



PLAN REVIEW GUIDELINE FOR ONSITE WASTEWATER SYSTEMS (OWTS)

Rancho Cucamonga is located within the **Santa Ana Region of the California Water Quality Control Board (SRWQCB)**. SRWQCB has adopted the **Local Agency Management Program (LAMP)** and adopted by **Ordinance 911** by the City of Rancho Cucamonga on **June 21, 2017**, effective **August 21, 2017**. **Ordinance No.936** adopts the amended **Chapter 19.28** in its entirety by the City of Rancho Cucamonga with an effective date of **September 17, 2018**.

For this reason, the following are requirements necessary for the design plan check and inspection of **Onsite Wastewater Treatment Systems (OWTS)**:

Should there be a discrepancy between this handout and the **Local Agency Management Program (LAMP)**, the requirements in the **LAMP** shall prevail.

Approved by:


Signature

Michael Frasure, CBO

Building & Safety Services Manager



This handout is a summary of the Local Agency Management Program for Onsite Wastewater Treatment Systems (**LAMP OWTS**). For further information, the reader is directed to the LAMP OWTS document available on the City of Rancho Cucamonga Building & Safety Services Department webpage and is available for review at the Building and Safety front counter.

The following design criteria may be used for the sizing of a replacement existing OWTS. If a percolation test has been performed, please see the sizing requirements based on a percolation test in the LAMP OWTS (see **Chapter 6**). For new OWTS, please see the requirements in the LAMP OWTS.

DESIGN CRITERIA FOR PRIVATE SEWAGE DISPOSAL SYSTEMS For Systems Without a Percolation Test

Check Sewage Rate Map for Minimum Depth of Seepage Pits and the website: <http://permitrack.sbcounty.gov/wap/> for the maximum depth of the seepage pits

<i>Septic Tank Capacity (Gallons)</i>	<i>Minimum Disposal Leach Field (Area Req'd)</i>	<i>3ft A.P.* @ 12" Wide Bottom Below Leach Line (A.P. x Length)</i>	<i>5ft A.P.* @ 24" Wide Bottom Below Leach Line (A.P. x Length)</i>	<i>7ft A.P.* @ 36" Wide Bottom Below Leach Line (A.P. x Length)</i>	<i>Seepage Pit with Min. 4ft. - Max. 6ft. Dia. Liner (Diameter x Depth) (See Notes: 3, 4, 5 & 6)</i>		
		Field Design at 60 sq. ft./100 gal. (See Notes: 1, 2, 3, & 6)			Pit Design 60 sq. ft./100 gal.		
1000	600	(2) 3' x 100'	(4) 5' x 55'	(2) 7' x 100' or (1) 7' x 200''	5' x 39'	6' x 32'	7' x 28'
1200	720	(3) 3' x 80'	(4) 5' x 66'	(4) 7' x 52'	5' x 46'	6' x 38'	7' x 33'
1500	900	(3) 3' x 100'	(3) 5' x 82'	(3) 7' x 70'	5' x 58'	6' x 48'	7' x 41'
		Field Design at 90 sq. ft./100 gal. (See Notes: 1, 2, 3, & 6)			Pit Design 90 sq. ft./100 gal.		
1000	900	(3) 3' x 100'	(2) 5' x 100'	(3) 7' x 64'	5' x 58'	6' x 48'	7' x 41'
1200	1080	(4) 3' x 90'	(3) 5' x 72'	(3) 7' x 78'	5' x 69'	6' x 58'	7' x 50'
1500	1350	(5) 3' x 90'	(3) 5' x 90'	(2) 7' x 100'	5' x 86'	6' x 72'	7' x 62'

