

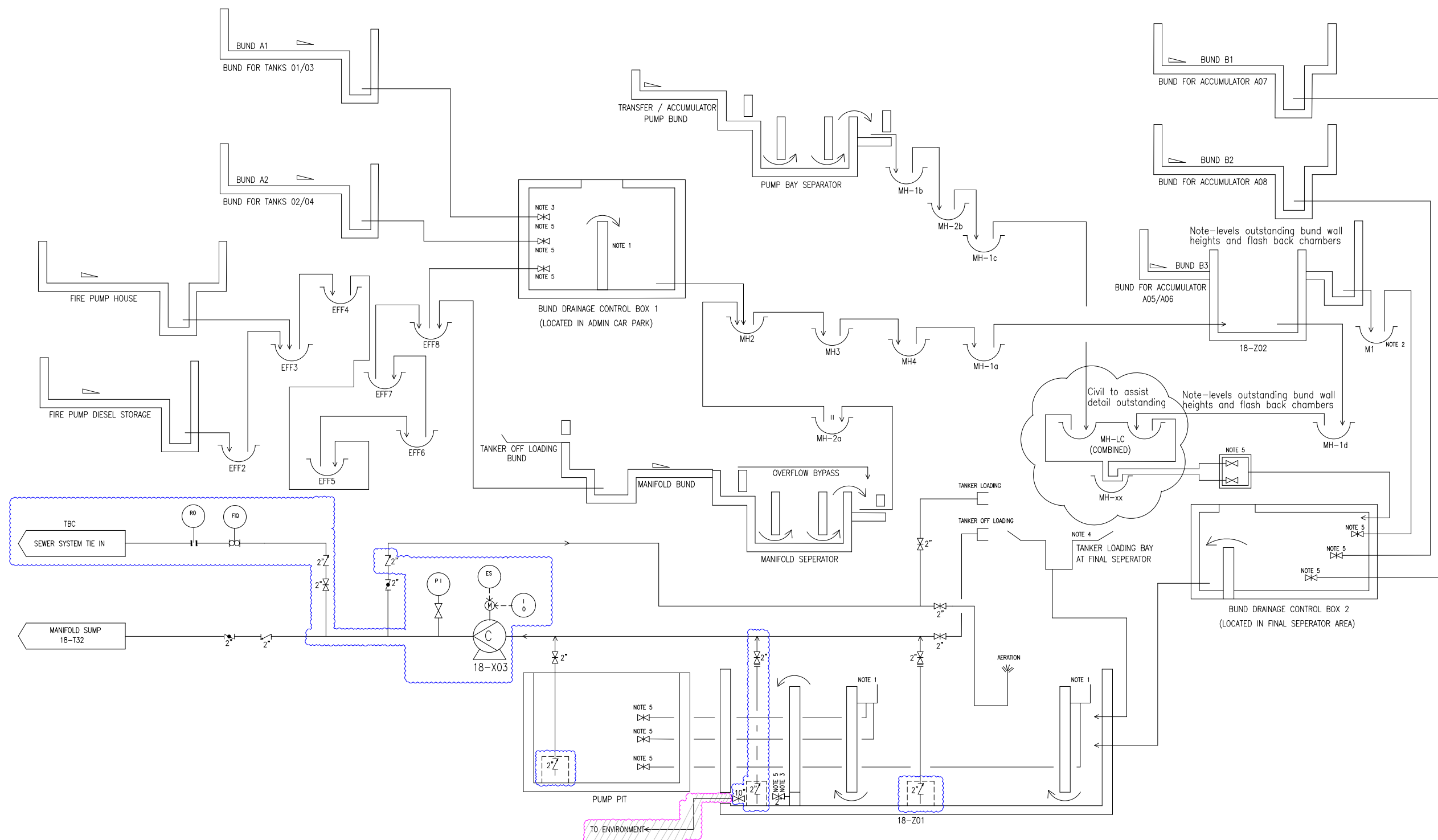
			Centrifugal Pump Data Sheet			
Sheet	1 of 3	Revision: A				
Item Tag Number (s)		18-X03				
Job No.		Alrode Oily water pump skid – spill basin to sewer.				
Process:		Craig Mcconnachie		Date 12.06.2024		
Mechanical:		Janie de Beer/Barry Trotter		Date 12.06.2024		
Control:		N/A		Date N/A		
Plant:		N/A		Date N/A		
Other:		N/A		Date N/A		
Applicable to (mark with "x")			☒	Request For Quotation		
			☐	Purchase		
			☐	As built		
01	Note: Information to be completed by:		☐ Purchaser	☐ Supplier	☒ By Both	
02	Applicable standard:					
03	☐	API 610 10 th Edition	☒	ASME	-	
04	☐	DIN	-	Other	-	
05	☐	Service:	Oily water to sewer / Hydrocarbon Product to sump			
06	☐	Liquid	Oily water / Hydrocarbons			
07	☐	No of pumps required:	1			
08	☐	Size and type:	Pump Vendor to confirm nozzle sizes			
09	☐	Serial no:				
10	☐	Pump MFR:				
11	☐	No of motors driven:	1	☐	No turbine driven:	N/A
12	☐	Pump item no:	18-X03	☐	Pump item no:	N/A
13	☐	Motor item no:	18-X03/M	☐	Turbine item no:	N/A
14	☐	Motor provided by:	Vendor	☐	Turbine provided by:	N/A
15	☐	Motor mounted by:	Vendor	☐	Turbine mounted by:	N/A
16	☐ Liquid		☐ Operating conditions		☐ Site conditions	
17	Pumping Conditions:		Capacity and Discharge Pressure		Site Conditions	
18	Min: 0 °C	Norm: amb °C	Max: 30 °C	Norm: 40 m³/h	Rated: 30 m³/h	Max. Temp: 36 °C
19	SP GR @ PT		0.997 @ 20°C	Discharge pressure (kPa)	1000	Min. Temp: 0 °C
20	Vapour pressure @ PT		4.25 kPa abs			Max. Rel. hum. 100 %
21	Viscosity @ PT		1cP @ 20°C			Min. Rel. hum. 8 %
22	Liquid Information		Suction Pressures:		Altitude: 1753m amsl	
23	Hazardous:	Yes		Max Suction Press: kPa	30	Outdoor x
24	Health rating:	2		Rated: Suction Press: kPa	-30	Unheated x
25	Flammable rating:	3		DIFF press kPa	1000	Sun x
26				DIFF head m	100	Area class Zone ** 2
27	See note 4,5 and 6.			NPSHA m	3.2	Temp T3
28				HYDR power kW	Vendor	Group IIA
29	Operation:					
30	Intermittent				☒	
31	Continuous				☐	
32	If intermittent number of starts per day: up to 24					
33	Installation in Parallel: No					
34	Installation in Series: No					
35						
36						
37						
38						
39						

