January 31, 2023

Nelson Avenue Owner LP
19700 S. Vermont Avenue, Suite 101
Torrance, CA 90502

Attention: Ms. Montana Kanen
Analyst

Project No.: **21G265-2R**

Subject: **Results of Infiltration Testing**
Proposed Industrial Building
15006 – 15100 Nelson Avenue
Industry, California

Reference: Geotechnical Investigation, Proposed Industrial Building, 15006 – 15100 Nelson Avenue, Industry, California, prepared by Southern California Geotechnical, Inc. (SCG) for Nelson Avenue Owner LP, SCG Project No. 21G265-1R, dated January 31, 2023.

Ms. Kanen:

In accordance with your request, we have conducted infiltration testing at the subject site. We are pleased to present 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 general accordance with our Proposal No. 21P363R, dated November 2, 2021. The scope of services included site reconnaissance, subsurface exploration, field testing, and engineering analysis to determine the infiltration rates of the onsite soils. The infiltration testing was performed in general accordance with Guidelines for Geotechnical Investigation and Reporting Low Impact Development Stormwater Infiltration (GS200.1) published by Los Angeles County Public Works – Geotechnical Engineering and Materials Division, dated June 30, 2021.

Site and Project Description

The subject site is located on the southwest side of Nelson Avenue at Cadbrook Drive in City of Industry, California. The site is also referenced by the street addresses 15006, 15010 and 15100 Nelson Avenue. The site is bounded to the northeast by Nelson Avenue, to the northwest by an existing commercial/industrial building, to the southwest by a railroad easement, and to the southeast by existing commercial/industrial buildings. The general location of the site is illustrated on the Site Location Map, included as Plate 1 of this report.

The site consists of two irregular-shaped parcels, 8.87± acres in size. The site is presently developed with five (5) commercial/industrial buildings, ranging in size from 1,400 to 14,850± ft^2 in size. Additionally, the site is developed with one (1) canopy, 2,500± ft^2 in size. Pipe products

are presently stored in the northwest area of the site. Semi-trucks are presently parked in the southwestern area of the site. A semi-truck driving school is in the southeastern area of the site. Ground surface consists of Portland cement concrete (PCC) pavements across the majority of the site, with asphaltic concrete pavements in northeastern area of the site. Landscape planters are present in the northwestern area of the site.

Detailed topographic information was not available at the time of this report. Based on elevations obtained from Google Earth and visual observations made at the time of the subsurface investigation, the overall site slopes downward to the southwest at gradients ranging from 0.5 to 1± percent.

Proposed Development

Based on a conceptual site plan provided to our office by the client, the site will be developed with one (1) new industrial building. The new building will be 142,730± ft^2 in size, and will be located in the southern area of the site. Dock-high doors will be constructed along a portion of the north building wall. The building will be surrounded by asphaltic concrete pavements in the parking and drive lanes, Portland cement concrete pavements in the loading dock area, and limited areas of concrete flatwork and landscape planters throughout.

We understand that the site may utilize on-site stormwater disposal. The type, depth, and location of the proposed infiltration system is not known at the time of this report. The infiltration system is expected to consist of below-grade chambers located in the north-central area of the site. The bottom of the infiltration system is expected to be at 10± feet below the bottom of the existing site grades.

Concurrent Study

Geotechnical Investigation

SCG concurrently conducted a geotechnical investigation for the subject site, referenced above. As a part of this study, five (5) borings were advanced to depths of 15 to 50± feet below the currently existing site grades. In addition to the borings, four (4) Cone Penetration Test (CPT) soundings were advanced to a depth of 50± feet.

