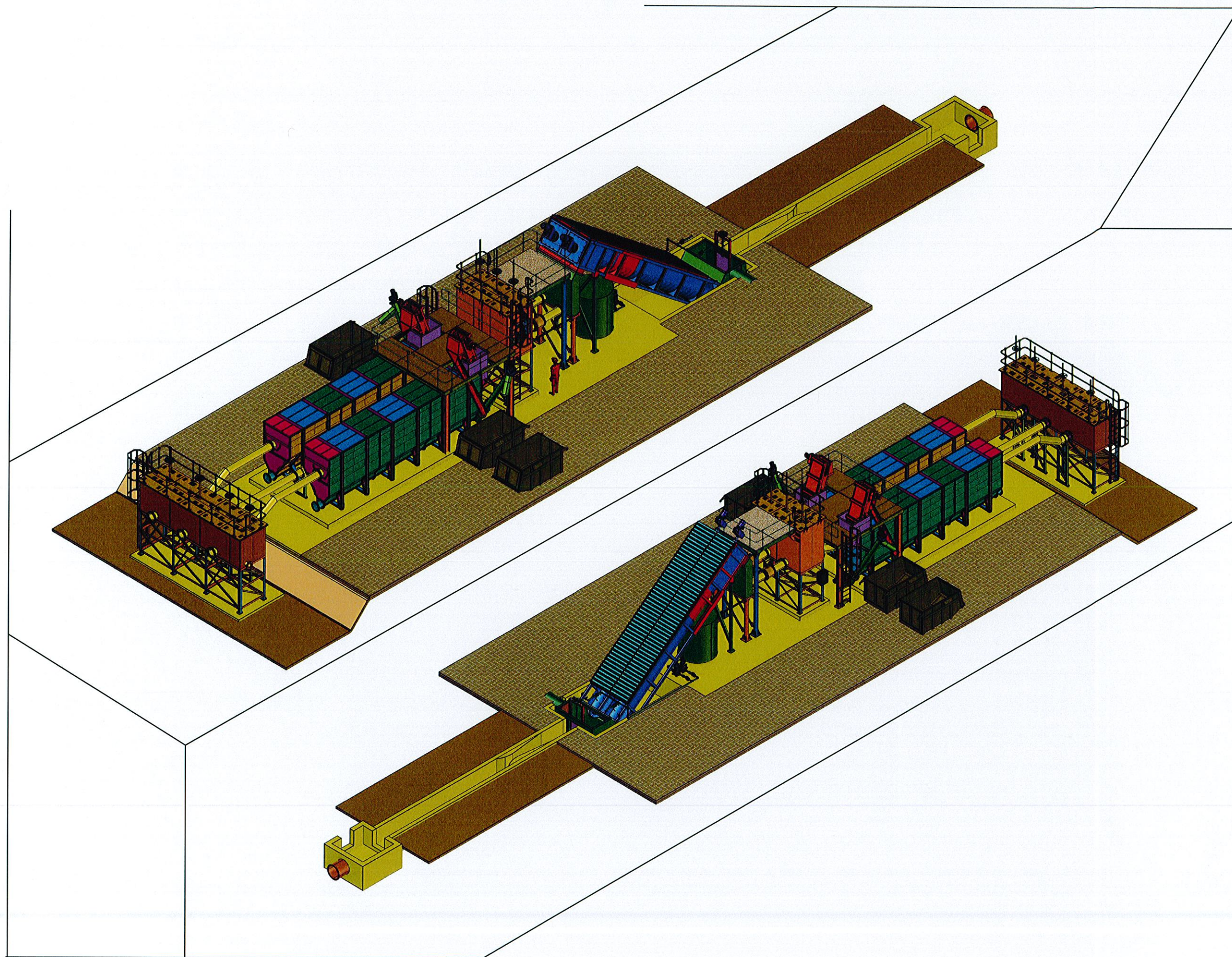
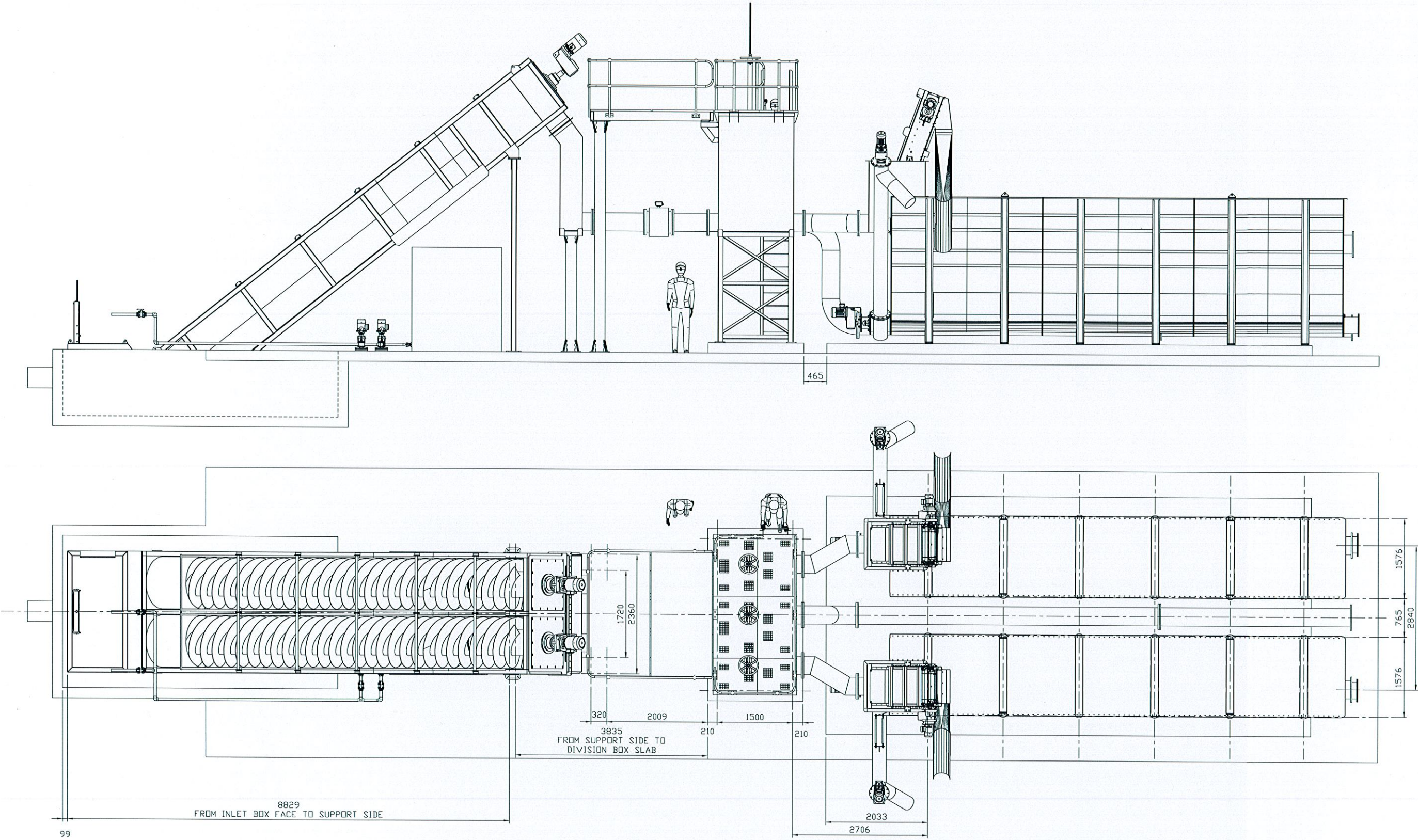
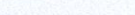
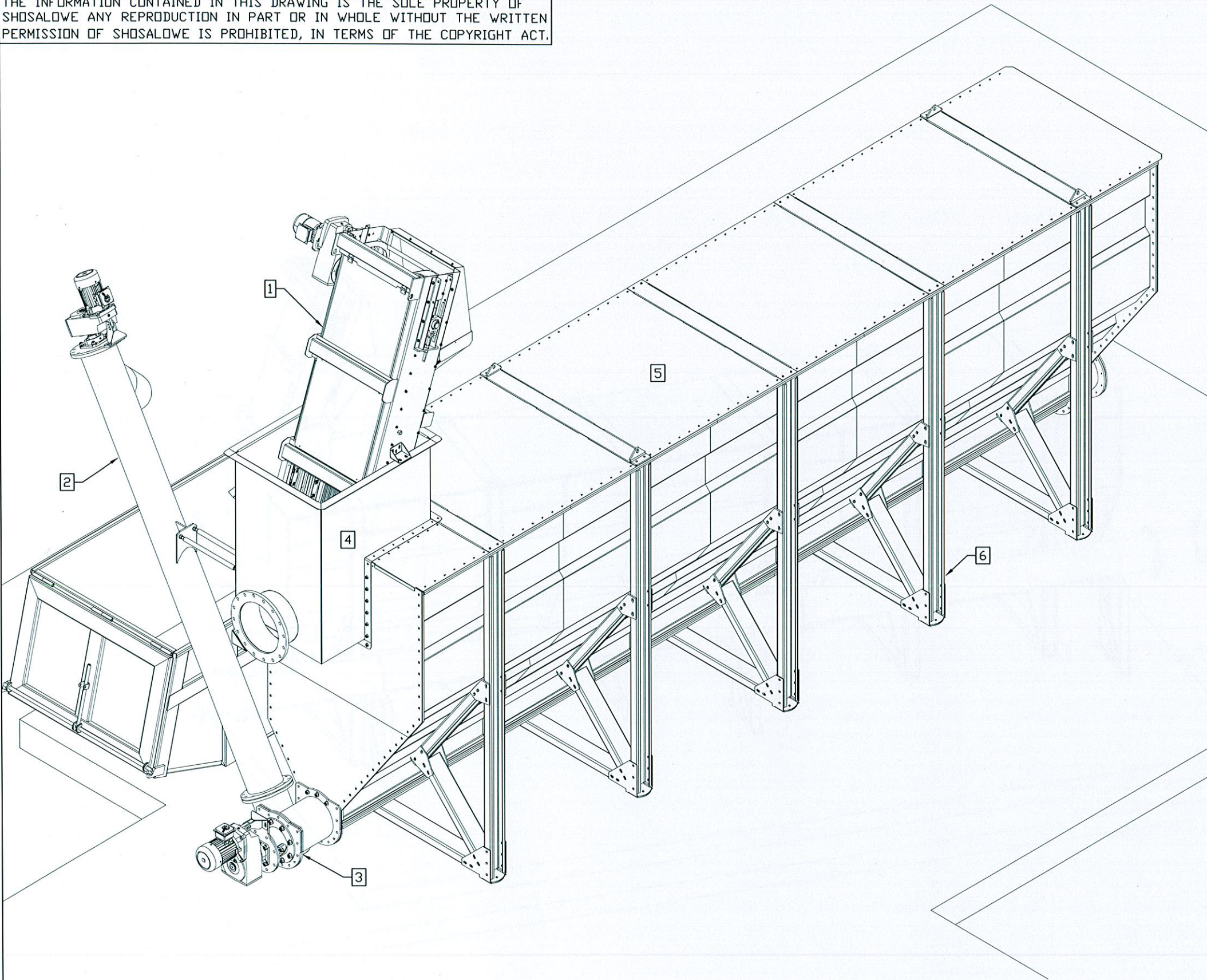




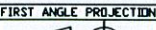


FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 Shosalowe Inv TEL083 302 9703 PD Box 12414 FAX086 671 0250 Hotfield 0028		
	0 - 6	0.1										
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO SANS 2001 - CS 1	6 - 30	0.2				 GENERAL SURFACE FINISH 3.2 um RMS U.O.S REMOVE ALL BURRS AND SHARP EDGES	APPROVALS		DATE	INLET WORKS INSTALLATION		
	30 - 100	0.3					DRAWN	DATE				
	100 - 300	0.5					A.L.FOURIE	2015 09 23				
	300 - 1000	0.8					CHECKED	DATE				
	1000 - 3000	1.2					DO NOT SCALE DRAWING		L.J.NIEMAND	2015 09 23	SIZE A2	
	3000 - PLUS	2.0							REV. 00	SCALE:		
	ANGLES	± 1°							SHEET:			

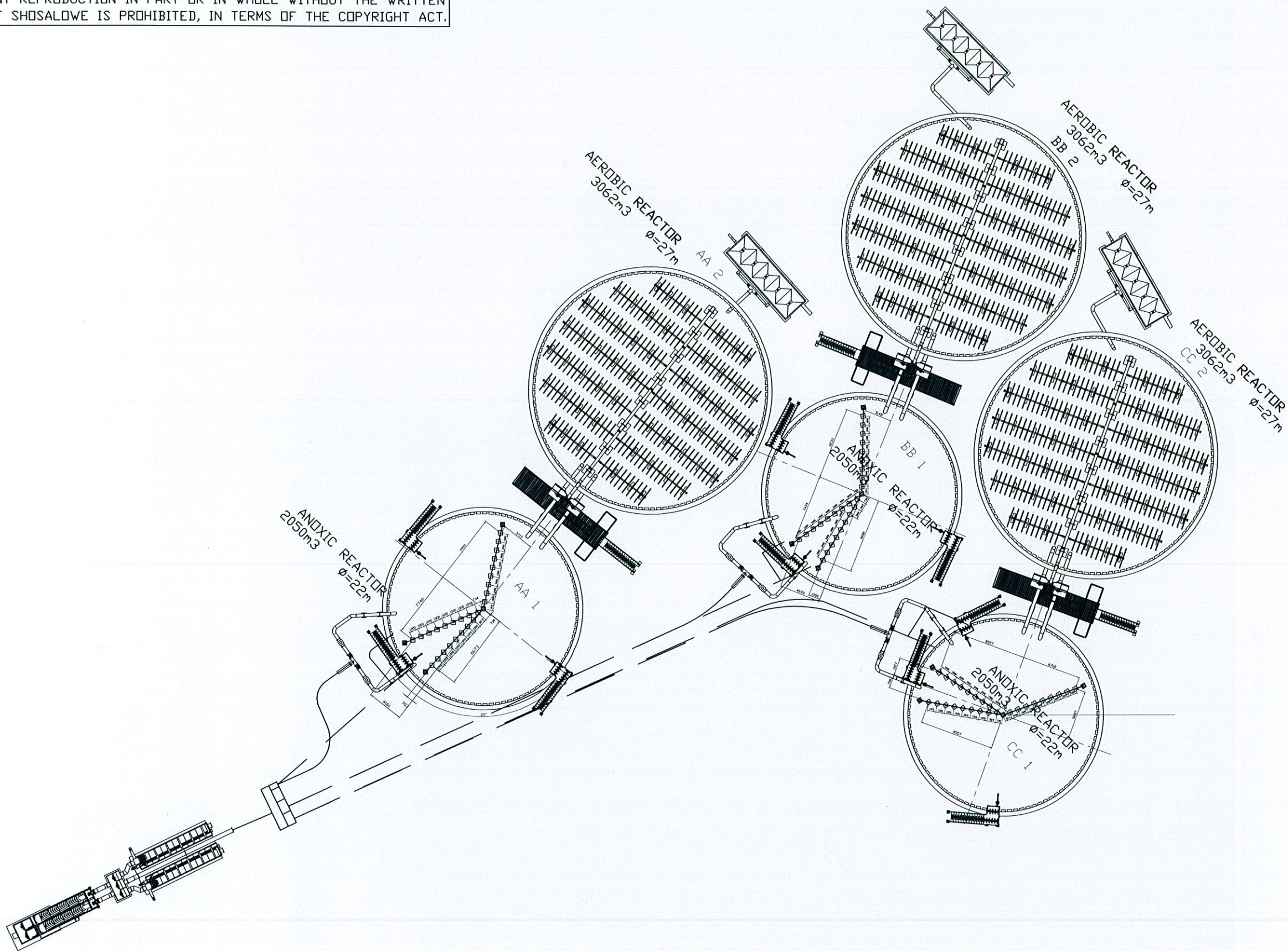
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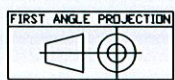


6	TANK SUPPORT	304S/S	12-OFF
5	TANK	304S/S	2-OFF
4	SCREEN BOX	304S/S	2-OFF
3	BOTTOM SCREW	304S/S	2-OFF
2	GRIND SCREW	304S/S	2-OFF
1	SCREEN	304S/S	2-OFF
ITEM	DESCRIPTION	MATERIAL	QTY

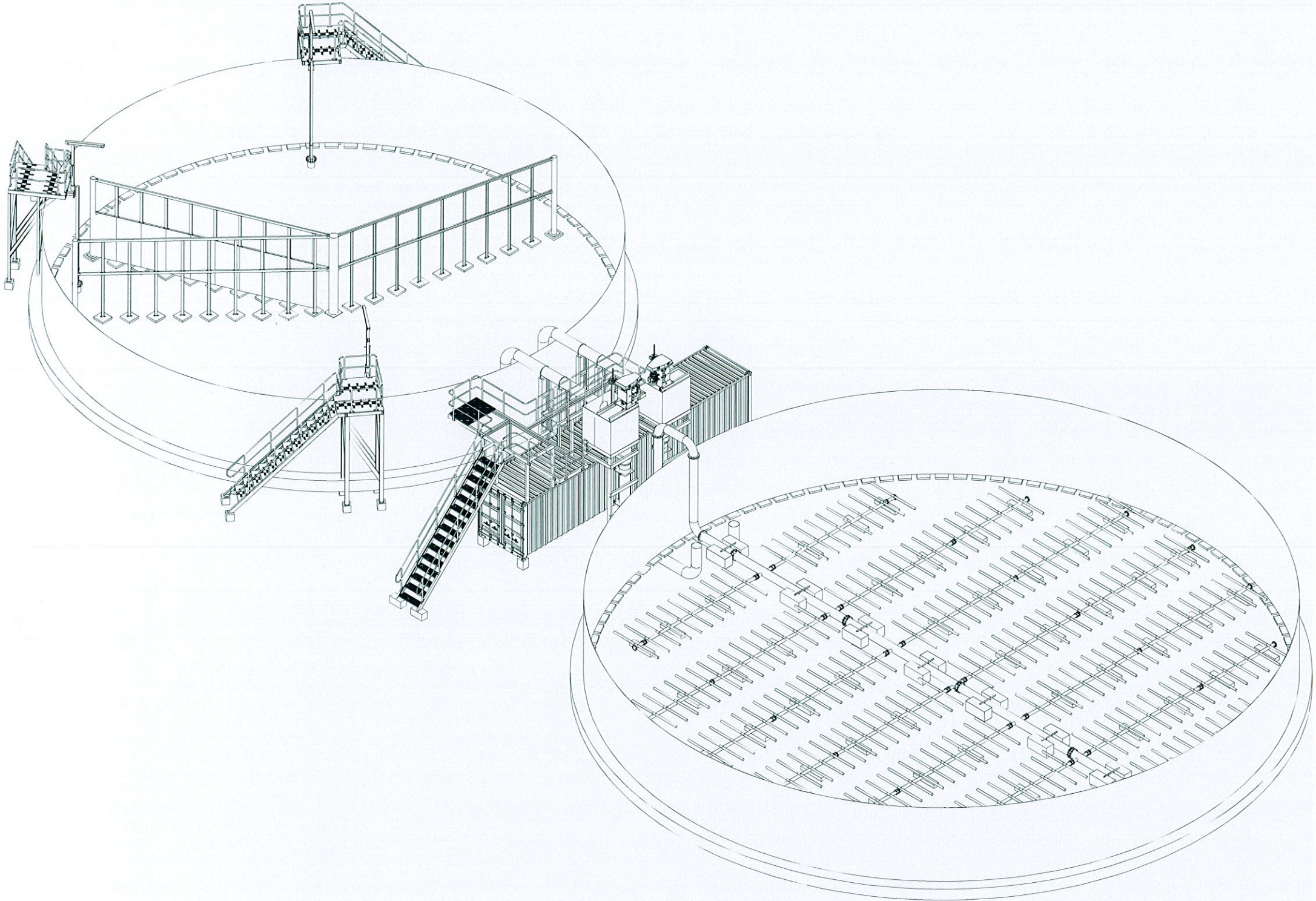
FINISH:	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			Shosalowe Inv TEL:083 302 9703 PD Box 12414 FAX:086 671 0250 Hatfield 0028			
					COLIGNY						
					FIRST ANGLE PROJECTION 			APPROVALS	DATE	GENERAL ARRANGEMENT DRAWING OF INLET WORKS COMBINASION UNIT	
							DRAWN	DATE			
							A.L.FOURIE	2017 06 05			
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART I-1990 2. ALL WELDING ACCORDING TO SANS 2001 - CS1 & AWS D1.1 3. WELDED CONSTRUCTION GENERAL TOLERANCES TO ISO 13920-BE 4. MACHINED COMPONENTS GENERAL TOLERANCES TO ISO 2768-mK				GENERAL SURFACE FINISH 3.2 um RMS U.O.S			CHECKED	DATE	SIZE A3	J853 ICU 01	
					REMOVE ALL BURRS AND SHARP EDGES	DO NOT SCALE DRAWING	L.J.NIEMAND	2017 06 05	REV. 00	SCALE:	SHEET:

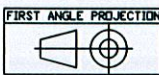
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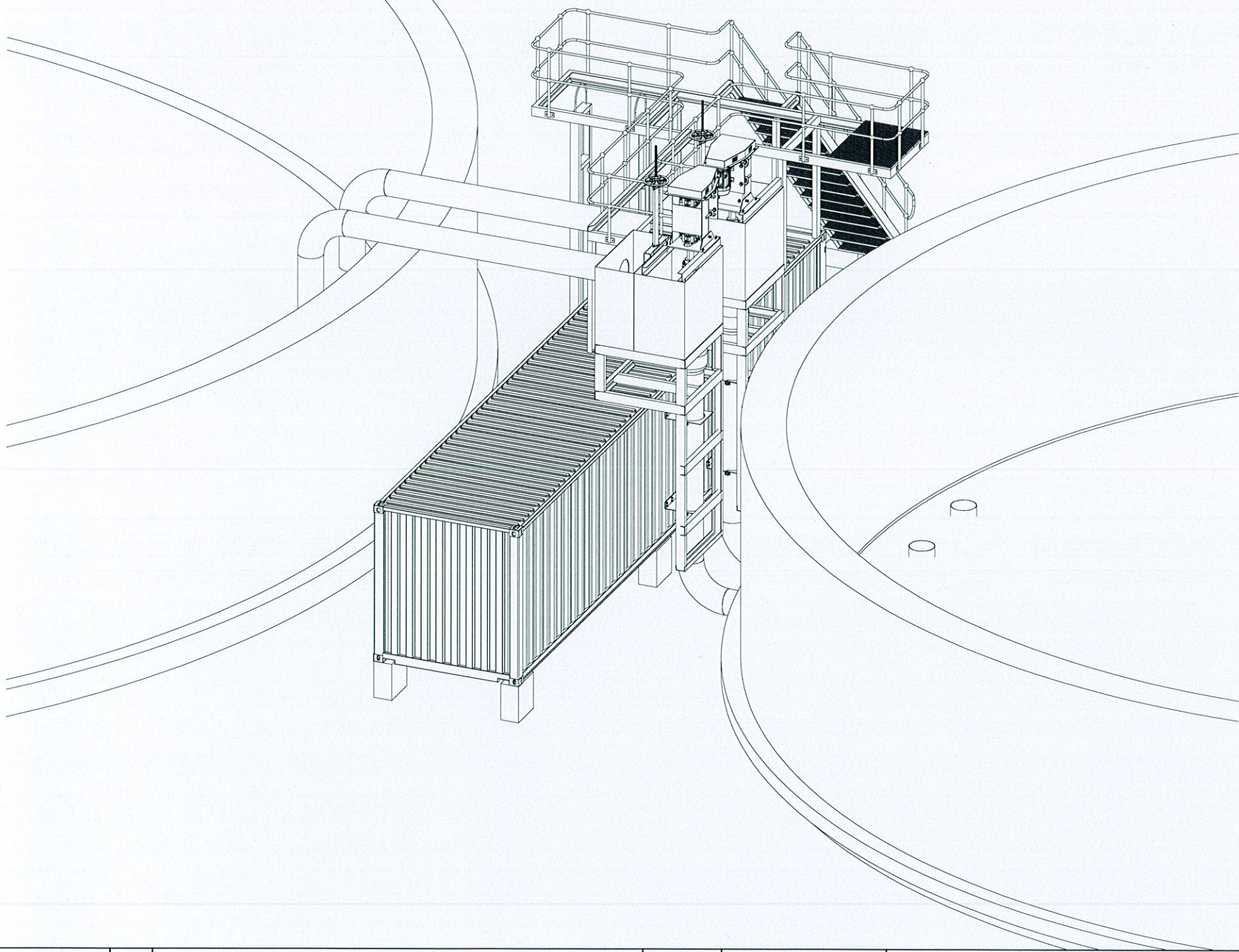
FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 Shosalowe Inv TEL:083 302 9703 FAX:086 671 0250 PO Box 12414 Hatfield 0028			
	0 - 6	0.1					BURGERSFORT						
	6 - 30	0.2					APPROVALS DATE						
	30 - 100	0.3						DRAWN C.V.VISAGIE	DATE 03/22/2016				
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO EN-ISO	100 - 300	0.5				GENERAL SURFACE FINISH 3.2 um RMS U.O.S REMOVE ALL BURRS AND SHARP EDGES	CHECKED L.J.NIEMAND	DATE 03/22/2016					
	300 - 1000	0.8											
	1000 - 3000	1.2											
	3000 - PLUS	2.0											
	ANGLES	± 1°					DO NOT SCALE DRAWING			GA OF AXIAL FLOW RECYCLE & AERATION			
										SIZE A3	BFFL-01-01		
										REV.	SCALE: 1:1	SHEET:	

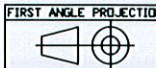
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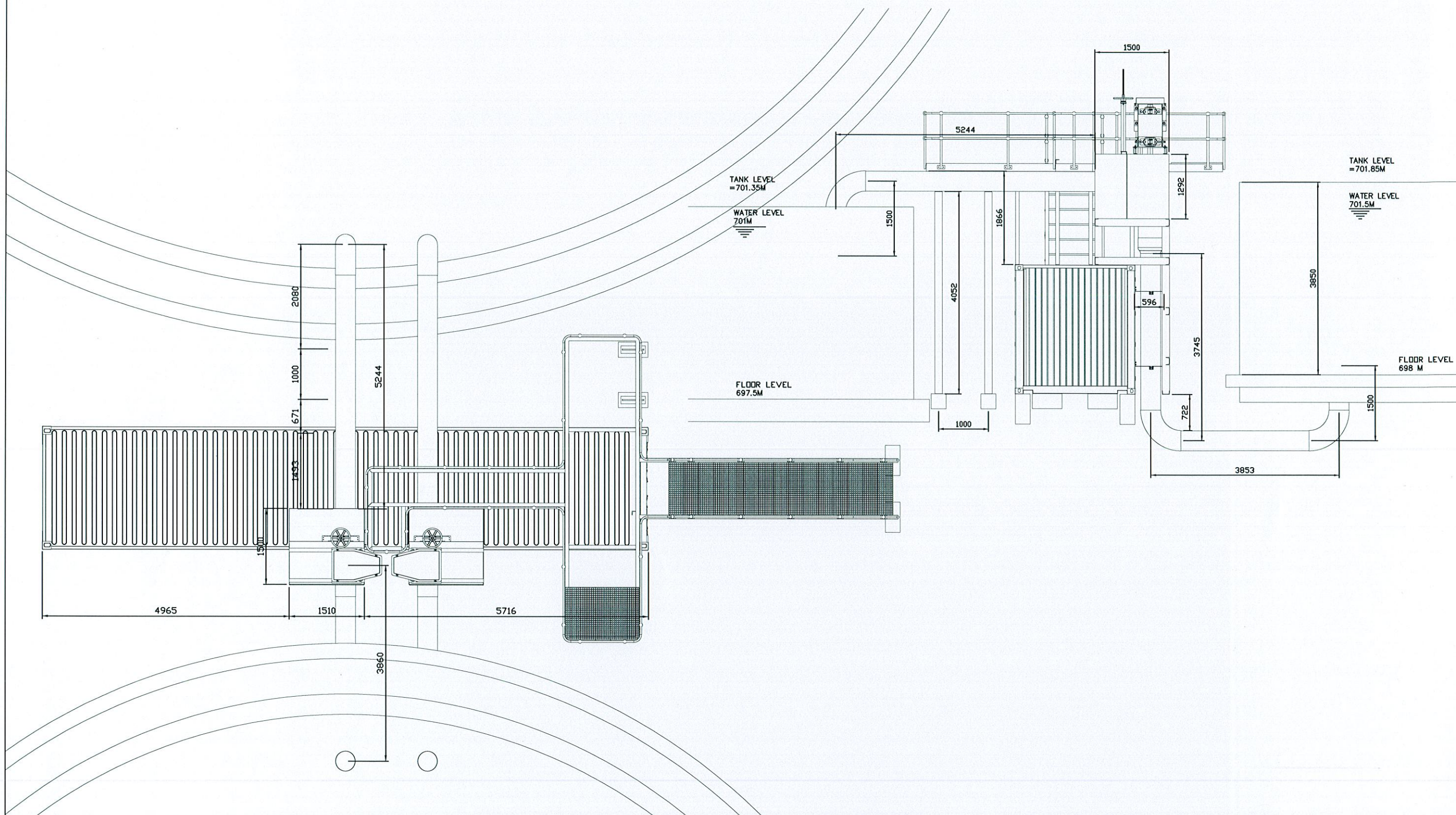
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	0 - 6	0.1					BURGERSFORT					
	6 - 30	0.2						APPROVALS	DATE		GA OF AXIAL FLOW RECYCLE & AERATION	
	30 - 100	0.3						DRAWN	DATE			
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO EN-ISO	100 - 300	0.5				GENERAL SURFACE FINISH 3.2 um RMS U.O.S	C.V.VISAGIE	03/01/2016	SIZE A3 BF-00-03			
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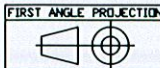
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SHOSALOWE ANY REPRODUCTION IN PART OR IN WHOLE WITHOUT THE WRITTEN PERMISSION OF SHOSALOWE IS PROHIBITED, IN TERMS OF THE COPYRIGHT ACT.



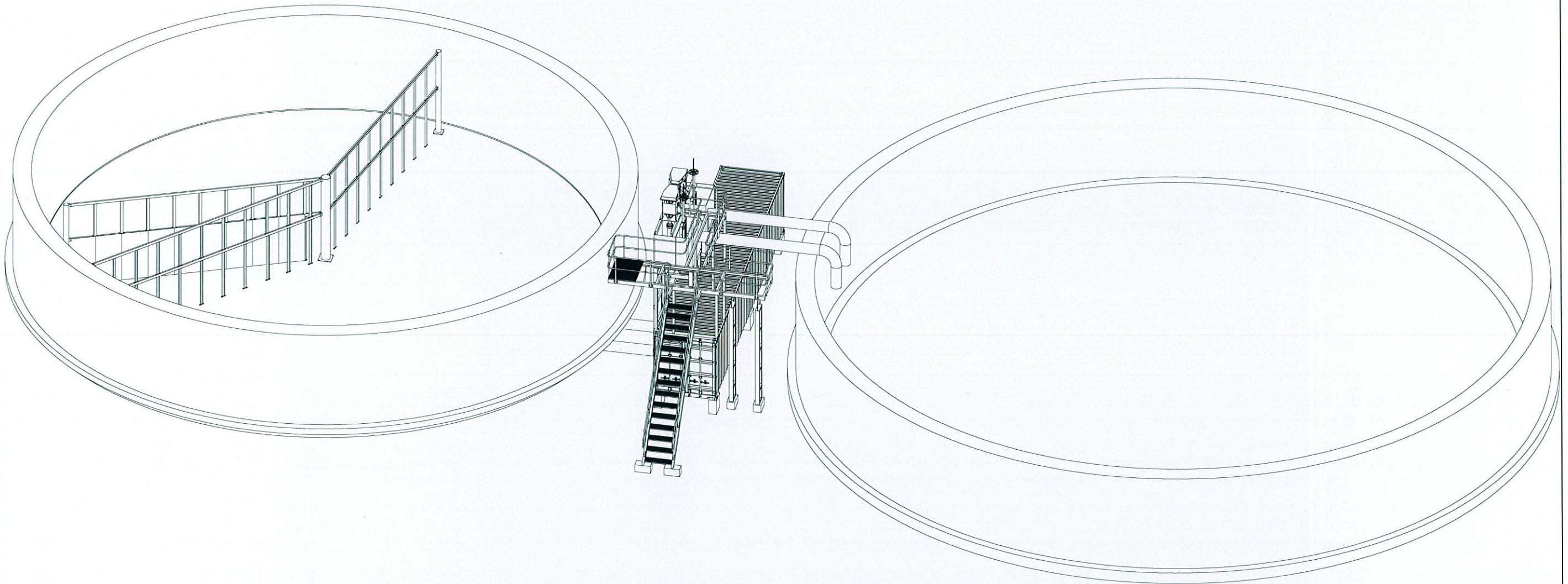
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					BURGERSFORD					
						APPROVALS	DATE			
						DRAWN	DATE			
						C.H.VISAGIE	03/01/2016			
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO SANS 2001 - CS1 & AWS D1.1 3. WELDED CONSTRUCTION GENERAL TOLERANCES TO ISO 13920-BE 4. MACHINED COMPONENTS GENERAL TOLERANCES TO ISO 2768-mK				GENERAL SURFACE FINISH 3.2 um RMS U.O.S	CHECKED	DATE	GA OFF ACTUAL FLOW RECYCLE			
				REMOVE ALL BURRS AND SHARP EDGES						
					DO NOT SCALE DRAWING	L.J.NIEMAND	03/01/2016	SIZE A3	BF-00-03	
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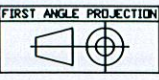
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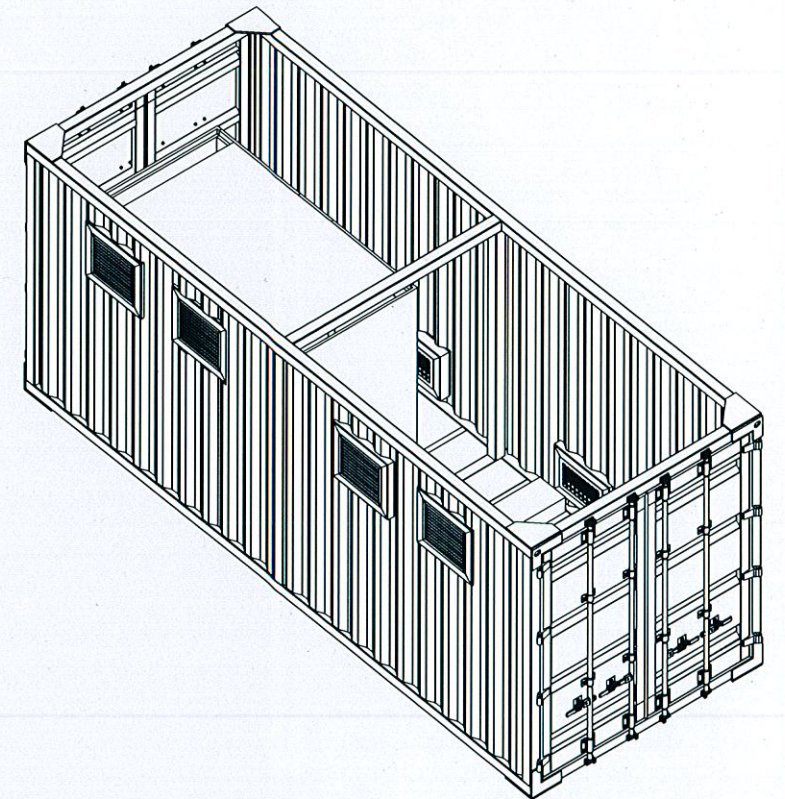
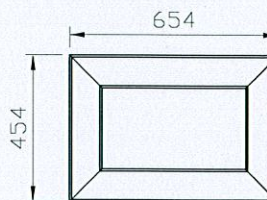
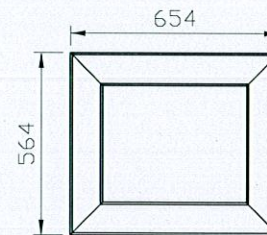
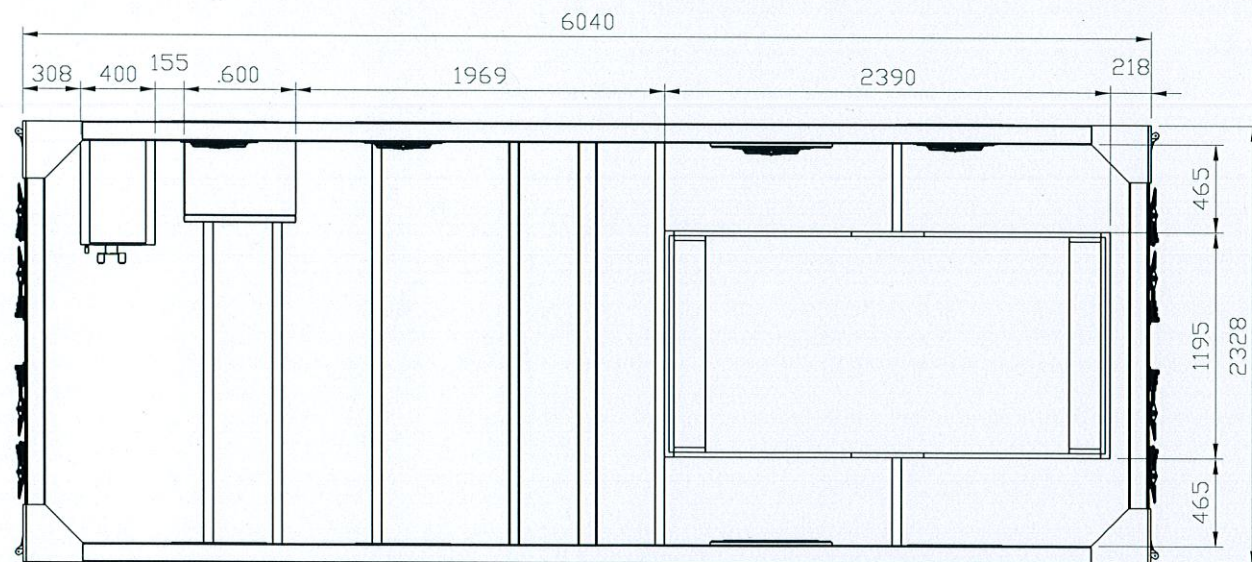
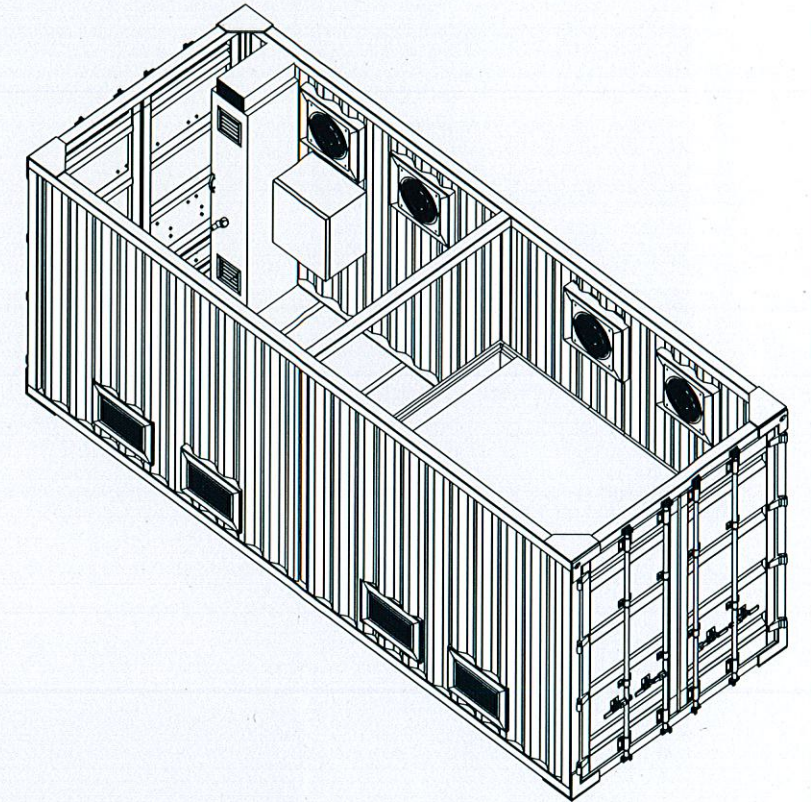
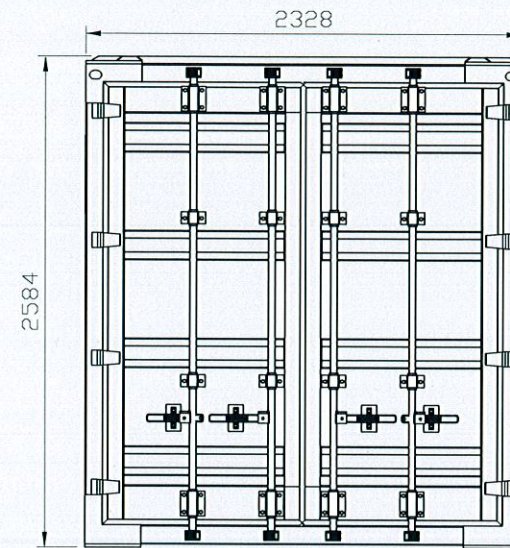
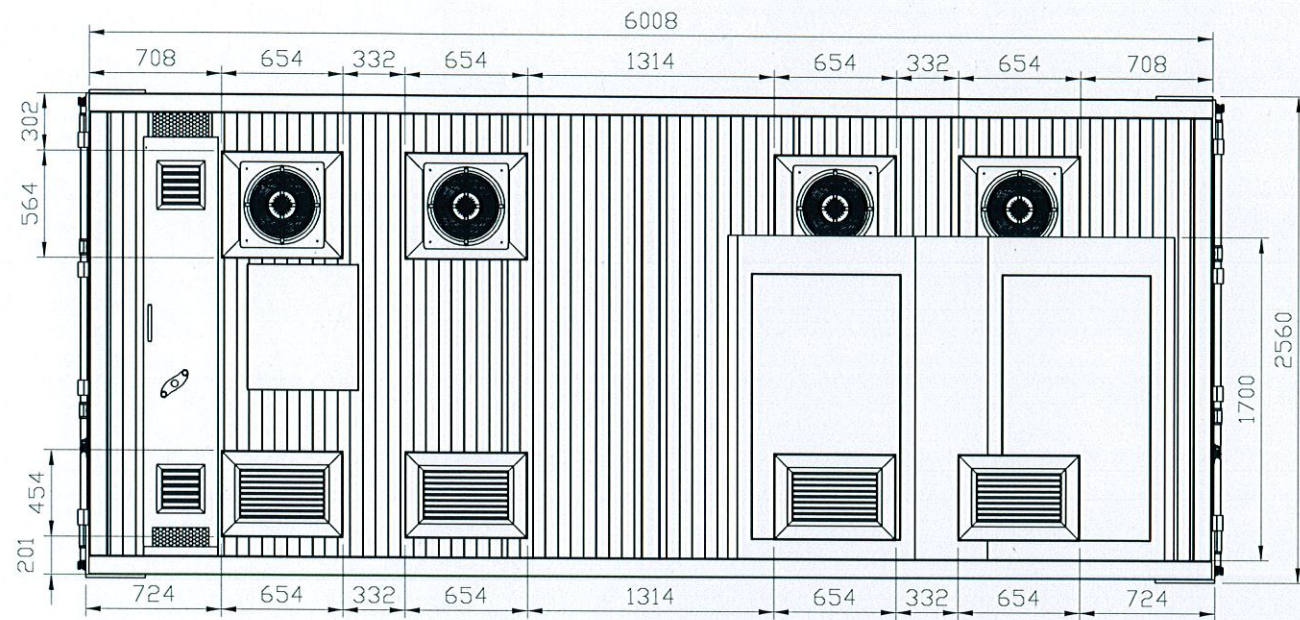
FINISH:	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 Shosalowe Inv TEL:083 302 9703 FAX:086 671 0250 PO Box 12414 Hatfield 0028			
					BURGERSFORD						
							APPROVALS	DATE	GA OFF ACTUAL FLOW RECYCLE		
							DRAWN	DATE			
							C.H.VISAGIE	03/01/2016			
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART I-1990 2. ALL WELDING ACCORDING TO SANS 2001 - CS1 & AWS D1.1 3. WELDED CONSTRUCTION GENERAL TOLERANCES TO ISO 13920-BE 4. MACHINED COMPONENTS GENERAL TOLERANCES TO ISO 2768-mK				GENERAL SURFACE FINISH 3.2 um RMS U.O.S		CHECKED	DATE	SIZE A3	BF-00-03		
					REMOVE ALL BURRS AND SHARP EDGES	DO NOT SCALE DRAWING	L.J.NIEMAND	03/01/2016	REV.	SCALE:	SHEET:

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FINISH:	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 Shosalowe Inv TEL:083 302 9703 PD Box 12414 FAX:086 671 0250 Hatfield 0028		
				FIRST ANGLE PROJECTION 	BURGERSFORD					
						APPROVALS	DATE	GA OFF ACTUAL FLOW RECYCLE		
						DRAWN	DATE			
						C.H.VISAGIE	03/01/2016			
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART I-1990 2. ALL WELDING ACCORDING TO SANS 2001 - CSI & AWS D1.1 3. WELDED CONSTRUCTION GENERAL TOLERANCES TO ISO 13920-BE 4. MACHINED COMPONENTS GENERAL TOLERANCES TO ISO 2768-mK				GENERAL SURFACE FINISH 3.2 um RMS U.O.S	CHECKED	DATE	SIZE A3	BF-00-03		
				REMOVE ALL BURRS AND SHARP EDGES	L.J.NIEMAND	03/01/2016	REV.	SCALE:	SHEET:	
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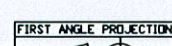
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF WAMECHSI ANY REPRODUCTION IN PART OR IN WHOLE WITHOUT THE WRITTEN PERMISSION OF WAMECHSI IS PROHIBITED, IN TERMS OF THE COPYRIGHT ACT.



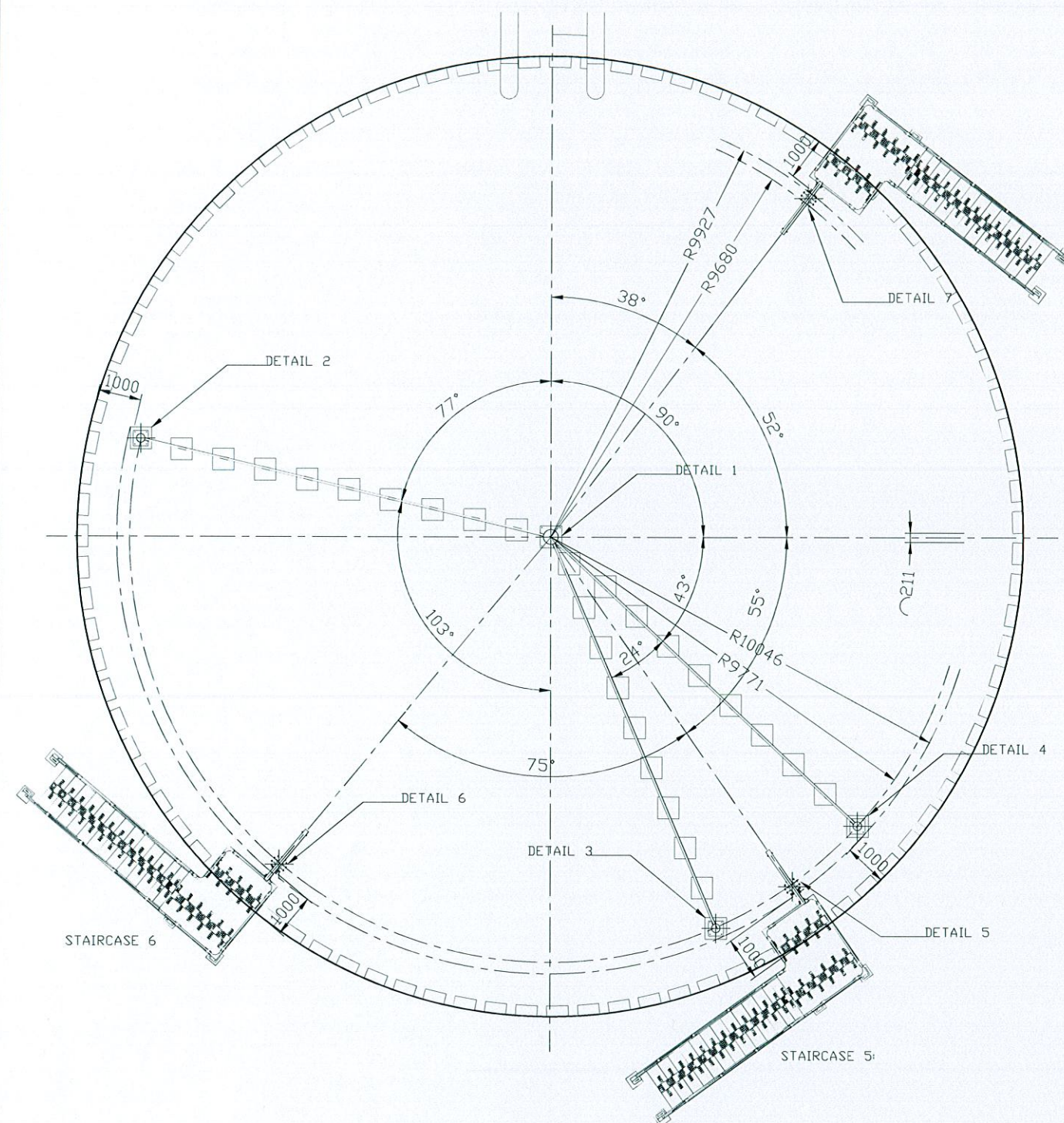
FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 WAMECHSI TEL:083 302 9703 PD Box 12414 FAX:086 671 0250 Hatfield 0028	
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	6 - 30	0.2					APPROVALS	DATE	GA OF BURGERSFORT CONTAINER		
	30 - 100	0.3						DRAWN			DATE
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART I-1990 2. ALL WELDING ACCORDING TO EN-ISO	100 - 300	0.5				GENERAL SURFACE FINISH 3.2 um RMS U.O.S	C.H.VISAGIE	11/17/2016		SIZE A3 J754 BFC 01-01	
	300 - 1000	0.8				REMOVE ALL BURRS AND SHARP EDGES	CHECKED	DATE			REV. SCALE: SHEET:
	1000 - 3000	1.2					DO NOT SCALE DRAWING	L.J.NIEMAND			
	3000 - PLUS	2.0									
	ANGLES	± 1°									

This technical drawing illustrates the floor plan of a circular building, likely a large hall or auditorium, with a central stage area. The drawing includes the following details:

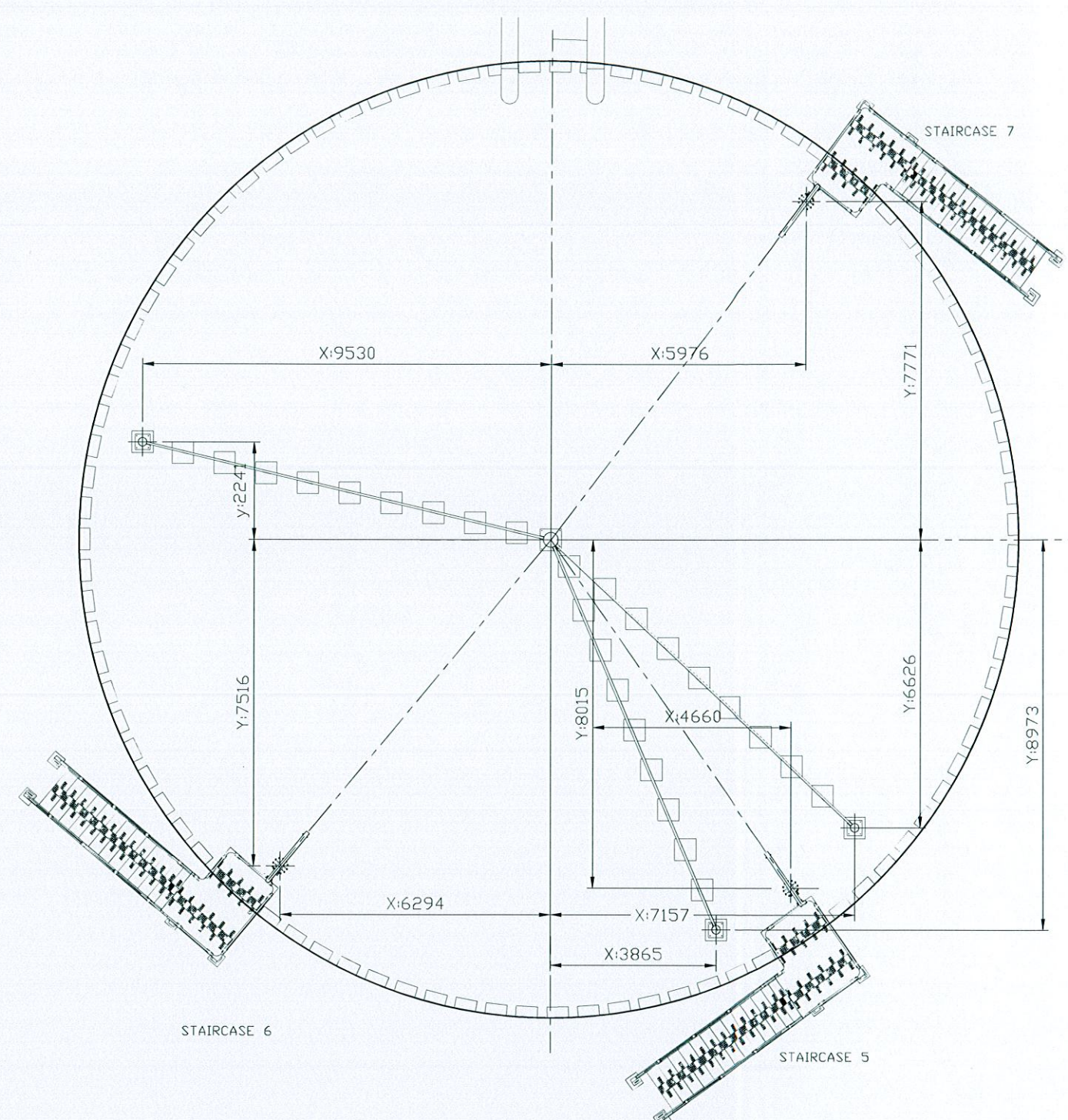
- Central Stage Area:** A rectangular stage is located in the center, with a width of 730 units. It is flanked by two side wings, each with a width of 734 units. The total width of the stage area is 730 + 734 + 734 = 2200 units.
- Radial Dimensions:** The distance from the center of the stage to the outer edge of the circular structure is 7746 units. The distance from the center of the stage to the inner edge of the circular structure is 7990 units.
- Radial Segments:** The radial distance is divided into segments of 1000 units, with a final segment of 1058 units at the top and 969 units at the bottom.
- Angular Dimensions:** The angle between the two side wings is 10°.
- Structural Details:** The drawing shows the structural layout of the stage, including the main stage, side wings, and a central aisle. It also shows the structural layout of the circular structure, including the outer wall, inner wall, and radial supports.
- Other Dimensions:** The total width of the circular structure is 4161 units. The distance from the center of the stage to the outer edge of the circular structure is 703 units. The distance from the center of the stage to the inner edge of the circular structure is 3713 units.

FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 Shoslowe Inv TEL:083 302 9703 PD Box 12414 FAX:086 671 0250 Hatfield 0028		
	0 - 6	0.1					BURGERSFORT					
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	30 - 100	0.3										
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO EN-ISO	100 - 300	0.5					APPROVALS	DATE	GA OF AXIAL FLOW RECYCLE & AERATION			
	300 - 1000	0.8					DRAWN	DATE				
	1000 - 3000	1.2					C.V.VISAGIE	03/22/2016				
	3000 - PLUS	2.0				CHECKED	DATE	SIZE A3			BFFL-01-02	
	ANGLES	± 1°					REMOVE ALL BURRS AND SHARP EDGES	DO NOT SCALE DRAWING			L.J.NIEMAND	03/22/2016

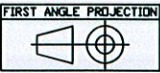
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DAM 1:



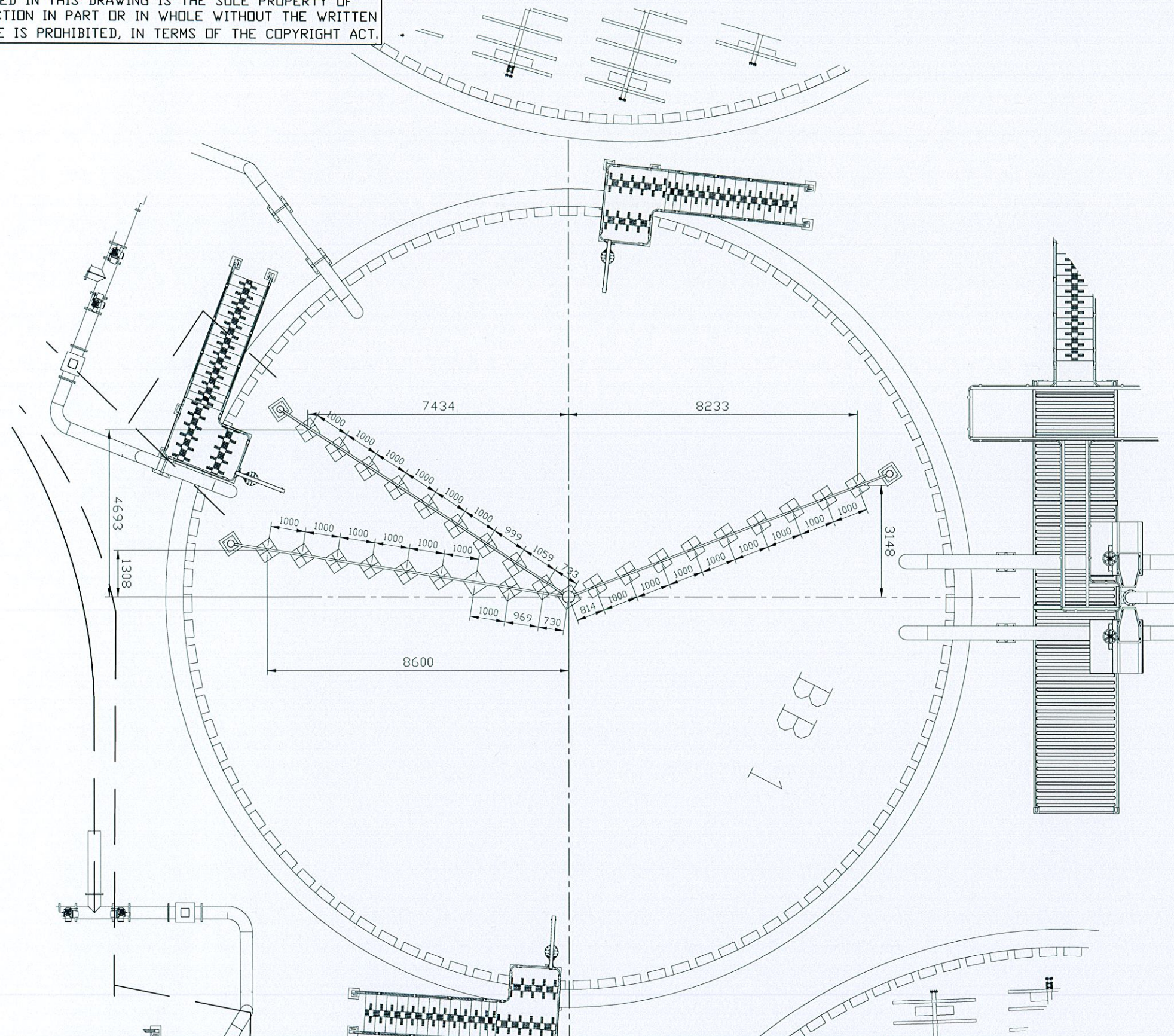
DAM 1:

FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:	 Shosalowe Inv TEL:083 302 9703 PO Box 12414 FAX:086 671 0250 Hatfield 0028	
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NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO EN-ISO	6 - 30	0.2				 GENERAL SURFACE FINISH 3.2 um RMS U.O.S REMOVE ALL BURRS AND SHARP EDGES	APPROVALS	DATE	GA OF AXIAL FLOW RECYCLE & AERATION SIZE A3 BF-00-03 REV. SCALE: 1:1 SHEET:
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	100 - 300	0.5					C.V.VISAGIE	03/01/2016	
	300 - 1000	0.8					CHECKED	DATE	
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	ANGLES	± 1°							

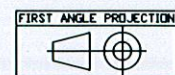
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FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 Shoshowe Inv TEL:083 302 9703 PD Box 12414 FAX:086 671 0250 Hatfield 0028	
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	6 - 30	0.2									
	30 - 100	0.3									
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO EN-ISO	100 - 300	0.5				GENERAL SURFACE FINISH 3.2 um RMS U.D.S REMOVE ALL BURRS AND SHARP EDGES	APPROVALS		DATE	GA OF AXIAL FLOW RECYCLE & AERATION	
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	3000 - PLUS	2.0					CHECKED	DATE	SIZE A3		BFFL-01-04
	ANGLES	± 1°					DO NOT SCALE DRAWING	L.J.NIEMAND	03/22/2016		REV.

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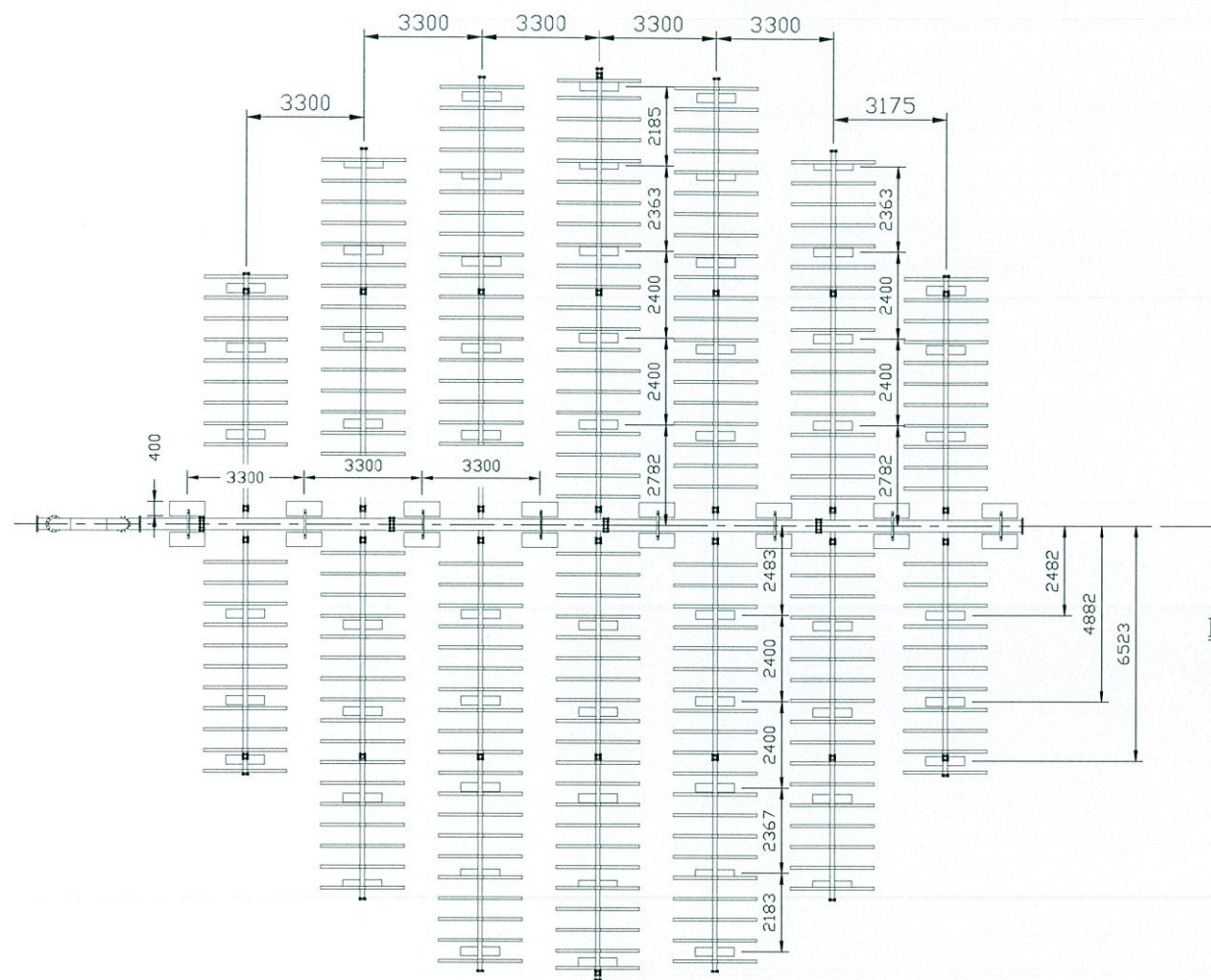


FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:	 Shosalowe Inv TEL:083 302 9703 PD Box 12414 FAX:086 671 0250 Hatfield 0028		
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	30 - 100	0.3						DRAWN	DATE	
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO EN-ISO	100 - 300	0.5						C.V.VISAGIE	03/22/2016	
	300 - 1000	0.8						CHECKED	DATE	
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	3000 - PLUS	2.0								
	ANGLES	± 1°					DO NOT SCALE DRAWING	REV.	SCALE: 1:1	SHEET:

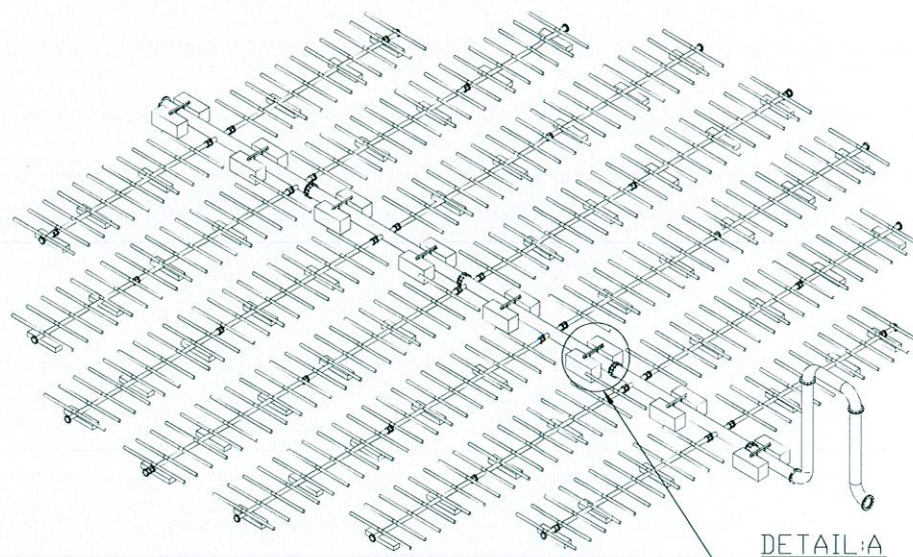
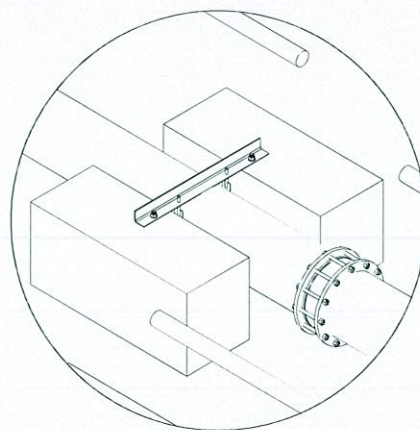


GENERAL SURFACE FINISH
3.2 μ m RMS U.O.S
REMOVE ALL BURRS
AND SHARP EDGES

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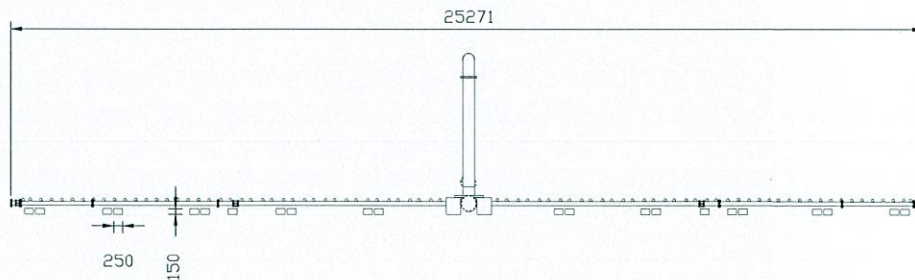
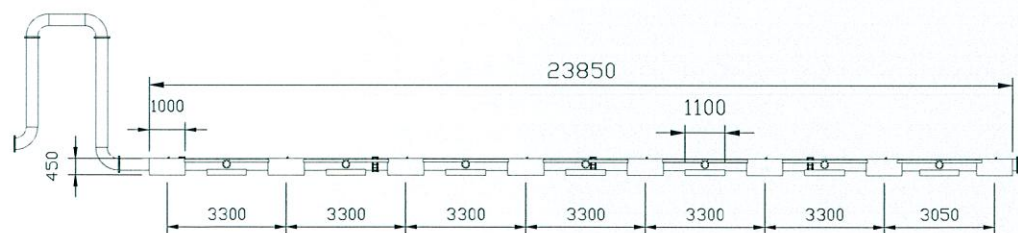
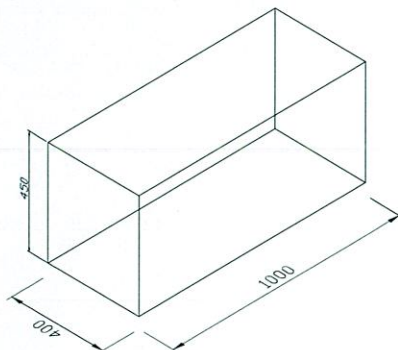
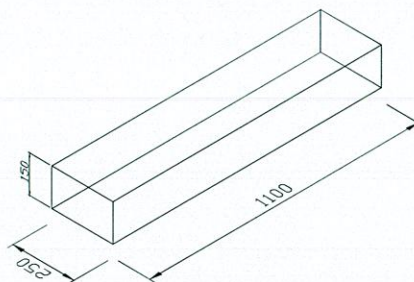


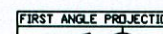
DETAIL: A



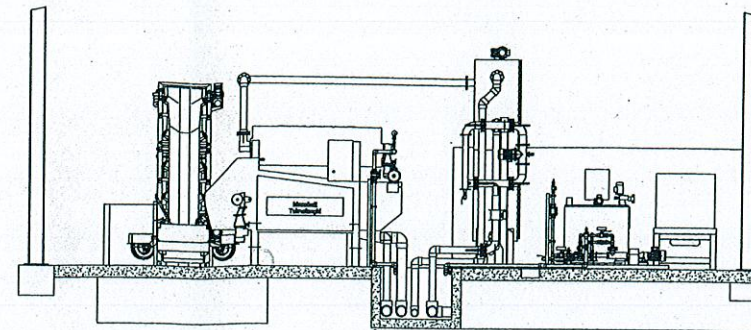
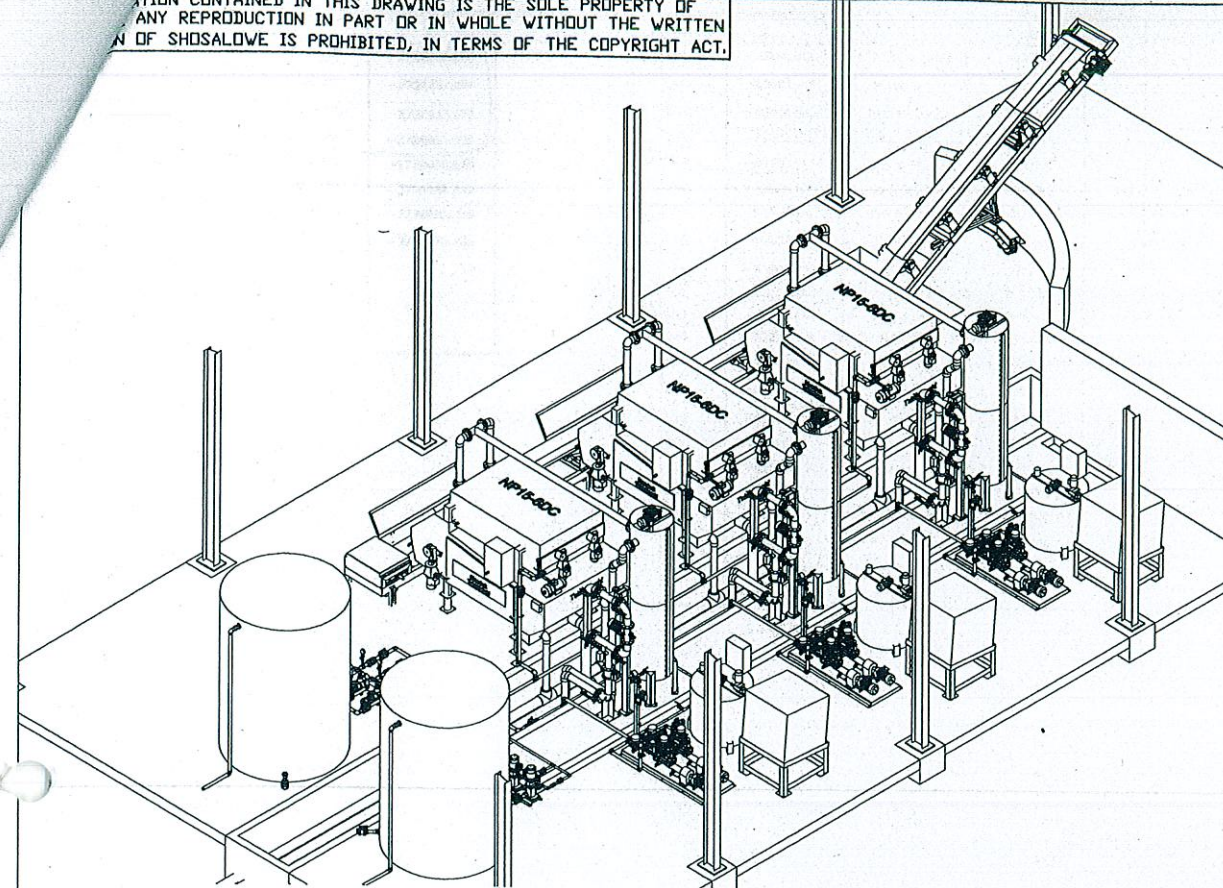
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MATERIAL: CONCRETE 150 x 250 x 1100
QTY: 58

