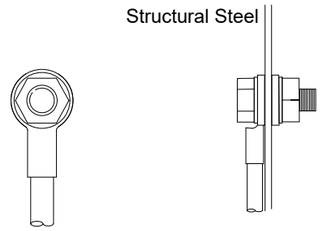
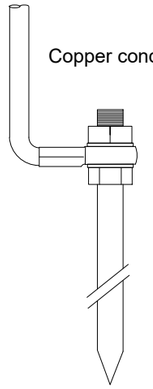
1. STEEL STRUCTURE BONDING



Copper conductor hexican crimped lug, 1 x stainless steel bolt, 1 x stainless steel nut, 2 x stainless steel washers

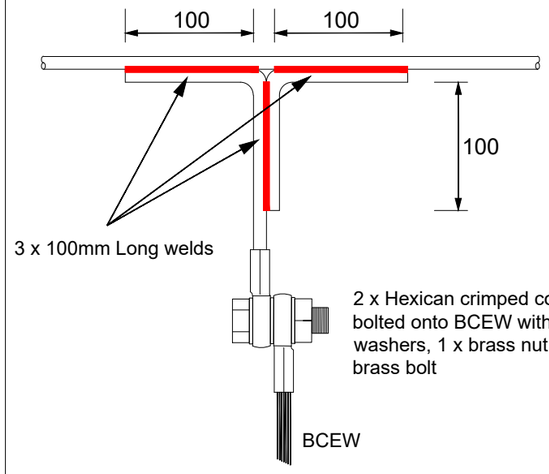
2. EARTH SPIKE CONNECTION



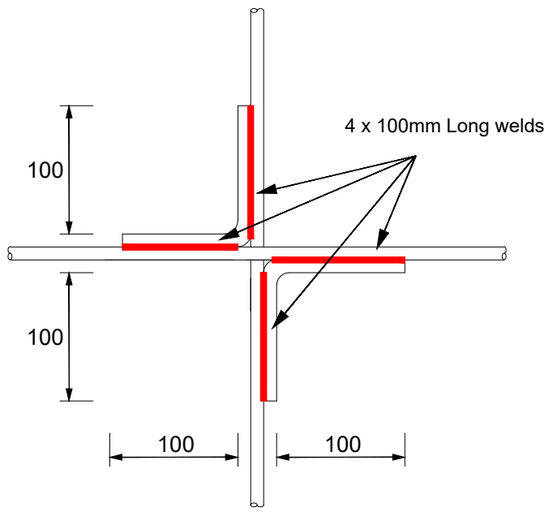
Hexican crimped copper lug bolted onto earth rod with 2 x brass washers and 2 x brass nuts

2 x 1.8m (min) x 16mm diameter SABS approved copper electroplated threaded earth steel rod (bearing SABS mark)

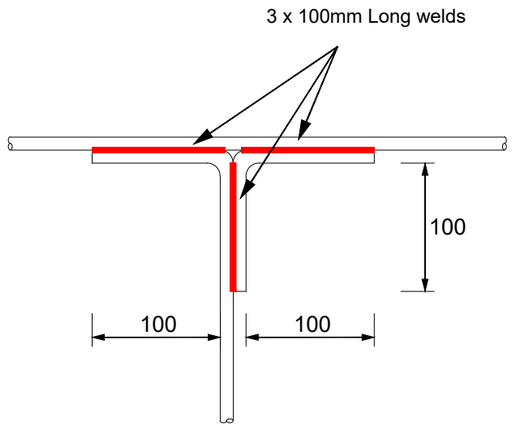
3. BCEW CONNECTION



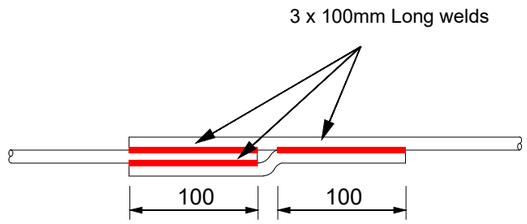
4. EARTH MAT CROSS JOINT



5. EARTH MAT T-JOINT



6. EARTH MAT EXTENSION JOINT



EARTH MAT SYSTEM GENERAL NOTES:

1. Earth mat systems shall be continuous runs with limited joints.
2. The complete detail design, installation, testing and commissioning of all earth mat systems remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
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15. All cable connections shall be fitted with a "star" or serrated washer in addition to the back-nut, to ensure good earth contact.
16. Where earth rods are paralleled in a group to reduce the earth resistance to the permissible value, the earth rods shall be spaced apart for a distance at least equal to their buried depth length.

ROLE	NAME	SIGN	DATE
DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
TYPICAL EARTH MAT SYSTEM JOINTS, WELDING AND EARTH SPIKE CONNECTION DETAIL

SCALE	CHECKED:	APPROVED:
NTS	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-10-22
PROJECT No: 11364	DRAWING No: 11364-A1029	REV: B

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(031) 816 9386

REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-10-22	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-13	RM	GM	TPL REVIEW COMMENTS INCLUDED

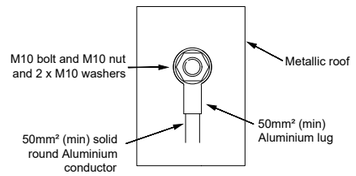
TRANSNET pipelines

PROJECT NAME
HW FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	

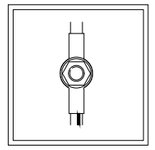
1. METALLIC ROOFS (NEW BUILDINGS)

DETAIL 1.1
DOWN CONDUCTOR CONNECTION



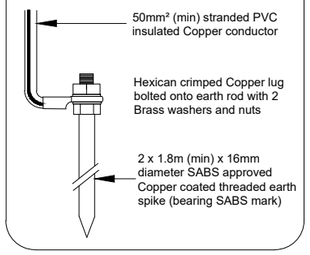
NB: Seal all holes with silicon sealant at bolt holes trough roof

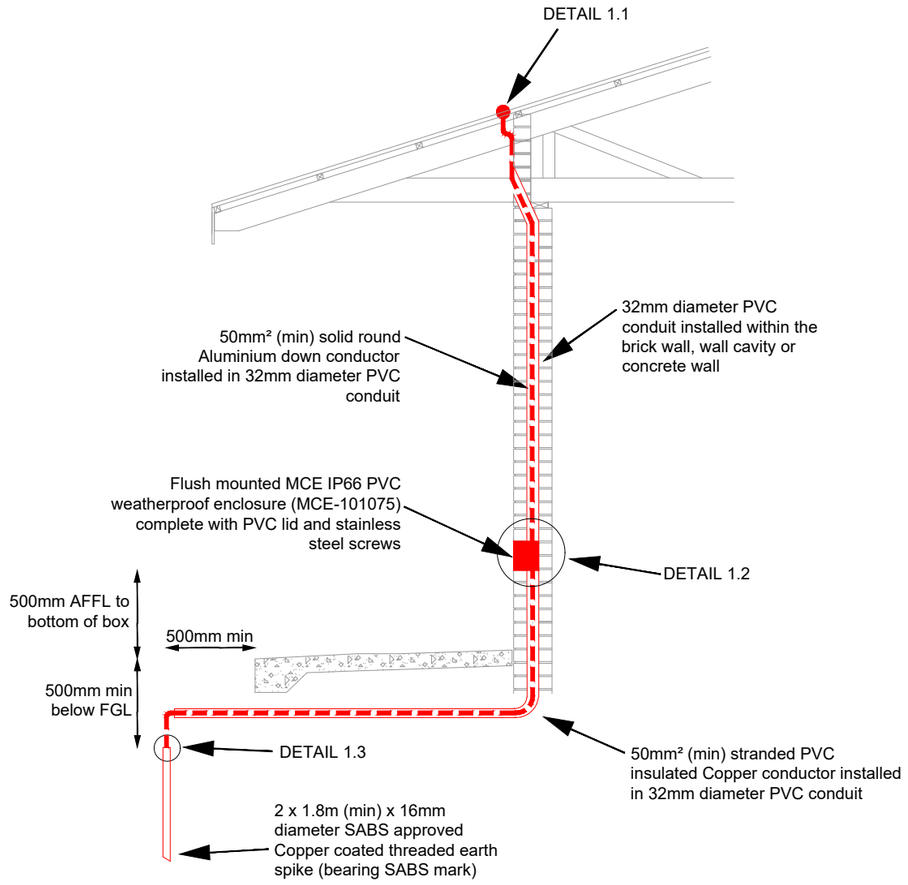
DETAIL 1.2
TEST POINT INSTALLATION



Flush mounted MCE IP66 PVC weatherproof enclosure (MCE-101075) c/w lid, stainless steel screws, 1 x 50mm² (min) bi-metal Aluminium to Copper lug, 1 x 50mm² (min) Copper lug, M10 bolt, M10 nut and 2 x M10 washers

DETAIL 1.3
EARTH SPIKE CONNECTION





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15. All cable connections shall be fitted with a "star" or serrated washer in addition to the back-nut, to ensure good earth contact.
16. Where earth rods are paralleled in a group to reduce the earth resistance to the permissible value, the earth rods shall be spaced apart for a distance at least equal to their buried depth length.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT: TRANSNET PIPELINES
HW FIRE

A3

TITLE: TYPICAL LIGHTNING PROTECTION INSTALLATION DETAILS - DETAIL 1 - METALLIC ROOFS (NEW BUILDINGS)

SCALE	CHECKED:	APPROVED:
NTS	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-10-22
PROJECT No: 11364	DRAWING No: 11364-A1030	REV: B

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REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-10-22	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-13	RM	GM	TPL REVIEW COMMENTS INCLUDED

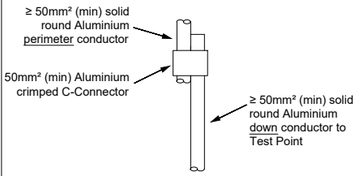
TRANSNET pipelines

PROJECT NAME
HW FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.			REV

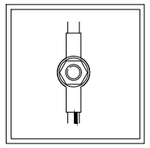
2. NON-METALLIC ROOFS (NEW BUILDINGS)

DETAIL 2.1
DOWN CONDUCTOR CONNECTION



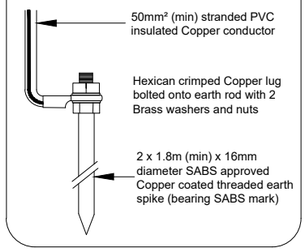
NB: Seal all holes where the conductor passes through non-metallic roofs with Rockset Cement

DETAIL 2.2
TEST POINT INSTALLATION



Flush mounted MCE IP66 PVC weatherproof enclosure (MCE-101075) c/w lid, stainless steel screws, 1 x 50mm² (min) bi-metal Aluminium to Copper lug, 1 x 50mm² (min) Copper lug, M10 bolt, M10 nut and 2 x M10 washers

DETAIL 2.3
EARTH SPIKE CONNECTION



DETAIL NOTES

2.1 Secure 50mm² (min) solid round Aluminum conductor with Aluminum cable cleats, fixed to the roof tiles with Rockset Cement. Cable cleats shall be fixed at max 1m spacings along the route of the Aluminium conductor.

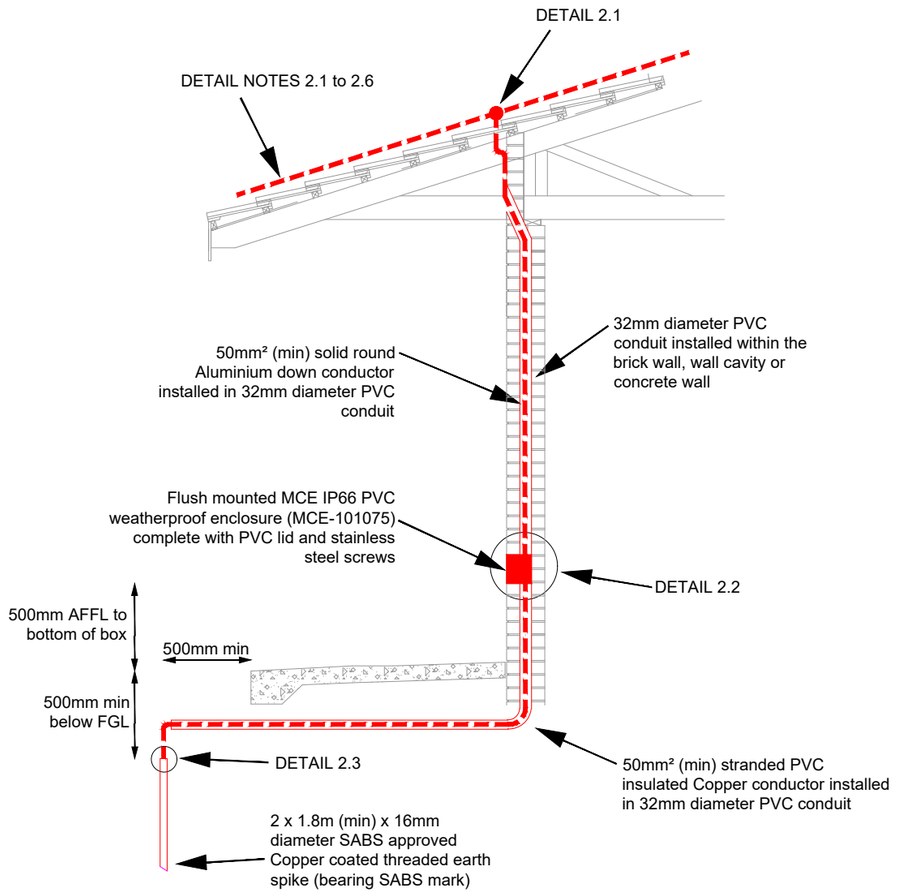
2.2 Joint solid round Aluminium conductors together with 50mm² Aluminium C-Connectors.

2.3 Perimeter conductors to be installed 200mm from roof edges with slow bends.

2.4 Expansion settings to be done at every 8m section.

2.5 All joints on perimeter or ridge conductor to be approved by Engineer PRIOR to installation.

2.6 Down conductor shall be 50mm² (min) solid round Aluminium conductor in 32mm diameter conduit. Joint Aluminium down conductor to the Copper conductors by means of a bi-metal crimp lugs (Aluminium crimp to Copper lug).



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DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT: TRANSNET PIPELINES
HW FIRE

A3

TITLE: TYPICAL LIGHTNING PROTECTION INSTALLATION DETAILS - DETAIL 2 - NON-METALLIC ROOFS (NEW BUILDINGS)

SCALE	CHECKED:	APPROVED:
NTS	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-10-22
PROJECT No: 11364	DRAWING No: 11364-A1031	REV: B

GREYJONES (PTY) LTD.
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REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-10-22	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-13	RM	GM	TPL REVIEW COMMENTS INCLUDED

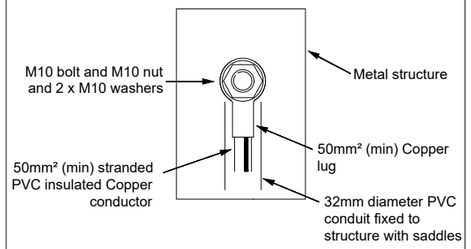
TRANSNET pipelines

PROJECT NAME
HW FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.			REV

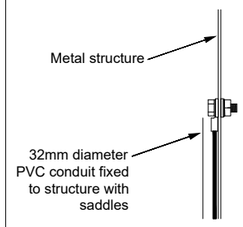
3. METAL STRUCTURES (NEW BUILDINGS)
(NO BOLTED FOOT MOUNT CONNECTIONS)

DETAIL 3.1
DOWN CONDUCTOR CONNECTION



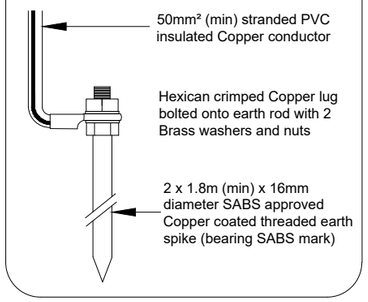
NB: Seal all holes with silicon sealant at bolt holes trough metal structure

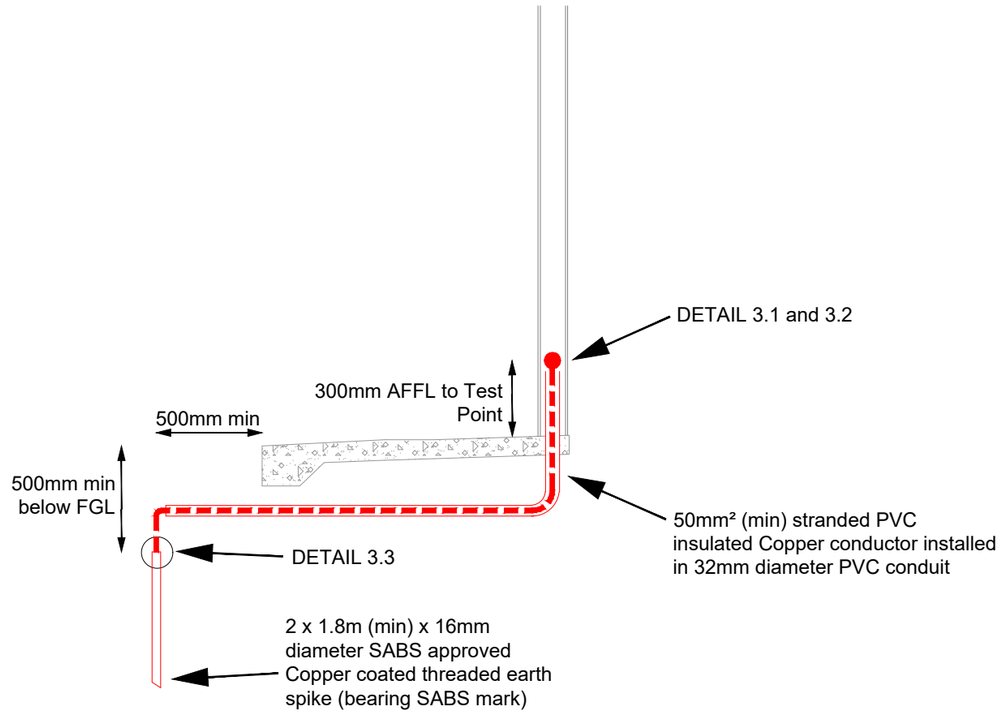
DETAIL 3.2
TEST POINT INSTALLATION



50mm² (min) stranded PVC insulated Copper conductor hexican crimped lug, M10 bolt, M10 nut, 2 x M10 washers and conduit

DETAIL 3.3
EARTH SPIKE CONNECTION





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DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

SCALE
NTS

CHECKED:
GM

APPROVED:
BJ

CAD FILE:
HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001

DESIGN-DRAWN:
GM - RM

DATE:
2025-10-22

PROJECT No:
11364

DRAWING No:
11364-A1032

REV:
B

A3

TITLE:
TYPICAL LIGHTNING PROTECTION INSTALLATION DETAILS - DETAIL 3 - METAL STRUCTURES (NEW BUILDINGS)

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REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-10-22	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-13	RM	GM	TPL REVIEW COMMENTS INCLUDED

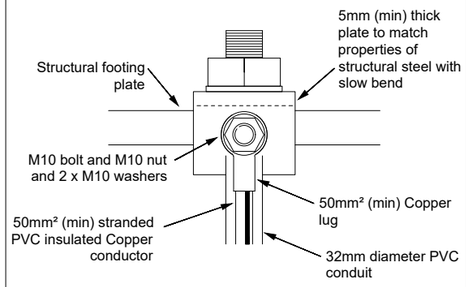
TRANSNET pipelines

PROJECT NAME
HW FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	

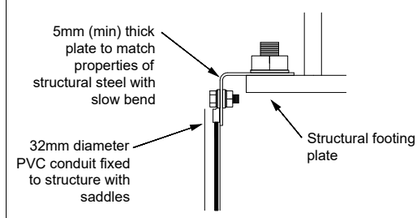
4. METAL STRUCTURES (NEW BUILDINGS)
(BOLTED FOOT MOUNT CONNECTIONS)

