

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

Dist. Cont. Map Dia. of Sampler 2" Date 7-11-67 Page 37
Surface 1745 Wt. of Hammer # Job No. 2906 Boring No. R-9

BORING RECORD

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

ELEV. Depth Per Ft. LOG OF MATERIAL

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
6	From	115	Ring	80	22		
	To	120				Core Length	40'
7	From	135	11	80	23		
	To	140				Core Length	42'
	From						
	To					Core Length	
	From						
	To					Core Length	
	From						
	To					Core Length	

Rig Used FWD - Toy 22
Type of Sampler
Type of Point Regular Extension
Sample Nos.
Type of Core Barrel Christensen NX
Type Bit Used Number From To
3 7/8" Varil Vd 23245 100 135
Diamond NX used 135 140
3 7/8" Varil Vd, Romp 96432

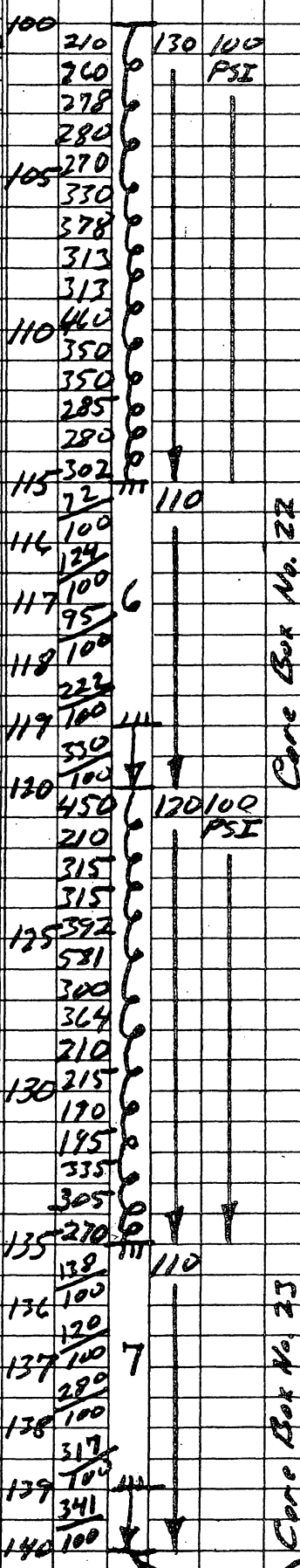
GROUND WATER DATA

Time	DEPTH TO WATER		Time	DEPTH TO BOT. BOR.	
	WATER	BOT. BOR.		WATER	BOT. BOR.
Rotary drilling w/ mud					

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

REMARKS

Weather: Hot - Smoggy
0730 - 0745 Travel
0745 - 0915 Fix mud pump & mix mud & gas truck
0915 - 1145 Drill & Core
1145 - 1215 Lunch
1215 - 1415 Drill & Core



Cuttings indicate same material as sample No. 6
Soft, light-gray decomposed granitic material. Will crumble to fine grains & powder in hand.

Same as above
End of Day

TO LABORATORY

BORING RECORD

DIST. Cont. Main Dia. of Sampler 2" Date 7-12-67 Page 38
 Datum 1745 Wt. of Hammer # Job No. 2906 Boring No. R-9

Location Sunland
 Dist. 07 Co. LA Rt. 210 Sec. Cont. W.O.
160 Ft., Right, Left Prop. 2 Line Sta. 208+30

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
8	From 150		Ring	50	24		
	To 155					Core Length 25'	
9	From 165		"	83	24		
	To 168					Core Length 23'	
	From					Core Length	
	To					Core Length	
	From					Core Length	
	To					Core Length	
	From					Core Length	
	To					Core Length	

Rig Used FWD - Joy 22
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel Christansen NX
 Type Bit Used

3 1/2 Vahl H ₄ Rot ₄	Number	From	To
<u>96432</u>		<u>140</u>	<u>165</u>
<u>Diamond NX (used)</u>		<u>150</u>	<u>165</u>

GROUND WATER DATA

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

Boring Flushed
 Boring Bailed
 Boring Cased

Dia. & Type P.A.P. Casing
 Type of Casing Cap

REMARKS
 Weather: Hot - Sunny

0730-0750 Travel
0750-0815 Service equipment
0815-1145 Drill & Core
1145-1230 Lunch
1230-1430 Fix mud pump
 + Hydraulic
look
1430-1615 Rig down,
 move to R-10,
 Rig up.

LOG OF MATERIAL

ELEV.	Depth	Sec. Per Ft.	RPM	Wt. of Tube	Wt. of Sample	Moist. Cont.	LOG OF MATERIAL
140	170	125	100				
170	170						Cuttings indicate same as sample # 8
120	170						
120	170						
145	120						
120	120						
120	168						
170	170						
150	213		120				Soft, light-gray decomposed granitic material. Will crumble to fine-grains + powder.
135	100						
151	100						
150	100						
152	100						
272	100						
153	100						
320	100						
154	100						
362	100						
155	100						
75	130		100				Cuttings indicate same as sample # 8
320	100						
215	100						
150	100						
140	152						
180	100						
180	100						
205	100						
250	100						
165	230						
165	100						
166	100						Same as sample # 8 w/ some red fracture stains.
167	150		9				
167	100						
252	100						
168	100						

Core Box # 24
Core Box # 24
Bottom of Boring

TO LABORATORY

BORING RECORD

DIST. CONT. Dia. of Sampler 2" Date 7-13-67 Page 39
 Datum Map Wt. of Hammer # Job No. 2906 Boring No. R-10
 Surface 1815

Location Sunland
 Dist. 07 Co. LA Rt. 210 Sec. 19/18E Cont. W.O.
70 Ft., Right, Left Face Line Sta. 243+70

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
1	From	15	Ring	75	25		
	To	17					
	From						
	To						
	From						
	To						
	From						
	To						
	From						
	To						

Rig Used Jay - 22 - FWD
 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, Ret. 96432 0 22
Diamond NX (used) 11 11
3 1/2 Varil V-1, Ret. 57567 22 26

GROUND WATER DATA

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

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

REMARKS
 Weather: Hot - Smoggy

0730-0750 Travel
 0750-0845 Rig-up & Service equipment.
 0845-0930 Turn Drill Core
 1130-1215 Drill Core
 1215-1530 Drill & Core
 1530-1600 Prepare to move to other (south) side of boring pad

Depth	Per Ft.	LOG OF MATERIAL	
		RPM	Wt. of Hammer
0			
50		120	120
17			PSI
21			
13			
12			
21			
51			
56			
120			
120			
600			
480			
200			
72		110	
100			
235			
100			
245		120	150
130			PSI
75			
168			
185			
1800			
2700			
2860			
5500			

Top 4 1/2 ft boring pad fill
 Partial loss of circulation.
 Hard, Cuttings indicate granitic material
 Very hard, solid, light granitic rock. Pieces of core to 2".

Core barrel blocked off.
 Very Hard Drilling

End of Day
 Bottom of boring

This boring is being abandoned because of hard material.

TO LABORATORY

BORING RECORD

Location Sealand
 Dist. 07 Co. LA Rt. 210 Sec. 15/15 Cont. W.O.
70 Ft., Left Prop 2 Line Sta. 243+70

Dist. Cont
 ELEV. Datum Maiz Dia. of Sampler 2" Date 7-14-67 Page 40
 Surface 1815 Wt. of Hammer # Job No. 2906 Boring No. R-10

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
2	From	26	Rings	63	25		Core Length 25'
	To	30					
	From						
	To						
	From						
	To						
	From						
	To						

Depth	Per Ft.	Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
26	840	1			Very hard, light-gray granitic rock w/ some fractures, stained brownish-yellow. Pieces of core to 4"
27	150	2			
28	150	2			
29	150	2			
30	150	2			
Bottom of Boring					

Rig Used FWD - Jay 22
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel Christensen NX
 Type Bit Used Number From To
Longyear 3 1/2" Retip 487M
Diamond NX (used) 26 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: Hot - Smoggy
0730-0750 Travel
0750-0800 Core
1100-1145 Lunch
1145-1300 Rig down, move to R-10A - Rig up
1300-1615 Drill & Core R-10A

Note: In disagreement with yesterday's boring log, this morning we decided to core (with diamond bit.) another 5 ft into the hard granite, to see if it would break through - it did not - will move 50 ft south (toward Prop 2) to R-10A

TO LABORATORY

BORING RECORD

Dist Cont.
 Datum *1740* Dia. of Sampler *2"* Date *7-14-67* Page *41*
 Surface *1815* Wt. of Hammer # Job No. Boring No. *R-10A*
 ELEV. *50.* Depth *50.* Per Ft. *100* PSI

Location *Sealand*
 Dist. *07 Co. LA Rt. 210 Sec. 14/15* Cont. *N.O.*
20 Ft., *Prop R* Left Line Sta. *243+70*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
1	From	<i>15</i>	<i>Ring 0</i>	<i>0</i>			
	To	<i>20</i>					
2	From	<i>20</i>	<i>" 3/8 26</i>	<i>26</i>			
	To	<i>25</i>					
	From						
	To						
	From						
	To						
	From						
	To						

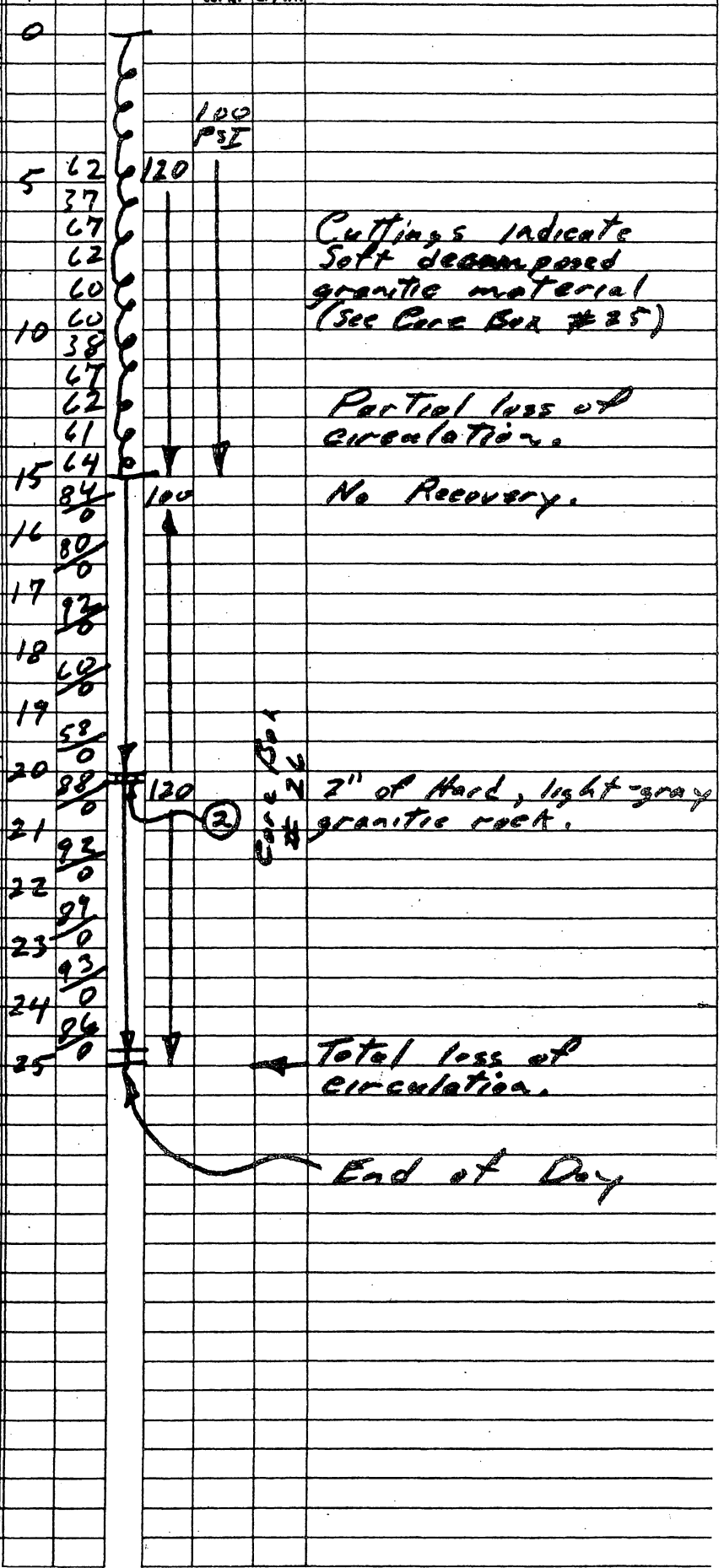
Rig Used _____
 Type of Sampler _____
 Type of Point Regular _____ Extension _____
 Sample Nos. _____
 Type of Core Barrel _____
 Type Bit Used _____ Number _____ From _____ To _____

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: *See p. 40*



TO LABORATORY

BORING RECORD

Location Susland
 Dist. 07 Co. LA Rt. 210 Sec. 11715 Cont. W.O.
20 Ft., W, Left Prop. R Line Sta. 243+70

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
3	From	30	Ring	30	26		
	To	35				Core Length	1-5'
4	From	50	"	30	26		
	To	55				Core Length	1-5'
	From					Core Length	
	To					Core Length	
	From					Core Length	
	To					Core Length	

Rig Used FWD - Joy 22

Type of Sampler

Type of Point	Regular	Extension
---------------	---------	-----------

Sample Nos. 70
61
81
60
130
100
58
100
60
100
73
10

Type of Core Barrel Christensen NX

Type Bit Used	Number	From	To
<u>Langyear 3 1/2" Retip</u>	<u>48734</u>	<u>25</u>	<u>55</u>
<u>Christensen Diamond</u>	<u>L-1062</u>	<u>30</u>	<u>35</u>

GROUND WATER DATA

Time	DEPTH TO WATER		Time	DEPTH TO BOT. BOR.	

