# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ON-SITE WASTEWATER SYSTEMS CHECKLIST FOR PROFESSIONALLY DESIGNED SYSTEMS

APPLICATION NO. \_\_\_\_\_\_ COUNTY, TEXAS

The following information must be included with the design package for review by the Texas Natural Resource Conservation Commission. Failure to include or address all of the following items may result in approval delays.

•	
<u>/</u> 1.	Plans and reports must bear a signed and dated seal of the responsible registered engineer or sanitarian. The address and telephone number of this person must also be included in the submittal. (Two originals with seal / signature / date.)
<b>√</b> 2.	A report must be included in the submittal containing the following information:
1	A. Basis of design;
E	Soil analysis and percolation test result;
(	C. System flow diagram and sizing calculation;
[	D. Material specification; and
	Size and model number of approved aerobic system (if used.)
<u>/</u> 3.	Construction drawings must include the following information:
1	A. A scaled, legible site plan with boundary description;
<u> </u>	The location of all buildings (existing or proposed) on the site plan;
	The location of the wastewater treatment units and disposal area;
[	site plan: The site plan must also include topographical countours for slopes greater than 15 percent:
	Easements and bodies of water (lakes, streams, ponds) must also be identified; and
	Installation details such as septic tank configuration, layouts and cross-sections of drainfields and disposal beds, irrigation systems, pump station including piping and controls
	Charles Iboland 2-24-2017 Signature of Designer Date

# SITE EVALUATION FORM WALLER COUNTY, TEXAS

CLIENT: RUPERT	D. SHERIDAN	ADDRES	S <u>24478</u>	DUBLIN		
HEMPSTEAD, TX. 77445						
LEGAL DESCRIPT SUBDIVISION:	「ION: ROLLING HILLS SUB.	SEC				
SURVEYABSTRACT:			TR5	_PROPERT	Υ ID# <u>267</u> 4	40
PROPERTY SIZE:						
EXISTING OR PRO	OPOSED STRUCTURET			ING 2 BEDF	ROOM SING.	FAM.
DWELLING, 1100	SQ.FT. W/ULF FIXTURE	S, 180 G.P.I	<u>).</u>			
		TOPOGRA	PHY			
SLOPE:FLAT(UND	DER 2%)SLIGH1			VEŖE(OVE	र 30%)	
VEGETATION: GRASS/BRUSH	/*LIGHTLY WO	ODED *	HEAVILY	WOODED		
SHE DRAINAGE:	POOR() ADE	EQUATE(*)	GOOD	() C	THER()	
NOTE: IF SLOPE IS SEVERE A TOPO SURVEY WITH HALF FOOT CONTOURS MUST BE PROVIDED WITH THIS FORM ON THE DESIGN. IF SITE DRAINAGE IS POOR OR SLOPE IS FLAT THEN A DETAILED DRAINAGE PLAN MUST BE PROVIDED ON THE DESIGN IF A SUBSURFACE SYSTEM IS						
PROPOSED.					1 15	
		FLOOD HAZ	7ARD		والمركز المنطاق	manage
PROPERTY IS LO	CATED:				MASSINTE	. C. C.
	IN 100 YEAR FLOOD PL			()		
	SIDE 100 YEAR FLOOD R FLOOD PLAIN	PLAIN		(*)	E RS 2990	/ 05/00/10438
	R FLOOD PLAN AND FLO	OODWAY		()	13. 1. P.	,
	,			•		
WATER SUPPLY: PUBLIC (*)		()	PRIVATE	()	1991	inmin (V
NAME OF WATER	SUPPLIER:					$\mathcal{N}_{r}$
	ON-SITE COMPLETE T N/A YEAR DRILLED			NI/A		
DEPTH OF WELL:			DINIELEN_	19/75	<del></del>	
	DDEOGNIT					<b>-</b>
SEALING BLOCK! WELL HOUSE PRO				YES ( YES (		O() O()
	VAILABLE (ATTACHED	F AVAILABL	.E)	YES (		0()
NEIGHBORING WELL WITHIN 100 FEET OF PROPERTY LINE. YES ( ) NO (*)						
	WELL(S) EXIST, THEY	· · · · · · · · · · · · · · · · · · ·		YES		

