CLIENT:

RAND WATER

COMPLETION OF CIVIL WORKS FOR THE EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

TENDER DRAWINGS

GIBB
INFRASTRUCTURE & TRANSPORT

Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128

Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

LIST OF DRAWINGS

DRAWING NO	DESCRIPTION
GENERAL DETAILS	
J40073/010-001	List of Drawings
J40073/010-002	General Site Layout Plan
GENERAL LAYOUTS - STANDARD DETAIL DRAWINGS	
J40073/010-101	Typical Detail For Thrust Blocks
J40073/010-102	Typical Detail for Connections, Anchor Blocks, Junctions and Rodding Eyes
J40073/010-103	Typical Detail for Concrete Joints
J40073/010-104	Typical Details for Valve Chambers and Flow Meter Chambers
J40073/010-105	Typical Detail For Grating, Hand Railing and Stairways
J40073/010-107	Architectural Notes
J40073/010-108	Name Boards
J40073/010-109	Typical Detail For Pipe Beddings
J40073/010-110	Buildings Notes
J40073/010-111	Typical Detail For Catchpits and Wingwalls
J40073/010-112	Typical Deatil For Roadsigns and Road Markings
J40073/010-113	Typical Details For Kerbing
GENERAL LAYOUTS - CONCRETE STRUCTURES	
J40073/010-201	Head of Works : Layout - Sheet 1 of 2
J40073/010-202	Head of Works : Details - Sheet 2 of 2
J40073/010-203	Raw Water Pump Station : Layout - Sheet 1 of 4
J40073/010-204	Raw Water Pump Station : Layout - Sheet 2 of 4
J40073/010-205	Raw Water Pump Station : Layout - Sheet 3 of 4
J40073/010-206	Raw Water Pump Station : Layout - Sheet 4 of 4
J40073/010-207	Biological Reactor : Layout - Sheet 1 of 4
J40073/010-208	Biological Reactor : Layout - Sheet 2 of 4
J40073/010-209	Biological Reactor : Layout - Sheet 3 of 4
J40073/010-210	Biological Reactor : Layout - Sheet 4 of 4
J40073/010-213	Secondary Sedimentation Tank - Sheet 1 of 3
J40073/010-214	Secondary Sedimentation Tank - Sheet 2 of 3
J40073/010-215	Secondary Sedimentation Tank - Sheet 3 of 3
J40073/010-216	Connection between SST and 4-Way Splitter Box
J40073/010-218	Sludge Drying Beds - Sheet 1 of 2
J40073-010-219	Sludge Drying Beds - Sheet 2 of 2
J40073/010-220	Irrigation Pump Station
J40073/010-223	Ferric Chloride Dosing Building
J40073/010-224	Biological Reactor : Pipe Schedule and Details
J40073/010-225	Secondary Sedimentation Tank Scum Box
J40073/010-226	Septic Tank: Layout and Details
J40073/010-227-1	WAS Pump Station Layout 01 & Layout 02
J40073/010-227-2	WAS Pump Station Layout 03
J40073/010-227-3	WAS Pump Station Layout 04
J40073/010-227-4	WAS Pump Station Section B-B, Section C-C
J40073/010-227-5	WAS Pump Station Section D-D, Section E-E
J40073/010-227-6	WAS Pump Station Details
J40073/010-230	Alteration to Existing RAS Pump Station

LIST OF DRAWINGS

DRAWING NO	DESCRIPTION
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J40073/010-409	Blower Building Details
J40073/010-415	MCC Building Layout and Sections
J40073/010-416	Admin Building: Foundation Layout and Sections
J40073/010-417	Admin Building:Surface Bed Layout and Sections
J40073/010-418	Admin Building: Surface Layout and Sections
J40073/010-419	Workshop Buidling Foundation, Beam Layout, Sections and Details
J40073/010-420	Workshop Building: Surface Bed Layout
J40073/010-421	Guard House Details
J40073/010-422	MCC Building Details
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J40073/010-501	Longitudinal Section - P1-B: From New Head Of works to Proposed Pump Station
J40073/010-502	Longitudinal Section - P7-B: From Prosed Pump Station to Proposed Biological Reactor (Sheet 1 of 2)
J40073/010-503	Longitudinal Section - P7-B: From Proposed Pump station to Proposed Biological Reactor (Sheet 2 of 2)
J40073/010-504	Longitudinal Section - P8-B: From Proposed Biological Reactor to 4-way Splitter
J40073/010-505	Longitudinal Section - P1-B: From Proposed Biological Reactor to New Sludge Drying Beds (Sheet 2 OF 3)
J40073/010-506	Longitudinal Section - P9-B: FromProposed Biological Reactor to New Sludge Drying Beds (Sheet 2 of)
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J40073/010-508	Longitudinal Section - P10-B: From 4-Way Splitter to Proposed SST3
J40073/010-509	Longitudinal Section - P11-B: From Proposed SST3 To Pump Station
J40073/010-510	Longitudinal Section - P12-B: FromExtend Existing P10-A to Proposed Biological Reactor (to follow)
J40073/010-511	Longitudinal Section - C0-3B: From Proposed SST3 to 4-way Splitter
J40073/010-512	Longitudinal Section SL Scum Line from sst's to mh connecting to sludge beds sheet 1 of 2
J40073/010-513	Longitudinal Section: SL Scum Line from sst's to mh connecting to sludge beds sheet 2 of 2
J40073/010-514	Subsoil Drain Longitudinal Section - From Biological Reactor to Manhole 4
J40073/010-515	Subsoil Drain Lingitudinal Section - From Manhole 4 to Existing Manhole 2
J40073/010-516	Subsoil Drain Longitudinal Section - From SST3 to Manhole 2
J40073/010-517	Longitudinal Section: P13-S1 Sewer Reticulation
J40073/010-521	Proposed New Water Reticulation: Long Sections Sheet 1 of 3
J40073/010-522	Proposed New Water Reticulation: Long Sections Sheet 2 of 3
J40073/010-523	Proposed New Water Reticulation: Long Section Sheet 3 Of 3

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ON ORIGINAL

0 5 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2180, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: ZU LIMPOKA

Designed By: M KAMPHYF

Reviewed By: DE WET

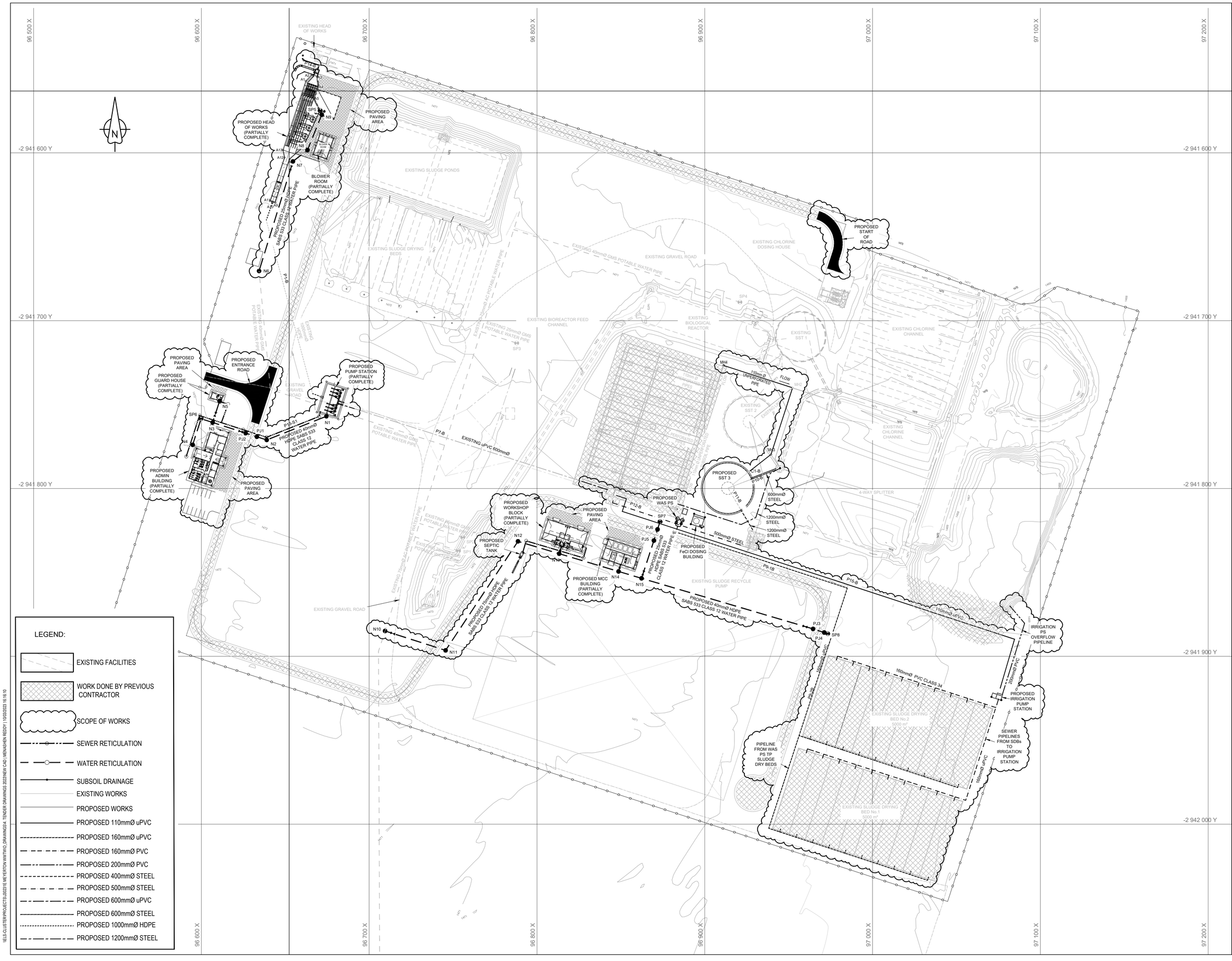
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LIST OF DRAWINGS

Scale: NTS

Date: NOVEMBER 2022

Project No: J40073 / Org. No: 010-001 / Rev: 0



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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. REFER TO BOQ FOR FULLL EXTENT OF WORKS TO BE COMPLETED.
2. FOR MORE DETAIL OF SCOPE FOR STRUCTURES REFER TO DRAWING NUMBERS INDICATED.
3. FUTURE PHASE NOT SHOWN.

REFERENCE DRAWINGS:

CONCRETE STRUCTURES
- J30231E-010-201 & 202 (HEAD OF WORKS)
- J30231E-010-203 TO 206 (PUMP STATION)
- J30231E-010-207 TO 208 (BNR)
- J30231E-010-212 TO 216 (SST 3)
- J30231E-010-218 & 219 (SLUDGE DRYING BEDS)
- J30231E-010-220 (IRRIGATION PUMP STATION)
- J30231E-010-223 (FeCl DOSING BUILDING)
- J30231E-010-224 (BNR PIPEWORK)
- J30231E-010-225 (SCUM MH)
- J30231E-010-226 (SEPTIC TANK)
- J30231E-010-227 (WAS PUMP STATION)

BUILDINGS
- J30231E-010-416 TO 418 (ADMIN BUILDING)
- J30231E-010-419 & 420 (WORKSHOP BLOCK)
- J30231E-010-415 & 422 (MCC BUILDING)
- J30231E-010-421 (GUARD HOUSE)

PIPELINES
- J30231E-010-500 TO 511 (TO FOLLOW)

SUBSOIL DRAINAGE
- J30231E-010-514 TO 516 (TO FOLLOW)

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
15 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLOVER

Drawn By	Designed By	Reviewed By
JD ZUNGA	JM KALENGWA	VDE WET

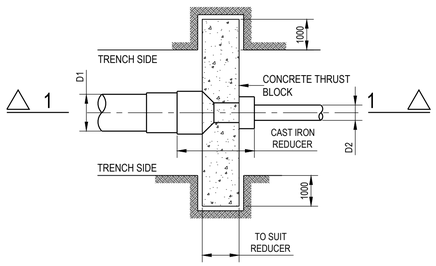
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: GENERAL SITE LAYOUT PLAN

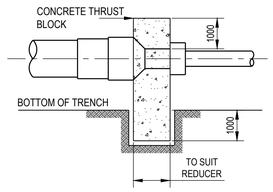
Scale	Date
NTS	NOVEMBER 2022

Project No	Drg. No	Rev
J40073	010-002	0

\\ELS-CLUSTER\PROJECTS-J\2023\E MEYERTON WWTW\O_DRAWINGS\4. TENDER DRAWINGS\ 2022\NEW CAD [MENGHEN REDDY / 10/03/2023 16:16:10

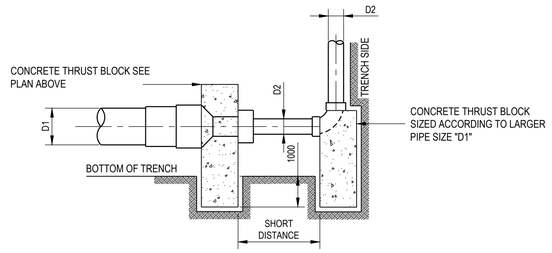


PLAN

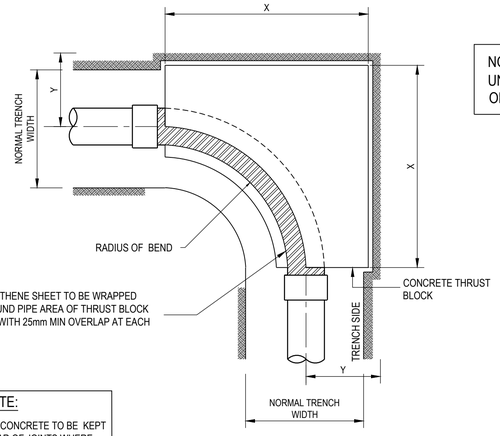


SECTION 1-1

REDUCER THRUST BLOCKS



REDUCER AND CHANGE OF DIRECTION THRUST BLOCKS

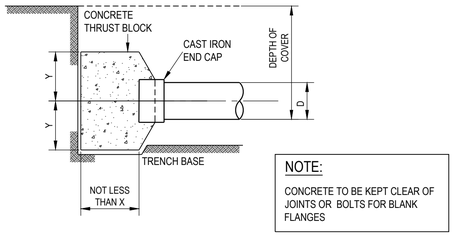


NO THRUST BLOCKS WILL BE REQUIRED UNLESS OTHERWISE SHOWN FOR CHANGE OF DIRECTION LESS THAN 10°

NOTE:

THE CONCRETE TO BE KEPT CLEAR OF JOINTS WHERE POSSIBLE

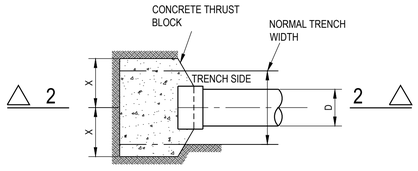
PLAN OF BEND



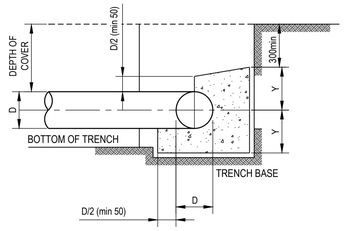
NOTE:

CONCRETE TO BE KEPT CLEAR OF JOINTS OR BOLTS FOR BLANK FLANGES

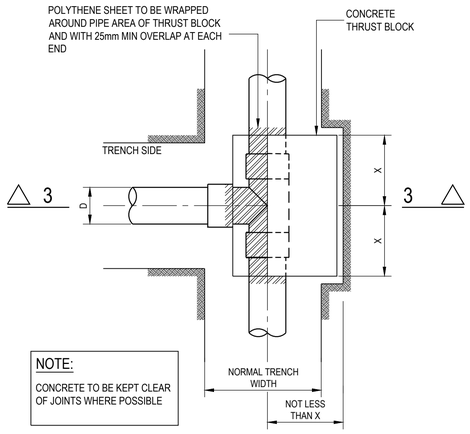
SECTION 2 - 2



PLAN OF END CAP OR BLANK FLANGE



SECTION 3 - 3



NOTE:

CONCRETE TO BE KEPT CLEAR OF JOINTS WHERE POSSIBLE

PLAN OF T-JUNCTION

APPLICATION LIMITED TO THE FOLLOWING PIPE SIZE REDUCTIONS:

LARGER SIZE (mm)	SMALLER SIZE (mm)
63	50
75	63, 50
90	75, 63
110	90, 75
125	110, 90
140	125, 110
160	140, 125, 110
200	160, 140
250	200
315	250

NOTES:

1. REDUCTION OF PIPE SIZES IS LIMITED TO THAT SHOWN IN ADJACENT TABLE. WHERE A REDUCTION IN PIPE SIZE OUTSIDE THE LIMITS SPECIFIED IS REQUIRED, THEN A THRUST BLOCK EQUIVALENT TO THAT FOR A "T-JUNCTION" OR FOR AN "END CAP", FOR THE LARGER PIPE SIZE, MUST BE CONSTRUCTED.

THRUST BLOCKS : BENDS AND T-JUNCTIONS MAX. TEST PRESSURE 900kPA : PIPE CLASS 12

PIPE D (mm)	ANGLE OF BEND								T-JUNCTION OR END CAP	
	11,25°		22,5°		45°		90°			
	X	Y	X	Y	X	Y	X	Y	X	Y
50	75	75	75	75	100	100	225	100	125	100
63	75	75	100	100	150	125	275	125	150	150
75	75	75	100	125	175	150	325	150	175	175
90	100	100	125	125	200	175	400	175	200	200
110	100	125	175	150	250	200	475	200	250	250
125	125	125	175	175	275	225	525	225	275	275
140	150	125	200	200	300	250	600	250	325	300
160	175	150	225	225	350	275	675	275	350	350
200	200	175	275	250	425	350	825	325	425	425
250	250	225	325	325	525	400	1000	375	525	500
315	300	275	400	400	650	500	1250	475	725	550

THRUST BLOCKS : BENDS AND T-JUNCTIONS MAX. TEST PRESSURE 1350kPA : PIPE CLASS 18

PIPE D (mm)	ANGLE OF BEND								T-JUNCTION OR END CAP	
	11,25°		22,5°		45°		90°			
	X	Y	X	Y	X	Y	X	Y	X	Y
50	75	75	100	75	125	125	250	125	150	125
63	75	75	125	100	150	150	300	150	175	175
75	100	100	125	125	175	175	350	175	200	200
90	125	100	150	150	225	200	425	200	250	225
110	150	125	200	175	250	250	500	250	300	275
125	150	150	225	200	300	275	575	275	325	325
140	175	150	225	225	325	300	625	300	375	350
160	200	175	275	250	375	350	725	350	425	400
200	225	225	325	300	450	425	875	400	500	500
250	275	275	400	375	600	475	1100	500	675	550
315	350	325	475	475	775	550	1325	600	925	600

THRUST BLOCKS : BENDS AND T-JUNCTIONS MAX. TEST PRESSURE 1800kPA : PIPE CLASS 24

PIPE D (mm)	ANGLE OF BEND								T-JUNCTION OR END CAP	
	11,25°		22,5°		45°		90°			
	X	Y	X	Y	X	Y	X	Y	X	Y
50	75	75	100	100	150	125	275	150	150	150
63	75	100	125	125	175	175	325	175	200	175
75	100	100	150	150	200	200	375	200	225	225
90	125	125	175	175	250	225	450	250	275	250
110	150	150	200	200	300	275	525	275	325	325
125	175	150	225	225	325	325	625	325	375	350
140	200	175	250	250	350	350	675	350	400	400
160	225	200	300	275	400	400	775	400	450	450
200	250	250	350	350	500	475	925	475	625	500
250	325	300	450	400	700	500	1150	575	825	550
315	375	375	575	475	975	550	1625	600	1150	600

THRUST BLOCKS : BENDS AND T-JUNCTIONS MAX. TEST PRESSURE 2400kPA : PIPE CLASS 30

PIPE D (mm)	ANGLE OF BEND								T-JUNCTION OR END CAP	
	11,25°		22,5°		45°		90°			
	X	Y	X	Y	X	Y	X	Y	X	Y
50	75	75	125	100	150	150	275	175	175	175
63	100	100	150	125	200	175	350	200	225	200
75	125	100	175	150	225	225	400	225	250	250
90	150	125	200	175	275	250	475	275	300	300
110	175	150	225	225	325	300	575	325	375	350
125	200	175	250	250	350	350	650	375	400	400
140	200	200	300	275	400	375	700	400	450	450
160	225	225	325	325	450	425	800	450	500	500
200	275	275	400	375	575	500	1000	550	675	550
250	350	325	500	450	750	575	1325	600	950	600
315	425	400	625	550	1100	600	2000	600	1425	600

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ON ORIGINAL

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
2198, South Africa
PO Box 2700, Rivonia, 2128
Telephone No: +27 11 519 4600
Fax No: +27 11 807 5670

Approved By: S.DUVIK
Drawn By: JD FERREIRA
Designed By: JDFERREIRA
Reviewed By: CVDE WET

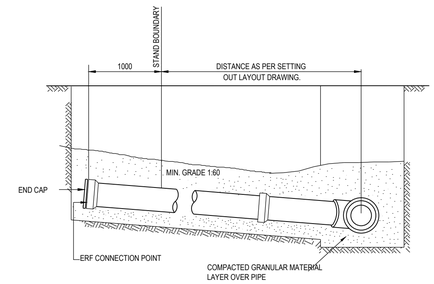
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: TYPICAL DETAIL FOR THRUST BLOCKS

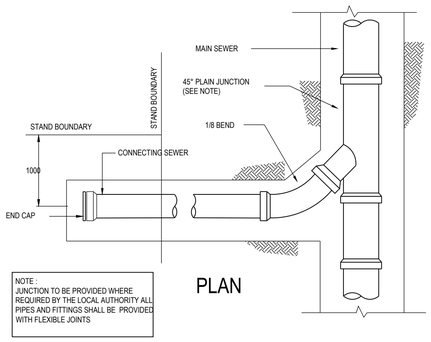
Scale: NTS
Date: NOVEMBER 2022

Project No: J40073
Org. No: 010-101
Rev: 0

\\ELS-CLUSTER\PROJECTS\J40073 E MEYERTON WWTW\CO_DRAWINGS\04. TENDER DRAWINGS 2022\NEW CAD \HEM\SHEN\RED001 | 10/03/2023 16:16:10



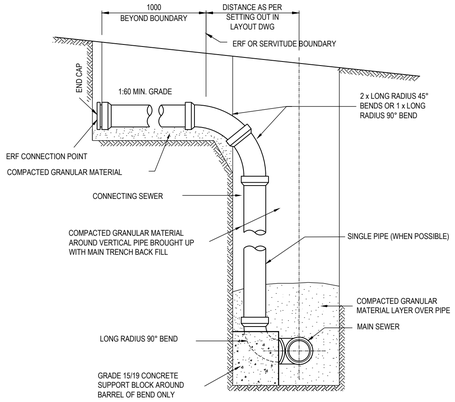
ELEVATION



PLAN

DIRECT HOUSE CONNECTION

(DEPTH OF MAIN SEWER <1200mm)



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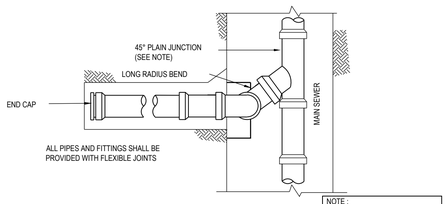
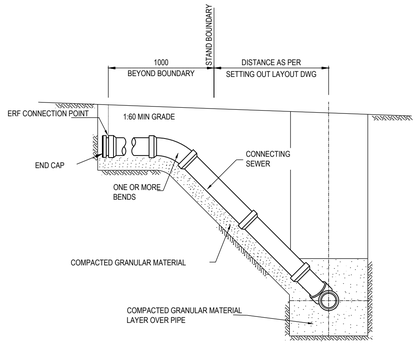


PLAN

VERTICAL DROP HOUSE CONNECTION

(DEPTH OF MAIN SEWER >2000mm)



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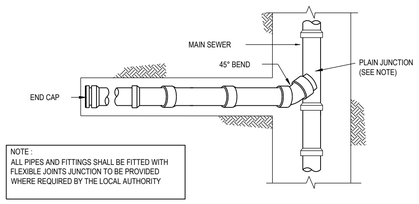
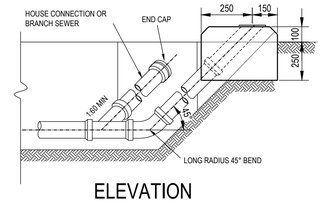


PLAN

SLOPING DROP HOUSE CONNECTION

(DEPTH OF MAIN SEWER >1200mm & >2000mm)



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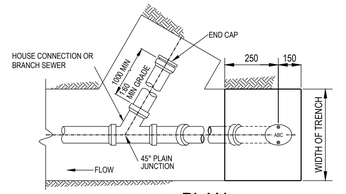
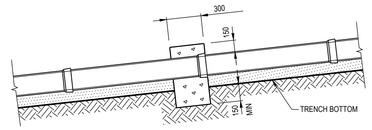


PLAN

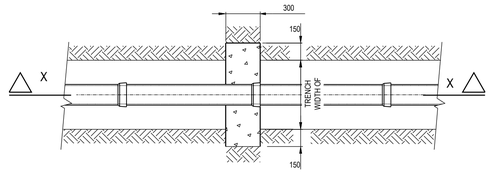
RODDING EYE DETAIL



SECTION X-X

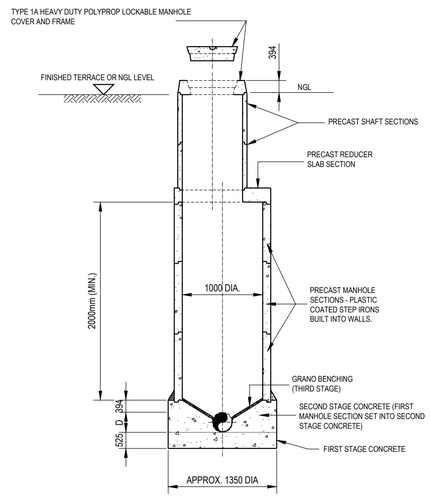
PLACING OF ANCHOR BLOCKS:

1:5 SLOPE - 1:10 SLOPE = 3m MAXIMUM 1:2 SLOPE
- 1:5 SLOPE = 1.5m MAXIMUM > 1:2 SLOPE = CONCRETE ENCASEMENT.

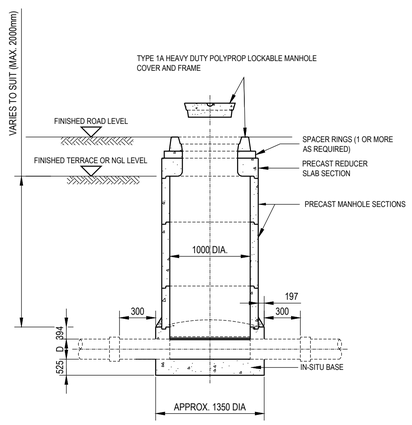


PLAN

PIPE ANCHOR BLOCK DETAIL

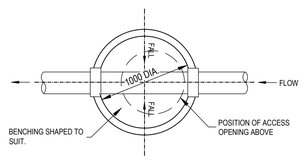


SECTION OF DEEP MANHOLE WITH SHAFT

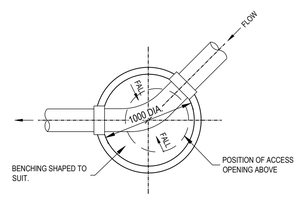


SECTION OF SHALLOW MANHOLE

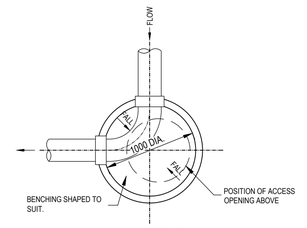
DETAIL OF PRECAST MANHOLES



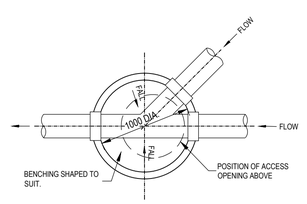
STRAIGHT



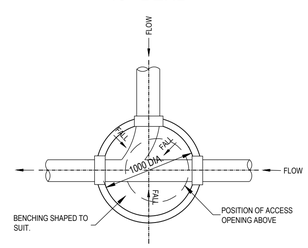
45° BEND



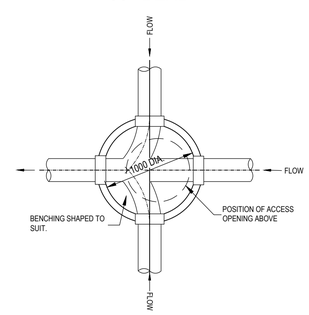
90° BEND



45° JUNCTION



90° JUNCTION



DOUBLE JUNCTIION

CHANNEL LAYOUTS

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ON ORIGINAL

GENERAL NOTES:

NOTES:

1. PIPE SECTIONS AND SLABS TO BE BEDDED ON A 2:1 CEMENT MORTAR GROUT TO FORM A COMPACTED WATER TIGHT JOINT.
2. MAXIMUM PROTRUSION OF PIPES INTO MANHOLES: 50mm.
3. IN ROAD/ROAD RESERVE,PAVED AREAS,PEDESTRIAN WALKWAYS ETC. THE TOP OF THE MANHOLE COVER SHALL BE THE SAME LEVEL AS THE ADJACENT FINISHED SURFACE;UNLESS INFORMED TO THE CONTRARY BY THE ENGINEER.
4. METHOD OF BEDDING uPVC CHANNELS IN MANHOLES

4.1 USE PVC SOLVENT AND COAT THE OUTSIDE OF THE uPVC CHANNEL

4.2 PRESS AND ROLL CHANNEL IN A RIVER SAND BED SO AS TO COAT THE GUMMED AREA WITH COURSE RIVER SAND.

4.3 ALLOW TO DRY FOR 4 HOURS BEFORE USE.

4.4 PLACE CHANNEL IN WET CONCRETE OF MANHOLE BASE, ENSURING CORRECT FALLS.

4.5 WHEN SET, CONSTRUCT BENCHING.

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5673

Approved By: D.LOWN

Drawn By: JD LUMAS

Designed By: JDV MURPHY

Reviewed By: VDW WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: TYPICAL DETAIL FOR CONNECTIONS, ANCHOR BLOCKS JUNCTIONS AND RODDING EYES

Scale: NTS

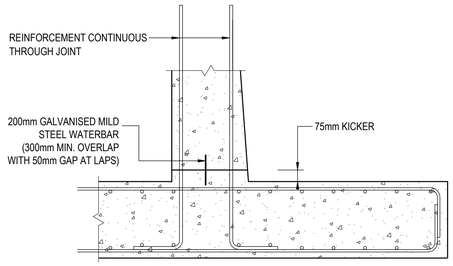
Date: NOVEMBER 2022

Project No: J40073

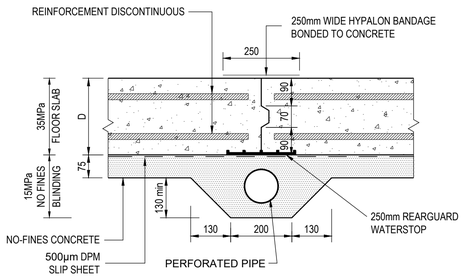
Drg. No: 010-102

Rev: 0

I:\ELS-CLUSTER\PROJECTS\J0023\E MEYERTON WWTW\TWO_DRAWINGS\04_TENDER DRAWINGS 2022\NEW CAD \MENASHEN REDDY \ 10/03/2023 16:16:10



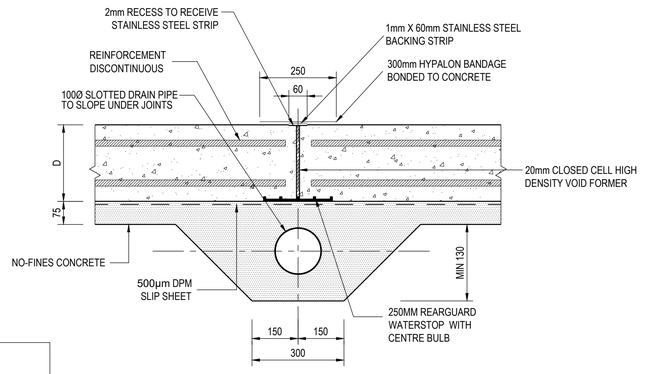
1:20 TYPICAL SECTION THROUGH HORIZONTAL WALL CONSTRUCTION JOINT AT KICKER



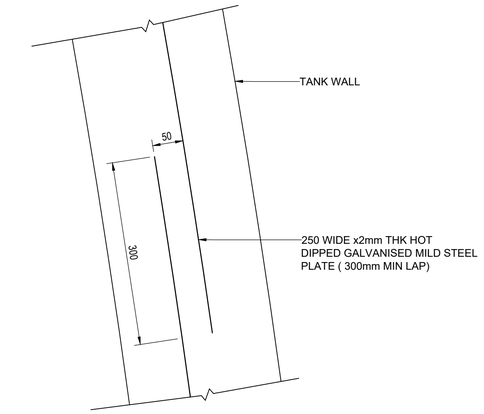
1:10 CONTRACTION JOINT IN FLOOR SLAB

NOTE:

STAINLESS STEEL BACKING STRIP EDGES TO BE ROUNDED TO PREVENT TEARING OF HYPALON BANDAGE

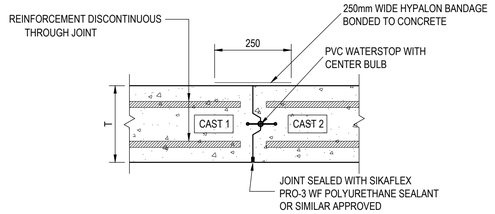


1:10 TYPICAL DETAIL OF EXPANSION JOINT

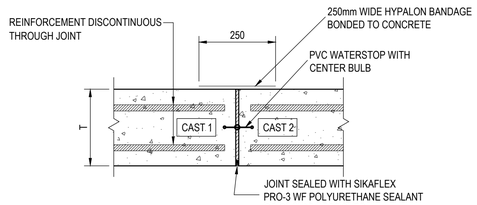


LAP DETAIL FOR MILD STEEL PLATE AT KICKER

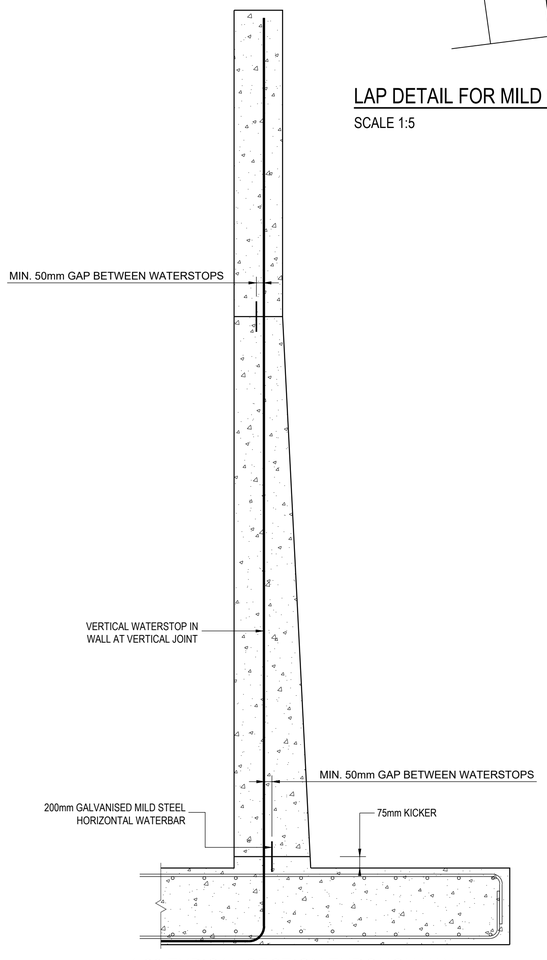
SCALE 1:5



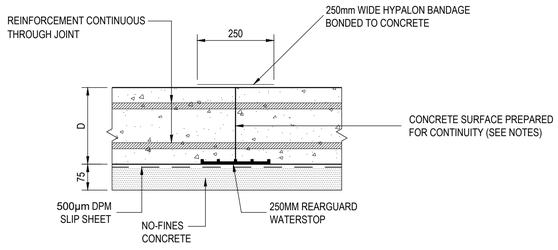
1:10 CONTRACTION JOINT IN WALL



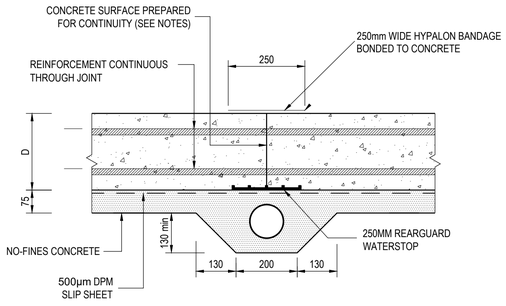
1:10 EXPANSION JOINT - WALL



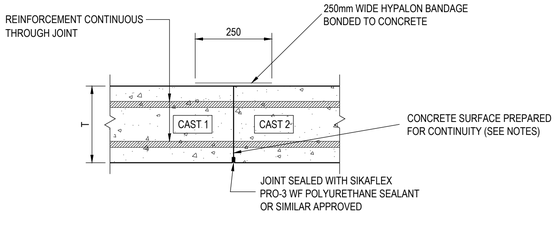
1:20 TYPICAL SECTION THROUGH WALL VERTICAL JOINT WATERSTOP DETAIL



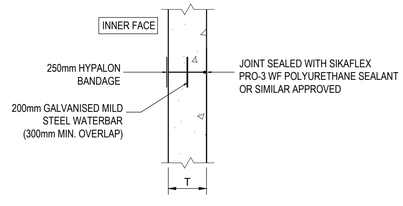
1:10 TYPICAL FLOOR CONSTRUCTION JOINT



1:10 TYPICAL DETAIL OF CONSTRUCTION JOINT WITH SUB-SOIL DRAINAGE



1:10 CONSTRUCTION JOINT - WALL



1:20 CONSTRUCTION JOINT IN WALL (HORIZONTAL)

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0 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.KOEN

Drawn By: JD LEMMER | Designed By: JDK MURPHY | Reviewed By: JOE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

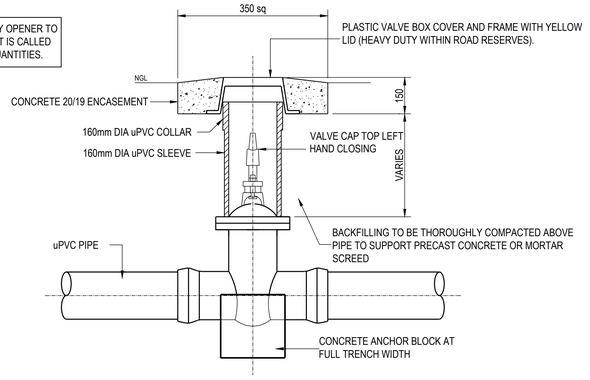
Description: TYPICAL DETAIL FOR CONCRETE JOINTS

Scale: NTS | Date: NOVEMBER 2022

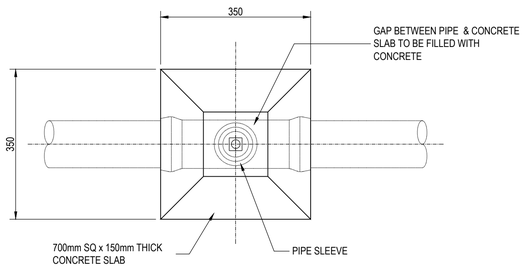
Project No: J40073 / Dg. No: 010-103 / Rev: 0

\\ELS-CLUSTER\PROJECTS\J00231E MEYERTON WWTW\O_DRAWINGS\04_TENDER DRAWINGS 2022\NEW CAD\ | MEINASHEN.REDDY | 10/03/2023 16:16:10

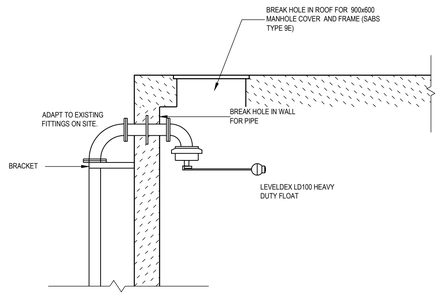
ONE VALVE "T" KEY OPENER TO BE PROVIDED AS IT IS CALLED IN THE BILL OF QUANTITIES.



VALVE CHAMBER SECTION
SCALE 1:100



PLAN LAYOUT
VALVE BOX FOR 50Ø TO 300Ø SOCKETED VALVES
SCALE 1:100



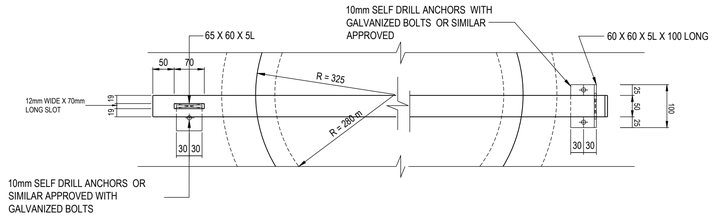
TYPICAL BALL VALVE DETAIL
SCALE 1:100

MEASUREMENTS OF FLOWMETER LAYOUT

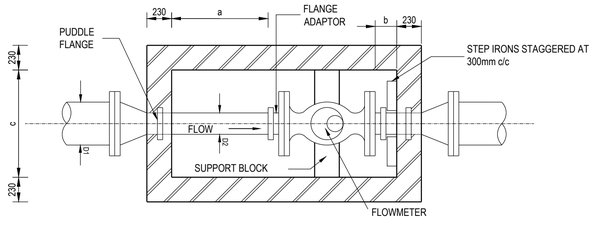
D1	D2	a	b	c
100	100	1000	500	1200
150	100	1500	750	1200
200	200	2000	1000	1200
250	200	2500	1250	1500
300	200	3000	1500	1500

NOTES:

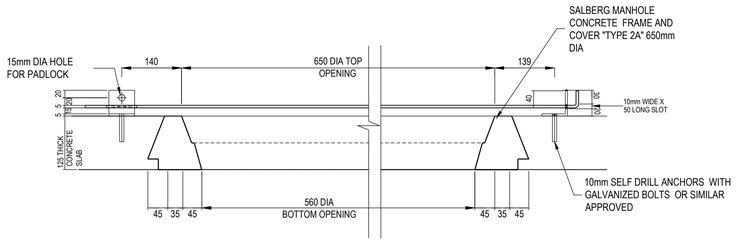
1. MANHOLE COVER AND FRAME (SABS 558 : TYPE 8A). AIR VALVE CHAMBER WITH REMOVABLE CONCRETE SLAB TO FIT.
2. IF D2<=200mm THE CONCRETE SLAB IS CAST AS A SINGLE UNIT. IF D2>200mm THE CONCRETE SLAB IS CAST AS TWO UNITS.
3. THE MANHOLE COVER MUST BE PLACED ABOVE THE FLOW METER. A SECOND MANHOLE COVER TO BE PLACED ABOVE STEP IRONS TO ALLOW ACCESS.
4. PUDDLE FLANGES TO BE FITTED ONLY TO PIPES WITH A DIA THAT IS GREATER THAN OR EQUAL TO 350mm.
5. NO REDUCERS REQUIRED FOR PIPES WITH A DIA OF 100mm AND 200mm.
6. IF D1 > 300mm, PIPE TO REDUCE TO D = 300mm BEFORE THE VALVE CHAMBER.



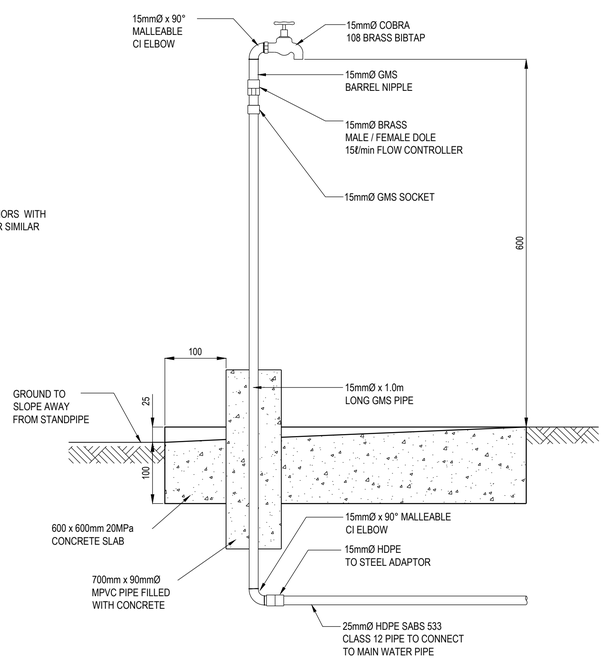
PLAN OF COVER - FRAME AND LOCKING BAR DETAIL OF COVER - FRAME AND LOCKING BAR
SCALE 1:100



TYPICAL FLOW METER CHAMBER AND PIPE LAYOUT
SCALE 1:100



SECTIONAL ELEVATION OF LOCKING BAR DETAIL OF COVER - FRAME AND LOCKING BAR
SCALE 1:100



TYPICAL DETAIL OF STANDPIPE
SCALE 1:100

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0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5570

Approved By: D.VORA

Drawn By: BE LEMMER | Designed By: BE KLOPPERS | Reviewed By: JOE WET

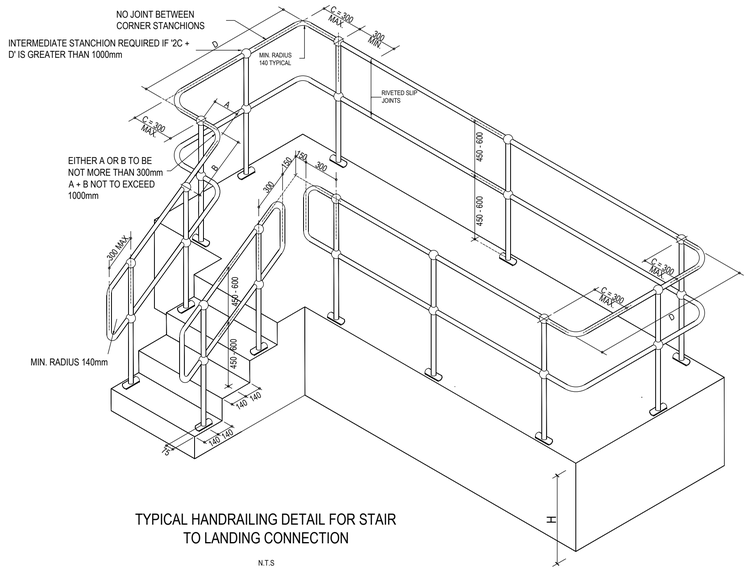
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: TYPICAL DETAIL FOR VALVE CHAMBERS, FLOW METER CHAMBERS AND STANDPIPES

Scale: NTS | Date: NOVEMBER 2022

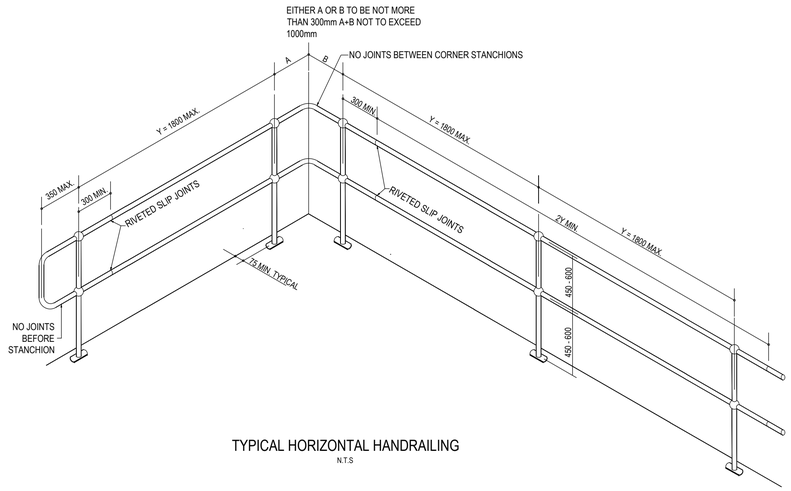
Project No: J40073 / Drg. No: 010-104 / Rev: 0

\\ELS-CLUSTERPROJECTS\J0\J0316 MEYERTON WWTW\O. DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \ MEINASHEN REDDY | 10/03/2023 16:16:10



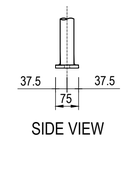
TYPICAL HANDRAILING DETAIL FOR STAIR TO LANDING CONNECTION

N.T.S

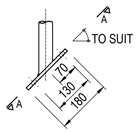


TYPICAL HORIZONTAL HANDRAILING

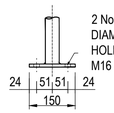
N.T.S



SIDE VIEW



FRONT VIEW

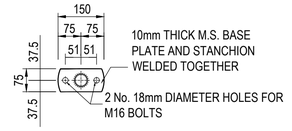


FRONT VIEW

VIEW A-A

TOP FIXING BASE PLATE DETAIL ON INCLINED SURFACE

SCALE 1:10



PLAN VIEW

TOP FIXING BASE PLATE DETAIL

SCALE 1:10

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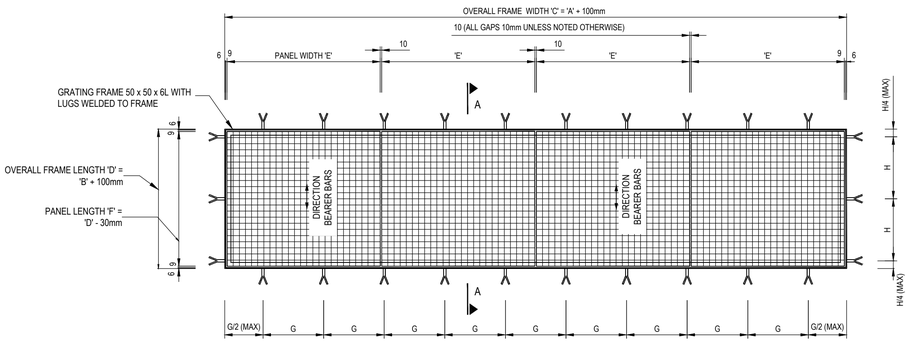
ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

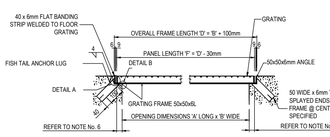
GENERAL NOTES:

ISSUED FOR TENDER



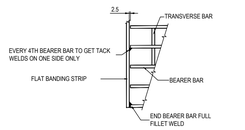
PLAN

SCALE 1:20



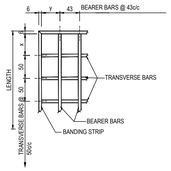
TYPICAL SECTION A - A

SCALE 1:20



PLAN: BANDING WELDING DETAIL FOR CORROSION PROTECTION (GALVANIZING)

N.T.S.



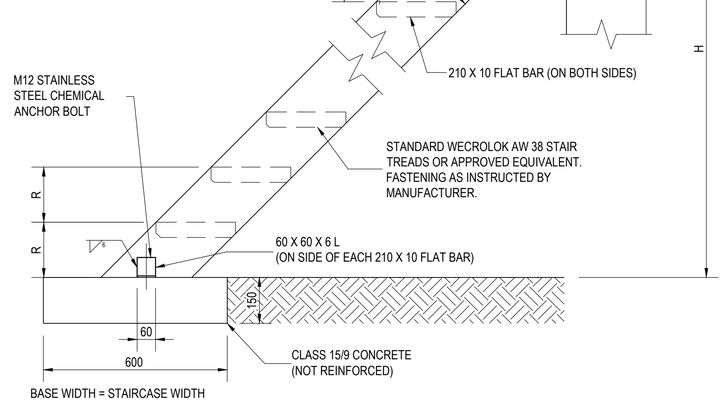
END EDGE DISTANCES (REFER TO NOTE 6)

N.T.S.

STAIRCASE NOTES:

MILD STEEL STAIRCASES SHALL BE HOT DIP GALVANISED.
DIMENSION 'H' SHALL BE DETERMINED ON SITE UNLESS OTHERWISE SPECIFIED.
STAIR WIDTH SHALL BE 600mm MIN UNLESS OTHERWISE SPECIFIED.
ALL STAIRCASES SHALL BE PROVIDED WITH HANDRAILS AS SPECIFIED.
DIMENSION 'R' VARIES BETWEEN 180mm AND 200mm AND SHALL BE CONSTANT FOR EACH STAIRCASE.

M12 STAINLESS STEEL BOLTS:
1) CONCRETE WORK - CHEMICAL ANCHOR BOLTS IN CONCRETE
2) BRICKWORK - BOLTS THROUGH BRICK WALL



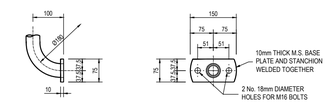
STANDARD DETAIL OF STEEL STAIRCASE

SCALE 1:10

SIDE VIEW FRONT VIEW

PLAN VIEW

TYPE A



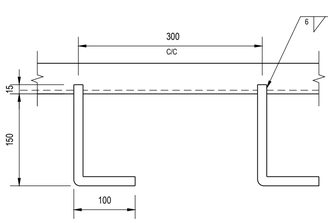
SIDE VIEW FRONT VIEW

PLAN VIEW

TYPE B

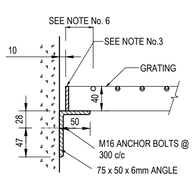
SIDE FIXING BASE PLATES

SCALE 1:10



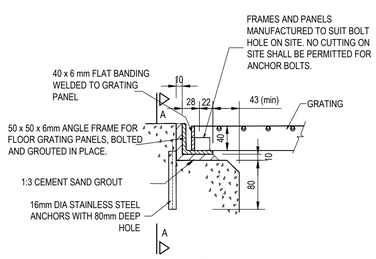
SECTION B

SCALE 1:5



DETAIL A

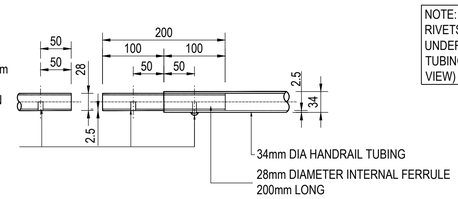
SCALE 1:5



DETAIL B

SCALE 1:5

8mm DIAMETER HOLE FOR 6mm DIAMETER POP RIVET WET ASSEMBLED FOR CORROSION PROTECTION (OR APPROVED EQUAL SYSTEM)



STANDARD SLIP JOINT FOR HANDRAILING

SCALE 1:5

NOTE:
RIVETS TO BE INSTALLED ON UNDERSIDE OF HANDRAIL TUBING ONLY. (HIDDEN FROM VIEW)

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5673

Approved By: D CLARK

Drawn By: JD LUBBE

Designed By: JM MURPHY

Reviewed By: VDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: TYPICAL DETAIL FOR GRATING, HANDRAILING AND STAIRWAYS

Scale: NTS

Date: NOVEMBER 2022

Project No: J40073

Drg. No: 010-105

Rev: 0

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ARCHITECTURAL NOTES

ROOF CONSTRUCTION

- ROOF SHEETING AS SPECIFIED BY THE ARCHITECT ON GRADE 5 CCATO GRADE 5 CCA TREATED TIMBER TRUSSES AT 750mm C/C TO SUPPLIERS SPECIFICATION.
- ROOF TRUSS DESIGN AND ROOFING TILE SELECTION AND DETAILS TO BE APPROVED BY ENGINEER.
- TRUSSES SHALL BE DESIGNED BY SUPPLIER TO ALLOW FOR ADDITIONAL LOADING OF SOLAR HEATING SYSTEMS TO BE INSTALLED IN THE FUTURE BY OTHERS.
- TRUSSES AND WALL PLATE AND TRUSSES SECURED BY 1.6mm x 30mm WIDE GMS HOOP IRON SET INTO MINIMUM. 5 COURSES OF BLOCKWORK AND VOID/CAVITY FILLED WITH 15MPA CONCRETE.
- 76x38mm GRADE 5 CCA SABS TREATED TIMBER WALL PLATE SECURED TO BLOCKWORK WITH WALL TIES AS FOR RAFTERS FIXING DETAIL AS SPECIFIED ABOVE.
- MORTAR EAVES AND CABLE ENDS TO U/S OF ROOF SHEET & FIBRE CEMENT BARGE BOARDS TO BE FIXED TO THE PURLINS.
- ALL EXPOSED TIMBER MEMBERS SHALL BE PAINTED WITH 2 COATS OF CARBOLINEUM
- ROOF TILE FIXING TO MANUFACTURERS SPECIFICATIONS.
- THE ROOF STRUCTURE MUST BE ANCHORED TO THE STRUCTURE WITH 2 STRANDS OF GALVANISED WIRE (MIN 4mmØ) OR GALVANISED HOOP IRONS 1.2mm THICK DIRECTLY UNDER BEAMS AND ANCHORED AT LEAST 600mm DEEP IN THE WALLS, INCLUDING LOAD BEARING INTERNAL WALLS.
- THE STRUCTURE SHALL BE APPROVED BY A REGISTERED STRUCTURAL ENGINEER
- A19 ROOF CERTIFICATE TO BE ISSUED FOR EVERY COMPLETED HOUSE.

FOUNDATIONS

- ALL FOUNDATIONS TO BE DESIGNED BY STRUCTURAL ENGINEER
- WHEN FOOTINGS ARE STEPPED, THE OVER LAPS SHALL BE TWICE THE THICKNESS OF THE CONCRETE.
- ALL FOUNDATION WALLS TO BE FILLED WITH MORTAR AND BRICKFORCE TO ALL COURSES
- MINIMUM OF TWO SUCCESSFUL DYNAMIC CONE PENETROMETER (DCP) TESTS PER UNIT TO BE RECORDED BY A TRAINED OPERATOR. THE MAX.

WALL CONSTRUCTION

- PRE-CAST LINTOLS 140x110 ABOVE INTERNAL DOOR FRAMES
- PRE-CAST LINTOLS 140x110 ABOVE EXTERNAL WINDOW FRAMES AND DOOR FRAMES 390x190x140 (w150) PRE-CAST SABS APPROVED LOAD BEARING EXTERNAL BLOCKWORK WITH 10mm FLUSH 3.5 MPA CLASS II MORTAR.
- JOINTS TO BE PAINTED WITH 1 COAT PLASTERED PRIMER & 1 COAT WATER RESISTANT PVA EXTERNALLY ONLY.
- INTERNAL WALLS TO BE FLUSH JOINTED, CLEANED AND LEFT UNFINISHED
- BRICKFORCE EVERY 2nd COURSE AND EVERY COURSE ABOVE WINDOW AND DOOR LINTOL LEVEL TO BE LAID IN CONTINUOUS LENGTHS.
- ALL WALLS TO BE KEYED TO ADJOINING WALLS AT EVERY 2nd COURSE. WHERE THIS CANNOT BE DONE 600m HOOP IRON WALL TIES TO BE USED AT EVERY 2nd COURSE
- ALL PERPEND JOINTS TO BE FULLY MORTAR FILLED AS EACH BUILDING BLOCK IS APPLIED TO THE EXISTING WALL.
- BLOCKS SHALL BE OF A GOOD STANDARD WITH A HIGH WATER RESISTANCE. CONTRACTORS SHALL PROVIDE THE DEPARTMENT AND LOCAL AUTHORITY WITH CERTIFICATION ON THE ABOVE.
- MORTAR JOINTS SHALL BE SHELL-BEDDED AND NOT RAKED.
- 375 MICRON EMBOSSED DPC MEMBRANE TO BE PLACED UNDER ALL WALLS.
- BRICK FORCE SHALL BE PLACED IN EVERY COURSE UP TO PLINTH LEVEL AND THEN IN EVERY 3rd COURSE TO LINTOL HEIGHT AND IN EVERY COURSE ABOVE WINDOWS & DOORS OPENINGS.
- INTERNAL WALLS SHALL BE TIED TO THE EXTERNAL WALLS WITH 1.2x30mm GALVANISED HOOP IRON EVERY 2nd COURSE WITH THE JOINTS POINTED.
- ALL OPENINGS LESS THAN 400mm TO HAVE REINFORCED BLOCKWORK OVER OPENINGS.
- V-JOINT AT FLOOR LEVEL
- ANY RETAINING WALL BELOW SURFACE BED MORE THAN 400mm TO BE REINFORCED AS PER ENGINEERS DETAIL.
- 140x390x190mm 7,5MPa CONCRETE HOLLOW BLOCKS WITH BRICK FORCE EVERY 3 COURSES TO WINDOW HEAD HEIGHT AND TO EVERY COURSE THEREAFTER. EXTERNAL WALLS TO BE PLASTERED 12mm THICK WITH V-JOINT AT BEAM FILL CONNECTIONS. SEE ENGINEERS SPECIFICATION
- CONSTRUCTION JOINTS AS PER NHBRC WITH JOINTEX FILLER AND POLYSULPHIDE CLOSER
- ALLOW FOR 220x150x50mm PRECAST AIR BRICK WITH INSECT PROOF GAUZE AS INDICATED ON ELEVATION - PAINTED TO MATCH WALL OR SIMILAR APPROVED.
- 140x390x190mm 7,5MPa CONCRETE HOLLOW BLOCKS WITH BRICK FORCE EVERY 3 COURSES TO WINDOW HEAD HEIGHT AND TO EVERY COURSE THEREAFTER. EXTERNAL WALLS TO BE PLASTERED 12mm THICK WITH V-JOINT AT BEAM FILL CONNECTIONS. SEE ENGINEERS SPECIFICATION
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FLOOR CONSTRUCTION

- HAND STEEL FLOAT FLOOR FINISHED REINFORCED CONCRETE (RAFT FOUNDATION) CONSTRUCTED TO ENGINEERS DETAILS REFER TO FOUNDATION DRAWING.
- REFER TO THE SCHEDULE OF DRAWINGS TO BE READ IN CONJUNCTION WITH THIS DRAWINGS FOR DRAFT FOUNDATION DETAILS AND CONCRETE STRENGTHS (MPA). FOR VARIOUS NHBRC SOIL CONDITIONS
- REINFORCING AS PER ENGINEERS DETAIL.
- SLAB LEVEL TO BE MIN. 150mm ABOVE THE NGL AT THE HIGHEST POINT ON THE BUILDING FOOTPRINT.
- CONTROL JOINTS TO BE PROVIDED WHEREVER THE SLAB EXCEEDS 6 LINEAR METERS.

FINISHING SCHEDULE

- FLOOR FINISH: HAND STEEL FLOAT FINISH
- INTERNAL WALL FINISH: FLUSH JOINTED, CLEAN UNCOATED BLOCKWORK TO IBR ROOF SHEETING.
- WINDOW CILL: 12mm, 1:4 MIX ONE COAT PLASTER WITH DRIP FORMED
- EXTERNAL WALL FINISH: 1 COAT PLASTER PRIMER (AND PLASTERED PROVISIONAL)1 COAT WATER PROVING PVA PAINT FOR EXTERNAL WALLS
- RAFT EXPOSED FACE: RUBBED DOWN OFF SHUTTER FACE FINISH.
- DIVIDER WALL CAP: TOP COURSE SHALL BE FILLED WITH 15MPA CONCRETE. CAP SHALL BE 12mm 1:4 MIX ONE COAT PLASTER.

DOOR SCHEDULE

- REFER TO THE SCHEDULE ON THE RELEVANT DRAWINGS TO BE READ IN CONJUNCTION WITH THESE NOTES
- FINISH: EX-FACTORY PRIMED, APPLY RED OXIDE PRIMER TO ALL SCRTACHED/DAMAGED AREAS ONLY AFTER INSTALLATION.
- NOTE: FOR BUILT IN DOORS, LUGS TO BE TURNED DOWN AND SET INTO 15MPA CONCRETE FILLED BLOCK VOID/CAVITY OF THE AFFECTED HOLLOW BLOCK IN ORDER TO ENSURE ADEQUATE FIXING.ALL DOORS JAMBS BETWEEN BLOCKWORK TO BE FILLED WITH MORTAR OR PLASTERED TO FORM A CLOSED REVEAL.

WINDOW SCHEDULE

- REFER TO THE SCHEDULE ON THE RELEVANT DRAWINGS TO BE READ IN CONJUNCTION WITH THESE NOTES
- FINISH: EX-FACTORY PRIMES, APPLY RED IRON OXIDE PRIMER TO ALL SCRATCHED/DAMAGED AREAS ONLY AFTER INSTALLATION & GLASS - 3mm CLEAR GLASS WITH PUTTY BEADING, UNPAINTED.
- NOTE: FOR BUILT IN WINDOWS, LUGS ARE TO BE TURNED DOWN AND SET INTO 15mPa CONCRETE FILLED BLOCK VOID/CAVITY OF THE AFFECTED HOLLOW BLOCK IN ORDER TO ENSURE ADEQUATE FIXING. ALL WINDOW JAMBS BETWEEN BLOCKWORK TO BE FILLED WITH MORTAR OR PLASTERED TO FORM A CLOSED REVEAL.

PLUMBING

ALL SOIL AND WASTE PIPES TO CONFORM IN ALL RESPECTS WITH SABS STANDARDS, NATIONAL BUILDING REGULATIONS AND LOCAL AUTHORITY REQUIREMENTS.

- WATER PIPE TO BE 15mm POLYCOP LAID AT A MINIMUM DEPTH OF 450mm WITH A SINGLE STOPCOCK.
- ALL PIPES UNDER SURFACE BED LEVEL TO BE ENCASED IN CONCRETE AS PER NHBRC DETAIL OR SIMILAR APPROVED
- ALL SOIL DRAIN PIPES (110mm) TO HAVE A MINIMUM FALL OF 1: 60 WITH MINIMUM COVER OF 450mm WITH A VENTED, CLOSED GULLEY, ALL WASTE PIPES TO BE 40mm EXTERNAL DIAMETER.
- SHOWER TRAY AND WALLS TO BE SCREEDED/PLASTERED AND SEALED (PROPERLY WATERPROOFED WITH AN APPROVED SEALER/TILES) UP TO 1.8m. SHOWER ROSE TO BE ATTACHED TO AN APPROVED BACK PLATE.
- ALLOW FOR CONNECTION TO MUNICIPAL LINE
- WATER METERS TO BE SET TO ZERO INSTALLED & A LIST OF ERF NUMBERS ISSUED WITH CORRESPONDING METER NUMBER ISSUED AT PRACTICAL COMPLETION
- EXTERNAL WATER SUPPLY: 15mm POLYCOP PIPE
- INTERNAL WATER SUPPLY: 15mm POLYCOP PIPE SURFACE HARNESS (COLD)
- TAPS: "COLOUR TAPS SANITARY WARE"
- CISTERN & WC: "COLOUR TAPS SANITARY WARE" WATERLESS CISTERN WITH CERAMIC PAN (ACCESSORIES INCLUDED)
- KITCHEN SINK: "COLOUR TAPS SANITARY WARE" POLYPROPYLENE SINK (COLOUR - WHITE) INSTALLED WITH THREADED ROD COUNTERSUNK BOLTED TRHOUGH WALL AT JOINTS BRACKETS
- SHOWER: 50mm SHOWER ROSE & FLOOR DRAIN
- BASIN: "COLOUR TAPS SANITARY WARE" POLYPROPYLENE BASIN - (COLOUR -WHITE)

TIMBER

- ALL TIMBER SECTIONS TO BE BUILT INTO WALLS AND WRAPPED IN 250micron PLASTIC
- EXPOSED BEAMS TO BE TREATED WITH AN APPROVED SEALER

ELECTRICAL:

- INSTALL 50mm ELECTRICAL DUCT AS INDICATED ON PLAN FOR READY BOARD & PREPAID METER

FRAMES

- SURROUNDING BLOCKS TO BE FILLED WITH CONCRETE AND REINFORCED WITH Y10 STEEL BARS WITH FRAMES TO BE BUILT INTO WALL WITH GALVANISED LUGS - 1.2x30mm

GENERAL NOTES

- ANY CHANGES TO THE CONSTRUCTION MATERIAL OR ALTERNATIVE MATERIAL AND CONSTRUCTION METHODS USED MUST BE APPROVED BY THE ENGINEER IN WRITING BEFORE AND SUCH MATERIALS ALTERNATIVE OR METHOD MAY BE USED.
- POSITION OF 1.6mm x 30mm WIDE GMS HOOP IRON ROOF TIES.
- CONTRACTOR AND SUB-CONTRACTORS TO CHECK ALL LEVELS AND DIMENSIONS ON SITE BEFORE ANY WORK STARTS (INCLUDES ORDERING OF PRODUCTS AND MATERIAL) AND ANY DISCREPANCIES ARE TO BE REPORTED TO THE PRINCIPAL AGENT IMMEDIATELY.
- FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED MEASUREMENTS AND ASSUMPTIONS WILL NOT BE ALLOWED WITHOUT PERMISSION FROM THE PRINCIPAL AGENT.
- ALL WORK TO BE DONE IN ACCORDANCE WITH NATIONAL BUILDING REGULATIONS SABS 0400 AND ALL REQUIREMENTS FROM MUNICIPAL AND LOCAL AUTHORITIES CONCERNED.
- ALL CONCRETE BLOCK CONSTRUCTION SHALL BE DONE IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND
- DETAIL OF THE CMA. THE QUALITY STRENGTH OF BLOCKS TO COMPLY WITH SABS 1215 AND SABS 0400.
- ALL CONSTRUCTION METHODS AND WORKMANSHIP TO COMPLY WITH THE RELEVANT SABS CODES OF PRACTICE AND NHBRC STANDARDS.

ALL DIMENSIONS AND LEVELS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE COMMENCING ANY WORK.