Notes: *Absorption Perimeter

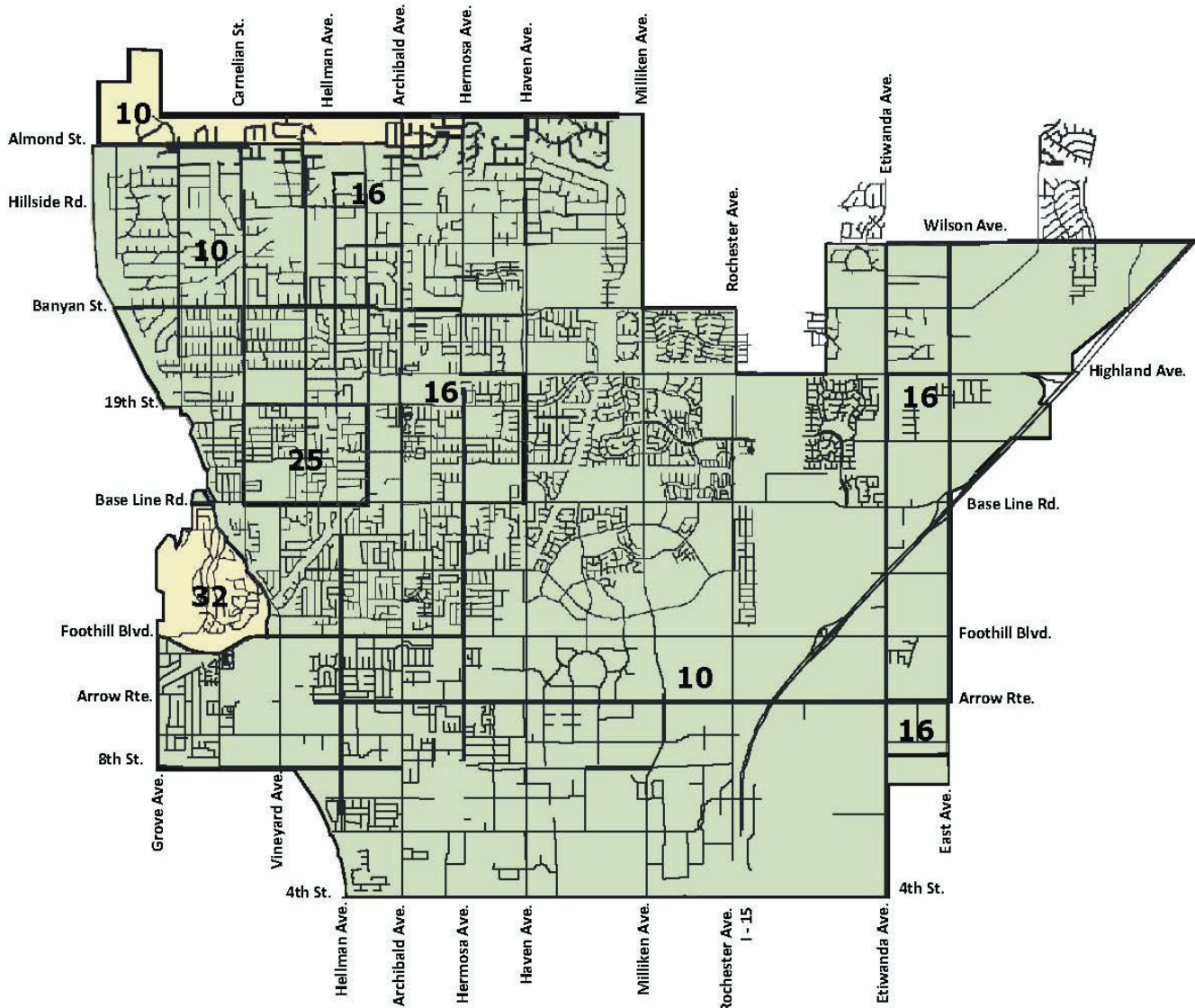
1. Other variations may be allowed to width and depth to achieve the required leach area. – **LAMP Chapter 8**
2. Trenches shall not have less than 600 sq. ft. of infiltrative area. – **LAMP Chapter 8**
3. All deviations from this handout will require a percolation test(s) with a designed septic system by a licensed Civil Engineer. – **LAMP Chapter 6**
4. **Depth of the seepage pit** shall be measured from the bottom of the pit to the invert of the distribution pipe. – **LAMP Chapter 9**
5. Multiple seepage pits may be used. If this is the case, the required depth from the table above can be divided equally among the numbers of seepage pits. In no cases the depth of seepage pits can be less than the "*minimum depth*". – **LAMP Chapter 9**
6. For design and construction requirements, see the Local Agency Management Program **Chapter 8** – Leach Line Systems, **Chapter 9** – Vertical Seepage Pit Systems and **Chapter 10** – Horizontal Seepage Pit Systems.



CITY OF RANCHO CUCAMONGA

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The following diagram shows the general soils types in the city and the allowable percolation rate without a site-specific percolation test.



LEGEND	
	90 SQ. FT./100 GAL.
	60 SQ. FT./100 GAL.



The following table is excerpted from the Local Agency Management Program (**LAMP OWTS**):

Table 3-1

Minimum Setback required from (feet)	Septic Tank	Disposal Field	Seepage Pit
Non-Public Water Supply Well ^{1,8}	100 ⁸	100 ²	150 ²
Public Water Supply Well ¹	100	150 ²	200
Buildings or Structures ³	5	8	8
Property line including Street Right of Way Line	5	5	8
Streams and other flowing bodies of water ⁹	100	100	150
Drainage Course	50	50	50
Lakes, ponds, and other surface water bodies ¹⁰	200	200	200
Large Trees ⁴	10	-	10
Seepage pits, Outside Perimeter	5	5	12
Disposal field, On Center	5	10 ⁶	5
Onsite domestic water lines (building service line)	5	5	5
Public Domestic Water Lines	25	25	25
Distribution Box	n/a	5	5
Ground surface on sloping ground	n/a	15	15
Groundwater ⁵	5	5 ⁷	10

1. Drainage system will clear domestic water supply wells by not less than 50-feet. This distance will be permitted to be reduced to not less than 25-feet where the drainage system is constructed of materials approved for use within a building.
2. For any system discharging 5,000 gallons per day (**GPD**), or more, the required setback will be increased to 200-feet.
3. Includes porches and steps whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walls, covered driveway, and similar structures or appurtenances.
4. Any tree with a trunk diameter of 1-foot or more within 5-feet of the system that will not be removed during construction.
5. The highest known level to which groundwater is known to have occurred rather than the level at the time when testing occurred: <http://permitrack.sbcounty.gov/wap/>
6. Plus 2-feet for each additional foot of depth in excess of 1-foot below the bottom of the drain line. – **LAMP Chapter 3**



7. For any system utilizing Alternative Treatment Systems and Sewage Holding Tanks (see **LAMP Chapter 11**), this minimum separation may be reduced to 2-feet with approval under the Advanced Protection Management Program (**APMP**). Refer to [Chapter 11: Tier 3 - Advanced Protection Management Program for Impaired Areas](#) for more information regarding the APMP and the Regional Water Quality Control Board (**RWQCB**).
8. Unless regulatory or legitimate data requirements necessitate that monitoring wells be located closer.
9. Where the edge of the water body is the natural or levied bank for creeks and rivers or may be less where site conditions prevent mitigation of wastewater to the water body.
10. Where the edge of the water body is the high-water mark for lakes and reservoirs and the mean high tide line for tidally influenced water bodies.

The following diagrams are visual illustrations of the separation requirements.



RECHECK LIST

To facilitate rechecking, please identify next to each circled item below the sheet page upon which correction has been made. Return two (2) sets of corrected plans and one (1) set of original plans used for plan check.

