

## **ATTACHMENT D**

### **Physical Parameter Laboratory**

PTS File No: 47118  
 Client: Ninyo & Moore  
 Report Date: 03/29/17

**PHYSICAL PROPERTIES DATA**

Project Name: Hollywood-Burbank Airport  
 Project No: 210048001

SAMPLE ID.	DEPTH, ft.	METHODS: SAMPLE ORIENTATION (1)	API RP 40 POROSITY, %Vb (2)		
			TOTAL	AIR-FILLED	WATER-FILLED
B-16 @ 5	5.7	V	39.9	37.4	2.5
B-16 @ 15	15.1	V	42.5	35.5	7.0
B-17 @ 5	5.35	V	48.2	38.4	9.8
B-17 @ 15	15.4	V	41.4	31.1	10.4
B-18 @ 5	5.45	V	36.0	32.8	3.2
B-18 @ 15	15.4	V	37.9	33.8	4.1
B-19 @ 5	5.2	V	46.7	23.4	23.3
B-19 @ 15	15.4	V	40.0	28.0	12.0
B-20 @ 5	5.4	V	37.7	33.1	4.6
B-20 @ 15	15.4	V	38.7	29.7	9.0
B-22 @ 5	5.2	V	49.6	36.7	12.9
B-22 @ 15	15.9	V	30.6	27.9	2.7

(1) Sample Orientation: H = horizontal; V = vertical; R = remold

(2) Total Porosity = all interconnected pore channels; Air Filled = pore channels not occupied by pore fluids.

Vb = Bulk Volume, cc.

-- = Analysis not requested.

PTS File No: 47118  
 Client: Ninyo & Moore  
 Report Date: 03/29/17

**DRY BULK DENSITY OF IN-PLACE SOIL**  
 (Methodology: ASTM D2937)

Project Name: Hollywood-Burbank Airport  
 Project No: 210048001

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	TOTAL SAMPLE VOLUME, cc	MOISTURE CONTENT, % wt	VOLUMETRIC MOISTURE CONTENT, fraction Vb	DRY BULK DENSITY, g/cc
B-16 @ 5	5-5.5	20170313	454.61	3.1	0.057	1.84
B-16 @ 15	15.5-16	20170313	451.50	2.8	0.051	1.82
B-17 @ 5	5.5-6	20170313	456.59	10.0	0.154	1.54
B-17 @ 15	15.5-16	20170313	454.18	3.0	0.051	1.68
B-18 @ 5	5.5-6	20170313	456.34	2.2	0.039	1.74
B-18 @ 15	15.5-16	20170313	455.27	3.6	0.066	1.85
B-19 @ 5	5.5-6	20170313	456.46	11.1	0.174	1.56
B-19 @ 15	15.5-16	20170313	457.03	5.8	0.097	1.67
B-20 @ 5	5.5-6	20170313	456.85	5.1	0.092	1.82
B-20 @ 15	15.5-16	20170313	456.05	4.5	0.075	1.64
B-22 @ 5	5.5-6	20170313	284.07	5.1	0.090	1.77
B-22 @ 15	16-16.5	20170313	284.75	1.9	0.034	1.76

Vb = Bulk Volume

PTS File No: 47118  
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**PHYSICAL PROPERTIES DATA - PERMEABILITY TO AIR**

(Methodology: API RP40)

Project Name: Hollywood-Burbank Airport  
 Project No: 210048001

SAMPLE ID.	DEPTH, ft.	SAMPLE ORIENTATION (1)	ANALYSIS DATE	25 PSI CONFINING STRESS
				EFFECTIVE (2) PERMEABILITY TO AIR millidarcy
B-16 @ 5	5.6	V	20170314	20500
B-16 @ 15	15.25	V	20170314	2380
B-17 @ 5	5.2	V	20170314	6210
B-17 @ 15	15.3	V	20170314	4740
B-18 @ 5	5.3	V	20170314	18900
B-18 @ 15	15.3	V	20170314	10300
B-19 @ 5	5.35	V	20170314	687
B-19 @ 15	15.25	V	20170314	2430
B-20 @ 5	5.2	V	20170314	24100
B-20 @ 15	15.3	V	20170314	7530
B-22 @ 5	5.1	V	20170314	13000
B-22 @ 15	15.75	V	20170314	8020

(1) Sample Orientation: H = horizontal; V = vertical; R = remold

(2) Effective (Native) = With as-received pore fluids in place.

Air = Nitrogen gas.

PTS File No: 47118  
 Client: Ninyo & Moore  
 Report Date: 03/29/17

**ORGANIC CARBON DATA - TOC (foc)**  
 (Methodology: Walkley-Black)

Project Name: Hollywood-Burbank Airport  
 Project No: 210048001

SAMPLE ID.	DEPTH, ft.	ANALYSIS DATE	ANALYSIS TIME	SAMPLE MATRIX	TOTAL ORGANIC CARBON, mg/kg	FRACTION ORGANIC CARBON, g/g
B-16 @ 5	5.5	20170328	1130	SOIL	<100	<1.00E-04
B-16 @ 15	15.5	20170328	1130	SOIL	110	1.10E-04
B-17 @ 5	5.5	20170328	1130	SOIL	400	4.00E-04
B-17 @ 15	15.5	20170328	1130	SOIL	1350	1.35E-03
B-18 @ 5	5.5	20170328	1130	SOIL	110	1.10E-04
B-18 @ 15	15.5	20170328	1130	SOIL	860	8.60E-04
B-19 @ 5	5.5	20170328	1130	SOIL	2200	2.20E-03
B-19 @ 15	15.5	20170328	1130	SOIL	<100	<1.00E-04
B-20 @ 5	5.5	20170328	1130	SOIL	200	2.00E-04
B-20 @ 15	15.5	20170328	1130	SOIL	6600	6.60E-03
B-22 @ 5	5.5	20170328	1130	SOIL	690	6.90E-04
B-22 @ 15	16.0	20170328	1130	SOIL	<100	<1.00E-04

