

DRAWING LIST & GENERAL NOTES

قائمة الرسومات والملاحظات العامة

DWG. NO.	DRAWING TITLE	SCALE
LIWA-EL-01	POLE TYPE A - 10 m DECORATIVE TWIN ARM POLE	1:50
LIWA-EL-02	POLE TYPE B - 10 m DECORATIVE SINGLE ARM POLE	1:50
LIWA-EL-03	POLE DETAILS - BASE, SHAFTS, ANCHOR BOLTS, ARM	1:5 - 1:20
LIWA-EL-04	STREET LIGHT FOUNDATION 600x600x1200	1:10 - 1:20
LIWA-EL-05	CABLE TRENCH TYPICAL SECTIONS	1:15
LIWA-EL-06	ROAD CROSSING BY THRUST BORING	1:25
LIWA-EL-07	GRP FEEDER PILLAR 1200x1000x300	1:8 - 1:12
LIWA-EL-08	FEEDER PILLAR - SINGLE LINE DIAGRAM	N.T.S.
LIWA-EL-09	PILLAR FOUNDATION & EARTH CHAMBER	1:15 - 1:25
LIWA-EL-10	CONCRETE CABLE MANHOLE 600x600x600	1:15
LIWA-EL-11	FLOOR RECESSED LUMINAIRES - DETAILS	1:5
LIWA-EL-12	CUT-OUT BOX & POLE WIRING DIAGRAM	1:3 / N.T.S.
LIWA-EL-13	MATERIALS & QUANTITIES SCHEDULE	N.T.S.
LIWA-EL-14	METERING & NAMA SERVICE CONNECTION	N.T.S.
LIWA-EL-15	TYPICAL LAYOUT & CIRCUIT SCHEDULE	1:500

GENERAL NOTES

ملاحظات عامة

- All dimensions are in millimetres unless otherwise stated. Levels are in metres.
- This drawing set shall be read in conjunction with the BOQ 'Supply and Installation LIWA' and the approved material submittals.
- All electrical items shall be as per the standard and material approval of the concerned department.
- Poles and brackets: local manufacturer (SLP Oman or equivalent), Canadian powder coating to resist high temperature, humidity and salty moisture, minimum 10 years warranty.
- LED luminaires to be complete with driver and surge protection, IP66 minimum, tested to LM-79 / LM-80. Colour temperature 3000 K for street lighting.
- All outdoor connections to be IP68 minimum. Buried cable joints are not permitted except inside approved cable manholes.
- Earthing: 70 mm² copper conductor to each pole and pillar, 2 copper rods per earth chamber, earth resistance not to exceed 5 ohm; test to be witnessed by the Engineer.
- Trenches: 100 mm sand bedding, sand surround to 200 mm above cable, red warning tape, selected backfill compacted in 200 mm layers to 95% MDD.
- Road crossings to be executed by thrust boring with 100 mm dia. pipe; open cutting of asphalt is not permitted without the Engineer's written approval.
- Feeder pillars and metering to Nama El. Co. requirements. Nama fees and meter connection (items 12 and 13) are included in the Contract.
- Any discrepancy between these drawings and site conditions shall be reported to the Engineer before execution. No deviation is permitted without written approval.
- Shop drawings to be submitted for approval before fabrication; as-built drawings and test certificates to be submitted after testing and commissioning.

نطاق الأعمال

توريد وتركيب 118 عمود إنارة مزخرف مزدوج الذراع بارتفاع 10 متر.

توريد وتركيب 10 أعمدة إنارة مزخرفة أحادية الذراع بارتفاع 10 متر.

توريد وتركيب 200 وحدة إنارة أرضية غاطسة 4030 واط و 1400 وحدة إنارة أرضية زرقاء 6 واط.

أساسات خرسانية 1200600600 مم 128 عدد وقواعد أبراج التغذية 4 عدد.

كابلات 470 مم بطول 300 متر و 416 مم بطول 5000 متر وحفر أفقي 150 متر.

لوحتان توزيع 12001000300 مم مع العدادات ورسوم ناما للتيار الكهربائي.

جميع الأبعاد بالمليمتر ما لم يذكر خلاف ذلك، والمناسيب بالمتر.



GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■ ■■■■■

DRAWING LIST & GENERAL NOTES

قائمة الرسومات والملاحظات العامة

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No. LIWA-EL-00

SCALE N.T.S.

DATE 21-10-2026

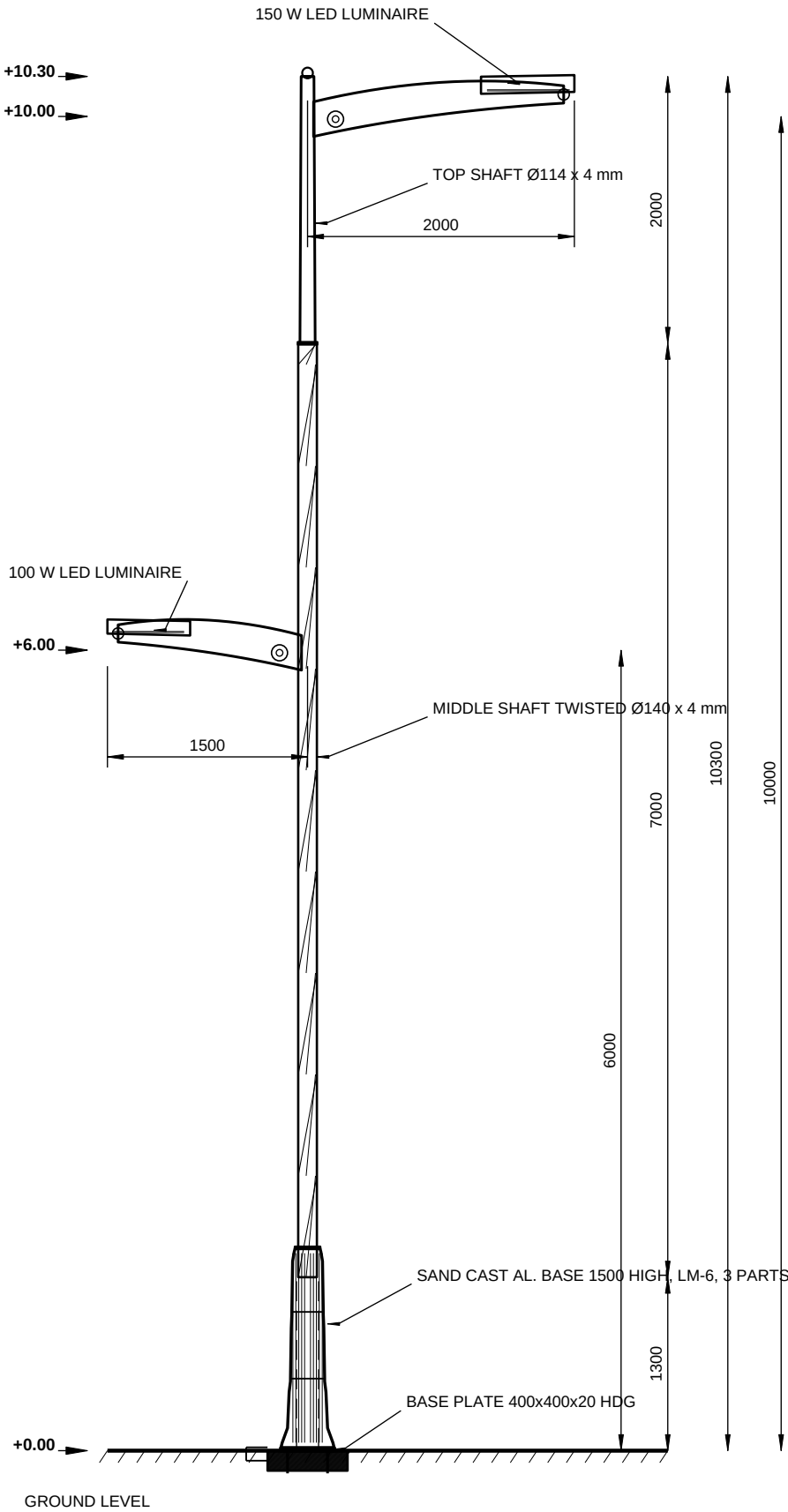
REV. 0

DRN. DEPT.

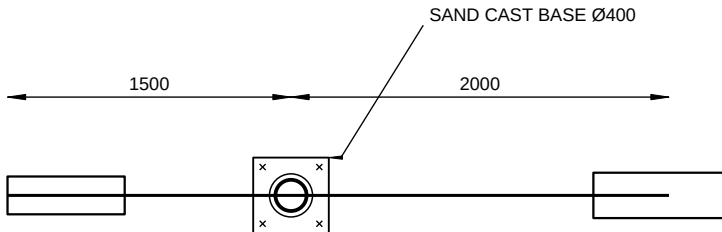
CHK.

POLE TYPE A - 10 m DECORATIVE TWIN ARM POLE

عمود إنارة مزخرف مزدوج الذراع 10 متر



POLE ELEVATION



PLAN VIEW - ARMS ORIENTATION

PLAN

ITEM	DESCRIPTION	QTY
TYPE A	TWIN ARM 2000 + 1500	118 Nos.
TOP ARM	150 W LED @ EL. +10.00	1 No.
LOWER ARM	100 W LED @ EL. +6.00	1 No.

NOTES

- Pole: 10 m high, HDG, decorative twisted shaft, sand cast aluminium base 1500 mm.
- Top arm at EL. +10.00 with 2000 mm out reach, 150 W LED luminaire.
- Lower arm at EL. +6.00 opposite side, 1500 mm out reach, 100 W LED luminaire.
- Base plate 400 x 400 x 20 mm HDG with 4 Nos. M24 x 800 mm anchor bolts.
- Cut-out box fixed at 1500 mm above ground level with door facing the road.
- Canadian powder coating, colour to Engineer's approval, 10 years warranty.
- Quantity: 118 Nos. (item 01 of the BOQ). Refer to drawing LIWA-EL-03 for details.