ALL PLANS (SEE LAMP CH.4):

- ___ 1. **All plans must be drawn to scale**, include property lines, direction arrow, drawing scale, structures, trees, pools, and paved areas such as driveways and walkways. Plans may be drawn on letter, legal or ledger size paper. A computerized drawing is preferred. **Minimum letter height is 1/8-inch.**
- ___ 2. Identify location and size of the existing private sewage disposal system on plans.
- ___ 3. Show number of **bedrooms*** in the house.
- ___ 4. Show the depth below grade of the outlet of the septic tank and inlet of the seepage pit or leach lines.
- ___ 5. Show sizes of **all** seepage pits and leach lines. New construction shall be in accordance with City of Rancho Cucamonga requirements. – **LAMP, effective September 17, 2018**
- ___ 6. For new septic systems, tanks shall be sized as follows per table below from the current adopted California Plumbing Code.

Single Family Dwelling Number of Bedrooms	Size of Tank (gallons)
1 or 2	750
3	1,000
4	1,200
5 or 6	1,500

* **Note:** Dens, studies and offices are considered as bedrooms (**LAMP Chapter 4, Guidelines for Determining the Number of Bedrooms**).



RECHECK LIST

(continue)

SEPTIC TANK (SEE LAMP CH. 7):

- __ 1. Show manufacturer, model number, capacity and IAPMO listing number. Tanks which are not IAPMO listed must have structural calculations and construction details submitted.
- __ 2. Show manufacturers approved installation requirements, the approved burial depths for the tank with or without grade boards, and any special devices necessary to attain greater burial depths.
- __ 3. Indicate number and size of compartments in the tank.
- __ 4. Show tanks drawn to scale and properly dimensioned from all buildings, property lines, water wells, trees, seepage pits, water lines, and disposal fields (see **LAMP Chapter 8** – Leach Line Systems, **Chapter 9** Vertical Seepage Pit Systems, and **Chapter 10** – Horizontal Seepage Pit Systems).
- __ 5. Show anticipated burial depth to the top of the tank. If extra burial depth is proposed, the number of risers and the **actual** and **effective** burial depths are to be identified on the plans.
- __ 6. Describe how the manholes will be brought to grade when installed under concrete or asphalt paving. Model numbers and sizes of extension rings, caps or access covers.
- __ 7. Provide a note requiring the tank to be filled with water, without leakage, at the time of the first inspection.

DISPOSAL FIELD OR SEEPAGE PIT (SEE LAMP CH. 8, 9 AND 10):

- __ 1. Show location drawn to scale including length, width, depth, and dimensions from all buildings, property lines, wells, trees (**for seepage pits**), adjoining seepage pits or disposal fields, water lines and distribution box.
- __ 2. **Provide cross sectional details:** For disposal fields, show the depth of filter material both above and below the leach pipe the size of the leach pipe and the paper or straw cover. For seepage pits, provide manufacturer's installation requirements, or for field fabricated pits, a complete structural section and structural calculations.
- __ 3. Show location of 100% expansion area or replacement pits, drawn to scale.
- __ 4. Provide a clear indication that disposal (**leach**) field will not be installed under concrete or asphalt paving.
- __ 5. Provide notes regarding leach line scope (**2-inch/100-feet max.**), filler material size, and preparation of the trench prior to line placement.
- __ 6. Show a minimum 2% drop (**1/4-inch per foot, CPC2019 §718.1**) from the outlet of the distribution box or the septic tank to the disposal (**leach**) field or disposal (**seepage**) pit(s). Sewage piping material to and from septic tank, distribution box, disposal field or seepage pits shall be in accordance to **CPC2019 Table 701.2**.



RECHECK LIST

(continue)

DISTRIBUTION BOX:

- ___ 1. Manufacturer and model number and installation instructions.
- ___ 2. Cross section detail depicting installation on a level 2-inch thick concrete slab (**precast or set-in-wet**) and showing the number of outlets.
- ___ 3. Drawn to scale and properly distanced from seepage pit or disposal field (see **LAMP Chapter 8** – Leach Line Systems, **Chapter 9** – Vertical Seepage Pit Systems, and **Chapter 10** – Horizontal Seepage Pit Systems)
- ___ 4. Show a minimum 2% drop (**1/4-inch per foot, CPC2019 §718.1**) from the outlet of the distribution box or the septic tank to the disposal (**leach**) field or disposal (**seepage**) pit(s).

GENERAL REQUIREMENTS:

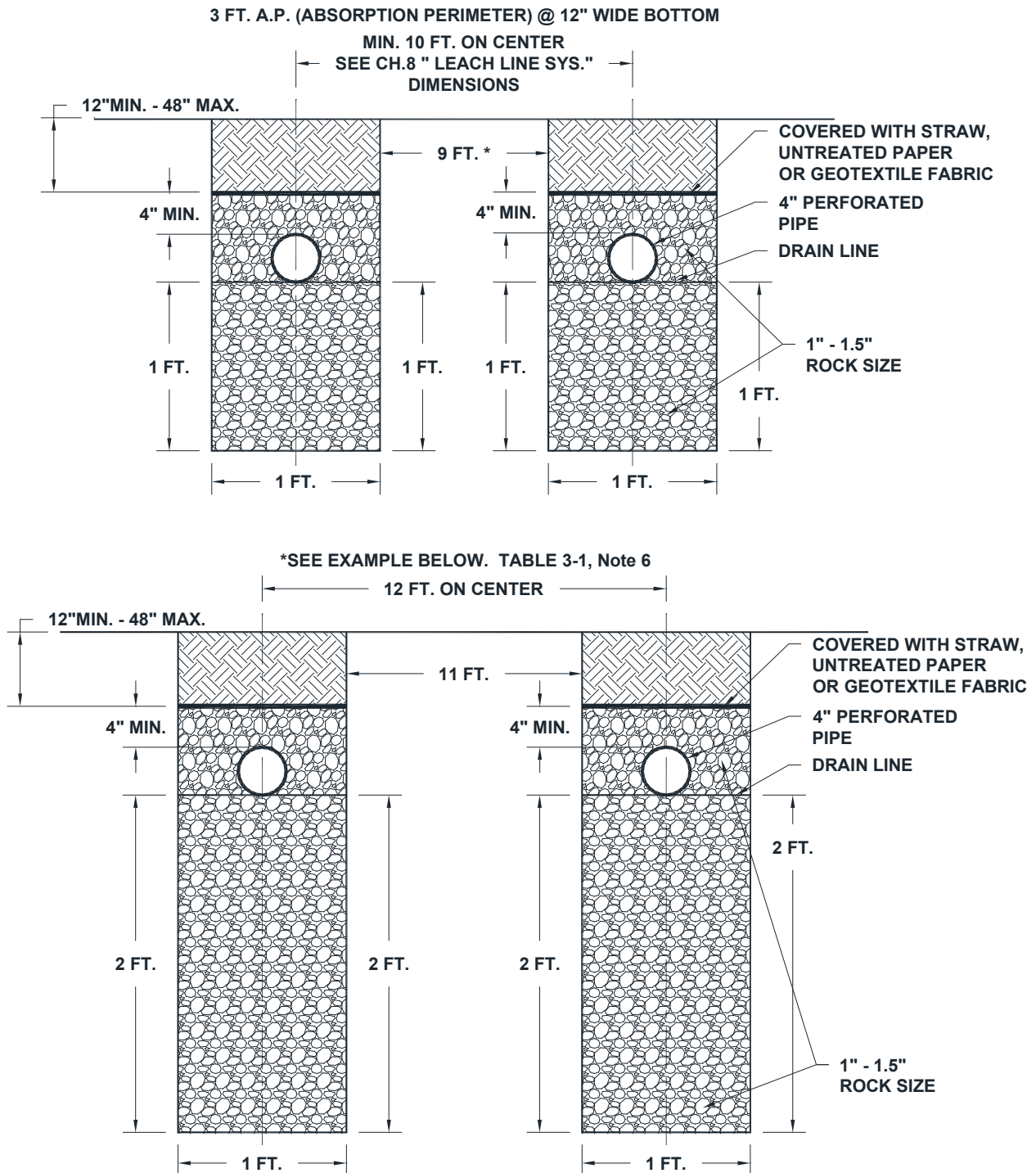
- ___ 1. If a percolation test/study was prepared for the project site, provide a copy of the percolation study/test for review by the Building Official, or his/her designee. **See Attachment No.1 - No.3.**
- ___ 2. Notes regarding the requirement to post, in a conspicuous location within each dwelling unit, "**A Homeowner's Guide to Septic Systems**" (see **LAMP Appendix B**), and individual **as-built drawings** prior to **final inspection**. These drawings are to be submitted the Building & Safety Inspector, prior to the time of final inspection on the septic system and are to be of a quality as to allow for computer scanning and subsequent imaging.
- ___ 3. **New Septic System:** show the general topography including contour lines of the site relative to the finish floor elevation to establish approximate burial depths of the leach field and septic tanks. For sites that have been graded, indicate all cut and fill areas in relation to the septic system.
- ___ 4. **Existing Septic System with Seepage Pit (s):** show the depth below grade from the seepage pit(s) inlet(s) to the bottom of the seepage pit(s).

If this is a new subdivision, with plans prepared by the Civil Engineer of Record, the engineer shall prepare the plans on a minimum 24" x 36" size sheet (**30" x 42" maximum**) with the information required in **LAMP Chapter 4** Layout Design shown on the construction drawings submitted for permitting.



