APPENDIX D

Percolation Investigation

AM/PAC

1-800-564-7372
(951) 354-6500
FAX 354-8600

TENTATIVE TRACT MAP # _____

PROJECT NUMBER: 21-15015

DATE: MAY 19, 2022

JOB SITE LOCATION:

0 ABERDEEN DRIVE JOSHUA TREE, CA. 92252
APN: (PARENT PARCEL) 0599-191-49-0000
A 304.24 ACRE VACANT PARCEL

PREPARED FOR:

JT304 LLC.
ATT: TEMIL MARMON (310) 500-7007
18340 VENTURA BLVD. SUITE 218
TARZANA, CA. 91356-4268
VIA E-MAIL: hello@yourskyhomes.com

Percolation Investigation

AM/PAC AND ASSOCIATES, INC.

2900 Adams St., Suite C-35 • Riverside, CA 92504

PROJECT NUMBER: 22-15015 **DATE**: MAY 19, 2022

DESCRIPTION OF SITE AND PROPOSAL:

CLIENT REQUESTING REPORT:

JT304 LLC.
ATT: TEMIL MARMON (310) 500-7007
18340 VENTURA BLVD. SUITE 218
TARZANA, CA. 91356-4268
VIA E-MAIL: hello@yourskyhomes.com

JOB SITE LOCATION:

0 ABERDEEN DRIVE JOSHUA TREE, CA. 92252
APN: (PARENT PARCEL) 0599-191-49-0000
A 304.24 ACRE VACANT PARCEL
PROPOSED TTM _____

ASSESSORS AND VICINITY MAPS ARE FOUND IN THE APPENDIX OF THIS REPORT

1.3 PROPOSED DEVELOPMENT:

THE OWNER PROPOSES TO SPLIT A 304 ACRE PARCEL INTO 15 SMALLER PARCELS. THE PROPERTY WAS VACANT DURING THE TIME OF TESTING. EVIDENCE SUGGESTS THE LOT HAS NOT BEEN BUILT UPON IN RECENT PAST. THE FOLLOWING INVESTIGATION WAS CONDUCTED TO ESTABLISH A PERCOLATION RATE FOR THE FUTURE UTILIZATION OF ON SITE SEPTIC SYSTEMS FOR EACH OF THE 15 PROPOSED LOTS. NO BUILDING PLANS WERE NOTED. THIS REPORT WAS PREPARED TO ALLOW THE TTM TO FINAL.

PURPOSE AND SCOPE OF THIS REPORT:

THIS TEST WAS PERFORMED TO DETERMINE THE FEASIBILITY OF USING AN ON SITE, SUBSURFACE SEWAGE DISPOSAL SYSTEM ON EACH PROPOSED LOT. THIS TEST WAS PERFORMED FOR LEACH FIELD DISPERSAL. THIS TEST AND REPORT WILL DETERMINE WHETHER OR NOT THERE IS SUFFICIENT AREA AND PROPER USABLE SOIL AVAILABLE FOR A SUBSURFACE SEWAGE DISPOSAL SYSTEM TO SUPPORT A FUTURE RESIDENTIAL STRUCTURE ON THE PARCELS TESTED.

1.4 PROPERTY DESCRIPTION:

THIS PARENT PARCEL IS A 304.24 ACRE PROPERTY. THE SITE IS RECTANGULAR IN SHAPE AND FRONTS OUTPOST ROAD ALONG THE WESTERLY LOT LINE, ABERDEEN DRIVE ALONG THE NORTHERLY LOT LINE AND AVENIDA DEL SOL ALONG THE EASTERLY LOT LINE OF THE PARCEL TESTED. GROUNDCOVER IS NOTED AS DESERT CHAPARRAL. NO JOSHUA TREES WERE NOTED ON THE PROPERTY. NO WELLS, OUTBUILDINGS, AND OR OTHER DETRIMENTAL FEATURES WERE NOTED ON THE PARCEL. A SEASONAL WATER DRAINAGE COURSE WAS NOTED AT THE SOUTHERLY END OF THE PARCEL. TOPOGRAPHY WAS NOTED AS FALLING FROM THE NORTHWEST DOWN TO THE SOUTHEAST. NO NEIGHBOR WELLS WERE NOTED WITHIN 100' OF THIS PARCEL. A STEEL WATER TANK IS NOTED OFF THE LOT AND TO THE EAST OF THE SOUTHERLY END OF THIS PARCEL. THIS TANK IS OWNED BY THE JOSHUA BASIN WATER DISTRICT. THIS PARCEL IS EASILY FOUND BY THE VICINITY AND ASSESSORS PARCEL MAP ATTACHED.

2. EQUIPMENT USED:

PER THE COUNTY OF SAN BERNARDINO, DEPARTMENT OF ENVIRONMENTAL HEALTH'S REQUIREMENTS: ALL EXCAVATIONS WERE MADE USING AM/PAC'S TRUCK MOUNTED MOBILE DRILL B-34, CONTINUOUS FLIGHT AUGER, DRILL RIG. A 6" DIAMETER AUGER WAS USED TO EXCAVATE THE PERCOLATION TEST HOLES AND THE EXPLORATORY BORING.
ALSO UTILIZED DURING TESTING WAS A SOLINST WATER LEVEL METER, A TAPE MEASURE, A POST HOLE DIGGER FOR CLEAN OUT, 5 GALLON WATER BOTTLES, A WIRE BRUSH, PERFORATED PIPE SLEEVES TO DEPTH AND A 300 GALLON WATER TANK.

3. METHODOLOGY AND PROCEDURES:

ALL TESTING WAS PERFORMED IN ACCORDANCE WITH THE COUNTY OF SAN BERNARDINO, DEPARTMENT OF ENVIRONMENTAL HEALTH'S REQUIREMENTS, AS NOTED IN THE PUBLICATION "PERCOLATION TESTING AND REPORTING STANDARDS FOR ONSITE WASTEWATER TREATMENT SYSTEMS", DATED SEPTEMBER 2019.

3.1 LOCATION OF EXPLORATORY BORINGS AND TRENCHES:

FOR EACH PROPOSED LOT, TESTING WAS PERFORMED IN AN AREA THAT IS SUITABLE FOR THE INSTALLATION OF AN ON-SITE WASTEWATER TREATMENT SYSTEM.

3.2 SOIL CHARACTERISTICS:

THE SOILS IN THIS GEOGRAPHICAL AREA OF THE COUNTY AS WELL AS THE SOILS EXCAVATED ON THIS PROJECT, ARE BEST DESCRIBED, AS FAVORABLE. THIS SOIL IS ALLUVIAL HILL WASH FROM THE NEARBY MOUNTAINS. THERE IS NO VISUAL EVIDENCE OF SHALLOW GROUNDWATER, BEDROCK, IMPERVIOUS MATERIALS, ETC. TESTS AND BORINGS PERFORMED AGREE WITH THE VISUAL EVIDENCE. THE NATURAL/FINISHED SLOPE OF THE AREA OF THE PROPOSED LEACH FIELD IS LESS THAN 5%.

3.3 MINIMUM NUMBER OF EXPLORATORY BORINGS:

PER THE REQUIREMENTS NOTED IN SECTION 3.2 OF THE GUIDEBOOK, ONE EXPLORATORY BORING PER PROPOSED LOT IS SUFFICIENT FOR THIS INVESTIGATION.

3.3.1 BORING/TRENCHING LOG:

SEE THE BORING LOGS ATTACHED IN THE APPENDIX PORTION OF THIS REPORT.

3.3.4 MINIMUM NUMBER OF TESTS FOR LEACH LINES:

PER THE REQUIREMENTS NOTED IN SECTION 4.1 OF THE GUIDEBOOK, ONE PERCOLATION TEST PER PROPOSED LOT IS SUFFICIENT FOR THIS INVESTIGATION.

3.4.1 PERCOLATION TEST PROCEDURE FOR LEACH LINES:

ALL PERCOLATION TEST SITE HOLES WERE DRILLED USING THE 6 INCH DIAMETER AUGER. ALL LOOSE MATERIAL WAS REMOVED FROM THE HOLE USING THE POST HOLE DIGGER. ALL TESTS WERE PERFORMED AT LEVELS SIMULATING THE PROPOSED ELEVATIONS OF THE BOTTOM OF THE LEACH FIELD TRENCHES. A 6 INCH DIAMETER PERFORATED PIPE SLEEVE WITH A SOLID CAP BOTTOM, ¼" DIAMETER HOLES DRILLED IN THE CAP BOTTOM TO ALLOW WATER TO ESCAPE, WAS INSERTED INTO EACH OF THE TEST HOLES. THE CAP AT THE BOTTOM ELIMINATES THE NEED FOR PEA GRAVEL AND PREVENTS SCOURING OF THE BOTTOM OF THE TEST HOLE DURING FILLINGS. THE DEPTH OF EACH TEST HOLE IS NOTED ON THE "FIELD DATA SHEET" ATTACHED.

THE TEST HOLES WERE FILLED WITH 10 INCHES OF CLEAR WATER AS MEASURED ABOVE THE PIPE CAP BOTTOM. AS NOTED ON THE "FIELD TEST DATA" SHEET, 10 INCHES OF CLEAR WATER SEEPED OR PERCOLATED AWAY IN LESS THAN 10 MINUTES TIME, TWICE IN CONSECUTIVE READINGS. THE NATURAL SOIL IS NOTED TO BE OF MEDIUM TO COARSE GRAINED. THEREFORE, TESTING WAS THEN CONDUCTED WITHOUT ANY ADDITIONAL PRESOAKING.

EACH TEST HOLE WAS THEN FILLED WITH 6 INCHES OF CLEAR WATER AS MEASURED FROM THE BOTTOM OF THE LINER. AS NOTED ON THE "FIELD DATA SHEET" ATTACHED, THE WATER PERCOLATED AWAY IN EXCESS OF 5 INCHES IN 30 MINUTES. THE TESTS WERE RUN AT INTERVALS OF 10 MINUTES. REFILLING EACH TEST HOLE AFTER EACH READING. ALL MEASUREMENTS WERE TAKEN TO THE NEAREST 1/10TH OF AN INCH.

EXPLORATORY BORING AND PERCOLATION TESTING WERE PERFORMED ON JANUARY 11, 2022, THROUGH JANUARY 13, 2022.

4. DISCUSSION OF RESULTS:

AS SHOWN IN THE TEST RESULTS, THE SOILS TESTED ARE NOTED TO BE UNIFORM IN CLASSIFICATION, GRADATION AND THE DEMONSTRATED ABILITY TO ABSORB WATER DURING TESTING. NO RESTRICTIVE SOIL LAYERS WERE ENCOUNTERED TO THE DEPTHS TESTED. NO TESTS WERE NOTED AS FAILING. THERE IS NO INDICATION OF ANY POSSIBLE SOURCE OF ERROR OR VARIABILITY OF THE RESULTS AS SHOWN.

5. DESIGN:

THE MOST CONSERVATIVE TEST RESULT HAS BEEN USED AS THE DESIGN RATE, 12.00 M.P.I. NO SOIL ANOMALIES EXIST THAT COULD INVALIDATE THE TEST RESULTS. NO GROUNDWATER WAS FOUND ON THIS PARCEL.

5.1 HISTORIC HIGH GROUNDWATER DATA:

THE CALIFORNIA DEPT. OF WATER RESOURCES SOUTHERN DISTRICT DATA SHOWS WELL LEVELS AT 300 TO 350 FEET BELOW GRADE FOR THIS AREA. NO GROUNDWATER WAS ENCOUNTERED IN AM/PAC'S EXPLORATORY BORE TO A DEPTH OF 15'.

