

The University of Newcastle

Infrastructure and Facilities Services

Drafting Standards

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UON-DSS-001

Document Revisions					
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Draft	18/08/2018	Issued for Approval	R. Eyre	T. Johnson	A. Jokinen-King
1	18/08/2018	Released	R. Eyre	T. Johnson	A. Jokinen-King
2	18/01/2020	Released	R. Eyre	E. Waterson	R. Eyre
2.1	24/07/2020	Minor changes related to coordination among building disciplines.	R. Eyre	A. J. King	T. Johnson

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Drafting Standards

1. Scope

This Specification covers the general requirements applicable to all technical and architectural drawings and documents provided by the supplier to the UON (University of Newcastle).

2. Approach

Where the stipulations of this Specification, the data sheets and the drawings do not comply with the minimum requirements of the Australian Standards and Statutory Regulations, the latter shall prevail.

Where the stipulations of this Specification, the data sheets and the drawings are more exacting than the minimum requirements of the Australian Standards and Statutory Regulations, the former shall prevail in the following order:

- a) Datasheets and detail drawings
- b) Specification and standard drawings

All CAD/BIM work undertaken on UON projects is to follow the principals of the NATSPEC National BIM Guide, tailored to the scope and nature of the project.

3. Scale

All drawings are to be drawn at 1:1 in model space and scaled onto paper space as required.

4. File Format

All 2D drawing files provided to the University as a vector only file type in AutoCAD 2013 format. The standards to be followed are:

- a) All files are to be a standalone file with no references or attachments
- b) All building drawings must be drawn at the scale noted above in the model space
- c) Drawings are to be sheeted in the paper space using the annotation scale to size the drawing
- d) Title block, schedules and keys are to be located on the paper space and not within the model space

Where 3D drawing packages have been used to create drawings, a 3D file is required by the University.

5. Drawing standard

All drawings are to be drawn to the relevant discipline Australian standard "AS1100", i.e. architectural drawings are to be drawn to AS1100.3.

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6. File Maintenance - 2D drawing files

Before submitting to the UON, all drawing files are to have the following actions taken;

- a) Purge and audit the file
- b) Ensure that all 3D elements have been flattened

7. Layer Naming

All layers within the file are to be named logically and understandably.