Drilling mud used

Boring Flushed	Depth	<u>1000</u>
Boring Bailed	Depth	<u>50</u>
Boring Cased	Depth	<u>144</u>
Dia., & Type P.M.P. Casing		<u>51</u>
Type of Casing Cap		<u>140</u>

REMARKS

Weather: Hot - Sunny

0730-0750 Travel

0750-0830 Move equipment to job site, haul load of water + call Soc to

0830-1130 Drill + Core

1130-1215 Lunch

1215-1615 Drill + Core

ELEV.	Depth	Sec Rec'd	Wet Tube	Wt. of Hammer	Moist. dry wt.	LOG OF MATERIAL
	25	52	130	100		Partial loss of Circulation
		70				
		61				
		81				
	30	60				Hard, light-gray granitic rock w/ fractures, stained rust color. Pieces to 2".
		130	120			
	31	100				
		31				
		32				
		33				
		34				
	35	100				Hard granitic layer
		480	110	150		
		990				
		915				
		1080				
	40	1150				
		780				
		480				
		490				
		120				
	45	183				Total loss of Circulation
		320				
		940				
		950				
		1000				
	50	910				Some as sample #3
		144	120			
		100				
		140				
		100				
		160				
		100				
		180				
		100				
		175				
		100				
		100				
		180				
		100				
		175				
		100				

End of Day

Haul 2 loads of water today = 2400 gal
 1 load on 7-15-67 (not recorded) = 1200 "
 Total = 3600 "

TO LABORATORY

BORING RECORD

Dist. Cont. *Map* Dia. of Sampler *2"* Date *7-18-67* Page *43*
 ELEV. Datum *1815* Wt. of Hammer # *100* Job No. *2906* Boring No. *R-10A*

Location *Sunland*
 Dist. *07* Co. *LA* Rt. *210* Sec. *11/15* Cont. *O.*
20 Fr., *North*, Left *Prop* Line Sta. *243+70*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
5	From	64	Ring	4	26		
	To	69					
6	From	75	"	"	26		
	To	79					
	From						
	To						Core Length
	From						
	To						Core Length
	From						
	To						Core Length

Rig Used *FWD - Joy 22*
 Type of Sampler *17*
 Type of Point Regular Extension
 Sample Nos. *18*
 Type of Core Barrel *Christerson NX*
 Type Bit Used Number From To
Long wear 3 1/2" Retip 48734 55 64
(Christerson NX) L-1002 64 79
Diamond Retip 3 1/2" Val 96429 64 82

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:
0730-0800 Travel
0800-0830 Service equipment
0830-1115 Drill & Core
1115-1200 Lunch
1200-1415 Drill & Core
 Haul 1 load of Water 1200 gal
 Total = 18,800 gal

LOG OF MATERIAL

Depth Per Fr. *55* *90* *120* *100*
157 *151*
515
120
60 *338*
231
600
87
64 *690*
100
45 *100*
45 *100*
66 *100*
276
100
130
100
515
100 *100*
170 *120*
170
165
170
185
75 *190*
270 *110*
76 *100*
358
77 *100*
475
78 *100*
448
79 *100*
30
202
82 *210*

Partial loss of Circulation to 82 ft.
2 2" pieces, hard, light-gray granitic rock.
Change from 70 to 85. Cuttings have a greenish clay like material mixed with granitic cuttings.
Cuttings and time indicate hard & soft layers of granitic material
Same as Sample # 5 Note: This may be slough from above boring wall - note concave bit marks.
End of Day

TO LABORATORY

BORING RECORD

Dist. *Cont.* Dia. of Sampler *2"* Date *7-19-67* Page *44*
 Datum *Map* Wt. of Hammer # Job No. *2906* Boring No. *R202*
 Surface *1815'*

Location *Sanland*
 Dist. *07* Co. *LA* Rt. *210* Sec. *11/15* Cont. *W.O.*
20 Ft., Blk. Left *Prop* Line Sta. *243+70*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
7	From	82	Ring	0			
	To	87					
8	From	87	"	10	27		Core Length 15'
	To	92					
9	From	95	"	50	27		Core Length 25'
	To	100					

ELEV.	Depth	LOG OF MATERIAL
100	82	No Recovery,
98	83	Partial loss of Circulation.
96	84	Cuttings indicate material similar to Sample # 9
94	85	
92	86	
90	87	Total loss of Circulation
88	88	Same as Sample No. 9
86	89	
84	90	
82	91	
80	92	
78	93	
76	94	
74	95	
72	96	Firm to soft, highly weathered, mtl. black biotite shist w/ some gold color mica. Rust color fracture staining. Pieces of core to 2". Also some packets of Quartz.
70	97	
68	98	
66	99	
64	100	Resin Circulation w/ cotton seed hulls.
62	101	
60	102	
58	103	Partial loss of Circulation.
56	104	
54	105	Cuttings indicate material similar to sample # 9
52	106	
50	107	
48	108	
46	109	
44	110	
42	111	
40	112	End of Day

Rig Used *FWD Jay 22*
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel *Christensen NX*
 Type Bit Used Number From To
Vacil H-1 3-Cone 24304 82 112
Christ. Di NX L-102 82 92
Cockaby NX (New) No. 95 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: *Hot - Smoggy*
 0730-0750 *Travel*
 0750-1130 *Drill & Case*
 1130-1215 *Lunch*
 1215-1615 *Drill & Case*

TO LABORATORY

BORING RECORD

Location Sanland
 Dist. 27 Co. LA Rt. 210 Sec. 11 1/2 Cont. W.O.
20 Ft. Left App # Line Sta. 243+70

LOG OF MATERIAL

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
10	From	115	Ring	40	27		
	To	120					
11	From	130	"	20	28		Core Length 25'
	To	134					
12	From	134	"				Core Length 15'
	To	139					
	From						Core Length
	To						
	From						Core Length
	To						

Depth	Sec. Per Ft.	Wt. of Hammer	Moist. Cont.
112	180	120	100
	180		PSI
115	180		
	150	100	100
	100		PSI
116	100		
	269		
117	100		
	250		
118	100		
	210		
119	100		
	170		
	100		
120	100		
	240	150	150
	240		PSI
	325		
	285		
	270		
125	210		
	235		
	190		
	240		
	192		
130	152	110	
	100		
131	148		
	100		
132	230		
	100		
133	100		
	310		
	100		
134	150	130	
	100		
135	145		
	100		
	141		
	100		
137	145		
	100		
138	140		
	100		
139	140		
	100		

Partial loss of Circulation
 Hard to soft, highly weathered, with black fine grained biotite schist w/ layers or pockets of quartz. Hard pieces of size 6" in length w/ near vertical, rust color fracture

Cuttings indicate material to sample No. 10

Same as Hard material in sample # 10

Same

Bottom of Hole

Rig Used FWD - July 22
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel Christianson NX
 Type Bit Used Number From To
Varel H1 3-coe 24394 112 130
Carbide NX No # (115 120)
134 139

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 Sunny
 0730-0750 Travel
 0750-1130 Drill + Core
 1130-1215 Lunch
 1215-1615 Drill + Core

TO LABORATORY

R. Horr

BORING RECORD

Location **SUNLAND**
 Dist. **07** Co. **LA** Rt. **210** Sp. **11.0/15.6** Cont. **W.O.**
253 Ft., Right, Left **E** Line Sta. **274+92**

ELEV.	Depth	SEC. Per Ft.	RPM Tubes	Wet Wt. of P. ft.	Moist. % of dr. wt.	LOG OF MATERIAL
	0					TOP 5'± BORING PAD FILL MAT'L
	5					CUTTINGS INDICATE DECOMPOSED GRANITIC MAT'L.
	10					
	15					END OF DAY

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
	From						
	To					Core Length	60
	From					Core Length	95
	To					Core Length	120
	From					Core Length	115
	To					Core Length	111
	From					Core Length	110
	To					Core Length	110
	From					Core Length	110
	To					Core Length	100

Rig Used **FWD - Joy 22**
 Type of Sampler **208**
 Type of Point Regular Extension **15 128**
 Sample Nos.
 Type of Core Barrel
 Type Bit Used Number From To
VAREL H1 24394 0 15

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

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

REMARKS
 Weather: **HOT - SMOGGY**
0730-0815 TRAVEL, GAS TRUCK
0815-1145 RIG-DOWN, MOVE TO R-11, RIG UP.
1145-1230 LUNCH
1230-1445 DRILL, MIX MUD
1445-1545 MOVE EQUIP. TO MAINT. STA.
1545-1645 TRAVEL TO LAX

TO LABORATORY

D. SATHRE R. HODD

BORING RECORD

Location **SUNLAND**
 Dist. **07** Co. **LA** Rt. **210** Sec. **14/15** Cont. **6 N.O.**
253 Ft., Right, Left **6** Line Sta. **274+92**

LOG OF MATERIAL

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
1	From	15	RING	20	29	Core Length	12"
	To	20					
2	From	35	RING	10	29	Core Length	6"
	To	40					
	From					Core Length	
	To						
	From					Core Length	
	To						
	From					Core Length	
	To						

Depth	SEL Per Ft.	RPM Tubes	Wet Wt. P. ft.	Moist. % dry wt.	LOG OF MATERIAL
15	90				SOFT DECOMPOSED GRANITE - CORE WASHED AWAY - MAT'L VERY FRIABLE AND POWDERY WHEN DRY
120					
124	115				DRILLS AS IF IN BROKEN MAT'L.
20	90				
150	180				CUTTINGS INDICATE DECOMPOSED GRAY GRANITE.
180					
25	100				CUTTINGS SAME AS ABOVE
180					
30	90				HARD GRAY BROKEN GRANITE
160					
35	100				HARD BROKEN GRANITE FROM CUTTINGS.
150					
150					END OF DAY.
150					
40	150				
150					
150					
150					
45					

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
CARB. NX	15	20
VAREL H-1	35	40
20394	15	44

GROUND WATER DATA

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

USING DRILLING MUD

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

REMARKS
 Weather: **HOT AND SMOGGY**
1030-1130 PICK UP EQUIP - TRAVEL TO DRILLING SITE LUNCH
1130-1230 CORING
1230-1400 DRILLING
1400-1500 CORING
1500-1530 REPAIR HYDR. LINE TO TRAVEL ON CHUCK
1530-1600 DRILLING

TO LABORATORY

Inspector **O BRADEN** Foreman **HORR**

BORING RECORD

Location SUNLAND
 Dist. 07 Co. LA Rt. 210 Sec. 10/15 Cont. W.O.
253 Fr., Right, Left R Line Sta. 2147+32

