

| BIM-AM No. | BIM-AM<br>EMSD System Name & Codes | BIM-AM<br>EMSD Equipment Type<br>( <sup>^</sup> ): Level 1 equipment type<br>( <sup>*</sup> ): Not existed in the EMSD asset templates.         | BIM-AM Version 2.0<br>EMSD Equipment Code | BIM-AM Version 3.0<br>EMSD Equipment Code | EMSD CCS Templates Available<br>(Y - Yes)/ (G-Generic Template)/ (N-No Template)<br>Liaise with EMSD O&M team for the templates | BIM Object<br>CAT Code<br>(Codes of CIC Master List) | Functional Type (Codes of<br>CIC Master List) | Omni Class Number | Provision of Asset Tag<br>RFID tag with QR Code<br>Label<br>(M - Mandatory) | Provision of Asset Tag<br>QR Code Label<br>(M - Mandatory) | Provision of Zone Tag<br>QR Code Label(M -<br>Mandatory) |
|------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------|-------------------|-----------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|
| 01         | Lift and Escalator (LIFT)          | Lift and Escalator ( <sup>^</sup> )                                                                                                             | LAE                                       | LIFT                                      | Y                                                                                                                               | N/A                                                  |                                               | 23-23 00 00       |                                                                             | N/A                                                        |                                                          |
| 01         | Lift and Escalator (LIFT)          | Electric Lifts (including the application for passenger lift, good lift, freight lift, vehicle lift, platform lift, stair-lift and dumbwaiter)  | ELL                                       | ELL                                       | Y                                                                                                                               | SPQ                                                  | LAE                                           | 23-23 11 11 11    | M<br>(Note 1)                                                               |                                                            |                                                          |
| 01         | Lift and Escalator (LIFT)          | Hydraulic Lifts (including the application for passenger lift, good lift, freight lift, vehicle lift, platform lift, stair-lift and dumbwaiter) | HYL                                       | HYL                                       | Y                                                                                                                               | SPQ                                                  | LAE                                           | 23-23 11 11 11    | M<br>(Note 1)                                                               |                                                            |                                                          |
| 01         | Lift and Escalator (LIFT)          | Escalators / Passenger Conveyors                                                                                                                | EPC                                       | EPC                                       | Y                                                                                                                               | SPQ                                                  | LAE                                           | 23-23 11 13       | M<br>(Note 2)                                                               |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | LV Switchboard ( <sup>^</sup> )<br>(Note 9)                                                                                                     | LVS                                       | LVS                                       | Y                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 31 29 11    | M                                                                           |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | Air Circuit Breaker (ACB)                                                                                                                       | ACB                                       | ACB                                       | Y                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 29 11       |                                                                             |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | Automatic Transfer Switch                                                                                                                       | N/A                                       | ATS                                       | Y                                                                                                                               | ELF                                                  | SWC                                           | 23-35 37 11       |                                                                             |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | Battery (including battery charger)                                                                                                             | BAT                                       | BAT                                       | Y                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 21 00       |                                                                             |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | Capacitor                                                                                                                                       | CAP                                       | CAP                                       | Y                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 23 19 17    |                                                                             |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | Harmonic Filter                                                                                                                                 | HAR                                       | HAR                                       | Y                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 23 11 13    |                                                                             |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | Moulded Case Circuit Breaker (Open Space)                                                                                                       | MCCB                                      | MCCB                                      | Y                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 29 17       |                                                                             |                                                            | M                                                        |
| 02         | LV Switchboard (LVS)               | Power Quality and Energy Management System (PQEMS)                                                                                              | PQM                                       | PQM                                       | Y                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 25 11 11    |                                                                             |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Generator ( <sup>^</sup> )<br>(Note 9)                                                                                                          | GEN                                       | EMG                                       | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-35 11 00       | M                                                                           |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Alternator                                                                                                                                      | ALT                                       | ALT                                       | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-35 11 13 13    |                                                                             |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Battery                                                                                                                                         | BAT                                       | BAT                                       | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-35 19 00       |                                                                             |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Battery Charger                                                                                                                                 | BAC                                       | BATC                                      | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-35 21 00       |                                                                             |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Controller                                                                                                                                      | CTR                                       | CTR                                       | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-27 13 00       |                                                                             |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Diesel Engine                                                                                                                                   | DIE                                       | DIE                                       | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-35 11 12 11    |                                                                             |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Fuel Tank                                                                                                                                       | FUT                                       | FUT                                       | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-27 29 19       | M                                                                           |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Fuel Pump                                                                                                                                       | FPMP                                      | FPMP                                      | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 03         | Emergency Generator (EMG)          | Undervolt Relay                                                                                                                                 | URE                                       | URE                                       | Y                                                                                                                               | ELQ                                                  | EMG                                           | 23-35 43 37 11    |                                                                             |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Air Side ( <sup>^</sup> )                                                                                                                       | AS                                        | AS                                        | Y                                                                                                                               | N/A                                                  |                                               | 23-33 00 00       |                                                                             | N/A                                                        |                                                          |
| 04         | HVAC-Air Side (HVAC)               | Air Handling Unit                                                                                                                               | AHU                                       | AHU                                       | Y                                                                                                                               | MCQ                                                  | AHU                                           | 23-33 25 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Air Treatment System ( including air purifier)                                                                                                  | N/A                                       | AP                                        | G                                                                                                                               | MCQ                                                  | OTR                                           | 23-27 57 35       |                                                                             |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Computer Room Air Conditioner and Handler (CRAC)                                                                                                | DXU                                       | CRAC                                      | Y                                                                                                                               | MCQ                                                  | AHU                                           | 23-33 25 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Constant Air Volume Box                                                                                                                         | N/A                                       | CAV                                       | Y                                                                                                                               | MCQ                                                  | FAN                                           | 23-33 41 17 11    | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | DX Unit (including split-type DX units, VRV outdoor units, single packaged units)                                                               | DXU                                       | DXU                                       | Y                                                                                                                               | MCQ                                                  | DXU                                           | 23-33 39 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Dehumidifier                                                                                                                                    | N/A                                       | DHUM                                      | G                                                                                                                               | MCQ                                                  | DHM                                           | 23-33 27 13       |                                                                             |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Exhaust Air Fan                                                                                                                                 | EAF                                       | EAF                                       | Y                                                                                                                               | MCQ                                                  | FAN                                           | 23-33 31 19       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Energy Recovery Unit (e.g. Heat Wheel)                                                                                                          | HW                                        | HW                                        | Y                                                                                                                               | MCQ                                                  | HWL                                           | 23-33 55 13       |                                                                             |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Fan Coil Unit                                                                                                                                   | FCU                                       | FCU                                       | Y                                                                                                                               | MCQ                                                  | FCU                                           | 23-33 33 11       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Fire Damper                                                                                                                                     | FD                                        | FD                                        | Y                                                                                                                               | DUA                                                  | DAM                                           | 23-33 29 23       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Fresh Air Fan                                                                                                                                   | FAF                                       | FAF                                       | Y                                                                                                                               | MCQ                                                  | FAN                                           | 23-33 31 19       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Humidifier                                                                                                                                      | N/A                                       | HUM                                       | G                                                                                                                               | MCQ                                                  | HMF                                           | 23-33 27 15       |                                                                             |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Jet Fan                                                                                                                                         | N/A                                       | JETF                                      | Y                                                                                                                               | MCQ                                                  | FAN                                           | 23-33 31 19       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Kitchen Mortuary Fan                                                                                                                            | N/A                                       | KMF                                       | G                                                                                                                               | MCQ                                                  | FAN                                           | 23-33 31 19       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Local Motor Control Panel ( <sup>*</sup> )                                                                                                      | LMCP                                      | LMCP                                      | N                                                                                                                               | ELQ                                                  | PAN                                           | 23-27 15 25       |                                                                             |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Primary Air Handling Unit                                                                                                                       | PAU                                       | PAU                                       | Y                                                                                                                               | MCQ                                                  | PAU                                           | 23-33 25 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Transfer Air Fan                                                                                                                                | N/A                                       | TAF                                       | Y                                                                                                                               | MCQ                                                  | FAN                                           | 23-33 31 19       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | VRV-IDU                                                                                                                                         | IDU                                       | IDU                                       | Y                                                                                                                               | MCQ                                                  | IDU                                           | 23-33 39 11       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Variable Speed Drives                                                                                                                           | VSD                                       | VSD                                       | G                                                                                                                               | ELQ                                                  | VFD                                           | 23-35 17 00       |                                                                             |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Variable Air Volume Box                                                                                                                         | VAV                                       | VAV                                       | Y                                                                                                                               | MCQ                                                  | VAV                                           | 23-33 41 17 13    | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Venturi Valve                                                                                                                                   | N/A                                       | VTV                                       | G                                                                                                                               | MCQ                                                  | VCS                                           | 23-27 31 13       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC-Air Side (HVAC)               | Water Scrubber                                                                                                                                  | N/A                                       | WSCR                                      | G                                                                                                                               | MCQ                                                  | WTS                                           | 23-27 57 35       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Water Side ( <sup>^</sup> )                                                                                                                     | WS                                        | WS                                        | Y                                                                                                                               | N/A                                                  |                                               | 23-33 00 00       |                                                                             | N/A                                                        |                                                          |
| 04         | HVAC - Water Side (HVAC)           | Air Cooled Chiller                                                                                                                              | CHR                                       | ACC                                       | Y                                                                                                                               | MCQ                                                  | ACC                                           | 23-33 21 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Auto-strainer                                                                                                                                   | ASR                                       | ASR                                       | Y                                                                                                                               | PPA                                                  | ASR                                           | 23-39 41 11 33    | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Chilled Water Pump                                                                                                                              | PMP                                       | CHWP                                      | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Circulation Pump                                                                                                                                | PMP                                       | CP                                        | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Condensing Water Pump                                                                                                                           | PMP                                       | CWP                                       | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Cooling Tower                                                                                                                                   | COT                                       | COT                                       | Y                                                                                                                               | MCQ                                                  | COT                                           | 23-33 23 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Cooling Tower Bleed Off Pump                                                                                                                    | PMP                                       | CTP                                       | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Heat Pump Type Chiller                                                                                                                          | HPC                                       | HPC                                       | Y                                                                                                                               | MCQ                                                  | HPC                                           | 23-33 21 13       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Heat Exchanger                                                                                                                                  | HEX                                       | HEX                                       | Y                                                                                                                               | MCQ                                                  | HEX                                           | 23-27 23 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Heating Water Pump                                                                                                                              | PMP                                       | HWP                                       | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Main motorized/ modulating control valve                                                                                                        | N/A                                       | MCV                                       | G                                                                                                                               | PPA                                                  | VLV                                           | 23-27 31 00       |                                                                             |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Pressurized Water System                                                                                                                        | PWS                                       | PWS                                       | Y                                                                                                                               | MCQ                                                  | PWS                                           | 23-33 00 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Sea Water Pump                                                                                                                                  | PMP                                       | SWP                                       | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Tube Cleaning System                                                                                                                            | N/A                                       | TCS                                       | G                                                                                                                               | MCQ                                                  | WTS                                           | 23-27 55 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Travelling Band Screen                                                                                                                          | TBS                                       | TBS                                       | Y                                                                                                                               | MCQ                                                  | TBS                                           | 23-39 33 11 33    | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Water Cooled Chiller                                                                                                                            | CHR                                       | WCC                                       | Y                                                                                                                               | MCQ                                                  | WCC                                           | 23-33 21 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Water Side (HVAC)           | Water Treatment System (including those serving chiller water, condenser water (fresh water) and condenser water (sea water))                   | WTS                                       | WTS                                       | Y                                                                                                                               | MCQ                                                  | WTS                                           | 23-27 55 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC - Cold Room / Store (HVAC)    | Cold Room/Store ( <sup>^</sup> )<br>(Note 9)                                                                                                    | CRM                                       | CRM                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-19 31 19 13 11 | M                                                                           |                                                            | M                                                        |
| 04         | HVAC- Miscellaneous (HVAC)         | Miscellaneous ( <sup>^</sup> )                                                                                                                  | MIS                                       | MIS                                       | G                                                                                                                               | N/A                                                  |                                               | 23-33 00 00       |                                                                             | N/A                                                        |                                                          |
| 04         | HVAC- Miscellaneous (HVAC)         | Central Control and Monitoring System (CCMS)<br>(e.g. DDC)                                                                                      | CCMS                                      | CCMS                                      | Y                                                                                                                               | MCQ                                                  | CCM                                           | 23-27 15 00       |                                                                             |                                                            | M                                                        |
| 04         | HVAC- Miscellaneous (HVAC)         | Energy Meter                                                                                                                                    | N/A                                       | EM                                        | G                                                                                                                               | PPA                                                  | OTR                                           | 23-27 15 17       |                                                                             |                                                            | M                                                        |
| 04         | HVAC- Miscellaneous (HVAC)         | Motor Control Center (MCC)                                                                                                                      | MCC                                       | MCC                                       | G                                                                                                                               | MCQ                                                  | MCC                                           | 23-35 31 23       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC- Miscellaneous (HVAC)         | Room Cooler                                                                                                                                     | RCR                                       | RCR                                       | Y                                                                                                                               | MCQ                                                  | ACD                                           | 23-33 45 00       | M                                                                           |                                                            | M                                                        |
| 04         | HVAC- Miscellaneous (HVAC)         | Refrigerator (including those for blood, food, medicine, vaccine, specimen etc.)                                                                | RFR                                       | RFR                                       | Y                                                                                                                               | SPQ                                                  | DMT                                           | 23-25 00 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Boiler System ( <sup>^</sup> )                                                                                                                  | BLR                                       | BLR                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-33 11 00       |                                                                             | N/A                                                        |                                                          |
| 05         | Boiler System (BLR)                | Boiler Feed Pump                                                                                                                                | PMP                                       | BFP                                       | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Booster Pump                                                                                                                                    | PMP                                       | BP                                        | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Calorifier                                                                                                                                      | CAL                                       | CAL                                       | Y                                                                                                                               | MCQ                                                  | CAL                                           | 23-33 11 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Circulation Pump                                                                                                                                | PMP                                       | CP                                        | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Gas boiler                                                                                                                                      | GAB                                       | GAB                                       | Y                                                                                                                               | MCQ                                                  | BLR                                           | 23-33 11 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Heat Exchanger                                                                                                                                  | HEX                                       | HEX                                       | Y                                                                                                                               | MCQ                                                  | HEX                                           | 23-27 23 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Hot water boiler                                                                                                                                | HWB                                       | HWB                                       | Y                                                                                                                               | MCQ                                                  | BLR                                           | 23-33 11 00       | M                                                                           |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Local Motor Control Panel ( <sup>*</sup> )                                                                                                      | LMCP                                      | LMCP                                      | N                                                                                                                               | ELQ                                                  | PAN                                           | 23-27 15 23 13    |                                                                             |                                                            | M                                                        |
| 05         | Boiler System (BLR)                | Steam boiler                                                                                                                                    | STO                                       | STO                                       | Y                                                                                                                               | MCQ                                                  | BLR                                           | 23-33 11 00       | M                                                                           |                                                            | M                                                        |
| 06         | Filtration Plant (FP)              | Filtration Plant ( <sup>^</sup> )                                                                                                               | FP                                        | FP                                        | Y                                                                                                                               | N/A                                                  |                                               | 23-39 41 11       |                                                                             | N/A                                                        |                                                          |
| 06         | Filtration Plant (FP)              | Air Blower or Air Compressor (including the application for sand tank and NaoCl tank)                                                           | AB                                        | AB                                        | Y                                                                                                                               | MCQ                                                  | OTR                                           | 23-33 31 13       | M                                                                           |                                                            | M                                                        |
| 06         | Filtration Plant (FP)              | Air Release Valve (for filtration tanks)                                                                                                        | ARV                                       | ARV                                       | Y                                                                                                                               | PPA                                                  | VLV                                           | 23-27 31 49       |                                                                             |                                                            | M                                                        |
| 06         | Filtration Plant (FP)              | Booster pump                                                                                                                                    | PMP                                       | BP                                        | Y                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       | M                                                                           |                                                            | M                                                        |
| 06         | Filtration Plant (FP)              | Building Management System                                                                                                                      | BMS                                       | BMS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-27 15 00       |                                                                             |                                                            | M                                                        |