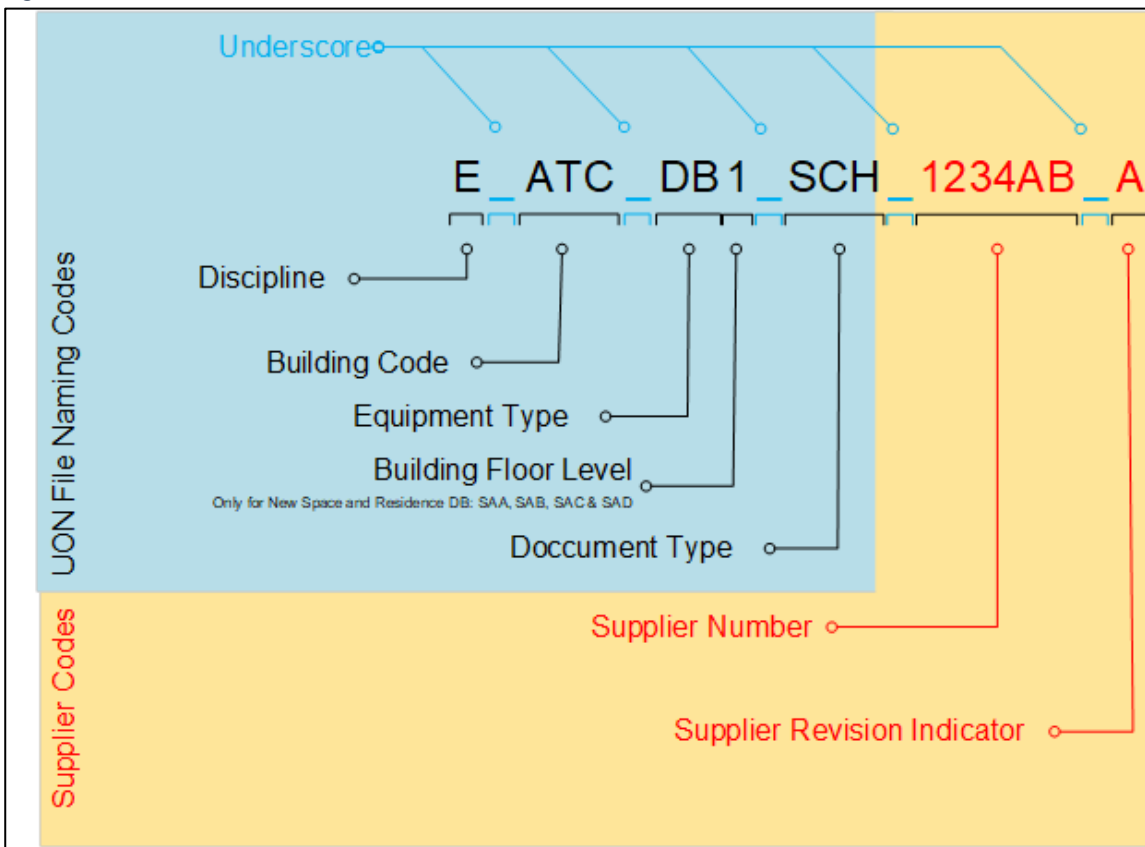
8. Room numbers

All floor plans are to include correct room numbers as approved by UON.

9. File Naming Conventions

All files submitted are to be named electronically by the supplier as Figure 1 below.

Figure 1



Equipment type is mandatory for electrical documents. Equipment type is not relevant to some disciplines, eg: Architecture, in which case Building Floor Level is used.

UON naming codes can be found in appendices A thru D.

The supplier number and revision indicator are file naming variables based on the Suppliers own numbering conventions. Shown in gold shading in Figure 1.

Where more than one file type is supplied for the same document or drawing, each file type must be named consistently, the extension is to be the only difference.

All drawings must have a unique drawing number allocated including each drawing controlled by the same base number or drawings identified as sheets:

- E.g. Sheet 1 of 3

Where sheet one equals the sequence and sheet three is the total number of sheets.

Figure 2 File name example - electrical

Drawing file	E_ATC_DB_SCH_1234AB_A.dwg
PDF file	E_ATC_DB_SCH_1234AB_A.pdf
Word Document	E_ATC_DB_SCH_1234AB_A.docx
Supplier Number 1-234_AB	Shown as 1234AB

Figure 3 File name example - architectural

Drawing file	A_ATC_RCP_A4001_A.dwg
PDF file	A_ATC_RCP_A4001_A.pdf
Supplier drawing number A4001	Shown as A4001

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Once the file name is allocated by the supplier for a given drawing or document it must only be used for the drawing or document originally submitted or revisions of the same drawing or document which may be required

9.1. Drawing Titles

Title block wording must indicate the drawing content.

10. Supplier Drawing File List (SDFL)

The supplier or contractor must submit the Supplier Drawing File List (SDFL) using the UON provided Excel Template.

11. Drawing and Document Electronic Format and Delivery to UON

Electronic files only are acceptable to UON.

Supplier is to deliver duplicated sets of drawing or document (files) to UON, including all required **Electronic File Formats** (Refer Table 1) on two separate non-returnable USB storage devices.

Table 1 – Electronic File Formats

Doc Type	Original Size	Required Electronic File Format
Drawings	Any	Native PDF
		Source file from AutoCAD 2013
		Native 3D file (if documented in 3D)
Documents	A4 - A3	Native PDF
		Source file e.g. Word = DOCX, Excel = XLSX

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UON - Discipline Codes

Discipline	Discipline Code
Architectural	A
Audio - Video - Media	V
Civil	C
Comms	IT
Electrical	E
Landscaping	L
Hydraulic	H
Mechanical	M
Piping	X
Quality	Q
Fire	F
Security	S
Structural	ST
Vertical Transport	T

