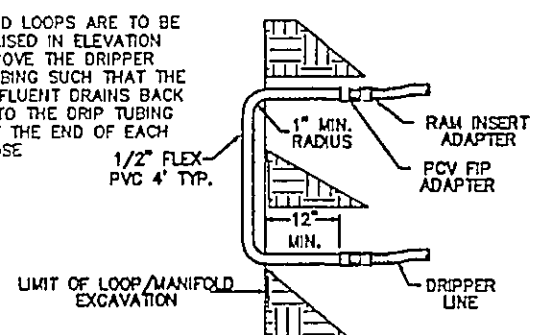


****IMPORTANT TANK NOTES**

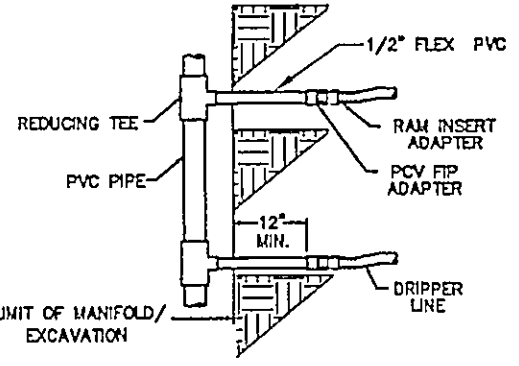
THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR PROVIDING WATERPROOF TANKS. BOTH THE SEPTIC TANK AND THE DOSING TANK SHALL BE FITTED WITH FLEXIBLE BOOTS ON THE INLETS AND OUTLETS. TANK OPENINGS ARE TO HAVE ADAPTER RINGS CAST IN THE TOP TO ACCEPT PVC RISERS. TANKS SHALL BE WATER TIGHT PER OHIO ADMINISTRATIVE CODE CHAPTER 3701-29 "SEWAGE TREATMENT SYSTEM RULES".

****SYSTEM DESCRIPTION**

DOMESTIC SEWAGE WILL FLOW BY GRAVITY THROUGH THE SEPTIC TANK THEN INTO A FINAL DOSING TANK. THE CENTRAL UNIT WILL DISPOSE OF THE EFFLUENT BY ALTERNATELY DOSING MULTIPLE ZONES IN THE ABSORPTION AREA. THE CENTRAL UNIT COMPRISES BOTH THE CONTROLS AND THE HYDRAULIC UNIT. THE HYDRAULIC UNIT INCLUDES WASTEWATER FILTRATION, FLOW MEASUREMENT AND VALVING TO ISOLATE FLOWS TO ZONES.



TYPICAL DRIP LOOP CONNECTION
NTS

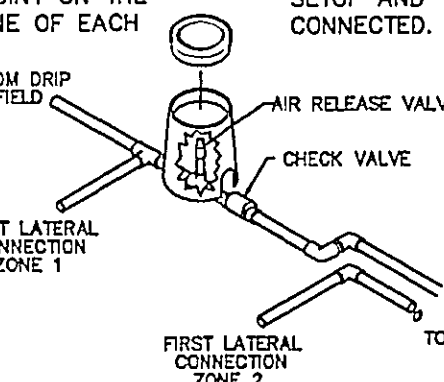


TYPICAL MANFOLD CONNECTION
NTS

NOTE:

1. THE AIR RELEASE VALVE SHALL BE PLACED AT THE HIGHEST POINT ON THE RETURN LINE OF EACH ZONE.

2. EACH ZONE TO HAVE THE SAME VALVE BOX SETUP AND THEREAFTER CONNECTED.



AIR RELEASE & CHECK VALVE DETAIL

TITLE:
HYDRAULIC PROFILE & TYPICAL DRIP DETAILS
MOUND INSTALLATION

Homeowner
Location
County, Ohio

DR. BY: RKM
CK BY: EJK
DATE:
SCALE: None
FILE:

Engineered by
StreamKey
Engineered Plumbing & Watercolor Solutions
10515 Reading Road
Cincinnati, OH 45241
513-792-1221

SHEET NO.

