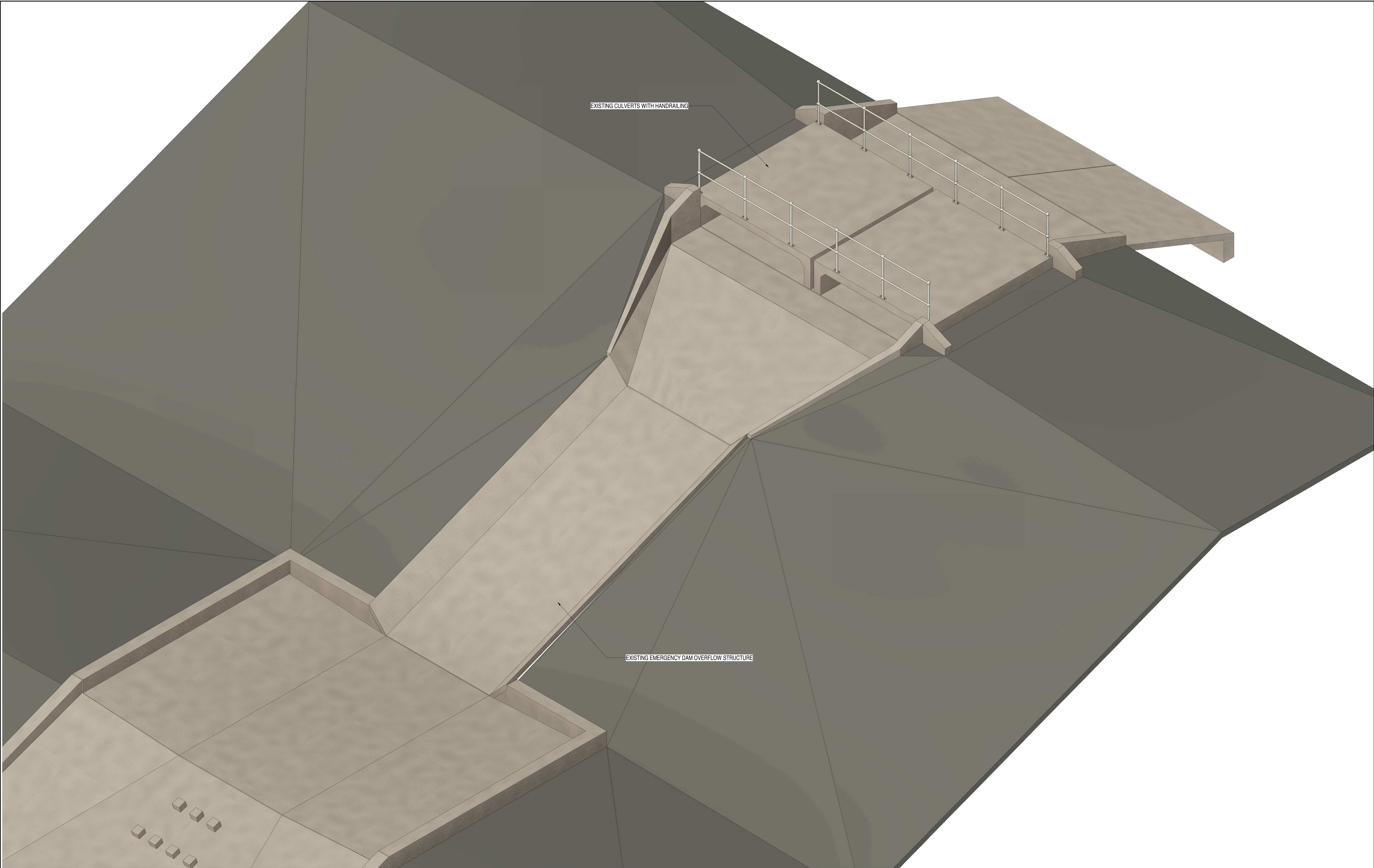
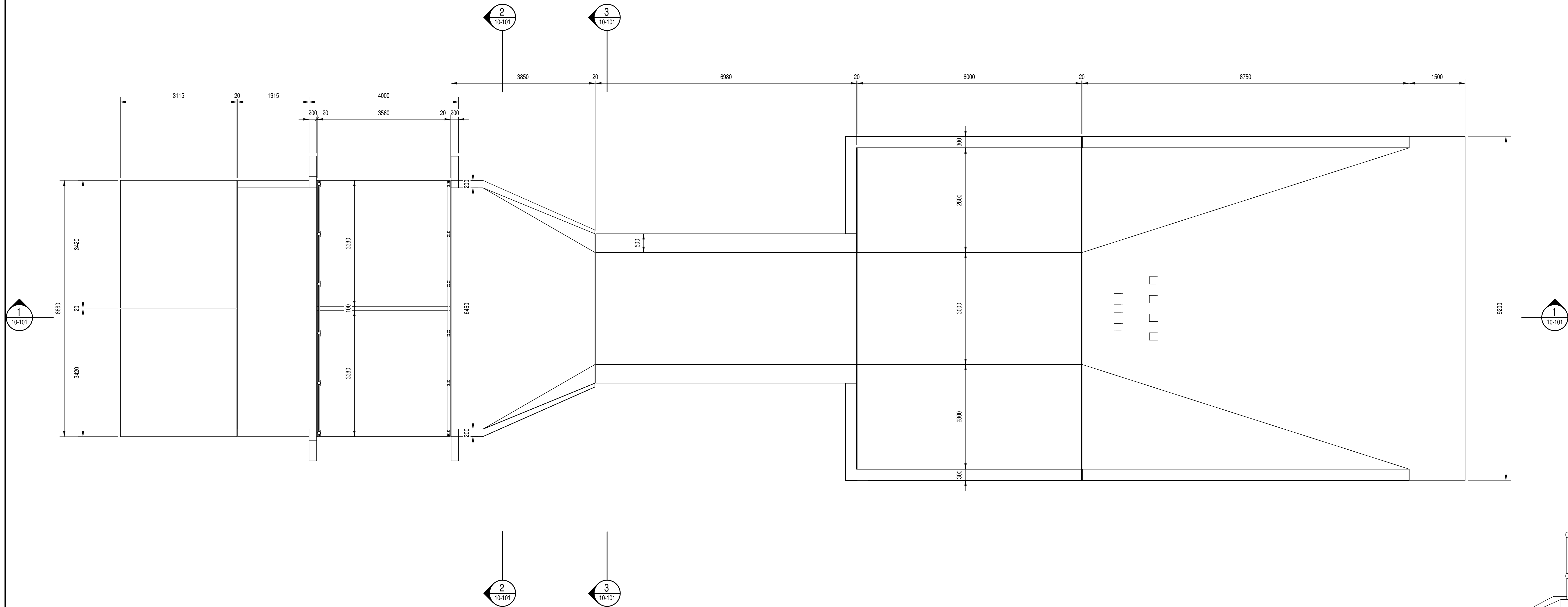




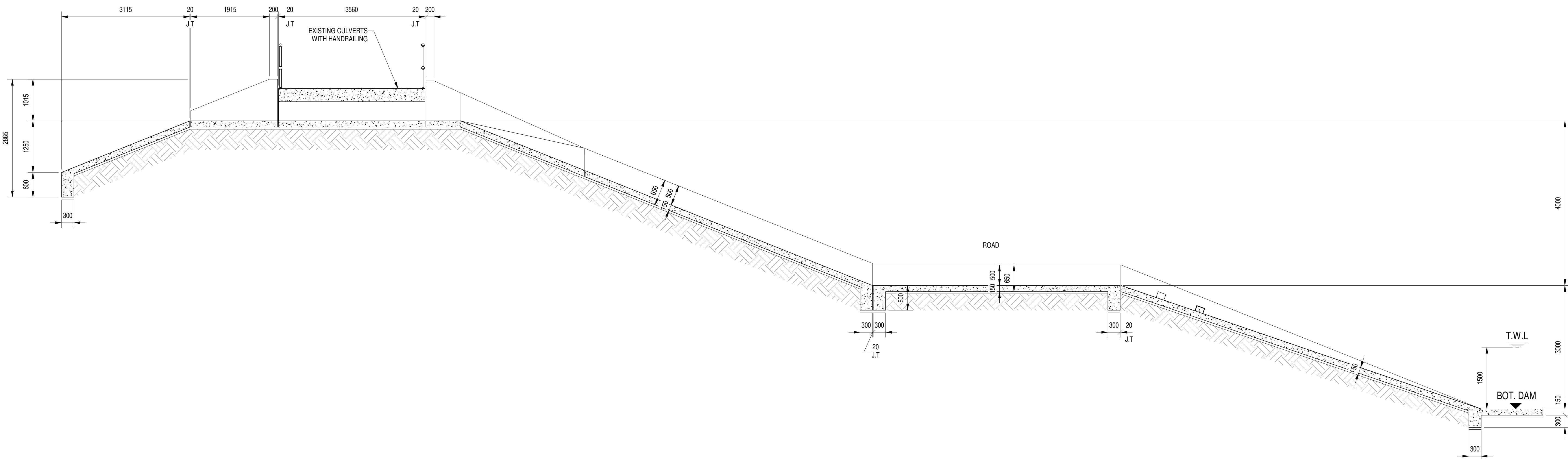
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS			JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG										DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER		
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-207 2060 FAX. 086 674 6121 EMAIL mail@zitholele.co.za		SURVEYED	J.S		BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN EMERGENCY DAM OVERFLOW 3D VIEW AS BUILT										DATE	1:250	200 AS BUILT		J.H.S	30.09.21	JW NUMBER	
			DESIGNED	D.P														T01 ISSUED FOR TENDER		J.H.S	24.03.2024	CONSULTANT'S NUMBER	
			DRAWN	J.S																		18056-73-10-100	
			CHECKED																			FILE NUMBER	
			SERVICES CHECKED																				
			GEOTECHNICAL INVESTIGATION																				
			SERVITUDES	J. SWART																			
			APPROVED	860169																			
			Pr. Eng. No.	860169																			
			DATE	24.03.2024																			
				TURBINE HALL 65 NTEM PILISO STREET NEWTOWN																			
				TEL: (011) 688 1400 FAX: (011) 688 1529																			



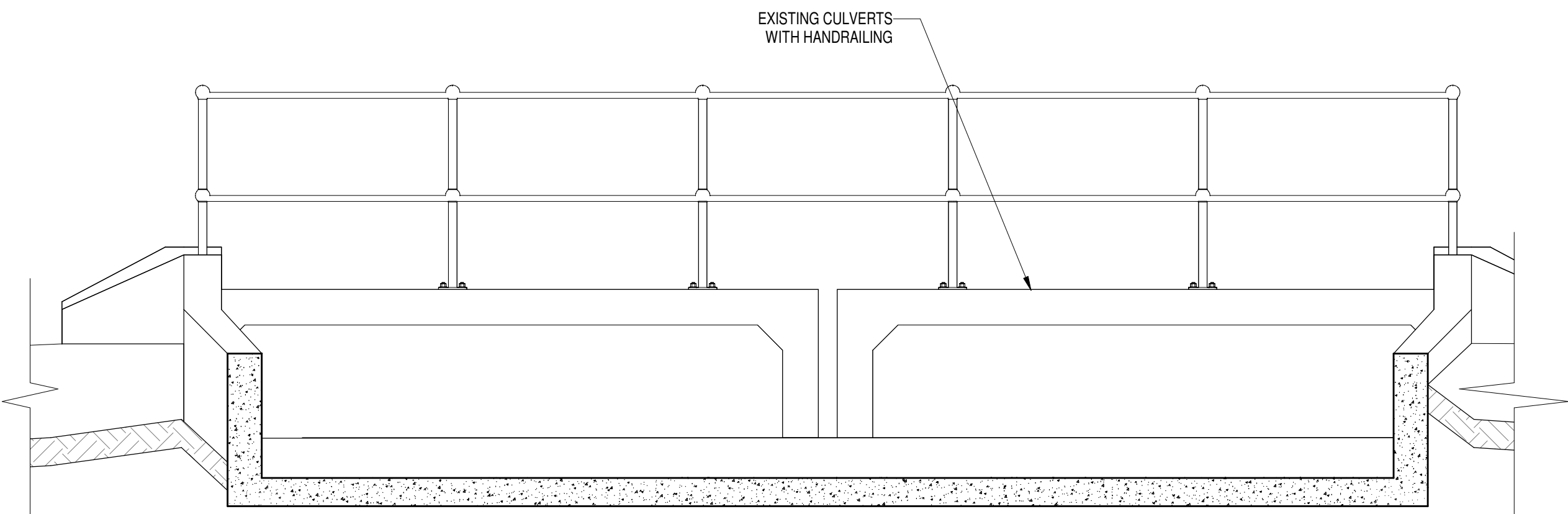
PLAN VIEW

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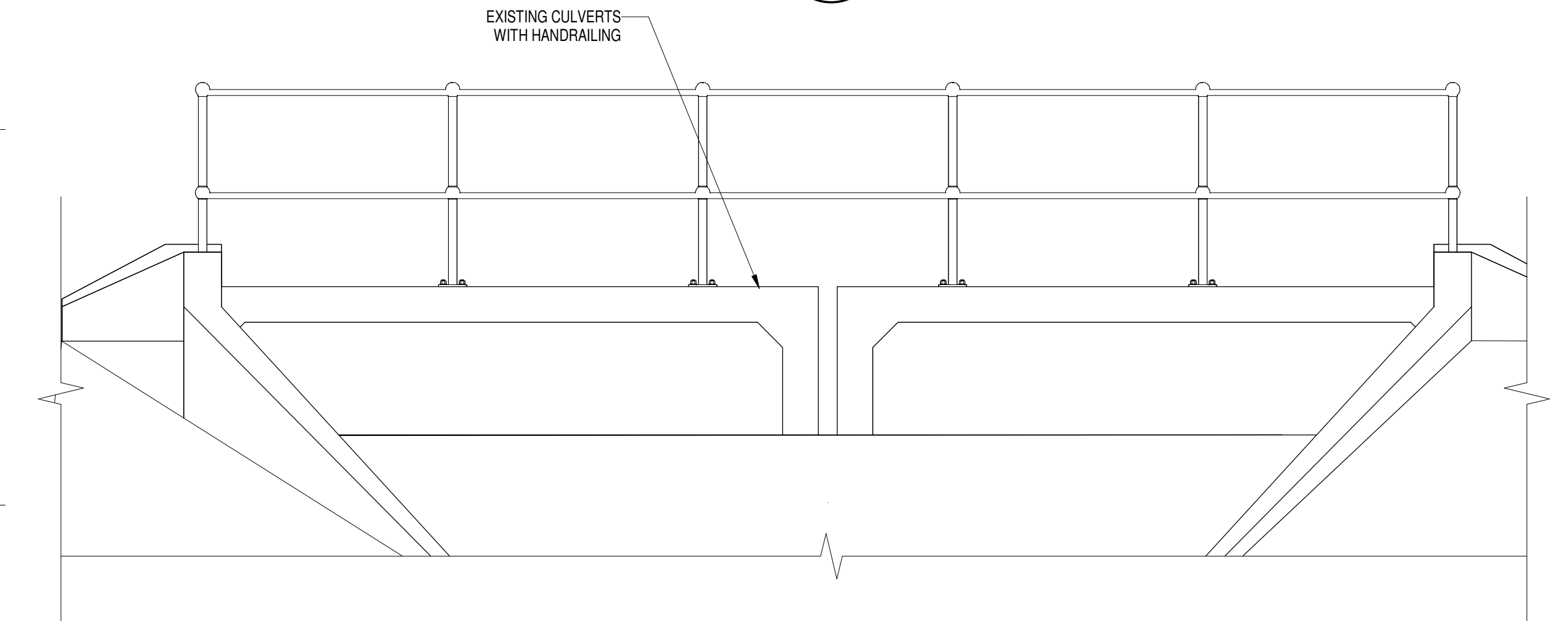
SECTION 1

1:50



SECTION 2

1:25

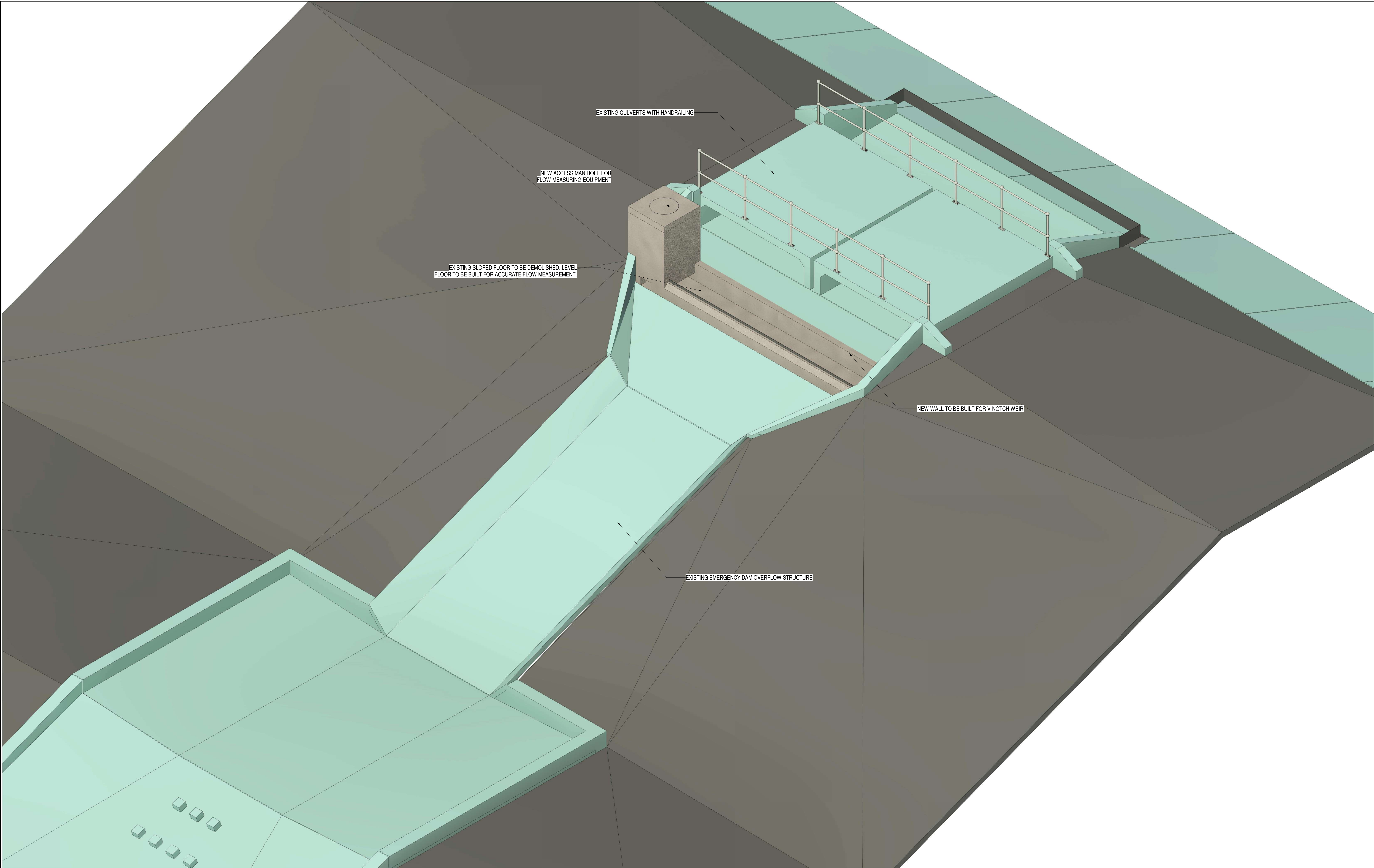


SECTION 3

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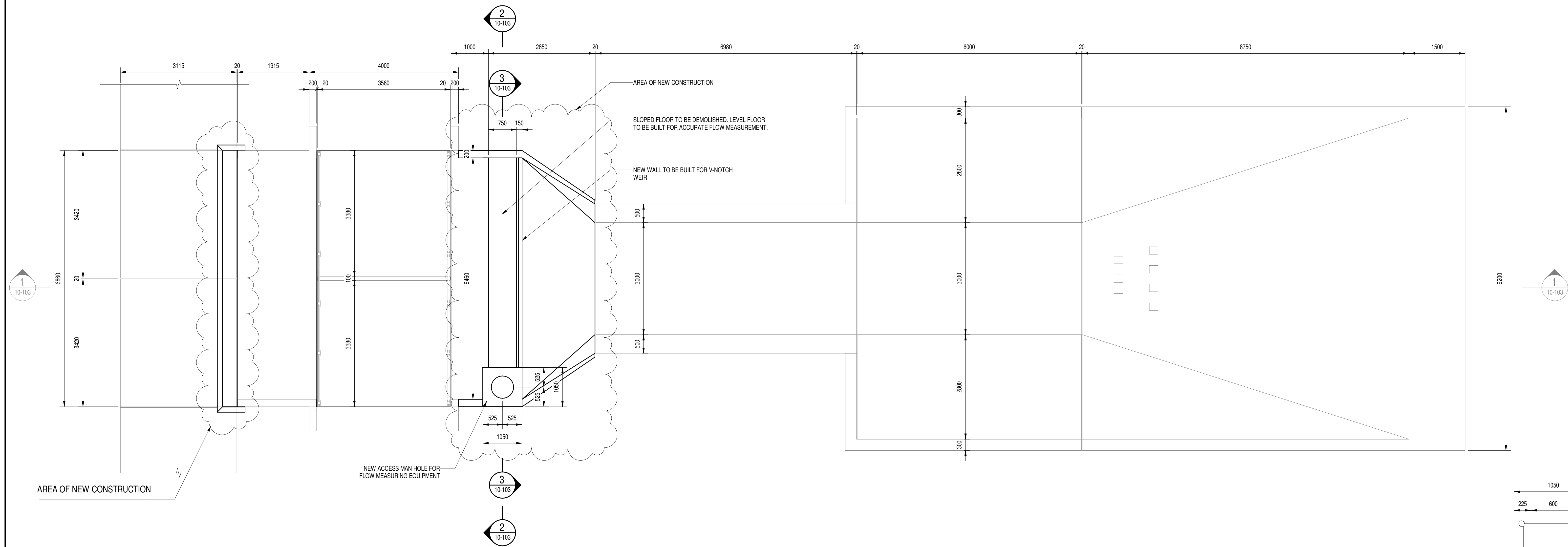
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD				CITY OF JOHANNESBURG				DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER	
ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-207 2060 FAX. 086 674 6121 EMAIL mail@zitholele.co.za		DESIGNED J.S.		DRAWN D.P.		JOHANNESBURG WATER		BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN EMERGENCY DAM OVERFLOW PLAN & SECTIONS AS BUILT						200 AS BUILT T01 ISSUED FOR TENDER				J.H.S. J.H.S.	
		SERVICES CHECKED		APPROVED J. SHWARTZ Pr. Eng. No. 860169 DATE 24.03.2024		TURBINE HALL 65 NTEM PILISO STREET NEWTOWN						N.T.S.						T 0 1	



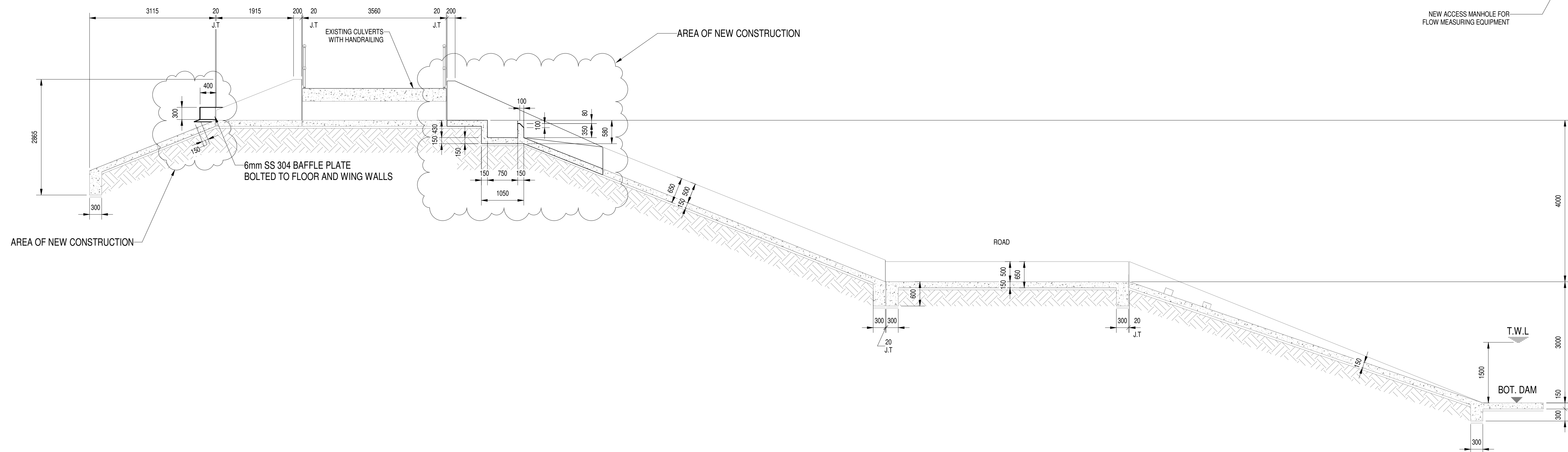
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG										DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER			
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-207 2060 FAX. 086 674 6121 EMAIL mail@zitholele.co.za					TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529		BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN EMERGENCY DAM OVERFLOW 3D VIEW REFURBISHMENT										T00	ISSUED FOR TENDER	J.H.S	12.11.2021	JW NUMBER			
																		T01	ISSUED FOR TENDER	J.H.S	24.03.2024	CONSULTANT'S NUMBER 18056-73-10-102			
																							FILE NUMBER		
SURVEYED				DESIGNED				J.S																	
DRAWN				CHECKED				J.S																	
SERVICES CHECKED				GEOTECHNICAL INVESTIGATION																					
SERVITUDES				APPROVED				J. SWART																	
Pr. Eng. No.				860169																					
DATE				15.07.2021																					



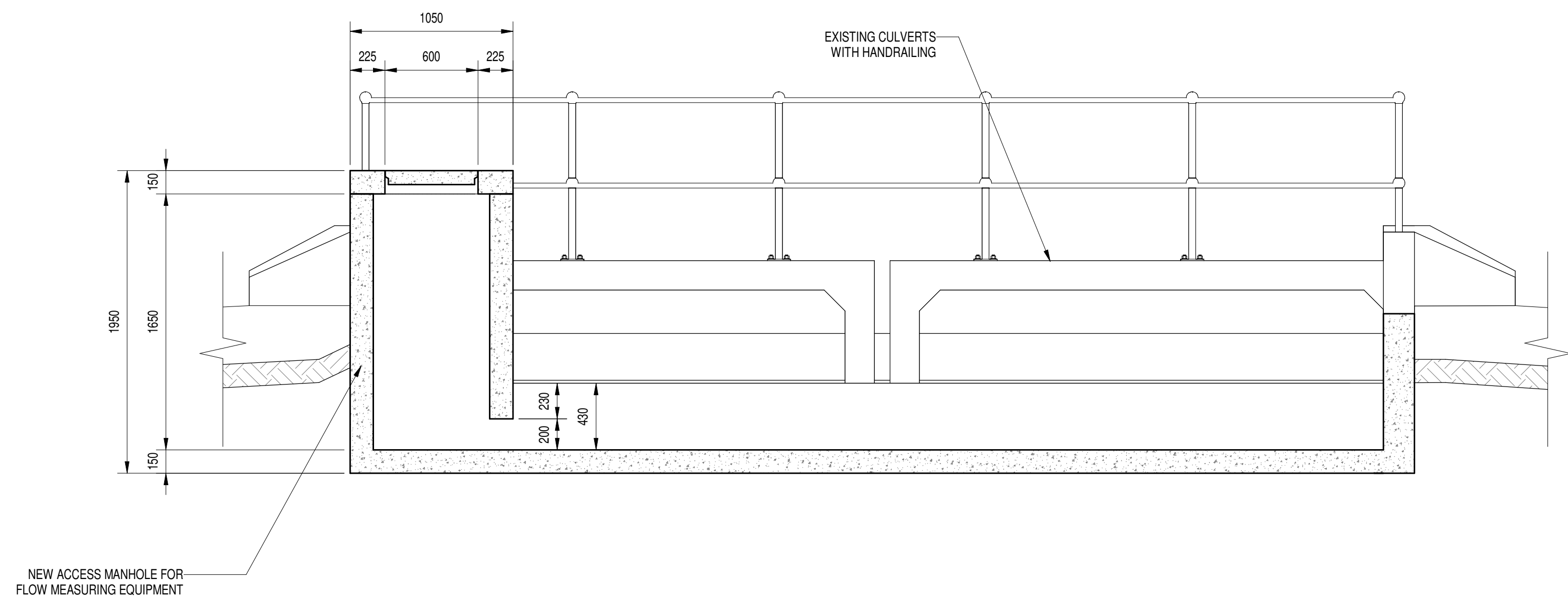
PLAN VIEW

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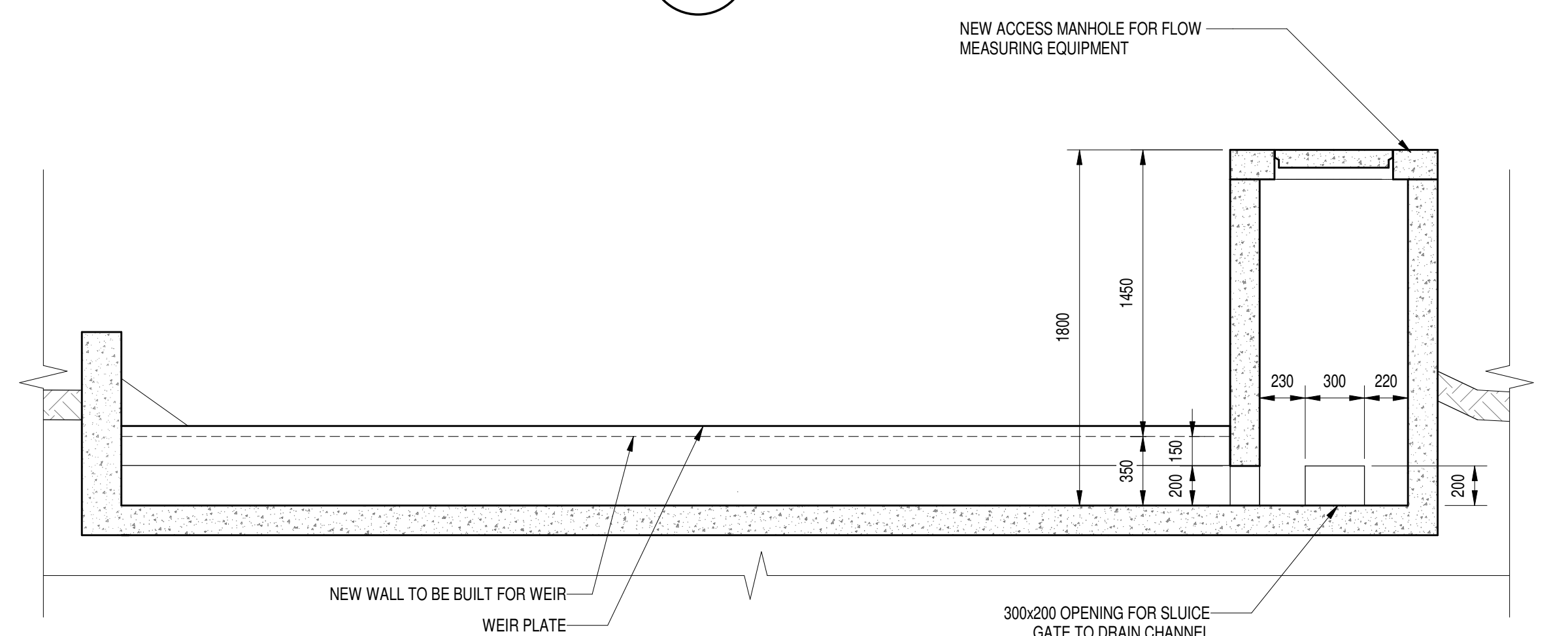
SECTION 1