Appendix A. Building Codes

Building Code	Building Name	Campus	Building Code	Building Name	Campus
A	ARCHITECTURE	Callaghan	EVCT	EVATT HOUSE BLOCK CT	Callaghan
ABEW	ARCHITECTURE & BUILT ENVIRONMENT W/SHOP	Callaghan	EVD	EVATT HOUSE BLOCK D	Callaghan
ADS	ARCHITECTURE DESIGN STUDIO	Callaghan	EVE	EVATT HOUSE BLOCK E	Callaghan
AE	NUSA BUILDING	Callaghan	EVF	EVATT HOUSE BLOCK F	Callaghan
AN	ANIMAL HOUSE	Callaghan	EVG	EVATT HOUSE BLOCK G	Callaghan
AOB	ACADEMIC OFFICE BLOCK	Callaghan	EVH	EVATT HOUSE BLOCK H	Callaghan
AS	ANIMAL HOUSE CENTRAL STORE	Callaghan	EVJ	EVATT HOUSE BLOCK J	Callaghan
AT	ART	Callaghan	EVK	EVATT HOUSE BLOCK K	Callaghan
ATC	ADVANCED TECHNOLOGY CENTRE	Callaghan	F	F BUILDING	Callaghan
AV	PSYCHOLOGY	Callaghan	FL	FLAMMABLE GOODS STORE	Callaghan
B	BIOLOGICAL SCIENCES	Callaghan	FS	FRIENDS SHED	Callaghan
BA	BASDEN THEATRE	Callaghan	G	EARTH SCIENCES	Callaghan
BAR	BARAHINEBAN	Callaghan	GH	GREAT HALL	Callaghan
BB	BOWMAN BUILDING	Callaghan	GP	GENERAL PURPOSE BUILDING	Callaghan
BHE	BIKE HUB EAST	Callaghan	GRTS	GROUNDWATER REMEDIATION TEST SITE	Callaghan
BHW	BIKE HUB WEST	Callaghan	GS	GALLERY: SCHOOL OF FINE ART	Callaghan
BS	BIKE STORAGE	Callaghan	H	HUNTER BUILDING	Callaghan
BSC	BSC. BUILDING	Callaghan	HPE	HEALTH & PHYSICAL EDUCATION	Callaghan
C	CHEMISTRY BUILDING	Callaghan	IA	INTERNATIONAL HOUSE BLOCK A	Callaghan
CB	COMMONWEALTH BANK	Callaghan	IB	INTERNATIONAL HOUSE BLOCK B	Callaghan
CCS	CHEMICAL CORROSIVE STORE	Callaghan	IC	INTERNATIONAL HOUSE BLOCK C	Callaghan
CE	CERAMICS	Callaghan	ICT	INFORMATION & COMMUNICATIONS TECH (Multi-Level Carpark)	Callaghan
CH	CHANCELLERY	Callaghan	ID	INTERNATIONAL HOUSE BLOCK D	Callaghan
COLA	COVERED OUTDOOR LEARNING AREA 1 & 2	Callaghan	IDC	INDUSTRY DEVELOPMENT CENTRE	Callaghan
CT	CT BUILDING	Callaghan	IE	INTERNATIONAL HOUSE BLOCK E	Callaghan
D	D BUILDING	Callaghan	IH	INTERNATIONAL HOUSE	Callaghan
DB	DRAMA BUILDING	Callaghan	II	INTERNATIONAL HOUSE BLOCK I	Callaghan
DS	DRAMA STUDIOS	Callaghan	IJ	INTERNATIONAL HOUSE BLOCK J	Callaghan
EA	ENGINEERING EA	Callaghan	IK	INTERNATIONAL HOUSE BLOCK K	Callaghan
EB	ENGINEERING EB	Callaghan	IL	INTERNATIONAL HOUSE BLOCK L	Callaghan
EC	ENGINEERING EC	Callaghan	IM	INTERNATIONAL HOUSE BLOCK M	Callaghan
ED	ENGINEERING ED	Callaghan	IN	INTERNATIONAL HOUSE BLOCK N	Callaghan
EE	ENGINEERING EE	Callaghan	IWR	INTERNATIONAL HOUSE WARDENS RESIDENCE	Callaghan
EF	ENGINEERING EF	Callaghan	KIN	CHILD CARE CENTRE KINTAIBA	Callaghan
EG	ENGINEERING EG	Callaghan	KOO	CHILD CARE CENTRE KOINDA	Callaghan
EHA	EDWARDS HALL BLOCK A	Callaghan	L	LIBRARY AUCHMUTY	Callaghan
EHB	EDWARDS HALL BLOCK B BURNETT HOUSE	Callaghan	LC	LANGUAGE CENTRE	Callaghan
EHC	EDWARDS HALL BLOCK C CUTLER HOUSE	Callaghan	LS	LIFE SCIENCES	Callaghan
EHF	EDWARDS HALL BLOCK F FRIENDS HOUSE	Callaghan	LSTH	LIFE SCIENCES THEATRE	Callaghan
EHS	EDWARDS HALL BLOCK S FORSYTHE HOUSE	Callaghan	MC	Mc MULLIN BUILDING	Callaghan
EHT	EDWARDS HALL BLOCK T TUNRA HOUSE	Callaghan	MCTH	Mc MULLIN THEATRE	Callaghan
EHX	EDWARDS HALL BLOCK X CALLAGHAN HOUSE	Callaghan	MS	MEDICAL SCIENCES	Callaghan
EHZ	EDWARDS HALL BLOCK Z	Callaghan	MSW	MEDICAL SCIENCES WEST	Callaghan
ES	ENGINEERING SCIENCE ES	Callaghan	MW	3D STUDIO	Callaghan
ESCS	EARTH SCIENCES CORE SHED	Callaghan	NIERA	NIER Block A	Callaghan
ET#	ENGINEERING THERMAL TEST ET BUILDINGS 1-6	Callaghan	NIERB	NIER Block B	Callaghan
EVA	EVATT HOUSE BLOCK A	Callaghan	NIERC	NIER Block C	Callaghan
EVAD	EVATT HOUSE BLOCK AD	Callaghan	NIERD	NIER Block D	Callaghan
EVB	EVATT HOUSE BLOCK B	Callaghan	NIERE	NIER Block E	Callaghan
EVC	EVATT HOUSE BLOCK C	Callaghan	NIERF	NIER Block F	Callaghan
			NIERG	NIER Block G	Callaghan
			NIERH	NIER Block H	Callaghan
			NIERI	NIER Block I	Callaghan
			NIERK	NIER Block K	Callaghan
			NIERL	NIER Block L	Callaghan
			NIERM	NIER Block M	Callaghan



