Appendix D-2

Percolation Feasibility Study Report, Conditional Use Permit 23002 Proposed Garden Cemetery
October 15, 2024
prepared by Lakeshore Engineering,

LAKESHORE ENGINEERING

EST.1987

November 7, 2024

To: Environmental Health Department
County of Riverside, CA.

Subject: Submittal of Updated Percolation Report, Dated 10/15/24
Garfield Rd. X Robertson Perris Murrieta, CA.
Propose Garden Cemetery; PR 8874

Attention: Ms. Shantel, EHS

Attached with this coiver transmittal letter, please find our updated/revised percolation report dated October 15, 2024 (update from 7/30/24 incorporating and responding to health department concerns.

Hope this report satisfy department concerns at this time.

Respectfully Submitted

Fen Yong EOR

Attachement: Perc. Report Dated 10/15/25

Phone/Text (951) 329-6730; Email:lakeshoreengineerin@yahoo.com

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SEPERATION SHEET

PERCOLATION FEASIBILITY STUDY REPORT

CONDITIONAL USE PERMIT 230002

PROPOSED GARDEN CEMETERY

END OF GARFIELD ROAD

PERRIS, RIVERSIDE COUNTY, CALIFORNIA

APN'S. 349-170-003 THRU 013
349-180-002, 003, 004, 005, 006, 007, 008, 016, 017, 020& 036
349-190-006

FOR MUSLIM MORTUARY & CEMETERY COMMITTE

PROJECT NO. PR 8874 **OCTOBER 15, 2024**

LAKESHORE ENGINEERING

LAKESHORE ENGINEERING

EST.1987

October 15, 2024
Project No. PR 8874

Client/Owner: Muslim Mortuary and Cemetery Committee

Contact/Agent: Norm Davis C/O Davis Plumbing, LLC
(951) 333-4088; E: contact@davisphinc.com

Subject: Percolation Feasibility Study Report
Conditional Use Permit 230002 (PR 8874)
Propose Mortuary, Chapel Caretaker residence and cemetery
Garfield Road, Meadowbrook Area, Perris, CA.

Gentlemen:

This report presents the results of our field percolation feasibility study recently completed for the above subject property. The objective of our site study was to determine the feasibility of installing onsite conventional OWTS (Onsite Waste Treatment System)s for the proposed property buildout, under CUP . 230002. Site proposed improvement plans consist of a chapel, mortuary and a caretaker residence.

As understood, all industrial waste from the mortuary (waste classified as Hazard Material, will be handle separately from effluent discharge) will be treated and permitted under oversight of applicable review agencies. All industrial waste generated onsite will be collected and piped into storage tanks and disposed offsite by an approved contractor. Only normal effluent will be discharged into onsite septic system.

Site percolation testing were conducted on June 21 and 22, 2024, under health department assigned PR # 8874 using Technical Manual/LAMP guidelines with scope of work as follows:

1. Excavate three 13'-15' deep exploratory trench slices (one on each proposed leach field area) to expose and log the subsurface soil profile and install a 4" perforated PVC pipe for presence of water level.

2. Excavate and conduct a total 6 percolation test hole pits at randomly locations spread-out over proposed designated primary and future expansion leach field areas.

3. Performed site reconnaissance, system design/layout recommendations and report preparation.

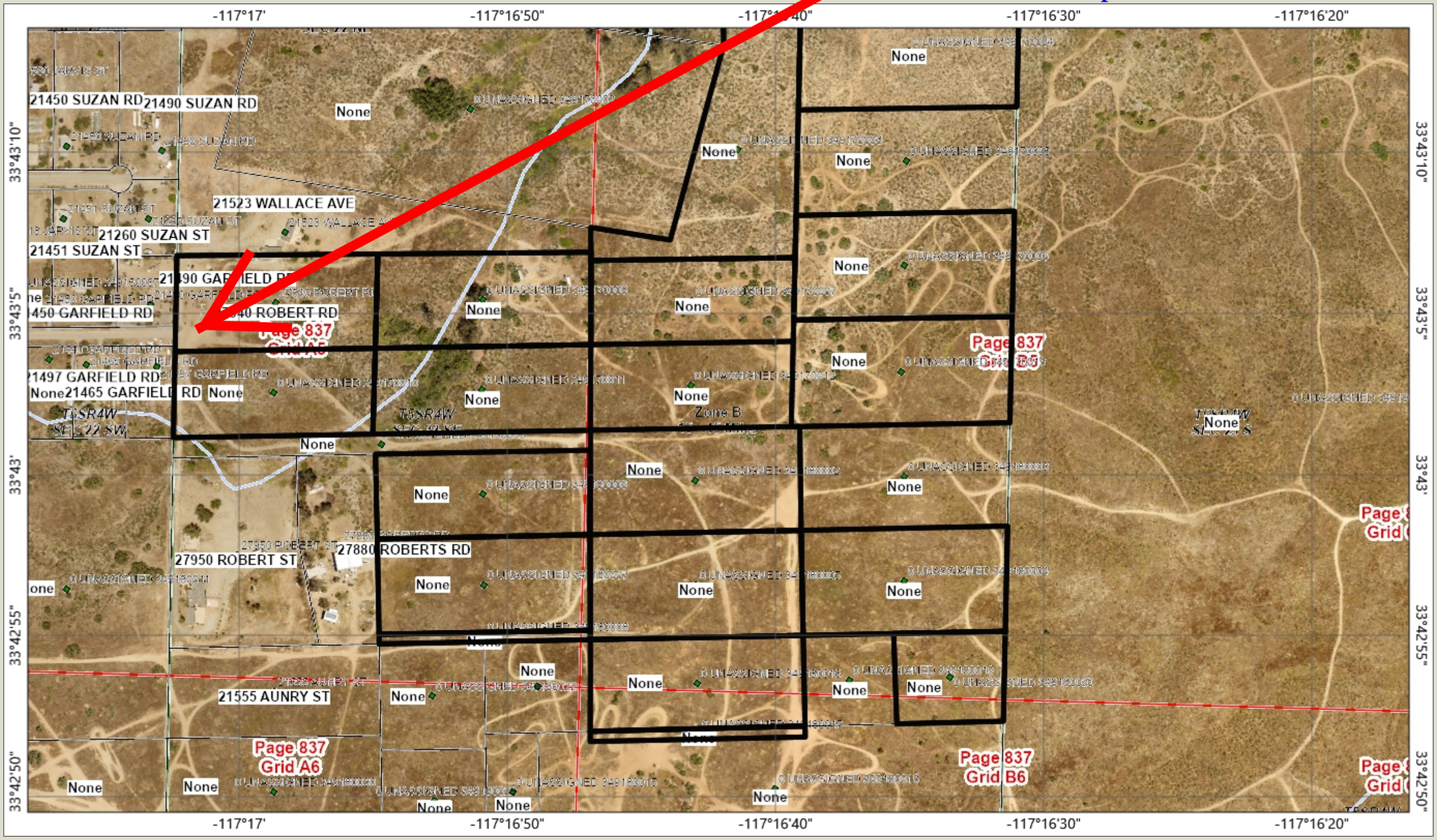
BACKGROUND INFORMATION AND SITE CONDITIONS

The subject property, located on the easterly at the end of Garfield Road, with building improvements planned on the westerly side adjacent to Robert Steet (APN's 349-170-009 & 010). The remainder of land acreage is designated for landscape and burial grounds. Area is still open rural residential undeveloped land, bordered by single family homes to the northeasterly and southwesterly corner and fronts Robert Street (dirt) to the west.

davis plumbing,

perris.cemetery

end of garfield rd. where bldg. located shown on site plan.