Examples of Leach Lines

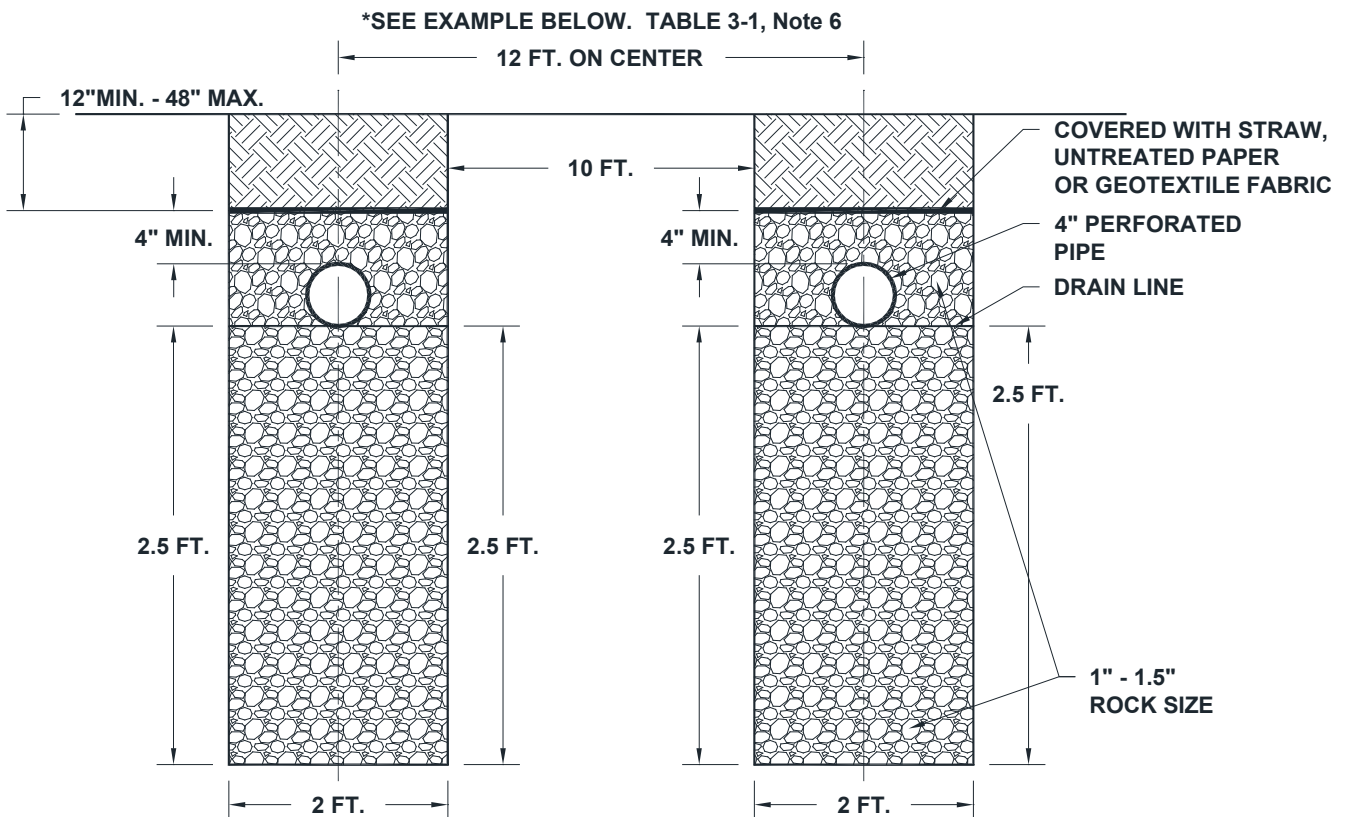
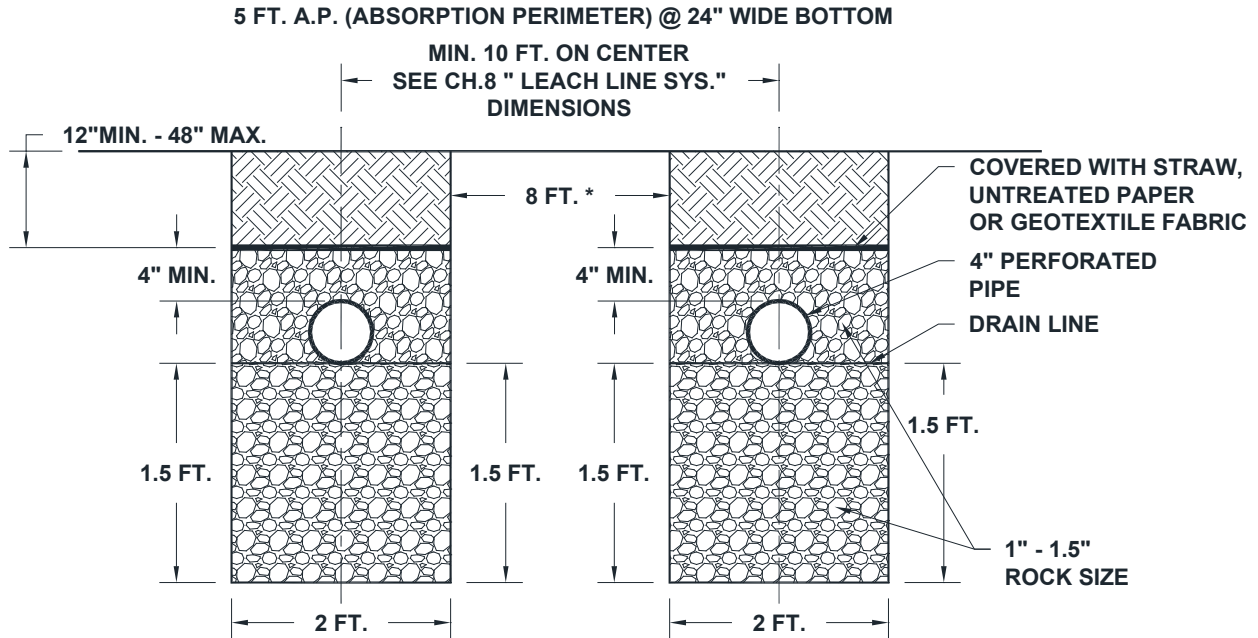
Example 1



