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PLANNERS

ARCHITECTS

ENGINEERS
Structure
MEP

www.raka-design.net

RAKA
DESIGN

SAMPLES OF PRODUCTION /**SHOP DRAWINGS**

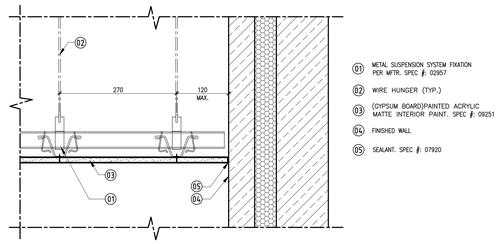


ARCHITECTURE
STRUCTURE
ELECTRICAL
MECHANICAL - HVAC
MECHANICAL - PLUMPING

RAKA
DESIGN

ARCHITECTURAL





01 METAL SUSPENSION SYSTEM FIXATION PER MFTR. SPEC #: 02957

02 WIRE HUNGER (TYP.)

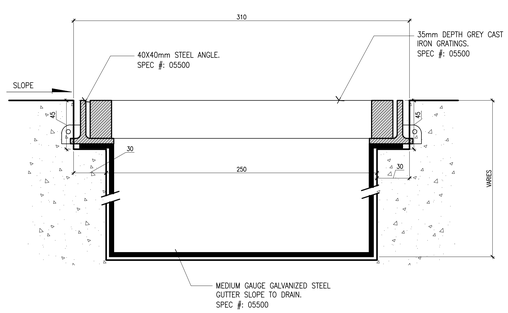
03 (GYPSUM BOARD)PAINTED ACRYLIC MATTE INTERIOR PAINT. SPEC #: 09251

04 FINISHED WALL

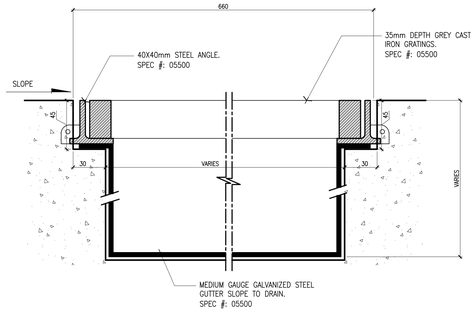
05 SEALANT. SPEC #: 07920

01 A0-90-100 CEILING END DETAIL

SCALE 1 : 5



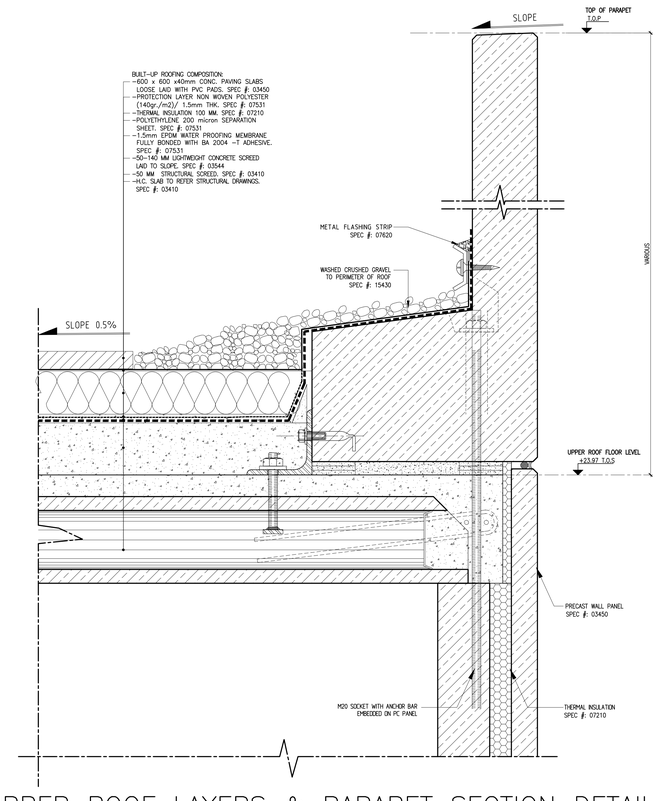
TRENCH COVER



SUMP PIT COVER

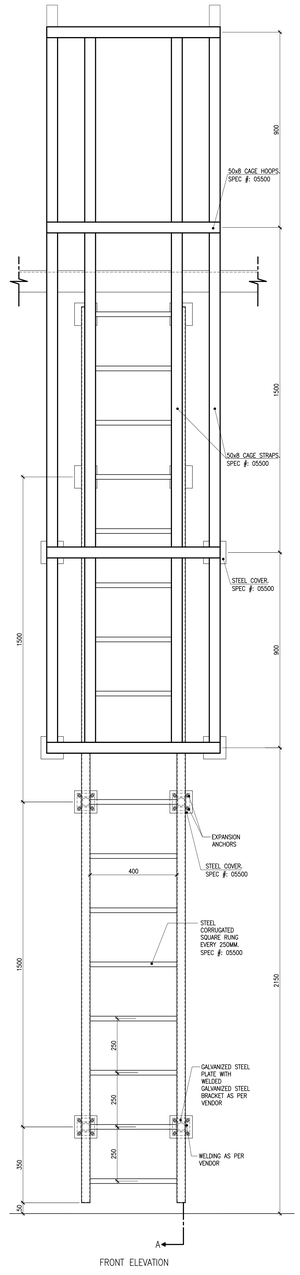
02 A0-90-100 GRATING DETAIL

SCALE 1 : 2

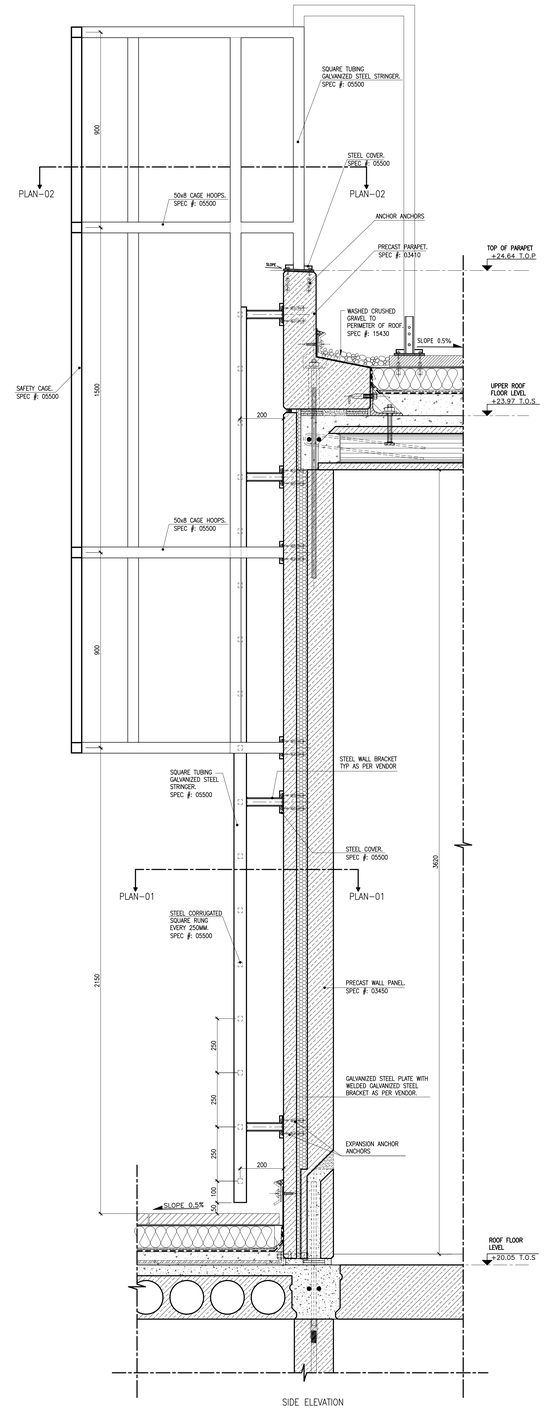


03 A0-90-100 UPPER ROOF LAYERS & PARAPET SECTION DETAIL

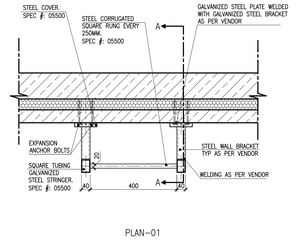
SCALE 1 : 5



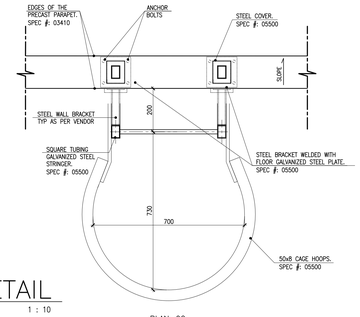
FRONT ELEVATION



SIDE ELEVATION



PLAN-01

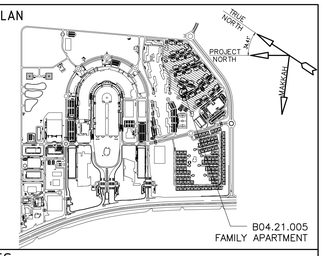


PLAN-02

04 A0-90-100 STEEL LADDER DETAIL

SCALE 1 : 10

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS UNLESS OTHERWISE NOTED. DRAWINGS SHOULD NOT BE SCALED AND ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

2. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE ROUGH DIMENSIONS AND DO NOT INCLUDE FINISHING MATERIALS AND THEIR CORRESPONDING FIXATION TOLERANCES. PLEASE REFER TO DETAILED PLANS AND/OR WALL SECTION DRAWINGS.

3. TOLERANCES REQUIRED FOR EXT. FINISHING WORKS SHALL BE CONSIDERED ALONG WITH DIMENSIONS SHOWN ON DOORS AND WINDOWS SCHEDULES.

4- PRECAST ELEMENTS CONNECTION DETAILS SHALL BE AS PER APPROVED VENDOR DETAILS.

5- CURTAIN WALL MULLION DETAILS ARE ONLY INDICATIVE AS THEY ARE AS PER APPROVED VENDOR DETAILS.

6- ALL CURTAIN WALLS DETAILS ARE INDICATIVE, WILL BE SUBJECT TO APPROVED DETAILED VENDOR DRAWINGS

REFERENCES

1-GENERAL NOTES, SYMBOLS, LEGEND AND ABBREVIATIONS	MI-IV-A3-B04.21.000-A0-10-001-05
2-FLOOR PLANS	MI-IV-A3-B04.21.000-A0-10-110-05 TO:190
3-SECTIONS	MI-IV-A3-B04.21.000-A0-30-110-05 MI-IV-A3-B04.21.000-A0-30-120-05

LEGENDS

1. FFL FINISH FLOOR LEVEL.
2. TOS TOP OF SLAB.
3. TOP TOP OF PARAPET.
4. FCH FULL CEILING HEIGHT.
5. TOH TOP OF HANDRAIL.

Rev.	Date	Drgtr.	Signature	ABV Appr.	Signature	Revision Description
09	24.DEC.2017	ZHH		APZ		ISSUED FOR APPROVAL
08	01.OCT.2017	ZHH		APZ		ISSUED FOR APPROVAL
07	15.JUN.2017	ZHH		APZ		ISSUED FOR APPROVAL
06	16.MAR.2017	ZHH		APZ		ISSUED FOR APPROVAL
05	15.MAY.2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

مملكة العربية السعودية
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الطبي لقوى الأمن في الرياض وجدة

Engineer / Owner's Representative

Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP CO. LTD.

ABV ROCK Group Co. Ltd. Lead Designer / Consultant :

P&T Architects and Engineers Ltd.
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T+971 4 350 3800/ 358 6803, Fax 971 4 358 6800
E-mail: pt.dubai@p-tgroup.com
Website: www.p-tgroup.com

ABV ROCK Group Co. Ltd. Structural,Infrastructure and MEPF Consultant:
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Fax: +966 126044701

Sub Consultant

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Jeddah 21445 Fax: +966 12 6600345
Kingdom of Saudi Arabia
www. Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
---	A.S@A0	---	ARCHITECTURE

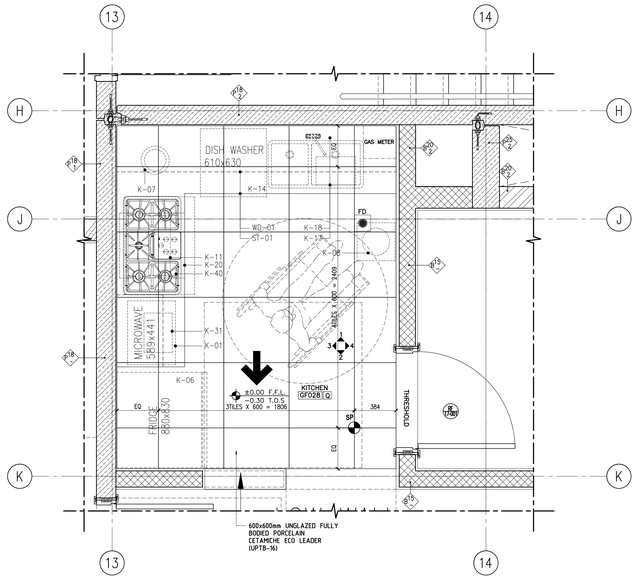
Drawing Title:

B04.21 FAMILY APARTMENT BUILDING-TYPE (01)
MISCELLANOUS DETAILS (01)

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-A0-90-100							05	09	A	

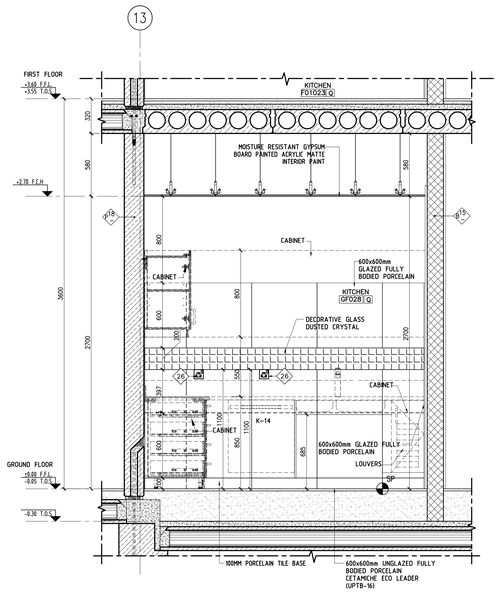
NOTE:

KITCHEN CABINETS WILL BE PROVIDED BY AN APPROVED SUPPLIER



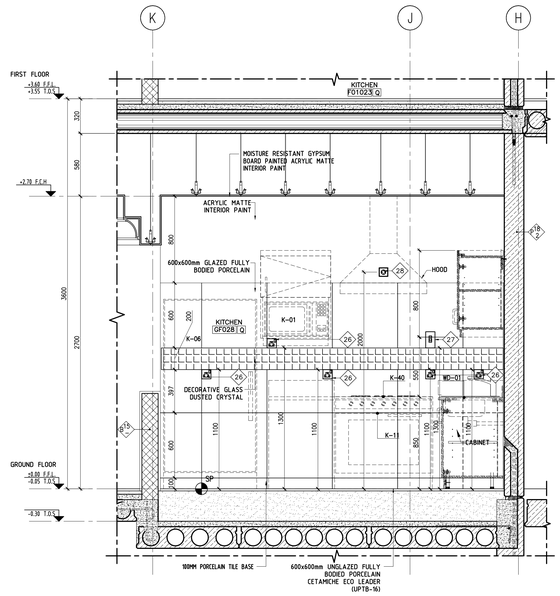
01 A0-50-207 KITCHEN FLOOR PATTERN PLAN

SCALE 1 : 20



03 A0-50-207 INTERNAL ELEVATION (1)

SCALE 1 : 20



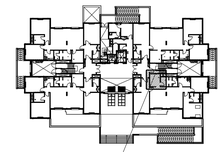
05 A0-50-207 INTERNAL ELEVATION (3)

SCALE 1 : 20

NOTE:

- GROUND FLOOR LEVEL(±0.00 F.FL.) EQUALS TO (717.47) IN SITE PLAN
- THIS KITCHEN IS ADJUSTED FOR ACCEIBLE USE AS A RESULT.
- COUNTER TOP HEIGHT IS 850 MM NOT 900 MM (MAXIMUM HEIGHT AS PER ADA IS 865 MM).
- THE CABINET UNDER THE KITCHEN SINK HAS A SPECIAL DESIGN IN ADDITION TO THE LOUVERED SMALL CABINET AT THE LPG METER .

KEY PLAN



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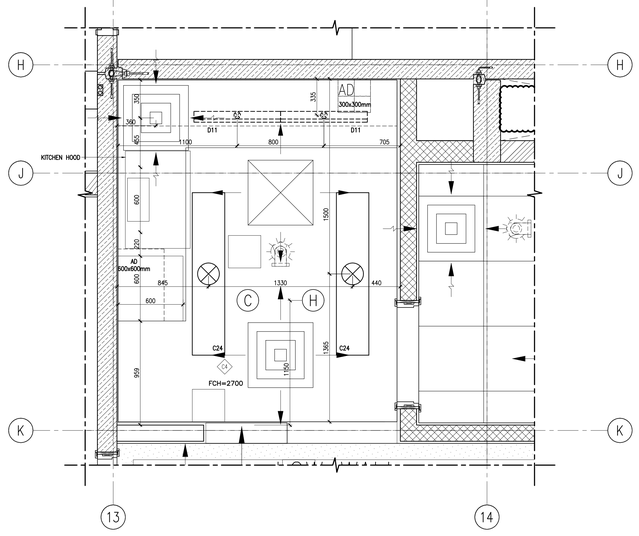
3. TOLERANCES REQUIRED FOR EXT. FINISHING WORKS SHALL BE CONSIDERED ALONG WITH DIMENSIONS SHOWN ON DOORS AND WINDOWS SCHEDULES.

REFERENCES

1- GENERAL NOTES, SYMBOLS, LEGEND AND ABBREVIATIONS	MI-IV-A3-B04.21.000-A0-10-001-05
2-FINISHING SCHEDULE	MI-IV-A3-B04.21.000-A0-60-101-05 TO:107
3-SCHEDULE OF DOORS	MI-IV-A3-B04.21.000-A0-60-201-05 TO:205
4-SCHEDULE OF WINDOWS	MI-IV-A3-B04.21.000-A0-60-301-05

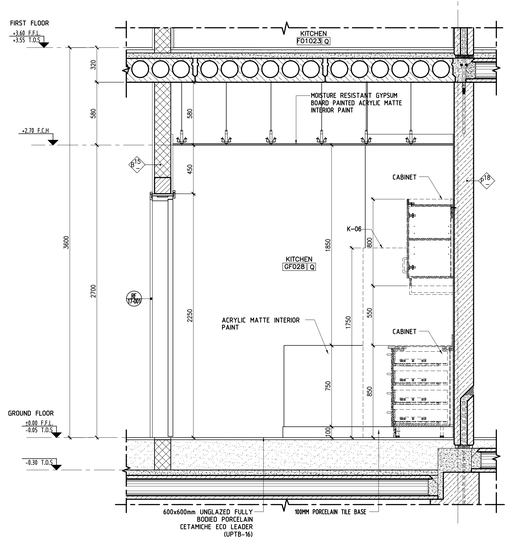
LEGEND

BUILDING CATEGORY — RV — BUILDING TYPE
DOOR TYPE — 001 — DOOR SERIAL
W — 00 — WINDOW TYPE / WINDOW NUMBER
F.F.L FINISH FLOOR LEVEL
T.O.S TOP OF SLAB
F.C.H FULL CEILING HEIGHT
F.C.L FULL CEILING LEVEL
ROOM NUMBER — LAUNDRY — RF001 N — ROOM DESIGNATION / FINISHING CODE



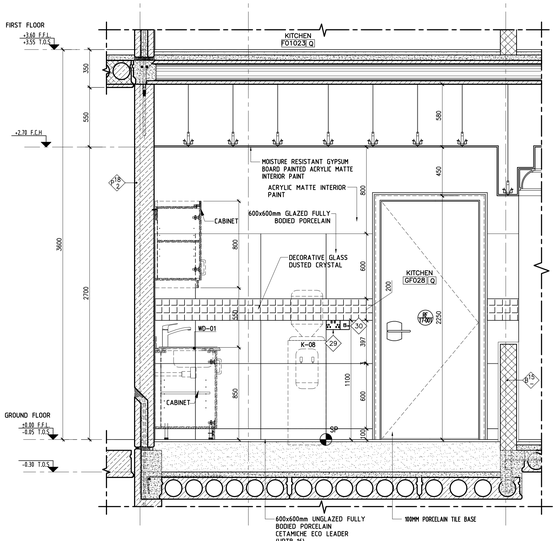
02 A0-50-207 KITCHEN REFLECTED CEILING PLAN

SCALE 1 : 20



04 A0-50-207 INTERNAL ELEVATION (2)

SCALE 1 : 20



06 A0-50-207 INTERNAL ELEVATION (4)

SCALE 1 : 20

ROOM NAME	FIXTURE	DESCRIPTION
KITCHEN	K-01	MICROWAVE
	K-06	FRIDGE
	K-07	KETTLE
	K-08	BOTTLE DISPENSER

ROOM NAME	FIXTURE	DESCRIPTION
KITCHEN	K-11	OVEN
	K-12 K-13	K-12 WASHING MACHINE K-13 DRYER
	K-14	DISH WASHER
	K-17 K-18	K-17 TWO BOWL SINK K-18 SINK MIXER

ROOM NAME	FIXTURE	DESCRIPTION
KITCHEN	K-20	HOOD
	K-40	GAS COOK TOP
	K-32	GARBAGE BIN

FURNITURE LEGEND	
K-01	MICROWAVE
K-06	FRIDGE
K-07	KITTLE
K-08	BOTTLE DISPENSER
K-11	OVEN
K-14	DISH WASHER
K-17	TWO BOWL SINK
K-18	SINK MIXER
K-20	HOOD
K-31	GARBAGE BIN
K-40	GAS COOK TOP
WD-01	CABINETS
ST-01	TOP COUNTER
26	ELECTRICAL SOCKET
27	ELECTRICAL SWITCH
28	ELECTRICAL OUTLET FOR HOOD
29	ELECTRICAL DUPLEX SOCKET
30	TELEPHONE OUTLET

SYMBOL	ABBREVATION	DESCRIPTION
		MOISTURE RESISTANT GYPSUM BOARD PAINTED ACRYLIC MATTE INTERIOR PAINT
	C24	SUSPENDED LUMINARE WITH 2X49W, 220V HIGH OUTPUT T5 FLUORESCENT LAMPS, IP20.
	D11	BARE BATTEN FLUORESCENT STAGGERED STRIPLUMINARE FORCONTINUOUS-ROW LIGHTING WITH 1x22W, 220V T5 LAMPS,IP20.
		SUPPLY DIFFUSER
		RETURN DIFFUSER
		FIXED TEMPERATURE THERMAL DETECTOR
		PENDENT SPRINKLER
	FD	FLOOR DRAIN
	SP	STARTING POINT
	AD	ACCESS DOOR

0.1
0 0.5 1 2 Meters

Rev.	Date	Orig'r.	Signature	ABV Appr.	Signature	Revision Description
07	24.DEC. 2017	ZHH		APZ		ISSUE FOR APPROVAL
06	01.OCT. 2017	ZHH		APZ		ISSUE FOR APPROVAL
05	15. JUN. 2017	ZHH		APZ		ISSUE FOR APPROVAL
04	16.MAR. 2017	ZHH		APZ		ISSUE FOR APPROVAL
03	15. MAY. 2016	ZHH		APZ		ISSUE FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

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وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH

مشروع مركز الامن العام

Engineer / Owner's Representative

Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP CO. LTD.

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E-mail: pt.dubai@p-tgroup.com
Website: www.p-tgroup.com

ABV ROCK Group Co. Ltd. Structural,Infrastructure and MEPF Consultant:

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Fax: +966 12604701

Sub Consultant

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Kingdom of Saudi Arabia
www. Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
---	1:20@A0		ARCHITECTURE

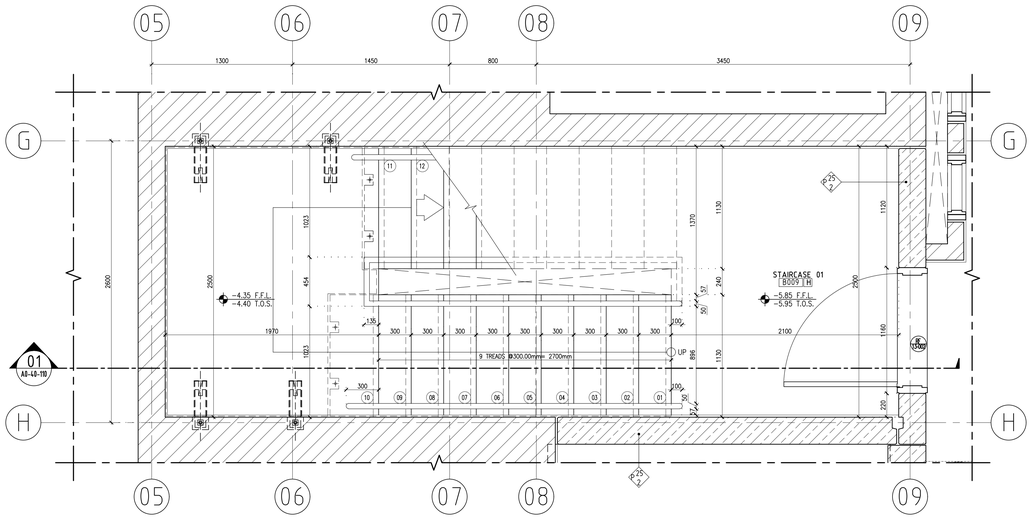
Drawing Title:

B04.21 FAMILY APARTMENT BUILDING–TYPE (01)
KITCHEN (GROUND FLOOR) DETAIL

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI–IV–A3–B04.21.000–A0– 50–207							05	07		A

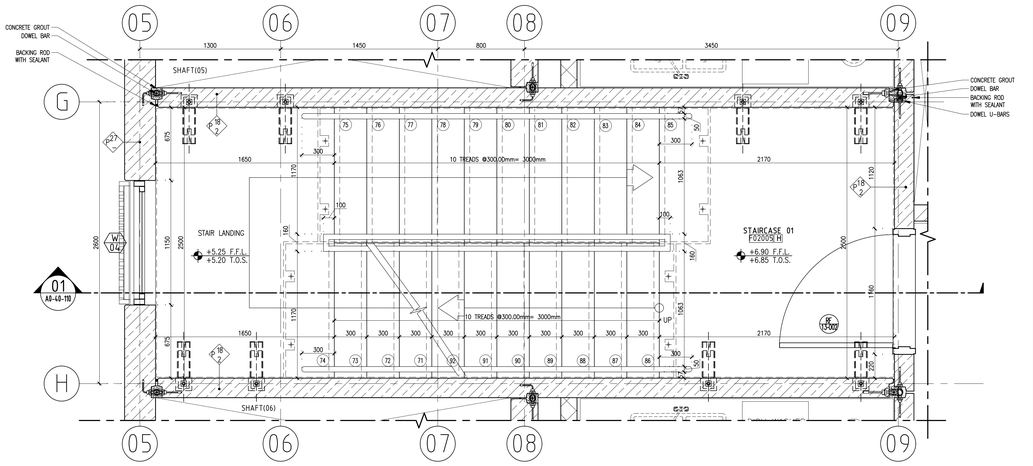
NOTE:

– GROUND FLOOR LEVEL(±0.00 F.F.L.) EQUALS TO (717.47) IN SITE PLAN



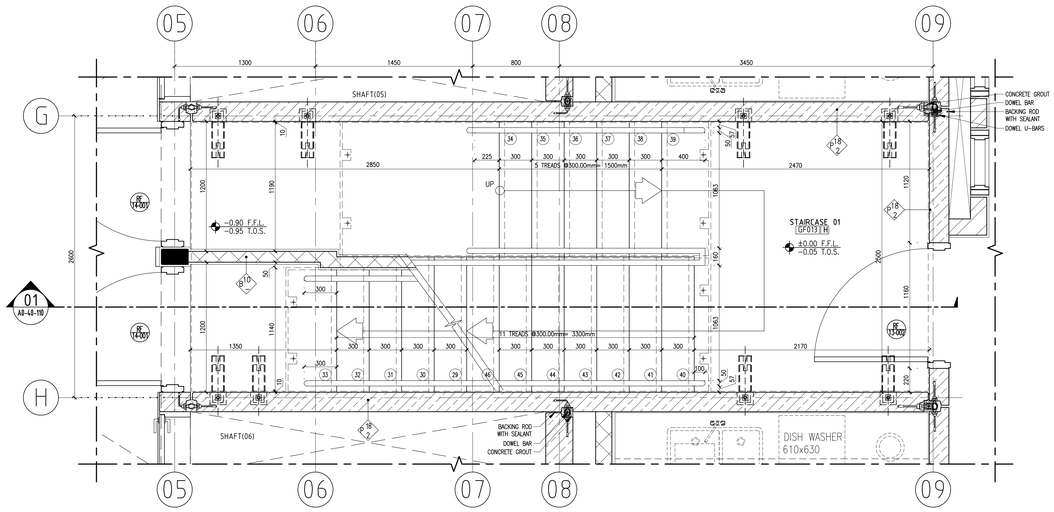
STAIRCASE DETAILED PLAN @ BASEMENT FLOOR