DETAIL 4.1
DOWN CONDUCTOR CONNECTION



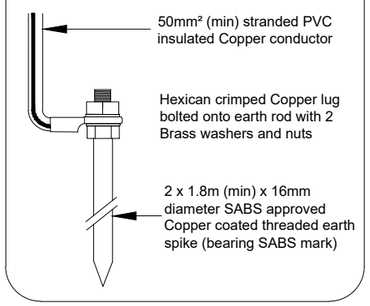
NB: Seal all holes with silicon sealant at bolt holes trough metal structure

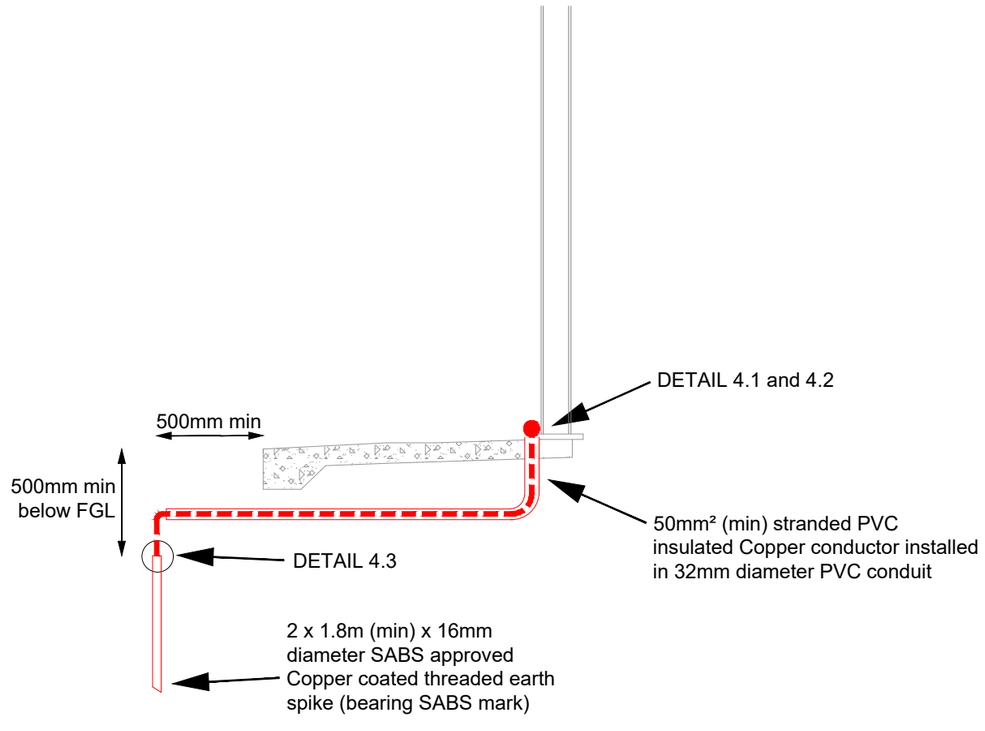
DETAIL 4.2
TEST POINT INSTALLATION



50mm² (min) stranded PVC insulated Copper conductor hexican crimped lug, M10 bolt, M10 nut, 2 x M10 washers and conduit

DETAIL 4.3
EARTH SPIKE CONNECTION





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DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
TYPICAL LIGHTNING PROTECTION INSTALLATION DETAILS - DETAIL 4 - METAL STRUCTURES (NEW BUILDINGS)

SCALE	CHECKED:	APPROVED:
NTS	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-10-22
PROJECT No: 11364	DRAWING No: 11364-A1033	REV: B

GREYJONES (PTY) LTD.
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REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-10-22	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-01-13	RM	GM	TPL REVIEW COMMENTS INCLUDED

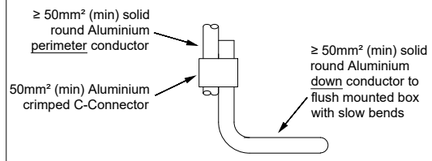
TRANSNET pipelines

PROJECT NAME
HW FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	

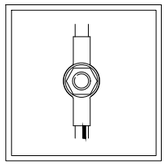
5. PARAPET WALLS (NEW BUILDINGS)

DETAIL 5.1
DOWN CONDUCTOR CONNECTION



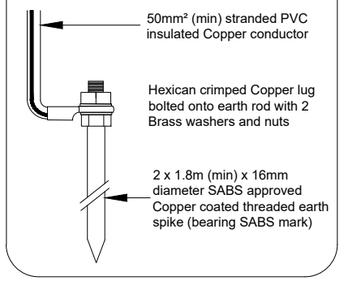
NB: Seal all holes where the conductor passes through non-metallic roofs with Rockset Cement

DETAIL 5.2
TEST POINT INSTALLATION



Flush mounted MCE IP66 PVC weatherproof enclosure (MCE-101075) c/w lid, stainless steel screws, 1 x 50mm² (min) bi-metal Aluminium to Copper lug, 1 x 50mm² (min) Copper lug, M10 bolt, M10 nut and 2 x M10 washers

DETAIL 5.3
EARTH SPIKE CONNECTION



DETAIL NOTES

5.1 Secure 50mm² (min) solid round Aluminum conductor with Aluminum cable cleats, fixed to the parapet walls with Rockset Cement. Cable cleats shall be fixed at max 1m spacings along the route of the Aluminium conductor.

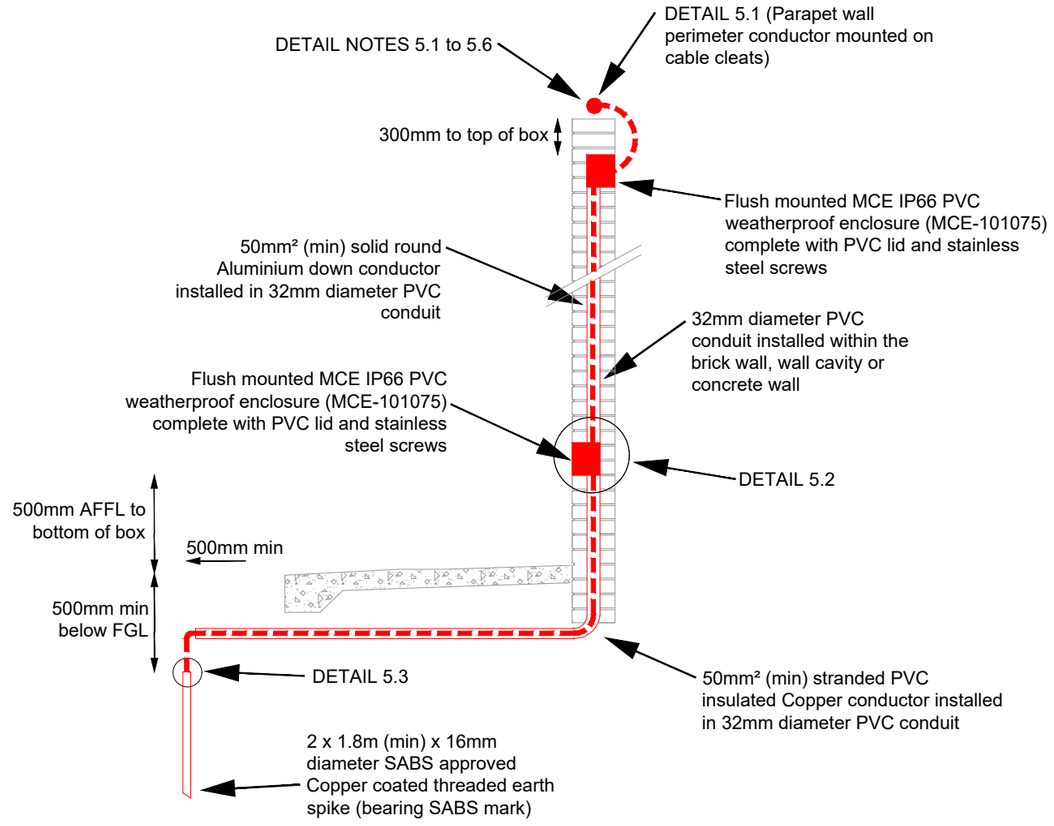
5.2 Joint solid round Aluminium conductors together with 50mm² Aluminium C-Connectors.

5.3 Perimeter conductors to be installed 50mm from parapet wall outer edges with slow bends.

5.4 Expansion settings to be done at every 8m section.

5.5 All joints on perimeter or ridge conductor to be approved by Engineer PRIOR to installation.

5.6 Down conductor shall be 50mm² (min) solid round Aluminium conductor in 32mm diameter conduit. Joint Aluminium down conductor to the Copper conductors by means of a bi-metal crimp lugs (Aluminium crimp to Copper lug).



EARTH MAT SYSTEM GENERAL NOTES:

1. Earth mat systems shall be continuous runs with limited joints.
2. The complete detail design, installation, testing and commissioning of all earth mat systems remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
3. The Contractor must be ELPA accredited and shall submit proof thereof the Engineer.
4. The Contractor shall issue a certificate of compliance (COC) for each earth mat system complete with design and applicable compliant material sheets to the Engineer.
5. Earth mat system shall be minimum 10mm (min) diameter solid hard drawn copper the correct amount of 100mm welding connections at each crossing and joint.
6. All earth spikes shall be 1800mm long (min) x 16mm diameter (min) SABS approved copper coated threaded rods (bearing SABS mark).
7. The Contractor shall liaise in advance with the Main Contractor for installation of all PVC conduits and all auxiliaries.
8. The Contractor shall take additional measures to ensure that all earth mat systems and installations has limited or no exposure to the public.
9. Lightning protection shall comply with the latest edition of SANS 10313.
10. Only written dimensions shall be used. The Contractor shall verify all dimensions on site. All dimensions indicated are in mm.
11. The Contractor shall consult the Civil Engineer / Architect / Structural Engineer drawings for final levels.
12. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
13. The Contractor shall identify any and all existing services prior to excavation.
14. "Equivalent" or "Similar Approved" shall have the same meaning and the Engineer shall evaluate the quality to be equal or better than the brand name quoted.
15. All cable connections shall be fitted with a "star" or serrated washer in addition to the back-nut, to ensure good earth contact.
16. Where earth rods are paralleled in a group to reduce the earth resistance to the permissible value, the earth rods shall be spaced apart for a distance at least equal to their buried depth length.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

SCALE
NTS

CHECKED:
GM

APPROVED:
BJ

CAD FILE:
HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001

DESIGN-DRAWN:
GM - RM

DATE:
2025-10-22

PROJECT No:
11364

DRAWING No:
11364-A1034

REV:
B

A3

TITLE:
TYPICAL LIGHTNING PROTECTION INSTALLATION DETAILS - DETAIL 5 - PARAPET WALLS (NEW BUILDINGS)

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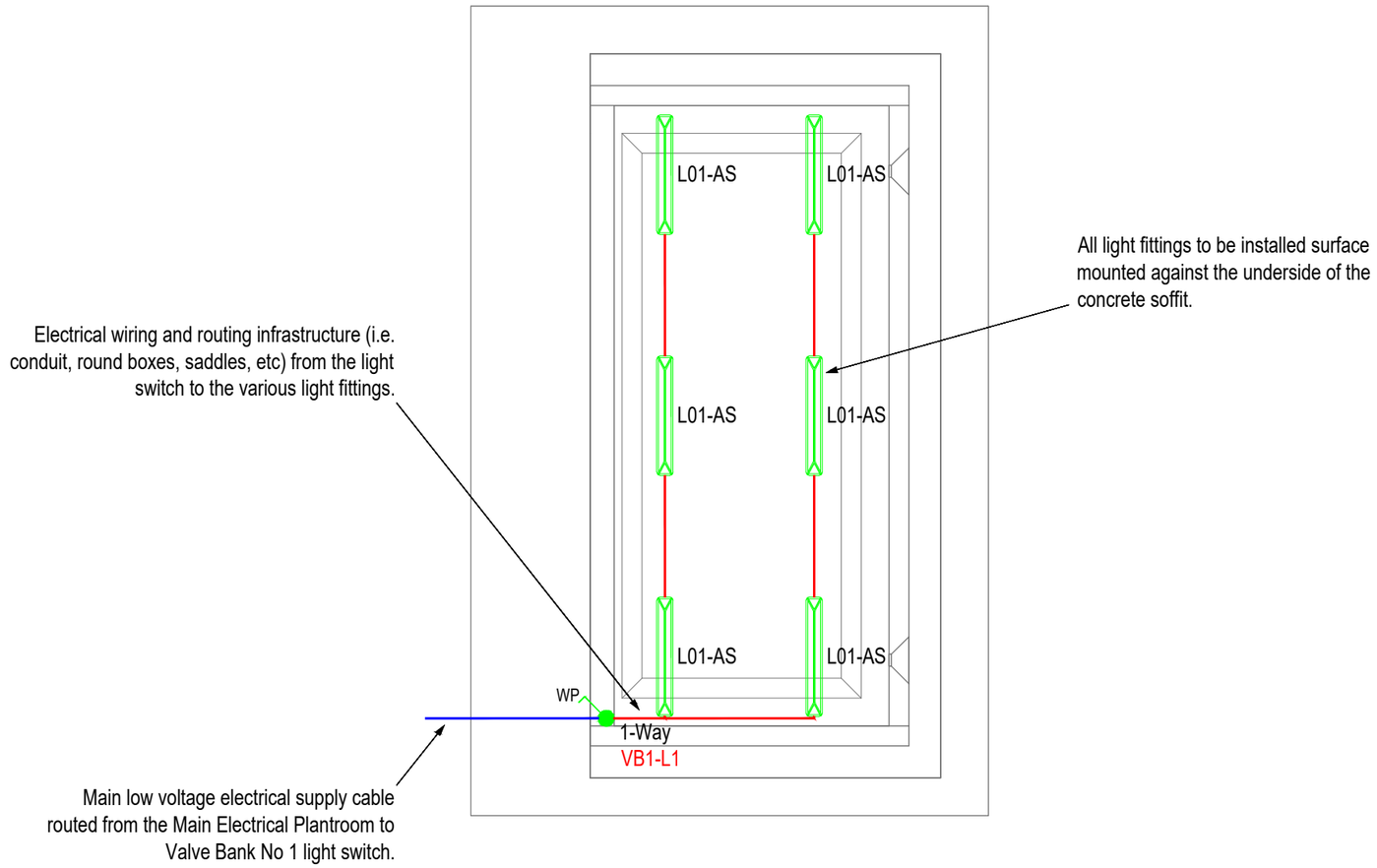
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-10-22	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-13	RM	GM	TPL REVIEW COMMENTS INCLUDED

TRANSNET pipelines

PROJECT NAME
HW FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. It is recommended that the entire electrical installation be flush mounted as far as practically possible and acceptable.
5. The electrical installation will be exposed to the outdoor weather-conditions (not an enclosed building) and therefore the entire electrical installation must be weather-proof and water-proof.
6. The entire electrical installation (light fittings, light switch, electrical routing, etc.) must be insect-proof and rodent-proof.
7. All light fittings must be installed surface mounted against the underside of the concrete roof soffit, the use of sub-structures will not be permitted.
8. The light fittings must be installed such to prevent birds from building and fixing nests against the light fittings.

ELECTRICAL LIGHT FITTING LEGEND

L01-AS	**Light Fitting - L01-AS:** Surface mounted non-dimmable 1500mm LED vapourproof light fitting.
WP	**Light Switch - Single Lever (Weatherproof):** Single lever light switch - Surface mounted weatherproof.

SPECIFIC NOTES:

1. All light switches to be installed at 1100mm AFFL to the center of the light switch draw-box and ±200mm away from the door frame to the center of the light switch draw-box where such references exist.
2. All 2-way light switching return wiring shall be of the shortest route possible back to the relevant light switch.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
VALVE BANK NO 1 - PROPOSED LIGHTING LAYOUT

SCALE: 1:75 (A3)	CHECKED: GM	APPROVED: BJ	
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-11-12	
PROJECT No: 11364	DRAWING No: 11364-A1068		REV: B

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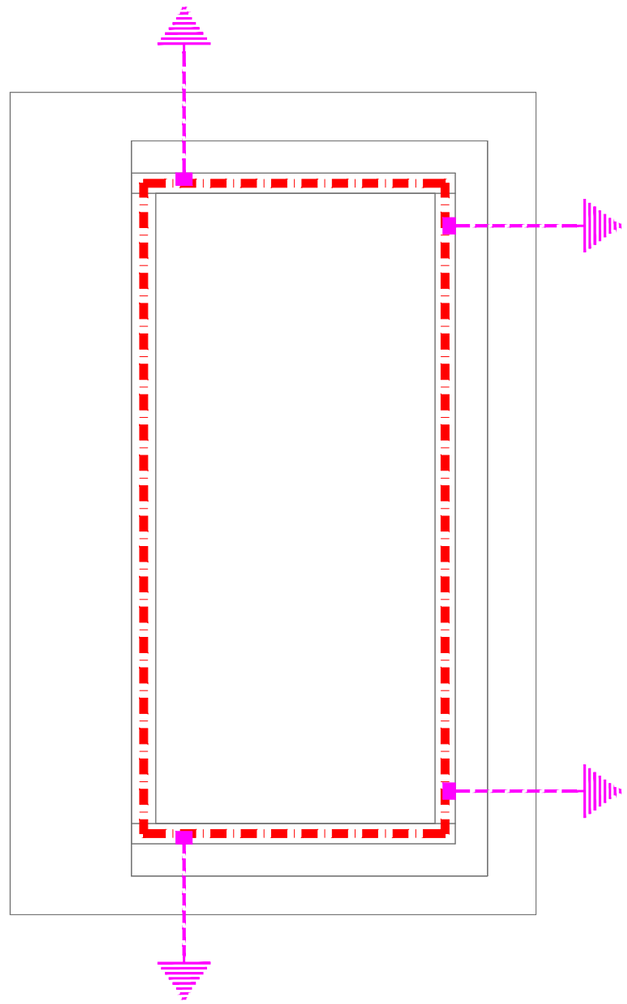
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-11-12	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-05	RM	GM	UPDATED TO LATEST BUILDING PLAN

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.			REV



LIGHTNING PROTECTION LEGEND

Lightning Protection - Test Point:

"*MCE-101075*" IP66 PVC weatherproof enclosure flush mounted (unless otherwise indicated) within concrete column, concrete wall, brickwall, etc. at height above finished floor level in accordance with detail drawings.

Lightning Protection - Conduit:

or

32mm Diameter PVC conduit installed within (unless otherwise indicated) concrete column, concrete wall, brickwall, etc.

Lightning Protection - Earth Spike:

16mm Diameter (minimum) SANS approved and bearing SANS mark copper coated threaded earth spike.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed upon a metal roof structure.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed either upon an up-stand wall or hardened roof structure (i.e. concrete roof, etc.).

SPECIFIC NOTES:

1. Lightning protection final design to be undertaken by specialist Earthing and Lightning Protection Contractor.
2. This drawing shall be read in conjunction with Contract Specification and detail drawing "Typical Lightning Protection Installation Detail (New Buildings)".
3. This drawing shall furthermore be read in conjunction with any other or additional detail drawings as applicable and as indicated on the drawing.

GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. Lightning protection shall comply with the latest edition of SANS 10313.
5. This drawing must be read in conjunction with the relevant typical lightning protection installation detail drawings.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
VALVE BANK NO 1 - PROPOSED LIGHTNING PROTECTION LAYOUT

SCALE
1:75 (A3)

CHECKED: GM

APPROVED: BJ

CAD FILE:
HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001

DESIGN-DRAWN: GM - RM

DATE: 2025-11-12

PROJECT No:
11364

DRAWING No:
11364-A1069

REV:
B

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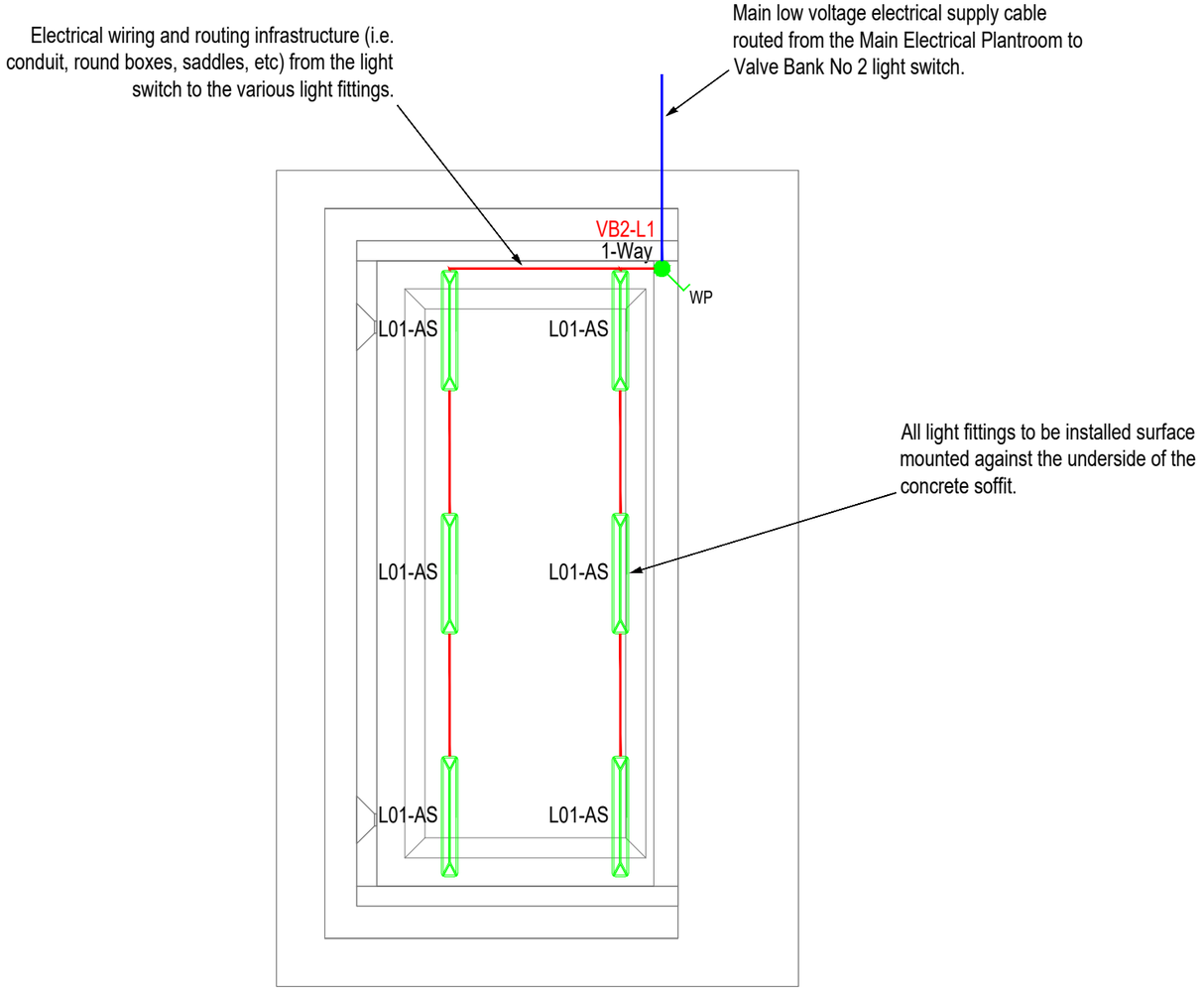
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-11-12	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-05	RM	GM	UPDATED TO LATEST BUILDING PLAN

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. It is recommended that the entire electrical installation be flush mounted as far as practically possible and acceptable.
5. The electrical installation will be exposed to the outdoor weather-conditions (not an enclosed building) and therefore the entire electrical installation must be weather-proof and water-proof.
6. The entire electrical installation (light fittings, light switch, electrical routing, etc.) must be insect-proof and rodent-proof.
7. All light fittings must be installed surface mounted against the underside of the concrete roof soffit, the use of sub-structures will not be permitted.
8. The light fittings must be installed such to prevent birds from building and fixing nests against the light fittings.

ELECTRICAL LIGHT FITTING LEGEND

L01-AS	**Light Fitting - L01-AS:** Surface mounted non-dimmable 1500mm LED vapourproof light fitting.
WP	**Light Switch - Single Lever (Weatherproof):** Single lever light switch - Surface mounted weatherproof.

SPECIFIC NOTES:

1. All light switches to be installed at 1100mm AFFL to the center of the light switch draw-box and ±200mm away from the door frame to the center of the light switch draw-box where such references exist.
2. All 2-way light switching return wiring shall be of the shortest route possible back to the relevant light switch.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT: TRANSNET PIPELINES
HW FIRE

A3

TITLE: VALVE BANK NO 2 - PROPOSED LIGHTING LAYOUT

SCALE: 1:75 (A3)
CHECKED: GM
APPROVED: BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001
DESIGN-DRAWN: GM - RM
DATE: 2025-11-12
PROJECT No: 11364
DRAWING No: 11364-A1070
REV: B

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REVISIONS

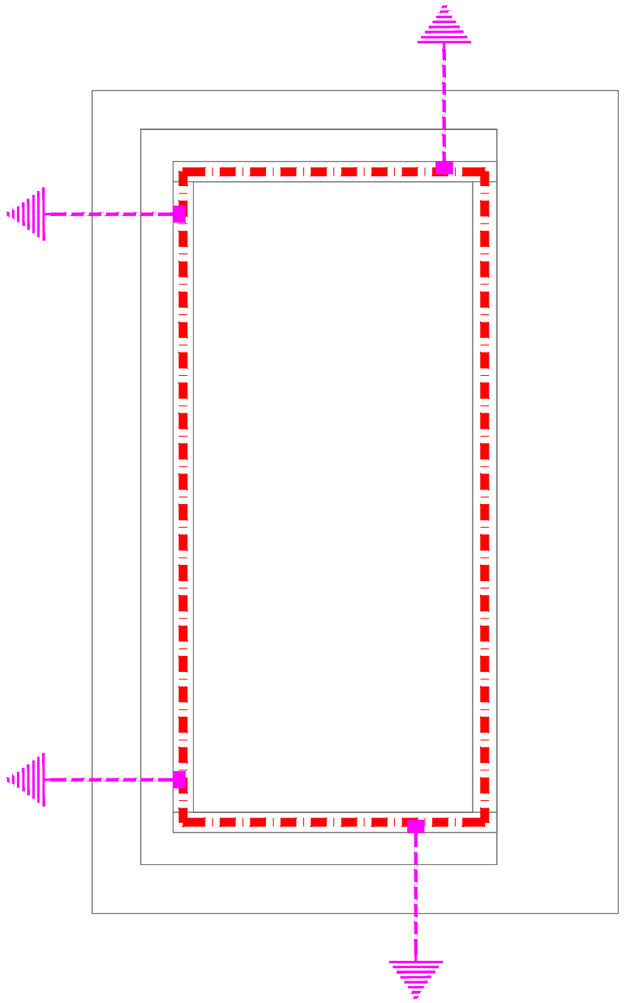
REV	DATE	BY	CHK	DESCRIPTION
A	2025-11-12	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-05	RM	GM	UPDATED TO LATEST BUILDING PLAN

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			

TPL DRAWING No. REV



LIGHTNING PROTECTION LEGEND

Lightning Protection - Test Point:

"*MCE-101075*" IP66 PVC weatherproof enclosure flush mounted (unless otherwise indicated) within concrete column, concrete wall, brickwall, etc. at height above finished floor level in accordance with detail drawings.

Lightning Protection - Conduit:

or

32mm Diameter PVC conduit installed within (unless otherwise indicated) concrete column, concrete wall, brickwall, etc.

Lightning Protection - Earth Spike:

16mm Diameter (minimum) SANS approved and bearing SANS mark copper coated threaded earth spike.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed upon a metal roof structure.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed either upon an up-stand wall or hardened roof structure (i.e. concrete roof, etc.).

SPECIFIC NOTES:

1. Lightning protection final design to be undertaken by specialist Earthing and Lightning Protection Contractor.
2. This drawing shall be read in conjunction with Contract Specification and detail drawing "Typical Lightning Protection Installation Detail (New Buildings)".
3. This drawing shall furthermore be read in conjunction with any other or additional detail drawings as applicable and as indicated on the drawing.

GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. Lightning protection shall comply with the latest edition of SANS 10313.
5. This drawing must be read in conjunction with the relevant typical lightning protection installation detail drawings.

ROLE	NAME	SIGN	DATE
DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
VALVE BANK NO 2 - PROPOSED LIGHTNING PROTECTION LAYOUT

SCALE	CHECKED:	APPROVED:
1:75 (A3)	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-11-12
PROJECT No: 11364	DRAWING No: 11364-A1071	REV: B

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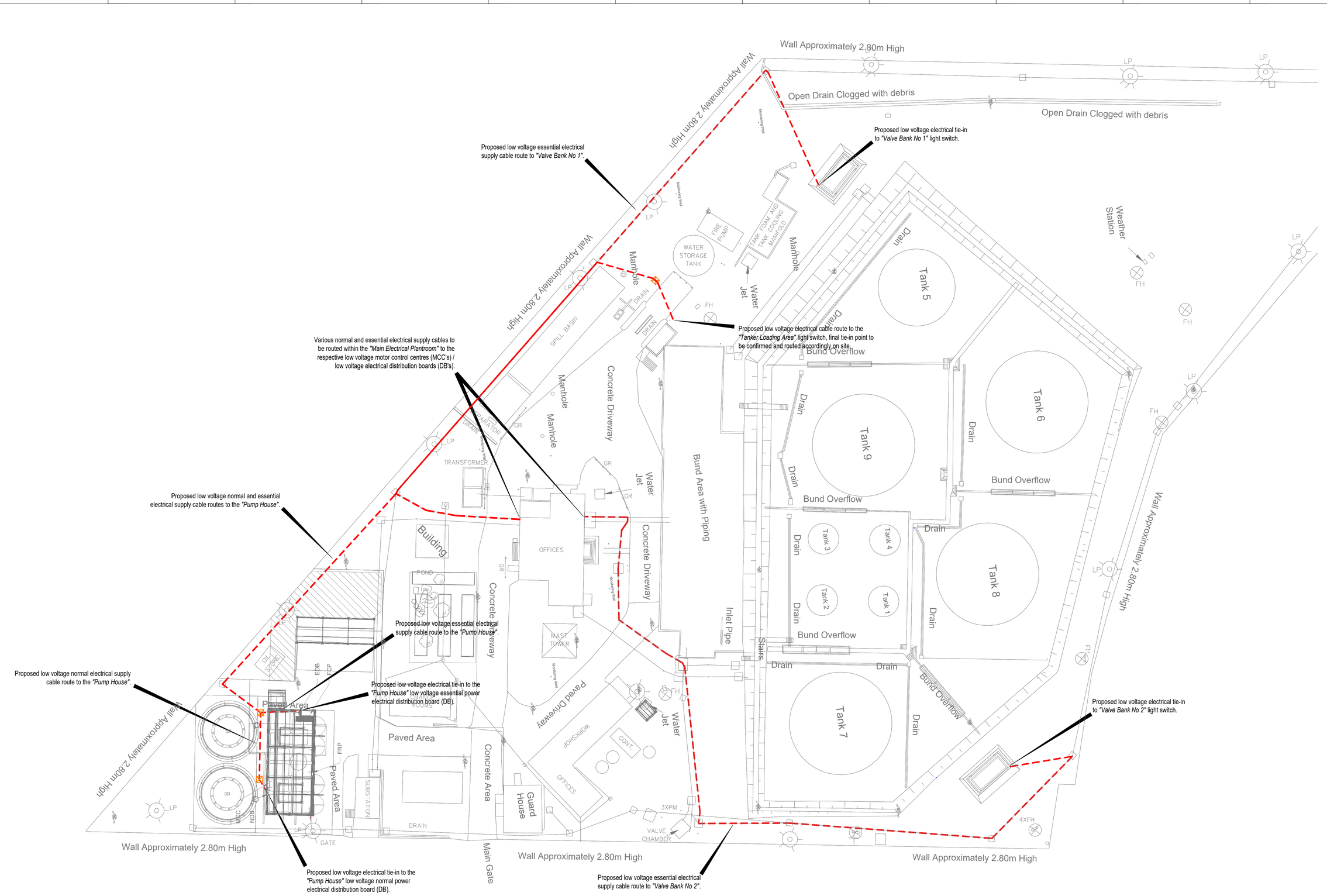
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-11-12	RM	GM	ISSUED FOR ACCEPTANCE
B	2026-02-05	RM	GM	UPDATED TO LATEST BUILDING PLAN

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the *Contractor* and the *Contractor* shall therefore take additional measures if necessary to ensure compliance.
4. The *Contractor* shall identify any and all existing services prior to any excavations being performed.
5. The *Contractor* shall inspect and verify all electrical cable routes on site (inclusive of cable sleeves and manholes) and ensure that all electrical cable routes are of the shortest possible length and furthermore ensure that there are no clashes with any "Other" services.
6. The *Contractor* shall measure and verify all electrical cable length quantities on site.
7. The *Contractor* shall consult the relevant drawings for final levels.
8. The *Contractor* shall report any concerns and discrepancies to the *Employer* immediately after such have been identified by the *Contractor*.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE
DRAWING APPROVAL STATUS			

A1

PROJECT:
TRANSNET PIPELINES
HW FIRE

TITLE:
PROPOSED PRIMARY ELECTRICAL CABLE RETICULATION ROUTING LAYOUT

SCALE	CHECKED:	APPROVED:
1:350	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-11-18
PROJECT No: 11364	DRAWING No: 11364-A1137	REV: B

GREYJONES (PTY) LTD.
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REFERENCES

DWG NUMBER	DESCRIPTION
-	-
-	-
-	-
-	-
-	-
-	-
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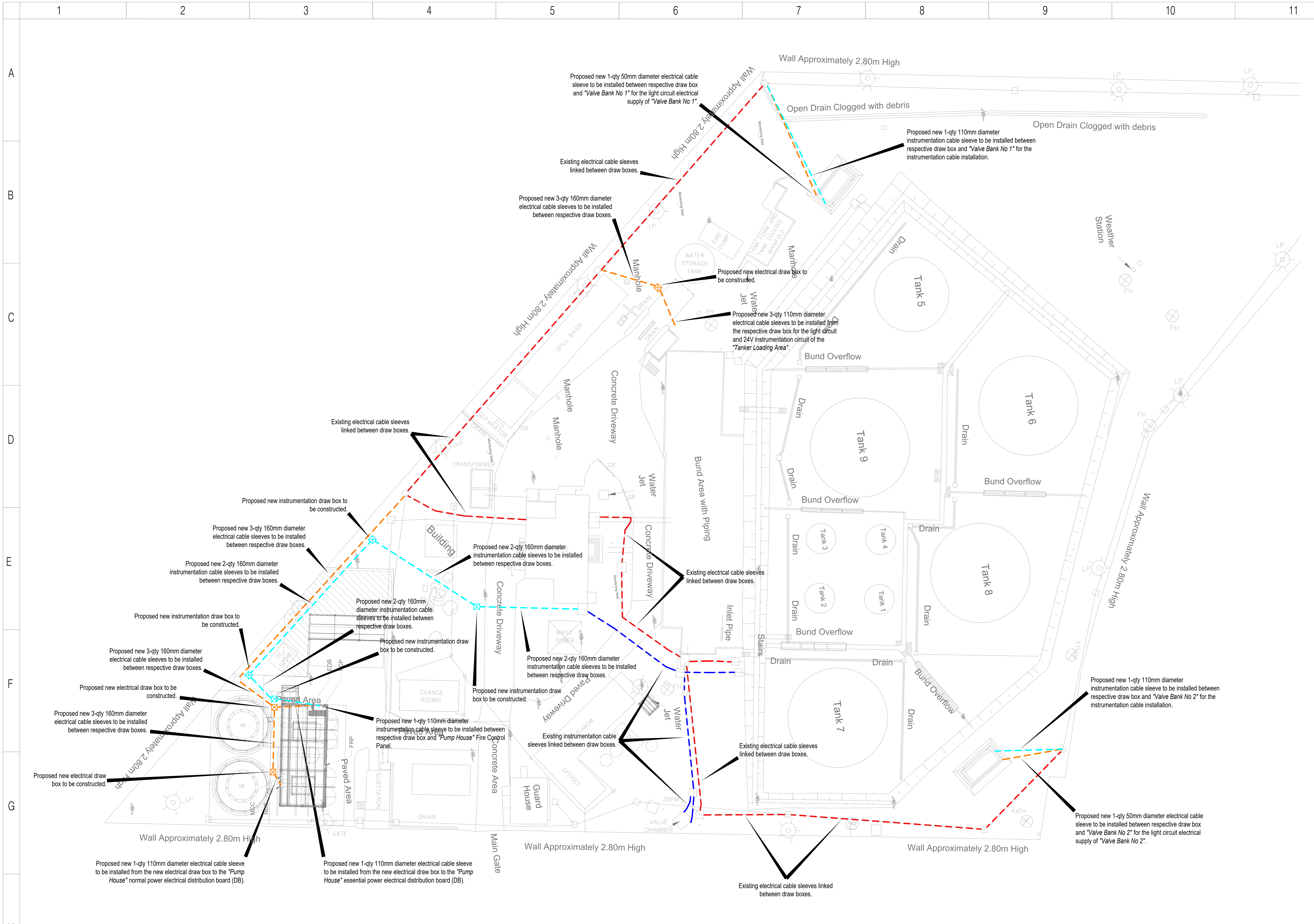
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-11-18	GM	BJ	ISSUED FOR ACCEPTANCE
B	2026-02-15	GM	BJ	DRAWING UPDATED TO LATEST SITE LAYOUT PLAN

TRANSNET pipelines

PROJECT NAME

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the *Contractor* and the *Contractor* shall therefore take additional measures if necessary to ensure compliance.
4. The *Contractor* shall identify any and all existing services prior to any excavations being performed.
5. The *Contractor* shall inspect and verify all electrical cable routes on site (inclusive of cable sleeves and manholes) and ensure that all electrical cable routes are of the shortest possible length and furthermore ensure that there are no clashes with any "Other" services.
6. The *Contractor* shall confirm the direction, quantity and diameter of all existing electrical cable sleeves and shall furthermore indicate the relevant information on *"As-Built"* drawings.
7. The *Contractor* shall consult the relevant drawings for final levels.
8. The *Contractor* shall report any concerns and discrepancies to the *Employer* immediately after such have been identified by the *Contractor*.
9. The *Contractor* shall check all electrical cable sleeves for blockages and report such to the *Employer* immediately after such have been identified by the *Contractor*.

ROLE	NAME	SIGN	DATE
DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			

DRAWING APPROVAL STATUS

A1

PROJECT: TRANSNET PIPELINES HW FIRE

TITLE: PROPOSED PRIMARY ELECTRICAL CABLE SLEEVE LAYOUT

SCALE	CHECKED:	APPROVED:
1:350	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2025-11-18
PROJECT No: 11364	DRAWING No: 11364-A1138	REV: B

GREYJONES (PTY) LTD.

GREYJONES (PTY) LTD.

(031) 816 9386 admin@greyjones.co.za www.greyjones.co.za

REFERENCES

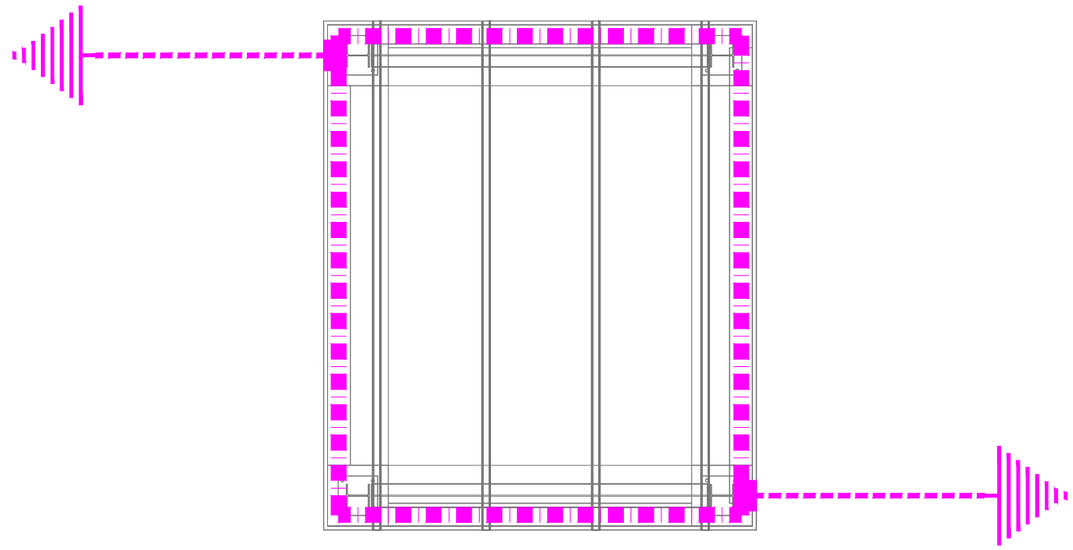
DWG NUMBER	DESCRIPTION
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2025-11-18	GM	BJ	ISSUED FOR ACCEPTANCE
B	2026-02-15	GM	BJ	DRAWING UPDATED TO LATEST SITE LAYOUT PLAN

TRANSNET pipelines

PROJECT NAME			
DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



LIGHTNING PROTECTION LEGEND

Lightning Protection - Test Point:

"*MCE-101075*" IP66 PVC weatherproof enclosure flush mounted (unless otherwise indicated) within concrete column, concrete wall, brickwall, etc. at height above finished floor level in accordance with detail drawings.