Blank	N/A	20170328	1130	BLANK	ND	ND
SRM D093-542	N/A	20170328	1130	SRM	6280	6.28E-03

Reporting Limit: 100 1.00E-04

**QC DATA**

SRM ID/Lot No.	REC (%)	Control Limits	Certified Concentration mg/kg	QC Performance	
				Acceptance Limits, mg/kg	
				Lower	Upper
SRM D093-542	112	75-125	5590	4193	6988

ND = Not Detected

Client: Ninyo & Moore  
 Project: Hollywood-Burbank Airport  
 Project No: 210048001

PTS File No: 47118  
 Sample ID: B-16 @ 5  
 Depth, ft: 5.5

### SIEVE - HYDROMETER ANALYSIS



Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1"	13.8	86.2	13.8
0.748	19.0	-4.25	3/4"	9.4	76.7	23.3
0.374	9.50	-3.25	3/8"	11.6	65.2	34.8
0.187	4.76	-2.25	4	13.0	52.2	47.8
0.0787	2.00	-1.00	10	13.5	38.6	61.4
0.0335	0.850	0.23	20	13.3	25.3	74.7
0.0166	0.420	1.25	40	10.5	14.8	85.2
0.0098	0.250	2.00	60	5.9	9.0	91.0
0.0042	0.106	3.24	140	4.8	4.2	95.8
0.0029	0.074	3.75	200	1.1	3.0	97.0
0.0014	0.036	4.80	Hydrometer	0.3	2.8	97.2
0.00090	0.023	5.45	Hydrometer	0.4	2.3	97.7
0.00052	0.013	6.24	Hydrometer	0.4	1.9	98.1
0.00037	0.0094	6.73	Hydrometer	0.4	1.5	98.5
0.00026	0.0066	7.24	Hydrometer	0.2	1.3	98.7
0.00013	0.0033	8.25	Hydrometer	0.3	0.9	99.1
0.00005	0.0014	9.51	Hydrometer	0.1	0.8	99.2
			"PAN"	0.8		100.0
<b>TOTALS</b>				100.0		100.0

Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-5.02	1.2749	32.384
10	-4.81	1.1010	27.965
16	-4.55	0.9238	23.464
25	-4.10	0.6736	17.109
40	-2.85	0.2840	7.214
50	-2.05	0.1632	4.144
60	-1.13	0.0860	2.184
75	0.26	0.0328	0.833
84	1.14	0.0179	0.454
90	1.87	0.0108	0.274
95	3.02	0.0049	0.123

Measure	Trask	Inman	Folk-Ward
Median, phi	-2.05	-2.05	-2.05
Median, in.	0.1632	0.1632	0.1632
Median, mm	4.144	4.144	4.144
Mean, phi	-3.17	-1.71	-1.82
Mean, in.	0.3532	0.1286	0.1392
Mean, mm	8.971	3.265	3.535
Sorting	4.533	2.845	2.640
Skewness	0.911	0.121	0.191
Kurtosis	0.294	0.412	0.755

**Grain Size Description (ASTM-USCS Scale)** Coarse sand (based on Trask Median)

Description	Retained on Sieve #	Weight Percent
Gravel	4	47.8
Coarse Sand	10	13.5
Medium Sand	40	23.8
Fine Sand	200	11.8
Silt/Clay	<200	3.0
<b>Total</b>		<b>100</b>

**Client:** Ninyo & Moore  
**Project:** Hollywood-Burbank Airport  
**Project No.:** 210048001

**PTS File No.:** 47118  
**Sample ID:** B-16 @ 15  
**Depth, ft.:** 15.3

**SIEVE - HYDROMETER ANALYSIS**



Client: Ninyo & Moore  
 Project: Hollywood-Burbank Airport  
 Project No: 210048001

PTS File No: 47118  
 Sample ID: B-17 @ 5  
 Depth, ft: 5.4

### SIEVE - HYDROMETER ANALYSIS





Client: Ninyo & Moore  
 Project: Hollywood-Burbank Airport  
 Project No: 210048001

