Johannesburg Water SOC Ltd

VOLUME 3

DRAWINGS

JW14452

BUILDING UPGRADE FOR THE MEGA WAREHOUSE IN LANGLAAGTE DEPOT

Date: ……

DRAWINGS ISSUED FOR TENDER

DOC / DRAWING REF NO.	DESCRIPTION
STRUCTURAL	
ECS328-STR-001 Rev B	General Notes
ECS328-STR-004 Rev B	Floor Plan Saw Cut Joints Layout & Details
ECS328-STR-005 Rev B	Ablution Block Layout & Typical Strip Foundation Details
ROADS & STORMWATER	
ECS328-SP-001 Rev B	Roads & Stormwater General Layout & Details
ECS328-TR-001 Rev B	Paving Setting-Out
MECHANICAL	
ECS328-M-001 Rev B	Mechanical – Wet Services Preliminary Layout
ECS328-M-002 Rev B	Mechanical – Fire Services Preliminary Sketch
ECS328-M-003 Rev B	Mechanical – HVAC Preliminary Layout
ELECTRICAL	
ECS328-E-001 Rev B	Lighting Layout
ECS328-E-002 Rev B	Small Power Layout
ECS328-E-003 Rev B	Wiring Channel & Wire-mesh Layout
ECS328-E-004 Rev B	Earthing System
ECS328-E-005 Rev B	Lighting Protection Systems Layout
ECS328-E-006 Rev B	CCTV System Layout
ECS328-E-007 Rev B	Access Control System Layout
ECS328-E-008 Rev B	Intruder Alarm System Layout
ECS328-E-009 Rev B	Intruder Alarm System Layout
ARCHITECTURAL	
ECS328-GEN-001 Rev B	Project Name Board Information
ECS328-ARCH-001 Rev B	Detailed Layout of Refurbishment & Upgrade at Mega Store, Workshop Building
ECS328-ARCH-002 Rev B	Mega Store Building Sections
ECS328-ARCH-003 Rev B	Existing Plan Layout for Demolitions
ECS328-ARCH-004 Rev B	Mega Store Elevations

GENERAL NOTES

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS' DRAWINGS AND ENGINEER'S DRAWINGS.
2. DIMENSIONS MUST NOT BE SCALED OR ASSUMED. AFTER NOTIFICATION, DISCREPANCIES OR MISSING DIMENSIONS WILL BE CORRECTED IN WRITING BY THE ENGINEER.
3. COMPACTION RESULTS MUST BE PROVIDED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK BEING CARRIED OUT.
4. UNLESS OTHERWISE NOTED, FINISH TO CONCRETE TO BE AS FOLLOWS:
   - STEEL TROWEL FOR VINYL FLOOR FINISH
   - WOOD FLOAT FOR CERAMIC FLOOR FINISH
5. DIMENSIONS AND LEVELS TO BE VERIFIED BY CONTRACTOR ON SITE. ANY DEVIATION OF DETAILS FROM DETAILS SHOWN ON DRAWINGS, TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
6. CONSTRUCTION DETAILS TO COMPLY WITH S.A.N.S. 1200 SERIES OF SPECIFICATIONS.
7. ENGINEER TO INSPECT THE REINFORCEMENT AND APPROVE PRIOR TO CASTING OF CONCRETE

2) STRUCTURAL CONCRETE

2.1) GENERAL

- EXCEPT WHERE MENTIONED OTHERWISE IN THESE NOTES, THE CONCRETE WORK SHALL COMPLY WITH SANS 1200 G SPECIFICATION LATEST REVISION.
- UNLESS OTHERWISE STATED (UOS), DEGREE OF ACCURACY II WILL APPLY FOR MASS AND REINFORCED CONCRETE ANCILLARIES.
- REFER TO ARCHITECT'S REQUIREMENTS FOR FINISH TO ALL CONCRETE ELEMENTS.
- THE CONTRACTOR TO ENSURE THAT ALL SERVICES PENETRATIONS AND EMBEDDED ITEMS ARE PROVIDED AND POSITIONED IN ACCORDANCE WITH THE LATEST APPLICABLE CONSULTANTS DRAWINGS.
- TEST CUBES TO BE TAKEN ON SITE AS PER S.A.N.S 1200 G REQUIREMENTS WHEN READY MIX CONCRETE IS USED
- ALL EXPOSED CONCRETE EDGES TO HAVE 20x20 CHAMFER UOS.

2.2) CONCRETE STRENGTH

STRUCTURAL ELEMENT	CHARACTERISTIC 28 DAY STRENGTH (MPa)		
BLINDING / MASS CONCRETE	15	PAD FOOTING	= 25
SURFACE BEDS	25	STRIP FOOTING	= 25
BEAMS / SLABS	30		
SHAFTS / WALLS	30		
COLUMNS	30		
FOUNDATIONS	25		
STAIRS	30		
RETAINING WALLS	30		
UPSTANDS / BALUSTRADES	30		

2.3) MINIMUM COVER TO REINFORCEMENT

STRUCTURAL ELEMENT	COVER (mm)
SLABS IN CONTACT WITH GROUND	75
SLABS NOT INCONTACT WITH GROUND	40
SURFACE BEDS	30
BEAMS IN CONTACT WITH GROUND	75
BEAMS NOT IN CONTACT WITH GROUND	40
SHAFTS / WALLS	40
COLUMNS	40
FOUNDATIONS	50
STAIRS	40
RETAINING WALLS	40
UPSTANDS / BALUSTRADES	40

2.4) CURING

- CURE CONCRETE BY KEEPING CONSTANTLY DAMP FOR AT LEAST 5 DAYS

2.5) FOUNDATIONS

- THE GEOTECHNICAL ENGINEER SHALL APPROVE ALL FOUNDING MATERIALS BEFORE ANY STEEL REINFORCEMENT IS PLACED OR CONCRETE IS CAST.
- BASES SHALL NOT BE PLACED ON BACKFILLING, MASS CONCRETE OR BLINDING TO BE PROVIDED UOS.
- ALL BASES AND FOUNDATIONS TO BE PROVIDED WITH 50mm BLINDING SHALL BE CAST WITHIN 12 HOURS AFTER COMPLETION OF EXCAVATION.
- ALL FOUNDATIONS SHALL BE CENTER TO COLUMNS UOS.
- NO HORIZONTAL JOINTS SHALL BE ALLOWED IN FOUNDATIONS WITHOUT ENGINEERS APPROVAL.

2.6) SURFACE BEDS

- SURFACE BED FINISH TO ARCHITECTS SPECIFICATIONS UOS.
- SURFACE TOLERANCE TO BE WITHIN SANS 1200G CLASS II UOS.
- ISOLATION JOINTS TO BE FORMED AROUND COLUMNS AND AGAINST WALLS WITH 10mm FLEXCELL AND SEALED ON TOP WITH POLYURETHANE SEALANT, UOS.
- REFER TO TYPICAL SURFACE BED DETAILS FOR SURFACE BED REQUIREMENTS.
- ALL TILED AREAS ARE TO HAVE SOFT JOINTS IN SCREED ON PERIMETER AND INTERNALLY AT MAX 3000 c/c UOS.
- MIN LAP LENGTH OF MESH REINFORCING 45 D WHERE D = REBAR DIAMETER UOS.
- DOWEL BARS TO BE LEVEL, STRAIGHT AND AT 90° ANGLE TO JOINTS WITH SMOOTH ENDS.
- CONSTRUCTION AND SAWN JOINTS TO BE TAKEN THROUGH ALL KERBS AND FLOOR CHANNELS.

2.7) VERTICAL ELEMENTS

- ALL COLUMNS CENTERED ON GRIDLINES UOS.
- ALL EXPOSED CONCRETE EDGES TO HAVE 20x20 CHAMFERS UOS.
- CASTING OF CONCRETE ABOVE 3.5m HIGH IS NOT ALLOWED WITHOUT ENGINEER'S APPROVAL.
- THE TOP OF ALL THE VERTICAL CONCRETE ELEMENTS THAT SUPPORT OTHER CONCRETE ELEMENTS TO BE CHIPPED AND CLEANED TO EXPOSE AGGREGATE BEFORE CASTING OF CONCRETE.

2.8) RETAINING WALLS

- CONSTRUCTION JOINTS IN RETAINING WALLS AT MAX 5000mm UOS.
- REINFORCEMENT CONTINUOUS THROUGH CONSTRUCTION JOINTS.

2.9) SUSPENDED SLABS / BEAMS

- THE CONTRACTOR TO ALLOW FOR ADEQUATE PROPPING OF SLAB BEING CAST. MIN 2 SLABS TO SUPPORT THE WET WEIGHT OF THE SLAB BEING CAST. (EXAMPLE CASTING LEVEL 7, SUPPORTWORK DOWN TO LEVEL 5).
- ALL CONSTRUCTION JOINT POSITIONS IN SLAB / BEAMS TO BE APPROVED BY THE ENGINEER.
- SLAB PANELS SUPPORTING UPSTAND BEAMS TO REMAIN PROPPED UNTIL THE UPSTAND BEAM HAS BEEN CAST AND THE CONCRETE IS MIN 14 DAYS OLD. THE TOP OF THE SLAB TO BE CHIPPED AND CLEANED AND A WET TO DRY EPOXY TO BE PROVIDED TO THE ENGINEERS' APPROVAL.

3) STRUCTURAL STEEL

3.1) GENERAL

- THESE NOTES TO BE READ IN CONJUNCTION WITH THE GENERAL LAYOUT DRAWINGS AND ANY DISCREPANCIES TO BE RESOLVED BEFORE CONSTRUCTION COMMENCES.
- SHOP DRAWINGS AND ERECTION METHOD STATEMENT TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL IN PRINCIPLE PRIOR TO FABRICATION OF ANY STEELWORK.
- WELDING PROCEDURE TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION
- BEFORE ANY STRUCTURAL STEELWORK IS MANUFACTURED, ALL INTERFACING CONCRETE WORK IS TO BE SURVEYED TO CONFIRM DIMENSIONS, LEVELS, BOLT POSITIONS ETC. RECTIFICATION OF ANY "LACK OF FIT" DUE TO NON-COMPLIANCE WITH THE ABOVE, WILL BE AT THE COST OF THE CONTRACTOR WHO CAST THE CONCRETE.
- WHERE ANY MEMBER SIZES OR DETAILS ON THE WORKSHOP DRAWINGS DEVIATE SUBSTANTIALLY FROM THE DESIGN DRAWINGS, THE CONTRACTOR SHALL INFORM THE ENGINEER EXPLICITLY IN WRITING IN ORDER TO OBTAIN APPROVAL FOR SUCH DEVIATIONS. FAILING TO DO SO WILL RESULT IN NON-APPROVAL OF SHOP DRAWINGS.
- ALL CONNECTIONS ARE TO BE FULLY DETAILED ON THE WORKSHOP DRAWINGS AND SUFFICIENT TIME SHOULD BE ALLOWED FOR THE ENGINEER TO APPROVE SUCH CONNECTION DETAILS.
- IN RECEIVING THE DESIGN DRAWINGS, THE CONTRACTOR MUST ARRANGE A MEETING / WORKSHOP WITH THE ENGINEER TO DISCUSS THE DESIGN, ERECTION METHOD AND CONNECTION DETAILS, AS WELL AS A QUALITY CONTROL METHOD.
- ALL WELDED AND BOLTED CONNECTIONS TO BE TESTED IN ACCORDANCE WITH AWD 1.1 OR OTHER APPROVED STANDARDS

3.2) DESIGN

- MEMBERS ARE DESIGNED TO THE REQUIREMENTS OF SANS 10400 AND ALL REFERENCED DESIGN CODES.
- HOT ROLLED STEELWORK TO BE IN ACCORDANCE WITH SANS 1431, GRADE S355JR UOS. MILL TEST CERTIFICATES TO BE APPROVED.
- COLD FORMED STEELWORK TO HAVE MINIMUM YIELD STRESS OF 200MPa.
- UNLESS NOTED OTHERWISE MINIMUM BOLT SIZE FOR ANY STRUCTURAL ELEMENT IS TO BE M16. ALL BOLTS BE GRADE 8.8 EXCEPT AT PURLIN CONNECTIONS
- BOLTS SAMPLE WITH CERTIFICATES TO BE PROVIDED TO THE ENGINEER FOR APPROVAL
- ALL WELDS TO BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE NOTED. ALL WELDS TO BE CARRIED OUT BY QUALIFIED CODED WELDERS
- ALL GUSSET PLATES TO BE MINIMUM 8mm THICK UOS.

3.3) FABRICATION AND ERECTION

- STEEL FABRICATION AND ERECTION TO COMPLY WITH SANS 1200H AND MAY NOT COMMENCE BEFORE SHOP DRAWINGS AND AN ERECTION METHOD STATEMENT HAVE BEEN APPROVED BY THE ENGINEER.
- CONNECTION DETAILS TO BE APPROVED BY ENGINEER BEFORE THE SHOP DRAWINGS ARE SUBMITTED FOR APPROVAL.

a.MINIMUM EDGE DISTANCE TO BOLTS TO BE 1.75 TIMES THE BOLT DIAMETER UOS.

b.MINIMUM BOLT SPACING TO BE 2.5 TIMES THE BOLT DIAMETER UOS.

- ALL BOLT HOLES TO BE DRILLED, NOT PUNCHED.
- ALL BOLTED CONNECTIONS TO HAVE A MINIMUM OF 2 BOLTS UOS.
- CONTRACTOR TO ENSURE THE STABILITY AND SAFE ERECTION OF THE STRUCTURE, AND TO PROVIDE ALL NECESSARY BRACING TO ENABLE HIM TO DO SO, SUCH BRACING TO BE INDICATED ON THE ERECTION GENERAL ARRANGEMENT DRAWING.
- NO SITE CUTTING OR WELDING WILL BE ALLOWED UNLESS PRIOR ARRANGEMENT WITH THE ENGINEER IS MADE
- ALL STEELWORK DELIVERED TO THE SITE SHALL BE STACKED ON TIMBER SUPPORT AT LEAST 300mm FROM GROUND LEVEL. TRUSSES SHALL BE STACKED VERTICALLY.
- FOR FULL PENETRATION FIELD WELDS BACKING PLATES TO BE USED. BACKING PLATES TO BE TACK WELDED TO MEMBER FOR SHIPMENT.
- FOR FULL PENETRATION SHOP WELDS BACKING OR BACK-UP FILLET WELDS MAY BE USED.
- DRILLED HOLES FOR BOLTED CONNECTIONS TO BE 2mm LARGER THAN BOLT DIAMETER.
- DRILLED HOLES IN BASE PLATES TO BE 4mm LARGER FOR M10 ANCHOR BOLTS AND SMALLER AND 6mm LARGER FOR M20 BOLTS AND BIGGER.
- PAINT TO BE OMITTED WITHIN 50mm OF FIELD WELDED CONNECTIONS.
- ROUGH EDGES SHALL BE GROUND SMOOTH PRIOR TO WELDING PLATES, BRACKETS OR PAINTING.
- HOLD OUT-TO-OUT DIMENSIONS EXACT FOR CONTINUOUS RUNS OF BEAMS TO AVOID ACCUMULATIVE ERRORS.
- SHOP SPLICING OF MEMBERS WILL NOT BE PERMITTED WITHOUT ENGINEER'S APPROVAL. APPROVED SPLICES TO HAVE 100% STRENGTH OF DESIGN MEMBERS.
- FRAME MEMBERS TO BE DETAILED AND MANUFACTURED SUCH THAT THEIR LINES OF GYRATION INTERSECT AT NODAL POINTS.
- INTERSECTIONS CREATING ECCENTRICITY AT NODES WILL NOT BE APPROVED.

3.4) FINISHES TO STEELWORK (INLAND):

SURFACE PREPARATION

(a) EXPOSED STEELWORK: BLAST CLEAN STEELWORK TO Sa 2.5 OR SIS 05-59-00 ALTERNATIVE TO BE APPROVED BY ENGINEER.

(b) NON-EXPOSED STEELWORK WIRE BRUSHING AS PER SANS 1200.

PRIMER:

- APPLY ONE COAT (30 MICRON) ZINC CHROMATE PRIMER IN ACCORDANCE WITH SANS 681.
- INTERMEDIATE COAT:
- APPLY BY BRUSH OR ROLLER ONE COAT (30 MICRON) MULTIPURPOSE UNDERCOAT IN ACCORDANCE WITH SANS 681. USE TYPE II IF PAINT IS APPLIED WITHIN 16 HOURS APPLICATION OR ZINC PHOSPHATE PRIMER, OTHERWISE USE TYPE I COLOR TO DIFFER FROM COLOR OF FINAL COAT.

TOP COATS:

- (ONLY FOR EXPOSED STEELWORK) AS SPECIFIED BY ARCHITECT.
- ALLOW 24 HOURS BETWEEN COATS FOR DRYING.
- DAMAGES TO COATINGS DURING TRANSIT, SITE WELDING AND / OR ERECTION MUST BE WIRE BRUSHED TO BARE METAL AND FOLLOWED BY THE APPLICABLE SPECIFICATIONS.
- APPROVED ALTERNATIVE PRODUCTS MAY BE USED.

3.5) FINISHES TO STEELWORK (COASTAL)

- ALL STEELWORK ARE TO BE CLEANED BY SWEEP BLASTING OR CHEMICAL CLEANING.
- ALL STEEL WORK ARE TO BE PROTECTED BY DUPLEX COATING SYSTEM CONSISTING OF HOT DIP GALVANIZING, A SUITABLE ZINC COMPATIBLE PRIMER AND A TOP COAT ALL AS PER DETAILS BELOW.
- ALL STEELWORK ARE TO BE INSPECTED AND APPROVED IN WRITING AFTER SWEEP BLAST CLEANING, AFTER HOT DIP GALVANIZING AND ON COMPLETION OF THE FINAL COAT BEFORE INSTALLATION.
- THE MINIMUM COAT THICKNESS FOR GALVANIZING IS 275 MICRONS, AND ALL GALVANIZING IS TO BE DONE BY A MEMBER FIRM OF THE SA ASSOCIATION OF HOT DIP GALVANIZERS AND ACCORDING TO THE LATEST SANS.
- THE MINIMUM THICKNESS FOR THE PRIMER AND TOPCOAT IS 30 MICRONS, COLOR OF TOPCOAT TO MATCH PIPING.

3.6) FINISHES TO STRUCTURAL STEEL GUTTERS

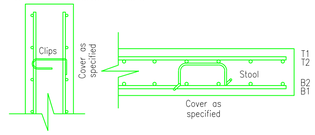
- SURFACE PREPARATION:
  BLAST CLEAN STEELWORK TO Sa 2.5 OR 05-59-00 OR ALTERNATIVE TO BE APPROVED BY ENGINEER.
- APPLY CARBOMASTIC 15 ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

4) REINFORCEMENT

4.1) ALL REINFORCING TO SANS 920 : 2011
4.2) R - PLAIN MILD STEEL BARS (TYPE A)
(fy = YIELD STRENGTH = 250 MPa
4.3) Y - HIGH YIELD STEEL
(TYPE C : CLASS 2 : GRADE 1 : fy = 450 MPa)
WHERE fy = YIELD STRENGTH

4.4) EXAMPLE

20Y25-100-150 T2
20 - No. OFF BARS
Y - HIGH YIELD STEEL
25 - DIAMETER IN mm
100 - BAR MARK NUMBER
150 - SPACING c/c IN mm
T2 - LOCATION
NF - NEAR FACE
FF - FAR FACE
EF - EACH FACE
CTF - CUT TO FIT
ABR - ALTERNATIVE BARS REVERSED
ALT - ALTERNATLIVELY PLACED
T - TOP FACE
B - BOTTOM FACE
CTL - CUT TO LENGTH
EW - EACH WAY



4.5)STOOLS STAND ON B1 SUPPORTING T2.

4.6) WELDING OF REINFORCING NOT ALLOWED.

5) BRICKWORK

5.1)ALL LOADBEARING BRICKWORK TO BE SET OUT IN ACCORDANCE WITH ARCHITECT DRAWINGS.

5.2) LOADBEARING BRICKWORK AND/OR RETAINING WALLS TO HAVE MINIMUM CHARACTERISTIC STRENGTH OF 10.5 MPa

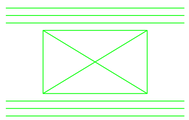
5.3)MORTAR 1:4 MIX CLASS II (MIN 7MPa COMPRESSIVE STRENGTH).

5.4)CONCRETE INFILL CHARACTERISTIC 28 DAY STRENGTH = 25 MPa.

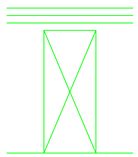
5.5)FOR R.W. PIPES AND SPOUTS REFER TO ARCHITECTS DRAWINGS.

5.6)ALL BRICKWORK BUILT ON SUSPENDED SLABS AND BEAMS, TO BE BUILT UP AFTER REMOVAL OF FORMWORK SUPPORT TO SLABS AND BEAMS.