Building Code	Building Name	Campus	Building Code	Building Name	Campus
NIERN	NIER Block N	Callaghan	SUB13	SUB STATION NO: 13	Callaghan
NIERO	NIER Block O	Callaghan	SUB14	SUB STATION NO: 14	Callaghan
NIERP	NIER Block P	Callaghan	SUB15	SUB STATION NO: 15	Callaghan
NIERS	NIER Block S	Callaghan	SUB16	SUB STATION NO: 16	Callaghan
NIERT1	NIER T1	Callaghan	SUB17	SUB STATION NO: 17	Callaghan
NIERT2	NIER T2	Callaghan	SUB18	SUB STATION NO: 18	Callaghan
NIERT3	NIER T3	Callaghan	SUB19	SUB STATION NO: 19	Callaghan
OMS	OVALS MACHINERY SHED	Callaghan	SUB20	SUB STATION NO: 20	Callaghan
OTS	OVALS TOOL SHED	Callaghan	SUB21	SUB STATION NO: 21	Callaghan
OVAL03	OVAL No 3	Callaghan	SW1	SCULPTURE WORKSHOP 1	Callaghan
OVAL05	OVAL No 5	Callaghan	TA	TUNRA ANNEXE	Callaghan
P	PHYSICS BUILDING	Callaghan	UH	UNIVERSITY UNION - HUNTER	Callaghan
CP1	CAR PARK 1	Callaghan	US	UNIVERSITY UNION - SHORTLAND	Callaghan
CP2	CAR PARK 2	Callaghan	V	V BUILDING	Callaghan
CP3	CAR PARK 3	Callaghan	VA	VISUAL ARTS & MEDIA STUDIES	Callaghan
CP4	CAR PARK 4	Callaghan	VE	VE BUILDING	Callaghan
CP5	CAR PARK 5	Callaghan	W	BEHAVIOURAL SCIENCES BUILDING	Callaghan
CP6	CARPARK 6	Callaghan	WON	CHILD CARE CENTRE WONNAYBA	Callaghan
CP7	CAR PARK 7	Callaghan	WP	WETLANDS PAVILION	Callaghan
CP8	CAR PARK 8	Callaghan	CEC	COFFS HARBOUR EDUCATION CENTRE	Coffs Harbour
CP9	CAR PARK 9	Callaghan	HMRI	HUNTER MEDICAL RESEARCH INSTITUTE	HMRI
CP10	CAR PARK 10	Callaghan	MTEC	MUSWELLBROOK TERTIARY EDUCATION CENTRE	Muswellbrook
CP11	CAR PARK 11	Callaghan	CON	CONSERVATORIUM OF MUSIC	Newcastle
CP12	CAR PARK 12	Callaghan	HUN	468 HUNTER STREET	Newcastle
CP13	CAR PARK 13	Callaghan	NH	NORTHUMBERLAND HOUSE	Newcastle
CP14	CAR PARK 14	Callaghan	UNH	UNIVERSITY HOUSE	Newcastle
CP15	CAR PARK 15	Callaghan	X	NEWSPACE	Newcastle
CP16	CAR PARK 16	Callaghan	376	INNOVATION HUB	Newcastle
CP17	CAR PARK 17	Callaghan	BC	BUILDING AND CONSTRUCTION FACILITY	Ourimbah
RAD	RADIOACTIVE WASTE STORE	Callaghan	BE	BUSINESS AND INVESTMENT COE	Ourimbah
RC	RESEARCH COTTAGE	Callaghan	BI	BUSINESS INCUBATOR	Ourimbah
RW	RICHARDSON WING	Callaghan	BO	BUSINESS OFFICE	Ourimbah
RWOP	RAY WATT OVAL PAVILION	Callaghan	BR	HORTICULTURE (BRACKENVIEW)	Ourimbah
SAA	RESIDENCE WEST	Callaghan	CP1	CAR PARK 1	Ourimbah
SAB	RESIDENCE NORTH	Callaghan	CP2	CAR PARK 2	Ourimbah
SAC	RESIDENCE EAST	Callaghan	CA	THE CASTLE	Ourimbah
SAD	RESIDENCE SOUTH	Callaghan	CC	CHILDCARE CENTRE	Ourimbah
SAS	BIRABAHN	Callaghan	CCA	COMMUNITY COLLEGE ADMINISTRATION	Ourimbah
SB	SCIENCE BUILDING	Callaghan	CCB	COMMUNITY COLLEGE CLASSROOM 1-3	Ourimbah
SC	STUDENT SERVICES CENTRE	Callaghan	CCC	COMMUNITY COLLEGE CLASSROOM 4-5	Ourimbah
SCH	SPORTS & AQUATICS CENTRE (THE FORUM)	Callaghan	CCD	COMMUNITY COLLEGE CLASSROOM 7-8	Ourimbah
SE	SE BUILDING	Callaghan	CN1	CLASSROOMS NORTH 1	Ourimbah
SER	SERVICES	Callaghan	CN2	CLASSROOMS NORTH 2	Ourimbah
SH	UNIVERSITY CLUB	Callaghan	CO	THE COTTAGE	Ourimbah
SP	SPORTS PAVILION	Callaghan	CORA	COVERED OUTDOOR RECREATION AREA	Ourimbah
SR	SOCIAL SCIENCE BUILDING	Callaghan	CPF	CENTRAL PLANT FACILITY	Ourimbah
STH	SCIENCE THEATRE	Callaghan	CS	CLASSROOM SOUTH AND DEMOUNTABLES	Ourimbah
SUB	SUB STATION MULTIPLE	Callaghan	ECS	EARLY CHILDHOOD STUDIES CENTRE	Ourimbah
SUB01	SUB STATION NO: 01	Callaghan	EH	STUDENT ACCOMMODATION	Ourimbah
SUB02	SUB STATION NO: 02	Callaghan	EN	EDUCATION AND NURSING	Ourimbah
SUB03	SUB STATION NO: 03	Callaghan	EXSA	EXERCISE & SPORTS SCIENCE BUILDING A	Ourimbah
SUB04	SUB STATION NO: 04	Callaghan	EXSB	EXERCISE & SPORTS SCIENCE BUILDING B	Ourimbah
SUB05	SUB STATION NO: 05	Callaghan	NHH	NURSERY HOT HOUSE	Ourimbah
SUB06	SUB STATION NO: 06	Callaghan	FA	FINE ART/ DRAMA STUDIO	Ourimbah
SUB07	SUB STATION NO: 07	Callaghan	FM	FACILITIES MANAGEMENT	Ourimbah
SUB08	SUB STATION NO: 08	Callaghan	GL	THE GLEN	Ourimbah
SUB09	SUB STATION NO: 09	Callaghan	HER	HERMITAGE	Ourimbah
SUB10	SUB STATION NO: 10	Callaghan	HI	HILLSIDE	Ourimbah
SUB11	SUB STATION NO: 11	Callaghan	HIGH	HIGHVIEW	Ourimbah
SUB12	SUB STATION NO: 12	Callaghan	HO	HUMANITIES OFFICE	Ourimbah



