

September 8, 2022

CHIPT Highland 210 L.P. - East
527 West 7th Street, Suite 200
Los Angeles, California 90014



**SOUTHERN
CALIFORNIA
GEOTECHNICAL**
A California Corporation

Attention: Mr. Jorge A. Garcia
Development Associate

Project No.: **22G156EA-2**

Subject: **Results of Infiltration Testing**
Proposed Warehouse
North Side of East 3rd Street, 730± feet East of Central Avenue
Highland, California

Reference: Updated Geotechnical Investigation, Proposed Warehouse, North Side of East 3rd Street, 730± feet East of Central Avenue, Highland, California, prepared for CHIPT Highland 210 L.P. - East by Southern California Geotechnical, Inc. (SCG), SCG Project No. 22G156EA-1, dated September 7, 2022.

Mr. Garcia:

In accordance with your request, we have conducted infiltration testing at the subject site. We are pleased to represent this report summarizing the results of the infiltration testing and our design recommendations.

Scope of Services

The scope of services performed for this project was in accordance with our Proposal No. 22P273R2, dated June 27, 2022. The scope of services included a visual site reconnaissance and the review of the previously prepared infiltration report to determine the infiltration rates of the on-site soils. The infiltration testing was performed in general accordance with ASTM Test Method D-3385-03, Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer.

Site and Project Description

The project site is located on the north side of East 3rd Street, approximately 730± feet east of the intersection of East 3rd Street and Central Avenue in Highland, California. The site is bounded to the north by West 5th Street, to the west by a restaurant business and a retail center, to the south by East 3rd Street, and to the east by a single-family residence (SFR) property and a storage lot. The general location of the site is illustrated on the Site Location Map, included as Plate 1 of this report.

The site consists of an irregular-shaped property, 11.09± acres in size. The site consists of numerous rectangular-shaped parcels which are developed for various uses, such as, truck and trailer parking facilities, small industrial/manufacturing buildings and equipment storage, and SFR properties. The existing buildings range from 1,000± to 3,000± ft² in size. The majority of

the buildings are single-story structures of wood frame and stucco construction or steel frame and metal panel construction, and are presumed to be supported on conventional shallow foundations with concrete slab-on-grade floors. The buildings are generally surrounded by asphaltic concrete (AC) and crushed aggregate base (CAB) pavements, with isolated Portland cement concrete (PCC) pavements and exposed soil with sparse to moderate grass and weed growth. The existing pavements are generally in poor condition with noticeable cracking throughout. Some medium-to large-size trees are scattered throughout the site.

Detailed topographic information was not available at the time of this report. Based on the elevations obtained from Google Earth, and visual observations made at the time of the subsurface investigation, the overall site topography slopes downward to the west at a gradient of 1 to 1½± percent.

Proposed Development

The conceptual site plan for the project site prepared by RGA, RGA Project No. 21072.00, has been provided to our office by the client. Based on this plan, the site will be developed with a 248,511± ft² warehouse located in the southern portion of the site. Dock-high doors will be constructed along a portion of the north building wall. The proposed building is expected to be surrounded by AC pavements in the parking and drive areas, PCC pavements in the loading dock area, and concrete flatwork and landscaped planters throughout the site.

The proposed development will include on-site storm water disposal. Three (3) infiltration systems identified as System "C," System "D," and System "E" will be constructed to the southwest, northwest, and southeast of the proposed building, respectively. The proposed infiltration systems will consist of below-grade chambers. The bottoms of the infiltration systems are expected to be 10 to 13± feet below the existing site grades.

Previous Study

SCG previously performed a geotechnical investigation at the subject site, which is referenced above. As a part of this study, fourteen (14) borings (identified as Boring Nos. B-4, B-5, B-6, B-8, B-9, and B-19 through B-27) were advanced to depths of 6½ to 35± feet below existing site grades.

AC pavements were encountered at the ground surface of Boring No. B-9. The pavement section at this location consists of 1± inch of AC with no discernible layer of underlying aggregate base. A 3½±-inch-thick PCC section was encountered at the ground surface at Boring No. B-26. Steel reinforcement was not observed at this location. Artificial fill soils were encountered beneath the existing pavements or at the ground surface at most of the boring locations, with the exception of Boring Nos. B-4, B-8, and B-22, extending to depths of 2½ to 5½± feet below the existing site grades. The fill soils generally consist of medium dense to very dense sands and silty sands, with occasional gravelly sands. Occasional cobbles were encountered at the ground surface at Boring Nos. B-6, and B-19. Native alluvium was encountered at the ground surface at Boring Nos. B-4, B-8, and B-22, and beneath the fill soils at the remaining boring locations, extending to at least the maximum depth explored of 35± feet. The alluvium generally consists of medium dense to very dense sands and gravelly sands with varying silt content, and occasional medium dense to very dense silty sands. Occasional

cobbles were encountered during drilling at most of the boring locations at various depths, and at the ground surface at Boring No. B-22.

Groundwater

Groundwater was not encountered at any of the borings. Based on the lack of any water within the borings, and the moisture contents of the recovered soil samples, the static groundwater table is considered to have existed at a depth in excess of 35± feet below existing site grades, at the time of the subsurface investigation.

As part of our research, we reviewed available groundwater data in order to determine groundwater levels for the site. Water level data was obtained from the California Department of Water Resources Water Data Library website, <https://wdl.water.ca.gov/waterdatalibrary/>. The nearest monitoring well on record (identified as State Well Number: 01S03W09E002S) is located as close as 3,000± feet southeast of the project site. Water level readings within this monitoring well indicate a high groundwater level of 52± feet below the ground surface in October 1984.

Subsurface Exploration

Scope of Exploration

The subsurface exploration for the infiltration testing consisted of nine (9) backhoe-excavated trenches, extending to depths of 10 to 13± feet below the existing site grades. The trenches were logged during excavation by a member of our staff. The approximate locations of the infiltration trenches (identified as Infiltration Test Nos. I-11 through I-19) are indicated on the Infiltration Test Location Plan, enclosed as Plate 2 of this report. The trenches were excavated between the dates of February 21 and February 24, 2022.

Geotechnical Conditions

Artificial fill soils were encountered at the ground surface at most of the infiltration test locations, extending to depths of 1 to 2± feet below the existing site grades. The fill soils generally consist of loose to medium dense silty sands with varying gravel content. Occasional cobbles were encountered at the ground surface at Infiltration Test No. I-12. The fill soils possess a disturbed appearance resulting in their classification as artificial fill. Native alluvium was encountered beneath the artificial fill soils or at the ground surface at all of the infiltration test locations, extending to at least the maximum depth explored of 13± feet. The alluvium generally consists of loose to dense gravelly sands with varying silt content, and sands with varying gravel content. Occasional cobbles were encountered at some of the infiltration trenches at various depths. The Trench Logs, which illustrate the conditions encountered at the infiltration test locations, are presented in this report. Infiltration Test No. I-16 encountered a stratum consisting of dense gravelly sands to sandy gravels with occasional to extensive cobbles and occasional boulders, extending from the ground surface to a depth of 13± feet.

Infiltration Testing

We understand that the results of the testing will be used to prepare a preliminary design for the storm water infiltration systems that will be used at the project site. As previously mentioned, the infiltration testing was performed in general accordance with ASTM Test Method D-3385-03, Standard Test Method for Infiltration Rate of Soils in Field Using Double Ring Infiltrometer.

Two stainless steel infiltration rings were used for the infiltration testing. The outer infiltration ring is 2 feet in diameter and 20 inches in height. The inner infiltration ring is 1 foot in diameter and 20 inches in height. At the test locations, the outer ring was driven 3± inches into the soil at the base of each trench. The inner ring was centered inside the outer ring and subsequently driven 3± inches into the soil at the base of the trench. The rings were driven into the soil using a ten-pound sledge hammer. The soil surrounding the wall of the infiltration rings was only slightly disturbed during the driving process.

Infiltration Testing Procedure

Infiltration testing was performed at all of the trench locations. The infiltration testing consisted of filling the inner ring and the annular space (the space between the inner and outer rings) with water, approximately 3 to 4 inches above the soil. To prevent the flow of water from one ring to the other, the water level in both the inner ring and the annular space between the rings was maintained using constant-head float valves. The volume of water that was added to maintain a constant head in the inner ring and the annular space during each time interval was determined and recorded. A cap was placed over the rings to minimize the evaporation of water during the tests.

The schedule for readings was determined based on the observed soil type at the base of each backhoe-excavated trench. Based on the existing soils at the trench locations, the volumetric measurements were made at 3-minute increments. The water volume measurements are presented on the spreadsheets enclosed with this report. The infiltration rates for each of the timed intervals are also tabulated on these spreadsheets.

The infiltration rates for the infiltration tests are calculated in centimeters per hour and then converted to inches per hour. The rates are summarized below:

<u>Infiltration Test No.</u>	<u>Depth (feet)</u>	<u>Soil Description</u>	<u>Measured Infiltration Rate (inches/hour)</u>
I-11	10	Gravelly fine to coarse Sand, trace Silt, occasional Cobbles	20.5
I-12	10	Gravelly fine to coarse Sand, trace to little Silt	20.0
I-13	13	Fine to coarse Sand, trace fine Gravel	21.0
I-14	13	Fine to coarse Sand, trace Silt, occasional Cobbles	23.7
I-15	13	Fine to coarse Sand, little fine Gravel	20.5

<u>Infiltration Test No.</u>	<u>Depth (feet)</u>	<u>Soil Description</u>	<u>Measured Infiltration Rate (inches/hour)</u>
I-16	13	Gravelly fine to coarse Sand to fine to coarse Sandy Gravel, occasional to extensive Cobbles, occasional Boulders	24.3
I-17	13	Gravelly fine to coarse Sand, trace Silt	20.2
I-18	13	Fine to coarse Sand, little fine Gravel, occasional Cobbles	23.2
I-19	13	Gravelly fine to medium Sand, trace coarse Sand, occasional Cobbles	22.7

Laboratory Testing

Moisture Content

The moisture contents for the recovered soil samples within the trenches were determined in accordance with ASTM D-2216 and are expressed as a percentage of the dry weight. These test results are presented on the Trench Logs.

Grain Size Analysis

The grain size distribution of selected soils collected from the base of each infiltration test location have been determined using a range of wire mesh screens. These tests were performed in general accordance with ASTM D-422 and/or ASTM D-1140. The weight of the portion of the sample retained on each screen is recorded and the percentage finer or coarser of the total weight is calculated. The results of these tests are presented on Plates C-1 through C-9 of this report.

Design Recommendations

Nine (9) infiltration tests were performed within the proposed infiltration systems at the project site. As noted above, the calculated infiltration rates at the infiltration test locations range from 20.0 to 24.3 inches per hour. **Based on the results of infiltration testing, we recommend that an infiltration rate of 20.0 inches per hour be used for the proposed infiltration systems if the bottom of each infiltration system is supported by sands or gravelly sands.**

We recommend that a representative from the geotechnical engineer be on-site during the construction of the proposed infiltration systems to identify the soil classification at the base of each chamber system. It should be confirmed that the soils at the base of the proposed infiltration systems correspond with those presented in this report to ensure that the performance of the systems will be consistent with the rates reported herein.

The design of the storm water infiltration system should be performed by the project civil engineer, in accordance with the City of Highland and/or County of San Bernardino guidelines. It is recommended that the system be constructed so as to facilitate removal of silt and clay, or other deleterious materials from any water that may enter the systems. The presence of such materials would decrease the effective infiltration rates. **It is recommended that the project**

civil engineer apply an appropriate factor of safety. The infiltration rate recommended above is based on the assumption that only clean water will be introduced to the subsurface profile. Any fines, debris, or organic materials could significantly impact the infiltration rate. It should be noted that the recommended infiltration rate is based on infiltration testing at nine (9) discrete locations and that the overall infiltration rate of the proposed infiltration systems could vary considerably.

Infiltration Rate Considerations

The infiltration rate presented herein was determined in accordance with the San Bernardino County guidelines and is considered valid only for the time and place of the actual test. Varying subsurface conditions will exist in other areas of the site, which could alter the recommended infiltration rate presented above. The infiltration rate will decline over time between maintenance cycles as silt or clay particles accumulate on the BMP surface. The infiltration rate is highly dependent upon a number of factors, including density, silt and clay content, grain size distribution throughout the range of particle sizes, and particle shape. Small changes in these factors can cause large changes in the infiltration rate.

Infiltration rates are based on unsaturated flow. As water is introduced into soils by infiltration, the soils become saturated and the wetting front advances from the unsaturated zone to the saturated zone. Once the soils become saturated, infiltration rates become zero, and water can only move through soils by hydraulic conductivity at a rate determined by pressure head and soil permeability. Changes in soil moisture content will affect the infiltration rate. Infiltration rates should be expected to decrease until the soils become saturated. Soil permeability values will then govern groundwater movement. Permeability values may be on the order of 10 to 20 times less than infiltration rates. The system designer should incorporate adequate factors of safety and allow for overflow design into appropriate traditional storm drain systems, which would transport storm water off-site.

Construction Considerations

The infiltration rate presented in this report is specific to the tested locations and tested depths. Infiltration rates can be significantly reduced if the soils are exposed to excessive disturbance or compaction during construction. Compaction of the soils at the bottom of the infiltration systems can significantly reduce the infiltration ability of the chambers. Therefore, the subgrade soils within proposed infiltration system areas should not be over-excavated, undercut or compacted in any significant manner. **It is recommended that a note to this effect be added to the project plans and/or specifications.**

We recommend that a representative from the geotechnical engineer be on-site during the construction of the proposed infiltration systems to identify the soil classification at the base of each chamber system. The infiltration rate of the system will likely vary significantly if the composition of the soil located beneath the system is not consistent with the tested soils.

We recommend that scrapers and other rubber-tired heavy equipment not be operated on the chambers bottom, or at levels lower than 2 feet above the bottom of the system, particularly within basins. As such, the bottom 24 inches of the infiltration system should be excavated with non-rubber-tired equipment, such as excavators.

Chamber Maintenance

The proposed project will include infiltration chambers. Water flowing into these chambers will carry some level of sediment. This layer has the potential to significantly reduce the infiltration rate of the chamber subgrade soils. Therefore, a formal chamber maintenance program should be established to ensure that these silt and clay deposits are removed from the chamber on a regular basis.

Location of Infiltration Systems

The use of on-site storm water infiltration systems carries a risk of creating adverse geotechnical conditions. Increasing the moisture content of the soil can cause the soil to lose internal shear strength and increase its compressibility, resulting in a change in the designed engineering properties. Overlying structures and pavements in the infiltration area could potentially be damaged due to saturation of the subgrade soils. **The proposed infiltration systems for this site should be located at least 25 feet away from any structures, including retaining walls.** Even with this provision of locating the infiltration system at least 25 feet from the building(s), it is possible that infiltrating water into the subsurface soils could have an adverse effect on the proposed or existing structures. It should also be noted that utility trenches which happen to collect storm water can also serve as conduits to transmit storm water toward the structure, depending on the slope of the utility trench. Therefore, consideration should also be given to the proposed locations of underground utilities which may pass near the proposed infiltration systems.

The infiltration system designer should also give special consideration to the effect that the proposed infiltration systems may have on nearby subterranean structures, open excavations, or descending slopes. Infiltration systems should not be located near the crest of descending slopes, particularly where the slopes are comprised of granular soils. Such systems will require specialized design and analysis to evaluate the potential for slope instability, piping failures and other phenomena that typically apply to earthen dam design. This type of analysis is beyond the scope of this infiltration test report, but these factors should be considered by the infiltration system designer when locating the infiltration systems.

General Comments

This report has been prepared as an instrument of service for use by the client in order to aid in the evaluation of this property and to assist the architects and engineers in the design and preparation of the project plans and specifications. This report may be provided to the contractor(s) and other design consultants to disclose information relative to the project. However, this report is not intended to be utilized as a specification in and of itself, without appropriate interpretation by the project architect, structural engineer, and/or civil engineer. The design of the proposed storm water infiltration system is the responsibility of the civil engineer. The role of the geotechnical engineer is limited to determination of infiltration rate only. By using the design infiltration rate contained herein, the civil engineer agrees to indemnify, defend, and hold harmless the geotechnical engineer for all aspects of the design and performance of the proposed storm water infiltration system. The reproduction and distribution of this report must be authorized by the client and Southern California Geotechnical,

Inc. Furthermore, any reliance on this report by an unauthorized third party is at such party's sole risk, and we accept no responsibility for damage or loss which may occur.

The analysis of this site was based on a subsurface profile interpolated from limited discrete soil samples. While the materials encountered in the project area are considered to be representative of the total area, some variations should be expected between boring locations and testing depths. If the conditions encountered during construction vary significantly from those detailed herein, we should be contacted immediately to determine if the conditions alter the recommendations contained herein.

This report has been based on assumed or provided characteristics of the proposed development. It is recommended that the owner, client, architect, structural engineer, and civil engineer carefully review these assumptions to ensure that they are consistent with the characteristics of the proposed development. If discrepancies exist, they should be brought to our attention to verify that they do not affect the conclusions and recommendations contained herein. We also recommend that the project plans and specifications be submitted to our office for review to verify that our recommendations have been correctly interpreted. The analysis, conclusions, and recommendations contained within this report have been promulgated in accordance with generally accepted professional geotechnical engineering practice. No other warranty is implied or expressed.

Closure

We sincerely appreciate the opportunity to be of service on this project. We look forward to providing additional consulting services during the course of the project. If we may be of further assistance in any manner, please contact our office.

Respectfully Submitted,

SOUTHERN CALIFORNIA GEOTECHNICAL, INC.



Joseph Lozano Leon
Staff Engineer

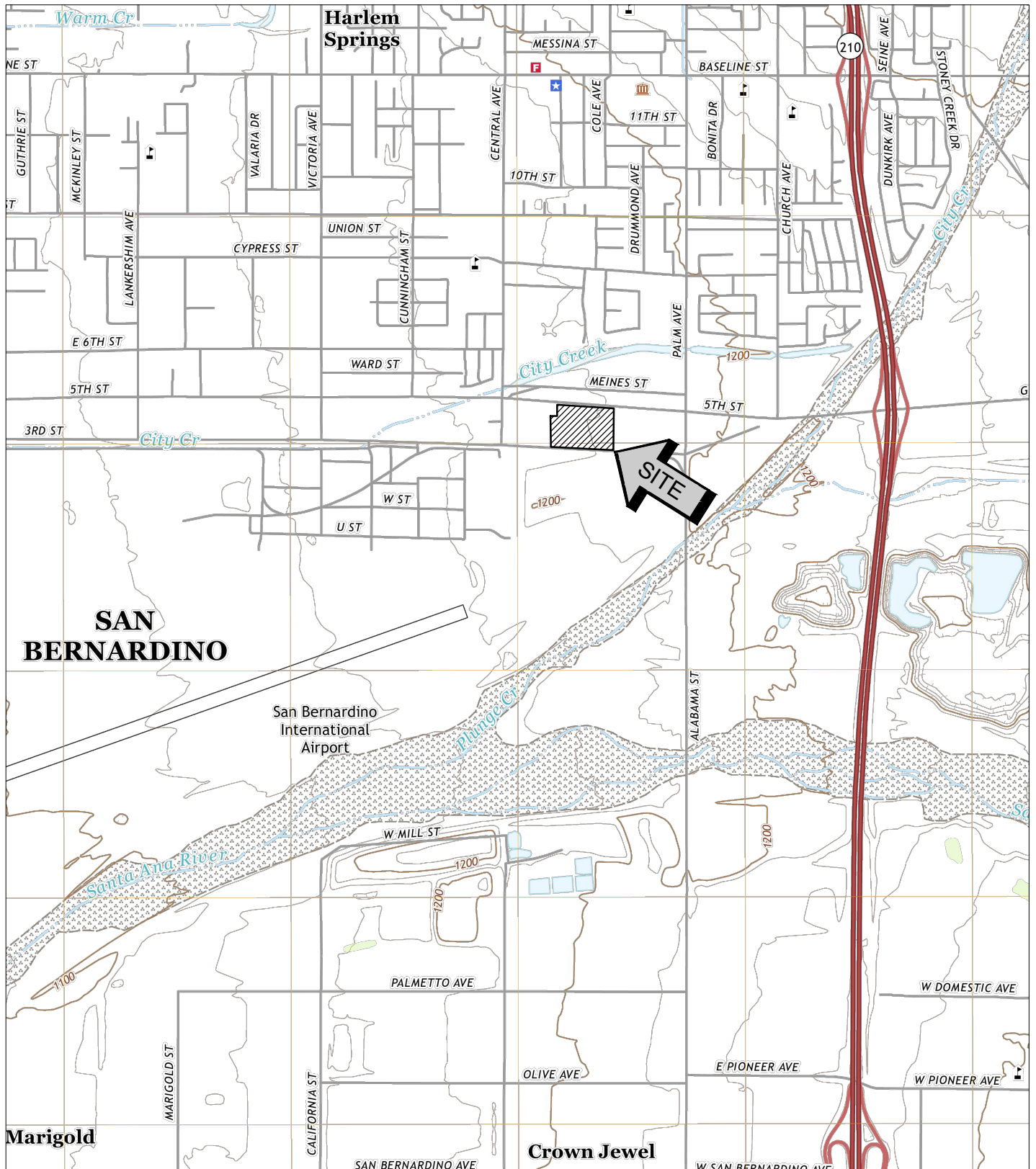


Robert G. Trazo, GE 2655
Principal Engineer



Distribution: (1) Addressee

Enclosures: Plate 1 - Site Location Map
Plate 2 - Infiltration Test Location Plan
Trench Log Legend and Logs (11 pages)
Infiltration Test Results Spreadsheets (45 pages)
Grain Size Distribution Graphs (9 pages)



SOURCE: USGS TOPOGRAPHIC MAP OF THE REDLANDS QUADRANGLE, SAN BERNARDINO COUNTY, CALIFORNIA, 2021.



SITE LOCATION MAP

PROPOSED WAREHOUSE

HIGHLAND, CALIFORNIA

SCALE: 1" = 2000'

DRAWN: JLL

CHKD: RGT

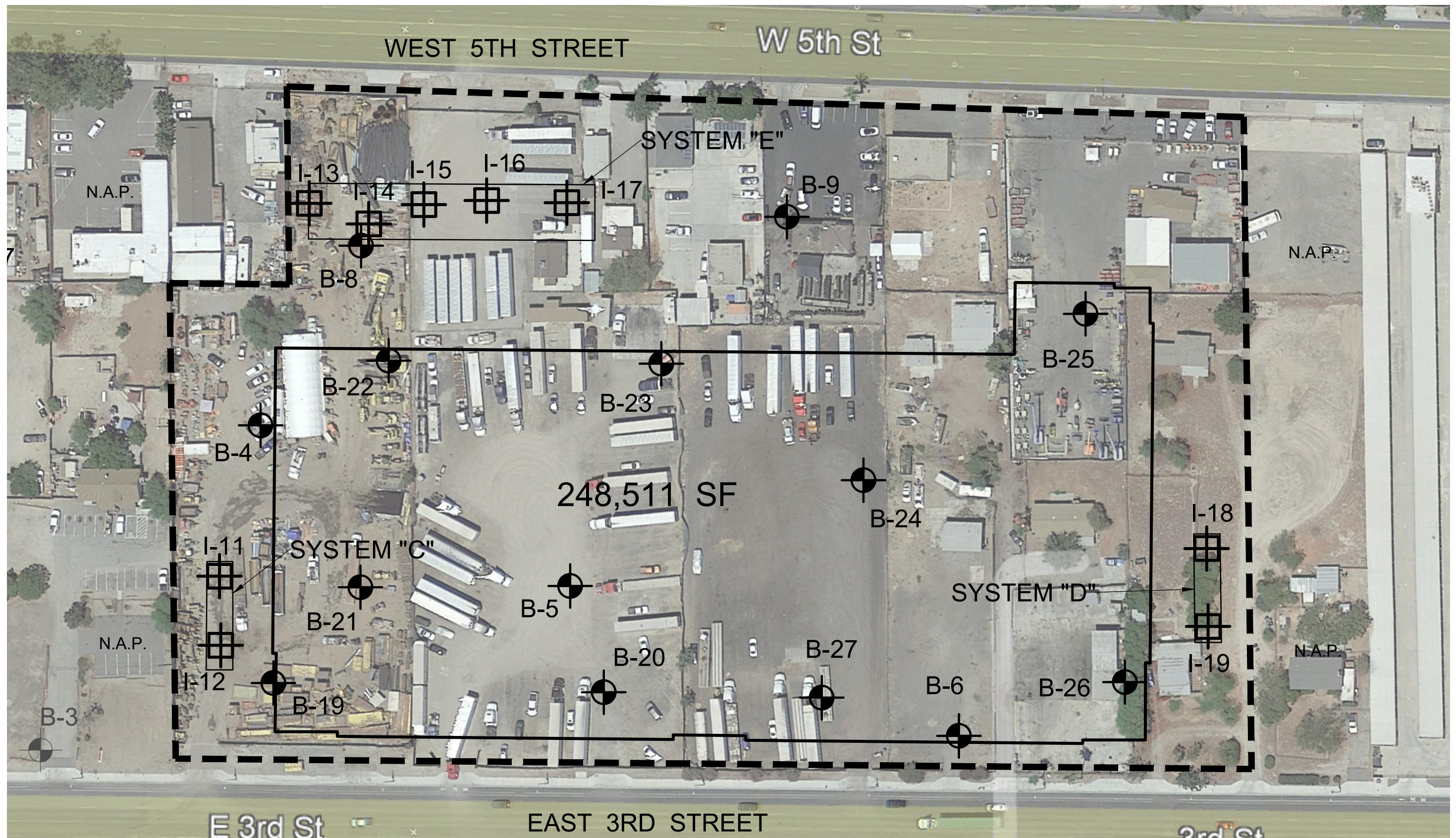
SCG PROJECT

22G156EA-2

PLATE 1



**SOUTHERN
CALIFORNIA
GEOTECHNICAL**



GEOTECHNICAL LEGEND

-  PREVIOUS BORING LOCATION
(SCG PROJECT NO. 21G193-4)
-  PREVIOUS INFILTRATION TEST LOCATION
(SCG PROJECT NO. 21G193-3)



NOTE: SITE PLAN PREPARED BY RGA.
AERIAL PHOTOGRAPH OBTAINED FROM GOOGLE EARTH.