18-X03
OILY WATER PUMP
RATED FLOW : TBC
 Δ HEAD : TBC
MOTOR SIZE : 7.5kW
MATERIAL : CARBON STEEL
TYPE : CENTRIFUGAL

NOTE - DRAWING VERIFICATION AND SYMBOLOGY TO BE CONFIRMED

NOTES:

1. MANUAL PRODUCT RECOVERY REQUIRED FROM SEPARATION COMPARTMENTS OF SEPARATORS.
2. LOCATED IN BUND B2
3. VALVES OPERATED FROM GRADE
4. TANKER BAY NOT YET COMPLETE. ONLY OILY WATER DRAINS IN PLACE.
5. EXTENDED VALVE SPINDLE WITH LOCKING BRACKETS.



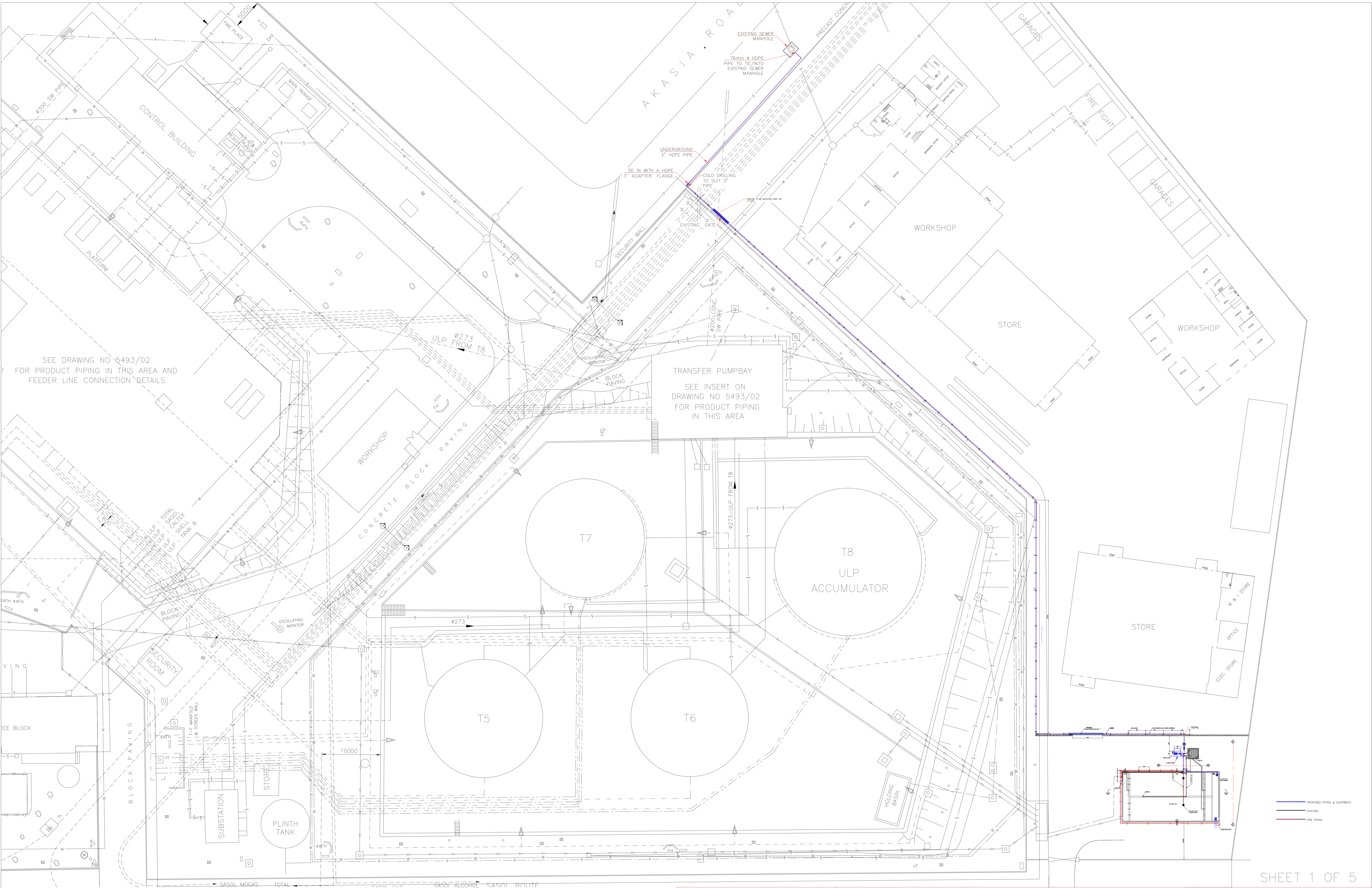
REVISIONS			
REV	BY	DATE	COMMENTS
B	A.Z	06/05/2024	ISSUED FOR DESIGN
A	A.Z	15/09/2022	ISSUED FOR HAZOP



ALRODE OILY WATER SYSTEM
P&ID

PROJECT NAME	

DRAWN	A.Z.	REF.	
TRACED	CAD	DATE	15-09-2022
CHECKED	EvB	APPROVED	C.M. <i>[Signature]</i>
SCALE	NTS		
DRAWING No.			REV
PL 122590			B



