Notes Ck'd by	Survey of Beach Erosion Studies
Map No.	W. O. 8412 Tape No. Std. 8 °F
Office Work	Surveyed by F H Blanchard
Checked	Notes F H B Date 8-10-51
	Indexed C. Johnson 8-15-51

BEACH EROSION STUDIES

J. N. 8412

~ ZUMA DIVISION ~

BOOK 4 OF 4 BOOKS

Station 278+50 to station 439+28

MALIBU LA COSTA

SPECIAL PROFILE

&

BEACH CONTROL

Page 155 + page 181

Ref FB 461-112 #3

F.B. 1297 PG. 6

RETURN TO
LOS ANGELES COUNTY SURVEYOR
725 LOS ANGELES COUNTY
ENGINEERING BLDG.

Do not extend notes this side of this line.

Note: Any Additions or Changes on This Sheet Must be Made or Circled in Red Ink With Date and Name of Person Making Change.

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
						FB 1296-243
278+50	3.6	15.3		11.74	1X2 ON 30' RT	OFFSET LINE
			3.1	12.2	Sand	SHORE ∡ 90°
			6.4	14.9	41' "	Toe SL.
TRANS. ON			7.6	7.7	00 BASE LINE	
283+50 - 30' OFFSET)			9.2	6.1	15' LT.	Water
6°-39' T.P.	3.0	7.7	10.6	4.7 T.P.	29' " (Calc. 28')	
9°-23'			5.4	2.3	53' Calc.	BRK
12°-54'			6.8	0.9	85' Calc.	OCEAN FLOOR.
15°-45'	30' SUBTRACTED FROM CALC. DIST.		7.6	0.1	111' "	" "
18°-03'		4.4	8.4	-0.7	133' "	
21°-58'		6.8	10.8	-3.1	172' "	
25°-50'		6.9	10.9	-3.2	212' "	
		10.5	~~14.5~~	~~-6.9~~	"	"
		10.0	14.0	-6.3	262' "	"
30°-15'						

SHORE
278+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 7
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
Notes Chkd. T.M.I. Checked ____ Survey by C.K.C. Notes C.K.C. Date 7-31-57
Date 8-27-57 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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STATION	B. S.	H. I.	F. S.	ELEV.		
284+50	90	17 7		[illegible] 73	1x2 on 30' RT.	FB1296-243 OFFSET.
			8 6	9.1	SAND, " "	SHORE ∠ 90°
			69	10 8	49 "	
			52	12 5	79 "	
TRANS. ON 279+50 - 30' OFFSET			40	13 7	94 " "	
			18	15.9	105 "	
			17	16.0	125 "	TOE BLUFF
3°28' T.P.	20	84	11 3	6 1	T.P. 2.0 (calc. [illegible])	BASE LINE (water)
8°11'			57	[illegible] 7	42 calc.	LT.
11°13'			69	[illegible]	69' "	"
12°06'		3.5	75	[illegible]	77 "	"
13°25'		5.0	90	[illegible]	89 "	"
17°52'		6.0	10 0	[illegible]	131' "	"
21°08'		8.6	12 6	[illegible]	163' "	"
27°55'	-30'	10.3	14 3	[illegible]	235 "	"
SHORE 284+50						

F.B. 1297 PG. 8 56

Job No. 8412 Division No. Notes Red. Plotted Profile No.

Survey of BEACH EROSION STUDIES (ZUMA) Date Date X-Sec.

Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.N.I. Checked

Indexed A. C. Johnson Date 7-31-51 Date 8-27-51 Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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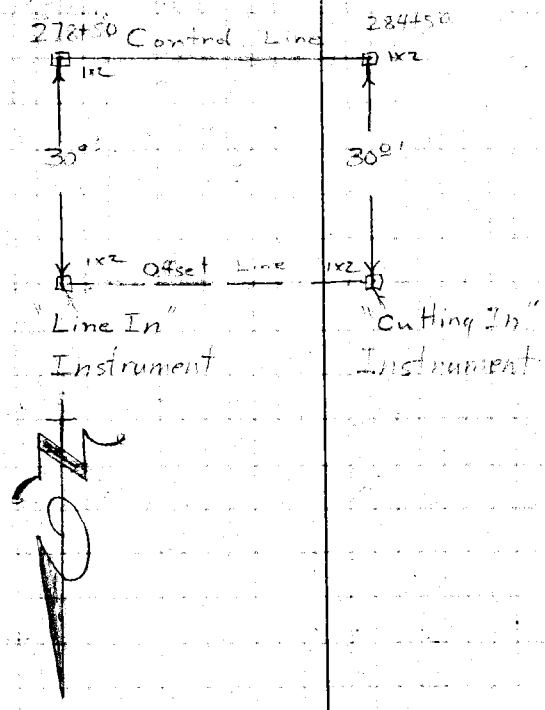
STATION		B. S.	H. I.	F. S.	ELEV.
Inst. Sight At	On	#	Color	Time	Hor. Ang.
278+50	284+50	1	R-Y	9 50	89 00
30'0"	30'0"	2	R		91 12
		3	Y		90 19
		4	R-Y	9 57	90 25
		5	R		90 53
		6	Y		89 59
		7	R-Y	10:00	89 47
		8	R		89 53
		9	Y		90 00
		10	R-Y	10 05	90 01
		11	R		89 54
		12	Y		90 01
		13	R-Y	10 09	89 40
		14	R		90 40
		15	Y		90 40
		16	R-Y	10 12	90 34
		17	R		90° 43
		18	Y	10 13	89° 44

Remarks



RANGE
278+50

Profile Notes Red. Plotted ③ Job No. 8412 Division No. V F. B. 1297 PG. 9
No. Date Date Survey of BEACH EROSION
X-Sec. Notes Chkd. Checked Survey by FHS Notes MS Date 7-31-51
No. Date Date Map No. Indexed Johnson Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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F. B. 1297 Pg. 10 | Job No. | Division No. | Notes Red. | Plotted | Profile
Survey of | Date | Date | No.
Survey by L. C. Johnson | Notes | Notes Chkd. | Checked | X-Sec.
Indexed | Date | Date | Date | No.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At	On	#	Color	Time	Hor. Ang.	Remarks	
284+50	289+50	1	R-Y	10:35	90° 12'	284+50	289+50
		2	R		89° 47'		
		3	Y		89° 56'		
		4	R&Y	10:39	89° 21'		
		5	R		89° 37'		
		6	Y		90° 04'		
		7	R&Y	10:44	89° 17'		
		8	R		89° 45'		
		9	Y		90° 20'	"LINE IN" INSTRUMENT	"CUTTING IN" INSTRUMENT
		10	R&Y	10:48	90° 09'		
		11	R		89° 51'		
		12	Y		89° 48'		
		13	R&Y	10:52	90° 3'		
		14	R		89° 14'		
		15	Y		89° 54'		
		16	R&Y	10:59	90° 08'		
		17	R		90° 08'		
		18	Y		90° 08'		
		19	R&Y	11:02	90° 08'		
		20	R				

RANGE 284+50

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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STATION		B. S.	H. I.	F. S.	ELEV.		Remarks
Inst. At	Sight On	#	Color	Time	Hor. Ang.		
284+50	278+50	1	RY	9:50	62°55'	..	
30 ft	Offset	2	R		60°55'	..	
Line		3	Y		58°45'	..	1X2 30' 278+00 — 278+00
		4	RY	9:57	57°20'	..	278+00 Line-in
		5	R		56 00'	..	
		6	Y		55°33'	..	
		7	RY	10:01	51°50'	..	
		8	R		51°40'	..	
		9	Y		50°40'	..	
		10	RY	10 05	49°40'	..	
		11	R		45°24'	..	
		12	Y		40°22'	..	
		13	RY	10:09	38 45'	..	
		14	R		36°57'	..	
		15	Y		35°23'	..	1X2 284+50 — 284+50
		16	RY	10:12	28°40'	..	284+50 Cut-in
		17	R		26°30'	..	
		18	Y	10 13	24°40'	..	

Control Line

CUT IN 278+50

Profile Notes Red. Plotted Job No. 8412 Division No. F.B. 1297 Pg. 71
No. Date Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. Checked Survey by KH.B. Notes Sutter Date 7-31-51
No. Date Date Map No. Indexed Johnson Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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STATION Inst. At	Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
289+50	284+50	1	RY	10:35	[illegible]	
30 ft	[illegible]	2	R		67°14'	
		3	Y		66°16'	
		4	RY	10:40	66°16'	1X2 284+50 Line-in — 30' — 284+50
		5	R		66°12'	
		6	Y		65°30'	
		7	RY	10:45	64°08'	
		8	R		62°20'	
		9	Y		60°10'	
		10	RY	10:48	59°14'	
		11	R		56°15'	
		12	Y		53°17'	
		13	RY	10:53	49°25'	
		14	R		49°12'	1X2 289+50 Cut-in — 289+50
		15	Y		46°28'	
		16	RY	11:00	37°10'	
		17	R		33°50'	
		18	Y		29°08'	
		19	RY	11:03	27°20'	

Cut in 284+50

F. B. 1297 Pg. 12 Job No. 8417 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date 7-31-51 Date No. X-Sec.
Survey by F.H.B. Notes Sutter Notes Chkd. Checked No.
Indexed A. C. Johnson Date Date Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

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STATION 2-28-50

#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
		B. S.	H. I.	F. S.	ELEV.		
			29.0				
1	R.Y.	9:50	28.0	28.3	4.1	24.2	Shore side of kelp bed
		08.50	27.0				
2	R.		26.0	26.3		22.2	
			25.5				
3	Y.		24.5	24.8		20.7	Kelp between shots #2 & #3
			23.6				
4	R.Y.	9:57	22.6	22.9	4.1	18.8	
		0857	22.3				
5	R.		21.3	21.6		17.5	
			20.1				
6	Y		19.1	19.4		15.3	
			19.1				
7	R.Y.	10:01	18.1	18.4	4.1	14.3	
		0901	18.1				
8	R.		16.8	17.2		13.1	
			16.6				
9	Y		15.5	15.9		11.8	
			16.0				
10	RY	10:05	14.5	15.0	4.1	10.9	
		0905	14.2				
11	R.		13.0	13.4		9.3	
			14.1				
12	Y.		13.7	14.0		9.9	
			13.2				
13	RY	10:09	12.2	12.5	4.1	8.4	
		0909	12.0				
14	R.		10.9	11.3		7.2	
			11.0				
15	Y		9.5	10.0		5.9	
			10.0				
16	RY	10:12	8.5	9.0	4.1	4.9	
		0912	9.0				
17	R		7.5	8.0		3.9	
			8.0				
18	Y	10:14	6.9	7.3	4.1	3.2	
		0914					
19	RY						
20	R						

Boat 2784 J.S.

Profile
Notes Bed LCWW Plotted
Job No. 8412 Division No. V
No. Date 8-17-51 Date
Survey of Beach Erosion Study
X-Sec.
Notes Chkd. T.M.L. Checked
Survey by F.H.B. Notes E.R.K. Date 7-31-51
No.
Date 8-27-51 Date
Map No. Inspector Johnson Date
Pg. A3

F.B. 1997 PG. 72 Profile No. X-Sec. No.

Survey of Bazos Erosion Study Date 7-31-5 Date Plotted Lewis Notes Red. X Division No. 2

Survey by F.H.B. Notes Vollmagle Chkd. T.M.I. Checked Date 8-27-57

Indexed R. C. Johnson Date 7-31-81

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION 284+50 | B. S. | H. I. | F. S. | ELEV.

#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
			29.5				
1	RY	10:36 0936	28.4 26.3	28.8	4.1	24.7	Seaward side of Kelp bed
2	R.		25.3 28.2	25.6		21.5	Shore " " " "
3	Y		27.0 25.5	27.4		23.3	
4	RY	10:39 0939	24.5 22.7	24.8	4.1	20.7	
5	R		21.5 21.7	21.9		17.8	
6	Y		20.5 19.7	20.9		16.8	Seaward side of Kelp bed
7	RY	10:45 0945	18.5 18.7	18.9	4.1	14.8	Channel in Kelp bed
8	R		17.5 17.4	17.9		13.8	Shore side of Kelp bed
9	Y		16.2 16.4	16.6		12.5	
10	RY	10:48 0948	15.2 15.4	15.6	4.1	11.5	
11	R.		14.2 17.5	14.6		10.5	
12	Y		16.0 16.1	16.5		12.4	
13	RY	10:53 0953	14.8 14.5	15.2	4.0	11.2	
14	R		13.2 12.8	13.6		9.6	
15	Y		11.5 11.4	11.9		7.9	
16	RY	11:00 1000	10.0 10.7	10.5	4.0	6.5	
17	R.		9.0 9.7	9.6		5.6	
18	Y		8.0 8.5	8.6		4.6	
19	RY	11:04 1004	7.0	7.5	4.0	3.5	
20	R						

Boat 284+50

76L298 307 5-49

16.5
47
18

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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STATION	B. S.	H. I.	F. S.	ELEV.			
289+50	56	165		1085	1X2 on	30' RT	FB 1296-243 offset.
			49	116	sand	" "	SHORE ∡ 90°
(TRANS. ON 284+50 - 30' OFFSET)			39	126		48'	BRK.
			39	126		82'	Toe Bluff.
			74	91		14 "	Beach.
6°-09' T.P.	3.3	80	118	47 T.P.		24 LT.	(calc. 24' Water.
9°-32'			58	22		54 calc "	BRK
12°-04'			70	10		77 " "	ocean FLOOR.
14°-06'		3.6	76	04		96' " "	" "
43°-54'		10.8	148	-68		451' "	"
41°-33'		11.0	150	-70		413 "	"
38°-34'		10.7	147	-67		369 "	"
35°-42'		9.2	132	-52		329 "	"
33°-02'		8.7	127	-47		295 "	"
30°-04'		8.0	120	-40		259 "	"

30' WAS SUBTRACTED FROM Calc. DIST

(TOO MANY SUBMERGED ROCKS CLOSE IN - MAKES VERY Risky FOR SWIMMERS

SHORE 289+50

Profile Notes Red. Plotted Job No. 8412 Division No. 57 F.B. 1297 Pg. 15
No. Date Date Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. Notes Chkd. TM.I Checked Survey by C.V. CRUMLEY Notes C.V.C. Date 7-31-51
No. Date 8-27-51 Date Map No. Indexed Date

Johnson

F.B. 1297 PG. 16 | 58 | Job No. 8412 | Division No. | Notes Red. | Plotted | Profile No.

Survey of BEACH EROSION STUDIES. (ZUMA) | Date | Date

Survey by C.V. CRUMLEY | Notes C.V.C. | Notes Chkd. T.M.I | Checked | X-Sec.

Indexed A. C. Johnson | Date 8-3-51 | Date 8-27-51 | Date | No.

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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9.0

11.7
4.7
7.0

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.			
B.M. # 671 296+00	0.52	11.7		11.35	B.M. 5?? Elev. 11.15 F.B. 930-150 Cut sq. top sandstone boulder		SHORE ∡ 90°
			0.3	11.4		65' RT	Toe BLUFF
			3.1	8.6		50' "	
(TRANS. ON 300+25-120' OFFSET)			6.0	5.7		25 "	
			7.0	4.7		15 "	
15°-43'			8.2	[illegible]		00 "	BASE LINE
17°-33' T.P.	2.1	4.0	9.8	1.9	T.P.	13 LT.	(Calc 14')
21°-33'			3.1	0.9		48' Calc.	Water
~~22°-12'~~ 23°-12'			3.6	0.4		~~53~~ 62	ocean FLOOR
26°-44'			3.5	[illegible]		94'	" "
29°-46'			5.5	-1.5		123'	" "
31°-01'			6.0	-2.0		136'	" "
32°-02'			4.9	-0.9		146	" "

* 120' SUBTRACTED FROM Calc. DIST

LARGE & SMALL SUBMERGED ROCKS MAKES IT VERY RISKY FOR SWIMMERS.

SHORE
296+00

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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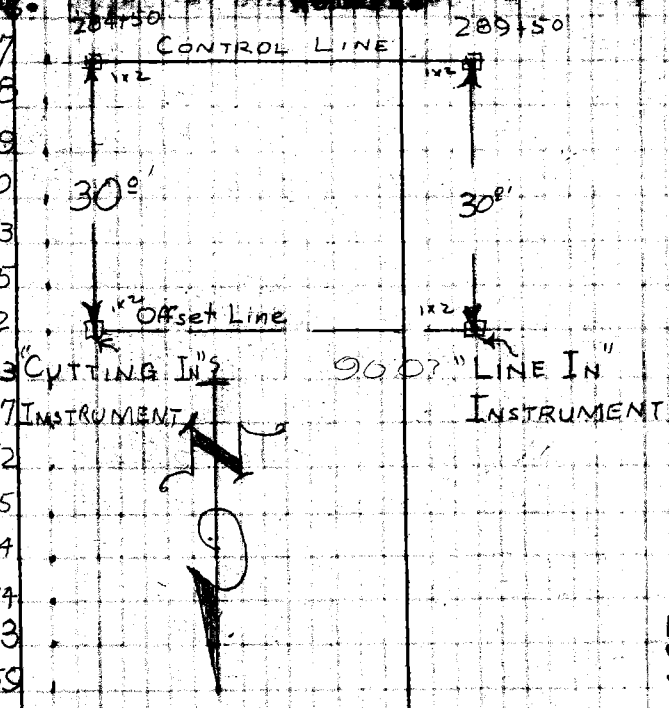
STATION	B. S.	H. I.	F. S.	ELEV.	
Inst. Sight At On	#	Color	Time	Hor. Ang.	Remarks
289+50 284+50	1	R-Y	7:33	90°27	
	2	R		89°58	
	3	Y		90°29	
	4	R Y	7:44	91°10	
	5	R		90°03	
	6	Y		90°25	
	7	R-Y	7:49	90°12	
	8	R		90°03	
	9	Y		91°47	
	10	R-Y	7:53	89°52	
	11	R		89°45	
	12	Y		89°34	
	13	R-Y	7:57	90 24	
	14	R		90 43	
	15	Y		90 59	
	16	R-Y	8:00	90°19	
	17	R		91°03	
	18	Y		90°34	
	19	R-Y	8 02	90 54	
	20	R	8 03	91 32	



RANGE
289+50

Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. X
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by E.H.G. Notes M.S. Date 8-2-51
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

P.B. 7297 PG. 17

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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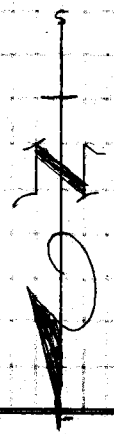
Do not extend notes this side of this line.

STATION Inst. At	STATION Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks	
296+00	300+25	1	R-Y	8 34	89 44	296+00 CONTROL LIN 1x2	300+25 1x2
50' OFF	50' OFF	2	R		90 24		
		3	Y		90°20	50	50
		4	R-Y	8:38	90 21	50' OFFSET LINE 1x2	set sight
		5	R		89 55	"LINE IN." Instrument Sight west	set nothing
		6	Y		90°30		
		7	R-Y	8:42	89 14	70	70
		8	R		88 52	set sight 120' OFFSET LINE nothing set	1x2
		9	Y		90 20		"Cutting In" Instrument Sight East
		10	R-Y	8 46	89 25		
		11	R		90 18		
		12	Y		90 18		
		13	R-Y	8 49	89 45		
		14	R		90° 5		
		15	Y		90 35		
		16	R-Y	8 54	90°35		
		17	R		89 16		
		18	Y		90 30		
		19	R-Y	8 59	90°30		
		20	R				

RANGE 296+00



F.B. 1297 Pg. 18 Job No. 8412 Division No. V Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date 8-2-51 Date No.
Survey by F.H.B Notes M.S. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

76L298 307 4-50

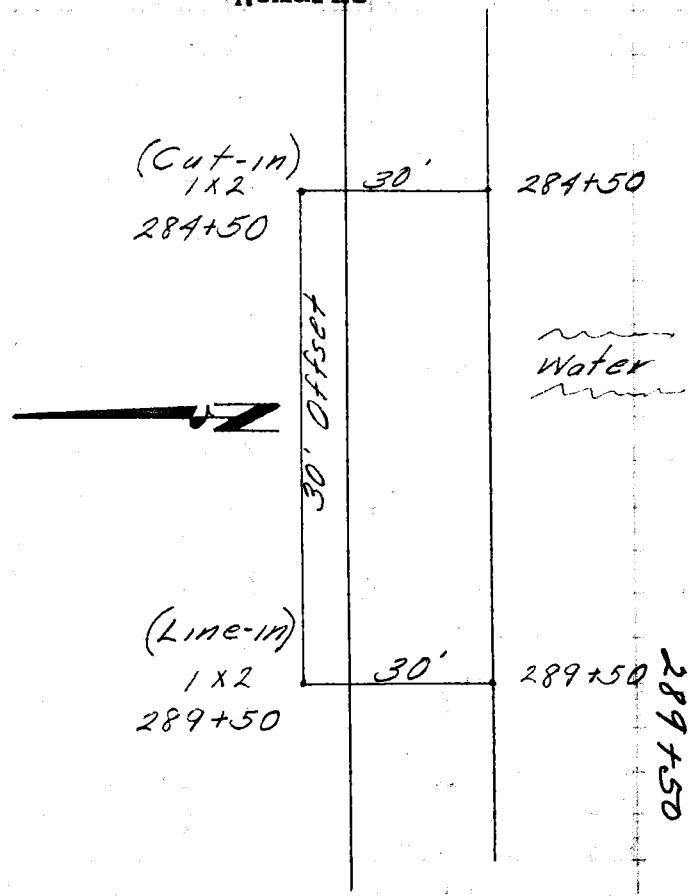
PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.

Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
284+50	289+50	1	R-Y	7:33	68° 48'	
30' Offset		2	R		68° 01'	
Line		3	Y		66° 04'	
		4	R-Y	7:44	64° 04'	(Cut-in) 1x2 284+50
		5	R		63° 37'	
		6	Y		61° 55'	
		7	R-Y	7:49	59° 16'	
		8	R		56° 05'	
		9	Y		55° 26'	
		10	R-Y	7:53	53° 48'	
		11	R		50° 16'	
		12	Y		48° 38'	
		13	R-Y	7:57	45° 30'	
		14	R		43° 23'	(Line-in)
		15	Y		41° 55'	1x2
		16	R-Y	8:00	40° 16'	289+50
		17	R		38° 55'	
		18	Y		36° 49'	
		19	R-Y	8:02	33° 54'	
		20	R	8:03	30° 25'	



Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. ____ F. B. 1297 Pg. 12
No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. ____ Checked ____ Survey by EH R. Notes English Date 8-2-51
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76L298 307 4-50

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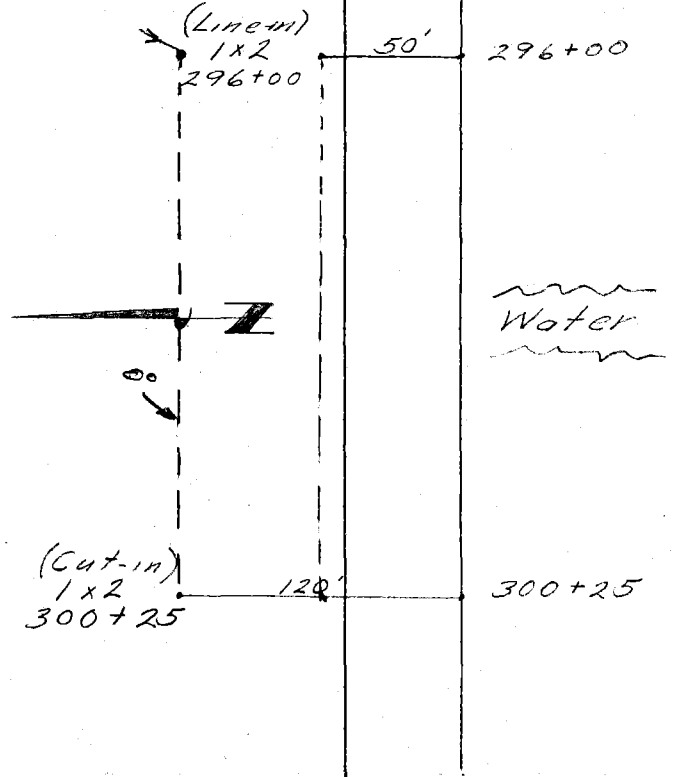
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.
Inst. At	Sight On	#	Color	Time	Hor. Ang.
300+25 120' Offset	296+00 120 Offset	1	R-Y	8:34	72° 21'
		2	R		71° 14'
		3	Y		70° 35'
		4	R-Y	8:38	69° 07'
		5	R		68° 31'
		6	Y		66° 27'
		7	R-Y	8:42	66° 01'
		8	R		66° 02'
		9	Y		63° 26'
		10	R-Y	8:46	61° 19'
		11	R		59° 39'
		12	Y		57° 31'
		13	R-Y	8:50	52° 00'
		14	R		51° 23'
		15	Y		50° 01'
		16	R-Y	8:54	47° 52'
		17	R		38° 41'
		18	Y		35° 07'
		19	R-Y	8 59	35° 42'

Remarks



CUT IN 296+00

F. B. 1297 PG. 20
Job No. 8412 Division No. ____ Notes Red. ____ Plotted ____ Profile ____
Survey of Beach Erosion Studies Date ____ Date ____ No. ____
Survey by F.H.B. Notes English Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed A. C. Johnson Date ____ Date ____ Date ____ No. ____

76L298 307 4-50

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LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 289+50		B. S.	H. I.	F. S.	ELEV.			
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks	
1	RY	7:34 0634	28.5 27.2 24.9	27.6	2.4	25.2 ~~24.3~~	channel in Kelp bed	
2	R		23.5 22.6	24.0		21.6		
3	Y		21.5 21.6	21.9		19.5		
4	RY	7:45 0645	20.5 20.2	20.9	2.5	18.4		
5	R		18.9 20.4	19.3	2.5	16.8		
6	Y		19.3 17.9	19.7	2.6	17.1		
7	RY	7:50 0650	16.8 16.9	17.2	2.7	14.5		
8	R		14.5 15.1	15.3		12.6		
9	Y		13.5 13.4	14.0		11.3		
10	RY	7:53 0653	12.0 13.4	12.5	2.7	9.8		
11	R		12.0 11.8	12.5		9.8	Shore edge of Kelp bed	
12	Y		10.5 12.0	10.9 ~~10.7~~		8.2 ~~8.0~~		
13	RY	7:58 0658	9.0 11.3	10.0	2.8	7.2		
14	R		9.5 9.9	10.1		7.3		
15	Y		8.5 8.7	9.0		6.2		
16	RY	8:00 0700	7.3 10.8	7.8	2.8	5.0		
17	R		8.9 9.5	9.5		6.7		
18	Y		7.1 8.3	7.9		5.1		
19	RY	8:03 0703	6.1 6.8	6.8	2.8	4.0		
20	R	8:04 0704	5.0	5.6	2.8	2.8		

BOAT
289+50

Profile Notes Red. Lelli Plotted Job No. 8412 Division No. V F.B. 1297 Pg. 21
No. Date 8-23-51 Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. T.M.I. Checked Survey by F.H.B. Notes E.R.V. Date 8-2-51
No. Date 8-27-51 Date Map No. Indexed Johnson Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 22 Job No. 8412 Division No. V Notes Red. RWF Plotted Profile
Survey of Date 8-17-51 Date No.
Survey by Notes Chkd. T.M.L. Checked X-Sec.
Indexed A. C. Johnson Date 8-2-51 Date 8-27-51 Date No.