INFILTRATION TEST LOCATION PLAN

PROPOSED WAREHOUSE
HIGHLAND, CALIFORNIA

SCALE: 1" = 80'

DRAWN: JLL
CHKD: RGT

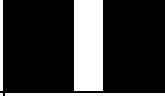
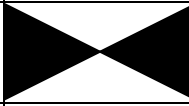
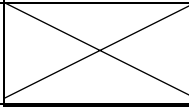
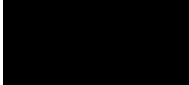
SCG PROJECT
22G156EA-2

PLATE 2



**SOUTHERN
CALIFORNIA
GEOTECHNICAL**

TRENCH LOG LEGEND

SAMPLE TYPE	GRAPHICAL SYMBOL	SAMPLE DESCRIPTION
AUGER		SAMPLE COLLECTED FROM AUGER CUTTINGS, NO FIELD MEASUREMENT OF SOIL STRENGTH. (DISTURBED)
CORE		ROCK CORE SAMPLE: TYPICALLY TAKEN WITH A DIAMOND-TIPPED CORE BARREL. TYPICALLY USED ONLY IN HIGHLY CONSOLIDATED BEDROCK.
GRAB		SOIL SAMPLE TAKEN WITH NO SPECIALIZED EQUIPMENT, SUCH AS FROM A STOCKPILE OR THE GROUND SURFACE. (DISTURBED)
CS		CALIFORNIA SAMPLER: 2-1/2 INCH I.D. SPLIT BARREL SAMPLER, LINED WITH 1-INCH HIGH BRASS RINGS. DRIVEN WITH SPT HAMMER. (RELATIVELY UNDISTURBED)
NSR		NO RECOVERY: THE SAMPLING ATTEMPT DID NOT RESULT IN RECOVERY OF ANY SIGNIFICANT SOIL OR ROCK MATERIAL.
SPT		STANDARD PENETRATION TEST: SAMPLER IS A 1.4 INCH INSIDE DIAMETER SPLIT BARREL, DRIVEN 18 INCHES WITH THE SPT HAMMER. (DISTURBED)
SH		SHELBY TUBE: TAKEN WITH A THIN WALL SAMPLE TUBE, PUSHED INTO THE SOIL AND THEN EXTRACTED. (UNDISTURBED)
VANE		VANE SHEAR TEST: SOIL STRENGTH OBTAINED USING A 4 BLADED SHEAR DEVICE. TYPICALLY USED IN SOFT CLAYS-NO SAMPLE RECOVERED.

COLUMN DESCRIPTIONS

DEPTH:

Distance in feet below the ground surface.

SAMPLE:

Sample Type as depicted above.

BLOW COUNT:

Number of blows required to advance the sampler 12 inches using a 140 lb hammer with a 30-inch drop. 50/3" indicates penetration refusal (>50 blows) at 3 inches. WH indicates that the weight of the hammer was sufficient to push the sampler 6 inches or more.

POCKET PEN.:

Approximate shear strength of a cohesive soil sample as measured by pocket penetrometer.

GRAPHIC LOG:

Graphic Soil Symbol as depicted on the following page.

DRY DENSITY:

Dry density of an undisturbed or relatively undisturbed sample in lbs/ft³.

MOISTURE CONTENT:

Moisture content of a soil sample, expressed as a percentage of the dry weight.

LIQUID LIMIT:

The moisture content above which a soil behaves as a liquid.

PLASTIC LIMIT:

The moisture content above which a soil behaves as a plastic.

PASSING #200 SIEVE:

The percentage of the sample finer than the #200 standard sieve.

UNCONFINED SHEAR:

The shear strength of a cohesive soil sample, as measured in the unconfined state.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS	

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS



JOB NO.: 21G193-3	EXCAVATION DATE: 2/24/22	WATER DEPTH: Dry
PROJECT: Proposed Warehouse	EXCAVATION METHOD: Backhoe	CAVE DEPTH: --
LOCATION: Highland, California	LOGGED BY: Caleb Brackett	READING TAKEN: At Completion

FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG		DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
					SURFACE ELEVATION: --- MSL							
					<u>FILL</u> : Brown Silty fine to medium Sand, trace fine Gravel, loose-damp							
5					<u>ALLUVIUM</u> : Gray Brown Gravelly fine to coarse Sand, trace Silt, occasional Cobbles, medium dense-damp							
10							2			3		
					Trench Terminated at 10'							

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3				EXCAVATION DATE: 2/24/22				WATER DEPTH: Dry				
PROJECT: Proposed Warehouse				EXCAVATION METHOD: Backhoe				CAVE DEPTH: --				
LOCATION: Highland, California				LOGGED BY: Sam Bergeland				READING TAKEN: At Completion				
FIELD RESULTS				GRAPHIC LOG	DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)			DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
					SURFACE ELEVATION: --- MSL							
					FILL: Brown Silty fine to coarse Sand, trace to little fine Gravel, occasional Cobbles, medium dense-damp							
5					ALLUVIUM: Gray Brown Gravelly fine to coarse Sand, trace to little Silt, dense-damp							
10						2			8			
					Trench Terminated at 10'							

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3				EXCAVATION DATE: 2/24/22				WATER DEPTH: Dry				
PROJECT: Proposed Warehouse				EXCAVATION METHOD: Backhoe				CAVE DEPTH: --				
LOCATION: Highland, California				LOGGED BY: Sam Bergeland				READING TAKEN: At Completion				
FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG		DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
5					<u>ALLUVIUM</u> : Light Gray Brown fine to coarse Sand, trace fine Gravel, medium dense-dry		1			2		
10					Trench Terminated at 13'							

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3				EXCAVATION DATE: 2/21/22				WATER DEPTH: Dry				
PROJECT: Proposed Warehouse				EXCAVATION METHOD: Backhoe				CAVE DEPTH: --				
LOCATION: Highland, California				LOGGED BY: Sam Bergeland				READING TAKEN: At Completion				
FIELD RESULTS				DESCRIPTION	LABORATORY RESULTS						COMMENTS	
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)		GRAPHIC LOG	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)		ORGANIC CONTENT (%)
5					SURFACE ELEVATION: --- MSL <u>ALLUVIUM</u> : Light Gray Gravelly fine to coarse Sand, trace Silt, occasional Cobbles, dense-damp		2			3		
10												
Trench Terminated at 13'												

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3	EXCAVATION DATE: 2/21/22	WATER DEPTH: Dry
PROJECT: Proposed Warehouse	EXCAVATION METHOD: Backhoe	CAVE DEPTH: --
LOCATION: Highland, California	LOGGED BY: Sam Bergeland	READING TAKEN: At Completion

FIELD RESULTS				GRAPHIC LOG	DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)			DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
					SURFACE ELEVATION: --- MSL							
5					FILL: Light Gray Brown Silty fine to medium Sand, little fine Gravel, medium dense-dry to damp							
10					ALLUVIUM: Light Gray Brown fine to coarse Sand, little fine Gravel, medium dense-dry							
							1			2		
					Trench Terminated at 13'							

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3				EXCAVATION DATE: 2/21/22				WATER DEPTH: Dry				
PROJECT: Proposed Warehouse				EXCAVATION METHOD: Backhoe				CAVE DEPTH: --				
LOCATION: Highland, California				LOGGED BY: Sam Bergeland				READING TAKEN: At Completion				
FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG		DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
5					<u>ALLUVIUM</u> : Light Gray Gravelly fine to coarse Sand to fine to coarse Sandy Gravel, occasional to extensive Cobbles, occasional Boulders, dense-dry		1			1		
					Trench Terminated at 13'							

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3				EXCAVATION DATE: 2/21/22				WATER DEPTH: Dry				
PROJECT: Proposed Warehouse				EXCAVATION METHOD: Backhoe				CAVE DEPTH: --				
LOCATION: Highland, California				LOGGED BY: Sam Bergeland				READING TAKEN: At Completion				
FIELD RESULTS				GRAPHIC LOG	DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)			DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
						SURFACE ELEVATION: --- MSL						
					FILL: Brown Silty fine to medium Sand, little fine to coarse Gravel, loose-damp							
5					ALLUVIUM: Gray Gravelly fine to coarse Sand, trace Silt, dense-damp to moist							
10												
						5				4		
Trench Terminated at 13'												

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3
PROJECT: Proposed Warehouse
LOCATION: Highland, California

EXCAVATION DATE: 2/24/22
EXCAVATION METHOD: Backhoe
LOGGED BY: Sam Bergeland

WATER DEPTH: Dry
CAVE DEPTH: --
READING TAKEN: At Completion

FIELD RESULTS					DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG		DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
5						SURFACE ELEVATION: --- MSL						
10												

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22



JOB NO.: 21G193-3
PROJECT: Proposed Warehouse
LOCATION: Highland, California

EXCAVATION DATE: 2/24/22
EXCAVATION METHOD: Backhoe
LOGGED BY: Sam Bergeland

WATER DEPTH: Dry
CAVE DEPTH: --
READING TAKEN: At Completion

FIELD RESULTS				GRAPHIC LOG	DESCRIPTION	LABORATORY RESULTS						COMMENTS
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)			DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	
					SURFACE ELEVATION: --- MSL							
5					FILL: Brown Silty fine Sand, trace to little medium to coarse Sand, little fine Gravel, loose-damp ALLUVIUM: Gray Brown Gravelly fine to medium Sand, trace coarse Sand, occasional Cobbles, medium dense-damp							
10							2			2		
					Trench Terminated at 13'							

TBL 22G156EA-2.GPJ SOCALGEO.GDT 9/8/22

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-11**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	10:30 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:33 AM	3	4500		14500					
2	Initial	10:33 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	10:36 AM	6	4750		14500					
3	Initial	10:36 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:39 AM	9	4500		14500					
4	Initial	10:39 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:42 AM	12	4650		14500					
5	Initial	10:42 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:45 AM	15	4650		14500					
6	Initial	10:45 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:48 AM	18	4500		14500					
7	Initial	10:48 AM	3	0	4700	0	14500	128.83	132.49	50.72	52.16
	Final	10:51 AM	21	4700		14500					
8	Initial	10:51 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:54 AM	24	4500		14500					
9	Initial	10:54 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:57 AM	27	4650		14500					
10	Initial	10:57 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:00 AM	30	4650		14500					
11	Initial	11:00 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:03 AM	33	4500		14500					
12	Initial	11:03 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	11:06 AM	36	4750		14500					
13	Initial	11:06 AM	3	0	4550	0	14500	124.72	132.49	49.10	52.16
	Final	11:09 AM	39	4550		14500					
14	Initial	11:09 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:12 AM	42	4650		14500					
15	Initial	11:12 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:15 AM	45	4650		14500					
16	Initial	11:15 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:18 AM	48	4500		14500					
17	Initial	11:18 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	11:21 AM	51	4750		14500					

18	Initial	11:21 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:24 AM	54	4500		14500					
19	Initial	11:24 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:27 AM	57	4650		14500					
20	Initial	11:27 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:30 AM	60	4650		14500					
21	Initial	11:30 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:33 AM	63	4500		14500					
22	Initial	11:33 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	11:36 AM	66	4750		14500					
23	Initial	11:36 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:39 AM	69	4500		14500					
24	Initial	11:39 AM	3	0	4200	0	14500	115.13	132.49	45.33	52.16
	Final	11:42 AM	72	4200		14500					
25	Initial	11:42 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	11:45 AM	75	4100		14500					
26	Initial	11:45 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	11:48 AM	78	4000		14500					
27	Initial	11:48 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	11:51 AM	81	4100		14500					
28	Initial	11:51 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	11:54 AM	84	4000		14500					
29	Initial	11:54 AM	3	0	4150	0	14100	113.76	128.83	44.79	50.72
	Final	11:57 AM	87	4150		14100					
30	Initial	11:57 AM	3	0	3900	0	14100	106.90	128.83	42.09	50.72
	Final	12:00 PM	90	3900		14100					
31	Initial	12:00 PM	3	0	3950	0	14000	108.27	127.92	42.63	50.36
	Final	12:03 PM	93	3950		14000					
32	Initial	12:03 PM	3	0	3850	0	14100	105.53	128.83	41.55	50.72
	Final	12:06 PM	96	3850		14100					
33	Initial	12:06 PM	3	0	3750	0	13900	102.79	127.00	40.47	50.00
	Final	12:09 PM	99	3750		13900					
34	Initial	12:09 PM	3	0	3700	0	13800	101.42	126.09	39.93	49.64
	Final	12:12 PM	102	3700		13800					
35	Initial	12:12 PM	3	0	3600	0	13850	98.68	126.55	38.85	49.82
	Final	12:15 PM	105	3600		13850					
36	Initial	12:15 PM	3	0	3550	0	13700	97.31	125.18	38.31	49.28
	Final	12:18 PM	108	3550		13700					
37	Initial	12:18 PM	3	0	3550	0	13500	97.31	123.35	38.31	48.56
	Final	12:21 PM	111	3550		13500					
38	Initial	12:21 PM	3	0	3600	0	13650	98.68	124.72	38.85	49.10
	Final	12:24 PM	114	3600		13650					
39	Initial	12:24 PM	3	0	3400	0	13700	93.20	125.18	36.69	49.28
	Final	12:27 PM	117	3400		13700					
40	Initial	12:27 PM	3	0	3300	0	13600	90.46	124.26	35.61	48.92
	Final	12:30 PM	120	3300		13600					
41	Initial	12:30 PM	3	0	3000	0	13500	82.23	123.35	32.38	48.56
	Final	12:33 PM	123	3000		13500					
42	Initial	12:33 PM	3	0	3100	0	13550	84.97	123.81	33.45	48.74
	Final	12:36 PM	126	3100		13550					
43	Initial	12:36 PM	3	0	3050	0	13400	83.60	122.44	32.91	48.20
	Final	12:39 PM	129	3050		13400					

44	Initial	12:39 PM	3	0	3100	0	13300	13300	84.97	121.52	33.45	47.84
	Final	12:42 PM	132	3100		13300						
45	Initial	12:42 PM	3	0	3000	0	13300	13300	82.23	121.52	32.38	47.84
	Final	12:45 PM	135	3000		13300						
46	Initial	12:45 PM	3	0	2900	0	13400	13400	79.49	122.44	31.30	48.20
	Final	12:48 PM	138	2900		13400						
47	Initial	12:48 PM	3	0	2950	0	13400	13400	80.86	122.44	31.84	48.20
	Final	12:51 PM	141	2950		13400						
48	Initial	12:51 PM	3	0	2800	0	13500	13500	76.75	123.35	30.22	48.56
	Final	12:54 PM	144	2800		13500						
49	Initial	12:54 PM	3	0	2750	0	13300	13300	75.38	121.52	29.68	47.84
	Final	12:57 PM	147	2750		13300						
50	Initial	12:57 PM	3	0	2800	0	13400	13400	76.75	122.44	30.22	48.20
	Final	1:00 PM	150	2800		13400						
51	Initial	1:00 PM	3	0	2500	0	13300	13300	68.53	121.52	26.98	47.84
	Final	1:03 PM	153	2500		13300						
52	Initial	1:03 PM	3	0	2400	0	13400	13400	65.79	122.44	25.90	48.20
	Final	1:06 PM	156	2400		13400						
53	Initial	1:06 PM	3	0	2300	0	13500	13500	63.05	123.35	24.82	48.56
	Final	1:09 PM	159	2300		13500						
54	Initial	1:09 PM	3	0	2350	0	13400	13400	64.42	122.44	25.36	48.20
	Final	1:12 PM	162	2350		13400						
55	Initial	1:12 PM	3	0	2250	0	13300	13300	61.67	121.52	24.28	47.84
	Final	1:15 PM	165	2250		13300						
56	Initial	1:15 PM	3	0	2200	0	13300	13300	60.30	121.52	23.74	47.84
	Final	1:18 PM	168	2200		13300						
57	Initial	1:18 PM	3	0	2100	0	13100	13100	57.56	119.69	22.66	47.12
	Final	1:21 PM	171	2100		13100						
58	Initial	1:21 PM	3	0	2200	0	13000	13000	60.30	118.78	23.74	46.76
	Final	1:24 PM	174	2200		13000						
59	Initial	1:24 PM	3	0	2200	0	13100	13100	60.30	119.69	23.74	47.12
	Final	1:27 PM	177	2200		13100						
60	Initial	1:27 PM	3	0	2100	0	13200	13200	57.56	120.61	22.66	47.48
	Final	1:30 PM	180	2100		13200						
61	Initial	1:30 PM	3	0	2150	0	13100	13100	58.93	119.69	23.20	47.12
	Final	1:33 PM	183	2150		13100						
62	Initial	1:33 PM	3	0	2000	0	12900	12900	54.82	117.87	21.58	46.40
	Final	1:36 PM	186	2000		12900						
63	Initial	1:36 PM	3	0	2150	0	13100	13100	58.93	119.69	23.20	47.12
	Final	1:39 PM	189	2150		13100						
64	Initial	1:39 PM	3	0	2200	0	13000	13000	60.30	118.78	23.74	46.76
	Final	1:42 PM	192	2200		13000						
65	Initial	1:42 PM	3	0	2100	0	12900	12900	57.56	117.87	22.66	46.40
	Final	1:45 PM	195	2100		12900						
66	Initial	1:45 PM	3	0	2050	0	13000	13000	56.19	118.78	22.12	46.76
	Final	1:48 PM	198	2050		13000						
67	Initial	1:48 PM	3	0	2000	0	13700	13700	54.82	125.18	21.58	49.28
	Final	1:51 PM	201	2000		13700						
68	Initial	1:51 PM	3	0	2050	0	12900	12900	56.19	117.87	22.12	46.40
	Final	1:54 PM	204	2050		12900						
69	Initial	1:54 PM	3	0	2100	0	12800	12800	57.56	116.95	22.66	46.04
	Final	1:57 PM	207	2100		12800						

70	Initial	1:57 PM	3	0	2100	0	12700	57.56	116.04	22.66	45.68
	Final	2:00 PM	210	2100		12700					
71	Initial	2:00 PM	3	0	2100	0	12500	57.56	114.21	22.66	44.97
	Final	2:03 PM	213	2100		12500					
72	Initial	2:03 PM	3	0	2000	0	12600	54.82	115.13	21.58	45.33
	Final	2:06 PM	216	2000		12600					
73	Initial	2:06 PM	3	0	2100	0	12600	57.56	115.13	22.66	45.33
	Final	2:09 PM	219	2100		12600					
74	Initial	2:09 PM	3	0	2200	0	12500	60.30	114.21	23.74	44.97
	Final	2:12 PM	222	2200		12500					
75	Initial	2:12 PM	3	0	2100	0	12300	57.56	112.38	22.66	44.25
	Final	2:15 PM	225	2100		12300					
76	Initial	2:15 PM	3	0	2050	0	12200	56.19	111.47	22.12	43.89
	Final	2:18 PM	228	2050		12200					
77	Initial	2:18 PM	3	0	2100	0	12400	57.56	113.30	22.66	44.61
	Final	2:21 PM	231	2100		12400					
78	Initial	2:21 PM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	2:24 PM	234	2150		12300					
79	Initial	2:24 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	2:27 PM	237	2250		12300					
80	Initial	2:27 PM	3	0	2100	0	12000	57.56	109.64	22.66	43.17
	Final	2:30 PM	240	2100		12000					
81	Initial	2:30 PM	3	0	2150	0	12200	58.93	111.47	23.20	43.89
	Final	2:33 PM	243	2150		12200					
82	Initial	2:33 PM	3	0	2000	0	12100	54.82	110.56	21.58	43.53
	Final	2:36 PM	246	2000		12100					
83	Initial	2:36 PM	3	0	2050	0	12000	56.19	109.64	22.12	43.17
	Final	2:39 PM	249	2050		12000					
84	Initial	2:39 PM	3	0	2000	0	11800	54.82	107.82	21.58	42.45
	Final	2:42 PM	252	2000		11800					
85	Initial	2:42 PM	3	0	2000	0	11600	54.82	105.99	21.58	41.73
	Final	2:45 PM	255	2000		11600					
86	Initial	2:45 PM	3	0	2050	0	11400	56.19	104.16	22.12	41.01
	Final	2:48 PM	258	2050		11400					
87	Initial	2:48 PM	3	0	1900	0	11250	52.08	102.79	20.50	40.47
	Final	2:51 PM	261	1900		11250					
88	Initial	2:51 PM	3	0	1950	0	11300	53.45	103.25	21.04	40.65
	Final	2:54 PM	264	1950		11300					
89	Initial	2:54 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:57 PM	267	1900		11200					
90	Initial	2:57 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:00 PM	270	1900		11200					
91	Initial	3:00 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:03 PM	273	1900		11000					
92	Initial	3:03 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:06 PM	276	1900		11000					
93	Initial	3:06 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:09 PM	279	1900		11000					
94	Initial	3:09 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:12 PM	282	1900		11000					
95	Initial	3:12 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:15 PM	285	1900		11000					

96	Initial	3:15 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:18 PM	288	1950		11000					
97	Initial	3:18 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:21 PM	291	1900		11000					
98	Initial	3:21 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:24 PM	294	1900		11000					
99	Initial	3:24 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:27 PM	297	1900		11000					
100	Initial	3:27 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:30 PM	300	1900		11000					
101	Initial	3:30 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:33 PM	303	1900		11000					
102	Initial	3:33 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:36 PM	306	1900		11000					
103	Initial	3:36 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:39 PM	309	1900		11000					
104	Initial	3:39 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:42 PM	312	1900		11000					
105	Initial	3:42 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:45 PM	315	1900		11000					
106	Initial	3:45 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:48 PM	318	1900		11000					
107	Initial	3:48 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:51 PM	321	1900		11000					
108	Initial	3:51 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:54 PM	324	1900		11000					
109	Initial	3:54 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	3:57 PM	327	1900		11000					
110	Initial	3:57 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:00 PM	330	1900		11000					
111	Initial	4:00 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:03 PM	333	1900		11000					
112	Initial	4:03 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:06 PM	336	1950		11000					
113	Initial	4:06 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:09 PM	339	1900		11000					
114	Initial	4:09 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:12 PM	342	1900		11000					
115	Initial	4:12 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:15 PM	345	1900		11000					
116	Initial	4:15 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:18 PM	348	1900		11000					
117	Initial	4:18 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:21 PM	351	1900		11000					
118	Initial	4:21 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:24 PM	354	1900		11000					
119	Initial	4:24 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:27 PM	357	1900		11000					
120	Initial	4:27 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:30 PM	360	1900		11000					
121	Initial	4:30 PM	3	0	1900	0	11000	52.08	100.51	20.50	39.57
	Final	4:33 PM	363	1900		11000					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-12**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	8:00 AM	3	0	4400	0	14800	120.61	135.23	47.48	53.24
	Final	8:03 AM	3	4400	4400	14800	14800				
2	Initial	8:03 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	8:06 AM	6	4650	4650	14500	14500				
3	Initial	8:06 AM	3	0	4300	0	14900	117.87	136.14	46.40	53.60
	Final	8:09 AM	9	4300	4300	14900	14900				
4	Initial	8:09 AM	3	0	4550	0	14800	124.72	135.23	49.10	53.24
	Final	8:12 AM	12	4550	4550	14800	14800				
5	Initial	8:12 AM	3	0	4300	0	14500	117.87	132.49	46.40	52.16
	Final	8:15 AM	15	4300	4300	14500	14500				
6	Initial	8:15 AM	3	0	4300	0	14500	117.87	132.49	46.40	52.16
	Final	8:18 AM	18	4300	4300	14500	14500				
7	Initial	8:18 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	8:21 AM	21	4750	4750	14500	14500				
8	Initial	8:21 AM	3	0	4300	0	14500	117.87	132.49	46.40	52.16
	Final	8:24 AM	24	4300	4300	14500	14500				
9	Initial	8:24 AM	3	0	4400	0	14500	120.61	132.49	47.48	52.16
	Final	8:27 AM	27	4400	4400	14500	14500				
10	Initial	8:27 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	8:30 AM	30	4650	4650	14500	14500				
11	Initial	8:30 AM	3	0	4300	0	14500	117.87	132.49	46.40	52.16
	Final	8:33 AM	33	4300	4300	14500	14500				
12	Initial	8:33 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	8:36 AM	36	4750	4750	14500	14500				
13	Initial	8:36 AM	3	0	4300	0	14500	117.87	132.49	46.40	52.16
	Final	8:39 AM	39	4300	4300	14500	14500				
14	Initial	8:39 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	8:42 AM	42	4650	4650	14500	14500				
15	Initial	8:42 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	8:45 AM	45	4650	4650	14500	14500				
16	Initial	8:45 AM	3	0	4300	0	14500	117.87	132.49	46.40	52.16
	Final	8:48 AM	48	4300	4300	14500	14500				
17	Initial	8:48 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	8:51 AM	51	4750	4750	14500	14500				

