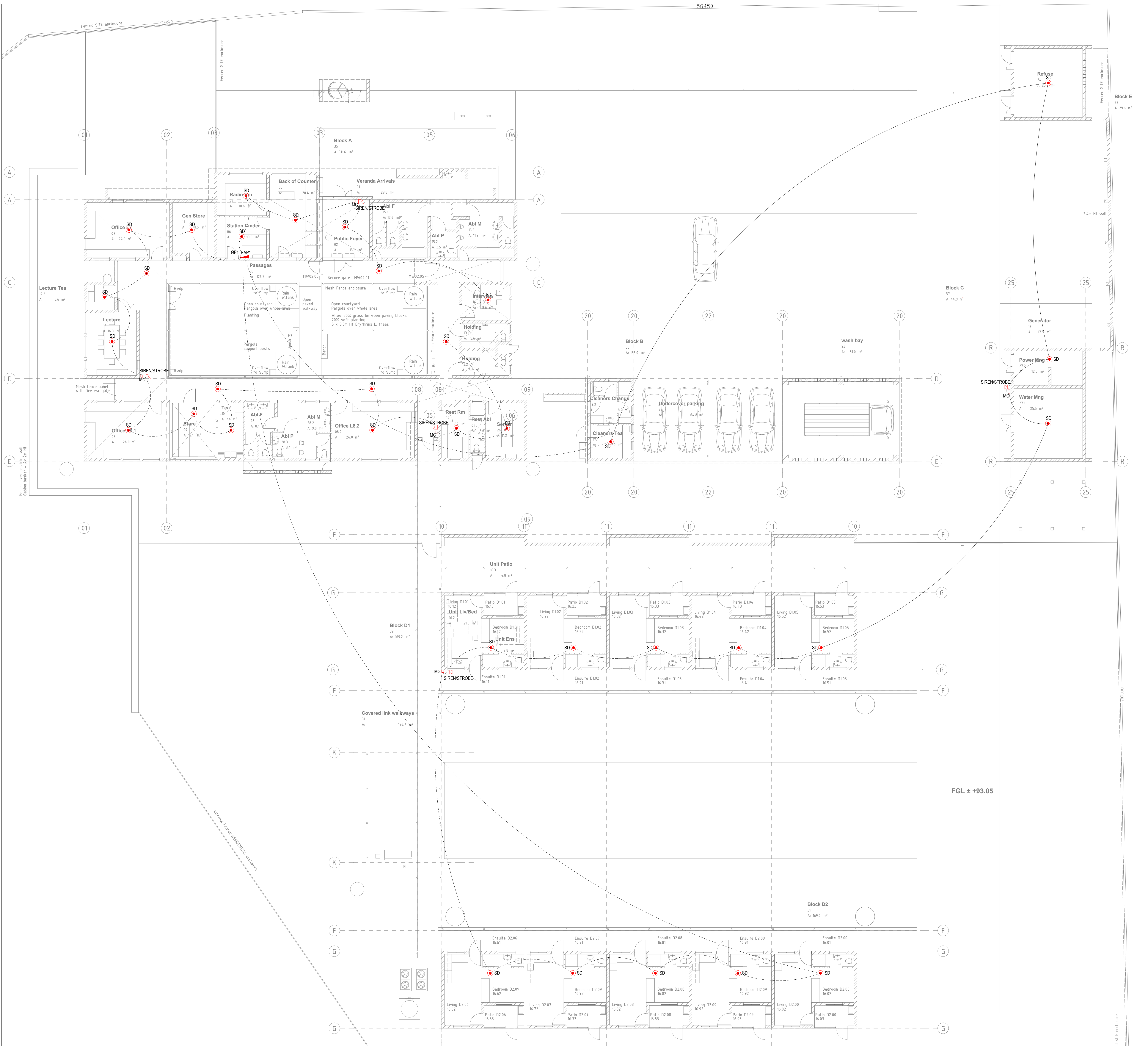


MECHANICAL DRAWINGS



AUTOMATIC ALARM AND FIRE DETECTION LAYOUT
SCALE 1:100

PROVISIONAL ELECTRICAL REQUIREMENTS
FIRE DETECTION INSTALLER SHALL VERIFY AND COORDINATE SPECIFICATIONS
AND POSITIONS OF POWER POINTS WITH ELECTRICIAN