PTS File No: 47118  
 Sample ID: B-17 @ 15  
 Depth, ft: 15.35

### SIEVE - HYDROMETER ANALYSIS



Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1"	0.0	100.0	0.0
0.748	19.0	-4.25	3/4"	0.0	100.0	0.0
0.374	9.50	-3.25	3/8"	3.9	96.1	3.9
0.187	4.76	-2.25	4	10.5	85.5	14.5
0.0787	2.00	-1.00	10	12.9	72.6	27.4
0.0335	0.850	0.23	20	16.4	56.3	43.7
0.0166	0.420	1.25	40	14.1	42.1	57.9
0.0098	0.250	2.00	60	10.7	31.4	68.6
0.0042	0.106	3.24	140	11.8	19.6	80.4
0.0029	0.074	3.75	200	3.6	16.1	83.9
0.0013	0.034	4.87	Hydrometer	3.6	12.5	87.5
0.00086	0.022	5.52	Hydrometer	1.7	10.8	89.2
0.00051	0.013	6.28	Hydrometer	2.5	8.3	91.7
0.00036	0.0092	6.77	Hydrometer	1.7	6.6	93.4
0.00026	0.0065	7.26	Hydrometer	0.8	5.8	94.2
0.00013	0.0032	8.27	Hydrometer	1.7	4.1	95.9
0.00005	0.0014	9.53	Hydrometer	0.8	3.3	96.7
"PAN"				3.3		100.0
<b>TOTALS</b>				100.0		100.0

Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.15	0.3490	8.863
10	-2.67	0.2512	6.380
16	-2.10	0.1689	4.291
25	-1.23	0.0923	2.343
40	-0.05	0.0406	1.032
50	0.69	0.0245	0.622
60	1.40	0.0149	0.379
75	2.68	0.0062	0.157
84	3.77	0.0029	0.073
90	5.77	0.0007	0.018
95	7.75	0.0002	0.005

Measure	Trask	Inman	Folk-Ward
Median, phi	0.69	0.69	0.69
Median, in.	0.0245	0.0245	0.0245
Median, mm	0.622	0.622	0.622
Mean, phi	-0.32	0.83	0.78
Mean, in.	0.0492	0.0221	0.0229
Mean, mm	1.250	0.561	0.581
Sorting	3.869	2.934	3.117
Skewness	0.975	0.050	0.173
Kurtosis	0.172	0.856	1.144

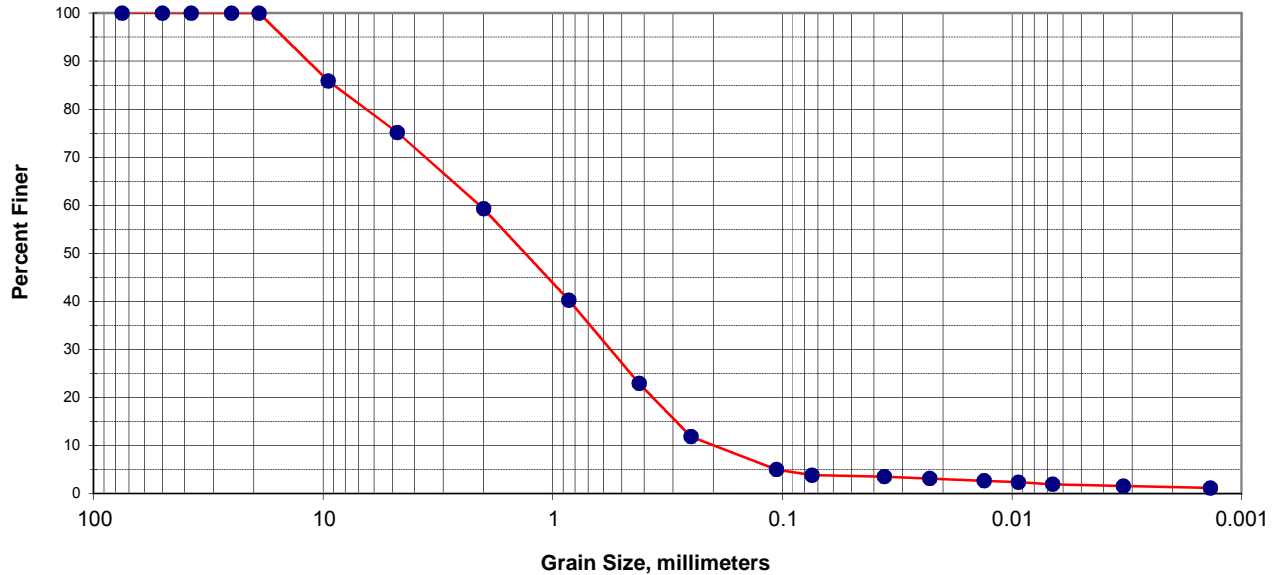
**Grain Size Description** (ASTM-USCS Scale) Medium sand (based on Trask Median)

Description	Retained on Sieve #	Weight Percent
Gravel	4	14.5
Coarse Sand	10	12.9
Medium Sand	40	30.5
Fine Sand	200	26.1
Silt/Clay	<200	16.1
<b>Total</b>		<b>100</b>

Client: Ninyo & Moore  
 Project: Hollywood-Burbank Airport  
 Project No: 210048001

PTS File No: 47118  
 Sample ID: B-18 @ 5  
 Depth, ft: 5.25

### SIEVE - HYDROMETER ANALYSIS



Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1"	0.0	100.0	0.0
0.748	19.0	-4.25	3/4"	0.0	100.0	0.0
0.374	9.50	-3.25	3/8"	14.1	85.9	14.1
0.187	4.76	-2.25	4	10.7	75.2	24.8
0.0787	2.00	-1.00	10	15.9	59.3	40.7
0.0335	0.850	0.23	20	19.1	40.2	59.8
0.0166	0.420	1.25	40	17.3	22.9	77.1
0.0098	0.250	2.00	60	11.0	11.9	88.1
0.0042	0.106	3.24	140	6.9	5.0	95.0
0.0029	0.074	3.75	200	1.2	3.8	96.2
0.0014	0.036	4.80	Hydrometer	0.3	3.5	96.5
0.00090	0.023	5.45	Hydrometer	0.4	3.1	96.9
0.00052	0.013	6.24	Hydrometer	0.5	2.6	97.4
0.00037	0.0094	6.73	Hydrometer	0.3	2.3	97.7
0.00026	0.0067	7.23	Hydrometer	0.4	1.9	98.1
0.00013	0.0033	8.25	Hydrometer	0.4	1.5	98.5
0.00005	0.0014	9.51	Hydrometer	0.4	1.2	98.8
			"PAN"	1.2		100.0
<b>TOTALS</b>				100.0		100.0

Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.89	0.5851	14.861
10	-3.54	0.4576	11.623
16	-3.07	0.3311	8.409
25	-2.24	0.1857	4.718
40	-1.06	0.0819	2.081
50	-0.40	0.0519	1.319
60	0.25	0.0332	0.842
75	1.13	0.0180	0.458
84	1.72	0.0120	0.304
90	2.33	0.0078	0.198
95	3.24	0.0042	0.106

Measure	Trask	Inman	Folk-Ward
Median, phi	-0.40	-0.40	-0.40
Median, in.	0.0519	0.0519	0.0519
Median, mm	1.319	1.319	1.319
Mean, phi	-1.37	-0.68	-0.58
Mean, in.	0.1019	0.0629	0.0590
Mean, mm	2.588	1.599	1.499
Sorting	3.209	2.395	2.278
Skewness	1.115	-0.116	-0.048
Kurtosis	0.186	0.489	0.869

Grain Size Description (ASTM-USCS Scale) Medium sand (based on Trask Median)

Description	Retained on Sieve #	Weight Percent
Gravel	4	24.8
Coarse Sand	10	15.9
Medium Sand	40	36.4
Fine Sand	200	19.1
Silt/Clay	<200	3.8
<b>Total</b>		<b>100</b>

**Client:** Ninyo & Moore  
**Project:** Hollywood-Burbank Airport  
**Project No:** 210048001

**PTS File No:** 47118  
**Sample ID:** B-18 @ 15  
**Depth, ft:** 15.35

**SIEVE - HYDROMETER ANALYSIS**



Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1"	0.0	100.0	0.0
0.748	19.0	-4.25	3/4"	0.0	100.0	0.0
0.374	9.50	-3.25	3/8"	3.8	96.2	3.8
0.187	4.76	-2.25	4	8.2	88.0	12.0
0.0787	2.00	-1.00	10	12.8	75.1	24.9
0.0335	0.850	0.23	20	25.9	49.3	50.7
0.0166	0.420	1.25	40	22.1	27.2	72.8
0.0098	0.250	2.00	60	11.0	16.2	83.8
0.0042	0.106	3.24	140	7.4	8.8	91.2
0.0029	0.074	3.75	200	1.4	7.4	92.6
0.0014	0.036	4.80	Hydrometer	0.7	6.7	93.3
0.00090	0.023	5.46	Hydrometer	0.5	6.1	93.9
0.00052	0.013	6.24	Hydrometer	1.0	5.1	94.9
0.00037	0.0094	6.74	Hydrometer	0.5	4.6	95.4
0.00026	0.0066	7.23	Hydrometer	0.5	4.1	95.9
0.00013	0.0033	8.26	Hydrometer	0.9	3.2	96.8
0.00005	0.0014	9.52	Hydrometer	0.7	2.5	97.5
"PAN"				2.5		100.0
<b>TOTALS</b>				100.0		100.0

Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-3.11	0.3392	8.615
10	-2.50	0.2224	5.650
16	-1.86	0.1433	3.640
25	-0.99	0.0784	1.991
40	-0.28	0.0477	1.212
50	0.20	0.0343	0.871
60	0.66	0.0249	0.632
75	1.40	0.0149	0.379
84	2.04	0.0096	0.243
90	3.04	0.0048	0.121
95	6.35	0.0005	0.012

Measure	Trask	Inman	Folk-Ward
Median, phi	0.20	0.20	0.20
Median, in.	0.0343	0.0343	0.0343
Median, mm	0.871	0.871	0.871
Mean, phi	-0.24	0.09	0.12
Mean, in.	0.0467	0.0371	0.0361
Mean, mm	1.185	0.941	0.917
Sorting	2.293	1.952	2.409
Skewness	0.997	-0.057	0.122
Kurtosis	0.146	1.422	1.618