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GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
79 Watt Street, Houghton Estate
Nowlands, 2195
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: VDLARK

Drawn By: DV DAVIE

Designed By: DV MURPHY

Reviewed By: JOE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: ARCHITECTURAL NOTES

Scale: NTS

Date: NOVEMBER 2022

Project No: J40073 / Org. No: 010-107 / Rev: 0

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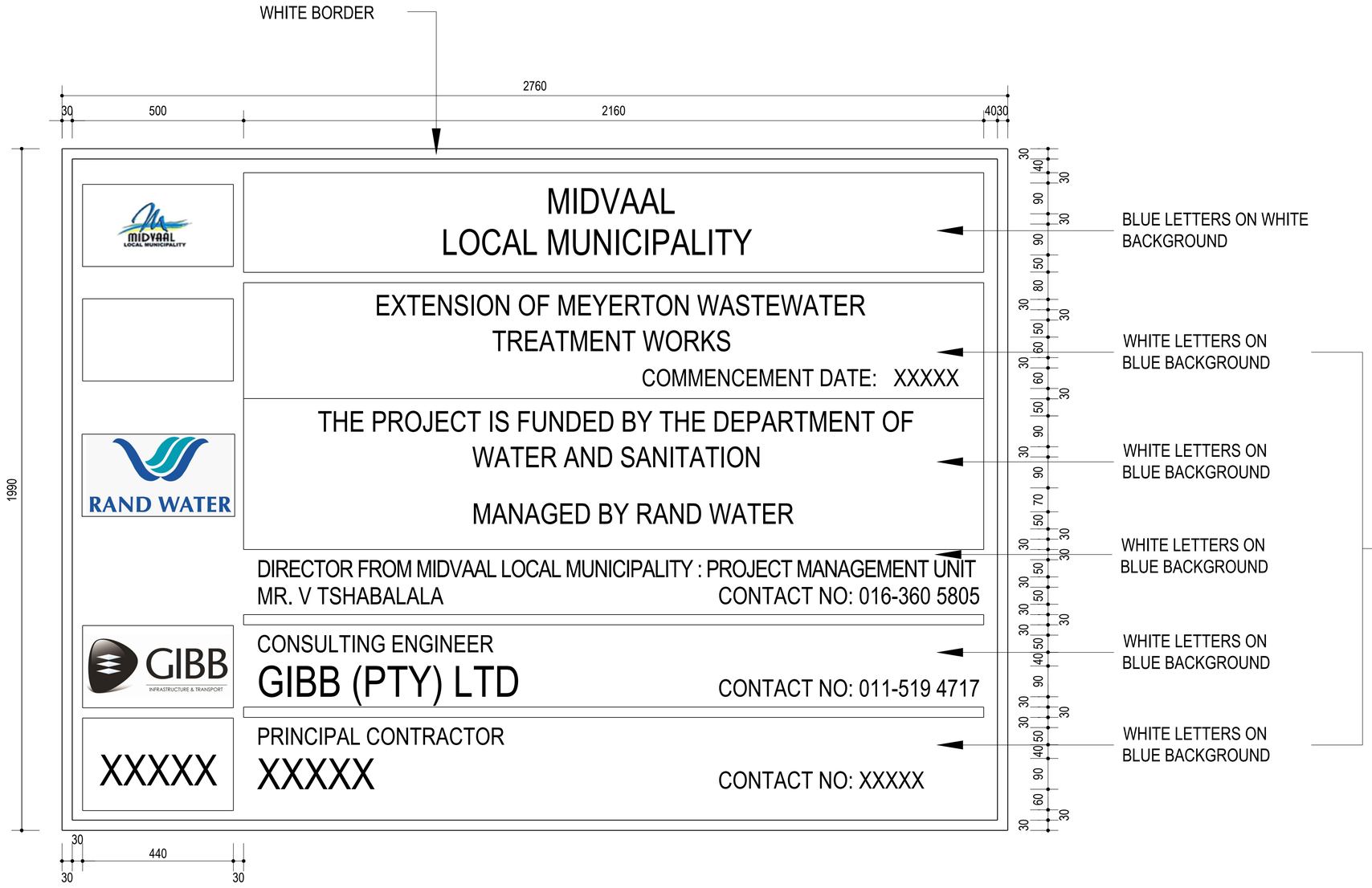

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GENERAL NOTES:

ISSUED FOR TENDER

No.	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDM	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
15 North Street, Houghton Estate
Rosebank, 2196
PO Box 2750, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By

Drawn By	Designed By	Reviewed By
JD J BOTHA	JEFF MURPHY	CJDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: NAME BOARD

Scale	Date
NTS	NOVEMBER 2022

Project No	Drg. No	Rev
J40073	010-108	0

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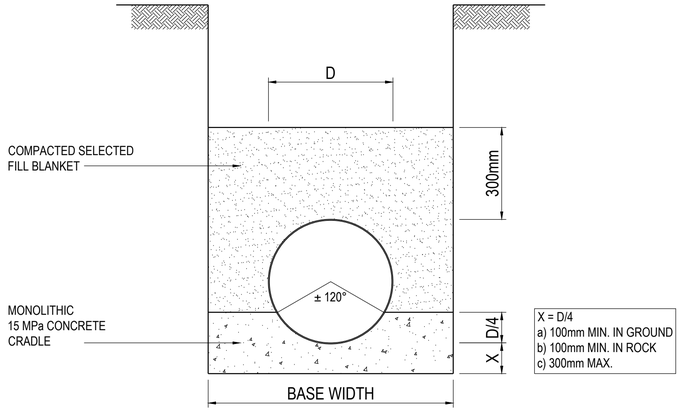
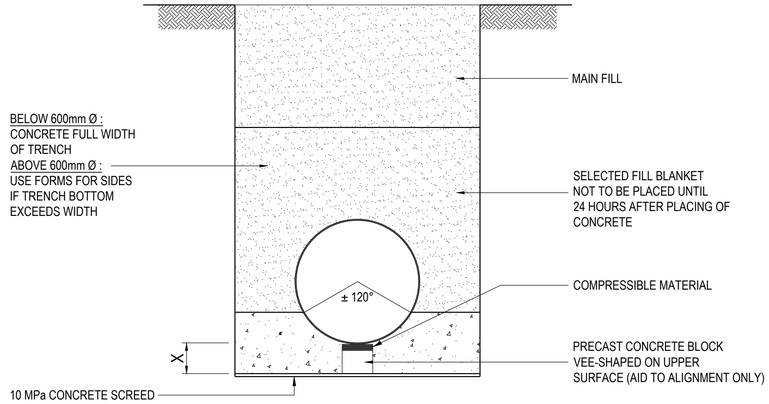
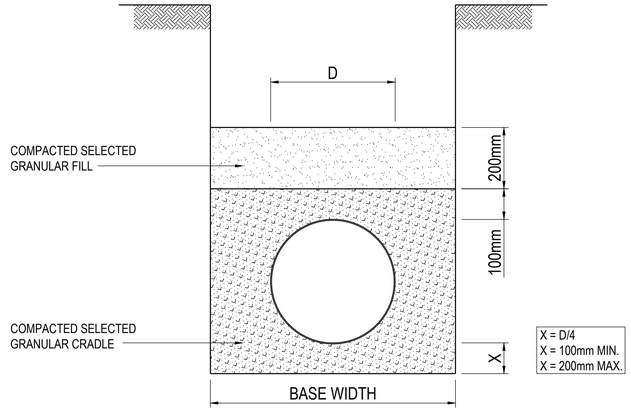


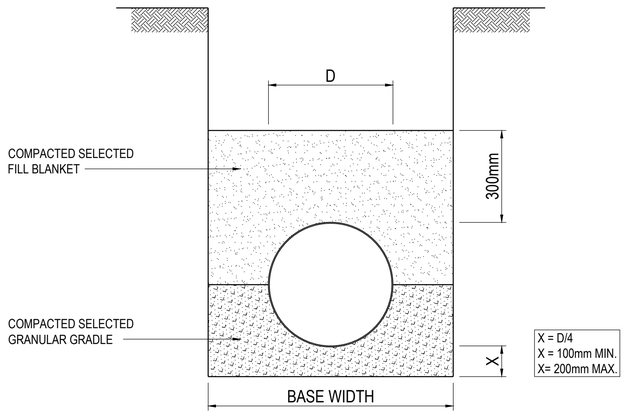
RIGID PIPE ON CLASS A BEDDING



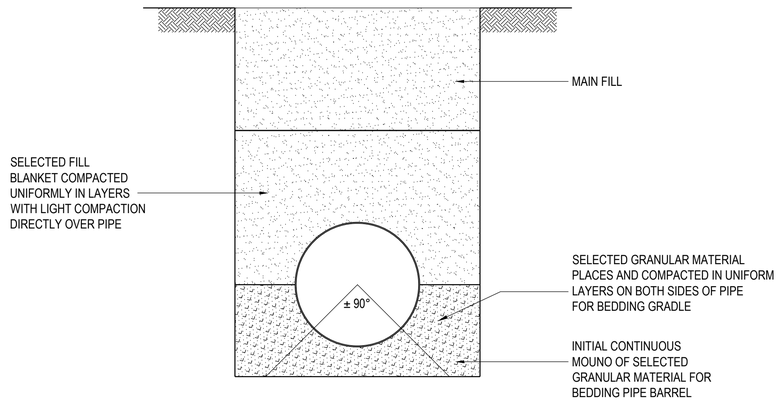
RIGID PIPE ON CLASS A BEDDING



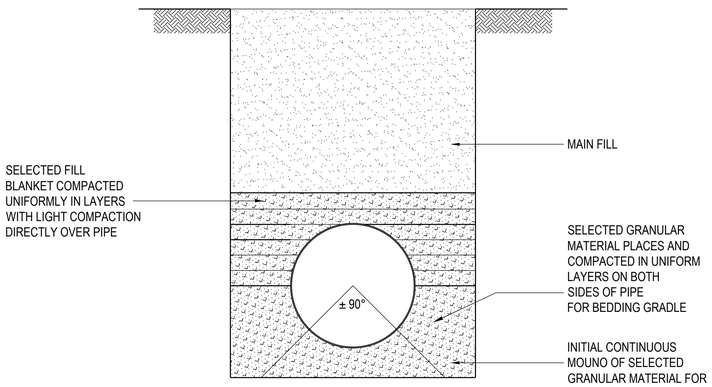
FLEXIBLE PIPE SUPPORTED ON
SELECTED GRANULAR MATERIAL
DETAIL OF PIPE BEDDING



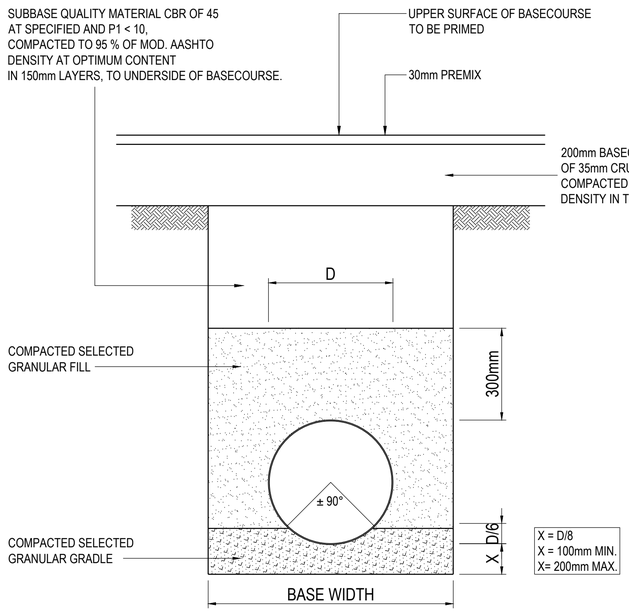
RIGID PIPE ON CLASS B BEDDING



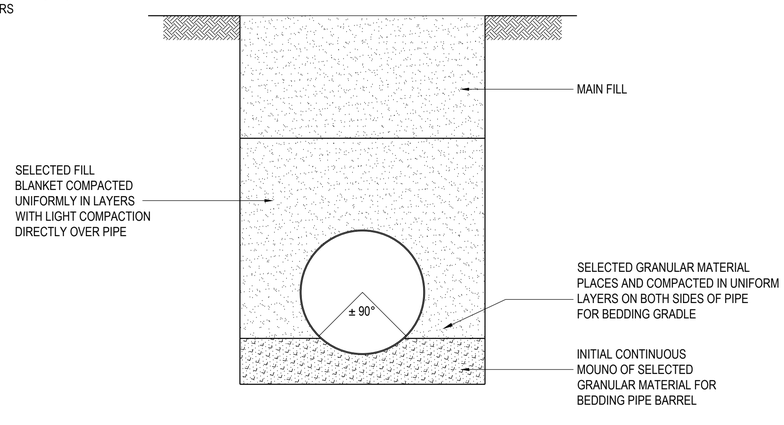
RIGID PIPE ON CLASS B BEDDING



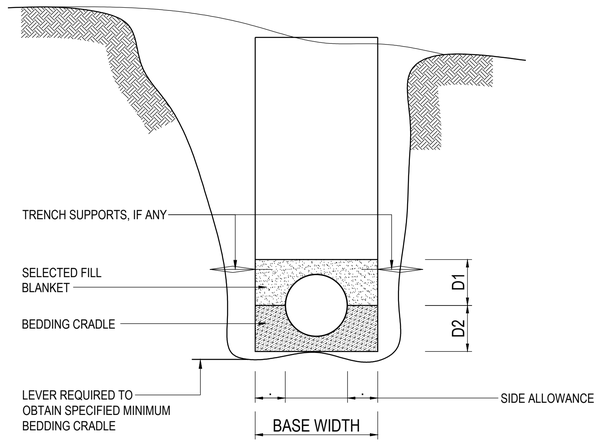
FLEXIBLE PIPE SUPPORTED ON
SELECTED GRANULAR MATERIAL
CONSTRUCTION METHOD OF PIPE BEDDING



RIGID PIPE ON CLASS B BEDDING UNDER
PROVINCIAL AND REGIONAL COUNCIL ROADS WITH
PERMANENT SURFACE



RIGID PIPE ON CLASS C BEDDING



MEASUREMENT OF BEDDINGS

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ON ORIGINAL

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5675

Approved By: D CLARK

Drawn By: JD LOMBARD | Designed By: JDV MURPHY | Reviewed By: DOE WET

Project:
EXTENSION
OF MEYERTON
WASTEWATER
TREATMENT WORKS

Description:
TYPICAL DETAIL FOR
PIPE BEDDINGS

Scale: NTS | Date: NOVEMBER 2022

Project No.: J40073 / Drg. No.: 010-109 / Rev.: 0

I:\ELS-CLUSTER\PROJECTS\J40231E MEYERTON WWTW\TWO_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD (MENASHEN REDDY) 10/03/2023 16:16:10

BRICKWORK CONSTRUCTION

1. THE FOLLOWING BRICK AND MORTAR STRENGTHS SHALL APPLY: BRICKWORK BELOW GROUND LEVEL NFX 14MPa AVERAGE.

	BRICK STRENGTH	MORTAR CLASS (SABS 0164)
RETAINING WALLS & BWK BELOW GROUND	14 MPa	CLASS 1
LOADBEARING WALLS PANEL WALLS	7 MPa	CLASS 2

2. GALVANISED WALL TIES TO SABS 28 ARE TO BE PROVIDED AS FOLLOWS:

WALL TYPE	NUMBER OF TIES
GROUTED CAVITY WALL	4 PER m2
CAVITY WALL	3 PER m2
WITHIN 230 mm EITHER SIDE OF VERTICAL CONTROL JOINT IN THE OUTER SKIN OF A CAVITY WALL	VERTICAL ROW OF TIES AT 250 mm CENTRES (EVERY THIRD COURSE)

3. GALVANISED BRICKFORCE IS TO BE PROVIDED AS FOLLOWS: ALL BRICKFORCE TO BE SABS APPROVED.

WALL TYPE	BRICKFORCE QUANTITY
BRICK FOUNDATION WALLS	EVERY COURSE
BRICK WALLS GENERALLY	EVERY SIXTH COURSE
BLOCKWORK WALLS (THROUGHOUT)	EVERY SECOND COURSE
WALLS WITH OPENINGS	FIRST FIVE COURSES ABOVE AND (WHERE APPLICABLE) 2 COURSES BELOW OPENINGS, AND 600 mm PAST OPENINGS.

4. BRICK PANEL WALLS TO BE ANCHORED TO RC COLUMNS WITH GALVANISED HOOP IRON ANCHORS (50 mm2 CROSS SECTION), FIXED TWICE TO THE COLUMN AT 400 mm VERTICAL CENTRES AND BUILT 700 mm INTO BRICKWORK. PROVIDE 10 mm JOINTEX BETWEEN BRICKWORK AND COLUMN.

5. PROVIDE A 10 mm SOFT JOINT (JOINTEX) BETWEEN THE TOP OF ALL NON LOADBEARING BRICK PANEL WALLS AND THE SOFFIT OF CONCRETE STRUCTURE OVER.

6. PROVIDE A MOVEMENT JOINT IN BRICKWORK WHEREVER A BRICK WALL CROSSES A MOVEMENT JOINT IN THE FLOOR SLAB. THE JOINT IS TO CONSIST OF 10mm JOINTEX FILL, EDGES SEALED WITH AN APPROVED SEALANT. MIN 1.2x30x700mm GALVANISED HOOP IRON TIE TO BE PROVIDED ACROSS THE JOINT EVERY FOURTH COURSE IN ADDITION TO BRICKFORCE

6. PROVIDE A SKIMMED MORTAR FINISH AND TWO LAYERS OF MALTHOID AS A SLIP JOINT TO THE TOPS OF ALL LOADBEARING BRICK WALLS PRIOR TO CASTING OF CONCRETE MEMBER.

7. WALLS BUILT ON SUSPENDED RC SLABS/BEAMS: ALL TEMPORARY PROPS TO HAVE BEEN REMOVED PRIOR TO COMMENCEMENT OF BRICKWORK. PROVIDE DPC LAYER AS BOND BREAKER BETWEEN SLAB AND FIRST COURSE OF BRICKWORK. PROVIDE GALVANISED BRICKFORCE TO THE BOTTOM THREE COURSES AND EVERY SIXTH COURSE THEREAFTER.

8. TIMBER MEMBERS BUILT INTO BRICKWORK TO BE GIVEN TWO COATS OF DURAM 195 OR SIMILAR AND WRAPPED IN PLASTIC.

9. REINFORCED MASONRY CONSTRUCTION: CAVITIES IN REINFORCED MASONRY WALLS TO BE GROUTED UP WITH 25 MPa/10mm CONCRETE IN MAXIMUM LIFTS OF 450 mm AS BRICK LAYING PROCEEDS. CAVITIES TO BE CLEAR OF MORTAR DROPPINGS AND PROVIDED WITH WALL TIES IN ACCORDANCE WITH NOTE ABOVE (SEE "WALL TIES") MINIMUM GROUT COVER TO REINFORCEMENT = 20 mm.

10. NO HORIZONTAL CHASING WILL BE PERMITTED.

11. ALL EXPANSION AND CHEMICAL TYPE ANCHORS FOR FIXING INTO CONCRETE AND MASONRY TO BE INSTALLED STRICTLY TO MANUFACTURERS SPECIFICATION.

12. ALL WATERPROOFING AND TANKINGS TO BE CARRIED OUT TO MANUFACTURERS SPECIFICATIONS.

CONCRETE WORK

1. ALL CONCRETE WORK TO BE CARRIED OUT AND TESTED IN ACCORDANCE WITH THE REQUIREMENTS AND FREQUENCY OF SABS 1200 G (LATEST ADDITION). IT IS A REQUIREMENT OF THIS SPEC THAT A SINGLE CUBE STRENGTH TEST IS TAKEN ON THE AVERAGE OF THREE CUBES , CRUSHED AFTER 28 DAYS.

2. MINIMUM CONCRETE CUBE STRENGTH AT 28 DAYS:

ELEMENT	28 DAY STRENGTH (MPa)
BLINDING,MASS CONCRETE FOOTINGS	15
RC FOUNDATIONS, SLABS, STAIRS, BEAMS, RC WALLS	30
COLUMNS	30
STRUCTURAL TOPPING	AS FOR BASE SLAB
LIQUID RETAINING MEMBERS	35

3. MINIMUM COVER TO REINFORCEMENT:

ELEMENT	COVER (mm)
FOUNDATIONS (WITH BLINDING)	50
COLUMNS, BEAMS	40
SLABS AND STAIRS	40
RC WALLS: - 200mm THICK - > 200mm THICK	 40 50

4. ALL REINFORCEMENT IS TO BE APPROVED BY THE ENGINEER BEFORE CONCRETE IS CAST. INSPECTION TO BE UNDERTAKEN WHEN REBAR IS PROPERLY FIXED AND COVER BLOCKS HAVE BEEN POSITIONED.

5. KICKERS TO BE CAST FOR WALLS OR COLUMNS. THE LOCATION OF CONSTRUCTION JOINTS, SHUTTER AND PROP REMOVAL TIMES ARE TO BE AGREED WITH ENGINEER PRIOR TO CONSTRUCTION.

6. 20x20mm CHAMFERS TO BE PROVIDED TO EXPOSED CONCRETE CORNERS, UNLESS NOTED OTHERWISE.

7. ALL CONCRETE TO BE COMPACTED USING A MECHANICAL VIBRATOR OF A SUITABLE SIZE. DEEP MEMBERS TO BE VIBRATED IN 500mm LAYERS AND WHEN VIBRATING EACH LAYER, THE POKER SHOULD BE PUSHED DOWN INTO THE PRECEDING LAYER. POURS DEEPER THAN 300mm (AND ALL SLABS) TO BE DOUBLE VIBRATED, THE SECOND VIBRATING BEING DONE JUST BEFORE INITIAL SET. IF FOR ANY REASON A COLD JOINT SHOULD FORM DURING CASTING, THE PLANE OF THE JOINT SHOULD BE AT 45 DEGREES TO THE SOFFIT OF THE MEMBER AND THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.

8. ALL CONCRETE TO BE CONTINUOUSLY CURED USING AN APPROVED METHOD FOR A MINIMUM OF 7 DAYS.

STEEL NOTES:

1. ALL STRUCTURAL STEEL TO BE GRADE S355JR UNLESS COLD FORMED. FLAT PLATE MEMBERS TO BE GRADE 300W U.N.O.

2. ALL STEELWORK U.N.O. SHALL BE HOT DIP GALVANISED. SURFACE TREATMENT AND PAINTING SHALL BE AS FOLLOWS:
   (i) HOT DIP GALVANISING
   - DEGREASE AND BLAST CLEAN TO SWEDISH STANDARD SA 2.5. SURFACE TO BE CLEAN AND DRY
   - HOT DIP GALVANISE TO SANS 121/SABS ISO 1461

   (ii) PAINTING
   - DEGREASE GALVANISED SURFACE AND SAND DOWN WITH ABRASIVE PAPER AND SOLVENT TO LEAVE A CLEAN DRY SURFACE OR USE GALVANISED IRON CLEANER
   - APPLY ETCH PRIMER TO MANUFACTURERS SPECIFICATION FOR PROPER ADHESION OF PAINT SYSTEM
   - APPLY UNDERCOAT AND TOP COAT PAINT TO MANUFACTURERS SPECIFICATION

3. UN-GALVINSED STEEL (WHERE SPECIFIED):
   (i) SURFACE PREPARATION OF STRUCTURAL STEELWORK (S.A.N.S 1200HC-1988)

   - APPLY SURFACE PREPARATION IN ACCORDANCE WITH SWEDISH STANDARD SIS 05 59 00 - 1967.
   - THE TREATMENT MUST REMOVE LOOSE MILL SCALE, RUST AND FOREIGN MATTER.

   (ii) APPLICATION OF PAINT COATINGS
   (ALL NEW STEELWORK)

   -PRIMER: STEELWORK TO BE PAINTED ONE COAT OF ZINC PHOSPHATE ALKYD PRIMER, (35 microns DTF)
   -INTERMEDIATE COAT: STEELWORK TO BE PAINTED WITH ONE COAT OF UNIVERSAL UNDERCOAT, (30 microns DFT)
   -TOP COAT: STEELWORK TO BE PAINTED WITH TWO FINAL COATS ENAMEL (ALKALYD ENAMEL) (30 microns DTF EACH)

   ALL PAINTWORK DAMAGED DURING ERECTION & TRANSPORTATION TO BE TOUCHED UP TO ABOVE SPEC. FINAL COLOUR TO ARCHITECTURAL SPEC.

4. ALL PURLINS & GIRTS TO BE DOUBLE SPAN OR TO BE CONTINIOUS OVER 2 BAYS.

5. NO SERVICES SHALL BE SUSPENDED FROM THE LIP OF CFLC PURLINS OR GIRTS. ALL SERVICES TO BE SUSPENDED FROM BACK WEB OF CFLC PURLINS AND GIRTS.

6. THE CONTRACTOR SHALL SATISFY HIMSELF THAT THE ENGINEER'S DRAWINGS CONTAIN ALL THE INFORMATION REQUIRED FOR THE PREPARATION OF SHOP DRAWINGS AS SOON AS POSSIBLE.

7. CONTRACTOR TO SUPPLY TWO SETS OF SHOP DRAWINGS TOGETHER WITH SUPPORTING CALCULATIONS TO ENGINEER FOR APPROVAL BEFORE COMMENCING WITH FABRICATION.

8. ALL BOLTS TO BE GRADE 8.8 UNLESS OTHWERWISE SPECIFIED.

9. ALL BOLTED CONNECTIONS TO CONSIST OF MINIMUM 2-M16 GRD. 8.8 BOLTS UNLESS OTHERWISE SPECIFIED.

10. ALL WELDING TO SANS 10044-2004.

11. ALL WELDS TO BE 6mm FILLET WELDS TO GRADE E70XX UNLESS OTHERWISE NOTED. WELDS TO BE CONTINIOUS ROUND ALL INTERSECTIONS.

12. ALL CONNECTIONS NOT DETAILED SHALL BE WELDED TO FULL STRENGTH USING GRADE E70XX ELECTRODES.

13. NO SITE WELDING IS PERMITTED.

14. FABRICATION AND ERECTION TO BE DONE TO SANS 1200.

15. ALL RUNNERS AND BRACING TO BE FULLY FIXED IN POSITION BEFORE SHEETING COMMENCES.

16. ALL STRUCTURAL STEEL BELOW GROUND LEVEL, CAST INTO CONCRETE OR BUILT INTO BRICKWORK, SHALL BE PAINTED WITH TWO COATS OF BITUMEN BEFORE BACKFILLING.

17. STEEL PLATES RESTING ON CONCRETE BEAMS TO BE PLACED ON NON-SHRINK GROUT.

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ON ORIGINAL

0 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

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ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2750, Parklands, 2121
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: I.CLARK

Drawn By: JP DU PLESSIS | Designed By: JM KLEINHANS | Reviewed By: CDE WET

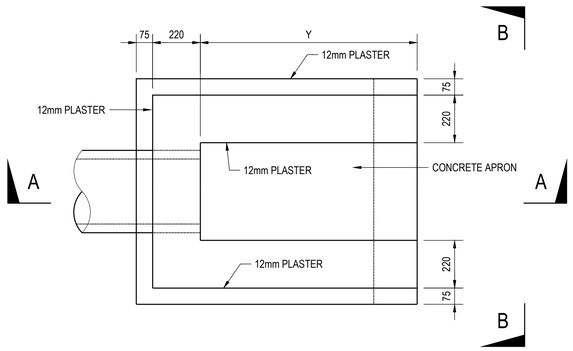
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: STANDARD CONCRETE AND BUILDING NOTES

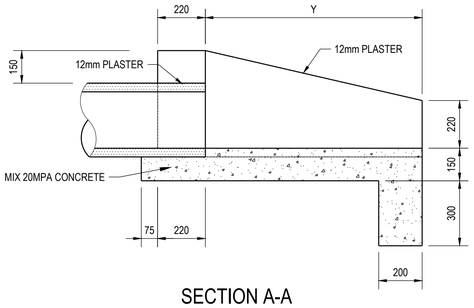
Scale: NTS | Date: NOVEMBER 2022

Project No: J40073 | Dig. No: 010-110 | Rev: 0

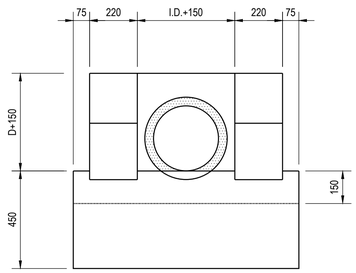
\\ELS-CL-IS\TERRPROJECTS\J0\2015 MEYERTON WWTW\NO_DRAWINGS\4_TENDER_DRAWINGS\ 2022\NEW CAD_MENASHEN FILES\DY | 10/03/2023 16:16:10



PLAN VIEW



SECTION A-A

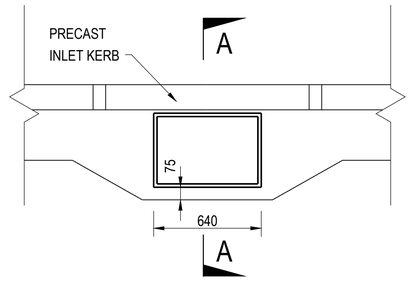


ELEVATION B-B

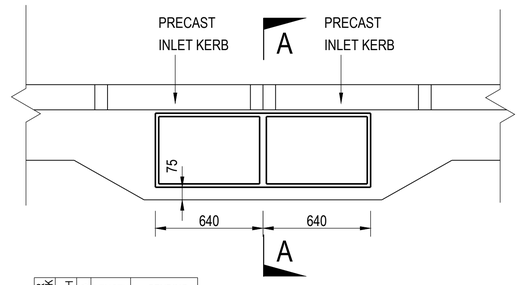
TABLE OF HEADWALL DIMENSIONS

NOMINAL PIPE DIAMETER I.D.	W	Y
100-225	550	600
300+375	690	750
450+525	860	900
600+675	980	1050
750+825	1180	1200
900	1350	1350
1200	1630	1650

DETAIL OF A WINGWALL

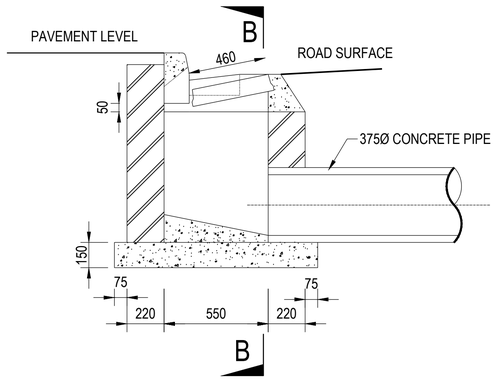


PLAN



PLAN

BAR MARK	NO. EACH	DIA	LENGTH	BENDING
A	2	10	1 220	90°
S	8	6	230	130 AT C/C



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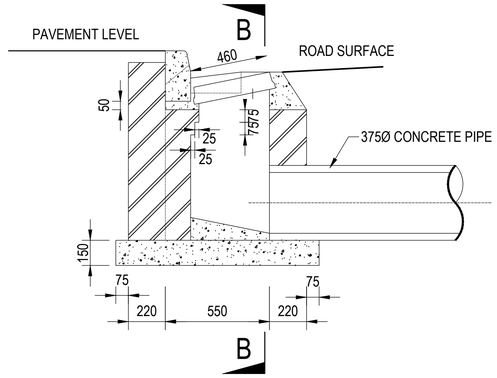

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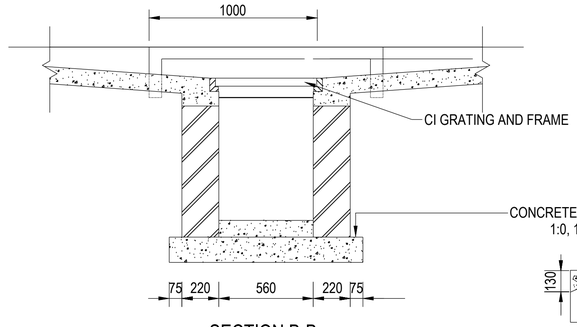

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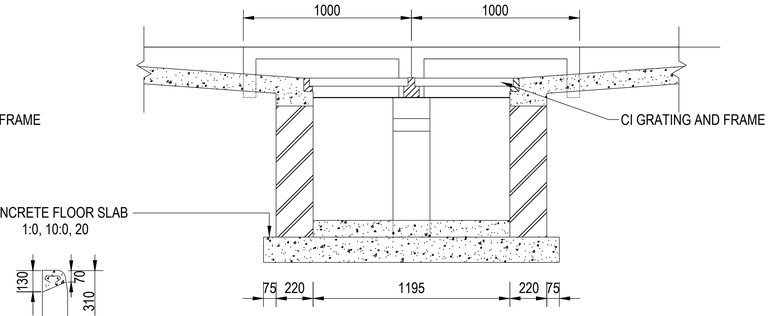

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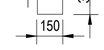

DETAIL OF SINGLE AND DOUBLE CATCHPITS

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0 5 10 15 20 25 30 40 50 60 70 80 90MM

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0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
70 Rivonia Road, Houghton Estate
Rivonia, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5010

Approved By: D CLARK

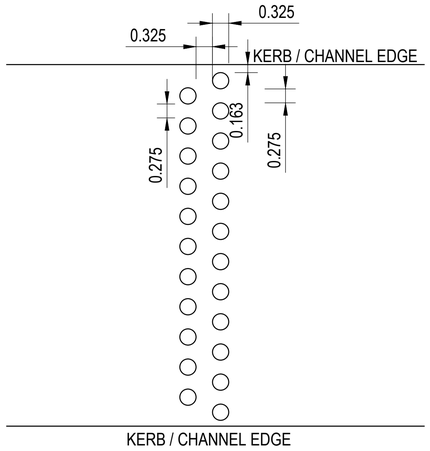
Drawn By: BS SIBANDA | Designed By: MK MURPHY | Reviewed By: JOE WET

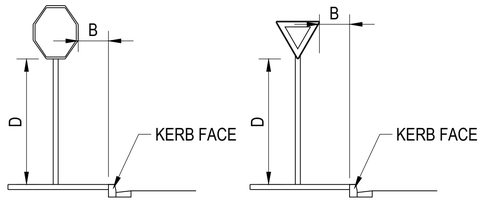
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: TYPICAL DETAIL FOR CATCHPITS AND WINGWALLS

Scale: NTS | Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-109 / Rev: 0

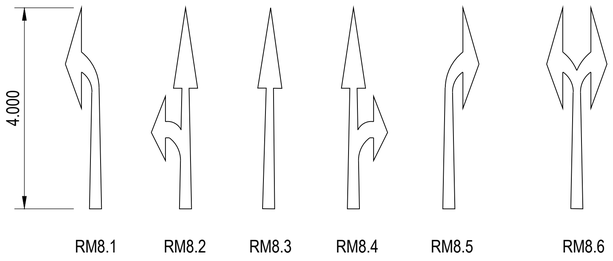




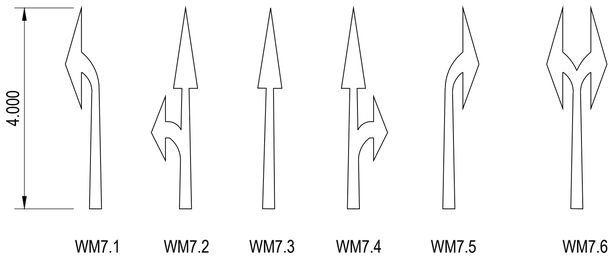
DETAILS: REGULATORY AND WARNING SIGNS
WITH KERB AND SIDEWALK

PERMANENT SIGN PLACEMENT DIMENSIONS			
POSITIONING		PREFERED	RANGE
VERTICAL	LATERAL	(mm)	(mm)
D		2.5m	2.1m TO 3.0m
	B	0.6m	0.3m TO 0.6m

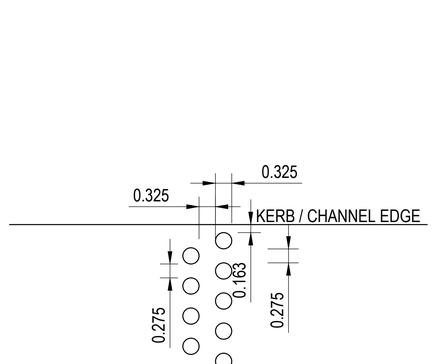
RECOMMENDED SYMBOL LENGTHS FOR URBAN AREA'S



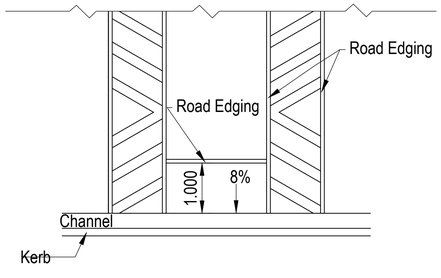
COLOUR OF MANDATORY DIRECTION ARROWS ARE YELLOW



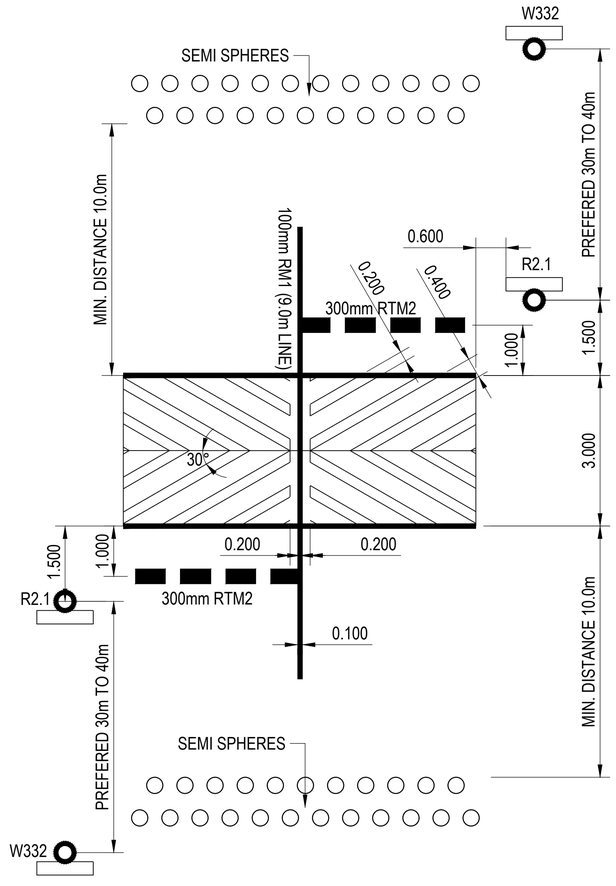
COLOUR OF MANDATORY DIRECTION ARROWS ARE WHITE



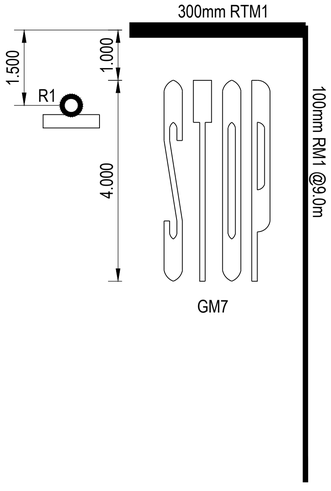
SPEED HUMP
DETAIL FOR BARRIER KERB



SPEED HUMP
DETAIL FOR KERB AND CHANNEL



SPEED HUMP (WM10)
DETAIL: PEDESTRIAN CROSSING WITH SEMI SPHERES



DETAIL OF A STOP STREET

NOTE: ROADSTUD KEY

W		OMNIDIRECTIONAL WHITE
	W	UNIDIRECTIONAL WHITE
W	W	BIDIRECTIONAL WHITE/WHITE
R	W	BIDIRECTIONAL RED/WHITE
R	Y	BIDIRECTIONAL RED/YELLOW
R	R	BIDIRECTIONAL RED/RED

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ON ORIGINAL

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
2nd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No.: +27 11 519 4600
Fax No.: +27 11 807 5670

Approved By: D.CLARK

Drawn By	Designed By	Reviewed By
BP P.BAKA	BR K.MURPHY	VDE WET

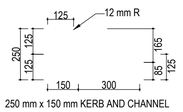
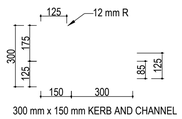
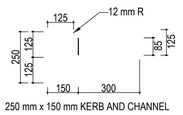
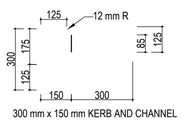
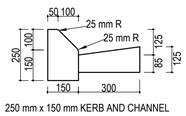
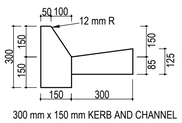
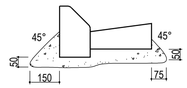
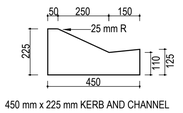
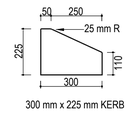
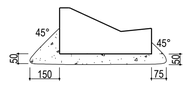
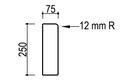
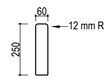
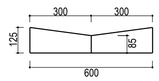
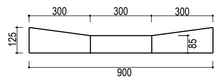
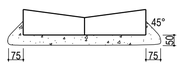
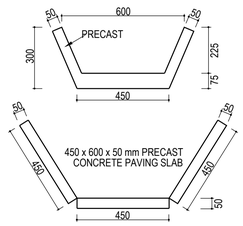
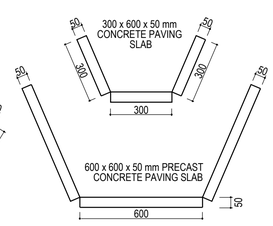
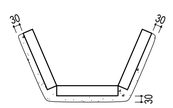
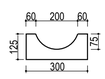
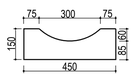
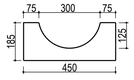
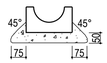
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

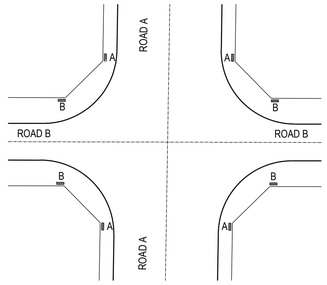
Description: TYPICAL DETAIL OF ROAD SIGNS AND MARKINGS

Scale	Date
NTS	NOVEMBER 2022

Project No.	Drg. No.	Rev.
J40073	010-112	0

I:\ELS-CLUSTER\PROJECTS\J00231E MEYERTON WWTW\D_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \ MEN\MSHEN.REDDV | 10/03/2023 16:16:10

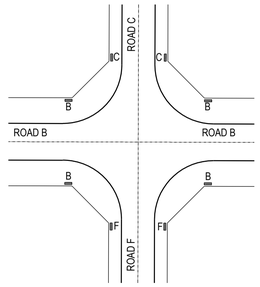
TYPE	DIMENSIONS		BEDDING (CONCRETE 1 : 0,10 : 0,20)
VERTICAL BARRIER KERB AND CHANNEL	 250 mm x 150 mm KERB AND CHANNEL	 300 mm x 150 mm KERB AND CHANNEL	
DROPPED VERTICAL BARRIER KERB AND CHANNEL	 250 mm x 150 mm KERB AND CHANNEL	 300 mm x 150 mm KERB AND CHANNEL	
SEMI-MOUNTABLE KERB AND CHANNEL	 250 mm x 150 mm KERB AND CHANNEL	 300 mm x 150 mm KERB AND CHANNEL	
MOUNTABLE KERB AND CHANNEL (ROLL-OVER)	 450 mm x 225 mm KERB AND CHANNEL	 300 mm x 225 mm KERB	
ROAD AND PATH EDGING	 ROAD EDGING	 ARIS TOP PATH EDGING	CHAMFER TOP PATH EDGING
VEE-CHANNELS	 600 mm WIDE	 900 mm WIDE	
TRAPEZOIDAL CHANNELS	 450 x 600 x 50 mm PRECAST CONCRETE PAVING SLAB	 600 x 600 x 50 mm PRECAST CONCRETE PAVING SLAB	
HALF-ROUND SURFACE WATER CHANNELS	150 x 75 mm WATERWAY	 200 x 75 mm WATERWAY	 300 x 60 mm WATERWAY
	 300 x 175 mm WATERWAY		



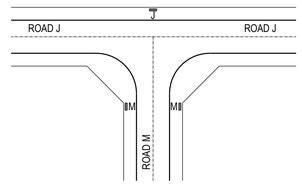
2 ROAD NAMES

NOTES :

1. DENOTES THE RELATIVE POSITION OF THE PRECAST ROAD NAME KERB TO THE SPLAY CORNER.
2. NAME KERBS TO BE INSTALLED 200 mm FROM CADASTRAL BOUNDARY.
3. THE LETTER DENOTES THE RELATIVE ROAD NAME TO APPEAR ON THE UNIT.
4. NAME KERB TO HAVE A SHOW OF 150 mm ABOVE VERGE LEVEL.

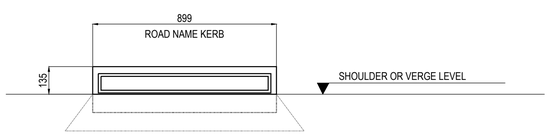


3 ROAD NAMES



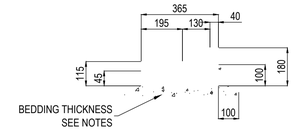
KERBED EDGE TREATMENT
OPPOSITE INTERSECTING ROAD

SCALE 1 : 5

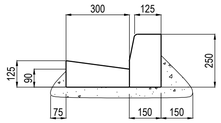


SCALE 1 : 20

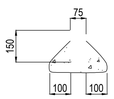
NOTE :
ROAD NAME KERB TO HAVE A SHOW OF
150 mm ABOVE SHOULDER OR VERGE LEVEL



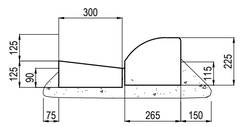
NEW PAROW COMBINATION KERB WITH INFALL CHANNEL TYPE B



TYPE 4A BARRIER KERB AND TYPE 14 CHANNEL



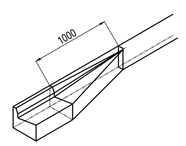
TYPE 12 ROAD EDGING

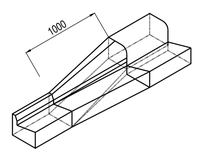


TYPE "C" MOUNTABLE KERB AND TYPE 14 CHANNEL

NOTES :

1. 10 mm EXPANDED POLYSTYRENE FILLED JOINTS SHALL BE PLACED IN KERB AND CHANNEL UNITS AT INTERVALS NOT EXCEEDING 10,0 m.
2. KERB AND CHANNEL BEDDING THICKNESS VARIES ACCORDING TO LAYER THICKNESSES AND ALSO UPON WHICH LAYER THE BEDDING IS PLACED. REFER TO TYPICAL CROSS SECTIONS FOR DETAILS. BEDDING THICKNESS SHALL NOT BE LESS THAN 50 mm CONCRETE.
3. BEDDING AND BACKING SHALL CONSIST OF 15 MPa/19 mm CONCRETE.
4. THE TRANSITION FROM INFALL TO OUTFALL CHANNELS SHALL BE MADE OVER A MINIMUM LENGTH OF 10,0 m.
5. ALL PRECAST UNITS SHALL COMPLY WITH THE PROVISIONS OF SABS 927 IN ALL RESPECTS.





KERB AND CHANNEL TRANSITIONS

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDM	DC

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT

Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK

Drawn By	Designed By	Reviewed By
JW P.SARKA	JW K.MURPHY	JDE WET

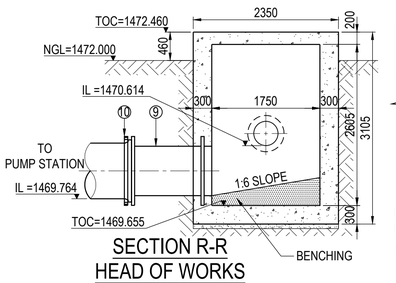
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: TYPICAL DETAIL FOR KERBING

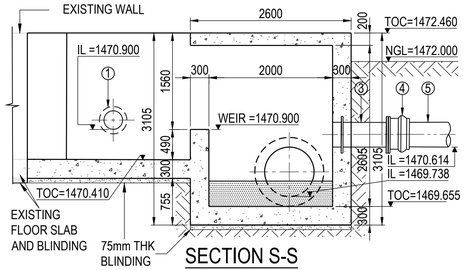
Scale	Date
NTS	NOVEMBER 2022

Project No	Dwg. No	Rev
J40073	010-113	0

\\EL5-CLUSTERPROJECTS\J0023\E MEYERTON WWTW\NO_DRAWINGS\4_TENDER DRAWINGS\5-2022\NEW CAD | MEMASHEN REDDY | 10/03/2023 16:16:10



SECTION R-R
HEAD OF WORKS
SCALE 1:50



SECTION S-S
HEAD OF WORKS
SCALE 1:50

INLET TO WASTEWATER TREATMENT WORKS - FITTINGS LIST					
ITEM No.	DIAMETER	DESCRIPTION	QUANTITY	SKETCH	WALL THICKNESS
9	800	800NB STEEL STRAIGHT PUDDLE PIPE, FLANGED ON ONE END ONLY TO SANS 1123 TABLE 1000/3. PUDDLE FLANGE 150mm FROM PLAIN END.	1	150 / 1300	t=8.0mm
10	800/900	900NB HDPE TO 800NB STEEL CONNECTION, SEE DETAIL E, PN10	1		t=8.0mm
11	900	900NB HDPE PE100 PN10 90 DEG. SEGMENTED BEND	1		

NOTE: ALL PIPE SPECIALS TO BE MILD STEEL UNLESS SPECIFIED OTHERWISE.

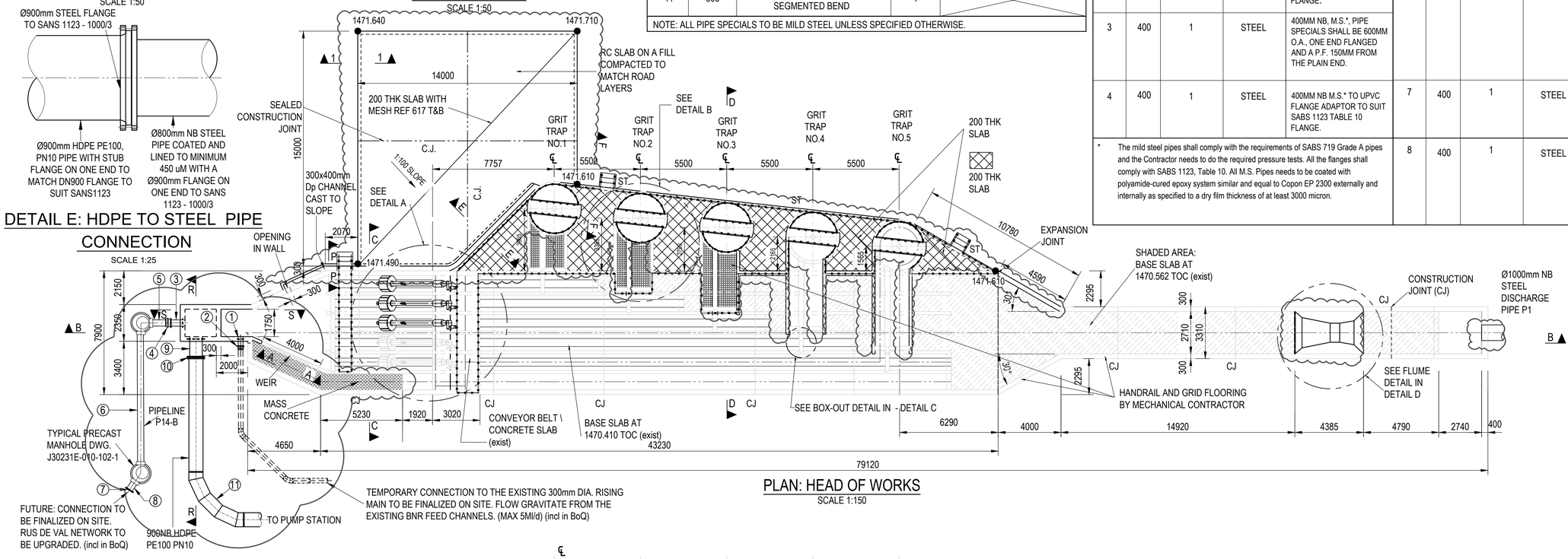
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS
PIPING, FITTINGS AND VALVES

HEAD OF WORKS CONNECTION DETAILS

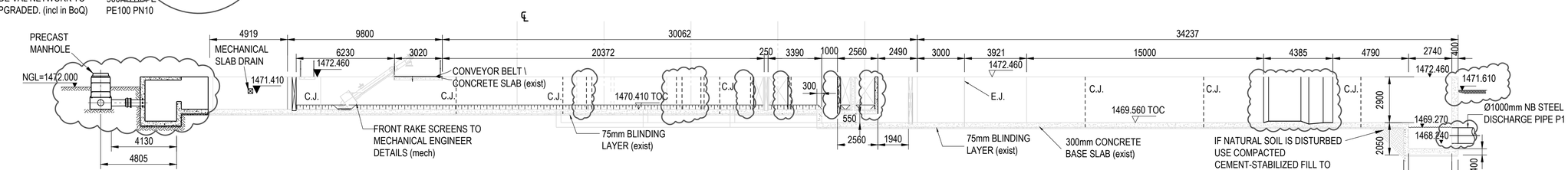
MARK	NOM.INT. Ø (mm)	QUANTITY	MATERIAL	DESCRIPTION
1	300	1	STEEL	300mm NB, M.S.*, PIPE SPECIALS SHALL BE 600mm O.A., ONE END FLANGED AND A P.F. 150mm FROM THE PLAIN END.
2	300	1	STEEL	M.S.* BLANK FLANGE TO SUIT A 300MM NB FLANGE.
3	400	1	STEEL	400MM NB, M.S.*, PIPE SPECIALS SHALL BE 600MM O.A., ONE END FLANGED AND A P.F. 150MM FROM THE PLAIN END.
4	400	1	STEEL	400MM NB M.S.* TO UPVC FLANGE ADAPTOR TO SUIT SABS 1123 TABLE 10 FLANGE.
5	400	1	uPVC	400mm NB, uPVC, CLASS 9, PLAIN-ENDED PIPE SPECIALS SHALL BE 1170mm O.A. THE ONE END SHALL BE CAST INTO THE CONCRETE MANHOLE AND THE OTHER END SHALL BE CONNECTED TO FLANGE ADAPTOR
6	400	1	uPVC	400mm NB, uPVC, CLASS 9, PLAIN-ENDED PIPE SPECIALS SHALL BE 8530MM O.A. THE ONE END SHALL BE CAST INTO THE CONCRETE MANHOLE AND THE OTHER END SHALL BE CONNECTED TO CONCRETE MANHOLE
7	400	1	STEEL	M.S.* BLANK FLANGE TO SUIT A 400mm NB FLANGE.
8	400	1	STEEL	400MM NB, M.S.* PIPE SPECIALS SHALL BE 700MM O.A. THE PLAIN END SHALL BE CAST INTO THE CONCRETE MANHOLE AND THE OTHER END FLANGED

* The mild steel pipes shall comply with the requirements of SABS 719 Grade A pipes and the Contractor needs to do the required pressure tests. All the flanges shall comply with SABS 1123, Table 10. All M.S. Pipes needs to be coated with polyamide-cured epoxy system similar and equal to Copon EP 2300 externally and internally as specified to a dry film thickness of at least 3000 micron.

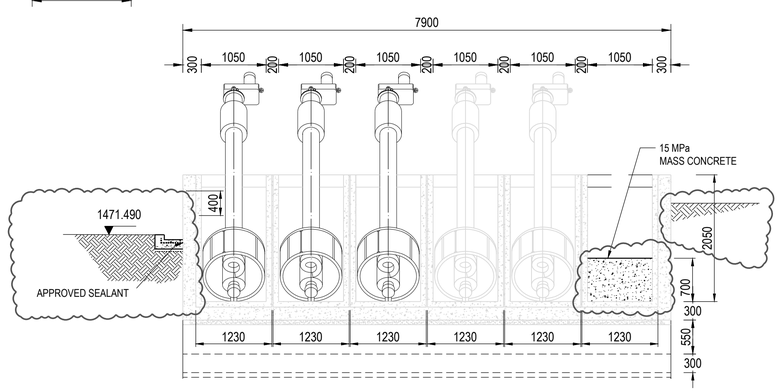
DETAIL E: HDPE TO STEEL PIPE CONNECTION
SCALE 1:25



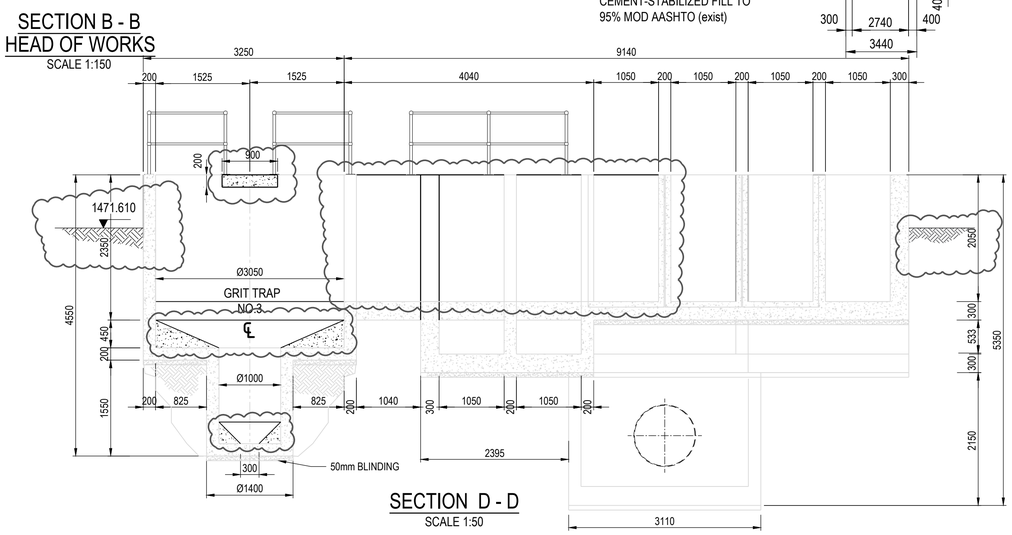
PLAN: HEAD OF WORKS
SCALE 1:150



SECTION B - B
HEAD OF WORKS
SCALE 1:150



SECTION C - C
SCALE 1:50



SECTION D - D
SCALE 1:50

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ON ORIGINAL
0 5 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. FOR CONCRETE NOTES, SEE DWG NO:010/110
2. FOR CONCRETE JOINTS, SEE DWG NO:010 - 103
3. "FOR TYPICAL DETAIL HAND RAILING SEE DWG. No J30231E/010-105"
4. ALSO REFER TO BoQ FOR FULL EXTENT OF WORK

LEGEND

- HAND RAILING
- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
13 North Street, Houghton Estate
Rosebank, 2196
PO Box 2750, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: S CLARK

Drawn By	Designed By	Reviewed By
JP J SMUTS	JP K MURPHY	VDE WET

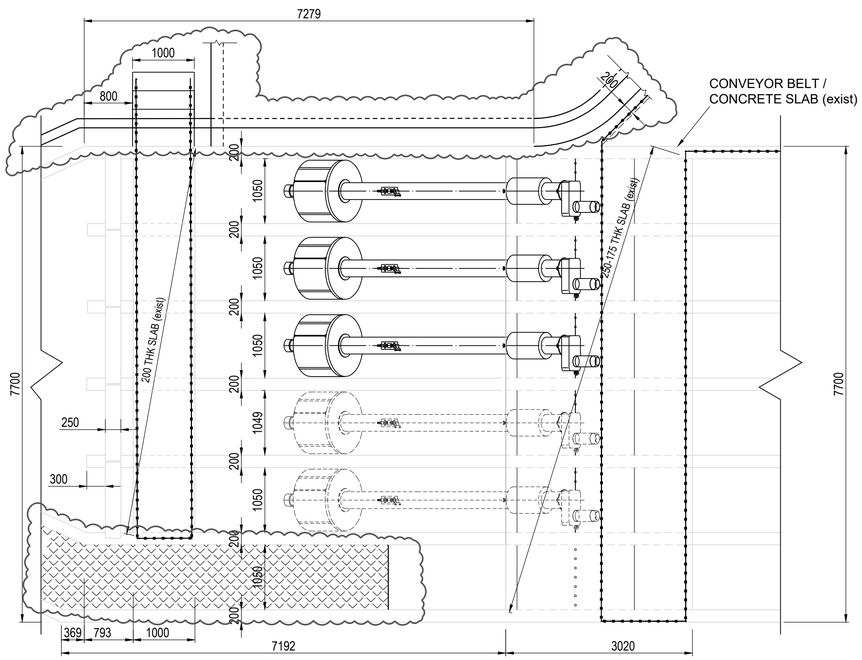
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: HEAD OF WORKS SHEET 1 OF 2

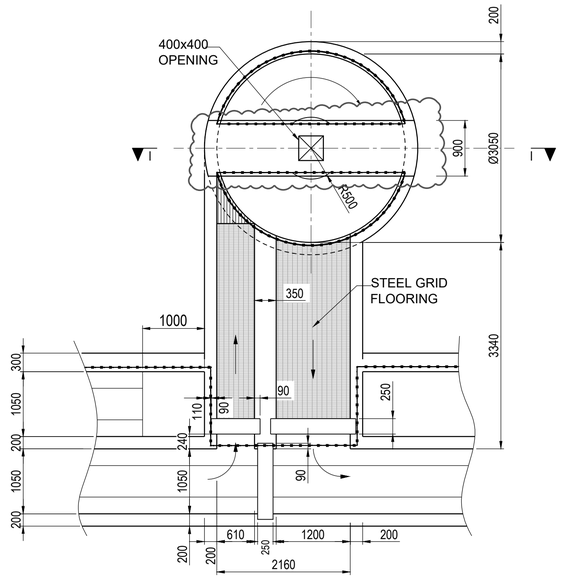
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Dig. No	Rev
J40073	010-201	0

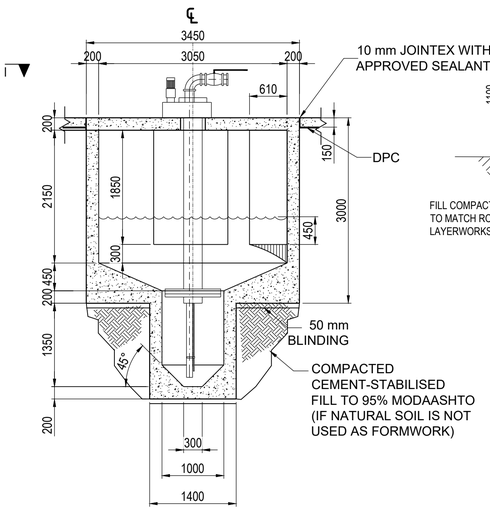
\\ELS-CLUSTER\PROJECTS\J0231E MEYERTON WWTW\0_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD\ MERASHEN REDDY | 10/03/2023 16:16:10



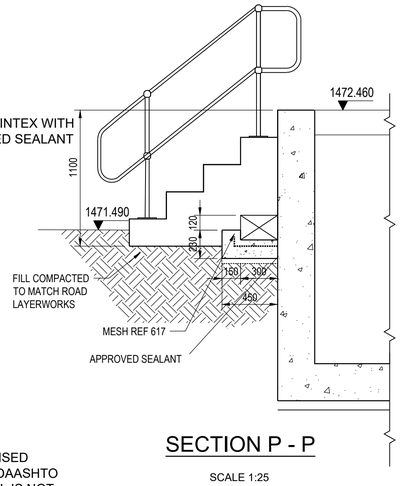
DETAIL A
SCALE 1:50



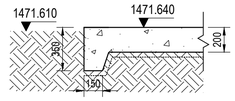
DETAIL B: JET AIR GRIT TRAP
SCALE 1:50



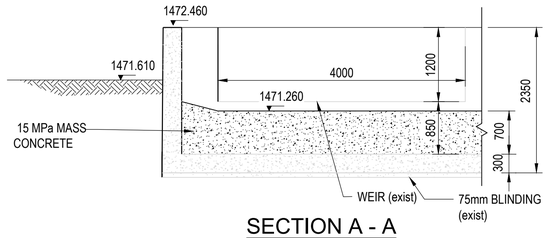
SECTION I - I
JET AIR GRIT TRAP
SCALE 1:50



SECTION P - P
SCALE 1:25



TYPICAL SLAB EDGE SECTION 1-1
SCALE 1:25



SECTION A - A
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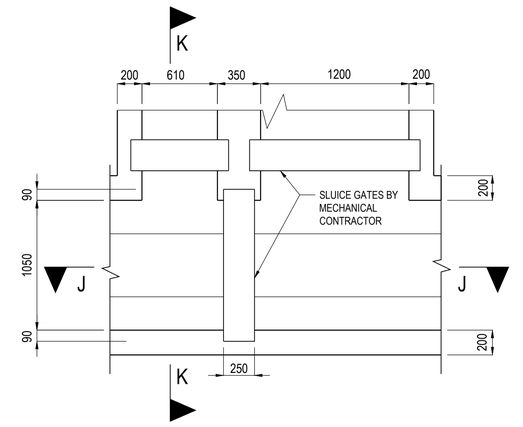
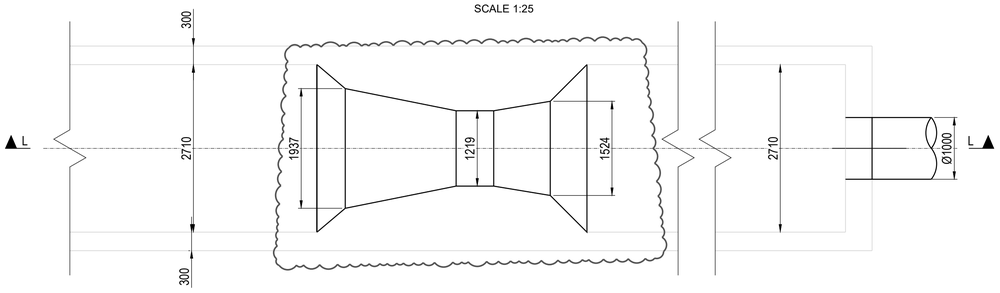
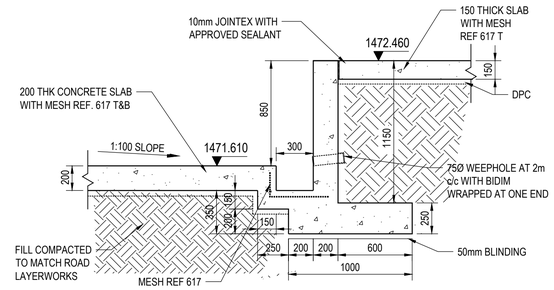


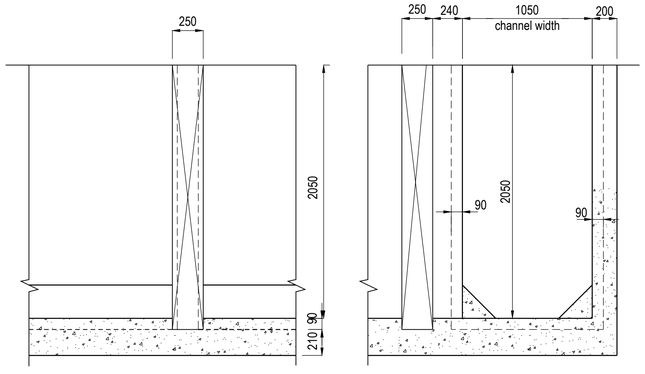
DETAIL C: BOX-OUTS FOR CHANNEL GATES
SCALE 1:25



DETAIL D: PARSHALL FLUME SCALE
1:50



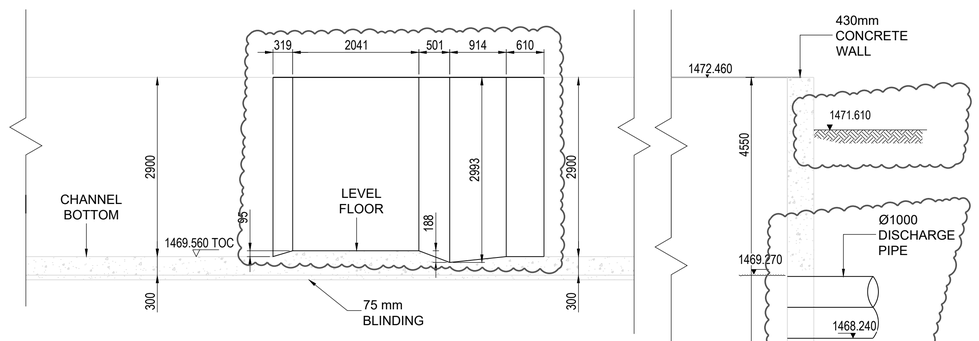
SECTION E - E
SCALE 1:25



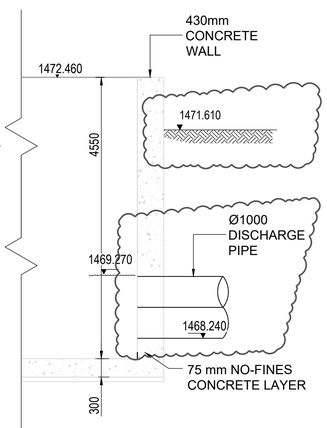
SECTION J - J
SCALE 1:25

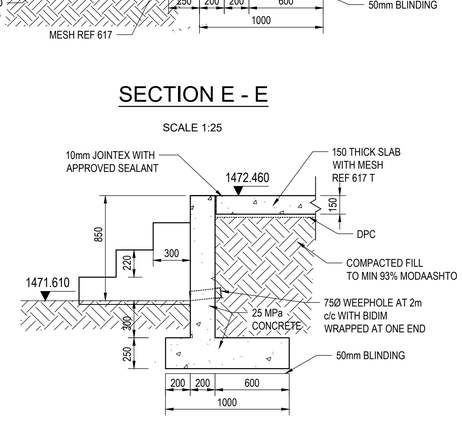
SECTION K - K
SCALE 1:25

SLUICE GATE RECESS DETAIL



SECTION L - L
PARSHALL FLUME
SCALE 1:50





SECTION F - F
SCALE 1:25

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- HAND RAILING
- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

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Johannesburg
3rd Floor, Building 4
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Telephone No. +27 11 519 4600
PO Box 2720, Rivonia, 2128
Fax No. +27 11 807 5670

Approved By: SCLARK

Drawn By	Designed By	Reviewed By
JW	JW KMURPHY	DE WET

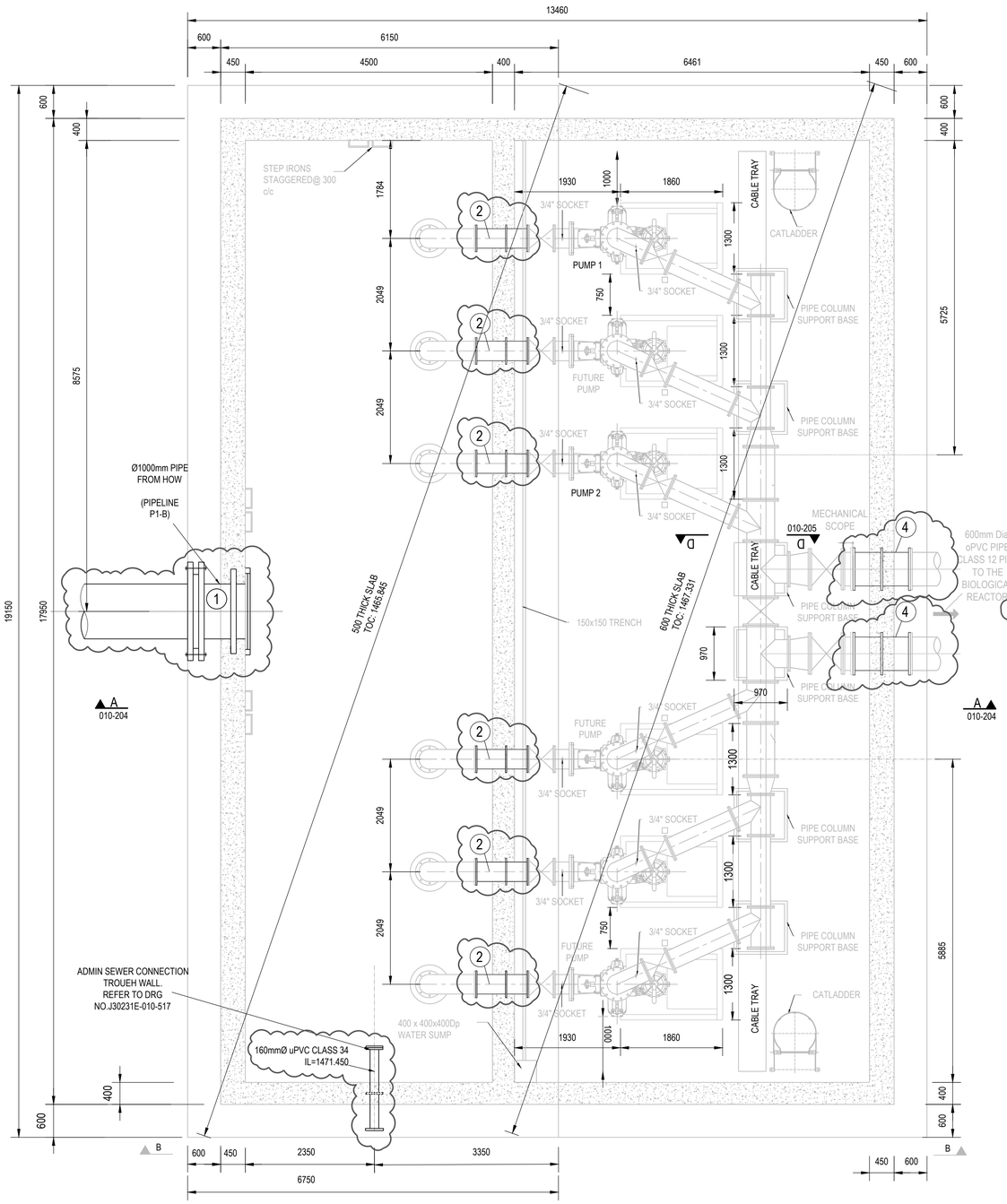
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: HEAD OF WORKS SHEET 2 OF 2

Scale: AS SHOWN | Date: NOVEMBER 2022

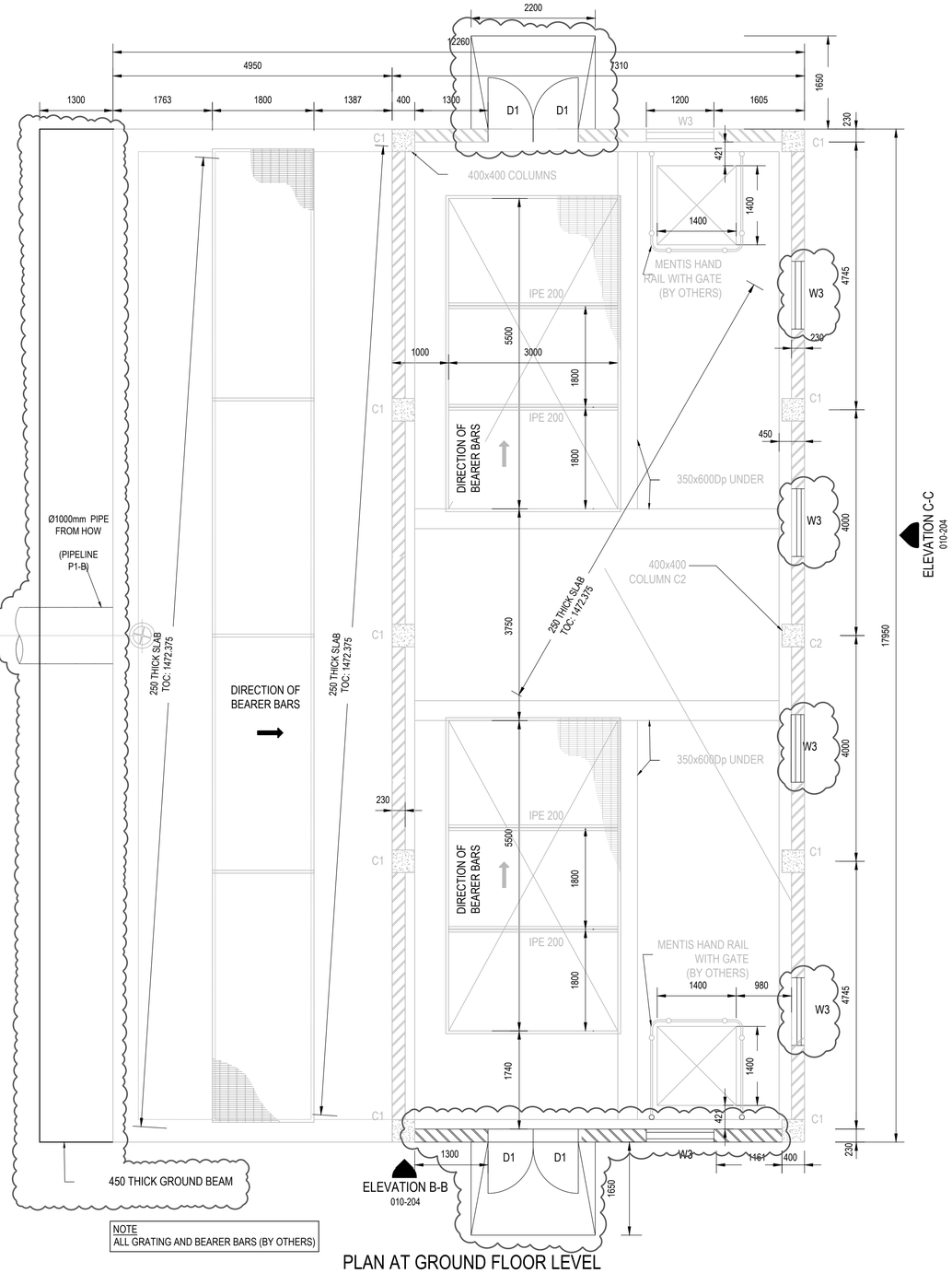
Project No: J40073 | Drg No: 010-202 | Rev: 0

I:\EJS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD\ [MENGSHEN REDDY] 10/03/2023 16:16:10



SECTIONAL PLAN VIEW

SCALE 1:50



NOTE
ALL GRATING AND BEARER BARS (BY OTHERS)

PLAN AT GROUND FLOOR LEVEL

SCALE 1:50

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0 5 10 15 20 25 30 40 50 60 70 80 90MM

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- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
15 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: S CLARK

Drawn By: JP J SMIT

Designed By: JH K MURPHY

Reviewed By: VDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: RAW WATER PUMP STATION PLAN LAYOUTS SHEET 1 OF 3

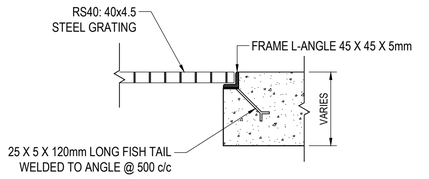
Scale: AS SHOWN

Date: NOVEMBER 2022

Project No: J40073

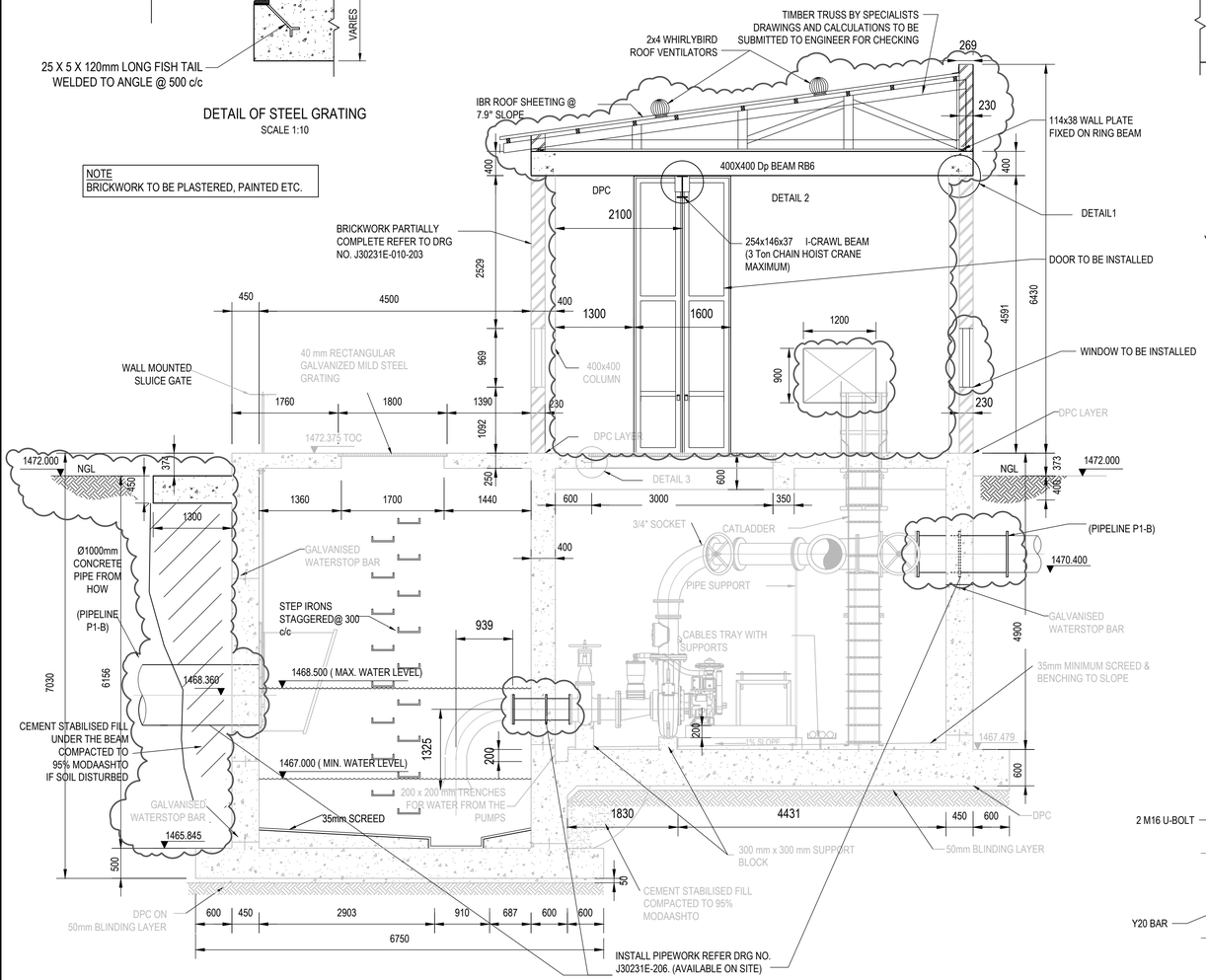
Dg. No: 010-203

Rev: 0

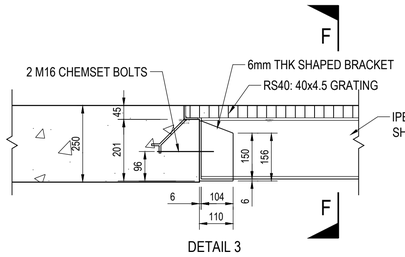


DETAIL OF STEEL GRATING
SCALE 1:10

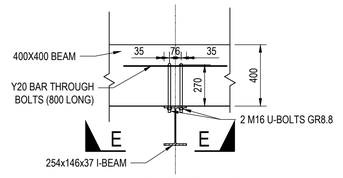
NOTE
BRICKWORK TO BE PLASTERED, PAINTED ETC.