| BIM-AM No. | BIM-AM EMSD System Name & Codes                                       | BIM-AM EMSD Equipment Type<br>( <sup>^</sup> ): Level 1 equipment type<br>(*): Not existed in the EMSD asset templates.                                                                                                                                    | BIM-AM Version 2.0 EMSD Equipment Code | BIM-AM Version 3.0 EMSD Equipment Code | EMSD CCS Templates Available<br>(Y - Yes)/ (G-Generic Template)/ (N-No Template)<br>Liaise with EMSD O&M team for the templates | BIM Object CAT Code<br>(Codes of CIC Master List) | Functional Type (Codes of CIC Master List) | Omni Class Number | Provision of Asset Tag RFID tag with QR Code Label<br>(M - Mandatory)      | Provision of Asset Tag QR Code Label<br>(M - Mandatory) | Provision of Zone Tag QR Code Label(M - Mandatory) |
|------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------|-------------------|----------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------|
| 06         | Filtration Plant (FP)                                                 | Chemical Dosing Pump (including the application for NaOCl, Soda, ALUM, Acid and Brine)                                                                                                                                                                     | CHP                                    | CHP                                    | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Circulation Pump                                                                                                                                                                                                                                           | PMP                                    | CP                                     | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Controller Analyser and Sensor (including those sensors for measuring ppm, mV, PH, °C and ORP)                                                                                                                                                             | CAS                                    | CTRS                                   | Y                                                                                                                               | ELF                                               | SNR                                        | 23-27 11 00       |                                                                            |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Diesel Boiler                                                                                                                                                                                                                                              | DIB                                    | DIB                                    | Y                                                                                                                               | MCQ                                               | BLR                                        | 23-33 11 00       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Electric Boiler                                                                                                                                                                                                                                            | ELB                                    | ELB                                    | Y                                                                                                                               | MCQ                                               | BLR                                        | 23-33 11 22       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Electro-Chlorinator System                                                                                                                                                                                                                                 | ECS                                    | ELCS                                   | Y                                                                                                                               | N/A                                               |                                            | 23-27 55 00       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Filtration Tank (including those sand tanks, carbon tanks and reaction tanks.)                                                                                                                                                                             | FIT                                    | FIT                                    | Y                                                                                                                               | MCQ                                               | WAT                                        | 23-27 29 19       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Heat Exchanger                                                                                                                                                                                                                                             | HEX                                    | HEX                                    | Y                                                                                                                               | MCQ                                               | HEX                                        | 23-27 23 00       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Motor                                                                                                                                                                                                                                                      | MOT                                    | MOT                                    | Y                                                                                                                               | ELQ                                               | MOT                                        | 23-35 15 00       |                                                                            |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Misc. Swimming Pool Equipment (e.g. electric valve)                                                                                                                                                                                                        | MSP                                    | MSP                                    | Y                                                                                                                               | MCQ                                               | OTR                                        | 23-21 29 19 23    |                                                                            |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Motor Control Center (MCC)                                                                                                                                                                                                                                 | MCCP                                   | MCC                                    | Y                                                                                                                               | MCQ                                               | MCC                                        | 23-35 25 23       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Ozone Generator System                                                                                                                                                                                                                                     | OGS                                    | OGS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-39 35 11 23    | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Ultraviolet Sterilizer                                                                                                                                                                                                                                     | ULS                                    | ULS                                    | Y                                                                                                                               | MCQ                                               | OTR                                        | 23-39 41 15       | M                                                                          |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Variable Speed Drives / Soft Starter                                                                                                                                                                                                                       | VSD / SS                               | VSD / SS                               | Y                                                                                                                               | ELQ                                               | VFD                                        | 23-35 17 00       |                                                                            |                                                         | M                                                  |
| 06         | Filtration Plant (FP)                                                 | Local Motor Control Panel (*)                                                                                                                                                                                                                              | LMCP                                   | LMCP                                   | N                                                                                                                               | ELQ                                               | PAN                                        | 23-27 15 25       |                                                                            |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Wet System ( <sup>^</sup> )                                                                                                                                                                                                                                | WTS                                    | WES                                    | Y                                                                                                                               | N/A                                               |                                            | 23-29 33 11       | N/A                                                                        |                                                         |                                                    |
| 07         | Fire Services Installation (FS)                                       | Drencher Pump                                                                                                                                                                                                                                              | PMP                                    | DWP                                    | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Fire Service Jockey Pump                                                                                                                                                                                                                                   | PMP                                    | FJP                                    | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Fire Service Intermediate Booster Pump                                                                                                                                                                                                                     | PMP                                    | FIP                                    | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Fire Service Pump (e.g. FH/HR pump)                                                                                                                                                                                                                        | PMP                                    | FSP                                    | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Sprinkler Pump                                                                                                                                                                                                                                             | PMP                                    | SPRP                                   | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Sprinkler Jockey pump                                                                                                                                                                                                                                      | PMP                                    | SJP                                    | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Sprinkler Booster Pump                                                                                                                                                                                                                                     | PMP                                    | SIP                                    | Y                                                                                                                               | MCQ                                               | PMP                                        | 23-27 17 00       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Sprinkler control valve set & accessories (including sprinkler control valve set, sprinkler subsidiary valve, pre-action recycling sprinkler control valve set, air compressor, dry alarm sprinkler control valve, foam-water sprinkler control valve set) | SCV                                    | SPKCV                                  | Y                                                                                                                               | PPA                                               | VLV                                        | 23-29 33 11       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Local Control Panel (*)                                                                                                                                                                                                                                    | LMCP                                   | LMCP                                   | N                                                                                                                               | ELQ                                               | PAN                                        | 23-35 25 23       |                                                                            |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Automatic Fire Detection and Alarm System ( <sup>^</sup> )                                                                                                                                                                                                 | AFA                                    | AFA                                    | Y                                                                                                                               | N/A                                               |                                            | 23-29 31 00       | N/A                                                                        |                                                         |                                                    |
| 07         | Fire Services Installation (FS)                                       | Audio/ Visual Advisory System                                                                                                                                                                                                                              | AVA                                    | AVA                                    | Y                                                                                                                               | N/A                                               |                                            | 23-29 31 19       |                                                                            |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Fire Alarm equipment (including manual call point, smoke detector, flashing lighting, alarm siren, alarm bell, heat detector, optical beam smoke detector, multi-sensor detector, fire alarm panel and aspirating smoke detection equipment)               | FAE                                    | FAE                                    | Y                                                                                                                               | ALM                                               | OTR                                        | 23-29 31 00       | M<br>(Note 4)<br>(For main automatic fire detection and alarm (AFA) panel) |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Gas Suppression System ( <sup>^</sup> )                                                                                                                                                                                                                    | GSS                                    | GSS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-29 33 13       | N/A                                                                        |                                                         |                                                    |
| 07         | Fire Services Installation (FS)                                       | Gas cylinder and equipment (including gas cylinders, control panels and discharge nozzles for CO <sub>2</sub> , FM200, NAFS III and Novec 1230 system)                                                                                                     | GCE                                    | GCE                                    | Y                                                                                                                               | ALM                                               | OTR                                        | 23-29 33 13       | M<br>(Note 3)                                                              |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Portable Equipment ( <sup>^</sup> )                                                                                                                                                                                                                        | PE                                     | PE                                     | Y                                                                                                                               | ALM                                               | OTR                                        | 23-29 25 00       | N/A                                                                        |                                                         |                                                    |
| 07         | Fire Services Installation (FS)                                       | Portable fire extinguisher (including all type of fire extinguishers, fire blanket and sand bucket)                                                                                                                                                        | PFE                                    | PFE                                    | Y                                                                                                                               | SPQ                                               | FSI                                        | 23-29 25 19       | M                                                                          |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Gas Detection System ( <sup>^</sup> )                                                                                                                                                                                                                      | GDS                                    | GDS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-27 11 27       | N/A                                                                        |                                                         |                                                    |
| 07         | Fire Services Installation (FS)                                       | Gas detector and equipment (including CO2 gas detector, hydrogen gas detector, ammonia gas detector, ozone gas detector and gas detection control panel)                                                                                                   | GDE                                    | GDE                                    | Y                                                                                                                               | ALM                                               | OTR                                        | 23-27 11 27 17    | M<br>(Note 4)<br>(For control panel)                                       |                                                         | M                                                  |
| 07         | Fire Services Installation (FS)                                       | Exit sign & Directional sign                                                                                                                                                                                                                               | EXS                                    | EXS                                    | Y                                                                                                                               | SPQ                                               | FSI                                        | 23-35 47 15       |                                                                            |                                                         | M                                                  |
| 08         | Uninterrupted Power Supply (UPS)                                      | Uninterrupted Power Supply (UPS)                                                                                                                                                                                                                           | UPD                                    | UPS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-35 23 21       | N/A                                                                        |                                                         |                                                    |
| 08         | Uninterrupted Power Supply (UPS)                                      | Battery System                                                                                                                                                                                                                                             | BATS                                   | BATS                                   | Y                                                                                                                               | N/A                                               |                                            | 23-35 19 00       | M                                                                          |                                                         | M                                                  |
| 08         | Uninterrupted Power Supply (UPS)                                      | Static Transfer Switch                                                                                                                                                                                                                                     | STS                                    | STS                                    | Y                                                                                                                               | ELQ                                               | LAS                                        | 23-35 37 00       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Access Control System ( <sup>^</sup> )                                                                                                                                                                                                                     | ACS                                    | ACS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-29 13 00       | N/A                                                                        |                                                         |                                                    |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Accessories (including keypad, UPS/battery, electro-magnetic contact, electric strike, access control converter, interface board etc.)                                                                                                                     | ACC                                    | AES                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-29 00 00       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Card Reader                                                                                                                                                                                                                                                | SMR                                    | CAR                                    | Y                                                                                                                               | SCD                                               | CRD                                        | 23-29 13 13 11 13 |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Card Reader Control                                                                                                                                                                                                                                        | CRC                                    | CRC                                    | Y                                                                                                                               | SCD                                               | CRD                                        | 23-29 13 13       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Computer                                                                                                                                                                                                                                                   | COM                                    | COM                                    | Y                                                                                                                               | FNy                                               | PRT                                        | 23-37 13 11       |                                                                            | M                                                       | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Emergency Breakglass                                                                                                                                                                                                                                       | EMB                                    | EMB                                    | Y                                                                                                                               | SPQ                                               | FSI                                        | 23-37 27 13 11    |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Intercom (including door phone system, intercom door station and intercom master station etc.)                                                                                                                                                             | INM                                    | INM                                    | Y                                                                                                                               | COM                                               | ICM                                        | 23-37 23 17 11    |                                                                            | M                                                       | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Lock/Button/Switch (including electro-magnetic lock, door release button, bypass key switch etc.)                                                                                                                                                          | LBS                                    | LBS                                    | Y                                                                                                                               | ELF                                               | SWC                                        | 23-17 19 11       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Lock Control Unit                                                                                                                                                                                                                                          | LCU                                    | LCU                                    | Y                                                                                                                               | SCD                                               | ELK                                        | 23-17 19 11 31 13 |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Panel (including control panel, telephone door phone panel, buzzer & lighting indicator panel etc.)                                                                                                                                                        | PAN                                    | PAN                                    | Y                                                                                                                               | ELQ                                               | PAN                                        | 23-27 15 25       | M                                                                          |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Remote Release Button Receiver                                                                                                                                                                                                                             | RER                                    | RER                                    | Y                                                                                                                               | SCD                                               | OTR                                        | 23-17 19 11 29 17 |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Access Control system (ACS) | Turnstiles                                                                                                                                                                                                                                                 | TUR                                    | TUR                                    | Y                                                                                                                               | SCD                                               | OTR                                        | 23-29 13 23       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Burglar Alarm System ( <sup>^</sup> )                                                                                                                                                                                                                      | BAS                                    | BAS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-29 11 00       | N/A                                                                        |                                                         |                                                    |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Accessories (including Security alarm bell, video control unit, video door-phone set, wireless microphone, volume speaker, siren, transformer, buzzer light etc.)                                                                                          | ACC                                    | AES                                    | Y                                                                                                                               | SPQ                                               | OTR                                        | 23-29 00 00       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Amplifier                                                                                                                                                                                                                                                  | AMP                                    | AMP                                    | Y                                                                                                                               | COM                                               | AMP                                        | 23-37 15 29 11 15 |                                                                            | M                                                       | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Audio / Video Product                                                                                                                                                                                                                                      | AVP                                    | AVP                                    | Y                                                                                                                               | SPQ                                               | OTR                                        | 23-37 15 00       |                                                                            | M                                                       | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Camera                                                                                                                                                                                                                                                     | CAM                                    | CAM                                    | Y                                                                                                                               | SPQ                                               | OTR                                        | 23-37 15 11       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Controller (including volume controller, lighting controller etc.)                                                                                                                                                                                         | CTR                                    | CTR                                    | Y                                                                                                                               | SCD                                               | OTR                                        | 23-37 15 00       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Intrusion Detector (including electro-magnetic contact, wide angle duet tech detector, dual tech motion detector etc.)                                                                                                                                     | IND                                    | IND                                    | Y                                                                                                                               | SCD                                               | OTR                                        | 23-29 11 23       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Lock/Button/Switch (including call bell button, bypass key switch, emergency lock, push alarm E-lock etc.)                                                                                                                                                 | LBS                                    | LBS                                    | Y                                                                                                                               | SCD                                               | OTR                                        | 23-29 00 00       |                                                                            |                                                         | M                                                  |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)  | Panel (including zones alarm panel, alarm repeater, outdoor S.S. panel, push button wall etc.)                                                                                                                                                             | PAN                                    | PAN                                    | Y                                                                                                                               | ELQ                                               | PAN                                        | 23-29 00 00       | M                                                                          |                                                         | M                                                  |