NOT TO SCALE



Example 2

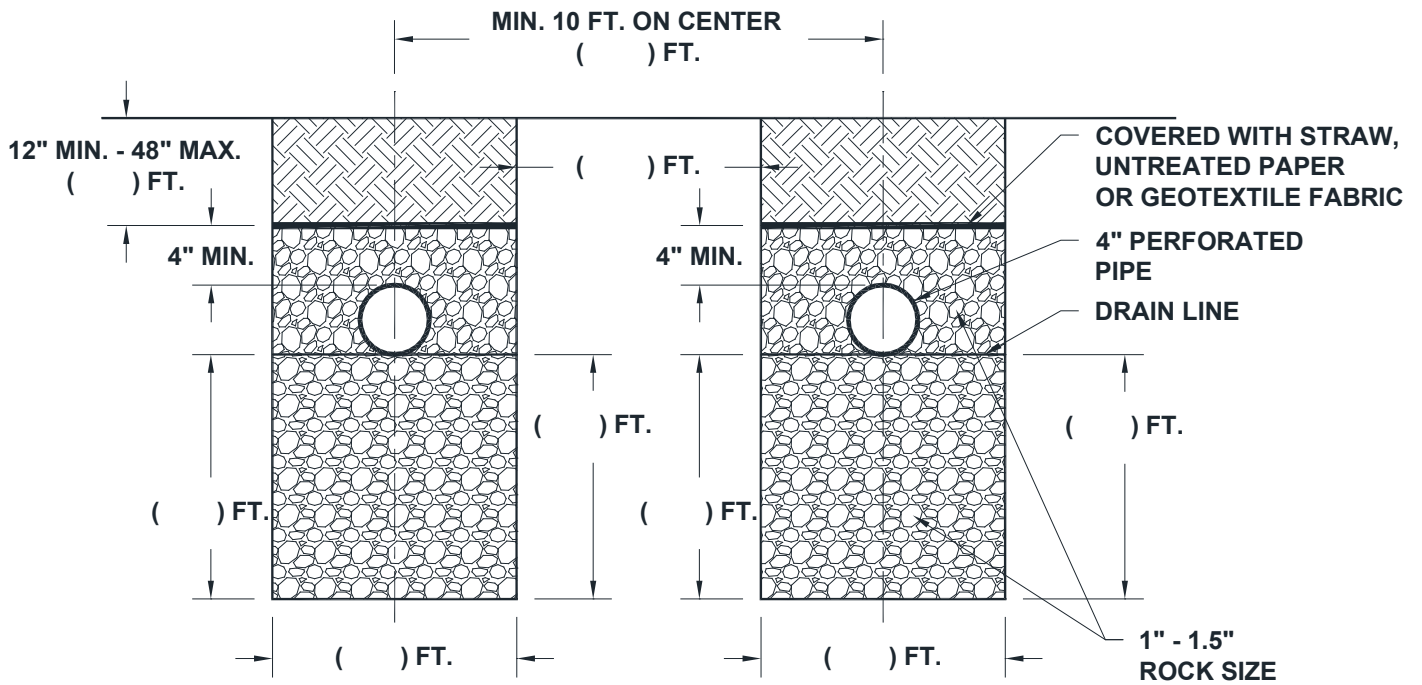


NOT TO SCALE



LEACH LINE SECTIONAL VIEW

See LAMP Chapter 8

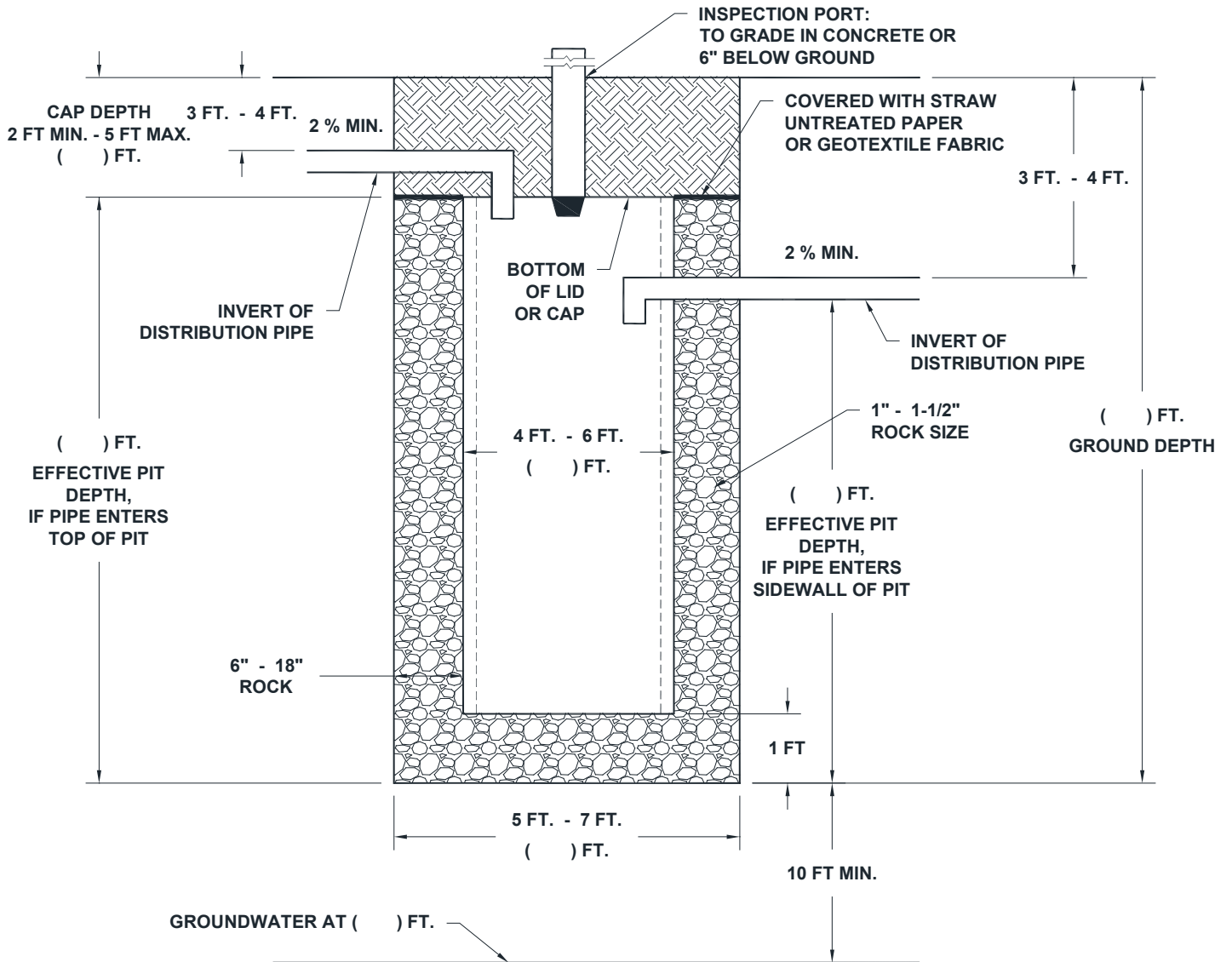


NOT TO SCALE



SEEPAGE PIT SECTIONAL VIEW

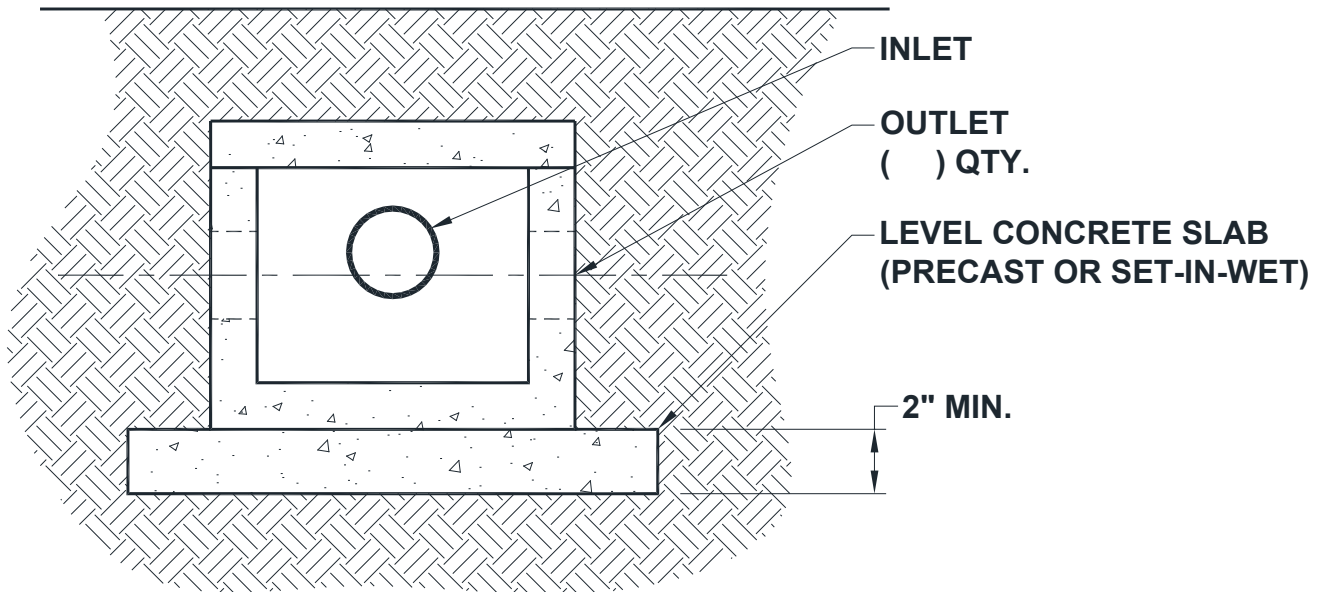
See LAMP Chapter 9



NOT TO SCALE



DISTRIBUTION BOX SECTIONAL VIEW





Attachment No.1

Percolation Testing

The following information is an excerpted from the Local Agency Management Program for Onsite Wastewater Treatment Systems. – **LAMP Chapter 2**

Percolation Test Notification

Prior to a percolation test the applicant shall notify the City of Rancho Cucamonga Building & Safety Services Department which day the percolation test and the hours of the day the percolation test will be performed.



Attachment No.2 Percolation Test Notification Form

The following form may be completed and emailed to the **Building Inspection Supervisor, Zack Neighbors** at zack.neighbors@cityofrc.us.

City OWTS PMT number (*if known*): _____

Date submitted: _____

Date of Testing: _____

Time of Testing:
(*provide a range of testing hours*) _____

Assessor's Parcel Number: _____

Street Address: _____

Lot Size: _____

Slope of Lot where OWTS will be located: _____

Disposal Field Type: _____

Are there streams nearby?: _____

Are there rock outcroppings?: _____

Provide any other criteria which may affect
the installation of a standard OWTS system: _____

Estimate Soil Type: _____

Other Comments: _____



Attachment No.3 Percolation Testing

If a percolation test was performed by Qualified Professional as defined in the Definitions Section of **Chapter 1** of the Local Agency Management Program for Onsite Wastewater Treatment Systems (**LAMP OWTS**). The following information shall be provided at the time an OWTS permit is submitted for review, approval and permitting.