AMERICAN MANUFACTURING COMPANY

SEPTIC DRIP CALCULATION SHEET

Job Name: Petro Location: City of Kirtland, Lake County, Ohio
Project No.: 05100 Date: 10/29/2008

1 360 GALLONS PER DAY 3 NO. OF BEDROOMS
2 140 FT. (Length) 17 FT. (Width) AREA FOR DISPOSAL LAYO. 2380 FT²
3 2 ZONES
4 1400 TOTAL DRIPPER LINE PROVIDED (Zone 1 + Zone 2)
5 2000 SEPTIC TANK SIZE (gallons)
6 2000 DOSING TANK SIZE (gallons)
7 38.46 GALLONS PER INCH IN DOSING TANK (Provided From Manufacturer)

9 ZONE ONE
10 1190 TOTAL ABSORPTION AREA (FT²)
11 700 LINEAR FEET OF DRIP TUBING (Total Tubing for Zone 1)
12 140 LONGEST LATERAL LENGTH (FT) 31.85 Minimum Dose Volume (Gal/Dose)
13 3.56 DOSING FLOW RATE (GPM) (Length of tubing / 2) x (0.61 Gal/Hr) / (60 Min/Hr.)
14 5 NO. RETURN FIELD FLUSH CONNECTIONS (#/zone)
15 8.00 FIELD FLUSH FLOW RATE (GPM (1.6 gpm/Connection) x (no. of field flush connections)
16 11.56 TOTAL FLOW REQUIRED (GPM) (Dosing flow rate + Field flushing flow rate)

17 ZONE TWO
18 1190 TOTAL ABSORPTION AREA (FT²)
19 700 LINEAR FEET OF DRIP TUBING (Total Tubing for Zone 2)
20 140 LONGEST LATERAL LENGTH (FT) 31.85 Minimum Dose Volume (Gal/Dose)
21 3.56 DOSING FLOW RATE (GPM) (Length of tubing / 2) x (0.61 Gal/Hr) / (60 Min/Hr.)
22 5 NO. RETURN FIELD FLUSH CONNECTIONS (#/zone)
23 8.00 FIELD FLUSH FLOW RATE (GPM (1.6 gpm/Connection) x (no. of field flush connections)
24 11.56 TOTAL FLOW REQUIRED (GPM) (Dosing flow rate + Field flushing flow rate)

25 12 MAXIMUM DESIGN TOTAL FLUSHING FLOW (GPM)
26 11 FEET OF HEAD LOSS FROM HYDRAULIC UNIT (TDH) (Based Chart 2A)

27 HYDRAULIC UNIT SUPPLY LINE
28 1.5 PIPE DIAMETER (inches) (From pump to Hydraulic Unit)
29 20 LENGTH SUPPLY PIPE (FT) (From pump to Hydraulic Unit)
30 6 FEET OF STATIC LIFT (From pump to Hydraulic Unit)
31 8 TOTAL FEET HEAD LOSS IN LINE (Dynamic Head Loss + #30)

35 RETURN FLUSH LINE SIZE & RETURN:
36 1" ZONE 1 SIZE 265 ZONE 1 LENGTH 10 FT. HEAD LOSS
37 1" ZONE 2 SIZE 265 ZONE 2 LENGTH 10 FT. HEAD LOSS
(Friction losses through return return piping at the specific size, distance and flow, as listed above)

38 STATIC HEAD:
39 2 FEET OF TOTAL STATIC HEAD LOSS (Vertical Lift)
(From the base of the Hydraulic Unit to the highest run of dripper tubing)

40 TOTAL PRESSURE LOSS (Add items 26, 31, 33/34, 35/37, 39 + Flushing).
41 68 ZONE 1 HEAD LOSS, INCLUDES 16 FEET FLUSHING (Chart 3A)
42 68 ZONE 2 HEAD LOSS, INCLUDES 16 FEET FLUSHING (Chart 3A)
(Total head loss includes friction from pump to HU, through HU, supply piping, return piping, Chart 2A, and Chart 3A)

43 PUMP SIZING:
44 68 MAXIMUM TOTAL PRESSURE LOSS (Highest 41 or 42)
45 123 DISC FILTER BACKFLUSH (#31 + 15ft. @ 15 GPM)
46 15 GPM @ 123 FEET 115 VOLTS 1 PHASE 0.5 HP

47 TIMED DOSING PER ZONE:
48 ZONE ONE:
49 3.56 Dosing GPM 8.95 Min/Dose 31.85 Gallons Per Dose (Minimum Fill Ratio 3.5)
50 3.4 Ave. Cycles 5.7 Peak Cycles (Run Frequencies)
51 ZONE TWO:
52 3.56 Dosing GPM 8.95 Min/Dose 31.85 Gallons Per Dose (Minimum Fill Ratio 3.5)
53 3.4 Ave. Cycles 5.7 Peak Cycles (Run Frequencies)