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SECTION 2

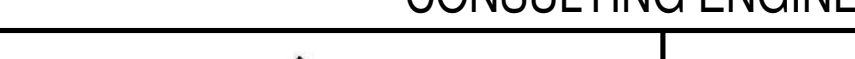
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SECTION 3

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DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG				DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER			
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-207 2060 FAX. 086 674 6121 EMAIL mail@zitholele.co.za	DESIGNED	J.S		TURBINE HALL 65 NTEM PILISO STREET NEW TOWN	BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN EMERGENCY DAM OVERFLOW PLAN & SECTIONS REFURBISHMENT						T00	ISSUED FOR TENDER	J.H.S	12.11.2021	JW NUMBER			
		DRAWN	D.P									T01	ISSUED FOR TENDER	J.H.S	20.03.2024	CONSULTANT'S NUMBER 18056-73-10-103			
		CHECKED	J.S									FILE NUMBER							
		SERVICES CHECKED																	
		GEOTECHNICAL INVESTIGATION																	
		SERVITUDES																	
		APPROVED	J. SWART																
Pr. Eng. No.	860169																		
DATE	24.03.2024																		
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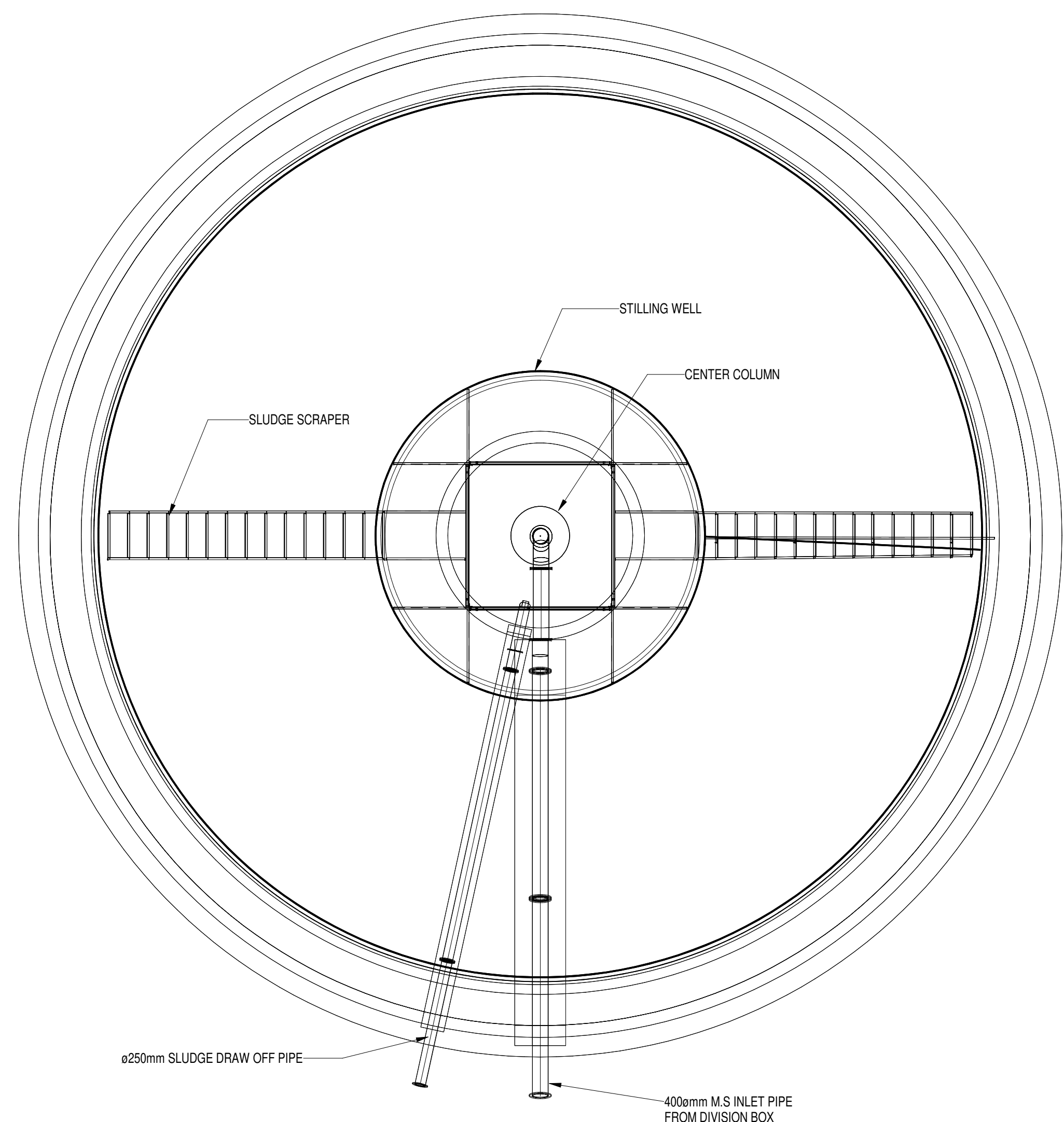
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS			JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG			DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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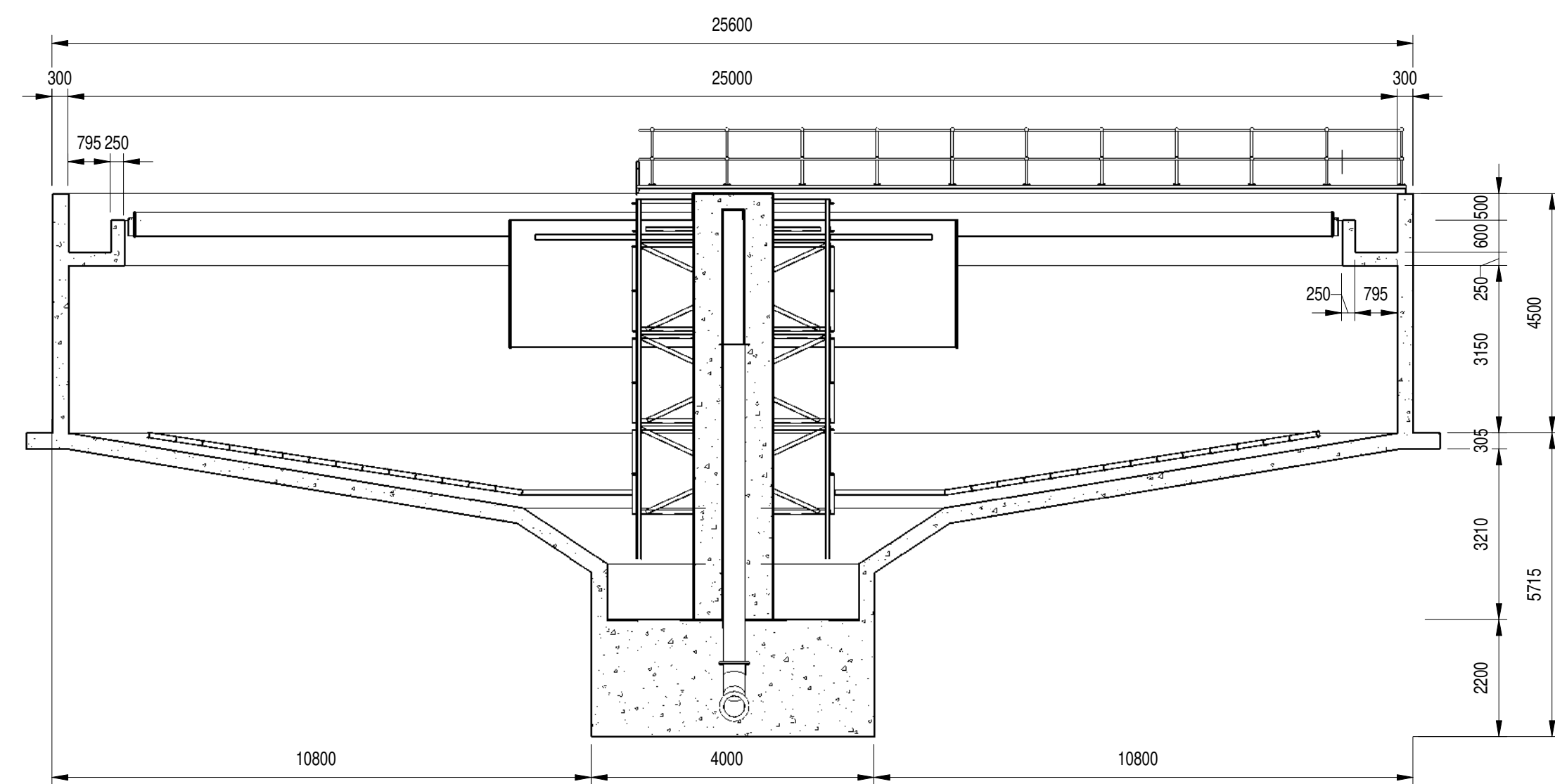


DEPARTMENT	APPROVED	DESIGNATION	DATE

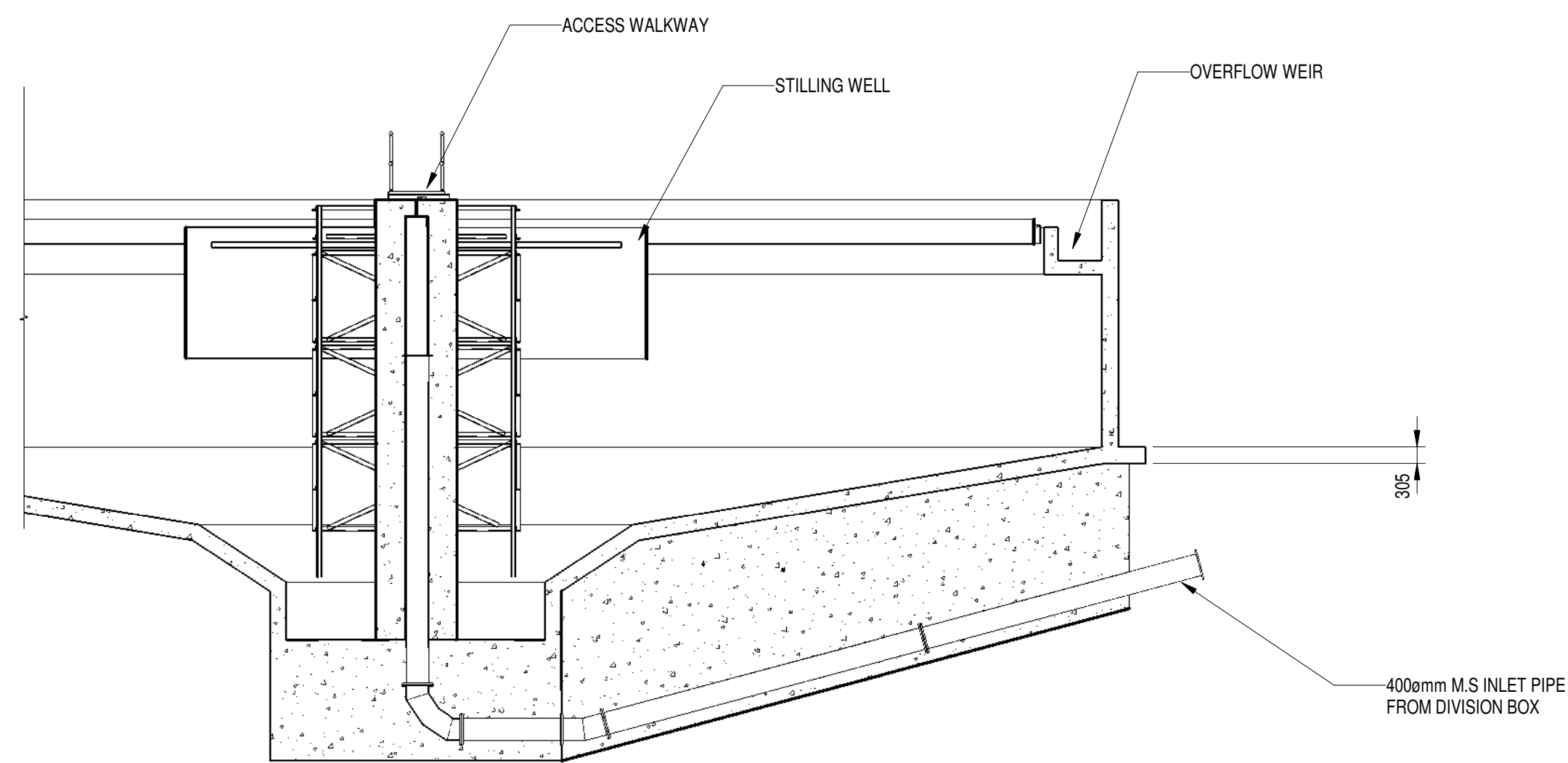
CONSULTING ENGINEERS		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG		DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING No.			
	ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE 1685 TEL: (011) 207 2060 FAX: (086) 674 6121 EMAIL: mail@zitholele.co.za	SURVEYED	J.S		TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN TEL: (011) 688-1400 FAX: (011) 688-1529			BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN LIME SILO LAYOUT OF NEW LIME SILO – DOSING INSTALLATION		T01	ISSUED FOR TENDER	JHS	23.04.2024	JW NUMBER	
		DESIGNED	J.P							CONSULTANT'S NUMBER					
		DRAWN	J.S							18056-73-11-101					
		CHECKED	J.S							FILE No					
		SERVICES CHECKED				DATE	1:200								
		GEOTECHNICAL INVESTIGATION													
		SERVITUDES													
		APPROVED	J SWART												
		Prc. Eng. No.	860169												
		DATE	23.04.2024												



LAYOUT OF LIME CLARIFIER
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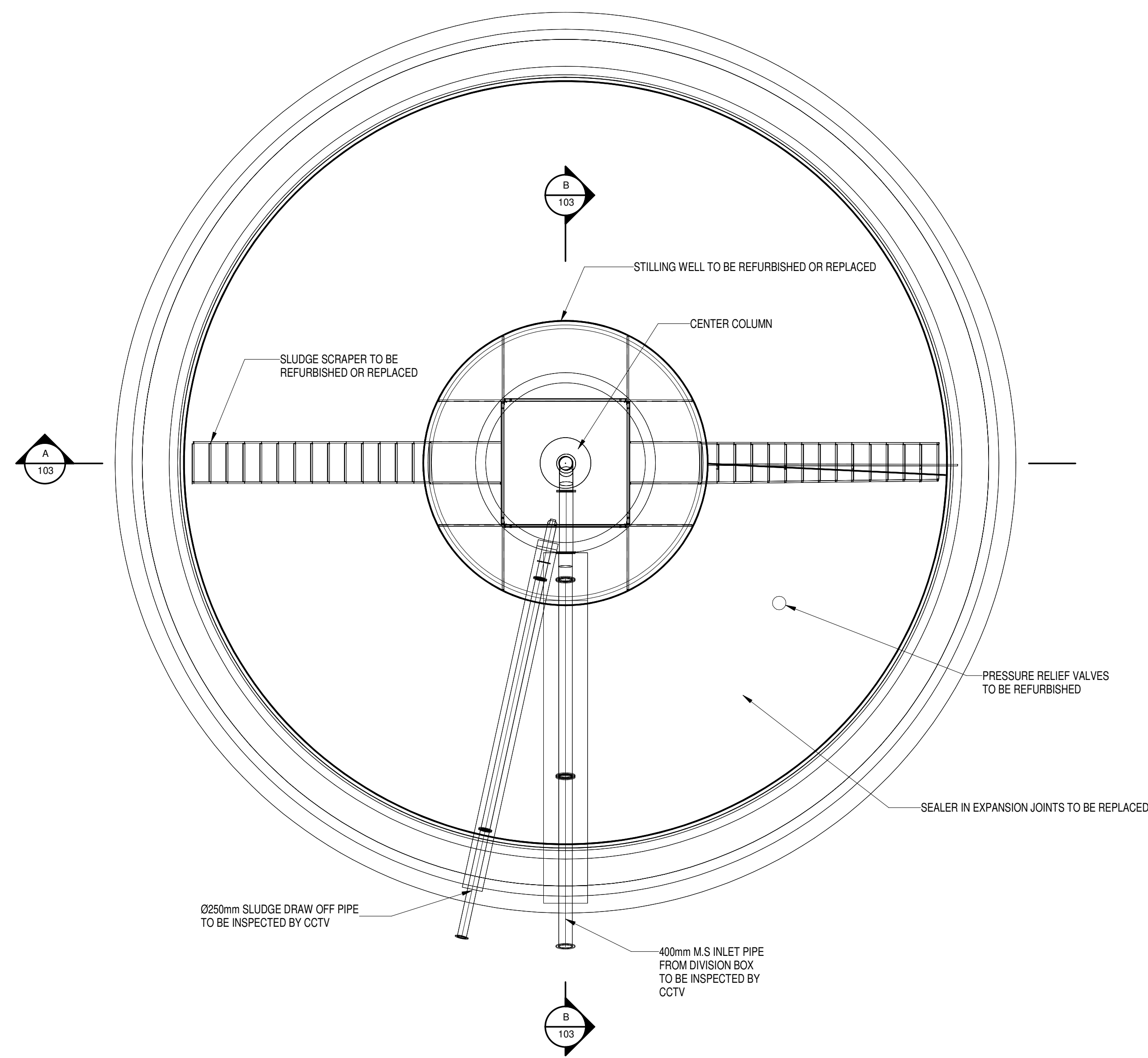
SECTION A
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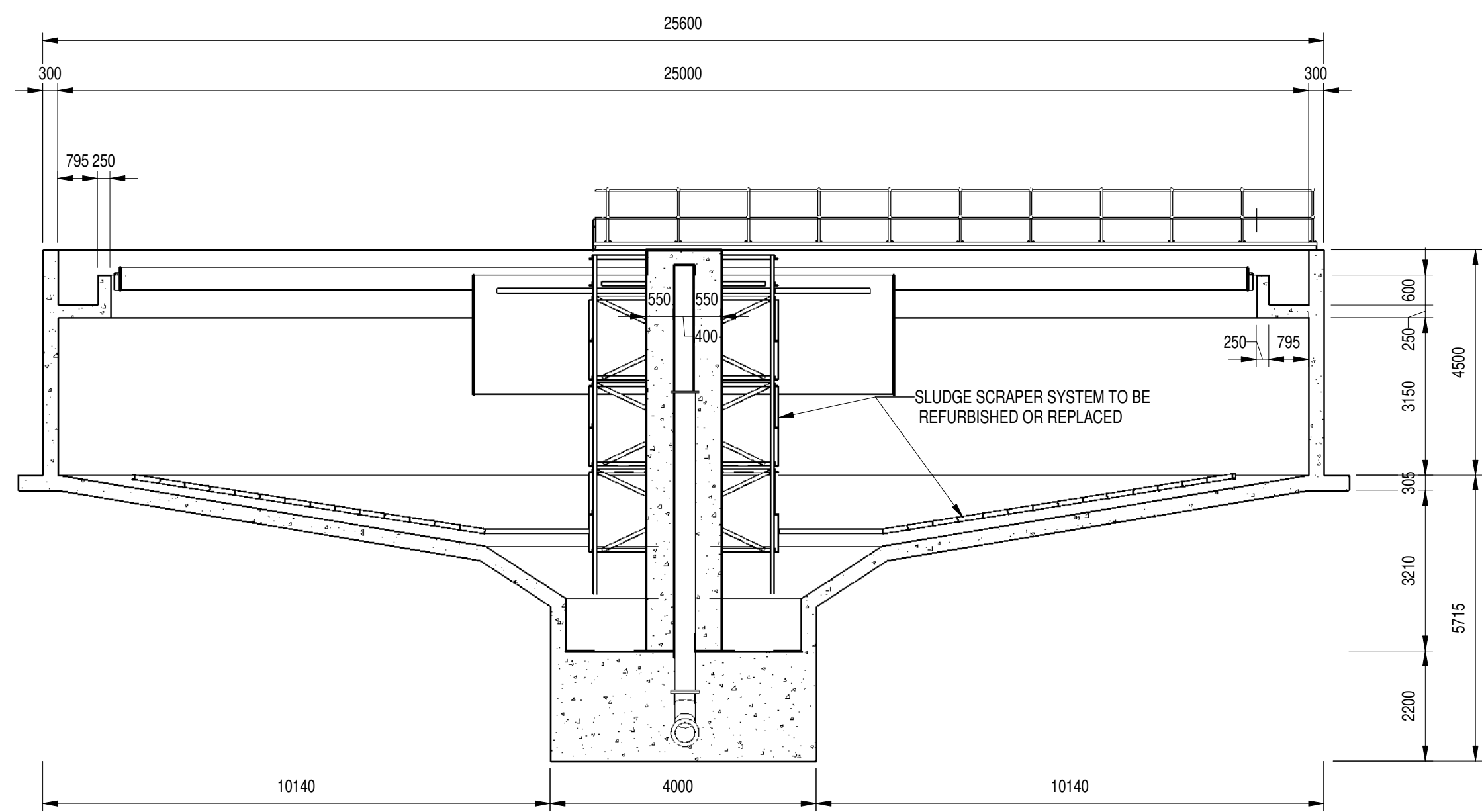
SECTION B
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DEPARTMENT	APPROVED	DESIGNATION	DATE

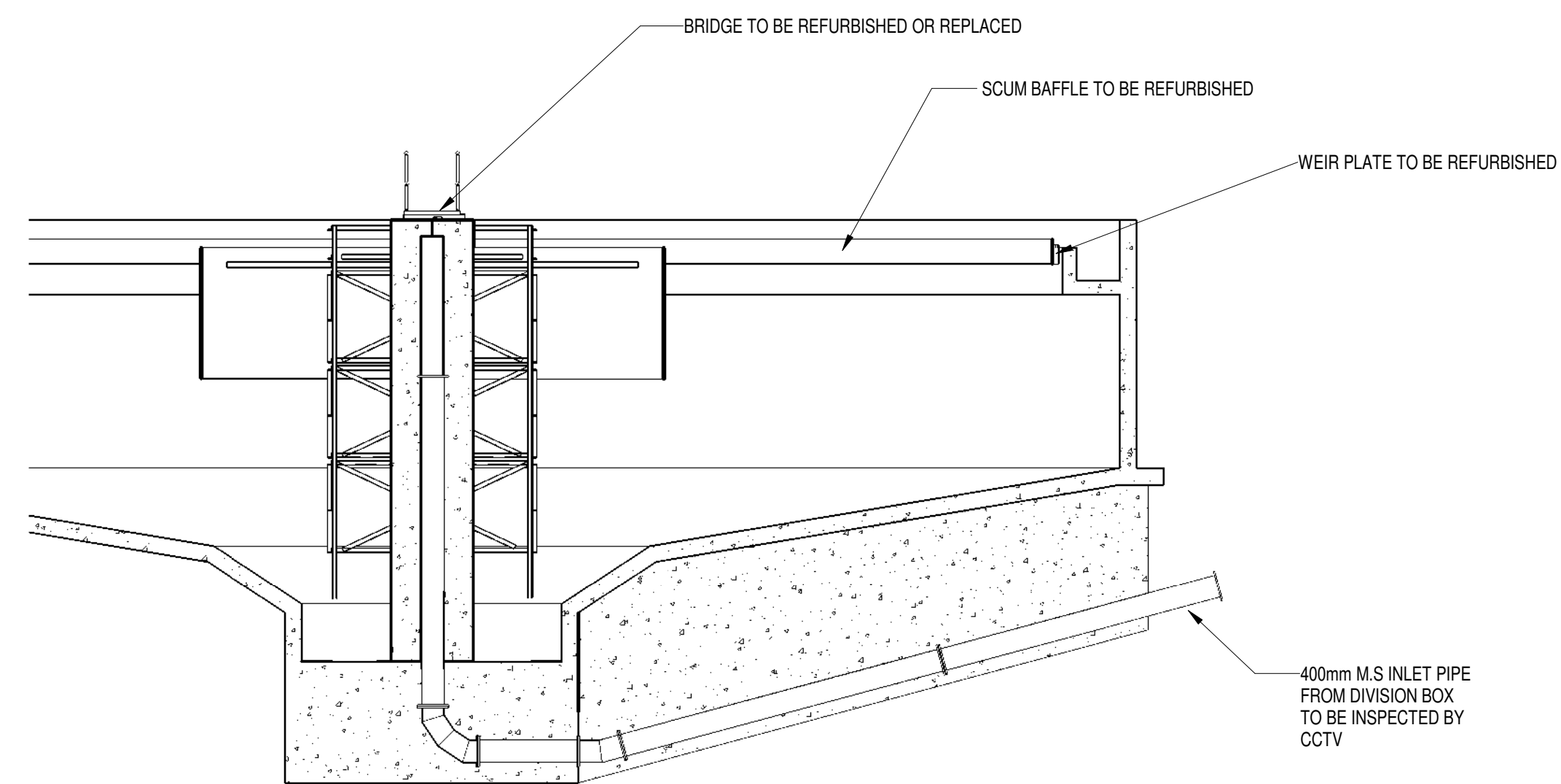
CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG		DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER			
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	DESIGNED	J.S		TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529	BUSHKOPPIE WWTW PRIMARY TREATMENT LIME CLARIFIER PLAN & SECTIONS AS BUILT				T01	ISSUED FOR TENDER			J.S	24.03.2024	JW NUMBER	
		DRAWN	J.P							CONSULTANT'S NUMBER							
		CHECKED	J.S							18056-73-11-102							
		SERVICES CHECKED								FILE NUMBER							
		GEOTECHNICAL INVESTIGATION															
		SERVITUDES															
		APPROVED	J. SWART			DATE											
		Pr. Eng. No.	860169					T 0 1									
		DATE	24.03.2024														