Lightning Protection - Conduit:

32mm Diameter PVC conduit installed within (unless otherwise indicated) concrete column, concrete wall, brickwall, etc.

Lightning Protection - Earth Spike:

16mm Diameter (minimum) SANS approved and bearing SANS mark copper coated threaded earth spike.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed upon a metal roof structure.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed either upon an up-stand wall or hardened roof structure (i.e. concrete roof, etc.).

SPECIFIC NOTES:

1. Lightning protection final design to be undertaken by specialist Earthing and Lightning Protection Contractor.
2. This drawing shall be read in conjunction with Contract Specification and detail drawing "Typical Lightning Protection Installation Detail (New Buildings)".
3. This drawing shall furthermore be read in conjunction with any other or additional detail drawings as applicable and as indicated on the drawing.

GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. Lightning protection shall comply with the latest edition of SANS 10313.
5. This drawing must be read in conjunction with the relevant typical lightning protection installation detail drawings.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
OIL STORE - PROPOSED LIGHTNING PROTECTION LAYOUT

SCALE 1:40 (A3)	CHECKED: GM	APPROVED: BJ	
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2026-02-12	
PROJECT No: 11364	DRAWING No: 11364-A1204		REV: A

GREYJONES (PTY) LTD.
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(031) 816 9386

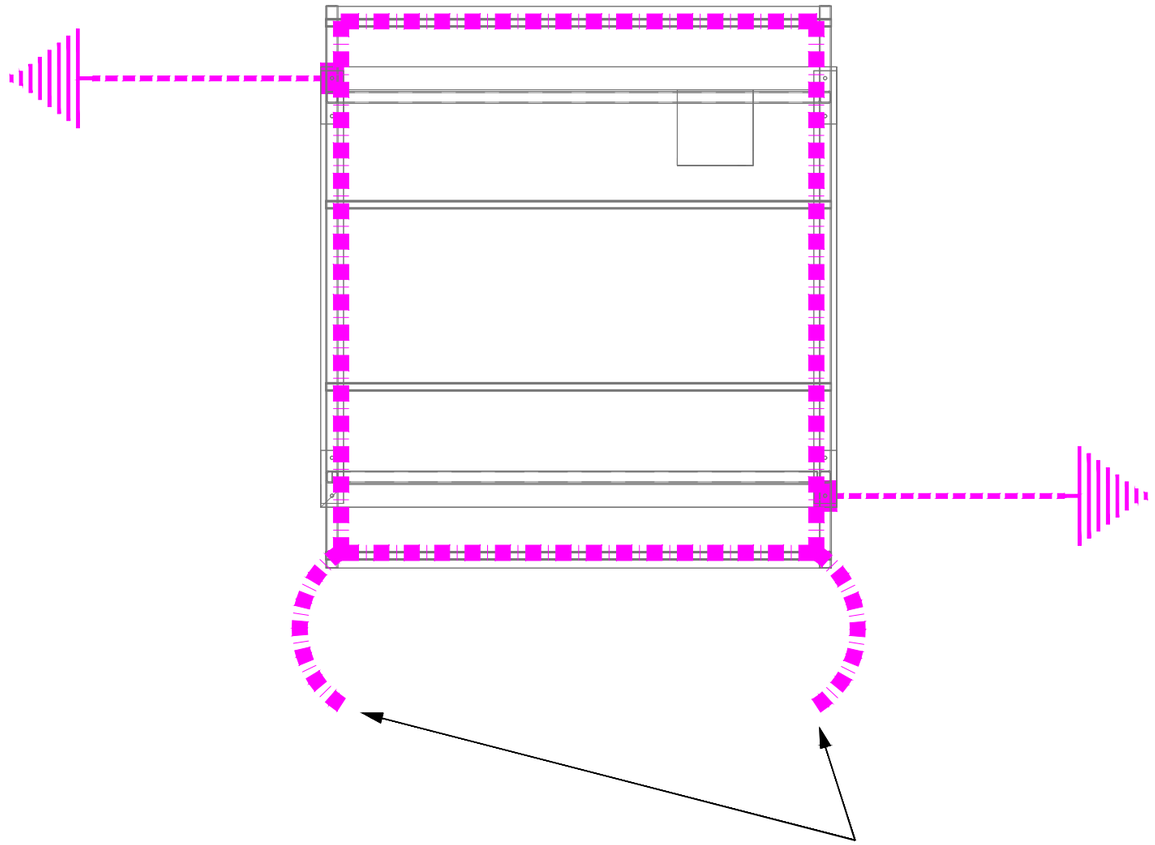
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2026-02-12	RM	GM	ISSUED FOR ACCEPTANCE

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.			REV



Lightning protection system of the "Diesel Store" to be bonded to the "Pump House" building lightning protection system.

LIGHTNING PROTECTION LEGEND

Lightning Protection - Test Point:

"*MCE-101075*" IP66 PVC weatherproof enclosure flush mounted (unless otherwise indicated) within concrete column, concrete wall, brickwall, etc. at height above finished floor level in accordance with detail drawings.

Lightning Protection - Conduit:

or

32mm Diameter PVC conduit installed within (unless otherwise indicated) concrete column, concrete wall, brickwall, etc.

Lightning Protection - Earth Spike:

16mm Diameter (minimum) SANS approved and bearing SANS mark copper coated threaded earth spike.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed upon a metal roof structure.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed either upon an up-stand wall or hardened roof structure (i.e. concrete roof, etc.).

SPECIFIC NOTES:

1. Lightning protection final design to be undertaken by specialist Earthing and Lightning Protection Contractor.
2. This drawing shall be read in conjunction with Contract Specification and detail drawing "Typical Lightning Protection Installation Detail (New Buildings)".
3. This drawing shall furthermore be read in conjunction with any other or additional detail drawings as applicable and as indicated on the drawing.

GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. Lightning protection shall comply with the latest edition of SANS 10313.
5. This drawing must be read in conjunction with the relevant typical lightning protection installation detail drawings.

ROLE	NAME	SIGN	DATE
DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
DIESEL STORE - PROPOSED LIGHTNING PROTECTION LAYOUT

SCALE	CHECKED:	APPROVED:
1:40 (A3)	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2026-02-12
PROJECT No: 11364	DRAWING No: 11364-A1205	REV: A

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(031) 816 9386

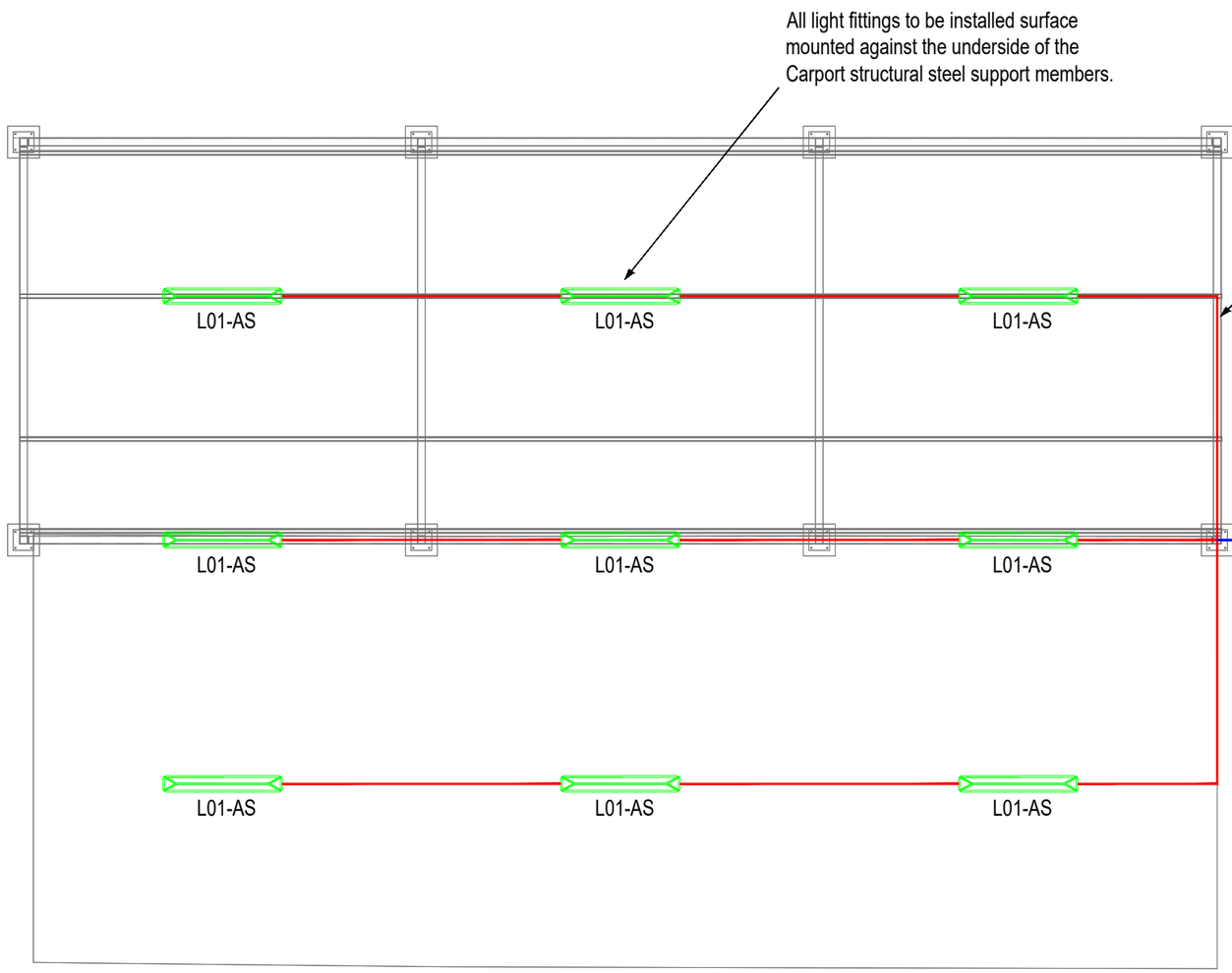
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2026-02-12	RM	GM	ISSUED FOR ACCEPTANCE

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. It is recommended that the entire electrical installation be flush mounted as far as practically possible and acceptable.
5. The electrical installation will be exposed to the outdoor weather-conditions (not an enclosed building) and therefore the entire electrical installation must be weather-proof and water-proof.
6. The entire electrical installation (light fittings, light switch, electrical routing, etc.) must be insect-proof and rodent-proof.
7. All light fittings must be installed surface mounted against the underside of the concrete roof soffit, the use of sub-structures will not be permitted.
8. The light fittings must be installed such to prevent birds from building and fixing nests against the light fittings.

ELECTRICAL LIGHT FITTING LEGEND

L01-AS	**Light Fitting - L01-AS:** Surface mounted non-dimmable 1500mm LED vapourproof light fitting.
WP	**Light Switch - Single Lever (Weatherproof):** Single lever light switch - Surface mounted weatherproof.

SPECIFIC NOTES:

1. All light switches to be installed at 1100mm AFFL to the center of the light switch draw-box and ±200mm away from the door frame to the center of the light switch draw-box where such references exist.
2. All 2-way light switching return wiring shall be of the shortest route possible back to the relevant light switch.

ROLE	NAME	SIGN	DATE
DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			

DRAWING APPROVAL STATUS

PROJECT: TRANSNET PIPELINES
HW FIRE

SCALE: 1:75 (A3)
CHECKED: GM
APPROVED: BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001
DESIGN-DRAWN: GM - RM
DATE: 2026-02-12
PROJECT No: 11364
DRAWING No: 11364-A1206
REV: A

A3
TITLE: CARPORTS - PROPOSED LIGHTING LAYOUT

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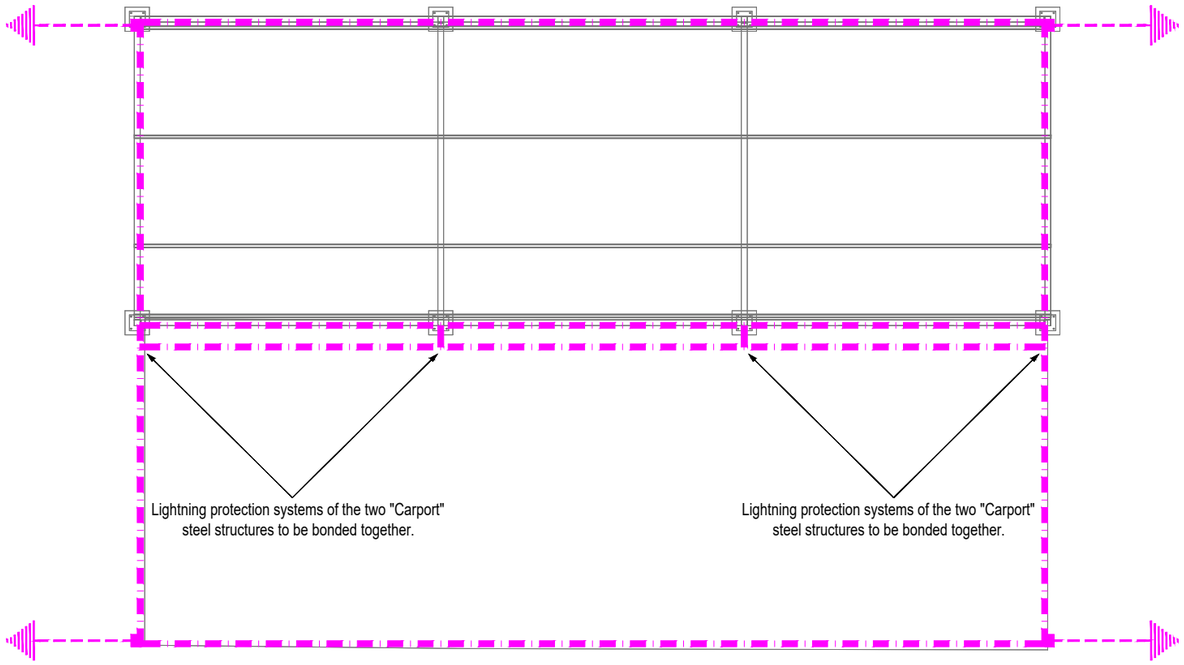
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2026-02-12	RM	GM	ISSUED FOR ACCEPTANCE

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



LIGHTNING PROTECTION LEGEND

Lightning Protection - Test Point:

"*MCE-101075*" IP66 PVC weatherproof enclosure flush mounted (unless otherwise indicated) within concrete column, concrete wall, brickwall, etc. at height above finished floor level in accordance with detail drawings.

Lightning Protection - Conduit:

or

32mm Diameter PVC conduit installed within (unless otherwise indicated) concrete column, concrete wall, brickwall, etc.

Lightning Protection - Earth Spike:

16mm Diameter (minimum) SANS approved and bearing SANS mark copper coated threaded earth spike.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed upon a metal roof structure.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed either upon an up-stand wall or hardened roof structure (i.e. concrete roof, etc.).

SPECIFIC NOTES:

1. Lightning protection final design to be undertaken by specialist Earthing and Lightning Protection Contractor.
2. This drawing shall be read in conjunction with Contract Specification and detail drawing "Typical Lightning Protection Installation Detail (New Buildings)".
3. This drawing shall furthermore be read in conjunction with any other or additional detail drawings as applicable and as indicated on the drawing.

GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. Lightning protection shall comply with the latest edition of SANS 10313.
5. This drawing must be read in conjunction with the relevant typical lightning protection installation detail drawings.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
CARPORTS - PROPOSED LIGHTNING PROTECTION LAYOUT

SCALE 1:100 (A3)
CHECKED: GM
APPROVED: BJ
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001
DESIGN-DRAWN: GM - RM
DATE: 2026-02-12
PROJECT No: 11364
DRAWING No: 11364-A1207
REV: A

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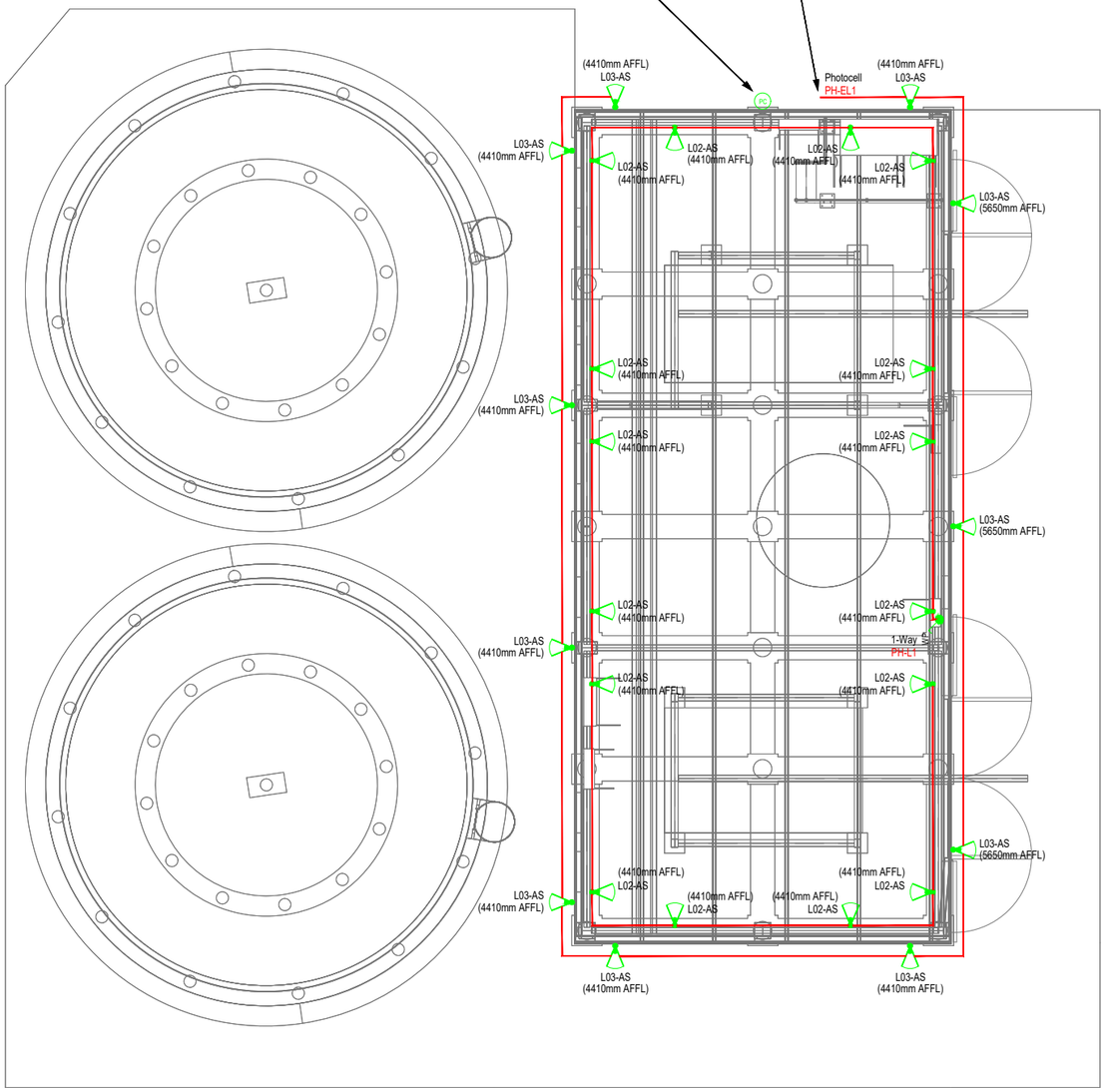
REV	DATE	BY	CHK	DESCRIPTION
A	2026-02-12	RM	GM	ISSUED FOR ACCEPTANCE

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



ELECTRICAL LIGHT FITTING LEGEND

L02-AS	**Light Fitting - L02-AS:** Surface mounted non-dimmable 40W-60W 4000K 231V 120° beam IP65 LED floodlight fitting complete with mounting brackets, bolts, nuts, washers, etc. mounted at the height as indicated above the finished floor level.
L03-AS	**Light Fitting - L03-AS:** Surface mounted non-dimmable 100W 4000K 231V 120° beam IP65 LED floodlight fitting complete with mounting brackets, bolts, nuts, washers, etc. mounted at the height as indicated above the finished floor level.
WP	**Light Switch - Single Lever (Weatherproof):** Single lever light switch - Surface mounted weatherproof.
PC	**Light Switch - Photocell:** 231V IP65 weatherproof photocell surface mounted at the height as indicated.

