

Johannesburg Water (Pty) Ltd



TENDER DRAWINGS

CONTRACT No. JW 14425

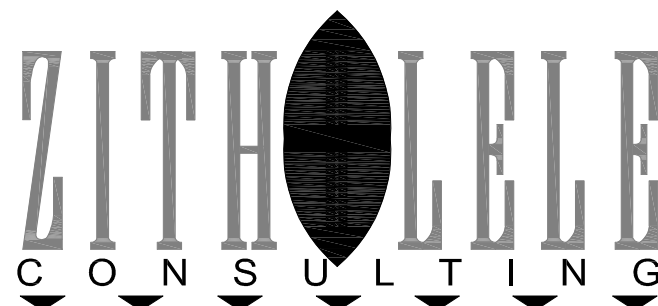
BUSHKOPPIE WASTEWATER TREATMENT WORKS
INFRASTRUCTURE RENEWAL PLAN

BUSHKOPPIE
INFRASTRUCTURE RENEWAL PLAN
LIST OF DRAWINGS

DRAWING NUMBER	DRAWING DESCRIPTION
SECTION 01 – SITE LAYOUTS	
18056-73-01-100	SITE LAYOUT
18056-73-01-101	SITE LAYOUT – HEAD OF WORKS
18056-73-01-102	SITE LAYOUT – BIO REACTORS
18056-73-01-103	SITE LAYOUT – SECONDARY CLARIFIERS, EFFLUENT PUMP STATION, WASH WATER PUMP STATION, BELT PRESS BUILDING & NEW WASH WATER FILTER STATION
SECTION 02 – ACCESS ROAD	
18056-73-02-100	INTERNAL ROADS – AREAS TO BE RESURFACED
18056-73-02-102	INTERNAL ROADS – HEAVY VEHICLE ACCESS ROUTES
SECTION 03 – HEAD OF WORKS	
18056-73-03-100	HEAD OF WORKS – MODULE 1 & MODULE 2 GENERAL ARRANGEMENT
18056-73-03-101	HEAD OF WORKS – MODULE 1 & MODULE 2 3D VIEW
18056-73-03-102	COARSE SCREENS MODULE 1 LAYOUT & SECTIONS – AS BUILT
18056-73-03-103	VORTEX DEGRITTERS MODULE 1 LAYOUT & SECTIONS – AS BUILT
18056-73-03-104	FINE SCREENS MODULE 1 LAYOUT & SECTIONS – AS BUILT
18056-73-03-105	COARSE SCREENS MODULE 1 LAYOUT & SECTIONS – REFURBISHMENT
18056-73-03-106	VORTEX DEGRITTERS MODULE 1 LAYOUT & SECTIONS – REFURBISHMENT
18056-73-03-107	FINE SCREENS MODULE 1 LAYOUT & SECTIONS – REFURBISHMENT
18056-73-03-108	MODULE 1 COARSE SCREENS WASHER COMPACTOR INSTALLATION PLAN & SECTIONS
18056-73-03-109	MODULE 2 VORTEX DEGRITTER, SKIP BIN & ROTARY SCREW FEEDER INSTALLATION PLAN & SECTIONS
18056-73-03-110	MECHANICAL TRASH SCREEN GENERAL ARRANGEMENT
18056-73-03-111	MECHANICAL TRASH SCREEN PLAN & SECTIONS
18056-73-03-112	FINE SCREENS AND DEGRITTING AREA ACCESS PLAN
18056-73-03-113	MODULE 1 BLOWER ROOM NEW BLOWER INSTALLATION PLAN & SECTIONS
18056-73-03-114	COMPRESSOR ROOM PLAN, SECTION AND DETAILS – AS BUILT
18056-73-03-115	MACERATING PUMP STATION – AS BUILT
18056-73-03-116	MACERATING PUMP STATION – REFURBISHMENT
18056-73-03-117	COARSE SCREENS MODULE 2 LAYOUT & SECTIONS – AS BUILT
18056-73-03-118	COARSE SCREENS MODULE 2 LAYOUT & SECTIONS – REFURBISHMENT
18056-73-03-119	MODULE 1 BLOWER ROOM – REFURBISHMENT
18056-73-03-120	MODULE 2 BLOWER ROOM NEW BLOWER BUILDING, 3D VIEWS & ELEVATIONS
18056-73-03-121	MODULE 2 BLOWER ROOM NEW BLOWER BUILDING, ROOF LAYOUT, SECTION & DETAILS
18056-73-03-122	MODULE 2 BLOWER ROOM NEW BLOWER BUILDING, TRUSS LAYOUT & DETAILS
SECTION 04 – SECONDARY CLARIFIERS	
18056-73-04-100	GENERAL ARRANGEMENT
18056-73-04-101	CLARIFIER 3D VIEW – AS BUILT
18056-73-04-102	CLARIFIER LAYOUT & SECTION – AS BUILT
18056-73-04-103	CLARIFIER LAYOUT & SECTIONS – REFURBISHMENT