ملاحظات

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

POLE TYPE A - 10 m DECORATIVE TWIN ARM POLE

عمود إنارة مزخرف مزدوج الذراع 10 متر

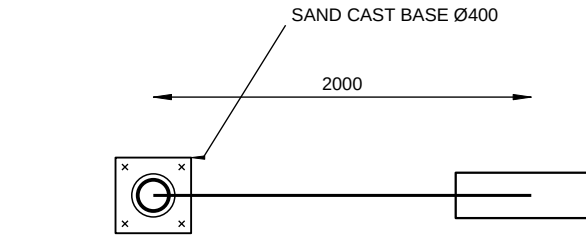
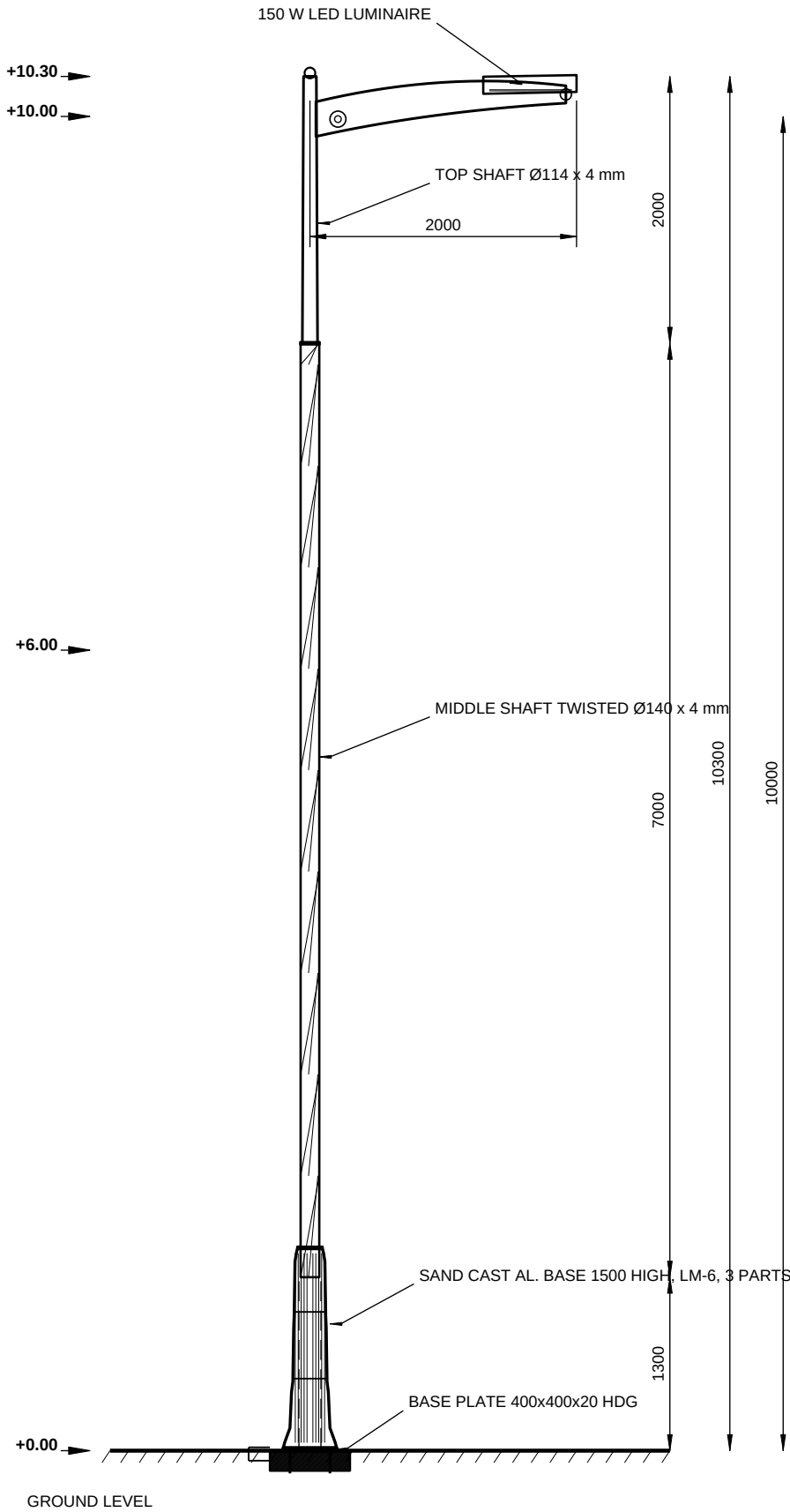
Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No.		LIWA-EL-01	
SCALE		1:50 / 1:40	
DATE		21-10-2026	
REV.		0	
DRN.		DEPT.	
CHK.		SHEET 2 OF 1	

POLE TYPE B - 10 m DECORATIVE SINGLE ARM POLE

عمود إنارة مزخرف أحادي الذراع 10 متر



PLAN VIEW - ARMS ORIENTATION

PLAN

ITEM	DESCRIPTION	QTY
TYPE B	SINGLE ARM 2000	10 Nos.
TOP ARM	150 W LED @ EL. +10.00	1 No.
LOWER ARM	NOT APPLICABLE	-

NOTES

- Pole: 10 m high, HDG, decorative twisted shaft, sand cast aluminium base 1500 mm.
- Single decorative arm at EL. +10.00 with 2000 mm out reach, 150 W LED luminaire.
- Base plate 400 x 400 x 20 mm HDG with 4 Nos. M24 x 800 mm anchor bolts.
- Cut-out box fixed at 1500 mm above ground level with door facing the road.
- Canadian powder coating, colour to Engineer's approval, 10 years warranty.
- Quantity: 10 Nos. (item 02 of the BOQ). Refer to drawing LIWA-EL-03 for details.

ملاحظات

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

POLE TYPE B - 10 m DECORATIVE SINGLE ARM POLE

عمود إنارة مزخرف أحادي الذراع 10 متر

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No. LIWA-EL-02

SCALE 1:50 / 1:40

DATE 21-10-2026

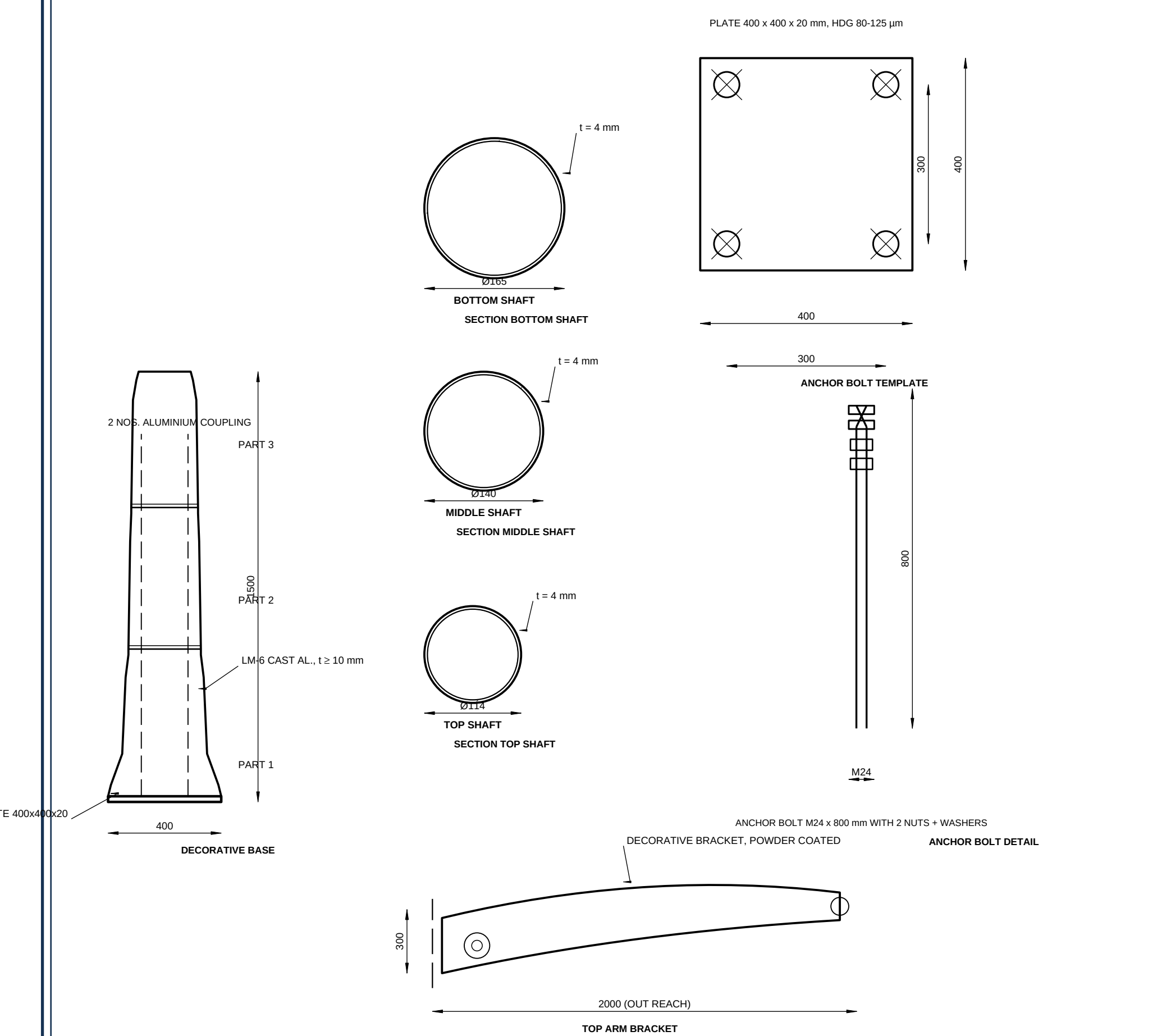
REV. 0

DRN. DEPT.

CHK.