Legend

- County Boundary
- City Boundaries
- Parcels, Public
- Blueline Streams
- City Areas

0 376 752 Feet

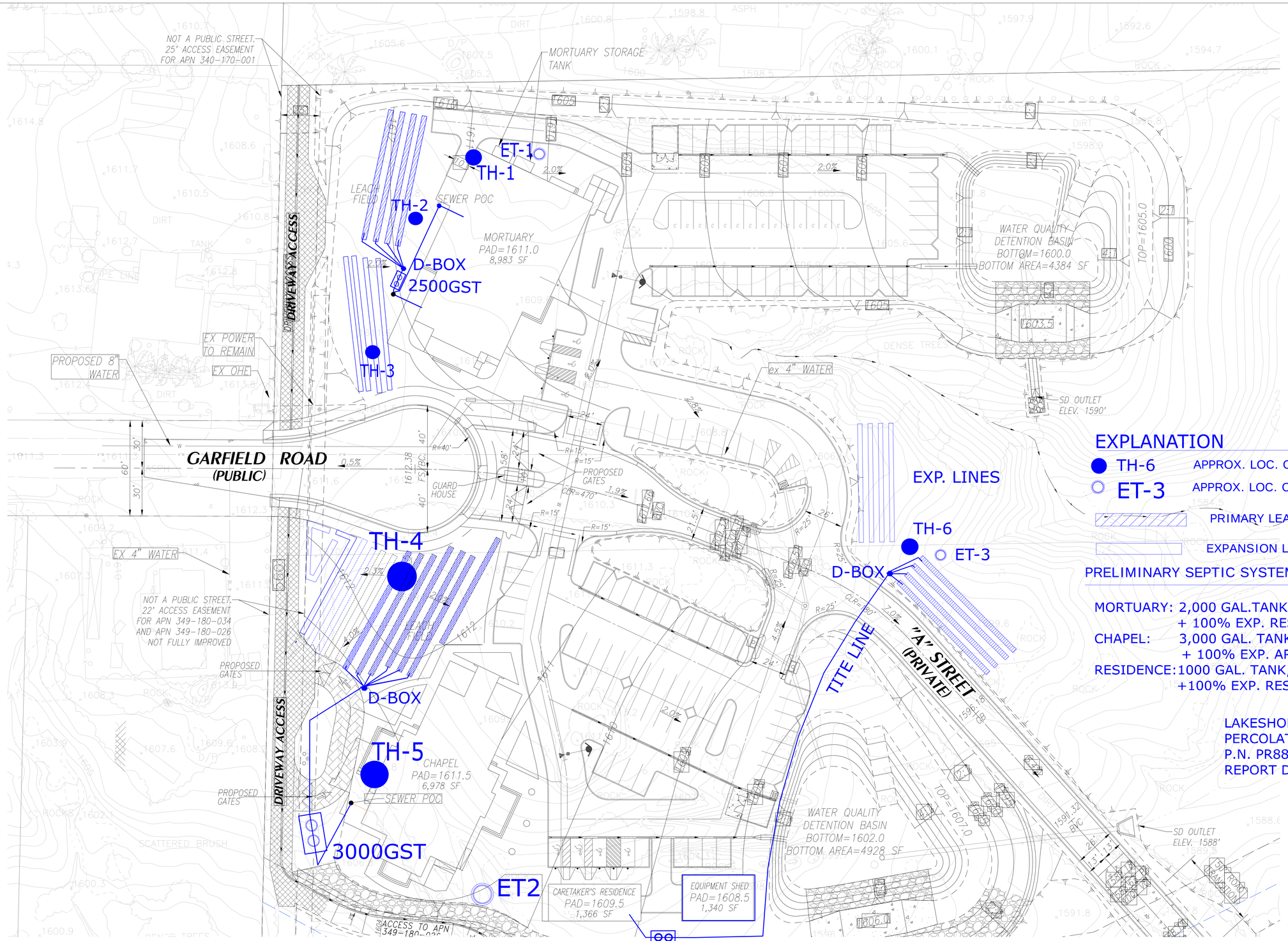
IMPORTANT Maps and data are to be used for reference purposes only. Map features are approximate, and are not necessarily accurate to surveying or engineering standards. The County of Riverside makes no warranty or guarantee as to the content (the source is often third party), accuracy, timeliness, or completeness of any of the data provided, and assumes no legal responsibility for the information contained on this map. Any use of this product with respect to accuracy and precision shall be the sole responsibility of the user.

REPORT PRINTED ON... 5/30/2024 9:32:22 AM

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Notes

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349180.020&035/25
349.190.006



LEGEND

- PROJECT BOUNDARY LINE
- PROPOSED RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED CURB
- EXISTING LOT LINE
- EASEMENT LINE
- PROPOSED CENTERLINE
- W — PROPOSED WATER
- 4"W — EXISTING WATER
- S — PROPOSED SEWER
- PROPOSED STORM DRAIN
- PROPOSED CATCH BASIN
- FLOOD PLAIN LIMITS (PER PRELIMINARY HYDROLOGY)
- JD STREAM BASED ON VCS ENVIRONMENTAL FIELD SURVEY
- WALL
- TOP OF SLOPE
- TOE OF SLOPE

EXPLANATION

- TH-6 — APPROX. LOC. OF PERC. TEST HOLE
- ET-3 — APPROX. LOC. OF EXPLORATORY TRENCH
- PRIMARY LEACH LINES
- EXPANSION LEACH LINES

PRELIMINARY SEPTIC SYSTEM DESIGN/LAYOUT:

MORTUARY: 2,000 GAL.TANK, 4 CHAMBER LINES X 89 L.F. EACH
+ 100% EXP. RESERVED
CHAPEL: 3,000 GAL. TANK, 6 CHAMBER LINES X 80 L.F.
+ 100% EXP. AREA RESERVED
RESIDENCE: 1000 GAL. TANK, 3 CHAMBER LINES X 86 L.F.
+100% EXP. RESERVED

LAKESHORE ENGINEERING
PERCOLATION FEASIBILITY STUDY REPORT
P.N. PR8874
REPORT DATE: REV.1, 10/15/24

FEET 0 15 30 60
INCHES 0 1/2 1 2

PREPARED BY:
HUNSAKER & ASSOCIATES
IRVINE, INC.
PLANNING ▪ ENGINEERING ▪ SURVEYING
Three Hughes ▪ Irvine, CA 92618 ▪ PH: (949) 583-1010 ▪ FX: (949) 583-0759

SEPTIC SYSTEM DESIGN AND LAYOUT

W.O.: XXXX-X

DATE: Aug. 23, 2024 04:25:20 PM FILE: F:\1167\Planning\SA_CUP 230003\Exh_CUP\Exhibit\Septic System Design Exhibit.dwg

Gound is undulating, from gentle to steep sloping ground, distinct high ridgelines, valleys, drainage flowlines and watercourses. Terrian contours in general appears are smooth and uniform, with annual grass and scrub cover. Where buildings are proposed, land is relatively flat with only minor grading needed for building pads construction. Ground shows no anomaly that could impede system installation.