DRAWING NUMBER	DRAWING DESCRIPTION
SECTION 05 – BIO REACTOR	
18056-73-05-100	3D VIEW – REFURBISHMENT
18056-73-05-101	PLAN VIEW & FLOOR PLAN – REFURBISHMENT
18056-73-05-102	PLATFORMS AND SECTIONS– REFURBISHMENT
SECTION 06 – FINAL EFFLUENT PUMP STATION	
18056-73-06-100	3D VIEW – REFURBISHMENT
18056-73-06-101	PLAN, LAYOUT & SECTIONS – REFURBISHMENT
18056-73-06-102	ELEVATIONS – REFURBISHMENT
18056-73-06-103	VALVE CHAMBER PLAN, LAYOUT, SECTIONS AND DETAILS
SECTION 07 – WASH WATER PUMP STATIONS	
18056-73-07-100	WASH WATER PUMP STATION PLAN – AS BUILT
18056-73-07-101	WASH WATER PUMP STATION SECTIONS – AS BUILT
18056-73-07-102	WASH WATER PUMP STATION PLAN – REFURBISHMENT
18056-73-07-103	WASH WATER PUMP STATION SECTIONS – REFURBISHMENT
18056-73-07-105	NEW WASH WATER FILTER STATION 3D VIEWS
18056-73-07-106	NEW WASH WATER FILTER STATION ELEVATIONS
18056-73-07-107	NEW WASH WATER FILTER STATION LAYOUTS & SECTIONS
18056-73-07-108	NEW WASH WATER FILTER STATION ROOF LAYOUT & DETAILS
18056-73-07-109	NEW WASH WATER FILTER STATION SECTIONS AND DETAILS
SECTION 08 – SLUDGE HANDLING FACILITY	
18056-73-08-100	BELT PRESS BUILDING LAYOUT – REFURBISHMENT
SECTION 09 – MV ROOMS	
18056-73-09-100	MAIN INTAKE SUBSTATION PLAN ,ELEVATION & SECTIONS – AS BUILT
18056-73-09-101	WAS THICKENER SUBSTATION PLAN ,ELEVATION & SECTIONS – AS BUILT
18056-73-09-102	TYPICAL SUBSTATION – PLAN ,ELEVATION & SECTIONS – AS BUILT
SECTION 10 – EMERGENCY DAM	
18056-73-10-100	EMERGENCY DAM OUTLET 3D VIEW – AS BUILT
18056-73-10-101	EMERGENCY DAM OUTLET PLAN & SECTIONS – AS BUILT
18056-73-10-102	EMERGENCY DAM OUTLET 3D VIEW – REFURBISHMENT
18056-73-10-103	EMERGENCY DAM OUTLET PLAN & SECTIONS – REFURBISHMENT

DEPARTMENT	APPROVED	DESIGNATION	DATE

CONSULTING ENGINEERS		SURVEYED		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	DESIGNED	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 DRAWING LIST SHEET 1																			
		DRAWN	DP																						
		CHECKED	J.S																						
		SERVICES CHECKED																							
		GEOTECHNICAL INVESTIGATION																							
		SERVITUDES				DATE										JW NUMBER									
		APPROVED	J. SWART																						
		Pr. Eng. No.	860169																						
		DATE	24.03.2024													CONSULTANT'S NUMBER									
																FILE No									

