

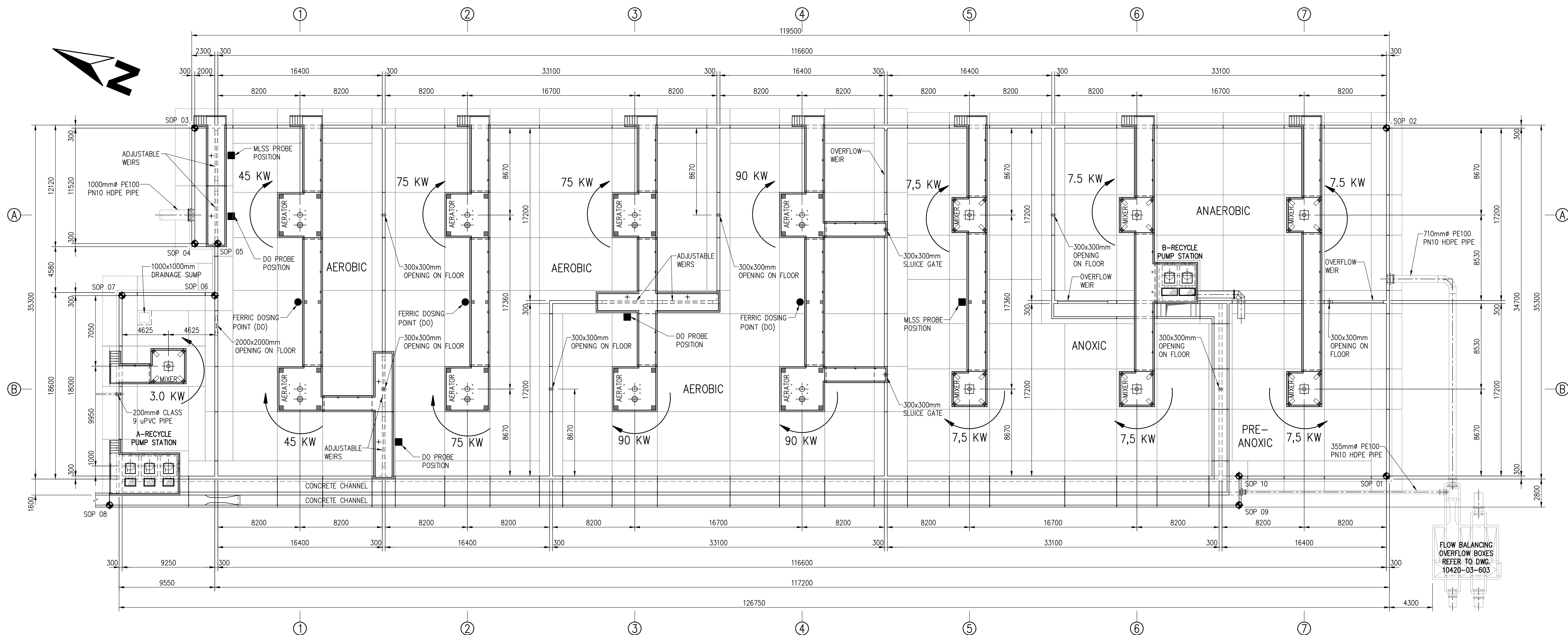
Johannesburg Water (Pty) Ltd



DRAWINGS

CONTRACT No. JW14337

DRIEFONTEIN WASTE WATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN
TENDER DRAWINGS



LAYOUT OF BIOLOGICAL REACTOR
1:200

- REFERENCE DRAWINGS:
- 10420-03-804 - INTERCONNECTING PIPEWORK - FLOW BALANCING OVERFLOW BOXES TO BIOLOGICAL REACTOR
 - 10420-04-101 - LAYOUT AND SETTING OUT DETAILS
 - 10420-04-102 - PIPEWORK LAYOUT
 - 10420-04-202 - LAYOUT OF UNDER-DRAINS
 - 10420-04-203 - FLOOR PLAN
 - 10420-04-204 - FLOOR PLAN AND DETAILS
 - 10420-04-205 - WALKWAY AND PLATFORM LAYOUT
 - 10420-04-206 - WALKWAY AND PLATFORM LAYOUT AND DETAILS
 - 10420-04-207 - SECTIONS
 - 10420-04-208 - SECTIONS
 - 10420-04-209 - A-RECYCLE PUMP STATION
 - 10420-04-210 - B-RECYCLE PUMP STATION
 - 10420-04-211 - CONCRETE CHANNELS
 - 10420-04-212 - MIXER AND AERATOR PLATFORMS

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS
Knight Piésold CONSULTING
 Knight Piésold
 P.O. Box 221
 Rivonia
 Gauteng
 2126
 Tel: 011-800 7130
 Email: andrew@kpi.co.za

PDNA
 PD Naidoo & Associates
 P.O. Box 7707
 Johannesburg
 Gauteng
 2000
 Tel: 011-666 8800
 Email: andrew@pdna.co.za

ZITHOLELE
 Zitholele Consulting
 P.O. Box 6002
 Halfway House
 Gauteng
 1685
 Tel: 011-254 4800
 Email: charles@zitholele.co.za

WSP
 WSP Consulting Engineers SA
 P.O. Box 98867
 Silver Park
 Gauteng
 2150
 Tel: 011-361 1434
 Email: chris.duval@wspgroup.co.za

JOHANNESBURG WATER (PTY) LTD

**17 HARRISON STREET
MARSHALLTOWN
2107**
**TEL: (011) 688-1400
FAX: (011) 688-1529**

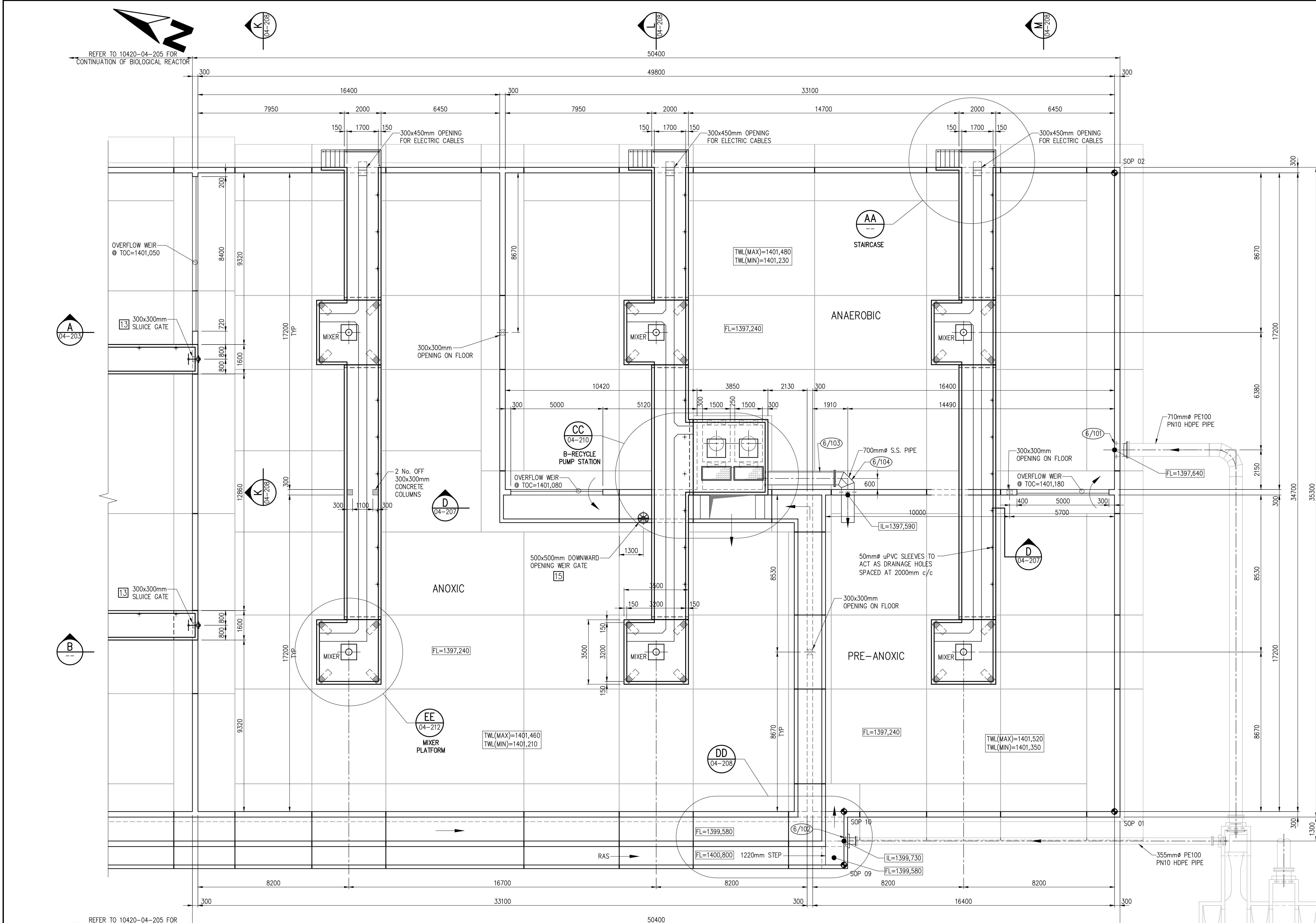
CITY OF JOHANNESBURG
DRIEFONTEIN WASTEWATER TREATMENT WORKS
PLANT EXPANSION (25 MI/day MODULE)
BIOLOGICAL REACTOR
LAYOUT
SHEET 1 OF 12

FOR TENDER PURPOSES ONLY!

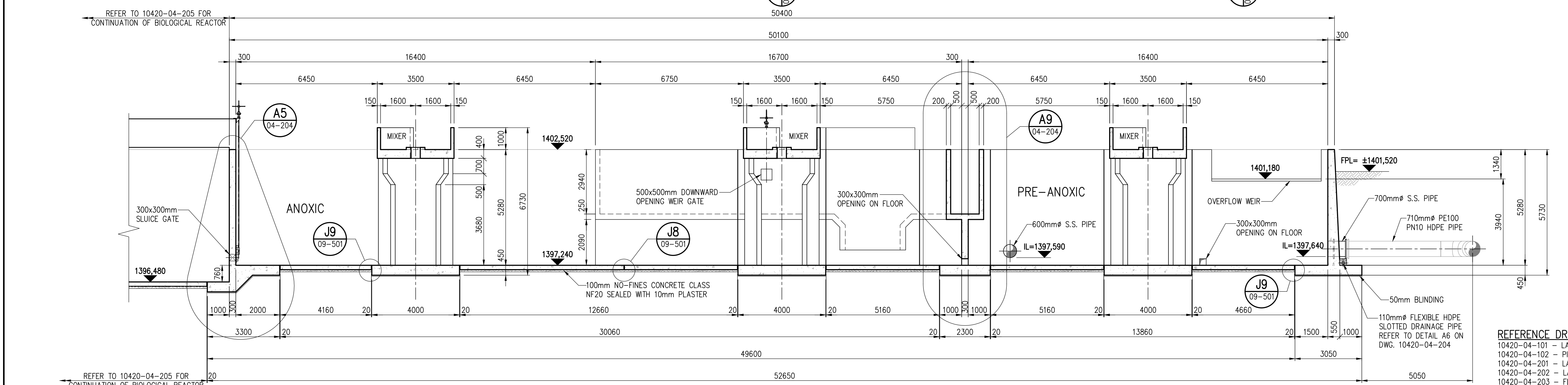
FOR COMMISSIONING
PURPOSES ONLY!

