

PERMIT

VOID

SEWAGE DISPOSAL SYSTEM

DEPARTMENT OF HEALTH AND MENTAL HYGIENE

P 50759I

A 49877A

DISTRICT _____

DATE 4/30/95

HOWARD COUNTY HEALTH DEPARTMENT

BUREAU OF ENVIRONMENTAL HEALTH
~~461-0000~~ 313-2640

DATE SYSTEM APPROVED _____

INSPECTOR _____

Jack Fyock Septic Service IS PERMITTED TO INSTALL ALTER _____

ADDRESS _____ PHONE 988-9270

SUBDIVISION Willow Wood Farm Kennel LOT _____ ROAD 1654 Marriottsville Road

PROPERTY OWNER Fred Wolpert (Kennel and Groom Shop)
1654 Marriottsville Road
ADDRESS Marriottsville, Maryland 21104

Maximum Sewage Design Flow 4000 Gallons per Day
Design Loading Rate 1.25 Gallons per Square Foot per Day of Either Single Sidewall or Bottom Area (whichever is larger).

INSTALL:
2 Separate 2000 Gallon Septic Tank (1-Kennel, 1-Groom Shop)
Total Length of Trench to be Installed 800 Feet
Pump Pit Capacity - 1-1000 Gallon Pump Pit with Dual Effluent Pumps with Alarms as per TSA Design Document Revised 2/09/95.

TRENCHES - Trench to be 2 feet wide. Inlet maximum depth $3\frac{1}{2}$ feet below original grade. Bottom maximum depth $7\frac{1}{2}$ feet below original grade. 4 feet of stone below distribution pipe.

LOCATION - Starting from the intersection of the 1496.49' and 498.47' lot lines, place the distribution box 150 feet down the 498.47' lot line and 40 feet off this same lot line. Run trenches on contour in both directions.

NOTES - DISTRIBUTION BOX TO HAVE 2 OUTLETS, EACH SERVING 4 TRENCHES AND A MANIFOLD. No trench to exceed 100 feet in length. Provide 6" - 8" diameter cleanout and cap to grade or above on septic tank. Call for inspection before and after stone is installed. *OK MR 5/9/95*

PLANS APPROVED BY Mark Rifkin/C. Williams DATE 04/11/95

COVER NO WORK UNTIL INSPECTED AND APPROVED

NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM

NOTE: CLEANOUT REQUIRED EVERY 70 FEET OF SEWER LINE AND/OR AT 90° SWEEPS IN LINES FROM HOUSE TO DRAIN FIELDS, 90° ELBOWS NOT ACCEPTABLE.

NOTE: ALL PARTS OF SEPTIC SYSTEMS (I.E. TANK, DISTRIBUTION BOX TRENCHES) TO BE 100 FEET FROM WELL (UNLESS OTHERWISE SPECIFICALLY AUTHORIZED)

NOTE: IF DEEP TRENCH(ES) ARE USED CALL FOR INSPECTION BEFORE AND AFTER PLACING GRAVEL IN TRENCH(ES)

NOTE: NO DRY WELL SHALL EXCEED 15 FOOT IN DIAMETER NO ABSORPTION TRENCH TO EXCEED 100 FEET IN LENGTH

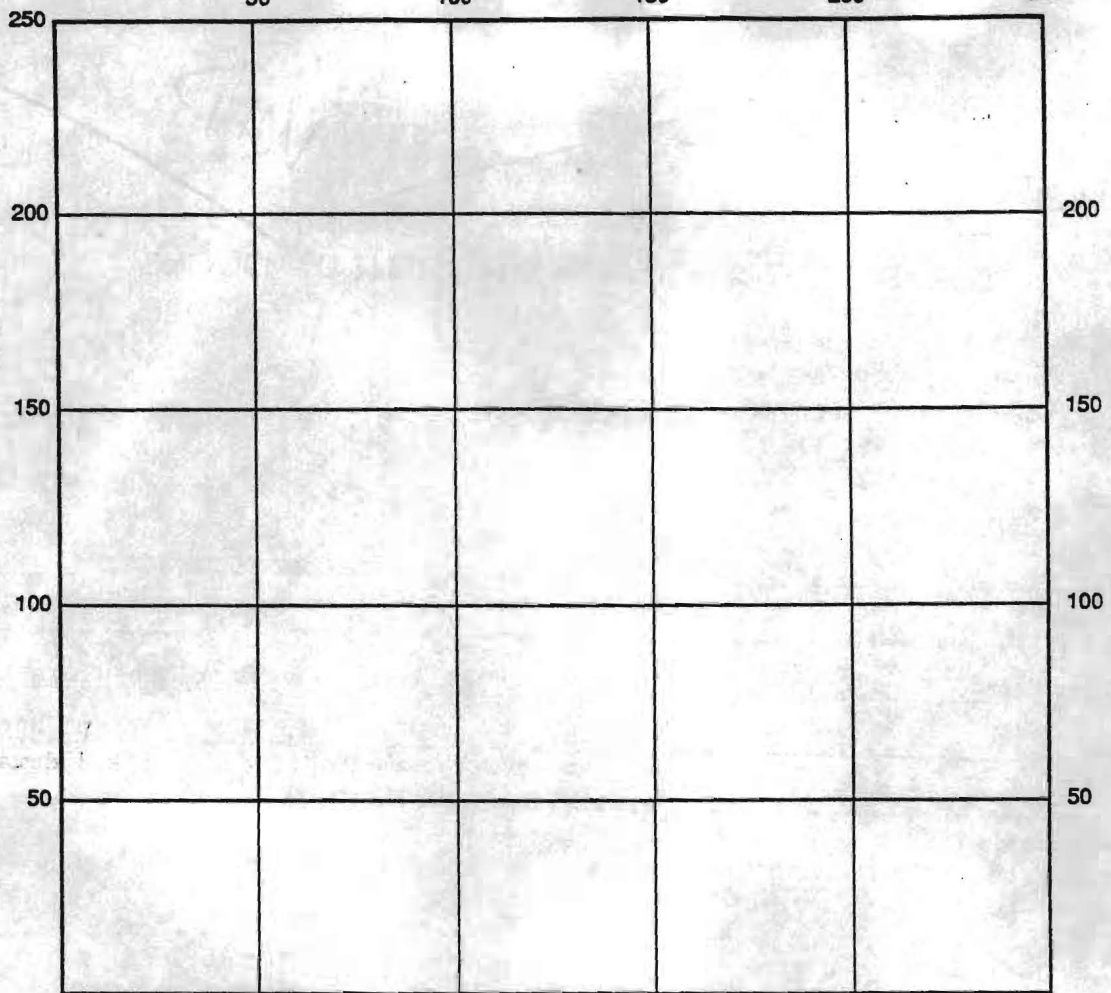
NOTE: ALL PIPE FROM HOUSE TO SEPTIC TANK MUST BE CAST IRON OR SCHEDULE 35/40 PVC OR ABS

PERMIT VOID AFTER TWO YEARS

NOTE: INSTALL STAND PIPE ON SEPTIC TANK AND DRY WELL STAND PIPES MUST BE 6 INCHES IN DIAMETER CAST IRON. CONCRETE OR TERRA COTTA OR PVA OR ABS ACCEPTED. IF TOP OF SEPTIC TANK IS DEEPER THAN 3 FEET. MANHOLE TO GRADE REQUIRED.

NOTE: DISTRIBUTION BOXES MUST HAVE BAFFLES

***INSTALLER IS RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT**



INDICATE NORTH - NAME ADJOINING ROADWAY AS BASE LINE

SEPTIC TANK LEVEL _____ CLEANOUTS _____

DISTRIBUTION BOX LEVEL _____

DRAIN FIELD/TITLE DEPTH _____ FT. TRENCH WIDTH _____ FT. INLET DEPTH _____ FT.

EFFECTIVE GRAVEL DEPTH _____ FT. TOTAL LENGTH _____ FT.

NUMBER OF TRENCHES _____ ONE SIDEWALL/BOTTOM AREA _____ SQ. FT.

DRYWALL INSIDE DIAMETER _____ FT. EFFECTIVE DEPTH BELOW INLET _____ FT.

ABSORBENT AREA _____ SQ. FT.

REMARKS: _____

DATE SYSTEM APPROVED _____ INSPECTOR _____

COMMERCIAL SEPTIC SYSTEM SPECIFICATIONS

Property: Willow Wood Farm Kennel
Marriottsville Rd

Design reference: SDP _____

Maximum Sewage Design Flow 4000 GPD

Average Percolation Time 4 min

Design Loading Rate 1.25 Gallons per square foot per day of either single sidewall or bottom area (whichever is larger).

Septic Tank Capacity 2 separate 2000 GAL TANKS (1-Kennel)

Pump Pit Capacity 1 1000 GAL PUMPPIT (1-groom shop)

Trench to be 2' wide DUAL EFFLUENT PUMPS WITH ALARMS AS PER TSA

Inlet maximum depth 3½ below original grade DESIGN DOCUMENT REVISED 2/9/95

Bottom maximum depth 7½ below original grade

4 feet of stone below distribution pipe

Total length of trench to be installed 800

LOCATION: STARTING FROM THE INTERSECTION OF THE 1496.49' AND 498.47' LOT LINES, PLACE THE DISTRIBUTION BOX 150' DOWN THE 498.47' LOT LINE AND 40' OFF THIS SAME LOT LINE. RUN TRENCHES ON CONTOUR IN BOTH DIRECTIONS.

NOTE: No trench to exceed 100 feet in length. Provide 6" - 8" diameter cleanout and cap to grade or above on septic tank(s) or drywell(s).

PLEASE CALL FOR INSPECTION BEFORE AND AFTER STONE IS INSTALLED.

DISTRIBUTION ^{Box} TO HAVE 2 OUTLETS, EACH SERVING 4 TRENCHES ON A MANIFOLD

MR/CW
4/11/95

TSA GROUP INC.

8480 Baltimore National Pike
Suite 418
Ellicott city, Maryland 21043

JOB WILLOW WOOD FARM
SHEET NO. _____ OF _____
CALCULATED BY MLV DATE 1-16-95
CHECKED BY CAM DATE _____
SCALE REVISED 2/9/95 CAM

PUMPING TANK CAPACITY

MAXIMUM DAILY VOLUME = 4000 gpd INTO PUMPING TANK

$gpm = 4000 \text{ gp} / (24 \text{ HRS.} * 60 \text{ MIN.}) = 2.78$, SAY 3 gpm

THE ABS PUMP WILL PUMP 10 gpm AT NORMAL OPERATING LEVEL WITH 69 FT. OF HEAD

∴ PUMP OUTFLOW > GRAVITY INFLOW

SIZE OF 1000 GAL. TANK = 96" L x 48" W x 65" H (INV.)

- WALL THICKNESS 8" SIDES 8" SIDES 4" BOT.

88" L x 40" W x 61" H (INV.)

ACTUAL VOLUME TO INV. WT = $214720 \text{ in}^3 \div 231 \text{ GAL/in}^3 = 929.52 \text{ GAL}$

PUMP ACTIVATION @ 2' EFFLUENCE LEVEL

PUMPED VOLUME = $88" \times 40" \times 24" = 84480 \text{ in}^3 = 366 \text{ GAL}$

$\frac{366 \text{ GAL}}{10 \text{ gpm}} = 36.6 \text{ MIN.}$ OUTFLOW < $\frac{366 \text{ GAL}}{3 \text{ gpm}} = 122 \text{ MIN. INFLOW}$

∴ PUMP & TANK ✓

TSA GROUP INC.