BUSHKOPPIE
INFRASTRUCTURE RENEWAL PLAN
LIST OF DRAWINGS

DRAWING NUMBER	DRAWING DESCRIPTION
SECTION 11 – LIME PLANT	
18056–73–11–100	GENERAL ARRANGEMENT
18056–73–11–101	NEW LINE INSTALLATION LAYOUT
18056–73–11–102	LIME CLARIFIER – AS BUILT
18056–73–11–103	LIME CLARIFIER – REFURBISHMENT
SECTION 12 – ELECTRICAL	
18056–73–12–100	SINGLE LINE MV RETICULATION
18056–73–12–101	SINGLE LINE PROPOSED MV RETICULATION
18056–73–12–102	SUBSTATION No.1 LAYOUT
18056–73–12–103	SUBSTATION No.2 LAYOUT
18056–73–12–104	SUBSTATION No.0 LAYOUT
18056–73–12–105	SUBSTATION No.3 LAYOUT
18056–73–12–106	HOW SUBSTATION LAYOUT
18056–73–12–107	BLOWERS SUBSTATION LAYOUT
18056–73–12–108	HOW TYPICAL 2.2KW SCREENINGS WASHER DOL
18056–73–12–109	HOW TYPICAL 2.2KW SCREENINGS COMPACTOR FORWARD RESERVE
18056–73–12–110	HOW TYPICAL 2.2KW WW BOOSTER PUMP DOL
18056–73–12–111	HOW TYPICAL 1.5KW BLOWER PUMP DOL
18056–73–12–112	HOW TYPICAL 2.2KW DRAINAGE RETURN PUMP
18056–73–12–113	HOW MODULE 1 TYPICAL 2.2KW GRIT CLASSIFIER WASHER STIRRER DOL
18056–73–12–114	HOW MODULE 1 TYPICAL 2.2KW GRIT CLASSIFIER WASHER SCREW DOL
18056–73–12–115	HOW MODULE 1 TYPICAL 2.2KW GRIT DEGRITTERS STATIC SCREW CONVEYOR DOL
18056–73–12–116	HOW TYPICAL 7.5KW MACERATOR DOL
18056–73–12–117	HOW COMPRESSOR MCC SINGLE LINE DIAGRAM
18056–73–12–118	HOW TYPICAL 1.5KW COMPRESSOR DOL
18056–73–12–119	HOW COMPRESSOR PRESSURE SWITCH SCHEMATIC
18056–73–12–120	HOW SKIP WINCH & TRAVERSING CONVEYOR POSITION DOL
18056–73–12–121	HOW MODULE TWO 2.2KW GRIT TRAVERSING CONVEYOR DOL
18056–73–12–122	HOW MODULE 2 2.2KW DEGRITTERS STATIC SCREW CONVEYOR DOL
18056–73–12–123	HOW MODULE 2 2.2KW GRIT CLASSIFIER WASHER STIRRER DOL
18056–73–12–124	HOW MODULE 2 2.2KW GRIT CLASSIFIER WASHER SCREW DOL
18056–73–12–125	HOW MODULE TWO 2.2KW DEGRITTERS DRAINAGE RETURN PUMP
18056–73–12–126	HOW MODULE 2 TYPICAL 2.2KW WW BOOSTER PUMP DOL
18056–73–12–127	HOW NEW BLOWER ROOM MCC SINGLE LINE DIAGRAM
18056–73–12–128	HOW NEW BLOWER ROOM TYPICAL 15KW BLOWER DOL
18056–73–12–129	HOW NEW BLOWER ROOM TYPICAL 15KW COMPRESSOR DOL
18056–73–12–130	HOW NEW BLOWER ROOM COMPRESSOR PRESSURE SWITCH SCHEMATIC
18056–73–12–131	INLET WORKS 2.2KW TRASH SCREEN VSD
18056–73–12–132	HOW NEW BLOWER ROOM1.1KW MCC ROOM FAN
18056–73–12–133	EXISTING WASH WATER PUMP STATION MCC SINGLE LINE DIAGRAM
18056–73–12–134	TYPICAL 30KW WASH WATER TRANSFER PUMP DOL
18056–73–12–135	TYPICAL 15KW FILTER FEED PUMP DOL
18056–73–12–136	TYPICAL 11KW BLOWER DOL
18056–73–12–137	1.1KW MCC ROOM FAN
18056–73–12–138	1.5KW EXTRACTION FAN
18056–73–12–139	1.1KW SUMP PUMP

DRAWING NUMBER	DRAWING DESCRIPTION
SECTION 12 – ELECTRICAL	
18056–73–12–140	NEW WASH WATER FILTER STATION MCC SINGLE LINE DIAGRAM
18056–73–12–141	TYPICAL 15KW FLITER FEED PUMP DOL
18056–73–12–142	TYPICAL 11KW AIR BLOWER DOL
18056–73–12–143	1.1KW MCC ROOM FAN
18056–73–12–144	1.1KW SUMP PUMP
18056–73–12–145	TYPICAL 1.5KW MIXER DOL
18056–73–12–146	TYPICAL 0.55KW CLARIFIER DOL
18056–73–12–147	TYPICAL 1.1KW SCREW CONVEYOR DOL
18056–73–12–148	TYPICAL 2.2KW LIME MIXER DOL
18056–73–12–149	MODULE 2 NEW BLOWER ROOM LIGHTING & SMALL POWER
18056–73–12–150	NEW WASH WATER FILTER STATION LIGHTING & SMALL POWER
18056–73–12–151	EXISTING WASH WATER PUMP STATION LIGHTING & SMALL POWER
18056–73–12–152	HOW LV RETICULATION
18056–73–12–153	HOW MODULE 1 MCC SINGLE LINE DIAGRAM
18056–73–12–154	HOW TYPICAL 1.5KW SCREEN FORWARD REVERSE
18056–73–12–155	LV CABLE SCHEDULE BUSHKOPPIES