LAYOUT OF LIME CLARIFIER REFURBISHMENT
1:100



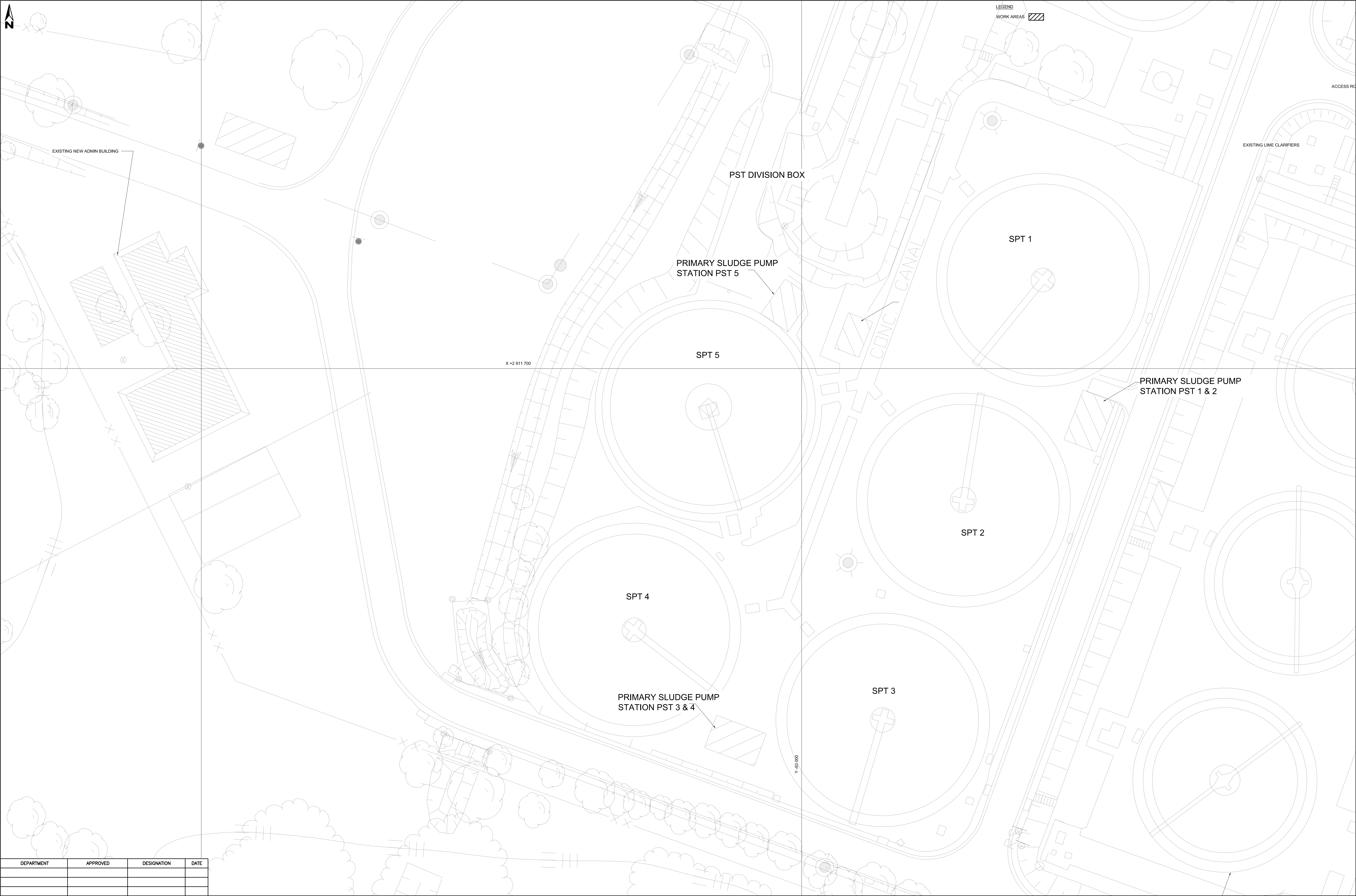
SECTION A
1:100



SECTION B
1:100

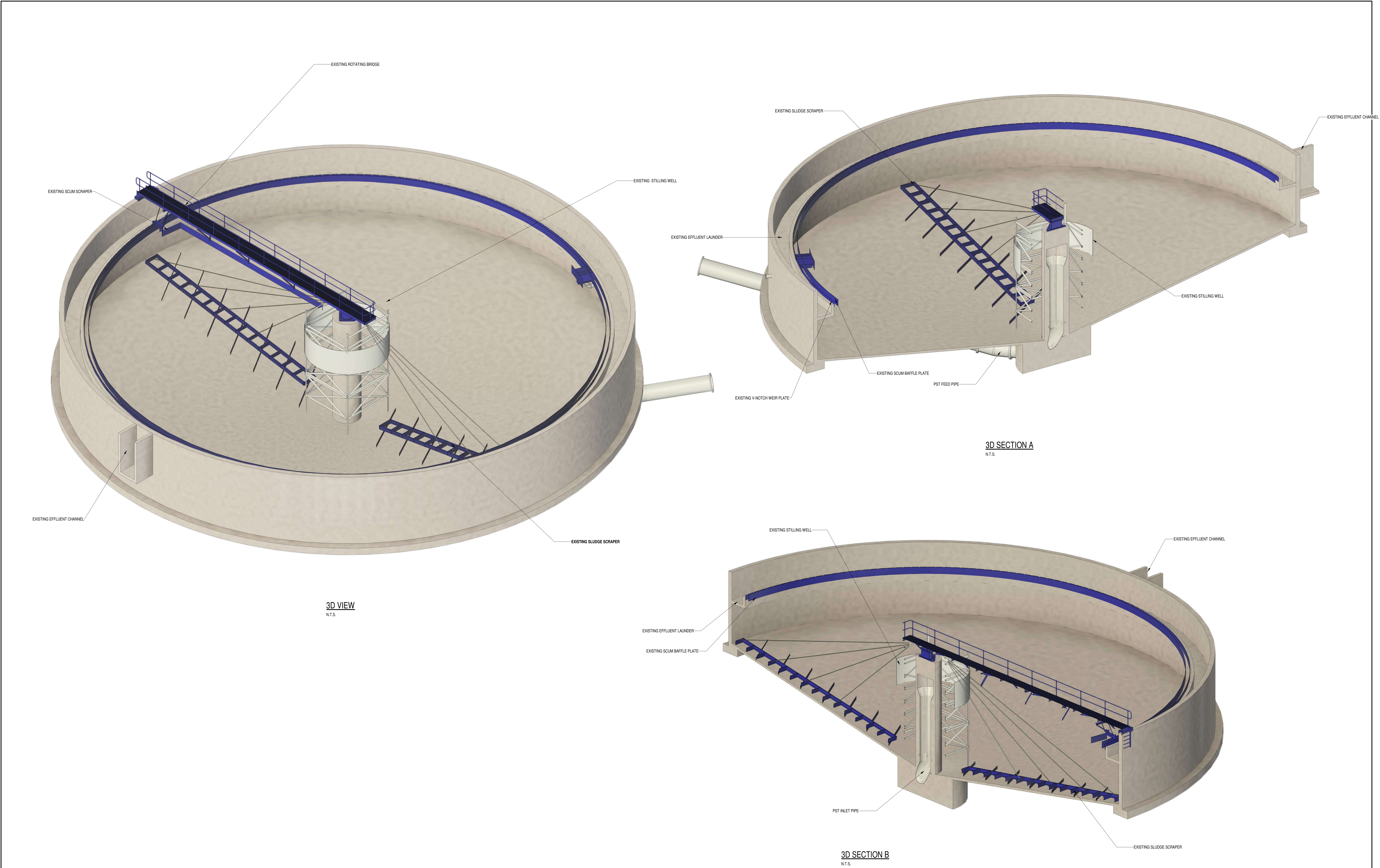
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG				DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER					
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	DESIGNED	J.S		TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529			BUSHKOPPIE WWTW PRIMARY TREATMENT LIME CLARIFIER PLAN & SECTIONS REFURBISHMENT				T01	ISSUED FOR TENDER			J.S	24.03.2024	JW NUMBER			
		DRAWN	J.P									CONSULTANT'S NUMBER									
		CHECKED	J.S									18056-73-11-103									
		SERVICES CHECKED										FILE NUMBER									
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		APPROVED	J. SWART																		
		Pr. Eng. No.	860169																		
		DATE	24.03.2024																		

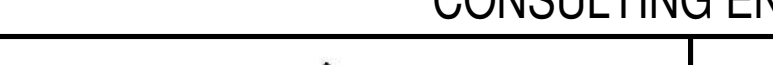


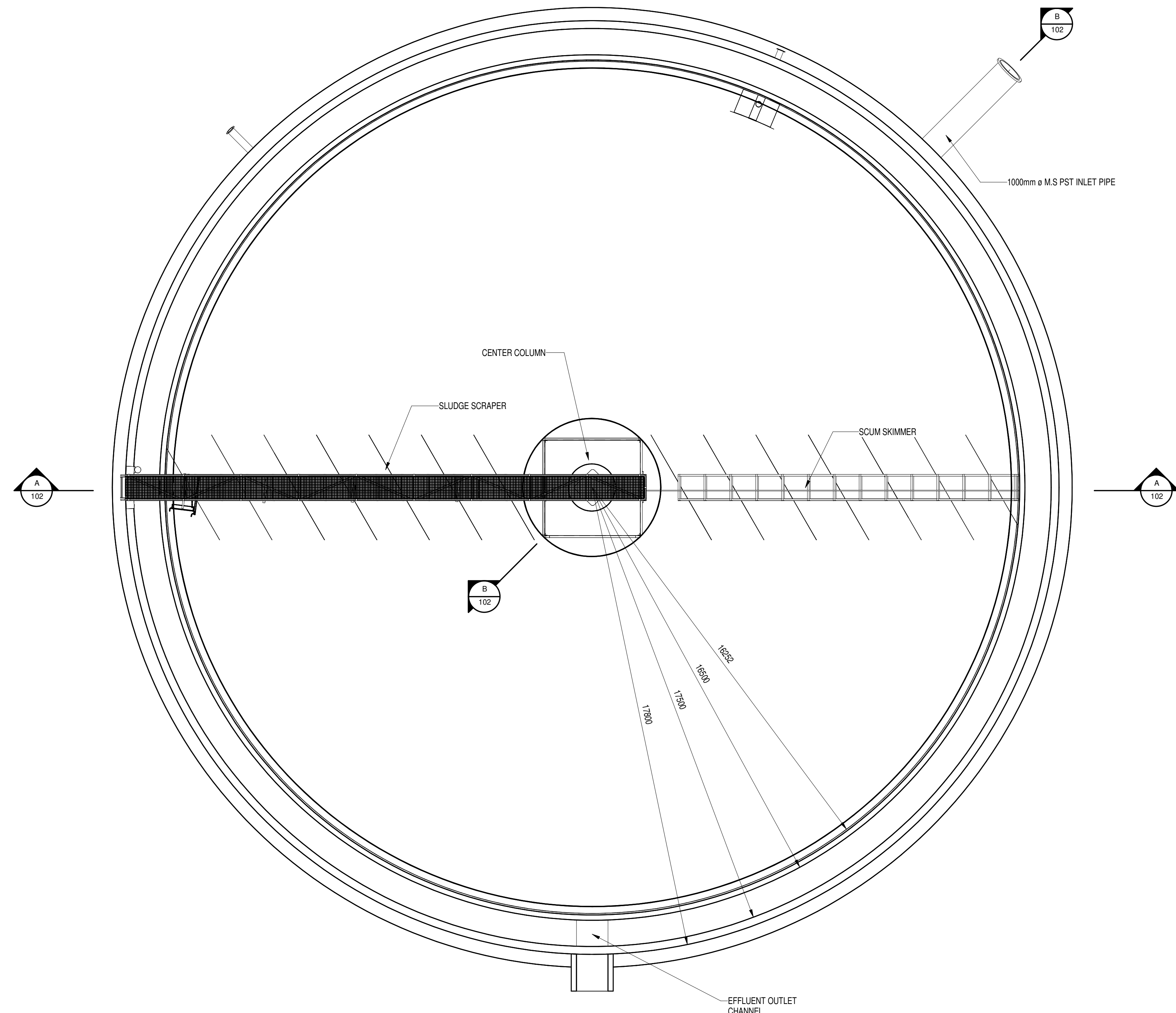
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN SITE LAYOUT GENERAL ARRANGEMENT PRIMARY SEDIMENTATION TANKS										DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING No.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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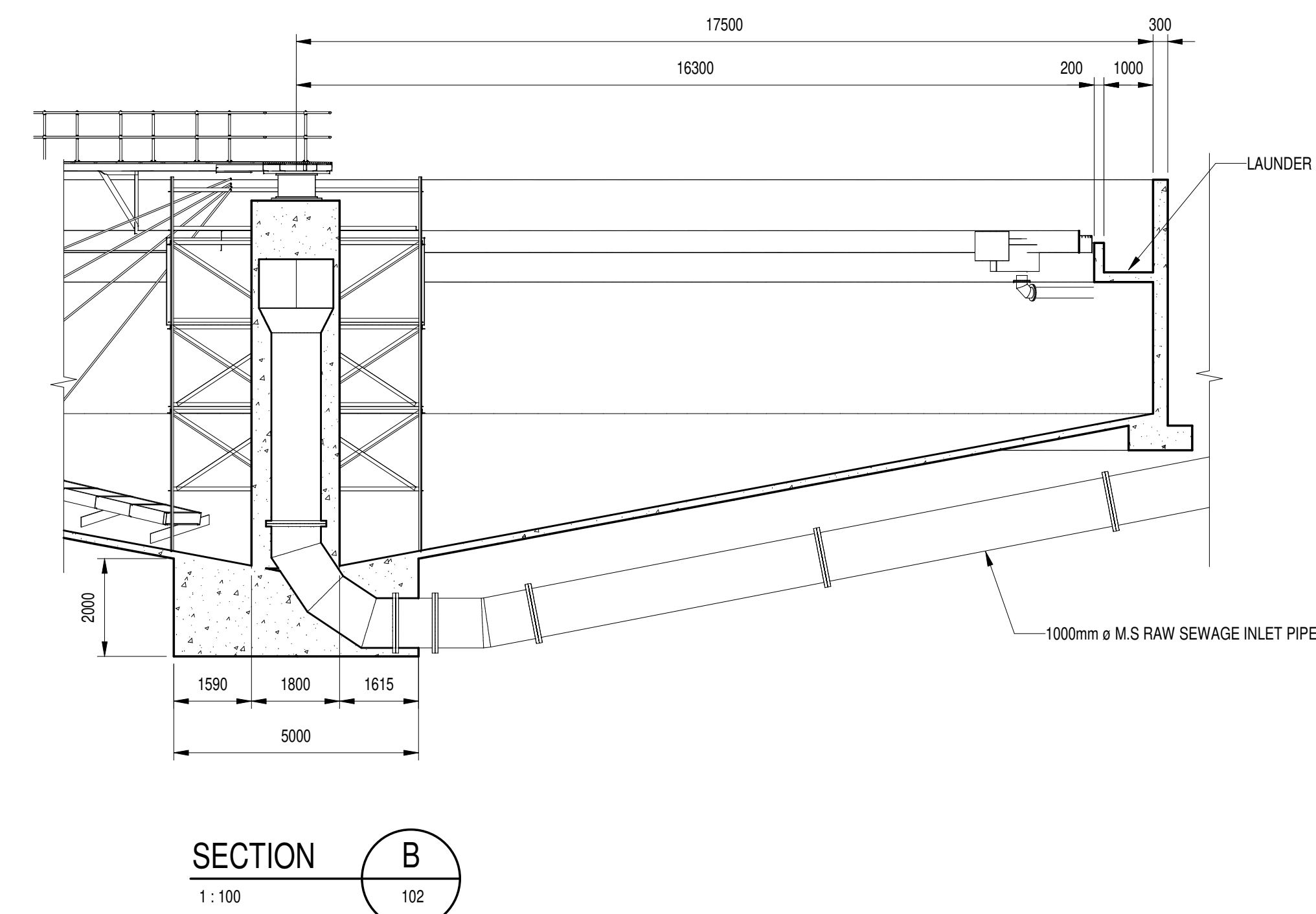
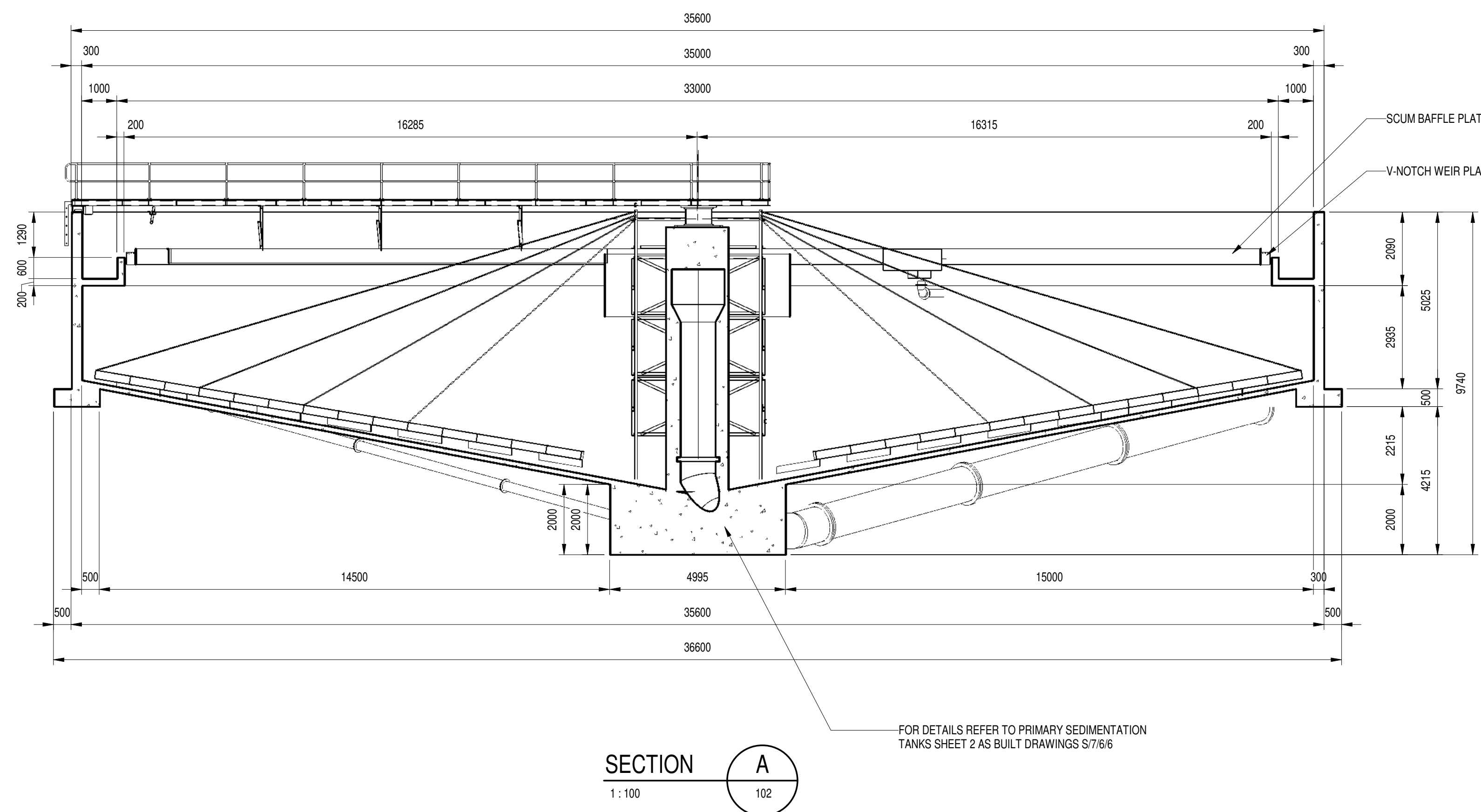


DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG				DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING NUMBER
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	SURVEYED	J.S		TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN	BUSHKOPPIE WASTEWATER TREATMENT WORKS EXISTING PRIMARY SEDIMENTATION TANKS PRIMARY SEDIMENTATION TANKS 1-4 SCHEMATICS OF MECHANICAL EQUIPMENT 3D VIEW & SECTIONS	DATE	AS SHOWN	T01	ISSUED FOR TENDER	JHS	23.04.2024	JW NUMBER
		DESIGNED	J.S										CONSULTANT'S NUMBER
		DRAWN	J.P										18056-73-13-101
		CHECKED	J.S										FILE NUMBER
		SERVICES CHECKED											
		GEOTECHNICAL INVESTIGATION											
SERVICES													
APPROVED	J.H SWART												
Pr. Eng. No.	860169												
DATE	23.04.2024												



LAYOUT OF PRIMARY SEDIMENTATION TANKS 1-4
1:100



NOTES :

FOR STRUCTURAL JOINTS/WATER PRESSURE RELIEF VALVES DETAILS REFER TO PRIMARY SEDIMENTATION TANK (SHEET 1 & 2) AS BUILT DRAWINGS S/7/6/5 & S/7/6/6

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG					DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING NUMBER		
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	DESIGNED	J.S		TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN	BUSHKOPPIE WASTEWATER TREATMENT WORKS EXISTING PRIMARY SEDIMENTATION TANKS PRIMARY SEDIMENTATION TANKS 1-4 SCHEMATICS OF MECHANICAL EQUIPMENT PLAN & SECTIONS												
		DRAWN	J.P															
		CHECKED	J.S															
		SERVICES CHECKED																
		GEOTECHNICAL INVESTIGATION																
SERVITUDES		APPROVED	J.H SWART	TEL: (011) 688 1400														
		Pr. Eng. No.	800169	FAX: (011) 688 1529														
		DATE	23.04.2024															
											DATE	AS SHOWN	T01	ISSUED FOR TENDER	JHS	23.04.2024	JW NUMBER	
																		CONSULTANT'S NUMBER
																		18056-73-13-102
																		FILE NUMBER



FOR DETAILS REFER TO PRIMARY SEDIMENTATION
TANKS SHEET 2 AS BUILT DRAWINGS S/7/6/6



FOR STRUCTURAL JOINTS/WATER PRESSURE RELIEF VALVES DETAILS REFER TO PRIMARY SEDIMENTATION TANK (SHEET 1 & 2) AS BUILT DRAWINGS S/7/6/5 & S/7/6/6

CONSULTING ENGINEERS	
 ZITHOLELE CONSULTING	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za

JOHANNESBURG W

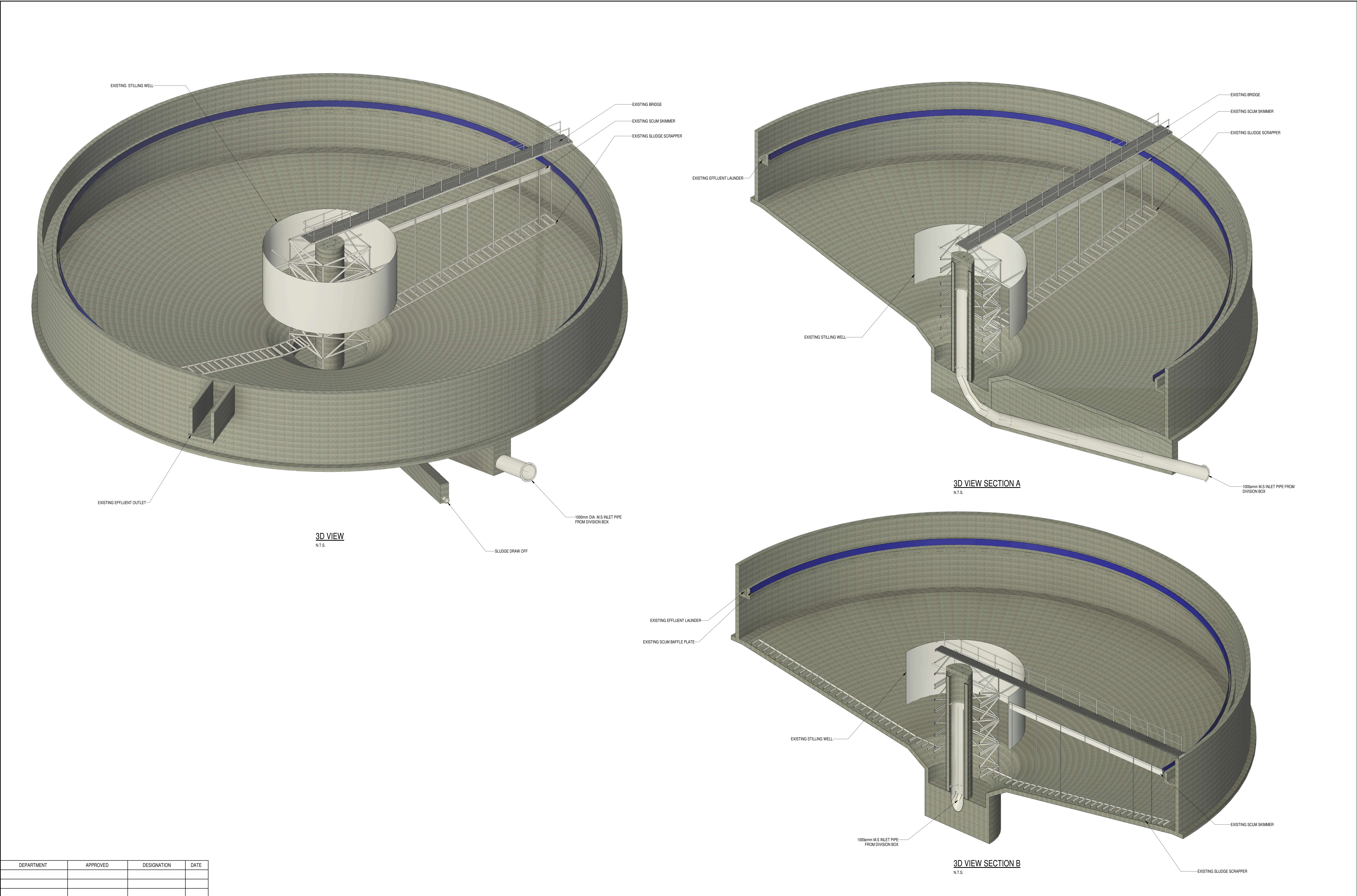


Johannesburg Water

DESIGN MANAGER	
DATE	

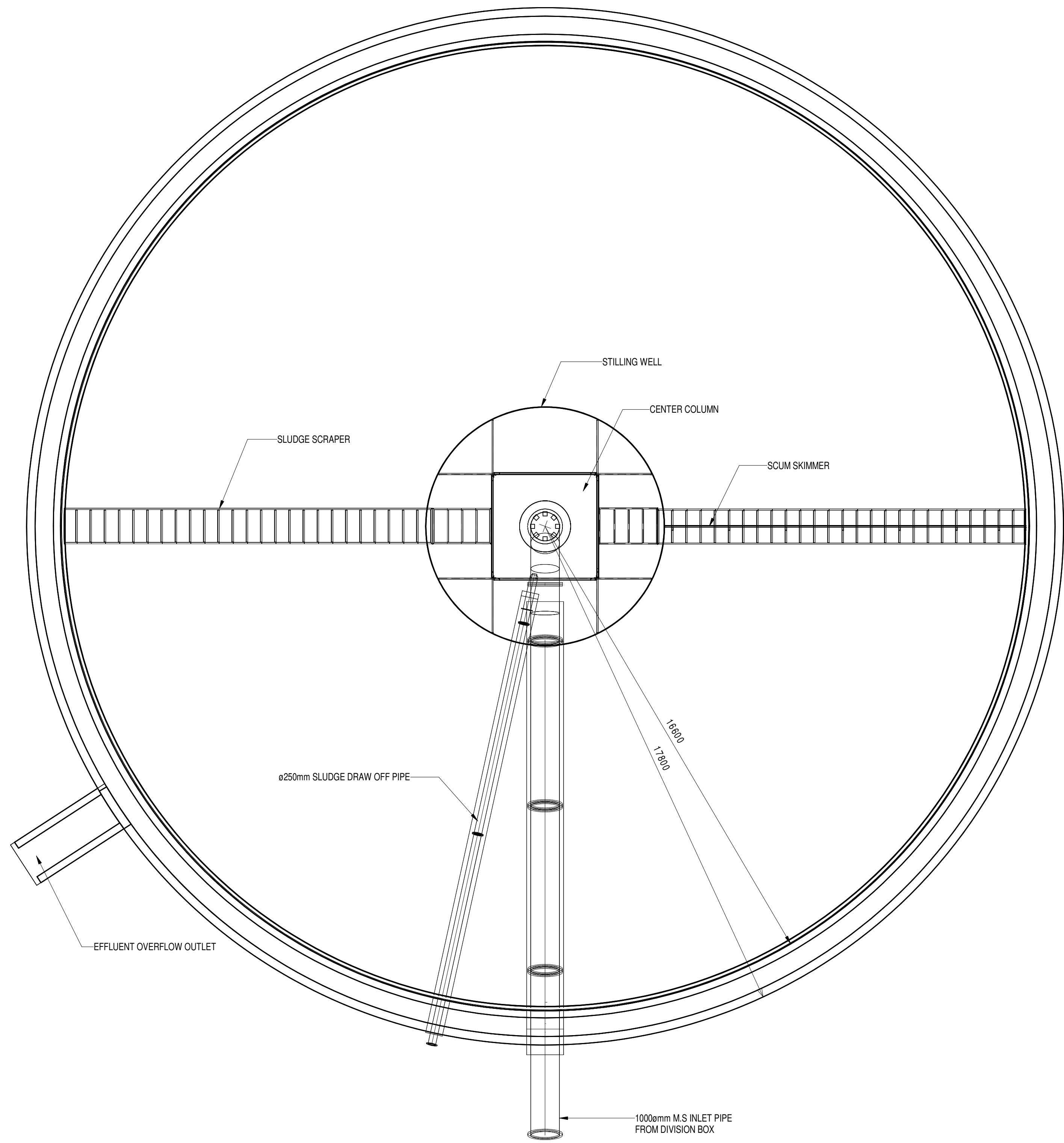
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APPROVED	DATE	DRAWING NUMBER						
JHS	23.04.2024	JW NUMBER						
		CONSULTANT'S NUMBER						
		18056-73-13-103						
		FILE NUMBER						
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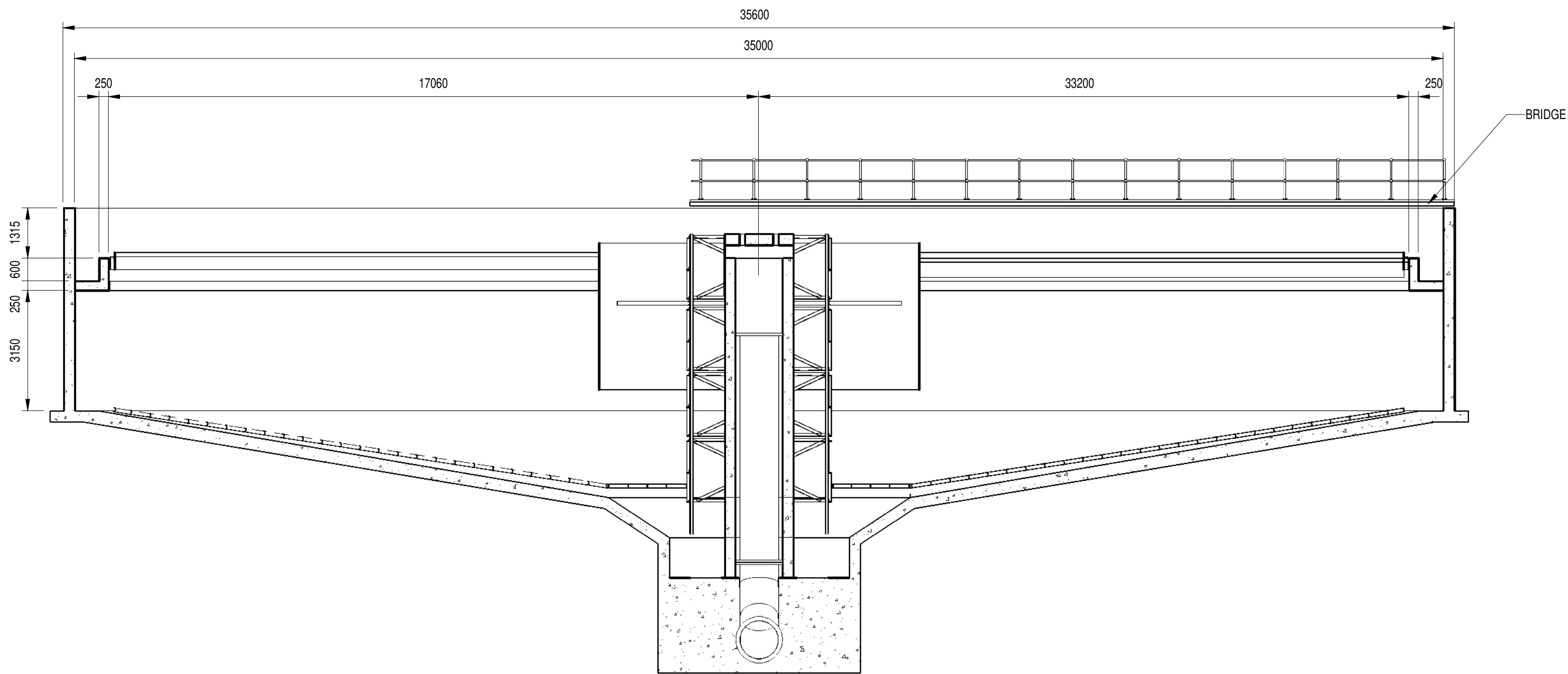


