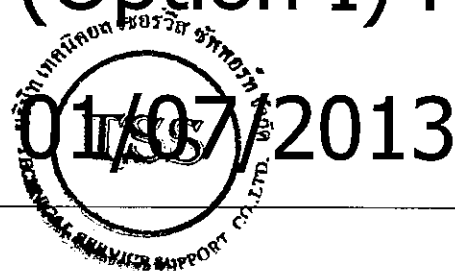




# e-Government Agency Data Center Upgrade

## ELECTRICAL SYSTEM of 5&6 the Car park, 11 th Floor PLAN Phase II (Option I) For Tender



**TSSI**

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DRAWING LIST	
DWG.NO.	DESCRIPTION
01-EE-01	DRAWING LIST, ABBREVIATION AND SYMBOLS
01-EE-02	DEMOLITION EXISTING ELECTRICAL SINGLE LINE DIAGRAM
01-EE-03	NEW ELECTRICAL SINGLE LINE DIAGRAM
01-EE-04	CCTV & ACCESS CONTROL SYSTEM WIRING DIAGRAM
01-EE-05	GROUNDING SYSTEM WIRING DIAGRAM
02-EE-01	ELECTRICAL LOAD SCHEDULE SHEET-01
02-EE-02	ELECTRICAL LOAD SCHEDULE SHEET-02
03-EE-01	DEMOLITION EXISTING ELECTRICAL MAIN ROUTING SYSTEM FOR 5th FLOOR PLAN
03-EE-02	DEMOLITION EXISTING ELECTRICAL MAIN ROUTING SYSTEM FOR 11th FLOOR PLAN
03-EE-03	ELECTRICAL MAIN ROUTING SYSTEM FOR 5th FLOOR PLAN
03-EE-04	ELECTRICAL MAIN ROUTING SYSTEM FOR 11th FLOOR PLAN
04-EE-01	COMMUNICATION MAIN ROUTING SYSTEM FOR 5th FLOOR PLAN
04-EE-02	COMMUNICATION MAIN ROUTING SYSTEM FOR 11th FLOOR PLAN
05-EE-01	DEMOLITION EXISTING LIGHTING SYSTEM FOR 5th FLOOR
05-EE-02	DEMOLITION EXISTING LIGHTING SYSTEM FOR 11th FLOOR
05-EE-03	LIGHTING SYSTEM FOR 5th FLOOR
05-EE-04	LIGHTING SYSTEM FOR 11th FLOOR
06-EE-01	ELECTRICAL POWER OUTLET SYSTEM FOR 5th FLOOR PLAN
06-EE-02	ELECTRICAL POWER OUTLET SYSTEM FOR 11th FLOOR PLAN
09-EE-03	DETAIL POWER PLUG AT RACK LOW DENSITY
06-EE-04	POWER SUPPLY FOR AIR CONDITIONING SYSTEM FOR 11th FLOOR PLAN
07-EE-01	DATA OUTLET SYSTEM FOR 11th FLOOR PLAN
08-EE-01	FIRE ALARM SYSTEM FOR 11th FLOOR PLAN
09-EE-01	DEMOLITION EXISTING CCTV SYSTEM FOR 11th FLOOR PLAN
09-EE-02	CCTV SYSTEM FOR 5th FLOOR PLAN
09-EE-03	CCTV SYSTEM FOR 11th FLOOR PLAN
10-EE-01	EXISTING ACCESS CONTROL SYSTEM FOR 11th FLOOR PLAN
10-EE-02	ACCESS CONTROL SYSTEM FOR 5th FLOOR PLAN
10-EE-03	ACCESS CONTROL SYSTEM FOR 11th FLOOR PLAN
11-EE-01	GROUNDING SYSTEM WITH GEN. FOR 5th FLOOR PLAN
11-EE-02	GROUNDING SYSTEM FOR RACK 11th FLOOR PLAN
11-EE-03	GROUNDING SYSTEM GRID LINE FOR UNDER RASSED FLOOR 11th FLOOR PLAN

ELECTRICAL SYSTEM SYMBOLS	
SYMBOL	DESCRIPTION
	DRYTYPE CAST RESIN TRANSFORMER OR STANDBY GENERATOR
	HIGH VOLTAGE LOAD BREAK SWITCH
	HIGH VOLTAGE FUSE
	CIRCUIT BREAKER
	MAIN DISTRIBUTION BOARD OR ESSENTIAL MAIN DISTRIBUTION BOARD
	DISTRIBUTION BOARD OR ESSENTIAL DISTRIBUTION BOARD
	PANEL BOARD OR ESSENTIAL PANEL BOARD
	CURRENT TRANSFORMER
	CONTROL FUSE AND FUSE BASE
	PILOT LAMP
	SELECTOR SWITCH
	VOLT METER
	AMMETER
	KILOWATT-HOURS METER
	KILOWATT METER
	POWER FACTOR METER
	KILO-VAR CONTROLLER
	CAPACITOR BANK
	AIR CONDITION OR SANITARY MOTOR CENTER BOARD
	ESSENTIAL AIR CONDITION OR SANITARY MOTOR CENTER BOARD
	UP TO
	DOWN TO
	NORMAL CIRCUIT
	EMERGENCY CIRCUIT
	NIGHT LIGHT CIRCUIT
	EMT OR IMC
	CONCRETE POLE 14 M. OR 12 M.
	FLUORESCENT LED 2x19MM MASTER TLED INT DRVR STD T8 19W 840 G13
	FLUORESCENT LED 1x19MM MASTER TLED INT DRVR STD T8 18W 840 G13
	MOTION DETECTION INSTALL ABOVE CEILING
	MOTION DETECTION INST ALL WALL MOUNTED
	EXIT SIGN (DOOR EXIT) (MAX BRIGHT C.E.E. TYPE EXB 1114-LED 40 LED 2x5 W WALL BOX TYPE)
	FIRE EXIT SIGN (1 SIDE VIEW) (MAX BRIGHT C.E.E. TYPE EXB 3035-ED 24 LED 1x5 W SLIMLINE TYPE)
	FIRE EXIT SIGN (2 SIDE VIEW) (MAX BRIGHT C.E.E. TYPE EXB 3037-ED 24 LED 1x5 W SLIMLINE TYPE)
	SINGLE SWITCH 10A 230V
	SINGLE SWITCH 10A 230V FOR EXHAUST FAN
	TWO WAY SWITCH 10A 230V
	DIMMER SWITCH MINIMUM 200 W.
	NIGHT LIGHT FIXTURE (ON-OFF BY TIMER 24 HR. AND SWITCH)
	EMERGENCY LIGHT (REMOTE LAMP MAX BRIGHT C.E.E. CE230-4DS 12 LED DISC WALL TYPE)
	SWITCH PANEL
	NAME OF SWITCH
	LOAD CENTER
	SIMPLEX RECEPTACLE (INSTALLED ABOVE CEILING)
	SIMPLEX RECEPTACLE 10A, 250V. (INSTALLED FL. +0.300 M.)
	DUPLEX RECEPTACLE 10A, 250V. (INSTALLED FL. +0.300 M.)
	DUPLEX RECEPTACLE 10A, 250V. POP-UP TYPE (INSTALLED CONCEAL. CONCRETE SLAB)
	DUPLEX RECEPTACLE 16A, 250V. (INSTALLED FL. +0.300 M.)
	DUPLEX RECEPTACLE 10A, 250V. (INSTALLED FL. +1.200 M. FOR HAND DRYER)
	JUNCTION BOX
	SIMPLEX RECEPTACLE (INSTALLED ABOVE CEILING FOR EXHAUST FAN)
	SAFETY SWITCH WEATHER PROOF TYPE 1P 30 A. (HEAVY DUTY)
	SAFETY SWITCH WEATHER PROOF TYPE 3P 30 A. (HEAVY DUTY)
	ELECTRICAL EQUIPMENT WEATHER PROOF TYPE
	SELF CONTAINED BATTERY EMERGENCY LIGHT WITH HALOGEN LAMP 2x55 W. SEAL LEAD ACID BATTERY 12 V.D.C. (INSTALLED UNDERNEATH CEILING -0.300 M.)

TELEPHONE AND COMMUNICATION SYSTEM SYMBOLS	
SYMBOL	DESCRIPTION
	TELEPHONE OUTLET RJ11 (CONNECTED DIRECT LINE FROM TOT)
	TELEPHONE OUTLET RJ11 (CONNECTED INTERNAL LINE FROM BUILDING) OR 4P MODULAR JACK
	COMMUNICATION OUTLET RJ45 OR 8P MODULAR JACK
	TELEPHONE AND DATA OUTLET POP-UP TYPE
	LAN HUB (PROVIDE BY OWNER)
	4C-0.65 MM. TIE IN 1/2 EMT
	UTP CAT5 CABLE IN 1/2 EMT.
	INSTALLED ABOVE CEILING
	INSTALLED HIGHEST MORE TOP OF JOINERY 10 CAL TO CENTER
	TELEPHONE CONNECTION
	PRIVATE AUTOMATIC BRANCH EXCHANGE
	ATTENDANT CONSOLE
	HOME RUN BACK PABX

FIRE ALARM SYSTEM SYMBOLS	
SYMBOL	DESCRIPTION
	FIRE ALARM CONTROL PANEL
	FIRE ALARM GRAPHIC ANNUNCIATOR
	FIRE ALARM TERMINAL BOX LOCATED AT 'X'
	HEAT DETECTOR ZONE 'X' RATE OF RISE WITH FIXED TEMPERATURE 135 F
	HEAT DETECTOR ZONE 'X' RATE OF RISE WITH FIXED TEMPERATURE 200 F
	IONIZATION SMOKE DETECTOR ZONE 'X'
	ALARM BELL ZONE 'X' DIAMETER 6 INCH
	MANUAL STATION WITH KEY SWITCH ZONE 'X'
	END OF LINE RESISTOR
	RELOCATED UNIT
	NEW UNIT
	4x1.5 SQ.MM. THW IN 1/2" EMT.
	2x1.5 SQ.MM. THW IN 1/2" EMT.

MATV AND SOUND SYSTEM SYMBOLS	
SYMBOL	DESCRIPTION
	NEW VOLUME OF SOUND SPEAKER (EXISTING SOUND SIGNAL FROM BUILDING)
	TV OUTLET
	CCTV EQUIPMENT
	STEREO EQUIPMENT
	SOUND SPEAKER
	VOLUME OF SOUND SPEAKER
	ANTENNA OF CHANNEL 3, 5, 7, 9, 11, 26
	MULTIBAND AMPLIFIER (BOOSTER) BUILT-IN POWER SUPPLY
	SPLITTER 'X' WAY
	TAP OFF 'X' WAY
	TV OUTLET INSTALLED FL. +0.300 M.
	TV OUTLET INSTALLED IN CONCRETE SLAB
	COAXIAL CABLE 75 OHM, RG 6, 11, 58

LIGHTNING AND GROUNDING SYSTEM SYMBOLS	
SYMBOL	DESCRIPTION
	AIR TERMINAL #18MM. x 600MM. LONG
	BARE COPPER GROUNDING CONDUCTOR SURFACE MOUNTED
	EXOTHERMIC CONNECTION
	COPPER CLAD STEEL GROUND ROD DIA. 16MM. x 3000MM. LONG
	TEST BOX
	DOWN CONDUCTOR

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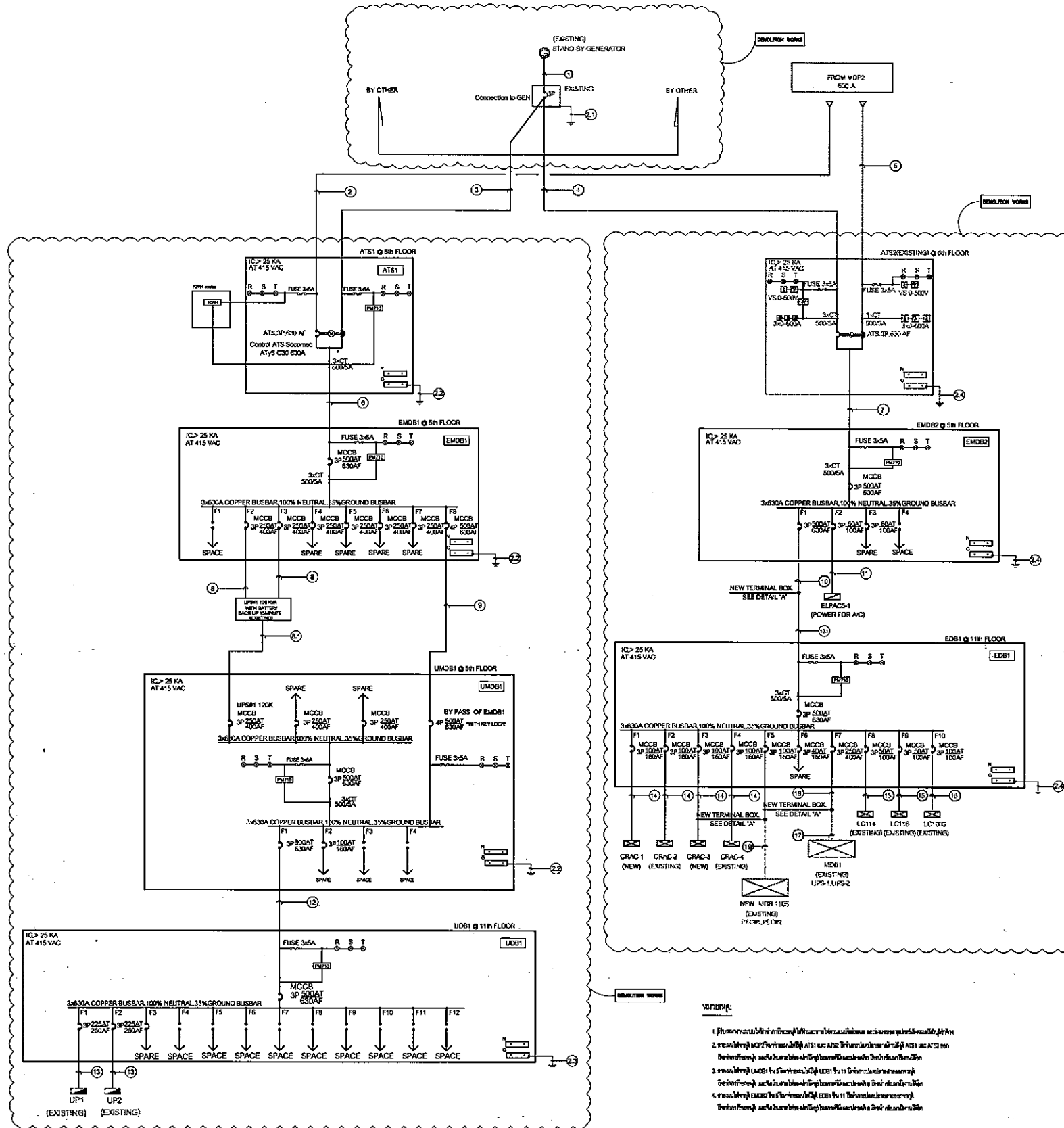
Project  
**EGA MAIN DATA CENTER  
 UPGRADE  
 PHASE II**  
 Owner  
**e-GOVERNMENT AGENCY**

Mark	Date	Description
0	01/07/2013	ISSUE FOR TENDER

Project no. : 321.000  
 Scale : A3 INTS.A1 = NTS  
 Drawn by : WEERAYUT P...  
 Chk'd by : ANIRUT S...  
 Plot date : 2013/07/2013  
 CAD dwg. file : 321.000-EE-R5 PHASE II (OPDRN I)  
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Sheet title  
**DRAWING LIST, ABBREVIATION AND  
 SYMBOLS(PHASE II)**  
**01-EE-01**  
 Sheet Of





WIRING DESCRIPTION 1 :

- ① :2(4x300/G120) SQ.MM., THW IN CABLE TRAY 400x100 MM/W.
- ② :2(4x240/G50) SQ.MM., THW IN CABLE TRAY 400x100 MM/W.
- ③ :2(4x240/G50) SQ.MM., THW IN CONDUIT DIA. 2x4" EMT.
- ④ :4x300/G35 SQ.MM., 600V/CV IN CABLE TRAY
- ⑤ :4x300/G35 SQ.MM., 600V/CV IN CABLE TRAY
- ⑥ :2(4x240/G50) SQ.MM., THW IN CABLE TRAY 300x100 MM/W.
- ⑦ :2(4x185/G35) SQ.MM., THW IN CONDUIT DIA. 2x3 1/2" EMT.
- ⑧ :4x185/G35 SQ.MM., THW IN CABLE TRAY 400x100 MM/W.
- ⑨ :4x185/G35 SQ.MM., THW IN CABLE TRAY 400x100 MM/W.
- ⑩ :4x300/G35 SQ.MM., THW IN CABLE TRAY 400x100 MM/W.
- ⑪ :4x25/G6 SQ.MM., THW IN CONDUIT DIA. 2" EMT.
- ⑫ :2(4x185/G35) SQ.MM., THW IN CABLE TRAY 300x100 MM/W.
- ⑬ :4x150/G25 SQ.MM., THW IN CONDUIT DIA. 3" EMT.
- ⑭ :4x50/G10 SQ.MM., THW IN WIRE WAY 300x100 MM/W.
- ⑮ :4x25/G6 SQ.MM., THW IN CONDUIT DIA. 2" INC.
- ⑯ :4x50/G10 SQ.MM., THW IN CONDUIT DIA. 2" INC.
- ⑰ :4x240/G25 SQ.MM., THW IN CONDUIT DIA. 3 1/2" INC.
- ⑱ :4x240/G25 SQ.MM., THW IN CONDUIT DIA. 3 1/2" INC.
- ⑲ :4x185/G25 SQ.MM., THW IN CABLE TRAY 400x100 MM/W.

WIRING DESCRIPTION 2 :

- ① :3x120 SQ.MM., THW IN CONDUIT DIA. 2 1/2" EMT.
- ② :2x50 SQ.MM., THW IN CONDUIT DIA. 1 1/2" EMT.
- ③ :2x35 SQ.MM., THW IN CONDUIT DIA. 1" EMT.
- ④ :2x35 SQ.MM., THW IN CONDUIT DIA. 1" EMT.