POLE DETAILS - BASE, SHAFTS, ANCHOR BOLTS & ARM

تفاصيل الأعمدة القاعدة والأجزاء والمثبتات والذراع

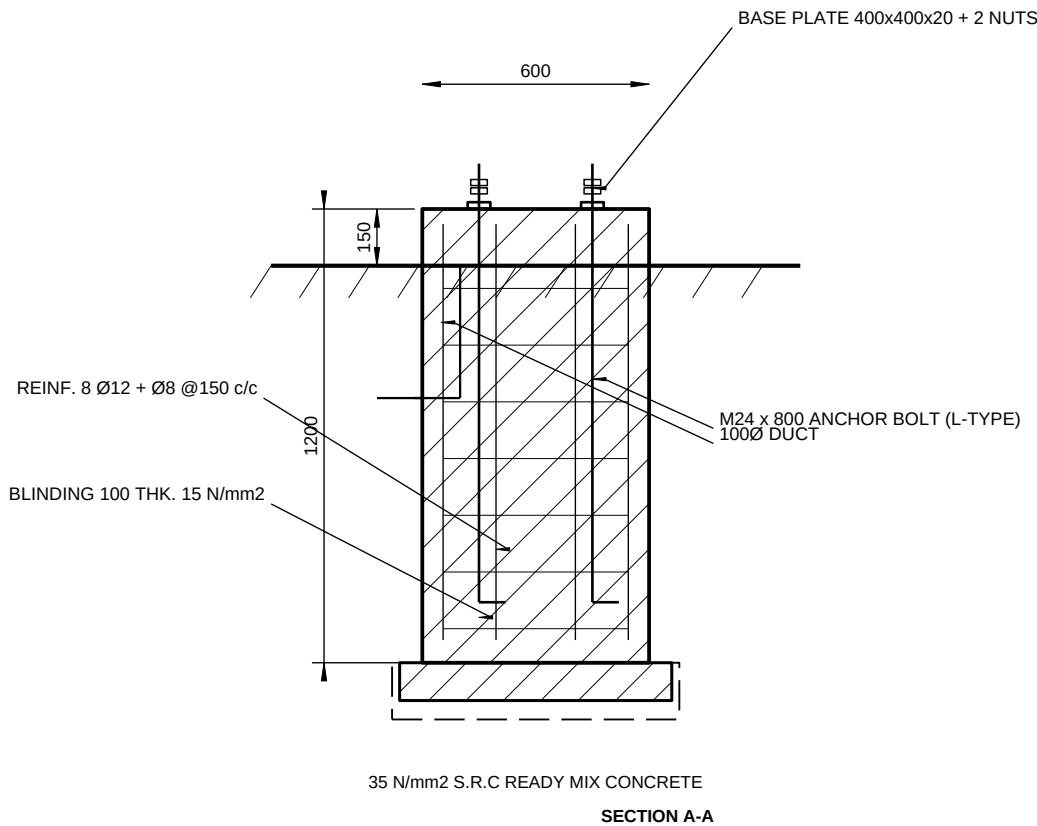
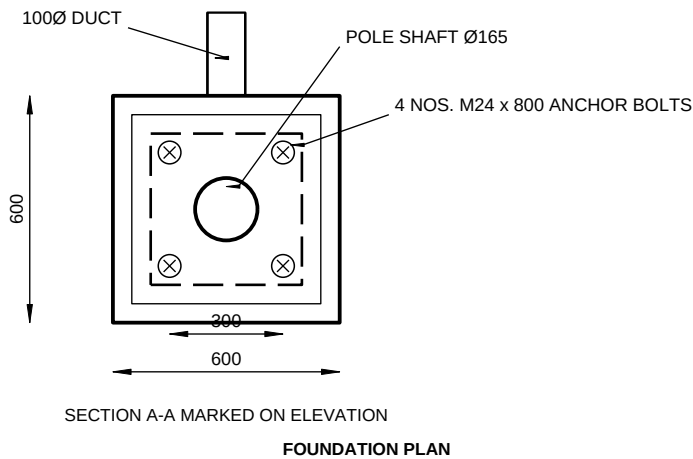


ملاحظات	NOTES
1. Shafts: 4 mm thick steel tube, hot dip galvanized after fabrication, 80-125 micron.	
2. Bottom shaft Ø165 x 4, up to 1300 mm; middle twisted shaft Ø140 x 4 x 7000 mm; top shaft Ø114 x 4 x 2000 mm.	
3. Base plate 400 x 400 x 20 mm HDG with 4 Nos. M24 x 800 mm L-type anchor bolts, double nuts and washers.	
4. Decorative sand cast aluminium base LM-6 grade, 1500 mm high, 3 parts, minimum thickness 10 mm, 2 Nos. aluminium couplings.	
5. All welds continuous, ground smooth and galvanized; no welding after powder coating.	
6. Powder coating: Canadian system, colour RAL 9007 / to Engineer's approval, min. 10 years warranty.	

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT		DWG. No.	LIWA-EL-03
Consultant / Contractor:		SCALE	AS SHOWN
المقاول الاستشاري:		DATE	21-10-2026
Drawing Title / ■■■■■■ ■■■■■■		REV.	0
POLE DETAILS - BASE, SHAFTS, ANCHOR BOLTS & AR		DRN.	DEPT.
تفاصيل الأعمدة القاعدة والأجزاء والمثبتات والذراع		CHK.	
Ref. BOQ: Supply and Installation LIWA			
دائرة المشاريع محافظة شمال الباطنة			
			SHEET 4 OF 16

STREET LIGHT FOUNDATION 600 x 600 x 1200

أساس عمود الإنارة 1200x600x600 مم



NOTES

- Excavate to the dimensions shown, keep bottom dry and free of loose material before placing blinding.
- Blinding: 100 mm thick plain concrete 15 N/mm2. Foundation: ready-mix concrete 35 N/mm2 S.R.C.
- Base plate and anchor bolt template to be set level and checked for diagonal spacing before concreting.
- Anchor bolts 4 Nos. M24 x 800 mm L-type with double nuts and washers, embedded as shown.
- 100 mm dia. duct for cable entry, sealed with mastic after cable laying, minimum bend radius 20 D.
- Backfill in 200 mm layers, compacted to 95% MDD; surplus soil to be removed from site.
- Quantity: 128 Nos. (Item 07 of the BOQ). Top of foundation 150 mm above finished ground level.

ملاحظات

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

STREET LIGHT FOUNDATION 600 x 600 x 1200

أساس عمود الإنارة 1200x600x600 مم

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No. LIWA-EL-04

SCALE 1:20

DATE 21-10-2026

REV. 0

DRN. DEPT.

CHK.

SHEET 5 OF 16

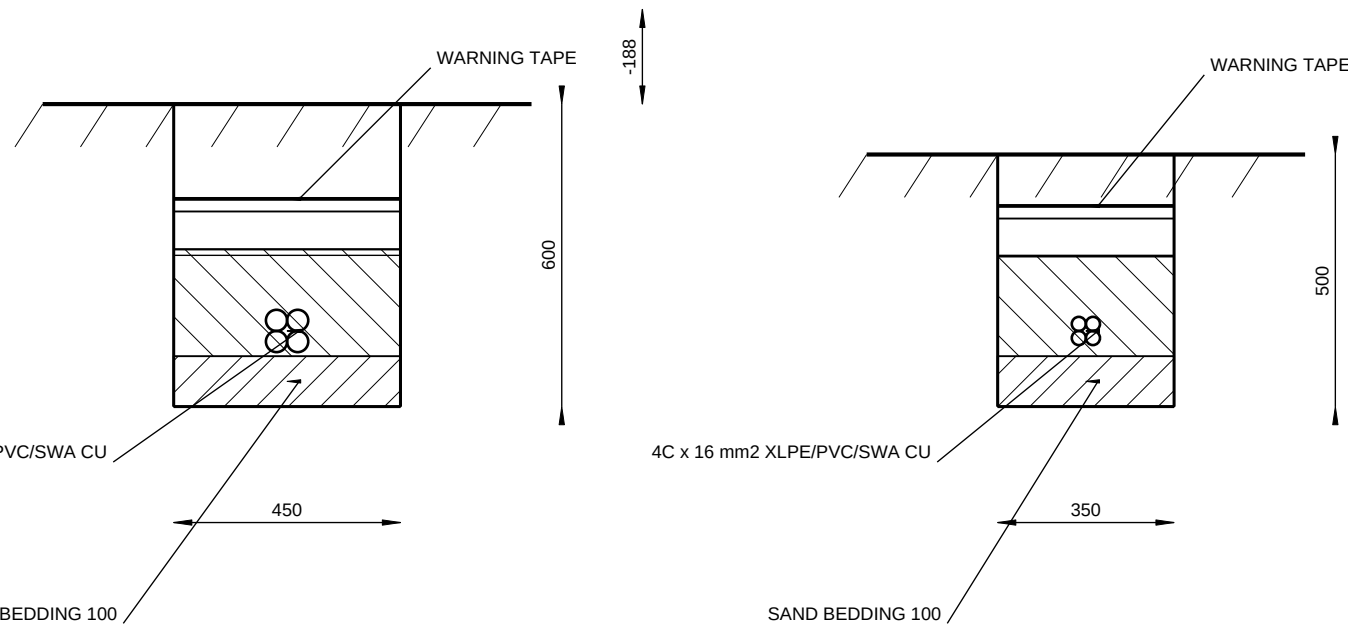
CABLE TRENCH - TYPICAL SECTIONS

قطاعات خندق الكابلات النموذجية

NOTES

1. Trench for 4C x 70 mm2 cable: width 450 mm, depth 500-700 mm. For 4C x 16 mm2 cable: width 350 mm, depth 400-600 mm.
2. Sand bedding 100 mm below cable and sand surround to 200 mm above the cable, free from stones and salts.
3. Red warning tape to be laid 200 mm above the sand surround, full width of the trench, continuously.
4. Selected backfill in 200 mm layers, compacted to 95% MDD; restore surface to original condition.
5. Cable to be laid in smooth curves, no sharp bends; minimum bending radius 12 D for SWA cable.
6. Where cable crosses existing services, provide 100 mm dia. duct and maintain 300 mm clearance.
7. Quantities: 300 m of 4C x 70 mm2 (item 08) and 5000 m of 4C x 16 mm2 (item 09).

ملاحظات



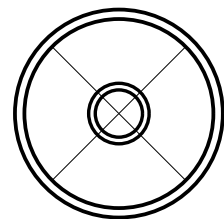
TRENCH ITEM 08 - DEPTH AS SPECIFIED (SEE NOTE)

TRENCH 4C x 70 mm2

TRENCH ITEM 09 - DEPTH AS SPECIFIED (SEE NOTE)

TRENCH 4C x 16 mm2

Ø100



100 Ø OMANI MADE DUCT, CABLE INSIDE

DUCT DETAIL

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

CABLE TRENCH - TYPICAL SECTIONS

قطاعات خندق الكابلات النموذجية

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No.

LIWA-EL-05

SCALE

1:15

DATE

21-10-2026

REV.