ESSENTIAL					NON-ESSENTIAL							
REF.	VOLTS	FLA	KVA	PHASE	QTY	VOLTS	FLA	KVA	PHASE	QTY	LOCATION	DESCRIPTION
E1	220	3	-	1	-	-	-	-	-	-	BELOW CEILING	POWER SUPPLY WITH ISOLATOR TO FIRE ALARM PANEL SWITCHABLE FROM ELECTRICIAN DB

- NOTES**
- ALL WORKS SHALL BE DESIGNED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AND REGULATIONS:
 - SANS 10339: FIRE DETECTION AND ALARM SYSTEMS FOR BUILDINGS - SYSTEM DESIGN, INSTALLATION AND SERVICING
 - SANS 50054: FIRE DETECTION AND FIRE ALARM SYSTEMS (ADOPTED FROM BS EN 54)
 - SANS 246: CODE OF PRACTICE FOR FIRE PROTECTION FOR ELECTRONIC EQUIPMENT INSTALLATIONS
 - THE FIRE DETECTION AND ALARM SYSTEM SHALL BE FULLY ADDRESSABLE.
 - THE CONTROL PANEL SHALL HAVE 4 LOOPS FULLY ADDRESSABLE (ZT0N)
 - FIRE DETECTION CABLEING TO BE PH30
 - ALL CABLEING FOR EQUIPMENT LOCATED IN AREAS WHERE THERE ARE DROPPED IN CEILING TILES, SHALL BE RUN IN PVC CONDUIT IN THE CEILING VOID ALONG SOFFIT. CABLEING MUST BE TERMINATED WITH FLEXIBLE SPRAGUE CONDUIT BEFORE CONNECTING TO CEILING MOUNTED DETECTORS.
 - CABLEING FOR EQUIPMENT LOCATED IN AREAS WITH NO CEILINGS SHALL BE SURFACE RUN IN PVC TRUNKING.
 - CABLEING FOR EQUIPMENT LOCATED IN AREAS WHERE THERE ARE SKIMMED CEILINGS, MAY BE LEFT TO LAY ON THE CEILING, IN THE CEILING VOID. NO ALLOWANCE MUST BE MADE FOR PVC CONDUITS OR FLEXIBLE SPRAGUES IN THESE AREAS.
 - CABLEING ROUTED IN DUCTS SHALL BE RUN IN PVC TRUNKING.
 - PVC CONDUIT MUST BE FIXED IN PLACE WITH NECESSARY SUPPORT CLAMPS.
 - ALL BUILDER'S WORKS MUST BE ALLOWED FOR AND DONE BY DESIGNATED FIRE DETECTION CONTRACTOR.
 - FIRE DETECTION CONTRACTOR SHALL PROVIDE CERTIFICATION IN ACCORDANCE WITH THE CATEGORY OF INSTALLATION INSTALLED.
 - THE INSTALLATION SHALL BE GUARANTEED AND MAINTAINED FOR 12 MONTHS AFTER PRACTICAL HANDOVER.
 - ALL TRAPDOORS TO BE 500mm X 500mm. TRAPDOOR INSTALLATION TO BE INCLUSIVE OF ALUMINIUM MATT WHITE FRAME SURROUND.

FIRE DETECTION LEGEND	
	MANUAL CALL
	SMOKE DETECTOR
	HEAT DETECTOR
	VOID DETECTOR
	FIRE ESCAPE SIREN & STROBE COMBINATION
	BREAKGLASS BOX WITH KEY (SAME KEYED THROUGHOUT)
	FIRE DETECTION ALARM PANEL

AUTOMATIC FIRE DETECTION

ARCHITECT:
ARITEK 4 ARCHITECTS (Pty) Ltd
Durban: 4E Lonsdale Road, Glenwood, Durban 4000
Tel: 031 201 0445 Fax: 031 201 6609 email: admin@aritek4.co.za
Port Shepstone: 19 Tradewinds, Marine Drive, Shelly Beach
Tel: 039 662 2447 Fax: 039 662 2446 email: admin@aritek4.co.za



REV	DESCRIPTION	BY	DATE
C	ISSUED FOR STAGE 4 APPROVAL	MK	06/11/2024
B	UPDATED TO SUIT NEW ARCHITECTURAL LAYOUT	OM	25/03/2024
A	ISSUED FOR STAGE 3	OM	25/03/2024
A	PRELIMINARY DESIGN STAGE	MK	08/01/2024