SECTION 13 – PRIMARY SEDIMENTATION TANK

18056–73–13–100	GENERAL ARRANGEMENT
18056–73–13–101	PRIMARY SEDIMENTATION TANK 1–4 3D VIEW – AS BUILT
18056–73–13–102	PRIMARY SEDIMENTATION TANK 1–4 LAYOUT & SECTION – AS BUILT
18056–73–13–103	PRIMARY SEDIMENTATION TANK 1–4 LAYOUT & SECTION – REFURBISHMENT
18056–73–13–104	PRIMARY SEDIMENTATION TANK 5 3D VIEW – AS BUILT
18056–73–13–105	PRIMARY SEDIMENTATION TANK 5 LAYOUT & SECTION – AS BUILT
18056–73–13–105	PRIMARY SEDIMENTATION TANK 5 LAYOUT & SECTION – REFURBISHMENT

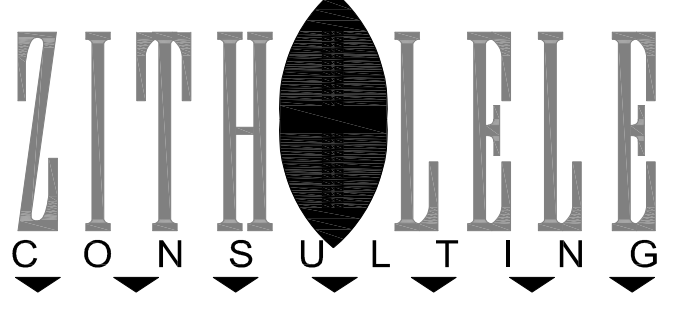
SECTION 14 – FERMENTERS

18056–73–14–100	GENERAL ARRANGEMENT
18056–73–14–101	FERMENTER 3D VIEW – AS BUILT
18056–73–14–102	FERMENTER LAYOUT & SECTION – AS BUILT
18056–73–14–103	FERMENTER LAYOUT & SECTION – REFURBISHMENT

SECTION 15 – MISCELLANEOUS BUILDING

18056–73–15–100	GUARD HOUSE 3D VIEWS
18056–73–15–101	GUARD HOUSE LAYOUT, ELEVATIONS, SECTIONS & DETAILS

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	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 NTEMI PILISO STREET NEW TOWN TEL: (011) 688-1400 FAX: (011) 688-1529	BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN DRAWING LIST SHEET 2		MANAGER					JW NUMBER
		DRAWN	DP										CONSULTANT'S NUMBER
		CHECKED	J.S										FILE No
		SERVICES CHECKED											
		GEOTECHNICAL INVESTIGATION											
		SERVICES											
		APPROVED	J. SWART										
		Pr. Eng. No.	860169										
		DATE	24.03.2024										
								DATE					

