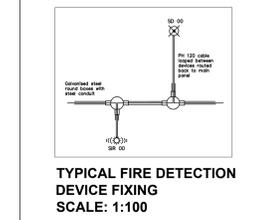


- NOTES:**
- FOR GENERAL NOTES REFER TO DRAWING
 - DRAWINGS ARE NOT TO BE SCALED. ALL LEVELS AND DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
 - THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS, SCHEDULES AND SPECIFICATIONS RELATED TO THIS PROJECT.
 - ALL BUILDING WORK AND MATERIALS ARE TO COMPLY WITH LOCAL AUTHORITY'S REQUIREMENTS AND ARE TO BE IN ACCORDANCE WITH SANS 10400 NATIONAL BUILDING REGULATIONS AS WELL AS THE RELEVANT MUNICIPAL BY-LAWS.
- FIRE DETECTION AND FIRE SUPPRESSION LEGEND:**
- Heat detector
 - Optical smoke detector
 - Optical smoke detector in ceiling void
 - Smoke/Sounder combination
 - Strobe
 - Manual call point
 - Green break key-box
 - Break glass key-box
 - REMRAD System
 - High sensitivity smoke detector
 - Fire alarm panel
 - Public address panel
 - Evacuation Sounder/Siren
 - Evacuation Speaker
 - PVSD Ceiling



PROFESSIONAL APPROVAL CONSULTANT
Name: Wessel Johannes Jacobus Roux Date: 2025/11/28
Signature: [Signature] Pr no: 20120210

PROFESSIONAL DESIGN CONSULTANT
Name: Ozayr Adam Date: 2025/11/28
Signature: [Signature] Pr no: 202301456

OCCUPANCY CLASSIFICATION:
G1 - OFFICES
E1 - PLACE OF DETENTION
J2 - MODERATE RISK STORAGE

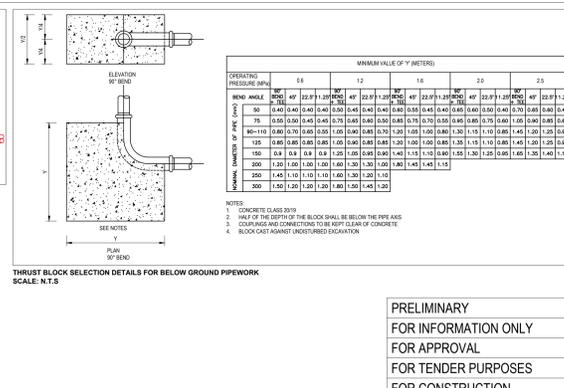
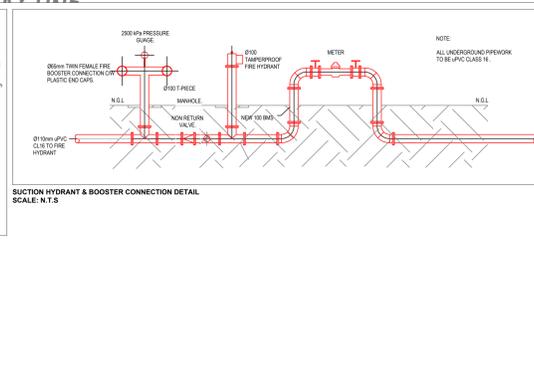
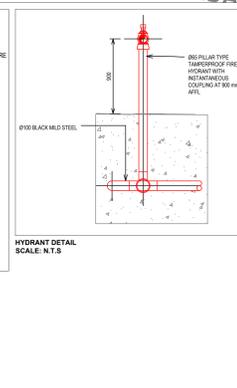
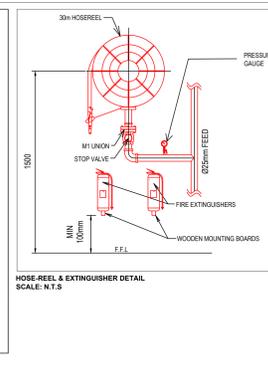
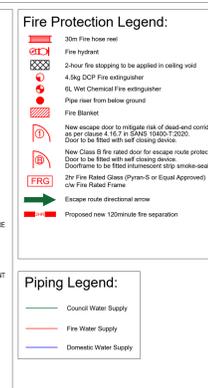
NO	DATE	DESCRIPTION	DRAWN BY
01	2025/11/28	ISSUED FOR TENDER	GA

CLIENT NAME:
SAPS MSINSINI

ARCHITECT DETAILS:
SAKHISIZWE ARCHITECTS
Physical Address: 33 Adelaide-Torres Dr, Durban North, 4051
Postal Address: Private Bag x 12, Gateway, 4321

CONSULTANTS DETAILS:
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Dihlase Consulting Engineers
4 Stockdale Avenue
Website: www.dihlase.co.za
Tel: (031) 266-7961
Fax: 090760088
Email: info@dihlase.co.za

- SITE SCALE: 1:125**
- GENERAL FIRE PROTECTION NOTES:**
- ALL WORK TO COMPLY WITH SANS 10400 T 2024 EDITION 5
 - OCCUPANCY CLASSIFICATION E1 - G1
 - MAXIMUM NUMBER OF OCCUPANTS - AS PER SEAT COUNT
 - REFERENCE MUST BE MADE TO ARCHITECTURAL PLANS FOR SECTIONS AND ELEVATIONS.
 - FIRE PLANS TO BE READ IN CONJUNCTION WITH NATIONAL FIRE DESIGN REPORT.
 - ALL SAFETY DISTANCES COMPLY WITH SANS 10400 T 2024 FIRE PROTECTION TABLE 2.
 - FIRE EXTINGUISHERS TO BE INSTALLED IN ACCORDANCE WITH SANS 10400 2004 AND SANS 10105 AS PER PLAN.
 - FIRE EXTINGUISHERS TO BE HUNG ON PURPOSE MADE BOARDS, AS INDICATED ON PLAN OR RETAINED IN THE EXISTING FIRE EXTINGUISHER CABINETS ON SITE.
 - FIRE HOSEREELS ON DRAGON SEAL AND TAMPERPROOF FIRE HYDRANTS TO BE INSTALLED AS PER SANS 10400 2004 AS PER PLAN.
 - ESCAPE DOORS MAY ONLY BE FITTED WITH LOCKING DEVICES APPROVED BY LOCAL AUTHORITY. DOORS TO BE UNLOCKED DURING WORK HOURS.
 - ALL FIRE DOORS TO COMPLY WITH SANS 1202 AND BE PROVIDED WITH SELF-CLOSING DEVICES AS WELL AS INTUMESCENT SMOKE SEAL STRIPS.
 - FIRE SEALING AND FIRE FRONTS AND INTUMESCENT FRONTS OF SERVICES IN ACCORDANCE WITH FIRE ENGINEER'S SPECIFICATION AND TO BE COMPLETED BY APPROVED FIRE SEALING SPECIALIST CONTRACTOR. ALL PENETRATIONS FROM DIFFERENT OCCUPANCIES TO BE FIRE SEALED ACCORDINGLY.
 - FLOOR COVERINGS TO COMPLY WITH SANS 10400.
 - WALL COVERINGS TO COMPLY WITH SANS 10400.
 - EMERGENCY LIGHTING TO BE SPECIFIED BY ELECTRICAL CONSULTANT AS PART OF THE BUILDING SHELL AND DOES NOT FORM A PART OF FIRE SERVICES SCOPE OF WORKS. EMERGENCY LIGHTING IS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH SANS 10114 LIGHTING CODES BY AN ACCREDITED INSTALLER WITH A MINIMUM AVERAGE ILLUMINANCE OF 50 LUX ON A HORIZONTAL PLANE 1.50m ABOVE THE FLOOR.
 - PHOTOLUMINESCENT STATUARY EMERGENCY SIGNS TO BE PROVIDED AND TO COMPLY WITH SANS 1186 PART 1 AND 5.
 - SUPPRESSED CHANGES AND ITS SUPPORTING MEMBERS, SHALL BE OF AN EQUAL OR BETTER MATERIAL.
 - FIRE RATED SEPARATION WILL NEED TO BE PROVIDED FOR ANY SHARED WALLS OF DIFFERENT OCCUPANCIES.
 - FIRE WALLS TO BE CONSTRUCTED FULL HEIGHT FROM FLOOR TO INSIDE OF SLAB OR ROOF COVERING WITH ALL PENETRATIONS AND GAPS FIRE SEALED OR PROVIDED WITH APPROPRIATE FIRE DAMPER TO SANS 193.
 - ALL ABOVE AND BELOW GROUND PIPING TO BE BLACK MILD STEEL. THURST BLOCKS TO BE INSTALLED ON ANY BENDS BELOW GROUND.
 - BELOW GROUND FIREWORK TO BE WRAPPED IN DENSOTEPE.
 - TO COMPENSATE FOR THE LACK OF WATER PRESSURE ON SITE, A DEGRADED WATER STORAGE TANK AND DIESEL DRIVEN PUMP ON ELECTRICAL JOCKEY PUMP WILL NEED TO BE INSTALLED. THE PUMP/TANK SYSTEM WILL ENSURE 300kPa MINIMUM CONSISTANT PRESSURE AT ALL FIRE EQUIPMENT FITTINGS IS MAINTAINED AND WILL BE SIZED FOR OPERATION OF 2 HYDRANTS AT 120L/min PER HYDRANT FOR AN HOUR.
 - FIRE WATER SYSTEM TO HAVE A MINIMUM 15% EXCESS CAPACITY TO OVERCOME IN THE EVENT OF PUMP FAILURE.
 - FOR THE INVERTER INSTALLATION BATTERY STORAGE AREA, THIS ZONE SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS OUTLINED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT.
 - GENERATOR/TRANSFORMER AREAS ON SITE TO ADDRESS TO THE FIRE SAFETY REQUIREMENTS AND RECOMMENDATIONS PROVIDED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT.
 - IN THE EVENT THE CLIENT OPTS FOR SOLAR PANELS TO BE INSTALLED ON SITE, THE INSTALLER AND DESIGN SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS AND RECOMMENDATIONS OUTLINED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT.
 - FIRE SUPPRESSION FOR BELIEVED ROOM IS NOT REQUIRED AS PART OF SANS 10400 T 2024 FIRE PROTECTION. SHOULD THE CLIENT REQUIRE A FIRE SUPPRESSION SYSTEM TO BE INSTALLED, THIS WILL NOT FORM PART OF THE FIRE ENGINEER'S SCOPE AND SHALL BE DONE BY A SPECIALIST.
 - MANUAL FIRE DETECTION SYSTEMS TO BE INSTALLED IN ACCORDANCE WITH SANS 101201 RECALLING.
 - FIRE DETECTION SYSTEM TO BE AS PER FIRE DETECTION LAYOUT. HVAC SYSTEM TO AUTO SHUT OFF IN THE EVENT OF A FIRE FOR ZONES WITH ADDRESSABLE FIRE DETECTION SYSTEMS.