8480 Baltimore National Pike
Suite 418
Ellicott city, Maryland 21043

JOB WILLOW WOOD FARM
SHEET NO. _____ OF _____
CALCULATED BY MLV DATE 1-16-95
CHECKED BY _____ DATE _____
SCALE REVISED 2/9/95 CAM

SEPTIC SEWER DESIGN

TOTAL DYNAMIC HEAD

1. FORCE MAIN LENGTH = $780' \pm$
 $703'$

LOSSES: (1 1/2" PIPE)

2. 90° ELBOW = $4.1' \text{ EA.} * 2 = 8.2' *$

3. SWING CHECK VALVE = $10.4' *$

4. GATE VALVE = $0.86' *$

722.46' TOTAL EQUIV LENGTH FOR HAZEN-
WILLIAMS $C' = 100$

1. CONVERT TO $C' = 140$ (PVC)

THE FRICTION LOSS COEFF. FOR $C = 100 @ 100' = 3.00$

$\frac{722.46'}{100'} = 7.22 \times 3.00 = 21.67$ HEAD

CONVERSION FOR $C' = 140 \Rightarrow 0.54 \times (21.67) = 11.70'$

BOTTOM OF PUMPING TANK = $465' \pm$

INV. IN DISTRIB. BOX = $523' \pm$

DIFF. = $58' \pm$ STATIC HEAD

\therefore TOTAL DYNAMIC HEAD = $11.70' + 58' = 69.70'$

READ PERFORMANCE CURVE : 70 FT. OF HEAD YIELDS 10 gpm (ATTACHED)

* REFERENCE : CAMERON'S HYDRAULICS : 1962

TSA GROUP INC.

8480 Baltimore National Pike
Suite 418
Ellicott city, Maryland 21043

JOB WILLOW WOOD FARM

SHEET NO. _____ OF _____

CALCULATED BY MLV DATE 1-16-95

CHECKED BY _____ DATE _____

SCALE _____

MINIMUM SEPTIC TANK CAPACITY

FLOWIS OF 1500 gpd OR GREATER :

$$V = 1125 \text{ GALLONS} + 0.75 Q$$

$$V = 1125 \text{ GALLONS} + 0.75 (4000 \text{ GALLONS})$$

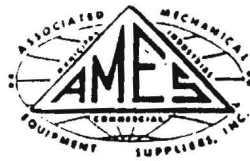
$$V = 1125 \text{ GALLONS} + 3000 \text{ GALLONS}$$

$$V = 4125 \text{ GALLONS}$$

WILLOW WOOD FARM VOLUME = 4000 GALLONS ∴ ✓

REFERENCE : COMAR 26.04.02.05

9020 Mendenhall Court
Suite J
Columbia, Maryland 21045



AMES, Inc.
Manufacturers' Representative

D.C. (301) 621-8899
BALT. (410) 995-6971
(FAX) (410) 381-5760

MUNICIPAL AND INDUSTRIAL LINE CARD

WATER AND WASTEWATER TREATMENT EQUIPMENT

Schreiber Corporation	Head Works, Nutrient Removal and Clarification
B. T. G.	Meters: Turbidity, Suspended Solids & Solids Level Detectors
Chemco	Lime Storage Towers, Feeders and Mixers
Envirovac	Vacuum Sewage Collection for municipal and marinas
Hydro Instruments	Gas Chlorination Feeders, Detectors and Scales
A Z Tech	Sewage and Sludge Grinders, Channel and Pipe Lines
Klein America	Sludge Dewatering Belt Filter Presses
Refinite	Pressure Filters and Chemical Feeders
A.K. Industries	Fiberglass Pump Basins and Septic Tanks
Filtomat	Self-cleaning in-line filters, 2"-16", protects; spray nozzles, pump seals, instrumentation, Heat Exchangers I.E. and R.O. units
Aerators, Inc.	Floating Aerators, Fiberglass and Stainless Steel

PUMPS

ABS Pumps	Submersible Sewage, Propeller Pumps, and Submersible Mixers
Bornemann Pumps	Progressive Cavity Pumps
Dakota Pumps	Packaged Pump Stations and Water Booster Stations
Fairbanks Morse	Sewage, Split-Case, Vertical Turbine and Propeller Pumps
Liqui-Trol	Packaged Booster and Irrigation Pumps
Warren-Rupp	Air or Motor Operated Double Diaphragm Pumps
Weil Pump Company	Pneumatic Ejectors, Sump and Condensate, Sewage Ejectors

CONTROL SYSTEMS

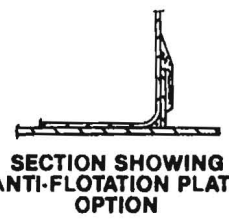
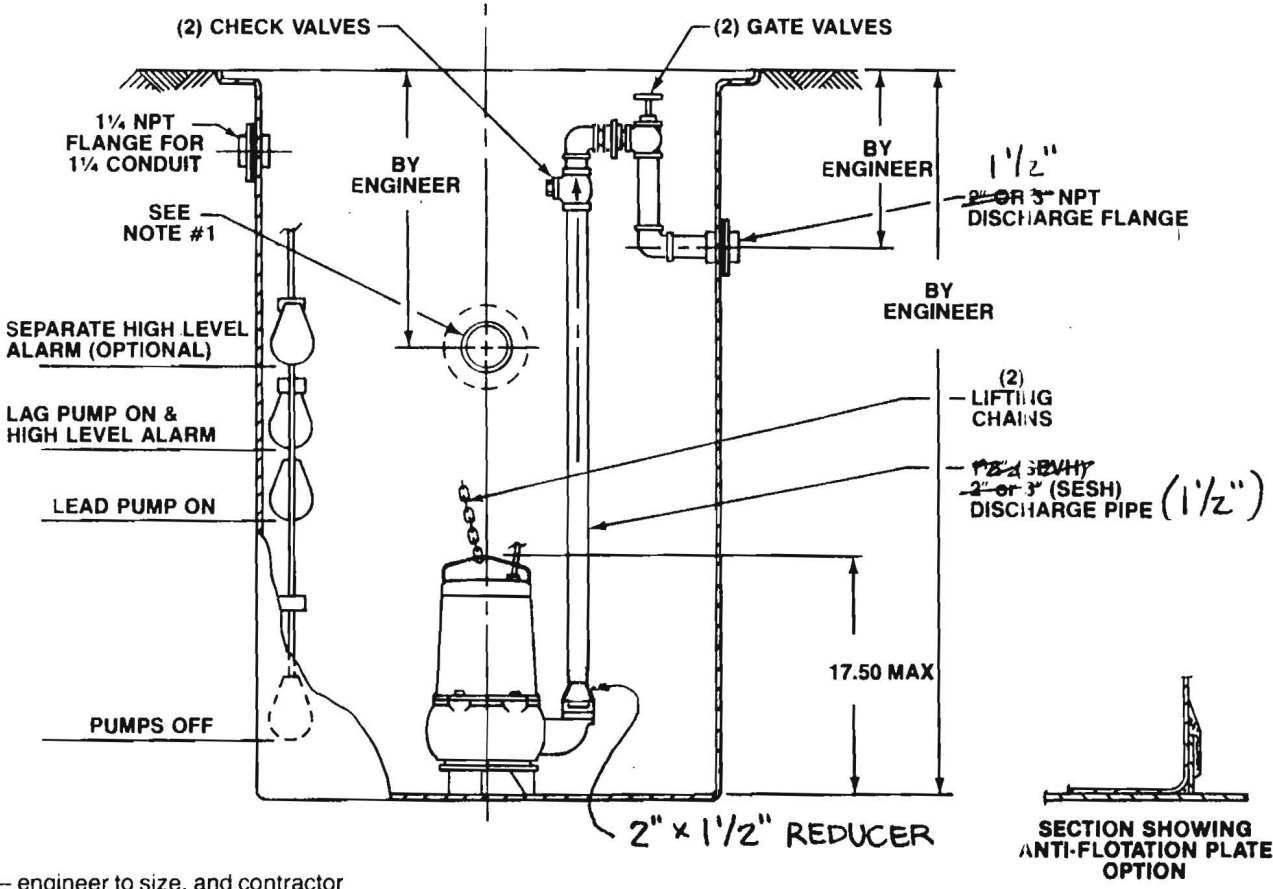
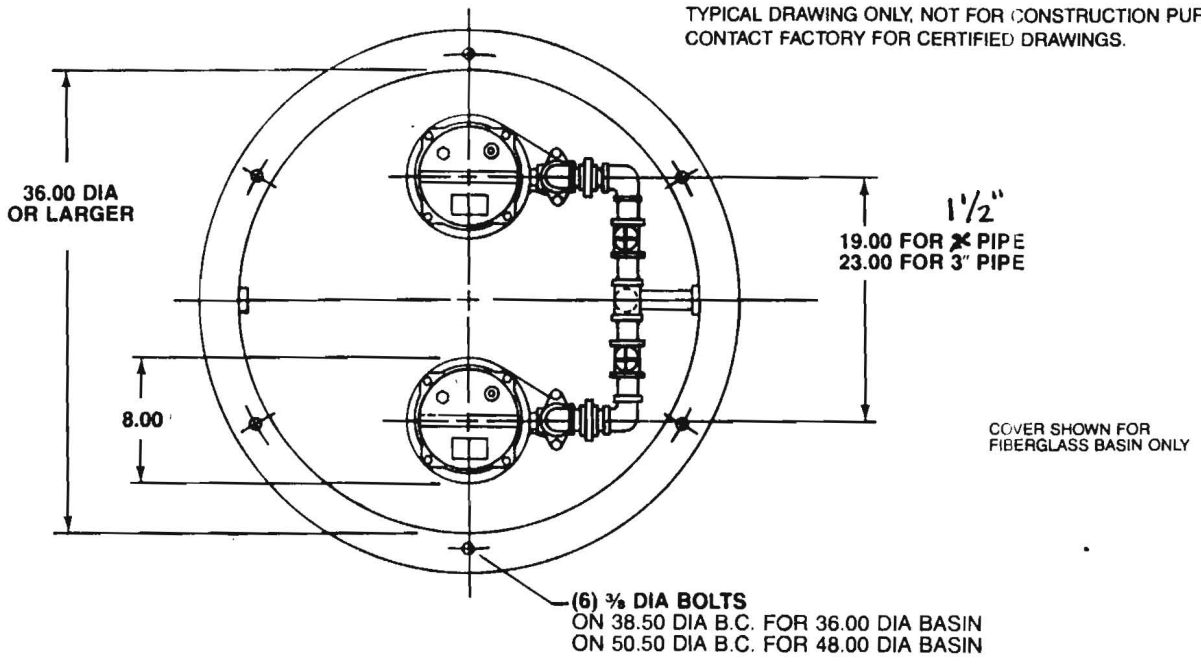
Ames/Messco Controls	Pump Station, Liquid Level and Custom Controls
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TANKS

<u>Fiberglass</u>	Chemical Storage, Bladder, Vertical, Horizontal
<u>Fibersteel</u>	Steel Tanks with fiberglass coating for chemical storage
<u>Steel Pressure</u>	Hydropneumatic, Bladder, Diaphragm

MODEL: Scavenger SEVH, SESH

TYPICAL DRAWING ONLY, NOT FOR CONSTRUCTION PURPOSES.
CONTACT FACTORY FOR CERTIFIED DRAWINGS.