| BIM-AM No. | BIM-AM EMSD System Name & Codes                                          | BIM-AM EMSD Equipment Type<br>( <sup>^</sup> ): Level 1 equipment type<br>( <sup>*</sup> ): Not existed in the EMSD asset templates.                                                      | BIM-AM Version 2.0<br>EMSD Equipment Code | BIM-AM Version 3.0<br>EMSD Equipment Code | EMSD CCS Templates Available<br>(Y - Yes)/ (G-Generic Template)/ (N-No Template)<br>Liaise with EMSD O&M team for the templates | BIM Object<br>CAT Code<br>(Codes of CIC Master List) | Functional Type (Codes of<br>CIC Master List) | Omni Class Number | Provision of Asset Tag<br>RFID tag with QR Code<br>Label<br>(M - Mandatory) | Provision of Asset Tag<br>QR Code Label<br>(M - Mandatory) | Provision of Zone Tag<br>QR Code Label(M -<br>Mandatory) |
|------------|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------|-------------------|-----------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)     | Power Management Unit (including control room charge, telephone link charge, power supply unit & battery and UPS for DVR etc.)                                                            | PMU                                       | PMU                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-35 31 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)     | Projectoring Product (including LCD projector, visualizer etc.)                                                                                                                           | PRP                                       | PRP                                       | Y                                                                                                                               | SPQ                                                  | OFQ                                           | 23-37 15 00       |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - Burglar Alarm System (BAS)     | Screen/Monitor                                                                                                                                                                            | SCM                                       | SCM                                       | Y                                                                                                                               | SPQ                                                  | OFQ                                           | 23-19 11 25       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | CCTV and Intercom System ( <sup>^</sup> )                                                                                                                                                 | CCTVI                                     | CCTVI                                     | Y                                                                                                                               | N/A                                                  |                                               | 23-29 11 00       |                                                                             | N/A                                                        |                                                          |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | Accessories (including backward direction control, UPS, video distribution amplifier, control keyboard, media converter, fibre transmitter/ receiver, LCD KVM switch, HDMI extender etc.) | ACC                                       | AES                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 13 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | Camera                                                                                                                                                                                    | CAM                                       | CAM                                       | Y                                                                                                                               | SCD                                                  | CTV                                           | 23-37 15 11       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | Computer                                                                                                                                                                                  | COM                                       | COM                                       | Y                                                                                                                               | FN Y                                                 | PRT                                           | 23-37 13 11       |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | Duplex Multiplexer                                                                                                                                                                        | DUM                                       | DUM                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 15 00       |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | Intercom (including handset with release button)                                                                                                                                          | INM                                       | INM                                       | Y                                                                                                                               | COM                                                  | ICM                                           | 23-37 23 17 11    |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | Multi Channel DVR / NVR                                                                                                                                                                   | DVR/NVR                                   | DVR/NVR                                   | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 15 00       |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - CCTV & Intercom System (CCTVI) | Video Switcher                                                                                                                                                                            | VIS                                       | VIS                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 15 00       |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Smart Card System ( <sup>^</sup> )                                                                                                                                                        | SCS                                       | SCS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-37 13 00       |                                                                             | N/A                                                        |                                                          |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Access Controller                                                                                                                                                                         | ACR                                       | ACR                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 00 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Accessories (including interfacing module, interconnection point with FS panel, alarm siren etc.)                                                                                         | ACC                                       | AES                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 13 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Card Reader                                                                                                                                                                               | CAR                                       | CAR                                       | Y                                                                                                                               | SCD                                                  | CRD                                           | 23-29 13 13       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Computer                                                                                                                                                                                  | COM                                       | COM                                       | Y                                                                                                                               | FN Y                                                 | PRT                                           | 23-37 13 11       |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Control Unit                                                                                                                                                                              | COU                                       | COU                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 00 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Keypad                                                                                                                                                                                    | KEP                                       | KEP                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 11 27       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Lock/Button/Switch (including door release button, electro-magnetic lock, alarm shunt key switch etc.)                                                                                    | LBS                                       | LBS                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-17 19 11       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Printer                                                                                                                                                                                   | PRI                                       | PRI                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 13 23       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Smart Card System (SCS)        | Power Management Unit                                                                                                                                                                     | PMU                                       | PMU                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 00 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Call Alarm System (CAS)        | Call Alarm System ( <sup>^</sup> )                                                                                                                                                        | CAS                                       | CAS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-29 11 00       |                                                                             | N/A                                                        |                                                          |
| 09         | Burglar Alarm and Security Installation - Call Alarm System (CAS)        | Alarm Siren/Bell                                                                                                                                                                          | ASB                                       | ASB                                       | Y                                                                                                                               | COM                                                  | BLL                                           | 23-37 17 13       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Call Alarm System (CAS)        | Button (including push button, emergency call button etc.)                                                                                                                                | BUT                                       | BUT                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 27 13 11    |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Call Alarm System (CAS)        | Control Panel                                                                                                                                                                             | COP                                       | COP                                       | Y                                                                                                                               | ELQ                                                  | PAN                                           | 23-27 15 25       | M                                                                           |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Videophone System (VPS)        | Videophone System ( <sup>^</sup> )                                                                                                                                                        | VPS                                       | VPS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-37 23 00       |                                                                             | N/A                                                        |                                                          |
| 09         | Burglar Alarm and Security Installation - Videophone System (VPS)        | Extension Speaker                                                                                                                                                                         | EXS                                       | EXTS                                      | Y                                                                                                                               | COM                                                  | SPK                                           | 23-37 17 13 19    |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Videophone System (VPS)        | Handset                                                                                                                                                                                   | HAN                                       | HAN                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-37 15 29       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Videophone System (VPS)        | Station (including master station and door station etc.)                                                                                                                                  | STA                                       | STA                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-37 00 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Videophone System (VPS)        | Videophone Control                                                                                                                                                                        | VPC                                       | VPC                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-37 13 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Keypad Lock System (KLS)       | Keypad Lock System ( <sup>^</sup> )                                                                                                                                                       | KLS                                       | KLS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-29 13 00       |                                                                             | N/A                                                        |                                                          |
| 09         | Burglar Alarm and Security Installation - Keypad Lock System (KLS)       | Backup Battery                                                                                                                                                                            | BAB                                       | BAB                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-35 23 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Keypad Lock System (KLS)       | Door Release Button                                                                                                                                                                       | DRB                                       | DRB                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-17 19 11       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Keypad Lock System (KLS)       | Keypad                                                                                                                                                                                    | KEP                                       | KEP                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-29 11 27       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Drop-arm Barrier( <sup>^</sup> )                                                                                                                                                          | DAB                                       | DAB                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-39 11 11       |                                                                             | N/A                                                        |                                                          |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Accessories (including push button, LCD monitor, UPS supply etc.)                                                                                                                         | ACC                                       | AES                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 13 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Barrier Gate (e.g. Vehicle Road Blocker )                                                                                                                                                 | BAG                                       | BAG                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-39 11 11       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Card Accessories Controller                                                                                                                                                               | CAC                                       | CAC                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 13 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Control Panel                                                                                                                                                                             | COP                                       | COP                                       | Y                                                                                                                               | ELQ                                                  | PAN                                           | 23-27 15 25       | M                                                                           |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Detector (including infrared magnetic loop etc.)                                                                                                                                          | DER                                       | DER                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 11 23       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Intercom (including intercom door station, intercom master station etc.)                                                                                                                  | INM                                       | INM                                       | Y                                                                                                                               | COM                                                  | ICM                                           | 23-37 23 17 11    |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Proximity Card                                                                                                                                                                            | PRC                                       | PRC                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-29 13 00       |                                                                             |                                                            | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Recorder                                                                                                                                                                                  | REC                                       | REC                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 15 21 15    |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - Drop-arm Barrier (DAB)         | Workstation Unit                                                                                                                                                                          | WOU                                       | WOU                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-29 13 00       |                                                                             | M                                                          | M                                                        |
| 09         | Burglar Alarm and Security Installation - Electric Lock System (ELS)     | Electric Lock System ( <sup>^</sup> )                                                                                                                                                     | ELS                                       | ELS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-17 19 11 31 13 |                                                                             | N/A                                                        |                                                          |
| 10         | Radar and Navigation System (RNS)                                        | Radar and Navigation System ( <sup>^</sup> )                                                                                                                                              | RNS                                       | RNS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-39 21 17 15    |                                                                             | N/A                                                        |                                                          |