Depth	Per Ft.	RPM	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
15	1850	300			RATE OF DRILLING AND CUTTINGS INDICATE ALTERNATING LAYERS OF HARD AND BROKEN GRANITIC MAT'L
25	1750	225			
35	1650	225			
45	1550	100			CORING IS SLOW BUT VERY SMOOTH, VERY LITTLE CUTTINGS.
55	1450	100			
60	1400	100			HARD - MULTI COLORED - BROKEN AND FRACT. GRANITE - SMALL PIECES CUTTINGS SHOW SOME BR. COLOR WITH THE GRAY. IT IS POSSIBLE CORE MAY HAVE FILL FROM BARREL.
65	1350	100			
70	1300	100			
75	1250	250			SHORTENED CORE RUN TO 3' HARD - VERY FRACT & BROKEN! GRAY GRANITE.
80	1200	250			
85	1150	250			FROM TIME AND ACTION OF THE DRILL, MAT'L APPEARS TO BE IN HARD AND SOFT LAYERS OF GRANITE
90	1100	250			
95	1050	100			SOFT D.G., CRUMPLES AT TOUCH, POWDERY
100	1000	100			
105	950	100			END OF DAY
110	900	100			

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
3	From 50		RING	20	30		
	To 55					Core Length	12"
4	From 60		RING	85	30		
	To 63					Core Length	25"
5	From 72		RING	85	31		
	To 75					Core Length	30"

Rig Used JOY 22 4 WD
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel CHRISTENSEN
 Type Bit Used Number From To
VAREL H-1 24394 44 50
DIAMOND (USED) L-1062 50-60 55-63
VAREL V-1 22080

GROUND WATER DATA

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

USING DRILLING MUD

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

Weather: HOT & SMOGGY **REMARKS**
0730-0745 TRAVEL
0745-0800 GAS & SERV. RIG
0800-1130 DRILL & CORE
1130-1230 LUNCH
1230-1530 DRILL & CORE
1530-1600 CLEAN SAND FROM MUD PIT, FLUSH & MIX NEW TANK OF DRILLING MUD
1600 END OF DAY

TO LABORATORY

BORING RECORD

Location **SUNLAND**
 Dist. **7** Co. **LA** Rt. **210** Sec. **110/5** Cont. **AN.O.**
253 Ft., Right, Left **E** Line Sta. **274192**

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
6	From	75	NO REC.				
	To	79					
7	From	90	100	31			12"
	To	91					
8	From	91	87				30"
	To	94					
	From						
	To						

Rig Used **Joy 22 4WD**
 Type of Sampler
 Type of Point **Regular** Extension
 Sample Nos.
 Type of Core Barrel **CHRISTENSEN**
 Type Bit Used

Number	From	To
VAREL V1 22080	75	94
DIAMOND (USED) L1062	75	82
	90	91
	91	94

GROUND WATER DATA

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

USING DRILLING MUD

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

REMARKS
 Weather: **SL. COOLER BUT SMOGGY**
0730-0740 TRAVEL TO JOB SITE
0740-0815 CREW MIXING MUD
FOREMAN AND INSPECTOR
TELEPH. M & R MECH.
0815-1130 REAM & CORE
1130-1230 LUNCH
1230-1500 DRILL AND CORE
 Inspector **D. BOADEAU** **R. HODO**

Depth	SEC Per Ft.	RPM Types	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
80	110	RETAINED 4 PIECES UP TO 1/2" IN SIZE			
85	110	HARD-GRAY-VERY FRACT. & BROKEN GRANITE-ROCK INTERBEDDED WITH P.G.			
90	110	CORE BARREL BLOCKED AT 91'			
95	110	HARD-GRAY-FRACT-BROKEN FRESH GRANITE -			
		COING AS IF MAT'L MAY BE BROKEN			
		SAME AS ABOVE			
		BOTTOM OF BORING 7-26-67			

TO INSPECTOR

BORING RECORD

Location Sunland
 Dist. 07 Co. LA Rt. 210 Sec. 11-156 Cont. W.O.
325 Ft., Right, Left Prop C Line Sta. 173+40

ELEV. Datum MAP Dia. of Sampler 2" Date 7/28/67 Page 51
 Surface 1775± Wt. of Hammer — # Job No. 32906 Boring No. K-8

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
9	From	137	SPR.	33	32		
	To	140					
10	From						
	To						
	From						
	To						
	From						
	To						
	From						
	To						

Depth	Secs Per Ft.	RPM	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
130	25/150	9	150	2	Hard gray very broken and fractured granite weathered + stained on
139	20/150		150	2	
140	27/150		150	2	Fracture & white spots materials scattered spots that thru the rock.
141	13/200		200		Rock size to 1" dia.
142	15/300				Drilling cones + balling on lights material to get granites very hard + broken.
143	15/300				
144	12/300		225		
145	12/300				
146	12/300				
147	12/300				
148	12/300				

Rig Used Joy 22
 Type of Sampler Regular
 Type of Point Regular Extension
 Sample Nos. 137-148
 Type of Core Barrel Christensen NX 2"
 Type Bit Used
 Dia. NX L-106Z From 137 To 140
 Rock Bit Z4390 From 139 To 148
 Dia. NX -0.5 09017 From 143

GROUND WATER DATA

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

Drilling mud

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

REMARKS
 Weather: Hot + Smog
0930 to 11:30 Drilling + Coring
11:30 to 12:30 Lunch + Service Rig
12:30 to 13:00 Drilling + Coring
13:00 to 16:00 Breakdown of Rig. Move Trucks to Maint. yard

End of Day

TO LABORATORY

Inspector O Braden Foreman P. Hon

BORING RECORD

Location *Sunland*
 Dist. *67* Co. *LA* Rt. *210* Sec. *11/15* Cont. W.O.
325 Ft., Right, Left *Prop 9* Line Sta. *12340*

Sample No.	Sampled			Core Catcher Used	% Rec.	Retained Sample		
	From	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
<i>10</i>	From	<i>148</i>		<i>Spyg.</i>	<i>.75</i>	<i>32</i>		
	To	<i>151</i>					<i>Core Length 27"</i>	
<i>11</i>	From						<i>Core Length</i>	
	To						<i>Core Length</i>	
	From						<i>Core Length</i>	
	To						<i>Core Length</i>	
	From						<i>Core Length</i>	
	To						<i>Core Length</i>	
	From						<i>Core Length</i>	
	To						<i>Core Length</i>	

Depth	Mh Per Ft.	PAM Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
<i>148</i>	<i>17</i>	<i>111</i>			
<i>150</i>	<i>150</i>	<i>100</i>			<i>Hard Hard may Badly Fract. Granite 5' diameter and</i>
<i>149</i>	<i>18</i>	<i>100</i>			<i>cracked in Frost. almost a Vert. dip to core.</i>
<i>150</i>	<i>16</i>	<i>123</i>			
<i>151</i>	<i>151</i>				
<i>152</i>	<i>12</i>	<i>225</i>			<i>Cutting show hard granitic</i>
<i>153</i>	<i>200</i>	<i>250</i>			<i>Rock. Some quartz.</i>
<i>154</i>	<i>1/200</i>	<i>250</i>			<i>Drills like is may be</i>
<i>155</i>	<i>1/200</i>	<i>250</i>			<i>Badly Broken + fractured</i>
<i>156</i>	<i>1/200</i>	<i>250</i>			
<i>157</i>	<i>1/200</i>	<i>250</i>			
<i>158</i>	<i>1800</i>	<i>250</i>			<i>Same as above</i>
<i>159</i>	<i>20</i>	<i>250</i>			<i>Very hard. Not as</i>
<i>160</i>	<i>1800</i>	<i>250</i>			<i>Broken.</i>
<i>161</i>	<i>1800</i>				
<i>162</i>	<i>400</i>				

Rig Used *Log 22*
 Type of Sampler
 Type of Point *Regular* Extension
 Sample No.

Type of Core Barrel *Christensen NXD3 2"*
 Type Bit Used
 Number From To
09019 140 151
24391 158 162
29340 170 158

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 + Smoggy*
0730 to 0800 Pick up trucks at Maint yard; telephone Sacto.
0800 to 0930 Put together connection on Kelly
0930 to 0900 Change Clean mud Pit mix new mud.
0900 to 0930 Clean hole with Rock Bit 0930 to 11:30 Coring + Drilling
11:30 to 12:30 Lunch 12:30 to 14:15 Drilling + Casing 14:15 to 14:45 Change Bit. Clean Hole.
14:15 to 1545 Drilling
1545 to 1600 Pick up tool Gas Equip.

Inspector *O/Braden* Foreman *R. Hoss*

End of Day

TO LABORATORY

BORING RECORD

Location Sunland
 Dist. 07 Co. LA Rt. 210 Sec. 12/156 Cont. W.O.
925 Fr., Right, Left Prop 8 Line Sta. 173+40

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
11	From 162			67	32		
	To 165					Core Length 24"	
12	From 172			100	33		
	To 174					Core Length 24"	
	From					Core Length	
	To					Core Length	
	From					Core Length	
	To					Core Length	
	From					Core Length	
	To					Core Length	

Rig Used Joy 22
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel Christensen NX-D3
 Type Bit Used Number From To
 Dia. NXD3 .05 09017 162 165
 Rock Bit 24391 162 172
 Rock Bit Yard 34399 172 177

GROUND WATER DATA

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.
	Using Drilling Mud.			End of Day.	

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

REMARKS

Weather HOT + Smoggy
 0730 to 0740 Travel - 0740 to 0800
 Open Hole 0800 to 11:30 Drilling
 + Cleanup 11:30 to 12:30 Lunch.
 12:30 to 15:45 Drilling + casing
 15:45 to 15:55 Pick up tools
 + Police access. 15:55 to 16:10
 Travel to Archive. CUSCA.

ELEV.	Depth	Min. Per Fr.	IPPM Feet	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL	
						Surface	1745 ±
162	10/150	111	125	N		Hard Basalt gray to light pink granitic rock.	
163	10/150	111	120	N		Near a vertical Fract. Fract.	
164	11/150	111	120	N		Close to soft weathered granitic. Badly fract.	
165	8/150	111	250	N		Occasional stains in seams + fractures.	
166	12/150	111	250	N			
167	12/150	111	250	N			
168	9/150	111	250	N		Drills as if Hard + Badly Broken Cuttings show granitic material.	
169	9/150	111	250	N			
170	11/150	111	250	N			
171	11/150	111	250	N			
172	17/150	111	120	N		Hard gray Badly Basalt + fractured granitic rock. Stained in the fractures.	
173	14/150	111	12	N			
174	14/150	111	225	N		Cuttings show material to be hard granitic rock.	
175	23/150	111	225	N			
176	23/150	111	225	N			
177	23/150	111	225	N			

TO LABORATORY

AR L... R Luvr

BORING RECORD

Location *Sunland*
 Dist. *07* Co. *LA* Rt. *210* Sec. *10/13* Cont. W.O.
325 Ft., Right, Left *Prop 9* Line Sta. *123+90±*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
13	From 181		<i>Spring</i>	0	33		
	To 183					Core Length 0	
14	From 183		"	75	33		
	To 185					Core Length 18"	
15	From 197		"	33%			
	To 200					Core Length 12"	

Rig Used *Joy 22*

Type of Sampler

Type of Point Regular Extension

Sample Nos.

