



# FAYETTE COUNTY

## OSSF SOIL EVALUATION FORM

Owner's Name: Charles Naumann Number: (210) 807-0418

Physical Address: 2407 SH 159

Name of Site Evaluator: Ross Weiskuhn 979 732 6997

Registration Number: OS 0033772

Date Performed: 5/4/2020

Proposed Excavation Depth: N/A

- At least two soil evaluations must be performed on the site, at opposite ends of the proposed disposal area. Please show the results of each soil evaluation on a separate table. Locations of soil evaluations must be shown on the site drawing.
- For subsurface disposal, soil evaluations must be performed to a depth of at least 2 ft. below the proposed excavation depth. For surface disposal, the surface horizon must be evaluated.
- Please describe each soil horizon and identify any restrictive features in the space provided below. Draw lines at the appropriate depths.

SOIL EVALUATION				
Soil Boring Number	Profile	Soil	Gravel	Restrictive
	Depth	Texture	Present	Horizon
	0"			
	↓			
	24"	Ib Loamy sand	ND	ND
	↓		↓	↓
	42"	IV clay		
	↓			
	60"			
60 Inch Minimum Depth or to a restrictive horizon whichever is less				

SOIL EVALUATION				
Soil Boring Number	Profile	Soil	Gravel	Restrictive
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	0"			
	↓			
	24"	Ib Loamy sand	ND	ND
	↓		↓	↓
	42"	IV clay		
	↓			
	60"			
60 Inch Minimum Depth or to a restrictive horizon whichever is less				

**Note:** TEXTURES: Sand/greater than 30% Gravel; Sand/30% or less Gravel; Sand; Loamy Sand; Sandy Loam; Loam; Silt; Silt Loam; Sandy Clay Loam; Clay Loam; Silty Clay Loam; Sandy Clay; Silty Clay; Clay.

STRUCTURES: Massive; Blocky; Platy

6100  
 1200  
 -----  
 \$ 7300<sup>00</sup>

# FAYETTE COUNTY OSSF SOIL EVALUATION FORM

## TOPOGRAPHY

SLOPE: UNDER 2% \_\_\_\_\_ -2% to 30%  GREATER THAN 30% \_\_\_\_\_  
Note: If slope is FLAT, provisions shall be made to insure good surface drainage of rainfall or runoff from covering the soil absorption field. Slopes greater than 30% are unsuitable.

VEGETATION: GRASS/BRUSH \_\_\_\_\_ LIGHTLY WOODED  HEAVILY WOODED \_\_\_\_\_

DRAINAGE: POOR \_\_\_\_\_ ADEQUATE \_\_\_\_\_ GOOD

## GROUND WATER

Yes \_\_\_\_\_ No  Depth \_\_\_\_\_ inches

## FLOOD HAZARD

100 Year Floodplain \_\_\_\_\_ Floodway \_\_\_\_\_ Outside the 500 Year Floodplain

## MINIMUM SEPARATION DISTANCES

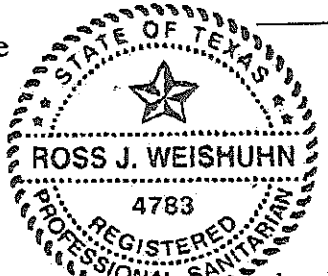
Public Water Wells N/A  
Public Water Supply Lines 10'  
Private Water Well 50' tanks/100' app. area.  
Streams, Ponds, Lakes, Rivers 75' app. area  
Surface Improvements 5' min.tanks  
Easements 5' min.  
Other Structures 5' min.  
Pressure Cemented or Grouted \_\_\_\_\_  
Foundations & Buildings 5' min.tanks  
Property Lines 5'  
Swimming Pools 25' min.  
Sharp Slopes, Breaks 25' min.