SPECIFIC NOTES:

1. All light switches to be installed at 1100mm AFFL to the center of the light switch draw-box and ±200mm away from the door frame to the center of the light switch draw-box where such references exist.
2. All 2-way light switching return wiring shall be of the shortest route possible back to the relevant light switch.

GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2, the Occupational Health and Safety (OHS) Act as well as the respective Transnet Pipeline specifications and requirements.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. It is recommended that the entire electrical installation be flush mounted as far as practically possible and acceptable.
5. The electrical installation will be exposed to the outdoor weather-conditions (not an enclosed building) and therefore the entire electrical installation must be weather-proof and water-proof.
6. The entire electrical installation (light fittings, light switch, electrical routing, etc.) must be insect-proof and rodent-proof.
7. All light fittings must be installed surface mounted against the underside of the concrete roof soffit, the use of sub-structures will not be permitted.
8. The light fittings must be installed such to prevent birds from building and fixing nests against the light fittings.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT:
TRANSNET PIPELINES
HW FIRE

A3

TITLE:
PUMP HOUSE - PROPOSED LIGHTING LAYOUT

SCALE 1:150 (A3)	CHECKED: GM	APPROVED: BJ	
CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2026-02-12	
PROJECT No: 11364	DRAWING No: 11364-A1208		REV: A

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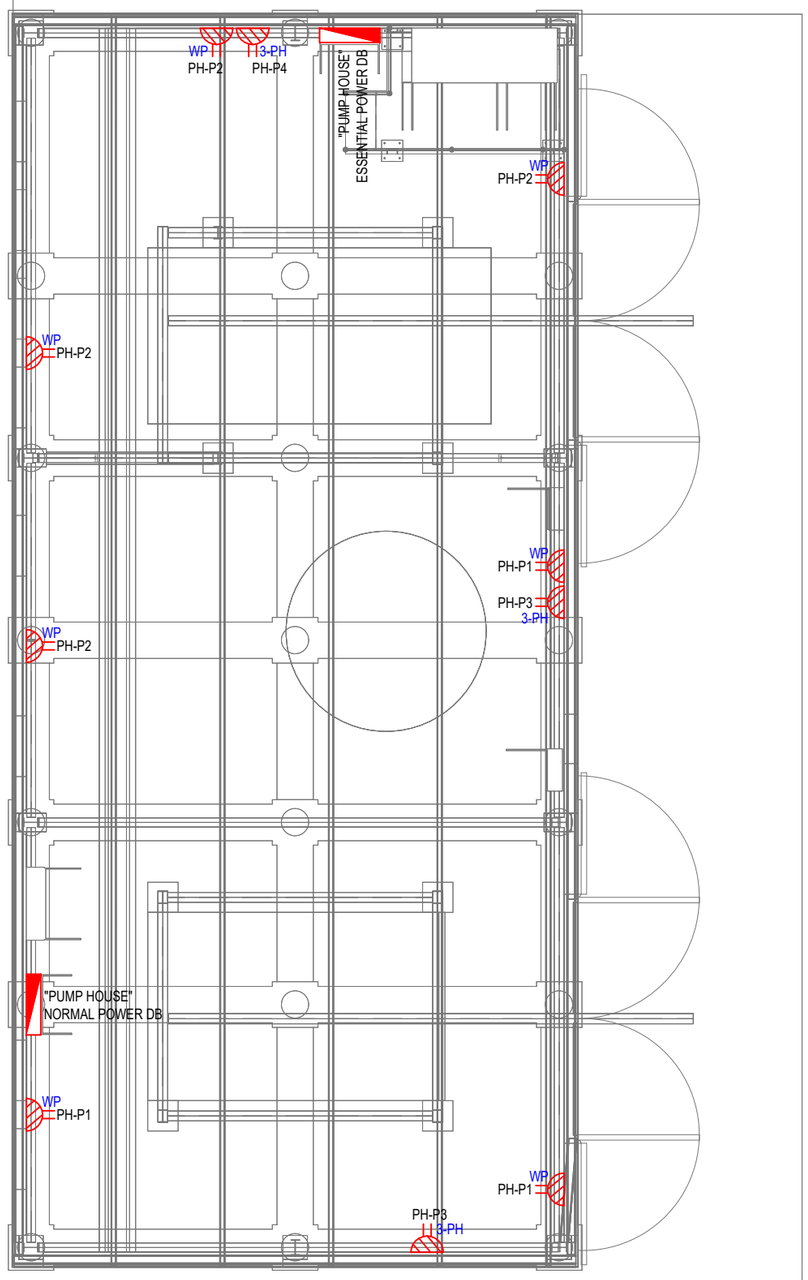
REV	DATE	BY	CHK	DESCRIPTION
A	2026-02-12	RM	GM	ISSUED FOR ACCEPTANCE

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.			REV



GENERAL NOTES:

1. All work shall comply with respective Municipal By-Laws.
2. All work shall comply with the latest editions of SANS 10142-1, 10142-2 and the Occupational Health and Safety (OHS) Act.
3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. The Contractor shall measure cable routes prior to ordering and cutting as only actual cable lengths installed shall be paid for.
5. Cables shall be installed with the maximum spacing between cables.
6. "Equivalent" or "Similar Approved" shall have the same meaning and the Engineer shall evaluate the quality to be equal or better than the brand name quoted.

ELECTRICAL SMALL POWER LEGEND

	Electrical DB: Low voltage electrical distribution board (DB).
WP	**Socket Outlet - Single-Phase Weatherproof:** 1 x 3-pin "OLD RSA" and 2 x 3-pin "NEW" RSA **"Switch All"** 16A, 230V socket outlet combination (EEx 'd' certified, double pole and earth) surface mounted (unless otherwise specified) at 1100mm above finished floor level within a S15 Duo weatherproof York Box with sliding lid (or other approved).
3PH	**Socket Outlet - Three-Phase Weatherproof:** 1 x 5-pin 63A, 400V, IP67, three-phase industrial switched socket outlet with interlock (EEx 'd' certified, 3-phase + N + E) surface mounted at 1100mm above finished floor level (unless otherwise specified).

SPECIFIC NOTES:

1. All socket outlets to be installed at 1100mm above finished floor level to the center of the outlet box unless otherwise indicated.

DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			
ROLE	NAME	SIGN	DATE

DRAWING APPROVAL STATUS

PROJECT: TRANSNET PIPELINES
HW FIRE

A3

TITLE: PUMP HOUSE - PROPOSED SMALL POWER LAYOUT

SCALE 1:100 (A3)

CAD FILE: HO1436-TPL_2024_09_0008_77334_RFP-FAT-0001

PROJECT No: 11364

CHECKED: GM

DESIGN-DRAWN: GM - RM

APPROVED: BJ

DATE: 2026-02-12

DRAWING No: 11364-A1209

REV: A

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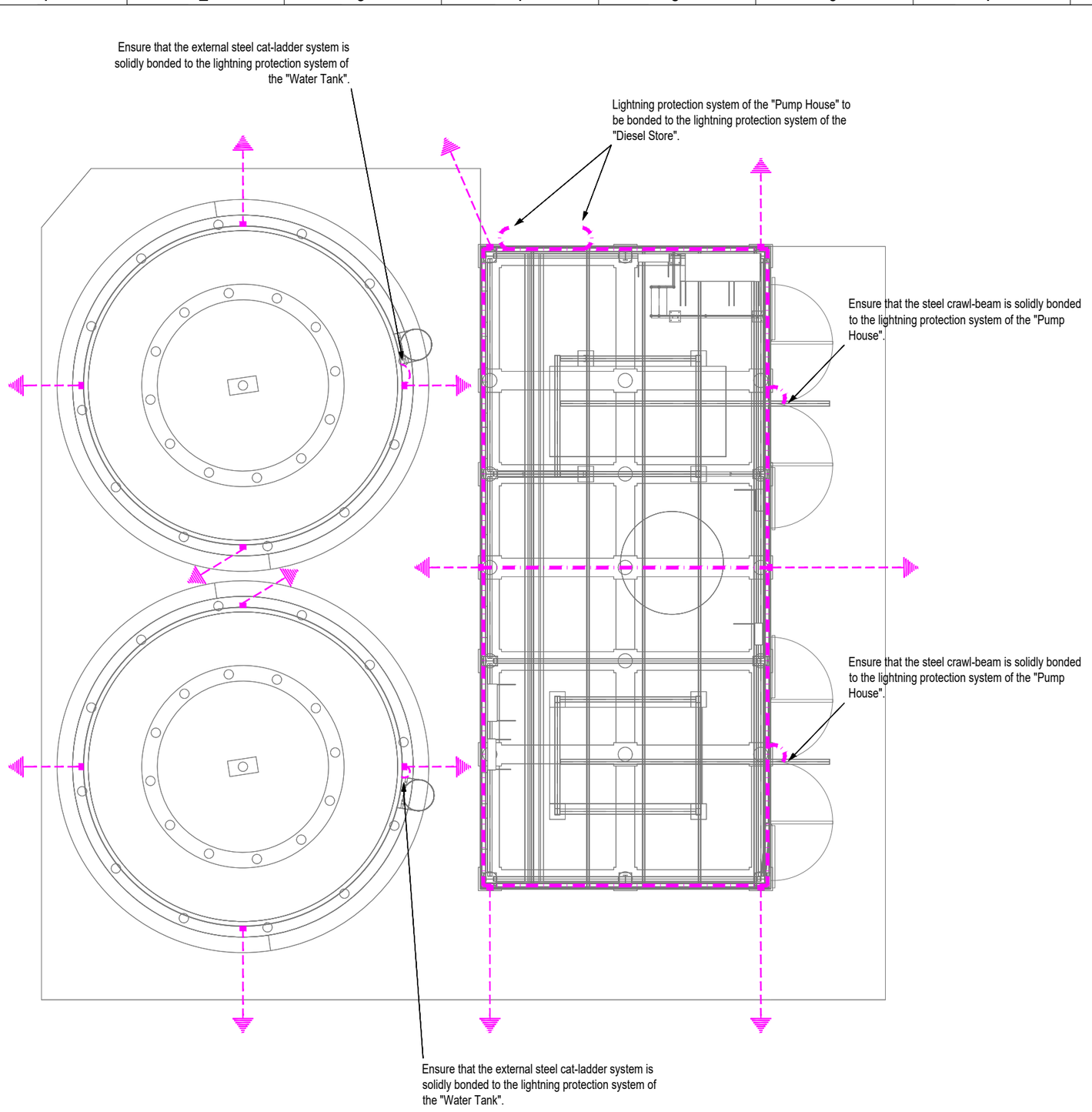
REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2026-02-12	RM	GM	ISSUED FOR ACCEPTANCE

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	



LIGHTNING PROTECTION LEGEND

Lightning Protection - Test Point:

"*MCE-101075*" IP66 PVC weatherproof enclosure flush mounted (unless otherwise indicated) within concrete column, concrete wall, brickwall, etc. at height above finished floor level in accordance with detail drawings.

Lightning Protection - Conduit:

32mm Diameter PVC conduit installed within (unless otherwise indicated) concrete column, concrete wall, brickwall, etc.

Lightning Protection - Earth Spike:

16mm Diameter (minimum) SANS approved and bearing SANS mark copper coated threaded earth spike.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed upon a metal roof structure.

Lightning Protection - Conductor:

50mm² (minimum) Diameter solid round Aluminium conductor for lightning protection air terminal and down conductor system installed either upon an up-stand wall or hardened roof structure (i.e. concrete roof, etc.).

SPECIFIC NOTES:

1. Lightning protection final design to be undertaken by specialist Earthing and Lightning Protection Contractor.
2. This drawing shall be read in conjunction with Contract Specification and detail drawing "Typical Lightning Protection Installation Detail (New Buildings)".
3. This drawing shall furthermore be read in conjunction with any other or additional detail drawings as applicable and as indicated on the drawing.

GENERAL NOTES:

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3. The installation remains the responsibility of the Contractor and the Contractor shall therefore take additional measures if necessary to ensure compliance.
4. Lightning protection shall comply with the latest edition of SANS 10313.
5. This drawing must be read in conjunction with the relevant typical lightning protection installation detail drawings.

ROLE	NAME	SIGN	DATE
DESIGNER			
RESP. ENG			
PROJ. MANAGER			
CLIENT			

DRAWING APPROVAL STATUS

PROJECT: TRANSNET PIPELINES
HW FIRE

A3

TITLE: PUMP HOUSE - PROPOSED LIGHTNING PROTECTION LAYOUT

SCALE	CHECKED:	APPROVED:
1:150 (A3)	GM	BJ
CAD FILE: HO1436-TPL_2024_09_0008 _77334_RFP-FAT-0001	DESIGN-DRAWN: GM - RM	DATE: 2026-02-12
PROJECT No: 11364	DRAWING No: 11364-A1210	REV: A

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REVISIONS

REV	DATE	BY	CHK	DESCRIPTION
A	2026-02-12	RM	GM	ISSUED FOR ACCEPTANCE

TRANSNET pipelines

PROJECT NAME
WITBANK FIRE

DRAWN		REF.	
TRACED		DATE	
CHECKED		APPROVED	
SCALE			
TPL DRAWING No.		REV	

TRANSNET PIPELINES
INSTR CABLE
SLEEVED

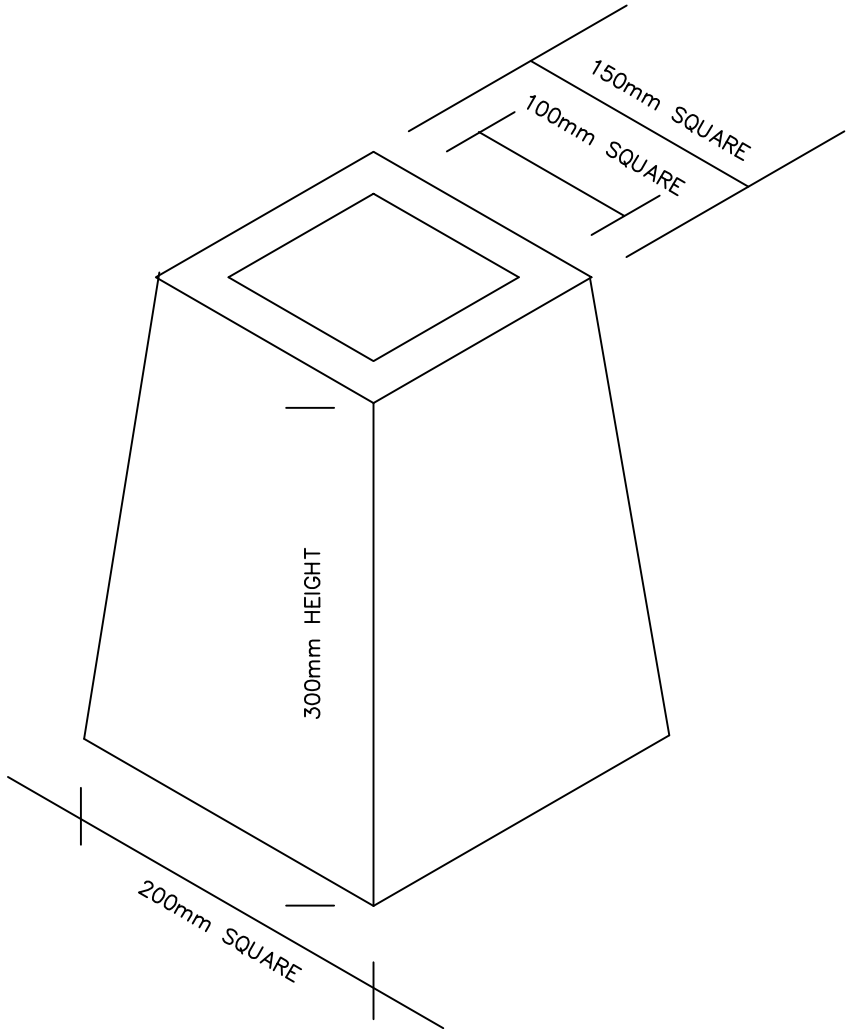
30mm 30mm

10mm

TRANSNET PIPELINES
INSTR CABLE
SLEEVED

30mm 30mm

10mm



BILL OF MATERIAL

ITEM	QTY	DESCRIPTION
1.	1	CABLE MARKER MATERIAL–CONCRETE
2.	1	NAME PLATE MATERIAL–ALUMINIUM 2mm

NOTES:

1. NAME PLATE AFFIXED WITH SS SCREWS
2. TEXT SIZE 10mm STAMPED LETTERING
3. LABEL DIRECTION ARROWS TO MATCH CABLE DIRECTION
3. MARKER COLOR SPECS:
   MV – BRILLIANT GREEN (RAL 6002)
   LV – BLACK (RAL 9005)
   INSTR – LIGHT BLUE (RAL 5012)

Rev	Remarks	Appr	Date	Chkd	Date	Design	Date
003	TPL LOGO ALTERED, RAL CODES ADDED	BB	10/4/13	CM	10/4/13		
002	MATERIAL SPEC ALTERED	PNET	10/6/02	CM	10/6/02		
001	AS APPROVED	PNET	02/7/96	CM	02/7/96		