LIST OF DRAWINGS

DRAWING NUMBER	DRAWING DESCRIPTION
SECTION 16 – ARCHITECTURAL DRAWINGS	
18056-73-16-100	MODULE 2 BLOWER ROOM, NEW BLOWER BUILDING, LAYOUT & 3D VIEWS
18056-73-16-101	MODULE 2 BLOWER ROOM, NEW BLOWER BUILDING, SECTIONS SCHEDULES & DETAILS
18056-73-16-200	NEW WASH WATER FILTER STATION, LAYOUT & DETAILS
18056-73-16-201	NEW WASH WATER FILTER STATION, ELEVATIONS
18056-73-16-202	NEW WASH WATER FILTER STATION, SECTIONS & DETAILS
18056-73-16-300	GUARD HOUSE 3D VIEWS, LAYOUT, ELEVATIONS, SECTIONS & DETAILS
SECTION 17 – CONTROL AND INSTRUMENTATION	
P & ID's	
46100563-WSP-DR-CI-PID00_T0-LEGEND	LEGEND SHEET FOR P&ID's
46100563-WSP-DR-CI-PID01_T0-INFLOW	INFLOW AND DAM -01 P&ID
46100563-WSP-DR-CI-PID02_T0-COARSE SCREENS	UNIT 1 COARSE SCREEN P&ID
46100563-WSP-DR-CI-PID03_T0-GRIT REMOVAL-MOD 1	UNIT 1 GRIT REMOVAL P&ID
46100563-WSP-DR-CI-PID4_T0-GRIT REMOVAL MOD 2	UNIT 2 GRIT REMOVAL P&ID
46100563-WSP-DR-CI-PID05_T0-FINE SCREENS	UNIT 1 FINE SCREENS P&ID
46100563-WSP-DR-CI-PID06_T0-LIME DOSING	LIME PLANT P&ID
46100563-WSP-DR-CI-PID07_T0-WASH WATER PS	WASH WATER PUMP STATION P&ID
46100563-WSP-DR-CI-PID08_T0-EX WASH WATER PS	FINAL EFFLUENT WASH WATER PUMP STATION P&ID
TYPICAL LOOP DIAGRAMS	
46100563-WSP-DR-CI-TYP-FCV001	FLOW CONTROL VALVE FCV001-TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-CLV001	OPEN/CLOSE VALVE CLV001 – TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-HDV001	HAND VALVE HDV001 – TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-FIT001	MAGFLOW FLOW METER – FIT001 – TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-FIT002	AREA VELOCITY FLOW METER – FIT002 – TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-FIT003	CLAMP ON FLOW METER – FIT003 – TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-FIT004	FLUME FLOW METER – FIT004-TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-LIT001	ULTRASONIC LEVEL TRANSMITTER – LIT001 – TYPICAL LOOP DIAGRAM
46100563-WSP-DR-CI-TYP-ICP-SLV001	SOLENOID INSTRUMENT CONTROL PANEL SLV001 – TYPICAL LOOP DIAGRAM
TYPICAL WIRING DIAGRAMS	
46100563-WSP-DR-CI-TYP-D1R0S5-AI	PLC-TYP REMOTE PANEL ANALOG INPUT MODULE DROP 1/RACK 0/SLOT 5-TYPICAL WIRING DIAGRAM
46100563-WSP-DR-CI-TYP-R0S2A-DI	PLC-TYP DIGITAL INPUT MODULE: SUB-BASE 1 OF 4 /RACK 0/SLOT 2A-TYPICAL WIRING DIAGRAM

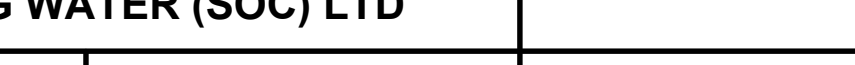
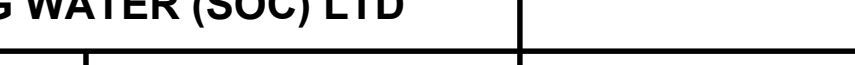
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CONSULTING ENGINEERS		SURVEYED		JOHANNESBURG WATER (SOC) LTD		CITY OF JOHANNESBURG		DESIGN MANAGER	SCALE	AMENDMENTS	APPROVED	DATE	DRAWING No.
	ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE TEL: (011) 207 2060 FAX: (085) 674 6121 EMAIL: mail@zitholele.co.za	DESIGNED	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 DRAWING LIST SHEET 3							
		DRAWN	DP										
		CHECKED	J.S										
		SERVICES CHECKED											
		GEOTECHNICAL INVESTIGATION											
		SERVITUDES						DATE					
		APPROVED	J. SWART										
		Pr. Eng. No.	860169										
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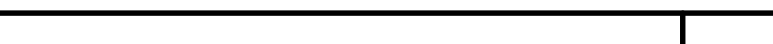
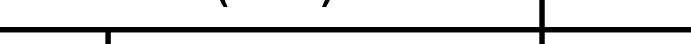