A0
DO NOT SCALE

DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING No.
		C00 ISSUED FOR CONSTRUCTION	FVP	28/07/11	JW NUMBER JW10005
		C01 ANNOTATION AND WALKWAY SUPPORT COLUMNS REVISED	FVP	04/11/11	CONSULTANT'S NUMBER 10420-04-201
		C02 RECYCLE PUMP STATIONS AND PLATFORMS REVISED	CN	16/01/12	FILE No
		C03 ISSUED FOR COMMISSIONING	SP	07/04/15	
DATE					



PLAN OF BIOLOGICAL REACTOR
1:100



SECTION B
1:100

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS
Knight Piésold
P.O. Box 221
Riverside
Gauteng
2150
Tel: 011-806 7130
Email: kpi@kpi.co.za

PDNA
P.O. Box 6002
Gauteng
2150
Tel: 011-806 8600
Email: pdna@pdna.co.za

WSP
WSP Consulting Engineers SA
P.O. Box 98867
Gauteng
2150
Tel: 011-361 1434
Email: chris.du@wspgroup.co.za

ZITHOLELE
P.O. Box 6002
Gauteng
2150
Tel: 011-254 4800
Email: charlesn@zitholele.co.za

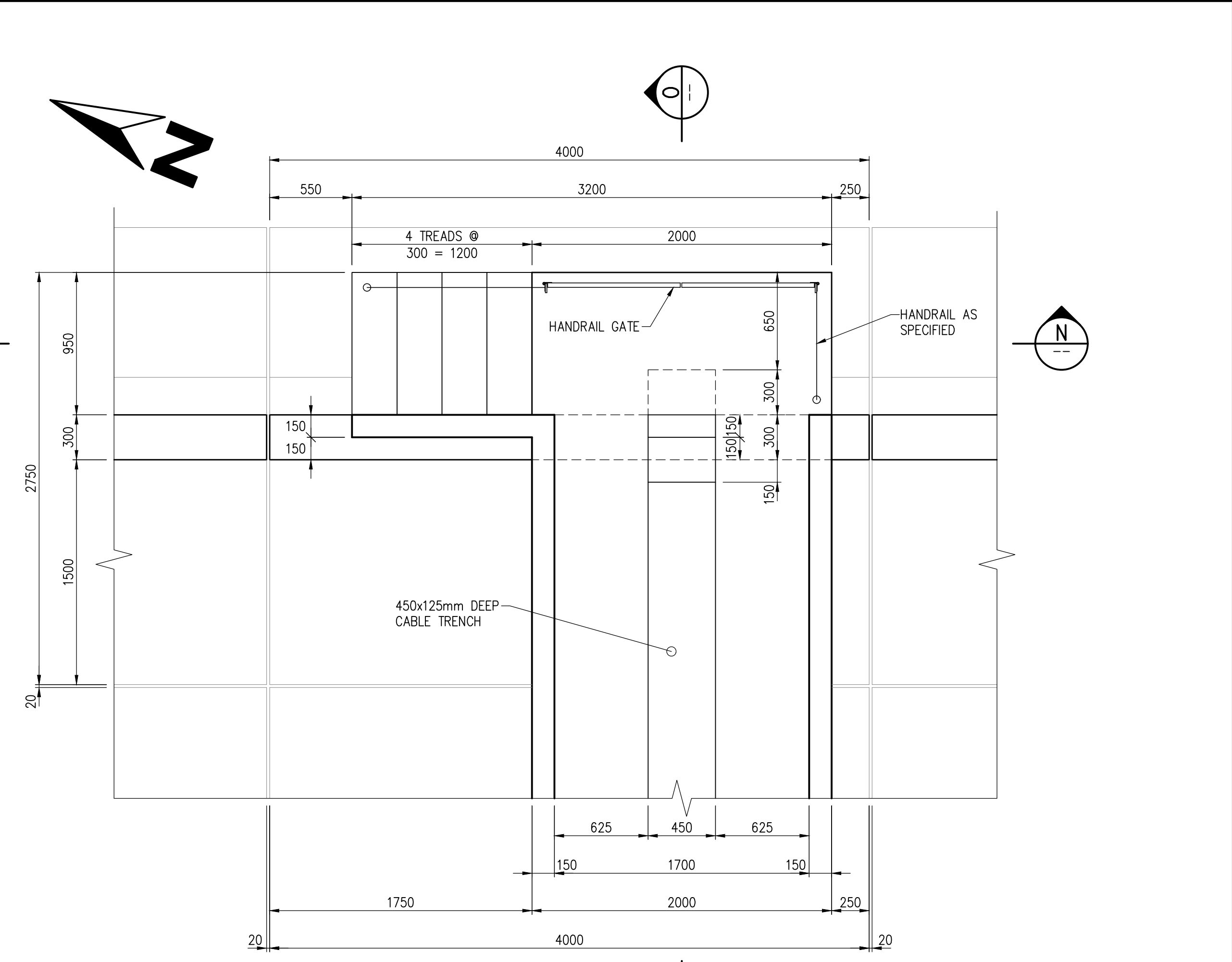
SURVEYED	FVP
DESIGNED	BVV
DRAWN	FVP
CHECKED	
SERVICES CHECKED	
GEOTECHNICAL INVESTIGATION	
SERVICES	
APPROVED	
Pr. Eng. No.	
DATE	

JOHANNESBURG WATER (PTY) LTD

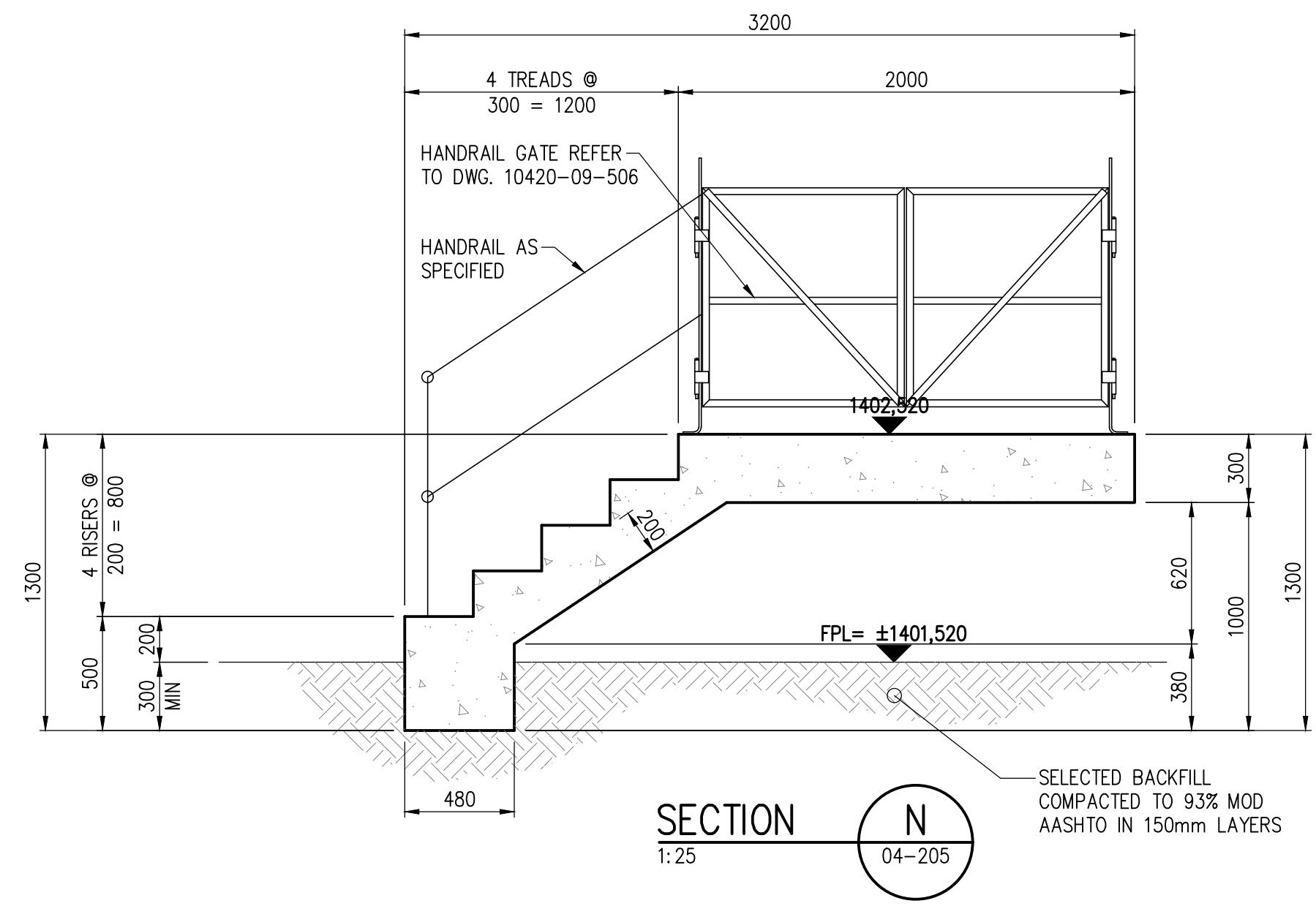
17 HARRISON STREET
MARSHALLTOWN
2107
TEL: (011) 688-1400
FAX: (011) 688-1529

CITY OF JOHANNESBURG
DRIEFONTEIN WASTEWATER TREATMENT WORKS
PLANT EXPANSION (25 Ml/day MODULE)
BIOLOGICAL REACTOR
WALKWAY AND PLATFORM LAYOUT AND DETAILS
SHEET 6 OF 12

