Alpha
Consulting Engineers Pte Ltd

FEEDBACK REPORT FORM

Ref No: 12B-080310(S)

To: LCT

From: LFY

Job No./Project: ELECTRICAL MASTER SPECS
Schedule 4 – Schedule of Rates
(where applicable)

Source of feedback:

Scope of Feedback: * ☐ Quality ☐ Environmental ☐ Administrative ☐ Contractual ☐ Technical ☑ Specification ☐ Others

Section A : Problem & Cause Unit rates for MI cables - MI cables are not in used anymore ; Unit rates for final sub-circuits (lighting & Small power) do not have incremental rates for 5m, and ($5m \leq x < 10m$) ; no rates for recessed LED luminaire and LED strip light, unit rates for CCTV cabling did not specify the different types of co-axial cables.

Section B : Mitigating Action Taken, if any

Section C : Suggested Corrective Action Unit rates for MI cable, deleted. Unit rates for final sub-circuits for 5m and for distance greater than 5m but less than 10m added. Unit rates for LED luminaires added. Unit rates on per metre run basis added for RG59, RG11 & RG6 added.

Section D : Approved Corrective Action

Document Affected * : ☑ Yes ☐ No Affected Document : E|SY-1 to E|SY-34

Approved By : Date : 3/3

Section E : Action

Action By : NA

Targeted Completion : March 2010

Actual Completion : 3/3/10 Verified By :

* *Mark [X] where appropriate*

Distribution:

ELECTRICAL INSTALLATION

SCHEDULE 4 - SCHEDULE OF RATES

Preamble

The prices in S$ as entered in the Schedule of Rates for the various works as detailed hereinafter will be used for any variation which may constitute adjustment (addition or subtraction) to the Sub-Contract Sum.

The rates quoted shall be for the 'Supply and Fixing' and shall cover all works to comply fully with the Sub-Contract (i.e. specifications, drawings, Conditions of Sub-Contract, etc.) and shall include all costs for incidental work, e.g. administration, project supervision, design, etc. and profits. The rates quoted shall be deemed to cover all associated items necessary for the completeness of the works inclusive of any wastage, etc.

(a) Prices for MCCBs, MCBs, RCCBs and Contactors shall include all connections, additional casing space, etc.

(b) Prices for cables shall include conduit, trunking or tray, where appropriate, cable boxes, glands, lugs, earth wire, jointings and connections, etc.

(c) Prices for lighting points shall include terminations, ceiling roses, etc.

(d) Prices for switches, switch socket outlets, TV and TV/FM outlets, telephone, data outlets and connection units shall include knock-out boxes, earth wires and fixing screws, etc.

(e) Prices for earth pits shall include securing the earth pits at the final level.

HV Switchgear

Code No.	Description	Unit Rate (S$)
E1000	1 no. 22kV receiving panel as specified excluding all external electrical connections only	
E1001	1 no. 22kV bus coupler as specified	
E1002	1 no. 22kV transformer panel as specified excluding all external electrical connections only	

Cast Resin Power Transformer

1 no. 22/0.433kV Type '**AN'** transformer as specified excluding all external electrical connections of the following capacity:		
Code No.	Description	Unit Rate (S$)
E1100	2000 kVA	
E1101	1600 kVA	

Cast Resin Power Transformer

1 no. 22/0.433kV Type '**ANAF'** transformer as specified excluding all external electrical connections of the following capacity:		
Code No.	Description	Unit Rate (S$)
E1120	2000 kVA	
E1121	1600 kVA	

Oil Immersed Power Transformer

1 no. 22/0.433kV Type '**KNAN**' transformer as specified excluding all external electrical connections of the following capacity:		
Code No.	Description	Unit Rate (S$)
E1130	2000 kVA	
E1131	1600 kVA	

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HV Cabling

Code No.	Description	Unit Rate (S$)
E1140	1 x 300 sq mm 3 core double steel wire armoured 22kV XLPE cable run on horizontal/vertical cable ladder and/or framing system as specified - **per metre run**	
E1141	1 x 300 sq mm 3 core single steel wire armoured 22kV XLPE cable run on horizontal/vertical cable ladder and/or framing system as specified - **per metre run**	
E1142	1 x 185 sq mm 3 core double steel wire armoured 22kV XLPE cable run on horizontal/vertical cable ladder and/or framing system as specified - **per metre run**	
E1143	1 x 185 sq mm 3 core single steel wire armoured 22kV XLPE cable run on horizontal/vertical cable ladder and/or framing system as specified - **per metre run**	

Busbar Trunking - Feeder

Feeder busbar trunking inclusive of supporting brackets, fixings, fire barriers, expansion joints, termination unit, earth conductor, connections, etc. of the following rating, **per metre run**:

Code No.	Description	Unit Rate (S$)
E1300	4000A 4 Pole	
E1301	3000A 4 Pole	
E1302	2500A 4 Pole	
E1303	2000A 4 Pole	
E1304	1600A 4 Pole	
E1305	1000A 4 Pole	

Busbar Trunking - Vertical

Vertical busbar trunking (rising mains) inclusive of supporting brackets, fixings, fire barriers, expansion joints, trust block, tap-off parts, feed-in unit, earth conductor connections, etc. of the following rating, **per metre run**:

Code No.	Description	Unit Rate (S$)
E1350	1600A 4 Pole	
E1351	1200A 4 Pole	
E1352	1000A 4 Pole	
E1353	700A 4 Pole	
E1354	600A 4 Pole	
E1355	400A 4 Pole	

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Busbar Trunking - Horizontal

Horizontal busbar trunking (sub-mains) inclusive of supporting brackets, fixings, fire barriers, expansion joints, tap-off parts, feed-in unit, earth conductor connections, etc. of the following rating, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E1400	500A TPN	
E1401	400A TPN	
E1402	300A TPN	
E1403	200A TPN	

Busbar Trunking - Tap-Offs

Plug-in tap-off units inclusive of HRC fuses, etc. of the following rating, per unit:		
Code No.	Description	Unit Rate (S$)
E1450	500A TPN	
E1451	400A TPN	
E1452	300A TPN	
E1453	200A TPN	
E1454	150A TPN	
E1455	100A TPN	
E1456	60A TPN	
E1457	40A TPN	
E1458	30A TPN	
E1459	20A TPN	
E1460	60A SPN	
E1461	30A SPN	

Air Circuit Breakers

Supply and installation of 1 no. ACB in low voltage switchboard inclusive of all connections, additional casing space, etc.		
Code No.	Description	Unit Rate (S$)
E1500	4000A 4P, 100 kA	
E1501	3000A 4P, 100 kA	
E1502	2500A 4P, 50 kA	
E1503	1600A 4P, 50 kA	