# **SOIL EVALUATION**

PROFILE DEPTH	TEXTURE (COLOR)	GRAVEL ANALYSIS ( CLASS II & III)	RESTRICTIVE HORIZON	GROUND WATER	COMMENTS
0	Brown/	Less than 5%	No	Yea	
	1 1	1		12-18"	
	Tan Loam Sand				
48"					
60"					

PROFILE DEPTH	TEXTURE (COLOR)	GRAVEL ANALYSIS (CLASS II & III)	RESTRICTIVE HORIZON	GROUND WATER	COMMENTS
		Same as above			
					/
					1 And
				Mass	05 7 C
				William .	0000 / 05 000/4/20
		,		25.5	13:61:158 ( B)
				13.	CONTROL TO
					124
60"					

# SOIL CLASSIFICATION:

CLASS lb:	Sandy, Loamy Sand
CLASS II:	Sandy Loam, Loam
CLASS III:	Sandy Clay Loam, Sandy Clay, Clay Loam, Silty Clay Loam, Silt Loam, Silt
CLACC IN.	Cile. Clay. Clay.

CLASS IV: Silty Clay, Clay

#### EFFLUENT LOADING DETERMINATION

SOIL TEXTURE	SOIL CLASS	LONG TERM LOADING RATE
COARSE SAND/GRAVEL	1a	> .50 (NOT SUITABLE FOR STANDARD SYSTEMS)
SAND/LOAMY SAND	1b	38
SANDY LOAM/LOAM	11	.25
SANDY CLAY LOAM/ SANDY CLAY/CLAY LOAM/ SILTY CLAY LOAM/SILTY LOAM	III	.20
CLAY/SILTY CLAY	IV	0.1 (NOT SUITABLE FOR STANDARD SYSTEMS)

NOTE: SOIL MUST BE EVALUATED TO A MINIMUM OF TWO (2) FEET BELOW APPLICATION AREA INDICATION OF SEASONAL WATER TABLE: YES (\*) NO () DEPTH\_\_12\_\_18 IN.\_\_\_\_

NOTE: SUBSURFACE HORIZONS WITH COLORS OF RED, YELLOW AND BROWN GENERALLY INDICATE GOOD SOIL AERATION AND DRAINAGE THROUGHOUT THE YEAR. SUBSURFACE HORIZONS THAT ARE IN COLORS OF GRAY, OLIVE OR BLACKISH COLORS INDICATE POOR AERATION AND POOR SOIL DRAINAGE. ANY SOIL PROFILE THAT HAS THE GRAYISH COLORS INDICATIVE OF HIGHWATER TABLES OR SOIL MOTTLING WITHIN 36 INCHES OF THE SURFACE OR HAS GROUND WATER VISIBLE IN THE TEST BORE HOLE LESS THAN 48 INCHES BELOW THE GROUND SURFACE SHALL BE DEEMED UNSUITABLE FOR CONVENTIONAL SUBSURFACE DISPOSAL DUE TO INTERNAL DRAINAGE.

IS SOIL SUITABLE FOR A CONVENTIONAL SYSTEM?