54 AVERAGE DOSING REST TIMES: 212 Minutes

55 PEAK DOSING REST TIMES: 127 Minutes

56 LANDSCAPE LINEAR LOADING RATE. AS PROVIDED 2.57 GPD/LF ELAVUATION OR DESIGNER 3.00 GPD/LF

57 SOIL LOADING RATE: 0.15 GPD/Sq. Ft. 0.40 GPD/Sq. Ft.

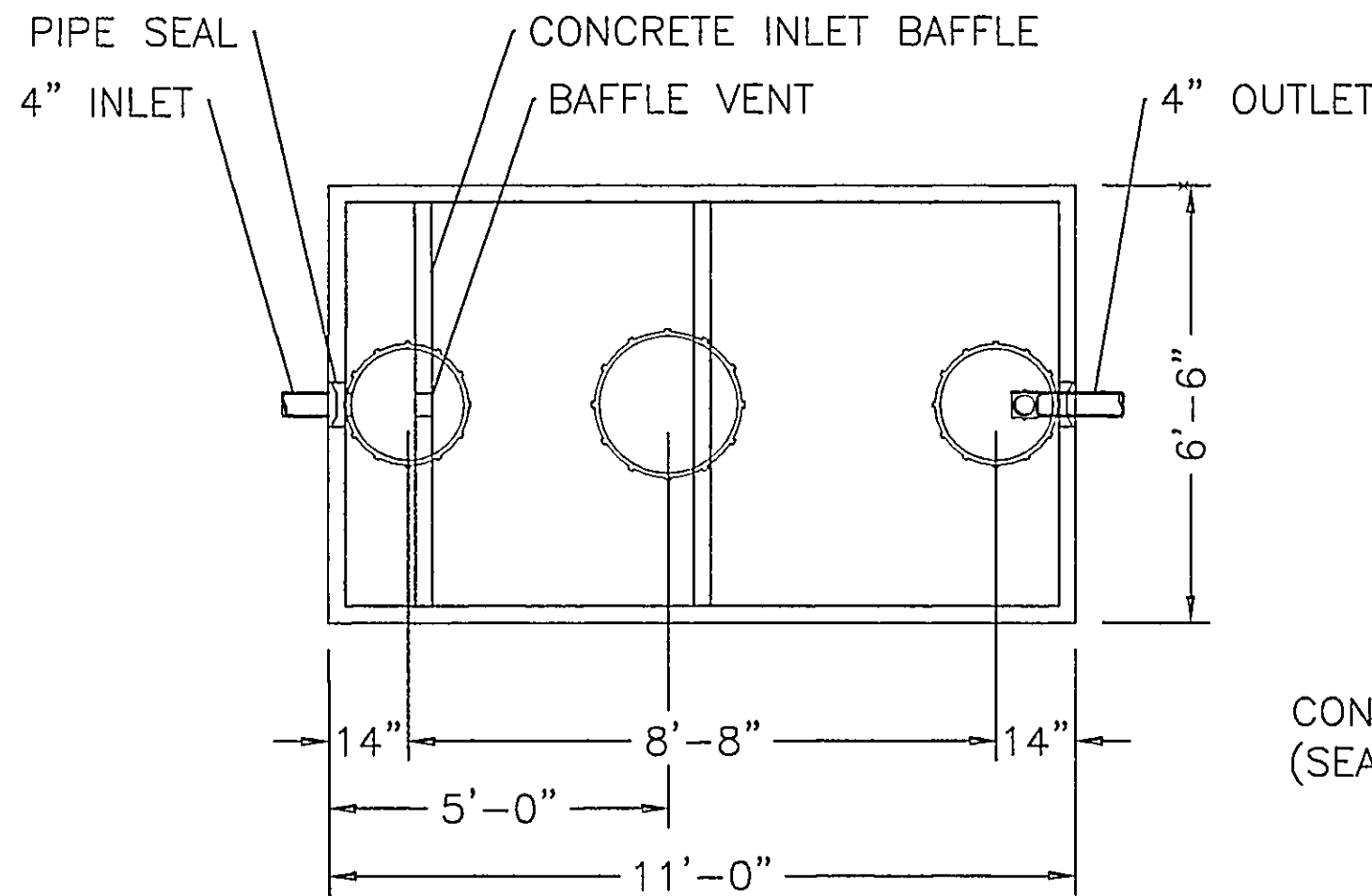
TITLE:
CALCULATION SHEET - MOUND

Homeowner
Location
County, Ohio

DR. BY: RKM
CK BY: EJK
DATE:
SCALE: None
FILE:

Engineered by
StreamKey
Engineered Plumbing & Watercolor Solutions
10515 Reading Road, Cincinnati, Ohio 45241
513-792-1221 phone / 513-792-1223 fax

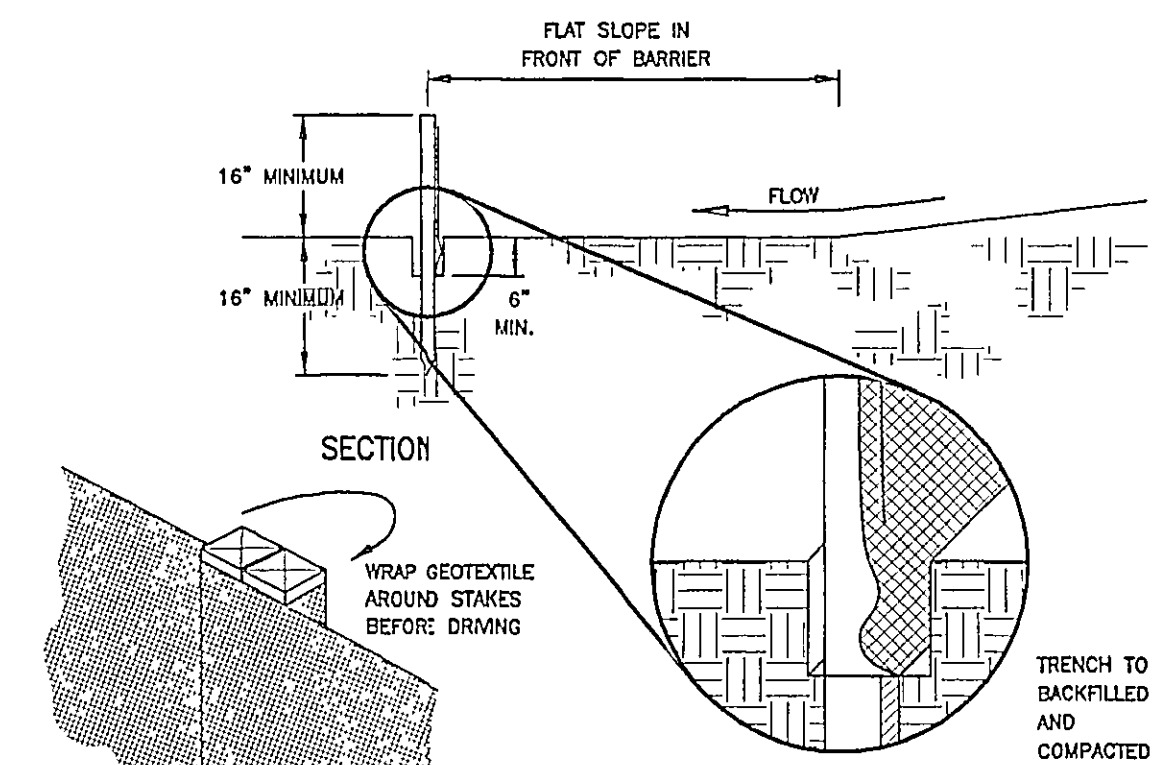
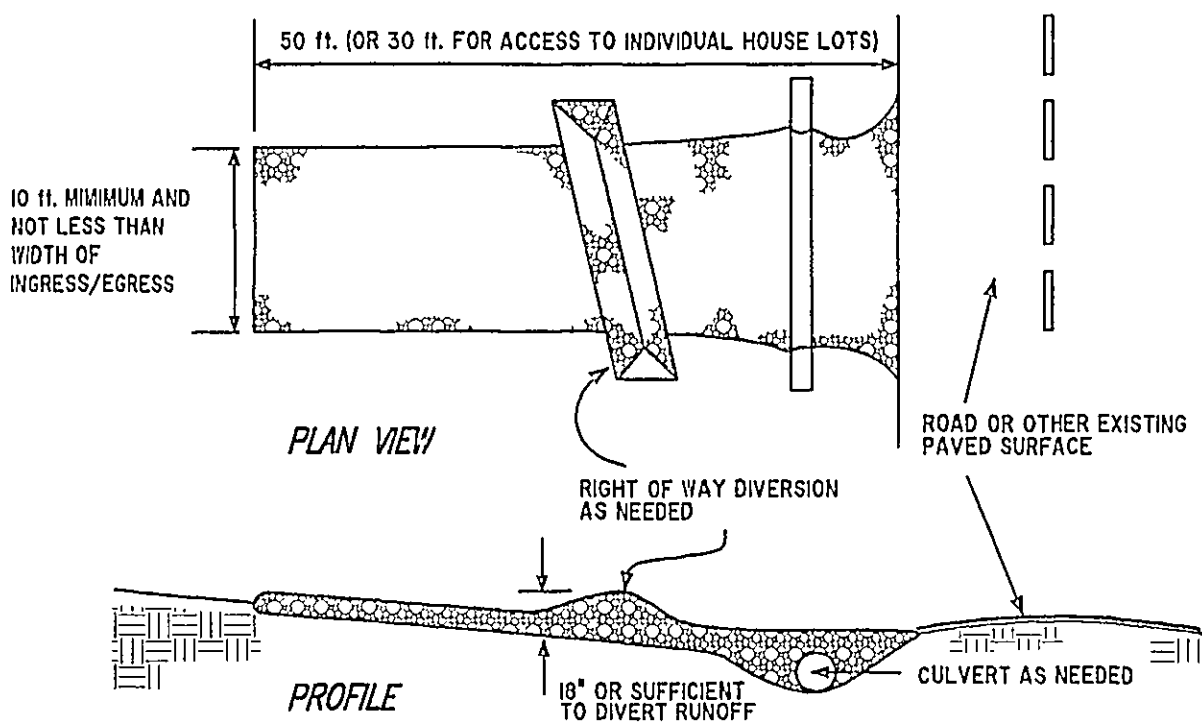
SHEET NO.