5.2 LEACH FIELD DESIGN:

12.00 MINUTES PER INCH PERCOLATION RATE (MOST CONSERVATIVE RATE)

1.3 SQUARE FEET OF ABSORPTION AREA PER GALLON OF UPC RATED DISCHARGE PER DAY.

AS NO BUILDING PLANS WERE NOTED, A 1500 GALLON OWTS REQUIREMENT IS NOTED BELOW.

(1,500 GALLON SEPTIC TANK = 1,000 GALLONS PER DAY DISCHARGE)

1.3 X 1,000 = 1,300 SQ. FT. OF ABSORPTION AREA

1,300 / 7 = 186 LINEAL FEET OF LEACH LINE AT 36" WIDE USING 3' OF ROCK AND PIPE OR E Z FLOW MATERIAL.

INSTALL 3 LINES, EACH BEING 3' X 62' WITH 3' OF ROCK BELOW THE DRAIN LINES OR E Z FLOW.

LINES ARE TO BE SPACED A MINIMUM OF 11' ON CENTER (O.C.)

OPTION FOR PLASTIC CHAMBERS:

1,300 X .7 = 910 / 3 = 303.3'

INSTALL 5 LINES, EACH BEING 3' X 60' WITH PLASTIC CHAMBERS

5.3 CONSTRUCTION REQUIREMENTS AND RECOMMENDATIONS:

SEE THE ATTACHED TYPICAL SIDEWALL, E Z FLOW AND PLASTIC CHAMBER CROSS SECTIONS AND SETBACK GUIDELINES FOR FURTHER INFORMATION.

ALL WATER WELLS MUST BE AT LEAST 100' AWAY FROM ANY SEPTIC TANK AND/OR LEACH LINE AND 150 FEET FROM ANY SEEPAGE PIT.

THERE IS SUFFICIENT ROOM AVAILABLE FOR A SWIMMING POOL AND OR OUTBUILDING ON ALL PROPOSED PARCELS WITHOUT ENDANGERING THE 100% EXPANSION AREA REQUIRED.

INSTALL RISERS TO GRADE WITH GAS TIGHT LIDS ON BOTH SEPTIC TANK OPENINGS. AN EFFLUENT FILTER MUST BE INSTALLED IN THE OUTLET TEE OF THE SEPTIC TANK.

THE LEACH FIELD AND THE SEPTIC TANK MUST BE AT LEAST 5' AWAY FROM ANY VEHICULAR TRAFFIC OR PARKING AREA.

NOTE: ALL DOMESTIC WATER LINES AND WATER METERS MUST BE AT LEAST 10' AWAY FROM ANY PORTION OF THE OWTS, AS MEASURED HORIZONTALLY.

CONCLUSIONS AND RECOMMENDATIONS

BASED ON THE DATA PRESENTED IN THIS REPORT AND USING THE RECOMMENDATIONS SET FORTH HEREIN, IT IS THE OPINION OF THE UNDERSIGNED THAT THERE IS SUFFICIENT AREA ON EACH LOT IN QUESTION 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.

BASED ON THE DATA PRESENTED IN THE REPORT AND THE TESTING INFORMATION ACCUMULATED, IT IS THE OPINION OF THIS PROFESSIONAL THAT THE GROUNDWATER TABLE WILL NOT ENCROACH WITHIN THE CURRENT ALLOWABLE LIMITS SET FORTH BY COUNTY AND STATE REQUIREMENTS.

HORSE CORRALS, ANIMAL PENS OR DRIVEWAYS, PAVED OR UNPAVED, MUST NOT BE PLACED OVER LEACH LINES. THE PROPOSED PROJECT SHALL BE LOCATED SO THAT THE SEWAGE DISPOSAL SYSTEM AND THE REQUIRED 100% EXPANSION SYSTEM SHALL OPERATE BY GRAVITY FLOW. THE ORIGINAL LEACH FIELD AND EXPANSION SYSTEMS LEACHING SIDEWALL AND BOTTOM AREA MUST BE IN NATURAL, UNDISTURBED SOIL AND AT THE DEPTH OF THE TESTS PERFORMED. THE NATURAL OCCURRING BODY OF MINERALS AND ORGANIC MATTER AT THE PROPOSED WASTEWATER DISPOSAL AREA CONTAINS EARTHEN MATERIALS HAVING MORE THAN 50% OF ITS VOLUME COMPOSED OF PARTICLES SMALLER THAN 0.08 INCHES IN SIZE.

THE CONCLUSIONS AND RECOMMENDATIONS PROVIDED IN THIS REPORT WERE DERIVED FROM DATA GATHERED FROM OUR FIELD INVESTIGATIONS AND ENGINEERING ANALYSIS, USING METHODS MEETING THE STANDARD PRACTICES AT THIS TIME. THIS REPORT IS BASED ON CONDITIONS EXISTING AT THE TIME OF THE INVESTIGATION. ANY ENVIRONMENTAL CHANGES, WHETHER NATURAL OR CAUSED BY MAN, MAY ALTER OR NEGATE THE CONCLUSIONS AND RECOMMENDATIONS HEREIN. NO WARRANTY IS MADE OR IMPLIED BY THE SUBMITTAL OF THIS REPORT OR BY ANY ORAL OR WRITTEN AGREEMENT. ANY LIABILITY IN CONNECTION HEREWITH IS LIMITED TO THE FEE CHARGED FOR THIS REPORT.

THIS INVESTIGATION AND REPORT HAVE BEEN PREPARED FOR THE PARTY LISTED AS "CLIENT" AND FOR THE PROJECT AND PROJECT LOCATION ON THE LOT AS SPECIFIED BY THAT CLIENT. THIS REPORT AND THE FINDINGS HEREIN ARE THE PROPERTY OF AM/PAC AND ASSOCIATES, INC. AND ARE NOT TRANSFERABLE WITHOUT WRITTEN PERMISSION OF AM/PAC AND ASSOCIATES, INC.

THE REPORT STAMPED "ORIGINAL" MUST BE SUBMITTED TO THE ENVIRONMENTAL HEALTH DEPARTMENT WHEN APPLICATION FOR A PERMIT IS MADE. THE HEALTH DEPARTMENT WILL NOT ACCEPT A COPY OF THIS REPORT.

GEORGE E. HAWES, VICE PRESIDENT
RCE C-034779 STATE OF CALIFORNIA
LIC. EXP: 9/30/23

5/19/22
DATE

DAVID E. BALLINGER, PRESIDENT
AM/PAC AND ASSOCIATES, INC.

this official stamp is in blue ink;
otherwise a copy

FILE COPY

REGISTERED PROFESSIONAL ENGINEER
GEORGE E. HAWES
No.C034779
9/30/23
STATE OF CALIFORNIA

APPENDIX

A-1 FIELD TEST DATA SHEETS

A-2 EXPLORATORY BORE LOGS

A-3 UNIFIED SOIL CLASSIFICATION SYSTEM

A-4 SETBACK REQUIREMENTS

A-5 CROSS SECTIONS

A-6 ASSESSOR'S MAP

A-7 VICINITY MAPS

A-8 GEOTECHNICAL DATA

A-9 SITE PHOTOGRAPHS

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 1

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be typical of THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL, D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT/ΔD = MINUTES PER INCH RATE
0921	38	0931	48"	10 min	10"	
0935	38	0945	48"	10	10"	
1000	40	1010	42.5	10	2.5	
1014	40	1024	42.1	10	2.1	
1029	40	1039	41.7	10	1.7	
1044	40	1054	41.4	10	1.4	
1058	40	1108	41.2	10	1.2	
1112	40	1122	41.0	10	1.0	10:00 mpi

AMPAC SBDO TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

^-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

^-D = change in depth, inches

LEACHLINE TEST DATA Project # 21-15015 DATE: 5-19-22

HOLE NUMBER: 2

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME D-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT / ΔD = MINUTES PER INCH RATE
0924	38	0936	48"	10 min	10"	
0941	38	0951	48"	10	10"	
1005	40	1015	42.1	10	2.1	
1019	40	1029	41.7	10	1.7	
1033	40	1043	41.4	10	1.4	
1047	40	1057	41.2	10	1.2	
1102	40	1112	41.1	10	1.1	
1118	40	1129	41.0	11.0	1.0	11:00 mpi

AVPAC SBD TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

LEACHLINE TEST DATA Project # 21-15015 DATE: 5-19-22

HOLE NUMBER: 3

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL, D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT/ΔD = MINUTES PER INCH RATE
0931	38	0941	48"	10 min	10"	
0945	38	0955	48"	10	10"	
1009	40	1019	42.4	10	2.4	
1024	40	1034	42.0	10	2.0	
1038	40	1048	41.6	10	1.6	
1053	40	1103	41.4	10	1.4	
1107	40	1117	41.2	10	1.2	
1122	40	1132	41.0	10	1.0	10:00 mpi

AMPAC SBDO TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 4

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL, D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT/ΔD = MINUTES PER INCH RATE
0936	38	0946	48"	10 min	10"	
0952	38	1002	48"	10	10"	
1014	40	1024	42.5	10	2.5	
1029	40	1039	42.0	10	2.0	
1043	40	1053	41.6	10	1.6	
1058	40	1108	41.4	10	1.4	
1113	40	1123	41.2	10	1.2	
1128	40	1137	41.0	9.0	1.0	9:00 mpi

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 5

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be typical of THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT / ΔD = MINUTES PER INCH RATE
0942	38	0952	48"	10 min	10"	
0958	38	1008	48"	10	10"	
1018	40	1028	42.4	10	2.4	
1033	40	1043	42.0	10	2.0	
1049	40	1059	41.6	10	1.6	
1104	40	1114	41.3	10	1.3	
1120	40	1130	41.1	10	1.1	
1135	40	1145	41.0	10	1.0	10:00 mpi

AVPAC SBDO TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

^-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

^-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 6

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL Δ D WATER DROP	ΔT / Δ D = MINUTES PER INCH RATE
0933	38	0943	48"	10 min	10"	
0948	38	0958	48"	10	10"	
				10		
1006	40	1016	42.4	10	2.4	
1021	40	1031	42.2	10	2.2	
1036	40	1046	41.8	10	1.8	
1050	40	1100	41.4	10	1.4	
1105	40	1115	41.2	10	1.2	
1120	40	1130	41.0	10	1.0	10:00 mpi

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 7

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT = MINUTES PER ΔD INCH RATE
0938	38	0948	48"	10 min	10"	
0953	38	1003	48"	10	10"	
1010	40	1020	42.2	10	2.2	
1025	40	1035	41.7	10	1.7	
1040	40	1050	41.4	10	1.4	
1055	40	1105	41.2	10	1.2	
1110	40	1120	41.0	10	1.0	
1124	40	1136	41.0	12.0	1.0	12:00 mpi

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

^-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

^-D = change in depth, inches

LEACHLINE TEST DATA Project # 21-15015 DATE: 5-19-22

HOLE NUMBER: 8

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Reqd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL, D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT/ΔD = MINUTES PER INCH RATE
0944	38	0954	48"	10 min	10"	
0958	38	1008	48"	10	10"	
1016	40	1026	42.4	10	2.4	
1031	40	1041	41.9	10	1.9	
1046	40	1056	41.6	10	1.6	
1101	40	1111	41.3	10	1.3	
1116	40	1126	41.1	10	1.1	
1130	40	1141	41.0	11.0	1.0	11:00 mpi