01 A0-40-111 SCALE 1 : 20



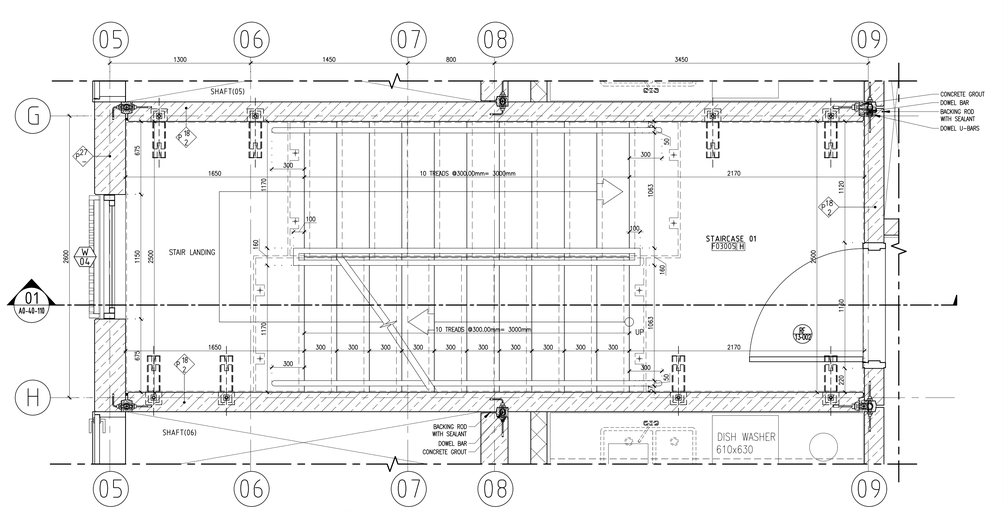
STAIRCASE DETAILED PLAN @SECOND FLOOR

04 A0-40-111 SCALE 1 : 20



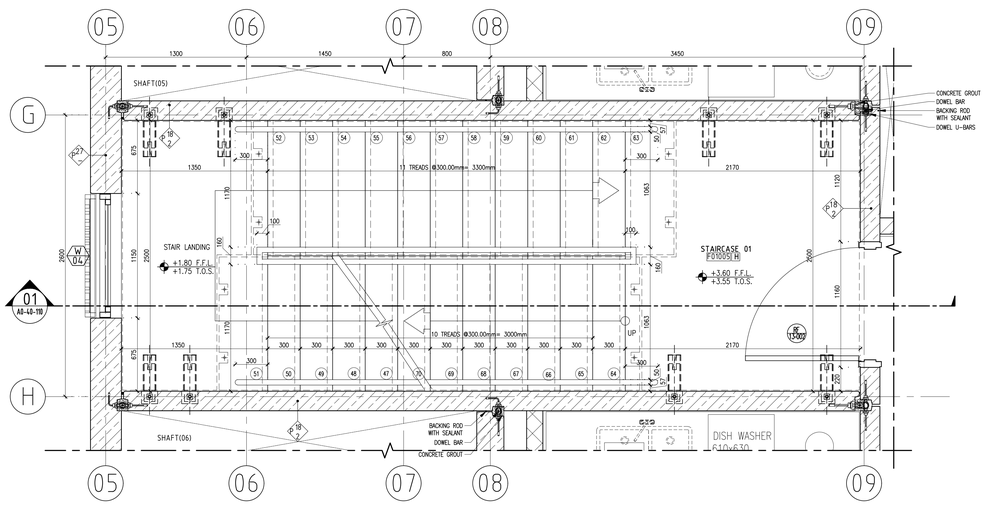
STAIRCASE DETAILED PLAN @ GROUND FLOOR

02 A0-40-111 SCALE 1 : 20



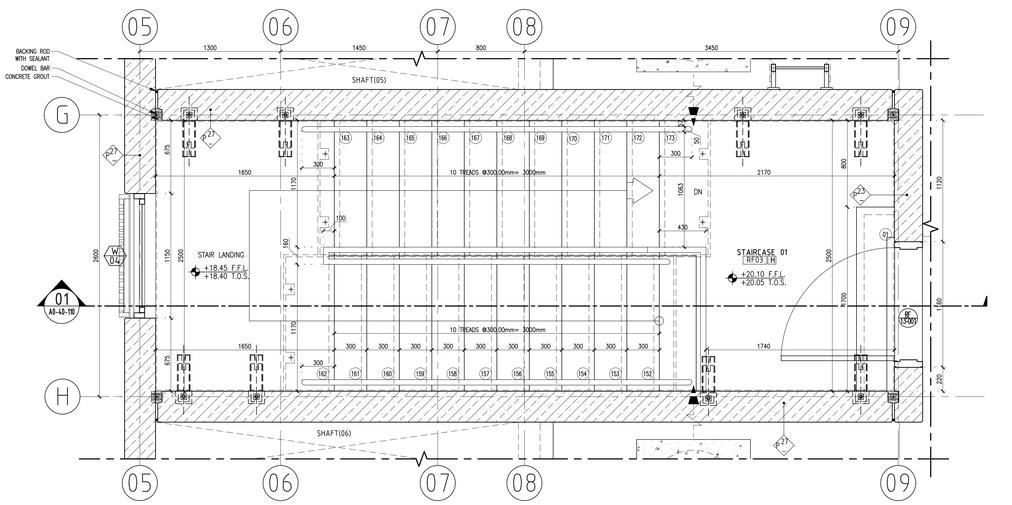
STAIRCASE DETAILED PLAN @FROM 3 RD TO 5TH FLOOR

05 A0-40-111 SCALE 1 : 20



STAIRCASE DETAILED PLAN @FIRST FLOOR

03 A0-40-111 SCALE 1 : 20

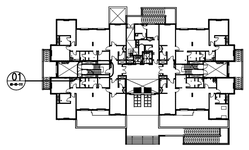


STAIRCASE DETAILED PLAN @ROOF FLOOR

06 A0-40-111 SCALE 1 : 20

0 0.5 1 2 Meters

KEY PLAN



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3. TOLERANCES REQUIRED FOR EXT. FINISHING WORKS SHALL BE CONSIDERED ALONG WITH DIMENSIONS SHOWN ON DOORS AND WINDOWS SCHEDULES.

4. ALL CLADDING MATERIAL PATTERNS SHOWN ON THE DRAWINGS ARE ONLY INDICATIVE. ACTUAL DESIGN WILL BE SUBMITTED SEPARATELY.

5. ALL DOORS SHOWN ON THE DRAWINGS ARE OF INDICATIVE DESIGN, AND SHALL BE SUBMITTED SEPARATELY.

6. PRECAST GROOVES SHOWN ON THE DRAWINGS ARE INDICATIVE AND THEY WILL BE DETAILED BY APPROVED VENDOR DRAWINGS.

7. ALL CORNICES SHOWN IN THE DRAWINGS ARE OF INDICATIVE DESIGN ONLY, AND WILL BE SUBMITTED SEPARATELY.

REFERENCES

1–FLOOR PLANS	MI-IV-A3-B04.21.000-A0-10-100-05 TO 190
2–SECTIONS	MI-IV-A3-B04.21.000-A0-30-100-05 TO 120
3–FINISHING SCHEDULE	MI-IV-A3-B04.21.000-A0-60-101-05 TO 107
4–SCHEDULE OF DOORS	MI-IV-A3-B04.21.000-A0-60-201-05 TO 205
5–SCHEDULE OF WINDOWS	MI-IV-A3-B04.21.000-A0-60-301-05 TO 303

LEGENDS

1. F.F.L. FINISH FLOOR LEVEL.
2. T.O.S. TOP OF SLAB.
3. T.O.P. TOP OF PARAPET.
4. DOOR TAG
   BUILDING CATEGORY, BUILDING TYPE, DOOR TYPE, DOOR SERIAL
5. ROOM NAME
   FLOOR LOCATION, ROOM NUMBER, ROOM FINISH CODE
6. WINDOW TAG
   WINDOW TYPE, WINDOW NUMBER
7. STEP NUMBER
   STEP NUMBER
8. WALL TAG
   WALL TYPE, WALL THICKNESS, FIRE RATING

B- BLOCK
S- STRUCTURAL RC. /WALLS/ COLUMNS
P- PRECAST CONCRETE

CMU WALL
REINFORCED CONCRETE
PRECAST WALL

Rev.	Date	Orgtr.	Signature	ABV Appr.	Signature	Revision Description
09	24.DEC. 2017	ZHH		APZ		ISSUED FOR APPROVAL
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05	15.MAY. 2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

المملكة العربية السعودية
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH

مشروع المركز الامني الطبي

Engineer / Owner's Representative

Manens-Tifs ENGINEERING

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP

ABV ROCK Group Co. Ltd. Lead Designer / Consultant :

P&T Architects and Engineers Ltd.
Al Hudaiba Awards Bldg., 5/F., Unit 510 Block B,
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Website : www.p-tgroup.com

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Fax: +966 126044701

Hyder

Sub Consultant

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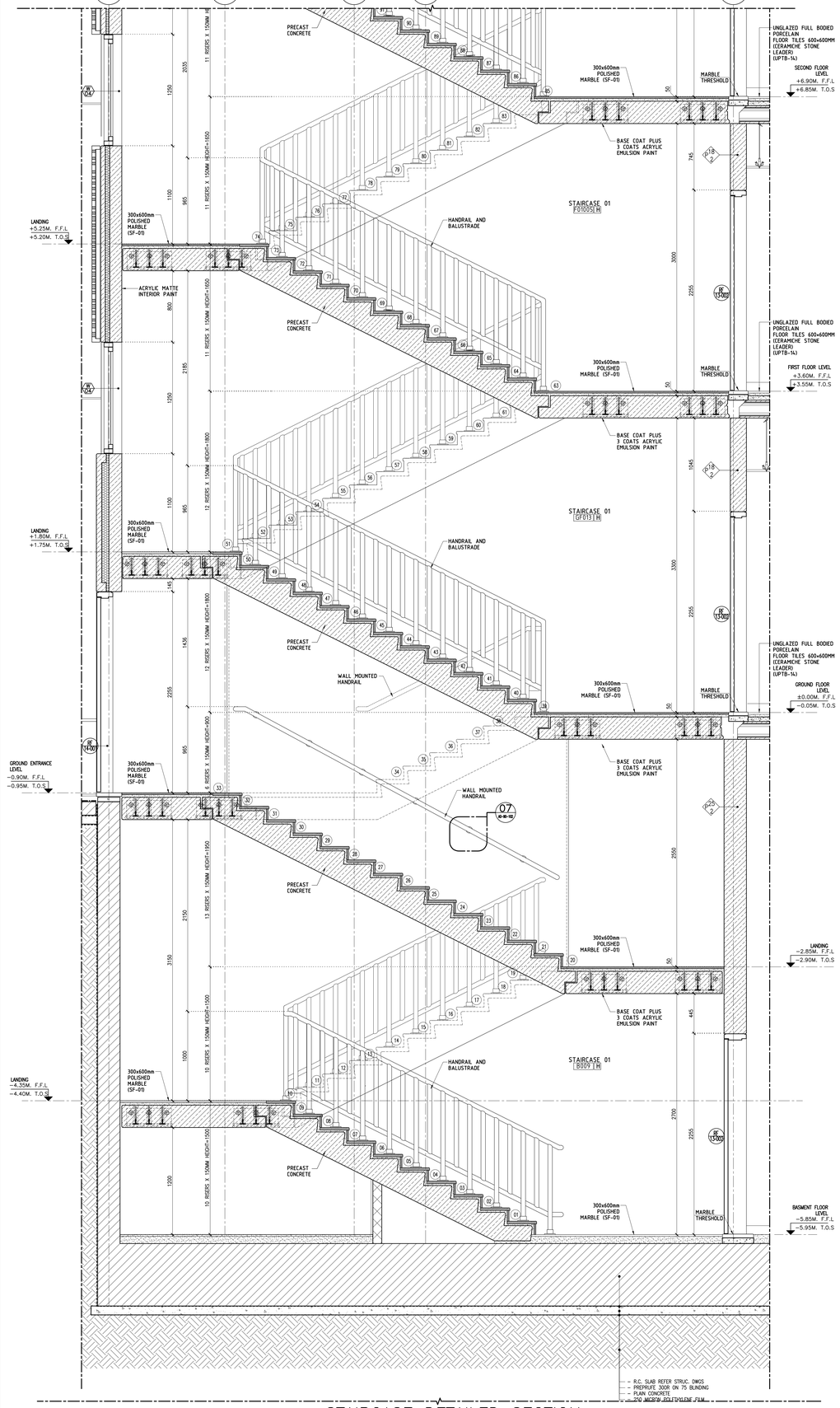
Jeddah 21446 Fax: +966 12 6503345
Kingdom of Saudi Arabia
www. Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
---	1:20@A0		ARCHITECTURE

Drawing Title:

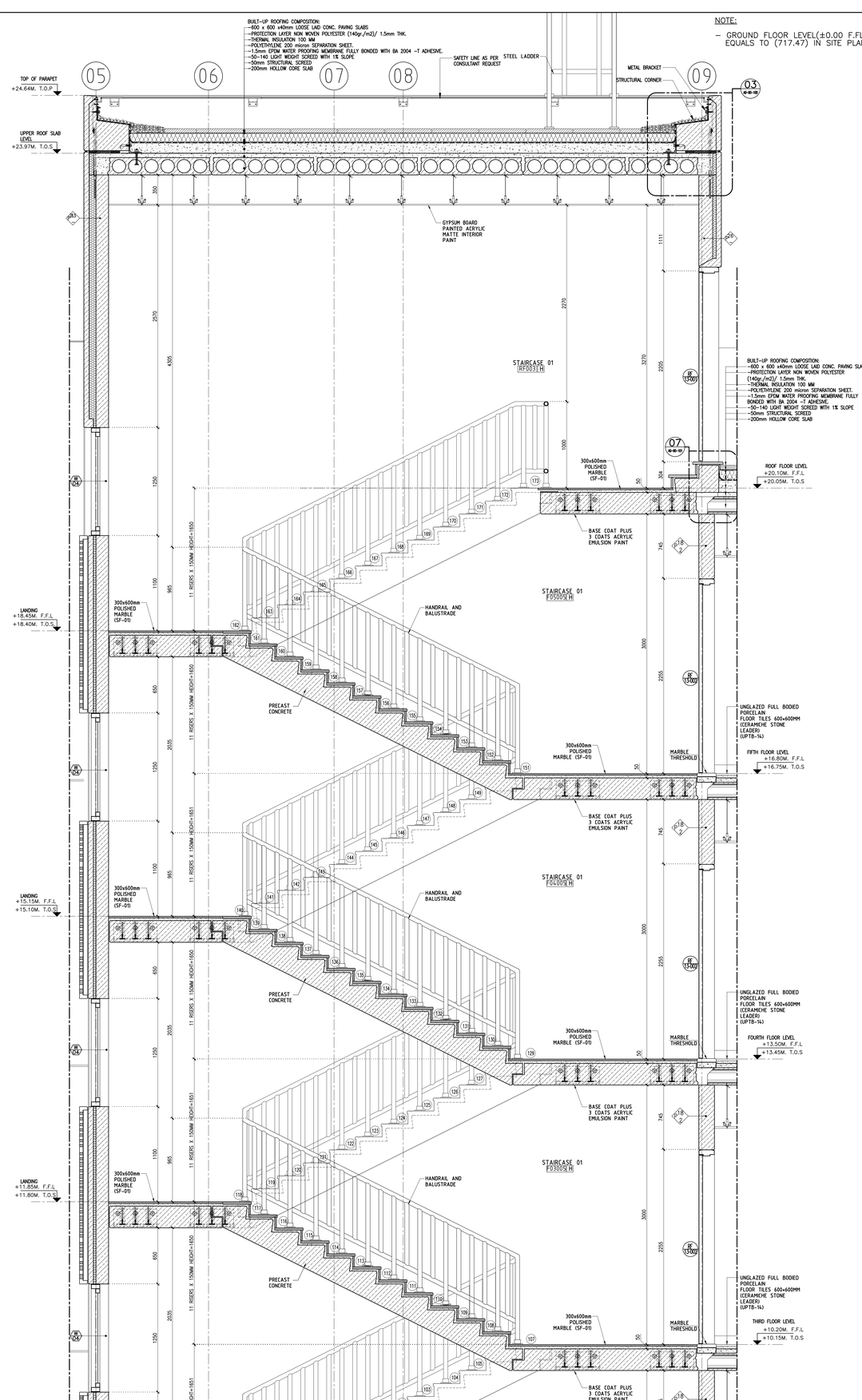
B04.21 FAMILY APARTMENT BUILDING–TYPE (01) STAIRCASE (01) PLANS

Drawing No.:	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI–IV–A3–B04.21.000–A0– 40–111								05	09	A



01 A0-40-110 STAIRCASE DETAILED SECTION

SCALE 1 : 20

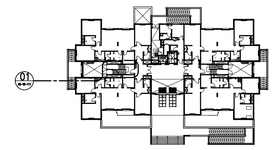


NOTE:

– GROUND FLOOR LEVEL(±0.00 F.FL.) EQUALS TO (717.47) IN SITE PLAN

0 0.5 1 2 Meters

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS UNLESS OTHERWISE NOTED. DRAWINGS SHOULD NOT BE SCALED AND ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

2. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE ROUGH DIMENSIONS AND DO NOT INCLUDE FINISHING MATERIALS AND THEIR CORRESPONDING FIXATION TOLERANCES. PLEASE REFER TO DETAILED PLANS AND/OR WALL SECTION DRAWINGS.

3. TOLERANCES REQUIRED FOR EXT. FINISHING WORKS SHALL BE CONSIDERED ALONG WITH DIMENSIONS SHOWN ON DOORS AND WINDOWS SCHEDULES.

4. ALL CLADDING MATERIAL PATTERNS SHOWN ON THE DRAWINGS ARE ONLY INDICATIVE. ACTUAL DESIGN WILL BE SUBMITTED SEPARATELY.

5. ALL DOORS SHOWN ON THE DRAWINGS ARE OF INDICATIVE DESIGN, AND SHALL BE SUBMITTED SEPARATELY.

6. PRECAST GROOVES SHOWN ON THE DRAWINGS ARE INDICATIVE AND THEY WILL BE DETAILED BY APPROVED VENDOR DRAWINGS.

7. ALL CORNICES SHOWN IN THE DRAWINGS ARE OF INDICATIVE DESIGN ONLY, AND WILL BE SUBMITTED SEPARATELY.

REFERENCES

1–FLOOR PLANS	MI-IV-A3-B04.21.000-A0-10-100-05 TO 190
2–SECTIONS	MI-IV-A3-B04.21.000-A0-30-100-05 TO 120
3–FINISHING SCHEDULE	MI-IV-A3-B04.21.000-A0-60-101-05 TO 107
4–SCHEDULE OF DOORS	MI-IV-A3-B04.21.000-A0-60-201-05 TO 205
5–SCHEDULE OF WINDOWS	MI-IV-A3-B04.21.000-A0-60-301-05 TO 303

LEGENDS

1. F.F.L. FINISH FLOOR LEVEL.
2. T.O.S. TOP OF SLAB.
3. T.O.P. TOP OF PARAPET.
4. DOOR TAG
   BUILDING CATEGORY, BUILDING TYPE, DOOR TYPE, DOOR SERIAL
5. ROOM NAME
   FLOOR LOCATION, ROOM NUMBER, ROOM FINISH CODE
6. WINDOW TAG
   WINDOW TYPE, WINDOW NUMBER
7. STEP NUMBER
   STEP NUMBER
8. WALL TAG
   WALL TYPE, WALL THICKNESS, FIRE RATING

B- BLOCK
S- STRUCTURAL RC. /WALLS/ COLUMNS
P- PRECAST CONCRETE

CMU WALL
REINFORCED CONCRETE
PRECAST WALL

Rev	Date	Origtr	Signature	ABV Appr	Signature	Revision Description
09	24.DEC. 2017	ZHH		APZ		ISSUED FOR APPROVAL
08	01.OCT. 2017	ZHH		APZ		ISSUED FOR APPROVAL
07	15.JUN. 2017	ZHH		APZ		ISSUED FOR APPROVAL
06	16.MAR. 2017	ZHH		APZ		ISSUED FOR APPROVAL
05	15.MAY. 2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
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مشروع القسم مكثر الامني العلاجي

Engineer / Owner's Representative

Manens-Tifs

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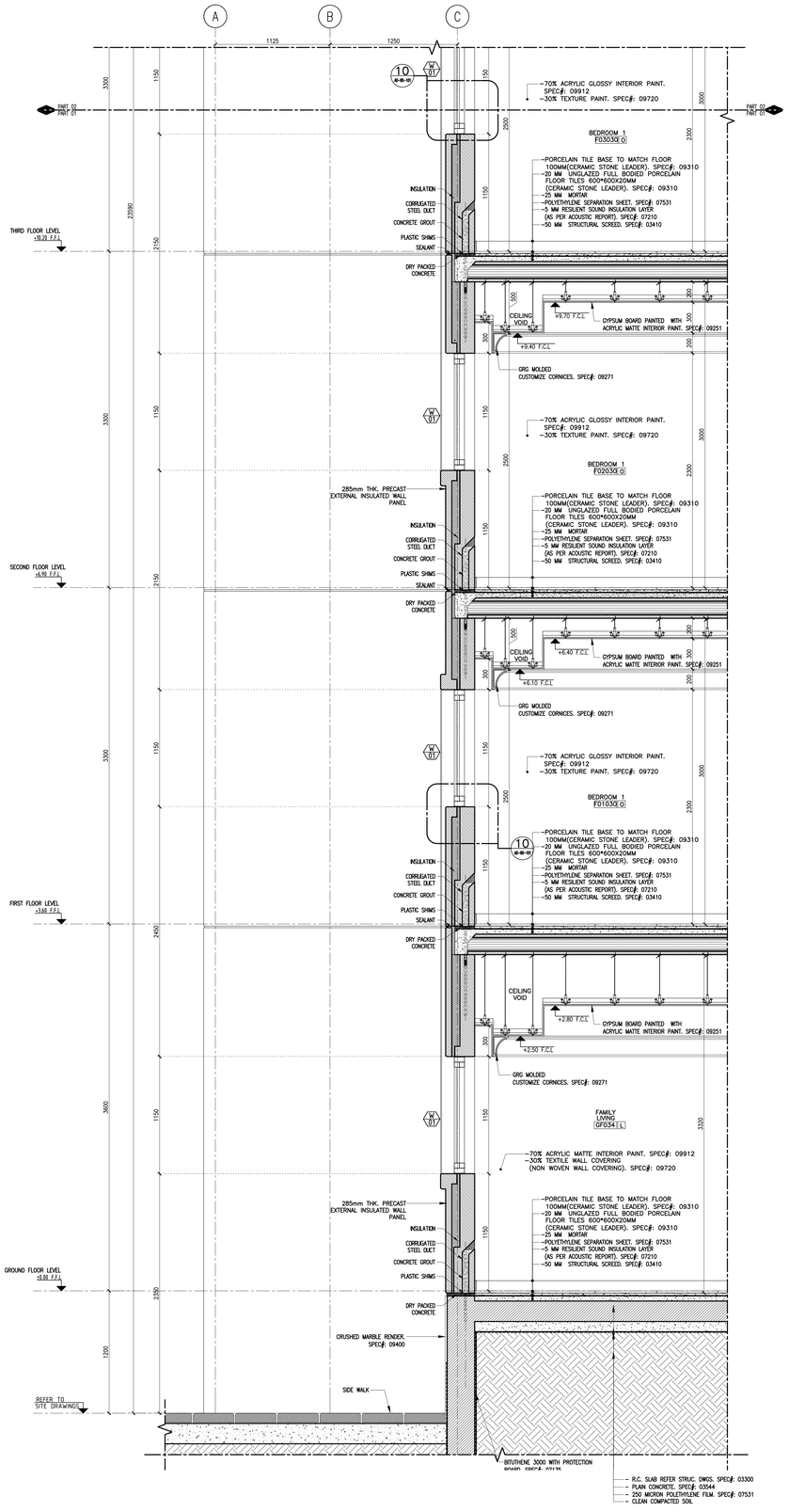
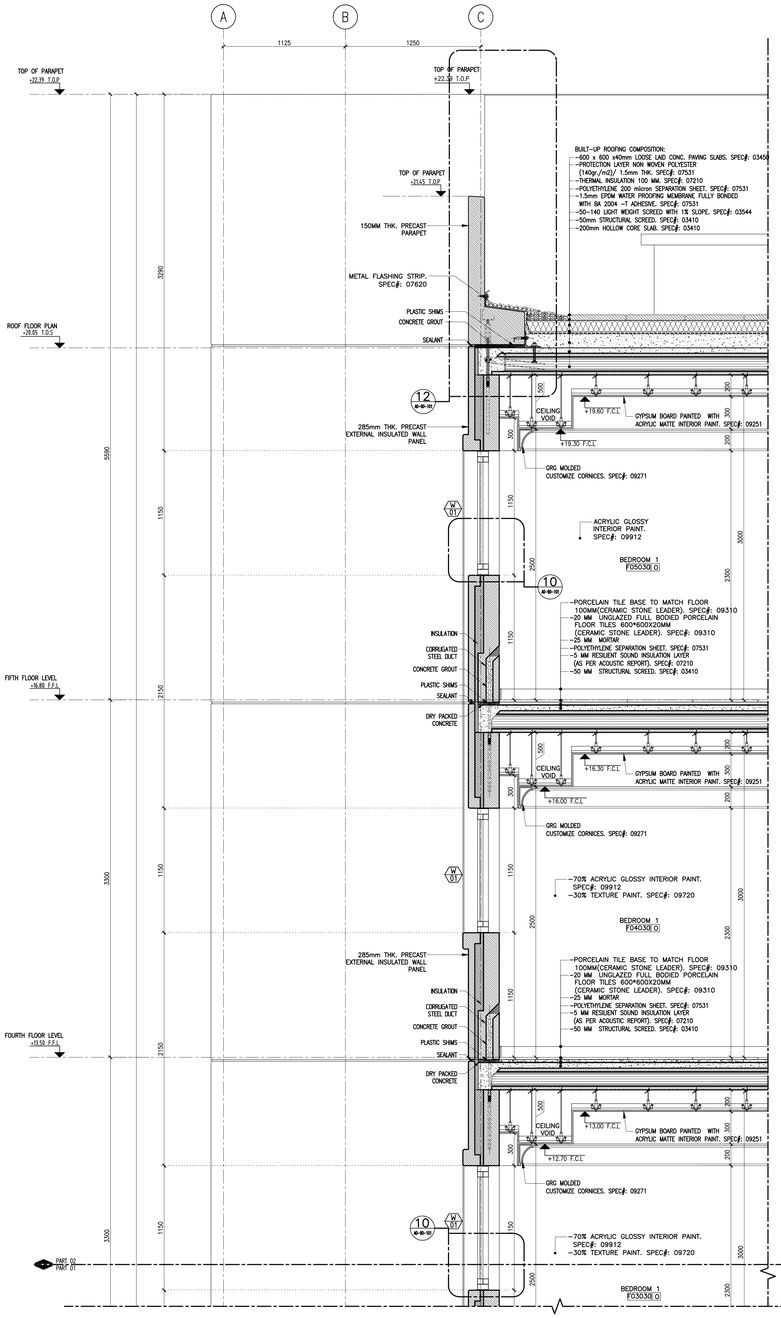
Non-ABV Reference:	Scale:	Floor:	Discipline:
---	1:20@A0		ARCHITECTURE

Drawing Title:

B04.21 FAMILY APARTMENT BUILDING–TYPE (01) STAIRCASE (01) SECTION

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI–IV–A3–B04.21.000–A0– 40–110	05		09		A					

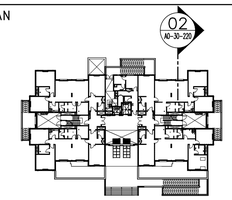




NOTE

– GROUND FLOOR LEVEL(±0.00 F.FL.) EQUALS TO (717.47) IN SITE PLAN

KEY PLAN



WINDOW TAG

WINDOW NUMBER — W 00 — WINDOW TYPE

ROOM NAME

FLOOR LOCATION ROOM NUMBER ROOM FINISH CODE

- PRECAST WALL
- CONCRETE
- LIGHTWEIGHT CONCRETE
- GRAVEL

NOTES:

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REFERENCES

1–GENERAL NOTES, SYMBOLS, LEGEND AND ABBREVIATIONS — MI-IV-A3-B04.21.000-A0-10-001-05
2–FLOOR PLANS — MI-IV-A3-B04.21.000-A0-10-110-05 TO:190
3–FINISHING SCHEDULE — MI-IV-A3-B04.21.000-A0-60-101-05 TO:107
4–SCHEDULE OF DOORS — MI-IV-A3-B04.21.000-A0-60-201-05 TO:205
5–SCHEDULE OF WINDOWS — MI-IV-A3-B04.21.000-A0-60-301-05 TO:303

LEGENDS

1. FFL FINISH FLOOR LEVEL.
2. TOS TOP OF SLAB.
3. TOP TOP OF PARAPET.
4. FCL FALSE CEILING LEVEL.
5. TOH TOP OF HANDRAIL.
6. DOOR TAG

BUILDING CATEGORY — RE 01-002 — BUILDING TYPE
DOOR TYPE — DOOR SERIAL

Rev	Date	Drgtr	Signature	ABV Appr	Signature	Revision Description
11	24.DEC. 2017	ZHH		APZ		ISSUED FOR APPROVAL
10	01.OCT. 2017	ZHH		APZ		ISSUED FOR APPROVAL
09	15.JUN. 2017	ZHH		APZ		ISSUED FOR APPROVAL
08	16.MAR. 2017	ZHH		APZ		ISSUED FOR APPROVAL
07	15.MAY. 2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner: Kingdom of Saudi Arabia, Ministry of Interior — المملكة العربية السعودية وزارة الداخلية
SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع مجمع القوى الأمنية الطبي

Engineer / Owner's Representative: Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

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Kingdom of Saudi Arabia
www.Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
---	1:20@A0	---	ARCHITECTURE

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING–TYPE (01)
WALL SECTION (02)

