

Work Order 101724  
 Date Exc. 5/24/90  
 Logged by JMP  
 Elevation \_\_\_\_\_  
 Equipment 410C Backhoe

T A B L E I

LOG OF TEST PITS

<u>Test Pit No.</u>	<u>Depth (ft)</u>	<u>USCS</u>	<u>Description</u>
T-1	0.0 - 0.5		SOIL: Brown silty sand, loose, dry, voids, roots
	0.5 - 6.0		GRANODIORITE (gd): Gray to dark gray, weathered, brown colored staining, large grained texture, 3-4" wide sheared zone, dry, loose to moderately hard @ 6.5 ft., refusal Attitude: N12W, 64W - shear Attitude: N3E, 54W - fault  Total Depth 6.5 ft.
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T-2	0.0 - 5.0		QUARTZ MONZONITE (qm): Buff tan, medium grained, weathered, iron stains on fractures and joints, dry, loose to moderately hard @ 3.5 ft., decreasing weathering effects @ 4.0 ft., increasing hardness @ 5.0 ft., refusal Attitude: N55E, 65SE - joint Attitude: N28W, 70SW - joint  Total Depth 5.0 ft.

Work Order 101724  
May 24, 1990

T-3

0.0 - 5.0

QUARTZ MONZONITE (qm):  
Buff tan to brown, medium grained,  
weathered, dry, loose to  
moderately hard, iron staining on  
joints  
@ 3.0 ft., increasing hardness and  
decreasing weathering  
@ 5.0 ft., refusal  
Attitude: N85E, 50S - joint

Total Depth 5.0 ft.

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T-4

0.0 - 7.0

GRANDIORITE (qd):  
Brown to gray, large grained, dry  
to slightly moist, moderately hard  
to hard, 1" quartzite stringer,  
weathered  
@ 3.0 ft., decrease in weathering  
@ 7.0 ft., refusal  
Attitude on quartzite bed:  
N80E, 20N  
Attitude: N65E, 74SE - joint  
Attitude: N86E, 37N - joint

Total Depth 7.0 ft.

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T-5

0.0 - 5.0

QUARTZ MONZONITE (qm):  
Tan brown, large grained, dry,  
moderately hard to hard, sheared,  
weathered,  
@ 3.0 ft., decrease in weathering  
@ 5.0 ft., refusal  
Attitude: N75W, 60S - shear  
Attitude: N55E, 65SE - joint  
Attitude: NS, 84W - joint

Total Depth 5.0 ft.

Work Order 101724  
May 24, 1990

T-6

0.0 - 5.0

GRANDIORITE (qd):  
Gray to dark gray, large grained,  
dry, moderately hard to hard,  
sheared, quartzite vein 2" thick,  
weathered

@ 5.0 ft., refusal

Attitude: N80E, 60S - fault

Attitude: N60W, 80S - shear

Attitude: N36W, 80NE - joint

Total Depth 5.0 ft.

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T-7

0.0 - 5.0

GRANDIORITE (qd):  
Gray to dark gray, large grained,  
dry, moderately hard to hard,  
weathered

@ 5.0 ft., refusal

Attitude: N68E, Vertical - joint

Total Depth 5.0 ft.

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T-8

0.0 - 4.0

GRANDIORITE (qd):  
Light gray to gray, large grained,  
dry, moderately hard to hard, iron  
staining on joints, weathered

@ 4.0 ft., refusal

Attitude: N15W, 65W - joint

Total Depth 4.0 ft.

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T-9

0.0 - 4.5

GRANDIORITE (qd):  
Brown to gray, large grained, dry,  
moderately hard to hard, weathered

@ 4.5 ft., refusal

Total Depth 4.5 ft.

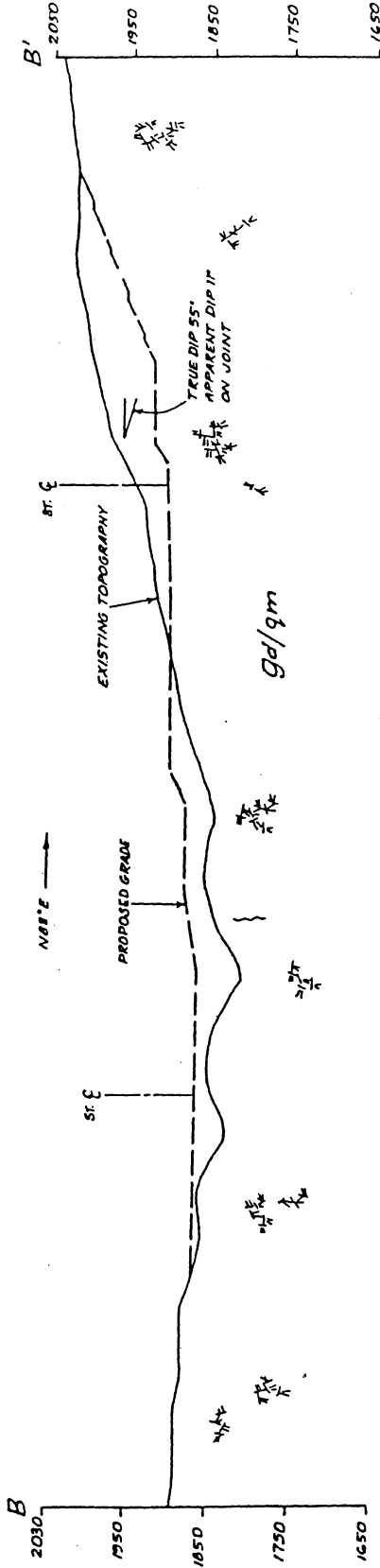
Work Order 101724  
June 5, 1990  
Hand Dug Trench

HT-1	0.0 - 0.5	ALLUVIUM (Qal): Brown to gray silty sand, loose, dry, rootlets, organics
	0.5 - 2.0	GRANODIORITE (qd): Gray to dark gray, large grained, moderately hard to hard, weathered Attitude: N20E, Vertical - joint
		Total Depth 2.0 ft.

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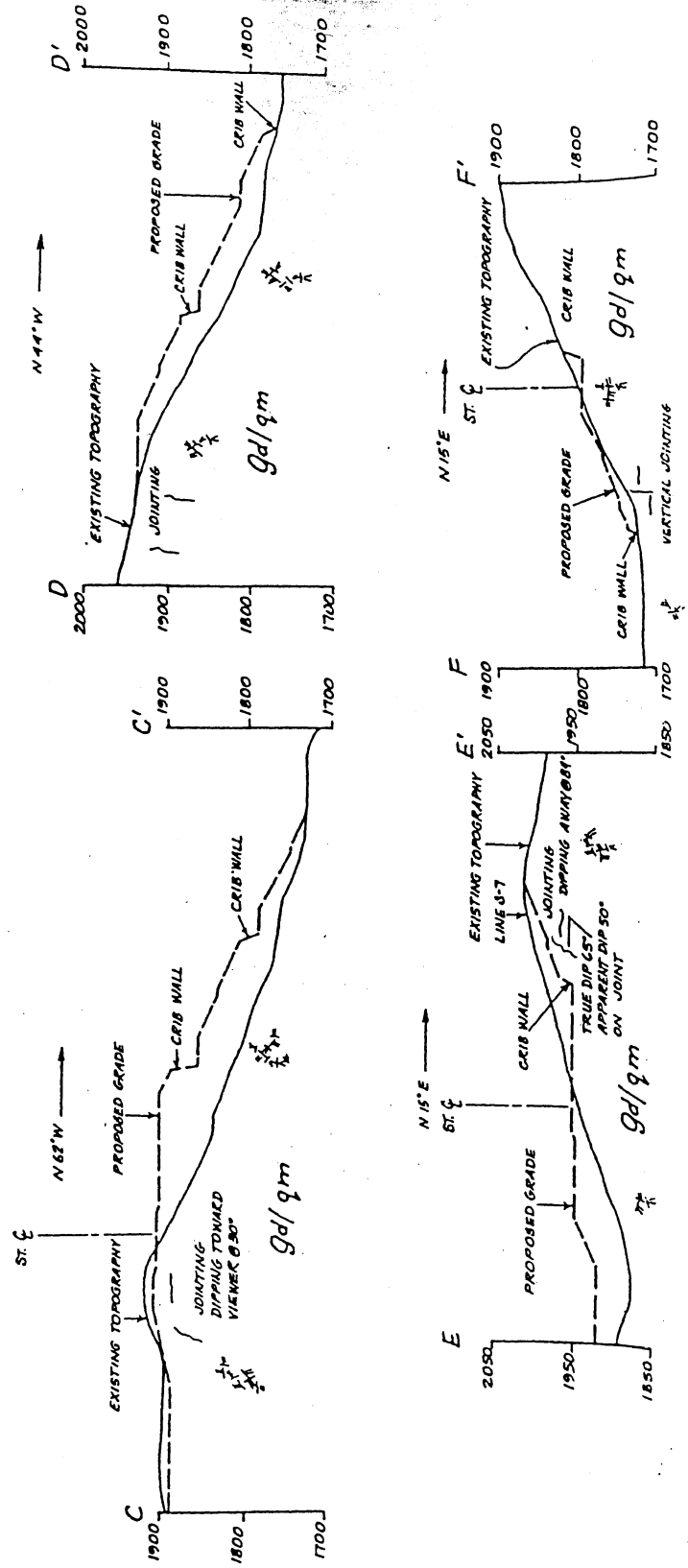
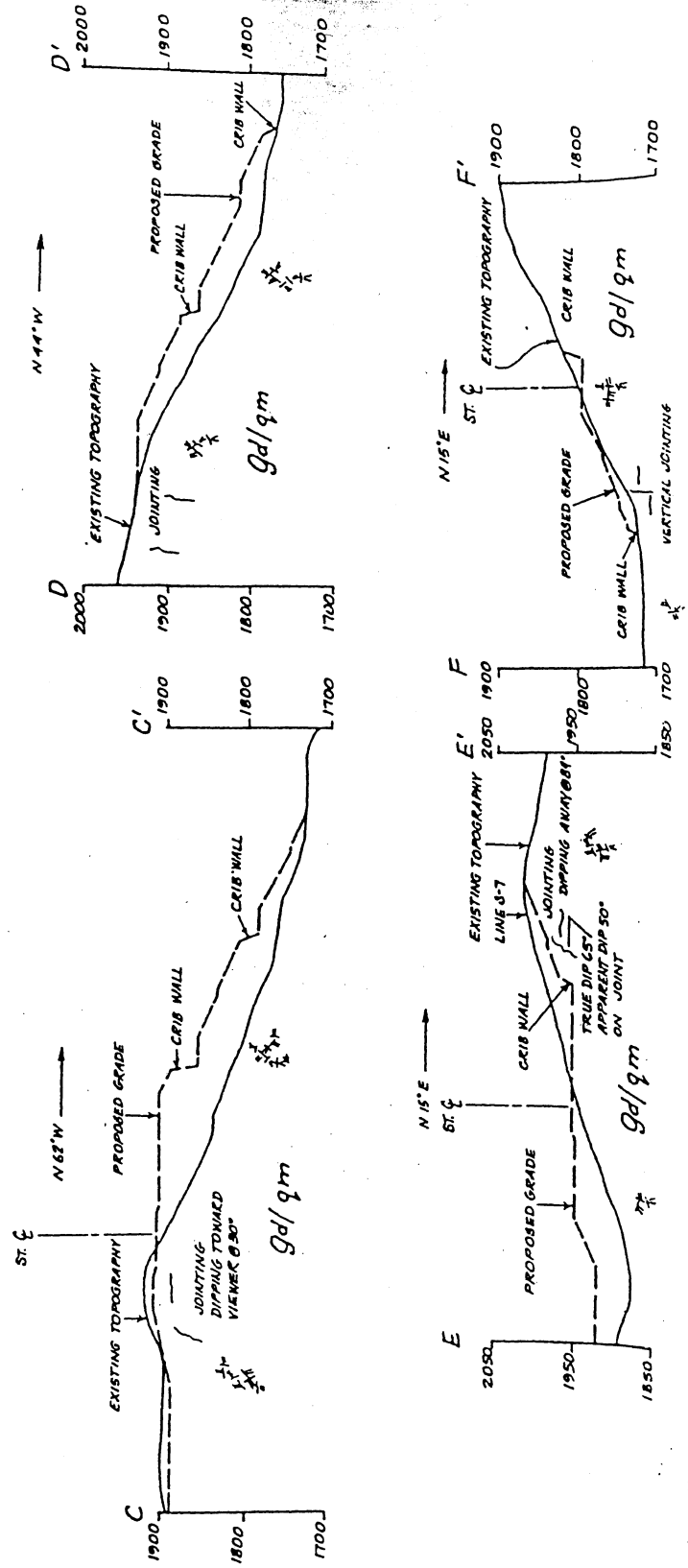
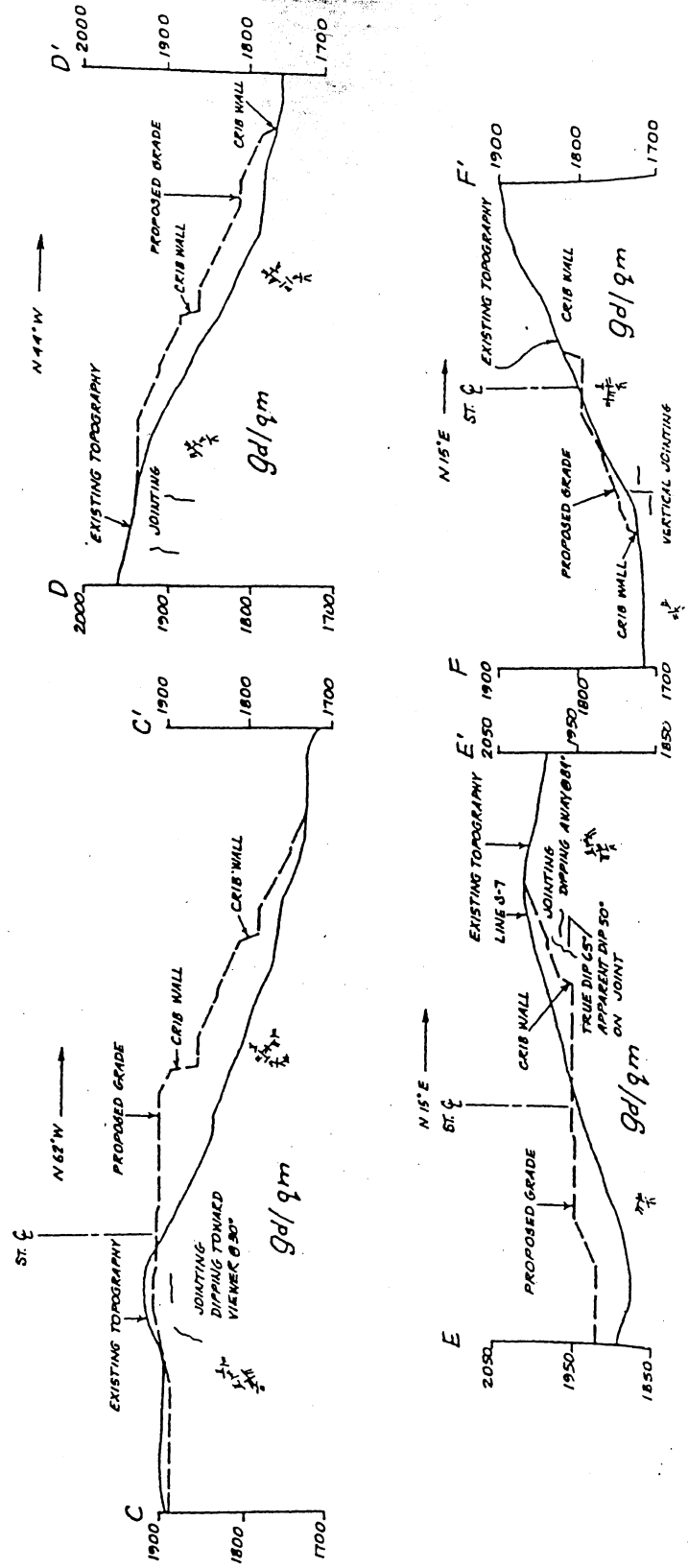
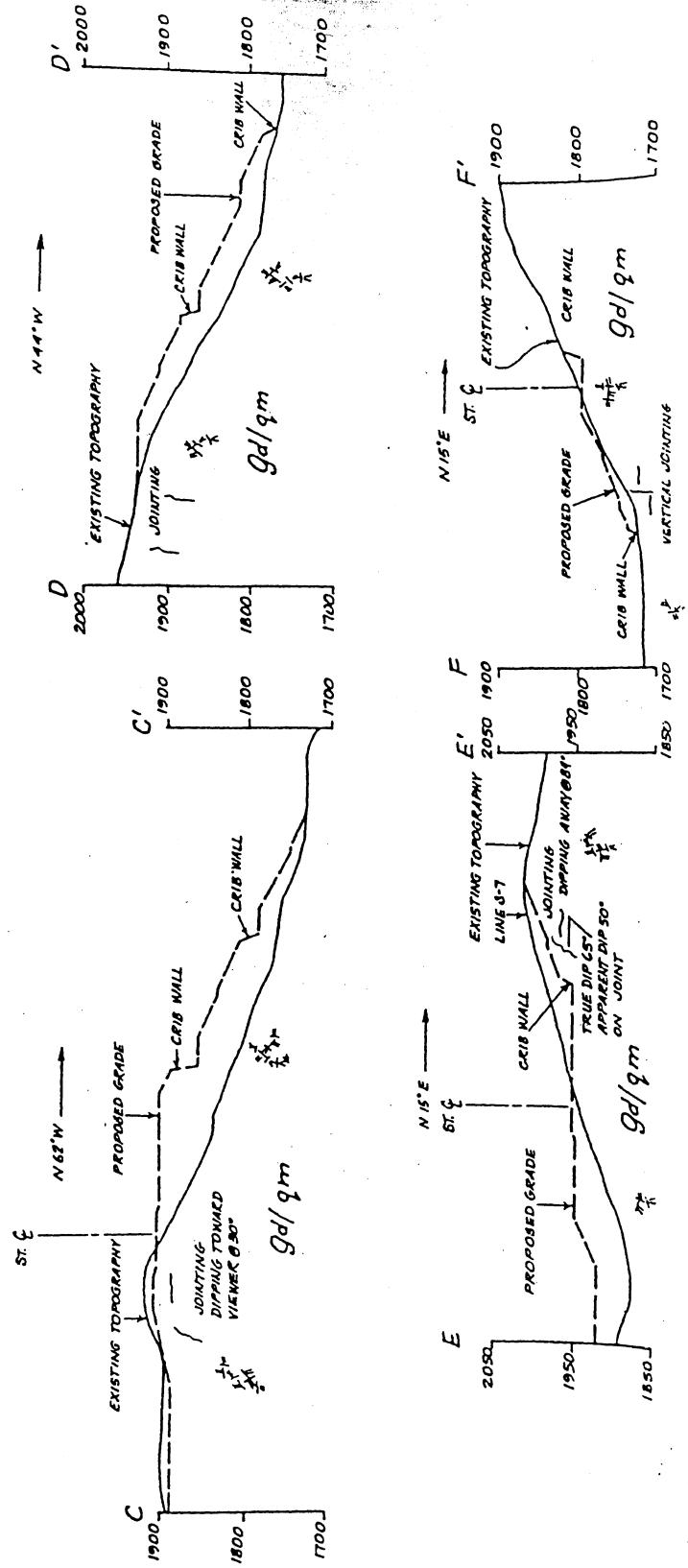
HT-2	0.0 - 1.0	ALLUVIUM (Qal): Brown to gray silty sand, loose, dry, organics
	1.0 - 2.0	GRANODIORITE (qd): Gray to dark gray, large grained, moderately hard to hard, weathered Attitude: N48E, 75SE - joint
		Total Depth 2.0