AM/PAC SBD TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 9

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT / ΔD = MINUTES PER INCH RATE
0949	38	0959	48"	10 min	10"	
1004	38	1014	48"	10	10"	
1018	40	1028	42.4	10	2.4	
1033	40	1043	41.9	10	1.9	
1048	40	1058	41.6	10	1.6	
1104	40	1114	41.3	10	1.3	
1118	40	1128	41.2	10	1.2	
1133	40	1143	41.0	10	1.0	10.00 mpi

AMPAC SBDO TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

LEACHLINE TEST DATA Project # 21-15015 DATE: 5-19-22

HOLE NUMBER: 10

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT / ΔD = MINUTES PER INCH RATE
0954	38	1004	48"	10 min	10"	
1008	38	1018	48"	10	10"	
1023	40	1033	42.5	10	2.5	
1038	40	1048	41.9	10	1.9	
1053	40	1103	41.4	10	1.4	
1108	40	1118	41.3	10	1.3	
1122	40	1132	41.1	10	1.1	
1132	40	1142	41.0	10	1.0	10:00 mpi

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

^-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

^-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 11

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT / ΔD = MINUTES PER INCH RATE
0830	38	0840	48"	10 min	10"	
0845	38	0855	48"	10	10"	
0913	40	0923	42.4	10	2.4	
0927	40	0937	41.9	10	1.9	
0943	40	0953	41.6	10	1.6	
0959	40	1009	41.3	10	1.3	
1014	40	1024	41.0	10	1.0	
1028	40	1040	41.0	12.0	1.0	12.00 mpi

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

^-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

^-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 12

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME P-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT / ΔD = MINUTES PER INCH RATE
0837	38	0847	48"	10 min	10"	
0852	38	0902	48"	10	10"	
0917	40	0927	42.5	10	2.5	
0933	40	0943	42.1	10	2.1	
0948	40	0958	41.7	10	1.7	
1004	40	1014	41.4	10	1.4	
1018	40	1028	41.2	10	1.2	
1033	40	1043	41.0	10	1.0	10:00 mpi

AMPAC SBDO TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 13

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED
To be typical of this
GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT / ΔD = MINUTES PER INCH RATE
0843	38	0853	48"	10 min	10"	
0858	38	0909	48"	10	10"	
0922	40	0932	42.5	10	2.5	
0938	40	0948	41.9	10	1.9	
0953	40	1003	41.5	10	1.5	
1008	40	1018	41.3	10	1.3	
1022	40	1032	41.1	10	1.1	
1036	40	1047	41.0	11.0	1.0	11.00 mpi

AM/PAC SBD TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 14

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT/ΔD = MINUTES PER INCH RATE
0848	38	0858	48"	10min	10"	
0904	38	0914	48"	10	10"	
0928	40	0938	42.5	10	2.5	
0944	40	0954	42.1	10	2.1	
0958	40	1008	41.7	10	1.7	
1013	40	1023	41.4	10	1.4	
1028	40	1038	41.2	10	1.2	
1042	40	1052	41.0	10	1.0	10:00 mpi

AVPAC SBDO TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project # 21-15015 DATE: 5-19-22

LEACHLINE TEST DATA

HOLE NUMBER: 15

DIAMETER OF HOLE: 6"

DEPTH BELOW GRADE (BOTTOM): 48"

HOURS OF PRESATURATION: NOT Req'd

TYPE OF STRATA TESTED: (SM)

NAME OF TESTER: D. BALLINGER

METHOD TO PREVENT CAVING: SCREENED LINERS

DATE TESTED: 1-11-22 ~ 1-13-22

COMMENTS: SOILS WERE NOTED To be TYPICAL OF THIS GEOGRAPHICAL AREA

FILL TIME T-1	DEPTH TO WATER AT FILL D-1	READ TIME T-2	DEPTH OF WATER AT T-2	TOTAL TIME ELAPSED ΔT	TOTAL ΔD WATER DROP	ΔT = MINUTES PER ΔD INCH RATE
0854	38	0904	48"	10 min	10"	
0910	38	0920	48"	10	10"	
0934	40	0944	42.2	10	2.2	
0948	40	0958	41.8	10	1.8	
1004	40	1014	41.5	10	1.5	
1018	40	1028	41.2	10	1.2	
1033	40	1043	41.0	10	1.0	
1047	40	1059	41.0	12:0	1.0	12:00 mpi

AMPAC SBDO TEST DATA 1-92 10/30

SBDO Guidebook 9-19

T-1 = initial time when filling or refilling is completed, minutes

T-2 = final time in minutes

Δ-T = change in time, minutes

D-1 = initial depth of water in the test hole

D-2 = final depth of water in the test hole

Δ-D = change in depth, inches

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-1
Address, City, State: Aberdeen DR @ AVENIDA Del SOL JT		Drilling Contractor: AM/PAC	Drill Rig Type: M·D·B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY- FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-15					(SM) FINE TO MEDIUM GRAINED SANDS, FIRM AND SLIGHTLY MOIST, TAN.			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 1 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-2
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-10					(SM) FINE TO MEDIUM GRAINED SANDS WITH FEW GRAVELS FIRM & SLIGHTLY MOIST TAN			
10-15					(SM) FINE TO MEDIUM GRAINED SANDS, FIRM & MOIST, TAN EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 2 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Peak	Project Number: 21-15015	Client: JT 304 LLC	Boring No. B-3
Address, City, State: Aberaleen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-15					(SM) FINE TO MEDIUM GRAINED SANDS, FEW GRAVELS, FIRM & SLIGHTLY MOIST TAN - BROWN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 3 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-4
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-15					(SM) FINE TO MEDIUM GRAINED SANDS WITH FEW SUB ANGULAR GRAVELS FIRM & DAMP, TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 4 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Peak	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-5
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB VJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-13'					(SM) FINE TO MEDIUM GRAINED SANDS, FEW GRAVELS, FIRM AND DRY, TAN			
13-15'					(SM) FINE GRAINED SANDS FIRM & MOIST, TAN.			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 5 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Peak	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-6
Address, City, State: Aberdeen Dr @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY-FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-10					(SM) SILTY-FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, FIRM & DRY TAN			
10-15					(SM) FINE TO COARSE GRAINED SANDS, NO GRAVELS, FIRM AND DAMP, TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 6 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-7
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M·D·B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-15					(SM) FINE to MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, FIRM & MOIST. TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 7 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perris	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-8
Address, City, State: Aberdeen Dr @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. Ballinger	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB VJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY- FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-15					(SM) FINE TO MEDIUM GRAINED SANDS, FEW SUB-ROUNDED GRAVELS, LOOSE TO FIRM AND DAMP, TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 8 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-9
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-16					(SM) FINE GRAINED SANDS FEW SUBROUNDED GRAVELS FIRM & SLIGHTYL MOIST TAN			
					EOB 15' NO G/W NO Refusal			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 9 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-10
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(Sm) SILTY- FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE & DRY, TAN			
5-10					(Sm) FINE GRAINED SANDS FIRM & DAMP, TAN			
10-15					(Sm) FINE to MEDIUM GRAINED SANDS, FEW SUBROUNDED GRAVELS, FIRM & SLIGHTLY DAMP, TAN EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 10 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-11
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-15					(SM) FINE TO COARSE GRAINED FIRM & DAMP, TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 11 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample

- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-12
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Date Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Date Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-15					(SM) FINE TO MEDIUM GRAINED SANDS, FEW GRAVELS, FIRM & DAMP, TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 2 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-13
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-10					(SM) FINE GRAINED SANDS, FEW GRAVELS, FIRM & DRY, TAN			
10-15					(SM) FINE to MEDIUM GRAINED SANDS, FEW GRAVELS FIRM & MOIST, TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 13 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-14
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M.D. B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB VKJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5.15					(SM) Fine to Medium GRAINED SANDS, Few GRAVELS, FIRM & DAMP, TAN			
					EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 14 of 15

- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

Project: TTM Perk	Project Number: 21-15015	Client: JT304 LLC	Boring No. B-15
Address, City, State: Aberdeen DR @ Avenida Del Sol JT		Drilling Contractor: AM/PAC	Drill Rig Type: M·D·B-31
Logged By: D. BALLINGER	Date Started: 1-11-22	Bit Type: Carbide F.B.	Diameter: 6"
Drill Crew: DEB KJB	Completed: 1-13-22	Hammer Type: —	—
USA Ticket Number: —	Backfilled: 1-13-22	Hammer Weight: —	Hammer Drop: —
—	Groundwater Depth: None to 15'	Elevation: —	Total Depth of Boring: 15'

Depth (feet)	Sample Type	Sample Number	Blow Counts (blows/foot)	Graphic Log	Lithology **Soil Group Name:** modifier, color, moisture, density/consistency, grain size, other descriptors **Rock Description:** modifierm color, hardness/degree of concentration, bedding and joint characteristics, solutions, void conditions.	Dry Density (pcf)	Moisture Content (%)	Additional Test
0-5					(SM) SILTY - FINE TO MEDIUM GRAINED SANDS, FEW ANGULAR GRAVELS, ROOT MATERIAL, LOOSE AND DRY, TAN			
5-10					(SM) FINE to MEDIUM GRAINED SANDS, FEW SUB ANGULAR GRAVELS, FIRM & DAMP TAN			
10-15					(SM) FINE to COARSE GRAINED SANDS, FEW SUB ROUNDED GRAVELS, FIRM & MOIST, TAN EOB 15' NO G/W NO REFUSAL			

AM/PAC & ASSOC., INC.

Boring Log: Sheet 15 of 15

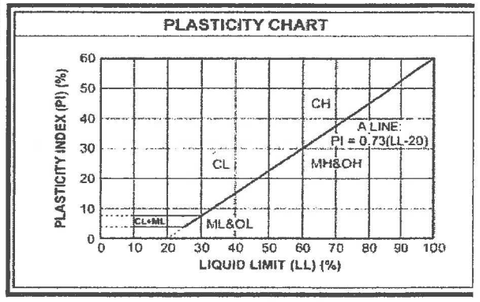
- Standard Penetration Slit Spoon Sampler (SPT)
- California Sampler
- Shelby Tube
- CPP Sampler
- Bulk/ Bag Sample
- Stabllized Ground water
- Groundwater At time of Drilling

UNIFIED SOIL CLASSIFICATION (ASTM D-2487-98)

Material Types	Criteria for assigning soil group names			Group symbol	Group Name
Coarse Grained Soils more than 50% retained on or above No. 200 (0.075mm) sieve	Gravel > 50% of coarse fraction retained on No.4 (4.75 mm) sieve	Clean gravel <5% smaller than No.200 sieve	Cu ≥ 4 and 1 ≤ Cc ≤ 3	GW	Well-graded gravel, fine to coarse gravel
			Cu < 4 and/or Cc < 1 or Cc > 3	GP	Poorly graded gravel
		Gravel with >12% fines	Fines classify as ML or MH	GM	Silty gravel
			Fines classify as CL or CH	GC	Clayey gravel
	Sand ≥ 50% of coarse fraction passes No.4 (4.75 mm) sieve	Clean Sand	Cu ≥ 6 and 1 ≤ Cc ≤ 3	SW	Well-graded sand, fine to coarse sand
			Cu < 6 and/or Cc < 1 or Cc > 3	SP	Poorly graded sand
		Sand with >12% fines	Fines classify as ML or MH	SM	Silty sand
			Fines classify as CL or CH	SC	Clayey sand
Fine grained soils 50% or more passing the No.200 (0.075 mm) sieve	Silt and Clay Liquid Limit < 50	Inorganic	PI > 7 and plots on or above "A" line	CL	Clay of low plasticity, lean clay
			PI < 4 and plots below "A" line	ML	Silt
		Organic	Liquid limit—oven dried < 0.75	OL	Organic Clay
			Liquid limit—not dried	OL	organic silt
	Silt and Clay liquid limit ≥ 50	Inorganic	PI plots on or above "A" line	CH	clay of high plasticity, fat clay
			PI plots below "A" line	MH	silt of high plasticity, elastic silt
		Organic	Liquid limit—oven dried < 0.75	OH	organic clay
			Liquid limit - not dried	OH	organic silt
Highly Organic Soils				PT	Peat

Penetration Resistance (Recorded as Blows/0.5ft)				
Sand & Gravel		Silt & Clay		
Relative Density	Blows/Foot	Consistency	Blows/Foot	Compressive Strength (TSF)
Very Loose	0 - 4	Very Soft	0 - 2	0 - 0.25
Loose	4 - 10	Soft	2 - 4	0.25 - 0.50
Medium Dense	10 - 30	Firm	4 - 8	0.50 - 1.0
Dense	30 - 50	Stiff	8 - 15	1.0 - 2.0
Very Dense	Over 50	Very Stiff	15 - 30	2.0 - 4.0
		Hard	Over 30	Over 4.0

* Number of blows of 140lb hammer falling 30in to drive a 2in O.D (1-3/8 in I.O) split barrel. Sample the last 12in of a 15in drive (ASTM-1586 standard penetration test).