YES () NO (\*)
APPLICATION RATE .1

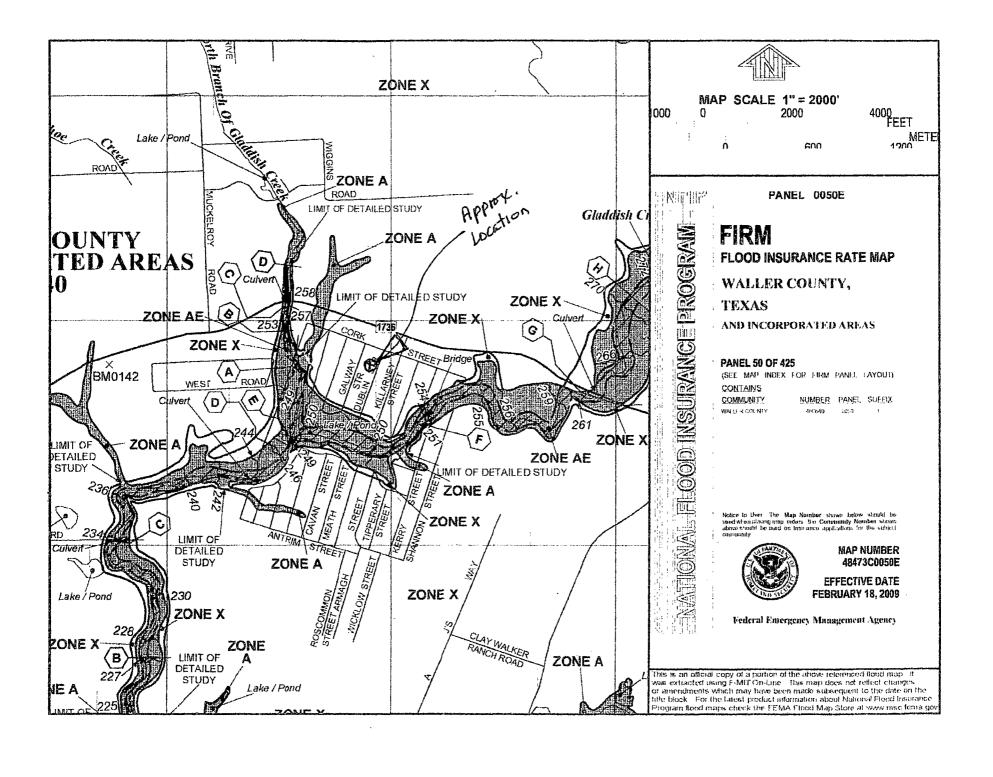
I CERTIFY THESE RESULTS ARE TRUE AND CORRECT FOR THE PROPERTY EVALUATED.