Type of Core Barrel *Christensen NXD3*

Type Bit Used	Number	From	To
<i>Rock 13 1/2 inch #1</i>	<i>24389</i>	<i>177</i>	<i>181</i>
<i>Dia-NXD3</i>	<i>09017</i>	<i>181</i>	<i>183</i>
		<i>183</i>	<i>185</i>
		<i>185</i>	<i>200</i>

GROUND WATER DATA

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.
	<i>using Drilling mud</i>				

Boring Flushed Depth

Boring Bailed Depth

Boring Cased Depth

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

Type of Casing Cap

REMARKS

Weather: *Het + Smoggy*

07:30 to 08:30 Clean Mud Pit
 Mix new mud. Go in Hole with Bit + Drill Rod. 08:30 to 09:30 Drilling
 09:30 to 10:00 Change to Core Barrel
 10:00 to 12:00 Coring + coming out of Hole No Rec Clean Barrel.
 Back in Hole Corer + came out of Hole 12:00 to 12:30 Lunch
 12:30 to 14:30 Drilling 14:30 to 15:25 go on in Hole + coring.
 15:25-16:00 Wash down Rig
 Clean Mud pit, and Pack up tools

Inspector *A Braden* Foreman *R. Hory*

Depth	Min. Per Ft.	RPM	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
177	20'				
178	25'	200			
179	30'				
180	35'	200			<i>Change in direction of Drill</i>
181	4'				<i>High speed coring of water</i>
182	150'	100			<i>No Recovery Granitic Material Relieved to be Weathered + Frk.</i>
183					
184	150'	100			<i>Hard partly conc. Gray Granitic Rock. Rather strained + Fract. stains could be from water. Fract. appear to be vert.</i>
185	150'	100			
186	4'				
187					
188	4 1/2'	200			<i>Drilling appears to be soft + bit still breaking.</i>
189	5 1/2'	200			<i>cutting show granitic rock.</i>
190	6 1/2'				
191	7 1/2'				
192					
193	8 1/2'	225			
194	9 1/2'				
195	10 1/2'				
196	11 1/2'				
197	12 1/2'	150			<i>Hard gray granitic Rock. Rather Fractured + Broken. Relieve most of core fell from barrel.</i>
198	13 1/2'	175			
199	14 1/2'	175			
200	15 1/2'				

End of Day

TO LABORATORY

BORING RECORD

Location *Sealand*
 Dist. *27* Co. *LA* Rt. *210* Sec. *10/15* Cont. W.O.
325 Ft., Right, Left *Prop* Line Sta. *173+40 ±*

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
16	From	212		20	34		
	To	215					
17	From	215		67	34		
	To	218					
	From						
	To						
	From						
	To						
	From						
	To						
	From						
	To						

Rig Used *Joy 22*
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel *Christensen*
 Type Bit Used Number From To
Rock Bit Vard H-1 24389 200 212
Rock Bit Vard H-1 24393 212 232

GROUND WATER DATA

Time	DEPTH TO		Time	DEPTH TO	
	WATER	BOT. BOR.		WATER	BOT. BOR.
<i>7:15</i>	<i>using Drill Mud</i>				
<i>7:45</i>	<i>Head No. 2244</i>	<i>215</i>	<i>218</i>		

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

REMARKS

Weather: *Hot + smoggy*
0715 to 0730 Travel to Job
0730 to 0930 Service Rig, Head
Water Mix Mud - 0930 to 12:00
Drilling + casing 12:00 to 12:30
Lunch 12:30 to 15:50
Drilling + casing
15:50 to 16:00 travel

Depth	Min Per Ft.	SPM Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
200	<i>4 1/2"</i>				
201	<i>4 1/2"</i>				
202	<i>4 1/2"</i>				
203	<i>7 1/2"</i>				<i>Cuttings show granitic material shells as if</i>
204	<i>9 1/2"</i>				<i>Badly Broken Med. hard.</i>
205	<i>9 1/2"</i>				
206	<i>11 1/2"</i>				<i>cuttings are the same</i>
207	<i>11 1/2"</i>				<i>as above drilling</i>
208	<i>12 1/2"</i>				<i>harder.</i>
209	<i>12 1/2"</i>				
210	<i>12 1/2"</i>				
211	<i>12 1/2"</i>				<i>Cutting the same.</i>
212	<i>11 1/2"</i>				
213	<i>6 1/2"</i>				<i>4 to 6" of Rec. core med</i>
214	<i>6 1/2"</i>				<i>Soft Frb. granitic</i>
215	<i>4 1/2"</i>				<i>Rock with mineral</i>
216	<i>5 1/2"</i>				<i>stains some ocean color</i>
217	<i>6 1/2"</i>				<i>Core could have fallen</i>
218	<i>6 1/2"</i>				<i>from barrel because</i>
219	<i>16 1/2"</i>				<i>of D.H. Condition of</i>
220	<i>5 1/2"</i>				<i>Part. Retained 7'</i>
221	<i>16 1/2"</i>				<i>Badly weathered + Broken</i>
222	<i>16 1/2"</i>				<i>Plastic rocks stained</i>
223	<i>5 1/2"</i>				<i>very</i>
224	<i>4 1/2"</i>				<i>Cuttings include</i>
225	<i>4 1/2"</i>				<i>soft</i>
226	<i>3 1/2"</i>				<i>Diabase and granitic</i>
227	<i>3 1/2"</i>				<i>material</i>
228	<i>3 1/2"</i>				
229	<i>3 1/2"</i>				
230	<i>3 1/2"</i>				
231	<i>3 1/2"</i>				
232	<i>3 1/2"</i>				

Much softer chipping

Cuttings same as above.

End of Day

TO LABORATORY

Inspector *A. Braden* Foreman *R. Horr*

BORING RECORD

Location Sunland
 Dist. 07 Co. LA Rt. 210 Sec. 9/18 Cont. W.O.
325 Ft., Right, Left Prop. R Line Sta. 173+90

ELEV. Dist Contour Dia. of Sampler 2" Date 8/4/67 Page 56
 Datum M&P Wt. of Hammer - # Job No. 32906 Boring No. R-8
 Surface 1745 ±

Sample No.	Sampled		Core Catcher Used	% Rec.	Retained Sample		
	Depth	Elev.			Core Box No.	No. Tubes	No. Jars
18	From	232	Spring	75	34		Core Length 18'
	To	234					
	From						Core Length
	To						Core Length
	From						Core Length
	To						Core Length
	From						Core Length
	To						Core Length

Depth	No. of Per Ft.	NFM Tubes	Wet Wt. per cu. ft.	Moist. % dry wt.	LOG OF MATERIAL
232	8/50	111	130		Soft Bailey Forest + Banksian. Lithological + Decomposed. Granitic Rock. Bit Block.
233	14/50	118	150		
234		111			
					Bottom of Boring. 8/4/67

Rig Used Joy 22
 Type of Sampler
 Type of Point Regular Extension
 Sample Nos.
 Type of Core Barrel Christensen
 Type Bit Used Number From To
Dia. NRD3 Reg R-2244 232' 234'

GROUND WATER DATA

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

Using Drilling Mact

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

REMARKS
 Weather: Hot + Smoggy
0715 to 0730 travel
0730 to 0830 Clean out hole
 with Rock Bit 0830 to 0900
 Casing 0930 to
Shal. Dgt shattering
 Hole.

Inspector P. Bearden Foreman R. Horn

TO LABORATORY

DIVISION OF HIGHWAYS DISTRICT 7 ENGINEERING SERVICES DEPARTMENT MATERIALS I & R SECTION		DATA USED TO ESTIMATE GRADING FACTORS										Table No. 3				
		County	LA	Route	210	Post Miles	11.0 TO 15.6						Sheet No. 2 OF 5	Date	JANUARY 1968	
		Exp. Auth.	07202 - 063741													
Station to Station	Test No.	Classification of Material	Moisture Density Data					Est. Emb. R.C. %	Ratio RC Exc to RC Emb	Misc Loss %	Est. Earth-work Factor	% Exc. by Factor	Wgt'd Factor	Wgt'd. Factor for Total Exc.	Remarks	
			In Situ H ₂ O %	Dens Lbs Ft ³	Opt H ₂ O %	Max. Dens Lbs Ft ³	R.C. %									
167+00 TO 182+00	27B1	D.G.	3.0	132.7	10.5	131.4	101	95	1.06	1	1.05	7	7.4			
	124	"	12.4	109.4	10.8	126.3	87	95	.92	1	.91	7	6.4			
	123	"	7.3	133.6	11.5	125.0	107	95	1.13	1	1.12	7	7.8			
	23A1	"	6.2	110.8	10.2	125.1	89	95	.94	1	.93	7	6.5			
	23C1	"	4.9	111.0	12.5	125.1	89	95	.94	1	.93	7	6.5			
	R8	"	BULK SP.GR. = 2.60		162.2				1.20	1	1.19	11	13.1			
	"	"	" " = 2.63		164.1				1.22	1	1.21	11	13.3			
	125	D.G.	4.4	138.8	9.5	126.2	110	95	1.16	1	1.15	7	8.1			
	22A1	"	4.0	120.9	9.4	132.8	91	95	.96	1	.95	7	6.7			
	126	"	5.7	113.2	11.2	125.2	91	95	.96	1	.95	7	6.7			
	R14	"	BULK SP.GR. = 2.54		158.5				1.19	1	1.18	11	13.0			
	R6	"	" " = 2.55		159.1				1.19	1	1.18	11	13.0			
	-----														108.5	
	202+00 TO 217+00	R9	DENSE GRANITE	BULK SP.GR. = 2.28			142.3			1.11	1	1.10	37	41.0		
11A1		D.G.	10.3	119.2	12.5	118.8	100	95	1.05	1	1.04	9	9.4			
11D1		"	2.3	135.0	7.5	132.3	102	95	1.07	1	1.06	9	9.5			
120		"	7.2	121.4	10.5	123.5	98	95	1.03	1	1.02	9	9.2			
15A1		"	5.6	125.8	11.3	125.3	100	95	1.05	1	1.04	9	9.4			
121		"	4.7	129.3	10.6	125.1	103	95	1.08	1	1.07	9	9.6			
14A1		"	6.0	133.1	12.5	125.2	106	95	1.12	1	1.11	9	10.0			
14D1	"	3.7	124.7	9.1	132.4	94	95	.99	1	.98	9	8.8				
-----														106.9		

INDEX OF SHEETS

Sheet No. 1	Title Sheet
2	Typical Cross Sections
3	Standard Plans List
4-13	Layout Plans
14-25	Profiles
26-35	Street Plans
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46-65	Drainage Plans and Details
66-85	Structure Lists
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126-155	Analysis of Contract Quantities
156-175	Markers and Strip Plans
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216-235	BRIDGE PLANS
236-255	172-176 Old Culvert, Br. No. 53-2613
256-275	177-181 Cross Canyon Culvert, Br. No. 53-2339
276-295	182-186 La Tuna Canyon Rd. Br. No. 53-2187
296-315	203 Small (see Br. No. 53-297)
316-335	209

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed 10-16-75
 Document No. 70007379

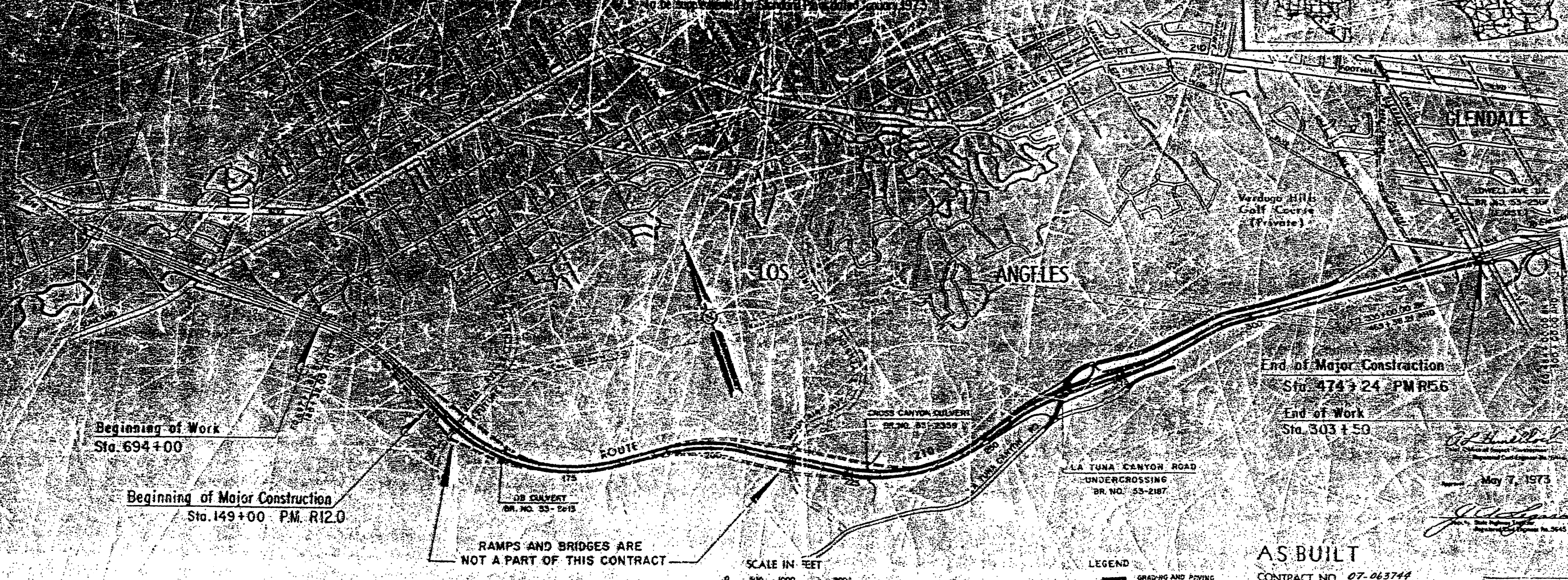
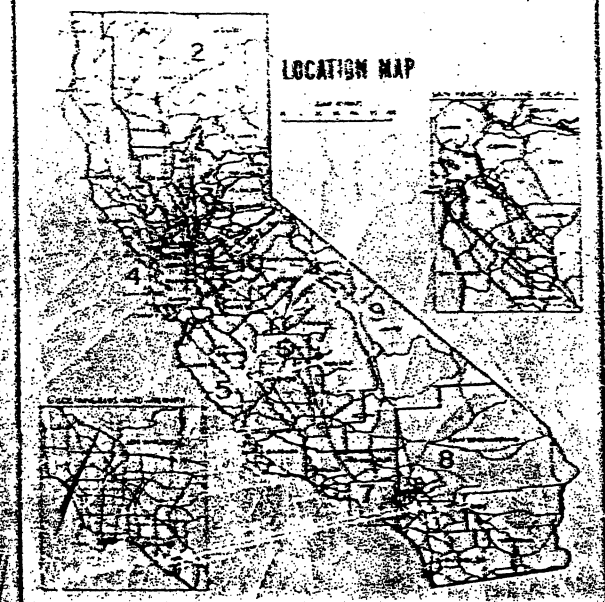
STATE OF CALIFORNIA
 BUSINESS AND TRANSPORTATION AGENCY