หมายเหตุ :  
 1. รายการนี้เป็นเพียงข้อมูลเบื้องต้นเท่านั้น รายละเอียดจะปรากฏในแบบแปลนฉบับต่อไป  
 2. รายการนี้เป็นเพียงข้อมูลเบื้องต้นเท่านั้น รายละเอียดจะปรากฏในแบบแปลนฉบับต่อไป  
 3. รายการนี้เป็นเพียงข้อมูลเบื้องต้นเท่านั้น รายละเอียดจะปรากฏในแบบแปลนฉบับต่อไป  
 4. รายการนี้เป็นเพียงข้อมูลเบื้องต้นเท่านั้น รายละเอียดจะปรากฏในแบบแปลนฉบับต่อไป

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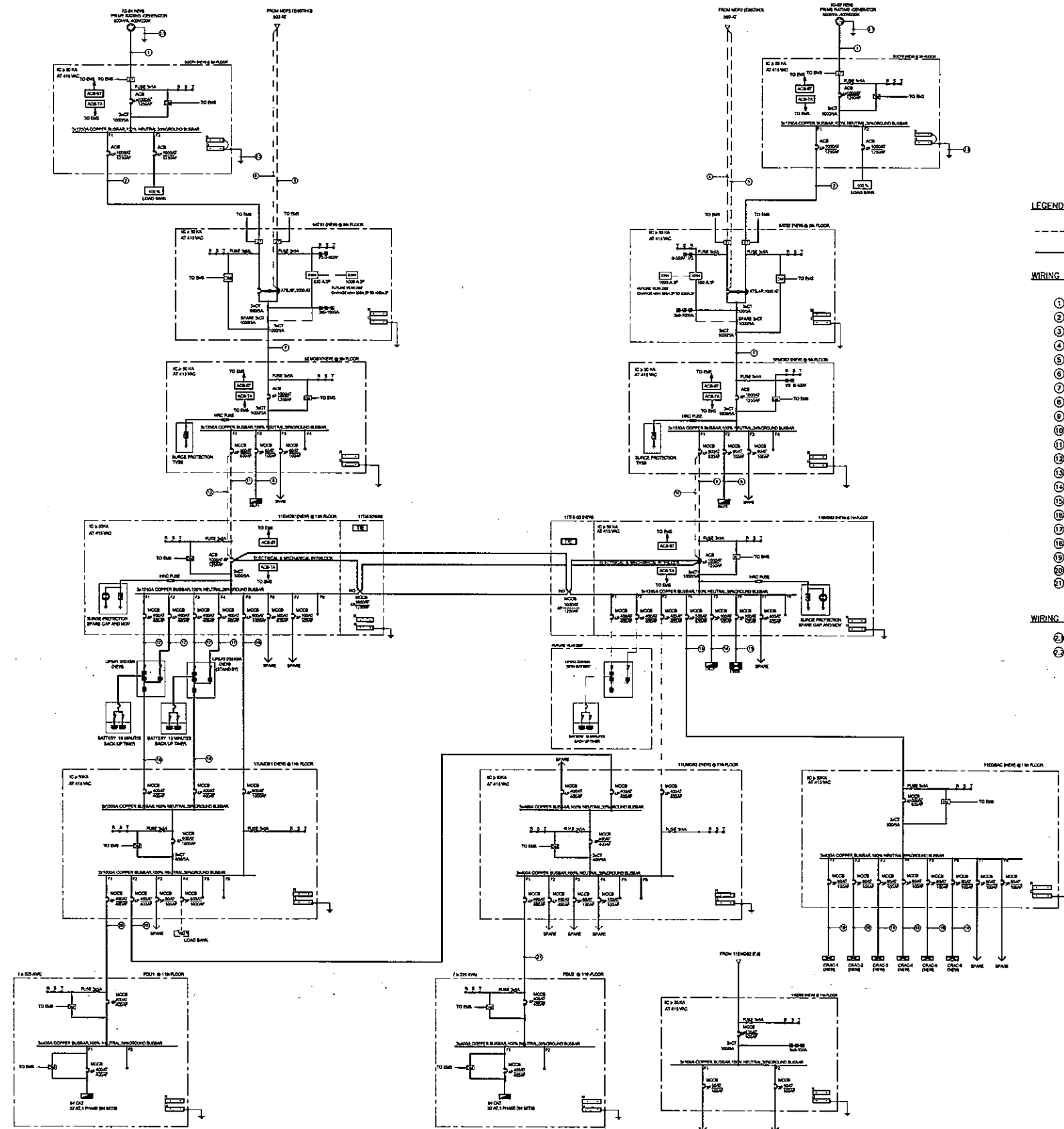
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Project  
**EGA MAIN DATA CENTER  
 UPGRADE  
 PHASE II**  
 Owner  
**e-GOVERNMENT AGENCY**

Mark	Date	Description
0	01/07/2013	ISSUE FOR TENDER

Project no. : A32-000-EE-R5  
 Scale : 1:1  
 Drawn by : WEERATON  
 Chk'd by : ANRUT S.  
 Plot date : 01/07/2013  
 CAD dwg. file : A32-000-EE-R5 PHASE II (OPTION 1)  
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Sheet title  
**DEMOLITION ELECTRICAL  
 SINGLE LINE DIAGRAM  
 (PHASE II)**  
**01-EE-02**  
 Sheet 01



- LEGEND :**
- : EXISTING WIRING CABLE
  - \_\_\_\_\_ : NEW WIRING CABLE
- WIRING DESCRIPTION 1 :**
- ① : 4(4x185)G-95 SQ.MM., THW IN CABLE TRAY 500x100 MM/W. (NEW)
  - ② : 4(4x185)G-95 SQ.MM., THW IN CABLE TRAY 500x100 MM/W. (NEW)
  - ③ : 2(4x240)G-50 SQ.MM., THW IN CABLE TRAY 400x100 (EXISTING)
  - ④ : 2(4x240)G-50 SQ.MM., THW IN CABLE TRAY 400x100 (FUTURE CABLE)
  - ⑤ : 4x300/G-35 SQ.MM., "600V/CV" IN CABLE TRAY 250x100 (EXISTING)
  - ⑥ : 4x300/G-35 SQ.MM., "600V/CV" IN CABLE TRAY 250x100 (FUTURE CABLE)
  - ⑦ : 4(4x185)G-70 SQ.MM., THW IN CABLE TRAY 500x100 MM/W. (NEW)
  - ⑧ : 4x25/G-6 SQ.MM., THW IN WIREWAY 50x100 MM/W. (NEW)
  - ⑨ : 2(4x185)G-35 SQ.MM., THW IN CABLE TRAY 400x100 (EXISTING)
  - ⑩ : 2(4x185)G-35 SQ.MM., THW IN CABLE TRAY 400x100 (FUTURE CABLE)
  - ⑪ : 4x300/G-35 SQ.MM., "600V/CV" IN CHAMBER OF RISER SHAFT (EXISTING)
  - ⑫ : 4x300/G-35 SQ.MM., "600V/CV" IN CHAMBER OF RISER SHAFT (FUTURE CABLE)
  - ⑬ : 4x50/G-10 SQ.MM., THW IN WIRE WAY 100x100 MM/W. (NEW)
  - ⑭ : 4x50/G-10 SQ.MM., THW IN WIRE WAY 100x100 MM/W. (NEW)
  - ⑮ : 2(4x185)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. (NEW)
  - ⑯ : 3(4x240)G-70 SQ.MM., THW IN CABLE TRAY 500x100 MM/W. (NEW)
  - ⑰ : 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. (NEW)
  - ⑱ : 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. (NEW)
  - ⑲ : 4x35/G-10 SQ.MM., THW IN CONDUIT DIA. 2" EMT. (NEW)
  - ⑳ : 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. (NEW)
  - ㉑ : 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. (NEW)
- WIRING DESCRIPTION 2 :**
- ① : 1x55 SQ.MM., THW IN CONDUIT DIA. 1 1/2" EMT. (NEW)
  - ② : 1x55 SQ.MM., THW IN CONDUIT DIA. 1 1/2" EMT. (NEW)

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**EGA**  
 e-Government Agency

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Project  
**EGA MAIN DATA CENTER  
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 PHASE III**  
 Owner  
**e-GOVERNMENT AGENCY**

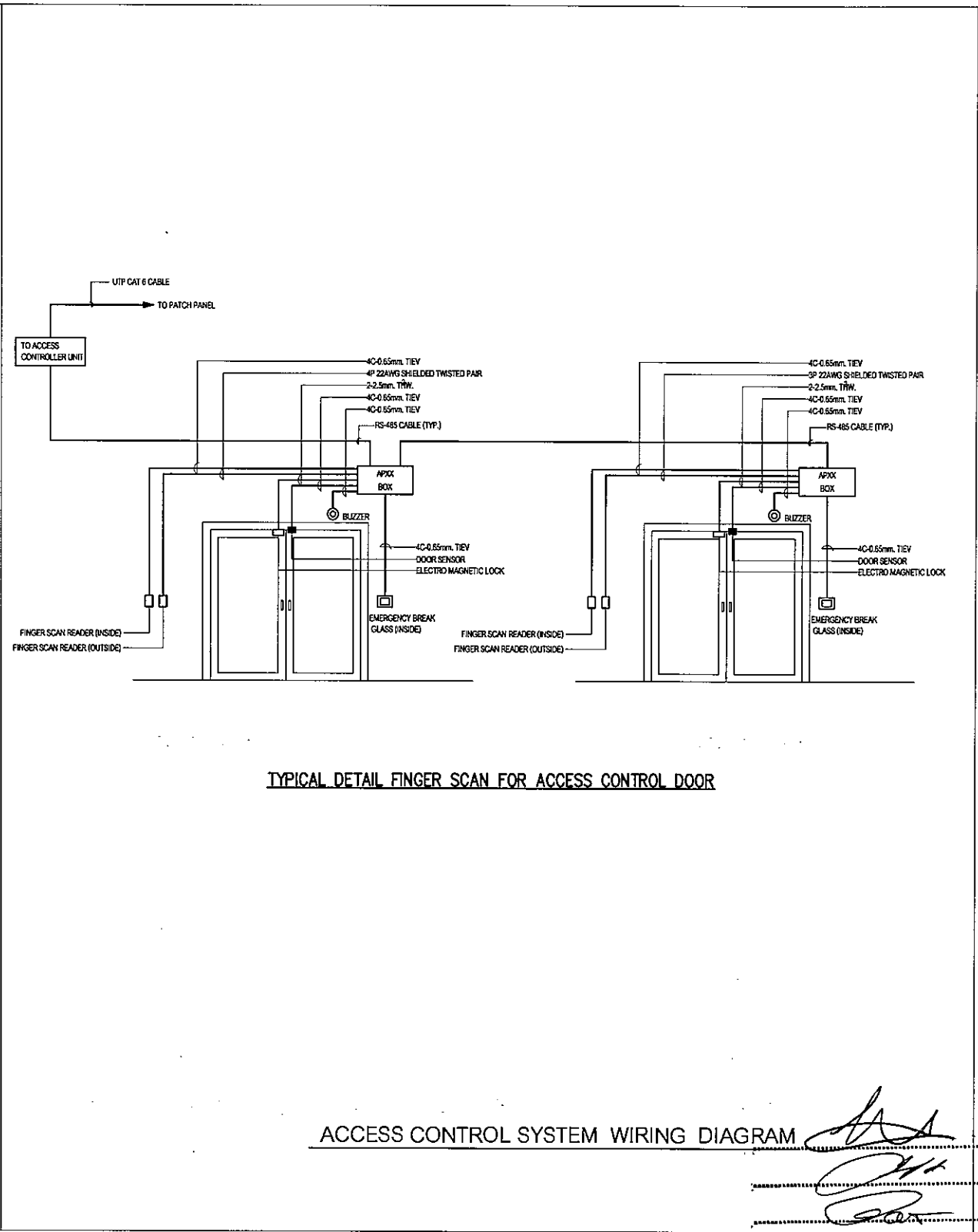
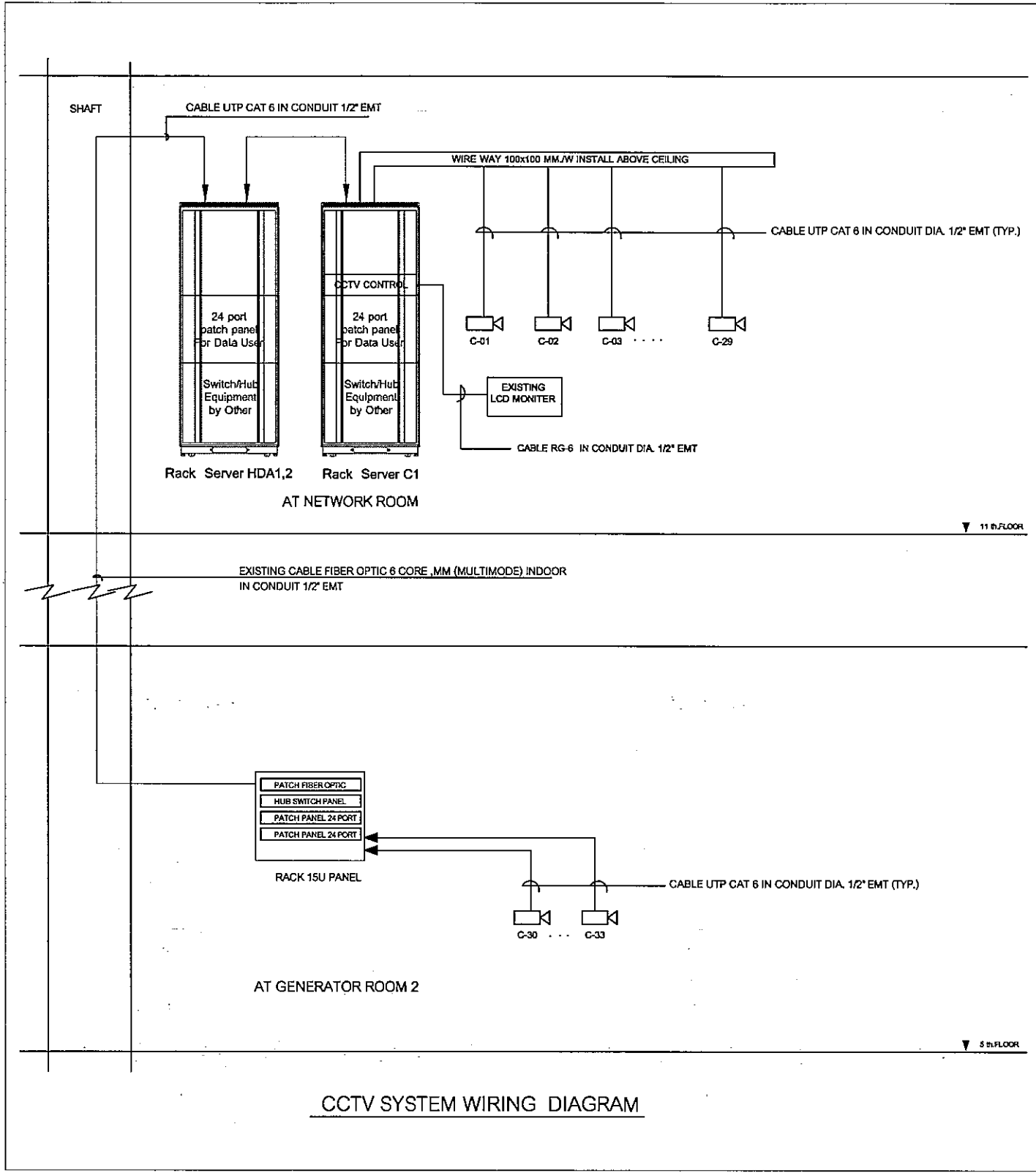
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0	01/07/2013	ISSUE FOR TENDER

Project no. : A327000  
 Scale : A1 = NTS (1:1)  
 Drawn by : WEERAYUT  
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 Plot date : 01/07/2013  
 CAD dwg. file : A327000-EE-R5 PHASE II (OPTION I)  
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Sheet title  
**NEW ELECTRICAL SINGLE LINE  
 DIAGRAM (PHASE II)**

**01EE-03**  
 Sheet of





**ACCESS CONTROL SYSTEM WIRING DIAGRAM**

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Project  
**EGA MAIN DATA CENTER  
 UPGRADE  
 PHASE II**  
 Owner  
**e-GOVERNMENT AGENCY**

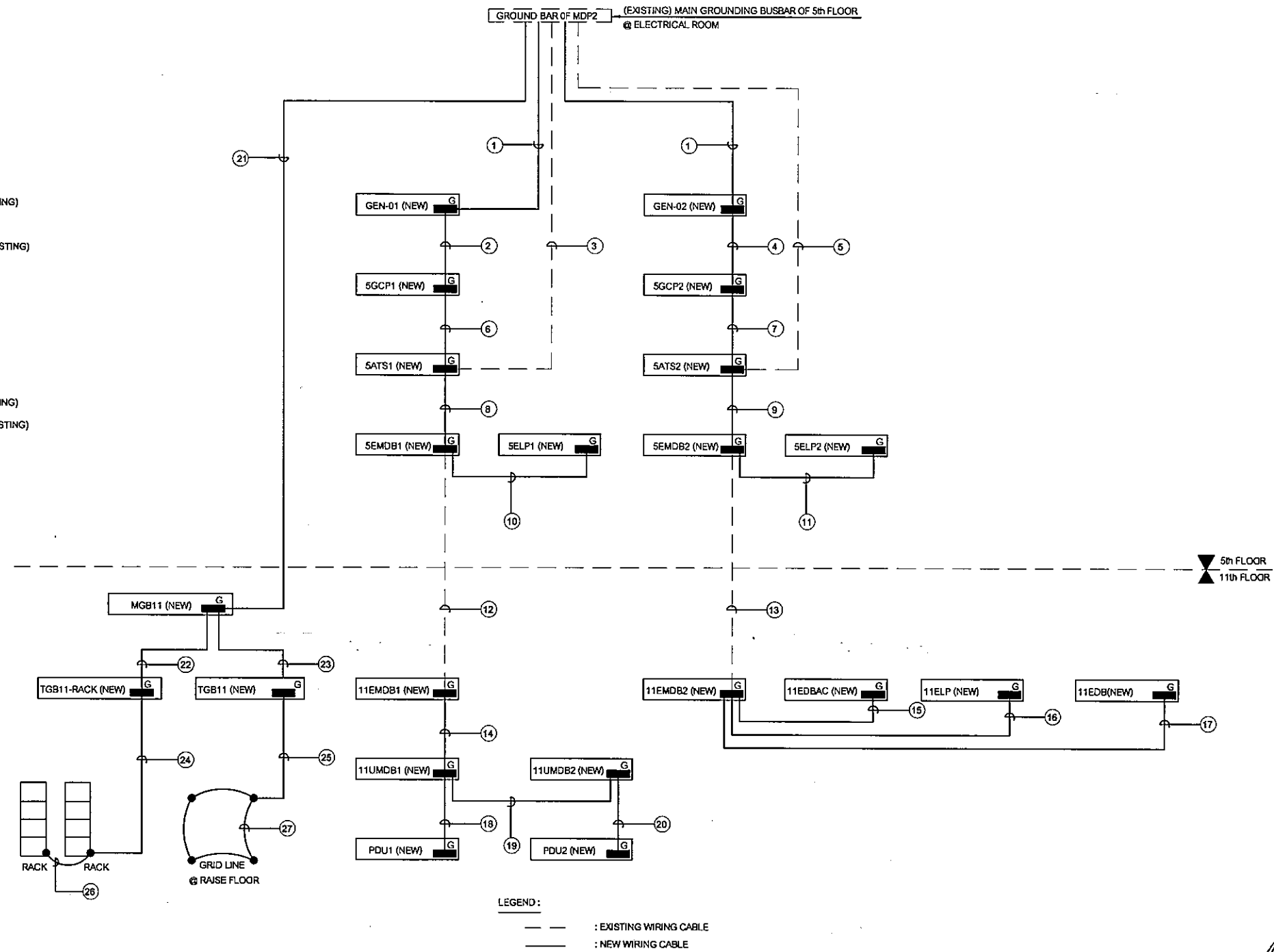
Mark	Date	Description
0	01/07/2013	ISSUE FOR TENDER

Project no. A321.000  
 Scale A3 = NTS, A1 = NTS  
 Drawn by WEERAYUT P.  
 Chk'd by ANIRUT S.  
 Plot date 01/07/2013  
 CAD dwg. file : A321.000-EE-R5 PHASE II(OPTION I)  
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Sheet title  
**CCTV & ACCESS CONTROL SYSTEM  
 WIRING DIAGRAM (PHASE II)**  
**01-EE-04**  
 Sheet 01

WIRING DESCRIPTION:

- ① G-95 SQ.MM. THW IN CONDUIT DIA.2"EMT.
- ② G-95 SQ.MM. THW IN CABLE TRAY 500x100
- ③ G-35 SQ.MM.CV IN CABLE TRAY 250x100 (EXISTING)
- ④ G-95 SQ.MM. THW IN CABLE TRAY 500x100
- ⑤ G-50 SQ.MM. THW IN CABLE TRAY 400x100 (EXISTING)
- ⑥ G-95 SQ.MM. THW IN CABLE TRAY 500x100
- ⑦ G-95 SQ.MM. THW IN CABLE TRAY 500x100
- ⑧ G-70 SQ.MM. THW IN CABLE TRAY 500x100
- ⑨ G-70 SQ.MM. THW IN CABLE TRAY 500x100
- ⑩ G-6 SQ.MM.THW IN WIRE WAY 50x100 MM./W
- ⑪ G-6 SQ.MM.THW IN WIRE WAY 50x100 MM./W
- ⑫ G-35 SQ.MM.CV IN CABLE TRAY 250x100 (EXISTING)
- ⑬ G-35 SQ.MM.THW. IN CABLE TRAY 400x100 (EXISTING)
- ⑭ G-70 SQ.MM. THW IN CABLE TRAY 500x100
- ⑮ G-35 SQ.MM.THW. IN CABLE TRAY 300x100
- ⑯ G-10 SQ.MM. THW IN WIRE WAY 100x100 MM./W
- ⑰ G-10 SQ.MM. THW IN WIRE WAY 100x100 MM./W
- ⑱ G-35 SQ.MM.THW. IN CABLE TRAY 300x100
- ⑲ G-35 SQ.MM.THW. IN CABLE TRAY 300x100
- ⑳ G-35 SQ.MM.THW. IN CABLE TRAY 300x100
- ㉑ G-16 SQ.MM. THW IN CONDUIT DIA.3/4"EMT.
- ㉒ G-16 SQ.MM. THW IN CONDUIT DIA.3/4"EMT.
- ㉓ G-16 SQ.MM. THW IN CONDUIT DIA.3/4"EMT.
- ㉔ G-6 SQ.MM. THW IN CONDUIT DIA.1/2"EMT.
- ㉕ G-6 SQ.MM. THW IN CONDUIT DIA.1/2"EMT.
- ㉖ G-6 SQ.MM. THW IN CONDUIT DIA.1/2"EMT.
- ㉗ G-6 SQ.MM. THW IN CONDUIT DIA.1/2"EMT.