Additional Tests	
CA- Chemical Analysis (corrosivity)	(200)- (with passing No. 200 sieve)
CD- Consolidated Drained Triaxial	SW- Swell Test
CN- Consolidation	TC- Cyclic Triaxial
CU- Consolidated Undrained Triaxial	TV- Torvane Shear
DS- Direct Shear	UC- Unconfined Compression
PP- Pocket Penetrometer (TSF)	(1.5)- (with shear strength in KSF)
(3.0)- (with shear strength KSF)	UU- Unconsolidated Undrained Triaxial
RV- R-Value	WA- Wash Analysis
SA- Sieve Analysis % Passing #200 Sieve - Water Level (with date of) measurement	(200%)- (with % passing No. 200 sieve)

To ensure that OWTS do not adversely affect water quality, the government agencies tasked with protecting the public's health, ground water and safety have developed siting standards for OWTS. This chapter provides information regarding siting standards such as, minimum lot size, setback requirements (including increased setback and notification requirements for OWTS located near public water systems), natural ground slope and density.

Setback Requirements

The minimum separations listed herein are largely derived from the California Plumbing Code, Appendix H and are measured in feet. In some cases, additions or changes have been made in order to adequately protect public health. Where differences exist, the greater separation prevails, unless waived for cause by the County (as described in Chapter 7 of the LAMP). The following table provides the minimum requirements for installation of OWTS for either new or existing structures.

Table 3.1

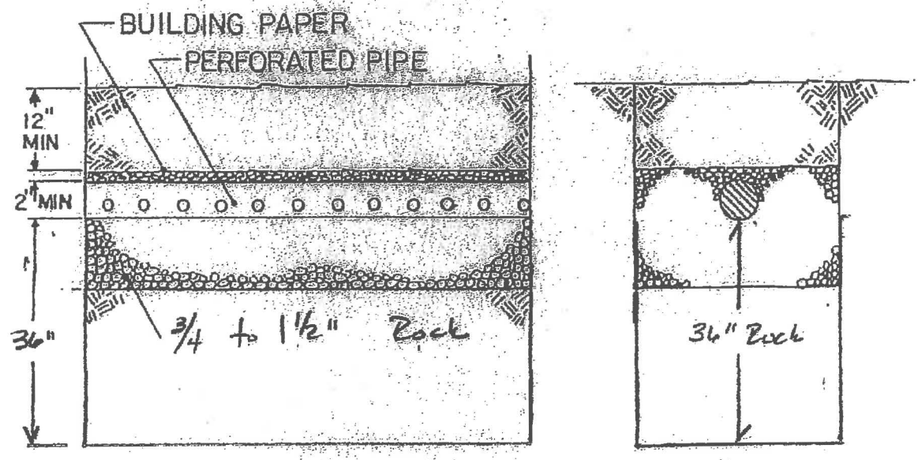
Minimum Setback Required From	Septic Tank	Disposal Field	Seepage Pit
Non-Public Water Supply Well[1,8]	100	100[2]	150[2]
Public Water Supply Well[1]	100	150[2]	200[12]
Buildings or Structures[3]	5	8	8
Property line adjoining private property	5	5	8
Streams and other flowing bodies of water[9,11]	100	100	150
Drainage Course	50	50	50
Lakes, ponds, and other surface water bodies[10,11]	200	200	200
Colorado River/ Mojave River	50	200	200
Large Trees[4]	10	-	10
Seepage pits	5	5	12
Disposal field	5	4[6]	5
Private 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 piping 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 piping is constructed of materials approved for use within a building.
2 For any system discharging 5,000 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 one 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.
6 Plus 2 feet for each additional foot or depth in excess of 1 foot below the bottom of the drain line.
7 For any system utilizing advanced treatment, this minimum separation may be reduced to 2 feet with approval under the APMP (refer to Chapter 6 for more information regarding the APMP) and the RWB.
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.
11 Where the effluent dispersal system is within 1,200 feet from a public water systems' surface water intake point, within the catchment of the drainage, and located such that it may impact water quality at the intake point (such as upstream of the intake point for flowing water bodies), the dispersal system will be no less than 400 feet from the high water mark of the reservoir, lake or flowing water body. Where the effluent dispersal system is located more than 1,200 feet but less than 2,500 feet from a public water systems' surface water intake point, the dispersal system will be no less than 200 feet from the high water mark of the reservoir, lake or flowing water body.
12 Dispersal systems which exceed 20 feet in depth and are located within 600 feet of a municipal well will be required to have the consultant evaluate the two year travel time for microbial contaminants to determine required setback. In no case will the setback be less than 200 feet.

AM/PAC

1-800-564-7372
(951) 354-6500
FAX 354-8600

Typical "SIDEWALL" LEACH LINE DIAGRAM



A. LARGE CONTACT AREA WITH SOIL.

B. AGGREGATE PROVIDES ADDED TREATMENT SURFACE AND PROTECTS THE SOIL.

C. EFFLUENT IS DISPOSED OF IN THREE FASHIONS: PERCOLATION, EVAPORATION, TRANSPIRATION.

LIMITATIONS OF LEACH LINES INCLUDE:

A. A LARGER SURFACE AREA FOR DISPOSAL IS REQUIRED WHICH BECOMES A VERY LIMITING FACTOR IN COMMERCIAL SYSTEMS.

B. THE USE OF LEACH LINES IS DEPENDENT ON A POROUS STRATA BEING WITHIN A REASONABLE DISTANCE OF GROUND SURFACE.

C. ALL COUNTIES REQUIRES 100 % EXPANSION AREA IN ADDITION TO THE PRIMARY AREA..

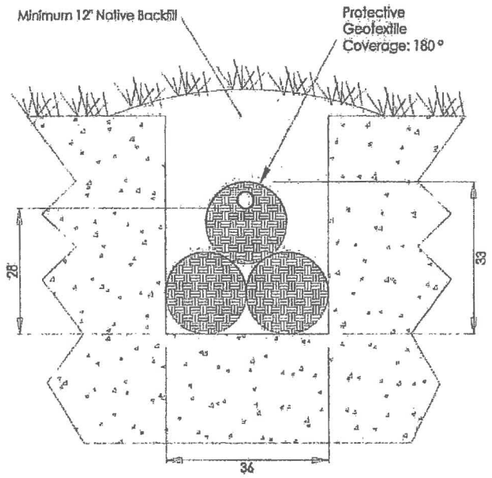
AM/PAC AND ASSOCIATES, INC.
2900 Adams St., Suite C-35 • Riverside, CA 92504

INFILTRATOR WATER TECHNOLOGIES
ALLOWABLE PRODUCTS IN SAN BERNARDINO COUNTY, CALIFORNIA

San Bernardino County allows the use of EZflow bundled expanded polystyrene (EPS) systems, Quick4 and Arc chambers, and IM-Series tanks listed below when installed in accordance with applicable county requirements and the 2019 California Plumbing Code. All products listed below are IAPMO-certified.

EZflow 1803T

EZflow bundled expanded polystyrene is permissible in accordance with the 2019 California Plumbing Code at a 0.70 sizing factor. EZflow 1803T is sized as follows.



Description:

Two 18-inch-diameter bundles placed side-by-side and spanning the width of a 36-inch-wide trench, with a single, centered 18-inch-diameter bundle placed between the bottom 18-inch-diameter bundles. The top, centered 18-inch-diameter bundle contains a pipe.

Sizing:

- Trench width = 3.0 feet
- Effective sidewall height = 1.33 feet
- Rating per linear foot of trench = [(3.0 feet) + (1.33 feet x 2.0)] ÷ 0.70 sizing factor = 8.1 sf/lf
- Maximum allowable rating is 7.0 sf/lf
- **Permissible rating for EZflow 1803T = 7.0 sf/lf**
- **Trench length = Required area ÷ 7.0 sf/lf**

Quick4 and Arc Chambers

San Bernardino County's chamber sizing method is published in the county publication "How to Size Your Leach Lines, Infiltrators, or Pits"[1], as follows:

For INFILTRATORS, Total Trench Length = (A x 0.7) ÷ 3

Approved chamber models:

- Quick4 Plus High Capacity
- Quick4 High Capacity
- Quick4 Standard
- Quick4 Plus Standard
- Quick4 Plus Standard LP
- High Capacity H-20
- Arc 36
- Arc 36 HC

IM-Series Tanks

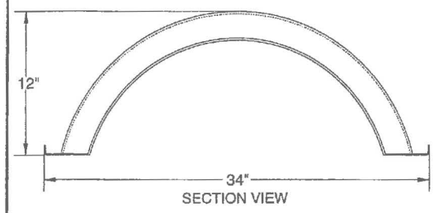
IM-Series tanks a lightweight strong and durable septic tank. This watertight tank design is offered with Infiltrator's line of custom-fit risers and heavy-duty lids. Infiltrator injection molded tanks provide a revolutionary improvement in plastic septic tank design, offering long-term exceptional strength and watertightness.

- IM-540
- IM-1060
- IM-1530

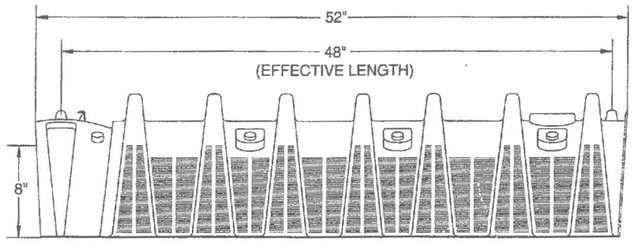
[1] http://www.sbcounty.gov/uploads/dph/dehs/Depts/EnvironmentalHealth/FormsPublications/550049_how_to_size_leach_lines.pdf

Quick4™
STANDARD CHAMBER

Quick4 Standard Chamber

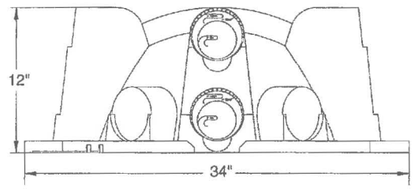


SECTION VIEW

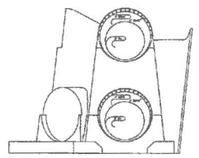


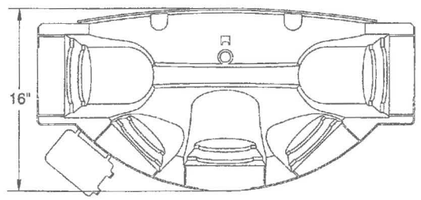
SIDE VIEW

MultiPort End Cap



FRONT VIEW


SIDE VIEW



TOP VIEW

Quick4 Standard Chamber Nominal Specifications

Size (W x L x H)	34" x 52" x 12"
Effective Length	48"
Invert Height	8"

MultiPort End Cap Nominal Specifications

Size (W x L x H)	34" x 16" x 12"
Invert Height	8" or 1.25"

INFILTRATOR SYSTEMS, INC. STANDARD LIMITED WARRANTY

(a) The structural integrity of each chamber, end plate, wedge and other accessory manufactured by Infiltrator ("Units"), when installed and operated in a leachfield of an onsite septic system in accordance with Infiltrator's instructions, is warranted to the original purchaser ("Holder") against defective materials and workmanship for one year from the date that the septic permit is issued for the septic system containing the Units; provided, however, that if a septic permit is not required by applicable law, the warranty period will begin upon the date that installation of the septic system commences. To exercise its warranty rights, Holder must notify Infiltrator in writing at its Corporate Headquarters in Old Saybrook, Connecticut within fifteen (15) days of the alleged defect. Infiltrator will supply replacement Units for Units determined by Infiltrator to be covered by this Limited Warranty. Infiltrator's liability specifically excludes the cost of removal and/or installation of the Units.