5.7)ABOVE MENTIONED BRICKWORK TO BE REINFORCED WITH BRICKFORCE AS FOLLOWS:



WINDOW OPENINGS



DOOR OPENINGS

- 2 LAYERS PER COURSE FOR 3 COURSES ABOVE AND BELOW WINDOWS/VENTILATION OPENINGS AND ABOVE DOORS
- FIRST 5 COURSES ABOVE ALL FOUNDATIONS.
- EVERY 4TH COURSE IN ALL BRICKWALLS.
- TOP 5 COURSES OF BRICKWALLS BELOW SLAB SOFFITS FOR ALL LOAD BEARING BRICKWALLS AS WELL AS WALLS SUPPORTING ROOF TRUSSES.

5.8)CONTRACTOR TO ALLOW FOR AT LEAST A 15mm TOLERANCE BETWEEN SOFFIT OF BEAMS / SLABS AND TIMBER / ALUMINIUM FRAMES AND NON LOAD BEARING BRICKWORK FORMED WITH JOINTEX OR SIMILAR APPROVED.

5.9) PROVIDE 2 LAYERS OF DPC SLIP SHEET ON TOP OF ALL LOAD BEARING WALLS. TOP OF WALLS TO BE SMOOTH AND LEVEL.

5.10 PROVIDE JOINTS IN ALL BRICKWALLS AS PER TYPICAL DETAILS AT MAX 5000mm c/c UOS.

5.11) ALL BRICKWORK IN ACCORDANCE WITH SANS 10400-K: 2011 & SANS 10164

5.12) ALL LINTOLS TO BE PROVIDED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

6) STRUCTURAL TIMBER

6.1)ALL TIMBER DESIGNS TO BE DONE IN ACCORDANCE WITH THE LATEST SANS CODES FOR TIMBER STRUCTURES AND GENERAL PROCEDURE AND LOADING FOR THE DESIGNS.

6.2)ALL TIMBER ROOF TRUSSES TO BE MANUFACTURED BY A FABRICATOR WHO IS APPROVED BY THE INSTITUTE OF TIMBER CONSTRUCTION.

6.3)ALL WORKSHOP DRAWINGS TO BE APPROVED BY THE ENGINEER BEFORE MANUFACTURED.

6.4 ALL DESIGN LOADS FOR TIMBER STRUCTURES TO BE APPROVED BY THE ENGINEER.

7) BACKFILLING

7.1)BACKFILLING BEHIND RETAINING WALLS, BELOW SURFACE BEDS, UNDER JOCKEY SLABS OR ANY OTHER STRUCTURAL ELEMENT ON FILL TO BE G7 QUALITY MATERIAL OR BETTER COMPACTED IN 150mm THICK LAYERS TO 95% MOD AASHTO DENSITY UOS.

7.2)ALL MATERIAL USED FOR BACKFILLING TO BE TESTED BY THE CONTRACTOR AND RESULTS FORWARDED TO THE ENGINEER FOR APPROVAL.

7.3)A MINIMUM OF ONE COMPACTION TEST PER $100m^2$ WITH A MINIMUM OF THREE TESTS PER AREA IS REQUIRED AT A MAXIMUM OF EVERY 300mm OF BACKFILLING.

7.4)IN CONFINED BACKFILLING SPACES WHERE THE WIDTH IS LESS THAN 600mm, SOILCRETE TO BE USED, ALL TO ENGINEER'S APPROVAL.

8) EARTHWORKS

8.1)ALL COMPACTION TO BE DONE AT OPTIMUM MOISTURE CONTENT

8.2)ALL PARTICLES WITH A MAXIMUM DIMENSION IN EXCESS OF 100mm SHOULD BE BROKEN UP OR REMOVED FROM THE LAYER PRIOR TO COMPACTION.

GENERAL NOTES:

FOR TENDER

Drg. No.	Description
Reference Drawings	

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	SD	CM	KM	20-11-24
Revision History					

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG. 2093	TURBINE HALL, 65 NTEMI PILISO STREET, NEWTOWN, JOHANNESBURG

LESEDI TECHNICAL ENGINEERING — E N G I N E E R I N G —
A Division Of Lesedi La Africa Holdings

Physical Address	Postal Address
Maxwell Office Park 1st Floor, Building 3 37 Magwa Crescent Waterfall City 2195 Tel: +27 10 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name: JOBURG WATER BUILDING UPGRADE FOR THE MEGA WAREHOUSE IN LANGLAAGTE DEPOT

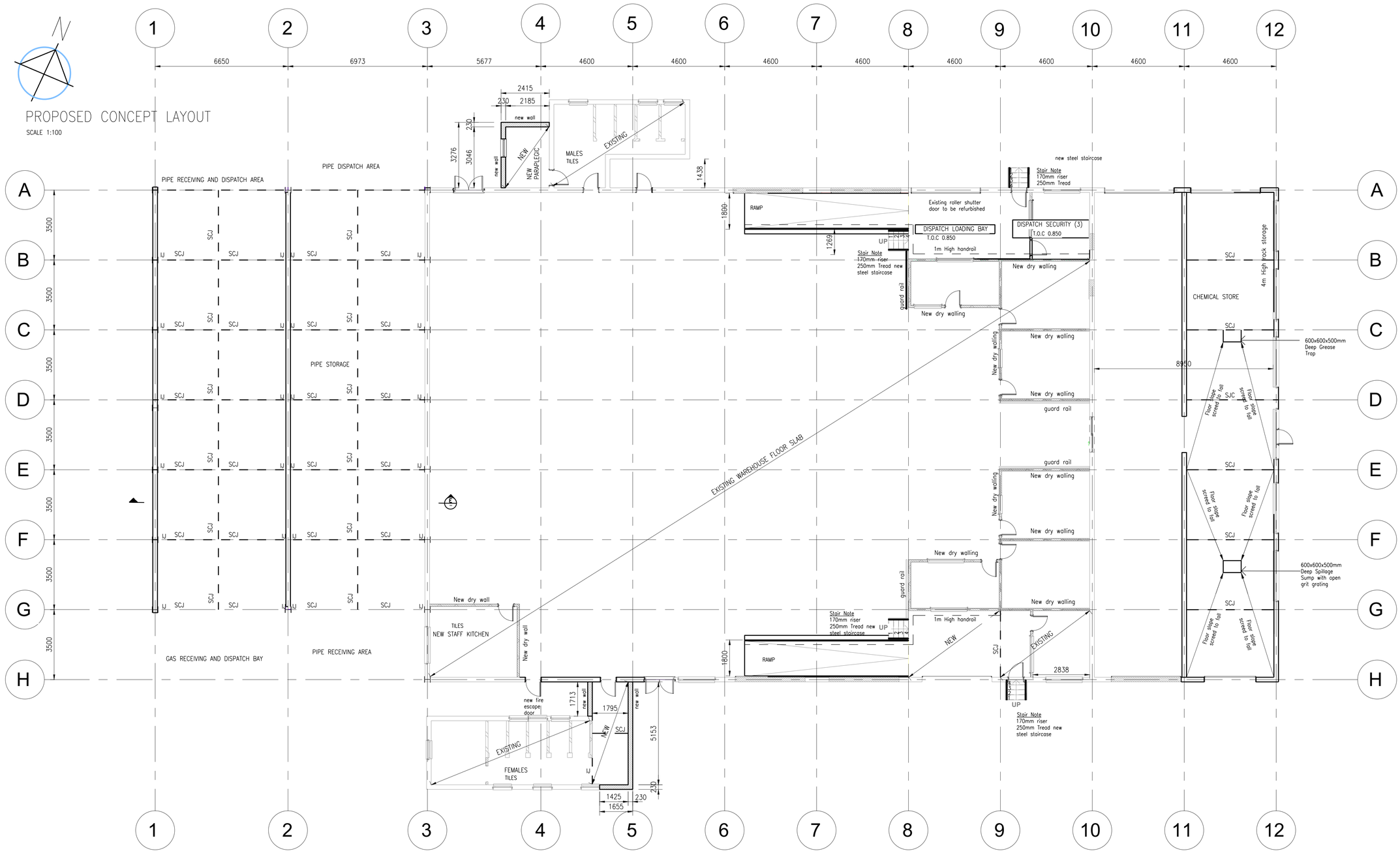
Project Number: ECS328

Drawing Title: GENERAL NOTES

Size	LESEDI Drawing No.	Rev
A1	ECS328-STR-001	B

	Name	Signed	Date
Approved	K. MUDZAMIRI		
Engineer	S. DUBE		
Checked	C. MOEKETSI		
Drawn	G.W. KASIRORI		
Scale AS SHOWN			

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



GROUND FLOOR PLAN
SCALE 1:100

GENERAL NOTES:

FOR TENDER

Drg. No.	Description
Reference Drawings	

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	SD	CM	KM	19-11-24

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG. 2093	TURBINE HALL, 65 NTEMI PILISO STREET, NEWTOWN. JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
a division of Lesedi La Africa Holdings

Physical Address	Postal Address
Maxwell Office Park 1st Floor, Building 3 37 Magwa Crescent Waterfall City 2196 Tel: +27 10 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name: JOBURG WATER BUILDING UPGRADE FOR THE MEGA WAREHOUSE IN LANGLAAGTE DEPOT

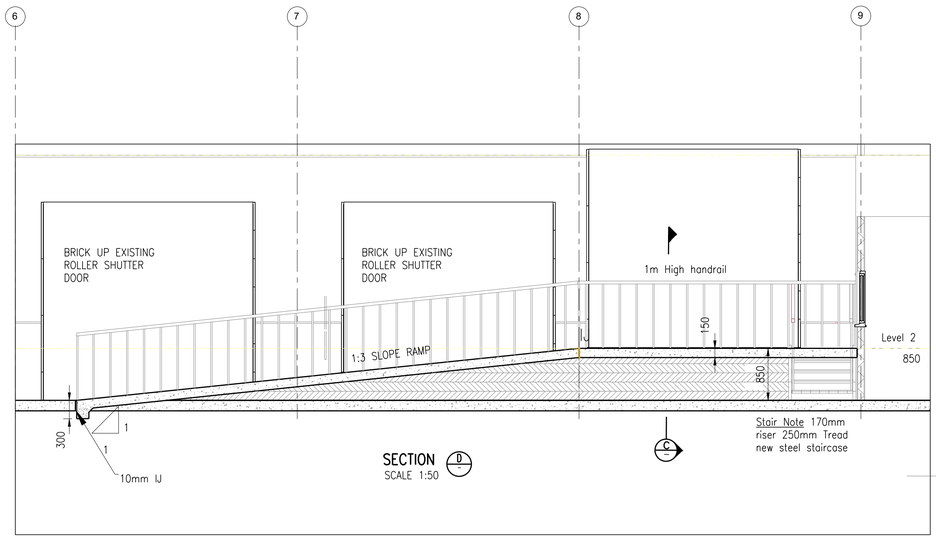
Project Number: 328

Drawing Title: FLOOR PLAN SAW CUT JOINTS LAYOUT AND DETAILS

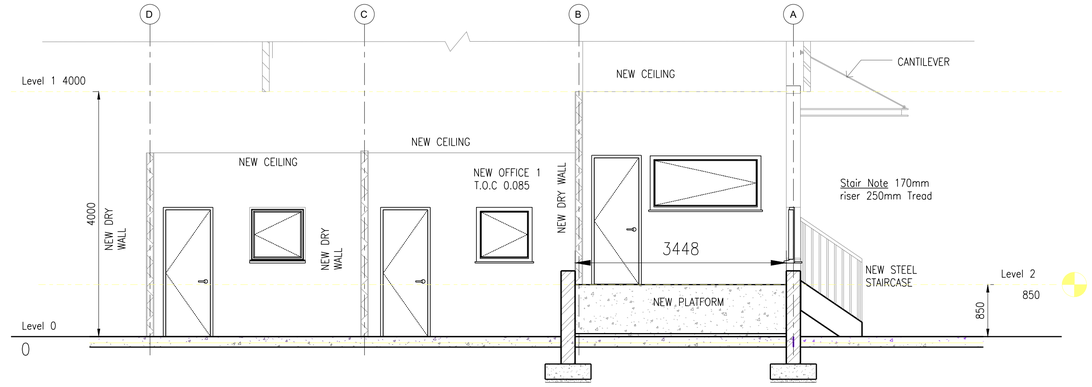
Size	LESEDI Drawing No.	Rev
A1	ECS328-STR-004	B

Approved	K. MUDZAMIRI		
Engineer	S. DUBE		
Checked	C. MOEKETSI		
Drawn	G.W. KASIRORI		
Scale AS SHOWN	Name	Signed	Date

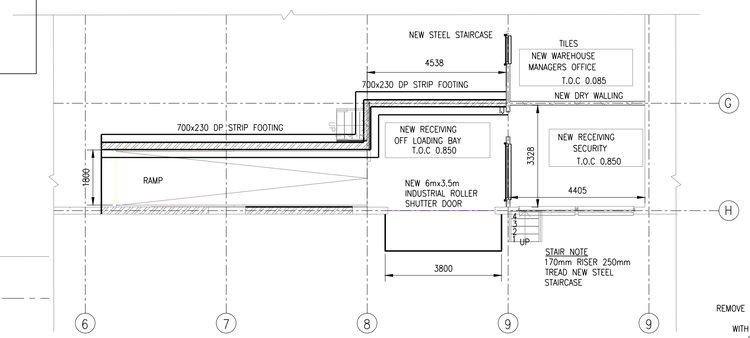
ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



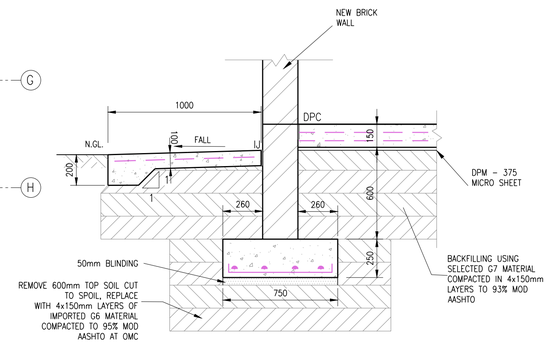
SECTION D
SCALE 1:50



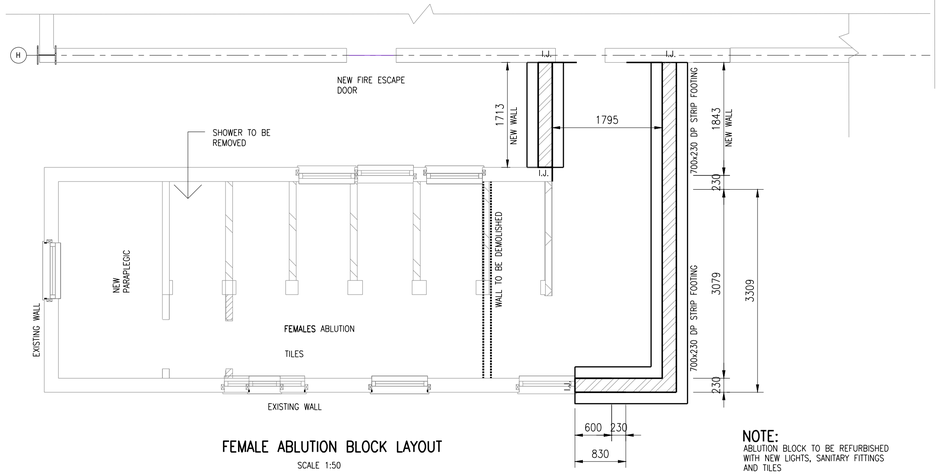
SECTION C
SCALE 1:50



RECEIVING BAY AND RAMP FLOOR PLAN
SCALE 1:100

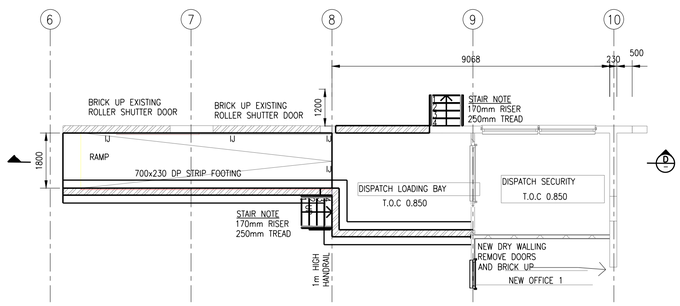


TYPICAL STRIP FOUNDATION AND SURFACE BED SECTION
SCALE 1:20

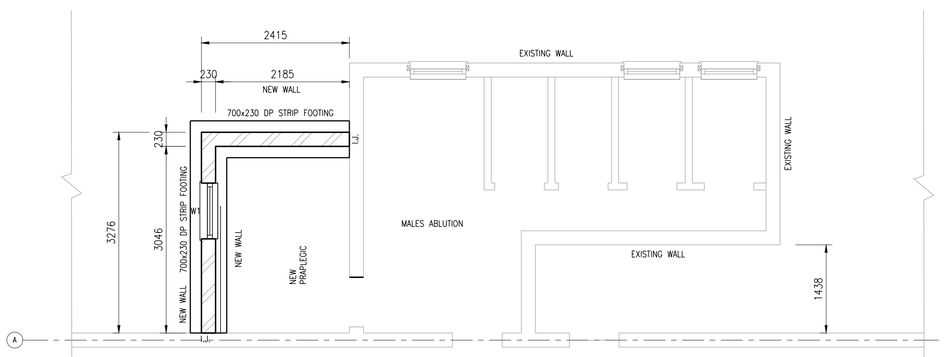


FEMALE ABLUTION BLOCK LAYOUT
SCALE 1:50

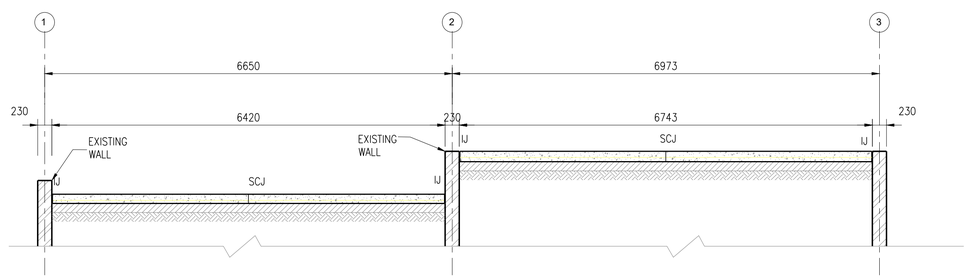
NOTE:
ABLUTION BLOCK TO BE REFURBISHED WITH NEW LIGHTS, SANITARY FITTINGS AND TILES



DISPATCH BAY AND RAMP FLOOR PLAN
SCALE 1:100



MALE ABLUTION BLOCK LAYOUT
SCALE 1:50



SECTION E
SCALE 1:50

GENERAL NOTES:

FOR TENDER

Drg. No.	Description

Reference Drawings

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	SD	CM	KM	19-11-24

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG. 2093	TURBINE HALL, 65 NTEMI PILISO STREET, NEWTOWN. JOHANNESBURG

LESEDI TECHNICAL ENGINEERING
A division of Lesedi La Africa Holdings

Physical Address	Postal Address
Maxwell Office Park 1st Floor, Building 3 37 Magwa Crescent Waterfall City 2195 Tel: +27 10 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name: JOBURG WATER BUILDING UPGRADE FOR THE MEGA WAREHOUSE IN LANGLAAGTE DEPOT