| BIM-AM No. | BIM-AM EMSD System Name & Codes                                | BIM-AM EMSD Equipment Type<br>( <sup>^</sup> ): Level 1 equipment type<br>(*): Not existed in the EMSD asset templates.                                                                                                                                                                 | BIM-AM Version 2.0 EMSD Equipment Code | BIM-AM Version 3.0 EMSD Equipment Code | EMSD CCS Templates Available<br>(Y - Yes)/ (G-Generic Template)/ (N-No Template)<br>Liaise with EMSD O&M team for the templates | BIM Object CAT Code<br>(Codes of CIC Master List) | Functional Type (Codes of CIC Master List) | Omni Class Number | Provision of Asset Tag<br>RFID tag with QR Code Label<br>(M - Mandatory) | Provision of Asset Tag<br>QR Code Label<br>(M - Mandatory) | Provision of Zone Tag<br>QR Code Label(M - Mandatory) |
|------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------|-------------------|--------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------|
| 10         | Radar and Navigation System (RNS)                              | Accessories (including AIS receiver, AIS transceiver, GPS receiver, fluxgate, gyrocompass, satellite compass, electronic sea chart, echo sounder, wind sensor, speed log, speed indicator, monitor, instrument display unit, control panel, digital video recorder, pan tilt head etc.) | ACC                                    | AES                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-39 21 11       |                                                                          |                                                            | M                                                     |
| 10         | Radar and Navigation System (RNS)                              | Antenna                                                                                                                                                                                                                                                                                 | BRR                                    | ANT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-39 21 11       |                                                                          |                                                            | M                                                     |
| 10         | Radar and Navigation System (RNS)                              | Display and processing unit                                                                                                                                                                                                                                                             | DPU                                    | DPU                                    | Y                                                                                                                               | COM                                               | DPL                                        | 23-37 25 15       |                                                                          | M                                                          | M                                                     |
| 10         | Radar and Navigation System (RNS)                              | Network Equipment (including switch, hub, router etc.)                                                                                                                                                                                                                                  | NEE                                    | NEE                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 17       |                                                                          |                                                            | M                                                     |
| 10         | Radar and Navigation System (RNS)                              | Turning unit                                                                                                                                                                                                                                                                            | TUU                                    | TUU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-39 21 11       |                                                                          | M                                                          | M                                                     |
| 10         | Radar and Navigation System (RNS)                              | Video camera                                                                                                                                                                                                                                                                            | VIC                                    | VIC                                    | Y                                                                                                                               | SPQ                                               | OTR                                        | 23-37 15 11       |                                                                          |                                                            | M                                                     |
| 11         | Microwave Link System (MLS)                                    | Microwave Link System ( <sup>^</sup> )                                                                                                                                                                                                                                                  | MLS                                    | MLS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-37 23 19       |                                                                          | N/A                                                        |                                                       |
| 11         | Microwave Link System (MLS)                                    | Accessories                                                                                                                                                                                                                                                                             | ACC                                    | AES                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 00       |                                                                          |                                                            | M                                                     |
| 11         | Microwave Link System (MLS)                                    | Antenna                                                                                                                                                                                                                                                                                 | ANT                                    | ANT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 23 19       |                                                                          |                                                            | M                                                     |
| 11         | Microwave Link System (MLS)                                    | Network Equipment (including switch, hub, router etc.)                                                                                                                                                                                                                                  | NEE                                    | NEE                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 17       |                                                                          | M                                                          | M                                                     |
| 11         | Microwave Link System (MLS)                                    | Processing unit (including multiplexer, modulator etc.)                                                                                                                                                                                                                                 | PRU                                    | PRU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 25 15       |                                                                          | M                                                          | M                                                     |
| 11         | Microwave Link System (MLS)                                    | RF Interface Unit (including duplexer, coupler combiner, exciter, filter, splitter, waveguide etc.)                                                                                                                                                                                     | RIU                                    | RIU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 23 19       |                                                                          | M                                                          | M                                                     |
| 11         | Microwave Link System (MLS)                                    | Transceiver                                                                                                                                                                                                                                                                             | TRAN                                   | TRAN                                   | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 23 19       |                                                                          |                                                            | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Timing & Display System ( <sup>^</sup> )                                                                                                                                                                                                                                                | TDS                                    | TDS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-37 13 00       |                                                                          | N/A                                                        |                                                       |
| 12         | Timing & Display System (TDS)                                  | Control Unit / Server                                                                                                                                                                                                                                                                   | CUS                                    | CUS                                    | Y                                                                                                                               | COM                                               | SER                                        | 23-29 13 00       |                                                                          | M                                                          | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Master Clock Unit                                                                                                                                                                                                                                                                       | MCU                                    | MCU                                    | Y                                                                                                                               | COM                                               | CLK                                        | 23-29 13 00       |                                                                          |                                                            | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Network Equipment (including router/ switch, firewalls/ security appliances, fiber equipment, cables/ connectors, printer, dispenser etc.)                                                                                                                                              | NEE                                    | NEE                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 17       |                                                                          |                                                            | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Operator Control Console / Workstation, PC                                                                                                                                                                                                                                              | OCC                                    | OCC                                    | Y                                                                                                                               | FNJ                                               | PRT                                        | 23-37 13 00       |                                                                          | M                                                          | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Queue Management Unit (including public kiosk, counter keypad etc.)                                                                                                                                                                                                                     | QMU                                    | QMU                                    | Y                                                                                                                               | SPQ                                               | OTR                                        | 23-19 29 15 19    |                                                                          |                                                            | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Sensing Unit                                                                                                                                                                                                                                                                            | SEU                                    | SEU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 00       |                                                                          |                                                            | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Uninterruptible Power Supply (UPS)                                                                                                                                                                                                                                                      | UPS                                    | UPS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-35 23 21       | M                                                                        |                                                            | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Video Display Unit                                                                                                                                                                                                                                                                      | VDU                                    | VDU                                    | Y                                                                                                                               | COM                                               | DPL                                        | 23-29 13 00       |                                                                          |                                                            | M                                                     |
| 12         | Timing & Display System (TDS)                                  | Video & Audio Equipment (including monitor, camera, extender, switch/ splitter/ matrix, video player etc.)                                                                                                                                                                              | VAE                                    | VAE                                    | Y                                                                                                                               | SPQ                                               | OFQ                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Audio Video System ( <sup>^</sup> )                                                                                                                                                                                                                                                     | AV                                     | AV                                     | Y                                                                                                                               | N/A                                               |                                            | 23-37 15 00       |                                                                          | N/A                                                        |                                                       |
| 13         | Audio Video System (AV)                                        | Audio Amplifier                                                                                                                                                                                                                                                                         | AAM                                    | AAM                                    | Y                                                                                                                               | COM                                               | AMP                                        | 23-37 15 29 11 15 |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Audio Mixer                                                                                                                                                                                                                                                                             | AMI                                    | AMI                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Audio Equalizer                                                                                                                                                                                                                                                                         | AEQ                                    | AEQ                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 29 11 17 |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Audio Loudspeaker                                                                                                                                                                                                                                                                       | ALO                                    | ALO                                    | Y                                                                                                                               | COM                                               | SPK                                        | 23-37 15 29 11 13 |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Audio Microphone                                                                                                                                                                                                                                                                        | AMC                                    | AMC                                    | Y                                                                                                                               | COM                                               | MIC                                        | 23-37 15 29 11 11 |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Audio Miscellaneous (including antenna, combiner, converter, IR emitter, IR receiver, processor, simultaneous interpretation system, sound box, UPS, transcriber etc.)                                                                                                                  | AMS                                    | AMS                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Console (e.g. computer)                                                                                                                                                                                                                                                                 | CONS                                   | CONS                                   | Y                                                                                                                               | FNJ                                               | PRT                                        | 23-37 13 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Distribution Amplifier                                                                                                                                                                                                                                                                  | DIS                                    | DISA                                   | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          | M                                                          | M                                                     |
| 13         | Audio Video System (AV)                                        | Display Unit (including digital whiteboard, TV monitor, projector, screen, video wall, visualizer etc.)                                                                                                                                                                                 | DIU                                    | DIU                                    | Y                                                                                                                               | COM                                               | DPL                                        | 23-29 13 00       |                                                                          | M                                                          | M                                                     |
| 13         | Audio Video System (AV)                                        | Extender                                                                                                                                                                                                                                                                                | EXT                                    | EXT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Matrix Switcher                                                                                                                                                                                                                                                                         | MAT                                    | MAT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Miscellaneous (including analyzer, control panel, generator, limiter, matrix, patch panel, selector/ switcher, time synchronizer etc.)                                                                                                                                                  | MIS                                    | MIS                                    | Y                                                                                                                               | SPQ                                               | OFQ                                        | 23-37 13 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Player                                                                                                                                                                                                                                                                                  | PLA                                    | PLA                                    | Y                                                                                                                               | SPQ                                               | OFQ                                        | 23-37 15 00       |                                                                          | M                                                          | M                                                     |
| 13         | Audio Video System (AV)                                        | Recorder                                                                                                                                                                                                                                                                                | REC                                    | REC                                    | Y                                                                                                                               | SPQ                                               | OFQ                                        | 23-37 15 21       |                                                                          | M                                                          | M                                                     |
| 13         | Audio Video System (AV)                                        | Splitter                                                                                                                                                                                                                                                                                | SPL                                    | SPL                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 13         | Audio Video System (AV)                                        | Switch (including the switches for HDMI, VGA, DVI, multimedia etc.)                                                                                                                                                                                                                     | SW                                     | SW                                     | Y                                                                                                                               | ELF                                               | SWC                                        | 23-29 13 00       |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Audio System ( <sup>^</sup> )                                                                                                                                                                                                                                                           | AUS                                    | AUS                                    | Y                                                                                                                               | N/A                                               |                                            | 23-37 15 00       |                                                                          | N/A                                                        |                                                       |
| 14         | Audio System (AUS)                                             | Amplifier                                                                                                                                                                                                                                                                               | AMP                                    | AMP                                    | Y                                                                                                                               | COM                                               | AMP                                        | 23-37 15 29 11 15 |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Annunciator                                                                                                                                                                                                                                                                             | ANN                                    | ANN                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Chairman Unit                                                                                                                                                                                                                                                                           | CHU                                    | CHU                                    | Y                                                                                                                               | COM                                               | MIC                                        | 23-37 00 00       |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Controller                                                                                                                                                                                                                                                                              | CTR                                    | CTR                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 29       |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Delegate Unit                                                                                                                                                                                                                                                                           | DEU                                    | DEU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Equalizer                                                                                                                                                                                                                                                                               | EQU                                    | EQU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 29 11 17 |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Intercom Master Station                                                                                                                                                                                                                                                                 | IMS                                    | IMS                                    | Y                                                                                                                               | COM                                               | ICM                                        | 23-37 27 15       |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Intercom Slave Station                                                                                                                                                                                                                                                                  | ISS                                    | ISS                                    | Y                                                                                                                               | COM                                               | ICS                                        | 23-37 27 15       |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Interpreter Unit                                                                                                                                                                                                                                                                        | INT                                    | INT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Loudspeaker                                                                                                                                                                                                                                                                             | LOU                                    | LOU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 29 11 13 |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Loop Amplifier                                                                                                                                                                                                                                                                          | LAM                                    | LAM                                    | Y                                                                                                                               | COM                                               | AMP                                        | 23-37 15 29       |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Matrix                                                                                                                                                                                                                                                                                  | MAT                                    | MAT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Microphone                                                                                                                                                                                                                                                                              | MIC                                    | MIC                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 29 11 11 |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Mixer                                                                                                                                                                                                                                                                                   | MIX                                    | MIX                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Miscellaneous (including analyser, antenna, audio tape, players, combiner, converter, extender, IR emitter, IR receiver, monitor, processor, simulator interpretation system, sound box, splitter, switcher, tape, transcribers, UPS, zone selector etc.)                               | MIS                                    | MIS                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | Network Switch                                                                                                                                                                                                                                                                          | NES                                    | NES                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 17 25    |                                                                          |                                                            | M                                                     |
| 14         | Audio System (AUS)                                             | PC Workstation                                                                                                                                                                                                                                                                          | PCW                                    | PCW                                    | Y                                                                                                                               | FNJ                                               | PRT                                        | 23-37 13 00       |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | Recorder                                                                                                                                                                                                                                                                                | REC                                    | REC                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 21 11    |                                                                          | M                                                          | M                                                     |
| 14         | Audio System (AUS)                                             | T-coil (Hearing Aid)                                                                                                                                                                                                                                                                    | TCO                                    | TCO                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 15         | Radio System (RS)                                              | Radio System ( <sup>^</sup> )                                                                                                                                                                                                                                                           | RS                                     | RS                                     | Y                                                                                                                               | N/A                                               |                                            | 23-37 23 00       |                                                                          | N/A                                                        |                                                       |
| 15         | Radio System (RS)                                              | Accessories (including battery charger, speaker, earpiece, microphone, multiplexer, PTT switch etc.)                                                                                                                                                                                    | ACC                                    | AES                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 00       |                                                                          |                                                            | M                                                     |
| 15         | Radio System (RS)                                              | Antenna                                                                                                                                                                                                                                                                                 | ANT                                    | ANT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 23 19       |                                                                          |                                                            | M                                                     |
| 15         | Radio System (RS)                                              | Base Radio/Repeater (including transmitter, receiver, transceiver bi-directional amplifier etc.)                                                                                                                                                                                        | BRR                                    | BRR                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 23 21       |                                                                          | M                                                          | M                                                     |
| 15         | Radio System (RS)                                              | Console (e.g. workstation)                                                                                                                                                                                                                                                              | CONS                                   | CONS                                   | Y                                                                                                                               | FNJ                                               | PRT                                        | 23-37 13 00       |                                                                          |                                                            | M                                                     |
| 15         | Radio System (RS)                                              | Network Equipment (including switch, router, firewall, encryptor, server, modem etc.)                                                                                                                                                                                                   | NEE                                    | NEE                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 17       |                                                                          |                                                            | M                                                     |
| 15         | Radio System (RS)                                              | Power Supply (e.g. UPS, DC power supply)                                                                                                                                                                                                                                                | POS                                    | POS                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-35 31 11       |                                                                          |                                                            | M                                                     |
| 15         | Radio System (RS)                                              | Radio Terminals                                                                                                                                                                                                                                                                         | RAT                                    | RAT                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 23 19       |                                                                          |                                                            | M                                                     |
| 15         | Radio System (RS)                                              | RF Interface Unit (including duplexer, coupler combiner, exciter, filter, splitter etc.)                                                                                                                                                                                                | RIU                                    | RIU                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 23 19       |                                                                          | M                                                          | M                                                     |
| 15         | Radio System (RS)                                              | Voice logger                                                                                                                                                                                                                                                                            | VLO                                    | VLO                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 00       |                                                                          | M                                                          | M                                                     |
| 16         | Closed Circuit TV System (CCTV)<br>(Non-burglar-alarm purpose) | CCTV System ( <sup>^</sup> )<br>(Note 8)                                                                                                                                                                                                                                                | CCTV                                   | CCTV                                   | Y                                                                                                                               | N/A                                               |                                            | 23-29 11 00       |                                                                          | N/A                                                        |                                                       |
| 16         | Closed Circuit TV System (CCTV)                                | Camera                                                                                                                                                                                                                                                                                  | CAM                                    | CAM                                    | Y                                                                                                                               | SCD                                               | OTR                                        | 23-37 15 11       |                                                                          |                                                            | M                                                     |
| 16         | Closed Circuit TV System (CCTV)                                | Console/ Server (e.g. workstation)                                                                                                                                                                                                                                                      | CONS                                   | CONS                                   | Y                                                                                                                               | FNJ                                               | PRT                                        | 23-37 13 00       |                                                                          |                                                            | M                                                     |
| 16         | Closed Circuit TV System (CCTV)                                | Display Unit (including video wall, projector, monitor, LCD panel etc.)                                                                                                                                                                                                                 | DIU                                    | DIU                                    | Y                                                                                                                               | COM                                               | DPL                                        | 23-29 13 00       |                                                                          | M                                                          | M                                                     |
| 16         | Closed Circuit TV System (CCTV)                                | Miscellaneous (including O/E converter, E/O converter, video encoder, video decoder, VDA, HDMI extender, PoE injector, PoE splitter, selector/ switcher etc.)                                                                                                                           | MIS                                    | MIS                                    | Y                                                                                                                               | SCD                                               | OTR                                        | 23-37 15 00       |                                                                          |                                                            | M                                                     |
| 16         | Closed Circuit TV System (CCTV)                                | Network Switch                                                                                                                                                                                                                                                                          | NES                                    | NES                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 13 17 25    |                                                                          |                                                            | M                                                     |
| 16         | Closed Circuit TV System (CCTV)                                | Video Recorder                                                                                                                                                                                                                                                                          | VIR                                    | VIR                                    | Y                                                                                                                               | COM                                               | OTR                                        | 23-37 15 21 13    |                                                                          | M                                                          | M                                                     |