TYPE OF SYSTEM REQUIRED: Mound WATER using 24" of profile top  
3 bdrm < 2500 sq ft; Q = 240 gpd

NAME OF SITE EVALUATOR: Ross Weishuhn  
REGISTRATION NUMBER: 050033772

ADDRESS: Weishuhn Engineering, Inc. RF #66  
425 Spring St Ste 102  
P.O. Box 358  
Columbus, TX 78934  
979 732 6997

Seal if applicable



I certify that the above statements are true and are based on my own field observations.  
Signature Ross Weishuhn Date 5/4/2020

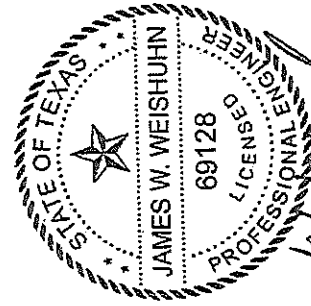
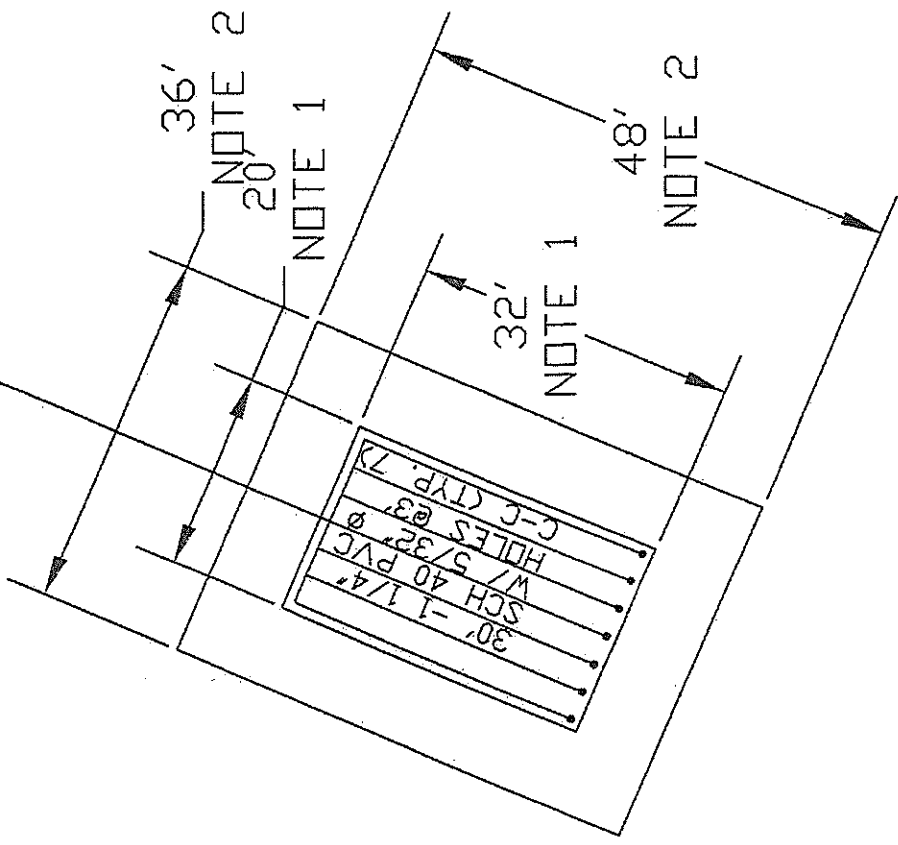
NOTES

- 1. PEA GRAVEL
- 2. SANDY LOAM COVER

2" SCH 40 PVC  
FROM PUMP TANK



SLOPE  
~2%



*James W. Weishuhn*  
5-5-2020

FIGURE 5  
DETAILED MOUND PLAN  
CHARLES NAUMANN  
2407 SH 159  
FAYETTEVILLE, TEXAS  
FAYETTE COUNTY

Weishuhn Engineering, Inc. R.F. 866  
425 SPRING ST. PO BOX 358  
Columbus, Texas 76934  
(979) 732-5397

