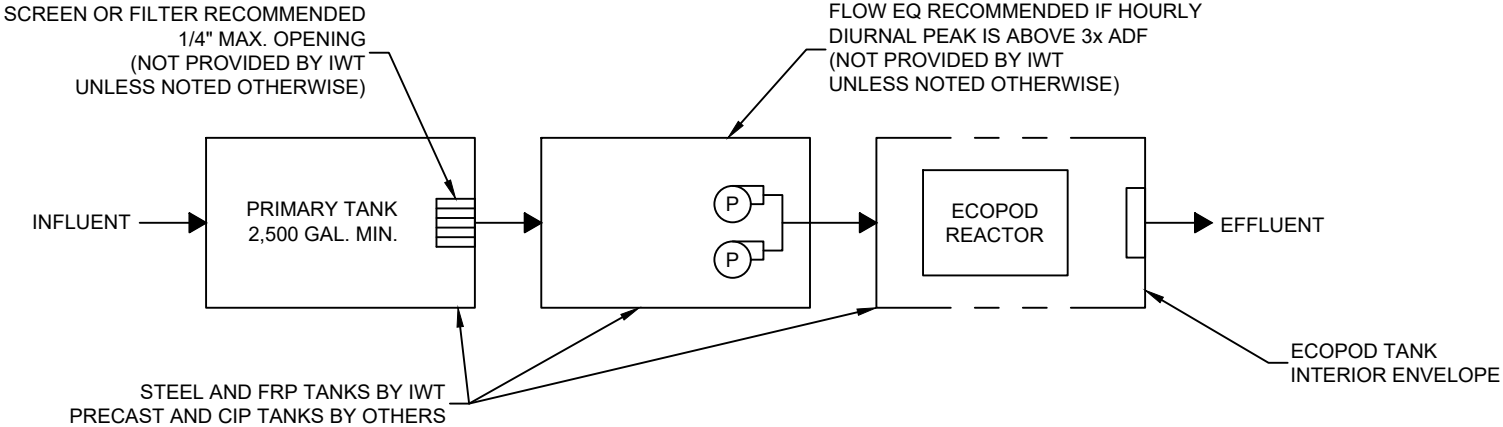


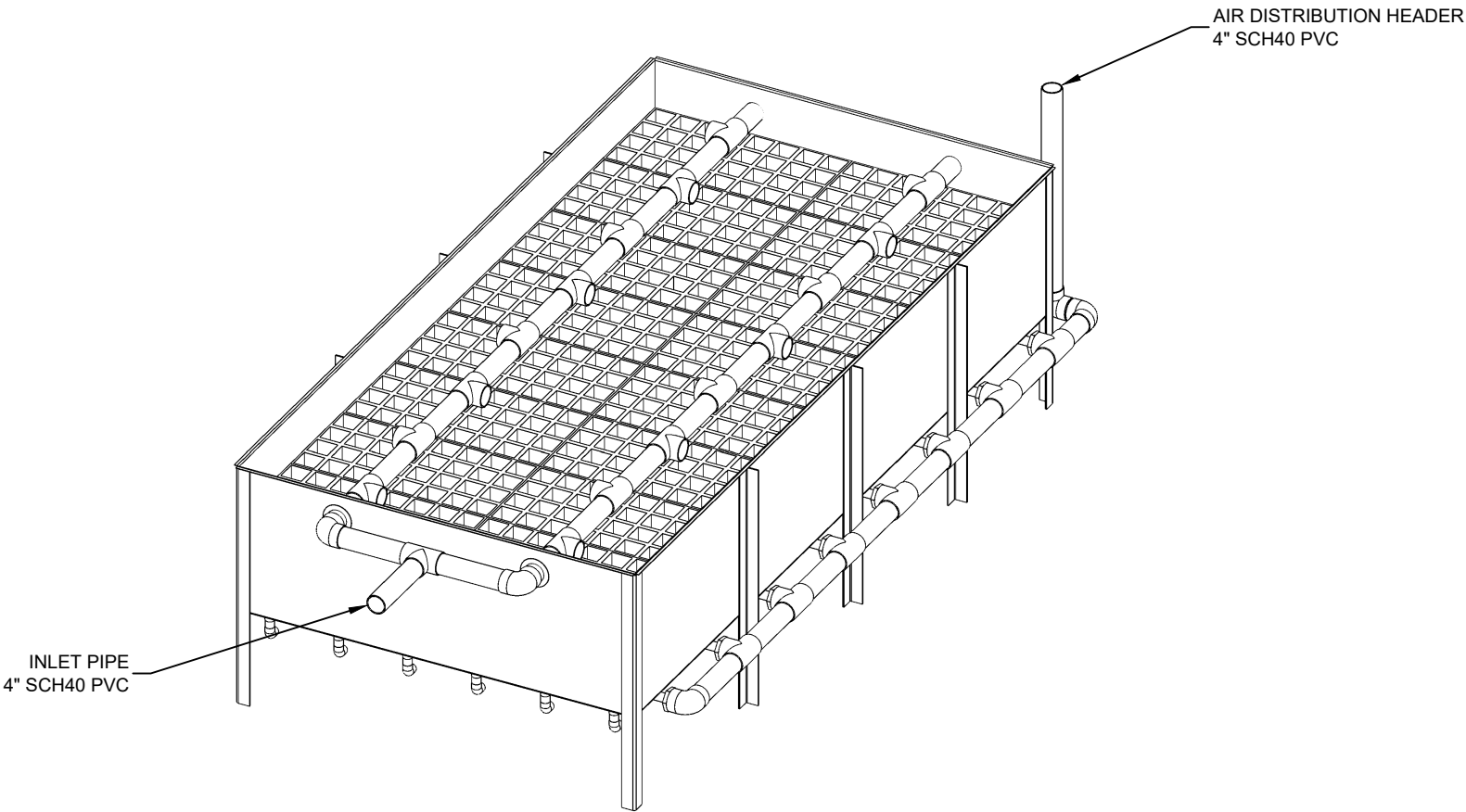
- GENERAL NOTES
- THE DRAWINGS DEPICTED HEREIN REPRESENT PRELIMINARY LAYOUTS OF A WASTEWATER TREATMENT SYSTEM CAPABLE OF TREATING THE DOMESTIC WASTE CONSTITUENTS NOTED IN TABLE 1.
 - ECOPOD REACTOR BOX SHALL BE CONSTRUCTED OF AISI 304/304L STAINLESS STEEL.
 - TANK MATERIAL OPTIONS:
 - CARBON STEEL PER ASTM A36 w/COATING PER IWT STANDARDS.
 - FIBERGLASS REINFORCED PLASTIC (FRP) (NOT ALL MODELS).
 - PRECAST CONCRETE PER ENGINEER OF RECORD REQUIREMENTS, BY OTHERS.
 - CAST-IN-PLACE CONCRETE PER ENGINEER OF RECORD REQUIREMENTS, BY OTHERS.
 - BLOWERS, WEIRS, CONTROL PANELS, AND VARIOUS SMALL PARTS WILL BE SHIPPED UNASSEMBLED AND SECURELY PACKAGED, TO BE INSTALLED BY CONTRACTOR.
 - SEE INSTALLATION GUIDE FOR INSTALLATION DETAILS.
 - CONTACT AN IWT REPRESENTATIVE REGARDING DEVIATIONS FROM THESE STANDARDS.