A0

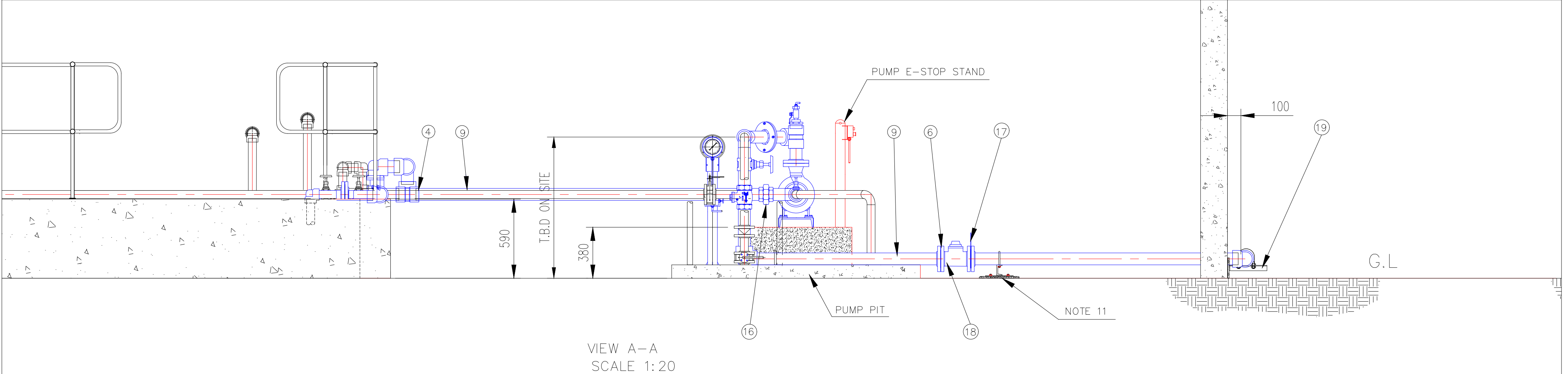
APPROVAL				REVISIONS				CHK	APP
DISCIPLINE	NAME	SIGN	DATE	REV	DATE	DESCRIPTION			
ELECTRICAL				A	T.N.	21-06-2024	ISSUED FOR DISCUSSIONS	J.J.	
MECHANICAL	JDB		06/08/2025	B	T.N.	27-08-2024	ISSUED FOR TENDER	J.J.	
M&I									
PROCESS									
CIVIL									
FIRE									



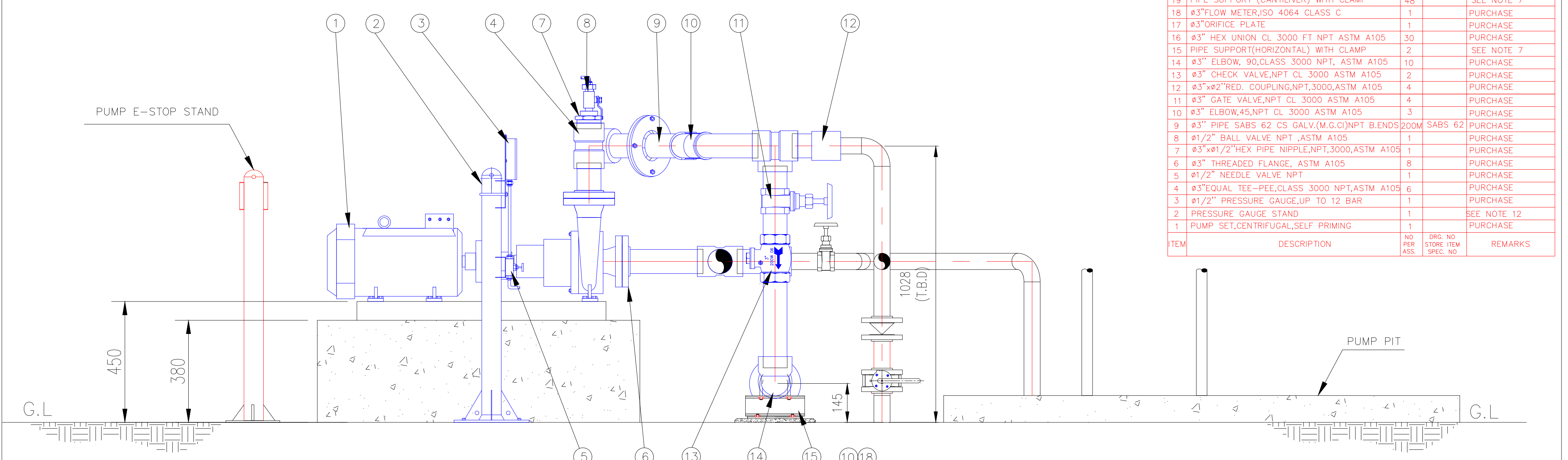
TRANSNET
pipelines

ALRODE SEPARATOR
PIPING GA

PROJECT NAME							
DRAWN	T.N.	REF.	-	DRAWN	T.N.	REF.	-
TRACED	CAD	DATE	12-05-2024	TRACED	CAD	DATE	12-05-2024
CHECKED	Z.M.	APPROVED	Z.M.	CHECKED	Z.M.	APPROVED	Z.M.
SCALE		1:200		EDMS No.		REV	
ORIGINAL		No.		PL 122604		B	