PROPOSED DEVELOPMENT

Based on the three (3) buildings design layout, each building is proposed for its own individual OWTS systems. Septic system is design for storage septic tanks, draining into chamber leach lines.

Existing ground in the area of proposed leach field are relatively flat with minor earthwork grading required for pad preparation, with less than 3 feet of cuts and/or fill placement needed for building pads construction. No adverse conditions, such as rock outcrops or obstructions was encountered in the field that could impede systems installation. Surface water runoff post systems installation will remain sheet-flows across leach field.

SUBSURFACE EXPLORATION

Three (3) 12 ½ -15 feet deep exploratory backhoe trenches were dug to log the subsurface soil profile and to determine the presence of ground water and/or impervious bedrock condition. 4" diameter perforated PVC pipes were installed in each trench slice for groundwater monitoring. Based on our backhoe field exploratory trenching efforts, topsoil or alluvial deposit cover varies from 3-7 feet in thickness, granular sandy soil, loose, light tan-brown, underlain by weathered decomposed granite.

The granitic is moderately dense, light orange brown, damp, to 12 feet becoming to very moist below 12 ½ feet (digging using mini excavator with 24 inch wide bucket). The soil profile is consistent with both exploratory trenches dug to depth of 13 feet. No sidewall caving, seepage or standing water was encountered (48 hour check) in all three monitoring holes.

Wet or very moist soils were encountered in both trenches ET- 1 and ET-2 at 12 feet deep, indicating the possibility of high perched water elevation during wet rainfall seasons. ET-3 did not encounter any wet soils to depth of 15 feet with no signs of mottling/discoloration of subsoil to indicate the presence of groundwater.

FIELD PERCOLATION TESTING AND TEST RESULTS

Four shallow backhoe test pits were excavated and tested in the area of the proposed leach fields. The pits were randomly selected and were excavated to about 4 -5 feet in depth. In each of the pits, a test hole, approximately 8 inches in diameter and about 10-12 inches deep, was hand dug with the aid of a long nose shovel , metal digging bar, and a post hole type digger. The test holes (lined with 8" diameter PVC pipe to prevent caving and consistent sidewall surface area during testing) were flooded with water (5 gallon bottles) continuous for 2 hours and left flooded overnight to presoak. After the presoak period the test holes were refilled to 10-11 inches of water and measurement of water level dropped

taken at every 30 minutes interval for a duration of six hours. The last reading form each test hole was used to determine of onsite soil rate. The field test results are presented in the Test Data Sheet attached with this report. A rate in the order of **27-44 minutes per inch fall was obtained,** which corresponds to **60-100 square feet** of required bottom area per 100 gallons of effluent per day.

CONLUSIONS AND RECOMMENDATIONS

Based on our findings in the field and review of test results obtained, it is our opinion that an adequately constructed individual sewage disposal system consisting of conventional septic tank draining into leach lines placed in the loose soils at the location as indicated on the grading plan, appears feasible from a geotechnical viewpoint. Conclusion statements are as follows:

1. Based on the data presented in this report and using the recommendations set forth, it is the judgment of this professional that there is sufficient area on subject lot to support a primary and expansion OWTS that will meet the current standards of the Department of Environmental Health and the Regional Water Quality Control Board (RWQCB).

11. The design system shall be located in natural undisturbed soil at the depth of the tests performed.

111. The natural occurring body of minerals and organic matter at the proposed wastewater disposal area contains earthen materials having more that 50% of its volume composed of particles smaller than 0.08 inches (2 mm) in size.

1V. Based on the data presented in this report and the testing information accumulated, it is the judgment of this professional that the groundwater table will not encroach within the current allowable limit set forth by the County and State requirements.

RECOMMENDED DESIGN SOIL RATES AND SYSTEM DESIGN

Lakeshore Engineering recommends a soil rate of 60 sq.ft./gal./day for the upper pad (chapel and mortuary buildings) and a soil rate of 100 **sq.ft./100 gal./day** for servicing the residence (leach field on native ground to southwest). Proposed sewage disposal systems are shown on the attached 40-scale Plot Plan Exhibit. The SYSTEM design are presented hereon:

PRELIMINARY SYSTEMS DESIGN

CHAPEL (SOUTHERLY) BUILDING (75 FIXTURE UNIT COUNT/ OCCUPANCY)

TANK SIZE: 3000 GAL. SEPTIC TANK.
PAD/GROUND SLOPE IS IN THE ORDER OF < 15 % = O.B.F. = 1.0
PERCOLATION RATE = 27 MIN./IN.FALL = 60 S.F./GAL./DAY
USING LINES 36" WIDE INFILTRATOR CHAMBERS = (3000X60X1.0X0.8)/(3 X 100) = 480 **L.F.**
INSTALL 6 LINES X 80 L.F. EACH FOR PRIMARY STSTEM

MORTUARY (NORTHERLY) BUILDING (45 FIXTURE UNITS COUNT)

2000 GAL. SEPTIC TANK REQ.
PAD/GROUND SLOPE IS IN THE ORDER OF < 15 % = O.B.F. = 1.0
PERCOLATION RATE = 27 MIN./IN.FALL = 60 S.F./GAL./DAY
USING LINES 36" WIDE INFILTRATOR CHAMBERS = (2000X60X1.0X0.8)/(3 X 100) = 320 **L.F.**
INSTALL 4 LINES X 80 L.F. EACH FOR PRIMARY STSTEM PLUS 100% RESERVED LEACH FIELD

CARETAKER RESIDENCE (18 FIXTURE UNITS COUNT)

1000 GAL. SEPTIC TANK REQ..
PAD/GROUND SLOPE IS IN THE ORDER OF < 15 % = O.B.F. = 1.0
PERCOLATION RATE = 44 MIN./IN.FALL = 100 S.F./GAL./DAY
USING LINES 36" WIDE INFILTRATOR CHAMBERS = (1000X100X1.0X0.8)/(3 X 100) = 267 **L.F.**
INSTALL 3 LINES X 89 L.F. EACH FOR PRIMARY STSTEM PLUS 100% RESERVED LEACH FIELD

SITE DRAINAGE

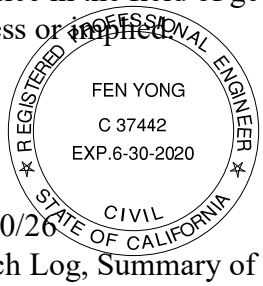
Drainage concentration created from the construction of accessory structures, secondary access roads, relocation, landscape planting and installation of irrigation pipes should be directed away from the leach field by the use of concrete lined V-ditches and/or manufactured drainage swale and flowlines. Flooding of leach field area will likely result in premature failure of system. Pproperty owner should be made aware of the potential problems which may develop when drainage is altered through future construction of driveway improvements, garden walls, accessory structures, built-outs of patios, jacuzzi, gazebos, etc.