LEGEND:  
--- : EXISTING WIRING CABLE  
— : NEW WIRING CABLE

หมายเหตุ:

1. ให้ผู้รับเหมาทำการเดินสายกราวนด์ตามแบบที่กำหนดและให้ต่อกราวนด์เข้ากับกราวนด์ระบบที่ห้องไฟฟ้าชั้น 5 ของอาคาร

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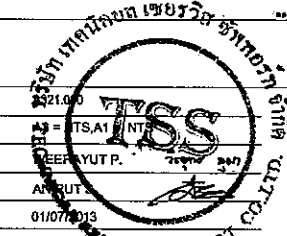


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Project  
EGA MAIN DATA CENTER  
UPGRADE  
PHASE II  
Owner  
e-GOVERNMENT AGENCY

Mark	Date	Description
0	01/07/2013	ISSUE FOR TENDER

Project no. : 2321.000  
Scale : A3 - TS, A1 (INT)  
Drawn by : PEEERAYUT P.  
Chk'd by : ANIRUT  
Plot date : 01/07/2013  
CAD dwg. file : A321.000-EE-05 (PHASE II OPTION I)  
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Sheet title  
GROUNDING SYSTEM WIRING  
DIAGRAM (PHASE II)  
01-EE-05  
Sheet Of



PROJECT : e-GOVERNMENT AGENCY							SPECIFICATION	
ELECTRICAL INSTALLTION								
LOAD SCHEDULE OF 5ELP1 (NEW) PANEL								
CCT. No.	CONNECTED LOAD, VA.			DESCRIPTION	CB.		CONDUCTOR SIZE mm <sup>2</sup>	RACEWAY
	A	B	C		POLE	AT		
1	480			LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
3		400		FIRE EXIT SIGN	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT
5			400	BATTERY EMERGENCY LIGHT	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT
7	200			ACCESS CONTROL PANEL	1P	20		
9				SPARE	1P	20		
11				SPARE	1P	20		
13				SPARE	1P	20		
15				SPARE	1P	20		
17								
19								
21								
23								
25								
27								
29								
2	600			RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
4		400		RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
6			400	RECEPTACLE FOR CCTV CAMERA	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
8	1,000			POWER PLUG FOR RACK	1P	32	2x10/6G SQ.MM., THW.	1"EMT.
10				SPARE	1P	20		
12				SPARE	1P	20		
14				SPARE	1P	20		
16				SPARE	1P	20		
18								
20								
22								
24								
26								
28								
30								
TOTAL	2,280	800	800	CONNECTED FROM : 5EDB1	MAIN INCOMING :			
	3,880				3P,60AT/ 100 AF IC>= 18KA			
80% LOAD	3104				4x25/G6 SQ.MM.,THW. IN CONDUIT 2" EMT			

- 3ph, 4W, 415/240V., 50Hz.  
 - DEGREE OF PROTECTION : IP - 41  
 - CAPACITY 30 CIRCUITS  
 - RATED 100 CURRENT A.  
 - SURFACE MOUNTING  
 - WITH BUILT-IN MAIN CB: 3P, 60AT.660V.MIN.BREAKING CAPACITY IS 18 KArms.AT 415/380,AND FIXED SHORT  
 - CIRCUIT RELEASES CURRENT (Amps)  
 - LOCATION : GEN.1 ROOM

PROJECT : e-GOVERNMENT AGENCY							SPECIFICATION	
ELECTRICAL INSTALLTION								
LOAD SCHEDULE OF 5ELP2(NEW) PANEL								
CCT. No.	CONNECTED LOAD, VA.			DESCRIPTION	CB.		CONDUCTOR SIZE mm <sup>2</sup>	RACEWAY
	A	B	C		POLE	AT		
1	480			LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
3		400		FIRE EXIT SIGN	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT
5			400	BATTERY EMERGENCY LIGHT	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT
7	200			ACCESS CONTROL PANEL	1P	20		
9				SPARE	1P	20		
11				SPARE	1P	20		
13				SPARE	1P	20		
15				SPARE	1P	20		
17								
19								
21								
23								
25								
27								
29								
2	600			RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
4		400		RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
6			400	RECEPTACLE FOR CCTV CAMERA	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
8	1,000			POWER PLUG FOR RACK	1P	32	2x10/6G SQ.MM., THW.	1"EMT.
10				SPARE	1P	20		
12				SPARE	1P	20		
14				SPARE	1P	20		
16				SPARE	1P	20		
18								
20								
22								
24								
26								
28								
30								
TOTAL	2,280	800	800	CONNECTED FROM : EDB1	MAIN INCOMING :			
	3,880				3P,60AT/ 100 AF IC>= 18KA			
80% LOAD	3104				4x25/G6 SQ.MM.,THW. IN CONDUIT 2" EMT			

- 3ph, 4W, 415/240V., 50Hz.  
 - DEGREE OF PROTECTION : IP - 41  
 - CAPACITY 30 CIRCUITS  
 - RATED 100 CURRENT A.  
 - SURFACE MOUNTING  
 - WITH BUILT-IN MAIN CB: 3P, 60AT.660V.MIN.BREAKING CAPACITY IS 18 KArms.AT 415/380,AND FIXED SHORT  
 - CIRCUIT RELEASES CURRENT (Amps)  
 - LOCATION : GEN.2 ROOM

1. วิศวกรโครงการ  
 2. วิศวกร  
 3. วิศวกร  
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Project  
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 PHASE II  
 Owner  
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Project no. : A321000  
 Scale : A3 = 1:1  
 Drawn by : WEEN YU P.  
 Chk'd by : ANIRUT  
 Plot date : 01/07/2013  
 CAD dwg. file : A321.000-EE-R5 PHASE II (OPTION I)  
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Sheet title  
 ELECTRICAL LOADSCHEDULE  
 SHEET-01 (PHASE II)  
 02-EE-01  
 Sheet 01



ELECTRICAL INSTALLTION				SPECIFICATION				
LOAD SCHEDULE OF 11ELP (NEW) PANEL								
CCT. No.	CONNECTED LOAD, VA.			DESCRIPTION	CB.		CONDUCTOR SIZE mm <sup>2</sup>	RACEWAY
	A	B	C		POLE	AT		
1	330			LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
3		300		LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
5			540	LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
7	270			LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
9		330		LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
11			240	LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
13	240			LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
15		240		LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
17			210	LIGHTING	1P	16	2x2.5/2.5G SQ.MM., THW.	1/2"EMT
19				SPARE	1P	20		
21				SPARE	1P	20		
23				SPARE	1P	20		
25								
27								
29								
31								
33								
35								
37								
39								
41								
2	800			RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
4		1,000		RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
6			200	CENTRAL BATTERY EMERGENCY LIGHT	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT
8	1,200			RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
10		600		RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
12			1,200	RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
14	800			RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
16		600		RECEPTACLE	1P	20	2x4/2.5G SQ.MM., THW.	1/2"EMT.
18				SPARE	1P	20		
20				SPARE	1P	20		
22				SPARE	1P	20		
24								
26								
28								
30								
32								
34								
36								
38								
40								
42								
TOTAL	3,640	3,070	2,390	CONNECTED FROM : EDB1	MAIN INCOMING :			
	9,100				3P,100AT/ 100 AF IC>= 18KA			
80% LOAD	7280				4x50/G-10 SQ.MM.,THW. IN CONDUIT 2" EMT			

- 3ph, 4W, 415/240V., 50Hz.
- DEGREE OF PROTECTION : IP - 41
- CAPACITY 42 CIRCUITS
- RATED 100 CURRENT A.
- SURFACE MOUNTING
- WITH BUILT-IN MAIN CB: 3P, 100AT.660V.MIN.BREAKING CAPACITY IS 18 KArms.AT 415/380,AND FIXED SHORT CIRCUIT RELEASES CURRENT (Amps)
- LOCATION :EE.ROOM LEVEL 11th

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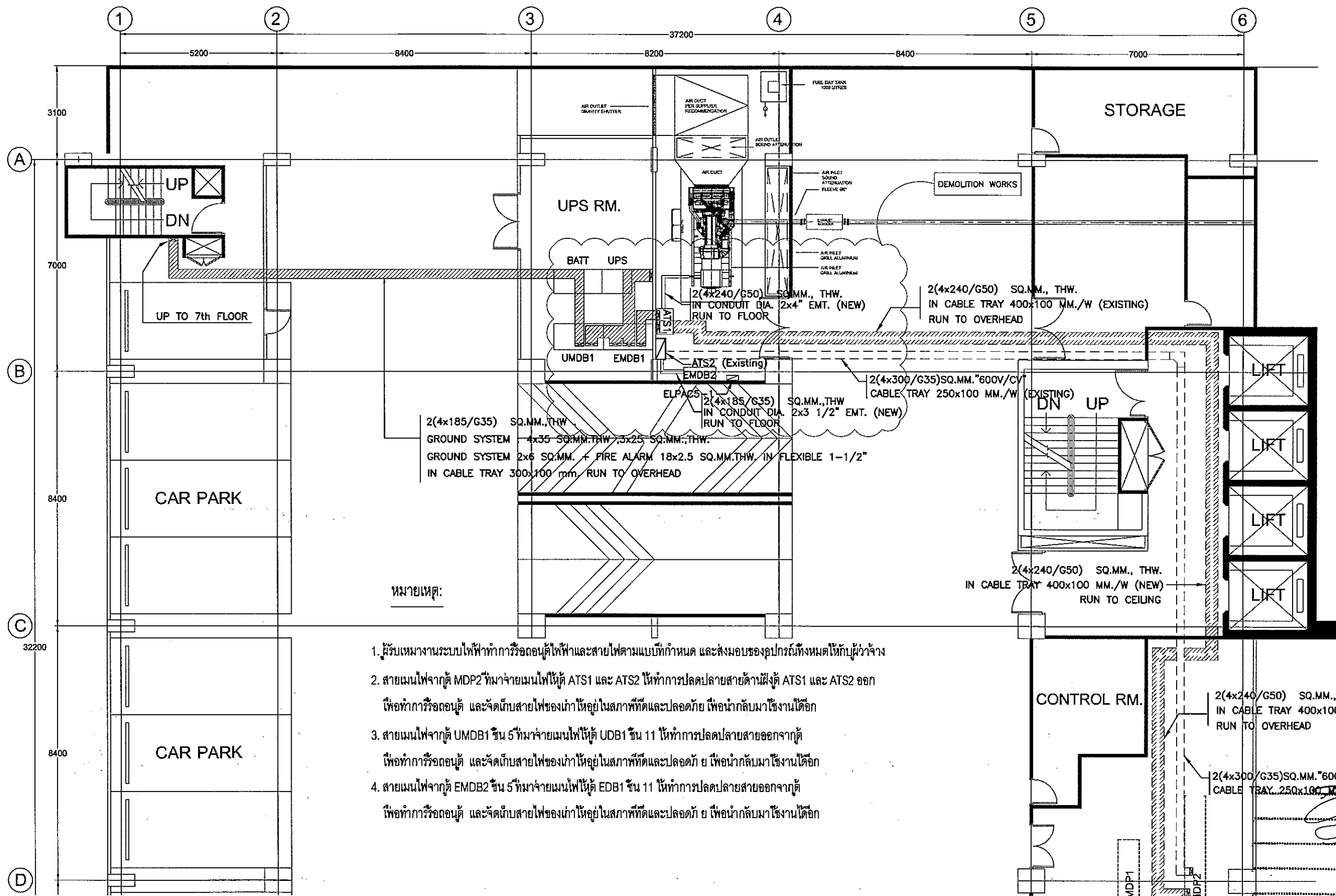
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 Chk'd by : ANIRUT S.  
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 ELECTRICAL LOADSCHEDULE  
 SHEET-02 (PHASE II)  
 02-EE-02  
 Sheet Of







หมายเหตุ:

1. ผู้รับเหมางานระบบไฟฟ้าทำการรื้อถอนตู้ไฟฟ้าและสายไฟตามแบบที่กำหนด และส่งมอบของอุปกรณ์ทั้งหมดให้กับผู้ว่าจ้าง
2. สายเมนไฟจากตู้ MDP2 ที่มาจ่ายเมนไฟให้ตู้ ATS1 และ ATS2 ให้ทำการปลดปลายสายด้านฝั่งตู้ ATS1 และ ATS2 ออก เพื่อทำการรื้อถอนตู้ และจัดเก็บสายไฟของเก่าให้อยู่ในสภาพที่หีดและปลอดภัย เพื่อนำกลับมาใช้งานได้อีก
3. สายเมนไฟจากตู้ UMDB1 ชั้น 5 ที่มาจ่ายเมนไฟให้ตู้ UDB1 ชั้น 11 ให้ทำการปลดปลายสายออกจากตู้ เพื่อทำการรื้อถอนตู้ และจัดเก็บสายไฟของเก่าให้อยู่ในสภาพที่หีดและปลอดภัย เพื่อนำกลับมาใช้งานได้อีก
4. สายเมนไฟจากตู้ EMD2 ชั้น 5 ที่มาจ่ายเมนไฟให้ตู้ EDB1 ชั้น 11 ให้ทำการปลดปลายสายออกจากตู้ เพื่อทำการรื้อถอนตู้ และจัดเก็บสายไฟของเก่าให้อยู่ในสภาพที่หีดและปลอดภัย เพื่อนำกลับมาใช้งานได้อีก



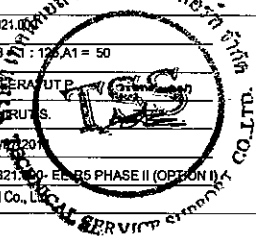
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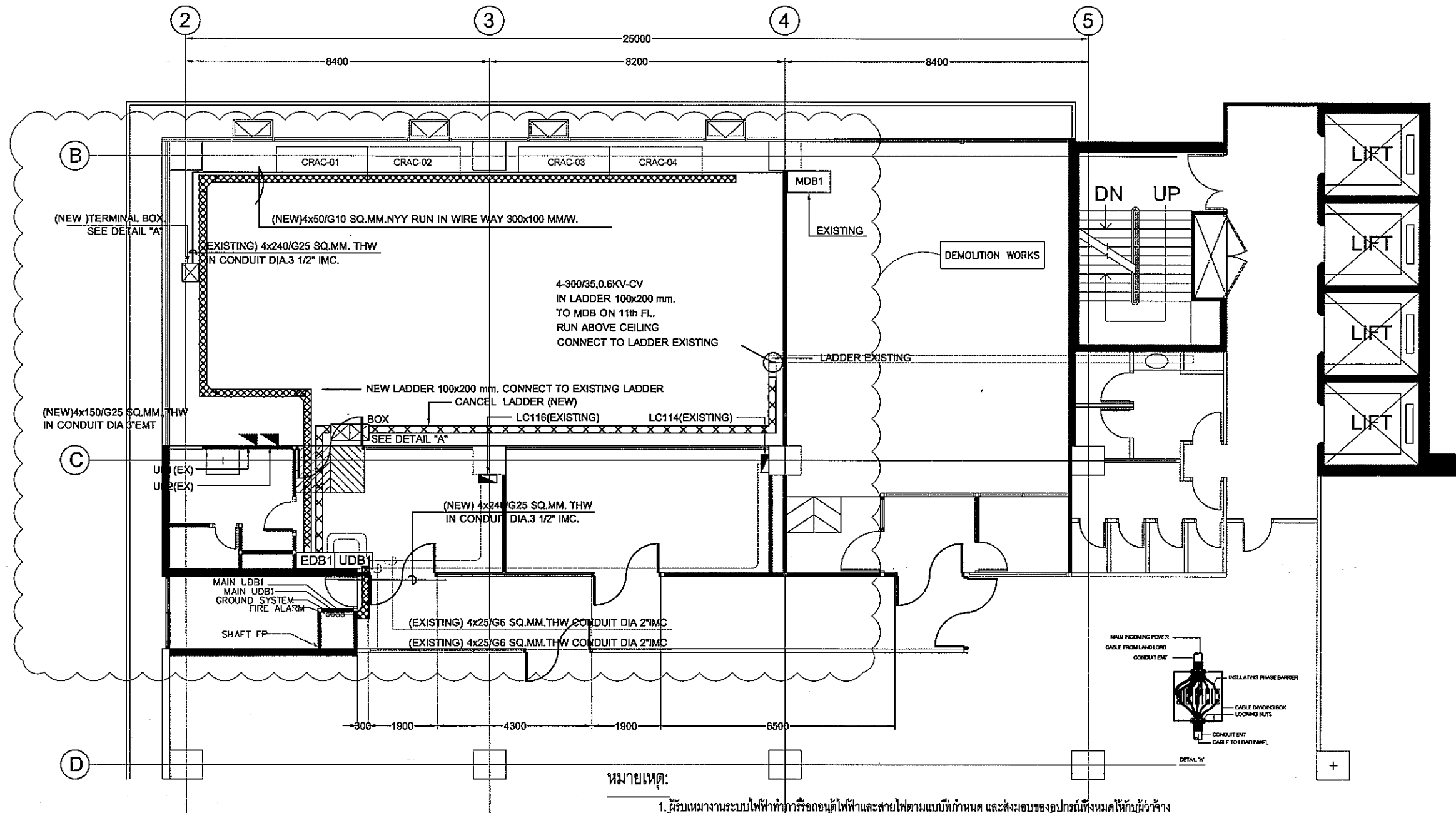
Project  
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Project no. : A321.000000 เซอร์วิส ซัพพลาย  
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**DEMOLITION EXISTING ELECTRICAL  
 MAIN ROUTING SYSTEM  
 FOR 5th FLOOR PLAN(PHASE II)**  
 03-EE-01  
 Sheet 01





หมายเหตุ:

1. ผู้รับเหมางานระบบไฟฟ้าทำการร้อยลวดให้เข้าและสายไฟตามแบบที่กำหนด และส่งมอบของอุปกรณ์ทั้งหมดให้กับผู้ว่าจ้าง
2. สายเมนไฟฟ้าจากตู้ MDP2 ที่มาจ่ายเมนไฟให้ตู้ ATS1 และ ATS2 ให้ทำการปลดปลายสายด้านฝั่งตู้ ATS1 และ ATS2 ออก เพื่อทำการร้อยลวด และจัดเก็บสายไฟของเก่าให้อยู่ในสภาพที่ดีและปลอดภัย เพื่อนำกลับมาใช้งานได้อีก
3. สายเมนไฟฟ้าจากตู้ UMDB1 ชั้น 5 ที่มาจ่ายเมนไฟให้ตู้ UDB1 ชั้น 11 ให้ทำการปลดปลายสายออกจากตู้ เพื่อทำการร้อยลวด และจัดเก็บสายไฟของเก่าให้อยู่ในสภาพที่ดีและปลอดภัย เพื่อนำกลับมาใช้งานได้อีก
4. สายเมนไฟฟ้าจากตู้ EMDB2 ชั้น 5 ที่มาจ่ายเมนไฟให้ตู้ EDB1 ชั้น 11 ให้ทำการปลดปลายสายออกจากตู้ เพื่อทำการร้อยลวด และจัดเก็บสายไฟของเก่าให้อยู่ในสภาพที่ดีและปลอดภัย เพื่อนำกลับมาใช้งานได้อีก

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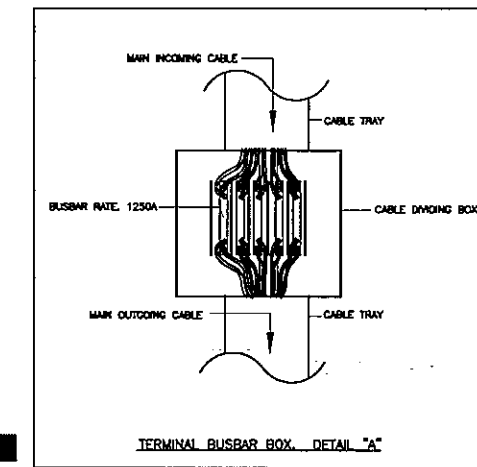
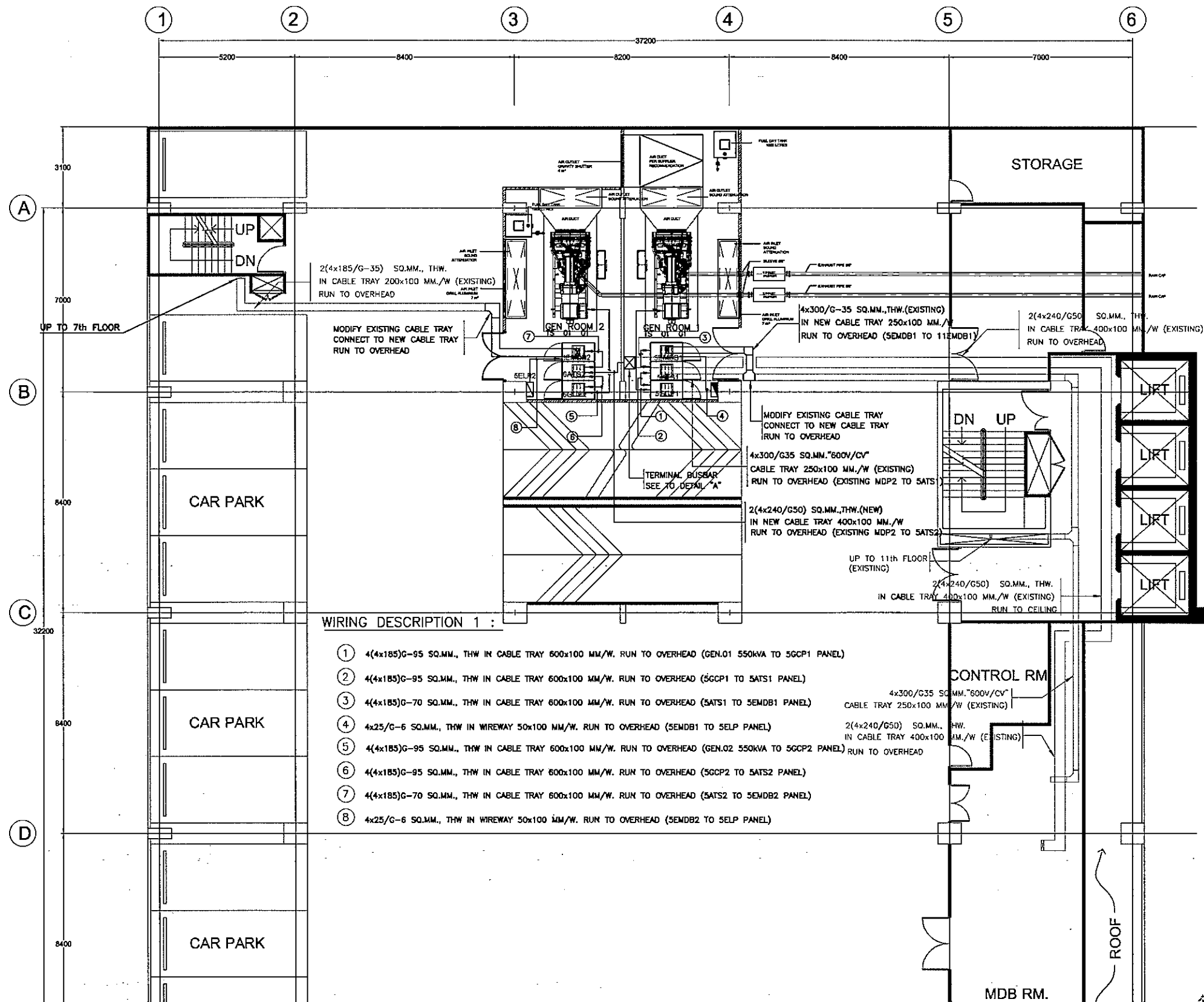
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Project no. : A321.000  
 Scale : A3 = 42x125 A1 = 50  
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 MAIN ROUTING SYSTEM  
 FOR 11th FLOOR PLAN(PHASE II)  
 03-EE-02  
 Sheet of