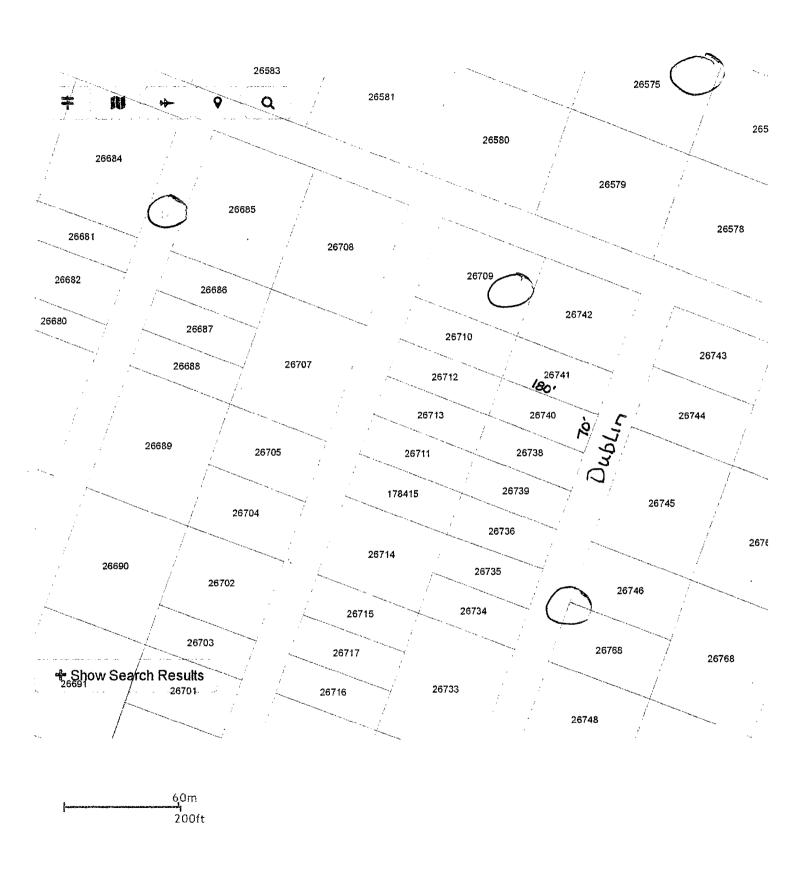
7 05 6010438

2/24/2017

DATE

Marles Genty SIGNATURE





#### NOTES:

- 1. AEROBIC SEWAGE TREATMENT PLANT PRO FLOW 500 G.P.D. AEROBIC SEWAGE TREATMENT PLANT OR EQUAL.
- 2. PUMP PRO FLO 1/2 H.P. SUBMERSIBLE PUMP, MODEL HE8-51, HE12-51 OR HE20-51 OR EQUAL.
- 3. SPRINKLER HEADS HUNTER PROFESSIONAL SERIES ADJUSTABLE GEAR DRIVEN OR RAIN-BIRD AG-5, POP-UP, LOW ANGLE, 40 P.S.I. MAX., OR EQUAL.
- 4. PUMP CONTROLS B.I.O. INC. AEROBIC PUMP CONTROL, MODEL # BIO500C OR EQUAL. TIMER IS REQUIRED ON THIS SYSTEM.
- 5. CALCULATIONS ARE FOR AN EXISTING 2 BEDROOM SING, FAM. DWELLING 1100 SQ.FT. W/ ULF FIXTURES. PROPERTY LOCATION IS 24478 DUBLIN, HEMPSTEAD, TX. 77445.
  - A. TOTAL FLOW RATE 180 G.P.D.
  - B. 180 G.P.D. ÷ .045 = .4000.00 → 4000 SQ.FT. REQUIRED
  - C.  $A = \pi * 25^2 * 2 \text{ HEADS} + \pi * 24.5^2 * 1 \text{ HEAD} \div 2 622 \text{ SQ.FT. OVERLAP}$
  - D. TOTAL AREA PROVIDED 4247 SQ.FT.
- 6. ACCEPTABLE SURFACE APPLICATION AREAS. LAND ACCEPTABLE FOR SURFACE APPLICATION SHALL HAVE FLAT TERRAIN (WITH LESS THAN OR EQUAL TO 15 % SLOPE) AND SHALL BE COVERED WITH GRASSES, EVERGREEN SHRBS, BUSHES, TREES OR LANDSCAPED BEDS CONTAINING MIXED VEGETATION. THERE SHALL BE NOTHING IN THE SURFACE APPLICATION AREA WITHIN TEN FEET OF THE SPRINKLER WHICH WOULD INTERFERE WITH THE UNIFORM APPLICATION OF THE EFFLUENT. SLOPED LAND (WITH GREATER THAN 15%) MAY BE ACCEPTABLE IF IT IS PROPERLY LANDSCAPED AND TERRACED TO MINIMIZE RUNOFF. 7. UNACCEPTABLE SURFACE APLICATION AREAS. LAND THAT IS USED FOR GROWING FOOD, GARDENS, ORCHARDS, OR CROPS THAT MAY BE USED FOR HUMAN CONSUMPTION AS WELL AS UNSEEDED BARE GROUND, SHALL NOT BE USED FOR SURFACE APPLICATION.
- 8. LANDSCAPING PLAN SPRAY IRRIGATION AREAS MUST BE PLANTED WITH GRASSES SUITABLE FOR THE WALLER COUNTY AREA. GRASSES THAT ARE THE BEST FOR THIS AREA. ARE: ST. AUGUSTINE, CENTIPEDE, AND ZOYSIA. A QUICK GROWING TEMPORARY GRASS SUCH AS GULF COAST RYE, MAY BE UTILIZED. UNTIL ONE OF THE PERMANENT GRASSES LISTED ABOVE ARE PLANTED. ANY SPRAY AREAS THAT HAVE NATIVE GRASSES GROWING NATURALLY, DO NOT NEED TO BE MODIFIED, BUT ANY BARE AREAS MUST BE SEEDED OR SODDED WITH ONE OF THE ABOVE.
- 9. NO EXISTING OR PROPOSED ADDITIONAL TREES MAY BE WITHIN 10 FT. OF ANY SPRAY AREA. LOCATION OF SPRAY HEADS MAY BE ADJUSTED TO ACCOMODATE ANY EXISTING TREES.
- 10. ALL ELECTRICAL CONNECTIONS MUST BE 2 FT. MIN. ABOVE FLOOD PLAIN LEVEL (IF APPLICABLE)
- 11. CONTAMINATES SUCH AS HYDROCARBON WASTE, PESTICIDES, OR TRASH SUCH AS PAPER TOWELS, SANITARY NAPKINS, CONDOMS, ET.C SHOULD NOT BE ALLOWED TO ENTER THIS SYSTEM.
- 12. EXISTING SEPTIC TANKS MAY BE RE-USED. THEY MUST BE PUMPED AND CLEANED AND BROUGHT UP TO ALL CONSTRUCTION STANDARDS AS REQUIRED BY THE TCEQ MANDATE OF JAN. 1997. IF TANK(S) ARE NOT RE-USED THEY MUST BE ABANDONED BY THE SAME TCEQ MANDATE.
- 13. SITE DRAINAGE INSTALLER OR PROPERTYOWNER SHALL ADD ADDITIONAL FILL ON DISPOSAL AREA TO PROVIDE POSITIVE STORM WATER RUNOFF AND CONSTRUCT DRAINAGE SWALES TO EXISTING ROADSIDE DRAINAGE AS NECESSARY.
- 14. IT IS THE OWNERS RESPONSIBILITY TO KEEP A MAINTENANCE/SERVICE CONTRACT WITH AN APPROVED AEROBIC SYSTEM MAINTENANCE COMPANY. ONLY APPROVED CHLORINE TABLETS ARE TO BE USED IN THIS SYSTEM. LIQUID CHLORINATORS ARE ACCEPTABLE.