CLOSURE

This report presents our findings, conclusions and recommendations pertaining to the subject site based on the assumption that the subsurface conditions do not deviate appreciably from those disclosed by our exploratory trenches. It is the responsibility of the property owner to bring any deviations or unexpected conditions observed during earthwork construction to the attention of the consulting engineer. In this regard, any required supplemental recommendations can be made with a minimum of delays.

The findings and recommendations of the report were prepared in accordance with generally accepted professional principles and practice in the field of geotechnical engineering. This warranty is in lieu of all other warranties, either express or implied.

Respectfully Submitted,



fen yong

Fen Yong, RCE 37442, Exp. 6/30/26
Enclosed: Appendix – A - Trench Log, Summary of Field Test Data,
Plot Plan Exhibit and Worksheets.

LAKESHORE ENGINEERING

APPENDIX A

Trench Log
Summary of Field Test Data
Plot Pan
Worksheets

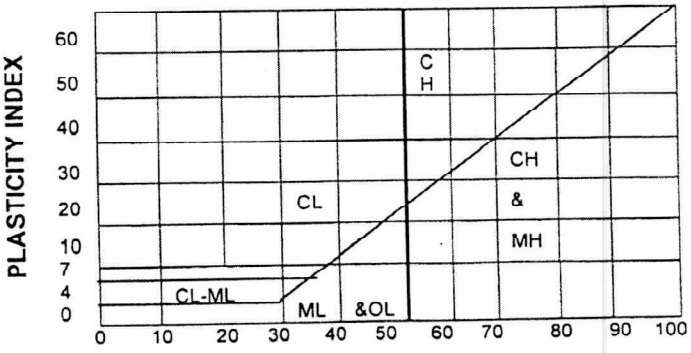
MAJOR DIVISIONS			SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS (More than ½ of soil < No. 200 sieve)	GRAVELS (More than ½ of coarse fraction > No. 4 sieve size)	GW		Well-graded gravels or gravel-sand mixtures, little or no fines
		GP		Poorly graded gravels or gravel-sand mixtures, little or no fines
		GM		Silty gravels, gravel-sand-silt mixtures
		GC		Clayey gravels, gravel-sand-clay mixtures
	SANDS (More than ½ of coarse fraction < No. 4 sieve size)	SW		Well-graded sands or gravely sands, little or no fines
		SP		Poorly graded sands or gravelly sands, little or no fines
		SM		Silty sands, sand-salt mixtures
		SC		Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (More than ½ of soil < No. 200 sieve)	SILTS & CLAYS LL < 50	ML		Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
		CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
		OL		Organic silts and organic silty clays of low plasticity.
	SILTS & CLAYS LL > 50	MH		Inorganic silts, caceous or diatonaceous fine sandy or silty soils, elastic silts
		CH		Inorganic clays of medium to high plasticity, organic silty clays, organic silts
		OH		Organic clays of medium to high plasticity, organic silty clays, organic silts
	HIGHLY ORGANIC SOILS	Pt		Peat and other highly organic soils

CLASSIFICATION CHART

(UNIFIED SOIL CLASSIFICATION SYSTEM)

CLASSIFICATION	RANGE OF GRAIN SIZES	
	U.S. Standard Sieve Size	Grain Size in Millimeters
BOULDER	ABOVE 12"	ABOVE 305
COBBLES	3" to 12"	305 to 76.2
GRAVEL	3" to No. 4	762 to 4.76
COARSE	3" TO ¾"	76.2 to 19.1
FINE	¾"to No. 4	19.1 to 4.76
SAND	No. 4 to 200	4.76 to 0.074
COARSE	No. 4 to 10	4.76 to 2.00
MEDIUM	No. 10 to 40	2.00 to 0.420
FINE	No. 40 to 200	0.420 to 0.074
SILT & CLAY	BELOW No. 200	BELOW 0.074

GRAIN SIZE CHART



PLASTICITY CHART

Ring Sample	Bag Sample	**NR** No Recovery
SPT Sample	= Seepage	

Classification in accordance with ASTM D2487
Description and visual observation in accordance with ASTM D2488
All Sieve Sizes shown are US Standard
SPT Refusal is defined as one of the following:
10 blows for no apparent displacement
50 blows for less than 6 inches advancement
100 blows for 6 to 18 inches advancement

DEEP BORING/TRENCH LOG.

JOB NO. 8874.PERC	DATE: 6/11/24	PR NO.: 8874	
PROJECT NAME: MUSLIM CEMETERY	LOCATION: FORREST ROAD.		
LOG. BY: F.Y.	TRENCH NO. T-1		
DRILL COMPANY: DAVIS PLUMBING	ELEVATION: 1605 +/-		
EQUIP.: CAT. MINI. EXC.	START(TIME): 9.30 AM	STOP: 4.00 P.M.	

Depth (Feet)	USCS Symbol	Samples Bulk	Samples Tube	Material Description (consistency, moisture, color)	Remarks
0					
1	SM/ML			TOPSOIL- SILTY SAND, LT. TAN COLOR, LOOSE TO SL. DENSE, MOIST TO TOUCH, ROOTLET&ROOTHAIR UPPER 24" WELL GRADED FROM FINE TO MED. GRIAN GRAIN SIZE, SOME SILT, NO CLAYS, SCATTERING COBBLES < 8"DIA.	
	ALLUVIAL				
5				TRANSITION TO WEATHERED D.G.; GRANULAR SAND. TO SANDSTONE CONSISTENCY, TAN-BRN., SL. MOIST., MEDIUM DENSE CONSISTENCY,	
	D.G.			VERY MOIST/WET SOIL ENCOUNTERED AT 12 FEET, 12' TRECNCH CHECK AFTER 1 HR.- TRICKEL SEEPAGE GROUND WATER CK. AFTER 24 HOURS, PIPE HOLE DRY.	
10				NO REFUSAL DIGGING TO 12 3/4' FEET WITH CAT. MINI. EXCAVATOR USING 24" BUCKET.	
				TOTAL DEPTH -STOP AT 12 3/4' NO SIDEWALL CAVING NOTED NO WATER SEEPGE, V. WET SOIL @ 12' BACKFILL W/4"PVC PIPE INSTALL	
15					

DEEP BORING/TRENCH LOG.