Asphaltic concrete pavements were encountered at the ground surface of Boring No. B-4. The pavement section consists of 3± inches of Asphaltic concrete underlain by 2± inches of Aggregate base. Portland cement concrete, 6± inches in thickness, was encountered at the ground surface of Boring Nos. B-1, B-2, B-3 and B-5. Artificial fill soils were encountered beneath the pavements of Boring Nos. B-1, B-2 and B-5, extending to depths of 2½ to 3± feet below ground surface. The fill soils generally consist of medium stiff to very stiff silty clays and clayey silts. Native alluvium was encountered beneath the pavements of Boring Nos. B-3 and B-4, and beneath the fill of the remaining borings, extending to at least the maximum depth explored of 50± feet below ground surface. The near-surface alluvial soils generally consist of loose to medium dense silty sands, clayey sands and sandy silts, and medium stiff to stiff silty clays, sandy clays and clayey silts, extending to depths of 12 to 22± feet. At greater depths the alluvium consists of medium dense to very dense fine to coarse sands, silty sands and sandy silts, and stiff to very stiff silty

clays and sandy clays. The alluvium generally possesses trace to little iron oxide staining and calcareous nodules/veining.

Groundwater

Free water was not encountered during the drilling of 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 50± feet at the time of the subsurface exploration.

Subsurface Exploration

Scope of Exploration

The subsurface exploration for the infiltration testing consisted of two (2) borings, advanced to a depth of 10± feet below existing site grades. The borings were logged during excavation by a member of our staff. The approximate locations of the infiltration borings (identified as Infiltration Boring Nos. I-1 and I-2) are indicated on the Infiltration Test Location Plan, enclosed as Plate 2 of this report.

Geotechnical Conditions

PCC pavements were encountered at the ground surface at both infiltration test locations. The pavement sections at these locations generally consist of 5 to 8± inches of unreinforced PCC. Undocumented fill was encountered beneath the pavements, extending to a depth of 3± feet below the existing site grades. The fill soils generally consist of medium dense fine to coarse sands with varying gravel content, and stiff silty clay with little fine sand. The fill material appeared to be mottled, resulting in the classification of fill. Native alluvium was encountered beneath the undocumented fill soils at both of the infiltration boring locations. The near-surface alluvial soils generally consist of stiff to very stiff silty clays and sandy clays, extending to a depth 8± feet. Below these materials, the alluvium consists of medium dense fine sandy silts with varying medium to coarse sand and clay content, extending to at least the maximum depth explored of 10± feet below the ground surface.

Free water was not encountered during the drilling of 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 10± feet at the time of the subsurface exploration.

Recent water level data was obtained from the California State Water Resources Control Board, GeoTracker, website, https://geotracker.waterboards.ca.gov/. One monitoring wells on record is located 30± feet north of the site. Water level readings within this monitoring wells indicate a high groundwater level of 66± feet below the ground surface in September 2016.

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 subject site. As previously mentioned, the infiltration testing was performed in general accordance with Guidelines for Geotechnical

Investigation and Reporting Low Impact Development Stormwater Infiltration (GS200.1) published by Los Angeles County Public Works – Geotechnical Engineering and Materials Division, dated June 30, 2021.

Pre-soaking

Both of the infiltration test borings were pre-soaked for at least 1 hour to ensure the sand around the annulus of the perforated pipe was fully saturated. The pre-soaking procedure consisted of filling each test boring with clean potable water to an elevation of at least 12± inches above the bottom of each test boring. In accordance with the Los Angeles County guidelines, since the water in both of the infiltration test borings did not completely infiltrate within a 30-minute time period after filling each boring, a falling head test was the appropriate test method.

Infiltration Testing Procedure

After the completion of the pre-soaking process, SCG performed the infiltration testing. A sufficient amount of water was added to the test borings so that the water level was approximately 12± inches higher than the bottom of the borings and less than or equal to the water level used during the pre-soaking process. Readings were taken at 30-minute intervals at all of the infiltration test locations. A stabilized rate of drop, where the highest and lowest readings from three consecutive readings are within 10 percent of each other, was obtained for each of the test borings. These water level readings are presented on the spreadsheets enclosed with this report. The infiltration rates for each of the timed intervals are also tabulated on the spreadsheets.

The infiltration rates for the tests are tabulated in inches per hour. In accordance with the typically accepted practice, it is recommended that the most conservative reading from the latter part of the infiltration tests be used for design. These rates are summarized below:

Infiltration Test No.	Depth (feet)	Soil Description	Measured Infiltration Rate (inches/hour)
I-1	10	Light Gray Brown fine Sandy Silt, little Clay, trace medium to coarse Sand	1.9
I-2	10	Light Brown fine Sandy Silt, little Clay	0.0

Laboratory Testing

Moisture Content

The moisture contents for selected soil samples from 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 Boring Logs.