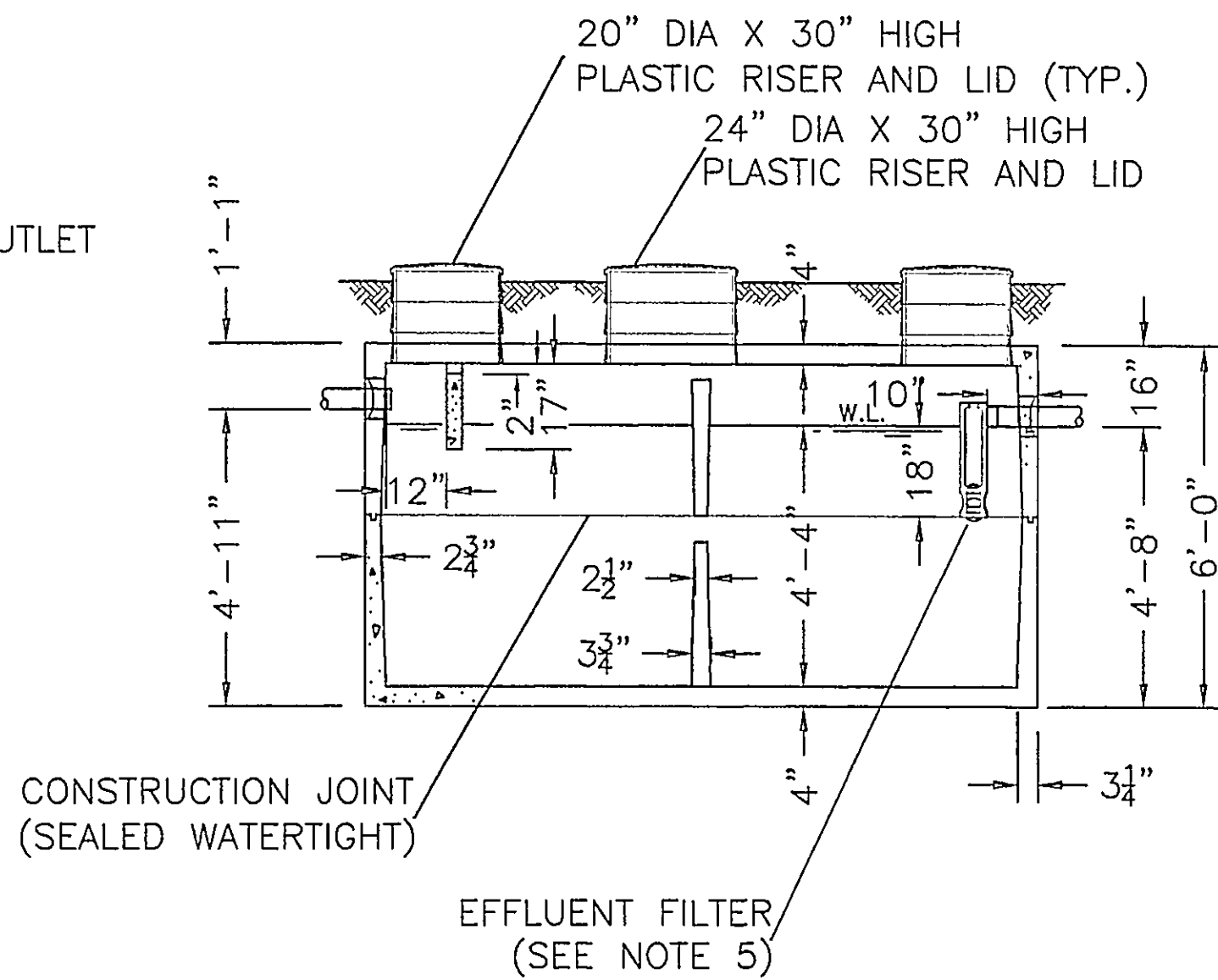
NOTES:

1. REINFORCED PRECAST CONCRETE TO HAVE A COMPRESSIVE STRENGTH OF 5000 PSI @ 28 DAYS.
2. PRECAST CONCRETE TANK SHALL MEET OR EXCEED SPECIFICATIONS AS SET BY O.A.C. RULE 3701-293-11.
3. CONCRETE JOINT SEALANT CONFORMS TO ASTM C-990.
4. TANK SEALS CONFORM TO ASTM C-923.
5. EFFLUENT FILTER RETAINS SOLIDS GREATER THAN 1/16" AND CONFORMS TO ASTM C-1227.
6. STAMP OR LABEL TOP OF TANK AS FOLLOWS:
MACK INDUSTRIES LOGO
2000 GAL. TANK CAPACITY
DATE OF MANUFACTURE

THIS DRAWING IS THE PROPERTY OF MACK INDUSTRIES, INC., AND IT OR THE TECHNOLOGY CONTAINED HEREIN MAY NOT BE REPRODUCED NOR USED EXCEPT AS ORIGINALLY INTENDED WITHOUT THE EXPRESSED CONSENT OF MACK INDUSTRIES, INC.



JOINING SECTIONS OF SILT FENCE



STATE APPROVAL PENDING

DUAL COMPARTMENT 2000 GALLON SEPTIC TANK

O.D.H. 2007 COMPLIANCE, OAC RULE 3701-29-11

DRAWN BY: CJ SCALE: 1/4"=1'-0" DRAWING NO.:
DATE: 4/5/07 REV: D 1000 GAL

MACK INDUSTRIES, INC.

201 COLUMBIA ROAD, VALLEY CITY, OHIO 44280 (330) 483-3111

TEMPORARY SEEDING SPECIFICATIONS			
SEEDING DATES	SPECIES	LB./1000 FT.	PER AC.
MARCH 1 TO AUGUST 15	OATS	3	4 BUSHEL
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
	PERENNIAL RYEGRASS	1	40 LB.
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
AUGUST 16 TO NOVEMBER 1	RYE	3	2 BUSHEL
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
	WHEAT	3	2 BUSHEL
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.
NOVEMBER 1 TO SPRING SEEDING	PERENNIAL RYEGRASS	1	40 LB.
	TALL FESCUE	1	40 LB.
	ANNUAL RYEGRASS	1	40 LB.

NOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED.

EROSION AND SEDIMENT CONTROL SCHEDULE

INGRESS-EGRESS

A STONE ACCESS DRIVE COMPLETE WITH UNDER LYING GEO-TEXTILE FABRIC (20 FEET WIDE AND 50 FEET LONG) FOR INGRESS AND EGRESS AT THE SITE SHALL BE INSTALLED. THIS DRIVE SHALL BE THE ONLY ENTRANCE AND EXIT TO THE SITE.

