



July 3, 2023

Project No. 23115-10

Mr. Phil Martin

**PHIL MARTIN & ASSOCIATES**

1809 East Dyer Road, Suite 301

Santa Ana, CA 92705

**Subject: Infiltration System Design Interpretive Report, Proposed Guadalupe Manor, 17103 Magnolia Street, City of Fountain Valley, Orange County, California**

In accordance with your request, CW Soils is pleased to present this infiltration system interpretive report for the proposed Guadalupe Manor, located at 17103 Magnolia Street in the City of Fountain Valley, Orange County, California. The purpose of our feasibility study was to determine the onsite infiltration rates and physical characteristics of the subsurface soils within the vicinity of the proposed infiltration systems. We have provided guidelines for the design of onsite infiltration systems. This interpretive report is intended to provide onsite infiltration rates for the existing soils.

### **SITE DESCRIPTION**

The subject property consists of partially developed land with relatively flat terrain. Topographic relief at the subject property is relatively low. Vegetation at the site includes moderate amounts of annual weeds/grasses, along with some scattered trees.

### **PROPOSED DEVELOPMENT**

Based on information provided by you, the proposed improvements will consist of two additional buildings with associated interior parking, utilities, and on-site infiltration areas.

## SUBSURFACE EXPLORATION AND INFILTRATION TESTING

### SUBSURFACE EXPLORATION

Subsurface exploration at the site consisted of three (3) exploratory excavations to a maximum depth of 51.5 feet, to evaluate the subsurface earth materials. The exploratory holes were excavated and logged, see Appendix A. The approximate locations of the exploratory excavations are shown on the attached Infiltration Location Map, Plate 1.

The soils observed during exploration were classified and logged in general accordance with the Standard Practice for Description and Identification of Soils (Visual-Manual Procedure) of ASTM D 2488.

### INFILTRATION TESTING

Aardvark Permeameter testing was utilized to conduct in-situ infiltration tests within the proposed basin on June 29, 2023, to evaluate the infiltration rates in order to estimate the amount of storm water runoff that can infiltrate into the proposed systems. The testing utilizes the constant head method with extremely accurate (0.2 ml resolution) hydraulic conductivity testing under saturated conditions, for the determination of reliable in-situ infiltration rates. Automated readings are taken at 1 minute intervals until the rate becomes constant and saturated hydraulic conductivity for the particular soil has been reached. This is reflected by the flattening of the curve generated by sample test data as shown on the Water Consumption Rate graph (Plot of Water Consumption Rate vs. Time) in Appendix B. Steady Flow Rate is achieved when the Water Consumption Rate changes less than +/- 5% for 3 consecutive readings.

The Aardvark Permeameter was utilized in replacement of the Guelph Permeameter as recommended by Soil Moisture Equipment Corporation, due to the higher reliability, accuracy, and ease of use. The Aardvark Permeameter is the latest version of the Guelph Permeameter.



The infiltration tests were conducted in a 3 inch diameter test hole, at depths of 2 to 3 feet deep. The approximate locations of the infiltration test holes are indicated on the attached Infiltration Location Map, Plate 1. Infiltration test holes were located by property boundary measurement on the site plan and/or by using geographic features. The test holes were filled with water and allowed to stand for an extended period of time.

Relatively shallow Aardvark Permeameter testing (P-1 & P-2) was conducted using the guidelines of the product instruction manuals. Stabilized infiltration test readings are summarized in the following table and more detailed test data recorded

in the field can be found in Appendix B. The test results are anticipated to be representative of the soils found in the vicinity of the test locations.

## INFILTRATION TEST SUMMARY

TEST NUMBER	TEST HOLE DIAMETER (in)	HOLE DEPTH (in)	INFILTRATION RATE (in/hr)	SOIL DESCRIPTION
P-1	3	24	0.57	Sandy CLAY
P-2	3	38	0.94	Sandy CLAY

## FINDINGS

### SOILS

A general description of the soils observed on site is provided below:

- Artificial Fill, Undocumented (map symbol Afu): Undocumented artificial fill materials were encountered throughout the westerly end of the site within the upper 1 to 2 feet during exploration. These materials are typically locally derived from the native materials and consist generally of orange brown clayey sand in a slightly moist to moist, and loose to medium dense state. These materials are generally inconsistent, poorly consolidated fills.
- Quaternary Alluvial Fan Deposits (map symbol Qyf): Quaternary alluvium was encountered to a maximum depth of 51.5 feet. These alluvial deposits consist predominately of grayish brown to light gray, sandy clay and clay with occasional lenses of clayey sand. These deposits were generally noted to be in a slightly moist to wet, soft to very stiff state.

### GROUNDWATER

Groundwater was observed during exploration of B-1, B-2, and B-3 at depths ranging from 13.5 to 16.5 feet deep excavated to a maximum depth of 51.5 feet.

## CONCLUSIONS AND RECOMMENDATIONS

### GENERAL

The shallow in-situ soils within the subject property have an average infiltration design rate of 0.755 in/hr.

## **PLAN REVIEW AND CONSTRUCTION SERVICES**

This report has been prepared for the exclusive use of **City of Fountain Valley** and their authorized representative. It is unlikely to contain sufficient information for other parties or other uses. CW Soils should be provided the opportunity to review the final design plans and specifications prior to construction, in order to verify that the recommendations have been properly incorporated into the project plans and specifications. If CW Soils is not accorded the opportunity to review the project plans and specifications, we are not responsible for misinterpretation of our recommendations.