Grain Size Analysis

The grain size distribution of selected soils collected from the base of each infiltration test trench has 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 the grainsize analysis are presented on Plates C-1 and C-2 of this report.

Design Recommendations

Two (2) infiltration tests were performed at the subject site. As noted above, the measured infiltration rates at the infiltration test locations range from 0.0 to 1.9 inches per hour. The Guidelines for Geotechnical Investigation and Reporting Low Impact Development Stormwater Infiltration, GS200.1 prepared by the County of Los Angeles, Department of Public Works, Geotechnical and Materials Division (GMED) on June 30, 2021 dictate that a reduction factor be utilized in the design infiltration rate. The following reduction factors are considered in the design assumed infiltration rate:

Reduction Factor	
Small Diameter Boring	$RF_t = 2$
Site Variability, number of tests, and thoroughness of subsurface investigation	$RF_v = 2$
Long-term siltation plugging and maintenance	$RF_v = 1$
Total Reduction Factor, $RF = RF_t + RF_v + RF_v$	$RF = 4$
Design Infiltration Rate (DIR) = Measured Infiltration Rate (MIR)/RF	**DIR = 0.0**

Based on the results of testing, and the subsurface soil conditions identified in the referenced geotechnical report, infiltration is not recommended for this project. Although the location, depth and type of system was not known at the time of the subsurface investigation, the results included herein are considered valid for this project. This is based on the results of the infiltration testing, and the on-site soil types, generally comprised of high silt and clay content.

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 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 rates 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 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 trench 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.

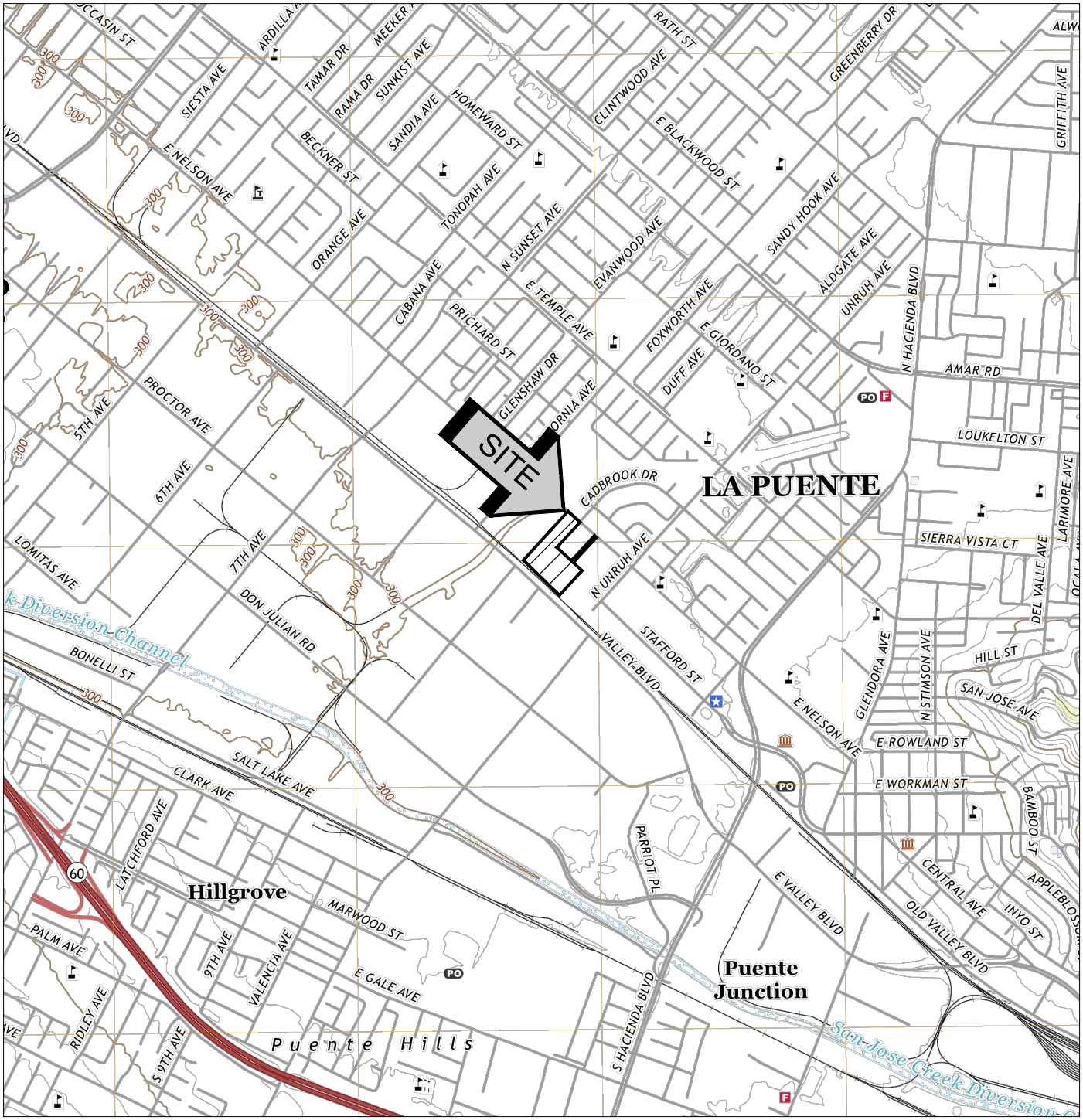
Respectfully Submitted,
SOUTHERN CALIFORNIA GEOTECHNICAL, INC.