18	Initial	8:51 AM	3	0	4300	0	14500	14500	117.87	132.49	46.40	52.16
	Final	8:54 AM	54	4300		14500						
19	Initial	8:54 AM	3	0	4650	0	14500	14500	127.46	132.49	50.18	52.16
	Final	8:57 AM	57	4650		14500						
20	Initial	8:57 AM	3	0	4650	0	14500	14500	127.46	132.49	50.18	52.16
	Final	9:00 AM	60	4650		14500						
21	Initial	9:00 AM	3	0	4300	0	14500	14500	117.87	132.49	46.40	52.16
	Final	9:03 AM	63	4300		14500						
22	Initial	9:03 AM	3	0	4750	0	14500	14500	130.20	132.49	51.26	52.16
	Final	9:06 AM	66	4750		14500						
23	Initial	9:06 AM	3	0	4300	0	14500	14500	117.87	132.49	46.40	52.16
	Final	9:09 AM	69	4300		14500						
24	Initial	9:09 AM	3	0	4200	0	14500	14500	115.13	132.49	45.33	52.16
	Final	9:12 AM	72	4200		14500						
25	Initial	9:12 AM	3	0	4100	0	14500	14500	112.38	132.49	44.25	52.16
	Final	9:15 AM	75	4100		14500						
26	Initial	9:15 AM	3	0	4000	0	14500	14500	109.64	132.49	43.17	52.16
	Final	9:18 AM	78	4000		14500						
27	Initial	9:18 AM	3	0	4100	0	14500	14500	112.38	132.49	44.25	52.16
	Final	9:21 AM	81	4100		14500						
28	Initial	9:21 AM	3	0	4000	0	14500	14500	109.64	132.49	43.17	52.16
	Final	9:24 AM	84	4000		14500						
29	Initial	9:24 AM	3	0	4150	0	14100	14100	113.76	128.83	44.79	50.72
	Final	9:27 AM	87	4150		14100						
30	Initial	9:27 AM	3	0	3900	0	14100	14100	106.90	128.83	42.09	50.72
	Final	9:30 AM	90	3900		14100						
31	Initial	9:30 AM	3	0	3900	0	14000	14000	106.90	127.92	42.09	50.36
	Final	9:33 AM	93	3900		14000						
32	Initial	9:33 AM	3	0	3850	0	14100	14100	105.53	128.83	41.55	50.72
	Final	9:36 AM	96	3850		14100						
33	Initial	9:36 AM	3	0	3750	0	13900	13900	102.79	127.00	40.47	50.00
	Final	9:39 AM	99	3750		13900						
34	Initial	9:39 AM	3	0	3700	0	13800	13800	101.42	126.09	39.93	49.64
	Final	9:42 AM	102	3700		13800						
35	Initial	9:42 AM	3	0	3600	0	13850	13850	98.68	126.55	38.85	49.82
	Final	9:45 AM	105	3600		13850						
36	Initial	9:45 AM	3	0	3550	0	13700	13700	97.31	125.18	38.31	49.28
	Final	9:48 AM	108	3550		13700						
37	Initial	9:48 AM	3	0	3550	0	13500	13500	97.31	123.35	38.31	48.56
	Final	9:51 AM	111	3550		13500						
38	Initial	9:51 AM	3	0	3600	0	13650	13650	98.68	124.72	38.85	49.10
	Final	9:54 AM	114	3600		13650						
39	Initial	9:54 AM	3	0	3400	0	13700	13700	93.20	125.18	36.69	49.28
	Final	9:57 AM	117	3400		13700						
40	Initial	9:57 AM	3	0	3300	0	13600	13600	90.46	124.26	35.61	48.92
	Final	10:00 AM	120	3300		13600						
41	Initial	10:00 AM	3	0	3000	0	13500	13500	82.23	123.35	32.38	48.56
	Final	10:03 AM	123	3000		13500						
42	Initial	10:03 AM	3	0	3100	0	13550	13550	84.97	123.81	33.45	48.74
	Final	10:06 AM	126	3100		13550						
43	Initial	10:06 AM	3	0	3050	0	13400	13400	83.60	122.44	32.91	48.20
	Final	10:09 AM	129	3050		13400						

44	Initial	10:09 AM	3	0	3050	0	13300	83.60	121.52	32.91	47.84
	Final	10:12 AM	132	3050		13300					
45	Initial	10:12 AM	3	0	3000	0	13300	82.23	121.52	32.38	47.84
	Final	10:15 AM	135	3000		13300					
46	Initial	10:15 AM	3	0	2900	0	13400	79.49	122.44	31.30	48.20
	Final	10:18 AM	138	2900		13400					
47	Initial	10:18 AM	3	0	2950	0	13400	80.86	122.44	31.84	48.20
	Final	10:21 AM	141	2950		13400					
48	Initial	10:21 AM	3	0	2800	0	13500	76.75	123.35	30.22	48.56
	Final	10:24 AM	144	2800		13500					
49	Initial	10:24 AM	3	0	2750	0	13300	75.38	121.52	29.68	47.84
	Final	10:27 AM	147	2750		13300					
50	Initial	10:27 AM	3	0	2600	0	13400	71.27	122.44	28.06	48.20
	Final	10:30 AM	150	2600		13400					
51	Initial	10:30 AM	3	0	2500	0	13300	68.53	121.52	26.98	47.84
	Final	10:33 AM	153	2500		13300					
52	Initial	10:33 AM	3	0	2400	0	13400	65.79	122.44	25.90	48.20
	Final	10:36 AM	156	2400		13400					
53	Initial	10:36 AM	3	0	2250	0	13500	61.67	123.35	24.28	48.56
	Final	10:39 AM	159	2250		13500					
54	Initial	10:39 AM	3	0	2350	0	13400	64.42	122.44	25.36	48.20
	Final	10:42 AM	162	2350		13400					
55	Initial	10:42 AM	3	0	2250	0	13300	61.67	121.52	24.28	47.84
	Final	10:45 AM	165	2250		13300					
56	Initial	10:45 AM	3	0	2100	0	13300	57.56	121.52	22.66	47.84
	Final	10:48 AM	168	2100		13300					
57	Initial	10:48 AM	3	0	2100	0	13100	57.56	119.69	22.66	47.12
	Final	10:51 AM	171	2100		13100					
58	Initial	10:51 AM	3	0	2150	0	13000	58.93	118.78	23.20	46.76
	Final	10:54 AM	174	2150		13000					
59	Initial	10:54 AM	3	0	2100	0	13100	57.56	119.69	22.66	47.12
	Final	10:57 AM	177	2100		13100					
60	Initial	10:57 AM	3	0	2100	0	13200	57.56	120.61	22.66	47.48
	Final	11:00 AM	180	2100		13200					
61	Initial	11:00 AM	3	0	2150	0	13100	58.93	119.69	23.20	47.12
	Final	11:03 AM	183	2150		13100					
62	Initial	11:03 AM	3	0	2000	0	12900	54.82	117.87	21.58	46.40
	Final	11:06 AM	186	2000		12900					
63	Initial	11:06 AM	3	0	2150	0	13100	58.93	119.69	23.20	47.12
	Final	11:09 AM	189	2150		13100					
64	Initial	11:09 AM	3	0	2100	0	13000	57.56	118.78	22.66	46.76
	Final	11:12 AM	192	2100		13000					
65	Initial	11:12 AM	3	0	2100	0	12900	57.56	117.87	22.66	46.40
	Final	11:15 AM	195	2100		12900					
66	Initial	11:15 AM	3	0	2050	0	13000	56.19	118.78	22.12	46.76
	Final	11:18 AM	198	2050		13000					
67	Initial	11:18 AM	3	0	2000	0	13700	54.82	125.18	21.58	49.28
	Final	11:21 AM	201	2000		13700					
68	Initial	11:21 AM	3	0	2100	0	12900	57.56	117.87	22.66	46.40
	Final	11:24 AM	204	2100		12900					
69	Initial	11:24 AM	3	0	2100	0	12800	57.56	116.95	22.66	46.04
	Final	11:27 AM	207	2100		12800					

70	Initial	11:27 AM	3	0	2100	0	12700	57.56	116.04	22.66	45.68
	Final	11:30 AM	210	2100		12700					
71	Initial	11:30 AM	3	0	2100	0	12500	57.56	114.21	22.66	44.97
	Final	11:33 AM	213	2100		12500					
72	Initial	11:33 AM	3	0	2000	0	12600	54.82	115.13	21.58	45.33
	Final	11:36 AM	216	2000		12600					
73	Initial	11:36 AM	3	0	2100	0	12600	57.56	115.13	22.66	45.33
	Final	11:39 AM	219	2100		12600					
74	Initial	11:39 AM	3	0	2100	0	12500	57.56	114.21	22.66	44.97
	Final	11:42 AM	222	2100		12500					
75	Initial	11:42 AM	3	0	2100	0	12300	57.56	112.38	22.66	44.25
	Final	11:45 AM	225	2100		12300					
76	Initial	11:45 AM	3	0	2050	0	12200	56.19	111.47	22.12	43.89
	Final	11:48 AM	228	2050		12200					
77	Initial	11:48 AM	3	0	2100	0	12400	57.56	113.30	22.66	44.61
	Final	11:51 AM	231	2100		12400					
78	Initial	11:51 AM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	11:54 AM	234	2150		12300					
79	Initial	11:54 AM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	11:57 AM	237	2250		12300					
80	Initial	11:57 AM	3	0	2100	0	12000	57.56	109.64	22.66	43.17
	Final	12:00 PM	240	2100		12000					
81	Initial	12:00 PM	3	0	2150	0	12200	58.93	111.47	23.20	43.89
	Final	12:03 PM	243	2150		12200					
82	Initial	12:03 PM	3	0	2000	0	12100	54.82	110.56	21.58	43.53
	Final	12:06 PM	246	2000		12100					
83	Initial	12:06 PM	3	0	2050	0	12000	56.19	109.64	22.12	43.17
	Final	12:09 PM	249	2050		12000					
84	Initial	12:09 PM	3	0	2100	0	11800	57.56	107.82	22.66	42.45
	Final	12:12 PM	252	2100		11800					
85	Initial	12:12 PM	3	0	2050	0	11600	56.19	105.99	22.12	41.73
	Final	12:15 PM	255	2050		11600					
86	Initial	12:15 PM	3	0	2100	0	11400	57.56	104.16	22.66	41.01
	Final	12:18 PM	258	2100		11400					
87	Initial	12:18 PM	3	0	2150	0	11250	58.93	102.79	23.20	40.47
	Final	12:21 PM	261	2150		11250					
88	Initial	12:21 PM	3	0	2250	0	11300	61.67	103.25	24.28	40.65
	Final	12:24 PM	264	2250		11300					
89	Initial	12:24 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	12:27 PM	267	2100		11200					
90	Initial	12:27 PM	3	0	2150	0	11200	58.93	102.33	23.20	40.29
	Final	12:30 PM	270	2150		11200					
91	Initial	12:30 PM	3	0	2050	0	11200	56.19	102.33	22.12	40.29
	Final	12:33 PM	273	2050		11200					
92	Initial	12:33 PM	3	0	2050	0	11200	56.19	102.33	22.12	40.29
	Final	12:36 PM	276	2050		11200					
93	Initial	12:36 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	12:39 PM	279	2100		11200					
94	Initial	12:39 PM	3	0	2050	0	11200	56.19	102.33	22.12	40.29
	Final	12:42 PM	282	2050		11200					
95	Initial	12:42 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	12:45 PM	285	2100		11200					

96	Initial	12:45 PM	3	0	2150	0	11200	58.93	102.33	23.20	40.29
	Final	12:48 PM	288	2150		11200					
97	Initial	12:48 PM	3	0	2250	0	11200	61.67	102.33	24.28	40.29
	Final	12:51 PM	291	2250		11200					
98	Initial	12:51 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	12:54 PM	294	2100		11200					
99	Initial	12:54 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	12:57 PM	297	1950		11200					
100	Initial	12:57 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:00 PM	300	1900		11200					
101	Initial	1:00 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:03 PM	303	1900		11200					
102	Initial	1:03 PM	3	0	2000	0	11200	54.82	102.33	21.58	40.29
	Final	1:06 PM	306	2000		11200					
103	Initial	1:06 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	1:09 PM	309	1950		11200					
104	Initial	1:09 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:12 PM	312	1900		11200					
105	Initial	1:12 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:15 PM	315	1900		11200					
106	Initial	1:15 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:18 PM	318	1900		11200					
107	Initial	1:18 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:21 PM	321	1900		11200					
108	Initial	1:21 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	1:24 PM	324	1950		11200					
109	Initial	1:24 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:27 PM	327	1900		11200					
110	Initial	1:27 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:30 PM	330	1900		11200					
111	Initial	1:30 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	1:33 PM	333	1950		11200					
112	Initial	1:33 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:36 PM	336	1900		11200					
113	Initial	1:36 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:39 PM	339	1900		11200					
114	Initial	1:39 PM	3	0	1850	0	11200	50.71	102.33	19.96	40.29
	Final	1:42 PM	342	1850		11200					
115	Initial	1:42 PM	3	0	1850	0	11200	50.71	102.33	19.96	40.29
	Final	1:45 PM	345	1850		11200					
116	Initial	1:45 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:48 PM	348	1900		11200					
117	Initial	1:48 PM	3	0	1850	0	11200	50.71	102.33	19.96	40.29
	Final	1:51 PM	351	1850		11200					
118	Initial	1:51 PM	3	0	1850	0	11200	50.71	102.33	19.96	40.29
	Final	1:54 PM	354	1850		11200					
119	Initial	1:54 PM	3	0	1850	0	11200	50.71	102.33	19.96	40.29
	Final	1:57 PM	357	1850		11200					
120	Initial	1:57 PM	3	0	1850	0	11200	50.71	102.33	19.96	40.29
	Final	2:00 PM	360	1850		11200					
121	Initial	2:00 PM	3	0	1850	0	11200	50.71	102.33	19.96	40.29
	Final	2:03 PM	363	1850		11200					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-13**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	11:06 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:09 AM	3	4500	4500	14500	14500				
2	Initial	11:09 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:12 AM	6	4650	4650	14500	14500				
3	Initial	11:12 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:15 AM	9	4500	4500	14500	14500				
4	Initial	11:15 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:18 AM	12	4650	4650	14500	14500				
5	Initial	11:18 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:21 AM	15	4650	4650	14500	14500				
6	Initial	11:21 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:24 AM	18	4500	4500	14500	14500				
7	Initial	11:24 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:27 AM	21	4650	4650	14500	14500				
8	Initial	11:27 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:30 AM	24	4500	4500	14500	14500				
9	Initial	11:30 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:33 AM	27	4650	4650	14500	14500				
10	Initial	11:33 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:36 AM	30	4650	4650	14500	14500				
11	Initial	11:36 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:39 AM	33	4500	4500	14500	14500				
12	Initial	11:39 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:42 AM	36	4650	4650	14500	14500				
13	Initial	11:42 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:45 AM	39	4500	4500	14500	14500				
14	Initial	11:45 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:48 AM	42	4650	4650	14500	14500				
15	Initial	11:48 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:51 AM	45	4650	4650	14500	14500				
16	Initial	11:51 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:54 AM	48	4500	4500	14500	14500				
17	Initial	11:54 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:57 AM	51	4650	4650	14500	14500				

18	Initial	11:57 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	12:00 PM	54	4500		14500					
19	Initial	12:00 PM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	12:03 PM	57	4650		14500					
20	Initial	12:03 PM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	12:06 PM	60	4650		14500					
21	Initial	12:06 PM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	12:09 PM	63	4500		14500					
22	Initial	12:09 PM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	12:12 PM	66	4650		14500					
23	Initial	12:12 PM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	12:15 PM	69	4500		14500					
24	Initial	12:15 PM	3	0	4200	0	14500	115.13	132.49	45.33	52.16
	Final	12:18 PM	72	4200		14500					
25	Initial	12:18 PM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	12:21 PM	75	4100		14500					
26	Initial	12:21 PM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	12:24 PM	78	4000		14500					
27	Initial	12:24 PM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	12:27 PM	81	4100		14500					
28	Initial	12:27 PM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	12:30 PM	84	4000		14500					
29	Initial	12:30 PM	3	0	4150	0	14100	113.76	128.83	44.79	50.72
	Final	12:33 PM	87	4150		14100					
30	Initial	12:33 PM	3	0	3900	0	14100	106.90	128.83	42.09	50.72
	Final	12:36 PM	90	3900		14100					
31	Initial	12:36 PM	3	0	3900	0	14000	106.90	127.92	42.09	50.36
	Final	12:39 PM	93	3900		14000					
32	Initial	12:39 PM	3	0	3850	0	14100	105.53	128.83	41.55	50.72
	Final	12:42 PM	96	3850		14100					
33	Initial	12:42 PM	3	0	3750	0	13900	102.79	127.00	40.47	50.00
	Final	12:45 PM	99	3750		13900					
34	Initial	12:45 PM	3	0	3700	0	13800	101.42	126.09	39.93	49.64
	Final	12:48 PM	102	3700		13800					
35	Initial	12:48 PM	3	0	3600	0	13850	98.68	126.55	38.85	49.82
	Final	12:51 PM	105	3600		13850					
36	Initial	12:51 PM	3	0	3550	0	13700	97.31	125.18	38.31	49.28
	Final	12:54 PM	108	3550		13700					
37	Initial	12:54 PM	3	0	3550	0	13500	97.31	123.35	38.31	48.56
	Final	12:57 PM	111	3550		13500					
38	Initial	12:57 PM	3	0	3600	0	13650	98.68	124.72	38.85	49.10
	Final	1:00 PM	114	3600		13650					
39	Initial	1:00 PM	3	0	3400	0	13700	93.20	125.18	36.69	49.28
	Final	1:03 PM	117	3400		13700					
40	Initial	1:03 PM	3	0	3300	0	13600	90.46	124.26	35.61	48.92
	Final	1:06 PM	120	3300		13600					
41	Initial	1:06 PM	3	0	3000	0	13500	82.23	123.35	32.38	48.56
	Final	1:09 PM	123	3000		13500					
42	Initial	1:09 PM	3	0	3100	0	13550	84.97	123.81	33.45	48.74
	Final	1:12 PM	126	3100		13550					
43	Initial	1:12 PM	3	0	3050	0	13400	83.60	122.44	32.91	48.20
	Final	1:15 PM	129	3050		13400					

44	Initial	1:15 PM	3	0	3100	0	13300	84.97	121.52	33.45	47.84
	Final	1:18 PM	132	3100		13300					
45	Initial	1:18 PM	3	0	3000	0	13300	82.23	121.52	32.38	47.84
	Final	1:21 PM	135	3000		13300					
46	Initial	1:21 PM	3	0	2900	0	13400	79.49	122.44	31.30	48.20
	Final	1:24 PM	138	2900		13400					
47	Initial	1:24 PM	3	0	2950	0	13400	80.86	122.44	31.84	48.20
	Final	1:27 PM	141	2950		13400					
48	Initial	1:27 PM	3	0	2800	0	13500	76.75	123.35	30.22	48.56
	Final	1:30 PM	144	2800		13500					
49	Initial	1:30 PM	3	0	2750	0	13300	75.38	121.52	29.68	47.84
	Final	1:33 PM	147	2750		13300					
50	Initial	1:33 PM	3	0	2800	0	13400	76.75	122.44	30.22	48.20
	Final	1:36 PM	150	2800		13400					
51	Initial	1:36 PM	3	0	2500	0	13300	68.53	121.52	26.98	47.84
	Final	1:39 PM	153	2500		13300					
52	Initial	1:39 PM	3	0	2400	0	13400	65.79	122.44	25.90	48.20
	Final	1:42 PM	156	2400		13400					
53	Initial	1:42 PM	3	0	2300	0	13500	63.05	123.35	24.82	48.56
	Final	1:45 PM	159	2300		13500					
54	Initial	1:45 PM	3	0	2350	0	13400	64.42	122.44	25.36	48.20
	Final	1:48 PM	162	2350		13400					
55	Initial	1:48 PM	3	0	2250	0	13300	61.67	121.52	24.28	47.84
	Final	1:51 PM	165	2250		13300					
56	Initial	1:51 PM	3	0	2200	0	13300	60.30	121.52	23.74	47.84
	Final	1:54 PM	168	2200		13300					
57	Initial	1:54 PM	3	0	2100	0	13100	57.56	119.69	22.66	47.12
	Final	1:57 PM	171	2100		13100					
58	Initial	1:57 PM	3	0	2200	0	13000	60.30	118.78	23.74	46.76
	Final	2:00 PM	174	2200		13000					
59	Initial	2:00 PM	3	0	2200	0	13100	60.30	119.69	23.74	47.12
	Final	2:03 PM	177	2200		13100					
60	Initial	2:03 PM	3	0	2100	0	13200	57.56	120.61	22.66	47.48
	Final	2:06 PM	180	2100		13200					
61	Initial	2:06 PM	3	0	2150	0	13100	58.93	119.69	23.20	47.12
	Final	2:09 PM	183	2150		13100					
62	Initial	2:09 PM	3	0	1950	0	12900	53.45	117.87	21.04	46.40
	Final	2:12 PM	186	1950		12900					
63	Initial	2:12 PM	3	0	2150	0	13100	58.93	119.69	23.20	47.12
	Final	2:15 PM	189	2150		13100					
64	Initial	2:15 PM	3	0	2200	0	13000	60.30	118.78	23.74	46.76
	Final	2:18 PM	192	2200		13000					
65	Initial	2:18 PM	3	0	2100	0	12900	57.56	117.87	22.66	46.40
	Final	2:21 PM	195	2100		12900					
66	Initial	2:21 PM	3	0	2000	0	13000	54.82	118.78	21.58	46.76
	Final	2:24 PM	198	2000		13000					
67	Initial	2:24 PM	3	0	1950	0	13700	53.45	125.18	21.04	49.28
	Final	2:27 PM	201	1950		13700					
68	Initial	2:27 PM	3	0	2000	0	12900	54.82	117.87	21.58	46.40
	Final	2:30 PM	204	2000		12900					
69	Initial	2:30 PM	3	0	2100	0	12800	57.56	116.95	22.66	46.04
	Final	2:33 PM	207	2100		12800					

70	Initial	2:33 PM	3	0	2100	0	12700	57.56	116.04	22.66	45.68
	Final	2:36 PM	210	2100		12700					
71	Initial	2:36 PM	3	0	2100	0	12500	57.56	114.21	22.66	44.97
	Final	2:39 PM	213	2100		12500					
72	Initial	2:39 PM	3	0	1950	0	12600	53.45	115.13	21.04	45.33
	Final	2:42 PM	216	1950		12600					
73	Initial	2:42 PM	3	0	2100	0	12600	57.56	115.13	22.66	45.33
	Final	2:45 PM	219	2100		12600					
74	Initial	2:45 PM	3	0	2200	0	12500	60.30	114.21	23.74	44.97
	Final	2:48 PM	222	2200		12500					
75	Initial	2:48 PM	3	0	2100	0	12300	57.56	112.38	22.66	44.25
	Final	2:51 PM	225	2100		12300					
76	Initial	2:51 PM	3	0	2000	0	12200	54.82	111.47	21.58	43.89
	Final	2:54 PM	228	2000		12200					
77	Initial	2:54 PM	3	0	2100	0	12400	57.56	113.30	22.66	44.61
	Final	2:57 PM	231	2100		12400					
78	Initial	2:57 PM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	3:00 PM	234	2150		12300					
79	Initial	3:00 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	3:03 PM	237	2250		12300					
80	Initial	3:03 PM	3	0	2100	0	12000	57.56	109.64	22.66	43.17
	Final	3:06 PM	240	2100		12000					
81	Initial	3:06 PM	3	0	2150	0	12200	58.93	111.47	23.20	43.89
	Final	3:09 PM	243	2150		12200					
82	Initial	3:09 PM	3	0	1950	0	12100	53.45	110.56	21.04	43.53
	Final	3:12 PM	246	1950		12100					
83	Initial	3:12 PM	3	0	2000	0	12000	54.82	109.64	21.58	43.17
	Final	3:15 PM	249	2000		12000					
84	Initial	3:15 PM	3	0	1950	0	11800	53.45	107.82	21.04	42.45
	Final	3:18 PM	252	1950		11800					
85	Initial	3:18 PM	3	0	1950	0	11600	53.45	105.99	21.04	41.73
	Final	3:21 PM	255	1950		11600					
86	Initial	3:21 PM	3	0	2000	0	11400	54.82	104.16	21.58	41.01
	Final	3:24 PM	258	2000		11400					
87	Initial	3:24 PM	3	0	1950	0	11250	53.45	102.79	21.04	40.47
	Final	3:27 PM	261	1950		11250					
88	Initial	3:27 PM	3	0	1950	0	11300	53.45	103.25	21.04	40.65
	Final	3:30 PM	264	1950		11300					
89	Initial	3:30 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	3:33 PM	267	1950		11200					
90	Initial	3:33 PM	3	0	2000	0	11200	54.82	102.33	21.58	40.29
	Final	3:36 PM	270	2000		11200					
91	Initial	3:36 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:39 PM	273	1950		11000					
92	Initial	3:39 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:42 PM	276	1950		11000					
93	Initial	3:42 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:45 PM	279	1950		11000					
94	Initial	3:45 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:48 PM	282	1950		11000					
95	Initial	3:48 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:51 PM	285	1950		11000					