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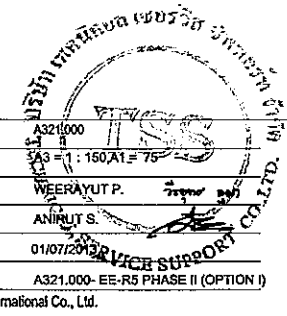
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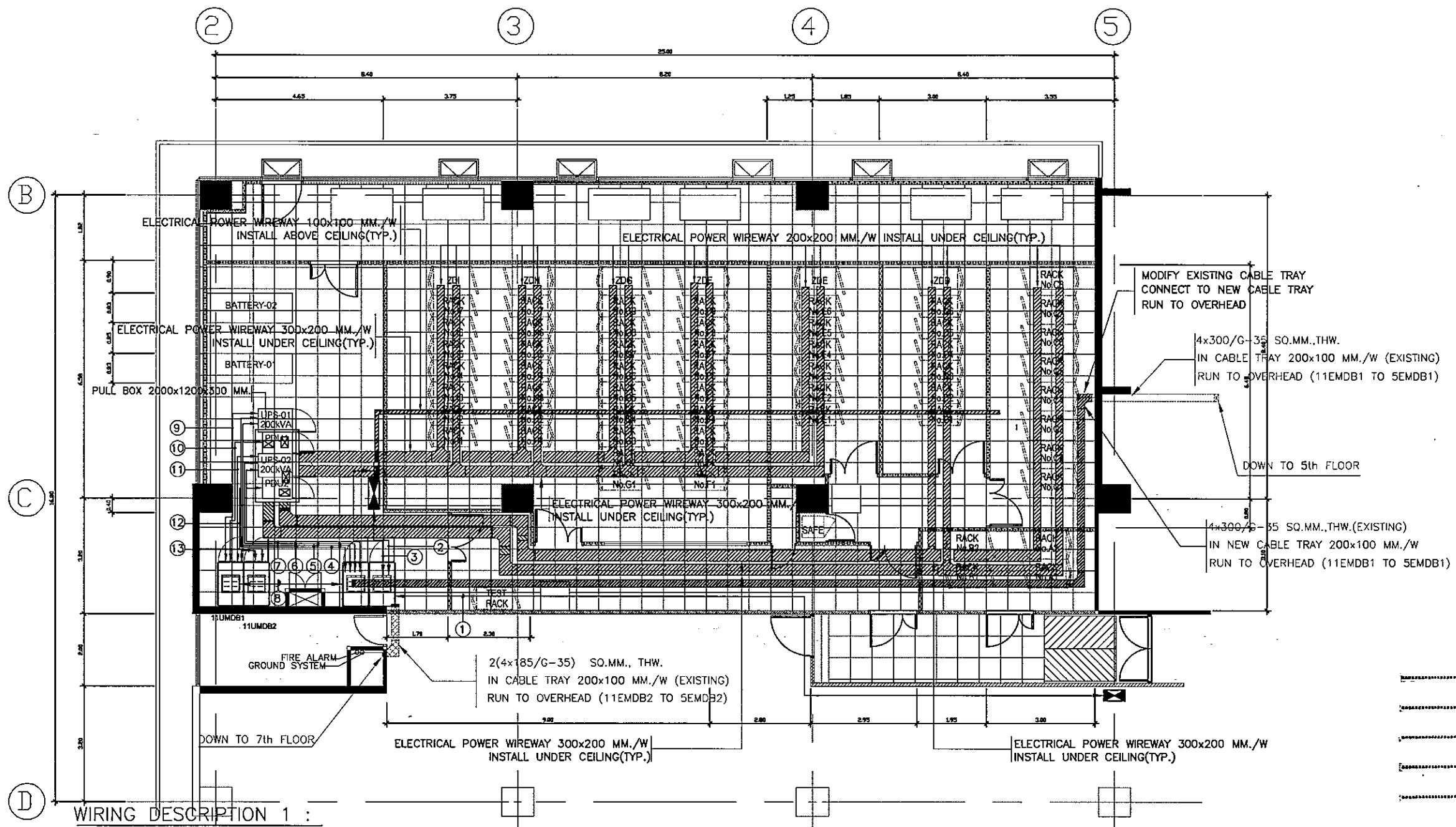
Project  
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 Owner  
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 Scale : A3 = 1 : 160, A1 = 75  
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Sheet title  
**ELECTRICAL MAIN ROUTING SYSTEM  
 FOR 5th FLOOR PLAN(PHASE II)**  
**03-EE-03**  
 Sheet of





WIRING DESCRIPTION 1 :

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>① 4x50/G-10 SQ.MM., THW IN WAIRE WAY 50x100 MM/W. RUN TO ABOVE CEILING (11EMDB2 TO 11EDB PANEL)</li> <li>② 2(4x185)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11EDB2 TO 11EDBAC. PANEL)</li> <li>③ 4x50/G-10 SQ.MM., THW IN WAIRE WAY 50x100 MM/W. RUN TO UNDER RAISE FLOOR (11EMDB2 TO 11ELP PANEL)</li> <li>④ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11E0B1/F.1 TO UPS01)</li> <li>⑤ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11E0B1/F.2 TO UPS01)</li> <li>⑥ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11EDB1/F.3 TO UPS02)</li> <li>⑦ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11EDB1/F.4 TO UPS02)</li> </ul> | <ul style="list-style-type: none"> <li>⑧ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11EDB1/F.5 TO 11UDB1)</li> <li>⑨ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (UPS01 TO 11UDB1)</li> <li>⑩ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11UDB1/F.1 TO 11PDU1)</li> <li>⑪ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (UPS02 TO 11UDB1)</li> <li>⑫ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11UDB2/F.1 TO 11PDU2)</li> <li>⑬ 2(4x150)G-35 SQ.MM., THW IN CABLE TRAY 300x100 MM/W. RUN TO UNDER RAISE FLOOR (11UDB1/F.2 TO 11PDU2)</li> </ul> |
|--|--|

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 \_\_\_\_\_ กรรมการ  
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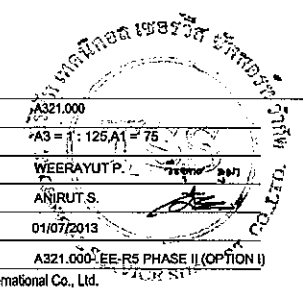
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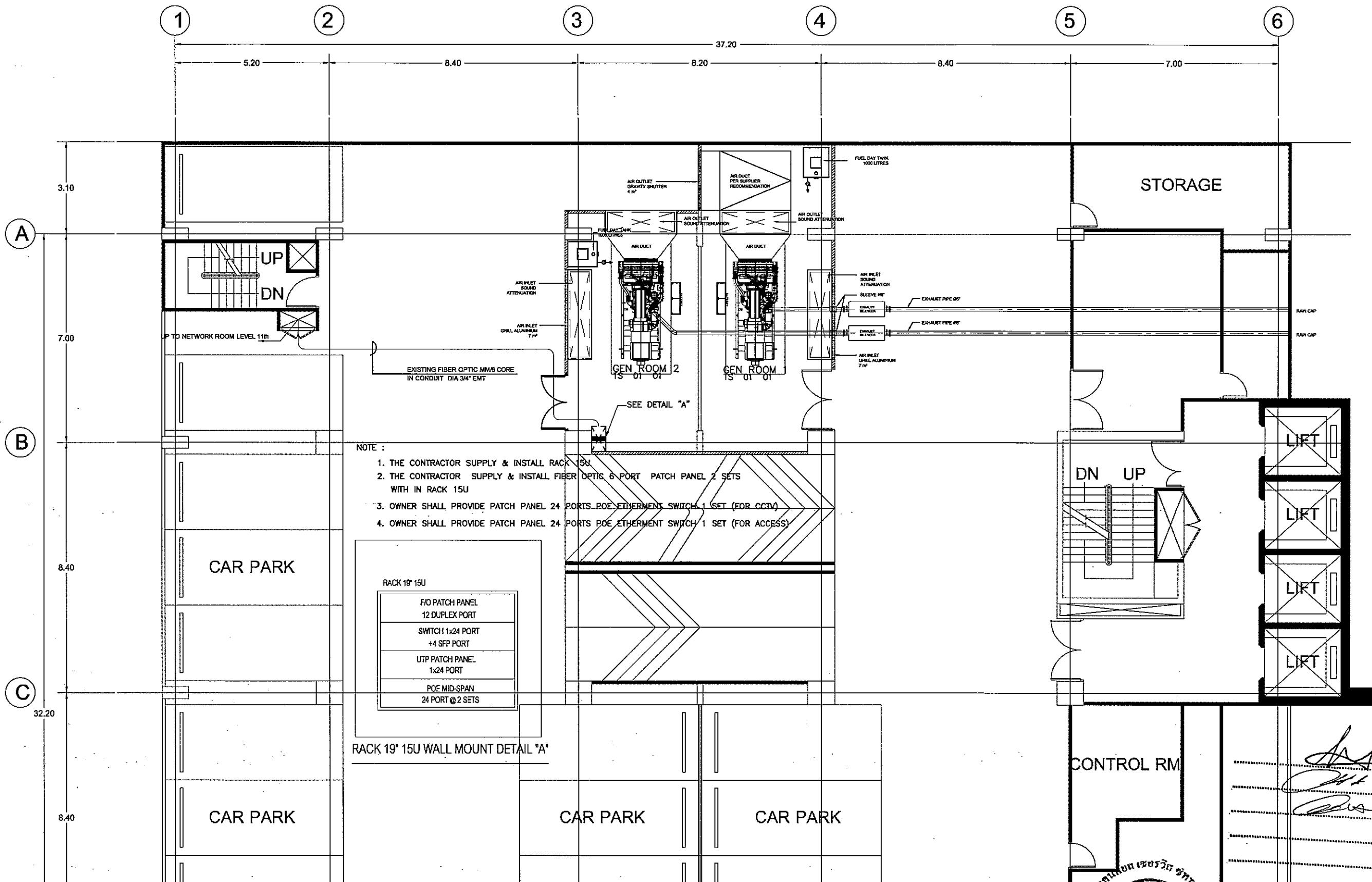
Project  
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 PHASE II  
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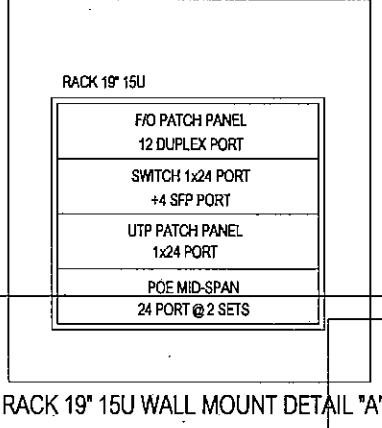
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Sheet title  
 ELECTRICAL MAIN ROUTING SYSTEM  
 FOR 11th FLOOR PLAN(PHASE II)  
 03-EE-04  
 Sheet 01





- NOTE :
1. THE CONTRACTOR SUPPLY & INSTALL RACK 19U
  2. THE CONTRACTOR SUPPLY & INSTALL FIBER OPTIC 6 PORT PATCH PANEL 2 SETS WITH IN RACK 15U
  3. OWNER SHALL PROVIDE PATCH PANEL 24 PORTS POE ETHERNET SWITCH 1 SET (FOR CCTV)
  4. OWNER SHALL PROVIDE PATCH PANEL 24 PORTS POE ETHERNET SWITCH 1 SET (FOR ACCESS)



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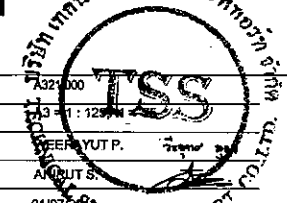
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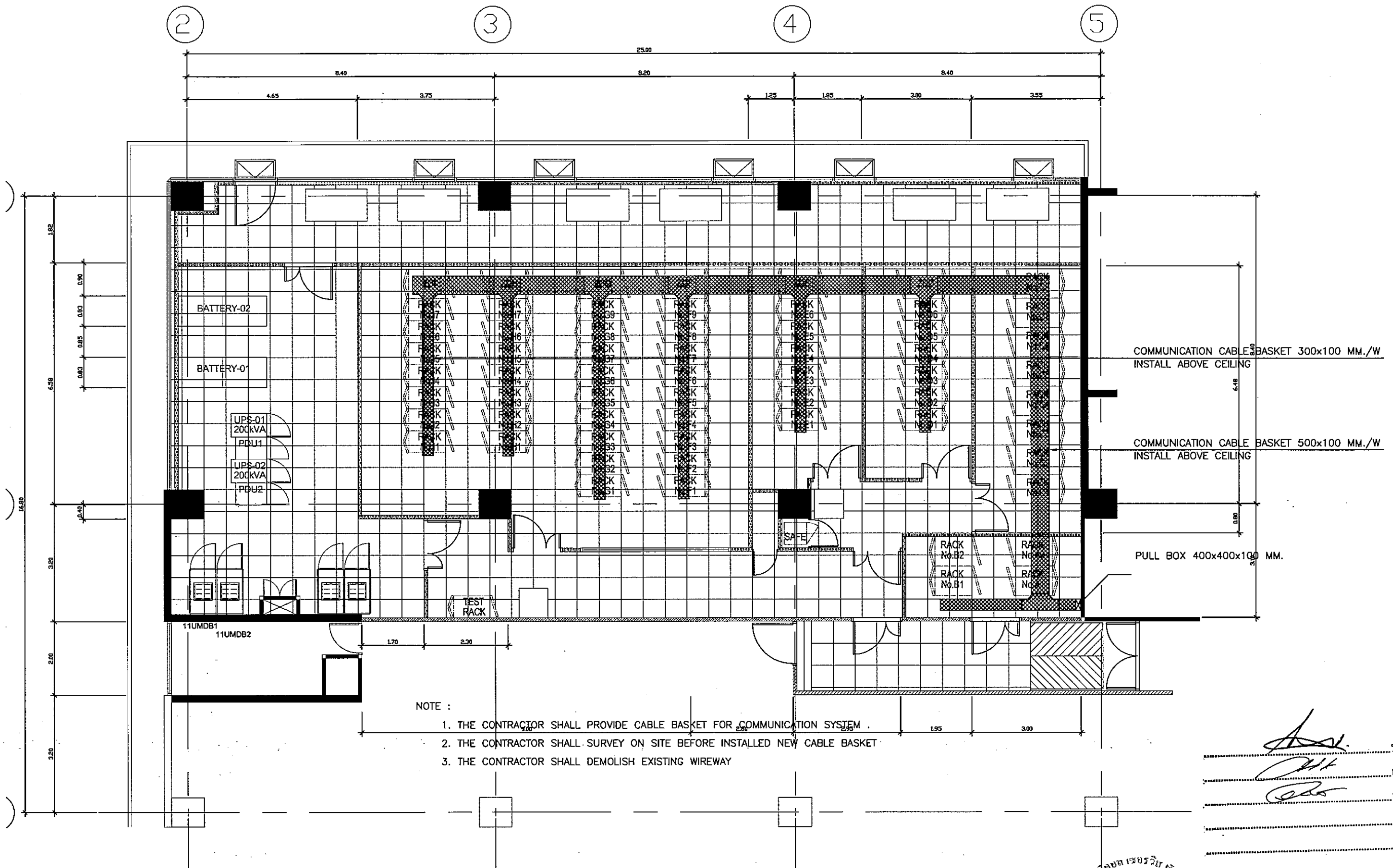
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**COMMUNICATION MAIN ROUTING  
 SYSTEM FOR 5th FLOOR PLAN  
 (PHASE II)**  
**04-EE-01**  
 Sheet 01





NOTE :

1. THE CONTRACTOR SHALL PROVIDE CABLE BASKET FOR COMMUNICATION SYSTEM .
2. THE CONTRACTOR SHALL SURVEY ON SITE BEFORE INSTALLED NEW CABLE BASKET
3. THE CONTRACTOR SHALL DEMOLISH EXISTING WIREWAY

COMMUNICATION CABLE BASKET 300x100 MM./W  
INSTALL ABOVE CEILING

COMMUNICATION CABLE BASKET 500x100 MM./W  
INSTALL ABOVE CEILING

PULL BOX 400x400x100 MM.

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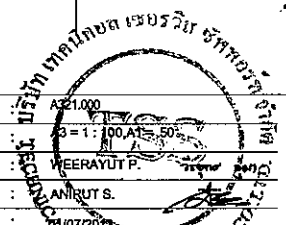
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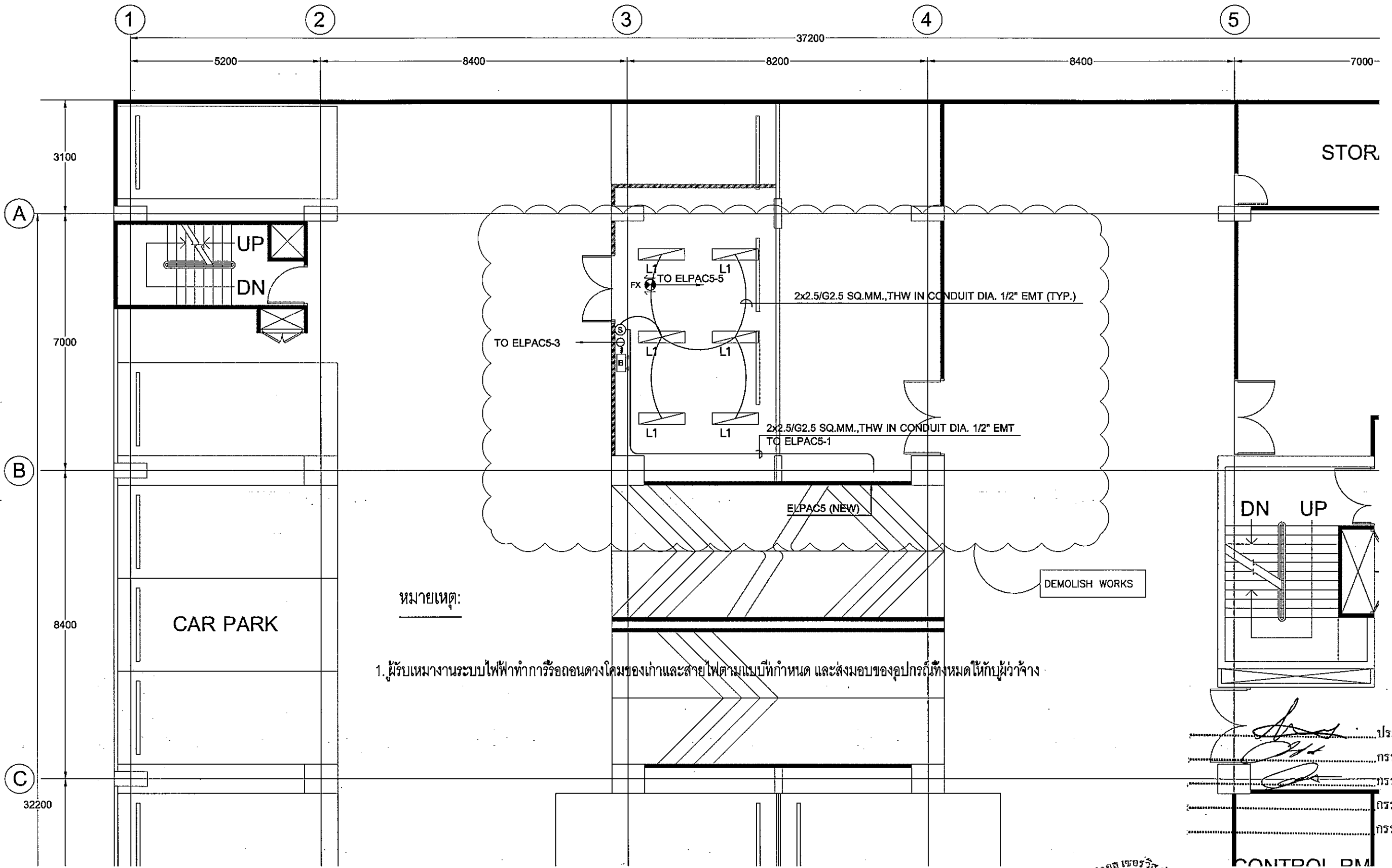
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**COMMUNICATION MAIN ROUTING  
 SYSTEM FOR 11 th FLOOR PLAN  
 (PHASE II)**  
**04-EE-02**  
 Sheet Of