NOTE:

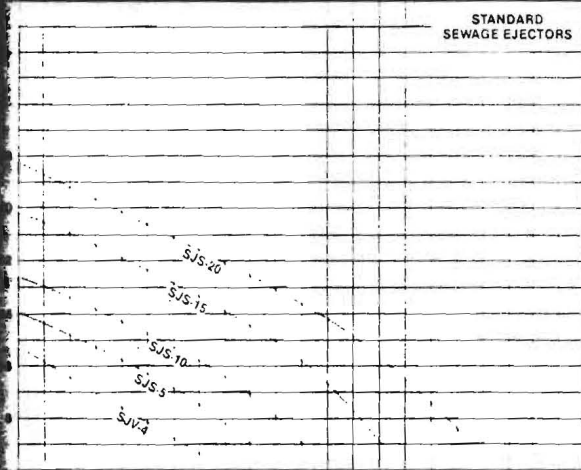
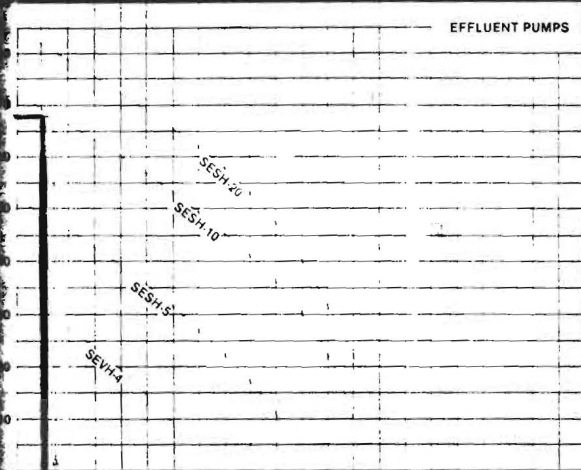
1. Inlet Hub — engineer to size, and contractor to locate and install in field.
2. Covers available in various styles, i.e., blank steel or with vent flange.
3. Pilot floats shown, piggyback type float also available for certain models.
4. Due to space limitations in smaller basins, pump location will not be centered in basin.
5. Dimensions in inches.



1-1-86
ABS Pumps Inc.
140 Pond View Drive
Meriden, CT 06450-7156

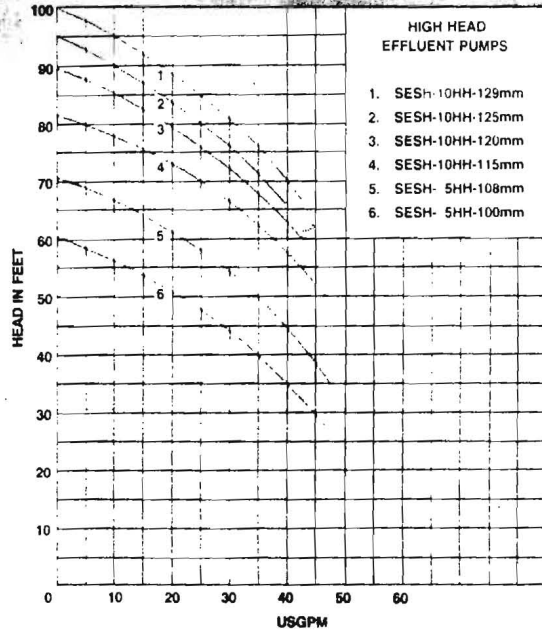
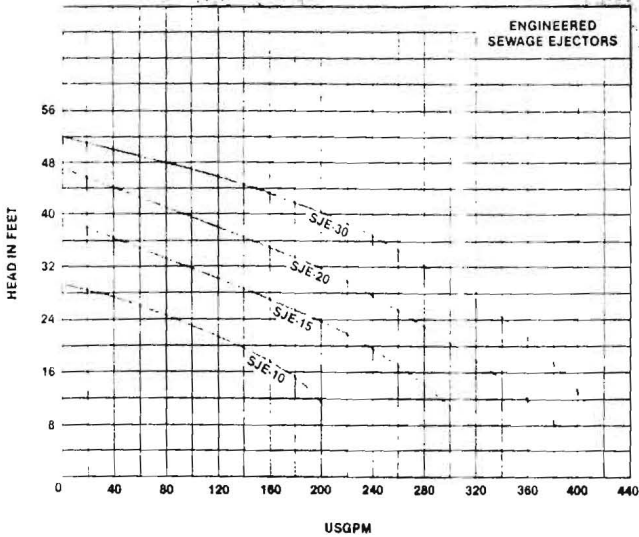
DUPLEX SIDE DISCHARGE
IN FIBERGLASS BASIN
OR CONCRETE SUMP

performance curves



engineered sewage ejectors (2 1/2" solids)

high head effluent (1/4" solids)





DATE January 1, 1986

MODEL SEVH-

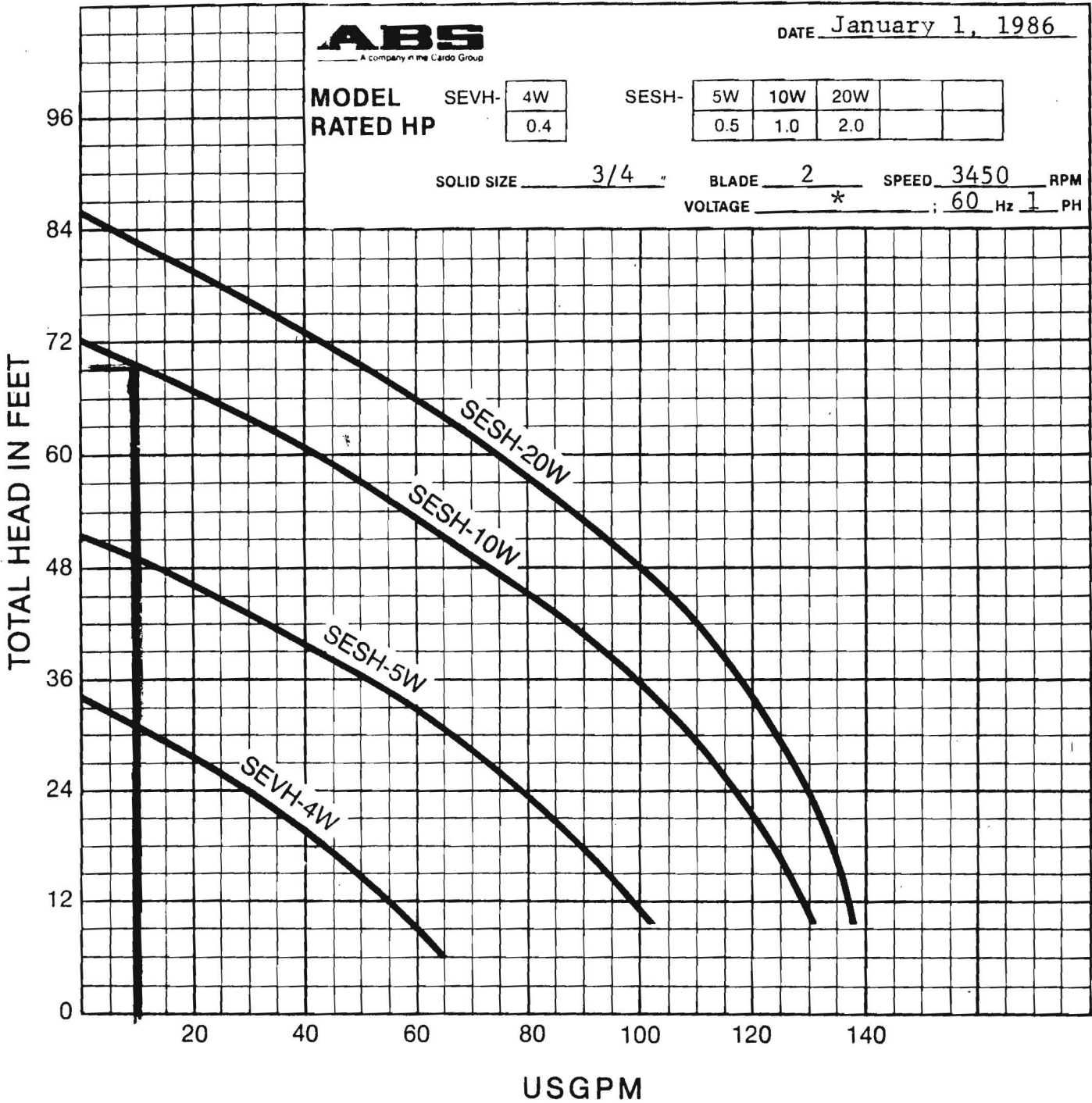
4W
0.4

 RATED HP

SESH-

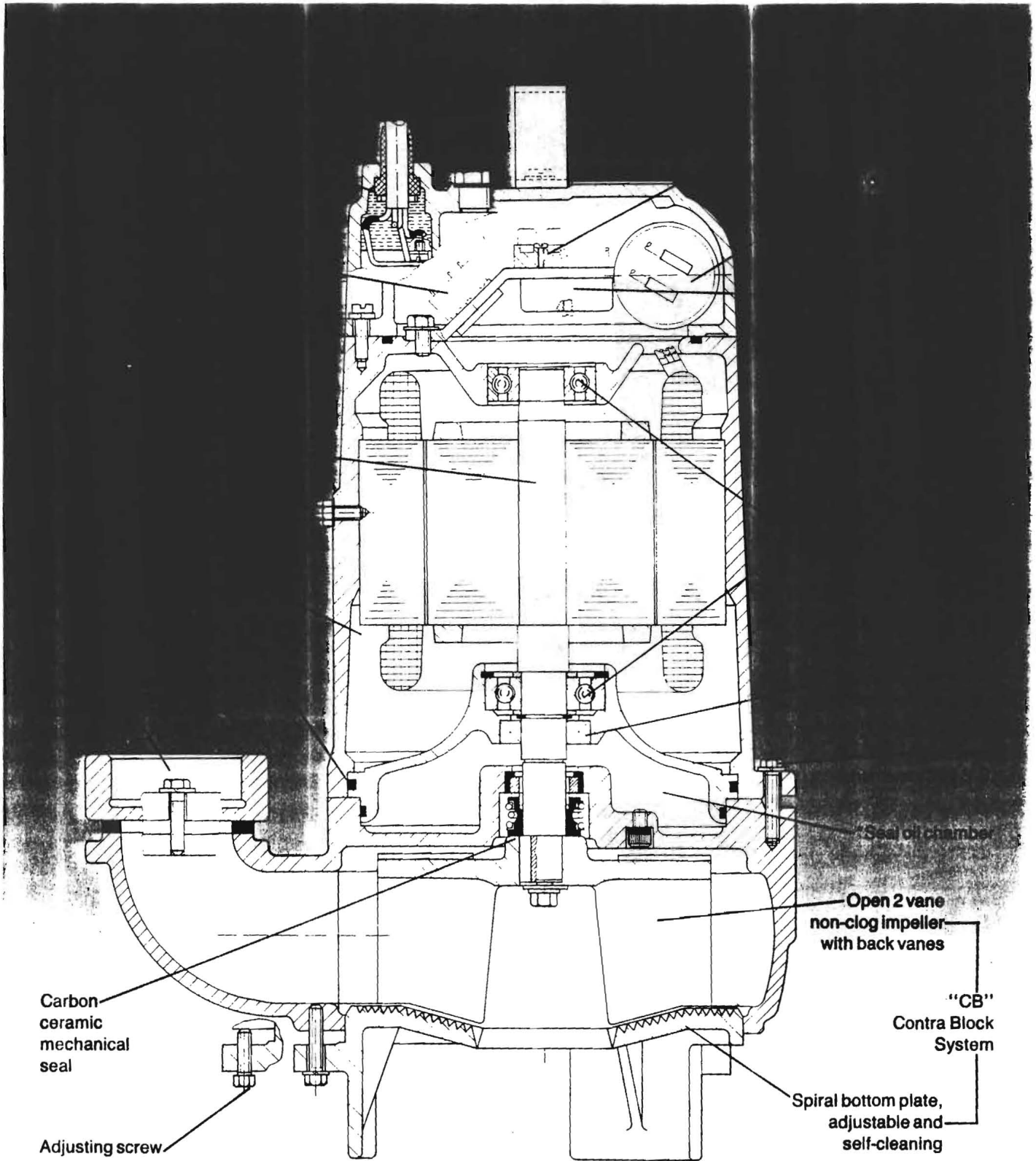
5W	10W	20W		
0.5	1.0	2.0		

SOLID SIZE 3/4 BLADE 2 SPEED 3450 RPM
 VOLTAGE * ; 60 Hz 1 PH



* SEVH-4W: 115V or 230V, 208V.
 SESH-5W: 115/230V, 208V
 SESH-10W and SESH-20W: 230V only

Features




*2.0 HP SESH, 1.5 and 2.0 HP SJS, and all SJE models.