VIEW A-A
SCALE 1:20



19	PIPE SUPPORT (CANTILIVER) WITH CLAMP	48		SEE NOTE 7
18	Ø3"FLOW METER,ISO 4064 CLASS C	1		PURCHASE
17	Ø3"ORIFICE PLATE	1		PURCHASE
16	Ø3" HEX UNION CL 3000 FT NPT ASTM A105	30		PURCHASE
15	PIPE SUPPORT(HORIZONTAL) WITH CLAMP	2		SEE NOTE 7
14	Ø3" ELBOW, 90,CLASS 3000 NPT, ASTM A105	10		PURCHASE
13	Ø3" CHECK VALVE,NPT CL 3000 ASTM A105	2		PURCHASE
12	Ø3"xØ2"RED, COUPLING,NPT,3000,ASTM A105	4		PURCHASE
11	Ø3" GATE VALVE,NPT CL 3000 ASTM A105	4		PURCHASE
10	Ø3" ELBOW,45,NPT CL 3000 ASTM A105	3		PURCHASE
9	Ø3" PIPE SABS 62 CS GALV.(M.G.CI)NPT B.ENDS 200M SABS 62	200M		PURCHASE
8	Ø1/2" BALL VALVE NPT ,ASTM A105	1		PURCHASE
7	Ø3"xØ1/2"HEX PIPE NIPPLE,NPT,3000,ASTM A105	1		PURCHASE
6	Ø3" THREADED FLANGE, ASTM A105	8		PURCHASE
5	Ø1/2" NEEDLE VALVE NPT	1		PURCHASE
4	Ø3"EQUAL TEE-PEE,CLASS 3000 NPT,ASTM A105	6		PURCHASE
3	Ø1/2" PRESSURE GAUGE,UP TO 12 BAR	1		PURCHASE
2	PRESSURE GAUGE STAND	1		SEE NOTE 12
1	PUMP SET,CENTRIFUGAL,SELF PRIMING	1		PURCHASE
ITEM	DESCRIPTION	NO PER ASS.	DRG: NO STORE ITEM SPEC. NO	REMARKS

- NOTES
- ALL DIMENSIONS ARE IN MM.
 - REMOVE ALL SHARP EDGES.
 - MATERIAL TO BE CARBON STEEL UNLESS SPECIFIED
 - ALL PIPING,PIPE SUPPORT TO BE GALVANIZED AS PER ASTM A123
 - PUMP HEIGHT AND DIMENSIONS TO BE CONFIRMED
 - DISCHARGE PIPE HEIGHT TO BE 100 MM OFF THE GROUND LEVEL
 - ALL PIPE SUPPORT TO BE MANUFACTURED AS PER DRAWING PL 122648.
 - ALL THREADED FITTINGS SHALL BE CLASS 3000 AS PER PIPING MATERIAL CLASSES SPECIFICATION
 - PRESSURE GAUGE TO BE PUCHARSED, MC&I TO PROVIDE DATA SHEET.
 - CLEARANCE FROM THE WALL TO THE EDGE OF 3" ON THE EXPORT LINE(SEWER) TO BE 100 MM.
 - CONCRETE PLINTH TO BE 300x300x500 ON THE HORIZONTAL SUPPORTS.
 - GAUGE/INSTRUMENT STAND TO BE FABRICATED AS PER DRAWING G52001-T400-P106.

VIEW B-B
SCALE 1:10

- PROPOSED PIPING & EQUIPMENT
- EXISTING
- FIRE PIPING

A2

APPROVAL				REVISIONS				
DISCIPLINE	NAME	SIGN	DATE	REV	DATE	DESCRIPTION	CHK	APP
ELECTRICAL				A	T.N.21-06-2024	ISSUED FOR DISCUSSIONS	J.J.	.
MECHANICAL	JDB	<i>JDB</i>	06/08/2025	B	T.N.27-08-2024	ISSUED FOR TENDER	J.J.	.
MC&I								
PROCESS								
CIVIL								
FIRE								

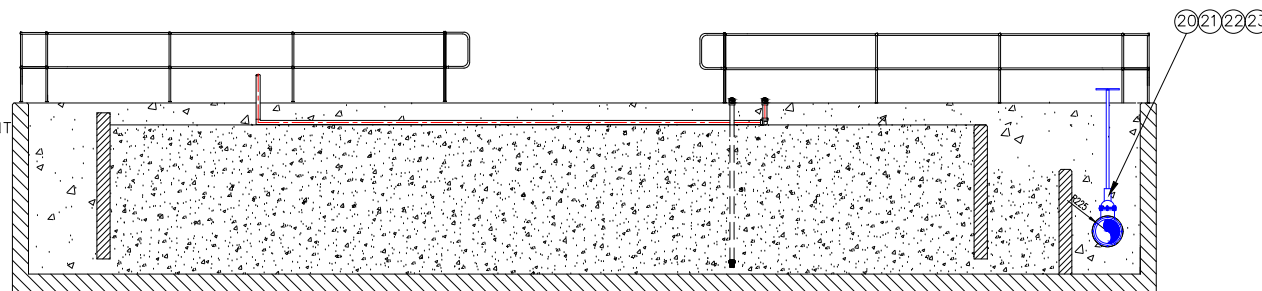
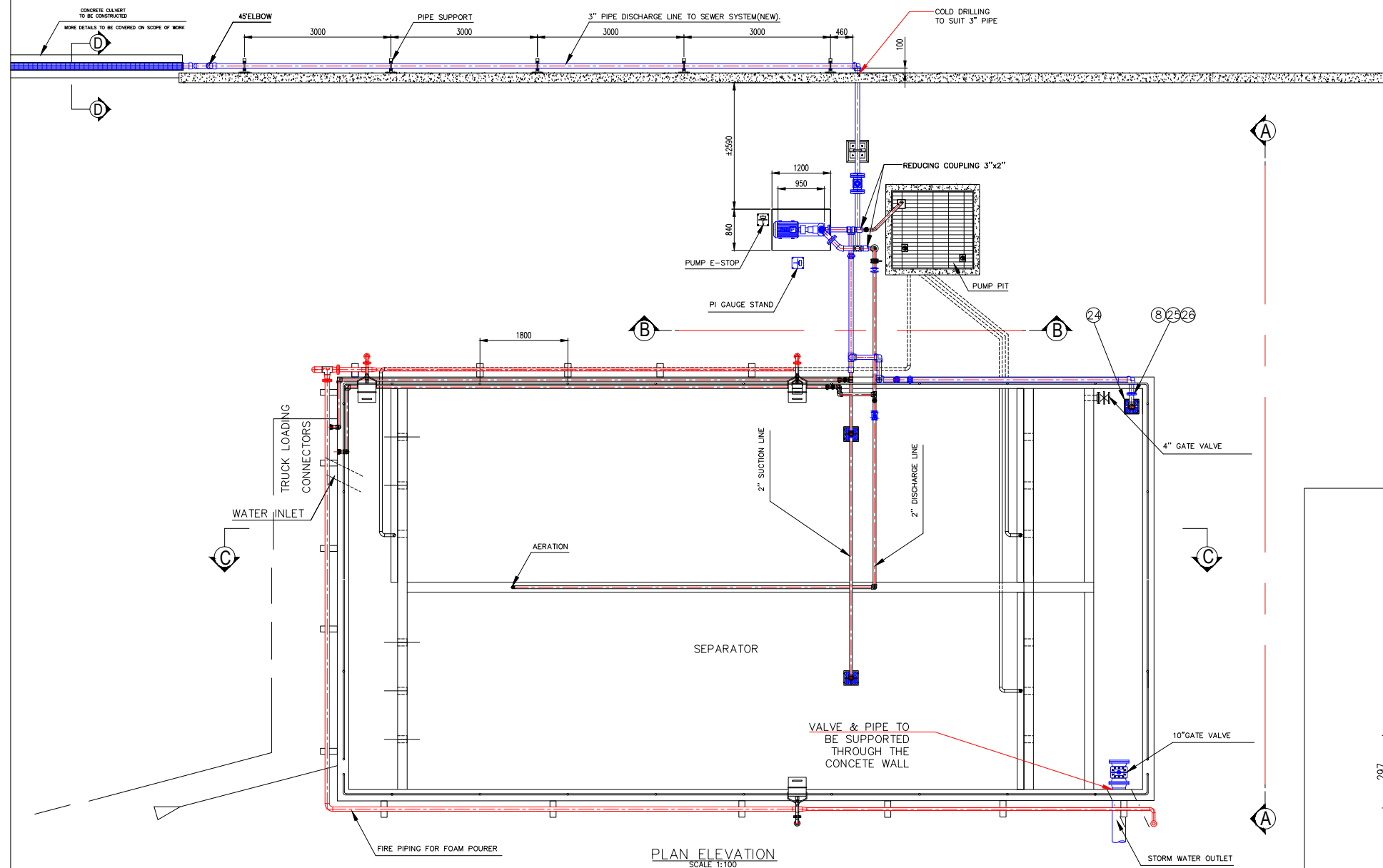
**TRANSNET**
pipelines