หมายเหตุ:

1. ผู้รับเหมางานระบบไฟฟ้าทำการรื้อถอนดวงโคมของเก่าและสายไฟตามแบบที่กำหนด และส่งมอบของอุปกรณ์ทั้งหมดให้กับผู้ว่าจ้าง

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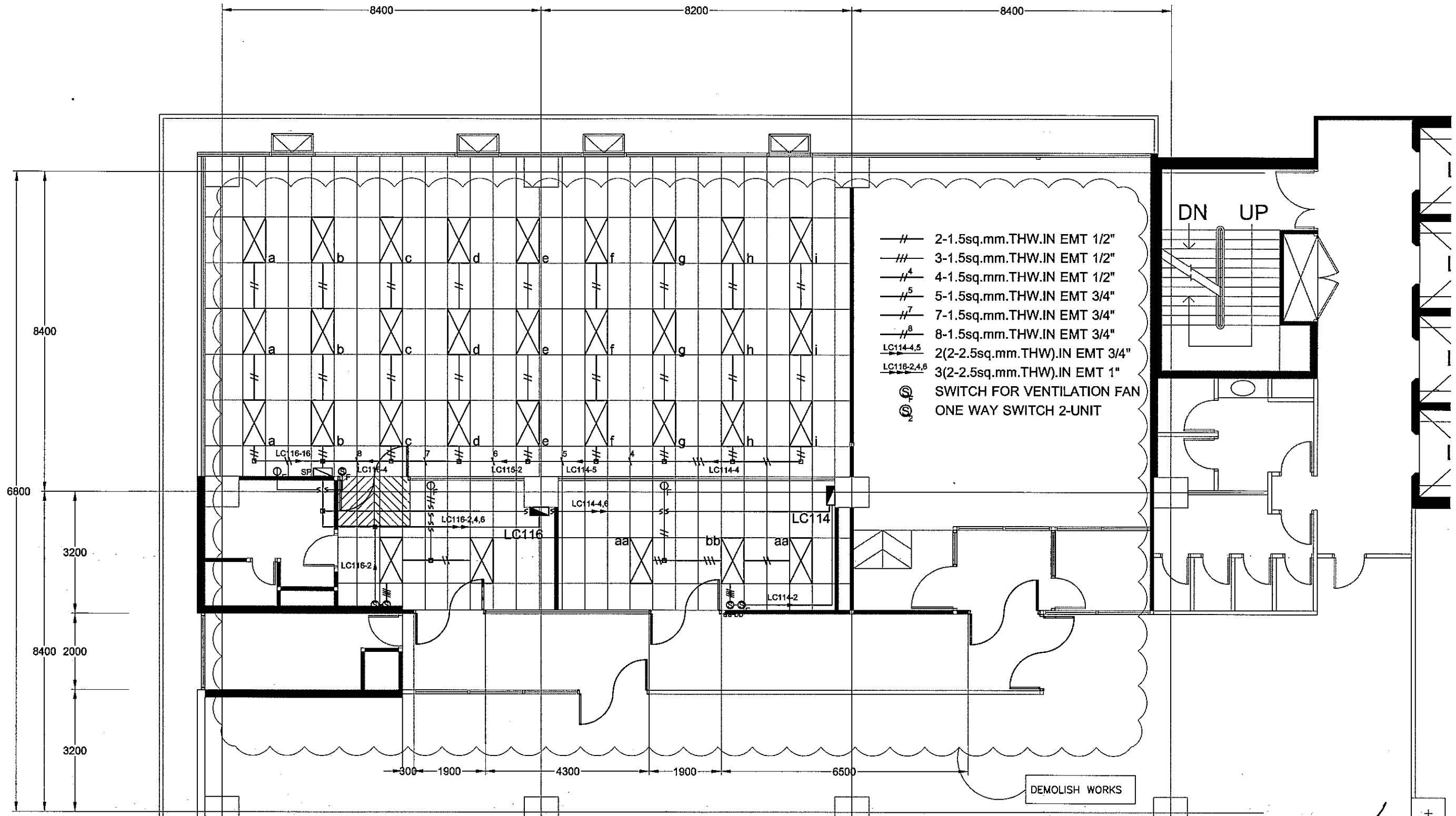
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 SYSTEM FOR 5 th FLOOR PLAN  
 (PHASE II)**  
**05-EE-01**  
 Sheet Of





- #— 2-1.5sq.mm.THW.IN EMT 1/2"
- ##— 3-1.5sq.mm.THW.IN EMT 1/2"
- #<sup>A</sup>— 4-1.5sq.mm.THW.IN EMT 1/2"
- #<sup>B</sup>— 5-1.5sq.mm.THW.IN EMT 3/4"
- #<sup>C</sup>— 7-1.5sq.mm.THW.IN EMT 3/4"
- #<sup>D</sup>— 8-1.5sq.mm.THW.IN EMT 3/4"
- #<sup>E</sup>— 2(2-2.5sq.mm.THW).IN EMT 3/4"
- #<sup>F</sup>— 3(2-2.5sq.mm.THW).IN EMT 1"
- ⊕ SWITCH FOR VENTILATION FAN
- ⊖ ONE WAY SWITCH 2-UNIT

หมายเหตุ:

1. ผู้รับเหมางานระบบไฟฟ้าทำการร้อยลวดวงโคมของเก่าและสายไฟตามแบบที่กำหนด และส่งมอบของอุปกรณ์ทั้งหมดให้กับผู้ว่าจ้าง

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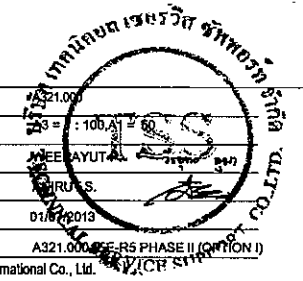
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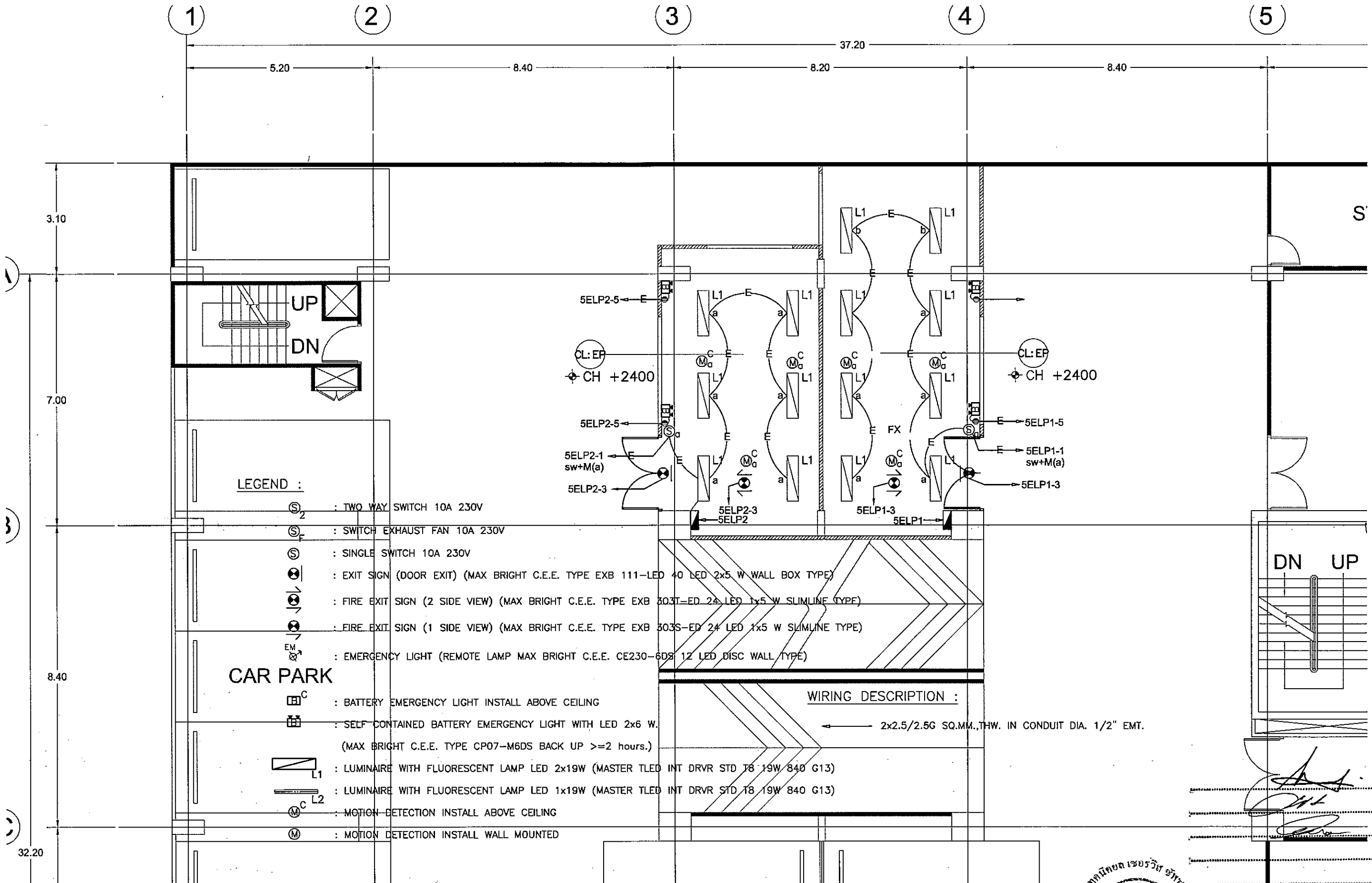
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 DEMOLITION EXISTING LIGHTING  
 SYSTEM FOR 11 th FLOOR PLAN  
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 05-EE-02  
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**LEGEND :**

- : TWO WAY SWITCH 10A 230V
- : SWITCH EXHAUST FAN 10A 230V
- : SINGLE SWITCH 10A 230V
- : EXIT SIGN (DOOR EXIT) (MAX BRIGHT C.E.E. TYPE EXB 111-LED 40 LED 2x5 W WALL BOX TYPE)
- : FIRE EXIT SIGN (2 SIDE VIEW) (MAX BRIGHT C.E.E. TYPE EXB 303T-ED 24 LED 1x5 W SLIMLINE TYPE)
- : FIRE EXIT SIGN (1 SIDE VIEW) (MAX BRIGHT C.E.E. TYPE EXB 303S-ED 24 LED 1x5 W SLIMLINE TYPE)
- : EMERGENCY LIGHT (REMOTE LAMP MAX BRIGHT C.E.E. CE230-6DS 12 LED DISC WALL TYPE)
- : BATTERY EMERGENCY LIGHT INSTALL ABOVE CEILING
- : SELF-CONTAINED BATTERY EMERGENCY LIGHT WITH LED 2x6 W. (MAX BRIGHT C.E.E. TYPE CP07-M6DS BACK UP >=2 hours.)
- : LUMINAIRE WITH FLUORESCENT LAMP LED 2x19W (MASTER TLED INT DRVR STD T8 19W 840 G13)
- : LUMINAIRE WITH FLUORESCENT LAMP LED 1x19W (MASTER TLED INT DRVR STD T8 19W 840 G13)
- : MOTION DETECTION INSTALL ABOVE CEILING
- : MOTION DETECTION INSTALL WALL MOUNTED

**WIRING DESCRIPTION :**

← 2x2.5/2.5G SQ.MM., THW. IN CONDUIT DIA. 1/2" EMT.

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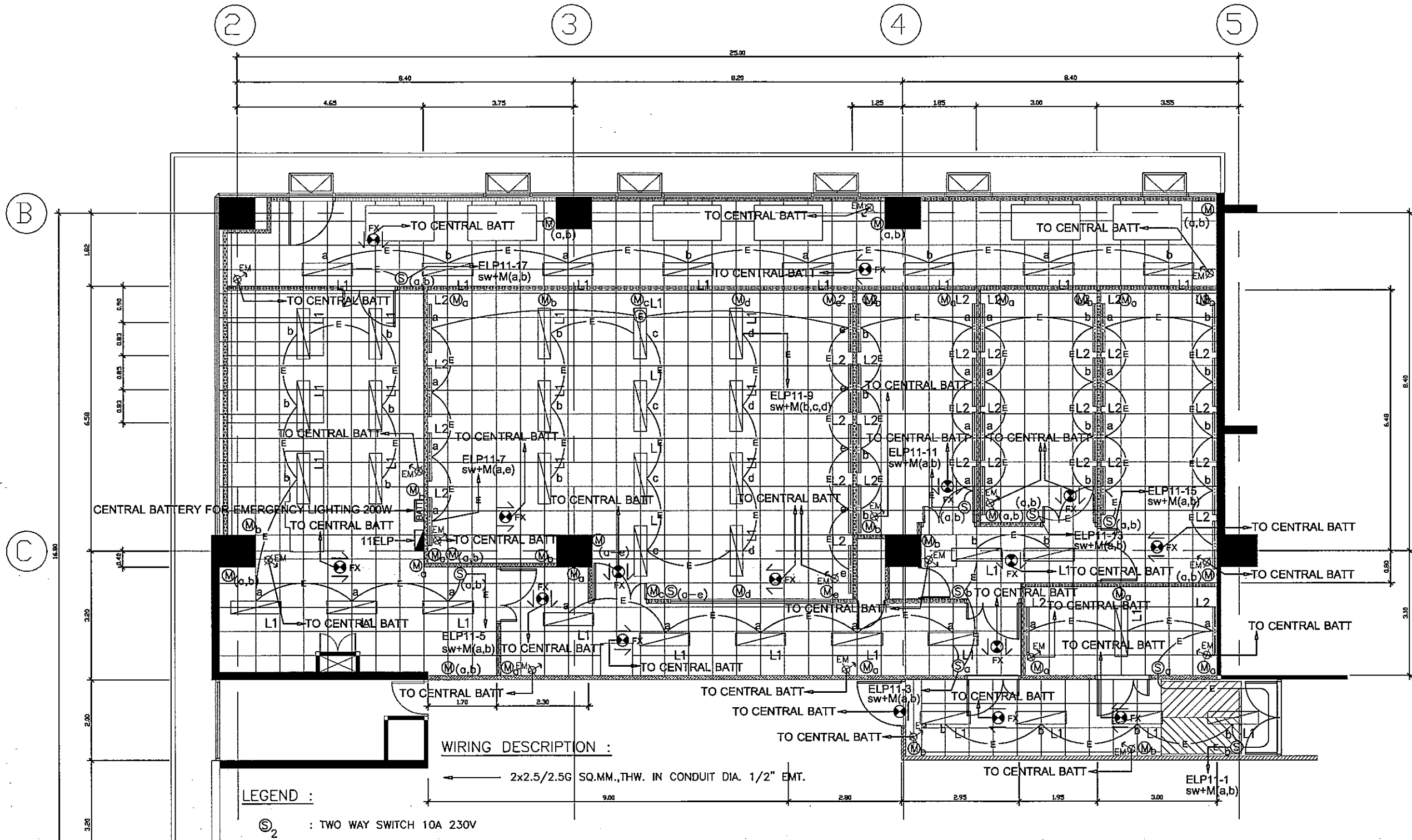
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**LIGHTING SYSTEM  
 FOR 5th FLOOR PLAN  
 (PHASE II)**  
**05-EE-03**  
 Sheet 01





**WIRING DESCRIPTION :**

← 2x2.5/2.5G SQ.MM., THW. IN CONDUIT DIA. 1/2" EMT.

**LEGEND :**

- ⊙<sub>2</sub> : TWO WAY SWITCH 10A 230V
- ⊙<sub>F</sub> : SWITCH EXHAUST FAN 10A 230V
- ⊙ : SINGLE SWITCH 10A 230V
- ⊙ : EXIT SIGN (DOOR EXIT) (MAX BRIGHT C.E.E. TYPE EXB 111-LED 40 LED 2x5 W WALL BOX TYPE)
- ⊙ : FIRE EXIT SIGN (2 SIDE VIEW) (MAX BRIGHT C.E.E. TYPE EXB 303T-ED 24 LED 1x5 W SLIMLINE TYPE)
- ⊙ : FIRE EXIT SIGN (1 SIDE VIEW) (MAX BRIGHT C.E.E. TYPE EXB 303S-ED 24 LED 1x5 W SLIMLINE TYPE)
- ⊙ : EMERGENCY LIGHT (REMOTE LAMP MAX BRIGHT C.E.E. CE230-6DS 12 LED DISC WALL TYPE)

- [BATT] : CENTRAL BATTERY EMERGENCY 200W.
- L1 : LUMINAIRE WITH FLUORESCENT LAMP LED 2x19W(MASTER TLED INT DRVR STD T8 19W 840 G13)
- L2 : LUMINAIRE WITH FLUORESCENT LAMP LED 1x19W(MASTER TLED INT DRVR STD T8 19W 840 G13)
- M<sup>C</sup>L2 : MOTION DETECTION INSTALL ABOVE CEILING
- M : MOTION DETECTION INSTALL WALL MOUNTED.

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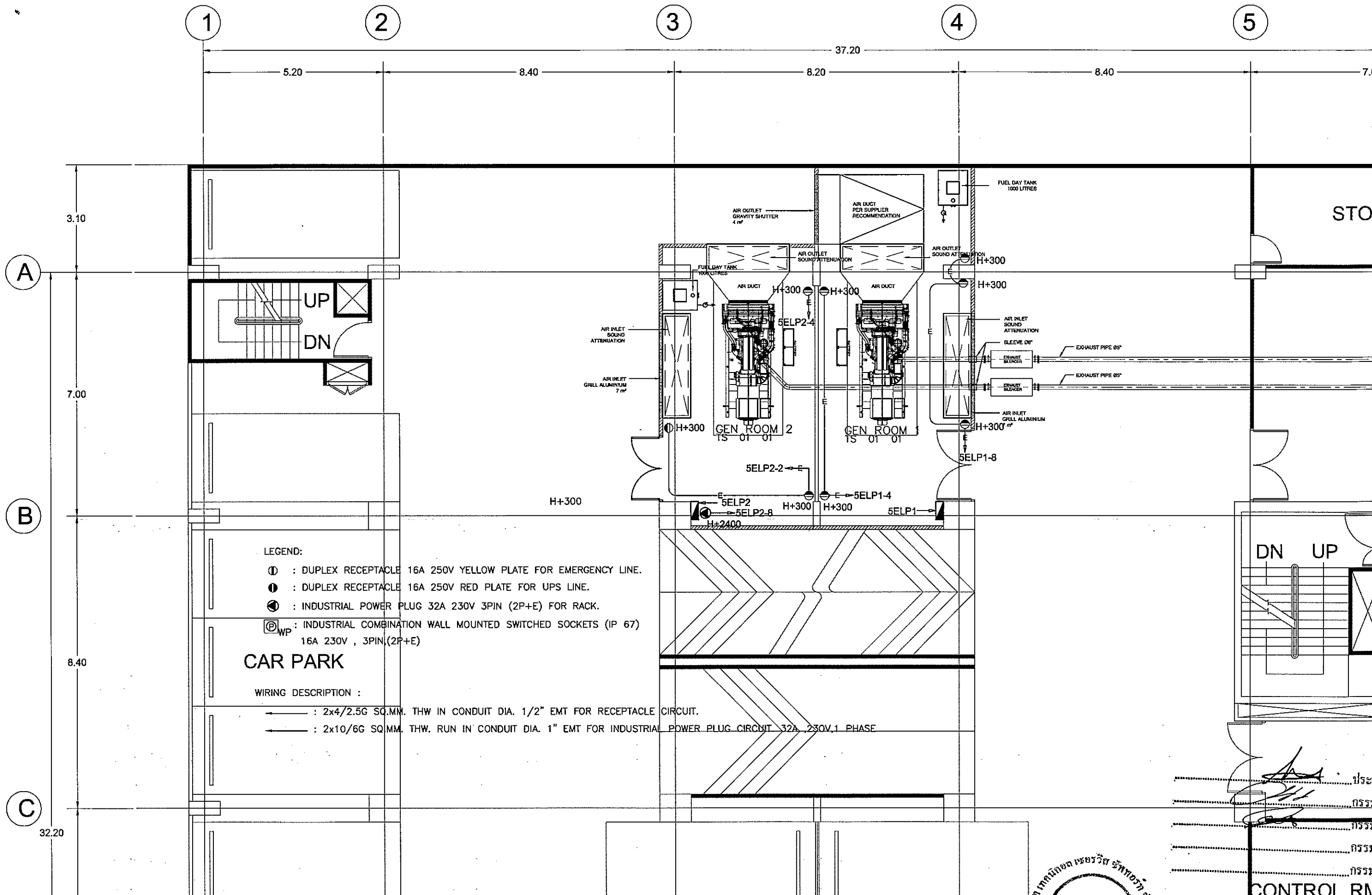
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**LIGHTING SYSTEM  
FOR 11 th FLOOR PLAN  
(PHASE II)**