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Automatic Transfer Switches

1 no. 4-Pole automatic transfer switch as specified of the following rating, per unit:		
Code No.	Description	Unit Rate (S$)
E1550	1200A	
E1551	1000A	
E1552	800A	
E1553	700A	
E1554	600A	
E1555	500A	
E1556	400A	
E1557	300A	
E1558	250A	

Moulded Case Circuit Breakers (MCCBs)

Supply and installation of 1 no. outgoing or incoming MCCB in low-voltage switchboard as specified inclusive of all connections, additional casing space, etc.		
Code No.	Description	Unit Rate (S$)
E1600	1200A TP, 50 kA	
E1601	1000A TP, 50 kA	
E1602	800A TP, 50 kA	
E1603	630A TP, 50 kA	
E1604	400A TP, 50 kA	
E1605	400A TP, 36 kA	
E1606	250A TP, 36 kA	
E1607	200A TP, 36 kA	
E1608	160A TP, 36 kA	
E1609	100A TP, 36 kA	

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Miniature Circuit Breakers (MCBs)

Supply and installation of 1 no. outgoing or incoming MCB of Type 'B' or Type 'C' tripping characteristic in any distribution board as specified inclusive of all connections, additional casing space etc.		
Code No.	Description	Unit Rate (S$)
E1650	100A TP, 15 kA	
E1651	63A TP, 15 kA	
E1652	40A TP, 15 kA	
E1653	32A TP, 15 kA	
E1654	20A TP, 15kA	
E1655	10A TP, 15kA	
E1656	63A TP, 10 kA	
E1657	40A TP, 10 kA	
E1658	32A TP, 10 kA	
E1659	20A TP, 10 kA	
E1660	15A TP, 10 kA	
E1661	10A TP, 10 kA	
E1662	63A SP, 15 kA	
E1663	40A SP, 15 kA	
E1664	32A SP, 15 kA	
E1665	20A SP, 15 kA	
E1666	15A SP, 15 kA	
E1667	63A SP, 10 kA	
E1668	40A SP, 10 kA	
E1669	32A SP, 10 kA	
E1670	20A SP, 10 kA	
E1671	15A SP, 10 kA	
E1672	20A SP, 6 kA	
E1673	15A SP, 6 kA	
E1674	10A SP, 6 kA	

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Residual Current Circuit Breakers (RCCBs)

Supply and installation of 1 no. RCCB in any distribution board inclusive of all connections, additional casing space, etc. of the following rating & sensitivity:		
Code No.	Description	Unit Rate (S$)
E1700	100A 4 Pole (100mA)	
E1701	80A 4 Pole (100mA)	
E1702	63A 4 Pole (100mA)	
E1703	40A 4 Pole (100mA)	
E1704	100A 4 Pole (30mA)	
E1705	80A 4 Pole (30mA)	
E1706	63A 4 Pole (30mA)	
E1707	40A 4 Pole (30mA)	
E1708	100A 2 Pole (30mA)	
E1709	80A 2 Pole (30mA)	
E1710	63A 2 Pole (30mA)	
E1711	40A 2 Pole (30mA)	

Contactors

Supply and installation of 1 no. 25 A contactor to the outgoing circuits of any distribution board inclusive of auxiliary contacts, fuse, connection, internal wiring, etc. with the following no. of poles:		
Code No.	Description	Unit Rate (S$)
E1750	1 Pole	
E1751	2 Pole	
E1752	3 Pole	
E1753	4 Pole	

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LV Cabling - XLPE/PVC Cables

Supply and installation of 450/750 volt grade **XLPE/PVC** cables inclusive of cable ties, glands, lugs jointings and terminations, etc. but excluding cable tray/ladder etc. of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2000	1 x 1000 mm^2/1C	
E2001	1 x 630 mm^2/1C	
E2002	1 x 500 mm^2/1C	
E2003	1 x 400 mm^2/1C	
E2004	1 x 300 mm^2/1C	
E2005	1 x 240 mm^2/1C	
E2006	1 x 185 mm^2/1C	
E2007	1 x 150 mm^2/1C	
E2008	1 x 120 mm^2/1C	
E2009	1 x 95 mm^2/1C	
E2010	1 x 70 mm^2/1C	
E2011	1 x 50 mm^2/1C	

LV Cabling - FR Cables

Supply and installation of 450/750 volt grade **FR** cables inclusive of cable ties, glands, lugs, jointings and terminations, etc. but excluding cable tray/ladder of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2050	1 x 630 mm^2/1C	
E2051	1 x 500 mm^2/1C	
E2052	1 x 400 mm^2/1C	
E2053	1 x 300 mm^2/1C	
E2054	1 x 240 mm^2/1C	
E2055	1 x 185 mm^2/1C	
E2056	1 x 150 mm^2/1C	
E2057	1 x 120 mm^2/1C	
E2058	1 x 95 mm^2/1C	
E2059	1 x 70 mm^2/1C	
E2060	1 x 50 mm^2/1C	

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LV Cabling - PVC/PVC Cables

Supply and installation of 450/750 volt grade **PVC/PVC** cables inclusive of cable ties, glands, lugs, jointings and terminations, etc. but excluding cable tray/ladder of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2100	1 x 185 mm^2/1C	
E2101	1 x 150 mm^2/1C	
E2102	1 x 120 mm^2/1C	
E2103	1 x 95 mm^2/1C	
E2104	1 x 70 mm^2/1C	
E2105	1 x 50 mm^2/1C	

LV Cabling - PVC Cables

Supply and installation of 450/750 volt grade **PVC** cables inclusive of cable ties, glands, lugs, jointings and terminations, etc. but excluding cable tray/ladder of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2150	1 x 185 mm^2/1C	
E2151	1 x 150 mm^2/1C	
E2152	1 x 120 mm^2/1C	
E2153	1 x 95 mm^2/1C	
E2154	1 x 70 mm^2/1C	

LV Cabling - FR Cables

Supply and installation of 450/750 volt grade **FR** cables in GI conduit run concealed in floor slabs, columns, beams or walls inclusive of conduit fittings, earth wire termination, etc. of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2200	1 x 25 mm^2/1C	
E2201	1 x 16 mm^2/1C	
E2202	1 x 10 mm^2/1C	
E2203	1 x 6 mm^2/1C	
E2204	1 x 4 mm^2/1C	
E2205	1 x 2.5 mm^2/1C	