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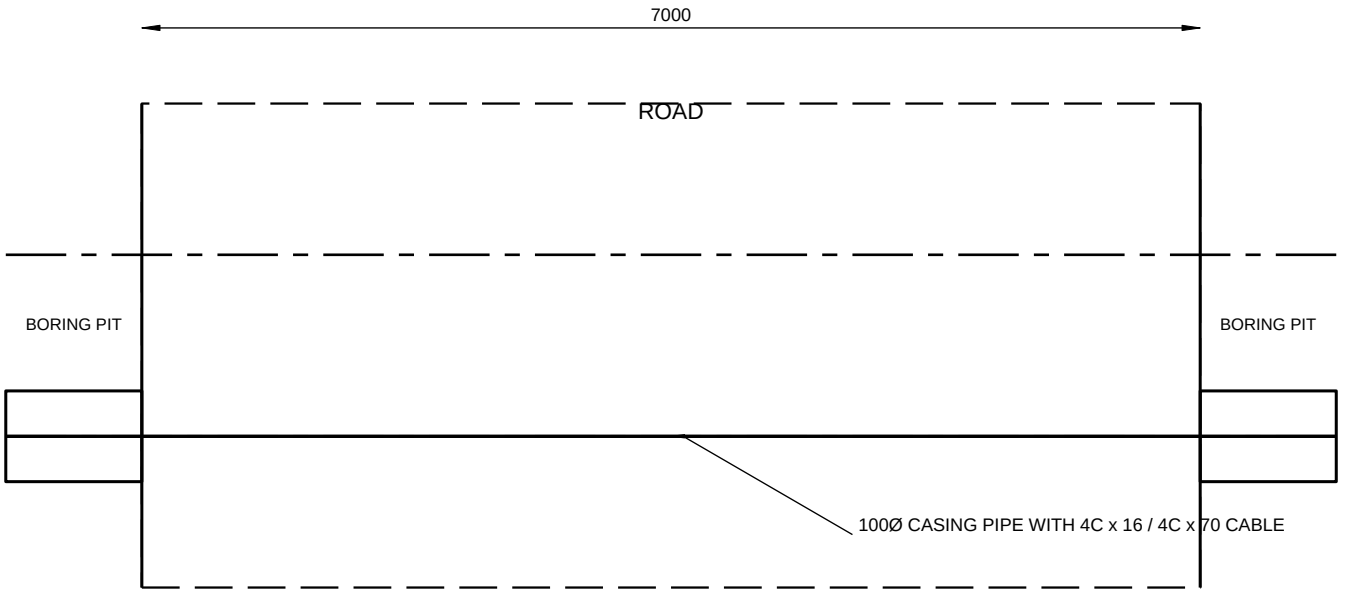
DEPT.

CHK.

SHEET 6 OF 16

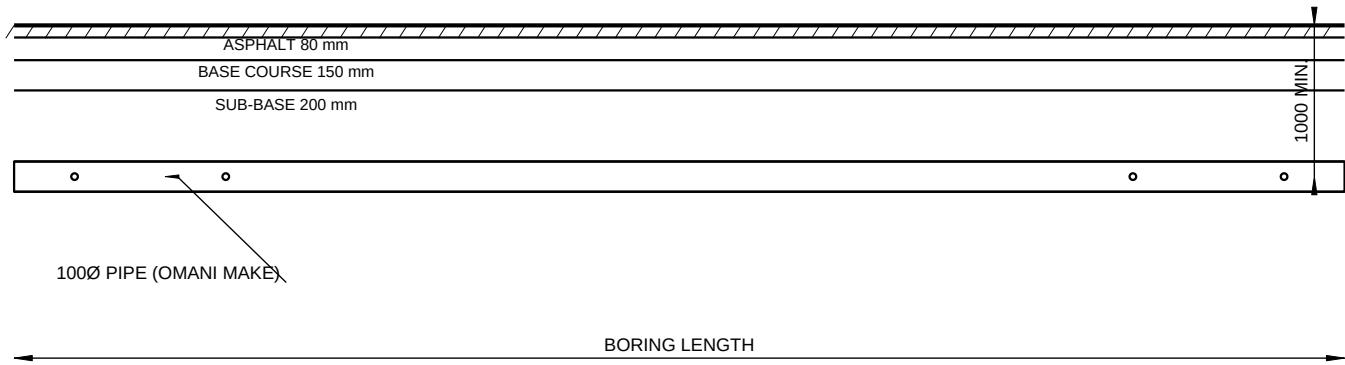
ROAD CROSSING BY THRUST BORING

عبور الطرق بالحفر الأفقي



THRUST BORING LENGTH AS MEASURED - ITEM 10

ROAD CROSSING - PLAN



ROAD CROSSING - SECTION

NOTES

1. Thrust boring with 100 mm dia. Omani made pipe, minimum cover 1000 mm below road surface.
2. Boring pits 900 x 600 mm at each side, shored as required, backfilled and reinstated after works.
3. No open cutting of asphalt or interlock without the Engineer's written approval.
4. Cables to be pulled with a draw wire, no joints inside the crossing pipe.
5. Pipe ends to be sealed and the cable protected with half-round concrete or duct seal.
6. Quantity: 150 m (item 10). Final length to be measured on site and approved before payment.

ملاحظات

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

ROAD CROSSING BY THRUST BORING

عبور الطرق بالحفر الأفقي

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No. LIWA-EL-06

SCALE 1:50

DATE 21-10-2026

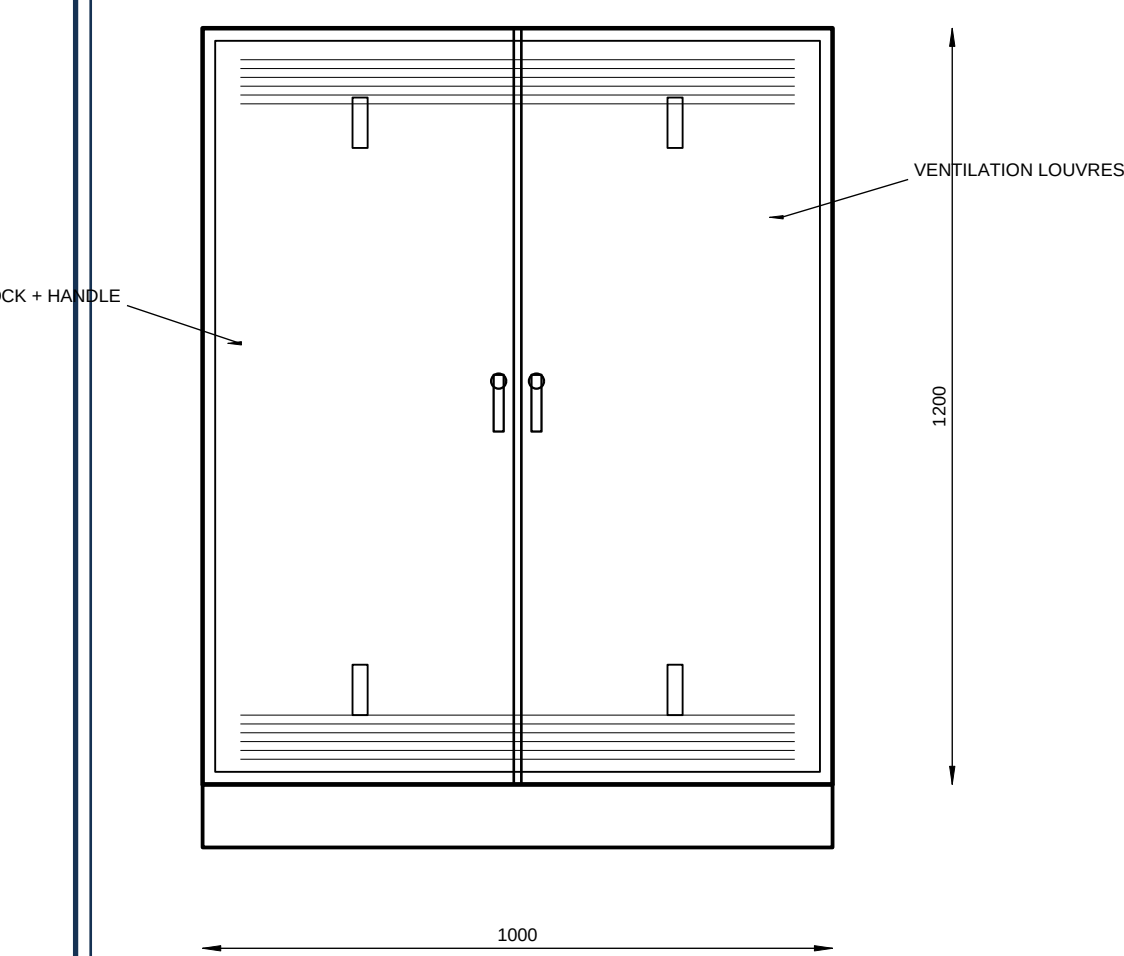
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DRN. DEPT.

CHK.