Note: SEVH and SJV Vortex models not shown.

Specifications

		Rated HP	Speed RPM	Solids Size Inches	Operating Voltage	Hertz	Phase	Discharge Connection Inches	Weight with Cables Lbs.	Cable Length Ft.
effluent pumps <i>(3/4" solids)</i>	SEVH-4W	1/10	3450	3/4	115 or 230, 208	60	1	2	35	15
	SESH-5W	1/2	3450	3/4	115/230, 208	60	1	2 or 3	61	15
	SESH-10W	1	3450	3/4	208, 230	60	1	2 or 3	66	15
	SESH-10D	1	3450	3/4	208, 230/460	60	3	2 or 3	54	15
	SESH-20W	2	3450	3/4	208, 230	60	1	2 or 3	75	15
	SESH-20D	2	3450	3/4	208, 230/460	60	3	2 or 3	73	15
standard sewage ejectors <i>(2" solids)</i>	SJV-4W	1/10	1750	2	115 or 230, 208	60	1	2	40	15
	SJS-5W	1/2	1750	2	115/230, 208	60	1	2 or 3	66	15
	SJS-5D	1/2	1750	2	208, 230/460	60	3	2 or 3	61	15
	SJS-10W	1	1750	2	208, 230	60	1	2 or 3	78	15
	SJS-10D	1	1750	2	208, 230/460	60	3	2 or 3	68	15
	SJS-15W	1 1/2	1750	2	208, 230	60	1	2 or 3	87	15
	SJS-20W	2	1750	2	230	60	1	2 or 3	90	15
	SJS-20D	2	1750	2	208, 230/460	60	3	2 or 3	83	15
engineered sewage ejectors <i>(2 1/2" solids)</i>	SJE-10W	1	1750	2 1/2	208, 230	60	1	3	83	15
	SJE-10D	1	1750	2 1/2	208, 230/460	60	3	3	76	15
	SJE-15W	1 1/2	1750	2 1/2	208, 230	60	1	3	88	15
	SJE-20W	2	1750	2 1/2	230	60	1	3	92	15
	SJE-20D	2	1750	2 1/2	208, 230/460	60	3	3	85	15
	SJE-30D	3	1750	2 1/2	208, 230/460	60	3	3	92	15

Materials of construction

Motor Housing • Cast Iron	
Shaft • 420SS	
*Upper Seal • Lip	
Lower Seal • Carbon and Ceramic	
Bearings • Heavy Duty Ball	
Impeller • Cast Iron	
Bottom Plate • Cast Iron	
Volute • Cast Iron	
Hardware • 304SS	

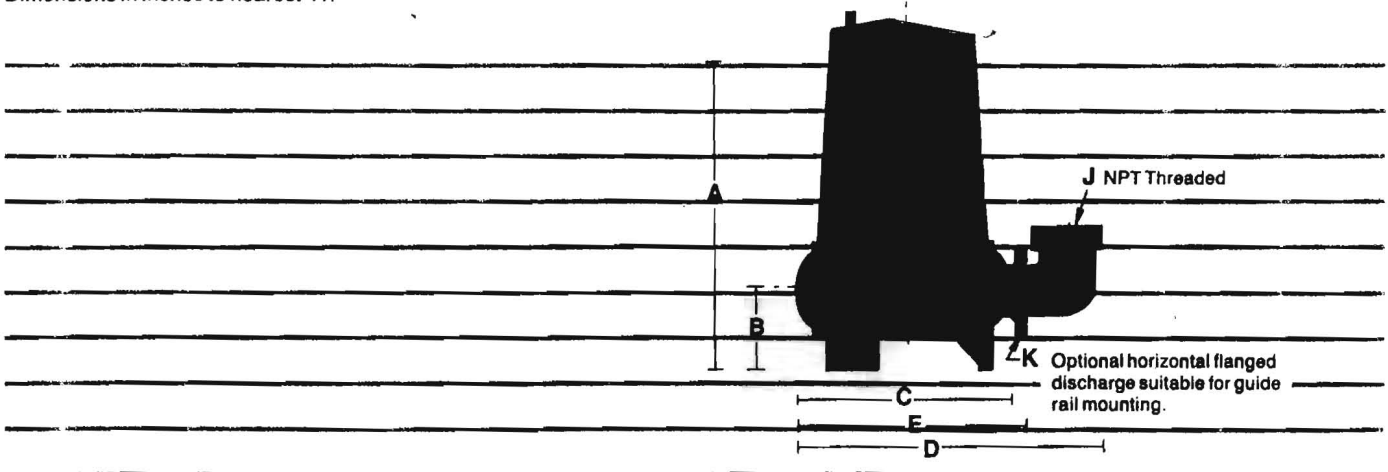
* 2.0 HP SESH, 1.5 and 2.0 HP SJS, and all SJE models.

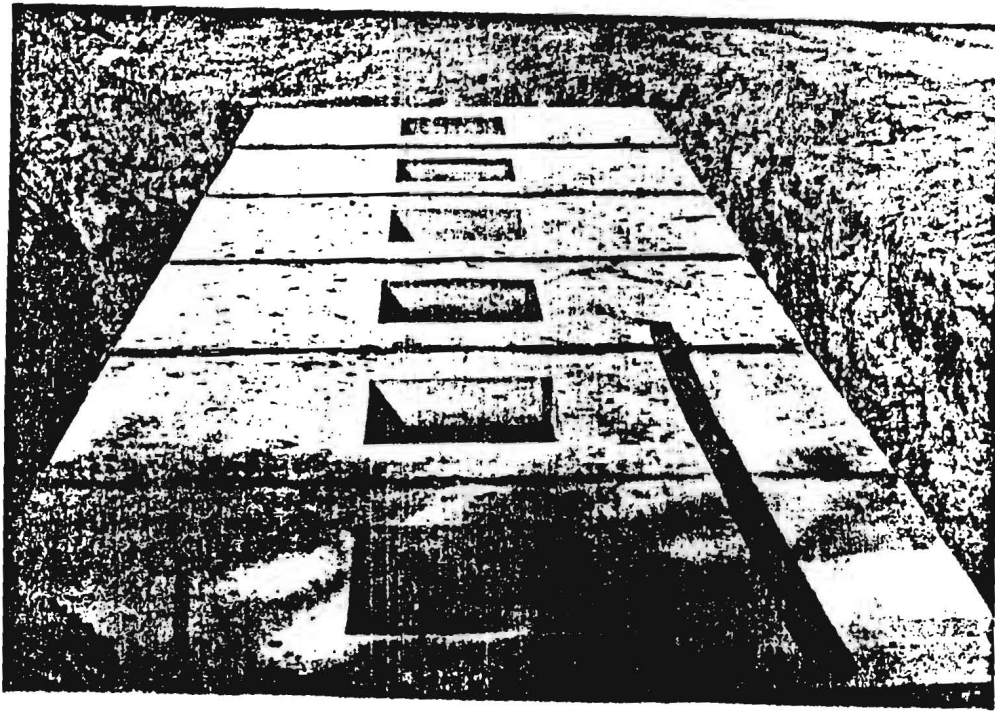
Dimensions

ABS

		A	B	C	D	E	J	K
effluent pumps	SEVH-4W	11	2¼	7¾	9	9¼	1½	—
	SESH-5W	14½	2¼	8	11	9¼	2 or 3	1¼
	SESH-10W	13¾	2¼	8	11	9¼	2 or 3	1¼
	SESH-10D	12	2¼	8	11	9¼	2 or 3	1¼
	SESH-20W	15¾	2¼	8	11	9¼	2 or 3	1¼
	SESH-20D	14½	2¼	8	11	9¼	2 or 3	1¼
standard sewage ejectors	SJV-4W	14	2¾	8¼	10	10½	2	—
	SJS-5W	17	3¾	9	12	10½	2 or 3	2
	SJS-5D	14½	3¾	9	12	10½	2 or 3	2
	SJS-10W	16¼	3¾	9	12	10½	2 or 3	2
	SJS-10D	15	3¾	9	12	10½	2 or 3	2
	SJS-15W	18½	3¾	9	12	10½	2 or 3	2
	SJS-20W	19¼	3¾	9	12	10½	2 or 3	2
	SJS-20D	17¼	3¾	9	12	10½	2 or 3	2
engineered sewage ejectors	SJE-10W	16¼	4¾	9¼	15½	10½	3	3
	SJE-10D	16	4¾	9¼	15½	10½	3	3
	SJE-15W	19¼	4¾	9¼	15½	10½	3	3
	SJE-20W	20	4¾	9¼	15½	10½	3	3
	SJE-20D	18¼	4¾	9¼	15½	10½	3	3
	SJE-30D	18¼	4¾	9¼	15½	10½	3	3

Dimensions in inches to nearest ¼"





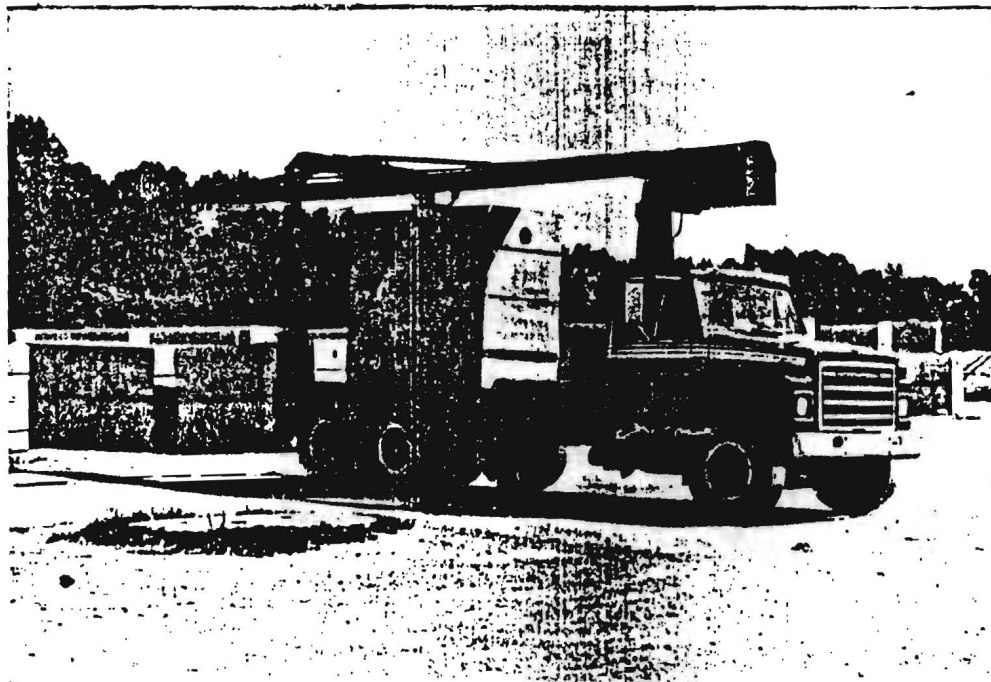
Superior Tank, Inc.