SCALE: 1"=100' H/V

PACIFIC SOILS ENGINEERING, INC.  
 10833 PROGRESS WAY, CYPRESS, CALIFORNIA 17141820-0770  
 W.O. 10/724 DATE 6-21-90



**APPENDIX D**  
**CALTRANS EXPLORATION**





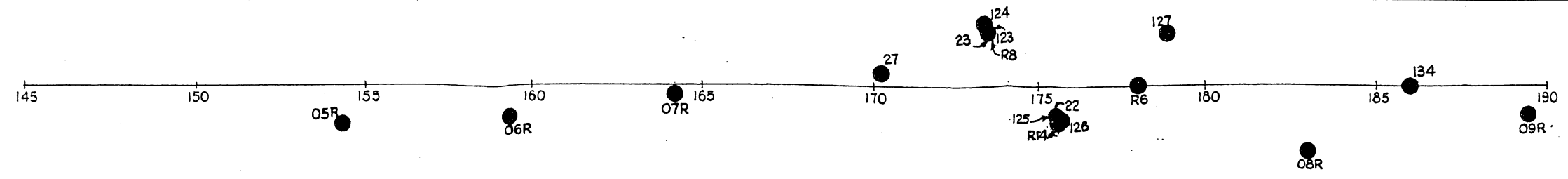
W.O. 07202 - 063741  
 PARTY CHIEF A. J. CRAMER  
 DATE NOVEMBER, 1967

STANDARD SOIL SURVEY SHEET

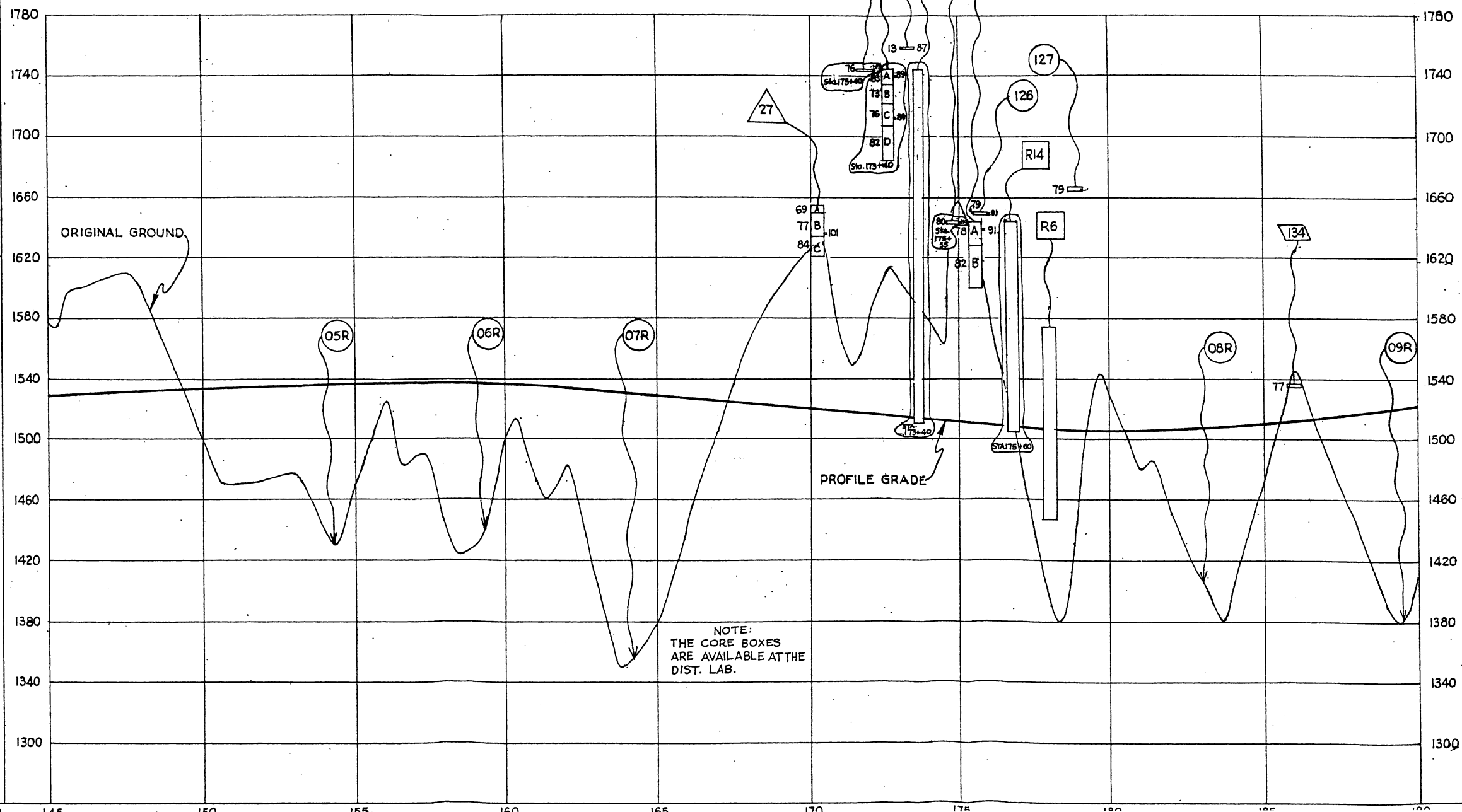
LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE

DIST	COUNTY	ROUTE	SEC	SHEET NO	TOTAL SHEETS
VII	LA	210	11.0/15.6	2	6
STA. 145+00			TO STA. 190+00		

PLAN OF BORINGS  
 LONGITUDINAL SCALE 1" = 200'  
 LATERAL SCALE 1" = 400'



CENTER LINE PROFILE & DETAIL LOG OF BORINGS  
 SCALE HOR. 1" = 200' VERT. PROFILE 1" = 40' BORINGS 1" = 40'



NOTE:  
 THE CORE BOXES  
 ARE AVAILABLE AT THE  
 DIST. LAB.



1 E.A. 07202 - 063741		STANDARD SOIL SURVEY SHEET										LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE				DIST	COUNTY	ROUTE	P.M.	SHEET NO.	TOTAL SHEETS		
2 PROJECT ENGR. A. J. CRAMER																07	LA	210	11.0/15.6	2A	6		
3 DATE NOVEMBER, 1967																STA. 145+00		TO STA. 190+00					
4 BORING & SAMPLE NO. (R.C. NO.)		05R		06R		07R		27A		27B (-B1)		27C		124		123				SEE SHEET #2B FOR FURTHER DAT.			
5 DATE SAMPLED BY		5-22-67 Surface		5-22-67 Surface		5-22-67 Surface		4-20-67 Bucket		170+25: 75' Lt.		173+30: 370' Lt.		173+40: 325' Lt.									
6 LOCATION FT. LEFT OR RIGHT		154+30: 220' Rt.		159+30: 180' Rt.		164+20: 50' Rt.		0'-4.5'		4.5'-20' (18-18.8')		20'-33'		0'-1'		0'-1'							
7 DEPTH R.C. DEPTH																							
8 ORIGINAL GROUND ELEVATIONS								(E1=1655')				2-1/2"=100		(E1=1760')		(E1=1745')							
9 CORROSION DATA		SEE BELOW		SEE BELOW		SEE BELOW		100		100		90		81		100							
10 MECHANICAL ANALYSIS								AS RECEIVED		AS RECEIVED		AS RECEIVED		AS RUN		AS RUN							
11 1-1/2"								96		99		81		100		100							
12 3/4"								90		100		98		100		100							
13 1/2"								78		87		94		96		78							
14 3/8"								45		76		90		92		43		69					
15 No. 4 MESH (4760 MICRONS)								45		50		76		78		43		69					
16 No. 8 "								26		38		59		60		33		32					
17 No. 16 "								19		21		33		34		20		25					
18 No. 30 "								14		16		24		24		15		19					
19 No. 50 "								11		12		17		17		11		14					
20 No. 100 "								9		10		14		14		8		10					
21 No. 200 "																							
22 No. 270 "																							
23 5 MICRONS																							
24 1 MICRON																							
25 FIELD DESCRIPTION OF SOIL		Sandy Silt		Sandy Silt		Sandy Silt		D.G.		D.G.		D.G. & Granite		D.G.		D.G.							
26 MOIST. & DRY WT. OPT. MOIST. %										3.0		10.0		12.4		10.8		7.3		11.5			
27 DRY WT. LB./CU. FT. MAX. DENSITY										132.7		131.4		109.4		126.3		133.6		125.0			
28 RELATIVE COMPACTION										101%				87%									
29 LIQUID LIMIT PLASTICITY INDEX																							
30 SAND EQUIVALENT % GRAVITY FINES								26		31		42		12		2.67		48		2.67			
31 SPECIMEN IDENTIFICATION		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C			
32 % MOIST. IN FABRICATED SPEC.								8.2		8.7		9.3		8.7		9.1		9.0		7.1		7.6	
33 % MOIST. AFTER SOAKING								8.3		8.8		9.3		9.3		9.4		9.3		7.8		7.6	
34 DRY WEIGHT PER CUBIC FOOT								132.7		133.0		133.1		129.9		130.4		129.5		132.4		135.5	
35 EXUDATION PRESSURE P.S.I.								510		350		135		390		250		220		480		380	
36 EXPANSION PRESSURE DVL PD. P.S.I.								0		0		0		0		0		0		0		0	
37 STABILOMETER R VALUE								83		73		36		80		71		63		84		84	
38 THICKNESS INDIC. BY STAB. FEET								0		0		0		0		0		0		0		0	
39 THICK. INDIC. BY EXP. PRESS. FEET								0		0		0		0		0		0		0		0	
40 "R" VALUE AT EQUIL. CONDITION								69 Exud.		77 Exud.		84 Exud.		13 Exud.		0		0.40		0.20		0	
41 INDIC. MIN. THICK. FOR BELOW COND.																							
42 SEC. / GRAVEL FACTOR / T.I.																							
43 SPECIMEN NUMBER																							
44 MOIST. USED & BY WEIGHT																							
45 WATER SQUEEZED OUT, GRAMS																							
46 CEMENT % OF AGG. DRY WEIGHT								0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH	
47 COMPACTED DRY WT. / CU. FT.								1500 7.4		500 7.8		6000 6.7		850 7.5		3500 7.6		4600 7.5		6250 7.4			
48 DAYS COMPRESSIVE STR. / SQ. IN.								Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life	
49								36 years		24 years		31 years		30 years		52 years		58 years		67 years			
50 REMARKS																							