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	ZITHOLELE P.O. BOX 6002 HALFWAY HOUSE 1685 TEL: (011) 207 2060 FAX: (086) 674 6121 EMAIL: mail@zitholele.co.za	SURVEYED			TURBINE HALL 65 NTEMI PILISO STREET NEW TOWN	BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN SITE LAYOUT										T00	ISSUED FOR TENDER			JHS	24.11.2021	JW NUMBER			
		DESIGNED	J.S													T01	ISSUED FOR TENDER			JHS	24.03.2024	CONSULTANT'S NUMBER			
		DRAWN	DP																		18056-73-01-100				
		CHECKED	J.S		TEL: (011) 688-1400 FAX: (011) 688-1529		DATE																		
		SERVICES CHECKED																							
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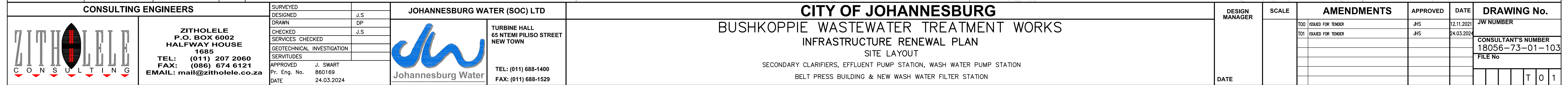
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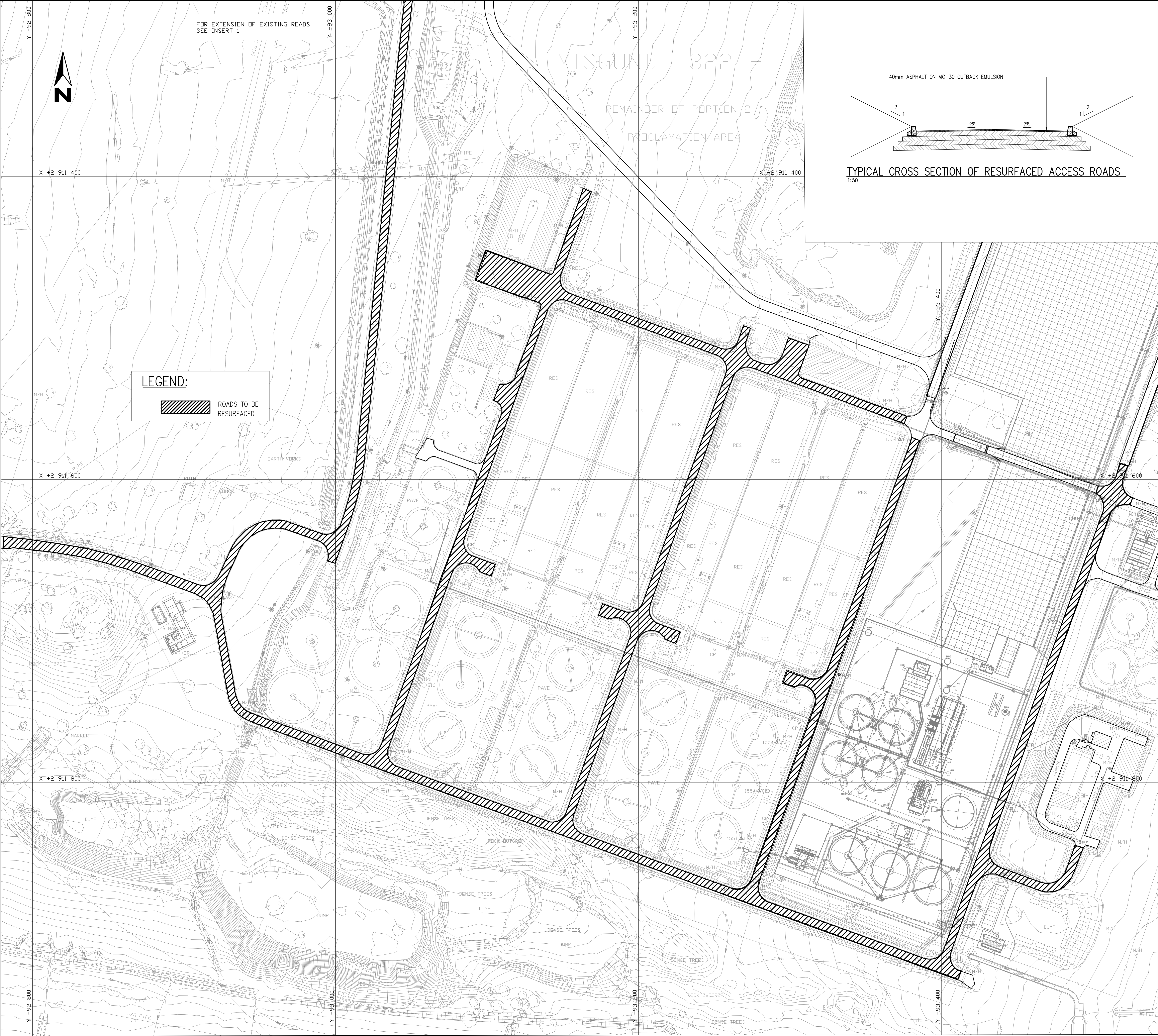
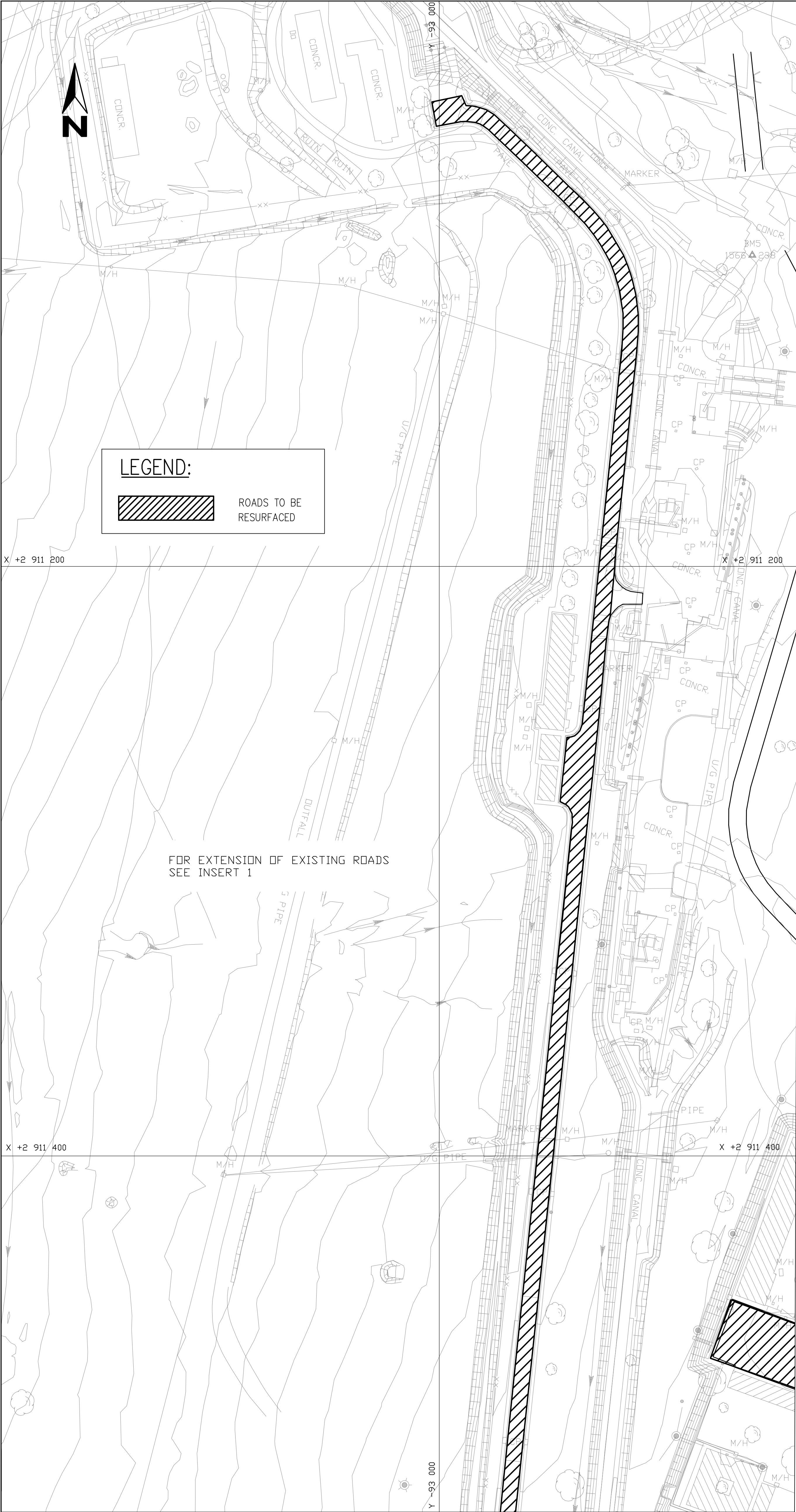
CONSULTING ENGINEERS										SURVEYED DESIGNED		J.S.	JOHANNESBURG WATER (SOC) LTD										CITY OF JOHANNESBURG										DESIGN MANAGER		SCALE		AMENDMENTS		APPROVED		DATE		DRAWING No.	
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DEPARTMENT	APPROVED	DESIGNATION	DATE