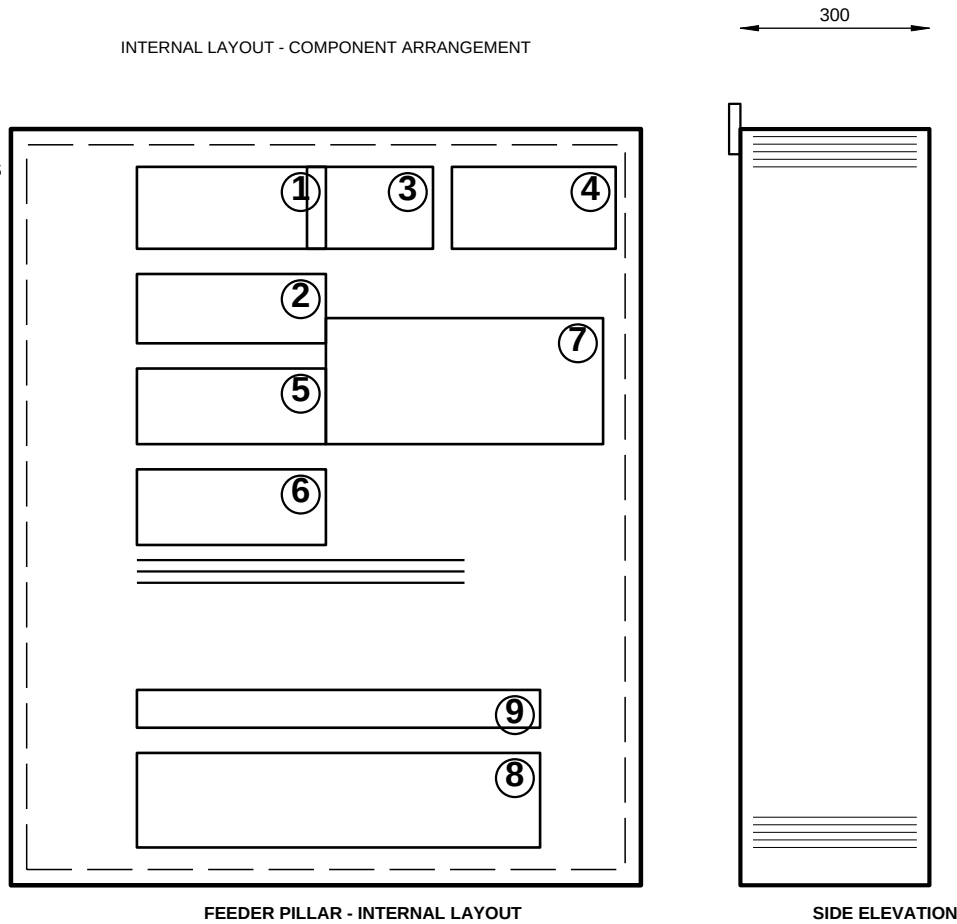
GRP FEEDER PILLAR 1200 x 1000 x 300

لوحة توزيع 12001000300 مم



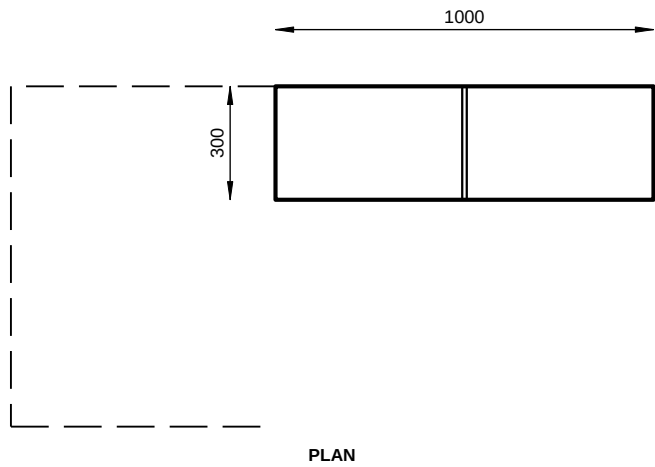
FRONT ELEVATION (2 DOORS)

FEEDER PILLAR - FRONT



FEEDER PILLAR - INTERNAL LAYOUT

SIDE ELEVATION



PLAN

NO.	COMPONENT	QTY
1	100A TP MCCB, Icu 10 kA	1
2	100A cut-out fuse unit	1
3	Digital timer SELEKTA 170 top2	1
4	3 phase sequence relay	1
5	63A 4P RCCB, 100 mA	1
6	63A TP contactor	1
7	63A HRC blade fuse, 6 ways	6
8	Terminal blocks 35 mm2	1 set
9	Earth busbar 70 mm2	1
NOTES		ملاحظات
1. GRP enclosure, 2 doors, IP65, size 1200 x 1000 x 300 mm, mounted on 100 mm concrete plinth.		
2. Nama El. Co. approved pillar; earthing and labelling as per Nama requirements.		
3. Incoming 4C x 70 mm2, outgoing 6 ways 4C x 16 mm2 through 25 L brass glands.		

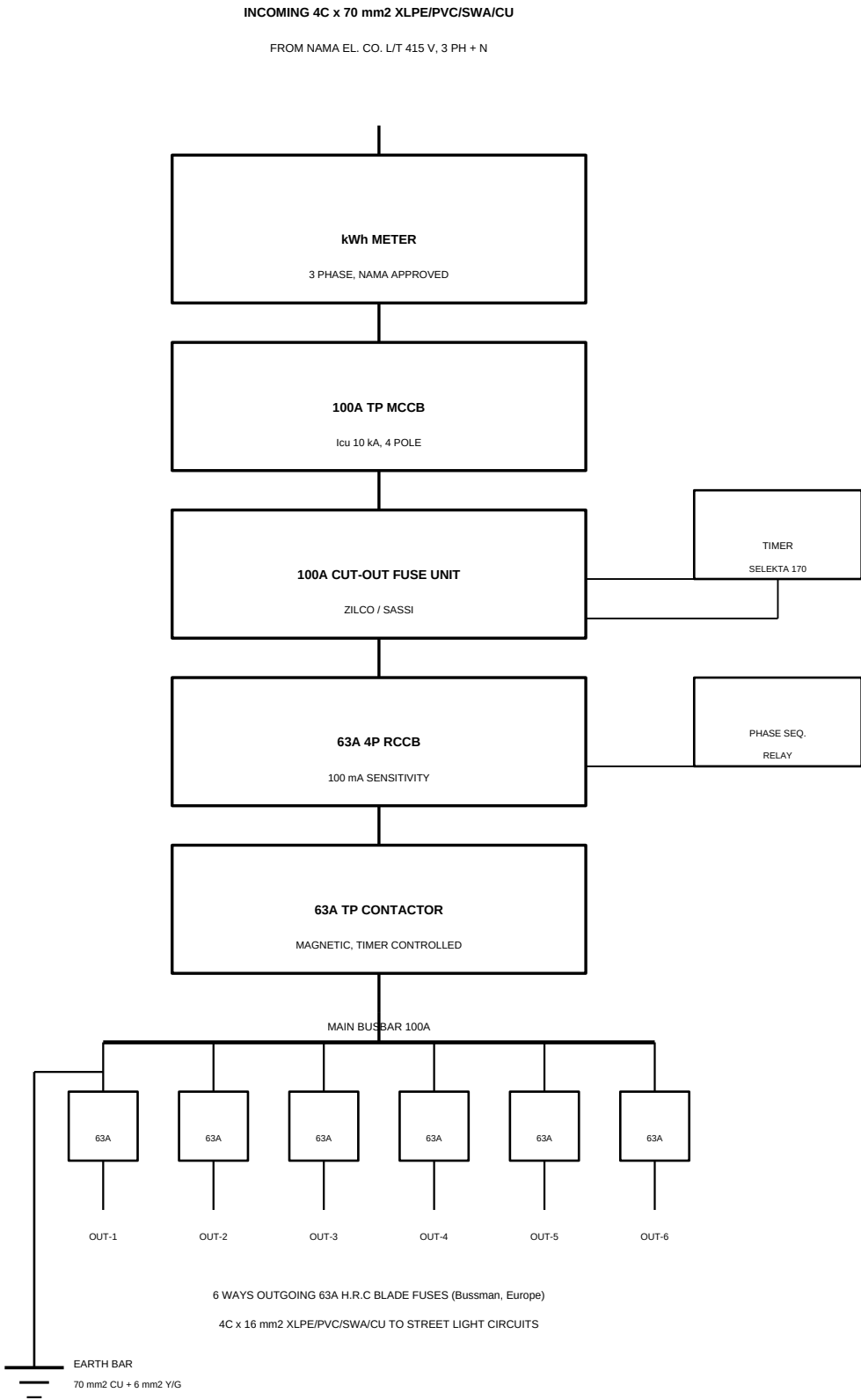
GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT		DWG. No. LIWA-EL-07	
Consultant / Contractor:		SCALE	1:8 / 1:12
المقاول الاستشاري:		DATE	21-10-2026
Drawing Title / ■■■■■■ ■■■■■■		REV.	0
GRP FEEDER PILLAR 1200 x 1000 x 300		DRN.	DEPT.
لوحة توزيع 12001000300 مم		CHK.	
Ref. BOQ: Supply and Installation LIWA			
دائرة المشاريع محافظة شمال الباطنة			
			SHEET 8 OF 16

FEEDER PILLAR - SINGLE LINE DIAGRAM

المخطط أحادي الخط للوحة التوزيع

ITEM	DESCRIPTION
INCOMING	4C x 70 mm2 XLPE/PVC/SWA/Cu from Nama L/T 415 V
METERING	3 phase kWh meter, Nama approved, item 13
PROTECTION	100A MCCB 10 kA + 100A cut-out fuse unit
EARTH LEAKAGE	63A 4P RCCB, 100 mA sensitivity
CONTROL	63A TP contactor + digital timer SELEKTA 170 top2
OUTGOING	6 ways 63A HRC fuses, 4C x 16 mm2 to street light circuits
EARTHING	70 mm2 copper earth bar + 6 mm2 Y/G to earth chamber

NOTES	ملاحظات
1. All switching and protection devices to be from Schneider, ABB or approved equivalent. 2. Timer to be set for the approved switching schedule; photocell cell coordination by the Engineer. 3. Balance the outgoing ways over the three phases as far as practicable. 4. Label all circuits, phases and earthing points with engraved traffolyte labels.	