W.O. 07202 - 063741  
 PARTY CHIEF A. J. CRAMER  
 DATE NOVEMBER, 1967

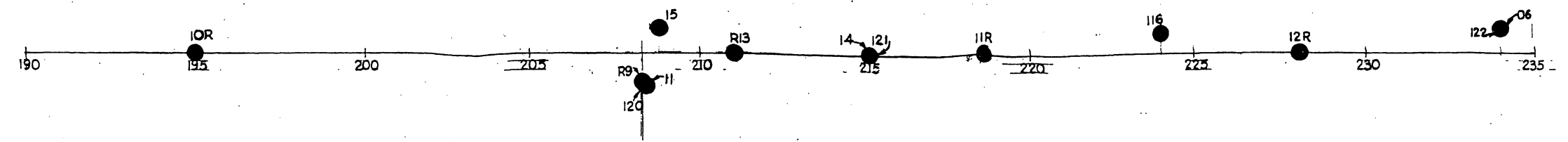
STANDARD SOIL SURVEY SHEET

LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE

DIST	CGUNTY	ROUTE	SEC	SHEET NO.	TOTAL SHEETS
VII	LA	210	11.0/15.6	3	6
STA. 190+00			TO STA. 235+00		

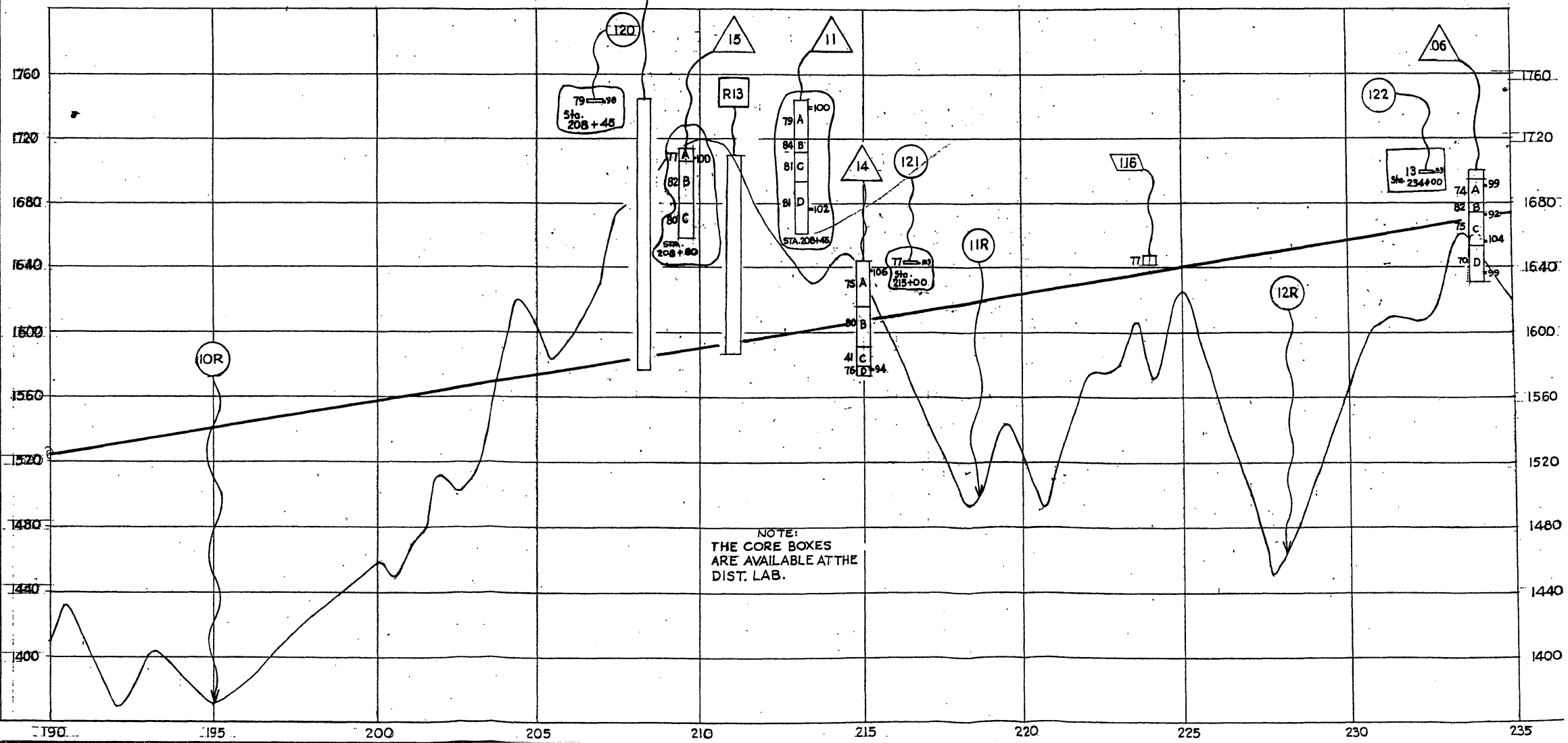
PLAN OF BORINGS

LONGITUDINAL SCALE 1" = 200'  
 LATERAL SCALE 1" = 400'



CENTER LINE PROFILE & DETAIL LOG OF BORINGS

SCALE HOR. 1" = 200' VERT. PROFILE 1" = 40' BORINGS 1" =



NOTE:  
 THE CORE BOXES  
 ARE AVAILABLE AT THE  
 DIST. LAB.

STATION 190 195 200 205 210 215 220 225 230 235

1 E.A. 07202 - 063741		STANDARD SOIL SURVEY SHEET						LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE			DIST. COUNTY ROUTE		P.M.		SHEET NO. TOTAL SHEETS				
2 PROJECT ENGR. A. J. CRAMER											07 LA 210		11.0/15.6		3A 6				
3 DATE NOVEMBER, 1967											STA. 190+00		TO STA. 235+00						
4 BORING & SAMPLE NO. (R.C. NO.)		10R	R9	11A (-A1)	11B	11C	* 11D (-D1)	120											
5 DATE SAMPLED BY		5-23-67 Surface	Core	3-16-67 Bucket				3-17-67 Bucket	5-11-67 Surface										
6 STATION + FT., LEFT OR RIGHT*		195+00: f	208+30: 160' Lt.	208+45: 195' Rt.					208+45: 195' Rt.										
7 DEPTH (R.C. DEPTH)			135'-140'	0'-24' (5-5.8')	24'-32'	32'-51'	51'-83' (67-67.8')	0'-1'											
8 (ORIGINAL GROUND ELEVATIONS*)				(E1=1745')	2'-100			(E1=1745')											
9 CORROSION DATA		SEE BELOW																	
10 MECHANICAL ANALYSIS																			
11 3/4"																			
12 3/8"																			
13 3/8"																			
14 No. 4 MESH (4750 MICRONS)																			
15 No. 10 " 2380 "																			
16 No. 20 " 1190 "																			
17 No. 30 " 503 "																			
18 No. 50 " 297 "																			
19 No. 100 " 149 "																			
20 No. 200 " 74 "																			
21 No. 270 " 53 "																			
22 5 MICRONS																			
23 1 MICRON																			
24 FIELD DESCRIPTION OF SOIL		D.G. & Silt		Granitic		D.G.		D.G. & Granite		D.G.		D.G.							
25 MOIST. & DRY WT. OPT. MOIST. %		10.3		12.5				2.3		7.5		7.2		10.5					
26 DRY WT. LB./CU. FT. MAX. DENSITY		119.2		118.8				135.0		132.3		121.4		123.5					
27 RELATIVE COMPACTION		100%						102%				98%							
28 LIQUID LIMIT PLASTICITY INDEX		67		63		53		44		46		2.61							
29 SAND EQUIVALENT SP. GRAVITY FINES																			
30 SPECIMEN IDENTIFICATION		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C			
31 % MOIST. IN FABRICATED SPEC.		9.4		10.2		11.1		8.3		8.9		9.6		8.2		9.1		9.5	
32 % MOIST. AFTER SOAKING		11.5		11.3		11.6		9.9		10.1		10.5		9.5		9.7		10.0	
33 DRY WEIGHT PER CUBIC FOOT		118.5		120.5		120.2		126.2		125.2		125.0		126.5		125.7		126.4	
34 EXUDATION PRESSURE P.S.I.		470		360		110		455		345		145		705		320		135	
35 EXPANSION PRESSURE D.V.L.P. P.S.I.		0.12		0.09		0		0		0		0.06		0.03		0		0	
36 STABILOMETER R VALUE		81		79		78		83		84		82		84		81		80	
37 THICKNESS INDIC. BY STAB. FEET		0.13		0.10		0		0		0		0.07		0.03		0		0	
38 THICK. INDIC. BY EXP. PRESS. FEET		0.13		0.10		0		0		0		0.07		0.03		0		0	
39 "R" VALUE AT EQUIL. CONDITION		79		Exud.				84		Exud.		81		Exud.		81		Exud.	
40 INDIC. MIN. THICK. FOR BELOW COND.																			
41 SEC. / GRAVEL FACTOR / T.I.																			
42 SPECIMEN NUMBER																			
43 MOIST. USED & BY WEIGHT																			
44 WATER SQUEEZED OUT, GRAMS																			
45 CEMENT % OF AGG. DRY WEIGHT																			
46 7 COMPACTED DRY WT./CU. FT.																			
47 DAYS COMPRESSIVE STR. /SQ. IN.																			
48																			
49																			
50 REMARKS																			



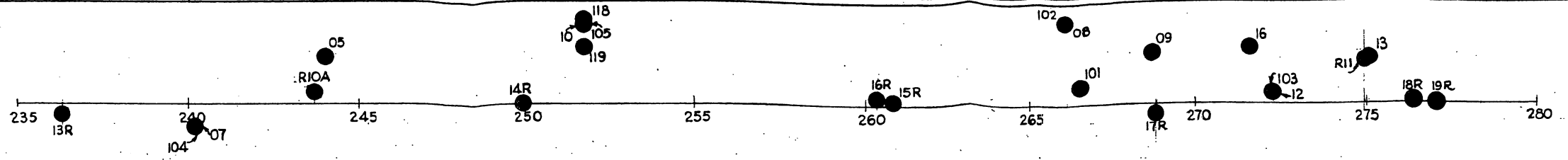
W.O. 07202 - 063741  
 PARTY CHIEF A. J. CRAMER  
 DATE NOVEMBER, 1967

# STANDARD SOIL SURVEY SHEET

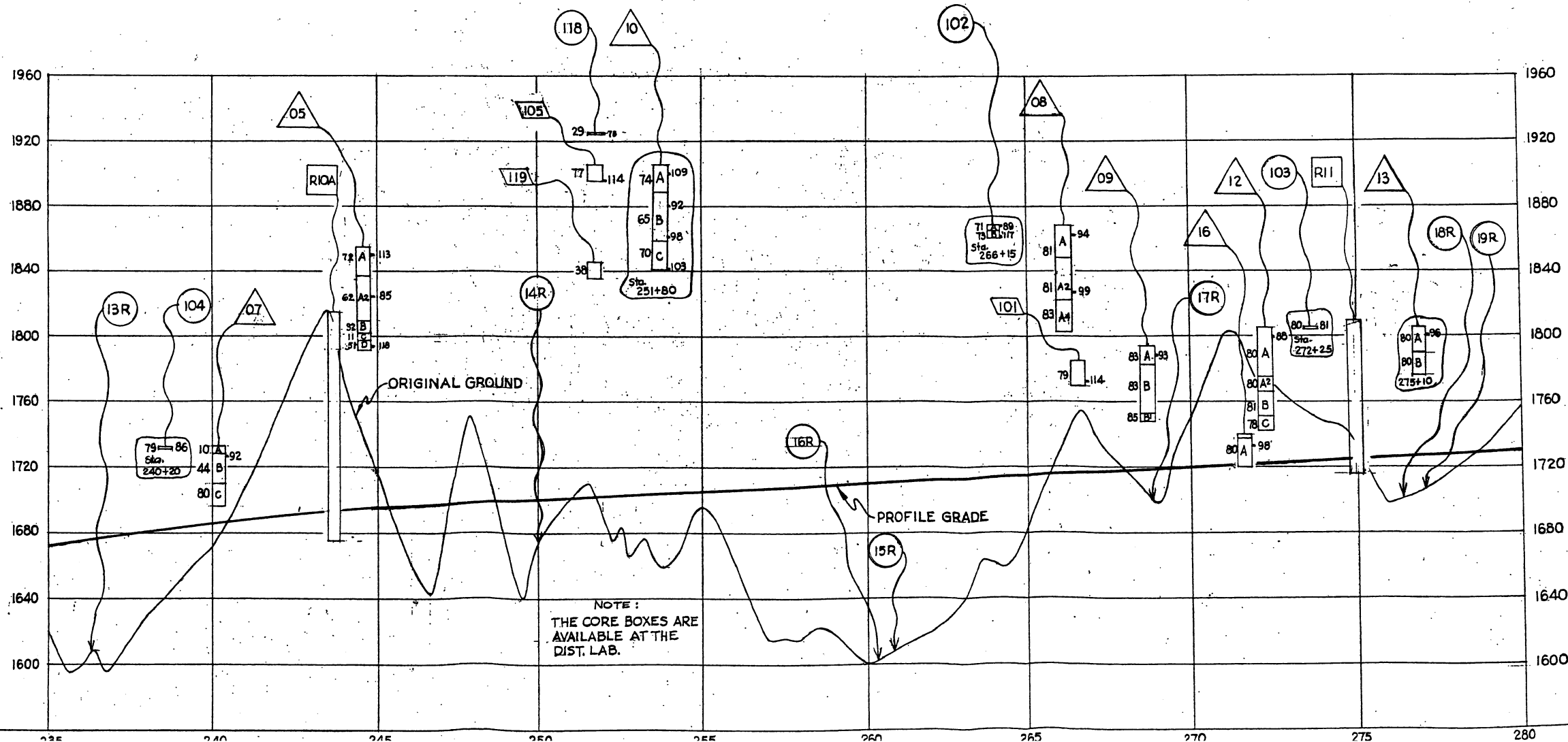
LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE

DIST.	COUNTY	ROUTE	SEC	SHEET NO.	TOTAL SHEETS
VII	LA	210	11.0/15.6	4	6
STA. 235+00			TO STA. 280+00		

PLAN OF BORINGS  
 LONGITUDINAL SCALE 1" = 200'  
 LATERAL SCALE 1" = 400'



CENTER LINE PROFILE & DETAIL LOG OF BORINGS  
 SCALE: HOR. 1" = 200', VERT. PROFILE 1" = 40', BORINGS 1" = 40'



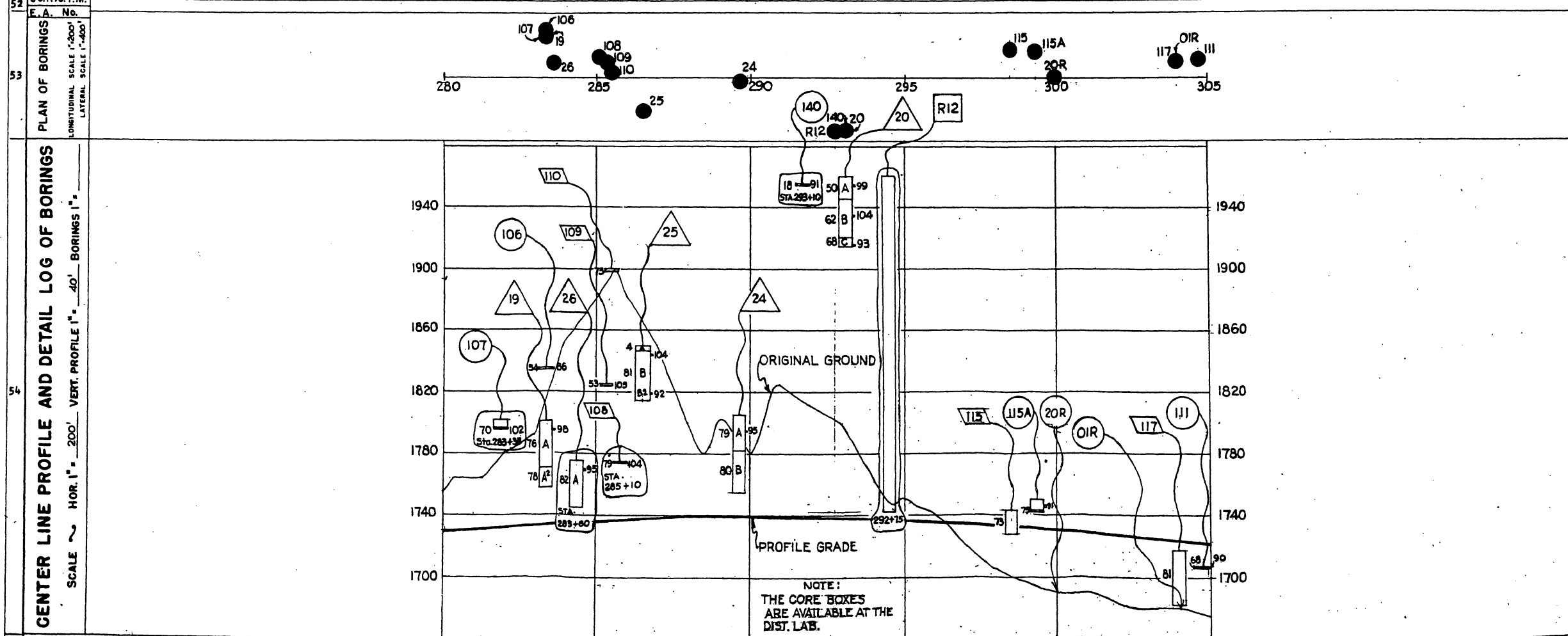






1 E.A. 07202 - 063741		STANDARD SOIL SURVEY SHEET										LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE										DIST	COUNTY	ROUTE	P.M.	SHEET NO.	TOTAL SHEETS
2 PROJECT ENGR. A. J. CRAMER																						07	LA	210	11.0/15.6	5	6
3 DATE NOVEMBER, 1967																						STA. 280+00		TO STA. 305+00			
4 BORING & SAMPLE NO. (R.C. NO.)		19A (-A)		19A2		107		106		26A (-A1)		108		109		110		25A		25B		(25B1)		(25B2)		SEE SHEET #5A FOR FURTHER DATA	
5 DATE SAMPLED BY		3-28-67 Bucket		5-1-67 Surface		5-1-67 Surface		4-6-67 Bucket		5-2-67 Surface		5-2-67 Surface		5-2-67 Surface		4-6-67 Bucket											
6 STATION - FT LEFT OR RIGHT*		283+35; 265'lt.		283+35; 265'lt.		283+35; 265'lt.		283+60; 95'lt.		285+10; 135'lt.		285+35; 95'lt.		285+50; 140'lt.		286+55; 220'lt.											
7 DEPTH (R.C. DEPTH)		0'-30" (5-5.8')		30'-43'		5'-6.1'		0'-4'-1.4'		0'-30" (5-5.8')		80'-81' Cut Face		50'-51' Cut Face		0'-31'		0'-31'		31'-35.5'		(5-5.8')		(30-30.8')			
8 (ORIGINAL GROUND ELEVATIONS*)		(E1=1800')				(E1=1800')		(E1=1835')		(E1=1775')		2'-100' (E1=1775')		50'-100' (E1=1825')		3'-100' (E1=1900')		(E1=1850')		2'-100'							
9 MECHANICAL ANALYSIS		100		100		100		100		100		100		100		100		100		100		100		100		100	
10 1/2"		99		99		99		99		99		99		99		99		99		99		99		99		99	
11 3/4"		97		97		97		97		97		97		97		97		97		97		97		97		97	
12 1/2"		97		97		97		97		97		97		97		97		97		97		97		97		97	
13 3/8"		91		91		91		91		91		91		91		91		91		91		91		91		91	
14 No. 4 MESH (4760 MICRONS)		86		86		86		86		86		86		86		86		86		86		86		86		86	
15 No. 10 " 2380 "		84		84		84		84		84		84		84		84		84		84		84		84		84	
16 No. 20 " 1190 "		76		76		76		76		76		76		76		76		76		76		76		76		76	
17 No. 30 " 503 "		66		66		66		66		66		66		66		66		66		66		66		66		66	
18 No. 50 " 297 "		54		54		54		54		54		54		54		54		54		54		54		54		54	
19 No. 100 " 149 "		39		39		39		39		39		39		39		39		39		39		39		39		39	
20 No. 200 " 74 "		26		26		26		26		26		26		26		26		26		26		26		26		26	
21 No. 270 " 53 "		25		25		25		25		25		25		25		25		25		25		25		25		25	
22 5 MICRONS		2		2		2		2		2		2		2		2		2		2		2		2		2	
23 1 MICRON		2		2		2		2		2		2		2		2		2		2		2		2		2	
24 FIELD DESCRIPTION OF SOIL		D.G.		D.G.		D.G.		Silty D.G.		D.G.		D.G.		D.G.		Clayey D.G.		D.G.		D.G.		D.G.		D.G.		D.G.	
25 MOIST. % DRY WT. OPT. MOIST. %		6.0 10.8		6.0 10.8		12.5 13.7		4.5 10.4		6.1 8.0		7.6 9.3		9.4 10.3		10.3 10.3		4.5 11.9		3.6 9.5		4.5 11.9		3.6 9.5		4.5 11.9	
26 DRY WT. LB./CU. FT. MAX. DENSITY		124.0 126.2		124.0 126.2		119.7 117.8		109.6 127.6		124.1 130.7		134.2 129.2		134.1 127.8		131.5 126.9		121.8 132.0		104%		104%		92%		92%	
27 RELATIVE COMPACTION		98%		98%		102%		86%		95%		104%		105%													
28 LIQUID LIMIT PLASTICITY INDEX		41		34		51		22		31		49		22		48		32		32		32		32		32	
29 SAND EQUIVALENT SP. GRAVITY FINES		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C	
30 SPECIMEN IDENTIFICATION		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C		A B C	
31 % MOIST. IN FABRICATED SPEC.		8.8 9.3		9.0 9.5 9.9		13.7 14.4 15.3		11.6 12.5 15.8		9.4 9.8 10.3		8.7 9.2 9.3		9.0 9.8 10.3		8.6 9.0 9.3		14.0 15.8 18.7		8.9 9.5 10.1		8.9 9.5 10.1		8.9 9.5 10.1		8.9 9.5 10.1	
32 % MOIST. AFTER SOAKING		9.2 9.3		9.2 9.7 10.2		13.7 14.5 15.3		13.4 13.3 18.0		10.0 10.5 10.8		9.4 9.8 9.7		9.5 10.7 12.0		10.2 9.8 9.9		14.3 15.9 18.9		9.5 10.0 10.3		9.5 10.0 10.3		9.5 10.0 10.3		9.5 10.0 10.3	
33 DRY WEIGHT PER CUBIC FOOT		125.6 125.0		125.7 125.1 125.1		116.9 115.2 113.7		116.5 114.6 111.0		124.9 124.3 124.1		128.3 127.0 128.0		128.1 127.0 126.4		127.7 128.1 127.5		116.6 113.5 106.6		129.7 129.5 129.2		129.7 129.5 129.2		129.7 129.5 129.2		129.7 129.5 129.2	
34 EXTRUSION PRESSURE P.S.I.		340 235		370 150 90		350 310 265		630 300 165		445 205 105		340 160 150		440 295 260		610 410 210		440 340 275		355 220 140		355 220 140		355 220 140		355 220 140	
35 EXPANSION PRESSURE D.V.L.P.D. P.S.I.		0.27 0.09		0.21 0.15 0.06		0 0 0		1.65 0.93 0.48		0.24 0.21 0.12		0.06 0.12 0.09		0.72 0.24 0.30		0.18 0.15 0.09		0.12 0 0		0.09 0.03 0.15		0.09 0.03 0.15		0.09 0.03 0.15		0.09 0.03 0.15	
36 STABILOMETER R VALUE		77 75		78 75 72		74 72 54		64 54 28		83 80 76		79 77 76		71 52 39		80 76 75		9 5 3		83 78 73		83 78 73		83 78 73		83 78 73	
37 THICKNESS INDIC. BY STAB. FEET		0.30 0.10		0.23 0.17 0.07		0 0 0		1.50 1.03 0.53		0.27 0.23 0.13		0.07 0.13 0.10		0.80 0.27 0.33		0.20 0.17 0.10		0.13 0 0		0.10 0.03 0.17		0.10 0.03 0.17		0.10 0.03 0.17		0.10 0.03 0.17	
38 INDIC. MIN. THICK. FOR BELOW COND.		76 Exud.		78 Exud.		70 Exud.		54 Exud.		82 Exud.		79 Exud.		53 Exud.		75 Exud.		4 Exud.		81 Exud.		81 Exud.		81 Exud.		81 Exud.	
39 SPEC. GRAVITY FACTOR / T.I.																											
40 SOIL CEMENT TEST		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA		CORROSION DATA	
41 CEMENT % OF AGG. DRY WEIGHT		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH		0hm/cm <sup>3</sup> pH	
42 COMPACTED DRY WT./CU. FT.		11,000 7.7		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6		10,000 7.6	
43 DAYS		84 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years	
44 COMPRESSIVE STR./SQ. IN.		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life		Est. Life	
45		84 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years		80 years	

50 REMARKS																										
51 LEGEND	B S BASEMENT SOIL	P C C PORTLAND CEMENT CONCRETE	Volc. = Volcanic	Boring By :	Manual	Equipment	Auger B/or	Cal-Weld Bucket Rig	TRAFFIC INDEX																	
	I B IMPORTED BORROW	A C ASPHALT CONCRETE	S S Silt(y)	Di. Boring :	6-8"	Tranch or Bank	Rotary Rig	16", 20", 28"	Equivalent 5000 lb Wheel Loads (EWL)																	
	A S AGGREGATE SUBBASE	C T B CEMENT TREATED BASE	Sd Sand(y)	Symbol :																						
	A B AGGREGATE BASE		Sh Shale																							
			Ss Sandstone																							
			Grv Gravel																							
			DG Decomposed Granite																							