DEPARTMENT	APPROVED	DESIGNATION	DATE

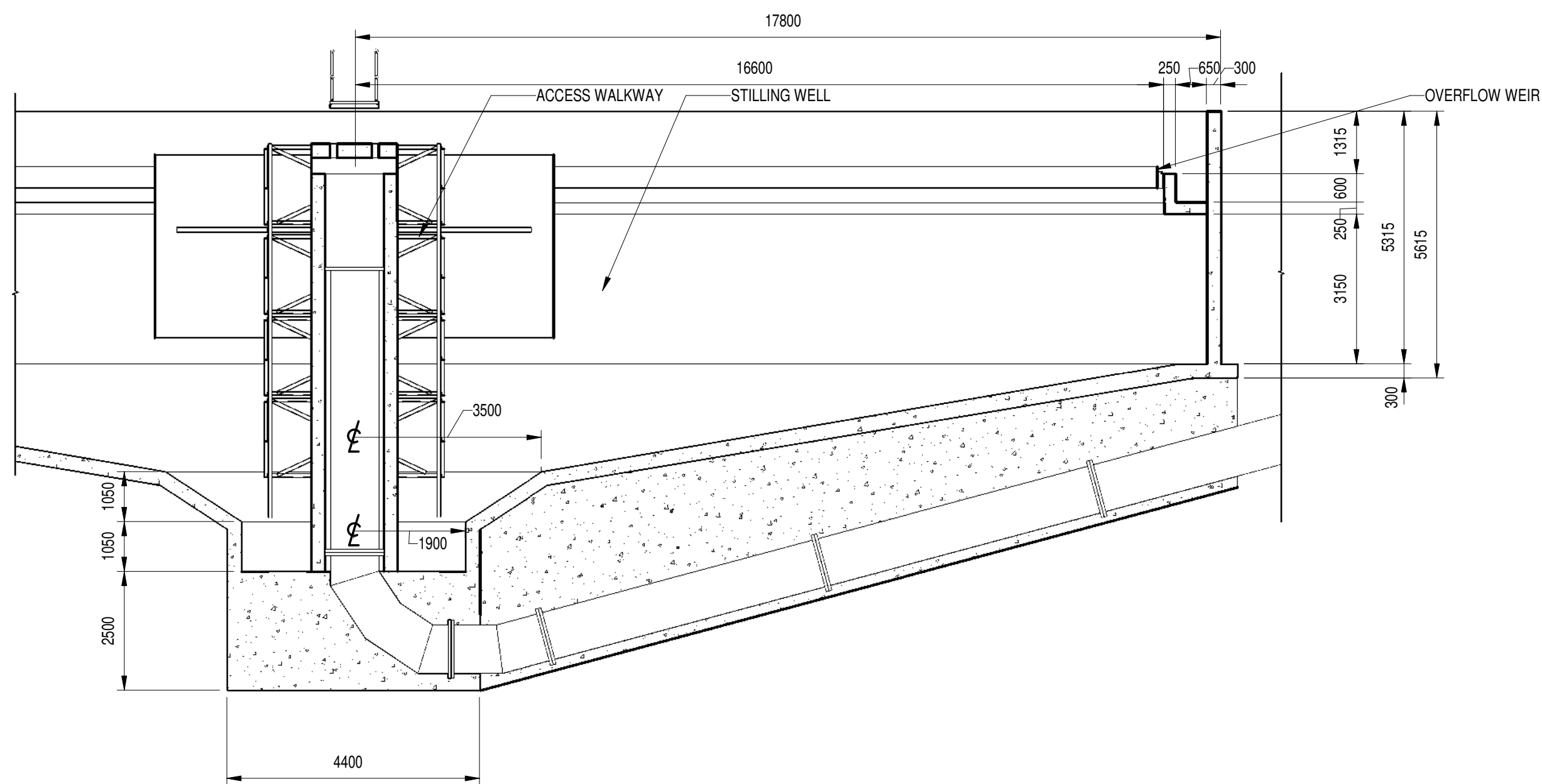
CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG		DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	DESIGNED	J.S		TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529	BUSHKOPPIE WWTW PRIMARY TREATMENT PRIMARY SEDIMENTATION TANK 5 3D PLAN & SECTIONS AS BUILT				T01	ISSUED FOR TENDER			J.H.S	24.03.2024	JW NUMBER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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LAYOUT OF PRIMARY SEDIMENTATION TANK 5
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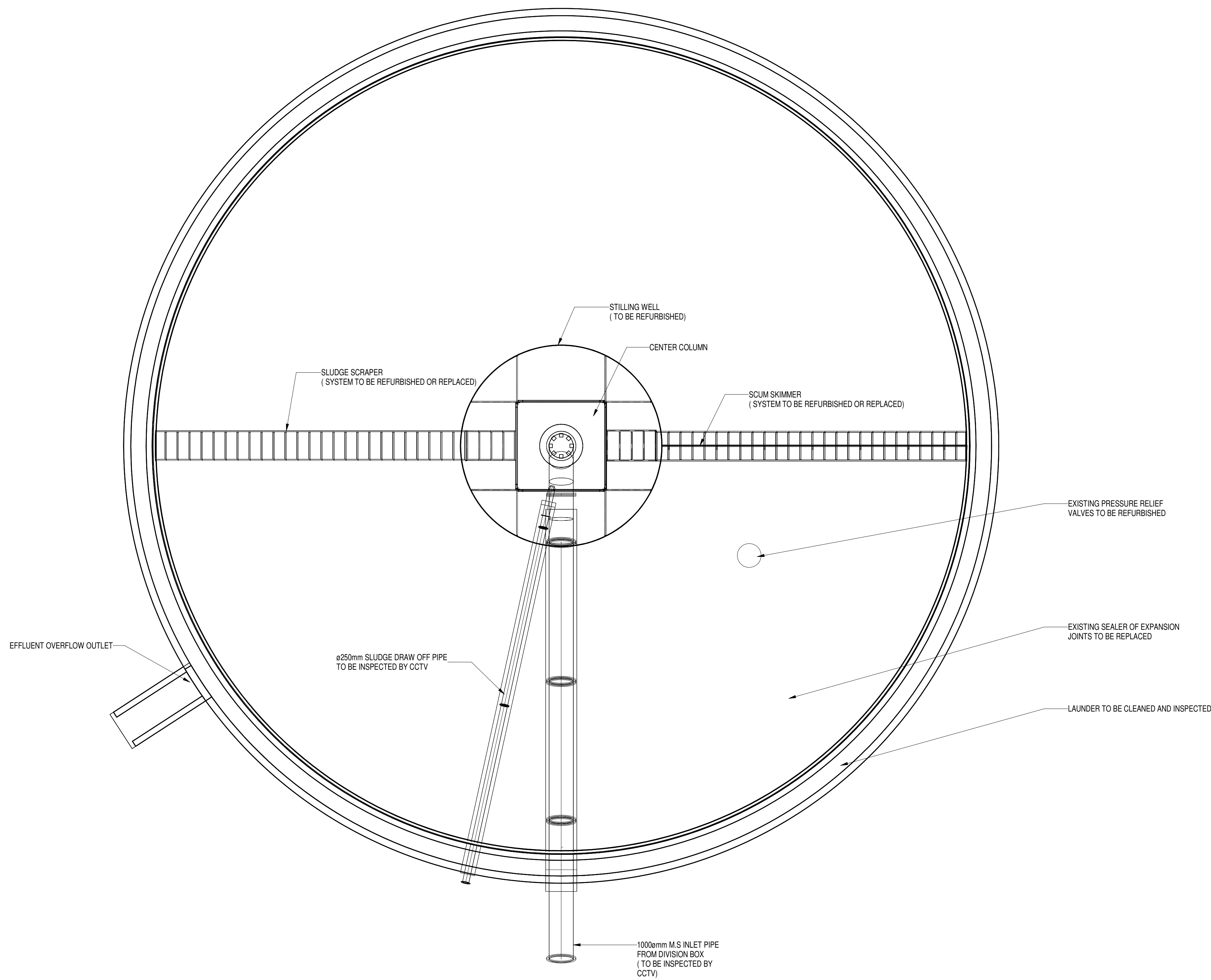
SECTION A
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SECTION B
1 : 100

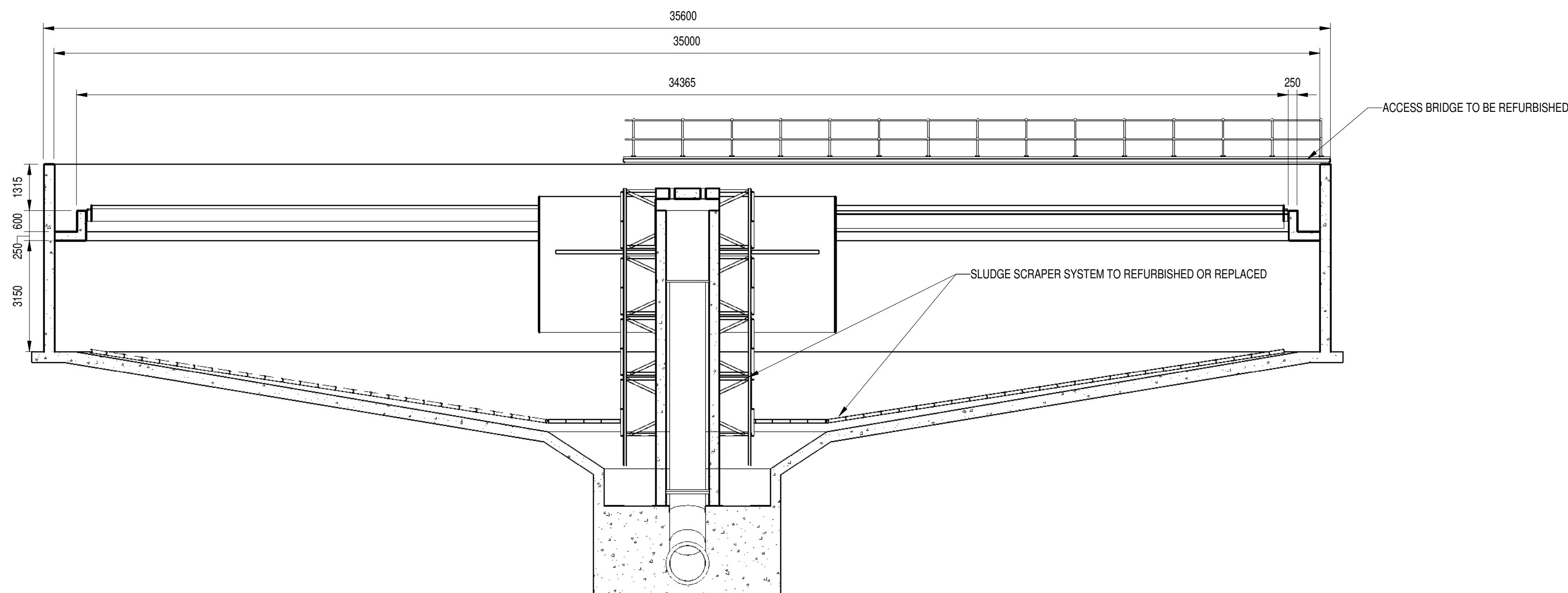
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG		DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER	
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	DESIGNED	J.S.		TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529	BUSHKOPPIE WWTW PRIMARY TREATMENT PRIMARY SEDIMENTATION TANK 5 PLAN & SECTIONS AS BUILT				T01	ISSUED FOR TENDER			J.S.	24.03.2024
		DRAWN	J.P.					CONSULTANT'S NUMBER		18056-73-13-105					
		CHECKED	J.S.					FILE NUMBER							
		SERVICES CHECKED													
		GEOTECHNICAL INVESTIGATION													
		SERVICES													
		APPROVED	J. SWART												
		Pr. Eng. No.	860169												
		DATE	24.03.2024												



LAYOUT OF PRIMARY SEDIMENTATION TANK 5 REFURBISHMENT

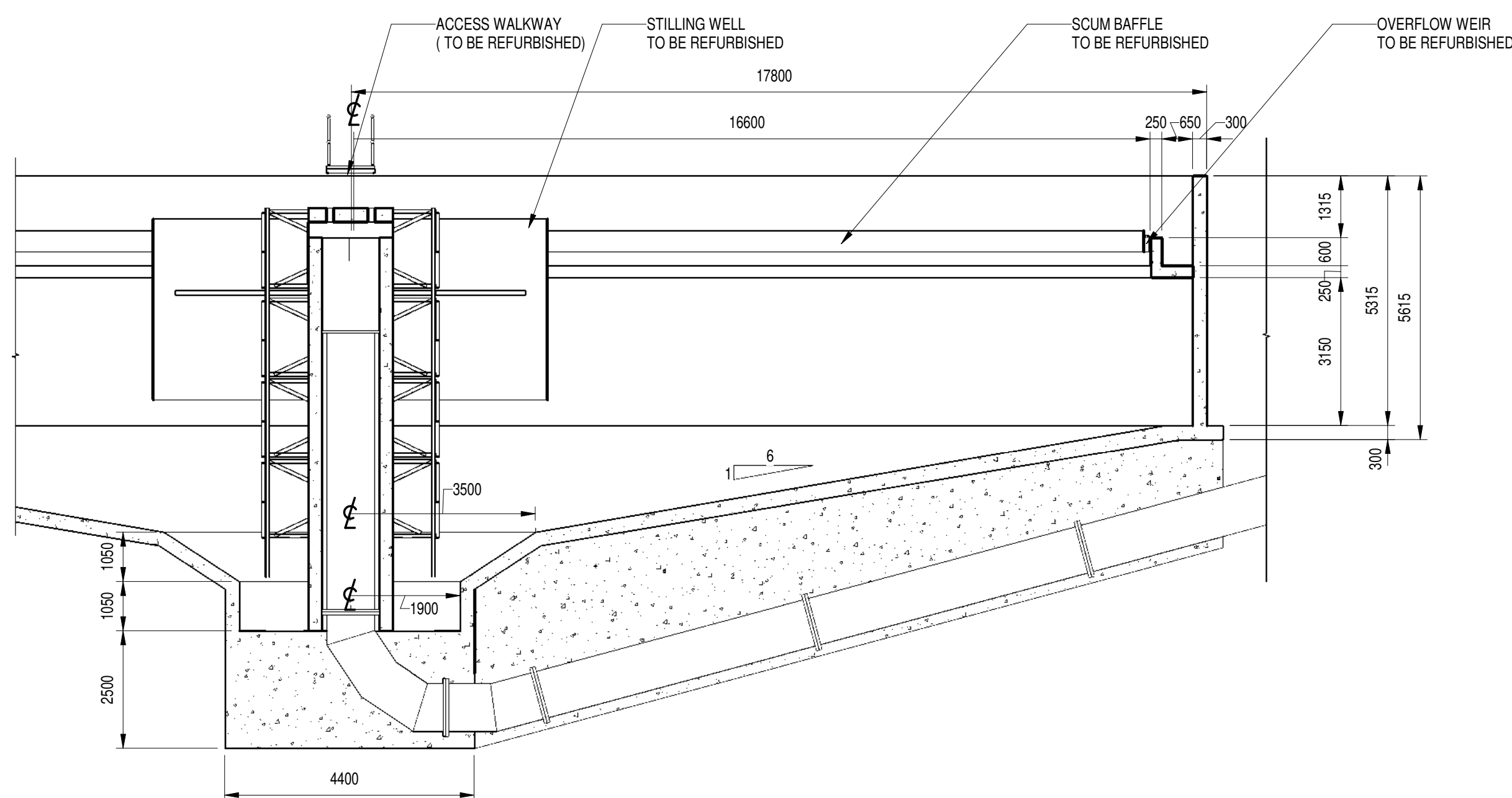
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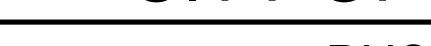


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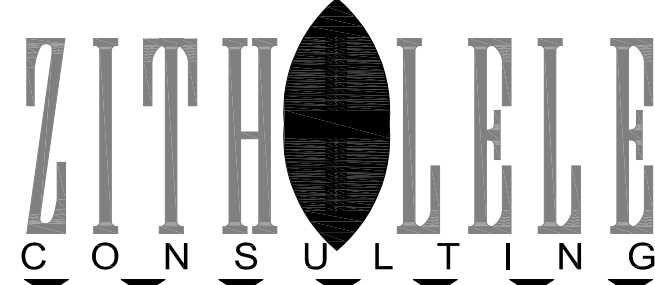
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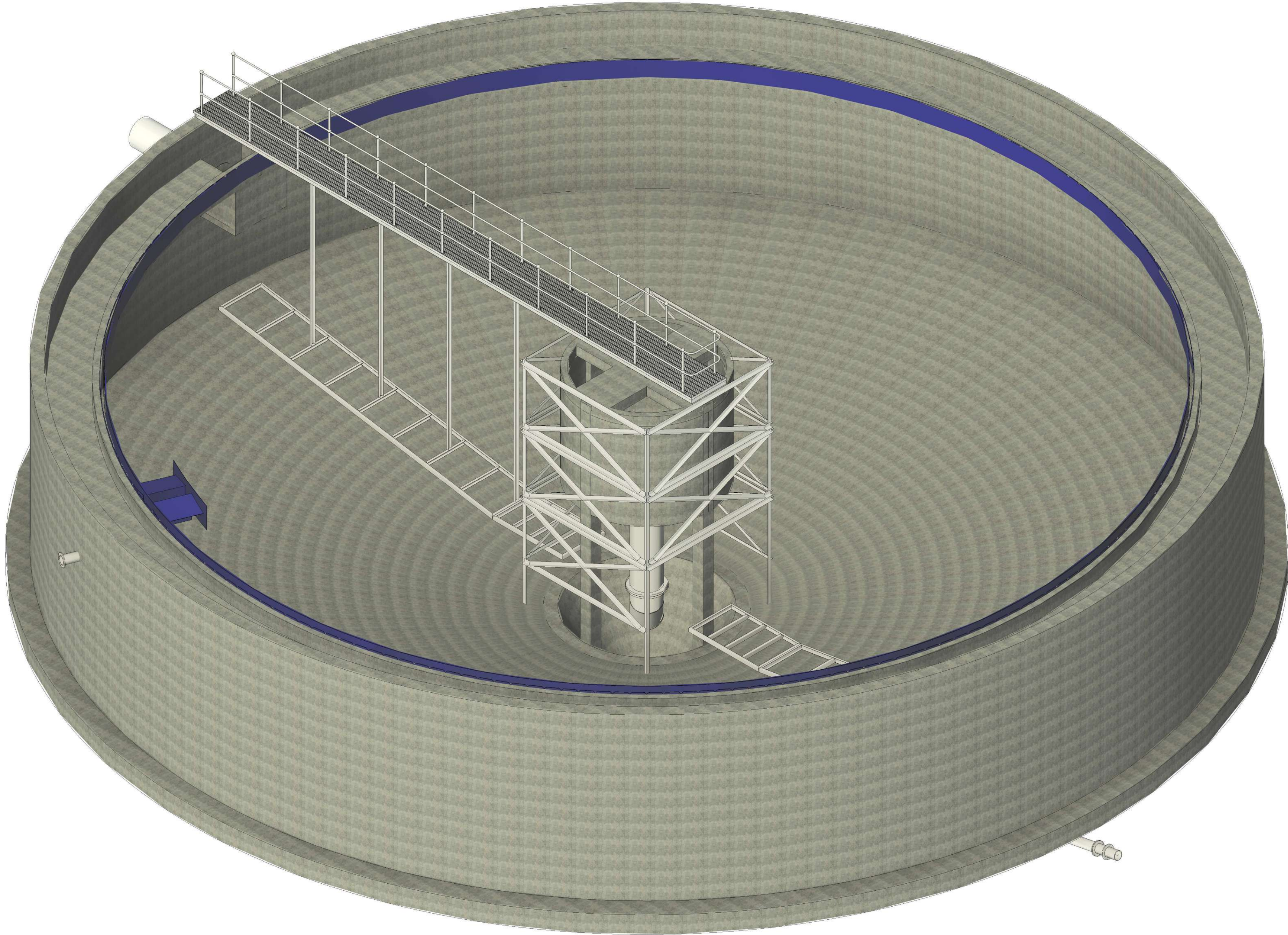
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG				DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER			
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	DESIGNED	J.S		TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529	BUSHKOPPIE WWTW PRIMARY TREATMENT PRIMARY SEDIMENTATION TANK 5 PLAN & SECTIONS REFURBISHMENT						T01	ISSUES FOR TENDER			J.S	24.03.2024	JW NUMBER	
		DRAWN	J.P									CONSULTANT'S NUMBER							
		CHECKED	J.S									18056-73-13-106							
		SERVICES CHECKED										FILE NUMBER							
		GEOTECHNICAL INVESTIGATION																	
SERVITUDES		APPROVED J. SWART																	
Pr. Eng. No.		860169																	
DATE		24.03.2024																	

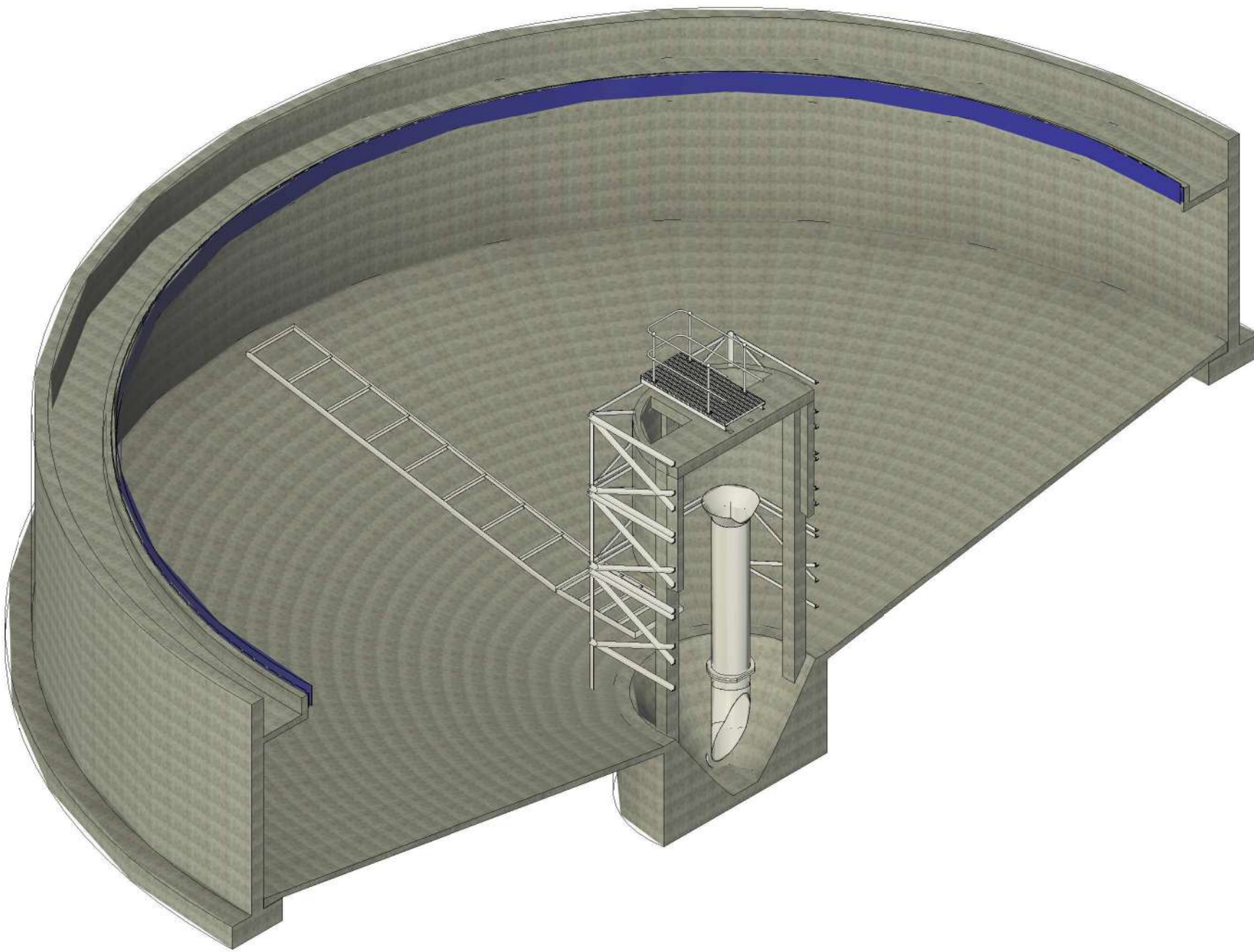


DEPARTMENT	APPROVED	DESIGNATION	DATE

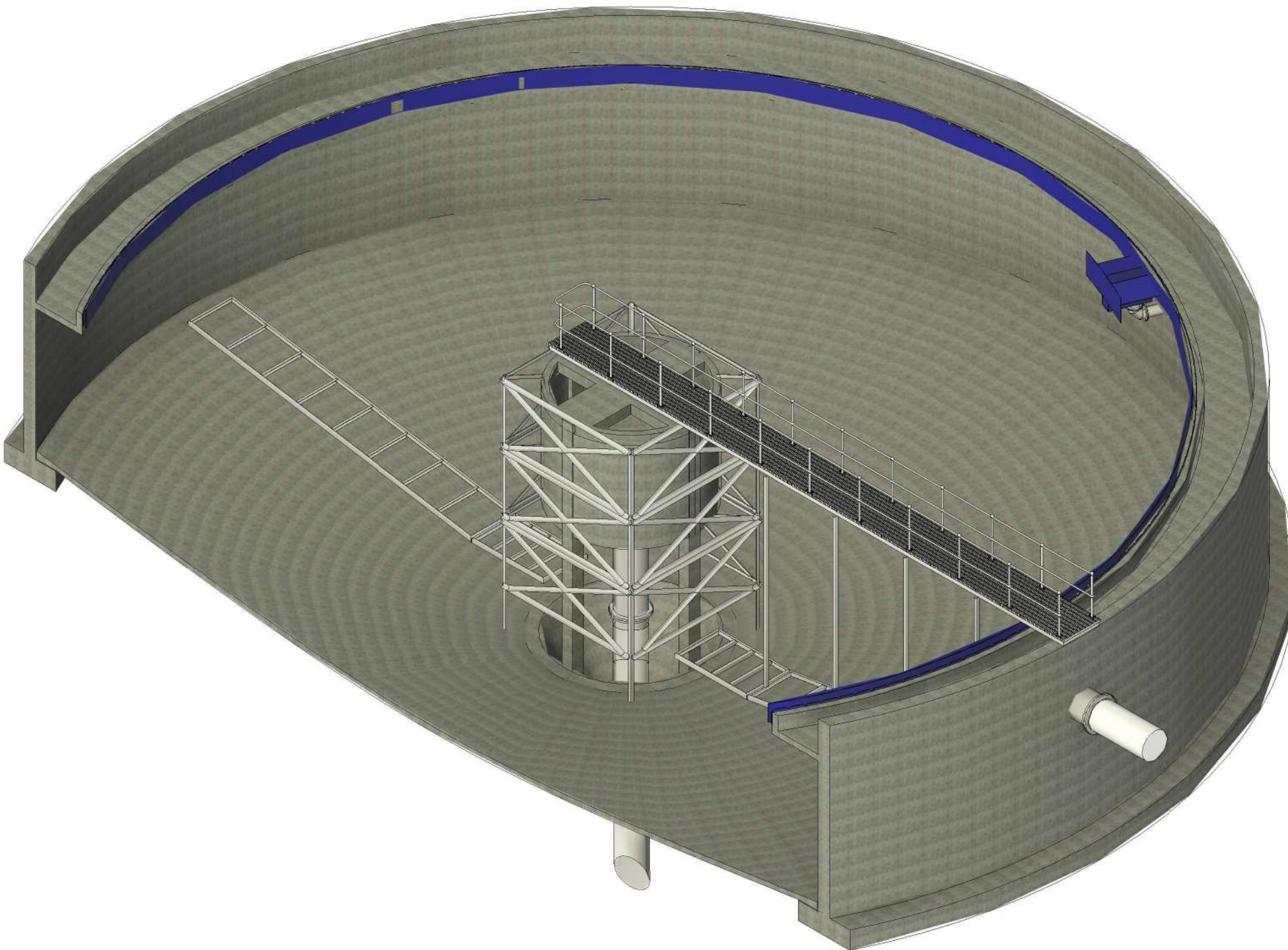
CONSULTING ENGINEERS		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG										DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING No.						
	ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE 1685 TEL: (011) 207 2060 FAX: (086) 674 6121 EMAIL: mail@zitholele.co.za	SURVEYED	J.S		TURBINE HALL 65 NTEMI PILISO STREET NEW TOWN TEL: (011) 688-1400 FAX: (011) 688-1529		BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN SITE LAYOUT GENERAL ARRANGEMENT EXISTING FERMENTERS																		
		DESIGNED	DP																T00	ISSUED FOR TENDER	JHS	12.11.2021	JW NUMBER		
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		CHECKED	J.S																				FILE No		
		SERVICES CHECKED																							
		GEOTECHNICAL INVESTIGATION																							
		SERVITUDES																							
		J. SWART																							
		Pr. Eng. No.	860169																						
		DATE	24.03.2024													T 0 1									



3D VIEW PLAN



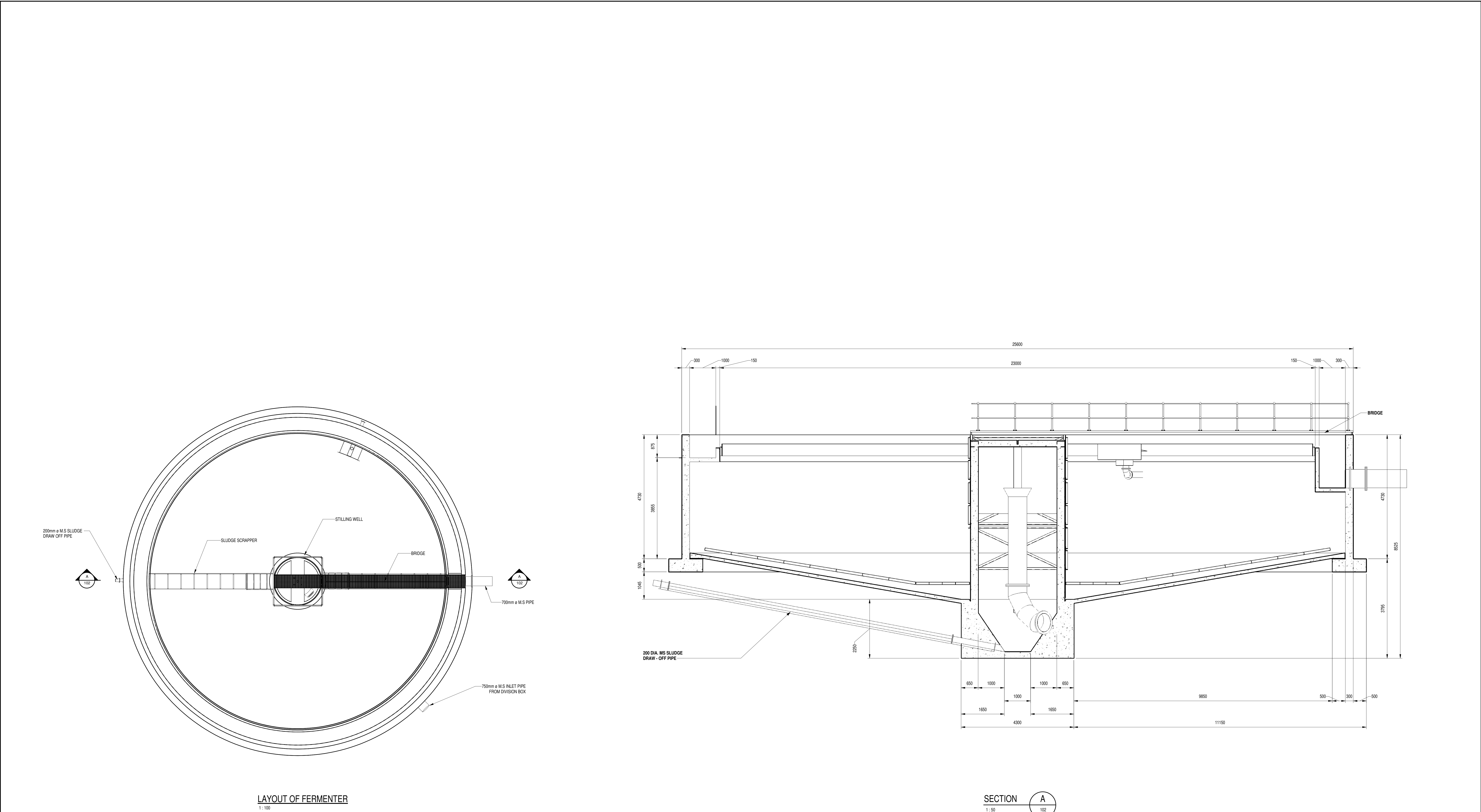
ISOMETRIC 3D VIEW A



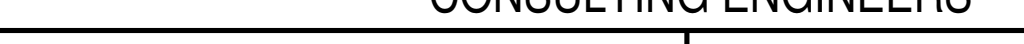
ISOMETRIC 3D VIEW B

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS				JOHANNESBURG WATER (SOC) LTD				CITY OF JOHANNESBURG										DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER			
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za				TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529			BUSHKOPPIE WWTW FERMENTER 1 & 2 GENERAL LAYOUT SECTIONS AND DETAILS AS BUILT												T01	ISSUED FOR TENDER	J.S	24.03.2024	JW NUMBER			
																				CONSULTANT'S NUMBER							
																				18056-73-14-101							
																				FILE NUMBER							
Z:\Projects\18056 - BK Infrass Renewal Plan\7 Drawings\173 Civil\14 FERMENTER TANKS\18056-73-14-100 FERMENTER TANK-AS BUILT.rvt				APPROVED J. SWART Pr. Eng. No. 860169 DATE 24.03.2024				DATE																			