96	Initial	3:51 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:54 PM	288	1950		11000					
97	Initial	3:54 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	3:57 PM	291	1950		11000					
98	Initial	3:57 PM	3	0	2000	0	11000	54.82	100.51	21.58	39.57
	Final	4:00 PM	294	2000		11000					
99	Initial	4:00 PM	3	0	2000	0	11000	54.82	100.51	21.58	39.57
	Final	4:03 PM	297	2000		11000					
100	Initial	4:03 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:06 PM	300	1950		11000					
101	Initial	4:06 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:09 PM	303	1950		11000					
102	Initial	4:09 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:12 PM	306	1950		11000					
103	Initial	4:12 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:15 PM	309	1950		11000					
104	Initial	4:15 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:18 PM	312	1950		11000					
105	Initial	4:18 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:21 PM	315	1950		11000					
106	Initial	4:21 PM	3	0	2000	0	11000	54.82	100.51	21.58	39.57
	Final	4:24 PM	318	2000		11000					
107	Initial	4:24 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:27 PM	321	1950		11000					
108	Initial	4:27 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:30 PM	324	1950		11000					
109	Initial	4:30 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:33 PM	327	1950		11000					
110	Initial	4:33 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:36 PM	330	1950		11000					
111	Initial	4:36 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:39 PM	333	1950		11000					
112	Initial	4:39 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:42 PM	336	1950		11000					
113	Initial	4:42 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:45 PM	339	1950		11000					
114	Initial	4:45 PM	3	0	2000	0	11000	54.82	100.51	21.58	39.57
	Final	4:48 PM	342	2000		11000					
115	Initial	4:48 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:51 PM	345	1950		11000					
116	Initial	4:51 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:54 PM	348	1950		11000					
117	Initial	4:54 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	4:57 PM	351	1950		11000					
118	Initial	4:57 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	5:00 PM	354	1950		11000					
119	Initial	5:00 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	5:03 PM	357	1950		11000					
120	Initial	5:03 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	5:06 PM	360	1950		11000					
121	Initial	5:06 PM	3	0	1950	0	11000	53.45	100.51	21.04	39.57
	Final	5:09 PM	363	1950		11000					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-14**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	8:30 AM	3	0	4600	0	14000	126.09	127.92	49.64	50.36
	Final	8:33 AM	3	4600	4600	14000	14000				
2	Initial	8:33 AM	3	0	4300	0	14300	117.87	130.66	46.40	51.44
	Final	8:36 AM	6	4300	4300	14300	14300				
3	Initial	8:36 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	8:39 AM	9	4600	4600	14500	14500				
4	Initial	8:39 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	8:42 AM	12	4650	4650	14500	14500				
5	Initial	8:42 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	8:45 AM	15	4500	4500	14500	14500				
6	Initial	8:45 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	8:48 AM	18	4500	4500	14500	14500				
7	Initial	8:48 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	8:51 AM	21	4750	4750	14500	14500				
8	Initial	8:51 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	8:54 AM	24	4500	4500	14500	14500				
9	Initial	8:54 AM	3	0	4550	0	14500	124.72	132.49	49.10	52.16
	Final	8:57 AM	27	4550	4550	14500	14500				
10	Initial	8:57 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:00 AM	30	4650	4650	14500	14500				
11	Initial	9:00 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:03 AM	33	4500	4500	14500	14500				
12	Initial	9:03 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:06 AM	36	4650	4650	14500	14500				
13	Initial	9:06 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:09 AM	39	4500	4500	14500	14500				
14	Initial	9:09 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:12 AM	42	4650	4650	14500	14500				
15	Initial	9:12 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:15 AM	45	4650	4650	14500	14500				
16	Initial	9:15 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:18 AM	48	4500	4500	14500	14500				
17	Initial	9:18 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:21 AM	51	4750	4750	14500	14500				

18	Initial	9:21 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	9:24 AM	54	4600		14500					
19	Initial	9:24 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:27 AM	57	4650		14500					
20	Initial	9:27 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:30 AM	60	4650		14500					
21	Initial	9:30 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:33 AM	63	4500		14500					
22	Initial	9:33 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:36 AM	66	4750		14500					
23	Initial	9:36 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:39 AM	69	4500		14500					
24	Initial	9:39 AM	3	0	4200	0	14500	115.13	132.49	45.33	52.16
	Final	9:42 AM	72	4200		14500					
25	Initial	9:42 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	9:45 AM	75	4100		14500					
26	Initial	9:45 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	9:48 AM	78	4000		14500					
27	Initial	9:48 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	9:51 AM	81	4100		14500					
28	Initial	9:51 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	9:54 AM	84	4000		14500					
29	Initial	9:54 AM	3	0	4150	0	14100	113.76	128.83	44.79	50.72
	Final	9:57 AM	87	4150		14100					
30	Initial	9:57 AM	3	0	3900	0	14100	106.90	128.83	42.09	50.72
	Final	10:00 AM	90	3900		14100					
31	Initial	10:00 AM	3	0	3900	0	14000	106.90	127.92	42.09	50.36
	Final	10:03 AM	93	3900		14000					
32	Initial	10:03 AM	3	0	3850	0	14100	105.53	128.83	41.55	50.72
	Final	10:06 AM	96	3850		14100					
33	Initial	10:06 AM	3	0	3750	0	13900	102.79	127.00	40.47	50.00
	Final	10:09 AM	99	3750		13900					
34	Initial	10:09 AM	3	0	3700	0	13800	101.42	126.09	39.93	49.64
	Final	10:12 AM	102	3700		13800					
35	Initial	10:12 AM	3	0	3600	0	13850	98.68	126.55	38.85	49.82
	Final	10:15 AM	105	3600		13850					
36	Initial	10:15 AM	3	0	3550	0	13700	97.31	125.18	38.31	49.28
	Final	10:18 AM	108	3550		13700					
37	Initial	10:18 AM	3	0	3550	0	13500	97.31	123.35	38.31	48.56
	Final	10:21 AM	111	3550		13500					
38	Initial	10:21 AM	3	0	3600	0	13650	98.68	124.72	38.85	49.10
	Final	10:24 AM	114	3600		13650					
39	Initial	10:24 AM	3	0	3400	0	13700	93.20	125.18	36.69	49.28
	Final	10:27 AM	117	3400		13700					
40	Initial	10:27 AM	3	0	3300	0	13600	90.46	124.26	35.61	48.92
	Final	10:30 AM	120	3300		13600					
41	Initial	10:30 AM	3	0	3000	0	13500	82.23	123.35	32.38	48.56
	Final	10:33 AM	123	3000		13500					
42	Initial	10:33 AM	3	0	3100	0	13550	84.97	123.81	33.45	48.74
	Final	10:36 AM	126	3100		13550					
43	Initial	10:36 AM	3	0	3050	0	13400	83.60	122.44	32.91	48.20
	Final	10:39 AM	129	3050		13400					

44	Initial	10:39 AM	3	0	3050	0	13300	13300	83.60	121.52	32.91	47.84
	Final	10:42 AM	132	3050		13300						
45	Initial	10:42 AM	3	0	3000	0	13300	13300	82.23	121.52	32.38	47.84
	Final	10:45 AM	135	3000		13300						
46	Initial	10:45 AM	3	0	2900	0	13400	13400	79.49	122.44	31.30	48.20
	Final	10:48 AM	138	2900		13400						
47	Initial	10:48 AM	3	0	2950	0	13400	13400	80.86	122.44	31.84	48.20
	Final	10:51 AM	141	2950		13400						
48	Initial	10:51 AM	3	0	2800	0	13500	13500	76.75	123.35	30.22	48.56
	Final	10:54 AM	144	2800		13500						
49	Initial	10:54 AM	3	0	2750	0	13300	13300	75.38	121.52	29.68	47.84
	Final	10:57 AM	147	2750		13300						
50	Initial	10:57 AM	3	0	2600	0	13400	13400	71.27	122.44	28.06	48.20
	Final	11:00 AM	150	2600		13400						
51	Initial	11:00 AM	3	0	2500	0	13300	13300	68.53	121.52	26.98	47.84
	Final	11:03 AM	153	2500		13300						
52	Initial	11:03 AM	3	0	2400	0	13400	13400	65.79	122.44	25.90	48.20
	Final	11:06 AM	156	2400		13400						
53	Initial	11:06 AM	3	0	2300	0	13500	13500	63.05	123.35	24.82	48.56
	Final	11:09 AM	159	2300		13500						
54	Initial	11:09 AM	3	0	2350	0	13400	13400	64.42	122.44	25.36	48.20
	Final	11:12 AM	162	2350		13400						
55	Initial	11:12 AM	3	0	2250	0	13300	13300	61.67	121.52	24.28	47.84
	Final	11:15 AM	165	2250		13300						
56	Initial	11:15 AM	3	0	2200	0	13300	13300	60.30	121.52	23.74	47.84
	Final	11:18 AM	168	2200		13300						
57	Initial	11:18 AM	3	0	2200	0	13100	13100	60.30	119.69	23.74	47.12
	Final	11:21 AM	171	2200		13100						
58	Initial	11:21 AM	3	0	2250	0	13000	13000	61.67	118.78	24.28	46.76
	Final	11:24 AM	174	2250		13000						
59	Initial	11:24 AM	3	0	2200	0	13100	13100	60.30	119.69	23.74	47.12
	Final	11:27 AM	177	2200		13100						
60	Initial	11:27 AM	3	0	2200	0	13200	13200	60.30	120.61	23.74	47.48
	Final	11:30 AM	180	2200		13200						
61	Initial	11:30 AM	3	0	2250	0	13100	13100	61.67	119.69	24.28	47.12
	Final	11:33 AM	183	2250		13100						
62	Initial	11:33 AM	3	0	2400	0	12900	12900	65.79	117.87	25.90	46.40
	Final	11:36 AM	186	2400		12900						
63	Initial	11:36 AM	3	0	2250	0	13100	13100	61.67	119.69	24.28	47.12
	Final	11:39 AM	189	2250		13100						
64	Initial	11:39 AM	3	0	2200	0	13000	13000	60.30	118.78	23.74	46.76
	Final	11:42 AM	192	2200		13000						
65	Initial	11:42 AM	3	0	2200	0	12900	12900	60.30	117.87	23.74	46.40
	Final	11:45 AM	195	2200		12900						
66	Initial	11:45 AM	3	0	2200	0	13000	13000	60.30	118.78	23.74	46.76
	Final	11:48 AM	198	2200		13000						
67	Initial	11:48 AM	3	0	2200	0	12900	12900	60.30	117.87	23.74	46.40
	Final	11:51 AM	201	2200		12900						
68	Initial	11:51 AM	3	0	2250	0	12900	12900	61.67	117.87	24.28	46.40
	Final	11:54 AM	204	2250		12900						
69	Initial	11:54 AM	3	0	2400	0	12800	12800	65.79	116.95	25.90	46.04
	Final	11:57 AM	207	2400		12800						

70	Initial	11:57 AM	3	0	2250	0	12700	61.67	116.04	24.28	45.68
	Final	12:00 PM	210	2250		12700					
71	Initial	12:00 PM	3	0	2200	0	12500	60.30	114.21	23.74	44.97
	Final	12:03 PM	213	2200		12500					
72	Initial	12:03 PM	3	0	2200	0	12600	60.30	115.13	23.74	45.33
	Final	12:06 PM	216	2200		12600					
73	Initial	12:06 PM	3	0	2200	0	12600	60.30	115.13	23.74	45.33
	Final	12:09 PM	219	2200		12600					
74	Initial	12:09 PM	3	0	2200	0	12500	60.30	114.21	23.74	44.97
	Final	12:12 PM	222	2200		12500					
75	Initial	12:12 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	12:15 PM	225	2250		12300					
76	Initial	12:15 PM	3	0	2400	0	12200	65.79	111.47	25.90	43.89
	Final	12:18 PM	228	2400		12200					
77	Initial	12:18 PM	3	0	2250	0	12400	61.67	113.30	24.28	44.61
	Final	12:21 PM	231	2250		12400					
78	Initial	12:21 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	12:24 PM	234	2200		12300					
79	Initial	12:24 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	12:27 PM	237	2200		12300					
80	Initial	12:27 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	12:30 PM	240	2200		12000					
81	Initial	12:30 PM	3	0	2200	0	12200	60.30	111.47	23.74	43.89
	Final	12:33 PM	243	2200		12200					
82	Initial	12:33 PM	3	0	2250	0	12100	61.67	110.56	24.28	43.53
	Final	12:36 PM	246	2250		12100					
83	Initial	12:36 PM	3	0	2400	0	12000	65.79	109.64	25.90	43.17
	Final	12:39 PM	249	2400		12000					
84	Initial	12:39 PM	3	0	2250	0	11800	61.67	107.82	24.28	42.45
	Final	12:42 PM	252	2250		11800					
85	Initial	12:42 PM	3	0	2200	0	12400	60.30	113.30	23.74	44.61
	Final	12:45 PM	255	2200		12400					
86	Initial	12:45 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	12:48 PM	258	2200		12300					
87	Initial	12:48 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	12:51 PM	261	2200		12300					
88	Initial	12:51 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	12:54 PM	264	2200		12000					
89	Initial	12:54 PM	3	0	2250	0	12200	61.67	111.47	24.28	43.89
	Final	12:57 PM	267	2250		12200					
90	Initial	12:57 PM	3	0	2400	0	12100	65.79	110.56	25.90	43.53
	Final	1:00 PM	270	2400		12100					
91	Initial	1:00 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	1:03 PM	273	2250		12000					
92	Initial	1:03 PM	3	0	2200	0	11800	60.30	107.82	23.74	42.45
	Final	1:06 PM	276	2200		11800					
93	Initial	1:06 PM	3	0	2200	0	12400	60.30	113.30	23.74	44.61
	Final	1:09 PM	279	2200		12400					
94	Initial	1:09 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	1:12 PM	282	2200		12300					
95	Initial	1:12 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	1:15 PM	285	2200		12300					

96	Initial	1:15 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	1:18 PM	288	2250		12000					
97	Initial	1:18 PM	3	0	2200	0	12200	60.30	111.47	23.74	43.89
	Final	1:21 PM	291	2200		12200					
98	Initial	1:21 PM	3	0	2200	0	12100	60.30	110.56	23.74	43.53
	Final	1:24 PM	294	2200		12100					
99	Initial	1:24 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	1:27 PM	297	2200		12000					
100	Initial	1:27 PM	3	0	2250	0	11800	61.67	107.82	24.28	42.45
	Final	1:30 PM	300	2250		11800					
101	Initial	1:30 PM	3	0	2200	0	12400	60.30	113.30	23.74	44.61
	Final	1:33 PM	303	2200		12400					
102	Initial	1:33 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	1:36 PM	306	2250		12300					
103	Initial	1:36 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	1:39 PM	309	2250		12300					
104	Initial	1:39 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	1:42 PM	312	2200		12000					
105	Initial	1:42 PM	3	0	2300	0	12200	63.05	111.47	24.82	43.89
	Final	1:45 PM	315	2300		12200					
106	Initial	1:45 PM	3	0	2250	0	12100	61.67	110.56	24.28	43.53
	Final	1:48 PM	318	2250		12100					
107	Initial	1:48 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	1:51 PM	321	2250		12000					
108	Initial	1:51 PM	3	0	2250	0	11800	61.67	107.82	24.28	42.45
	Final	1:54 PM	324	2250		11800					
109	Initial	1:54 PM	3	0	2250	0	12400	61.67	113.30	24.28	44.61
	Final	1:57 PM	327	2250		12400					
110	Initial	1:57 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:00 PM	330	2200		12000					
111	Initial	2:00 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:03 PM	333	2200		12000					
112	Initial	2:03 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:06 PM	336	2200		12000					
113	Initial	2:06 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	2:09 PM	339	2250		12000					
114	Initial	2:09 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:12 PM	342	2200		12000					
115	Initial	2:12 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:15 PM	345	2200		12000					
116	Initial	2:15 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:18 PM	348	2200		12000					
117	Initial	2:18 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:21 PM	351	2200		12000					
118	Initial	2:21 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:24 PM	354	2200		12000					
119	Initial	2:24 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:27 PM	357	2200		12000					
120	Initial	2:27 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:30 PM	360	2200		12000					
121	Initial	2:30 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:33 PM	363	2200		12000					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-15**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	9:46 AM	3	0	4800	0	14800	131.57	135.23	51.80	53.24
	Final	9:49 AM	3	4800	4800	14800					
2	Initial	9:49 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:52 AM	6	4750	4750	14500					
3	Initial	9:52 AM	3	0	4500	0	14900	123.35	136.14	48.56	53.60
	Final	9:55 AM	9	4500	4500	14900					
4	Initial	9:55 AM	3	0	4650	0	14800	127.46	135.23	50.18	53.24
	Final	9:58 AM	12	4650	4650	14800					
5	Initial	9:58 AM	3	0	4400	0	14500	120.61	132.49	47.48	52.16
	Final	10:01 AM	15	4400	4400	14500					
6	Initial	10:01 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:04 AM	18	4500	4500	14500					
7	Initial	10:04 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	10:07 AM	21	4750	4750	14500					
8	Initial	10:07 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:10 AM	24	4500	4500	14500					
9	Initial	10:10 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	10:13 AM	27	4600	4600	14500					
10	Initial	10:13 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:16 AM	30	4650	4650	14500					
11	Initial	10:16 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:19 AM	33	4500	4500	14500					
12	Initial	10:19 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	10:22 AM	36	4750	4750	14500					
13	Initial	10:22 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:25 AM	39	4500	4500	14500					
14	Initial	10:25 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:28 AM	42	4650	4650	14500					
15	Initial	10:28 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:31 AM	45	4650	4650	14500					
16	Initial	10:31 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:34 AM	48	4500	4500	14500					
17	Initial	10:34 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	10:37 AM	51	4750	4750	14500					

18	Initial	10:37 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:40 AM	54	4500		14500					
19	Initial	10:40 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:43 AM	57	4650		14500					
20	Initial	10:43 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:46 AM	60	4650		14500					
21	Initial	10:46 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:49 AM	63	4500		14500					
22	Initial	10:49 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	10:52 AM	66	4750		14500					
23	Initial	10:52 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:55 AM	69	4500		14500					
24	Initial	10:55 AM	3	0	4200	0	14500	115.13	132.49	45.33	52.16
	Final	10:58 AM	72	4200		14500					
25	Initial	10:58 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	11:01 AM	75	4100		14500					
26	Initial	11:01 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	11:04 AM	78	4000		14500					
27	Initial	11:04 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	11:07 AM	81	4100		14500					
28	Initial	11:07 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	11:10 AM	84	4000		14500					
29	Initial	11:10 AM	3	0	4150	0	14100	113.76	128.83	44.79	50.72
	Final	11:13 AM	87	4150		14100					
30	Initial	11:13 AM	3	0	3900	0	14100	106.90	128.83	42.09	50.72
	Final	11:16 AM	90	3900		14100					
31	Initial	11:16 AM	3	0	3900	0	14000	106.90	127.92	42.09	50.36
	Final	11:19 AM	93	3900		14000					
32	Initial	11:19 AM	3	0	3850	0	14100	105.53	128.83	41.55	50.72
	Final	11:22 AM	96	3850		14100					
33	Initial	11:22 AM	3	0	3750	0	13900	102.79	127.00	40.47	50.00
	Final	11:25 AM	99	3750		13900					
34	Initial	11:25 AM	3	0	3700	0	13800	101.42	126.09	39.93	49.64
	Final	11:28 AM	102	3700		13800					
35	Initial	11:28 AM	3	0	3600	0	13850	98.68	126.55	38.85	49.82
	Final	11:31 AM	105	3600		13850					
36	Initial	11:31 AM	3	0	3550	0	13700	97.31	125.18	38.31	49.28
	Final	11:34 AM	108	3550		13700					
37	Initial	11:34 AM	3	0	3550	0	13500	97.31	123.35	38.31	48.56
	Final	11:37 AM	111	3550		13500					
38	Initial	11:37 AM	3	0	3600	0	13650	98.68	124.72	38.85	49.10
	Final	11:40 AM	114	3600		13650					
39	Initial	11:40 AM	3	0	3400	0	13700	93.20	125.18	36.69	49.28
	Final	11:43 AM	117	3400		13700					
40	Initial	11:43 AM	3	0	3300	0	13600	90.46	124.26	35.61	48.92
	Final	11:46 AM	120	3300		13600					
41	Initial	11:46 AM	3	0	3000	0	13500	82.23	123.35	32.38	48.56
	Final	11:49 AM	123	3000		13500					
42	Initial	11:49 AM	3	0	3100	0	13550	84.97	123.81	33.45	48.74
	Final	11:52 AM	126	3100		13550					
43	Initial	11:52 AM	3	0	3050	0	13400	83.60	122.44	32.91	48.20
	Final	11:55 AM	129	3050		13400					

44	Initial	11:55 AM	3	0	3050	0	13300	13300	83.60	121.52	32.91	47.84
	Final	11:58 AM	132	3050		13300						
45	Initial	11:58 AM	3	0	3000	0	13300	13300	82.23	121.52	32.38	47.84
	Final	12:01 PM	135	3000		13300						
46	Initial	12:01 PM	3	0	2900	0	13400	13400	79.49	122.44	31.30	48.20
	Final	12:04 PM	138	2900		13400						
47	Initial	12:04 PM	3	0	2950	0	13400	13400	80.86	122.44	31.84	48.20
	Final	12:07 PM	141	2950		13400						
48	Initial	12:07 PM	3	0	2800	0	13500	13500	76.75	123.35	30.22	48.56
	Final	12:10 PM	144	2800		13500						
49	Initial	12:10 PM	3	0	2750	0	13300	13300	75.38	121.52	29.68	47.84
	Final	12:13 PM	147	2750		13300						
50	Initial	12:13 PM	3	0	2600	0	13400	13400	71.27	122.44	28.06	48.20
	Final	12:16 PM	150	2600		13400						
51	Initial	12:16 PM	3	0	2500	0	13300	13300	68.53	121.52	26.98	47.84
	Final	12:19 PM	153	2500		13300						
52	Initial	12:19 PM	3	0	2400	0	13400	13400	65.79	122.44	25.90	48.20
	Final	12:22 PM	156	2400		13400						
53	Initial	12:22 PM	3	0	2300	0	13500	13500	63.05	123.35	24.82	48.56
	Final	12:25 PM	159	2300		13500						
54	Initial	12:25 PM	3	0	2350	0	13400	13400	64.42	122.44	25.36	48.20
	Final	12:28 PM	162	2350		13400						
55	Initial	12:28 PM	3	0	2250	0	13300	13300	61.67	121.52	24.28	47.84
	Final	12:31 PM	165	2250		13300						
56	Initial	12:31 PM	3	0	2200	0	13300	13300	60.30	121.52	23.74	47.84
	Final	12:34 PM	168	2200		13300						
57	Initial	12:34 PM	3	0	2100	0	13100	13100	57.56	119.69	22.66	47.12
	Final	12:37 PM	171	2100		13100						
58	Initial	12:37 PM	3	0	2150	0	13000	13000	58.93	118.78	23.20	46.76
	Final	12:40 PM	174	2150		13000						
59	Initial	12:40 PM	3	0	2200	0	13100	13100	60.30	119.69	23.74	47.12
	Final	12:43 PM	177	2200		13100						
60	Initial	12:43 PM	3	0	2100	0	13200	13200	57.56	120.61	22.66	47.48
	Final	12:46 PM	180	2100		13200						
61	Initial	12:46 PM	3	0	2150	0	13100	13100	58.93	119.69	23.20	47.12
	Final	12:49 PM	183	2150		13100						
62	Initial	12:49 PM	3	0	2000	0	12900	12900	54.82	117.87	21.58	46.40
	Final	12:52 PM	186	2000		12900						
63	Initial	12:52 PM	3	0	2150	0	13100	13100	58.93	119.69	23.20	47.12
	Final	12:55 PM	189	2150		13100						
64	Initial	12:55 PM	3	0	2200	0	13000	13000	60.30	118.78	23.74	46.76
	Final	12:58 PM	192	2200		13000						
65	Initial	12:58 PM	3	0	2100	0	12900	12900	57.56	117.87	22.66	46.40
	Final	1:01 PM	195	2100		12900						
66	Initial	1:01 PM	3	0	2050	0	13000	13000	56.19	118.78	22.12	46.76
	Final	1:04 PM	198	2050		13000						
67	Initial	1:04 PM	3	0	2000	0	13700	13700	54.82	125.18	21.58	49.28
	Final	1:07 PM	201	2000		13700						
68	Initial	1:07 PM	3	0	2100	0	12900	12900	57.56	117.87	22.66	46.40
	Final	1:10 PM	204	2100		12900						
69	Initial	1:10 PM	3	0	2100	0	12800	12800	57.56	116.95	22.66	46.04
	Final	1:13 PM	207	2100		12800						

70	Initial	1:13 PM	3	0	2100	0	12700	57.56	116.04	22.66	45.68
	Final	1:16 PM	210	2100		12700					
71	Initial	1:16 PM	3	0	2100	0	12500	57.56	114.21	22.66	44.97
	Final	1:19 PM	213	2100		12500					
72	Initial	1:19 PM	3	0	2000	0	12600	54.82	115.13	21.58	45.33
	Final	1:22 PM	216	2000		12600					
73	Initial	1:22 PM	3	0	2100	0	12600	57.56	115.13	22.66	45.33
	Final	1:25 PM	219	2100		12600					
74	Initial	1:25 PM	3	0	2200	0	12500	60.30	114.21	23.74	44.97
	Final	1:28 PM	222	2200		12500					
75	Initial	1:28 PM	3	0	2100	0	12300	57.56	112.38	22.66	44.25
	Final	1:31 PM	225	2100		12300					
76	Initial	1:31 PM	3	0	2100	0	12200	57.56	111.47	22.66	43.89
	Final	1:34 PM	228	2100		12200					
77	Initial	1:34 PM	3	0	2100	0	12400	57.56	113.30	22.66	44.61
	Final	1:37 PM	231	2100		12400					
78	Initial	1:37 PM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	1:40 PM	234	2150		12300					
79	Initial	1:40 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	1:43 PM	237	2250		12300					
80	Initial	1:43 PM	3	0	2100	0	12000	57.56	109.64	22.66	43.17
	Final	1:46 PM	240	2100		12000					
81	Initial	1:46 PM	3	0	2150	0	12200	58.93	111.47	23.20	43.89
	Final	1:49 PM	243	2150		12200					
82	Initial	1:49 PM	3	0	2100	0	12100	57.56	110.56	22.66	43.53
	Final	1:52 PM	246	2100		12100					
83	Initial	1:52 PM	3	0	2050	0	12000	56.19	109.64	22.12	43.17
	Final	1:55 PM	249	2050		12000					
84	Initial	1:55 PM	3	0	2100	0	11800	57.56	107.82	22.66	42.45
	Final	1:58 PM	252	2100		11800					
85	Initial	1:58 PM	3	0	2050	0	11600	56.19	105.99	22.12	41.73
	Final	2:01 PM	255	2050		11600					
86	Initial	2:01 PM	3	0	2100	0	11400	57.56	104.16	22.66	41.01
	Final	2:04 PM	258	2100		11400					
87	Initial	2:04 PM	3	0	2150	0	11250	58.93	102.79	23.20	40.47
	Final	2:07 PM	261	2150		11250					
88	Initial	2:07 PM	3	0	2250	0	11300	61.67	103.25	24.28	40.65
	Final	2:10 PM	264	2250		11300					
89	Initial	2:10 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	2:13 PM	267	2100		11200					
90	Initial	2:13 PM	3	0	2150	0	11200	58.93	102.33	23.20	40.29
	Final	2:16 PM	270	2150		11200					
91	Initial	2:16 PM	3	0	2050	0	11200	56.19	102.33	22.12	40.29
	Final	2:19 PM	273	2050		11200					
92	Initial	2:19 PM	3	0	2050	0	11200	56.19	102.33	22.12	40.29
	Final	2:22 PM	276	2050		11200					
93	Initial	2:22 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	2:25 PM	279	2100		11200					
94	Initial	2:25 PM	3	0	2050	0	11200	56.19	102.33	22.12	40.29
	Final	2:28 PM	282	2050		11200					
95	Initial	2:28 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	2:31 PM	285	2100		11200					