SINGLE LINE DIAGRAM

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

FEEDER PILLAR - SINGLE LINE DIAGRAM

المخطط أحادي الخط للوحة التوزيع

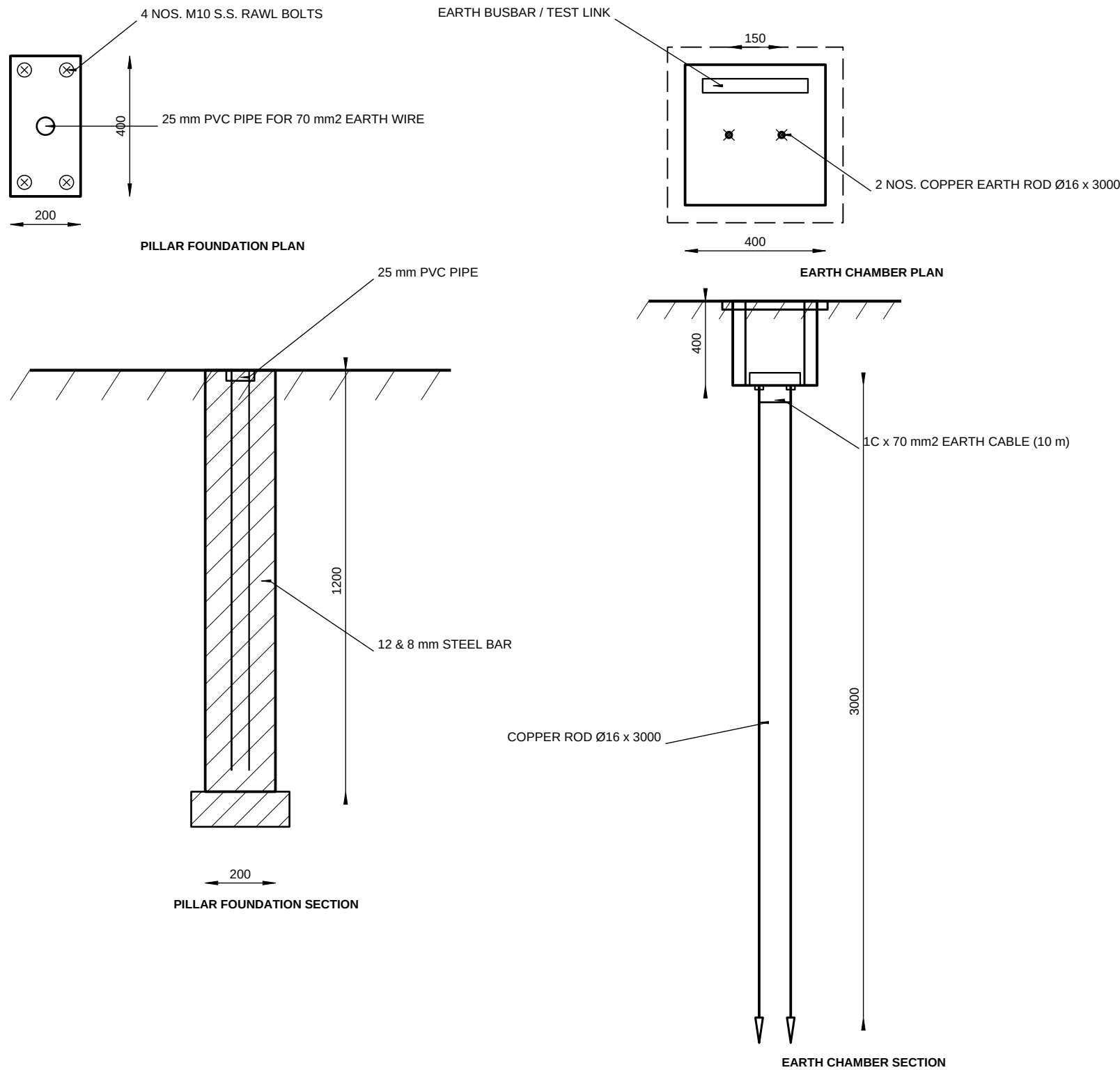
Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No.		LIWA-EL-08
SCALE		N.T.S.
DATE		21-10-2026
REV.		0
DRN.		DEPT.
CHK.		
		SHEET 9 OF 16

FEEDER PILLAR FOUNDATION & EARTH CHAMBER

أساس لوحة التوزيع وغرفة التأريض



NOTES

- Pillar foundation 200 x 400 x 1200 mm, ready-mix concrete 35 N/mm² S.R.C, 12 & 8 mm steel bars.
- 4 Nos. M10 stainless steel rawl bolts to fix the GRP pillar; 25 mm PVC pipe for 70 mm² earth wire.
- Earth chamber: 400 x 400 mm with cover, 2 Nos. copper rods Ø16 x 3000 mm, driven vertically.
- 10 m of 1C x 70 mm² earth cable from the pillar earth bar to the chamber, in 25 mm PVC duct.
- Earth resistance to be measured and recorded; not to exceed 5 ohm. Additional rods if required.
- Quantities: 4 Nos. pillar foundations (item 16), 2 Nos. earth chambers (item 17).

ملاحظات

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

FEEDER PILLAR FOUNDATION & EARTH CHAMBER

أساس لوحة التوزيع وغرفة التأريض

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No. LIWA-EL-09

SCALE 1:15 / 1:25

DATE 21-10-2026

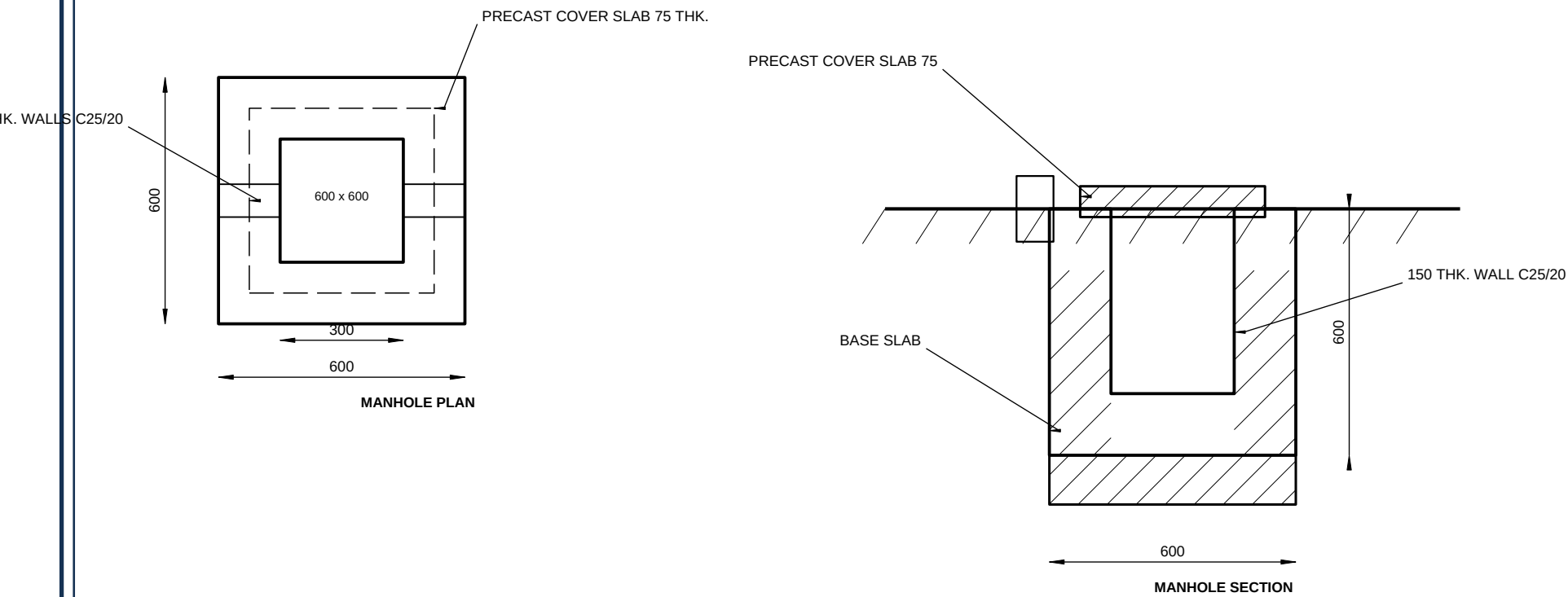
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DRN. DEPT.

CHK.

SHEET 10 OF 16

غرفة كابلات خرسانية 600600مم



ملاحظات

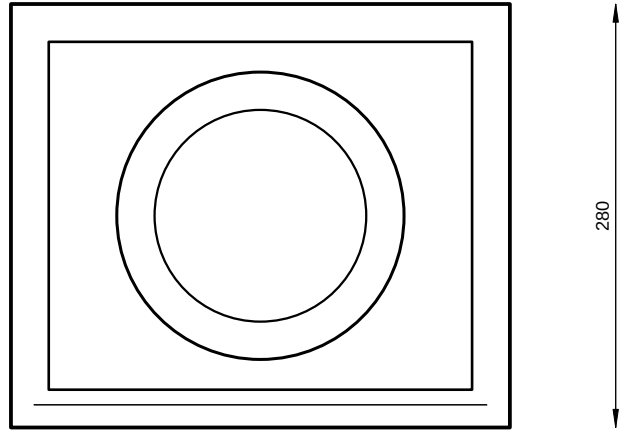
1. Overall size 600 x 600 x 600 mm, class 25/20 concrete, 150 mm thick walls.
2. 75 mm thick precast cover slab with lifting points, flush with finished ground level.
3. Connected to street light foundation sleeves with 100 mm dia. ducts, sealed at both ends.
4. Excavation and backfilling included; base slab 150 mm thick on 100 mm blinding.
5. Cable entries to be smooth and free from sharp edges; cables supported on galvanized trays or cleats.
6. Quantity: 128 Nos. (Item 18 of the BOQ).

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT Consultant / Contractor: المقاول الاستشاري: Drawing Title / ■■■■■ ■■■■■ CONCRETE CABLE MANHOLE 600 x 600 x 600 غرفة كابلات خرسانية 600600600 مم Ref. BOQ: Supply and Installation LIWA دائرة المشاريع محافظة شمال الباطنة	DWG. No.	LIWA-EL-10
	SCALE	1:15
	DATE	21-10-2026
	REV.	0
	DRN.	DEPT.
	CHK.	SHEET 11 OF 16

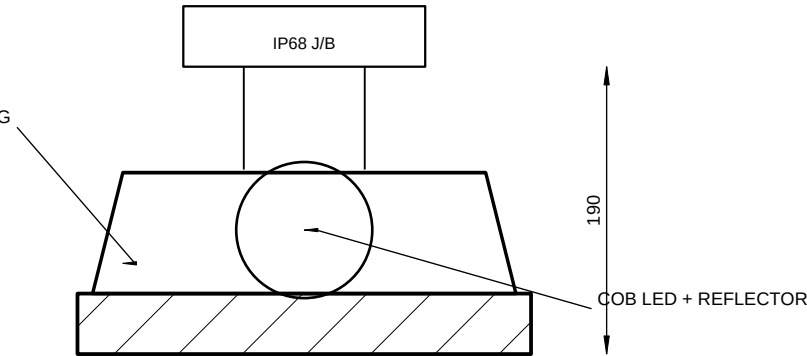
FLOOR RECESSED LUMINAIRES - DETAILS

تفاصيل وحدات الإنارة الأرضية الغاطسة

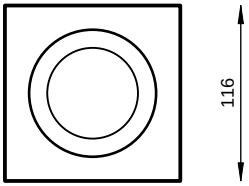
Ø190
PLAN



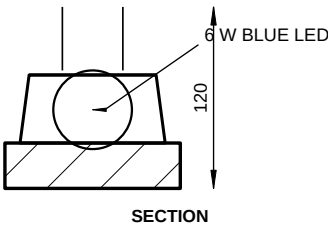
330
FLOOR RECESSED LUMINAIRE 30-40 W



15° TILTABLE BRACKET, IK10 GLASS
SECTION



116
FLOOR RECESSED 6 W BLUE LED



NOTES

1. Type 1: 30-40 W, 280 x 330 mm, 3000 K, 50 deg beam, 316 stainless steel housing, IK10 tempered glass, 3000 kg load, 15 deg tiltable bracket, 3 years warranty.
2. Type 2: 6 W blue LED, 116 x 115 mm, die cast aluminium body, IP67, 100-240 V AC, 120-150 lm, 60 deg beam, 30000 hrs, 3 years warranty.
3. Connection: PVC 25 mm duct, 2.5 mm² flexible wire, IP68 junction box, sealed glands.
4. Recess to be formed in the concrete slab; drainage provision to avoid water accumulation in the housing.
5. Quantities: 200 Nos. type 1 (item 03) and 1400 Nos. type 2 (item 04).