(301)
Local: 274-3772
884-3222

P. O. Box 10, Bryantown, MD 20617

D.C.: 870-3904
535-0040

MADE IN AMERICA

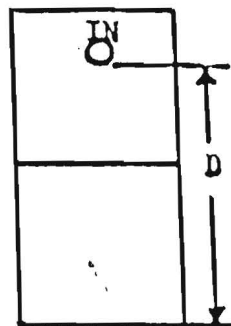
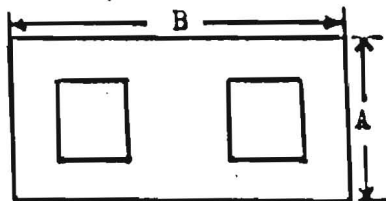
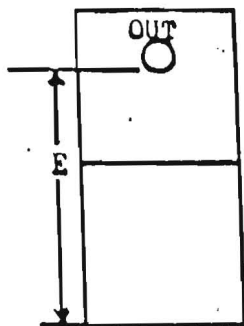


Superior Tank, Inc.

P. O. Box 10, Bryantown, Maryland 20617

Phones:
274-3772 (Local)
870-3904 (D.C.)

884-3222
635-0040

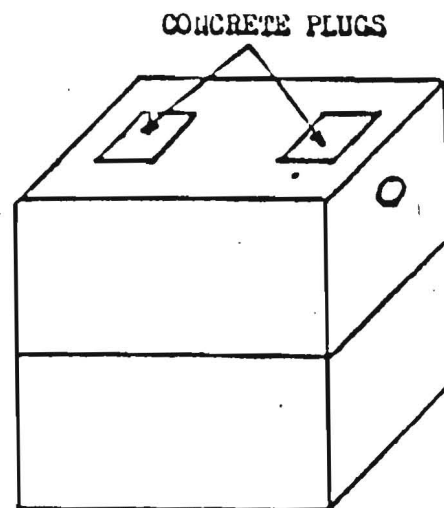
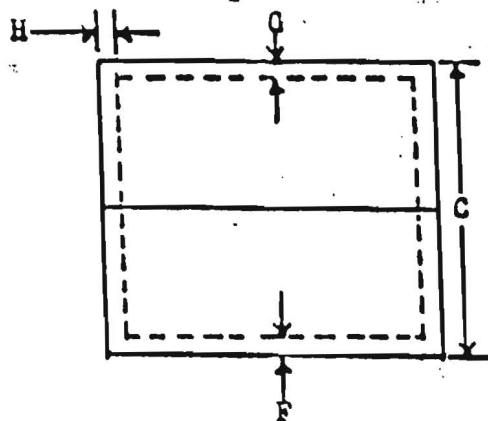


Manufacturers of:
750-2,000 GALLON
CONCRETE
SEPTIC TANKS

DRYWELL
TOPS

DISTRIBUTION
BOXES

OIL
INTERCEPTORS &
GREASE TRAPS



Septic Tank Capacity	Dimensions							
	A	B	C	D	E	F	G	H
750 gallons	48"	96"	69"	54"	52"	4"	5"	3"
1000 gallons	48"	96"	81"	67"	65"	4"	5"	3"
1250 gallons	61"	126"	67"	52"	50"	4"	5"	3½"
1500 gallons	61"	126"	75"	61"	59"	4"	5"	3½"
1800 gallons	61"	126"	86"	73"	71"	4"	5"	3½"
2000 gallons	61"	126"	93"	79"	77"	4"	5"	3½"

Our septic tanks are all pre-cast (six bag mix) concrete and they are reinforced with 6x6 #10 gauge wire mesh. Additional reinforcement can be added upon request for special situations. We guarantee our tanks against breakage due to defective materials, manufacturing or handling on our part when they are installed according to state and county regulations. Our septic tanks meet state and county regulations.

Plant Located on Route 488, Bryantown, Maryland

Howard County Health Department

Bureau of Environmental Health, Ellicott City, Md. 313-2640

SEWAGE DISPOSAL PERMIT NO. A- 49877A P- 50759I

PERMITTEE Jack Fyrck, Syster Sewer

LOCATION Willow Wood Farm Parcel - 1454 Manistowille Road
(Field W/Sept)

Do Not Cover Work Until Health Department Approval Appears On This Card

NOTICE

STOP ALL CONSTRUCTION ON SEWAGE DISPOSAL SYSTEM AND CONTACT HEALTH DEPARTMENT BEFORE CONTINUING

WORK IS SATISFACTORY,
CONTINUE

Inspector _____

Date _____

FINAL INSPECTION MADE,
COVER ALL WORK

Inspector _____

Date _____

Inspector _____

Date _____

POST THIS CARD WHERE IT CAN BE SEEN FROM ROAD

TSA GROUP INC.
8480 Baltimore National Pike
Suite 418
Ellicott city, Maryland 21043

JOB WILLOW WOOD FARM
SHEET NO. _____ OF _____
CALCULATED BY MLV DATE 1-16-95
CHECKED BY Cam DATE SEE REVISION
SCALE _____ OF 2/9/95

SEPTIC SEWER DESIGN

TOTAL DYNAMIC HEAD

1. FORCE MAIN LENGTH = 780' ±

← SEE REVISED COMPS

LOSSES: (1 1/2" PIPE)

2. 90° ELBOW = 4.1' EA. * 3 = 12.3' *

3. SWING CHECK VALVE = 10.4' *

4. GATE VALVE = 0.86' *

803.56' TOTAL EQUIV. LENGTH FOR HAZEN-

WILLIAMS C' = 100

1. CONVERT TO C' = 140 (PVC)

THE FRICTION LOSS COEFF. FOR C = 100 @ 100' = 3.00

$$\frac{803.56'}{100'} = 8.0356 \times 3.00 = 24.1068' \text{ HEAD}$$

CONVERSION FOR C' = 140 ⇒ 0.54 × (24.1068') = 13.02'

INV. OUT PUMPING TANK = 469' ±

INV. IN DISTRIB. BOX = 523' ±

DIFF. = 54' ± STATIC HEAD

∴ TOTAL DYNAMIC HEAD = 13.02' + 54' = 67.02'

READ PERFORMANCE CURVE : 67 FT. OF HEAD YIELDS 15 gpm (ATTACHED)

* REFERENCE : CAMERON'S HYDRAULICS : 1962

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JOB WILLOW WOOD FARM

SHEET NO. _____ OF _____

CALCULATED BY MLV DATE 1-16-95

CHECKED BY OPM DATE _____

SCALE _____

PUMPING TANK CAPACITY

- MAXIMUM DAILY VOLUME = 4000 gpd INTO PUMPING TANK

$gpm = 4000 \text{ gpd} / (24 \text{ HRS.} * 60 \text{ MIN.}) = 2.78$, SAY 3 gpm

- THE ABS PUMP WILL PUMP 15 gpm AT NORMAL OPERATING LEVEL WITH 67 FT. OF HEAD

- \therefore PUMP OUTFLOW > GRAVITY INFLOW

- SIZE OF 1000 GAL. TANK = 96" L x 48" W x 65" H (INV. / OUT)

- WALL THICKNESS 8" SIDES 3" SIDES 4" BOT.

$88" \text{ L} \times 40" \text{ W} \times 61" \text{ H (INV. / OUT)}$

ACTUAL VOLUME TO INV. OUT = $214720 \text{ in}^3 \div 231 \text{ GAL/in}^3 = 929.52 \text{ GAL}$

PUMP ACTIVATION @ 2' EFFLUENCE LEVEL

PUMPED VOLUME = $88" \times 40" \times 24" = 84480 \text{ in}^3 = 366 \text{ GAL}$

$\frac{366 \text{ GAL.}}{15 \text{ gpm}} = 24.4 \text{ MIN.}$ OUTFLOW < $\frac{366 \text{ GAL}}{3 \text{ gpm}} = 122 \text{ MIN. INFLOW}$

\therefore PUMP \neq TANK \checkmark

TSA GROUP INC.

8480 Baltimore National Pike
Suite 418
Ellicott city, Maryland 21043

JOB WILLOW/ WOOD FARM

SHEET NO. _____ OF _____

CALCULATED BY MLV DATE 1-16-95

CHECKED BY CAM DATE _____

SCALE _____

MINIMUM SEPTIC TANK CAPACITY

Flows of 1500 gpd or greater:

$$V = 1125 \text{ GALLONS} + 0.75 Q$$

$$V = 1125 \text{ GALLONS} + 0.75 (4000 \text{ GALLONS})$$

$$V = 1125 \text{ GALLONS} + 3000 \text{ GALLONS}$$

$$V = 4125 \text{ GALLONS}$$

WILLOW/ WOOD FARM Volume: = 4000 GALLONS ∴ ✓

REFERENCE : COMAR 26.04.02.05

9020 Mendenhall Court
Suite J
Columbia, Maryland 21045



D.C. (301) 621-8899
BALT. (410) 995-6971
(FAX) (410) 381-5760

AMES, Inc.
Manufacturers' Representative

MUNICIPAL AND INDUSTRIAL LINE CARD

WATER AND WASTEWATER TREATMENT EQUIPMENT

Schreiber Corporation	Head Works, Nutrient Removal and Clarification
B. T. G.	Meters: Turbidity, Suspended Solids & Solids Level Detectors
Chemco	Lime Storage Towers, Feeders and Mixers
Envirovac	Vacuum Sewage Collection for municipal and marinas
Hydro Instruments	Gas Chlorination Feeders, Detectors and Scales
A Z Tech	Sewage and Sludge Grinders, Channel and Pipe Lines
Klein America	Sludge Dewatering Belt Filter Presses
Refinite	Pressure Filters and Chemical Feeders
A.K. Industries	Fiberglass Pump Basins and Septic Tanks
Filtomat	Self-cleaning in-line filters, 2"-16", protects; spray nozzles, pump seals, Instrumentation, Heat Exchangers I.E. and R.O. units
Aerators, Inc.	Floating Aerators, Fiberglass and Stainless Steel