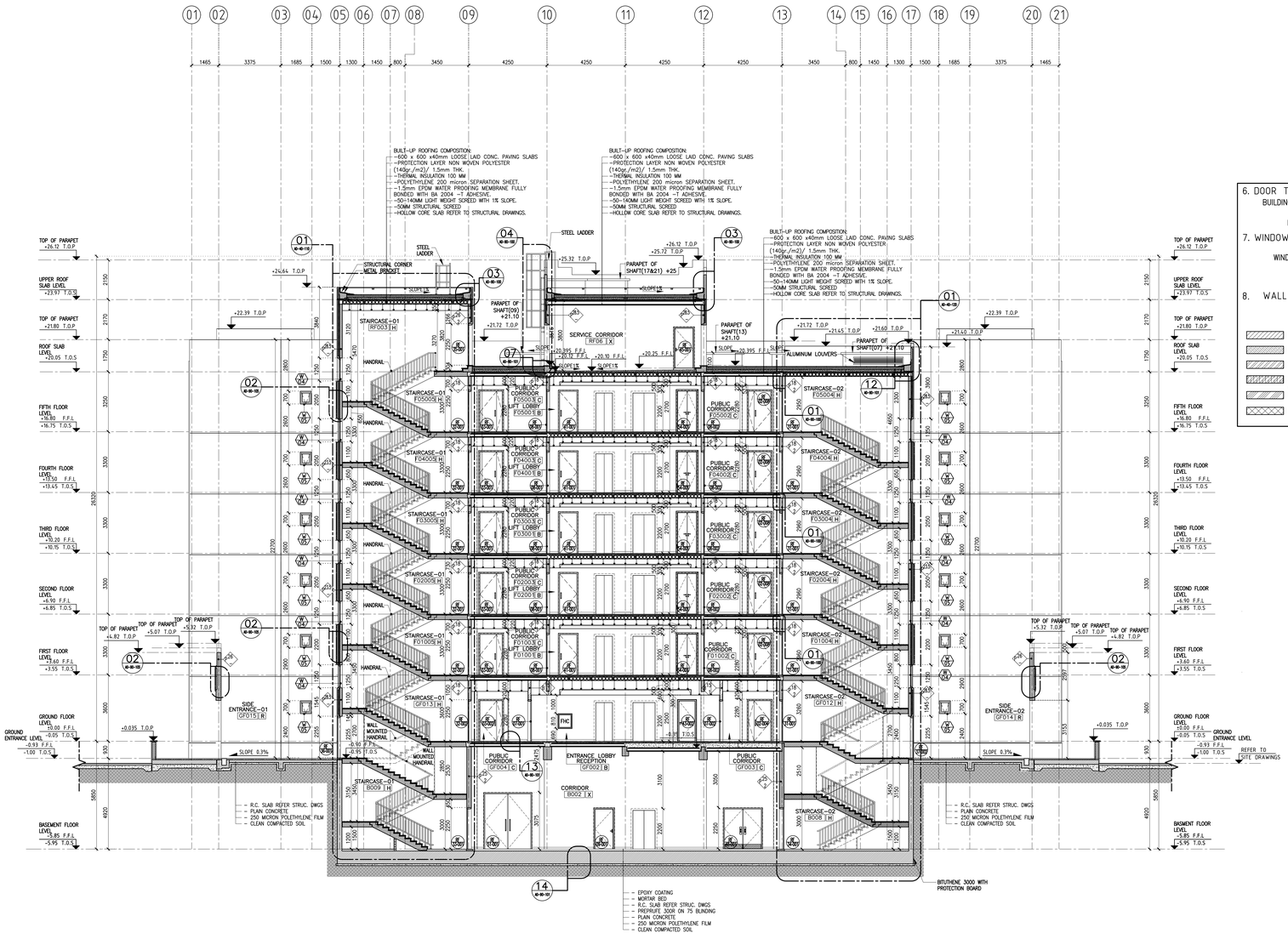
Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI–IV–A3–B04.21.000–A0–30–220							05	11	A	

01 A0-30-220 WALL SECTION (2)
SCALE 1 : 20

0 0.5 1 2 Meters (0.1)

NOTE:

- GROUND FLOOR LEVEL(±0.00 F.FL.) EQUALS TO (717.47) IN SITE PLAN
- -1.079 F.FL. EQUALS TO (716.391) IN SITE PLAN



01 A0-30-110 SCALE 1 : 100 SECTION (1-1)

0 1 2 5 10 Meters

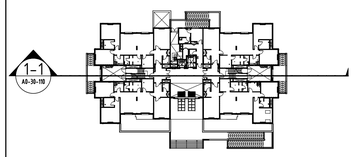
6. DOOR TAG
BUILDING CATEGORY — RF 01-001 — BUILDING TYPE
DOOR TYPE — DOOR SERIAL

7. WINDOW TAG
WINDOW NUMBER — W 00 — WINDOW TYPE

8. WALL TAG
WALL TYPE (B- BLOCK) — X Y — WALL THICKNESS / FIRE RATING

- REINFORCED CONCRETE
- PRECAST CONCRETE
- 2 HOURS FIRE RATED CMU BLOCK WALL
- 2 HOURS FIRE RATED INSULATED CMU BLOCK WALL
- 1 HOUR FIRE RATED CMU BLOCK WALL
- NON RATED CMU WALL WITH DIFFERENT THICKNESS

KEY PLAN



NOTES:

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2-FLOOR PLANS	MI-IV-A3-B04.21.000-A0-10-110-05 TO:190
3-FINISHING SCHEDULE	MI-IV-A3-B04.21.000-A0-60-101-05 TO:107
4-SCHEDULE OF DOORS	MI-IV-A3-B04.21.000-A0-60-201-05 TO:205
5-SCHEDULE OF WINDOWS	MI-IV-A3-B04.21.000-A0-60-301-05 TO:303

LEGENDS

1. FFL FINISH FLOOR LEVEL.
2. TOS TOP OF SLAB.
3. TOP TOP OF PARAPET.
4. FCH CEILING HEIGHT.
5. ROOM NAME — XXX — FLOOR LOCATION ROOM NUMBER ROOM FINISH CODE

Rev.	Date	Orgtr.	Signature	ABV Appr.	Signature	Revision Description
14	24.DEC. 2017	ZHH		APZ		ISSUED FOR APPROVAL
13	01.OCT. 2017	ZHH		APZ		ISSUED FOR APPROVAL
12	15.JUN. 2017	ZHH		APZ		ISSUED FOR APPROVAL
11	16.MAR. 2017	ZHH		APZ		ISSUED FOR APPROVAL
10	17.NOV. 2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner
Kingdom of Saudi Arabia
Ministry of Interior
مملكة العربية السعودية
وزارة الداخلية
SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الطبي لقوى الأمن في الرياض وجدة

Engineer / Owner's Representative
Manens-Tifs

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Kingdom of Saudi Arabia
www. Innovators.com.sa

Non-ABV Reference	Scale	Floor:	Discipline
PS10694-CD-RS-B04.21-A-30-00-REV0	1:100@A0		ARCHITECTURE

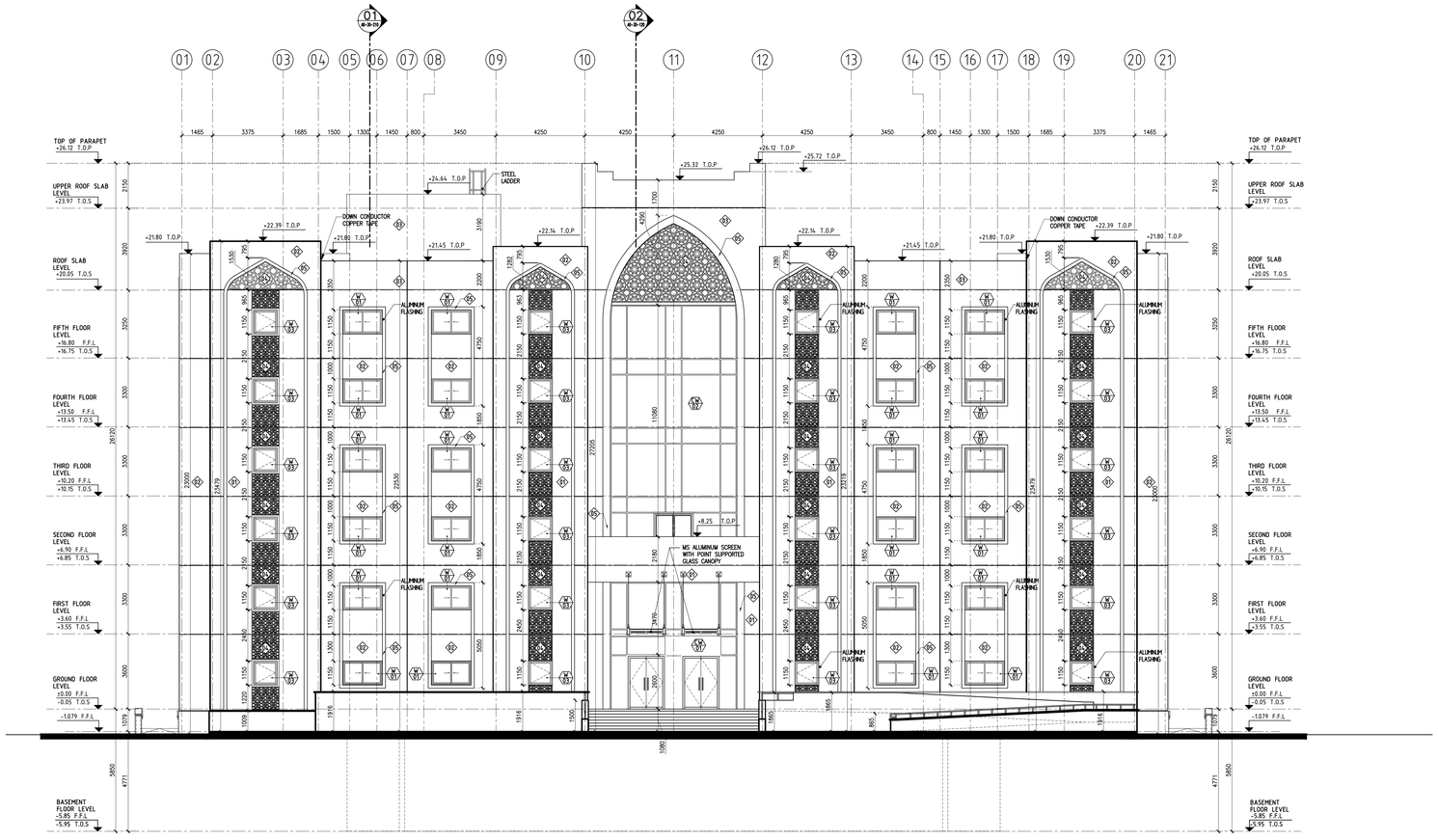
Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE (01) SECTION (1-1)

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-A0-30-110								05	14	A

NOTE:

- GROUND FLOOR LEVEL(±0.00 F.FL.) EQUALS TO (717.47) IN SITE PLAN
- -1.079 F.FL. EQUALS TO (716.391) IN SITE PLAN

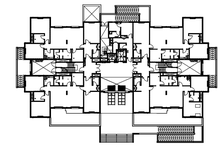
EXTERNAL FINISHING SCHEDULE		
CODE		DESCRIPTION
01		PRECAST PANEL COLOR CODE # PC-178
02		PRECAST PANEL COLOR CODE # PC-RAL-1001
03		PRECAST PANEL COLOR CODE # PC-254
04		RECESSED GFRC PATTERN
05		PROJECTED PRECAST BORDER
CW		CURTAIN WALL



01 A8-20-110 FRONT ELEVATION (A)
SCALE 1 : 100

0 1 2 5 10 Meters

KEY PLAN



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REFERENCES

1-FLOOR PLANS	MI-IV-A3-B04.21.000-A0-10-120-05 TO:190
2-DOOR TYPES & SCHEDULE	MI-IV-A3-B04.21.000-A0-60-201-05 TO:205
3-WINDOW TYPES & SCHEDULE	MI-IV-A3-B04.21.000-A0-60-301-05 TO:303

LEGENDS

1. FFL FINISH FLOOR LEVEL.
2. T.O.S TOP OF SLAB
3. T.O.P TOP OF PARAPETS
4. DOOR TAG
   BUILDING CATEGORY — RF — BUILDING TYPE
   DOOR TYPE — 01-001 — DOOR SERIAL
5. WINDOW TAG
   WINDOW NUMBER — W 00 — WINDOW TYPE

Rev	Date	Origtr	Signature	ABV Appr	Signature	Revision Description
13	24.DEC. 2017	ZHH		APZ		ISSUED FOR APPROVAL
12	01.OCT. 2017	ZHH		APZ		ISSUED FOR APPROVAL
11	15.JUN. 2017	ZHH		APZ		ISSUED FOR APPROVAL
10	16.MAR. 2017	ZHH		APZ		ISSUED FOR APPROVAL
09	17.NOV. 2016	ZHH		APZ		ISSUED FOR APPROVAL

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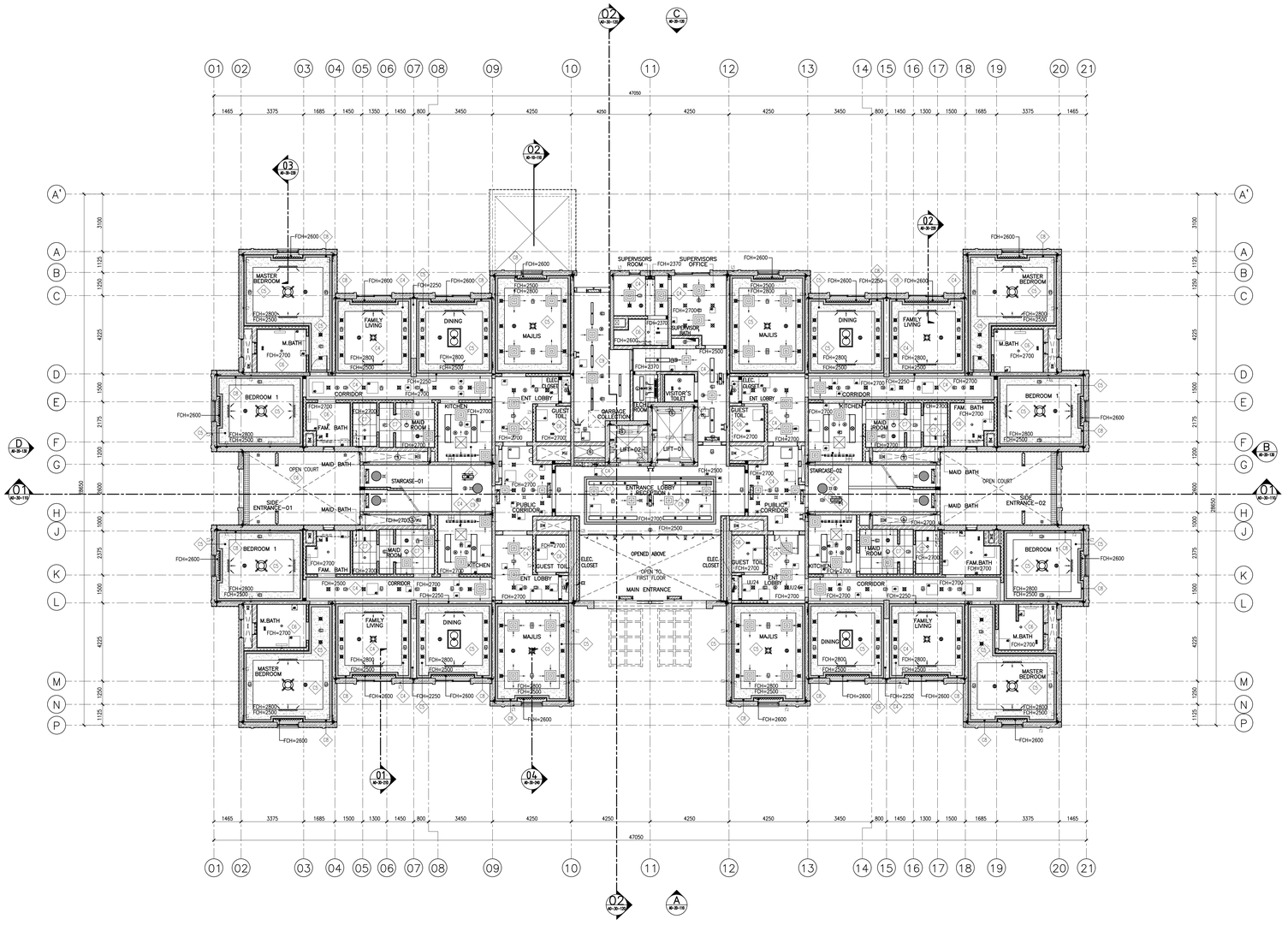
Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-A-20-00-REV00	1:100@A0	NONE	ARCHITECTURE

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE (01)
FRONT ELEVATION (A)

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-A0-20-110							05	13	A	

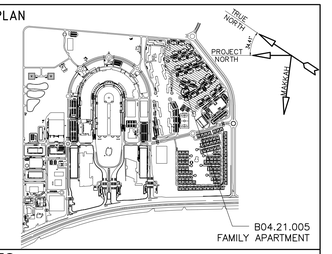


01 GROUND FLOOR REFLECTED CEILING PLAN

A0-10-220 SCALE 1 : 100

SYMBOL	ABBREVIATION	DESCRIPTION
⊠	UU24	RECESSED LED LIGHTING FIXTURE WITH 23W, 230V AND 2400 LUMINOUS FLUX
⊠	UU6	RECESSED LED LIGHTING FIXTURE WITH 11.2W, 230V AND 1200 LUMINOUS FLUX
○	UU47	RECESSED LED LIGHTING FIXTURE WITH 31W, 230V AND 3500 LUMINOUS FLUX
	F30	CHANDELIER IN BRASS AND GLASS LAMP HOLDER WITH 5X11.2W LED LAMP IN BEDROOM AND MASTER BEDROOM .
	F31	CHANDELIER IN BRASS AND GLASS LAMP HOLDER WITH 4X11.2W LED LAMP IN DINNING ROOM .
	F32	CHANDELIER IN BRASS AND GLASS LAMP HOLDER WITH 4X11.2W LED LAMP IN LIVING AND MAJLIS ROOMS .
	F33	WALL SCONCE PROVIDING DIRECT AND INDIRECT LIGHT. WHITE OR BLACK SHADE MADE OF POLYESTER FIBER PROTECTED BY A PVC COATING.
	F34	WALL MOUNTED LED LUMINARE, 18W, 230V AT HEIGHT 1800mm F.F.F.L AND 1200 LUMINOUS FLUX
	F35	WALL MOUNTED LED LUMINARE, 64W, 230V AT HEIGHT 1800mm F.F.F.L AND 7900 LUMINOUS FLUX
	CC1	SURFACE MOUNTED LED LIGHTING FIXTURE WITH 11.2W 230V AND 1200 LUMINOUS FLUX
	E1	FIRE RATED WALL MOUNTED LED EXIT SIGN, MAINTAINED, SELF CONTAINED,SUITABLE FOR 3HOURS OPERATIONLAT 2000 mm ABOVE THE DOOR,WITH EMERGENCY SUPPLY.
	E3	SELF CONTAINED, EMERGENCY LED LIGHTING FIXTURE SUITABLE FOR 3 HOURS OPERATION EQUIPPED WITH 25W, 230V WITH LED LAMP,IP 44, AT 1800 mm FROM F.F.L. AND 245 LUMINOUS FLUX
⊗	B30	RECESSED LED LIGHTING FIXTURE WITH 33.5W, 230V AND 4300 LUMINOUS FLUX
	F2	SURFACE MOUNTED / SUSPENDED LED LIGHTING FIXTURE WITH 36W 230V AND 4400 LUMINOUS FLUX
⊗	C24	RECESSED LED LIGHTING FIXTURE WITH 60W, 230V AND 6300 LUMINOUS FLUX
	D11	BARE BATTEN LED STRIPLUMINARE FOR CONTINUOUS-ROW UNDER CABINET LIGHTING WITH 1x14W, 230V LED LAMP,IP20 WITH 1098 LUMINOUS FLUX
○	LL2	SUSPENDED LED LIGHTING FIXTURE WITH 36W,230V AND 2942 LUMINOUS FLUX
	L0	WALL MOUNTED LED LUMINARE, 4W, 230V AT HEIGHT 1800mm F.F.F.L AND 230 LUMINOUS FLUX
	M4	WALL MOUNTED LED LUMINARE, 26.5W, 230V AT HEIGHT 1800mm F.F.F.L AND 4000 LUMINOUS FLUX
		CEILING MOUNTED OPTICAL SMOKE DETECTOR
		FIXED TEMPERATURE THERMAL DETECTOR
		CARBON MONOXIDE (CO) DETECTOR.
		LASER-TYPE SMOKE DETECTOR
		PENDENT FIRE SPRINKLER
		EXTENDED COVERAGE SIDE WALL FIRE SPRINKLER
		EXHAUST REGISTER
		RETURN REGISTER
		SUPPLY REGISTER
		EXHAUST AIR DUCT
		RETURN DIFFUSER
		SUPPLY DIFFUSER
		WALL MOUNTED LUMINARE WITH 1x13W 230V COMPACT FLUORESCENT LAMPS, IP54
AD		ACCESS DOORS
		REMOTE INDICATOR LAMP
		CEILING MOUNTED PRESENCE DETECTOR
	SRAC	SPLIT REFRIGERANT AIR CONDITION
	AFE	AUTOMATIC FIRE EXTINGUISHER

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS UNLESS OTHERWISE NOTED. DRAWINGS SHOULD NOT BE SCALED AND ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

2. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE ROUGH DIMENSIONS AND DO NOT INCLUDE FINISHING MATERIALS AND THEIR CORRESPONDING FIXATION TOLERANCES. PLEASE REFER TO DETAILED PLANS AND/OR WALL SECTION DRAWINGS.

3. TOLERANCES REQUIRED FOR EXT. FINISHING WORKS SHALL BE CONSIDERED ALONG WITH DIMENSIONS SHOWN ON DOORS AND WINDOWS SCHEDULES.

4. A WATER RESISTANT GYPSUM BOARD SHALL BE USED AT ALL HIGH HUMIDITY AREA INCLUDING BATHROOMS, JANITORS & KITCHENS.

5. FOR LIGHT FIXTURES, SMOKE DETECTOR, STROBE LIGHT, PUBLIC ADDRESS SPEAKER & DATA OUTLETS REFER TO ELECTRICAL DRAWINGS, DOCUMENTS AND SPECIFICATIONS WITHIN COORDINATION WITH ARCHITECTURAL & STRUCTURAL DRAWINGS.

6. FOR DIFFUSERS, GRILLES AND SPRINKLERS REFER TO MECHANICAL DRAWINGS, DOCUMENTS AND SPECIFICATIONS WITHIN COORDINATION WITH ARCHITECTURAL & STRUCTURAL DRAWINGS.

REFERENCES

1- GROUND FLOOR PLAN	MI-IV-A3-B04.21.000-A0-10-121-04
2-FINISHING SCHEDULE	MI-IV-A3-B04.21.000-A0-60-101-05 TO:107

LEGENDS

1. FCH FINISH CEILING HEIGHT
2. BOS BOTTOM OF SLAB
3. CEILING TAG

CEILING FINISH CODE — X

Rev	Date	Drgtr	Signature	ABV Appr	Signature	Revision Description
10	24.DEC. 2017	ZHH		APZ		ISSUED FOR APPROVAL
09	01.OCT. 2017	ZHH		APZ		ISSUED FOR APPROVAL
08	15.JUN. 2017	ZHH		APZ		ISSUED FOR APPROVAL
07	16.MAR 2017	ZHH		APZ		ISSUED FOR APPROVAL
06	17.NOV. 2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner: Kingdom of Saudi Arabia, Ministry of Interior — المملكة العربية السعودية وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع مجمع القوى الطبي

Engineer / Owner's Representative: Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK Group Co. Ltd. Lead Designer / Consultant :
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Tel 971 4 350 3800/ 358 6800, Fax 971 4 358 6800
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Kingdom of Saudi Arabia
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Fax: +966 1260447001

Sub Consultant: INNOVATORS
P.O. Box 24373 Tel: +966 12 6603323
Jeddah 21446 Fax: +966 12 6600345
Kingdom of Saudi Arabia
www. Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
-	1:100@A0	GROUND	ARCHITECTURE

Drawing Title:

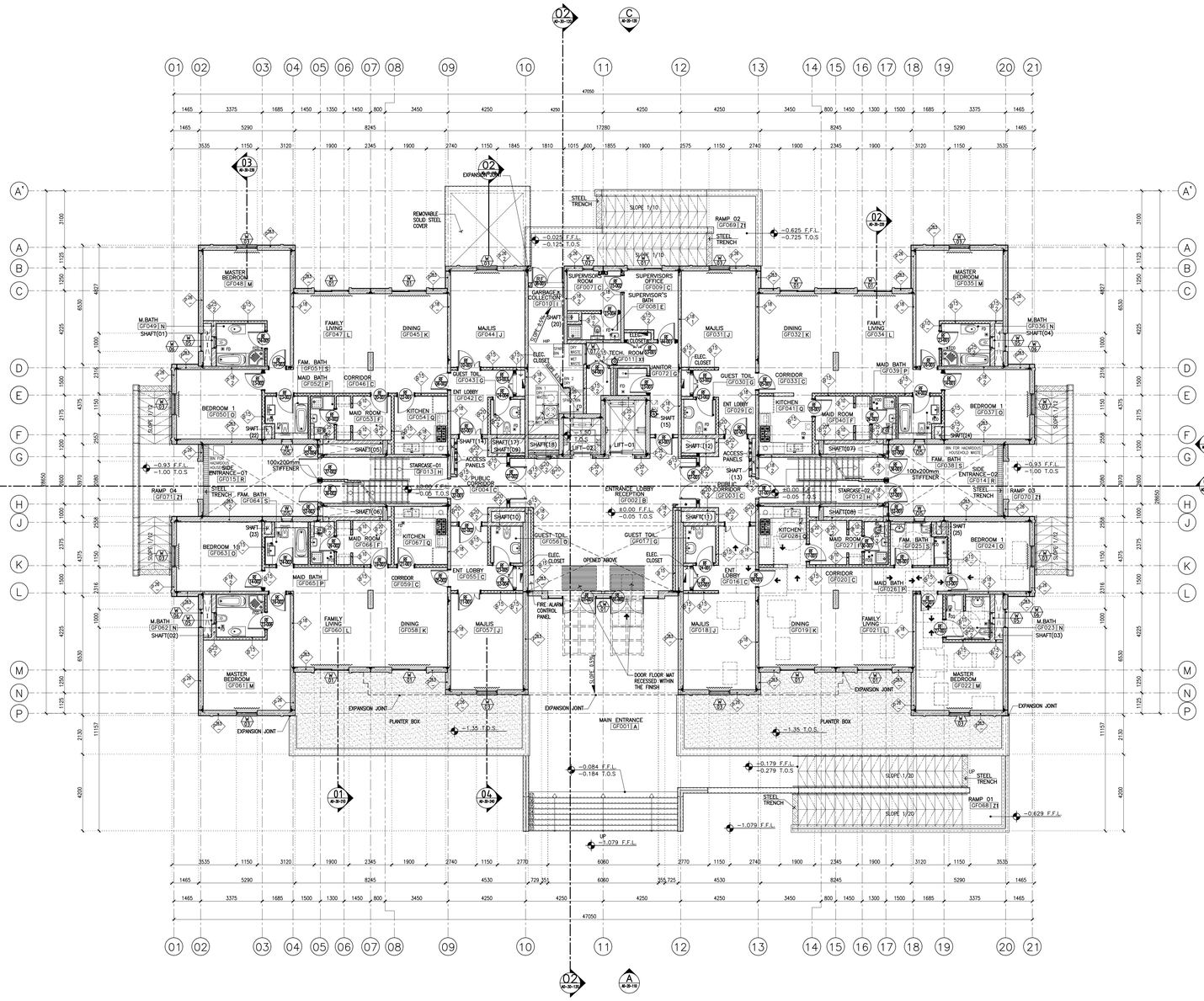
B04.21 FAMILY APARTMENT BUILDING-TYPE (01) GROUND FLOOR REFELECTED CEILING PLAN

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-A0-10-220							05	10		A

0.5 0 1 2 5 10 Meters

NOTE:

- GROUND FLOOR LEVEL(±0.00 F.FL.) EQUALS TO (717.47) IN SITE PLAN
- -1.079 F.FL EQUALS TO (716.391) IN SITE PLAN



01 40-10-122 GROUND FLOOR TAGS PLAN
SCALE 1 : 100

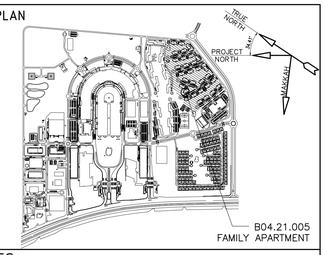
ROUGH OPENINGS DIMENSIONS				
OPENING TYPE	ROUGH WIDTH	ROUGH HEIGHT	SILL HEIGHT FROM F.F.L	HARDWARE SET TYPE
D1800	1800	2500	--	--
D1300	1300	2250	--	HW02/S/F
D1300	1300	2250	--	HW02/S/F
D1415	1415	2250	--	HW02/S/F
D1000	1000	2250	--	HW03/S
D1000	1000	2250	--	HW03/S
D1950	1950	2250	--	HW04/D/F
D1300	1300	2250	--	HW03/S
D1300	1300	2250	--	HW03/S
D1000	1000	2250	--	HW07/S
D1000	1000	2250	--	HW07/S
D1000	1000	2250	--	HW07/S
D1000	1000	2250	--	HW07/S
D900	900	2250	--	HW07/S
D900	900	2250	--	HW07/S
D900	900	2250	--	HW07/S
D1000	1000	2250	--	HW03/S
D1000	1000	2250	--	HW03/S
D1000	1000	2250	--	HW09/S
D1000	1000	2250	--	HW09/S
D1000	1000	2250	--	HW09/S
D1030	1030	2250	--	HW09/S
D1030	1030	2250	--	HW09/S
D900	900	2250	--	HW09/S
D900	900	2250	--	HW09/S
D1160	1160	2250	--	HW12/S/F
D1160	1160	2250	--	HW12/S/F
D1160	1160	2250	--	HW22/S/F
D1160	1160	2250	--	HW22/S/F
D1810	1810	2250	--	HW14/D
D1000	1000	2250	--	HW07/S
D1000	1000	2250	--	HW07/S
D555	555	2250	1150	--
D1180	1180	2100	--	HW01/E
D1180	1180	2100	--	HW01/E
D1180	1180	2250	--	HW01/E
W1900	1900	1150	1150	--
W600	600	1250	1100	--
W1150	1150	1150	1150	--
W600	600	700	1500	--
W1000	1000	1150	1150	--
W6060	6060	UP TO 1ST FLOOR	--	--

SHAFTS SCHEDULE		
SHAFT NO.	AREA	DESCRIPTION
SHAFT 01	2345*450 MM	MECHANICAL
SHAFT 02	2345*450 MM	MECHANICAL
SHAFT 03	2345*450 MM	MECHANICAL
SHAFT 04	2345*450 MM	MECHANICAL
SHAFT 05	3350*570 MM	MECHANICAL
SHAFT 06.	3350*570 MM	MECHANICAL
SHAFT 07	3350*570 MM	MECHANICAL
SHAFT 08.	3350*570 MM	MECHANICAL
SHAFT 09	1835*800 MM	MECHANICAL
SHAFT 10	1835*600 MM	MECHANICAL
SHAFT 11	1835*600 MM	MECHANICAL
SHAFT 12	1835*800 MM	MECHANICAL
SHAFT 13	1200*200 MM	ELECTRICAL
SHAFT 14	1200*200 MM	ELECTRICAL
SHAFT 15	600*400 MM	ELECTRICAL
SHAFT 17	900*900 MM	CHUTE TUBE
SHAFT 18	1620*650 MM	MECHANICAL
SHAFT 20	1450*440 MM	MECHANICAL
SHAFT 22	680*400 MM	MECHANICAL
SHAFT 23	680*400 MM	MECHANICAL
SHAFT 24	680*400 MM	MECHANICAL
SHAFT 25	680*400 MM	MECHANICAL

5. DOOR TAG
BUILDING CATEGORY — RF 01-001 — BUILDING TYPE
DOOR TYPE — DOOR SERIAL

6. WINDOW TAG
WINDOW NUMBER — W 00 — WINDOW TYPE

KEY PLAN



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REFERENCES

1. GENERAL NOTES, SYMBOLS, LEGEND AND ABBREVIATIONS	MI-IV-A3-B04.21.000-A0-10-001-05
2. FINISHING SCHEDULE	FROM MI-IV-A3-B04.21.000-A0-60-101-05 TO MI-IV-A3-B04.21.000-A0-60-107-05
3. SCHEDULE OF DOORS	FROM MI-IV-A3-B04.21.000-A0-60-201-05 TO MI-IV-A3-B04.21.000-A0-60-205-05
4. SCHEDULE OF WINDOWS	MI-IV-A3-B04.21.000-A0-60-301-05 MI-IV-A3-B04.21.000-A0-60-302-05
5. SITE PLAN	MI-PT-A0-B00.00-A0-SK-00142-04 MI-IV-A3-B04.21.000-AS-10-100-05-06

LEGEND

1. FFL FINISH FLOOR LEVEL.
2. TOS TOP OF SLAB.
3. ROOM NAME
   FLOOR LOCATION ROOM NUMBER ROOM FINISH CODE
   PRECAST CONCRETE
   NON RATED CMU WALL WITH DIFFERENT THICKNESS
   2 HOURS FIRE RATED CMU BLOCK WALL
4. WALL TAG
   B- BLOCK
   S- STRUCTURAL RC. /WALLS/ COLUMNS
   P- PRECAST CONCRETE
   WALL TYPE — WALL THICKNESS / FIRE RATING

FD FLOOR DRAIN.
FCO FLOOR CLEAN OUT.