MECHANICAL (FIRE)

PROJECT NAME:
SAPS MSINSINI

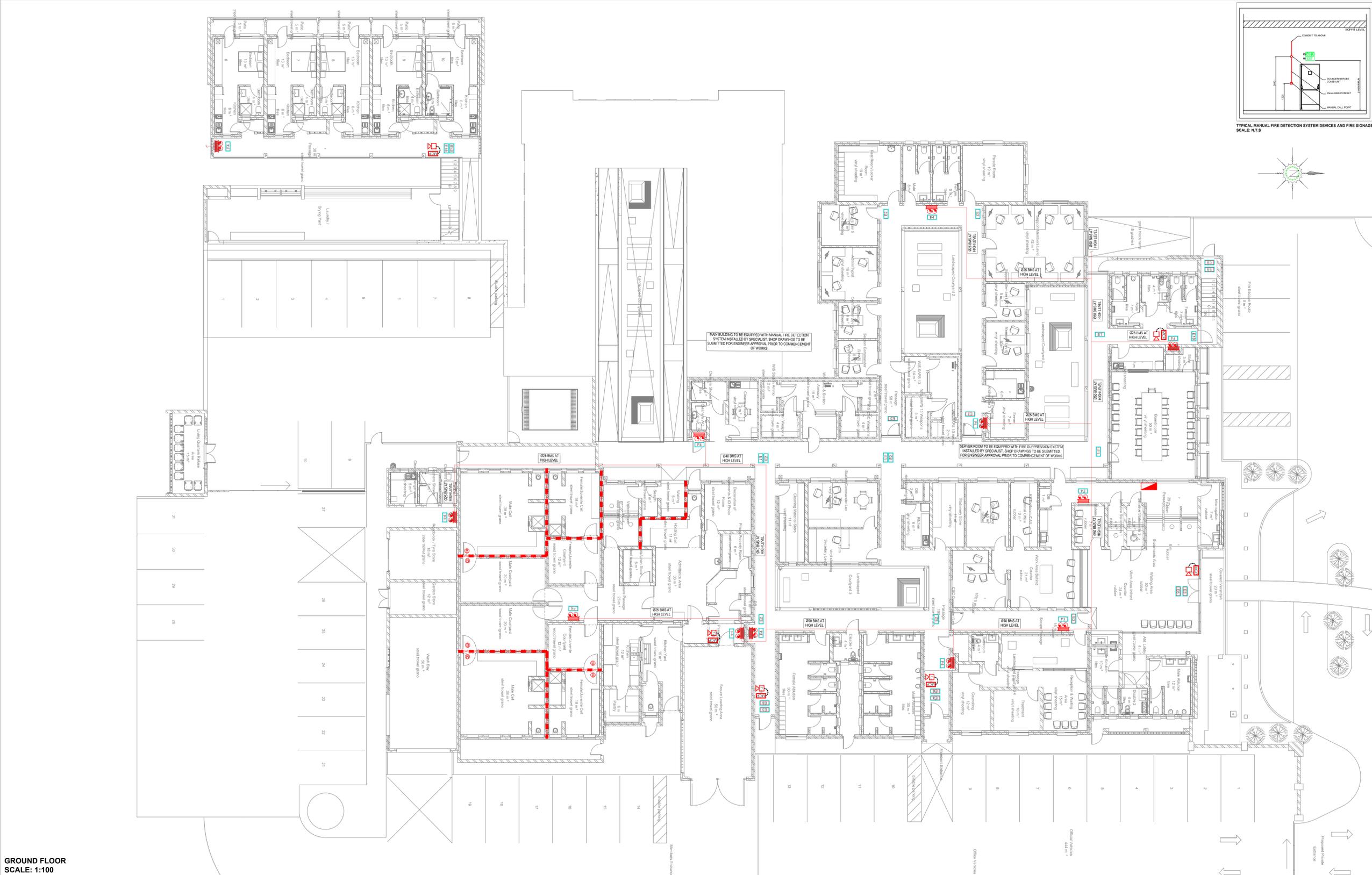
SHEET TITLE:
SITE FIRE PROTECTION LAYOUT

DATE: 2025/11/28
PAPER SIZE: A0
SCALE: 1:125

REF NO: 0000
DESIGNED BY: O ADAM
DRAWN BY: O ADAM
CHECKED BY: W J TOULX

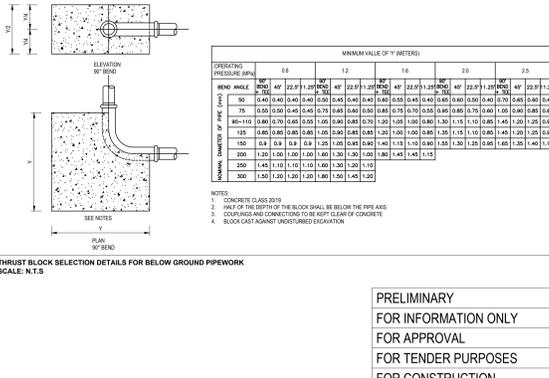
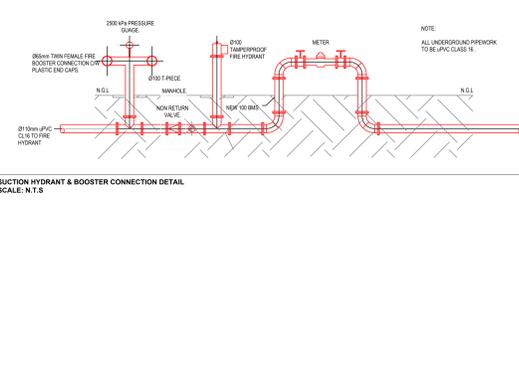
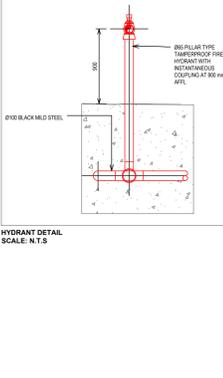
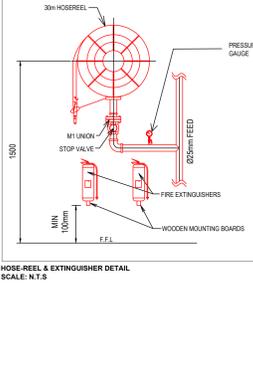
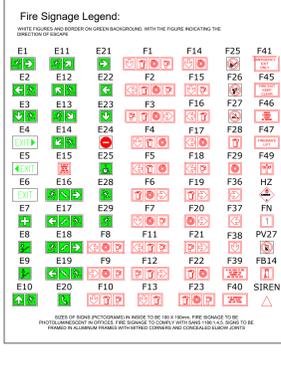
DRAWING NUMBER: D0000-MF-A0-01
REV: 01