I-210-1(197)11

07 LA E10 R12.0/R15.6 1 20

DEPARTMENT OF TRANSPORTATION

**PROJECT PLANS FOR CONSTRUCTION ON
 STATE HIGHWAY
 IN LOS ANGELES COUNTY
 IN LOS ANGELES AND GLENDALE
 FROM 0.8 MILE EAST OF SUNLAND
 BOULEVARD TO LOWELL AVENUE**



Beginning of Work
 Sta. 694+00

Beginning of Major Construction
 Sta. 149+00 P.M. R12.0

End of Major Construction
 Sta. 474+24 P.M. R15.6
 End of Work
 Sta. 303+50

RAMPS AND BRIDGES ARE
 NOT A PART OF THIS CONTRACT

SCALE IN FEET
 0 500 1000 2000

LEGEND
 [Symbol] GRADING AND PAVING
 [Symbol] ROUGH GRADING ONLY
 [Symbol] FUTURE CONSTRUCTION

AS BUILT

CONTRACT NO. 07-063744
 RESIDENT ENGR. J. Michels
 DATE 5-23-77

MICROFILMED
 12/1977

CONTRACT PLANS
 Contract No. 07-063744
 Document No. 6116

Length of Major Construction = 3.6 Miles
 Length of Work = 4.3 Miles

UPDATED BY DISTRICT-LTR. 3-1-73.

07203-063741

Contract No. 07-063744

The detailed plans are a portion of the route for the State Highway adopted by the California Highway Commission November 18, 1964 and declared a FREEWAY by resolution of the California Highway Commission November 18, 1964

Drawn by HIGHFELL
 Checked by
 Date

DESIGN DESIGNATION 1970-1990

ADT (70): 33,000
 ADT (90): 58,000
 DHV: 6.400
 P: 55%
 T: 3%
 V: 70 MPH

RTE 210 FREEWAY TYPICAL CROSS SECTIONS

07-LA-210-R12.0/R15.6

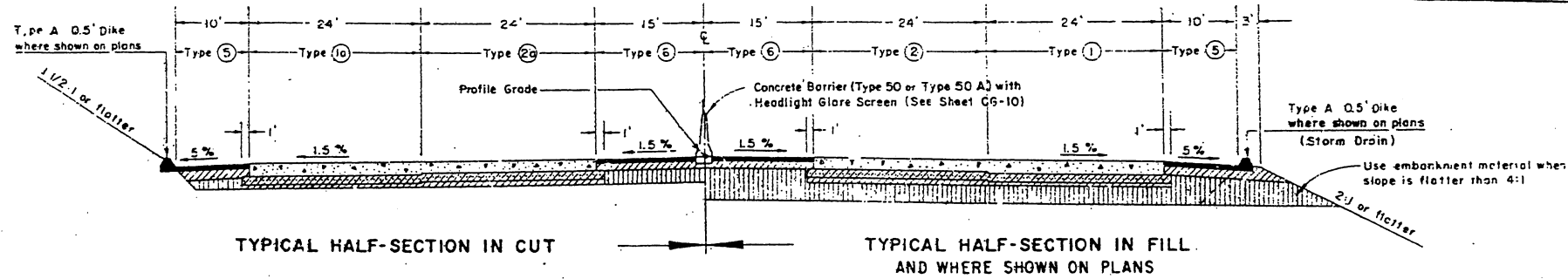
Scale 1" = 10' (except as noted)

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed 10-16-75
 Document No. 7379

DATE	REVISION	BY	DESCRIPTION
07/1/73	LA	210	R12.0/R15.6
			2
			205

K. H. Hintzman
 REGISTERED CIVIL ENGINEER
 No. C14703
 DATE APPROVED: May 7, 1973

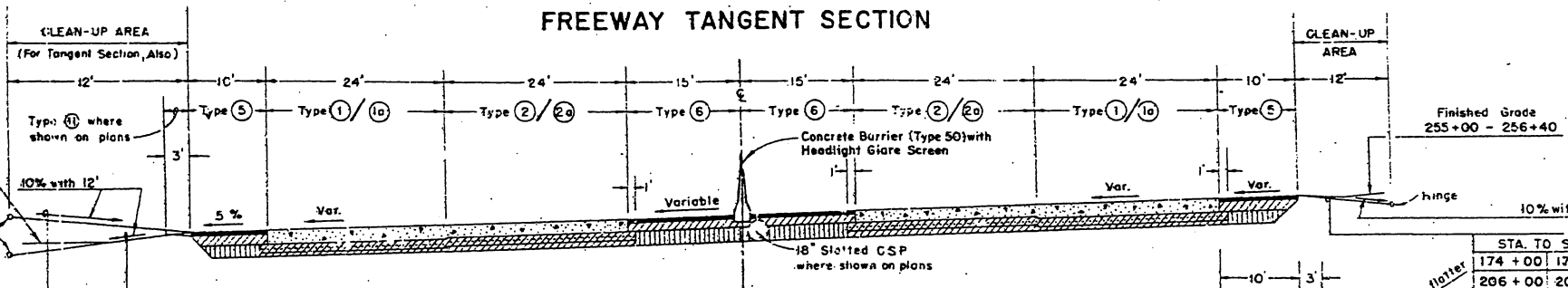
- Note:
- Dimensions are subject to the tolerances specified in the standard specifications
 - See Contour Grading Plans for Slope Rounding.



TYPICAL HALF-SECTION IN CUT
 TYPICAL HALF-SECTION IN FILL
 AND WHERE SHOWN ON PLANS
FREEWAY TANGENT SECTION

- TYPE 50: 0.75' Portland Cement Concrete (Ramp termini), 0.45' Class "A" Cement Treated Base, 0.20' Class "3" Aggregate Base, 0.95' Class "5" Aggregate Subbase
- TYPE 1: 0.70' Portland Cement Concrete, 0.45' Class "A" Cement Treated Base, 0.20' Class "3" Aggregate Base, 1.00' Class "5" Aggregate Subbase
- TYPE 10: 0.70' Portland Cement Concrete, 0.45' Class "A" Cement Treated Base, 0.20' Class "3" Aggregate Base
- TYPE 2: 0.65' Portland Cement Concrete, 0.45' Class "A" Cement Treated Base, 0.25' Class "3" Aggregate Base, 1.00' Class "5" Aggregate Subbase
- TYPE 20: 0.65' Portland Cement Concrete, 0.45' Class "A" Cement Treated Base, 0.25' Class "3" Aggregate Base
- TYPE 3: 0.30' Type "B" Asphalt Concrete, 0.70' Class "A" Cement Treated Base, 0.20' Class "3" Aggregate Base, 1.15' Class "5" Aggregate Subbase
- TYPE 4: 0.30' Type "B" Asphalt Concrete, 0.35' Class "2" Aggregate Base, Var. Class "5" Aggregate Subbase
- TYPE 5: 0.25' Type "B" Asphalt Concrete, 0.50' Class "2" Aggregate Base, Var. Class "5" Aggregate Subbase
- TYPE 6: 0.20' Type "B" Asphalt Concrete, 0.45' Class "2" Aggregate Base, 1.70' Class "5" Aggregate Subbase - Fill, 0.70' Class "5" Aggregate Subbase - Cut
- TYPE 7: 0.67' Type "B" Asphalt Concrete
- TYPE 8: 0.50' Type "B" Asphalt Concrete
- TYPE 9: 0.33' Type "B" Asphalt Concrete
- TYPE 10: 0.30' Type "B" Asphalt Concrete
- TYPE 11: 0.25' Type "B" Asphalt Concrete
- TYPE 12: 0.17' Type "B" Asphalt Concrete

STA. TO STA.	R/L
167+50	188+00 L
202+20	216+00 R
241+77	254+00 L
289+00	297+70 R
315+50	332+20 R
233+35	234+90 L

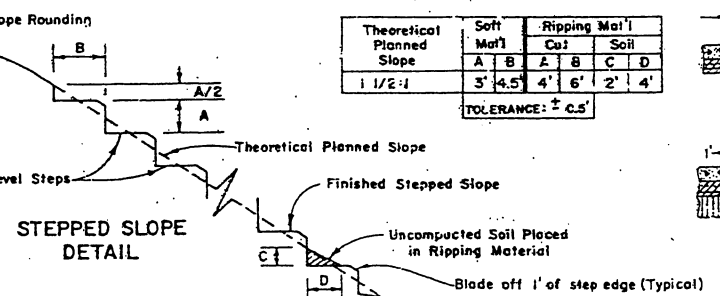


FREEWAY SUPERELEVATION SECTION

STA. TO STA.	R/L
208+00	215+50 L
285+50	287+10 R

Theoretical Planned Slope	Soft Mat'l		Ripping Mat'l		Soil
	A	B	A	B	
1 1/2:1	3'	4.5'	4'	6'	2' 4"

TOLERANCE: ± 0.5'

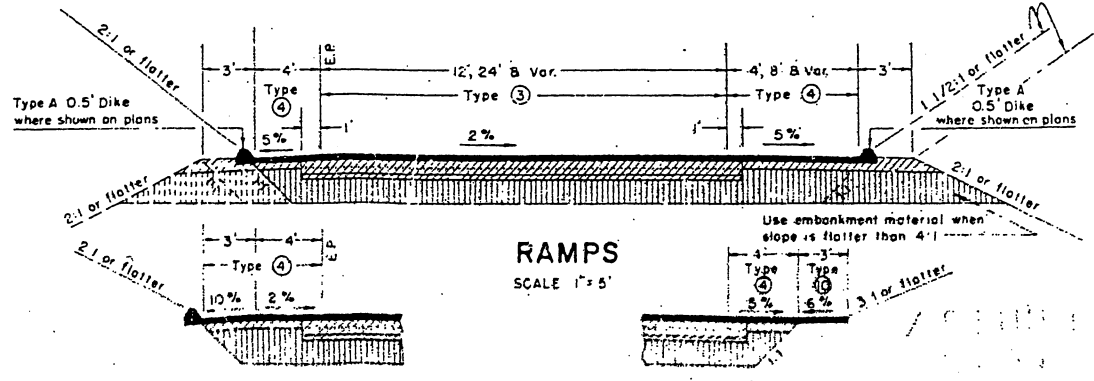


STEPPED SLOPE DETAIL

STATION	R/L	(X ₀)	(Y ₀)
128+32	R	63.44	42.29
146+00	R	90.00	60.00
132+50	L	53.56	35.72
146+50	L	90.00	60.00
169+50	L	90.00	60.00
177+00	L	54.38	36.25
174+50	R	90.00	60.00
177+00	R	78.12	52.08
178+00	L	90.00	60.00
181+00	L	75.75	50.50
204+00	R	89.43	59.62
211+50	R	89.12	59.41
206+50	L	80.90	53.93
214+00	L	88.50	59.00
242+00	L	53.88	35.92
248+50	L	90.00	60.00
251+00	L	77.93	51.95
253+50	L	90.00	60.00
Rmp. 1	16+00	86.63	57.75
LTCR	77+16	90.00	60.00
316+50	R	90.00	60.00
319+50	R	81.80	54.53