0 1 2 5 10 Meters

Rev.	Date	Drgtr.	Signature	ABV Appr.	Signature	Revision Description
14	24.DEC.2017	ZHH		APZ		ISSUED FOR APPROVAL
13	01.OCT.2017	ZHH		APZ		ISSUED FOR APPROVAL
12	15.JUN.2017	ZHH		APZ		ISSUED FOR APPROVAL
11	16.MAR.2017	ZHH		APZ		ISSUED FOR APPROVAL
10	17.NOV.2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner
Kingdom of Saudi Arabia
Ministry of Interior
المملكة العربية السعودية
وزارة الداخلية
SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الأمني الطبي

Engineer / Owner's Representative
Manens-Tifs

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ABV ROCK Group Co. Ltd. Lead Designer / Consultant :
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Kingdom of Saudi Arabia
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Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-A-10-00-REV02	1:100@A0	GROUND	ARCHITECTURE

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE (01)
GROUND FLOOR TAGS PLAN

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-A0-10-122							05	14		A

NOTE:

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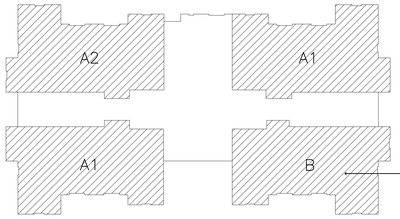


FAMILY APARTMENTS TYPE (B04.21) SPACES AREAS

APRT. TYPE		TOTAL APRT. AREA	FAMILY LIVING + DINING	FAMILY LIVING	DINING	MAJLIS	MASTER BEDROOM	MASTER BATHROOM	BEDROOM 1	BEDROOM 2	FAMILY BATHROOM	KITCHEN	MAID ROOM	MAID BATHROOM	GUEST TOILET	ENTRANCE LOBBY	CORRIDOR
A	1	175	34.75	---	---	21.5	21.6	6.3	17.77	---	5.2	9.36	7.3	3.14	3.67	9.3	13
	2	175	34.75	---	---	21.5	21.6	6.3	17.77	---	5.2	9.36	7.3	3.14	3.67	9.3	13
B		175	34.75	---	---	21.5	21.6	6.05	16.44	---	6.89	8.35	7.03	3.14	3.86	9.15	13
C	1	205	---	16.9	21.5	27.5	21.6	6.3	16.9	17.77	5.2	9.36	7.3	3.14	3.47	10.9	13
	2	205	---	16.9	21.5	27.5	21.6	6.3	16.9	17.77	5.2	9.36	7.3	3.14	3.47	10.9	13

SPREADSHEET FOR FAMILY APARTMENT TYPES (3 BEDROOMS+2 BEDROOMS APARTMENTS)

FAMILY APARTMENT B04.21

NEW FLOOR		3 Bed RM APART. (UNIT)	2 Bed RM APART. (UNIT)	2 Bed RM APART. (UNIT) H.C
BASEMENT		N.A	N.A	N.A
G.F	(±0.00 F.F.L)	---	3	1
1st FLOOR	(+3.60 F.F.L.)	2	2	---
2nd FLOOR	(+6.90 F.F.L.)	2	2	---
3rd FLOOR	(+10.20 F.F.L.)	2	2	---
4th FLOOR	(+13.50 F.F.L.)	2	2	---
5th FLOOR	(+16.80 F.F.L.)	2	2	---
ROOF FLOOR	(+32.65 T.O.S.)	N.A	N.A	N.A
TOP OF ROOF FLOOR	(+36.35 T.O.S.)	N.A	N.A	N.A
APARTMENT IN 1 BUILDING		10	13	1
APARTMENT IN 4 BUILDINGS		40	52	4

STC RATINGS SCHEDULE

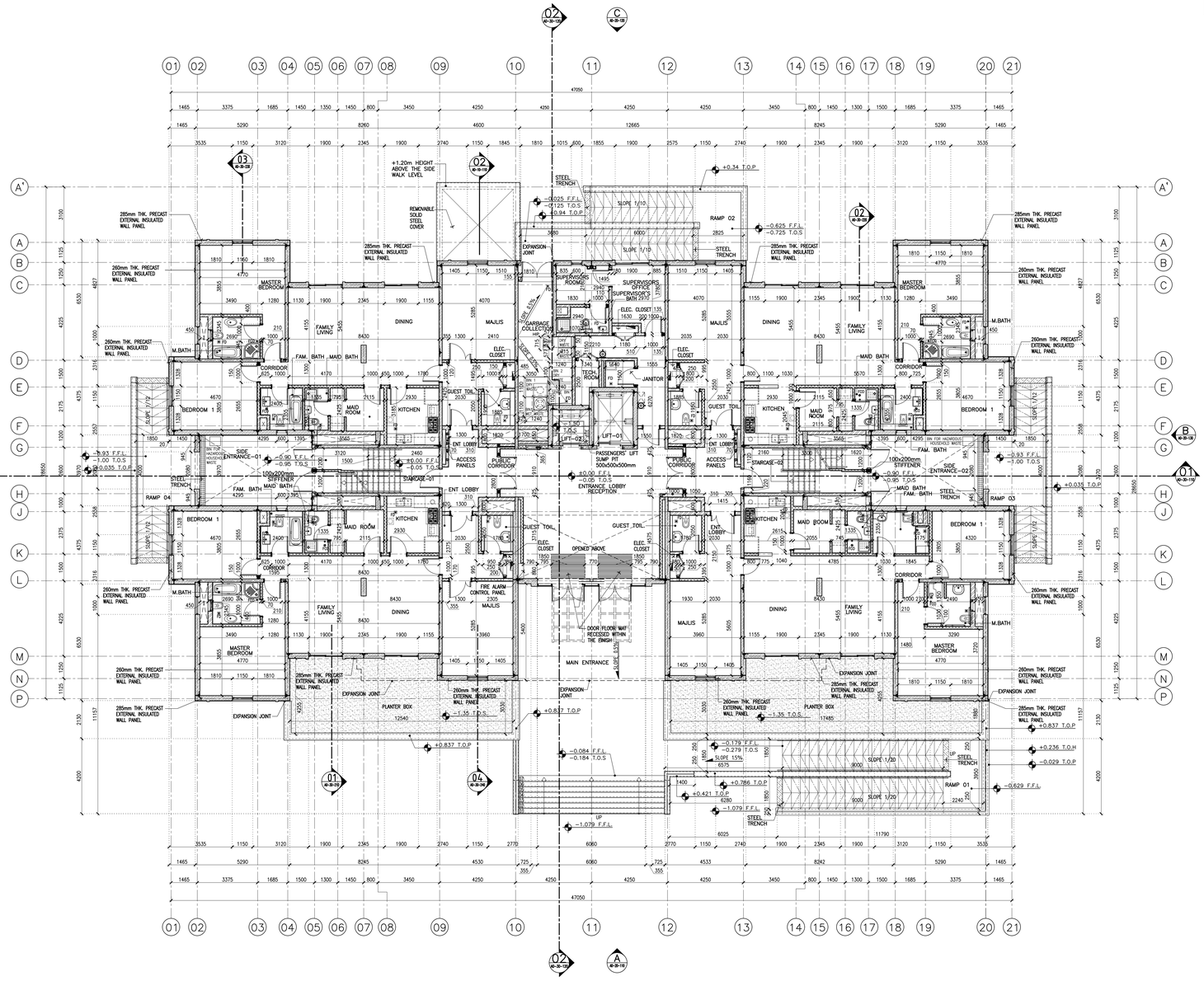
		STC
BEDROOM	BEDROOM	≥ 50
LIVING ROOM	BEDROOM	≥ 55
KITCHEN	BEDROOM	≥ 55
BATHROOM	BEDROOM	≥ 55
LIVING ROOM	LIVING ROOM	≥ 55
KITCHEN	LIVING ROOM	≥ 59
BATHROOM	LIVING ROOM	≥ 59
TECHNICAL ROOM	APARTMENT	≥ 60
EXTERNAL WALLS		60

ROOM SCHEDULE AND VENTILATION AREA

ROOM TYPES	ROOM NAME	ROOM AREA	OPENABLE WINDOW AREA	OPENABLE WINDOW AREA % TO ROOM AREA
2 BED ROOM (RIGHT SIDE)	ENT. LOBBY	9.30 m2	--	--
	GUEST TOIL.	3.68 m2	--	--
	MAJLIS	21.50 m2	1.3225 m2	6.15%
	DINING	17.38 m2	2.185 m2	12.57%
	CORRIDOR	13.02 m2	--	--
	FAMILY LIVING	17.38 m2	2.185 m2	12.57%
	MASTER BEDROOM	21.58 m2	1.3225 m2	6.13%
	M.BATH	6.31 m2	0.42 m2	6.66%
	BEDROOM 1	17.77 m2	1.3225 m2	7.44%
	FAM. BATH	5.20 m2	0.42 m2	8.08%
	MAID BATH	3.19 m2	--	--
	MAID ROOM	7.30 m2	--	--
	KITCHEN	9.36 m2	--	--
	ELEC. CLOSET	0.73 m2	--	--
2 BED ROOM (ACCESSIBILITY)	ENT. LOBBY	9.15 m2	--	--
	GUEST TOIL.	3.65 m2	--	--
	MAJLIS	20.93 m2	1.3225 m2	6.32%
	DINING	17.38 m2	2.158 m2	12.42 %
	CORRIDOR	13.47 m2	--	--
	FAMILY LIVING	17.38 m2	2.158 m2	12.42 %
	MASTER BEDROOM	21.64 m2	1.3225 m2	6.11%
	M.BATH	6.18 m2	0.42 m2	6.80%
	BEDROOM 1	16.44 m2	1.3225 m2	8.04%
	FAM. BATH	6.73 m2	0.42m2	6.24%
	MAID BATH	3.22 m2	--	--
	MAID ROOM	7.03 m2	--	--
	KITCHEN	8.35 m2	--	--
	ELEC. CLOSET	0.53 m2	--	--
2 BED ROOM (LEFT SIDE)	ENT. LOBBY	9.15 m2	--	--
	GUEST TOIL.	3.65 m2	--	--
	MAJLIS	20.93 m2	1.3225 m2	6.32%
	DINING	17.38 m2	2.185 m2	12.57%
	CORRIDOR	13.02 m2	--	--
	FAMILY LIVING	17.38 m2	2.185 m2	12.57%
	MASTER BEDROOM	21.58 m2	1.3225 m2	6.13%
	M.BATH	6.31 m2	0.42 m2	6.66%
	BEDROOM 1	17.77 m2	1.3225 m2	7.44%
	FAM. BATH	5.20 m2	0.42 m2	8.08%
	MAID BATH	3.19 m2	--	--
	MAID ROOM	7.30 m2	--	--
	KITCHEN	9.36 m2	--	--
	ELEC. CLOSET	0.53 m2	--	--
SERVICES	ENT. LOBBY	67.00 m2	--	--
	PUBLIC CORRIDOR	23.44 m2	--	--
	SIDE ENTRANCE	25.00 m2	--	--
	STAIRCASE	34.10 m2	2.875 m2	8.43%
	SUPERVISOR OFFICE	10.31 m2	2.185 m2	21.19%
	SUPERVISOR ROOM	6.23 m2	0.69 m2	11.07%
	SUPERVISOR'S BATH	3.79 m2	--	--
	JANITOR	2.46 m2	--	--
	TECH. ROOM	2.81 m2	--	--
	GARBAGE COLLECTION	21.44 m2	--	--
	CORRIDOR TO GARBAGE	12.16 m2	--	--
	ELEC. CLOSET	0.59 m2	--	--

BUILT-UP AREA = 955.65 m2

COMPLIANCE WITH REQUIRED WINDOW AREA AS PER SBC (4% OF THE ROOM AREA)

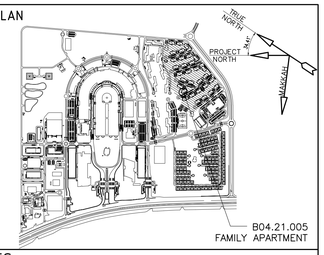


01 A0-10-121 GROUND FLOOR DIMENSIONS PLAN

SCALE 1 : 100

0 1 2 5 10 Meters

KEY PLAN



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1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS UNLESS OTHERWISE NOTED. DRAWINGS SHOULD NOT BE SCALED AND ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

2. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE ROUGH DIMENSIONS AND DO NOT INCLUDE FINISHING MATERIALS AND THEIR CORRESPONDING FIXATION TOLERANCES. PLEASE REFER TO DETAILED PLANS AND/OR WALL SECTION DRAWINGS.

3. TOLERANCES REQUIRED FOR EXT. FINISHING WORKS SHALL BE CONSIDERED ALONG WITH DIMENSIONS SHOWN ON DOORS AND WINDOWS SCHEDULES.

REFERENCES

1. GENERAL NOTES, SYMBOLS, LEGEND AND ABBREVIATIONS		MI-IV-A3-B04.21.000-A0-10-001-05
2. FINISHING SCHEDULE	FROM	MI-IV-A3-B04.21.000-A0-60-101-05
	TO	MI-IV-A3-B04.21.000-A0-60-107-05
3. SCHEDULE OF DOORS	FROM	MI-IV-A3-B04.21.000-A0-60-201-05
	TO	MI-IV-A3-B04.21.000-A0-60-205-05
4. SCHEDULE OF WINDOWS		MI-IV-A3-B04.21.000-A0-60-301-05
		MI-IV-A3-B04.21.000-A0-60-302-05
5. SITE PLAN		MI-PT-A0-B00.00-A0-SK-00142-04
		MI-IV-A3-B04.21.000-AS-10-100-05-06

LEGEND

1. FFL FINISH FLOOR LEVEL.
2. TOS TOP OF SLAB.
3. TOP TOP OF PARAPET.
4. TOH TOP OF HANDRAIL.
5. FD FLOOR DRAIN.
6. FCO FLOOR CLEAN OUT.

TOH TOP OF HANDRAIL.
FD FLOOR DRAIN.
FCO FLOOR CLEAN OUT.

PRECAST CONCRETE
NON RATED CMU WALL WITH DIFFERENT THICKNESS
2 HOURS FIRE RATED CMU BLOCK WALL

Rev.	Date	Drgtr.	Signature	ABV Appr.	Signature	Revision Description
14	24.DEC. 2017	ZHH		APZ		ISSUED FOR APPROVAL
13	01.OCT. 2017	ZHH		APZ		ISSUED FOR APPROVAL
12	15.JUN. 2017	ZHH		APZ		ISSUED FOR APPROVAL
11	16.MAR 2017	ZHH		APZ		ISSUED FOR APPROVAL
10	17.NOV. 2016	ZHH		APZ		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

المملكة العربية السعودية
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH

مشروع المركز الامني الطبي

Engineer / Owner's Representative

Manens-Tifs ENGINEERING

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP

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E-mail : pt.dubai@p-tgroup.com
Website : www.p-tgroup.com

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Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-A-10-00-REV02	1:100@A0	GROUND	ARCHITECTURE

Drawing Title:

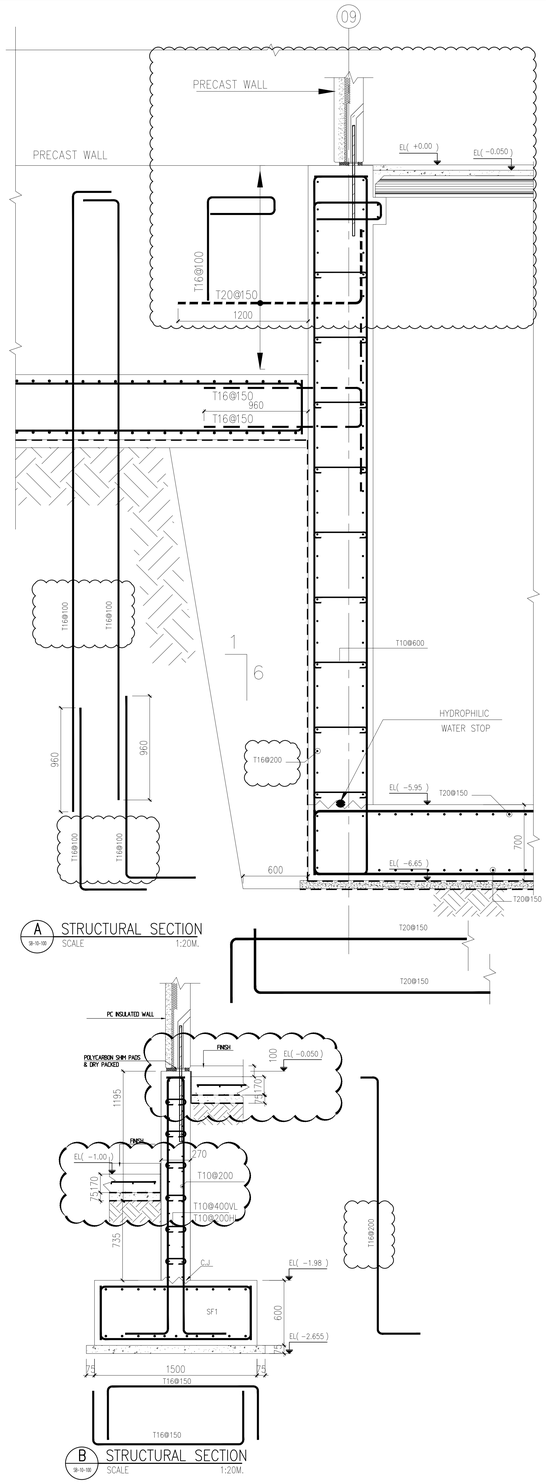
B04.21 FAMILY APARTMENT BUILDING-TYPE (01) GROUND FLOOR DIMENSIONS PLAN

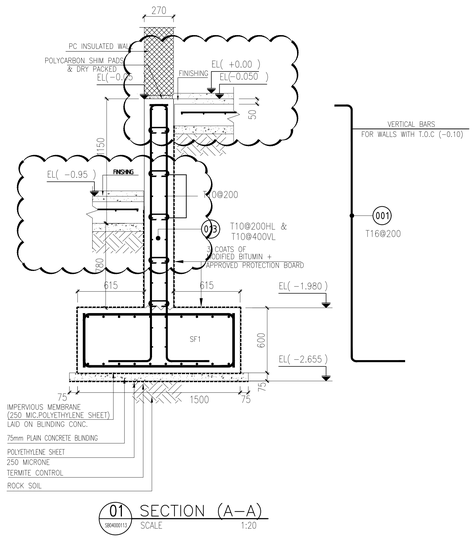
Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-A0-10-121	05	14	A							

RAKA
DESIGN

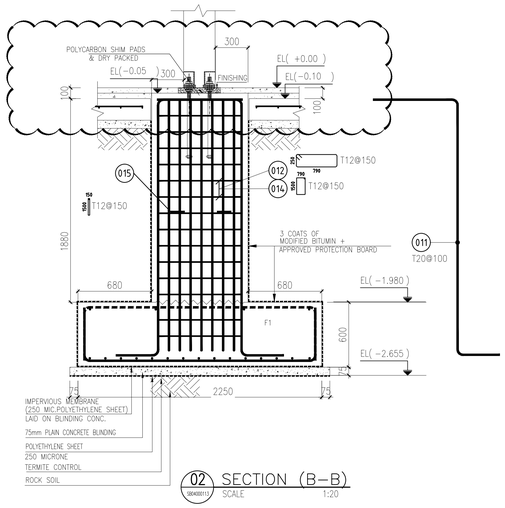
STRUCTURAL



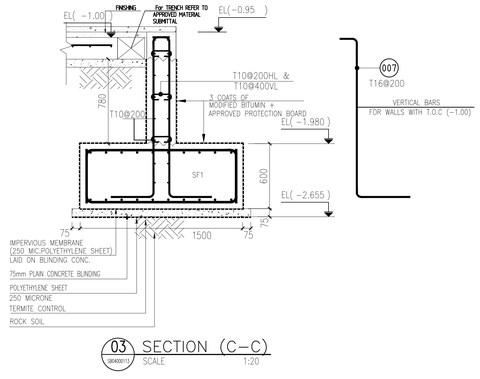

09
PRECAST WALL
PRECAST WALL
EL(+0.00)
EL(-0.050)
T16@100
T20@150
1200
T16@150
960
T16@150
T16@100
T16@100
1
6
T10@600
HYDROPHILIC
WATER STOP
960
960
T16@200
EL(-5.95)
T20@150
700
EL(-6.65)
600
T20@150
A STRUCTURAL SECTION
SCALE 1:20M.
T20@150
T20@150
PC INSULATED WALL
FINISH
POLYCARBON SHIM PADS
& DRY PACKED
100
EL(-0.050)
1195
170
FINISH
EL(-1.00)
75
170
T10@200
T10@400VL
T10@200HL
735
T16@200
CJ
EL(-1.98)
SF1
600
EL(-2.655)
75
1500
75
T16@150
T16@150
B STRUCTURAL SECTION
SCALE 1:20M.
PRECAST COLUMN
T20@150
EL(-5.95)
700
EL(-6.65)
T20@150
T20@150
REFER TO FOUNDATION
REINFORCEMENT
T20@150
T20@150
G STRUCTURAL SECTION
SCALE 1:20M.
EL(-0.10)
EL(-0.050)
75
170
170
100
T10@400VL
T10@200HL
T16@200
EL(-1.98)
600
EL(-2.655)
75
1500
75
T16@150
T16@150
T16@150
L STRUCTURAL SECTION
SCALE 1:20M.
07
EL(-0.050)
EL(+0.00)
75
170
100
T16@100
T10@600
HYDROPHILIC
WATER STOP
960
960
EL(-5.95)
T16@100
T16@100
700
EL(-6.65)
T20@150
T20@150
C STRUCTURAL SECTION
SCALE 1:20M.
11
EL(-5.95)
T20@150
T12@150
HYDROPHILIC
WATER STOP
T20@150
T20@150
T20@150
T20@150
T12@150
T12@150
HYDROPHILIC
WATER STOP
T20@150
EL(-7.35)
T20@150
T20@150
T20@150
EL(-8.35)
450
T20@150
T20@150
EL(-8.875)
T20@150
T20@150
E STRUCTURAL SECTION
SCALE 1:20M.
PRECAST WALL
HYDROPHILIC
WATER STOP
700
EL(-6.725)
T12@150
T20@150
T20@150
T20



01 SECTION (A-A)
SCALE 1:20



02 SECTION (B-B)
SCALE 1:20



03 SECTION (C-C)
SCALE 1:20

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – αx		
001	T16	1	1683	1683	2970	23		A=165 B=2375 C=500		
002	T10	1	80	80	6650	21		A=800 B=5090 C=800		
003	T10	1	40	40	8960	21		A=130 B=8070 C=800		
004	T10	1	166	166	8220	21		A=800 B=6660 C=800		
005	T10	1	80	80	8110	23		A=800 B=6555 C=800		
006	T10	1	80	80	8710	21		A=130 B=7825 C=800		
007	T16	1	72	72	2070	23		A=165 B=1475 C=500		
008	T10	1	24	24	5960	21		A=800 B=4400 C=800		
009	T10	1	86	86	5770	21		A=800 B=4210 C=800		
010	T10	1	40	40	4790	21		A=130 B=3900 C=800		
011	T20	1	92	92	3480	23		A=790 B=2375 C=400		

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – αx		
012	T12	1	28	28	4720	99		A=790 B=1500		
013	T10	1	1966	1966	370	99		A=190		
014	T12	1	84	84	2220	99		A=250 B=790		
015	T12	1	56	56	3440	99		A=150 B=1500		
017	T16	1	12	12	1870	21		A=170 B=1600 C=170		
019	T16	1	54	54	2580	11		A=720 B=1890		
026	T16	1	8	8	2560	11		A=730 B=1860		
027	T16	1	6	6	970	21		A=170 B=690 C=170		
029	T16	1	4	4	1910	21		A=170 B=1640 C=170		
033	T16	1	24	24	2310	21		A=170 B=1475 C=730		
034	T16	1	12	12	1880	21		A=170 B=1610 C=170		

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – αx		
040	T16	1	12	12	1870	21		A=170 B=1600 C=170		
051	T20	1	20	20	2400	11		A=1725 B=715		
052	T16	1	6	6	970	21		A=170 B=690 C=170		
054	T16	1	4	4	1910	21		A=170 B=1640 C=170		
055	T20	1	20	20	2400	00		A=2400		
058	T20	1	20	20	2400	00		A=2400		
059	T16	1	18	18	1870	21		A=170 B=1600 C=170		
064	T20	1	78	78	2400	11		A=1725 B=715		
065	T20	1	78	78	2400	11		A=1725 B=715		
066	T20	1	20	20	2400	00		A=2400		
067	T20	1	20	20	2400	00		A=2400		

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – αx		
068	T20	1	20	20	2400	11		A=1725 B=715		
073	T16	1	24	24	1500	00		A=1500		

REBARS WEIGHT

Number of members: 1

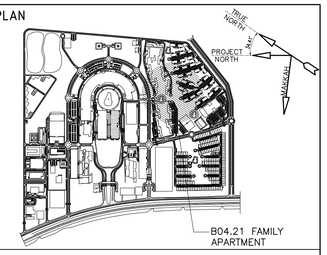
Diameter	HIGH YIELD STEEL Total length (m)	Unit weight (kg/m)	Total weight (kg)	Total length (m)	Unit weight (kg/m)	Total weight (kg)
8	0.0	0.395	0.00			
10	5158.8	0.617	3182.98			
12	511.3	0.888	454.02			
14	0.0	1.208	0.00			
16	5526.8	1.578	8721.31			
18	0.0	2.000	0.00			
20	982.6	2.466	2422.99			
22	0.0	2.984	0.00			
25	0.0	3.853	0.00			
28	0.0	4.834	0.00			
32	0.0	6.313	0.00			

Medium diameter (mm)	14.0
Bend bar length (m)	11951
Straight bar length (m)	228
Total length (m)	12179
Bend bar weight (kg)	14251
Straight bar weight (kg)	530
Total weight (kg)	14781

Total weight for one member (kg)	14781
Total weight for all members (kg)	14781

0.1
0 0.5 1 2 Meters

KEY PLAN



NOTES:

1. IN CASE OF ANY DISCREPANCY BETWEEN STRUCTURAL DRAWINGS & SITE CONDITIONS, REPORT TO THE ENGINEER.
2. ALL DIMENSIONS ARE IN MILLIMETERS.
3. MINIMUM SPLICE LENGHT IS 60Ø
4. FOR DAMP PROOFING DETAIL REFER APPROVED DRAWING MIAA05A3B04-20C03050101.