PRELIMINARY FOR INFORMATION ONLY FOR APPROVAL FOR TENDER PURPOSES FOR CONSTRUCTION



GROUND FLOOR SCALE: 1:100

- GENERAL FIRE PROTECTION NOTES:**
- ALL WORK TO COMPLY WITH SANS 1040:1 2004 EDITION 5
 - OCCUPANCY CLASSIFICATION E1 - OFFICE
 - MAXIMUM NUMBER OF OCCUPANTS - AS PER SEAT COUNT
 - REFERENCE MUST BE MADE TO ARCHITECTURAL PLANS FOR SECTIONS AND ELEVATIONS
 - FIRE PLANS TO BE READ IN CONJUNCTION WITH NATIONAL FIRE DESIGN REPORT
 - ALL SAFETY DISTANCES COMPLY WITH SANS 1040:1 2004 FIRE PROTECTION TABLE 2
 - FIRE EXTINGUISHERS TO BE INSTALLED IN ACCORDANCE WITH SANS 1040:1 2004 AND SANS 1015 AS PER PLAN
 - FIRE EXTINGUISHERS TO BE HUNG ON PURPOSE MADE BOARDS, AS INDICATED ON PLAN OR RETAINED IN THE EXISTING FIRE EXTINGUISHER CABINETS ON SITE
 - FIRE HOSEREELS ON DRAGON SEAL AND TAMPERPROOF FIRE HYDRANTS TO BE INSTALLED AS PER SANS 1040:1 2004 AS PER PLAN
 - ESCAPE DOORS MAY ONLY BE FITTED WITH LOCKING DEVICES APPROVED BY LOCAL AUTHORITY. DOORS TO BE UNLOCKED DURING WORK HOURS
 - ALL FIRE DOORS TO COMPLY WITH SANS 1020 AND BE PROVIDED WITH SELF-CLOSING DEVICE AS WELL AS INTUMESCENT STRIKE SEA STRIPS
 - FIRE SEALING OF PENETRATIONS AND INTUMESCENT FINISHES OF SERVICES IN ACCORDANCE WITH FIRE ENGINEER'S SPECIFICATION AND TO BE COMPLETED BY APPROVED FIRE SEALING SPECIALIST CONTRACTOR. ALL PENETRATIONS FROM DIFFERING OCCUPANCIES TO BE FIRE SEALED ACCORDINGLY
 - FLOOR COVERINGS TO COMPLY WITH SANS 1040
 - WALL COVERINGS TO COMPLY WITH SANS 1040
 - EMERGENCY LIGHTING TO BE SPECIFIED BY ELECTRICAL CONSULTANT AS PART OF THE BUILDING SHELL AND DOES NOT FORM A PART OF FIRE SERVICES SCOPE OF WORKS. EMERGENCY LIGHTING IS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH SANS 1014:1 LIGHTING CODES BY AN ACCREDITED INSTALLER WITH A MINIMUM AVERAGE ILLUMINANCE OF 50 LUX ON A HORIZONTAL PLANE 100mm ABOVE THE FLOOR
 - PHOTOLUMINESCENT STATUARY EMERGENCY SIGNS TO BE PROVIDED AND TO COMPLY WITH SANS 1186: PART 1 AND 5
 - SUPPLEMENTED CEILING AND ITS SUPPORTING MEMBERS, SHALL BE OF NON-COMBUSTIBLE MATERIAL
 - FIRE RATED SEPARATION WILL NEED TO BE PROVIDED FOR ANY SHARED WALLS OF DIFFERENT OCCUPANCIES
 - FIRE WALLS TO BE CONSTRUCTED FULL HEIGHT FROM FLOOR TO INTERIOR OF SLAB OR ROOF COVERING WITH ALL PENETRATIONS AND GAPS FIRE SEALED OR PROVIDED WITH APPROPRIATE FIRE DAMPER TO SANS 193
 - ALL ABOVE AND BELOW GROUND PERIPHERY TO BE BLACKENED STEEL. THURST BLOCKS TO BE INSTALLED ON ANY BENDS BELOW GROUND
 - BELOW GROUND PERIPHERY TO BE WRAPPED IN DENSOTE TAPE
 - ANY FLAMMABLE LIQUIDS OR GASES TO BE STORED AND HANDLED IN ACCORDANCE LOCAL AUTHORITY BY LAWS
 - TO COMPENSATE FOR THE LACK OF WATER PRESSURE ON SITE, A DEGRADED WATER STORAGE TANK AND DIESEL DRIVEN PUMP ON ELECTRICAL JOCKEY PUMP WILL NEED TO BE INSTALLED. THE PUMP/TANK SYSTEM WILL ENSURE 300kPa MINIMUM CONTINUOUS PRESSURE AT ALL FIRE EQUIPMENT FITTINGS IS MAINTAINED AND WILL BE SIZED FOR OPERATION OF HYDRANTS AT 200kPa PER HYDRANT FOR AN HOUR
 - FIRE WATER SYSTEM TO HAVE A MINIMUM 15% EXCESS CAPACITY TO OVER-RENDERANCY IN THE EVENT OF PUMP FAILURE
 - FOR THE INVERTER INSTALLATION BATTERY STORAGE AREA, THIS ZONE SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS OUTLINED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT
 - GENERATOR/TRANSFORMER AREAS ON SITE TO ADDRESS TO THE FIRE SAFETY REQUIREMENTS AND RECOMMENDATIONS PROVIDED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT
 - IN THE EVENT THE CLIENT OPTS FOR SOLAR PANELS TO BE INSTALLED ON SITE, THE INSTALLER AND DESIGN SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS AND RECOMMENDATIONS OUTLINED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT
 - FIRE SUPPRESSION SYSTEM FOR SERVER ROOM IS NOT REQUIRED AS PART OF SANS 1040:1 2004 COMPLIANCE. SHOULD THE CLIENT REQUIRE A FIRE SUPPRESSION SYSTEM TO BE INSTALLED, THIS WILL NOT FORM PART OF THE FIRE ENGINEER'S SCOPE AND SHALL BE DONE BY A SPECIALIST
 - MANUAL FIRE DETECTION SYSTEM TO BE INSTALLED IN ACCORDANCE WITH SANS 1040:1 2004 INSTALLATION
 - FIRE DETECTION SYSTEM TO BE AS PER FIRE DETECTION LAYOUT HVAC SYSTEM TO AUTO SHUT OFF IN THE EVENT OF A FIRE FOR ZONES WITH ADDRESSABLE FIRE DETECTION SYSTEMS



MECHANICAL (FIRE)

PROJECT NAME: SAPS MSINSINI

SHEET TITLE: GROUND FLOOR FIRE PROTECTION LAYOUT

DATE: 2025/11/28 REF NO: 0000

PAPER SIZE: A0 DESIGNED BY: O ADAM

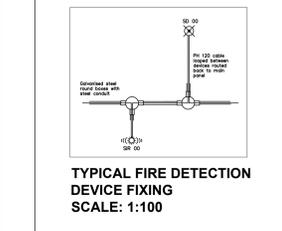
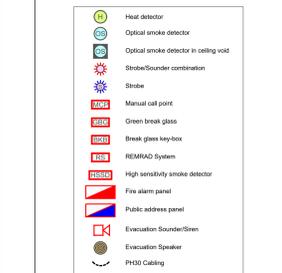
SCALE: 1:100 DRAWN BY: O ADAM

DRAWING NUMBER: D0000-MF-A0-02 CHECKED BY: W J TROUX

REV: 01

PRELIMINARY FOR INFORMATION ONLY FOR APPROVAL FOR TENDER PURPOSES FOR CONSTRUCTION

- NOTES:**
- FOR GENERAL NOTES REFER TO DRAWING
 - DRAWINGS ARE NOT TO BE SCALED. ALL LEVELS AND DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO COMMENCEMENT OF WORKS. ANY DISCREPANCIES TO BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY
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 - ALL BUILDING WORK AND MATERIALS ARE TO COMPLY WITH LOCAL AUTHORITY'S REQUIREMENTS AND ARE TO BE IN ACCORDANCE WITH SANS 1040 NATIONAL BUILDING REGULATIONS AS WELL AS THE RELEVANT MUNICIPAL BY-LAWS



PROFESSIONAL APPROVAL CONSULTANT
 Name: Wessel Johannes Jacobus Roux Date: 2025/11/28
 Signature: [Signature] Pr no: 20120210

PROFESSIONAL DESIGN CONSULTANT
 Name: Ozayr Adam Date: 2025/11/28
 Signature: [Signature] Pr no: 202301456