SECTION A - A
SCALE 1:50



DETAIL 3
SCALE 1:10



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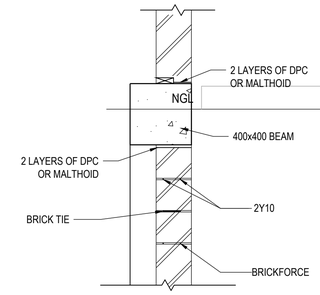

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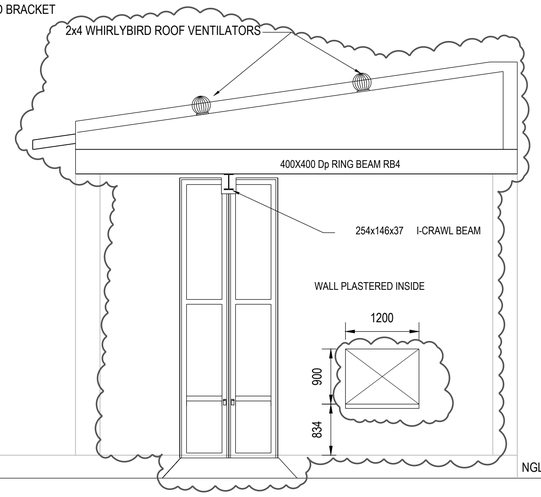
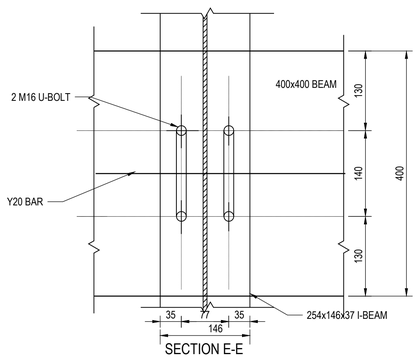
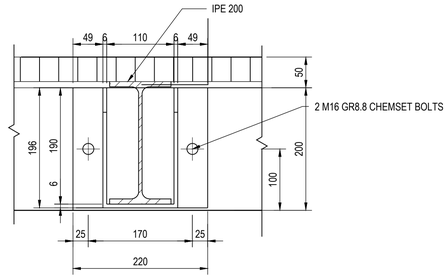


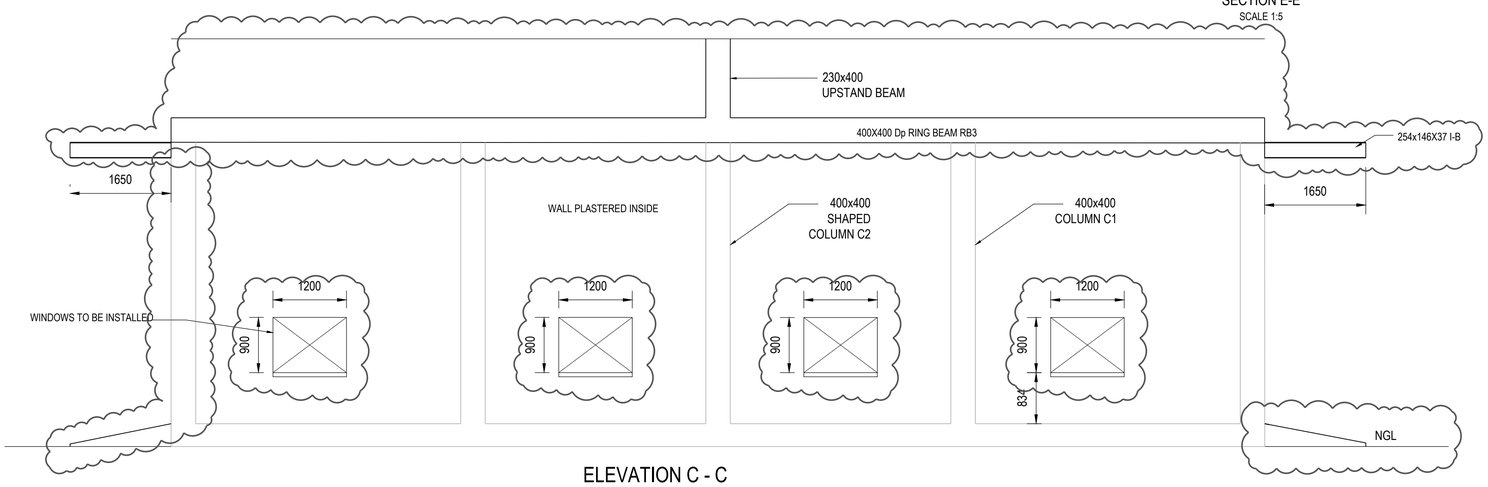
ELEVATION B - B
SCALE 1:50
(010-203)



SECTION E-E
SCALE 1:5



SECTION F-F
SCALE 1:5



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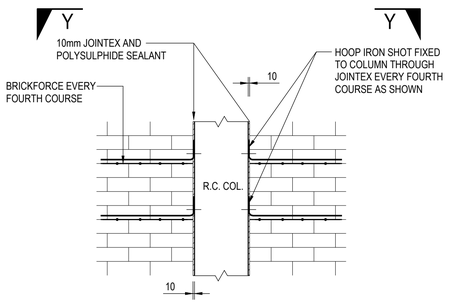
SCALE 1:50
(010-203)



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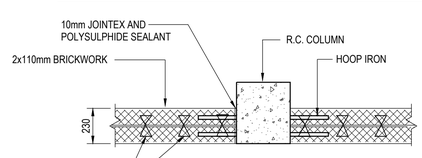

SECTION Y-Y

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- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
3	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5570

Approved By
D CLARK
Drawn By
ZIP D'ARCY
Designed By
RUK GUMPHY
Reviewed By
VDE WET

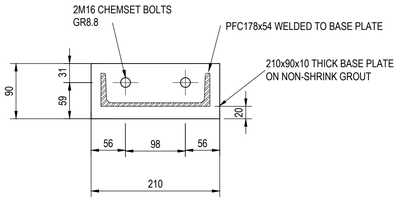
Project
EXTENSION
OF MEYERTON
WASTEWATER
TREATMENT WORKS

Description
RAW WATER
PUMP STATION
PLAN LAYOUTS
SHEET 2 OF 3

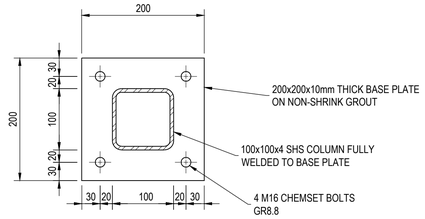
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Drg No	Rev
J40073	010-204	0

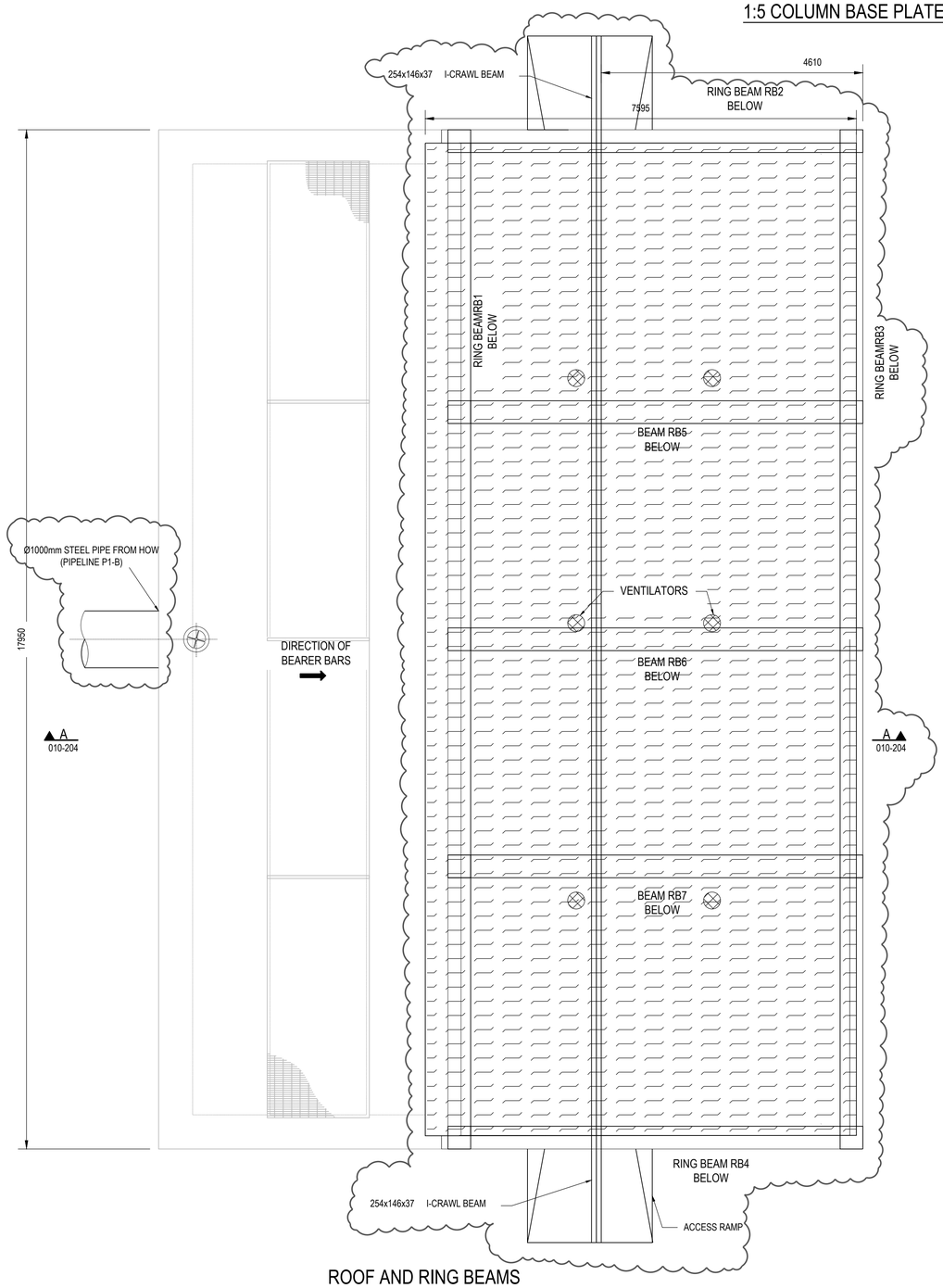
IELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\3_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD | MENASHEN READY | 10/03/2023 16:16:10



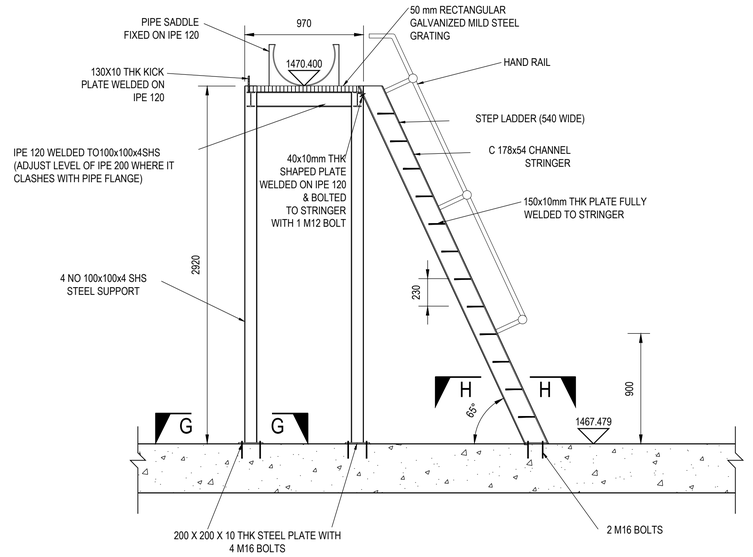
SECTION H-H
SCALE 1:5



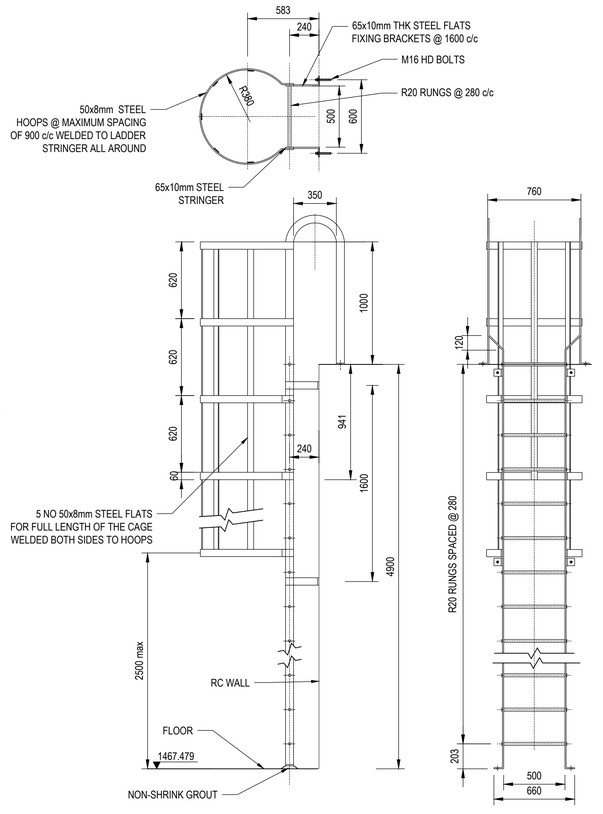
1:5 COLUMN BASE PLATE DETAIL G-G



ROOF AND RING BEAMS
SCALE 1:50



SECTION D - D
SCALE 1:25



CATLADDER DETAIL
SCALE 1:25

DOOR AND WINDOW SCHEDULE FOR RAW SEWAGE PUMP STATION

MARK	SIZE	DESCRIPTION	No. USED
D1	1600 X 4500	DARK BRONZE ANODIZED ALUMINIUM DOUBLE DOOR WITH 6mm CLEAR SAFETY GLASS, ALUMINIUM ALLOY BUTT HINGES & HIGH QUALITY KNOB FURNITURE LOCK WITH DUPLICATE KEYS. FRAME TO FIT BUTT ON TO FACE BRICK WALLS WITH APPROPRIATE SEALERS.	2
W3	1200 X 900	DARK BRONZE ANODIZED ALUMINUM SLIDING WINDOW CAT.No 129 AND FITTED WITH OBSCURE GLASS AND FLYSCREEN	8

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ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
Block C, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: G CLARK

Drawn By: JSP D'ARMOND

Designed By: JSP D'ARMOND

Reviewed By: CDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: RAW WATER PUMP STATION PLAN LAYOUTS SHEET 3 OF 3

Scale: AS SHOWN

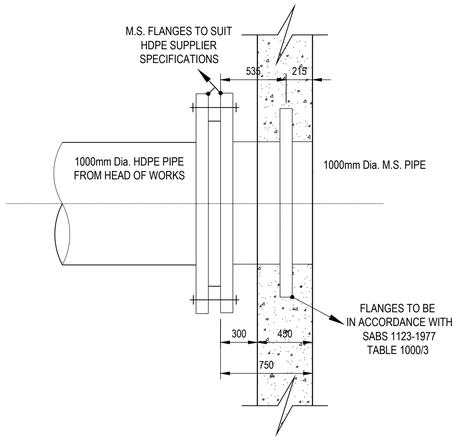
Date: NOVEMBER 2022

Project No: J40073

Drg. No: 010-205

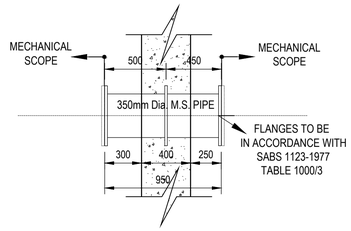
Rev: 0

I:\EL-S-CLUSTER\PROJECTS\J40073 E MEYERTON WWTW\2_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD [MENU\REVISED\T] 10/03/2023 16:16:10



PIPE SPECIAL No.1

SCALE 1:25



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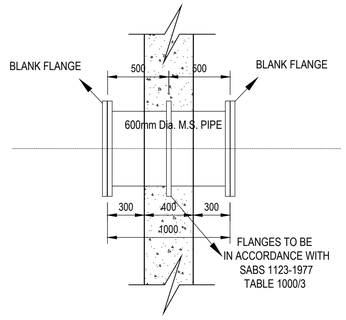

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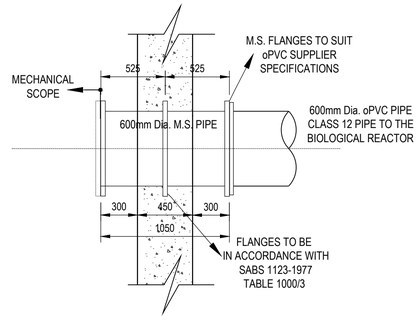

PIPE SPECIAL No.4

SCALE 1:25

P7-B

EXTENSION OF MEYERTON WASTEWATER
TREATMENT WORKS
PIPING, FITTINGS AND VALVES

PUMP STATION - PIPE SPECIALS

MARK	NOM.INT. Ø (mm)	QUANTITY	MATERIAL	DESCRIPTION
1	1000	1	STEEL	1000mm DIA. M.S. PIPE, GRADE A, t=6mm, LENGTH 750 mm O.A., WITH FLANGE ON ONE END AND PUDDLE FLANGE 200mm FROM PLAIN END.
2	350	6	STEEL	350mm DIA. M.S. PIPE, GRADE A, t=4.5mm, LENGTH 950 mm O.A., DOUBLE FLANGED WITH PUDDLE FLANGE 450mm FROM ONE END.
3	600	1	STEEL	600mm DIA. M.S. PIPE, GRADE A, t=6mm, LENGTH 1000 mm O.A., DOUBLE FLANGED WITH PUDDLE FLANGE 500mm FROM ONE END. TWO BLANK FLANGES AT EACH END FOR FUTURE EXTENSIONS
4	600	2	STEEL	600mm DIA. M.S. PIPE, GRADE A, t=6mm, LENGTH 1050 mm O.A., DOUBLE FLANGED WITH PUDDLE FLANGE 525mm FROM ONE END.

NOTE
GROUTING IN OF PIPES SPECIALS.
(AVAILABLE ON SITE EXCEPT No. 1)

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. POSITIONS AND SIZES OF ALL POCKETS AND OPENINGS TO BE CONFIRMED WITH MECHANICAL CONTRACTOR BEFORE CONSTRUCTION.
2. FOR DRAWING NOTES, REFER TO DWG No 010-110
3. FOR JOINT DETAILS, REFER TO DWG No 010-103
4. ALSO REFER TO BOQ FOR FULL EXTEND OF WORK TO BE COMPLETED.

- SCOPE OF WORK

ISSUED FOR TENDER

No.	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4000
Fax No. +27 11 807 5019

Approved By: D CLARK

Drawn By: JSP STRYDOM

Designed By: JH K MURPHY

Reviewed By: CHE WET

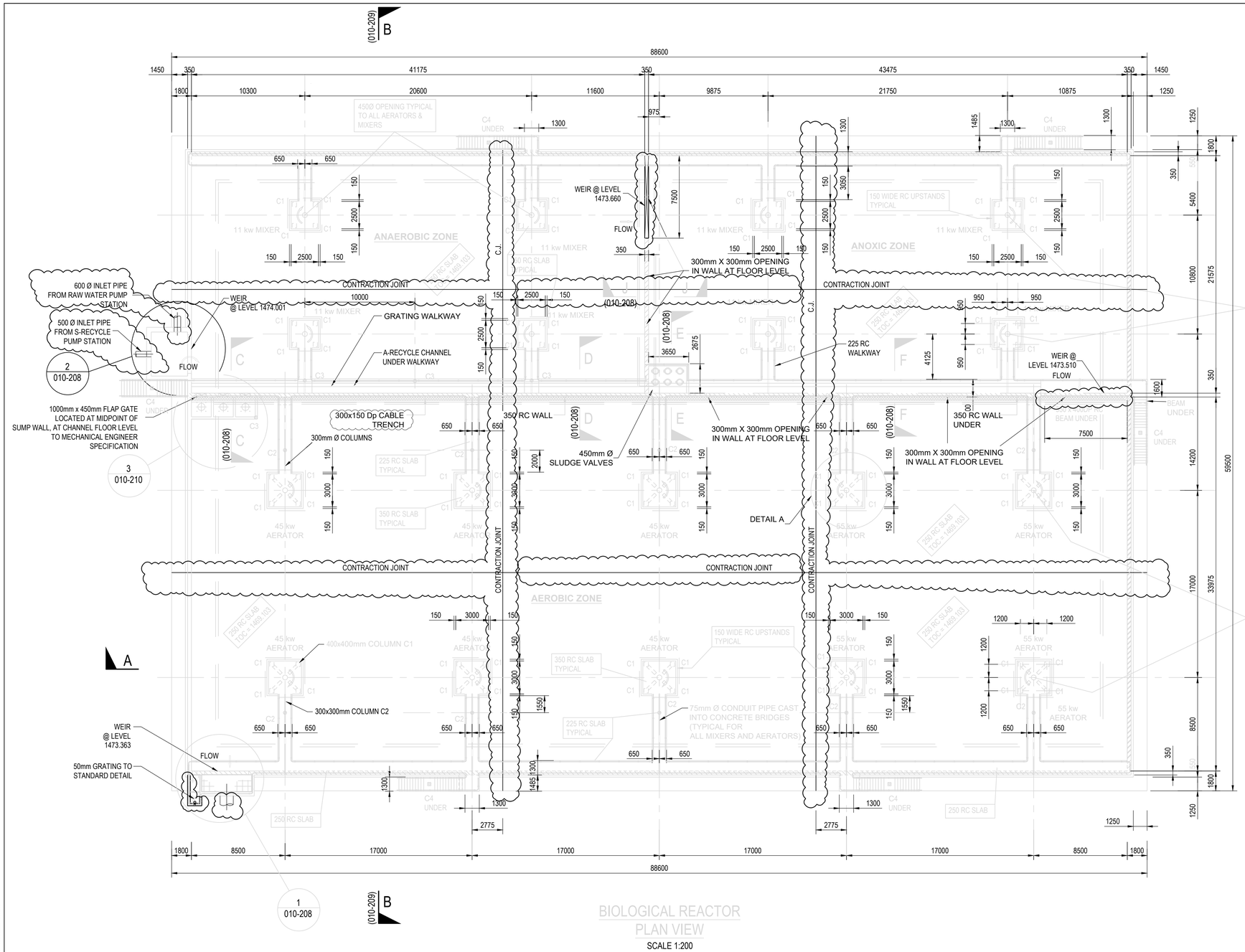
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: RAW WATER PUMP STATION CIVIL PIPE SPECIALS

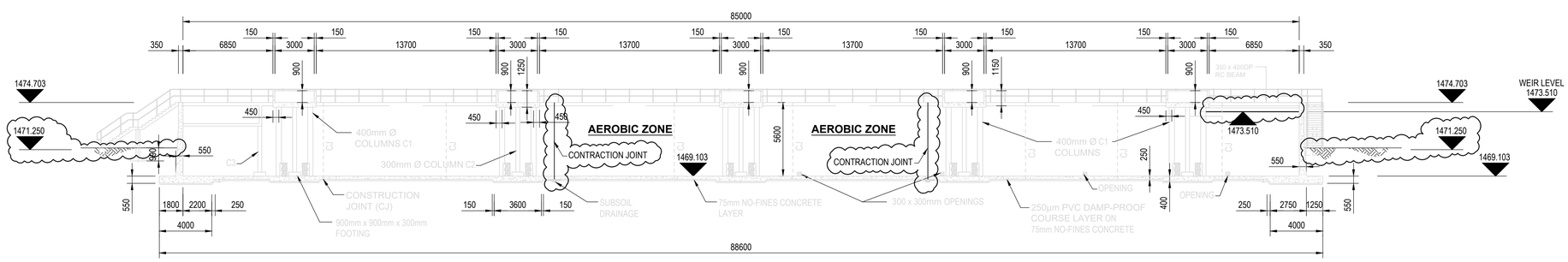
Scale: AS SHOWN

Date: NOVEMBER 2022

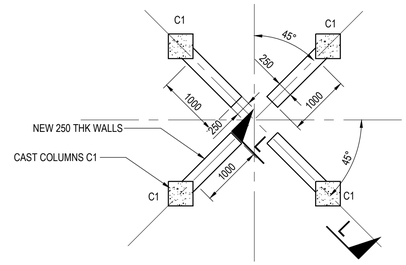
Project No: J40073 / Drg. No: 010-206 / Rev: 0



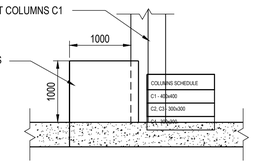
BIOLOGICAL REACTOR
PLAN VIEW
SCALE 1:200



SECTION A - A
SCALE 1:200



TYPICAL PLAN ON NEW BASE WALLS
DETAIL A
SCALE 1:50



ELEVATION L-L
SCALE 1:50

COLUMNS SCHEDULE
C1 - 400x400
C2, C3 - 300x300
C4 - 300x300

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ON ORIGINAL
0 10 20 30 40 50 60 70 80 90MM

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- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Roseberry, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5970

Approved by: S CLARK
Drawn By: JP LOMBARD
Designed By: M KLOPPERT
Reviewed By: VDW WET

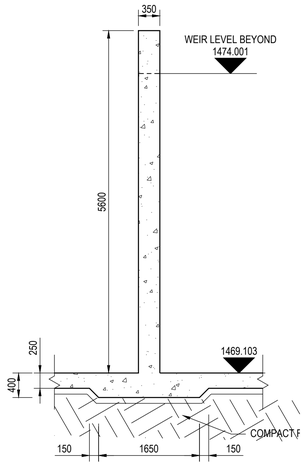
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: BIOLOGICAL REACTOR LAYOUT AND SECTION SHEET 1 OF 4

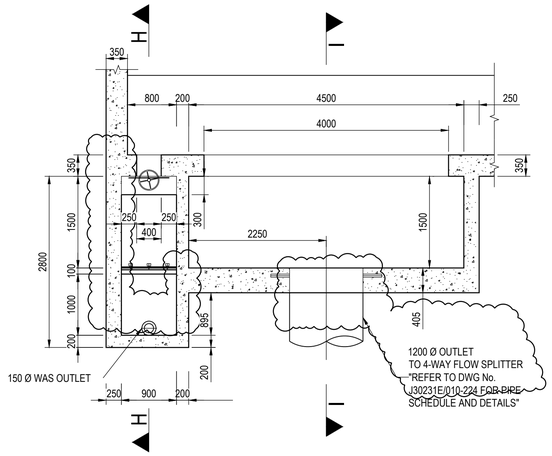
Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073 / Dig. No: 010-207 / Rev: 0

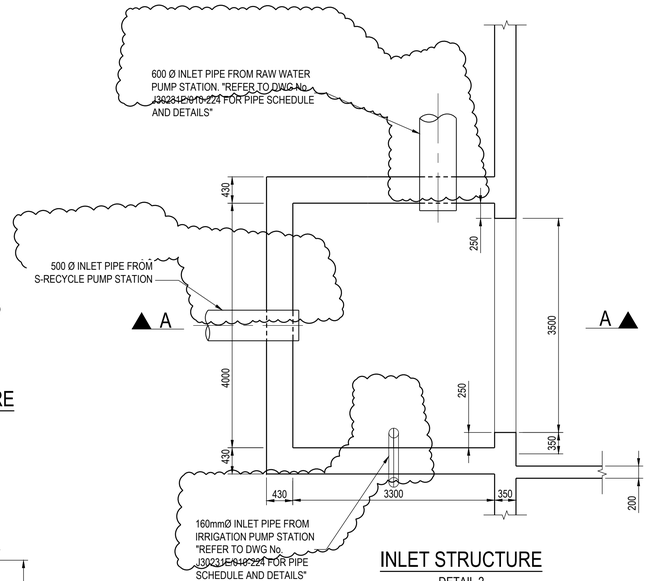
I:\ELS-CLUSTER\PROJECTS\J0231E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD\ MERVSHEN REDDY\ 10/03/2023 16:16:10



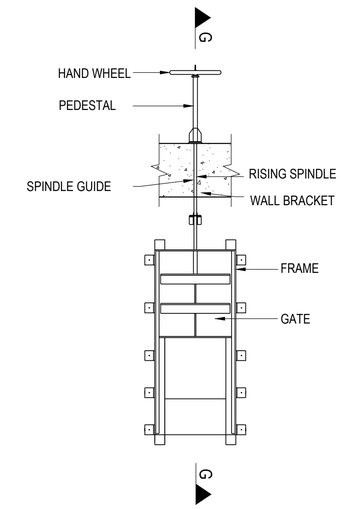
SECTION J-J
SCALE 1:50



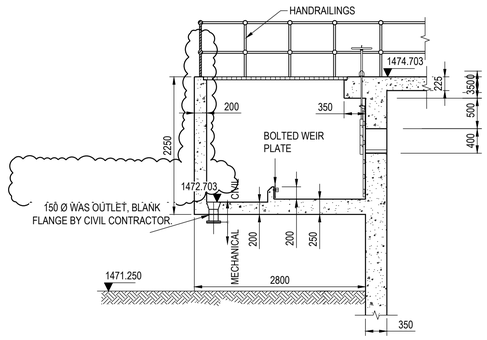
WAS OUTLET AND BIO-REACTOR OUTLET STRUCTURE
DETAIL 1
SCALE 1:50



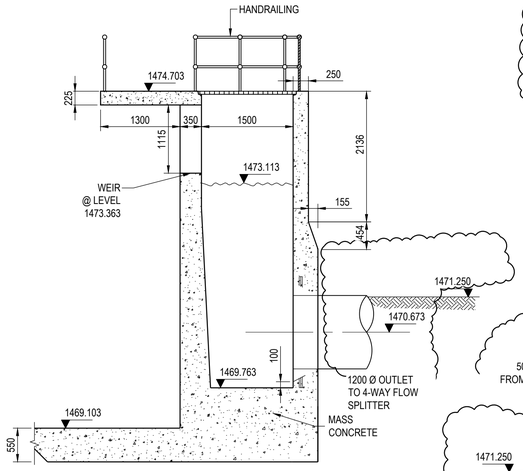
INLET STRUCTURE
DETAIL 2
SCALE 1:50



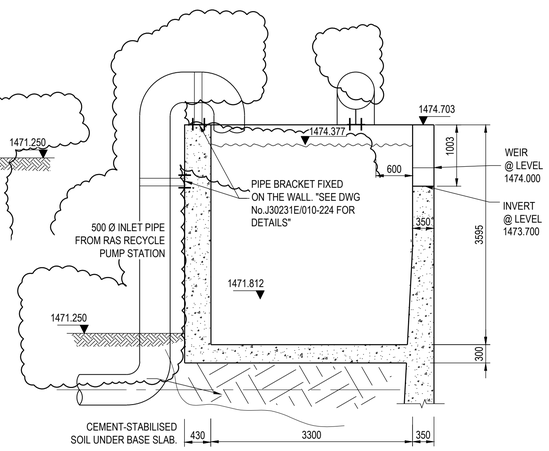
DOWNWARD OPENING WEIR
OUTLET STRUCTURE
SCALE 1:20



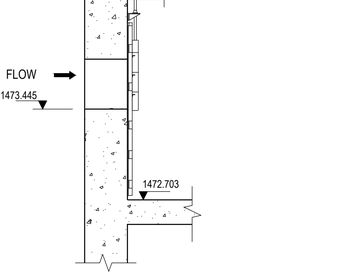
WAS OUTLET STRUCTURE
SECTION H-H
SCALE 1:50



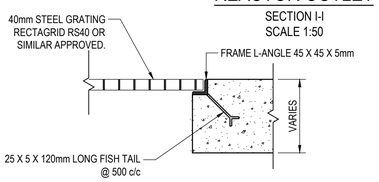
BIOLOGICAL REACTOR OUTLET
SECTION I-I
SCALE 1:50



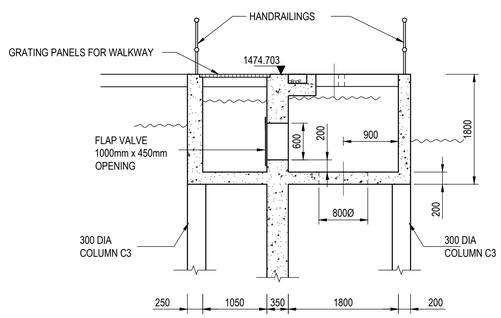
INLET STRUCTURE
SECTION A - A
SCALE 1:50



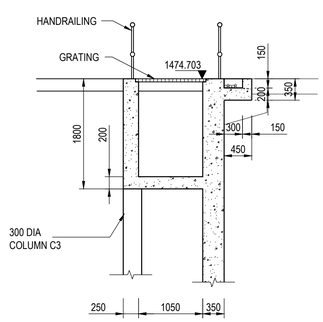
DOWNWARD OPENING WEIR DETAIL SECTION G - G
SCALE 1:25



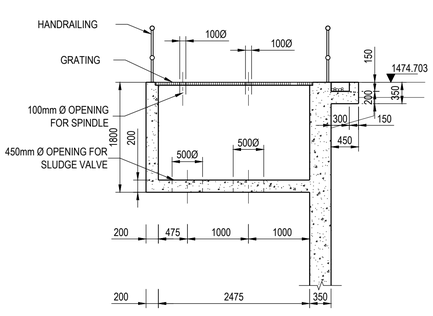
DETAIL OF STEEL GRATING
SCALE 1:10



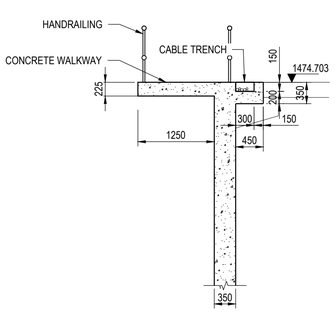
SECTION C-C
SCALE 1:50



SECTION D-D
SCALE 1:50



SECTION E-E
SCALE 1:50



SECTION F-F
SCALE 1:50

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ON ORIGINAL

0 5 15 20 30 40 50 60 70 80 90MM

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- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	OC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK

Drawn By: JM

Designed By: pp K.MURPHY

Reviewed By: C.DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: BIOLOGICAL REACTOR LAYOUT AND SECTION SHEET 2 OF 4

Scale: AS SHOWN

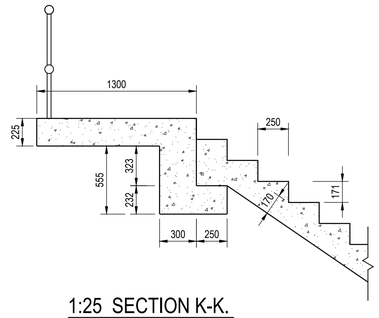
Date: NOVEMBER 2022

Project No: J40073

Org. No: 010-208

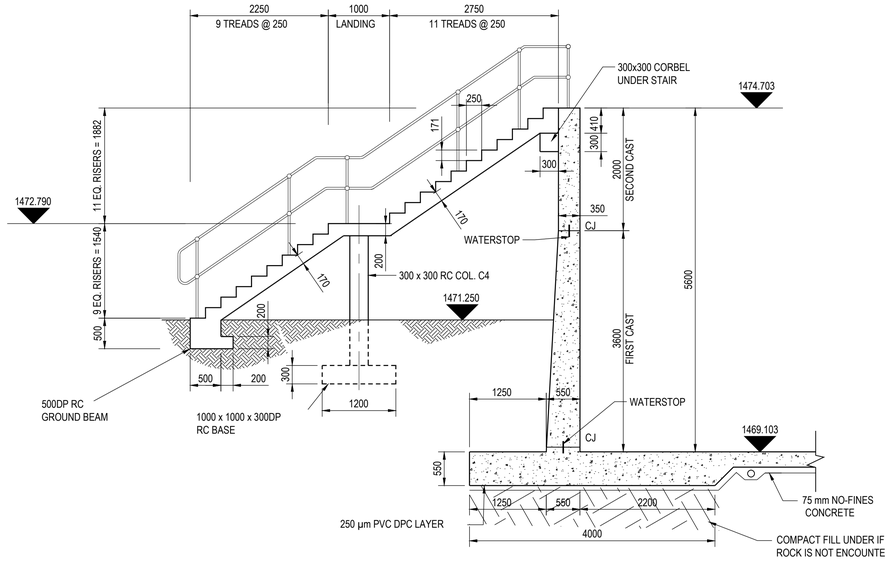
Rev: 0

\\ELS-CLUSTER\PROJECTS\J0231E MEYERTON WWTW\O_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD] MENASHEN REDDY] 10/03/2023 16:16:10



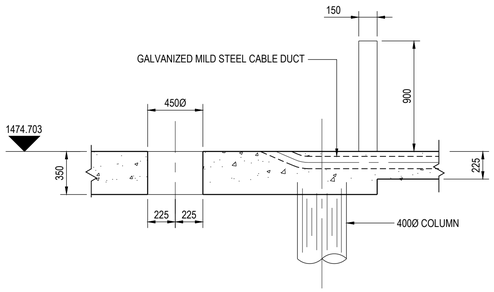
1:25 SECTION K-K.

TYPICAL TO ALL STAIRS WITH LANDING ON TOP

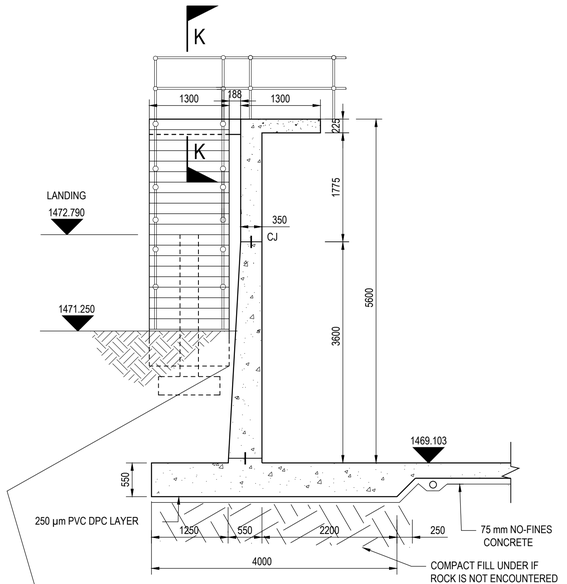


DETAIL OF OUTSIDE WALL AND STAIR

SCALE 1:50

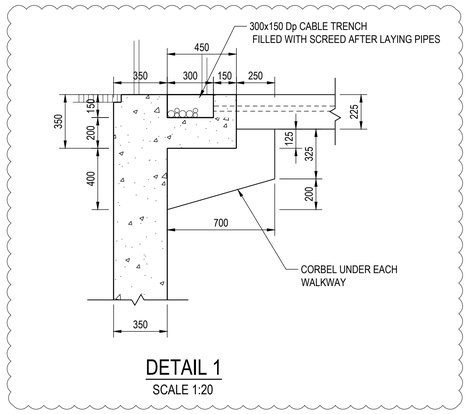


1:25 TYPICAL SECTION MIXER BRIDGE & CABLE CHANNEL



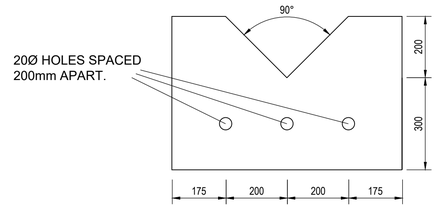
DETAIL OF OUTSIDE WALL

SCALE 1:50



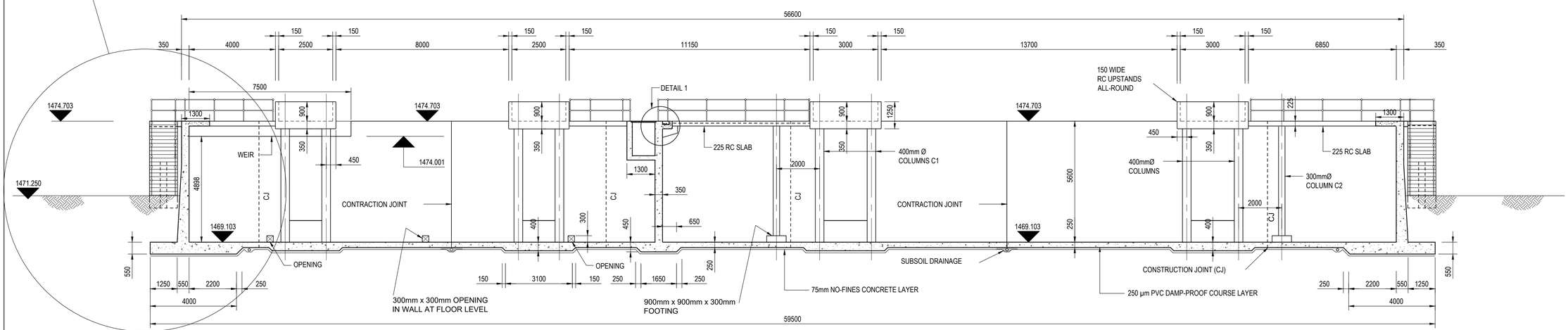
DETAIL 1

SCALE 1:20



WEIR PLATE

SCALE 1:10



SECTION B - B

SCALE 1:100

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0 5 10 15 20 25 30 40 50 60 70 80 90MM

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- SCOPE OF WORK

ISSUED FOR TENDER

No.	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

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INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2750, Rivonia, 2128
Telephone No. +27 11 519 4500
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JM LAUBSCHER

Designed By: JM LAUBSCHER

Reviewed By: JC DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: BIOLOGICAL REACTOR LAYOUT AND SECTION SHEET 3 OF 4

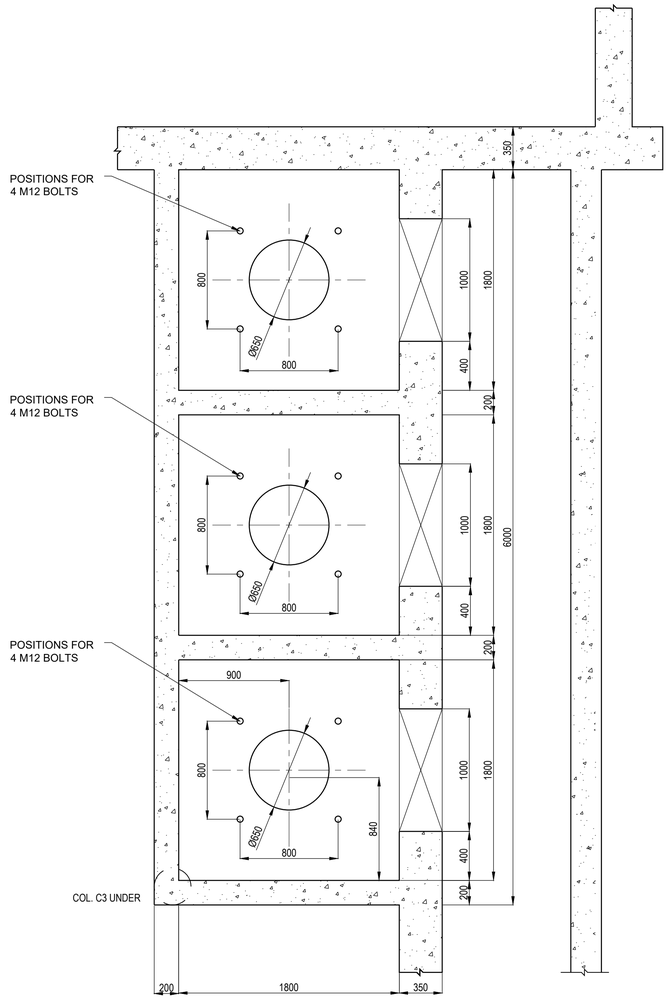
Scale: AS SHOWN

Date: NOVEMBER 2022

Project No: J40073

Org. No: 010-209

Rev: 0



CIVIL SECTION B - B
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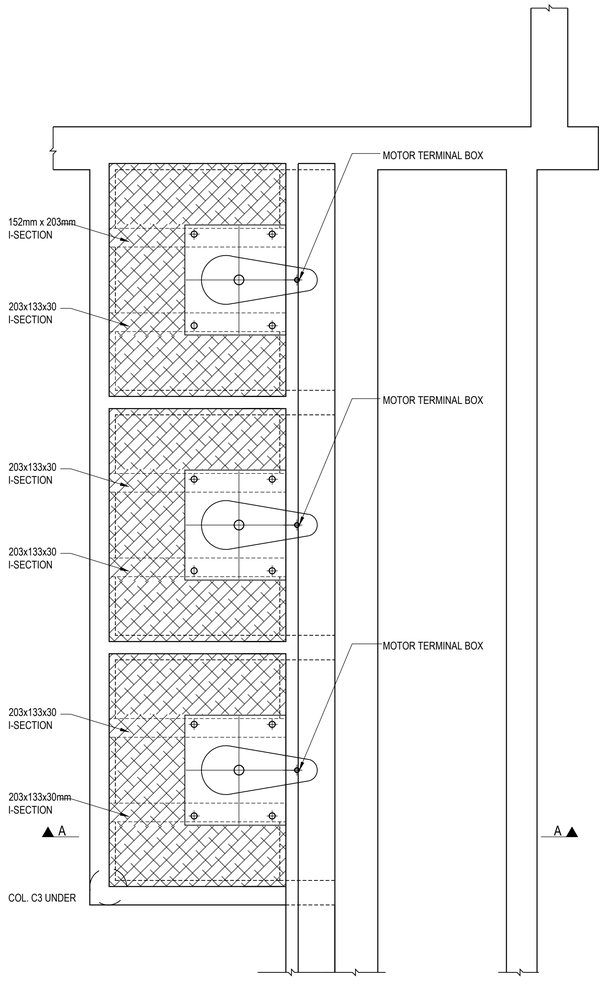
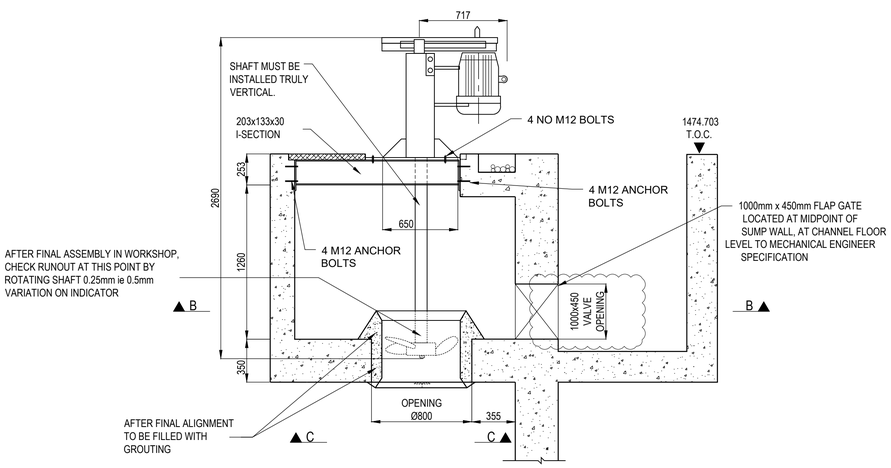
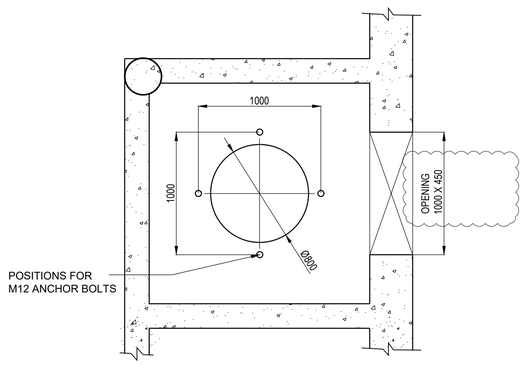


PLAN VEIW
1:25



SECTION A - A
1:25



PLAN DETAIL VIEW C - C
(TYPICAL TO ALL THREE SUMPS)
1:25

INSTALATION DETAILS:

1. INSTALL PUMP & THROAT TUBE & LEVEL PLATE & THROAT TUBE, CENTRALISE PROP IN THROAT TUBE. CHECK SHAFT IS VERTCAL.
2. ANCHOR THE THROAT TUBE, CHECK PROP IS STILL CENTRALIN THROAT TUBE, GROUT BASEPLATE ANCHORS.
3. CHECK ALIGNMENT FOR FINAL TIME.
4. GROUT BASEPLATE & THOAT TUBE

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ON ORIGINAL

0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. POSITIONS AND SIZES OF ALL POCKETS AND OPENINGS TO BE CONFIRMED WITH MECHANICAL CONTRACTOR BEFORE CONSTRUCTION.
2. FOR DRAWING NOTES, REFER TO DWG No 010-110
3. FOR JOINT DETAILS, REFER TO DWG No 010-103

- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5070

Approved By: D.C.VAN

Drawn By: per J.MAY

Designed By: per K.MURRAY

Reviewed By: VDW WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: BIOLOGICAL REACTOR LAYOUT AND SECTION SHEET 4 OF 4

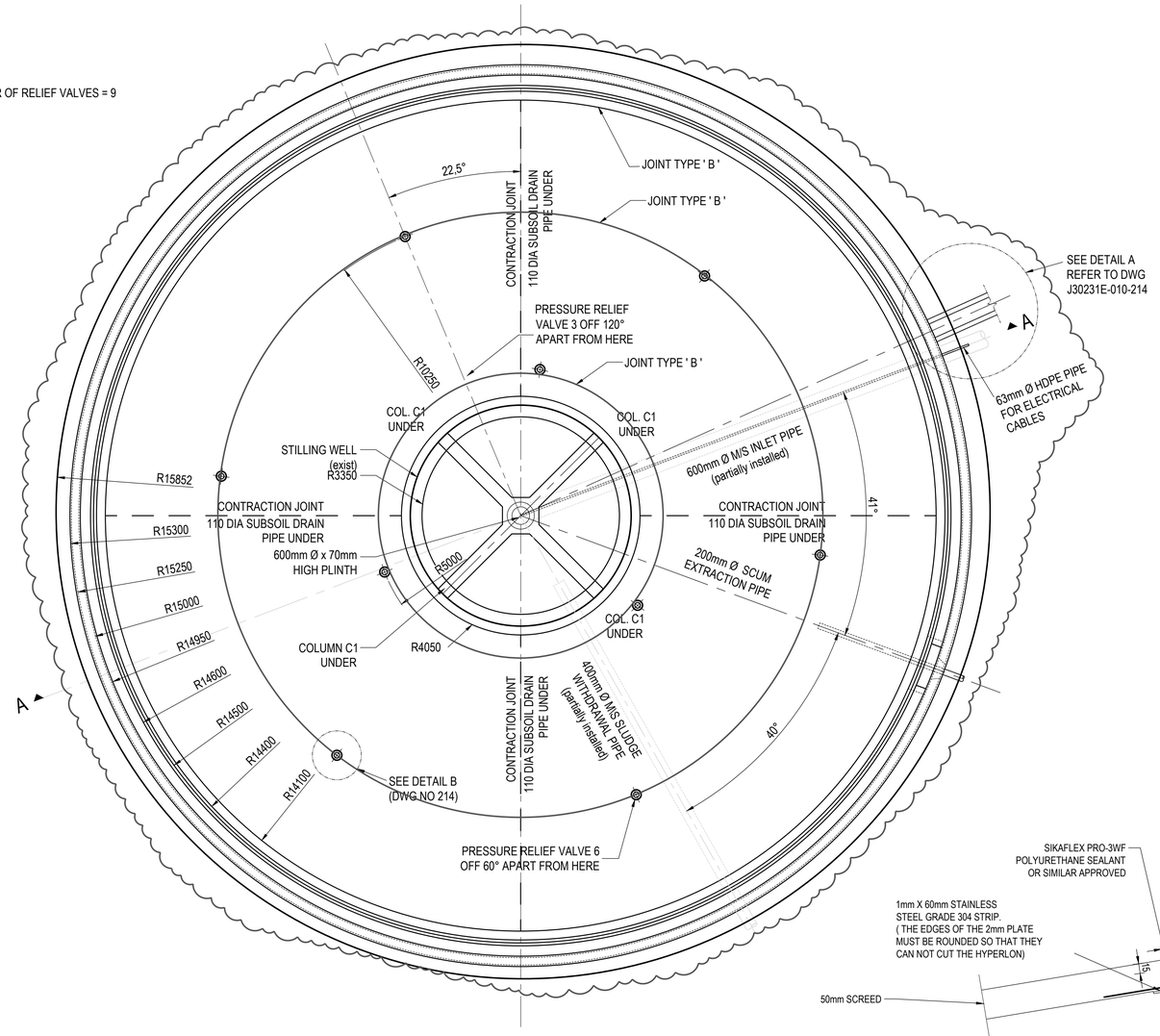
Scale: 1:25

Date: NOVEMBER 2022

Project No: J40073 / Dwg No: 010-210 / Rev: 0

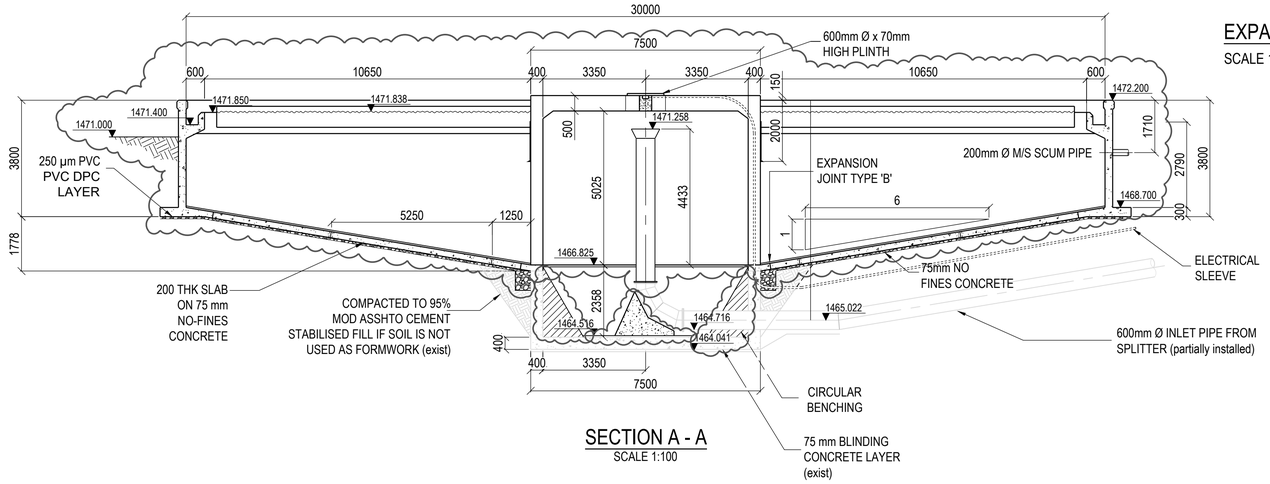
NOTE :

TOTAL NUMBER OF RELIEF VALVES = 9



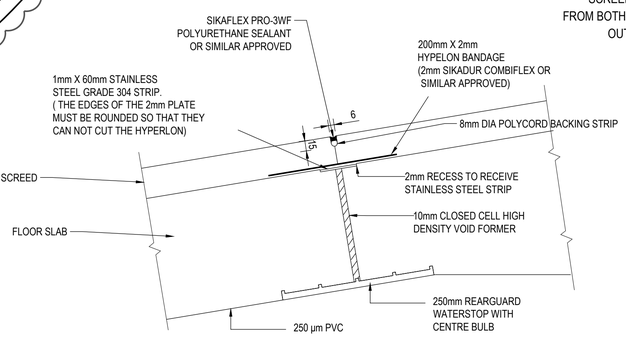
PLAN: SECONDARY SEDIMENTATION TANK

SCALE 1:100



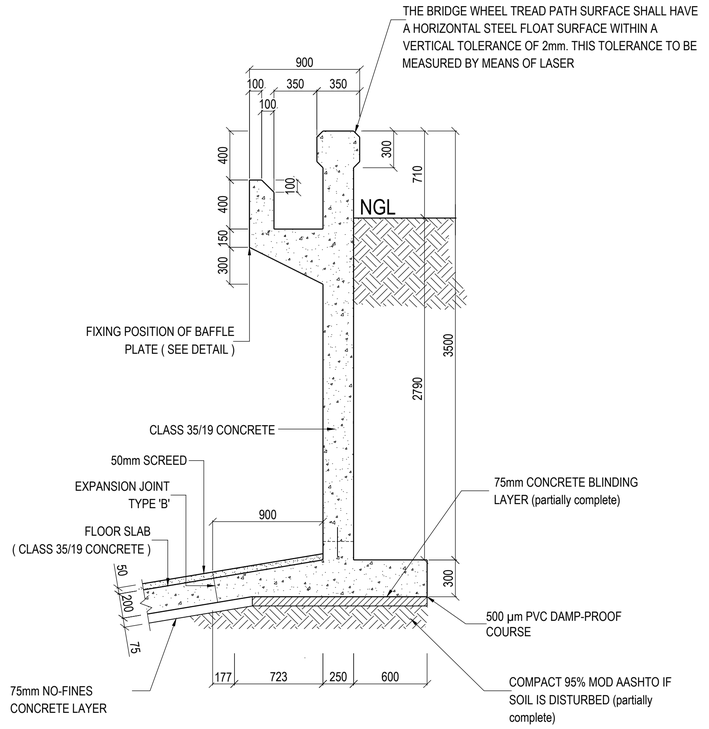
SECTION A - A

SCALE 1:100



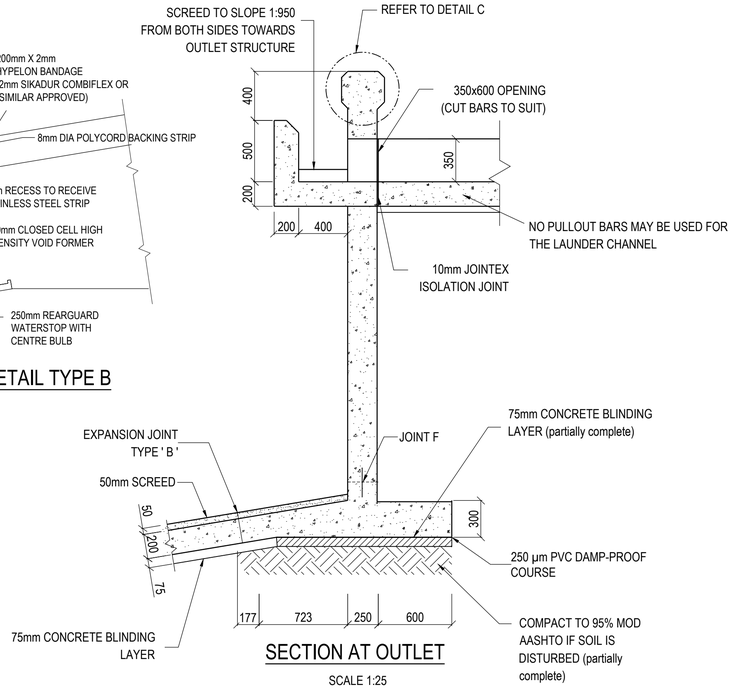
EXPANSION JOINT DETAIL TYPE B

SCALE 1:5



TYPICAL WALL SECTION

SCALE 1 : 25



SECTION AT OUTLET

SCALE 1:25

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. POSITIONS AND SIZES OF ALL POCKETS AND OPENINGS TO BE CONFIRMED WITH MECHANICAL CONTRACTOR BEFORE CONSTRUCTION.
2. FOR DRAWING NOTES, REFER TO DWG NO 010-110-0
3. FOR JOINT DETAILS, REFER TO DWG NO 010-103-0
4. ALSO REFER TO BoQ FOR FULL EXTENT OF WORK TO BE COMPLETED.

- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Ridgeberry 00, Riviona, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: B CLARK

Drawn By: JM FERREIRA | Designed By: JD K MURPHY | Reviewed By: JC DE WET

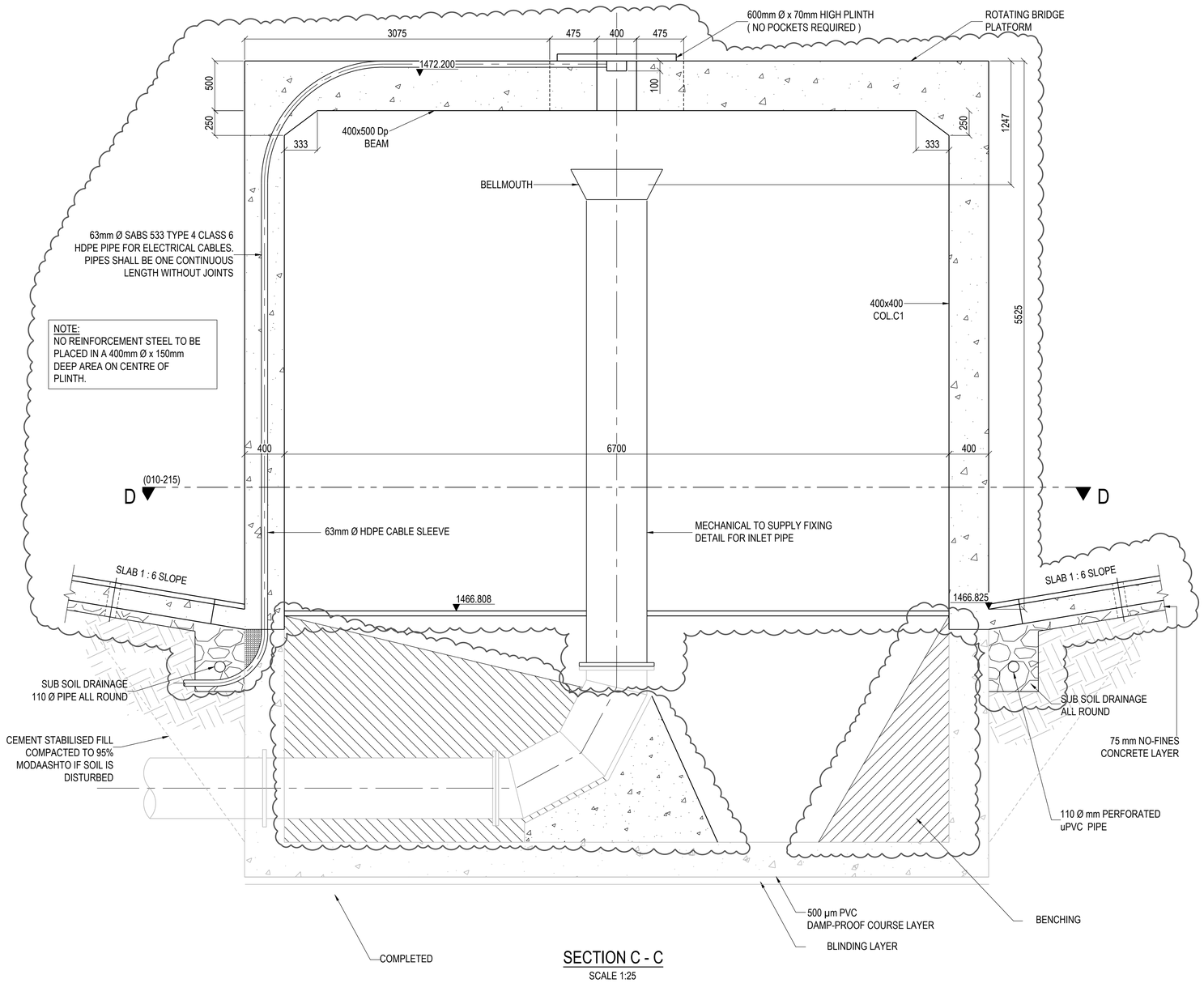
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: SECONDARY SEDIMENTATION TANK - PLAN SECTIONS AND DETAILS SHEET 1 OF 3

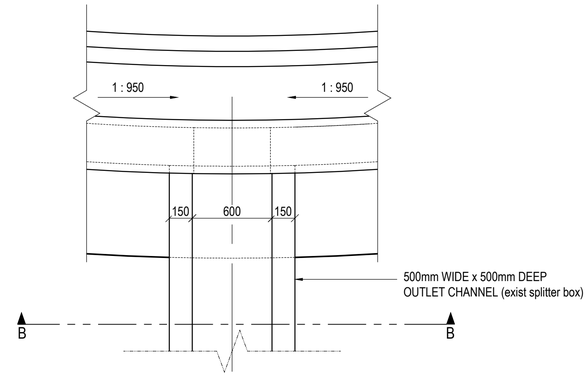
Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 / Dwg. No: 010-213 / Rev: 0

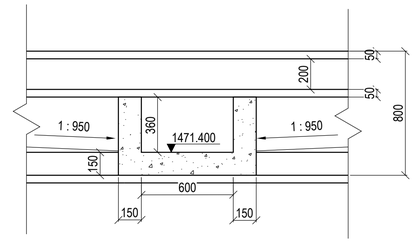
\\ELS-CLUSTERPROJECTS\J40231E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD\ MENASHEN REDDY | 10/03/2023 16:16:10



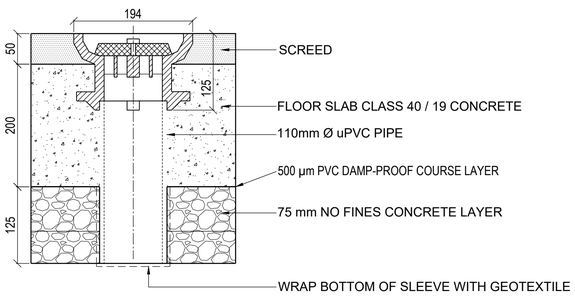
SECTION C - C
SCALE 1:25



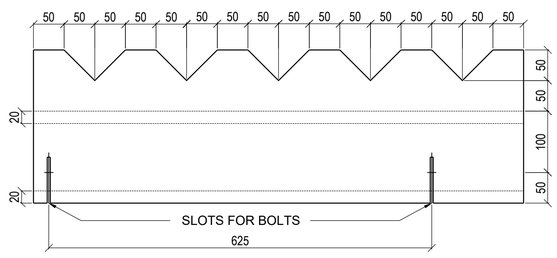
DETAIL A - PLAN
SCALE 1:20



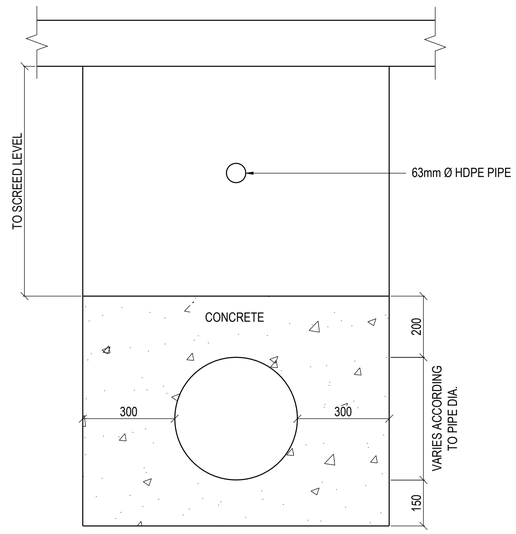
DETAIL A - SECTION B - B
SCALE 1:20



DETAIL B
1 : 5



DETAIL OF V - NOTCH PLATE
SCALE 1:5



TYPICAL SECTION OF INLET AND OUTLET PIPES IN SOILCRETE
SCALE 1:10

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ON ORIGINAL

GENERAL NOTES:

1. POSITIONS AND SIZES OF ALL POCKETS AND OPENINGS TO BE CONFIRMED WITH MECHANICAL CONTRACTOR BEFORE CONSTRUCTION.
2. FOR DRAWING NOTES, REFER TO DWG NO 010-110-0
3. FOR JOINT DETAILS, REFER TO DWG NO 010-103-0
4. ALSO REFER TO BoQ FOR FULL EXTENT OF WORK TO BE COMPLETED.

SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: DARMA

Drawn By	Designed By	Reviewed By
JM ZUMA	JM MURPHY	VDE WET

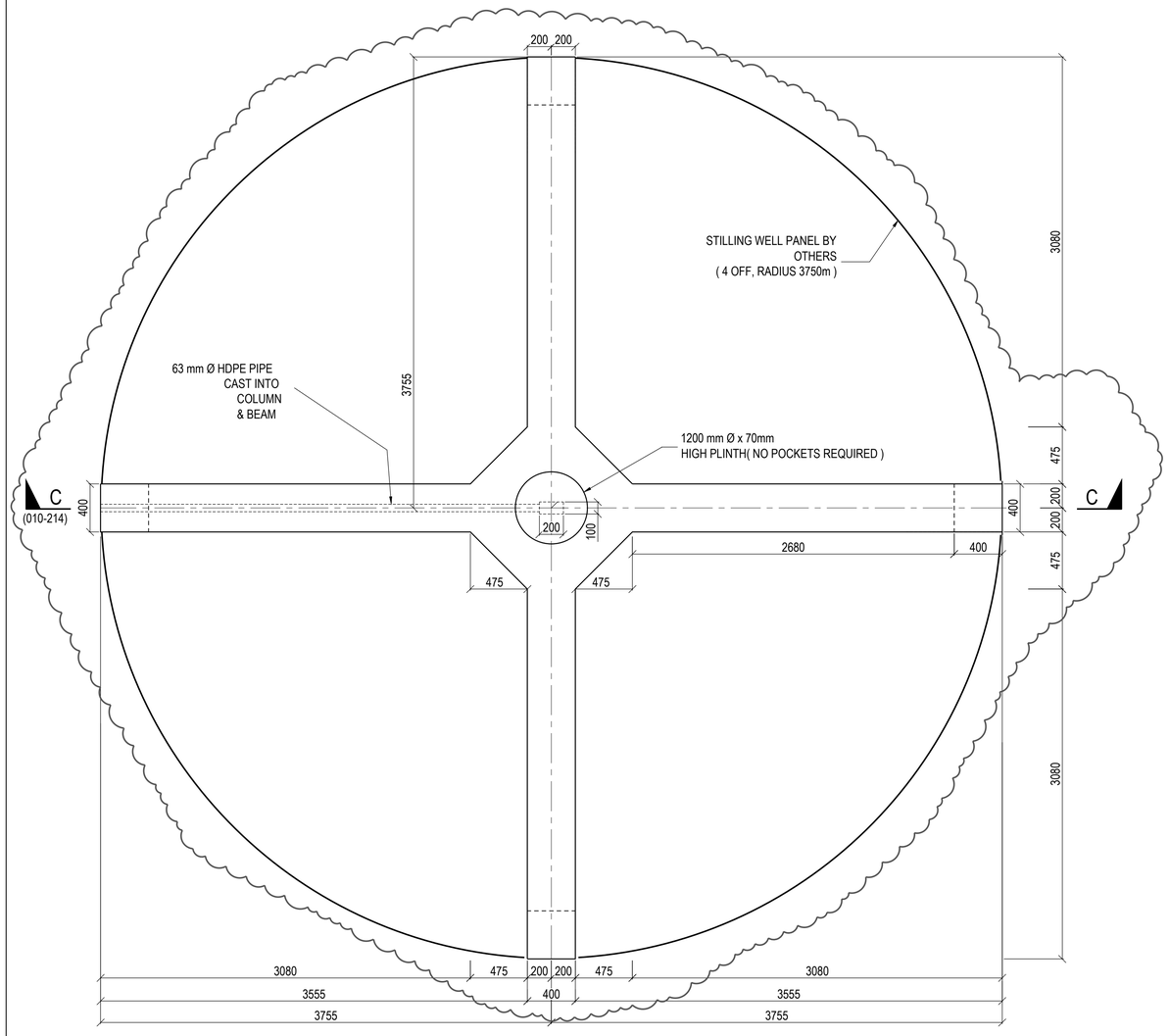
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: SECONDARY SEDIMENTATION TANK - PLAN SECTIONS AND DETAILS SHEET 2 OF 3

Scale	Date
AS SHOWN	NOVEMBER 2022

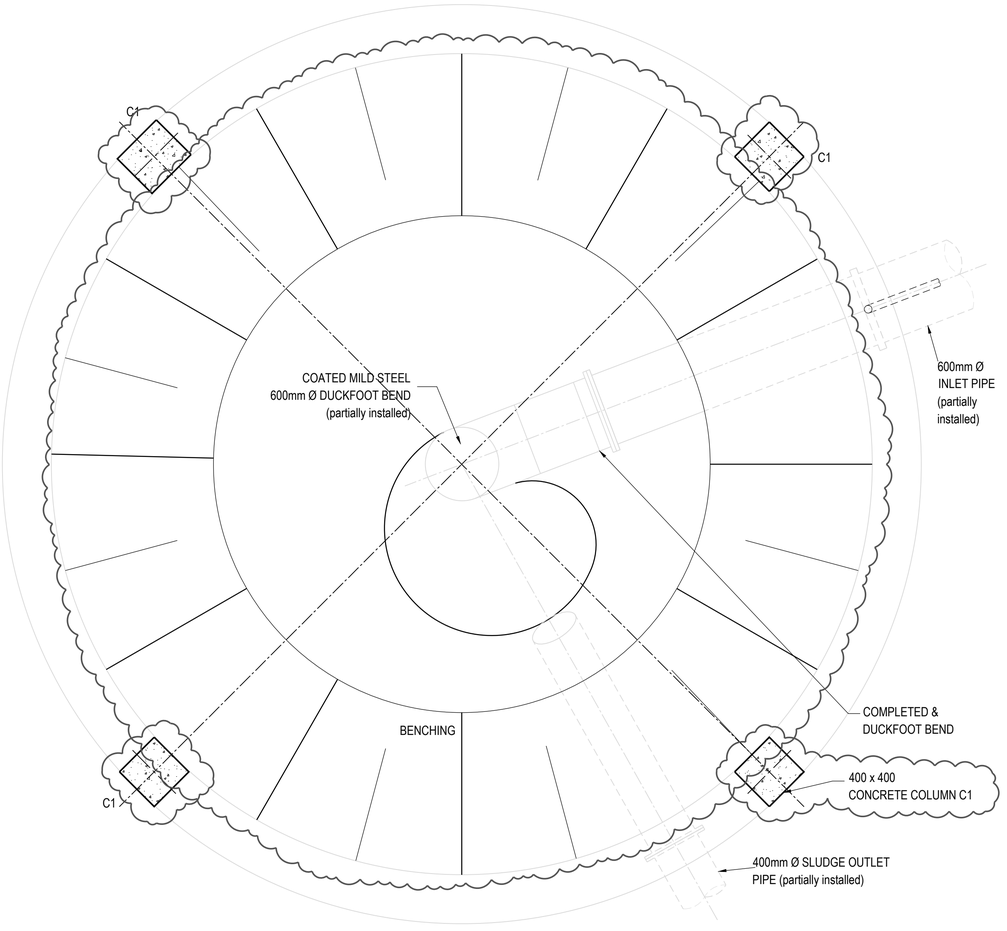
Project No	Dg. No	Rev
J40073	010-214	0

\\BLS-C\CLUSTER\PROJECTS\J40073\E MEYERTON WWTW\O_DRAWINGS\4_ TENDER DRAWINGS 2022\NEW CAD \ MENAKSHEN REDDY | 11/03/2023 16:16:10



PLAN: DETAIL OF PLATFORM

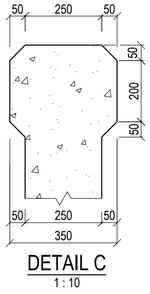
SCALE 1:25



SECTION D - D

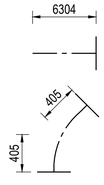
(CENTER CONE AND PIPE CONFIGURATION)

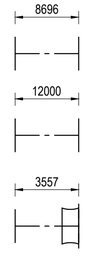
SCALE 1:25



DETAIL C

1 : 10





NOTE :

SEDIMENTATION TANK WALL TO BE A SINGLE ELEMENT.

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ON ORIGINAL

0 10 20 30 40 50 60 70 80 90MM

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3. FOR JOINT DETAILS, REFER TO DWG NO 010-103-0
4. ALSO REFER TO BoQ FOR FULL EXTENT OF WORK TO BE COMPLETED.

- SCOPE OF WORK -

ISSUED FOR TENDER

No	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No: +27 11 519 4600
Fax No: +27 11 807 5670

Approved By: J.P.CLARK

Drawn By: JP.P.BOTHA | Designed By: JD.P.MURPHY | Reviewed By: VDE WET

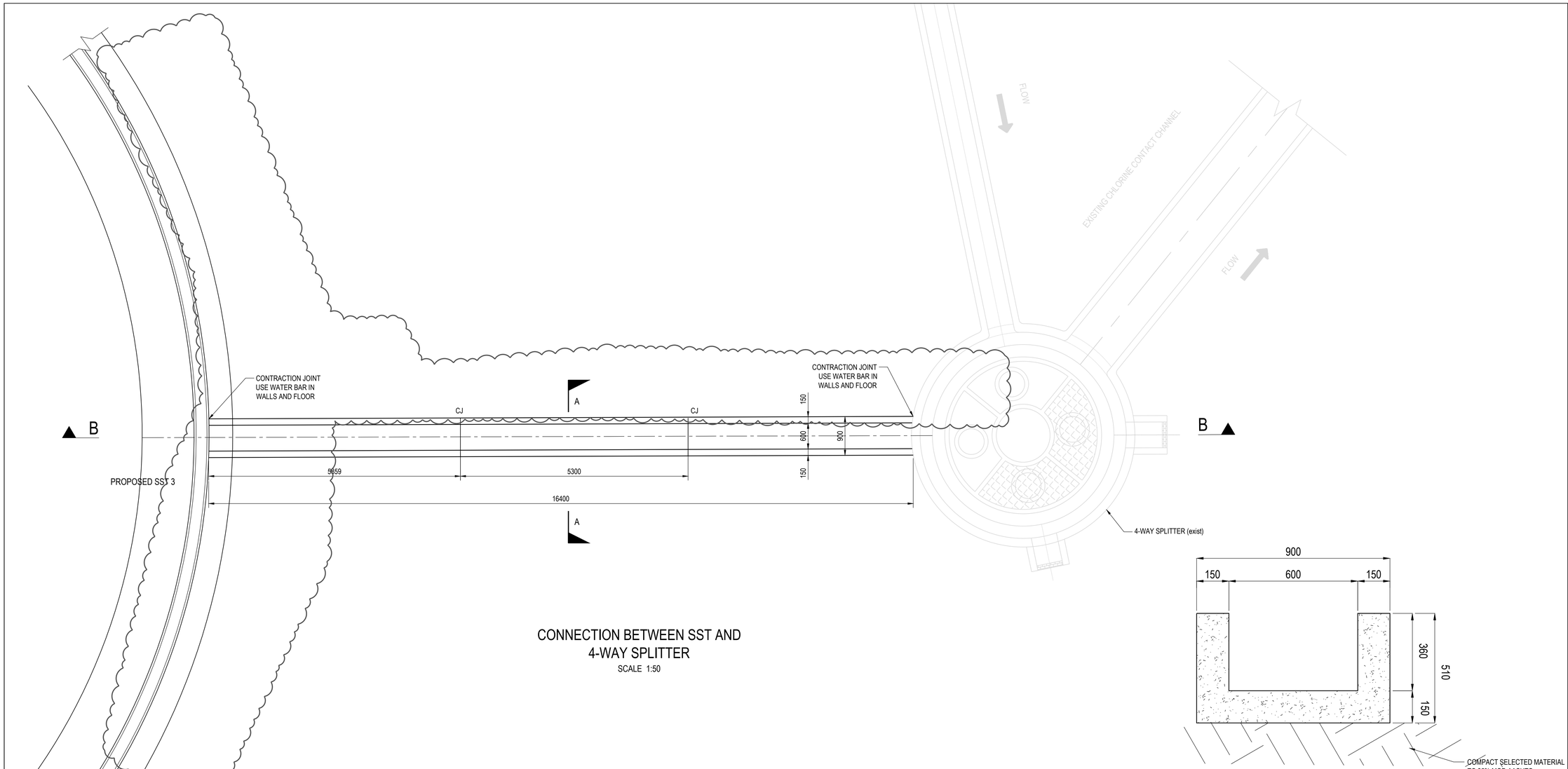
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: SECONDARY SEDIMENTATION TANK - PLAN SECTIONS AND DETAILS SHEET 3 OF 3

Scale: AS SHOWN | Date: NOVEMBER 2022

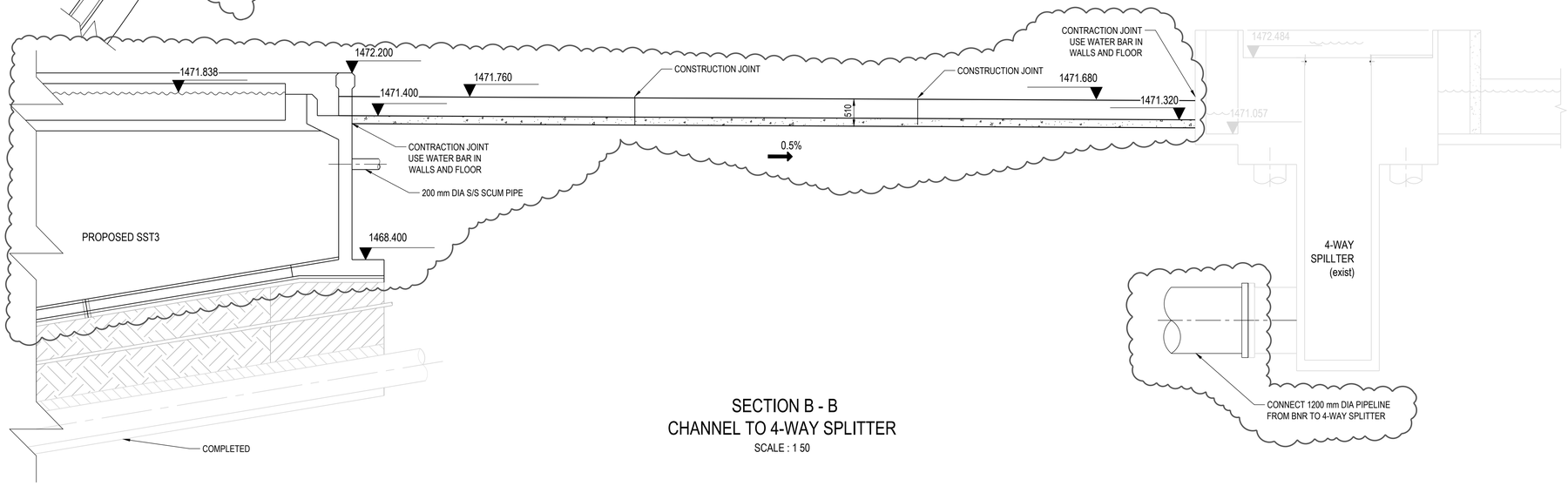
Project No: J40073 / Org. No: 010-215 / Rev: 0

\\ELS-CLUSTER\PROJECTS\J0023\E MEYERTON WWTW\O_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \ MENASHEN.REDDY | 11/03/2023 16:16:10



CONNECTION BETWEEN SST AND
4-WAY SPLITTER
SCALE 1:50

CROSS SECTION A - A
SCALE 1:10



SECTION B - B
CHANNEL TO 4-WAY SPLITTER
SCALE : 1 50

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ON ORIGINAL

0 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. FOR DRAWING NOTES, REFER TO DWG NO 010-110-0
2. FOR JOINT DETAILS, REFER TO DWG NO 010-103-0
3. ALSO REFER TO BoQ FOR FULL EXTEND OF WORK TO BE COMPLETED.

SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK
Drawn By: JS LOMAS
Designed By: JS KLOPPERS
Reviewed By: JCE VIET

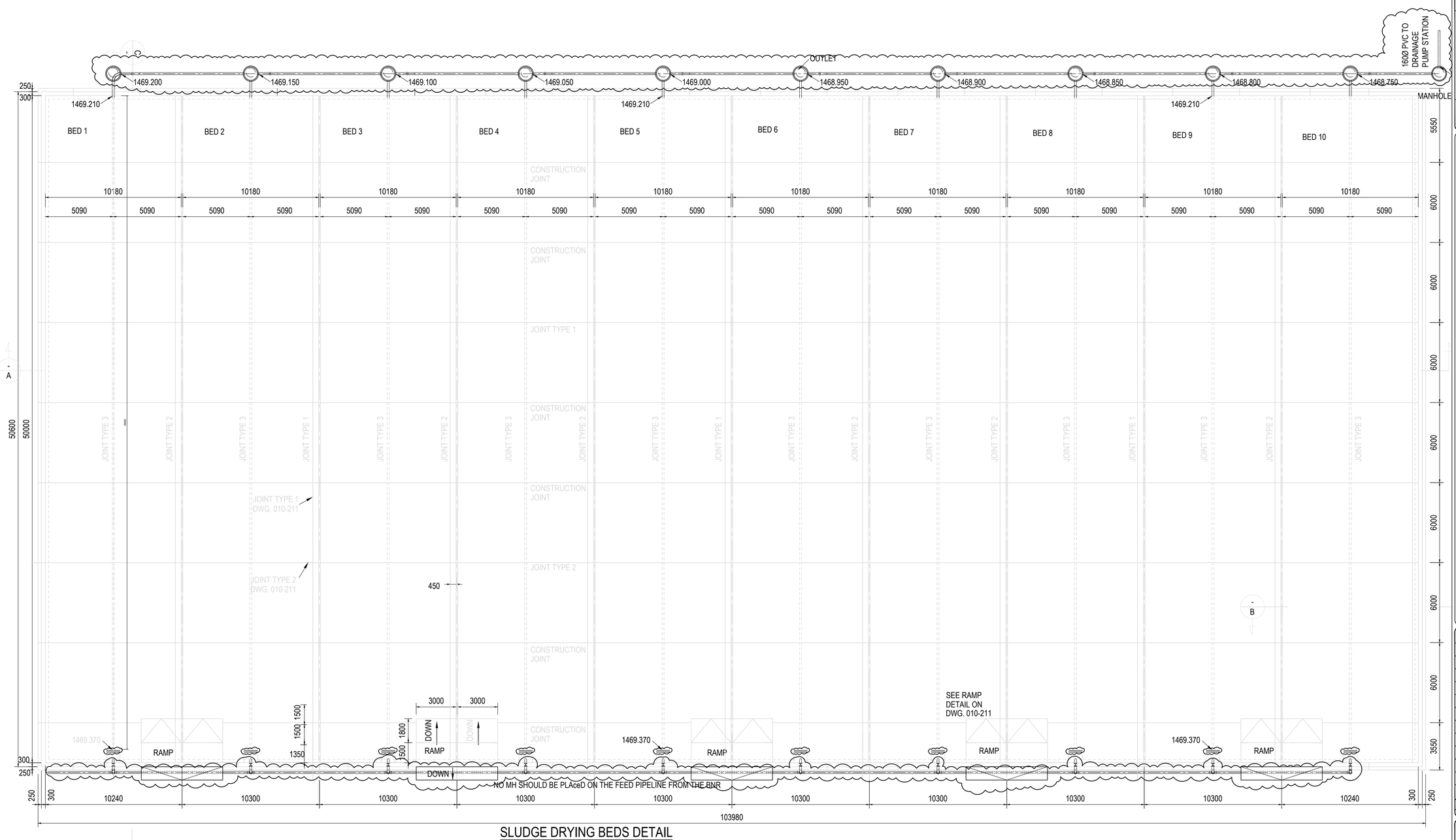
Project
EXTENSION
OF MEYERTON
WASTEWATER
TREATMENT WORKS

Description
CONNECTION BETWEEN
SST AND 4-WAY SPLITTER

Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-216 / Rev: 0

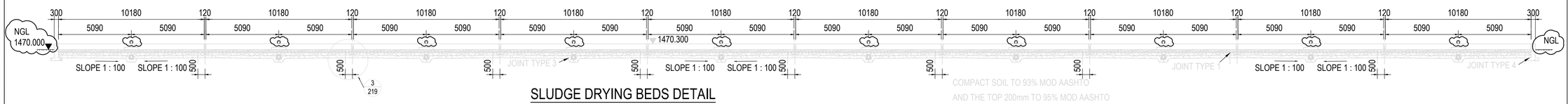
\\ELS-CLUSTER\PROJECTS\J00316 MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY | 10/03/2023 16:16:10



SLUDGE DRYING BEDS DETAIL

PLAN VIEW

SCALE 1: 100



SLUDGE DRYING BEDS DETAIL

SECTION A-A

SCALE 1: 100

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. WALLS ARE NOT DESIGNED FOR IMPACT. CARE TO BE TAKEN WHEN PLACING LAYERS OVER SLAB AND WHEN DESLUDGING.
2. FOR CONCRETE NOTES, SEE DWG No 010-110
3. FOR CONCRETE JOINTS, SEE DWG No 010-103
4. ALSO REFER TO BoQ FOR FULL EXTENT OF WORK TO BE COMPLETED
5. PIPEWORK, MANHOLE, UPSTAND WALL, OUTSIDE RAMPS TO BE COMPLETED

- SCOPE OF WORK

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JM LEMMER

Designed By: JM LEMMER

Reviewed By: CHE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

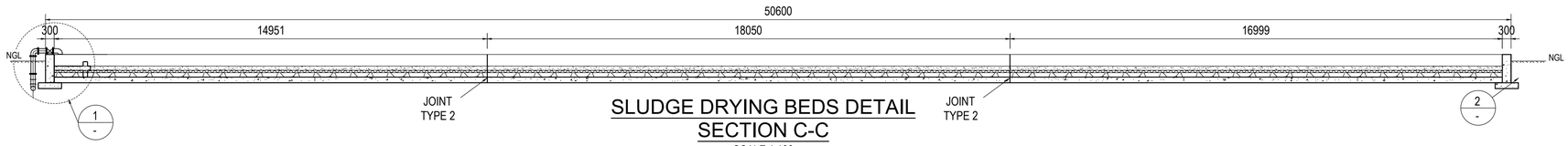
Description: SLUDGE DRYING BEDS DETAILS SHEET 1 OF 2

Scale: AS SHOWN

Date: NOVEMBER 2022

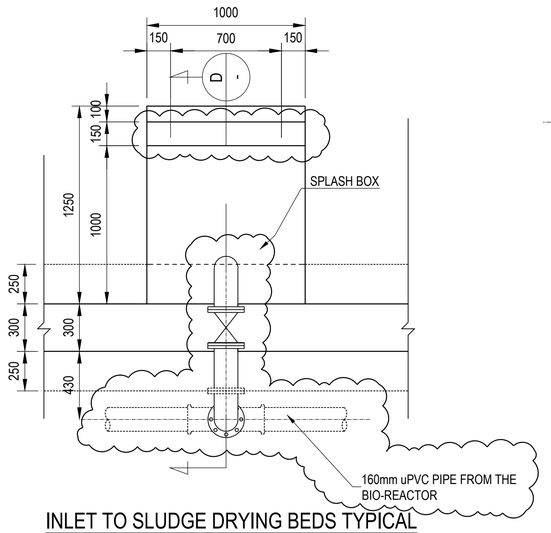
Project No: J40073 / Drg. No: 010-218 / Rev: 0

\\ELS-CLUSTER\PROJECTS\J40073\E MEYERTON WWTW\3_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \MEMSHEN REDDY | 10/10/2023 16:16:10



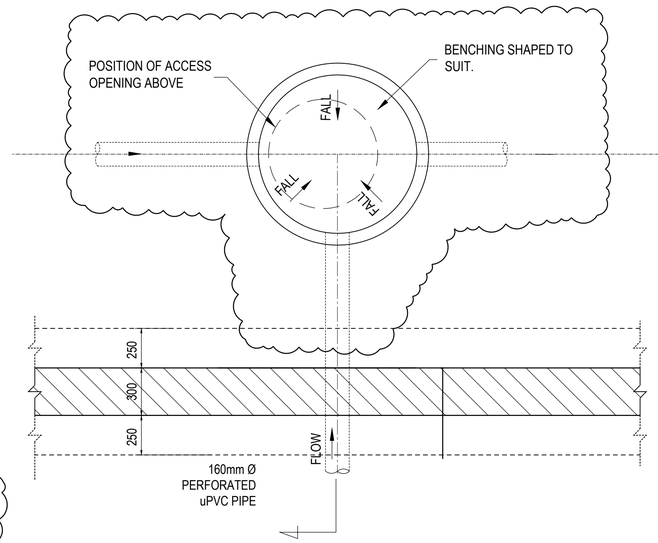
SLUDGE DRYING BEDS DETAIL SECTION C-C

SCALE 1:100



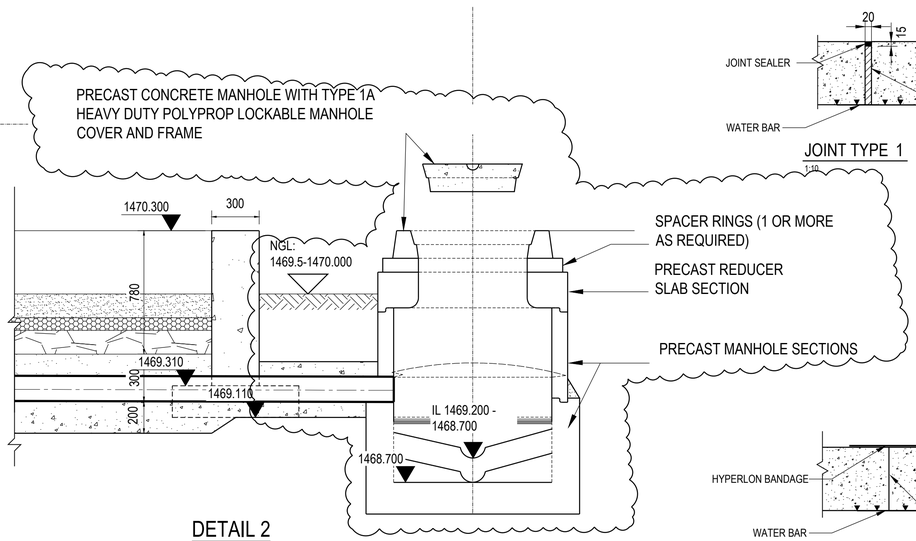
INLET TO SLUDGE DRYING BEDS TYPICAL DETAIL

SCALE 1: 20



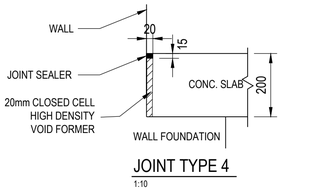
OUTLET OF SLUDGE DRYING BEDS TYPICAL DETAIL

SCALE 1: 20



DETAIL 2 SECTION E-E OUTLET OF SLUDGE DRYING BEDS

SCALE 1: 20



JOINT TYPE 4

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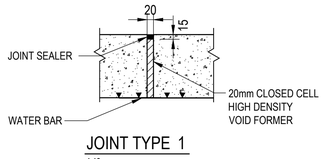


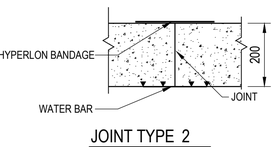
JOINT TYPE 1

1:10

- SCOPE OF WORK

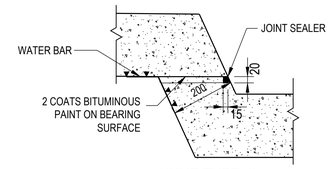
GENERAL NOTES:

1. WALLS ARE NOT DESIGNED FOR IMPACT. CARE TO BE TAKEN WHEN PLACING LAYERS OVER SLAB AND WHEN DESLUDGING.
2. FOR CONCRETE NOTES, SEE DWG No 010-110
3. FOR CONCRETE JOINTS, SEE DWG No 010-103
4. PIPEWORK, MANHOLES, OUTSIDE RAMP, BACKFILLING TO BE COMPLETED



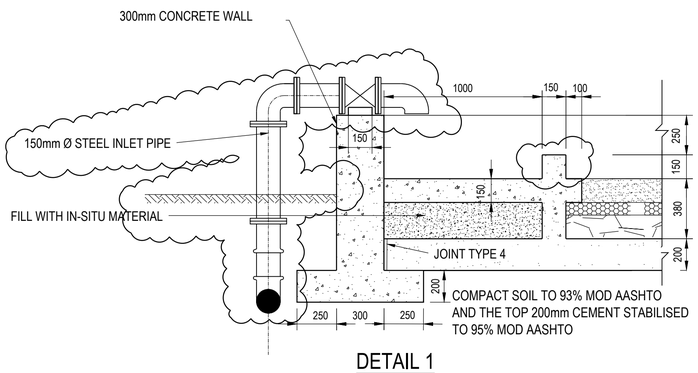
JOINT TYPE 2

1:10



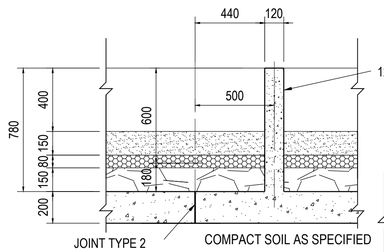
JOINT TYPE 3

1:10



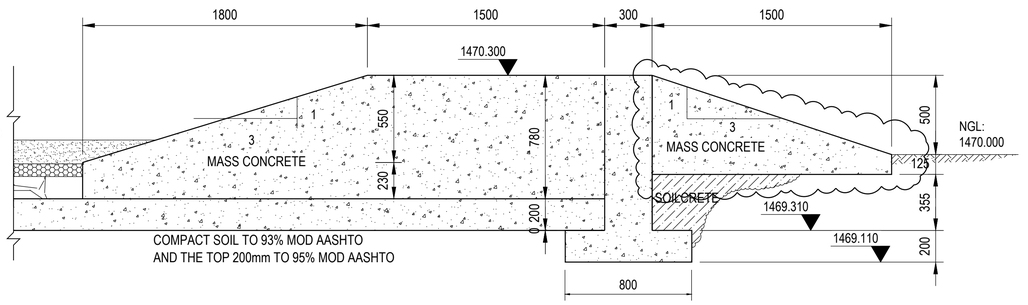
DETAIL 1 SECTION D-D INLET TO SLUDGE DRYING BEDS

SCALE 1: 20



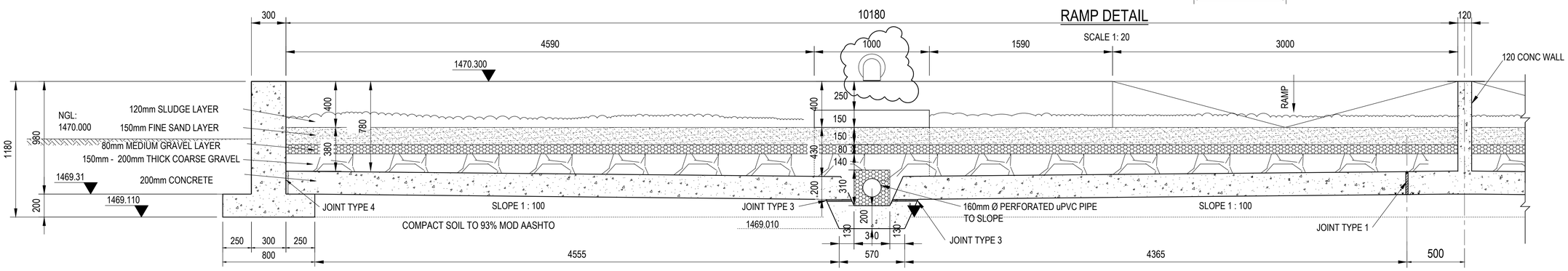
DETAIL 3 INTERMEDIATE WALL

SCALE 1: 20



RAMP DETAIL

SCALE 1: 20



SLUDGE DRYING BEDS TYPICAL DETAIL SECTION B-B

SCALE 1: 20

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4000
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JP JOUBERT

Designed By: SV MURPHY

Reviewed By: CJ DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: SLUDGE DRYING BEDS DETAILS SHEET 2 OF 2

Scale: AS SHOWN

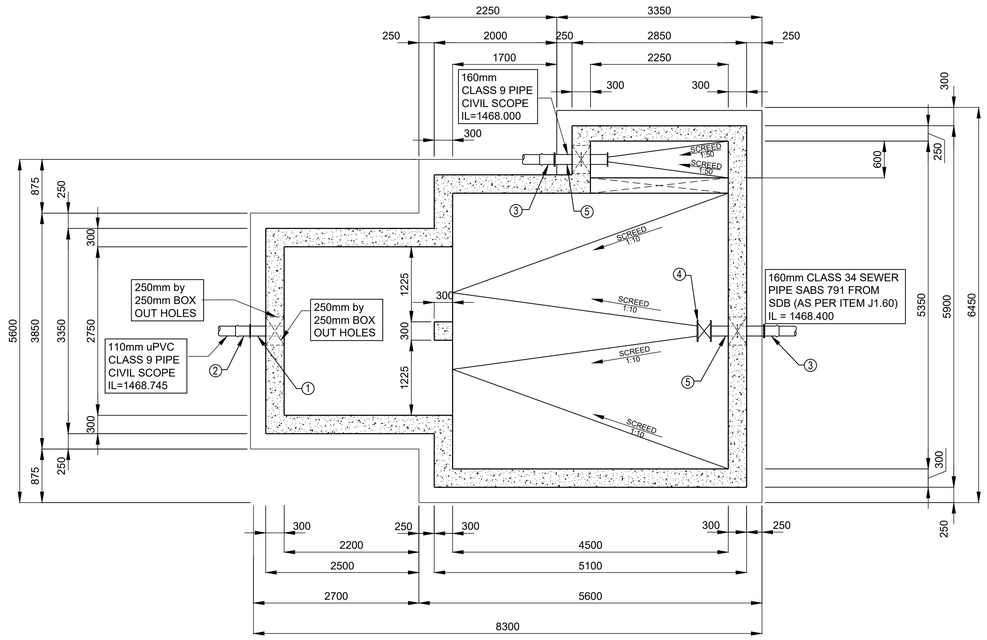
Date: NOVEMBER 2022

Project No: J40073

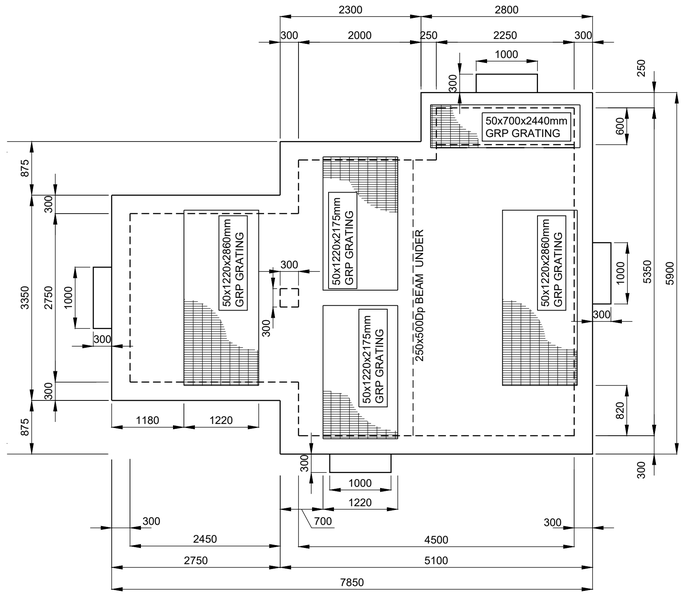
Drg. No: 010-219

Rev: 0

I:\ELS-CLUSTER\PROJECTS\J40073 MEYERTON WWTW\3_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD | MENASHEN REDDY | 10/03/2023 16:16:10

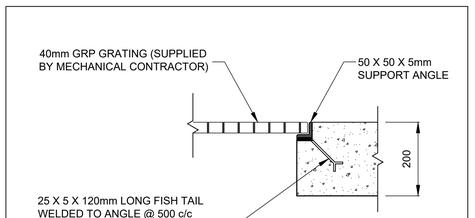


SECTIONAL PLAN VIEW IRRIGATION PUMP STATION
SCALE 1:50

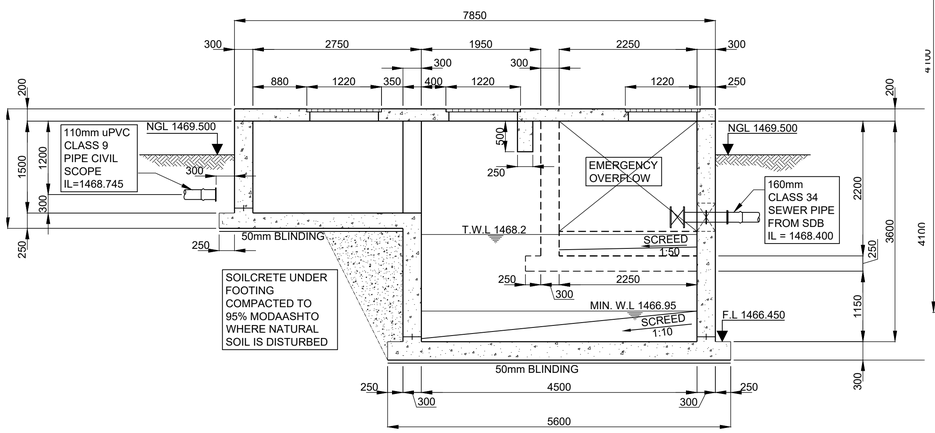


PLAN: ROOF SLAB FOR IRRIGATION PUMP STATION
SCALE 1:50

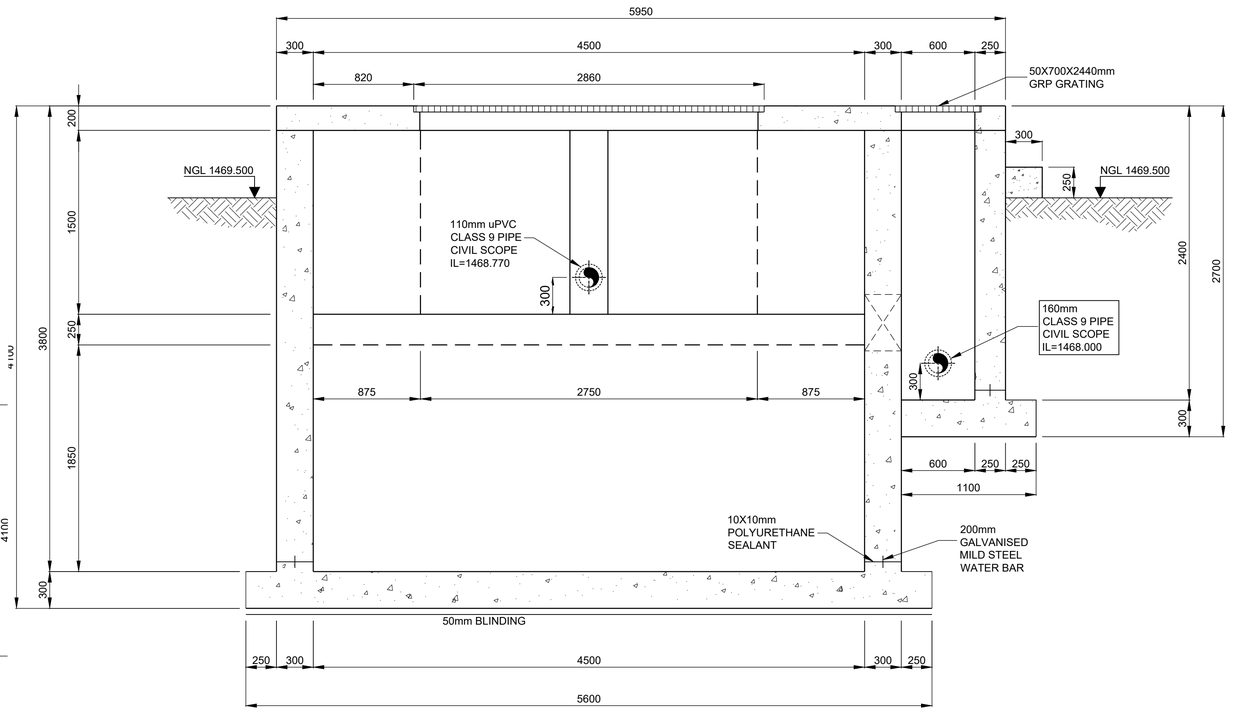
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS PIPING, FITTINGS AND VALVES				
HEAD OF WORKS CONNECTION DETAILS				
MARK	NOM.INT. Ø (mm)	QUANTITY	MATERIAL	DESCRIPTION
1	110	1	STEEL	110mm NB, M.S.*, 4.5mm w.t, PIPE SPECIALS SHALL BE 550mm O.A., ONE END FLANGED AND A P.F. 150mm FROM THE PLAIN END.
2	110	1	CAST IRON	110mm NB uPVC STEEL FLANGE ADAPTOR TO SUIT SABS 1123 TABLE 1600/3 FLANGE.
3	160	2	CAST IRON	160mm NB uPVC STEEL FLANGE ADAPTOR TO SUIT SABS 1123 TABLE 1600/3 FLANGE.
4	150	1	STEEL	150mm NB, RESILIENT SEAL GATE VALVE COMPLETE WITH STAINLESS STEEL SPINDLE.
5	150	2	STEEL	150mm NB M.S.*, 4.5mm w.t, 850mm O.A. DOUBLE FLANGED WITH PUDDLE FLANGE IN THE CENTER.



DETAIL OF GRP GRATING
SCALE 1:10



SECTION A - A
SCALE 1:50



SECTION B - B
SCALE 1:25

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ON ORIGINAL

GENERAL NOTES:

1. POSITIONS AND SIZES OF ALL POCKETS AND OPENINGS TO BE CONFIRMED WITH MECHANICAL CONTRACTOR BEFORE CONSTRUCTION.
2. FOR DRAWING NOTES, REFER TO DWG NO 010-110-0
3. FOR JOINT DETAILS, REFER TO DWG NO 010-103-0
4. CONCRETE TO BE 35MPa

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
2198 Johannesburg
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5078

Approved By: D.CLARK

Drawn By	Designed By	Reviewed By
JM FERREIRA	JM FERREIRA	A DE WET

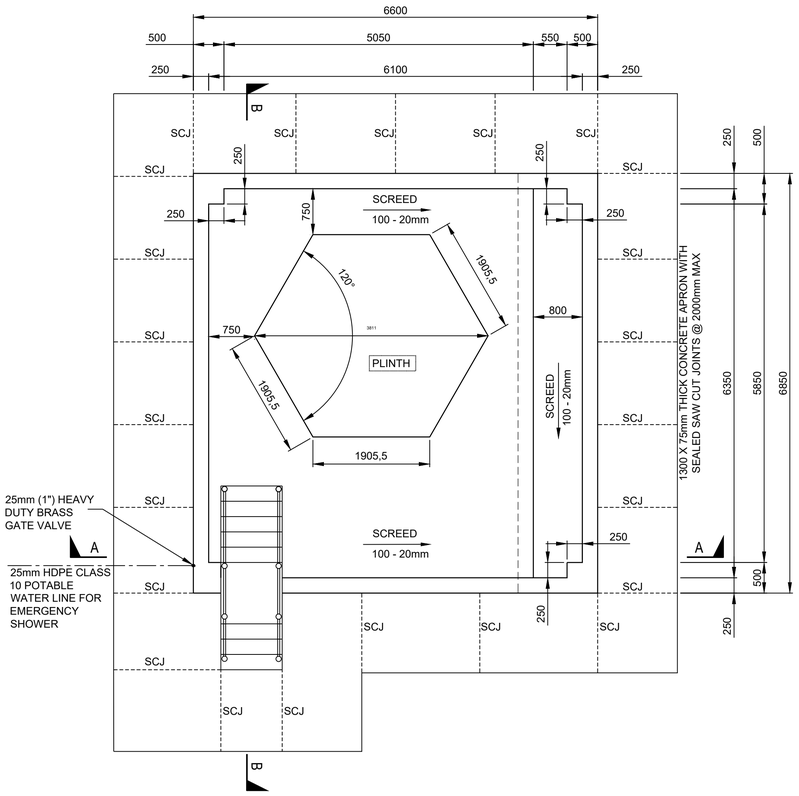
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: IRRIGATION PUMP STATION

Scale	Date
AS SHOWN	NOVEMBER 2022

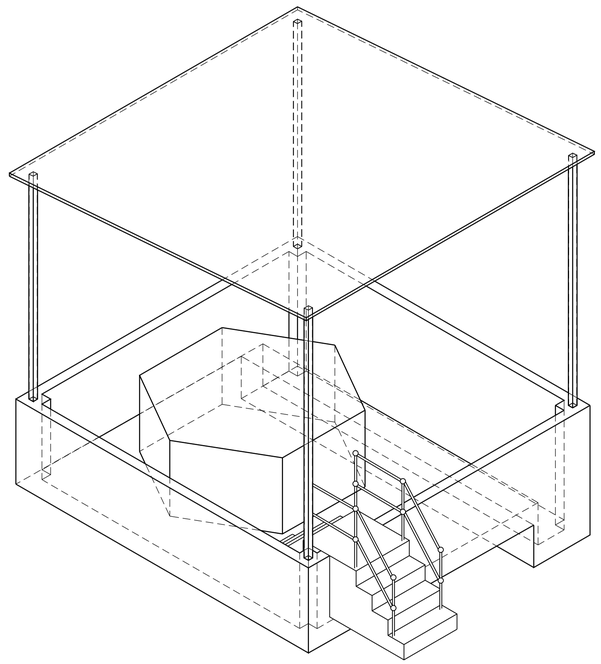
Project No	Drg. No	Rev
J40073	010-220	0

\\ELS-CLUSTERPROJECTS.IJ3023\E MEYERTON WWTW\0_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY | 10/03/2023 16:16:10

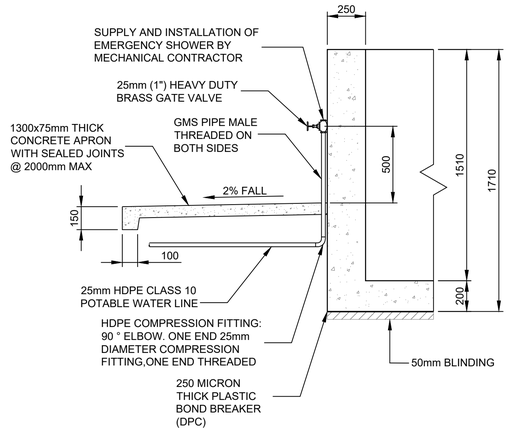


PLAN VIEW: FERRIC CHLORIDE DOSING PLATFORM

SCALE 1:50

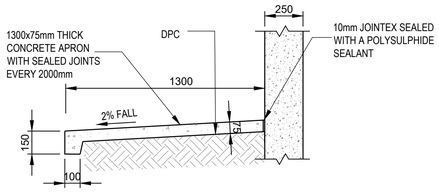


ISOMETRIC VIEW OF FERRIC CHLORIDE DOSING PLATFORM



DETAIL A

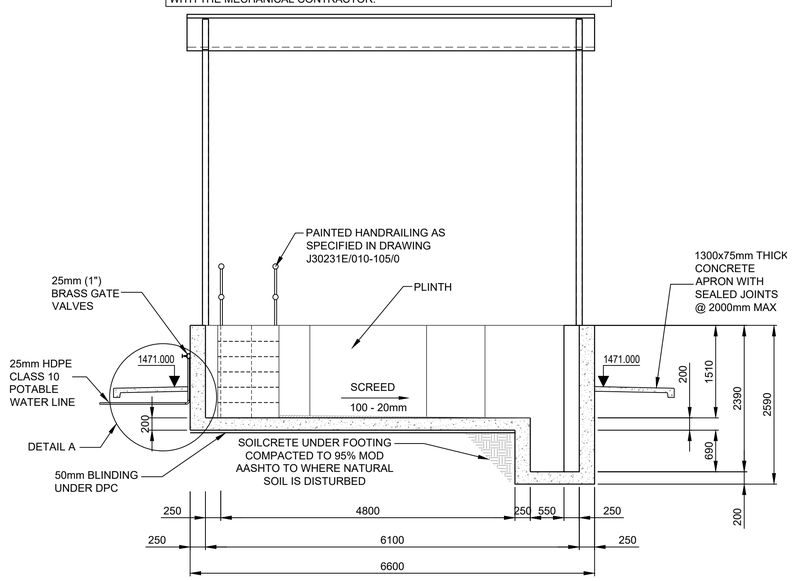
SCALE 1:20



APRON DETAIL

SCALE 1:20

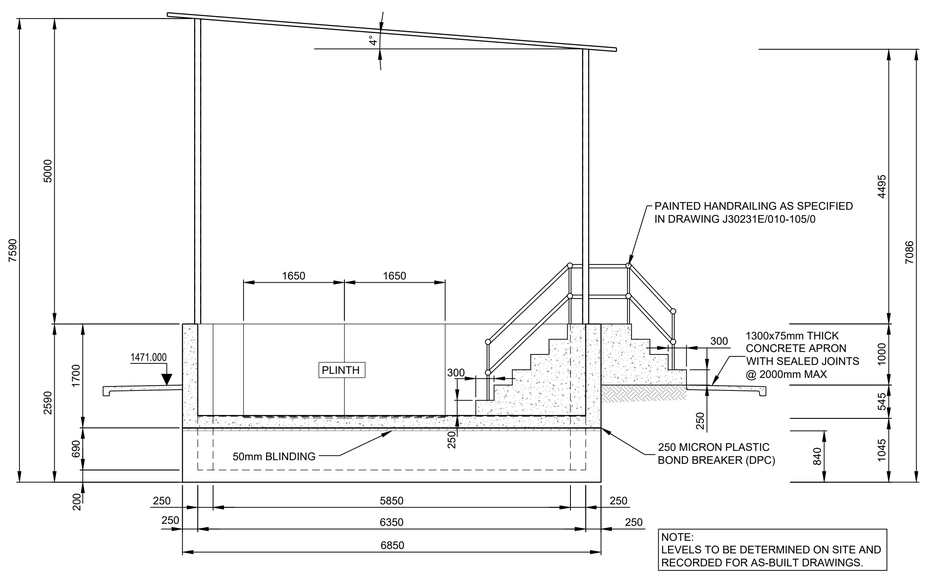
NOTE:
CANOPY TO BE DESIGNED AND SUPPLIED BY CIVIL CONTRACTOR. ENGINEER TO COMMENT ON THE DESIGN PRIOR TO MANUFACTURE. STEEL STRUCTURE TO BE HOT DIPPED GALVANISED. 0.8mm THICK, TYPE 686 IBR GALVANISED ROOF SHEETING. INSTALLATION OF FERRIC CHORIDE TANK MUST BE CO-ORDINATED WITH THE MECHANICAL CONTRACTOR.



SECTION A - A

SCALE 1:50

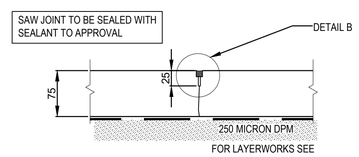
NOTE:
CANOPY TO BE DESIGNED AND SUPPLIED BY CIVIL CONTRACTOR. ENGINEER TO COMMENT ON THE DESIGN PRIOR TO MANUFACTURE. STEEL STRUCTURE TO BE HOT DIPPED GALVANISED. 0.8mm THICK, TYPE 686 IBR GALVANISED ROOF SHEETING. INSTALLATION OF FERRIC CHORIDE TANK MUST BE CO-ORDINATED WITH THE MECHANICAL CONTRACTOR.



NOTE:
LEVELS TO BE DETERMINED ON SITE AND RECORDED FOR AS-BUILT DRAWINGS.

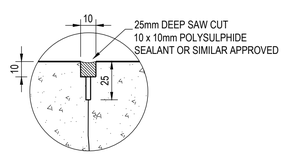
SECTION B - B

SCALE 1:50



TYPICAL SAW CUT-APRON JOINT DETAIL (SCJ)

SCALE 1:5



DETAIL B

SCALE 1:2

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ON ORIGINAL

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
79 Watt Street, Houghton Estate
Nowlands, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JD MEINTJIES | Designed By: JD MEINTJIES | Reviewed By: JOE WET

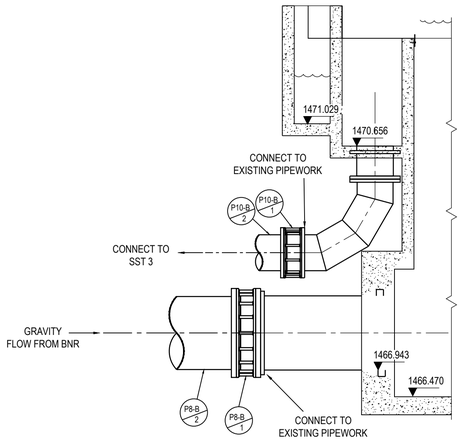
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: FERRIC CHLORIDE DOSING BUILDING

Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 / Org. No: 010-223 / Rev: 0

\\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS-2022\NEW CAD \ MENASHEN.REDDY | 10/03/2023 16:16:10



1200 Ø SPLITTER TO BNR PIPE OUTLET AND 600 Ø SPLITTER TO SST 3 OUTLET

1200NB PIPELINE P8-B FROM BNR TO 4-WAY SPLITTER - FITTINGS LIST			
ITEM No.	DESCRIPTION	QUANTITY	SKETCH
P8-B/1	1200NB STEEL VJ DISMANTLING COUPLING, FLANGED BOTH ENDS	2	
P8-B/2	1200NB MILD STEEL STRAIGHT PIPE, FLANGED BOTH ENDS,10mm WALL THICKNESS.	1	
P8-B/3 *	1200NB MILD STEEL 45° BEND WITH STRAIGHT PIPE, FLANGED BOTH ENDS, 10mm WALL THICKNESS.	1	
P8-B/4 *	1200NB MILD STEEL STRAIGHT PIPE, FLANGED BOTH ENDS,10mm WALL THICKNESS.	4	
P8-B/5 *	1200NB MILD STEEL STRAIGHT PIPE, FLANGED BOTH ENDS,10mm WALL THICKNESS. LENGTH TO BE CONFIRMED ON SITE.	1	
P8-B/6 *	1200NB MILD STEEL 45° BEND WITH STRAIGHT PIPE, FLANGED BOTH ENDS, 10mm WALL THICKNESS.	1	
P8-B/7 *	1200NB MILD STEEL STRAIGHT PIPE, FLANGED BOTH ENDS,10mm WALL THICKNESS.	1	
P8-B/8 *	1200NB MILD STEEL 45° BEND WITH STRAIGHT PIPE, FLANGED BOTH ENDS, 10mm WALL THICKNESS. LENGTH TO BE CONFIRMED ON SITE.	1	
P8-B/9 *	1200NB MILD STEEL STRAIGHT PIPE, FLANGED BOTH ENDS,10mm WALL THICKNESS. LENGTH TO BE CONFIRMED ON SITE.	1	
P8-B/10 *	1200NB MILD STEEL STRAIGHT PIPE WITH PUDDLE FLANGE, FLANGED ONE END,10mm WALL THICKNESS. DIMENSIONS TO BE CONFIRMED ON SITE.	1	

FITTINGS - COATING AND LINING SPECIFICATION

1. EXTERNAL COATING:
   SOLVENT FREE UV-RESISTANT MULTI-PURPOSE EPOXY, REFER TO GSM 1.24 WITH A MINIMUM DRY FILM THICKNESS OF 350 MICRON AND A MAXIMUM DRY FILM THICKNESS OF 500 MICRON. AFTER INSTALLATION THE PIPE SHALL BE PAINTED WITH RE-COATABLE POLYURETHANE ENAMEL WITH A MINIMUM DFT OF 40 MICRONS TO THE EMPLOYERS COLOUR CODING SPECIFICATION. EPOXY PAINT SHALL COMPLY TO SABS 1217.
2. INTERNAL LINING:
   FUSION BONDED EPOXY WITH A MINIMUM DRY FILM THICKNESS OF 300 MICRON. EPOXY PAINT SHALL COMPLY TO SABS 1217 AND GSM 1.17.

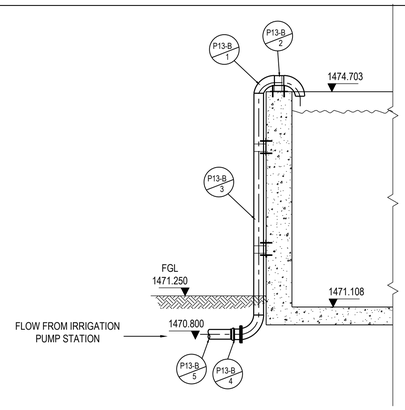
NOTE:
1. ALL STEEL CONNECTIONS TO BE SHOP-WELDED UNLESS SPECIFIED OTHERWISE.
2. ALL STEEL FLANGES TO BE MANUFACTURED TO SABS 1123 1600/3 STANDARD.
* REFER TO DRAWING J30231U-010-504 Rev 1 FOR ARRANGEMENT OF THESE ITEMS.

600NB PIPELINE P10-B FROM BNR TO 4-WAY SPLITTER - FITTINGS LIST			
ITEM No.	DESCRIPTION	QUANTITY	SKETCH
P10-B/1	600NB VJ DISMANTLING COUPLING, FLANGED BOTH ENDS	2	
P10-B/2	600NB MILD STEEL PIPE FLANGED BOTH ENDS, 4.5mm WALL THICKNESS.	1	
P10-B/3 *	600NB MILD STEEL PIPE FLANGED BOTH ENDS, 4.5mm WALL THICKNESS. LENGTH TO BE CONFIRMED ON SITE.	1	
P10-B/4 *	600NB MILD STEEL PIPE FLANGED BOTH ENDS, 4.5mm WALL THICKNESS.	1	
P10-B/5 *	600NB MILD STEEL PUDDLE PIPE FLANGED ONE END, 4.5mm WALL THICKNESS	1	

FITTINGS - COATING AND LINING SPECIFICATION

1. EXTERNAL COATING:
   SOLVENT FREE UV-RESISTANT MULTI-PURPOSE EPOXY, REFER TO GSM 1.24 WITH A MINIMUM DRY FILM THICKNESS OF 350 MICRON AND A MAXIMUM DRY FILM THICKNESS OF 500 MICRON. AFTER INSTALLATION THE PIPE SHALL BE PAINTED WITH RE-COATABLE POLYURETHANE ENAMEL WITH A MINIMUM DFT OF 40 MICRONS TO THE EMPLOYERS COLOUR CODING SPECIFICATION. EPOXY PAINT SHALL COMPLY TO SABS 1217.
2. INTERNAL LINING:
   FUSION BONDED EPOXY WITH A MINIMUM DRY FILM THICKNESS OF 300 MICRON. EPOXY PAINT SHALL COMPLY TO SABS 1217 AND GSM 1.17.

NOTE:
1. ALL STEEL CONNECTIONS TO BE SHOP-WELDED UNLESS SPECIFIED OTHERWISE.
2. ALL STEEL PIPE WORK AND FLANGES TO BE MANUFACTURED TO SABS 1123 1600/3 STANDARD.
* REFER TO DRAWING J30231U-010-504 Rev 1 FOR ARRANGEMENT OF THESE ITEMS.



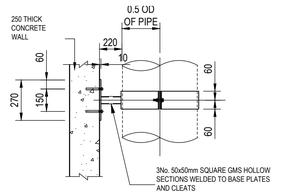
160NB PIPELINE P13-B FROM IRRIGATION PUMP STATION TO BNR - FITTINGS LIST			
ITEM No.	DESCRIPTION	QUANTITY	SKETCH
P13-B/1	Ø100NB 90° MILD STEEL SHORT GUSSET BEND , 4.5mm WALL THICKNESS. DIMENSIONS TO BE CONFIRMED BY MANUFACTURER.	2	
P13-B/2	Ø100NB 90° MILD STEEL PIPE, 4.5mm WALL THICKNESS.	1	
P13-B/3	Ø 100NB 90° MILD STEEL PIPE, 4.5mm WALL THICKNESS.	1	3745
P13-B/4	Ø 100NB 90° ELBOW MILD STEEL, FLANGED ONE END, 4.5mm WALL THICKNESS. DIMENSIONS TO BE CONFIRMED BY MANUFACTURER.	1	
P13-B/5	110NB uPVC CLASS 9 STRAIGHT PIPE WITH uPVC TO STEEL FLANGED COUPLING AT ONE END. LENGTH TO BE CONFIRMED.	1	
P13-B/6 *	110NB uPVC CLASS 9 STRAIGHT PIPE	48	
P13-B/7 *	110NB uPVC CLASS 9 STRAIGHT PIPE. LENGTH TO BE CONFIRMED.	1	
P13-B/8 *	110NB uPVC CLASS 9 STRAIGHT PIPE. LENGTH TO BE CONFIRMED.	1	

FITTINGS - COATING AND LINING SPECIFICATION

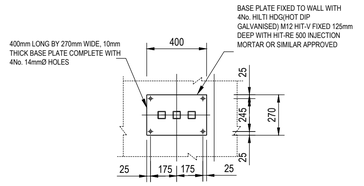
1. EXTERNAL COATING:
   SOLVENT FREE UV-RESISTANT MULTI-PURPOSE EPOXY, REFER TO GSM 1.24 WITH A MINIMUM DRY FILM THICKNESS OF 350 MICRON AND A MAXIMUM DRY FILM THICKNESS OF 500 MICRON. AFTER INSTALLATION THE PIPE SHALL BE PAINTED WITH RE-COATABLE POLYURETHANE ENAMEL WITH A MINIMUM DFT OF 40 MICRONS TO THE EMPLOYERS COLOUR CODING SPECIFICATION. EPOXY PAINT SHALL COMPLY TO SABS 1217.
2. INTERNAL LINING:
   FUSION BONDED EPOXY WITH A MINIMUM DRY FILM THICKNESS OF 300 MICRON. EPOXY PAINT SHALL COMPLY TO SABS 1217 AND GSM 1.17.

NOTE:
1. ALL STEEL CONNECTIONS TO BE SHOP-WELDED UNLESS SPECIFIED OTHERWISE.
2. ALL STEEL FLANGES TO BE MANUFACTURED TO SABS 1123 1000/3 STANDARD.
3. ALL 150 NB STEEL SPECIALS TO ADHERE TO SABS 62 ERW HEAVY UNLESS OTHERWISE STATED.
* REFER TO DRAWING J30231U-010-225 - J30231E-010-227 FOR ARRANGEMENT OF THESE ITEMS.

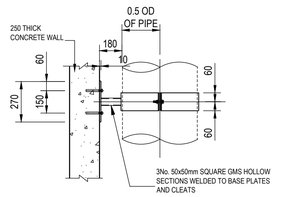
160 Ø INLET PIPE FROM IRRIGATION PUMP STATION



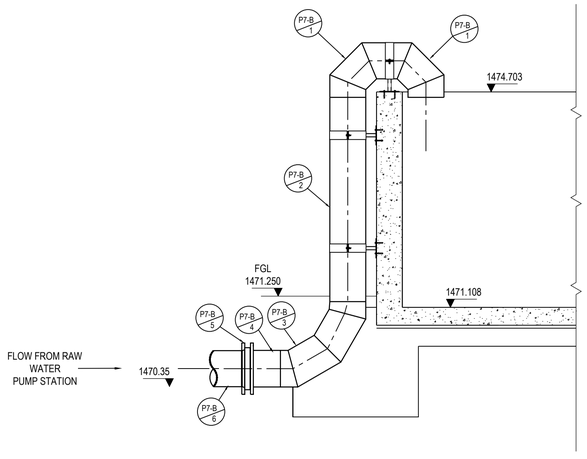
FIXING 1 : PIPE CLEAT FIXING
N.T.S



DETAIL OF PIPE CLEAT BASE PLATE
SCALE 1:20



FIXING 2 : PIPE CLEAT FIXING
N.T.S



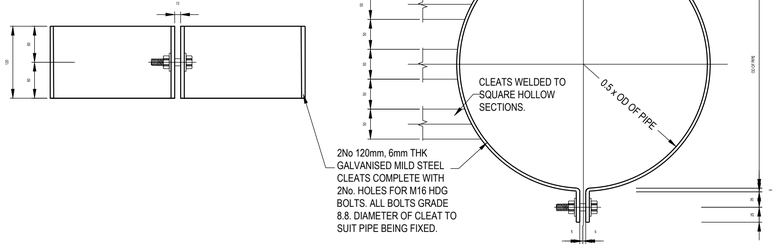
600 Ø INLET PIPE FROM RAW WATER PUMP STATION

600NB PIPELINE P7-B FROM RAW WATER PUMP STATION TO BNR PIPEWORK - FITTINGS LIST			
ITEM No.	DESCRIPTION	QUANTITY	SKETCH
P7-B/1	600NB 90° ELBOW MILD STEEL PIPE, 4.5mm WALL THICKNESS	2	
P7-B/2	600NB MILD STEEL STRAIGHT PIPE, 4.5mm WALL THICKNESS	1	
P7-B/3	600NB 90° MEDIUM RADIUS BEND MILD STEEL PIPE, 4.5mm WALL THICKNESS	1	
P7-B/4	600NB MILD STEEL STRAIGHT PIPE, FLANGED ONE END, 4.5mm WALL THICKNESS FLANGES TO BE DRILLED TO ACCOMMODATE PVC-O CLASS 9 STUB FLANGE.	1	
P7-B/5	600NB MILD STEEL BACKING RING DRILLED TO ACCOMMODATE PVC-O CLASS 9 STUB FLANGE	1	
P7-B/6	600NB PVC-O CLASS 9 STRAIGHT PIPE, STUB FLANGE ON ONE END. DIMENSIONS TO BE CONFIRMED ON SITE.	1	

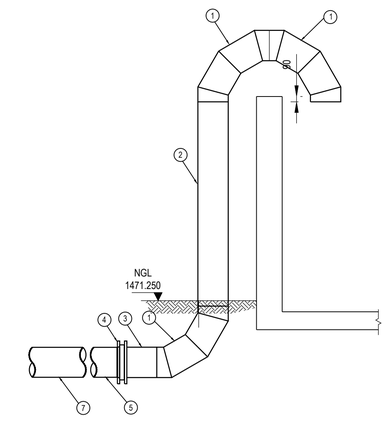
FITTINGS - COATING AND LINING SPECIFICATION

1. EXTERNAL COATING:
   SOLVENT FREE UV-RESISTANT MULTI-PURPOSE EPOXY, REFER TO GSM 1.24 WITH A MINIMUM DRY FILM THICKNESS OF 350 MICRON AND A MAXIMUM DRY FILM THICKNESS OF 500 MICRON. AFTER INSTALLATION THE PIPE SHALL BE PAINTED WITH RE-COATABLE POLYURETHANE ENAMEL WITH A MINIMUM DFT OF 40 MICRONS TO THE EMPLOYERS COLOUR CODING SPECIFICATION. EPOXY PAINT SHALL COMPLY TO SABS 1217.
2. INTERNAL LINING:
   FUSION BONDED EPOXY WITH A MINIMUM DRY FILM THICKNESS OF 300 MICRON. EPOXY PAINT SHALL COMPLY TO SABS 1217 AND GSM 1.17.

NOTE:
1. ALL STEEL CONNECTIONS TO BE SHOP-WELDED UNLESS SPECIFIED OTHERWISE.
2. ALL STEEL FLANGES TO BE MANUFACTURED TO SABS 1123 1600/3 STANDARD.



