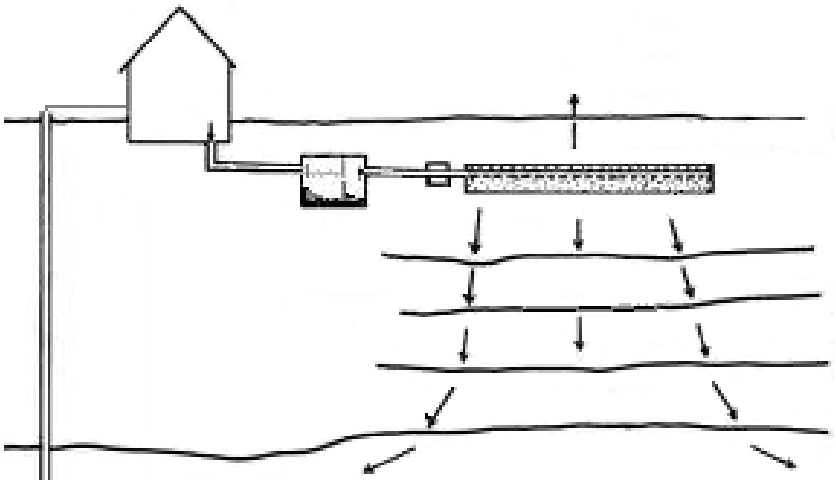
MERCED COUNTY

Installation Guide

- for standard, residential septic systems -

Onsite Wastewater Treatment Systems ~ OWTs



Community and Economic Development Department Division of Environmental Health **Revised October 6, 2022**

MINIMUM SIZE REQUIREMENTS for STANDARD SEPTIC SYSTEMS

		ABSORPTIVE AREA & LEACHLINE LENGTH					
		Slight Soil		Moderate Soil		Severe Soil	
# of Bedrooms	Tank Size (gallons)	*total area (sq. ft.)*	*linear feet*	*total area (sq. ft.)*	*linear feet*	*total area (sq. ft.)*	*linear feet*
1	1200	300	100	300	100	300	100
2	1200	300	100	400	133	600	200
3	1200	450	150	600	200	900	300
4	1500	600	200	800	267	1200	400
5	1800	750	250	1000	333	1500	500
6	2100	900	300	1200	400	1800	600
7	2400	1050	350	1400	467	2100	700

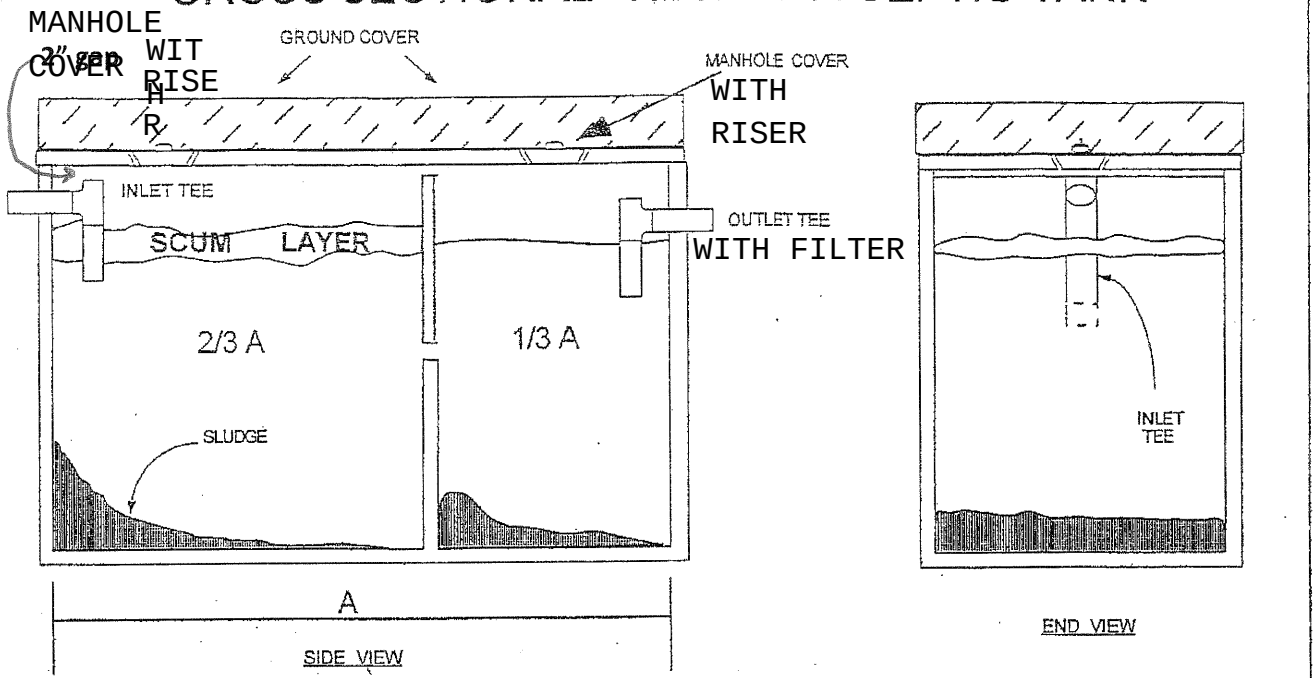
MINIMUM SEPARATION DISTANCES (SETBACKS)