STREETS DIRECTLY ADJACENT TO THE CONSTRUCTION ENTRANCES AND RECEIVING TRAFFIC FROM THE DEVELOPMENT AREA, SHALL BE CLEANED DAILY TO REMOVE SEDIMENT TRACKED OFF-SITE. IF APPLICABLE, THE CATCH BASINS ON THESE STREETS NEAREST TO THE CONSTRUCTION ENTRANCES SHALL BE CLEANED WEEKLY.

SILT FENCE

ALL SILT FENCE SHALL BE INSTALLED PRIOR TO ANY EARTHWORK ACTIVITIES AT THE SITE IN THE LOCATIONS SHOWN ON THE SITE PLAN AS WELL AS ALONG THE FRONT OF ANY LOT THAT SLOPES TOWARDS THE STREET.

TEMPORARY SEEDING

DISTURBED AREAS OF THE SITE THAT ARE TO REMAIN IDLE FOR MORE THAN TWENTY-ONE (21) DAYS SHALL BE PROPERLY SEEDDED AND STRAW MULCHED WITHIN SEVEN (7) DAYS OF COMPLETION OF INITIAL GRADING. TEMPORARY SEEDING AND MULCHING OF A THIRTY (30) FOOT STRIP OF THE ENTIRE FRONT OF THE LOT SHALL BE MAINTAINED ON THE SITE ONCE INITIAL GRADING IS COMPLETE.

STABILIZATION OF CRITICAL AREAS WITHIN FIFTY (50) FEET OF ANY STREAM OR WETLAND SHALL BE COMPLETE WITHIN TWO (2) DAYS OF THE DISTURBANCE IF THE SITE IS TO REMAIN INACTIVE FOR LONGER THAN FOURTEEN (14) DAYS.

MULCHING

STRAW/MULCH SHALL BE APPLIED AT A RATE OF 1 BALE PER EVERY TEN (10) FEET OF CURB, AT A WIDTH OF THIRTY (30) FEET OF THE ENTIRE LENGTH OF THE LOT. WOOD CHIPS MAY ALSO BE USED BUT MUST BE SPREAD AT A MINIMUM DEPTH OF FOUR INCHES OVER THE THIRTY-FOOT WIDTH AND MUST BE ACCOMPANIED BY A PROPERLY INSTALLED SILT FENCE.

MAINTENANCE

EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED EVERY SEVEN (7) DAYS OR WITHIN 24 HOURS OF A 0.5" OR GREATER RAINFALL EVENT. NECESSARY REPAIRS SHALL BE MADE AT THIS TIME.

NOTE:

ALL EROSION AND SEDIMENT CONTROL SPECIFICATIONS, APPLICATIONS, AND TIMETABLES ARE BASED OF THE DESCRIPTIONS AND STANDARDS OF THE OHIO DEPARTMENT OF NATURAL RESOURCES "RAINWATER AND LAND DEVELOPMENT MANUAL" AND CAN BE FOUND IN THE LAKE COUNTY EROSION AND SEDIMENT CONTROL RULES AS ADOPTED DECEMBER 21, 1999.

THE SPECIFIED EROSION AND SEDIMENT CONTROL STANDARDS ARE GENERAL GUIDELINES AND SHALL NOT LIMIT THE RIGHT OF THE COUNTY TO IMPOSE, AT ANY TIME, ADDITIONAL, MORE STRINGENT REQUIREMENTS. NOR SHALL THE STANDARDS LIMIT THE RIGHT OF THE COUNTY TO WAIVE, IN WRITING, INDIVIDUAL REQUIREMENTS.

REVISIONS	BY
REVISED HOUSE LOCATION APR. 01, 2009	WSO
REVISED SEPTIC PER STEADYSTATE APR. 07, 2009	WSO

Barrington
CONSULTING GROUP, INC.
9114 TYLER BLVD., MENTOR, OHIO 44060
PHONE 440.205.1260 FAX 440.205.1262
www.BarringtonCGI.com

STEVEN J. PETRO
7991 AILEEN DR.
MENTOR, OHIO 44060
440-255-1211

SITE PLAN
SIL 4 PALOMINO TR., KIRTLAND, OHIO 44094
BRIDLEHURST ESTATES SUBDIVISION No. 3 VOL. Y PG. 31
PETRO RESIDENCE

DRAWN WSO
CHECKED DOWN
DATE OCT. 20, 2008
SCALE 1" = 20'
JOB NO. 08100
SHEET 3/3
OF SHEETS