JOB NO. 8874.PERC	DATE: 6/11/24	PR NO.: 8874	
PROJECT NAME: MUSLIM CEMETERY	LOCATION: FORREST ROAD.		
LOG. BY: F.Y.	TRENCH NO. ET-2		
DRILL COMPANY: DAVIS PLUMBING	ELEVATION: 1604 +/-		
EQUIP.: CAT. MINI. EXC.	START(TIME): 9.30 AM	STOP: 4.00 P.M.	

Depth (Feet)	USCS Symbol	Samples Bulk	Samples Tube	Material Description (consistency, moisture, color)	Remarks
0					
1	SM/ML				
	ALLUVIAL			TOPSOIL- SILTY SAND, LT. TAN COLOR, LOOSE TO SL. DENSE, MOIST TO TOUCH, ROOTLET&ROOTHAIR UPPER 24" WELL GRADED FROM FINE TO MED. GRIAN GRAIN SIZE, SOME SILT, NO CLAYS, SCATTERING COBBLES < 8"DIA.	
5					
	D.G.			TRANSITION TO HGEAVY WEATHERED D.G.; MED. TO COARSE SAND.SANDSTONE CONSISTENCY, LT. BRN., SL. MOIST., MEDIUM DENSE CONSISTENCY,	
				VERY MOIST AT 11 FEET, NO WATER SEEPAGE TRECNCH BOTTOM CHECK AFTER 1 HR.	
10				GROUND WATER CK. AFTER 24 HOURS, PIPE HOLE DRY. POSSIBLE HIGH GROUND WATER TABLE 11' NO REFUSAL DIGGING TO 12 1/2'' FEET WITH CAT. MINI. EXCAVATOR USING 24" BUCKET.	
				TOTAL DEPTH -STOP AT 12 2/3' NO SIDEWALL CAVING NOTED NO WATER SEEPAGE, SOIL WET @ 11.5' BACKFILL W/4"PVC PIPE INSTALLED	
15					

DEEP BORING/TRENCH LOG.

JOB NO. 8874.PERC	DATE: 6/12/24	PR NO.: 8874	
PROJECT NAME: MUSLIM CEMETERY	LOCATION: GARFIELD RD.		
LOG. BY: F.Y.	TRENCH NO. ET-3		
DRILL COMPANY: DAVIS PLUMBING	ELEVATION: 1599 +/-		
EQUIP.: CAT. MINI. EXC.	START(TIME): 9.30 AM	STOP: 1.00 P.M.	

Depth (Feet)	USCS Symbol	Samples Bulk	Samples Tube	Material Description (consistency, moisture, color)	Remarks
0					
1	SM/ML			TOPSOIL- SILTY SAND, LT. TAN COLOR, LOOSE TO SL. DENSE, DAMP TO TOUCH, ROOTLET&ROOTHAIR UPPER 30" WELL GRADED FROM FINE TO COARSE GRIAN SOME SILT (,20%), NO CLAYS, SCATTERING COBBLES/BOULDERS 6-36"+ DIA.	
	ALLUVIAL				
5				TRANSITION TO WEATHERED D.G.; MED. TO COARSE SAND.SANDSTONE CONSISTENCY, LT. BRN., SL. MOIST., MEDIUM DENSE CONSISTENCY,	
	D.G.			UNIFORM TO BOTTOM OF TRENCH DUG TO 15 FEET DRY, DAMP, TYPICAL D.G. IN THE AREA.	
				NO REFUSAL DIGGING TO 12 1/2'' FEET WITH CAT. MINI. EXCAVATOR USING 24" BUCKET.	
10					
				TOTAL DEPTH -STOP AT 15' NO SIDEWALL CAVING NOTED NO WATER SEEPAGE OR WET SOIL BACKFILL W/4"PVC PIPE INSTALLED	
15					

TH-6 @ 0-5'
MUNSELL COLOR CHART
5YR 4/5



T-1 @ 5'-12' UNIFORM
MUNSELL COLOR CHART : 5GY 4/5



GARFIELD ROAD. 349-170-003.

APPENDIX IV – LEACH FIELD PERCOLATION DATA SHEET

Leach Line Percolation Data Sheet

Project CEMETERY	Job No. PR8874.
Test Hole No. TH-1	Date Excavated: JUNE 11, 24
Depth of Test Hole: 55"	Soil Classification SM/SP.
Check for Sandy Soil Criteria Tested by: F.Y	Date: 6/19 Presoak: ✓
Actual Percolation Tested by: F.Y/RR.	Date: 6/21/24.

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)
1	7³⁰ – 8⁰⁰	30	12¼	8½	3½
2	8⁰⁰ – 8³⁰	30	12"	9	3

Use: Normal Sandy (Circle One) Soil Criteria

	Time	Time Interval (Min)	Total Elapsed Time (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)	Percolation Rate (Min/Inch)
3	8³⁰ – 9⁰⁰	30	90	11 / 10"	7⅞	3	
4	9⁰⁰ – 9³⁰	30	120	11	8¼	2¾	
5	9³⁰ – 10⁰⁰	30	150	11	8½	2½	
6	10⁰⁰ – 10³⁰	30	180	11	8½	2½	
7	10³⁰ – 11⁰⁰	30	210	11	9	2	
8	11⁰⁰ – 11³⁰	30	240	11	9	2	
9	11³⁰ – 12⁰⁰	30	270	11	9¼	1¾	
10	12⁰⁰ – 12³⁰	30	300	11	9½	1½	
11	12³⁰ – 1⁰⁰	30	330	11	9¾	1¼	
12	1⁰⁰ – 1³⁰	30	360	11"	≈9⅞	≈1⅛	> 27"/IN FALL

CONSTANT 10 SEC/INCH

END.

>> 60 MIN/IN

SHT. 1 OF 6.

GARFIELD RD, PERRIS 349-170-003...

APPENDIX IV – LEACH FIELD PERCOLATION DATA SHEET

Leach Line Percolation Data Sheet

Project MUSLIM CEMETERY	Job No. PR-3874
Test Hole No. TH-2	Date Excavated: 6/11
Depth of Test Hole: 54"	Soil Classification SP/SM
Check for Sandy Soil Criteria Tested by: F.Y	Date 6/19 | Presoak: ✓
Actual Percolation Tested by: F.Y / RR	Date: 6/21/24

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)
1	734 – 804	30	12"	8"	4"
2	804 – 834	30	12"	8 1/2	3 1/2

Use: Normal Sandy (Circle One) Soil Criteria

	Time	Time Interval (Min)	Total Elapsed Time (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)	Percolation Rate (Min/Inch)
3	834 – 904	30	90	12	9	3	
4	904 – 934	30	120	11 1/2	8 3/4	2 3/4	
5	934 – 1004	30	150	11 1/2	10	2 1/2	
6	1004 – 1034	30	180	11 1/2	10"	2 1/2	
7	1034 – 1104	30	210	11 1/2	10	2 1/2	
8	1104 – 1134	30	240	11 1/2	9 1/2	2	
9	1134 – 1204	30	270	11 1/2	9 1/2	2	
10	1204 – 1234	30	300	11 1/2	9 1/2	2	
11	1234 – 104	30	330	11 1/2	9 1/4	1 3/4	
12	104 – 134	30	360	11"	9 1/4	1 3/4	40

END

SHT 2 OF 6.