(b) THE LIMITED WARRANTY AND REMEDIES IN SUBPARAGRAPH (a) ARE EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE UNITS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

(c) This Limited Warranty shall be void if any part of the chamber system is manufactured by anyone other than Infiltrator. The Limited Warranty does not extend to incidental, consequential, special or indirect damages. Infiltrator shall not be liable for penalties or liquidated damages, including loss of production and profits, labor and materials, overhead costs, or other losses or expenses incurred by the Holder or any third party. Specifically excluded from Limited Warranty coverage are damage to the Units due to ordinary wear and tear, alteration, accident, misuse, abuse or neglect of the Units; the Units being subjected to vehicle traffic or other conditions which are not permitted by the installation instructions; failure to maintain the minimum ground covers set forth in the installation instructions; the placement of improper materials into the system containing the Units; failure of the Units or the septic system due to improper siting or improper sizing, excessive water usage, improper grease disposal, or improper operation; or any other event not caused by Infiltrator. This Limited Warranty shall be void if the Holder fails to comply with all of the terms set forth in this Limited Warranty.

Further, in no event shall Infiltrator be responsible for any loss or damage to the Holder, the Units, or any third party resulting from installation or shipment, or from any product liability claims of Holder or any third party. For this Limited Warranty to apply, the Units must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and Infiltrator's installation instructions.

(d) No representative of Infiltrator has the authority to change or extend this Limited Warranty. No warranty applies to any party other than the original Holder.

- - - - - - -

The above represents the Standard Limited Warranty offered by Infiltrator. A limited number of states and counties have different warranty requirements. Any purchaser of Units should contact Infiltrator's Corporate Headquarters in Old Saybrook, Connecticut, prior to such purchase, to obtain a copy of the applicable warranty, and should carefully read that warranty prior to the purchase of Units.

INFILTRATOR® SYSTEMS INC
Environmental Onsite Wastewater Solutions℠

6 Business Park Road • P.O. Box 768
Old Saybrook, CT 06475
860-577-7000 • FAX 860-577-7001
800-221-4436

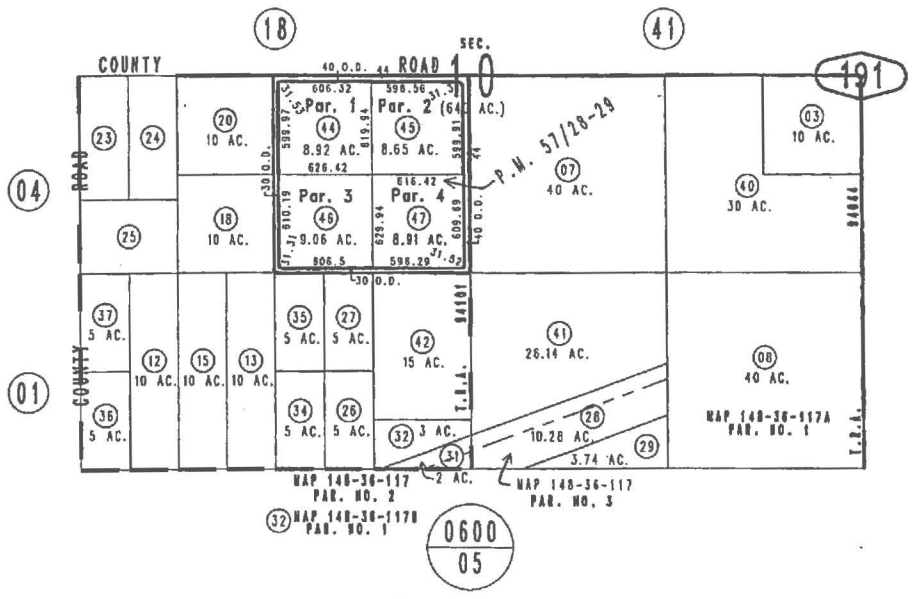
Q010705HP-0

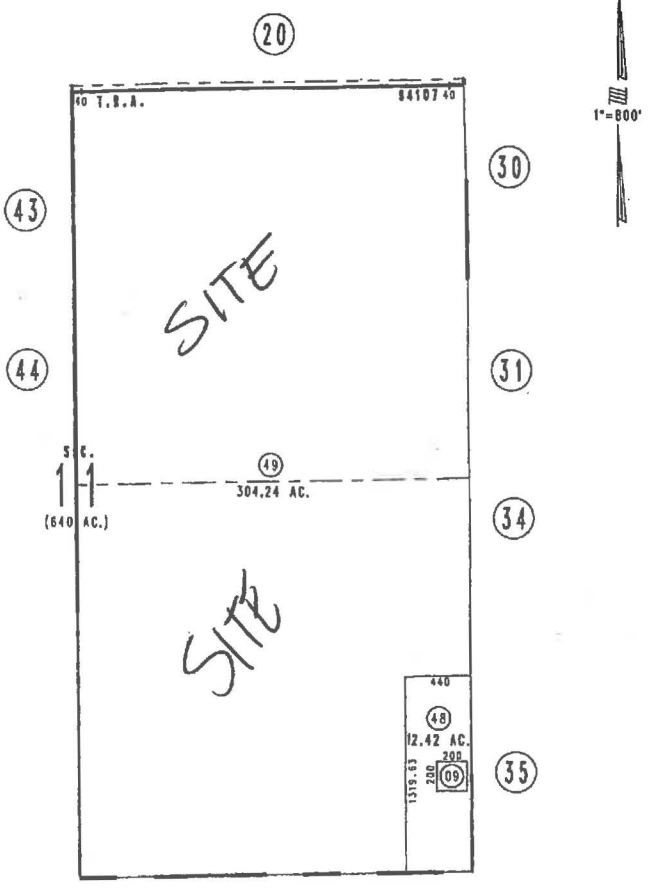
THIS MAP IS FOR THE PURPOSE OF AD VALOREM TAXATION ONLY.

S.1/2 Sec.10 & E.1/2, Sec.11, T.1N.,R.6E., S.B.B.&M.

Morongo Unified
Tax Rate Area
94044,94107
94101

0599 - 19



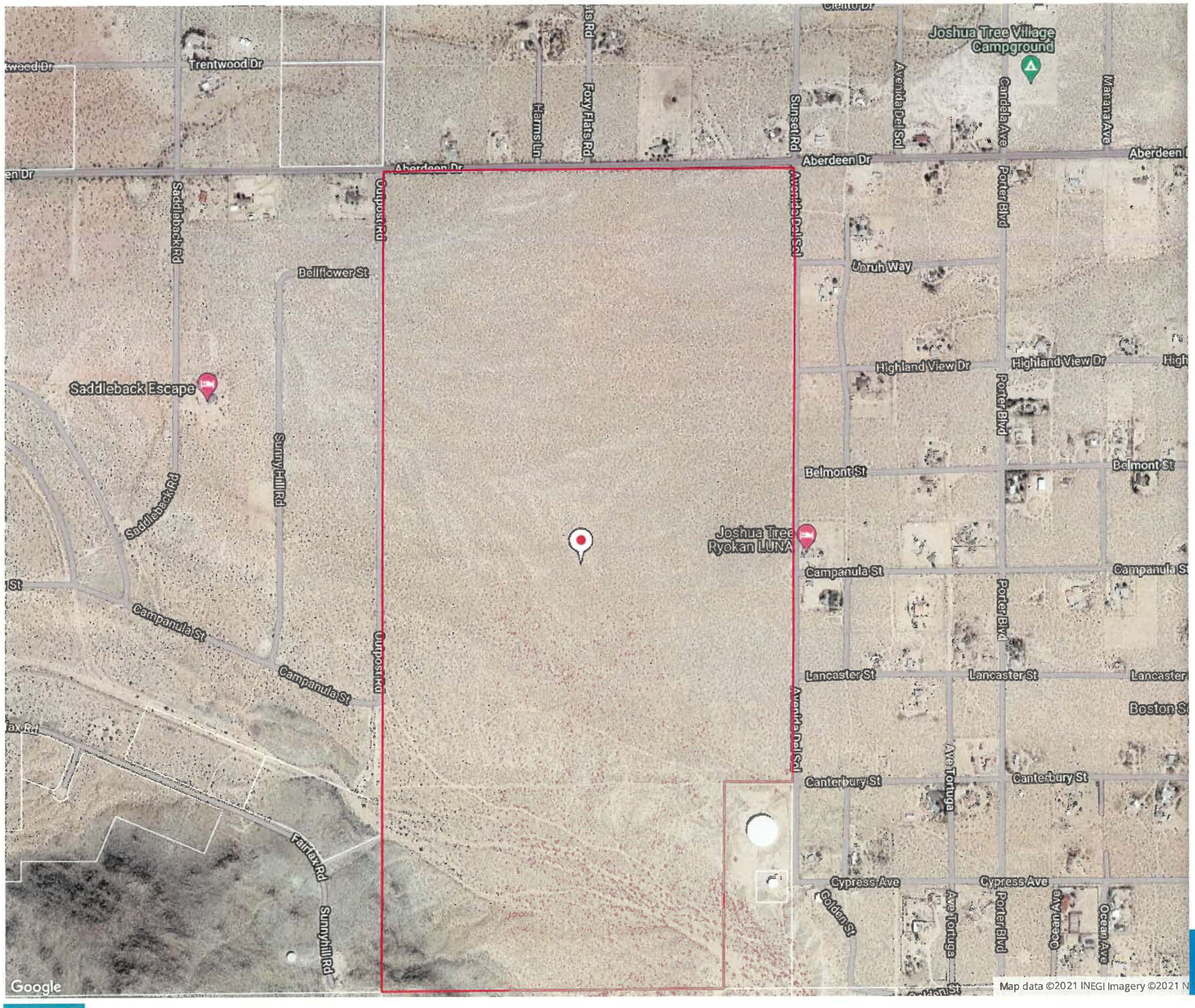


January 2005

Parcel Map No. 5806, P.M. 57/28-29

Assessor's Map
Book 0599 Page 19
San Bernardino County

REVISED
08/10/09 GW
01/14/10 KA



Property Data

Owner Name
JT304 LLC

Situs Address
JOSHUA TREE, CA 92252

APN
0599-191-49-0000

Mailing Address
18340 VENTURA BLVD STE 218, TARZANA, CA 91356-4268

Approximate Size
304.24 AC

Year Built
[no data]