We recommend that CW Soils be retained to provide soils engineering and engineering geologic services during the grading and foundation excavation phases of work, in order to allow for design changes in the event that the subsurface conditions differ from those anticipated prior to construction.

CW Soils should review any changes in the project and modify the conclusions and recommendations of this report in writing. This report along with the drawings contained within are intended for design input purposes only and are not intended to act as construction drawings or specifications. In the event that conditions during grading or construction operations appear to differ from those indicated in this report, our office should be notified immediately, as appropriate revisions may be required.

## **REPORT LIMITATIONS**

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable soils engineers and geologists, practicing at the time and location this report was prepared. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

Soils vary in type, strength, and other engineering properties between points of observation and exploration. Groundwater and moisture conditions can also vary due to natural processes or the works of man on this or adjacent properties. As a result, we do not and cannot have complete knowledge of the subsurface conditions beneath the proposed project. No practical study can completely eliminate uncertainty with regard to the anticipated geologic and soils engineering conditions in connection with a proposed project. The conclusions and recommendations within this report are based upon the findings at the points of observation and are subject to confirmation by CW Soils based on the conditions revealed during grading and construction operations.

This report was prepared with the understanding that it is the responsibility of the owner, to ensure that the conclusions and recommendations contained herein are brought to the attention of the other project consultants and are incorporated into the plans and specifications. The owners' contractor should implement the recommendations in this report and notify the owner as well as our office if they consider any of the recommendations presented herein to be unsafe or unsuitable.

CW Soils appreciates the opportunity to offer our services on this project. If we can be of further assistance, please do not hesitate to contact the undersigned at your convenience.

Respectfully submitted,

CW Soils



Chad E. Welke, PG, CEG, PE  
Principal Geologist/Engineer



Distribution: (1) Addressee (email)

Attachments: Appendix A – Exploration  
Appendix B – Infiltration Test Results  
Plate 1 – Infiltration Location Map (*Rear of Text*)

# **APPENDIX A**

## **EXPLORATION**

# LOG SYMBOLS & TERMS

The No. 200 Standard Sieve is about the smallest particle visible to the naked eye.

<b>Coarse-grained Soils</b> > ½ of materials larger than #200 sieve	<b>GRAVELS</b> Higher percentage of coarse fraction is larger than #4 sieve	Clean Gravels (less than 5% fines)		<b>GW</b>	Well-graded gravels, little or no fines
				<b>GP</b>	Poorly-graded gravels, little or no fines
		5 – 12% fines		<b>GW-GM</b>	Well-graded gravel with silt
				<b>GW-GC</b>	Well-graded gravel with clay
				<b>GP-GM</b>	Poorly-graded gravel with silt
				<b>GP-GC</b>	Poorly-graded gravel with clay
	Gravels with fines	PI < 4	<b>GM</b>	Silty Gravels	
		PI > 7	<b>GC</b>	Clayey Gravels	
	<b>SANDS</b> Higher percentage of coarse fraction is smaller than #4 sieve	Clean Sands (less than 5% fines)		<b>SW</b>	Well-graded sands, little or no fines
				<b>SP</b>	Poorly-graded sands, little or no fines
		5 – 12% fines		<b>SW-SM</b>	Well-graded sand with silt
				<b>SW-SC</b>	Well-graded sand with clay
				<b>SP-SM</b>	Poorly-graded sand with silt
				<b>SP-SC</b>	Poorly-graded sand with clay
Sands with fines				PI < 4	<b>SM</b>
		PI > 7	<b>SC</b>	Clayey Sands	
		PI 4-7	<b>SC-SM</b>	Silty clayey sands	
<b>Fine-grained Soils</b> ≥ ½ of materials smaller than #200 sieve	<b>SILTS &amp; CLAYS</b> Liquid Limit Less Than 50		PI < 4	<b>ML</b>	Inorganic silts & sandy silts
			PI > 7	<b>CL</b>	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
			PI 4-7	<b>ML-CL</b>	Silts & clays of low plasticity, sandy silty clay, silty clay
	<b>SILTS &amp; CLAYS</b> Liquid Limit Greater Than 50			<b>MH</b>	Inorganic silts, micaceous or diatomaceous silt, sandy silt
				<b>CH</b>	Inorganic clays of high plasticity, fat clays, sandy clays, gravelly clays
				<b>OH</b>	Organic silts and clays of medium-to-high plasticity
<b>Highly Organic Soils</b>				<b>PT</b>	Peat, humus swamp soils with higher organic content

Symbols	
	Ring Sample
	SPT Sample
<b>NR</b>	No Recovery
	Groundwater

Grain Size			
Description	Sieve Size	Grain Size	Approximate Size
Boulders	>12"	>12"	Larger than basketball-sized
Cobbles	3-12"	3-12"	Fist-sized to basketball-sized
Gravel	Coarse	¾-3"	Thumb-sized to fist-sized
	Fine	#4-¾"	Pea-sized to thumb-sized
Sand	Coarse	#10-#4	Rock salt-sized to pea-sized
	Medium	#40-#10	Sugar-sized to rock salt-sized
	Fine	#200-#40	Flour-sized to sugar-sized
Fines	Passing #200	<0.0029"	Flour-sized and smaller