Building Code	Building Name	Campus
HW	HORTICULTURAL WORKSHOP	Ourimbah
IRC	INFORMATION RESOURCES CENTRE	Ourimbah
IT	IT STUDIES CENTRE	Ourimbah
LO	THE LODGE	Ourimbah
LT	LECTURE THEATRE 1 AND 2	Ourimbah
MA	THE MANOR	Ourimbah
MP	MULTI-PURPOSE	Ourimbah
NP	NURSERY POTTING SHED	Ourimbah
NS	NURSERY SHADE HOUSE	Ourimbah
NW	NURSERY WORKSHOP	Ourimbah
OP1	OURIMBAH CARPARK 1	Ourimbah
OP2	OURIMBAH CARPARK 2	Ourimbah
P2	PONDS 2	Ourimbah
P4	PONDS 4	Ourimbah
PI	PRIMARY INDUSTRY CENTRE	Ourimbah
PO	PONDS 1	Ourimbah
SA	STUDENT AMENITIES	Ourimbah
SL1	SCIENCE LABORATORIES 1	Ourimbah
SL2	SCIENCE LABORATORIES 2	Ourimbah
SO	SCIENCE OFFICE	Ourimbah
SS1	STORAGE SHED	Ourimbah
SUO	STUDENT UNION OFFICES	Ourimbah
TH	TOURISM AND HOSPITALITY	Ourimbah
TO	TECHNOLOGY OFFICE AND DEMOUNTABLES	Ourimbah
PM	PORT MAQUARIE	Port Macquarie
PMA	BUILDING A	Port Macquarie
PMB	BUILDING B	Port Macquarie
PMCA	BUILDING CA	Port Macquarie
PMD	BUILDING D	Port Macquarie
PMJ	BUILDING J	Port Macquarie
PMKK	BUILDING KK	Port Macquarie
ELI	55-65 ELIZABETH STREET	Sydney
RH	TAMWORTH UDRH (HOSPITAL)	Tamworth
TEC	TAMWORTH EDUCATION CENTRE	Tamworth
TSAA	TAMWORTH STUDENT ACCOMMODATION BLOCK A	Tamworth
TSAB	TAMWORTH STUDENT ACCOMMODATION BLOCK B	Tamworth
TSAC	TAMWORTH STUDENT ACCOMMODATION BLOCK C	Tamworth
TSAD	TAMWORTH STUDENT ACCOMMODATION BLOCK D	Tamworth
TSAE	TAMWORTH STUDENT ACCOMMODATION BLOCK E	Tamworth
TSAF	TAMWORTH STUDENT ACCOMMODATION BLOCK F	Tamworth
FSA	FLETT STREET ACCOMMADATION UNITS 9-12	Taree
FSB	FLETT STREET ACCOMMADATION UNITS 1-3	Taree
FSC	FLETT STREET ACCOMMADATION UNITS 4-8	Taree
MEC	MANNING EDUCATION CENTRE	Taree
NM	MATER HOSPITAL: NEW MED2	Waratah
MCC	MATER MCAULEY CENTRE	Waratah
WAE	WILLIAMTOWN AEROSPACE CENTRE	Williamstown
WYPC	WYONG HOSPITAL PODIATRY CLINIC	Wyong