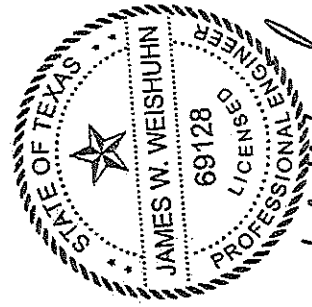
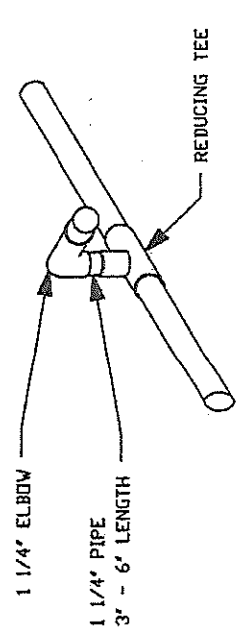
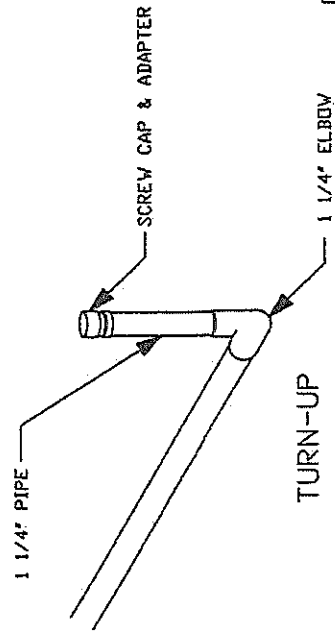
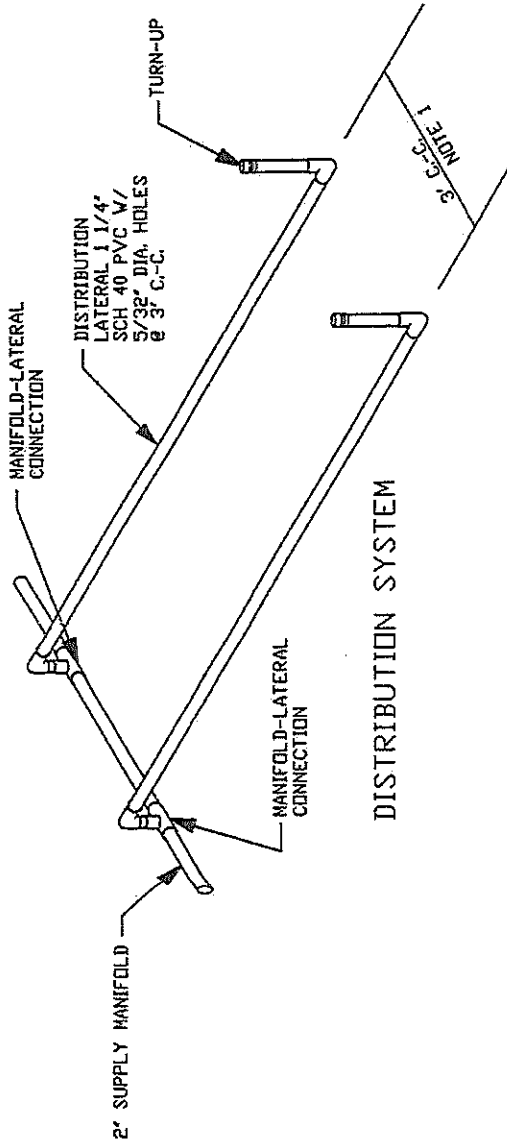
SCALE: 1"=20'  
DESIGNED BY: JWW  
DRAWN BY: RJW



REV	DESCRIPTION	DATE	APPROVED

**NOTES:**

1. INSTALL LATERALS ON PEA GRAVEL PAD  
INSTALL PIPING @ 3' C.-C.
2. ALL PIPING IS SCH 40 PVC.



*James W. Weishuhn*  
5-5-2020

FIGURE 3  
LDW PRESSURE DOISING SYSTEM  
PIPING DETAILS  
CHARLES NAUMANN  
2407 SH 159  
FAYETTEVILLE, TEXAS  
FAYETTE COUNTY

Weishuhn Engineering Inc. 27-866  
423 SPRING ST. PD. 378  
COLLEGE, TEXAS 75834  
9372-732-3327