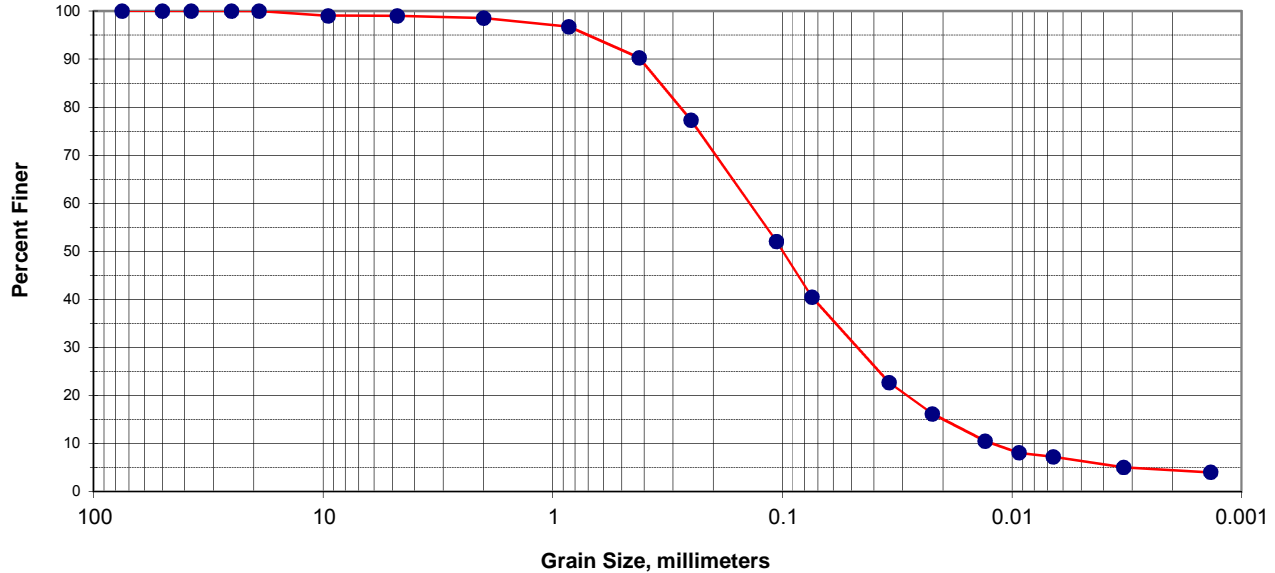
**Grain Size Description (ASTM-USCS Scale)** Medium sand (based on Trask Median)

Description	Retained on Sieve #	Weight Percent
Gravel	4	12.0
Coarse Sand	10	12.8
Medium Sand	40	47.9
Fine Sand	200	19.8
Silt/Clay	<200	7.4
<b>Total</b>		<b>100</b>

**Client:** Ninyo & Moore  
**Project:** Hollywood-Burbank Airport  
**Project No.:** 210048001

**PTS File No.:** 47118  
**Sample ID:** B-19 @ 5  
**Depth, ft:** 5.2

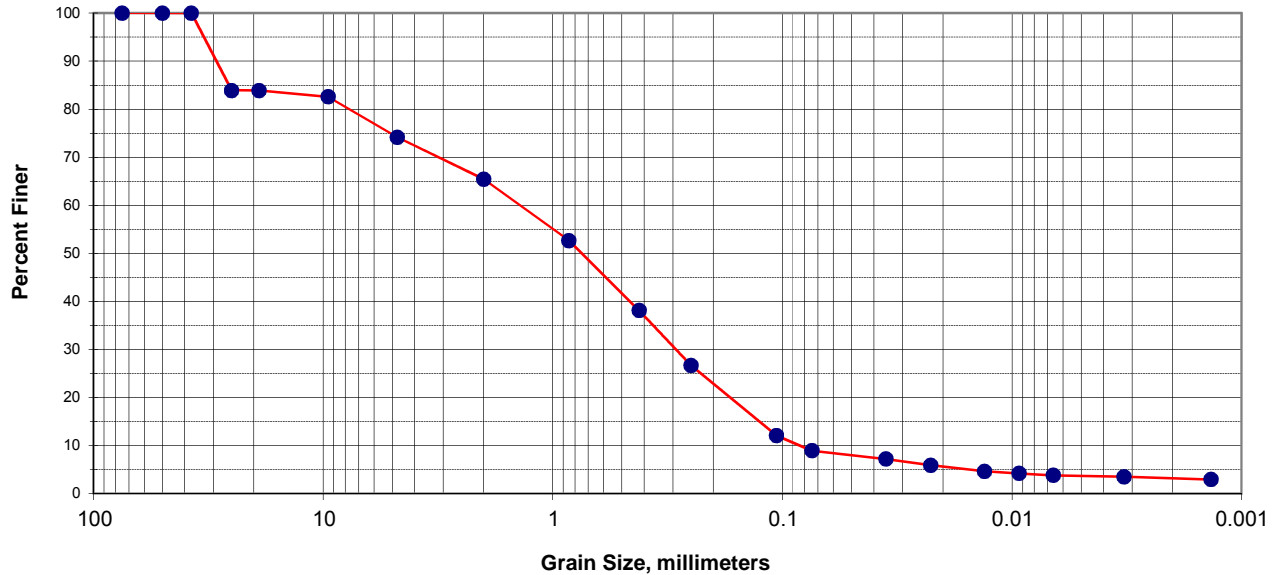
**SIEVE - HYDROMETER ANALYSIS**



Client: Ninyo & Moore  
 Project: Hollywood-Burbank Airport  
 Project No: 210048001