ملاحظات

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

FLOOR RECESSED LUMINAIRES - DETAILS

تفاصيل وحدات الإنارة الأرضية الغاطسة

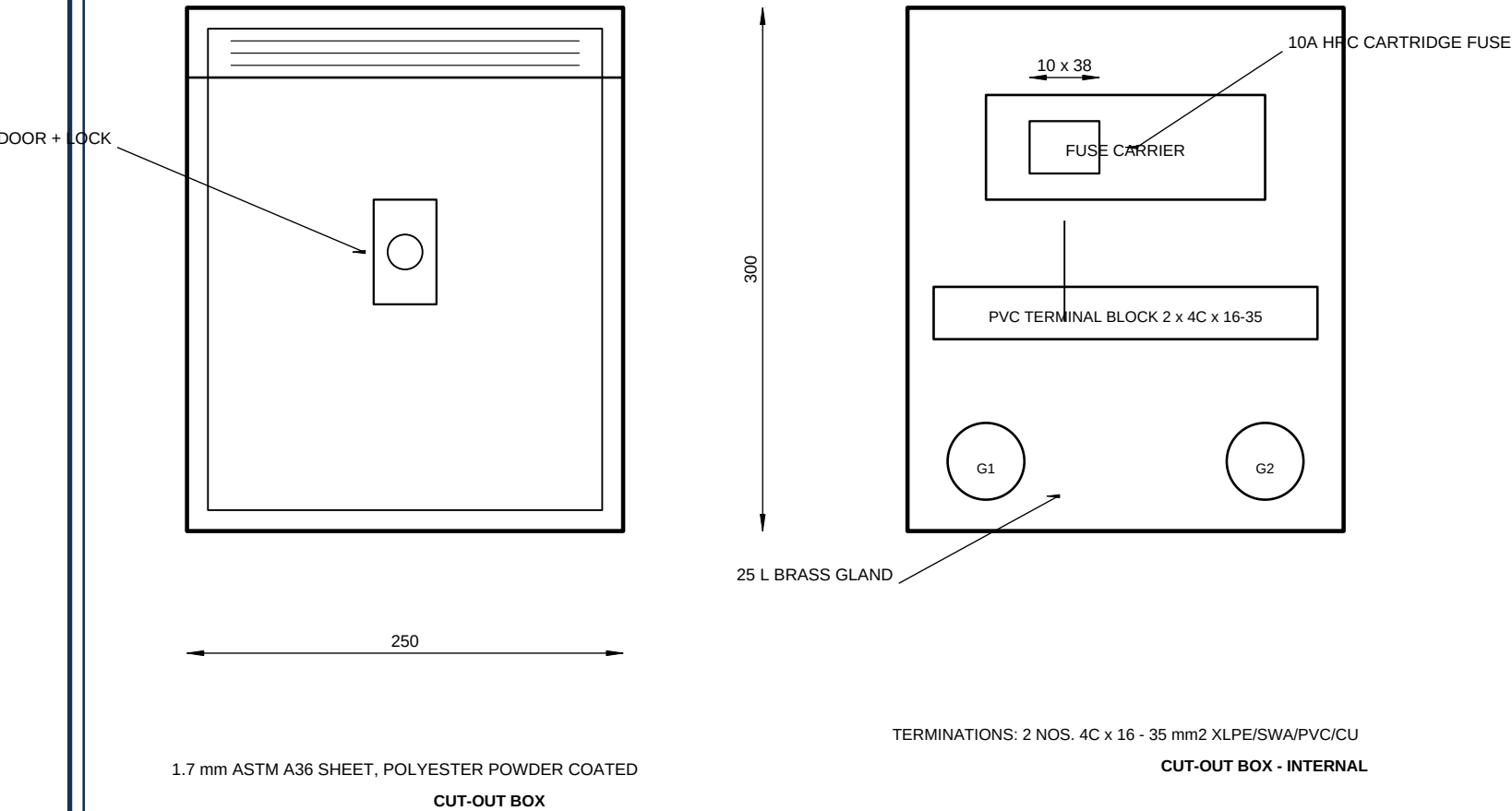
Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

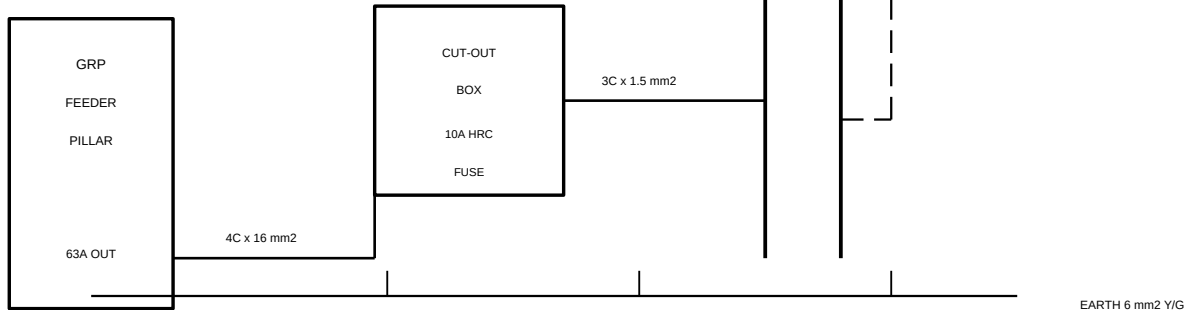
DWG. No.	LIWA-EL-11	
SCALE		1:5
DATE		21-10-2026
REV.		0
DRN.		DEPT.
CHK.		
SHEET 12 OF 16		

CUT-OUT BOX & POLE WIRING DIAGRAM

صندوق القاطع وتوصيلات العمود



NOTES	ملاحظات
1. Cut-out box: 1.7 mm ASTM A36 sheet, polyester powder coated, 250 x 300 x 150 mm, with lock and door.	
2. Contains: PVC insulated terminal block for 2 Nos. 4C x 16-35 mm2, 1 No. 10A HRC cartridge fuse 10 x 38 mm (Legrand/Bussman), modular fuse carrier 10.3 x 38 mm (Hager), 2 Nos. 25 L brass glands with locknut, earth tag and PVC shroud.	
3. Earth continuity: 6 mm2 Y/G wire with insulated lugs (Oman Cable / Nuhas Oman) from the box to the pole and base plate.	
4. Quantities: 10 Nos. single MCB (item 05) and 118 Nos. double MCB (item 06) cut-out boxes.	



TYPICAL POLE CONNECTION - ALL CIRCUITS THROUGH CUT-OUT BOX
POLE WIRING

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT Consultant / Contractor: المقاول الاستشاري: Drawing Title / CUT-OUT BOX & POLE WIRING DIAGRAM صندوق القاطع وتوصيلات العمود Ref. BOQ: Supply and Installation LIWA دائرة المشاريع محافظة شمال الباطنة	DWG. No. LIWA-EL-12	
	SCALE	1:3 / N.T.S.
	DATE	21-10-2026
	REV.	0
	DRN.	DEPT.
	CHK.	SHEET 13 OF 16

MATERIALS & QUANTITIES SCHEDULE

جدول المواد والكميات

ITEM	DESCRIPTION	QTY	UNIT
01	10 m HDG decorative twisted twin arm pole, c/w 150 W + 100 W LED	118	Nos.
02	10 m HDG decorative twisted single arm pole, c/w 150 W LED	10	Nos.
03	Floor mounted recessed luminaire 30-40 W, 280 x 330 mm, IP67	200	Nos.
04	Floor recessed blue LED 6 W, 116 x 115 mm, IP67	1400	Nos.
05	Street light cut-out box, single MCB	10	Nos.
06	Street light cut-out box, double MCB	118	Nos.
07	Street light foundation 600 x 600 x 1200, 35N S.R.C	128	Nos.
08	4C x 70 mm2 XLPE/PVC/SWA/Cu cable, trench & termination	300	m
09	4C x 16 mm2 XLPE/PVC/SWA/Cu cable, trench & termination	5000	m
10	Thrust boring with 100 mm dia. pipe	150	m
11	3C x 1.5 mm2 flexible wire, Oman make	46	Roll
12	Nama fees for 3 phase meter	2	Nos.
13	kWh meter + connection from existing L/T line 415 V	2	Nos.
14	100 mm dia. duct, Omani make	3300	m
15	GRP feeder pillar 1200 x 1000 x 300 mm, 100A, 6 way	2	Nos.
16	Feeder pillar foundation 200 x 400 x 1200 mm	4	Nos.
17	Earth chamber with 2 copper rods and 10 m 1C x 70 mm2	2	Nos.
18	Concrete cable manhole 600 x 600 x 600 mm	128	Nos.