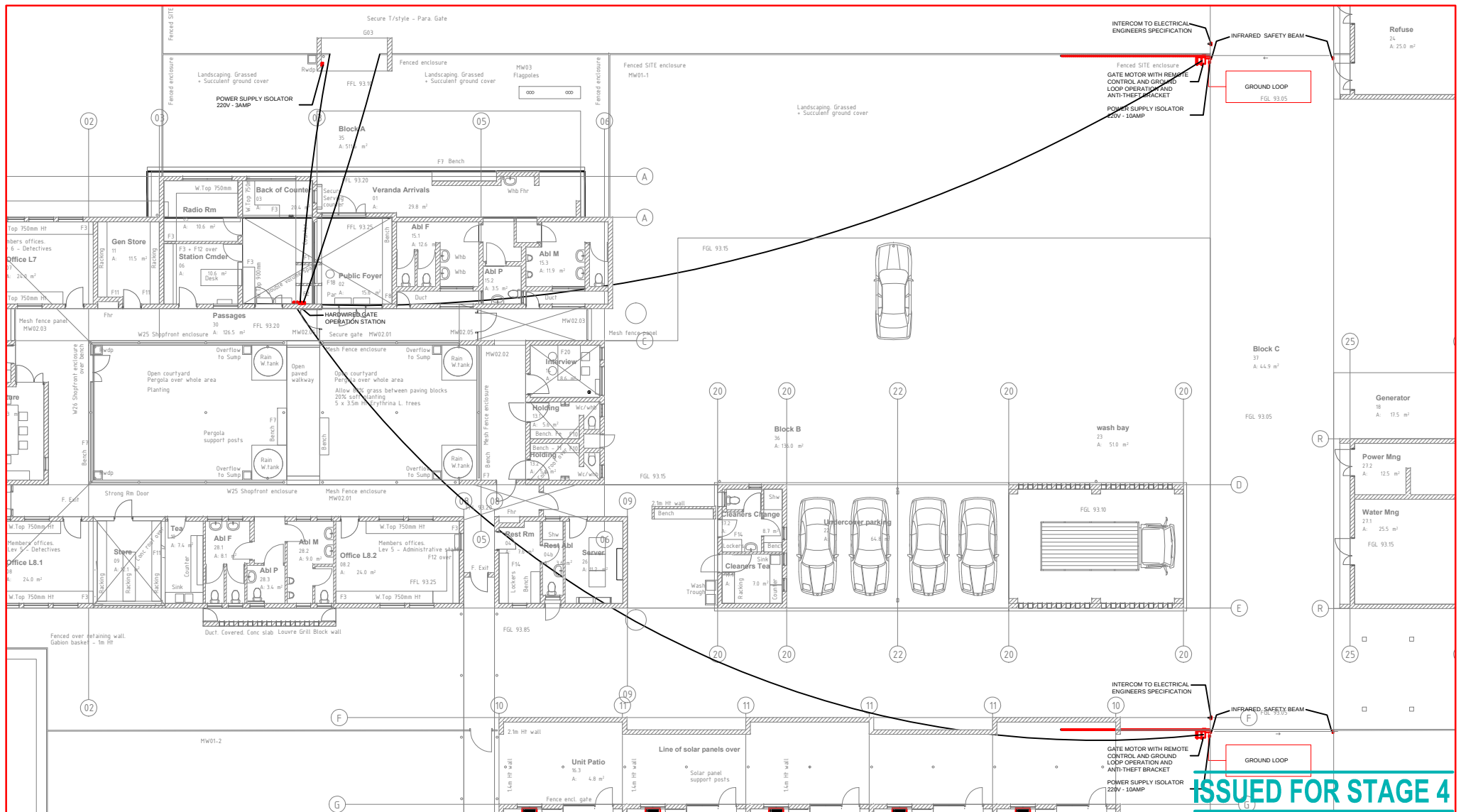
CONSULTING MECHANICAL ENGINEERS:
MAHESH KHOOSAL & ASSOCIATES
Mechanical Consulting Engineers
Ph: 031-536 8336
Fax: 031-536 8276

PROJECT:
NEW NTSHINGWE SATELLITE POLICE STATION
Portion 481 of the Farm Makathini Flats No 16533
Access road P441, Ntshongwe, uMhlabuyalingana Local Municipality for the South African Police Services

DRAWING TITLE:
AUTOMATIC ALARM AND FIRE DETECTION NTSHONGWE POLICE STATION

DESIGNED :	AK	DATE :	26/09/23	SCALE :	1:100
DRAWN :	OM	PROJ. No.	M693	CHKD. No.:	
CHECKED :	AK	PRINCIPAL :	MK	Rev.:	
				M693/FD/01	C