PUMPS

ABS Pumps	Submersible Sewage, Propeller Pumps, and Submersible Mixers
Bornemann Pumps	Progressive Cavity Pumps
Dakota Pumps	Packaged Pump Stations and Water Booster Stations
Fairbanks Morse	Sewage, Split-Case, Vertical Turbine and Propeller Pumps
Liqui-Trol	Packaged Booster and Irrigation Pumps
Warren-Rupp	Air or Motor Operated Double Diaphragm Pumps
Weil Pump Company	Pneumatic Ejectors, Sump and Condensate, Sewage Ejectors

CONTROL SYSTEMS

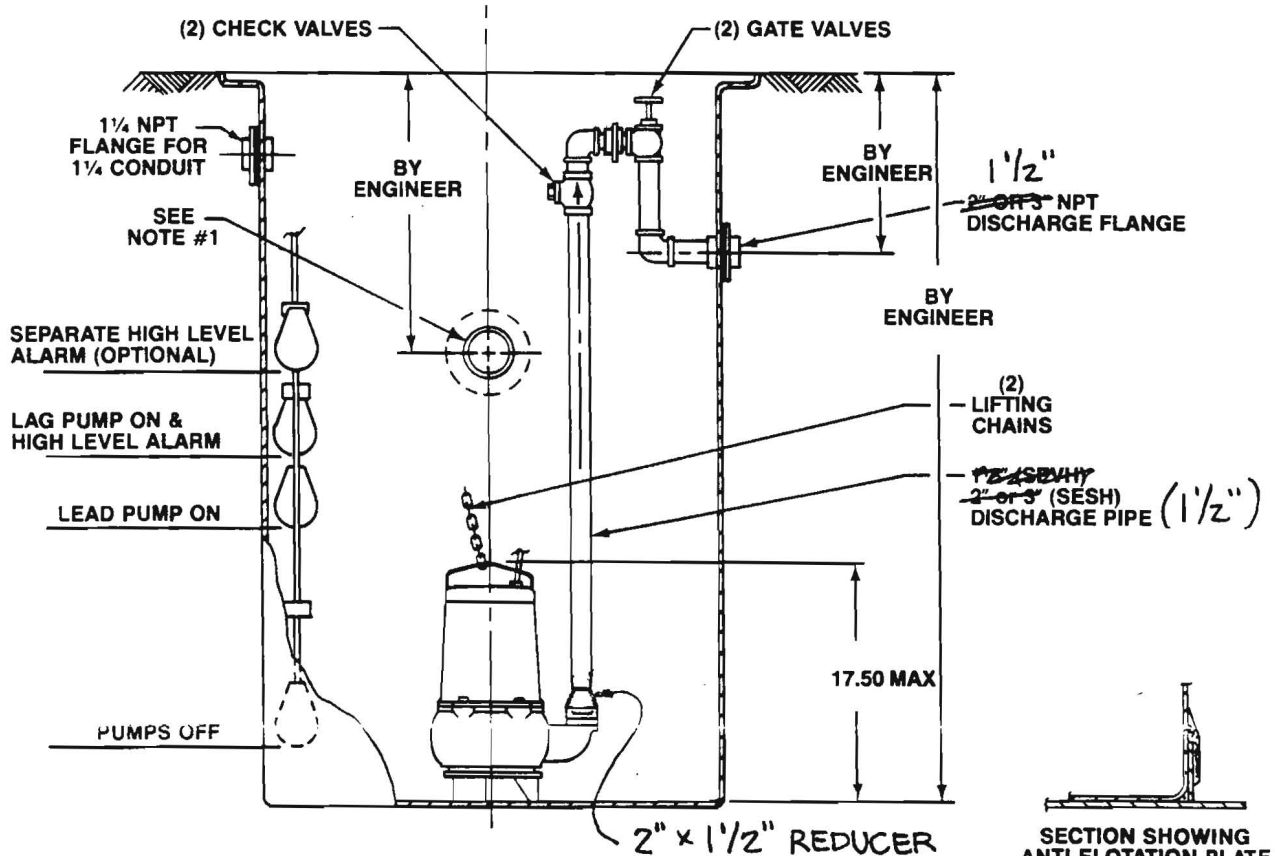
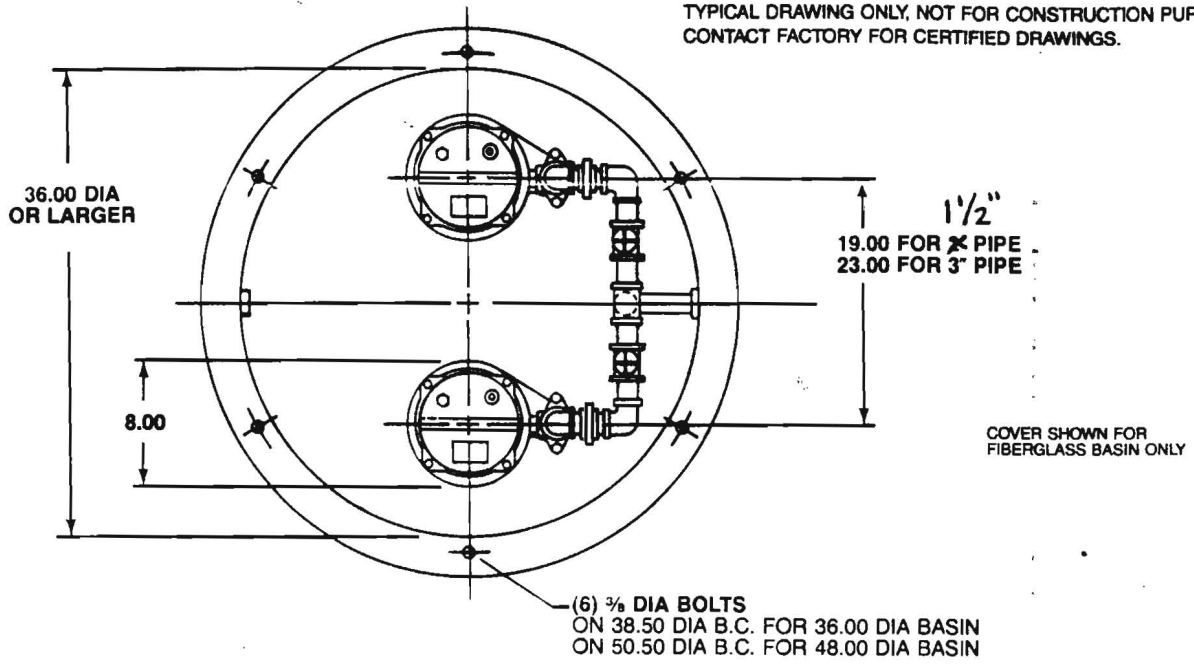
Ames/Messco Controls	Pump Station, Liquid Level and Custom Controls
----------------------	--

TANKS

<u>Fiberglass</u>	Chemical Storage, Bladder, Vertical, Horizontal
<u>Fibersteel</u>	Steel Tanks with fiberglass coating for chemical storage
<u>Steel Pressure</u>	Hydropneumatic, Bladder, Diaphragm

MODEL: Scavenger SEVH, SESH

TYPICAL DRAWING ONLY, NOT FOR CONSTRUCTION PURPOSES.
CONTACT FACTORY FOR CERTIFIED DRAWINGS.



NOTE:

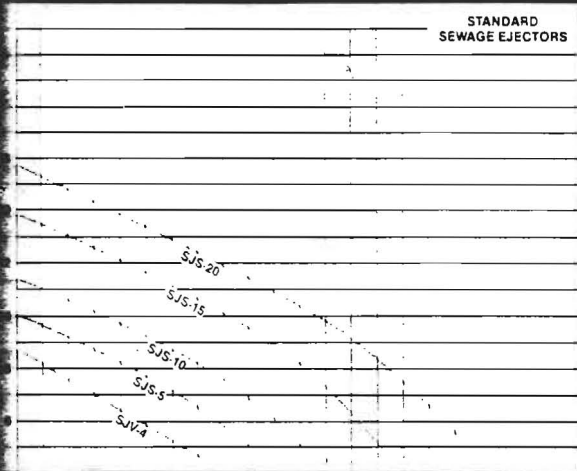
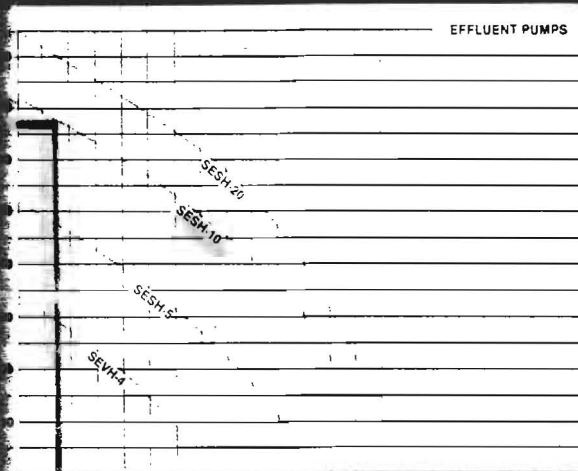
1. Inlet Hub — engineer to size, and contractor to locate and install in field.
2. Covers available in various styles, i.e., blank steel or with vent flange.
3. Pilot floats shown; piggyback type float also available for certain models.
4. Due to space limitations in smaller basins, pump location will not be centered in basin.
5. Dimensions in inches.

ABS
A company in the Cardo Group

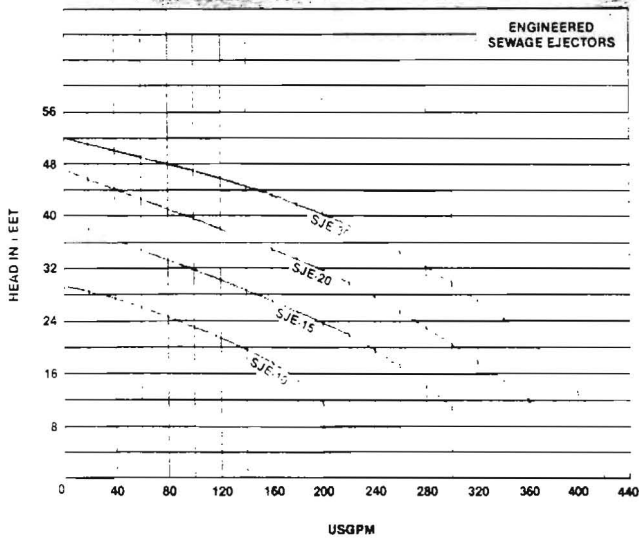
1-1-86
ABS Pumps Inc.
140 Pond View Drive
Meriden, CT 06450-7156

DUPLEX SIDE DISCHARGE
IN FIBERGLASS BASIN
OR CONCRETE SUMP

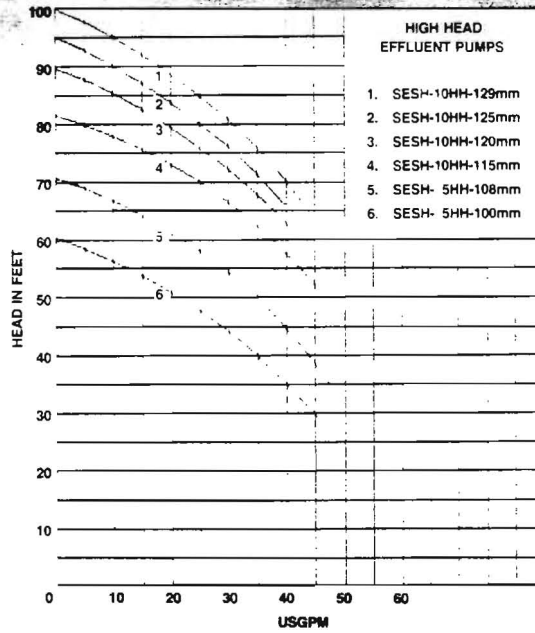
Performance curves



engineered sewage ejectors (2% solids)



high head effluent (% solids)