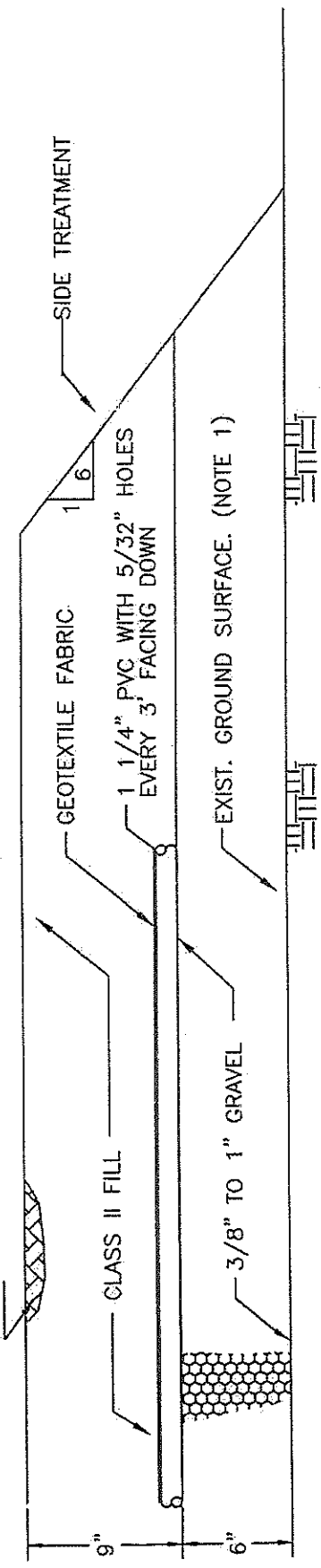
SCALE NONE SHEET of

REVISIONS		DATE	APPROVED
REV	DESCRIPTION		

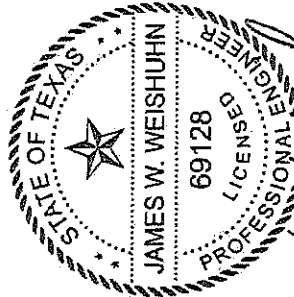
NOTES

1. LEVEL TO WITHIN 1" ON 25' OR 3" ON ENTIRE MOUND LENGTH.

ESTABLISH VEGETATIVE COVER BY SEEDING WITH MIXTURE OF RYE AND BERMUDA GRASS



DRAIN FIELD CROSS SECTION



*James W. Weishuhn*  
5-9-2020

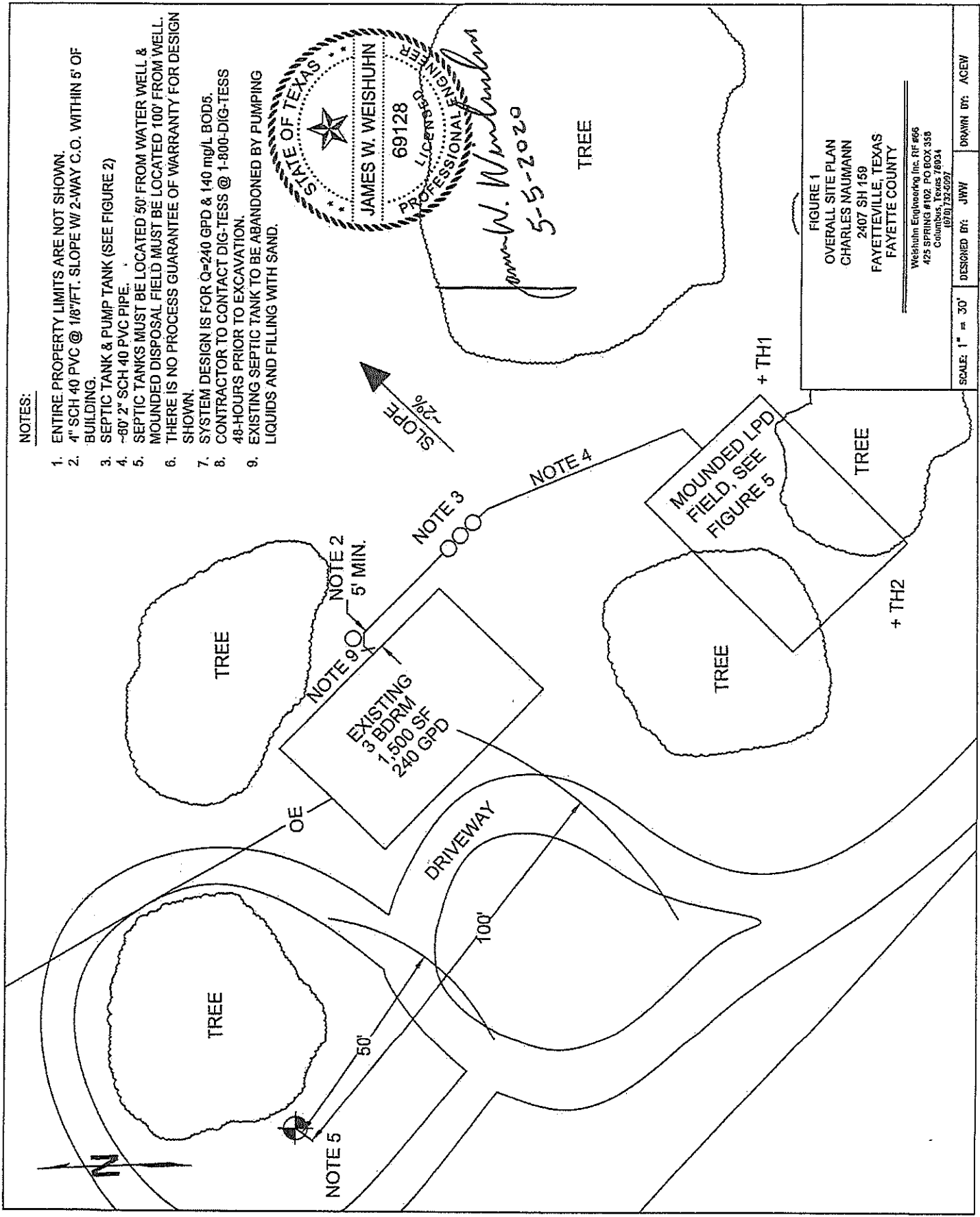
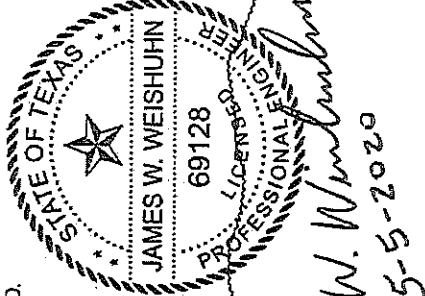
FIGURE 4  
TRENCH DETAILS  
CHARLES NAUMANN  
2407 SH. 159  
FAYETTEVILLE, TEXAS  
FAYETTE COUNTY