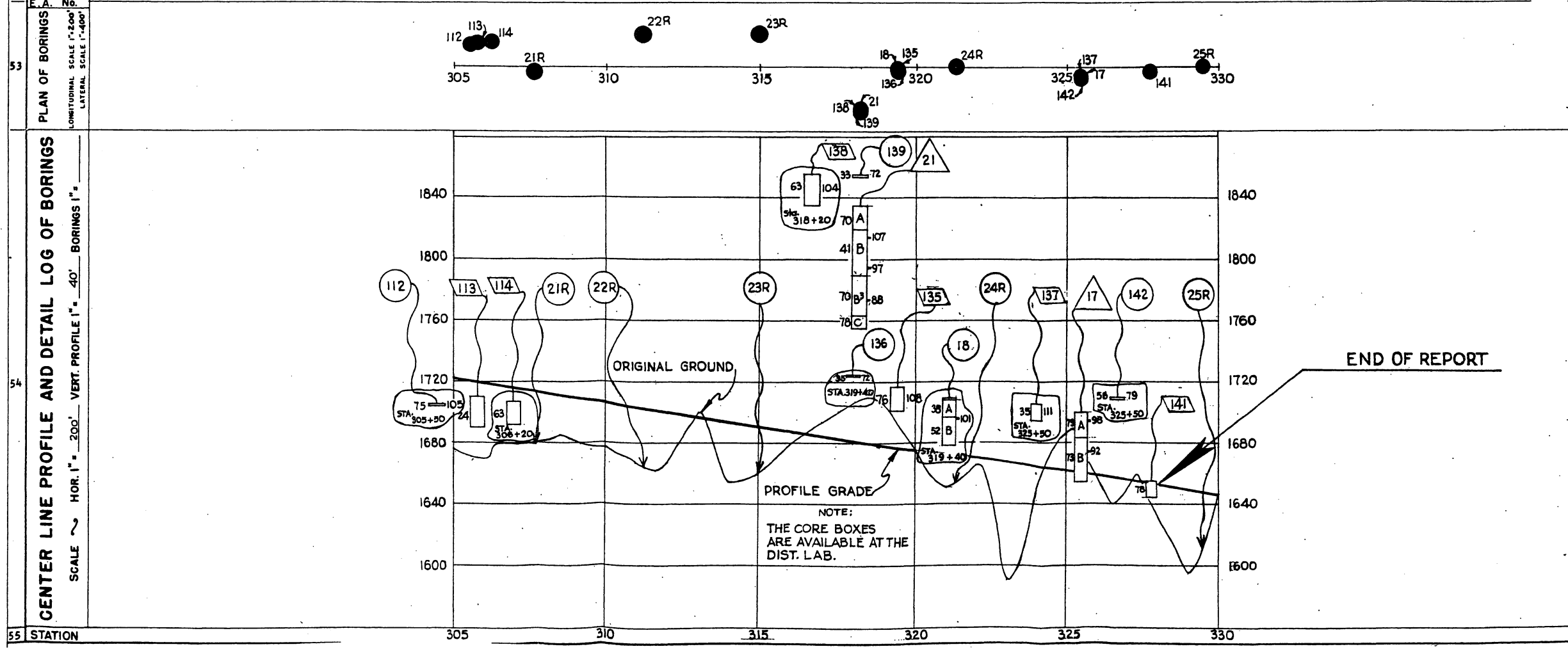
55 STATION	280	285	290	295	300	305
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1	E.A.	07202 - 063741	STANDARD SOIL SURVEY SHEET										LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE			DIST	COUNTY	ROUTE	P.M.	SHEET NO.	TOTAL SHEETS	
2	PROJECT ENGR.	A. J. CRAMER											O7	LA	210	11.0/15.6	6	6				
3	DATE	NOVEMBER, 1967											STA. 305+00			TO STA. 330+00						
4	BORING & SAMPLE NO. (R.C. NO.)	112	113	114	21R	22R	23R	21A	21B	(21B1)	(21B2)	* 21B3 (-B4)	21C	SEE SHEET #6A FOR FURTHER DATA								
5	DATE SAMPLED BY	5-5-67 Surface	5-5-67 Surface	5-5-67 Surface	5-26-67 Surface	5-26-67 Surface	5-26-67 Surface	3-29-67 Bucket														
6	STATION	305+50	305+75	306+20	307+60	311+20	315+00	318+20														
7	DEPTH (R.C. DEPTH)	0'-8"	0'-20"	0'-15"	0'-15"	0'-15"	0'-15"	0'-5"	15'-45"	(20'-20.8")	(40'-40.8")	45'-72"	(61'-61.8")	72'-80"								
8	(ORIGINAL GROUND ELEVATIONS)	2'-1/2" (E1=1705')	2'-10" (E1=1720')	(E1=1715')																		
9	1"-172"	96	99	CORROSION DATA SEE BELOW						100												
10	1"	92	99	CORROSION DATA SEE BELOW						99												
11	3 3/4"	82	97	100							97	100										
12	3 7/8"	78	92	96							93	96										
13	4"	64	88	91							83	89										
14	MESH (4760 MICRONS)	64	72	98							79	94										
15	No. 4	61	68	82							69	79										
16	No. 10	54	60	77							63	71										
17	No. 20	45	50	68							55	65										
18	No. 40	33	37	55							43	54										
19	No. 60	20	23	39							35	36										
20	No. 100	13	14	26							16	16										
21	No. 200	7	7	10							4	4										
22	No. 420	3	3	4							2	2										
23	FIELD DESCRIPTION OF SOIL	O.G.	Clay. Sandy Silt	Sandy Silt	Clay. Sandy Silt	Clay. Sandy Silt	Sandy Silt	D.G.	D.G.													
24	MOIST. & DRY WT.	2.8	7.3							2.9	9.0	2.9	10.0	9.4	9.8							
25	DRY WT. LB./CU. FT.	150.5	142.9							149.6	139.4	130.6	135.4	116.3	132.7							
26	RELATIVE COMPACTION	105%							107%	97%	88%											
27	LIQUID LIMIT	38	2.68	18	NP	34	NP															
28	PLASTICITY INDEX	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C			
29	SAND EQUIVALENT	7.6	8.4	9.3	11.9	12.8	13.7	13.1	13.6	14.0	10.5	11.1	10.9	11.1	11.4	9.0	9.4	9.7	8.9	9.1	9.4	
30	% MOIST. IN FABRICATED SPEC.	9.1	9.4	9.9	12.4	12.2	14.2	14.9	15.0	15.3	11.2	11.8	11.3	11.1	11.5	9.5	9.9	9.9	9.3	9.3	9.7	
31	DRY WEIGHT PER CUBIC FOOT	132.1	131.3	132.5	125.3	124.0	120.9	118.1	117.5	116.5	127.5	127.6	126.8	131.6	130.6	132.6	132.2	129.6	131.8	132.0	131.6	
32	EXTENSION PRESSURE P.S.I.	75	510	270	635	380	240	553	340	250	350	260	235	360	275	490	210	160	580	260	180	
33	STABILOMETER R VALUE	0.24	0.18	0.18	0.84	0.48	0.24	1.32	1.17	0.99	0.51	0.54	0.42	0.30	0.30	0.24	0.12	0.03	0.03	0	0	
34	THICKNESS INDIC. BY STAB. FEET	80	77	74	49	32	17	64	64	62	71	69	66	51	36	77	66	63	85	77	74	
35	THICK. INDIC. BY EXP. PRESS. FEET	0.27	0.20	0.20	0.93	0.53	0.27	1.43	1.30	1.10	0.57	0.60	0.47	0.32	0.33	0.27	0.13	0.03	0.03	0	0	
36	"R" VALUE AT EQUIL. CONDITION	75	Exud.	24	Exud.	63	Exud.							70	Exud.							
37	INDIC. MIN. THICK. FOR BELOW COND.																					
38	SEC. / GRAVEL FACTOR / T.I.																					
39	SPECIMEN NUMBER																					
40	MOIST. USED & BY WEIGHT	SP. GR. COARSE	CORROSION DATA						SP. GR. COARSE (21B1)	SP. GR. COARSE	CORROSION DATA											
41	WATER SQUEEZED OUT, GRAMS	Apparent=2.74	CORROSION DATA (22R)						SOIL	CORROSION DATA												
42	CEMENT % OF AGG. DRY WEIGHT	Bulk SSD=2.69	Ohm/cm <sup>3</sup> pH						Ohm/cm <sup>3</sup> pH	Ohm/cm <sup>3</sup> pH												
43	COMPACTED DRY WT./CU. FT.	Bulk OD=2.66	6000 6.6						2300 7.5	7000 6.9	10,000 6.8											
44	DAYS COMPRESSIVE STR./50 IN.	Absorption=1.2%	Est. Life						Est. Life	Est. Life												
45			30 years						45 years	34 years												
46									36 years													
47									39 years	* For CTB Test #312 results, see Sheet 6C.												
48									62 years													
49																						
50	REMARKS	Bulk OD = 2.67																				

**LEGEND**

B S	BASEMENT SOIL	P C C	PORTLAND CEMENT CONCRETE	Volc.	= Volcanic	Boring By :	Manual	Equipment	Auger &/or	Cal. Weld	Bucket Rig	TRAFFIC INDEX						
I B	IMPORTED BORROW	A C	ASPHALT CONCRETE	Si	Silt(y)	Di. Boring :	6"-8"	Trench or Bank	Rotary Rig	16", 20", 28"	Symbols	Equivalent 5,000 lb Wheel Loads (EWL)						
A S	AGGREGATE SUBBASE	C T B	CEMENT TREATED BASE	Cl	Clay(ey)	Symbol :						R Value						
A B	AGGREGATE BASE			Sd	Sand(y)							A=Standard Oil Sampler						
				Sh	Shale							C=Consolidation Sampler						
				Ss	Sandstone							RC=Relative Compaction						
				Gv	Gravel							B						
				D.G.	Decomposed Granite													



END OF REPORT

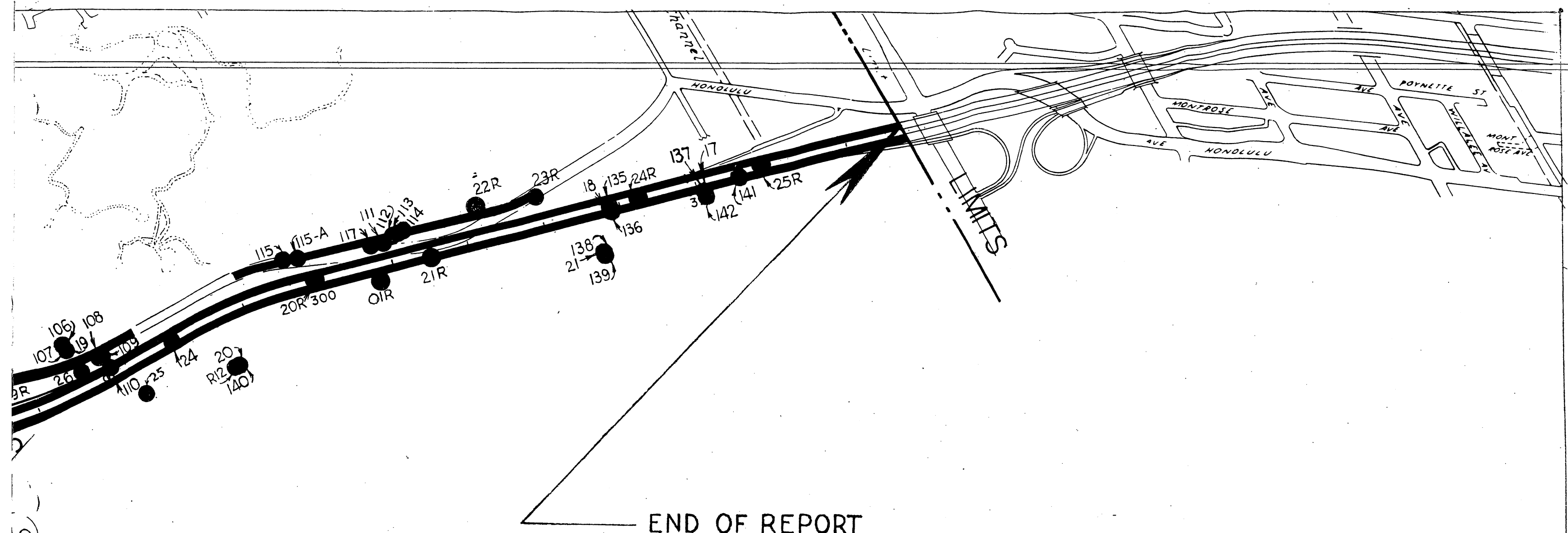


1 E.A. 07202 - 063741		STANDARD SOIL SURVEY SHEET										LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE										DIST COUNTY ROUTE P.M.		SHEET NO. TOTAL SHEETS			
2 PROJECT ENGR. A. J. CRAMER																						07 LA 210 11.0/15.6		6C. 6			
3 DATE NOVEMBER, 1967																						STA. Various		TO STA. Various			
4	BORING & SAMPLE NO.	110	126	208	215	178																					
5	DATE SAMPLED BY	3-17-67 Bucket	3-21-67 Bucket	3-17-67 Bucket	3-29-67 Bucket	3-29-67 Bucket																					
6	STATION ± FT., LEFT OR RIGHT	208+45; 195' Rt.	272+25; 60' Lt.	293+10; 345' Rt.	318+20; 275' Rt.	325+50; 60' Rt.																					
7	DEPTH (R.C. DEPTH)	51'-85'	54'-63'	15'-40'	45'-92'	16'-45'																					
8	(ORIGINAL GROUND ELEVATIONS)	(E1=1710')	(E1=1710')	3"-100 (E1=1660')																							
9	1-1/2"	100	96	97	97	96																					
10	3/4"	REGRADED	REGRADED	REGRADED	REGRADED	REGRADED																					
11	1/2"	100	96	97	97	96																					
12	3/8"	AS RUN	AS RUN	AS RUN	AS RUN	AS RUN																					
13	No. 4 MESH (4760 MICRONS)	63	66	69	63	68																					
14	No. 8 " 2380 "																										
15	No. 16 " 1190 "																										
16	No. 30 " 503 "																										
17	No. 50 " 297 "																										
18	No. 100 " 149 "																										
19	No. 200 " 74 "																										
20	No. 270 " 53 "																										
21	5 MICRONS																										
22	1 MICRON																										
23	FIELD DESCRIPTION OF SOIL	D.G.		D.G.		D.G.		D.G.		D.G.		D.G.		D.G.		D.G.		D.G.		D.G.		D.G.					
24	MOIST. & DRY WT. OPT. MOIST. %																										
25	DRY WT. LB./CU. FT. MAX. DENSITY																										
26	RELATIVE COMPACTION																										
27	LIQUID LIMIT PLASTICITY INDEX																										
28	SAND EQUIVALENT SP. GRAVITY FINES																										
29	SPECIMEN IDENTIFICATION																										
30	% MOIST. IN FABRICATED SPEC.																										
31	% MOIST. AFTER SOAKING																										
32	DRY WEIGHT PER CUBIC FOOT																										
33	EXUDATION PRESSURE P.S.I.																										
34	EXPANSION PRESSURE D.V.L.P.D. P.S.I.																										
35	STABILOMETER R VALUE																										
36	THICKNESS INDIC. BY STAB. FEET																										
37	THICK. INDIC. BY EXP. PRESS. FEET																										
38	"R" VALUE AT EQUIL. CONDITION																										
39	INDIC. MIN. THICK. FOR BELOW COND.																										
40	SEC. / GRAVEL FACTOR / I.I.																										
41	SPECIMEN NUMBER	3.5A	3.5B	5A	5B	6A	6B	3.5A	3.5B	5A	5B	6A	6B	3.5A	3.5B	5A	5B	6A	6B	3.5A	3.5B	5A	5B	6A	6B		
42	MOIST. USED & BY WEIGHT	9.4	8.1	8.1	8.1	8.1	8.1	7.3	8.0	8.0	8.0	8.0	8.8	8.8	13.0	12.2	12.2	12.2	12.2	12.2	12.2	10.0	8.9	9.1	9.0		
43	WATER SQUEEZED OUT, GRAMS	35	13	9	12	12	12	0	0	0	0	7	8	25	5	12	0	8	12	23	6	6	3	2	2		
44	CEMENT % OF AGG. DRY WEIGHT	3.4	3.5	5.0	5.0	6.0	6.0	3.5	3.5	5.0	5.0	6.0	6.0	3.5	3.5	5.0	5.0	6.0	6.0	3.5	3.5	5.0	5.0	6.0	6.0		
45	7 DAYS COMPACTED DRY WT./CU. FT.	135.0	133.2	133.2	133.8	134.1	133.8	126.4	127.0	127.3	127.3	127.4	128.3	129.3	129.2	128.8	129.1	129.4	128.9	128.9	134.4	133.8	134.0	133.8	133.6		
46	7 DAYS COMPRESSIVE STR. /50. IN.	995	860	1100	1145	1305	1375	620	710	925	970	1100	1195	700	730	865	850	1065	980	645	770	795	875	985	900		
47																											
48																											
49																											
50	REMARKS																										