DETAIL OF: CONCRETE BLOCK
MATERIAL: CONCRETE 450 x 400 x 1000
QTY: 16

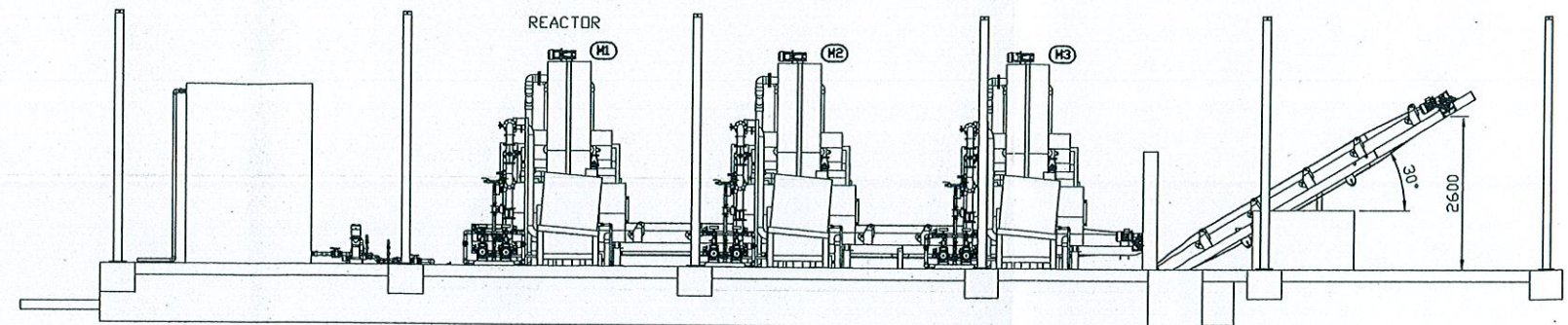


FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT:			 Shosalowe Inv TEL:083 302 9703 FAX:086 671 0250 PO Box 12414 Hatfield 0028			
	0 - 6	0.1					BURGERSFORT						
	6 - 30	0.2						APPROVALS	DATE				
	30 - 100	0.3						DRAWN	DATE				
NOTES: 1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990 2. ALL WELDING ACCORDING TO EN-ISO	100 - 300	0.5				GENERAL SURFACE FINISH 3.2 um RMS U.O.S	C.V.VISAGIE	03/01/2016	GA OF AXIAL FLOW RECYCLE & AERATION				
	300 - 1000	0.8					CHECKED	DATE					
	1000 - 3000	1.2							SIZE A3	BF-00-05			
	3000 - PLUS	2.0					REMOVE ALL BURRS AND SHARP EDGES	DO NOT SCALE DRAWING	L.J.NIEMAND	03/01/2016	REV.	SCALE: 1:1	SHEET:
	ANGLES	± 1°											

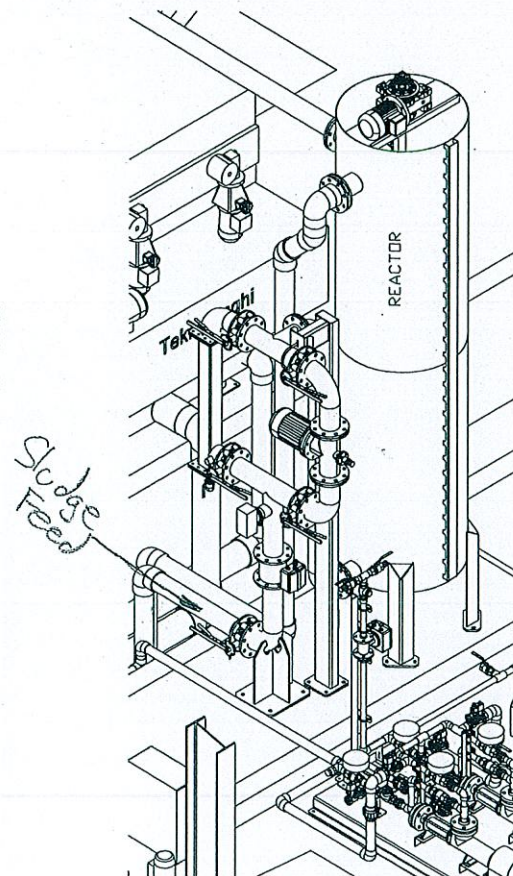
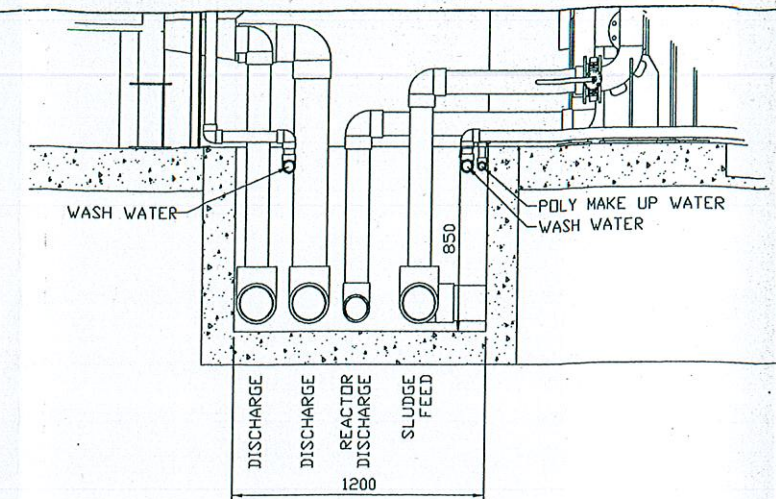
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SECTION A-A



FRONT VIEW



32	INCLINE ROT. BELT CONVEYOR	
31	BELT CONVEYOR	

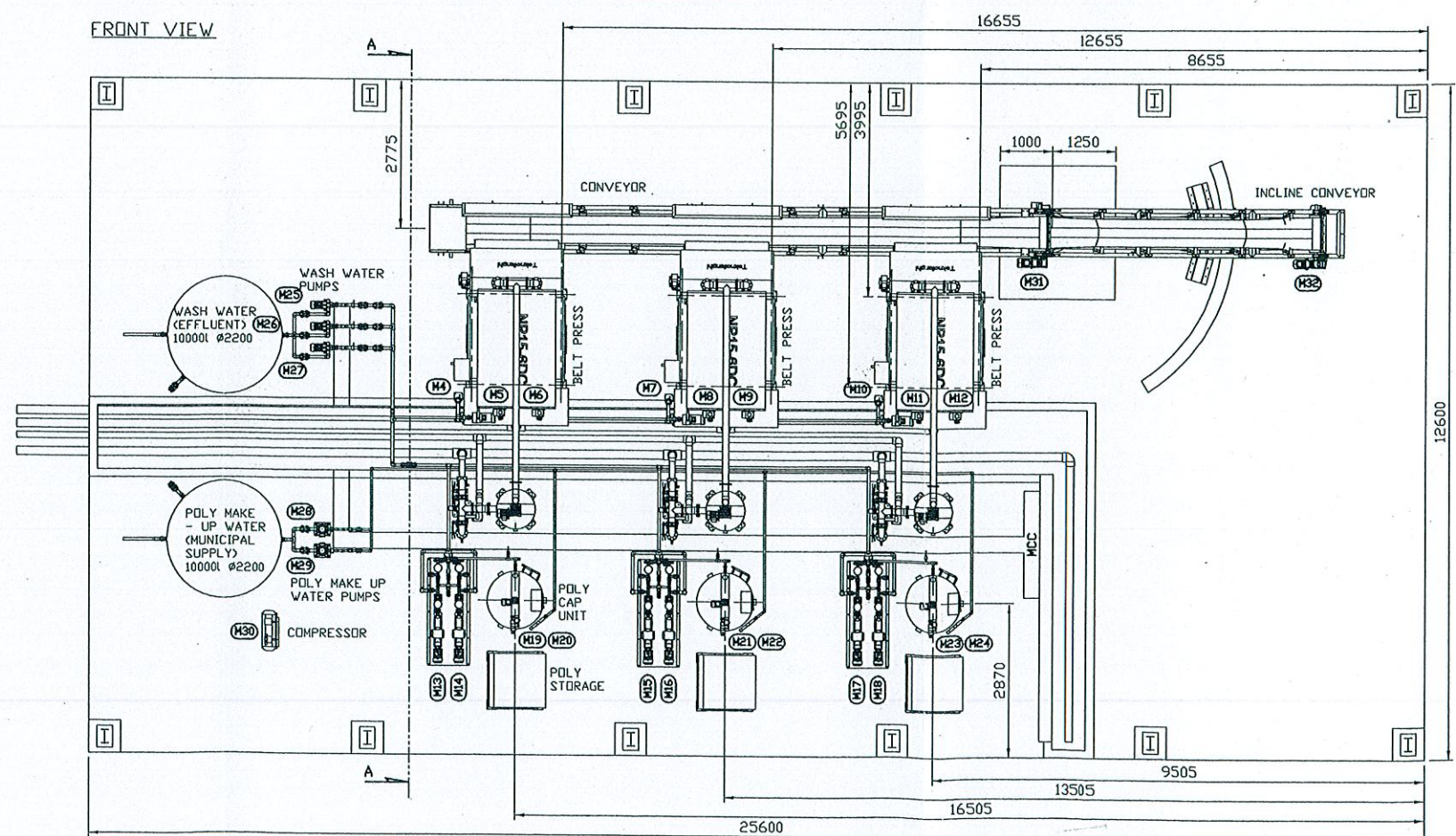
30	COMPRESSOR	1.5kW
----	------------	-------

29	POLY MAKE UP WATER PUMPS	1.5kW
28	POLY MAKE UP WATER PUMPS	1.5kW
27	WASH WATER PUMP	2.2kW
26	WASH WATER PUMP	2.2kW
25	WASH WATER PUMP	2.2kW

24	POLYMER MAKE-UP	0.2kW
23	POLYMER MAKE-UP	0.18kW
22	POLYMER MAKE-UP	0.2kW
21	POLYMER MAKE-UP	0.18kW
20	POLYMER MAKE-UP	0.2kW
19	POLYMER MAKE-UP	0.18kW

18	POLY PUMP	2.2kW
17	POLY PUMP	2.2kW
16	POLY PUMP	2.2kW
15	POLY PUMP	2.2kW
14	POLY PUMP	2.2kW
13	POLY PUMP	2.2kW

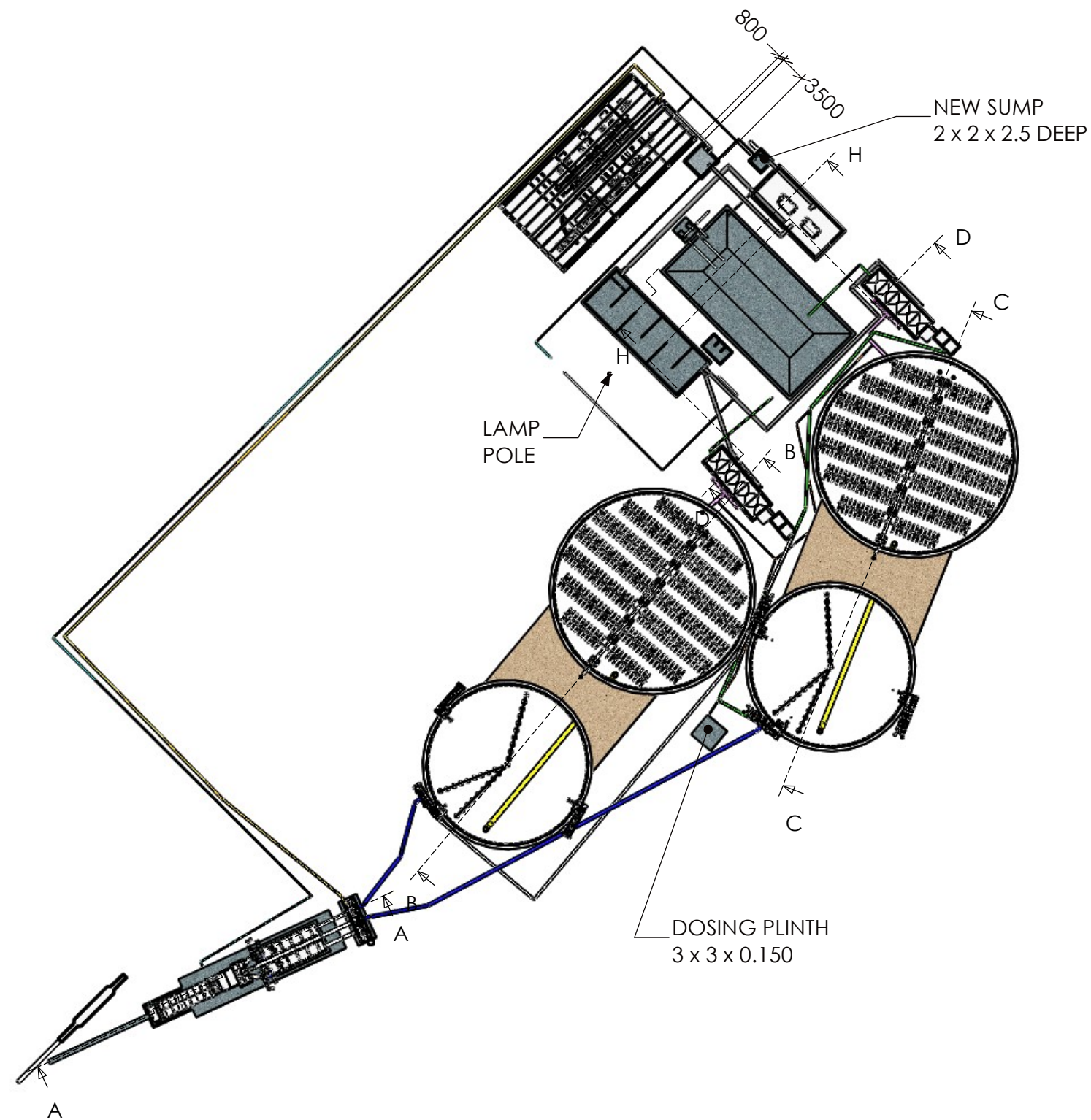
12	BELT PRESS NP15-6DC BOOSTER PUMP	3kW
11	BELT PRESS NP15-6DC	0.75kW
10	BELT PRESS NP15-6DC	0.75kW
9	BELT PRESS NP15-6DC BOOSTER PUMP	3kW
8	BELT PRESS NP15-6DC	0.75kW
7	BELT PRESS NP15-6DC	0.75kW
6	BELT PRESS NP15-6DC BOOSTER PUMP	3kW
5	BELT PRESS NP15-6DC	0.75kW
4	BELT PRESS NP15-6DC	0.75kW
3	REACTOR	0.55kW
2	REACTOR	0.55kW
1	REACTOR	0.55kW
MOTOR	DESCRIPTION	POWER



TOP VIEW

FINISH:	OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE	CAD GENERATED DRAWING DO NOT MANUALLY UPDATE	PROJECT: LWI BURGERSFORT	Shosalowe Inv TEL:083 302 9703 FAX:086 671 0250 PO Box 12414 Hatfield 0028
NOTES:	0 - 6	0.1					APPROVALS	GENERAL ARRANGEMENT DRAWING OF SLUDGE DEWATERING BUILDING
1. ALL DRAWINGS ACCORDING TO SANS 0111 : PART 1-1990	6 - 30	0.2					DRAWN	DATE
2. ALL WELDING ACCORDING TO SANS 2001 - CS 1	30 - 100	0.3					A.L.FOURIE	2015 09 23
	100 - 300	0.5					CHECKED	DATE
	300 - 1000	0.8						2015 09 23
	1000 - 3000	1.2						REV. 00
	3000 - PLUS	2.0						SCALE:
	ANGLES	± 1°						SHEET:

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NOTES: 1.) DRAWING ACCORDING TO SANS 0111:PART 1-1990.
2.)ALL WELDING ACCORDING TO SANS 2001 - CS1
3.)HDG ACCORDING TO SANS 121/ISO 1461
4.)GENERAL TOLERANCES TO ISO 13920 CASS C U.O.S

OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE
0 - 6	0.1	1.	LEACH WATER SUMP MOVED AND SIZECHANGED	10/06/2021
6 - 30	0.2	2.	LEVELS UPDATE TO SURVEY	08/07/2021
30 - 100	0.3	3.	LEVELS UPDATE TO SURVEY	25/08/2021
100 - 300	0.5	4.	CIVELS MOVED AND LEVELS CHANGED	18/10/2021
300 - 1000	0.8			
1000 - 3000	1.2			
3000 - PLUS	2.0			
ANGLES	± 1°			

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE
GENERAL SURFACE FINISH 3.2 um RMS U . O . S
REMOVE ALL BURRS AND SHARP EDGES

PROJECT : J2022 BURGERSFORT		APPROVALS		DATE
		DRAWN	C.JP GERBER	2021/11/12
		CHECKED	LJ NIEMAND	
MATERIAL: STOCK SIZE: GRADE: QUANTITY: 1 OFF WEIGHT:				
DO NOT SCALE DRAWING				

LEPELLE NORTHERN WATER
Water is our passion

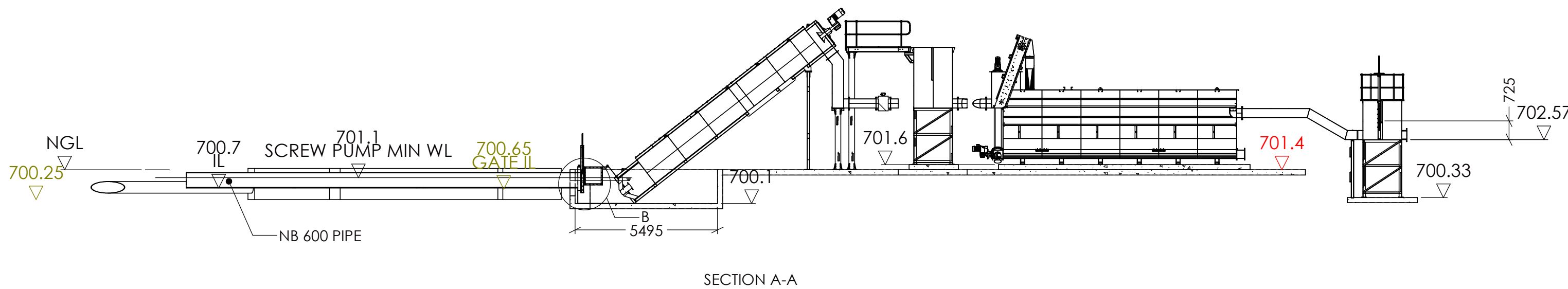
Water skills
(Pty) Ltd.
TEL: 011 316 0079/97 FAX: 086 523 2515 INFO@WATERSKILLSA.CO.ZA

JN Water
TEL: 083 302 9703 P.O. Box 12414
FAX: 086 671 0250 Hatfield 0028

**WASTEWATER TREATMENT WORKS
SITE GENERAL ARRANGEMENT**

SIZE A3 DWG. NO.J2022-WWTW -S-GA- 00
REV. 5. SCALE:1:750 SHEET 1 OF 4

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2.) ALL WELDING ACCORDING TO SANS 2001 - CS1
3.) HDG ACCORDING TO SANS 121/ISO 1461
4.) GENERAL TOLERANCES TO ISO 13920 CASS C U.O.S

OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE
0 - 6	0.1	1.	LEACH WATER SUMP MOVED AND SIZE CHANGED	10/06/2021
6 - 30	0.2	2.	LEVELS UPDATE TO SURVEY	08/07/2021
30 - 100	0.3	3.	LEVELS UPDATE TO SURVEY	25/08/2021
100 - 300	0.5	4.	CIVELS MOVED AND LEVELS CHANGED	18/10/2021
300 - 1000	0.8			
1000 - 3000	1.2			
3000 - PLUS	2.0			
ANGLES	± 1°			