CLAMP CLEAT
SCALE 1:5



500 Ø INLET PIPE FROM RAS RECYCLE PUMP STATION

500NB PIPE FROM RAS TO BNR PIPEWORK - FITTINGS LIST			
ITEM No.	DESCRIPTION	QUANTITY	SKETCH
1	500NB 90° MEDIUM RADIUS BEND MILD STEEL PIPE, 4.5mm WALL THICKNESS	3	
2	500NB MILD STEEL STRAIGHT PIPE, 4.5mm WALL THICKNESS	1	
3	500NB MILD STEEL STRAIGHT PIPE, FLANGED ONE END TO SABS123 1600/3, 4.5mm WALL THICKNESS	1	
4	500NB MILD STEEL BACKING RING TO SABS1123 1600/3	1	
5	500NB PVC-O CLASS 9 STRAIGHT PIPE, STUB FLANGE ON ONE END. LENGTH TO BE CONFIRMED ON SITE.	1	
6	500NB 90° BEND PVC-O CLASS 9 PIPE	2	
7	500NB PVC-O CLASS 9 STRAIGHT PIPE	47	
8	500NB PVC-O CLASS 9 STRAIGHT PIPE, LENGTH TO BE CONFIRMED ON SITE.	1	
9	500NB PVC-O CLASS 9 STRAIGHT PIPE WITH WALL COUPLING AT ONE END, LENGTH TO BE CONFIRMED ON SITE.	1	

FITTINGS - COATING SPECIFICATION

1. SOLVENT FREE EPOXY + FINAL TOP COAT POLYURETHANE TO A TOTAL OF 450uM ETERNALLY
2. SOLVENT FREE EPOXY TO A TOTAL OF 450uM INTERNALLY

NOTE:
1. ALL PIPE SPECIALS TO BE MILD STEEL EPOXY COATED TO 450uM UNLESS SPECIFIED OTHERWISE.
2. ALL STEEL CONNECTIONS TO BE SHOP-WELDED UNLESS SPECIFIED OTHERWISE.
3. ALL STEEL FLANGES TO BE MANUFACTURED TO SABS 1123 1600/3 STANDARD.

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ON ORIGINAL
0 5 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. CONTRACTOR TO REFER TO PARTICULAR SPECIFICATION ISSUED TO SITE.
2. PIPES PREVIOUSLY GALVANISED NEED TO BE TREATED AS INSTRUCTED AND CONFIRMED BY THE ENGINEER.
3. DENSO HT PETROLATUM TAPE WRAPPING SYSTEM SHALL BE USED FOR WRAPPING OF BURIED FLANGE, FLEXIBLE JOINTS AND BURIED EPOXY PAINT COATED PIPES. REFER TO GSM 1.18 AND GSM 1.19.

ISSUED FOR TENDER

No	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLOETE
Drawn By: JP LEMMER
Designed By: JV KLEINHY
Reviewed By: JOE WET

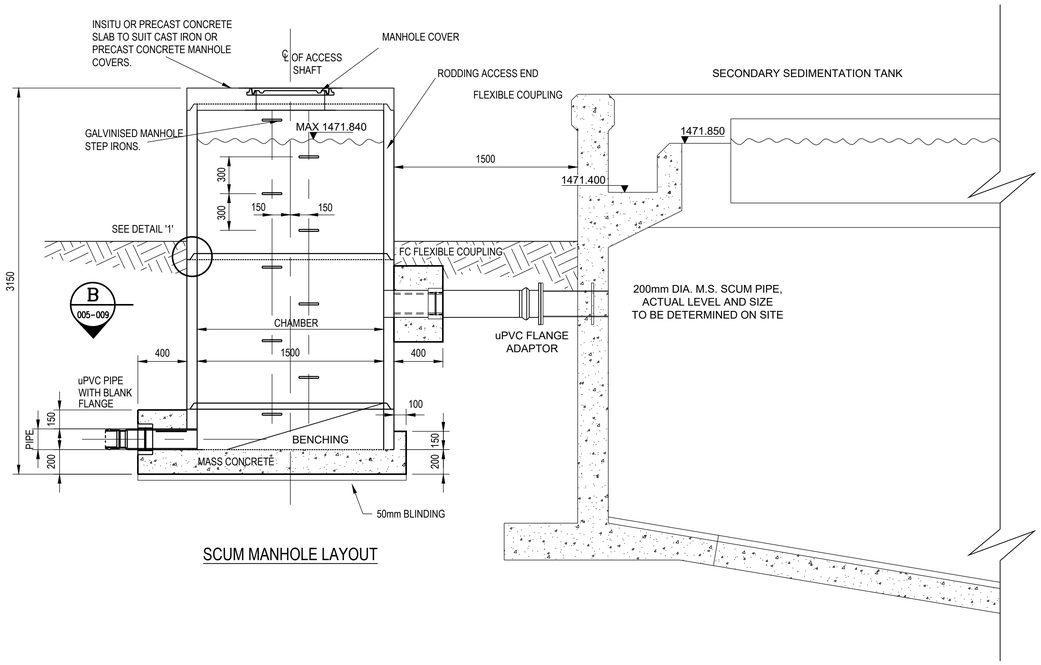
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: BIOLOGICAL REACTOR PIPE SCHEDULE AND DETAILS

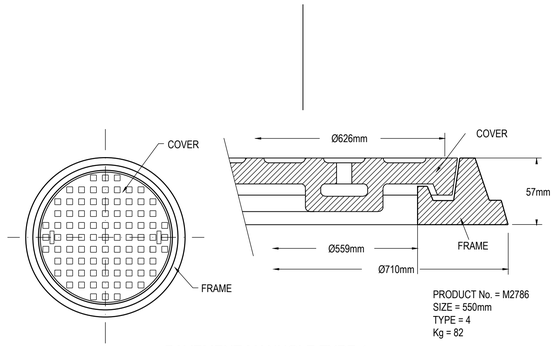
Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073
Org. No: 010-224
Rev: 0

\\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\O. DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \ MENAKHEN REDDY | 10/03/2023 16:10



SCUM MANHOLE LAYOUT



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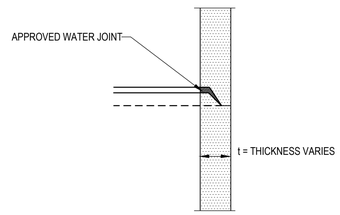
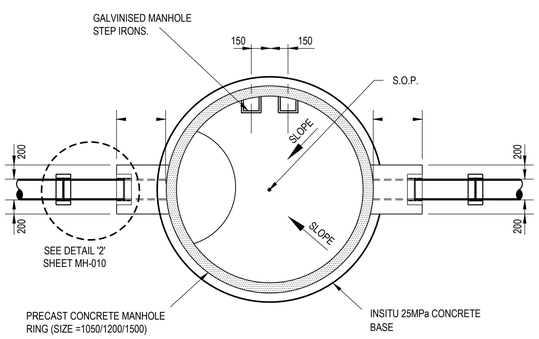
SIZE = 550mm
TYPE = 4
Kg = 82

PAVEMENT MANHOLE TYPE 4



DETAIL '1' PRECAST PIPE INTERLOCKING JOINT



SECTIONAL PLAN B-B

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ON ORIGINAL

0 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. POSITIONS AND SIZES OF ALL POCKETS AND OPENINGS TO BE CONFIRMED WITH MECHANICAL CONTRACTOR BEFORE CONSTRUCTION.
2. FOR DRAWING NOTES, REFER TO DWG No 010-110
3. FOR JOINT DETAILS, REFER TO DWG No 010-103
4. ALSO REFER TO BoQ FOR FULL EXTENT OF WORK TO BE COMPLETED
5. THERE ARE 2 No. SCUM MANHOLES TO BE COMPLETED, INCLUDING PIPEWORK (CONNECTING AND INTERNAL, WATERTIGHTNESS TESTING, CONCRETE SLABS, BACKFILLING ETC.

ISSUED FOR TENDER

No.	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JM LEMMA

Designed By: JDK MURPHY

Reviewed By: CJDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

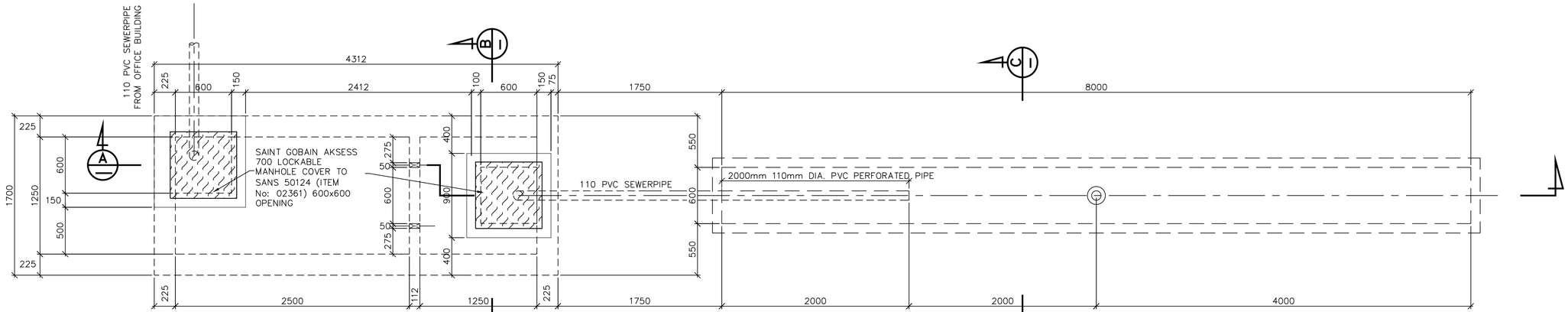
Description: SECONDARY SETTLEMENT TANK SCUMBOX DETAIL

Scale: NTS

Date: NOVEMBER 2022

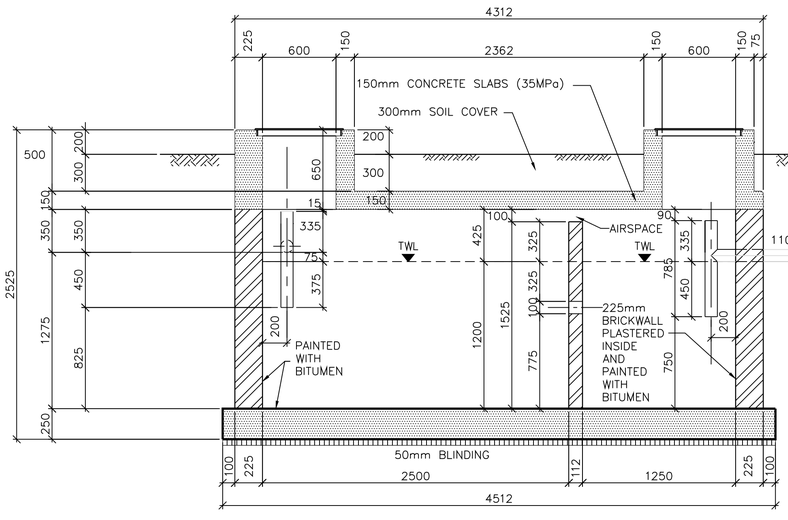
Project No: J40073 / Org. No: 010-225 / Rev: 0

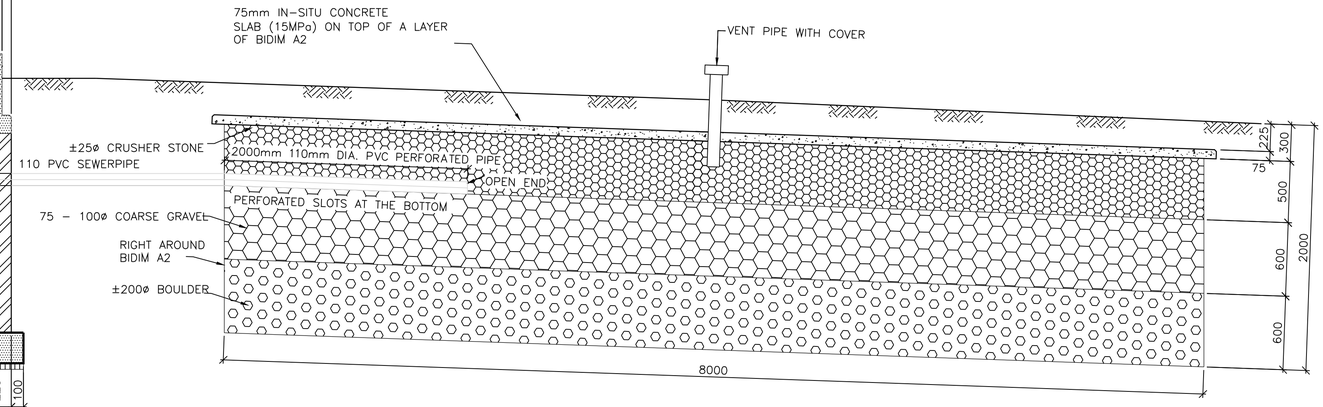
I:\ELS-CLUSTER\PROJECTS\J0023\E MEYERTON WWTW\O_DRAWINGS\4. TENDER\DRAWINGS 2022\NEW CAD] MENASHEN REDDY] 10/03/2023 16:16:10



SEPTIC TANK AND SOAK DRAIN SYSTEM

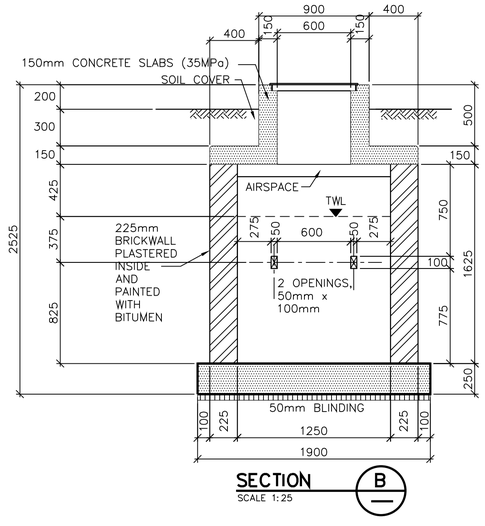
SCALE 1:25





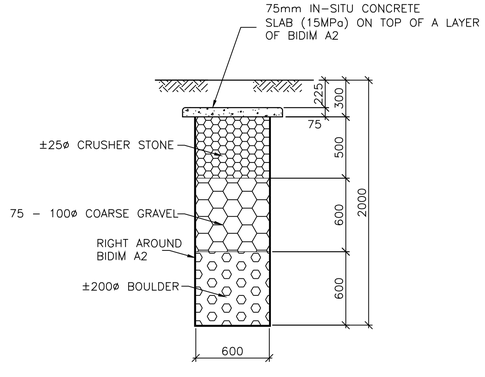
SECTION A

SCALE 1:25



SECTION B

SCALE 1:25



SECTION C

SCALE 1:25

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90Mm

GENERAL NOTES:

1. ALSO REFER TO BoQ FOR FULL EXTENT OF WORK TO BE CONSTRUCTED.
2. TO BE INSTALLED NEAR WORKSHOP BUILDING.

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2750, Rivonia, 2128
Telephone No. +27 11 519 4000
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JD LOMBARD

Designed By: JD K MURPHY

Reviewed By: DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: TYPICAL DETAIL SEPTIC TANK

Scale: AS SHOWN

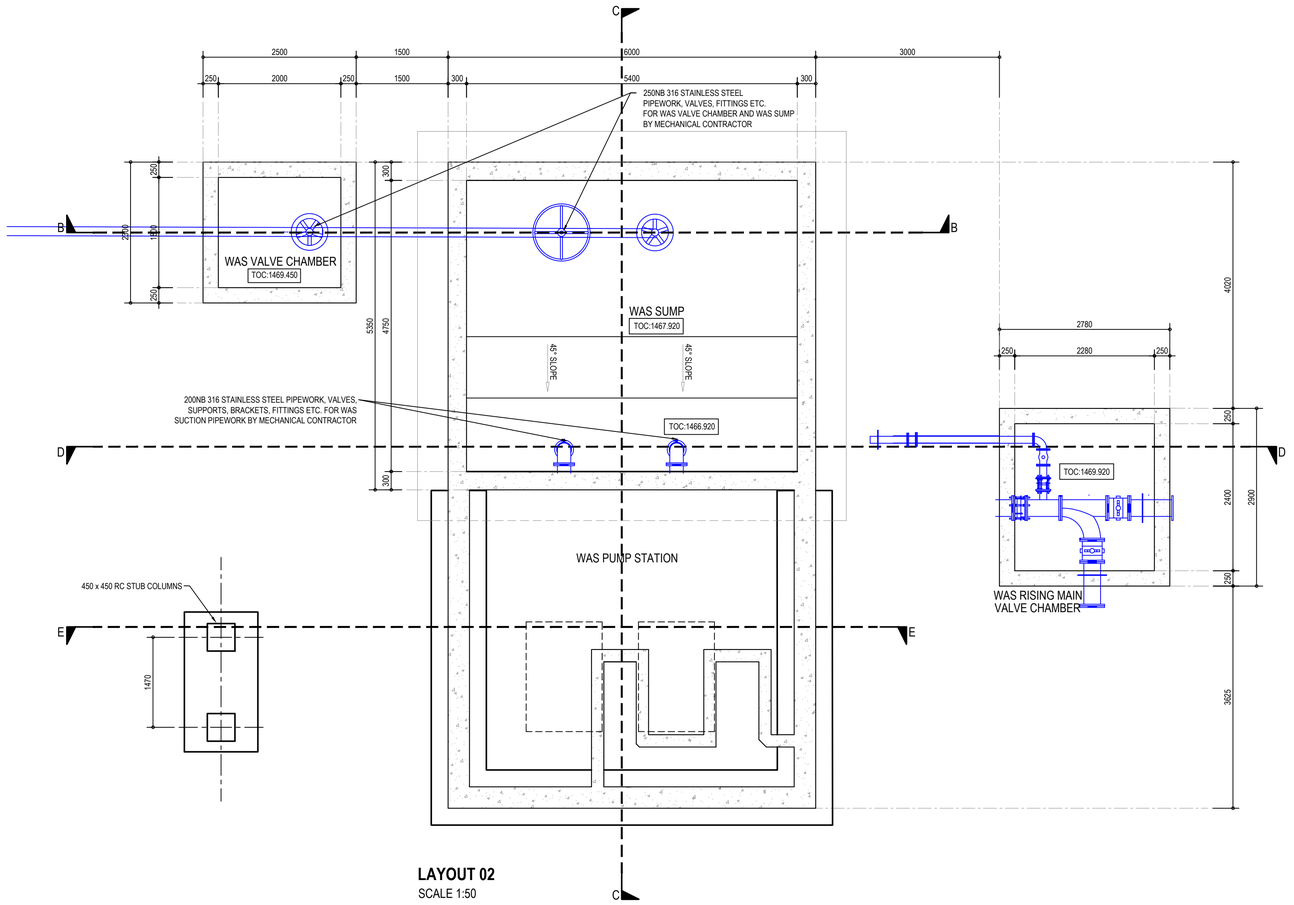
Date: NOVEMBER 2022

Project No.: J40073

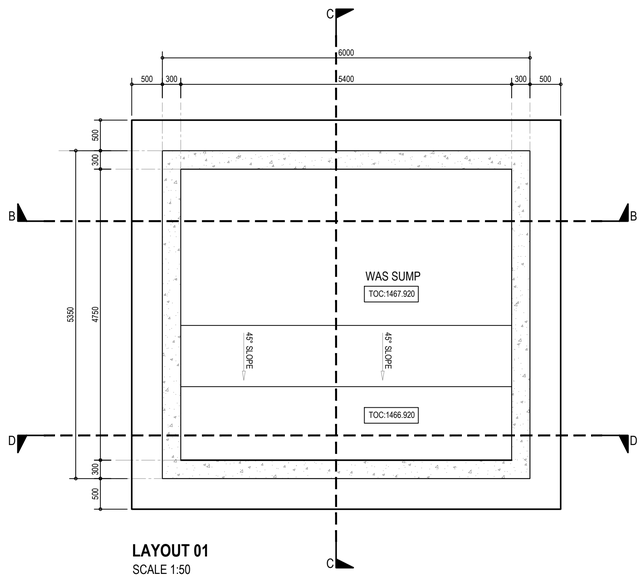
Dwg No.: 010-226

Rev: 0

I:\ELS-CLUSTER\PROJECTS\J40073\E METERTON WWTW\0_DRAWINGS\4- TENDER DRAWINGS 22\22\NEW CAD \MEINASHEN.REDDY1 [10/03/2023 16:16:10]



LAYOUT 02
SCALE 1:50



LAYOUT 01
SCALE 1:50

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. CONCRETE WORKS

CONCRETE STRENGTH GRADES

MASS CONCRETE AND BLINDING
PIPE BEDDING AND ENCASEMENT: 15MPa/19 mm

PIPE ANCHOR BLOCKS : 25MPa/19 mm

FOUNDATIONS, FLOORS, WALLS
AND SLABS ETC FOR WATER
RETAINING STRUCTURES : 40MPa/19 mm/W

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
The Woodlands, Woodlands Drive
Woodmead, Sandton
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By
DC CLARK

Drawn By	Designed By	Reviewed By
JD J BRINK	JD K MURPHY	VDE WET

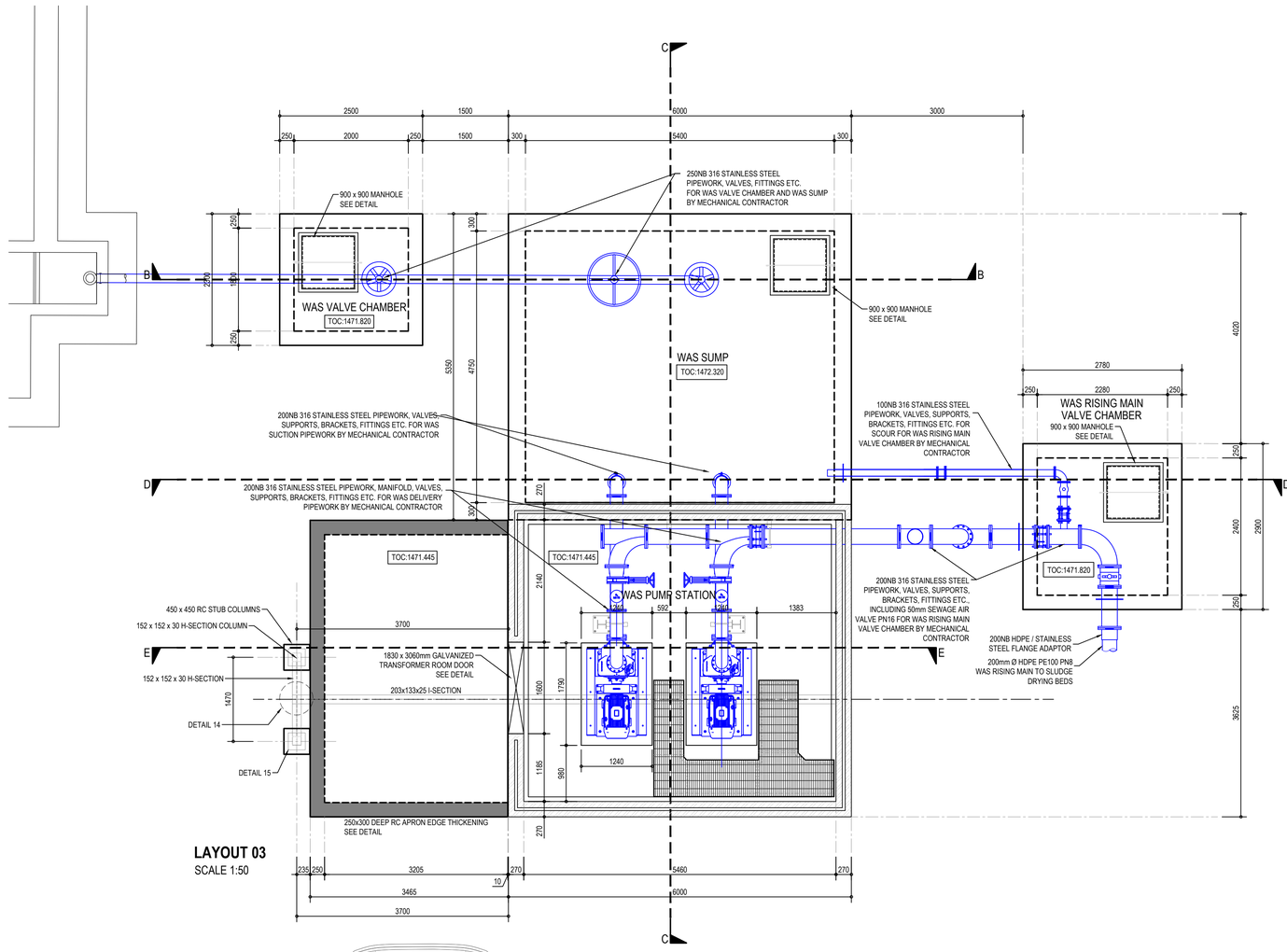
Project
EXTENSION
OF MEYERTON
WASTEWATER
TREATMENT WORKS

Description
WAS PUMP STATION
LAYOUT 01
LAYOUT 02

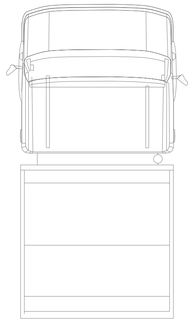
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Dg. No	Rev
J40073	010-227-1	0

\\ELS-CLUSTER\PROJECTS\J40073\E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY | 10/03/2023 16:16:10



LAYOUT 03
SCALE 1:50



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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. CONCRETE WORKS

CONCRETE STRENGTH GRADES

MASS CONCRETE AND BLINDING
PIPE BEDDING AND ENCASEMENT: 15MPa/19 mm

PIPE ANCHOR BLOCKS : 25MPa/19 mm

FOUNDATIONS, FLOORS, WALLS AND SLABS ETC FOR WATER RETAINING STRUCTURES : 40MPa/19 mm/W

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Gauteng, 2198
PO Box 2700, Rivonia, 2128
Telephone No: +27 11 519 4600
Fax No: +27 11 807 5670

Approved By
D CLARK

Drawn By
JD LOUBSER

Designed By
JD K MURPHY

Reviewed By
C VDE WET

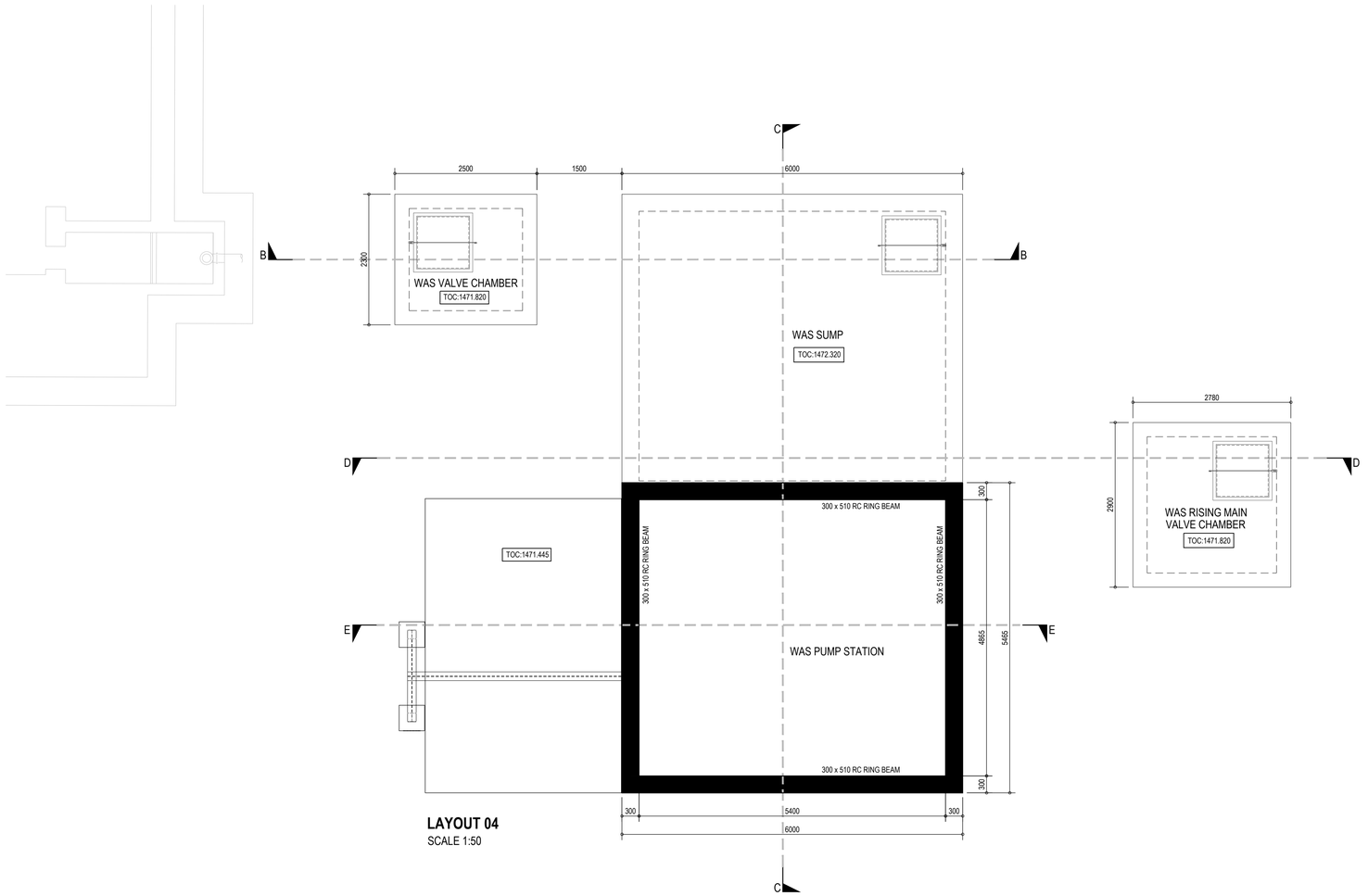
Project
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description
WAS PUMP STATION
LAYOUT 03

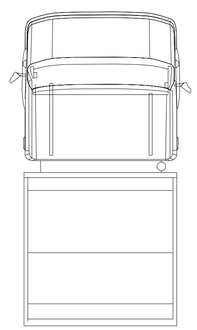
Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073
Org. No: 010-227-2
Rev: 0

\\ELS-CLUSTER\PROJECTS\J4023\E MEYERTON WWTW\O_DRAWINGS\4_TENDER\DRAWINGS 2022\NEW CAD] MENGSHEN.REDD? | 10/03/2023 16:16:10



LAYOUT 04
SCALE 1:50



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ON ORIGINAL

0 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

1. CONCRETE WORKS

CONCRETE STRENGTH GRADES

MASS CONCRETE AND BLINDING
PIPE BEDDING AND ENCASEMENT: 15MPa/19 mm

PIPE ANCHOR BLOCKS : 25MPa/19 mm

FOUNDATIONS, FLOORS, WALLS
AND SLABS ETC FOR WATER
RETAINING STRUCTURES : 40MPa/19 mmW

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5673

Approved By
S.CLARK

Drawn By
JM LUBBE

Designed By
JM LUBBE

Reviewed By
CWDE WET

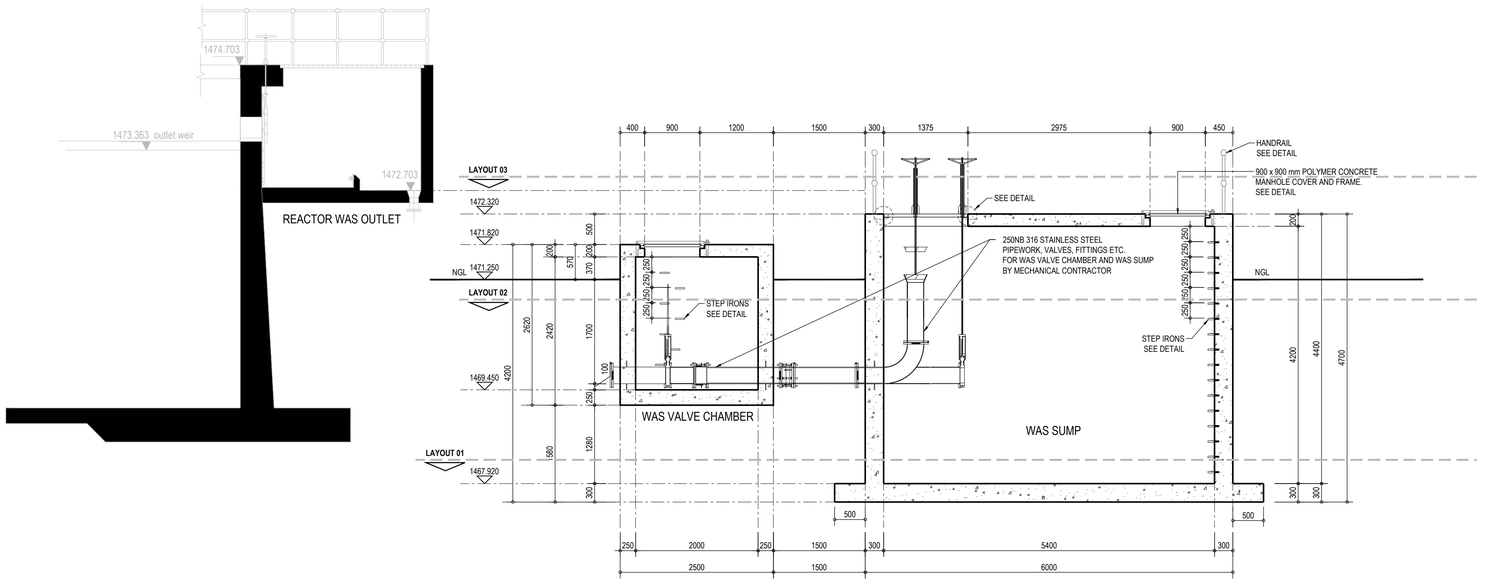
Project
EXTENSION
OF MEYERTON
WASTEWATER
TREATMENT WORKS

Description
WAS PUMP STATION
LAYOUT 04

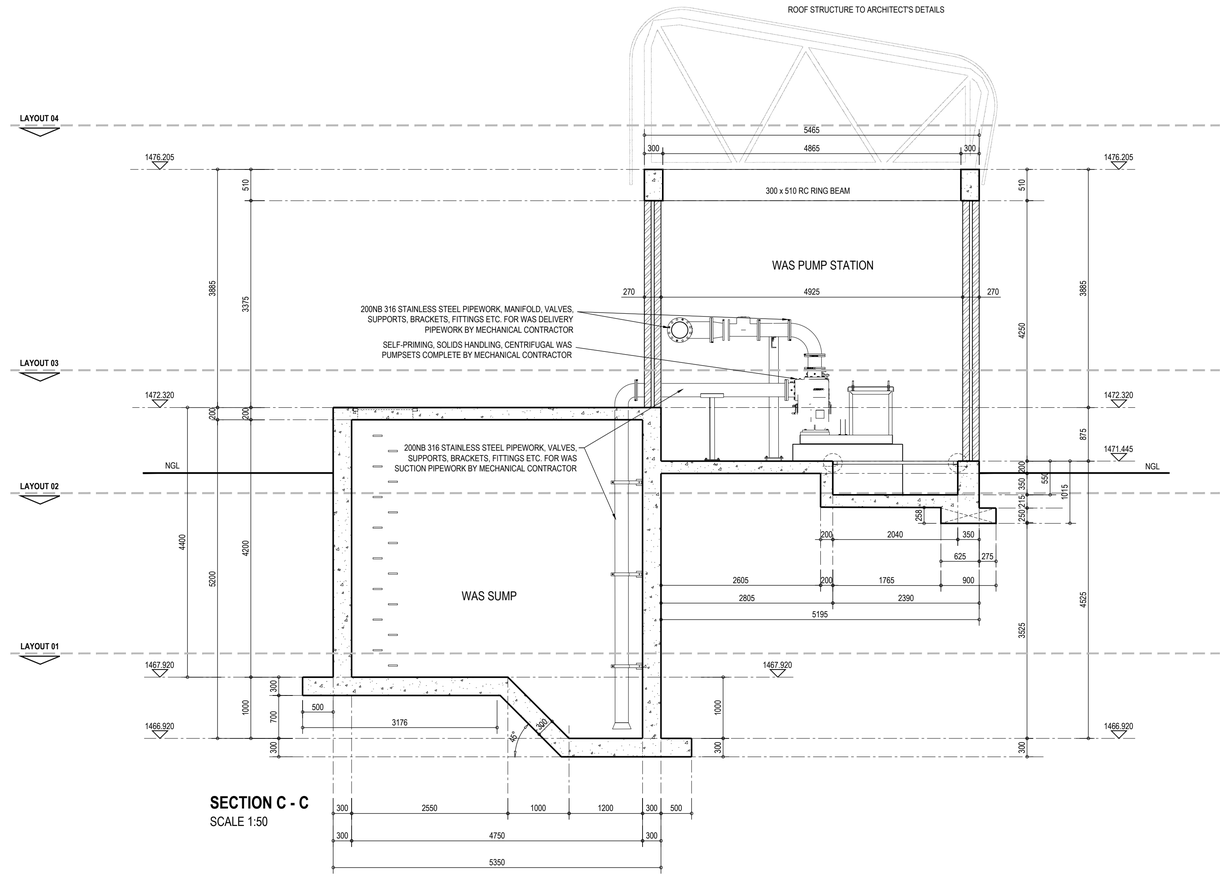
Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-227-3 / Rev: 0

I:\ELS-CLUSTER\PROJECTS\J3023\E MEYERTON WWTW\TWO_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD] MENASHEN REDDY] 10/03/2023 16:16:10



SECTION B - B
SCALE 1:50



SECTION C - C
SCALE 1:50

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ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
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Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5070

Approved By: DOLAN

Drawn By: JH DAVIES

Designed By: JH KILPATRY

Reviewed By: JOE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: **WAS PUMP STATION**
SECTION B-B
SECTION C-C

Scale: AS SHOWN

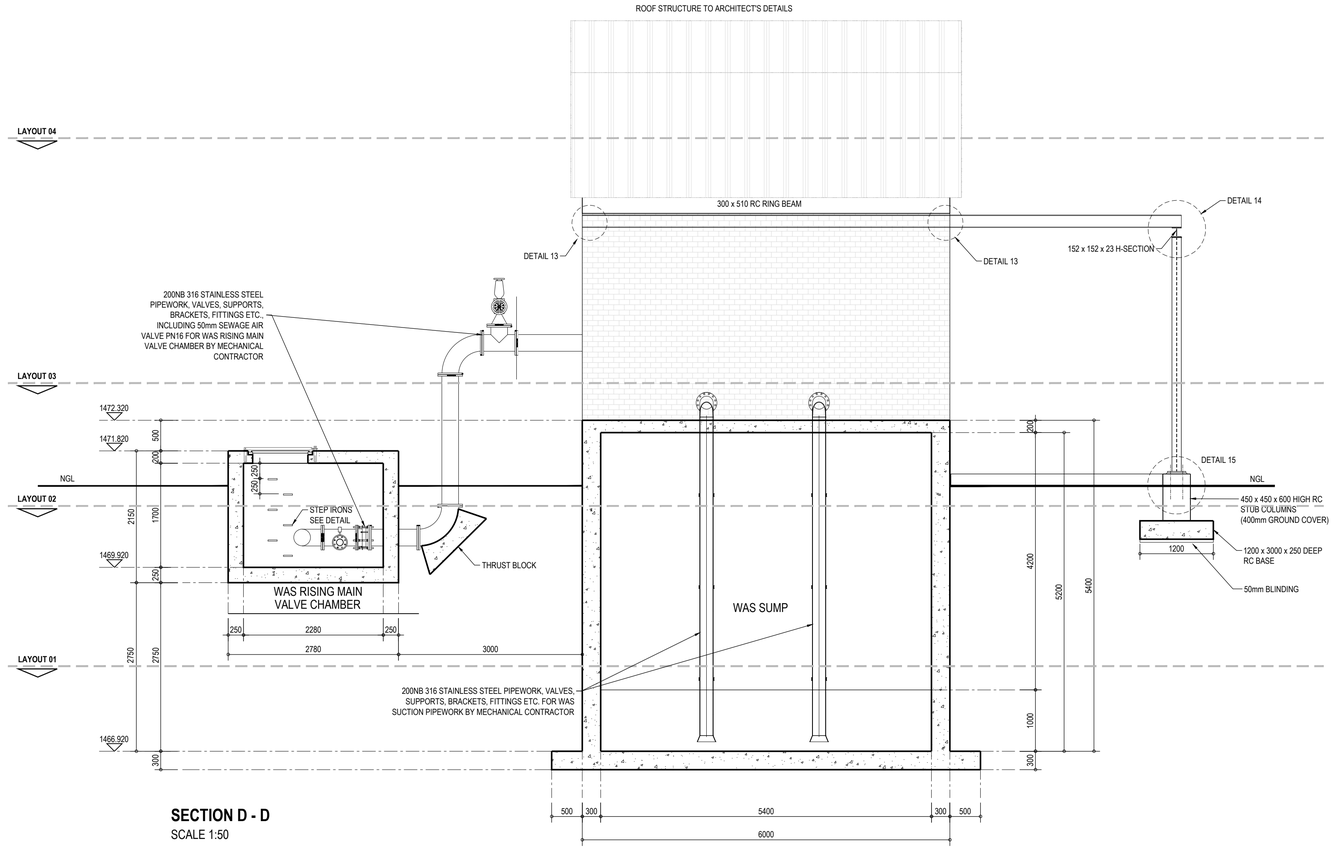
Date: NOVEMBER 2022

Project No: J40073

Drg. No: 010-227-4

Rev: 0

I:\ELS-CLUSTER\PROJECTS\J00319 E MEYERTON WWTW\O_DRAWINGS\04_TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY | 10/03/2023 16:16:10



SECTION D - D
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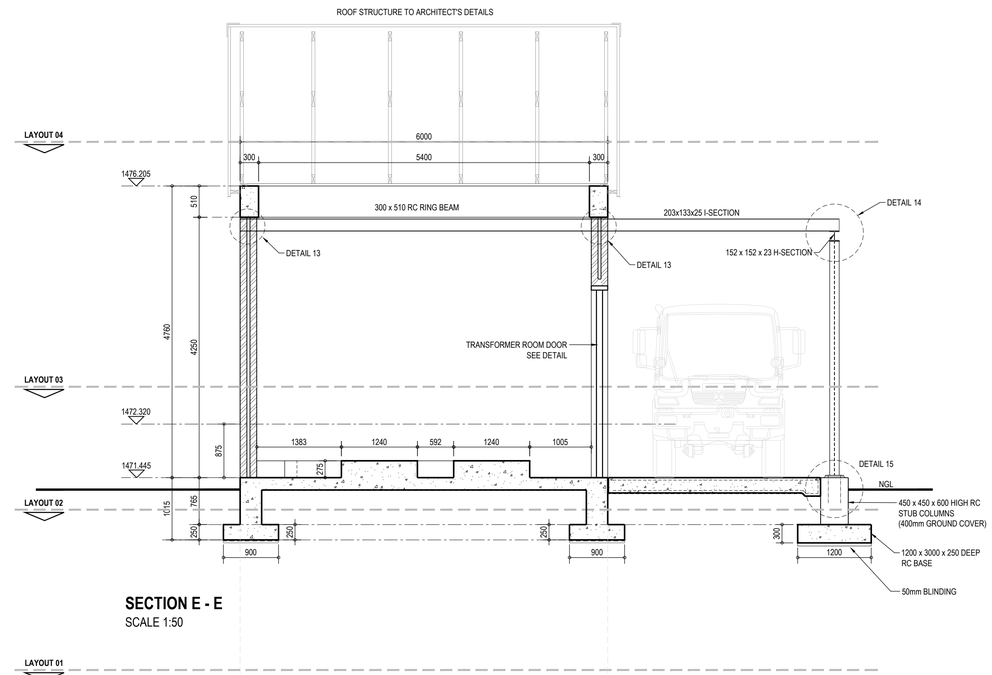

SECTION E - E
SCALE 1:50

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ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
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Revisions

Client: RAND WATER

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19 North Street, Houghton Estate
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PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 9675

Approved By: D.CLARK

Drawn By: J.BARNARD | Designed By: J.K.MURPHY | Reviewed By: C.DE WET

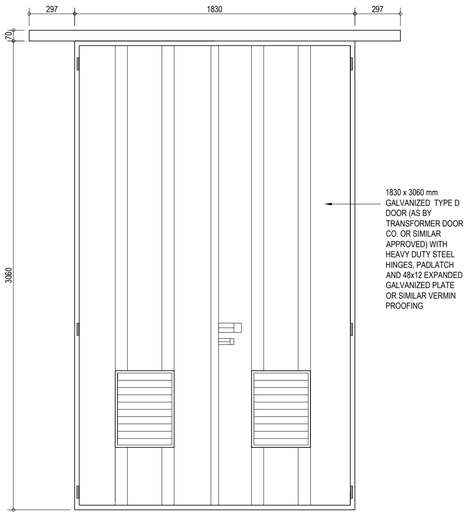
Project:
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description:
WAS PUMP STATION
SECTION D-D
SECTION E-E

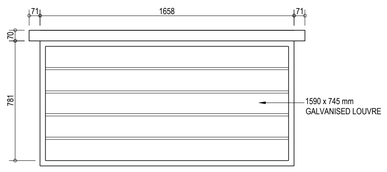
Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 | Drg. No: 010-227-5 | Rev: 0

I:\ELS-CLUSTER\PROJECTS\J3023\E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY \ 10/03/2023 16:16:10



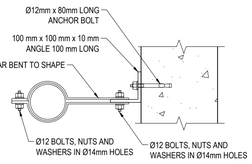
DETAIL 12
PUMP ROOM DOOR
SCALE 1:20



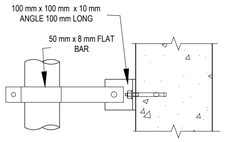
DETAIL 11
VENTILATION LOUVRE
SCALE 1:20

NOTE:

1. ALL PIPE FIXINGS TO BE MANUFACTURED FROM STAINLESS STEEL OR SIMILAR APPROVED.
2. ALL BOLTS, AS INDICATED TO BE Ø12mm STAINLESS STEEL OF APPROPRIATE LENGTH, WITH NUTS AND WASHERS.
3. HOLES THROUGH STEEL TO BE 14mm DIAMETER.

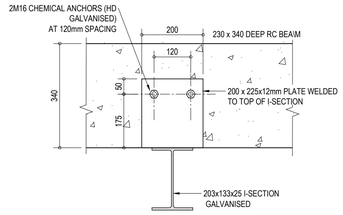


ELEVATION

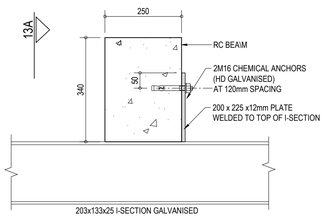


PLAN

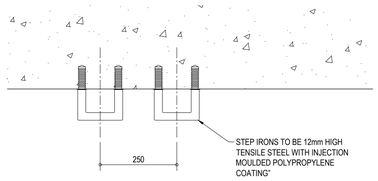
DETAIL 10
PIPE FIXING TO WALL
SCALE 1:10



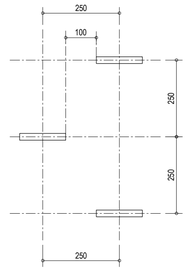
SECTION 13A
GANTRY CONNECTION DETAIL
SCALE 1:10



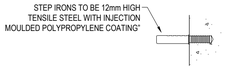
DETAIL 13
GANTRY CONNECTION DETAIL
SCALE 1:10



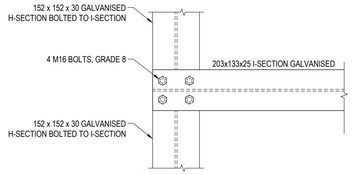
LAYOUT OF STAGGERED STEP IRONS
SCALE 1:10



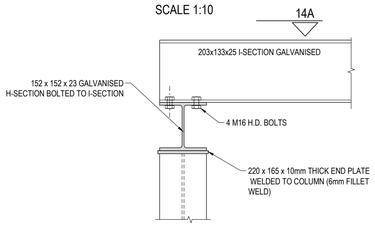
ELEVATION OF STAGGERED STEP IRONS
SCALE 1:10



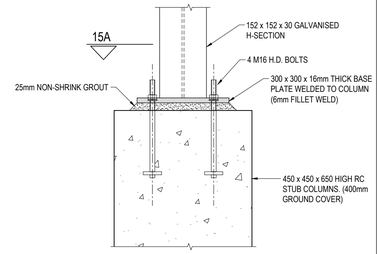
SECTION OF STAGGERED STEP IRONS
SCALE 1:10



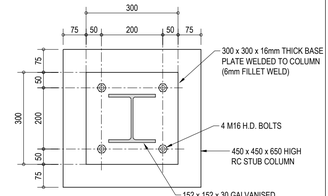
SECTION 14A
SCALE 1:10



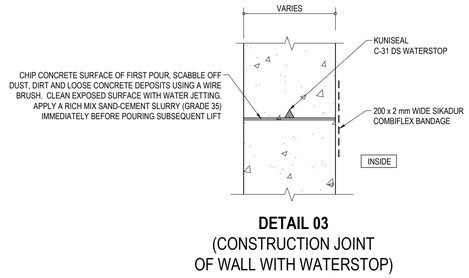
DETAIL 14
SCALE 1:10



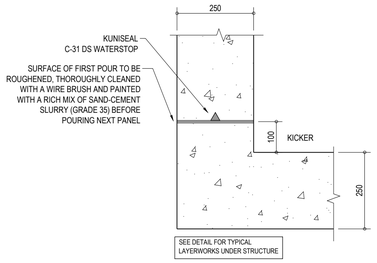
DETAIL 15
SCALE 1:10



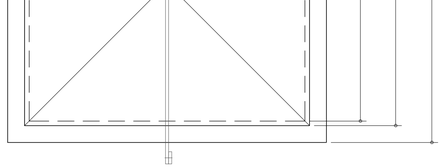
SECTION 15A
SCALE 1:10



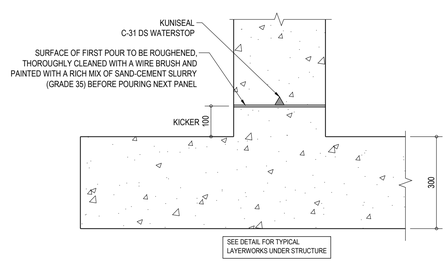
DETAIL 03
(CONSTRUCTION JOINT OF WALL WITH WATERSTOP)
SCALE 1:10



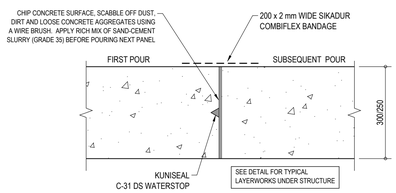
DETAIL 01B
TYPICAL KICKER DETAIL
SCALE 1:10



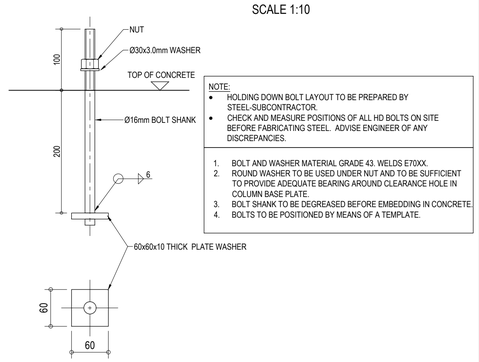
LAYOUT OF CHAMBER ACCESS
SCALE 1:10



DETAIL 01A
TYPICAL KICKER DETAIL
SCALE 1:10



DETAIL 02
TYPICAL JOINT IN FLOOR
SCALE 1:10

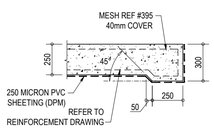


NOTE:

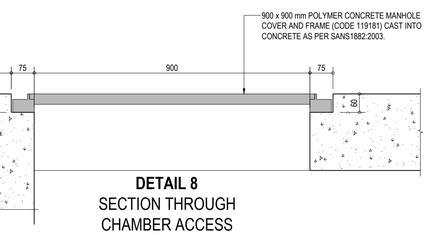
- HOLDING DOWN BOLT LAYOUT TO BE PREPARED BY STEEL-SUBCONTRACTOR.
- CHECK AND MEASURE POSITIONS OF ALL HD BOLTS ON SITE BEFORE FABRICATING STEEL. ADVISE ENGINEER OF ANY DISCREPANCIES.

1. BOLT AND WASHER MATERIAL GRADE 43. WELDS E70XX.
2. ROUND WASHER TO BE USED UNDER NUT AND TO BE SUFFICIENT TO PROVIDE ADEQUATE BEARING AROUND CLEARANCE HOLE IN COLUMN BASE PLATE.
3. BOLT SHANK TO BE DEGREASED BEFORE EMBEDDING IN CONCRETE.
4. BOLTS TO BE POSITIONED BY MEANS OF A TEMPLATE.

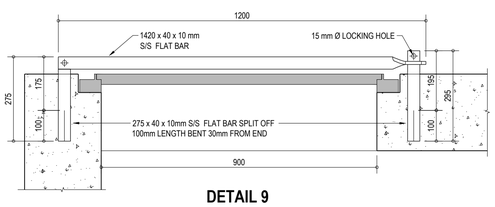
Ø16mm H.D. BOLT DETAIL
SCALE 1:5



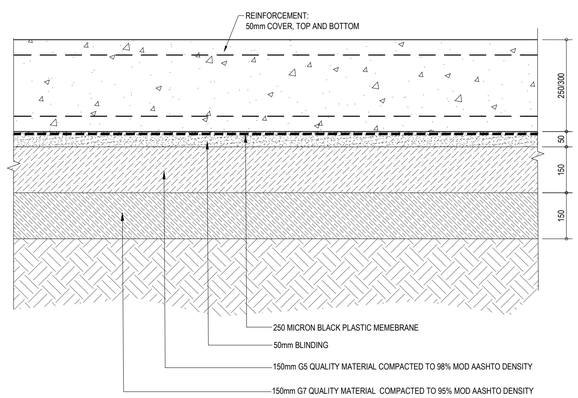
SECTION THROUGH 250mm DEEP APRON EDGE THICKENING
SCALE1:25



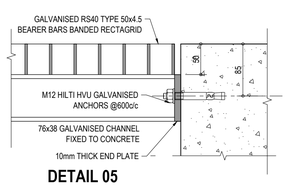
DETAIL 8
SECTION THROUGH CHAMBER ACCESS
SCALE 1:10



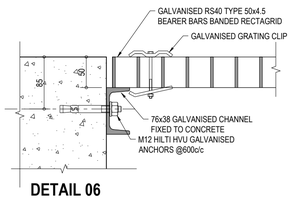
DETAIL 9
LOCKING MECHANISM
SCALE 1:10



DETAIL 04
TYPICAL LAYERWORKS UNDER STRUCTURE
SCALE 1:10



DETAIL 05
RECTAGRID RS40 TYPE **50x4.5**
SCALE 1:5



DETAIL 06
RECTAGRID RS40 TYPE **50x4.5**
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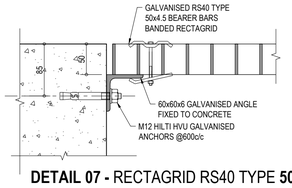

DETAIL 07 - RECTAGRID RS40 TYPE **50x4.5**
SCALE 1:5

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Revisions

Client: RAND WATER

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INFRASTRUCTURE & TRANSPORT

Johannesburg
3rd Floor, Building 4
15 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5570

Approved By: J DE WET

Drawn By: JD LOMBARD | Designed By: JD KLAUWERT | Reviewed By: J DE WET

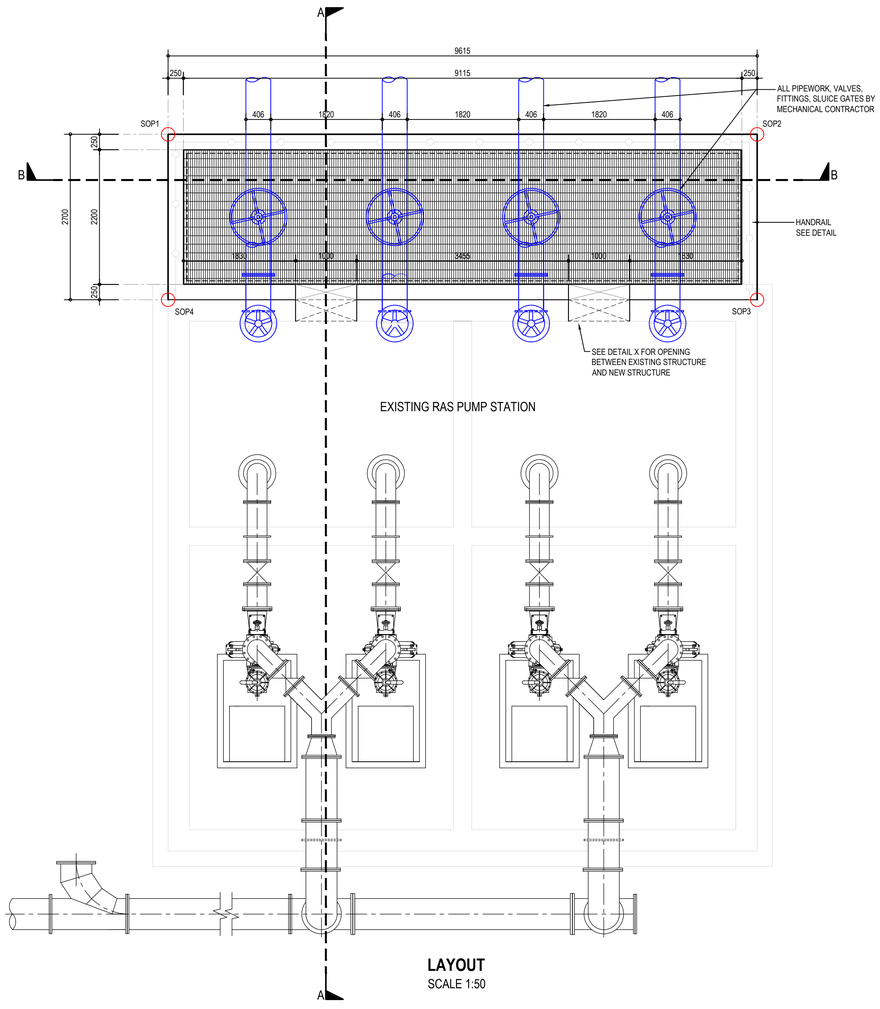
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: **WAS PUMP STATION** DETAILS

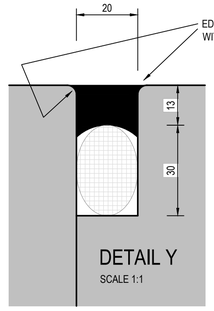
Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 / Org. No: 010-227-6 / Rev: 0

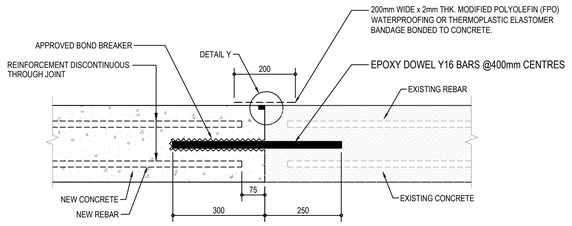
COORDINATES - Arbitrary X-Y Coordinates (Meters)		
Name	X	Y
SOP1	96 927.633	-2 941 822.427
SOP2	96 936.779	-2 941 825.395
SOP3	96 935.945	-2 941 827.963
SOP4	96 926.800	-2 941 824.995



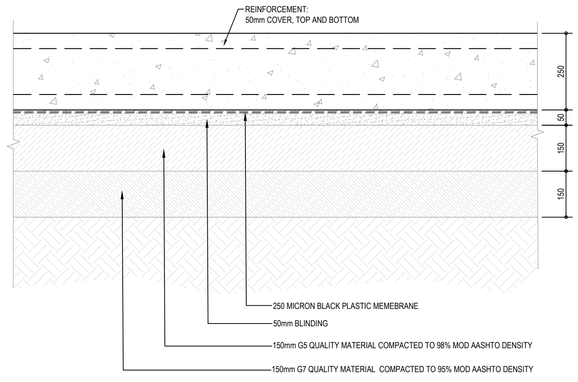
LAYOUT
SCALE 1:50



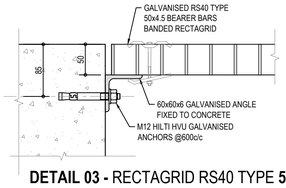
20mm WIDE JOINT WITH 25mm dia. BOND BREAKING CORD AND 20x13mm POLYURETHANE OR EQUIVALENT APPROVED SEALANT APPLIED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.



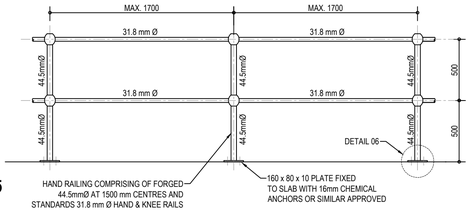
DETAIL X
WVC - VERTICAL CONTRACTION JOINT IN WALL (PLAN)
SCALE 1:10



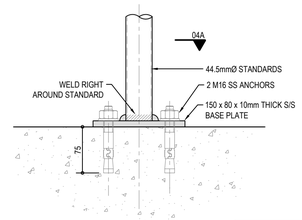
DETAIL 02
TYPICAL LAYERWORKS UNDER STRUCTURE
SCALE 1:10



DETAIL 03 - RECTAGRID RS40 TYPE **50x4.5**
SCALE 1:5

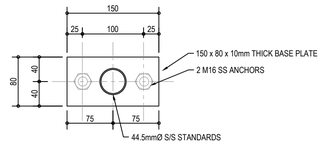


TOP MOUNTED HANDRAIL ELEVATION
SCALE1:25

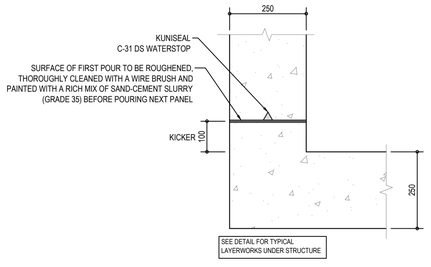


DETAIL 04 BALUSTRADE FIXING
SCALE 1:5

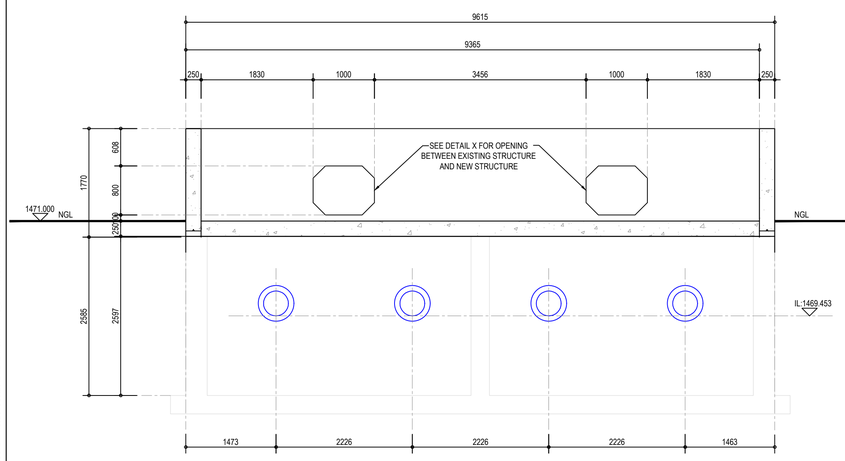
NOTE:
- ALL LADDER COMPONENTS TO BE STAINLESS STEEL.
- MINIMUM THICKNESS OF TUBE WALLS TO BE 2.5mm
- CONFIRM DIMENSIONS ON SITE BEFORE MANUFACTURING



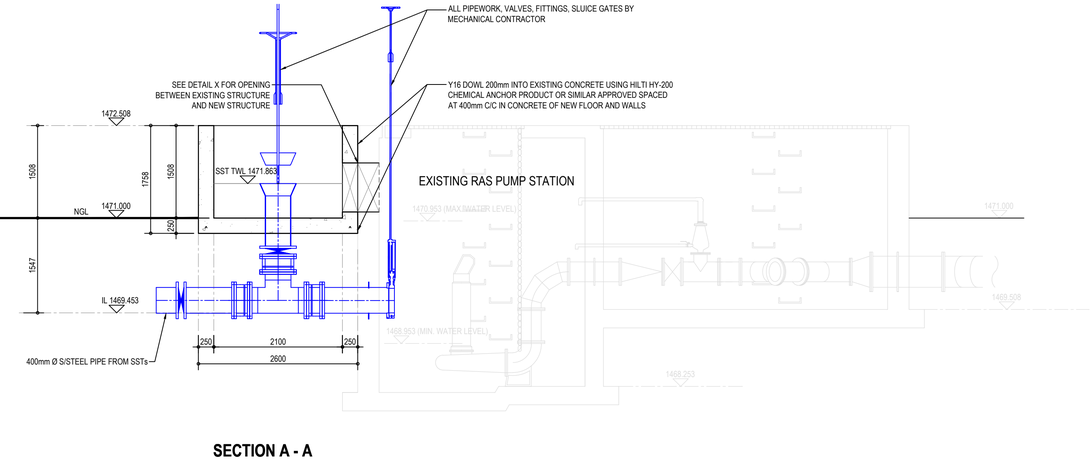
SECTION 04A
SCALE 1:5



DETAIL 01
TYPICAL KICKER DETAIL
SCALE 1:10



SECTION B - B
SCALE 1:50



SECTION A - A
SCALE 1:50

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ON ORIGINAL

mm 0 5 10 15 20 25 30 40 50 60 70 80 90A0

GENERAL NOTES:

NOTE:
1. CONTRACTOR IS TO VERIFY ALL SPECIALS, DIMENSIONS, ANGLES AND MEASUREMENTS PRIOR TO CONSTRUCTION.
2. ALL FLANGES SHALL BE TO SABS 1123 TABLE 600/3 FOR GRAVITY LINES AND SABS 1123 TABLE 1000/3 FOR RISING MAINS
3. ALL PUDDLE FLANGES TO BE 100mm LONG AND 10mm WIDE.
4. ALL STEEL PIPE WORK SPECIALS AND FITTINGS ARE TO BE DESIGNED BY THE MECHANICAL CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PLACING ORDERS.