ALRODE SEPARATOR
PROPOSED PIPES ROUTING TO SEWER

SHEET 2 OF 5

PROJECT NAME			
DRAWN	T.N	REF.	—
TRACED	CAD	DATE	15-06-2023
CHECKED	J.B.	APPROVED	Z.M.
SCALE	1:150		
ORIGINAL No.	EDMS No.	REV	
	PL 122604	B	

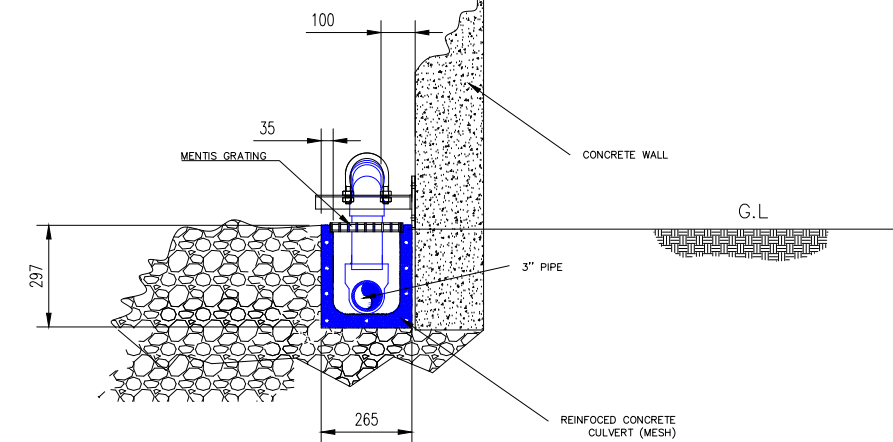
A3

SECTION C-C
SCALE 1:100

SHEET 3 OF 5

NOTES:

1. ALL DIMENSIONS ARE MM
2. FOOT VALVE TO BE 100 MM OFF THE BOTTOM BASE LEVEL OF THE SPILL BASIN.
3. ISOLATION HAND OPERATED GATE VALVE WITH SPINDLE AND PIPING TO BE INSTALLED FOR EMERGENCY RELEASE OF OILY WATER.
4. FOOT VALVE TO BE FITTED IN ALL SUCTION PIPE WITHIN THE SPILL BASIN.
5. CLEARANCE FROM THE WALL TO THE EDGE OF 3 INCHES PIPE TO BE 100 MM.
6. DISCHARGE PIPE HEIGHT TO BE 100 MM ABOVE THE GROUND LEVEL
7. PIPE SPECIFICATION AND MATERIAL TO BE GALVANIZED CARBON STEEL.
8. PUMP HEIGHT AND DIMENSIONS TO BE CONFIRMED
9. ISOLATION VALVE ON THE EXPORT LINE(SEWER) TO BE BALL VALVE
10. CANTILEVER PIPE SUPPORTS TO BE 3000MM APART ON THE EXPORT LINE
11. CAGE TO BE INSTALL IN ALL SUCTION LINE TO PROTECT FOOT VALVE FROM FOREIGN OBJECTS.
12. FOOT VALVE CAGE TO BE MANUFACTURED, DRAWING DETAIL PROVIDED ON SHEET 5 OF 5
13. PRECAST CONCRETE CULVERT TO BE INSTALLED IN ONE ENTRANCE GATE, MORE DETAILED ON SECTION D-D
14. PRECAST REINFORCED CONCRETE CULVERT : STRENGTH TO BE 30 MPa.