Pablo Montes Jr.
Staff Engineer

Robert G. Trazo, GE 2655
Principal Engineer

Distribution: (1) Addressee

Enclosures: Plate 1 - Site Location Map
Plate 2 - Infiltration Test Location Plan
Boring Logs and Legend (4 pages)
Infiltration Test Results Spreadsheets (2 pages)
Grain Size Distribution Graphs (2 pages)



SOURCE: USGS TOPOGRAPHIC MAP OF THE BALDWIN PARK, LOS ANGELES COUNTY, CALIFORNIA, 2018.

SITE LOCATION MAP

PROPOSED INDUSTRIAL DEVELOPMENT

CITY OF INDUSTRY, CALIFORNIA

SCALE: 1" = 2000'	
DRAWN: MD CHKD: RGT	
SCG PROJECT 21G265-2R	
PLATE 1	

SoCalGeo

SOUTHERN CALIFORNIA GEOTECHNICAL

NORTH

GEOTECHNICAL LEGEND

- APPROXIMATE INFILTRATION TEST LOCATION
- APPROXIMATE BORING LOCATION (SCG PROJECT NO. 21G265-1R)
- APPROXIMATE CPT LOCATION (SCG PROJECT NO. 21G265-1R)

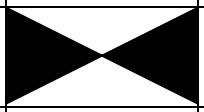
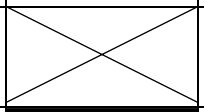
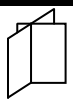
NOTE: SITE PLAN PREPARED BY HPA ARCHITECTURE.
AIR PHOTO OBTAINED FROM GOOGLE EARTH.

INFILTRATION TEST LOCATION PLAN
PROPOSED INDUSTRIAL BUILDING
CITY OF INDUSTRY, CALIFORNIA

SCALE: 1" = 100'	
DRAWN: JAH CHKD: RGT	
SCG PROJECT 21G265-2R	
PLATE 2	

SoCalGeo
SOUTHERN CALIFORNIA GEOTECHNICAL

BORING 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/ft^3.