PTS File No: 47118  
 Sample ID: B-19 @ 15  
 Depth, ft: 15.4

### SIEVE - HYDROMETER ANALYSIS



Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1"	16.1	83.9	16.1
0.748	19.0	-4.25	3/4"	0.0	83.9	16.1
0.374	9.50	-3.25	3/8"	1.3	82.6	17.4
0.187	4.76	-2.25	4	8.4	74.2	25.8
0.0787	2.00	-1.00	10	8.7	65.4	34.6
0.0335	0.850	0.23	20	12.8	52.6	47.4
0.0166	0.420	1.25	40	14.5	38.1	61.9
0.0098	0.250	2.00	60	11.4	26.7	73.3
0.0042	0.106	3.24	140	14.6	12.0	88.0
0.0029	0.074	3.75	200	3.1	8.9	91.1
0.0014	0.035	4.82	Hydrometer	1.8	7.2	92.8
0.00089	0.023	5.47	Hydrometer	1.3	5.9	94.1
0.00052	0.013	6.25	Hydrometer	1.3	4.6	95.4
0.00037	0.0093	6.74	Hydrometer	0.4	4.2	95.8
0.00026	0.0066	7.24	Hydrometer	0.4	3.8	96.2
0.00013	0.0033	8.26	Hydrometer	0.3	3.5	96.5
0.00005	0.0014	9.52	Hydrometer	0.6	2.9	97.1
"PAN"				2.9		100.0
<b>TOTALS</b>				100.0		100.0

Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.92	1.1954	30.364
10	-4.62	0.9679	24.585
16	-4.25	0.7513	19.084
25	-2.35	0.2005	5.093
40	-0.48	0.0547	1.390
50	0.42	0.0294	0.748
60	1.12	0.0181	0.461
75	2.14	0.0089	0.227
84	2.90	0.0053	0.134
90	3.57	0.0033	0.084
95	6.02	0.0006	0.015

Measure	Trask	Inman	Folk-Ward
Median, phi	0.42	0.42	0.42
Median, in.	0.0294	0.0294	0.0294
Median, mm	0.748	0.748	0.748
Mean, phi	-1.41	-0.68	-0.31
Mean, in.	0.1047	0.0629	0.0488
Mean, mm	2.660	1.598	1.241
Sorting	4.740	3.578	3.447
Skewness	1.437	-0.306	-0.141
Kurtosis	0.099	0.529	0.999

Grain Size Description (ASTM-USCS Scale) Medium sand (based on Trask Median)

Description	Retained on Sieve #	Weight Percent
Gravel	4	25.8
Coarse Sand	10	8.7
Medium Sand	40	27.3
Fine Sand	200	29.2
Silt/Clay	<200	8.9
<b>Total</b>		<b>100</b>

**Client:** Ninyo & Moore  
**Project:** Hollywood-Burbank Airport  
**Project No.:** 210048001

**PTS File No.:** 47118  
**Sample ID:** B-20 @ 5  
**Depth, ft.:** 5.25

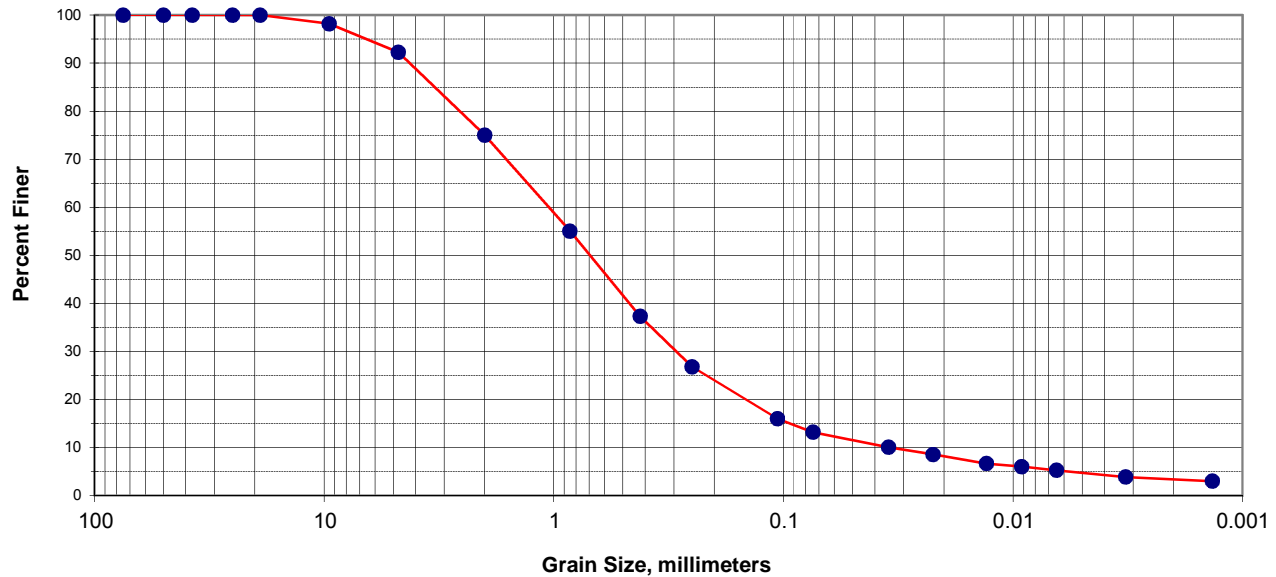
**SIEVE - HYDROMETER ANALYSIS**



Client: Ninyo & Moore  
 Project: Hollywood-Burbank Airport  
 Project No: 210048001