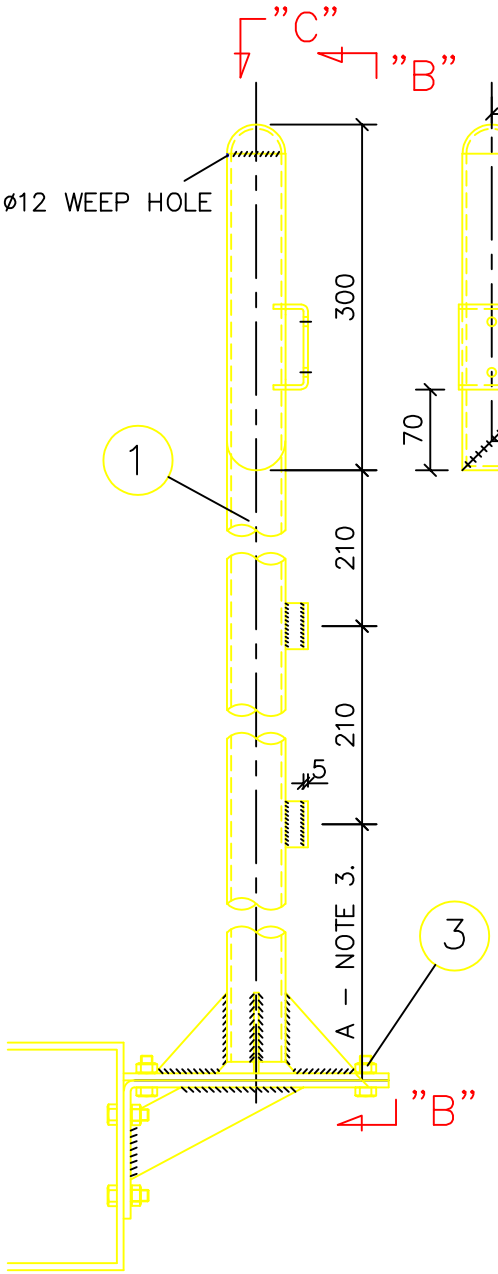
TRANSNET pipelines

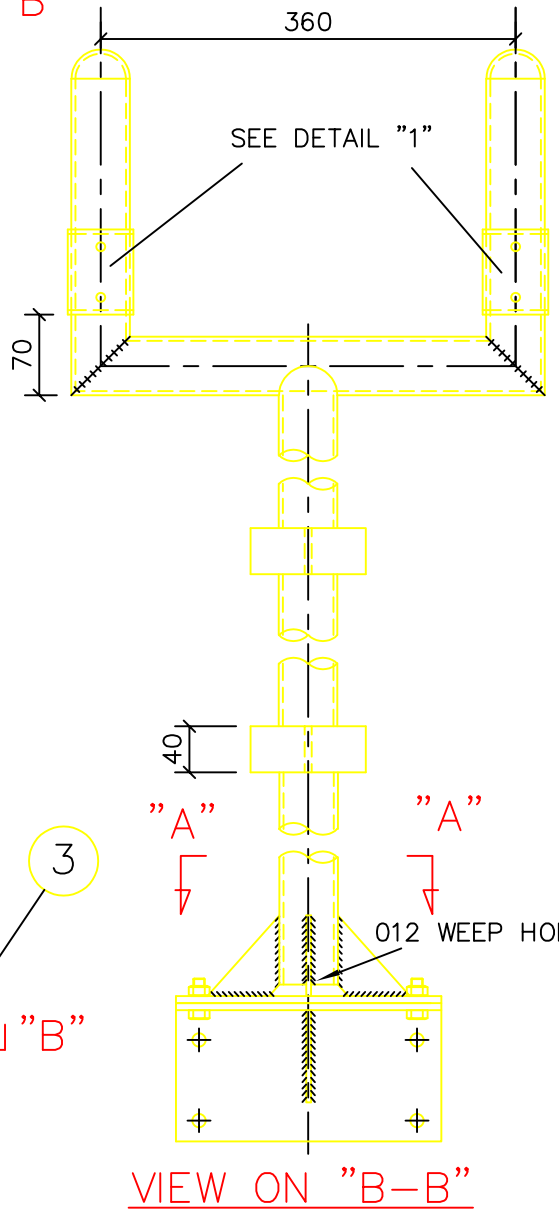
CABLE CONCRETE MARKER SPECIFICATION

HOOK–UP

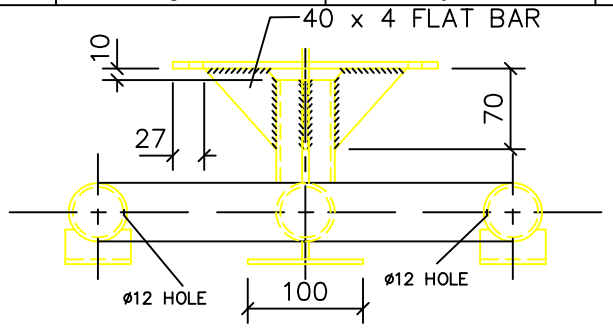
REVISIONS
PROJECT NAME

DRAWN	CM	REF.	727–001CBLMRK
TRACED	CAD	DATE	10/04/13
CHECKED		APPROVED	BB
SCALE	NTS		
DRAWING No.	PL	REV	3

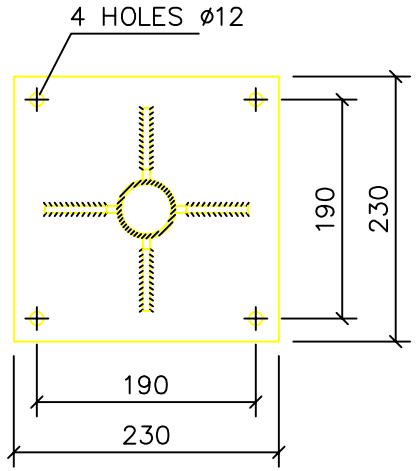




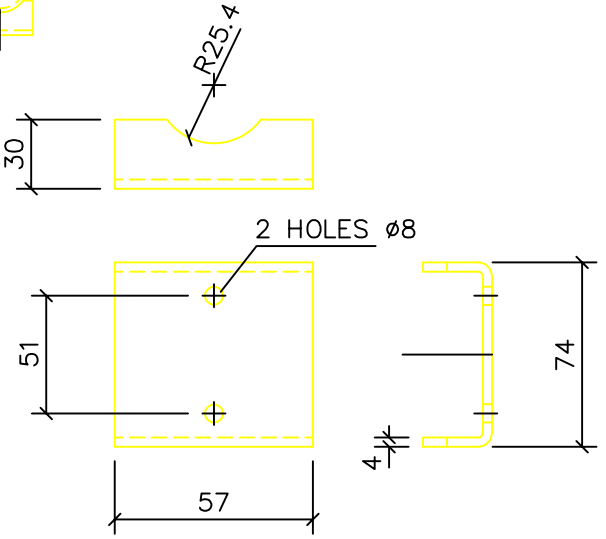
VIEW ON "B–B"



VIEW ON C



SECTION "A–A"



DETAIL "1"

NOTES:

1. ALL WELDING DONE TO BE CONTINUOUS FILLET 4–5mm
2. ITEM TO BE HOT DIP GALV. ACC. TO SABS 763 SPEC.
3. LENGTH DETERMINED ON SITE.

ITEM	QTY.	MATERIAL	DESCRIPTION
1		COM. STEEL 43A	TUBE STRUCTURAL NOM. SIZE 50.8 x 3.5
3	4	COM. STEEL ZINC PL.	BOLT M10 x 20
3.1	4	COM. STEEL ZINC PL.	NUT (HEX) M10
3.2	4	COM. STEEL ZINC PL.	WASHER (FLAT) M10
3.3	4	COM. STEEL ZINC PL.	WASHER (SPRING) M10

Rev	Remarks	Appr	Date	Chkd	Date	Design	Date
R0	AS BUILT	G.M	22.5.97	S.J	22.5.97	W.B	22.5.97

SIEMENS DRAWING No.
(3)G52001–H2151–1086

Sht. 1 of 2

PETRONET DRAWING No.

PETRONET

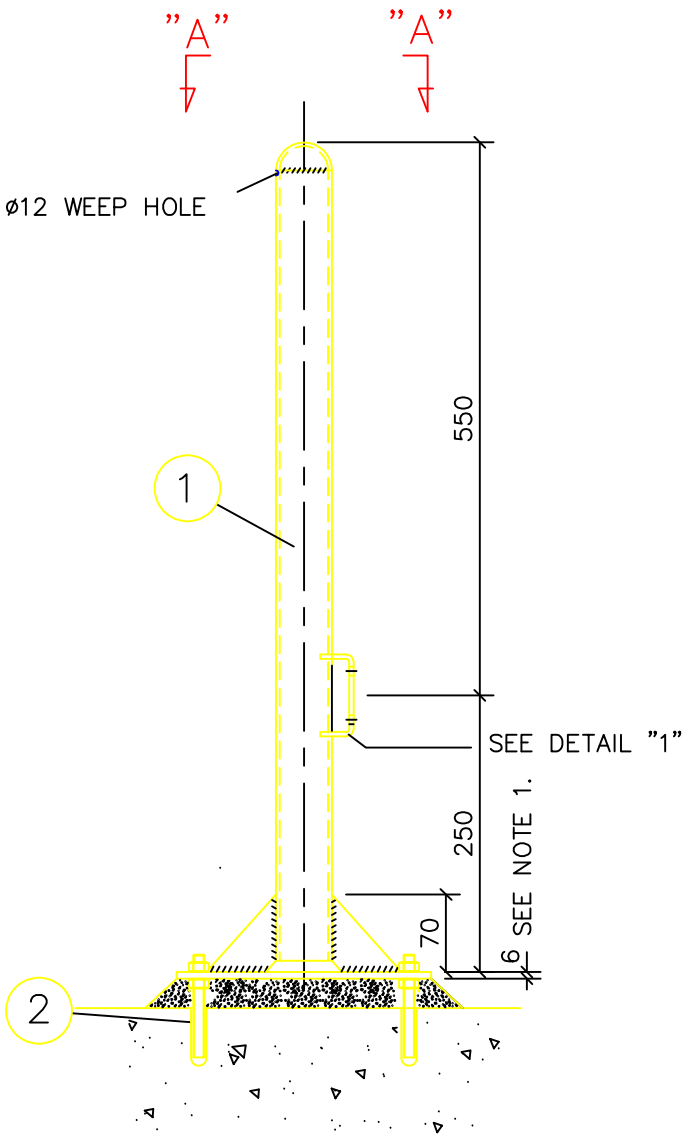
INSTRUMENT STAND
DUAL INSTRUMENT

PROJECT NAME:
INSTRUMENT STAND – DOUBLE

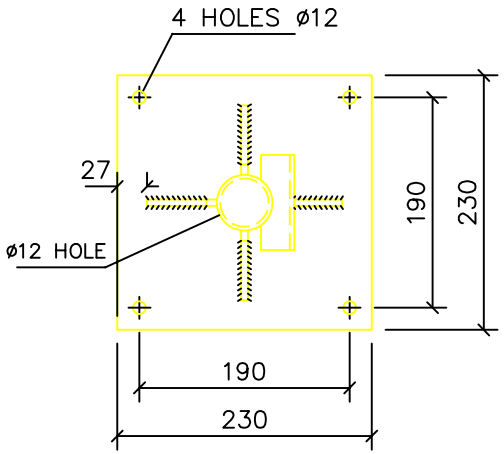
DRAWN	L.V.	REF	
TRACED	CAD	DATE	JAN 1997
CHECKED	W.B	APPR.	G.M.
SCALE	NONE		

DRAWING No. 727–002–INSTAND

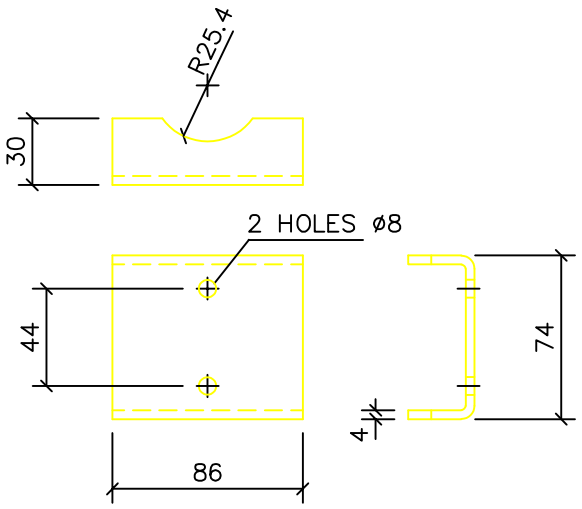
REV 01



NOTE:
1. STAND HEIGHT DEPENDANT ON POSITION OF Tx



SECTION "A–A"



DETAIL "1"

NOTES:
1. LENGTH DETERMINED ON SITE
2. ALL WELDING DONE TO BE CONTINUOUS FILLET 4–5mm
3. ITEM TO BE HOT DIP GALV. ACC. TO SABS 763 SPEC.
4. GROUTING TO LEVEL.

ITEM	QTY.	MATERIAL	DESCRIPTION
1		COM. STEEL 43A	TUBE STRUCTURAL NOM. SIZE 50.8 x 3.5 SCHEDULE
2	4	COM. STEEL ZINC PL.	"UPAT" UKA 3 ANCHOR STUD – ASTA M10 x 165
2.1	4	CHEMICAL RES.	"UPAT" CHEM. ANCHOR CAPSULE UK 3 EAP M10
2.2	4	COM. STEEL ZINC PL.	M10 HEX NUT (COUNTER NUT)

Rev	Remarks	Appr	Date	Chkd	Date	Design	Date
R0	AS BUILT	G.M	22.5.97	S.J	22.5.97	W.B	22.5.97

SIEMENS DRAWING No. (3)G52001–H2151–I087 | Sht. 1 of 1 | = | + | PETRONET DRAWING No.

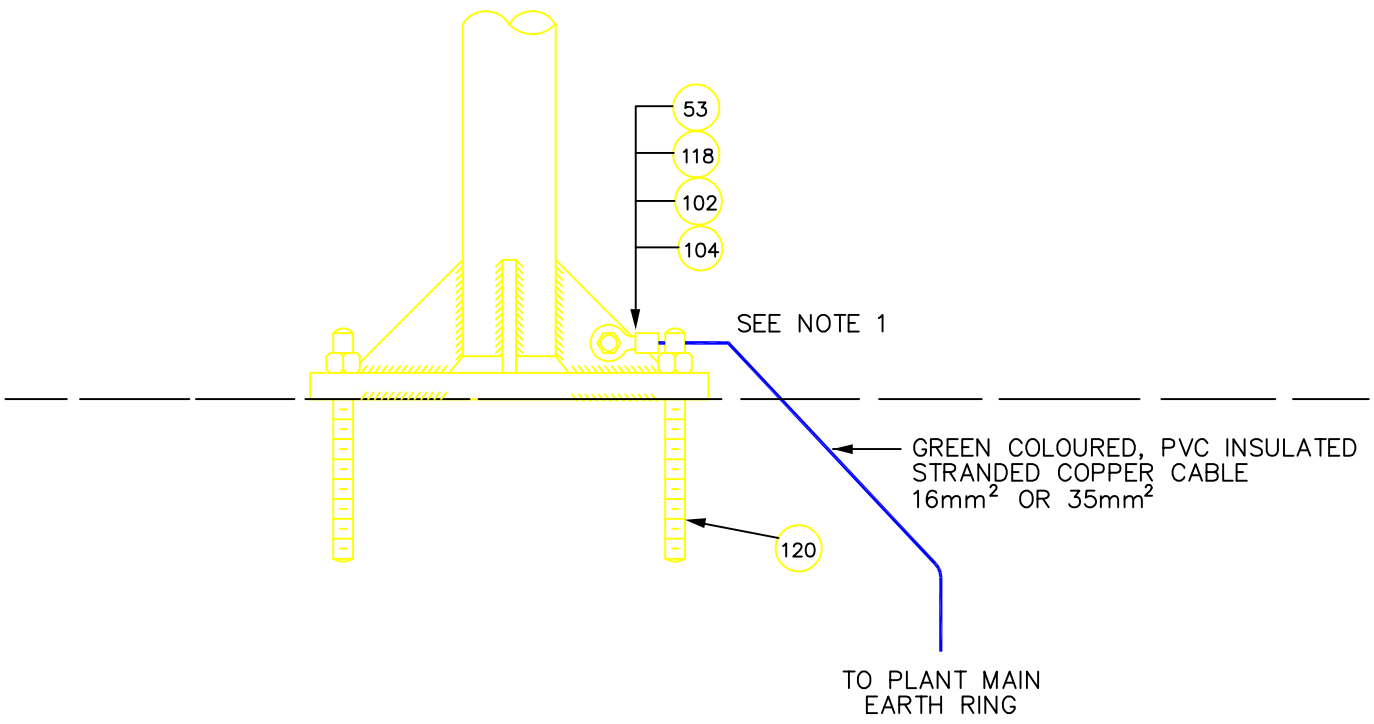
PETRONET

INSTRUMENT STAND
SINGLE INSTRUMENT

PROJECT NAME: INSTRUMENT STAND – SINGLE

DRAWN	L.V.	REF	
TRACED	CAD	DATE	JAN 1997
CHECKED	W.B	APPR.	G.M.
SCALE	NONE		

DRAWING No. 727–003–INSTAND | REV 01



NOTES:

1. EARTH STUD TO BE WAX TAPED

ITEM	QTY.	MATERIAL	DESCRIPTION
53	1	16mm² x 10mm	CABLE LUG
102	1	10m	FLAT WASHER
104	1	10m	HEX FULL NUT
118	1	M10 x 30mm	HEX HEAD BOLT
120	4	M10 x 70mm	ANCHORS

Rev	Remarks	Appr	Date	Chkd	Date	Design	Date
R0	AS BUILT	GM	18.11.97	MP	18.11.97		

SIEMENS DRAWING No.
(3)G52001–H2151–I035

Sht. 1 of 1

PETRONET DRAWING No.

PETRONET

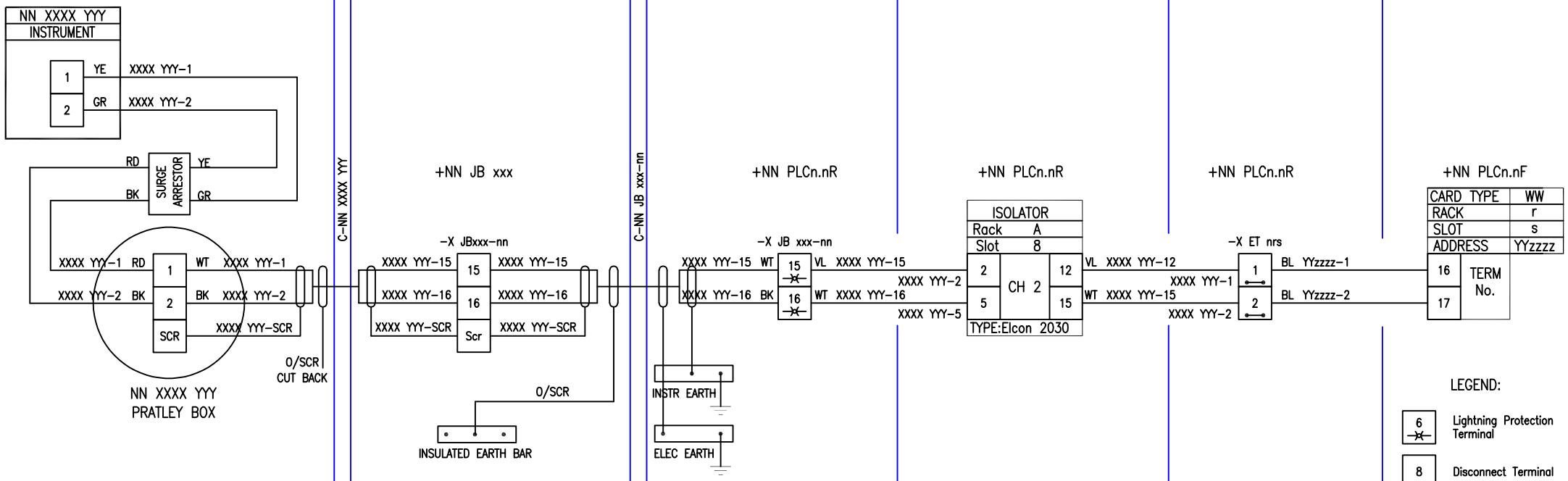
HOOK–UP FOR EARTHING ON INSTRUMENT STANDS

PROJECT NAME:
EARTHING DETAIL–INSTRUMENTATION

DRAWN	L.V.	REF	
TRACED	CAD	DATE	JAN 1997
CHECKED	W.B	APPR.	G.M.
SCALE	NONE		

DRAWING No. 727–004–INSTR EARTH

REV 01



LOOP SPECIFICATIONS

1. INSTRUMENT TAG NUMBER : NN XXXX YYY

Where
NN represents Pump Station ID
XXXX YYY represents Instr Functional Design
Example : 17 TT121

2. INSTR CABLE CORE IDENT : XXXX YYY-nn

Where
XXXX YYY represents Instr Functional Design
nn represents the Terminal Number into which the core is terminated.
Example : TT121-1

3. INSTRUMENT J/B ID : + NN JB xxx

Where
xxx represents unique ID based on the associated Device Group
Example : +17 JB P01 for Group P01
Example : +17 JB 12 for Routing Group

4. J/B TERMINAL LABEL : -X JB xxx-nn

Where
-X denotes a Terminal Rail
-nn denotes Signal Type
A=Analog D=Digital
Example : -X JB P01-A

5. PLC PANEL LOCATION IDENTIFIER: +NN PLCn.nR

Where
+ denotes Location Identifier
NN denotes Pump Station ID
PLCn denoters PLC Panel ID
R denotes R=Rear F=Front
Example : +17 PLC01.1R

6. PLC CORE IDENT: YYzzzz-1

Where
YY represents Signal Type
I=Digital Inp IW=Analog Inp
Q=Digital Out QW=Analog Out
zzzz denotes S/W Address
-1 denotes Terminal No.
Example : I 7.3 -1

7. PLC TERM RAIL LABEL -X ET nrs

Where
-X denotes Terminal Rail
ET denotes Remote I/O
ET=located in PLC Panel
ETL=located in LV Panel
ETM=located in MV panel
n denotes PLC ID No.
r denotes ET Rack No.
s denotes ET Slot No.