Moisture Content
Slightly Moist
Moist
Very Moist
Wet

Consistency – Fine Grained Soils			
Apparent Density	SPT (# blows/foot)	Modified CA Sampler (# blows/foot)	Field Test
<b>Very Soft</b>	<1	<2	Easily penetrated by thumb; exudes between thumb and fingers when squeezed in hand
<b>Soft</b>	2-3	3-6	Easily penetrated one inch by thumb; molded by light finger pressure
<b>Medium Stiff</b>	4-6	7-12	Penetrated over ½ inch by thumb with moderate effort; molded by strong finger pressure
<b>Stiff</b>	7-10	13-15	Indented about ½ inch by thumb but penetrated only with great effort
<b>Very Stiff</b>	11-20	16-30	Readily indented thumbnail
<b>Hard</b>	>20	>30	Indented with difficulty by thumbnail
Relative Density – Coarse Grained Soils			
Apparent Density	SPT (# blows/foot)	Modified CA Sampler (# blows/foot)	Field Test
Very Loose	<2	<4	Easily penetrated with ½ inch reinforcing rod pushed by hand
Loose	3-5	4-10	Easily penetrated with ½ inch reinforcing rod pushed by hand
Medium Dense	6-15	11-30	Easily penetrated 1-foot with ½ inch reinforcing rod driven with a 5-lb hammer
Dense	16-25	31-50	Difficult to penetrate 1-foot with ½ inch reinforcing rod driven with a 5-lb hammer
Very Dense	>25	>50	Penetrated only a few inches with ½ inch reinforcing rod driven with a 5-lb hammer

# Geotechnical Boring Log B-1

Date: June 12, 2023	Project Name: Guadalupe Manor	Page: 1 of 2
Project Number: 23115-10	Logged By: CW	
Drilling Company: California Pacific	Type of Rig: Mobile B61	
Drive Weight (lbs): 140	Drop (in): 30	Hole Diameter (in): 8
Top of Hole Elevation (ft): See Plate 1	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count Per Foot	Sample Number	Dry Density (pcf)	Moisture (%)	Classification Symbol	MATERIAL DESCRIPTION
0		Bag 1 @ 0-5'			SC	<b>Artificial Fill, Undocumented (Afu):</b> Clayey SAND; orange brown, moist, loose
						<b>Quaternary Alluvial Fan Deposits (Qyf):</b>
					CL	Sandy CLAY; grayish brown, moist, medium stiff, high silt content
5	19	R-1	100.1	23.3		
10	17	R-2	91.6	30.7		very moist
					▽	groundwater at 13.5 feet
15	11	R-3	88.4	32.6	CL	CLAY with sand; light gray, very moist, medium stiff
20	8	N-1	-	30.1		Initial groundwater at 21.5 feet
25	22	R-4	94.1	28.7		very stiff, lenses of clayey sand
30						

# Geotechnical Boring Log B-1

Date: June 12, 2023	Project Name: Guadalupe Manor	Page: 2 of 2
Project Number: 23115-10	Logged By: CW	
Drilling Company: California Pacific	Type of Rig: Mobile B61	
Drive Weight (lbs): 140	Drop (in): 30	Hole Diameter (in): 8
Top of Hole Elevation (ft): See Plate 1	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count Per Foot	Sample Number	Dry Density (pcf)	Moisture (%)	Classification Symbol	MATERIAL DESCRIPTION
30	6	N-2	-	32.8		medium stiff, lenses of clayey sand
35	14	R-5	96.0	22.2		moist, stiff
40	9	N-3	-	29.6		moist to very moist
45	8	N-4	-	31.6		very moist, lower silt content, higher plasticity
50	12	N-5	-	39.2		grayish olive brown, very stiff
<b>Total Depth 51.5 Feet</b>						
<b>Groundwater at 13.5 Feet</b>						
55						
60						



# Geotechnical Boring Log B-2

Date: June 12, 2023	Project Name: Guadalupe Manor	Page: 1 of 2
Project Number: 23115-10	Logged By: CW	
Drilling Company: California Pacific	Type of Rig: Mobile B61	
Drive Weight (lbs): 140	Drop (in): 30	Hole Diameter (in): 8
Top of Hole Elevation (ft): See Plate 1	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count Per Foot	Sample Number	Dry Density (pcf)	Moisture (%)	Classification Symbol	MATERIAL DESCRIPTION
0					SC	<b>Artificial Fill, Undocumented (Afu):</b> Clayey SAND; orange brown, slightly moist to moist, loose to medium dense
					CL	<b>Quaternary Alluvial Fan Deposits (Qyf):</b> Sandy CLAY; grayish brown, slightly moist, soft to medium stiff
5	23	R-1	106.5	19.6		moist, very stiff, high silt content
10	10	R-2	94.1	27.6		moist to very moist, medium stiff, fine grained
15	12	R-3	81.3	40.7		very moist to wet
					▽	groundwater at 16.5 feet
20	9	N-1	-	NR		
<b>Total Depth 21.5 Feet</b>						
<b>Groundwater at 16.5 Feet</b>						
25						
30						