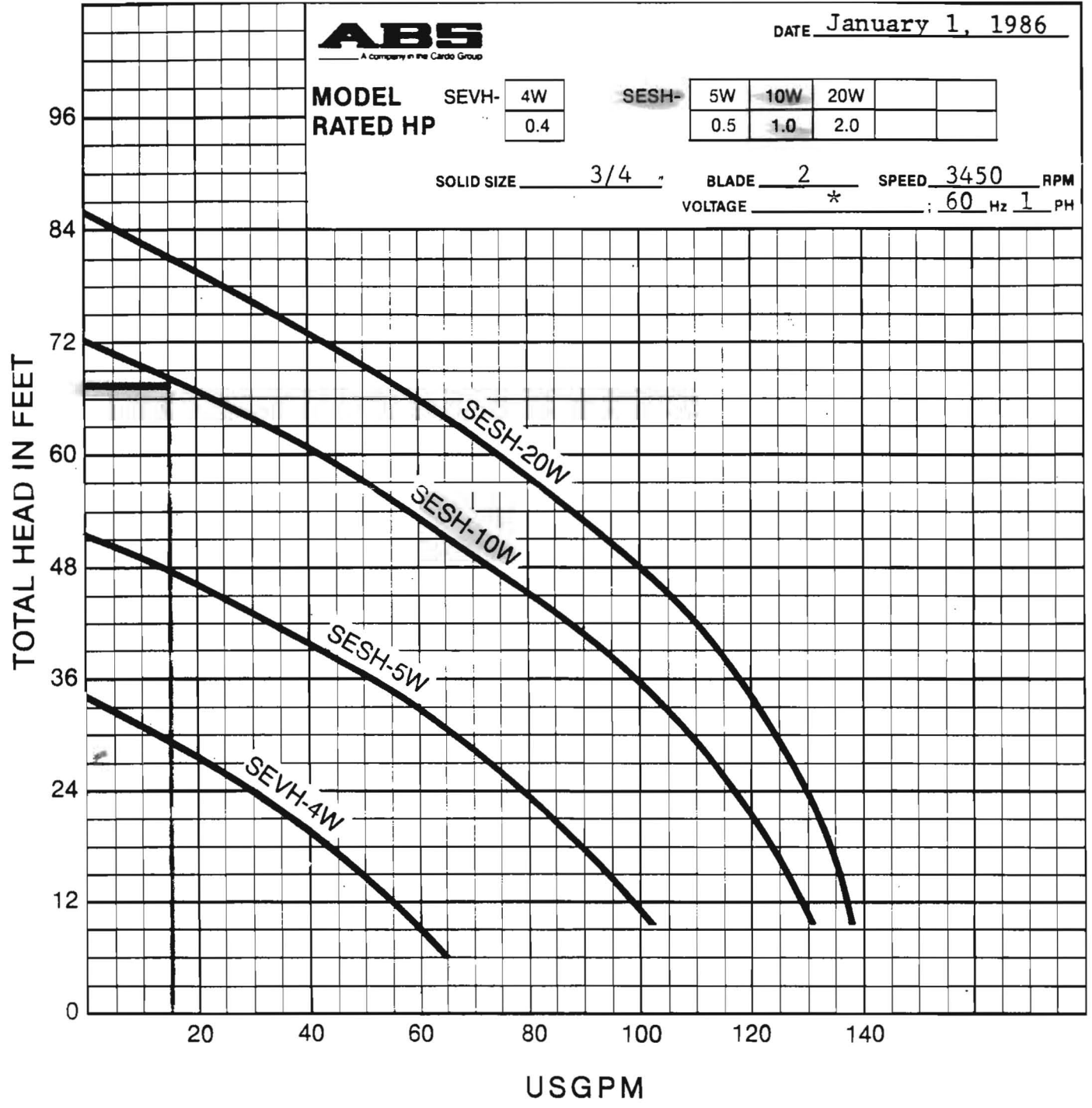
DATE January 1, 1986



MODEL SEVH- 4W
 RATED HP 0.4

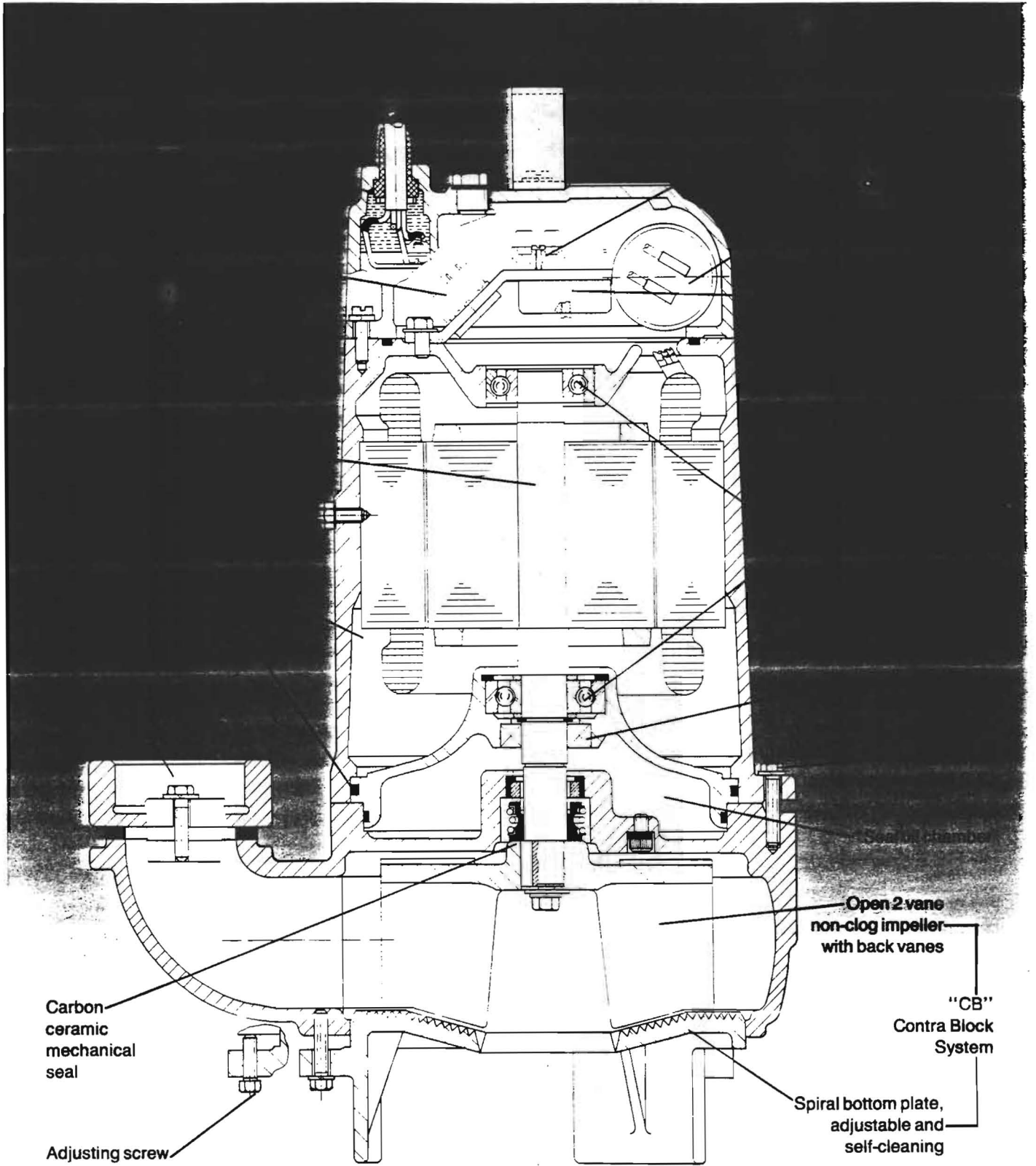
SESH-	5W	10W	20W		
	0.5	1.0	2.0		

SOLID SIZE 3/4 BLADE 2 SPEED 3450 RPM
 VOLTAGE * ; 60 Hz 1 PH



* SEVH-4W: 115V or 230V, 208V
 SESH-5W: 115/230V, 208V
 SESH-10W and SESH-20W: 230V only

Features



*2.0 HP SESH, 1.5 and 2.0 HP SJS, and all SJE models.

Note: SEVH and SJV Vortex models not shown.

Specifications

		Rated HP	Speed RPM	Solids Size Inches	Operating Voltage	Hertz	Phase	Discharge Connection Inches	Weight with Cables Lbs.	Cable Length Ft.
effluent pumps <i>(3/4" solids)</i>	SEVH-4W	4/10	3450	3/4	115 or 230, 208	60	1	2	35	15
	SESH-5W	1/2	3450	3/4	115/230, 208	60	1	2 or 3	61	15
	SESH-10W	1	3450	3/4	208, 230	60	1	2 or 3	66	15
	SESH-10D	1	3450	3/4	208, 230/460	60	3	2 or 3	54	15
	SESH-20W	2	3450	3/4	208, 230	60	1	2 or 3	75	15
	SESH-20D	2	3450	3/4	208, 230/460	60	3	2 or 3	73	15
standard sewage ejectors <i>(2" solids)</i>	SJV-4W	4/10	1750	2	115 or 230, 208	60	1	2	40	15
	SJS-5W	1/2	1750	2	115/230, 208	60	1	2 or 3	66	15
	SJS-5D	1/2	1750	2	208, 230/460	60	3	2 or 3	61	15
	SJS-10W	1	1750	2	208, 230	60	1	2 or 3	78	15
	SJS-10D	1	1750	2	208, 230/460	60	3	2 or 3	68	15
	SJS-15W	1 1/2	1750	2	208, 230	60	1	2 or 3	87	15
	SJS-20W	2	1750	2	230	60	1	2 or 3	90	15
	SJS-20D	2	1750	2	208, 230/460	60	3	2 or 3	83	15
	engineered sewage ejectors <i>(2 1/2" solids)</i>	SJE-10W	1	1750	2 1/2	208, 230	60	1	3	83
SJE-10D		1	1750	2 1/2	208, 230/460	60	3	3	76	15
SJE-15W		1 1/2	1750	2 1/2	208, 230	60	1	3	88	15
SJE-20W		2	1750	2 1/2	230	60	1	3	92	15
SJE-20D		2	1750	2 1/2	208, 230/460	60	3	3	85	15
SJE-30D		3	1750	2 1/2	208, 230/460	60	3	3	92	15

Materials of construction

Motor Housing • Cast Iron
Shaft • 420SS
*Upper Seal • Lip
Lower Seal • Carbon and Ceramic
Bearings • Heavy Duty Ball
Impeller • Cast Iron
Bottom Plate • Cast Iron
Volute • Cast Iron
Hardware • 304SS