ISSUED FOR TENDER

No	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT

Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By	Designed By	Reviewed By
JM SHAKA	JM MURPHY	VDE WET

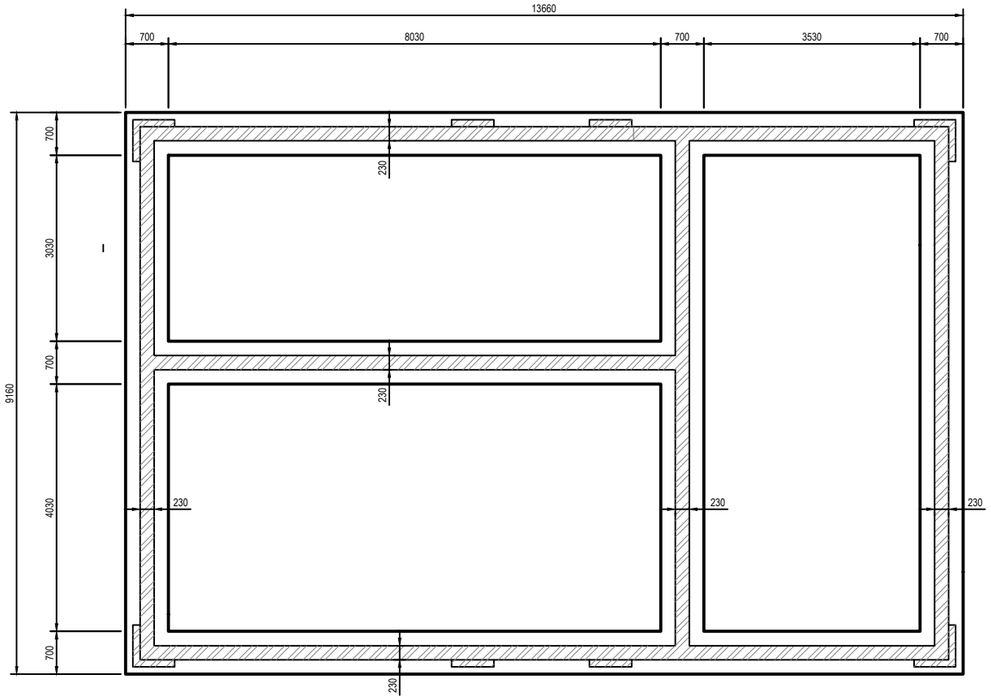
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: **ALTERATIONS TO THE EXISTING RAS PUMP STATION**
LAYOUT AND SECTIONS

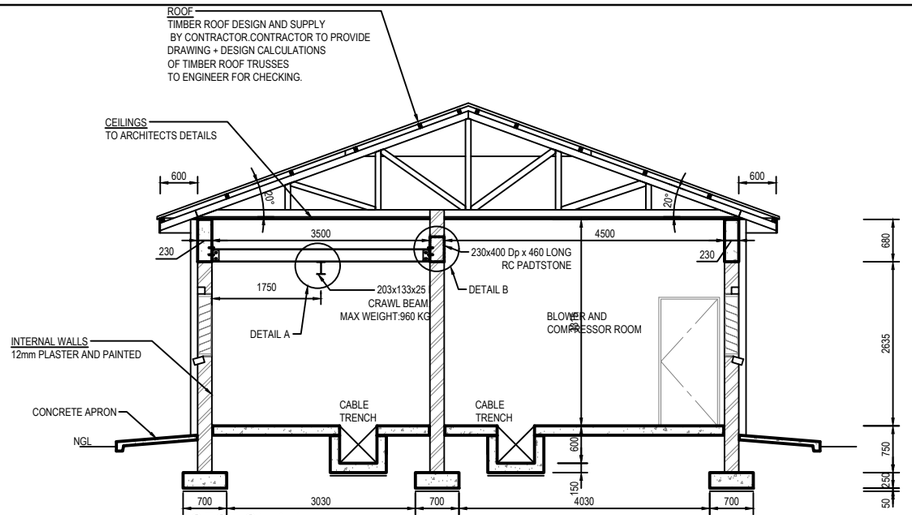
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No.	Drg. No.	Rev
J40073	010 - 230	0

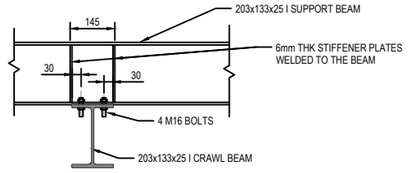
I:\EJS-CLUSTER\PROJECTS\J00315 MEYERTON WWTW\CAD_DRAWINGS\04. TENDER DRAWINGS 2022\NEW CAD\ MEINASHEN REDDY | 10/3/2023 16:16:10



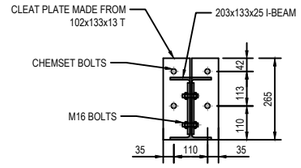
FOUNDATION LAYOUT
SCALE 1:50



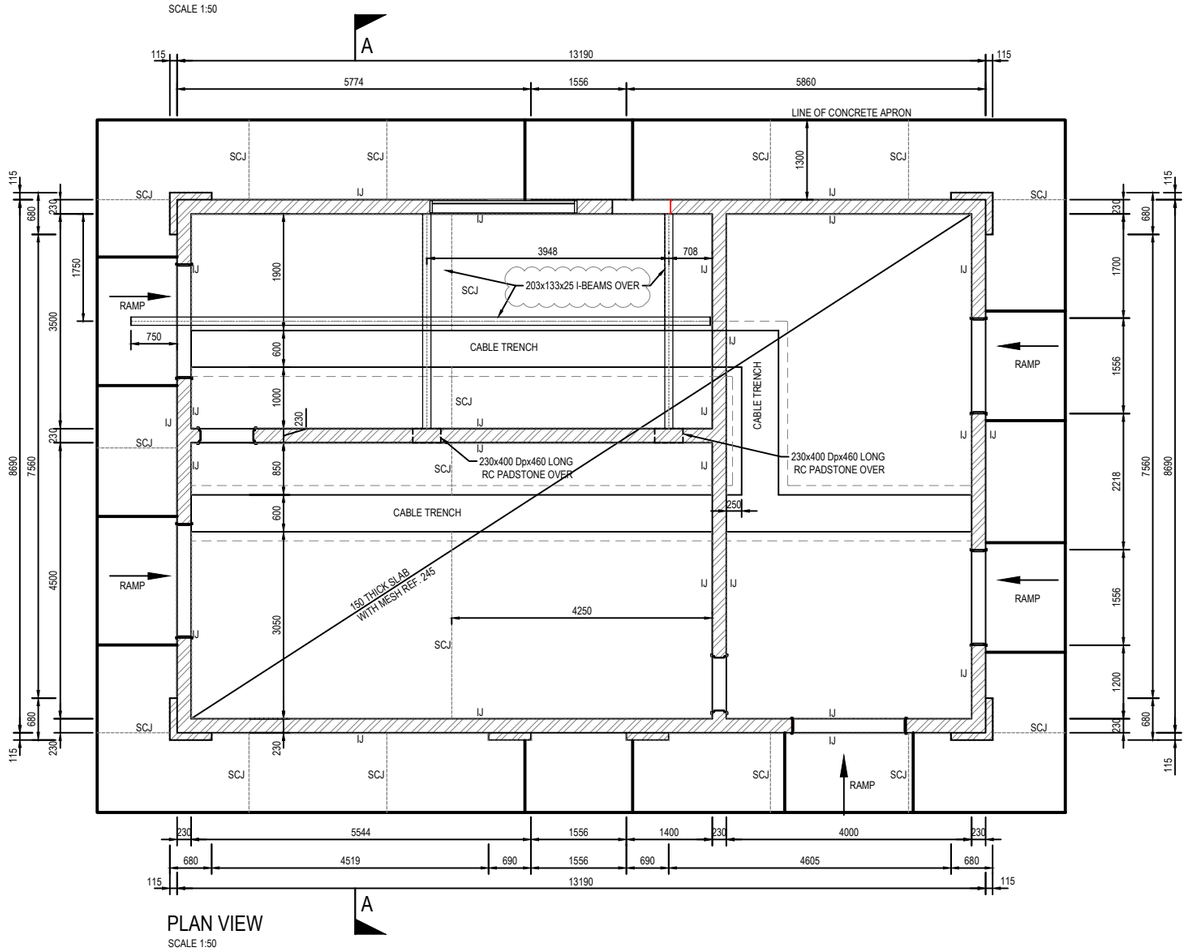
SECTION A-A
SCALE 1:50



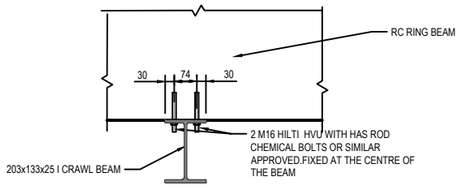
1:10 DETAIL A AT I-BEAM TO I-BEAM



1:10 SECTION 2-2



PLAN VIEW
SCALE 1:50



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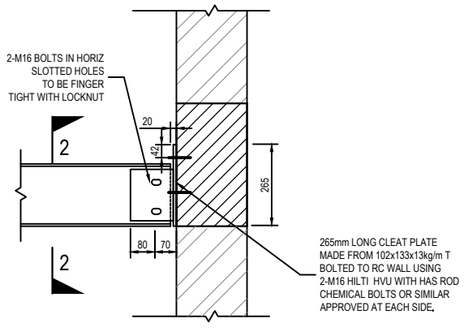
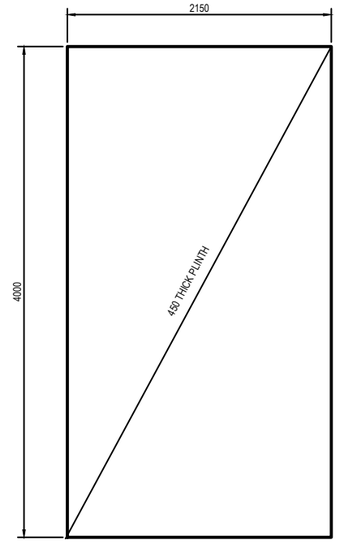
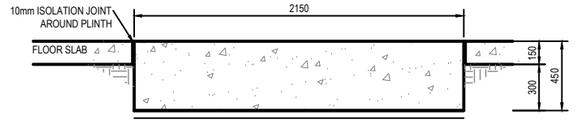


1:10 DETAIL B



GENERATOR PLINTH
SCALE 1:25



GENERATOR PLINTH TYPICAL SECTION
SCALE 1:20

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ON ORIGINAL

GENERAL NOTES:
REFER TO NOTES IN DRAWING J30231E-010-10

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: S.D.MAPHOSA
Drawn By: J.P.SMIT
Designed By: J.P.SMIT
Reviewed By: CHTE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: BLOWER BUILDING LAYOUT PLAN & SECTION

Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073
Drg. No: 010-408
Rev: 0

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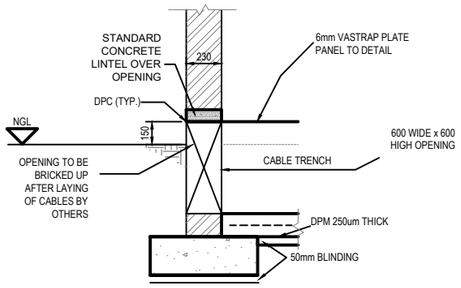
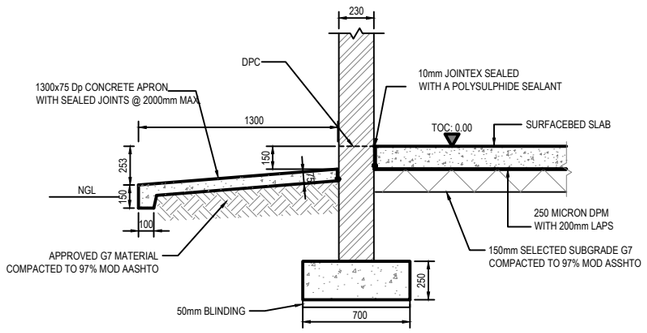
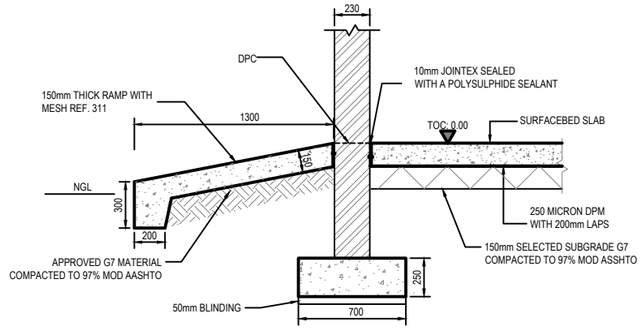


SECTION THROUGH CABLE TRENCH
SCALE 1:20



TYPICAL SECTION ALONG 230mm WALLS
SCALE 1:20

NOTE:
FOUNDING DEPTH TO BE TO SUITABLE MATERIAL AND APPROVED BY THE ENGINEER



TYPICAL SECTION AT RAMPS
SCALE 1:20

NOTE:
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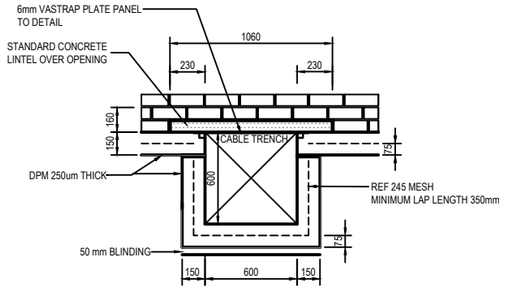
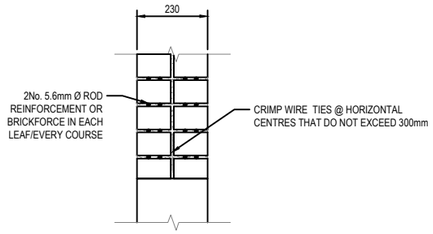
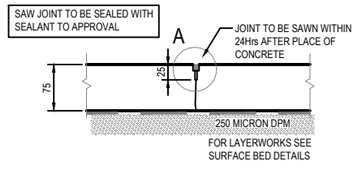


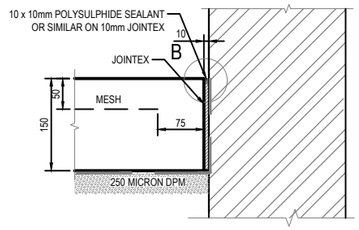
TYPICAL SECTION @ CABLE TRENCH
SCALE 1:20



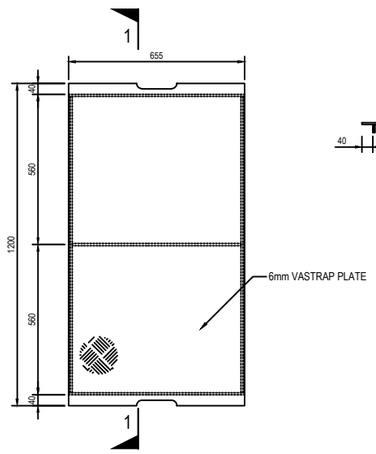
DETAIL ABOVE REVEAL
SCALE 1:10



TYPICAL SAW CUT-APRON JOINT DETAIL (SCJ)
SCALE 1:5

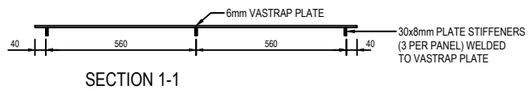


TYPICAL ISOLATION JOINT DETAIL (IJ)
SCALE 1:5



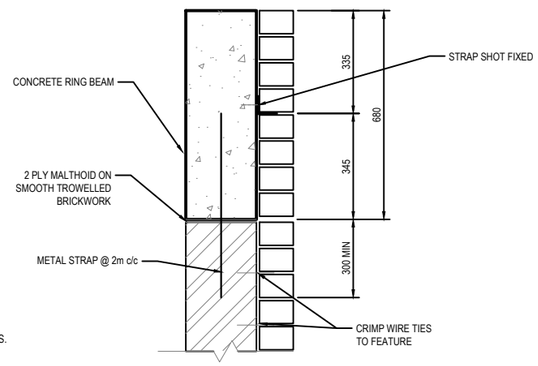
TRENCH PLATE PANEL COVER
SCALE 1:10

NOTE:
WHERE APPLICABLE PANELS TO BE ADJUSTED TO SUIT.

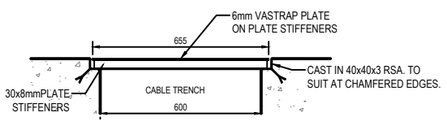


SECTION 1-1
SCALE 1:10

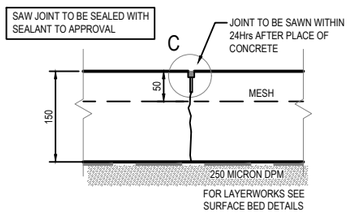
NOTE:
STIFFENER PLATE TO BE MIN. GRADE 300W STEEL.



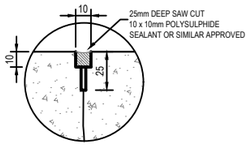
DETAIL AT FEATURE
SCALE 1:10



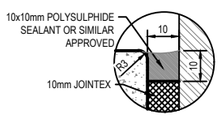
DETAIL AT TRENCH
SCALE 1:10



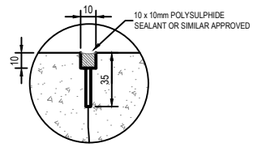
TYPICAL SAW CUT-SURFACEBED JOINT DETAIL (SCJ)
SCALE 1:5



DETAIL A
SCALE 1:2



DETAIL B
SCALE 1:1



DETAIL C
SCALE 1:2

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ON ORIGINAL

REFER TO NOTES IN DRAWING J30231E-010-112

GENERAL NOTES:
REFER TO NOTES IN DRAWING J30231E-010-112

ISSUED FOR TENDER

No	Date	Details	Cmd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT

Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK

Drawn By: JM PIENAAR

Designed By: JM PIENAAR

Reviewed By: C VAN DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: BLOWER BUILDING DETAILS

Scale: AS SHOWN

Date: NOVEMBER 2022

Project No: J40073

Drg. No: 010-409

Rev: 0

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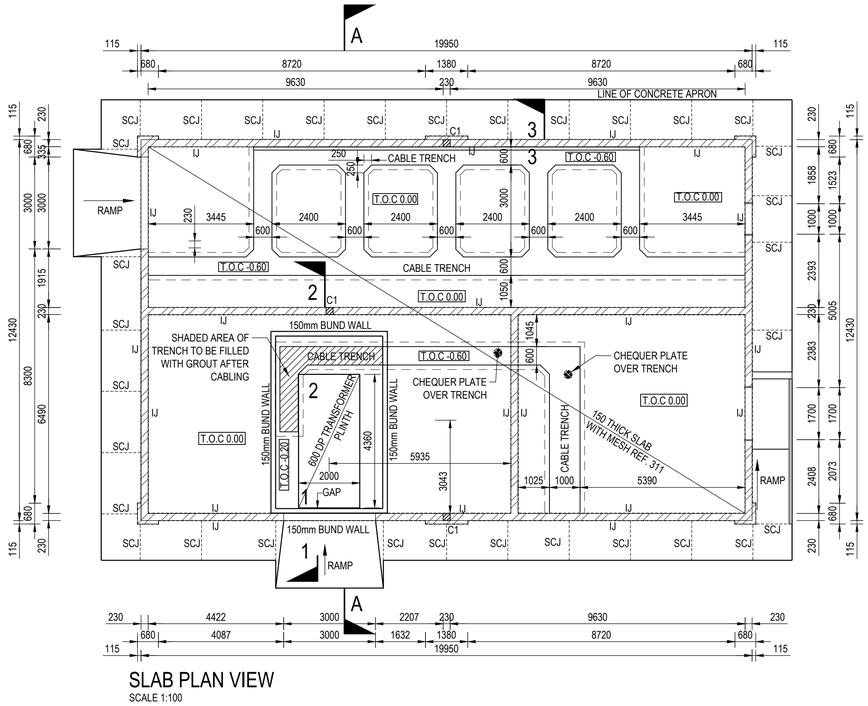
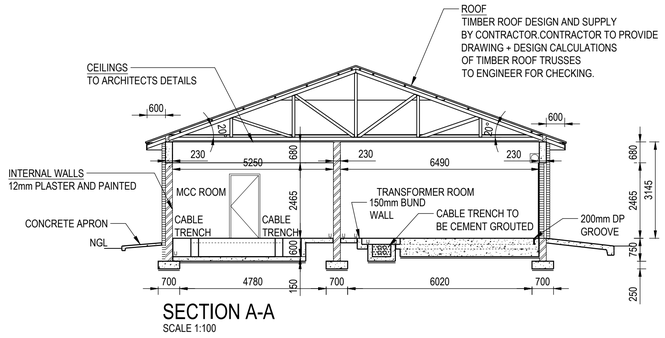
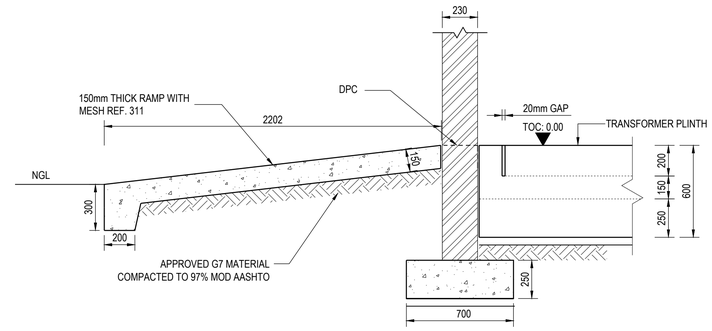


SLAB PLAN VIEW
SCALE 1:100



SECTION A-A
SCALE 1:100

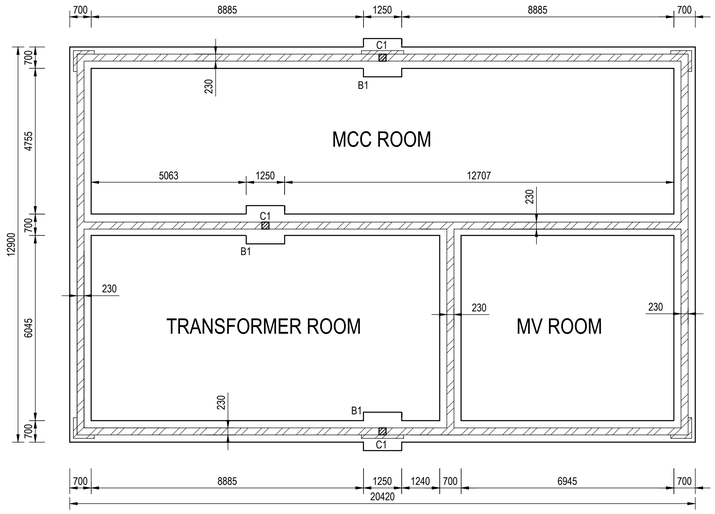


SECTION 1-1
SCALE 1:20

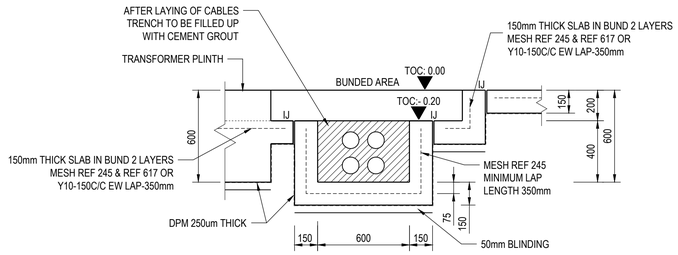
BASE SCHEDULE
B1 - 1250 x 1250 x 300
STRIP FOOTING - 700 x 250

COLUMN SCHEDULE
C1 - 230 x 230

NOTE : STRIP FOOTINGS POSITION ALONG CENTRES OF COLUMN BASES

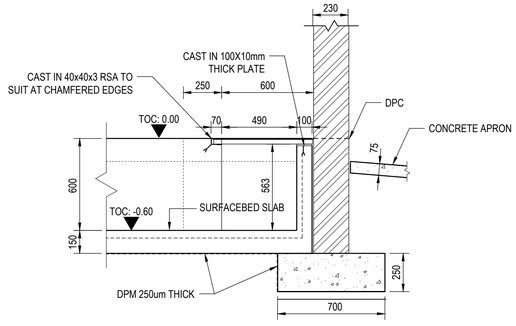


FOUNDATION LAYOUT PLAN
SCALE 1:100



SECTION 2-2
SCALE 1:20

NOTE:
ISOLATION JOINTS (IJ) TO BE SEALED TO DETAIL



SECTION 3-3
SCALE 1:20

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GENERAL NOTES:

REFER TO NOTES IN DRAWING 010-110

ISSUED FOR TENDER

No.	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: S.CLARK

Drawn By: JJP J.PARKS

Designed By: JB K.LAUBSCHT

Reviewed By: CDE WET

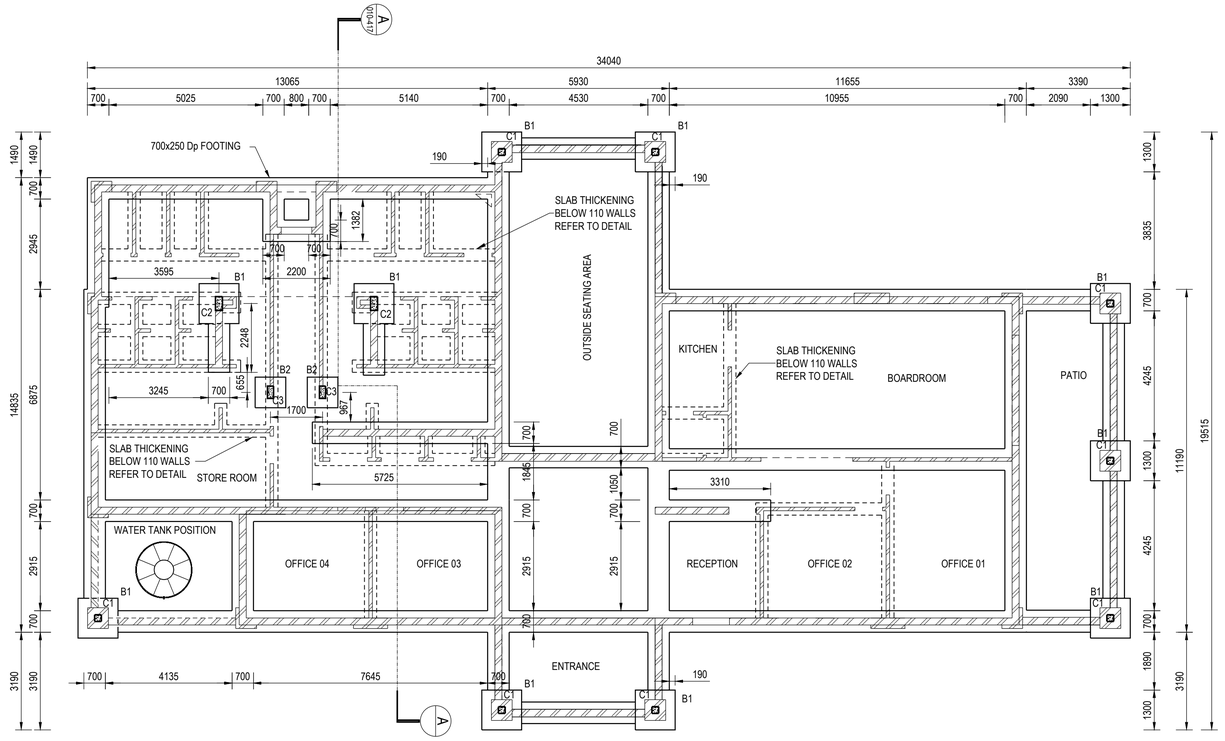
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: MCC BUILDING LAYOUT AND SECTIONS

Scale	Date
AS SHOWN	NOVEMBER 2022

Project No.	Dwg. No.	Rev.
J40073	010-415	0

\\ELS-CLUSTER\PROJECTS\J40073 MEYERTON WWTW\0_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \ MEHASHEN REDDY | 10/03/2023 16:16:10

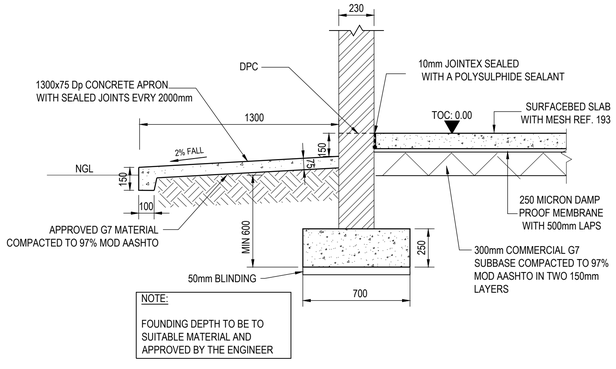


FOUNDATION LAYOUT

SCALE 1:100

BASE SCHEDULE
B1 - 1300 x 1300 x 300
B2 - 1000 x 1000 x300
STRIP FOOTING - 700 x 250

COLUMN SCHEDULE
C1 - 220 x 220
C2 - 230 x 450
C3 - 200 x 400

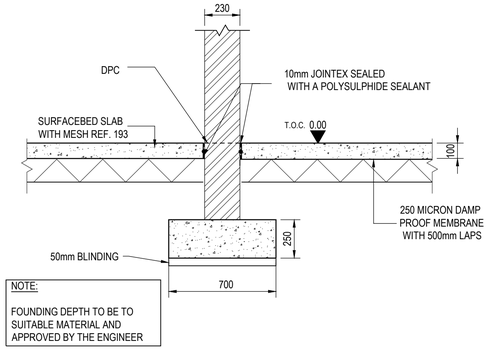


NOTE:

FOUNDING DEPTH TO BE TO SUITABLE MATERIAL AND APPROVED BY THE ENGINEER

TYPICAL STRIP FOOTING FOR 230 THICK WALLS

SCALE 1:20

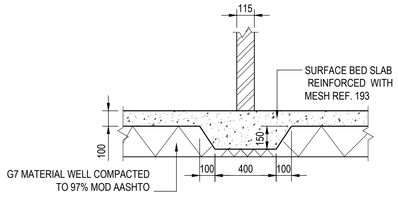


NOTE:

FOUNDING DEPTH TO BE TO SUITABLE MATERIAL AND APPROVED BY THE ENGINEER

TYPICAL STRIP FOOTING FOR 230 THICK WALLS

SCALE 1:20



TYPICAL STRIP FOOTING FOR 115 THK WALLS

SCALE 1:20

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90mm

GENERAL NOTES:

REFER TO NOTES IN DRAWING J30231E-010-110

ISSUED FOR TENDER

No.	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	OC

Client

RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
2198 Johannesburg
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By

S.CLOUGH

Drawn By: JST DAVIES

Designed By: JSR MURPHY

Reviewed By: JVDE WET

Project

EXTENSION
OF MEYERTON
WASTEWATER
TREATMENT WORKS

Description

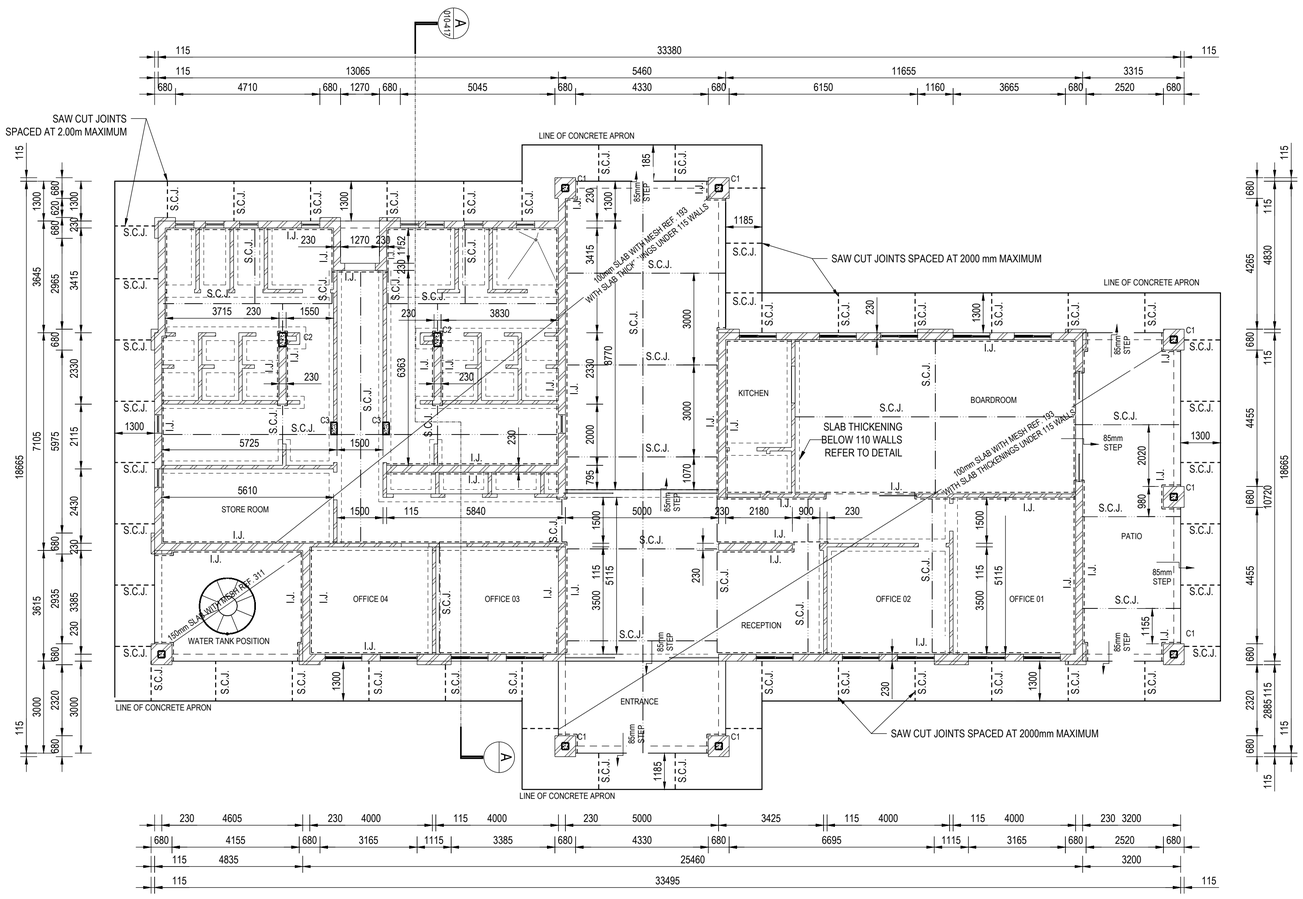
ADMIN BUILDING
FOUNDATION LAYOUT & DETAILS

Scale: AS SHOWN

Date: NOVEMBER 2022

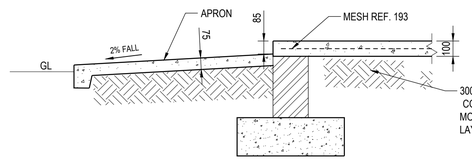
Project No: J40073 / Dg. No: 010-416 / Rev: 0

\\ELS-CLUSTERPROJECTS\J0231E MEYERTON WWTW\TWO_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \MENASHEN REDDY\ 10/03/2023 16:16:10

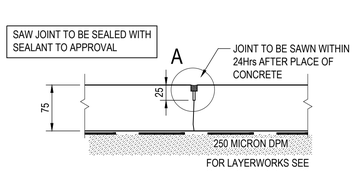


SURFACE BED LAYOUT

SCALE 1:100

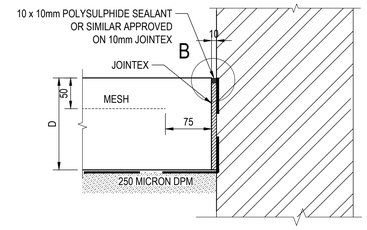


1:20 SLAB EDGE DETAIL AT PATIO



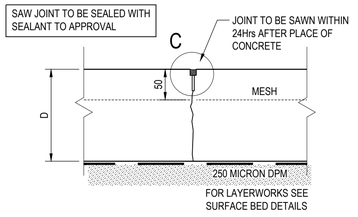
TYPICAL SAW CUT-APRON JOINT DETAIL (SCJ)

SCALE 1:5



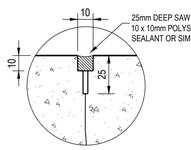
TYPICAL ISOLATION JOINT DETAIL (IJ)

SCALE 1:5



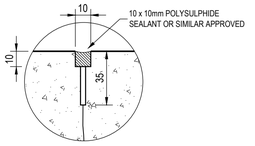
TYPICAL SAW CUT-SURFACEBED JOINT DETAIL (SCJ)

SCALE 1:5



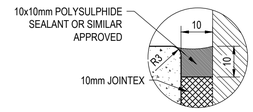
DETAIL A

SCALE 1:2



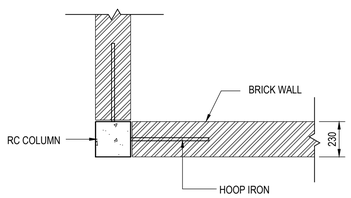
DETAIL C

SCALE 1:2



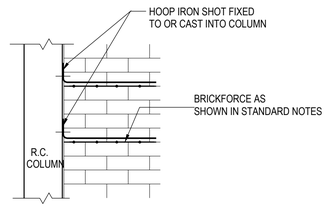
DETAIL B

SCALE 1:1



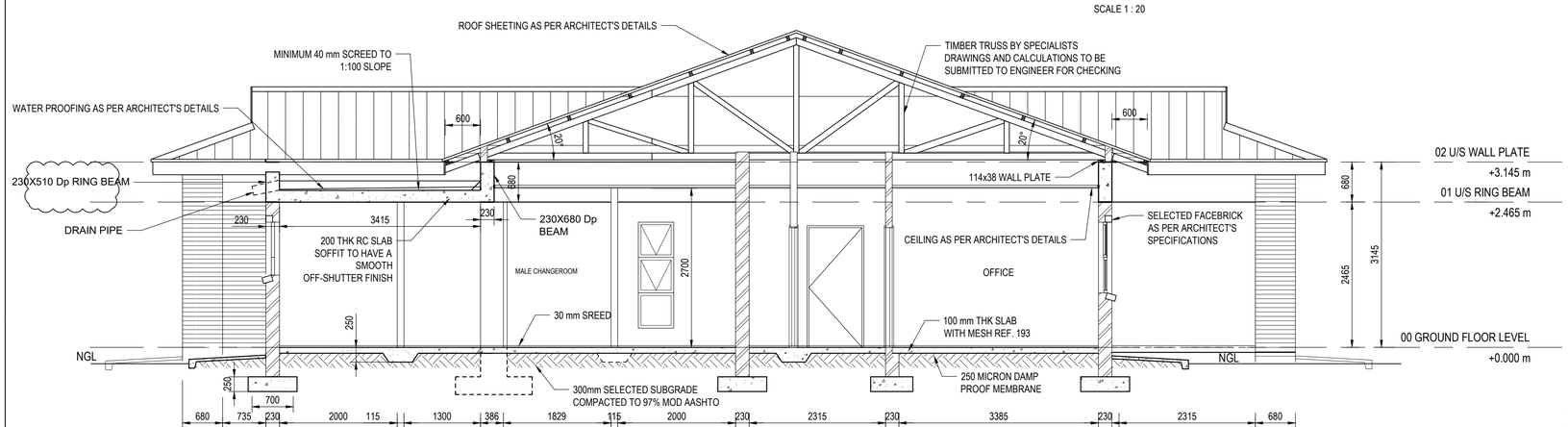
TYPICAL BRICKWORK TO COLUMN PLAN CONNECTION

SCALE 1 : 20



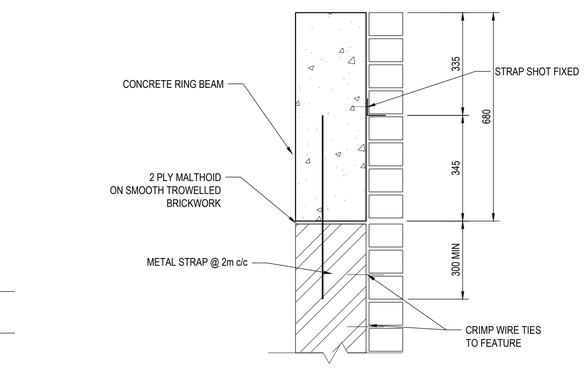
TYPICAL BRICKWORK TO COLUMN ELEVATION CONNECTION

SCALE 1 : 20



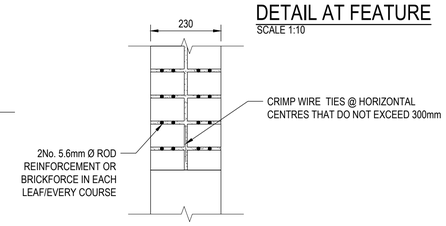
SECTION A-A

SCALE 1:50



DETAIL AT FEATURE

SCALE 1:10



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SCALE 1:10

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GENERAL NOTES:

REFER TO NOTES IN DRAWING J30231E-010-110

ISSUED FOR TENDER

No	Date	Details	Chkd	Apvd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Johannesburg, 2198
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4000
Fax No. +27 11 807 6879

Approved By: D CLARK
Drawn By: JB FOURIE
Designed By: JB FOURIE / M MURPHY
Reviewed By: C DE WET

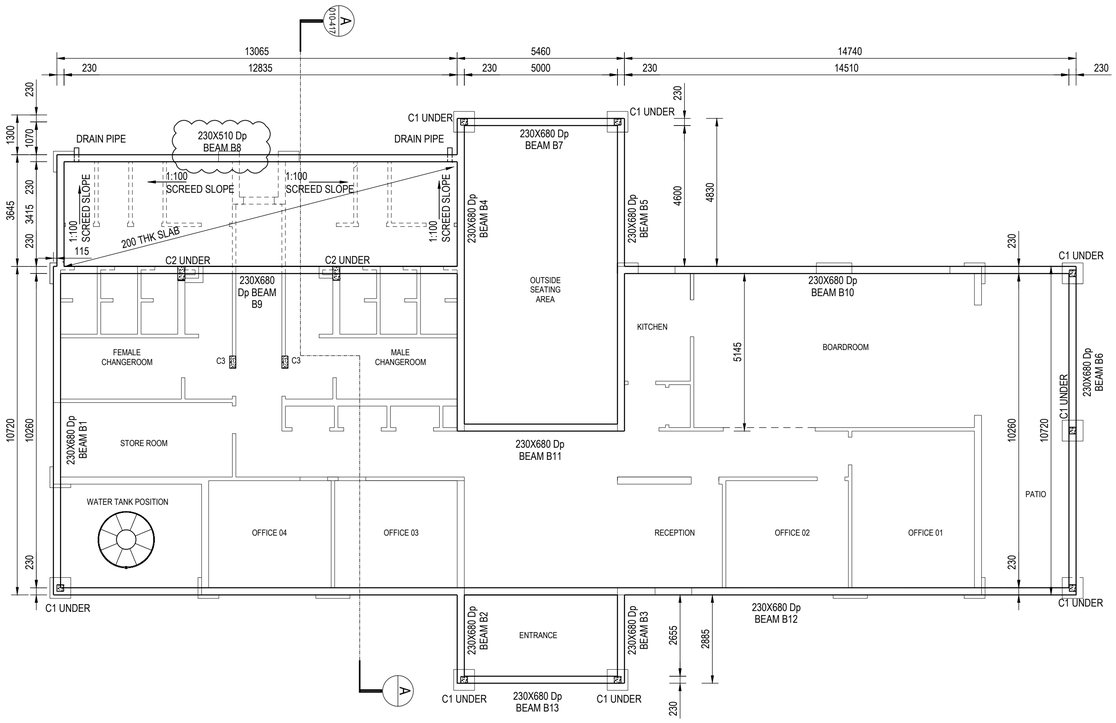
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: ADMIN BUILDING SURFACE BED LAYOUT AND SECTIONS

Scale: AS SHOWN
Date: NOVEMBER 2022

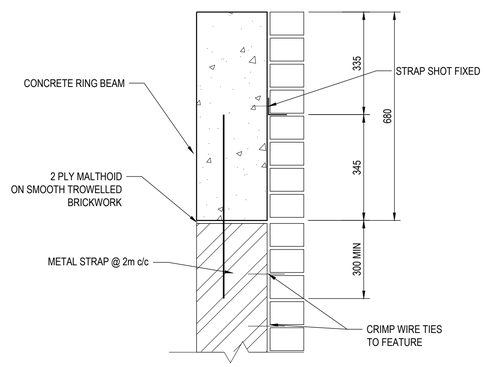
Project No: J40073 / Drg. No: 010-417 / Rev: 0

\\ELS-CLUSTER\PROJECTS\J40231E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \MENGHEN RED\DY | 10/03/2023 16:16:10



RING BEAM AND ROOF SLAB LAYOUT

SCALE 1:100



DETAIL AT FEATURE

SCALE 1:10

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

REFER TO NOTES IN DRAWING J30231E-010-110

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 518 4600
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: PP J DIPPA

Designed By: RK LAUFFY

Reviewed By: DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

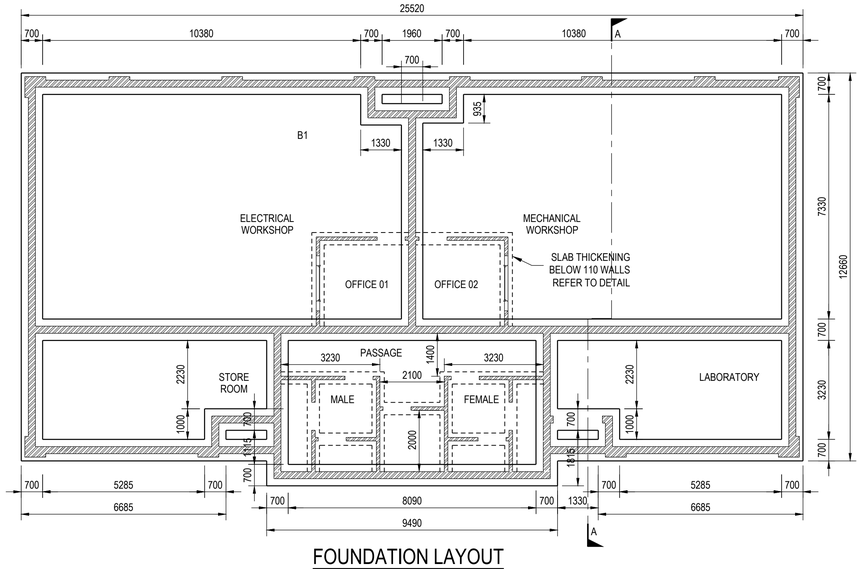
Description: ADMIN BUILDING RING BEAM AND ROOF SLAB LAYOUT

Scale: AS SHOWN

Date: NOVEMBER 2022

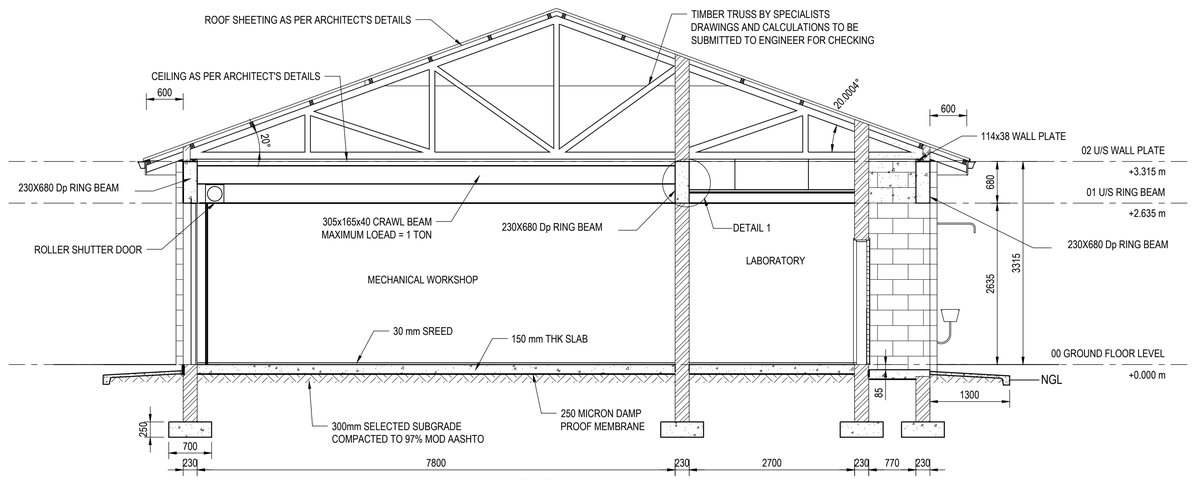
Project No: J40073 / Drg. No: 010-418 / Rev: 0

I:\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\2_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY | 10/03/2023 16:16:10



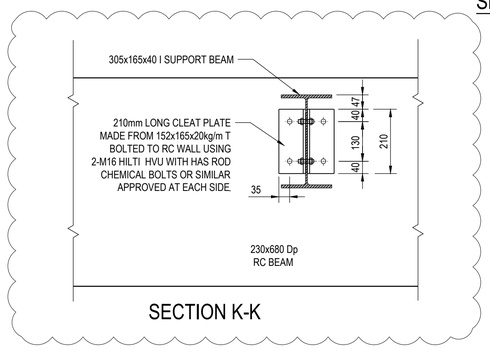
FOUNDATION LAYOUT

SCALE 1:100

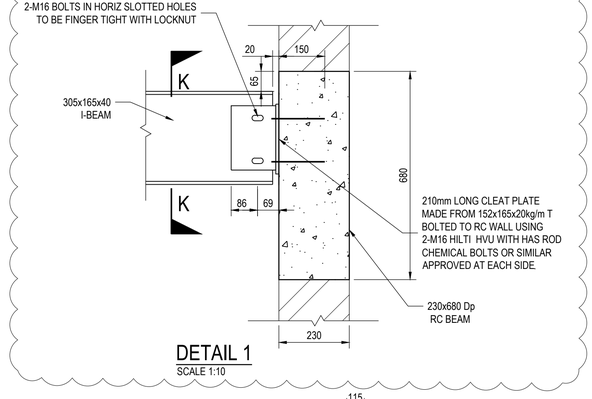


SECTION A-A

SCALE 1:50

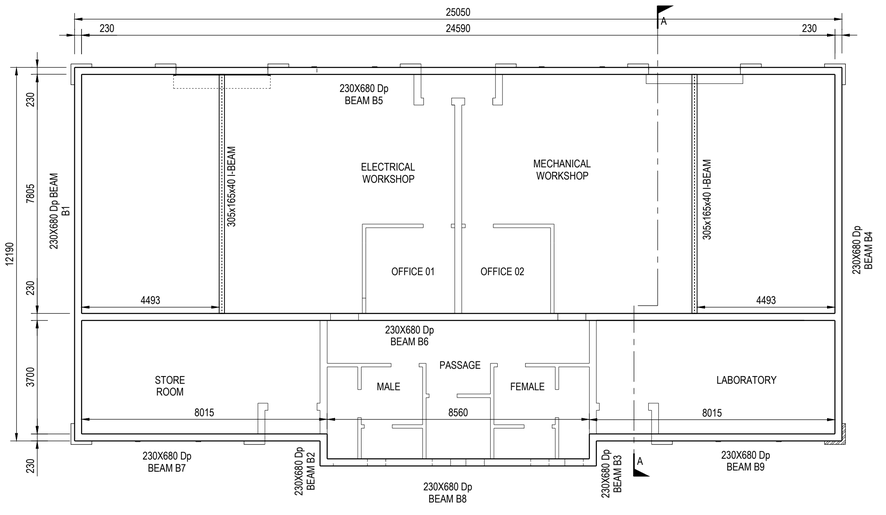


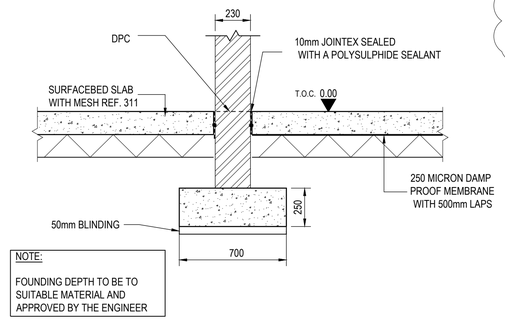
SECTION K-K



DETAIL 1

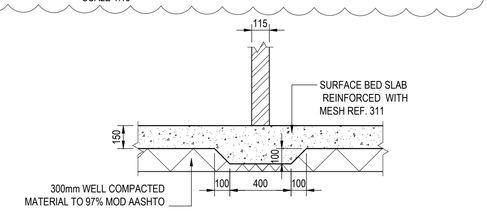
SCALE 1:10





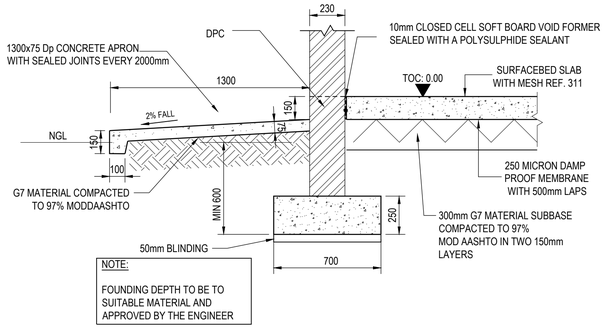
TYPICAL STRIP FOOTING FOR 230 THICK WALLS

SCALE 1:20



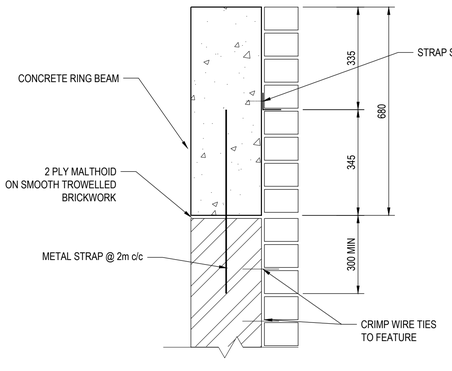
TYPICAL DETAIL OF THICKENING UNDER 115 THK WALLS

SCALE 1:20



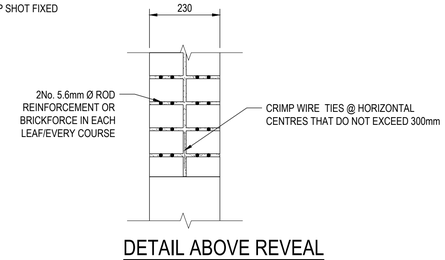
TYPICAL STRIP FOOTING FOR 230 THICK WALLS

SCALE 1:20



DETAIL AT FEATURE

SCALE 1:10



DETAIL ABOVE REVEAL

SCALE 1:10

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GENERAL NOTES:

REFER TO NOTES IN DRAWING J30231E-010-110

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
Gibb Campus, 19 Aughton Estate
Rosebank, 2196
PO Box 2705, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5070

Approved By: S.GOKHOOL

Drawn By: JD LEMMER | Designed By: JD K.MURPHY | Reviewed By: JDE WET

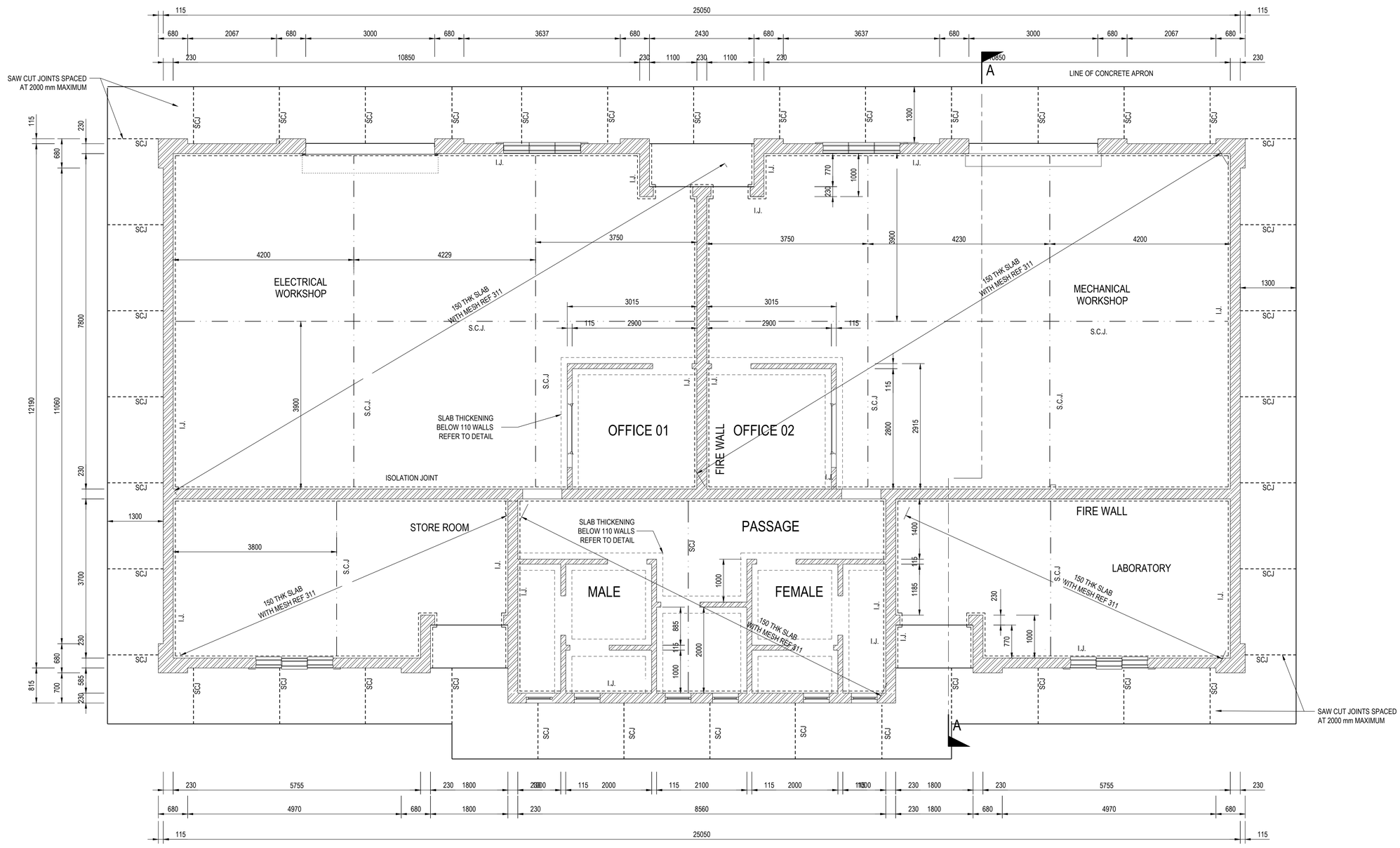
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: WORKSHOP BUILDING FOUNDATION, BEAM LAYOUT SECTIONS AND DETAILS

Scale: AS SHOWN | Date: NOVEMBER 2022

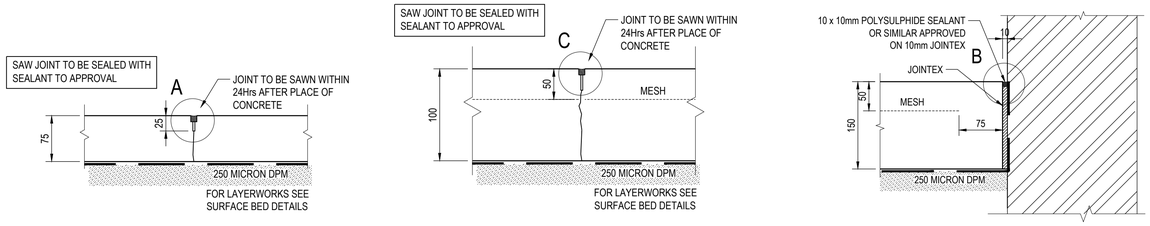
Project No: J40073 / Dg. No: 010-419 / Rev: 0

\\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\2. DRAWINGS\04. TENDER DRAWINGS 2022\NEW CAD \ MENASHEN.REDDY \ 10/03/2023 16:16:10



SURFACE BED LAYOUT

SCALE 1:50



TYPICAL SAW CUT-APRON JOINT DETAIL (SCJ)

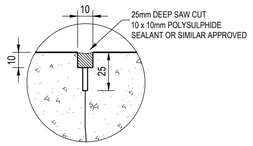
SCALE 1:5

TYPICAL SAW CUT-SURFACEBED JOINT DETAIL (SCJ)

SCALE 1:5

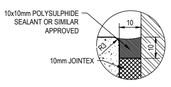
TYPICAL ISOLATION JOINT DETAIL (IJ)

SCALE 1:5



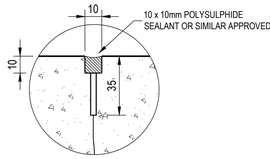
DETAIL A

SCALE 1:2



DETAIL B

SCALE 1:1



DETAIL C

SCALE 1:2

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ON ORIGINAL

0 5 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

REFER TO NOTES IN DRAWING J30231E-010-110

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4000
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JM JANSEN

Designed By: JM JANSEN

Reviewed By: JE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

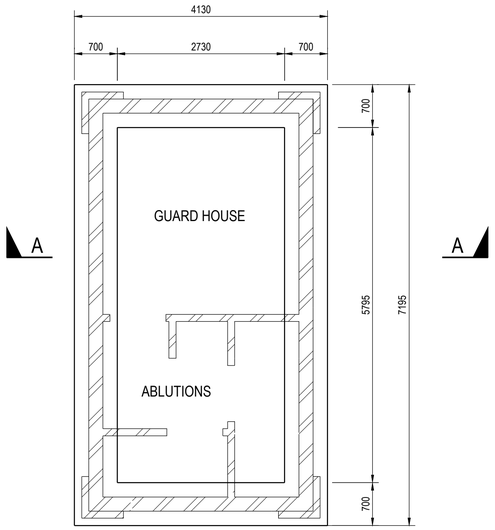
Description: WORKSHOP BUILDING SURFACE BED LAYOUT

Scale: AS SHOWN

Date: NOVEMBER 2022

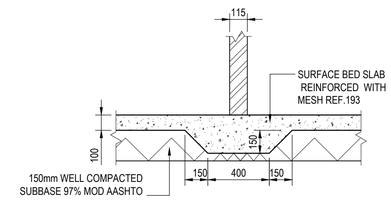
Project No: J40073 / Drg No: 010-420 / Rev: 0

I:\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\VO_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \MENASHEN REDDY \ 10/03/2023 16:16:10



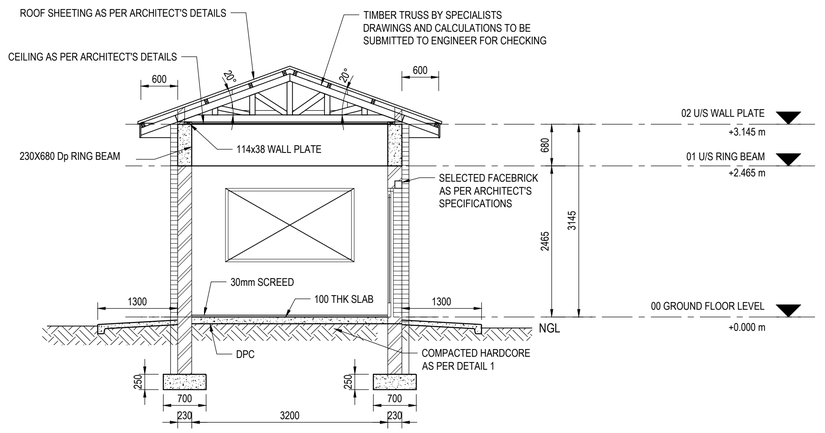
FOUNDATION LAYOUT

SCALE 1:50



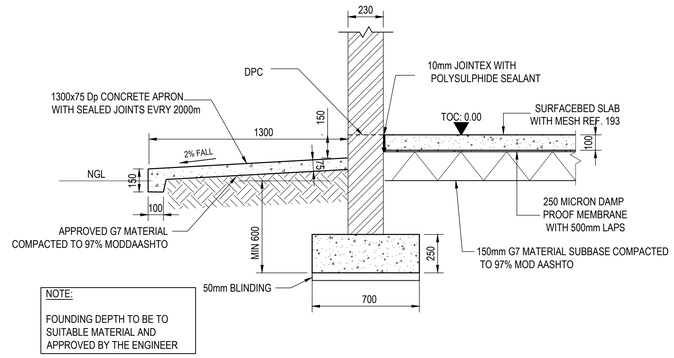
TYPICAL DETAIL OF THICKENING UNDER 115 THK WALLS

SCALE 1:20



SECTION A-A

SCALE 1:50

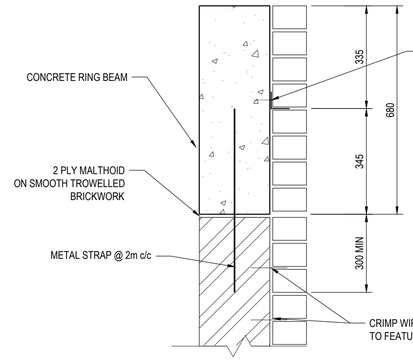


NOTE:

FOUNDING DEPTH TO BE TO SUITABLE MATERIAL AND APPROVED BY THE ENGINEER

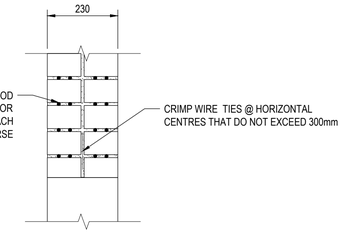
DETAIL 1. SECTION TROUGH EXTERNAL WALLS

SCALE 1:20



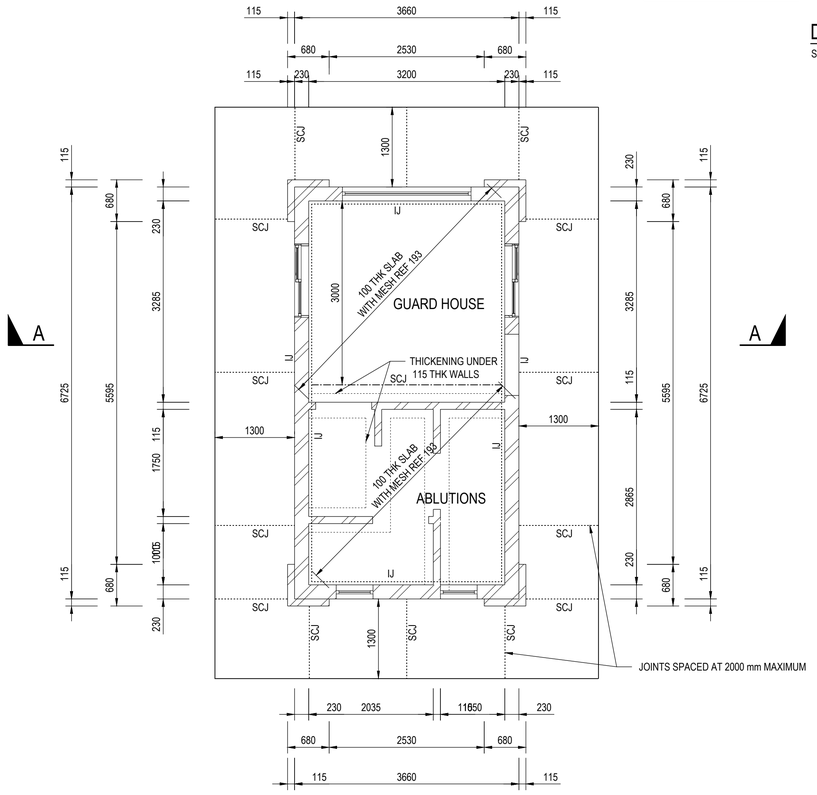
DETAIL AT FEATURE

SCALE 1:10



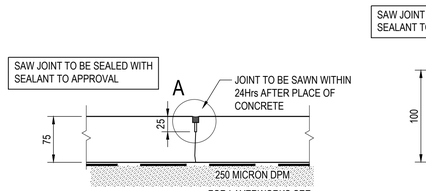
DETAIL ABOVE REVEAL

SCALE 1:10



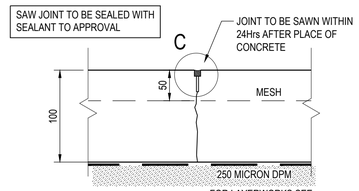
SURFACE BED LAYOUT

SCALE 1:50



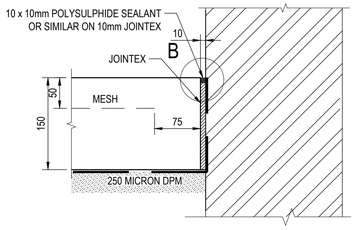
TYPICAL SAW CUT-APRON JOINT DETAIL (SCJ)

SCALE 1:5



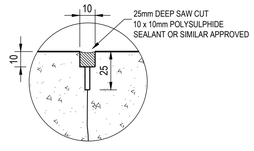
TYPICAL SAW CUT-SURFACEBED JOINT DETAIL (SCJ)

SCALE 1:5



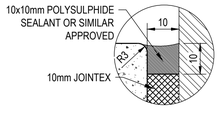
TYPICAL ISOLATION JOINT DETAIL (IJ)

SCALE 1:5



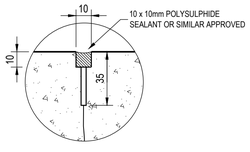
DETAIL A

SCALE 1:2



DETAIL B

SCALE 1:1



DETAIL C

SCALE 1:2

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ON ORIGINAL

0 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

REFER TO NOTES IN DRAWING J30231E-010-110

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5570

Approved By: D CLARK

Drawn By: JM JEWASS

Designed By: JM KAUMBWA

Reviewed By: CYE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

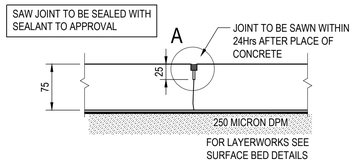
Description: GUARD HOUSE DETAILS

Scale: AS SHOWN

Date: NOVEMBER 2022

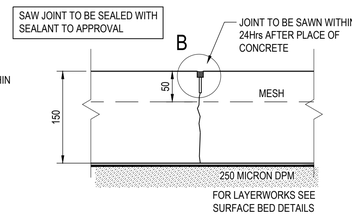
Project No: J40073 / Org. No: 010-421 / Rev: 0

I:\ELS-CLUSTER\PROJECTS\J30231E MEYERTON\WWTW\2_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \MENASHEN REDDY \ 10/03/2023 16:16:10



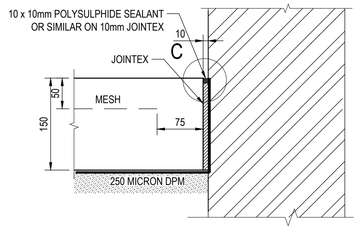
TYPICAL SAW CUT-APRON JOINT DETAIL (SCJ)

SCALE 1:5



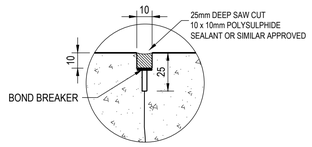
TYPICAL SAW CUT-SURFACEBED JOINT DETAIL (SCJ)

SCALE 1:5



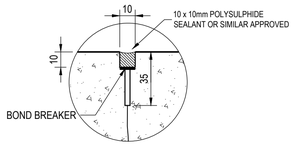
TYPICAL ISOLATION JOINT DETAIL (IJ)

SCALE 1:5



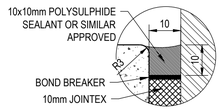
DETAIL A

SCALE 1:2



DETAIL B

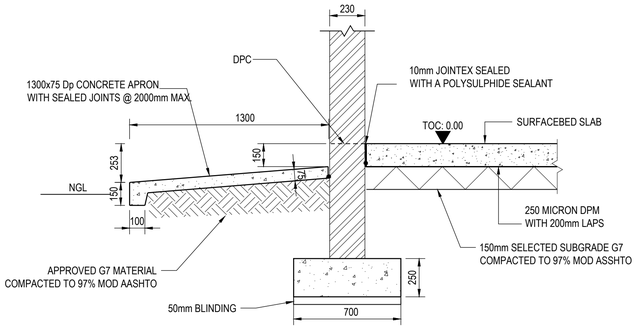
SCALE 1:2



DETAIL C

SCALE 1:1

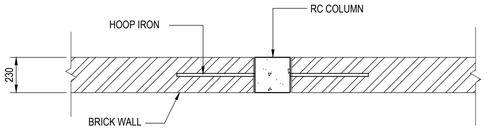
NOTE:
BOND BREAKER AT THE BOTTOM OF SEALANT MAY BE A BOND BREAKING TAPE OR AN APPROVED BACKING CHORD.



TYPICAL SECTION ALONG 230mm WALLS

SCALE 1:20

NOTE:
FOUNDING DEPTH TO BE TO SUITABLE MATERIAL AND APPROVED BY THE ENGINEER



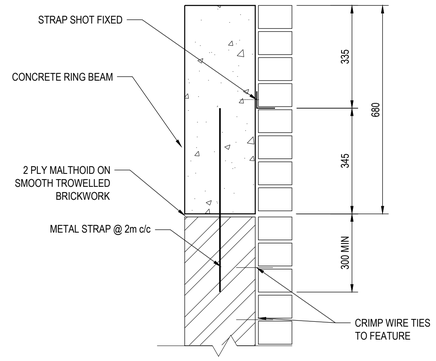
DETAIL 1:TYPICAL BRICKWORK TO COLUMN

SCALE 1:20

BASE SCHEDULE
B1 - 1250 x 1250 x 300
STRIP FOOTING - 700 x 250

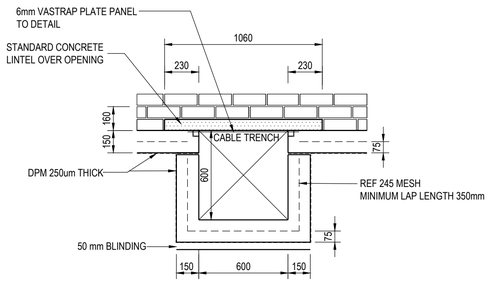
COLUMN SCHEDULE
C1 - 230 x 230

NOTE : STRIP FOOTINGS POSITION ALONG CENTRES OF COLUMN BASES



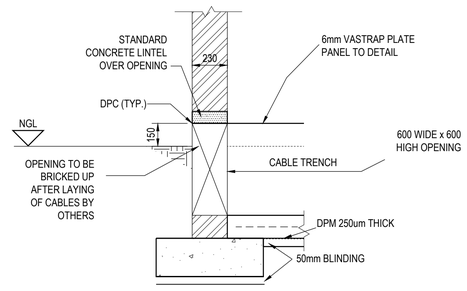
DETAIL AT FEATURE

SCALE 1:10



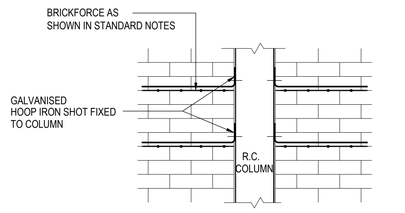
TYPICAL SECTION @ CABLE TRENCH

SCALE 1:20



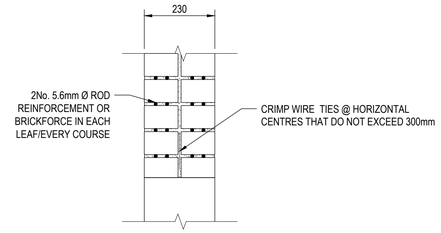
SECTION THROUGH CABLE TRENCH

SCALE 1:20



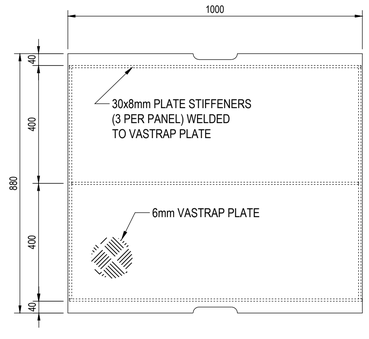
TYPICAL BRICKWORK TO COLUMN ELEVATION

SCALE 1:20



DETAIL ABOVE REVEAL

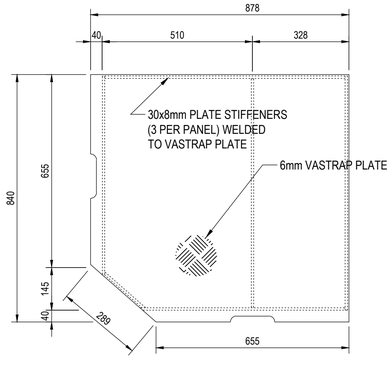
SCALE 1:10



1m TRENCH COVER

SCALE 1:10

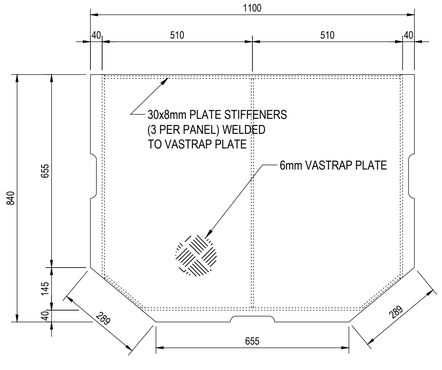
NOTE:
WHERE APPLICABLE PANELS TO BE ADJUSTED TO SUIT.



TYPICAL CORNER TRENCH COVER

SCALE 1:10

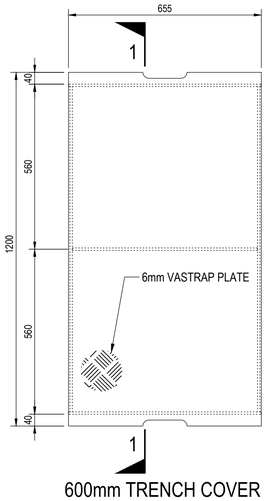
NOTE:
WHERE APPLICABLE PANELS TO BE ADJUSTED TO SUIT.



TYPICAL T-JUNCTION TRENCH COVER

SCALE 1:10

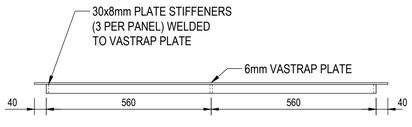
NOTE:
WHERE APPLICABLE PANELS TO BE ADJUSTED TO SUIT.



600mm TRENCH COVER

SCALE 1:10

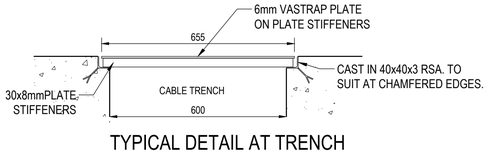
NOTE:
WHERE APPLICABLE PANELS TO BE ADJUSTED TO SUIT.