# Geotechnical Boring Log B-3

Date: June 12, 2023	Project Name: Guadalupe Manor	Page: 1 of 2
Project Number: 23115-10	Logged By: CW	
Drilling Company: California Pacific	Type of Rig: Mobile B61	
Drive Weight (lbs): 140	Drop (in): 30	Hole Diameter (in): 8
Top of Hole Elevation (ft): See Plate 1	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count Per Foot	Sample Number	Dry Density (pcf)	Moisture (%)	Classification Symbol	MATERIAL DESCRIPTION
0						<b>Quaternary Alluvial Fan Deposits (Qyf):</b>
					CL	Sandy CLAY; grayish brown, slightly moist to moist, soft
5	12	R-1	96.8	26.1		medium stiff
10	6	R-2	96.6	28.0		soft, fine grained, lenses of clayey sand
					▽	groundwater at 13.5 feet
15	14	R-3	83.3	39.1		very moist, stiff
20	6	N-1	-	29.6		medium stiff
<b>Total Depth 21.5 Feet</b>						
<b>Groundwater at 13.5 Feet</b>						
25						
30						



# **APPENDIX B**

## **INFILTRATION TEST RESULTS**



Location: 23115

Site: P1

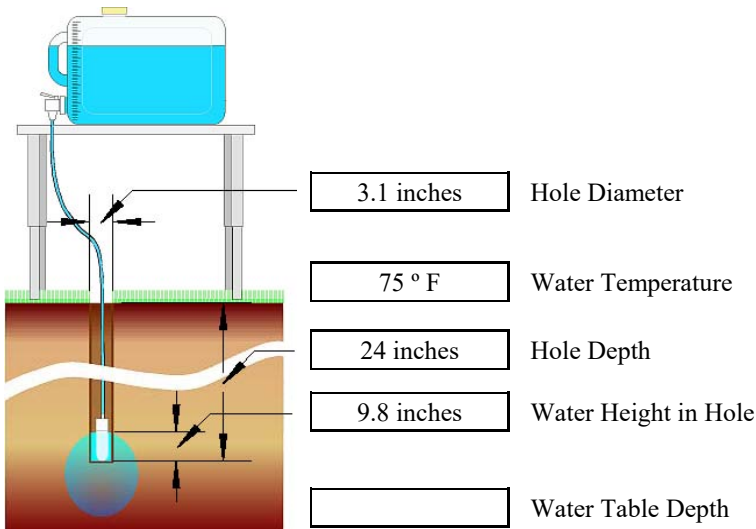
Time interval between readings: 1 minute

Ksat Method:

**Steady Flow Rate Condition**  
 Steady Flow Rate achieved when Water Consumption Rate changes less than +/- 5 % for 3 consecutive readings

Steady Flow Rate:   
 Temp. Adj. FR:   
 Percolation Rate:   
**Ksat:**

Notes:

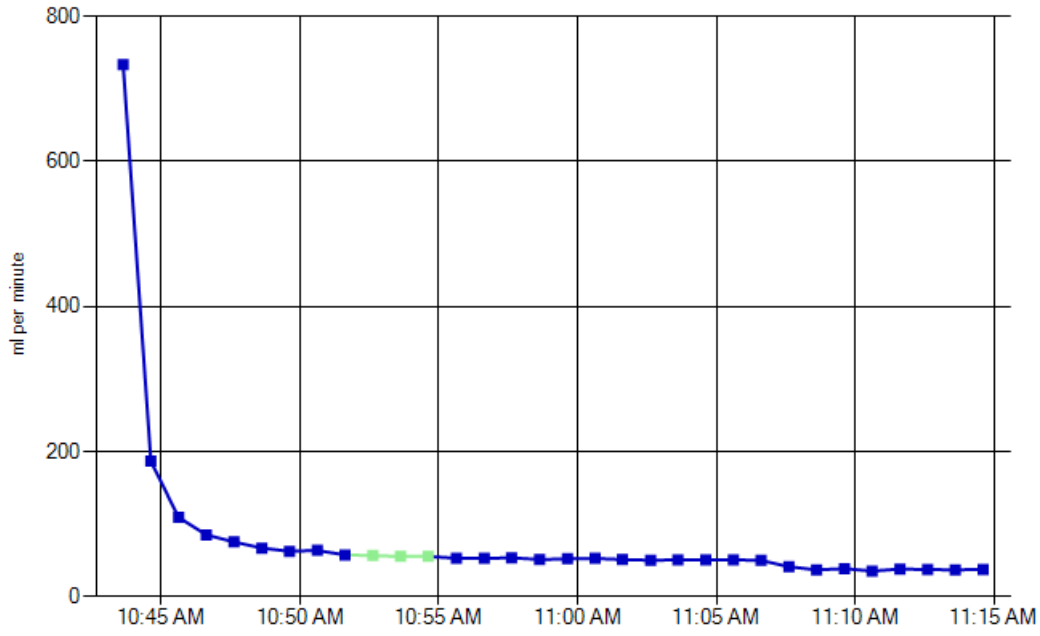


**Site GPS Position**

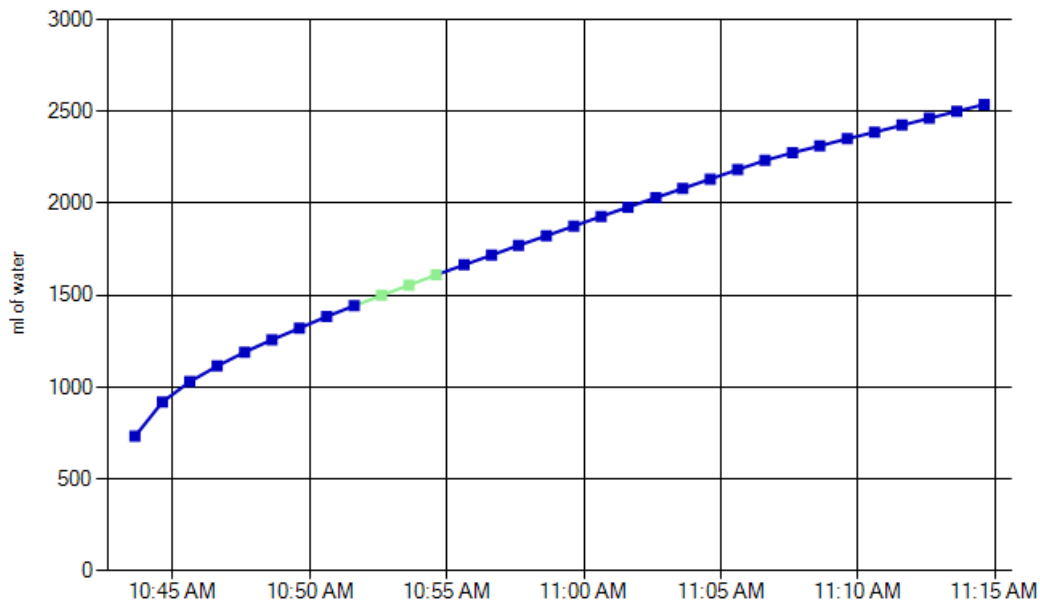
	Degrees	Minutes	Seconds	
Longitude:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	East
Latitude:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	North

Soil Texture-Structure Category:

Water Consumption Rate



Total Water Consumed



<u>Time</u>	<u>Reservoir Water Level</u>	<u>Elapsed Time Interval</u>	<u>Interval Water Consumed</u>	<u>Total Water Consumed</u>	<u>Water Consumption Rate</u>	<u>Ignore Reading</u>
10:42:37 AM	8079.6 ml					
10:43:37 AM	7346.2 ml	1 minute	733.4 ml	733.4 ml	733.400 ml/min	
10:44:37 AM	7159.2 ml	1 minute	187.0 ml	920.4 ml	187.000 ml/min	
10:45:37 AM	7049.6 ml	1 minute	109.6 ml	1030.0 ml	109.600 ml/min	
10:46:37 AM	6964.2 ml	1 minute	85.4 ml	1115.4 ml	85.400 ml/min	
10:47:37 AM	6888.4 ml	1 minute	75.8 ml	1191.2 ml	75.800 ml/min	
10:48:37 AM	6821.2 ml	1 minute	67.2 ml	1258.4 ml	67.200 ml/min	
10:49:37 AM	6758.4 ml	1 minute	62.8 ml	1321.2 ml	62.800 ml/min	
10:50:37 AM	6694.4 ml	1 minute	64.0 ml	1385.2 ml	64.000 ml/min	
10:51:37 AM	6636.6 ml	1 minute	57.8 ml	1443.0 ml	57.800 ml/min	
10:52:37 AM	6579.6 ml	1 minute	57.0 ml	1500.0 ml	57.000 ml/min	
10:53:37 AM	6523.8 ml	1 minute	55.8 ml	1555.8 ml	55.800 ml/min	
10:54:37 AM	6468.0 ml	1 minute	55.8 ml	1611.6 ml	55.800 ml/min	
10:55:38 AM	6413.8 ml	1 minute	54.2 ml	1665.8 ml	53.311 ml/min	
10:56:38 AM	6360.8 ml	1 minute	53.0 ml	1718.8 ml	53.000 ml/min	
10:57:37 AM	6307.8 ml	59 seconds	53.0 ml	1771.8 ml	53.898 ml/min	
10:58:38 AM	6255.4 ml	1 minute	52.4 ml	1824.2 ml	51.541 ml/min	
10:59:38 AM	6203.0 ml	1 minute	52.4 ml	1876.6 ml	52.400 ml/min	
11:00:38 AM	6150.0 ml	1 minute	53.0 ml	1929.6 ml	53.000 ml/min	
11:01:37 AM	6099.4 ml	59 seconds	50.6 ml	1980.2 ml	51.458 ml/min	
11:02:38 AM	6048.0 ml	1 minute	51.4 ml	2031.6 ml	50.557 ml/min	
11:03:37 AM	5997.8 ml	59 seconds	50.2 ml	2081.8 ml	51.051 ml/min	
11:04:37 AM	5946.6 ml	1 minute	51.2 ml	2133.0 ml	51.200 ml/min	
11:05:37 AM	5895.4 ml	1 minute	51.2 ml	2184.2 ml	51.200 ml/min	
11:06:37 AM	5845.2 ml	1 minute	50.2 ml	2234.4 ml	50.200 ml/min	
11:07:37 AM	5803.6 ml	1 minute	41.6 ml	2276.0 ml	41.600 ml/min	
11:08:37 AM	5766.4 ml	1 minute	37.2 ml	2313.2 ml	37.200 ml/min	
11:09:37 AM	5727.4 ml	1 minute	39.0 ml	2352.2 ml	39.000 ml/min	
11:10:37 AM	5691.8 ml	1 minute	35.6 ml	2387.8 ml	35.600 ml/min	
11:11:37 AM	5653.4 ml	1 minute	38.4 ml	2426.2 ml	38.400 ml/min	
11:12:37 AM	5615.8 ml	1 minute	37.6 ml	2463.8 ml	37.600 ml/min	
11:13:37 AM	5578.4 ml	1 minute	37.4 ml	2501.2 ml	37.400 ml/min	
11:14:37 AM	5540.6 ml	1 minute	37.8 ml	2539.0 ml	37.800 ml/min	