96	Initial	2:31 PM	3	0	2150	0	11200	58.93	102.33	23.20	40.29
	Final	2:34 PM	288	2150		11200					
97	Initial	2:34 PM	3	0	2250	0	11200	61.67	102.33	24.28	40.29
	Final	2:37 PM	291	2250		11200					
98	Initial	2:37 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	2:40 PM	294	2100		11200					
99	Initial	2:40 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	2:43 PM	297	1950		11200					
100	Initial	2:43 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:46 PM	300	1900		11200					
101	Initial	2:46 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:49 PM	303	1900		11200					
102	Initial	2:49 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:52 PM	306	1900		11200					
103	Initial	2:52 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	2:55 PM	309	1950		11200					
104	Initial	2:55 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:58 PM	312	1900		11200					
105	Initial	2:58 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:01 PM	315	1900		11200					
106	Initial	3:01 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:04 PM	318	1900		11200					
107	Initial	3:04 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:07 PM	321	1900		11200					
108	Initial	3:07 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	3:10 PM	324	1950		11200					
109	Initial	3:10 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:13 PM	327	1900		11200					
110	Initial	3:13 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:16 PM	330	1900		11200					
111	Initial	3:16 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	3:19 PM	333	1950		11200					
112	Initial	3:19 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:22 PM	336	1900		11200					
113	Initial	3:22 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:25 PM	339	1900		11200					
114	Initial	3:25 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:28 PM	342	1900		11200					
115	Initial	3:28 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:31 PM	345	1900		11200					
116	Initial	3:31 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:34 PM	348	1900		11200					
117	Initial	3:34 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:37 PM	351	1900		11200					
118	Initial	3:37 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	3:40 PM	354	1950		11200					
119	Initial	3:40 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:43 PM	357	1900		11200					
120	Initial	3:43 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:46 PM	360	1900		11200					
121	Initial	3:46 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	3:49 PM	363	1900		11200					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-16**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	10:18 AM	3	0	4600	0	14000	126.09	127.92	49.64	50.36
	Final	10:21 AM	3	4600	4600	14000	14000				
2	Initial	10:21 AM	3	0	4500	0	14300	123.35	130.66	48.56	51.44
	Final	10:24 AM	6	4500	4500	14300	14300				
3	Initial	10:24 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	10:27 AM	9	4600	4600	14500	14500				
4	Initial	10:27 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:30 AM	12	4650	4650	14500	14500				
5	Initial	10:30 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:33 AM	15	4500	4500	14500	14500				
6	Initial	10:33 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:36 AM	18	4500	4500	14500	14500				
7	Initial	10:36 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	10:39 AM	21	4600	4600	14500	14500				
8	Initial	10:39 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:42 AM	24	4500	4500	14500	14500				
9	Initial	10:42 AM	3	0	4550	0	14500	124.72	132.49	49.10	52.16
	Final	10:45 AM	27	4550	4550	14500	14500				
10	Initial	10:45 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:48 AM	30	4650	4650	14500	14500				
11	Initial	10:48 AM	3	0	4550	0	14500	124.72	132.49	49.10	52.16
	Final	10:51 AM	33	4550	4550	14500	14500				
12	Initial	10:51 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:54 AM	36	4650	4650	14500	14500				
13	Initial	10:54 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:57 AM	39	4500	4500	14500	14500				
14	Initial	10:57 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:00 AM	42	4650	4650	14500	14500				
15	Initial	11:00 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	11:03 AM	45	4600	4600	14500	14500				
16	Initial	11:03 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:06 AM	48	4500	4500	14500	14500				
17	Initial	11:06 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	11:09 AM	51	4600	4600	14500	14500				

18	Initial	11:09 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	11:12 AM	54	4600		14500					
19	Initial	11:12 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:15 AM	57	4650		14500					
20	Initial	11:15 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:18 AM	60	4650		14500					
21	Initial	11:18 AM	3	0	4550	0	14500	124.72	132.49	49.10	52.16
	Final	11:21 AM	63	4550		14500					
22	Initial	11:21 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	11:24 AM	66	4650		14500					
23	Initial	11:24 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	11:27 AM	69	4500		14500					
24	Initial	11:27 AM	3	0	4200	0	14500	115.13	132.49	45.33	52.16
	Final	11:30 AM	72	4200		14500					
25	Initial	11:30 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	11:33 AM	75	4100		14500					
26	Initial	11:33 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	11:36 AM	78	4000		14500					
27	Initial	11:36 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	11:39 AM	81	4100		14500					
28	Initial	11:39 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	11:42 AM	84	4000		14500					
29	Initial	11:42 AM	3	0	4150	0	14100	113.76	128.83	44.79	50.72
	Final	11:45 AM	87	4150		14100					
30	Initial	11:45 AM	3	0	3900	0	14100	106.90	128.83	42.09	50.72
	Final	11:48 AM	90	3900		14100					
31	Initial	11:48 AM	3	0	3900	0	14000	106.90	127.92	42.09	50.36
	Final	11:51 AM	93	3900		14000					
32	Initial	11:51 AM	3	0	3850	0	14100	105.53	128.83	41.55	50.72
	Final	11:54 AM	96	3850		14100					
33	Initial	11:54 AM	3	0	3750	0	13900	102.79	127.00	40.47	50.00
	Final	11:57 AM	99	3750		13900					
34	Initial	11:57 AM	3	0	3700	0	13800	101.42	126.09	39.93	49.64
	Final	12:00 PM	102	3700		13800					
35	Initial	12:00 PM	3	0	3600	0	13850	98.68	126.55	38.85	49.82
	Final	12:03 PM	105	3600		13850					
36	Initial	12:03 PM	3	0	3550	0	13700	97.31	125.18	38.31	49.28
	Final	12:06 PM	108	3550		13700					
37	Initial	12:06 PM	3	0	3550	0	13500	97.31	123.35	38.31	48.56
	Final	12:09 PM	111	3550		13500					
38	Initial	12:09 PM	3	0	3600	0	13650	98.68	124.72	38.85	49.10
	Final	12:12 PM	114	3600		13650					
39	Initial	12:12 PM	3	0	3400	0	13700	93.20	125.18	36.69	49.28
	Final	12:15 PM	117	3400		13700					
40	Initial	12:15 PM	3	0	3300	0	13600	90.46	124.26	35.61	48.92
	Final	12:18 PM	120	3300		13600					
41	Initial	12:18 PM	3	0	3000	0	13500	82.23	123.35	32.38	48.56
	Final	12:21 PM	123	3000		13500					
42	Initial	12:21 PM	3	0	3100	0	13550	84.97	123.81	33.45	48.74
	Final	12:24 PM	126	3100		13550					
43	Initial	12:24 PM	3	0	3050	0	13400	83.60	122.44	32.91	48.20
	Final	12:27 PM	129	3050		13400					

44	Initial	12:27 PM	3	0	3000	0	13300	82.23	121.52	32.38	47.84
	Final	12:30 PM	132	3000		13300					
45	Initial	12:30 PM	3	0	3000	0	13300	82.23	121.52	32.38	47.84
	Final	12:33 PM	135	3000		13300					
46	Initial	12:33 PM	3	0	2900	0	13400	79.49	122.44	31.30	48.20
	Final	12:36 PM	138	2900		13400					
47	Initial	12:36 PM	3	0	2950	0	13400	80.86	122.44	31.84	48.20
	Final	12:39 PM	141	2950		13400					
48	Initial	12:39 PM	3	0	2800	0	13500	76.75	123.35	30.22	48.56
	Final	12:42 PM	144	2800		13500					
49	Initial	12:42 PM	3	0	2750	0	13300	75.38	121.52	29.68	47.84
	Final	12:45 PM	147	2750		13300					
50	Initial	12:45 PM	3	0	2600	0	13400	71.27	122.44	28.06	48.20
	Final	12:48 PM	150	2600		13400					
51	Initial	12:48 PM	3	0	2500	0	13300	68.53	121.52	26.98	47.84
	Final	12:51 PM	153	2500		13300					
52	Initial	12:51 PM	3	0	2550	0	13400	69.90	122.44	27.52	48.20
	Final	12:54 PM	156	2550		13400					
53	Initial	12:54 PM	3	0	2300	0	13500	63.05	123.35	24.82	48.56
	Final	12:57 PM	159	2300		13500					
54	Initial	12:57 PM	3	0	2350	0	13400	64.42	122.44	25.36	48.20
	Final	1:00 PM	162	2350		13400					
55	Initial	1:00 PM	3	0	2400	0	13300	65.79	121.52	25.90	47.84
	Final	1:03 PM	165	2400		13300					
56	Initial	1:03 PM	3	0	2250	0	13300	61.67	121.52	24.28	47.84
	Final	1:06 PM	168	2250		13300					
57	Initial	1:06 PM	3	0	2250	0	13100	61.67	119.69	24.28	47.12
	Final	1:09 PM	171	2250		13100					
58	Initial	1:09 PM	3	0	2300	0	13000	63.05	118.78	24.82	46.76
	Final	1:12 PM	174	2300		13000					
59	Initial	1:12 PM	3	0	2250	0	13100	61.67	119.69	24.28	47.12
	Final	1:15 PM	177	2250		13100					
60	Initial	1:15 PM	3	0	2250	0	13200	61.67	120.61	24.28	47.48
	Final	1:18 PM	180	2250		13200					
61	Initial	1:18 PM	3	0	2300	0	13100	63.05	119.69	24.82	47.12
	Final	1:21 PM	183	2300		13100					
62	Initial	1:21 PM	3	0	2500	0	12900	68.53	117.87	26.98	46.40
	Final	1:24 PM	186	2500		12900					
63	Initial	1:24 PM	3	0	2300	0	13100	63.05	119.69	24.82	47.12
	Final	1:27 PM	189	2300		13100					
64	Initial	1:27 PM	3	0	2250	0	13000	61.67	118.78	24.28	46.76
	Final	1:30 PM	192	2250		13000					
65	Initial	1:30 PM	3	0	2250	0	12900	61.67	117.87	24.28	46.40
	Final	1:33 PM	195	2250		12900					
66	Initial	1:33 PM	3	0	2250	0	13000	61.67	118.78	24.28	46.76
	Final	1:36 PM	198	2250		13000					
67	Initial	1:36 PM	3	0	2250	0	12900	61.67	117.87	24.28	46.40
	Final	1:39 PM	201	2250		12900					
68	Initial	1:39 PM	3	0	2300	0	12900	63.05	117.87	24.82	46.40
	Final	1:42 PM	204	2300		12900					
69	Initial	1:42 PM	3	0	2400	0	12800	65.79	116.95	25.90	46.04
	Final	1:45 PM	207	2400		12800					

70	Initial	1:45 PM	3	0	2300	0	12700	63.05	116.04	24.82	45.68
	Final	1:48 PM	210	2300		12700					
71	Initial	1:48 PM	3	0	2250	0	12500	61.67	114.21	24.28	44.97
	Final	1:51 PM	213	2250		12500					
72	Initial	1:51 PM	3	0	2250	0	12600	61.67	115.13	24.28	45.33
	Final	1:54 PM	216	2250		12600					
73	Initial	1:54 PM	3	0	2250	0	12600	61.67	115.13	24.28	45.33
	Final	1:57 PM	219	2250		12600					
74	Initial	1:57 PM	3	0	2250	0	12500	61.67	114.21	24.28	44.97
	Final	2:00 PM	222	2250		12500					
75	Initial	2:00 PM	3	0	2300	0	12300	63.05	112.38	24.82	44.25
	Final	2:03 PM	225	2300		12300					
76	Initial	2:03 PM	3	0	2400	0	12200	65.79	111.47	25.90	43.89
	Final	2:06 PM	228	2400		12200					
77	Initial	2:06 PM	3	0	2300	0	12400	63.05	113.30	24.82	44.61
	Final	2:09 PM	231	2300		12400					
78	Initial	2:09 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	2:12 PM	234	2250		12300					
79	Initial	2:12 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	2:15 PM	237	2250		12300					
80	Initial	2:15 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	2:18 PM	240	2250		12000					
81	Initial	2:18 PM	3	0	2250	0	12200	61.67	111.47	24.28	43.89
	Final	2:21 PM	243	2250		12200					
82	Initial	2:21 PM	3	0	2300	0	12100	63.05	110.56	24.82	43.53
	Final	2:24 PM	246	2300		12100					
83	Initial	2:24 PM	3	0	2400	0	12000	65.79	109.64	25.90	43.17
	Final	2:27 PM	249	2400		12000					
84	Initial	2:27 PM	3	0	2300	0	11800	63.05	107.82	24.82	42.45
	Final	2:30 PM	252	2300		11800					
85	Initial	2:30 PM	3	0	2250	0	12400	61.67	113.30	24.28	44.61
	Final	2:33 PM	255	2250		12400					
86	Initial	2:33 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	2:36 PM	258	2250		12300					
87	Initial	2:36 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	2:39 PM	261	2250		12300					
88	Initial	2:39 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	2:42 PM	264	2250		12000					
89	Initial	2:42 PM	3	0	2300	0	12200	63.05	111.47	24.82	43.89
	Final	2:45 PM	267	2300		12200					
90	Initial	2:45 PM	3	0	2400	0	12100	65.79	110.56	25.90	43.53
	Final	2:48 PM	270	2400		12100					
91	Initial	2:48 PM	3	0	2300	0	12000	63.05	109.64	24.82	43.17
	Final	2:51 PM	273	2300		12000					
92	Initial	2:51 PM	3	0	2250	0	11800	61.67	107.82	24.28	42.45
	Final	2:54 PM	276	2250		11800					
93	Initial	2:54 PM	3	0	2250	0	12400	61.67	113.30	24.28	44.61
	Final	2:57 PM	279	2250		12400					
94	Initial	2:57 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	3:00 PM	282	2250		12300					
95	Initial	3:00 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	3:03 PM	285	2250		12300					

96	Initial	3:03 PM	3	0	2300	0	12000	63.05	109.64	24.82	43.17
	Final	3:06 PM	288	2300		12000					
97	Initial	3:06 PM	3	0	2250	0	12200	61.67	111.47	24.28	43.89
	Final	3:09 PM	291	2250		12200					
98	Initial	3:09 PM	3	0	2250	0	12100	61.67	110.56	24.28	43.53
	Final	3:12 PM	294	2250		12100					
99	Initial	3:12 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	3:15 PM	297	2250		12000					
100	Initial	3:15 PM	3	0	2300	0	11800	63.05	107.82	24.82	42.45
	Final	3:18 PM	300	2300		11800					
101	Initial	3:18 PM	3	0	2250	0	12400	61.67	113.30	24.28	44.61
	Final	3:21 PM	303	2250		12400					
102	Initial	3:21 PM	3	0	2300	0	12300	63.05	112.38	24.82	44.25
	Final	3:24 PM	306	2300		12300					
103	Initial	3:24 PM	3	0	2300	0	12300	63.05	112.38	24.82	44.25
	Final	3:27 PM	309	2300		12300					
104	Initial	3:27 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	3:30 PM	312	2250		12000					
105	Initial	3:30 PM	3	0	2300	0	12200	63.05	111.47	24.82	43.89
	Final	3:33 PM	315	2300		12200					
106	Initial	3:33 PM	3	0	2300	0	12100	63.05	110.56	24.82	43.53
	Final	3:36 PM	318	2300		12100					
107	Initial	3:36 PM	3	0	2300	0	12000	63.05	109.64	24.82	43.17
	Final	3:39 PM	321	2300		12000					
108	Initial	3:39 PM	3	0	2300	0	11800	63.05	107.82	24.82	42.45
	Final	3:42 PM	324	2300		11800					
109	Initial	3:42 PM	3	0	2300	0	12400	63.05	113.30	24.82	44.61
	Final	3:45 PM	327	2300		12400					
110	Initial	3:45 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	3:48 PM	330	2250		12000					
111	Initial	3:48 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	3:51 PM	333	2250		12000					
112	Initial	3:51 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	3:54 PM	336	2250		12000					
113	Initial	3:54 PM	3	0	2300	0	12000	63.05	109.64	24.82	43.17
	Final	3:57 PM	339	2300		12000					
114	Initial	3:57 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:00 PM	342	2250		12000					
115	Initial	4:00 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:03 PM	345	2250		12000					
116	Initial	4:03 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:06 PM	348	2250		12000					
117	Initial	4:06 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:09 PM	351	2250		12000					
118	Initial	4:09 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:12 PM	354	2250		12000					
119	Initial	4:12 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:15 PM	357	2250		12000					
120	Initial	4:15 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:18 PM	360	2250		12000					
121	Initial	4:18 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	4:21 PM	363	2250		12000					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-17**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	8:30 AM	3	0	4800	0	14800	131.57	135.23	51.80	53.24
	Final	8:33 AM	3	4800	4800	14800	14800				
2	Initial	8:33 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	8:36 AM	6	4750	4750	14500	14500				
3	Initial	8:36 AM	3	0	4500	0	14900	123.35	136.14	48.56	53.60
	Final	8:39 AM	9	4500	4500	14900	14900				
4	Initial	8:39 AM	3	0	4650	0	14800	127.46	135.23	50.18	53.24
	Final	8:42 AM	12	4650	4650	14800	14800				
5	Initial	8:42 AM	3	0	4400	0	14500	120.61	132.49	47.48	52.16
	Final	8:45 AM	15	4400	4400	14500	14500				
6	Initial	8:45 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	8:48 AM	18	4500	4500	14500	14500				
7	Initial	8:48 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	8:51 AM	21	4750	4750	14500	14500				
8	Initial	8:51 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	8:54 AM	24	4500	4500	14500	14500				
9	Initial	8:54 AM	3	0	4600	0	14500	126.09	132.49	49.64	52.16
	Final	8:57 AM	27	4600	4600	14500	14500				
10	Initial	8:57 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:00 AM	30	4650	4650	14500	14500				
11	Initial	9:00 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:03 AM	33	4500	4500	14500	14500				
12	Initial	9:03 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:06 AM	36	4750	4750	14500	14500				
13	Initial	9:06 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:09 AM	39	4500	4500	14500	14500				
14	Initial	9:09 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:12 AM	42	4650	4650	14500	14500				
15	Initial	9:12 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:15 AM	45	4650	4650	14500	14500				
16	Initial	9:15 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:18 AM	48	4500	4500	14500	14500				
17	Initial	9:18 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:21 AM	51	4750	4750	14500	14500				

18	Initial	9:21 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:24 AM	54	4500		14500					
19	Initial	9:24 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:27 AM	57	4650		14500					
20	Initial	9:27 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:30 AM	60	4650		14500					
21	Initial	9:30 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:33 AM	63	4500		14500					
22	Initial	9:33 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:36 AM	66	4750		14500					
23	Initial	9:36 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:39 AM	69	4500		14500					
24	Initial	9:39 AM	3	0	4200	0	14500	115.13	132.49	45.33	52.16
	Final	9:42 AM	72	4200		14500					
25	Initial	9:42 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	9:45 AM	75	4100		14500					
26	Initial	9:45 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	9:48 AM	78	4000		14500					
27	Initial	9:48 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	9:51 AM	81	4100		14500					
28	Initial	9:51 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	9:54 AM	84	4000		14500					
29	Initial	9:54 AM	3	0	4150	0	14100	113.76	128.83	44.79	50.72
	Final	9:57 AM	87	4150		14100					
30	Initial	9:57 AM	3	0	3900	0	14100	106.90	128.83	42.09	50.72
	Final	10:00 AM	90	3900		14100					
31	Initial	10:00 AM	3	0	3900	0	14000	106.90	127.92	42.09	50.36
	Final	10:03 AM	93	3900		14000					
32	Initial	10:03 AM	3	0	3850	0	14100	105.53	128.83	41.55	50.72
	Final	10:06 AM	96	3850		14100					
33	Initial	10:06 AM	3	0	3750	0	13900	102.79	127.00	40.47	50.00
	Final	10:09 AM	99	3750		13900					
34	Initial	10:09 AM	3	0	3700	0	13800	101.42	126.09	39.93	49.64
	Final	10:12 AM	102	3700		13800					
35	Initial	10:12 AM	3	0	3600	0	13850	98.68	126.55	38.85	49.82
	Final	10:15 AM	105	3600		13850					
36	Initial	10:15 AM	3	0	3550	0	13700	97.31	125.18	38.31	49.28
	Final	10:18 AM	108	3550		13700					
37	Initial	10:18 AM	3	0	3550	0	13500	97.31	123.35	38.31	48.56
	Final	10:21 AM	111	3550		13500					
38	Initial	10:21 AM	3	0	3600	0	13650	98.68	124.72	38.85	49.10
	Final	10:24 AM	114	3600		13650					
39	Initial	10:24 AM	3	0	3400	0	13700	93.20	125.18	36.69	49.28
	Final	10:27 AM	117	3400		13700					
40	Initial	10:27 AM	3	0	3300	0	13600	90.46	124.26	35.61	48.92
	Final	10:30 AM	120	3300		13600					
41	Initial	10:30 AM	3	0	3000	0	13500	82.23	123.35	32.38	48.56
	Final	10:33 AM	123	3000		13500					
42	Initial	10:33 AM	3	0	3100	0	13550	84.97	123.81	33.45	48.74
	Final	10:36 AM	126	3100		13550					
43	Initial	10:36 AM	3	0	3050	0	13400	83.60	122.44	32.91	48.20
	Final	10:39 AM	129	3050		13400					

44	Initial	10:39 AM	3	0	3050	0	13300	83.60	121.52	32.91	47.84
	Final	10:42 AM	132	3050		13300					
45	Initial	10:42 AM	3	0	3000	0	13300	82.23	121.52	32.38	47.84
	Final	10:45 AM	135	3000		13300					
46	Initial	10:45 AM	3	0	2900	0	13400	79.49	122.44	31.30	48.20
	Final	10:48 AM	138	2900		13400					
47	Initial	10:48 AM	3	0	2950	0	13400	80.86	122.44	31.84	48.20
	Final	10:51 AM	141	2950		13400					
48	Initial	10:51 AM	3	0	2800	0	13500	76.75	123.35	30.22	48.56
	Final	10:54 AM	144	2800		13500					
49	Initial	10:54 AM	3	0	2750	0	13300	75.38	121.52	29.68	47.84
	Final	10:57 AM	147	2750		13300					
50	Initial	10:57 AM	3	0	2600	0	13400	71.27	122.44	28.06	48.20
	Final	11:00 AM	150	2600		13400					
51	Initial	11:00 AM	3	0	2500	0	13300	68.53	121.52	26.98	47.84
	Final	11:03 AM	153	2500		13300					
52	Initial	11:03 AM	3	0	2400	0	13400	65.79	122.44	25.90	48.20
	Final	11:06 AM	156	2400		13400					
53	Initial	11:06 AM	3	0	2300	0	13500	63.05	123.35	24.82	48.56
	Final	11:09 AM	159	2300		13500					
54	Initial	11:09 AM	3	0	2350	0	13400	64.42	122.44	25.36	48.20
	Final	11:12 AM	162	2350		13400					
55	Initial	11:12 AM	3	0	2250	0	13300	61.67	121.52	24.28	47.84
	Final	11:15 AM	165	2250		13300					
56	Initial	11:15 AM	3	0	2200	0	13300	60.30	121.52	23.74	47.84
	Final	11:18 AM	168	2200		13300					
57	Initial	11:18 AM	3	0	2100	0	13100	57.56	119.69	22.66	47.12
	Final	11:21 AM	171	2100		13100					
58	Initial	11:21 AM	3	0	2150	0	13000	58.93	118.78	23.20	46.76
	Final	11:24 AM	174	2150		13000					
59	Initial	11:24 AM	3	0	2200	0	13100	60.30	119.69	23.74	47.12
	Final	11:27 AM	177	2200		13100					
60	Initial	11:27 AM	3	0	2100	0	13200	57.56	120.61	22.66	47.48
	Final	11:30 AM	180	2100		13200					
61	Initial	11:30 AM	3	0	2150	0	13100	58.93	119.69	23.20	47.12
	Final	11:33 AM	183	2150		13100					
62	Initial	11:33 AM	3	0	2000	0	12900	54.82	117.87	21.58	46.40
	Final	11:36 AM	186	2000		12900					
63	Initial	11:36 AM	3	0	2150	0	13100	58.93	119.69	23.20	47.12
	Final	11:39 AM	189	2150		13100					
64	Initial	11:39 AM	3	0	2200	0	13000	60.30	118.78	23.74	46.76
	Final	11:42 AM	192	2200		13000					
65	Initial	11:42 AM	3	0	2100	0	12900	57.56	117.87	22.66	46.40
	Final	11:45 AM	195	2100		12900					
66	Initial	11:45 AM	3	0	2050	0	13000	56.19	118.78	22.12	46.76
	Final	11:48 AM	198	2050		13000					
67	Initial	11:48 AM	3	0	2000	0	13700	54.82	125.18	21.58	49.28
	Final	11:51 AM	201	2000		13700					
68	Initial	11:51 AM	3	0	2100	0	12900	57.56	117.87	22.66	46.40
	Final	11:54 AM	204	2100		12900					
69	Initial	11:54 AM	3	0	2100	0	12800	57.56	116.95	22.66	46.04
	Final	11:57 AM	207	2100		12800					