SECTION 1-1

SCALE 1:10

NOTE:
STIFFENER PLATE TO BE MIN. GRADE 300W STEEL.



TYPICAL DETAIL AT TRENCH

SCALE 1:10

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GENERAL NOTES:

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ISSUED FOR TENDER

No	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
76 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: S CLARK

Drawn By	Designed By	Reviewed By
JM JOHNSON	MK MURPHY	VDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

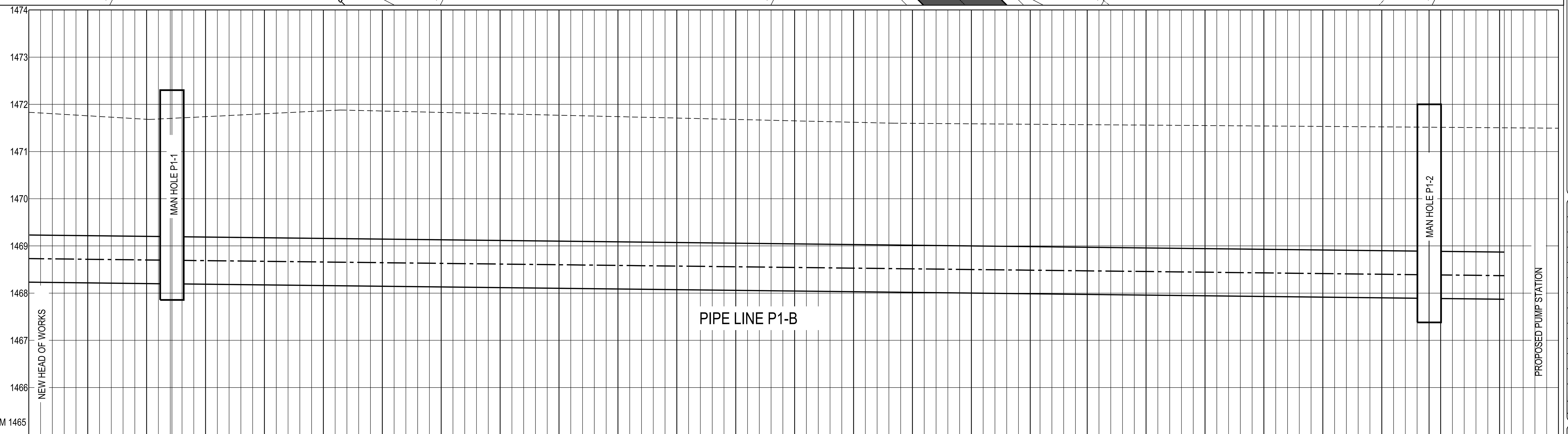
Description: MCC BUILDING DETAILS

Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Drg. No	Rev
J40073	010-422	0

\\ELS-CLUSTER\PROJECTS\J40073\E MEYERTON WWTW\PO_DRAWINGS4. TENDER DRAWINGS 2022\NEW DAD (MENASHEN RESDY) 10/03/2023 16:16:10

LAYOUT PLAN
SCALE 1 : 200



LONGITUDINAL SECTION

PIPE SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

CHAINAGE	GROUND LEVEL	INVERT LEVEL	DEPTH
0.000	1471.832	1468.240	3.094
5.000			
10.000			
		1500mm DIA. MAN HOLE	
15.000			
20.000			
25.000			
30.000			
35.000			
40.000			
45.000			
50.000			
55.000			
60.000	1471.680	1468.058	3.622
65.000			
70.000			
75.000			
80.000			
85.000			
90.000			
95.000			
100.000			
105.000			
110.000			
115.000			
		1500mm DIA. MAN HOLE	
120.000			
125.000			
120.405	1471.503	1467.870	3.633

GRADIENT	SLOPE 0.003%
PIPE DESCRIPTION	1050mm ND 50D CONCRETE PIPE
FLOW	(532 - 1105) L/s

ALL DIMENSIONS AND LEVELS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE COMMENCING ANY WORK.

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ON ORIGINAL
0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

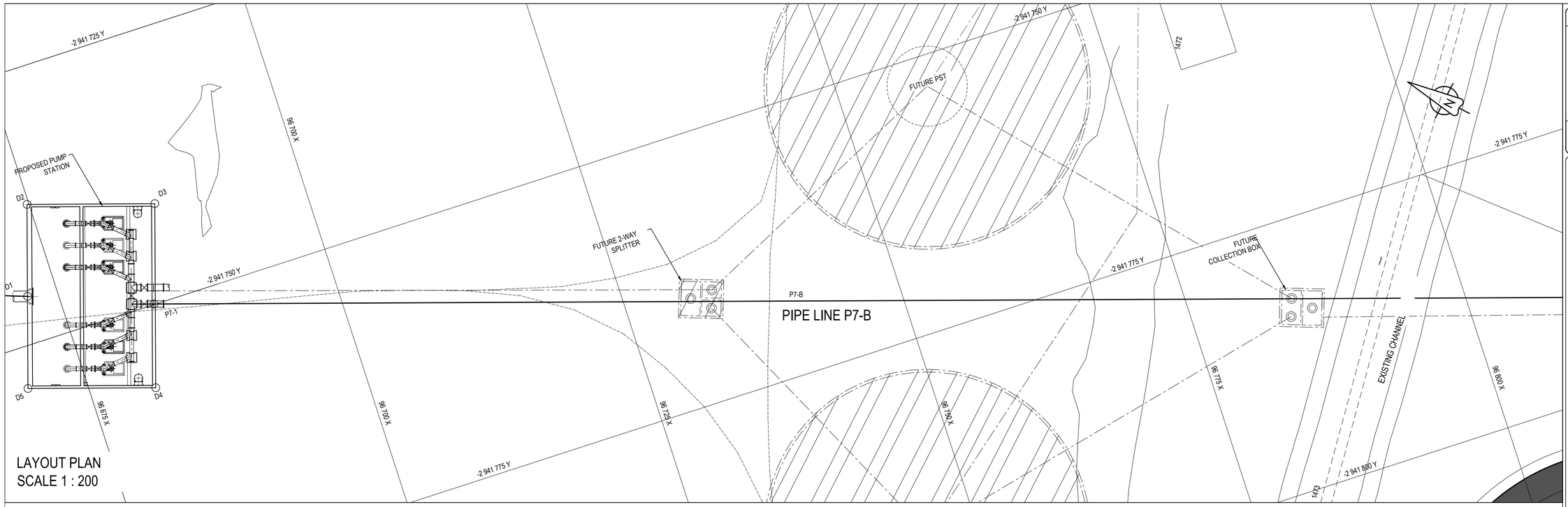
Approved By: D.CLARK
Drawn By: pp J.BHIKA
Designed By: pp K.MURPHY
Reviewed By: V.DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

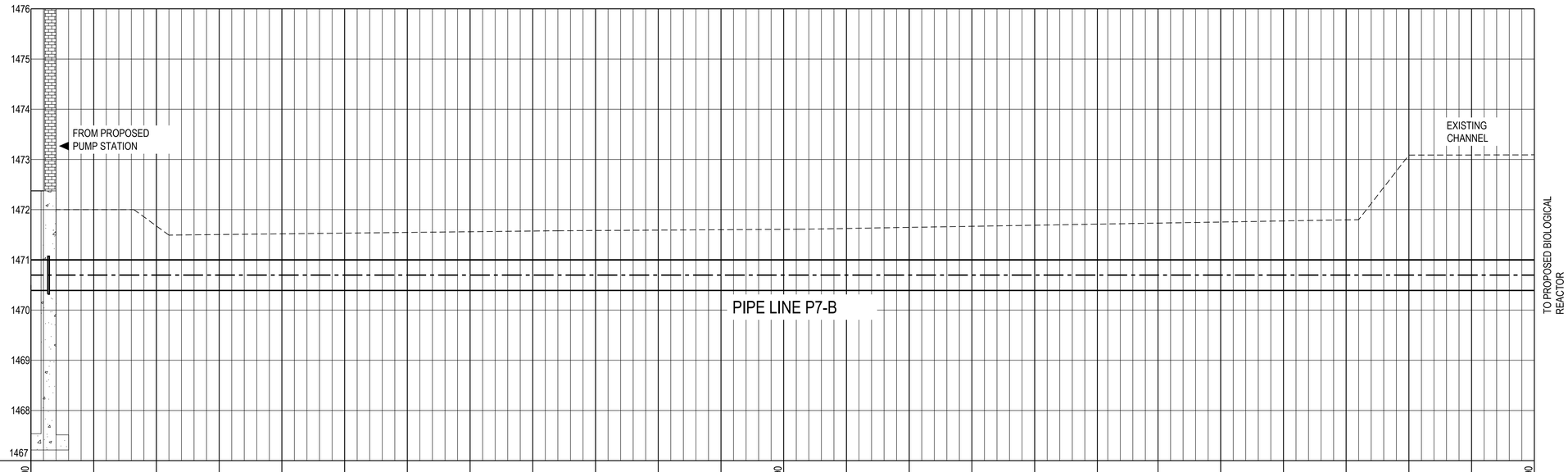
Description: LONGITUDINAL SECTION: P1-B FROM NEW HEAD OF WORKS TO PROPOSED PUMP STATION

Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-501 / Rev: 0



LAYOUT PLAN
SCALE 1 : 200



NGL – – – –

PIPE ———

LONGITUDINAL SECTION

PIPE SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1472.000											1471.590												1473.090
INVERT LEVEL	1470.390											1470.390												1470.390
DEPTH	1.610											1.200												2.700
CHAINAGE	0.000	5.000	10.000	15.000	20.000	25.000	26.416	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000	85.000	90.000	95.000	100.000	105.000	110.000	115.000	120.000
GRADIENT	SLOPE 0.00 %																									
PIPE DESCRIPTION	600mm ND M.S. PIPE																									
FLOW	532-1105 L/s																									

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GENERAL NOTES:

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No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2100, Rivonia, 2128
Telephone No. +27 11 510 4600
Fax No. +27 11 807 5213

Approved By: G CLARK

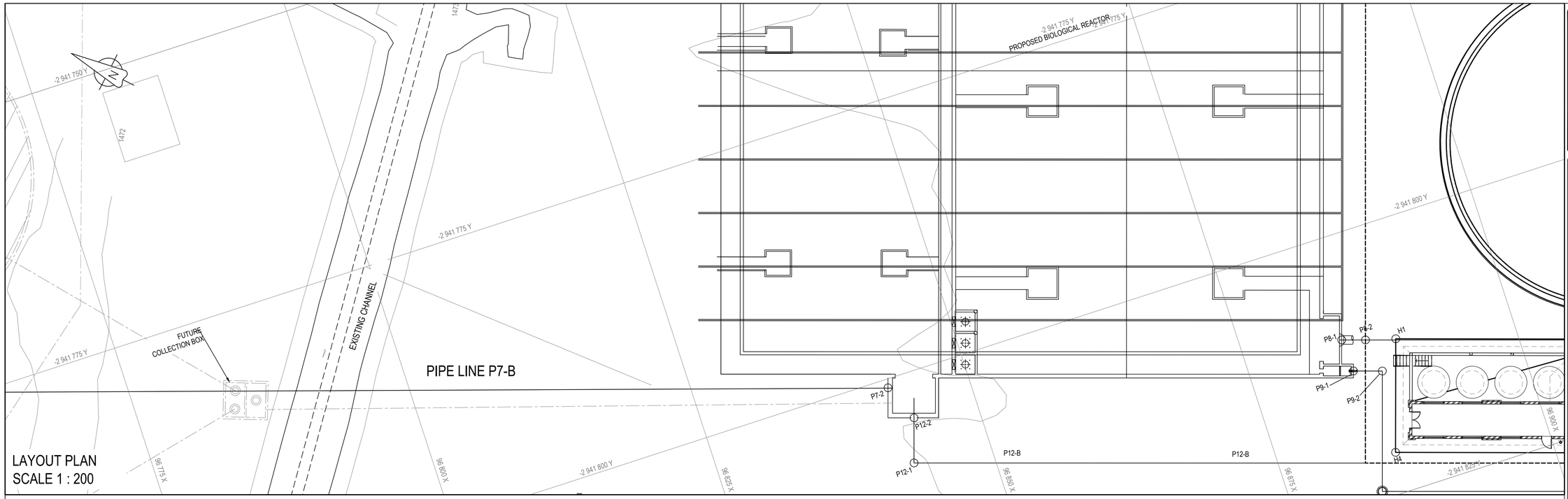
Drawn By: JM LOMBARD | Designed By: JM K MURPHY | Reviewed By: CDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

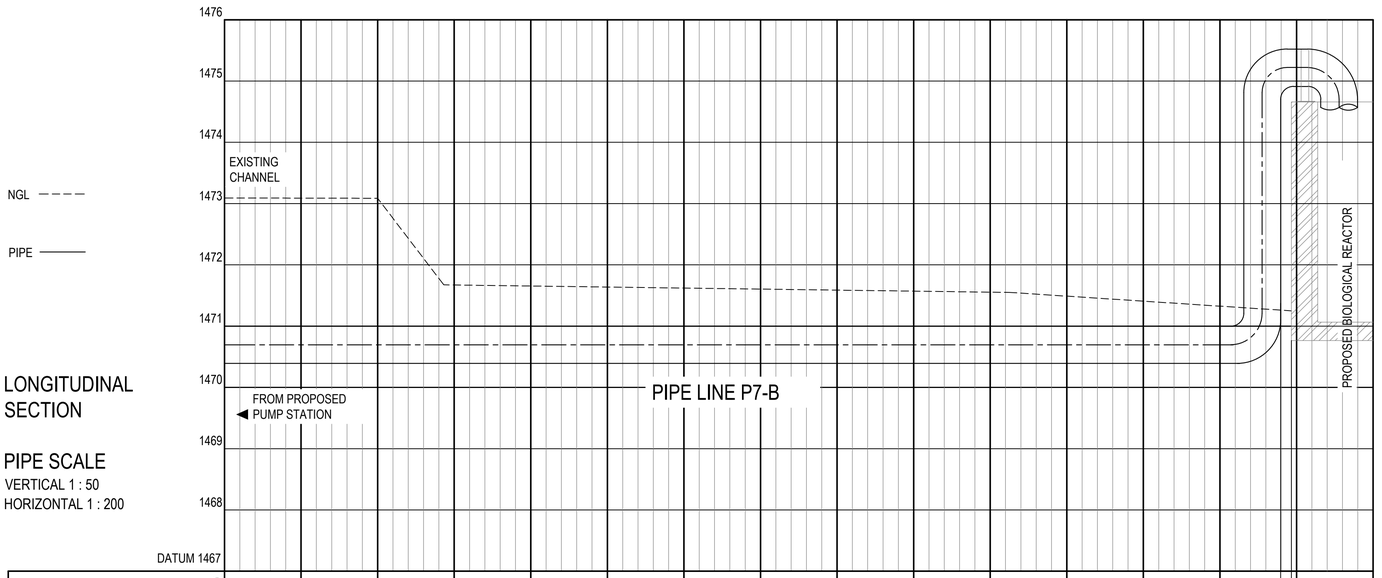
Description: LONGITUDINAL SECTION: P7-B FROM PROPOSED PUMP STATION TO PROPOSED BIO REACTOR SHEET 1 OF 2

Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 / Org. No: 010-502 / Rev: 0



LAYOUT PLAN
SCALE 1 : 200



LONGITUDINAL SECTION

PIPE SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1473.090																	
INVERT LEVEL	1470.390																	
DEPTH	2.700															90° BEND		
CHAINAGE	120.000	125.000	130.000	135.000	140.000	145.000	150.000	155.000	160.000	165.000	170.000	175.000	180.000	185.000	188.962	189.662	190.000	
GRADIENT	SLOPE 0.00%																	
PIPE DESCRIPTION	600mm ND M.S. PIPE																	
FLOW	532-1105 L/s																	

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GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK

Drawn By	Designed By	Reviewed By
JD LOMBARD	JD KLOPPERS	JCW WET

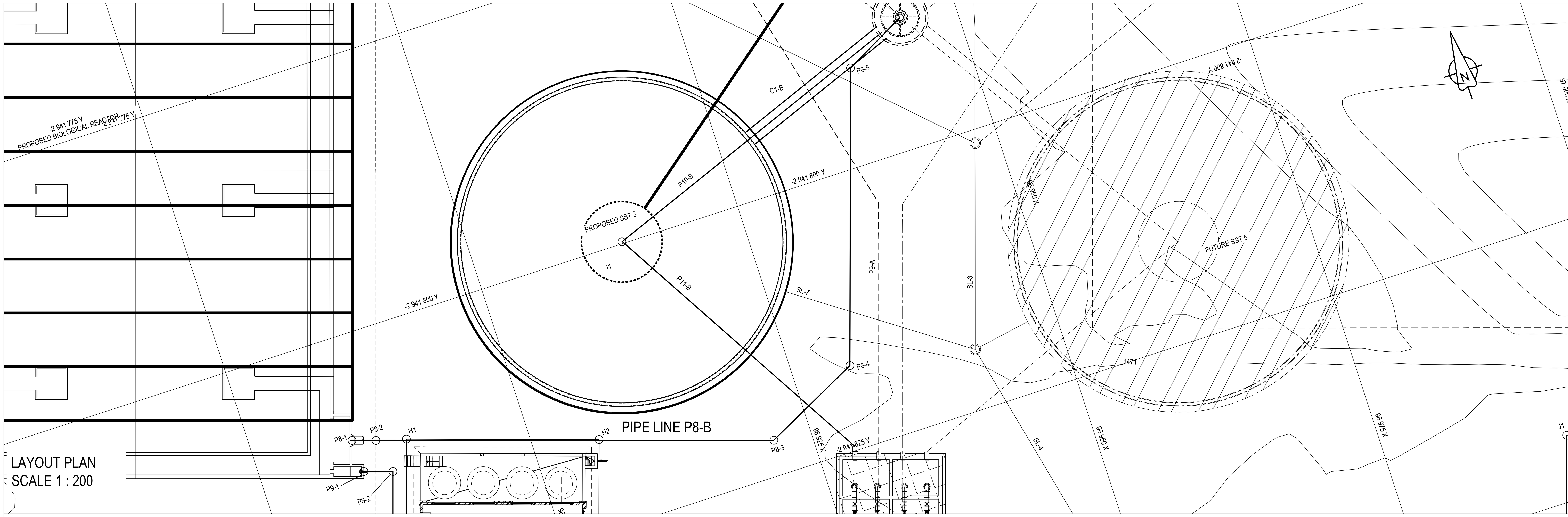
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LONGITUDINAL SECTION: P7-B FROM PROPOSED PUMP STATION TO PROPOSED BIO REACTOR SHEET 2 OF 2

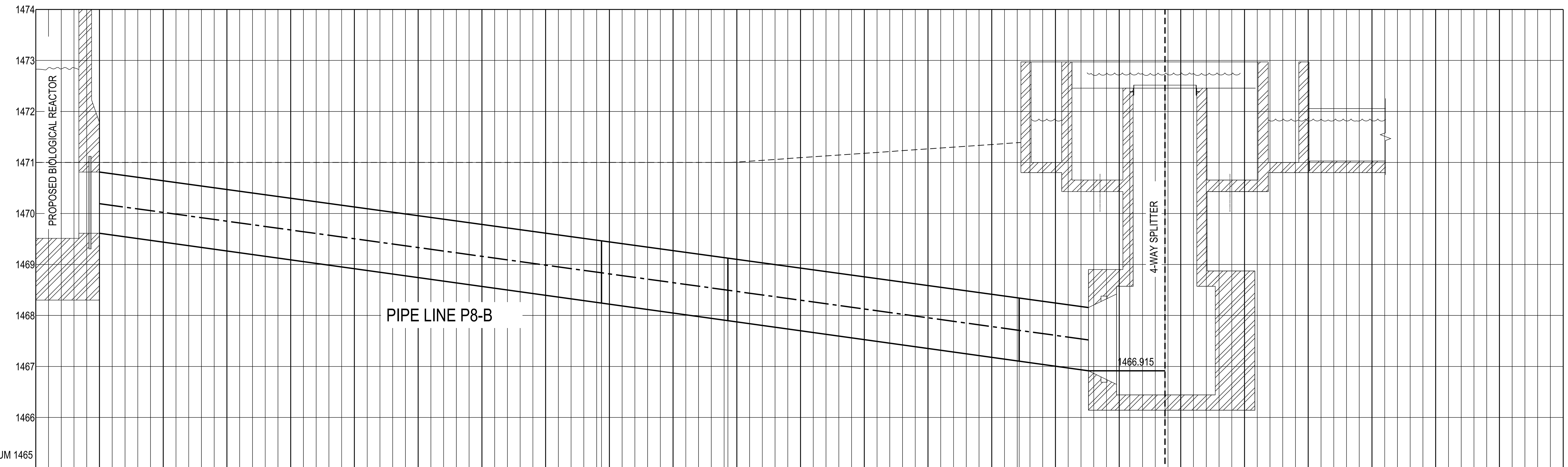
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Dgg. No	Rev
J40073	010-503	0

I:\ELS-CLUSTER\PROJECTS\J00315\ E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY (11/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 200



LONGITUDINAL SECTION

PIPE SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

CHAINAGE	GROUND LEVEL	INVERT LEVEL	DEPTH
0.000	1471.000	1469.650	1.350
5.000			
10.000			
15.000			
20.000			
25.000			
30.000			
35.000			
39.388	1471.000	1468.243	45°BEND 2.947
40.000			
45.000			
49.298	1471.000	1467.899	45°BEND 3.101
50.000			
55.000			
60.000			
65.000			
70.000			
77.150	1471.391	1467.104	45°BEND 4.287
75.000			
80.000			
83.591	1471.500	1466.915	4.585
85.000			

GRADIENT: SLOPE 3.475%

PIPE DESCRIPTION: 1200mm ND M.S. PIPE

FLOW: 1021.7-1471.2 L/s

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ON ORIGINAL
0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

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No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

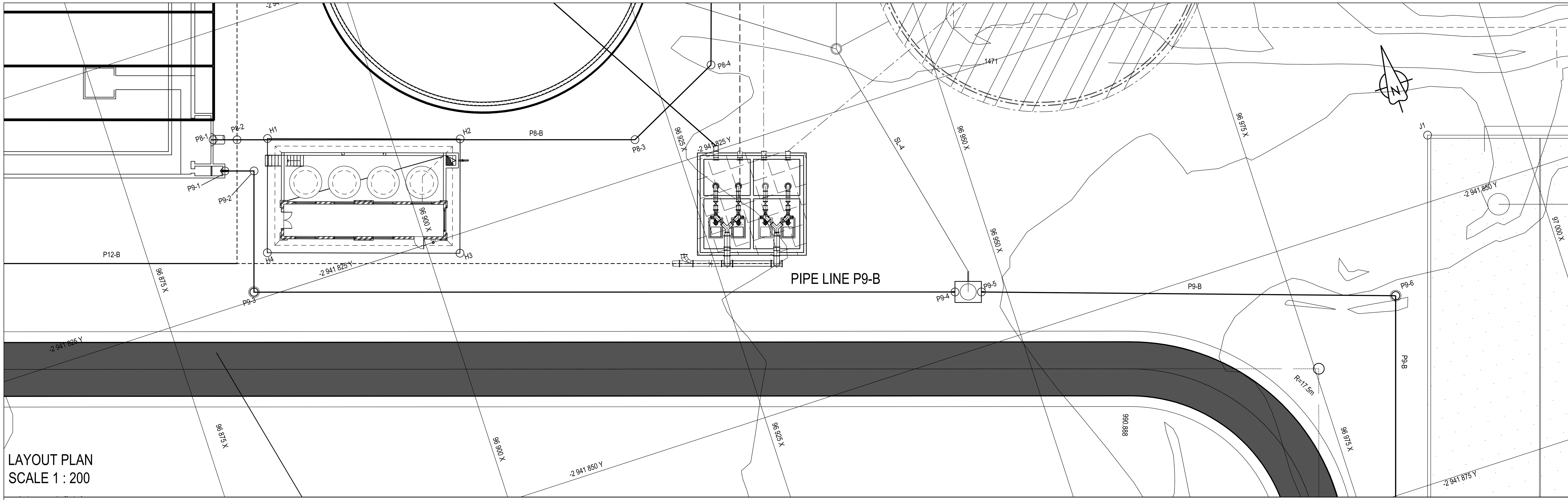
Approved By: D.CLARK
Drawn By: pp J.BHIKA
Designed By: pp K.MURPHY
Reviewed By: V.DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

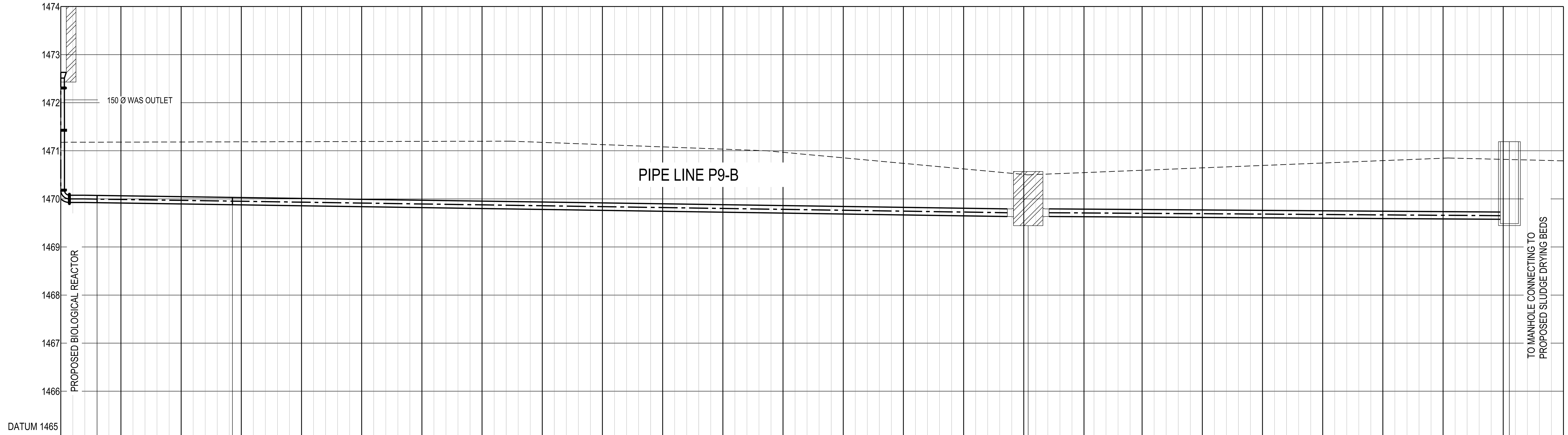
Description: LONGITUDINAL SECTION: P8-B FROM PROPOSED BIOLOGICAL REACTOR TO 4-WAY SPLITTER SHEET 1 OF 1

Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-504 / Rev: 0



LAYOUT PLAN
SCALE 1 : 200



LONGITUDINAL SECTION

PIPE SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

CHAINAGE	GROUND LEVEL	INVERT LEVEL	DEPTH	
0.000	1471.250	1470.072	1.178	90° BEND
3.015	1471.476	1470.291	1.185	90° BEND
5.000				
10.000				
14.265	1471.386	1470.150	1.236	90° BEND
15.000				
20.000				
25.000				
30.000				
35.000				
40.000				
45.000				
50.000				
55.000				
60.000				
65.000				
70.000				
75.000				
80.000				CL OF SLUDGE BOX
80.365	1470.500	1469.875	0.625	
85.000				
90.000				
95.000				
100.000				
105.000				
110.000				
115.000				
120.000	1470.824	1469.577	1.247	
120.506				CL OF MANHOLE

GRADIENT	SLOPE 0.370%
PIPE DESCRIPTION	160mm ND uPVC PIPE
FLOW	11.31 L/s

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ON ORIGINAL

0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

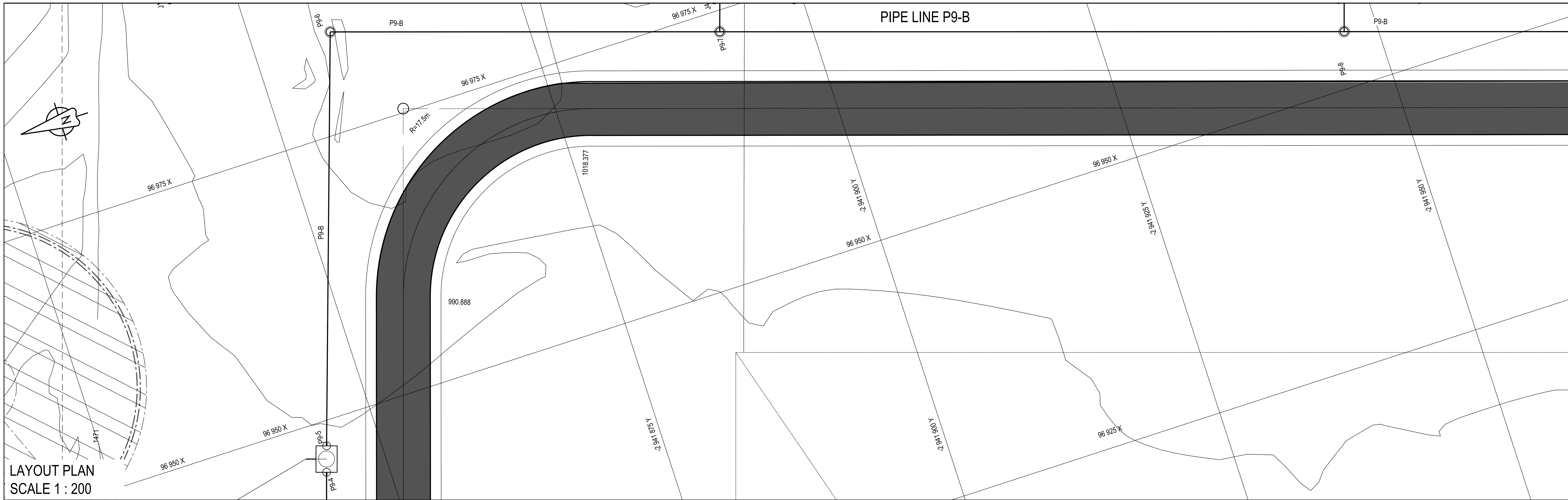
Approved By: D.CLARK
Drawn By: pp J.BHIKA
Designed By: pp K.MURPHY
Reviewed By: V.DE WET

Project
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

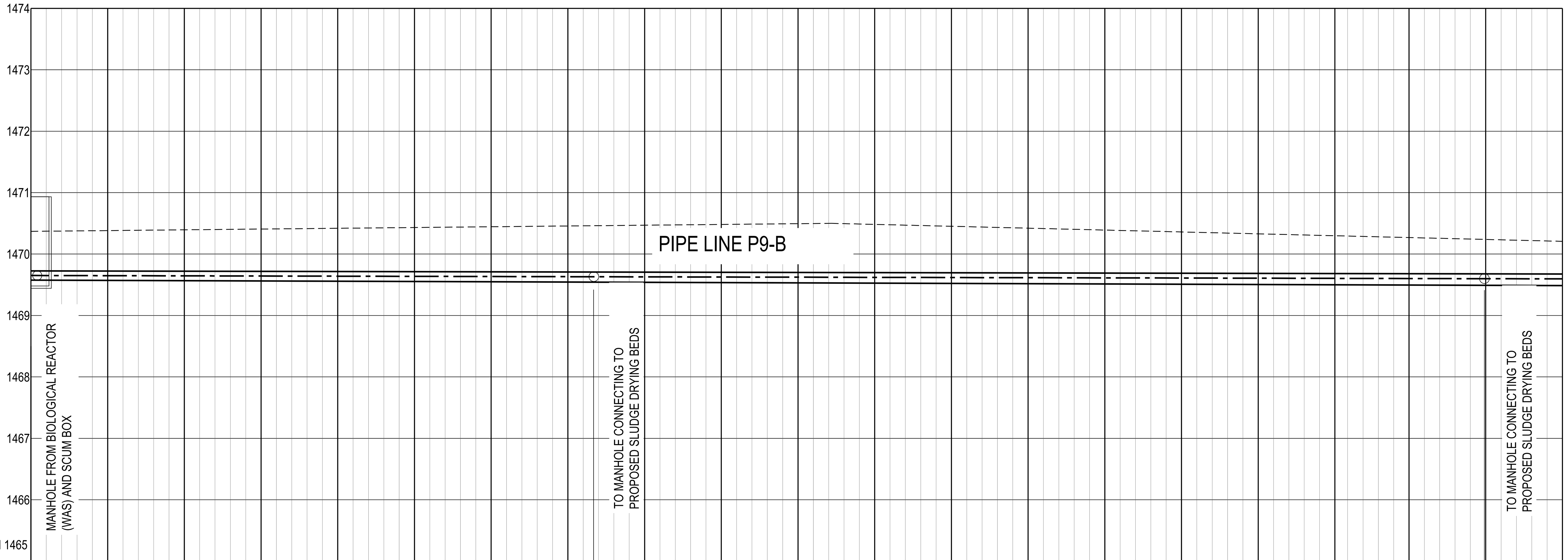
Description
LONGITUDINAL SECTION: P9-B FROM PROPOSED BIO REACTOR NEW SLUDGE DRYING BEDS SHEET 1 OF 3

Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-505 / Rev: 0



LAYOUT PLAN
SCALE 1 : 200



NGL - - - -

PIPE ——

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1470.824							1470.763													1470.242		
INVERT LEVEL	1469.577							1469.516													1469.419		
DEPTH	1.247							1.247													0.821		
CHAINAGE	125.000	130.000	135.000	140.000	145.000	150.000	155.000	155.929	160.000	165.000	170.000	175.000	180.000	185.000	190.000	125.000	200.000	205.000	210.000	214.915	215.000	220.000	
GRADIENT	SLOPE 0.16%																						
PIPE DESCRIPTION	160mm ND uPVC PIPE																						
FLOW	(11.31) L/s																						

\\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\O_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD | MENASHEN REDDY | 10/03/2023 16:16:10

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0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

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No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

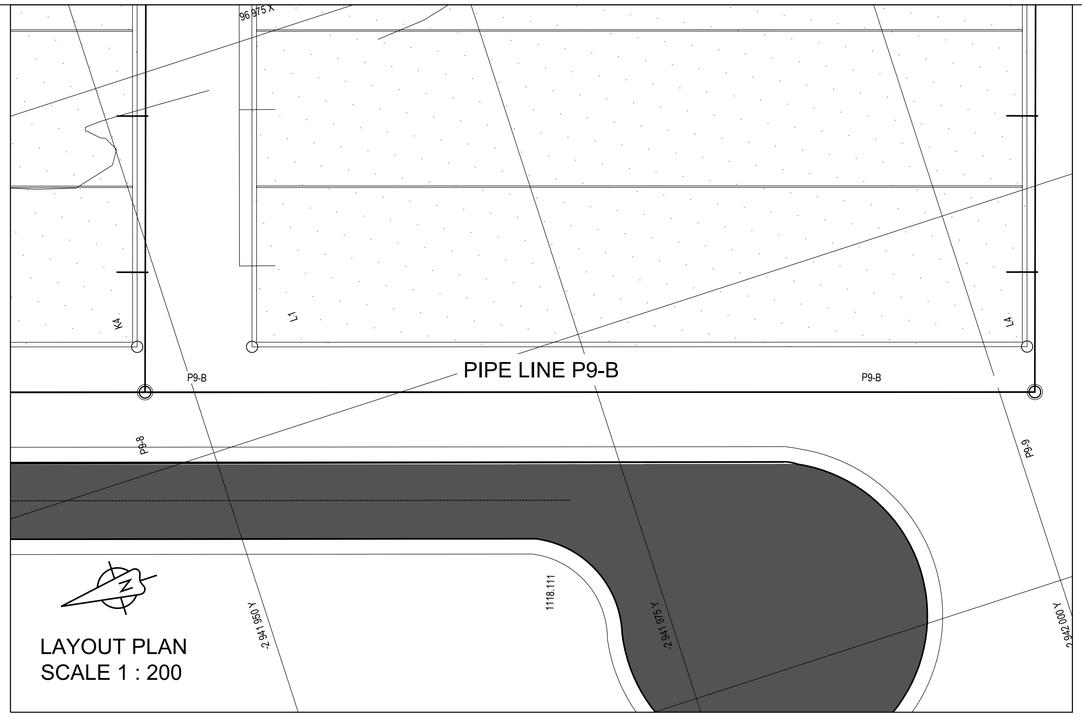
Approved By D.CLARK
Drawn By pp J.BHIKA
Designed By pp K.MURPHY
Reviewed By V.DE WET

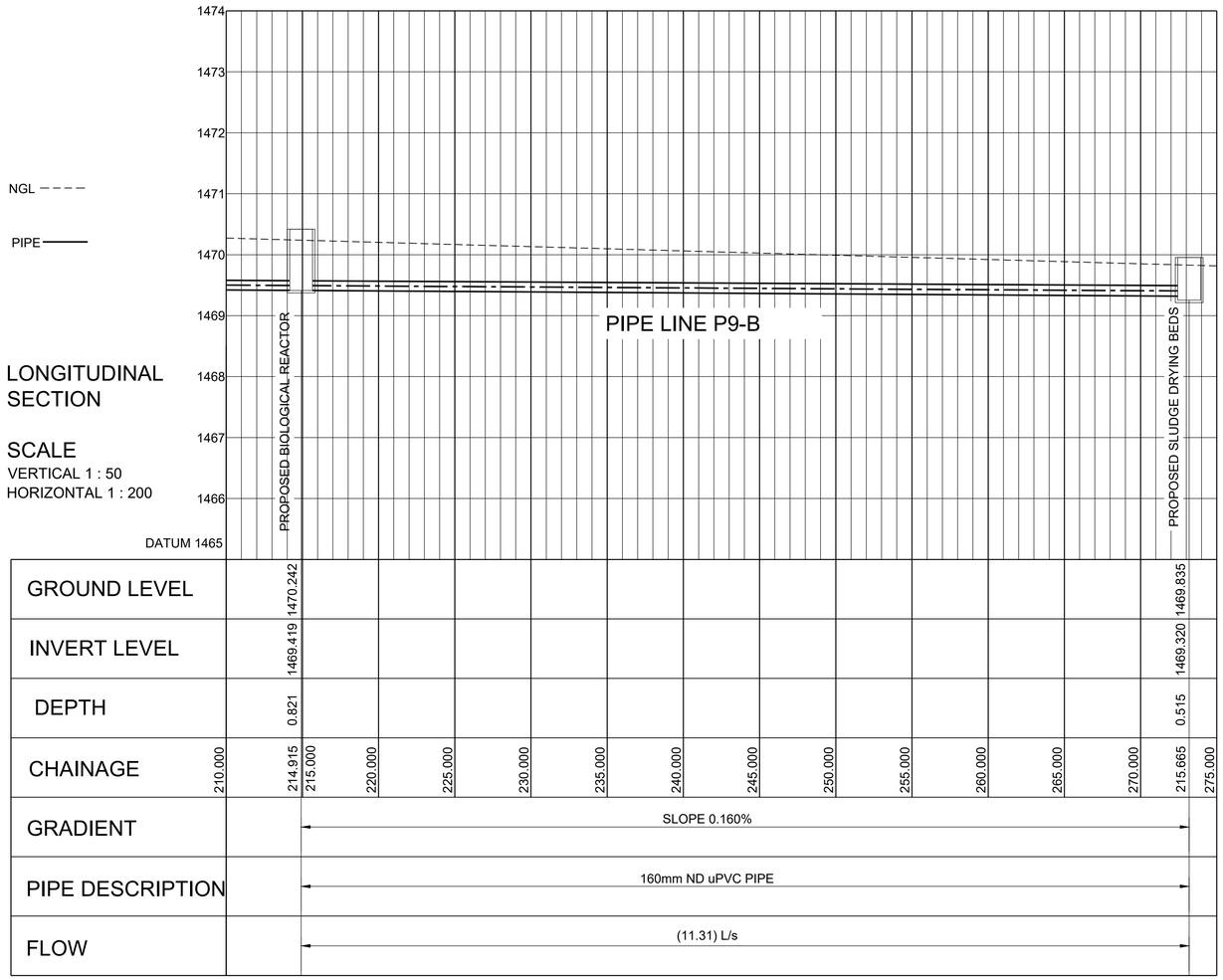
Project
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description
LONGITUDINAL SECTION: P9-B FROM PROPOSED BIO REACTOR NEW SLUDGE DRYING BEDS SHEET 2 OF 3

Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-506 / Rev: 0





GROUND LEVEL		1470.242														1469.835	
INVERT LEVEL		1469.419														1469.320	
DEPTH		0.821														0.515	
CHAINAGE	210.000	214.915	215.000	220.000	225.000	230.000	235.000	240.000	245.000	250.000	255.000	260.000	265.000	270.000	215.665	275.000	
GRADIENT			SLOPE 0.160%														
PIPE DESCRIPTION			160mm ND uPVC PIPE														
FLOW			(11.31) L/s														

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GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK

Drawn By: JST DAVIES | Designed By: JW K MURPHY | Reviewed By: VDE WET

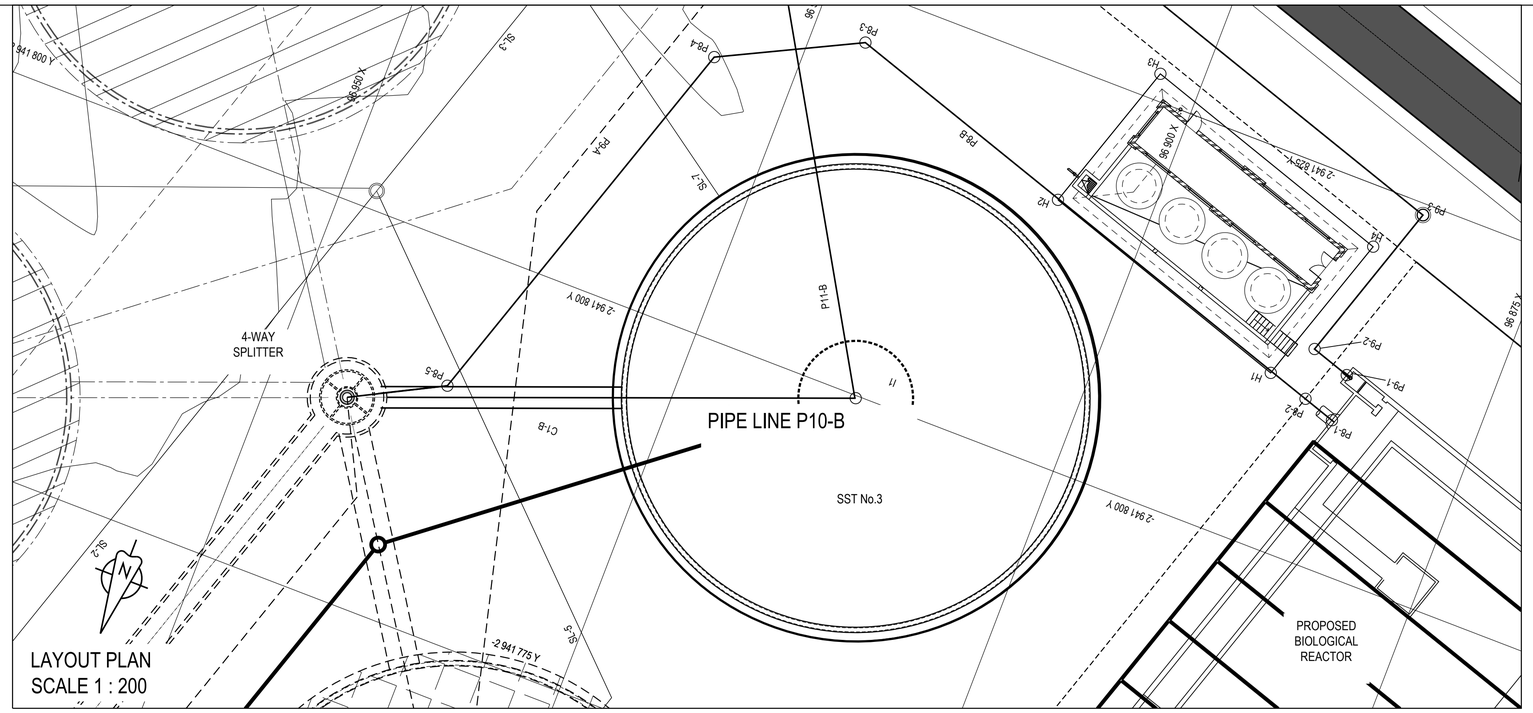
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LONGITUDINAL SECTION: P9-B FROM PROPOSED BIO REACTOR NEW SLUDGE DRYING BEDS SHEET 3 OF 3

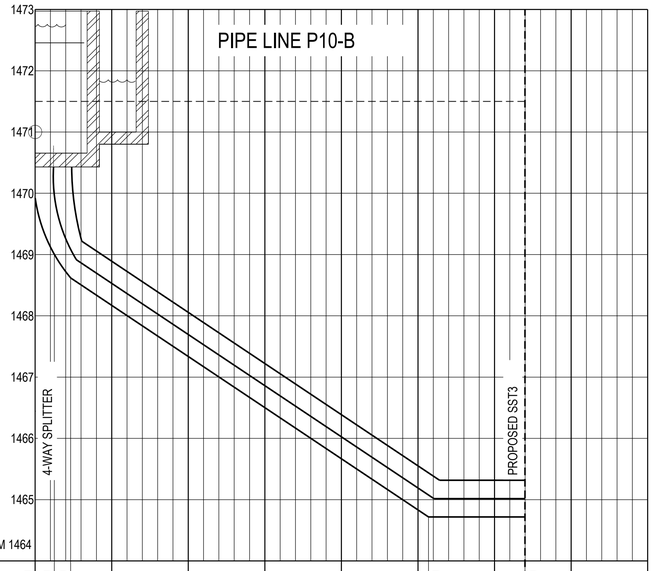
Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-507 / Rev: 0

IELS-CLUSTERPROJECTS-2022\IE MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \MENASHEN REDDY I 11/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 200



NGL – – – –

PIPE ——

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1471.500	1471.500	1471.500					1471.500		1471.500		
INVERT LEVEL	1470.684	1468.618	1468.618					1464.716	TOP 1471.258	1464.717 BOTTOM		
DEPTH	0.816m	2.882m	2.882m					6.783m	6.783m	6.783m		
CHAINAGE	0.000	1.250	2.317	5.000	10.000	15.000	20.000	25.000	25.684	30.000	31.988	35.000	40.000
GRADIENT			16.69%						0.000%				
PIPE DESCRIPTION			600mm DIA. M.S. PIPE						STEEL PIPE				
FLOW			(255.4/367.8) L/s						(255.4/367.8) L/s				

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ON ORIGINAL

0 5 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4500
Fax No. +27 11 807 5670

Approved By
D CLARK

Drawn By	Designed By	Reviewed By
JP J SWICA	JW K MURPHY	C VDE WET

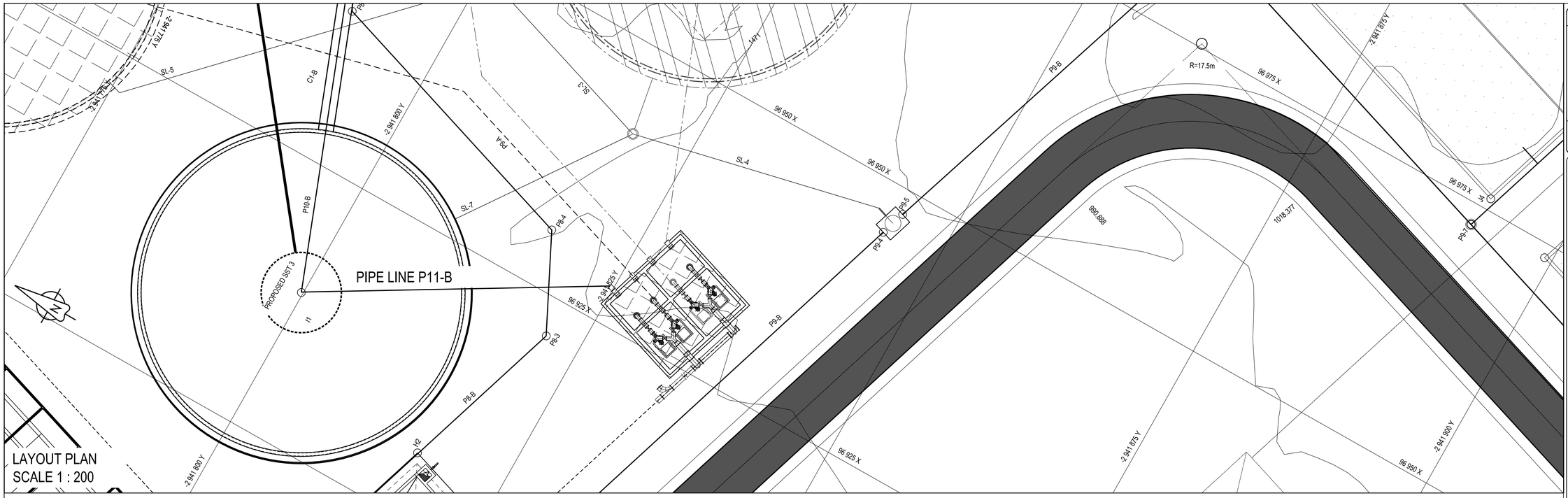
Project
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description
LONGITUDINAL SECTION: P10-B FROM 4-WAY FLOW SPLITTER TO PROPOSED SST3
SHEET 1 OF 1

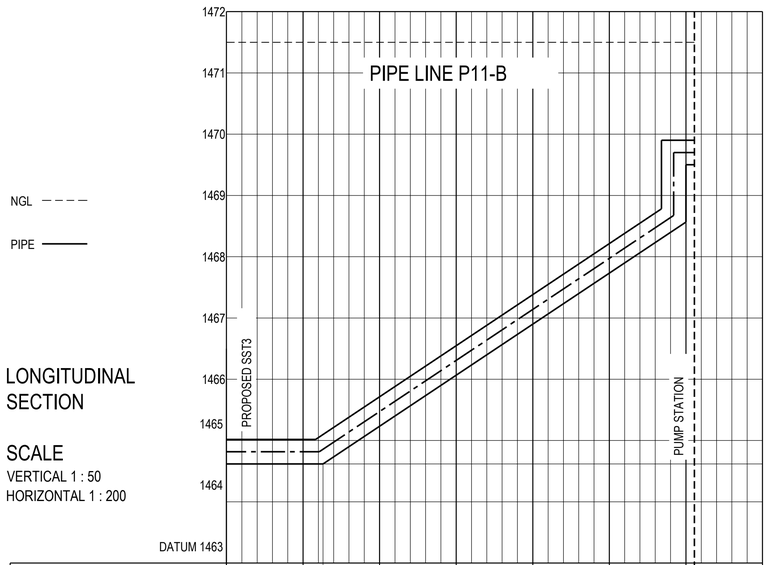
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Drg. No	Rev
J40073	010-508	0

I:\EL5-CLUSTER\PROJECTS\J0231E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY [10/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 200



NGL – – – –

PIPE ———

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1471.500		1471.500					90DEG. BEND 1471.500	1471.500					
INVERT LEVEL	1464.617		1464.617					1468.566	1469.453					
DEPTH	6.883m		6.883m					2.934	2.047m					
CHAINAGE	0.000	5.000	6.304	10.000	15.000	20.000	25.000	30.000	30.557	35.000				
GRADIENT	0.000%		SLOPE 16.666%											
PIPE DESCRIPTION	STEEL PIPE		400mm DIA. M.S. PIPE											
FLOW	(130.5) L/s		(156.4) L/s											

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ON ORIGINAL

0 5 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK

Drawn By	Designed By	Reviewed By
JST DAVIES	JD K.MURPHY	JP DE WET

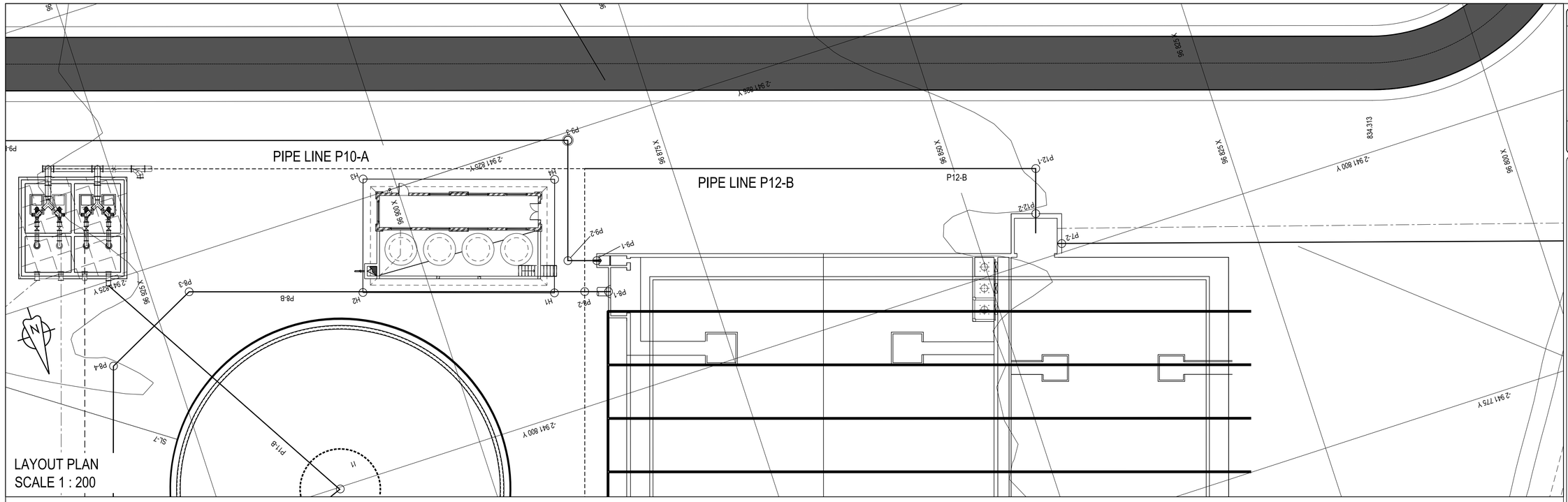
Project:
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description:
LONGITUDINAL SECTION: P11-B FROM PROPOSED SST 3 TO PUMP STATION SHEET 1 OF 1

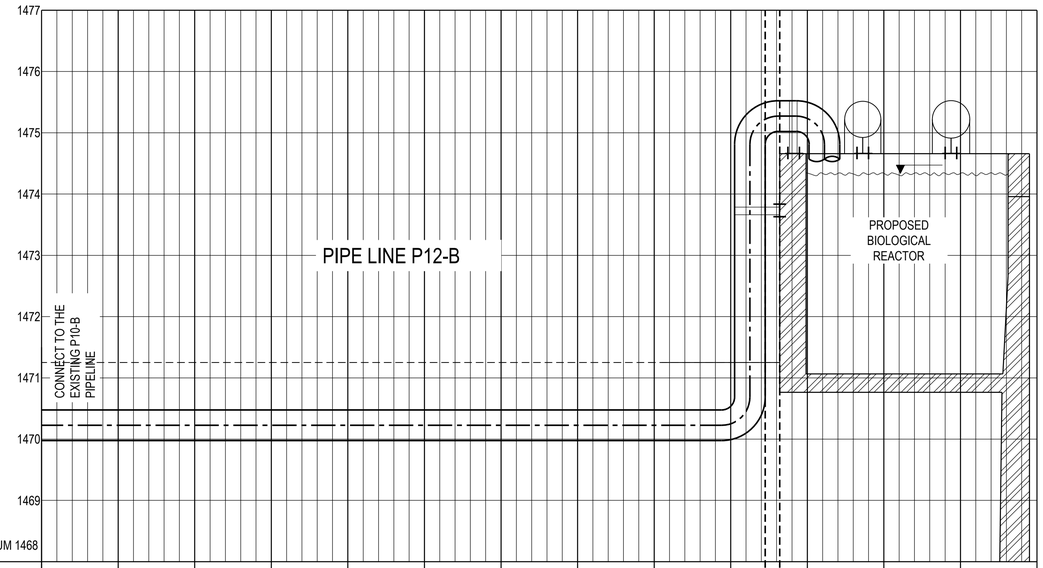
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Org. No	Rev
J40073	010-509	0

\\ELS-CLUSTERPROJECTS-2022\E\MEYERTON WWTW\CO_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \MENASHEN REDDY \ 11/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 200



NGL – – – –

PIPE ——

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1471.216										90DEG. BEND 1471.216				
INVERT LEVEL	1469.976										1469.976	IL 1475.050			
DEPTH	1.240										1.240				
CHAINAGE	0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	48.198	50.000			
GRADIENT	SLOPE 3.282%														
PIPE DESCRIPTION	500mm DIA. M.S. PIPE														
FLOW	(625.5) L/s														

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ON ORIGINAL

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
15 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: C CLARK

Drawn By	Designed By	Reviewed By
per J BRACK	per K MURPHY	A DE WET

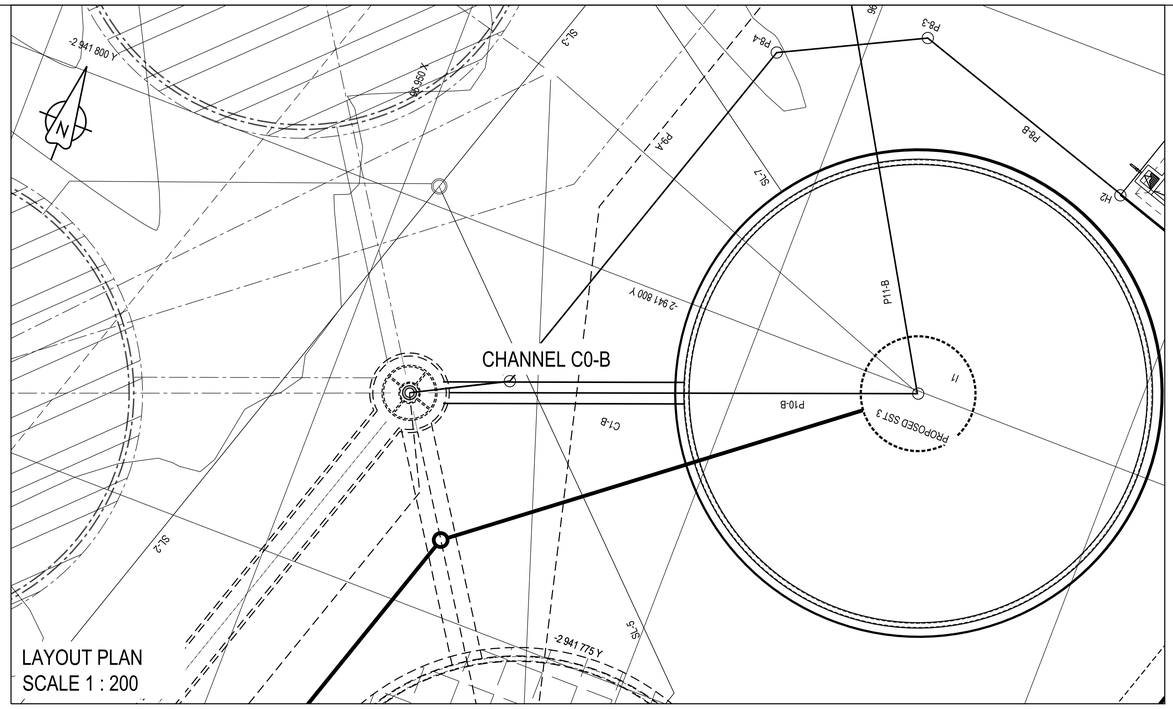
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LONGITUDINAL SECTION: P12-B EXTEND EXISTING P10-A TO TO PROPOSED BIO REACTOR SHEET 1 OF 1

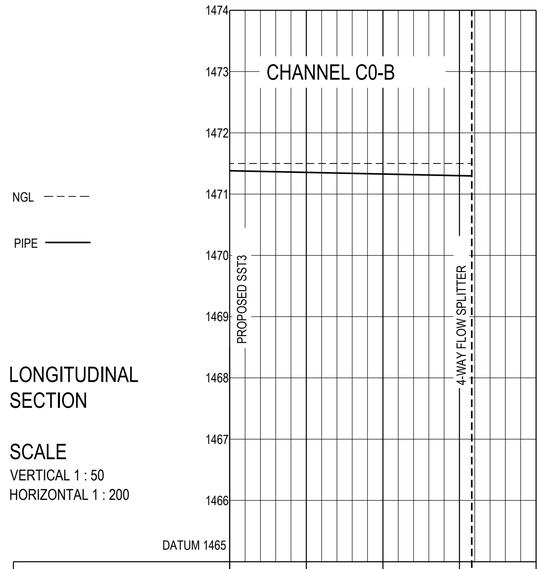
Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Drg. No	Rev
J40073	010-510	0

\\ELS-CLUSTER\PROJECTS\J40073\E MEYERTON WWTW\O_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \ MEINASHEN REDDY \ 10/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 200



NGL – – – –

PIPE ——

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

DATUM 1465

GROUND LEVEL	1471.500	1471.500	1471.500	1471.500	1471.500
INVERT LEVEL	1471.382				1471.297
DEPTH	0.118				0.203
CHAINAGE	0.000	5.000	10.000	15.000	15.806
GRADIENT	0.5%				
PIPE DESCRIPTION	CONCRETE CHANNEL				
FLOW	99/211.4) L/s				

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ON ORIGINAL

0 5 10 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
Gibb Campus, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.DEVAK

Drawn By: JP.BRINK

Designed By: JEK.MURPHY

Reviewed By: CDE.WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LONGITUDINAL SECTION: C0-B FROM PROPOSED SST3 TO 4-WAY FLOW SPLITTER SHEET 1 OF 1

Scale: AS SHOWN

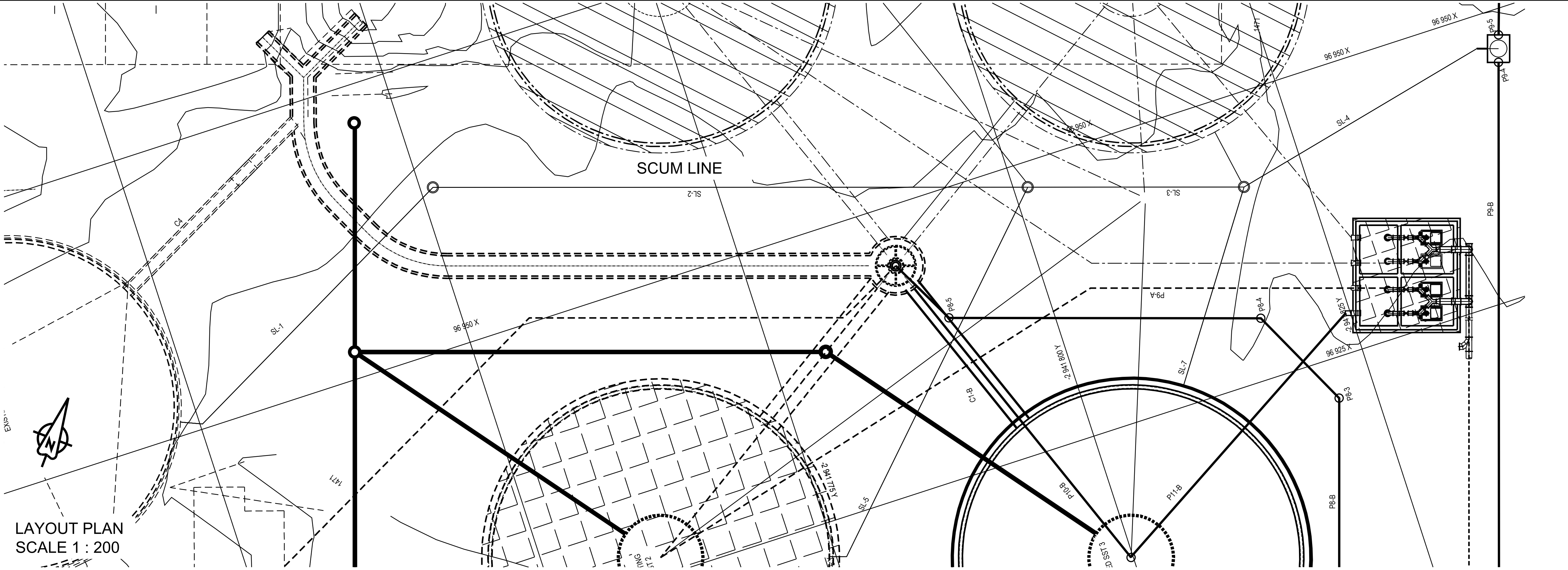
Date: NOVEMBER 2022

Project No: J40073

Drg. No: 010-511

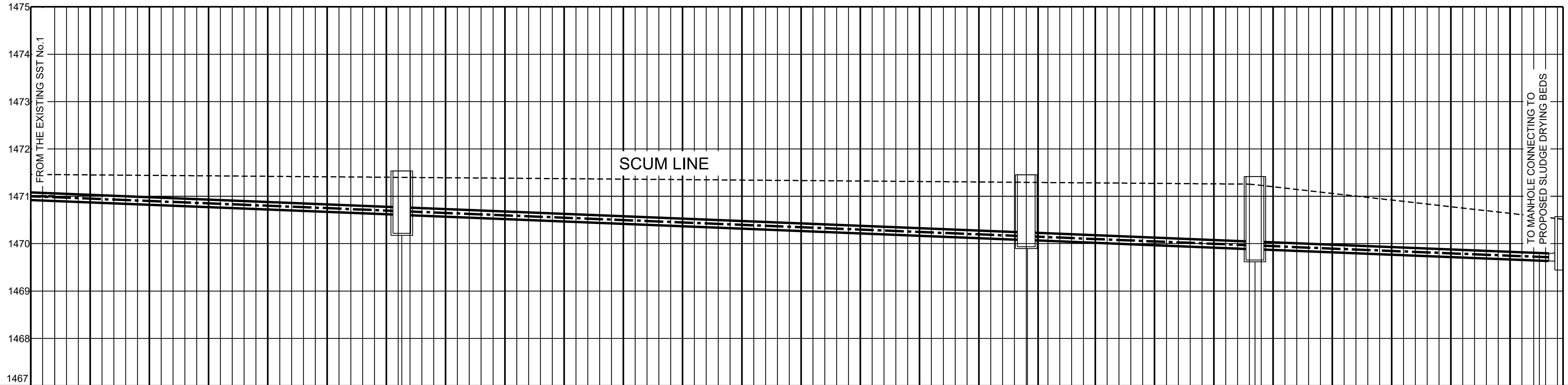
Rev: 0

\\ELS-CLUSTER\PROJECTS\J0023 E MEYERTON WWTW\O_DRAWINGS\04 TENDER DRAWINGS 2022\NEW CAD) NIENKSHEN REDDY (10/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 200

NGL - - - -
PIPE ———



LONGITUDINAL SECTION

PIPE SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

CHAINAGE	GROUND LEVEL	INVERT LEVEL	DEPTH	Remarks
0.000	1471.500	1470.200	1.300	
2.000	1471.500	1470.900	0.600	50°BEND
5.000				
10.000				
15.000				
20.000				
25.000				
30.000				
31.300				1500mm DIA. MAN HOLE
35.000				
40.000				
45.000				
50.000				
55.000				
60.000				
65.000				
70.000				
75.000				
80.000				
84.100				1500mm DIA. MAN HOLE
85.000				
90.000				
95.000				
100.000				
103.300				1500mm DIA. MAN HOLE
105.000				
110.000				
115.000				
120.000				
125.000				
127.300	1470.571	1469.641	0.930	30°BEND
129.00	1470.763	1469.516	1.247	

GRADIENT: SLOPE 1.006 %

PIPE DESCRIPTION: 160mm ND uPVC PIPE

FLOW: XXX L/s

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ON ORIGINAL
0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

Revisions

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK
Drawn By: pp J.BHIKA
Designed By: pp K.MURPHY
Reviewed By: V.DE WET

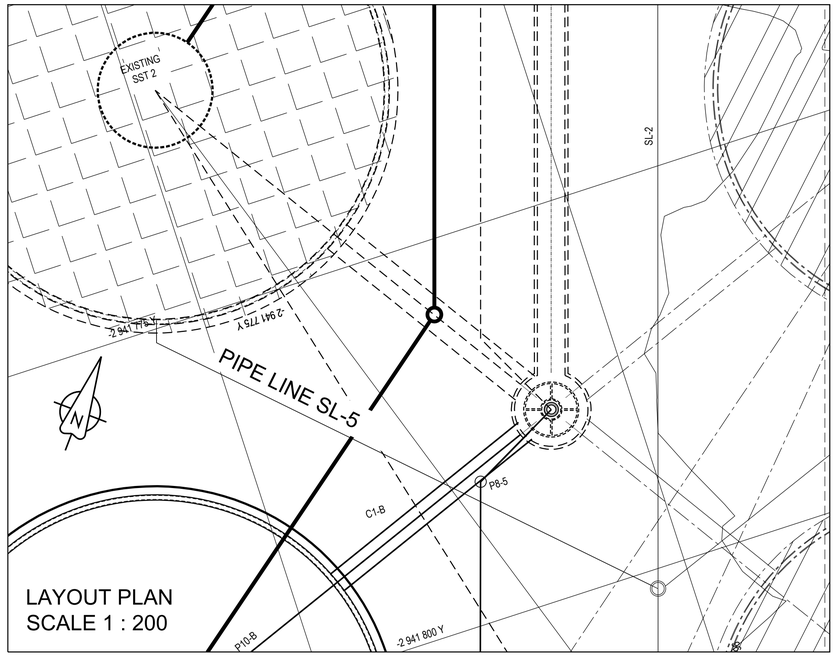
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LONGITUDINAL SECTION: SL SCUM LINE FROM SST'S TO MH CONNECTING TO SLUDGE BEDS SHEET 1 OF 2

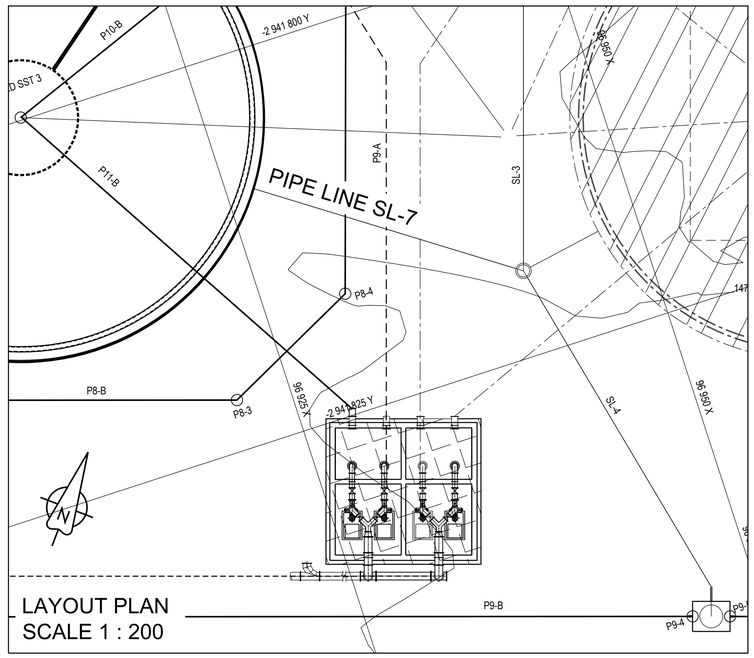
Scale: AS SHOWN | Date: NOVEMBER 2022

Project No: J40073 / Drg. No: 010-512 / Rev: 0

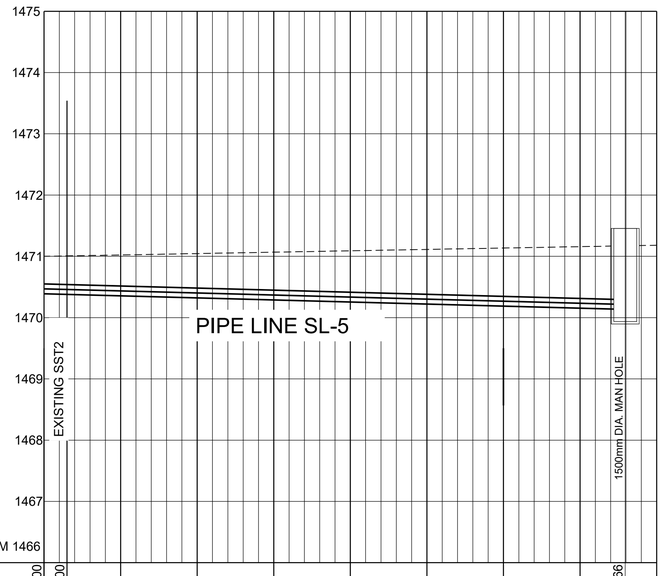
\\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\0_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD | MENASHEN REDDY | 10/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 200