PTS File No: 47118  
 Sample ID: B-20 @ 15  
 Depth, ft: 15.4

### SIEVE - HYDROMETER ANALYSIS



**Client:** Ninyo & Moore  
**Project:** Hollywood-Burbank Airport  
**Project No.:** 210048001

**PTS File No.:** 47118  
**Sample ID:** B-22 @ 5  
**Depth, ft.:** 5.25

**SIEVE - HYDROMETER ANALYSIS**



Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1"	0.0	100.0	0.0
0.748	19.0	-4.25	3/4"	0.0	100.0	0.0
0.374	9.50	-3.25	3/8"	0.0	100.0	0.0
0.187	4.76	-2.25	4	0.5	99.5	0.5
0.0787	2.00	-1.00	10	1.9	97.7	2.3
0.0335	0.850	0.23	20	5.3	92.3	7.7
0.0166	0.420	1.25	40	16.2	76.1	23.9
0.0098	0.250	2.00	60	17.9	58.2	41.8
0.0042	0.106	3.24	140	31.9	26.4	73.6
0.0029	0.074	3.75	200	8.5	17.9	82.1
0.0014	0.036	4.81	Hydrometer	8.7	9.2	90.8
0.00090	0.023	5.45	Hydrometer	2.0	7.2	92.8
0.00052	0.013	6.23	Hydrometer	2.0	5.3	94.7
0.00037	0.0093	6.74	Hydrometer	0.3	4.9	95.1
0.00026	0.0066	7.24	Hydrometer	0.5	4.4	95.6
0.00013	0.0033	8.26	Hydrometer	1.3	3.1	96.9
0.00005	0.0014	9.52	Hydrometer	0.6	2.4	97.6
			"PAN"	2.4		100.0
<b>TOTALS</b>				100.0		100.0

Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-0.38	0.0512	1.301
10	0.38	0.0302	0.768
16	0.76	0.0233	0.592
25	1.30	0.0160	0.407
40	1.93	0.0104	0.263
50	2.32	0.0079	0.200
60	2.71	0.0060	0.153
75	3.32	0.0039	0.100
84	3.98	0.0025	0.063
90	4.72	0.0015	0.038
95	6.61	0.0004	0.010

Measure	Trask	Inman	Folk-Ward
Median, phi	2.32	2.32	2.32
Median, in.	0.0079	0.0079	0.0079
Median, mm	0.200	0.200	0.200
Mean, phi	1.98	2.37	2.35
Mean, in.	0.0100	0.0076	0.0077
Mean, mm	0.253	0.193	0.196
Sorting	2.016	1.613	1.866
Skewness	1.007	0.031	0.129
Kurtosis	0.210	1.167	1.416

**Grain Size Description (ASTM-USCS Scale)** Fine sand (based on Trask Median)

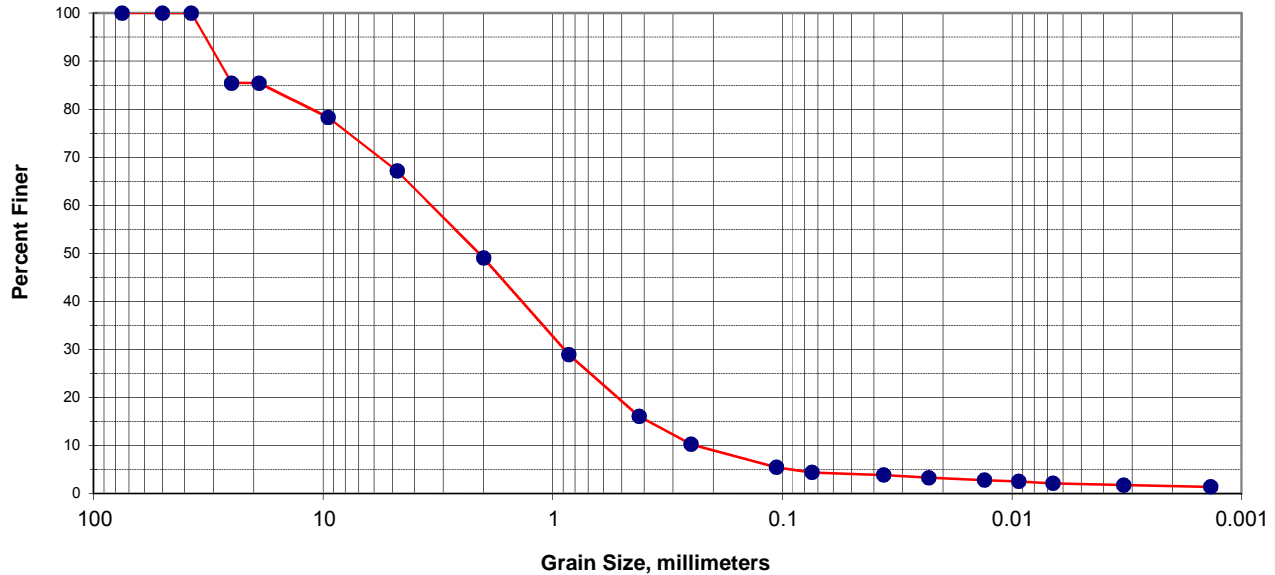
Description	Retained on Sieve #	Weight Percent
Gravel	4	0.5
Coarse Sand	10	1.9
Medium Sand	40	21.5
Fine Sand	200	58.2
Silt/Clay	<200	17.9
<b>Total</b>		<b>100</b>