15. WHEN A WATER SUPPLY LINE MUST BE CROSSED BY A SPRAY IRRIGATION LINE, OSSF INSTALLERS WILL LOCATE IRRIGATION LINES AT LEAST 6 INCHES BELOW THE WATER SUPPLY LINE, UTILIZE 150 PSI OR GREATER PRESSURE PIPE AND CENTER AT LEAST AN 18 FT. LONG PIPE ON THE WATER LINE THUS MAKING THE PIPE JOINTS AT LEAST 9 FT. FROM THE WATER LINE. IN INSTANCES WHEN THE IRRIGATION LINE CANNOT BE PLACED BELOW THE WATER LINE, THE IRRIGATION LINE MUST BE PLACED AT LEAST SIX INCHES ABOVE THE WATER LINE, USE 150 PSI PIPE, CENTER AN 18 FT. OR LONGER PIPE ON THE WATER LINE, AND SLEEVE THE IRRIGATION LINE INSIDE ANOTHER PRESSURE RATED PIPE. (IF APPLICABLE)

16. THIS PLAN IS INTENDED FOR USE AS AN INSTALLATION GUIDE THE DIMENSIONS OF THE PROPERTY ARE TAKEN FROM SURVEYS AND APPROXIMATE FIELD MEASUREMENTS. THIS IS NOT INTENDED AS A LEGAL LAND SURVEY AND SHOULD NOT BE TREATED AS SUCH.

17. APPROXIMATE BOD TREATMENT CAPACITIES IN LBS/DAY & .21 LBS/BOD/DAY PER PERSON

500 G.P.D. - 1.25 LBS/DAY - 5 PEOPLE

600 G.P.D. - 1.5 LBS/DAY. - 7 PEOPLE

750 G.P.D. - 1.88 LBS/DAY - 8 PEOPLE

800 G.P.D. - 2.0 LBS/DAY - 9 PEOPLE

1000 G.P.D. - 2.5 LBS/DAY - 11 PEOPLE

1500 G.P.D. - 3.75 LBS/DAY - 17 PEOPLE

AVAILABLE DATA IS APPROXIMATE AND ACTUAL CONDITIONS MAY VARY.



DATE: 02/24/2017 SCALE: 1'' = 30'

ROLLING HILLS SUB. SEC. 1, BL. 5 N. 70 FT. LOT 15 WALLER COUNTY, TEXAS

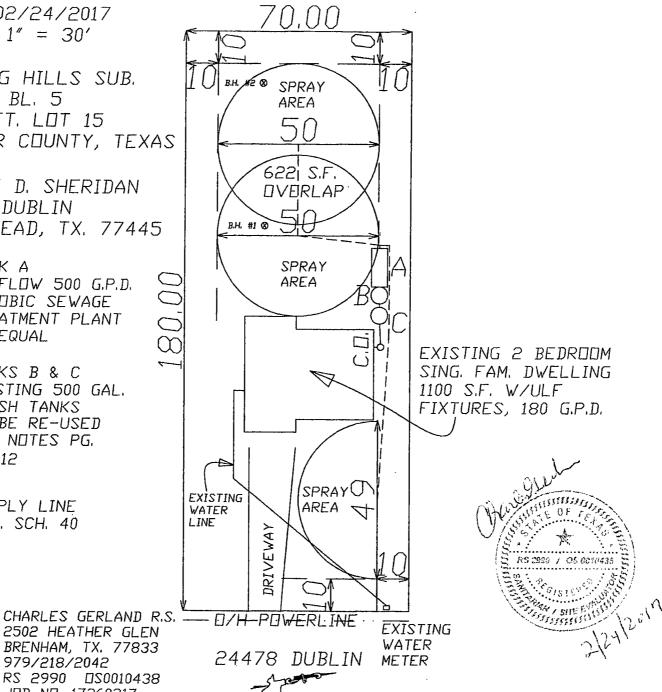
RUPERT D. SHERIDAN 24478 DUBLIN HEMPSTEAD, TX. 77445

