

**PRESSURE Dosed TRENCH SYSTEM WITH PRIMARY (SEPTIC TANK) TREATMENT RATIONALE:**

A Pressure-Dosed Trench Septic System was selected for this project to ensure adequate separation to possible groundwater indicated by a thin band of mottled clay soil observed in Soil Profile test hole #4. The mottled clay layer, approximately 3" thick, started at 7 ft deep at the transition from the overlying Sandy Loam Clay soil matrix to more consolidated Sandy Clay. The proposed PD trench depth of 4 ft will meet the regulatory standard of 3 ft separation from trench bottom to the possible groundwater bearing layer. The mottled soil observed may be due to seasonal subsurface movement of infiltrating rain water along the top horizon of the relatively impermeable soil matrix seen below 7 ft. There were no other mottled soils or other indications of groundwater seen in SP4 or in SP2 or SP3 within the proposed dispersal field. Percolation rates obtained from testing at 3 1/2 & 4 ft depths varied greatly with half of the test holes failing above 120 MPI while nearby test holes demonstrated good absorption (41, 21 & 8 MPI). Therefore the proposed dispersal field was sized using the most conservative application rate (0.2 gpd/ft<sup>2</sup>) coupled with provision of leaching chambers resulting in approximately 30% over-sizing of the dispersal trench system as per DEH allowance for the chambers installation.

Christopher  
her Day

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**ALIQUOT**  
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**SURVEYORS**  
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SUITE 310  
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New Pressure Dosed Trench Septic System to Serve  
Proposed 1 BR House, Public Restrooms & Horse Wash

Plan By: Christopher Day, R.E.H.S.  
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District  
330 District Circle  
Los Altos, CA 94022  
Tel. 650-631-1200  
lin@openspace.org

Los Gatos, CA APN 544-32-001 (SR854209)

OWTS 1

**PROPOSED SANITARY SEWER SYSTEM MAP**  
**BEAR CREEK STABLES**  
(APN: 544-32-001)

JOB NO. 217017

SCALE 1" = 50'