STATION 296+00 sol offset #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	8:34 0734	29.5 27.1	27.9	3.3	24.6	Shots in clear spots
2	R		27.9 26.0	26.6		23.3	in Kelp bed
3	Y		28.0 25.8	26.5		23.2	
4	RY	8:38 0738	26.3 24.9	25.4	3.4	22.0	
5	R		23.0 21.0	21.7		18.3	
6	Y		21.3 20.0	20.4		17.0	
7	RY	8:42 0742	20.2 18.9	19.3	3.4	15.9	
8	R		19.3 17.9	18.4		15.0	
9	Y		16.4 15.0	15.5		12.1	
10	RY	8:47 0747	14.7 13.5	13.9	3.5	10.4	
11	R		11.9 10.5	11.0		7.5	
12	Y		13.9 12.1	12.7		9.2	
13	RY	8:50 0750	12.5 11.6	11.5	3.6	7.9	Shore edge of Kelp bed
14	R		11.3 9.8	10.3		6.7	
15	Y		10.3 7.5	8.4		4.8	
16	RY	8:54 0754	11.3 8.0	9.1	3.6	5.5	
17	R		9.0 7.0	7.7	3.6	4.1	
18	Y		8.2 6.0	6.7	3.7	3.0	
19	RY	8:59 0759	8.5 5.0	6.2	3.7	2.5	
20	R						

BOAT 296+00

76L298 307 5-49

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LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F.B. 1296-244

STATION	B. S.	H. I.	F. S.	ELEV.		
300+25	31	135		10.41	1X2 ON 120' RT	OFFSET. (SHORE ∠ 90)
			14	12.1	127 "	TOE BLUFF
TRANS. ON			79	5.6	95 "	
295+00±			88	4.7	87 "	
			101	3.4	60 "	Water
T.P.	2.9	45	11.9	1.6 T.P.	20 "	BRK
0°-13'			46	-0.1	2' LT calc.	OCEAN FLOOR
2°-12			44	+0.1	20' " "	"
4°-24			47	-0.2	40' " calc	
5°-53'			58	-1.3	54' " calc.	
9°-06'			60	-1.9	84' " "	" "
10°-4'			66	-2.1	99' " "	" "
12°-44'			72	-2.7	119' " "	" "
14°-13'			69	-2.4	133' " "	" "

LARGE & SMALL SUBMERGED ROCKS MAKES IT VERY RISKY FOR SWIMMERS.

SHORE 300+25

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 23
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. T.M.I. Checked ____ Survey by C.V. CRUMLEY Notes C.V.C. Date 8-3-51
Date 8-27-51 Date ____ Map No. ____ Indexed B. C. Johnson Date ____

F.B. 1297 PG. 24

60

Job No. 8412 Division No. ______ Notes Red. ______ Plotted ______ Profile No. ______

Survey of BEACH EROSION STUDIES (ZUMA) Date ______ Date ______

Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.I. Checked ______ X-Sec. No. ______

Indexed A. C. Johnson Date 8-3-51 Date 8-27-51 Date ______

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 Los Angeles County Engineering Bldg.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
304+50	4.3	16.7		12.4	F.B. 1296-244 1 x 2 on Line.	(SHORE ∡ 90°)
			1.6	15.1	4' RT	Top Bank.
			1.6	15.1	14 "	Toe SL. of Bluff
(TRANS. ON			4.6	12.1	7 LT	[illegible]
308+25-75' RT OFFSET.)			5.5	11.2	37	" "
			7.1	9.6	48	
23°-01' T.P.	1.8	6.5	12.0	4.7 T.P.	TAPE 86 (Calc 84) "	Water
27°-10'			4.7	1.8	117 Lt. Calc.	BRK.
28°-26'			5.2	1.3	128 "	Ocean FLOOR
29°-55'			6.2	0.3	141 "	"
32°-06'			6.2	0.3	165 "	"
33°-55'			8.4	-1.9	177 "	"
37°-18'			9.5	-3.0	211 "	"
38°-54'			10.7	-4.2	228 "	"
40°-07'			11.0	-4.5	241 "	"

75' WAS SUBTRACTED FROM Calc. DIST.

ROUND Boulders MAKES THIS STATION DANGEROUS FOR SWIMMERS — SHOULD BE MOVED AHEAD 50'

SHORE 304+50

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

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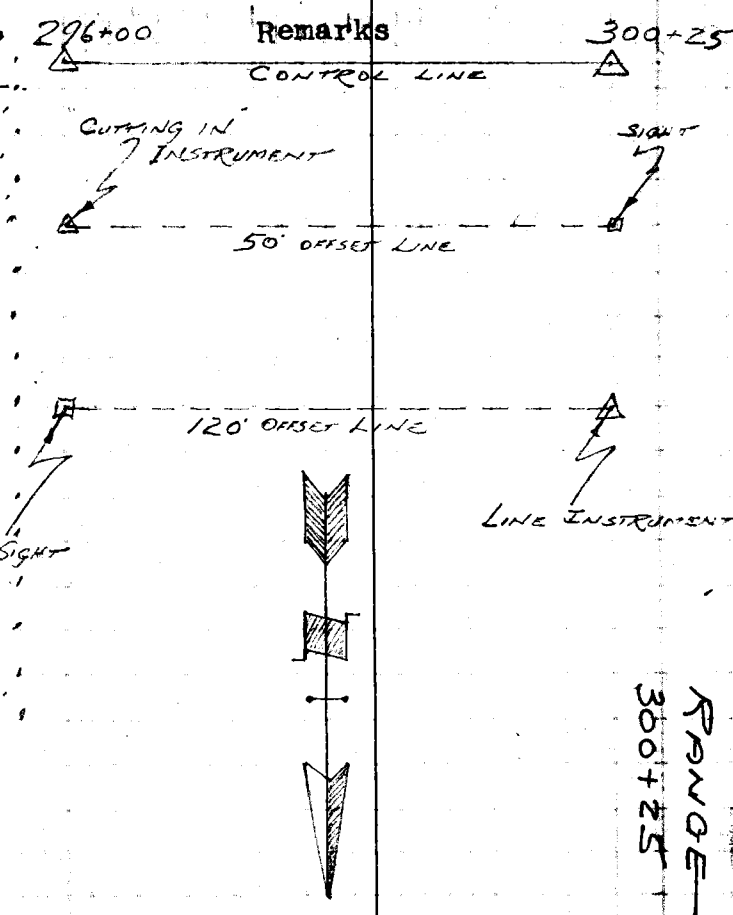
Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.
Inst. At	Sight On	#	Color	Time	Hor. Ang.
300+25	296+00	1	R&Y	9:08	89° 04'
		2	R		89° 02'
		3	Y		89° 15'
		4	R&Y	9:12	89° 27'
		5	R		90° 15'
		6	Y		89° 17'
		7	R&Y	9:14	89° 25'
		8	R		88° 56'
		9	Y		89° 17'
		10	R&Y	9:20	89° 56'
		11	R		89° 56'
		12	Y		89° 56'
		13	R&Y	9:22	89° 39'
		14	R		88° 57'
		15	Y	9:24	90° 04'
		16	R&Y		
		17	R		
		18	Y		
		19	R&Y		
		20	R		

Remarks



Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. V F. B. 1297 Pg. 25
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by E.H.B. Notes M.N. Date 8-2-51
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 4-50

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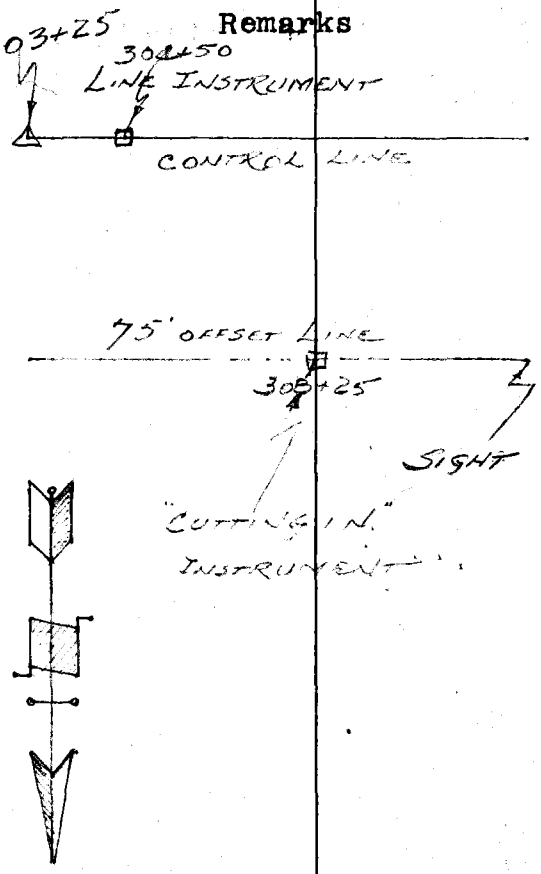
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. Sight At	On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
304+50	308+25	1	R&Y	9:47	90°00'	
		2	R		90°07'	
		3	Y		90°07'	
		4	R&Y	9:52	89°44'	
		5	R		89°44'	
		6	Y		90°03'	
		7	R&Y	9:55	89°44'	
		8	R		89°49'	
		9	Y		89°49'	
		10	R&Y	9:57	89°32'	
		11	R		89°32'	
		12	Y		89°32'	
		13	R&Y	10:01	90°00'	
		14	R		89°28'	
		15	Y		89°28'	
		16	R&Y	10:03	89°58'	
		17	R		89°40'	
		18	Y		89°30'	
		19	R&Y	10:07	89°15'	
		20	R	10:08	90°33'	

RANGE 304+50



F. B. 1297 Pg. 26 Job No. 8412 Division No. V Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-2-51 Date No. X-Sec.
Survey by F.H.B. Notes M.N. Notes Chkd. Checked
Indexed R. C. Johnson Date Date Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.			
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks		
296+00	300+25	1	R-Y	9:08	71° 00'			
		2	R		68° 21'			
		3	Y		67° 21'	(Cut-in) 1X2 296+00	50'	296+00
		4	R-Y	9:11	64° 04'			
		5	R		61° 08'			
		6	Y		60° 19'			
		7	R-Y	9:13	57° 10'			
		8	R		55° 03'			Water
		9	Y		53° 05'			
		10	R-Y	9:19	43° 45'			
		11	R		43° 14'			
		12	Y		41° 21'			
		13	R-Y	9:22	36° 24'			
		14	R		30° 19'			
		15	Y	9:24	23° 12'	(Line-in) 1X2 300+25	120'	300+25

CUT IN 300+25

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 27
No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.H.B. Notes English Date 8-2-51
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.			
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks		
308+25	304+50	1	R-Y	9:48	71° 00'			
75' offset		2	R		69° 50'			
Right		3	Y		68° 14'			(Line-in) 1X2 304+50
		4	R-Y	9:53	67° 31'			
		5	R		66° 29'			
		6	Y		65° 22'			
		7	R-Y	9:55	64° 21'			
		8	R		62° 21'			Water
		9	Y		61° 31'			
		10	R-Y	9:57	60° 58'			
		11	R		57° 20'			
		12	Y		55° 47'	(Cut-in) 1X2 308+25	75'	308+25
		13	R-Y	10:00	52° 21'			
		14	R		51° 11'			
		15	Y		49° 19'			
		16	R-Y	10:03	48° 51'			
		17	R		47° 04'			
		18	Y		46° 20'			
		19	R-Y	10:07	43° 02'			
		20	R	10:08	40° 28'			

Cut in 304+50

F. B. 1297 Pg. 28
Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date Date No.
Survey by F.H.B. Notes English Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION 300+25

#	Color	Time	B. S.	H. I.	Meas. Depth	F. S.	Bottom	ELEV.	Tide	Adj. Depth	Remarks
					29.4						
1	RY	9:08 0808			28.0 28.2		28.5		3.8	24.7	shots taken in clear
2	R				26.9 25.3		27.3			23.5	spots in kelp bed
3	Y				24.0 24.2		24.4			20.6	
4	RY	9:12 0812			23.0 22.2		23.4		3.9	19.5	
5	R				21.0 20.1		21.4			17.5	
6	Y				18.9 18.2		19.3			15.4 ~~23.2~~	
7	RY	9:14 0814			17.0 16.3		17.4		3.9	13.5	shore edge of kelp bed
8	R				15.2 15.4		15.6			11.7	
9	Y				14.0 14.5		14.5			10.6	
10	RY	9:20 0820			13.0 15.0		13.5		3.9	9.6	
11	R				11.8 11.3		12.9			9.0	
12	Y				9.8 10.0		10.3			6.4	
13	RY	9:23 0823			8.3 8.9		8.9		4.0	4.9	
14	R				7.1 7.8		7.7			3.7	
15	Y	9:25 0825			5.8		6.5		4.0	2.5	
16	RY										
17	R										
18	Y										
19	RY										
20	R										

BOAT
300+25

Profile No. ____ X-Sec. No. ____

Notes Red. LCWW Date 8-17-51 Notes Chkd. TMJ Date 8-27-51

Plotted ____ Date ____ Checked ____ Date ____

Job No. 8412 Division No. V
Survey of Beach Erosion Study
Survey by F.H.B. Notes ERY Date 8-2-51
Indexed Johnson Date ____
Map No. ____

F. B. 1297 Pg. 29

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 30 Job No. 8412 Division No. V Notes Red. [illegible] Plotted _____ Profile _____
Survey of Beach Erosion Studies Date 8-17-51 Date _____ No. _____
Survey by F.H.B. Notes Vollmagle Notes Chkd. T.M.I. Checked _____ X-Sec. _____
Indexed A. C. Johnson Date 8-2-51 Date 8-27-51 Date _____ No. _____

STATION 304+50		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Ht. Tide	Adj. Depth	Remarks
1	RY	9:48 0848	30.3 28.7 29.0	29.2	4.2	25.0	Range time clear of kelp
2	R		27.5 27.8	28.0		23.8	
3	Y		26.3 26.3	26.8		22.6	
4	RY	9:53 0853	25.0 25.2	25.4	4.2	21.2	
5	R		24.0 24.5	24.4		20.2	
6	Y		22.8 22.2	23.4		19.2	
7	RY	9:56 0856	21.1 21.5	21.5	4.2	17.3	
8	R		20.0 20.3	20.5		16.3	
9	Y		19.0 18.5	19.4		15.2	
10	RY	9:58 0858	17.3 17.2	17.7	4.2	13.5	
11	R		16.0 16.0	16.4		12.2	
12	Y		14.8 14.5	15.2		11.0	
13	RY	10:01 0901	13.3 13.0	13.7	4.2	9.5	
14	R		12.0 12.3	12.3		8.1	
15	Y		11.0 11.5	11.4		7.2	
16	RY	10:03 0903	10.0 10.5	10.5	4.2	6.3	
17	R		9.0 9.0	9.5		5.3	
18	Y		7.5 7.7	8.0		3.8	
19	RY	10:07 0907	6.2 7.8	6.7	4.3	2.4	
20	R	10:08 0908	5.2	6.1 6.4		1.8 ~~2.1~~	

BOAT 304+50

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

9.7
7
5.0

STATION	B. S.	H. I.	F. S.	ELEV.			
308+25	3 7	19 1		15 42	1X2 ON 75' RT.		FB 1296-244 offset
			3 6	15. 5	Sand	" "	(SHORE ∡ 90°)
			2.0	17.1		94 "	BRK.
TRANS. ON			0 5	18.6		110 "	TOE SL. of Bluff
308+25 ± PROD			4 2	14.9		63 "	
			7.0	12.1		36 "	
2°-12' back - T.P.	2.6	9 7	12.0	7.1	T.P.	20 " (calc. 19)	WATER.
0°-0'			5 5	4 7		00 "	
3°-21'			7 6	2 1		29 LT	calc.
6°-01'			8 9	0 8		53' "	"
8°-44'		6.0	10 0	-0 3		77' "	"
12°-01'		7.3	11 3	-1 6		106' "	"
16°-38'		9.0	13 0	-3 3		149' "	"
22°-55'		10.8	14 8	-5 1		211' "	"
26°-11'		12.3	16 3	-6 6		246' "	"

SHORE
308+25

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 31
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. T.M.L. Checked ____ Survey by C.V.C. Notes C.V.C. Date 8-2-51
Date 8-27-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

15.4
47
11.2

STATION	B. S.	H. I.	F. S.	ELEV.		
312+00	1.0	15.9		14.5	1 X 2 ON BANK 75' RT	SHORE ∠ 90° TOP Bank
			01	15	77 "	Toe BLUFF
			12	14	74 "	TOP Bank
			25	13	72 "	BRK
TRANS ON 307+00 - 75 OFFSET			55	13.4	61 "	"
∠s			99	[illegible]	34 "	Water
5°-25' T.P.	4.8	9.1	11.2	4.7 T.P.	25 " (calc. 26')	
8°-54'			72	1.9	3' LT	conc.
10°-48'			75	[illegible]	20' "	"
14°-11'			94	-0.3	51' "	"
17°-12'			10.0	[illegible]	80' "	"
20°-56'		8.4	12.4	[illegible]	116' "	"
24°-09'		9.0	13.0	-3.[illegible]	149' "	"
27°-33'		10.1	14	-5	186' "	"
30°-55'		11.7	15.7	-5.6	224' "	"

75' SUBTRACTED FROM Calc. DIST.

SHORE 312+00

F.B. 129 pg. 32 62 Job No. 8412 Division No. Notes Red. Plotted No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.I. Checked No.
Indexed A. C. Johnson Date 8-2-51 Date 8-27-51 Date

76L298 307 4-50

PLEASE RETURN TO
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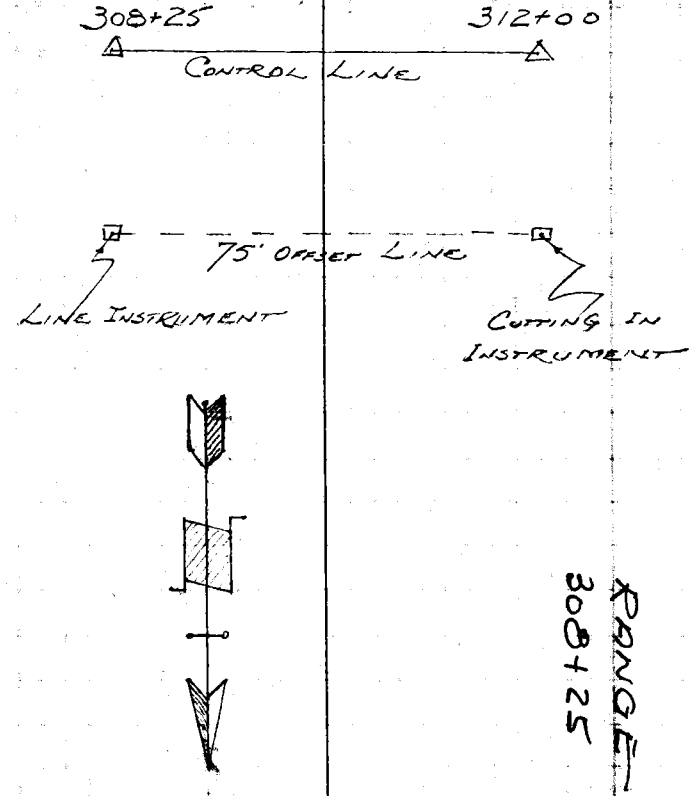
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
308+25	312+00	1	R&Y	10:20	89°26'	
		2	R		89°26'	
		3	Y		89°05'	
		4	R&Y	10:27	89°35'	
		5	R		90°00'	
		6	Y		89°47'	
		7	R&Y	10:30	89°47'	
		8	R		90°05'	
		9	Y		89°54'	
		10	R&Y	10:33	89°54'	
		11	R		89°55'	
		12	Y		89°30'	
		13	R&Y	10:38	89°30'	
		14	R		89°30'	
		15	Y		89°30'	
		16	R&Y	10:40	89°30'	
		17	R		89°31'	
		18	Y		89°26'	
		19	R&Y	10:43	89°34'	
		20	R	10:44	89°12'	



Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. V F. B. 1297 Pg. 33
Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by FHB Notes MN Date 8-2-51
Date ____ Date ____ Map No. ____ Inspector Johnson Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 34 | Job No. 8412 Division No. 1 | Notes Red. | Plotted | Profile
Survey of BEACH EROSION STUDIES Date 8-2-51 | Date | No.
Survey by E.H.B. Notes M.N. | Notes Chkd. | Checked | X-Sec.
Indexed C. Johnson Date | Date | Date | No.

STATION Inst. At	Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
312+00	308+25	1	R&Y	10:54	91° 40'	308+25
?	?	2	R		91° 25'	312+00
		3	Y		90° 38'	CONTROL LINE
		4	R&Y	10:58	90° 38'	
		5	R		91° 03'	
		6	Y		90° 48'	
		7	R&Y	11:01	90° 48'	
		8	R		90° 43'	75' OFFSET LINE
		9	Y		90° 43'	CUTTING IN INSTRUMENT
		10	R&Y	11:03	90° 28'	LINE INSTRUMENT
		11	R		90° 20'	
		12	Y		91° 20'	
		13	R&Y	11:08	90° 18'	
		14	R		91° 26'	
		15	Y		90° 38'	
		16	R&Y	11:11	90° 26'	
		17	R		90° 02'	
		18	Y		90° 47'	
		19	R&Y	11:14	90° 47'	
		20	R	11:15	89° 36'	

RANGE 312+00

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
[illegible]t. Sight On	#	Color	Time	Hor. Ang.	
312+00 308+25	1	R-Y	10:21	69° 50'	
75' Offset	2	R		70° 05'	
Right	3	Y		69° 28'	(Line-in) 1X2 308+25 — 75' — 308+25
	4	R-Y	10:27	67° 41'	
	5	R		65° 13'	
	6	Y		64° 20'	
	7	R-Y	10:30	64° 22'	
	8	R		63° 01'	Water
	9	Y		61° 29'	
	10	R-Y	10:33	59° 13'	
	11	R		57° 07'	
	12	Y		55° 56'	
	13	R-Y	10:38	51° 47'	
	14	R		49° 28'	
	15	Y		46° 15'	
	16	R-Y	10:41	42° 50'	(Cut-in) 1X2 312+00 — 75' — 312+00
	17	R		39° 22'	
	18	Y		34° 29'	
	19	R-Y	10:44	29° 48'	
	20	R	10:45	25° 48'	

75' Offset

Cut in 308+25

Profile Notes Red. Plotted Job No. 8412 Division No.
No. Date Date Survey of Beach Erosion Studies
X Sec. Notes Chkd. Checked Survey by E.H.B. Notes English Date 8-2-51
No. Date Date Map No. Indexed Date

P. 1297 Pg. 35

76L298 307 4-50

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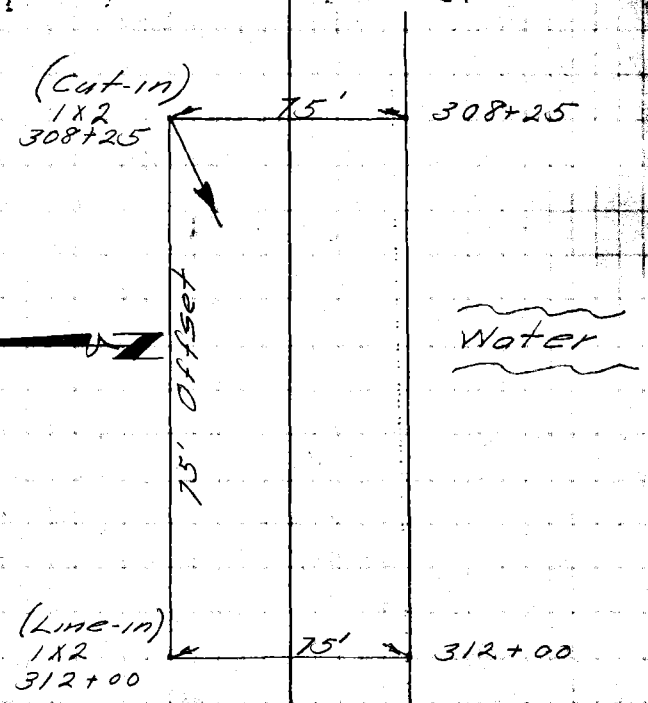
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line. F00

STATION		B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight	On	#	Color	Time	Hor. Ang.	
308+25	312+00	1	R-Y	10:55	69° 29'	
75' Offset		2	R		68° 27'	
Right		3	Y		68° 21'	
		4	R-Y	10:58	67° 41'	
		5	R		66° 34'	
		6	Y		65° 29'	
		7	R-Y	11:01	64° 36'	
		8	R		63° 24'	
		9	Y		62° 15'	
		10	R-Y	11:04	61° 35'	
		11	R		60° 42'	
		12	Y		56° 18'	
		13	R-Y	11:08	53° 10'	
		14	R		50° 23'	
		15	Y		48° 37'	
		16	R-Y	11:11	45° 52'	
		17	R		43° 17'	
		18	Y		35° 55'	
		19	R-Y	11:14	31° 12'	
		20	R	11:15	28° 10'	



CUT IN 312+00

Job No. 8412 Division No. ____ Notes Red. ____ Plotted ____ Profile ____
Survey of Beach Erosion Studies Date ____ Date ____ No. ____
Survey by F.H.B. Notes English Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed A. C. Johnson Date ____ Date ____ No. ____

F.B. 1297 PG. 36

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 308+25 | B. S. | H. I. | F. S. | ELEV.

#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
			30.4				
1	R.Y.	10:21 0921	28.9	29.4	4.3	25.1	Range line clear
			29.1				
2	R		27.8	28.2		23.9	of kelp.
			27.3				
3	Y		26.1	26.5		22.2	
			27.0				
4	R.Y.	10:27 0927	24.9	25.6	4.3	21.3	
			24.3				
5	R.		22.9	23.4	4.3	19.1	
			22.9				
6	Y.		21.4	21.9	4.4	17.5	
			21.9				
7	R.Y.	10:30 0930	20.2	20.8	4.4	~~16.0~~ 16.4	
			20.2				
8	R.		18.5	19.1		14.7	
			22.1				
9	Y.		20.1	20.8		16.4	
			19.3				
10	R.Y.	10:33 0933	18.1	18.5	4.4	14.1	
			18.5				
11	R.		16.5	17.2		12.8	
			16.5				
12	Y.		15.0	15.5		11.1	
			15.0				
13	R.Y.	10:39 0939	13.5	14.0	4.4	9.6	
			13.3				
14	R		12.0	12.4		8.0	
			12.5				
15	Y.		11.0	11.5		7.1	
			11.5				
16	R.Y.	10:41 0941	10.0	10.5	4.4	6.1	
			11.6	9.9		5.5	
17	R		9.0	~~7.8~~		~~3.4~~	
			9.0				
18	Y.		7.8	8.2		3.8	
			7.8				
19	R.Y.	10:44 0944	6.3	6.8	4.4	2.4	
			6.5				
20	R.	10:45 0945	4.5	5.2	4.4	0.8	

BOAT 308+25

Profile No. ____ Notes Red. Pour Plotted ____ Job No. 8412 Division No. V F.B. 1297 Pg. 37
Date 8-17-51 Date ____ Survey of Beach Erosion Studies
X-Sec. No. ____ Notes Chkd. T.M.I. Checked ____ Survey by E.H.B. Notes E.R.V. Date 8-2-51
Date 8-27-51 Date ____ Map No. ____ Indexed C. Johnson Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 38 | Job No. 8412 Division No. 1 Notes Red RCW Plotted | Profile No.
Survey of Beach Erosion Studies Date 8-17-51 Date | X-Sec. No.
Survey by E.H.B. Notes Vb 11/2 Notes Chkd. T.M.L. Checked
Indexed R. C. Johnson Date 8-2-51 Date 8-27-51 Date | No.