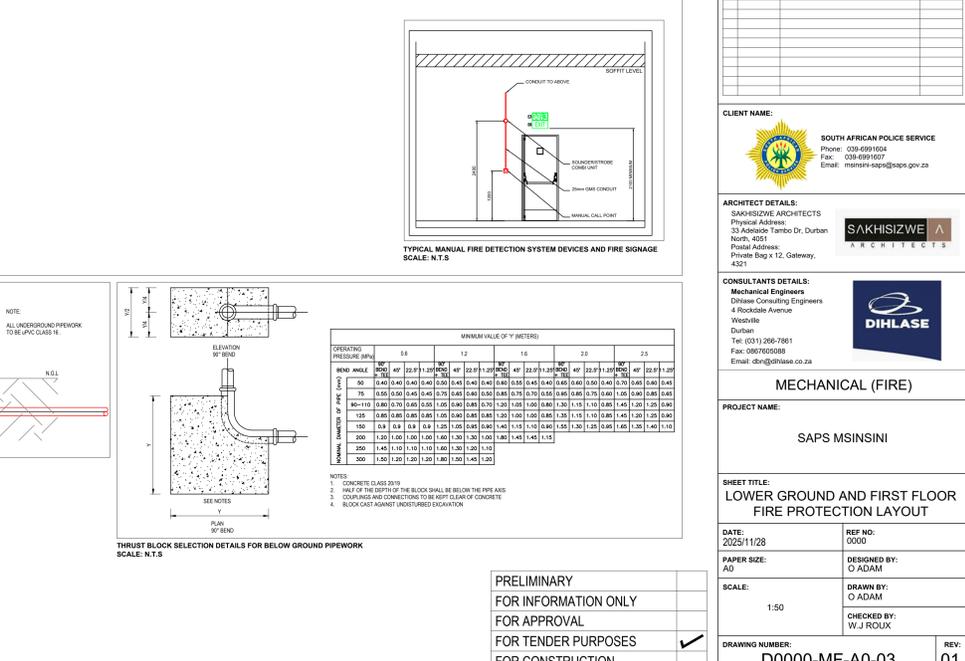
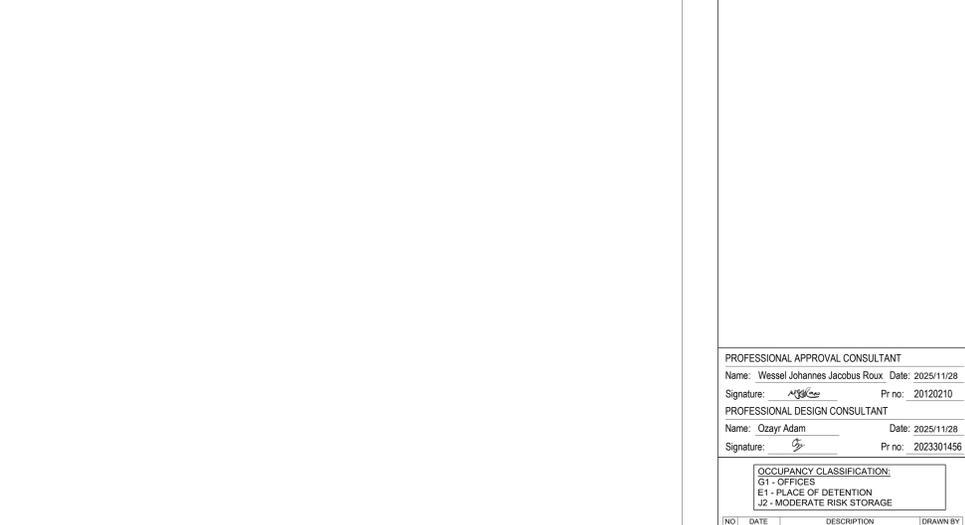
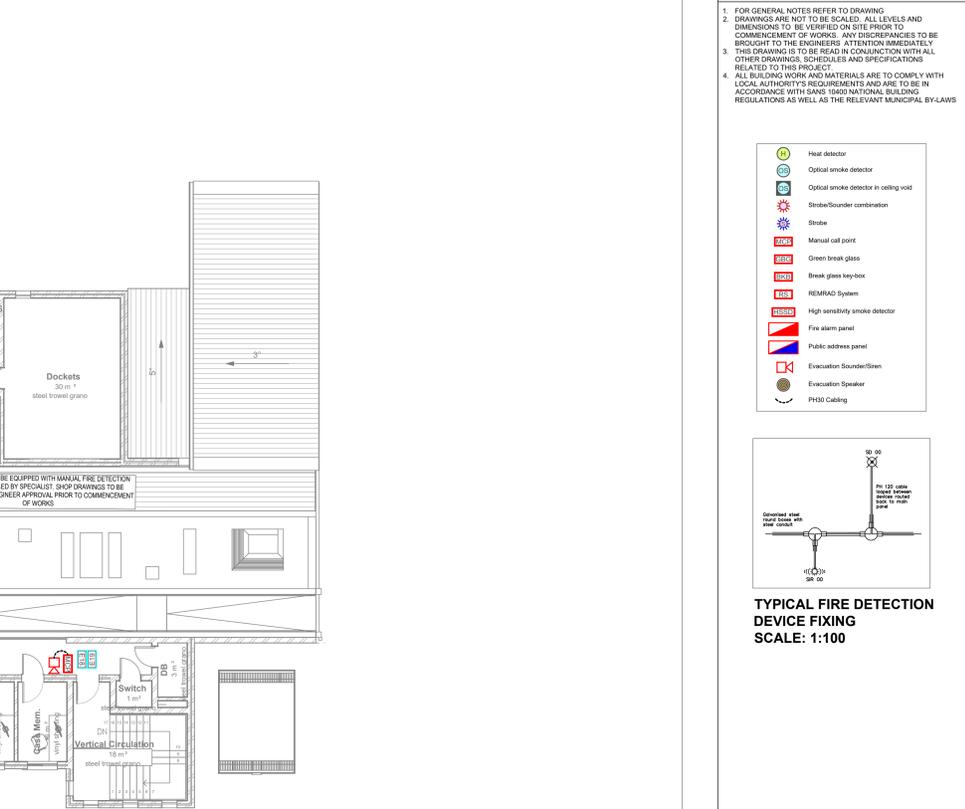
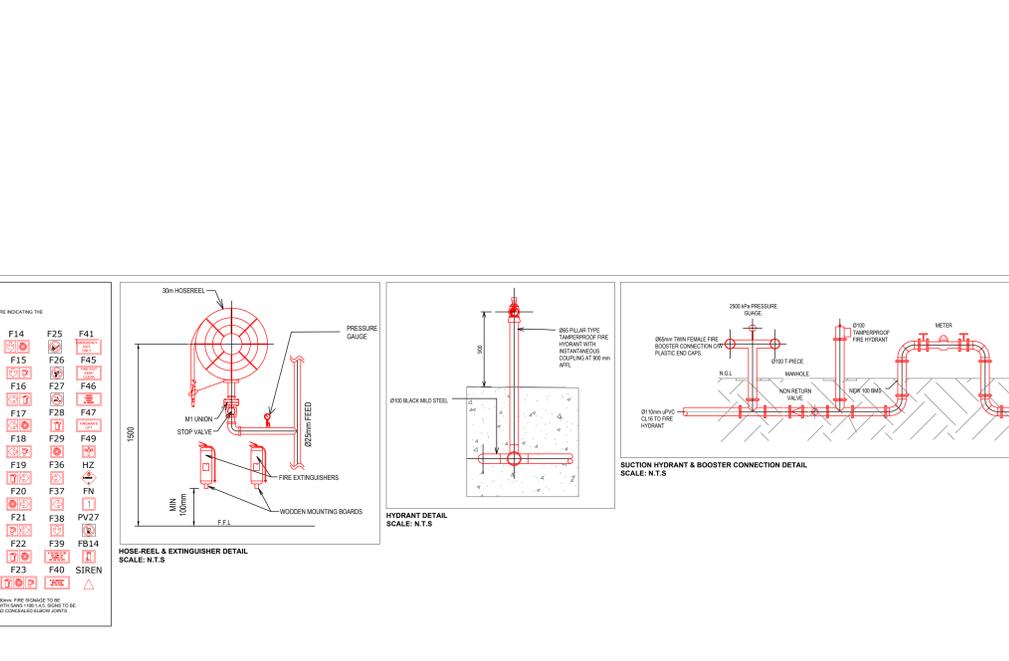
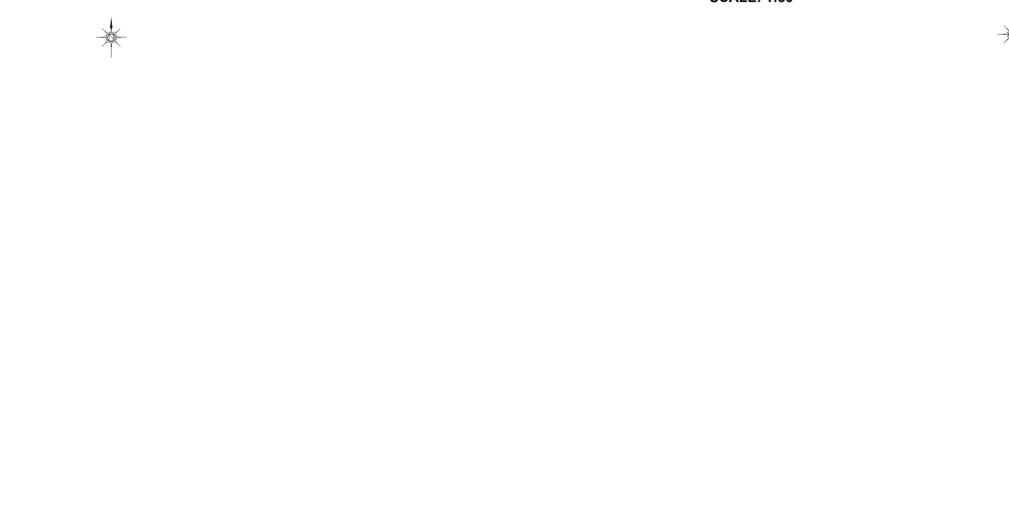
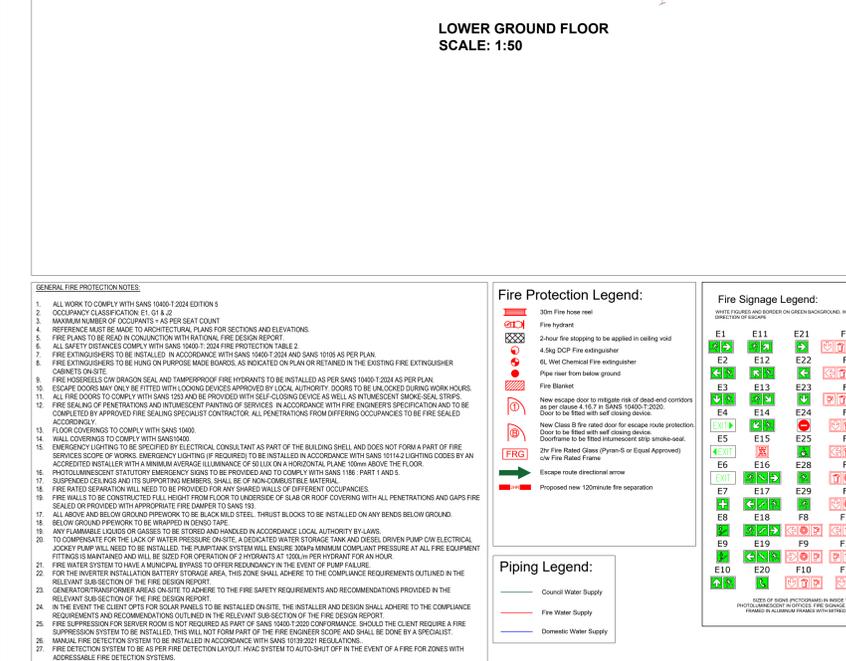
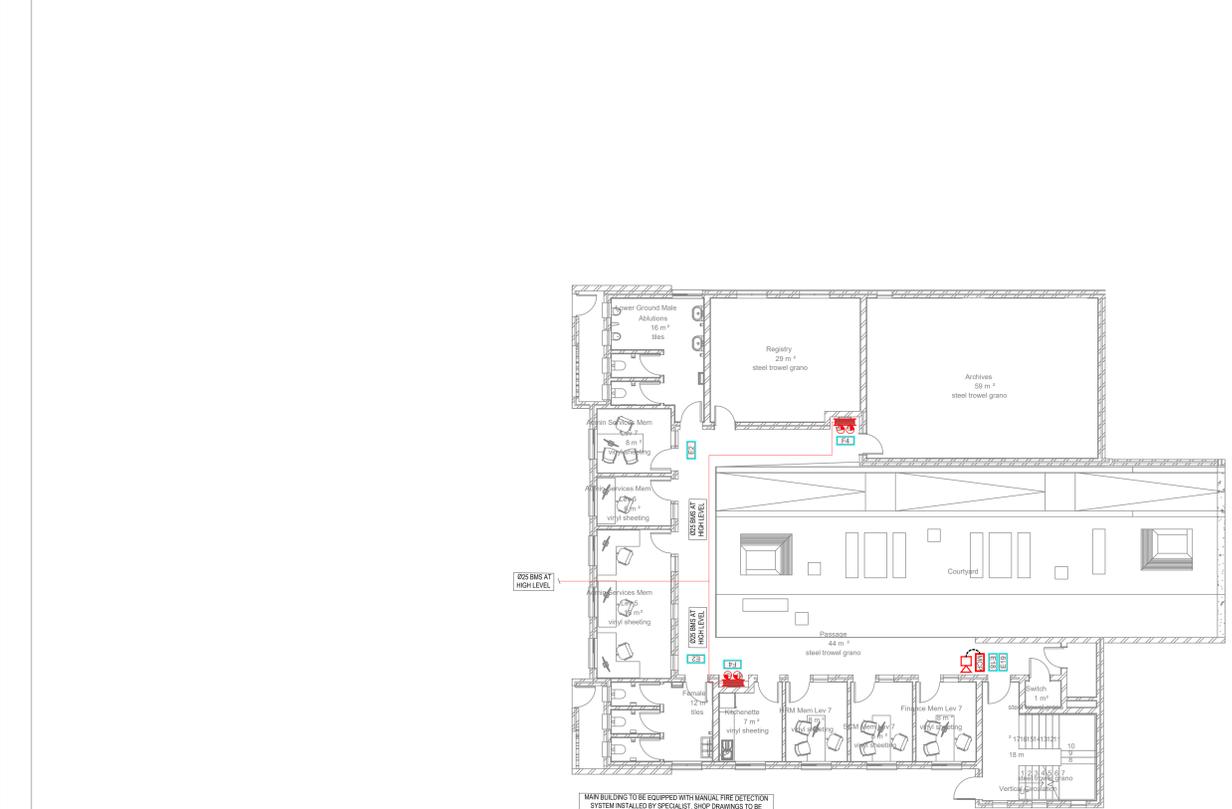
OCCUPANCY CLASSIFICATION:
 G1 - OFFICES
 E1 - PLACE OF DETENTION
 J2 - MODERATE RISK STORAGE