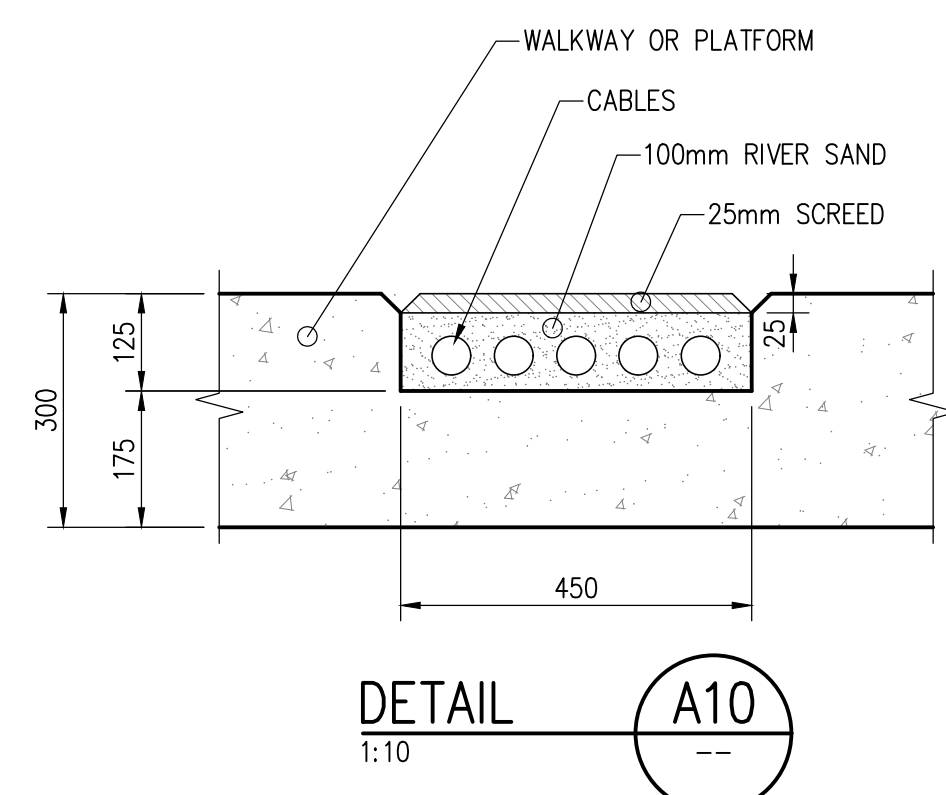
- REFERENCE DRAWINGS:
- 10420-04-101 - LAYOUT AND SETTING OUT DETAILS
 - 10420-04-102 - PIPEWORK LAYOUT
 - 10420-04-201 - LAYOUT
 - 10420-04-202 - LAYOUT OF UNDER-DRAINS
 - 10420-04-203 - FLOOR PLAN
 - 10420-04-204 - FLOOR PLAN AND DETAILS
 - 10420-04-205 - WALKWAY AND PLATFORM LAYOUT
 - 10420-04-206 - SECTIONS
 - 10420-04-207 - SECTIONS
 - 10420-04-208 - SECTIONS
 - 10420-04-209 - A-RECYCLE PUMP STATION
 - 10420-04-210 - B-RECYCLE PUMP STATION
 - 10420-04-211 - CONCRETE CHANNELS
 - 10420-04-212 - MIXER AND AERATOR PLATFORMS
 - 10420-09-501 - TYPICAL DETAILS (SHEET 1 OF 4)



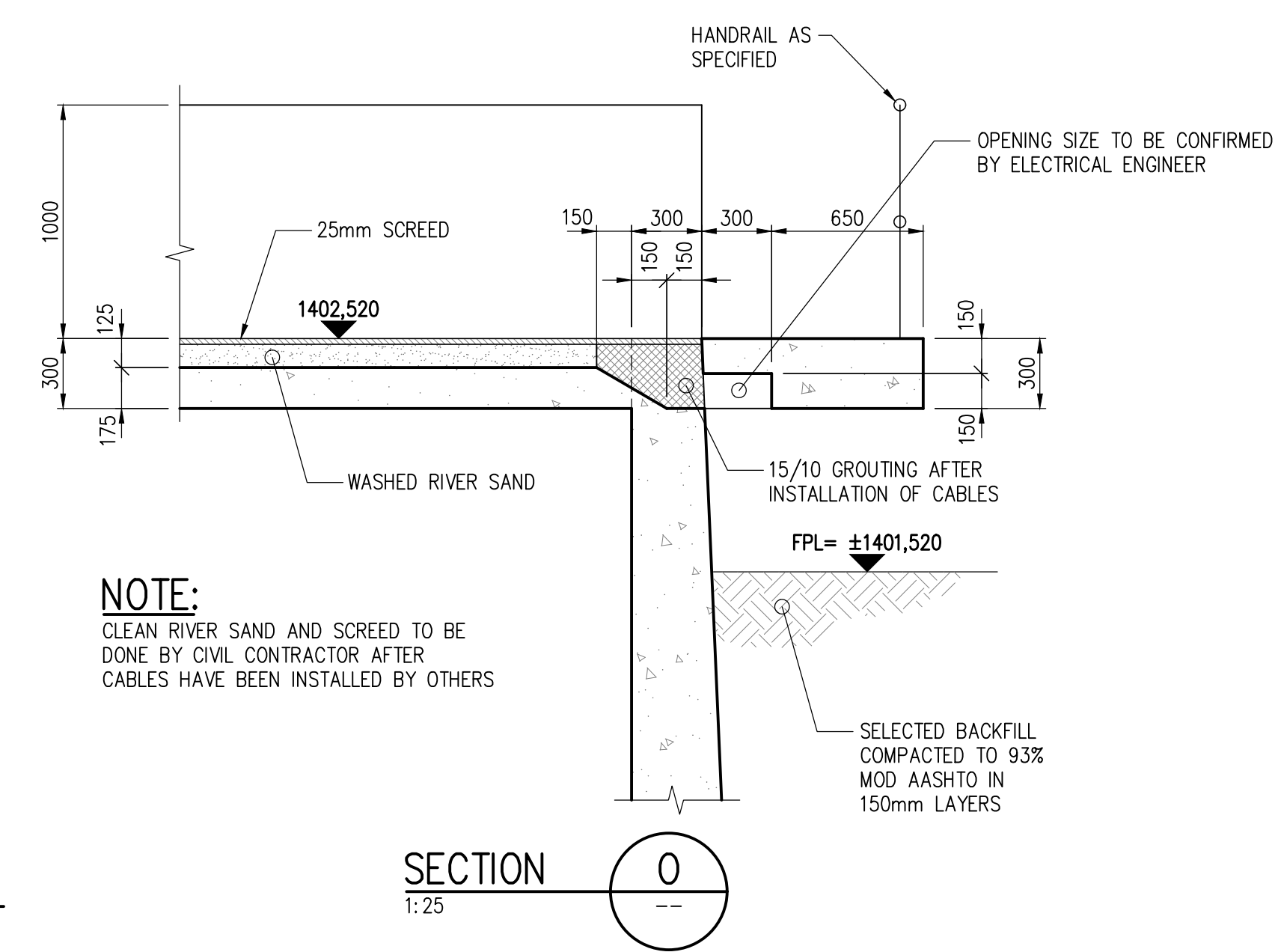
DETAIL AA
1:25
TYPICAL PLAN OF STAIRCASE



SECTION N
1:25
TYPICAL SECTION OF LOWER STAIRCASE
(APPLICABLE TO WALKWAYS LEADING TO MIXERS)



TYPICAL CROSS SECTION OF CABLE TRENCH



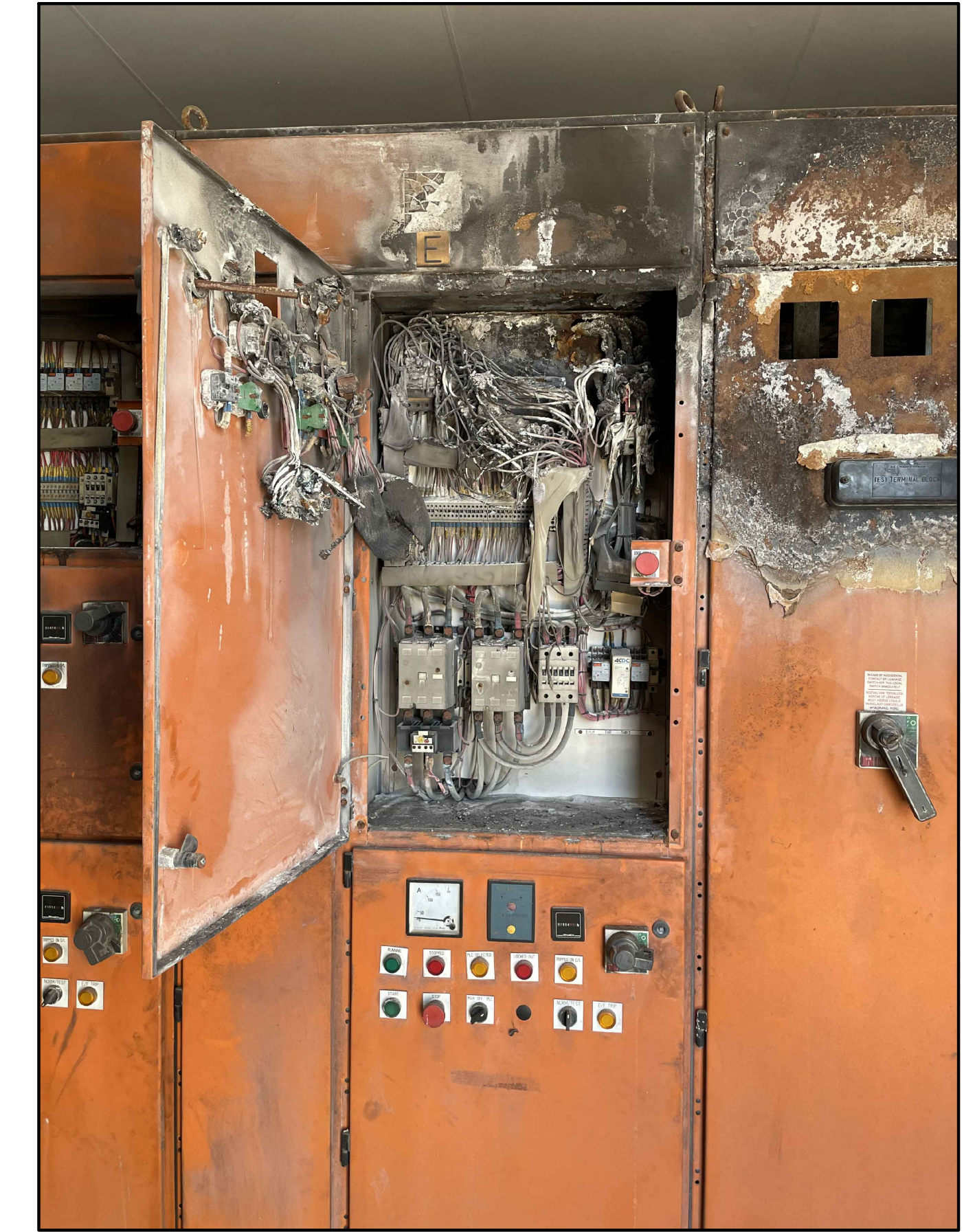
TYPICAL SECTION OF OPENING FOR ELECTRICAL CABLES

FOR TENDER PURPOSES ONLY!

FOR COMMISSIONING PURPOSES ONLY!