SLOPE TREATMENT
 NO SCALE

STATION	R/L	(X ₀)	(Y ₀)
330+70	R	50.00	50.00
331+50	R	49.33	49.33



RAMP 2
 (Sta. 13+32 to 21+30)

RAMP 5
 (Sta. 13+00 to 16+60)

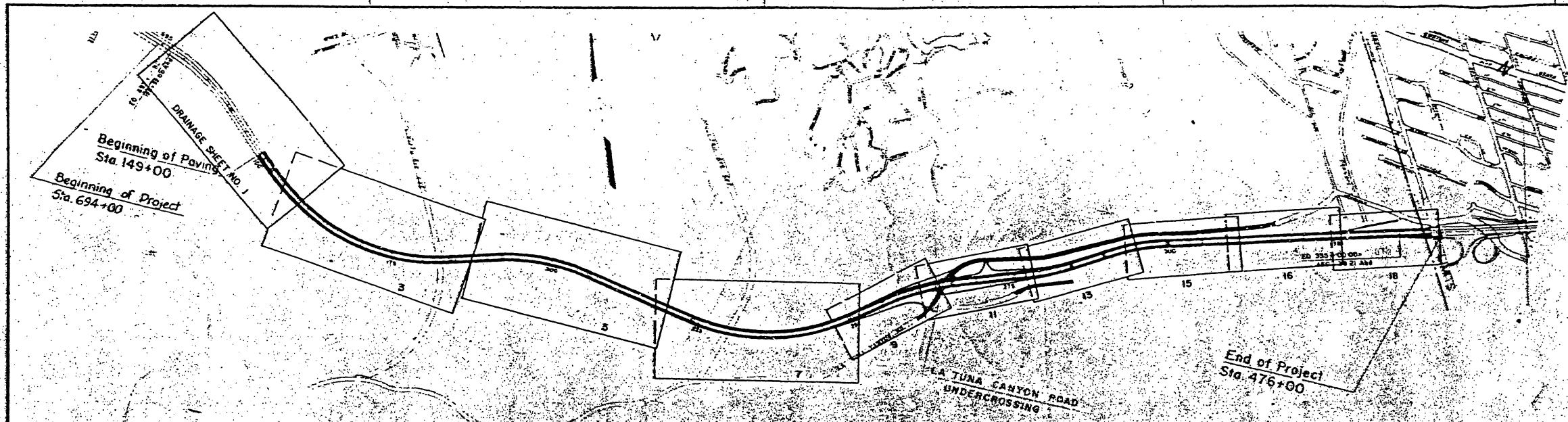
07-063744
 L. MICHEL (SM)
 5-23-77

STRUCTURAL SECTIONS
 VERTICAL SCALE 1" = 3'

Project Engineer	Date	Drawn Engineer	Date	Approval Recommended By	Date
J.W. Kim	10/69	K.W. Hintzman	10/69	A.A. Smith	10/69

STATE	FEDERAL PROJECT NO.	YEAR	POST	DATE
7 CALIF.				
COUNTY	ROUTE	POST MILES - TOTAL	POST MILES	DATE
07 LA	210	R120/R156	46	7/23
R.P. Hintzman DESIGN ENGINEER REGISTERED CIVIL ENGINEER NO. C-14703 DATE APPROVED May 7, 1977				

CITY OF LOS ANGELES	
BUREAU OF ENGINEERING	
SUBMITTED	DATE
July 27	77
BY	
APPROVED	DATE
July 27	77



KEY MAP
NO SCALE

INDEX TO SHEETS

DRAINAGE SHEET NO.	DESCRIPTION
1	PLAN - Sta. 128+32 to 158+00; PROFILES 5 & 6; DETAILS
2	PROFILES 7, 8, 9, 12, 13 & 14
3	PLAN - Sta. 155+00 to 188+60; DETAILS
4	PROFILES 11, 15, 23 & 25
5	PLAN - Sta. 187+40 to 220+10; PROFILES 23, 24 & 25; DETAILS
6	PROFILES 28, 29, 31 & 32
7	PLAN - Sta. 218+50 to 249+45; DETAILS
8	PROFILES 41, 42, 43, 46 & 47
9	PLAN - Sta. 249+30 to 262+00; DETAILS
10	PROFILES 54, 55, 56, 58 & 59
11	PLAN - Sta. 261+50 to 270+50; DETAILS
12	PROFILES 63, 65, 67, 70, 72, 73, 78, 28, 91 & 93
13	PLAN - Sta. 277+50 to 293+50; DETAILS
14	PROFILE 64
15	PLAN - Sta. 293+60 to 309+25; PROFILES 114 & 122
16	PLAN - Sta. 309+00 to 325+00; PROFILES 123, 126 & 128; DETAILS
17	PROFILES 100 & 108
18	PLAN - Sta. 325+00 to Lowell Ave; PROFILE 131; DETAIL
19	DETAILS - STEEL PLATE ALTERNATE, RISER, MODIFIED MANHOLE AX
20	DETAILS - MODIFIED MANHOLE JM, STD. DROP STEP, L.A.C.F.C.D.'S "CONC. REINF. STEEL INSTITUTE"

- 21. DETAILS - MODIFIED GDO-14-2, ROCK SLOPE PROTECTION FOR FLARED END SECTION
- 22. OUTLET DETAILS, STA. 249+00 (HOOK DISSIPATOR)
- 23. OUTLET DETAILS, STA. 166+75 (HOOK DISSIPATOR)
- 24. SPECIAL DESIGN RCP+RCB - PROFILE 7120, 64
- 25. TRANSITION STRUCTURE No. 1 - PROFILE 64
- 26. L.A.C.F.C.D. STD. DWG. 2-D107 - CONC. RINGS, REDUCER AND PIPE FOR MANHOLE SHAFT

AS BUILT PLANS
 Contract No. 07-063744
 Date Completed 10-16-75
 Document No. 70007379

NOTE: THE FOLLOWING APPLICABLE DETAIL SHEETS ARE ALSO INCLUDED IN THESE CONTRACT PLANS:
 MISCELLANEOUS DETAILS 8
 STORM DRAIN DETAILS 5, 6, 7, 8, 9, 10, 12, 13, 15, 16, 17

GENERAL NOTES (cont'd.)

- 9. All storm drain pipes placed outside the freeway right of way shall be bedded per Case I Bedding, "Pipe Laying in Trenches", Miscellaneous Details 8 unless otherwise specified.
- 10. Special R.C.B. and T.S. No. 1 of Profile 64 shall be constructed in accordance with the provisions of Storm Drain Shts. 241, 25.

GENERAL NOTES

- 1. All side opening Catch Basins, except State Standard GDO, shall be constructed with Steel Plate Alternate per Drainage Sht. No. 19
 - 2. Surface of all exposed concrete shall conform in slope, color, finish & scoring to proposed curb, gutter, roadway or sidewalk adjacent to the structure.
 - 3. Misc. Detail 18 Monolithic Catch Basin Connection for Pipes 12" to 72" Inclusive may be used to avoid cutting standard lengths of pipes & shall be used when the connecting pipe is embedded less than 3" from the outside face of the Storm Drain Structure.
 - 4. On Profile 64 the Transition Structures shall have an additional 1" of Monolithic PCC internally over the invert slab.
 - 5. The following abbreviations apply to this contract:
 APC - Alternate Pipe Culvert RCP - Reinforced Concrete Pipe
 CSP - Corrugated Steel Pipe SSPP - Structural Plate Pipe
 ACP - Asbestos Cement Pipe
- | TYPE | CSP | | RCP | ACP |
|------|--------|--------|--------|--------|
| | BIT | CTB | | |
| A | 0.079" | 0.064" | 1350 D | 2000 D |
| C | 0.109" | 0.079" | 1350 D | 2000 D |
- 6. Alternate Pipe Culverts
 - 7. All Reducers for Manhole Shafts shall be made eccentric in lieu of a concentric section.
 - 8. All manhole covers for Catch Basins outside of the freeway pricing shall have "City of Los Angeles" in lieu of "State of California" inscription shown for "Manhole Frame and Cover for Sidewalks" on Std. Plan No. 57-11.

DESIGNED	JLF
CHECKED	RMS
Supervised by R.P. Thompson	

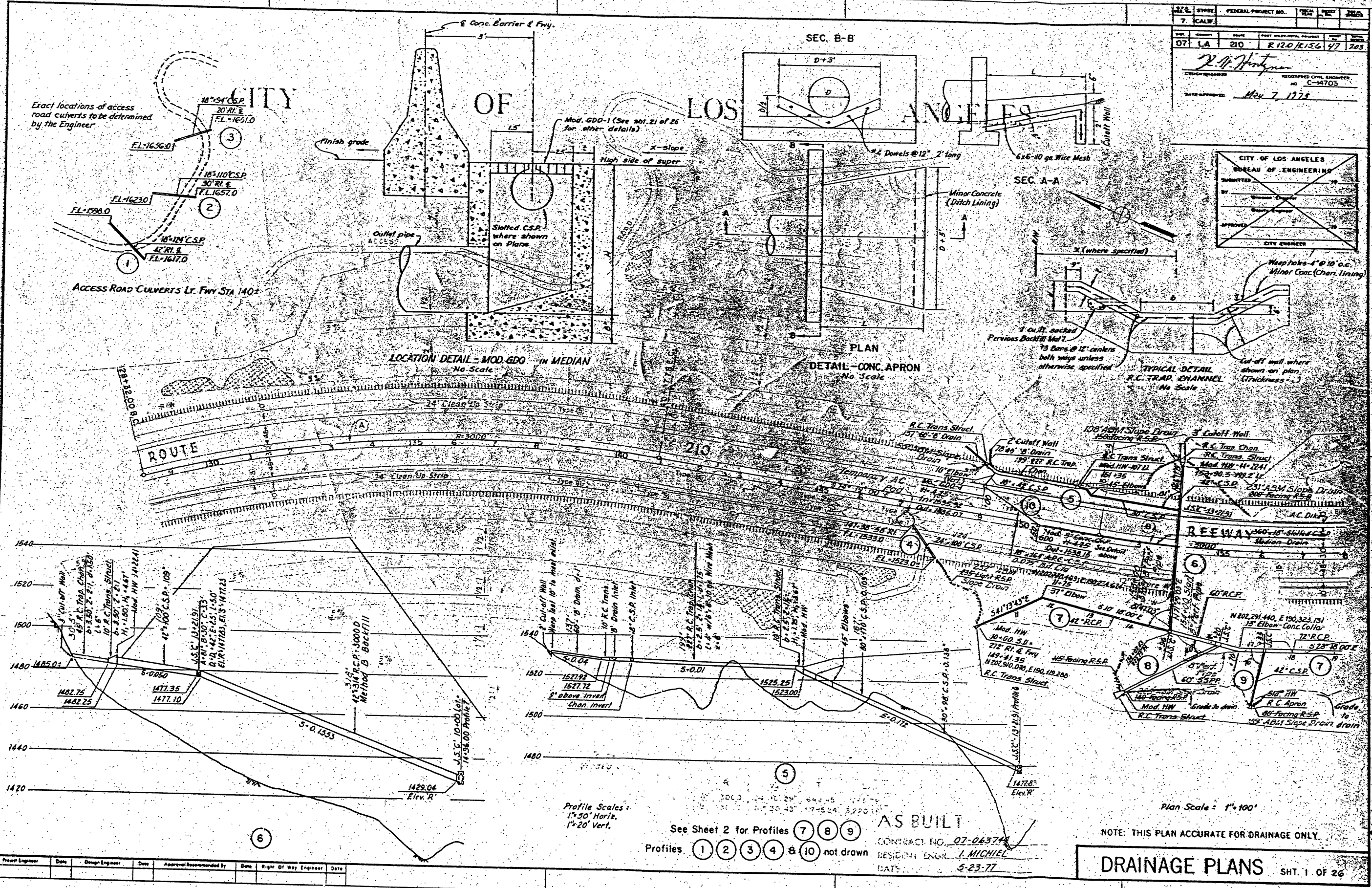
AS BUILT
 CONTRACT NO. 07-063744
 RESIDENT ENGR. I. MICHIEL
 DATE 5-23-77

DRAINAGE INDEX SHEET

Prep. of Engineer	Date	Design Engineer	Date	Approval Recommended By	Date	Right of Way Engineer	Date
J.W. Kim	10/69	K.W. Hintzman	10/69	A.A. Smith	10/69		

191

STATE	FEDERAL PROJECT NO.	DATE	BY	CHKD.
7 CALIF.				
07 LA	210	R 120/E 156	47	203
R. G. Hartman REGISTERED CIVIL ENGINEER No. C-14705		DATE APPROVED: May 7, 1972		



CITY OF LOS ANGELES	
BUREAU OF ENGINEERING	
DESIGNED BY	APPROVED BY
CHECKED BY	CITY ENGINEER

DESIGNED	DATE
R.J.S. 5/68	
CHECKED	DATE
J.J.S. 9/68	
SUPERVISED BY	
R.P. Thompson	

Profile Scales:
 1" = 30' Horiz.
 1" = 20' Vert.