| BIM-AM No. | BIM-AM<br>EMSD System Name & Codes                           | BIM-AM<br>EMSD Equipment Type<br>( <sup>^</sup> ): Level 1 equipment type<br>( <sup>*</sup> ): Not existed in the EMSD asset templates.                                                            | BIM-AM Version 2.0<br>EMSD Equipment Code | BIM-AM Version 3.0<br>EMSD Equipment Code | EMSD CCS Templates Available<br>(Y - Yes)/ (G-Generic Template)/ (N-No Template)<br>Liaise with EMSD O&M team for the templates | BIM Object<br>CAT Code<br>(Codes of CIC Master List) | Functional Type (Codes of<br>CIC Master List) | Omni Class Number | Provision of Asset Tag<br>RFID tag with QR Code<br>Label<br>(M - Mandatory) | Provision of Asset Tag<br>QR Code Label<br>(M - Mandatory) | Provision of Zone Tag<br>QR Code Label(M -<br>Mandatory) |
|------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------|-------------------|-----------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|
| 16         | Closed Circuit TV System (CCTV)                              | Video Matrix                                                                                                                                                                                       | VIM                                       | VIM                                       | Y                                                                                                                               | SCD                                                  | CTV                                           | 23-37 15 00       |                                                                             | M                                                          | M                                                        |
| 17         | Broadcast Reception Installation - UHF TV System (UTV)       | UHF TV System ( <sup>^</sup> )                                                                                                                                                                     | UTV                                       | UTV                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-37 25 00       | N/A                                                                         |                                                            |                                                          |
| 17         | Broadcast Reception Installation - UHF TV System (UTV)       | Accessories (including attenuator, rejection filter, CCTV modulator, RF modulator, equalizer, power supply unit, splitter, tee unit, channel optic coupler, combiner, filter optics receiver etc.) | ACC                                       | AES                                       | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 25 00       |                                                                             |                                                            | M                                                        |
| 17         | Broadcast Reception Installation - UHF TV System (UTV)       | Antenna/Preamplifier (including bandpass filter)                                                                                                                                                   | ANT/PAM                                   | ANT/PAM                                   | Y                                                                                                                               | SCD                                                  | OTR                                           | 23-37 25 00       |                                                                             | M                                                          | M                                                        |
| 17         | Broadcast Reception Installation - UHF TV System (UTV)       | Channel Amplifier/Amplifier                                                                                                                                                                        | AMP                                       | AMP                                       | Y                                                                                                                               | COM                                                  | AMP                                           | 23-37 25 19 15    |                                                                             | M                                                          | M                                                        |
| 17         | Broadcast Reception Installation - Satellite TV System (STV) | Satellite TV System ( <sup>^</sup> )                                                                                                                                                               | STV                                       | STV                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-37 23 23       | N/A                                                                         |                                                            |                                                          |
| 17         | Broadcast Reception Installation - Satellite TV System (STV) | Accessories (including satellite IF outlet, wide-band splitter, wide-band T-unit, motor control kit, sat. multi-switch, steel frame cleaning, optical transmitter, fiber cable etc.)               | ACC                                       | AES                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-37 23 23       |                                                                             |                                                            | M                                                        |
| 17         | Broadcast Reception Installation - Satellite TV System (STV) | Antenna / Amplifier (including satellite dish, antenna, IF insertion amplifier, feedhorn, LNB etc.)                                                                                                | ANT/AMP                                   | ANT/AMP                                   | Y                                                                                                                               | COM                                                  | AMP                                           | 23-37 25 19 15    |                                                                             |                                                            | M                                                        |
| 17         | Broadcast Reception Installation - Satellite TV System (STV) | Converter (including programmable controller)                                                                                                                                                      | CON                                       | CON                                       | Y                                                                                                                               | COM                                                  | OTR                                           | 23-37 23 23       |                                                                             | M                                                          | M                                                        |
| 17         | Broadcast Reception Installation - Satellite TV System (STV) | Receiver (including satellite receiver, RF modulator, amplifier etc.)                                                                                                                              | REC                                       | RECV                                      | Y                                                                                                                               | COM                                                  | OTR                                           | 23-37 23 23       |                                                                             | M                                                          | M                                                        |
| 18         | Lighting System (LTG)                                        | Lighting System ( <sup>^</sup> )                                                                                                                                                                   | LTG                                       | LTG                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-35 47 00       | N/A                                                                         |                                                            |                                                          |
| 18         | Lighting System (LTG)                                        | Light / Photo Sensor                                                                                                                                                                               | N/A                                       | LS                                        | N                                                                                                                               | LTD                                                  | OPS                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 18         | Lighting System (LTG)                                        | Lighting Control System (including Control panel, room controller, partition controller, Digital Addressable Lighting Interface (DALI) Workstation, lighting controller, relay controller)         | LCS                                       | LCS                                       | Y                                                                                                                               | N/A                                                  |                                               | 23-27 15 21       | M<br>(Note 4)<br>(For control panel only)                                   |                                                            | M                                                        |
| 18         | Lighting System (LTG)                                        | Luminaire (including external and exterior lighting and signs)                                                                                                                                     | LUM                                       | LUM                                       | Y                                                                                                                               | LTG                                                  | OTR                                           | 23-35 47 11       |                                                                             |                                                            | M                                                        |
| 18         | Lighting System (LTG)                                        | Motion and Occupancy Sensor                                                                                                                                                                        | N/A                                       | MSEN                                      | N                                                                                                                               | LTD                                                  | OPS                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 19         | Electrical Distribution System (EL)                          | Electrical Distribution System ( <sup>^</sup> )                                                                                                                                                    | EL                                        | EL                                        | N                                                                                                                               | N/A                                                  |                                               | 23-35 31 00       | N/A                                                                         |                                                            |                                                          |
| 19         | Electrical Distribution System (EL)                          | Distribution Board                                                                                                                                                                                 | DTB                                       | DTB                                       | N                                                                                                                               | ELQ                                                  | PAN                                           | 23-35 31 13       | M                                                                           |                                                            | M                                                        |
| 19         | Electrical Distribution System (EL)                          | Fuse switch & Switch fuse                                                                                                                                                                          | FSW                                       | FSW                                       | N                                                                                                                               | ELF                                                  | OTR                                           | 23-35 29 29       |                                                                             |                                                            | M                                                        |
| 19         | Electrical Distribution System (EL)                          | Isolating switch                                                                                                                                                                                   | ISW                                       | ISW                                       | N                                                                                                                               | ELF                                                  | SWC                                           | 23-35 37 00       |                                                                             |                                                            | M                                                        |
| 19         | Electrical Distribution System (EL)                          | Power Distribution Unit (PDU)                                                                                                                                                                      | N/A                                       | PDU                                       | N                                                                                                                               | ELF                                                  | OTR                                           | 23-35 31 27       |                                                                             |                                                            | M                                                        |
| 19         | Electrical Distribution System (EL)                          | Solar Photovoltaic (PV) System (including PV panels, control panel, inverter, battery and isolation transformer)                                                                                   | PV                                        | PV                                        | G                                                                                                                               | SPQ                                                  | SUD                                           | 23-35 11 17       |                                                                             |                                                            | M                                                        |
| 20         | Medical Gas System (MG)                                      | Medical Gas System ( <sup>^</sup> )                                                                                                                                                                | MG                                        | MG                                        | G                                                                                                                               | N/A                                                  |                                               | 23-25 33 00       | N/A                                                                         |                                                            |                                                          |
| 20         | Medical Gas System (MG)                                      | Blower (for Anaesthetic Gas Scavenging System)                                                                                                                                                     | AGP                                       | AGP                                       | G                                                                                                                               | MCQ                                                  | AIC                                           | 23-25 00 00       | M                                                                           |                                                            | M                                                        |
| 20         | Medical Gas System (MG)                                      | Compressor (including those for medical air and surgical air)                                                                                                                                      | COM                                       | COMP                                      | G                                                                                                                               | MCQ                                                  | AIC                                           | 23-25 00 00       | M                                                                           |                                                            | M                                                        |
| 20         | Medical Gas System (MG)                                      | Manifold (including those for O <sub>2</sub> , N <sub>2</sub> O, MA4, SA7 and compressed air)                                                                                                      | MAN                                       | MAN                                       | G                                                                                                                               | PPA                                                  | VLV                                           | 23-25 33 23       |                                                                             |                                                            | M                                                        |
| 20         | Medical Gas System (MG)                                      | Oxygen VIE Tank                                                                                                                                                                                    | VIE                                       | VIE                                       | G                                                                                                                               | MCQ                                                  | PWS                                           | 23-25 00 00       | M<br>(Note 6)                                                               |                                                            |                                                          |
| 20         | Medical Gas System (MG)                                      | Receiver/ Reservoir (including those for medical air and surgical air)                                                                                                                             | REC                                       | RECV/RES                                  | G                                                                                                                               | MCQ                                                  | PWS                                           | 23-25 00 00       | M                                                                           |                                                            | M                                                        |
| 20         | Medical Gas System (MG)                                      | Vacuum Pump                                                                                                                                                                                        | VP                                        | VP                                        | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-25 00 00       | M                                                                           |                                                            | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Pneumatic Tube Transport ( <sup>^</sup> )                                                                                                                                                          | PTS                                       | PTS                                       | G                                                                                                                               | N/A                                                  |                                               | 23-23 17 21       | N/A                                                                         |                                                            |                                                          |