Example : -X ET 124

Rev	Remarks	Date
0.2	ITEMS CLARIFIED	10/04/2001
0.1	CABLE SCREENS ALTERED	20/09/2000
0.0	STANDARDS	20/09/2000

Appr:	Date:	Chkd:	Date:	Design:CM	Date: 09/2000

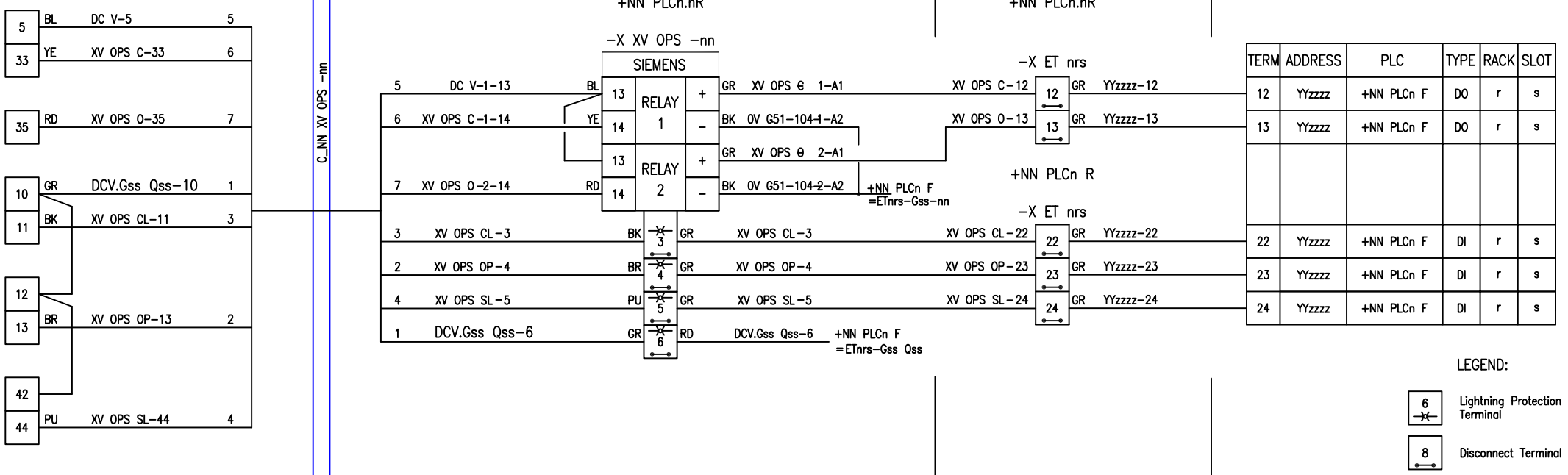
PETRONET
TELE PHASE II

SIEMENS
LIMITED
JOHANNESBURG
REG No 01/07514/06

LOOP DIAGRAM FOR INSTRUMENTATION
STANDARD SPECIFICATION

IAT Document Number	IAT/727-005_InstrLoop
PETRONET Document Number	PL
□ No.	=
W No.	+
SCALE : NTS	
SHT	1 of 1
REV	0.2

\PNETSTDS\LOOPTYPICAL\INSTRUMENTATION



LOOP SPECIFICATION

1. ACTUATOR TAG NUMBER : NN XV OPS

Where
NN represents Pump Station ID
XV OPS represents Valve Functional Design
Example : 17 XV R1A

2. VALVE CABLE CORE IDENT : XV OPS AA-nn

Where
XV OPS represents Valve Functional Design
AA represents Signal Type (e.g. O=Open)
nn represents the Terminal Number into which the core is terminated.
Example : XV R1A O-35

3. FIELD TERM LABEL : -X XV OPS-nn

Where
-X denotes a Terminal Rail
-nn denotes Signal Type
A=Analog D=Digital
Example : -X XV R1A-D

4. POWER SUPPLY CORE IDENTS:
DCV.Gss Qss-nn

Where
DCV denotes Supply (either 24V,110V,0V)
Gss denotes PSU Source
Qss denotes MCB Feeder ID/0V Term No.
nn denotes Terminal No. (For Relay: nn=Relay No-Term No)

5. PLC PANEL LOCATION IDENTIFIER:
+NN PLCn.nR

Where
+ denotes Location Identifier
NN denotes Pump Station ID
PLCn denoters PLC Panel ID
R denotes R=Rear F=Front
Example : +17 PLC01.1R

6. PLC CORE IDENT: YYzzzz-1

Where
YY represents Signal Type
I=Digital Inp IW=Analog Inp
Q=Digital Out QW=Analog Out
zzzz denotes S/W Address
-1 denotes Terminal No.
Example : I 7.3 -1

7. PLC TERM RAIL LABEL
-X ET nrs

Where
-X denotes Terminal Rail
ET denotes Remote I/O
ET=located in PLC Panel
ETL=located in LV Panel
ETM=located in MV panel
n denotes PLC ID No.
r denotes ET Rack No.
s denotes ET Slot No.

Example : -X ET 124

Rev	Remarks	Date
0.2	ITEMS CLARIFIED	10/04/2001
0.1	POWER DISTRIBUTION CORE IDENT MODS	10/02/2001
0.0	STANDARDS	20/09/2000

Appr: Date: Chkd: Date: Design:CM Date: 09/2000

PETRONET
TELE PHASE II

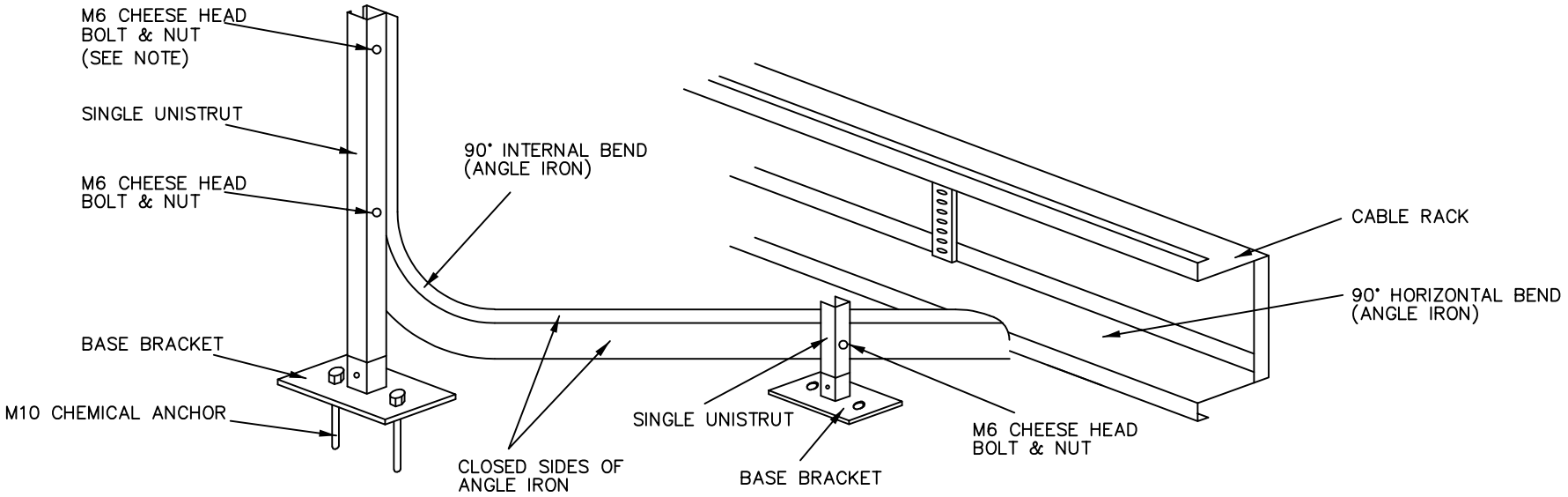
SIEMENS
LIMITED
JOHANNESBURG
REG No 01/07514/06

LOOP DIAGRAM FOR ACTUATED VALVES
STANDARD SPECIFICATION

IAT Document Number: IAT/727-006_VlvLoop
PETRONET Document Number: PL

□ No. =
W No. +
SCALE : NTS
SHT 1 of 1
REV 0.2

\PNETSTDS\LOOPTYPICAL\VALVES



NOTE:

1. CHEESE HEAD BOLT TO BE ON ANGLE IRON SIDE WITH THE NUT INSIDE UNISTRUT
2. THE ANGLE IRON MUST FACE THE SIDE THAT THE CABLE IS COMING FROM
3. ALL BOLTS, NUTS, WASHERS, SPRING WASHERS TO BE HOT DIPPED GALVANISED

Rev	Remarks	Appr	Date	Chkd	Date	Design	Date
0.2	AS APPROVED	WF	26.8.99	WF	26.8.99		

SIEMENS DRAWING No. (3)G52001–L4001–P913 | Sht. 1 of 1 | = | + | PETRONET DRAWING No.

PETRONET

HOOK–UP
TYPICAL CABLE RACKING LAYOUTS
SECONDARY RACKING DROPPERS

PROJECT NAME: RACKING DROPPERS TYPICAL			
DRAWN	W.F	REF	
TRACED	CAD	DATE	08/99
CHECKED	W.F	APPR.	PNET
SCALE	NONE		
DRAWING No. 727–007/RACK DROPPER			REV 0.2

3,3kV TRANSFORMER BAY

400V AUX TRANSFORMER BAY

DIESEL GENERATOR SET

FIELD

SYSTEM EARTH MAT EB00

LATTICE NETWORK
BARE Cu 40x3mm EARTH TAPE
BURIED TO DEPTH 1m
CROSSOVER POINTS BRAISED & TAPED

Cu 40x3mm Earth Tape

Cu 40x3mm Earth Tape

70 mm² PVC Cu

NER

System Earth Mat/Spike

Cu 50 x 5mm Earth Bar EB06

Cu 50 x 5mm Earth Bar EB07

Cu 50 x 5mm Earth Bar EB08

Cu 50 x 5mm Earth Bar EB09

Diesel

G 3n

GEN01 Control Panel

35 mm² PVC Cu

0V Battery

N Mains

N Alternator

PE

Cu 50 x 5mm Earth Bar EB05

SWITCHGEAR ROOM

NEW STATIONS:
All 2' Electrical Earth bars terminated to Main Safety Earth bar in Switchgear Room.
EXISTING STATIONS:
Electrical Earth bar taken directly to Station Earth mat.

TEST POINT

EB01 – MAIN SAFETY/ELECTRICAL EARTH BAR CU 50X5mm EARTH BAR

Cu 40 x 3mm Earth Tape Connections brought into Switchgear Room as spare.

NEW STATIONS:
All 2' Electrical Earth bars terminated to Main Safety Earth bar in Switchgear Room.
EXISTING STATIONS:
Electrical Earth bar taken directly to Station Earth mat.

INFRASTRUCTURE
– Tanks
– Supports

Manifold Piping

LF.

LF.

3.3 kV PANEL

Cu 50 x 5mm Earth Bar

3.3 kV Main Earth

Marshalling Box

Protection Compartment

O/Screen

LV DISTRIBUTION PANEL

N CU 50X5mm EARTH BAR

Removable Link

P E CU 50X5mm EARTH BAR

Power Cable 1 2 1 2 (min 16mm²)

PVC Cu (min 16mm²)

MV ET 200 M

LV ET 200 M

6mm²(min) PVC Cu

24 VDC PSU

ET200 BACKPLANE

CVT

CVT N

Distribution Compartment LV Panel

UPS

UPS N

Power Cable

MANIFOLD EARTH TP1:
Located at P01 if possible. Mounted on insulators.
EB03 50 x 5mm

Bare Cu 40x3mm Earth Tape Running along main Electrical Rack within Manifold Bund area

JB

Infrastructure

P01

Instrument/Electrical Racking Reticulation

Cu Strap 10 mm²

Power Cable (min 4mm²)

AUX M 3 Ph

16 mm² MIN PVC Cu

Actuator Housing

P02

Instrument J/B

Insulated O/Screen

MANIFOLD EARTH TP2:
Located at P04 if possible. Mounted on insulators.
EB04 50 x 5mm

P04

Instrument Housing

Instrument Stands.

NEW STATIONS:
All 2' Electrical Earth bars terminated to Main Safety Earth bar in Switchgear Room.
EXISTING STATIONS:
Electrical Earth bar taken directly to Station Earth mat.

2 x 70 mm² PVC Cu

CONTROL ROOM

UPS Distribution

PE CU 50X5mm EARTH BAR

CPU & ET 200 M PANELS

IES CU 50X5mm EARTH BAR

IE CU 50X5mm EARTH BAR

PLC/ET200 BACKPLANE

4 x 70 mm² PVC Cu

2 x 70 mm² PVC Cu

Cu 50x5mm Earth Bar Mounted in False Floor

IB01

EB02

TEST POINT PRIMARY EARTH TEST POINT – New and Existing Stations.

TEST POINT SECONDARY EARTH TEST POINTS – Existing Stations only.

Rev	Remarks	Date
0.2	MANIFOLD EARTHING CONCEPT CLARIFICATION	01/10/02
0.1	MODIFIED TO REFLECT TYPICAL EARTH LAYOUT	01/10/02
0.0	ORIGINAL DRAWING QS2001-L4017-A506 – CBK EARTH LAYOUT	11/10/99

Appr: Date: Chkd: Date: Design: LT Date: 21/09/99

PETRONET TELEPHASE 2

SIEMENS LIMITED JOHANNESBURG REG No 01/07514/06

CONCEPT DRAWING
EARTHING LAYOUT TYPICAL

=17A70.A01

+17

727-008 Earth Concept

SHT 1– REV 0.2

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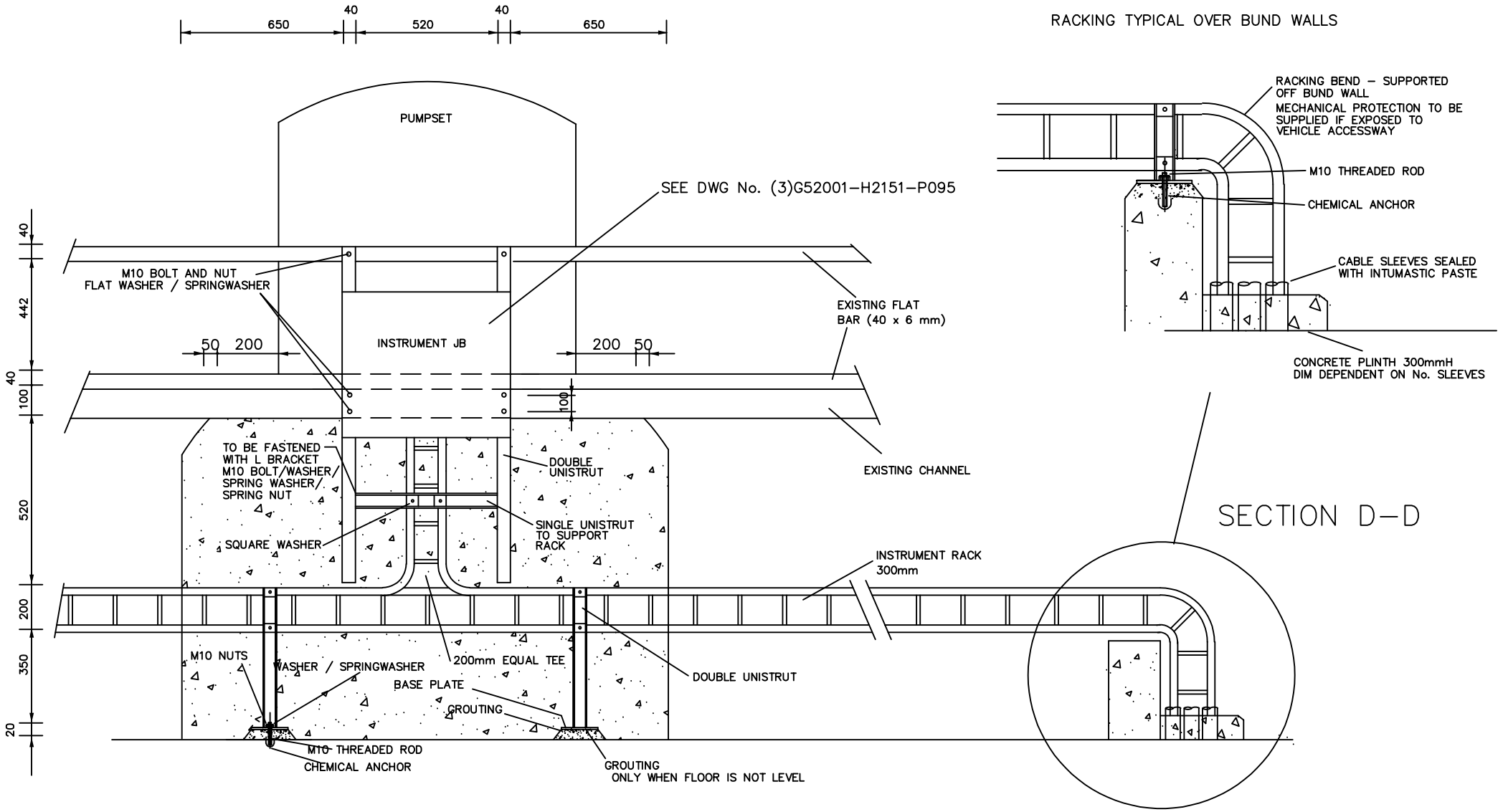


Rev	Remarks	Appr	Date	Chkd	Date	Design	Date
0.3	BUND WALL DETAIL ADDED	PNET	10/6/02	MP	10/6/02		
0.2	AS APPROVED	PNET	26/8/99	MP	26/8/99		

SIEMENS DRAWING No. (3)G52001-L4001-P920

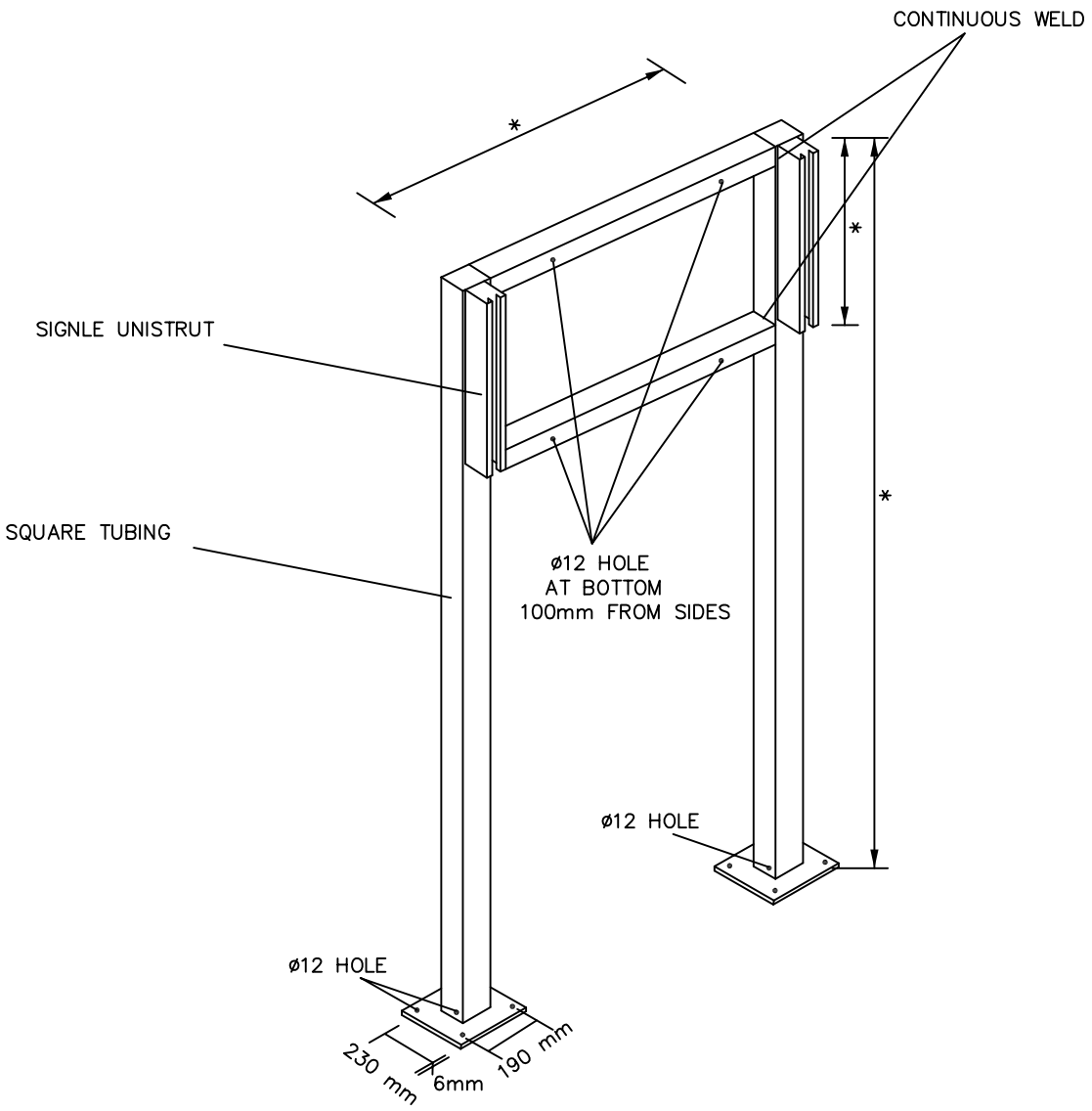
Sht. 1 of 1

PETRONET DRAWING No.