1 E.A. 07202 - 063741		STANDARD SOIL SURVEY SHEET										LIMITS SUNLAND BOULEVARD TO WEST CITY LIMITS OF GLENDALE										DIST COUNTY ROUTE P.M.		SHEET NO. TOTAL SHEETS			
2 PROJECT ENGR. A. J. CRAMER																						07 LA 210 11.0/15.6		6B. 6			
3 DATE NOVEMBER, 1967																						STA. 305+00		TO STA. 330+00			
4	BORING & SAMPLE NO. (R.C. NO.)	137	142	141	25R																						
5	DATE SAMPLED BY	5-17-67 Surface	5-19-67 Surface	5-18-67 Surface	5-26-67 Surface																						
6	STATION ± FT., LEFT OR RIGHT	325+50; 60' Rt.	325+50; 70' Rt.	327+80; 30' Rt.	329+50; 6'																						
7	DEPTH (R.C. DEPTH)	0.5'-10, 5' Cut Face	0.8'-1.8'	0.5'-10, 5' Cut Face																							
8	(ORIGINAL GROUND ELEVATIONS)	(E1=1710')	(E1=1710')	3"-100 (E1=1660')																							
9	1-1/2"	94	91	91	94	CORROSION DATA SEE BELOW																					
10	3/4"	100	99	90	99																						
11	1/2"	RECEIVED	RECEIVED	RECEIVED	RECEIVED																						
12	3/8"	AS RUN	AS RUN	AS RUN	AS RUN																						
13	No. 4 MESH (4760 MICRONS)	100	100	88	97																						
14	No. 8 " 2380 "																										
15	No. 16 " 1190 "																										
16	No. 30 " 503 "																										
17	No. 50 " 297 "																										
18	No. 100 " 149 "																										
19	No. 200 " 74 "																										
20	No. 270 " 53 "																										
21	5 MICRONS																										
22	1 MICRON																										
23	FIELD DESCRIPTION OF SOIL	D.G.		D.G.		D.G.		Silty Sand																			
24	MOIST. & DRY WT. OPT. MOIST. %	5.6	11.7	9.7	11.9																						
25	DRY WT. LB./CU. FT. MAX. DENSITY	138.0	124.5	98.3	124.0																						
26	RELATIVE COMPACTION	111%		79%																							
27	LIQUID LIMIT PLASTICITY INDEX																										
28	SAND EQUIVALENT SP. GRAVITY FINES																										
29	SPECIMEN IDENTIFICATION																										
30	% MOIST. IN FABRICATED SPEC.	11.3	11.9	12.8	13.0	14.5	16.4	10.4	10.7	11.2																	
31	% MOIST. AFTER SOAKING	11.4	11.9	12.8	13.4	14.5	16.4	11.0	11.0	12.5																	
32	DRY WEIGHT PER CUBIC FOOT	125.4	124.7	122.1	120.5	118.5	114.1	124.4	125.0	124.5																	
33	EXUDATION PRESSURE P.S.I.	310	275	225	320	150	170	665	320	215																	
34	EXPANSION PRESSURE D.V.L.P.D. P.S.I.	0.24	0	0	0.24	0.15	0	0.18	0.18	0.24																	
35	STABILOMETER R VALUE	37	30	21	62	18	13	84	78	76																	
36	THICKNESS INDIC. BY STAB. FEET																										
37	THICK. INDIC. BY EXP. PRESS. FEET	0.27	0	0	0.27	0.17	0	0.20	0.20	0.27																	
38	"R" VALUE AT EQUIL. CONDITION	35 Exud.		56 Exud.		78 Exud.																					
39	INDIC. MIN. THICK. FOR BELOW COND.																										
40	SEC. / GRAVEL FACTOR / I.I.																										
41	SPECIMEN NUMBER																										
42	MOIST. USED & BY WEIGHT																										
43	WATER SQUEEZED OUT, GRAMS																										
44	CEMENT % OF AGG. DRY WEIGHT																										
45	7 DAYS COMPACTED DRY WT./CU. FT.																										
46	7 DAYS COMPRESSIVE STR. /50. IN.																										
47																											
48																											
49																											
50	REMARKS																										

CORROSION DATA (25R)

Ohm/cm <sup>2</sup>	pH	Ohm/cm <sup>2</sup>	pH
2700	7.9	8000	6.8
Est. Life		Est. Life	
47 years		34 years	



END OF REPORT

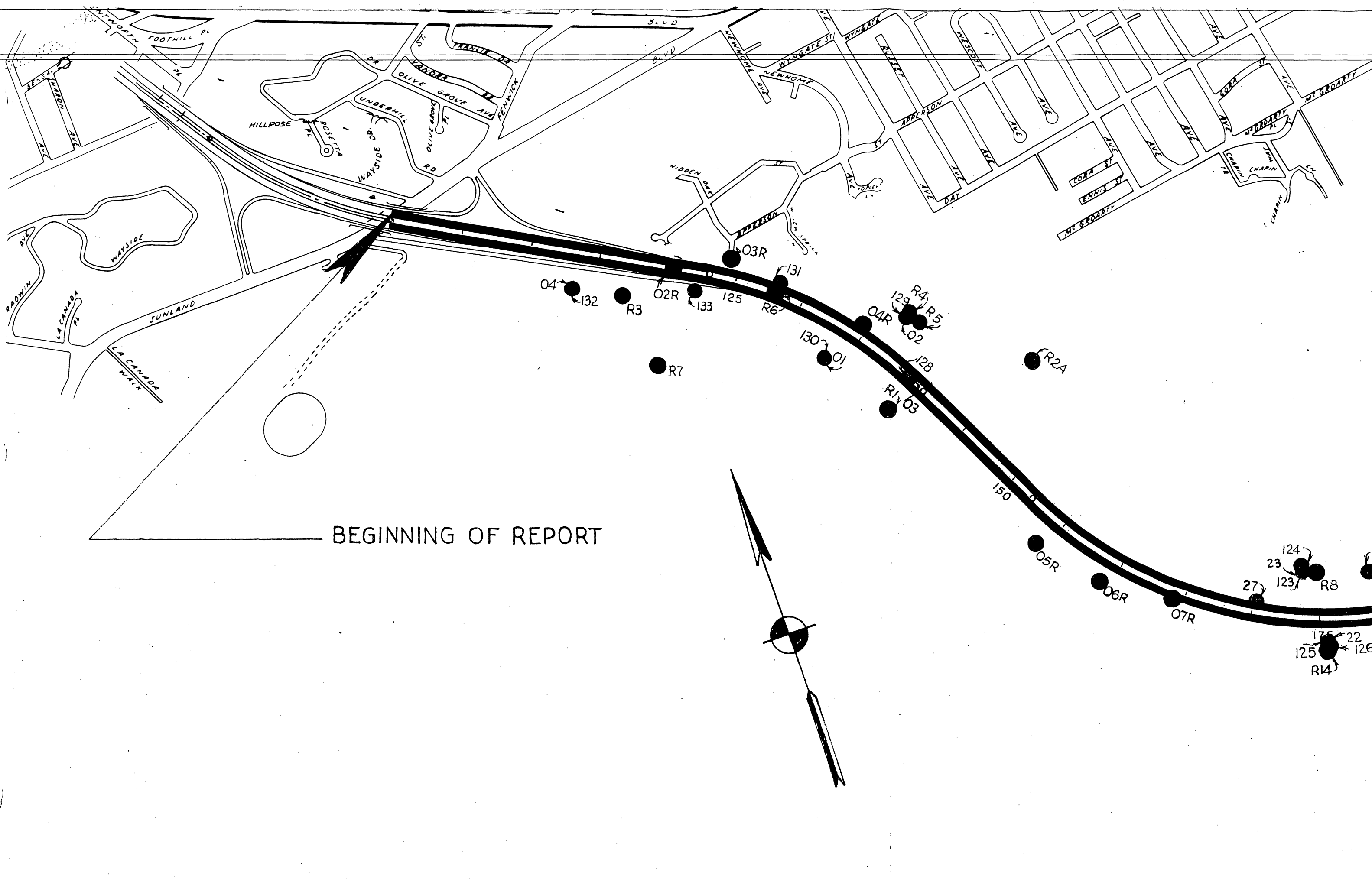
DISTRICT 07 MATERIALS SECTION  
 07-LA-210 11.0/15.6  
**ROUTE 210 FREEWAY**  
 SUNLAND BLVD.  
 to  
 LOS ANGELES/GLENDALE CITY  
 07202 LIMITS 063741  
**INDEX MAP**  
 20' FEBRUARY 1968

LEGEND

10.0 = T.I.

● TEST LOCATIONS





BEGINNING OF REPORT









STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

ELEV.	Datum	Dia. of Sampler	Date	Page
Surface	170	Wt. of Hammer	4-27-67	7
		#	Job No.	Boring No.

Location                       
 Dist. IL Co. LA Rt. 20 Sec. 11E1 Cont. W.O. 1141  
255 Ft., Right, Left 7 Line Sta. 177+40

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
6	From	113	1122	100	2		
	To	114	1121			Core Length	
7	From	122	1123	10	2		
	To	127	1118			Core Length	
8	From	132	1119	0			
	To	133	1118			Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	

Rig Used MANUAL DRILL  
 Type of Sampler                       
 Type of Point                      Regular                      Extension                       
 Sample Nos.                       
 Type of Core Barrel                       
 Type Bit Used                      Number                      From                      To                       
6 1/2" CORE BIT 72011 10'                     

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.
11:00	114				
1:30	114				

Boring Flushed 65 Depth 114 FT  
 Boring Bailed                      Depth                       
 Boring Cased                      Depth                       
 Dia., & Type P.M.P. Casing                       
 Type of Casing Cap                     

**REMARKS**

Weather: Mostly sunny  
 4-27-67 1:30 LOST THREE BELTS FOR WATER PUMP WHILE CILING AT 114 FT  
 4-27-67 19:30 FILL WATER INTO WATER TRUCK.  
 4-27-67 6:55 ROTARY SHAFT DISSENT  
 4-27-67 1:09 AT 300# RUBBER HOSE UNLOOSEN FROM CLAMP.  
 4-27-67 1:10 RUBBER HOSE CLAMP ON ROTARY SHAFT PROMPTED OFF.  
 4-28 MOVING TO REPAIR MANUAL DRILL

Inspector                      110 Foreman                     

Depth	Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
113	1121				
114	1120				
122	1118				
127	1115				
132	1118				
133	1117				
134	1116				
135	1115				
136	1114				
137	1113				
138	1112				
139	1111				
140	1110				
145	1105				
150	1100				
155	1095				

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STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

*Dist*

**BORING RECORD**

ELEV.	Datum	Dia. of Sampler	Date	Page
Surface	1960 ±	Wt. of Hammer	7-25-67	1
		#	Job No. 32906	Boring No. 112

Location Junland Blvd to Lowell Ave.  
 Dist. 67 Co. LA Rt. 210 Sec.          Cont.          W.O.           
350 Ft., Right, left          Line Sta. 292775

Depth	Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
-------	---------	-------	---------------------	------------------	-----------------

*Mid. hard granitic rock cuttings*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	

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*End of day 7-25-67*

Rig Used \_\_\_\_\_  
 Type of Sampler \_\_\_\_\_  
 Type of Point      Regular      Extension  
 Sample Nos. \_\_\_\_\_  
 Type of Core Barrel \_\_\_\_\_  
 Type Bit Used      Number      From      To

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed      Depth \_\_\_\_\_  
 Boring Bailed      Depth \_\_\_\_\_  
 Boring Cased      Depth \_\_\_\_\_  
 Dia., & Type P.M.P. Casing \_\_\_\_\_  
 Type of Casing Cap \_\_\_\_\_

**REMARKS**

Weather: \_\_\_\_\_  
*0700 to 1130 picking equipment & moving to drill site  
 Changed equipment from Van CMC 3704 to 1819.  
 1130 to 1200 lunch  
 1200-1520 Setting up on drill site  
 hauling water & mixing  
 1520-1600 Drilling  
 1 load of water*

TO LABORATORY

STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

Location Sunland Blvd to Lowell Ave.  
 Dist. 07 Co. 19 Rt. 210 Sec.          Cont. W.O.           
350 Ft., Right, Left E Line Sta. 2927254

ELEV. Datum 237. Dia. of Sampler 3" Date 7-26-67 Page 2  
 Surface 1960± Wt. of Hammer          Job No. 063741 Boring No. 102

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
1	From	10		15			
	To	15			Core Length	9"	
2	From	25		50			
	To	30			Core Length	2 1/2'	
3	From	40		100			
	To	45			Core Length	5'	
	From						
	To				Core Length		
	From						
	To				Core Length		

Rig Used Joy 250  
 Type of Sampler           
 Type of Point          Regular          Extension           
 Sample Nos.           
 Type of Core Barrel Longyear  
 Type Bit Used Carboloy Number          From 10 To 15  
         "          " 25 30  
         "          " 45

**GROUND WATER DATA**

Time	DEPTH TO WATER		Time	DEPTH TO WATER	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed          Depth           
 Boring Bailed          Depth           
 Boring Cased          Depth           
 Dia., & Type P.M.P. Casing           
 Type of Casing Cap         

**REMARKS**  
 Weather: Hot & overcast  
0700-0730 Trace!  
0730-1130 Drilling & casing  
1130-1200 lunch  
1200-1545 Drilling & coring  
1545-1600 Gas in big ma. &  
Securing equipment at end of day

LOG OF MATERIAL	Wet Wt. per cu. ft.	Moist. % dry wt.
<u>Dry soft and friable D.G.</u>	<u>150 pps</u>	<u>        </u>
<u>cuttings Granitic Rock From 15 to 25 ft</u>		
<u>Highly weathered gray brn &amp; gray w/ layer of micaceous sand Mineral stained</u>		
<u>cuttings shows Granitic Rock from 30 to 40 ft</u>		
<u>soft high weathered brn &amp; gray D.G. w/ some pieces of hard granitic rock</u>		

TO LABORATORY

Note: MAR # 8906





STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

Location Sunland Blvd to Howell Ave  
 Dist. 07 Co. LA Rt. 210 Sec. W.O.  
350 Ft., Right, 2 Line Sta. 292+75 ±

ELEV. Datum DIST Dia. of Sampler 3" Date 7-27-67 Page 4  
 Surface 1960 ± Wt. of Hammer # Job No. 063741 Boring No. R-12

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
6	From	85					
	To	90		40		Core Length	2'
7	From	100					
	To	105		10		Core Length	6"
8	From	110					
	To	115		40		Core Length	2'
9	From	115					
	To	118		50		Core Length	1.5'

Rig Used Joy 250  
 Type of Sampler  
 Type of Point Regular Extension  
 Sample Nos.