REFERENCES

- GENERAL NOTES, SYMBOLS & ABBREVIATIONS AS PER MI-IV-A3-B04.21.000-S0-10-101-07
- ARCH DWG REFERENCE MI-IV-A3-B04.21.000-A0-10-110-04
- MEP DWG REFERENCE MI-IV-A3-B04.21.000-P0-10-100-05

LEGENDS

T	BAR DIAMETER
T.O.C	TOP OF CONCRETE
EL.	ELEVATION LEVEL
⊕	TOP LEVEL OF ELEMENT

Rev	Date	Orgtr.	Signature	ABV Appr	Signature	Revision Description
06	01 SEP. 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
05	26.MAY 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
04	10.MAY 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
03	28.FEB 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
02	23.NOV 2015	MUN		APZ		ISSUED FOR APPROVAL
01	07.SEP 2015	MUN		APZ		ISSUED FOR APPROVAL
00	12.APR 2015	MUN		APZ		ISSUED FOR APPROVAL

Owner
Kingdom of Saudi Arabia
Ministry of Interior
المملكة العربية السعودية
وزارة الداخلية
SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع مجمع القوى الطبي

Engineer / Owner's Representative
Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.
ABV ROCK GROUP

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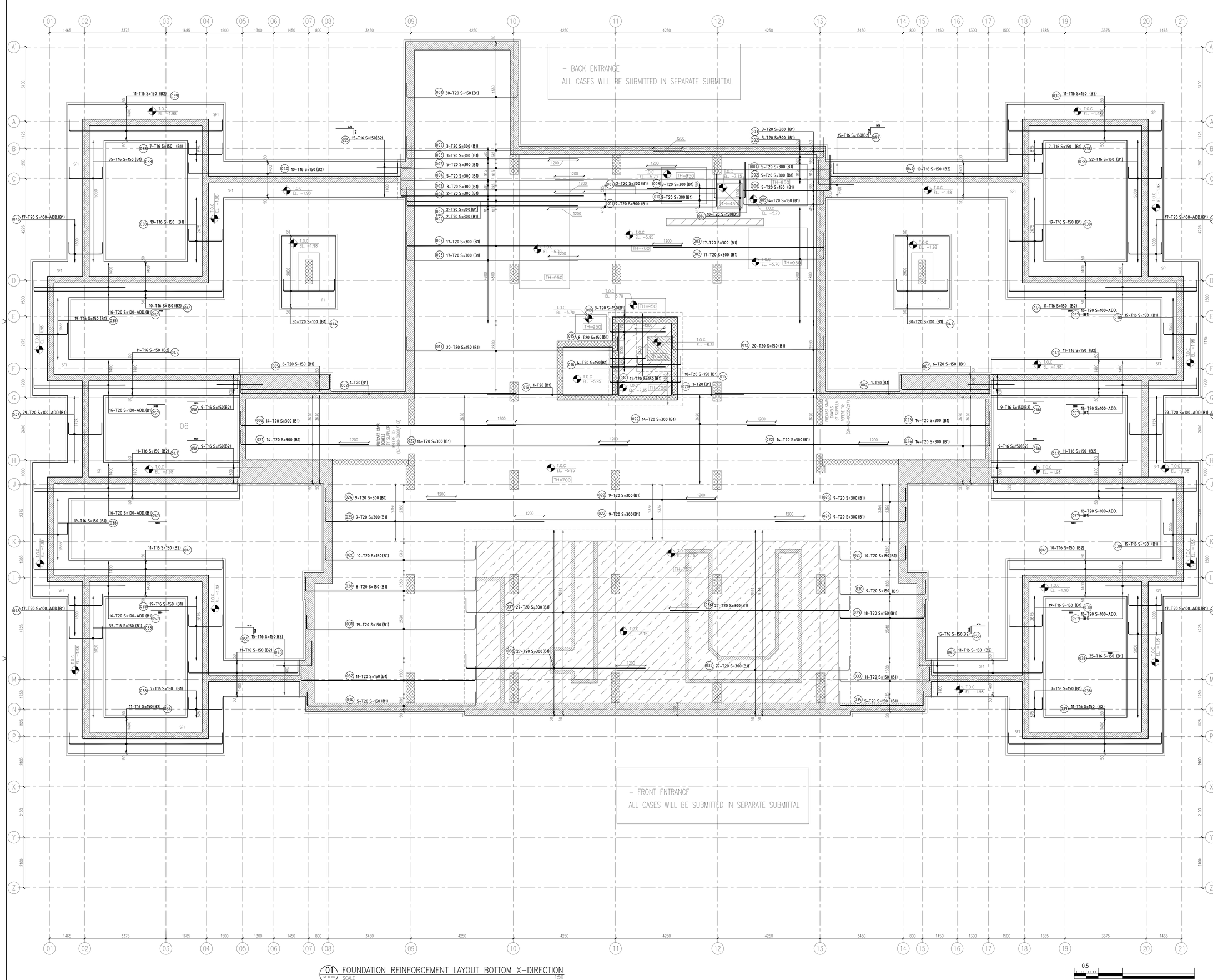
Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-SC-10-00	1:20@A0	FOUNDATION	STRUCTURAL

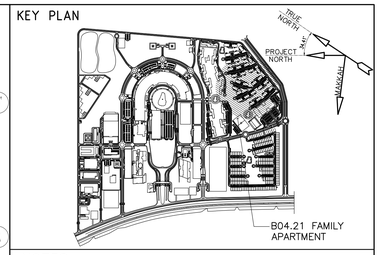
Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE(01) SHEAR WALLS & COLUMNS STARTER BARS DETAILS & BBS

Drawing No.	Project	Orig	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI - IV - A3 - B04.21.000 - SB - 40 - 115								07	06	C



01 FOUNDATION REINFORCEMENT LAYOUT BOTTOM X-DIRECTION
SCALE 1:50

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL DIMENSIONS, ELEVATIONS, SHAFTS, PIPE SLEEVES & OTHER BUILDER'S WORK REQUIREMENTS HAVE BEEN COORDINATED WITH ARCHITECTURAL & MEP DRAWINGS.
3. IN CASE OF ANY DISCREPANCY BETWEEN STRUCTURAL DRAWINGS & SITE CONDITIONS, PLEASE REPORT TO THE ENGINEER.
4. FOUNDATIONS ARE DESIGNED BASED ON MIN. NET ALLOWABLE BEARING CAPACITY OF 600 KN/M2.
5. ALL PRECAST ELEMENTS REFER TO PRECAST DRAWINGS.
6. THIS DRAWING HAS BEEN CHECKED WITH ALL DISCIPLINES.
7. MINIMUM PLAIN CONCRETE BLINDING THICKNESS IS 75 MM.
8. ALL ENTRANCE CASES WILL BE SUBMITTED IN SEPARATE SUBMITTAL.

REFERENCES

- GENERAL NOTES, SYMBOLS & ABBREVIATIONS AS PER MI-IV-A3-B04.21.000-S0-10-101-07
- ARCH DWG REFERENCE MI-IV-A3-B04.21.000-S0-10-110-04
- MEP DWG REFERENCE MI-IV-A3-B04.21.000-P0-10-110-05

LEGENDS

	CAST IN SITU
	PRECAST COLUMNS / WALLS
T.O.C	TOP OF FOUNDATION
EL.	ELEVATION LEVEL
TH=	SLAB THICKNESS
⊕	TOP LEVEL OF ELEMENT

Rev.	Date	Origtr.	Signature	ABV Appr	Signature	Revision Description
06	01 SEP. 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
05	10.MAY 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
04	10.MAY 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
03	28.FEB 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
02	23.NOV 2015	MUN		APZ		ISSUED FOR APPROVAL
01	07.SEP 2015	MUN		APZ		ISSUED FOR APPROVAL
00	12.APR 2015	MUN		APZ		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

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وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH

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Manens-Tifs

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ABV ROCK GROUP

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Website: www.p-t-group.com

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Kingdom of Saudi Arabia
www. Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-SC-10-00	1:50@A0	FOUNDATION	STRUCTURAL

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE(01)
FOUNDATION DETAIL
BOTTOM X-DIRCTION

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
	MI	IV	A3	B04.21.000	SB	40	104	07	06	C

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – α		
001	T20	1	30	30	5720	21		A=600 B=4600 C=600		
002	T20	1	71	71	12000	11		A=600 B=11440		
003	T20	1	42	42	7670	11		A=7110 B=600		
004	T20	1	12	12	8170	11		A=7610 B=600		
005	T20	1	12	12	4820	21		A=600 B=3700 C=600		
006	T20	1	5	5	4740	21		A=600 B=3630 C=600		
007	T20	1	2	2	7270	11		A=600 B=6715		
008	T20	1	3	3	3440	11		A=2880 B=600		
009	T20	1	4	4	4490	21		A=600 B=3380 C=600		
010	T20	1	2	2	3190	11		A=2630 B=600		
011	T20	1	2	2	7520	11		A=600 B=6965		

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – α		
012	T20	1	20	20	7420	21		A=600 B=6300 C=600		
013	T20	1	20	20	9900	21		A=600 B=8780 C=600		
014	T20	1	10	10	4220	21		A=1500 B=1300 C=1500		
015	T20	1	8	8	2640	21		A=600 B=1520 C=600		
016	T20	1	18	18	2420	21		A=350 B=1800 C=350		
017	T20	1	11	11	4090	21		A=600 B=2970 C=600		
018	T20	1	12	12	2880	11		A=600 B=2320		
019	T20	1	1	1	6000	11		A=5440 B=600		
020	T20	1	1	1	3520	11		A=2960 B=600		
021	T20	1	14	14	5870	11		A=600 B=5310		
022	T20	1	60	60	12000	00		A=12000		

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – α		
023	T20	1	14	14	10670	11		A=10110 B=600		
024	T20	1	32	32	6000	11		A=5440 B=600		
025	T20	1	18	18	9670	11		A=9110 B=600		
026	T20	1	10	10	7370	21		A=600 B=6250 C=600		
027	T20	1	10	10	3860	21		A=600 B=2745 C=600		
028	T20	1	8	8	8190	21		A=600 B=7070 C=600		
029	T20	1	18	18	4630	21		A=600 B=3515 C=600		
030	T20	1	9	9	4680	21		A=600 B=3565 C=600		
031	T20	1	19	19	8140	21		A=600 B=7020 C=600		
032	T20	1	11	11	8370	21		A=600 B=7250 C=600		
033	T20	1	11	11	4860	21		A=600 B=3745 C=600		

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – α		
034	T20	1	5	5	8120	21		A=600 B=7000 C=600		
035	T20	1	5	5	4610	21		A=600 B=3495 C=600		
036	T20	1	54	54	8030	11		A=600 B=7470		
037	T20	1	54	54	10240	11		A=600 B=9680		
038	T16	1	337	337	2330	21		A=500 B=1400 C=500		
039	T16	1	44	44	7260	21		A=475 B=6380 C=475		
040	T16	1	20	20	9590	21		A=475 B=8705 C=475		
041	T16	1	42	42	8710	21		A=475 B=7825 C=475		
042	T16	1	44	44	9360	21		A=475 B=8480 C=475		
043	T16	1	22	22	5440	21		A=475 B=4560 C=475		
044	T20	1	60	60	3070	21		A=500 B=2150 C=500		

Bar mark	Type and size	No. of memb.	No. of bars in each memb.	Total No.	Length	Shape Code	Bend Type	Dimensions	Shape	Rev.
	mm				mm			mm – α		
045	T20	1	126	126	2320	21		A=500 B=1400 C=500		
055	T16	1	60	60	2480	11		A=1470 B=1040		
056	T16	1	36	36	1920	00		A=1920		
057	T20	1	128	128	3800	00		A=3800		

REBARS WEIGHT

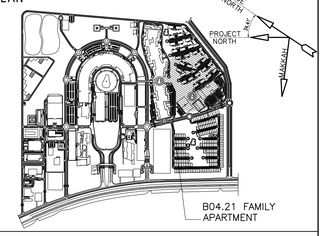
Number of members: 1

Diameter	HIGH YIELD STEEL					
	Total length (m)	Unit weight (kg/m)	Total weight (kg)	Total length (m)	Unit weight (kg/m)	Total weight (kg)
8	0.0	0.395	0.00			
10	0.0	0.617	0.00			
12	0.0	0.888	0.00			
14	0.0	1.208	0.00			
16	2411.7	1.578	3805.68			
18	0.0	2.000	0.00			
20	6066.2	2.466	14959.13			
22	0.0	2.984	0.00			
25	0.0	3.853	0.00			
28	0.0	4.834	0.00			
32	0.0	6.313	0.00			

Medium diameter (mm)	18.9	
Bend bar length (m)	7202	
Straight bar length (m)	1276	
Total length (m)	8478	
Bend bar weight (kg)	15681	
Straight bar weight (kg)	3084	
Total weight (kg)	18765	

Total weight for one member (kg)	18765
Total weight for all members (kg)	18765

KEY PLAN



NOTES:

1. IN CASE OF ANY DISCREPANCY BETWEEN STRUCTURAL DRAWINGS & SITE CONDITIONS, REPORT TO THE ENGINEER.
2. ALL DIMENSIONS ARE IN MILLIMETERS.
3. MINIMUM SPLICE LENGHT IS 60Ø

REFERENCES

- GENERAL NOTES, SYMBOLS & ABBREVIATIONS AS PER MI-IV-A3-B04.21.000-S0-10-101-07
- ARCH DWG REFERENCE MI-IV-A3-B04.21.000-A0-10-110-04
- MEP DWG REFERENCE MI-IV-A3-B04.21.000-P0-10-110-05

LEGENDS

T BAR DIAMETER

Rev.	Date	Drgtr.	Signature	ABV Appr.	Signature	Revision Description
06	01 SEP. 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
05	26 MAY 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
04	10.MAY 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
03	28.FEB 2016	MUN		APZ		ISSUED FOR APPROVAL
02	23.NOV 2015	MUN		APZ		ISSUED FOR APPROVAL
01	07.SEP 2015	MUN		APZ		ISSUED FOR APPROVAL
00	12.APR 2015	MUN		APZ		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

المملكة العربية السعودية
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH

مشروع القوات الأمنية الطبي العلمي

Engineer / Owner's Representative

Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP CO. LTD.

ABV ROCK Group Co. Ltd. Lead Designer / Consultant :

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E-mail : pt.dubai@p-t-group.com
Website : www.p-t-group.com

ABV ROCK Group Co. Ltd. Structural,Infrastructure and MEPF Consultant:

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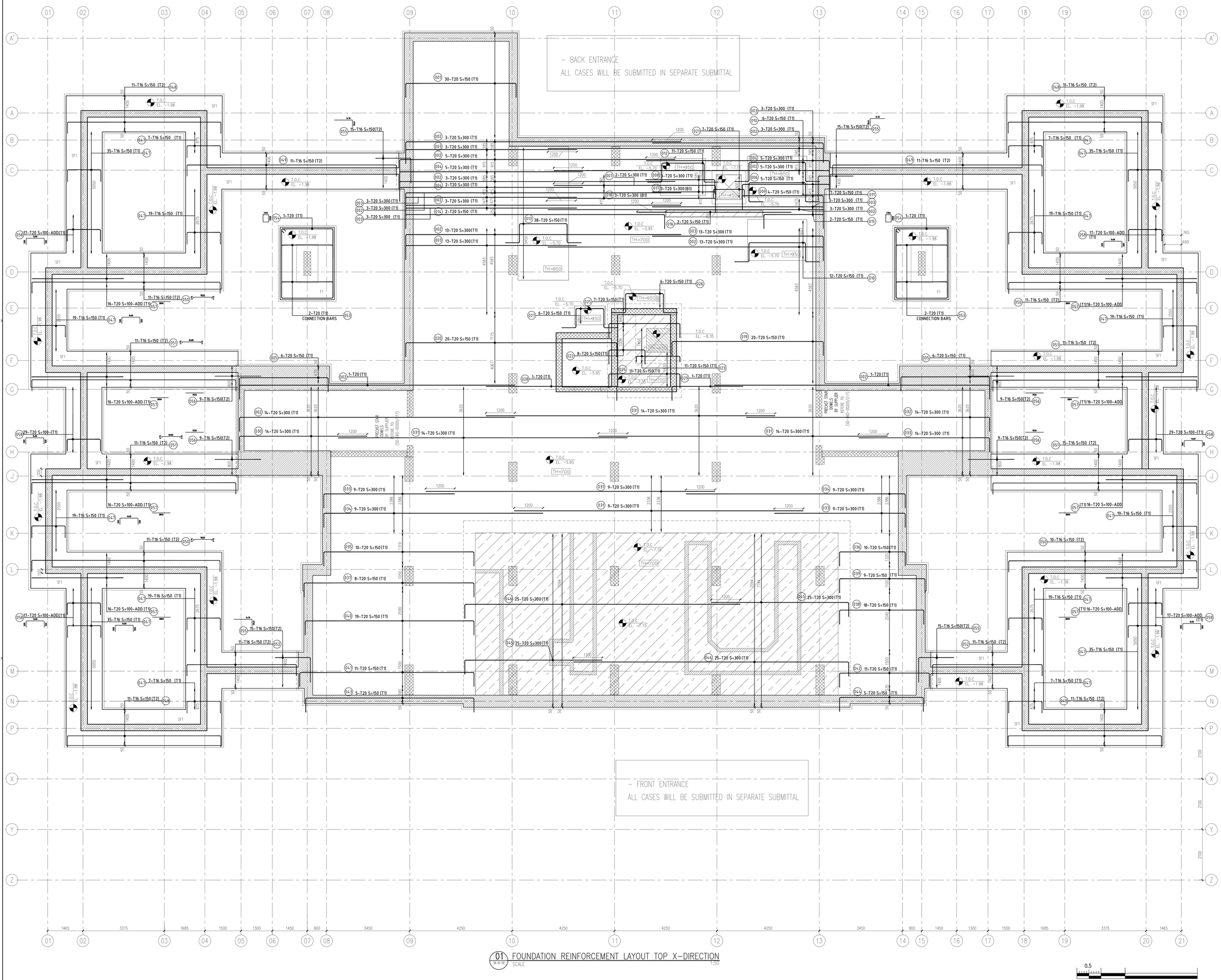
Fax: +966 12 6603345

Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-SC-10-00	A.S@A0	FOUNDATION	STRUCTURAL

Drawing Title:

B04.21 FAMILY APARTMENT BUILDING-TYPE(01) FOUNDATION DETAIL BOTTOM X-DIRCTION (BBS)

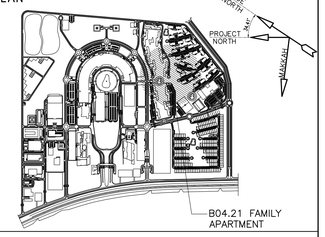
Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI - IV - A3 - B04.21.000 - SB - 40 - 103								07	06	C



01 FOUNDATION REINFORCEMENT LAYOUT TOP X-DIRECTION
SCALE 1:50

0 0.5 1 2 5 Meters

KEY PLAN



NOTES:

1. IN CASE OF ANY DISCREPANCY BETWEEN STRUCTURAL DRAWINGS & SITE CONDITIONS, REPORT TO THE ENGINEER.
2. ALL DIMENSIONS ARE IN MILLIMETERS.
3. MINIMUM SPLICE LENGHT IS 60Ø
4. ALL PRECAST ELEMENTS REFER TO PRECAST DRAWINGS.

REFERENCES

- GENERAL NOTES, SYMBOLS & ABBREVIATIONS AS PER MI-IV-A3-B04.21.000-S0-10-101-07
- ARCH DWG REFERENCE MI-IV-A3-B04.21.000-A0-10-110-04
- MEP DWG REFERENCE MI-IV-A3-B04.21.000-P0-10-100-05
- B.B.S MI-IV-A3-B04.21.000-SB-40-101-07

LEGENDS

	CAST IN SITU
	PRECAST COLUMNS / WALLS
T.O.C	TOP OF CONCRETE
EL.	ELEVATION LEVEL
TH=	THICKNESS
⊕	TOP LEVEL OF ELEMENT
B1	FIRST BOTTOM LAYER
B2	SECOND BOTTOM LAYER
T1	FIRST TOP LAYER
T2	SECOND TOP LAYER

Rev	Date	Origtr.	Signature	ABV Appr.	Signature	Revision Description
06	01 SEP. 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
05	26 MAY 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
04	10 MAY 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
03	28 FEB 2016	MUN		APZ		ISSUED FOR APPROVAL
02	23 NOV 2015	MUN		APZ		ISSUED FOR APPROVAL
01	07 SEP 2015	MUN		APZ		ISSUED FOR APPROVAL
00	12 APR 2015	MUN		APZ		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

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وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH

Engineer / Owner's Representative

Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP

ABV ROCK Group Co. Ltd. Lead Designer / Consultant :

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Website www.p-tgroup.com

ABV ROCK Group Co. Ltd. Structural,Infrastructure and MEPF Consultant:

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Hyder

Sub Consultant

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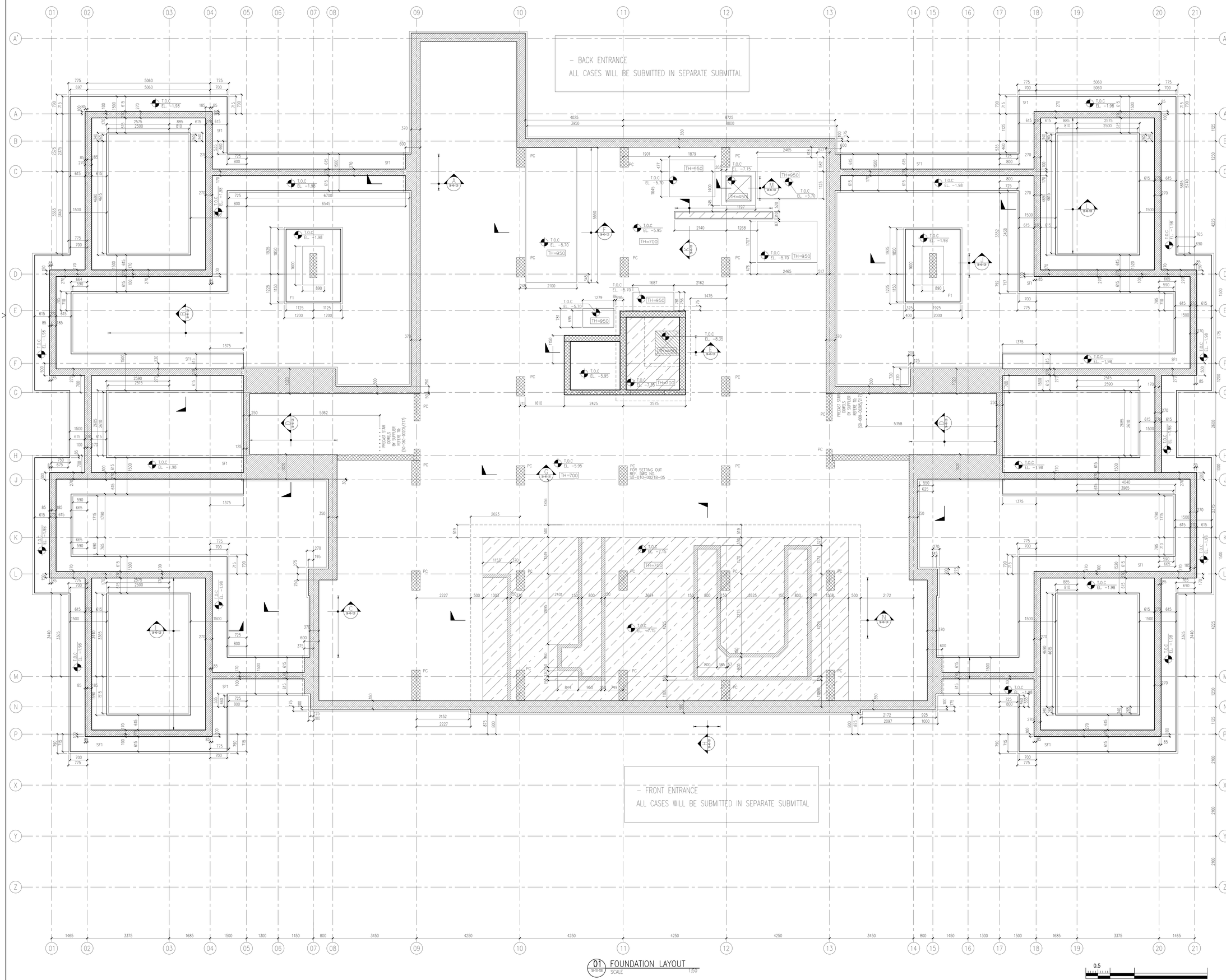
Kingdom of Saudi Arabia
www.innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-SC-10-00	1:50@A0	FOUNDATION	STRUCTURAL

Drawing Title:

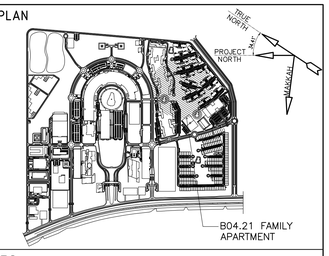
B04.21 FAMILY APARTMENT BUILDING-TYPE(01) FOUNDATION REINFORCEMENT MAIN TOP X-DIRCTION

Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI - IV - A3 - B04.21.000 - SB - 40 - 102								07	06	C



01 FOUNDATION LAYOUT
SCALE 1:50

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL DIMENSIONS, ELEVATIONS, SHAFTS, PIPE SLEEVES & OTHER BUILDER'S WORK REQUIREMENTS HAVE BEEN COORDINATED WITH ARCHITECTURAL & MEP DRAWINGS.
3. IN CASE OF ANY DISCREPANCY BETWEEN STRUCTURAL DRAWINGS & SITE CONDITIONS, PLEASE REPORT TO THE ENGINEER.
4. FOUNDATIONS ARE DESIGNED BASED ON MIN. NET ALLOWABLE BEARING CAPACITY OF 600 KN/M2.
5. ALL PRECAST ELEMENTS REFER TO PRECAST DRAWINGS.
6. THIS DRAWING HAS BEEN CHECKED WITH ALL DISCIPLINES.
7. MINIMUM PLAIN CONCRETE BLINDING THICKNESS IS 75 MM.
8. ALL ENTRANCE CASES WILL BE SUBMITTED IN SEPARATE SUBMITTAL.

REFERENCES

- GENERAL NOTES, SYMBOLS & ABBREVIATIONS AS PER MI-IV-A3-B04.21.000-S0-10-101-07
- ARCH DWG REFERENCE MI-IV-A3-B04.21.000-S0-10-110-04
- MEP DWG REFERENCE MI-IV-A3-B04.21.000-P0-10-110-05

LEGENDS

	CAST IN SITU
	PRECAST COLUMNS / WALLS
T.O.C	TOP OF FOUNDATION
EL.	ELEVATION LEVEL
TH=	SLAB THICKNESS
⊕	TOP LEVEL OF ELEMENT

Rev.	Date	Origtr.	Signature	ABV Appr	Signature	Revision Description
07	01 SEP. 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
06	10.MAY 2016	MUN.		WRT		ISSUED FOR CONSTRUCTION
05	10.MAY 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
04	28.FEB 2016	MUN.		APZ.		ISSUED FOR SUBMITTAL
03	23.NOV 2015	MUN		APZ		ISSUED FOR APPROVAL
02	07.SEP 2015	MUN		APZ		ISSUED FOR APPROVAL
01	12.APR 2015	MUN		APZ		ISSUED FOR APPROVAL

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Kingdom of Saudi Arabia
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وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH

مشروع المركز الأمني الطبي

Engineer / Owner's Representative

Manens-Tifs
ENGINEERING

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP

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Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-SC-10-00	1:50@A0	FOUNDATION	STRUCTURAL

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE(01)
FOUNDATION LAYOUT

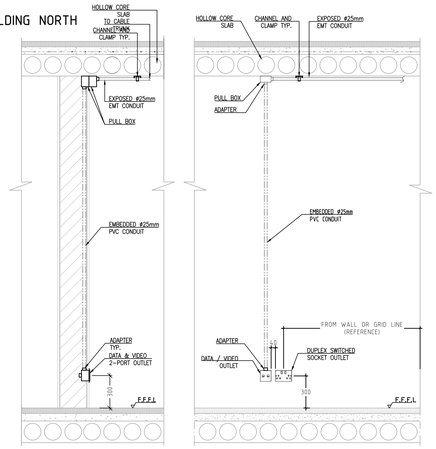
Drawing No.	Project	Orig	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
	MI	IV	A3	B04.21.000	SB	10	100	07	07	C

RAKA
DESIGN

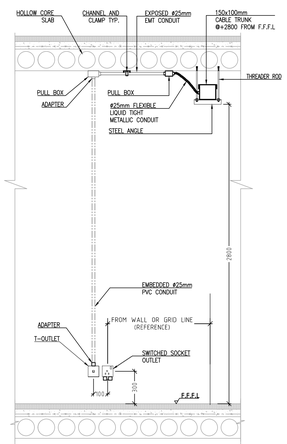
MEP



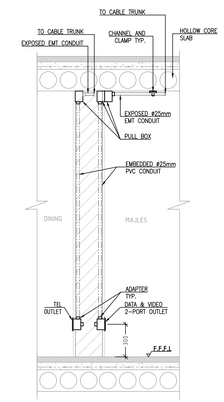
BUILDING NORTH



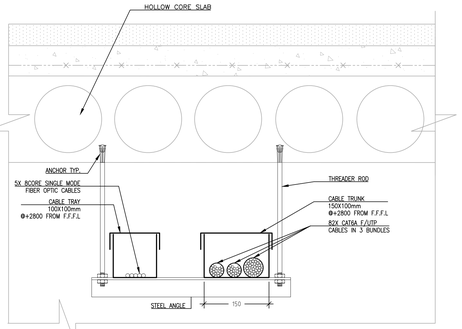
02 TN-10-120 DOUBLE OUTLET&SOCKET
SCALE 1:20



03 TN-10-120 SINGLE OUTLET&SOCKET
SCALE 1:20



04 TN-10-120 BACK TO BACK BOX
SCALE 1:20



05 TN-10-120 CABLE TRUNK SECTION–SECTION (01–01)
SCALE 1:5

LEGEND:

SYMBOL	DESCRIPTION
TCC	TELECOM CABINET
mT/nD/xV	RJ45,INFORMATION OUTLET @300 mm FROM F.F.F.L. (WALL MOUNTED),OTHERWISE INDICATED IN DRAWING.(m=NUMBER OF TELEPHONE PORTS,n=NUMBER OF DATA PORTS, x=NUMBER OF VIDEO PORTS)
	EMT CONDUITS UP/DOWN, SIZE AS INDICATED
PB ⊠	PULL BOX (100x100x55mm) UNLESS OTHERWISE SHOWN IN THE DWG.
	GROUP OF Ø25mm EMT CONDUIT RUNNING EXPOSED,UNLESS OTHERWISE INDICATED.
	Ø25mm EMT CONDUIT RUNNING EXPOSED, UNLESS OTHERWISE INDICATED.
	Ø25mm PVC CONDUIT RUNNING EMBEDDED UNDER FINISH FLOOR, UNLESS OTHERWISE INDICATED.