PETRONET

HOOK-UP
TYPICAL CABLE RACKING LAYOUTS INCLUSIVE OF OVER BUND WALLS

PROJECT NAME: RACKING LAYOUT TYPICAL			
DRAWN	L.V.	REF	
TRACED	CAD	DATE	JAN 1997
CHECKED	W.B	APPR.	G.M.
SCALE	NONE		
DRAWING No. 727-009-RACK TYPICAL			REV 0.3



NOTES :

1. SQUARE TUBING : COM. STEAL 43A NOMINAL SIZE 50 x 3.5 mm
2. STAND TO BE HOT DIP GALVANISED AFTER MANUFACTURING
3. * LENGTHS TO BE DETERMINED AS REQUIRED
4. CHEMICAL ANCHOR REQUIRED

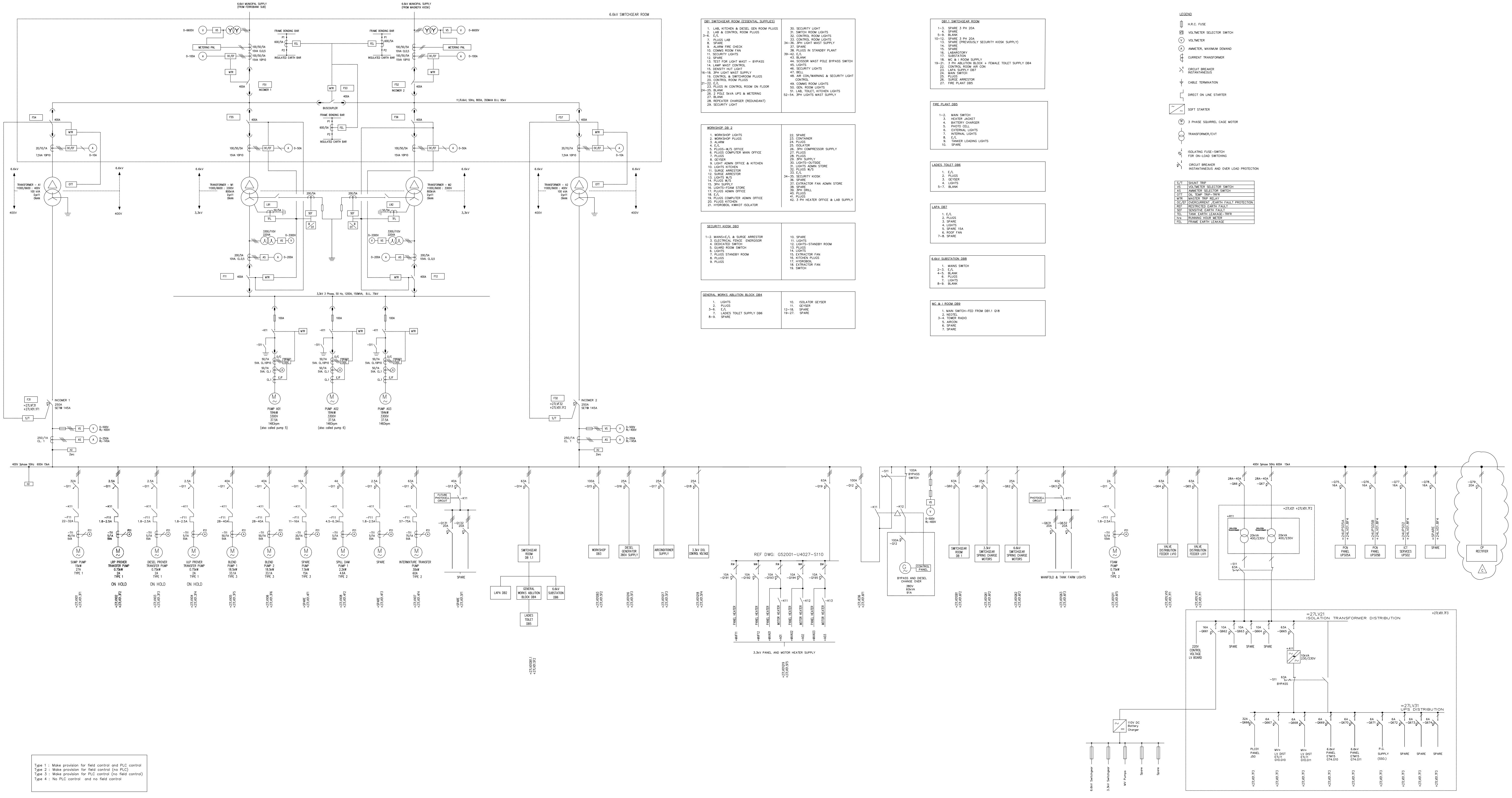
Rev	Remarks	Appr	Date	Chkd	Date	Design	Date
0.3	FOR CONSTRUCTION		15.6.06				
0.2	AS APPROVED	W.F	1.9.99	W.F	1.9.99	W.F	5.8.99

SIEMENS DRAWING No. (3)G52001–L4001–P901 | Sht. 1 of 1 | PETRONET DRAWING No.

PETRONET

HOOK–UP FOR JUNCTION BOX STAND DETAILS

PROJECT NAME: JUNCTION BOX STAND DETAIL			
DRAWN	W.F	REF	
TRACED	CAD	DATE	1.9.99
CHECKED	W.F	APPR.	PNET
SCALE	NONE		
DRAWING No. 727–010–J/B STAND			REV 0.2



DB1 SWITCHGEAR ROOM (ESSENTIAL SUPPLIES)

1. LAB, KITCHEN & DIESEL GEN ROOM PLUGS	30. SECURITY LIGHT
2. LAB & CONTROL ROOM PLUGS	31. SWITCH ROOM LIGHTS
3–6. E/L	32. CONTROL ROOM LIGHTS
7. PLUGS LAB	33. CONTROL ROOM LIGHTS
8. SPARE	34–36. 3PH LIGHT MAST SUPPLY
9. ALARM FIRE CHECK	37. SPARE
10. COMMS ROOM FAN	38. PLUGS IN STANDBY PLANT
11. SECURITY LIGHTS	39–42. E/L
12. SPARE	43. BLANK
13. TEST FOR LIGHT MAST – BYPASS	44. SCISSOR MAST POLE BYPASS SWITCH
14. LAMP MAST CONTROL	45. LIGHTS
15. DENSITY HUT LIGHT	46. SECURITY LIGHTS
16–18. 3PH LIGHT MAST SUPPLY	47. BELL
19. CONTROL & SWITCHROOM PLUGS	48. AIR CON/WARNING & SECURITY LIGHT CONTROL
20. CONTROL ROOM PLUGS	49. COMMS ROOM LIGHTS
21–22. E/L	50. GEN. ROOM LIGHTS
23. PLUGS IN CONTROL ROOM ON FLOOR	51. LAB, TOILET, KITCHEN LIGHTS
24–25. BLANK	52–54. 3PH LIGHTS MAST SUPPLY
26. 2 POLE 5kVA UPS & METERING	
27. BLANK	
28. REPEATER CHARGER (REDUNDANT)	
29. SECURITY LIGHT	

WORKSHOP DB 2

1. WORKSHOP LIGHTS	22. SPARE
2. WORKSHOP PLUGS	23. CONTAINER
3. ALARM	24. PLUGS
4. E/L	25. ISOLATOR
5. PLUGS–W/S OFFICE	26. 3PH COMPRESSOR SUPPLY
6. PLUGS COMPUTER MAIN OFFICE	27. PLUGS
7. PLUGS	28. PLUGS
8. GEYSER	29. 3PH SUPPLY
9. LIGHT ADMIN OFFICE & KITCHEN	30. LIGHTS–OUTSIDE
10. LIGHTS KITCHEN	31. LIGHTS ADMIN STORE
11. SURGE ARRESTOR	32. PLUGS W/S
12. SURGE ARRESTOR	33. E/L
13. LIGHTS W/S	34–35. SECURITY KIOSK
14. PLUGS W/S	36. SPARE
15. 3PH SUPPLY	37. EXTRACTOR FAN ADMIN STORE
16. LIGHTS–FOAM STORE	38. SPARE
17. PLUGS ADMIN OFFICE	39. 3PH DRILL
18. E/L	40. PLUGS
19. PLUGS COMPUTER ADMIN OFFICE	41. PLUGS
20. PLUGS KITCHEN	42. 3 PH HEATER OFFICE & LAB SUPPLY
21. HYDROBOIL KWIKOT ISOLATOR	

SECURITY KIOSK DB3

1–2. MAINS+E/L & SURGE ARRESTOR	10. SPARE
3. ELECTRICAL FENCE ENERGISOR	11. LIGHTS
4. DEDICATED SWITCH	12. LIGHTS–STANDBY ROOM
5. GUARD ROOM SWITCH	13. PLUGS
6. LIGHTS	14. LIGHTS
7. PLUGS STANDBY ROOM	15. EXTRACTOR FAN
8. PLUGS	16. KITCHEN PLUGS
9. PLUGS	17. HYDROBOIL
	18. EXTRACTOR FAN
	19. SWITCH

GENERAL WORKS ABLUTION BLOCK DB4

1. LIGHTS	10. ISOLATOR GEYSER
2. PLUGS	11. GEYSER
3–6. E/L	12–18. SPARE
7. LADIES TOILET SUPPLY DB6	19–27. SPARE
8–9. SPARE	

DB1.1 SWITCHGEAR ROOM

1–3. SPARE 3 PH 20A
4. SPARE
5–9. BLANK
10–12. SPARE 3 PH 20A
13. SPARE (PREVIOUSLY SECURITY KIOSK SUPPLY)
14. SPARE
15. SPARE
16. LABAROTORY
17. SUBSTATION
18. MC & I ROOM SUPPLY
19–21. 3 PH ABLUTION BLOCK + FEMALE TOILET SUPPLY DB4
22. CONTROL ROOM AIR CON
23. LAPA SUPPLY DB7
24. MAIN SWITCH
25. PLUGS
26. SURGE ARRESTOR
27. FIRE PLANT DB5

FIRE PLANT DB5

1–2. MAIN SWITCH
3. HEATER JACKET
4. BATTERY CHARGER
5. PHOTO CELL
6. EXTERNAL LIGHTS
7. INTERNAL LIGHTS
8. E/L
9. TANKER LOADING LIGHTS
10. SPARE

LADIES TOILET DB6

1. E/L
2. PLUGS
3. GEYSER
4. LIGHTS
5–7. BLANK

LAPA DB7

1. E/L
2. PLUGS
3. SPARE
4. LIGHTS
5. SPARE 15A
6. ROOF FAN
7–8. SPARE

6.6kV SUBSTATION DB8

1. MAINS SWITCH
2–3. E/L
4–5. BLANK
6. PLUGS
7. LIGHTS
8–9. BLANK

MC & I ROOM DB9

1. MAIN SWITCH–FED FROM DB1.1 Q18
2. NEOTEL
3–4. TOWER RADIO
5. AIRCON
6. SPARE
7. SPARE

LEGEND

- H.R.C. FUSE
- VOLTMETER SELECTOR SWITCH
- VOLTMETER
- AMMETER, MAXIMUM DEMAND
- CURRENT TRANSFORMER
- CIRCUIT BREAKER INSTANTANEOUS
- CABLE TERMINATION
- DIRECT ON LINE STARTER
- SOFT STARTER
- 3 PHASE SQUIRREL CAGE MOTOR
- TRANSFORMER/CVT
- ISOLATING FUSE–SWITCH FOR ON–LOAD SWITCHING
- CIRCUIT BREAKER INSTANTANEOUS AND OVER LOAD PROTECTION

S/T	SHUNT TRIP
VS	VOLTMETER SELECTOR SWITCH
AS	AMMETER SELECTOR SWITCH
OTT	OIL TEMP TRIP–TRFR
MTR	MASTER TRIP RELAY
OC/EF	OVERCURRENT /EARTH FAULT PROTECTION
REF	RESTRICTED EARTH FAULT
SEF	SENSITIVE EARTH FAULT
TEL	TANK EARTH LEAKAGE–TRFR
hrs	RUNNING HOUR METER
FEL	FRAME EARTH LEAKAGE

Type 1 : Make provision for field control and PLC control
Type 2 : Make provision for field control (no PLC)
Type 3 : Make provision for PLC control (no field control)
Type 4 : No PLC control and no field control

REVISIONS

No.	DATE	DESCRIPTION	BY	CHKD
C	15/07/25	CP RECTIFIER ADDED TO EMERGENCY SUPPLY.	NM	ZM
B	29/07/16	LIGHTS & FOAM PUMP FEEDERS ADDED TO EMERGENCY SUPPLY, INTERMIX PUMP ADDED,SUMP PUMP 2 REMOVED,LEGEND UPDATE	WD	ZM
A	1/10/12	PCN & ICT SERVICES FEEDERS ADDED	AM	CM
1.0	1/10/12	REDRAWN FROM ORIG DWG: U4027–A005–001 REV 1.0	AM	CM

TRANSNET pipelines

WITBANK DEPOT
SINGLE LINE DIAGRAM

PROJECT NAME

DRAWN	Z.M	REF.	
TRACED	CAD	DATE	09–07–2012
CHECKED		APPROVED	
SCALE	N.T.S		
DRAWING No.	PL 117396	REV	B

S:\Energy\Oil & Gas\pipeline\02 JobsCurrent\27 WITBANK\08 AS BUILT\VOLUME 22 - INSTALLATION FILE 1\01 CABLE BLOCK DIAGRAM\U4027-S001-003_Elec_Rev1.0.dwg

NOTE 1:
1) FOR PROFIBUS NETWORK AND CABLE CONNECTIONS SEE DWG No. G52001-U4027-S802-001

Rev	Remarks	Date
1.0	AS BUILT	30/10/09

Appr: | Date: | Chkd: | Date: | Design:LV | Date: 08/11/06

TRANSNET pipelines

SIEMENS LIMITED JOHANNESBURG
REG No 1923/007514/06

Description of Drawing: WITBANK CABLE BLOCK DIAGRAM (ELECTRICAL)

Siemens Document Number: (1)G52001-U4027-S001

External Document Number

Order Number: PYP 401/12

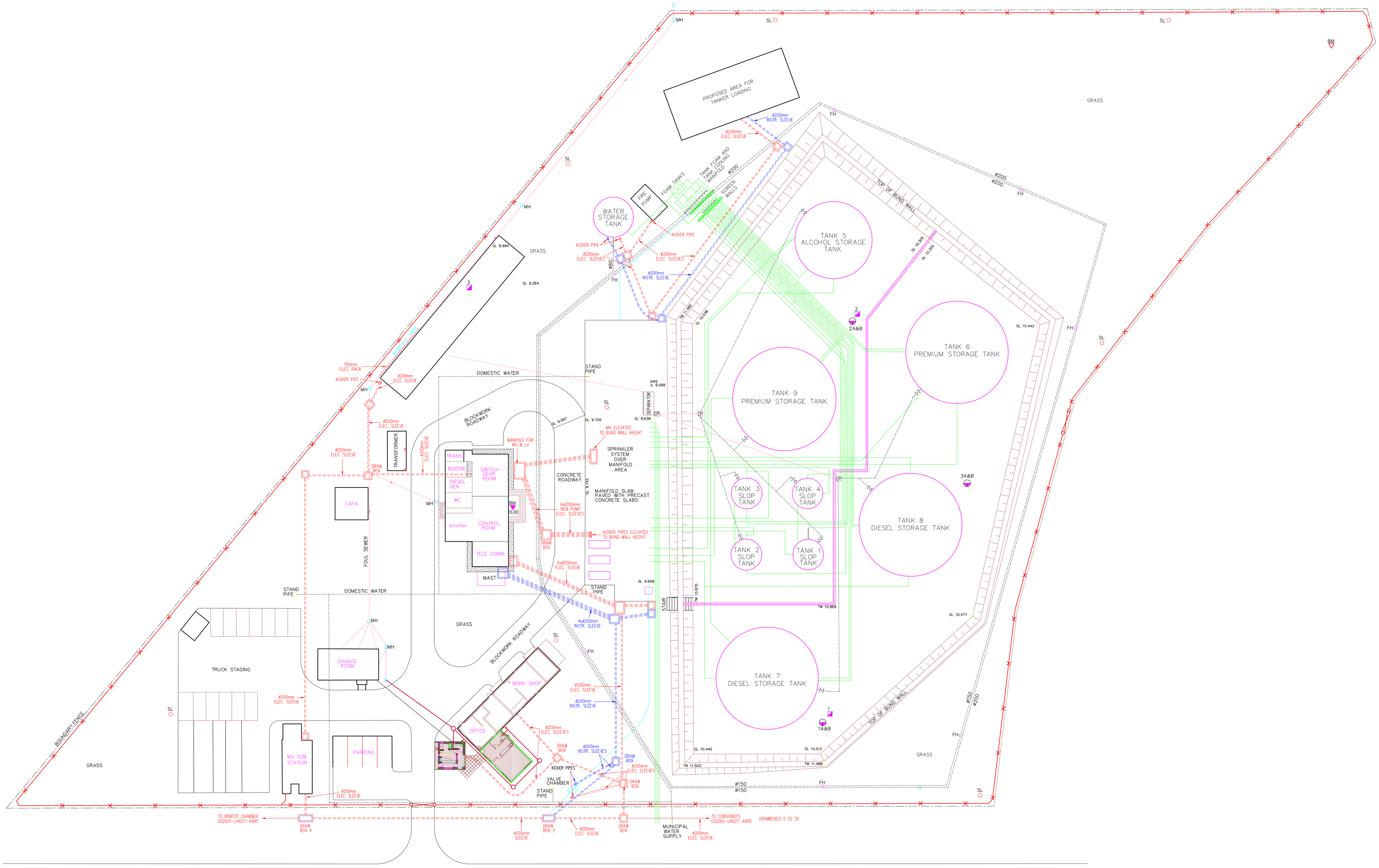
SCALE- NTS

Function Description: =

Location Description: +

Sht No (+) cont. (-) last page: SHT 3-

REV: 1.0



Rev	Remarks	Date
1.0	AS BUILT	30/10/09

Appr:	Date:	Chkd:	Date:	Design: C.S.	Date: 18/03/08

TRANSNET pipelines

SIEMENS LIMITED JOHANNESBURG
REG No 1923/007514/06

Description of Drawing	WITBANK TRENCHING GENERAL ARRANGEMENT
Order Number	PYP 401/12
SCALE– 1:250	
Function Description	=
Location Description	+
Siemens Document Number	(0)G52001-U4027-A998
External Document Number	
Sheet Number, (+) continuing, (–) last page	SHT 1–
REV	1.0

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