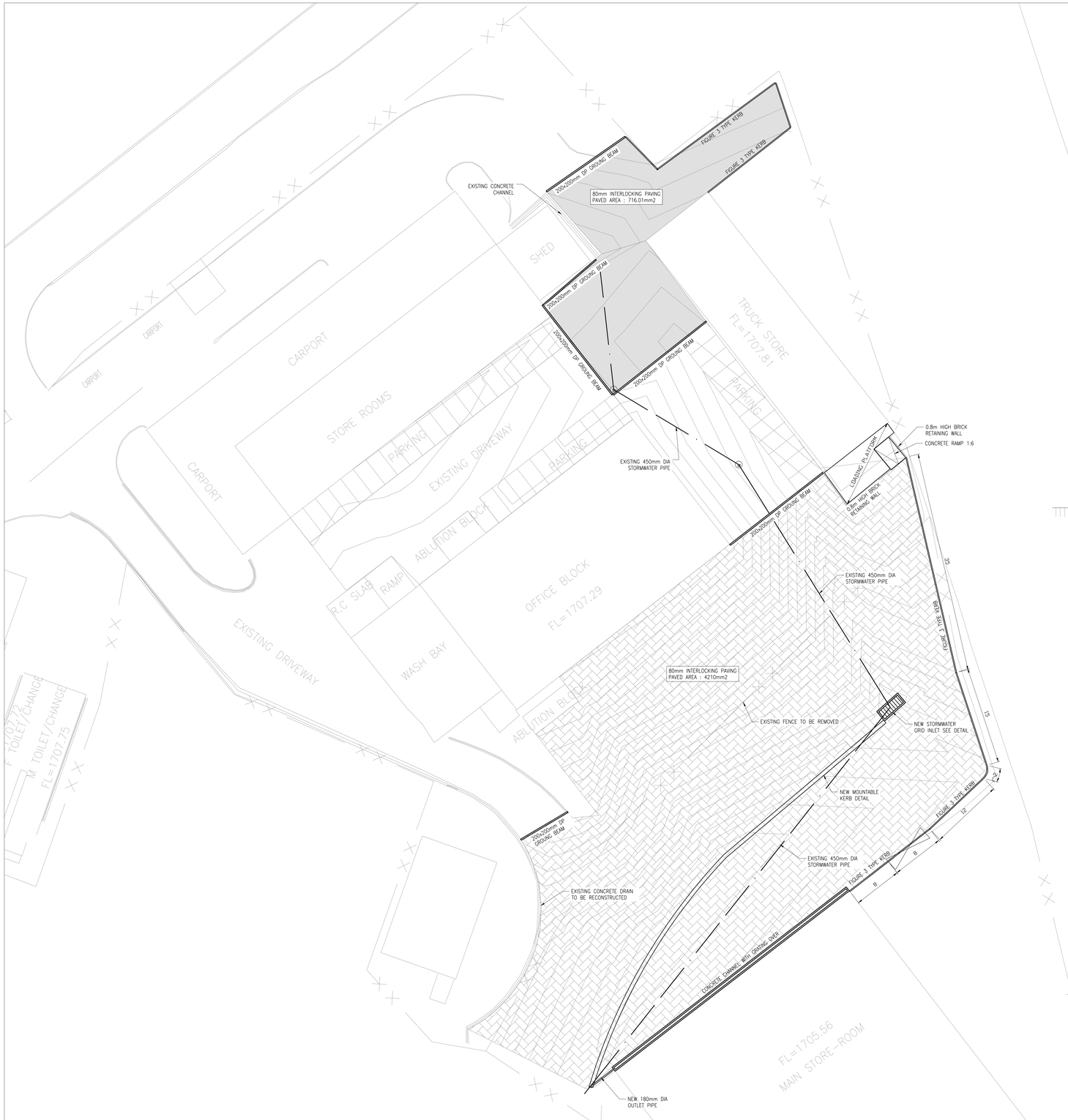
Project Number: 328

Drawing Title: ABLUTION BLOCK LAYOUT AND TYPICAL STRIP FOUNDATION DETAILS

Size	LESEDI Drawing No.	Rev
A1	ECS328-STR-005	B

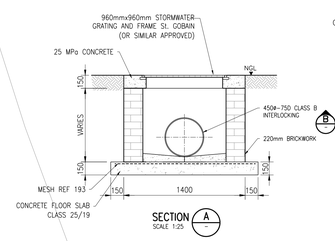
Approved	K. MUDZAMIRI		
Engineer	S. DUBE		
Checked	C. MOEKETSI		
Drawn	G.W. KASIRORI		
Scale AS SHOWN	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



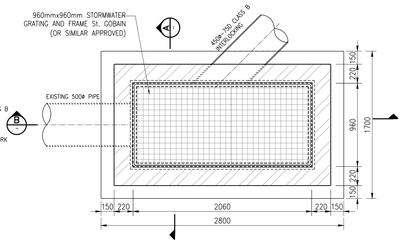
SITE LAYOUT

SCALE 1:250



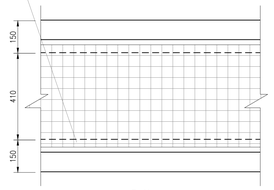
SECTION A

SCALE 1:25



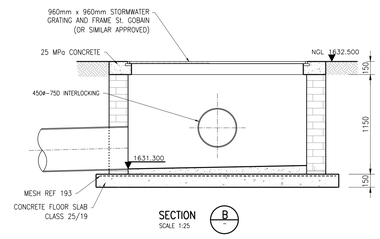
TYPICAL GRID INLET MANHOLE DETAILS

SCALE 1:25



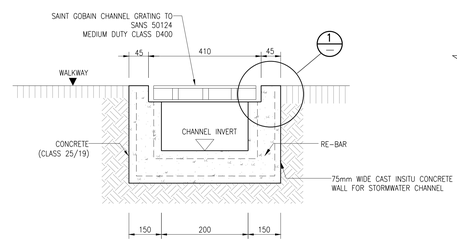
PLAN

SCALE 1:5



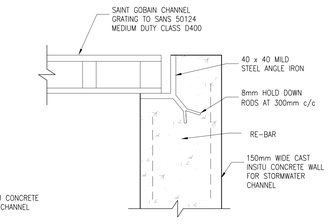
SECTION B

SCALE 1:25



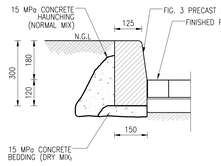
CHANEL-DETAIL

SCALE 1:5



DETAIL 1

SCALE 1:2

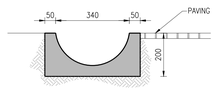


NOTE
- ALL KERBING TO BE CONSTRUCTED TO SABS 1200
- HAUNCHING AT JOINTS ONLY

LENGTH OF PRECAST KERB SECTIONS FOR VARYING RAD	
RADIUS	MAX KERB LENGTH
1-4m	0.3 m
4-20m	0.5 m
20m -	1.0 m

FIG. 3 PRECAST CONCRETE KERB

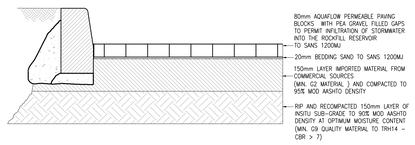
SCALE 1:10



CHANNEL DETAIL

SCALE 1:10

NOTE:
ALL PAVING BLOCKS TO BE MANUFACTURED IN ACCORDANCE WITH SANS 1200 MJ (CLASS 25)



TYPICAL LAYERWORKS DETAILS

SCALE 1:10

GENERAL NOTES:

FOR TENDER

Drg. No.	Description
Reference Drawings	

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	SD	CM	KM	20-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG. 2093	TURBINE HALL, 65 NTEMI PILISO STREET, NEWTOWN. JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
A Division Of Lesedi co Africa Holdings

Physical Address	Postal Address
LESEDI House Kildrummy Office Park, Glenfloger Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 tel: + 010 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name: JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

Project Number: 328

Drawing Title: ROADS AND STORMWATER GENERAL LAYOUT AND DETAILS

Size	LESEDI Drawing No.	Rev
A0	ECS328-SP-001	B

Approved	K. MUDZAMIRI		
Engineer	S. DUBE		
Checked	C. MOEKETSI		
Drawn	S. DUBE		
Scale AS SHOWN	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.

SITE LAYOUT

SCALE 1:400

SETTINGO OUT DATA		
Point #	Northing	Easting
1	-2899835.5268	98386.0874
2	-2899814.6782	98412.9494
3	-2899803.2622	98427.6292
4	-2899808.6519	98431.4281
5	-2899800.9040	98440.8646
6	-2899848.4778	98453.0223
7	-2899851.5559	98452.8273
8	-2899869.3153	98431.7979
9	-2899859.6019	98444.5276
10	-2899868.7449	98431.2275
11	-2899897.1175	98394.3880
12	-2899900.2651	98390.7558
13	-2899891.0990	98371.6950
14	-2899861.3336	98380.0872
15	-2899856.9482	98387.4907
16	-2899857.8080	98388.1990
17	-2899857.4102	98392.2893
18	-2899841.9330	98380.2794
19	-2899791.1434	98394.3761
20	-2899779.4770	98409.1720

SETTINGO OUT DATA		
Point #	Northing	Easting
21	-2899766.8198	98399.6918
22	-2899759.1151	98409.4733
23	-2899748.8849	98422.5932
24	-2899741.9614	98420.2894
25	-2899755.5574	98401.4316
26	-2899750.5236	98396.5227
27	-2899759.1420	98384.1260
28	-2899768.9040	98392.7670
29	-2899777.0166	98383.3519
30	-2899885.8154	98396.4614
31	-2899875.0715	98402.7516
32	-2899863.6020	98412.0050
33	-2899842.5590	98437.3363
34	-2899839.6218	98440.6439
35	-2899838.1267	98439.4112
36	-2899841.0488	98436.1177

GENERAL NOTES:

FOR TENDER

Drg. No.	Description
Reference Drawings	

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	SD	CM	KM	20-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG. 2093	TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING

a Division Of Lesedi La Afrika Holdings

Physical Address	Postal Address
LESEDI House Kildrummy Office Park, Glenflager Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 010 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

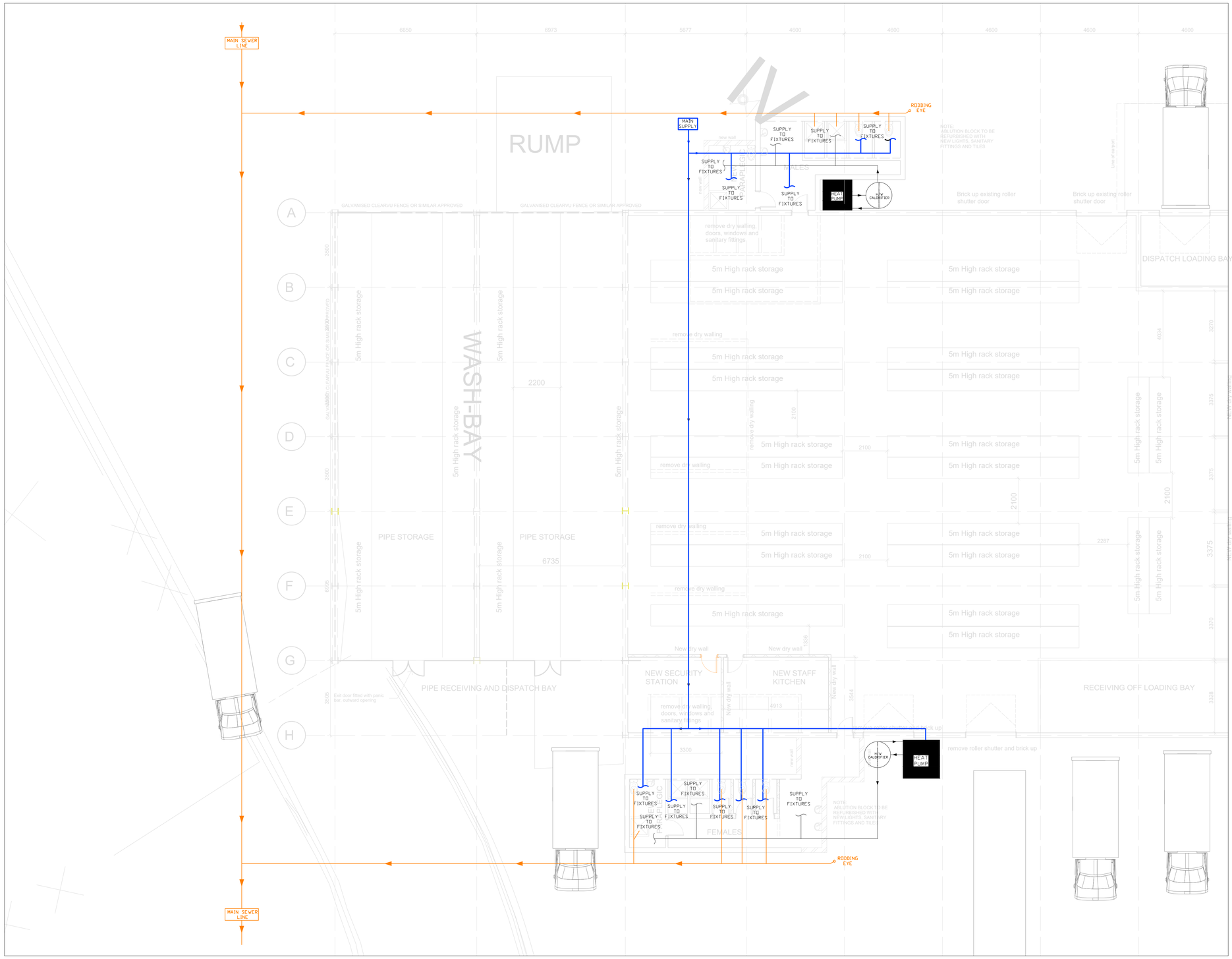
Project Number: ECS328

Drawing Title:
PAVING SETTING OUT

Size	LESEDI Drawing No.	Rev
A1	ECS328-TR-001	B

Approved	K. MUDZAMIRI		
Engineer	S. DUBE		
Checked	C. MOEKETSI		
Drawn	S. DUBE		
Scale AS SHOWN	**Name**	**Signed**	**Date**

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



GENERAL NOTES:

LEGEND	
	COLD WATER PIPE
	HOT WATER PIPE
	DRAINAGE PIPE
	FLOW DIRECTION

ISSUED FOR TENDER

Drg. No.	Description
Reference Drawings	

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	TM	LB	TM	21-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte Johannesburg 2093	Turbine Hall 65 Ntemi Piliso Street Newtown Johannesburg

LESEDI TECHNICAL ENGINEERING CONSULTANTS
A Division Of Lesedi Le Africe Holdings

Physical Address	Postal Address
Maxwell Office Park 1st Floor, Building 3 37 Magwa Crescent Waterfall City 2195 Tel: +27 10 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAARGTE

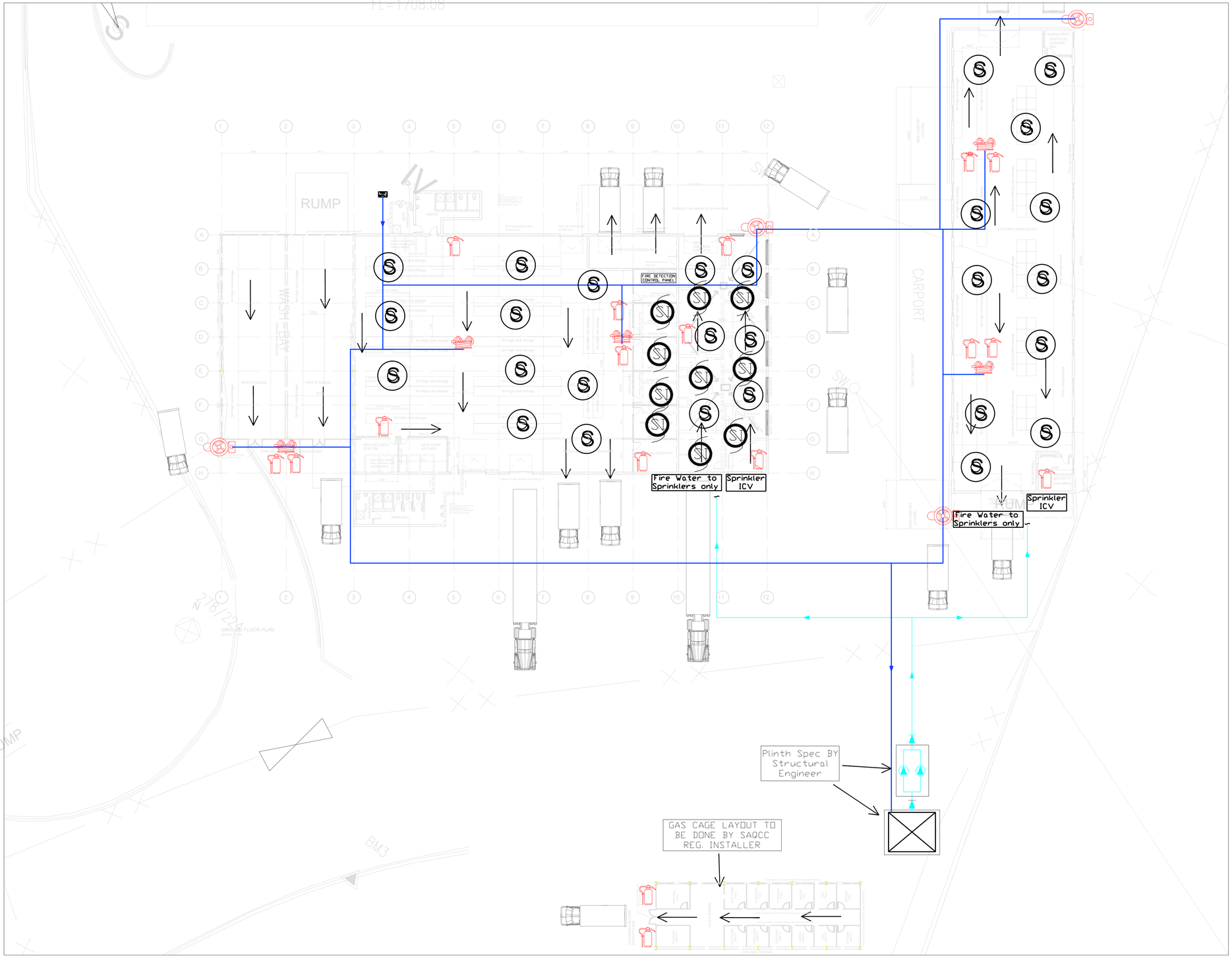
Project Number: ECS328

Drawing Title:
MECHANICAL – WET SERVICES PRELIMINARY LAYOUT

Size	LESEDI Drawing No.	Rev
A1	ECS328-M-001	B

Approved			
Engineer	TM		21-11-2024
Checked	LB		21-11-2024
Drawn	TM		21-11-2024
Scale AS SHOWN	**Name**	**Signed**	**Date**

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



GENERAL NOTES:

FIRE EQUIPMENT LEGEND

- Fire Water Line
- Fire Extinguisher
- Fire Hose Reel
- Fire Hydrant
- Fire Wall
- Fire Escape Route
- Fire Water Tank
- Pump Setup
- Twin Booster
- Sprinkler Covered Area
- Sprinkler Water
- Fire Detection Covered Area

ISSUED FOR TENDER

Drg. No.	Description
Reference Drawings	

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	TM	LB	TM	21-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte Johannesburg 2093	Turbine Hall 65 Ntemi Piliso Street Newtown Johannesburg

LESEDI TECHNICAL ENGINEERING CONSULTING
A division Of Lesedi Le Africe Holdings

Physical Address	Postal Address
Maxwell Office Park 1st Floor, Building 3 37 Magwa Crescent Waterfall City 2195 Tel: +27 10 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAARGTE

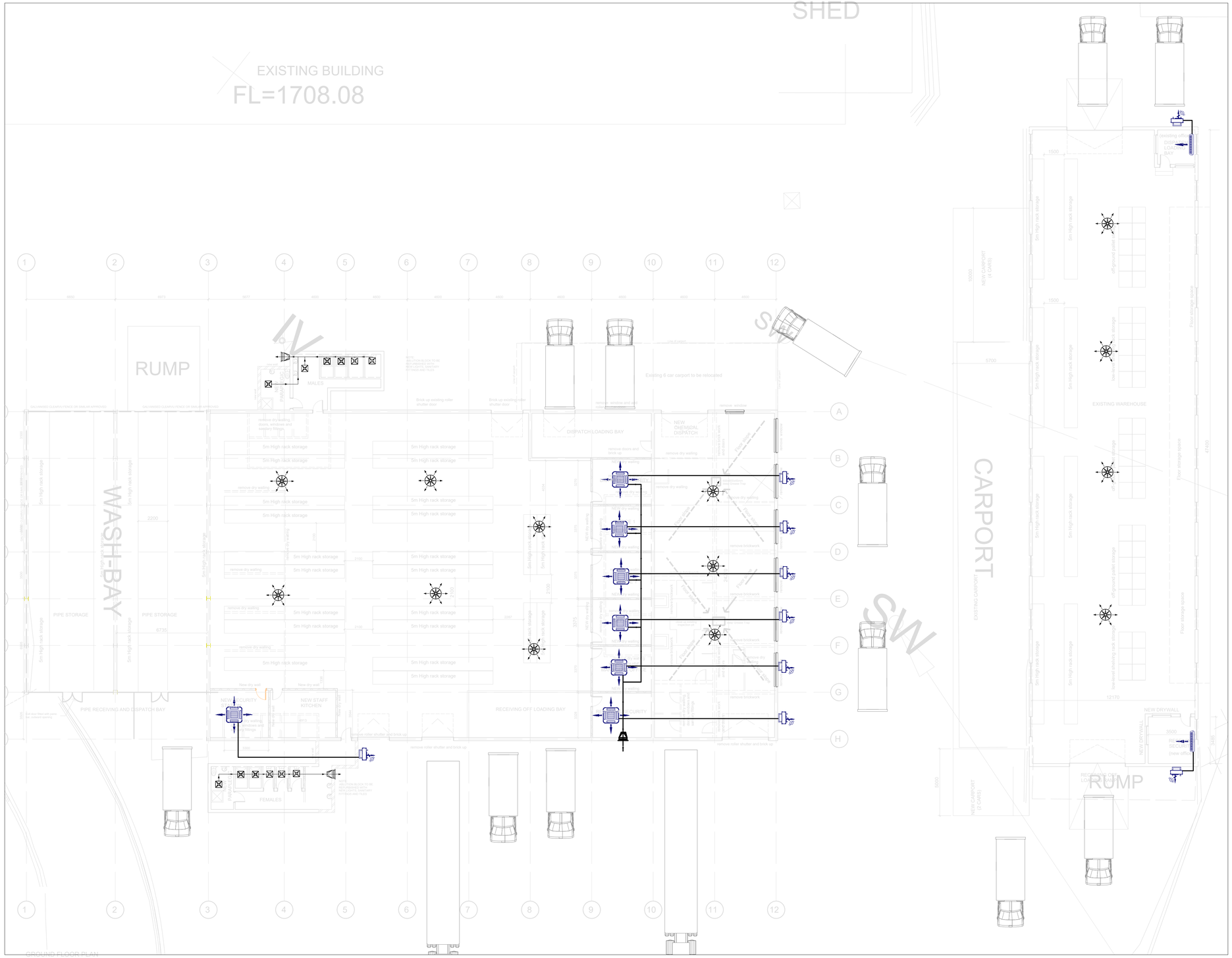
Project Number: ECS328

Drawing Title:
MECHANICAL – FIRE SERVICES PRELIMINARY SKETCH

Size	LESEDI Drawing No.	Rev
A1	ECS328-M-002	B

Approved			
Engineer	TM		21-11-2024
Checked	LB		21-11-2024
Drawn	TM		21-11-2024
Scale AS SHOWN	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