AS BUILT
 CONTRACT NO. 07-06374
 RESIDENT ENGR. J. MICHEL
 DATE 5-23-77

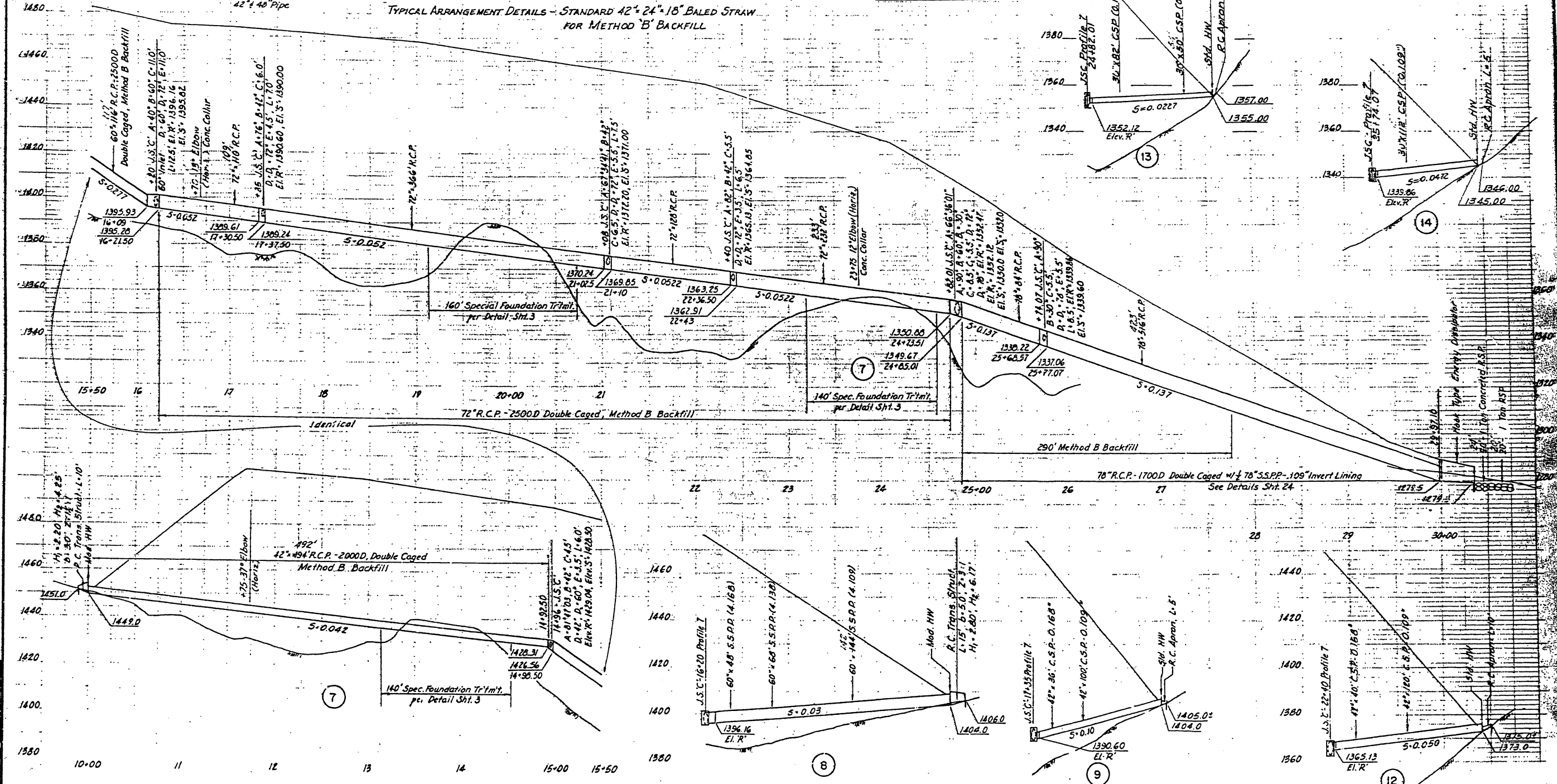
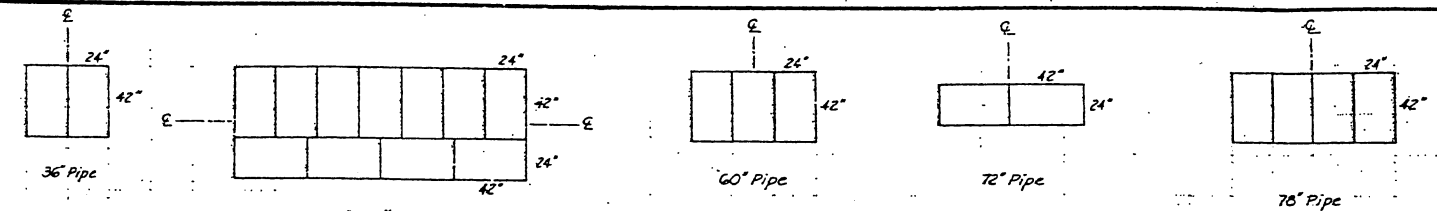
NOTE: THIS PLAN ACCURATE FOR DRAINAGE ONLY.
DRAINAGE PLANS SH. 1 OF 26

AS BUILT PLANS

STATE	FEDERAL PROJECT NO.	7	210
CALIF			
DATE	LA	210	R 120/R 156 48 203
DESIGN ENGINEER	2. M. H. [Signature]		
REGISTERED CIVIL ENGINEER	NO. C-14703		
DATE APPROVED	May 7, 1973		

CITY OF LOS ANGELES
BUREAU OF ENGINEERING

APPROVED: [Signature]
CITY ENGINEER



DESIGN	DATE
DESIGNED BY	R.J.S. 5/69
DRAWN BY	S.F.T. 7/69
CHECKED BY	J.L.S. 7/69
SUPERVISOR	R.P. Thompson
RIGHT OF WAY	

Profile Scales:
1" = 50' Horiz.
1" = 20' Vert.

AS BUILT

CONTRACT NO. 07-063744
RESIDENT ENGINEER I. MICHEL
DATE 5-23-77

NOTE: THIS PLAN ACCURATE FOR DRAINAGE ONLY

DRAINAGE PLANS SHT. 2 OF 26

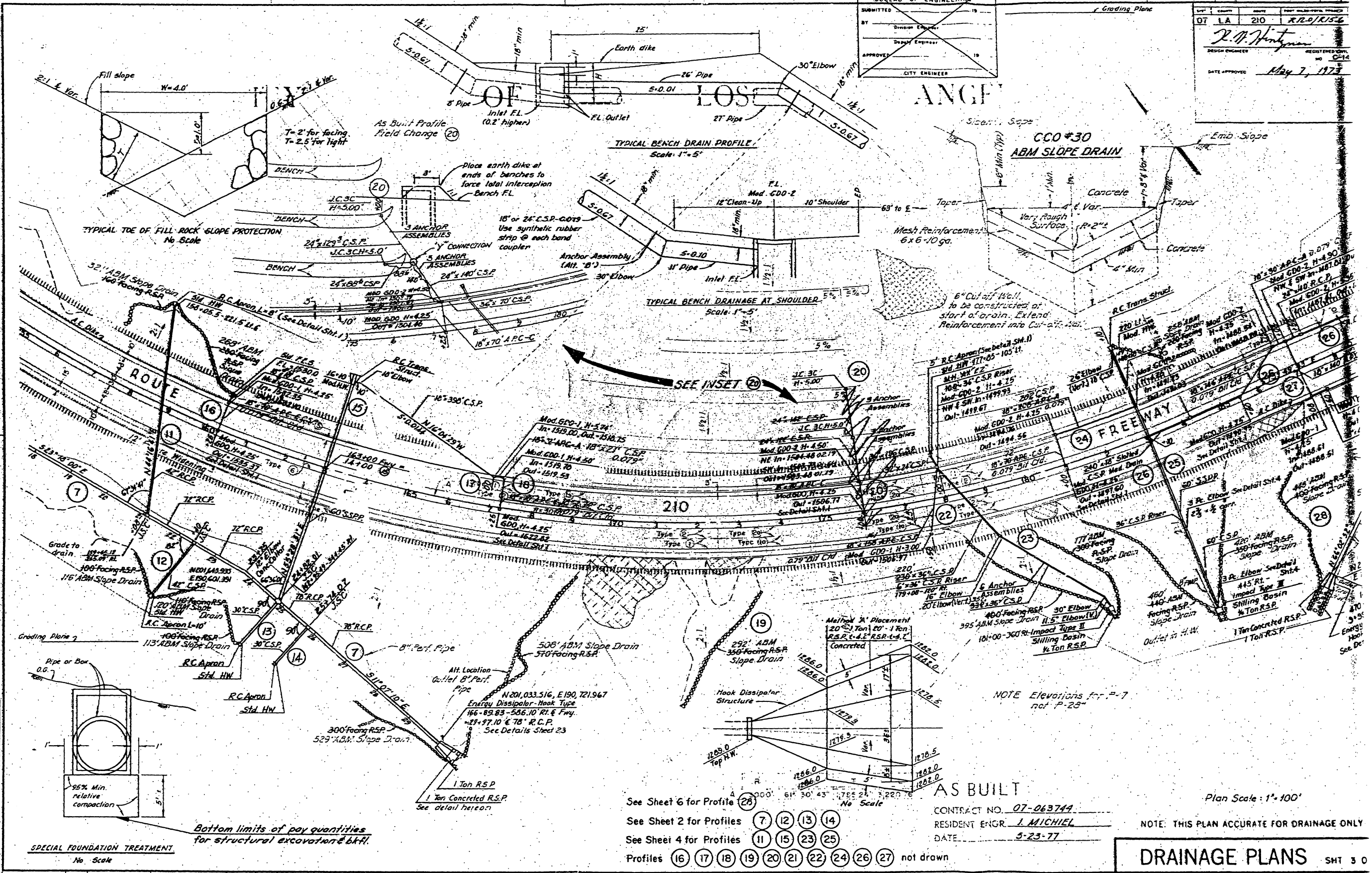
AS BUILT PLANS

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN

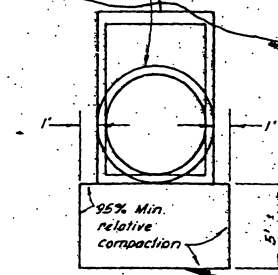
CITY OF LOS ANGELES
BUREAU OF ENGINEERING

SUBMITTED BY: _____
BY: _____
APPROVED: _____
CITY ENGINEER

STATE OF CALIF. FEDERAL PROJECT NO. _____
7 LA 210 R.R.O./R.156
DESIGN ENGINEER: *R. N. Wintner*
REGISTERED NO. C-14
DATE APPROVED: *May 7, 1973*



Designed	I.M.M. 9/69
Traced	S.F.T. 9/69
Checked	R.P.T. 9/69
Supervised by	R. P. Thompson



Bottom limits of pay quantities for structural excavations & b&f.