Appendix B. Equipment Codes

Equipment type	Equipment
Air Con	AC
Battery Charger	BC
Electrical Cable	CAB
Control Station/Panel	CNT
Conduit	CON
Distribution Board	DB
Duct	DUCT
Elevator	ELR
Electrical Services General	ESG
Escalator	ESR
Fan	FAN
Generator	GEN
High Voltage Switch	HVS
High Voltage Switchboard	HVSB
Internal Elevation	IEL
Light and Power	LAP
Lighting	LGHT
Power Meter	MET
Main Switch Board	MSB
Miscellaneous	MIS
Power factor Correction Unit	PFC
Pump	PMP
Pole	POL
Power	PWR
Reflected Ceiling Plan	RCP
Schedule	SCD
Site Services	SER
Tray	TRAY
Trench	TRN
Transformer	TX
Uninterruptible Power Supply	UPS

Appendix C. Drawing/Document type

Document Type	Document Type Code
Block Diagram	BLK
3D Views	3D
Control Diagram	CON
Cover sheet Title page only	CSH
Cut/Fill	CUT
Detail Multiple Legends, SLD and other Details on one drawing	DET
Data Sheet	DS
Elevation	ELV
Equipment	EQP
Floor Plan	FLR
General Arrangement	GA
Index Sheet List of Drawings	IS
Isometric	ISO
Layout	LAY
Legend Symbols Legend DB Assignments DB Legend	LEG
Manual	MAN
Orthographic	OTH
Schematic	SCH
Section	SEC
Single line diagram	SLD
Topology	TOP
Wiring diagram	WIR