FOR STAGE 4



MAHESH KHOOSAL & ASSOCIATES

Mechanical Consulting Engineers

PH: 031-536 8306

FAX: 031-536 8276

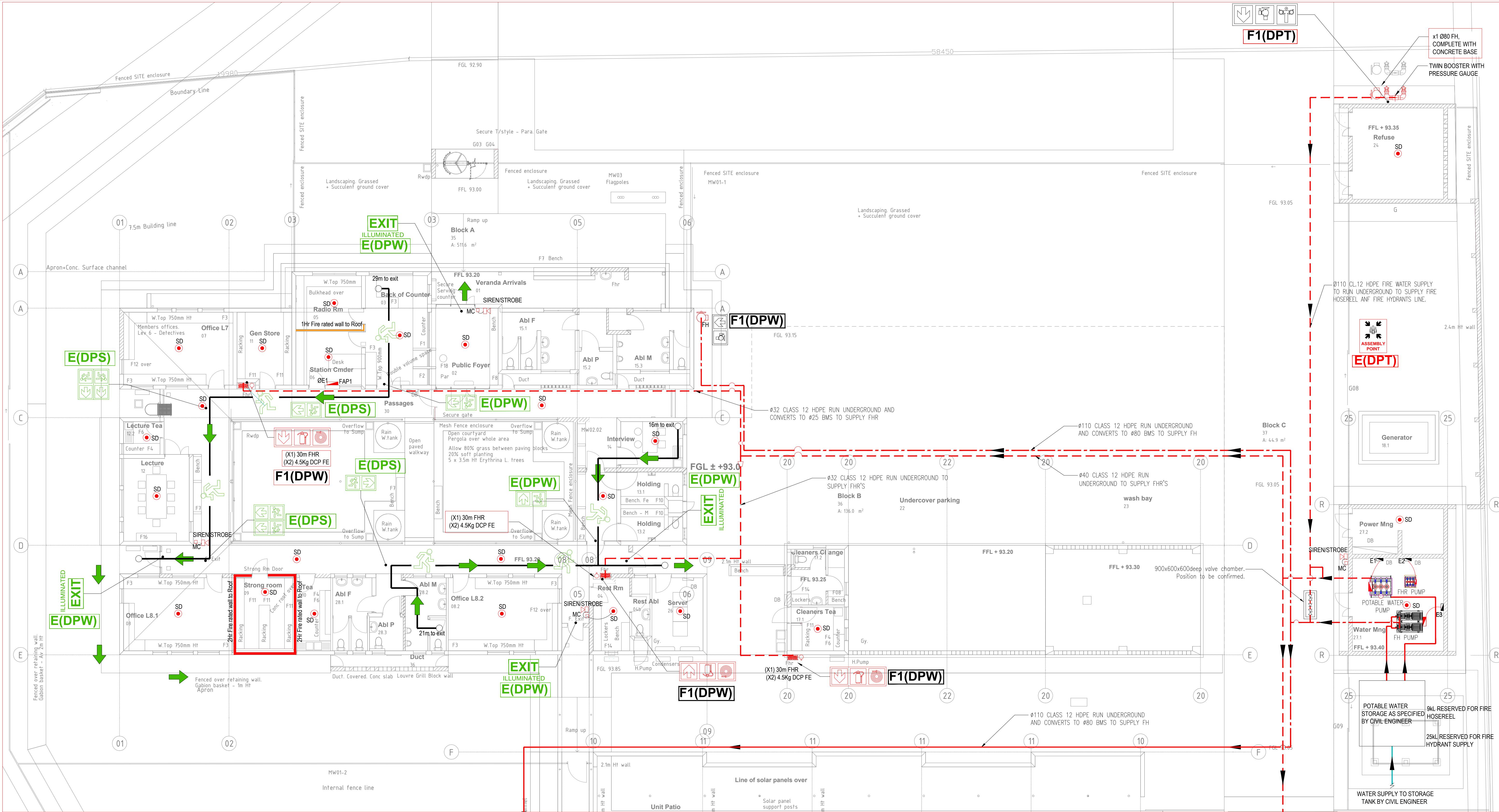
DRAWING TITLE :