TABLE 1 PROCESS PARAMETERS IWT E500S BOD+NITRIFICATION		
PARAMETER	MINIMUM	MAXIMUM
AVERAGE DAILY FLOW	-	5,000 GPD
PEAK DAILY FLOW	-	7,500 GPD
INFLUENT BOD ₅	-	12.5 LB/DAY
AIR TEMPERATURE	-	115 °F
WATER TEMPERATURE	68 °F	68 °F
RELATIVE HUMIDITY	10%	90%
SITE ELEVATION	0 FT AMSL	3,000 FT AMSL

TABLE 2 AIR DEMAND		
PARAMETER	UP TO 1,000 FT AMSL	1,000 TO 3,000 FT AMSL
STANDARD AIRFLOW	208 SCFM	242 SCFM
SITE AIR REQUIREMENT	234 ICFM	290 ICFM
BLOWER INLET AIR	234 ICFM	290 ICFM
AIR HEADER SIZE	4 IN	4 IN
MIN. TANK VENT X-SECT. AREA	96.3 IN ² 2 EA 8" OR 1 EA 12"	119 IN ² 2 EA 10" OR 1 EA 14"
BLOWER SELECTION	G-D SUTORBILT 3L	G-D SUTORBILT 3L
NOISE LEVEL	ENCLOSURE DEPENDENT	ENCLOSURE DEPENDENT
AIR TEMPERATURE RISE ¹	22 F (12.2 C)	21 F (11.7 C)
BLOWER INLET DIAMETER	2.5 IN NPT	2.5 IN NPT
BLOWER OUTLET DIAMETER	2.5 IN NPT	2.5 IN NPT
MOTOR POWER RATING ²	3 HP	5 HP
OPERATING POWER	2.1 KW	2.5 KW
1. REVIEW BLOWER DISCHARGE AIR TEMPERATURE WHEN SPECIFYING AIR MAIN PIPING MATERIAL.		
2. REVIEW BLOWER MANUFACTURER CUTSHEETS FOR ADDITIONAL ELECTRICAL INFORMATION.		



TYPICAL PROCESS DIAGRAM



ECOPOD REACTOR
LAYOUT 2

TABLE 3 STANDARD EQUIPMENT LIST			
DESCRIPTION	QTY	MAKE	MODEL
ECOPOD REACTOR	1	IWT	E500S-N
BLOWER	1	G-D SUTORBILT	PER TABLE 2
CONTROL PANEL	1	IWT	PER DESIGN
24" S.S. EFFLUENT WEIR	1	IWT	TROUGH-3.0

NO.	DATE	INITIALS	DESCRIPTION
A	10/12/21	AOB	ADDED TRIMETRIC VIEW



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ECOPOD E500S-N
STANDARD DESIGN FOR BOD AND NITRIFICATION

GENERAL ARRANGEMENT
DESIGN OVERVIEW

HORIZ. SCALE N/A	PROJECT NO. N/A
VERT. SCALE N/A	DATE 02/11/2021
DRAWN BY CGK	DESIGNED BY AOB
DRAWING NO. C1.0	SHEET NO. 01 of 02

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- GENERAL NOTES
- ECOPOD REACTOR BOX SHALL BE CONSTRUCTED OF AISI 304/304L STAINLESS STEEL.
 - TANK MATERIAL OPTIONS:
 - CARBON STEEL PER ASTM A36 w/COATING PER IWT STANDARDS,
 - FIBERGLASS REINFORCED PLASTIC (FRP) (NOT ALL MODELS),
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 - CAST-IN-PLACE CONCRETE PER ENGINEER OF RECORD REQUIREMENTS, BY OTHERS.
 - SEE INSTALLATION GUIDE FOR INSTALLATION DETAILS.
 - CONTACT AN IWT REPRESENTATIVE REGARDING DEVIATIONS FROM THESE STANDARDS.