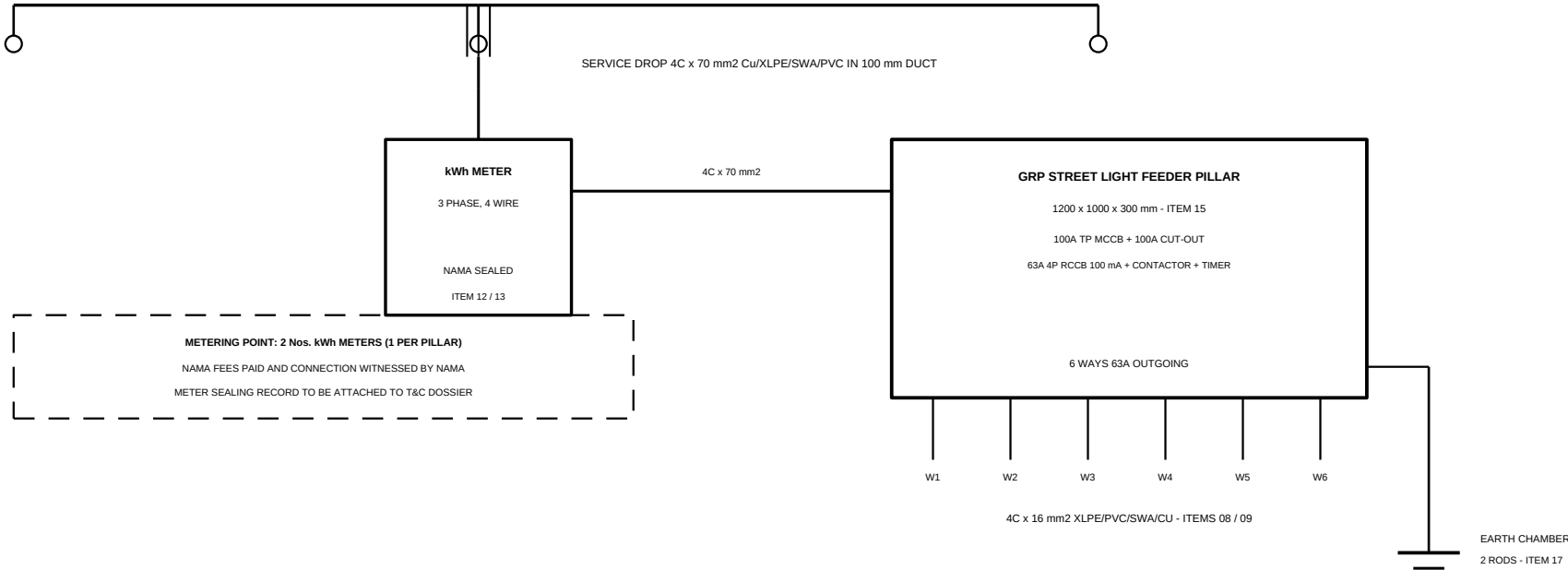
NOTES	ملاحظات
1. Quantities as per the BOQ 'Supply and Installation LIWA' and are subject to re-measurement on site. 2. All items include supply, installation, testing and commissioning unless stated otherwise. 3. Materials to be approved by the Engineer before procurement; samples to be submitted for approval. 4. Warranty: poles and brackets 10 years; luminaires 3 years; feeder pillars as per manufacturer. 5. This schedule is for coordination only; the Contract BOQ governs the payment quantities.	

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT Consultant / Contractor: المقاول الاستشاري: Drawing Title / جدول المواد والكميات MATERIALS & QUANTITIES SCHEDULE جدول المواد والكميات Ref. BOQ: Supply and Installation LIWA دائرة المشاريع محافظة شمال الباطنة	DWG. No. LIWA-EL-13	
	SCALE	N.T.S.
	DATE	21-10-2026
	REV.	0
	DRN.	DEPT.
	CHK.	SHEET 14 OF 16

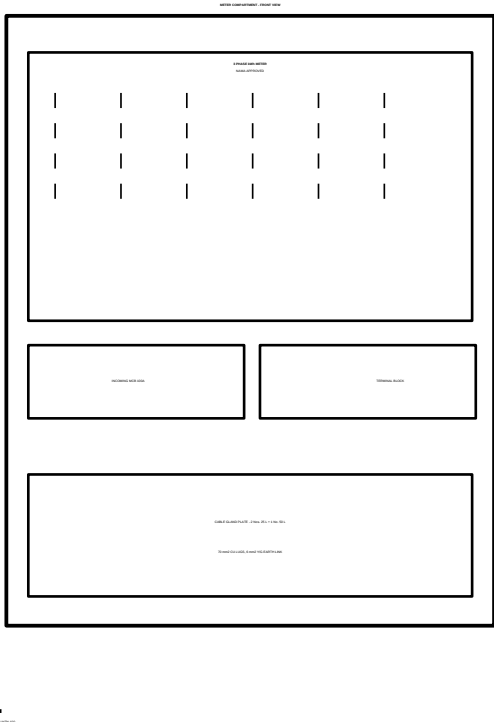
METERING & NAMA SERVICE CONNECTION

توصيل العدادات وخط الخدمة من ناما

NG NAMA EL. CO. L/T LINE 415 V, 3 PH + N



SERVICE CONNECTION SCHEMATIC



METER PANEL

NOTES

ملاحظات

- Two independent service connections from the existing Nama El. Co. L/T 415 V line, one per feeder pillar.
- Service cable 4C x 70 mm2 Cu/XLPE/SWA/PVC in 100 mm duct; minimum cover 600 mm under roadway.
- 3 phase 4 wire kWh meters, Nama approved and sealed; meter compartments lockable and labelled.
- Nama fees for the 3 phase meters shall be paid by the Contractor and receipts submitted (item 12).
- Meter connection, termination and sealing to be witnessed and recorded by Nama and the Engineer (item 13).
- Test certificate for polarity, phase sequence and earth loop impedance to be submitted before energisation.

NO.	METERING SCOPE	QTY	ITEM
1	Nama application and fees, 3 phase meter	2 Nos.	12
2	3 phase 4 wire kWh meter, direct connected	2 Nos.	13
3	Service cable 4C x 70 mm2, glands and lugs	300 m	08
4	100 mm duct for service cable	3300 m	14
5	Meter compartment, lockable, in GRP pillar	2 Nos.	15
6	Earth bar, 6 mm2 Y/G link and rod chamber	2 Nos.	17

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

METERING & NAMA SERVICE CONNECTION

توصيل العدادات وخط الخدمة من ناما

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No. LIWA-EL-14

SCALE N.T.S.

DATE 21-10-2026

REV. 0

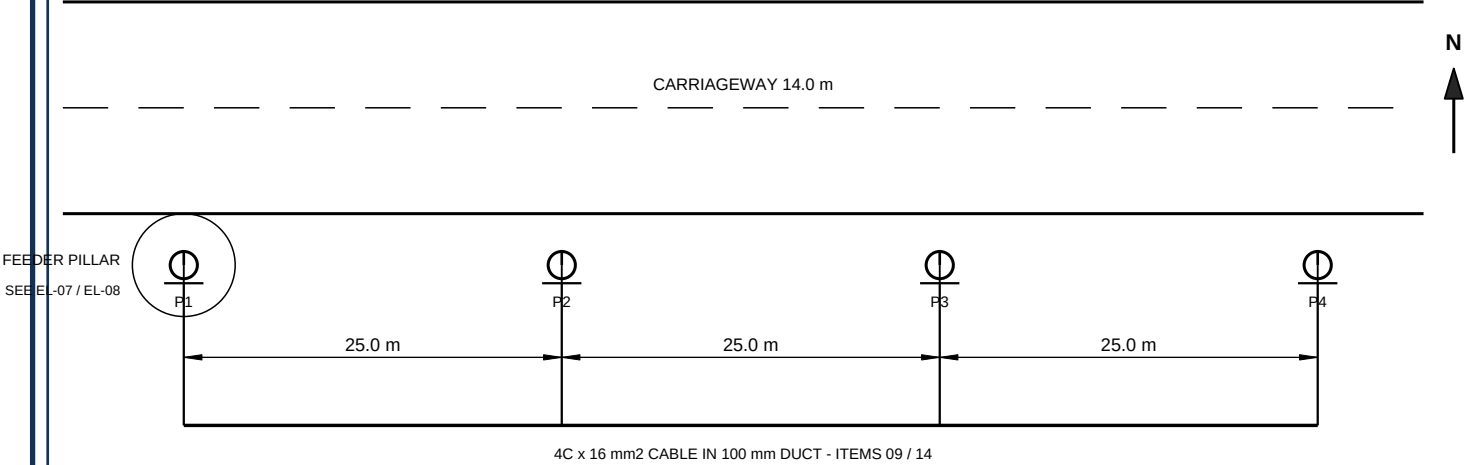
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TYPICAL LAYOUT & CIRCUIT SCHEDULE

المخطط النموذجي وجدول الدوائر

TYPICAL POLE SPACING 25 m - FINAL LAYOUT SUBJECT TO SITE SURVEY
POLE HEIGHT 10 m, ARM OUT-REACH 2000 mm OVER CARRIAGEWAY



CUT-OUT BOX AT EACH POLE (ITEMS 05 / 06)

TYPICAL LAYOUT

NOTES

- 12 outgoing ways, 6 per pillar. Ways 1-5 supply street lighting, way 6 supplies the floor recessed luminaires.
- Connected load 47.9 kW total (31.0 kW street lighting, 7.0 kW type 1 floor luminaires, 8.4 kW type 2 blue LED).
- Volt drop calculated at 415 V, 3 phase, 0.9 power factor, using 16 mm² and 70 mm² copper conductors.
- Maximum volt drop from the Nama point of supply to the last luminaire to be within 5% (0.6% feeder + 1.7% circuit).
- Final pole positions, spacing and circuit allocations to be confirmed against the site survey and road layout.
- Balancing of the three phases to be recorded in the as-built documentation.

ملاحظات

WAY	SERVICE	POLES	LOAD W	I (A)	CABLE	Vd %
A-W1	Street lighting	13	3250	5.0	4C x 16	0.9
A-W2	Street lighting	13	3250	5.0	4C x 16	0.9
A-W3	Street lighting	13	3250	5.0	4C x 16	0.9
A-W4	Street lighting	13	3250	5.0	4C x 16	0.9
A-W5	Street lighting	12	3250	5.0	4C x 16	0.9
A-W6	Floor luminaires	-	7700	11.9	4C x 16	1.7
B-W1	Street lighting	13	3250	5.0	4C x 16	0.9
B-W2	Street lighting	13	3250	5.0	4C x 16	0.9
B-W3	Street lighting	13	3250	5.0	4C x 16	0.9
B-W4	Street lighting	13	3250	5.0	4C x 16	0.9
B-W5	Street lighting	12	3250	5.0	4C x 16	0.9
B-W6	Floor luminaires	-	7700	11.9	4C x 16	1.7
A+B	TOTAL CONNECTED LOAD	128	47900	74.0	4C x 70	2.3

GOVERNORATE OF NORTH AL BATINAH - PROJECTS DEPARTMENT

Consultant / Contractor:

المقاول الاستشاري:

Drawing Title / ■■■■■■ ■■■■■■

TYPICAL LAYOUT & CIRCUIT SCHEDULE

المخطط النموذجي وجدول الدوائر

Ref. BOQ: Supply and Installation LIWA

دائرة المشاريع محافظة شمال الباطنة

DWG. No. LIWA-EL-15

SCALE 1:500 / N.T.S.

DATE 21-10-2026

REV. 0

DRN. DEPT.

CHK.