STATION 312+00 #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	R.Y.	10:55 0955	30.5 29.0 29.5	29.5	4.4	25.1	
2	R.		28.0 28.0	28.5		24.1	
3	Y.		26.5 26.6	27.0		22.6	
4	R.Y.	10:58 0958	25.4 25.8	25.8	4.4	21.4	
5	R.		24.1 24.5	24.7		20.3	
6	Y.		23.0 23.5	23.5		19.1	
7	R.Y.	11:02 1002	24.1 23.0	24.6	4.4	20.2	
8	R		21.5 20.5	22.0		17.6	
9	Y.		19.0 19.0	19.5		15.1	
10	R.Y.	11:04 1004	17.5 18.2	18.0	4.4	13.6	
11	R		16.5 16.7	17.1		12.7	
12	Y.		15.1 15.5	15.6		11.2	
13	R.Y.	11:09 1009	16.1 15.5	16.6	4.4	12.2	
14	R		13.5 14.3	14.2		9.8	
15	Y.		12.0 13.2	12.8		8.4	
16	R.Y.	11:11 1011	11.0 11.0	11.7	4.3	7.4	BOAT 312+00
17	R.		9.0 9.7	9.7		5.4	
18	Y.		8.0 8.0	8.6		4.3	
19	R.Y.	11:15 1015	7.0 7.3	7.6	4.3	3.3	
20	R	11:16 1016	5.3	6.0	4.3	1.7	

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.			
317+75	50	17.5		1247	1X2 ON	FB 1296-244 25' RT.	offset (SHORE ∡ 90°
			40	13.5		29' "	Base of Bank
			1.3	16.2		33 "	Top "
			65	11 0		12	
(TRANS. ON			86	8 9		0.0 "	Base Line
321+75 ℄			100	7.5		20' LT.	
4°-07' T.P.	36	9 6	115	6 0	T.P.	Tape 29 " (Calc. 29)	
10°-20'			95	0 1		73' " "	Rocky
12°-52'			102	-0 6		91' " "	Beach
17°-05'			113	-1 7		123' " "	[illegible] Floor
27°-[illegible]		9.2	132	-3 6		206' " "	"
[illegible]-24'		11.1	151	-5 5		244' " "	"
35°-2[illegible]		11.6	15[illegible]	-[illegible]		284' " "	"

SHORE
317+75

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 39
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
Notes Chkd. T.M.L. Checked ____ Survey by C.V.C. Notes C.V.C. Date 8-2-51
Date 8-27-51 Date ____ Map No. ____ Indexed Tolmason Date ____

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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9.6
4.7
4.9

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
					FB 1296-244	
321+75	13	18.2		16.85	1 X 2 ON 25' RT.	offset - Toe BLUFF.
			52	13.6	0.0	BASE LINE
TRANS. ON			108	7.2	36' LT	(SHORE ∡ 90°)
317+75 - ∡ T.P. 46-12	34	9.6	12.0	6.2	T.P. TAPE 44 " (Calc 43')	Water
7°-56			49	4.7	56 " Calc	
10°-35			69	2.7	75 " Calc.	Brk.
13°-23			80	1.0	95 "	OCEAN FLOOR
15°-04			84	1.2	108 "	" "
18°-41			95	0.1	135 "	" "
22°-45			100	-0.4	168 "	
25°-28			114	-1.8	191	
31°-28		10.4	144	-4.8	245	
37°-00		10.8	148	-5.7	301	
40°-13		12.2	162	-6.1	338	
43°-20		12.3	163	-6.7	377	

SHORE 321+75

F.B. 1297 PG. 40 64
Job No. 8412 Division No.
Survey of BEACH EROSION STUDIES (ZUMA)
Survey by C.V. CRUMLEY Notes C.V.C.
Indexed A. C. Johnson Date 8-2-51
Notes Red. Plotted
Date Date
Notes Chkd. T.M.I. Checked
Date 8-27-51 Date
Profile No.
X-Sec. No.

76L298 307 4-50

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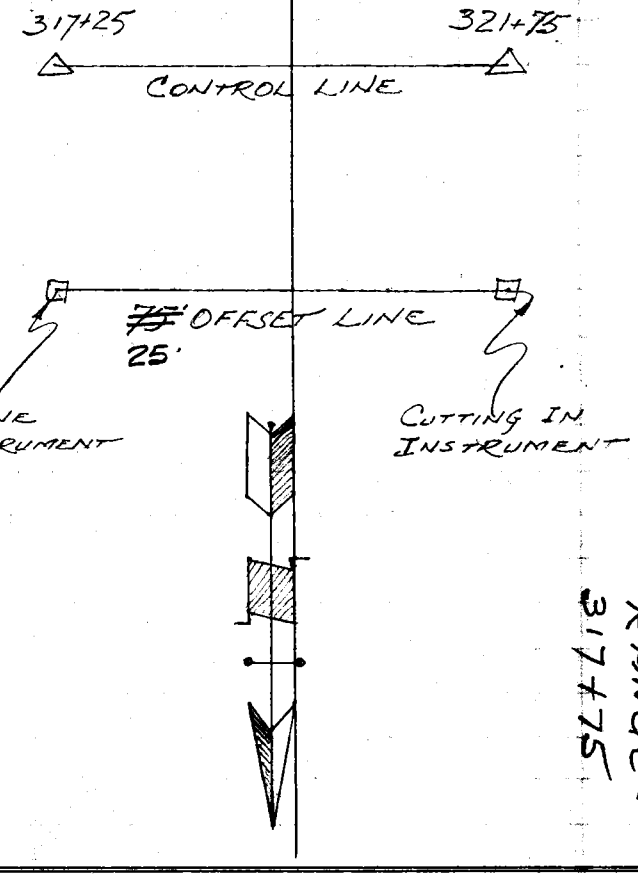
Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.	
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
317+75	321+75	1	R&Y	7:20	89°51'	
?	?	2	R		89°40'	
		3	Y		89°50'	
		4	R&Y	7:25	90°31'	
		5	R		89°36'	
		6	Y		89°01'	
		7	R&Y	7:28	88°43'	
		8	R		89°35'	
		9	Y		88°52'	
		10	R&Y	7:30	88°40'	
		11	R		89°19'	
		12	Y		89°40'	
		13	R&Y	7:34	89°03'	
		14	R		89°35'	
		15	Y		89°57'	
		16	R&Y	7:38	89°01'	
		17	R	7:39	91°03'	
		18	Y			
		19	R&Y			
		20	R			



Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. ✓ F. B. 1299 Pg. 41
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd ____ Checked ____ Survey by E.H.B. Notes M.N. Date 8-3-51
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

F. B. 1292 PG. 42 Job No. 8412 Division No. V Notes Red. ✓ Plotted ____ Profile ____

Survey of BEACH EROSION STUDIES Date 8-3-51 Date ____ No. ____ X-Sec. ____

Survey by E.H.B. Notes M.N. Notes Chkd. ____ Checked ____ No. ____

Indexed ____ Date ____ Date ____

76L298 307 4-50

PLEASE RETURN TO
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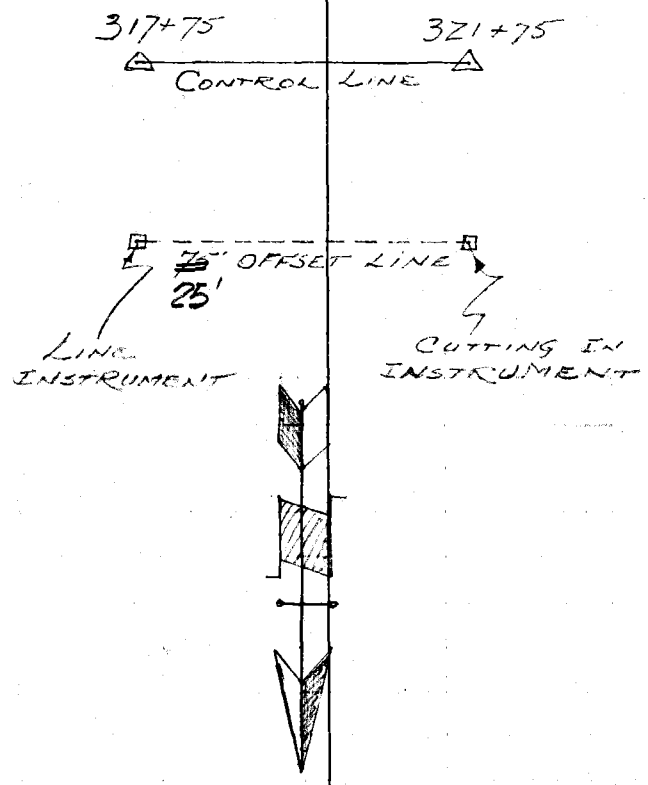
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At / Sight On	#	Color	Time	Hor. Ang.	Remarks	
321+75 / 317+75 ? ?	1	R&Y	7:51	90°36'		
	2	R		90°03'		
	3	Y		91°06'		
	4	R&Y	7:55	90°29'		
	5	R		89°34'		
	6	Y		89°58'		
	7	R&Y	7:59	90°28'		
	8	R		88°37'		
	9	Y		89°11'		
	10	R&Y	8:02	89°56'		
	11	R		90°14'		
	12	Y		89°52'		
	13	R&Y	8:04	89°25'		
	14	R		90°13'		
	15	Y		89°55'		
	16	R&Y	8:09	89°55'		
	17	R	8:10	89°55'		
	18	Y				
	19	R&Y				
	20	R				

RANGE 321+75



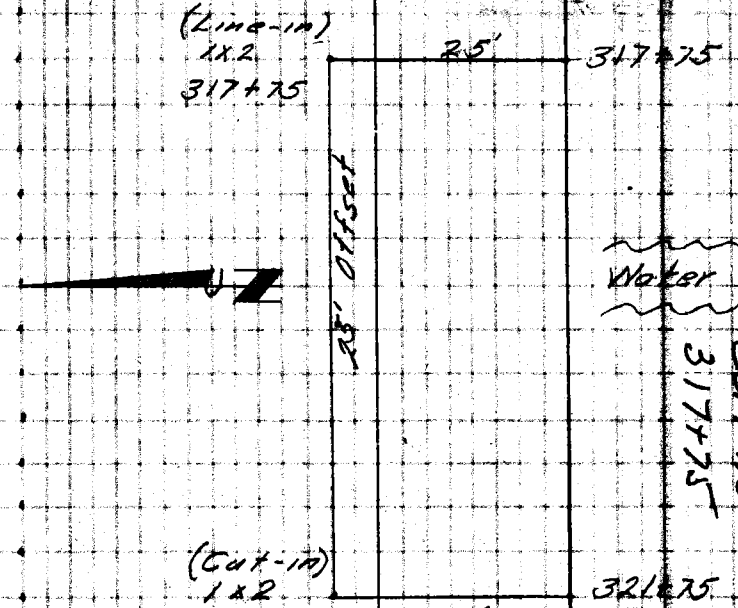
76L398 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At	On	#	Color	Time	Hor. Ang.	
321+75	317+75	1	R-Y	7:21	67° 50'	
25' Offset		2	R		66° 35'	
Right		3	Y		66° 25'	
		4	R-Y	7:25	65° 03'	
		5	R		64° 47'	
		6	Y		64° 05'	
		7	R-Y	7:27	62° 48'	
		8	R		60° 39'	
		9	Y		61° 14'	
		10	R-Y	7:30	60° 00'	
		11	R		59° 02'	
		12	Y		54° 10'	
		13	R-Y	7:35	50° 20'	
		14	R		46° 38'	
		15	Y		42° 10'	
		16	R-Y	7:39	35° 54'	
		17	R	7:40	29° 45'	



Profile No. 1 Sec. No. Date Notes Red. Date Plotted Date Checked Date Job No. 8412 Division No. Survey of Beach Erosion Studies Survey by E.H.B. Notes English Date 8-30-51 Map No. Indexed Johnson Date

Job No. 8412 Survey of Beach Erosion Studies Survey by E.H.B. Notes English Date 8-30-51 Map No. Indexed Johnson Date

Cut in 317+75

76L298 307 4-50

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Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At	On	#	Color	Time	Hor. Ang.	Remarks	
317+75	321+75	1	R-Y	7:52	68° 15'		
25' Offset		2	R		67° 45'		
Right		3	Y		66° 10'	(Cut-in) 1X2 317+75	25' 317+75
		4	R-Y	7:56	65° 42'		
		5	R		65° 26'		
		6	Y		64° 31'		
		7	R-Y	7:59	61° 24'		
		8	R		61° 53'		
		9	Y		59° 13'		Water
		10	R-Y	8:02	57° 47'		
		11	R		55° 25'		
		12	Y		53° 56'		
		13	R-Y	8:05	50° 46'		
		14	R		47° 04'		
		15	Y		40° 58'		
		16	R-Y	8:09	39° 22'	(Line-in) 1X2 321+75	25' 321+75
		17	R	8:10	37° 28'		

25' Offset

Cut in 321+75

F. S. 1297 Pg. 44 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date 8-3-51 Date No.
Survey by F.H.B. Notes English Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	7:20 0620	27.0 25.6	26.1	1.7	24.4	Range line clear of
2	R		26.1 24.0	24.7		23.0	Kelp.
3	Y		24.0 22.3	22.9		21.2	
4	RY	7:25 0625	22.8 21.3	21.8	1.7	20.1	
5	R		21.5 20.1	20.6		18.9	
6	Y		20.3 19.0	19.4		17.7	
7	RY	7:28 0628	18.9 17.7	18.1	1.8	16.3	
8	R		17.6 16.1	16.6		14.8	
9	Y		16.3 15.1	15.5		13.7	
10	RY	7:30 0630	15.1 13.7	14.2	1.8	12.4	
11	R		13.3 12.3	12.6		10.8	
12	Y		12.9 11.0	11.6		9.8	
13	RY	7:35 0635	11.6 10.0	10.5	1.9	8.6	
14	R		10.2 8.7	9.2	1.9	7.3	
15	Y		9.5 7.5	8.2	2.0	6.2	
16	RY	7:39 0639	7.7 6.0	6.6	2.0	4.6	
17	R	7:40 0640	8.0 5.0	6.0	2.0	4.0	
18	Y						
19	RY						
20	R						

BOAT
317+75

Profile No. ____ Date 8-17-51 Notes Red. Lewis Plotted ____ Date ____ Job No. 8412 Division No. V Survey of Beach Erosion Studies F. B. 1297 Pg. 45

X-Sec. No. ____ Date 8-27-51 Notes Chkd. T.M.I. Checked ____ Date ____ Survey by F.H.B. Notes E.R.V. Date 8-3-51 Map No. ____ Indexed Johnson Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 46 | Job No. 8412 Division No. V Notes Red. Ruv Plotted ____ No. ____ Profile
Survey of Beach Erosion Study Date 8-17-51 Date ____ X-Sec.
Survey by F.H.B. Notes Volleyball Notes Chkd. T.M.L. Checked ____
Indexed C. Johnson Date 8-3-51 Date 8-27-51 No. ____

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
			29.2				
1	RY	7:52 0652	29.1	27.8	2.3	25.5	
			29.0				
2	R		26.0	26.7		24.4	
			26.7				
3	Y		24.8	25.4		23.1	
			25.2				
4	RY	7:56 0656	23.7	24.2	2.3	21.9	
			23.3				
5	R		21.7	22.2		19.9	
			23.0				
6	Y		21.0	21.7		19.4	
			21.6				
7	RY	7:59 0659	19.7	20.3	2.4	17.9	
			20.1				
8	R		18.4	19.0		16.6	
			17.9				
9	Y		16.0	16.6		14.2	
			16.8				
10	RY	8:03 0703	15.0	15.6	2.4	13.2	
			15.6				
11	R		14.0	14.5		12.1	
			13.8				
12	Y		11.7	12.4		10.0	
			12.1				
13	RY	8:05 0705	10.7	11.2	2.5	8.7	
			11.9				
14	R		8.9	9.9		7.4	
			9.5				
15	Y		7.9	8.4		5.9	
			8.9				
16	RY	8:09 0709	6.4	7.2	2.5	4.7	
			7.4				
17	R	8:10 0710	5.4	6.1	2.6	3.5	
18	Y						BOAT
19	RY						321+75
20	R						

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.			
						FB1296-244	(SHORE ∡ 90°)
325+50	3.9	14.8		10.93	1X2 ON	45' RT	OFFSET.
(TRANSIT ON 330+50-45' OFF RT)			33	115		55' "	Toe SL. BLUFF.
			47	101		33 "	BRK. ON Beach.
T.P	15	8.5	7.8	70	T.P.	0.0 -	BASE LINE -
6°-34'			26	5.9		13' LT. calc.	Water
8°-42'			40	45		32' "	Calc.
11°-36'			57	28		58' "	"
13°-58'			67	18		79' "	"
16°-00'			75	10		98' "	"
17°-18'			81	04		111'	
19°-18'			90	-05		120' "	"
20°-54'			95	-10		146' "	"
22°-52'			100	-15		166' "	"
24°-26'			108	-23		182'	
25°-25'		7.1	111	-26		193'	
27°-40'		7.6	116	-31		217'	
29°-26'		9.5	135	-50		237'	
31°-23'		10.1	141	-56		260'	
32°-37'		9.5	135	-50		275'	
33°-21'		9.3	133	-48		284'	
34-17		11.6	156	-71		296'	
35°-28'		10.8	148	-63		311'	
37°-20'		12.2	16.2	-7.7		336'	

45' WS SUBTRACTED FROM CO. DIST.

SHORE 325+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 47
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
Notes Chkd. TMI Checked ____ Survey by C.V.C. Notes C.V.C. Date 8-2-51
Date 8-2-51 Date ____ Map No. ____ Indexed Johnson Date ____

65

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

6.2
4.7
3.5

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
					F.B. 1296-244	
330+50	37	184		16	1X2 ON 45 RT OFFSET.	SHORE ∡ 90°
			23	16	54 "	Toe SC Beach
(TRANS. ON 325+50-45 RT OFFSET)			0.0	1[illegible]	59 "	Top Bank
			109	7	0.0	Base Line
5°-47' T.P.	1.5	82	117	6	T.P. 7 TAPE LT. (6' calc.)	
8°-13'			35	4	27' calc. "	Water
10°-36'			51	3	49' " "	
13°-29'			66	[illegible]	75' " "	[illegible]
14°-48'			69	3	87' " "	" "
21°-07'		5.2	92	-1	148' " "	" "
24°-52'		6.8	10[illegible]	-2	187' " "	" "
28°-03'		8.0	12[illegible]	-3	221' " "	" "
31°-12'		11.3	153	-7	258' " "	" "

45' WAS SUBTRACTED FROM CALC. DIST.

SHORE 330+50

F.B. 1297 PG. 48 66 Job No. 8412 Division No. Notes Red. Plotted Date Date Notes Chkd. T.M.L. Checked Date 8-2-51 Date 8-3-51 Profile No. X-Sec. No.

Survey of BEACH EROSION STUDIES (ZUMA)
Survey by C.V. CRUMLEY Notes C.V.C.
Indexed A. C. Johnson Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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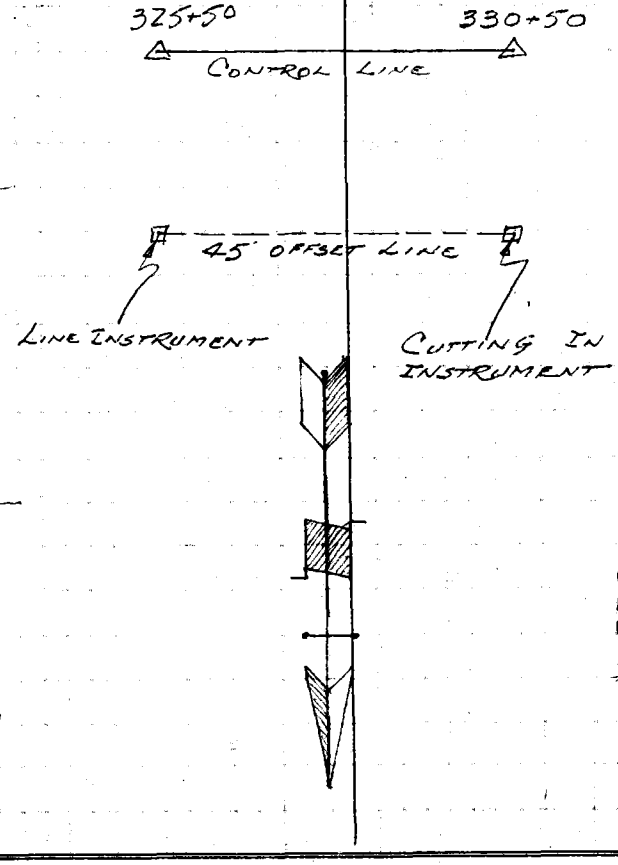
Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.
Inst. At	Sight On	#	Color	Time	Hor. Ang.
325+50	330+50	1	R&Y	8:24	90° 05'
?	?	2	R		90° 21'
		3	Y		90° 06'
		4	R&Y	8:28	90° 32'
		5	R		90° 32'
		6	Y		90° 41'
		7	R&Y	8:32	89° 55'
		8	R		89° 14'
		9	Y		90° 43'
		10	R&Y	8:38	90° 05'
		11	R		90° 05'
		12	Y		89° 58'
		13	R&Y	8:41	90° 13'
		14	R		89° 40'
		15	Y		89° 38'
		16	R&Y	8:45	89° 52'
		17	R		89° 52'
		18	Y		89° 52'
		19	R&Y	8:47	89° 14'
		20	R		

Remarks



Profile Notes Red. Plotted Job No. 8412 Division No. ✓ F. B. 1297 Pg. 49
No. Date Date Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. Checked Survey by E.H.B. Notes M.N. Date 8-3-51
No. Date Date Map No. Indexed C. Johnson Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

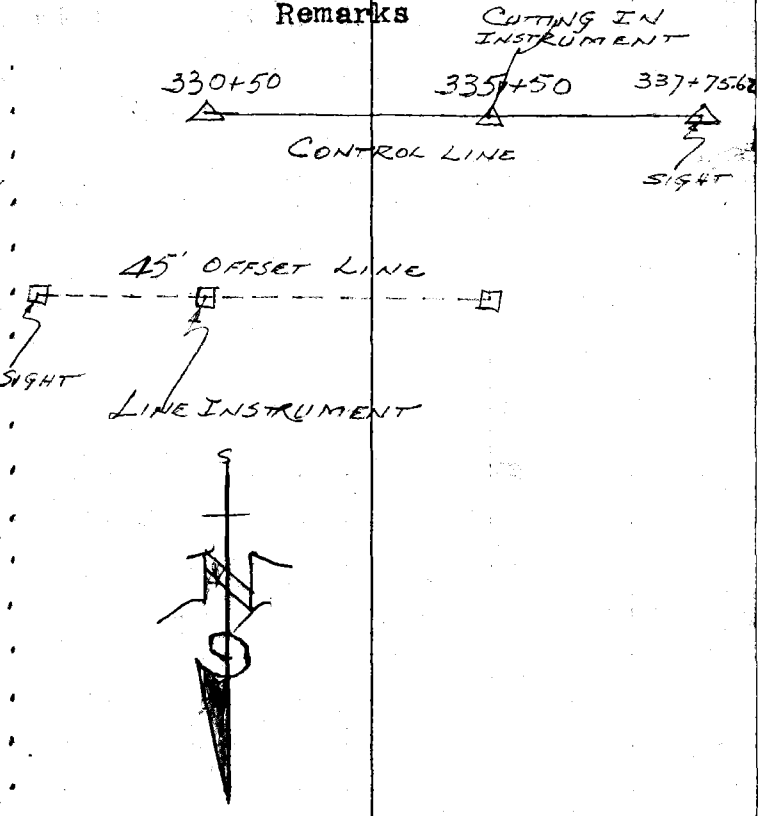
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	STATION Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.
330+50	335+50	1	R&Y	9:05	90°01'
?	?	2	R		90°36'
		3	Y		90°22'
		4	R&Y	9:11	90°07'
		5	R		90°54'
		6	Y		90°46'
		7	R&Y	9:15	91°46'
		8	R		91°21'
		9	Y		91°35'
		10	R&Y	9:18	91°00'
		11	R		91°00'
		12	Y		90°24'
		13	R&Y	9:22	91°18'
		14	R		92°02'
		15	Y		91°11'
		16	R&Y	9:25	91°15'
		17	R		92°02'
		18	Y	9:26	89°53'
		19	R&Y		
		20	R		

RANGE 330+50

Remarks



F. B. 1297 PG. 50
Job No. 8412 Division No. ✓ Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 3-3-51 Date No.
Survey by F.H.B. Notes M. N. Notes Chkd. Checked X-Sec.
Indexed [illegible] Date Date No.

76L298 307 4-50

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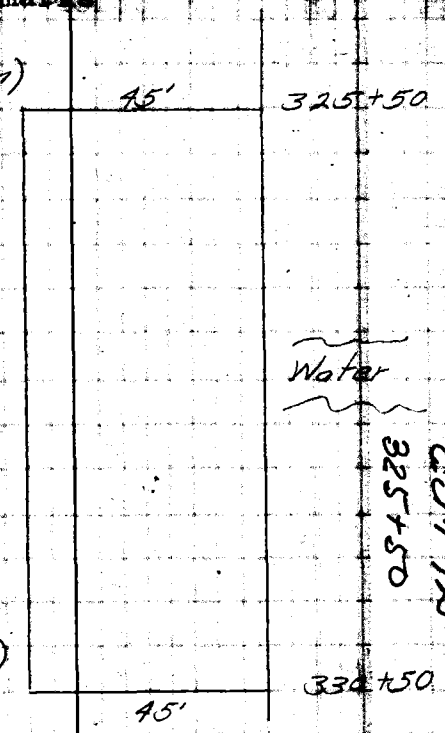
STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At ON	#	Color	Time	Hor. Ang.		Remarks
330+50 325+50	1	R-Y	8:24	66° 16'	-	(Line-in)
45' Offset	2	R		64° 45'	-	1X2
Right	3	Y		64° 28'	-	325+50
	4	R-Y	8:29	62° 34'	-	
	5	R		60° 49'	-	
	6	Y		60° 20'	-	
	7	R-Y	8:32	60° 04'	-	
	8	R		59° 55'	-	
	9	Y		56° 02'	-	
	10	R-Y	8:39	51° 51'	-	
	11	R		50° 04'	-	
	12	Y		46° 40'	-	
	13	R-Y	8:42	42° 39'	-	
	14	R		42° 40'	-	(Cut-in)
	15	Y		37° 51'	-	1X2
	16	R-Y	8:46	34° 35'	-	330+50
	17	R		32° 33'		
	18	Y		30° 13'		
	19	R-Y	8:48	27° 34'		



Profile Notes Red_____ Date_____ Plotted_____ Date_____ Job No. 8442 Division No. _____ F.B. 1297 Pg. 37
No._____ Date_____ Date_____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd_____ Date_____ Checked_____ Date_____ Survey by E.H.B. Notes Entered Date E.B. Ste
No._____ Date_____ Date_____ Map No._____ Engineer Date_____

76L298 307 4-50

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NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
335+50	Z-18	1	R-Y	9:06	65° 41'	-	
		2	R		64° 27'	-	
		3	Y		63° 11'	-	
		4	R-Y	9:11	57° 33'	-	
		5	R		55° 36'	-	
		6	Y		54° 00'	-	
		7	R-Y	9:15	48° 28'	-	
		8	R		45° 42'	-	
		9	Y		42° 04'	-	
		10	R-Y	9:19	39° 36'	-	
		11	R		37° 33'	-	
		12	Y		36° 23'	-	
		13	R-Y	9:22	32° 00'	-	
		14	R		29° 59'	-	
		15	Y		28° 01'	-	
		16	R-Y	9:25	25° 59'	-	
		17	R		23° 21'	-	
		18	Y	27	21° 29'	-	

CUT IN 330+50

F. B. 1297 PG. 52 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date 8-3-51 Date No.
Survey by F.H.B. Notes English Notes Chkd. Checked X-Sec.
Indexed H. C. Johnson Date Date No.