DATE 8/4/2017

DESIGN

DRAWN RB

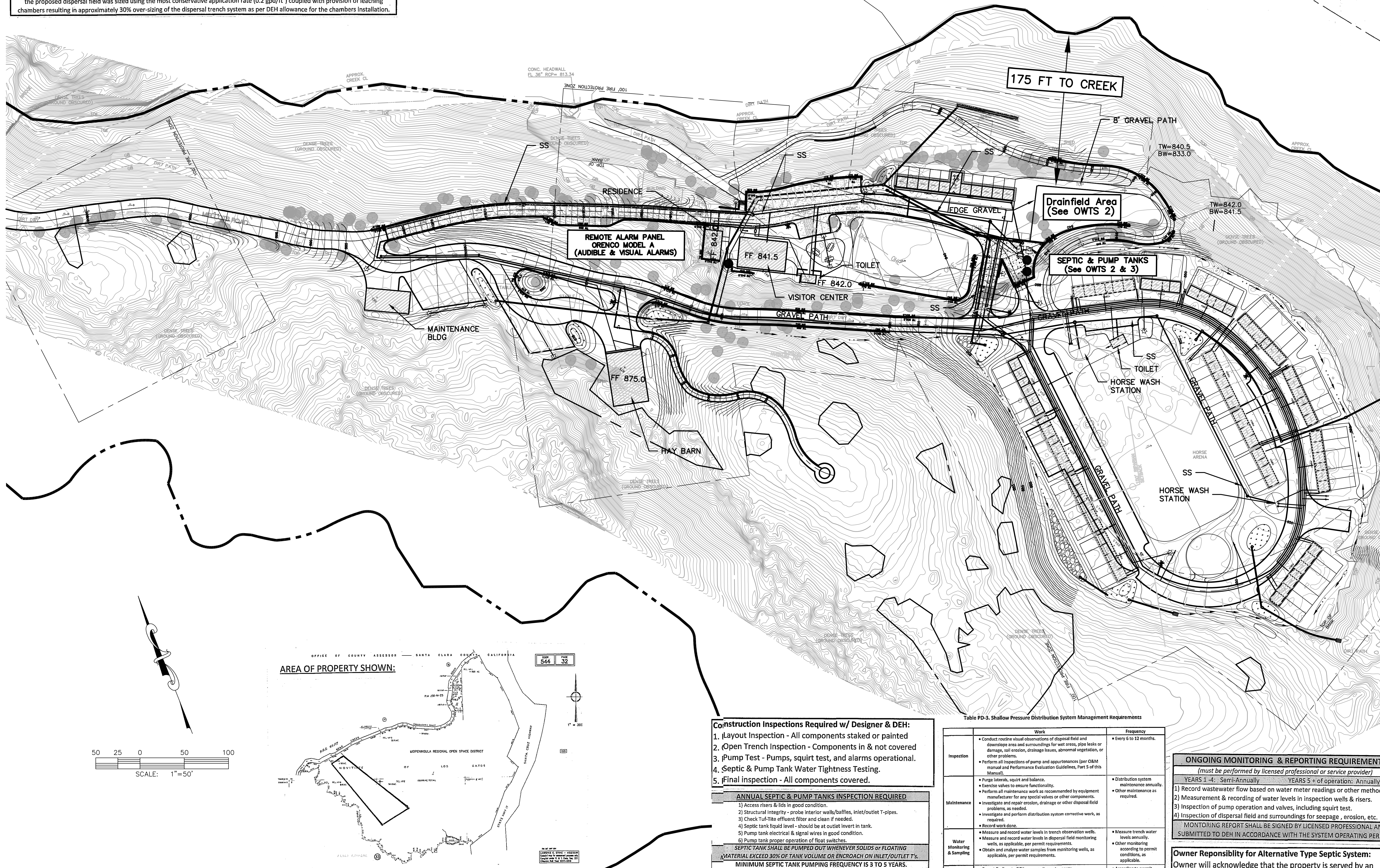
APPROVED RW

LOS GATOS

19100 Bear Creek Rd.

**SS MAP**

1 OF 2



- Construction Inspections Required w/ Designer & DEH:**
1. Layout Inspection - All components staked or painted
  2. Open Trench Inspection - Components in & not covered
  3. Pump Test - Pumps, squirt test, and alarms operational.
  4. Septic & Pump Tank Water Tightness Testing.
  5. Final Inspection - All components covered.

**ANNUAL SEPTIC & PUMP TANKS INSPECTION REQUIRED**

- 1) Access risers & lids in good condition.
- 2) Structural integrity - probe interior walls/baffles, inlet/outlet T-pipes.
- 3) Check Tuf-Tite effluent filter and clean if needed.
- 4) Septic tank liquid level - should be at outlet invert in tank.
- 5) Pump tank electrical & signal wires in good condition.
- 6) Pump tank proper operation of float switches.

SEPTIC TANK SHALL BE PUMPED OUT WHENEVER SOLIDS OR FLOATING

MATERIAL EXCEED 30% OF TANK VOLUME OR ENCRUST ON INLET/OUTLET T'S.

MINIMUM SEPTIC TANK PUMPING FREQUENCY IS 3 TO 5 YEARS.

PUMP TANK to be pumped out when debris may encroach on pump intake.

**ELECTRICAL BUILDING PERMIT REQUIRED**

Table PD-3. Shallow Pressure Distribution System Management Requirements

	Work	Frequency
Inspection	<ul style="list-style-type: none"><li>• Conduct routine visual observations of disposal field and downslope area and surroundings for wet areas, pipe leaks or damage, soil erosion, drainage issues, abnormal vegetation, or other problems.</li><li>• Perform all inspections of pump and appurtenances (per O&amp;M manual and Performance Evaluation Guidelines, Part 5 of this Manual).</li></ul>	<ul style="list-style-type: none"><li>• Every 6 to 12 months.</li></ul>
Maintenance	<ul style="list-style-type: none"><li>• Purge laterals, squirt and balance.</li><li>• Exercise valves to ensure functionality.</li><li>• Perform all maintenance work as recommended by equipment manufacturer for any special valves or other components.</li><li>• Investigate and repair erosion, drainage or other disposal field problems, as needed.</li><li>• Investigate and perform distribution system corrective work, as required.</li><li>• Record work done.</li></ul>	<ul style="list-style-type: none"><li>• Distribution system maintenance annually.</li><li>• Other maintenance as required.</li></ul>
Water Monitoring & Sampling	<ul style="list-style-type: none"><li>• Measure and record water levels in trench observation wells.</li><li>• Measure and record water levels in dispersal field monitoring wells, as applicable, per permit requirements.</li><li>• Obtain and analyze water samples from monitoring wells, as applicable, per permit requirements.</li></ul>	<ul style="list-style-type: none"><li>• Measure trench water levels annually.</li><li>• Other monitoring according to permit conditions, as applicable.</li></ul>
Reporting	<ul style="list-style-type: none"><li>• Report findings to DEH per permit requirements.</li><li>• Standard report to include dates, observation well and monitoring well readings and other data collected, work performed, corrective actions taken, and performance summary.</li><li>• Report public health/water quality emergency to DEH immediately.</li></ul>	<ul style="list-style-type: none"><li>• According to permit conditions, typically every 1 to 2 years, depending on system size, usage, history, location.</li></ul>

**ONGOING MONITORING & REPORTING REQUIREMENTS**

(must be performed by licensed professional or service provider)

YEARS 1-4: Semi-Annually YEARS 5+ of operation: Annually

- 1) Record wastewater flow based on water meter readings or other method.
- 2) Measurement & recording of water levels in inspection wells & risers.
- 3) Inspection of pump operation and valves, including squirt test.
- 4) Inspection of dispersal field and surroundings for seepage, erosion, etc.

MONITORING REPORT SHALL BE SIGNED BY LICENSED PROFESSIONAL AND SUBMITTED TO DEH IN ACCORDANCE WITH THE SYSTEM OPERATING PERMIT.