Valdicki Engineering Inc. BP 866  
1423 SPANGLER ST. PO. BOX 2538  
COLUMBUS, TEXAS 76924  
(0739) 732-5597

SCALE \_\_\_\_\_ of \_\_\_\_\_ SHEET \_\_\_\_\_ of \_\_\_\_\_

**NOTES:**

1. ENTIRE PROPERTY LIMITS ARE NOT SHOWN.
2. 4" SCH 40 PVC @ 1/8"FT. SLOPE W/ 2-WAY C.O. WITHIN 5' OF BUILDING.
3. SEPTIC TANK & PUMP TANK (SEE FIGURE 2)
4. -60' 2" SCH 40 PVC PIPE.
5. SEPTIC TANKS MUST BE LOCATED 50' FROM WATER WELL & MOUNDED DISPOSAL FIELD MUST BE LOCATED 100' FROM WELL. THERE IS NO PROCESS GUARANTEE OF WARRANTY FOR DESIGN SHOWN.
7. SYSTEM DESIGN IS FOR Q=240 GPD & 140 mg/L BOD5.
8. CONTRACTOR TO CONTACT DIG-TESS @ 1-800-DIG-TESS 48-HOURS PRIOR TO EXCAVATION.
9. EXISTING SEPTIC TANK TO BE ABANDONED BY PUMPING LIQUIDS AND FILLING WITH SAND.