76L298 307 4-50

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NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Tide	Adj. Depth	Remarks
1	RY	8:25 0725	29.1 27.6	28.1	2.8	25.3	
2	R.		27.9 25.9	26.6		23.8	
3	Y.		26.0 24.0	24.7		21.9	
4	RY	8:29 0729	24.5 22.3	23.0	2.9	20.1	
5	R		26.0 24.0	24.7		21.8	
6	Y		24.5 22.0	22.8		19.9	
7	RY	8:32 0732	22.8 21.0	21.6	3.0	18.6	
8	R.		21.5 19.5	20.2		17.2	
9	Y.		19.5 17.9	18.4		15.4	
10	RY	8:39 0739	18.1 16.4	17.0	3.1	13.9	
11	R.		16.9 15.4	15.9		12.8	
12	Y.		15.8 14.0	~~14.6~~ 14.6		~~11.5~~ 11.5	
13	R.Y	8:42 0742	14.7 12.9	13.5	3.2	10.3	
14	R.		13.0 11.8	12.2		9.0	
15	Y.		11.6 10.3	10.7		7.5	
16	RY	8:46 0746	10.3 8.9	9.4	3.2	6.2	
17	R		9.8 7.8	8.5	3.2	5.3	
18	Y.		8.5 6.7	7.3	3.3	4.0	
19	RY.	8:48 0748	7.5 5.0	5.8	3.3	2.5	
20	R						

BOAT
325+50

Profile Notes Red. LCWT Plotted ____ Job No. 8412 Division No. V F. B. 1297 Pg. 53
No. ____ Date 8-16-51 Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. TM I Checked ____ Survey by E.H.B. Notes E.R.V. Date 8-3-51
No. ____ Date 8-27-51 Date ____ Map No. ____ Indexed Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	9:06 0806	29.1 27.9	28.3	3.5	24.8	
2	R		27.7 26.8	27.1		23.6	
3	Y		26.3 25.1	25.5		22.0	
4	RY	9:12 0812	25.3 24.0	24.4	3.6	20.8	
5	R		24.8 22.8	23.5		19.9	
6	Y		22.3 21.0	21.4		17.8	
7	RY	9:16 0816	20.7 19.5	19.9	3.6	16.3	
8	R		19.2 18.0	18.4	3.6	14.8	
9	Y		18.1 16.9	17.3	3.7	13.6	
10	RY	9:19 0819	17.1 15.9	16.3	3.7	12.6	
11	R		15.9 14.4	14.9	3.7	11.2	
12	Y		14.3 13.1	13.5	3.8	9.7	
13	RY	9:23 0823	13.5 12.0	12.5	3.8	8.7	
14	R		12.1 11.0	11.4		7.6	
15	Y		13.6 12.3	12.7		8.9	
16	RY	9:26 0826	10.3 9.0	9.4	3.5	5.6	
17	R		9.0 7.3	7.9		4.1	
18	Y	9:27 0827	8.2 5.8	6.6	3.8	2.8	BOAT 330+50
19	RY						
20	R						

F. B. 1297 Pg. 54 Job No. 8412 Division No. X Notes Red. Rew Plotted ____ Profile ____
Survey of Beach Erosion Studies Date 8-16-51 Date ____ No. ____
Survey by F.H.B. Notes Vallnag Ic Notes Chkd. T.M.I. Checked ____ X-Sec. ____
Indexed H. C. Johnson Date 8-3-51 Date 8-27-51 Date ____ No. ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

7.7
4
30

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
335+50	38	18.5		14.67	FB 1296-245 1X2 ON Base Line	SHORE ∡ 90°
			35	15.0	11' RT.	TOE SC.
			05	18.0	13 "	ON Bank
TRANS. ON (335+50-45' RT OFFSET)			31	15.4	16 LT	
			62	12.3	42 "	
			95	9.0	58 "	
13°-13' T.P.	10	77	11.8	6.7 T.P	74 TEDC (Calc. 72')	
15°-43'			30	47	97 calc. "	
19°-34'			59	18	133 " "	BRK
22°-34'			67	10	163 " "	OCEAN FLOOR
25°-14'			77	00	191 " "	" "
26°-53'		4.6	82	-09	209 " "	"
29°-37'		5.6	96	-19	239 " "	"
32°-10'		7.5	110	-33	269 " "	"
36°-17'		10.8	148	-71	~~333~~ 323 " "	"
39°-26'		12.0	160	-83	366 " "	"

45' WAS SUBTRACTED FROM calc. DIST.

SHORE 335+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ 67 F.B. 1297 Pg. 55
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. T.M.I. Checked ____ Survey by C.V.C. Notes C.V.C. Date 8-3-51
Date 8-27-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
340+50	48	170		12 1	FB 1296-245 1x2 ON BASE LINE	SHORE ∡ 90°
			39	13 1	10' RT	
			44	12	25 "	
			23	14	34 "	
			10	16	44 "	TOE SL.
TRANS. ON			51	11	28 LT	BRK ON Beach
344+50 ℄			78	9 2	52 "	
			99	7	68 "	
			11.1	5 3	81 "	
11°-43' T.P.	25	80	115	5 5 T.P.	TAPE 83 " (Calc 83')	Water
12°-59'			33	4 7	92' Calc.	
17°-29'			59	2	126 "	BRK
20°-18'			64	1	148' "	OCEAN FLOOR
24°-21'			77	+0	181' "	"
27°-30'		4.8	88	-	208' "	"
31°-43'		6.2	102	-2	247' "	"
36°-32'		7.8	118	-3	296' "	"
40°-29'		10.4	144	-6	341' "	"
43°-02'		12.4	164	-8	373' "	"

SHORE 340+50

F.B. 1297 PG. 56 68 Job No. 8412 Division No. Notes Red. Plotted No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.L. Checked No.
Indexed A. C. Johnson Date 8-3-51 Date 8-27-51 Date

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
335+50	330+50	1	R&Y	9:49	90°00'		
		2	R		90°45'		
		3	Y		90°45'		
		4	R&Y	9:52	90°45'		
		5	R		89°05'		
		6	Y		89°36'		
		7	R&Y	9:54	89°36'		
		8	R		89°36'		
		9	Y		89°36'		
		10	R&Y	9:56	89°48'		
		11	R		90°00'		
		12	Y		90°00'		
		13	R&Y	9:59	89°54'		
		14	R		89°54'		
		15	Y		90°16'		
		16	R&Y	10:03	90°35'		
		17	R		89°50'		
		18	Y		90°18'		
		19	R&Y	10:04	89°53'		
		20	R	10:05	88°10'		

RANGE
335+50

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. ✓ (5) F. S. 1297 Pg. 57
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by E.H.B. Notes M.N. Date 8-3-51
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

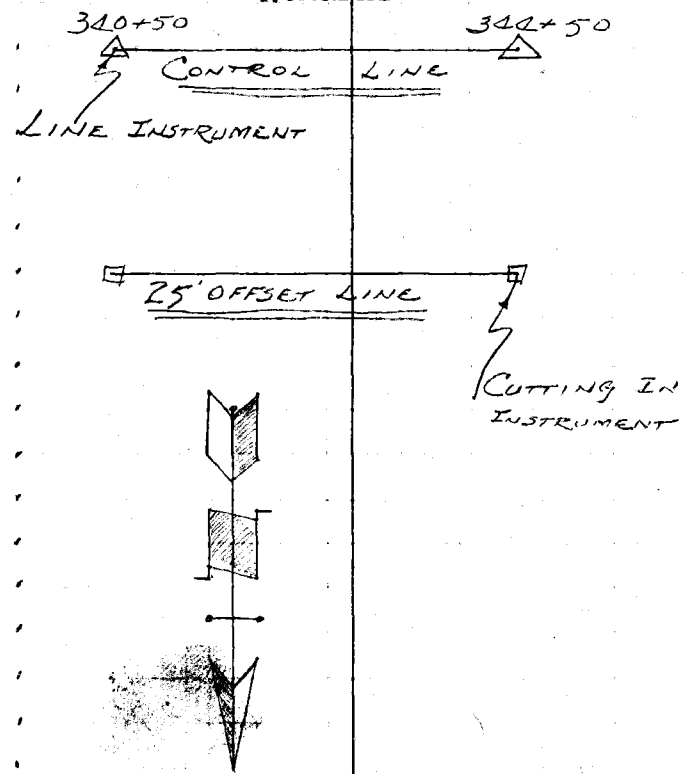
76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
340+50	344+50	1	R&Y	10 19	89° 40'	
		2	R		89° 40'	
		3	Y		90° 06'	
		4	R&Y	10:24	89° 32'	
		5	R		89° 52'	
		6	Y		89° 21'	
		7	R&Y	10:29	89° 32'	
		8	R		89° 42'	
		9	Y		89° 32'	
		10	R&Y	10:32	89° 32'	
		11	R		89° 32'	
		12	Y		89° 3'	
		13	R&Y	10:34	89° 13'	
		14	R		89° 14'	
		15	Y		89° 14'	
		16	R&Y	10:37	89° 27'	
		17	R		89° 02'	
		18	Y	10:39	89° 02'	
		19	R&Y			
		20	R			



RANGE 340+50

F. B. 1297 PG. 58 Job No. 8412 Division No. ✓ Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-3-51 Date No.
Survey by F.H.B. Notes M.N. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
330+50	335+50	1	R-Y	9:50	67° 20'	OMIT	
True Line		2	R		65° 15'		
		3	Y		64° 08'		
		4	R-Y	9:53	62° 09'	–	
		5	R		60° 55'	–	
		6	Y		57° 42'	–	
		7	R-Y	9:55	55° 44'	–	
		8	R		54° 15'	–	
		9	Y		53° 15'	–	
		10	R-Y	9:57	51° 46'	–	
		11	R		48° 49'	–	
		12	Y		46° 32'	–	
		13	R-Y	9:59	46° 01'	–	
		14	R		44° 26'	–	
		15	Y		39° 03'	–	
		16	R-Y	10:03	36° 25'	–	
		17	R		34° 57'	–	
		18	Y		32° 52'	–	
		19	R-Y	10:05	31° 01'	–	
		20	R		29° 02'	–	

CUT IN 335+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F. B. 1297 Pg. 59
Date ____ Date ____ Survey of Beach Erosion Studies
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by F.H.B. Notes English Date 8-2-51
Date ____ Date ____ Map No. ____ Inked Johnson Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 60 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date Date No.
Survey by EHB Notes Notes Chkd. Checked X-Sec.
Indexed Date Date Date No.

STATION ~~Inst. Sight~~ At	On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks		
344+50 25' Offset Right	340+50 25' Right	1	R-Y	10:20	72° 04'			
		2	R		70° 46'			
		3	Y		69° 02'		(Line-in) 1X2 340+50	
		4	R-Y	10:25	68° 25'			
		5	R		66° 56'			
		6	Y		66° 20'			
		7	R-Y	10:30	62° 54'			
		8	R		59° 52'			Water
		9	Y		59° 03'			
		10	R-Y	10:31	58° 00'	OFFSET	CONTROL	
		11	R		57° 27'			
		12	Y		56° 16'			
		13	R-Y	10:34	55° 25'			
		14	R		54° 13'	(Cut-in) 1X2 344+50	25'	344+50
		15	Y		53° 14'			
		16	R-Y	10:37	48° 42'			
		17	R		44° 59'			
		18	Y		43° 16'			

Cut-in 340+50

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	9:50 0850	30.0 28.8 28.5	29.2	4.0	25.2	
2	R		27.0 27.7	27.5		23.5	
3	Y		26.0 26.4	26.6		22.6	
4	RY	9:53 0853	25.0 24.7	25.5	4.0	21.5	
5	R		23.2 23.6	23.7	4.0	19.7	
6	Y		22.2 21.5	22.7	4.1	18.6	
7	RY	9:55 0855	20.0 22.2	20.5	4.1	16.4	
8	R		21.0 21.0	21.5 ~~21.4~~		17.4 ~~17.3~~	
9	Y		19.5 18.9	20.0		15.9	
10	RY	9:57 0857	16.9 17.2	17.6	4.1	13.5	
11	R		15.9 15.4	16.3		12.2	
12	Y		13.9 13.1	14.4		10.3	
13	RY	10:00 0900	11.9 14.1	12.3	4.1	8.2	
14	R		12.9 15.3	13.3		9.2	
15	Y		13.8 12.9	14.3		10.2	
16	RY	10:04 0904	11.1 11.9	11.7	4.1	7.6	
17	R		10.1 12.8	10.7		6.6	
18	Y		11.1 9.3	11.7		7.6	
19	RY	10:05 0905	8.0 7.8	8.4	4.1	4.3	
20	R	10:06 0906	6.5	6.9	4.1	2.8	

BOAT
335+50

Profile Notes Red. RCW Plotted ____ Job No. 8412 Division No. V F. B. 1297 Pg. 61
No. ____ Date 8-16-51 Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. TM.I Checked ____ Survey by F.H.B. Notes E.R.V. Date 8-3-51
No. ____ Date 8-27-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	10:20 0920	29.9 28.9	29.2	4.2	25.0	
2	R		29.3 27.7	28.2		24.0	
3	Y		27.2 26.5	26.7		22.5	
4	RY	10:25 0925	26.5 25.5	25.8	4.2	21.6	
5	R		25.7 24.3	24.8		20.6	
6	Y		24.3 22.6	23.2		19.0	
7	RY	10:30 0930	22.1 20.9	21.3	4.2	17.1	
8	R		20.2 19.0	19.4		15.2	
9	Y		19.0 18.0	18.3		14.1	
10	RY	10:32 0932	18.2 17.0	17.4	4.2	13.2	
11	R		19.9 18.9	19.2		15.0	
12	Y		18.8 17.8	18.1		13.9	
13	RY	10:34 0934	17.8 16.0	16.6	4.3	12.3	
14	R		17.1 15.0	15.7		11.4	
15	Y		15.5 13.9	14.4		10.1	
16	RY	10:37 0937	13.7 12.5	12.9	4.3	8.6	
17	R		12.2 11.0	11.4		7.1	
18	Y	10:40 0940	11.0 10.0	10.3	4.3	6.0	BOAT 340+50
19	RY						
20	R						

F. B. 1297 PG. 62

Job No. 8412 Division No. V Notes Red. LCW Plotted ____ Profile ____

Survey of Beach Erosion Studies Date 8-16-51 Date ____ No. ____

Survey by E.H.B. Notes Vallnagle Notes Chkd T.M.I. Checked ____ X-Sec. ____

Indexed C. Johnson Date 8-3-51 Date 8-27-50 Date ____ No. ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
					FB 1236-245	
344+50	7.8	6.7		8.93	1X2 on 25' RT.	OFFSET
			7.2	9.5	Sand " "	SHORE ∡ 90°
			5.6	11.1	45 "	BRK on Beach
			5.8	10.9	63 "	
			5.3	11.4	94 "	
TRANS. ON			5.7	11.0	99	BRK
348+50±			3.8	12.9	109	TOE BRK
			1.2	15.5	116	TOP BRK
			0.9	15.8	129	TOE BLUFF
T.P.	0.0	6.3	10.4	6.30	1X2 on Base LINE (Calc. 21')	
3°-04'			1.6	4.7	TAPE 21 Left	Beach
9°-25'			3.6	2.7	TAPE 66 " Calc.	Water
12°-32'			4.2	2.1	89 Calc LT.	BRK
17°-13'			5.9	0.4	124 " "	Ocean FLOOR
20°-39'			7.0	-0.7	151 " "	" "
24°-19'			8.0	-1.7	181 " "	" "
26°-57'			8.7	-2.4	203 " "	" "
29°-21'			10.5	-4.2	225 " "	" "
32°-17'			10.8	-4.5	253 " "	" "
36°-21'			13.2	-6.9	294 " "	" "

SHORE 344+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ 69 F.B. 297 Pg. 63
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. T.M.J. Checked ____ Survey by C.K.C. Notes C.K.C. Date 8-6-51
Date 8-27-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

9.6
47
4.9

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
348+50	-015	-7.955	-7	9 70	F.B. 1296 - 245 BT. SPK. IN ROCK. 25'	SHORE ∠ 90° RT. OFFSET. TOE BLUF
			12	8 4	13'	" TOP ROCK
TRANS. ON			31	6 5	9'	"
344+50-25' OFFSET			34	6 2	0 10	BASE LINE -
			33	6 3	13' LT.	TOP ROCK
			50	4 6	15'	BASE "
12°-38' T.P.	23	4.7	72	2 4	T.P. TAPE 65 (calc 65) "	Water
17°-19'			40	0 7	100' Calc "	BRK
20°-18'			47	0 [illegible]	123' "	OCEAN FLOOR.
22°-44'			56	-0 9	143' "	" "
24°-23'			60	-1 3	156' "	" "
27°-22'			70	-2 3	182' "	" "
29°-44'		4.2	82	-3 5	203' "	" "
32°-20'		5.9	99	-5 2	228' "	" "
35°-03'		7.1	111	-6 4	256' "	" "
37°-30'		6.3	103	-5 6	282' "	" "
40°-17'		8.5	125	-7 8	314' "	" "
41°-50'		8.2	122	-7 5	333'	
45°-23'		7.8	118	-7 1	380'	

25' WAS SUBTRACTED FROM CALC. DIST.

SHORE 348+50

F.B. 1297 PG. 64 70 Job No. 8412 Division No. Notes Red. Plotted No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date No. X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.I. Checked
Indexed A. C. Johnson Date 8-6-51 Date 8-27-57 Date No.

FORM 307 10M 10-48

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8412 Division No. Y
X-Sec. No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
Notes Chkd. ____ Checked ____ Survey by F.H.B. Notes M.S. Date 8-6-51
Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

F.B. 727 Pg. 85

STATION	B. S.	H. I.	F. S.	ELEV.			
Inst. At	Sight On	#	Color	Time	Hor. Ang.		Remarks
344+50	348+50	1	R-Y	7:51	90° 02		
		2	R		90° 17		
		3	Y		90° 19		
		4	R-Y	7:54	90° 00		
		5	R		90° 29		
		6	Y		90° 16		
		7	R-Y	7:56	90° 10		
		8	R		89° 57		
		9	Y		89° 57		
		10	R-Y	8:05	90° 05		
		11	R		90° 05		
		12	Y		89° 39		
		13	R-Y	8:10	89° 39		
		14	R		89° 23		
		15	Y		89 18		
		16	R-Y	8:12	89 11		
		17	R	8:13	89 41		
		18	Y				
		19	R-Y				
		20	R				

RANGE
344+50

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
348+50	344+50	1	R-Y	8:23	90°50		
		2	R		90°09		
		3	Y		90°09		
		4	R-Y	8:25	90°34		
		5	R		90°08		
		6	Y		90°36		
		7	R-Y	8:29	90°12		
		8	R		90°26		
		9	Y		91°04		
		10	R-Y	8:33	89°18		
		11	R		90°22		
		12	Y		89°38		
		13	R-Y	8:10	89°45		
		14	R		89°[illegible]		
		15	Y		89°24		
		16	R-Y	8:43	89°09		
		17	R		90°13		
		18	Y		89°22		
		19	R-Y	8:46	90°06		
		20	R				

RANGE 348+50

F.B. 1297 PG. 66

Job No. 8412 Division No. V Notes Red Plotted Profile

Survey of Beach Erosion Date 8-6-51 Date No.

Survey by THB Notes MS Notes Chkd Checked X-Sec.

Indexed A. C. Johnson Date Date Date No.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
348+50	344+50	1	R&Y	7:51	70°25'		
		2	R		69°12'		
		3	Y		68°33'		
		4	R&Y	7:54	67°57'		
		5	R		66°37'		
		6	Y		65°53'		
		7	R&Y	7:57	64°07'		
		8	R		62°02'		
		9	Y		60°25'		
		10	R&Y	8:05	57°57'		
		11	R		56°53'		
		12	Y		52°40'		
		13	R&Y	8:11	45°34'		
		14	R		41°16'		
		15	Y		35°50'		
		16	R&Y	8:13	34°43'		
		17	R	8:14	31°00'		
		18	Y				
		19	R&Y				
		20	R				

CUTIN
344+50

Profile Notes Red. ____ Plotted ____ Job No. B412 Division No. ✓ F. B. 1297 Pg. 67
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by FHB. Notes MN. Date 8-6-51
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 4-50

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. Sight At	On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
344+50	348+50	1	R&Y	8:23	71°28'	
		2	R		70°15'	
		3	Y		69°42'	
		4	R&Y	8:26	69°18'	
		5	R		68°07'	
		6	Y		66°15'	
		7	R&Y	8:30	66°22'	
		8	R		64°12'	
		9	Y		62°10'	
		10	R&Y	8:33	60°50'	
		11	R		56°33'	
		12	Y		55°15'	
		13	R&Y	8:41	50°36'	
		14	R		48°40'	
		15	Y		46°25'	
		16	R&Y	8:43	44°06'	
		17	R		40°18'	
		18	Y		35°28'	
		19	R&Y	8:46	32°20'	
		20	R			

CUT IN 348+50

F. B. 1297 Pg. 68 Job No. 8412 Division No. 9 Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-6-51 Date No.
Survey by F.H.B. Notes M.N. Notes Chkd. Checked X-Sec.
Indexed R. C. Johnson Date Date Date No.

76L298 307 4-50

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 344+50 | B. S. | H. I. | F. S. | ELEV.

#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
			26 8				
1	RY	7 51 0651	25 8	26.1	1.6	24.5	
			25 8				
2	R		24 8	25.1		23.5	
			25 0				
3	Y		23 5	24.0		22.4	
			24 3				
4	RY	7 53 0653	22 7	23.2	1.7	21.5	
			22 8				
5	R		21 5	21.9		20.2	
			21 7				
6	Y		20 5	20.9		19.2	
			19 9				
7	RY	7 56 0656	18 9	19.2	1.7	17.5	
			18 1				
8	R		17 1	17.4		15.7	
			17 1				
9	Y		16 0	16.4		14.7	
			15 0				
10	RY	8 05 0705	14 0	14.3	1.8	12.5	
			14 5				
11	R		13 0	13.5		11.7	
			13 1				
12	Y		11 9	12.3		10.5	
			12 3				
13	RY	8 10 0710	10 9	11.4		9.6	
			11 5				
14	R		9 9	10.4	1.9	8.5	
			10 1				
15	Y		8 9	9.3		7.4	
			8 4				
16	RY	8 13 0713	7 3	7.7	1.9	5.8	
			7 3				
17	R	8 14 0714	6 1	6.5	1.9	4.6	

BOAT
344+50

Profile Notes Red LEW Plotted Job No. 8412 Division No. F.B. 1297 Pg. 69
No. Date 8-16-51 Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. T.H.I. Checked Survey by F.H.B. Notes C.B.S. Date 8-6-51
No. Date 8-27-51 Date Map No. Indexed G. Johnson Date

76L298 307 4-50

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

348+50

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	8 23 0723	271 261	26.4	2.1	24.3	
2	R		263 249	25.4		23.3	
3	Y		251 239	24.3		22.2	
4	RY	8 25 0725	240 228	23.2	2.2	21.0	
5	R		220 210	21.3		19.1	
6	Y		208 191	19.7		17.5	
7	RY	8 29 0729	218 201	20.7	2.3	18.4	
8	R		193 183	18.6		16.3	
9	Y		181 171	17.4		15.1	
10	RY	8 33 0733	177 160	16.6	2.3	14.3	
11	R		153 140	14.4		12.1	
12	Y		141 129	13.3		11.0	
13	RY	8 40 0740	153 141	14.5	2.4	12.1	
14	R		141 131	13.4		11.0	
15	Y		113 98	10.3		7.9	
16	RY	8 43 0743	96 85	8.9	2.4	6.5	
17	R		100 90	9.3	2.4	6.9	
18	Y		100 90	9.3	2.5	6.8	
19	RY	8 46 0746	90 80	8.3	2.5	5.8	

BOAT 348+50

F. B. 1297 Pg. 70 Job No. 8412 Division No. Notes Red. Lcur Plotted Profile
Survey of Beach Erosion Studies Date 8-16-51 Date No.
Survey by F.H.B. Notes C.B.S. Notes Chkd. T.M.I. Checked X-Sec.
Indexed K. C. Johnson Date 8-6-51 Date 8-27-51 Date No.

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK. WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
					FB.1296-245	SHORE ∡ 90°
350+50	67	12.9		6.20	1x2 IN Hole on Base Line	11.57
" "			49	8.0	Sand "	1.3
(TRANS ON 353+50')			29	10.0	36' RT.	Base of CLIFF 12.9
∡s			74	5.5	35' LT	6.2
8°-24'			82	4.7	TAPE 45 " (Calc 44')	6.7
13°-25' T.P.	2.6	5.8	97	3.2	T.P. 73 " (Calc 72)	Water
22°-30'			54	0.4	121' Calc "	BRK.
27°-05'			54	0.4	153' " " "	OCEAN FLOOR
29°-02'			65	-0.7	167' " " "	" "
32°-42'			76	-1.8	193' " "	
37°-26'			10[illegible]	-5[illegible]	230' " "	
41°-19'			112	-5.4	264' " " "	
48°-52'			122	-6.4	344' " "	
53°-26'		10.3	143	-8.5	404' " "	
56°-41'		11.2	152	-9.4	456' " "	" "
51°-25'		10.2	142	-8.4	376' " "	
49°-12'		9.0	130	-7.2	347' " "	

SHORE
350+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 71 PG. 71
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. TM.1 Checked ____ Survey by C.V.C. Notes C.V.C. Date 8-6-57
Date 8-27-57 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

7.4
47
14.62.7

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
353+50	60	176			✓ F.B. 1296-245	
					1 X 2 on Base Line	SHORE ∡ 90°
			57	11.9	✓ sand.	
			26	13.3	✓ 13' RT	BRK
			15	16	✓ 17' "	TOP Bank
(TRANS. ON 349+50)			03	17	✓ 35 "	Toe SLOPE
			91		✓ 29' LT	Beach
∡s T.P.	13	7.4	115	6.1	✓ T.P. 50 "	
9°-33' ✓			27	4.2	✓ TAPE 68 (Calc. 67'3) "	Water
16°-47' ✓			59	15	✓ 121 Calc. "	BRK
21°-45' ✓			74	0.3	✓ 160' " "	Ocean Floor
25°-16' ✓			84	—	✓ 189' " "	" "
27°-13' ✓		5.0	95	—	✓ 206' " "	" "
32°-01' ✓		8.0	12	—	✓ 250' " "	
37°-44' ✓		8.2	12	—	✓ 310' ✓	" "
40°-09' ✓		9.1	13	—	✓ 337' " "	
42°-29' ✓		10.5	14 5	— 7	✓ 366' "	" "
45°-32' ✓		11.4	15 4	— 8	✓ 408' "	" "

SHORE 353+50

F.B. PG. 72 72 Job No. 8412 Division No. Notes Red. Plotted Date No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.I. Checked Date No.
Indexed R. C. Johnson Date 8-18-51 Date 8-27-51

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
350+50	353+50	1	R-Y	9 00	90° 14 ✓	
		2	R		90° 12 ✓	
		3	Y		89° 27 ✓	
		4	R-Y	9 06	90° 18 ✓	
		5	R		90° 06 ✓	
		6	Y		89° 48 ✓	
		7	R-Y	9:09	90° 30 ✓	
		8	R		90° 27 ✓	
		9	Y		89° 41 ✓	
		10	R-Y	9:13	90° 24 ✓	
		11	R		90° 06 ✓	
		12	Y		90° 06 ✓	
		13	R-Y	9:16	90° 16 ✓	
		14	R		90° 16 ✓	
		15	Y		89° 45 ✓	
		16	R-Y	9 19	89° 36 ✓	
		17	R		89° 36 ✓	
		18	Y		89° 43 ✓	
		19	R-Y	9 25	89° 43 ✓	
		20	R		90° 01 ✓	

RANGE
350+50

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Date ____
X-Sec. ____ Notes Chkd ____ Checked ____ Date ____
No. ____ Date ____ Job No. 8412 Division No. V
Survey of BEACH EROSION STUDIES
Survey by F.H.B. Notes M.S. Date 8-6-51
Map No. ____ Indexed Johnson Date ____

F.B. 429 Pg. 73

F.B. 1297 PG. 74

Job No. 8412 Division No. V Notes Red. — Plotted _____ Profile

Survey of BEACH EROSION STUDIES Date 8-6-51 Date _____ No. _____

Survey by F. H. B. Notes M. S. Notes Chkd. _____ Checked _____ X-Sec.