A0
DO NOT SCALE

DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING No.
	AS SHOWN	C00 ISSUED FOR CONSTRUCTION	FVP	28/07/11	JW10005
		C01 WALKWAYS AND SUPPORT COLUMNS REVISED	FVP	04/11/11	CONSULTANT'S NUMBER
		C02 B-RECYCLE PUMP STATION REVISED	ON	16/01/12	10420-04-206
		C03 ISSUED FOR COMMISSIONING	SP	07/04/15	FILE No
DATE					



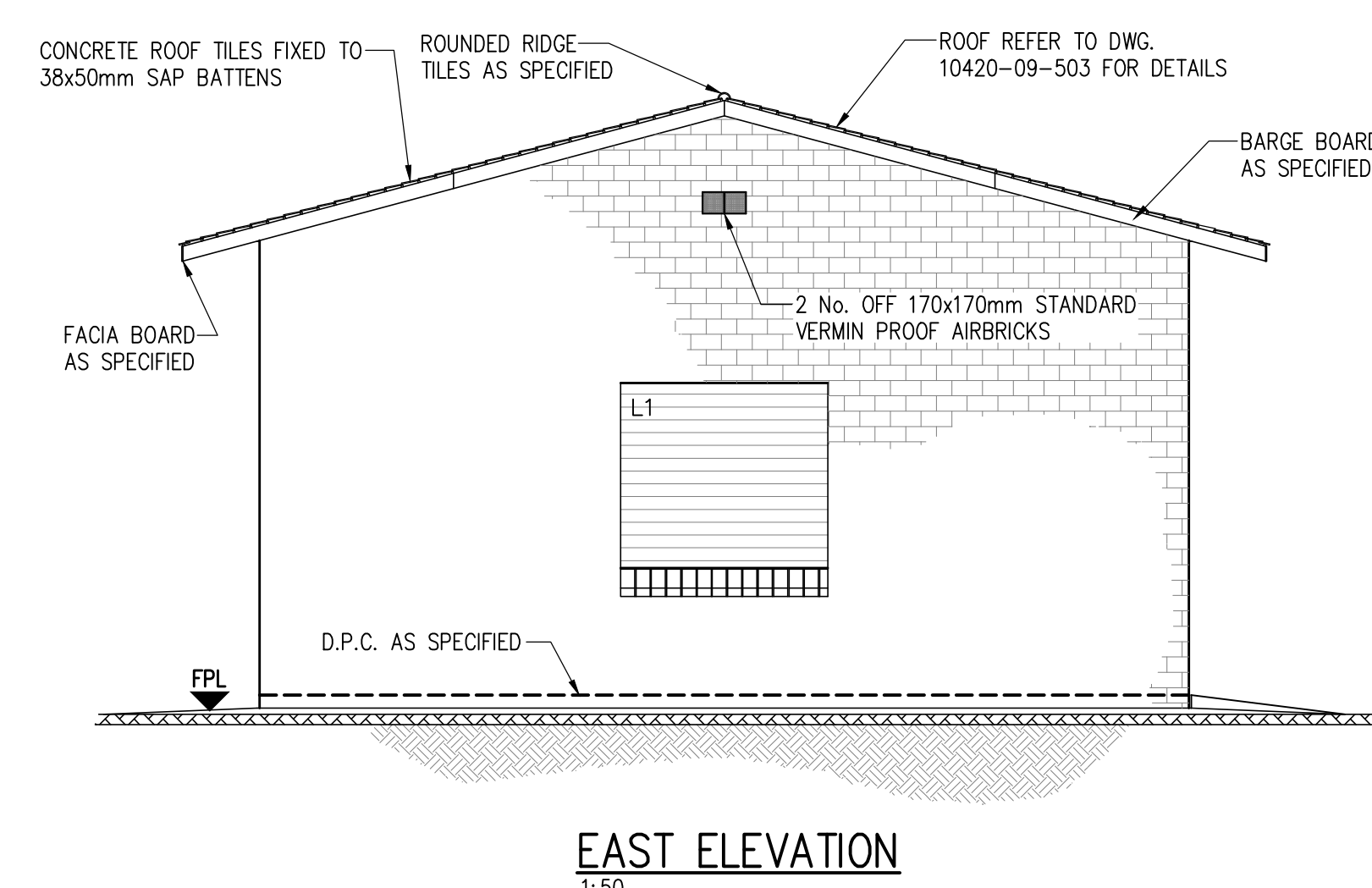
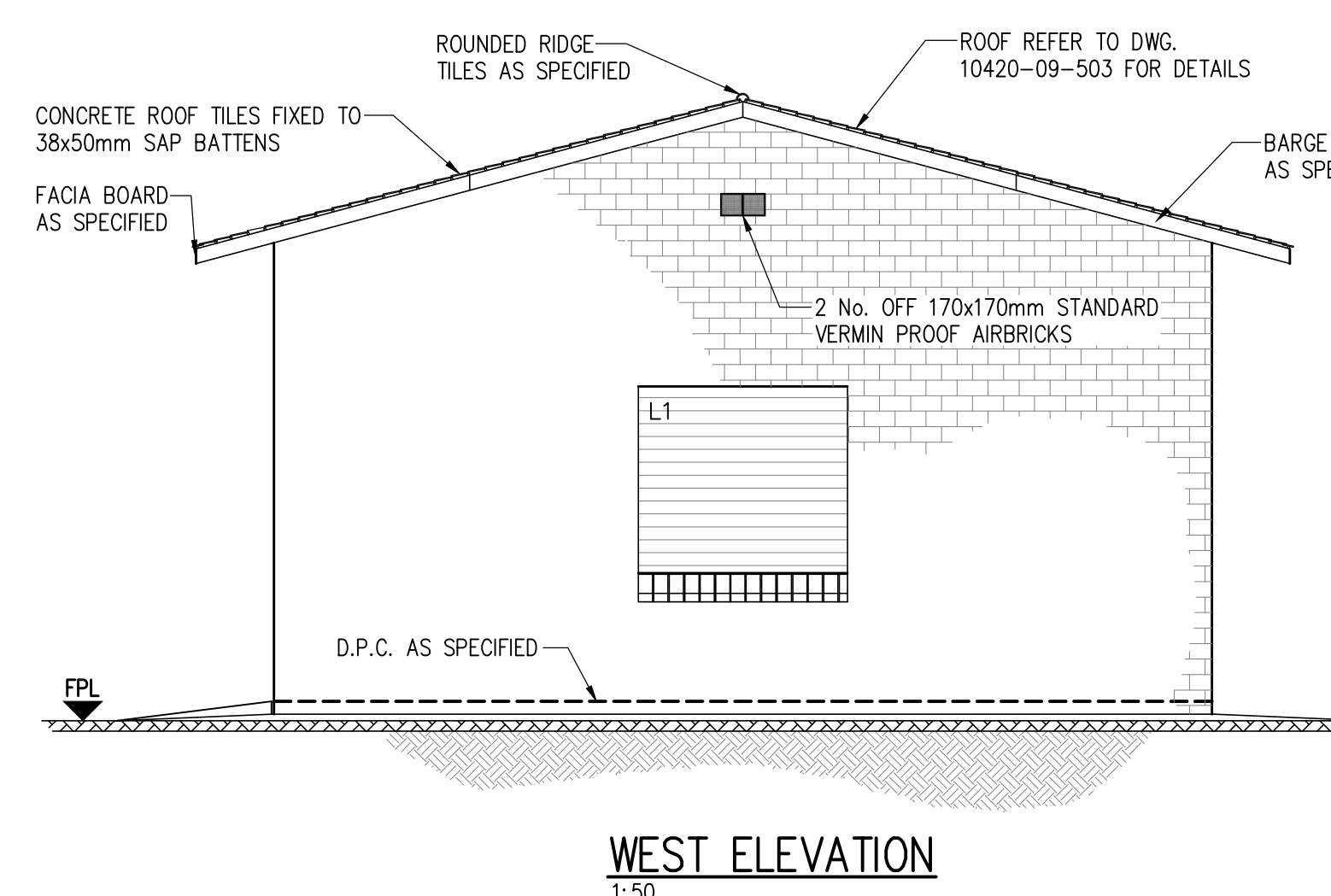
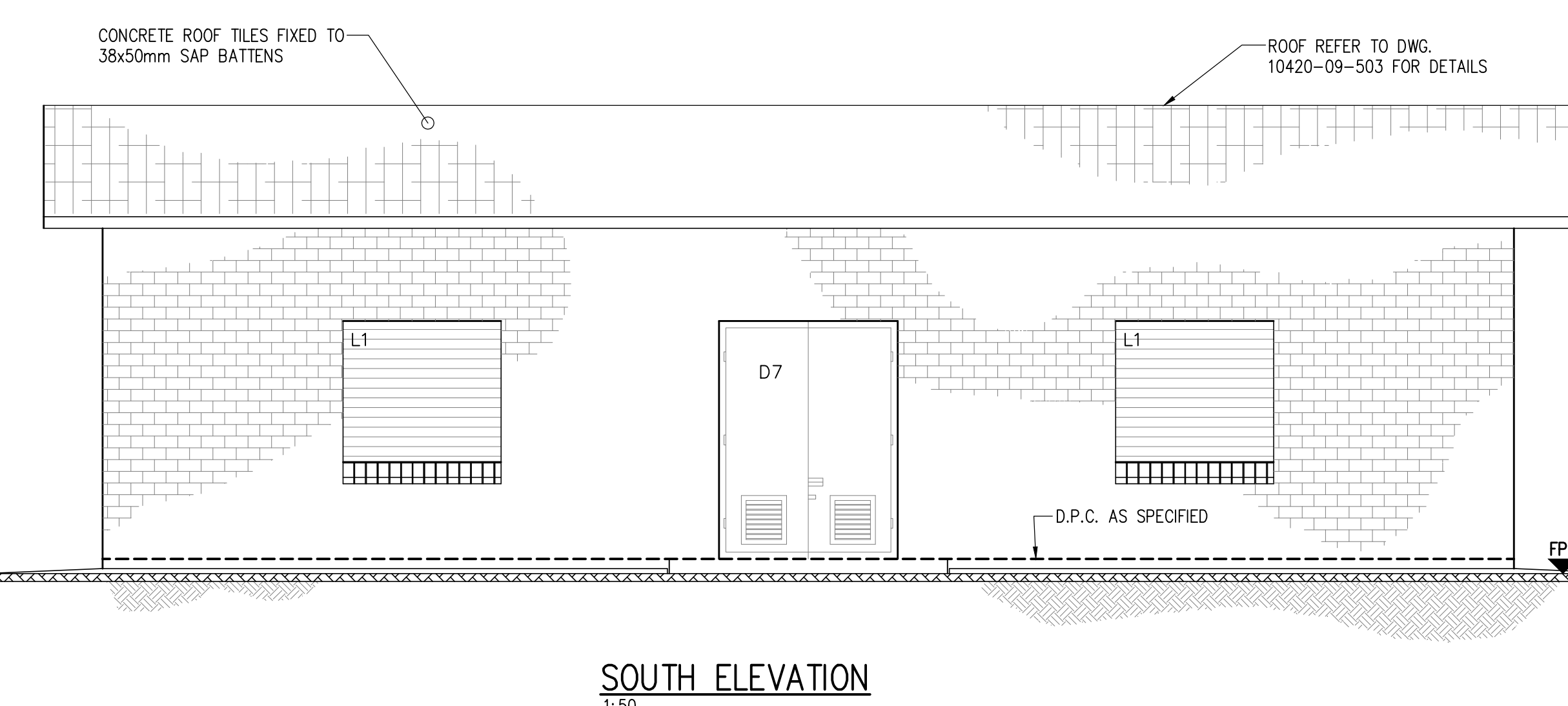
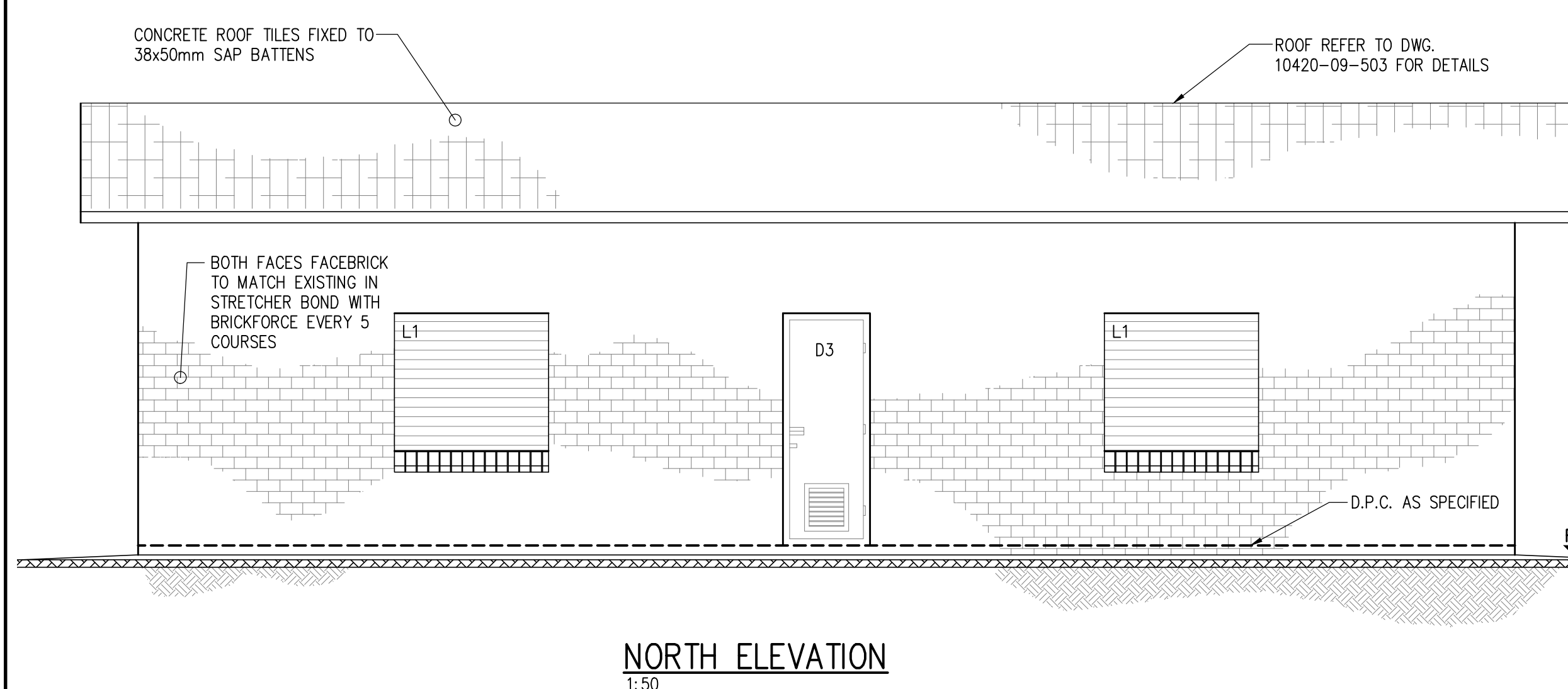