NO	DATE	DESCRIPTION	DRAWN BY
01	2025/11/28	ISSUED FOR TENDER	GA

CLIENT NAME:
 SOUTH AFRICAN POLICE SERVICE
 Phone: 021-6991654
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 Email: msoom-esp@scps.gov.za

ARCHITECT DETAILS:
 SAKHISIZWE ARCHITECTS
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CONSULTANTS DETAILS:
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 Dhlase Consulting Engineers
 4 Rockside Avenue
 Website: www.dhlase.co.za
 Tel: (011) 266-7961
 Fax: 0927600688
 Email: dhlase@scps.gov.za



GENERAL FIRE PROTECTION NOTES

- ALL WORK TO COMPLY WITH SANS 1040:1 2004 EDITION 5
- OCCUPANCY CLASSIFICATION: E1 - OFFICE
- MAXIMUM NUMBER OF OCCUPANTS - AS PER SEAT COUNT
- REFERENCE MUST BE MADE TO ARCHITECTURAL PLANS FOR SECTIONS AND ELEVATIONS
- FIRE PLANS TO BE READ IN CONJUNCTION WITH NATIONAL FIRE DESIGN REPORT
- ALL SAFETY DISTANCES COMPLY WITH SANS 1040:1 2004 FIRE PROTECTION TABLE 2
- FIRE EXTINGUISHERS TO BE INSTALLED IN ACCORDANCE WITH SANS 1040:1 2004 AND SANS 1015 AS PER PLAN
- FIRE EXTINGUISHERS TO BE HUNG ON PURPOSE MADE BOARDS, AS INDICATED ON PLAN OR RETAINED IN THE EXISTING FIRE EXTINGUISHER CABINETS ON SITE
- FIRE HOSEREELS ON DRAGON STEEL AND TAMPERPROOF FIRE HYDRANTS TO BE INSTALLED AS PER SANS 1040:1 2004 AS PER PLAN
- ESCAPE DOORS MAY ONLY BE FITTED WITH LOCKING DEVICES APPROVED BY LOCAL AUTHORITY. DOORS TO BE UNLOCKED DURING WORK HOURS
- ALL FIRE DOORS TO COMPLY WITH SANS 1020 AND BE PROVIDED WITH SELF-CLOSING DEVICE AS WELL AS INTUMESCENT SMOKE SEALED STRIPS
- FIRE SEALING OF PENETRATIONS AND INTUMESCENT FINISHES OF SERVICES IN ACCORDANCE WITH FIRE ENGINEER'S SPECIFICATION AND TO BE COMPLETED BY APPROVED FIRE SEALING SPECIALIST CONTRACTOR. ALL PENETRATIONS FROM DIFFERING OCCUPANCIES TO BE FIRE SEALED ACCORDINGLY
- FLOOR COVERINGS TO COMPLY WITH SANS 1040
- WALL COVERINGS TO COMPLY WITH SANS 1040
- EMERGENCY LIGHTING TO BE SPECIFIED BY ELECTRICAL CONSULTANT AS PART OF THE BUILDING SHELL AND DOES NOT FORM A PART OF FIRE SERVICES SCOPE OF WORKS. EMERGENCY LIGHTING IF REQUIRED TO BE INSTALLED IN ACCORDANCE WITH SANS 1014:1 LIGHTING CODES BY AN ACCREDITED INSTALLER WITH A MINIMUM AVERAGE ILLUMINANCE OF 50 LUX ON A HORIZONTAL PLANE 100mm ABOVE THE FLOOR
- PHOTOLUMINESCENT STATUARY EMERGENCY SIGNS TO BE PROVIDED AND TO COMPLY WITH SANS 1186 PART 1 AND 5
- SUPPRESSED CEILING AND ITS SUPPORTING MEMBERS, SHALL BE OF NON-COMBUSTIBLE MATERIAL
- FIRE RATED SEPARATION WILL NEED TO BE PROVIDED FOR ANY SHARED WALLS OF DIFFERENT OCCUPANCIES
- FIRE WALLS TO BE CONSTRUCTED FULL HEIGHT FROM FLOOR TO INTERIOR OF SLAB OR ROOF COVERING WITH ALL PENETRATIONS AND GAPS FIRE SEALED OR PROVIDED WITH APPROPRIATE FIRE DAMPER TO SANS 193
- ALL ABOVE AND BELOW GROUND FIREWORKS TO BE BLACKENED STEEL. THURST BLOCKS TO BE INSTALLED ON ANY BENDS BELOW GROUND
- BELOW GROUND FIREWORKS TO BE WRAPPED IN DENSITE TAPE
- ANY FLAMMABLE LIQUIDS OR GASES TO BE STORED AND HANDLED IN ACCORDANCE LOCAL AUTHORITY BY LAWS
- TO COMPENSATE FOR THE LACK OF WATER PRESSURE ON SITE, A DEGRADED WATER STORAGE TANK AND DIESEL DRIVEN PUMP ON ELECTRICAL JOCKEY PUMP WILL NEED TO BE INSTALLED. THE PUMP/TANK SYSTEM WILL ENSURE 300kPa MINIMUM CONSUMABLE PRESSURE AT ALL FIRE EQUIPMENT FITTINGS IS MAINTAINED AND WILL BE SIZED FOR OPERATION OF HYDRANTS AT 1200kPa PER HYDRANT FOR AN HOUR
- FIRE WATER SYSTEM TO HAVE A MINIMUM REDUNDANCY TO OVER REDUNDANCY IN THE EVENT OF PUMP FAILURE
- FOR THE INVERTER INSTALLATION BATTERY STORAGE AREA, THIS ZONE SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS OUTLINED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT
- GENERATOR/TRANSFORMER AREAS ON SITE TO ADHERE TO THE FIRE SAFETY REQUIREMENTS AND RECOMMENDATIONS PROVIDED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT
- IN THE EVENT THE CLIENT OPTS FOR SOLAR PANELS TO BE INSTALLED ON SITE, THE INSTALLER AND DESIGN SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS AND RECOMMENDATIONS OUTLINED IN THE RELEVANT SUBSECTION OF THE FIRE DESIGN REPORT
- FIRE SUPPRESSION FOR EACH ROOM IS NOT REQUIRED AS PART OF SANS 1040:1 2003 COMPLIANCE. SHOULD THE CLIENT REQUIRE A FIRE SUPPRESSION SYSTEM TO BE INSTALLED, THIS WILL NOT FORM PART OF THE FIRE ENGINEER SCOPE AND SHALL BE DONE BY A SPECIALIST
- MANUAL FIRE DETECTION SYSTEMS TO BE INSTALLED IN ACCORDANCE WITH SANS 1019:201 RECALLING
- FIRE DETECTION SYSTEM TO BE AS PER FIRE DETECTION LAYOUT. HVAC SYSTEM TO AUTO SHUT OFF IN THE EVENT OF A FIRE FOR ZONES WITH ADDRESSABLE FIRE DETECTION SYSTEMS