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE

GENERAL SURFACE FINISH 3.2 um RMS U.O.S

REMOVE ALL BURRS AND SHARP EDGES

PROJECT : J2022 BURGERSFORT			
MATERIAL: STOCK SIZE:	APPROVALS	DATE	
GRADE:	DRAWN		
QUANTITY: 1 OFF	C.JP GERBER	2021/11/12	
WEIGHT:	CHECKED		
DO NOT SCALE DRAWING	LJ NIEMAND		



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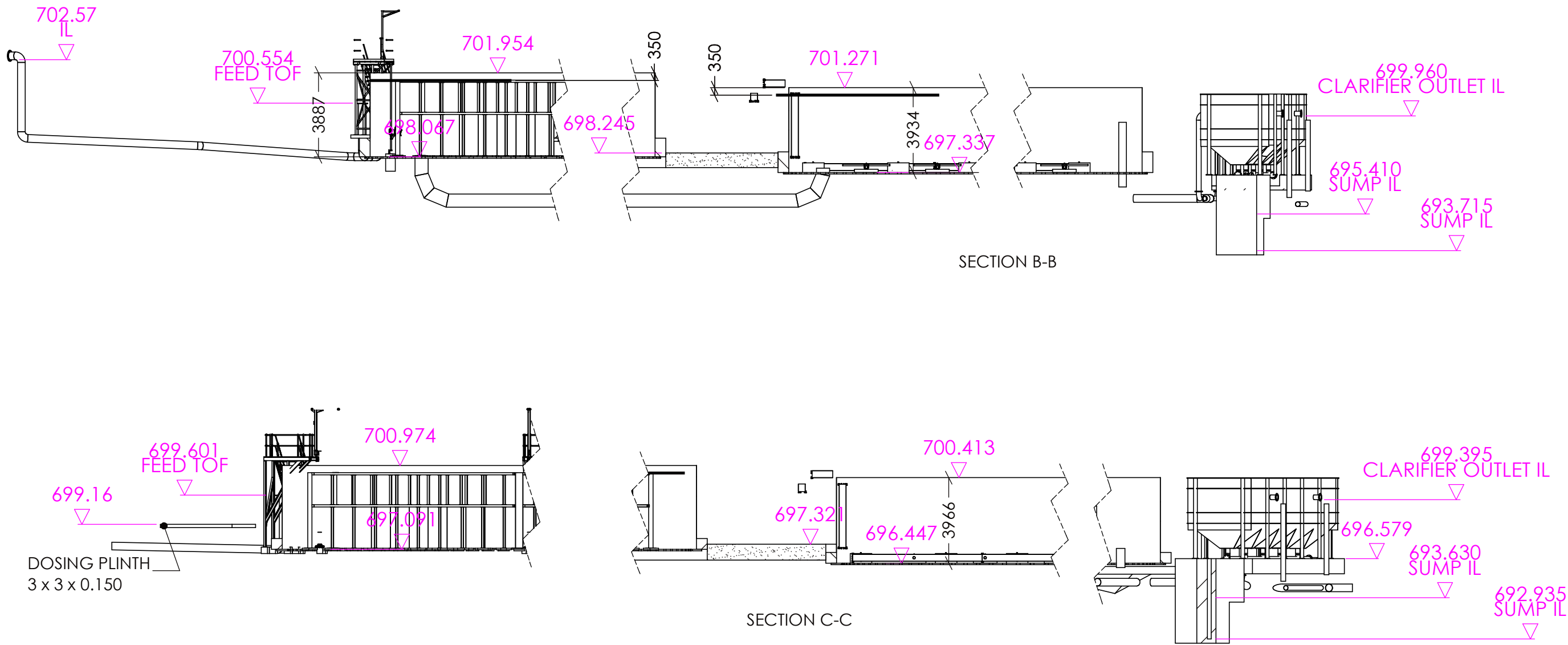
JN Water
TEL: 083 302 9703
FAX: 086 671 0250
P.O. Box 12414
Hatfield
0028

**WASTEWATER TREATMENT WORKS
SITE GENERAL ARRANGEMENT**

SIZE A3 DWG. NO. J2022-WWTW -S-GA- 00

REV. 5. SCALE: 1:150 SHEET 2 OF 4

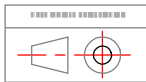
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NOTES: 1.) DRAWING ACCORDING TO SANS 0111:PART 1-1990.
2.)ALL WELDING ACCORDING TO SANS 2001 - CS1
3.)HDG ACCORDING TO SANS 121/ISO 1461
4.)GENERAL TOLERANCES TO ISO 13920 CASS C U.O.S

OVER TO	TOL ±	REV.	DETAIL OF CHANGE	DATE
0 - 6	0.1	1.	LEACH WATER SUMP MOVED AND SIZECHANGED	10/06/2021
6 - 30	0.2	2.	LEVELS UPDATE TO SURVEY	08/07/2021
30 - 100	0.3	3.	LEVELS UPDATE TO SURVEY	25/08/2021
100 - 300	0.5	4.	CIVELS MOVED AND LEVELS CHANGED	18/10/2021
300 - 1000	0.8			
1000 - 3000	1.2			
3000 - PLUS	2.0			
ANGLES	± 1°			

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE



GENERAL SURFACE FINISH 3.2 um RMS U . O . S

REMOVE ALL BURRS AND SHARP EDGES

MATERIAL:
STOCK SIZE:
GRADE:
QUANTITY: 1 OFF
WEIGHT:
DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN C.JP GERBER	2021/11/12
CHECKED LJ NIEMAND	

PROJECT :
J2022 BURGERSFORT



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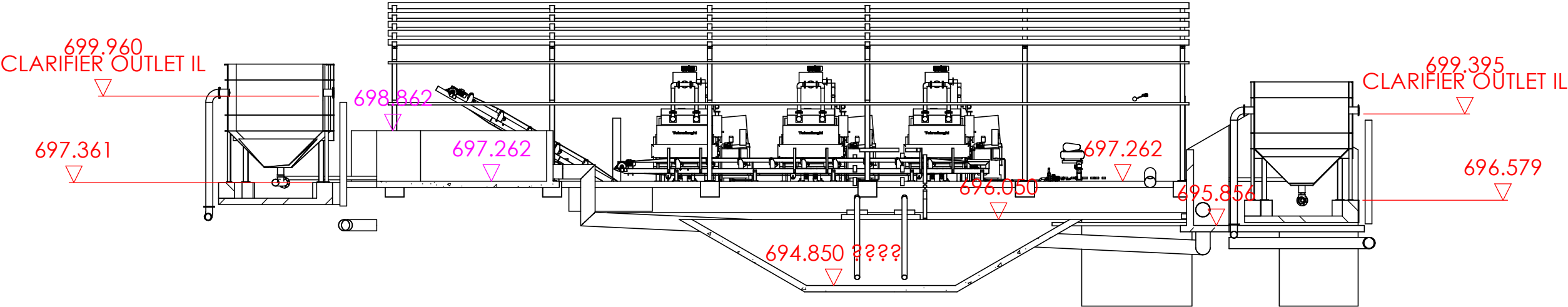


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FAX: 086 671 0250
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Hatfield
0028

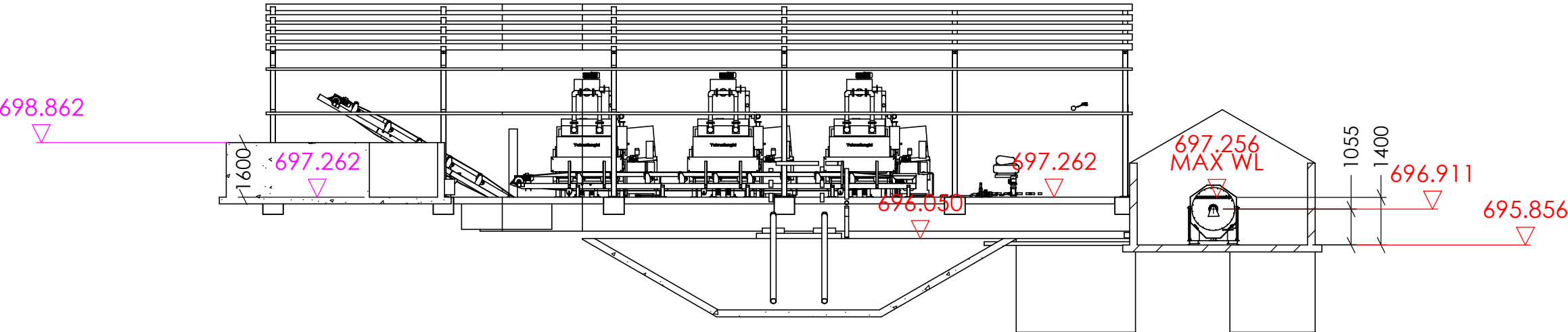
**WASTEWATER TREATMENT WORKS
SITE GENERAL ARRANGEMENT**

SIZE A3
DWG. NO. J2022-WWTW -S-GA- 00
REV. 5. SCALE:1:200 SHEET 3 OF 4

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SECTION D-D



SECTION H-H

NOTES: 1.) DRAWING ACCORDING TO SANS 0111:PART 1-1990.
2.)ALL WELDING ACCORDING TO SANS 2001 - CS1
3.)HDG ACCORDING TO SANS 121/ISO 1461
4.)GENERAL TOLERANCES TO ISO 13920 CASS C U.O.S

OVER TO	TOL ±	REV.	DETAIL OF CHANGE
0 - 6	0.1	1.	LEACH WATER SUMP MOVED AND SIZECHANGED
6 - 30	0.2	2.	LEVELS UPDATE TO SURVEY
30 - 100	0.3	3.	LEVELS UPDATE TO SURVEY
100 - 300	0.5	4.	CIVELS MOVED AND LEVELS CHANGED
300 - 1000	0.8		
1000 - 3000	1.2		
3000 - PLUS	2.0		
ANGLES	± 1°		

DATE
10/06/2021
08/07/2021
25/08/2021
18/10/2021

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE
GENERAL SURFACE FINISH 3.2 um RMS U . O . S
REMOVE ALL BURRS AND SHARP EDGES

MATERIAL:
STOCK SIZE:
GRADE:
QUANTITY: 1 OFF
WEIGHT:
DO NOT SCALE DRAWING

PROJECT :
J2022 BURGERSFORT

APPROVALS	DATE
DRAWN C.JP GERBER	2021/11/12
CHECKED LJ NIEMAND	

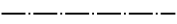
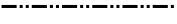


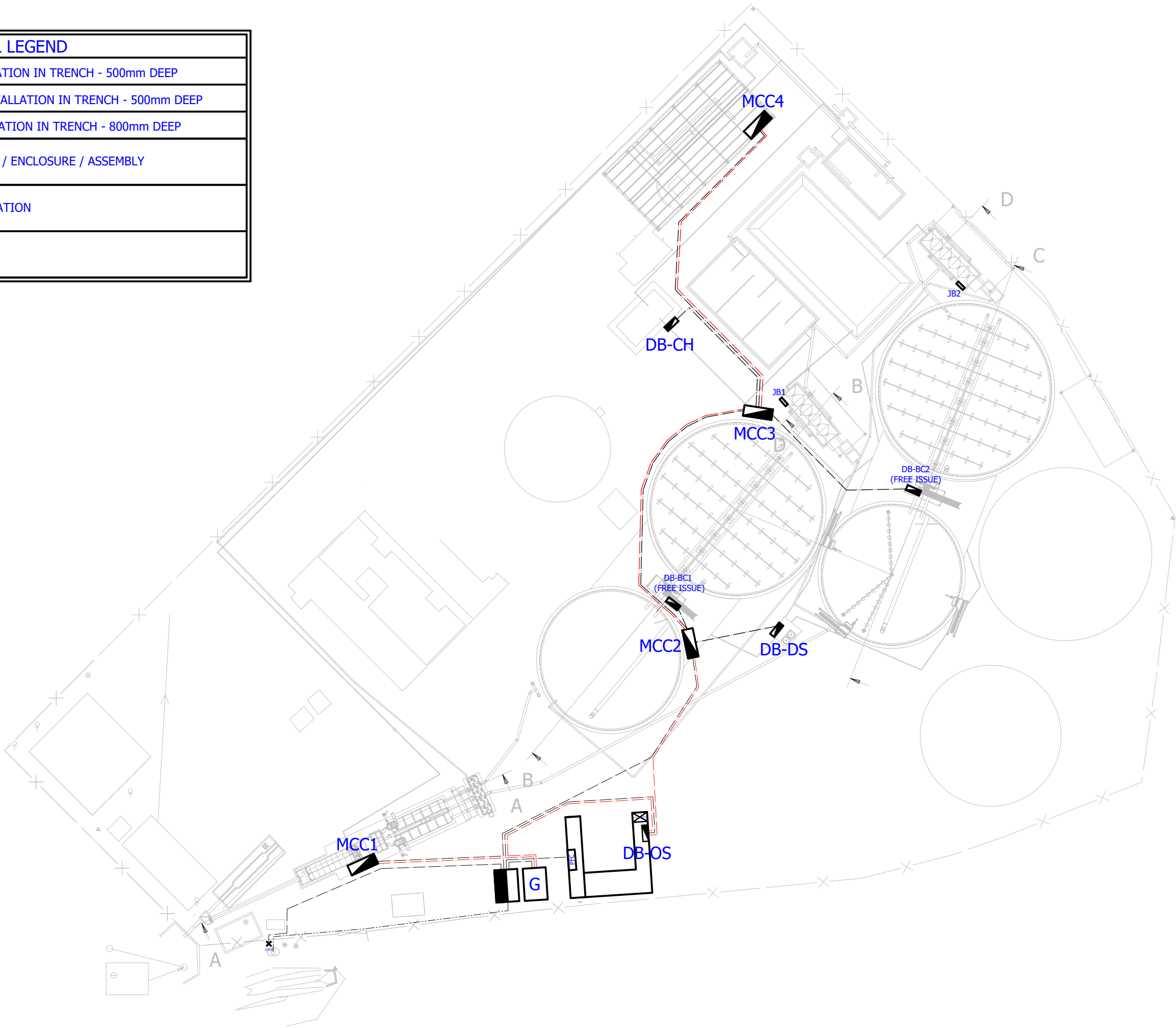
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WASTEWATER TREATMENT WORKS
SITE GENERAL ARRANGEMENT

SIZE A3	DWG. NO. J2022-WWTW -S-GA- 00
REV. 5.	SCALE:1:150
	SHEET 4 OF 4

PANEL LEGEND	
	LV CABLE INSTALLATION IN TRENCH - 500mm DEEP
	UPS LV CABLE INSTALLATION IN TRENCH - 500mm DEEP
	MV CABLE INSTALLATION IN TRENCH - 800mm DEEP
	ELECTRICAL PANEL / ENCLOSURE / ASSEMBLY
	MINIATURE SUBSTATION
	SCADA SYSTEM



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FAX: 086 671 0250 Hatfield 0028

22/11/21	0	FOR APPROVAL	Revision	0
			Design date	2022/05/21
			Designed by	Barend Muller
			Approved by	
Date	Rev	Description	Approved date	



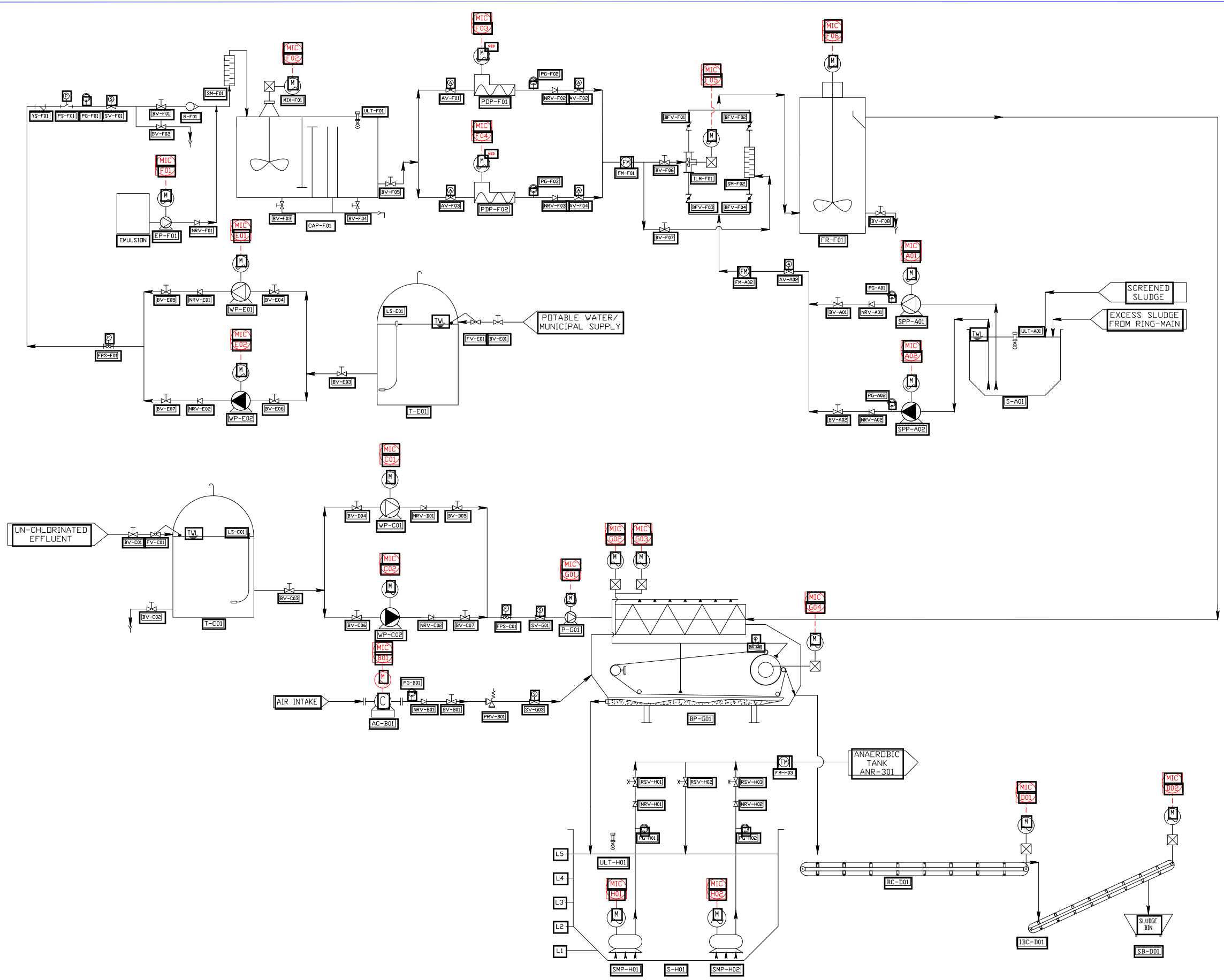
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Project:	Burgersfort WWTW
Title:	Site Electrical Layout

Job Number:	17556
Customer:	Water Skills & Lepelle Northern Water

=	
+	/ 2
Sheet	2
of	15



P&ID CHART					
	First Letters		Succeeding Letters		
	Measured/Initiating Variable	Variable Modifier	Readout/Passive Function	Output/Active Function	Function Modifier
A	Analysis		Alarm		
B	Burner, Combustion		User's Choice	User's Choice	User's Choice
C	User's Choice			Control	Close
D	User's Choice	Difference, Differential			Deviation
E	Voltage		Sensor, Primary Element		
F	Flow, Flow Rate	Ratio			
G	User's Choice		Glass, Gauge, Viewing Device		
H	Hand				High
I	Current		Indicate		
J	Power		Scan		
K	Time, Schedule	Time Rate of Change		Control Station	
L	Level		Light		Low
M	User's Choice				Middle, Intermediate
N	User's Choice		User's Choice	User's Choice	User's Choice
O	User's Choice		Orifice, Restriction		Open
P	Pressure		Point (Test Connection)		
Q	Quantity	Integrate, Totalize	Integrate, Totalize		
R	Radiation		Record		Run
S	Speed, Frequency	Safety		Switch	Stop
T	Temperature			Transmit	
U	Multivariable		Multifunction	Multifunction	
V	Vibration, Mechanical Analysis			Valve, Damper, Louver	
W	Weight, Force		Well, Probe		
X	Unclassified	X-axis	Accessory Devices, Unclassified	Unclassified	Unclassified
Y	Event, State, Presence	Y-axis		Auxiliary Devices	
Z	Position, Dimension	Z-axis, Safety Instrumented System		Driver, Actuator, Unclassified final control element	

P&ID SYMBOLS					
No	SHARED DISPLAY, SHARED CONTROL		C	D	LOCATION & ACCESSIBILITY
	A	B			
1	PRIMARY CHOICE OR BASIC PROCESS CONTROL SYSTEM	ALTERNATE CHOICE OR SAFETY INSTRUMENT SYSTEM	COMPUTER SYSTEMS AND SOFTWARE	DISCRETE	LOCATED IN FIELD. NOT PANEL MOUNTED. VISIBLE. OPERATOR ACCESSIBLE.
2					LOCATED IN MAIN PANEL. VISIBLE. OPERATOR ACCESSIBLE.
3					LOCATED IN REAR MAIN PANEL. LOCATED IN CABINET BEHIND PANEL. NOT VISIBLE. NOT OPERATOR ACCESSIBLE AT PANEL.
4					LOCATED IN REAR OF SECONDARY PANEL. VISIBLE. OPERATOR ACCESSIBLE.
5					LOCATED IN REAR OF SECONDARY PANEL. LOCATED IN FIELD CABINET. NOT VISIBLE. NOT OPERATOR ACCESSIBLE AT PANEL.



