  |  |  |

Note:

1. Include the copies of technical literature in the same order as listed above.

## Asset Register

The Contractor (in conjunction with the Consultant) are to provide an asset register reflecting all new, removed/demolished assets during the construction process.

Note:

1. The Contractor must complete the requirements of section 1.4 by 100% revision for review and approval by the University of Adelaide.
2. **Using the template provided by the PM (as supplied by the Senior Maintenance Scheduling Officer), supply the asset register as a separate .xls document.**
3. Also insert updated asset register as a PDF in this section.
4. Consultant to identify assets which have been removed/demolished.
5. Only UoA Infrastructure-maintained assets to be included in this section, if unsure, liaise with Project Manager for clarification.
6. Asset register to be submitted in conjunction with the Defects Liability Period (DLP) Maintenance Schedule.

|  |  |
| --- | --- |
| Design Standard reference: | Volume K:  ‘Asset/equipment register’ page 26 |

## Defects Liability Period (DLP) Maintenance Schedule

The Contractor is required to provide a combined maintenance schedule in a spreadsheet, provided by the University. Provide maintenance schedule two months prior to Practical Completion.

Sample table format as follows, populate as applicable:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Equipment Code** | **Site** | **PM Procedure** | **Service Contractor** | **Date for First DLP PM** | **Date of Last DLP PM** | **Frequency (months)** |
| INF0000001 | RW - DLP | DLP (M) |  | 2020-07-01 | 2021-07-01 | 1 |
| INF0000002 | RW - DLP | DLP (Q) |  | 2020-10-01 | 2021-07-01 | 3 |
| INF0000003 | RW - DLP | DLP (A) |  | 2020-12-01 | 2021-07-01 | 12 |

Note:

1. Refer to DLP Scheduling procedure provided by the University of Adelaide.
2. Schedule to identify all items that have an ESP function (where applicable).
3. Provide completed DLP Maintenance Schedule in conjunction with the Asset Register.
4. Contractor to complete all columns of the DLP maintenance schedule template except PM Procedure, which will be completed by the University of Adelaide.
5. The Contractor must provide maintenance schedule two months prior to Practical Completion.

## Commissioning & Testing Data

The Contractor is to provide commissioning and testing records for each system and component for each applicable trade discipline.

Table format below, populate as applicable:

|  |  |  |
| --- | --- | --- |
| **Trade Discipline** | **Contractor** | **Document Title** |
|  |  |  |
|  |  |  |
|  |  |  |

Note:

1. All records must be witnessed and verified by the UoA Project Manager in consultation with the Consultant and/or Designer.
2. Documents to be inserted in order as listed in table provided above.

## Warranties

Provide in table format a combined warranties schedule for each trade discipline, product, or equipment, listing all warranty periods as specified in the table below.

Warranty period timeframe table below, populate as applicable with duration of warranty (in years):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Trade Discipline / Product / Equipment** | **Manufacturer’s Warranty** | **Installation Warranty** | **Material Warranty** | **Defects Liability Warranty** | **Assignment of Warranty** |
| i.e. Lighting | 5 years | 1 year | 3 years | 1 year | UoA |
| Etc. |  |  |  |  |  |

Note:

1. Copies of warranties for each trade discipline / product / equipment are to be included in this section, and inserted in the same order as listed.
2. Provide confirmation that warranties have been assigned to the University of Adelaide.
3. Warranties commence from the date of practical completion (identify any departures where warranties do not commence from date of practical completion).
4. Warranty expiry dates to be included in Asset Register (refer to section 1.4).
5. Mark each product data sheet to clearly identify the specific products and components used in the installation and the data applicable.

## Document Register

Provide a document register that includes project-specific Electrical As-Built Drawings, Schedules, Specifications, and Shop Drawings in table format.

Table format as follows, populate as applicable:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Document Number** | **Document Name/Title** | **Discipline (i.e. Architectural, Electrical etc.)** | **Document Author (i.e. Company name)** | **Revision** | **Revision Date** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Note:

1. **All documents included in the register above are to be inserted below as PDFs in the same order as listed.**
2. **All documents that appear in this register are to be submitted separately from the O&M Manual for review and archival, in both PDF and DWG format, where applicable.**
3. All separate DWG format drawings must have external references (x-refs) bound (no zip folders to be submitted).
4. Ensure any “As-Built” documents listed are reviewed, endorsed, and labelled “As-Built” / ”As Constructed” / ”As Installed” / ”Record Set”.
5. “As-Built” drawings should reflect all changes made in the specifications and working drawings during the construction process, showing the exact dimensions, geometry, and location of all elements of the work completed under the contract.
6. All drawings to include legends/keys/schedules where applicable.
7. Generally, all services As-Built documents are to be created by the relevant subcontractor.

|  |  |
| --- | --- |
| Design Standard references: | Volume K:   * As Built (record) documentation 3.2.10, page 7 * ‘Document Deliverables’ |

## Further Information

The purpose of this section is to include all other documents applicable to the project, that are irrelevant to the previous sections.

This may include documents pertaining to, but not limited to, Specialist Tools & Testing Equipment, Spares & Consumables, Imported / Specialist Equipment, Training Plans & Records, etc.

This section is separated into (5) subsections as follows:

* 1. *a) Specialist Tools & Testing Equipment*
  2. *b) Spares & Consumables*
  3. *c) Imported / Specialist Equipment*
  4. *d) Training Plans & Records*
  5. *e) Other Information*

## *a) Specialist Tools & Testing Equipment*

This applies to special, non-generic tools and instruments that are not commercially available for the operation, maintenance and dismantling or assembly of the plant and equipment.

Populate the table below as applicable:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Trade Discipline** | **Item / Asset Number** | **Building Name** | **Level Number** | **Room Number** | **Tool Type** | **Tool Reference** | **Number of Tools** |
| Trade Discipline |  |  |  |  |  |  |  |
| Etc. |  |  |  |  |  |  |  |

Note:

1. Provide a register/transmittal of handover of tools including both signatories from Builder and UoA, if applicable.

## *b) Spares & Consumables*

Provide information on spares and consumable products that are supplied as part of the project.

Sample table format for documenting spares & consumables as follows, populate as applicable:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Product** | **Manufacturers Name** | **Name of Local Distributor** | **Local Distributor Contact Details** | **Model / Catalogue Number** | **Expected Replacement Frequency** | **Quantity Provided** | **Storage Location** |
| Product |  |  |  |  |  |  |  |
| Etc. |  |  |  |  |  |  |  |

## *c) Imported / Specialist Equipment*

Sample table format for documenting Imported / Specialist Equipment as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Trade Discipline** | **Type of Equipment** | **Cost** | **Country of Origin** | **Importer Details** | **Maintenance Contractor** |
| Trade Discipline |  |  |  |  |  |
| Etc. |  |  |  |  |  |

Note:

1. Include details of any specialised equipment and/or materials which may be subject to procurement risk.
2. All equipment directly procured from interstate or internationally should be included here.
3. Only fill the ‘Maintenance Contractor’ column if the equipment is not to be maintained by the incumbent contractor.

## *d) Training Plans & Records*

The Contractor is to provide full details of training provided to end users including copies of documentation issued (e.g. presentations and attendance records).

## *e) Other Information*

The purpose of this section is to provide additional information specific to the project that is not relevant to any previous sections. Examples may include RFI registers, Enabling Investigation Reports, Variations register, etc.