GARFIELD. RD, PERRIS. 345.170-005...

APPENDIX IV – LEACH FIELD PERCOLATION DATA SHEET

Leach Line Percolation Data Sheet

Project MUSLIM CEMETERY.		Job No. PR 8874	
Test Hole No. TH-3.		Date Excavated:	6/11/24
Depth of Test Hole: 55"		Soil Classification	SP/SM
Check for Sandy Soil Criteria Tested by: FY/RR		Date: 6/19	Presoak:
Actual Percolation Tested by: FY/RR.		Date:	6/21/24.

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)
1	~~7:38~~ 8:08	30	11"	8	3
2	~~8:08~~ 8:38	30	11"	~~8~~	3

Use: Normal Sandy (Circle One) Soil Criteria

	Time	Time Interval (Min)	Total Elapsed Time (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)	Percolation Rate (Min/Inch)
3	~~8:38~~ 9:08	30	90	11"	8¼	2¾	
4	~~9:08~~ 9:38	30	120	11"	8½	2½	
5	~~9:38~~ 10:08	30	150	11"	9"	2"	
6	~~10:08~~ 10:38	30	180	11"	9"	2"	
7	~~10:38~~ 11:08	30	210	11"	9¼	1¾	
8	~~11:08~~ 11:38	30	240	11"	9¼	1¾	
9	~~11:38~~ 12:08	30	270	11"	9½	1½	
10	~~12:08~~ 12:38	30	300	11"	9¾	1¼	
11	~~12:38~~ 1:08	30	330	11"	9¾	1¼	
12	~~1:08~~ 1:38	30	360	10"	8⅞ = 1⅛	27" /in fact	

END

>> 60#/gal.

SHT. 30F 56.

GARFIELD RD X ROBERT. 349. 170.003...

APPENDIX IV – LEACH FIELD PERCOLATION DATA SHEET

Leach Line Percolation Data Sheet

Project MUSLIM CEMETERY	Job No. PL 8874
Test Hole No. TH-4	Date Excavated: 6/11/24
Depth of Test Hole: 52"	Soil Classification SP
Check for Sandy Soil Criteria Tested by: FY/RR	Date 6/19 Presoak:
Actual Percolation Tested by: FY/RR	Date: 6/12/24

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)
1	7:41 – 8"	30	11	9	3
2	8" – 8:41	30	11	9 1/4	2 3/4

Use: Normal Sandy (Circle One) Soil Criteria

	Time	Time Interval (Min)	Total Elapsed Time (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)	Percolation Rate (Min/Inch)
3	8:41 – 9"	30	90	10 1/2	8	2 1/2	
4	9" – 9:41	30	120	10 1/2	8 1/16	2 1/2	
5	9:41 – 10"	30	150	10 1/2	8 3/4	2 1/4	
6	10" – 10:41	30	180	10 1/2	8 1/2	2	
7	10:41 – 11"	30	240	10 1/2	8 1/2	2	
8	11" – 11:41	30	240	10 1/2	9 1/4	1 3/4	
9	11:41 – 12"	30	270	10 1/2	9	1 1/2	
10	12" – 12:41	30	300	10 1/2	9	1 1/2	
11	12:41 – 1"	30	330	10 1/2	8 1/4	1 1/4	
12	1" – 1:41	30	360	10	8 1/8 ≈ 1 3/8	> 27"/INFAL	

END

> 60#/gal.

SHT. 4 OF 6

GARFIELD RD & ROBERT

APPENDIX IV – LEACH FIELD PERCOLATION DATA SHEET

APN. 345.170-003. --

Leach Line Percolation Data Sheet

Project MUSLIM CEMETERY	Job No. PC-8874
Test Hole No. TH. 5	Date Excavated: 6/11/24
Depth of Test Hole: 50"	Soil Classification SP/SW
Check for Sandy Soil Criteria Tested by: FY/RR.	Date: 6/19 Presoak:
Actual Percolation Tested by: FY/RR.	Date: 6/21/24

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)
1	7⁴⁵–8¹⁵	30	11½	8¼	3¼
2	8¹⁵–8⁴⁵	30	11½	8½	3

Use: Normal Sandy (Circle One) Soil Criteria

	Time	Time Interval (Min)	Total Elapsed Time (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)	Percolation Rate (Min/Inch)
3	8⁴⁵–9¹⁵	30	90	11-	8¼	2¾	
4	9¹⁵–9⁴⁵	30	120	11-	8	3-	
5	9⁴⁵–10¹⁵	30	150	11-	8¼	2¾	
6	10¹⁵–10⁴⁵	30	180	11-	8½	2½	
7	10⁴⁵–11¹⁵	30	210	11-	8¾	2¼	
8	11¹⁵–11⁴⁵	30	240	11-	9-	2	
9	11⁴⁵–12¹⁵	30	270	11-	9¼	1¾	
10	12¹⁵–12⁴⁵	30	300	11-	9½	1½	
11	12⁴⁵–1¹⁵	30	330	11-	9½	1½	
12	1¹⁵–1⁴⁵	30	360	10½	9-	1½ > 20 W/MIN	

END —

RATE: >> 45 MI/91 day

SAT 5 SE 6

GARFIELD & ROBERTS, PERRIS.

APPENDIX IV – LEACH FIELD PERCOLATION DATA SHEET

349.170.003

Leach Line Percolation Data Sheet

Project MUSLIM CEMETERY	Job No. PP.8874
Test Hole No. TH-6	Date Excavated: 7.6
Depth of Test Hole: 55"	Soil Classification- SM/SP/DG.
Check for Sandy Soil Criteria Tested by: F.J/RR	Date: 7/16/24 Presoak: ✓
Actual Percolation Tested by: FJ/RR	Date: 7/17/24

Sandy Soil Criteria Test

Trial No.	Time	Time Interval (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)
1	~~7:30~~ 8- ~~8-~~	30	12	9 1/4	2 3/4
2	8- ~~8:30~~	30	11	8 1/2	2 1/2

Use: Normal Sandy (Circle One) Soil Criteria

	Time	Time Interval (Min)	Total Elapsed Time (Min)	Initial Water Level (Inches)	Final Water Level (Inches)	▲in Water Level (Inches)	Percolation Rate (Min/Inch)
3	~~8:30~~ 9-	30	90	11	9-	2	
4	9- ~~9:30~~	30	120	11	9-	2	
5	~~9:30~~ 10-	30	180	11	9 1/2	1 1/2	
6	10- ~~10:30~~	30	180	11	9 3/4	1/4	
7	~~10:30~~ 11-	30	210	11	9 3/4	1/4	
8	11- ~~11:30~~	30	240	11	10	1	
9	~~11:30~~ 12-	30	270	11	10 1/4	3/4	
10	12- ~~12:30~~	30	300	11	10 1/4	3/4	
11	~~12:30~~ ~~1:00~~	30	330	11	9 11/16	11/16	
12	~~1:00~~ ~~1:30~~	30	360	10 3/8	9 11/16	11/16	48"/INCH

INSERT 8" TUBE
CONSTANT

END

RATE: 100 GAL/DAY

SHT. 6 OF 6.