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

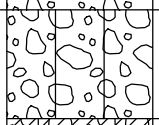
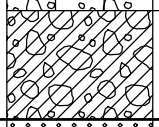
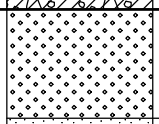
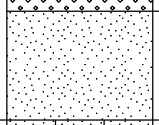
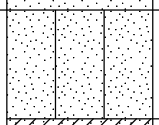
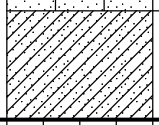
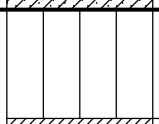
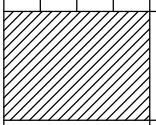
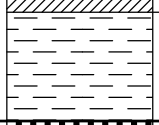
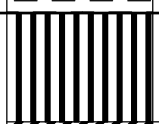
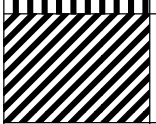
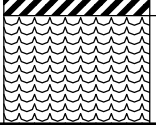
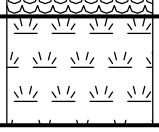
LIQUID LIMIT: The moisture content above which a soil behaves as a liquid.

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

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. I-1

JOB NO.: 21G265-2R
PROJECT: Proposed Industrial Building
LOCATION: Industry, California

DRILLING DATE: 11/4/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

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

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					CONCRETE: 8± inches Portland Cement, no discernible Aggregate Base							
		16			FILL: Light Gray Brown fine to coarse Sand, little fine to coarse Gravel, trace to little Silt, medium dense-dry to damp		3					
			3.0		FILL: Black Silty Clay, little fine Sand, stiff-very moist		17					
		15	4.5		ALLUVIUM: Dark Brown Silty Clay, little fine to medium Sand, trace Iron Oxide staining, trace Calcareous nodules and veining, stiff to very stiff-moist		15					
5												
		10	3.5		Light Brown fine Sandy Clay, little to some Calcareous nodules, little Iron Oxide staining, stiff-moist		13					
		10			Light Gray Brown fine Sandy Silt, little Clay, trace medium to coarse Sand, medium dense-very moist		28					
10												
					Boring Terminated at 10'							

TBL 21G265-2R.GPJ SOCALGEO.GDT 1/31/23

TEST BORING LOG

PLATE B-1

SOUTHERN CALIFORNIA GEOTECHNICAL
A California Corporation

BORING NO. I-2

JOB NO.: 21G265-2R
PROJECT: Proposed Industrial Building
LOCATION: Industry, California

DRILLING DATE: 11/4/21
DRILLING METHOD: Hollow Stem Auger
LOGGED BY: Jamie Hayward

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

FIELD RESULTS						LABORATORY RESULTS						
DEPTH (FEET)	SAMPLE	BLOW COUNT	POCKET PEN. (TSF)	GRAPHIC LOG	DESCRIPTION SURFACE ELEVATION: --- MSL	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTIC LIMIT	PASSING #200 SIEVE (%)	ORGANIC CONTENT (%)	COMMENTS
					CONCRETE: 5± inches Portland Cement, no discernible Aggregate Base							
		9	3.0		FILL: Dark Brown to Black Silty Clay, little fine Sand, porous, stiff-very moist		17					
		10	4.0		ALLUVIUM: Brown fine Sandy Clay, little Calcareous nodules and veining, stiff-very moist		19					
5		9	3.5		@ 6', trace porosity		23					
		10			Light Brown fine Sandy Silt, little Clay, little Calcareous nodules and veining, little Iron Oxide staining, medium dense-very moist		26					
10					Boring Terminated at 10'							

TBL 21G265-2R.GPJ SOCALGEO.GDT 1/31/23

TEST BORING LOG **PLATE B-2**

INFILTRATION CALCULATIONS

Project Name	Proposed Industrial Development
Project Location	Industry, California
Project Number	21G265-2R
Engineer	Ryan Bremer

Test Hole Radius	4.00	(in)
Test Depth	10.00	(ft)

Infiltration Test Hole: I-1

Start Time for Pre-Soak	10:09 AM	Water Remaining in Boring (Y/N)	Y
Start Time for Standard	11:09 AM	Time Interal Between Readings	30min