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LV Cabling - PVC Cables (surface)

450/750 volt grade **PVC** cables in GI conduit/trunking run on **surface** inclusive of conduit/trunking, accessories, earth wire, terminations, etc. of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2250	1 x 35 mm^2/1C	
E2251	1 x 25 mm^2/1C	
E2252	1 x 16 mm^2/1C	
E2253	1 x 10 mm^2/1C	
E2254	1 x 6 mm^2/1C	
E2255	1 x 4 mm^2/1C	
E2256	1 x 2.5 mm^2/1C	
E2257	1 x 25 mm^2/4C	
E2258	1 x 16 mm^2/4C	
E2259	1 x 10 mm^2/4C	
E2260	1 x 6 mm^2/4C	
E2261	1 x 4 mm^2/4C	
E2262	1 x 2.5 mm^2/4C	
E2263	1 x 25 mm^2/2C	
E2264	1 x 16 mm^2/2C	
E2265	1 x 10 mm^2/2C	
E2266	1 x 6 mm^2/2C	
E2267	1 x 4 mm^2/2C	

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LV Cabling - PVC Cables (concealed)

450/750 volt grade **PVC** cables in UPVC conduit run **concealed** in floor slabs, columns, beams or walls inclusive of conduit fittings, earth wire termination, etc. of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2270	1 x 25 mm^2/1C	
E2271	1 x 16 mm^2/1C	
E2272	1 x 10 mm^2/1C	
E2273	1 x 6 mm^2/1C	
E2274	1 x 4 mm^2/1C	
E2275	1 x 2.5 mm^2/1C	
E2276	1 x 6 mm^2/4C	
E2277	1 x 4 mm^2/4C	
E2278	1 x 2.5 mm^2/4C	
E2279	1 x 6 mm^2/2C	
E2280	1 x 4 mm^2/2C	
E2281	1 x 2.5 mm^2/2C	

LV Cabling - PVC/SWA/PVC

Supply and installation of 450/750 volt grade **PVC/SWA/PVC** cables laid underground inclusive of cable lugs, cable cover, markers, terminations, joints, accessories & backfilling as specified of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2300	1 x 16 mm^2/4C	
E2301	1 x 10 mm^2/4C	
E2302	1 x 4 mm^2/4C	
E2303	1 x 2.5 mm^2/4C	
E2304	1 x 16 mm^2/2C	
E2305	1 x 10 mm^2/2C	
E2306	1 x 4 mm^2/2C	
E2307	1 x 2.5 mm^2/2C	

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Cable Ladders

Supply and installation of horizontal cable ladder inclusive of rawl bolts, threaded rods, steel channels, fixing bolts and threaded nuts, earthing links, fixing etc. **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2350	1000 mm	
E2351	800 mm	
E2352	600 mm	

Supply and installation of vertical cable ladder inclusive of rawl bolts, threaded rods, steel channels, fixing bolts and threaded nuts, earthing links, fixing etc. **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2400	1000 mm	
E2401	800 mm	
E2402	600 mm	

Cable Trays

Supply and installation of horizontal cable tray inclusive of rawl bolts, threaded rods, steel channels, fixing bolts and threaded nuts, earthing links, fixing etc. **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2450	1000 mm	
E2451	800 mm	
E2452	600 mm	
E2453	400 mm	
E2454	300 mm	
E2455	200 mm	
E2456	150 mm	
E2457	100 mm	

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Supply and installation of vertical cable tray inclusive of rawl bolts, threaded rods, steel channels, fixing bolts and threaded nuts, earthing links, fixing etc. **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2550	1000 mm	
E2551	800 mm	
E2552	600 mm	
E2553	400 mm	
E2554	300 mm	
E2555	200 mm	
E2556	150 mm	
E2557	100 mm	

UPVC Pipes

Heavy duty **UPVC** pipe buried underground including excavation, concrete encasement, reinstatement, etc. as specified of the following size, **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2600	1 no. 150 mm diameter	
E2601	1 no. 110 mm diameter	

LV Cabling - Final Circuits (Lighting)

New circuit wiring to 1 no. ceiling/wall **lighting point** using the following type & size of cables in **surface/concealed G.I.** conduit/trunking inclusive of earth wire, conduit/trunking & fittings, terminations, ceiling rose etc., (excluding switch):		
Code No.	Description	Unit Rate (S$)
E2650	2 x 1.5 mm^2/1C PVC	
E2651	2 x 2.5 mm^2/1C PVC	
E2652	2 x 2.5 mm^2/1C FR	
E2653	2 x 2.5 mm^2/1C FR together with a 1 x 1.5mm^2/1C PVC unswitch cable for maintained emergency light (excluding emergency light)	

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Extension of 1 no. ceiling/wall **lighting point** from the last lighting point of an existing circuit using the following type & size of cables in **surface/concealed G.I.** conduit/trunking inclusive of earth wire, conduit/trunking & fittings, terminations, ceiling rose etc., (excluding switch):		
Code No.	Description	Unit Rate (S$)
E2700	2 x 1.5 mm^2/1C PVC (up to 5m)	
E2701	2 x 1.5 mm^2/1C PVC (to a distance exceeding 5m but less than 10m)	
E2702	2 x 2.5 mm^2/1C PVC (up to 5m)	
E2703	2 x 2.5 mm^2/1C PVC (to a distance exceeding 5m but less than 10m)	
E2704	2 x 1.5 mm^2/1C FR (up to 5m)	
E2705	2 x 1.5 mm^2/1C FR (to a distance exceeding 5m but less than 10m)	
E2706	2 x 2.5 mm^2/1C FR with a 1.5 mm^2 IC PVC unswitch cable for maintained emergency light (up to 5m)	
E2707	2 x 2.5 mm^2/1C FR with a 1.5 mm^2 IC PVC unswitch cable for maintained emergency light (to a distance exceeding 5m but less than 10m)	

New Circuit wiring to 1 no. ceiling/wall **lighting point** using the following type & size of cables in **concealed UPVC** conduit inclusive of earth wire, conduit/trunking & fittings, terminations, ceiling rose etc., (excluding switch):		
Code No.	Description	Unit Rate (S$)
E2750	2 x 1.5 mm^2/1C PVC (up to 5m)	
E2751	2 x 1.5 mm^2/1C PVC (to a distance exceeding 5m but less than 10m)	
E2752	2 x 2.5 mm^2/1C PVC (up to 5m)	
E2753	2 x 2.5 mm^2/1C PVC (to a distance exceeding 5m but less than 10m)	
E2754	2 x 1.5 mm^2/1C FR (up to 5m)	
E2755	2 x 1.5 mm^2/1C FR (to a distance exceeding 5m but less than 10m)	
E2756	2 x 2.5 mm^2/1C FR with a 1.5 mm^2 IC PVC unswitch cable for maintained emergency light (up to 5m)	
E2757	2 x 2.5 mm^2/1C FR with a 1.5 mm^2 IC PVC unswitch cable for maintained emergency light (to a distance exceeding 5m but less than 10m)	