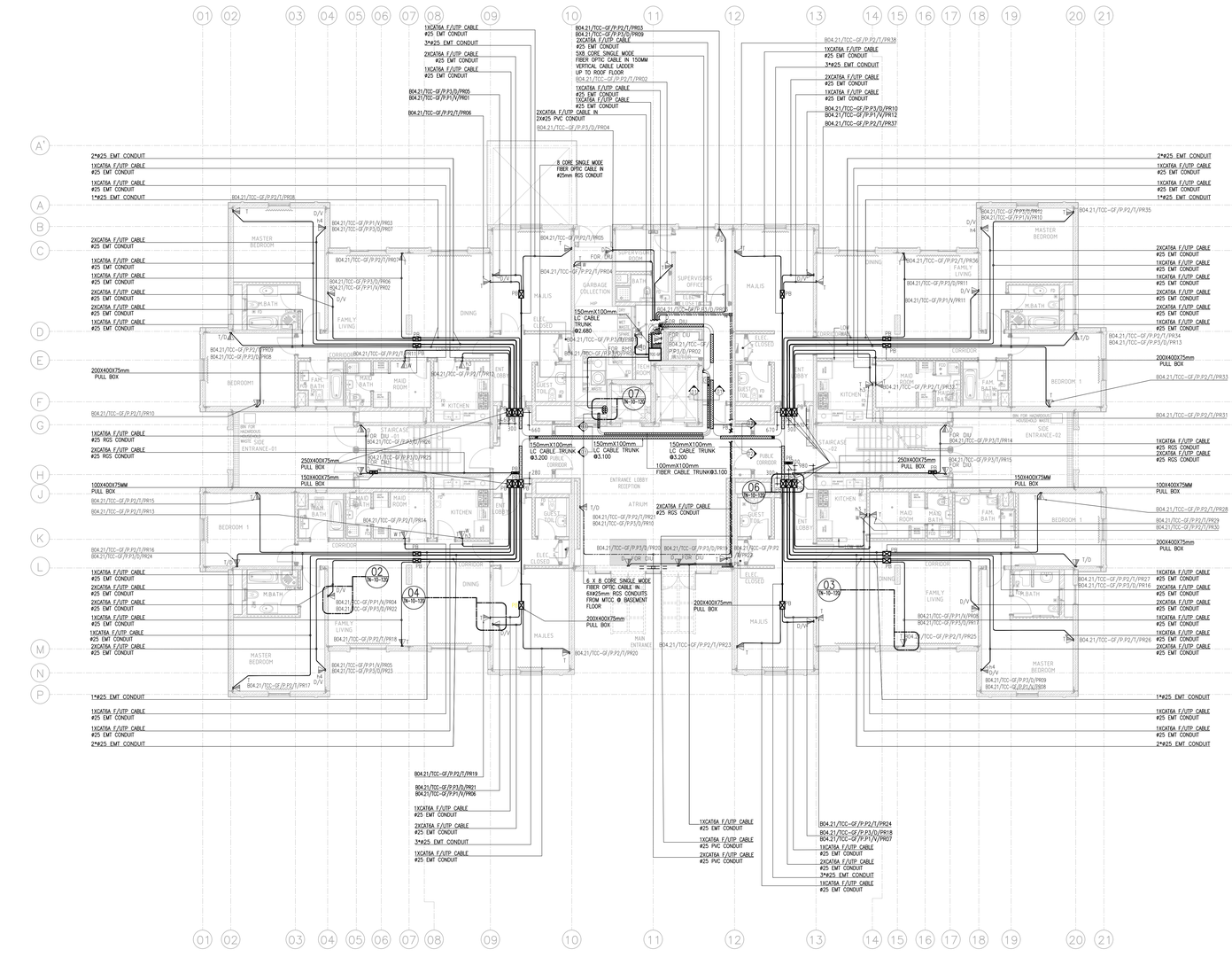
ABBREVIATION:

PB PULL BOX
CAT CATEGORY
GF GROUND FLOOR
h3 AT LEVEL 1500mm FROM F.F.F.L
h4 AT LEVEL 1200mm FROM F.F.F.L
F.F.F.L. FROM FINISH FLOOR LEVEL

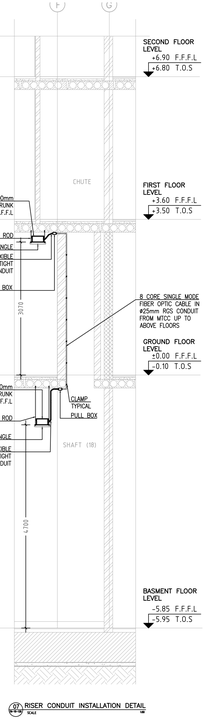
BUILDING NUMBER — B04.21/TCC–GF/P.P1/T/PR13
TELECOM CABINET IN GROUND FLOOR — PATCH PANEL REFERENCE — PORT FUNCTION — PORT REFERENCE

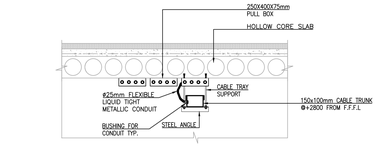
REFERENCES

MI–IV–A3–B04.21.000–EP–10–120–05 GROUND FLOOR POWER LAYOUT
MI–IV–A3–B04.21.000–A0–10–120–04 GROUND FLOOR PLAN
MI–IV–A3–B04.21.000–G0–10–110–05 GROUND FLOOR COORDINATION LAYOUT
MI–IV–A3–B04.21.000–AI–10–110–05 GROUND FLOOR FURNITURE PLAN

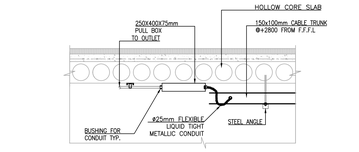


01 TN-10-120 GROUND FLOOR TEL & DATA SYSTEM LAYOUT
SCALE 1:100

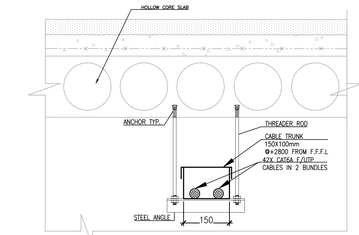




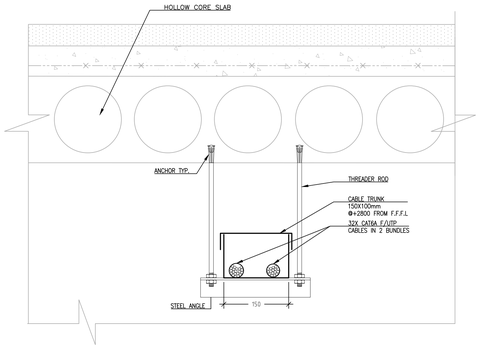
06 TN-10-120 250X400X75mm PB TO CABLE TRUNK FRONT VIEW
SCALE 1:20



06 TN-10-120 250X400X75mm PB TO CABLE TRUNK SIDE VIEW
SCALE 1:20

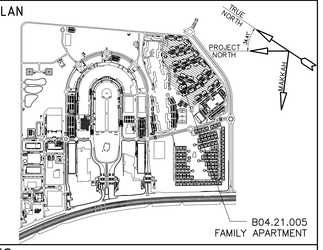


09 TN-10-120 CABLE TRUNK SECTION–SECTION (03–03)
SCALE N.T.S.



08 TN-10-120 CABLE TRUNK SECTION–SECTION (02–02)
SCALE 1:5

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS UNLESS OTHERWISE NOTED. DRAWINGS SHOULD NOT BE SCALED AND WRITTEN DIMENSIONS SHALL BE FOLLOWED.
2. FOR EQUIPMENT REQUIREMENTS & SPECIFICATIONS OF WIRING DEVICES REFER TO DRAWINGS FOR SYSTEM TECHNICAL SPECIFICATIONS. INCLUDE FINISHING MATERIALS AND MOUNTING HEIGHTS AS PER ARCHITECTURAL DRAWINGS AND/OR WALL SECTION DRAWINGS.
3. ALL FLOOR OUTLETS, PATCH FRAMES AND HORIZONTAL CABLES SHOULD BE LABELED AND MARKED WITH DIMENSIONS SHOWN ON DRAWING. ~~ALL~~ FLOOR POINT PORTS/OUTLETS SHOULD BE ABOUT 300mm FROM F.F.F.L, OTHERWISE INDICATED.
4. ~~THE CONTRACTOR SHALL CONSTRUCT ALL WALLS AND BLOCK WORK AS REQUIRED FOR THE INSTALLATION OF THE SYSTEM. ALL BLOCK WORK SHALL BE CONSTRUCTED AS THE WORK PROGRESSES AND NOT LEFT TO BE BUILT AROUND CABLES AND EQUIPMENT AFTER INSTALLATION. ALL BLOCK WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SHALL BE PLUMB, LEVEL AND TRUE TO LINE. ALL BLOCK WORK SHALL BE BONDED AT INTERSECTIONS AND ADEQUATELY TIED TO CONCRETE WALLS AND COLUMNS AS SHOWN ON THE DRAWINGS. CABLE DUCTS SHALL BE FORMED AND CAST IN CONCRETE WALLS AND SLABS AS SHOWN ON THE DRAWINGS. ALL CHASES AND OPENINGS REQUIRED FOR SHUTTERS, INTERNAL BLOCK WORKS.~~
5. ALL HOLLOW BLOCKS FOR EXTERNAL WALLS SHALL BE 200 MM THICK HOLLOW BLOCKS AND FOR INTERNAL WALLS 150 MM THICK HOLLOW BLOCKS. ALL BLOCKS SHALL BE LAID IN CEMENT MORTAR AND ALL JOINTS SHALL BE RAKED OUT TO A DEPTH OF 20 MM FOR PLASTERING.
6. ALL BLOCK WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SHALL BE PLUMB, LEVEL AND TRUE TO LINE. ALL BLOCK WORK SHALL BE BONDED AT INTERSECTIONS AND ADEQUATELY TIED TO CONCRETE WALLS AND COLUMNS AS SHOWN ON THE DRAWINGS. CABLE DUCTS SHALL BE FORMED AND CAST IN CONCRETE WALLS AND SLABS AS SHOWN ON THE DRAWINGS. ALL CHASES AND OPENINGS REQUIRED FOR SHUTTERS, INTERNAL BLOCK WORKS.
7. ALL HOLLOW BLOCKS FOR EXTERNAL WALLS SHALL BE 200 MM THICK HOLLOW BLOCKS AND FOR INTERNAL WALLS 150 MM THICK HOLLOW BLOCKS.
8. MAINTAIN MINIMUM BEND RADIUS OF 10 X OVERALL DIAMETER FOR ALL UTP CABLES. FOR ALL MASONRY WALLS OF ~~100 MM AND 150 MM~~, AS PER ANSI/TIA-569 (NON-LOAD BEARING WALL), BE USED FOR THE ~~INSTALLATION OF CABLE TRAY AND CONDUIT~~ INSTALLATION AND ~~SHALL~~ BE AS PER APPROVED SYSTEM'S VENDOR RECOMMENDATIONS.
9. ALL PULL BOX SIZE IS SUBJECT TO CONTRACTOR VERIFICATION FOR THE SIZE BASED ON THE CALCULATION AND CABLE TYPE APPROVAL, ALSO MAINTAIN MINIMUM BEND RADIUS FOR ALL TECHNOLOGY RELATED CABLE/RACEWAY.
10. FIRE STOP ASSEMBLIES SHALL BE PROVIDED FOR ALL THROUGH-WALL PENETRATION FOR THE INSTALLATION OF CABLE AS REQUIRED TO MAINTAIN FIRE RATING OF WALL.
11. ALL GENERAL SOCKET OUTLET IN THE ELECTRICAL/LOW CURRENT ROOMS TO BE SWITCHED SOCKET WITH STAINLESS STEEL PLATES.
12. DIMENSION FOR PULL BOXES SHOULD ACCOMMODATE EMT CONDUIT, ALSO BEND RADIUS FOR TECHNOLOGY CABLE RESPECTED.
13. THE HEIGHTS OF DATA OUTLETS ARE SUBJECT TO ARCHITECT APPROVAL.
14. CRITICAL SYSTEM: SAFETY SYSTEM (E.G. FIRE ALARM OR BUILDING MANAGEMENT), SECURITY SYSTEM (E.G. ACCESS CONTROL OR CCTV) AND CONFIDENTIAL SYSTEM SHALL BE FURTHER SECURED BY CONNECTING THEIR RESPECTIVE VLAN EQUIPMENT TO SEPARATE ACCESS SWITCH, CONTRACTOR SHALL PROVIDE A DEDICATED SWITCH FOR THE CRITICAL SYSTEM.

Rev.	Date	Orgtr.	Signature	ABV Appr.	Signature	Revision Description
02	04-JAN. 2018	AFZ.		APZ		ISSUE FOR APPROVAL
01	02 OCT. 2017	AFZ.		APZ		ISSUE FOR APPROVAL

Owner
Kingdom of Saudi Arabia
Ministry of Interior
مملكة العربية السعودية
وزارة الداخلية
SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الطبي لقوى الأمن

Engineer / Owner's Representative
Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP

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Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694–CD–RS–B04.21–ET–10–02–REV 0	A.S@A0	GROUND	TELECOMM.

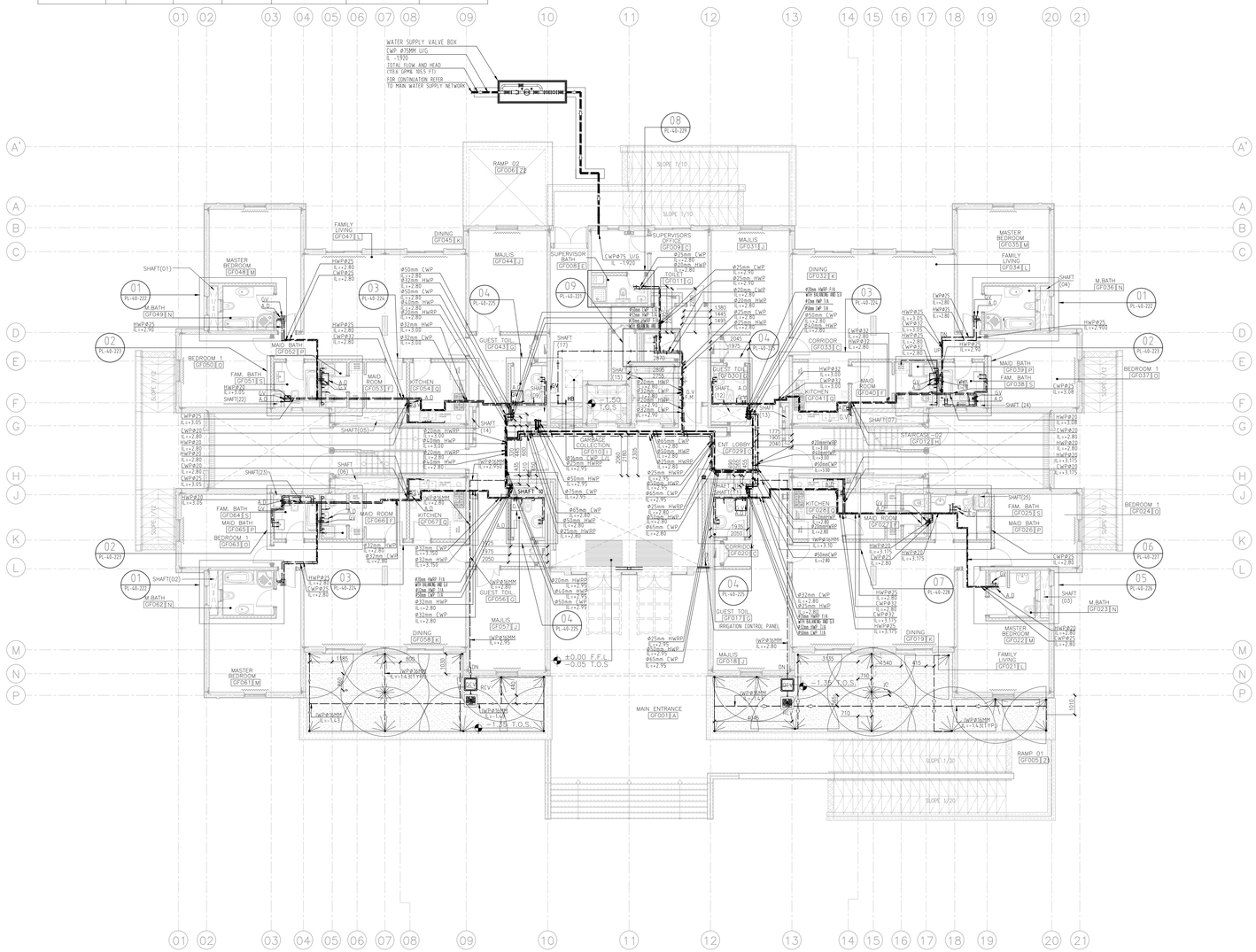
Drawing Title:
B04.21 FAMILY APARTMENT BUILDING–TYPE (01)
GROUND FLOOR TEL & DATA SYSTEM LAYOUT

| Drawing-No: | No. | | |

SELECTING SPRINKLER TYPE:

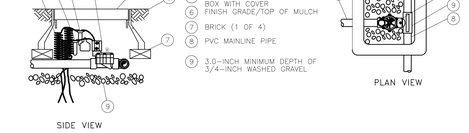
SPRINKLER RADIUS = 4.6 M, SPRINKLER FLOW = 0.10 M3/HR

AREA TYPE	M2	NO. OF AREAS	WATER DEMAND LIT./DAY/AREA	WATER DEMAND M3/DAY/AREA	TOTAL SUPPLIED FLOW /AREA (M3/HR)	TOTAL SUPPLIED FLOW /AREA (M3/DAY)	TIME REQUIRED FOR EACH AREA (MIN)
AREA-1	56	1	896	0.896	0.66	15.84	81.45
AREA-2	46	1	736	0.736	0.51	12.24	86.59



01 GROUND FLOOR WATER SUPPLY LAYOUT

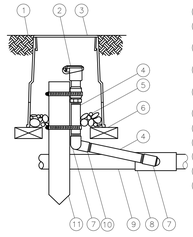
PL-10-220 SCALE 1 : 100



NOTE:
VALVE BOX SHOULD BE USED ONLY IN FREEZE-FREE AREAS.

02 ELECTRIC REMOTE-CONTROL VALVE DETAIL

PL-10-220 SCALE NTS



CHOOSING EQUIPMENT CALLOUT METHOD

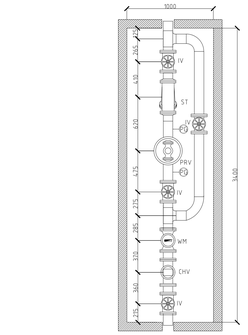
CHOOSE EITHER LEADERS OR BUBBLE CALLOUTS BY TURNING ON THE APPROPRIATE LAYER:

TEXT_LEADERS — ITEM 1 — TEXT_BUBBLES — 1

TO TURN OFF THIS INSTRUCTION BOX, TURN OFF LAYER "INSTRUCT-CALLOUT".

03 QUICK COUPLING VALVE DETAIL

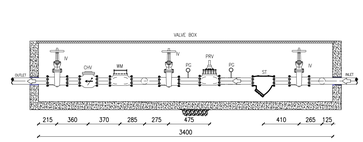
PL-10-220 SCALE NTS



WATER VALVE BOX
WITH DIMENSION (1400X1000X700)MM

04 VALVE BOX ASSEMBLY

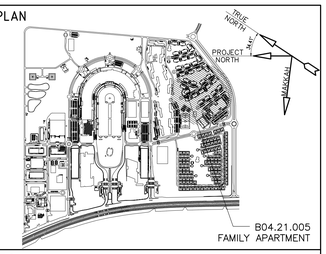
PL-10-220 SCALE 1 : 25



05 VALVE BOX SECTIONAL ELEVATION

PL-10-220 SCALE 1 : 25

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. DRAWINGS SHOULD NOT BE SCALED AND ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
2. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS SHOWN ON THE DRAWINGS ARE ROUGH DIMENSIONS AND DO NOT INCLUDE FINISHING MATERIALS AND THEIR CORRESPONDING FIXATION TOLERANCES. PLEASE REFER TO DETAILED PLANS AND/OR WALL SECTION DRAWINGS.
3. UPVC, SCHEDULE 80 FOR COLD WATER DISTRIBUTION
4. CPVC, SCHEDULE 80 FOR HOT WATER DISTRIBUTION
5. ALL MATERIAL AND EQUIPMENT SELECTION WILL BE AS PER APPROVED MATERIAL SUBMITTAL AND APPROVED VENDOR.
6. INSTALLATION WORKS SHOULD PROCEED AS PER APPROVED METHOD STATEMENT.

REFERENCE:

MI-IV-A3-B04.21.000-PL-10-210
MI-IV-A3-B04.21.000-PL-10-230
MI-IV-A3-B04.21.000-PL-10-240
MI-IV-A3-B04.21.000-PL-10-250
MI-IV-A3-B04.21.000-PL-10-260
MI-IV-A3-B04.21.000-PL-10-270
MI-IV-A3-B04.21.000-PL-10-280

LEGEND:

CWP	COLD (DOMESTIC) WATER PIPE	EFM	ENERGY FLOW METER
HWP	HOT WATER SUPPLY PIPE	CHV	CHECK VALVE
HWRP	HOT WATER RETURN SUPPLY PIPE	ST	STRAINER
CWR	COLD (DOMESTIC) WATER RISER	A.D	ACCESS DOOR
HWR	HOT WATER SUPPLY RISER	IV	ISOLATION VALVE
HWRR	HOT WATER RETURN RISER	PRV	PRESSURE REDUCING VALVE
GV	GATE VALVE	WM	WATER METER
F/A	FROM ABOVE		HOT WATER RETURN PIPE
T/A	TO ABOVE		DIRECTION OF FLOW
RCV	REMOTE CONTROL VALVE		GATE VALVE
IWP	IRRIGATION WATER PIPE	H/L	HIGH LEVEL
H.B	HOSE BIB	L/L	LOW LEVEL
	RISER	DN	DOWN
	COLD WATER PIPE	GV	GATE VALVE
	HOT WATER PIPE	QCV	QUICK COUPLING VALVE

Rev.	Date	Origtr.	Signature	ABV Appr.	Signature	Revision Description
00	25DEC 2017	MAR		AKC		ISSUED FOR CONSTRUCTION

Owner

Kingdom of Saudi Arabia
Ministry of Interior

قيادة قوة الأمن الخاصة
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الأمني الطبي

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Non-ABV Reference:	Scale:	Floor:	Discipline:
CDRSB04-21MP100100	A.S@A0	GROUND	PLUMBING

Drawing Title:

B04.21 FAMILY APARTMENT BUILDING-TYPE(01)
GROUND FLOOR WATER SUPPLY LAYOUT

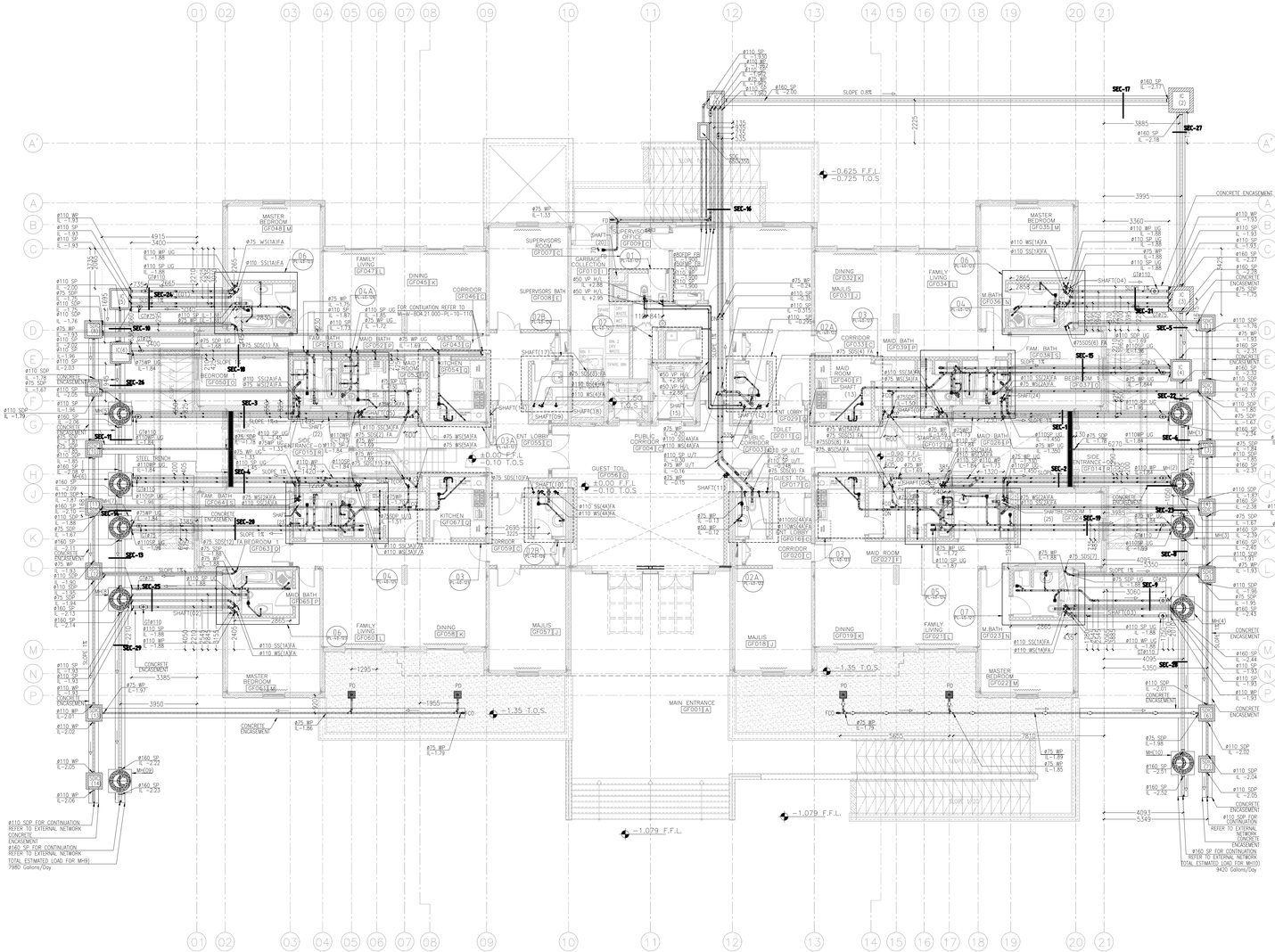
Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-PL-10-220								07	00	A

MANHOLE AND INSPECTION CHAMBER LEVEL TABLE:

EGS. (0.00) LVL. BLDG. = -717.47 IL. (INFRASTRUCTURE).

MANHOLE / INSPECTION CHAMBER TYPE	COVER LEVEL TOC (TOP OF COVER) (M)	BOTTOM LEVEL (M) IL(IN)	IL(OUT)	LENGTH X WIDTH (M)	DIAMETER (M)
IC-1	+716.023	-1.962 -1.962 -1.93	-1.962 -1.962	-1.98	900X900
IC-2	+716.300	-2.17		-2.18	900X900
IC-3	+716.300	-1.93 -1.93 -2.27	-1.93 -1.93	-2.28	900X900
IC-4	+716.300	-1.96 -2.31	-1.844	-2.32	900X900
IC-5	+716.300	-1.963 -1.963	-1.963 -1.963	-2.00	900X900
IC-6	+716.300	-1.84 -2.02	-1.96	-2.03	900X900
MH-1	+716.300	-1.96 -2.33	-1.84	-2.34	1.200
MH-2	+716.300	-1.96 -2.37	-1.84	-2.38	1.200
MH-3	+716.300	-1.84 -2.39	-1.99	-2.40	1.200
MH-4	+716.300	-1.93 -1.93 -2.43	-1.93 -1.93	-2.44	1.200
MH-5	+716.300	-1.91	-1.95	-1.96	1.200
MH-6	+716.300	-1.96 -2.08	-1.84	-2.09	1.200
MH-7	+716.300	-1.96 -2.10	-1.84	-2.11	1.200
MH-8	+716.300	-1.75 -1.75		-1.76	1.200
MH-9	+716.500	-2.22		-2.23	1.200
MH-10	+715.800	-2.51		-2.52	1.200
SDIC-1	+716.300	-1.75		-1.76	600X600
SDIC-2	+716.300	-1.79 -1.67		-1.80	600X600
SDIC-3	+716.300	-1.82 -1.84		-1.85	600X600
SDIC-4	+716.300	-1.67 -1.87		-1.88	600X600
SDIC-5	+716.300	-1.90 -2.38		-2.39	600X600
SDIC-6	+715.800	-1.98 -2.01		-2.02	600X600
SDIC-7	+716.300	-2.04		-2.05	600X600
SDIC-8	+716.300	-2.05 -2.53		-2.54	600X600
SDIC-9	+716.300	-1.78 -1.67		-1.79	600X600
SDIC-10	+716.300	-1.81 -1.85		-1.85	600X600
SDIC-11	+716.023	-1.87 -1.67		-1.88	600X600
SDIC-12	+716.500	-1.90 -1.94		-1.95	600X600
SDIC-13	+716.500	-2.01 -1.97		-2.02	600X600
SDIC-14	+716.500	-2.05		-2.06	600X600

NOTE: ALL MANHOLE & INSPECTION CHAMBER TOP COVER LEVEL SHALL BE FINALIZED AFTER FINAL HARDSCAPE.