PRECAST REINFORCED CONCRETE CULVERT
SECTION D-D(SCALE 1:20)

26	Ø3" BOLTS AND NUTS FOR 150#	—		PURCHASE
25	Ø3" GASKET	5		PURCHASE
24	FOOT VALVE CAGE	3		SEE NOTE 12
23	Ø10" GASKET	1		PURCHASE
22	Ø10" BOLTS AND NUTS	—		PURCHASE
21	Ø10" WN FLANGE,150# ASTM A105,	1		PURCHASE
20	Ø10" GATE VALVE RF 150# ASTM A105	1		PURCHASE
ITEM	DESCRIPTION	NO PER ASS.	DRG. NO STORE ITEM SPEC. NO	REMARKS

APPROVAL

DISCIPLINE	NAME	SIGN	DATE
ELECTRICAL			
MECHANICAL	JDB	<i>JDB</i>	06/08/2025
MC&I			
PROCESS			
CIVIL			
FIRE			

REVISIONS

REV	BY	DATE	DESCRIPTION	CHK	APP
A	T.N	21-06-2024	ISSUED FOR DISCUSSIONS	J.J	
B	T.N	27-08-2024	ISSUED FOR TENDER	J.J	

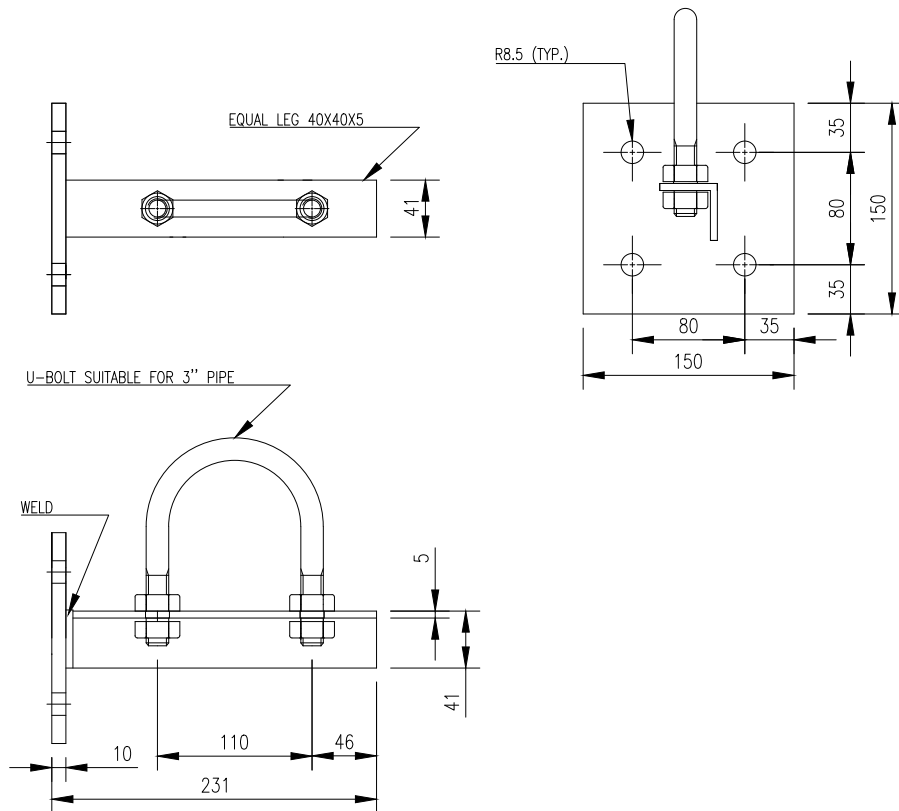


ALRODE SEPARATOR

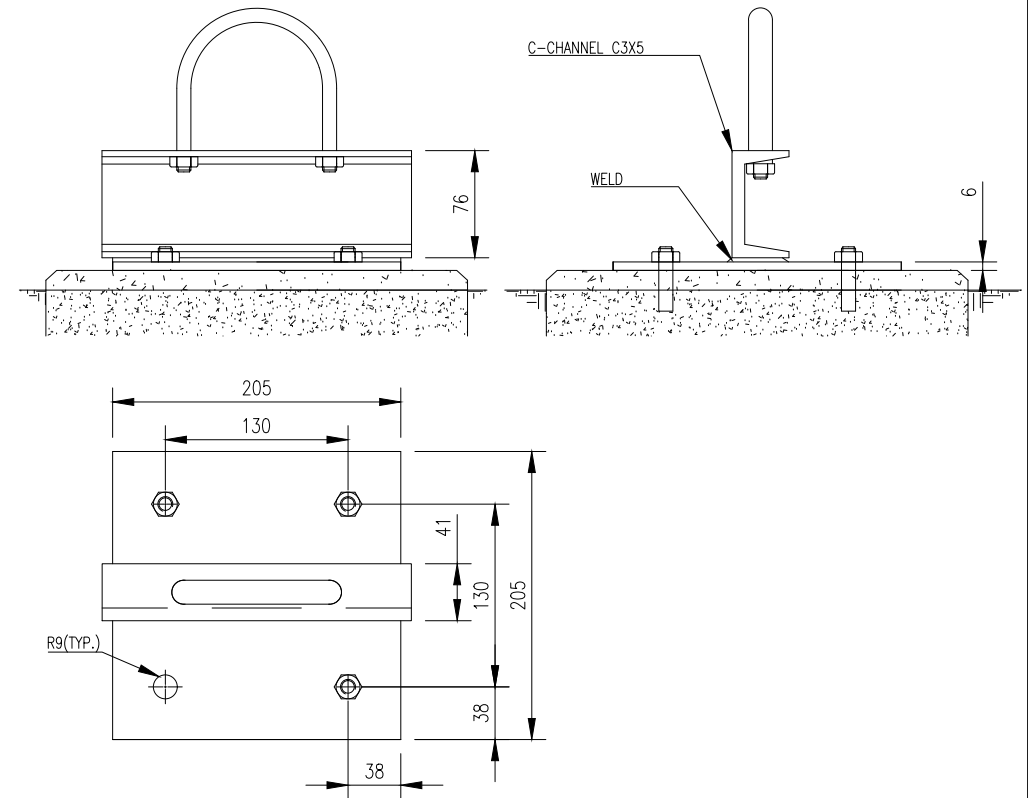
PROPOSED OILY WATER DISCHARGE

PROJECT NAME

DRAWN	T.N	REF.	—
TRACED	CAD	DATE	12-05-2024
CHECKED	N.K	APPROVED	Z.M
SCALE	AS SHOWN		
ORIGINAL No.	EDMS No.	REV	
	PL 122604	B	



CANTILEVER PIPE SUPPORT DETAILS
SCALE 1:5



PIPE SUPPORT DETAILS
SCALE 1:5

NOTES:

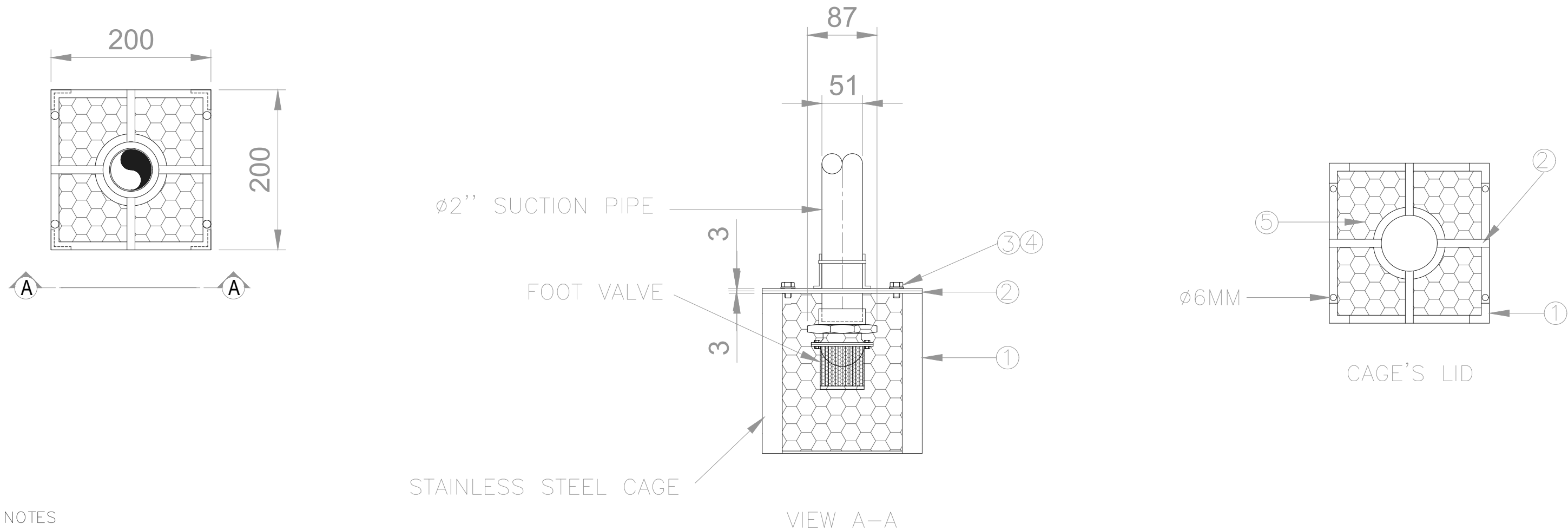
1. ALL DIMENSIONS ARE IN MM.
2. REMOVE ALL SHARP EDGES
3. MATERIAL OF THE BRACKET TO BE CARBON STEEL
4. ANCHOR BOLTS TO BE M8.

SHEET 4 OF 5

APPROVAL				REVISIONS			
DISCIPLINE	NAME	SIGN	DATE	REV BY	DATE	DESCRIPTION	CHK APP
ELECTRICAL				A T.N	21-06-2024	ISSUED FOR DISCUSSIONS	J.J
MECHANICAL	Janie De Beer	<i>Janie De Beer</i>	02/09/2024	B T.N	27-08-2024	ISSUED FOR TENDER	J.J
MC&I							
PROCESS							
CIVIL							
FIRE							

TRANSNET
pipelines
ALRODE SEPARATOR
PIPE SUPPORT DETAILS FOR EXPORT LINE

PROJECT NAME			
DRAWN	T.N.	REF.	-
TRACED	CAD	DATE	05-05-2023
CHECKED	J.J	APPROVED	Z.M.
SCALE AS SHOWN			
ORIGINAL No.		EDMS No.	REV
PL 122648			B



NOTES

1. ALL DIMENSION ARE IN MM
2. REMOVE ALL SHARP EDGES
3. MATERIAL OF EQUAL LEG ANGLES TO BE STAINLESS STEEL 304
4. 25 X25 X 4MM EQUAL LEG TO BE USED FOR THE CAGE FRAME
5. TICK WELD THE MASH ON THE CAGE FRAME
6. CAGE DIMENSION TO BE 200 X 200 X 200 MM

SHEET 5 OF 5

5	3 MESH STAINLESS STEEL, ASTM 304	1		PURCHASE
4	Ø10 MM STAINLESS STEEL WASHER, ASTM 304	1		PURCHASE
3	M6 X 20 MM BOLT, ASTM 304	4		PURCHASE
2	METAL STRIP 3MM X 10MM, ASTM 304	2M		PURCHASE
1	25 X 25 X 4 MM EQUAL LEG, ASTM 306	2M		PURCHASE
ITEM	DESCRIPTION	NO PER ASS.	DRG. NO STORE ITEM SPEC. NO	REMARKS

APPROVAL				REVISIONS				PROJECT NAME			
DISCIPLINE	NAME	SIGN	DATE	REV	BY	DATE	DESCRIPTION	CHK	APP	DRAWN	T.N
ELECTRICAL				A	T.N	21-06-2024	ISSUED FOR DISCUSSIONS	J.J		REF.	-
MECHANICAL	Janie De Beer	<i>Janie De Beer</i>	02/09/2024	B	T.N	27-08-2024	ISSUED FOR TENDER	J.J		TRACED	CAD
MC&I										CHECKED	N.K
PROCESS										APPROVED	Z.M
CIVIL										SCALE	1:5
FIRE										ORIGINAL No.	EDMS No.
										PL 122625	REV
											B