**NEW NTSHONGWE SATELLITE POLICE
STATION - GATE MOTORS AND
TUNSTILE LAYOUTS**

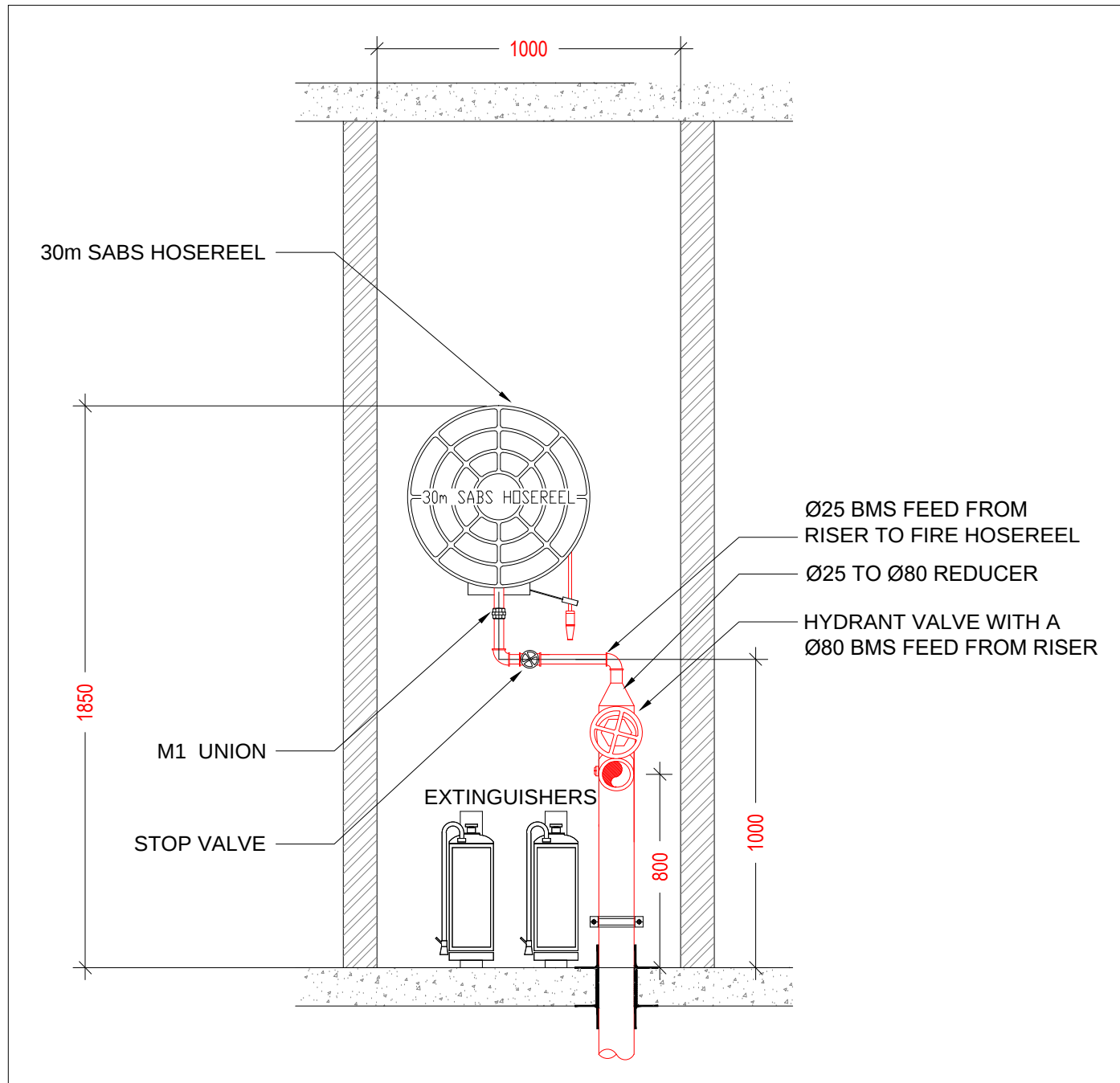
DESIGNED : MK DATE : SCALE : 1:100

DRAWN : OM 26/09/23 PROJ. No. M693

DRG. No.: M693/GM/01 Rev.: B



FIRE PLAN LAYOUT PART A
SCALE 1:100



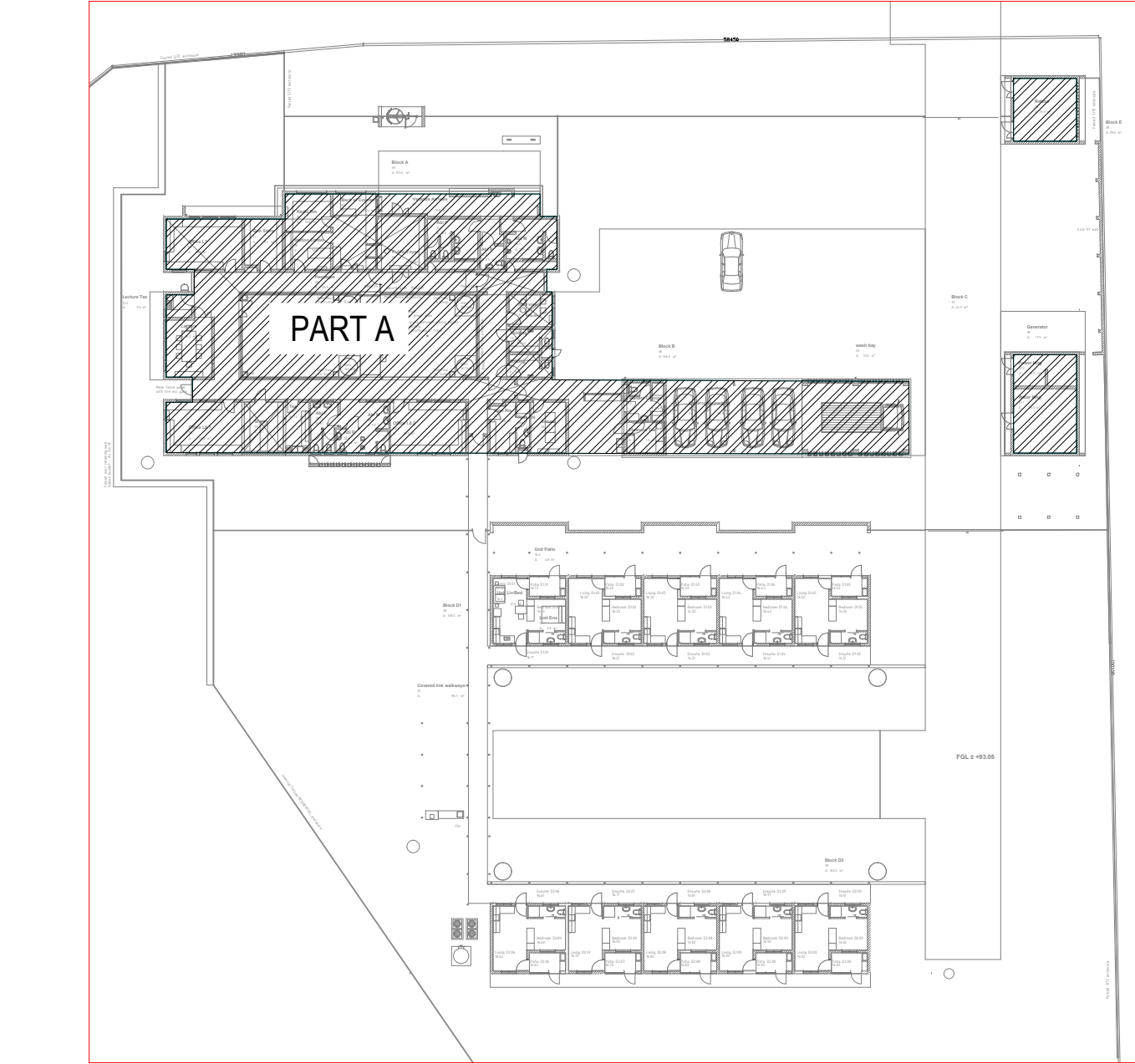
TYPICAL HYDRANT & HOSE REEL ARRANGEMENT
SCALE 1:20

FIRE FIGHTING EQUIPMENT LEGEND:	FIRE ESCAPE & EQUIPMENT SIGNAGE LEGEND:
30m Hose reel & 2x extinguishers	EXIT
5kg CO ₂ Fire extinguisher	FIRE ESCAPE
Twin booster connection	FIRE ALARM
65mm fire hydrant	FIRE ALARM
Sprinkler (Ceiling)	FIRE ALARM
Sprinkler (Exposed)	FIRE ALARM
Sprinkler control valve	FIRE ALARM

SIGNAGE NOTES:
SIGNAGE SIZE INDICATION AND DESCRIPTIONS: THE FOLLOWING CODES ARE USED TO INDICATE SIGNS AND SIZES AS FOLLOWS: [FW] FIRE EQUIPMENT [EW] EMERGENCY DIRECTIONAL EXPLANATION: F1 SIGNAGE SYMBOL AS INDICATED ON DRAWING A SIZE 190mm x 190mm B SIZE 290mm x 290mm D SIGNAGE MATERIAL HIGH IMPACT ACRYLIC P SIGNAGE MATERIAL PHOTO LUMINESCENT ACRYLIC F ALUMINIUM FRAMED SIGNAGE W WALL MOUNTED SIGNAGE S SUSPENDED SIGNAGE T POLE MOUNTED SIGNAGE H DOOR MOUNTED SIGNAGE X1 ELECTRICALLY ILLUMINATED EXIT SIGNAGE X2 SIGNAGE INDICATING CHANGE IN FLOOR LEVEL