Fire Protection Legend:

- 30m Fire hose reel
- Fire hydrant
- 2-hour fire stopping to be applied in ceiling void
- 2-hour fire stopping to be applied in ceiling void
- 4.5kg DCP Fire extinguisher
- 6L Wet Chemical Fire extinguisher
- Pipe-riser from below ground
- Fire Blanket
- New escape door to mitigate risk of dead end conditions as per clause 16.1.1 of SANS 1040:1 2004. Door to be fitted with self-closing device.
- New Class B fire rated door for escape route protection. Door to be fitted with self-closing device.
- 2hr Fire Rated Glass (PhyreX or Equal Approved) c/w Fire Rated Frame
- Escape route directional arrow
- Proposed new 120minute fire separation

Fire Signage Legend:

E1	E11	F1	F14	F25	F41
E2	E12	F2	F15	F26	F45
E3	E13	F3	F16	F27	F46
E4	E14	F4	F17	F28	F47
E5	E15	F5	F18	F29	F49
E6	E16	F6	F19	F36	HZ
E7	E17	F7	F20	F37	FN
E8	E18	F8	F21	F38	PV27
E9	E19	F9	F12	F22	F39
E10	E20	F10	F13	F23	F40
E11	E21	F11	F14	F24	F41

Piping Legend:

- Council Water Supply
- Fire Water Supply
- Domestic Water Supply

HOSE-REEL & EXTINGUISHER DETAIL
SCALE: N.T.S.

HYDRANT DETAIL
SCALE: N.T.S.

SUCTION HYDRANT & BOOSTER CONNECTION DETAIL
SCALE: N.T.S.

THRUST BLOCK SELECTION DETAILS FOR BELOW GROUND PIPING
SCALE: N.T.S.

TYPICAL MANUAL FIRE DETECTION SYSTEM DEVICES AND FIRE SIGNAGE
SCALE: N.T.S.

GENERAL FIRE PROTECTION NOTES

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PROFESSIONAL APPROVAL CONSULTANT
Name: Wessel Johannes Jacobus Roux Date: 2025/11/28
Signature: [Signature] Pr no: 20120210

PROFESSIONAL DESIGN CONSULTANT
Name: Ozayr Adam Date: 2025/11/28
Signature: [Signature] Pr no: 202301456

OCCUPANCY CLASSIFICATION:
E1 - OFFICES
J2 - MODERATE RISK STORAGE

NO	DATE	DESCRIPTION	ISSUED FOR TENDER	DRAWN BY	QA
01	2025/11/28				

CLIENT NAME:
SOUTH AFRICAN POLICE SERVICE
Phone: 021-6991054
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Postal Address: Private Bag 12, Gateway, 4321

CONSULTANTS DETAILS:
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Dihlase Consulting Engineers
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Westville
Durban
Tel: (031) 266-7961
Fax: 031-6907088
Email: dch@dihlase.co.za

MECHANICAL (FIRE)

PROJECT NAME:
SAPS MSINSINI

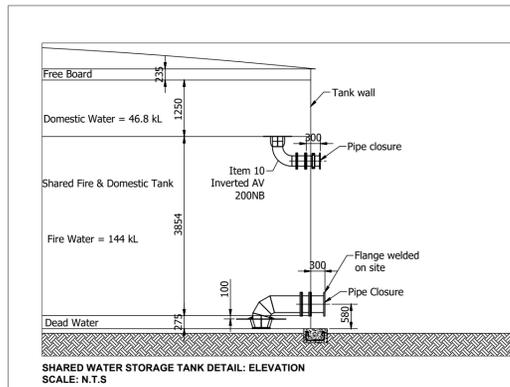
SHEET TITLE:
LOWER GROUND AND FIRST FLOOR FIRE PROTECTION LAYOUT

DATE: 2025/11/28
PAPER SIZE: A0
SCALE: 1:50

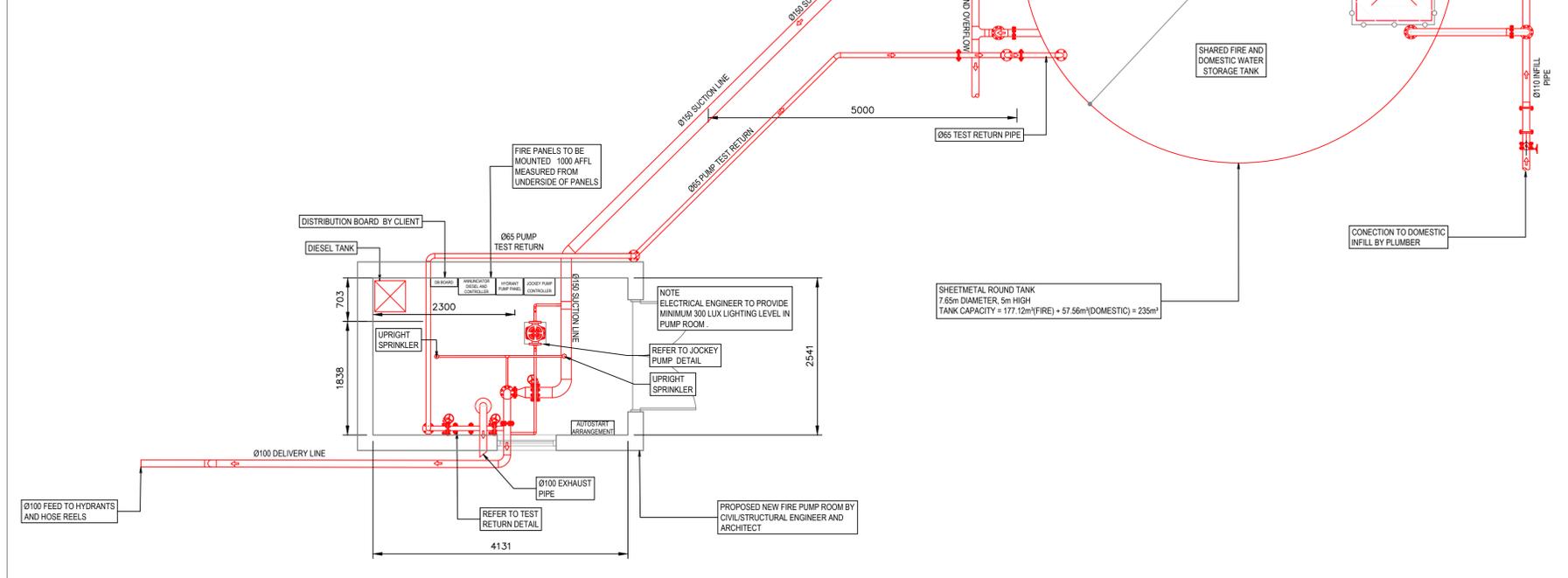
REF NO: 0000
DESIGNED BY: O ADAM
DRAWN BY: O ADAM
CHECKED BY: W J TROUX

DRAWING NUMBER: D0000-MF-A0-03
REV: 01

PRELIMINARY FOR INFORMATION ONLY FOR APPROVAL FOR TENDER PURPOSES FOR CONSTRUCTION

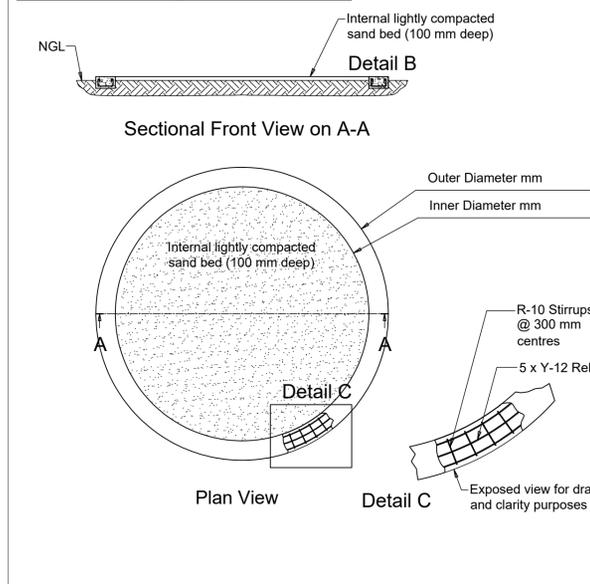


SHARED WATER STORAGE TANK DETAIL: ELEVATION
SCALE: N.T.S

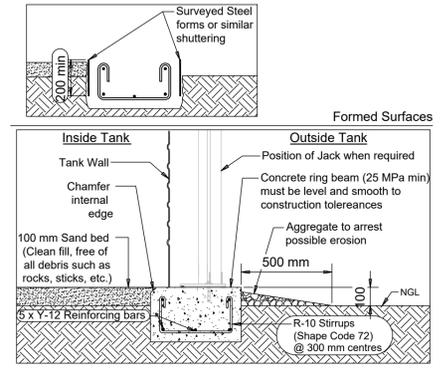
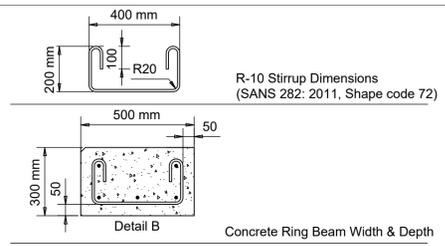