ALRODE SEPARATOR
PROPOSED FOOT VALVE CAGE

				Centrifugal Pump Data Sheet								
Sheet		2 of 3		Revision: A								
Item Tag Number (s)				Alrode Oily water pump skid – spill basin to sewer.								
Job No.												
By:												
Process:		Craig Mcconnachie				Date 12.06.2024						
Mechanical:		Janie de Beer				Date 12.06.2024						
Control:		N/A				Date N/A						
Plant:		N/A				Date N/A						
Other:		N/A				Date N/A						
☐ Performance												
41	Proposal curve No:				Min continuous flow		30 m³/h Assume vendor to confirm		NPSH required:		mH ₂ O	
42	Speed		r/min		Thermal:		Stable		3% Head drop:		m	
43	Efficiency		%		Max head @ rated temp:		m		Suction specific speed:			
44	Rated power		kW		Max power:		kW					
☐ Construction												
47	Nozzle *	Size	Class	Facing	Location	Miscellaneous connection		Size	Location			
48	Suction	2" (tbc)	150	RF	End	Drain		(tbc)	Casing bottom			
49	Discharge	2" (tbc)	150	RF	Top	Vent		N/A	Discharge piping			
50						Press gauge		N/A	Discharge piping			
51												
☐ Casing mount:				☐ Impeller				☐ Coupling:				
53	Centreline		Bracket		Open		Close		Type:			
54	Near centreline		In-line		Diameter		(mm)		Model:			
55	Vertical		Sump		Rotation (Viewed from Coupling Guard)				Driver half-coupling mounted by:			
56	Vertical barrel		Foot		Clock Wise		Counter Clock Wise		Pump MFR			
57					Overhung		Between Bearings		Driver MFR			
☐ Casing split:								Gland type/material:				
58												
59	Axial		Radial		☒ Seal Mechanism:				☐ Gland plate taps required:			
60												
☐ Casing type:				Packing:		Mechanical Seal		X		Quench		
☐ Diffuser				☐ Packing:				Flush				
62	Double		Volute		MFR:				Drains			
63	☐ Staggered				Type:				Vent			
64					Size/no rings:							
65	Single		Volute									
66					☐ Pump sealing:				☐ Coupling Guard:			
67					Single		Dual		Non-sparking material		X	
68					Cartridge Type: (Yes/no)				Brass			
69					Pusher (Yes/no)				Bronze			
70	☐ Max allowable press kPa:				Non pusher (Yes/no)				Other specify:			
71					Bellow (Yes/no)							
72	At 15°C	1900	kPa		Multi spring (Yes/no)				☐ Bearing:			
73	At norm pump temp:	1900	kPa		API Class code:				Type/Number			
74	Hydro test press	2375	kPa		Manufacturer:				Radial			
75					Mode:				Thrust			
76					Manufacturer Code:							
77												
☐ Materials												
79												
80	☐ MDMT:		0		☐ Case / imp wear rings:				Baseplate: Fabricated			
81	☐ API 610 Table G-I & H-I Class: S-1 #2				☐ Sleeve:				☐ Material / type:			
82	☐ Barrel / case:				☐ Shaft:				☐ API 610 Std No:			
83	☐ Impeller:											
84												
85												
86												
87												

		Centrifugal Pump Data Sheet			
Sheet	3 of 3	Revision: A			
Item Tag Number (s)		Alrode Oily water pump skid – spill basin to sewer.			
Job No.					
By:					
Process:	Craig Mcconnachie	Date	12.06.2024		
Mechanical:	Janie de Beer	Date	12.06.2024		
Control:	N/A	Date	N/A		
Plant:	N/A	Date	N/A		
Other:	N/A	Date	N/A		
88	☒ Inspection and test				
89	Shop inspection (Yes/No)				Yes
90	Material certificate (Yes/No)				Yes
91	Dismantle and inspection after test (Yes/No)				No
92	Casting repair procedure approval required #4 (Yes/No)				No
93	Performance Test #9				Yes
94	Hydrostatic pressure test #10				Yes
95	Inspection required for nozzle welds #5 (Yes/No) if yes indicate applicable NDE below				N/A
96	MT	N/A	PT	N/A	
97	Inspection required for castings #6 (Yes/No) if yes indicate applicable NDE below				Yes
98	RT		UT	X	
99	Inspection required for weld to casing #6 (Yes/No) if yes indicate applicable NDE below				Yes
101	MT	X	PT		
102	RT		UT		
103	☐ Motor driver				
104	Kilowatt	kW	Full load amps:		
105	RPM	r/min	Locked rotor amps:		
106	Frame:		Insulation:		
107	Volts/phase/hertz:		Bearings:		
108	Type:		Lube:		
109	Enclosure:		Vertical shaft	Solid	Hollow
110	Temperature rise:	°C	Vertical thrust capacity, N	Up	Down
111	Manufacturer:				
112	☐ Mass				
113	Mass of pump:				kg
114	Mass of baseplate:				kg
115	Mass of motor / turbine:				kg
116	Mass of gear:				kg
117	Total mass:				kg
118	Additional Information/Notes				
119	1. API standard 610 10 th Edition governs unless otherwise noted				
120	2. * Refer to ANSI B16.5				
121	3. **Area classification according to SANS 10108				
	4. Motor sizing to be based on end of curve conditions				
	5. Pump must be of a self-priming type				
	6. Operating conditions given for water. Pump can also be used to pump petrol to Sump Tank – SG 0.725 and vapour pressure of 75kPa.				
122	Remarks:				
123	#1 Specify any other upset conditions - None				
124	#2 Material Class to be selected at MDMT				
125	#3 Mechanical test run for 4 hours				
126	#4 Casting repairs not permitted				
127	#5 Welded nozzles not permitted				
128	#6 Per Manufacturers Standard procedures				
129	#7 Automatic re-circulation valve required				
130	#8 Where a Standard and/or Specification are referred to, it shall mean the latest revision.				
131	#9 Performance Test Certificate to be included in data book				
132	#10 Hydrostatic pressure test Certificate to be included in data book				
133	Documentation Required in Data Book				
134	General Arrangement Drawings				
135	As-Built Data Sheet				
136	Sign off Quality Control Plan				
137	Performance Test Certificate				
138	Hydrostatic pressure test Certificate				
139	Material Certificate 3.1				
140	Maintenance, Installation & Operational Manuals				
141	Certificate of Conformity				
B	02.09.2024	Issued for RFQ	Janie de Beer/ Barry Trotter	Janie De Beer <i>gdebeer</i>	
A	12.06.2024	Issued for review	Janie de Beer/ Barry Trotter		