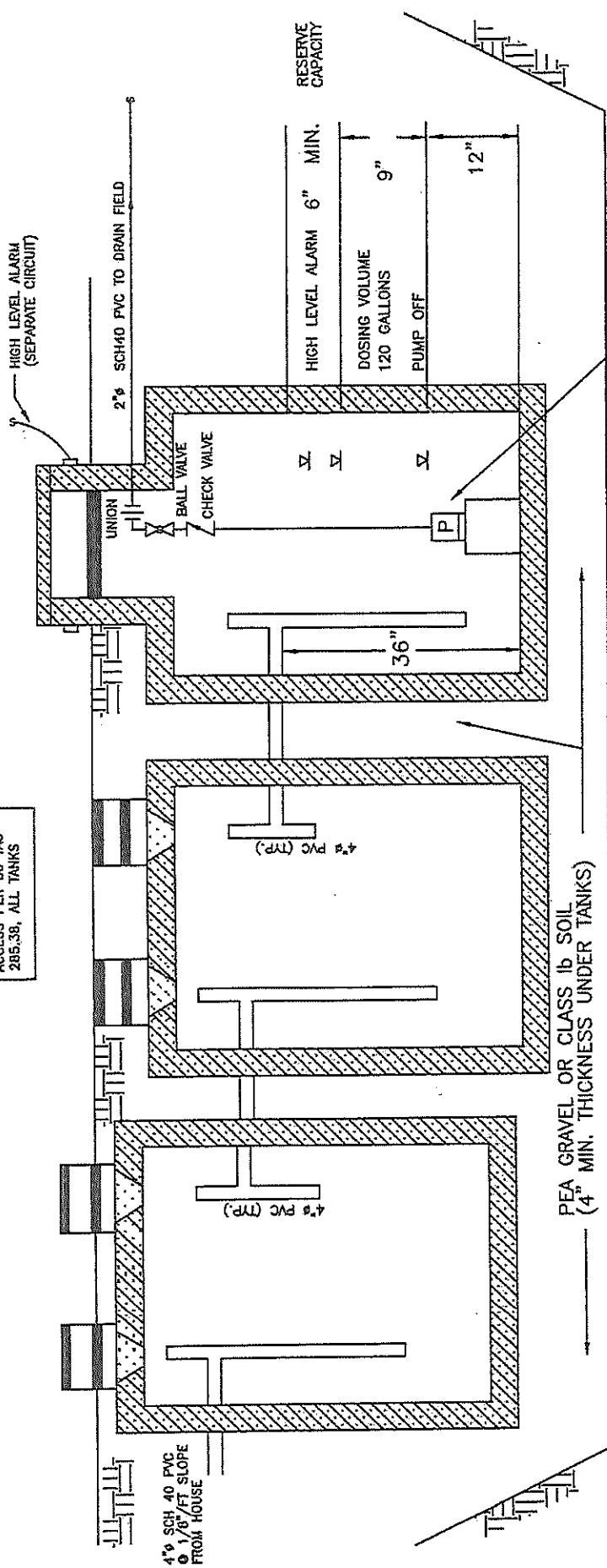
**FIGURE 1**  
 OVERALL SITE PLAN  
 CHARLES NAUMANN  
 2407 SH 159  
 FAYETTEVILLE, TEXAS  
 FAYETTE COUNTY  
 Weishuhn Engineering Inc. RF #66  
 425 SPRING #102, PO BOX 358  
 Columbus, Texas 76934  
 (817) 737-6997

SCALE: 1" = 30'  
 DESIGNED BY: JWV  
 DRAWN BY: ACEW



REV	DESCRIPTION	DATE	APPROVED

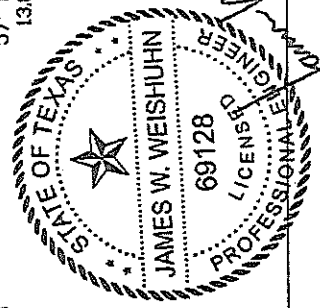
PROVIDE RESTRICTED ACCESS PER 30 TAC 285.38, ALL TANKS



500 GAL. SEPTIC TANK  
FALDYN MC500  
57' H X 62' DIA

280 GAL. SEPTIC TANK  
FALDYN MC280  
48' H X 54' DIA

500 GAL. PUMP TANK  
FALDYN MC500  
57' H X 62' DIA  
13.8 GAL./IN.



*James W. Weishuhn*  
5-5-2020

FIGURE 2  
TANK DETAILS  
CHARLES NAUMANN  
2407 SH 159  
FAYETTEVILLE, TEXAS  
FAYETTE COUNTY

Wetshub Engineering Inc. P.O. Box 866  
465 Springdale, Texas 75782-0866  
Columbus, Texas 76934  
(979) 732-4997