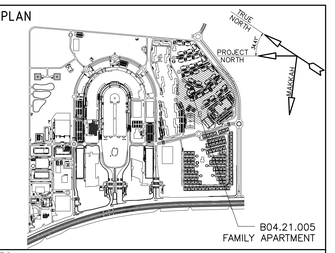
01 PL-10-115 SCALE

BELOW GROUND FLOOR DRAINAGE LAYOUT

1 : 100

0 1 2 5 10 Meters (0.5)

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE NOTED.
2. ALL MECHANICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH GENERAL NOTES, SPECIFICATION AND MISCELLANOUS DETAILS.
3. ALL UNDERGROUND SERVICES SHALL BE INSTALLED PRIOR TO BLINDING CONCRETE POURING.
4. UPVC CLASS(4) FOR ALL DRAINAGE PIPE.
5. UPVC, SCHEDULE 80 FOR COLD WATER DISTRIBUTION
6. CPVC, SCHEDULE 80 FOR HOT WATER DISTRIBUTION
7. ALL PIPE SHALL HAVE MINIMUM 600mm CLEARANCE OR PROVIDE CONCRETE ENCASEMENT IF PIPE DEEPER THAN 600MM.
8. ALL PIPE SLEEVES MATERIAL SHALL BE BASED ON SPECIFICATION AND APPROVED MATERIAL SUBMITTAL

REFERENCES:

1. MI-IV-A3-B04.21-A0-10-100-05
2. MI-IV-A3-B04.21-PL-10-100-05
3. MI-IV-A3-B04.21-PL-10-110-05
4. MI-IV-A3-B04.21-PL-10-120-05
5. MI-IV-A3-B04.21-PL-10-130-05
6. MI-IV-A3-B04.21-PL-10-140-05
7. MI-IV-A3-B04.21-PL-10-150-05
8. MI-IV-A3-B04.21-PL-10-160-05
9. MI-IV-A3-B04.21-PL-10-170-05
10. MI-IV-A3-B04.21-PL-10-180-05
11. MI-IV-A3-B04.21-PL-10-190-05

LEGEND:

SDIC	STORM DRAIN INSPECTION CHAMBER	VS	VENT RISER
IC	INSPECTION CHAMBER	SDS	STORM DRAIN RISER
GT	GULLY TRAP	FMR	FORCE MAIN RISER
SDC	SLOW DOWN CHAMBER	CO	CLEAN OUT
WP	WASTE WATER PIPE	FCO	FLOOR CLEAN OUT
SP	SOIL WATER PIPE	UG	UNDER GROUND
VP	VENT PIPE	US	UNDER SLAB
SDP	STORM DRAINAGE PIPE	FA	FROM ABOVE
FMP	FORCE MAIN PIPE	FB	FROM BELOW
WS	WASTE WATER RISER	FL	FINISH LEVEL
DP/FCU	DRAIN PIPE FROM FAN COIL UNIT	SS	SOIL WATER RISER

WASTE WATER PIPE
SOIL WATER PIPE
VENT PIPE
STORM DRAINAGE PIPE
FORCE MAIN PIPE
STORM DRAIN INSPECTION CHAMBER
MANHOLE
GULLY TRAP
WASTE WATER RISER
SOIL WATER RISER
VENT RISER
STORM DRAIN RISER
FORCE MAIN RISER
SLOPE

Rev.	Date	Origtr.	Signature	ABV Appr.	Signature	Revision Description
00	28DEC 2017	MAR		AKC		ISSUED FOR CONSTRUCTION

Owner

Kingdom of Saudi Arabia
Ministry of Interior

المملكة العربية السعودية
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الامني الطبي

Engineer / Owner's Representative

Manens-Tifs ENGINEERING

Contractor: ABV Rock Group Co. Ltd.

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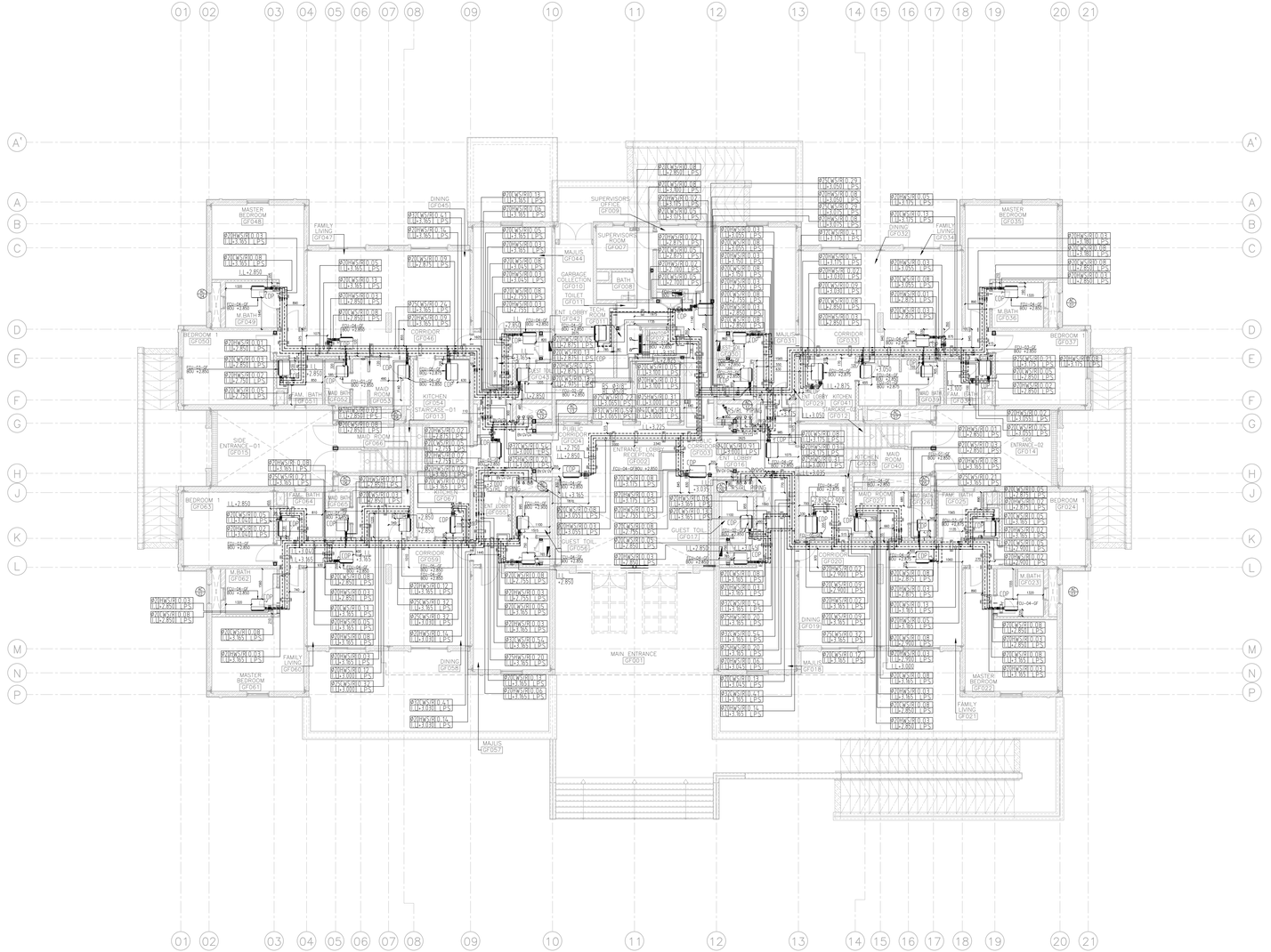
www. Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
CDRSB04-21MP100100	1:100@A0	GROUND	PLUMBING

Drawing Title:

B04.21 FAMILY APARTMENT BUILDING-TYPE(01)
BELOW GROUND FLOOR DRAINAGE LAYOUT

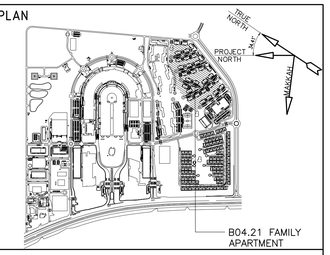
Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-PL-10-115								07	00	A



01 GROUND FLOOR HVAC PIPING LAYOUT
MP-10-120 SCALE 1:100

0 1 2 5 10 Meters

KEY PLAN



NOTES:

1. FOR SYMBOLS, ABBREVIATIONS, GENERAL NOTES, MATERIAL SPECIFICATION AND STANDARD DETAIL REFER TO DWG MI-IV-A3-B04.21.000-MH-00-101.
2. ALL EQUIPMENTS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR PROPER OPERATION AND MAINTENANCE.
3. FINAL EQUIPMENTS DIMENSIONS SHALL BE SUBJECTED TO APPROVED EQUIPMENTS SUBMITTALS.
4. FOR CONDENSATE DRAIN PIPE (CDP) OF FAN COIL UNITS REFER TO DRAINAGE DWG.
5. DRAIN PIPE SHALL HAVE ELASTOMERIC RUBBER INSULATION.
6. PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS IN HOT & COLD WATER PIPING.
7. WALL U-VALUE 0.44 W/(M^2-K), ROOF U-VALUE 0.25 W/(M^2-K) OVERALL GLASS U-VALUE 2.0W/(M^2-K) & CURATIN WALL 2.1 W/(M^2-K).
8. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE NOTED.
9. FOR SECTION REFER TO DWG MI-IV-A3-B04.21.000-G0-10-111,112,113.

REFERENCES:

MI-IV-A3-B04.21.000-A0-10-120

LEGEND:

SRAC	SPLIT REFRIGERANT AIR CONDITIONER
CDP	CONDENSATION DRAIN PIPE
CHWS	CHILLED WATER SUPPLY
CHWR	CHILLED WATER RETURN
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
FCU	FAN COIL UNIT
GV	GATE VALVE
BV	BALANCING VALVE
WO	WALL OPENING
RS/RL	REFRIGERANT SUPPLY/LIQUID
LPS	LITER PER SECOND
IL	INVERT LEVEL

Rev.	Date	Drgtr.	Signature	ABV Appr.	Signature	Revision Description
02	30 JAN. 2018	MAR		AKC		ISSUED FOR CONSTRUCTION

Owner

Kingdom of Saudi Arabia
Ministry of Interior

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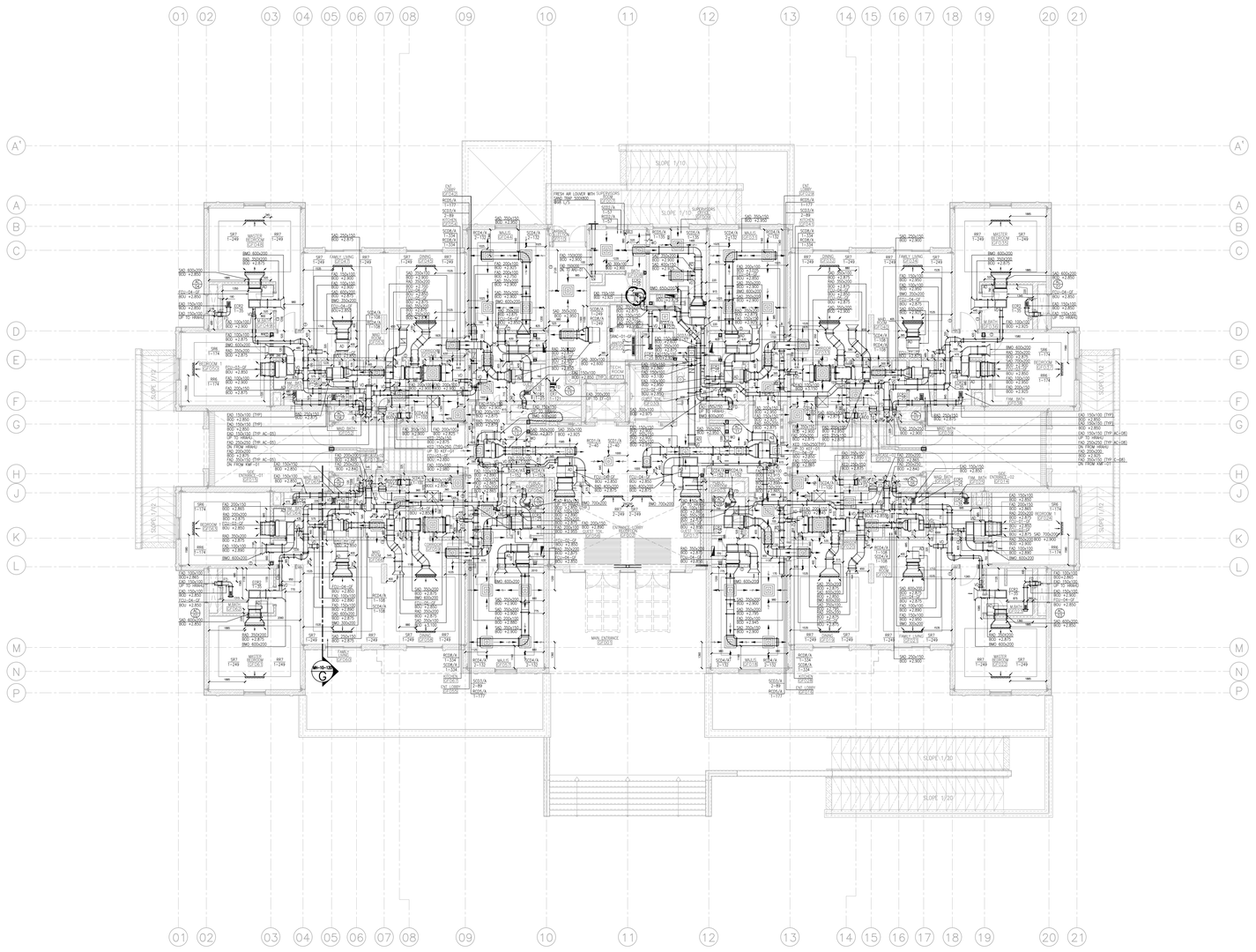
Non-ABV Reference:	Scale:	Floor:	Discipline:
NON.	1:100@A0	GROUND	MECHANICAL

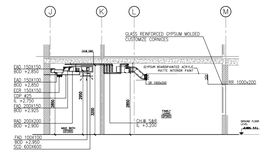
Drawing Title:

B04.21 FAMILY APARTMENT BUILDING-TYPE (01) GROUND FLOOR HVAC PIPING LAYOUT

Drawing-No.	Project	Orig.	Fac.	Type	Package	Building	Discipline	Type	Sequence	Phase	Sheet No.	Revision	Issued Date
MI-IV-A3-B04.21.000-MP-10-120											07	02	A

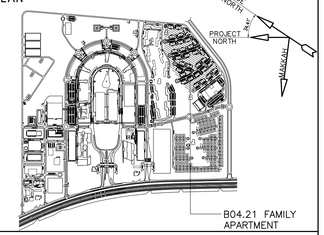


01 GROUND FLOOR HVAC DUCTING LAYOUT
MH-10-120 SCALE 1:100



02 SECTION G-G (GROUND FLOOR)
MH-10-120 SCALE 1:100

KEY PLAN



NOTES:

1. FOR SYMBOLS, ABBREVIATIONS, GENERAL NOTES, MATERIAL SPECIFICATION AND STANDARD DETAIL REFER TO DWG MI-IV-A3-B04.21.000-MH-00-101
2. A BACK DRAFT DAMPER SHALL BE INSTALLED FOR HOOD DUCT.
3. ALL EQUIPMENTS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR PROPER OPERATION AND MAINTENANCE.
4. FINAL EQUIPMENTS DIMENSIONS SHALL BE SUBJECTED TO APPROVED EQUIPMENTS SUBMITTALS.
5. WALL U-VALUE 0.44 $W/(M^2-K)$, ROOF U-VALUE 0.25 $W/(M^2-K)$ OVERALL GLASS U-VALUE 2.0W/(M^2-K) & CURATIN WALL 2.1 $W/(M^2-K)$.
6. INDOOR FCU ACOUSTIC LINE PLENUM BOX SHALL BE PROVIDED.
7. ALL DIMENSIONS ARE IN MM. UNLESS OTHERWISE NOTED.
8. FOR SECTION REFER TO DWG MI-IV-A3-B04.21.000-G0-10-111,112,113.

REFERENCES:

MI-IV-A3-B04.21.000-A0-10-120

LEGEND:

SRAC	SPLIT REFRIGERANT AIR CONDITION
BDD	BACK DRAFT DAMPER
FCU	FAN COIL UNIT
ER	EXHAUST REGISTER
EXH	EXHAUST AIR
FD	FIRE DAMPER
VD	VOLUME DAMPER
KEF	KITCHEN EXHAUST FAN
KMF	KITCHEN MAKEUP FAN
KED	KITCHEN EXHAUST DUCT
EAD	EXHAUST AIR DUCT
AD	ACCESS DOOR
BDU	BOTTOM OF UNIT
SR	SUPPLY REGISTER
RR	RETURN REGISTER
BMO	BELL MOUTH OPENING
BOD	BOTTOM OF DUCT
WO	WALL OPENING
SCD	SUPPLY CEILING DIFFUSER
ECR	EXHAUST CEILING REGISTER
SAD	SUPPLY AIR DUCT
RAD	RETURN AIR DUCT
FAD	FRESH AIR DUCT
EAD	EXHAUST AIR DUCT

0.5 0 1 2 5 10 Meters

Rev.	Date	Drigtr.	Signature	ABV Appr	Signature	Revision Description
02	30 JAN. 2018	MAR		AKC		ISSUED FOR CONSTRUCTION

Owner
Kingdom of Saudi Arabia
Ministry of Interior
المملكة العربية السعودية
وزارة الداخلية
SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع القسم مطار الامني الطبي

Engineer / Owner's Representative
Manens-Tifs

Contractor: ABV Rock Group Co. Ltd.

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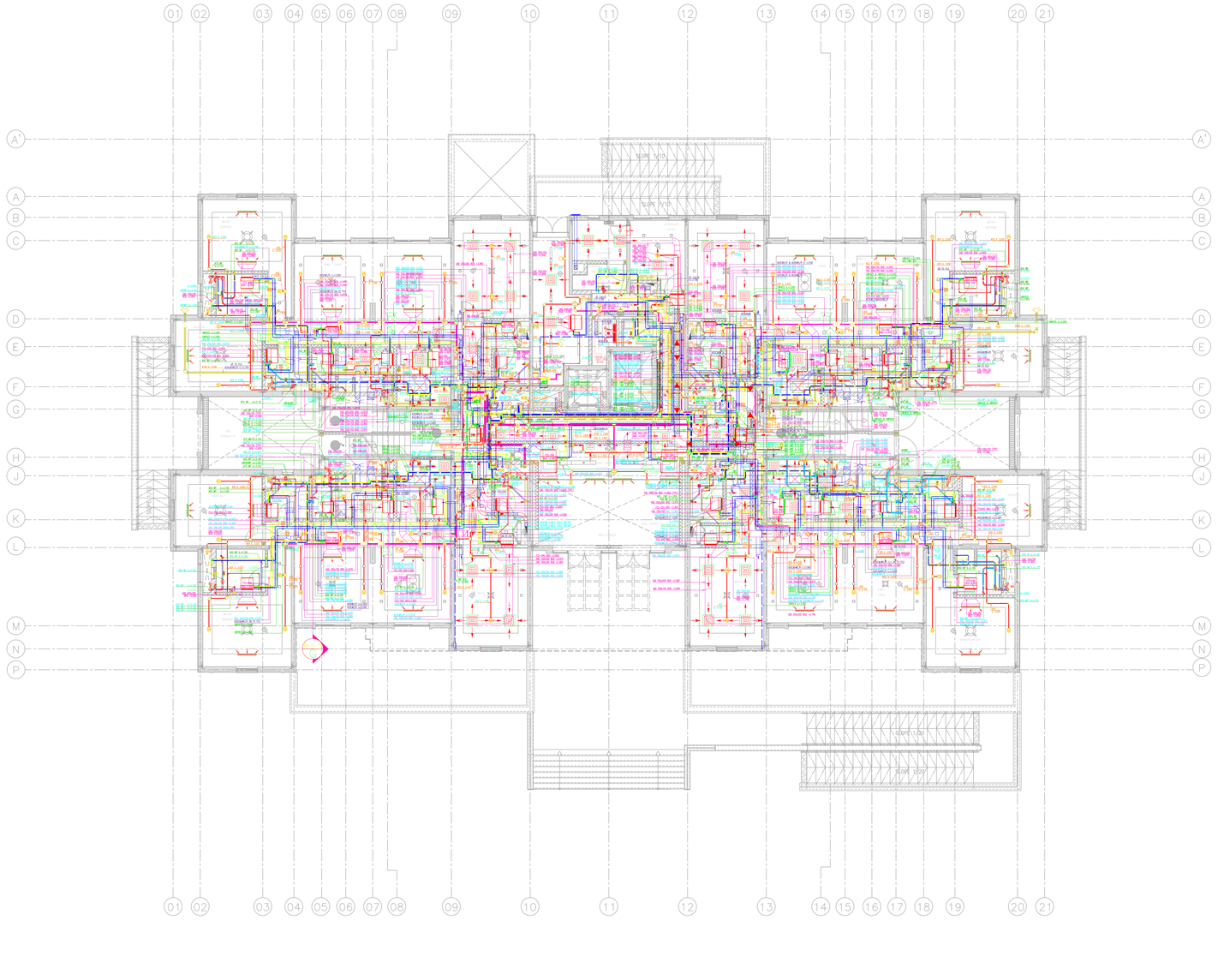
Kingdom of Saudi Arabia
www. Innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
NON.	1:100@A0	GROUND	MECHANICAL

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE (01)
GROUND FLOOR HVAC DUCTING LAYOUT

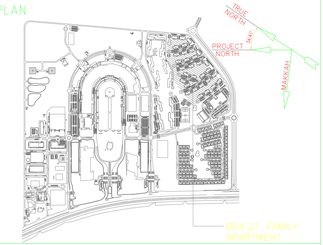
Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-MH-10-120								07	02	A



01 GROUND FLOOR MEP COORDINATION LAYOUT
00-10-110 SCALE 1:100

0 1 2 5 10 Meters

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED.
2. MEP DRAWINGS SHALL BE READ IN CONJUNCTION WITH RESPECTIVE MEP DISCIPLINES SHOP DRAWINGS,WITH GENERAL NOTES,SPECIFICATION MISCELLANEOUS DETAILS.

REFRENCES:

MI-M-A3-B04.21.000-A0-10-121	GROUND FLOOR PLAN
MI-M-A3-B04.21.000-PL-10-220	GROUND FLOOR WATER SUPPLY LAYOUT
MI-M-A3-B04.21.000-PL-40-131	FIRST FLOOR DRAINAGE TOILET DETAILS
MI-M-A3-B04.21.000-PL-40-132	FIRST FLOOR DRAINAGE TOILET DETAILS
MI-M-A3-B04.21.000-PL-10-120	GROUND FLOOR DRAINAGE LAYOUT
MI-M-A3-B04.21.000-FX-70-120	GROUND FLOOR FIRE FIGHTING LAYOUT
MI-M-A3-B04.21.000-MH-10-120	GROUND FLOOR HVAC DUCTING LAYOUT
MI-M-A3-B04.21.000-MP-10-120	GROUND FLOOR HVAC PIPING LAYOUT
MI-M-A3-B04.21.000-TN-10-120	GROUND FLOOR TEL & DATA SYSTEM LAYOUT
MI-M-A3-B04.21.000-EP-10-220	GROUND FLOOR CABLE RACEWAYS LAYOUT
MI-M-A3-B04.21.000-DC-10-120	GROUND FLOOR LPG LAYOUT

LEGEND:

FOR ALL LEGEND AND SYMBOL REFFER TO THE FOLLOWING DRAWING NUMBERS:

[MI-M-A3-B04.21.000-MH-00-101] HVAC GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
[MI-M-A3-B04.21.000-PD-10-101] PLUMBING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
[MI-M-A3-B04.21.000-FG-10-101] FIREFIGHTING GENERAL NOTES, SYMBOLS AND ABBREVIATIONS
[MI-M-A3-B04.21.000-EG-00-101] ELECTRICAL GENERAL NOTES, SYMBOLS AND ABBREVIATIONS

Rev.	Date	Orgtr.	Signature	ABV Appr	Signature	Revision Description
00	25/08/2019	MAR		AKC		ISSUED FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

المملكة العربية السعودية
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الأمني الطبي

Engineer / Owner's Representative

Manens-Tifs
INGENIERIA

Contractor: ABV Rock Group Co. Ltd.

ABV ROCK GROUP | ابيه في روك جروب

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ABV ROCK Group Co. Ltd. Structural,Infrastructure and MEPE Consultant:

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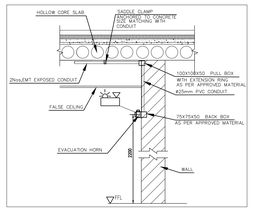
Kingdom of Saudi Arabia
www. innovators.com.sa

Non-ABV Reference:	Scale:	Floor:	Discipline:
Non-	1:100@A0	GROUND	MECHANICAL

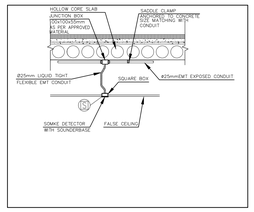
Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE (01)
GROUND FLOOR MEP COORDINATION LAYOUT

Drawing No: MI-M-A3-B04.21.000-00-10-110 | 07 | 00 | A

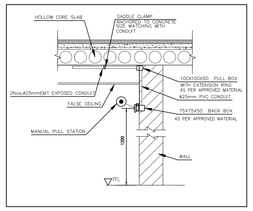
Project	Orig	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code



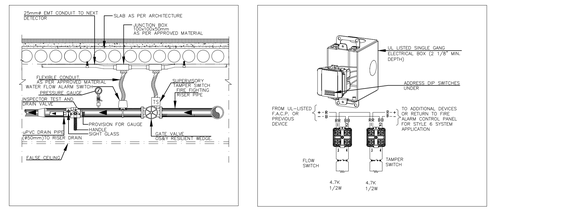
02 EVACUATION HORN INSTALLATION DETAIL
(TA-10-120) SCALE N.T.S



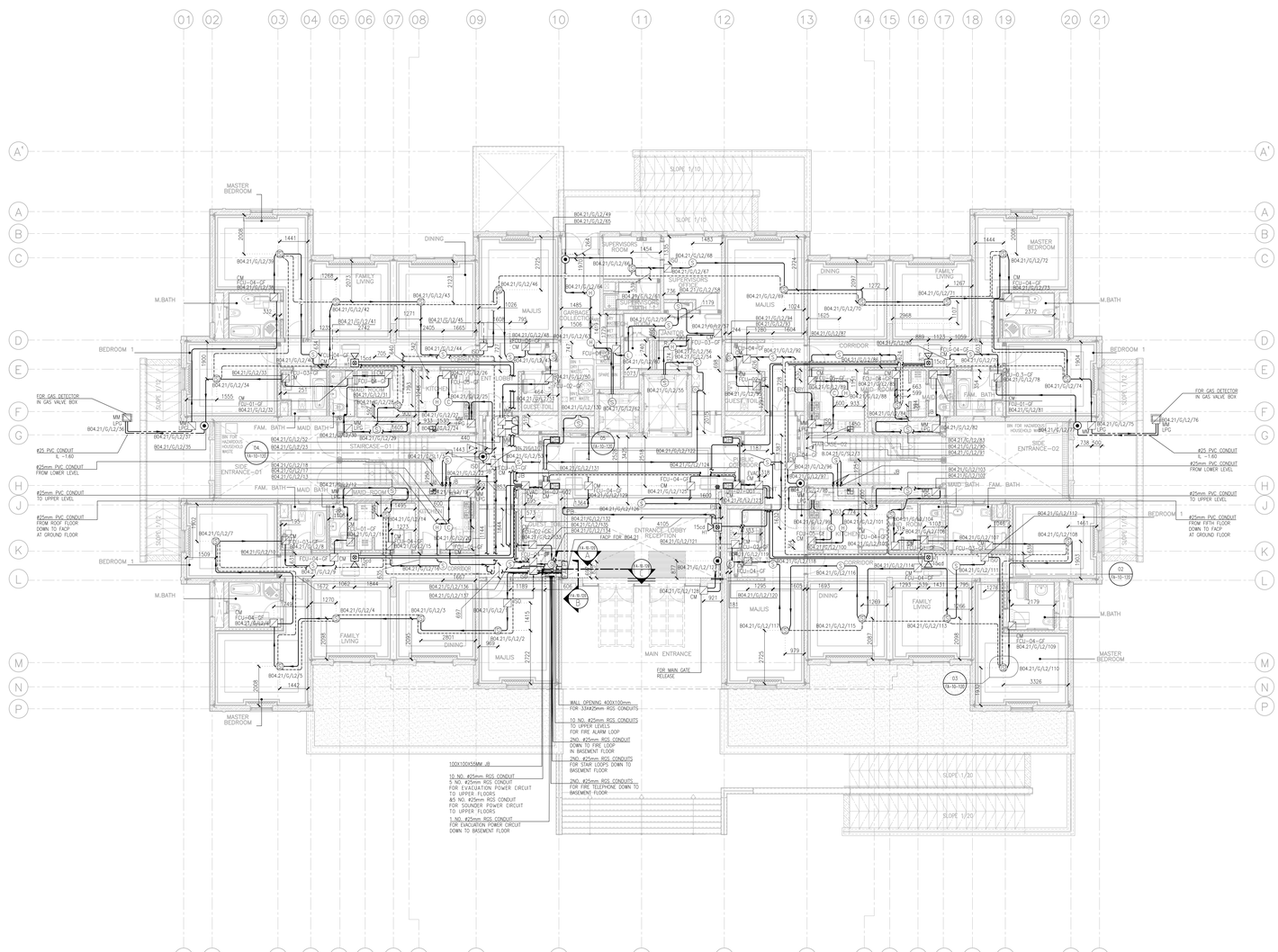
03 FIRE ALARM DETECTOR FALSE CEILING INSTALLATION DETAILS
(TA-10-120) SCALE N.T.S



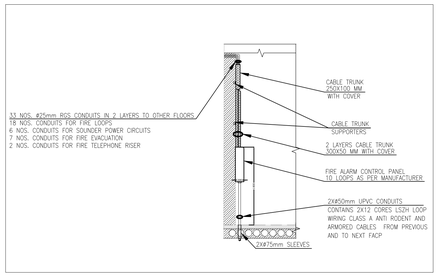
04 MANUAL PULL STATION INSTALLATION DETAIL
(TA-10-120) SCALE N.T.S



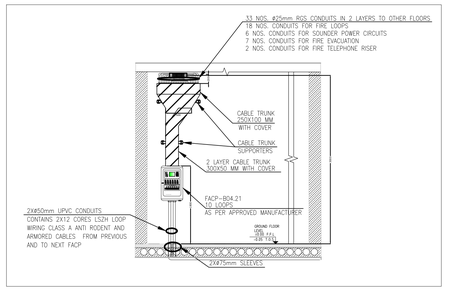
05 TYPICAL INSTALLATION DETAILS OF ZONE CONTROL VALVE & MONITOR MODULE WIRING
(TA-10-120) SCALE N.T.S