**05-EE-04**

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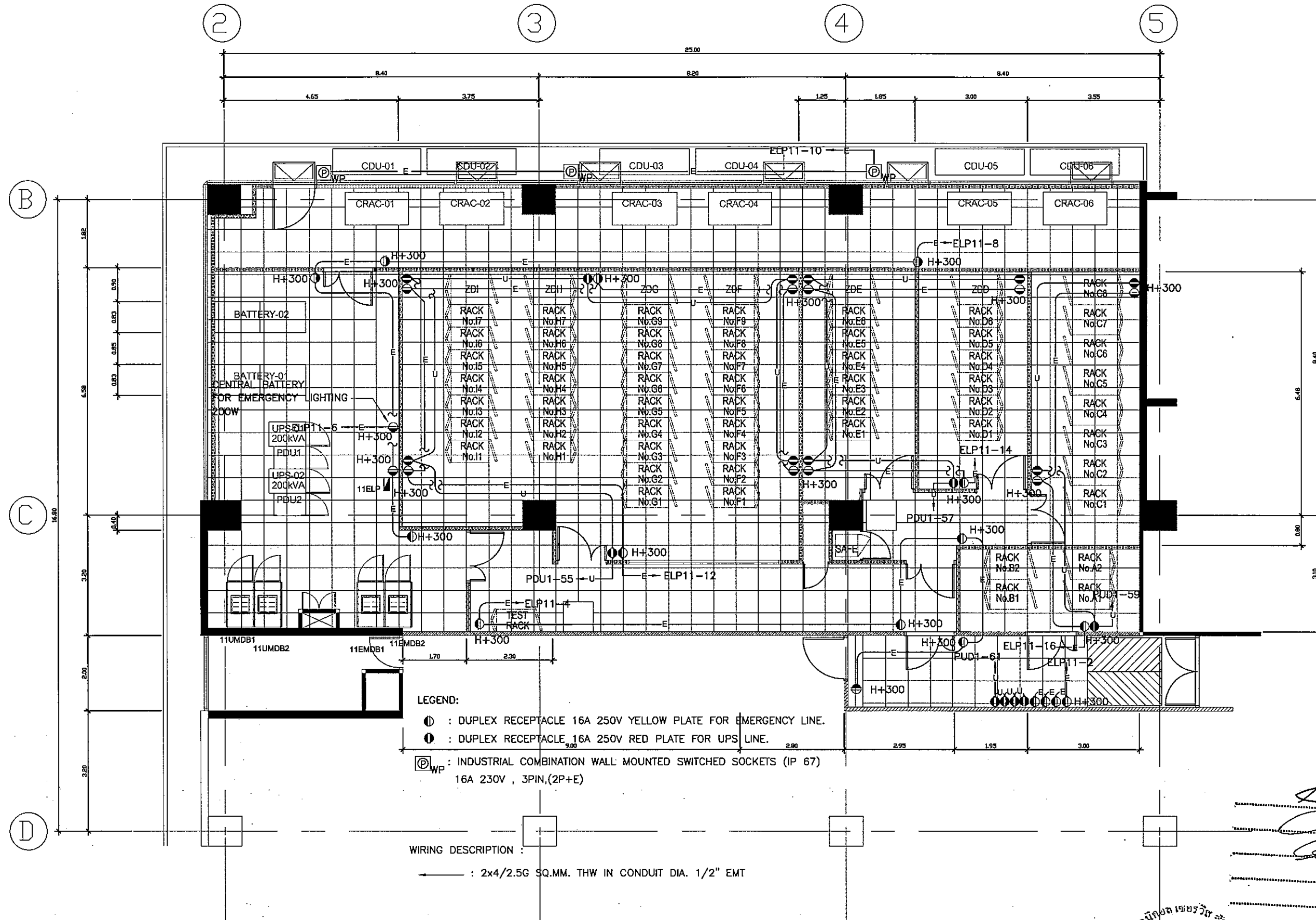
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ELECTRICAL POWER OUTLET  
SYSTEM FOR 5th FLOOR PLAN  
(PHASE II)  
06-EE-01  
Sheet 01

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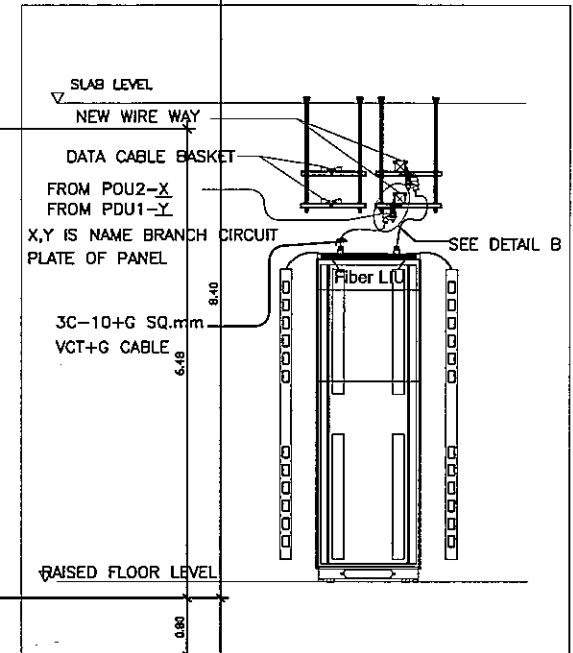
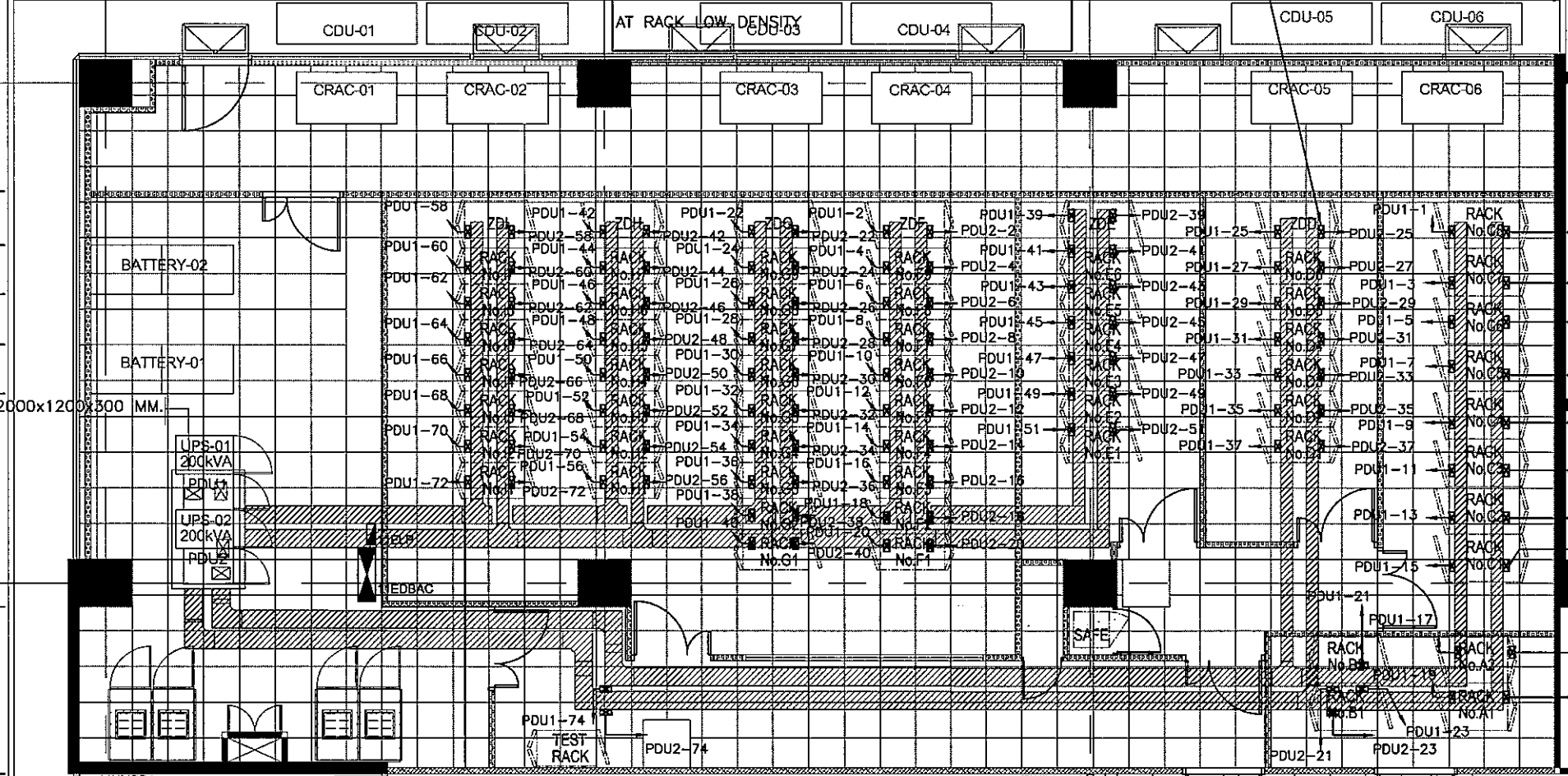
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 ELECTRICAL POWER OUTLET  
 SYSTEM FOR 11th FLOOR PLAN  
 (PHASE II)  
 06-EE-02  
 Sheet Of

② ③ ④ ⑤

INDUSTRIAL POWER PLUG FOR RACK.  
THE EE. CONTRACTOR SHALL BE SUPPLY AND  
INSTALL WIRING CABLE SEE TO DETAIL POWER PLUG



**DETAIL "A"**  
SCALE NTS  
DETAIL POWER PLUG  
AT RACK LOW DENSITY

LEGEND:

: INDUSTRIAL POWER PLUG 32A 400V ,3PIN (2P+E) FOR RACK.

WIRING DESCRIPTION :

: 3Cx10+G SQ.MM. VCT+G RUN IN WIREWAY FOR INDUSTRIAL POWER PLUG CIRCUIT. 32A ,240V,1 PHASE

POWER SOCKET COMPLETED WITH POWER PLUG  
( 32 AT.1 PHASE,240 V.)

**DETAIL B**

SCALE NTS

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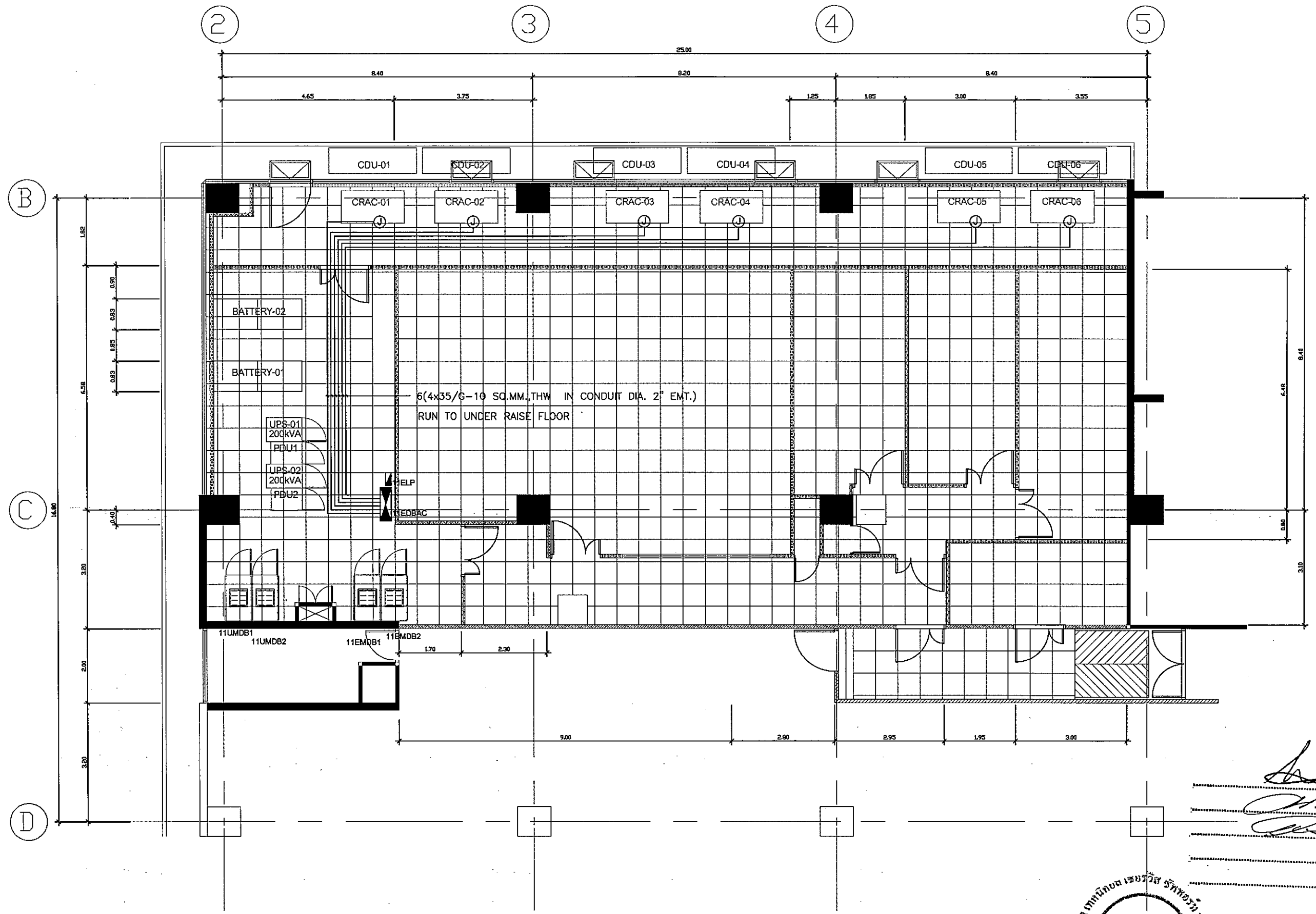
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**DETAIL POWER PLUG AT RACK  
LOW DENSITY FOR 11th FLOOR PLAN  
(PHASE II)**  
**06-EE-03**  
Sheet 01



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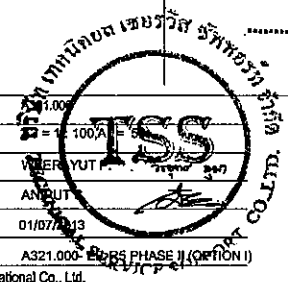
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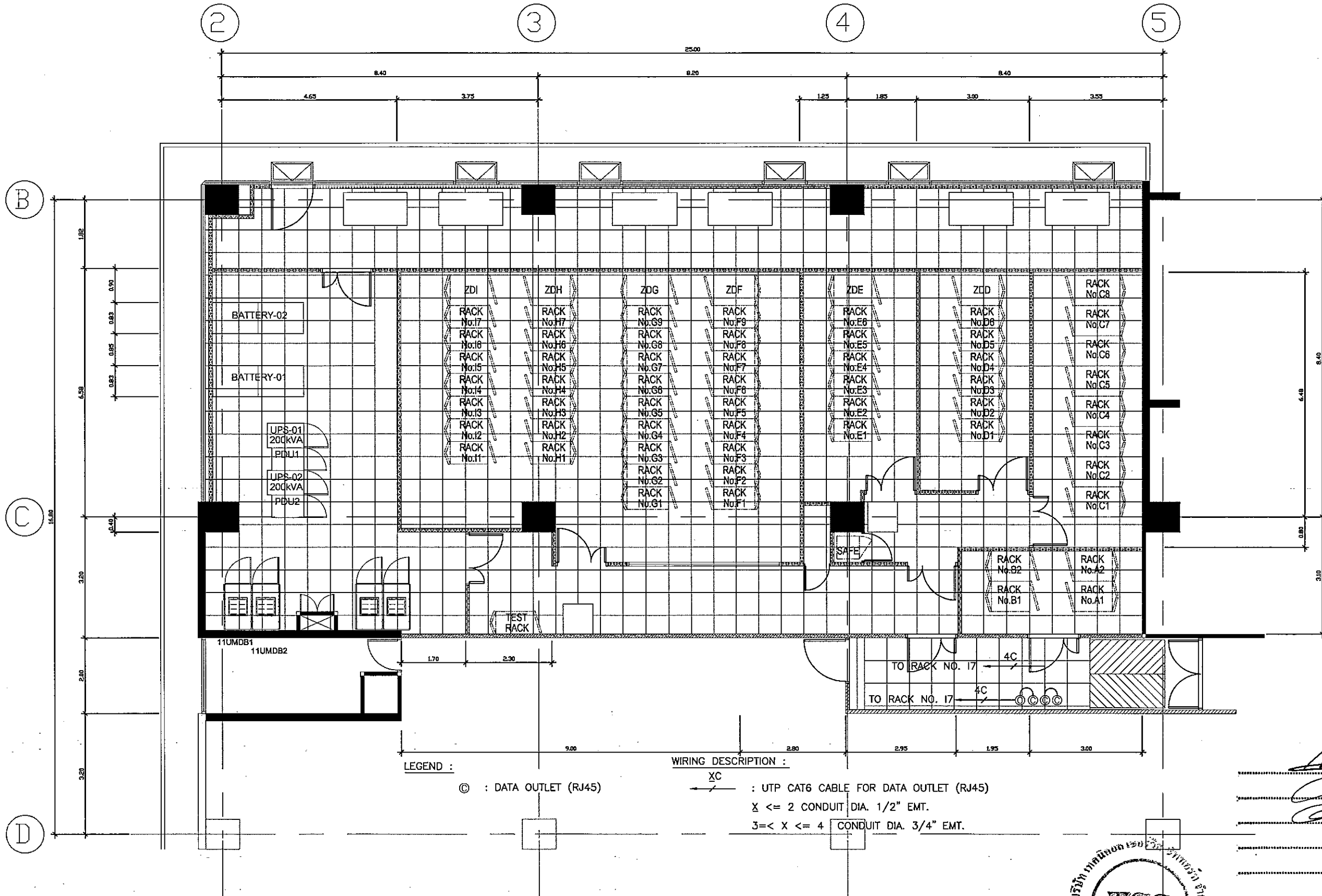
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 POWER SUPPLY FOR AIR  
 CONDITIONING SYSTEM  
 FOR 11 th FLOOR PLAN (PHASE II)  
 06-EE-04  
 Sheet 01



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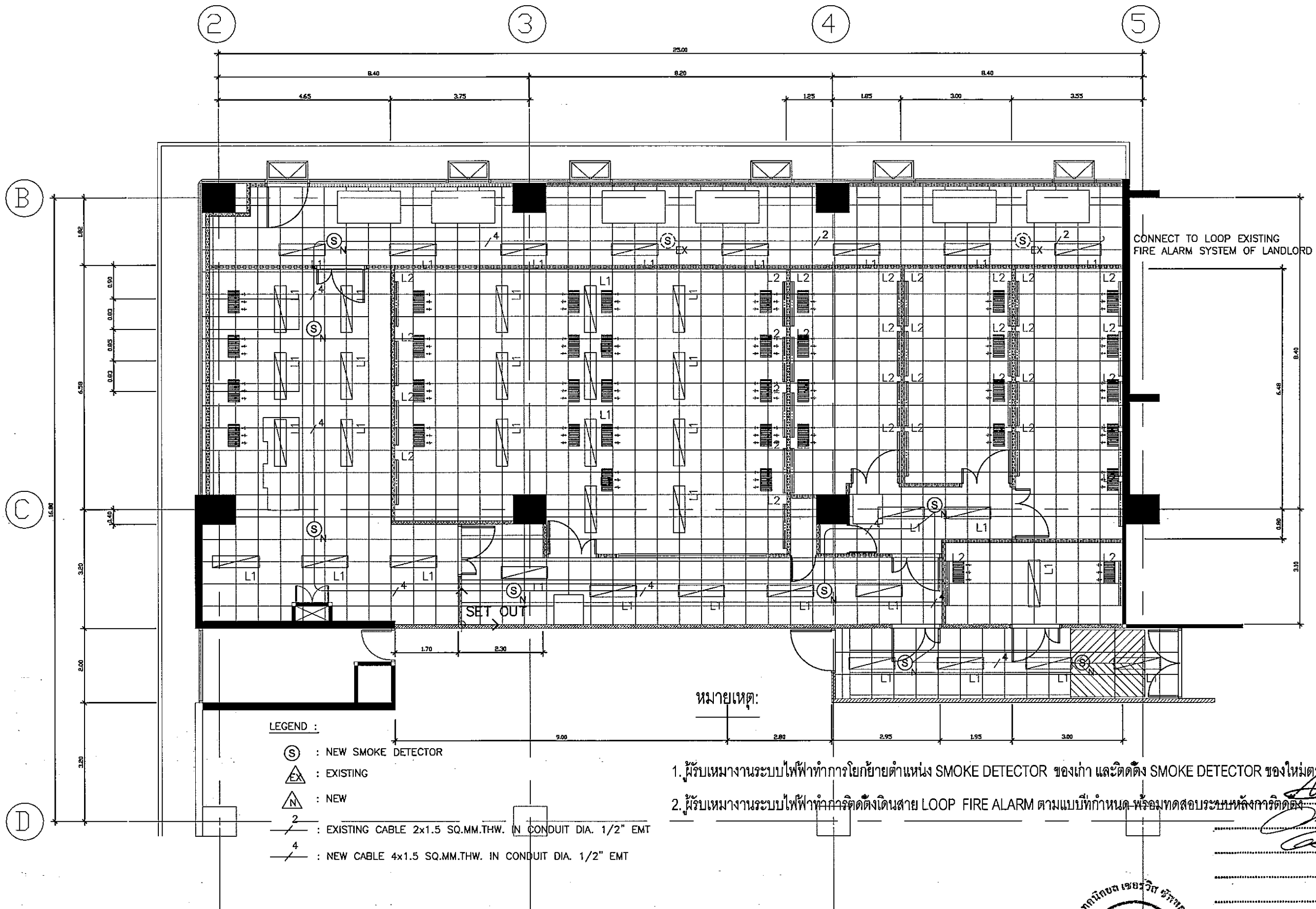
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**DATA OUTLET SYSTEM  
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**07-EE-01**  
 Sheet Of