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Extension of 1 no. ceiling/wall **lighting point** from existing circuit using the following type & size of cables in **concealed UPVC** conduit inclusive of earth wire, conduit/trunking & fittings, terminations, ceiling rose etc., (excluding switch):		
Code No.	Description	Unit Rate (S$)
E2800	2 x 1.5 mm^2/1C PVC (up to 5m)	
E2801	2 x 1.5 mm^2/1C PVC (to a distance exceeding 5m but less than 10m)	
E2802	2 x 2.5 mm^2/1C PVC (up to 5m)	
E2803	2 x 2.5 mm^2/1C PVC (to a distance exceeding 5m but less than 10m)	
E2804	2 x 1.5 mm^2/1C FR (up to 5m)	
E2805	2 x 1.5 mm^2/1C FR (to a distance exceeding 5m but less than 10m)	
E2806	2 x 2.5 mm^2/1C FR with a 1.5 mm^2 IC PVC unswitch cable for maintained emergency light (up to 5m)	
E2807	2 x 2.5 mm^2/1C FR with a 1.5 mm^2 IC PVC unswitch cable for maintained emergency light (to a distance exceeding 5m but less than 10m)	

New circuit wiring from a cable transition/junction box to **1 no. outdoor** lighting point using PVC/SWA/PVC cables of the following size run underground including excavation, cable cover, markers, reinstatement, terminations, etc. as specified (excluding transition/junction box):		
Code No.	Description	Unit Rate (S$)
E2850	1 x 2.5 mm^2/2C	
E2851	1 x 4 mm^2/2C	

Extension of **1 no. outdoor** lighting point from existing circuit using PVC/SWA/PVC cables of the following size run underground including excavation, cable cover, markers, reinstatement, terminations, etc. as specified (excluding transition/junction box) **per metre run**:		
Code No.	Description	Unit Rate (S$)
E2900	1 x 2.5 mm^2/2C	
E2901	1 x 4 mm^2/2C	

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LV Cabling - Final Circuits (Power)

New circuit wiring to 1 no. **wall/column mounted power point** (ring or radial circuit) for the following type/rating of switch socket outlets (SSO) & type/size of cables in **surface/concealed G.I.** conduit/trunking inclusive of earth wire, conduit/trunking & fittings, terminations, etc. (excluding switch socket outlet):

Code No.	Description	Unit Rate (S$)
E2910	13A single SSO using 2 x 2.5 mm^2/1C PVC cable	
E2911	13A twin SSO using 2 x 2.5 mm^2/1C PVC cable	
E2912	13A single SSO using 2 x 2.5 mm^2/1C FR cable	
E2913	13A twin SSO using 2 x 2.5 mm^2/1C FR cable	
E2914	15A SSO using 2 x 2.5 mm^2/1C PVC cable	
E2915	15A SSO using 2 x 2.5 mm^2/1C FR cable	

Extension of 1 no. **wall/column mounted power point** from existing circuit (ring or radial circuit) for the following type/ rating of switch socket outlets (SSO) & type/size of cables in **surface/ concealed G.I.** conduit/trunking inclusive of earth wire, conduit/trunking & fittings, terminations, etc. (excluding switch socket outlet):

Code No.	Description	Unit Rate (S$)
E2920	13A single SSO using 2 x 2.5 mm^2/1C PVC cable (up to 5m)	
E2921	13A single SSO using 2 x 2.5 mm^2/1C PVC cable (greater than 5m but less than 10m)	
E2922	13A twin SSO using 2 x 2.5 mm^2/1C PVC cable (up to 5m)	
E2923	13A twin SSO using 2 x 2.5 mm^2/1C PVC cable (greater than 5m but less than 10m)	
E2924	13A single SSO using 2 x 2.5 mm^2/1C FR cable (up to 5m)	
E2925	13A single SSO using 2 x 2.5 mm^2/1C FR cable (greater than 5m but less than 10m)	
E2926	13A twin SSO using 2 x 2.5 mm^2/1C FR cable (up to 5m)	
E2927	13A twin SSO using 2 x 2.5 mm^2/1C FR cable (greater than 5m but less than 10m)	
E2928	15A SSO using 2 x 2.5 mm^2/1C PVC cable (up to 5m)	
E2929	15A SSO using 2 x 2.5 mm^2/1C PVC cable (greater than 5m but less than 10m)	
E2930	15A SSO using 2 x 2.5 mm^2/1C FR cable (up to 5m)	
E2931	15A SSO using 2 x 2.5 mm^2/1C FR cable (greater than 5m but less than 10m)	

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Wiring to 1 no. **wall/column mounted power point** (ring or radial circuit) for the following type/rating of switch socket outlets (SSO) & type/size of cables in **concealed UPVC** conduit inclusive of earth wire, conduit/trunking & fittings, terminations, etc. (excluding switch socket outlet):

Code No.	Description	Unit Rate (S$)
E2932	13A single SSO using 2 x 2.5 mm^2/1C PVC cable	
E2933	13A twin SSO using 2 x 2.5 mm^2/1C PVC cable	
E2934	13A single SSO using 2 x 2.5 mm^2/1C FR cable	
E2935	13A twin SSO using 2 x 2.5 mm^2/1C FR cable	
E2936	15A SSO using 2 x 2.5 mm^2/1C PVC cable	
E2937	15A SSO using 2 x 2.5 mm^2/1C FR cable	

Extension of 1 no. **wall/column mounted power point** from existing circuit (ring or radial circuit) for the following type/rating of switch socket outlets (SSO) & type/size of cables in **concealed UPVC** conduit inclusive of earth wire, conduit/trunking & fittings, terminations, etc. (excluding switch socket outlet):