FIRE PUMP-ROOM AND SHARED WATER STORAGE TANK DETAIL: FLOOR PLAN (AERIAL VIEW)
SCALE: 1:50

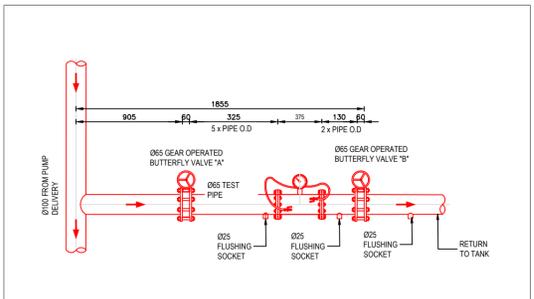
ST10 Concrete Ring Beam - Not to Scale



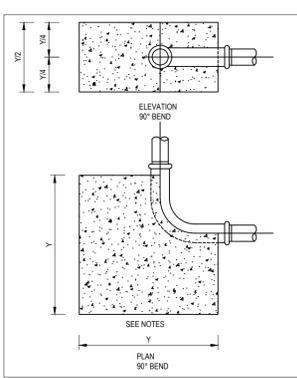
FIRE TANK PLINTH DETAIL
SCALE: N.T.S



Finished Ring Beam Detail



TEST RETURN PIPE DETAIL
SCALE: 1:30



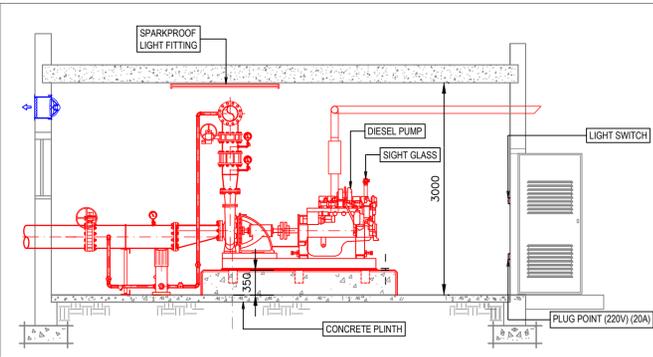
THRUST BLOCK SELECTION DETAILS FOR BELOW GROUND PIPEWORK
SCALE: N.T.S

MINIMUM VALUE OF "Y" (METERS)	0.6		1.2		1.6		2.0		2.5	
	90° BEND	45° BEND								
50	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
75	0.50	0.50	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45
100	0.60	0.60	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
125	0.70	0.70	0.65	0.65	0.65	0.65	0.65	0.65	0.65	0.65
150	0.80	0.80	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
175	0.90	0.90	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
200	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
225	1.10	1.10	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
250	1.20	1.20	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15
275	1.30	1.30	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
300	1.40	1.40	1.35	1.35	1.35	1.35	1.35	1.35	1.35	1.35

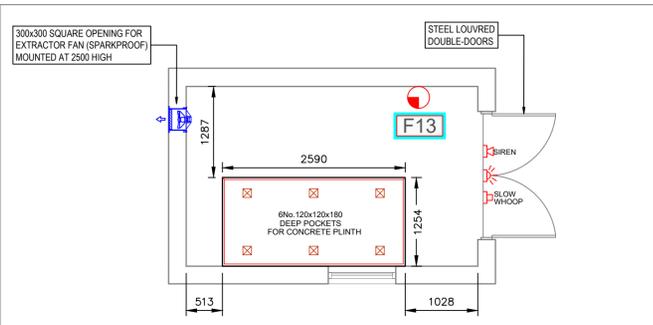
NOTES:
1. CONCRETE CLASS 20/19
2. HALF OF THE DEPTH OF THE BLOCK SHALL BE BELOW THE PIPE AXIS
3. COUPLINGS AND CONNECTIONS TO BE KEPT CLEAR OF CONCRETE
4. BLOCK CAST AGAINST UNDISTURBED EXCAVATION

GENERAL FIRE PROTECTION NOTES:

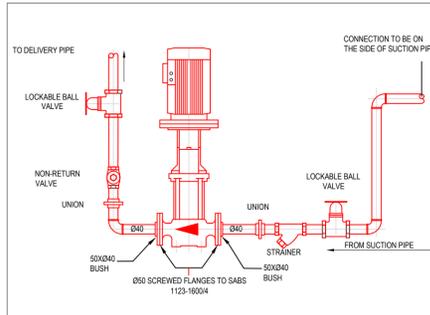
1. ALL WORK TO COMPLY WITH SANS 10400-T:2024 EDITION 5
2. OCCUPANCY CLASSIFICATION: E1, G1 & J2
3. MAXIMUM NUMBER OF OCCUPANTS - AS PER SEAT COUNT
4. REFERENCE MUST BE MADE TO ARCHITECTURAL PLANS FOR SECTIONS AND ELEVATIONS
5. FIRE PLANS TO BE READ IN CONJUNCTION WITH RATIONAL FIRE DESIGN REPORT
6. ALL SAFETY DISTANCES COMPLY WITH SANS 10400-T: 2024 FIRE PROTECTION TABLE 2
7. FIRE EXTINGUISHERS TO BE INSTALLED IN ACCORDANCE WITH SANS 10400-T:2024 AND SANS 10105 AS PER PLAN.
8. FIRE EXTINGUISHERS TO BE HUNG ON PURPOSE MADE BOARDS, AS INDICATED ON PLAN OR RETAINED IN THE EXISTING FIRE EXTINGUISHER CABINETS ON-SITE.
9. FIRE HOSE REELS CW/ DRAGON SEAL AND TAMPERPROOF FIRE HYDRANTS TO BE INSTALLED AS PER SANS 10400-T:2024 AS PER PLAN.
10. ESCAPE DOORS MAY ONLY BE FITTED WITH LOCKING DEVICES APPROVED BY LOCAL AUTHORITY. DOORS TO BE UNLOCKED DURING WORK HOURS.
11. ALL FIRE DOORS TO COMPLY WITH SANS 1253 AND BE PROVIDED WITH SELF-CLOSING DEVICE AS WELL AS INTUMESCENT SMOKE-SEAL STRIPS
12. FIRE SEALING OF PENETRATIONS AND INTUMESCENT PAINTING OF SERVICES IN ACCORDANCE WITH FIRE ENGINEER'S SPECIFICATION AND TO BE COMPLETED BY APPROVED FIRE SEALING SPECIALIST CONTRACTOR. ALL PENETRATIONS FROM DIFFERING OCCUPANCIES TO BE FIRE SEALED ACCORDINGLY.
13. FLOOR COVERINGS TO COMPLY WITH SANS 10400.
14. WALL COVERINGS TO COMPLY WITH SANS10400.
15. EMERGENCY LIGHTING TO BE SPECIFIED BY ELECTRICAL CONSULTANT AS PART OF THE BUILDING SHELL AND DOES NOT FORM A PART OF FIRE SERVICES SCORE OF WORKS. EMERGENCY LIGHTING (IF REQUIRED) TO BE INSTALLED IN ACCORDANCE WITH SANS 10114-2 LIGHTING CODES BY AN ACCREDITED INSTALLER WITH A MINIMUM AVERAGE ILLUMINANCE OF 50 LUX ON A HORIZONTAL PLANE 100mm ABOVE THE FLOOR.
16. PHOTOLUMINESCENT STATUARY EMERGENCY SIGNS TO BE PROVIDED AND TO COMPLY WITH SANS 1186 - PART 1 AND 5.
17. SUSPENDED CEILING AND ITS SUPPORTING MEMBERS, SHALL BE OF NON-COMBUSTIBLE MATERIAL
18. FIRE RATED SEPARATION WILL NEED TO BE PROVIDED FOR ANY SHARED WALLS OF DIFFERENT OCCUPANCIES
19. FIRE WALLS TO BE CONSTRUCTED FULL HEIGHT FROM FLOOR TO UNDERSIDE OF SLAB OR ROOF COVERING WITH ALL PENETRATIONS AND GAPS FIRE SEALED OR PROVIDED WITH APPROPRIATE FIRE DAMPER TO SANS 193.
19. ALL ABOVE AND BELOW GROUND PIPEWORK TO BE BLACK MILD STEEL. THRUST BLOCKS TO BE INSTALLED ON ANY BENDS BELOW GROUND.
18. BELOW GROUND PIPEWORK TO BE WRAPPED IN DENS-O-TAPE.
19. ANY FLAMMABLE LIQUIDS OR GASSES TO BE STORED AND HANDLED IN ACCORDANCE LOCAL AUTHORITY BY-LAWS.
20. TO COMPENSATE FOR THE LACK OF WATER PRESSURE ON-SITE, A DEDICATED WATER STORAGE TANK AND DIESEL DRIVEN PUMP CW ELECTRICAL JOCKEY PUMP WILL NEED TO BE INSTALLED. THE PUMPTANK SYSTEM WILL ENSURE 300kPa MINIMUM COMPLIANT PRESSURE AT ALL FIRE EQUIPMENT FITTINGS IS MAINTAINED AND WILL BE SIZED FOR OPERATION OF 2 HYDRANTS AT 1200l/min PER HYDRANT FOR AN HOUR.
21. FIRE WATER SYSTEM TO HAVE A MUNICIPAL BYPASS TO OFFER REDUNDANCY IN THE EVENT OF PUMP FAILURE.
22. FOR THE INVERTER INSTALLATION BATTERY STORAGE AREA, THIS ZONE SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS OUTLINED IN THE RELEVANT SUB-SECTION OF THE FIRE DESIGN REPORT.
23. GENERATOR/TRANSFORMER AREAS ON SITE TO ADHERE TO THE FIRE SAFETY REQUIREMENTS AND RECOMMENDATIONS PROVIDED IN THE RELEVANT SUB-SECTION OF THE FIRE DESIGN REPORT.
24. IN THE EVENT THE CLIENT OPTS FOR SOLAR PANELS TO BE INSTALLED ON-SITE, THE INSTALLER AND DESIGN SHALL ADHERE TO THE COMPLIANCE REQUIREMENTS AND RECOMMENDATIONS OUTLINED IN THE RELEVANT SUB-SECTION OF THE FIRE DESIGN REPORT.
25. FIRE SUPPRESSION FOR SERVER ROOM IS NOT REQUIRED AS PART OF SANS 10400-T:2020 CONFORMANCE. SHOULD THE CLIENT REQUIRE A FIRE SUPPRESSION SYSTEM TO BE INSTALLED, THIS WILL NOT FORM PART OF THE FIRE ENGINEER SCOPE AND SHALL BE DONE BY A SPECIALIST.
26. MANUAL FIRE DETECTION SYSTEM TO BE INSTALLED IN ACCORDANCE WITH SANS 10139:2021 REGULATIONS.
27. FIRE DETECTION SYSTEM TO BE AS PER FIRE DETECTION LAYOUT. HVAC SYSTEM TO AUTO-SHUT OFF IN THE EVENT OF A FIRE FOR ZONES WITH ADDRESSABLE FIRE DETECTION SYSTEMS.