CLIENT APPROVAL

DATE

SIGNATURE

PROJECT: J2022

BURGERSFORT WWTW

PIPING & INSTRUMENTATION DIAGRAM (P&ID)

SLUDGE DEWATERING (4)

SLUDGE FEED

APPROVALS

DRAWN

JCN LOURENS

CHECKED

LJ NIEMAND

DATE

2020/06/03

DATE

2020/06/03

REV. DETAIL OF CHANGE

01

02

03

04

05

DATE

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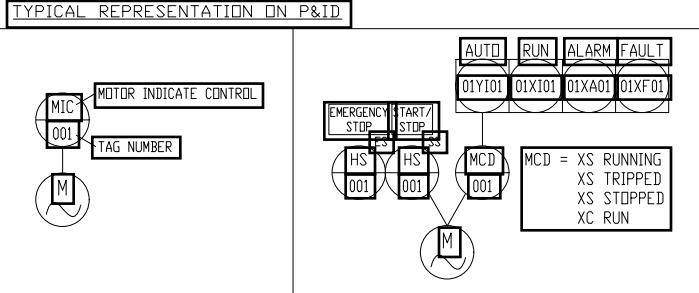


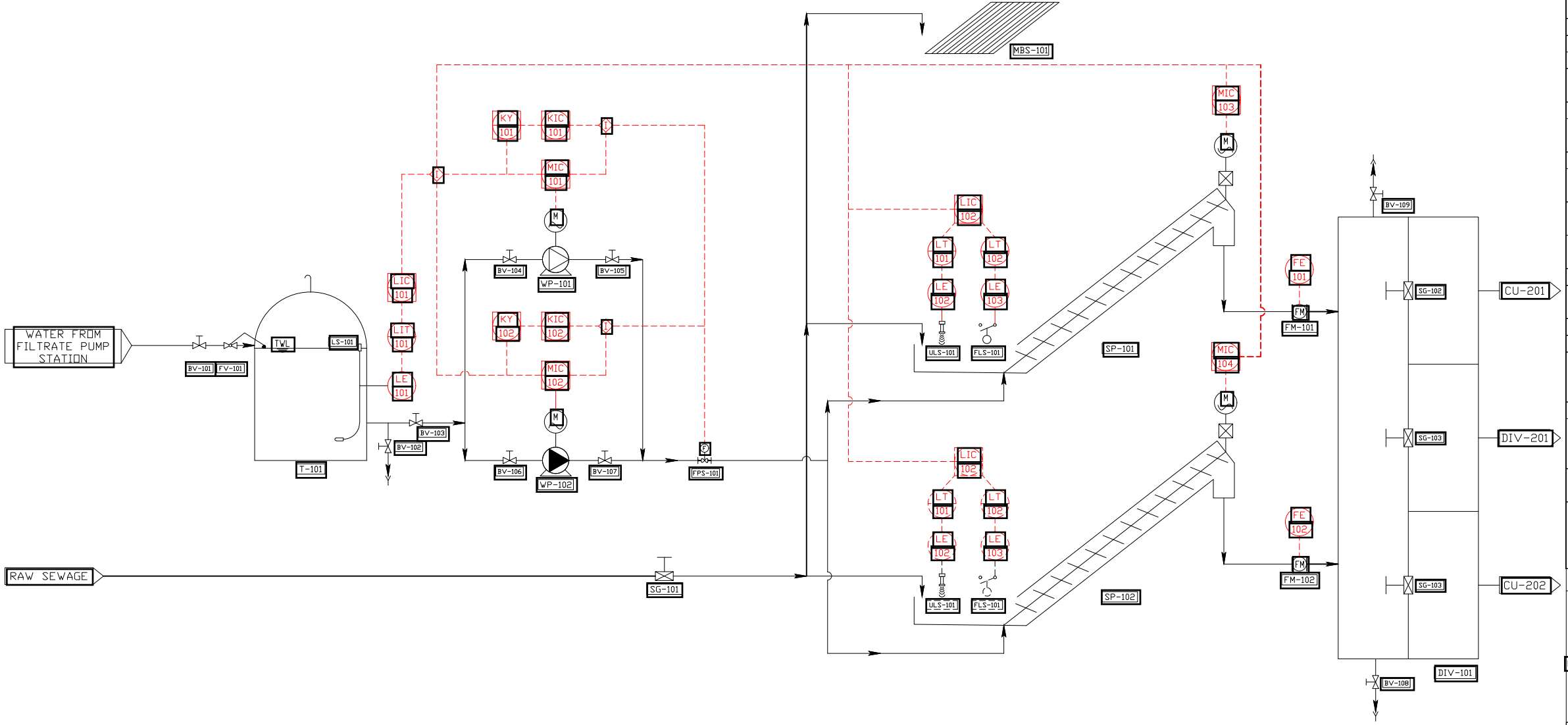
SIZE A3

REV. 00

DIAGRAM NO. 04 A

DO NOT SCALE DIAGRAM





P&ID CHART				
	First Letters		Succeeding Letters	
	Measured/Initiating Variable	Variable Modifier	Readout/Passive Function	Output/Active Function
A	Analysis		Alarm	
B	Burner, Combustion		User's Choice	User's Choice
C	User's Choice			Control
D	User's Choice	Difference, Differential		Deviation
E	Voltage		Sensor, Primary Element	
F	Flow, Flow Rate	Ratio		
G	User's Choice		Glass, Gauge, Viewing Device	
H	Hand			High
I	Current		Indicate	
J	Power		Scan	
K	Time, Schedule	Time Rate of Change		Control Station
L	Level		Light	Low
M	User's Choice			Middle, Intermediate
N	User's Choice		User's Choice	User's Choice
O	User's Choice		Orifice, Restriction	Open
P	Pressure		Point (Test Connection)	
Q	Quantity	Integrate, Totalize	Integrate, Totalize	
R	Radiation		Record	Run
S	Speed, Frequency	Safety		Switch
T	Temperature			Transmit
U	Multivariable		Multifunction	Multifunction
V	Vibration, Mechanical Analysis			Valve, Damper, Louver
W	Weight, Force		Well, Probe	
X	Unclassified	X-axis	Accessory Devices, Unclassified	Unclassified
Y	Event, State, Presence	Y-axis		Auxiliary Devices
Z	Position, Dimension	Z-axis, Safety Instrumented System		Driver, Actuator, Unclassified final control element

P&ID SYMBOLS				
No	PRIMARY CHOICE OR BASIC PROCESS CONTROL SYSTEM	ALTERNATE CHOICE OR SAFETY INSTRUMENT SYSTEM	COMPUTER SYSTEMS AND SOFTWARE	DISCRETE
1				
2				
3				
4				
5				

CLIENT APPROVAL

DATE

SIGNATURE

PROJECT:

BURGERSFORT WWTW

PIPING & INSTRUMENTATION DIAGRAM (P&ID) - SCREW PUMP STATION

REV.

01

02

03

04

05

DETAIL OF CHANGE

APPROVALS

DRAWN

JCN LOURENS

CHECKED

LJ NIEMAND

DATE

2020/06/02

DATE

2020/06/02

DATE

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SIZE A3

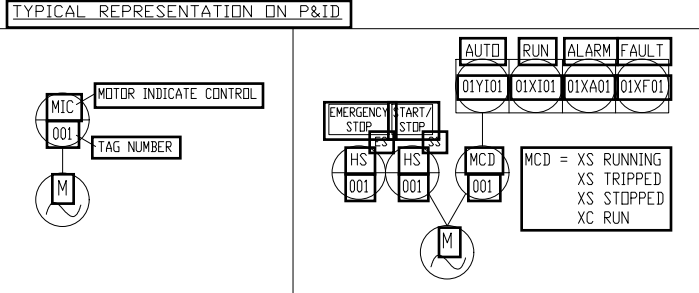
REV.

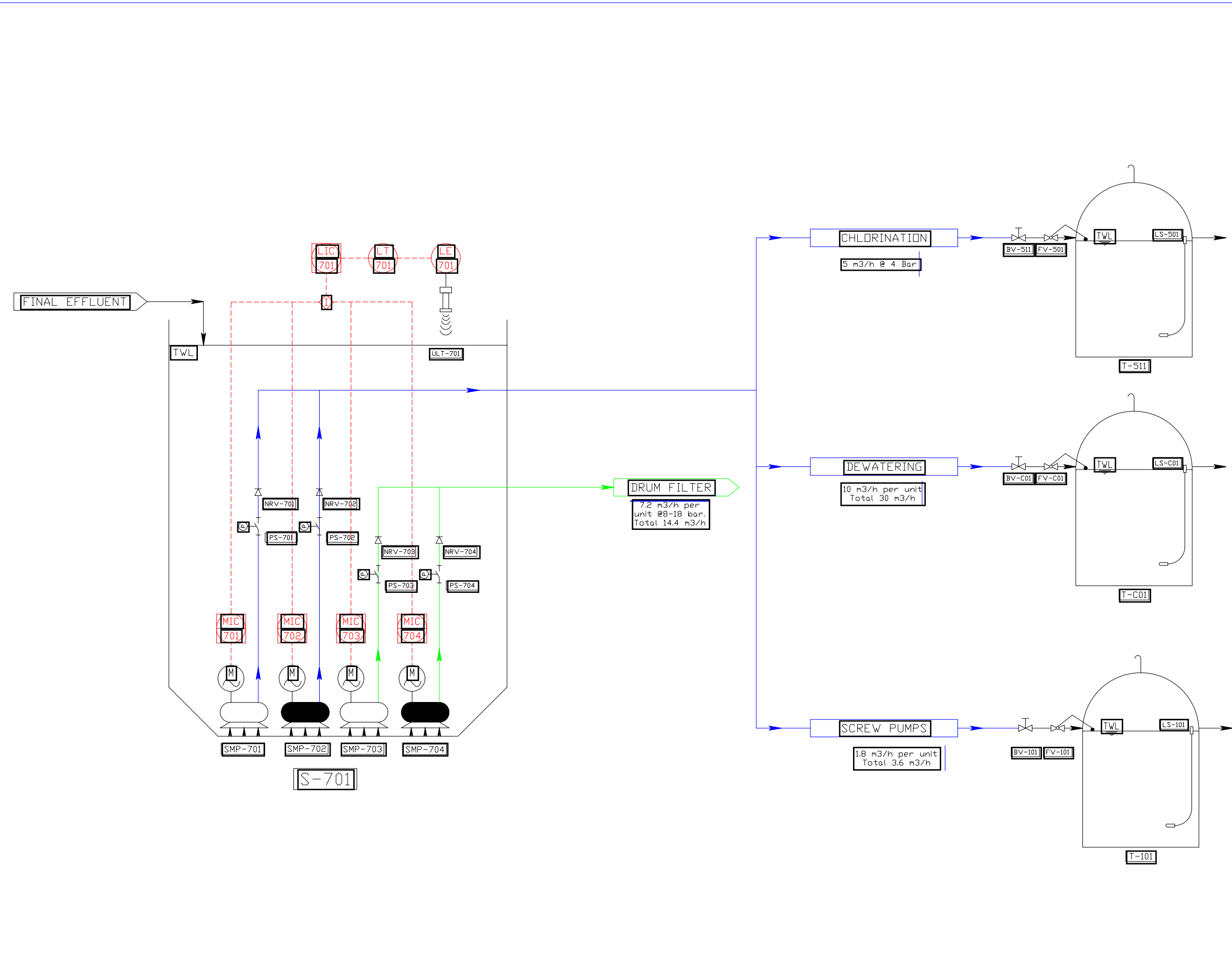
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DIAGRAM NO.

01

DO NOT SCALE DIAGRAM





P&ID CHART				
	First Letters		Succeeding Letters	
	Measured/Initiating Variable	Variable Modifier	Readout/Passive Function	Output/Active Function
A	Analysis Variable		Alarm	
B	Burner, Combustion		User's Choice	User's Choice
C	User's Choice			Control
D	User's Choice	Delay, Differential		
E	Voltage		Sensor, Primary Element	
F	Flow, Flow Rate	Ratio		
G	User's Choice		Glass, Gauge, Viewing Device	
H	Hand			High
I	Current		Indicate	
J	Power		Scan	
K	Time, Schedule	Time Rate of Change		Control Station
L	Level		Light	
M	Motor			Low, Middle, Intermediate
N	User's Choice		User's Choice	User's Choice
O	User's Choice	Overrun	Orifice, Restriction	Open
P	Pressure		Point (Test Connection)	
Q	Quantity	Integrate, Totalize	Integrate, Totalize	
R	Radiation		Record	Run
S	Speed, Frequency	Safety		Switch
T	Temperature			Transmit
U	Multivariable		Multifunction	Multifunction
V	Variable, Mechanical Analysis			Valve, Damper, Louver
W	Weight, Force		Well, Probe	
X	Unclassified	X-axis	Accessory Devices, Unclassified	Unclassified
Y	Event, State, Presence	Y-axis		Auxiliary Devices
Z	Position, Dimension	Z-axis, Safety Instrumented System		Driver, Actuator, Unclassified final control element

P&ID SYMBOLS				
No	SHARED DISPLAY, SHARED CONTROL		C	D
	A	B		
	PRIMARY CHOICE OR BASIC PROCESS CONTROL SYSTEM	ALTERNATE CHOICE OR SAFETY INSTRUMENT SYSTEM	COMPUTER SYSTEMS AND SOFTWARE	DISCRETE
1				
2				
3				
4				
5				



CLIENT APPROVAL

DATE

SIGNATURE

PROJECT:

BURGERSFORT WWTW

PIPING & INSTRUMENTATION DIAGRAM (P&ID) - FILTRATE PUMP STATION

APPROVALS

DRAWN

A SNYMAN

CHECKED

LJ NIEMAND

DATE

2021/05/17

DATE

2021/05/17

REV.

DETAIL OF CHANGE

01

THIRD FEED LINE HAVE BEEN ADDED

02

03

04

05

DATE

SIZE A3

REV.

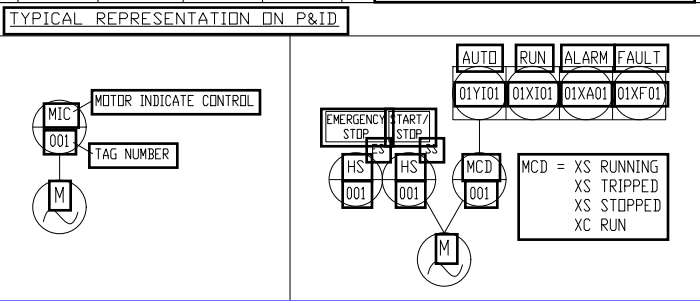
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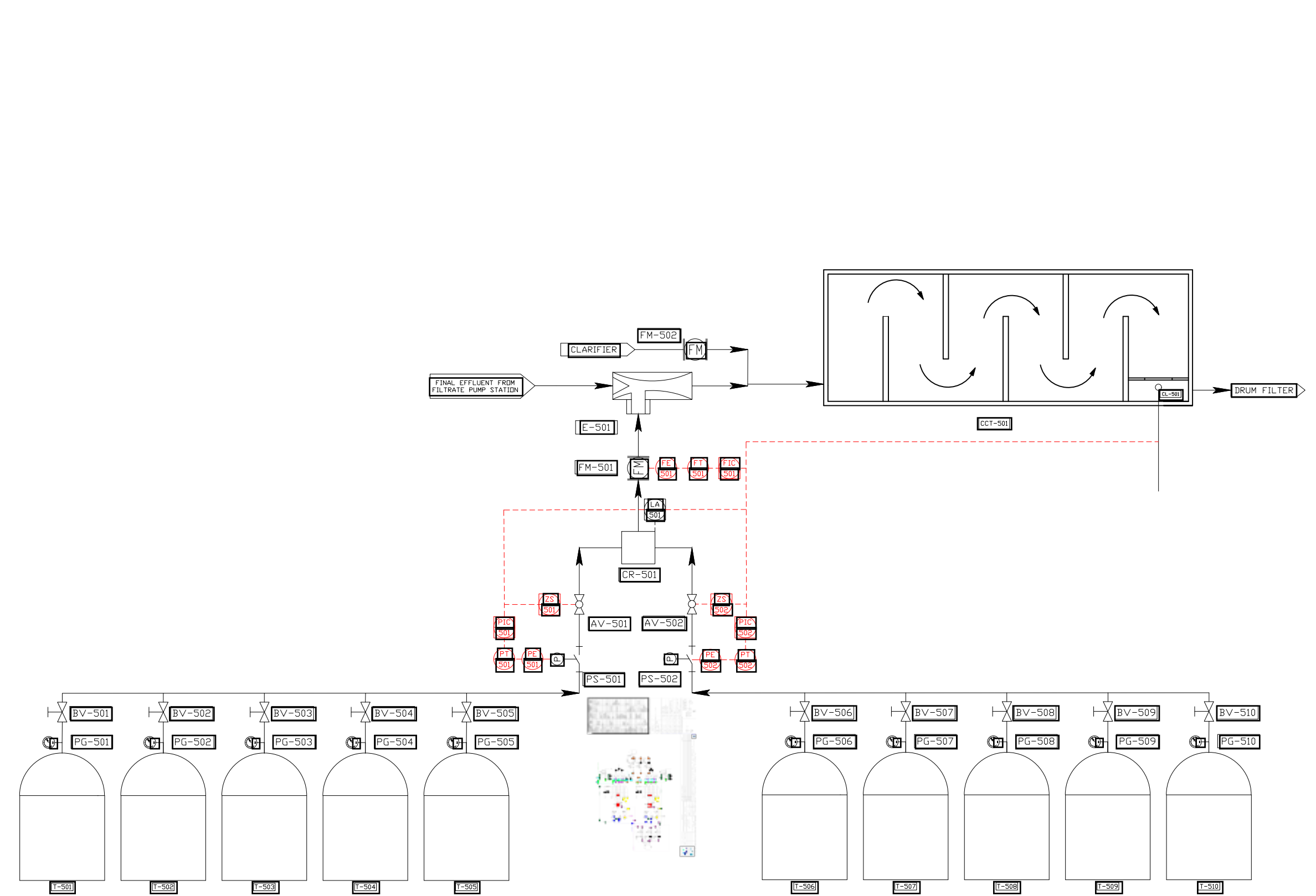
DIAGRAM NO.