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 NEW TOWN TEL: (011) 688-1400 FAX: (011) 688-1529	BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN SITE LAYOUT BIO REACTORS													T00 ISSUED FOR TENDER	JHS	12.11.2021	JW NUMBER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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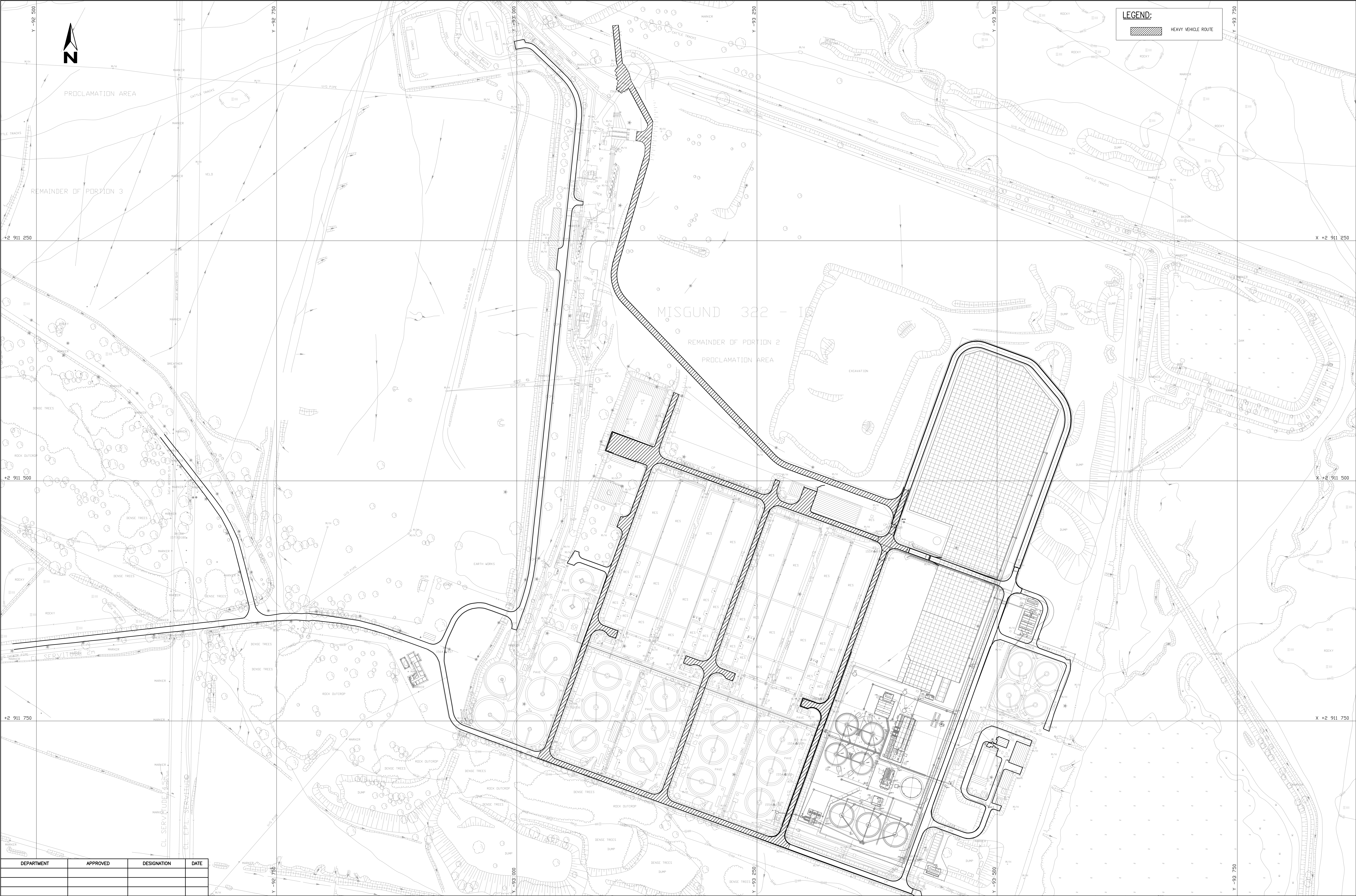


INSERT 1 (EXISTING ROADS TO BE RESURFACED)
1:750

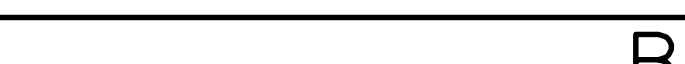
LAYOUT OF THE EXISTING ROADS TO BE RESURFACED
1:1000

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				 Johannesburg Water		BUSHKOPPIE WASTEWATER TREATMENT WORKS INFRASTRUCTURE RENEWAL PLAN SITE LAYOUT INTERNAL ROADS AREAS TO BE RESURFACED															CONSULTANT'S NUMBER 18056-73-02-100 FILE No					
SURVEYED				NG		TURBINE HALL 65 NTEMI PILISO STREET NEW TOWN													T00 ISSUED FOR TENDER	JHS	12.11.2021	JW NUMBER				
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SERVITUDES																										
APPROVED				J. SWART		TEL: (011) 688-1400																				
Pr. Eng. No.				860169		FAX: (011) 688-1529																				
DATE				20.03.2024																						



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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