**Client:** Ninyo & Moore  
**Project:** Hollywood-Burbank Airport  
**Project No.:** 210048001

**PTS File No.:** 47118  
**Sample ID:** B-22 @ 15  
**Depth, ft.:** 15.6

**SIEVE - HYDROMETER ANALYSIS**



Opening		Phi of Screen	U.S. Sieve No.	Incremental Percent Finer	Percent Finer	Cumulative Percent Retained
Inches	Millimeters					
2.95	75.0	-6.23	3"	0.0	100.0	0.0
1.97	50.0	-5.64	2"	0.0	100.0	0.0
1.48	37.5	-5.23	1-1/2"	0.0	100.0	0.0
0.984	25.0	-4.64	1"	14.6	85.4	14.6
0.748	19.0	-4.25	3/4"	0.0	85.4	14.6
0.374	9.50	-3.25	3/8"	7.1	78.3	21.7
0.187	4.76	-2.25	4	11.2	67.1	32.9
0.0787	2.00	-1.00	10	18.1	49.0	51.0
0.0335	0.850	0.23	20	20.1	28.9	71.1
0.0166	0.420	1.25	40	12.9	16.0	84.0
0.0098	0.250	2.00	60	5.8	10.2	89.8
0.0042	0.106	3.24	140	4.8	5.5	94.5
0.0029	0.074	3.75	200	1.1	4.4	95.6
0.0014	0.036	4.79	Hydrometer	0.5	3.9	96.1
0.00091	0.023	5.44	Hydrometer	0.6	3.3	96.7
0.00052	0.013	6.24	Hydrometer	0.5	2.8	97.2
0.00037	0.0094	6.74	Hydrometer	0.3	2.5	97.5
0.00026	0.0066	7.23	Hydrometer	0.4	2.1	97.9
0.00013	0.0033	8.26	Hydrometer	0.4	1.8	98.2
0.00005	0.0014	9.52	Hydrometer	0.4	1.4	98.6
"PAN"				1.4		100.0
<b>TOTALS</b>				100.0		100.0

Cumulative Percent greater than (retained)			
Weight percent	Phi Value	Particle Size	
		Inches	Millimeters
5	-4.89	1.1692	29.697
10	-4.56	0.9259	23.518
16	-4.05	0.6512	16.540
25	-2.95	0.3050	7.748
40	-1.76	0.1332	3.383
50	-1.07	0.0826	2.097
60	-0.45	0.0537	1.363
75	0.54	0.0270	0.687
84	1.25	0.0165	0.419
90	2.06	0.0094	0.239
95	3.46	0.0036	0.091

Measure	Trask	Inman	Folk-Ward
Median, phi	-1.07	-1.07	-1.07
Median, in.	0.0826	0.0826	0.0826
Median, mm	2.097	2.097	2.097
Mean, phi	-2.08	-1.40	-1.29
Mean, in.	0.1660	0.1037	0.0961
Mean, mm	4.217	2.633	2.441
Sorting	3.359	2.651	2.591
Skewness	1.100	-0.124	-0.020
Kurtosis	0.152	0.575	0.979

**Grain Size Description (ASTM-USCS Scale)** Coarse sand (based on Trask Median)

Description	Retained on Sieve #	Weight Percent
Gravel	4	32.9
Coarse Sand	10	18.1
Medium Sand	40	33.0
Fine Sand	200	11.6
Silt/Clay	<200	4.4
<b>Total</b>		<b>100</b>



COMPANY NINVO & MOORE				ANALYSIS REQUEST														PO#						
ADDRESS		CITY		ZIP CODE		NUMBER OF SAMPLES SOIL PROPERTIES PACKAGE HYDRAULIC CONDUCTIVITY PACKAGE PORE FLUID SATURATIONS PACKAGE TCEQ/TNRC PROPERTIES PACKAGE CAPILLARITY PACKAGE FLUID PROPERTIES PACKAGE PHOTOLOG: CORE PHOTOGRAPHY MOISTURE CONTENT, ASTM D2216 POROSITY: TOTAL, API RP40 POROSITY: EFFECTIVE, ASTM D425M SPECIFIC GRAVITY, ASTM D854 BULK DENSITY (DRY), API RP40 or ASTM D2937 AIR PERMEABILITY, API RP40 HYDRAULIC CONDUCTIVITY, EPA9100, API RP40, D5084 GRAIN SIZE DISTRIBUTION, ASTM D422/464M TOC: WALKLEY-BLACK ATTERBERG LIMITS, ASTM D4318	TURNAROUND TIME 24 HOURS <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 48 HOURS <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/> 72 HOURS <input type="checkbox"/>														OTHER: _____			
PROJECT MANAGER				PHONE NUMBER				SAMPLE INTEGRITY (CHECK): INTACT <input checked="" type="checkbox"/> ON ICE <input checked="" type="checkbox"/>														PTS QUOTE NO.		
PROJECT NAME				FAX NUMBER				PTS FILE:														COMMENTS		
PROJECT NUMBER				SITE LOCATION				per Quote Q17-040 Pending email confirmation														47118		
SAMPLER SIGNATURE				SAMPLER SIGNATURE				X														COMMENTS		
SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT																					
B-22 @ 15.5	2/22/17		15.5-16.5																					
1. RELINQUISHED BY				2. RECEIVED BY				3. RELINQUISHED BY				4. RECEIVED BY												
COMPANY				COMPANY				COMPANY				COMPANY												
DATE				DATE				DATE				DATE												
TIME				TIME				TIME				TIME												
NINVO & MOORE				NINVO & MOORE				NINVO & MOORE				PTS LABS												
3/6/17				3/6/17				3/6/17				3/6/17												
9:45 a.m.				0945 hrs.				1047 hrs				1047												

NOTED