	Domestic Well	Public Well	Flowing Stream, Unlined Canal[1]	Drainage Course or Intermittent Stream[2]	Cut or Fill Bank[3]	Property Line	Lakel, Pond, Reservoir or Wetland[5]
Septic Tank or Sewer Line	50	100	50	25	10	25	200
Leaching Trench	100	150	100	50	4 x height	50	200
Seepage Pit	150	200	100	50	4 x height	75	200

1. As measured from the stream's 10-year frequency flood line or canal's high water line.
2. As measured from the edge of the drainage course/basin or intermittent stream.
3. Distance in feet equal to four times the vertical height of the cut or fill.
4. Distance from parcel lines adjacent to undeveloped property where individual domestic wells may be allowed but locations are not yet determined.
5. As measured from the high water line.

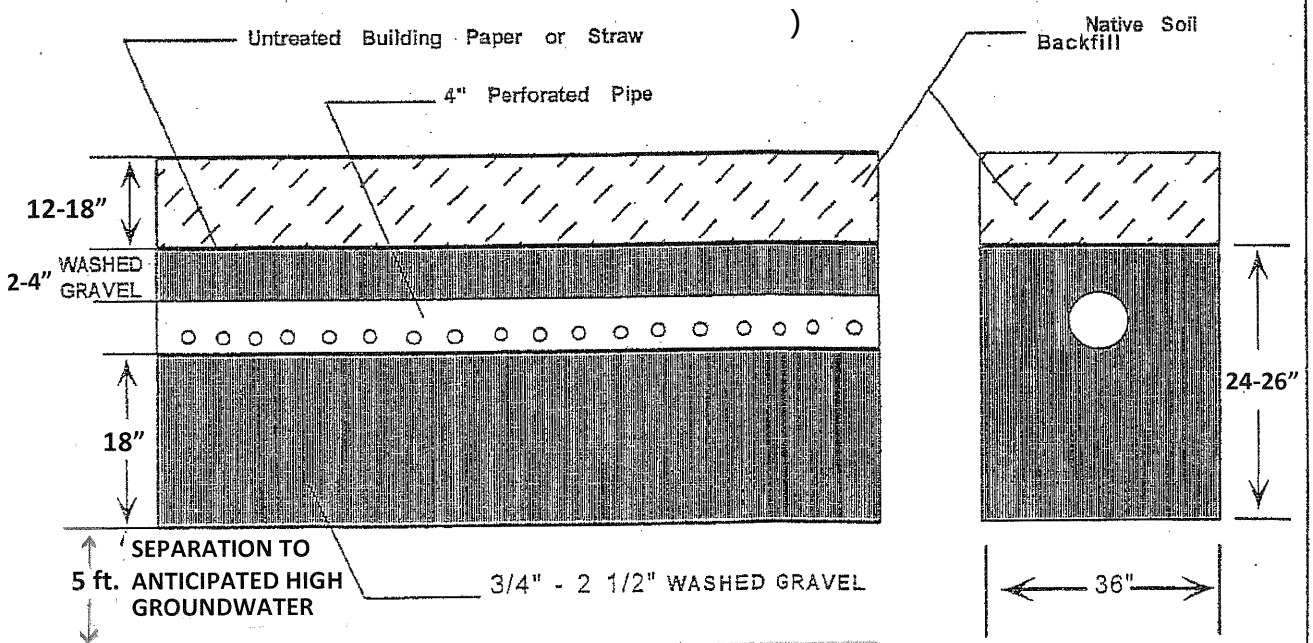
- Minimum distance between leachlines is 10 feet.
- No leachline may be greater than 100 feet long.
- Minimum distance between any structure and leachline is 10 feet.
- Minimum distance between septic tank and any structure is 5 feet.