MORTUARY

FIXTURES

Fixture Type	Unit Counts	Fixture Values (Table 702.1 (1)-2022 CPC)	Fixture Loads
Shower, single-head trap	1	2	2
Urinal, integrated trap 1 GPF	1	5	5
Lavatory	6	1	6
Drinking Fountain	2	1	2
Water Closet - 1.6 GPF	5	6	30
Total Fixture Value			**45**
Minimum Septic Tank size based on calculated Fixture Load (Table H 201.1(1) - Appendix H - 2022 CPC)			**2000**

OCCUPANCIES

Occupancy Type	Unit Counts	Flow per Unit in GPD (Table H-201.1(4))	Estimated Flow Rate in GPD
Lobby: Churches - sanctuary (per seat)	76	5	380
Office - (per employee)	4	20	80
Washing Room - Factories w/ shower (per employee)	6	35	210
Total Estimated Flow Rate in Gallons Per Day (GPD)			**670**
Minimum Septic Tank size based on occupancy load (Table H201.1(4) - Appendix H - 2022 CPC))			**1005**

Floor drains from the Washing Rooms and Storage Rooms, along with laundary drains will be piped to concrete underground storage tanks for collection and disposal by an approved licensed contractor. These fixtures have not been included in septic tank sizing calculations.

CHAPEL

FIXTURES

Fixture Type	Unit Counts	Fixture Values (Table 702.1 (1)-2022 CPC)	Fixture Loads
Shower, single-head trap	1	2	2
Urinal, integrated trap 1 GPF	1	5	5
Lavatory	8	1	8
Sinks- Commercial with food waste	4	3	12
Washfountains (wudu stations)	5	2	10
Floor Drain emergency	6	0	0
Drinking Fountain	2	1	2
Water Closet - 1.6 GPF	6	6	36
Total Fixture Value			**75**
Minimum Septic Tank size based on calculated Fixture Load (Table H 201.1(1) - Appendix H - 2022 CPU)			**3000**

OCCUPANCIES

Occupancy Type	Unit Counts	Flow per Unit in GPD (Table H-201.1(4))	Estimated Flow Rate in GPD
Prayer Hall: Churches - with kitchen waste	256	7	1792
Office - (per employee)	8	20	160
Dinning: Restaurant with toilet waste (per customer)	47	7	329
Kitchen: Cafeteria (per empl)	3	20	60
Play Room:	5	5	25
Library	6	5	30
Total Estimated Flow Rate in Gallons Per Day (GPD)			**2396**
Minimum Septic Tank size based on occupancy load (Table H201.1(4) - Appendix H - 2022 CPC))			**2922**

CARETAKER'S RESIDENCE

FIXTURES

Fixture Type	Unit Counts	Fixture Values (Table 702.1 (1)- 2022 CPC)	Fixture Loads
Bathtub or Combo. Bath/Shower	2	2	4
Lavatory	2	1	2
Sinks- kitchen, domestic	1	2	2
Dishwasher	1	2	2
Clothes Washer, domestic, standpipe	1	2	2
Water Closets	2	3	6
Total Fixture Value			18

Minimum Septic Tank size based on calculated Fixture Load (Table H 201.1(1) - Appendix H - 2022 CPU) **1000**

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[2] Extra dwelling units over 10: 250 gallons (946 L) each.

[3] Extra fixture units over 100: 25 gallons (94.6 L) per fixture unit.

[4] Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposers without further volume increase.

TABLE H 201.1(2)
DESIGN CRITERIA OF FIVE TYPICAL SOILS

TYPE OF SOIL	REQUIRED SQUARE FEET OF LEACHING AREA PER 100 GALLONS	MAXIMUM ABSORPTION CAPACITY IN GALLONS PER SQUARE FEET OF LEACHING AREA FOR A 24 HOUR PERIOD
Coarse sand or gravel	20	5.0
Fine sand	25	4.0
Sandy loam or sandy clay	40	2.5
Clay with considerable sand or gravel	90	1.1
Clay with small amount of sand or gravel	120	0.8

For SI units: 1 square foot = 0.0929 m^2, 1 gallon = 3.785 L, 1 gallon per square foot = 40.7 L/m^2

TABLE H 201.1(3)
LEACHING AREA SIZE BASED ON SEPTIC TANK CAPACITY

REQUIRED SQUARE FEET OF LEACHING AREA PER 100 GALLONS SEPTIC TANK CAPACITY (square feet per 100 gallons)	MAXIMUM SEPTIC TANK SIZE ALLOWABLE (gallons)
20—25	7500
40	5000
90	3500
120	3000

For SI units: 1 square foot per 100 gallons = 0.000245 m^2/L, 1 gallon = 3.785 L

TABLE H 201.1(4)
ESTIMATED WASTE/SEWAGE FLOW RATES[1, 2, 3]

TYPE OF OCCUPANCY	GALLONS PER DAY
Airports (per employee)	15
Airports (per passenger)	5
Auto washers — check with equipment manufacturer	—
Bowling alleys — with snack bar only (per lane)	75
Campground — with central comfort station (per person)	35
Campground — with flush toilets — no showers (per person)	25
Camps (day) — no meals served (per person)	15
Camps (summer and seasonal camps) — (per person)	50
Churches — sanctuary (per seat)	5
Churches — with kitchen waste (per seat)	7
Dance halls — (per person)	5
Factories — no showers (per employee)	25
Factories — with showers (per employee)	35
Factories — with cafeteria (per employee)	5
Hospitals — (per bed)	250

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LAKESHORE ENGINEERING

Where demonstration systems are to be considered for installation, conditions for installation, maintenance, and monitoring at each such site shall first be established by the Authority Having Jurisdiction.

Approved aerobic systems shall be permitted to be substituted for conventional septic tanks provided the Authority Having Jurisdiction is satisfied that such systems will produce results not less than equivalent to septic tanks, whether their aeration systems are operating or not.

H 2.0 Capacity of Septic Tanks.