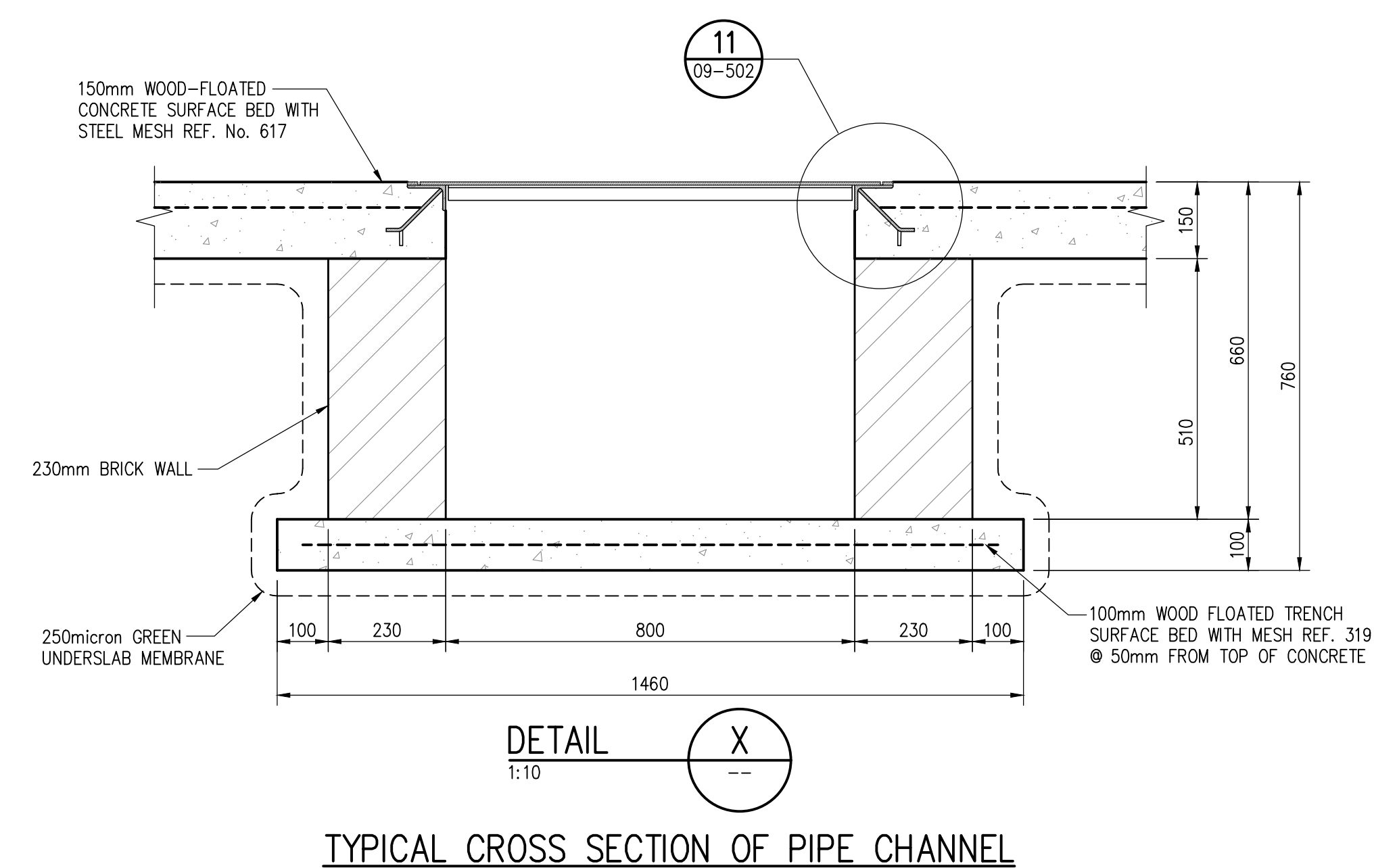
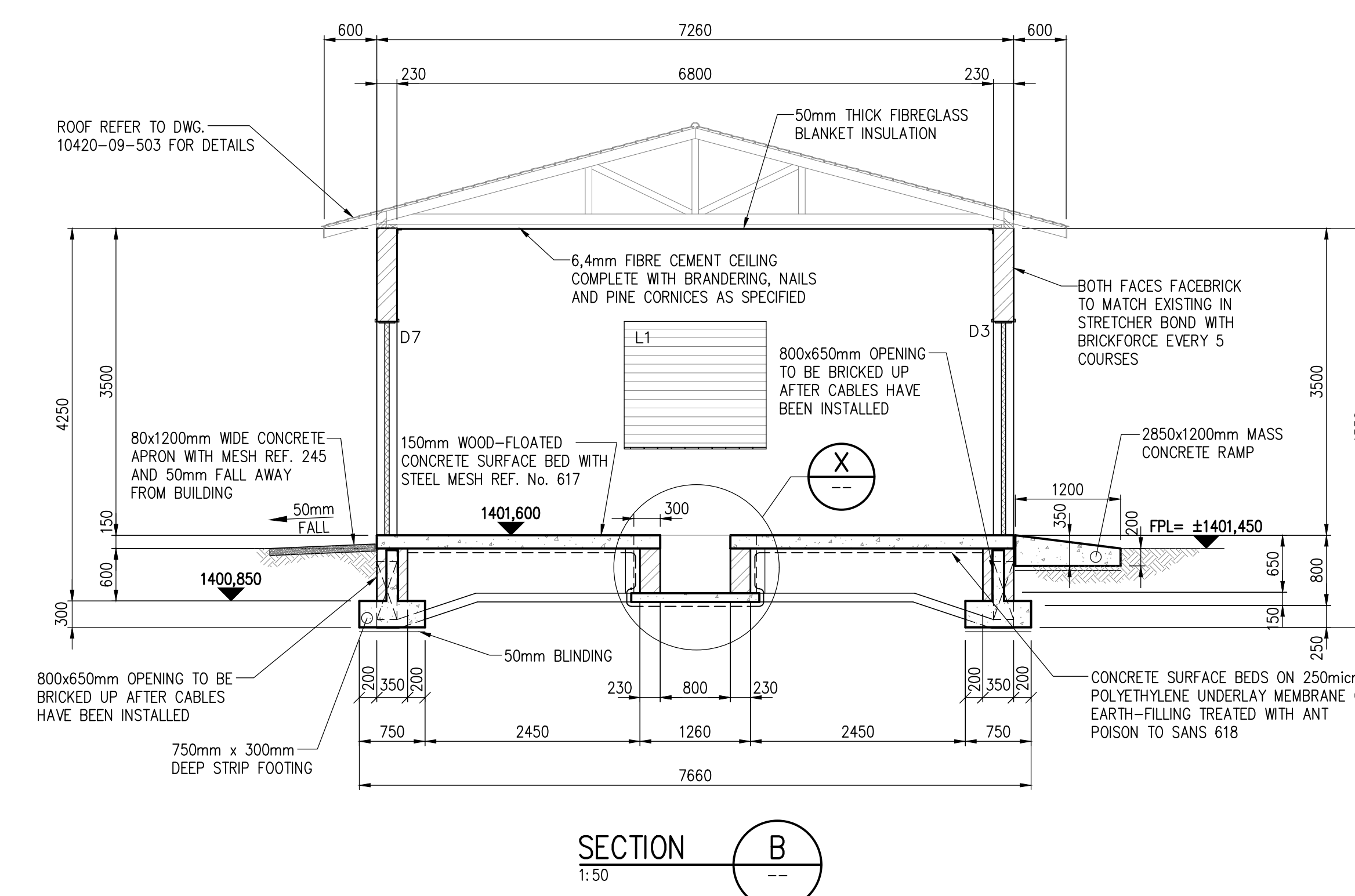
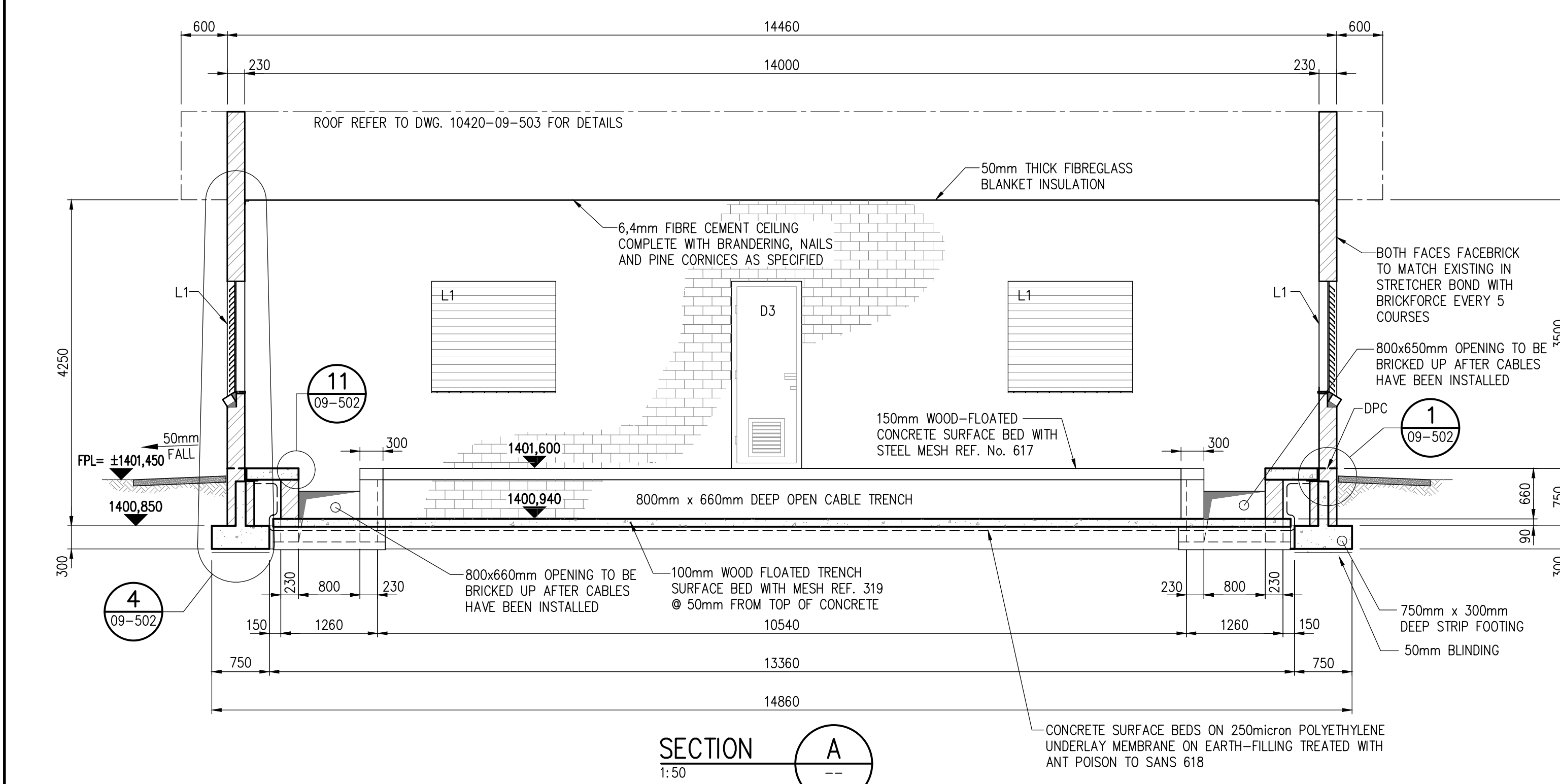
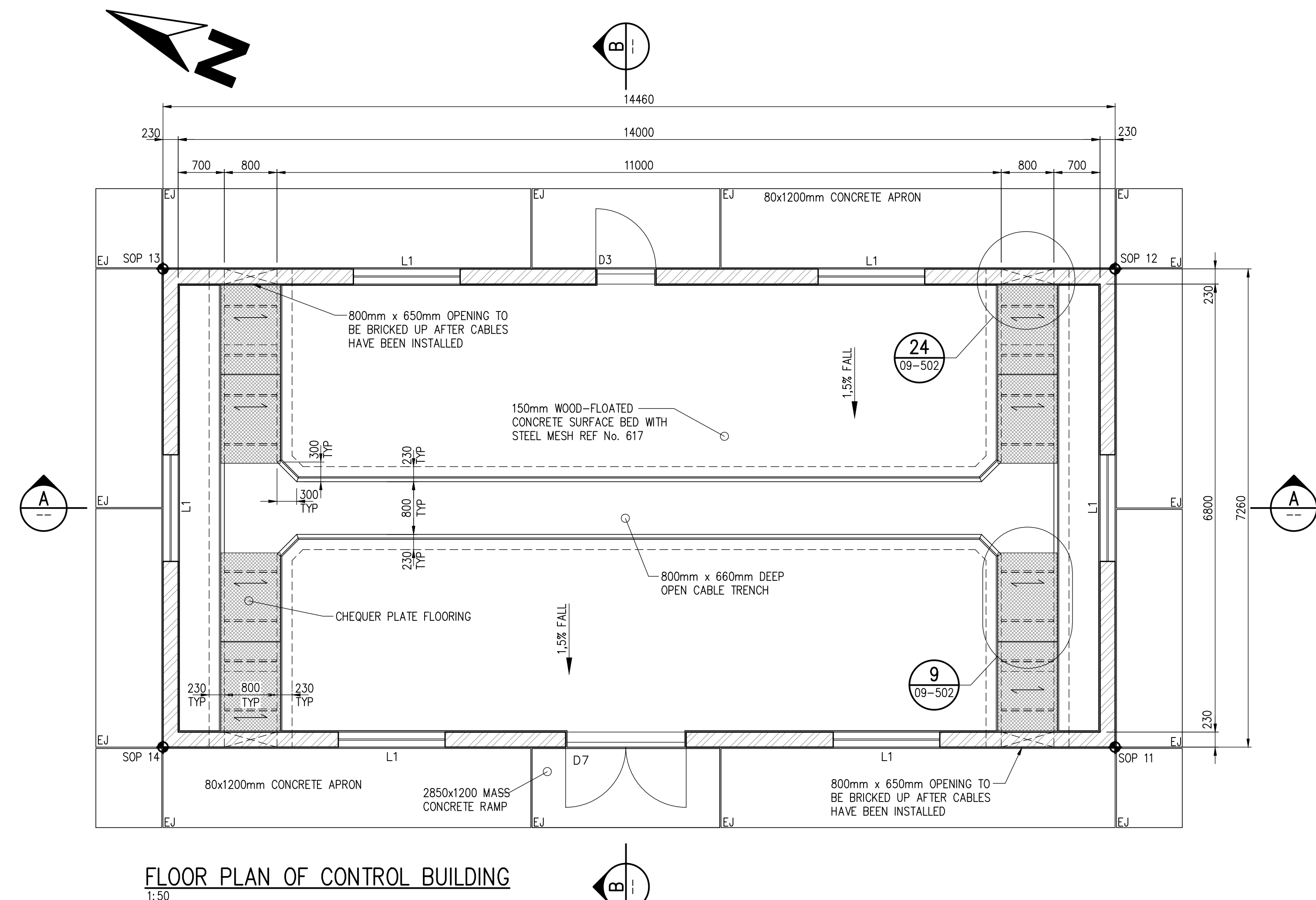
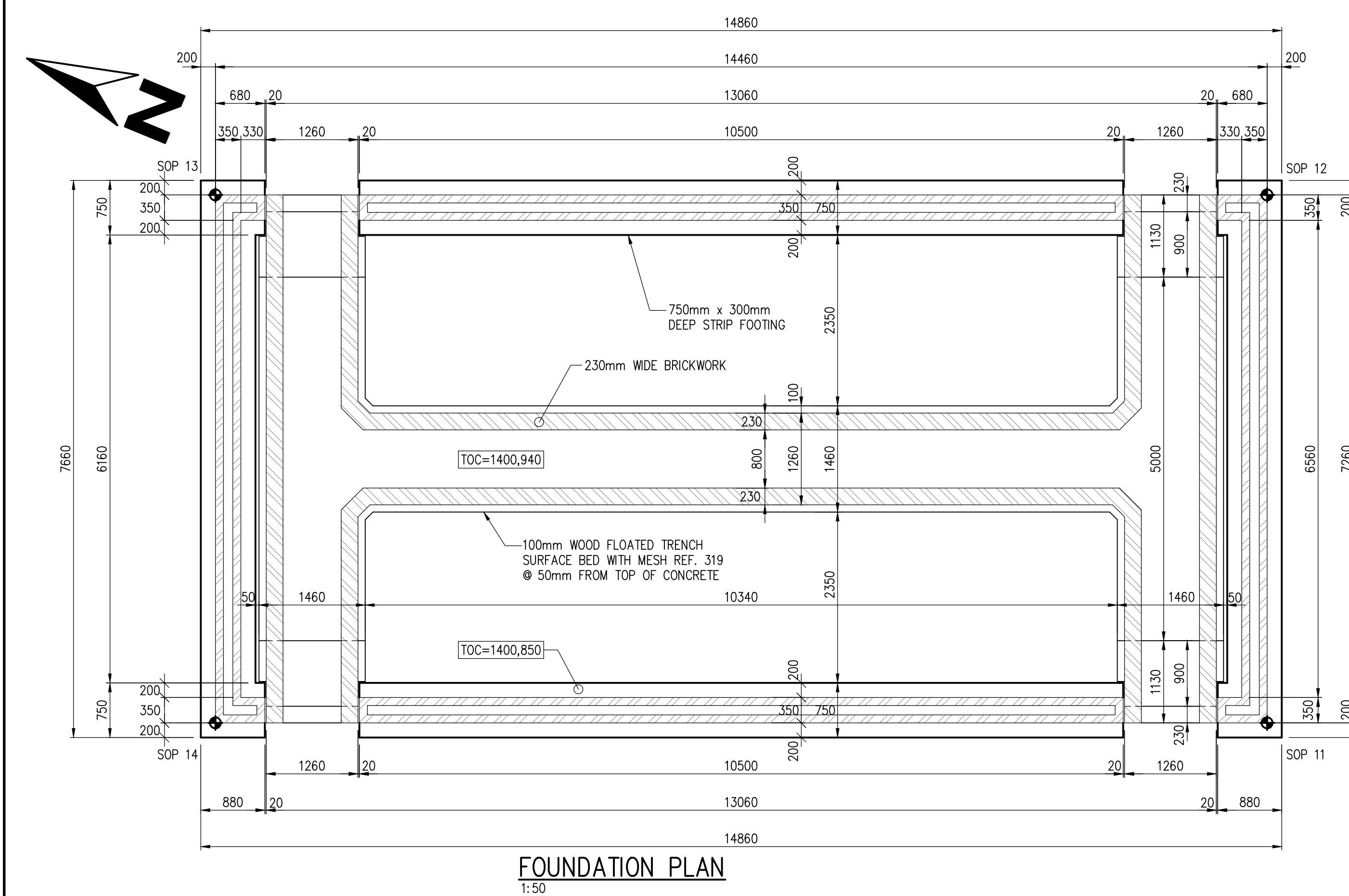
DEPARTMENT	APPROVED	DESIGNATION	DATE