07

DO NOT SCALE DIAGRAM

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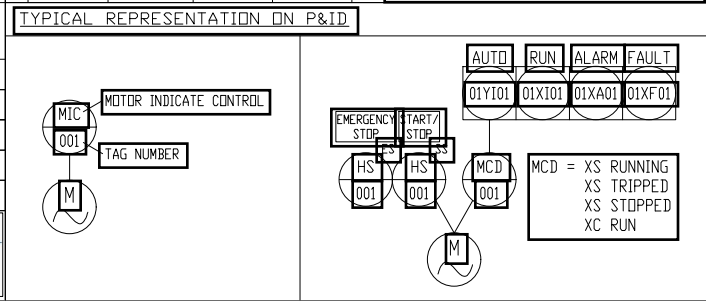


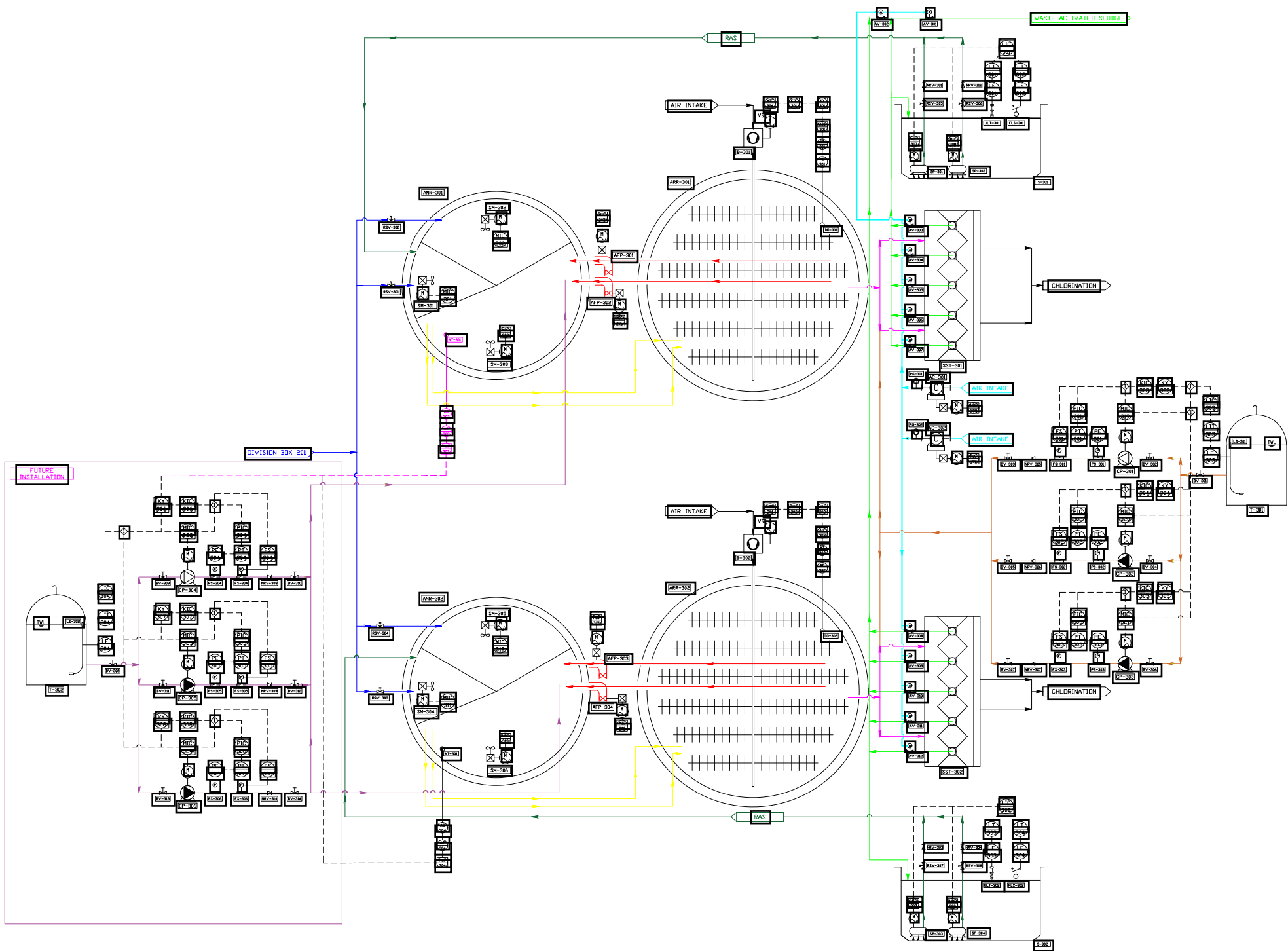


P&ID CHART					
	First Letters		Succeeding Letters		
	Measured/Initiating Variable	Variable Modifier	Readout/Passive Function	Output/Active Function	Function Modifier
A	Analysis		Alarm		
B	Burner, Combustion		User's Choice	User's Choice	User's Choice
C	User's Choice			Control	Close
D	User's Choice	Delay, Differential			Deviation
E	Voltage		Sensor, Primary Element		
F	Flow, Flow Rate	Ratio			
G	User's Choice		Glass, Gauge, Viewing Device		
H	Hand				High
I	Current		Indicate		
J	Power		Scan		
K	Time, Schedule	Time Rate of Change		Control Station	
L	Level		Light		Low
M	Motor				Middle, Intermediate
N	User's Choice		User's Choice	User's Choice	User's Choice
O	User's Choice	Overrun	Orifice, Restriction		Open
P	Pressure		Point (Test Connection)		
Q	Quantity	Integrate, Totalize	Integrate, Totalize		
R	Radiation		Record		Run
S	Speed, Frequency	Safety		Switch	Stop
T	Temperature			Transmit	
U	Multivariable		Multifunction	Multifunction	
V	Variable, Mechanical Analysis			Valve, Damper, Louver	
W	Weight, Force		Well, Probe		
X	Unclassified	X-axis	Accessory Devices, Unclassified	Unclassified	Unclassified
Y	Event, State, Presence	Y-axis		Auxiliary Devices	
Z	Position, Dimension	Z-axis, Safety Instrumented System		Driver, Actuator, Unclassified final control element	

P&ID SYMBOLS					
No	SHARED DISPLAY, SHARED CONTROL		C	D	LOCATION & ACCESSIBILITY
	A	B			
	PRIMARY CHOICE OR BASIC PROCESS CONTROL SYSTEM	ALTERNATE CHOICE OR SAFETY INSTRUMENT SYSTEM	COMPUTER SYSTEMS AND SOFTWARE	DISCRETE	
1					- LOCATED IN FIELD. - NOT PANEL MOUNTED. - VISIBLE. - OPERATOR ACCESSIBLE.
2					- LOCATED IN MAIN PANEL. - VISIBLE. - OPERATOR ACCESSIBLE.
3					- LOCATED IN REAR MAIN PANEL. - LOCATED IN CABINET BEHIND PANEL. - NOT VISIBLE. - NOT OPERATOR ACCESSIBLE AT PANEL.
4					- LOCATED IN REAR OF SECONDARY PANEL. - VISIBLE. - OPERATOR ACCESSIBLE.
5					- LOCATED IN REAR OF SECONDARY PANEL. - LOCATED IN FIELD CABINET. - NOT VISIBLE. - NOT OPERATOR ACCESSIBLE AT PANEL.

 	CLIENT APPROVAL		PROJECT:		REV.	DETAIL OF CHANGE	DATE
	DATE	SIGNATURE	BURGERSFORT WWTW		01		
					02		
			APPROVALS		03		
			DRAWN		04		
			A SNYMAN		2021/05/17		
			CHECKED		DATE		
			LJ NIEMAND		2021/05/17		
SIZE A3	REV. 02	DIAGRAM NO. 05	DO NOT SCALE DIAGRAM		THE INFORMATION CONTAINED IN THIS PFD OR P&ID IS THE SOLE PROPERTY OF JN WATER WORKS. ANY REPRODUCTION IN PART OR IN WHOLE WITHOUT THE WRITTEN PERMISSION FROM JN WATER WORKS IS PROHIBITED, IN TERMS OF THE COPYRIGHT ACT.		





P&ID CHART				
	First Letters		Succeeding Letters	
	Measured/Initiating Variable	Variable Modifier	Readout/Passive Function	Output/Active Function
A	Analysis		Alarm	
B	Burner, Combustion		User's Choice	User's Choice
C	User's Choice			Control
D	User's Choice	Difference, Differential		Deviation
E	Voltage		Sensor, Primary Element	
F	Flow, Flow Rate	Ratio		
G	User's Choice		Glass, Gauge, Viewing Device	
H	Hand			High
I	Current		Indicate	
J	Power		Scan	
K	Time, Schedule	Time Rate of Change		Control Station
L	Level		Light	Low
M	User's Choice			Middle, Intermediate
N	User's Choice		User's Choice	User's Choice
O	User's Choice		Orifice, Restriction	Open
P	Pressure		Point (Test Connection)	
Q	Quantity	Integrate, Totalize	Integrate, Totalize	
R	Radiation		Record	Run
S	Speed, Frequency	Safety		Switch
T	Temperature			Transmit
U	Multivariable		Multifunction	Multifunction
V	Vibration, Mechanical Analysis			Valve, Damper, Louver
W	Weight, Force		Well, Probe	
X	Unclassified	X-axis	Accessory Devices, Unclassified	Unclassified
Y	Event, State, Presence	Y-axis		Auxiliary Devices
Z	Position, Dimension	Z-axis, Safety Instrumented System		Driver, Actuator, Unclassified final control element

P&ID SYMBOLS				
No	SHARED DISPLAY, SHARED CONTROL		C	D
	A	B		
	PRIMARY CHOICE OR BASIC PROCESS CONTROL SYSTEM	ALTERNATE CHOICE OR SAFETY INSTRUMENT SYSTEM	COMPUTER SYSTEMS AND SOFTWARE	DISCRETE
1				
2				
3				
4				
5				



CLIENT APPROVAL

DATE

SIGNATURE

PROJECT:

BURGERSFORT WWTW

PIPING AND INSTRUMENTATION DIAGRAM (P&ID) - BIOLOGICAL NUTRIENT REACTOR

DO NOT SCALE DIAGRAM

APPROVALS

A SNYMAN

DATE

2021/05/17

CHECKED

LJ NIEMAND

DATE

2020/06/05

REV.

01

ISSUED FOR COMMENTS

02

03

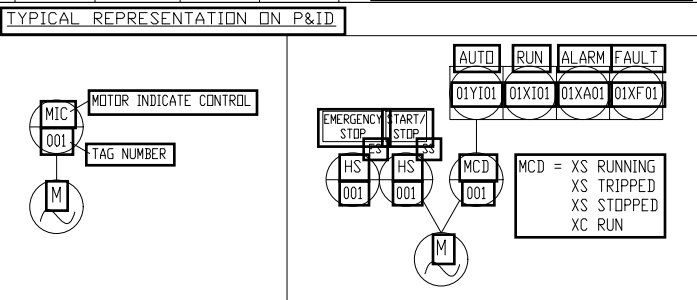
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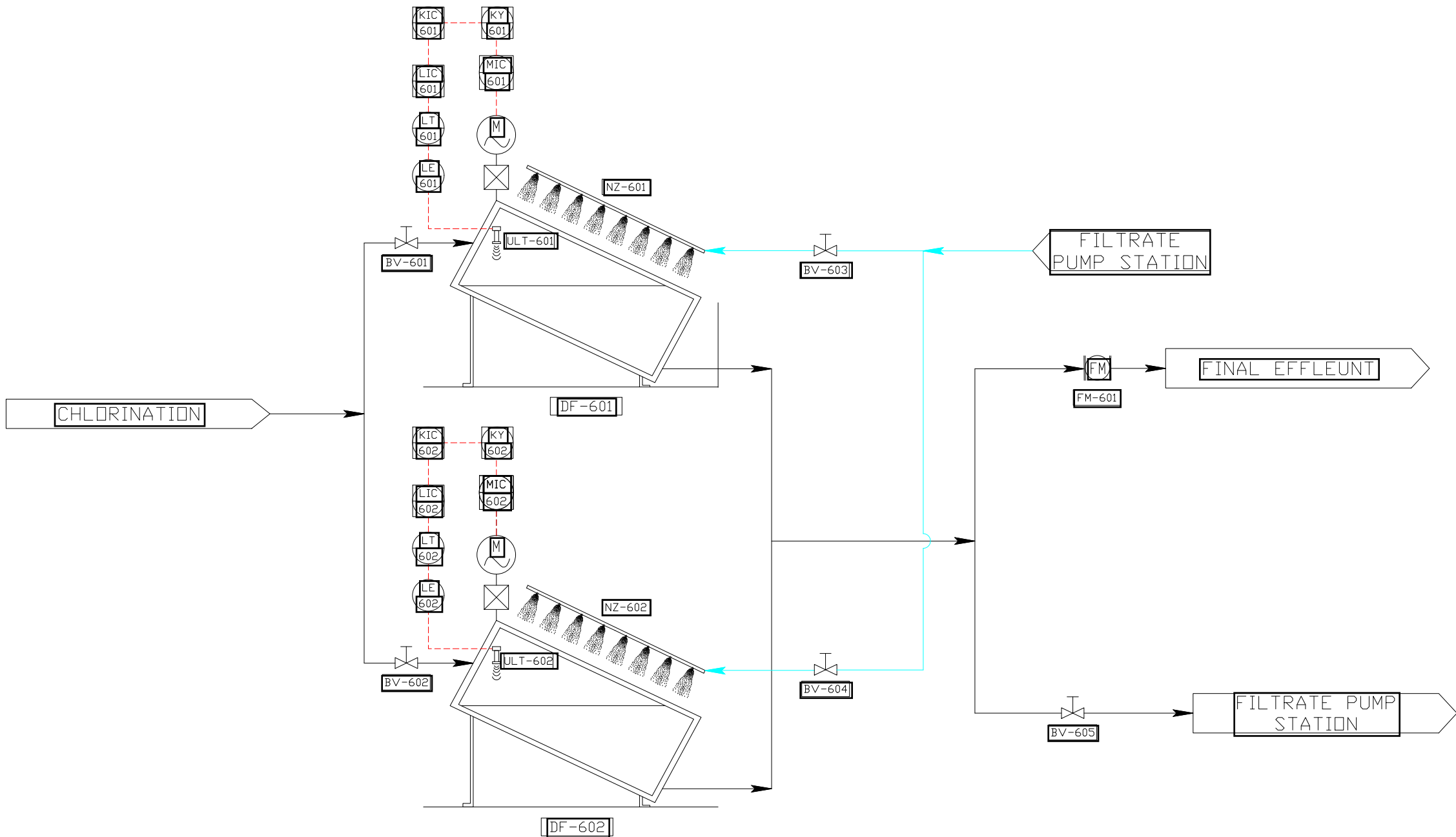
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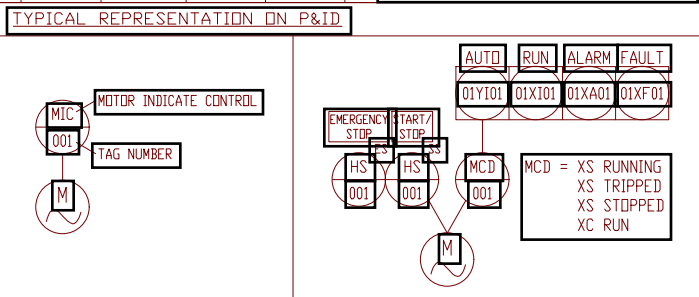
DATE





P&ID CHART				
	First Letters		Succeeding Letters	
	Measured/Initiating Variable	Variable Modifier	Readout/Passive Function	Output/Active Function
A	Analysis		Alarm	
B	Burner, Combustion		User's Choice	User's Choice
C	User's Choice			Control
D	User's Choice	Delay, Differential		
E	Voltage		Sensor, Primary Element	
F	Flow, Flow Rate	Ratio		
G	User's Choice		Glass, Gauge, Viewing Device	
H	Hand			High
I	Current		Indicate	
J	Power		Scan	
K	Time, Schedule	Time Rate of Change		Control Station
L	Level		Light	
M	Motor			Low, Middle, Intermediate
N	User's Choice		User's Choice	User's Choice
O	User's Choice	Overrun	Orifice, Restriction	Open
P	Pressure		Point (Test Connection)	
Q	Quantity	Integrate, Totalize	Integrate, Totalize	
R	Radiation		Record	Run
S	Speed, Frequency	Safety		Switch
T	Temperature			Transmit
U	Multivariable		Multifunction	Multifunction
V	Variable, Mechanical Analysis			Valve, Damper, Louver
W	Weight, Force		Well, Probe	
X	Unclassified	X-axis	Accessory Devices, Unclassified	Unclassified
Y	Event, State, Presence	Y-axis		Auxiliary Devices
Z	Position, Dimension	Z-axis, Safety Instrumented System		Driver, Actuator, Unclassified final control element

P&ID SYMBOLS				
No	PRIMARY CHOICE OR BASIC PROCESS CONTROL SYSTEM	ALTERNATE CHOICE OR SAFETY INSTRUMENT SYSTEM	COMPUTER SYSTEMS AND SOFTWARE	DISCRETE
1				
2				
3				
4				
5				



	CLIENT APPROVAL		PROJECT:	REV.	DETAIL OF CHANGE	DATE
	DATE	SIGNATURE	BURGERSFORT WWTW	01		
			APPROVALS	DATE		
			DRAWN	DATE		
			A SNYMAN	2021/05/17		
			CHECKED	DATE		
			LJ NIEMAND	2021/05/17		
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