Indexed A. C. Johnson Date _____ Date _____ Date _____ No. _____

RANGE
350+50

STATION	B.S.	H.I.	F.S.	ELEV.	
Inst. Sight At On	#	Color	Time	Hor. Ang.	Remarks
350+50 (cont'd) 353+50	21	Y		90.01	
	22	R-Y	9:27	89.46	
	23	R	9:29	89.46	

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

761.298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On	#	Color	Time	Hor. Ang.	Remarks	
353+50 350+50	1	R&Y	9:01	77°36'		
	2	R		77°00'		
	3	Y		77°19'		
	4	R&Y	9:07	76°02'		
	5	R		75°59'		
	6	Y		75°48'		
	7	R&Y	9:10	74°30'		
	8	R		74°00'		
	9	Y		74°39'		
	10	R&Y	9:14	73°30'		
	11	R		72°48'		
	12	Y		71°25'		
	13	R&Y	9:17	69°35'		
	14	R		67°38'		
	15	Y		67°12'		
	16	R&Y	9:20	66°25'		
	17	R		64°34'		
	18	Y		61°27'		
	19	R&Y	9:25	57°57'		
	20	R		56°30'		

CUT IN
350+50

Profile Notes Red Plotted Job No. 8412 Division No. 1 F. B. 1297
No. Date Date Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. Checked Survey by F.H.B. Notes N.H. Date 8-4
No. Date Date Map No. Date Johnson Date

F.B. 1297 Pg. 76 Job No. 8412 Division No. ✓ Notes Red. Plotted Profile

Survey of BEACH EROSION STUDIES Date 8-6-51 Date No.

Survey by E.H.B. Notes M.N. Notes Chkd. Checked X-Sec.

Indexed A. C. Johnson Date Date Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B.S.	H.I.	F.S.	ELEV.		
Inst. Sight At On	#	Color	Time	Hor. Ang.		Remarks
353+50 350+50	21	Y		54°37'		
	22	R&Y	9:28	50°51'		
	23	R	9:30	47°39'		

CUT IN
350 + 50

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 350+50		B. S.	H. I.	F. S.	ELEV.			
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks	
1	RY	9.01 0801	29.0 28.0	28.3	2.8	25.5		
2	R		27.0 26.8	26.9		24.1		
3	Y		25.5 24.5	24.8		22.0		
4	RY	1.06 0806	24.1 23.0	23.4	2.8	20.6		
5	R		[illegible]	26.0		23.2		
6	Y		[illegible]	23.3		20.5		
7	RY	9.09 0809	25.1 24.0	24.4	2.9	21.5		
8	R		23.0 22.0	22.3		19.4		
9	Y		18.5 21.0	19.0		16.1		
10	RY	9.14 0814	17.5 18.7	20.0	3.0	17.0		
11	R		17.1 17.1	17.4		14.4		
12	Y		16.1 16.3	16.4		13.4		
13	RY	9.17 0817	15.1 15.1	15.5	3.0	12.5		
14	R		14.0 14.2	14.4		11.4		
15	Y		12.2 15.0	12.9		9.9		
16	RY	9.19 0819	13.9 15.0	14.3	3.0	11.3		
17	R		12.9 16.2	13.6	3.0	10.6		
18	Y		14.7 15.5	15.2	3.1	12.1		
19	RY	9.25 0825	14.5 13.0	14.8	3.1	11.7		
	R		12.0	12.3		9.2		

BOAT 350+50

Profile No. ____ Notes Red. Rowe Plotted ____ Date 8-16-51 Job No. 8412 Division No. ____ Survey of Beach Erosion Studies

X-Sec. No. ____ Notes Chkd. T.M.I Checked ____ Date ____ Survey by F.H.B. Notes Sutter Date 8-6-51 Map No. ____ Indexed C. Johnson Date ____

F.B. 1297 Pg. 77

F. B. 1297 Pg. 78 | Job No. 8412 | Division No. | Notes Red. LCW. | Plotted | Profile

Survey of Beach Erosion Studies | Date 8-16-51 | Date | No.

Survey by [illegible] | Notes Cutter | Notes Chkd. T.M.I. | Checked | X-Sec.

Indexed A. C. Johnson | Date 8-6-51 | Date 8-28-51 | Date | No.

BOAT
350+50

STATION 350	B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Ht. Tide	Adj. Depth	Remarks
21	Y	921	12.1	11.4	3.2	8.2	
22	RY	0827	11.0	10.3		7.1	
23	R	929	10.0	8.5	3.2	5.3	
		0829	9.2				

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

76L298 307 5-49

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
356+50	3.0	21.8		188.2	FB 1296-245 1X2 ON BASE LINE	(SHORE ∡ 101+00' SIGHT ON Z-21)
			26	19.2	28' RT.	TOE SL.
			0.0	21.8	35 "	TOP Bank (RD)
			3.1	18.7	7 LT	TOP "
			5.4	16.4	14 "	BRK
			5.2	16.6	18 "	"
(TRANS. ON 359+50 ∡s)			7.8	14.0	26	TOE SL.
			8.3	13.5	47 "	Beach
			10.4	11.4	70 "	"
T.P.	1.2	11.2	11.8	10.0	T.P. 83 "	"
23°-59' T.P.	2.6	7.5	6.3	4.9	T.P. 126 (125.1' calc)	Water
32°-58'			5.6	1.9	176' "	BRK.
37°-34'			6.7	0.8	204' "	OCEAN FLOOR
40°-47'			7.7	-0.2	226' "	" "
44°-25'		4.7	8.7	-1.2	252' "	
50°-03'		7.7	11.7	-4.2	296'	
52°-35'		6.2	10.2	-2.7	319'	
56°-21'		8.2	12.2	-4.7	355'	
59°-35'		10.6	14.6	-7.1	390'	
65°-27'		9.0	13.0	-5.5	471'	

Calc. in office @ ∡ Not 90°

SHORE 356+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 84.2 Division No. ____ F.B. 1297 Pg. 79
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
Notes Chkd. TM.L. Checked ____ Survey by S.V.C. Notes S.V.C. Date 8-6-51
Date 8-28-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING B
Do not ex

Date 8-29-49

15.5
47
10.8

STATION	B. S.	H. I.	F. S.				
359+50	50	15.5					SHORE ∡ 90°
TRANS. ON 362+50 - 50' OFFSET			4.7				
			3[illegible]			23' RT	BEACH
			2[illegible]	[illegible]	✓	52 "	TOE BLUFF
			5.1	[illegible]	✓	6' LT	BRK BEACH
∡			7.5	8	✓	21'	"
19°-00 - T.P.	30	8.3	10.8	[illegible]	✓ T.P.	TAPE 53.5 "	(Calc 53') [illegible]
25°-18'			6.2	[illegible]	✓	92' Calc "	[illegible]
30°-06'			7.0	[illegible]	✓	124' " "	" "
33°-00'		4.0	[illegible]	+0	✓	145' " "	"
36°-28'		5.2	9.2	-0.[illegible]	✓	172' " "	" "
39°-48'		6.6	10.6	-2.[illegible]	✓	200' " "	"
45°-46'		8.7	12.7	-4.[illegible]	✓	258' " "	"
49°-25'		9.0	13.[illegible]	-4.[illegible]	✓	300' " "	" "
52°-21'		10.0	14.[illegible]	-5.[illegible]	✓	339' " "	" "
56°-42'		9.1	13.[illegible]	-4.[illegible]	✓	407' " "	" "

50' WAS SUBTRACTED FROM CALC. DIST.

SHORE 359+50

F.B. PG. 80 Job No. 8412 Division No. Notes Red. Plotted No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.L. Checked No.
Indexed A. C. Johnson Date 8-6-51 Date 8-28-51 Date

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.			Remarks
Inst. At	Sight On	#	Color	Time	Hor. Ang.		
353+50	350+50	1	R-Y	9:37.5	89°57		
		2	R		90°00		
		3	Y		90°35		
		4	R-Y	9:41	90°01	omit overlap	
		5	R		89°12		
		6	Y		90°03		
		7	R-Y	9:46	89°51		
		8	R		89°49		
		9	Y		89°14	out	
		10	R-Y	9:49	89°55		
		11	R		90°39		
		12	Y		89°36		
		13	R-Y	9:52	89°36		
		14	R		89°36		
		15	Y		89°47		
		16	R-Y	9:55.5	89°47		
		17	R		90°22		
		18	Y		89°45		
		19	R-Y	9:58	88°42		
		20	R	9:59	89°47		

RANGE
353+50

Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. Y
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.H.B. Notes M.S. Date ____
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

F.B. 1297 Pg. 81

FORM 307 10M 10-46

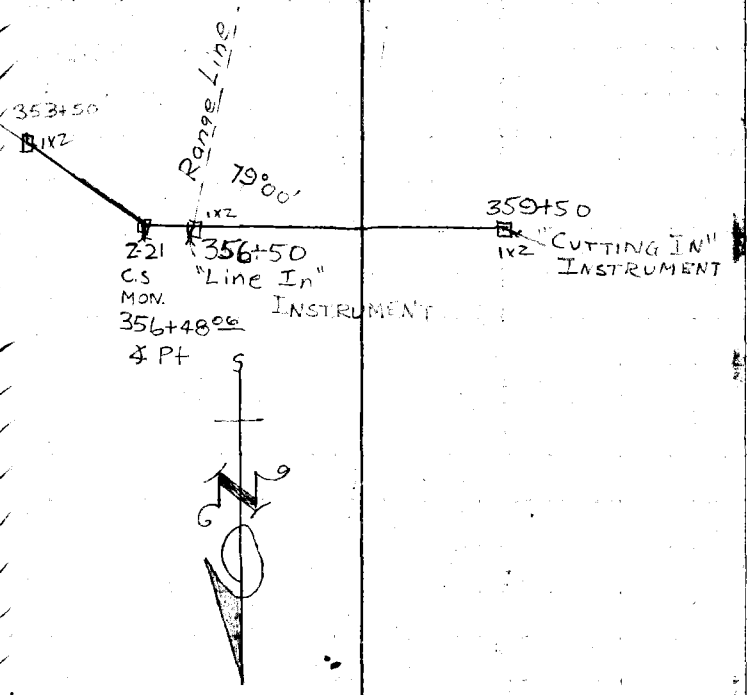
PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.	
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
356+50	359+50	1	R-Y	10 19	79°21	✓
		2	R		79°26	✓
		3	Y		79°26	✓
		4	R-Y	10:24	79°26	✓
		5	R		79°13	✓
		6	Y		79°13	✓
		7	R-Y	10 26	79°13	✓
		8	R		79°19	✓
		9	Y		79 00	✓
		10	R-Y	10 29	79°20	✓
		11	R		79°20	✓
		12	Y		79°18	✓
		13	R-Y	10 32	79°18	✓
		14	R		80°03	✓
		15	Y		79°18	✓
		16	R-Y	10°35	79°31	✓
		17	R		79°18	✓
		18	Y		79°24	✓
		19	R-Y	10 38	78°45	✓
		20	R		78°35	✓

RANGE 356+50



F.B. 77 PG. 82 | Job No. 8412 | Division No. V | Notes Red | Plotted | Profile
Survey of BEACH EROSION STUDIES | Date 8-6-51 | Date | No.
Survey by F.H.B. | Notes M.S. | Notes Chkd | Checked | X-Sec.
Indexed C. Johnson | Date | Date | Date | No.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On	#	Color	Time	Hor. Ang.	Remarks	
350+50 353+50	1	R&Y	9:38	78°04'		
	2	R		77°35'		
	3	Y		76°10'		
	4	R&Y	9:41	76°33'		
	5	R		76°43'		
	6	Y		75°20'		
	7	R&Y	9:46	74°19'		
	8	R		73°25'		
	9	Y		73°05'		
	10	R&Y	9:49	69°40'		
	11	R		67°25'		
	12	Y		66°30'		
	13	R&Y	9:52	65°00'		
	14	R		63°14'		
	15	Y		61°28'		
	16	R&Y	9:56	58°46'		
	17	R		55°40'		
	18	Y		52°02'		
	19	R&Y	9:58	49°06'		
	20	R	9:59	45°35'		

CUT IN
353+50

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. 1 (4) F.B. 1297 Pg. 83
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
Z-Sec. Notes Chkd. ____ Checked ____ Survey by EH.B. Notes M.N. Date 8-6-51
No. ____ Date ____ Date ____ Map No. ____ Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. Sight At	STATION Inst. Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
359+50	356+50	1	R-Y	10:20	88° 51'	
		2	R		88° 23'	
		3	Y		88° 06'	
		4	R-Y	10:24	87° 39'	
		5	R		87° 35'	
		6	Y		87° 04'	
		7	R-Y	10:26	86° 51'	
		8	R		86° 14'	
		9	Y		85° 26'	
		10	R-Y	10:29	84° 20'	
		11	R		83° 40'	
		12	Y		81° 33'	
		13	R-Y	10:33	80° 13'	
		14	R		78° 49'	
		15	Y		78° 30'	
		16	R-Y	10:35	78° 21'	
		17	R		76° 22'	
		18	Y		72° 06'	
		19	R-Y	10:38	72° 40'	
		20	R		71° 45'	

Cut in ~~359+50~~ 356+50

F. S. 1297 Pg. 84 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date Date No. X-Sec.
Survey by F.H.B. Notes English Notes Chkd. Checked
Indexed R. C. Johnson Date Date Date No.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 353+50		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	938 0838	278 278	28.1	3.3	24.8	overlap out.
2	R		280 165	27.0		23.7	
3	Y		271 253	25.9		22.6	
4	RY	941 0841	254 238	24.3	3.4	20.9	
5	R		240 225	23.0		19.6	
6	Y		225 210	21.5		18.1	
7	RY	945 0845	209 193	19.8	3.5	16.3	
8	R		183 175	17.8		14.3	
9	Y		176 162	16.7		13.2	
10	RY	949 0849	190 175	18.0	3.5	14.5	
11	R		180 165	17.0		13.5	
12	Y		190 175	18.0		14.5	
13	RY	952 0852	165 155	15.8	3.6	12.2	
14	R		155 145	14.8		11.2	
15	Y		143 135	13.8		10.2	
16	RY	956 0856	135 120	12.5	3.6	8.9	
17	R		112 108	10.9		7.3	
18	Y		112 98	10.3		6.7	
19	RY	958 0858	102 88	9.3	3.7	5.6	
20	R	959 0859	87 75	7.9	3.7	4.2	

BOAT
353+50

Profile Notes Red. Lew Plotted ____ Job No. 8412 Division No. ____ F. B. 1297 Pg. 85
No. ____ Date 8-16-51 Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. T.M.L. Checked ____ Survey by F.H.B. Notes Sutter Date 8-6-51
No. ____ Date 8-28-51 Date ____ Map No. ____ Indexed C. Johnson Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

356+50

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	1020 0920	300 288 281	29.2	4.0	25.2	
2	R		271 267	27.4		23.4	
3	Y		253 300	25.8		21.8	
4	RY	1024 0924	285 287	29.0	4.1	24.9	
5	R		272 250	27.7		23.6	
6	Y		235 230	24.0		19.9	
7	RY	1026 0926	225 225	22.7	4.1	18.6	
8	R		210 213	21.5	4.1	17.4	
9	Y		200 200	20.4	4.2	16.2	
10	RY	1029 0929	185 184	19.0	4.2	14.8	
11	R		168 169	17.3		13.1	
12	Y		155 159	16.0		11.8	
13	RY	1033 0933	145 175	15.0	4.2	10.8	
14	R		160 183	16.5	4.2	12.3	
15	Y		170 190	17.4	4.3	13.1	
16	RY	1035 0935	180 168	18.4	4.3	14.1	
17	R		155	15.8		11.5	
18	Y		140 137	14.5		10.2	
19	RY	1038 0938	128	13.1	4.3	8.8	
20	R		[illegible]	12.3		8.0	

BOAT 356+50

additional shots 21

F. B. 1297 Pg. 86 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date 8-16-51 Date No.
Survey by F.H.B. Notes Sutter Notes Chkd. T.M.I. Checked X-Sec.
Indexed C. Johnson Date 8-6-51 Date 8-29-51 Date No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
356+50	359+50	21	Y		78° 44 ✓	
(Cont'd.)		22	R-Y	10:41	78° 52 ✓	
		23	R		78° 56 ✓	
		24	Y		78° 56 ✓	
		25	R-Y	10:44	78° 47 ✓	
		26	R	10:45	78° 59	

RANGE
356+50

Profile No. ____ Notes Red ____ Plotted ____ Job No. 8412 Division No. V F.B. 1297 Pg. 87
Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. No. ____ Notes Chkd ____ Checked ____ Survey by T.H.B. Notes M.S. Date 8-6-51
Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
359+50	356+50	1	R-Y	10:56	89 57		
		2	R		89 36		
		3	Y		90 54		
		4	R-Y	10:59	89 54		
		5	R		89 27	omit	
		6	Y		90 04	overlap	
		7	R-Y	11:05	89 [illegible]		
		8	R		89°51	✓	
		9	Y		89°51	✓	
		10	R-Y	11:09	[illegible]	✓	
		11	R		89°36	✓	
		12	Y		90°16	✓	
		13	R-Y	11:15	89°36	✓	
		14	R		89°21	✓	
		15	Y		90°44	✓	
		16	R-Y	11:23	88°10	✓	
		17	R		89°56	✓	
		18	Y		88°58	✓	
		19	R-Y	11:26	89°33	✓	
		20	R		89°46	✓	

RANGE 359+50

F.B. 1247 PG. 88 Job No. 8412 Division No. V Notes Red Plotted No. Profile
Survey of BEACH EROSION STUDIES Date 8-6-51 Date X-Sec.
Survey by F.H.B. Notes M.S. Notes Chkd Checked No.
Indexed A. C. Johnson Date Date Date

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
359+00	356+00	21	Y		68° 06'		
		22	R-Y	10:41	66° 09'		
		23	R		65° 15'		
		24	Y		60° 51'		
		25	R-Y	10:44	57° 58'		
		26	R	10:45	54° 40'		

CUT IN.
356+50

Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. ____ F.S. 1797 Pg. [illegible]
No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
N. Sec. Notes Chkd. ____ Checked ____ Survey by F.H.B. Notes English Date 8-6-56
No. ____ Date ____ Date ____ Map No. ____ Index Tolerance Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At	On	#	Color	Time	Hor. Ang.	Remarks	
356+00	359+00	1	R-Y	10:56	78° 19'		
		2	R		77° 38'		
		3	Y		76° 41'		
		4	R-Y	10:59	77° 25'		
		5	R		77° 20'		
		6	Y		76° 12'		
		7	R-Y	11:05	76° 29'		
		8	R		75° 36'		
		9	Y		75° 21'		
		10	R-Y	11:09	74° 47'		
		11	R		73° 53'		
		12	Y		72° 21'		
		13	R-Y	11:15	71° 55'		
		14	R		70° 32'		
		15	Y		66° 04'		
		16	R-Y	11:24	64° 25'		
		17	R		60° 07'		
		18	Y		59° 00'		
		19	R-Y	11:27	58° 03'		
		20	R		56° 22'		

CUT IN 359+50

F.B. 1297 Pg. 90 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date 8-6-51 Date No.
Survey by E.H.B. Notes English Notes Chkd. Checked X-Sec.
Indexed R. C. Johnson Date Date No.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

From B6

Do not extend notes this side of this line.

STATION 356+50		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom Tide		Adj. Depth	Remarks
21	Y		12 2 10 8	11.3	4.3	7.0 ~~6.9~~	
22	RY	10 41 0941	10 3 9 2	9.6	4.4	5.2	
23	R		9 3 8 0	8.4		4.0	
24	Y		13 2 12 2	12.5 ~~12.4~~		8.1 ~~8.0~~	
25	RY	10 44 0944	11 6 9 8	10.4	4.4	6.0	
26	R	10 45 0945	9 4 8 0	8.5	4.4	4.1	

BOAT
356+50

Profile Notes Red PAUL Plotted ____ Job No. 8412 Division No. ____ F. B. 1297 Pg. 91
No. ____ Date 8-16-51 Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. TM.I Checked ____ Survey by E.H.B. Notes Sutter Date 8-6-51
No. ____ Date 8-28-51 Date ____ Map No. ____ Indexed ____ Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 359+50		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	1056 0956	30.6 29.8	30.1	4.5	25.6	Overlap out
2	R		30.3 28.8	29.3		24.8	
3	Y		29.3 27.8	28.3		23.8	
4	RY	1059 0959	28.5 26.8	27.4	4.6	22.8	
5	R		27.3 25.5	26.1		21.5	
6	Y		26.5 24.5	25.2		20.6	
7	RY	1105 1005	25.0 23.5	24.0	4.6	19.4	
8	R		23.9 22.3	22.8		18.2	
9	Y		22.5 21.0	21.5		16.9	
10	RY	1109 1009	21.3 [illegible]	20.3	4.6	15.7	
11	R		20.3 18.8	19.3	4.6	14.7	
12	Y		18.5 17.8	18.0	4.7	13.3	
13	RY	1116 1016	18.3 16.8	17.3	4.7	12.6	
14	R		18.3 16.8	17.3		12.6	
15	Y		17.0 15.5	16.0		11.3	
16	RY	1124 1021	14.5 12.5	13.2	4.8	8.4	BOAT 359+50
17	R		14.6 13.5	13.9		9.1	
18	Y		13.6 12.5	12.9		8.1	
19	RY	1127 1027	11.5 10.0	10.5	4.8	5.7	
20	R		10.2 9.0	9.4		4.6	

21 See page 99

Profile No. X-Sec. No.

Notes Red. RWW Plotted Date 8-16-51 Checked Date 8-28-51

Job No. 8412 Division No. Notes Chkd. T.M.I. Date 8-6-51

Survey of Beach Erosion Studies Notes Sutter Date

Survey by F.H.B. Notes Date

Indexed K. C. Johnson

C.B. 1297 Pg. 92

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

120
47
7.3

STATION	B. S.	H. I.	F. S.	ELEV.	FB. 1296-246	
362+50	0.1	12.0		11.92	1X2 ON 50' offset	TOE BLUFF
			08	11.2	sand	SHORE ∡ 95°
TRANS. ON			29	9.1	48 RT	
359+50 ℄			46	7.4	37 "	
			78	4.2	00	BASE LINE
8°-36' T.P.	2.4	3.8	10.6	1.4 T.P.	TAPE 45 LT.	(calc. 45-1) Water
14°-30'			34	0.4	78' calc "	ocean FLOOR
19°-02'			42	-0.4	104' " "	" "
23°-24'			44	-0.6	130' " "	" "
25°-45'			54	-1.6	145' " "	" "
29°-47'			60	-2.2	172' " "	" "
34°-43'			63	-2.5	208' " "	" "
41°-47'			89	-5.1	268' " "	" "
44°-42'			95	-5.7	297' " "	" "

SHORE
362+50

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 93
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
Notes Chkd. T.M.I. Checked ____ Survey by C.V.C. Notes C.V.C. Date 8-7-51
Date 2-14-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK. WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
380+00	5.3	11.8		6.54	1 x 2 IN HOLE	SHORE ∡ 90°
			3.3	8.5	Sand	
			2.2	9.[illegible]	19 RT	Beach
TRANS. ON 385+00 ℄			0.8	[illegible]	44 "	BASE of BLUFF
			4.5	7.3	21. LT	
			7.0	4.[illegible]	44 "	
9°-25' T.P.	2.2	4.9	9.1	[illegible] T.P.	TAPE 83 "	(Calc 83') Water
14°-38'			4.7	0.[illegible]	131' Calc. "	BRK
18°-59'			5.5	-[illegible]	172' " "	Ocean FLOOR.
23°-13'			6.7	-1.[illegible]	214' " "	" "
28°-42'			9.6	-4.7	274' " "	" "
33°-57'			11.2	-6.[illegible]	337' " "	" "

SHORE
380+00

F.B. 1297 PG. 94 76
Job No. 8412 Division No. Notes Red. Plotted No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date No. X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.I. Checked
Indexed A. C. Johnson Date 8-7-51 Date 2-14-51 Date No.

Profile No. _____ Notes Red _____ Plotted _____ Job No. 8412 Division No. V

F.B. 7297 Pg. 95

X-Sec. No. _____ Date _____ Date _____ Survey of BEACH EROSION STUDIES

Notes Chkd. _____ Checked _____ Survey by F.H.B. Notes M.S. Date 8-6-51

R. C. Johnson

Date _____ Date _____ Map No. _____ Indexed _____ Date _____

RANGE
359+50

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

Do not extend notes this side of this line.

STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At On					
359+50	356+50	21	Y	11:29	89 08

FORM 307 10M 10-46

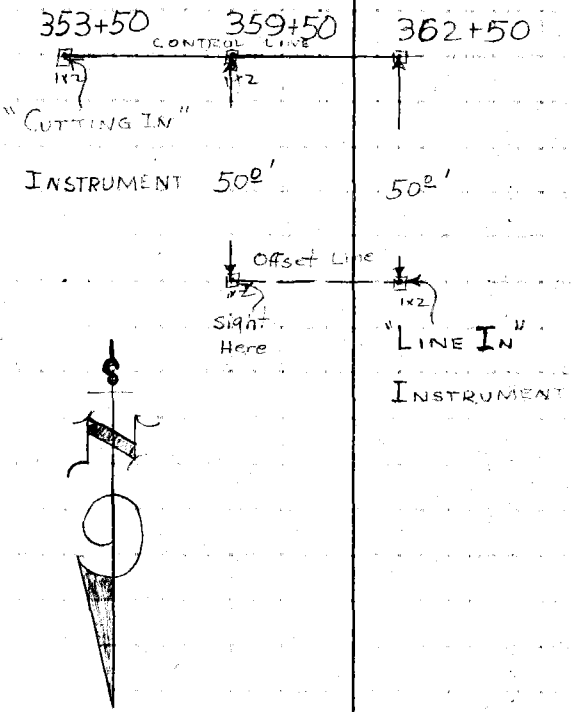
FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	STATION Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
362+50	359+50	1	R-Y	7:52	89°54	✓
50' OFF	50' OFF	2	R		90°39	✓
		3	Y		90°44	✓
		4	R-Y	7:55	90°29	✓
		5	R		89°[illegible]4	✓
		6	Y		90°[illegible]	✓
		7	R-Y	8:00	90°33	✓
		8	R		90°02	✓
		9	Y		90°33	✓
		10	R-Y	8 02⁵	90°09	✓
		11	R		89°[illegible]2	✓
		12	Y		90°08	✓
		13	R-Y	8 06⁵	90°[illegible]	✓
		14	R		89°19	✓
		15	Y		90°45	✓
		16	R-Y	8 11	90°33	✓
		17	R		90°22	✓
		18	Y		90°50	✓
		19	R-Y	8 13⁵	90°50	✓
		20	R		90°19	✓



RANGE 362+50

F.B. 1297 Pg. 96 ① Job No. 8412 Division No. V Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-8-51 Date No.
Survey by F.H.B. Notes M.S. Notes Chkd. Checked X-Sec.
Indexed K. C. Johnson Date Date No.