CROSS SECTIONAL VIEW OF A SEPTIC TANK



STANDARD LEACHLINE SPECIFICATIONS

Maximum Length of Each Leachline	100 ft.
Bottom Width of Trench	36 in.
Minimum Spacing of Leachlines Center to Center	10 ft.
Minimum Depth of Earth Cover Over Leachlines	12 in.
Maximum Depth of Earth Cover Over Leachlines	18 in.
Maximum Grade of Leachlines	Level
Depth of Gravel Under **Leach Pipe**	**18** in.
Depth of Gravel Over **Leach Pipe** (MIN.)	**2 - 4** in.



NOTE When the above requirements cannot be met a special design may be allowed with prior Health Department approval. Appropriate soils testing is required for all special design systems.

PLOT PLAN REQUIREMENTS & SPECIAL SYSTEMS

Plot Plans

A Plot Plan, consisting of a representational, detailed drawing of the subject parcel (or portion thereof), to a scale no larger than one (1) inch equals fifty (50) feet, shall be submitted for Division of Environmental Health approval. The drawing shall be on a minimum of 8.5-inch by 11-inch paper, and shall clearly show all relevant features of the parcel, including:

1. Owner's name, street address, job address and telephone number;
2. A diagram of the parcel showing all property lines, dimensions, the assessor parcel number (APN), and North arrow orientation;
3. Names of streets and roads fronting the property, and any existing and proposed internal roads and vehicle access and/or parking areas including driveways;
4. Dimensions, outlines, and locations of all existing and proposed structures, including hard surfaces such as patios, driveways and walks (e.g., earthen, asphalt, concrete and or gravel-covered);
5. Location of house sewer outlet and proposed location of septic tank and disposal system on the property;
6. Location and nature of any existing and proposed OWTS on the property, and dedicated replacement areas in the event of system failure;
7. Location of any existing trees which may affect location of septic tank or disposal areas and related systems.
8. Any prominent features on and adjacent to the property such as right-of-ways, easements, elevation changes, canals, creeks, lagoons, ponds, corrals;
9. Location of any existing or proposed well, in use or abandoned, either on this property or within 300 feet of the property lines;
10. A statement of the maximum expected waste volume per day: For dwelling units, pool houses, and/or guesthouses, provide the number of bedrooms and bathrooms (rooms with closets will be considered bedrooms for OWTS design purposes)
11. Source and description of domestic water supply;
12. Any public water supply well within 200 feet and any surface water intake for a public water system within 2,500 feet;
13. Total square footage of the lot, minimum useable disposal area on the lot, and all buildings;
14. Setback requirements of front, back and sides of property;
15. Name and telephone number of the preparer of the plot plan.

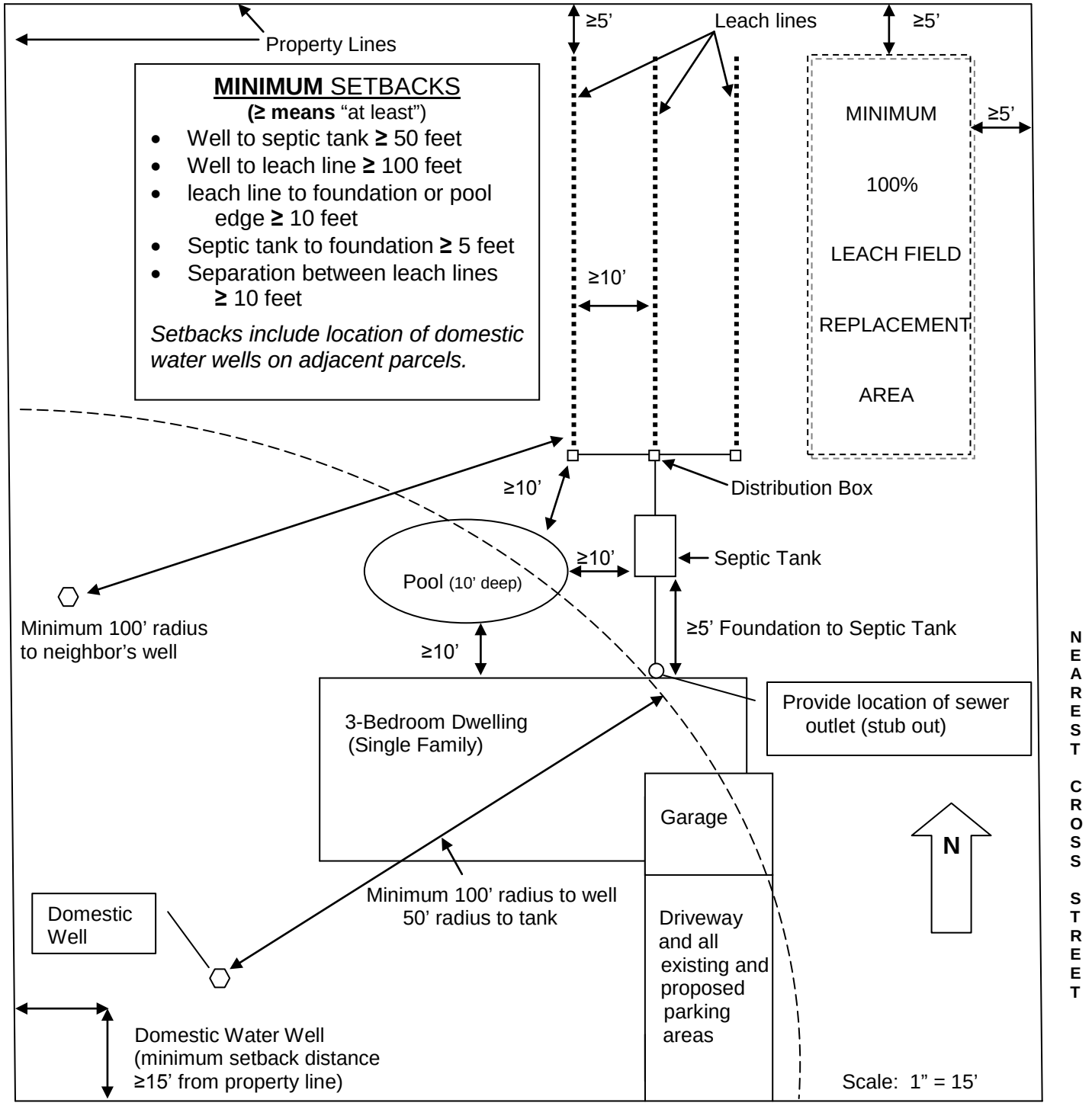
If any of the above information is not provided on the plot plan, approval may be delayed pending submission of the necessary information.