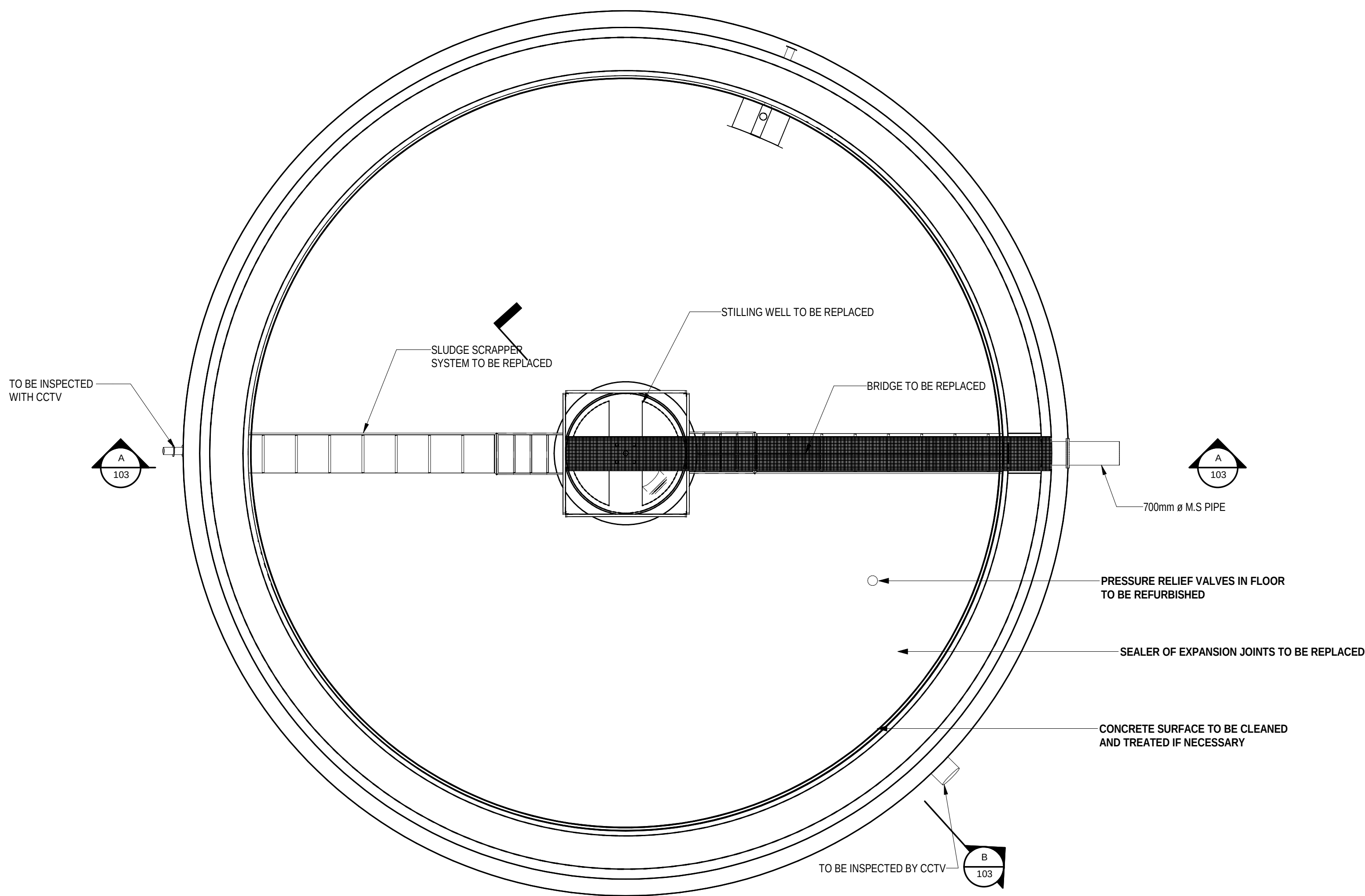


DEPARTMENT	APPROVED	DESIGNATION	DATE

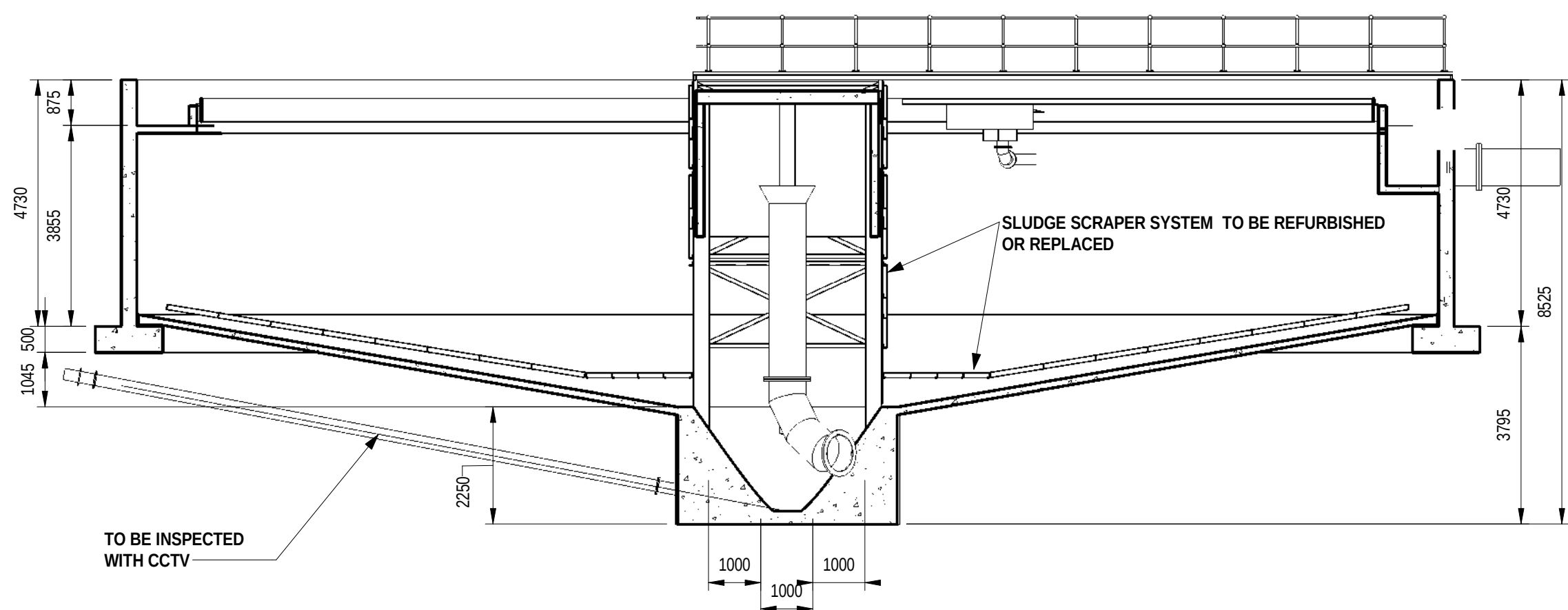
CONSULTING ENGINEERS		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG		DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER		
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	SURVEYED			TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529			T01	ISSUED FOR TENDER	J.S	24.03.2024	JW NUMBER		
		DESIGNED	J.S									CONSULTANT'S NUMBER		
		DRAWN	J.P									18056-73-14-102		
		CHECKED	J.S									FILE NUMBER		
		SERVICES CHECKED												
		GEOTECHNICAL INVESTIGATION				DATE								
		SERVITUDES												
		APPROVED	J. SWART											
		Pr. Eng. No.	860169											
		DATE	24.03.2024											



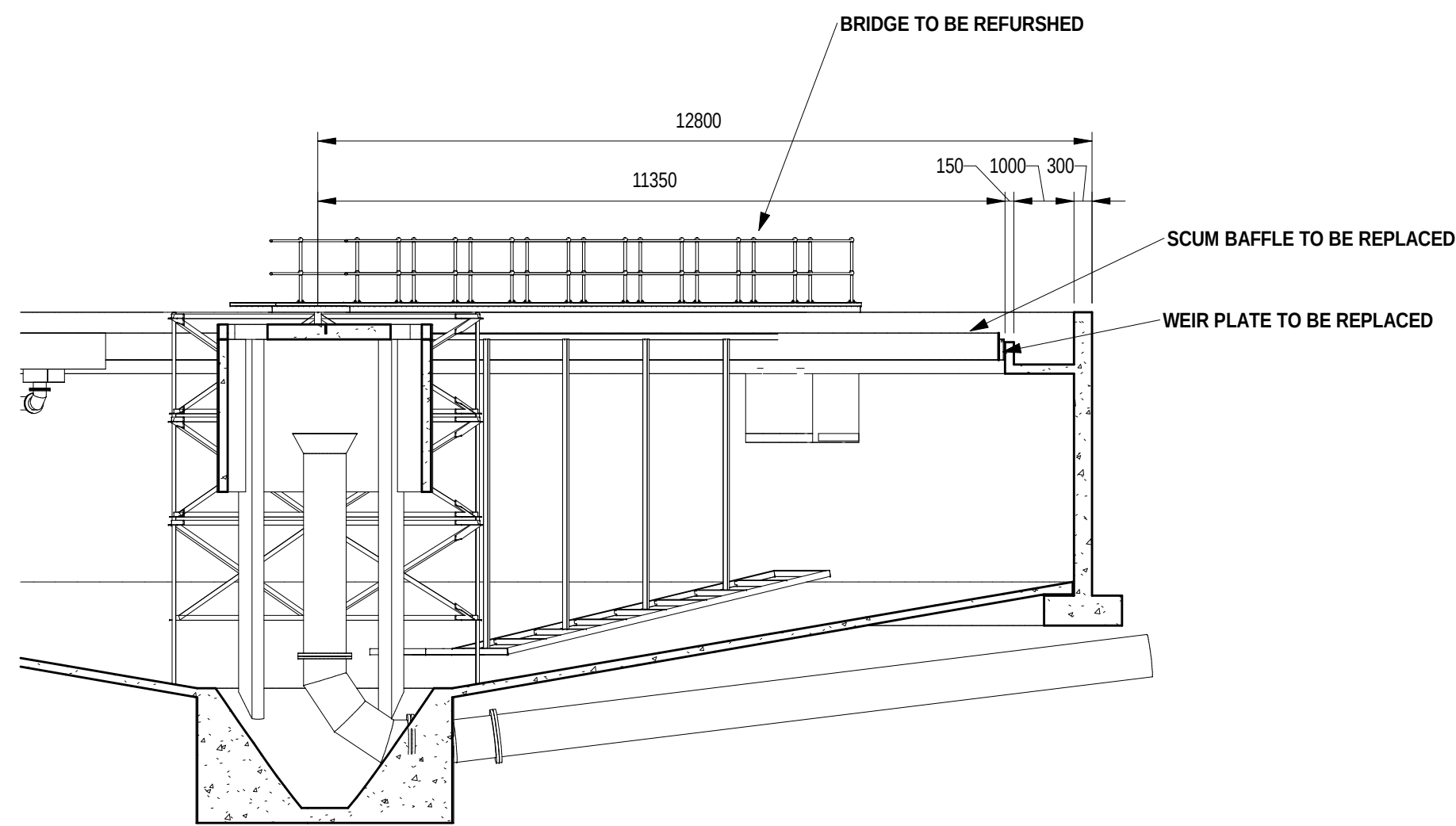
DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER	
		T01	ISSUED FOR TENDER	J.S	24.03.2024	JW NUMBER	
						CONSULTANT'S NUMBER 18056-73-14-103	
						FILE NUMBER	
DATE						T	0
						1	



LAYOUT OF FERMENTER REFURBISHMENT
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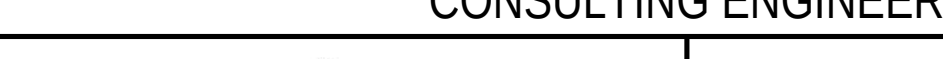


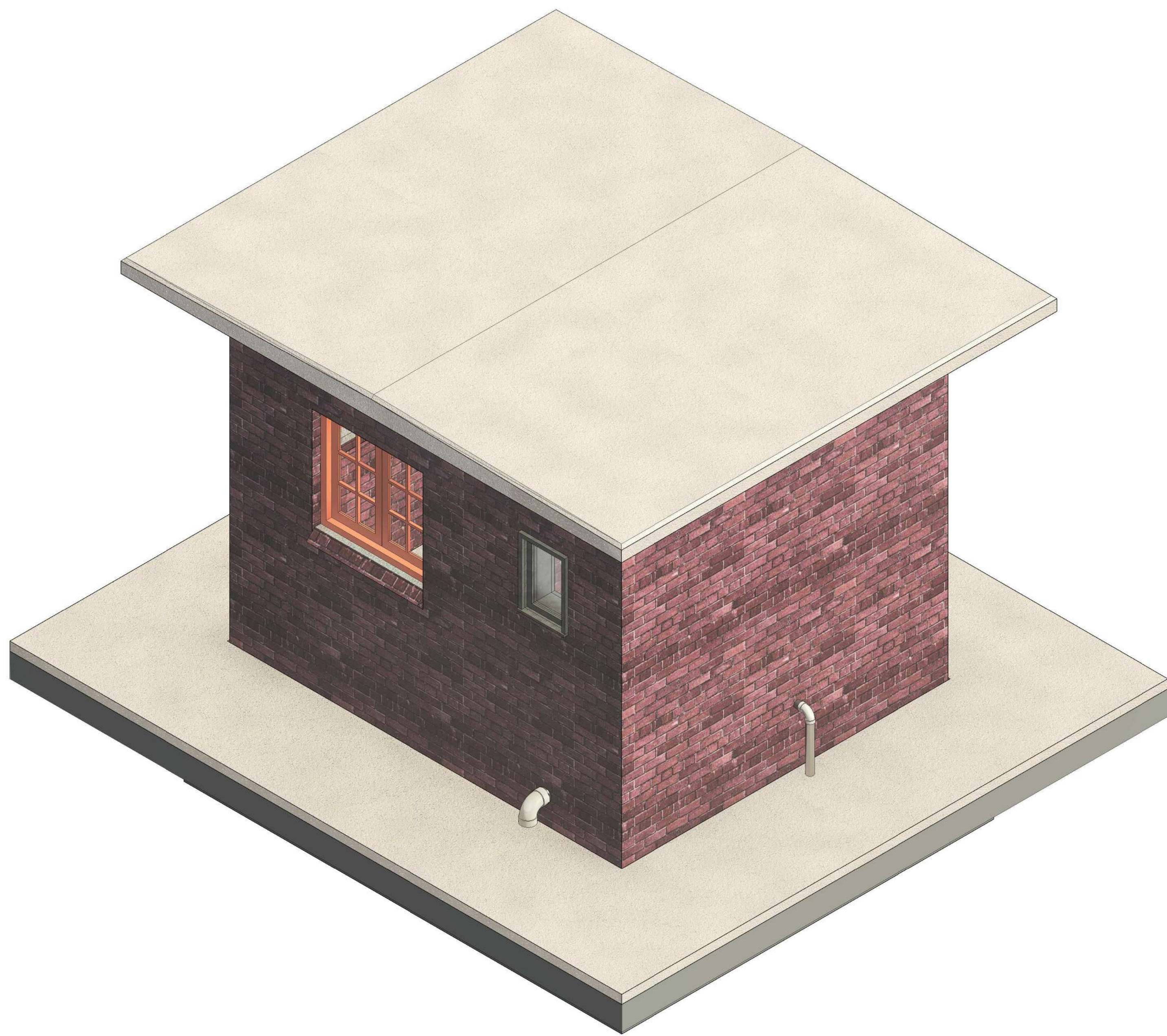
SECTION A
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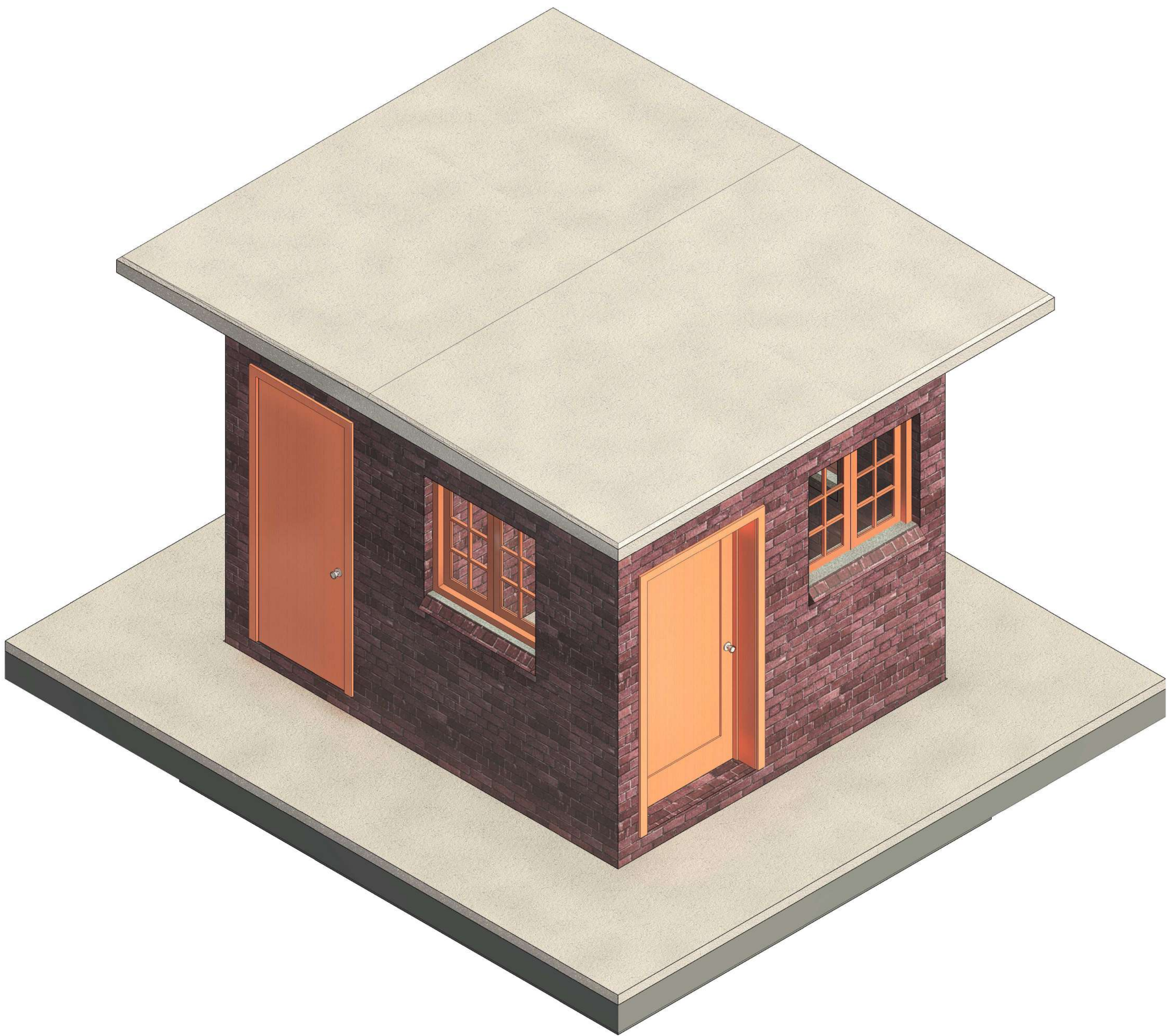
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DEPARTMENT	APPROVED	DESIGNATION	DATE

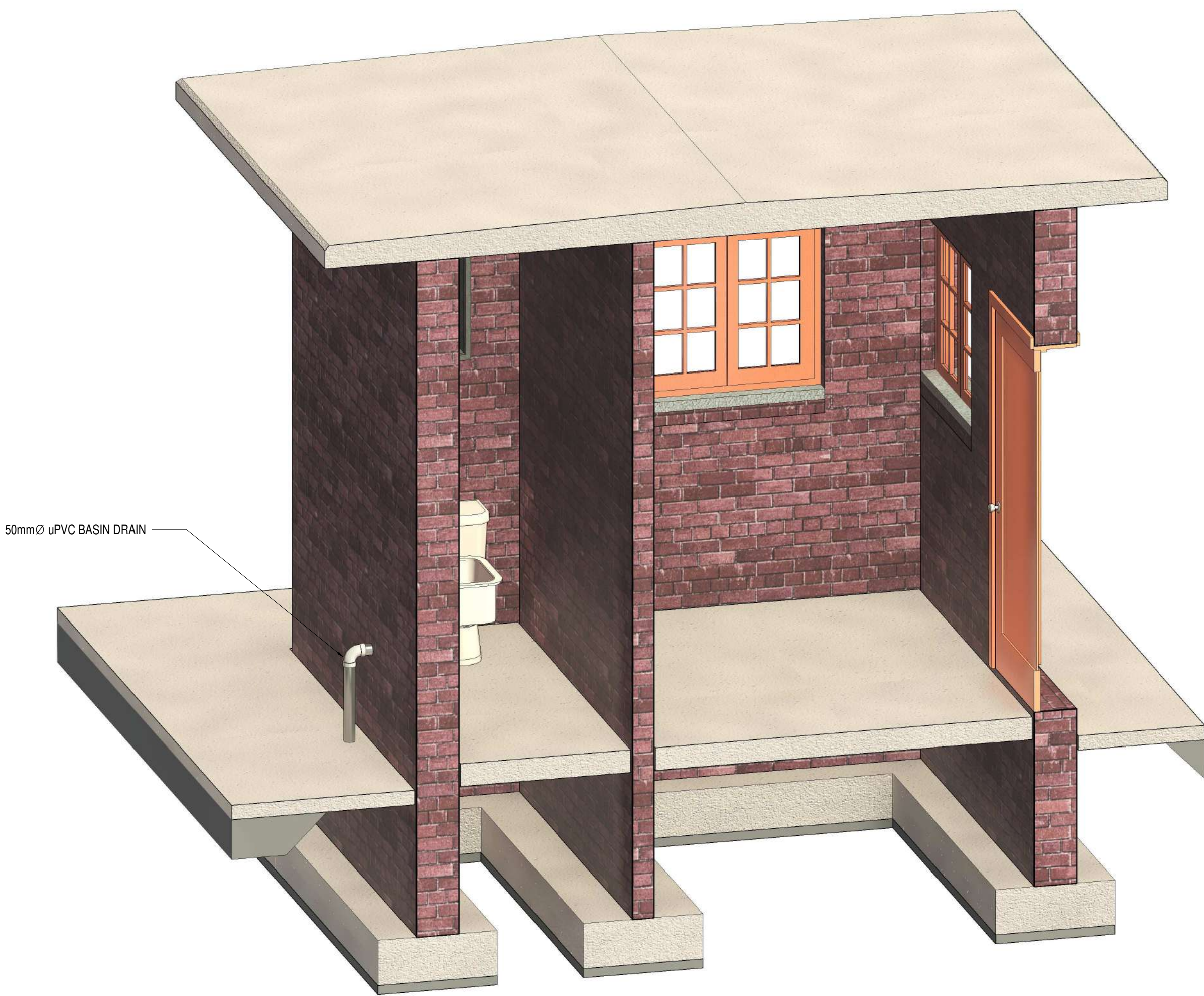
CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG		DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER	
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-254 4800 FAX. 011-805 2100 EMAIL mail@zitholele.co.za	DESIGNED	J.S		T01 ISSUED FOR TENDER					JW NUMBER					
		DRAWN	J.P							CONSULTANT'S NUMBER					
		CHECKED	J.S							18056-73-14-103					
		SERVICES CHECKED								FILE NUMBER					
		GEOTECHNICAL INVESTIGATION													
		SERVITUDES				DATE									
		APPROVED	J. SWART							T	0	1			
		Pr. Eng. No.	860169												
		DATE	24.03.2024												