70	Initial	11:57 AM	3	0	2100	0	12700	12700	57.56	116.04	22.66	45.68
	Final	12:00 PM	210	2100		12700						
71	Initial	12:00 PM	3	0	2100	0	12500	12500	57.56	114.21	22.66	44.97
	Final	12:03 PM	213	2100		12500						
72	Initial	12:03 PM	3	0	2000	0	12600	12600	54.82	115.13	21.58	45.33
	Final	12:06 PM	216	2000		12600						
73	Initial	12:06 PM	3	0	2100	0	12600	12600	57.56	115.13	22.66	45.33
	Final	12:09 PM	219	2100		12600						
74	Initial	12:09 PM	3	0	2200	0	12500	12500	60.30	114.21	23.74	44.97
	Final	12:12 PM	222	2200		12500						
75	Initial	12:12 PM	3	0	2100	0	12300	12300	57.56	112.38	22.66	44.25
	Final	12:15 PM	225	2100		12300						
76	Initial	12:15 PM	3	0	2050	0	12200	12200	56.19	111.47	22.12	43.89
	Final	12:18 PM	228	2050		12200						
77	Initial	12:18 PM	3	0	2100	0	12400	12400	57.56	113.30	22.66	44.61
	Final	12:21 PM	231	2100		12400						
78	Initial	12:21 PM	3	0	2150	0	12300	12300	58.93	112.38	23.20	44.25
	Final	12:24 PM	234	2150		12300						
79	Initial	12:24 PM	3	0	2250	0	12300	12300	61.67	112.38	24.28	44.25
	Final	12:27 PM	237	2250		12300						
80	Initial	12:27 PM	3	0	2100	0	12000	12000	57.56	109.64	22.66	43.17
	Final	12:30 PM	240	2100		12000						
81	Initial	12:30 PM	3	0	2150	0	12200	12200	58.93	111.47	23.20	43.89
	Final	12:33 PM	243	2150		12200						
82	Initial	12:33 PM	3	0	2000	0	12100	12100	54.82	110.56	21.58	43.53
	Final	12:36 PM	246	2000		12100						
83	Initial	12:36 PM	3	0	2050	0	12000	12000	56.19	109.64	22.12	43.17
	Final	12:39 PM	249	2050		12000						
84	Initial	12:39 PM	3	0	2100	0	11800	11800	57.56	107.82	22.66	42.45
	Final	12:42 PM	252	2100		11800						
85	Initial	12:42 PM	3	0	2050	0	11600	11600	56.19	105.99	22.12	41.73
	Final	12:45 PM	255	2050		11600						
86	Initial	12:45 PM	3	0	2100	0	11400	11400	57.56	104.16	22.66	41.01
	Final	12:48 PM	258	2100		11400						
87	Initial	12:48 PM	3	0	2150	0	11250	11250	58.93	102.79	23.20	40.47
	Final	12:51 PM	261	2150		11250						
88	Initial	12:51 PM	3	0	2250	0	11300	11300	61.67	103.25	24.28	40.65
	Final	12:54 PM	264	2250		11300						
89	Initial	12:54 PM	3	0	2100	0	11200	11200	57.56	102.33	22.66	40.29
	Final	12:57 PM	267	2100		11200						
90	Initial	12:57 PM	3	0	2150	0	11200	11200	58.93	102.33	23.20	40.29
	Final	1:00 PM	270	2150		11200						
91	Initial	1:00 PM	3	0	2050	0	11200	11200	56.19	102.33	22.12	40.29
	Final	1:03 PM	273	2050		11200						
92	Initial	1:03 PM	3	0	2050	0	11200	11200	56.19	102.33	22.12	40.29
	Final	1:06 PM	276	2050		11200						
93	Initial	1:06 PM	3	0	2100	0	11200	11200	57.56	102.33	22.66	40.29
	Final	1:09 PM	279	2100		11200						
94	Initial	1:09 PM	3	0	2050	0	11200	11200	56.19	102.33	22.12	40.29
	Final	1:12 PM	282	2050		11200						
95	Initial	1:12 PM	3	0	2100	0	11200	11200	57.56	102.33	22.66	40.29
	Final	1:15 PM	285	2100		11200						

96	Initial	1:15 PM	3	0	2150	0	11200	58.93	102.33	23.20	40.29
	Final	1:18 PM	288	2150		11200					
97	Initial	1:18 PM	3	0	2250	0	11200	61.67	102.33	24.28	40.29
	Final	1:21 PM	291	2250		11200					
98	Initial	1:21 PM	3	0	2100	0	11200	57.56	102.33	22.66	40.29
	Final	1:24 PM	294	2100		11200					
99	Initial	1:24 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	1:27 PM	297	1950		11200					
100	Initial	1:27 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:30 PM	300	1900		11200					
101	Initial	1:30 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:33 PM	303	1900		11200					
102	Initial	1:33 PM	3	0	2000	0	11200	54.82	102.33	21.58	40.29
	Final	1:36 PM	306	2000		11200					
103	Initial	1:36 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	1:39 PM	309	1950		11200					
104	Initial	1:39 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:42 PM	312	1900		11200					
105	Initial	1:42 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	1:45 PM	315	1875		11200					
106	Initial	1:45 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	1:48 PM	318	1950		11200					
107	Initial	1:48 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:51 PM	321	1900		11200					
108	Initial	1:51 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	1:54 PM	324	1950		11200					
109	Initial	1:54 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	1:57 PM	327	1900		11200					
110	Initial	1:57 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:00 PM	330	1875		11200					
111	Initial	2:00 PM	3	0	1950	0	11200	53.45	102.33	21.04	40.29
	Final	2:03 PM	333	1950		11200					
112	Initial	2:03 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:06 PM	336	1900		11200					
113	Initial	2:06 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:09 PM	339	1900		11200					
114	Initial	2:09 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:12 PM	342	1875		11200					
115	Initial	2:12 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:15 PM	345	1875		11200					
116	Initial	2:15 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:18 PM	348	1875		11200					
117	Initial	2:18 PM	3	0	1900	0	11200	52.08	102.33	20.50	40.29
	Final	2:21 PM	351	1900		11200					
118	Initial	2:21 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:24 PM	354	1875		11200					
119	Initial	2:24 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:27 PM	357	1875		11200					
120	Initial	2:27 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:30 PM	360	1875		11200					
121	Initial	2:30 PM	3	0	1875	0	11200	51.40	102.33	20.23	40.29
	Final	2:33 PM	363	1875		11200					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-18**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	9:15 AM	3	0	4400	0	14000	120.61	127.92	47.48	50.36
	Final	9:18 AM	3	4400	4400	14000	14000				
2	Initial	9:18 AM	3	0	4300	0	14300	117.87	130.66	46.40	51.44
	Final	9:21 AM	6	4300	4300	14300	14300				
3	Initial	9:21 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:24 AM	9	4500	4500	14500	14500				
4	Initial	9:24 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:27 AM	12	4650	4650	14500	14500				
5	Initial	9:27 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:30 AM	15	4650	4650	14500	14500				
6	Initial	9:30 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:33 AM	18	4500	4500	14500	14500				
7	Initial	9:33 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:36 AM	21	4750	4750	14500	14500				
8	Initial	9:36 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:39 AM	24	4500	4500	14500	14500				
9	Initial	9:39 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:42 AM	27	4650	4650	14500	14500				
10	Initial	9:42 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:45 AM	30	4650	4650	14500	14500				
11	Initial	9:45 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:48 AM	33	4500	4500	14500	14500				
12	Initial	9:48 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	9:51 AM	36	4750	4750	14500	14500				
13	Initial	9:51 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	9:54 AM	39	4500	4500	14500	14500				
14	Initial	9:54 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	9:57 AM	42	4650	4650	14500	14500				
15	Initial	9:57 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:00 AM	45	4650	4650	14500	14500				
16	Initial	10:00 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:03 AM	48	4500	4500	14500	14500				
17	Initial	10:03 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	10:06 AM	51	4750	4750	14500	14500				

18	Initial	10:06 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:09 AM	54	4500		14500					
19	Initial	10:09 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:12 AM	57	4650		14500					
20	Initial	10:12 AM	3	0	4650	0	14500	127.46	132.49	50.18	52.16
	Final	10:15 AM	60	4650		14500					
21	Initial	10:15 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:18 AM	63	4500		14500					
22	Initial	10:18 AM	3	0	4750	0	14500	130.20	132.49	51.26	52.16
	Final	10:21 AM	66	4750		14500					
23	Initial	10:21 AM	3	0	4500	0	14500	123.35	132.49	48.56	52.16
	Final	10:24 AM	69	4500		14500					
24	Initial	10:24 AM	3	0	4200	0	14500	115.13	132.49	45.33	52.16
	Final	10:27 AM	72	4200		14500					
25	Initial	10:27 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	10:30 AM	75	4100		14500					
26	Initial	10:30 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	10:33 AM	78	4000		14500					
27	Initial	10:33 AM	3	0	4100	0	14500	112.38	132.49	44.25	52.16
	Final	10:36 AM	81	4100		14500					
28	Initial	10:36 AM	3	0	4000	0	14500	109.64	132.49	43.17	52.16
	Final	10:39 AM	84	4000		14500					
29	Initial	10:39 AM	3	0	4150	0	14100	113.76	128.83	44.79	50.72
	Final	10:42 AM	87	4150		14100					
30	Initial	10:42 AM	3	0	3900	0	14100	106.90	128.83	42.09	50.72
	Final	10:45 AM	90	3900		14100					
31	Initial	10:45 AM	3	0	3900	0	14000	106.90	127.92	42.09	50.36
	Final	10:48 AM	93	3900		14000					
32	Initial	10:48 AM	3	0	3850	0	14100	105.53	128.83	41.55	50.72
	Final	10:51 AM	96	3850		14100					
33	Initial	10:51 AM	3	0	3750	0	13900	102.79	127.00	40.47	50.00
	Final	10:54 AM	99	3750		13900					
34	Initial	10:54 AM	3	0	3700	0	13800	101.42	126.09	39.93	49.64
	Final	10:57 AM	102	3700		13800					
35	Initial	10:57 AM	3	0	3600	0	13850	98.68	126.55	38.85	49.82
	Final	11:00 AM	105	3600		13850					
36	Initial	11:00 AM	3	0	3550	0	13700	97.31	125.18	38.31	49.28
	Final	11:03 AM	108	3550		13700					
37	Initial	11:03 AM	3	0	3550	0	13500	97.31	123.35	38.31	48.56
	Final	11:06 AM	111	3550		13500					
38	Initial	11:06 AM	3	0	3600	0	13650	98.68	124.72	38.85	49.10
	Final	11:09 AM	114	3600		13650					
39	Initial	11:09 AM	3	0	3400	0	13700	93.20	125.18	36.69	49.28
	Final	11:12 AM	117	3400		13700					
40	Initial	11:12 AM	3	0	3300	0	13600	90.46	124.26	35.61	48.92
	Final	11:15 AM	120	3300		13600					
41	Initial	11:15 AM	3	0	3000	0	13500	82.23	123.35	32.38	48.56
	Final	11:18 AM	123	3000		13500					
42	Initial	11:18 AM	3	0	3100	0	13550	84.97	123.81	33.45	48.74
	Final	11:21 AM	126	3100		13550					
43	Initial	11:21 AM	3	0	3050	0	13400	83.60	122.44	32.91	48.20
	Final	11:24 AM	129	3050		13400					

44	Initial	11:24 AM	3	0	3050	0	13300	83.60	121.52	32.91	47.84
	Final	11:27 AM	132	3050		13300					
45	Initial	11:27 AM	3	0	3000	0	13300	82.23	121.52	32.38	47.84
	Final	11:30 AM	135	3000		13300					
46	Initial	11:30 AM	3	0	2900	0	13400	79.49	122.44	31.30	48.20
	Final	11:33 AM	138	2900		13400					
47	Initial	11:33 AM	3	0	2950	0	13400	80.86	122.44	31.84	48.20
	Final	11:36 AM	141	2950		13400					
48	Initial	11:36 AM	3	0	2800	0	13500	76.75	123.35	30.22	48.56
	Final	11:39 AM	144	2800		13500					
49	Initial	11:39 AM	3	0	2750	0	13300	75.38	121.52	29.68	47.84
	Final	11:42 AM	147	2750		13300					
50	Initial	11:42 AM	3	0	2600	0	13400	71.27	122.44	28.06	48.20
	Final	11:45 AM	150	2600		13400					
51	Initial	11:45 AM	3	0	2500	0	13300	68.53	121.52	26.98	47.84
	Final	11:48 AM	153	2500		13300					
52	Initial	11:48 AM	3	0	2400	0	13400	65.79	122.44	25.90	48.20
	Final	11:51 AM	156	2400		13400					
53	Initial	11:51 AM	3	0	2300	0	13500	63.05	123.35	24.82	48.56
	Final	11:54 AM	159	2300		13500					
54	Initial	11:54 AM	3	0	2350	0	13400	64.42	122.44	25.36	48.20
	Final	11:57 AM	162	2350		13400					
55	Initial	11:57 AM	3	0	2250	0	13300	61.67	121.52	24.28	47.84
	Final	12:00 PM	165	2250		13300					
56	Initial	12:00 PM	3	0	2250	0	13300	61.67	121.52	24.28	47.84
	Final	12:03 PM	168	2250		13300					
57	Initial	12:03 PM	3	0	2150	0	13100	58.93	119.69	23.20	47.12
	Final	12:06 PM	171	2150		13100					
58	Initial	12:06 PM	3	0	2200	0	13000	60.30	118.78	23.74	46.76
	Final	12:09 PM	174	2200		13000					
59	Initial	12:09 PM	3	0	2250	0	13100	61.67	119.69	24.28	47.12
	Final	12:12 PM	177	2250		13100					
60	Initial	12:12 PM	3	0	2150	0	13200	58.93	120.61	23.20	47.48
	Final	12:15 PM	180	2150		13200					
61	Initial	12:15 PM	3	0	2200	0	13100	60.30	119.69	23.74	47.12
	Final	12:18 PM	183	2200		13100					
62	Initial	12:18 PM	3	0	2200	0	12900	60.30	117.87	23.74	46.40
	Final	12:21 PM	186	2200		12900					
63	Initial	12:21 PM	3	0	2200	0	13100	60.30	119.69	23.74	47.12
	Final	12:24 PM	189	2200		13100					
64	Initial	12:24 PM	3	0	2250	0	13000	61.67	118.78	24.28	46.76
	Final	12:27 PM	192	2250		13000					
65	Initial	12:27 PM	3	0	2150	0	12900	58.93	117.87	23.20	46.40
	Final	12:30 PM	195	2150		12900					
66	Initial	12:30 PM	3	0	2250	0	13000	61.67	118.78	24.28	46.76
	Final	12:33 PM	198	2250		13000					
67	Initial	12:33 PM	3	0	2150	0	12900	58.93	117.87	23.20	46.40
	Final	12:36 PM	201	2150		12900					
68	Initial	12:36 PM	3	0	2200	0	12900	60.30	117.87	23.74	46.40
	Final	12:39 PM	204	2200		12900					
69	Initial	12:39 PM	3	0	2250	0	12800	61.67	116.95	24.28	46.04
	Final	12:42 PM	207	2250		12800					

70	Initial	12:42 PM	3	0	2200	0	12700	60.30	116.04	23.74	45.68
	Final	12:45 PM	210	2200		12700					
71	Initial	12:45 PM	3	0	2250	0	12500	61.67	114.21	24.28	44.97
	Final	12:48 PM	213	2250		12500					
72	Initial	12:48 PM	3	0	2150	0	12600	58.93	115.13	23.20	45.33
	Final	12:51 PM	216	2150		12600					
73	Initial	12:51 PM	3	0	2250	0	12600	61.67	115.13	24.28	45.33
	Final	12:54 PM	219	2250		12600					
74	Initial	12:54 PM	3	0	2150	0	12500	58.93	114.21	23.20	44.97
	Final	12:57 PM	222	2150		12500					
75	Initial	12:57 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	1:00 PM	225	2200		12300					
76	Initial	1:00 PM	3	0	2200	0	12200	60.30	111.47	23.74	43.89
	Final	1:03 PM	228	2200		12200					
77	Initial	1:03 PM	3	0	2200	0	12400	60.30	113.30	23.74	44.61
	Final	1:06 PM	231	2200		12400					
78	Initial	1:06 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	1:09 PM	234	2250		12300					
79	Initial	1:09 PM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	1:12 PM	237	2150		12300					
80	Initial	1:12 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	1:15 PM	240	2250		12000					
81	Initial	1:15 PM	3	0	2150	0	12200	58.93	111.47	23.20	43.89
	Final	1:18 PM	243	2150		12200					
82	Initial	1:18 PM	3	0	2200	0	12100	60.30	110.56	23.74	43.53
	Final	1:21 PM	246	2200		12100					
83	Initial	1:21 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	1:24 PM	249	2200		12000					
84	Initial	1:24 PM	3	0	2200	0	11800	60.30	107.82	23.74	42.45
	Final	1:27 PM	252	2200		11800					
85	Initial	1:27 PM	3	0	2250	0	12400	61.67	113.30	24.28	44.61
	Final	1:30 PM	255	2250		12400					
86	Initial	1:30 PM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	1:33 PM	258	2150		12300					
87	Initial	1:33 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	1:36 PM	261	2250		12300					
88	Initial	1:36 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	1:39 PM	264	2150		12000					
89	Initial	1:39 PM	3	0	2200	0	12200	60.30	111.47	23.74	43.89
	Final	1:42 PM	267	2200		12200					
90	Initial	1:42 PM	3	0	2200	0	12100	60.30	110.56	23.74	43.53
	Final	1:45 PM	270	2200		12100					
91	Initial	1:45 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	1:48 PM	273	2200		12000					
92	Initial	1:48 PM	3	0	2250	0	11800	61.67	107.82	24.28	42.45
	Final	1:51 PM	276	2250		11800					
93	Initial	1:51 PM	3	0	2150	0	12400	58.93	113.30	23.20	44.61
	Final	1:54 PM	279	2150		12400					
94	Initial	1:54 PM	3	0	2250	0	12300	61.67	112.38	24.28	44.25
	Final	1:57 PM	282	2250		12300					
95	Initial	1:57 PM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	2:00 PM	285	2150		12300					

96	Initial	2:00 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:03 PM	288	2200		12000					
97	Initial	2:03 PM	3	0	2250	0	12200	61.67	111.47	24.28	43.89
	Final	2:06 PM	291	2250		12200					
98	Initial	2:06 PM	3	0	2250	0	12100	61.67	110.56	24.28	43.53
	Final	2:09 PM	294	2250		12100					
99	Initial	2:09 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	2:12 PM	297	2150		12000					
100	Initial	2:12 PM	3	0	2200	0	11800	60.30	107.82	23.74	42.45
	Final	2:15 PM	300	2200		11800					
101	Initial	2:15 PM	3	0	2250	0	12400	61.67	113.30	24.28	44.61
	Final	2:18 PM	303	2250		12400					
102	Initial	2:18 PM	3	0	2200	0	12300	60.30	112.38	23.74	44.25
	Final	2:21 PM	306	2200		12300					
103	Initial	2:21 PM	3	0	2150	0	12300	58.93	112.38	23.20	44.25
	Final	2:24 PM	309	2150		12300					
104	Initial	2:24 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	2:27 PM	312	2250		12000					
105	Initial	2:27 PM	3	0	2300	0	12200	63.05	111.47	24.82	43.89
	Final	2:30 PM	315	2300		12200					
106	Initial	2:30 PM	3	0	2150	0	12100	58.93	110.56	23.20	43.53
	Final	2:33 PM	318	2150		12100					
107	Initial	2:33 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:36 PM	321	2200		12000					
108	Initial	2:36 PM	3	0	2150	0	11800	58.93	107.82	23.20	42.45
	Final	2:39 PM	324	2150		11800					
109	Initial	2:39 PM	3	0	2150	0	12400	58.93	113.30	23.20	44.61
	Final	2:42 PM	327	2150		12400					
110	Initial	2:42 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	2:45 PM	330	2150		12000					
111	Initial	2:45 PM	3	0	2250	0	12000	61.67	109.64	24.28	43.17
	Final	2:48 PM	333	2250		12000					
112	Initial	2:48 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	2:51 PM	336	2150		12000					
113	Initial	2:51 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	2:54 PM	339	2200		12000					
114	Initial	2:54 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	2:57 PM	342	2150		12000					
115	Initial	2:57 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	3:00 PM	345	2150		12000					
116	Initial	3:00 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	3:03 PM	348	2150		12000					
117	Initial	3:03 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	3:06 PM	351	2150		12000					
118	Initial	3:06 PM	3	0	2200	0	12000	60.30	109.64	23.74	43.17
	Final	3:09 PM	354	2200		12000					
119	Initial	3:09 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	3:12 PM	357	2150		12000					
120	Initial	3:12 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	3:15 PM	360	2150		12000					
121	Initial	3:15 PM	3	0	2150	0	12000	58.93	109.64	23.20	43.17
	Final	3:18 PM	363	2150		12000					

INFILTRATION CALCULATIONS

Project Name	Proposed Warehouse
Project Location	Highland, CA
Project Number	21G193-3
Engineer	Sam Bergeland

Infiltration Test No **I-19**

Constants			
	Diameter (ft)	Area (ft ²)	Area (cm ²)
Inner	1	0.79	730
Anlr. Spac	2	2.36	2189

*Note: The infiltration rate was calculated based on current time interval

Test Interval		Time (hr)	Interval Elapsed (min)	Flow Readings				Infiltration Rates			
				Inner Ring (ml)	Ring Flow (cm ³)	Annular Ring (ml)	Space Flow (cm ³)	Inner Ring* (cm/hr)	Annular Space* (cm/hr)	Inner Ring* (in/hr)	Annular Space* (in/hr)
1	Initial	8:00 AM	3			0					
	Final	8:03 AM	3	4450	4450	14000	14000	121.98	127.92	48.02	50.36
2	Initial	8:03 AM	3		4350	0					
	Final	8:06 AM	6	4350	4350	14300	14300	119.24	130.66	46.94	51.44
3	Initial	8:06 AM	3		4550	0					
	Final	8:09 AM	9	4550	4550	14500	14500	124.72	132.49	49.10	52.16
4	Initial	8:09 AM	3		4700	0					
	Final	8:12 AM	12	4700	4700	14500	14500	128.83	132.49	50.72	52.16
5	Initial	8:12 AM	3		4700	0					
	Final	8:15 AM	15	4700	4700	14500	14500	128.83	132.49	50.72	52.16
6	Initial	8:15 AM	3		4550	0					
	Final	8:18 AM	18	4550	4550	14500	14500	124.72	132.49	49.10	52.16
7	Initial	8:18 AM	3		4800	0					
	Final	8:21 AM	21	4800	4800	14500	14500	131.57	132.49	51.80	52.16
8	Initial	8:21 AM	3		4550	0					
	Final	8:24 AM	24	4550	4550	14500	14500	124.72	132.49	49.10	52.16
9	Initial	8:24 AM	3		4700	0					
	Final	8:27 AM	27	4700	4700	14500	14500	128.83	132.49	50.72	52.16
10	Initial	8:27 AM	3		4700	0					
	Final	8:30 AM	30	4700	4700	14500	14500	128.83	132.49	50.72	52.16
11	Initial	8:30 AM	3		4550	0					
	Final	8:33 AM	33	4550	4550	14500	14500	124.72	132.49	49.10	52.16
12	Initial	8:33 AM	3		4800	0					
	Final	8:36 AM	36	4800	4800	14500	14500	131.57	132.49	51.80	52.16
13	Initial	8:36 AM	3		4550	0					
	Final	8:39 AM	39	4550	4550	14500	14500	124.72	132.49	49.10	52.16
14	Initial	8:39 AM	3		4700	0					
	Final	8:42 AM	42	4700	4700	14500	14500	128.83	132.49	50.72	52.16
15	Initial	8:42 AM	3		4700	0					
	Final	8:45 AM	45	4700	4700	14500	14500	128.83	132.49	50.72	52.16
16	Initial	8:45 AM	3		4550	0					
	Final	8:48 AM	48	4550	4550	14500	14500	124.72	132.49	49.10	52.16
17	Initial	8:48 AM	3		4800	0					
	Final	8:51 AM	51	4800	4800	14500	14500	131.57	132.49	51.80	52.16