Land Value Assessed
94,601

Improvement Value Assessed
0

Total Value Assessed
94,601

Deed ID
2021.202458

Deed Date
04-30-2021

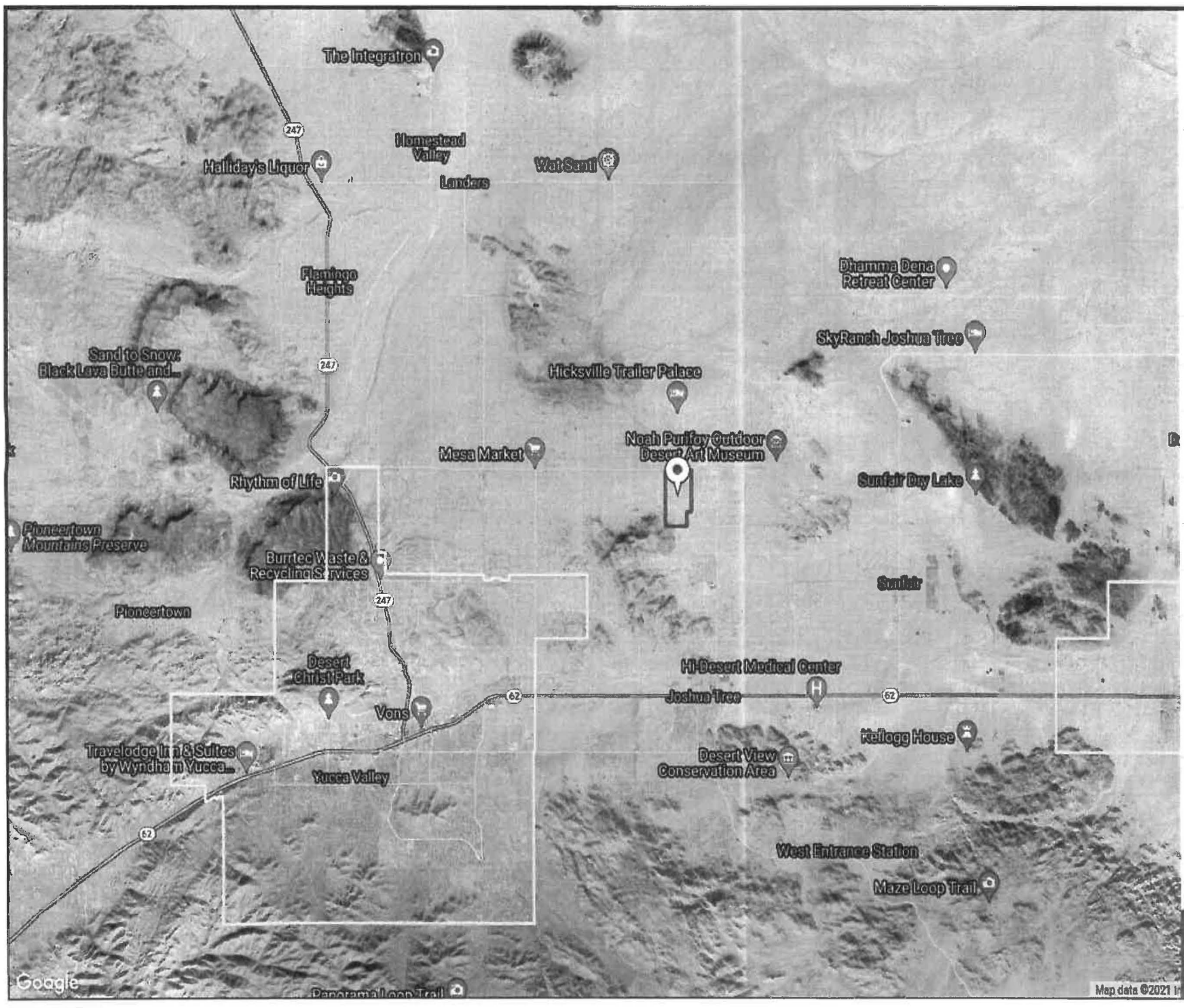
Land Use Class
VACANT

Current Land Use
Residential-Vacant Land

Zoning
[no data]

Assessor Parcel Map

ENPLAN



ENPLAN

Property Data

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304.24 AC

Year Built
[no data]

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94,601

Improvement Value Assessed
0

Total Value Assessed
94,601

Deed ID
2021.202458

Last Sale
04-30-2021

Land Use Class
VACANT

Current Land Use
Residential-Vacant Land

Zoning
[no data]

12
CAMPANULA ST
MANANA AVE
LANCASTER ST
CANTERBURY ST
ODEAN AVE
MO DOWELL ST
UNRUH WAY
ABERDEEN DR
BELLFLOWER ST
SUNNY HILL RD
APN # 0579-191-49
No Geologic Hazards
SNIP of 5000 map Fizzc

OSHPD

AM/PAC INC # 21-15015

Latitude, Longitude: 34.188135, -116.321513

Date	5/19/2022, 11:01:28 AM
Design Code Reference Document	ASCE7-10
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_S	1.719	MCE_R ground motion. (for 0.2 second period)
S_1	0.683	MCE_R ground motion. (for 1.0s period)
S_{MS}	1.719	Site-modified spectral acceleration value
S_{M1}	1.024	Site-modified spectral acceleration value
S_{DS}	1.146	Numeric seismic design value at 0.2 second SA
S_{D1}	0.683	Numeric seismic design value at 1.0 second SA

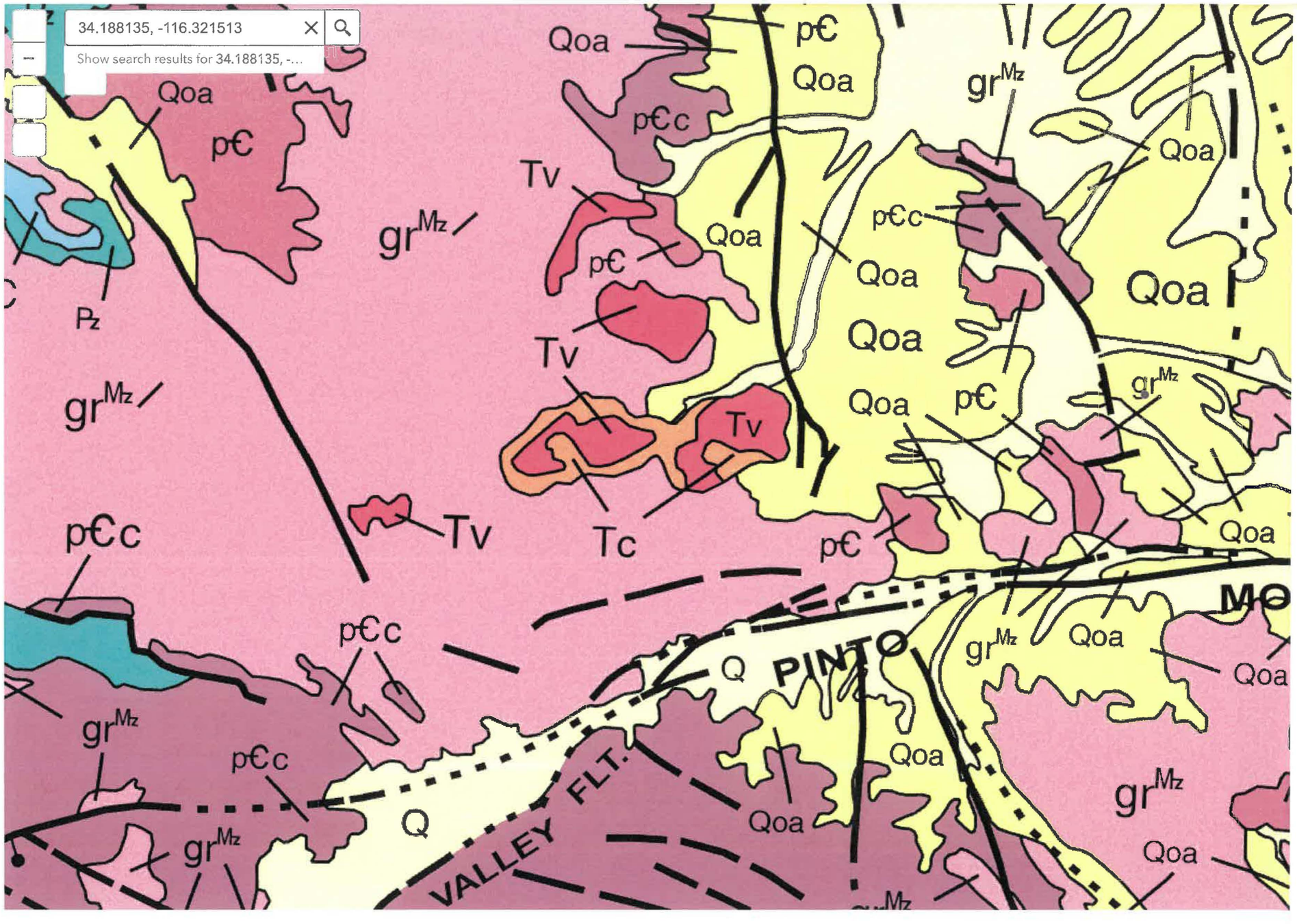
Type	Value	Description
SDC	D	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	1.5	Site amplification factor at 1.0 second
PGA	0.662	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.662	Site modified peak ground acceleration
T_L	8	Long-period transition period in seconds
SsRT	1.966	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	1.996	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	1.719	Factored deterministic acceleration value. (0.2 second)
S1RT	0.715	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	0.736	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.683	Factored deterministic acceleration value. (1.0 second)
PGAd	0.662	Factored deterministic acceleration value. (Peak Ground Acceleration)
C_{RS}	0.985	Mapped value of the risk coefficient at short periods
C_{R1}	0.97	Mapped value of the risk coefficient at a period of 1 s

Geologic Map of California

California Geological Survey

34.188135, -116.321513

Show search results for 34.188135, -...