SOUTH EASTERN 3D VIEW



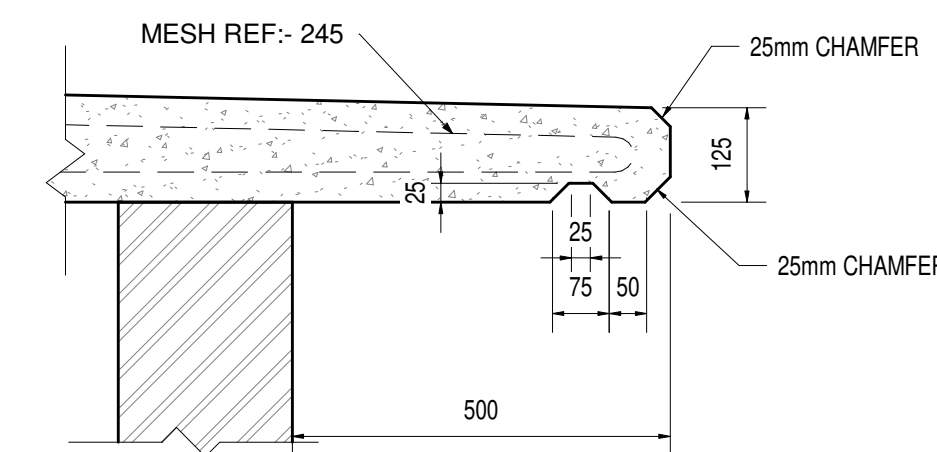
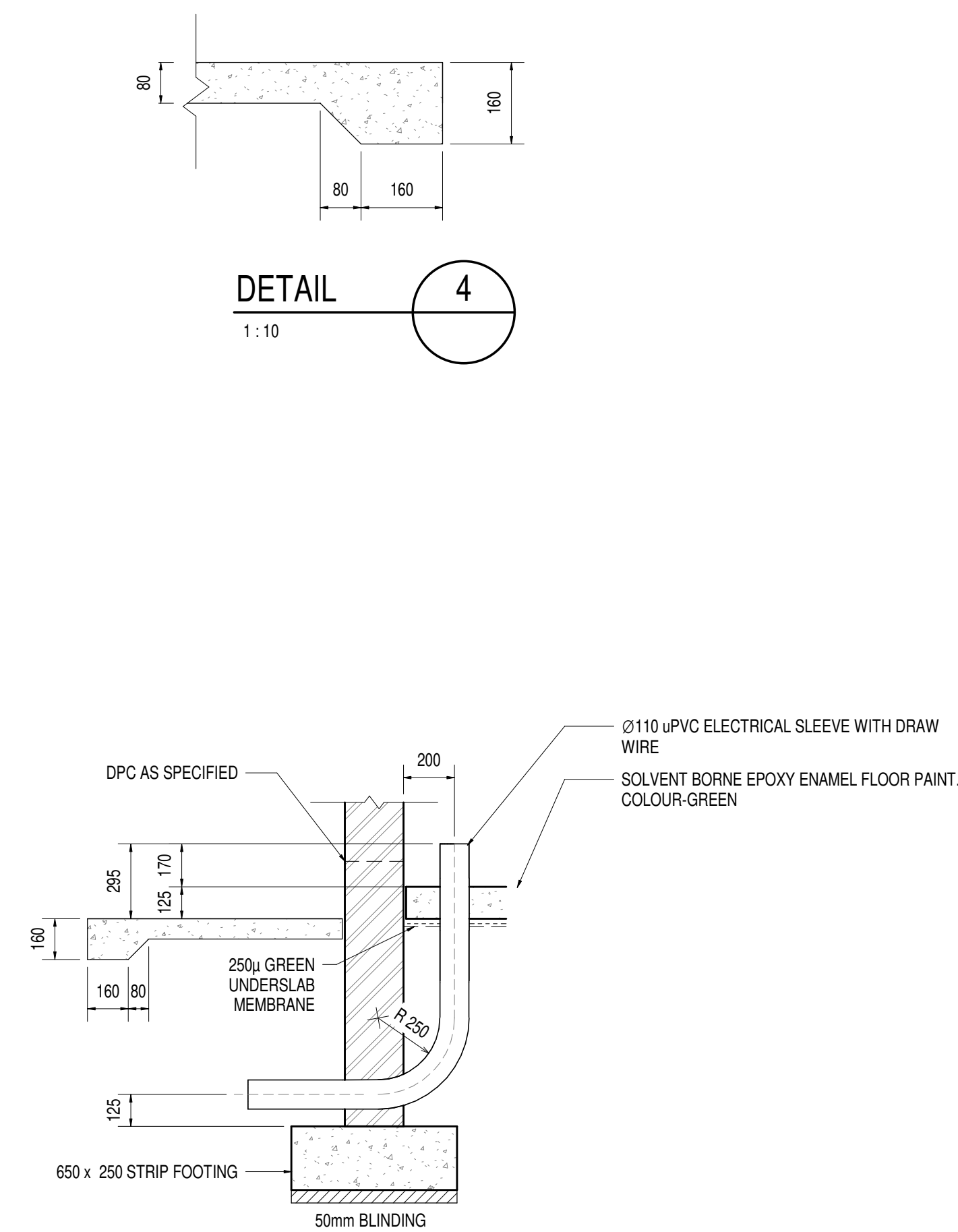
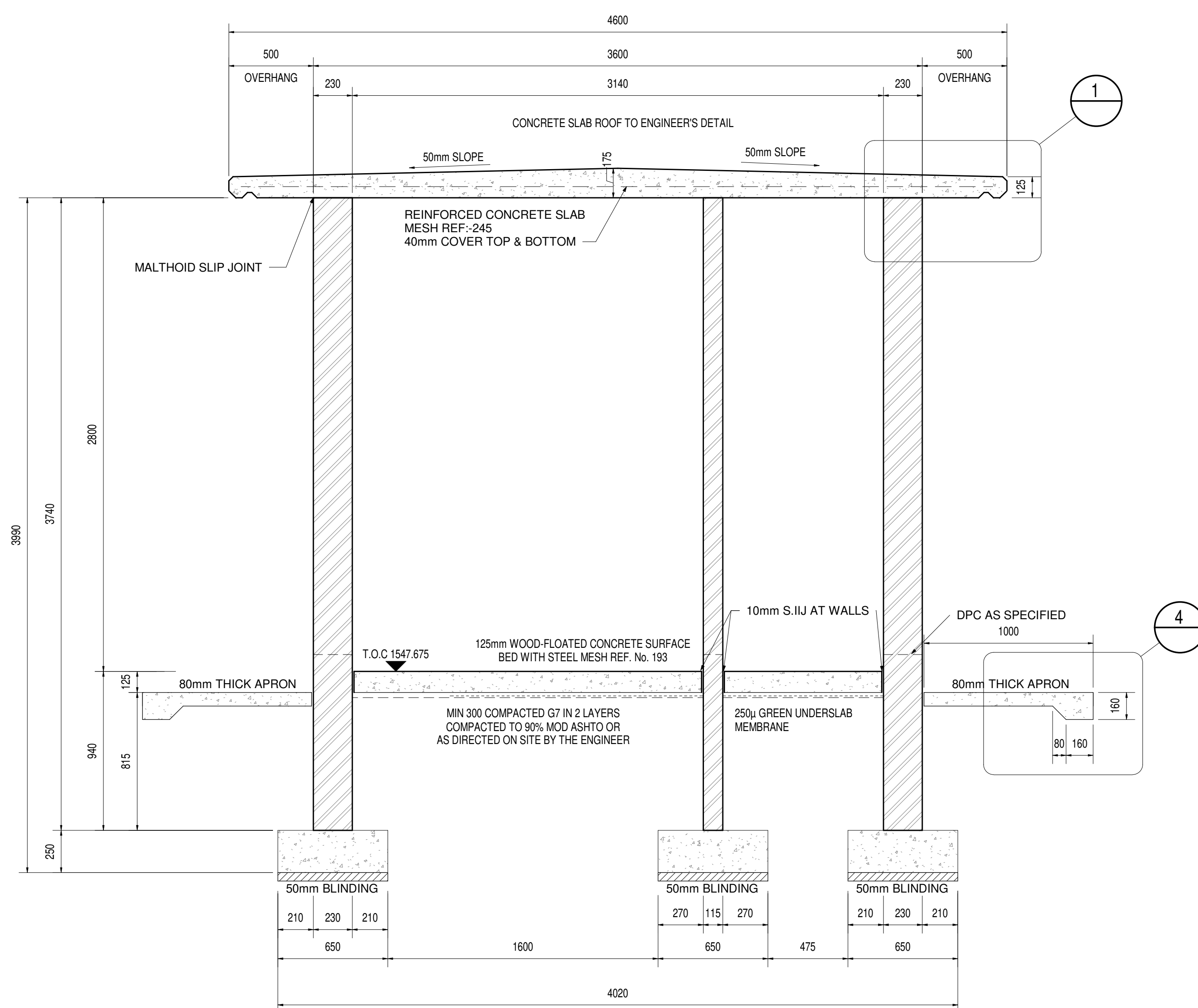
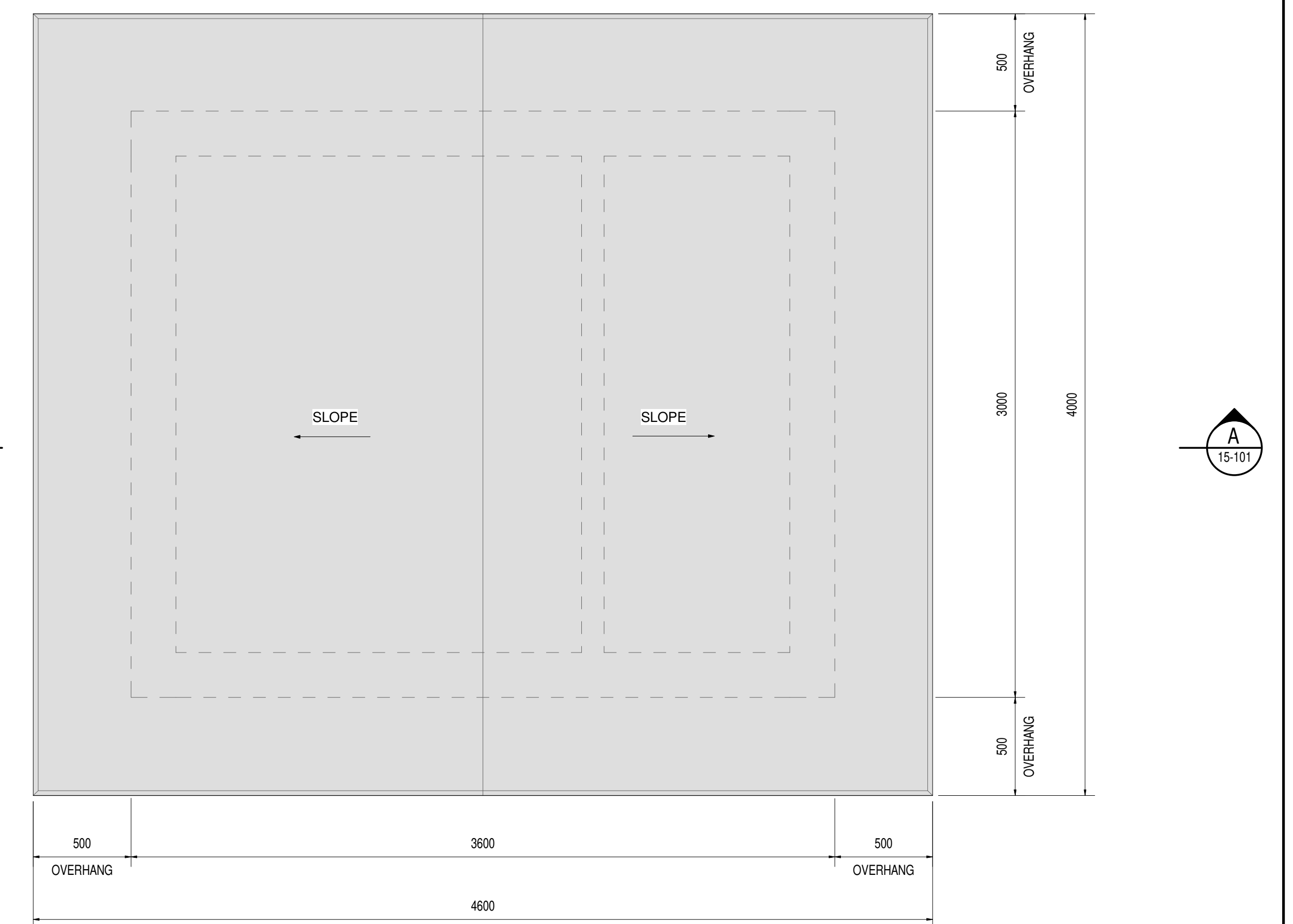
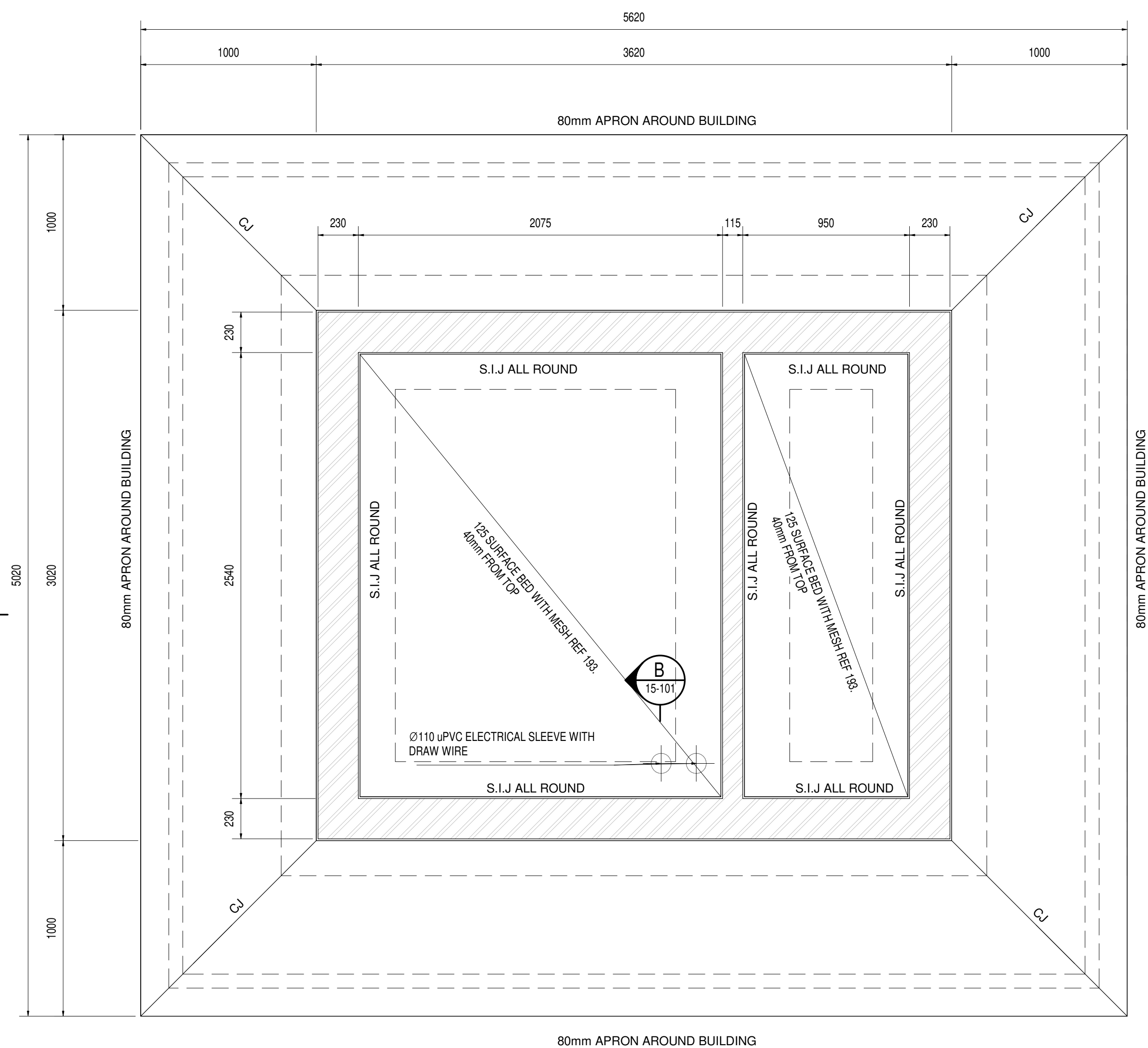
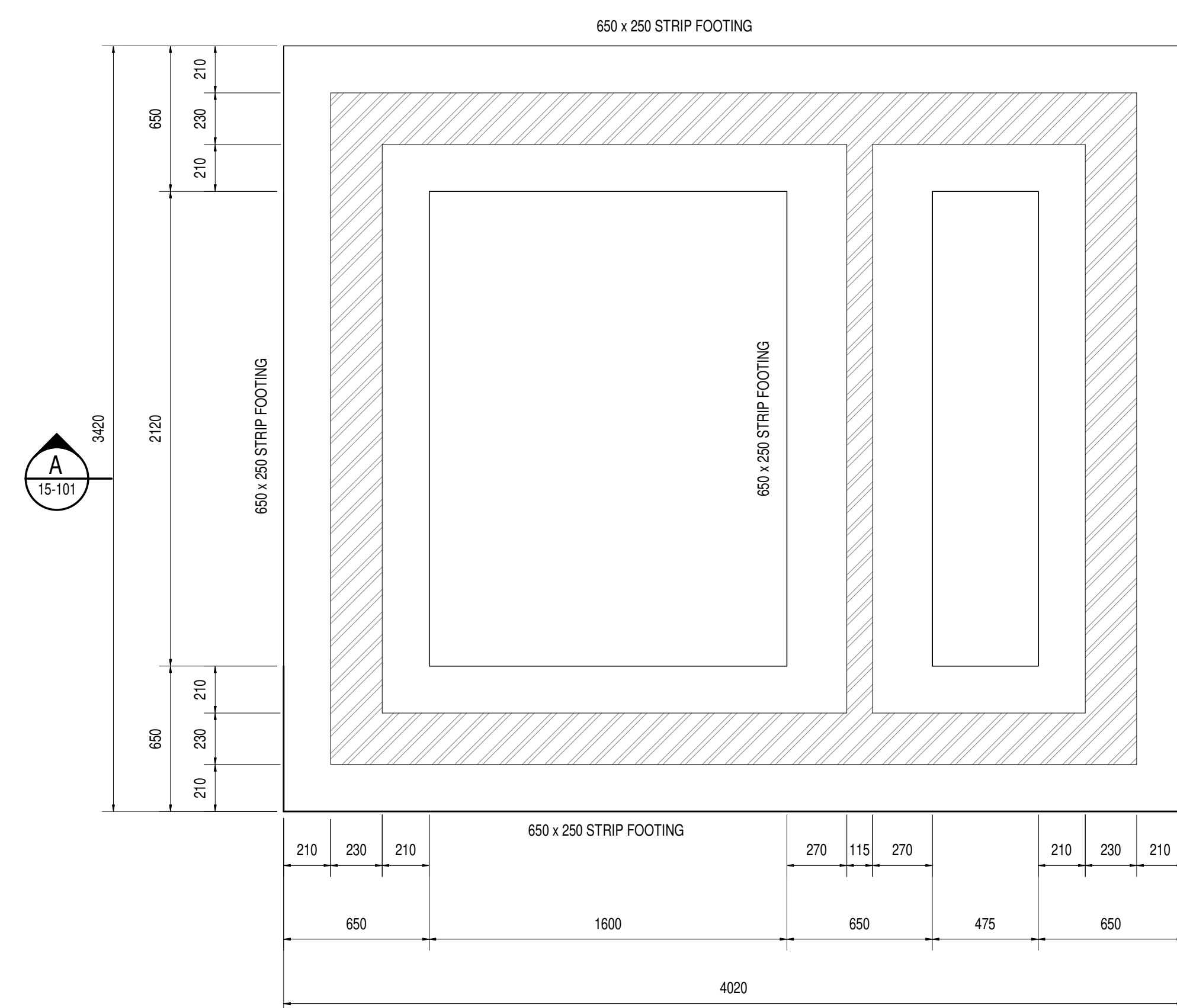
NORTH WESTERN 3D VIEW

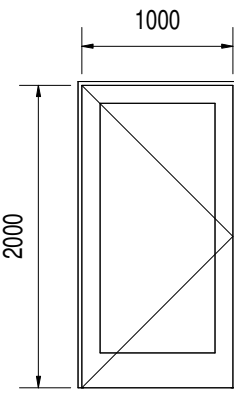
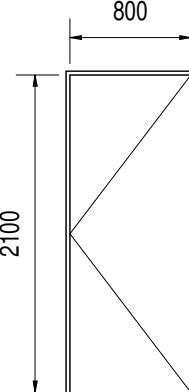


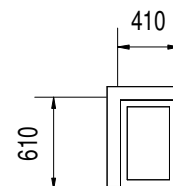
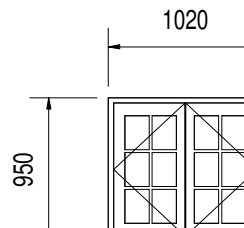
SECTION 3D VIEW

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS				SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG						DESIGN MANAGER	SCALE	AMENDMENTS		APPROVED	DATE	DRAWING NUMBER	
ZITHOLELE CONSULTING				DESIGNED	GK	Johannesburg Water		BUSHKOPPIE WASTEWATER TREATMENT WORKS								T00	ISSUED FOR TENDER	J.H.S	12.11.2021	JW NUMBER	
				DRAWN	NM											T01	DRAWING UPDATED	GK	24.03.2024	CONSULTANT'S NUMBER	
ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-207 2060 FAX. 086 674 6121 EMAIL mail@zitholele.co.za				CHECKED	GK	TURBINE HALL 65 NTEM PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529		INFRASTRUCTURE RENEWAL PLAN MISCELLANEOUS BUILDINGS GUARD HOUSE 3D VIEWS												18056-73-15-110	
				SERVICES CHECKED																FILE NUMBER	
				GEOTECHNICAL INVESTIGATION																	
				SERVITUDES																	
				APPROVED	J.D. KVEVLI							DATE									
				Pr. Eng. No.	960406																
				DATE	24.03.2024													T 0 1			



	DOORS	
	DESCRIPTION	QTY
	D1 : 1000mm x 2000mm HIGH SINGLE PANEL STEEL COMBINATION DOOR & FRAME WITH EXTERNAL SECURITY GATE.	1
	D2 : 800mm x 2100mm HIGH STANDARD SEMI-SOLID DOOR TO BE SUPPLIED WITH FRAME, CASH HOOK AND A LEVEL 3 LOCK SET COMPLETE WITH TWO KEYS. ALL FITTINGS, DOOR RESTRAINTS AND HINGES SOLID BRASS	1

		WINDOWS	
		DESCRIPTION	
		W1- SS40 - INDUSTRIAL TYPE WINDOW: 410mm x 610mm - M FIXED WITH TRIM INCLUDING 12mm DIA MS BUNGALAI PROOFING ON FULL FACE OF WINDOW, GLAZED AND PAINTED TO SYSTEM A2.	1
		W2- SS40 - INDUSTRIAL TYPE WINDOW: 1020mm x 960mm- DOUBLE SHUTTER WITH MELLON, ALUMINUM WINDOW WITH HORIZONTAL PIVOT HUNG VENTILATOR INCLUDING 12mm DIA MS BUNGALAI PROOFING ON FULL FACE OF WINDOW, GLAZED AND PAINTED TO SYSTEM A2.	3

DOOR & WINDOW SCHEDULE

DEPARTMENT	APPROVED	DESIGNATION	DATE

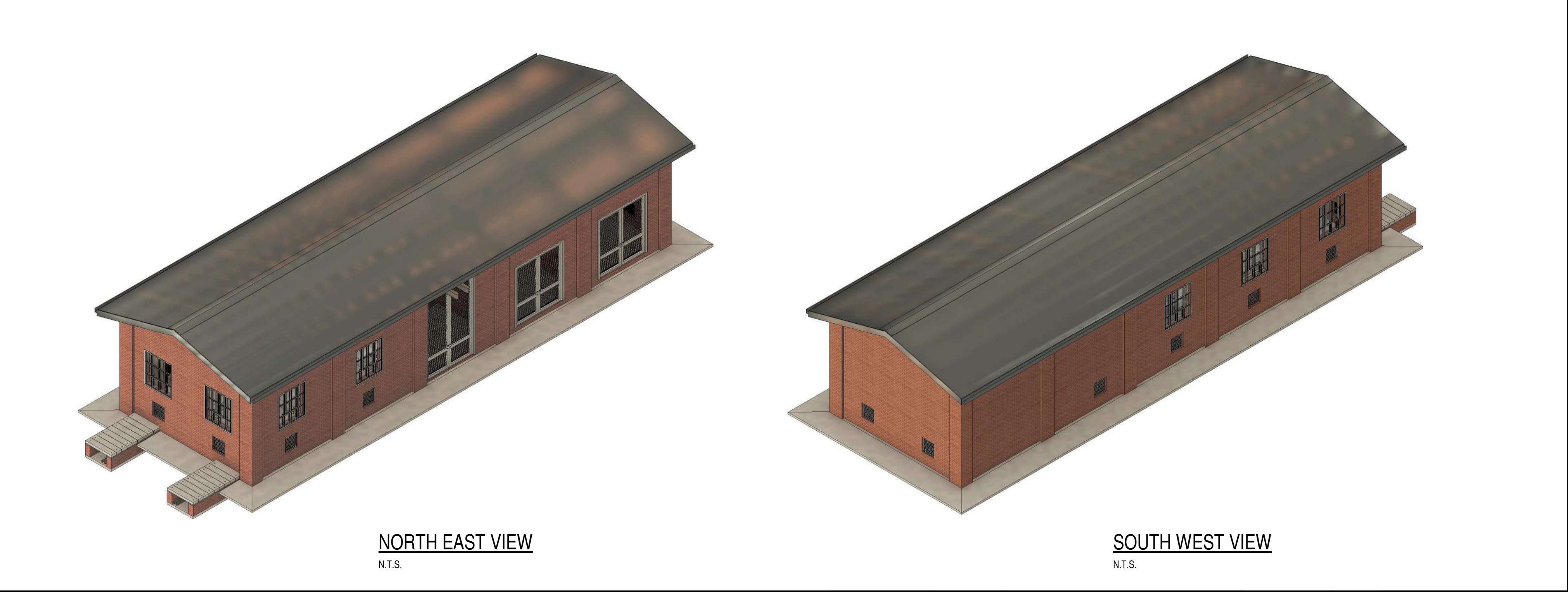
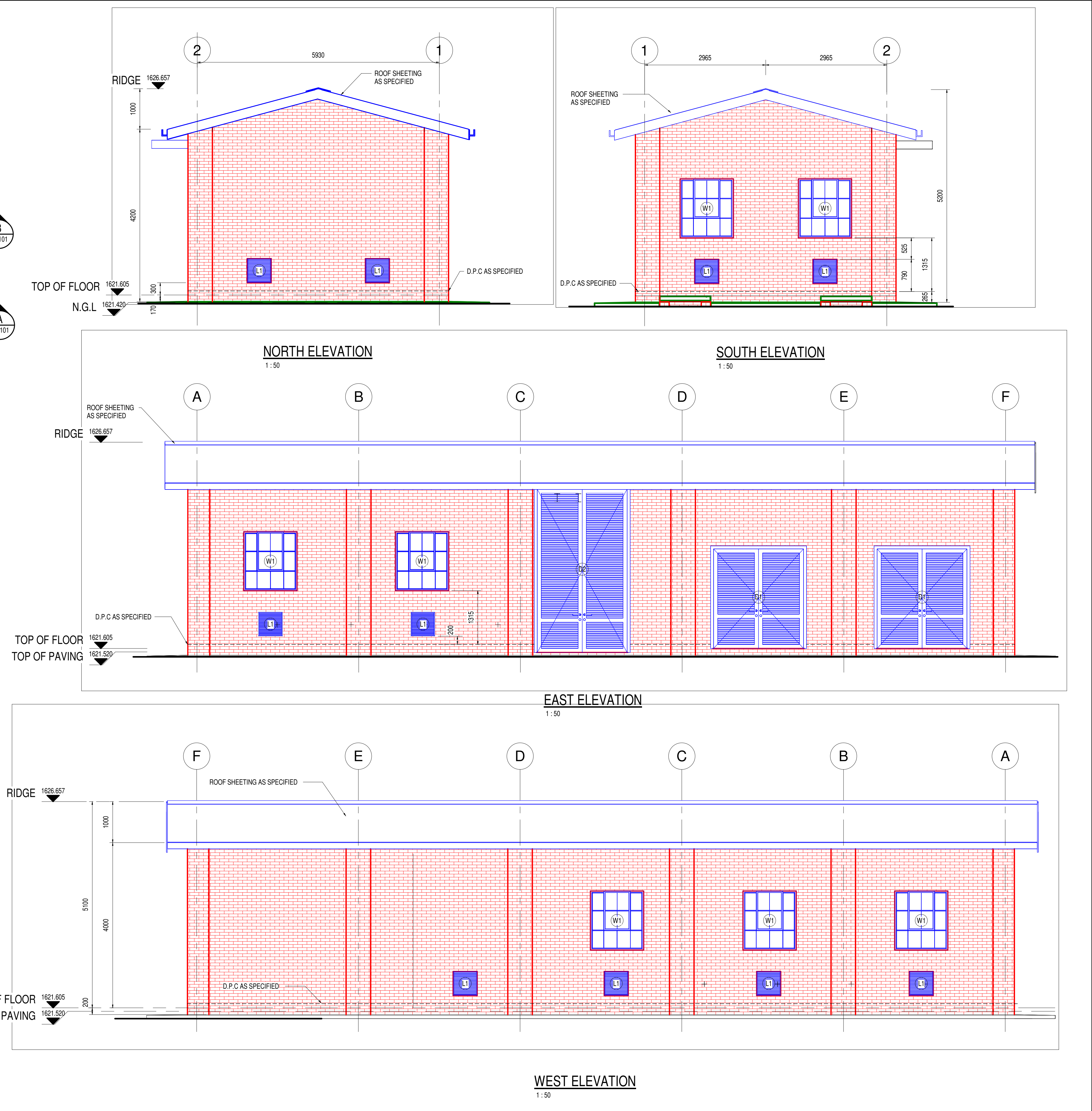
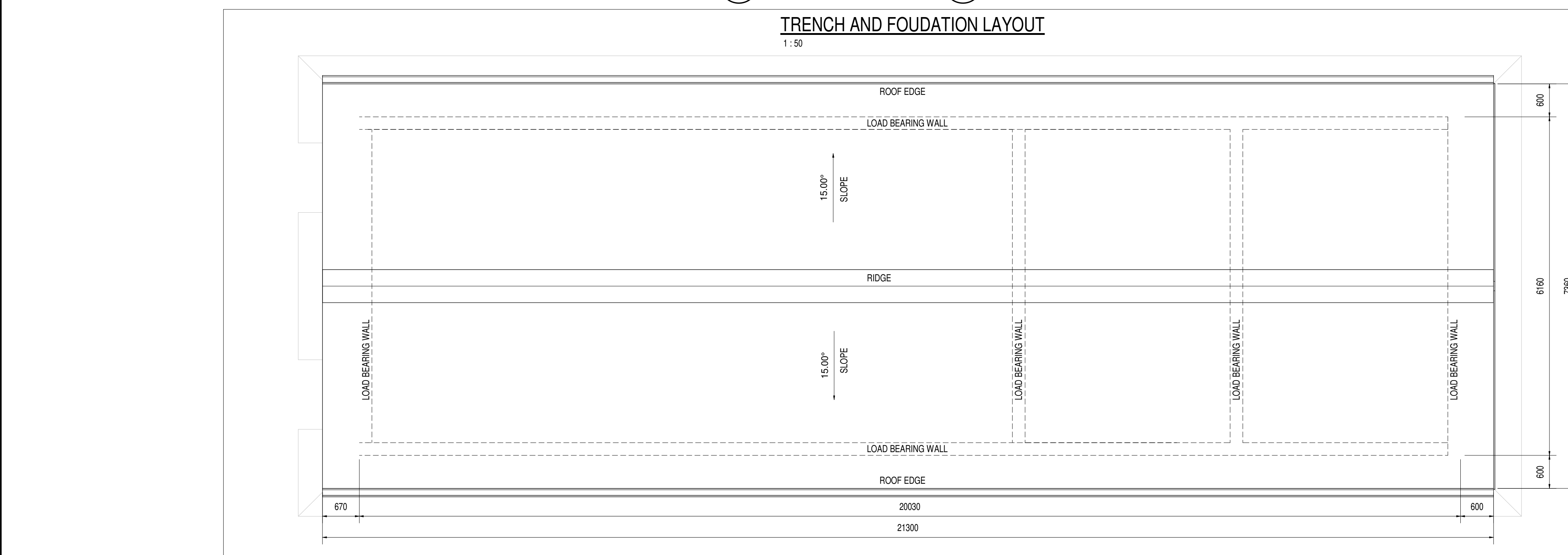
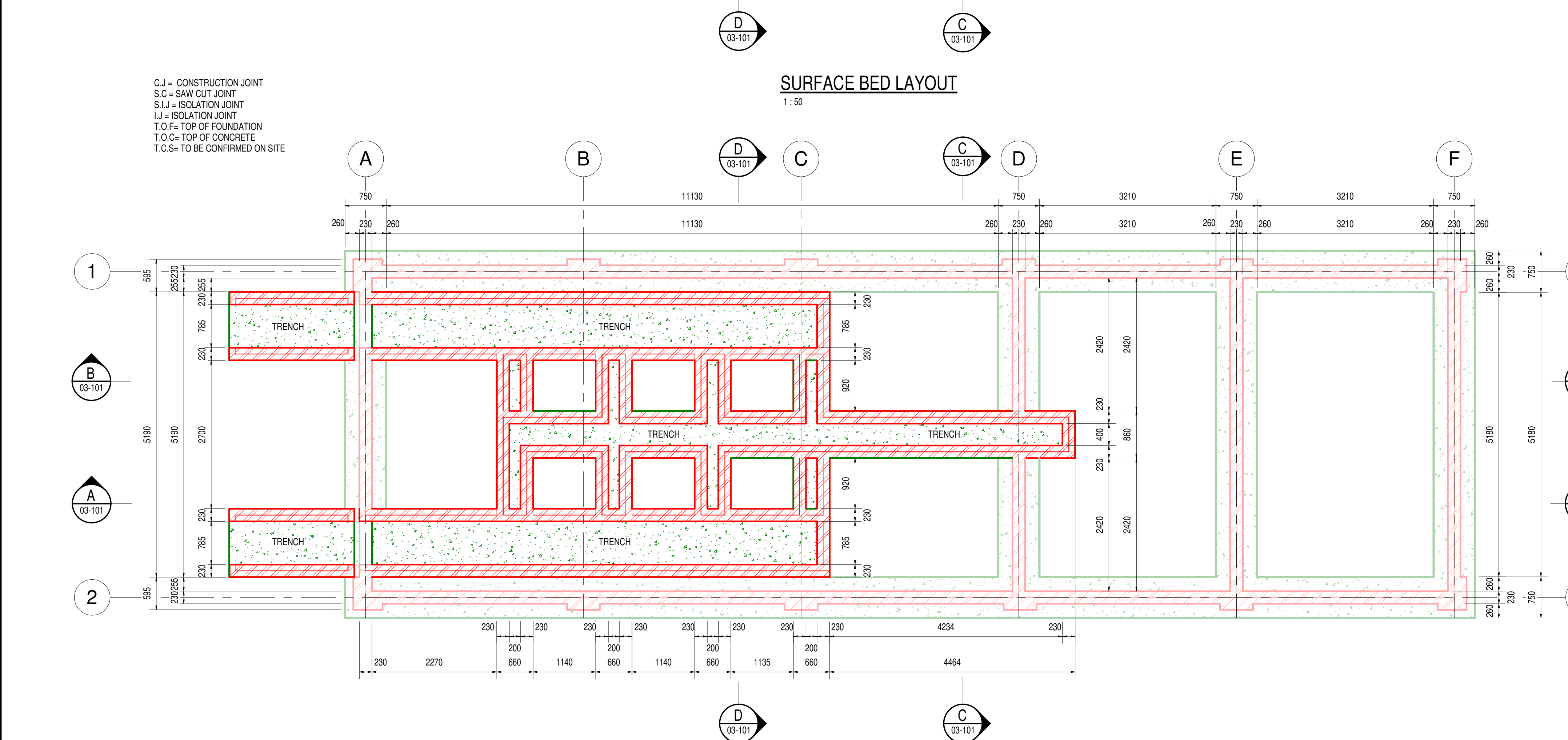
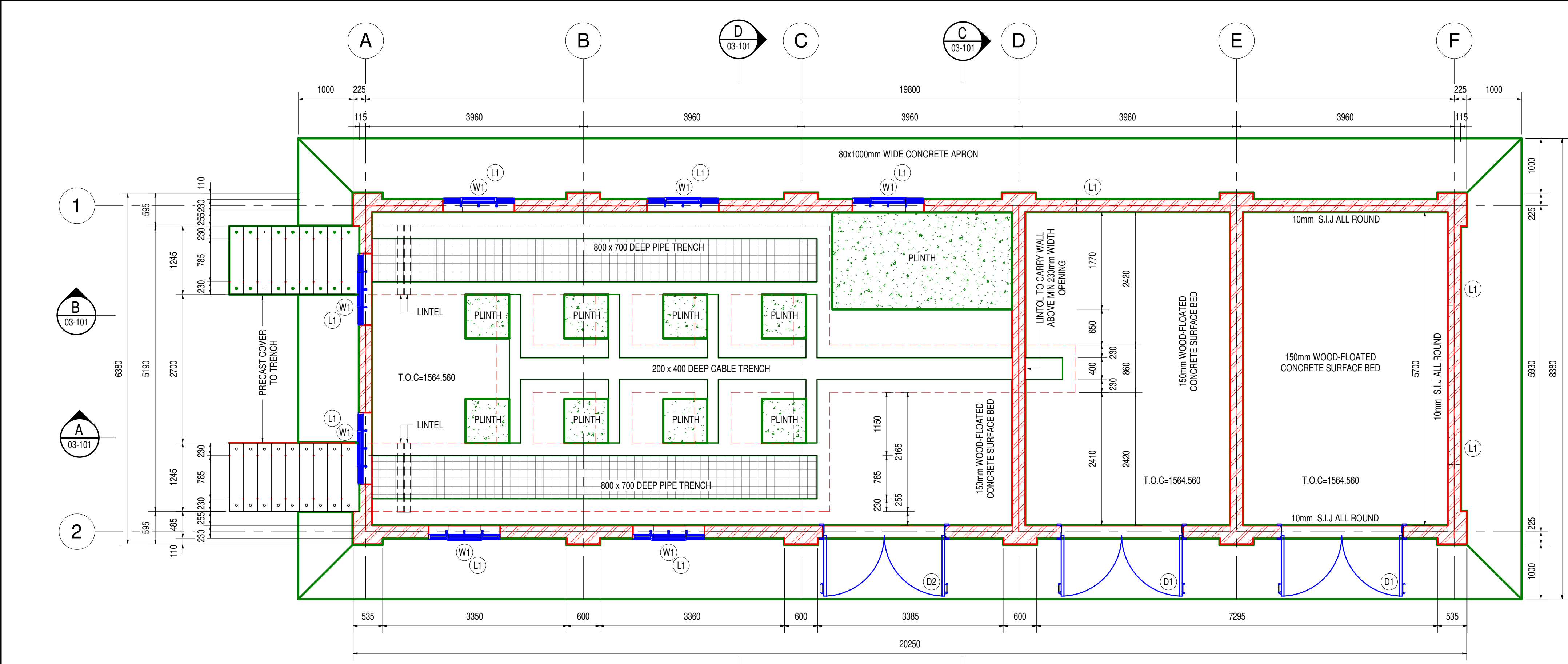
CONSULTING ENGINEERS	
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1685 TEL. 011-207 2060 FAX. 086 674 6121 EMAIL mail@zitholele.co.