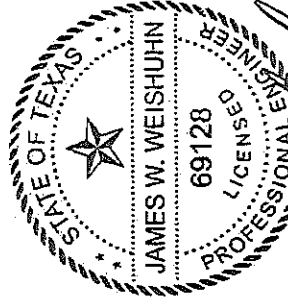
MOUNDED LOW PRESSURE DOSE SYSTEM SUMMARY  
FOR

CHARLES NAUMANN  
2407 SH 159  
FAYETTEVILLE, TX  
FAYETTE COUNTY

DAILY WASTEWATER FLOW: 240 GPD  
PRIMARY SEPTIC TANK SIZE: 500 GAL.  
SECONDARY SEPTIC TANK SIZE: 280 GAL.  
TOTAL SEPTIC TK. CAPACITY: 780 GAL.  
PUMP TANK SIZE: 500 GAL.  
ABSORPTION AREA: 640 S.F.  
TOTAL LENGTH OF LATERALS: 210'  
LATERAL DIAMETER: 1.25"  
LATERAL CONFIGURATION: 7-30' LINES  
SUPPLY LINE LENGTH: ~60'  
SUPPLY LINE DIAMETER: 2"  
MANIFOLD PLACEMENT: END  
HOLE SIZE: 5/32" DIA.  
HOLE SPACING: 3' C-C  
NUMBER OF HOLES: 70

FLOW PER HOLE: 0.41 GPM  
TOTAL FLOW: 29 GPM  
ELEVATION HEAD: 6'  
FRICTION HEAD: 1'  
PRESSURE HEAD: 2'  
TOTAL HEAD: 9'  
PUMP REQUIREMENTS: 29 GPM @ 9' TDH  
VOLUME IN LATERALS: 14 GAL.  
VOLUME IN SUPPLY PIPE: 10 GAL.  
TOTAL PIPE VOLUME: 19 GAL.  
DOSE VOLUME: 120 GAL.  
DOSE DEPTH: 9"  
EMERGENCY VOLUME: 80 GAL.  
EMERGENCY DEPTH: 6"  
CHECK VALVE NEEDED: YES

PEA GRAVEL VOLUME: 12 CY  
FILL VOLUME CLASS II: 40 CY



*James W. Weishuhn*  
5-5-2020

WEISHUHN ENGINEERING, INC.  
R.F. #66  
425 SPRING ST. PO BOX 358  
COLUMBUS, TX 78934  
(979)732-6997

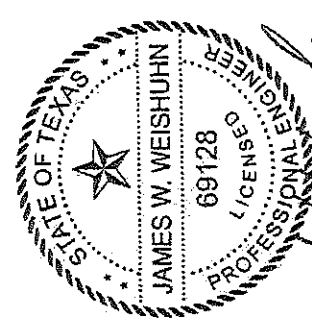
MOUNDED LOW PRESSURE DOSE SYSTEM

FOR  
 CHARLES NAUMANN  
 2407 SH 159  
 FAYETTEVILLE, TX  
 FAYETTE COUNTY

- STEP 1. THE SITE EVALUATION IS ATTACHED AND INDICATED THAT A MOUNDED LOW PRESSURE DOSE SYSTEM IS SUITABLE FOR THE PROPERTY.
2. HOUSE SIZE: 3 BDRM. HOME < 2,500 SF W/ WATER SAVINGS DEVICES.  
 SYSTEM SIZE: 240 GPD & 140 MG/L BOD5.
3. SEPTIC TANK SIZE: 780 GAL.
4. EFFLUENT LOADING RATE (R<sub>0</sub>): 0.38 GPD/SF FOR CLASS 1B SOIL.
5. MOUND DESIGN IN ACCORDANCE WITH NORTH CAROLINA GUIDANCE BASAL AREA REQUIRED (UNC SEA GRANT COLLEGE PUBLICATION UNC-SG-82-04 AUG 1982)
- STEP 1 AREA=DAILY FLOW RATE/LOADING RATE OF SOIL  
 Q=240 GPD/0.38 GPD/SF FOR CLASS 1b SOIL  
 BASAL AREA = 632 SF SAY 640 SF
- STEP 2  
 SELECT HEIGHT OF MOUND, MOUND HEIGHT IS SET AT 15' PLACE PEA GRAVEL PAD TO GROUND SURFACE & 9' CLASS 1b OR II LOAMY SAND COVER
- STEP 3  
 CALCULATE SIDESLOPE LENGTHS=6\*H  
 S=6\*1.25 FOOT  
 S=8 FEET
- STEP 4  
 CALCULATE BASAL WIDTH NEEDED FOR 640 SF OF AREA AND LINE LENGTH OF 30', BASAL AREA=640 SF/32'=20'  
 (PEA GRAVEL DIMENSION 20'X32') AREA RESULTING FROM 6'1' MOUND SIDE SLOPES  
 WIDTH 20'+8'+8' = 36'  
 LENGTH 32'+8'+8' = 48'