2mi

-116.053 34.290 Degrees

Explanation

California Geological Survey, Geologic Data Map No. 2

Compilation and Interpretation by: Charles W. Jennings (1977)

Updated version by: Carlos Gutierrez, William Bryant, George Saucedo, and Chris Wills

Graphics by: Milind Patel, Ellen Sander, Jim Thompson, Barbara Wanish and Milton Fonseca

DESCRIPTION OF MAP UNITS

QUATERNARY DEPOSITS

- Qs — Extensive marine and nonmarine sand deposits, generally near the coast or desert playas
- Q — Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated
- Qls — Selected large landslides
- Qg — Glacial till and moraines. Found at high elevations mostly in the Sierra Nevada and Klamath Mountains
- Qos — Older alluvium, lake, playa, and terrace deposits
- QPc — Pleistocene and/or Pliocene sandstone, shale, and gravels deposits, mostly loosely consolidated

QUATERNARY VOLCANIC ROCKS

- Qrv — Recent (Holocene) volcanic flow rocks, minor pyroclastic deposits
- Qrvᵖ — Recent (Holocene) pyroclastic and volcanic mudflow deposits
- Qv — Quaternary volcanic flow rocks, minor pyroclastic deposits
- Qvᵖ — Quaternary pyroclastic and volcanic mudflow deposits

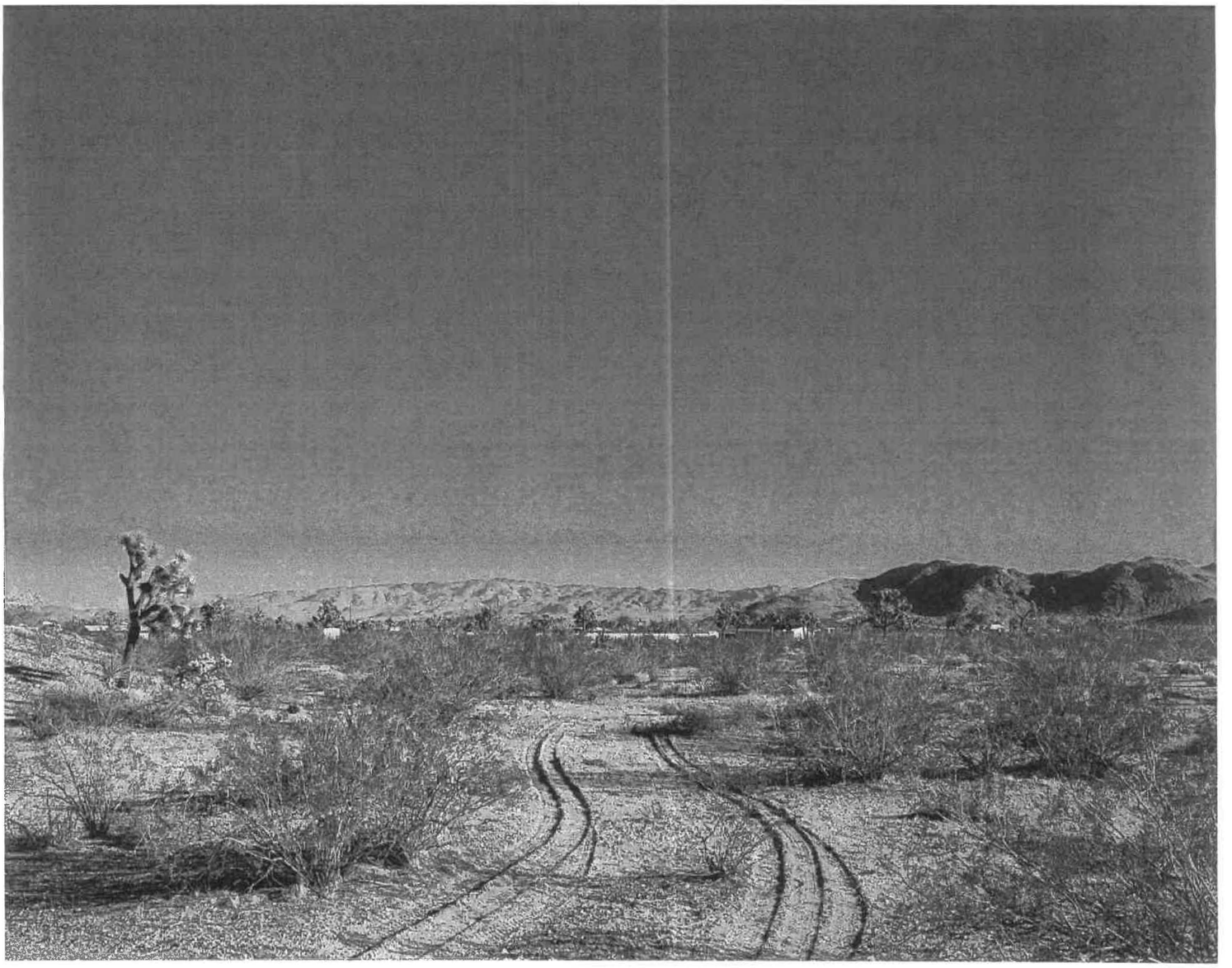
TERTIARY SEDIMENTARY ROCKS

- Tc — Undivided Tertiary nonmarine sandstone, shale, conglomerate, breccia, and ancient lake deposits
- P — Pliocene marine sandstone, siltstone, shale, and conglomerate; mostly moderately consolidated
- M — Miocene marine sandstone, shale, siltstone, conglomerate, and breccia, moderately to well consolidated
- Mc — Miocene nonmarine sandstone, shale, conglomerate and fanglomerate, moderately to well consolidated
- Os — Oligocene marine sandstone, shale, and conglomerate, mostly well consolidated
- Osc — Oligocene nonmarine sandstone, shale, and conglomerate; mostly well consolidated
- E — Eocene marine shale, sandstone, conglomerate, and minor limestone, mostly well consolidated
- Ec — Eocene nonmarine sandstone, shale, and conglomerate; moderately to well consolidated
- Ep — Paleocene marine sandstone, shale, and conglomerate; mostly well consolidated

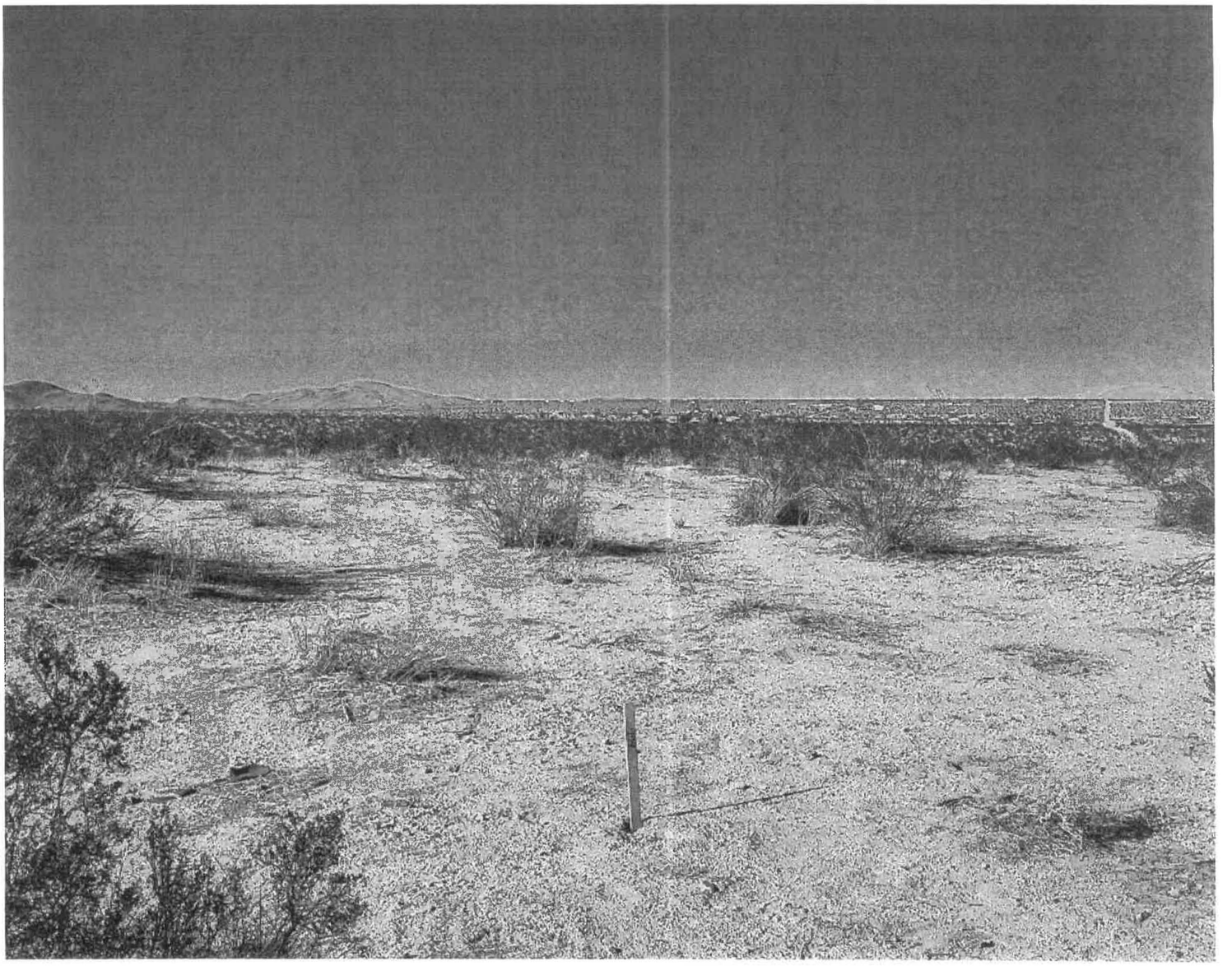
TERTIARY VOLCANIC ROCKS

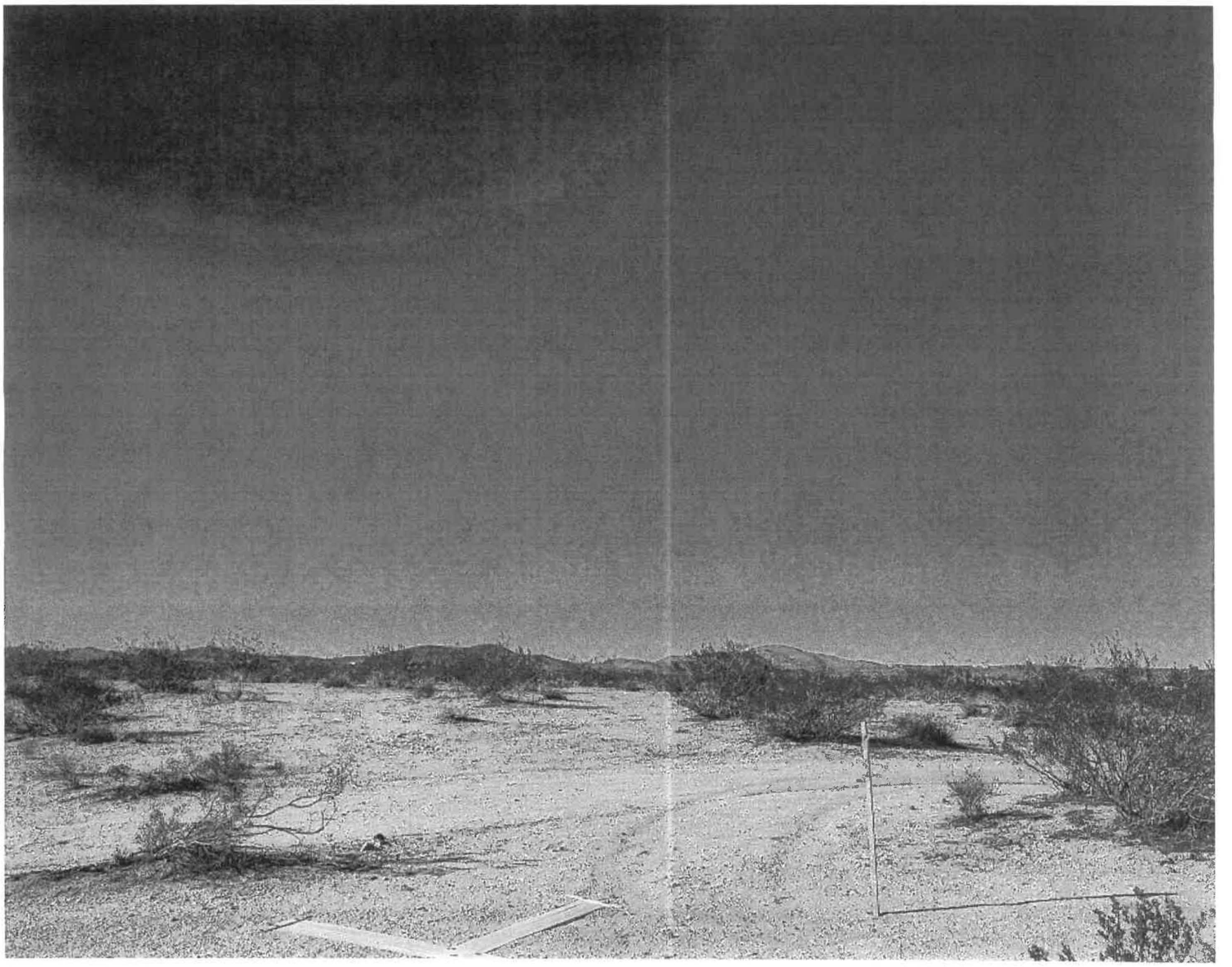
- Tv — Tertiary volcanic flow rocks, minor pyroclastic deposits
- Tvᵖ — Tertiary pyroclastic and volcanic mudflow deposits.
- Ti — Tertiary intrusive rocks; mostly shallow (hypabyssal) plugs and dikes