NOTE:
● ALL SIGNAGE SHALL COMPLY WITH SABS 1186-1997 AND MUST BEAR THE SABS LOGO ● SIGNS IN OFFICE ENVIRONMENT SHALL BE 190mm x 190mm MOUNTED AS INDICATED ● SIGNS IN EQUIPMENT ROOMS SHALL BE PHOTO LUMINESCENT 290mm x 290mm MODULES UNFRAMED ● OUTDOOR SIGNS SHALL BE NON- PHOTO LUMINESCENT, WEATHER RESISTANT 290mm x 290mm MODULES UNFRAMED ● ALL SIGNS SHALL BE INSTALLED AT A STANDARDISED HEIGHT, SUITED TO LOCAL SITE CONDITIONS AND AT THE MOST CONSPICUOUS POSITIONS AVAILABLE METHOD OF FIXING: ● SUSPENDED SIGNS SHALL BE SUSPENDED WITH 3mm DIAM. PVC COATED CABLE & 20mm DIAM. KEYRINGS. ● WALL MOUNTED SIGNS SHALL BE FIXED AT ALL FOUR CORNERS WITH DOUBLE SIDED TAPE. ● IN PASSAGES AND WALKWAYS, SIGNS TO BE PLACED AT 90° TO THE PASSAGE AND WALKWAY. ● SUSPENDED SIGNS TO BE POSITIONED AT MIN. 2100mm CLEARANCE HEIGHT AND NOT WITHIN 500mm OF ANY AUTOMATIC FIRE SPRINKLER HEAD. SUSPENDED SIGNS TO BE INSTALLED AT A UNIFORM HEIGHT AND TO HAVE A MAXIMUM VIEWING DISTANCE OF 30m.

FIRE PROTECTION TO COMPLY WITH SANS 10400 PART 1:	Applicable	Not Applicable
- All work to comply with sabs10400	☒	☐
- Safety distances to comply with clause 4.2	☒	☐
- Different occupancies in the building to comply with 4.3	☒	☐
- Division areas to comply with clause 4.4	☒	☐
- Fire Performance to comply with clause 4.5	☒	☐
- Fire resistance of occupancy separating and division -separating elements with clause 4.6	☒	☐
- Fire Stability of structural elements with clause 4.7	☒	☐
- Tenancy-separating elements with clause 4.8	☒	☐
- Partition walls & partitions with clause 4.9	☒	☐
- All openings to be protected in compliance with 4.10	☒	☐
- Any raised access & suspended floors of combustible material to comply with clause 4.11	☒	☐
- Roof assemblies & coverings to comply with clause 4.12	☒	☐
- Ceilings to comply with clause 4.13	☒	☐
- Floor coverings to comply with clause 4.14	☒	☐
- Internal finishes to comply with clause 4.15	☒	☐
- Provision of escape route to comply with clause 4.16	☒	☐
- Exit doors to comply with clause 4.17	☒	☐
- Feeder routes to comply with clause 4.18	☒	☐
- Emergency routes to comply with clause 4.19	☒	☐
- Dimensions of components of escape routes with clause 4.20	☒	☐
- Width of escape routes in accordance with 4.21	☒	☐
- All Basements to comply with clause 4.22	☒	☐
- Stairways and all level changes along escape route to comply with clause 4.23	☒	☐
- All staircases to be ventilated in accordance with 4.24	☒	☐
- Pressurization of emergency routes and components to comply with 4.25	☒	☐
- All openings in floors to comply with 4.26	☒	☐
- All external passages and stairways to comply with 4.27	☒	☐
- Lobbies, foyers & vestibules to comply with clause 4.28	☒	☐
- Marking & Signposting to be provided in accordance with 4.29	☒	☐
- Provision of emergency lighting in accordance with 4.30	☒	☐
- Fire detection and alarm systems designed by a professional engineer & endorsed with a certificate in accordance with 4.31	☒	☐
- Provision & maintenance of fire fighting equipment, installations & fire protection systems to comply with 4.32	☒	☐
- Fire reticulation to comply with 4.33 and SANS10400-W	☒	☐
- Fire hose reels (FHRs) to comply with 4.34	☒	☐
- Hydrants to be provided in accordance with 4.35	☒	☐
- Automatic sprinklers and other fixed fire extinguishing systems to comply with 4.36	☒	☐
- Portable fire extinguishers to comply with 4.37	☒	☐
- Mobile fire extinguishers to comply with 4.38	☒	☐
- Inaccessible concealed spaces to have fire stopping as per 4.39.	☒	☐
- Service shafts to be protected as per 4.40.	☒	☐
- Services in structural on separating elements to comply with 4.41.	☒	☐
- Smoke control to comply with 4.42.	☒	☐
- Air-conditioning & artificial ventilation systems to comply with 4.43.	☒	☐
- Lifts to comply with 4.44	☒	☐
- Lift shaft to comply with 4.45, the shaft must have 120 minute structural stability requirements.	☒	☐
- Lift to comply with 4.45	☒	☐
- Fire mans lift: the provision of and compliance of as per 4.46	☒	☐
- Stretcher lift: the provision of and compliance of as per 4.47	☒	☐
- All stage and backstage areas to comply as per 4.48	☒	☐
- Parking garages areas to comply as per 4.50	☒	☐
- Operating Theatres and intensive or critical care units to comply as per 4.51.	☒	☐
- Any installation of liquid fuel dispensing pumps and tanks to comply as per 4.52	☒	☐
- Installation of other tanks to comply as per 4.53	☒	☐
- Access for fire-fighting & rescue purposes to comply as per 4.54	☒	☐
- Presumed fire resistance of building materials & components to comply as per 4.55	☒	☐
- Building materials to comply as per 4.56	☒	☐
- Single storey category 1 buildings for H3 and H4 occupancies to comply as per 4.57	☒	☐
- Guest houses and bed and breakfast accommodation to comply as per 4.58	☒	☐
- All healthcare facilities to comply as per 4.59	☒	☐
- Call points to be provide at each refuge area	☒	☐
- Fire booster pumps to be supplied via back-up generator	☒	☐