7. DETERMINE # OF HOLES & FLOW RATE  
 ASSUME 3' HOLE SPACING & 5/32" OPERATED @ 2' HYDRAULIC HEAD  
 # OF HOLES=(7\*30')/3'/HOLE=70  
 FLOW RATE/HOLE=0.41 GPM  
 TOTAL FLOW RATE=  
 70 HOLES\*0.41 GPM/HOLE= 29 GPM
8. CALCULATE FRICTION LOSS  
 2" Ø PIPE SUPPLY LINE  
 FRICTION LOSS(2"Ø PIPE) @ 29 GPM = 1.54' FT/100 FT OF PIPE  
 FRICTION HEAD= 1.2\*(PIPE FRICTION)\*  
 =1.2\*(1.54/100)\*60'=1'
9. CALCULATE PRESSURE REQUIREMENTS  
 ELEVATION HEAD 6'  
 LOW PRESSURE SYSTEM HEAD 2'  
 TOTAL HEAD = 1'+6'+2'=9'
10. PUMP RATING: 29 GPM @ 9'
11. CALCULATE DOSE VOLUME  
 SUPPLY PIPE VOLUME =  
 314/4\*(2/12)\*2X60'X7.48=10 GAL.  
 LATERAL PIPE VOLUME=  
 314/4\*(1.25/12)\*2X210'X7.48=14 GAL.  
 RECOMMENDED DOSE VOLUME=  
 SUPPLY PIPE VOLUME+5X LATERAL  
 VOLUME = 10+5X(14)=80 GAL.  
 SET DOSE = 120 GAL./DOSE  
 FOR 2 DOSES/DAY.

12. PROVIDE CHECK VALVE FOR MOUNDED DRAIN FIELD.
13. CALCULATE DOSE DEPTH  
 ASSUME FALDYN MC500, 500 GAL. PUMP TANK (13.8 GAL/IN.)  
 DOSE DEPTH=120/13.8 GAL/IN.  
 DOSE DEPTH=9'
14. CALCULATE EMERGENCY VOLUME  
 EMERGENCY VOLUME = 1/3 OF DAILY FLOW = 1/3 (240 GAL.) = 80 GAL.
15. CALCULATE EMERGENCY DEPTH  
 EMERGENCY DEPTH = 80 GAL./13.8 GAL./IN. = 6'
16. SEPTIC TANK MUST BE > 50' FROM WELLS.
17. DISPOSAL FIELDS MUST BE > 100' FROM WELLS & > 10' FROM WATER DISTRIBUTION PIPING.
18. LANDSCAPE PLAN  
 GRADE DISPOSAL AREA SO THAT RAINWATER DOES NOT STAND OR POND.  
 A VEGETATED COVER MUST BE MAINTAINED ON THE DISPOSAL AREA. SEED WITH A COMBINATION OF RYE AND BERNUDA GRASS.
19. CONSTRUCTION NOTES  
 CONCRETE TANKS MUST BE CONSTRUCTED IN ACCORDANCE WITH ASTM C1227-93A.
20. THIS SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH 30 TAC 285 FOR THE PURPOSES OF SECURING A PERMIT FOR CONSTRUCTION OF A 240 GPD AND 140 MG/L BOD MOUNDED LOW PRESSURE DOSE SYSTEM. THERE IS NO PROCESS GUARANTEE OR WARRANTY FOR DESIGN SHOWN.
21. CONSERVATIVE WATER USAGE IS ENCOURAGED WITH ALL ON-SITE SEWAGE FACILITIES.



*James W. Weishuhn*  
 5-5-2020

**WEISHUHN ENGINEERING, INC.**  
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