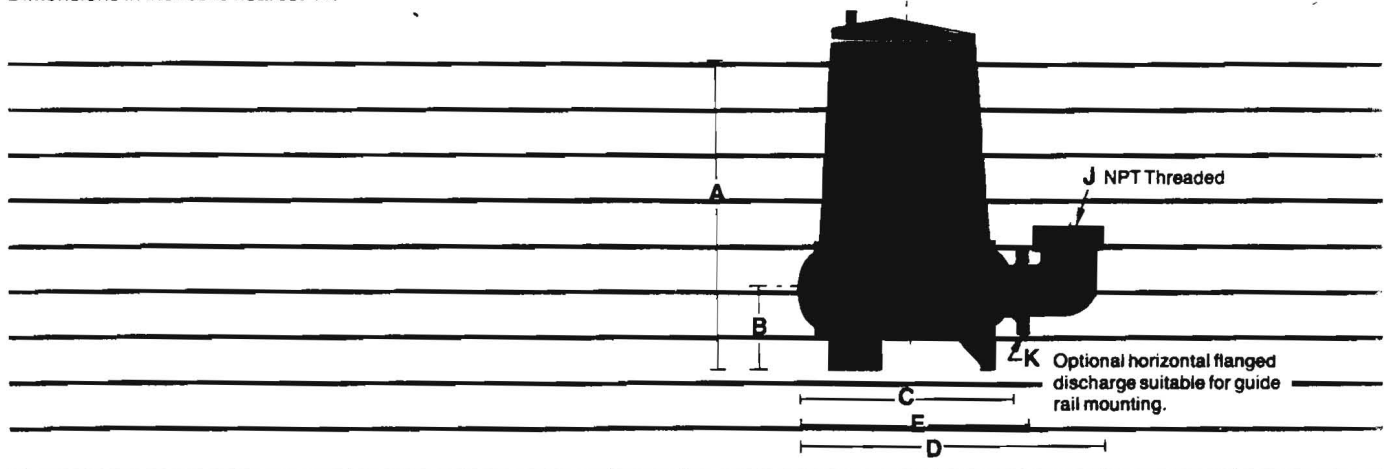
* 2.0 HP SESH, 1.5 and 2.0 HP SJS, and all SJE models.

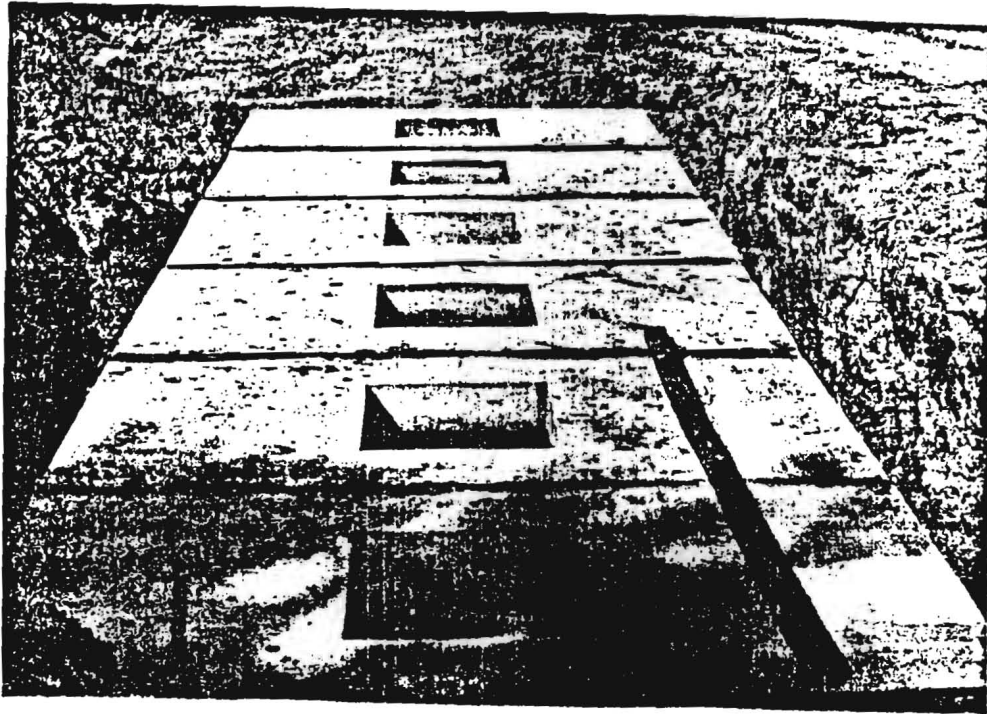
Dimensions

ABS

		A	B	C	D	E	J	K
effluent pumps	SEVH-4W	11	2¼	7¾	9	9¼	1½	—
	SESH-5W	14½	2¼	8	11	9¼	2 or 3	1¼
	SESH-10W	13¾	2¼	8	11	9¼	2 or 3	1¼
	SESH-10D	12	2¼	8	11	9¼	2 or 3	1¼
	SESH-20W	15¾	2¼	8	11	9¼	2 or 3	1¼
	SESH-20D	14½	2¼	8	11	9¼	2 or 3	1¼
standard sewage ejectors	SJV-4W	14	2¾	8¼	10	10½	2	—
	SJS-5W	17	3¾	9	12	10½	2 or 3	2
	SJS-5D	14½	3¾	9	12	10½	2 or 3	2
	SJS-10W	16¾	3¾	9	12	10½	2 or 3	2
	SJS-10D	15	3¾	9	12	10½	2 or 3	2
	SJS-15W	18½	3¾	9	12	10½	2 or 3	2
	SJS-20W	19¼	3¾	9	12	10½	2 or 3	2
	SJS-20D	17¼	3¾	9	12	10½	2 or 3	2
engineered sewage ejectors	SJE-10W	16¼	4¾	9¼	15½	10½	3	3
	SJE-10D	16	4¾	9¼	15½	10½	3	3
	SJE-15W	19¼	4¾	9¼	15½	10½	3	3
	SJE-20W	20	4¾	9¼	15½	10½	3	3
	SJE-20D	18¼	4¾	9¼	15½	10½	3	3
	SJE-30D	18¼	4¾	9¼	15½	10½	3	3

Dimensions in inches to nearest ¼"





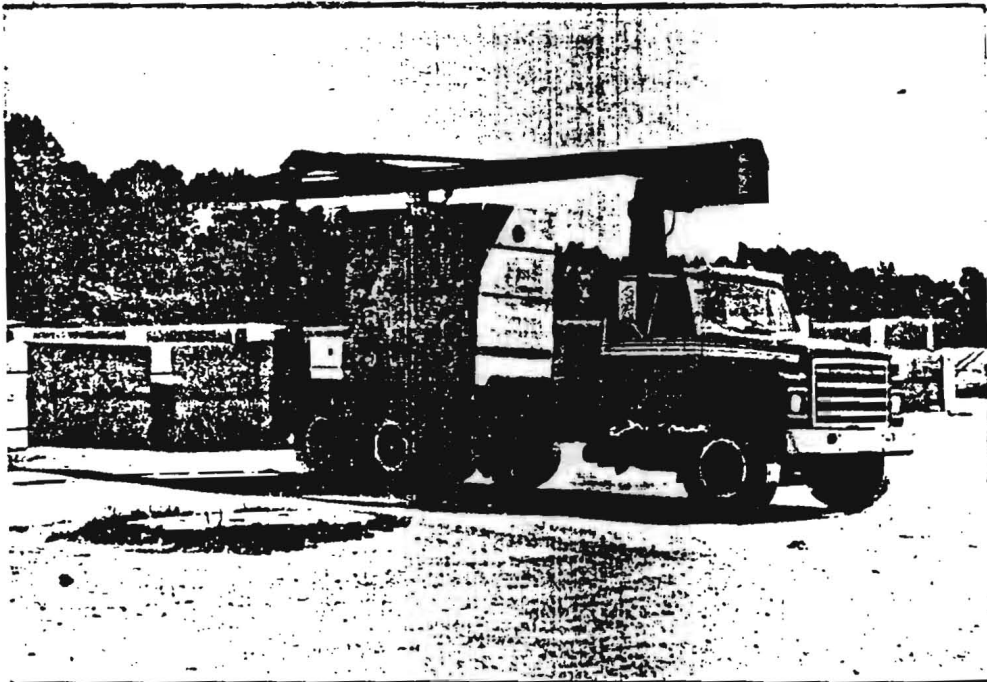
Superior Tank, Inc.

(301)
Local: 274-3772
884-3222

P. O. Box 10, Bryantown, MD 20617

D.C.: 870-3904
535-0040

MADE IN ARKANSAS



TSA GROUP, INC.

planning • architecture • engineering • surveying

8480 Baltimore National Pike • Suite 418 • Ellicott City, Maryland 21043 • (410) 465-6105

February 2, 1995

GLEN

Mr. Mark Rifken
Bureau of Environmental Health
3425-H Ellicott Mills Drive
Ellicott City, Maryland 21043

Re: Willow Wood County Club for Pets
(A.K.A. Willow Wood Farm)
Septic Design

Dear Mr. Rifken,

As previously discussed and as stated on the approved percolation plan, note #6, enclosed please find a plan and computations for the design of the septic system at the above referenced site. We want to make sure that the building permit, when applied for, is not held up due to the septic design. Therefore, please review the enclosed plan to ensure that it is satisfactory to the Bureau of Environmental Health.

If you should have any questions or need any additional information please do not hesitate to call me. Meanwhile we will be waiting your response to this important matter.

Sincerely,

Ch. Malagari

Christopher A. Malagari
Project Manager

CAM:dy

CC: Mr. Fred Wolpert - owner
Mr. Matthew Arnold - Architect

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8480 Baltimore National Pike • Suite 418 • Ellicott City, Maryland 21043 • (410) 465-6105

January 16, 1995

Mr. Mark Rifken
Bureau of Environmental Health
3425-H Ellicott Mills Drive
Ellicott City, Maryland 21043

Re: Willow Wood Farm
Restoration of Existing House and Septic/Well Repair

Dear Mr. Rifken,

This letter is to summarize our meeting of, January 13, 1995, regarding the restoration and repair of the existing vacant house and septic system at the above referenced site.

Mr. Frederick Wolpert owner of the subject site wishes to restore the existing vacant house located approximately 1000 feet north of the proposed dog kennel at the above referenced site. As indicated on the approved percolation certification plan for the proposed dog kennel, dated December 21, 1994, the existing well and septic for the vacant house were indicated as being abandoned. It was agreed by the owner, engineer and health department, via Mark Rifkins letter dated December 9, 1994, that this abandonment was to take place prior to approval of the building permit for the barn conversion to a dog kennel.

What the Health Department is calling an existing shack in the December 9, 1994, letter was interpreted by us as being the shack which houses the existing well not the existing vacant house. The owner never intended to abandon the existing vacant house.

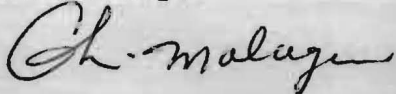
At this time, the owner has decided to restore the existing vacant house and plans to replace the existing septic system and well system. As discussed in our meeting a \$25.00 septic repair fee will be assessed and 4 percolation holes are required to be dug and

Mr. Mark Rifkin
January 16, 1995
Page - 2 -

tested. As agreed, the repair fee and testing can be handled directly between the health department and the septic contractor in the field. Mr. Jack Fyock of Fyock Septic Service Inc. has been contracted by the owner to make these repairs and will be contacting the health department to set up a time to inspect the septic repair and perc testing.

If you should have any questions or need any additional information please do not hesitate to call our office.

Sincerely,



Christopher A. Malagari
Project Manager

CAM:dy

CC: Mr. Fred Wolpert - owner
Mr. Jack Fyock
Craig Williams