SPECIAL FOUNDATION TREATMENT
No Scale

Project Engineer	Date	Design Engineer	Date	Approval Recommended by	Date	Right of Way Engineer	Date
------------------	------	-----------------	------	-------------------------	------	-----------------------	------

AS BUILT PLANS
Contract No. 07-063744

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION

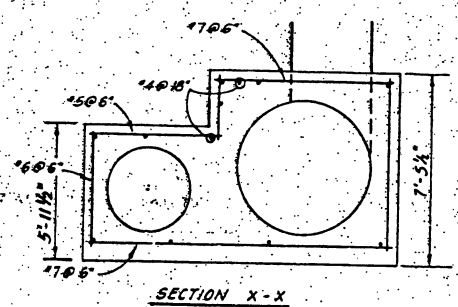
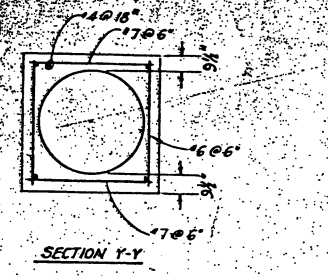
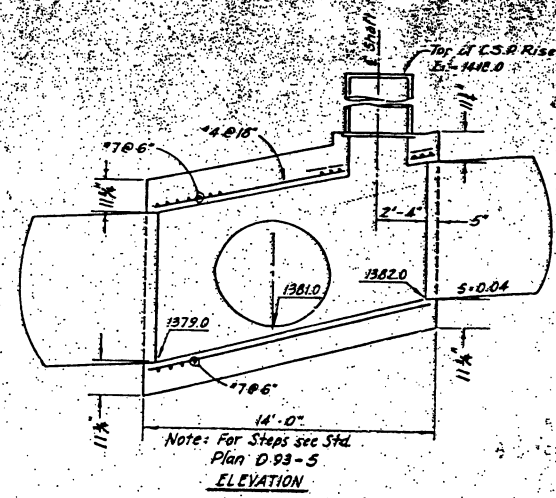
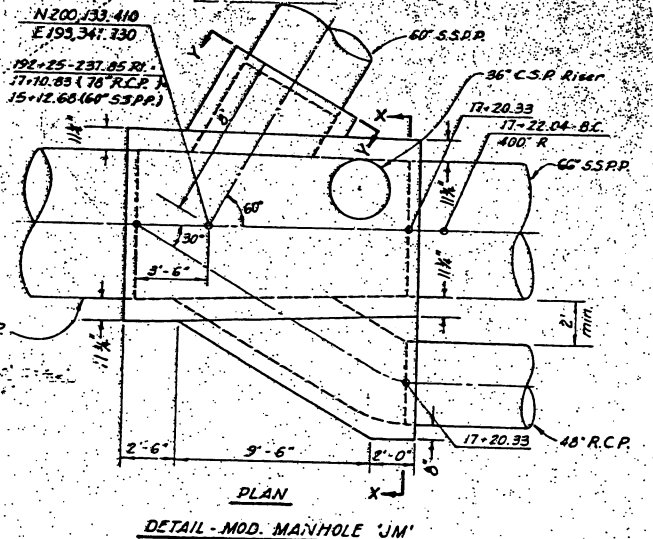
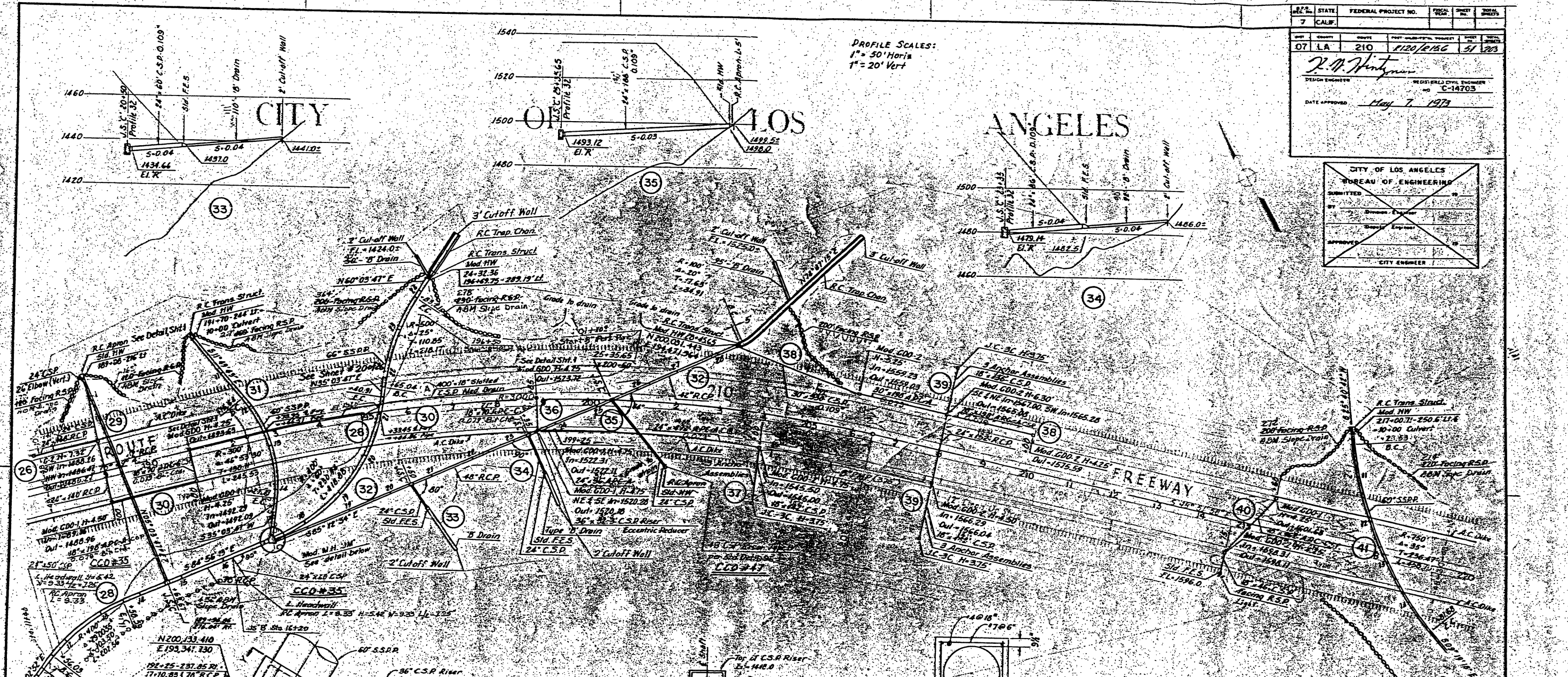
DRAINAGE PLANS SHT 3 OF 3

STATE	FEDERAL PROJECT NO.	SHEET NO.	TOTAL SHEETS
7 CALIF.		51	203
CITY	ROUTE	PROJECT NO.	DATE
07 LA	210	1120/1156	5/1/77

DESIGN ENGINEER: *R. W. Hinton*
 REGISTERED CIVIL ENGINEER NO. C-14703
 DATE APPROVED: *May 7, 1977*

CITY OF LOS ANGELES	
BUREAU OF ENGINEERING	
BY	DATE
APPROVED	
CITY ENGINEER	

PROFILE SCALES:
 1" = 50' Horiz
 1" = 20' Vert



AS BUILT

CONTRACT NO. *07-063744*
 RESIDENT ENGR. *I. Michael (56)*
 DATE *5-24-77*

See Sheet 6 for Profiles **(28, 29, 31, 32)**
 Profiles **(26, 30, 36, 37, 38, 39, 40)** not drawn
 See Sheet 8 for Profile **(41)**

Plan Scale: 1" = 100'

NOTE: THIS PLAN ACCURATE FOR DRAINAGE ONLY

DRAINAGE PLANS SHT. 5 OF 26

Project Engineer	Date	Design Engineer	Date	Approval Recommended by	Date	Right Of Way Engineer	Date

AS BUILT PLANS
 Contract No. *07-063744*

I HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ABOVE DOCUMENT TAKEN UNDER MY DIRECTION AND CONTROL ON THIS DATE IN SACRAMENTO, CALIFORNIA PURSUANT TO AUTHORIZATION BY THE DIRECTOR OF TRANSPORTATION.

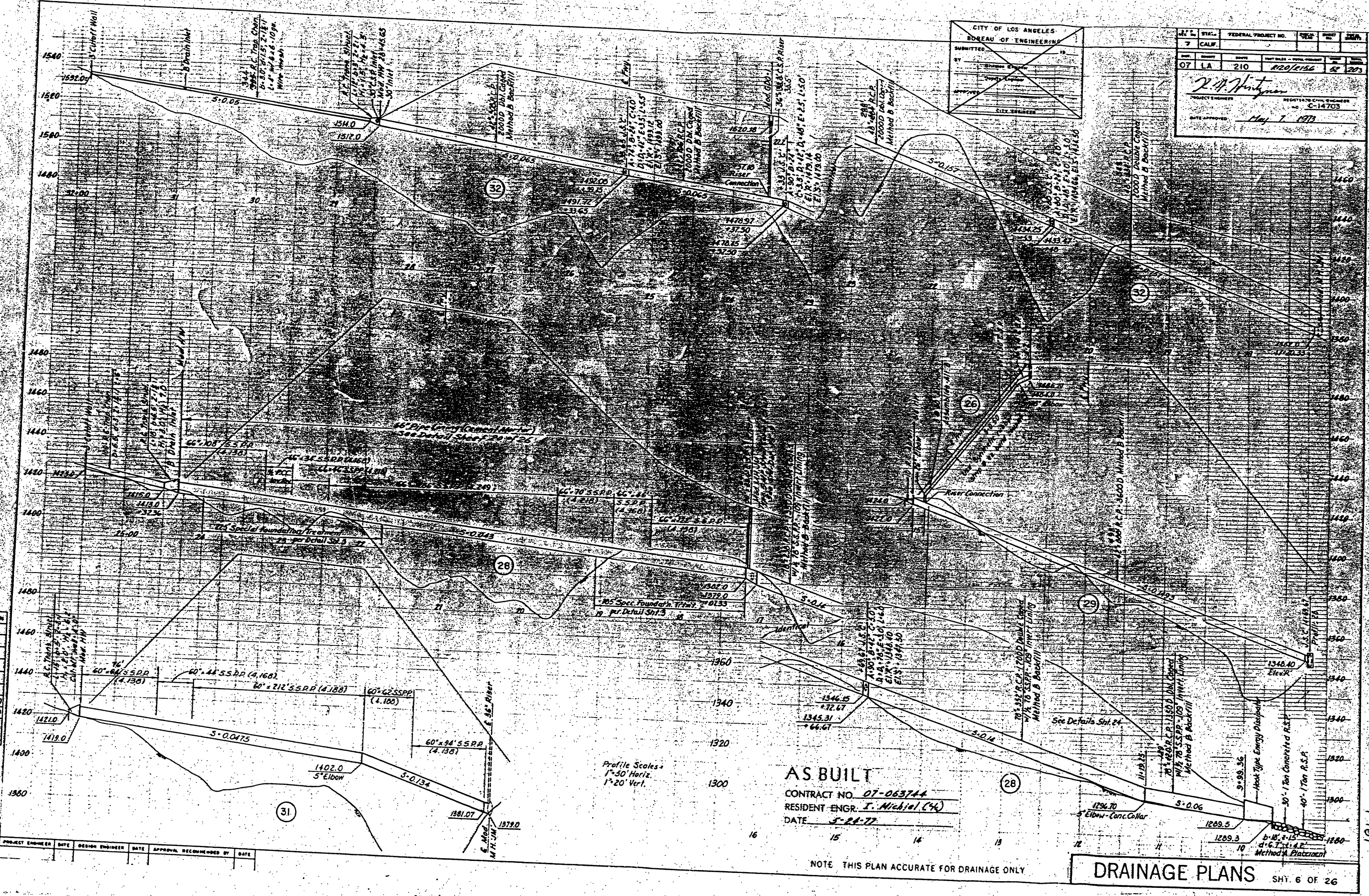
CITY OF LOS ANGELES
BUREAU OF ENGINEERS

SUBMITTED: _____
BY: _____
DATE: _____

LA 07	210	R20/156	52	203
PROJECT ENGINEER <i>P. A. Henderson</i>		REGISTERED PROFESSIONAL ENGINEER No. C-14703		
DATE APPROVED: <i>May 7, 1977</i>				

Design Dept.	Initials
Plan	
Construction	
Property	
Right of Way	
Profile	
Grades	
Drainage	YAN 9/69
Checked	RPT 9/69

Approved by
R.P. Thompson



AS BUILT
 CONTRACT NO. 07-063744
 RESIDENT ENGR. J. Nichol (64)
 DATE 5-21-77

NOTE: THIS PLAN ACCURATE FOR DRAINAGE ONLY

DRAINAGE PLANS SHY. 6 OF 26

AS BUILT PLANS
 Contract No. 07-063744

HEREBY CERTIFY THAT THIS IS A TRUE AND ACCURATE COPY OF THE ORIGINAL UNDER MY DIRECT SUPERVISION