Profile No. _____ Notes Red _____ Plotted _____ Job No. 8412 Division No. V

F.B. 7297 Pg. 97

X-Sec. No. _____ Date _____ Date _____ Survey of BEACH EROSION STUDIES

Notes Chkd _____ Checked _____ Survey by F.H.B. Notes English Date 8-6-51

Date _____ Date _____ Map No. _____ Indexed C. Johnson Date _____

Cut in
359+50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At	On	# Color		Time Hor. Ang.	
356+50	359+50	21	Y	11:29 52° 17	

FORM 307 10M 10-46

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
356+50	359+00	1	R-Y	7:52	67° 15'		
True Line		2	R		66° 00'		
		3	Y		65° 00'		
		4	R-Y	7:55	64° 33'		
		5	R		63° 47'		
		6	Y		63° 16'		
		7	R-Y	7:59	62° 04'		
		8	R		61° 48'		
		9	Y		60° 04'		
		10	R-Y	8:02	58° 31'		
		11	R		57° 10'		
		12	Y		56° 12'		
		13	R-Y	8:06	52° 35'		
		14	R		52° 49'		
		15	Y		51° 42'		
		16	R-Y	8:10	51° 12'		
		17	R		49° 55'		
		18	Y		48° 0'		
		19	R-Y	8:13	47° 15'		
		20	R		45° 30'		

Cut in 362+50

F.B. 1297 Pg. 98 Job No. 8412 Division No. Notes Red Plotted Profile
Survey of Beach Erosion Studies Date Date No. X-Sec.
Survey by F.H.B. Notes Shure Notes Chkd Checked
Indexed E. C. Johnson Date 8-8-51 Date Date No.

Profile No. _____ Notes Red. RCW Plotted _____ Job No. 8412 Division No. _____ F.B. 1297 PG. 99

Date 8-16-51 Date _____ Survey of Beach Erosion Studies

X-Sec. No. _____ Notes Chkd. T.M.I. Checked _____ Survey by F.H.B. Notes Sutter Date 8-6-51

Date 8-28-51 Date _____ Map No. _____ Indexed Johnson Date _____

BOAT
359+50

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

Do not extend notes this side of this line.

FROM PG 72

STATION #	Color	Time	B.S.	H.I.	Meas. Depth	F.S.	Botton Tide	ELEV.	Adj. Depth	Remarks
21	Y	11.48	10.48	9.0	7.5	8.0	4.9		3.1	

76L298 307 4-50

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

362+50

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	7 53 0653	277 263	26.8	2.0	24.8	
2	R		265 248	25.4		23.4	
3	Y		275 262	26.6		24.6	
4	RY	7 56 0656	270 252	25.8	2.0	23.8	
5	R		239 223	22.8		20.8	
6	Y		225 209	21.4		19.4	
7	RY	8 00 0700	204 194	19.7	2.0	17.7	
8	R		190 175	18.0		16.0	
9	Y		181 165	17.0		15.0	
10	RY	8 03 0703	198 185	18.9	2.0	16.9	
11	R		184 170	17.5		15.5	
12	Y		199 185	19.0		17.0	
13	RY	8 07 0707	190 175	18.0	2.1	15.9	
14	R		188 167	17.4		15.3	
15	Y		171 157	16.2		14.1	
16	RY	8 11 0711	169 147	15.4	2.1	13.3	
17	R		155 137	14.3		12.2	
18	Y		128 117	12.1		10.0	
19	RY	8 14 0714	147 135	13.9	2.1	11.8	
20	R		145 127	13.3		11.2	

BOAT 362+50

See page 105

F. B. 1297 PG. 100
Job No. 8412 Division No.
Survey of Beach Erosion Studies
Survey by F.H.B. Notes Sutter
Indexed H. C. Johnson Date 8-8-51
Notes Red. Lew Date 8-16-51
Notes Chkd. T.M.I. Date 8-28-51
Plotted Date
Checked Date
Profile No.
X-Sec. No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
362+50	359+50	21	Y		90° 35 ✓	
50' off	50' off	22	R-Y	8:16	89° 59 ✓	
		23	R		89° 59 ✓	
		24	Y		90° 14 ✓	
		25	R-Y	8:21	90° 17 ✓	
		26	R		90° 12 ✓	
		27	Y	8 23	90° 24 ✓	

RANGE
362+50

Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. Y
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd ____ Checked ____ Survey by F.H.B. Notes M.S. Date 8-8-51
No. ____ Date ____ Date ____ Map No. ____ Indexed A. C. Johnson Date ____

F.B. 1297 Pg. 101

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
380+00	385+00	1	R-Y	8:48	90°00	✓	
		2	R		90°15	✓	
		3	Y		89°32	✓	
		4	R-Y	8:52	89°32	✓	
		5	R		89°40	✓	
		6	Y		89°45	✓	
		7	R-Y	8 56	89°19	✓	
		8	R		90 34	✓	
		9	Y		89°18	✓	
		10	R-Y	8 59	90°09	✓	
		11	R		90°42	✓	
		12	Y		90°19	✓	
		13	R-Y	9 02⁵	90°30	✓	
		14	R	9 03⁵	90 08	✓	
		15	Y				
		16	R-Y				
		17	R				
		18	Y				
		19	R-Y				
		20	R				

RANGE 380+00

F.B. 4297 PG. 102 (2)

Job No. 8412 Division No. V Notes Red. Plotted No. Profile

Survey of BEACH EROSION STUDIES Date 8-8-51 Date X-Sec.

Survey by F H B Notes M.S. Notes Chkd. Checked No.

Indexed R. C. Johnson Date Date Date

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At	On	#	Color	Time	Hor. Ang.	Remarks	
356+50	359+00	21	Y		43°50'		
True Line		22	R-Y	8:16	42°19'		
		23	R		40°19'		
		24	Y		37°05'		
		25	R-Y	8:20	33°37'		
		26	R		30°20'		
		27	Y	8:23	27°21'		

Profile Notes Plotted Job No. 8412 Division No. F.B. 1297 Pg. 103
No. Date Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. Checked Survey by E.H.B. Notes Shure Date 8-8-61
No. Date Date Map No. Indexed A.C. Johnson Date

CUT IN
8621.50

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
385+00	380+00	1	R-Y	8:48	67° 31'		
True Line		2	R		68° 25'		
		3	Y		64° 10'		
		4	R-Y	8:52	61° 43'		
		5	R		6[illegible]° 25'		
		6	Y		58° 28'		
		7	R-Y	8:55	5[illegible]° 55'		
		8	R		53° 21'		
		9	Y		5[illegible]° 55'		
		10	R-Y	8:58	45° 32'		
		11	R		4[illegible]° 06'		
		12	Y		41° [illegible]5'		
		13	R-Y	9:02	3[illegible]° 03'		
		14	R	9:03	2[illegible]° 37'		

CWT IN 380+00

F. B. 1297 Pg. 102 Job No. 8412 Division No. ____ Notes Red. ____ Plot ____ Profile ____
Survey of Beach Erosion Studies Date ____ Date ____ No. ____
Survey by F.H.B. Notes Shure Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed K. C. Johnson Date 8-8-51 Date ____ Date ____ No. ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

FROM PG 100

Do not extend notes this side of this line.

STATION 362+50		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
21	Y		151 115	12.7	2.2	10.5	
22	RY	817 0717	125 105	11.2	2.2	9.0	
23	R		109 92	9.8		7.6	
24	Y		102 82	8.9 ~~8.8~~		6.7 ~~6.6~~	
25	RY	821 0721	90 71	7.7	2.3	5.4	
26	R		80 62	6.8		4.5	
27	Y	823 0723	90 72	7.8	2.3	5.5	

BOAT
362+50

Profile No. ____ Notes Red. Lewis Plotted ____ Date 8-16-51 Job No. 8412 Division No. ____ Survey of Beach Erosion Studies
X-Sec. No. ____ Notes Chkd. T.M.I. Checked ____ Date 8-28-51 Survey by F.H.B. Notes Sutter Date 8.8.51
Map No. ____ Date ____ Indexed by ____ Date ____

F. B. 1292 Pg. 105

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 106 Job No. 5417 Division No. ____ Notes Red. LCW Plotted ____ Profile ____
Survey of Beach Erosion Studies Date 8-17-51 Date ____ No. ____
Survey by F.H.B. Notes Sutter Notes Chkd. T.M.I. Checked ____ X-Sec. ____
Indexed E. C. Johnson Date 8-8-51 Date 8-28-51 Date ____ No. ____

STATION 380+00 #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	848 0748	284 271	27.5	2.6	24.9	
2	R		269 259	26.2		23.6	
3	Y		245 230	23.5		20.9	
4	RY	852 0752	215 200	20.5		17.9	
5	R		203 188	19.3	2.6	16.7	
6	Y		188 171	17.7		15.1	
7	RY	856 0756	173 158	16.3	2.7	13.6	
8	R		158 138	14.5		11.8	
9	Y		136 120	12.5		9.8	
10	RY	859 0759	123 108	11.3	2.7	8.6	
11	R		110 95	10.0	2.7	7.3	
12	Y		104 88	9.3	2.7	6.6	
13	RY	903 0803	90 70	7.7	2.7	5.0	
14	R	904 0804	83 60	6.8	2.7	4.1	

BOAT 380+00

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F.B. 1296-246

STATION	B. S.	H. I.	F. S.	ELEV.		
385+00	41	153		11 22	1X2 IN Hole on Beach.	
"			37	11 6	sand	SHORE 90°
			20	13 3	13 RT	
TRANS. ON			30	15 3	23 "	TOE BLUFF
380+00 ℄			51	10 2	12 LT	Beach
			69	8 4	26 "	"
∡s			92	6 1	45 "	"
6°-43'			106	4 7	TAPE 59 " (Calc. 59')	
8°-55' T.P.	24	5.6	12.1	3 2	T.P 78 " (Calc. 78)	Water
12°-50'			48	0 8	114' Calc. LT.	BRK
15°-44'			54	3 2	141' Calc. LT.	ocean Floor
17°-46'			63	-0 7	160' " "	" "
21°-12'			71	-1 5	194' " "	" "
24°-04'			82	-2 6	223' " "	" "
27°-03'			11.8	-6 2	255' " "	" "

SHORE 385+00

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 107
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. TM/ Checked ____ Survey by C.V. CRUMLEY Notes C.V.C. Date 8-7-51
Date 2-14-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		SHORE ∡ 90°
390+00	01	29.00		[illegible]	1x2 ON Top Bank - Sly. edge RD.	
			47	[illegible]	9' LT.	BRK.
			72	[illegible]	22 "	"
			105	[illegible]	36 "	"
T.P.	05	185	[illegible]	[illegible]	43 "	Top Bank
			29	[illegible]	47	Bot "
			57	[illegible]	68 "	
(TRANS. ON 385+00 ℄)			85	[illegible]	91' "	Brk on Beach
			95	[illegible]	92 "	" " "
11°-49' T.P.	05	70	120	[illegible] T.P.	TAPE 107 (Calc. 105) "	" "
13°-17'			23	[illegible]	118 Calc. "	
15°-41'			43	[illegible]	140' " "	Water
21°-03'			65	[illegible]	192' " "	Brk
22°-17'			70	[illegible]	205' " "	Ocean Floor.
24°-20'		4.0	80	[illegible]	226' " "	" "
27°-32'		5.1	91	[illegible]	261' " "	" "
30°-49'		7.3	113	[illegible]	298' " "	" "
34°-19'		12.1	161	[illegible]	341' " "	" "

SHORE 390+00

F.B. 1297 BG. 108 78
Job No. 8412 Division No.
Survey of BEACH EROSION STUDIES (ZUMA)
Survey by C.V. CRUMLEY Notes C.V.C.
Indexed A. C. Johnson Date 8-7-51
Notes Red. Date
Notes Chkd. Date
Plotted Date
Checked T.M.I. Date 9-14-51
Profile No.
X-Sec. No.

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
385+00	390+00	1	R-Y	9:16	90°10 -	
		2	R		90°10 -	
		3	Y		90°27 -	
		4	R-Y	9:21	90°27 -	
		5	R		90°00 -	
		6	Y		90°00 -	
		7	R-Y	9 24	89°11 -	
		8	R		89°11 -	
		9	Y		89°37 -	
		10	R-Y	9 28	89°14 -	
		11	R		90°00 -	
		12	Y		90°08 -	
		13	R-Y	9 31	90°08 -	
		14	R		90°25 -	
		15	Y		90°00 -	
		16	R-Y	9 33	89°48 -	
		17	R			
		18	Y			
		19	R-Y			
		20	R			

RANGE
385+00

Profile No. ___ Notes Red ___ Plotted ___ Date ___ Job No. 8412 Division No. V
X-Sec. No. ___ Notes Chkd. ___ Date ___ Checked ___ Date ___ Survey of BEACH EROSION STUDIES
Survey by F.H.B. Notes M.S. Date 8-8-51
Map No. ___ Indexed Johnson Date ___

F.B. 1297 Pg. 109

FORM 307 10M 10-46

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
390+00	395+00	1	R-Y	9 44	90 28	-	
		2	R		90 26	-	
		3	Y		90 23	-	
		4	R-Y	9 48	89 55	-	
		5	R		90 21	-	
		6	Y		89 26	-	
		7	R-Y	9 55	89 19	-	
		8	R		90 34	-	
		9	Y		90 13	-	
		10	R-Y	9 59	89 17	-	
		11	R		89 26	-	
		12	Y		89 52	-	
		13	R-Y	10 03	88 54	-	
		14	R		90 03	-	
		15	Y		89 41	-	
		16	R-Y	10 05	89 25	-	
		17	R		89 38	-	
		18	Y		90 20	-	
		19	R-Y	10 07 5	90 01	-	
		20	R				

RANGE 390+00

F.B. 1297 PG. 110

Job No. 8412 Division No. V Notes Red — Plotted — Profile

Survey of BEACH EROSION STUDIES Date 8-8-51 Date — No. — X-Sec.

Survey by F.H.B. Notes M.S. Notes Chkd — Checked — No.

Indexed C. Johnson Date — Date — Date — No.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.	
Inst. Sight At	On	#	Color	Time	Hor. Ang.	Remarks
390+00	385+00	1	R-Y	9:15	69°27'	
True Line		2	R		69°20'	
		3	Y		67°07'	
		4	R-Y	9:20	65°10'	
		5	R		63°48'	
		6	Y		60°57'	
		7	R-Y	9:24	60°55'	
		8	R		56°12'	
		9	Y		53°22'	
		10	R-Y	9:28	51°15'	
		11	R		47°37'	
		12	Y		40°20'	
		13	R-Y	9:31	35°33'	
		14	R		33°43'	
		15	Y		30°07'	
		16	R-Y	9:33	26°50'	

CUT IN
385+00

Profile Notes Red. _____ Plotted _____ Job No. 8412 Division No. V F. B. 1297 Pg. 111
No. _____ Date _____ Date _____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. _____ Checked _____ Survey by F.H.B. Notes Shure Date 8-8-51
No. _____ Date _____ Date _____ Map No. _____ Indexed Johnson Date _____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
395+00	390+00	1	R-Y	9:43	66° 54'	–	
True Line		2	R		66° 14'	–	
		3	Y		65° 06'	–	
		4	R-Y	9:47	64° 43'	–	
		5	R		63° 37'	–	
		6	Y		61° 28'	–	
		7	R-Y	9:55	57° 20'	–	
		8	R		54° 37'	–	
		9	Y		53° 50'	–	
		10	R-Y	9:59	51° 36'	–	
		11	R		49° 20'	–	
		12	Y		48° 05'	–	
		13	R-Y	10:03	42° 05'	–	
		14	R		38° 56'	–	
		15	Y		37° 20'	–	
		16	R-Y	10:05	34° 19'	–	
		17	R		33° 26'	–	
		18	Y		30° 32'	–	
		19	R-Y	10:07	28° 15'	–	

CUT IN 390+00

F. B. 1297 Pg. 112 Job No. 8412 Division No. Notes Red Plotted Profile
Survey of Beach Erosion Studies Date Date No.
Survey by F.H.B. Notes Shure Notes Chkd Checked X-Sec.
Indexed K. C. Johnson Date 8-8-51 Date Date No.

FORM 307 2M 6-48

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 385+00 #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
			285				
1	RY	9 16 0816	273	27.7	2.9	24.8	
			279				
2	R		263	26.8		23.9	
			263				
3	Y		250	25.4		22.5	
			250				
4	RY	9 21 0821	230	23.7	3.0	20.7	
			220				
5	R		202	20.8		17.8	
			200				
6	Y		183	18.9		15.9	
			189	17.0		14.0	
7	RY	9 24 0824	161	~~17.4~~	3.0	~~14.4~~	
			178				
8	R		160	16.6		13.6	
			162				
9	Y		151	15.5		12.5	
			155				
10	RY	9 28 0828	140	14.5	3.1	11.4	
			147				
11	R		130	13.6		10.5	
			141				
12	Y		130	13.4		10.3	
			123				
13	RY	9 31 0831	110	11.4	3.1	8.3	
			111				
14	R		100	10.4		7.3	
			105				
15	Y		90	9.5		6.4	
			85				
16	RY	9 33 0833	65	7.2	3.1	4.1	

BOAT
385+00

Profile No. _____ Notes Red. Louie Date 8-17-51 Plotted _____ Date _____
X-Sec. No. _____ Notes Chkd. TMI Date 8-23-51 Checked _____ Date _____
Job No. 8412 Division No. _____
Survey of Beach Erosion Studies
Survey by F.H.B. Notes Sutter Date 8-8-51
Map No. _____ Plotted Johnson Date _____
F.B. 1970-A

FORM 307 2M 8-45

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 390+00		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Ht. Tide	Adj. Depth	Remarks
1	RY	9 44 0844	288 278	28.1	3.2	24.9	
2	R		275 263	26.7		23.5	
3	Y		265 250	25.5		22.3	
4	RY	9 48 0848	254 240	24.5	3.3	21.2	
5	R		245 230	23.5		20.2	
6	Y		235 220	22.5		19.2	
7	RY	9 56 0856	220 205	21.0	3.4	17.6	
8	R		212 195	20.1		16.7	
9	Y		191 176	18.1		14.7	
10	RY	9 59 0859	173 163	16.6	3.4	13.2	
11	R		168 153	15.8		12.4	
12	Y		155 140	14.5		11.1	
13	RY	10 03 0903	138 125	12.9	3.4	9.5	
14	R		125 110	11.5		8.1	
15	Y		122 98	10.6		7.2	
16	RY	10 05 0905	128 110	11.6	3.5	8.1	
17	R		118 90	9.9		6.4	
18	Y		92 70	7.7		4.2	
19	RY	10 08 0908	75 50	5.8	3.5	2.3	

BOAT 390+00

F.B. 1297 PG. 114
Job No. 8412 Division No.
Survey of Beach Erosion Studies
Survey by F.H.B. Notes Sutter
Indexed R. C. Johnson Date 8-8-51
Notes Red. RCW Date 8-20-51
Notes Chkd. T.M.I. Date 8-28-51
Plotted Date
Checked Date
Profile No.
X-Sec. No.

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

FB 1296-246

STATION	B. S.	H. I.	F. S.	ELEV.			
				30.84			SHORE ∡ 90°
395+00	15	323		30.80	1X2 FL. - N'ly edge RD		
			16	307		32' LT	TOP Bank.
			70	253		43 "	BRK
			103	220		50 "	"
T.P.	05	208	120	203	T.P.	55 "	TOE SL.
			15	193		62 "	" "
			03	205		71	TOP "
(TRANS. ON			53	155		91 "	TOE "
390+00 ℄)			67	141		111 "	BRK
			78	130		127	
∡s			103	105		144	
16°-37' T.P.	02	96	114	94	T.P.	TAPE 150 "	(Calc. 149')
20°-22' T.P.	17	64	49	47	T.P.	185 "	(Calc. 186) Water -
24°-54'			51	13		232' Calc. "	BRK
27°-29'			59	05		260' " "	OCEAN FLOOR
29°-21'			73	-09		281' " "	" "
32°-13'		4.2	82	-18		315' " "	"
36°-24'		6.6	106	-42		369' " "	" "
39°-08'		9.4	134	-70		407' " "	" "
41°-42'		12.0	160	-96		446' " "	" "

SHORE 395+00

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ 79 F.B. 1297 Pg. 115
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. T.M.I. Checked ____ Survey by C.V.C. TUMLEY Notes C.V.C. Date 8-7-51
Date 9-14-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK. WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		SHORE ∡ 90°
400+00	25	28.3		25.81	1X2 IN RD.	
			28	2[illegible].5	35' LT	. Top Bank
T.P.	02	16.4	12.1	1[illegible].2	T.P. Top 1X4 STK.	
			24	14.5	40' LT	. Bot Bank
			41	12.3	59 "	. Beach
			50	11.4	81 "	. " "
(TRANS. ON			65	[illegible]	103 "	. " "
405+00)			75	[illegible]	121 "	. " "
Δs			103	6.1	150 "	.
18°-40-T.P.	23	7.0	11.7	4.7	F.P. TAPE 169	(Calc 169) Water
22°-27'			4[illegible]	[illegible]	207' calc. "	. BRK
24°-54'			58	[illegible]	233' " "	. [illegible] FLOOR
26°-56'			65	[illegible]	254' " "	. " "
28°-05'			75	-[illegible].5	267' " "	.
29°-50'		3.7	77	-[illegible].7	287' " "	.
33°-49'		5.5	95	-[illegible].5	335' " "	. " "
36°-41'		7.7	11.7	-4.7	372' " "	. " "
39°-15'		10.7	14.7	-7.7	409' " "	. "
40°-00'	SHORE 400+00	12.0	16.0	-9.0	420' " "	. "

F.B. 1297 PG. 116 80 Job No. 8412 Division No. Notes Red. Plotted TML Date 10-3-51 No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Notes Chkd. TM.L Checked [illegible] Date 10-3-51 No. X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Date 9-14-51
Indexed A. C. Johnson Date 8-7-51

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.		Remarks
395+00	390+00	1	R-Y	10 16	89°56'	-	
		2	R		90 13	-	
		3	Y		90 13	-	
		4	R-Y	10 19	90 05	-	
		5	R		90 05	-	
		6	Y		90 05	-	
		7	R-Y	10 21	89 43	-	
		8	R		90 11	-	
		9	Y		90 45	-	
		10	R-Y	10 25	89 46	-	
		11	R		90 15	-	
		12	Y		90 40	-	
		13	R-Y	10 29	90 34	-	
		14	R		90 07	-	
		15	Y		90 54	-	
		16	R-Y	1031	89 52	-	
		17	R	10 315	90 14	-	

RANGE
395+00

Profile Notes Red____ Plotted____ Job No. 8412 Division No. V F. B. 1297 Pg. 117
No.____ Date____ Date____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd____ Checked____ Survey by EHB Notes EHB Date 8-8-51
No.____ Date____ Date____ Map No.____ Indexed Changes Date____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 PG. 118 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date Date No.
Survey by FHB Notes Blanchard Notes Chkd Checked X-Sec.
Indexed C. Johnson Date Date Date No.

STATION Inst. Sight At	On	B. S. #	H. I. Color	F. S. Time	ELEV. Her. Ang.	Remarks	
400+00	405+00	1	R-Y	10:46	90°12'	-	
		2	R		90°12'	-	
		3	Y		89°53'	-	
		4	R-Y	1050	89°47'	-	
		5	R		89°58'	-	
		6	Y		89°58'	-	
		7	R-Y	1055	89°57'	-	
		8	R		90°08'	-	
		9	Y		89°50'	-	
		10	R-Y	1059	89°26	-	
		11	R		90°05'	-	
		12	Y		89°38'	-	
		13	R-Y	1101	90°00'	-	
		14	R		89°44'	-	
		15	Y		89°44'	-	
		16	R-Y	1103	89°44'	-	
		17	R		89°37'	-	
		18	Y	11.04	89°37'	-	

RANGE 400+00

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
390+00	395+00	1	R-Y	10:15	69°10'	-	
True Line		2	R		67°40'	-	
		3	Y		66°05'	-	
		4	R-Y	10:19	64°15'	-	
		5	R		62°40'	-	
		6	Y		61°04'	-	
		7	R-Y	10:21	60°16'	-	
		8	R		57°47'	-	
		9	Y		56°30'	-	
		10	R-Y	10:25	55°04'	-	
		11	R		50°45'	-	
		12	Y		45°15'	-	
		13	R-Y	10:29	43°37'	-	
		14	R		42°41'	-	
		15	Y		40°10'	-	
		16	R-Y	10:31	37°24'	-	
		17	R	10:32	36°08'		

CUT IN
395+00

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____
No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. ____ Checked ____ Survey by E.H.B. Notes Shore Date 8-8-51
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

F. B. 1297 Pg. 119

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
405+00	400+00	1	R-Y	10:46	6[illegible]°05'	—	
True Line		2	R		6[illegible]°15'	—	
		3	Y		65°55'	—	
		4	R-Y	10:50	6[illegible]°13'	—	
		5	R		6[illegible]°[illegible]1'	—	
		6	Y		6[illegible]°39'	—	
		7	R-Y	10:55	57°55'	—	
		8	R		55°05'	—	
		9	Y		5[illegible]°49'	—	
		10	R-Y	10:59	50°38'	—	
		11	R		4[illegible]°42'	—	
		12	Y		4[illegible]°21'	—	
		13	R-Y	11:01	4[illegible]°07'	—	
		14	R		39°30'	—	
		15	Y		38°23'	—	
		16	R-Y	11:03	36°42'	—	
		17	R		3[illegible]°[illegible]3'	—	
		18	Y	11:04	[illegible]9'	—	

CUT IN 400+00

F. B. 1297 PG. 120 Job No. 8412 Division No. V Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date Date No. X-Sec.
Survey by F.H.B. Notes Shure Notes Chkd. Checked No.
Indexed A. C. Johnson Date 8-8-51 Date Date

FORM 307 [illegible]

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE BY CIRCLED IN RED INK WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 395700

#	Color	Time	H.I. Meas. Depth	F.S. Bottom	ELEV. Ht. Tide	Adj. Depths	Remarks
			294				
1	RY	1016	280	28.5	3.6	24.9	
		0916	284				
2	R		270	27.5		23.9	
			273				
3	Y		259	26.4		22.8	
			256				
4	RY	1019	240	24.5		20.9	
		0919	239	23.0		19.3	
5	R		225	~~24.4~~	3.7	~~20.7~~	
			214				
6	Y		200	20.5		16.8	
			204				
7	RY	1021	190	19.5	3.7	15.8	
		0921	185				
8	R		172	17.6		13.9	
			171				
9	Y		158	16.2		12.5	
			195				
10	RY	1025	179	18.4	3.7	14.7	
		0925	180				
11	R		168	17.2	3.7	13.5	
			174				
12	Y		158	16.3	3.8	12.5	
			160				
13	RY	1029	145	15.0	3.8	11.2	
		0929	140				
14	R		125	13.0		9.2	
			130				
15	Y		110	11.7		7.9	
			106	9.6		5.8	
16	RY	1030	91	~~9.7~~	3.8	~~5.9~~	
		0930	106	7.7		3.9	
17	R	1031	65	~~7.8~~	3.8	~~4.0~~	
		0931					

BOAT
395700

Profile No. ____ Notes Red. Bauks Date 8-20-51 Plotted ____ Date ____ Job No. 8412 Division No. ____ Survey of Beach Erosion Studies
X-Sec. No. ____ Notes Chkd. TMI Date 8-28-51 Checked ____ Date ____ Survey by F.H.B. A.T. Notes Sutter Date 8-8-51 Map No. ____ Index Johnson Date ____

FIELD NOTES

FORM 307 2M 8-45

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 400+00		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Ht. Tide	Adj. Depth	Remarks
1	RY	10.47 0947	29.9 28.8	29.2	4.1	25.1	
2	R		28.8 27.6	28.0		23.9	
3	Y		27.8 26.1	26.7		22.6	
4	RY	10.50 0950	26.8 25.0	25.6	4.1	21.5	
5	R		24.8 23.3	23.8		19.7	
6	Y		25.2 24.0	24.4		20.3	
7	RY	10.56 0956	23.0 21.5	22.0	4.2	17.8	
8	R		22.2 20.5	21.1		16.9	
9	Y		20.3 19.3	19.6		15.4	
10	RY	10.59 0959	19.8 18.3	18.8	4.3	14.5	
11	R		17.9 16.7	17.1		12.8	
12	Y		16.3 15.0	15.4		11.1	
13	RY	11.01 1001	15.5 14.0	14.5	4.3	10.2	
14	R		14.0 12.4	12.9		8.6	
15	Y		11.7 10.4	10.8		6.5	
16	RY	11.03 1003	10.2 8.8	9.3	4.3	5.0	BOAT 400+00
17	R		9.0 7.0	7.7		3.4	
18	Y	11.04 1004	7.0 5.0	5.7	4.3	1.4	

F.B. 1/4 Pg. 122
Survey of Beach Erosion Studies
Survey by F.H.B.
Indexed A. C. Johnson
Job No. 8412 Division No.
Notes Sutter
Date 8-8-51
Notes Red. RCW
Date 8-20-51
Notes Chkd. T.M.I.
Date 8-22-51
Plotted
Date
Checked
Date
Profile No.
X-Sec. No.