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (ft)	Average Head Height (ft)	Measured Infiltration Rate Q (in/hr)	Reduction Factor (RF)	Design Infiltration Rate Q (in/hr)
1	Initial	11:09 AM	30.0	6.45	1.43	2.8	1.9	5.0	0.4
	Final	11:39 AM		7.88					
2	Initial	11:39 AM	30.0	6.45	1.35	2.9	1.8	5.0	0.4
	Final	12:09 PM		7.80					
3	Initial	12:09 PM	30.0	6.45	1.44	2.8	1.9	5.0	0.4
	Final	12:39 PM		7.89					
4	Initial	12:39 PM	30.0	6.45	1.47	2.8	2.0	5.0	0.4
	Final	1:09 PM		7.92					
5	Initial	1:09 PM	30.0	6.45	1.45	2.8	1.9	5.0	0.4
	Final	1:39 PM		7.90					
6	Initial	1:39 PM	30.0	6.45	1.43	2.8	1.9	5.0	0.4
	Final	2:09 PM		7.88					

Design Infiltration Rate = (Measured Infiltration Rate)/(Reduction Factor)

Reduction Factor (RF) = $RF_t+RF_v+RF_s$

Reduction Factors	
Double-ring Infiltrometer	RF_t = 1 to 3
Shallow Test Pit	
Small Diameter Boring	
Large Diameter Boring	
High Fow-rate	RF_t = 3
Grain Size Analysis Method	RF_t = 2 to 3
Site variability, number of tests and thoroughness of subsurface investigation	RF_v = 1 to 3
Long-term siltation, plugging, and maintenance	RF_s = 1 to 3

$$Q = \frac{\Delta H(60r)}{\Delta t(r + 2H_{avg})}$$

Where:
- Q = Measured Infiltration Rate (in inches per hour)
- ΔH = Change in Height (Water Level) over the time interval
- r = Test Hole (Borehole) Radius
- Δt = Time Interval
- H_{avg} = Average Head Height over the time interval

INFILTRATION CALCULATIONS

Project Name	Proposed Industrial Development
Project Location	Industry, California
Project Number	21G265-2R
Engineer	Ryan Bremer

Test Hole Radius	4.00	(in)
Test Depth	10.00	(ft)

Infiltration Test Hole: I-2

Start Time for Pre-Soak	10:13 AM	Water Remaining in Boring (Y/N)	Y
Start Time for Standard	11:13 AM	Time Interal Between Readings	30min

Interval Number		Time	Time Interval (min)	Water Depth (ft)	Change in Water Level (ft)	Average Head Height (ft)	Measured Infiltration Rate Q (in/hr)	Reduction Factor (RF)	Design Infiltration Rate Q (in/hr)
1	Initial	11:13 AM	30.0	7.12	0.01	2.9	0.0	5.0	0.0
	Final	11:43 AM		7.13					
2	Initial	11:43 AM	30.0	7.13	0.01	2.9	0.0	5.0	0.0
	Final	12:13 PM		7.14					
3	Initial	12:13 PM	30.0	7.14	0.00	2.9	0.0	5.0	0.0
	Final	12:43 PM		7.14					
4	Initial	12:43 PM	30.0	7.14	0.01	2.9	0.0	5.0	0.0
	Final	1:13 PM		7.15					
5	Initial	1:13 PM	30.0	7.15	0.00	2.9	0.0	5.0	0.0
	Final	1:43 PM		7.15					
6	Initial	1:43 PM	30.0	7.15	0.00	2.9	0.0	5.0	0.0
	Final	2:13 PM		7.15					