LEGEND :

- (S) : NEW SMOKE DETECTOR
- (EX) : EXISTING
- (N) : NEW
- 2 : EXISTING CABLE 2x1.5 SQ.MM.THW. IN CONDUIT DIA. 1/2" EMT
- 4 : NEW CABLE 4x1.5 SQ.MM.THW. IN CONDUIT DIA. 1/2" EMT

หมายเหตุ:

1. ผู้รับเหมางานระบบไฟฟ้าทำการโยกย้ายตำแหน่ง SMOKE DETECTOR ของเก่า และติดตั้ง SMOKE DETECTOR ของใหม่ตามแบบที่กำหนด
2. ผู้รับเหมางานระบบไฟฟ้าทำการติดตั้งเดินสาย LOOP FIRE ALARM ตามแบบที่กำหนด พร้อมทั้งทดสอบระบบหลังการติดตั้ง

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Scale : 1:100  
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Chk'd by : ANANT S.  
Plot date : 01/07/2013  
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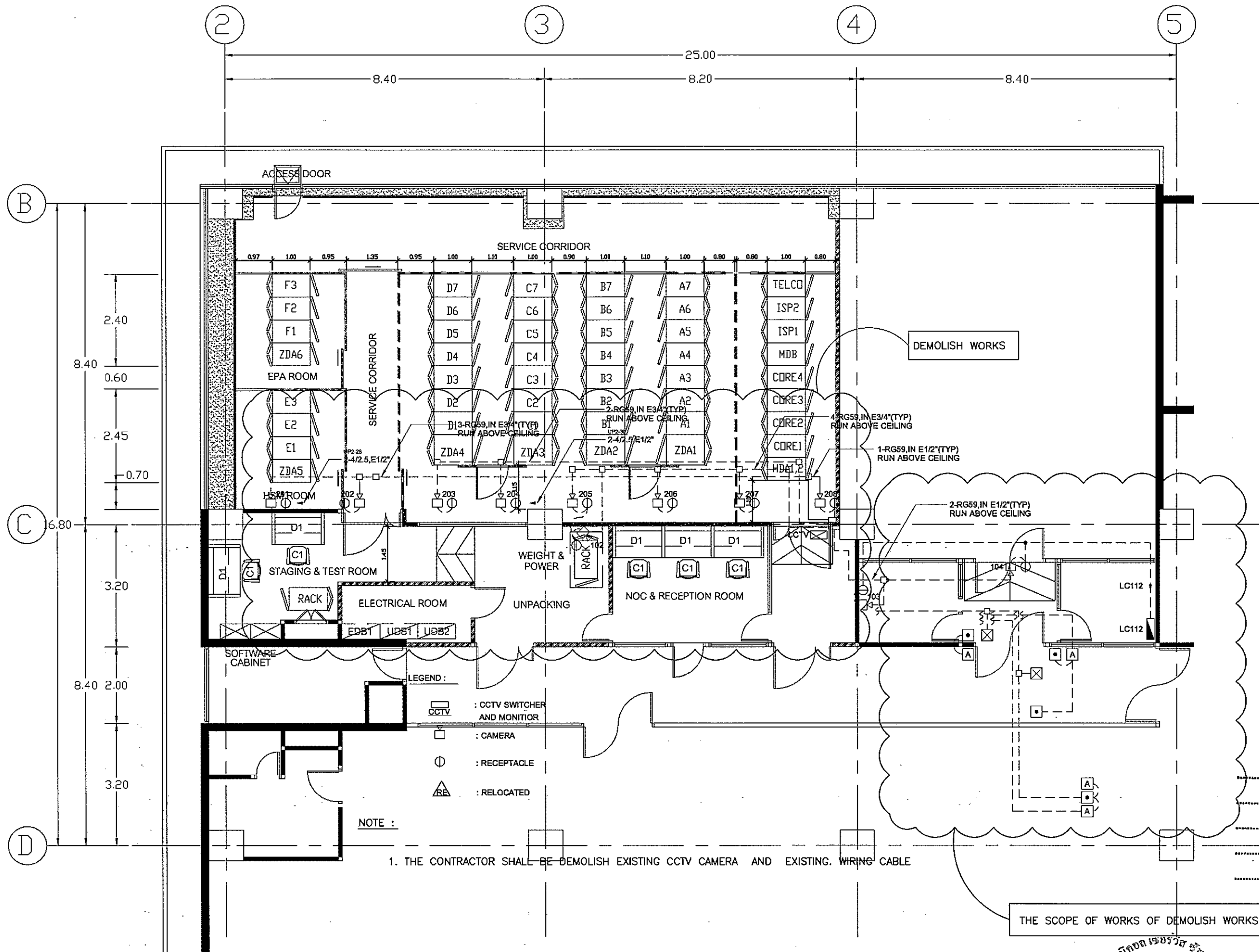
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FOR 11 th FLOOR PLAN (PHASE II)

08-EE-01

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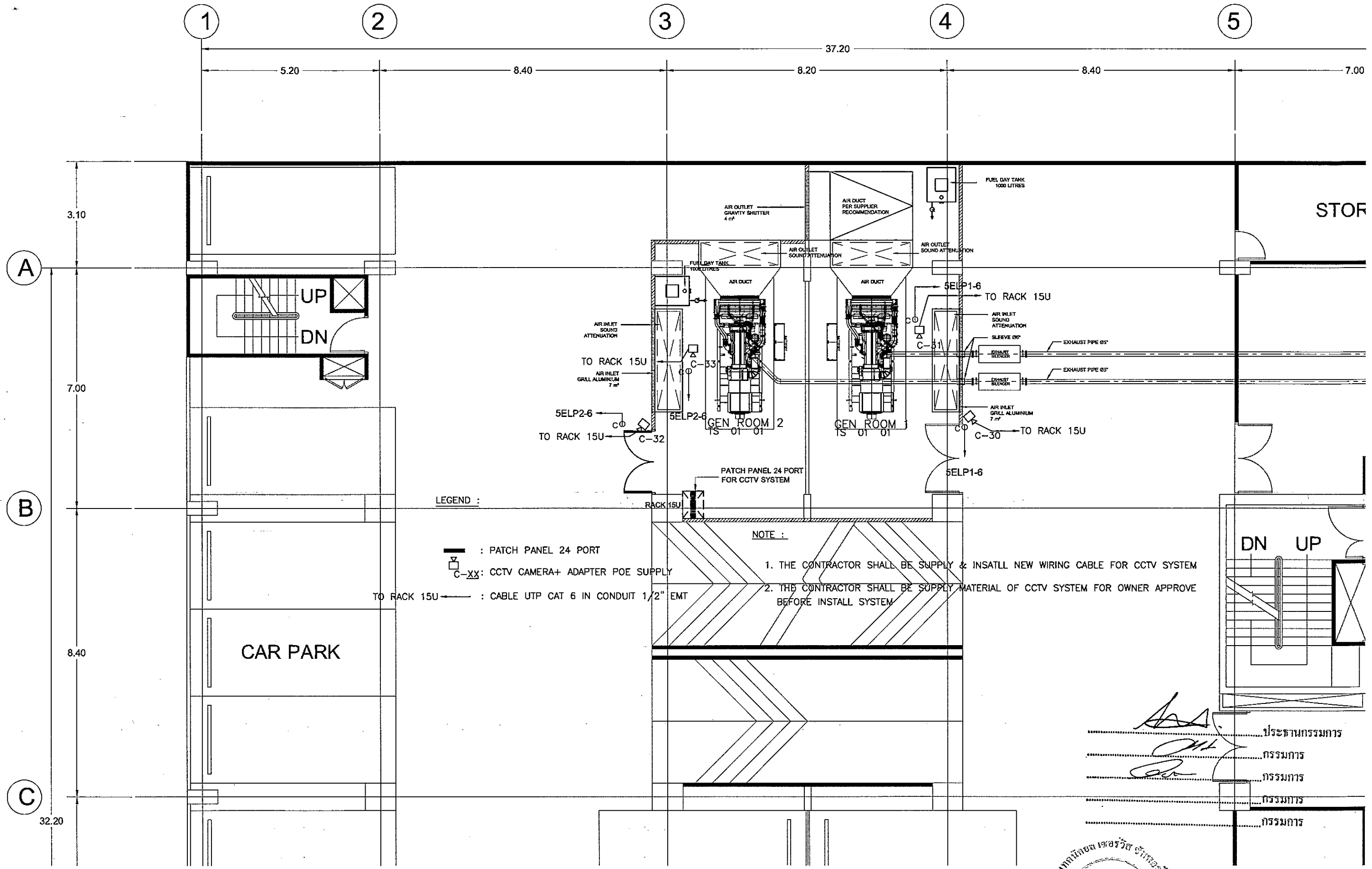
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 CCTV SYSTEM FOR 11 th FLOOR PLAN  
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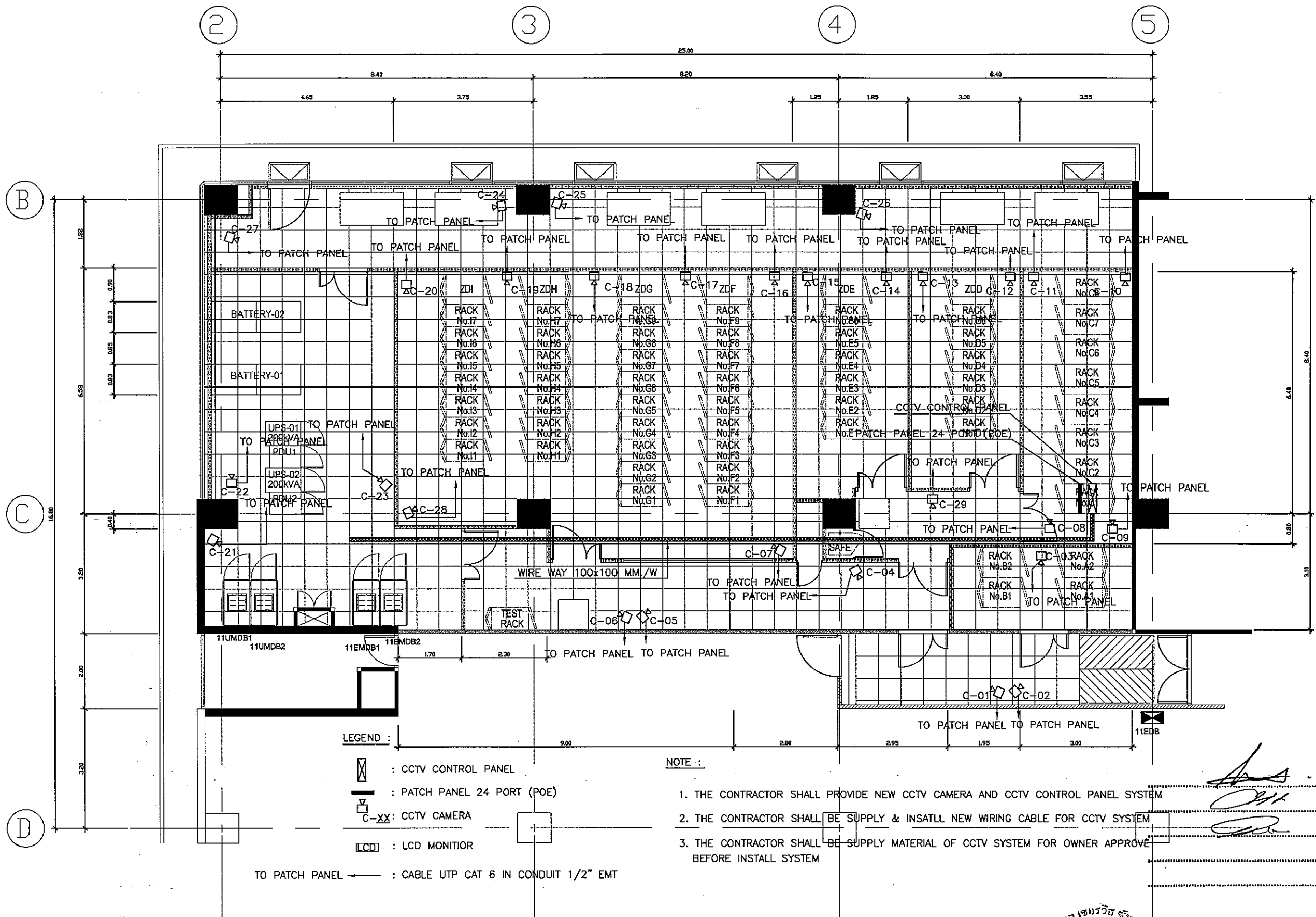
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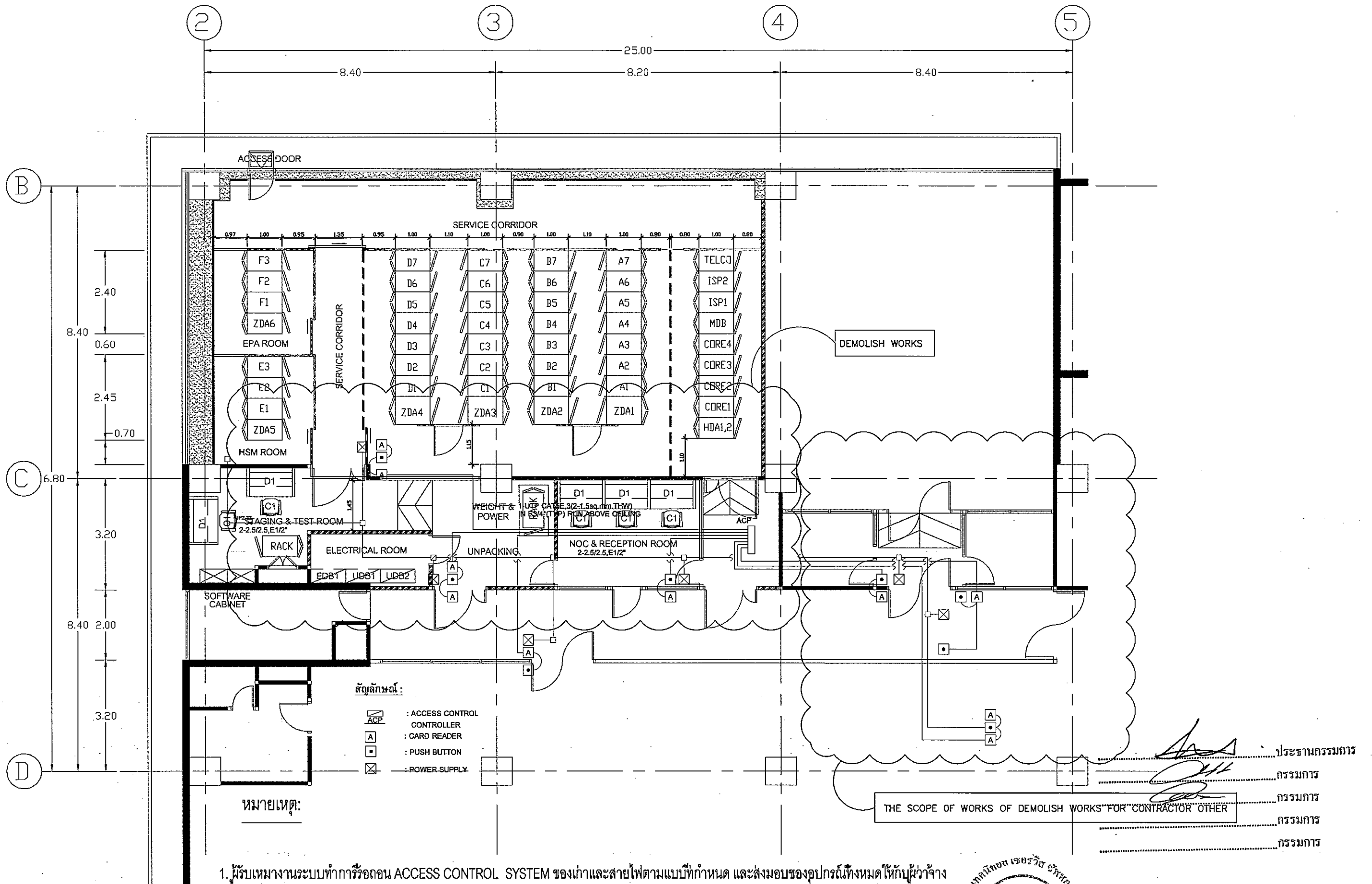
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Sheet title  
**CCTV SYSTEM  
 FOR 5th FLOOR PLAN (PHASE II)**  
**09-EE-02**  
 Sheet 01

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 ..... กรรมการ  
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 ..... กรรมการ  
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..... 1. ประจําโครงการ  
..... 2. ควบคุมการ  
..... 3. ควบคุมการ  
..... 4. ควบคุมการ  
..... 5. ควบคุมการ



THE SCOPE OF WORKS OF DEMOLISH WORKS FOR CONTRACTOR OTHER

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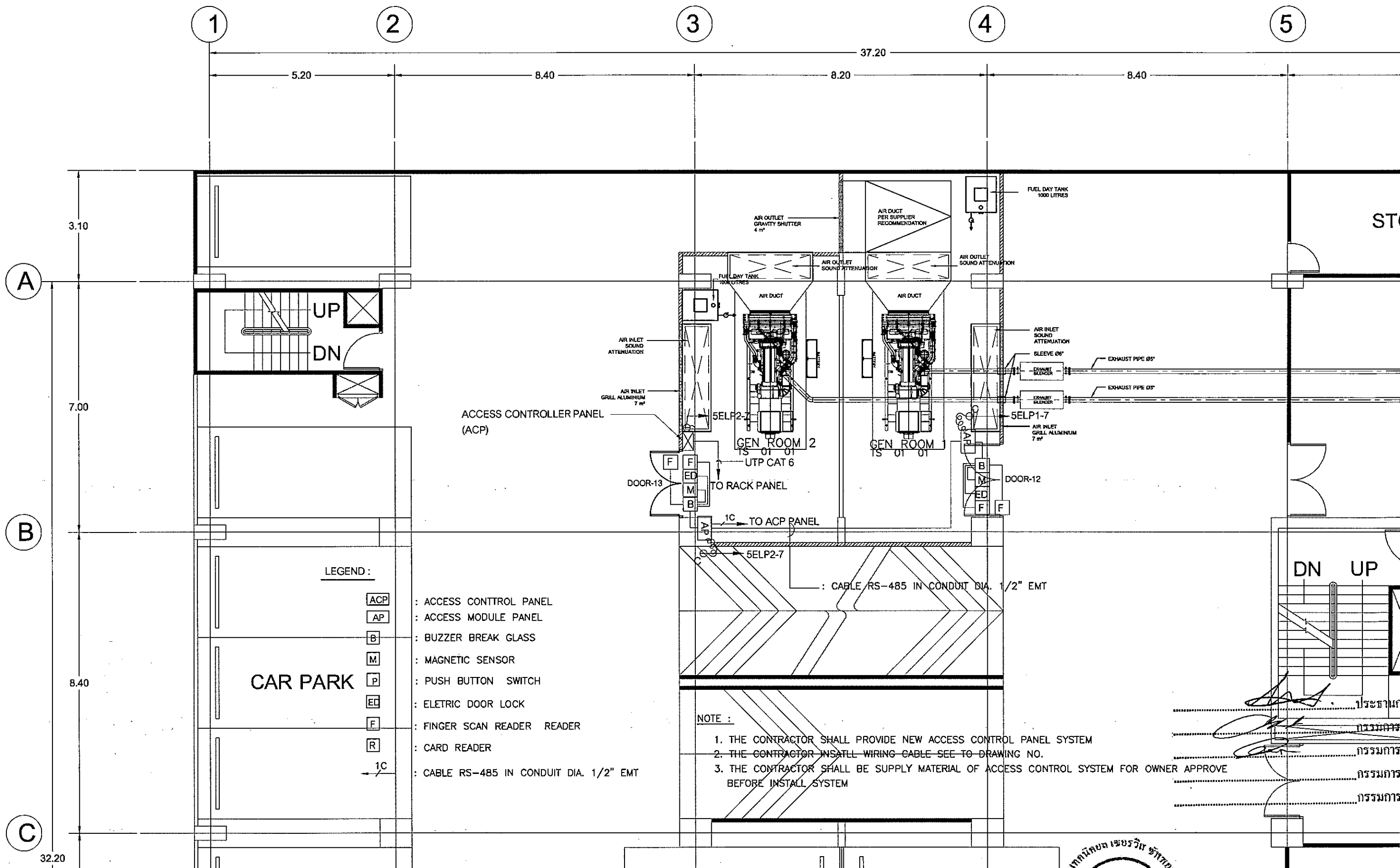
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**DEMOLITION EXISTING  
 CCTV SYSTEM FOR 11 th FLOOR PLAN  
 (PHASE II)**  
**10-EE-01**  
 Sheet Of