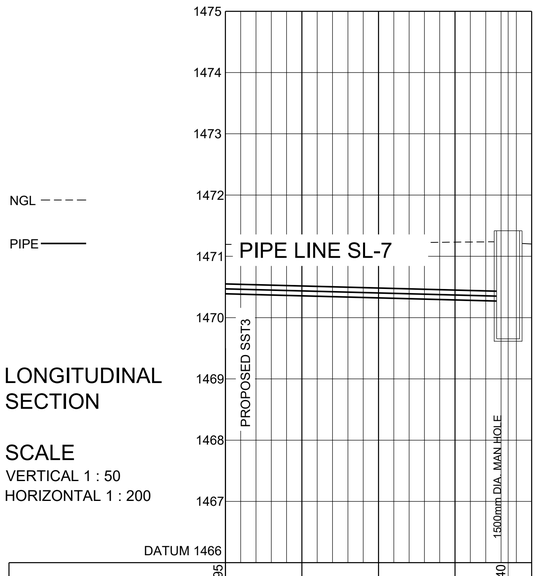
LAYOUT PLAN
SCALE 1 : 200



LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1471.000	1471.000							1471.166	
INVERT LEVEL	1470.390	1470.390	60 DEG BEND						1470.138	
DEPTH	6.883m	6.883m							1.029m	
CHAINAGE	0.000	1.500	5.000	10.000	15.000	20.000	25.000	30.000	35.000	37.950	40.000
GRADIENT		SLOPE 0.666%									
PIPE DESCRIPTION		110mm DIA. uPVC PIPE									
FLOW		L/s									



LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1471.195				1471.240	
INVERT LEVEL	1470.390				1470.240	
DEPTH	0.805m				1.000m	
CHAINAGE	0.000	5.000	10.000	15.000	18.466	20.000
GRADIENT		SLOPE 0.810%				
PIPE DESCRIPTION		110mm DIA. uPVC PIPE				
FLOW		L/s				

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GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2720, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5615

Approved By: D CLARK

Drawn By	Designed By	Reviewed By
JM FRANCIS	JM KLAPPOTT	JOE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LONGITUDINAL SECTION: SL SCUM LINE FROM SST'S TO MH CONNECTING TO SLUDGE BEDS SHEET 2 OF 2

Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Drg. No	Rev
J40073	010-513	0

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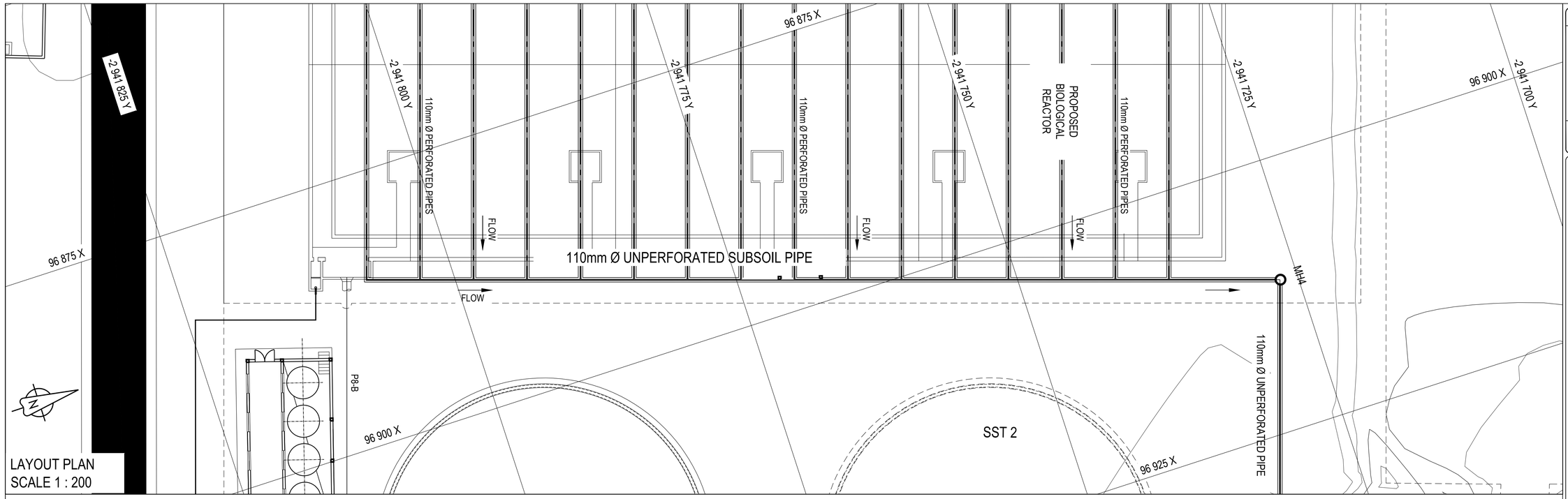

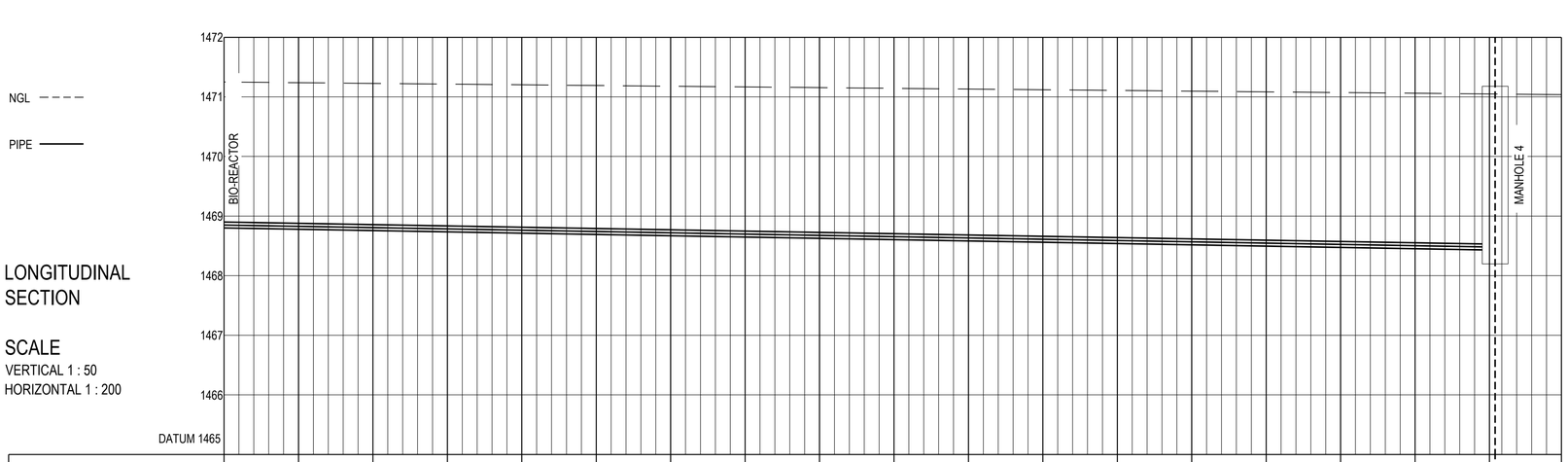

NGL – – – –

PIPE ———

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

DATUM 1465

GROUND LEVEL 1471.250																1471.048	
INVERT LEVEL 1468.800																1468.373	
DEPTH 2.450m																2.675m	
CHAINAGE	0.000	5.000	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	75.000	80.000	85.000	85.400 BEND 90°	90.000
GRADIENT	SLOPE 1:200																			
PIPE DESCRIPTION	110mm Ø UNPERFORATED PIPE																			

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GENERAL NOTES:

ISSUED FOR TENDER

No.	Date	Details	Chkd	Apprd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK

Drawn By: JM LEMMER

Designed By: JD K MURPHY

Reviewed By: CJE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

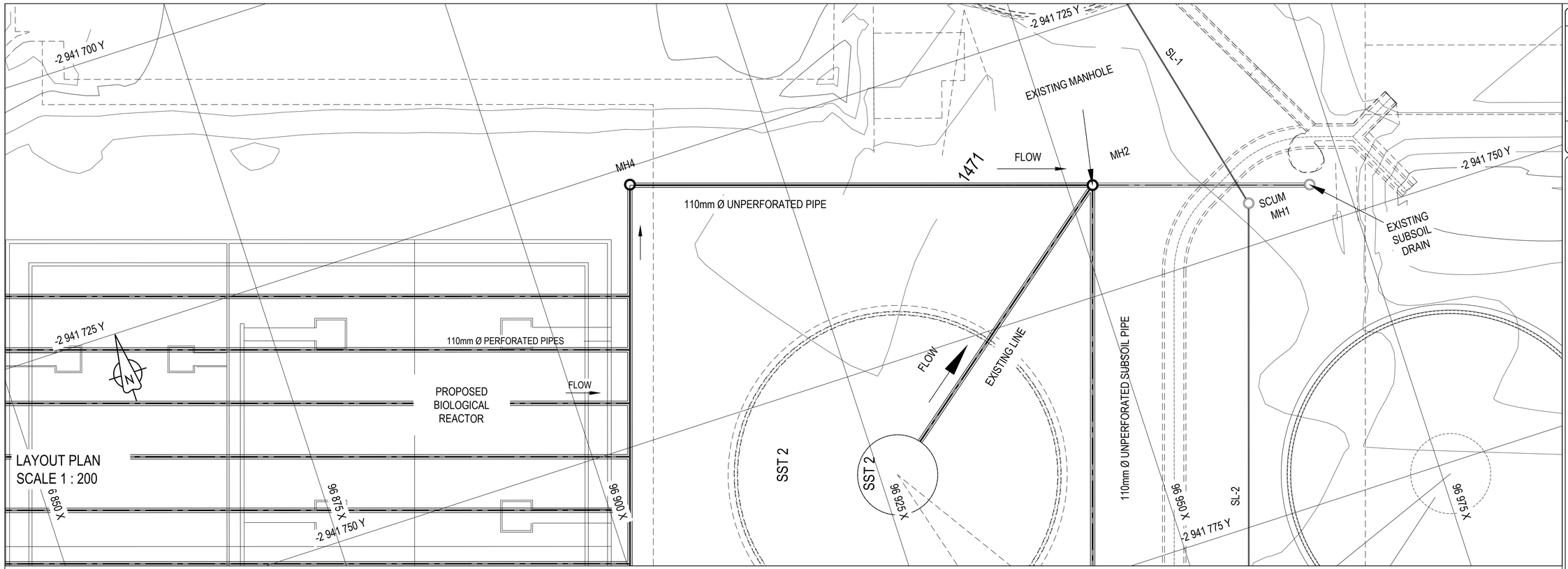
Description: SUBSOIL DRAIN LONGITUDINAL SECTION FROM BIO-REACTOR TO MANHOLE 4

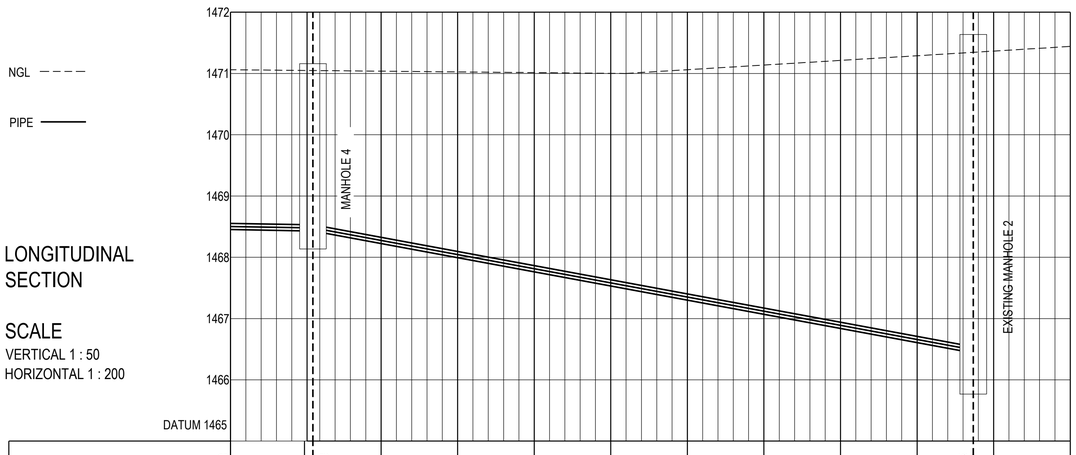
Scale: AS SHOWN

Date: NOVEMBER 2022

Project No.: J40073 / Org. No.: 010-514 / Rev.: 0

\\ELS-CLUSTER-PRO\JECTS\J40073 E MEYERTON WWTW\O_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD \\MENASHEN REDDY 1 10/30/2023 16:16:10





LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200

GROUND LEVEL	1471.060		1471.048										1471.345		
INVERT LEVEL	1468.800		1468.373										1465.968		
DEPTH	2.450m		2.246m										5.532m		
CHAINAGE	80.000	85.400	85.400	BEND 90°	90.000	95.000	100.000	105.000	110.000	115.000	120.000	125.000	128.868	130.000	135.000
GRADIENT			SLOPE 1:18												
PIPE DESCRIPTION			110mm Ø UNPERFORATED PIPE												

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ON ORIGINAL

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D CLARK
Drawn By: JM PEARCE
Designed By: JM KAUMBWA
Reviewed By: CJ DE WET

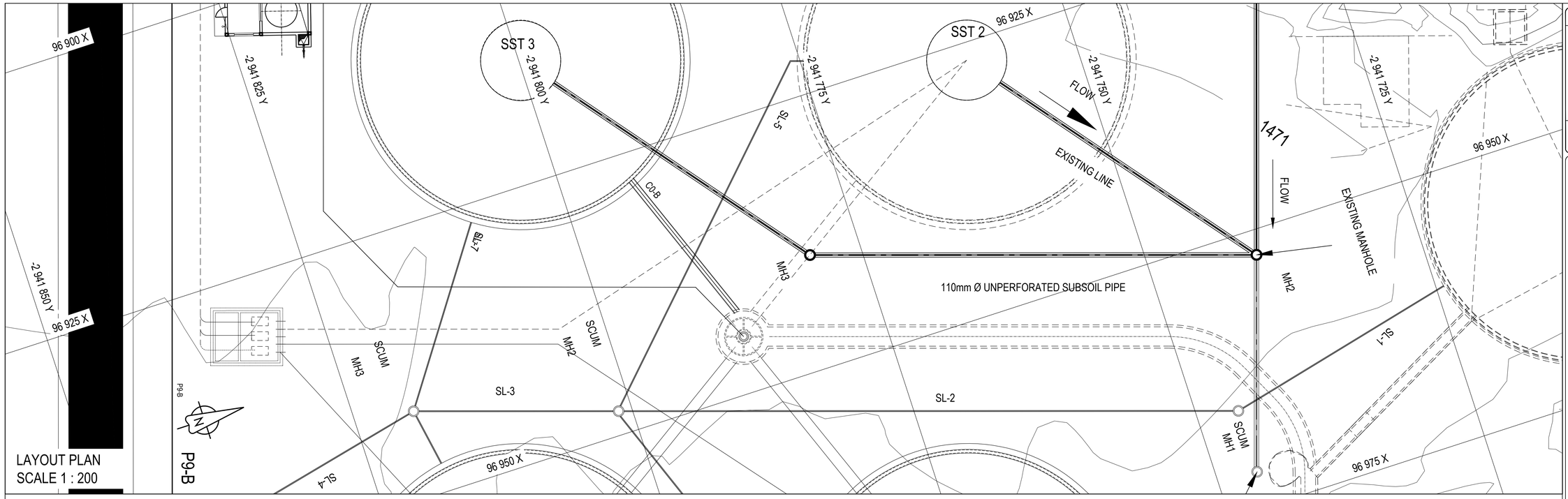
Project
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description
SUBSOIL DRAIN LONGITUDINAL SECTION FROM MANHOLE 4 TO EXISTING MANHOLE 2

Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073
Drg. No: 010-515
Rev: 0

\\ELS-CLUSTER\PROJECTS\J0023\1E MEYERTON WWTW\O_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD \ MENASHEN REDDY [10/03/2023 16:16:10



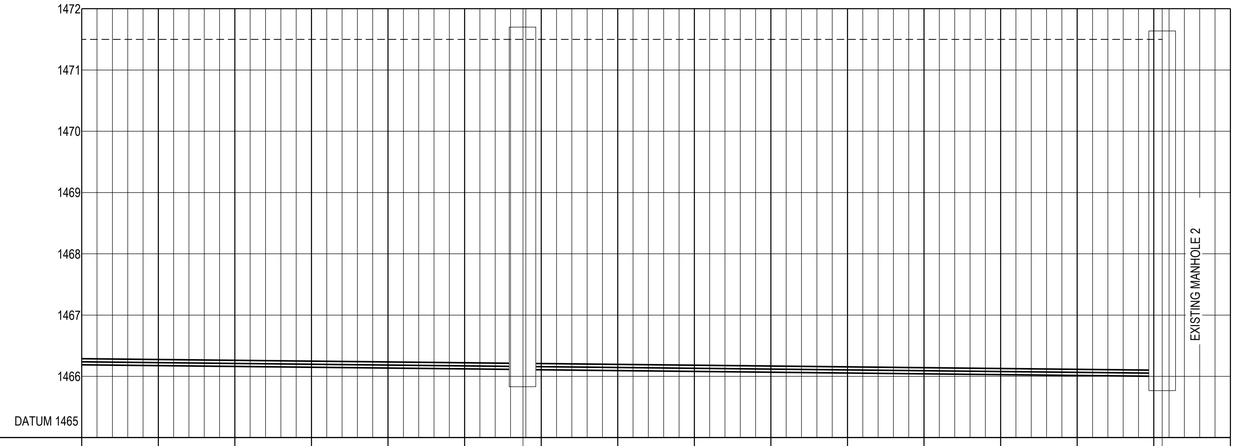
LAYOUT PLAN
SCALE 1 : 200

NGL – – – –

PIPE ———

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200



GROUND LEVEL 1471.500							1471.500									1471.500
INVERT LEVEL 1466.191							1466.109 MANHOLE 1.4									1466.000
DEPTH 5.532m							5.391									5.500m
CHAINAGE 0.000	5.000	10.000	15.000	20.000	25.000	BEND 1:8 28.81	30.000	35.000	40.000	45.000	50.000	55.000	60.000	65.000	70.000	70.550
GRADIENT	SLOPE 1:2500															
PIPE DESCRIPTION	110mm Ø UNPERFORATED PIPE															

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ON ORIGINAL

0 10 15 20 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5815

Approved By: S CLOUKE

Drawn By	Designed By	Reviewed By
JM DAVIES	JM MURPHY	C VDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: SUBSOIL DRAIN LONGITUDINAL SECTION FROM SST3 TO MANHOLE 2

Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Dg. No	Rev
J40073	010-516	0

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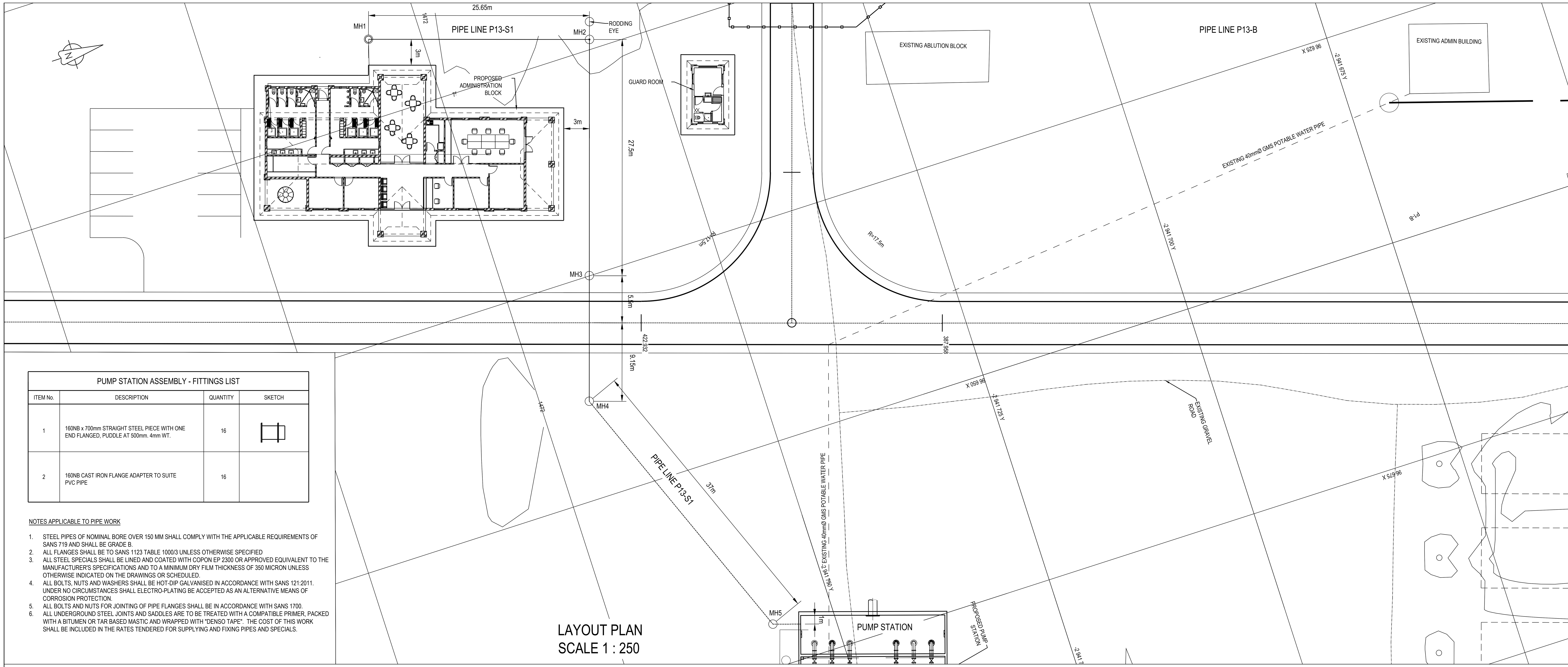


PUMP STATION ASSEMBLY - FITTINGS LIST

ITEM No.	DESCRIPTION	QUANTITY	SKETCH
1	160NB x 700mm STRAIGHT STEEL PIECE WITH ONE END FLANGED, PUDDLE AT 500mm. 4mm WT.	16	
2	160NB CAST IRON FLANGE ADAPTER TO SUITE PVC PIPE	16	

NOTES APPLICABLE TO PIPE WORK

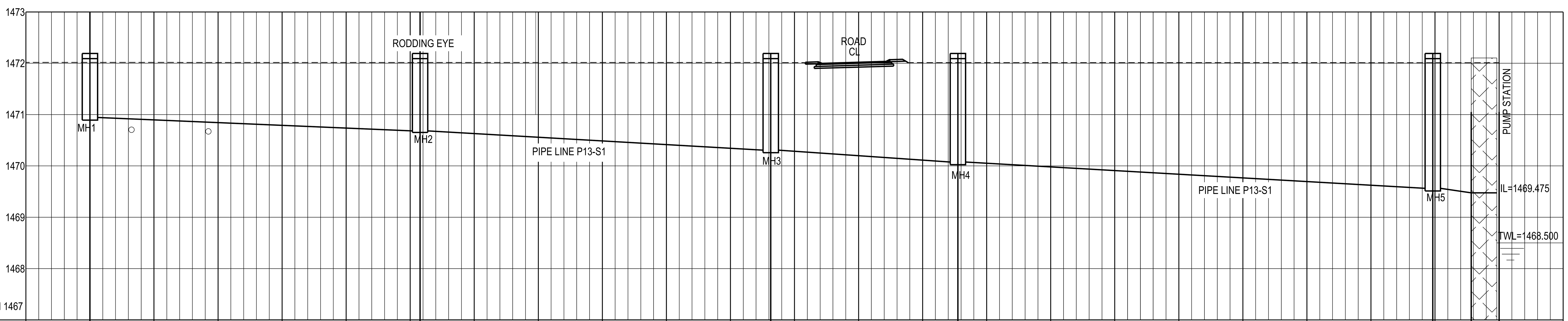
1. STEEL PIPES OF NOMINAL BORE OVER 150 MM SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF SANS 719 AND SHALL BE GRADE B.
2. ALL FLANGES SHALL BE TO SANS 1123 TABLE 1000/3 UNLESS OTHERWISE SPECIFIED
3. ALL STEEL SPECIALS SHALL BE LINED AND COATED WITH COPON EP 2300 OR APPROVED EQUIVALENT TO THE MANUFACTURER'S SPECIFICATIONS AND TO A MINIMUM DRY FILM THICKNESS OF 350 MICRON UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR SCHEDULED.
4. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANISED IN ACCORDANCE WITH SANS 121:2011. UNDER NO CIRCUMSTANCES SHALL ELECTRO-PLATING BE ACCEPTED AS AN ALTERNATIVE MEANS OF CORROSION PROTECTION.
5. ALL BOLTS AND NUTS FOR JOINTING OF PIPE FLANGES SHALL BE IN ACCORDANCE WITH SANS 1700.
6. ALL UNDERGROUND STEEL JOINTS AND SADDLES ARE TO BE TREATED WITH A COMPATIBLE PRIMER, PACKED WITH A BITUMEN OR TAR BASED MASTIC AND WRAPPED WITH "DENSO TAPE". THE COST OF THIS WORK SHALL BE INCLUDED IN THE RATES TENDERED FOR SUPPLYING AND FIXING PIPES AND SPECIALS.

LAYOUT PLAN
SCALE 1 : 250

LEGEND:
NGL
FGL
PIPE

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200



CHAINAGE	GROUND LEVEL	INVERT LEVEL	DEPTH
0.000	1472.000	CONNECTION FROM ADMIN BUILDING 1470.943 / 1470.893	0.500m
5.000			
10.000			
15.000			
20.000			
25.000 / 25.650	1472.000	90DEG BEND 1470.682 / 1470.652	0.820m / 0.870m
30.000			
35.000			
40.000			
45.000			
50.000			
53.150	1472.000	1470.308 / 1470.258	1.190m / 1.140m
55.000			
60.000			
65.000			
67.800	1472.000	40DEG BEND 1470.075 / 1470.025	1.425m / 1.375m
70.000			
75.000			
80.000			
85.000			
90.000			
95.000			
100.000			
104.800 / 105.000	1472.000	50DEG. BEND 1469.563 / 1469.513	1.935m / 1.985m
	1472.000	1469.475	2.025m
110.000			
115.000			

GRADIENT: SLOPE 1:80 (0.0125) | SLOPE 1:80 | SLOPE 1:80 | SLOPE 1:80 (0.0125) | SLOPE 1:80

PIPE DESCRIPTION: 160mm ND uPVC Class 34 PIPE (MAX FLOW 0.04l/s)

ALL DIMENSIONS AND LEVELS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE COMMENCING ANY WORK.

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ON ORIGINAL

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 Ninth Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: D.CLARK
Drawn By: pp J.BHIKA
Designed By: pp K.MURPHY
Reviewed By: V.DE WET

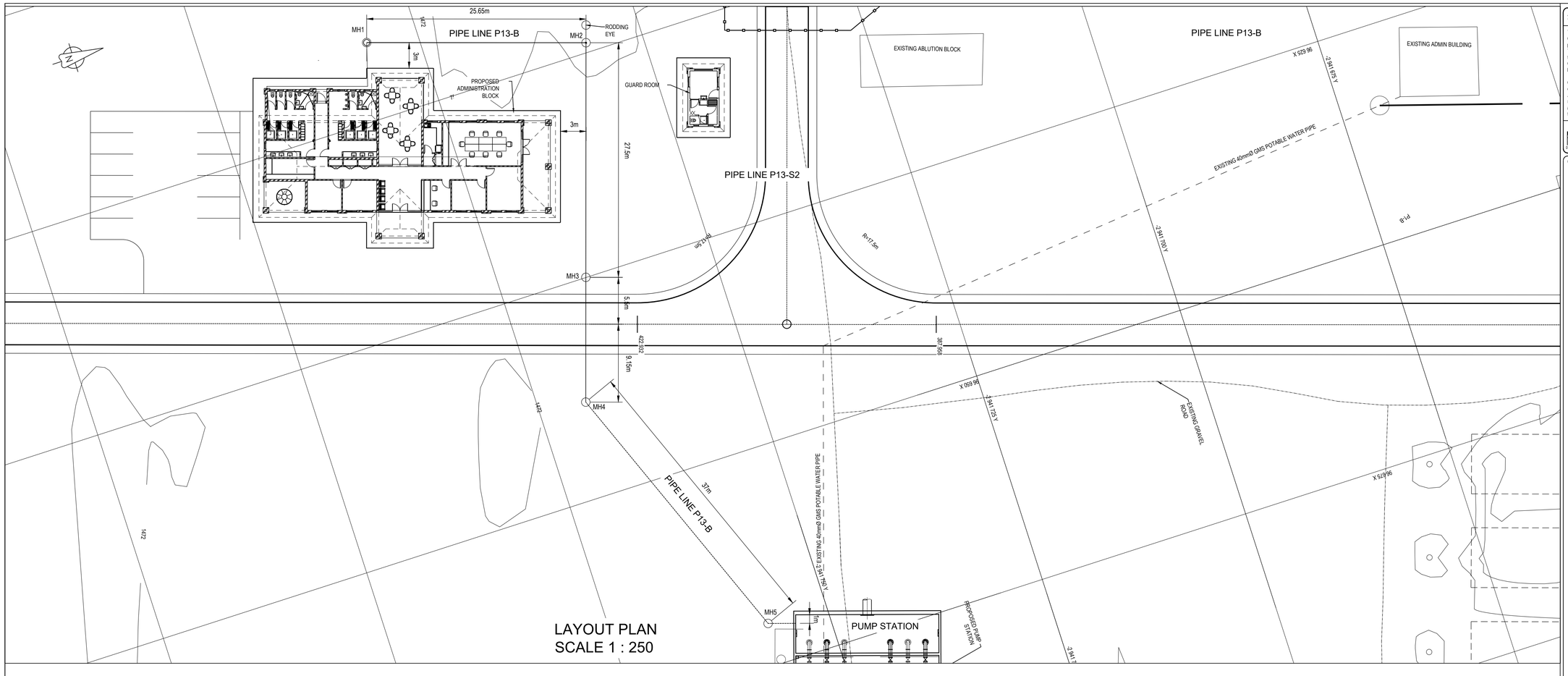
Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: LONGITUDINAL SECTION: P13-S1 SEWER RETICULATION

Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Drg. No	Rev
J40073	010-517	0

\\ELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\O_DRAWINGS\4. TENDER DRAWINGS 2022\NEW CAD | MENASHEN REDDY | 10/03/2023 16:16:10



LAYOUT PLAN
SCALE 1 : 250

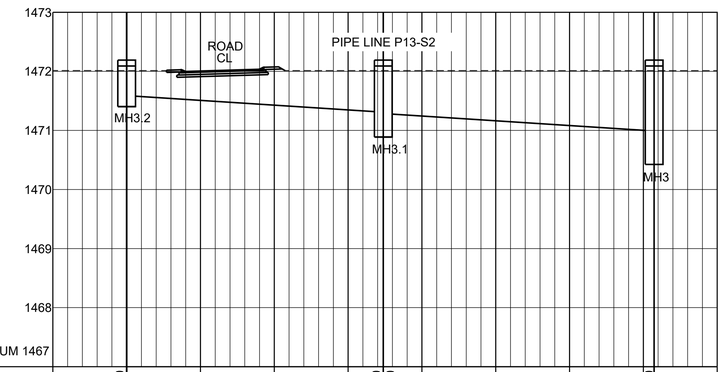
NGL – – – –

FGL ———

PIPE ———

LONGITUDINAL SECTION

SCALE
VERTICAL 1 : 50
HORIZONTAL 1 : 200



GROUND LEVEL	1472.000				1472.000	1472.000			1472.000	
INVERT LEVEL	1471.500				1471.275	1471.225			1471.000	
DEPTH	1.508m				1.508m	1.508m			1.000m	
CHAINAGE	0.000	5.000	10.000	15.000		20.000	25.000	25.650	30.000	35.000	40.000
GRADIENT	SLOPE 1:80 (0.0125)					SLOPE 1:80					
PIPE DESCRIPTION	160mm ND uPVC Class 34 PIPE (MAX FLOW 0.04l/s)										

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ON ORIGINAL

0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
		Revisions		
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Client
RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
15 North Street, Houghton Estate
Rosebank, 2196
PO Box 2192, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By
D.CLARK

Drawn By	Designed By	Reviewed By
J.V.TONDER	J.V.TONDER	JOE WET

Project
EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description
LONGITUDINAL SECTION: P13-S2 SEWER RETICULATION

Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Org. No	Rev
J40073	010-520	0

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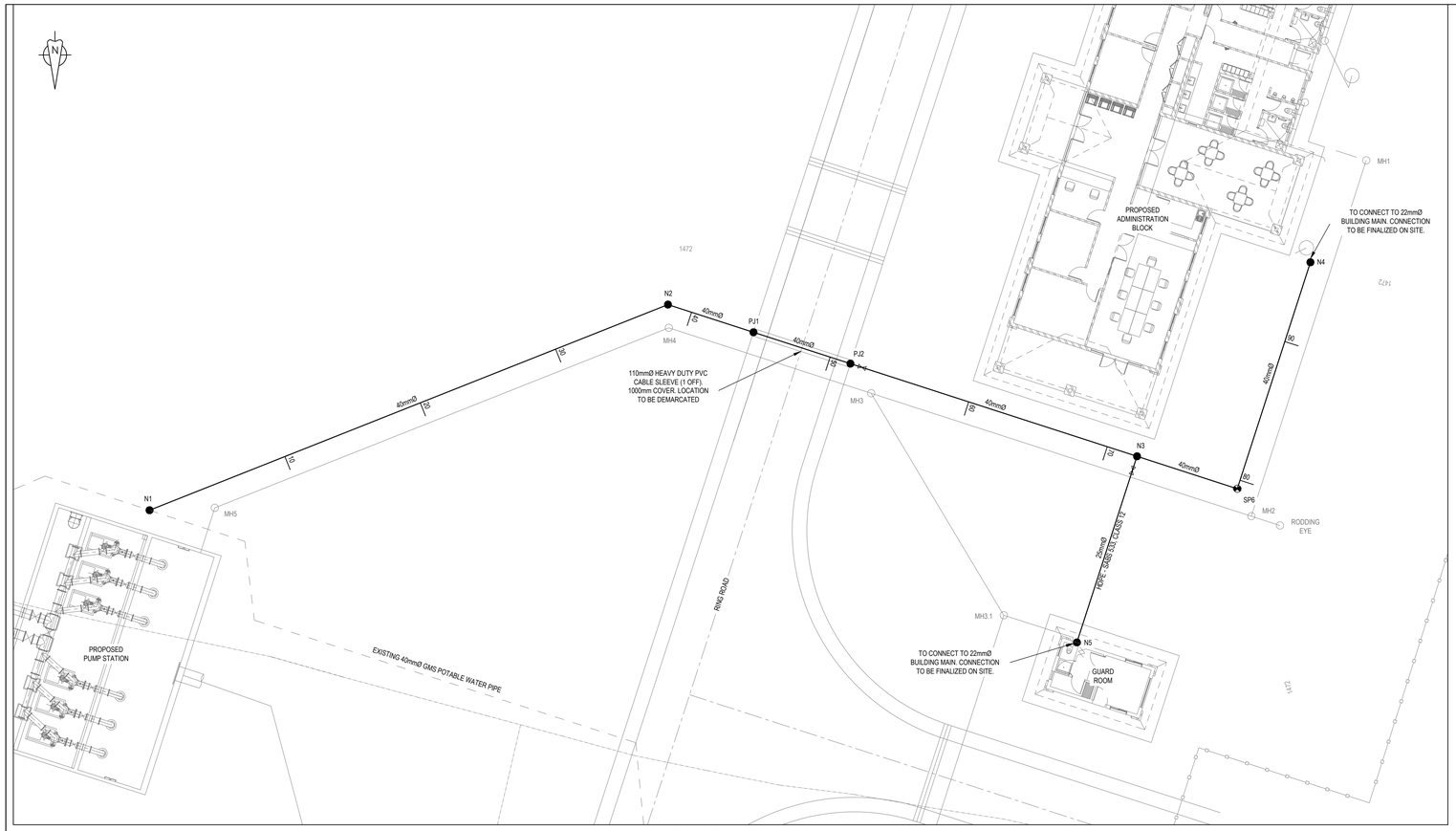
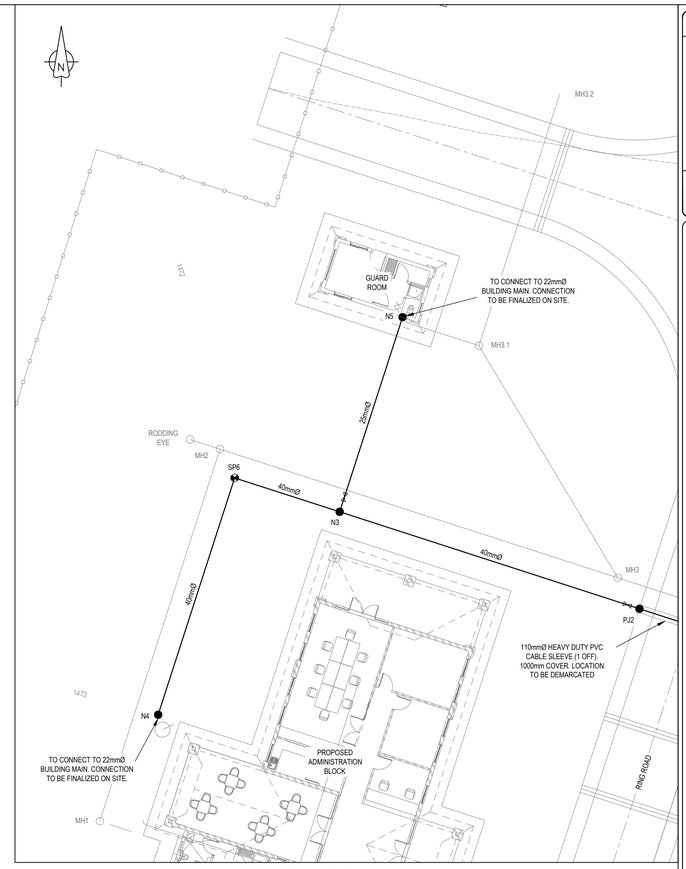
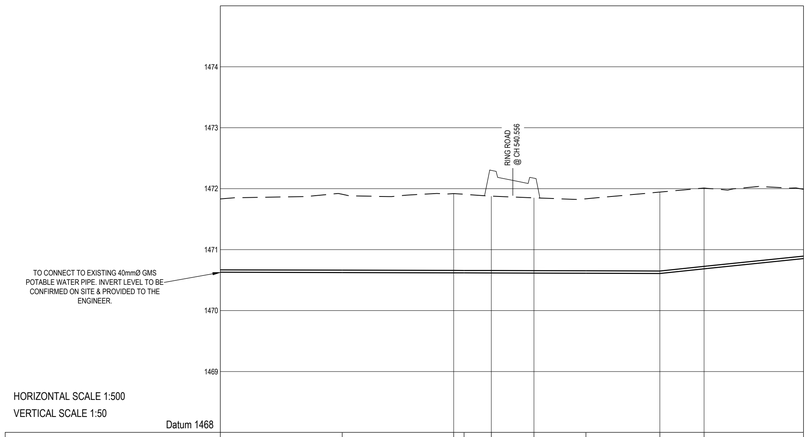


NODE N1 TO N4 LAYOUT PLAN
SCALE 1:200



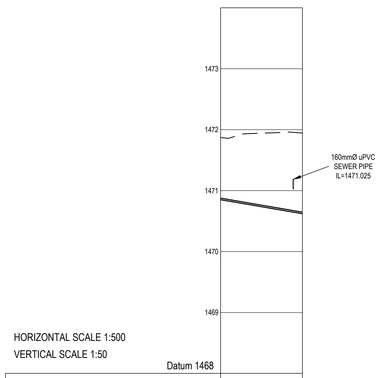
NODE N5 TO N3 LAYOUT PLAN
SCALE 1:200



HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:50
Datum 1468

CHAINAGE	0.000	20.000	38.295	40.000	44.463	51.464	60.000	72.145	73.384	95.719		
GROUND LEVEL	1471.832	1471.909	1471.909	1471.908	1471.877	1471.860	1471.884	1471.944	1472.010	1471.989		
BEND NAME	N1		N2		PJ1	PJ2		N3	SP6		N4	
INVERT LEVEL	1470.628	1470.623	1470.618	1470.618	1470.616	1470.615	1470.612	1470.609	1470.684	1470.853		
DEPTH	1.204	1.286	1.291	1.290	1.261	1.245	1.272	1.335	1.326	1.136		
PIPE TYPE / PIPE SIZE	HDPE - SABS 533 CLASS 12 40mmØ											
LENGTH / SLOPE	38.296 m 0.027 %			6.168 m 0.027 %	7.000 m 0.027 %	20.681 m 0.027 %		7.240 m 1.037 %	16.335 m 1.037 %			
DESIGN PEAK FLOW	0.025 l/s			0.025 l/s	0.025 l/s	0.025 l/s		0.024 l/s	0.023 l/s			
DESIGN VELOCITY	0.033 m/s			0.033 m/s	0.033 m/s	0.033 m/s		0.032 m/s	0.030 m/s			

NODE N1 TO N4 LONG SECTION



HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:50
Datum 1468

CHAINAGE	0.000	13.423
GROUND LEVEL	1471.873	1471.944
BEND NAME	N5	N3
INVERT LEVEL	1470.850	1470.621
DEPTH	1.022	1.324
PIPE TYPE / PIPE SIZE	HDPE - SABS 533 CLASS 12 25mmØ	
LENGTH / SLOPE	13.425 m 1.712 %	
DESIGN PEAK FLOW	0.001 l/s	
DESIGN VELOCITY	0.003 m/s	

NODE N5 TO N3 LONG SECTION

PROPOSED NEW WATER SETTING OUT DATA Lo 27 (WGS 84 DATUM)		
NODE	Y-COORD	X-COORD
N1	-96 674.523	2 941 756.955
N2	-96 638.923	2 941 771.068
PJ1	-96 633.054	2 941 769.170
PJ2	-96 626.393	2 941 767.017
N3	-96 606.715	2 941 760.654
SP6	-96 599.827	2 941 758.427
N4	-96 594.806	2 941 773.971
N5	-96 610.845	2 941 747.882

GENERAL NOTES:

PIPE MATERIALS:
1. ALL PIPES USED MUST CONFORM TO SANS1200L AND ALL OTHER STANDARDS REFERRED TO IN SANS1200L. THIS WILL INCLUDE THE USE OF uPVC, STEEL AND HDPE PIPES. COATED STEEL PIPES SHOULD BE USED AT ROAD CROSSINGS WHERE THE PIPE DIAMETER EXCEEDS 200mm. ALL PIPES UP TO 90mmØ WILL BE HDPE CLASS 12.

ISOLATING VALVES:
1. RESILIENT SEAL VALVES (RSV) TO BE USED FOR ALL PIPE DIAMETERS. VALVES WITH uPVC BODY MAY ALSO BE USED ON RETICULATION NETWORKS.
2. VALVES UP TO 200mmØ MAY BE PLAIN ENDED.

VALVE BOXES:
1. REFER TO DWG No. J30231E / 010-104 FOR VALVES UP TO 300mmØ.
2. VALVES OVER 300mmØ AND UP TO 600mmØ TO BE PLACED IN A 1050mmØ CONCRETE MANHOLE.
3. VALVES OVER 600mmØ SHALL BE PLACED IN A SPECIALLY DESIGNED MANHOLE TO SUIT THE SITE CONDITIONS AND SIZE OF VALVE.

BEDDING & BACKFILL
1. BEDDING, BACKFILL AND COMPACTION ARE TO BE DONE ACCORDING TO SANS1200LB AND ALL OTHER STANDARDS REFERRED TO IN SANS1200LB.
2. THE CHOICE OF BEDDING MUST BE SUFFICIENT TO ENSURE THE ADEQUATE PROTECTION OF THE PIPELINE.

MARKER POSTS
1. MARKER POSTS SHOULD BE PLACED ALONG THE PIPELINES AT INTERVALS SUFFICIENT TO FACILITATE LOCATION OF THE ROUTE. MARKER POSTS SHOULD ALSO BE PLACED AT ALL PIPE BENDS, JUNCTIONS AND OTHER FEATURES.

ANCHORAGE AND THRUST BLOCKS
1. ANCHORAGE AND THRUST BLOCKS SHOULD BE USED WHENEVER THE PIPELINE CHANGES VERTICAL OR HORIZONTAL DIRECTION BY MORE THAN 10º.
2. THRUST BLOCKS SHOULD ALSO BE USED WHERE THE SIZE OF THE PIPELINE CHANGES, AT BLANK ENDS, AND ON STEEP SLOPES (MORE THAN 1:6).
3. REFER TO DWG No. J30231E / 010-101 FOR ANCHORAGE AND THRUST BLOCKS DESIGNS.

TESTING OF PIPELINES
1. THE ONUS IS ON THE ENGINEER TO ENSURE THAT THE WORKS ARE PROPERLY CARRIED OUT. WITHOUT ABSOLVING THE ENGINEER OF THIS RESPONSIBILITY, JW SHALL REQUIRE THE FOLLOWING TESTS AND INSPECTIONS DURING THE CONSTRUCTION PHASE:
   a) INSPECTION ON COMPLETION OF THE EXCAVATION PRIOR TO LAYING THE BEDDING.
   b) INSPECTION OF PRESCRIBED BEDDING AND THE COMPACTION OF SURROUNDING MATERIAL UP TO THE CENTER LINE LEVEL OF THE PIPE.
   c) PRESSURE TESTS TO BE CONDUCTED AFTER THE PLACING AND COMPACTION OF THE BACKFILLING. CONTRACTORS ARE ENCOURAGED TO PRESSURE TEST THE PIPELINE PRIOR TO BACKFILLING, AT THEIR OWN EXPENSE, TO AVOID EXCAVATION OF THE FINAL BACKFILL. PIPES MUST BE PRESSURE TESTED TO A MINIMUM OF 1.25 TIMES THE MAXIMUM WORKING PRESSURE OF THE PIPE. A kPa GAUGE MUST BE USED FOR TESTING IN ACCORDANCE WITH SANS SPECIFICATIONS. DENSITY TESTS MUST BE CONDUCTED ON BACKFILL. CORRELATED DCP TESTS WILL BE ACCEPTED UNLESS OTHERWISE SPECIFIED.
   d) INSPECTION OF THE CONSTRUCTION OF VALVE BOXES, INSTALLATION OF HYDRANTS AND THE COMPLETION OF THE BACKFILL.
   e) ALL ANCHOR BLOCKS, BEFORE BACKFILLING.
   f) ALL LEADS, BEFORE BACKFILLING. ALL TESTS TO CONFORM TO SANS1200.

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ON ORIGINAL
0 10 20 30 40 50 60 70 80 90Mm

GENERAL NOTES:

LEGEND:
- EXISTING WATER PIPES
- PROPOSED WATER PIPES
- PROPOSED WATER NODES
- PROPOSED STANDPIPES
- PROPOSED VALVES

REFERENCE DRAWINGS:
- J30231E / 010-018 → WATER RETICULATION LAYOUT PLAN
- J30231E / 010-104 → TYPICAL DETAIL FOR VALVE CHAMBER & STANDPIPES
- J30231E / 010-522 → PROPOSED NEW WATER RETICULATION LONG SECTIONS - SHEET 2 OF 3
- J30231E / 010-523 → PROPOSED NEW WATER RETICULATION LONG SECTIONS - SHEET 3 OF 3

ISSUED FOR TENDER

No	Date	Details	Chkd	Appr
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Bruma, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5670

Approved By: S.CLARK

Drawn By	Designed By	Reviewed By
JP PEARCE	JS KILMARTIN	VDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: PROPOSED NEW WATER RETICULATION LONG SECTIONS SHEET 1 OF 3

Scale	Date
AS SHOWN	NOVEMBER 2022

Project No	Org. No	Rev
J40073	010-521	0

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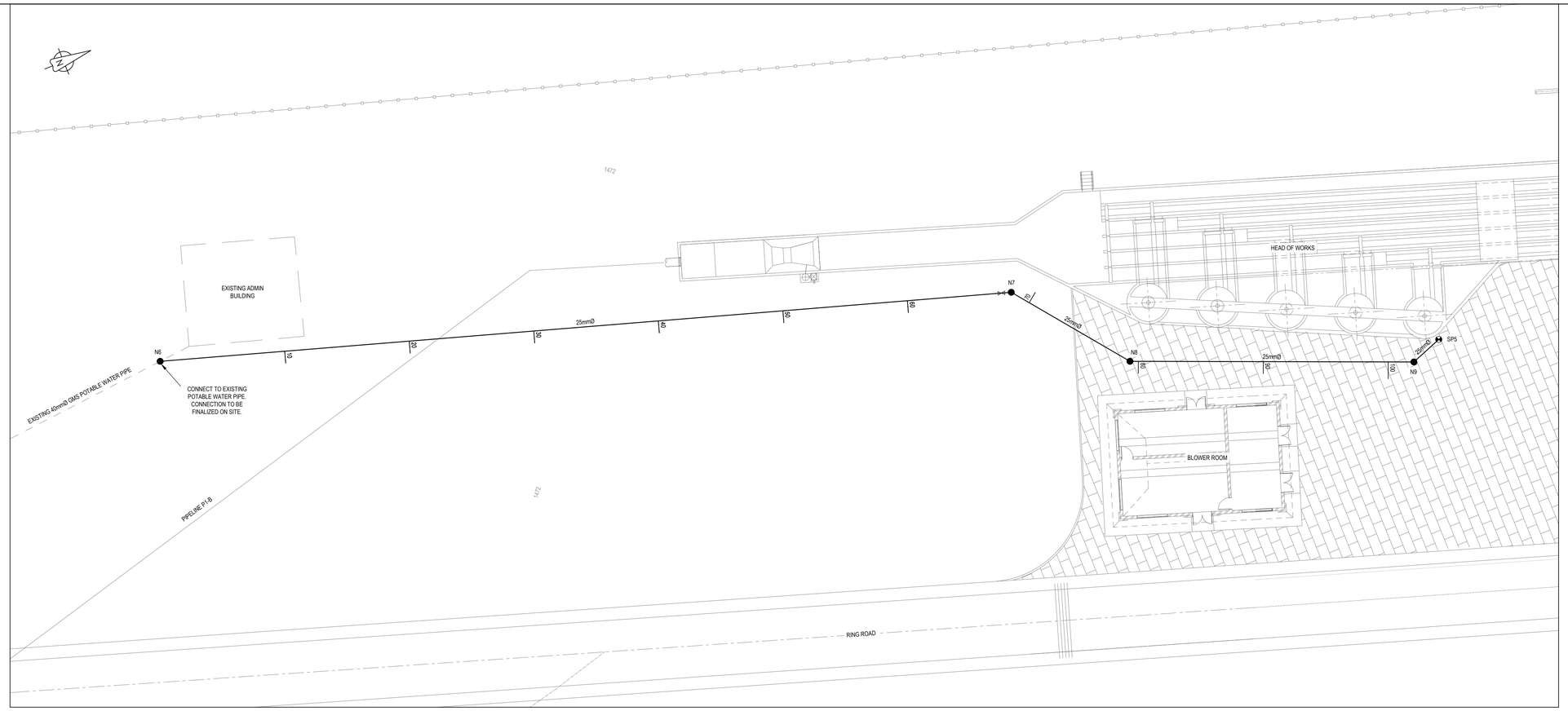
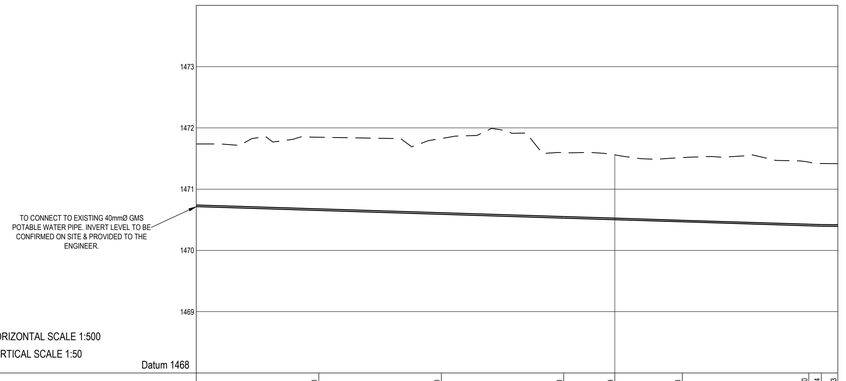


NODE N6 TO SP5 LAYOUT PLAN
SCALE 1:200



CHAINAGE	0.000	20.000	40.000	60.000	68.339	79.328	100.000	102.054	104.743
GROUND LEVEL	1471.738	1471.848	1471.826	1471.597	1471.559	1471.515	1471.439	1471.418	1471.417
BEND NAME	N6				N7	N8	N9		SP5
INVERT LEVEL	1470.716	1470.653	1470.590	1470.527	1470.501	1470.467	1470.402	1470.396	1470.395
DEPTH	1.022	1.195	1.236	1.070	1.058	1.048	1.037	1.022	1.022
PIPE TYPE / PIPE SIZE	HDPE - SABS 533 CLASS 12 25mmØ								
LENGTH / SLOPE	68.340 m 0.314 %				10.989 m 0.314 %		22.725 m 0.314 %		2.689 m 0.038 %
DESIGN PEAK FLOW	0.001 l/s				0.001 l/s		0.001 l/s		0.001 l/s
DESIGN VELOCITY	0.003 m/s				0.003 m/s		0.003 m/s		0.003 m/s

NODE N6 TO SP5 LONG SECTION

PROPOSED NEW WATER SETTING OUT DATA Lo 27 (WGS 84 DATUM)		
NODE	Y-COORD	X-COORD
N6	-96 634.365	2 941 670.402
N7	-96 654.571	2 941 605.118
N8	-96 663.234	2 941 598.357
N9	-96 671.736	2 941 577.282
SP5	-96 670.801	2 941 574.761

GENERAL NOTES:

PIPE MATERIALS:

1. ALL PIPES USED MUST CONFORM TO SANS1200L AND ALL OTHER STANDARDS REFERRED TO IN SANS1200L. THIS WILL INCLUDE THE USE OF uPVC, STEEL AND HDPE PIPES. COATED STEEL PIPES SHOULD BE USED AT ROAD CROSSINGS WHERE THE PIPE DIAMETER EXCEEDS 200mm. ALL PIPES UP TO 90mmØ WILL BE HDPE CLASS 12.

ISOLATING VALVES:

1. RESILIENT SEAL VALVES (RSV) TO BE USED FOR ALL PIPE DIAMETERS. VALVES WITH uPVC BODY MAY ALSO BE USED ON RETICULATION NETWORKS.
2. VALVES UP TO 200mmØ MAY BE PLAIN ENDED.

VALVE BOXES:

1. REFER TO DWG No. J30231E / 010-104 FOR VALVES UP TO 300mmØ.
2. VALVES OVER 300mmØ AND UP TO 600mmØ TO BE PLACED IN A 1050mmØ CONCRETE MANHOLE.
3. VALVES OVER 600mmØ SHALL BE PLACED IN A SPECIALLY DESIGNED MANHOLE TO SUIT THE SITE CONDITIONS AND SIZE OF VALVE.

BEDDING & BACKFILL

1. BEDDING, BACKFILL AND COMPACTION ARE TO BE DONE ACCORDING TO SANS1200LB AND ALL OTHER STANDARDS REFERRED TO IN SANS1200LB.
2. THE CHOICE OF BEDDING MUST BE SUFFICIENT TO ENSURE THE ADEQUATE PROTECTION OF THE PIPELINE.

MARKER POSTS

1. MARKER POSTS SHOULD BE PLACED ALONG THE PIPELINES AT INTERVALS SUFFICIENT TO FACILITATE LOCATION OF THE ROUTE. MARKER POSTS SHOULD ALSO BE PLACED AT ALL PIPE BENDS, JUNCTIONS AND OTHER FEATURES.

ANCHORAGE AND THRUST BLOCKS

1. ANCHORAGE AND THRUST BLOCKS SHOULD BE USED WHENEVER THE PIPELINE CHANGES VERTICAL OR HORIZONTAL DIRECTION BY MORE THAN 10°.
2. THRUST BLOCKS SHOULD ALSO BE USED WHERE THE SIZE OF THE PIPELINE CHANGES, AT BLANK ENDS, AND ON STEEP SLOPES (MORE THAN 1:6).
3. REFER TO DWG No. J30231E / 010-101 FOR ANCHORAGE AND THRUST BLOCKS DESIGNS.

TESTING OF PIPELINES

1. THE ONUS IS ON THE ENGINEER TO ENSURE THAT THE WORKS ARE PROPERLY CARRIED OUT. WITHOUT ABSOLVING THE ENGINEER OF THIS RESPONSIBILITY, JW SHALL REQUIRE THE FOLLOWING TESTS AND INSPECTIONS DURING THE CONSTRUCTION PHASE:
   a) INSPECTION ON COMPLETION OF THE EXCAVATION PRIOR TO LAYING THE BEDDING.
   b) INSPECTION OF PRESCRIBED BEDDING AND THE COMPACTION OF SURROUNDING MATERIAL UP TO THE CENTER LINE LEVEL OF THE PIPE.
   c) PRESSURE TESTS TO BE CONDUCTED AFTER THE PLACING AND COMPACTION OF THE BACKFILLING. CONTRACTORS ARE ENCOURAGED TO PRESSURE TEST THE PIPELINE PRIOR TO BACKFILLING, AT THEIR OWN EXPENSE, TO AVOID EXCAVATION OF THE FINAL BACKFILL. PIPES MUST BE PRESSURE TESTED TO A MINIMUM OF 1.25 TIMES THE MAXIMUM WORKING PRESSURE OF THE PIPE. A kPa GAUGE MUST BE USED FOR TESTING IN ACCORDANCE WITH SANS SPECIFICATIONS. DENSITY TESTS MUST BE CONDUCTED ON BACKFILL. CORRELATED DCP TESTS WILL BE ACCEPTED UNLESS OTHERWISE SPECIFIED.
   d) INSPECTION OF THE CONSTRUCTION OF VALVE BOXES, INSTALLATION OF HYDRANTS AND THE COMPLETION OF THE BACKFILL.
   e) ALL ANCHOR BLOCKS, BEFORE BACKFILLING.
   f) ALL LEADS, BEFORE BACKFILLING. ALL TESTS TO CONFORM TO SANS1200.

ALL DIMENSIONS AND LEVELS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE COMMENCING ANY WORK.

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ON ORIGINAL

0 5 10 15 20 25 30 40 50 60 70 80 90MM

GENERAL NOTES:

LEGEND:

- EXISTING WATER PIPES
- PROPOSED WATER PIPES
- PROPOSED WATER NODES
- PROPOSED STANDPIPES
- PROPOSED VALVES

REFERENCE DRAWINGS:

- J30231E / 010-018 → WATER RETICULATION LAYOUT PLAN
- J30231E / 010-104 → TYPICAL DETAIL FOR VALVE CHAMBER & STANDPIPES
- J30231E / 010-522 → PROPOSED NEW WATER RETICULATION LONG SECTIONS - SHEET 2 OF 3
- J30231E / 010-523 → PROPOSED NEW WATER RETICULATION LONG SECTIONS - SHEET 3 OF 3

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
ENGINEERS | ARCHITECTS | SCIENTISTS | PROJECT MANAGERS | ECONOMISTS | SPECIALISTS
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Rosebank, 2196
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4000
Fax No. +27 11 807 5970

Approved By: D.CLOUK

Drawn By: ZSP.D

Designed By: ZSP.K.MURPHY

Reviewed By: V.DE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: PROPOSED NEW WATER RETICULATION LONG SECTIONS SHEET 2 OF 3

Scale: AS SHOWN

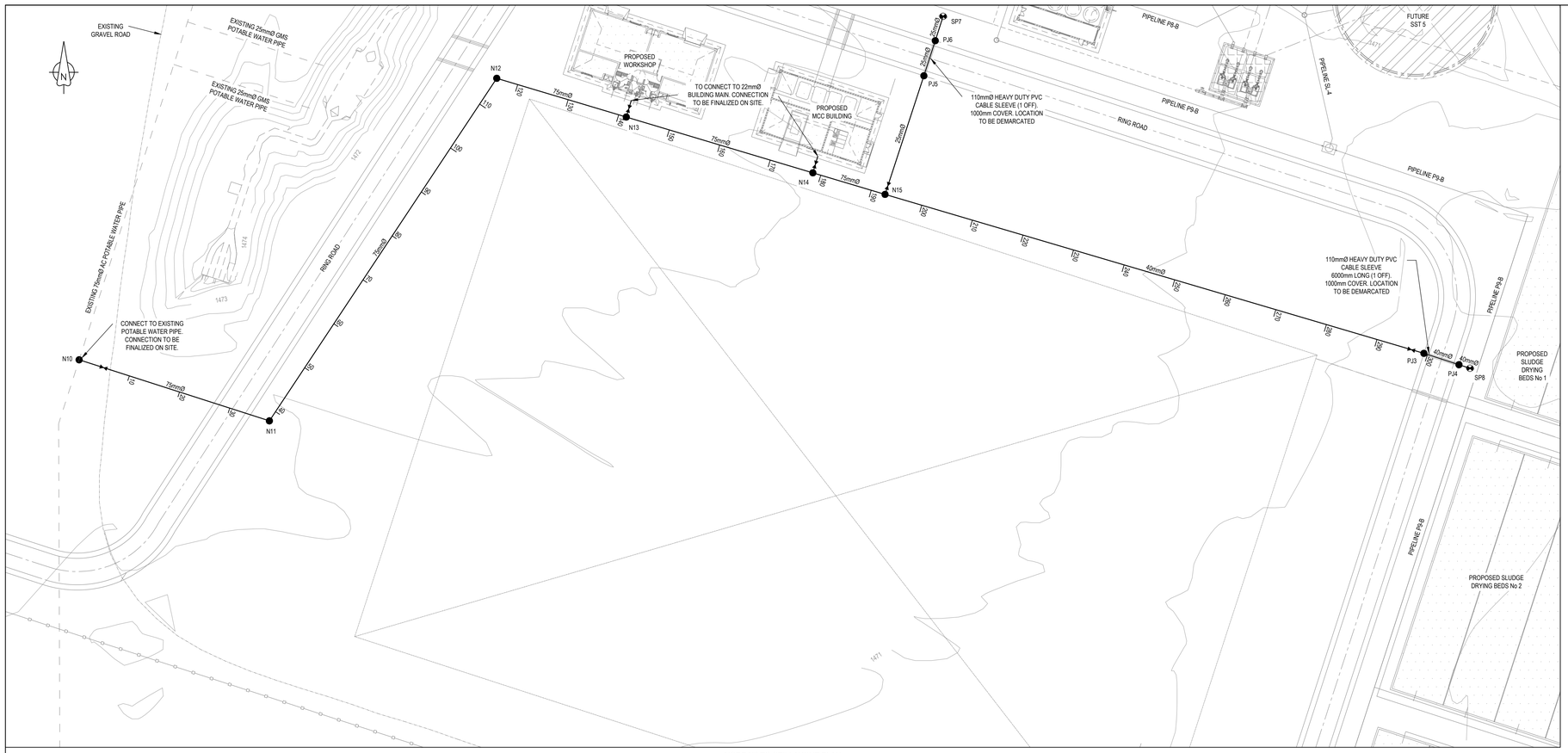
Date: NOVEMBER 2022

Project No: J40073

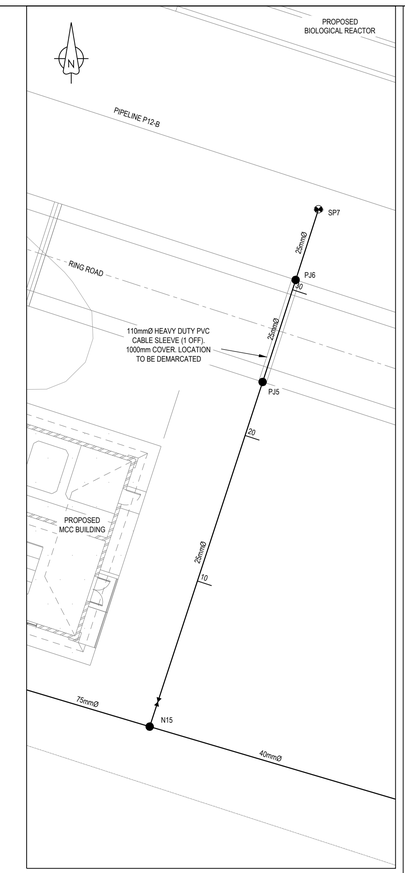
Org. No: 010-522

Rev: 0

IELS-CLUSTER\PROJECTS\J30231E MEYERTON WWTW\2_DRAWINGS\4_TENDER DRAWINGS 2022\NEW CAD\ MEN\HEN\REDDY 10/03/2023 15:16:10

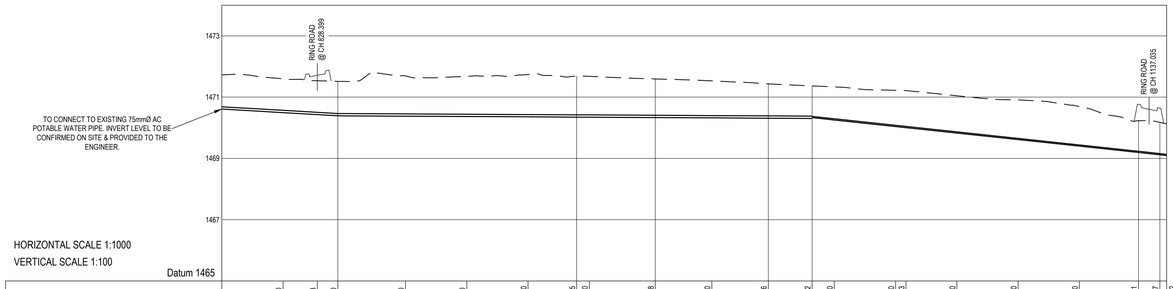


NODE N8 TO SP8 LAYOUT PLAN
SCALE 1:500



NODE N13 TO SP7 LAYOUT PLAN
SCALE 1:200

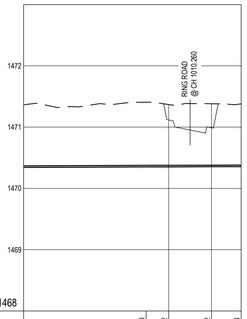
PROPOSED NEW WATER SETTING OUT DATA Lo 27 (WGS 84 DATUM)		
NODE	Y-COORD	X-COORD
N10	-96 709.451	2 941 884.862
N11	-96 745.539	2 941 896.439
N12	-96 788.667	2 941 831.489
N13	-96 813.237	2 941 838.832
N14	-96 848.618	2 941 849.408
N15	-96 862.315	2 941 853.502
PJ3	-96 964.523	2 941 883.642
PJ4	-96 971.179	2 941 885.794
SP8	-96 973.268	2 941 886.469
PJ5	-96 869.683	2 941 831.006
PJ6	-96 871.840	2 941 824.347
SP7	-96 873.330	2 941 819.739



HORIZONTAL SCALE 1:1000
VERTICAL SCALE 1:100
Datum 1465

CHAINAGE	0.000	20.000	31.203	37.900	60.000	80.000	100.000	115.865	120.000	141.598	160.000	178.456	192.732	200.000	220.000	233.243	240.000	260.000	280.000	299.251	306.287	308.482
GROUND LEVEL	1471.728	1471.596	1471.534	1471.516	1471.691	1471.679	1471.737	1471.698	1471.679	1471.595	1471.522	1471.455	1471.366	1471.333	1471.224	1471.214	1471.046	1470.909	1470.694	1470.230	1470.177	1470.127
BEND NAME	N10			N11				N12		N13		N14	N15							PJ3	PJ4	SP8
INVERT LEVEL	1470.611	1470.495		1470.391	1470.379	1470.388	1470.395	1470.348	1470.345	1470.333	1470.323	1470.313	1470.332	1470.254	1470.041		1469.857	1469.614	1469.400	1469.195	1469.116	1469.092
DEPTH	1.117	1.101	1.129	1.312	1.311	1.291	1.342	1.350	1.334	1.262	1.209	1.123	1.034	1.079	1.183		2.219	1.295	1.294	1.035	1.061	1.036
PIPE TYPE / PIPE SIZE	HDPE - SABS 533 CLASS 12 75mmØ													HDPE - SABS 533 CLASS 12 40mmØ								
LENGTH / SLOPE	37.900 m 0.579 %			77.965 m 0.056 %				25.644 m 0.056 %		36.928 m 0.056 %		14.296 m 0.056 %		106.565 m 1.067 %						2.195 m 0.996 m 1.119 %		1.119 %
DESIGN PEAK FLOW	0.039 l/s			0.039 l/s				0.039 l/s		0.019 l/s		0.002 l/s		0.001 l/s						0.001 l/s		0.001 l/s
DESIGN VELOCITY	0.015 m/s			0.015 m/s				0.015 m/s		0.007 m/s		0.001 m/s		0.001 m/s						0.001 m/s		0.001 m/s

NODE N10 TO SP8 LONG SECTION



HORIZONTAL SCALE 1:500
VERTICAL SCALE 1:50
Datum 1468

CHAINAGE	0.000	20.000	23.672	30.672	36.514
GROUND LEVEL	1471.366	1471.407	1471.369	1471.382	1471.379
BEND NAME	N15		PJ5	PJ6	SP7
INVERT LEVEL	1470.343	1470.351	1470.352	1470.355	1470.306
DEPTH	1.022	1.056	1.017	1.027	1.022
PIPE TYPE / PIPE SIZE	HDPE - SABS 533 CLASS 12 25				
LENGTH / SLOPE	23.672 m 0.036 %		7.000 m 0.036 %	4.843 m 0.036 %	
DESIGN PEAK FLOW	0.001 l/s		0.001 l/s	0.001 l/s	
DESIGN VELOCITY	0.003 m/s		0.003 m/s	0.003 m/s	

NODE N15 TO SP7 LONG SECTION

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ON ORIGINAL

GENERAL NOTES:

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- PROPOSED WATER PIPES
- PROPOSED WATER NODES
- PROPOSED STANDPIPES
- PROPOSED VALVES

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- J30231E / 010-523 → PROPOSED NEW WATER RETICULATION LONG SECTIONS - SHEET 3 OF 3

ISSUED FOR TENDER

No	Date	Details	Chkd	Appd
0	NOV 2022	ISSUED FOR TENDER	VDW	DC

Revisions

Client: RAND WATER

GIBB
INFRASTRUCTURE & TRANSPORT
Johannesburg
3rd Floor, Building 4
19 North Street, Houghton Estate
Gauteng, 2198
PO Box 2700, Rivonia, 2128
Telephone No. +27 11 519 4600
Fax No. +27 11 807 5978

Approved By: D CLARK

Drawn By: ZSP 2 MOKOENA

Designed By: ZSP K MURPHY

Reviewed By: CDE WET

Project: EXTENSION OF MEYERTON WASTEWATER TREATMENT WORKS

Description: PROPOSED NEW WATER RETICULATION LONG SECTIONS SHEET 3 OF 3

Scale: AS SHOWN
Date: NOVEMBER 2022

Project No: J40073
Org. No: 010-523
Rev: 0

\\ES-CLUSTERPROJECTS\J30231E MEYERTON WWTW\3_DRAWINGS\4. TENDER DRAWINGS 2022\CIVIL\CAD\ [MENASHEN.NEDDY] | 10/03/2023 16:16:10