SURVEYED	
DESIGNED	GK
DRAWN	NM
CHECKED	GK
SERVICES CHECKED	
GEOTECHNICAL INVESTIGATION	
SERVITUDES	
APPROVED	J.D. KVEVLI
Pr. Eng. No.	960406
DATE	24.03.2024

JOHANNESBURG WATER (SOC) LTD	
 Johannesburg Water	TURBINE HALL 65 NTEMI PILISO STREET NEWTOWN TEL: (011) 688 1400 FAX: (011) 688 1529

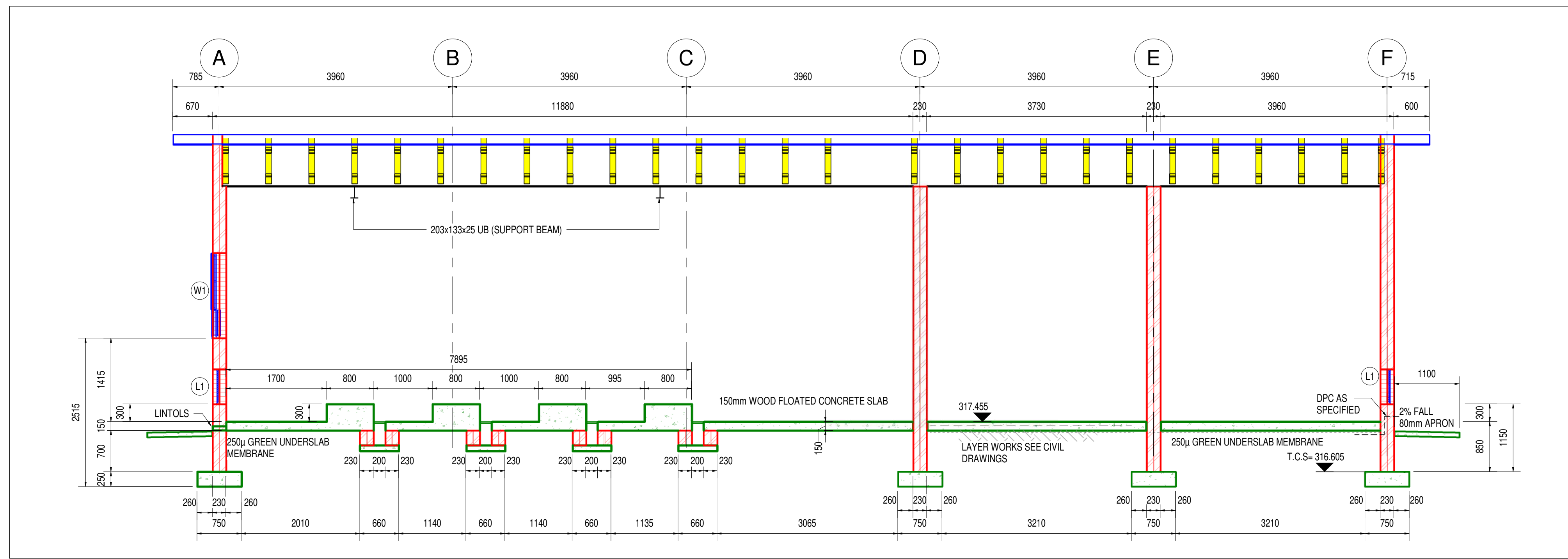
	CITY OF JOHANNESBURG
	BUSHKOPPIE WASTEWATER TREATMENT WORKS
	INFRASTRUCTURE RENEWAL PLAN
	MISCELLANEOUS BUILDINGS
	GUARD HOUSE
	LAYOUTS, SECTIONS & DETAILS

DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING NUMBER
DATE	AS SHOWN	T00 ISSUED FOR TENDER	JHS	12.11.2021	JW NUMBER
		T01 DRAWING UP DATED	GK	24.03.2024	CONSULTANT'S NUMBER 18056-73-15-101
					FILE NUMBER

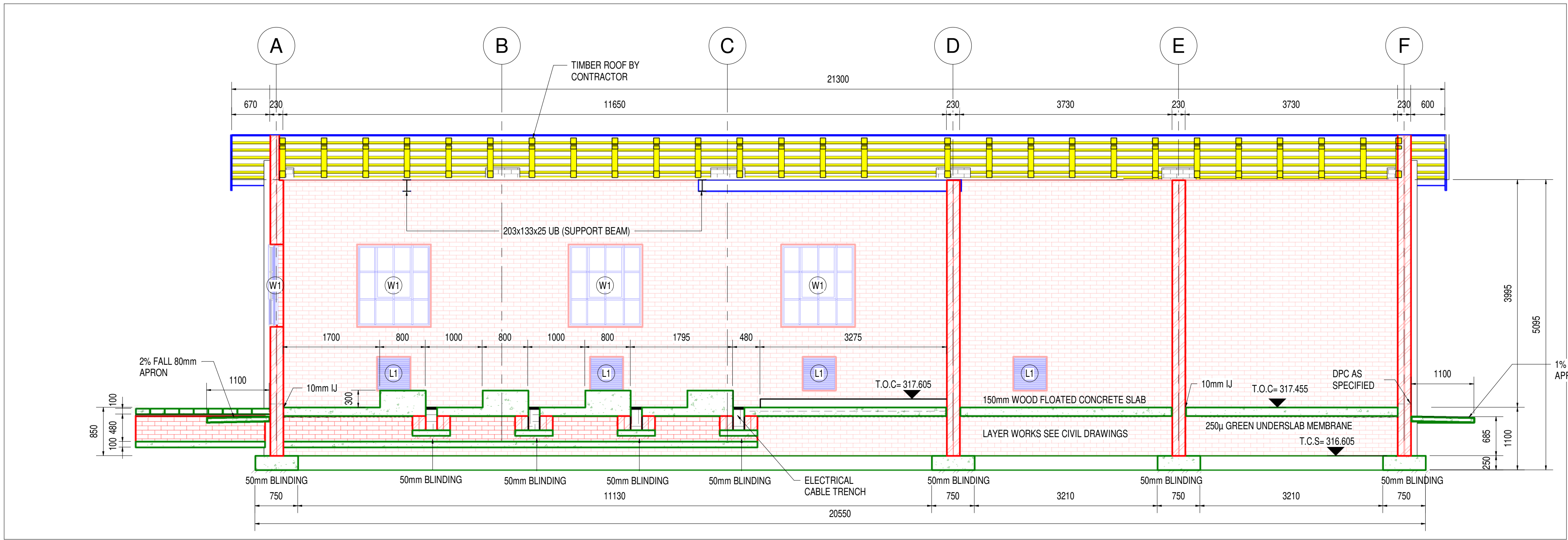


DEPARTMENT	APPROVED	DESIGNATION	DATE

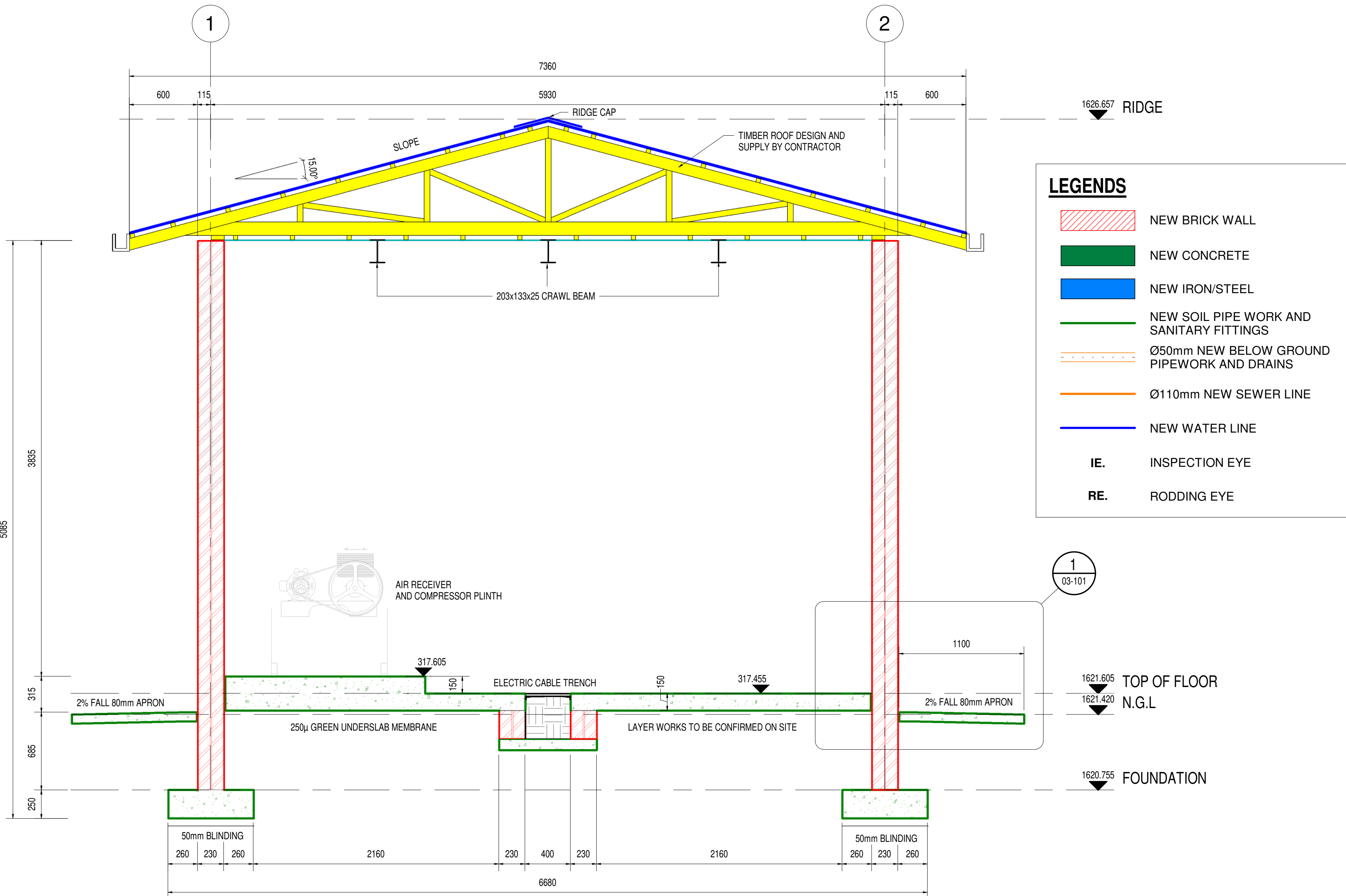
CONSULTING ENGINEERS				JOHANNESBURG WATER (SOC) LTD				CITY OF JOHANNESBURG				BUSHKOPPIE WASTEWATER TREATMENT WORKS				DESIGN MANAGER				SCALE				AMENDMENTS				APPROVED				DATE				DRAWING NUMBER			
ZITHOLELE				SURVEYED				TURBINE HALL				100				AS SHOWN				1:50				ISSUED FOR TENDER				ST				25/05/2024				JW NUMBER			
P.O. BOX 6002				DRAWN				65 NTEM PILISO STREET																															
HALFWAY HOUSE				CHECKED				NEWTOWN																															
1685				SERVICES CHECKED																																			
TEL. 011-207 2060				GEOTECHNICAL INVESTIGATION																																			
FAX. 086 674 6121				SERVITUDES																																			
EMAIL. mail@zitholele.co.za				APPROVED																																			
				Pr. Eng. No.																																			
				DATE																																			



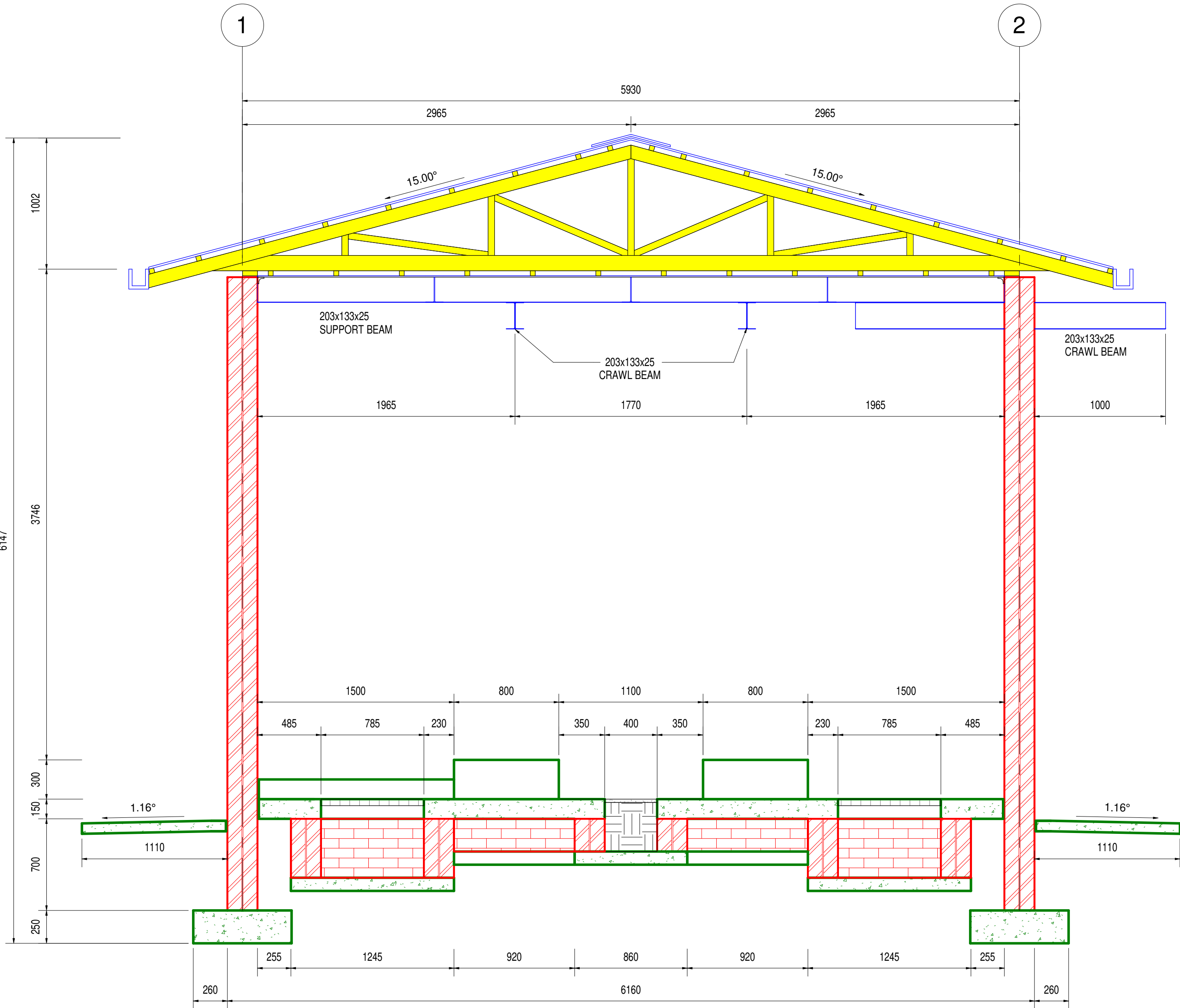
SECTION A
1:50



SECTION B
1:50



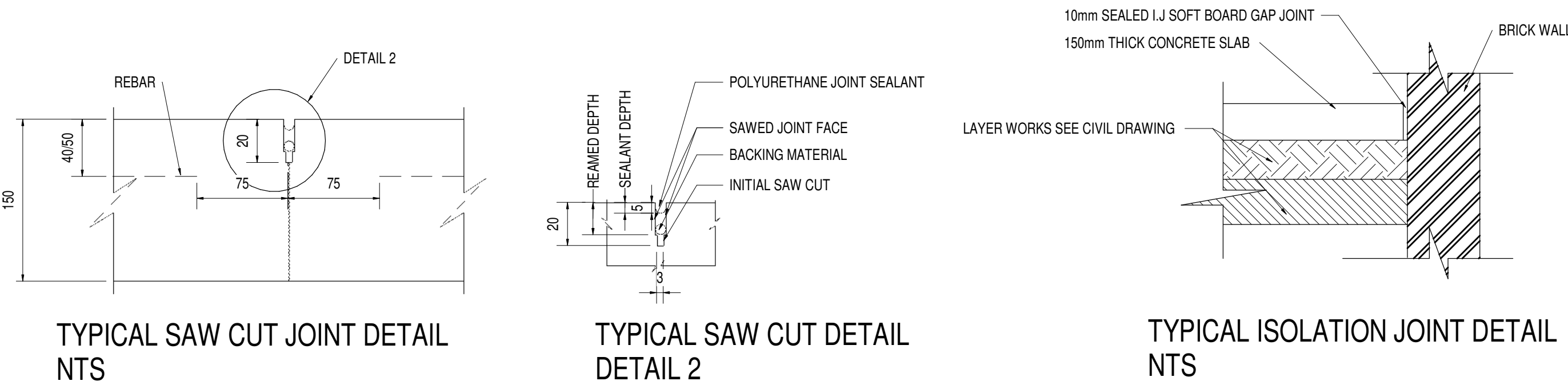
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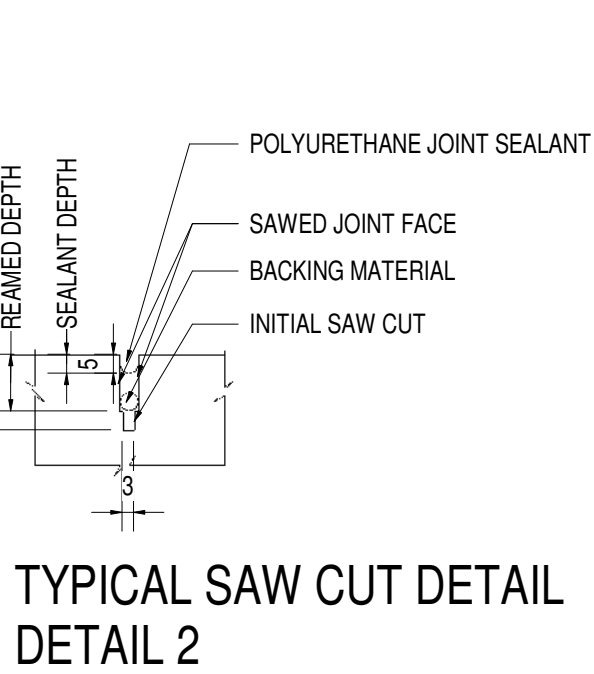
SECTION D
1:25

WINDOW SCHEDULE		LOUVER SCHEDULE	
WINDOW TAG	W1	LOUVER TAG	L1
NUMBER REQUIRED	7	LOUVER TYPE	POWDER COATED
FRAME	STEEL FRAMES TO BE PURPOSE-MADE INCLUDING 12mm DIA MS BURGULAR PROOFING ON FULL FACE OF WINDOW	QUANTITY	10
FINISH	PAINTED AS SPECIFIED. EVERY AT EVERY 5 COURSES, ETC COMPLETE	DESCRIPTION	VENTILATION LOUVER ALUMINUM 800 mm(H) x 1545 mm(W)
GLASS	CLEAR FLOAT GLASS ACCORDING TO SANS 10400-N. INSTALLED ACCORDING TO SANS 10137 AND COMPLYING WITH SANS 10400-XA	GLAZING	N/A
HARDWARE	SUPPLY 2x100MM BRASS FLAP HINGES AND ONE BRASS PEG STAY WITH BRASS CASEMENT FASTENER	FRAME TYPE	STANDARD: FLANGED
		FRAME FINISH	POWDER COATED
		DOOR FINISH	POWDER COATED
		DOOR VENT	N/A
		DOOR FURNITURE	EXTRUDED ALUMINUM 82P STEEL SCREWS OR ALUMINUM POP RIVETS.

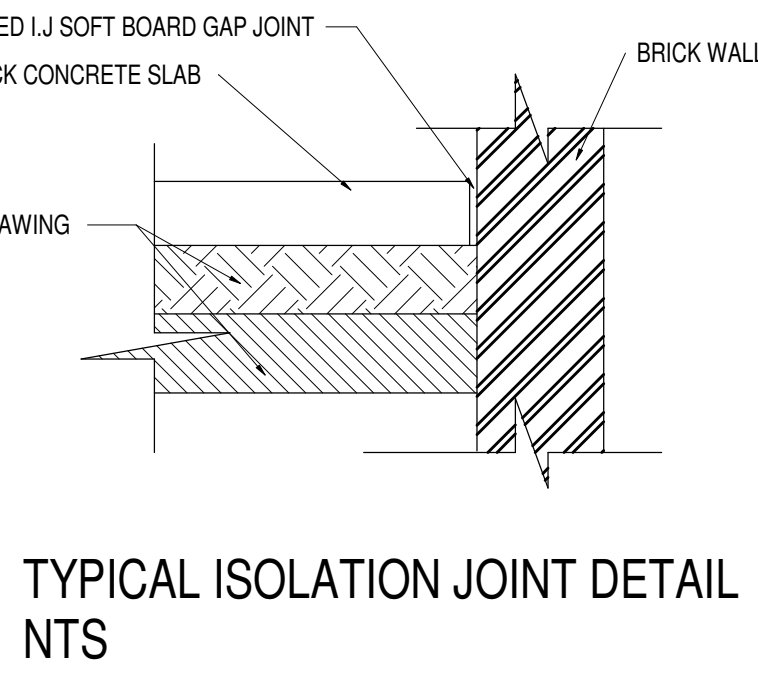
WINDOW SCHEDULE		LOUVER SCHEDULE	
WINDOW TAG	W1	LOUVER TAG	L1
NUMBER REQUIRED	7	LOUVER TYPE	POWDER COATED
FRAME	STEEL FRAMES TO BE PURPOSE-MADE INCLUDING 12mm DIA MS BURGULAR PROOFING ON FULL FACE OF WINDOW	QUANTITY	10
FINISH	PAINTED AS SPECIFIED. EVERY AT EVERY 5 COURSES, ETC COMPLETE	DESCRIPTION	VENTILATION LOUVER ALUMINUM 800 mm(H) x 1545 mm(W)
GLASS	CLEAR FLOAT GLASS ACCORDING TO SANS 10400-N. INSTALLED ACCORDING TO SANS 10137 AND COMPLYING WITH SANS 10400-XA	GLAZING	N/A
HARDWARE	SUPPLY 2x100MM BRASS FLAP HINGES AND ONE BRASS PEG STAY WITH BRASS CASEMENT FASTENER	FRAME TYPE	STANDARD: FLANGED
		FRAME FINISH	POWDER COATED
		DOOR FINISH	POWDER COATED
		DOOR VENT	N/A
		DOOR FURNITURE	EXTRUDED ALUMINUM 82P STEEL SCREWS OR ALUMINUM POP RIVETS.