Special Systems

A special septic system may be required, depending on housing density, soil conditions, the depth to groundwater, and sewage characteristics. A special system must be designed by a qualified professional and installed by an experienced contractor.

See Merced County Division of Environmental Health for additional information on special systems.

SAMPLE PLOT PLAN



PROPERTY ADDRESS _____

ASSESSOR's PARCEL NUMBER (APN) _____ MAX. EXPECTED VOLUME OF SEWAGE PER DAY (GAL/DAY) _____

OWNER NAME & PHONE # _____ PUBLIC WATER SYSTEM (PWS) WELL WITHIN 200 FT. YES / NO

OWNER MAILING ADDRESS _____ PWS SURFACE WATER INTAKE WITHIN 2500 FT. YES / NO

NAME AND PHONE # OF PLOT PLAN PREPARER _____

LEACH FIELD and SEPTIC TANK CARE

LEACH FIELD

DO...

1. Turn the valve every year if your system is equipped with an alternating valve.
2. Keep all automobiles and heavy vehicles off the leach field and distribution boxes to nearby leach lines.
3. Plant dense grass cover or other shallow-rooted plants over a leach field; they are beneficial.
4. Think ahead when planting trees and shrubs. Although they promote moisture removal from the leachfield, their roots may clog nearby leach lines.

DON'T...

1. Allow puddles of storm water to form over a leachfield.
2. Flood ground surface above leachfield. Use sprinkler or drip systems as a watering source.
3. Construct buildings or pave over the tank or leach field.
4. Park or drive over leach field.

SEPTIC TANK

DO...

1. Limit water entering the tank:
    - Use water-saving fixtures (faucets, showers, toilets).
    - Prevent roof, foundation and basement drainage from entering the tank.
    - Fix all faucet and toilet tank leaks.
2. Wash only full loads in the washer and spread out the washing times during the week to avoid overloading the sewage system in a single day.
3. Minimize use of the kitchen sink garbage disposal.
4. Keep records of the location and pumping of the septic tank and leachfield.
5. Clean the effluent filter regularly by removing the filter and cleaning the filter material into the intake side of the septic tank, making sure to replace the filter and secure the tank lids.

DON'T...

1. Put harmful materials in the tank. Avoid fats, solvents, oils, disinfectants, paints, chemicals, poisons, coffee grounds, paper towels, diapers, wipes (even if flushable), sanitary napkins, and tampons.
2. Use a "starter" in the septic tank. It is not needed for bacterial action to begin.
3. Use septic tank additives. Additives are of no benefit and some may do great harm if they cause the sludge and scum to be washed from the septic tank into the leach field.
4. Park or drive vehicles over septic tank, unless the tank, risers, and lids are traffic-rated.
5. Remove the effluent filter without replacing it or clean it anywhere but the intake side of the tank.