Location: 23115

Site: P2

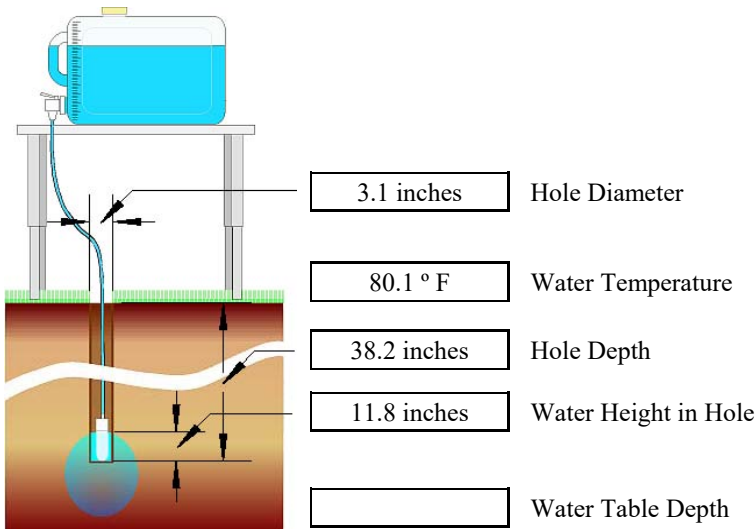
Time interval between readings: 1 minute

Ksat Method:

**Steady Flow Rate Condition**  
 Steady Flow Rate achieved when Water Consumption Rate changes less than +/- 5 % for 3 consecutive readings

Steady Flow Rate:   
 Temp. Adj. FR:   
 Percolation Rate:   
**Ksat:**

Notes:

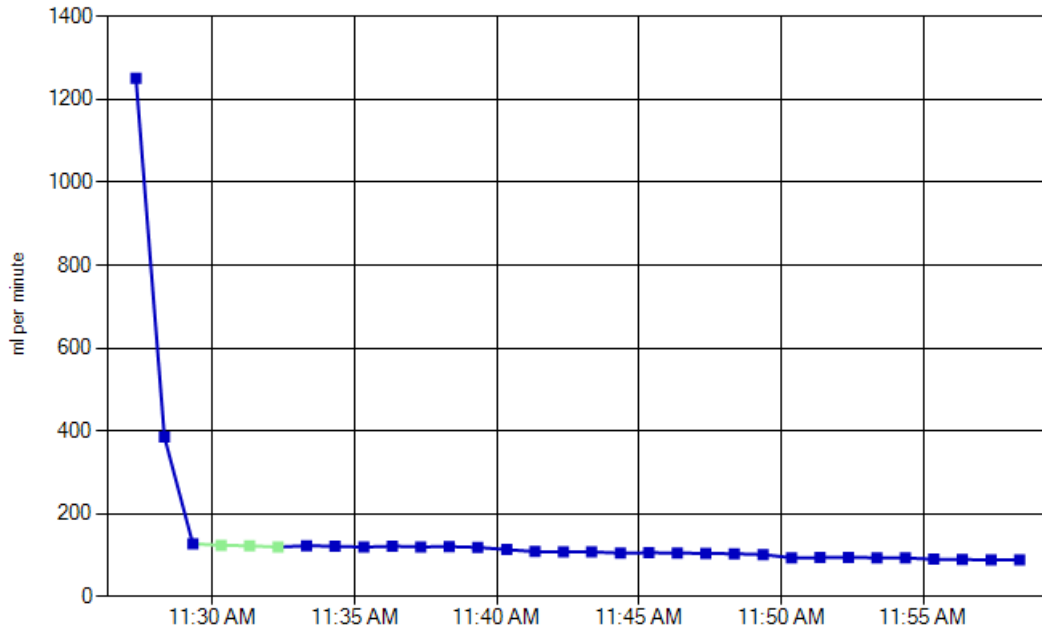


**Site GPS Position**

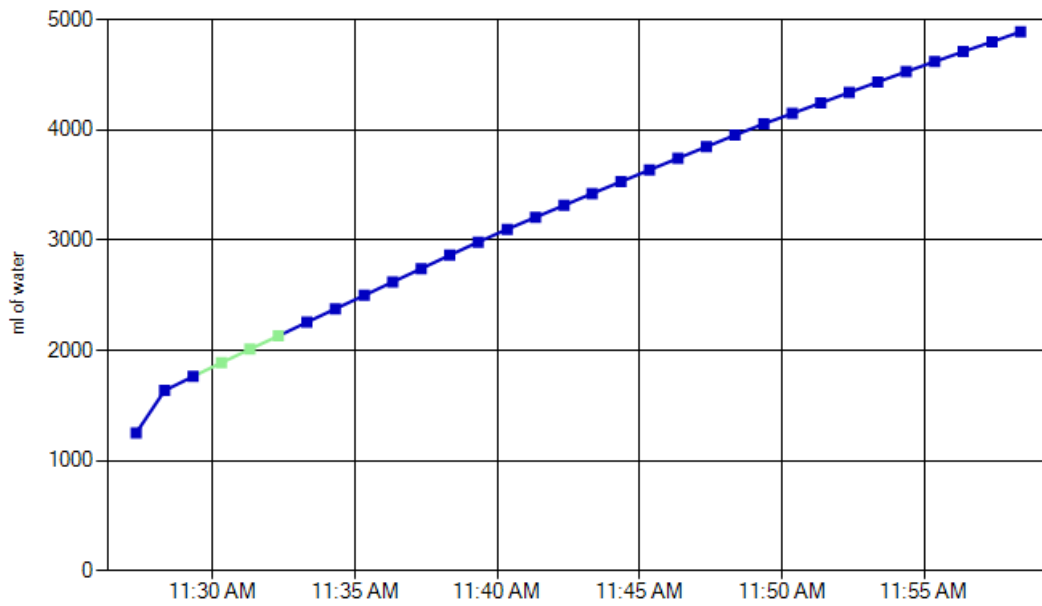
	Degrees	Minutes	Seconds	
Longitude:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	East
Latitude:	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	North

Soil Texture-Structure Category:

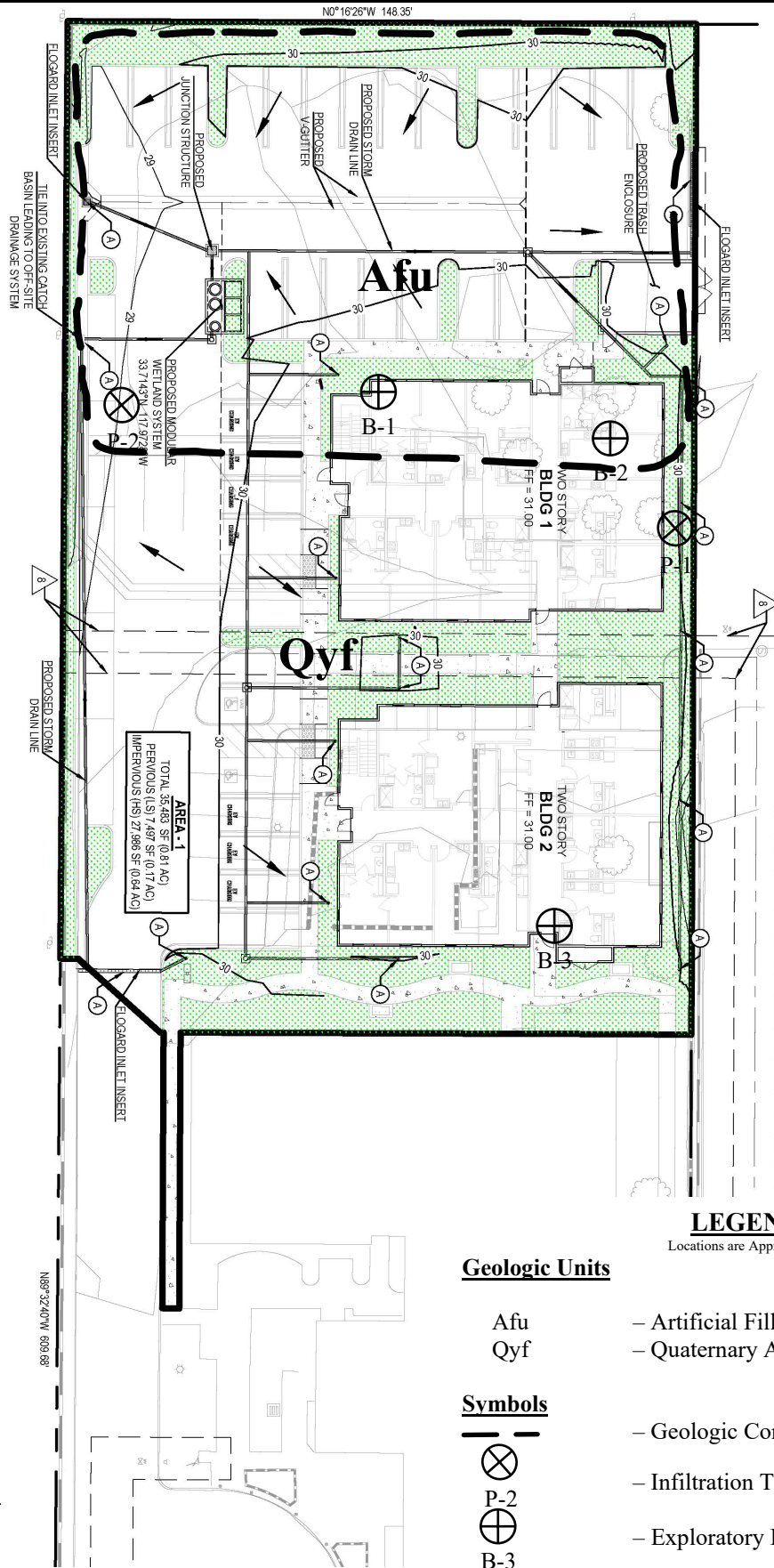
Water Consumption Rate



Total Water Consumed



<u>Time</u>	<u>Reservoir Water Level</u>	<u>Elapsed Time Interval</u>	<u>Interval Water Consumed</u>	<u>Total Water Consumed</u>	<u>Water Consumption Rate</u>	<u>Ignore Reading</u>
11:26:19 AM	8057.0 ml					
11:27:19 AM	6806.4 ml	1 minute	1250.6 ml	1250.6 ml	1250.600 ml/min	
11:28:19 AM	6420.4 ml	1 minute	386.0 ml	1636.6 ml	386.000 ml/min	
11:29:19 AM	6292.4 ml	1 minute	128.0 ml	1764.6 ml	128.000 ml/min	
11:30:19 AM	6168.0 ml	1 minute	124.4 ml	1889.0 ml	124.400 ml/min	
11:31:19 AM	6044.8 ml	1 minute	123.2 ml	2012.2 ml	123.200 ml/min	
11:32:19 AM	5924.6 ml	1 minute	120.2 ml	2132.4 ml	120.200 ml/min	
11:33:19 AM	5801.2 ml	1 minute	123.4 ml	2255.8 ml	123.400 ml/min	
11:34:19 AM	5679.2 ml	1 minute	122.0 ml	2377.8 ml	122.000 ml/min	
11:35:20 AM	5557.2 ml	1 minute	122.0 ml	2499.8 ml	120.000 ml/min	
11:36:20 AM	5434.8 ml	1 minute	122.4 ml	2622.2 ml	122.400 ml/min	
11:37:20 AM	5314.2 ml	1 minute	120.6 ml	2742.8 ml	120.600 ml/min	
11:38:20 AM	5192.8 ml	1 minute	121.4 ml	2864.2 ml	121.400 ml/min	
11:39:20 AM	5073.4 ml	1 minute	119.4 ml	2983.6 ml	119.400 ml/min	
11:40:21 AM	4957.4 ml	1 minute	116.0 ml	3099.6 ml	114.098 ml/min	
11:41:21 AM	4848.2 ml	1 minute	109.2 ml	3208.8 ml	109.200 ml/min	
11:42:21 AM	4740.0 ml	1 minute	108.2 ml	3317.0 ml	108.200 ml/min	
11:43:20 AM	4633.2 ml	59 seconds	106.8 ml	3423.8 ml	108.610 ml/min	
11:44:21 AM	4525.8 ml	1 minute	107.4 ml	3531.2 ml	105.639 ml/min	
11:45:21 AM	4419.2 ml	1 minute	106.6 ml	3637.8 ml	106.600 ml/min	
11:46:21 AM	4313.4 ml	1 minute	105.8 ml	3743.6 ml	105.800 ml/min	
11:47:21 AM	4208.6 ml	1 minute	104.8 ml	3848.4 ml	104.800 ml/min	
11:48:21 AM	4104.4 ml	1 minute	104.2 ml	3952.6 ml	104.200 ml/min	
11:49:22 AM	4000.8 ml	1 minute	103.6 ml	4056.2 ml	101.902 ml/min	
11:50:22 AM	3906.4 ml	1 minute	94.4 ml	4150.6 ml	94.400 ml/min	
11:51:22 AM	3811.6 ml	1 minute	94.8 ml	4245.4 ml	94.800 ml/min	
11:52:22 AM	3716.4 ml	1 minute	95.2 ml	4340.6 ml	95.200 ml/min	
11:53:22 AM	3622.0 ml	1 minute	94.4 ml	4435.0 ml	94.400 ml/min	
11:54:22 AM	3528.0 ml	1 minute	94.0 ml	4529.0 ml	94.000 ml/min	
11:55:22 AM	3437.2 ml	1 minute	90.8 ml	4619.8 ml	90.800 ml/min	
11:56:22 AM	3346.8 ml	1 minute	90.4 ml	4710.2 ml	90.400 ml/min	
11:57:23 AM	3256.4 ml	1 minute	90.4 ml	4800.6 ml	88.918 ml/min	
11:58:23 AM	3166.8 ml	1 minute	89.6 ml	4890.2 ml	89.600 ml/min	



**AREA - 1**  
 TOTAL 35,483 SF (0.81 AC)  
 PERVIOUS (LS) 7,497 SF (0.17 AC)  
 IMPERVIOUS (HS) 27,986 SF (0.64 AC)

**LEGEND**

Locations are Approximate

**Geologic Units**

- Afu – Artificial Fill, Undocumented
- Qyf – Quaternary Alluvial Fan Deposits

**Symbols**

- — Geologic Contact
- ⊗ — Infiltration Testing
- ⊕ — Exploratory Boring

Reference: Waber Consultants, Inc., 2022, Preliminary WQMP, Portion of Sheet 3 of 5, dated 10/21/22.



Proposed Guadalupe Manor

23115-10

**INFILTRATION MAP**

1" = 40'

2023

PLATE 1