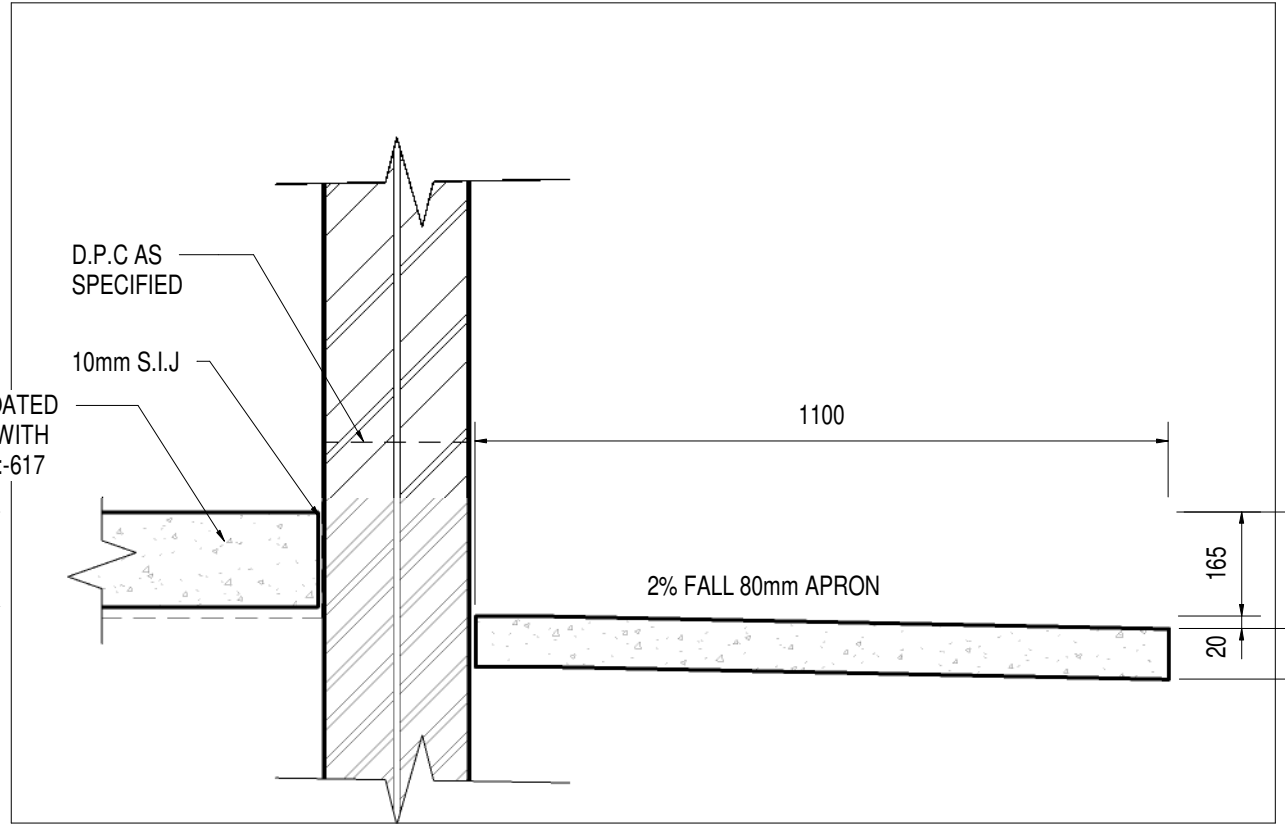
TYPICAL SAW CUT JOINT DETAIL NTS



TYPICAL SAW CUT DETAIL DETAIL 2

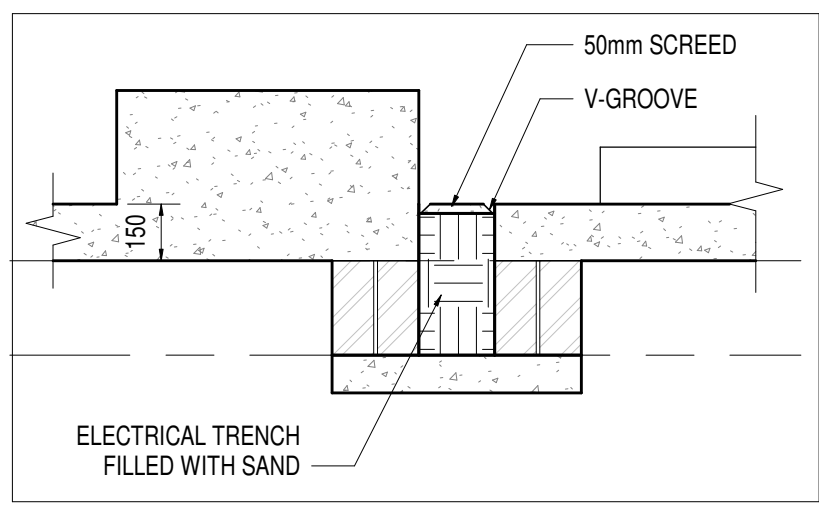


TYPICAL ISOLATION JOINT DETAIL NTS

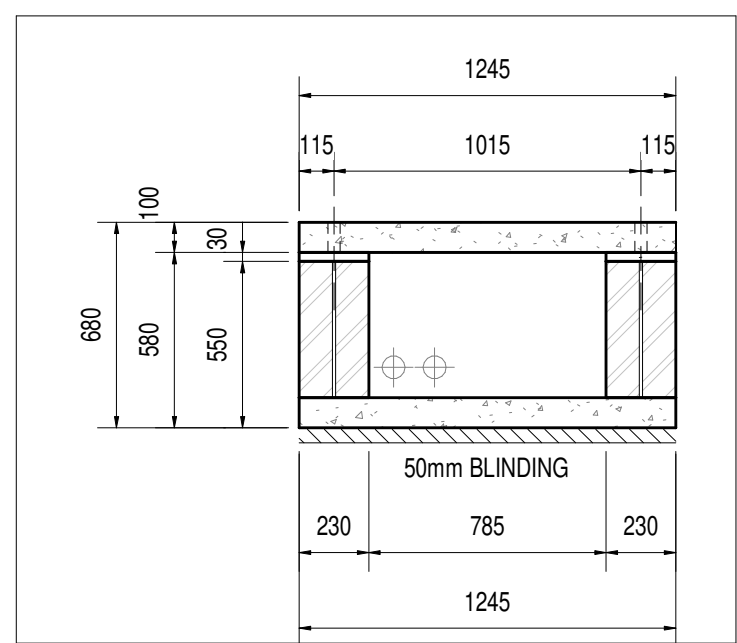


DETAIL 1
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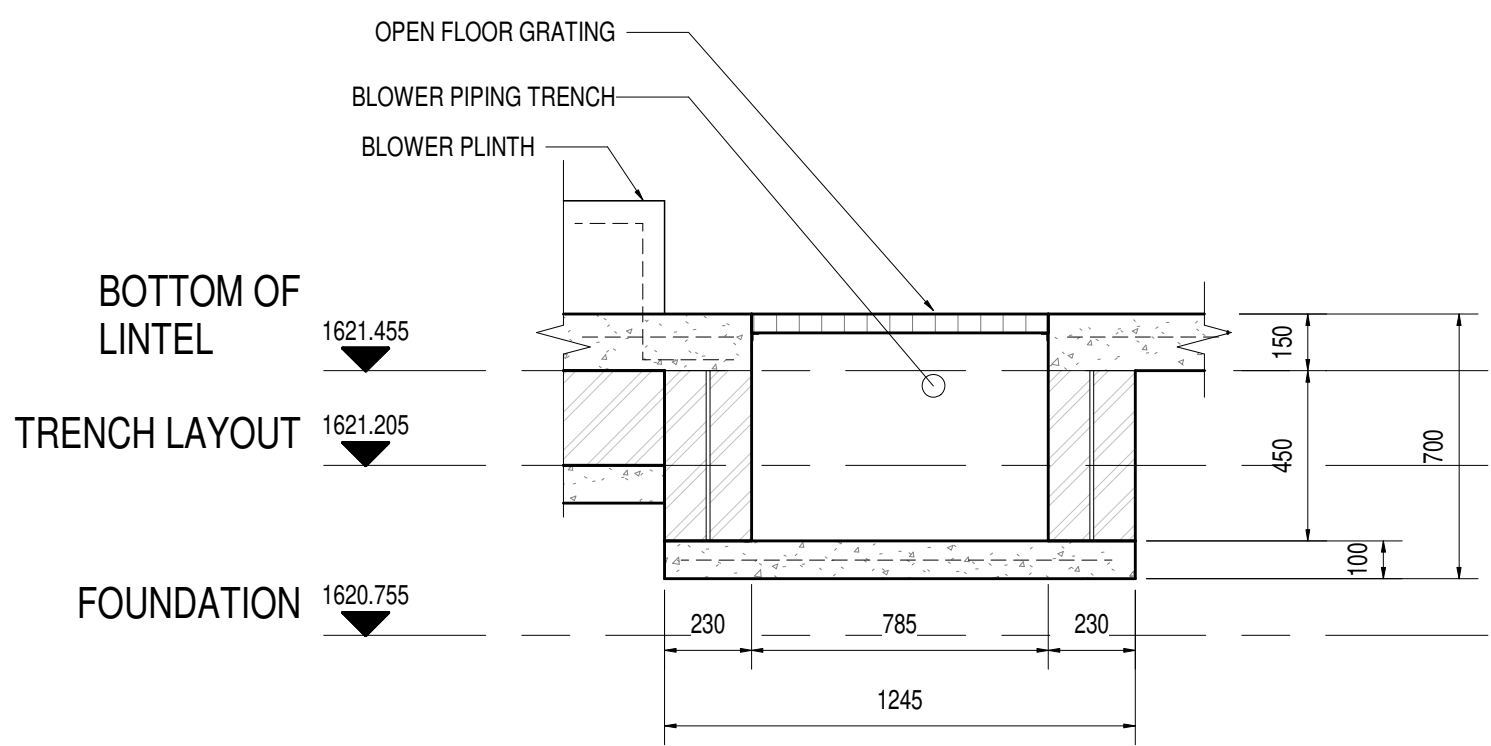
SECTION D
1:25



DETAIL 2
1:20



DETAIL 3
1:25

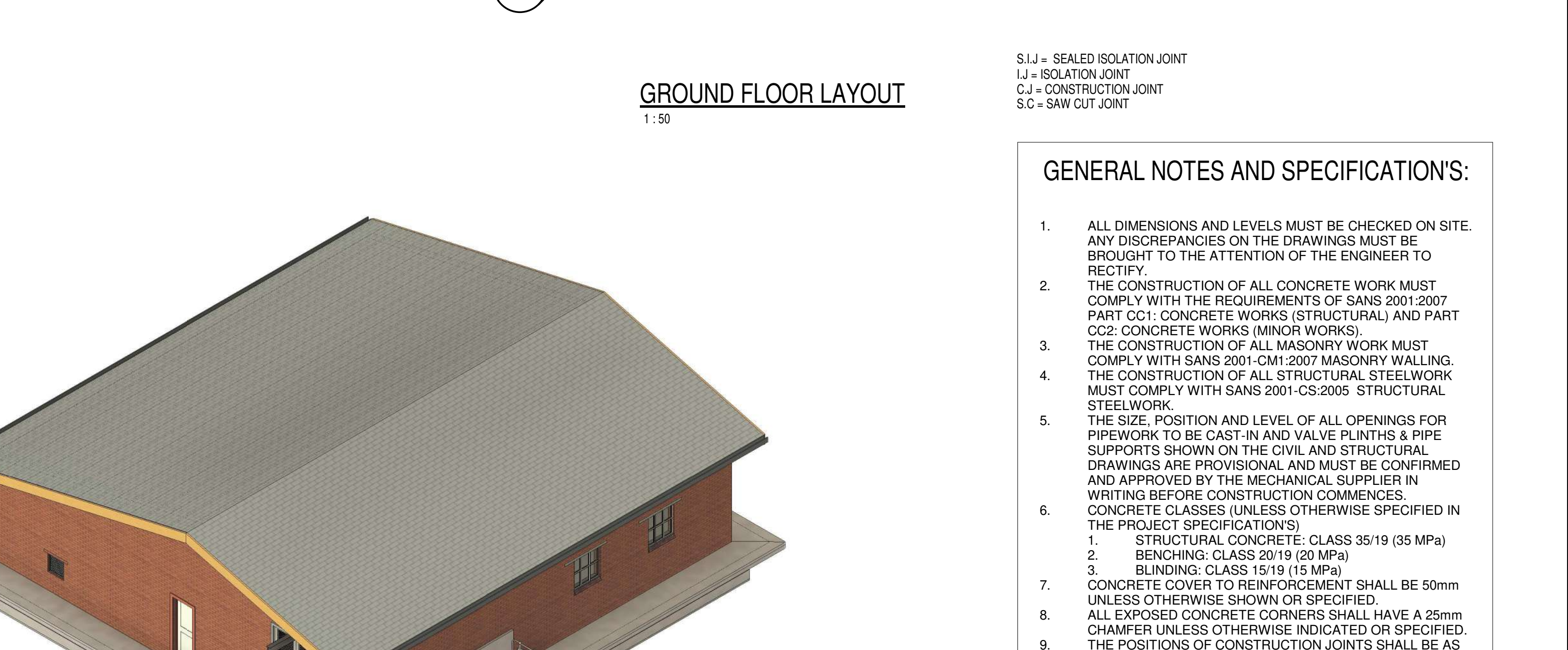
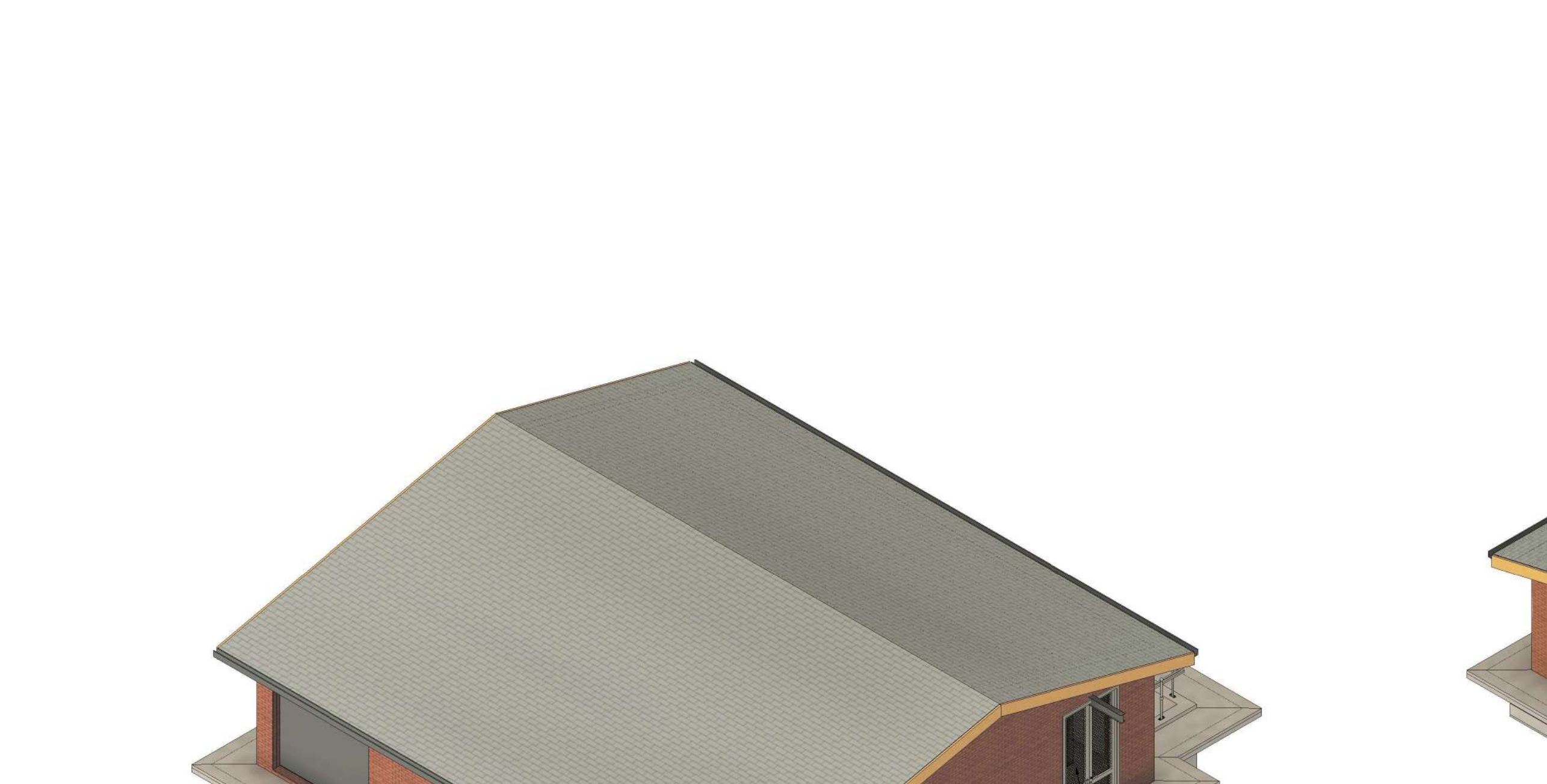
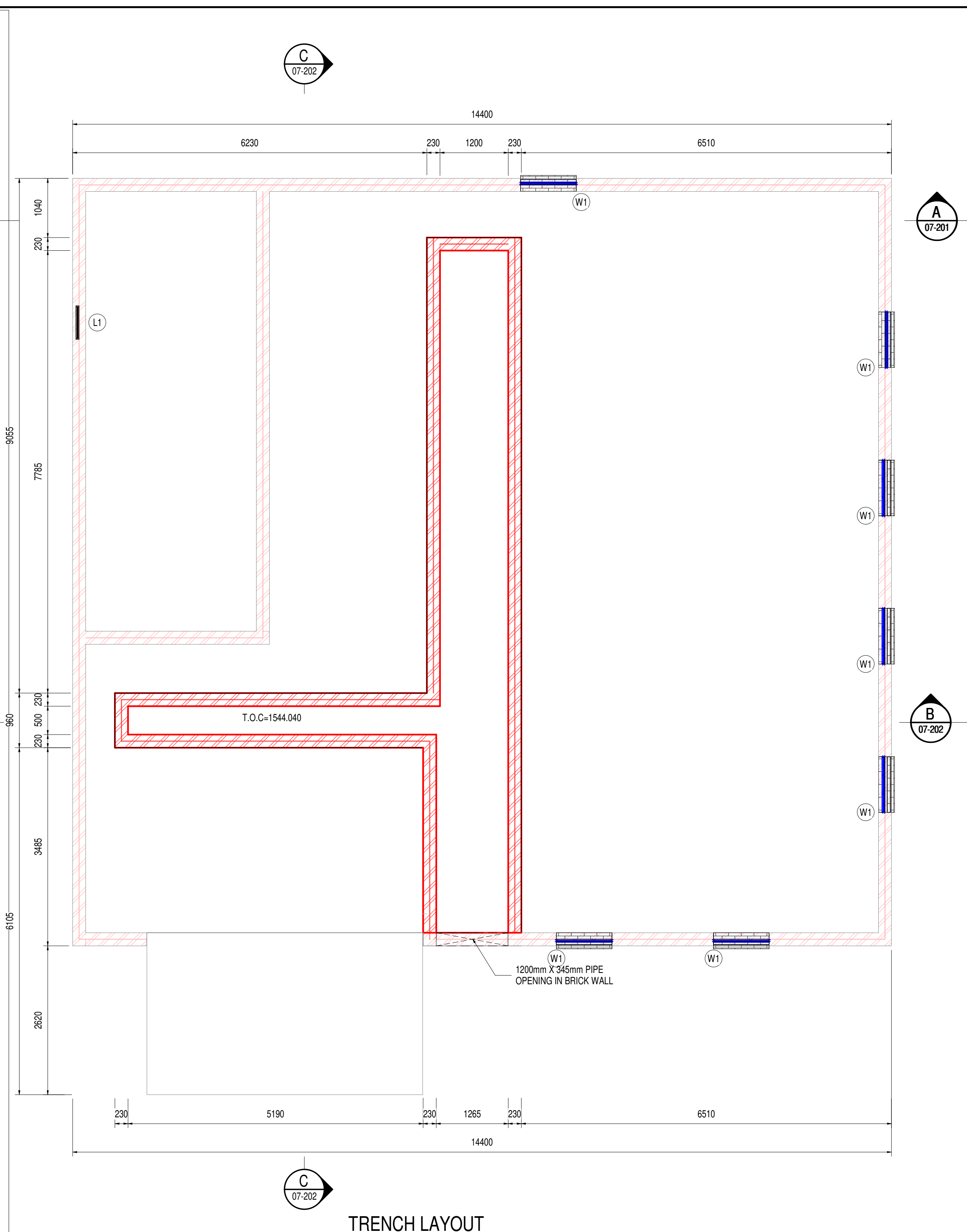


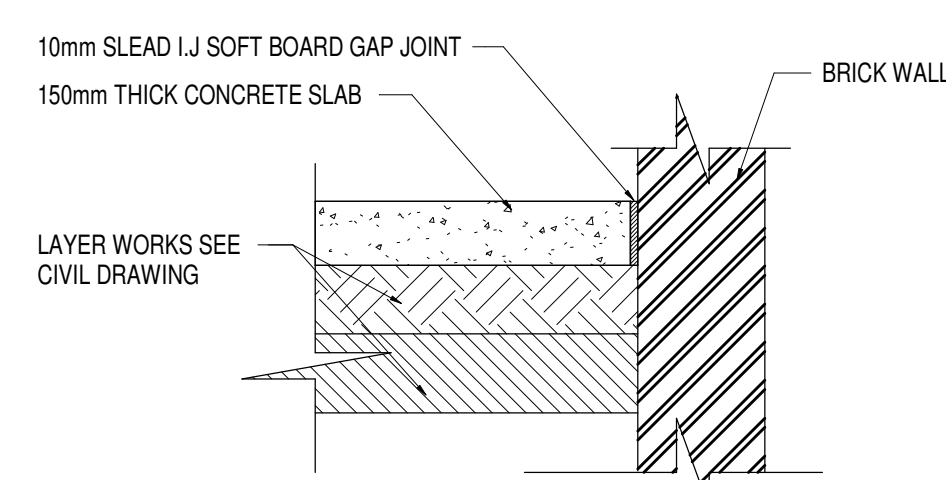
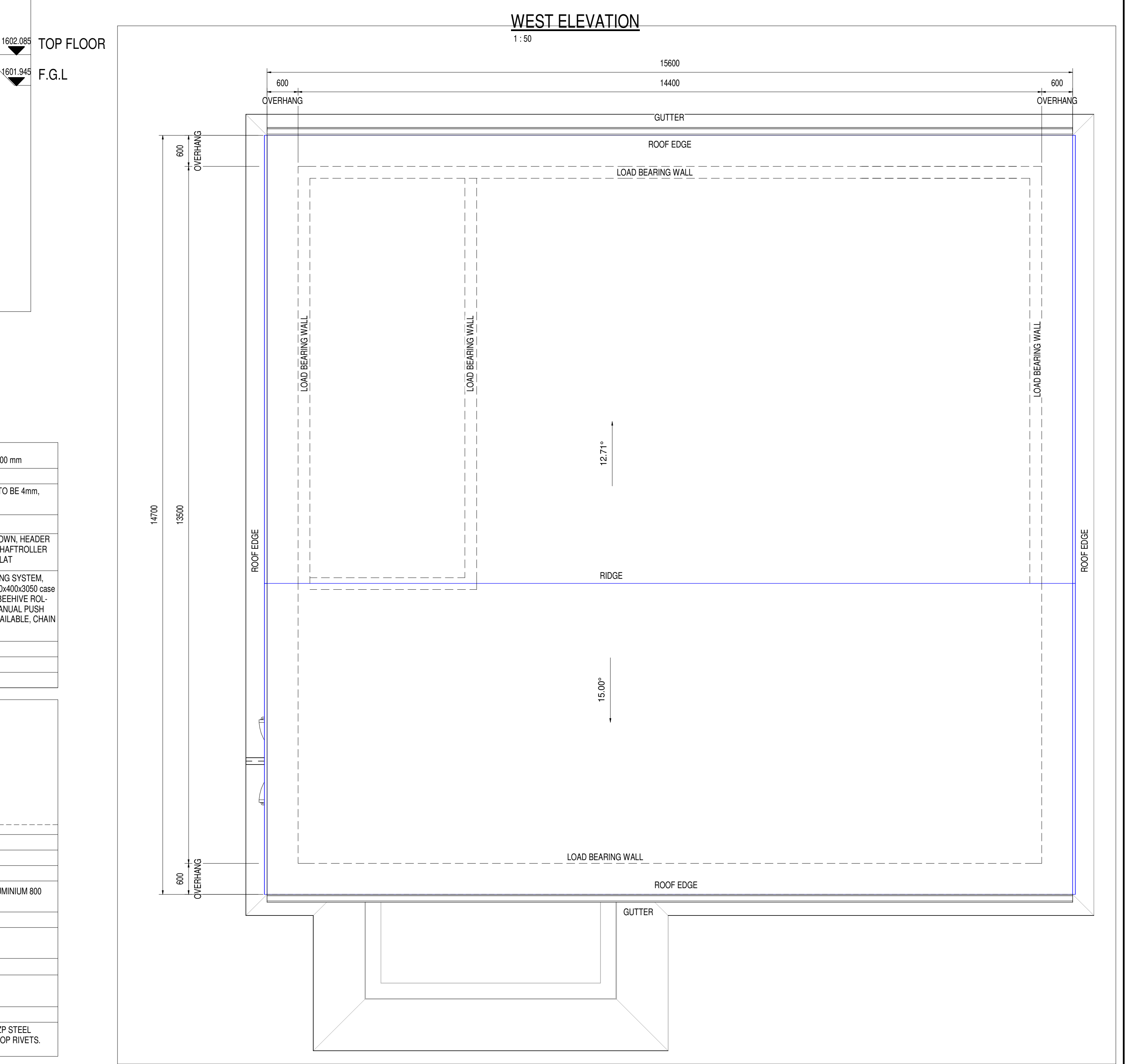
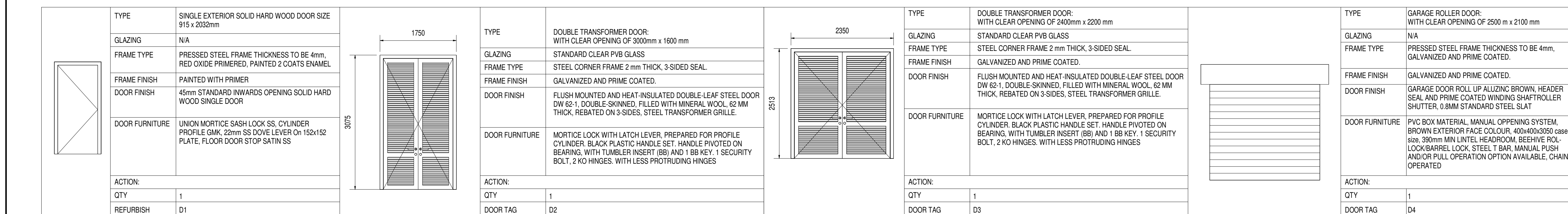
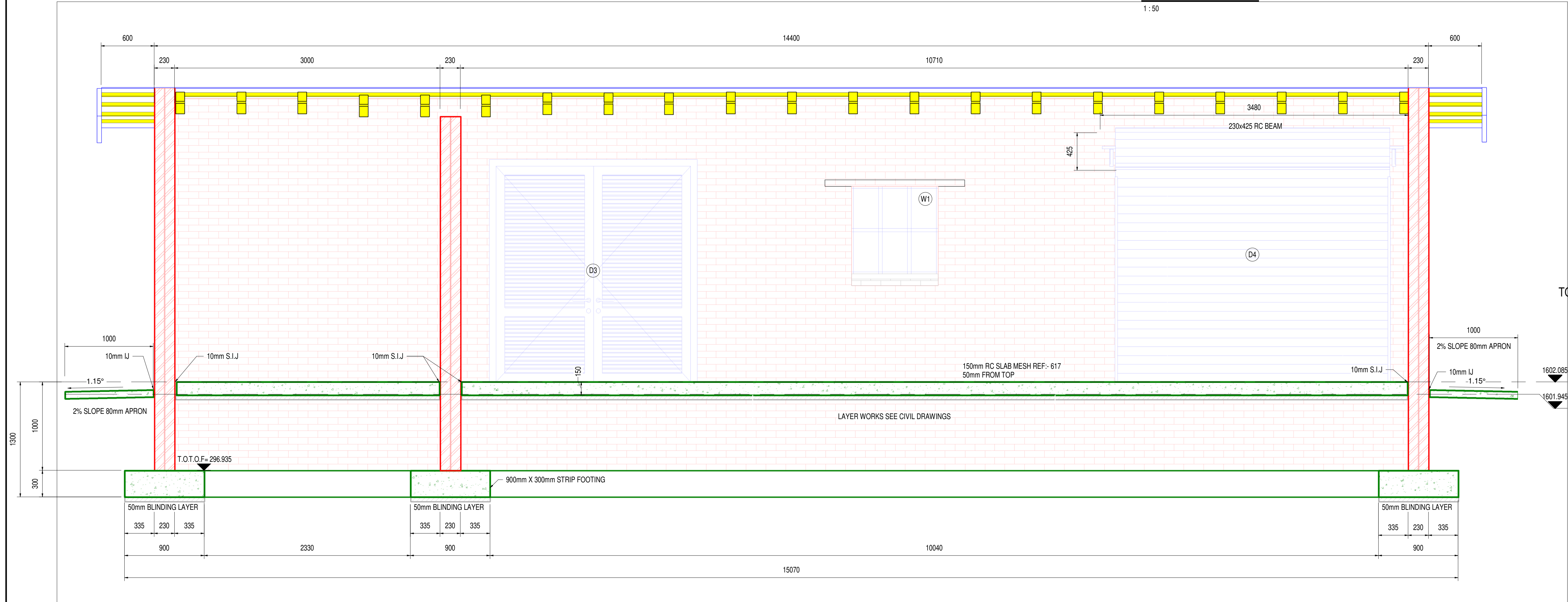
DETAIL 4
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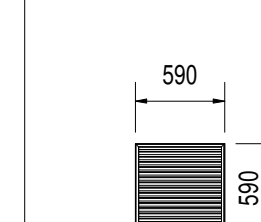
TYPICAL SECTION THROUGH PIPE TRENCH

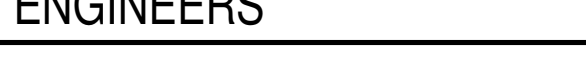
DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS				JOHANNESBURG WATER (SOC) LTD				CITY OF JOHANNESBURG				DESIGN MANAGER				SCALE				AMENDMENTS				APPROVED				DATE				DRAWING NUMBER			
ZITHOLELE CONSULTING				TURBINE HALL 65 NTEM PILISO STREET NEWTOWN				INFRASTRUCTURE RENEWAL PLAN				AS SHOWN				T00								ST				26.08.2024				18056-73-03-101			
ZITHOLELE CONSULTING				TEL: (011) 688 1400 FAX: (011) 688 1529				MODULE 2 BLOWER ROOM																											
P.O. BOX 6002 HALFWAY HOUSE 1685				Johannesburg Water				NEW BLOWER BUILDING																											
TEL: 011-207 2060 FAX: 086 674 6121 EMAIL: mail@zitholele.co.za								SECTIONS, SCHEDULES AND DETAILS																											
SURVEYED DESIGNED ST																																			
DRAWN KM																																			
CHECKED ST																																			
SERVICES CHECKED																																			
GEOTECHNICAL INVESTIGATION																																			
SERVITUDES																																			
APPROVED J.D. KVEVLI																																			
Pr. Eng. No. 9604106																																			
DATE																																			

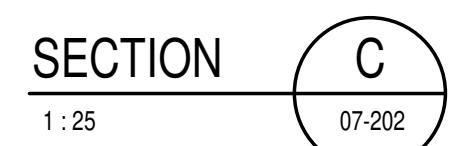
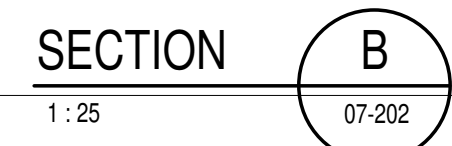
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LOUVER SCHEDULE		
	LOUVER TAG L1	LOUVER TYPE POWDER COATED
LOUVER TYPE QUANTITY	DESCRIPTION VENTILATION LOUVER ALUMINUM 800 mm(H) x 1546 mm(W)	
GLAZING	N/A	
FRAME TYPE	STANDARD; FLANGED	
FRAME FINISH	POWDER COATED	
DOOR FINISH	POWDER COATED	
DOOR VENT	N/A	
DOOR FURNITURE	EXTRUDED ALUMINUM, B2P SCREWS OR ALUMINUM POP RIVETS	

CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD	
	ZITHOLELE P.O.BOX 6002 HALFWAY HOUSE 1695 TEL. 011-207 2060 FAX. 086 674 6121 EMAIL mail@zitholele.co.za	DESIGNED	ST		TURBINE HALL 85 NTEMI PILISO STREET NEWTOWN FAX: (011) 688 1400 TEL: (011) 688 1529
		DRAWN	NM		
		CHECKED	ST		
		SERVICES CHECKED			
		GEOTECHNICAL INVESTIGATION			
		SERVITUDES			
		APPROVED	J.D. KVELU		
Pr. Eng. No.	3604106				
DATE:					

DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING NUMBER
					JW NUMBER
DATE	AS SHOWN	700 ISSUED FOR TENDER	ST	25.06.2024	CONSULTANT'S NUMBER 18056-73-07-201
					FILE NUMBER



APPROVED	DATE	DRAWING NUMBER			
ST	25.06.2024	JW NUMBER			
		CONSULTANT'S NUMBER 18056-73-03-202			
		FILE NUMBER			