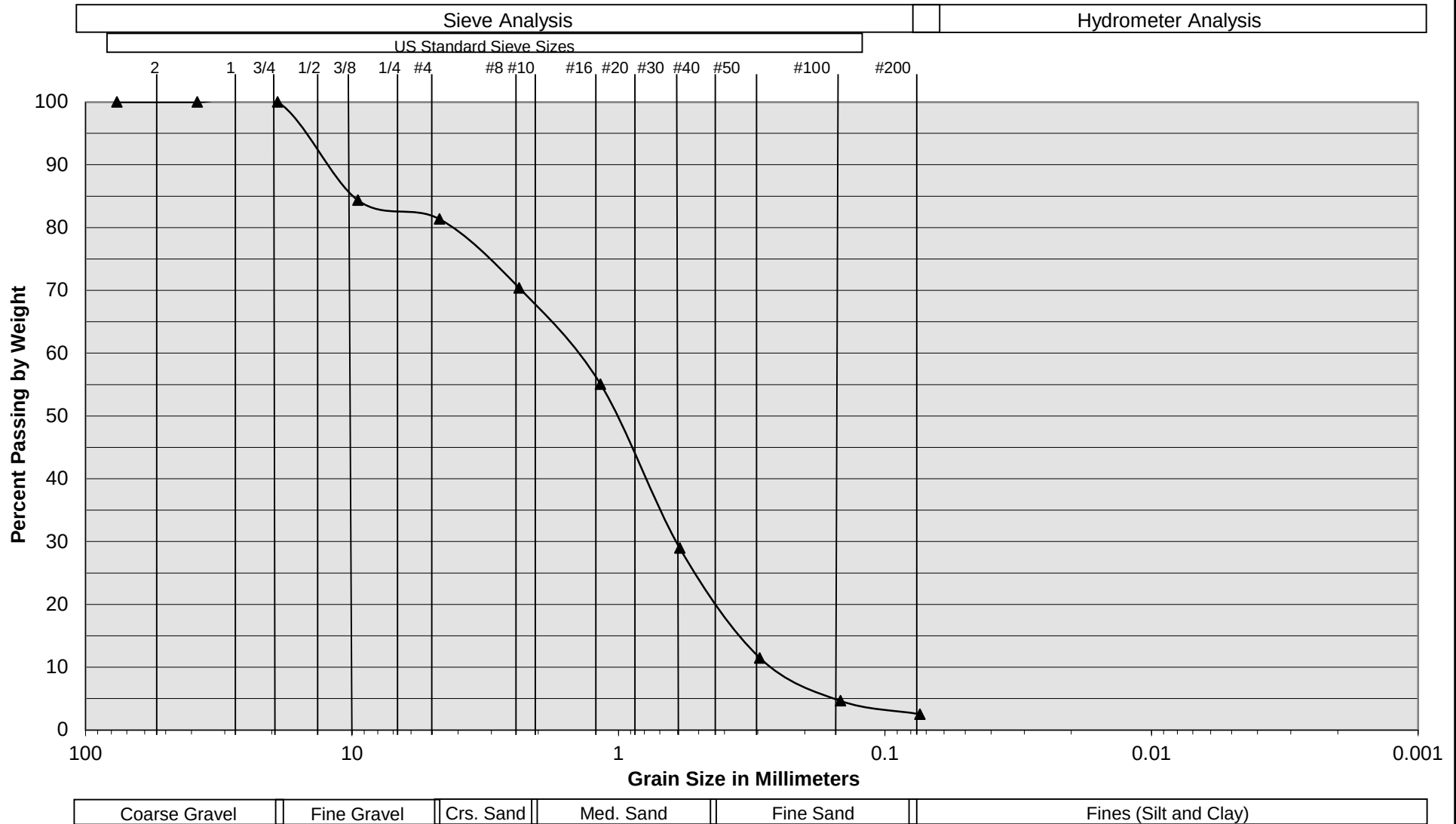
18	Initial	8:51 AM	3			0	14500	124.72	132.49	49.10	52.16
	Final	8:54 AM	54	4550	4550	14500					
19	Initial	8:54 AM	3			0	14500	128.83	132.49	50.72	52.16
	Final	8:57 AM	57	4700	4700	14500					
20	Initial	8:57 AM	3			0	14500	128.83	132.49	50.72	52.16
	Final	9:00 AM	60	4700	4700	14500					
21	Initial	9:00 AM	3			0	14500	124.72	132.49	49.10	52.16
	Final	9:03 AM	63	4550	4550	14500					
22	Initial	9:03 AM	3			0	14500	131.57	132.49	51.80	52.16
	Final	9:06 AM	66	4800	4800	14500					
23	Initial	9:06 AM	3			0	14500	124.72	132.49	49.10	52.16
	Final	9:09 AM	69	4550	4550	14500					
24	Initial	9:09 AM	3			0	14500	116.50	132.49	45.86	52.16
	Final	9:12 AM	72	4250	4250	14500					
25	Initial	9:12 AM	3			0	14500	113.76	132.49	44.79	52.16
	Final	9:15 AM	75	4150	4150	14500					
26	Initial	9:15 AM	3			0	14500	111.01	132.49	43.71	52.16
	Final	9:18 AM	78	4050	4050	14500					
27	Initial	9:18 AM	3			0	14500	113.76	132.49	44.79	52.16
	Final	9:21 AM	81	4150	4150	14500					
28	Initial	9:21 AM	3			0	14500	111.01	132.49	43.71	52.16
	Final	9:24 AM	84	4050	4050	14500					
29	Initial	9:24 AM	3			0	14100	115.13	128.83	45.33	50.72
	Final	9:27 AM	87	4200	4200	14100					
30	Initial	9:27 AM	3			0	14100	108.27	128.83	42.63	50.72
	Final	9:30 AM	90	3950	3950	14100					
31	Initial	9:30 AM	3			0	14000	108.27	127.92	42.63	50.36
	Final	9:33 AM	93	3950	3950	14000					
32	Initial	9:33 AM	3			0	14100	106.90	128.83	42.09	50.72
	Final	9:36 AM	96	3900	3900	14100					
33	Initial	9:36 AM	3			0	13900	104.16	127.00	41.01	50.00
	Final	9:39 AM	99	3800	3800	13900					
34	Initial	9:39 AM	3			0	13800	102.79	126.09	40.47	49.64
	Final	9:42 AM	102	3750	3750	13800					
35	Initial	9:42 AM	3			0	13850	100.05	126.55	39.39	49.82
	Final	9:45 AM	105	3650	3650	13850					
36	Initial	9:45 AM	3			0	13700	98.68	125.18	38.85	49.28
	Final	9:48 AM	108	3600	3600	13700					
37	Initial	9:48 AM	3			0	13500	98.68	123.35	38.85	48.56
	Final	9:51 AM	111	3600	3600	13500					
38	Initial	9:51 AM	3			0	13650	100.05	124.72	39.39	49.10
	Final	9:54 AM	114	3650	3650	13650					
39	Initial	9:54 AM	3			0	13700	94.57	125.18	37.23	49.28
	Final	9:57 AM	117	3450	3450	13700					
40	Initial	9:57 AM	3			0	13600	91.83	124.26	36.15	48.92
	Final	10:00 AM	120	3350	3350	13600					
41	Initial	10:00 AM	3			0	13500	83.60	123.35	32.91	48.56
	Final	10:03 AM	123	3050	3050	13500					
42	Initial	10:03 AM	3			0	13550	86.34	123.81	33.99	48.74
	Final	10:06 AM	126	3150	3150	13550					
43	Initial	10:06 AM	3			0	13400	84.97	122.44	33.45	48.20
	Final	10:09 AM	129	3100	3100	13400					

44	Initial	10:09 AM	3			0	13300	84.97	121.52	33.45	47.84
	Final	10:12 AM	132	3100	3100	13300					
45	Initial	10:12 AM	3			0	13300	83.60	121.52	32.91	47.84
	Final	10:15 AM	135	3050	3050	13300					
46	Initial	10:15 AM	3			0	13400	80.86	122.44	31.84	48.20
	Final	10:18 AM	138	2950	2950	13400					
47	Initial	10:18 AM	3			0	13400	82.23	122.44	32.38	48.20
	Final	10:21 AM	141	3000	3000	13400					
48	Initial	10:21 AM	3			0	13500	78.12	123.35	30.76	48.56
	Final	10:24 AM	144	2850	2850	13500					
49	Initial	10:24 AM	3			0	13300	76.75	121.52	30.22	47.84
	Final	10:27 AM	147	2800	2800	13300					
50	Initial	10:27 AM	3			0	13400	72.64	122.44	28.60	48.20
	Final	10:30 AM	150	2650	2650	13400					
51	Initial	10:30 AM	3			0	13300	69.90	121.52	27.52	47.84
	Final	10:33 AM	153	2550	2550	13300					
52	Initial	10:33 AM	3			0	13400	67.16	122.44	26.44	48.20
	Final	10:36 AM	156	2450	2450	13400					
53	Initial	10:36 AM	3			0	13500	64.42	123.35	25.36	48.56
	Final	10:39 AM	159	2350	2350	13500					
54	Initial	10:39 AM	3			0	13400	65.79	122.44	25.90	48.20
	Final	10:42 AM	162	2400	2400	13400					
55	Initial	10:42 AM	3			0	13300	63.05	121.52	24.82	47.84
	Final	10:45 AM	165	2300	2300	13300					
56	Initial	10:45 AM	3			0	13300	61.67	121.52	24.28	47.84
	Final	10:48 AM	168	2250	2250	13300					
57	Initial	10:48 AM	3			0	13100	58.93	119.69	23.20	47.12
	Final	10:51 AM	171	2150	2150	13100					
58	Initial	10:51 AM	3			0	13000	60.30	118.78	23.74	46.76
	Final	10:54 AM	174	2200	2200	13000					
59	Initial	10:54 AM	3			0	13100	61.67	119.69	24.28	47.12
	Final	10:57 AM	177	2250	2250	13100					
60	Initial	10:57 AM	3			0	13200	58.93	120.61	23.20	47.48
	Final	11:00 AM	180	2150	2150	13200					
61	Initial	11:00 AM	3			0	13100	60.30	119.69	23.74	47.12
	Final	11:03 AM	183	2200	2200	13100					
62	Initial	11:03 AM	3			0	12900	58.93	117.87	23.20	46.40
	Final	11:06 AM	186	2150	2150	12900					
63	Initial	11:06 AM	3			0	13100	60.30	119.69	23.74	47.12
	Final	11:09 AM	189	2200	2200	13100					
64	Initial	11:09 AM	3			0	13000	61.67	118.78	24.28	46.76
	Final	11:12 AM	192	2250	2250	13000					
65	Initial	11:12 AM	3			0	12900	58.93	117.87	23.20	46.40
	Final	11:15 AM	195	2150	2150	12900					
66	Initial	11:15 AM	3			0	13000	61.67	118.78	24.28	46.76
	Final	11:18 AM	198	2250	2250	13000					
67	Initial	11:18 AM	3			0	12900	58.93	117.87	23.20	46.40
	Final	11:21 AM	201	2150	2150	12900					
68	Initial	11:21 AM	3			0	12900	60.30	117.87	23.74	46.40
	Final	11:24 AM	204	2200	2200	12900					
69	Initial	11:24 AM	3			0	12800	58.93	116.95	23.20	46.04
	Final	11:27 AM	207	2150	2150	12800					

70	Initial	11:27 AM	3			0						
	Final	11:30 AM	210	2200	2200	12700	12700	60.30	116.04	23.74	45.68	
71	Initial	11:30 AM	3			0						
	Final	11:33 AM	213	2250	2250	12500	12500	61.67	114.21	24.28	44.97	
72	Initial	11:33 AM	3			0						
	Final	11:36 AM	216	2150	2150	12600	12600	58.93	115.13	23.20	45.33	
73	Initial	11:36 AM	3			0						
	Final	11:39 AM	219	2250	2250	12600	12600	61.67	115.13	24.28	45.33	
74	Initial	11:39 AM	3			0						
	Final	11:42 AM	222	2150	2150	12500	12500	58.93	114.21	23.20	44.97	
75	Initial	11:42 AM	3			0						
	Final	11:45 AM	225	2200	2200	12300	12300	60.30	112.38	23.74	44.25	
76	Initial	11:45 AM	3			0						
	Final	11:48 AM	228	2150	2150	12200	12200	58.93	111.47	23.20	43.89	
77	Initial	11:48 AM	3			0						
	Final	11:51 AM	231	2200	2200	12400	12400	60.30	113.30	23.74	44.61	
78	Initial	11:51 AM	3			0						
	Final	11:54 AM	234	2250	2250	12300	12300	61.67	112.38	24.28	44.25	
79	Initial	11:54 AM	3			0						
	Final	11:57 AM	237	2150	2150	12300	12300	58.93	112.38	23.20	44.25	
80	Initial	11:57 AM	3			0						
	Final	12:00 PM	240	2250	2250	12000	12000	61.67	109.64	24.28	43.17	
81	Initial	12:00 PM	3			0						
	Final	12:03 PM	243	2150	2150	12200	12200	58.93	111.47	23.20	43.89	
82	Initial	12:03 PM	3			0						
	Final	12:06 PM	246	2200	2200	12100	12100	60.30	110.56	23.74	43.53	
83	Initial	12:06 PM	3			0						
	Final	12:09 PM	249	2150	2150	12000	12000	58.93	109.64	23.20	43.17	
84	Initial	12:09 PM	3			0						
	Final	12:12 PM	252	2200	2200	11800	11800	60.30	107.82	23.74	42.45	
85	Initial	12:12 PM	3			0						
	Final	12:15 PM	255	2250	2250	12400	12400	61.67	113.30	24.28	44.61	
86	Initial	12:15 PM	3			0						
	Final	12:18 PM	258	2150	2150	12300	12300	58.93	112.38	23.20	44.25	
87	Initial	12:18 PM	3			0						
	Final	12:21 PM	261	2250	2250	12300	12300	61.67	112.38	24.28	44.25	
88	Initial	12:21 PM	3			0						
	Final	12:24 PM	264	2150	2150	12000	12000	58.93	109.64	23.20	43.17	
89	Initial	12:24 PM	3			0						
	Final	12:27 PM	267	2200	2200	12200	12200	60.30	111.47	23.74	43.89	
90	Initial	12:27 PM	3			0						
	Final	12:30 PM	270	2150	2150	12100	12100	58.93	110.56	23.20	43.53	
91	Initial	12:30 PM	3			0						
	Final	12:33 PM	273	2200	2200	12000	12000	60.30	109.64	23.74	43.17	
92	Initial	12:33 PM	3			0						
	Final	12:36 PM	276	2250	2250	11800	11800	61.67	107.82	24.28	42.45	
93	Initial	12:36 PM	3			0						
	Final	12:39 PM	279	2150	2150	12400	12400	58.93	113.30	23.20	44.61	
94	Initial	12:39 PM	3			0						
	Final	12:42 PM	282	2250	2250	12300	12300	61.67	112.38	24.28	44.25	
95	Initial	12:42 PM	3			0						
	Final	12:45 PM	285	2150	2150	12300	12300	58.93	112.38	23.20	44.25	

96	Initial	12:45 PM	3			0	12000	60.30	109.64	23.74	43.17
	Final	12:48 PM	288	2200	2200	12000					
97	Initial	12:48 PM	3			0	12200	61.67	111.47	24.28	43.89
	Final	12:51 PM	291	2250	2250	12200					
98	Initial	12:51 PM	3			0	12100	61.67	110.56	24.28	43.53
	Final	12:54 PM	294	2250	2250	12100					
99	Initial	12:54 PM	3			0	12000	58.93	109.64	23.20	43.17
	Final	12:57 PM	297	2150	2150	12000					
100	Initial	12:57 PM	3			0	11800	60.30	107.82	23.74	42.45
	Final	1:00 PM	300	2200	2200	11800					
101	Initial	1:00 PM	3			0	12400	61.67	113.30	24.28	44.61
	Final	1:03 PM	303	2250	2250	12400					
102	Initial	1:03 PM	3			0	12300	60.30	112.38	23.74	44.25
	Final	1:06 PM	306	2200	2200	12300					
103	Initial	1:06 PM	3			0	12300	58.93	112.38	23.20	44.25
	Final	1:09 PM	309	2150	2150	12300					
104	Initial	1:09 PM	3			0	12000	61.67	109.64	24.28	43.17
	Final	1:12 PM	312	2250	2250	12000					
105	Initial	1:12 PM	3			0	12200	64.42	111.47	25.36	43.89
	Final	1:15 PM	315	2350	2350	12200					
106	Initial	1:15 PM	3			0	12100	58.93	110.56	23.20	43.53
	Final	1:18 PM	318	2150	2150	12100					
107	Initial	1:18 PM	3			0	12000	60.30	109.64	23.74	43.17
	Final	1:21 PM	321	2200	2200	12000					
108	Initial	1:21 PM	3			0	11800	58.93	107.82	23.20	42.45
	Final	1:24 PM	324	2150	2150	11800					
109	Initial	1:24 PM	3			0	12400	57.56	113.30	22.66	44.61
	Final	1:27 PM	327	2100	2100	12400					
110	Initial	1:27 PM	3			0	12000	58.93	109.64	23.20	43.17
	Final	1:30 PM	330	2150	2150	12000					
111	Initial	1:30 PM	3			0	12000	61.67	109.64	24.28	43.17
	Final	1:33 PM	333	2250	2250	12000					
112	Initial	1:33 PM	3			0	12000	58.93	109.64	23.20	43.17
	Final	1:36 PM	336	2150	2150	12000					
113	Initial	1:36 PM	3			0	12000	60.30	109.64	23.74	43.17
	Final	1:39 PM	339	2200	2200	12000					
114	Initial	1:39 PM	3			0	12000	58.93	109.64	23.20	43.17
	Final	1:42 PM	342	2150	2150	12000					
115	Initial	1:42 PM	3			0	12000	57.56	109.64	22.66	43.17
	Final	1:45 PM	345	2100	2100	12000					
116	Initial	1:45 PM	3			0	12000	57.56	109.64	22.66	43.17
	Final	1:48 PM	348	2100	2100	12000					
117	Initial	1:48 PM	3			0	12000	57.56	109.64	22.66	43.17
	Final	1:51 PM	351	2100	2100	12000					
118	Initial	1:51 PM	3			0	12000	58.93	109.64	23.20	43.17
	Final	1:54 PM	354	2150	2150	12000					
119	Initial	1:54 PM	3			0	12000	58.93	109.64	23.20	43.17
	Final	1:57 PM	357	2150	2150	12000					
120	Initial	1:57 PM	3			0	12000	57.56	109.64	22.66	43.17
	Final	2:00 PM	360	2100	2100	12000					
121	Initial	2:00 PM	3			0	12000	57.56	109.64	22.66	43.17
	Final	2:03 PM	363	2100	2100	12000					

Grain Size Distribution



Sample Description

I-11 @ 9'

Soil Classification

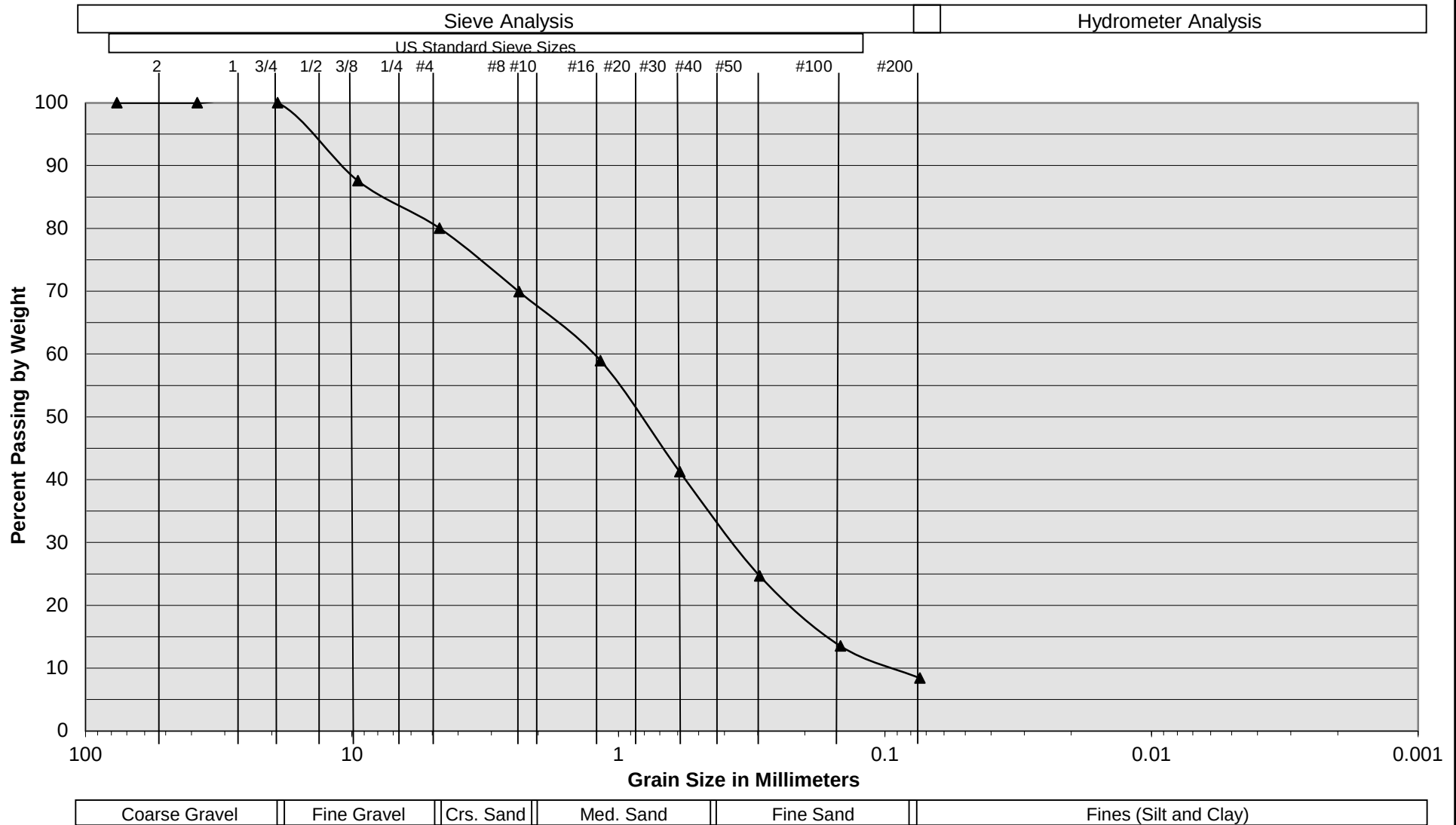
Gray Brown Gravelly fine to coarse Sand, trace Silt

Proposed Warehouse
Highland, California
Project No. 21G193-3
PLATE C- 1



**SOUTHERN
CALIFORNIA
GEOTECHNICAL**
A California Corporation

Grain Size Distribution



Sample Description

I-12 @ 9'

Soil Classification

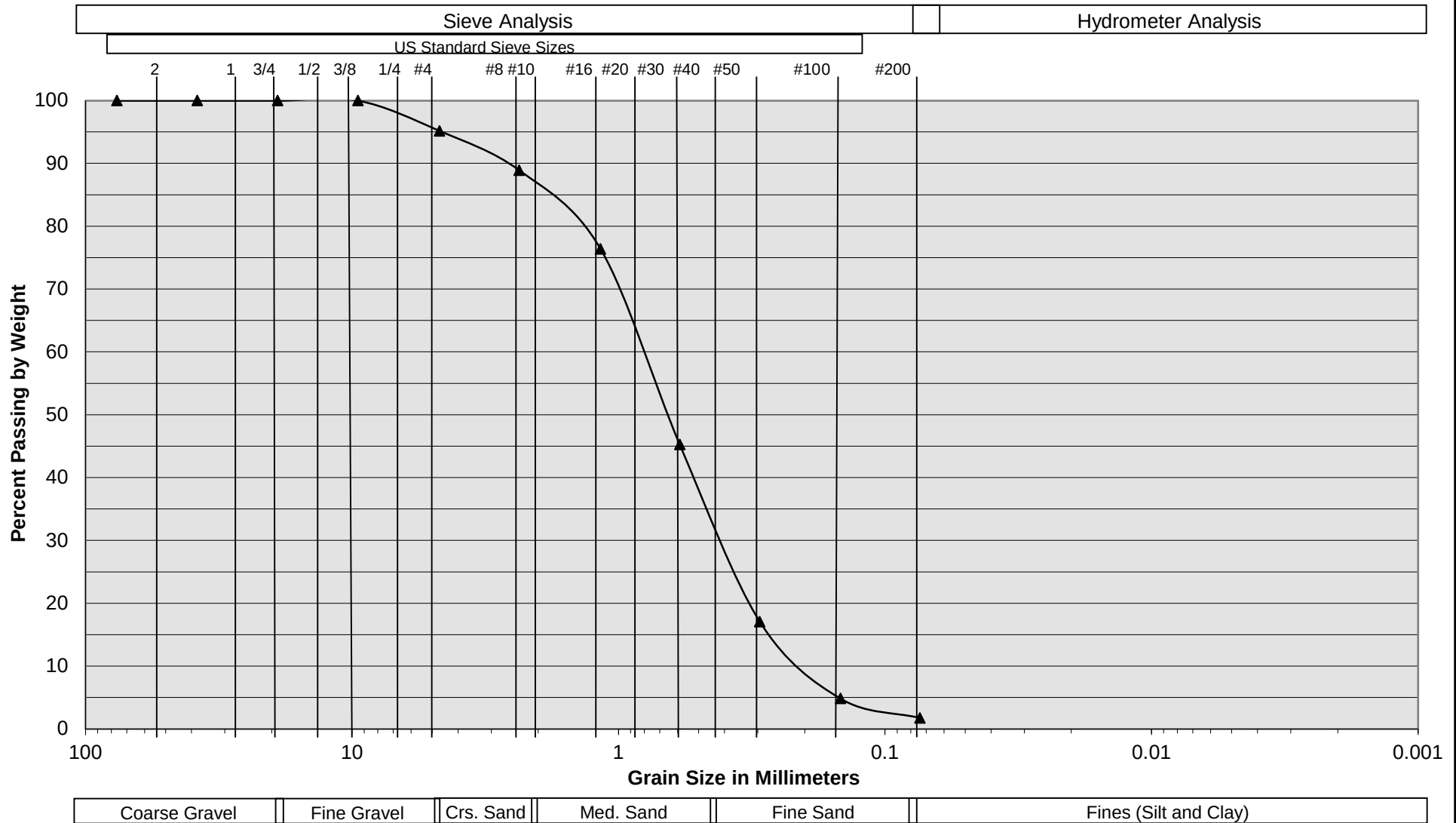
Gray Brown Gravelly fine to coarse Sand, trace to little Silt