Code No.	Description	Unit Rate (S$)
E2940	13A single SSO using 2 x 2.5 mm^2/1C PVC cable (up to 5m)	
E2941	13A single SSO using 2 x 2.5 mm^2/1C PVC cable (greater than 5m but less than 10m)	
E2942	13A twin SSO using 2 x 2.5 mm^2/1C PVC cable (up to 5m)	
E2943	13A twin SSO using 2 x 2.5 mm^2/1C PVC cable (greater than 5m but less than 10m)	
E2944	13A single SSO using 2 x 2.5 mm^2/1C FR cable (up to 5m)	
E2945	13A single SSO using 2 x 2.5 mm^2/1C FR cable (greater than 5m but less than 10m)	
E2946	13A twin SSO using 2 x 2.5 mm^2/1C FR cable (up to 5m)	
E2947	13A twin SSO using 2 x 2.5 mm^2/1C FR cable (greater than 5m but less than 10m)	
E2948	15A SSO using 2 x 2.5 mm^2/1C PVC cable (up to 5m)	
E2949	15A SSO using 2 x 2.5 mm^2/1C PVC cable (greater than 5m but less than 10m)	
E2950	15A SSO using 2 x 2.5 mm^2/1C FR cable (up to 5m)	
E2951	15A SSO using 2 x 2.5 mm^2/1C FR cable (greater than 5m but less than 10m)	

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New circuit wiring to 1 no. floor **pedestal mounted power point** (ring or radial circuit) for the following type/rating of switch socket outlets (SSO) using 2 x 2.5mm^2/1C PVC cables via the flushfloor or underfloor trunking system inclusive of earth wire, fixings, terminations, etc. (excluding flushfloor or underfloor trunking, pedestal and switch socket outlet):		
Code No.	Description	Unit Rate (S$)
E2955	13A single SSO	
E2956	13A twin SSO	
E2957	15A single SSO	

Extension of 1 no. floor **pedestal mounted power point** from existing circuit (ring or radial circuit) for the following type/rating of switch socket outlets (SSO) using 2 x 2.5mm^2/1C PVC cables via the flushfloor or underfloor trunking system inclusive of earth wire, fixings, terminations, etc. (excluding flushfloor or underfloor trunking, pedestal and switch socket outlet):		
Code No.	Description	Unit Rate (S$)
E2960	13A single SSO	
E2961	13A twin SSO	
E2962	15A single SSO	

LV Cabling - Final Circuits (Miscellaneous)

Code No.	Description	Unit Rate (S$)
E2970	Wiring to 1 no. DC door chime including bell push wiring using 2 x 1.5 mm^2/1C PVC cables in concealed G.I. conduit, inclusive of earth wire, conduit fittings, terminations, etc. (excluding chime & bell push)	
E2971	Wiring to 1 no. wall mounted 20A water heater switch and 20A unfused connection unit using 2 x 2.5 mm^2/1C PVC cables in concealed G.I. conduit inclusive of earth wire, terminations, etc. (excluding water heater switch connection unit)	
E2972	Wiring to 1 no. wall mounted 20A cooker control switch and 20A unfused connection unit using 2 x 2.5 mm^2/1C PVC cables in concealed G.I. conduit inclusive of earth wire, terminations, etc. (excluding cooker control switch & connection unit)	
E2973	Wiring to 1 no. wall mounted 32A cooker control switch and 32A unfused connection unit using 2 x 4 mm^2/1C PVC cables in concealed G.I. conduit inclusive of earth wire, terminations, etc. (excluding cooker control switch & connection unit)	
E2974	Wiring to 1 no. DC door chime including bell push wiring using 2 x 1.5 mm^2/1C PVC cables in concealed UPVC conduit, inclusive of earth wire, conduit fittings, terminations, etc. (excluding chime & bell push)	

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Code No.	Description	Unit Rate (S$)
E2975	Wiring to 1 no. wall mounted 20A water heater switch and 20A unfused connection unit using 2 x 2.5 mm^2/1C PVC cables in concealed UPVC conduit inclusive of earth wire, terminations, etc. (excluding water heater switch & connection unit)	
E2976	Wiring to 1 no. wall mounted 20A cooker control switch and 20A unfused connection unit using 2 x 2.5 mm^2/1C PVC cables in concealed UPVC conduit inclusive of earth wire, terminations, etc. (excluding cooker control switch & connection unit)	
E2977	Wiring to 1 no. wall mounted 32A cooker control switch and 32A unfused connection unit using 2 x 4 mm^2/1C PVC cables in concealed UPVC conduit inclusive of earth wire, terminations, etc. (excluding cooker control switch & connection unit)	
E2978	Wiring to 1 no. 13A fused connection unit using 2 x 2.5 mm2/1C PVC cable in concealed uPVC conduit inclusive of earth wire, conduit/trunking & fittings, terminations, etc. (excluding switch & fused connection unit)	

Distribution Boards

Distribution Boards as specified inclusive of incoming TPN, DP or SPN, MCB & RCCB, busbar, outgoing TP, DP or SP MCCBs/MCBs, contactors, connections, labels, etc. per unit:		
Code No.	Description	Unit Rate (S$)
E3001		
E3002		
E3003		
E3004		
E3005		
E3006		
E3007		
E3008		
E3009		
E3010		
E3011		
E3012		
E3013		
E3014		

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Metering Panels/Boards

Metering Panels/Boards as specified inclusive of incoming TPN, DP or SPN MCCB, busbars, outgoing MCCBs/MCBs, HRC fuse cut-out unit, connections, labels, etc. per unit:		
Code No.	Description	Unit Rate (S$)
E3101		
E3102		
E3103		
E3104		
E3105		

Cable Termination Boxes

Code No.	Description	Unit Rate (S$)
E3201	1 no. cable termination box as specified including 4 nos. HRC fuses and 3 nos. four way branching connectors.	

Wiring accessories, isolating switches etc.

1 no. flush mounted grid switch of white bakelite finish inclusive of accessories, etc.:		
Code No.	Description	Unit Rate (S$)
E3601	10A, 1 gang, 1 way	
E3602	10A, 2 gang, 1 way	
E3603	10A, 3 gang, 1 way	
E3604	10A, 4 gang, 1 way	
E3605	10A, 5 gang, 1 way	
E3606	20A, 1 gang, 1 way	
E3607	20A, 2 gang, 1 way	
E3608	20A, double pole, 1 way	

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1 no. surface mounted **metal-clad** switch inclusive of accessories, etc.:		
Code No.	Description	Unit Rate (S$)
E3621	10A, 1 gang, 1 way	
E3622	10A, 2 gang, 1 way	
E3623	10A, 3 gang, 1 way	
E3624	10A, 4 gang, 1 way	
E3625	10A, 5 gang, 1 way	
E3626	10A, 6 gang, 1 way	
E3627	20A, 1 gang, 1 way	
E3628	20A, 2 gang, 1 way	
E3629	20A, double pole, 1 way	

1 no. IP 56 polycarbonate switch inclusive of accessories, etc.:		
Code No.	Description	Unit Rate (S$)
E3631	10A, 1 gang, 1 way	
E3632	20A, 1 gang, 1 way	

1 no. flush mounted single phase switch socket outlet of white bakelite finish inclusive of accessories, etc.:		
Code No.	Description	Unit Rate (S$)
E3651	Single 13A	
E3652	Twin 13A	
E3653	Single 15A	
E3661	1 no. flush mounted 13A fused connection unit of white bakelite finish c/w fuse, accessories, etc.	
E3662	1 no. surface mounted metalclad 13A fused connection unit c/w fuse, accessories, etc.	