TABLE 4 MINIMUM ECOPOD REACTOR DIMENSIONS										
SITE ELEVATION		LAYOUT ID	REACTOR WEIGHT		A OVERALL LENGTH		B OVERALL WIDTH		B1 AIR HEADER CL DIM	
FT	M		LB	KG	IN	CM	IN	CM	IN	CM
0-3,000	0-914	1	2,090	949	372	945	60	153	33	84
0-3,000	0-914	2	1,730	786	215	547	108	275	57	145
0-3,000	0-914	3	1,760	799	252	641	84	214	45	115

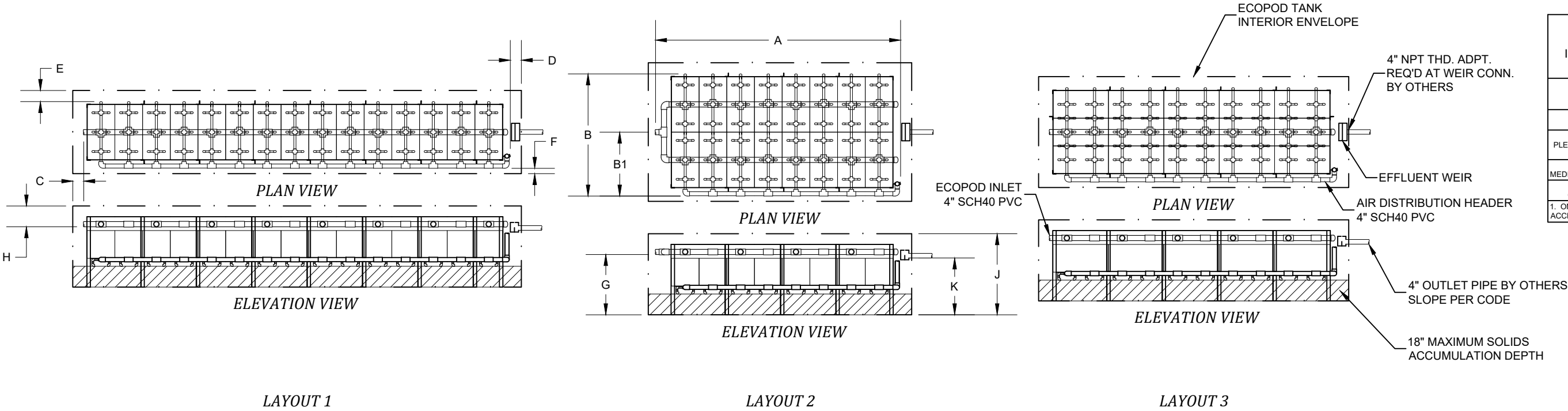
1. SOME REACTOR LAYOUTS NOT AVAILABLE IN FIBERGLASS TANKS. CONTACT AN IWT REPRESENTATIVE FOR DETAILS.

TABLE 5 RECOMMENDED ECOPOD TANK INTERIOR ENVELOPE DIMENSIONS		
DIMENSION	IN	CM
C VESSEL FRONT SPACE	12	30
D VESSEL REAR SPACE	18	46
E AIR HEADER SIDE INSIDE SPACE	6	15
F NO HEADER SIDE INSIDE SPACE	6	15

1: ADDITIONAL ACCESS HATCHES RECOMMENDED FOR SOLIDS REMOVAL ALONG VESSEL SIDES.

TABLE 6 REQUIRED ECOPOD TANK INTERIOR ENVELOPE MINIMUM DIMENSIONS		
DIMENSION	IN	CM
G INLET INVERT	50	127
H PLENUM SPACE ABOVE INLET INVERT	10	25
J MEDIA REACTOR HEIGHT	59	150
K OUTLET INVERT	47	119

1. ONE (1 EA.) INLET AND ONE (1 EA.) OUTLET ACCESS HATCH REQUIRED, 24" DIA MINIMUM.



NO.	DATE	INITIALS	DESCRIPTION



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ECOPOD E500S-N
STANDARD DESIGN FOR BOD AND NITRIFICATION

GENERAL ARRANGEMENT
LAYOUT DIMENSIONS

HORIZ. SCALE N/A	PROJECT NO. N/A
VERT. SCALE N/A	DATE 05/18/2021
DRAWN BY CGK	DESIGNED BY AOB
DRAWING NO. C1.1	SHEET NO. 02 of 02