> TANK A PROFLOW 500 G.P.D. AEROBIC SEWAGE TREATMENT PLANT OR EQUAL

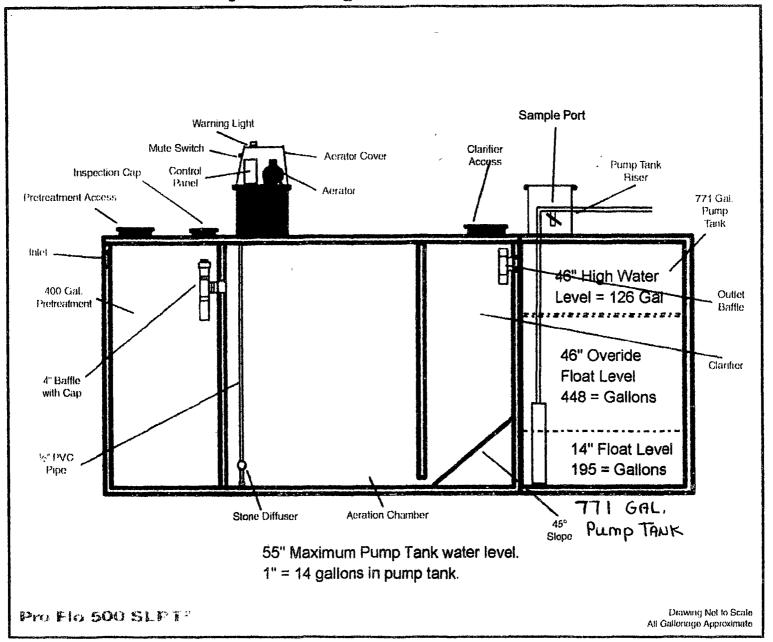
TANKS B & C EXISTING 500 GAL. TRASH TANKS TO BE RE-USED SEE NOTES PG. NO. 12

SUPPLY LINE 1 IN. SCH. 40 PVC

> 2502 HEATHER GLEN BRENHAM, TX. 77833 979/218/2042 JDB NO. 17260217



Pro Flo 500 SLPT2 System Magram



### Performance Data

Professionce

HILLMICH

8.8 10 Þ.E Ĺ 9.1 Þ 05 4.41 25. 2.8 6 2.2 9 2.1 3 .98 13.2 :09 09 15 2.4 8 0.5 ç 6. 5 30. 2.21 87 90 7.5 9 1.2 ε ۲. į. 52, 4,11 .97 0t 712 5:77012 08. 080 Αgθ Orte 2204 Blosed 3.01 .19 04 8.6 .09 Matched Pre 09 6.8 87 9 noitatiqipayq badətaM 0.8 .91 40 2.8 .19 04 9.7 .65 09 ŭ.α R۲ ПC 0.8 C+ 07 0.8 uniformity of the spray pattern.) .27 09 30% with nozzle retaining screw. (This may after the 6.6 .95 05 local conditions. Radius can be reduced by up to 6.4 £7 04 Data represent test results in zero wind. Adjust for ۵,4 38, 30 9.<sub>4</sub> .77 09 sprinkiers curring repairs maintenance, etc. 4.2 ďŽ, 20 d Bishik nozz a bug tr. turnig effected 3.7 d0. 07 3.5 ٤٤, 30 8.8 לל 7.5 04 45, 09 0.8 45 09 3.4 dS. 90 5.7 0Þ 09 3.0 d0. 00 **3.8** 38. 9.S 40 36, 30 1.8 27 09 5.9 :05 09 6.6 - .0t 09 7.2 01 20 0.8 2Σ 0Þ **4.**S 38 07 87 EΕ 30 0.5 36 30 1.4 88 09 2.2 38, 09 4.4 :48 09 0.2 38, 20 3.9 34. りゃ 8.1 .98 05 3.4 31 30 9.1 34. 30 8.5 **Δ**ε 09 8.1 34. 09 3.5 32. nς 9.1 34. 09 1.5 35. 07 21 33. 0Þ 8.5 56. 30 2.1 35. OΕ 0.6 32, 09 1.3 35, 09 8.2 33. 20 1.2 34. 09 2.5 30. 40 1.0 34, 05 1.5 52 30 6. 30, 30 5.3 30 09 0.1 18 09 58. 09 6 30. 09 my = About & X ;; 22 07 8. 30. 01 52 30 ۲. 58, 30 58. 09 8. 30, 09 8.1 .92 20 T. 56, 20 7.1 54. 07 8. 58. 04 7.1 55, 30 G. .82 30 NdO 11 iSd NOZZIG Radius MdĐ ISd 9 ZZON Hadins LOW ANGLE NOTALE STANDARD NOZZLES HE