GENERAL NOTES:

LEGEND

	OUT DOOR UNIT
	CEILING CASSETTE UNIT
	HIGH WALL UNIT
	FRESH AIR SUPPLY FAN
	ROOF MOUNTED EXTRACTION FAN
	WALL MOUNTED EXTRACTION FAN
	Dual Refrigerant Pipe
	Extraction Air Dust
	Supply Air Duct

ISSUED FOR TENDER

Drg. No.	Description

Reference Drawings

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	TM	LB	TM	21-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte Johannesburg 2093	Turbine Hall 65 Ntemi Piliso Street Newtown Johannesburg

LESEDI TECHNICAL ENGINEERING CONSULTANTS
A Division Of Lesedi La Africa Holdings

Physical Address	Postal Address
Maxwell Office Park 1st Floor, Building 3 37 Magwa Crescent Waterfall City 2195 Tel: +27 10 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name: JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAARGTE

Project Number: ECS328

Drawing Title: MECHANICAL – HVAC PRELIMINARY LAYOUT

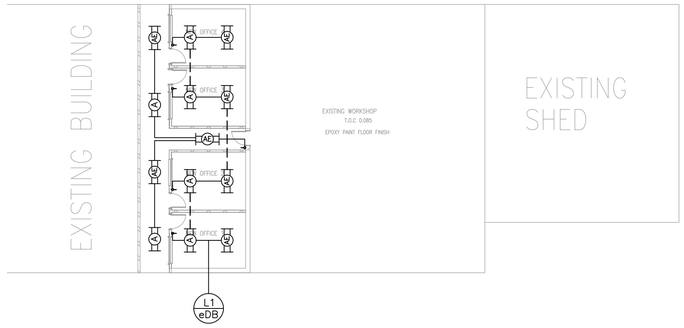
Size	LESEDI Drawing No.	Rev
A1	ECS328-M-003	B

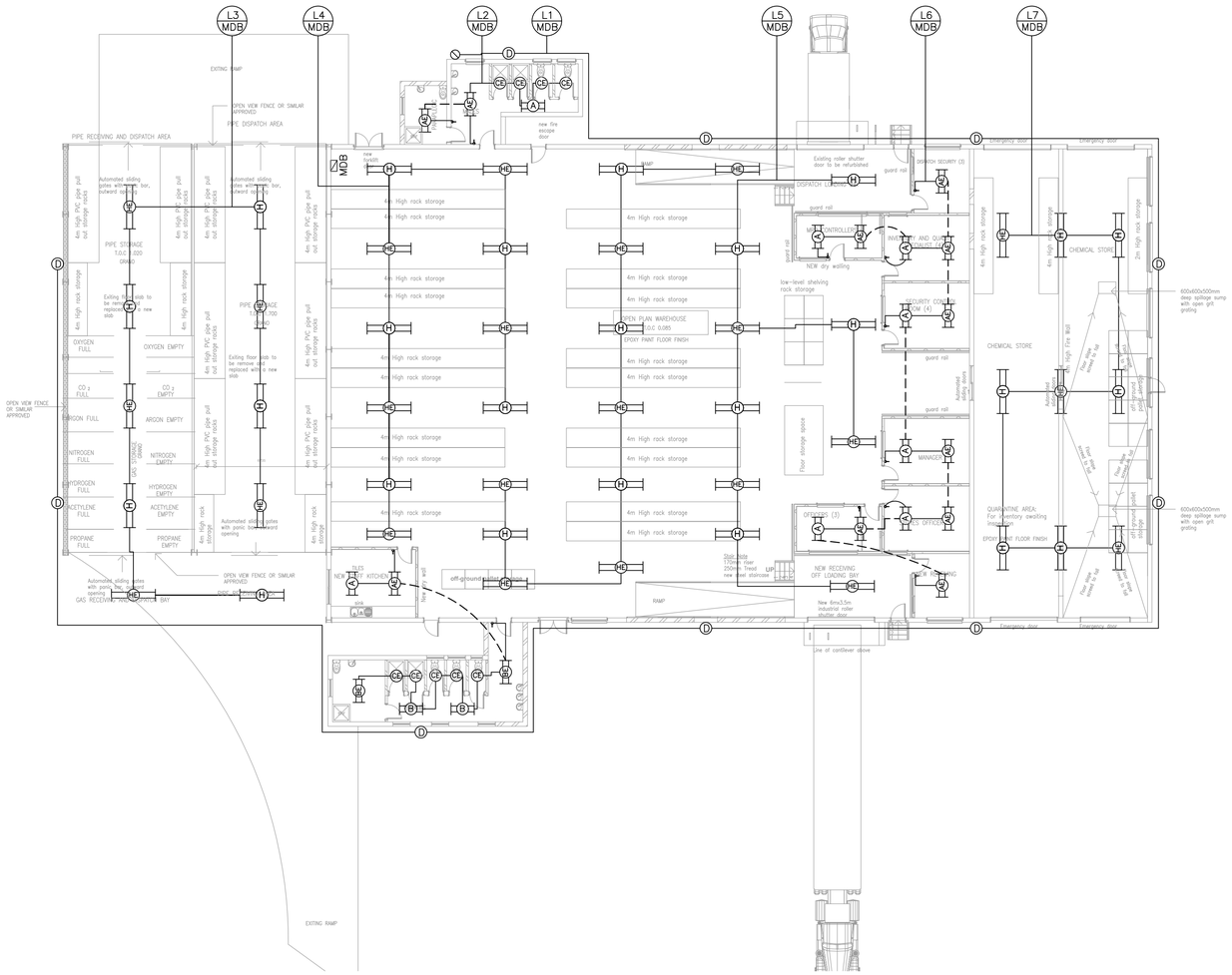
Approved			
Engineer	TM		21-11-2024
Checked	LB		21-11-2024
Drawn	TM		21-11-2024
Scale AS SHOWN	Name	Signed	Date

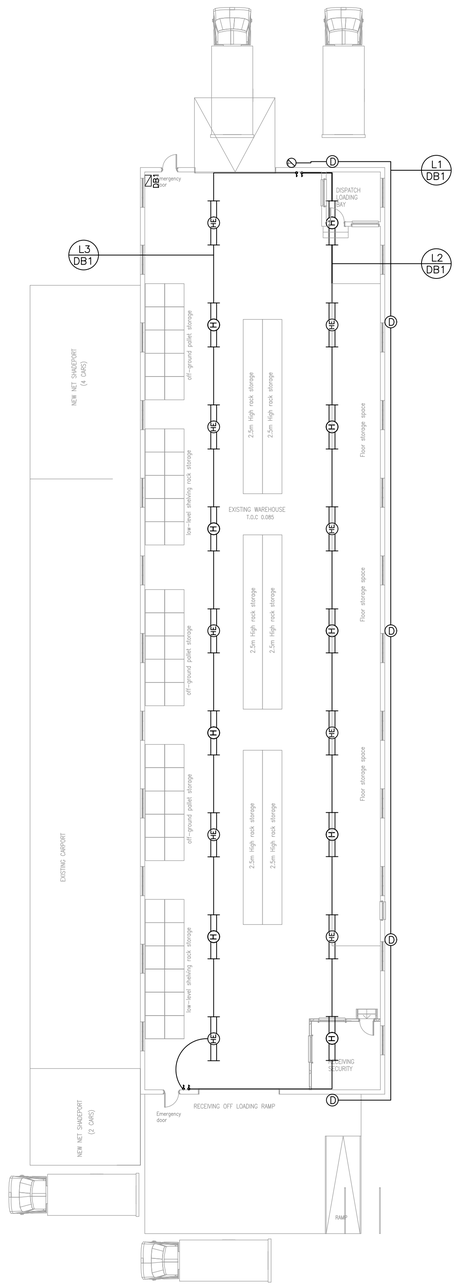
ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.

TYPE	DESCRIPTION
A	1200mm LONG SURFACE MOUNTED OPEN CHANNEL LIGHT FITTING COMPLETE WITH 2 x 23W LED TUBES, 2150 LUMENS PER LAMP, IP20 AND ELECTRONIC CONTROL GEAR.
AE	1200mm LONG SURFACE MOUNTED OPEN CHANNEL LIGHT FITTING COMPLETE WITH 2 x 23W LED TUBES, 2150 LUMENS PER LAMP, IP20, ONE HOUR EMERGENCY BATTERY BACK-UP AND ELECTRONIC CONTROL GEAR.
B	1200mm LONG SURFACE MOUNTED WATERTIGHT, STEAMPROOF AND CORROSION PROOF LIGHT FITTING COMPLETE WITH 2 x 23W LED TUBES, 2150 LUMENS PER LAMP, IP66 AND ELECTRONIC CONTROL GEAR.
BE	1200mm LONG SURFACE MOUNTED WATERTIGHT, STEAMPROOF AND CORROSION PROOF LIGHT FITTING COMPLETE WITH 2 x 23W LED TUBES, 2150 LUMENS PER LAMP, IP66, ONE HOUR EMERGENCY BATTERY BACK-UP AND ELECTRONIC CONTROL GEAR.
C	SURFACE MOUNTED BULKHEAD LIGHT FITTING COMPLETE WITH 24W, 231V LED BULB, 2594 LUMENS, IP66.
CE	SURFACE MOUNTED BULKHEAD LIGHT FITTING COMPLETE WITH 24W, 231V LED BULB, 2594 LUMENS, IP66 AND ONE HOUR EMERGENCY BATTERY BACK-UP.

TYPE	DESCRIPTION
D	SURFACE MOUNTED FLOODLIGHT FITTING COMPLETE WITH 79W, LED, 14 247 LUMENS, IP66 AND ELECTRONIC CONTROL GEAR.
H	HIGH BAY LIGHT FITTING COMPLETE WITH 200W LED LAMP, 32 492 LUMENS, IP67, 2mx0.75mm² 3CORE FLEX CABLE, 5A UNSWITCHED SOCKET OUTLET, PLUG TOP AND ELECTRONIC CONTROL GEAR
HE	HIGH BAY LIGHT FITTING COMPLETE WITH 200W LED LAMP, IP67, 2mx0.75mm² 3CORE FLEX CABLE, 5A UNSWITCHED SOCKET OUTLET, PLUG TOP, ONE HOUR BATTERY BACK-UP AND ELECTRONIC CONTROL GEAR
	20A 1LEVER 1WAY FLUSH SWITCH C/W STEEL COVER INSTALLED AT 1 400mm A.F.F.L.
	20A 1LEVER 2WAY FLUSH SWITCH C/W STEEL COVER INSTALLED AT 1 400mm A.F.F.L.
	20A INTERMEDIATE FLUSH SWITCH C/W STEEL COVER INSTALLED AT 1 400mm A.F.F.L.
	20A PHOTOCELL SWITCH.







GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Nteni Pilso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING SERVICES

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenfloger Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

Project Number: ECS328

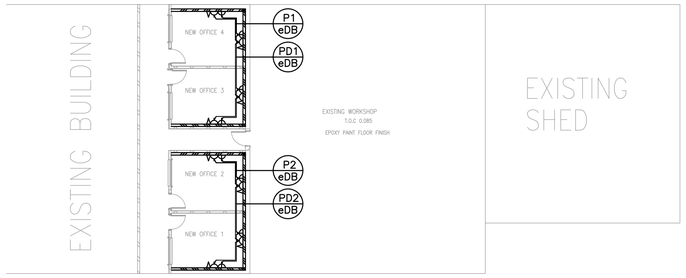
Drawing Title:
LIGHTING LAYOUT

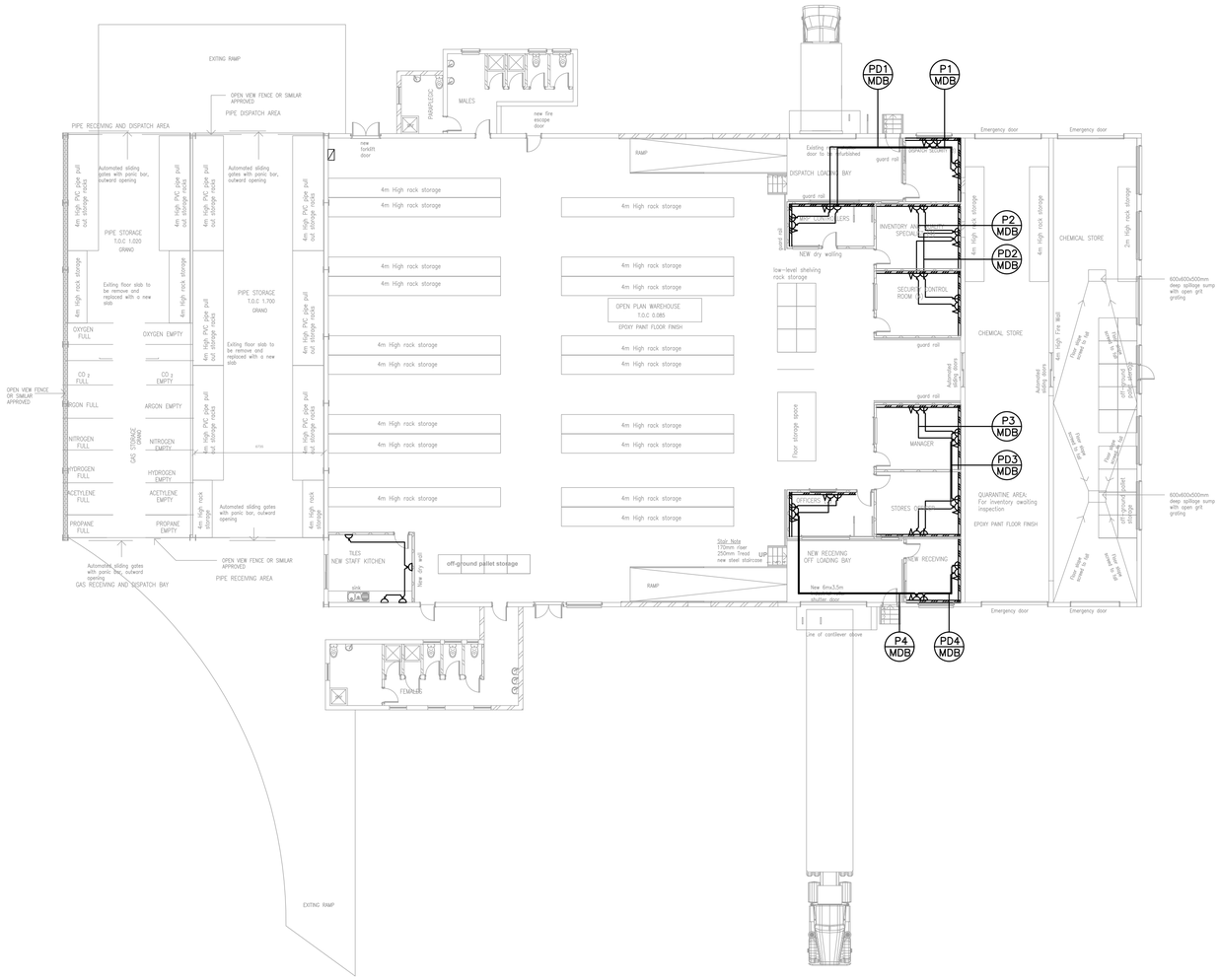
Size	Drawing No.	Rev
A1	ECS328/E – 001	B

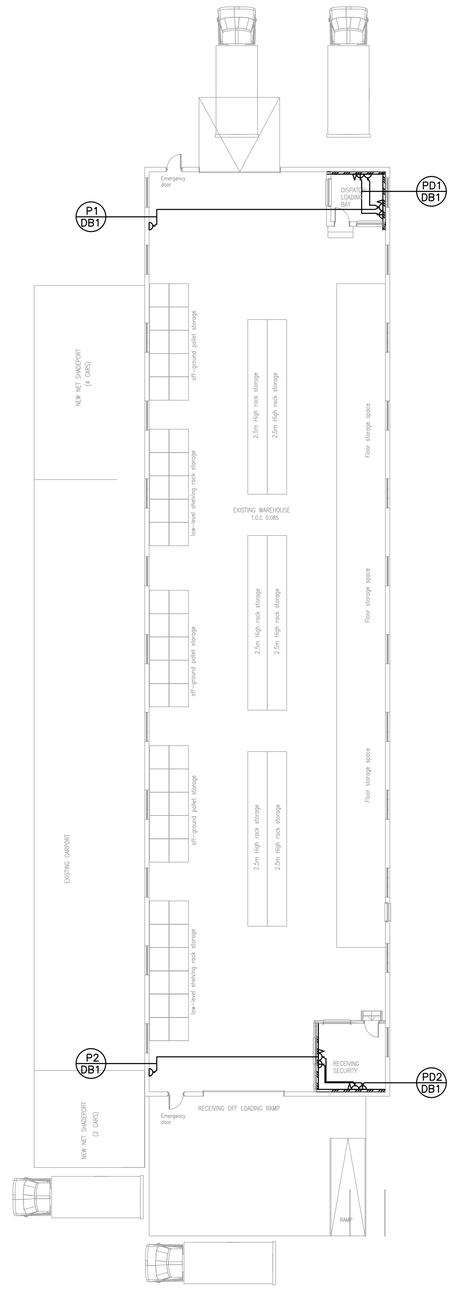
Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	M. KHUMALO		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.

	16A SINGLE SOCKET OUTLET COMPLYING WITH SANS 164–1 & SANS 164–2 INSTALLED AT 300mm A.F.F.L UNLESS OTHERWISE STATED.
	16A SINGLE DEDICATED SOCKET OUTLET COMPLYING WITH SANS 164–1 & SANS 164–2 INSTALLED AT 300mm A.F.F.L UNLESS OTHERWISE STATED.
20A	20A DOUBLE POLE ISOLATOR FOR AC UNIT INSTALLED OUTSIDE NEXT TO THE OUTDOOR UNIT.
	40A TRIPLE POLE ISOLATOR INSTALLED AT 1400mm A.F.F.L. UNLESS OTHERWISE STATED.
	DATA POINT INSTALLED AT 300mm A.F.F.L. UNLESS OTHERWISE STATED.
	2–COMPARTMENT STEEL POWER SKIRTING TRUNKING INSTALLED AT 100mm A.F.F.L. UNLESS OTHERWISE STATED.







GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19–11–2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Ntemi Pilliso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
a Division of Lesedi t/a Africa Holdings

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenfloger Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

Project Number: ECS328

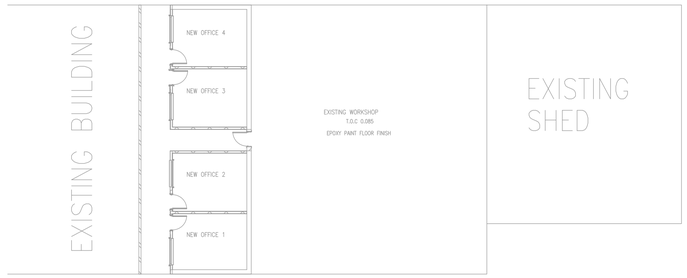
Drawing Title:
SMALL POWER LAYOUT

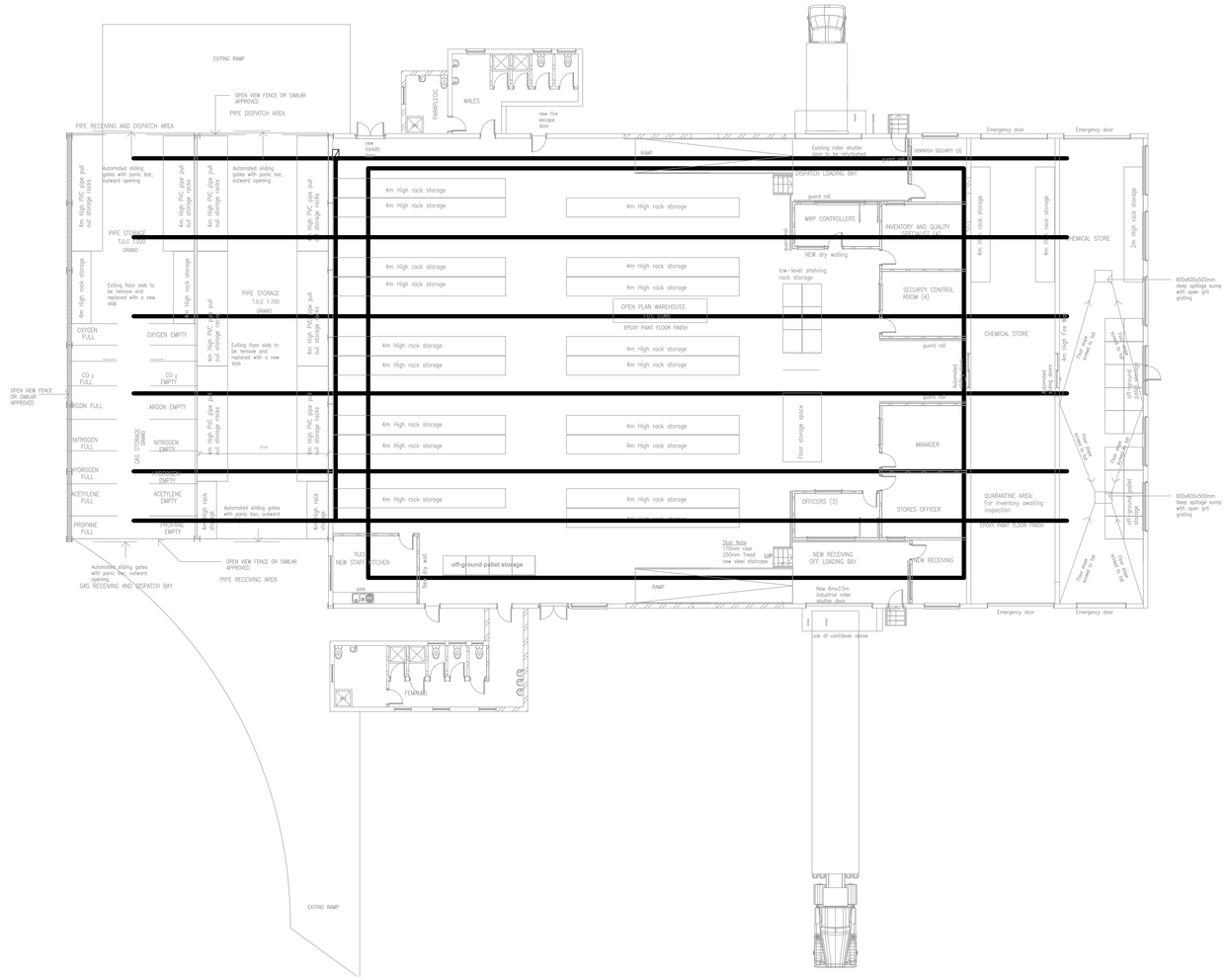
Size	Drawing No.	Rev
A1	ECS328/E – 002	B

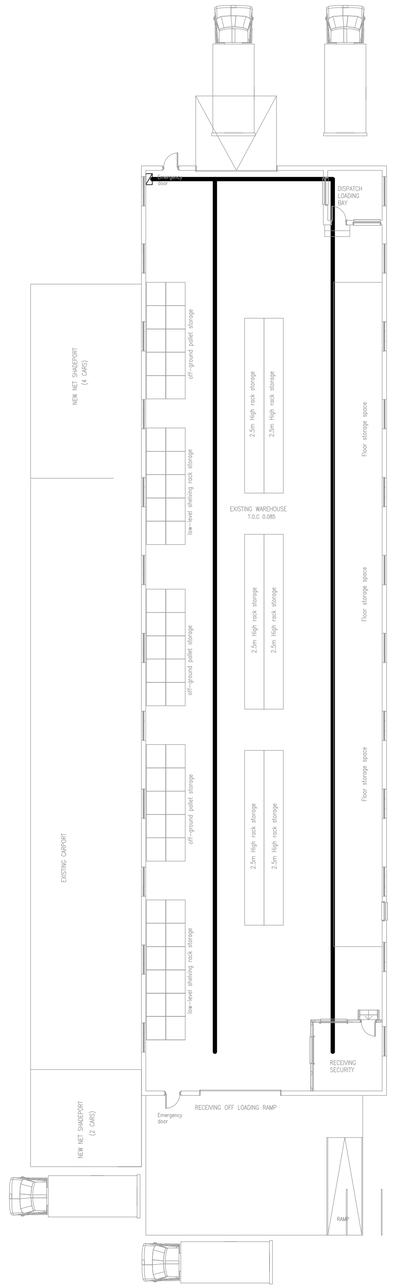
Approved			
Engineer	W. CHANAKIRA		21–05–2024
Checked	K. MUDZAMIRI		20–05–2024
Drawn	W. CHANAKIRA		20–05–2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.

━━━━	500mm WIRE MESH BASKET FOR ICT INSTALLED ON SOFFIT OR IN CEILING VOID UNLESS OTHERWISE STATED.
━━━━	P9000 WIRING CHANNEL FOR LIGHTING & POWER INSTALLED ON SOFFIT OR IN CEILING VOID UNLESS OTHERWISE STATED.







GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Miami Pilliso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTANTS
A division of Leseedi Africa Holdings

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenflogar Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

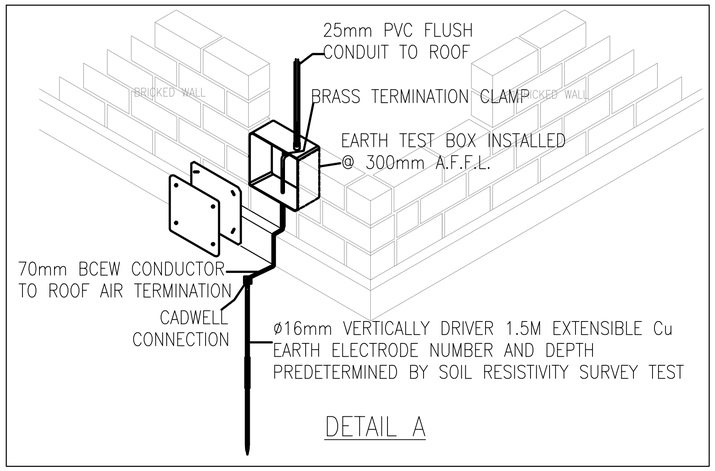
Project Number: ECS328

Drawing Title:
WIRING CHANNEL & WIREMESH LAYOUT

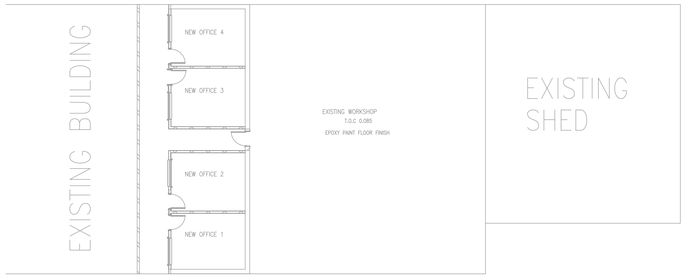
Size	Drawing No.	Rev
A1	ECS328/E – 003	B

Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	K. MUDZAMIRI		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



DETAIL A

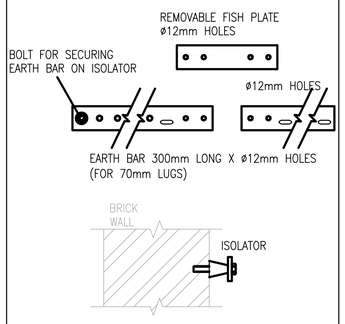


EARTHING LEGEND:

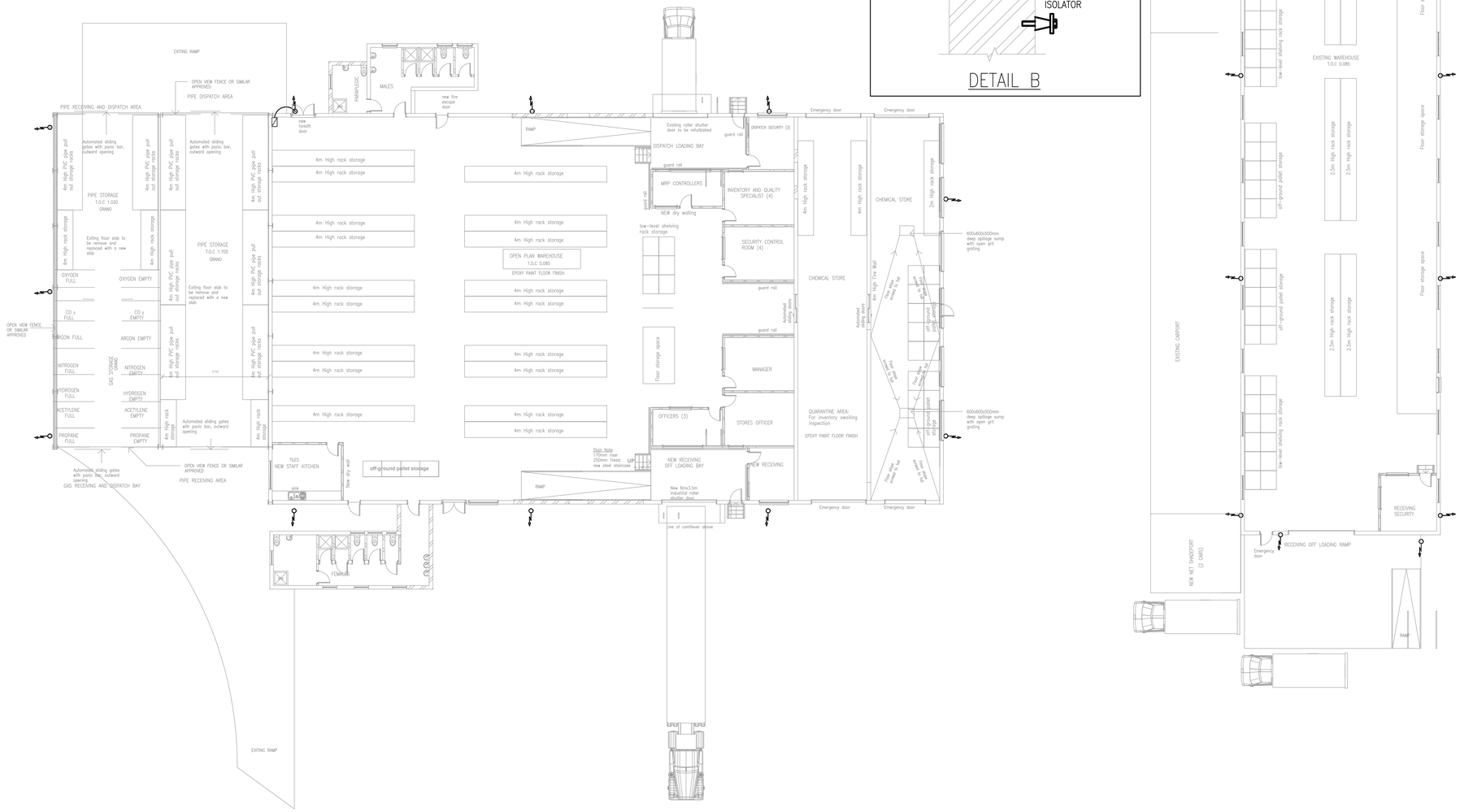
	ø16mm VERTICALLY DRIVEN 1.5m EXTENSIBLE EARTH ROD (SEE DETAIL A).
	CAD-WELD CONNECTION

NOTE:
1. EARTHING AND LIGHTNING PROTECTION SYSTEM SHOULD BE ACCORDING TO SANS 10142-1, SANS 10292, SANS 10313 AND BE DONE BY AN EARTHING & LIGHTNING SPECIALIST WHO WILL ISSUE A TEST CERTIFICATE.

ILLUSTRATION OF MAIN EARTH BAR



DETAIL B



GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langloogte JOHANNESBURG 2093	TURBINE HALL 65 Ntemi Pilliso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
A division of Lesedi Le African Holdings

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenflager Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROP. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

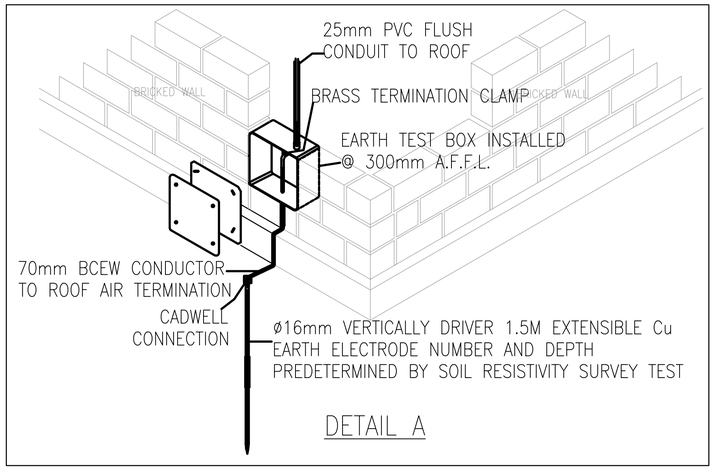
Project Number: ECS328

Drawing Title:
EARTHING SYSTEM

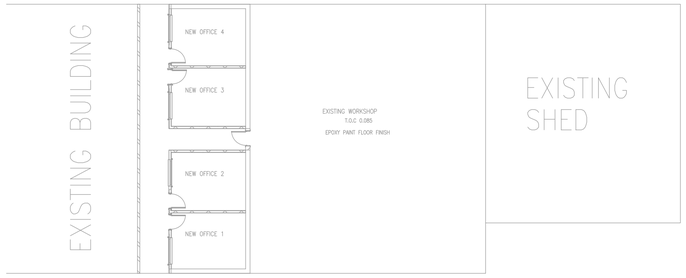
Size	Drawing No.	Rev
A1	ECS328/E - 004	B

Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	K. MUDZAMIRI		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



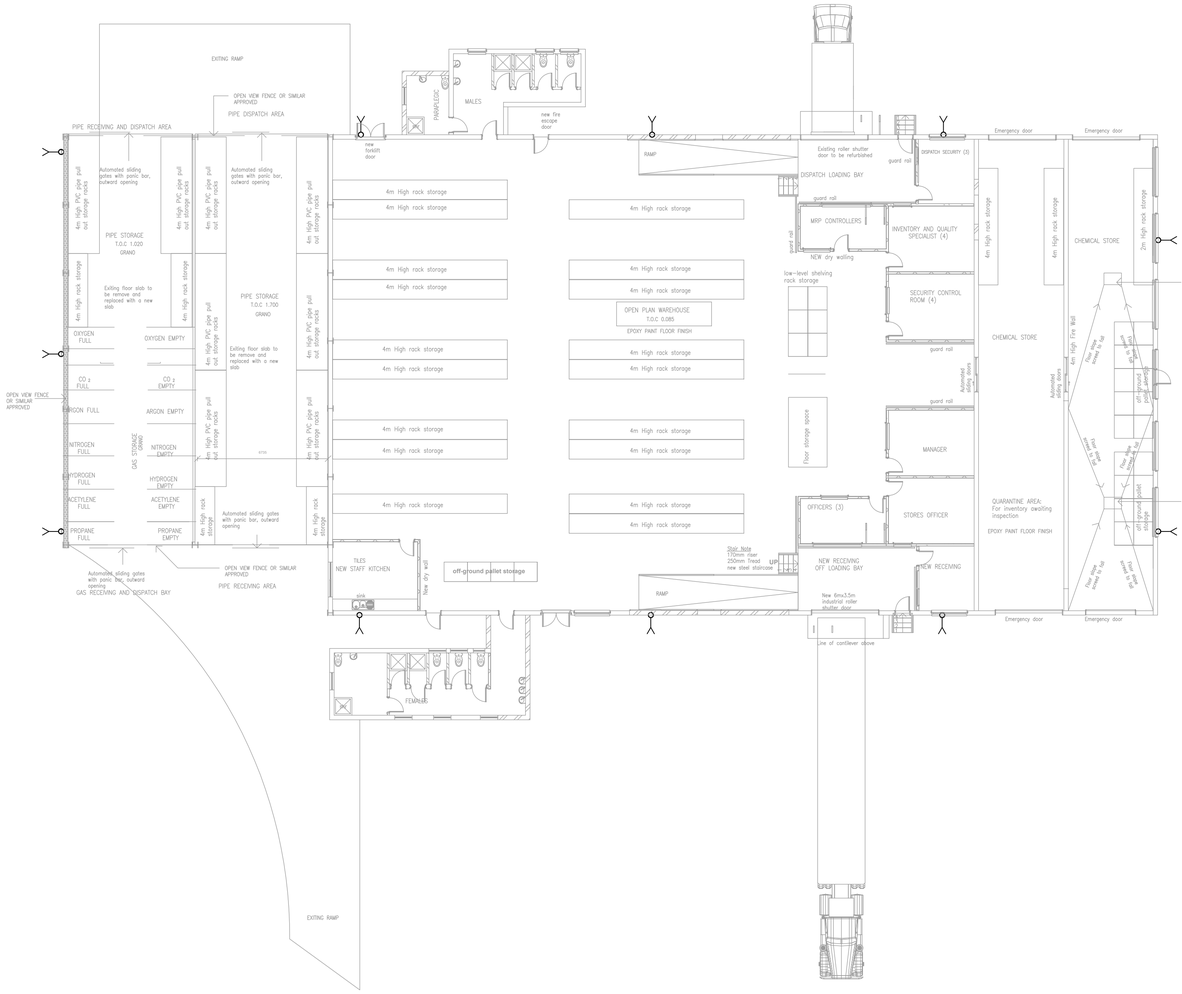
DETAIL A

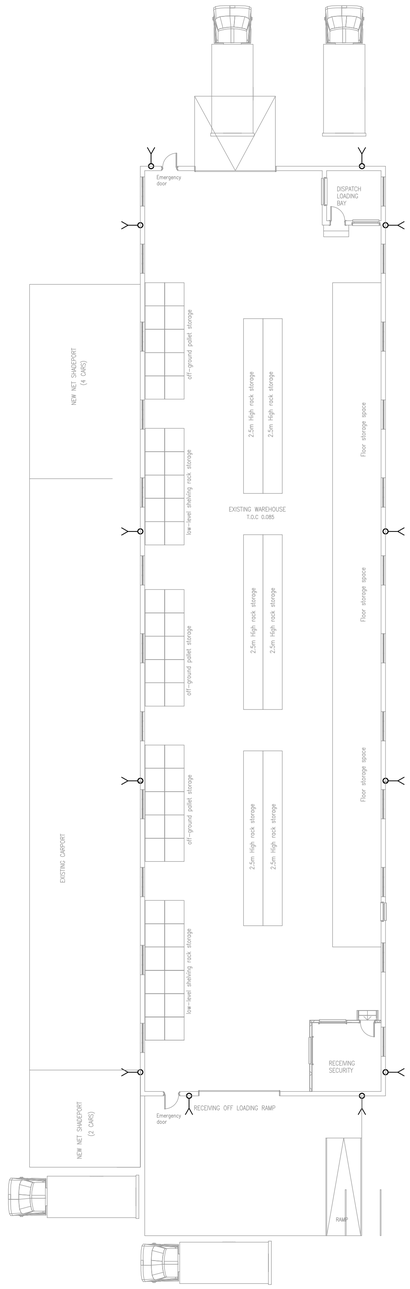


LIGHTNING PROTECTION LEGEND:

	ø16mm x 500mm LONG COPPER AIR TERMINATION ROD
O	ROOF TERMINATION POINT TO GROUND EARTHING SYSTEM VIA A 50mm² BARE COPPER EARTH WIRE WITH TERMINATION BOX @ 300mm A.F.F.L. (SEE DETAIL A)

NOTE:
1. EARTHING AND LIGHTNING PROTECTION SYSTEM SHOULD BE ACCORDING TO SANS 10142-1, SANS 10292, SANS 10313 AND BE DONE BY AN EARTHING & LIGHTNING SPECIALIST WHO WILL ISSUE A TEST CERTIFICATE.





GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Nlemi Pilisio Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
A Brickport MT company t/a Africa Holdings

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenfiogar Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

Project Number: ECS328

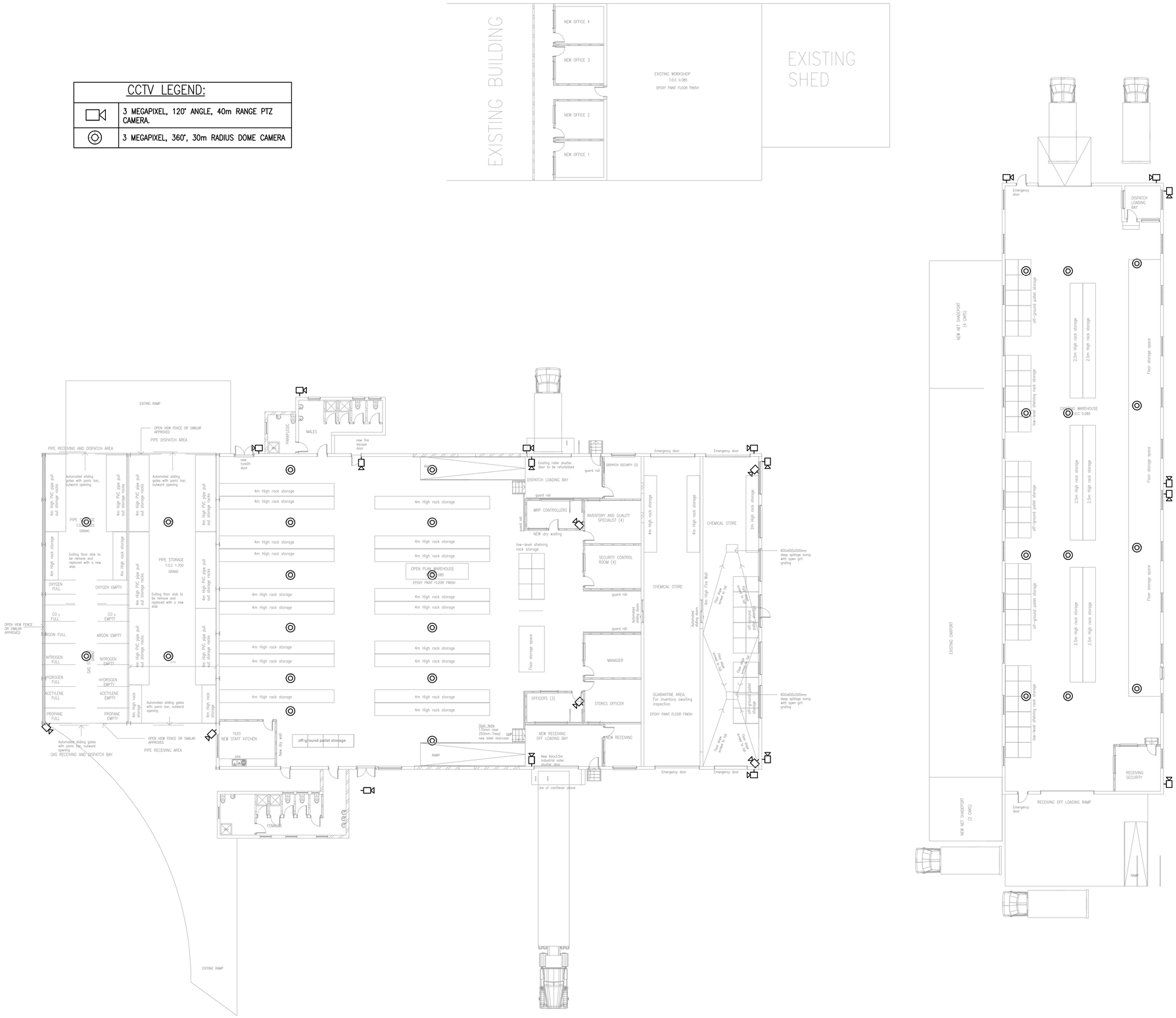
Drawing Title:
LIGHTNING PROTECTION SYSTEM LAYOUT

Size	Drawing No.	Rev
A1	ECS328/E – 005	B

Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	K. MUDZAMIRI		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.

CCTV LEGEND:	
	3 MEGAPIXEL, 120° ANGLE, 40m RANGE PTZ CAMERA.
	3 MEGAPIXEL, 360°, 30m RADIUS DOME CAMERA



GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Ntemi Pilso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
A Division Of Lesedi t/a Africa Holdings

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenfiager Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

Project Number: ECS328

Drawing Title:
CCTV SYSTEM LAYOUT

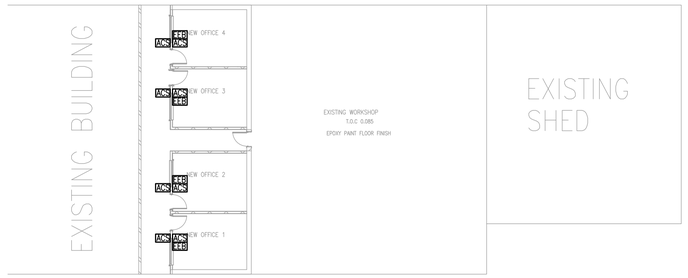
Size	Drawing No.	Rev
A1	ECS328/E – 006	B

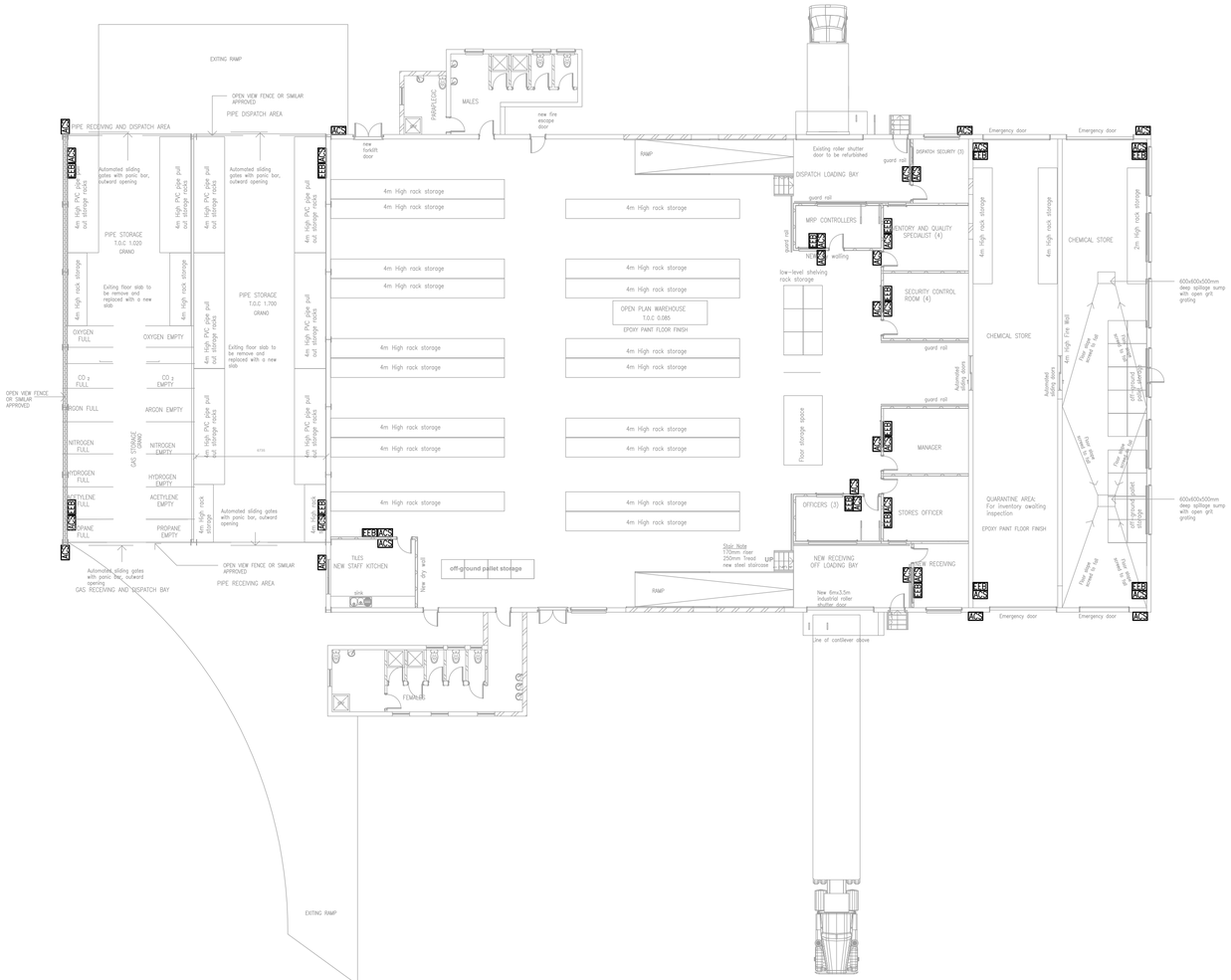
Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	K. MUDZAMIRI		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

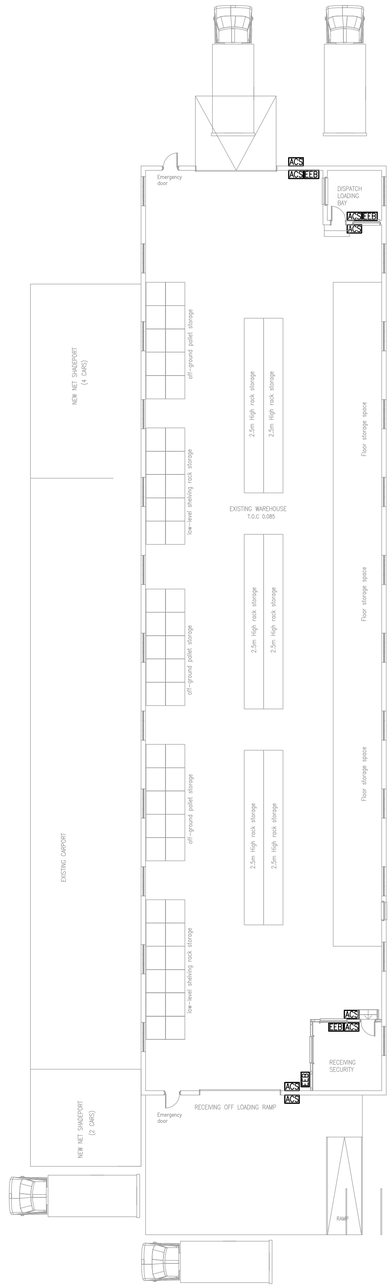
ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.

ACCESS CONTROL SYSTEM LEGEND:

ACS	CARD READER ACCESS CONTROL KEY PAD @ 1400mm A.F.F.L.
EEB	EMERGENCY EXIT BUTTON @ 1400mm A.F.F.L.







GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Ntemi Pilso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
a division of Lesedi t/a Africa Holdings

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenfloger Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

Project Number: ECS328

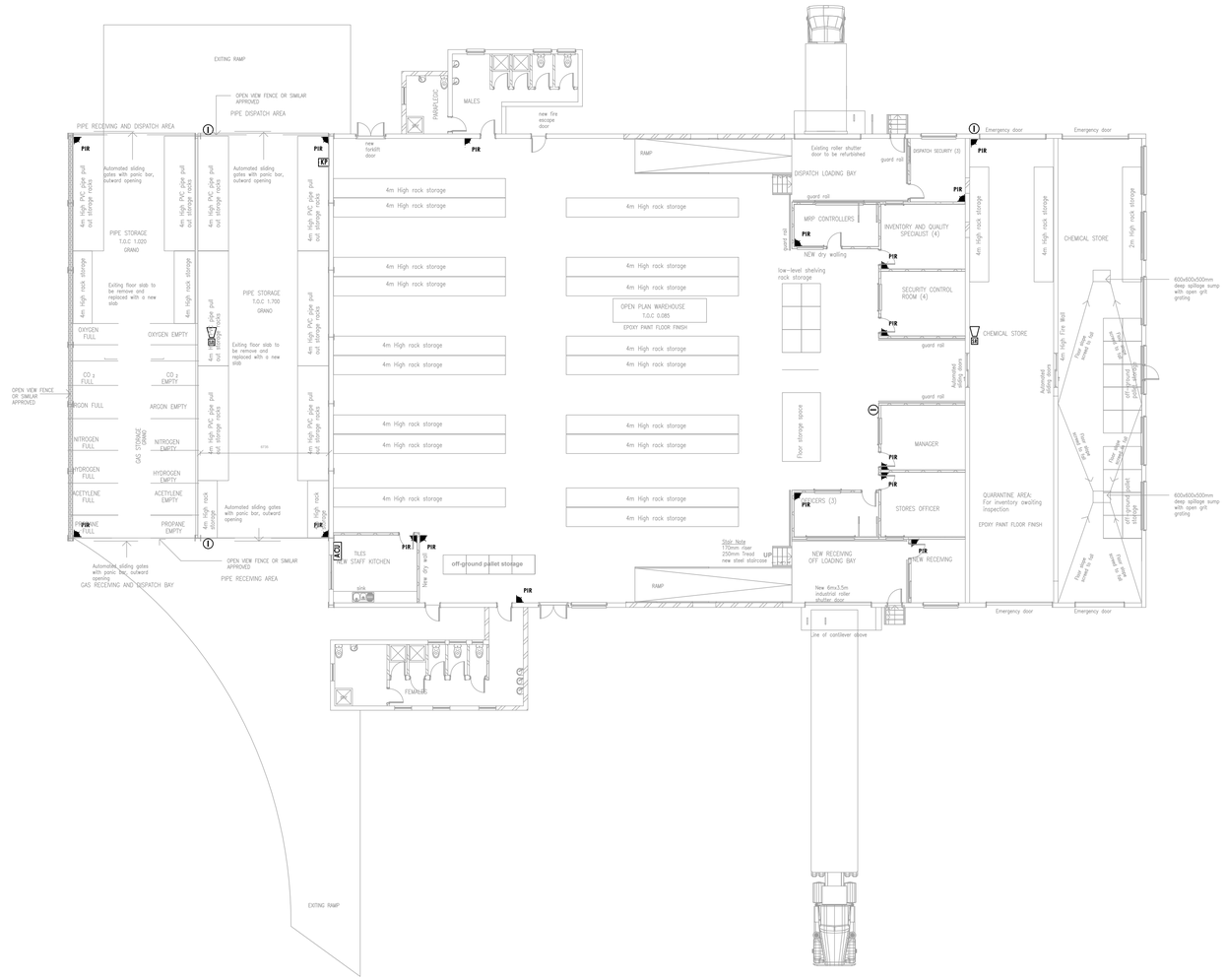
Drawing Title:
ACCESS CONTROL SYSTEM LAYOUT

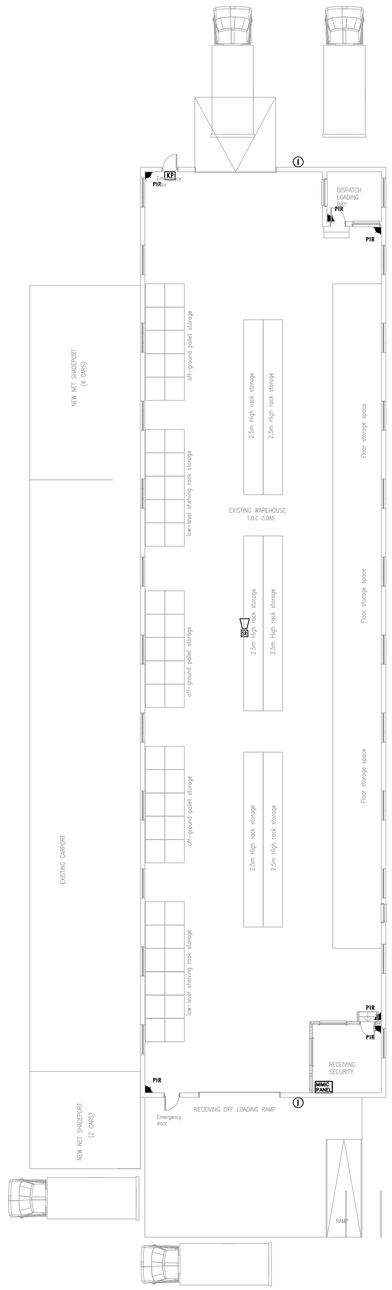
Size	Drawing No.	Rev
A1	ECS328/E - 007	B

Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	K. MUDZAMIRI		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.

PIR	PIR MOVEMENT DETECTOR
KP	ALARM KEY PAD @ 1400mm A.F.F.L
ACU	ALARM CONTROL UNIT @ 1500mm A.F.F.L
SR	SIREN MOUNTED IN ROOF SPACE
I	ALARM INDICATOR LIGHT 200mm ABOVE DOOR HEIGHT
MIMIC PANEL	MIMIC PANEL @ 1500mm A.F.F.L





GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Ntemi Pilliso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
a division BFF Leseedi t.a. Africa Holdings

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenfloger Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

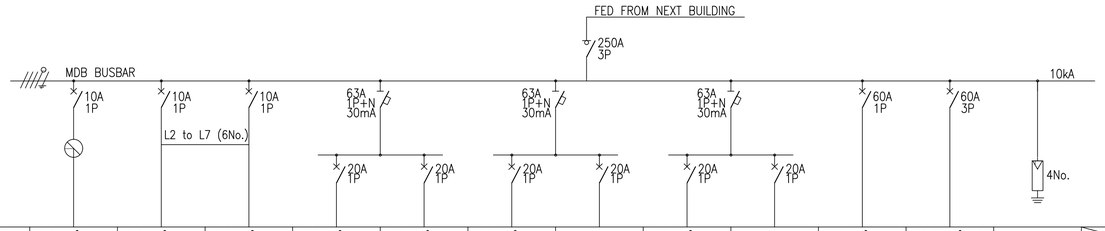
Project Number: ECS328

Drawing Title:
INTRUDER ALARM SYSTEM LAYOUT

Size	Drawing No.	Rev
A1	ECS328/E - 008	B

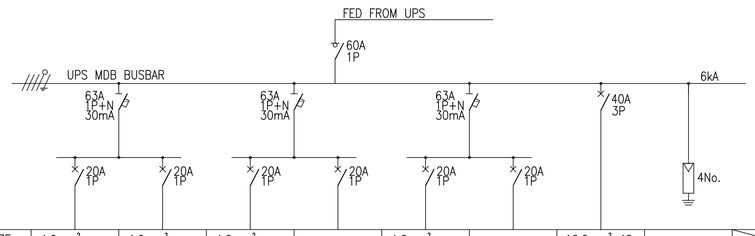
Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	K. MUDZAMIRI		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



CONDUCTOR SIZE IN mm²	2.5mm² Single Core	2.5mm² Single Core	2.5mm² Single Core	4.0mm² Single Core	4.0mm² Single Core	4.0mm² Single Core		4.0mm² Single Core		4.0mm² Single Core	25.0mm² 4C PVC/SWA/PVC		
EARTH CONDUCTOR SIZE IN mm²	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW		2.5mm² BCEW		2.5mm² BCEW	16.0mm² BCEW		
CONDUIT SIZE IN Ømm	ø20mm PVC	ø20mm PVC	ø20mm PVC	ø20mm PVC	ø20mm PVC	ø20mm PVC		ø20mm PVC		ø20mm PVC	IN TRENCH		
LABEL	L1	L2 to L7		P1	P2	P3	SPARE	P4	SPARE	AC1 to AC10	DB 1		SPARE SPACE 25%
EQUIPMENT	LIGHTS			NORMAL SOCKET OUTLETS						MECHANICAL	FEEDER CABLE		

MDB

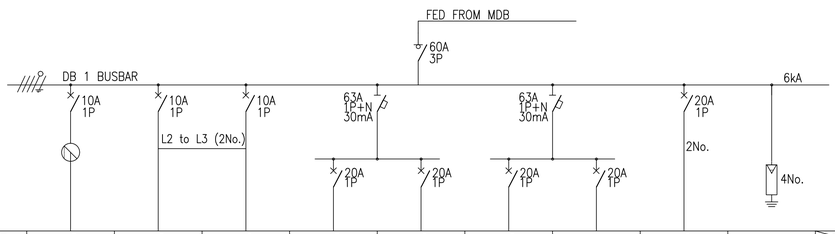


CONDUCTOR SIZE IN mm²	4.0mm² Single Core	4.0mm² Single Core	4.0mm² Single Core		4.0mm² Single Core		16.0mm² 4C PVC/SWA/PVC	
EARTH CONDUCTOR SIZE IN mm²	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW		2.5mm² BCEW		16.0mm² BCEW	
CONDUIT SIZE IN Ømm	ø20mm PVC	ø20mm PVC	ø20mm PVC		ø20mm PVC		IN TRENCH	
LABEL	PD1	PD2	PD3	SPARE	PD4	SPARE	Dedicated DB 1	SPARE SPACE 25%
EQUIPMENT	DEDICATED SOCKET OUTLETS						FEEDER CABLE	

MDB (DEDICATED)

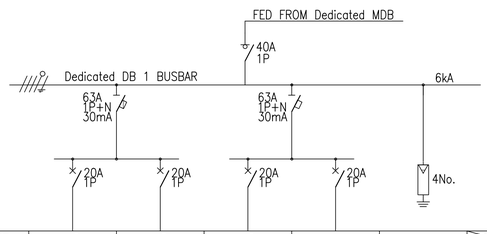
SCHEMATIC SYMBOL LIST:

xA xP	MOULDED CASE CIRCUIT BREAKER (xA, rating Amps)(xP, poles)
xA xP	ON LOAD ISOLATOR (xA, rating Amps)(xP, poles)
xA xP xmA	EARTH LEAKAGE (xA, rating Amps) (xP, poles)(xmA, relay value)
xA xP	CONTACTOR (xA, rating Amps) (xP, poles)
xA xP xmA	EARTH LEAKAGE WITH OVERLOAD (xA, rating Amps)(xP, poles) (xmA, relay value)
xkA	3PHASE, NEUTRAL & EARTH BAR (xkA, fault level rating)
xV xkA	SURGE ARRESTOR (xA, rating Amps) (xkA, fault level rating)
	TRANSFORMER