Type of Core Barrel Longyear 4 NX  
 Type Bit Used Number From To  
Carbide None 85 90  
" " 100 105  
Diamond A2233 110 115  
" GROUND WATER DATA 118

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**  
 Weather: Warm, partly cloudy  
0710 to 0730 Travel  
0730 to 1130 Drilling & casing  
1130 to 1200 lunch  
1200 to 1550 Drilling & casing  
1500 to 1600 Securing for  
credit day

Depth	SEC Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
85					
215			150		And hard, slightly friable fractured granitic rock
86		6	PSE		Mineral stained
271					changed to soft gray dbn loose D.G.
87					
192					
88					
199					
89					
202					
90					
91					
92					Cuttings show hard granitic rock
93					
94					
95					
96					
97					
98					
99					
100					
288					very hard gray & white broken schist & mineral stained
101					
329					
102					
147					
103					
423					
104					
358					
105					
106					
107					
108					
109					
110					
74					
111					And hard gray & white & broken & fractured granitic rock
69					
112					
118					
197					
114					
132					
115					
202					hard gray & dbn broken fractured granitic rock mineral stained
116					
213					
117					
234					
118					

TO LABORATORY

Note: M&R # 2906

STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

Location Sunland Blvd to Lowell Ave  
 Dist. 17 Co. LA Rt. 210 Sec. 9 Cont. W.O.  
350 Ft., Right, Q Line Sta. 292+75.2

ELEV.	Date <u>DST.</u>	Dia. of Sampler	Date <u>7-27-67</u>	Page <u>5</u>
	Surface <u>1960 I</u>	Wt. of Hammer	# Job No. <u>063741</u>	Boring No. <u>R-12</u>

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
	From						
	To						
	From						
	To						
	From						
	To						
	From						
	To						
	From						
	To						

Depth	Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
118			150		
119			150		
120			150		
121			150		
122			150		
123			150		
124			150		
125			150		
126			150		
127			150		
128			150		
129			150		
130			150		

*Cutting shows hard granitic rock*

*End of day 7-27-67*

Rig Used Jay 250

Type of Sampler

Type of Point  Regular  Extension

Sample Nos.

Type of Core Barrel

Type Bit Used  Number  From  To

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed  Depth

Boring Bailed  Depth

Boring Cased  Depth

Dia., & Type P.M.P. Casing

Type of Casing Cap

**REMARKS**

Weather:

*SEE PAGE 14*

*Note: M&R # 2906*

TO LABORATORY

STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
MATERIALS and RESEARCH DEPT.

**BORING RECORD**

Location Sunland Blvd to Lower Ave  
Dist. 07 Co. LA Rt. 210 Sec.          Cont.           
350 Fr., Right          Line Sta. 272+75.1

ELEV. Datum AST Dia. of Sampler 3" Date 7-29-67 Page 6  
Surface 1960± Wt. of Hammer #          Job No. 063741 Boring No. R-12

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
10	From	130					
	To	133		35	Core Length	1' 1"	
11	From	140					
	To	145		40	Core Length	2'	
12	From	155					
	To	160		20	Core Length	1'	

ELEV.	Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
130	1111		131		Very hard, fractured and broken gray & white schist & quartz
131	1111		131		
132	773		131		
133	133				
134	140				
135	140				
136	157				
137	138				
138	139				
139	140				
140	620				change - granite rock in clayey matrix in cuttings
141	181		150		very hard gray & white broken quartz & schist. Mineral stains
142	141		151		
143	138				
144	143				
145	141				
146	144				
147	97				
148	146		200		
149	147		151		
150	148				Cuttings shows same material as above
151	149				
152	150				
153	151				
154	152				
155	153				
156	154				
157	155		175		
158	161		151		
159	156				
160	158				Hard gray & white brkn schist, quartz granite

Rig Used Joy 250  
Type of Sampler           
Type of Point          Regular          Extension           
Sample Nos.           
Type of Core Barrel Longyear  
Type Bit Used          Number          From          To           
Carbide None 130 133  
" " " 140 145  
" " " 155 160

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed          Depth           
Boring Bailed          Depth           
Boring Cased          Depth           
Dia., & Type P.M.P. Casing           
Type of Casing Cap         

**REMARKS**  
Weather: Hot & overcast  
0710 - 0730 Travel.  
0730 - 1130 Drilling & coring  
hauling water, mixing mud.  
1130 - 1245 lunch.  
1245 - Drilling & coring  
  
Hauled 1 Load of water - 7-26-67

TO LABORATORY

**BORING RECORD**

Location Sunland Blvd to Lowell Ave  
 Dist. 07 Co. 419 Rt. 210 Sec. Cont. W.O.  
36.0 Ft., Right, 4 Line Sta. 292+75.1

Datum DIST Dia. of Sampler 2" Date 7-31-67 Page 7  
 Surface 1960± Wt. of Hammer # Job No. 065741 Boring No. R-12

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
13	From 170						
	To 173			84		Core Length 2.5'	
14	From 185			45		Core Length 2.3'	
	To 190						
	From					Core Length	
	To						
	From					Core Length	
	To						
	From					Core Length	
	To						

Rig Used Joy 250  
 Type of Sampler  
 Type of Point Regular Extension  
 Sample Nos.  
 Type of Core Barrel Howard  
 Type Bit Used Number From To  
Diamond 170 173  
 " 185 190

**GROUND WATER DATA**

Time	DEPTH TO WATER		Time	DEPTH TO WATER	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**  
 Weather: Warm Overcast & Not in PM  
0705 - 0720 Travel  
0720 - 0755 Changing oil in Buda & mixing mud.  
0755 - 1130 Drilling & casing  
1130 to 1200 Lunch  
1200 - 1400 Drilling & casing  
Hauling water

1. Load of water  
 Replaced rock bit w/ retip 4 1/2"  
 # 39437

SEC Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
160				
161		200		
162		151		
163				
164				
165				Cutting show hard granitic rock
166				
167				
168				
169				
170				Change cutting show granitic rock in clayey matrix
171				Hard gray fractured & broken granitic rock
172				
173				
174				
175		200		
176		151		
177				
178				
179				Cuttings shows hard granitic rock
180				
181				
182				
183				
184				
185				
186				
187				
188				
189				
190				
191				
192				
193				
194				
195				
196				
197				
198				
199				
200				

TO LABORATORY

End of day 7-31-67  
 Note: M & R # 2906

**BORING RECORD**

Location Sunland Blvd to house 1 Ave  
 Dist. 07 Co. LA Rt. 210 Sec. \_\_\_\_\_ Cont. \_\_\_\_\_ W.O. \_\_\_\_\_  
350 Ft., Right, Left R Line Sta. 292+75 ±

ELEV. Datum DIST. Dia. of Sampler 2" Date 8-1-67 Page 8  
 Surface 1960 ± Wt. of Hammer # \_\_\_\_\_ Job No. 063741 Boring No. R42

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
15	From	200					
	To	203		50		Core Length	18"
16	From	215					
	To	218		33		Core Length	12"
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	

Rig Used Jay 250  
 Type of Sampler \_\_\_\_\_  
 Type of Point Regular \_\_\_\_\_ Extension \_\_\_\_\_  
 Sample Nos. \_\_\_\_\_  
 Type of Core Barrel Howard  
 Type Bit Used Number From To  
Diamond \_\_\_\_\_ 200 203  
 " \_\_\_\_\_ 215 218  
 \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed \_\_\_\_\_ Depth \_\_\_\_\_  
 Boring Bailed \_\_\_\_\_ Depth \_\_\_\_\_  
 Boring Cased \_\_\_\_\_ Depth \_\_\_\_\_  
 Dia., & Type P.M.P. Casing \_\_\_\_\_  
 Type of Casing Cap \_\_\_\_\_

**REMARKS**  
 Weather: warm overcast  
0700 - to 0730 travel  
0730 to 0930 Drilling & coring  
0930 to 1130 mechanic working on drill rig.  
1130 - 1200 lunch  
1200 - 1350 Drilling & coring  
1350 - 1505 Mechanics working on drill rig  
1505 - 1600 coring  
 # 72021  
 Replaced rock bit with "New Vardel Bit"

**LOG OF MATERIAL**

Depth	Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	Notes
200	1111				
201	225	15			Hard gray & pink metamorphic rock
202	444	106			
203	430				
204					
205					
206	281				
207					
208					
209					Cutting shows hard metamorphic rock
210					
211	182				
212					
213					
214	211				
215					
216	16				
217					
218	315				

Bottom of boring  
 End of day 8-1-67

Note: M&R # 2906

TO LABORATORY

STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

ELEV. Datum *Dist.* Dia. of Sampler **3** Date **8-2-67** Page **9**  
 Surface **1710±** Wt. of Hammer # Job No. **063741** Boring No. **R-13**

Location **Sunland Blvd to Lowell Ave**  
 Dist. **07** Co. **LA** Rt. **210** Sec. **Cont. W.O.**  
 Fr., Right, Left **R** Line Sta. **211+00**

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
1	From	10					
	To	13		17		Core Length 6"	
2	From	15				Core Length 12"	
	To	16		33			
	From					Core Length	
	To						
	From					Core Length	
	To						
	From					Core Length	
	To						

Rig Used **Joy 250**  
 Type of Sampler  
 Type of Point Regular Extension  
 Sample Nos.  
 Type of Core Barrel **Christenson**  
 Type Bit Used Number From To  
**Diamond** 10 13  
**Lamphear Carbide** 13 16

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**  
 Weather: **Overcast & hot**  
 0710 to 0730 Travel  
 0730-1130 Moving & mechanics working on airlines to trucks on Big Red & Geologist showing R-12  
 1130-1200 lunch  
 1200-1410 finish moving & setting up on R-13  
 1410-1600 Drilling & Coring  
 Head of water 11'  
 R. P. ...

Depth	Sec Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
1			150		
2					
3					
4					
5					Cutting shows med hard granitic rock
6					
7					
8					
9					
10					
11	55				med hard white broken granitic rock
12	48				
13	53				
14	27	2			
15	29				
16	30				

*Handwritten notes in log:*  
 Core box 147  
 Core box 147  
 End of day 8-2-67

TO LABORATORY

STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

ELEV. Datum *DIST* Dia. of Sampler **3** Date **8-3-67** Page **10**  
 Surface **1710 ±** Wt. of Hammer # **Job No. 036741** Boring No. **A-49**

Location **Sunland Blvd to Lowell Ave**  
 Dist. **07** Co. **4A** Rt. **210** Sec. **Cont. W.O.**

Fr., Right Left **2** Line Sta. **211400 ±**

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample			Depth
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars	
<b>3</b>	From	<b>27</b>	<b>None necessary</b>				<b>21</b>	
	To	<b>30</b>						<b>0</b>
<b>4</b>	From	<b>30</b>					<b>22</b>	
	To	<b>33</b>						<b>56</b>
<b>5</b>	From	<b>45</b>					<b>25</b>	
	To	<b>49</b>						<b>38</b>
	From						<b>27</b>	
	To						<b>28</b>	
	From						<b>29</b>	
	To						<b>30</b>	

Rig Used **Jay 250**  
 Type of Sampler

Type of Point **Regular** Extension

Sample Nos.

Type of Core Barrel **Longyear & Christensen**

Type Bit Used	Number	From	To	Depth
<b>Carbide</b>		<b>27</b>	<b>30</b>	<b>130</b>
<b>Diamond</b>		<b>30</b>	<b>33</b>	
<b>Diamond</b>		<b>45</b>	<b>49</b>	

**GROUND WATER DATA**

Time	DEPTH TO WATER		Time	DEPTH TO BOT. BOR.	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**

Weather: **Overcast & hot**  
**7:05 to 7:30 Travel**  
**7:30 to 11:30 Drilling & Coring**  
**11:30 to 12:00 Lunch**  
**12:00 to 15:45 Drilling & Coring**  
**15:45 - 16:00 Securing area at day**

Depth	Sec Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
16					
17					
18					
19					
20					
21					
22	<b>91</b>				<b>Cuttings Shows med hard granitic rock</b>
23					
24					
25	<b>92</b>				
26					
27					
28	<b>58</b>				<b>a few pieces of broken granitic rock in core barrel (in plastic bag) core box 107</b>
29	<b>67</b>				
30	<b>87</b>				
31	<b>115</b>				
32	<b>107</b>				
33					
34					
35					
36	<b>117</b>				
37					
38					
39					
40	<b>121</b>				<b>Cuttings Shows med hard Granitic rock</b>
41					
42					
43	<b>135</b>				
44					
45	<b>116</b>				
46	<b>111</b>				<b>Hard broken friable granitic rock</b>
47					
48	<b>130</b>				
49	<b>215</b>				
50	<b>155</b>				
51					
52	<b>120</b>				
53					
54					
55	<b>116</b>				<b>Cuttings shows granitic rock</b>
56					
57					
58	<b>119</b>				
59					

**NOTE: MAR # 2906**

TO LABORATORY

F. F. ...



STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

Location Sunland Blvd to Lowell Ave  
 Dist. 07 Co. LA Rt. 210 Sec.          Cont. W.O.           
 Ft. Right      Left      Line Sta. 211+00 ±

ELEV. Datum Dist. Dia. of Sampler 3" Date 8-3-67 Page 11  
 Surface 1710 ± Wt. of Hammer #          Job No. 063741 Boring No. R-43

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
6	From	60					
	To	63			84 108	Core Length	30"
7	From	75			No recovery		
	To	78				Core Length	
8	From	80			No recovery		
	To	83				Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	