FIRE PUMP-ROOM: TYPICAL SECTION
SCALE: N.T.S



FIRE PUMP-ROOM PLINTH DETAIL: FLOOR PLAN
SCALE: N.T.S



ELECTRICAL JOCKEY PUMP DETAIL
SCALE: 1:30

PRELIMINARY
FOR INFORMATION ONLY
FOR APPROVAL
FOR TENDER PURPOSES
FOR CONSTRUCTION

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PROFESSIONAL APPROVAL CONSULTANT
Name: Wessel Johannes Jacobus Roux Date: 2025/11/28
Signature: [Signature] Pr no: 20120210
PROFESSIONAL DESIGN CONSULTANT
Name: Ozayr Adam Date: 2025/11/28
Signature: [Signature] Pr no: 2023301456

OCCUPANCY CLASSIFICATION:
G1 - OFFICES
E1 - PLACE OF DETENTION
J2 - MODERATE RISK STORAGE

NO	DATE	DESCRIPTION	DRAWN BY
01	2025/11/28	ISSUED FOR TENDER	OA

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Postal Address:
Private Bag x 12, Gateway, 4321

SAKHISIZWE ARCHITECTS

CONSULTANTS DETAILS:
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Durban
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Email: dbn@dihlase.co.za

DIHLASE

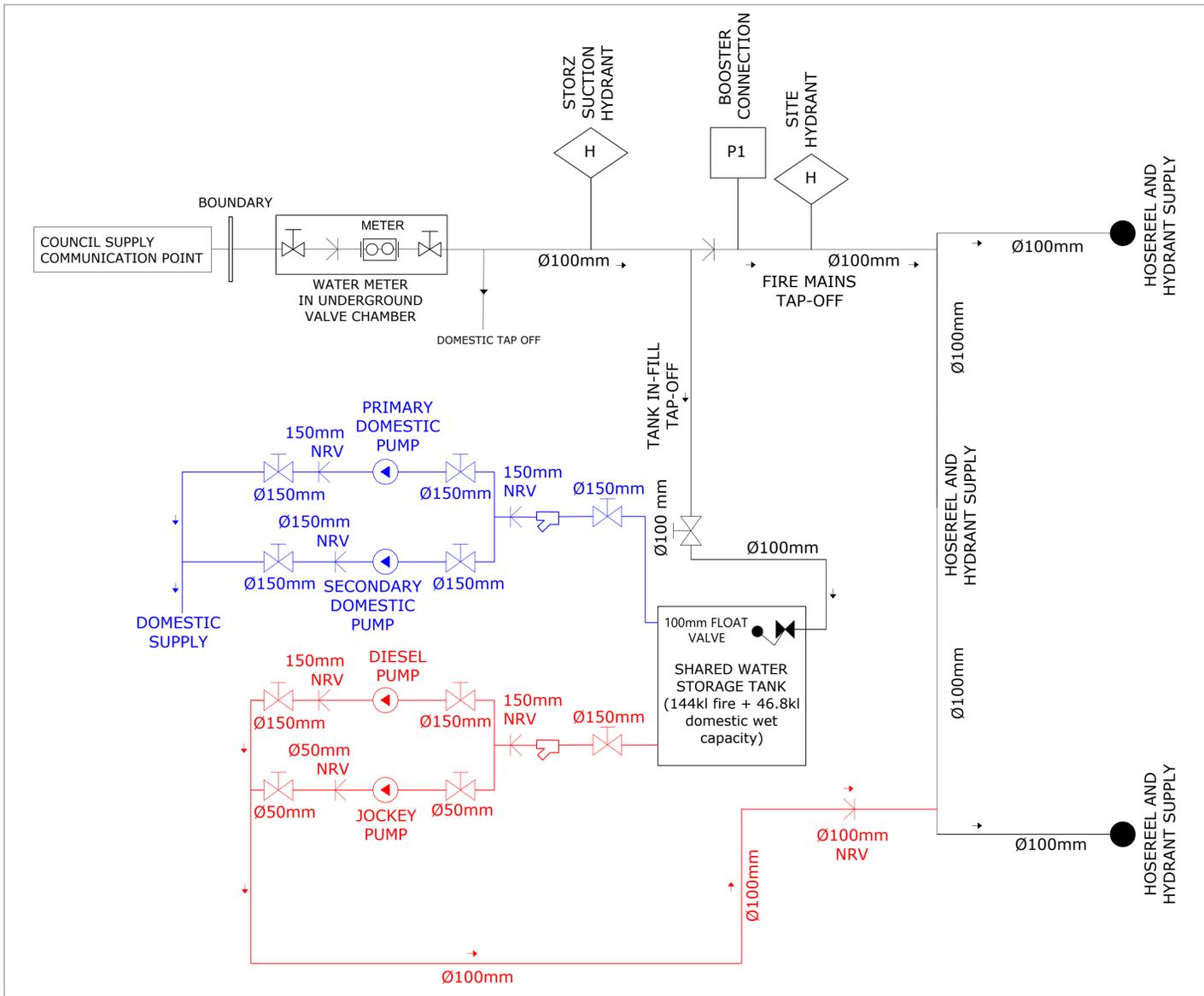
MECHANICAL (FIRE)
PROJECT NAME:
SAPS MSINSINI

SHEET TITLE:
FIRE PUMP ROOM AND DEDICATED FIRE STORAGE TANK LAYOUT

DATE: 2025/11/28	REF NO: 0000
PAPER SIZE: A1	DESIGNED BY: O ADAM
SCALE: 1:50	DRAWN BY: O ADAM
	CHECKED BY: W.J ROUX
DRAWING NUMBER: D0000-MF-A1-04	REV: 01

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PROCESS FLOW DIAGRAM
SCALE: N.T.S

PROCESS FLOW DIAGRAM LEGEND

ISOLATION VALVE	
NON RETURN VALVE	
STRAINER	
HYDRANT	
BOOSTER	

Diesel Pump Sizing Using Hazen-Williams Equation

Pipe length friction losses (m)	Fittings and valves expressed in equivalent meters of pipe									
Q	2400	300	120	101.6	76.2	50.8	38.1	25.4	12.7	6.35
C	120	100	80	70	60	50	40	30	20	15
d	101.6	76.2	50.8	38.1	25.4	12.7	6.35	3.175	1.5875	0.79375
P	0.0260069	0.0260069	0.0260069	0.0260069	0.0260069	0.0260069	0.0260069	0.0260069	0.0260069	0.0260069
pipework length	175	175	175	175	175	175	175	175	175	175
Total friction	4.5120667	4.5120667	4.5120667	4.5120667	4.5120667	4.5120667	4.5120667	4.5120667	4.5120667	4.5120667
A	0.00810732	0.00810732	0.00810732	0.00810732	0.00810732	0.00810732	0.00810732	0.00810732	0.00810732	0.00810732
V	4.9338331	4.9338331	4.9338331	4.9338331	4.9338331	4.9338331	4.9338331	4.9338331	4.9338331	4.9338331

Pipe fitting losses (m)	No.	Loss per fitting	Total
45 degree elbow	4	1.2192	4.8768
90 degree elbow	10	3.048	30.48
tee or cross (flow turned 90 degrees)	4	6.096	24.384
Butterfly valve	4	3.6076	14.6304
Total (m)			74.3712

Type	No.	Loss per fitting	Total
Static head	5		
Total head loss	6.99		
Minimum head at furthest fitting	4		
Pump Duty	10.99	bar	
Safety Factor	10%		
Required Pump Duty	12.08	bar	

FIRE PUMP SIZING
SCALE: N.T.S

PROFESSIONAL APPROVAL CONSULTANT
Name: Wessel Johannes Jacobus Roux Date: 2025/11/28
Signature: Pr no: 20120210

PROFESSIONAL DESIGN CONSULTANT
Name: Ozayr Adam Date: 2025/11/28
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CLIENT NAME:
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MECHANICAL (FIRE)

PROJECT NAME:
SAPS MSINSINI

SHEET TITLE:
PROCESS FLOW DIAGRAM

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SCALE: N.T.S	DRAWN BY: O ADAM
	CHECKED BY: W.J ROUX

DRAWING NUMBER: D0000-MF-A1-05 **REV:** 01

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