| 21         | Pneumatic Tube Transport (PTS)                               | 2-Way Diverter                                                                                                                                                                                     | 2WD                                       | 2WD                                       | G                                                                                                                               | PPA                                                  | VLV                                           | 23-23 17 21       | M                                                                           |                                                            | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | 3-Way Diverter                                                                                                                                                                                     | 3WD                                       | 3WD                                       | G                                                                                                                               | PPA                                                  | VLV                                           | 23-23 17 21       | M                                                                           |                                                            | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Blower Unit                                                                                                                                                                                        | BLW                                       | BLW                                       | G                                                                                                                               | MCQ                                                  | AIC                                           | 23-23 17 21       | M                                                                           |                                                            | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Central Control Unit                                                                                                                                                                               | CCU                                       | CCU                                       | G                                                                                                                               | MCQ                                                  | CCM                                           | 23-23 17 21 13    |                                                                             | M                                                          | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Dumping Station                                                                                                                                                                                    | DS                                        | DS                                        | G                                                                                                                               | MCQ                                                  | OTR                                           | 23-23 17 21       |                                                                             |                                                            | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Empty Carrier Storage Station                                                                                                                                                                      | ECS                                       | ECS                                       | G                                                                                                                               | MCQ                                                  | OTR                                           | 23-23 17 21       |                                                                             |                                                            | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Master Workstation                                                                                                                                                                                 | MW                                        | MW                                        | G                                                                                                                               | MCQ                                                  | OTR                                           | 23-23 17 21       |                                                                             | M                                                          | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Power Pack                                                                                                                                                                                         | PP                                        | PP                                        | G                                                                                                                               | MCQ                                                  | AIC                                           | 23-23 17 21       |                                                                             |                                                            | M                                                        |
| 21         | Pneumatic Tube Transport (PTS)                               | Sending and Receiving Station                                                                                                                                                                      | SRS                                       | SRS                                       | G                                                                                                                               | NCD                                                  | NST                                           | 23-23 17 21       |                                                                             |                                                            | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Internet-of-thing Installation-Sensor ( <sup>^</sup> )                                                                                                                                             | N/A                                       | SEN                                       | N                                                                                                                               | N/A                                                  |                                               | 23-27 11 00       | N/A                                                                         |                                                            |                                                          |
| 22         | Internet-of-thing Installation (IoT)                         | Air Quality Sensor                                                                                                                                                                                 | N/A                                       | IAQ                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Controller & Convertor                                                                                                                                                                             | N/A                                       | CTR                                       | N                                                                                                                               | ELQ                                                  | OTR                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Current Transformer Sensor                                                                                                                                                                         | N/A                                       | CTS                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-35 13 11       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Distance Sensor                                                                                                                                                                                    | N/A                                       | DIS                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Display Unit                                                                                                                                                                                       | N/A                                       | DIU                                       | N                                                                                                                               | ELQ                                                  | OTR                                           | 23-29 13 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | IoT Gateway                                                                                                                                                                                        | N/A                                       | GTW                                       | N                                                                                                                               | ELQ                                                  | OTR                                           | 23-37 13 17 21    |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Level Detection Sensor                                                                                                                                                                             | N/A                                       | LVL                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-27 11 21 23    |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Light Sensor                                                                                                                                                                                       | N/A                                       | LIG                                       | N                                                                                                                               | LTD                                                  | DYS                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Location Tracker                                                                                                                                                                                   | N/A                                       | LOC                                       | N                                                                                                                               | ELQ                                                  | OTR                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Magnetic Door Sensor                                                                                                                                                                               | N/A                                       | MAG                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-17 19 11 29 11 |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Occupancy Sensor                                                                                                                                                                                   | N/A                                       | OCS                                       | N                                                                                                                               | LTD                                                  | OPS                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | People Counting Sensor                                                                                                                                                                             | N/A                                       | PCT                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Toggle Button                                                                                                                                                                                      | N/A                                       | BUT                                       | N                                                                                                                               | ELQ                                                  | OTR                                           | 23-35 37 49       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Vehicle Occupancy Sensor                                                                                                                                                                           | N/A                                       | VOC                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-27 11 00       |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Vibration Sensor                                                                                                                                                                                   | N/A                                       | VIB                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-29 11 23 29    |                                                                             | M                                                          | M                                                        |
| 22         | Internet-of-thing Installation (IoT)                         | Water Leakage Sensor                                                                                                                                                                               | N/A                                       | LEK                                       | N                                                                                                                               | ELF                                                  | SNR                                           | 23-29 39 15 13 13 |                                                                             | M                                                          | M                                                        |
| 23         | High Voltage Power Supply (HV)                               | High Voltage Power Supply System ( <sup>^</sup> )                                                                                                                                                  | N/A                                       | HV                                        | N                                                                                                                               | N/A                                                  |                                               | 23-35 00 00       | N/A                                                                         |                                                            |                                                          |
| 23         | High Voltage Power Supply (HV)                               | HV Switchboards                                                                                                                                                                                    | N/A                                       | HVB                                       | N                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 31 29       | M                                                                           |                                                            | M                                                        |
| 23         | High Voltage Power Supply (HV)                               | Step Down Transformer                                                                                                                                                                              | N/A                                       | SDT                                       | N                                                                                                                               | ELQ                                                  | TRN                                           | 23-35 13 15 13    | M                                                                           |                                                            | M                                                        |
| 24         | Private Automatic Branch Exchange System (PX)                | Private Automatic Branch Exchange System ( <sup>^</sup> )                                                                                                                                          | N/A                                       | PX                                        | N                                                                                                                               | N/A                                                  |                                               | 23-37 13 00       | N/A                                                                         |                                                            |                                                          |
| 24         | Private Automatic Branch Exchange System (PX)                | Backup Batteries                                                                                                                                                                                   | N/A                                       | BAT                                       | N                                                                                                                               | ELQ                                                  | LAS                                           | 23-35 19 00       |                                                                             |                                                            | M                                                        |
| 24         | Private Automatic Branch Exchange System (PX)                | Network Switch/ Console/ PBX Server                                                                                                                                                                | N/A                                       | NES                                       | N                                                                                                                               | ELF                                                  | SWC                                           | 23-37 13 17 25    |                                                                             |                                                            | M                                                        |
| 25         | Automatic Refuse Collection System (ARCS)                    | Automatic Refuse Collection System ( <sup>^</sup> )                                                                                                                                                | N/A                                       | ARCS                                      | N                                                                                                                               | N/A                                                  |                                               | 23-39 45 27       | N/A                                                                         |                                                            |                                                          |
| 25         | Automatic Refuse Collection System (ARCS)                    | Automatic Refuse Collection System Compactor                                                                                                                                                       | N/A                                       | ARCSP                                     | N                                                                                                                               | MCQ                                                  | OTR                                           | 23-39 45 27       |                                                                             |                                                            | M                                                        |
| 25         | Automatic Refuse Collection System (ARCS)                    | Automatic Refuse Collection System Container                                                                                                                                                       | N/A                                       | ARCST                                     | N                                                                                                                               | MCQ                                                  | OTR                                           | 23-39 45 27 13    |                                                                             |                                                            | M                                                        |
| 25         | Automatic Refuse Collection System (ARCS)                    | Automatic Refuse Collection System Exhauster                                                                                                                                                       | N/A                                       | ARCSX                                     | N                                                                                                                               | MCQ                                                  | OTR                                           | 23-39 45 27       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                                | Plumbing System ( <sup>^</sup> )                                                                                                                                                                   | PL                                        | PL                                        | G                                                                                                                               | N/A                                                  |                                               | 23-31 00 00       | N/A                                                                         |                                                            |                                                          |
| A1         | Plumbing System (PL) (Note 7)                                | Booster Pump                                                                                                                                                                                       | BPMP                                      | BP                                        | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                                | Electric Heater                                                                                                                                                                                    | EHT                                       | EHT                                       | G                                                                                                                               | PLM                                                  | WHT                                           | 23-31 29 11 11    |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                                | Fresh Water Pump                                                                                                                                                                                   | N/A                                       | FWP                                       | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                                | Flushing Water Pump                                                                                                                                                                                | N/A                                       | FLWP                                      | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |

| BIM-AM No. | BIM-AM<br>EMSD System Name & Codes                  | BIM-AM<br>EMSD Equipment Type<br>(^): Level 1 equipment type<br>(*): Not existed in the EMSD asset templates. | BIM-AM Version 2.0<br>EMSD Equipment Code | BIM-AM Version 3.0<br>EMSD Equipment Code | EMSD CCS Templates Available<br>(Y - Yes)/ (G-Generic Template)/ (N-No Template)<br>Liaise with EMSD O&M team for the templates | BIM Object<br>CAT Code<br>(Codes of CIC Master List) | Functional Type (Codes of<br>CIC Master List) | Omni Class Number | Provision of Asset Tag<br>RFID tag with QR Code<br>Label<br>(M - Mandatory) | Provision of Asset Tag<br>QR Code Label<br>(M - Mandatory) | Provision of Zone Tag<br>QR Code Label(M -<br>Mandatory) |
|------------|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------------------|-------------------|-----------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------|
| A1         | Plumbing System (PL) (Note 7)                       | Gas Heater                                                                                                    |                                           | GAH                                       | G                                                                                                                               | PLM                                                  | WHT                                           | 23-31 29 11 13    |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                       | Local Motor Control Panel (*)                                                                                 |                                           | LMCP                                      | N                                                                                                                               | ELQ                                                  | PAN                                           | 23-27 15 25       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                       | Portable Water Pump                                                                                           |                                           | N/A                                       | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                       | Pressure Vessel                                                                                               |                                           | PVES                                      | G                                                                                                                               | MCQ                                                  | PRV                                           | 23-31 00 00       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                       | Pressure Reducing Valve                                                                                       |                                           | PRV                                       | G                                                                                                                               | PPA                                                  | VLV                                           | 23-27 31 47       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                       | Transfer Pump                                                                                                 |                                           | TPMP                                      | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |
| A1         | Plumbing System (PL) (Note 7)                       | Water Filter for Drinking Fountain                                                                            |                                           | N/A                                       | G                                                                                                                               | MCQ                                                  | OTR                                           | 23-31 31 00       |                                                                             |                                                            | M                                                        |
| A2         | Drainage System (DR) (Note 7)                       | Drainage System (^)                                                                                           |                                           | DR                                        | G                                                                                                                               | N/A                                                  |                                               | 23-39 29 00       |                                                                             | N/A                                                        |                                                          |
| A2         | Drainage System (DR) (Note 7)                       | Local Motor Control Panel (*)                                                                                 |                                           | LMCP                                      | N                                                                                                                               | ELQ                                                  | PAN                                           | 23-27 15 25       |                                                                             |                                                            | M                                                        |
| A2         | Drainage System (DR) (Note 7)                       | Rainwater Sump Pump                                                                                           |                                           | RWSP                                      | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |
| A2         | Drainage System (DR) (Note 7)                       | Soil and Waste Water Sump Pump                                                                                |                                           | SWSP                                      | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |
| A2         | Drainage System (DR) (Note 7)                       | Waste Water Sump Pump                                                                                         |                                           | WWSP                                      | G                                                                                                                               | MCQ                                                  | PMP                                           | 23-27 17 00       |                                                                             |                                                            | M                                                        |
| A3         | Water Leakage Detection System (LDS)                | Water Leakage Detection System (^)                                                                            |                                           | LDS                                       | G                                                                                                                               | N/A                                                  |                                               | 23-29 39 15 13 13 |                                                                             | N/A                                                        |                                                          |
| A3         | Water Leakage Detection System (LDS)                | Leak Detection Panel                                                                                          |                                           | LDP                                       | G                                                                                                                               | ELQ                                                  | PAN                                           | 23-29 39 15 13 13 |                                                                             |                                                            | M                                                        |
| A4         | Mechanical Handling & Lifting<br>Installation (MHL) | Mechanical Handling & Lifting Installation (^)                                                                |                                           | MHL                                       | G                                                                                                                               | N/A                                                  |                                               | 23-23 13 00       |                                                                             | N/A                                                        |                                                          |
| A4         | Mechanical Handling & Lifting<br>Installation (MHL) | Gondola (*)                                                                                                   |                                           | GON                                       | G                                                                                                                               | SPQ                                                  | BMU                                           | 23-23 17 00       |                                                                             |                                                            | M                                                        |