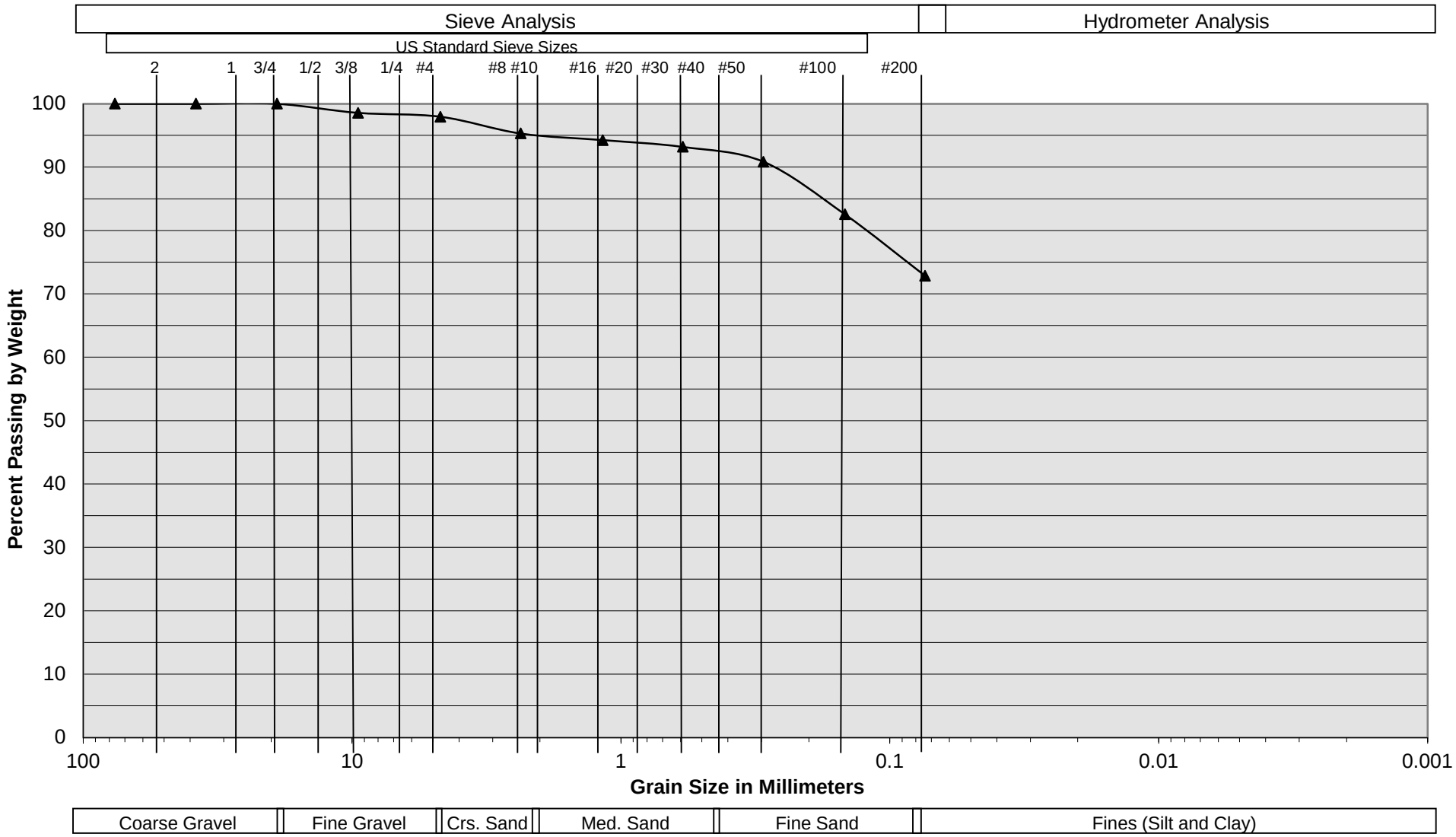
Design Infiltration Rate = (Measured Infiltration Rate)/(Reduction Factor)
Reduction Factor (RF) = $RF_t+RF_v+RF_s$

Reduction Factors	
Double-ring Infiltrometer	RF_t = 1 to 3
Shallow Test Pit	
Small Diameter Boring	
Large Diameter Boring	
High Fow-rate	RF_t = 3
Grain Size Analysis Method	RF_t = 2 to 3
Site variability, number of tests and thoroughness of subsurface investigation	RF_v = 1 to 3
Long-term siltation, plugging, and maintenance	RF_s = 1 to 3

$$Q = \frac{\Delta H(60r)}{\Delta t(r+2H_{avg})}$$

Where:
- Q = Measured Infiltration Rate (in inches per hour)
- ΔH = Change in Height (Water Level) over the time interval
- r = Test Hole (Borehole) Radius
- Δt = Time Interval
- H_{avg} = Average Head Height over the time interval

Grain Size Distribution



Sample Description	I-1 @ 8½'
Soil Classification	Light Gray Brown fine Sandy Silt, little Clay, trace medium to coarse Sand

Proposed Industrial Development
Industry, California
Project No. 21G265-2R
PLATE C- 1