**Owner Responsibility for Alternative Type Septic System:**

Owner will acknowledge that the property is served by an alternative pressure-dosed trench type septic system requiring an ongoing service contract, maintenance, and an annual DEH operating permit.







# County of Santa Clara

Department of Environmental Health

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October 26, 2017

Christopher Day, REHS  
P.O. Box 26  
Redwood City, CA 94064

PROJECT NUMBER: **SR0854209**  
PROJECT NAME: **BEAR CREEK STABLES**  
PROJECT ADDRESS: **19100 BEAR CREEK RD.**  
PROJECT CITY: **LOS GATOS**  
ASSESSORS PARCEL NO.: **544-32-001**

Dear Mr. Day:

The Department of Environmental Health (DEH) has received a proposal to develop a new onsite wastewater treatment system (OWTS) to serve a commercial horse stable with one bedroom caretaker residence, two public restrooms, two horse-wash facilities, and floor drains for a visitor center and maintenance building. This is a review letter based on the site assessment, site plan, soil profiles, the percolation rates, and OWTS design received. Site work and system design requirements are as follows:

- Four soil profiles conducted on June 22, 2017 and July 5, 2017 to depths of 4 feet to 13 feet. Mottling encountered at 7 feet in SP4.
- Percolation testing was conducted on July 6, 2017 at 3.5 to 4 foot depths for proposed pressure dosing system. Five percolation holes were utilized with a stabilized average percolation rate of 119 minutes per inch (mpi).
- The required application rate is 0.2 gallons per day per square foot (gpd/sqft).
- The waste water flow for the total commercial application is 305 gpd.
- The minimum requirements for the proposed pressure dosed system is 382 ft + 382 ft.

Christopher Day submitted an Onsite Wastewater Treatment System (OWTS) plan dated August 4, 2017. The plan is designed for a pressure dosed system for 305 gpd, with 375 ft + 375 ft, based on an application rate of 0.2 gpd/sqft.

The Department is unable to provide clearance for Building Site Approval by the Planning Office, nor complete the final approval of this project or permit issuance until the following information has been provided or corrected:

1. Provide a geotechnical report addressing proposed encroachment to cuts and steep slopes >50%. Please see "Geotechnical Report & Engineering Installation Plan Requirements" for more information.

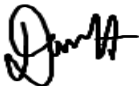
The Department is unable to complete the final review and approval of this project until the following information has also been provided or corrected:

2. The OWTS plans need to be modified as follows:
  - a. Narrative on OWTS 1 implies that the system is being oversized by 30% due to not utilizing the chamber reduction allowance, however, the current design proposal is sized with a 5 sqft/linear foot credit. The Shallow Pressure Distribution guidelines do not allow for greater than 4 sqft/linear foot credit. Ensure that the proposal is revised accordingly.
  - b. Soil profile locations do not match inspection notes in DEH files. Ensure that soil profile locations are revised to accurately depict the areas evaluated. Include area of fill encountered, with notation for installation around fill as necessary.
  - c. Ensure that additional evaluation by a hydrogeologist is conducted, with report provided to support the determination that the previously designated seasonal drainage was not originally a natural feature. Otherwise, ensure that a 50' minimum setback to seasonal drainage way is maintained.
  - d. Ensure that minimum 10' setback is maintained from all potable water utility lines and storage tanks. Include notation for required double-sleeving for all septic tightlines located with 10' of an existing water line.
  - e. Correct the calculation on OWTS 3 for number of chambers in Zone B.
  - f. Update the inspection well detail on OWTS 2 to ensure that perforations begin at 18" below grade, as required in the Shallow Pressure Distribution guidelines.
  - g. Specify spacing between drainfields in Zone A and Zone B (minimum 6').
  - h. Provide notation indicating required use of 150 psi pressure-rated PVC piping for all pipes, fittings and valves. Include requirement that all joints must be solvent welded.
  - i. Provide updated percolation test verification letter based on revised proposal.
3. Provide copies of most current floor plans for all existing and proposed structures the OWTS is proposed to serve.
4. Provide proof of potable water source.

**No guarantee of approval for development is implied in this letter until all requirements have been met.**

The original submittal fee(s) includes the review of one (1) revision. If additional revisions or site visits are required, supplemental fees will apply. Please submit all of the above in one final packet for review or additional fees may be incurred. If we can be of further assistance, please contact Darius Haghighi, Senior REHS at (408) 918-3468 between 7:30 a.m. and 9:00 a.m., Tuesday through Friday or Nicole Jorgensen, Senior REHS at (408) 918-3492, between 7:30 a.m. and 5:00 p.m., Monday through Thursday.

Very truly yours,



Darius Haghighi, Senior REHS  
Land Use Program  
Department of Environmental Health  
County of Santa Clara

cc: Owner: Midpeninsula Regional Open Space District, File

**Board of Supervisors: Cindy Chavez, Mike Wasserman, Dave Cortese, Ken Yeager, S. Joseph Simitian**  
**County Executive: Jeffrey V. Smith**