1 no. surface mounted **metal-clad** single phase switch socket outlet inclusive of accessories, etc.:		
Code No.	Description	Unit Rate (S$)
E3671	Single 13A	
E3672	Twin 13A	
E3673	Single 15A	

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1 no. weatherproof (IP 56) surface mounted polycarbonate single phase switch socket outlet inclusive of accessories, plug top, etc. for installation on wall/column/partition:		
Code No.	Description	Unit Rate (S$)
E3681	Single 13A	
E3682	Twin 13A	
E3683	Single 15A	

1 no. polycarbonate isolating switch inclusive of accessories, etc of the following current rating:		
Code No.	Description	Unit Rate (S$)
E3691	100A TPN	
E3692	60A TPN	
E3693	30A TPN	
E3694	20A TPN	
E3695	15A TPN	
E3696	30A SPN	
E3697	20A SPN	
E3698	15A SPN	

Code No.	Description	Unit Rate (S$)
E3700	1 no. 32A cooker unit as specified	
E3710	1 no. 32A cooker connector unit as specified	
E3720	1 no. 20A DP switch as specified and engraved with the wordings, "WATER HEATER", "HOOD", "HOB" or "OVEN" as required	
E3730	1 no. 20A connector unit as specified	
E3740	1 no. DC door chime as specified c/w fixing etc. excluding external wiring	
E3750	1 no. door bell push switch as specified excluding all external wiring	
E3751	1 no IP 55 clear plastic hinged cover for 13A switch socket outlet	

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Ceiling Fans

Code No.	Description	Unit Rate (S$)
E3771	1 no. ceiling fan as specified inclusive of suspension rod, fixings, terminations, etc. (excluding wiring)	
E3772	1 no. fan speed regulator (excluding wiring)	
E3773	Wiring to 1 no. ceiling fan and regulator using 2 x 2.5 mm^2/1C PVC cables in surface/concealed G.I. conduit trunking inclusive of earth wire, conduit/trunking & fittings, terminations, etc.	
E3774	1 no. oscillating fan as specified inclusive of fixings, terminations, etc. (excluding wiring)	
E3775	Wiring to 1 no. oscillating fan using 2 x 2.5 mm^2/1C PVC cables in surface/concealed G.I. conduit trunking inclusive of earth wire, conduit/trunking & fittings, terminations, etc.	

Dimming System

Code No.	Description	Unit Rate (S$)
E3781	Supply and install 1 no. 1 kW dimmer unit as specified	
E3782	Supply and install 1 no. 2 kW dimmer unit as specified	
E3783	Wiring from dimmer unit to dimmer control panel, **per metre run**	
E3784	Supply and install 1 no. low voltage electromagnetic transformer as specified, 230V/12V, 60W	
E3785	Supply and install 1 no. low voltage electronic transformer, as specified, 230V/12V, 60W	

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Underfloor Ducting Installation

Underfloor duct as specified inclusive of connections, terminations, cuttings, solvent welding, plugging, fixings, clips, draw wires, accessories, etc. (excluding wiring within ducts)		
Code No.	Description	Unit Rate (S$)
E3801	1 way duct **per metre run**	
E3802	2 way duct **per metre run**	
E3803	3 way duct **per metre run**	
E3804	1 no. 3 x 3 or 3 x 2 way junction box complete with cover etc.	
E3805	1 no. 2 x 2 way junction box complete with cover etc.	
E3806	1 no. 1 x 1 way junction box complete with cover etc.	
E3807	1 no. 3 way flush vertical access box complete with cover etc.	
E3808	1 no. 3 way surface vertical access box complete with cover etc.	
E3809	1 no. 2 way flush vertical access box complete with cover etc.	
E3810	1 no. 2 way surface vertical access box complete with cover etc.	
E3811	1 no. 20 mm or 25 mm PVC conduit connected to ducts/junction boxes to pedestals including hacking and making good of floor screed, fixings, etc. (excluding pedestals, junction boxes, & ducts)	

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Luminaires

Supply and installation of 1 no. luminaire complete with all mounting bracket, suspension sets, flexible heat resistant cable, etc.:		
Code No.	Description	Unit Rate (S$)
E4001	Type 'A1'	
E4002	Type 'B1'	
E4003	Type 'B2'	
E4004	Type 'E1'	
E4005	Type 'E2'	
E4006	Type 'E3'	
E4007	Type 'E4'	
E4008	Type 'E5'	
E4009	Type 'E6'	
E4010	Type 'E7'	
E4011	Type 'F1'	
E4012	Type 'F1A'	
E4013	Type 'F2'	
E4014	Type 'F2A'	
E4015	Type 'F3'	
E4016	Type 'F3A'	
E4017	Type 'F4'	
E4018	Type 'F4A'	
E4019	Type 'F5'	
E4020	Type 'F6'	
E4021	Type 'F7'	
E4022	Type 'F8'	
E4023	Type 'F8A'	
E4024	Type 'F9'	
E4025	Type 'F9A'	
E4026	Type 'F10'	
E4027	Type 'F10A'	
E4028	Type 'F11'	
E4029	Type 'F11A'	

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Luminaires (cont'd)

Supply and installation of 1 no. luminaire complete with all mounting bracket, suspension sets, flexible heat resistant cable, etc.:		
Code No.	Description	Unit Rate (S$)
E4030	Type 'F12'	
E4031	Type 'F12A'	
E4032	Type 'F13'	
E4033	Type 'F14'	
E4034	Type 'F14A'	

Installation of Luminaires

Installation of luminaires covered under Provisional Sums, including taking delivery on site, checking on the consignments for defective items including arrangement for replacements by suppliers, storage at site, fixing of lamps, installation and site testing, replacements of lamps/tubes and defective parts/fittings during the Maintenance Period, provision of fixing accessories, mounting brackets, supports, r.c. stumps/bases, heat resistant flexible cords, etc:		
Code No.	Description	Unit Rate (S$)
E4101	Recessed downlight luminaire	
E4202	Recessed fluorescent luminaire	
E4103	Surface/wall mounted luminaire	
E4104	Free standing bollards	
E4105	Pole mounted luminaire	
E4106	Cold cathode lamps (including transformers, etc.) **per metre run**	
E4107	Floodlight luminaire	
E4108	Planter spike mounted luminaire	
E4109	Recessed LED luminaire	
E4110	LED stripe light, **per metre run**	