Rig Used Joy 250  
 Type of Sampler           
 Type of Point          Regular          Extension           
 Sample Nos.           
 Type of Core Barrel Christensen  
 Type Bit Used          Number          From          To           
Diamond          60 63  
"          75 78  
"          80 83

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed          Depth           
 Boring Bailed          Depth           
 Boring Cased          Depth           
 Dia., & Type P.M.P. Casing           
 Type of Casing Cap         

**REMARKS**  
 Weather:           
See page # 10

Depth	Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
60	124	6	PSI		loose, friable, dg.
61	137	6	PSI		
62	160	6	PSI		
63		6	PSI		
64		6	PSI		
65		6	PSI		
66		6	PSI		
67		6	PSI		
68	120	6	PSI		Cutting shows dg.
69		6	PSI		
70		6	PSI		
71	137	6	PSI		
72		6	PSI		
73	141	6	PSI		
74		6	PSI		
75		6	PSI		
76	161	6	PSI		
77	129	6	PSI		Cuttings show dg
78	134	6	PSI		
79		6	PSI		
80		6	PSI		
81	70	6	PSI		Cuttings shows D.G.
82	100	6	PSI		
83	125	6	PSI		

End of day 8-3-67

Note: MER # 2906

TO LABORATORY

STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

Location Sunland Blvd to Longwell Ave  
 Dist. 67 Co. LA Rt. 210 Sec. 3  
 Cont. W.O.  
 Ft., Right, Left R Line Sta. 211400

ELEV. Datum DIST. Dia. of Sampler 3 Date 8-4-67 Page 12  
 Surface 17102 Wt. of Hammer # 1 Job No. 063741 Boring No. P-13

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
9	From 83						
	To 88						
10	From 95						
	To 98						
11	From 108						
	To 111						
12	From 120						
	To 123						

Depth	Sec. Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
83	71	111	175		
84	79	9			
85	88	111			
86	94	111			
87	108	111			
88	89	111			
89	90	137			
90	91	111			
91	92	111			
92	93	111			
93	171	111			
94	95	111			
95	96	111			
96	96	111			
97	204	10			
98	200	111			
99	160	111			
100	101	119			
101	102	111			
102	103	111			
103	104	111			
104	105	138			
105	106	111			
106	107	111			
107	108	111			
108	120	111			
109	189	11			
110	182	111			
111	179	111			
112	112	111			
113	131	111			
114	114	111			
115	115	111			
116	108	111			
117	117	111			
118	118	111			
119	119	111			
120	120	111			
121	97	12			
122	97	111			
123	122	111			
124	114	111			

Rig Used Joy 250  
 Type of Sampler  
 Type of Point Regular Extension  
 Sample Nos.  
 Type of Core Barrel Long core  
 Type Bit Used Number From To  
Cab/ny 83 88  
H 95 98  
" 108 111  
" 120 123

**GROUND WATER DATA**

Time	DEPTH TO WATER		Time	DEPTH TO BOT. BOR.	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**  
 Weather: overcast & hot  
0705 to 0730 Travel  
0730 to 1130 Drilling & Coring  
1130 to 1200 Lunch  
1200 to 1315 Coring & Drilling  
1315 Moving Equipment to Maint. yard

TO LABORATORY

frangible, fracture & broken granitic rock, some mineral staining w/ some med. hard pieces  
 friable DG  
 Cuttings shows granitic rock  
 Change to salmon pink granitic rock  
 very friable loose DG  
 Change hard broken granitic rock  
 Cuttings shows granitic rock

**BORING RECORD**

ELEV. Datum *Dist* Dia. of Sampler *3"* Date *8-8-67* Page *13*  
 Surface *1645'* Wt. of Hammer # Job No. *063741* Boring No. *R-19*

Location *Sunland Blvd to Lowell Ave*  
 Dist. *67* Co. *LA* Rt. *210* Sec. *Cont. W.O.*  
*210* Ft., Right, *E* Line Sta. *175+60.5*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
1	From	10					
	To	15		50	111	Core Length 30"	
2	From	25		40			
	To	30		111	Core Length 24"		
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	

Rig Used *Joy 250*  
 Type of Sampler  
 Type of Point Regular Extension  
 Sample Nos.  
 Type of Core Barrel *Longyear*  
 Type Bit Used Number From To  
*Carbide* 10 15  
 " 25 30

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**  
 Weather: *Overcast & hot.*  
*0705 to 0730 Travel*  
*0730 - 1130 Mixing mud, drilling & coring*  
*1130 - 1200 Lunch*  
*1200 - 1225 Mechanic working on Chuck at Big Ma.*  
*1225 - 1600 Drilling & coring*

Depth	Sec Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
1		50	151		
2					
3					
4					
5	53				
6					Cuttings shows coarse granitic rock (volcanic)
7					
8	45				
9					
10					
11	30		175		loose brn & white broken highly mineral stained granitic rock (volcanic)
12	31	1			
13	22	111			
14	34				
15	24				
16			50		
17			151		
18					
19					
20	81				Cuttings shows coarse granitic rock (volcanic)
21					
22					
23					
24	85				
25			175		loose white quartz & D.G.
26	58	111			
27	55	2			
28	53	111			
29	101				
30	163				
31			200		Change to hard gray granitic rock
32					
33					
34					
35	167				cuttings shows granitic rock
36			250		
37					
38	175				
39					
40					

NOTE ME R # 2906

TO LABORATORY

**BORING RECORD**

Location Sunland Blvd to Lowell Ave  
 Dist. 67 Co. LA Rt. 210 Sec.          Cont.          W.O.           
210 Ft., Right,          Line Sta. 175+60±

ELEV.	Datum <u>Dist</u>	Dia. of Sampler <u>3"</u>	Date <u>8-8-67</u>	Page <u>14</u>
	Surface <u>1645±</u>	Wt. of Hammer # <u>        </u>	Job No. <u>D63741</u>	Boring No. <u>R-14</u>

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
3	From 40						
	To 43			17	111	Core Length 6"	
4	From 50			100	112	Core Length 36"	
	To 53						
5	From 65			66	112	Core Length 24"	
	To 68						

Rig Used Joy 250

Type of Sampler         

Type of Point          Regular          Extension         

Sample Nos.         

Type of Core Barrel longyear, Christensen

Type Bit Used	Number	From	To
<u>Carbide</u>	<u>None</u>	<u>40</u>	<u>43</u>
<u>Diamond</u>		<u>50</u>	<u>53</u>
<u>"</u>		<u>65</u>	<u>68</u>

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed          Depth         

Boring Bailed          Depth         

Boring Cased          Depth         

Dia., & Type P.M.P. Casing         

Type of Casing Cap         

**REMARKS**

Weather:         

See page 13

Depth	Sec. Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
500			175		
41			175		Very hard gray & white quartz & granite
42					
43					
44			200		
45			125		
46					Cutting shows granitic rock
47			263		
48					
49			123		
50					
68					
51					Mod hard broken granitic rock
64					
52					
115					
53					
54			200		
55					
56					
57			159		
58					Cuttings shows granitic rock
59					
60			197		
61					
62			246		
63					
64					
65			97		
66			87		Mod hard gray fine & broken granitic rock w/ some mineral staining
70					
67					
109					
68					
69			200		
70			87		
71					
72					
73			91		Cutting shows granitic rock
74					
75					
76					
77			85		
78					
79					
80					

End of day 8-8-67  
 Note M&R# 2906

TO LABORATORY



**BORING RECORD**

Location Sunland Blvd to Lowell Ave  
 Dist. 07 Co. 19 Rt. 210 Sec. Cont. W.O.  
210 Ft., Right, 9 Line Sta. 175+60 ±

ELEV.	Datum	Dist	Dia. of Sampler	2"	Date	8-10-67	Page	16
Surface	1445 L		Wt. of Hammer	#	Job No.	063741	Boring No.	R-14
Depth	Sec Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL			
102	373	8	250	250	Diamond bit blockcut 103'			
103					Very hard frac. broken fresh granite			
104								
105								
106								
107	361				Cuttings shows granitic rock			
108								
109								
110	144							
111					Very hard, frac. & broken fresh granite.			
112								
113								
114								
115	146							
116								
117								
118	153				cuttings shows granitic rock.			
119								
120								
121	151							
122								
123	263							
124								
125								
126	340				Very hard, frac. & broken granite			
127								
128								
129								
130								
131								
132	241				Cuttings shows granitic rock			
133								
134	127							
135								
136	99							
137								
138	211				Very hard, frac. & broken granite w/ some mineral staining			
139	390							
140								

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
8	From	102					
	To	103		100	113	Core Length	12"
9	From	110		40	113	Core Length	12"
	To	112.5					
10	From	125		100	113	Core Length	30"
	To	127.5					
11	From	137		67	114	Core Length	24"
	To	140					

Rig Used Joy 250  
 Type of Sampler  
 Type of Point Regular Extension  
 Sample Nos.  
 Type of Core Barrel Christensen  
 Type Bit Used Number From To  
Diamond 102 103  
 " 110 112.5  
 " 125 127.5  
 " **GROUND WATER DATA** 137 140  
 Time DEPTH TO WATER BOT. BOR. Time DEPTH TO WATER BOT. BOR.  
 Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**  
 Weather: Clear & hot  
 8705 to 8730 travel  
 8730 to 1130 Drilling & casing  
 1130 to 1900 lunch  
 1700 to 1500 Drilling & casing  
 1500 to end of day tearing down to above equipment  
 used new 1 1/2" Varel rock bit #97531

TO LABORATORY

Bottom of boring  
 End of day 8-10-67



STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

ELEV. Datum	DIST. CONDUR MAP	Dia. of Sampler	Date	Page
Surface 1745'		2"	7-7-67	21
		Wt. of Hammer	Job No.	Boring No.
		#	2706	R-9

Location **SUNLAND**  
 Dist. **07** Co. **LA** Rt. **210** Mi. **11.715** Cont. **W.O.**  
 Ft., Bluff, Left **RT** Line Sta. **202+30**

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
	From						
	To						Core Length
	From						
	To						Core Length
	From						
	To						Core Length
	From						
	To						Core Length

Depth	Sec. Per Ft.	BPM	Wet Wt. per ft.	Moist. %	LOG OF MATERIAL
50					
139					
102					
142					
155					
55					END OF DAY
60					
65					

Rig Used **FWD - JAY 22 "LITTLE MOG"**  
 Type of Sampler **CS**  
 Type of Point Regular Extension  
 Sample Nos.  
 Type of Core Barrel **CHRISTENSEN NY**  
 Type Bit Used Number From To  
**3 1/2" VARIL VI 23245 50' 55'**

**GROUND WATER DATA**

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

**DRILLING MUD USED**

Boring Flushed Depth  
 Boring Bailed Depth  
 Boring Cased Depth  
 Dia., & Type P.M.P. Casing  
 Type of Casing Cap

**REMARKS**

Weather: **SEE pg 33**

Inspector **C.H. DEAN** Foreman **J. SHEPARD**

TO LABORATORY



STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
MATERIALS and RESEARCH DEPT.

BORING RECORD

Dist. Cont. Map Dia. of Sampler 2" Date 7-10-67 Page 35  
Surface 1745 Wt. of Hammer Job No. 2906 Boring No. A-9

Location Sunland  
Dist. 07 Co. LA Rt. 210 Sec. 42/15 Cont. W.O.  
160 Fr., 100 Left Prop 2 Line Sta. 208+30

LOG OF MATERIAL

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
3	From	55	Ring	50	21		
	To	60					
4	From	75	"	50	21		
	To	80					
	From						
	To						
	From						
	To						
	From						
	To						

Depth	Per Ft.	RPM	Wt. of Sample	Moist. Cont.	Remarks
55	120	100			Soft, mt. brown, coarse-grained highly decomposed granit.
56	120	3			
57	120				Cuttings indicate material similar to Sample # 3.
58	120				
59	120				100 PSI
60	100				
65	120				Harder drilling
70	125				
75	138				Firm, light gray decomposed granit pieces of core to 3"
76	120	4			
77	0				100 PSI
78	0				
79	0				Cuttings similar to sample # 4, w/ some salmon color grains.
80	0				
85	284				
85	270				
85	354				
90	332				
95	435				

Rig Used FWD - Joy 22

Type of Sampler

Type of Point Regular Extension

Sample Nos.

Type of Core Barrel Christensen

Type Bit Used Number From To

3 7/8 Varil V-1 23245 55 95

Diamond MX (used) 55 80

GROUND WATER DATA

Time DEPTH TO WATER BOT. BOR. Time DEPTH TO WATER BOT. BOR.

Drilling mud used

Boring Flushed Depth

Boring Bailed Depth

Boring Cased Depth

Dia., & Type P.M.P. Casing

Type of Casing Cap

REMARKS

Weather: Hot - Smoggy

0730-0750 Travel

0750-0830 Move equipment to job site.

0830-1200 Drill & Core

1200-1245 Lunch

1245-1615 Drill & Core

(1200 gal)

1 load of Water today

Total = 14,000 gal

TO LABORATORY

STATE OF CALIFORNIA — DIVISION OF HIGHWAYS  
**MATERIALS and RESEARCH DEPT.**

**BORING RECORD**

ELEV.	Datum <i>Dist. Cont.</i>	Dia. of Sampler <i>2"</i>	Date <i>7-10-67</i>	Page <i>36</i>
	Surface <i>Map</i>	Wt. of Hammer	# Job No. <i>2906</i>	Boring No. <i>R-9</i>

Location *Sunland*  
 Dist. *07* Co. *1A* Rt. *210* Sec. *11 1/2* Cont. W.O. *208*  
*160* Ft., *Left* Prop. *2* Line Sta. *250+30*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
5	From	95	Ring	70	22		
	To	100				Core Length 35'	
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	

Depth	Sec. Per Ft.	Notes	LOG OF MATERIAL
95	210		Firm, light gray decomposed granit. Pieces of core to 3'. Same as Sample #4.
96	100		
97	100	5	
98	100		
99	100		
100	100		

Rig Used *FWD - July 22*

Type of Sampler

Type of Point Regular Extension

Sample Nos.

Type of Core Barrel *Christensen NX*

Type Bit Used	Number	From	To
<i>Diamond NX (used)</i>		95	100

GROUND WATER DATA					
Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.

Boring Flushed Depth

Boring Bailed Depth

Boring Cased Depth

Dia., & Type P.M.P. Casing

Type of Casing Cap

**REMARKS**

Weather: *Sec. 12. 35*

*Core Box No. 32*

*End of Day*

TO LABORATORY