or local conditions. Radius can be reduced by after the uniformity of the spray pattern.)

Jalie represent test results in zero wind. Adjust

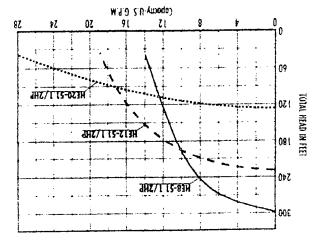
45' 6 2.0 8 4.2 11 8.9 White archaest combinations are spaced as indicated, the precipitation rate will be approximately .4"/hir. at 50 PSI.

. . .

# HE8-51, HE12-51 & HE20-57

atili prod tot rigezab finatzizat noisetto) e	
whigh pressure capacity.	setutest nonequ2
1ª - 20. ' ZIIM' ZIM-A (30' optional)	Power Cord
(mm1.8E) "I-1	esic senonail
Thermoplestic	19  eqm
300 221	nothuntano) to avariateM
Pressure Switch	политер Орепторы
(mmd, [0]) * = x9kgmi2	1919mpiQ
M48 0545 14 09	
stioy OSS 9HS\1-1 - (asoriq algoris)	
sendy signs, stiar 211 9HS/1 - (sendy signity)	1010M
230V, 10, 3 1FLA, 60Hz, 3450 RPM	
HIZY 10, 14.5FLA, 60Hz, 3450 RPM	Bedricai
(mE. 34f) ft 30E of	spoari
120 GPM (1.26 L/s)	zaithoqu)
High Head Phered Effluent	Typical Application
CANADA SERVICE DE LA CONTRACTION DEL CONTRACTION DE LA CONTRACTION	

- and the surrenge of the second second
- \* (Listings pending on 25 and 35 GPM unite.
- Dependable field proven meter
- Stainless-steel construction
- Built-in everlood and electric surge protection
   Hermetically sealed windings
- gaitat Ytub evounitais) •
- Frequent cycling copolities
- Fowerful, yet fightweight Fowerfulling and installation •



HE 30-51 12 HP IYPICAL

# Waller County Environmental Division

775 Business 290 East Hempstead, Texas 77445

Phone: 979-921-0391 Fax: 979-921-0402



# CERTIFICATE OF APPROVAL

Rupert D. Sheridan 28636 Clarke Bottom Hempstead, Texas 77445 PERMIT TO OPERATE # 7443 June 1, 2017 Property ID# 26740

This is to certify that the on-site sewage facility at 24478 Dublin Street, Hempstead, Texas has met all the minimum requirements of the STATE OF TEXAS and the COUNTY OF WALLER.

This approval simply grants permission to operate this on-site sewage facility, and does not guarantee its successful operation nor does this certificate warranty any parts associated with it.

The proper functioning and maintenance are the sole responsibility of the homeowner.

- 1. Grass should be kept mowed in the drain/spray field area.
- 2. On systems that need chlorination, it is the homeowner's responsibility.
- 3. On systems that require a maintenance contract, that contract will be put on file at the Waller County Environmental Office.
- 4. All plumbing should be kept in good repair (no leaks).

This permit to operate will remain in effect until such time that there is evidence that the system is not operating properly and may constitute a threat to the health of the people of this County.

Winford/Roberts, D. R. 25232

Waller County Road & Bridge Department Environmental Division