SITE PLAN
N.T.S

FIRE PROTECTION PLAN			
LOCAL AUTHORITY STAMPS:			
Checked by Professional Consultant			
Name	MAHESH KHOOSAL	PR. NO.	930282
Signature		Date	08/10/2024
ARCHITECT:			
ARTEK 4 ARCHITECTS (Pty) Ltd Durban: 46 Lena Afters Road, Glenwood, Durban 4000 tel: 031 201 0445 fax: 031 201 0609 email: admin@artek4.co.za Port Shepstone: 19 Trapsdowns, Marine Drive, Sheby Beach tel: 039 662 2447 fax: 039 662 2446 email: admin@artek4.co.za			
F	ISSUED FOR STAGE 4 APPROVAL	AK	06/11/2024
E	ISSUED FOR COUNCIL SUBMISSION	OM	09/10/2024
D	UPDATED TO SUIT NEW ARCHITECTURAL LAYOUT	OM	02/07/2024
C	ISSUED FOR STAGE 3	OM	25/03/2024
B	ISSUED FOR STAGE 2	YG	29/09/2023
A	STAGE 2 - CONCEPT DESIGN	YG	27/09/2023
REV	DESCRIPTION	BY	DATE
REVISION			
CONSULTING MECHANICAL ENGINEERS:			
MAHESH KHOOSAL & ASSOCIATES Mechanical Consulting Engineers P.O. Box 1000, Durban 4000 PH: 031-536 8306 FAX: 031-536 8276			
PROJECT :			
NEW NTSHINGWE SATELLITE POLICE STATION Portion 481 of the Farm Makathini Flats No 16533 Access road P441, Ntshongwe, uMhlabuyalingana Local Municipality for the South African Police Services			
DRAWING TITLE :			
FIRE PLAN PART A GROUND FLOOR LAYOUT			
DESIGNED :	AK	DATE :	26/09/23
DRAWN :	OM	SCALE :	1:100
CHECKED :	AK	PROJ. No. :	M693
PRINCIPAL :	AK	DRG. No. :	M693/F/01
		Rev. :	F

STAGE 4 APPROVAL



STAGE 4 APPROVAL

DESIGNED :	AK	DATE :	SCALE : 1:100	
DRAWN :	OM	26/09/23	PROJ. No. M693	
CHECKED :	AK		DRG. No.:	Rev.:
PRINCIPAL :	MK		M693/SD/01	F



DESIGNED :	AK	DATE :	SCALE : 1:100	
DRAWN :	OM	26/09/23	PROJ. No. M693	
CHECKED :	AK		DRG. No.:	Rev.:
PRINCIPAL :	MK		M693/WS/01	G