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

FB 1296-246

STATION	B. S.	H. I.	F. S.	ELEV.		
405+00	12	259		2470	1X2 - Top Bank.	SHORE ∡ 90°
			18	241	10' LT.	Sledge, Top Bank
			97	162	23 "	BRK. SHN
T.P.	0.6	142	123	136	T.P. 30 "	" "
			17	125	32 "	Toe SL. - Beach
TRANS. ON			34	108	83 "	
400+00 ℄			50	92	115 "	
∡s			67	75	147 "	
19°-50' T.P.	29	76	95	47	T.P. TAPE 180 "	(Calc 180) Water
24°-14'			54	22	225' calc. "	BRK.
26°-47'			65	11	252' " "	Ocean Floor
28°-02'			70	06	266' " "	"
30°-32'		4.1	81	-0.5	295' " "	" "
34°-35'		5.8	98	-22	345' " "	" "
37°-53'		8.0	120	-44	389' " "	" "
42°-00'		10.6	146	-70	450' " "	" "
43°-25'		12.4	164	-88	473' " "	" "

SHORE 405+00

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ 81 F.B. 1297 Pg. 123
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. T.M.L. Checked T.M.L. Survey by C.V. CRUMLEY Notes C.V.C. Date 8-7-51
Date 9-14-51 Date 9-14-51 Map No. ____ Indexed A. C. Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

7.7
4.7
3.0
10.6
13.0

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	FB 1296 - 247	
410+00	13	29.2		29.9	1X2 ON Bank.	SHORE ∡ 90°
			00	29.2	20' RT	Toe Bluff
			19	27.3	18' LT.	BRK
			32	[illegible]	25' "	Top Bank
T.P	23	19.5	120	17.2	T.P ON S.H.	
			70	12.5	41' LT.	Toe Bank on Beach.
			72	12.3	49'	BRK " "
			84	11.1	52'	
(TRANS. ON			80	11.5	80'	
415+00			82	11.3	102'	
∡s			94	10.1	131'	
19°-33'-T.P	02	7.7	120	7.5	T.P TAPE 177'	(calc 178')
23°-15'			30	4.7	215'	(calc 215')
25°-18'			43	3.4	236' Calc.	Water.
28°-22'			57	[illegible]	270' " LT.	BRK
31°-50'			73	0.4	310' " "	OCEAN FLOOR
34°-52'			86	-0.9	348' " "	" "
38°-50'		6.7	10.7	-3.0	403' " "	" "
39°-19'		7.2	11.2	-3.[illegible]	410' " "	" "
43°-18'		10.6	14.6	6.9	471' " "	" "
47°-19'		13.0	17.0	9.3	542'	

SHORE 410+00

F.B. 1297 PG. 124 82
Job No. 8412 Division No. Notes Red. Plotted No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date X-Sec.
Survey by C.V.C. Notes C.V.C. Notes Chkd. T.M.I. Checked No.
Indexed C. Johnson Date 8-8-51 Date 9-14-51 Date

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	
Inst. Sight At / On	#	Color	Time	Hor. Ang.	Remarks
405+00 / 400+00	1	R-Y	11:12	89°54	-
	2	R		90°19	-
	3	Y		89°43	-
	4	R-Y	11 15	89 57	-
	5	R		89 45	-
	6	Y		89 38	-
	7	R-Y	11 17	89 38	-
	8	R		89 47	-
	9	Y		89 40	-
	10	R-Y	11 23	89 50	-
	11	R		89 50	-
	12	Y		89°25	-
	13	R-Y	11 24	89°58'	-
	14	R		90 25	-
	15	Y	11 25		
	16				

RANGE 405+00

Profile Notes Red _____ Plotted _____ Job No. 8442 Division No. _____ F. B. 1297 Pg. 126
No. _____ Date _____ Date _____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. _____ Checked _____ Survey by FHB Notes FHB Date 8-8-51
No. _____ Date _____ Date _____ Map No. _____ Chief Johnson Date _____

76L298 307 4-50

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	STATION Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
410+00	415+00	1	R-Y	7 55	90° 00'	
		2	R		89° 57'	
		3	Y		89° 05'	
		4	R-Y	7 57	89° 37'	
		5	R		89° 20'	
		6	Y		89° 27'	
		7	R-Y	7 59.5	89° 37'	
		8	R		89° 38'	
		9	Y		89° 20'	
		10	R-Y	8 04	89° 14'	
		11	R		89° 27'	
		12	Y		89° 10'	
		13	R-Y	8 07.5	90° 05'	
		14	R		89 20	
		15	Y	8 08.5	89 24	
		16	R-Y			

RANGE 410+00

8-9-51

F. B. 1297 Pg. 126 Job No. 8412 Division No. Notes Red Plotted Profile
Survey of Beach Erosion Studies Date Date No. X-Sec.
Survey by Blanchard Notes Blanchard Notes Chkd Checked
Indexed K. C. Johnson Date Date Date No.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At	On	#	Color	Time	Hor. Ang.		Remarks
400+00	405+00	1	R-Y	11:12	66°33'	-	
True Line		2	R		64°33'	-	
		3	Y		63°27'	-	
		4	R-Y	11:15	59°27'	-	
		5	[illegible]		56°46'	-	
		6	[illegible]		53°13'	-	
		7	R-Y	11:17	50°05'	-	
		8	R		44°37'	-	
		9	Y		44°08'	-	
		10	R-Y	11:22	42°29'	-	
		11	[illegible]		40°43'	-	
		12	Y		38°32'	-	
		13	R-Y	11:24	36°33'	-	
		14	[illegible]	11:25	34°00'	-	

CUT IN
405+00

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. V F. B. 1297 Pg. 127
No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. ____ Checked ____ Survey by E.H.B. Notes Shure Date 8-8-51
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
415+00	410+00	1	R&Y	7:55	66° 38'		
		2	R		65° 2'		
		3	Y		64° 37'		
		4	R&Y	7:57	63° 04'		
		5	R		61° 31'		
		6	Y		59° 32'		
		7	R&Y	7:59	56° 56'		
		8	R		52° 43'		
		9	Y		49° 30'		
		10	R&Y	8:04	49° 10'		
		11	R		46° 06'		
		12	Y		45° 30'		
		13	R&Y	8:08	43° 09'		
		14	R		41° 59'		
		15	Y	8:09	40° 28'		

CUT IN 410+00

F. B. 1297 PG. 128 Job No. 8412 Division No. V Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-9-51 Date No.
Survey by F.H.B. Notes M.N. Notes Chkd. Checked X-Sec.
Indexed R. C. Johnson Date Date Date No.

FORM 307 2M 8-48

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 405700

#	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
			300				
1	RY	1112	285	29.0	4.4	24.6	
		1012	294				
2	R		277	28.3		23.9	
			280				
3	Y		260	26.7		22.3	
			254				
4	RY	1115	239	24.4	4.5	19.9	
		1015	225				
5	R		210	21.5		17.0	
			208				
6	Y		191	19.7		15.2	
			185				
7	RY	1117	170	17.5	4.5	13.0	
		1017	164				
8	R		149	15.4		10.9	
			145				
9	Y		133	13.7		9.2	
			130	12.1		7.5	
10	RY	1123	117	~~12.4~~	4.6	~~7.8~~	
		1023	114				
11	R		100	10.5		5.9	
			103				
12	Y		90	9.4		4.8	
			90			3.4	
13	RY	1125	75	8.0	4.6	~~7.4~~	
		1025	75			1.8	
14	R		59	6.4		~~5.8~~	
15							
16							
17							
18							

BOAT
405700

Profile No. _____ Notes Red Rouse Plotted _____ Job No. 8412 Division No. _____ F.B. 1770 Pg. 170
Date 8-20-54 Date _____ Survey of Beach Erosion Studies
X-Sec. No. _____ Notes Chkd. TMI Checked _____ Survey by E.H.B. Notes Sutter Date 8-8-54
Date 2-14-54 Date _____ Map No. _____ Inked Johnson Date _____

FORM 307 2M 8-45

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
700 HALL OF RECORDS

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

Profile No. X-Sec. No.

Plotted Date Checked Date

Notes Red. RDW Date 8-20-51 Notes Chkd. T.M.I. Date 9-14-51

Division No. Job No. 8412 Survey of Beach Erosion Studies

Survey by E.H.B. Notes Sutter Date 8-9-51

Indexed B. C. Johnson

F.B. 297 Pg. 130

STATION 410+00

#	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
			28.0				
1	RY	7.55 0655	26.5	27.0	2.2	24.8	
			26.5				
2	R		25.0	25.5		23.3	
			24.7				
3	Y		23.2	23.7		21.5	
			23.2				
4	RY	7.57 0657	21.7	22.2	2.2	20.0	
			21.9				
5	R		20.6	21.0		18.8	
			20.5				
6	Y		19.0	19.5		17.3	
			18.5				
7	RY	7.59 0659	17.0	17.5	2.2	15.3	
			16.9				
8	R		15.3	15.8		13.6	
			15.4				
9	Y		13.9	14.4		12.2	
			13.6				
10	RY	8.04 0704	12.1	12.6	2.2	10.4	
			12.5				
11	R		11.1	11.6		9.4	
			11.3				
12	Y		10.0	10.4		8.2	
			10.5				
13	RY	8.08 0708	9.0	9.5	2.2	7.3	
			9.0				
14	R		7.5	8.0		5.8	
			7.6				
15	Y	8.09 0709	6.0	6.5	2.2	4.3	

BOAT

410+00

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	FB. 1296 -	
415+00	3.7	15.8		12.09	1X2 IN HOLE ON Beach (SHORE ∡ 90°)	
			30	12.8	SAND	
(TRANS ON			29	12.9	27' RT.	TOE BANK
420+00)			34	12.4	12 LT	
∡			68	9.0	49 "	
11°-03'			107	5.1	TAPE 98 "	(calc 98')
12°-56'-T.P.	2.2	6.0	120	3.8	T.P 115 (calc 115)	WATER
19°-28'			52	0.8	177 calc. LT.	BRK.
24°-53'			69	-0.9	232 "	OCEAN FLOOR.
31°-13'		5.8	98	-3.8	303 "	" "
34°-50'		7.9	119	-5.9	348 "	" "
38°-47'		10.0	140	-8.0	402 "	" "
40°-17'		10.0	140	-8.0	424 "	" "
26°-16		5.2	92	3.2	247 "	" "

SHORE
415+00

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 131
Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
X-Sec. No. ____ Notes Chkd. TMI Checked ____ Survey by C.V.C. Notes C.V.C. Date 8-8-51
Date 9-14-51 Date ____ Map No. ____ Indexed A. C. Johnson Date ____

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

FB1296-247

STATION	B. S.	H. I.	F. S.	ELEV.		
420+00	78	14.7		[illegible]	1X2 IN HOLE ON BEACH	
			72	[illegible]	Sand	(SHORE ∡ 90°)
(TRANS. ON 425+00)			40	10.7	26' RT	
			12	[illegible]	48 "	
∡s			95	[illegible]	18 LT	
2°-41'			100	[illegible]	TAPE 23 "	(calc 23')
3°-54' T.P.	28	6.5	110	[illegible]	T.P. 34 "	(calc 34') Water
7°-34'			53	[illegible]	66' calc. "	BRK
9°-52'			59	[illegible]	87' " "	OCEAN FLOOR
12°-10'			64	[illegible]	108' " "	" "
15°-14'			67	-0.2	136' " "	" "
17°-54'			74	[illegible]	162' " "	" "
20°-05'		4.8	8[illegible]	[illegible]	183' " "	" "
27°-05'		7.5	11.5	[illegible]	256' " "	" "
29°-28'		7.0	110	-4.5	283' " "	" "
30°-56		7.6	116	-5.1	300' " "	" "
33°-35		8.8	128	-6.[illegible]	332' " "	" "

SHORE 420+00

F.B. 7297 PG. 132 84
Job No. 8412 Division No. ____ Notes Red. ____ Plotted ____ No. ____ Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date ____ Date ____ X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. TM.L. Checked ____ No. ____
Indexed A. C. Johnson Date 8-8-51 Date 9-14-51 Date ____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION		S. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.		Remarks
415+00	420+00	1	R-Y	8:22	90° 02'	-	
		2	R		89° 15'	-	
		3	Y		88° 52'	-	
		4	R-Y	8:24	89° 14'	-	
		5	R		89° 58'	-	
		6	Y		90° 00'	-	
		7	R-Y	8:27½	89° 57'	-	
		8	R		90° 02'	-	
		9	Y		90° 04'	-	
		10	R-Y	8:31	89° 54'	-	
		11	R		89° 55'	-	
		12	Y		89° 04'	-	
		13	R-Y	8:35	89° 40'	-	
		14	R		89° 52'	-	
		15	Y		89° 31'	-	
		16	R-Y	8:37	89° 48'	-	
		17	R		89° 42'	-	
		18	Y		90° 06'	-	
		19	R-Y	8:40	90° 06'	-	

RANGE
415+00

Profile Notes Red. Plotted. Job No. 8412 Division No. F.S. 1297 PG 133
No. Date. Date. Survey at BEACH EROSION STUDIES
X-Sec. Notes Chkd. Checked. Survey by FHB Notes FHB Date 8-9-51
No. Date. Date. Map No. Inspector Johnson Date.

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

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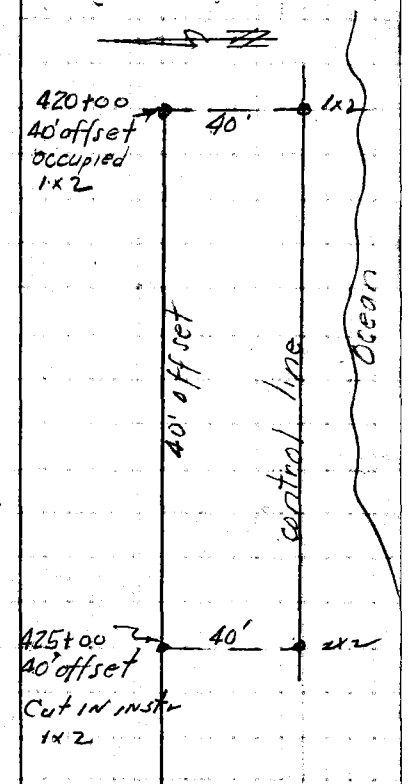
Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.		Remarks
420+00 40 ft offset	425+00 40' offset	1	R-Y	8 47	89 33	-	
		2	R	8 53	89 30	-	Kelp trouble
		3	Y		89 46	-	
		4	R-Y	8 54	90 26	-	
		5	R		90 36	-	
		6	Y		89 30	-	
		7	R-Y	8 56	90 30	-	
		8	R		89 33	-	
		9	Y		89 05	-	
		10	R-Y	8 59	89 20	-	
		11	R		89 10	-	
		12	Y		88 50	-	
		13	R-Y	9 00	89 54	-	
		14	R		89 00	-	
		15	Y		89 03	-	
		16	R-Y	9 03	88 20	-	
		17					



8-9-51

RANGE
420+00

F. B. 1297 PG. 134
Job No. 84-12 Division No. Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date Date No.
Survey by Blanchard Notes FHB Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
420+00	415+00	1	R&Y	8:21	68°26'		
		2	R		68°09'		
		3	Y		67°37'		
		4	R&Y	8:24	66°42'		
		5	R		65°11'		
		6	Y		63°31'		
		7	R&Y	8:27	62°21'		
		8	R		61°07'		
		9	Y		60°25'		
		10	R&Y	8:31	58°10'		
		11	R		56°55'		
		12	Y		56°06'		
		13	R&Y	8:34	52°28'		
		14	R		48°42'		
		15	Y		45°57'		
		16	R&Y	8:37	43°40'		
		17	R		41°14'		
		18	Y		37°31'		
		19	R&Y	8:40	33°15'		

CUT IN
415+00

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. 1 F. B. 1297 Pg. 135
No. ____ Date ____ Date ____ Survey of BEACH & ROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by E.H.B. C. Johnson Notes M.N. Date 8-9-51
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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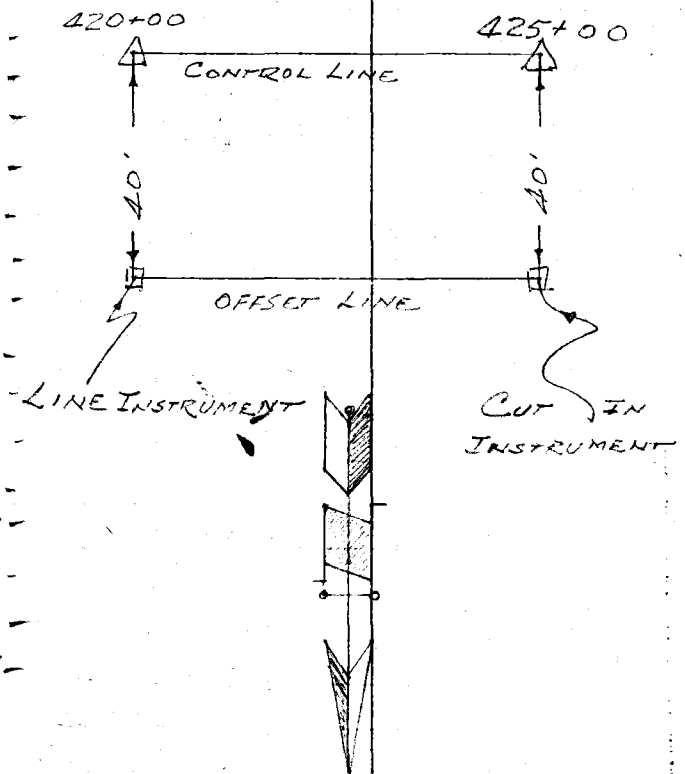
Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.
Inst. At	Sight On	#	Color	Time	Hor. Ang.
425+00	420+00	1	R&Y	8:47	67°58'
		2	R		65°45'
		3	Y		64°12'
		4	R&Y	8:54	62°33'
		5	R		60°39'
		6	Y		60°38'
		7	R&Y	8:56	58°12'
		8	R		57°23'
		9	Y		54°12'
		10	R&Y	8:58	51°57'
		11	R		49°00'
		12	Y		47°38'
		13	R&Y	9:00	45°25'
		14	R		40°36'
		15	Y		34°02'
		16	R&Y	9:03	30°43'

CUT IN 420+00

Remarks



F. B. 1297 Pg. 136 Job No. 8412 (3) Division No. V Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-9-51 Date No.
Survey by F.H.B. Notes M.N. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date Date No.

76L298 307 4-50

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 415+00		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	821 0721	286 272 276	27.7 ~~27.8~~	2.3	25.4 ~~25.5~~	
2	R		261	26.6		24.3	
3	Y		264 250	25.5		23.2	
4	RY	824 0724	259 240	24.6	2.3	22.3	
5	R		240 227	23.1		20.8	
6	Y		253 240	24.4		22.1	
7	RY	827 0727	230 219	22.3	2.4	19.9	
8	R		229 209	21.6		19.2	
9	Y		205 191	19.6		17.2	
10	RY	830 0730	193 170	17.8	2.4	15.4	
11	R		173 155	16.1		13.7	
12	Y		190 175	18.0		15.6	
13	RY	834 0734	175 160	16.5	2.4	14.1	
14	R		170 150	15.7		13.3	
15	Y		164 131	14.2		11.8	
16	RY	836 0736	145 120	12.8	2.4	10.4	
17	R		128 100	10.9		8.5	
18	Y		105 85	9.2		6.8	
19	RY	839 0739	88 65	7.3	2.4	4.9	

BOAT 415+00

Profile Notes Red. LCWC Plotted Job No. 8412 Division No. F. B. 1297 Pg. 137
No. Date 8-20-51 Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. T.M.I. Checked Survey by F.H.B. Notes Sutter Date 8-9-51
No. Date 9-14-51 Date Map No. Indexed Johnson Date

76L298 307 4-50

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420+00

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	847 0747	28 5 / 27 2	27.6	2.5	25.1	
2	R		27 3 / 25 3	26.0		23.5	
3	Y		25 4 / 24 0	24.5		22.0	
4	RY	854 0754	23 0 / 21 8	22.2	2.5	19.7	
5	R		21 8 / 20 5	20.9		18.4	
6	Y		20 7 / 19 3	19.8		17.3	
7	RY	857 0757	19 5 / 18 1	18.6	2.6	16.0	
8	R		18 5 / 17 1	17.6		15.0	
9	Y		17 6 / 16 1	16.6		14.0	
10	RY	859 0759	[illegible] / 17 1	15.4	2.6	12.8	
11	R		[illegible] / [illegible]	13.7		11.1	
12	Y		[illegible] / [illegible]	12.0		9.4	
13	RY	900 0800	[illegible] / 9 7	10.4	2.6	7.8	
14	R		10 4 / 8 7	9.3		6.7	
15	Y		8 9 / 7 2	7.8		5.2	
16	RY	903 0803	7 0 / 5 5	6.0	2.6	3.4	

BOAT 420+00

F. B. 1297 Pg. 138 Job No. 8412 Division No. Notes Red. Lewis Plotted Profile
Survey of Beach Erosion Studies Date 8-20-51 Date No.
Survey by E.H.B. Notes Sutter Notes Chkd. T.M.I. Checked X-Sec.
Indexed A. C. Johnson Date 8-9-51 Date 9-14-51 Date No.

76L298 307 5-49

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NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	F.B. 1296-247	
						SHORE ∡ 90°
425+00	3.4	155		12 12	1X2 ON 40' RT.	OFFSET ON Beach
(TRANS ON 430+00) ∡S			08	14 7	48' "	TOE Bank
T.P.	05	63	9.7	5 8	T.P. 1X2 ON BASE LINE, ON Beach.	
			1.6	4 7	11' LT.	Water
-4°-55'			44	1 9	43' Calc LT.	BRK
8°-31'			57	0 6	75' Calc.	
11°-34'			66	-0 3	102' "	"
15°-22'			70	-0 7	137' "	"
18°-11'			81	-1 8	164' "	"
21°-39'		5.3	93	-3 0	198' "	"
25°-18'		7.1	111	-4 8	236' "	"
28°-47'		7.8	118	-5 5	275' "	"
32°-43'		8.0	120	-5 7	321' "	"
35°-34'		9.0	130	-6 7	358' "	"
37°-40		10.0	140	-7 7	386' Calc. LT.	

SHORE
425+00

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 139
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (2 UMA)
Notes Chkd. T.M.I. Checked ____ Survey by C.V.C. RUMLEY Notes C.V.C. Date 8-8-51
Date 9-14-51 Date ____ Map No. ____ Indexed ____ Date ____

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

14.5
4.7
9.8

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.			
430+00	4.8	23.5		19.[illegible]		1X2 FL. ON Bank	SHORE ∡ 90°
			4.2	19.3		5' RT	BRK
(TRANS. ON			4.0	19.5		41' "	Toe Bank
425+00)			6.5	[illegible]		7' LT	Top "
			10.2	13.[illegible]		15' "	Toe " Beach
T.P.	2.6	14.5	11.6	11.9	T.P.	40' "	BRK "
∡ S			6.2	8.3		60' "	"
9°-04' T.P.	1.9	6.6	9.8	4.7	T.P.	TAPE 80' "	(Calc. 80') Water "
11°-27'			4.3	[illegible]		101' Calc "	BRK
14°-06'			4.[illegible]	8		126' " "	[illegible]
18°-41'			5.6			169' " "	" "
22°-10'			6.5	[illegible]		204' " "	" "
25°-57'			7.3	-[illegible]		243' " "	" "
28°-48'		4.1	8.1	-1.5		275' " "	
36°-32'		6.2	10.2	-3.6		370' " "	
41°-13'		7.4	11.4	-4.8		438' " "	
43°-55'		8.7	12.7	-6.1		481' " "	

SHORE
430+00

F.B. 1297 PG. 140 86
Job No. 8412 Division No. Notes Red. Plotted No. Profile
Survey of BEACH EROSION STUDIES (ZUMA) Date Date X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.I. Checked No.
Indexed A. C. Johnson Date 8-8-51 Date 2-19-51 Date

76L298 307 4-50

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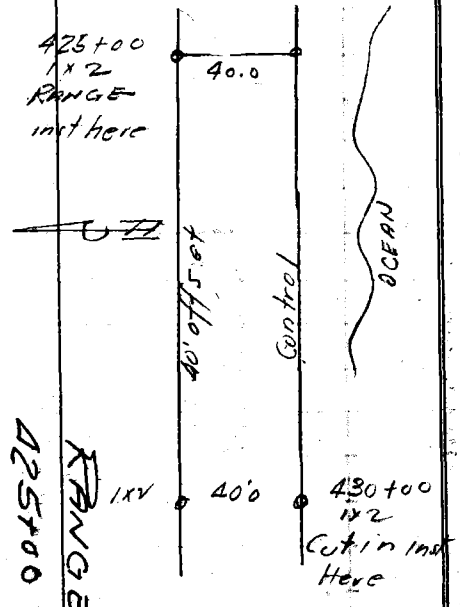
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F. B. 1297 Pg. 141
Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by FHB Notes FHB Date 8-9-51
Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At 425+00 40' offset On 430+00 40' offset	#	Color	Time	Hor. Ang.		Remarks
	1	R-Y	9 13	88 35	-	lot of drift and plenty of ocean
	2	R		89 00	-	
	3	Y		89 10	-	
	4	R-Y	9 18	89 20	-	
	5	R		88 50	-	
	6	Y		88 20	-	
	7	R-Y	9 23	88 55	-	
	8	R		88 50	-	
	9	Y		90 03	-	
	10	R-Y	9 29	89 58	-	
	11	R		89 20	-	
	12	Y		89 45	-	
	13	R-Y	9 32	89 45	-	
	14	R		89 48	-	
	15	Y		89 28	-	
	16	R-Y	9 35	89 20	-	
	17	R	9 37	88 50	-	
	18	Y				
	19	R-Y				
	20					



76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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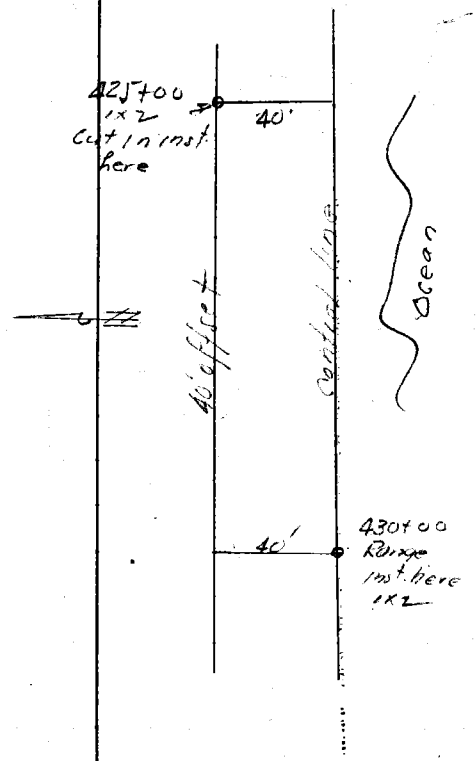
Do not extend notes this side of this line.