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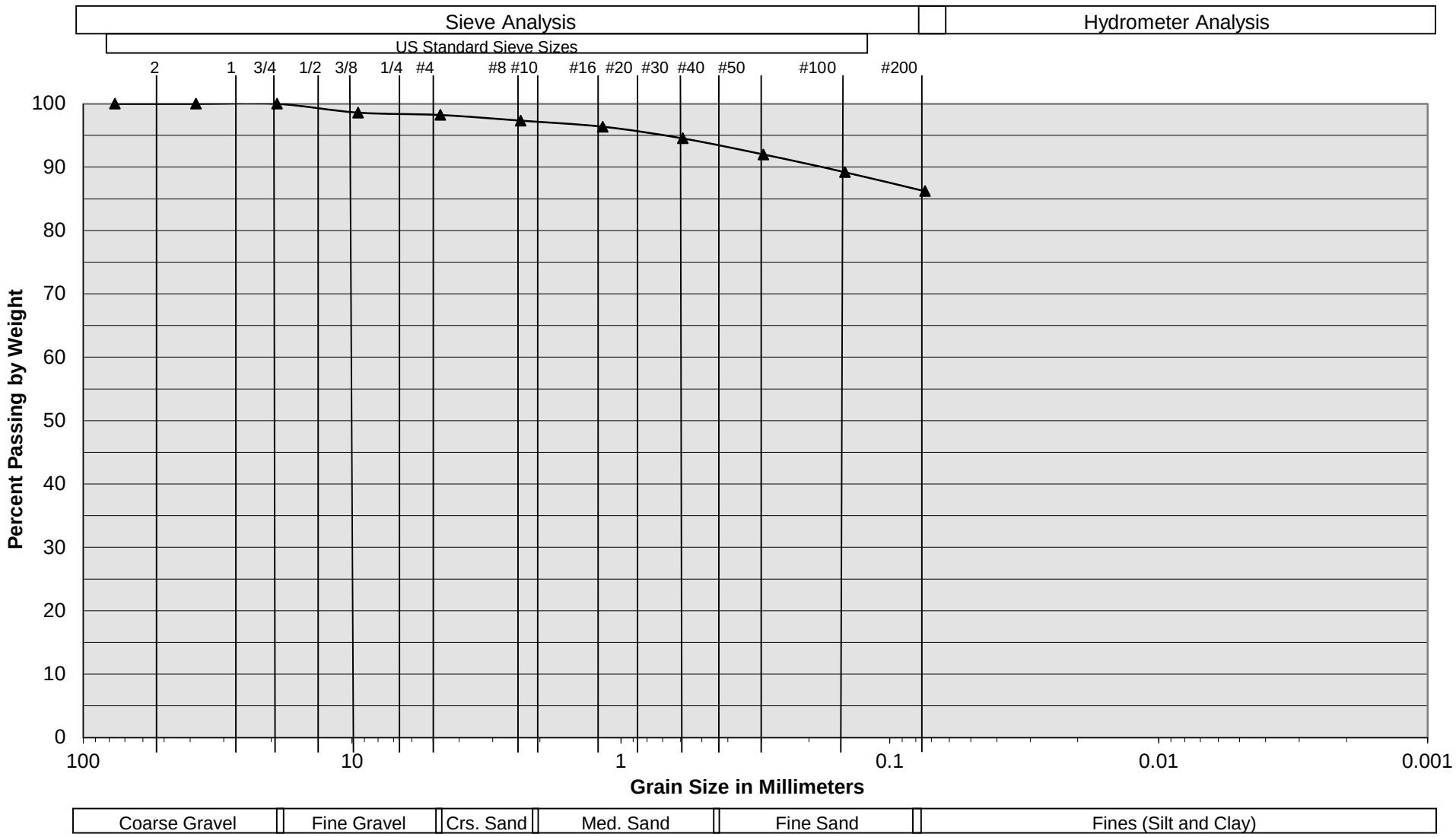
Grain Size Distribution



Sample Description	I-2 @ 8½'
Soil Classification	Light Brown fine Sandy Silt, little Clay

Proposed Industrial Development
Industry, California
Project No. 21G265-2R
PLATE C- 2

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