- LEGEND :**
- [ACP] : ACCESS CONTROL PANEL
  - [AP] : ACCESS MODULE PANEL
  - [B] : BUZZER BREAK GLASS
  - [M] : MAGNETIC SENSOR
  - [P] : PUSH BUTTON SWITCH
  - [ED] : ELETRIC DOOR LOCK
  - [F] : FINGER SCAN READER READER
  - [R] : CARD READER
  - 1C : CABLE RS-485 IN CONDUIT DIA. 1/2" EMT

- NOTE :**
1. THE CONTRACTOR SHALL PROVIDE NEW ACCESS CONTROL PANEL SYSTEM
  2. THE CONTRACTOR INSTALL WIRING CABLE SEE TO DRAWING NO.
  3. THE CONTRACTOR SHALL BE SUPPLY MATERIAL OF ACCESS CONTROL SYSTEM FOR OWNER APPROVE BEFORE INSTALL SYSTEM

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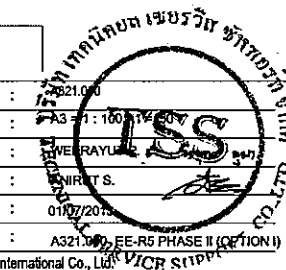
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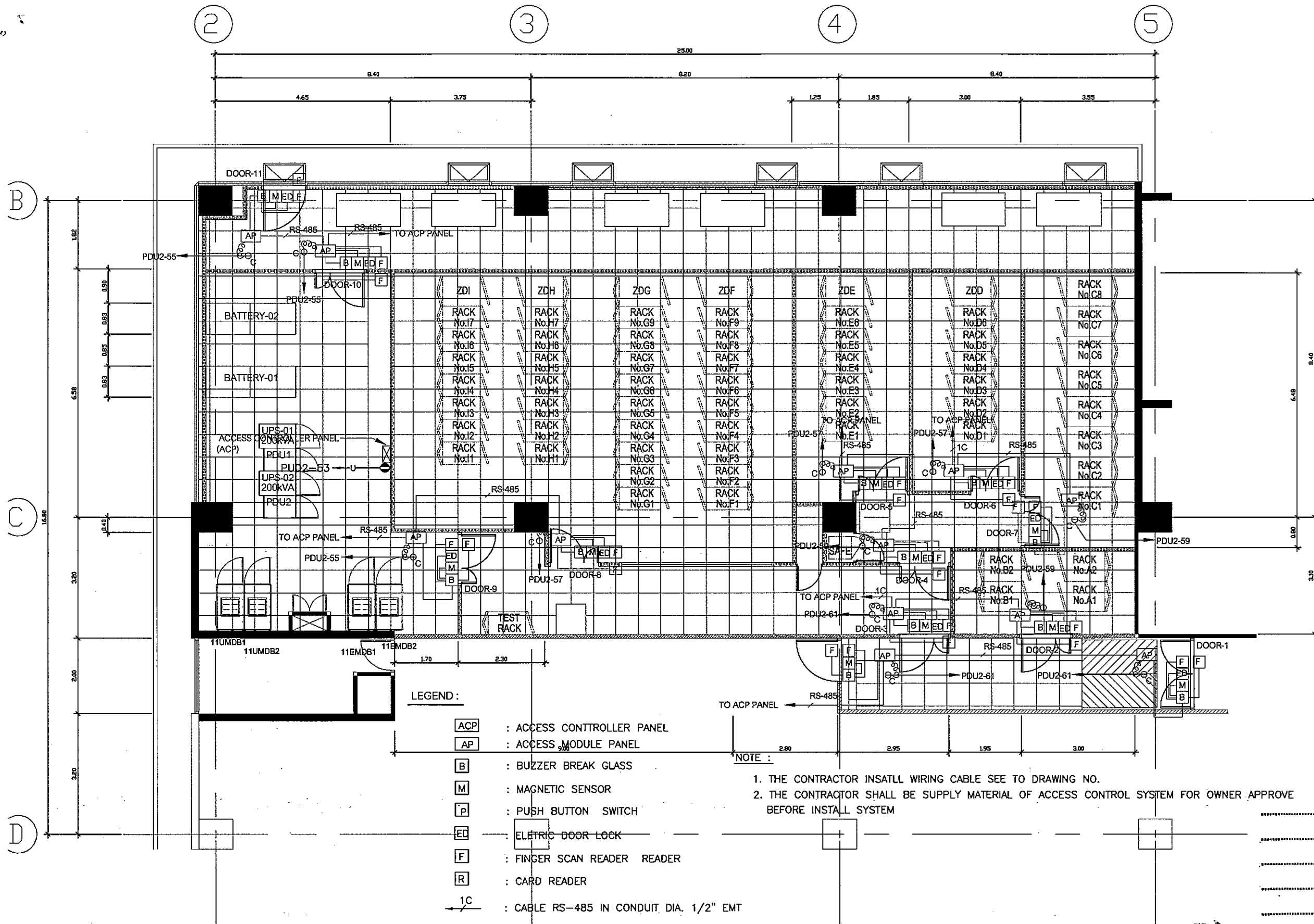
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**CCTV SYSTEM  
 FOR 5 th FLOOR PLAN PHASE II)**  
**10-EE-02**  
 Sheet 01





- LEGEND :**
- [ACP] : ACCESS CONTROLLER PANEL
  - [AP] : ACCESS MODULE PANEL
  - [B] : BUZZER BREAK GLASS
  - [M] : MAGNETIC SENSOR
  - [P] : PUSH BUTTON SWITCH
  - [EL] : ELECTRIC DOOR LOCK
  - [F] : FINGER SCAN READER
  - [R] : CARD READER
  - 1C : CABLE RS-485 IN CONDUIT DIA. 1/2" EMT

**NOTE :**

1. THE CONTRACTOR INSTALLL WIRING CABLE SEE TO DRAWING NO.
2. THE CONTRACTOR SHALL BE SUPPLY MATERIAL OF ACCESS CONTROL SYSTEM FOR OWNER APPROVE BEFORE INSTALL SYSTEM

\_\_\_\_\_ 1. วิศวกรควบคุมการติดตั้ง  
 \_\_\_\_\_ 2. วิศวกรระบบ  
 \_\_\_\_\_ 3. วิศวกรไฟฟ้า  
 \_\_\_\_\_ 4. วิศวกรความปลอดภัย



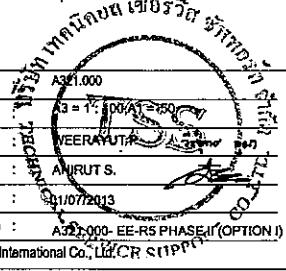
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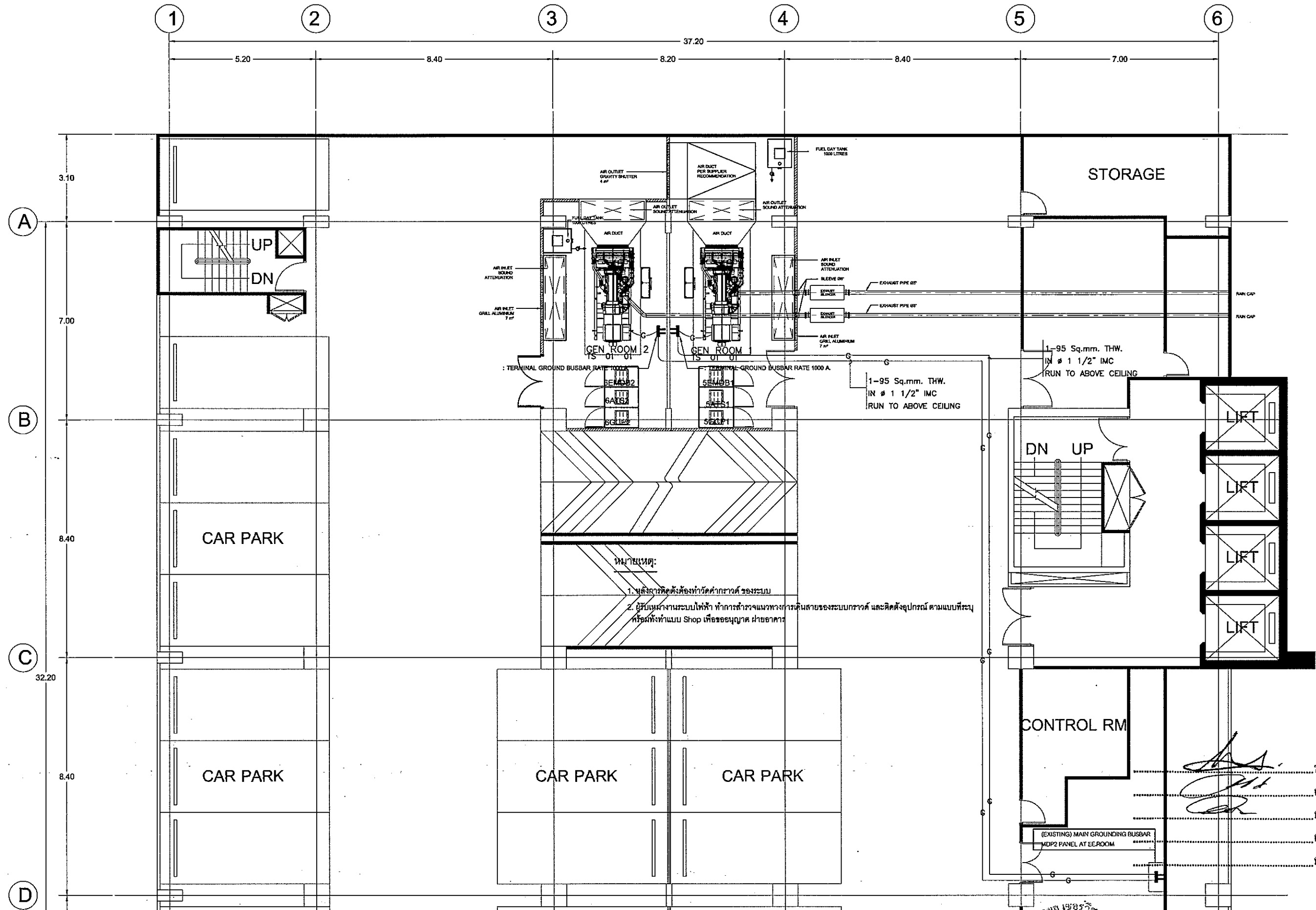
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**ACCESS CONTROL SYSTEM FOR 11 th FLOOR PLAN PHASE II)**  
**10-EE-03**  
 Sheet 01





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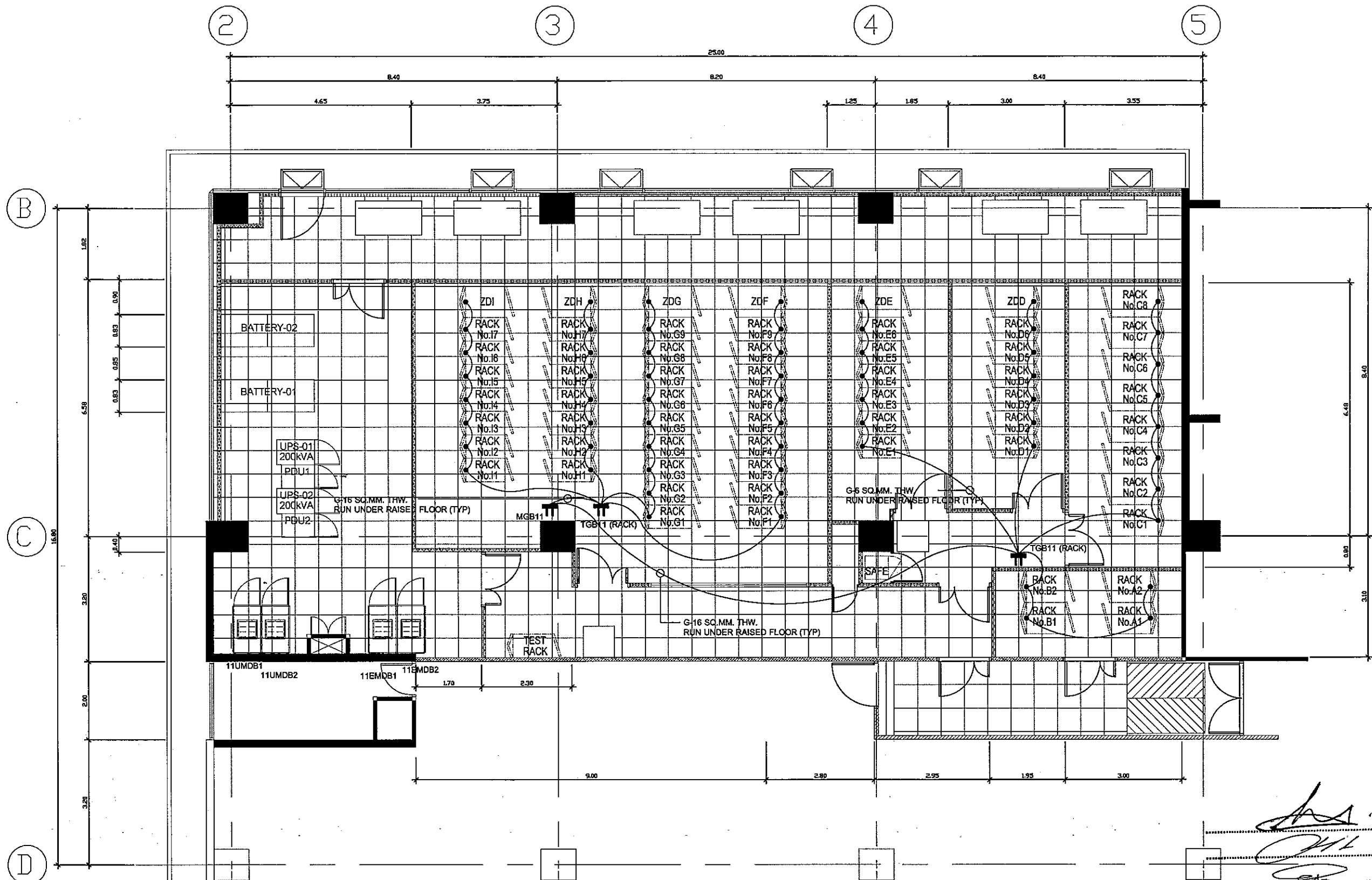
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GROUNDING SYSTEM WITH GEN.  
FOR 5th FLOOR PLAN (PHASE II)  
11-EE-01  
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**LEGEND :**  
 ▬ TGB11 (RACK) : TERMINAL GROUND BUSBAR SIZE 14"x4"x20"  
 ▬ MGB11 : MAIN TERMINAL GROUND BUSBAR SIZE 14"x4"x20"

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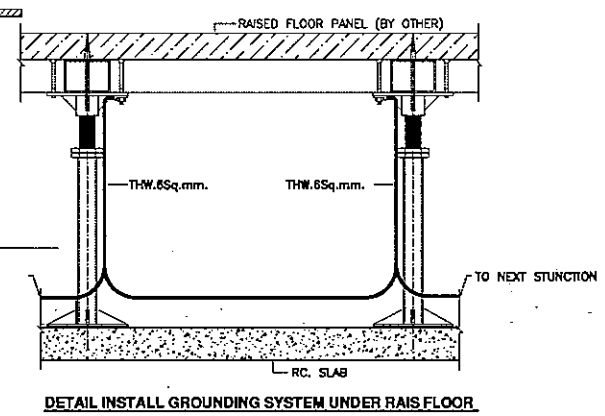
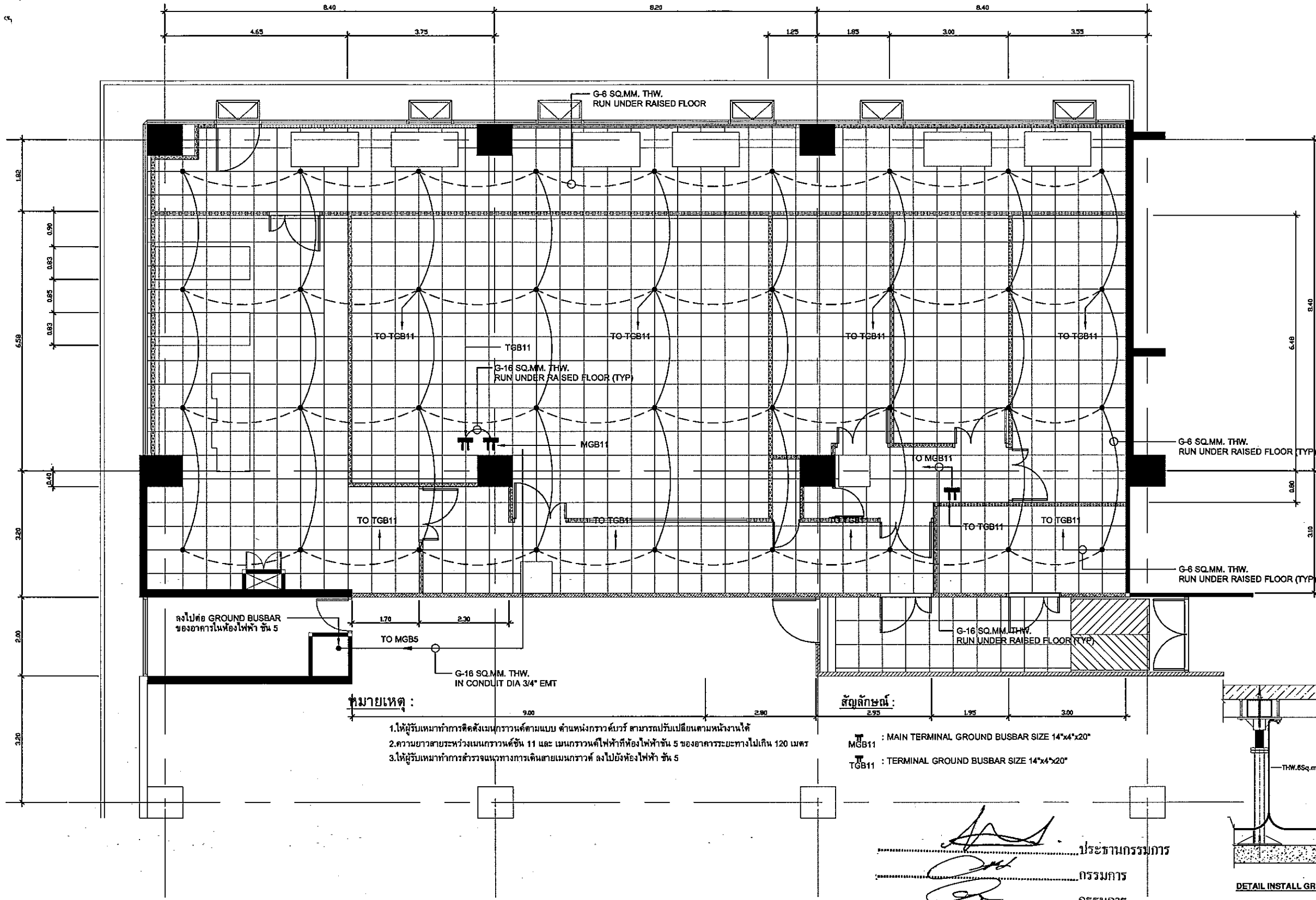
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 CAD dwg. file : A321.000-EE-R5 PHASE II (OPTION II)  
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**GROUNDING SYSTEM  
 FOR RACK  
 11th FLOOR PLAN (PHASE II)**  
**11-EE-02**  
 Sheet of







สัญลักษณ์ :

MGB11 : MAIN TERMINAL GROUND BUSBAR SIZE 14"x4"x20"

TGB11 : TERMINAL GROUND BUSBAR SIZE 14"x4"x20"

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GROUNDING SYSTEM  
GRID LINE FOR UNDER RAISED FLOOR  
11th FLOOR PLAN (PHASE II)  
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