 ZITHOLELE CONSULTING		CONSULTING ENGINEERS		SURVEYED DESIGNED		MM TK
		DRAWN CHECKED SERVICES CHECKED GEOTECHNICAL INVESTIGATION SURVETURES		APPROVED P. Eng. No. 2018300318 PATE.		T.D KAPONDA
ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE 1685 TEL: (011) 207 2060 FAX: (086) 674 6121 EMAIL: mail@zitholele.co.za						

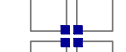
JOHANNESBURG WATER (PTY) LTD	
 Johannesburg Water	65 NTEMI PILISO STREET NEWTOWN 2001 TEL: (011) 688-1400 FAX: (011) 688-1521

CITY OF JOHANNESBURG
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN
BIOLOGICAL REACTOR – CONTROL BUILDING
PHOTOGRAPHICS RECORDS

DESIGN MANAGER		SCALE		AMENDMENTS		APPROVED	DATE	DRAWING No.		
		T00	PHOTOGRAPHIC RECORDS			TK	18/08/22	JW NUMBER		
								CONSULTANT'S NUMBER 18052-72-004		
								FILE No		
										T00
DATE										



DEPARTMENT	APPROVED	DESIGNATION	DATE	REFERENCE DRAWING
				10420-04-101 - LAYOUT AND SETTING OUT DETAILS
				10420-09-501 - TYPICAL DETAILS (SHEET 1 OF 4)
				10420-09-502 - TYPICAL DETAILS (SHEET 2 OF 4)
				10420-09-503 - TYPICAL DETAILS (SHEET 3 OF 4)
				10420-09-504 - TYPICAL DETAILS (SHEET 4 OF 4)

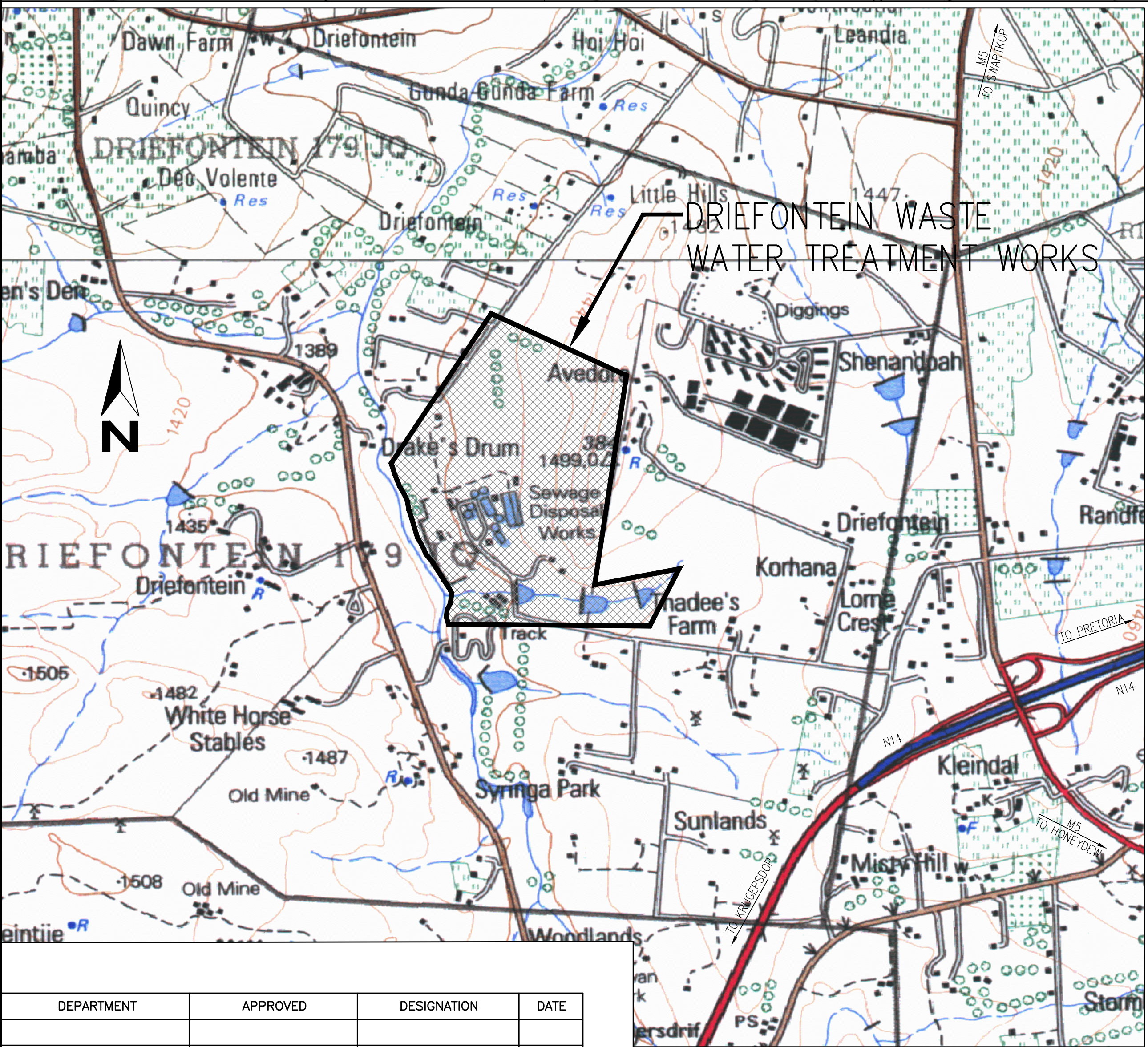
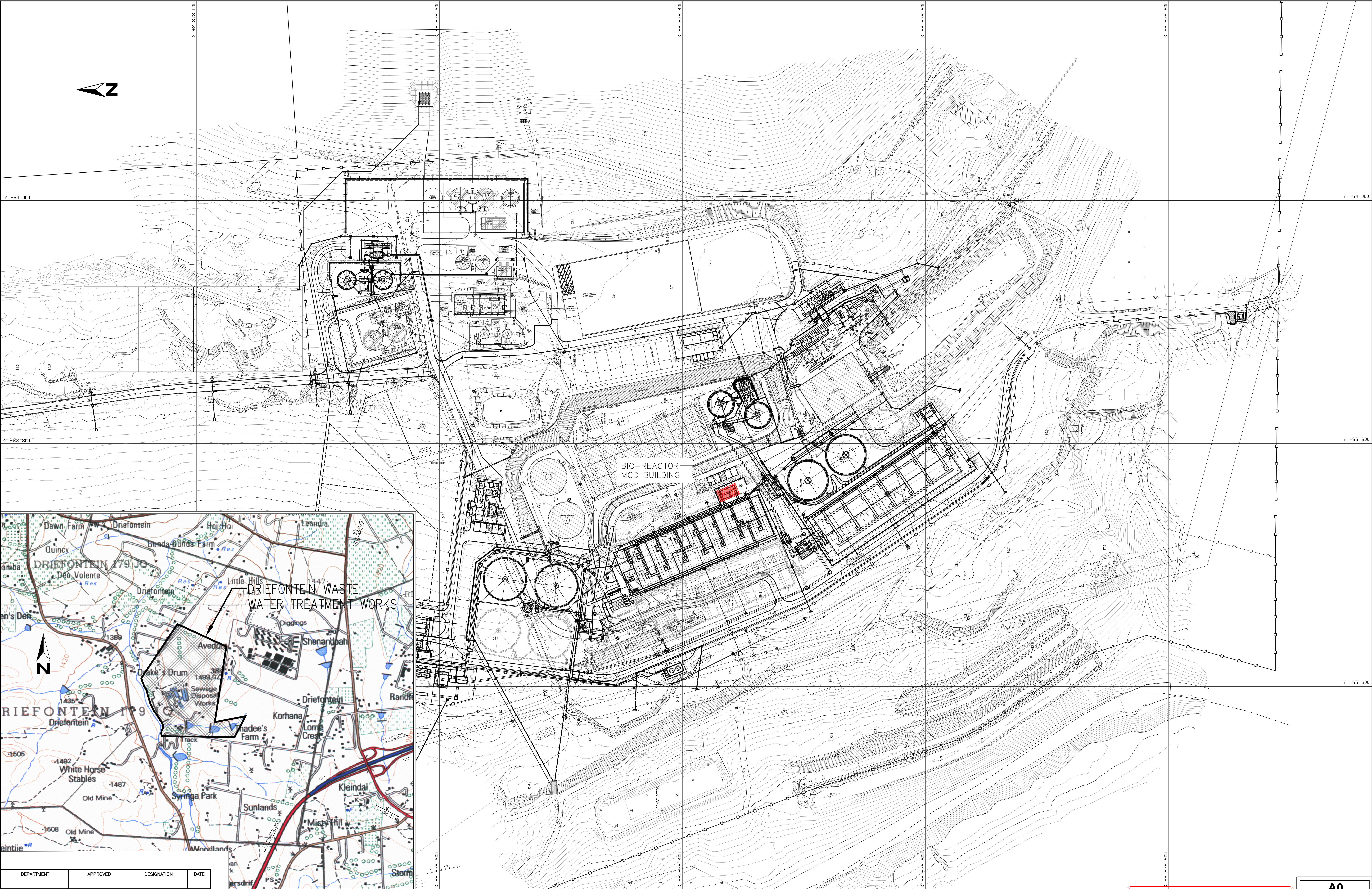
CONSULTING ENGINEERS				SURVEYED		
	Knight Piesold P.O. Box 221 Brixton Gauteng 2119 Tel: 011-8071 730 Email: andrea@kpi.co.za		PD Naidoo & Associates P.O. Box 7107 Johannesburg Gauteng 2000 Tel: 011-566 8600 Email: andron@pdna.co.za	DESIGNED	FVP	
		WSP Consulting Engineers SA P.O. Box 90867 Silver Park Gauteng 2152 Tel: 011-3147 1434 Email: crs.duff@wspgroup.co.za		Zitholele Consulting P.O. Box 6002 Halfway House Gauteng 1685 Tel: 011-254 4800 Email: info@zitholele.co.za	CHECKED	BVV
		GEOTECHNICAL INVESTIGATION SERVICES			SP	
				APPROVED Pr. Eng. No. DATE		

JOHANNESBURG WATER (PTY) LTD	
 Johannesburg Water	17 HARRISON STREET MARSHALLTOWN 2107 TEL: (011) 688-1400 FAX: (011) 688-1525

CITY OF JOHANNESBURG
DRIEFONTEIN WASTEWATER TREATMENT WORKS
PLANT EXPANSION (25 MI/day MODULE)
BIOLOGICAL REACTOR
CONTROL BUILDING

DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING No.
	AS SHOWN	Z	AS BUILT	SP	30/11/16	JW NUMBER JW10005 CONSULTANT'S NUMBER 10420-04-301 FILE No
DATE						

FOR TENDER PURPOSES ONLY!