City OWTS PMT number (*if known*): _____

Weather notes during testing: _____

Date of Testing: _____

Time of Testing: _____

Assessor's Parcel Number: _____

Street Address: _____

Lot Size: _____

Slope of Lot where OWTS will be located: _____

Disposal Field Type: _____

Are there Streams nearby?: _____

Are there rock outcroppings?: _____

Provide any other criteria which may affect the installation of a standard OWTS: _____

Estimate Soil Type: _____

Percolation Rate – minutes per inch (*mpi*): _____

Percolation Rate – square feet per 100 gallons: _____

Other Comments: _____



Attachment No.4 LAMP Variance Request

PERMIT NUMBER:	DATE SUBMITTED:
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Street Address:	APN:	No. of Bedrooms:
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SEPTIC TANK () GALLONS

Existing <input type="checkbox"/>	Proposed <input type="checkbox"/>
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DISPOSAL FIELD TYPE

<input type="checkbox"/> Leach Lines	<input type="checkbox"/> Vertical Seepage Pits	<input type="checkbox"/> Horizontal Seepage Pits
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Request by:

Signature

Print Name, Title, Contractor Co. or Engineering Firm

LAMP VARIANCE REQUEST

Reason for Variance:

Change to the Variance:

Outcome of Variance:

Approved

Denied

Approved by:

Date:

Signature

Print Name

Plans Examiner

Approved by:

Date:

Signature

Michael Frasure, CBO

Print Name

Building & Safety
Services Manager



Attachment No.5

Include an aerial copy of the property from Google Earth on this sheet.