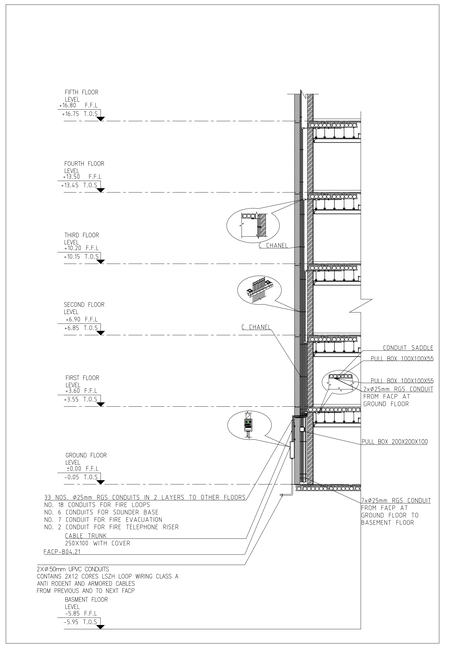
01 GROUND FLOOR FIRE ALARM & EVACUATION LAYOUT
(TA-10-120) SCALE 1:100



06 SECTION (A)
(TA-10-120) SCALE N.T.S



07 SECTION (B)
(TA-10-120) SCALE N.T.S



08 SECTION (C)
(TA-10-120) SCALE N.T.S

LEGEND:–

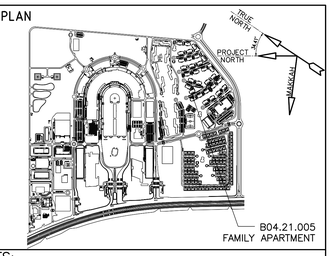
SYMBOL	DESCRIPTION
S	OPTICAL SMOKE DETECTOR
SB	OPTICAL SMOKE DETECTOR WITH SOUNDERBASE
M	MULTI CRITERIA FIRE DETECTOR
L	LASER–TYPE SMOKE DETECTOR
H	FIXED TEMPERATURE THERMAL DETECTOR
HR	RATE OF RISE HEAT DETECTOR
C	CARBON MONOXIDE (CO) DETECTOR.
H	WALL MOUNTED TEMPERATURE THERMAL DETECTOR

SB	WALL MOUNTED OPTICAL SMOKE DETECTOR
	MANUAL PULL STATION
FACP	FIRE ALARM CONTROL PANEL
DH	DOOR HOLDER
	2x2.5mm FIRE RESISTANT LOOP IN ø25mm EMT/RGS CONDUIT RUNNING EXPOSED
	2X2.5MM2 CABLE INSIDE ø25MM EMT CONDUIT FOR DETECTORS WITH SOUNDER BASE POWER CIRCUIT
	FIRE TELEPHONE
S	DUCT SMOKE DERECTOR
	ELECTRONIC SOUNDER WITH STROBE LIGHT. SPL 15 dB ABOVE AMBIENT SPL AS PER NFPA 72 , 15cd

	LED INDICATING LIGHT
X	INTERFACE UNIT (MM: MONITORING MODULE, CM:CONTROL MODULE) 'X' DENOTES AC – ACCESS CONTROL DH – DOOR HOLDERS FM – FM 200 FS – FLOW SYSTEM MD – MOTORIZED (FIRE/SMOKE) DAMPER ISO – SHORT CIRCUIT ISOLATOR FCU – FAN COIL UNIT AHU – AIR HANDLING UNIT EVAC– EVACUATION SYSTEM LPG– GAS DETECTION SYSTEM

FIRE ALARM CONDUIT FILLING RATIO							
FROM	TO	CABLE		CONDUIT			
		TYPE	DIAMETER	SIZE	TYPE	NO.	FILLING RATIO
PREVIOUS FACP	FACP FOR B04.21	FIBER OPTIC CABLE, 12 CORE	10.5MM	50MM	RGS	1	4.41%
–	–	2x2.5mm FIRE RESISTANT LOOP	10.69MM	25MM	EMT	1	18.3%

KEY PLAN



NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. FOR COMPLETE REQUIREMENTS & SPECIFICATION OF WIRING DEVICES REFER TO APPROVED SYSTEM TECHNICAL SPECIFICATIONS.
3. FIRE ALARM CABLES SHALL BE ACCORDING TO SYSTEM SUPPLIER RECOMMENDATION APPROVED MATERIAL.
4. FINAL LOCATION OF DEVICES IN AREA WITH FALSE CEILING AS PER REFLECTED CEILING PLAN.
5. DEVICES BACK BOX SHALL BE ACCORDING TO SYSTEM SUPPLIER RECOMMENDATION AND APPROVED MATERIAL.
6. FIRE ALARM CABLES SHALL BE FIRE RESISTANT MIN. SIZE 2X1.5 mm2 AS PER THE FINAL V.D CALCULATIONS , AS PER APPROVED VENDOR RUN INSIDE EXPOSED ø25mm EMT/RGS CONDUIT.
7. IF CONDUIT RUN HAVE MORE THAN TWO 90° BEND A PULL BOX SHALL BE ADDED IN BETWEEN
8. MINIMUM CONDUIT SIZE ø25mm UNLESS OTHERWISE INDICATED IN DWG
9. FIRE ALARM SYSTEM DEVICES BACK BOX SIZE=75mmX75mmX50mm. AS PER APPROVED MATERIAL
10. FIRE ALARM LOOPS SHOULD ALLOW 10 TO 15% SPARE POINTS.
11. FIRE ALARM CABLES TO BE CWZ CERTIFIED ACCORDING TO BS6387.

ABBREVIATIONS:

H1=2200

Rev.	Date	Origtr.	Signature	ABV Appr.	Signature	Revision Description
04	26 DEC. 2017	AFZ.		APZ		ISSUE FOR APPROVAL
03	12 OCT. 2017	AFZ.		APZ		ISSUE FOR APPROVAL
02	03 APR. 2016	AFZ.		APZ		ISSUE FOR APPROVAL
01	31 DEC. 2015	AFZ.		APZ		ISSUE FOR APPROVAL
00	04 NOV. 2015	AFZ.		APZ		ISSUE FOR APPROVAL

Owner
Kingdom of Saudi Arabia
Ministry of Interior
المملكة العربية السعودية
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SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الامني الطبي

Engineer / Owner's Representative
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Contractor: ABV Rock Group Co. Ltd.

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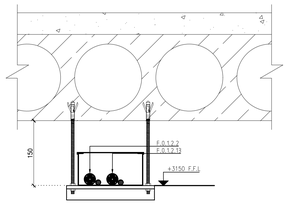
Kingdom of Saudi Arabia
www. innovators.com.sa

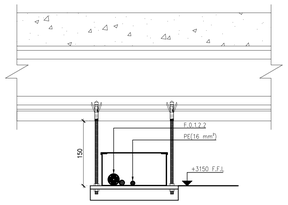
Non-ABV Reference:	Scale:	Floor:	Discipline:
Non.	A.S@A0	GROUND	ELECTRICAL

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING–TYPE (01)
GROUND FLOOR FIRE ALARM
& EVACUATION LAYOUT

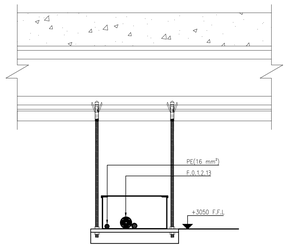
Drawing No.:	MI–IV–A3–B04.21.000–FA–10–120							05	04	A
	Project	Orig.	Package	Building		Discipline	Type	Sequence	Phase	Revision	Issue Code



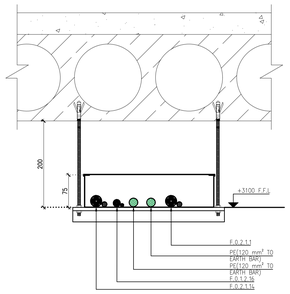
02 SECTION (01–01)
EP–10–220 SCALE 1:5



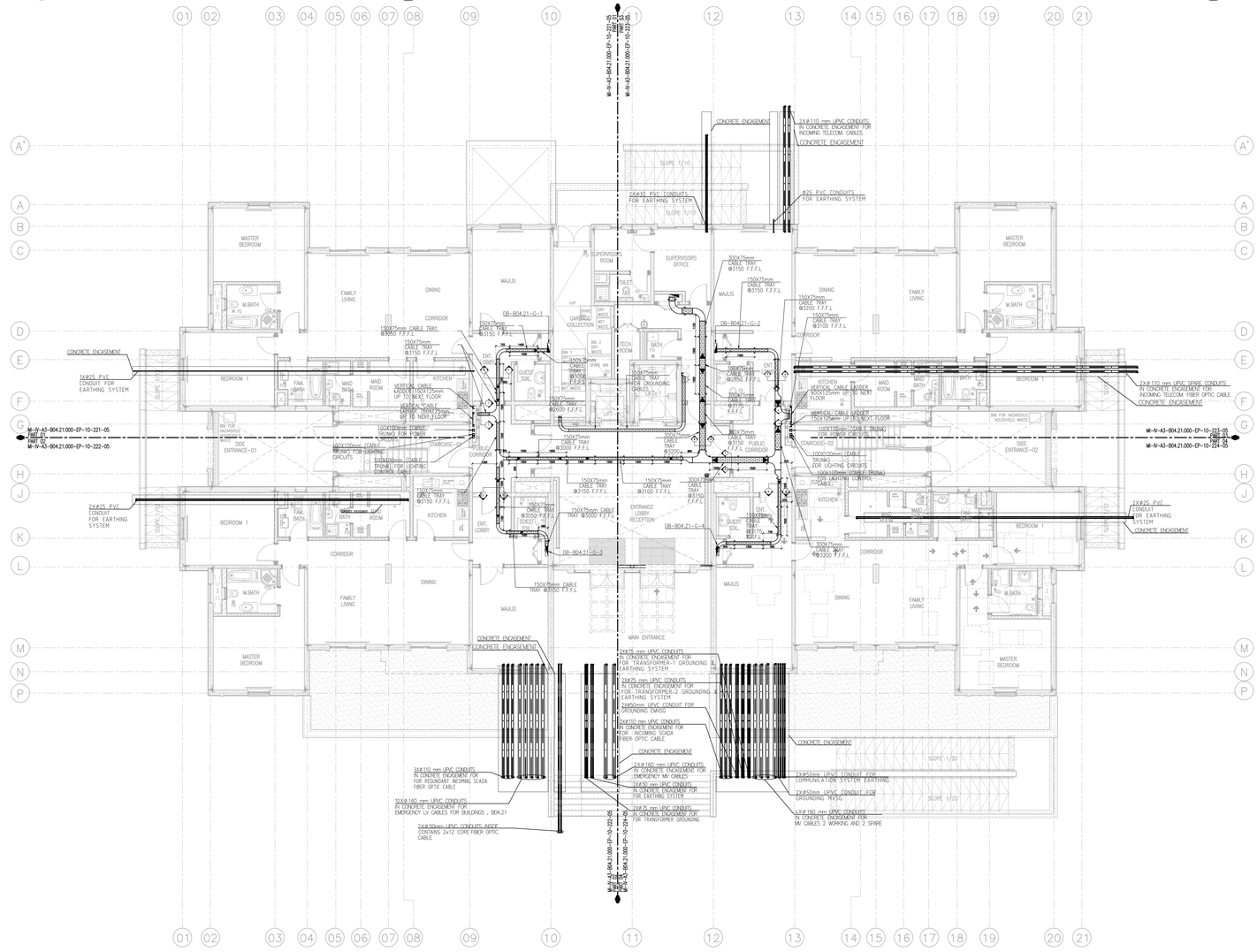
03 SECTION (02–02)
EP–10–220 SCALE 1:5



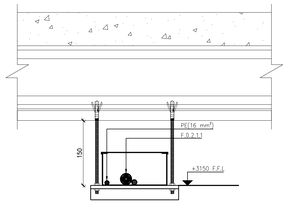
04 SECTION (03–03)
EP–10–220 SCALE 1:5



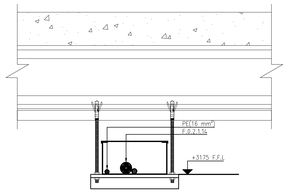
05 SECTION (04–04)
EP–10–220 SCALE 1:5



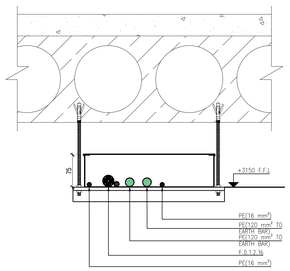
01 GROUND FLOOR CABLE RACEWAYS LAYOUT (FULL)
EP–10–220 SCALE 1:100



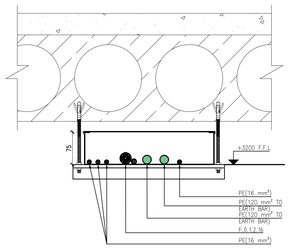
06 SECTION (05–05)
EP–10–220 SCALE 1:5



07 SECTION (06–06)
EP–10–220 SCALE 1:5

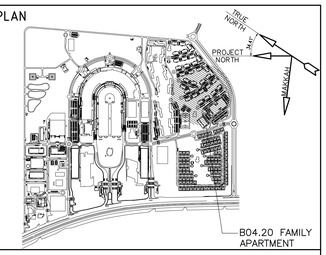


08 SECTION (07–07)
EP–10–220 SCALE 1:5



09 SECTION (08–08)
EP–10–220 SCALE 1:5

KEY PLAN



NOTES :-

1. FOR POWER SCHEMATIC DIAGRAM REFER TO DWG MI-IV-A3-B04.21.000-EP-RS-101.
2. FOR TYPICAL INSTALLATION DETAILS REFER TO DWG. MI-IV-A3-B04.21.000-EO-40-101.
3. FINAL LOCATIONS TO BE COORDINATED WITH OTHER DISCIPLINES.
4. CABLE TRAY/LADDER SHALL BE CORROSION PROTECTION.

LEGENDS:

SYMBOL	DESCRIPTION
	ELECTRICAL PANEL BOARD.
	VERTICAL CABLE LADDER, SIZE AS INDICATED ON DRAWING.
	CABLE TRAY, SIZE AS INDICATED ON DRAWING.
	EMERGENCY CABLE TRAY, SIZE AS INDICATED ON DRAWING.
	TEE BRANCH
	CURVED CORNERED BEND 90°
	SECTION

Rev.	Date	Origtr.	Signature	ABV Appr.	Signature	Revision Description
06	18.JAN 2018	AFZ.		APZ		ISSUE FOR APPROVAL

Owner
Kingdom of Saudi Arabia
Ministry of Interior
مملكة عربية سعودية
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SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الامني الطبي

Engineer / Owner's Representative
Manens-Tifs

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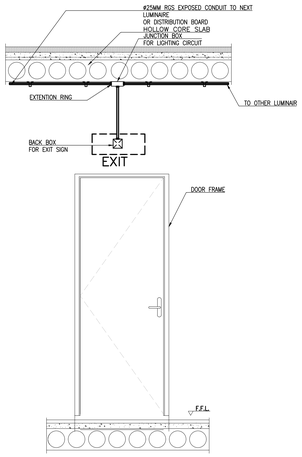
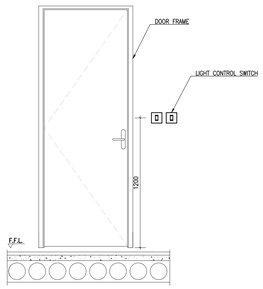
Non-ABV Reference:	Scale:	Floor:	Discipline:
NON.	A.S.@A0	GROUND	ELECTRICAL

Drawing Title:
B04.21 FAMILY APARTMENT BUILDING-TYPE (01)
GROUND FLOOR CABLE RACEWAYS LAYOUT

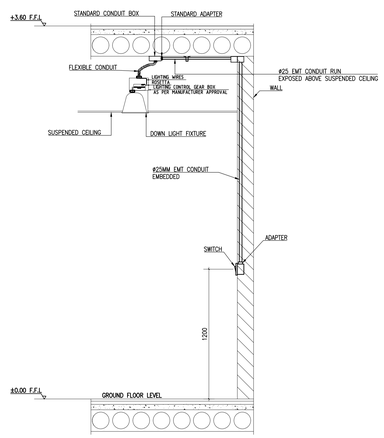
Drawing No.	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI–IV–A3–B04.21.000–EP–10–220	05							06		A



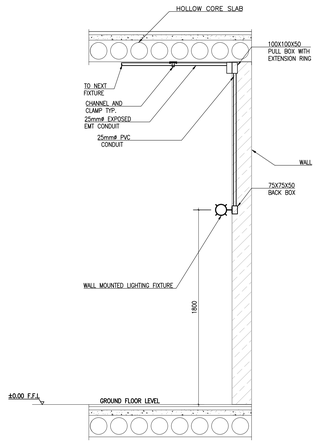
02 EL-10-120 DETAIL#2 INSTALLATION LIGHTING FIXTURE FOR EXIT SIGN
SCALE 1:20



03 EL-10-120 DETAIL #3 LIGHTING SWITCH INSTALLATION DETAIL
SCALE 1:20



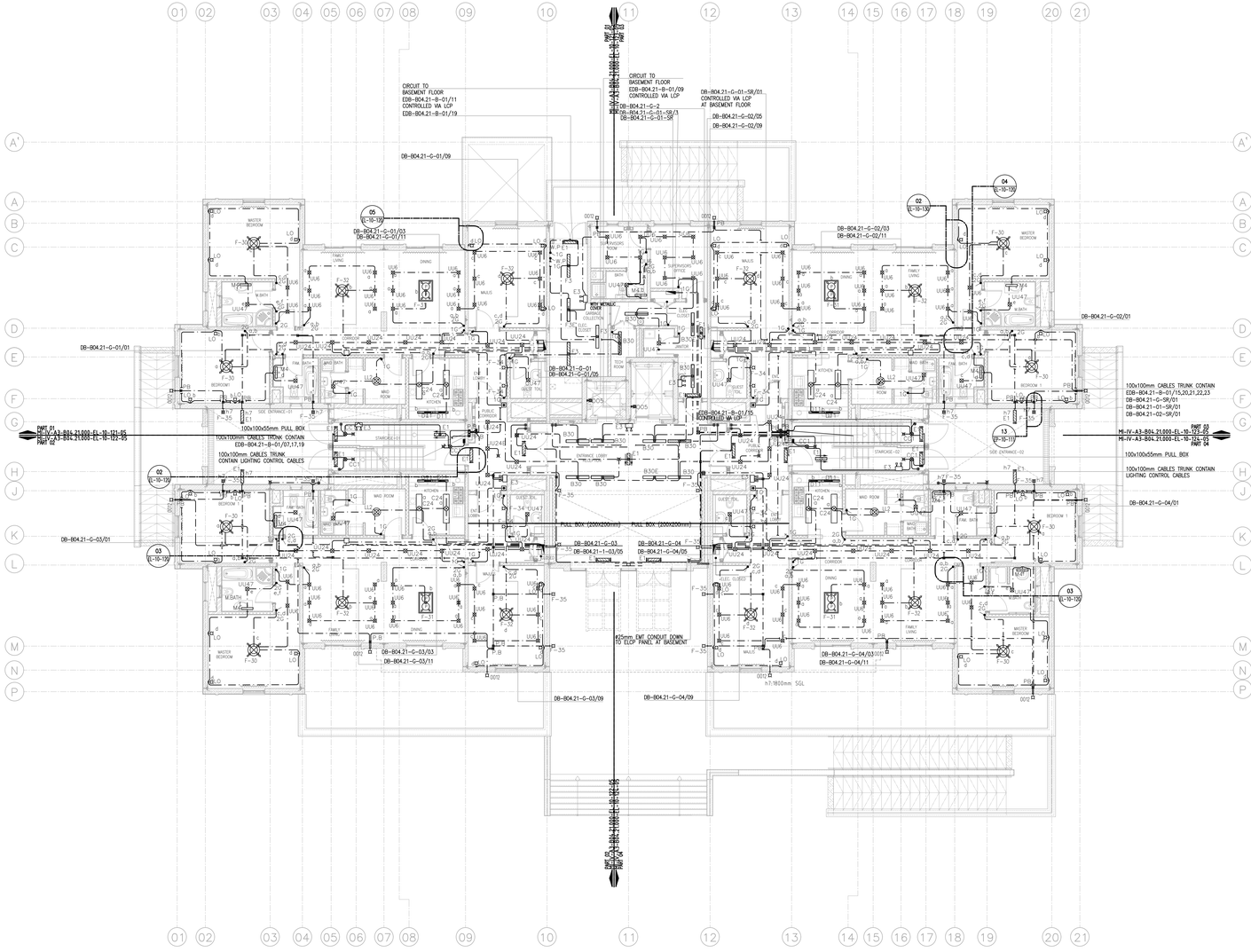
04 EL-10-120 DETAIL #4 CEILING MOUNTED LIGHTING FIXTURE INSTALLATION DETAIL
SCALE 1:20



05 EL-10-120 WALL MOUNTED LIGHTING FIXTURE INSTALLATION DETAIL
SCALE 1:20

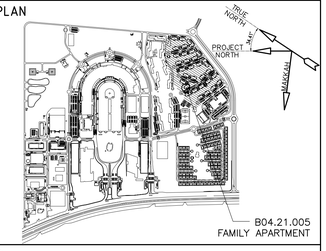
LEGEND :

SYMBOL	DESCRIPTION
B30	RECESSED LED LIGHTING FIXTURE WITH 33.5W, 230V AND 4300 LUMINOUS FLUX
B30E	DITTO BUT WITH EMERGENCY SUPPLY .
B30E	DITTO BUT WITH 3 HOURS BATTERY SUPPLY .
D13	BARE BATTEN LED STRIPLUMINAIRE FOR CONTINUOUS-ROW UNDER CABINET LIGHTING WITH 1x14W, 230V LED LAMP,IP20 WITH 1028 LUMINOUS FLUX
C24	RECESSED LED LIGHTING FIXTURE WITH 60W, 230V AND 6300 LUMINOUS FLUX
U6	RECESSED LED LIGHTING FIXTURE WITH 11.2W, 230V AND 1200 LUMINOUS FLUX
U24	RECESSED LED LIGHTING FIXTURE WITH 23W, 230V AND 2400 LUMINOUS FLUX
U24E	DITTO BUT WITH EMERGENCY SUPPLY .
U24E	DITTO BUT WITH 3 HOURS BATTERY SUPPLY .
LL2	SUSPENDED LED LIGHTING FIXTURE WITH 36W,230V AND 2942 LUMINOUS FLUX
CC1	SURFACE MOUNTED LED LIGHTING FIXTURE WITH 11.2W 230V AND 1200 LUMINOUS FLUX
D05	WALL MOUNTED LED LUMINAIRE, 24W, 230V AT HEIGHT 1800mm F.F.F.L AND 1600 LUMINOUS FLUX
U47	RECESSED LED LIGHTING FIXTURE WITH 31W, 230V AND 3500 LUMINOUS FLUX
F2	SURFACE MOUNTED / SUSPENDED LED LIGHTING FIXTURE WITH 38W 230V AND 4400 LUMINOUS FLUX
F2 EMERG.	DITTO BUT WITH EMERGENCY SUPPLY
F3	SURFACE MOUNTED LED LIGHTING FIXTURE WITH 19.6W 230V AND 2500 LUMINOUS FLUX
F3 EMERG.	DITTO BUT WITH EMERGENCY SUPPLY .
F3E	DITTO BUT WITH 3 HOURS BATTERY SUPPLY .
F36	CHANDELIER IN BRASS AND GLASS LAMP HOLDER WITH 20X11.2W LED LAMP IN MAIN ENTRANCE .
F-30	CHANDELIER IN BRASS AND GLASS LAMP HOLDER WITH 5X11.2W LED LAMP IN BEDROOM AND MASTER BEDROOM .
F-31	CHANDELIER IN BRASS AND GLASS LAMP HOLDER WITH 4X11.2W LED LAMP IN DINNING ROOM .
F-32	CHANDELIER IN BRASS AND GLASS LAMP HOLDER WITH 4X11.2W LED LAMP IN LIVING AND MAJLIS ROOMS .
F-35	WALL MOUNTED LED LUMINAIRE, 64W, 230V AT HEIGHT 1800mm F.F.F.L AND 7900 LUMINOUS FLUX
F-34	WALL MOUNTED LED LUMINAIRE, 18W, 230V AT HEIGHT 1800mm F.F.F.L AND 1200 LUMINOUS FLUX
M4	WALL MOUNTED LED LUMINAIRE, 26.5W, 230V AT HEIGHT 1800mm F.F.F.L AND 4000 LUMINOUS FLUX
E1	FIRE RATED WALL MOUNTED LED EXIT SIGN, MAINTAINED, SELF CONTAINED, SUITABLE FOR 3HOURS OPERATION,AT 2000 mm ABOVE THE DOOR, WITH EMERGENCY SUPPLY.
E1	FIRE RATED CEILING MOUNTED LED EXIT SIGN, MAINTAINED, SELF CONTAINED, SUITABLE FOR 3HOURS OPERATION,WITH EMERGENCY SUPPLY.
LO	WALL MOUNTED LED LUMINAIRE, 4W, 230V AT HEIGHT 1800mm F.F.F.L AND 230 LUMINOUS FLUX
0012	WALL MOUNTED LED LUMINAIRE, 85W, 230V AT HEIGHT 1800mm F.F.F.L AND 10400 LUMINOUS FLUX
1G	1 WAY LIGHT SWITCH (#G = No OF GANGS) AT 1200mm FROM F.F.L
2G	2 WAY LIGHT SWITCH (#G = No OF GANGS) AT 1200mm FROM F.F.L
	PUSH BUTTON
	LIGHTING AND POWER PANEL BOARD.
	INTELLIGENT LIGHTING CONTROL PANEL . INTELLIGENT ESSENTIAL LIGHTING CONTROL PANEL .
	CONDUIT (UP OR DOWN) SIZE AS SHOWN IN LAYOUT.
	EMT CONDUIT NORMAL/EMERGENCY RUNNING EXPOSED.
	PVC CONDUIT NORMAL/EMERGENCY RUNNING EMBEDDED.
	RGS CONDUIT NORMAL/EMERGENCY RUNNING EXPOSED.
	DOOR BELL.
	PUSH BUTTON FOR BELL.
E3	SELF CONTAINED, EMERGENCY LED LIGHTING FIXTURE SUITABLE FOR 3 HOURS OPERATION EQUIPPED WITH 25W, 230V WITH LED LAMP,IP 44, AT 1800 mm FROM F.F.L. AND 245 LUMINOUS FLUX
	CEILING MOUNTED PRESENCE DETECTOR
	WALL MOUNTED PRESENCE DETECTOR
	OVERRIDE SWITCH
	WALL MOUNTED PHOTOCELL



01 EL-10-120 GROUND FLOOR LIGHTING LAYOUT(FULL)
SCALE 1:100

KEY PLAN



NOTES :-

1- ALL MEP ENLARGED ROOMS DETAILS WILL BE PROVIDED AFTER EQUIPMENT APPROVAL

2- FOR DESCRIPTION OF LIGHTING FIXTURES, REFER TO DWG. MI-IV-A3-B04.21.000-E0-00-102.

3- ALL DIMENSIONS ARE IN MILLIMETERS AND ALL LEVELS ARE IN METERS UNLESS OTHERWISE NOTED. DRAWINGS SHOULD NOT BE SCALED AND ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

4- FOR CABLE/WIRE SIZE REFER TO PANEL LOAD SCHEDULE

5- ALL DEVICES/FIXTURES IN WET AREA OR OUTDOOR SHALL BE WEATHER PROOF TYPE.

6- ALL LIGHTING SWITCHES AND SOCKET OUTLETS SHALL BE INSTALLED AT 120cm & 30cm ABOVE F.F.L. RESPECTIVELY. LIGHTING SWITCHES SHALL BE MOUNTED INSIDE THE ROOM ON THE SIDE OF THE DOOR HANDLE WITHIN 15 TO 20cm FROM DOOR FRAME. UNLESS OTHERWISE INDICATED THE SPACE BETWEEN BACK BOX OF SWITCH OR SOCKET OUTLET SHALL BE 4cm.

7- MINIMUM WIRE SIZE SHALL BE 2.5mm2 AND PROTECTED BY A 15 AMPERE CIRCUIT BREAKERS UNLESS OTHERWISE INDICATED.

8-MINIMUM CONDUIT SIZE ø20MM BETWEEN OUTLETS AND ø25MM FOR HOMERUN.

9- CONDUIT RUN MORE THAN 25M OR IF MORE THAN TWO 90° (DEGREE) BENDS SHALL HAVE A PULL BOX.

10- WIRES IN PLENUM AREAS WILL BE LOW SMOKE ZERO HALOGEN

11- BENDING TO BE MADE WITHOUT DAMAGING CONDUIT OR TUBING AND WITHOUT REDUCING INTERNAL DIAMETER.

12- DETAIL CONNECTIONS, INSTALLATIONS AND SPECS SHALL BE AS PER APPROVED SYSTEM'S VENDOR RECOMMENDATIONS.

Rev.	Date	Orgtr.	Signature	ABV Appr.	Signature	Revision Description
06	21JAN. 2018	AFZ.		APZ		ISSUE FOR APPROVAL

Owner

Kingdom of Saudi Arabia
Ministry of Interior

المملكة العربية السعودية
وزارة الداخلية

SECURITY FORCES MEDICAL CENTER PROJECT AT RIYADH AND JEDDAH
مشروع المركز الأمني الطبي

Engineer / Owner's Representative

Manens-Tifs ENGINEERING

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Non-ABV Reference:	Scale:	Floor:	Discipline:
PS10694-CD-RS-B04.21-EL-10-00-REV 0	A.S@A0	GROUND	ELECTRICAL

Drawing Title:

B04.21 FAMILY APARTMENT BUILDING-TYPE (01)
GROUND FLOOR LIGHTING LAYOUT(FULL)

Drawing No.:	Project	Orig.	Package	Building	Discipline	Type	Sequence	Phase	Revision	Issue Code
MI-IV-A3-B04.21.000-EL-10-120							05	06		A