Landscape Lighting

Code No.	Description	Unit Rate (S$)
E4151	1 no. outdoor junction box (IP65) complete with connectors for connection to outdoor lighting fitting	
E4152	1 no. O/G box c/w concrete plinth, etc. as specified (excluding distribution board)	

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Telephone Installation - Conduits

Surface/concealed G.I. conduits in false ceiling/floor slab/wall/column for telephone or other services cables inclusive of bending and cutting where necessary, terminations, fixings, pull/junction box, coupling, outlet box, draw wire etc. (excluding telephone outlet plates & telephone cables), **per metre run**:

Code No.	Description	Unit Rate (S$)
E4281	50mm dia.	
E4282	32mm dia.	
E4283	25mm dia.	
E4284	20mm dia.	

Concealed UPVC conduits in ceiling/floor slab/wall/column for telephone or other services cables inclusive of bending and cutting where necessary, terminations, fixings, pull/junction box, coupling, outlet box, draw wire etc. (excluding telephone outlet plates & telephone cables), **per metre run**:

Code No.	Description	Unit Rate (S$)
E4291	50mm dia.	
E4292	32mm dia.	
E4293	25mm dia.	
E4294	20mm dia.	

Telephone Installation - Distribution Cases

Distribution case/frame including "quick connection" type terminals, fixing, terminations, etc. (excluding external wiring) for:

Code No.	Description	Unit Rate (S$)
E4301	100 pairs cable	
E4302	50 pairs cable	
E4303	30 pairs cable	
E4304	20 pairs cable	
E4305	10 pairs cable	

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Telephone Installation - Manholes

1 no. telephone manhole including excavation, etc. as specified		
Code No.	Description	Unit Rate (S$)
E4321	Type MC1	
E4322	Type MC2	
E4323	Type MC3	
E4324	Type MC4	

Telephone Installation – Cables (Cat 3)

Cat 3 cables run on trays or conduits inclusive of terminations, etc. (excluding trays & conduits), **per metre run:**		
Code No.	Description	Unit Rate (S$)
E4331	320 pairs	
E4332	200 pairs	
E4333	160 pairs	
E4334	80 pairs	
E4335	60 pairs	
E4336	40 pairs	
E4337	20 pairs	
E4338	10 pairs	

Telephone Installation – Cables

UTP cables run on trays or conduits inclusive of terminations, etc. (excluding trays & conduits), **per metre run**:		
Code No.	Description	Unit Rate (S$)
E4341	4 pairs Cat 5e	
E4342	4 pairs Cat 6	

Telephone/Data Installation – Telephone/Data Accessories

Code No.	Description	Unit Rate (S$)
E4351	1 no. telephone outlet plate (RJ11) including knockout box, etc.	
E4352	1 no. data outlet plate (RJ45) including knockout box, etc.	
E4353	1 no. block terminal	

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Earthing Installation

Code No.	Description	Unit Rate (S$)
E4401	50 mm x 6 mm main copper earth bar c/w insulators, connection studs, etc. as specified **per metre run**	
E4402	25 mm x 3 mm copper tape inclusive of jointing, connections, accessories, etc. **per metre run**	
E4403	150 mm^2/1C yellow/green PVC insulated copper conductor cable inclusive of jointing, fixing, connections, etc. **per metre run**	
E4404	95 mm^2/1C yellow/green PVC insulated copper conductor cable inclusive of jointing, fixing, connections, etc. **per metre run**	
E4405	15 mm diameter extensible steel cored copper electrode inclusive of coupling, etc. – 1.5 metre length	
E4406	1 no. earth pit (excluding earth rods)	
E4407	1 no. concrete earth pit (excluding earth rods)	
E4408	1 no. earth pit of the double seal electrode type (excluding earth rods)	

Lightning Protection Installation

Roof conductor inclusive of insulators, jointings connections, accessories, etc. **per metre run**		
Code No.	Description	Unit Rate (S$)
E4501	25mm x 3mm copper tape	
E4502	25mm x 3mm aluminium tape	

Down conductor inclusive of jointings, fixings, connections, accessories, etc. **per metre run**		
Code No.	Description	Unit Rate (S$)
E4503	25mm x 3mm copper tape	
E4504	25mm x 3mm aluminium tape	

Code No.	Description	Unit Rate (S$)
E4505	1 no. earthing pit as specified (excluding earth rods)	
E4506	1 no. earthing pit of the double seal electrode type (excluding earth rods)	

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Voice Communication System - Sound System

Code No.	Description	Unit Rate (S$)
E4601	1 no. 400 watt (r.m.s.) power amplifier excluding rack and external connections	
E4602	1 no. 240 watt (r.m.s.) power amplifier excluding rack and external connections	
E4603	1 no. 120 watt (r.m.s.) power amplifier excluding rack and external connections	
E4604	1 no. pre-amplifier excluding rack and external connections	
E4605	1 no. CD player excluding rack and external connections	
E4606	1 no. FM/AM radio tuner excluding rack and external connections	
E4607	1 no. recessed ceiling loudspeaker inclusive of matching transformer, enclosure, grille/baffle, mounting brackets, flexible heat resistant cable, etc. as specified	
E4608	1 no. surface/wall mounted loudspeaker inclusive of matching transformer, enclosure, grille/baffle, mounting brackets, flexible heat resistant cable, etc. as specified	
E4609	1 no. horn loudspeaker inclusive of matching transformer, mounting bracket, flexible heat resistant cable, etc. as specified	
E4610	Wiring to 1 no. loudspeaker point (ie. any recessed/surface/wall mounted loudspeaker or horn loudspeaker) using the cables as specified inclusive of conduit/trunking and fittings, accessories, terminations, etc. (excluding loudspeaker) **per metre run**	
E4611	1 no. line receptacle unit as specified	

Voice Communication System - Firemen Intercom System

Code No.	Description	Unit Rate (S$)
E4651	1 no. telephone set (slave unit) of the Firemen Intercom System with recessed or surface mounted enclosure as specified excluding all external connections	
E4652	Wiring to 1 no. slave unit point for the Firemen Intercom System using the cables as specified inclusive of conduit/trunking and fittings, accessories, terminations etc. (excluding slave unit) **per metre run**	