Note 1: Paper asset tags for lifts shall be provided underneath the “use permit” inside lift cars.

Note 2: Paper asset tags for escalators shall be provided underneath the “use permit”.

Note 3: Mandatory for cylinders, but not mandatory for control panel and nozzles. The asset tag shall be installed on the corresponding gas suppression system control panel.

Note 4: Mandatory for control panel, but not mandatory for all detectors.

Note 5: The asset information for network switch and display unit shall follow the asset template of “Accessories” or “Miscellaneous”.

Note 6: The RFID tag should be tied to the metal fencing outside the concrete enclosure of oxygen VIE tank.

Note 7: Requirements for all plumbing and drainage equipment should be with reference to the related BIM standards or guidelines issued by Architectural Services Department (ArchSD) and Drainage Services Department (DSD).

Note 8: Please note that Closed Circuit TV System (CCTV) shall refer to non-burglar alarm purpose such as CCTV at LVS room, people control and thermal camera.

Note 9: (^) Except LV Switchboard, Generator and Cold Room/ Store, Level 1 system cannot be drawn in model, and is created by means of asset templates via AIMP.

Note 10: Project BIM Manager may further create other system types if any specific system is not listed above. And the system name and coding used in a project should be agreed by all parties and documented in the project execution plan.

Note 11: Those equipment marked with (\*) is not in EMSD asset templates. The asset information shall follow table 6.2 in BIM-AM Standards and Guideline Section 6.