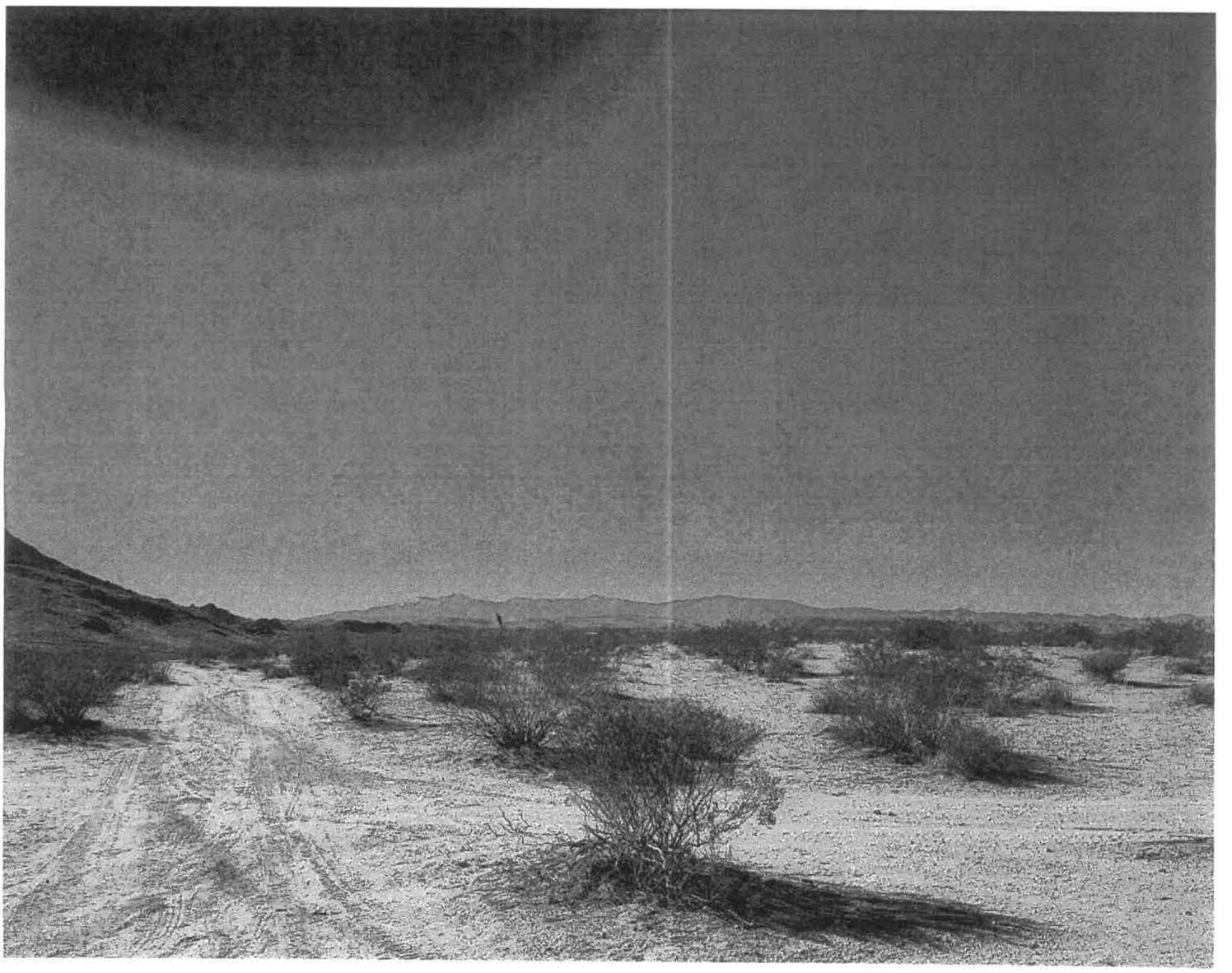
TERTIARY PLUTONIC ROCKS

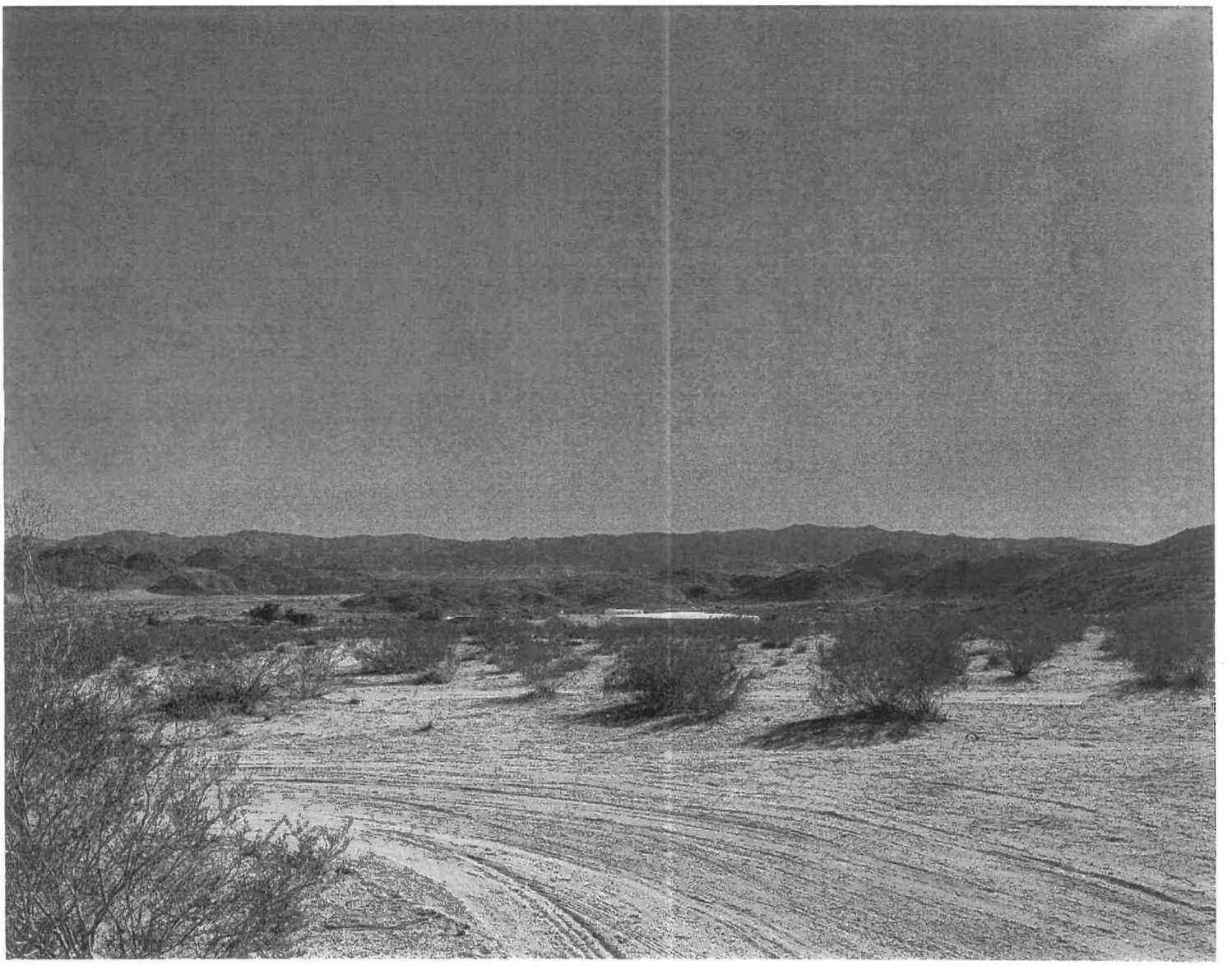


Mobile
22915









SAN BERNARDINO COUNTY

Public Health
Environmental Health Services
PERCOLATION TEST NOTIFICATION

www.SBCounty.gov
www.sbcounty.gov/dph/dehs
Phone: (800) 442-2283

Please email form to EHS.CustomerService@dph.sbcounty.gov or fax to 909.387.4323 at least two (2) working days before testing.

THIS SECTION TO BE COMPLETED BY QUALIFIED PROFESSIONAL

QUALIFIED PROFESSIONAL INFORMATION

Firm Name			Date	
AM/PAC AND ASSOCIATES			12-15-21	
Firm Address	City		State	Zip
2900 ADAMS ST. SUITE C-35	RIVERSIDE		CA	92504
Firm Contact Person	Email(s)		Phone Number	
DAVID BALLINGER	AMPACSOIL@GMAIL.COM		951-354-6500	

SITE INFORMATION

Owner's Name	Assessor's Parcel Number (APN)		
TEMIL MARMON	0599-191-49-0000		
Site Address	City	State	Zip
___ABERDEEN DR.	JOSHUA TREE	CA	92252
Email(s)		Phone Number	
HELLO@YOURSKYHOMES.COM		310-500-7007	

BILLING INFORMATION

Environmental Health Services may need to be onsite to observe percolation testing. This will be billed at the current hourly professional rate. Provide billing information below or check one of the following:

☐ Same as Qualified Professional Information ☒ Same as Site Information

Billing Name			
Billing Address	City	State	Zip
Email(s)		Phone Number	

PROJECT INFORMATION

Disposal field	☒ Leach Lines	☐ Seepage Pits	☐ Alternative Treatment System	
Exploratory Boring(s)	Boring Date(s) 1-11-22	Boring Time	Number of Borings	Depth of Boring(s) in ft.
Testing	Test Date(s) 1-11-22	Test Time	Number of Tests	Depth of Test Hole(s) in ft.
Project Type	☒ Single Family Residence	☐ Multi Family Residential		☐ Commercial
	Lot Size (ft^2/acres)	Number of Units		Lot Size (ft^2/acres)
		Lot Size (ft^2/acres)		Estimated Flow
	Please select one of the following			
	☐ Tentative Tract (TT) #		☐ Tentative Parcel Map (TPM) #	
	Number of Proposed Lots	Original Lot Size (ft^2/acres)	Average New Lot Size (ft^2/acres)	

A sewer connection will be required if a sewer is available within 200 ft. of the nearest property line (add 100 ft. for each additional lot). A "sewer will not serve" letter may be required prior to submittal of the percolation report.

Site Conditions	Historic groundwater level in feet	Slope in disposal area (%)
	Source of Water ☐ Private Well ☐ Water Purveyor	
	☐ Check box if parcel is on Forest Service Land	
	☐ Check box if lot is within 100 feet of a river/stream	

For Office Use Only For Office Use Only For Office Use Only For Office Use Only For Office Use Only

Fee:	FA Number:	Record ID:	PE Number:
Late Fee: ☐ Y ☐ N	Designated Employee:	Received By:	Date:
Check One: ☐ New ☐ Transfer ☐ Reactivate		Changes (please specify):	