Attachment No.6

Include a copy of the report from the San Bernardino County Stormwater Facility Mapping Tool (<http://permitrack.sbcounty.gov/wap/>):



Attachment No.7

Include the project site/construction drawing on this sheet:



Attachment No.8
City of Rancho Cucamonga
Onsite Water Treatment Systems
(Attached to Plans)

A. GENERAL NOTES

1. The city only approves the plumbing design in scope and not in detail on these plans. The city does not verify construction quantities of these plans. Approval of the plans is for permit purposes only and shall not prevent the city from requiring corrections of errors in the plans. City acceptance of the plans does not relieve the applicant/contractor from responsibilities from the correction of errors and omissions discovered during construction.
2. All work shall be completed in accordance with the current adopted California Plumbing Code and all subsequent amendments.
3. At the time of the first inspection, the septic tank shall be filled with water.
4. Disposal (**leach**) fields shall not be constructed under driveways, asphalt pavement, walkways or other impervious services.
5. Leach lines shall be laid level. The maximum allowable slope for a leach line is **2-inch/100-feet**.
6. The distribution box shall be set on a level 2-inch thick concrete slab (**precast or set-in-wet**) and showing the number of outlets.
7. The contractor shall provide to the homeowner "**A Homeowner's Guide to Septic Systems**".
8. Prior to final inspection, the contractor shall provide to the Building & Safety Services Inspector an **as-built** set of plans.

B. AS-BUILT CERTIFICATE:

I hereby certify that the "**record drawing**" measurements as shown hereon were made under my supervision or as noted and are correct to the best of my knowledge and belief.

Construction Address: _____

Permit Number: _____

Print Name: _____

Contractor's License No.: _____

Signature: _____

Date: _____



Attachment No.9

Other Notes to Be Completed by Applicant or Contractor

SEPTIC TANK	
Existing <input type="checkbox"/>	
Proposed <input type="checkbox"/>	
Manufacturer:	Capacity in Gallons:
Manufacturer Model Number:	IAPMO Listing No.:
Size of each Compartment:	

SEEPAGE PITS	
Manufacturer:	Manufacturer Model Number:

DISTRIBUTION BOX	
Manufacturer:	Manufacturer Model Number:



Attachment No.10

Inspection of Onsite Water Treatment Systems

PURPOSE: To provide a consistent method of inspection of private sewage disposal systems.

PROCEDURE: The inspection of private sewage (*septic*) systems requires three visits to the site.

First visit: Pre-inspection, after submittal of plans and payment of plan check fee, prior to issuance of a plumbing permit and commencement of construction activity. Ground must be outlined using paint.

Second visit: When excavation is complete, the septic tank and distribution box are installed; points to be considered include the following:

Septic Tank

1. Tank is installed on dry, level, well-compacted soil.
2. Inlet invert 2-inch above outlet invert.
3. Fittings properly vented with legs extending 12-inch below liquid level.
4. Compartment fitting in place.
5. Tank is coated in accordance with material used.
6. Located in accordance with **Table 3-1 (attached)** and the approved plans.
7. Burial depth of tank in accordance with manufacturer's design, IAPMO listing and approved plans. Deepened tanks installed in accordance with manufacturer's recommendations i.e. grade boards, tank risers, strengthened caps, etc. Interior coating.
8. Manholes brought to grade where under concrete or asphalt paving.
9. Additional manhole shall be provided over the baffle wall when first compartment exceeds 12-feet in length.
10. Tank filled with water to flow line. Seams and joints are left exposed (**except bottom**) and the tank and other components determined to be watertight.

Distribution Box

1. Set on a level 2-inch thick concrete slab (**precast or set-in-wet**) and showing the number of outlets.
2. Inside coated with a bituminous coating.
3. Invert of inlet 1-inch minimum above outlet inverts. **All outlets at the same level.**
4. Located 5-feet minimum from disposal fields, beds and seepage pits. – **Table 3-1**



Disposal Trenches, Bed or Seepage Pit

1. For disposal trenches or beds, grade line, or other acceptable filter material depth indicators, shall be installed with elevation of leach pipe invert indicated. Slope of leach line not to exceed **2-inches per 100-feet of run**.
2. Excavation properly prepared with no smeared surfaces. Soil roughened to facilitate proper percolation.
3. Width and location of trenches for leach lines and diameter and depth of seepage pit in accordance with **Table 3-1** and approved plans.
4. In a serial distribution system, upper trench to be saturated before effluent passes to the next lower trench. The connecting down line installed on natural undisturbed soil.

Third visit: Leach lines installed to previously determined gradients and ready for backfilling.

Disposal Trenches, Beds or Seepage Pit

1. Filter material (**stone, gravel, or slag**) to be clean and varying in size from **1-inch to 1-1/2-inches**. Liners or brick for seepage pit back filled with rock as required.
2. Leach lines minimum 4-inch diameter and checked for consistent grade not exceeding **2-inches fall in 100-feet of length**.
3. Fittings watertight with no mitering of pipe.
4. Lines covered with 4-inch minimum of filter material.
5. Leach line or bed covered with untreated building paper, straw or other acceptable porous material.
6. Minimum spacing between trenches shall be 10-feet on center plus 2-feet for each additional foot of depth more than 1-foot below the bottom of the drain line. Distribution lines in leach beds spaced not more than 10-feet on center nor more than 3-feet from edge of bed.
7. Multiple lines of approximately equal length.
8. Distribution box properly shaded prior to backfill (**CPC2019 §314.4**).

ANALYSIS: This procedure is intended to provide a thorough and accurate inspection of private sewage disposal systems. **Any variations** from that outlined above will be considered **on a case-by-case basis only** and must be discussed with the appropriate supervisor