H 2.1 General. The liquid capacity of ~~all~~ septic tanks shall ~~conform to~~ comply with Table H 2.~~0~~1 and Table H

TABLE H 1.7
LOCATION OF SEWAGE DISPOSAL SYSTEM

MINIMUM HORIZONTAL DISTANCE IN CLEAR REQUIRED FROM	BUILDING SEWER	SEPTIC TANK	DISPOSAL FIELD	SEEPAGE PIT OR CESSPOOL
Building or structures[1]	2 feet	5 feet	8 feet	8 feet
Property line adjoining private property	Clear[2]	5 feet	5 feet	8 feet
Water supply wells	50 feet[3]	50 feet	100 feet	150 feet
Streams and other bodies of water	50 feet	50 feet	100 feet[7]	150 feet[7]
Trees	–	10 feet	–	10 feet
Seepage pits or cesspools[8]	–	5 feet	5 feet	12 feet
Disposal field[8]	–	5 feet	4 feet[4]	5 feet
On-site domestic water service line	1 foot[5]	5 feet	5 feet	5 feet
Distribution box	–	–	5 feet	5 feet
Pressure public water main	10 feet[6]	10 feet	10 feet	10 feet

For SI units: 1 foot = 304.8 mm

Notes:

1 Including porches and steps, whether covered or uncovered, breezeways, roofed porte cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances.

2 See ~~also~~ Section 3~~11~~12.3 ~~of the Uniform Plumbing Code~~.

3 Drainage piping shall clear domestic water supply wells by not less than 50 feet (15 240 mm). This distance shall be permitted to be reduced to not less than 25 feet (7620 mm) where the drainage piping is constructed of materials approved for use within a building.

4 Plus 2 feet (610 mm) for each additional 1 foot (305 mm) of depth in excess of 1 foot (305 mm) below the bottom of the drain line. (See ~~also~~ Section ~~K~~H 6.0)

5 See Section 720.0 ~~of the Uniform Plumbing Code~~.

6 For parallel construction – For crossings, approval by the Health Department shall be required.

7 These minimum clear horizontal distances shall also apply between disposal fields, seepage pits, and the mean high-tide line.

8 Where disposal fields, seepage pits, or both are installed in sloping ground, the minimum horizontal distance between any part of the leaching system and ground surface shall be 15 feet (4572 mm).

TABLE H 2.~~0~~1
CAPACITY OF SEPTIC TANKS~~*~~ [1, 2, 3, 4]

SINGLE-FAMILY DWELLINGS - NUMBER OF BEDROOMS	MULTIPLE DWELLING UNITS OR APARTMENTS - ONE BEDROOM EACH	OTHER USES: MAXIMUM FIXTURE UNITS SERVED PER TABLE 702.1	MINIMUM SEPTIC TANK CAPACITY ~~IN~~ (gallons)
1 or 2	–	15	750
3	–	20	1000
4	2 units	25	1200
5 or 6	3	33	1500
–	4	45	2000
–	5	55	2250
–	6	60	2500
–	7	70	2750
–	8	80	3000
–	9	90	3250
–	10	100	3500

For SI units: 1 gallon = 3.785 L

Notes:

1 Extra bedroom, 150 gallons (568 ~~liters~~ L) each.

2 Extra dwelling units over 10: 250 gallons (946 ~~liters~~ L) each.

3 Extra fixture units over 100: 25 gallons (94.6 ~~liters~~ L) per fixture unit.

4 Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.

PRE-PRINT

Table 5.3
Leach line installations on sloping ground: Minimum depth of soil cover and depth of testing

(%) Slope of natural ground in area of disposal system	Minimum cover over lines / bed (ft.)	Minimum depth of test required (ft.)	Overburden Factor
5%	1	3	1.0
10%	1.5	3	1.0
15%	2.25	4	1.0
20%	3	4	1.0
25%	3.75	5	1.1
30%	4.5	6	1.2
35%	5.25	7	1.3
40%	6	8	1.4
45%	7.0	9	1.5

Serial Distribution (Step Dam System):

On steep slopes, leach lines or leach beds shall be stepped to prevent excessive line slope. The lines between each horizontal section shall be made with watertight joints and shall be designed so each horizontal leaching trench or bed shall be utilized to the maximum capacity before the effluent passes to the next lower leach line or bed. The lines between each horizontal leaching section may be installed on natural or unfilled ground. Step Dam Systems are generally required on slopes greater than. See Figure 5.1

Intervals between readings shall be not less than 30 minutes. The drop that occurs during the final reading should be used to calculate the percolation rate. To assure saturated conditions, if no water remains in the hole after the initial soaking, testing must start no later than 26 hours after that soaking.

The field results are to be reported in minutes per inch (minutes/inch). This then corresponds to the leach line trench bottom area in square feet for every 100 gallons of septic tank capacity. The conversion is provided in Table 3.1.

TABLE 3.1

Minutes / Inch	**Minimum Sq. Ft. per 100 Gallons**	**Minutes / Inch**	**Minimum Sq. Ft. per 100 Gallons**
0-9	20	26-27	60
10-11	25	28-30	65
12-13	30	31-32	70
14-16	35	33-37	80
17-18	40	38-43	90
19-20	45	44-48	100
21-23	50	50-54	110
24-25	55	55-60	120

Percolations Test Procedures for Seepage Pit Design

1) Borehole diameter shall be either 6 inch or 8 inch only. No other diameter test holes will be accepted.

2) The test depth shall be at the intended depth of the seepage pit. No pits will be allowed shallower than 10 ft. below inlet or deeper than 40 ft. below ground surface.

3) Fill the hole with clear water to a maximum depth of 4 feet below the surface of the ground or if grading cuts are anticipated, to the depth of the assumed inlet of the proposed seepage pit.

Percolation Test Measurements for Seepage Pit Design

1) All holes shall be pre-soaked for 24 hours unless the site consists of sandy soils containing little or no clay. If sandy soils exist and the water on two consecutive readings seeps away faster than half the wetted depth in 25 minutes or less, the tests may then be run after a 2 hour pre-soak.

2) Except in sandy soils, the percolation rate measurement shall be made on the day following the pre-soak as described in Item (A) above; adjust water depth to the proposed inlet depth.

Where demonstration systems are to be considered for installation, conditions for installation, maintenance, and monitoring at each such site shall first be established by the Authority Having Jurisdiction.

Approved aerobic systems shall be permitted to be substituted for conventional septic tanks provided the Authority Having Jurisdiction is satisfied that such systems will produce results not less than equivalent to septic tanks, whether their aeration systems are operating or not.

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Water supply wells	50 feet[3]	50 feet	100 feet	150 feet
Streams and other bodies of water	50 feet	50 feet	100 feet[7]	150 feet[7]
Trees	–	10 feet	–	10 feet
Seepage pits or cesspools[8]	–	5 feet	5 feet	12 feet
Disposal field[8]	–	5 feet	4 feet[4]	5 feet
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Distribution box	–	–	5 feet	5 feet
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For SI units: 1 foot = 304.8 mm

Notes:

1 Including porches and steps, whether covered or uncovered, breezeways, roofed porte cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances.

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–	6	60	2500
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For SI units: 1 gallon = 3.785 L

Notes:

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PRE-PRINT