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MATV System

Code No.	Description	Unit Rate (S$)
E4801	1 no. TV/FM coaxial socket outlet as specified excluding all external connections	
E4802	1 no. 4 way tap-off unit as specified excluding all external connections	
E4803	1 no. 4 way splitter unit as specified excluding all external connections	
E4804	Wiring to 1 no. TV/FM coaxial socket outlet point using coaxial cables as specified inclusive of concealed or surface conduits and fittings, accessories, terminations, etc. **per metre run**	
E4805	1 no. TV antennae as specified excluding all external connections	

CCTV System

Code No.	Description	Unit Rate (S$)
E4901	1 no. 1/3 inch CCD dome type monochrome CCTV camera without pan & tilt mechanism c/w accessories, etc. as specified excluding all external connections	
E4902	1 no. 1/3 inch CCD monochrome CCTV camera without pan & tilt mechanism c/w accessories, etc. as specified excluding all external connections	
E4903	1 no. 1/3 inch CCD monochrome CCTV camera with pan & tilt mechanism c/w accessories, etc. as specified excluding all external connections	
E4904	1 no. 1/3 inch CCD dome type colour CCTV camera without pan & tilt mechanism c/w accessories, etc. as specified excluding all external connections	
E4905	1 no. 1/3 inch CCD colour CCTV camera without pan & tilt mechanism c/w accessories, etc. as specified excluding all external connections	
E4906	1 no. 1/3 inch CCD colour CCTV camera with pan & tilt mechanism c/w accessories, etc. as specified excluding all external connections	
E4907	1 no. 20 inch LCD monitor as specified excluding all external connections	
E4908	1 no digital video recorder as specified excluding external connections	
E4909	1 no. HDD as specified excluding all external connections	
E4910	1 no. remote camera controller as specified excluding all external connections	

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CCTV System (cont'd)

Code No.	Description	Unit Rate (S$)
E4911	Wiring to 1 no. CCTV camera (with or without pan & tilt mechanism) using RG59 cables as specified inclusive of concealed or surface conduits/trunkings, fittings, accessories, terminations, etc. **per metre run**	
E4912	Wiring to 1 no. CCTV camera (with or without pan & tilt mechanism) using RG11 cables as specified inclusive of concealed or surface conduits /trunkings, fittings, accessories, terminations, etc. **per metre run**	
E4913	Wiring to 1 no. CCTV camera (with or without pan & tilt mechanism) using RG6 cables as specified inclusive of concealed or surface conduits /trunkings, fittings, accessories, terminations, etc. **per metre run**	

Card Access System

Code No.	Description	Unit Rate (S$)
E4921	1 no. door contact for single leaf swing door as specified excluding all external connections	
E4922	1 no. door contact for a double leaf swing door as specified excluding all external connections	
E4923	1 no. movement detector as specified excluding all external connections	
E4924	1 no. panic button as specified excluding all external connections	
E4925	1 no. emergency break glass excluding all external connections	
E4926	1 no. proximity card reader as specified excluding all external connections	
E4927	1 no. proximity card as specified	
E4928	1 no. electric strike for door lock as specified excluding all external connections	
E4929	1 no. interface terminal as specified excluding all external connections for: (a) 8 monitored points	
	(b) 10 monitored points	
	(c) 12 monitored points	
	(d) 20 monitored points	

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Card Access System (cont'd)

Code No.	Description	Unit Rate (S$)
E4930	Wiring between central controller and interface terminals using the cable as specified inclusive of concealed/surface conduits/trunkings, fittings, accessories, terminations, etc. - **per metre run**	
E4931	Wiring between interface terminals and any monitored point (i.e. door contacts, movement detectors, etc.) using the cable as specified inclusive of conduits/trunkings, fittings, accessories, terminations, etc. - **per metre run**	
E4932	Wiring between interface terminals and any control point (i.e. lighting control etc.) using the cable as specified inclusive of conduits/trunkings, fittings, accessories, terminations, etc. - **per meter run**	

Carpark Barrier System – Transponder System

Code No.	Description	Unit Rate (S$)
E4951	1 no. 3 m active reader as specified excluding all external connections	
E4952	1 no. 2 m passive reader as specified excluding all external connections	
E4953	1 no. universal mounting kit with pole including installation	
E4954	1 no. active transponder tag complete with holder and 3 colour printing	
E4955	1 no. passive transponder tag complete with holder and 3 colour printing	
E4956	1 no. carpark barrier unit with 4m straight boom complete with operating motor and barrier mounting as specified, excluding all external connections	
E4957	1 no. vehicle loop detector complete with loop sensing cable	

Carpark Barrier System – EPS System

Code No.	Description	Unit Rate (S$)
E4971	Supply and install 1 no. EPS antenna as specified	
E4972	Supply and install 1 no. carpark barrier unit with 4 m straight boom complete with operating motor and barrier mounting as specified	
E4973	1 no. vehicle loop detector complete with loop sensing cable.	

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Bedside Control Panel

Code No.	Description	Unit Rate (S$)
E5101	1 no. Bedside Control Panel complete with accessories, etc as specified excluding all external connection	
E5102	1 no. Living Room Control Panel complete with accessories, etc. as specified excluding all external connection	
E5103	1 no. Lobby Switch Panel complete with accessories, etc. as specified excluding all external connection	
E5104	1 no. Annunciation Panel complete with accessories, etc. as specified excluding all external connection	
E5105	1 no. Volume Control Panel complete with accessories, etc. as specified excluding all external connection	
E5106	1 no. Relay Control Panel complete with relays, contacts, ancillaries, etc. as specified excluding all external connection	
E5107	1 no. 1 Gang Switch Panel	
E5108	1 no. 2 Gang Switch Panel	
E5109	1 no. 3 Gang Switch Panel	
E5110	1 no. headphone jack	
E5111	1 no. TV controller	
E5112	1 no. key tag switch	
E5113	1 no. relay box	
E5114	Control wiring between the relay control panel and switch panel **- per metre run**	

Building Services Intercom System

Code No.	Description	Unit Rate (S$)
E4701	1 no. desk top telephone set as specified excluding all external connections	
E4702	1 no. recessed telephone set with lockable enclosure as specified excluding all external connections	
E4703	1 no. wall mounted telephone set with surface mounted lockable enclosure as specified excluding external connections	
E4704	Wiring to any 1 no. telephone set point using the cables as specified inclusive of conduit/trunking and fittings, accessories, terminations etc. (excluding telephone set)	

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