CONDUCTOR SIZE IN mm²	2.5mm² Single Core	2.5mm² Single Core	2.5mm² Single Core	4.0mm² Single Core	4.0mm² Single Core	4.0mm² Single Core		4.0mm² Single Core	
EARTH CONDUCTOR SIZE IN mm²	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW		2.5mm² BCEW	
CONDUIT SIZE IN Ømm	ø20mm PVC	ø20mm PVC	ø20mm PVC	ø20mm PVC	ø20mm PVC	ø20mm PVC		ø20mm PVC	
LABEL	L1	L2 to L3		P1	SPARE	P2	SPARE	AC1 to AC2	SPARE SPACE 25%
EQUIPMENT	LIGHTS			NORMAL SOCKET OUTLETS				MECHANICAL	

DB 1



CONDUCTOR SIZE IN mm²	4.0mm² Single Core	4.0mm² Single Core	4.0mm² Single Core			
EARTH CONDUCTOR SIZE IN mm²	2.5mm² BCEW	2.5mm² BCEW	2.5mm² BCEW			
CONDUIT SIZE IN Ømm	ø20mm PVC	ø20mm PVC	ø20mm PVC			
LABEL	PD1	SPARE	PD2	SPARE		SPARE SPACE 25%
EQUIPMENT	DEDICATED SOCKET OUTLETS					

DB 1 (DEDICATED)

GENERAL NOTES:

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	W.C.	W.C.		19-11-2024

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 Link Road Langlaagte JOHANNESBURG 2093	TURBINE HALL 65 Ntemi Pliso Street Newtown JOHANNESBURG

LESEDI TECHNICAL ENGINEERING SERVICES

Physical Address	Postal Address
LTE House Kildrummy Office Park, Glenflager Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 01 0015 5388	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

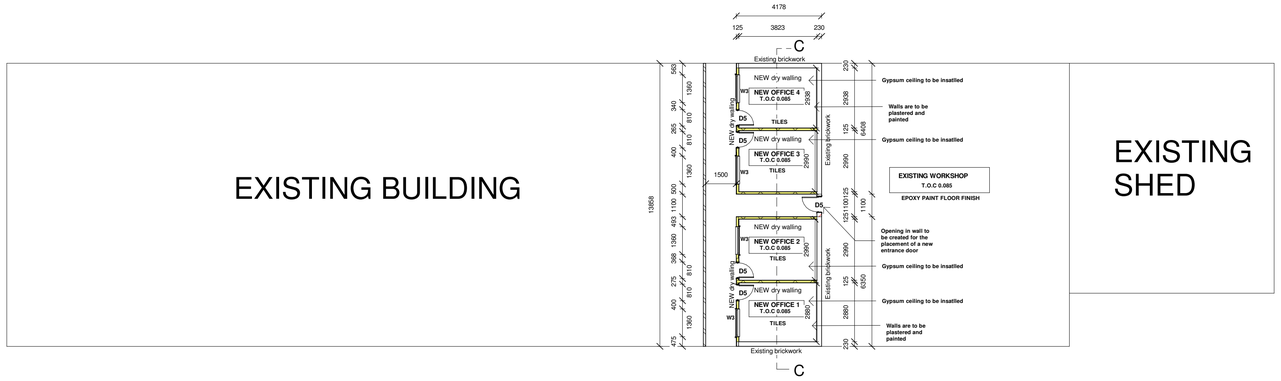
Project Number: ECS328

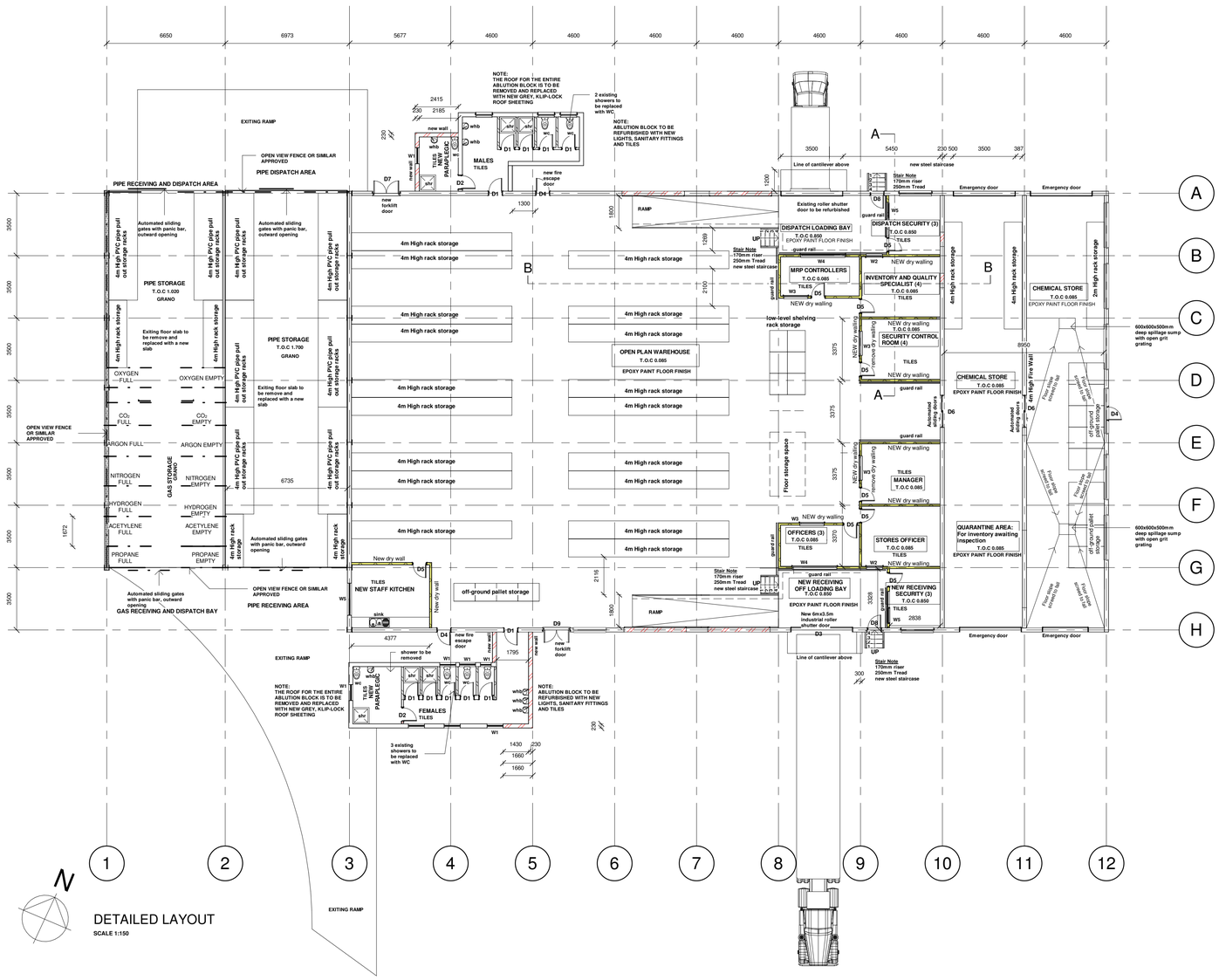
Drawing Title:
INTRUDER ALARM SYSTEM LAYOUT

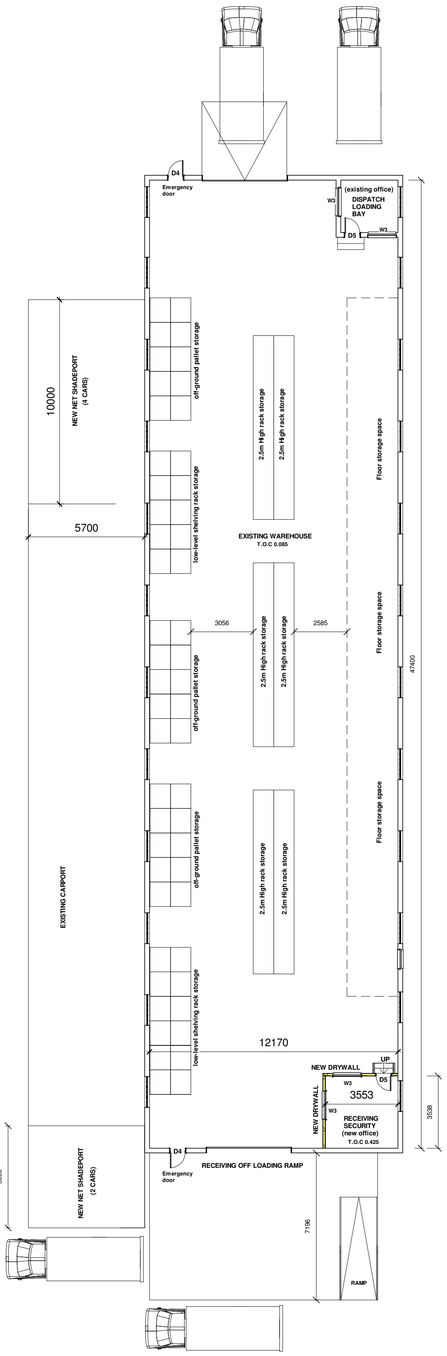
Size	Drawing No.	Rev
A1	ECS328/E – 009	B

Approved			
Engineer	W. CHANAKIRA		21-05-2024
Checked	K. MUDZAMIRI		20-05-2024
Drawn	W. CHANAKIRA		20-05-2024
Scale 1:150	Name	Signed	Date

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LTE CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.







GENERAL NOTES:

PIPE AND GAS AREA SCHEDULE

TOTAL FLOOR AREA = 287.85sqm

GAS AREA = 73.3sqm
PIPE STORAGE AREA = 90.37sqm

GAS COVERAGE = 25.5%
PIPE COVERAGE = 31.7%
TOTAL COVERAGE = 57.2%

OPEN PLAN WAREHOUSE AREA SCHEDULE

TOTAL FLOOR AREA = 801.87sqm

4m HIGH RACK STORAGE AREA = 163.22sqm
OFF-GROUND PALLET STORAGE AREA = 4.8sqm
LOW LEVEL SHELVING RACK STORAGE AREA = 7.2sqm
FLOOR STORAGE SPACE = 7.1sqm

TOTAL STORAGE SPACE = 182.32sqm
STORAGE COVERAGE = 22.7%

NEW STAFF KITCHEN = 16.5sqm
OFFICES = 107.1sqm
RECIEVING AND DISPATCH AREAS (INCLUDING RAMPS) = 81sqm

STORAGE COVERAGE = 25.5%
TOTAL STORAGE SPACE = 204.6sqm

SUM TOTAL SPACE = 386.92sqm
STORAGE COVERAGE = 48.2%

OVERFLOW WORKSHOP AREA SCHEDULE

TOTAL FLOOR AREA = 554sqm

FLOOR STORAGE AREA = 85.5sqm
RACK STORAGE AREA = 54sqm
LOW-LEVEL SHELVING RACK STORAGE = 27sqm
OFF-GROUND PALLET STORAGE = 36sqm

TOTAL STORAGE AREA = 202.5sqm
STORAGE COVERAGE = 36.5%

CHEMICAL AREA SCHEDULE

TOTAL FLOOR AREA = 218.11sqm

QUARANTINE AREA = 45sqm
RACK STORAGE AREA = 27sqm
OFF-GROUND PALLET STORAGE = 21.6sqm

TOTAL STORAGE AREA = 93.6sqm
STORAGE COVERAGE = 42.9%

FOR TENDER

Drg. No.	Description

Reference Drawings

Rev	Description	By	Chk'd	Eng	Date
B	ISSUED FOR TENDER	NC	NC	KM	19-11-24

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG, 2093	TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTANTS
A division Of Lesedi La Africa Holdings

Physical Address	Postal Address
LESEDI House Kidrummy Office Park, Glenfiagar Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 010 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

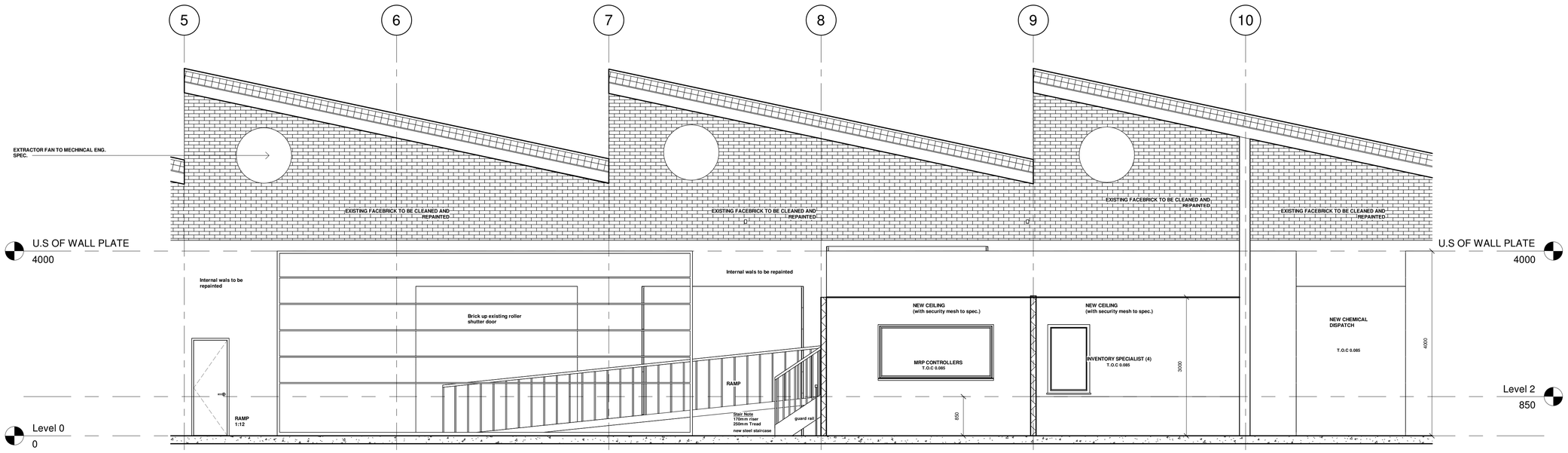
Project Number:

Drawing Title:
DETAILED LAYOUT OF REFURBISHMENT AND UPGRADES AT MEGA STORE, OVERFLOW AND WORKSHOP BUILDING

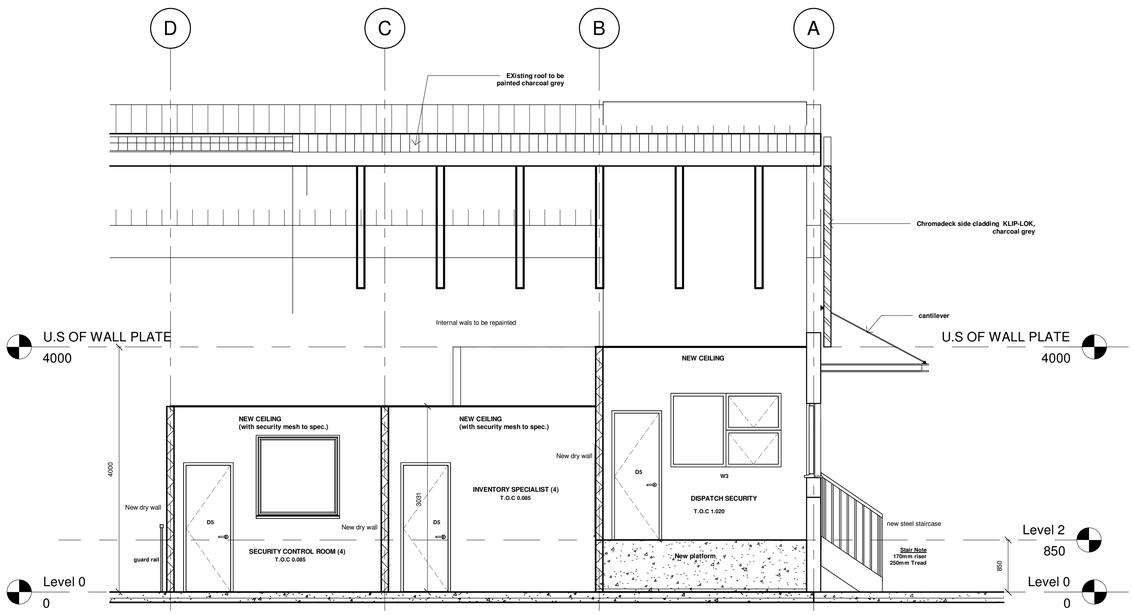
Size	LESEDI Drawing No.	Rev
A1	ECS328-ARCH-001	B

	Name	Signed	Date
Approved	N. CHISALE		
Engineer	K.MUDZAMIRI		
Checked	N. CHISALE		
Drawn	N. CHISALE		
Scale AS SHOWN			

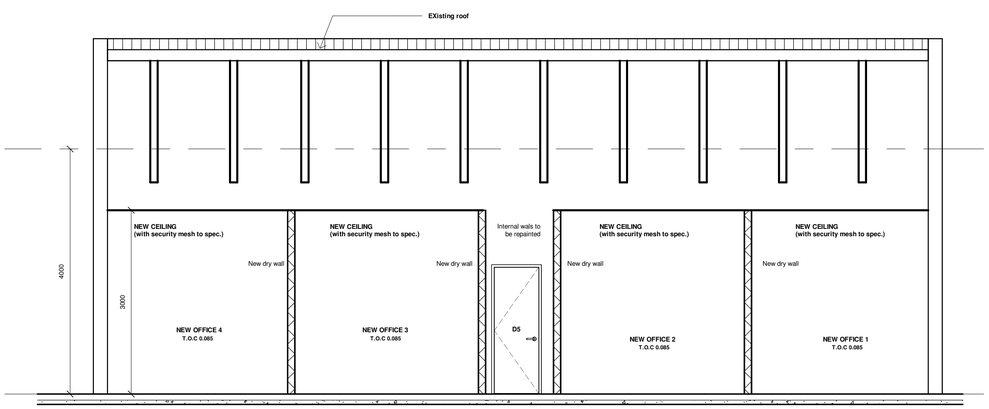
ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



SECTION B-B
SCALE 1:50



SECTION A-A
SCALE 1:50



SECTION C-C
SCALE 1:50

GENERAL NOTES:

FOR TENDER

Drg. No.	Description

Reference Drawings

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	NC	NC	KM	19-11-24

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG, 2093	TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
A Division of Lesedi Le Africa Holdings

Physical Address	Postal Address
LESEDI House Kilnummy Office Park, Glenfieger Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 010 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

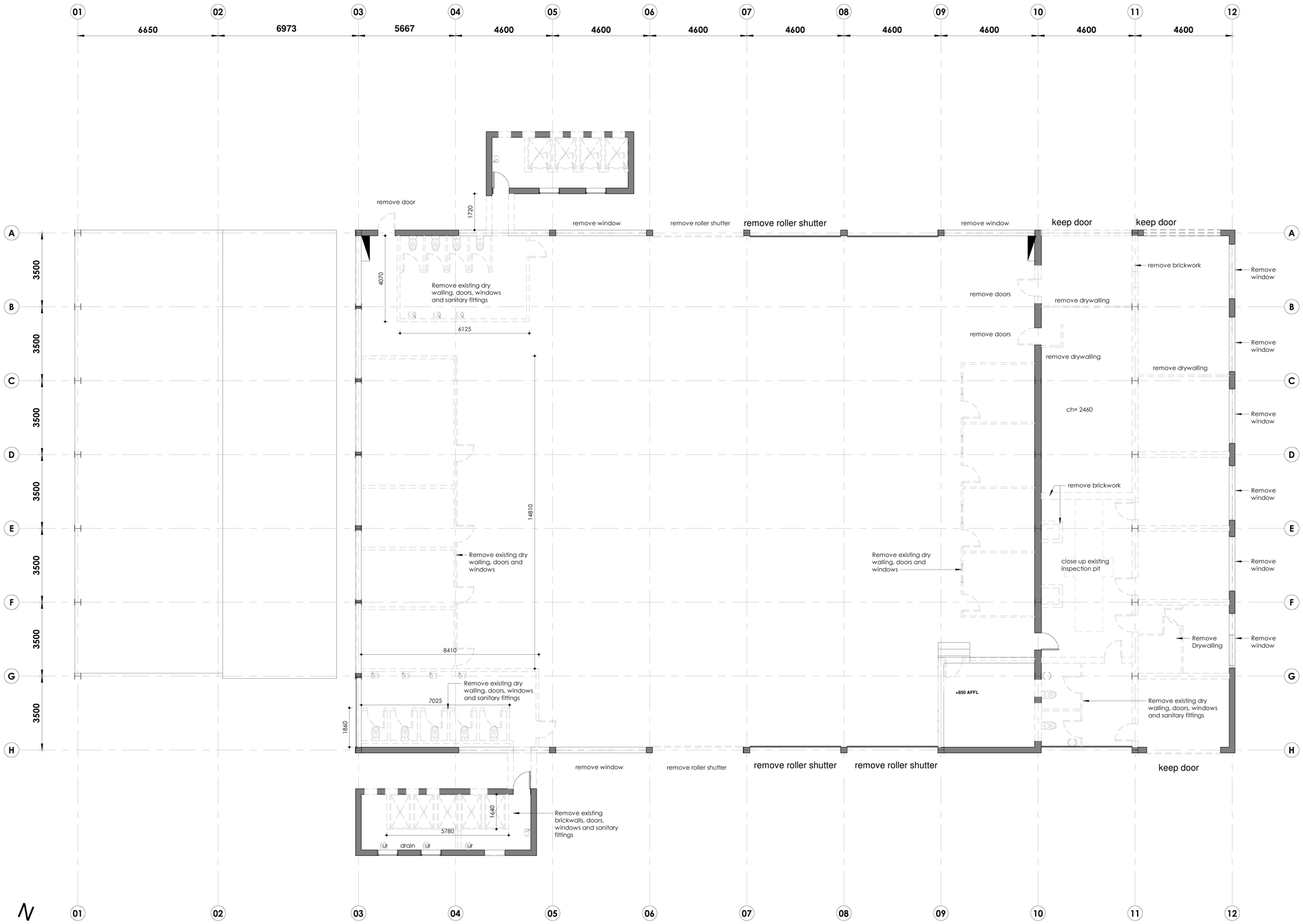
Project Number:

Drawing Title:
MEGA STORE BUILDING SECTIONS

Size	LESEDI Drawing No.	Rev
A1	ECS328-ARCH-002	B

	Name	Signed	Date
Approved Engineer	N. CHISALE		
Checked	K.MUDZAMIRI		
Drawn	N. CHISALE		
Scale AS SHOWN	N. CHISALE		

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



N

DEMOLITION PLAN

SCALE 1:150

GENERAL NOTES:

FOR TENDER

Drg. No.	Description

Reference Drawings

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	NC	NC	KM	19-11-24

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG. 2093	TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
A Division of Lesedi La Africa Holdings

Physical Address	Postal Address
LESEDI House Kilnumny Office Park, Glenfinger Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 010 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

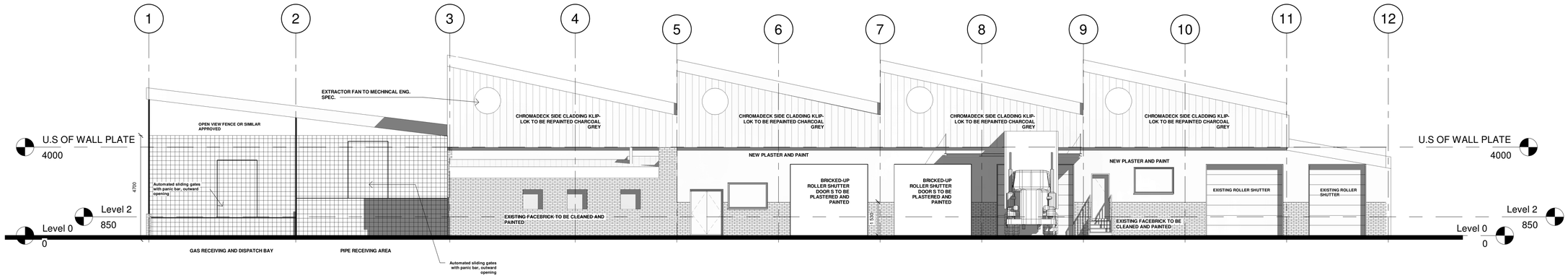
Project Number:

Drawing Title:
EXISTING PLAN LAYOUT FOR DEMOLITIONS

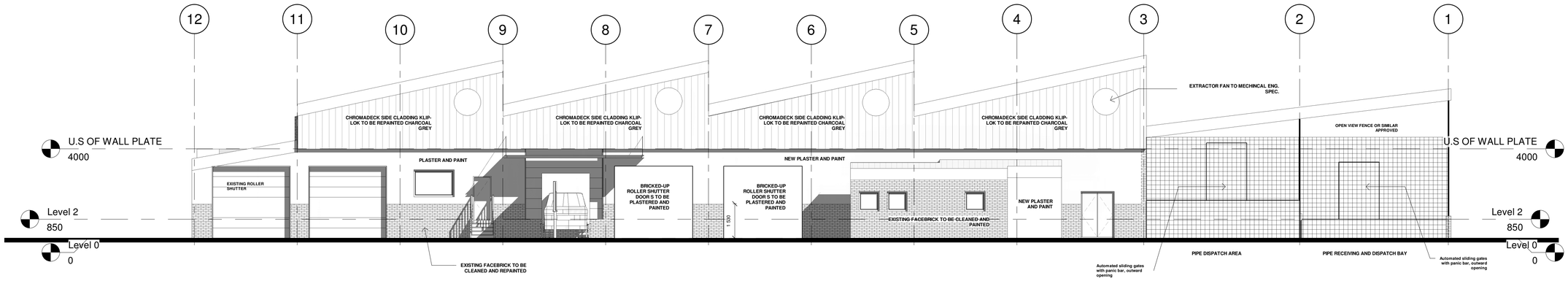
Size	LESEDI Drawing No.	Rev
A1	ECS328-ARCH-003	B

	Name	Signed	Date
Approved Engineer	N. CHISALE K.MUDZAMIRI		
Checked	N. CHISALE		
Drawn	N. CHISALE		
Scale AS SHOWN			

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



SOUTH ELEVATION-STORAGE WAREHOUSE
SCALE 1:100

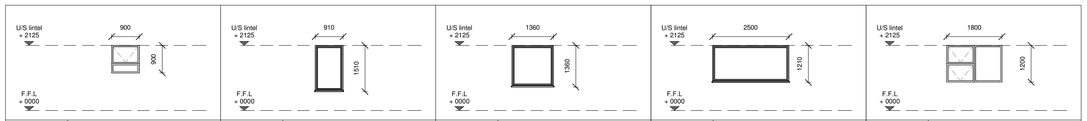


NORTH ELEVATION-STORAGE WAREHOUSE
SCALE 1:100

Door Schedule

DOOR NO.	D01	DOOR NO.	D02	DOOR NO.	D03	DOOR NO.	D04	DOOR NO.	D05	DOOR NO.	D06	DOOR NO.	D07	DOOR NO.	D08
POSITION	ABLUTIONS	POSITION	DISABLED BATHROOMS	POSITION	LOADING BAYS	POSITION	WAREHOUSE, OVER FLOW, CHEM. STORE	POSITION	OFFICES	POSITION	CHEMICAL STORE	POSITION	WAREHOUSE	POSITION	LOADING BAYS
NO. REQUIRED	11	NO. REQUIRED	02	NO. REQUIRED	02	NO. REQUIRED	05	NO. REQUIRED	15	NO. REQUIRED	02	NO. REQUIRED	02	NO. REQUIRED	02
DESCRIPTION	HOLLOW CORE DOOR	DESCRIPTION	HOLLOW CORE DOOR	DESCRIPTION	CUSTOM INDUSTRIAL ROLLER SHUTTER (6X3.5)	DESCRIPTION	SOLID HARDWOOD FIRE DOOR (40mm)	DESCRIPTION	ALUMINIUM SLIDING DOORS	DESCRIPTION	ALUMINIUM SLIDING DOORS	DESCRIPTION	SEMI-SOLID HARDWOOD DOUBLE DOOR	DESCRIPTION	SOLID HARDWOOD DOOR
FRAME	STANDARD TIMBER FRAME	FRAME	STANDARD TIMBER FRAME	FRAME	ALUMINIUM	FRAME	STANDARD TIMBER FRAME	FRAME	ALUMINIUM	FRAME	ALUMINIUM	FRAME	STANDARD TIMBER FRAME	FRAME	STANDARD TIMBER FRAME
FINISH	VARNISH	FINISH	VARNISH	FINISH	CHARCOAL GREY	FINISH	VARNISH	FINISH	CHARCOAL GREY	FINISH	CHARCOAL GREY	FINISH	VARNISH	FINISH	VARNISH
DOOR LEAF	VARNISH PAINTED DOOR LEAF	DOOR LEAF	VARNISH PAINTED DOOR LEAF	DOOR LEAF	SAND BLASTED GLASS PANELS	DOOR LEAF	VARNISH PAINTED DOOR LEAF	DOOR LEAF	SAND BLASTED GLASS PANELS	DOOR LEAF	SAND BLASTED GLASS PANELS	DOOR LEAF	VARNISH PAINTED DOOR LEAF	DOOR LEAF	VARNISH PAINTED DOOR LEAF
IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL

Window Schedule



WINDOW NO.	W01	WINDOW NO.	W02	WINDOW NO.	W03	WINDOW NO.	W04	WINDOW NO.	W05
POSITION	ABLUTIONS	POSITION	OFFICES	POSITION	STAFF ROOM	POSITION	OFFICERS	POSITION	KITCHEN,SECURITY OFFICES
NO. REQUIRED	06	NO. REQUIRED	02	NO. REQUIRED	11	NO. REQUIRED	02	NO. REQUIRED	03
DESCRIPTION	PTT99	DESCRIPTION	PTT915	DESCRIPTION	CUSTOM MADE	DESCRIPTION	CUSTOM MADE	DESCRIPTION	PTT1812
FRAME	ALUMINIUM FRAME	FRAME	ALUMINIUM FRAME	FRAME	ALUMINIUM FRAME	FRAME	ALUMINIUM FRAME	FRAME	ALUMINIUM FRAME
FINISH	POWDER COATED ALUMINIUM FRAME	FINISH	POWDER COATED ALUMINIUM FRAME	FINISH	POWDER COATED ALUMINIUM FRAME	FINISH	POWDER COATED ALUMINIUM FRAME	FINISH	POWDER COATED ALUMINIUM FRAME
GLAZING	LAMINATED GLAZING	GLAZING	LAMINATED GLAZING	GLAZING	LAMINATED GLAZING	GLAZING	LAMINATED GLAZING	GLAZING	LAMINATED GLAZING
IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL	IRONMONGERY	HINGES AND HANDLES TO MANUFACTURER'S SPECIFICATION AND CLIENT APPROVAL

GLAZING AND SAFETY GLAZING NOTES:

All bathroom windows to be fitted with frosted glass.

Doors and sidelights that form part of any entrace up to 2.1m in height from finished floor leevl shall be fitted with safety materia that complies with requirements on SANS 1263-1

Windows with a sill height less than 500mm in height from the floor leevl shall be fitted with safety material that complies with requirmmeta of SANS 1263-1

Windows with a sill height of less than 800mm in height from floor level without any permanent barrier that prevents persons from coming into contact with tha glass panel, and are so placed that persons are likely to move directly towards such window on normal traffic routes shall be fitted with safety material that complies with requirements of SANS 1263-1

Glass in balustrdees shall be toughened safety glass unless rigidly supported on all sides

All glazing as per requirements of SANS 10400-XA, SANS 204, SANS 10137 and SANS 1263

Existing windows to be painted Charcoal grey

GENERAL NOTES:

FOR TENDER

Drg. No.	Description

Reference Drawings

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	NC	NC	KM	19-11-24

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG, 2093	TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTANTS
A Division Of Lesedi Le Afrika Holdings

Physical Address	Postal Address
LESEDI House Kildrummy Office Park, Glenfiagar Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 010 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE FOR MEGA WAREHOUSE IN LANGLAAGTE

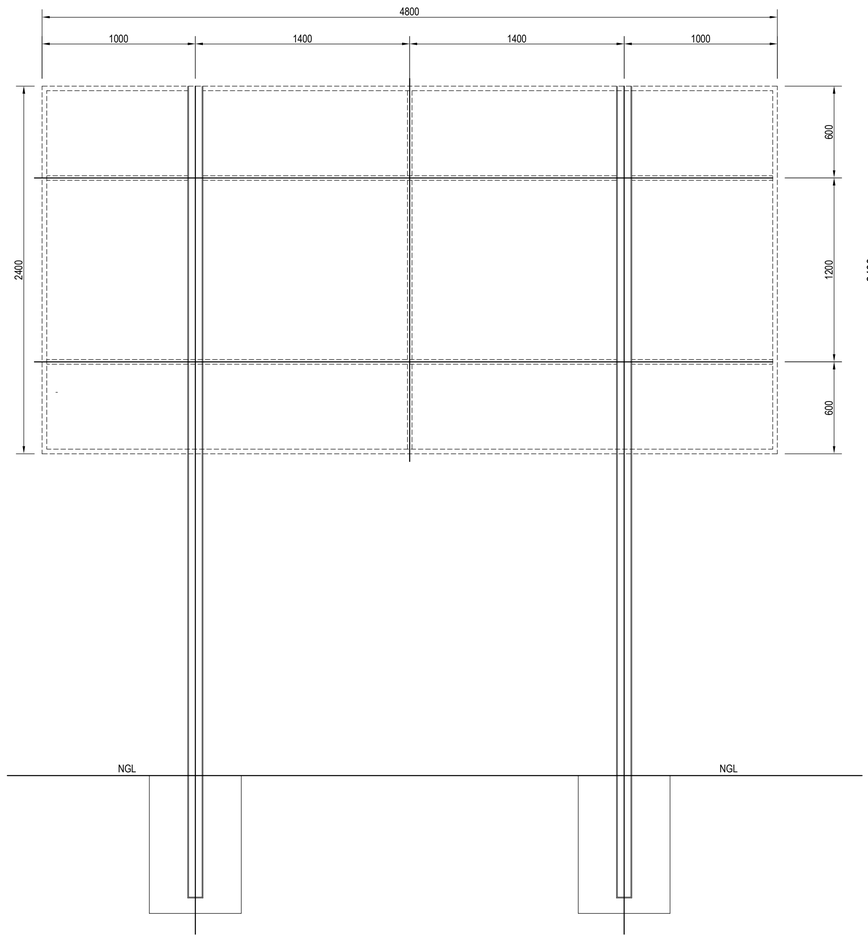
Project Number:

Drawing Title:
MEGA STORE ELEVATIONS

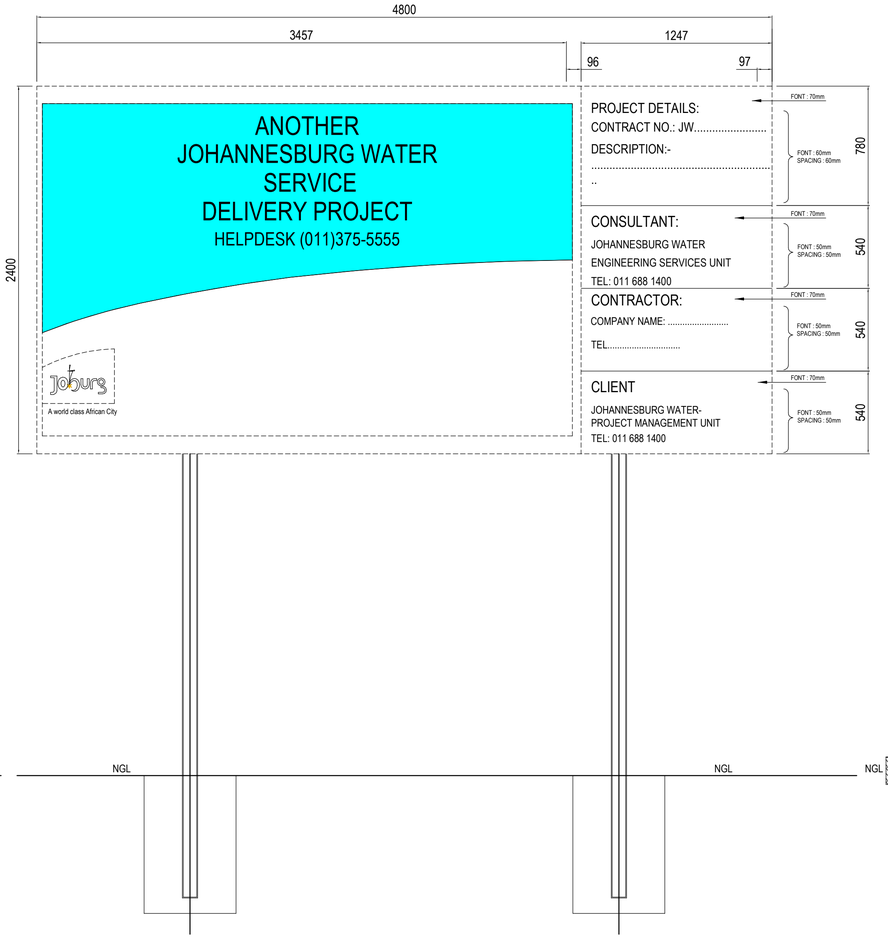
Size: A1
LESEDI Drawing No.: ECS328-ARCH-004
Rev: B

	Name	Signed	Date
Approved	N. CHISALE		
Engineer	K.MUDZAMIRI		
Checked	N. CHISALE		
Drawn	N. CHISALE		
Scale AS SHOWN			

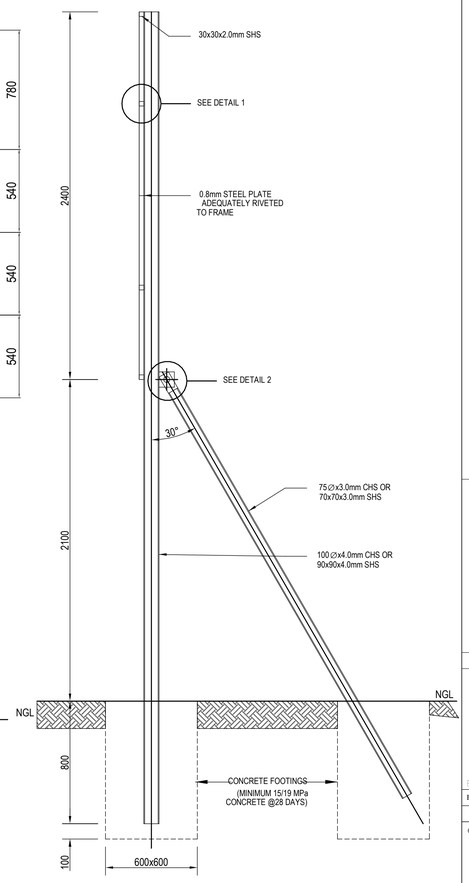
ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING, WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.



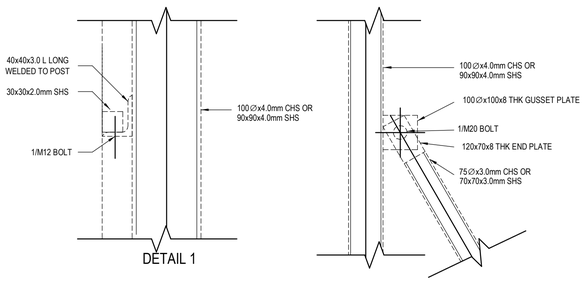
BACK ELEVATION



FRONT ELEVATION



TYPICAL SECTION



DETAIL 1

DETAIL 2

NOTE:
ALL WELDS TO BE 6mm FILLET
WELD ALL AROUND UNLESS
OTHERWISE SPECIFIED

GENERAL NOTES:

FOR TENDER

Drg. No.	Description

Reference Drawings

Rev	Description	BY	Chk'd	Eng	Date
B	ISSUED FOR TENDER	NC	NC	KM	19-11-24

Revision History

CLIENT:

Johannesburg Water

Physical Address	Postal Address
2 LINK ROAD, LANGLAAGTE, JOHANNESBURG. 2093	TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN JOHANNESBURG

LESEDI TECHNICAL ENGINEERING CONSULTING
A division of Lesedi La Afrika Holdings

Physical Address	Postal Address
LESEDI House Kidrummy Office Park, Glenflager Building 5 Cnr Witkoppen and Umhlanga Avenue Paulshof 2191 Tel: + 010 822 1050	Postnet Suite No. 326 Private Bag X26 Sunninghill 2157

APPROVED BY:

PROF. REGISTRATION:

DATE:

Project Name:
JOBURG WATER BUILDING UPGRADE
FOR MEGA WAREHOUSE IN LANGLAAGTE

Project Number:

Drawing Title:
PROJECT NAME BOARD INFORMATION

Size	LESEDI Drawing No.	Rev
A1	ECS328-GEN-001	B

	Name	Signed	Date
Approved Engineer	N. CHISALE K.MUDZAMIRI		
Checked	N. CHISALE		
Drawn	N. CHISALE		
Scale AS SHOWN			

ALL RIGHTS ON THIS DRAWING REST AT ANY TIME WITH LESEDI CONSULTING; WITHOUT WHOSE WRITTEN CONSENT IT MAY NOT BE COPIED, REPRODUCED, COMMUNICATED OR RENDERED ACCESSIBLE TO THIRD PARTIES.