Proposed Warehouse
Highland, California
Project No. 21G193-3
PLATE C- 2



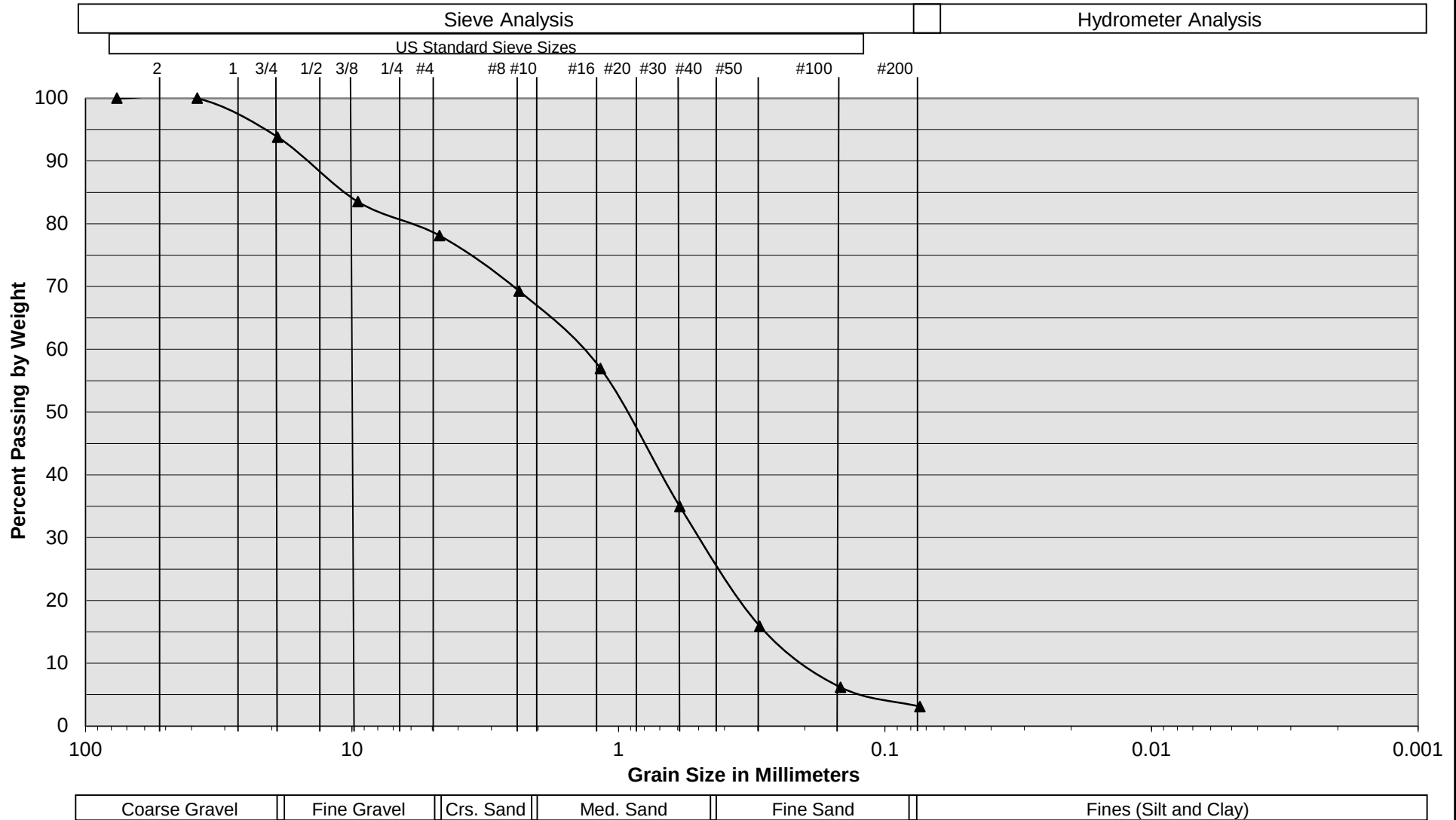
**SOUTHERN
CALIFORNIA
GEOTECHNICAL**
A California Corporation

Grain Size Distribution



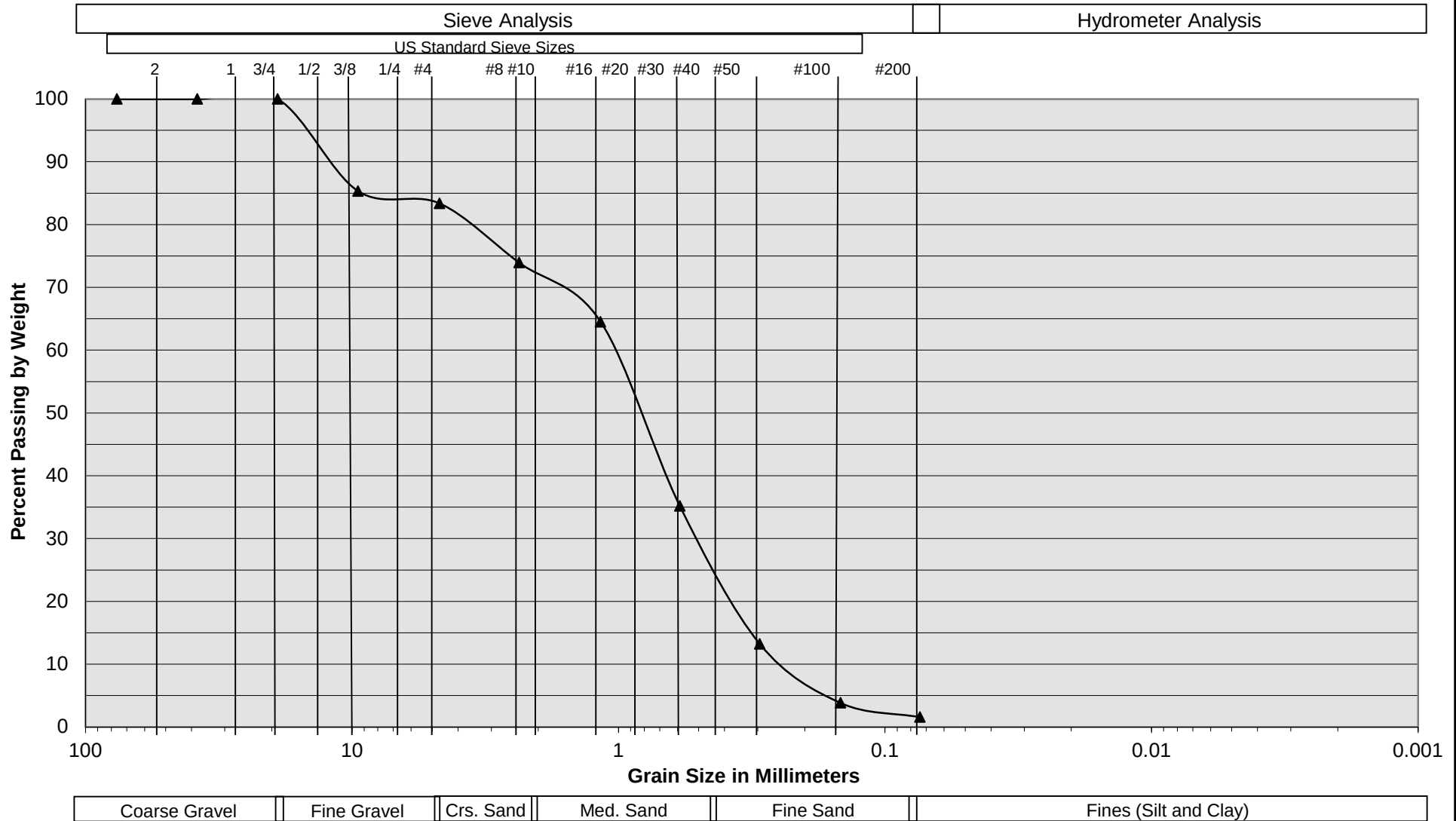
Sample Description	I-13 @ 12'
Soil Classification	Light Gray Brown fine to coarse Sand, trace fine Gravel
Proposed Warehouse Highland, California Project No. 21G193-3 PLATE C- 3	 SOUTHERN CALIFORNIA GEOTECHNICAL <i>A California Corporation</i>

Grain Size Distribution



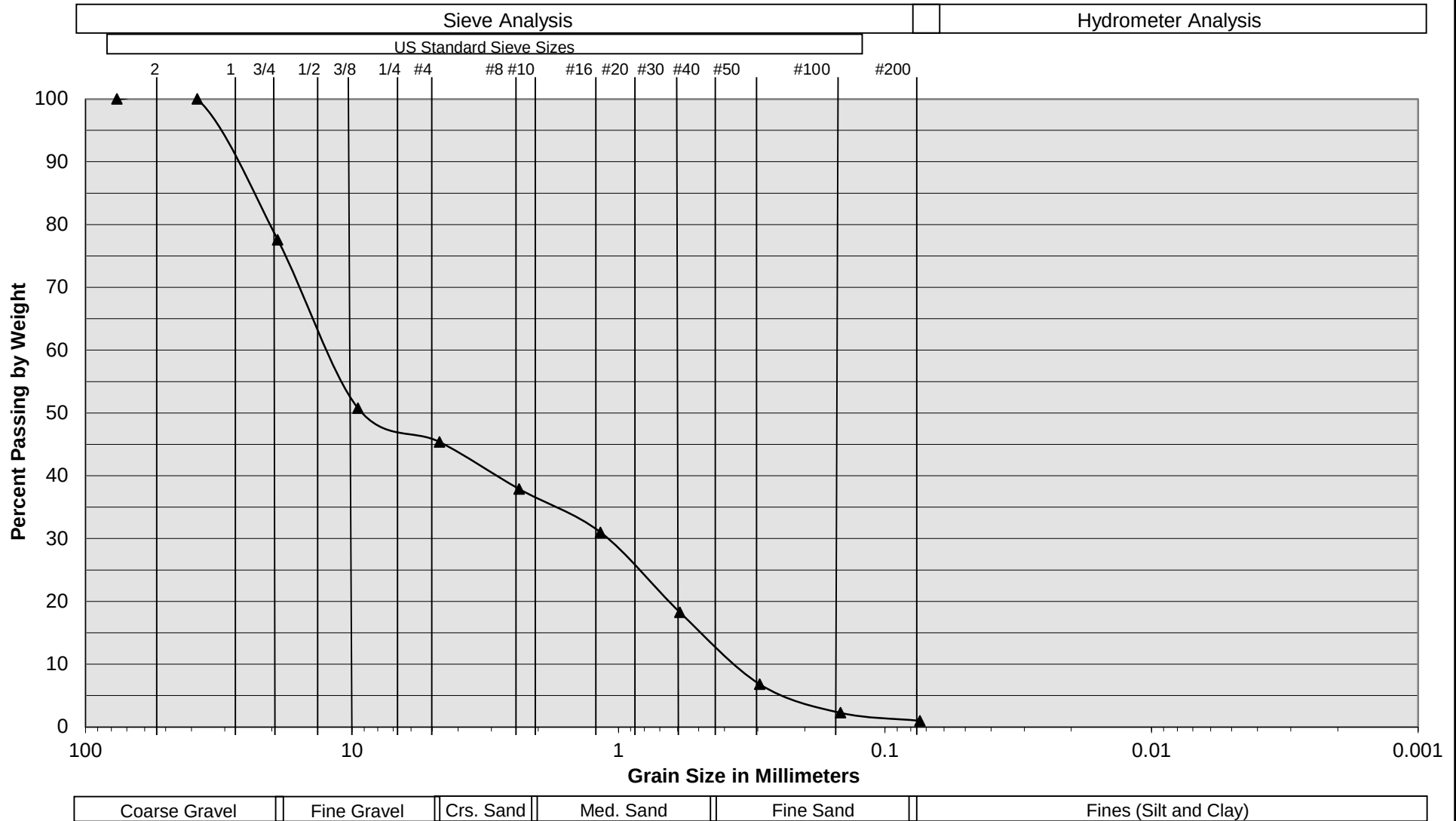
Sample Description	I-14 @ 12'		
Soil Classification	Light Gray Gravelly fine to coarse Sand, trace Silt		
Proposed Warehouse Highland, California Project No. 21G193-3 PLATE C- 4			SOUTHERN CALIFORNIA GEOTECHNICAL <i>A California Corporation</i>

Grain Size Distribution



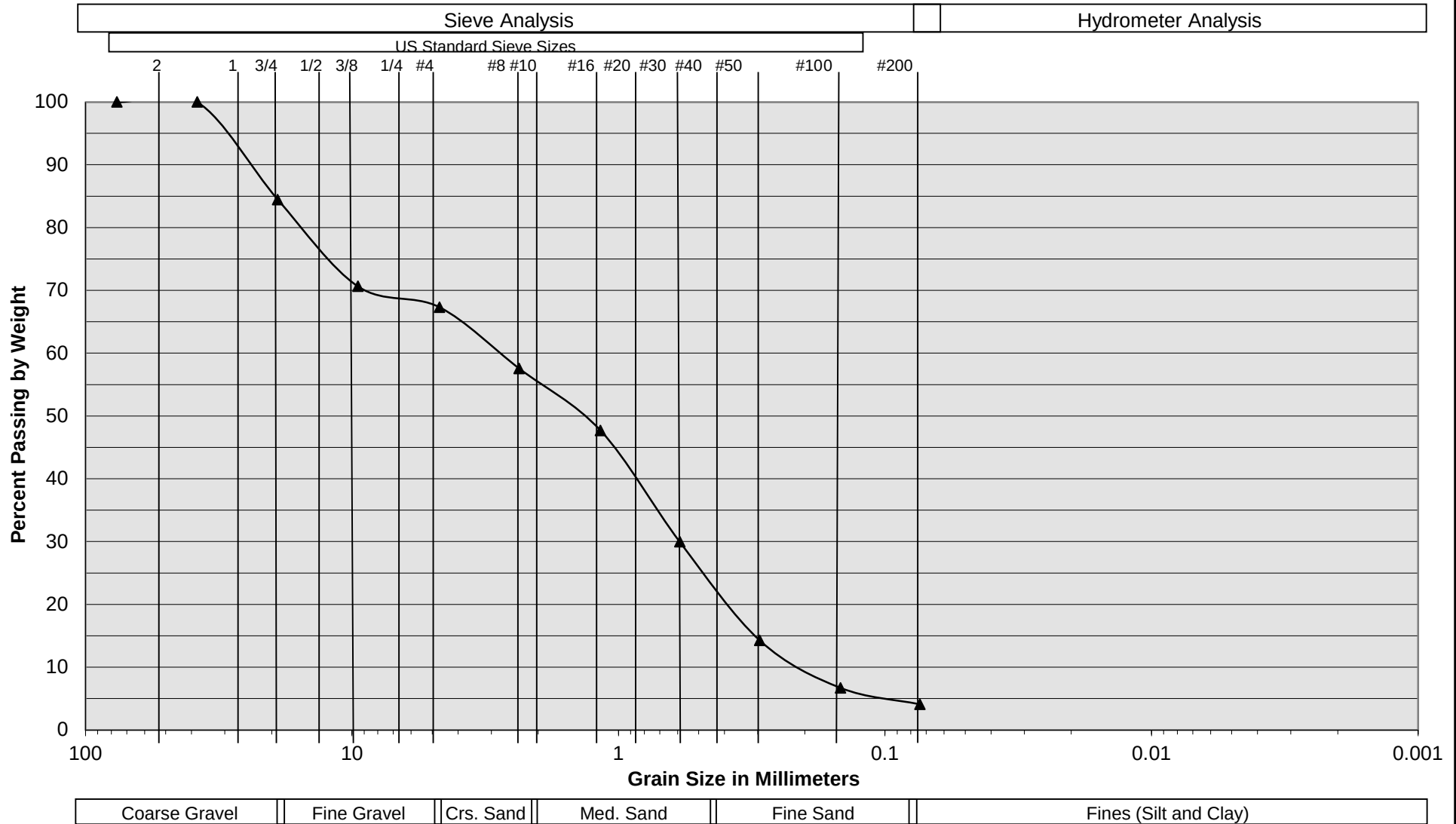
Sample Description	I-15 @ 12'
Soil Classification	Light Gray Brown fine to coarse Sand, little fine Gravel
Proposed Warehouse Highland, California Project No. 21G193-3 PLATE C- 5	
	 SOUTHERN CALIFORNIA GEOTECHNICAL <i>A California Corporation</i>

Grain Size Distribution



Sample Description	I-16 @ 12'		
Soil Classification	Light Gray Gravelly fine to coarse Sand to fine to coarse Sandy Gravel		
Proposed Warehouse Highland, California Project No. 21G193-3 PLATE C- 6			 SOUTHERN CALIFORNIA GEOTECHNICAL <i>A California Corporation</i>

Grain Size Distribution



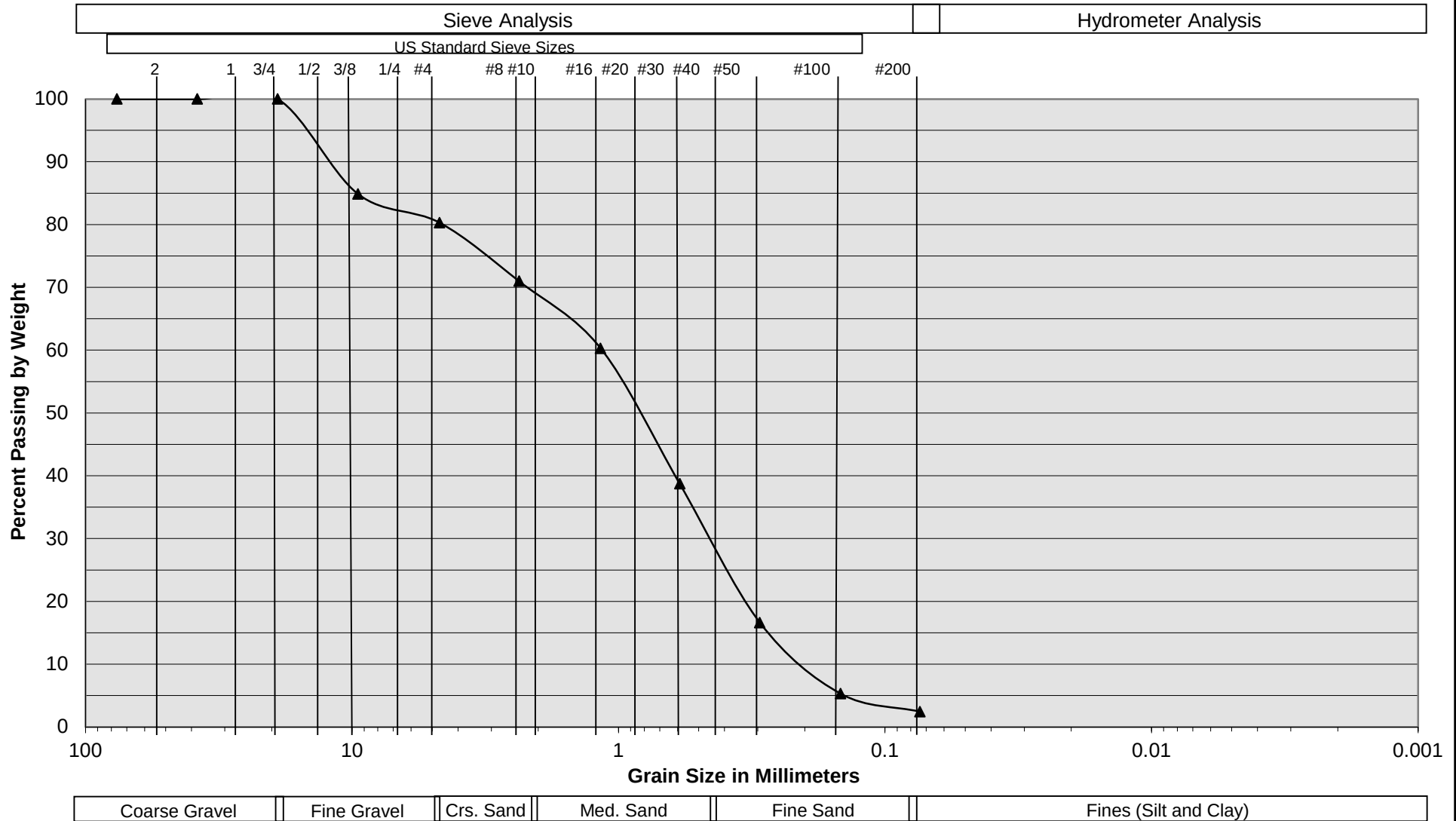
Sample Description	I-17 @ 12'
Soil Classification	Gray Gravelly fine to coarse Sand, trace Silt

Proposed Warehouse
Highland, California
Project No. 21G193-3
PLATE C- 7



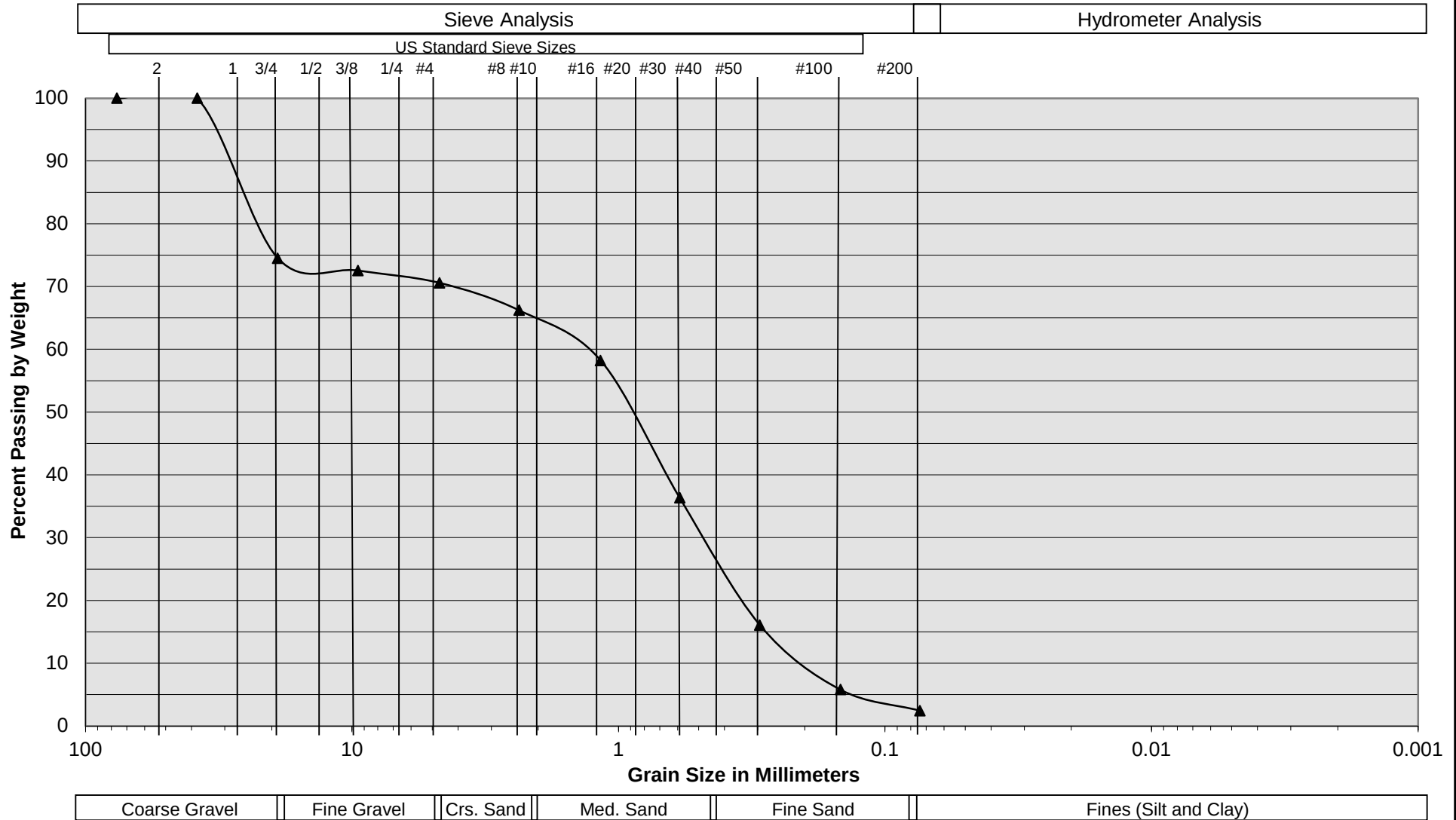
**SOUTHERN
CALIFORNIA
GEOTECHNICAL**
A California Corporation

Grain Size Distribution



Sample Description	I-18 @ 12'
Soil Classification	Gray Brown fine to coarse Sand, little fine Gravel
Proposed Warehouse Highland, California Project No. 21G193-3 PLATE C- 8	
	 SOUTHERN CALIFORNIA GEOTECHNICAL <i>A California Corporation</i>

Grain Size Distribution



Sample Description	I-19 @ 12'
Soil Classification	Gray Brown Gravelly fine to medium Sand, trace coarse Sand
Proposed Warehouse Highland, California Project No. 21G193-3 PLATE C- 9	
	 SOUTHERN CALIFORNIA GEOTECHNICAL <i>A California Corporation</i>