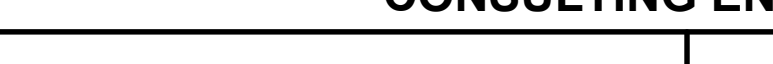
DEPARTMENT	APPROVED	DESIGNATION	DATE

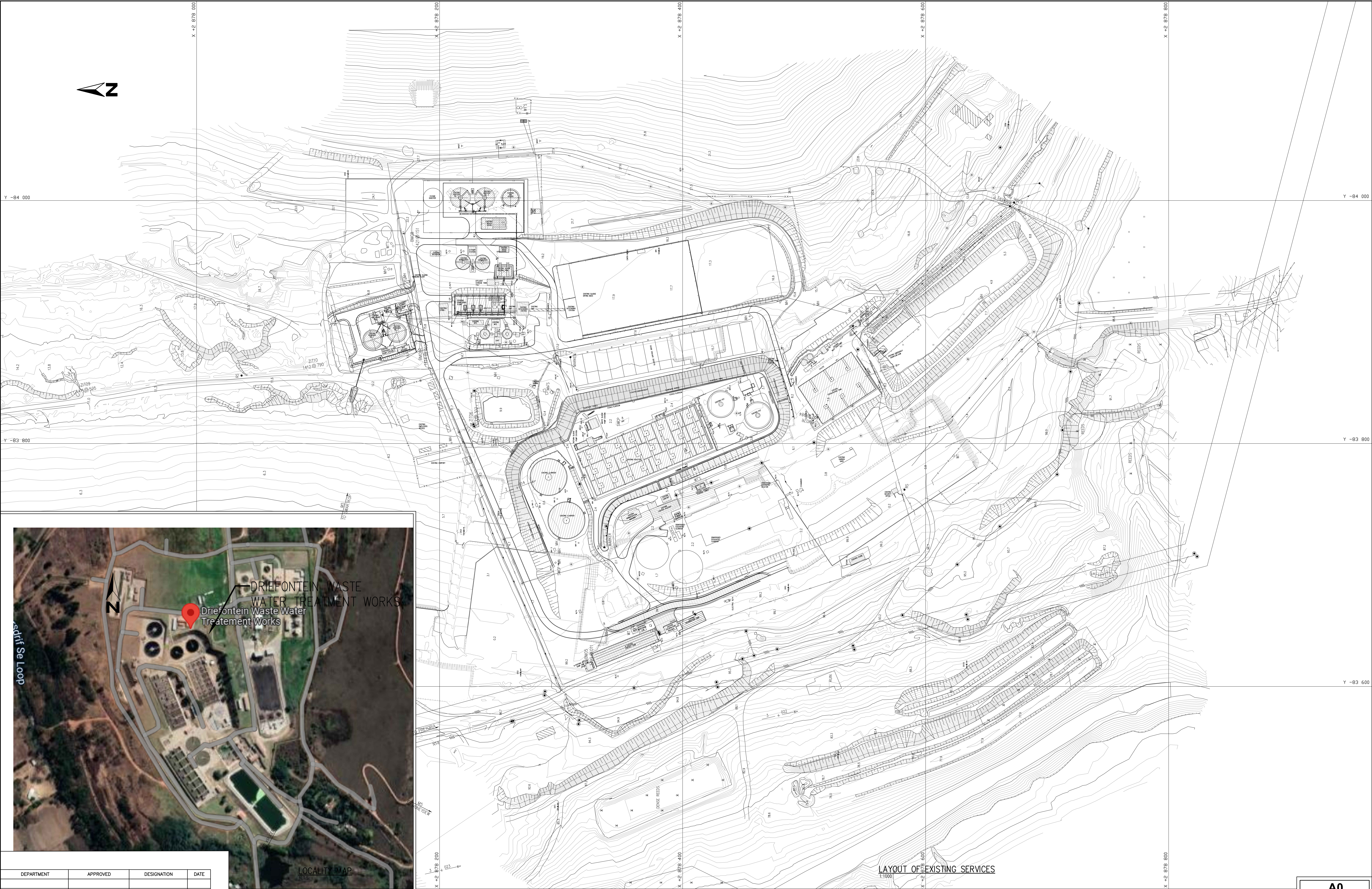
LOCALITY MAP
N.T.S.

SITE LAYOUT
1:1000

FOR TENDER PURPOSES ONLY!

A0
DO NOT SCALE

CONSULTING ENGINEERS			JOHANNESBURG WATER (PTY) LTD		CITY OF JOHANNESBURG				DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING No.	
	ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE 1685 TEL: (011) 207 2060 FAX: (086) 674 6121 EMAIL: mail@zitholele.co.za		SURVEYED			65 NTEMI PILISO STREET NEWTOWN 2001 TEL: (011) 688-1400 FAX: (011) 688-1521	DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN LOCALITY PLAN AND SITE LAYOUT		DATE	AS SHOWN	100	LOCALITY PLAN AND SITE LAYOUT	TK	18/08/22	JW NUMBER	
			DRAWN	MM							CONSULTANT'S NUMBER					
			CHECKED	TK							18052-72-01-002					
			SERVICES: CHECKED								FILE No					
			GEOTECHNICAL INVESTIGATION													
			SERVITUDES													
			APPROVED	T.D. KAPONDA												
Pr. Eng. No.	2018300318															
DATE																
														T00		



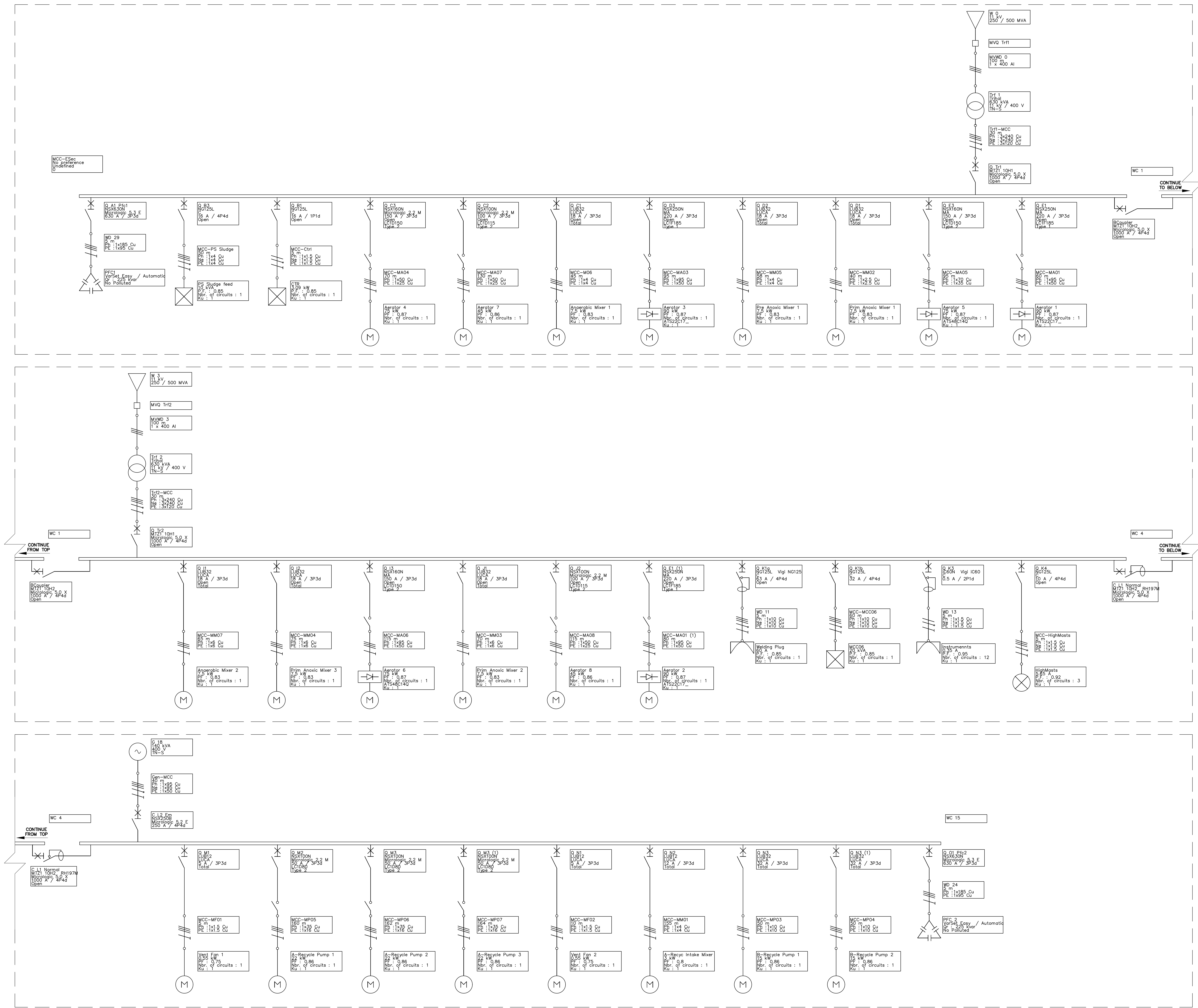
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS				SURVEYED		DESIGNED		JOHANNESBURG WATER (PTY) LTD		CITY OF JOHANNESBURG										DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING No.			
 ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE 1685 TEL: (011) 207 2060 FAX: (086) 674 6121 EMAIL: mail@zitholele.co.za				DRAWN		MM		 JOHANNESBURG WATER 65 NTEMI PILISO STREET NEWTOWN 2001 TEL: (011) 688-1400 FAX: (011) 688-1521		DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN LOCALITY PLAN AND SITE LAYOUT										DATE	100	LOCALITY PLAN AND SITE LAYOUT		TK	18/08/22	JW NUMBER CONSULTANT'S NUMBER 18052-72-01-002 FILE No			
				CHECKED		TK																							
				SERVICES CHECKED																									
				GEOTECHNICAL INVESTIGATION																									
				SERVITUDES																									
				APPROVED		T.D KAPONDA																							
				DATE																									

DRAWING NUMBER	DRAWING TITLE	DRAWING DESCRIPTION
GENERAL (GEN) DRAWINGS		
18052-73-01-001	DRAWING LIST	LAYOUT
18052-72-01-002	LOCALITY PLAN AND SITE LAYOUT	
AS-BUILT DRAWINGS OF UNIT 2 BIO-REACTOR		
10420-04-201	BIOLOGICAL REACTOR – LAYOUT – SHEET 1 OF 12	LAYOUT
10420-04-205	BIOLOGICAL REACTOR – WALKWAY AND PLATFORM DETAILS – SHEET 5 OF 12	LAYOUT
10420-04-206	BIOLOGICAL REACTOR – WALKWAY AND PLATFORM DETAILS – SHEET 6 OF 12	LAYOUT
AS-BUILT DRAWINGS OF UNIT 2 BIO-REACTOR CONTROL BUILDING		
10420-04-301	BIOLOGICAL REACTOR – CONTROL BUILDING	LAYOUT
18052-72-004	BIOLOGICAL REACTOR – CONTROL BUILDING – PHOTOGRAPHIC RECORDS	PHOTOS
ELECTRICAL ENGINEERING (ME) DRAWINGS		
18052-72-005	BIOLOGICAL REACTOR MCC – SINGLE LINE DIAGRAM	LAYOUT

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED DESIGNED		JOHANNESBURG WATER (PTY) LTD		CITY OF JOHANNESBURG				DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING No.		
	ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE 1685 TEL: (011) 207 2060 FAX: (086) 674 6121 EMAIL: mail@zitholele.co.za	DRAWN	MM		65 NTEMI PILISO STREET NEWTOWN 2001 TEL: (011) 688-1400 FAX: (011) 688-1521	DRIEFONTEIN WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN DRAWING LIST						DATE	T00			DRAWING LIST	JJ	17/08/22
		CHECKED	TK															
		SERVICES CHECKED														CONSULTANT'S NUMBER 18052-73-01-001		
		GEOTECHNICAL INVESTIGATION													FILE No			
		SERVITUDES																
		APPROVED	T.D KAPONDA															
		Pr. Eng. No.	2018300318															
		DATE																
																		T00



DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS

ZITHOLELE
P.O. BOX 6002
HALFWAY HOUSE
1685
TEL: (011) 207 2060
FAX: (011) 674 6121
EMAIL: mail@zitholele.co.za

SURVEYED	
DESIGNED	JJ
DRAWN	JJ
CHECKED	TK
SERVICES CHECKED	
GEOTECHNICAL INVESTIGATION	
SERVICES	
APPROVED	T.D. KAPONDA
Pr. Eng. No.	2018300318
DATE	

JOHANNESBURG WATER (PTY) LTD

65 NTEMI PILISO STREET
NEWTOWN
2001
TEL: (011) 688-1400
FAX: (011) 688-1521

CITY OF JOHANNESBURG
DRIEFONTEIN WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN
BIO - REACTOR MCC
SINGLE LINE DIAGRAM

DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING No.
		100 BIO-REACTOR MCC - SINGLE LINE DIAGRAM	JJ	17/08/22	JW NUMBER
					CONSULTANT'S NUMBER 18052-72-005
					FILE No
					T00