STATION Inst. Sight At	STATION Inst. Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks
430+00	425+00	1	R-Y	9 47	90 12	out drift very bad.
		2	R		90 10	
		3	Y		90 18	
		4	R-Y	9 50	90 14	
		5	R		90 17	
		6	Y		91 06	
		7	R-Y	9 55	90 45	
		8	R		90 36	
		9	Y		91 12	
		10	R-Y	9 58	9[illegible] 5	
		11	R		89 42	
		12	Y		90 02	
		13	R-Y	10 01	90 10	
		14	R		90 04	
		15	Y		89 40	
		16	R-Y	10 03	90 33	
			R			
			Y			

8-9-51

RANGE 430+00



F. B. 1297 Pg. 142 Job No. 8412 Division No. Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date Date No.
Survey by Blanchard Notes FHB Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On	#	Color	Time	Hor. Ang.	Remarks	
430+00 420+00	1	R&Y	9:14	66°10' -		
	2	R		63°52' -		
	3	Y		62°27' -		
	4	R&Y	9:18	60°17' -		
	5	R		58°35' -		
	6	Y		57°31' -		
	7	R&Y	9:23	55°58' -		
	8	R		52°19' -		
	9	Y		49°30' -		
	10	R&Y	9:29	48°30' -		
	11	R		47°55' -		
	12	Y		45°58' -		
	13	R&Y	9:32	42°35' -		
	14	R		37°14' -		
	15	Y		34°56' -		
	16	R&Y	9:35	32°30' -		
	17	R	9:37	25°46' -		

CUT IN
425+00

Profile Notes Red. Plotted Job No. 8412 Division No. V F.B. 1297 Pg. 143
No. Date Date Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. Checked Survey by F.H.B. Notes M.N. Date 8-9-51
No. Date Date Map No. Indexed C. Johnson Date

76L298 307 4-50

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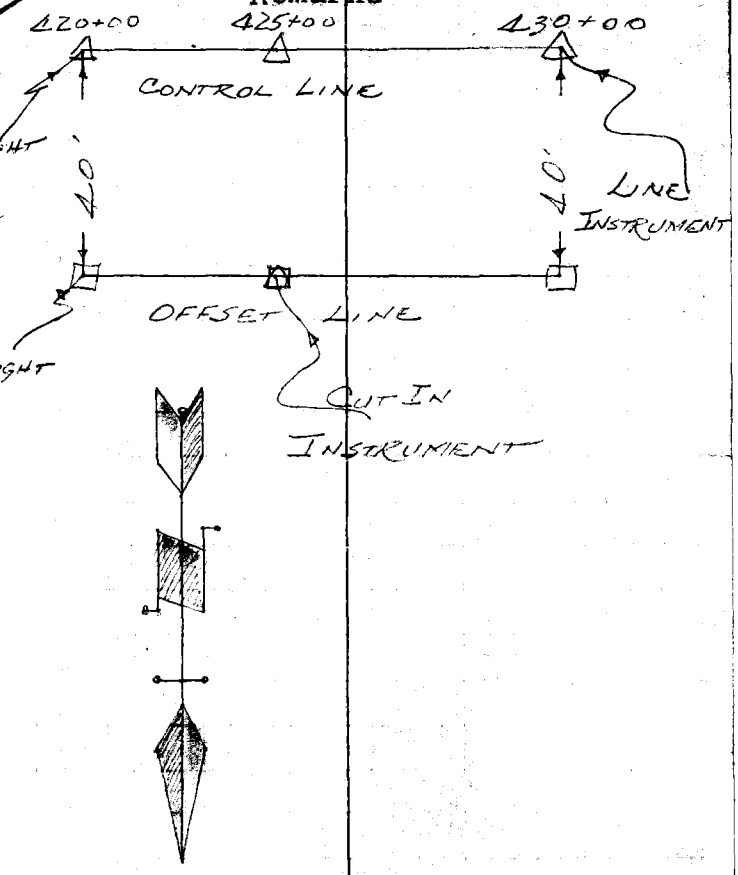
STATION Inst. At	Sight On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.
425+00	420+00	1	R&Y	9:46	66° 65'
		2	R		65° 41'
		3	Y		64° 19'
		4	R&Y	9:50	62° 27'
		5	R		61° 33'
		6	Y		59° 51'
		7	R&Y	9:54	58° 06'
		8	R		57° 50'
		9	Y		56° 18'
		10	R&Y	9:58	54° 33'
		11	R		54° 25'
		12	Y		50° 38'
		13	R&Y	10:01	48° 2'
		14	R		46° 16'
		15	Y		42° 08'
		16	R&Y	10:03	38° 30'

CUT IN 430+00

Remarks



F. B. 1297 Pg. 144 Job No. 8412 Division No. 5 Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-9-51 Date No.
Survey by F.H.B. Notes M.N. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

76L298 307 4-50

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STATION 425+00	B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom Tide	Adj. Depth	Remarks
1	RY	913 0813	291 279 274	28.3	2.7	25.6
2	R		260 261	26.5		23.8
3	Y		247 241	25.2		22.5
4	RY	918 0818	227 228	23.2	2.8	20.4
5	R		211 214	21.7		18.9
6	Y		200 204	20.5		17.7
7	RY	924 0824	190 195	19.5	2.8	16.7
8	R		180 185	18.5		15.7
9	Y		170 170	17.5		14.7
10	RY	929 0829	155 155	16.0	2.9	13.1
11	R		143 143	14.7		11.8
12	Y		130 135	13.4		10.5
13	RY	932 0832	115 115	12.2	2.9	9.3
14	R		97 110	10.3		7.4
15	Y		87 100	9.5		6.6
16	RY	935 0835	75 80	8.3	3.0	5.3
17	R	937 0837	65	7.0	3.0	4.0

BOAT
425+00

Profile
No. ____ Date 8-20-51 Date ____ Notes Red. LCWR Plotted ____ Job No. 8412 Division No. ____ F. B. 1297 Pg. 145
X-Sec. Notes Chkd. T.M.I. Checked ____ Survey of Beach Erosion Studies
No. ____ Date 2-14-51 Date ____ Map No. ____ Survey by F.H.B. Notes Sutter Date 8-9-51
Indexed Johnson Date ____

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430+00

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Ht. Tide	Adj. Depth	Remarks
1	RY	947 0847	297 285 285	28.9	3.1	25.8	out (no cut-in)
2	R		261 260	26.9		23.8	
3	Y		247 236	25.1		22.0	
4	RY	950 0850	216 216	22.3	3.1	19.2	
5	R		202 205	20.7		17.6	
6	Y		190 196	19.5 ~~19.4~~		16.4 16.3	
7	RY	955 0855	180 185	18.5	3.1	15.4	
8	R		170 174	17.5		14.4	
9	Y		158 147	16.3		13.2	
10	RY	958 0858	131 135	13.6	3.2	10.4	
11	R		120 127	12.5		9.3	
12	Y		110 115	11.6		8.4	
13	RY	1001 0901	99 103	10.4	3.2	7.2	
14	R		89 89	9.4		6.2	
15	Y		72 76	7.8		4.6	
16	RY	1004 0904	60	6.5	3.2	3.3	

BOAT 430+00

F. B. 1297 Pg. 146 Job No. 8417 Division No. Notes Red. PWK Plotted Profile
Survey of Beach Erosion Studies Date 8-20-51 Date No.
Survey by F.H.B. Notes Sutter Notes Chkd. T.M.L. Checked X-Sec.
Indexed A. C. Johnson Date 8-9-51 Date 2-19-51 Date No.

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		SHORE ∡ 90°
435+00	31	143		1117	-1 X 2 FL. ON 75' RT.	OFFSET.
			24	119	79 "	TOP BRK. Beach
(TRANS. ON)			45	98	119 "	Flat
430+00 ℄ PROD)			54	89	175 "	Toe HWY Bank.
			41	102	69 RT.	BRK on Beach.
∡ 5'			76	67	36 "	" "
2°04' T.P.	29	76	9.6	47	T-P TAPE 18 "	(calc 18')
1°26'			37	39	13 "	(calc. 13) Water-BRK.
0-0			44	32	0.0	BASE LINE
3°-53			50	26	-34' calc LT.	ocean Floor
8°-16'			59	17	-73' calc. "	" "
11°-44'			67	09	-104 "	" "
16°-08'		4.2	82	-0.6	-145' "	" "
23°-05'		6.9	109	-33	-213 "	" "
29°-36		9.2	132	-56	-284' "	" "
32°-41'		10.0	140	-64	-321' "	" "

ROCKY

SHORE 435+00

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 147
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (ZUMA)
Notes Chkd. T.M.I. Checked ____ Survey by C.V. CRUMLEY Notes C.V.C. Date 8-8-51
Date 9-14-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F.B. 1297 PG. 148 | Job No. 8412 | Division No. | Notes Red. | Plotted | Profile No.
Survey of BEACH EROSION STUDIES (ZUMA) | Date | Date | X-Sec. No.
Survey by C. VICRUMLEY | Notes C. VIC. | Notes Chkd. T.M.J. | Checked
Indexed E. C. Johnson | Date 8-8-51 | Date 2-14-51 | Date

STATION	B. S.	H. I.	F. S.	ELEV.	I=B 1226-247	SHORE ∡ 90°
439+25	4.4	14.1		9.70	1X2 ON 25' RT -	OFFSET - ON BEACH.
			44	9.7	115 "	FLAT
(TRANS. ON			41	10.0	127 "	"
430+00 & PROJ.)			33	10.8	137 "	"
			26	11.5	175 "	"
			49	9.2	71 "	BRK
			46	9.5	54 "	"
			77	6.[illegible]	29 "	
∡s T.P.	29	7.7	93	4.8	T.P 0.0	BASE LINE - Water
1°-45'			46	3.1	28' CUR. LT	BRK
3°-56'			52	2.[illegible]	64' " "	" OCEAN FLOOR -
6°-03'			55	2.2	98' " "	" " "
8°-44'			65	1.2	142' " "	" " "
11°-18'			75	0.2	185' " "	" " "
14°-10'			87	-1.0	233' " "	
15°-36		4.7	87	-1.0	258' " "	"
18°-52'		6.9	109	-3.2	316' " "	"
(No ∡ - BEHIND		8.3	123	-4.6		
ROCK.)						
21°-22	SHORE	8.8	128	-5.1	362' "	
	439+25					

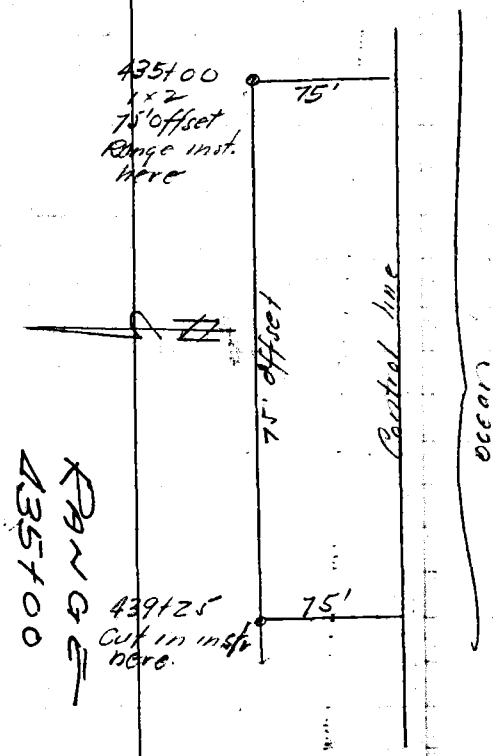
76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHAN[illegible] ON THIS SHEET MUST BE MADE [illegible] CIRCLED IN RED INK, WITH DATE [illegible] NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.	
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
435+00 75' offset	439+25 75' offset	1	R-Y	10 21	89 30	
		2	R		89°30'	
		3	Y		90°00'	omit. overlap.
		4	R-Y	10 28.5	89°39'	
		5	R		90 39	
		6	Y		90 22	-
		7	R-Y	10 30.5	90 15	-
		8	R		89°48'	-
		9	Y		90 22	-
		10	R-Y	10 33	89 34	-
		11	R		90 00	-
		12	Y		89 45	-
		13	R-Y	10 35	89 34	-
		14	R	10 36.5	89 06	-
		15				
		16				
		17				
		18				



Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F. B. 1297 Pg. 149
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by Blanchard Notes FHB Date 8-9-51
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 4-60

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

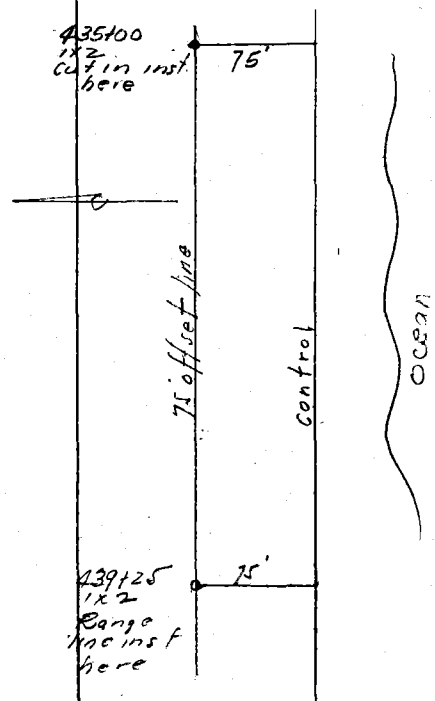
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 150 Job No. 842 Division No. Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date Date No. X-Sec.
Survey by Blanchard Notes FH8 Notes Chkd. Checked
Indexed K. C. Johnson Date Date Date No.

STATION	B. S.	H. I.	F. S.	ELEV.	
Inst. Sight At On	#	Color	Time	Hor. Ang.	Remarks
439+25 435+00	1	R-Y	6 58	90 00	
75' offset 75' offset	2	R		90 06	
	3	Y		90 32	
	4	R-Y	7 32	8[illegible]46	
	5	R		90 23	
	6	Y		90 03	
	7	R-Y	7 [illegible]	9[illegible]	
	8	R		9[illegible]08	
	9	Y		9[illegible]2	
8-10-51	10	R-Y	7 12	8[illegible]8	
	11	R		9[illegible]2	
	12	Y		9[illegible]4	
	13	R-Y	7 16	90 32	
	14	R	7 185	90 06	
	15	Y			
	16	R-Y			

RANGE 439+25



76L298 307 4-50

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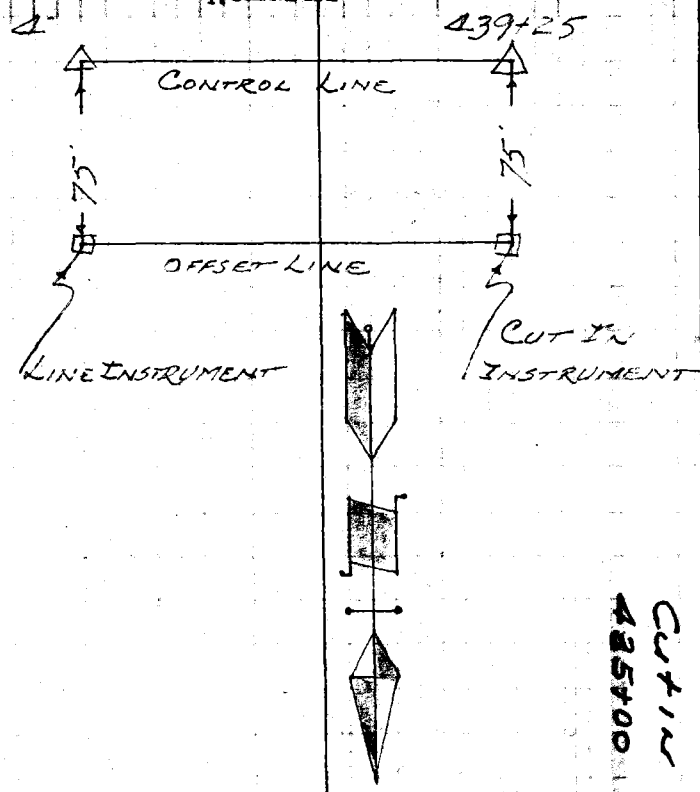
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.
Inst. Sight At	On	#	Color	Time	Hor. Ang.
439+25	435+00	1	R&Y	10:21	68° 00'
		2	R		65° 18'
		3	Y		62° 51'
		4	R&Y	10:28	61° 13'
		5	R		58° 54'
		6	Y		58° 16'
		7	R&Y	10:30	56° 25'
		8	R		55° 31'
		9	Y		54° 38'
		10	R&Y	10:32	51° 50'
		11	R		48° 57'
		12	Y		46° 50'
		13	R&Y	10:34	44° 15'
		14	R	10:35	40° 37'

Remarks



Cut in 435+00

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. 1 F. B. 1297 Pg. 151
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by E.H.B. Notes M.N. Date 8-9-57
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

76L298 307 4-50

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Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
435+00	439+25	1	R&Y	6:58	67° 21'	see page	150 - shows
		2	R		63° 22'	cut-in inst	on 75# offset
		3	Y		64° 44'		
		4	R&Y	7:02	63° 36'		
		5	R		62° 09'		
		6	Y		60° 21'		
		7	R&Y	7:06	58° 05'		
		8	R		56° 35'		
		9	Y		54° 13'		
		10	R&Y	7:12	54° 13'		
		11	R		53° 05'		
		12	Y		51° 13'		
		13	R&Y	7:16	51° 13'		
		14	R	7:18	48° 28'		
		15	Y				
		16	R&Y				
		17	R				

CUT IN 439+25

F. B. 1297 Pg. 154 Job No. 8412 Division No. ✓ Notes Red. Plotted Profile
Survey of BEACH EROSION STUDIES Date 8-10-51 Date No.
Survey by F.H.B. Notes M.N. Notes Chkd. Checked X-Sec.
Indexed H. C. Johnson Date Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

435+00

STATION #	Color	B. S. Time	H. I. Meas. Depth	F. S. Bottom	ELEV. Tide	Adj. Depth	Remarks
1	RY	1021 0921	29 3 / 27 7	28.2	3.5	24.7	overlap omit
2	R		26 2 / 24 5	25.1		21.6	
3	Y		23 5 / 22 5	22.8		19.3	
4	RY	1028 0928	16 6 / 15 0	15.5	3.6	11.9	
5	R		9 2 / 8 0	8.4		4.8	
6	Y		14 4 / 13 0	13.5		9.9	
7	RY	1030 0930	12 4 / 11 0	11.5	3.6	7.9	
8	R		10 0 / 8 5	9.0		5.4	
9	Y		14 4 / 13 0	13.5		9.9	
10	RY	1033 0933	16 0 / 15 0	15.3	3.6	11.7	
11	R		14 0 / 12 2	12.8		9.2	
12	Y		13 0 / 11 4	11.9		8.3	
13	RY	1035 0935	12 0 / 10 0	10.7	3.6	7.1	
14	R	1036 0936	10 0 / 8 0	8.7	3.6	5.1	

BOAT
435+00

Profile Notes Red. LCW Plotted Job No. 8412 Division No. F. S. 1297 Pg. 153
No. Date 8-20-51 Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. TM.1 Checked Survey by FHB Notes Sutter Date 8-9-51
No. Date 3-14-51 Date Map No. Indexed Johnson Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION 439+25		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	657 0557	30.0 27.7	28.5	2.6	25.9	
2	R		24.0 21.7	22.5	2.6	19.9	
3	Y		26.7 25.0	25.6		23.0	
4	RY	702 0602	25.0 24.0	24.3	2.6	21.7	
5	R		21.0 20.0	20.3		17.7	
6	Y		19.8 17.9	18.5		15.9	
7	RY	706 0606	18.9 17.0	17.6	2.6	15.0	
8	R		13.0 12.1	12.4		Rock 9.8 Bottom	
9	Y		12.1 11.1	11.4		" 8.8	
10	RY	712 0612	7.1 6.1	6.4	2.6	" 3.8	
11	R		13.0 12.0	12.3		" 9.7	
12	Y		12.5 11.0	11.5		8.9	
13	RY	716 0616	11.9 10.0	10.6	2.6	8.0	
14	R	718 0618	9.0 6.0	7.0	2.6	4.4	

BOAT 439+25

F. S. 1297 Pg. 154 Job No. 8412 Division No. Notes Red. RCW Plotted Profile
Survey of Beach Erosion Studies Date 8-20-51 Date No.
Survey by F.H.B. Notes Sutter Notes Chkd. TMI Checked X-Sec.
Indexed A. C. Johnson Date 8-10-51 Date 9-14-51 Date No.

Profile No.	Notes Red.	Plotted	Job No. 8412	Division No.	F.B. 7297 PG. 155
	Date	Date	Survey of BEACH EROSION STUDIES		
X-Sec. No.	Notes Chkd.	Checked	Survey by F.H.B	Notes A.C.S.	Date 8-10-51
	Date	Date	Map No.	Indexed Johnson	Date 8-15-51

MALIBU LA COSTA

Profile

&

Beach Control Line

From 0+00 = 1027+69 ± State Hwy (approx)
W'ly To: 40+00 = 985+45 ± State Hwy (approx)

Party:
Blanchard
MACK
Stangeland.
Sonnenschein
Vollnegle

STATION	B.S.	H.I.	F.S.	ELEV.
			FB 461-112-113	REF

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

76L298 307 5-49

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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STATION	B. S.	H. I.	F. S.	ELEV.	REMARKS
P-3 & Pt. 41+79.61	4.79	19.49		14.70	P-3 & Pt. STA 41+79.61 ELEV. 14.70 (11.96 + 2.74) FB 461/128
					+ ON TOP OR END OF A SECTION OF RAIL-ROAD-RAIL SET VERTLY IN BEACH & 1.0' HIGH, FOR ANCHOR POST ON W. SIDE OF CORRUGATED IRON CULVERT
40+00			5.09	14.40	1X2 (T.P.) OFFSET LINE STA 40+00
	4.26	18.66			
T.P.			3.17	15.49	T.P.
	3.17	18.66			
30+00			3.20	15.46	1X2 (T.P.) " " STA 30+00
	3.82	19.28			
T.P.			4.33	14.35	T.P.
	4.99	19.94			
20+00			4.49	15.45	1X2 (T.P.) OFF SET LINE STA 20+00
	5.90	21.35			
P-2 & Pt 20+00			4.69	16.66	P-2 & Pt STA 20+00 ELEV FB 461/
					TOP SPK IN 4X4 SET OVER C.S. MON RANGE LINE 90° TO BACK ANG.
	3.44	20.10			
T.P.			1.53	18.57	T.P. TOP ∧ IRON @ CULVERT

Profile ____ No. ____ X-Sec. ____ No. ____

Plotted ____ Date ____ Checked ____ Date ____

Notes Red. ____ Date ____ Notes Chkd. T.M.L. Date 2-14-51

Job No. 8412 Division No. ____ Notes A.C.S. Date ____

Survey of BEACH EROSION STUDIES

Survey by F.H.B. A. C. Johnson

Indexed ____

F.B. 1297 PG. 156

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV. 18.57	Preceding Pg.
	1.71	20.28			
10+00 ⊙			5.90	14.38	1X2 (T.P.) OFFSET LINE STA 10+00
	5.07	19.45			
T.P.			4.00	15.45	T.P.
	1.82	17.27			
0+00 ⊙			5.08	12.19	1X2 (T.P.) OFFSET LINE STA 0+00
	11.75	23.94			
B.M.	4.95	23.05	5.84	18.10	B.M. ELEV. FB. / BRASS BOLT SET IN CONC CURB ON NORTHLY SIDE U.S. HIGHWAY 101 @ 7.5 FT± FROM E. END CONC CULVERT HEAD WALL LOCATED APROX 1½ MI. EAST OF MALIBU BEACH SPORT FISHING PIER & APROX 295'± E. OF CARBON MESA CN RD.
T.P.	5.11	24.98	3.18	19.87	T.P.
T.P.	4.53	24.81	4.70	20.28	T.P.
T.P.	4.31	24.24	4.85	19.93	T.P.
BM #18-A-47			4.67	19.57	BM #18-A-47 EL=16.81 (State Hwy LA-60A) Lead & conc. nail S.W. cor (C.B.) 53.0' Lt. Sta 10+18 + 68.2 (19.57 - 2.74 Correc = 16.83 Check)

Profile No. ____ Notes Red ____ Plotted ____ Job No. P412 Division No. ____
X-Sec. No. ____ Date ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
Notes Chkd. T.M.L. Date 9-14-51 Checked ____ Date ____ Survey by F.H.B. Notes A.C.S. Date 8-10-51
Map No. ____ Indexed Johnson Date ____

F.B. 1297 Pg. 157

F.B. 1297 PG. 158

Job No._____ Division No._____ Notes Red._____ Plotted_____ Profile No._____

Survey of_____ Date_____ Date_____

Survey by_____ Notes_____ Notes Chkd._____ Checked_____ X-Sec. No._____

Indexed_____ Date_____ Date_____ Date_____

STATION	B. S.	H. I.	F. S.	ELEV.

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

10.5
4.7
5.8

STATION	B. S.	H. I.	F. S.	ELEV.		
MALIBU.						
0+00	64	18 6/5		1219	1X2 IN Hole -25' LT OFFSET LINE	
			53	13 3/2	sand "	(SHORE ∡ 90° SIGHT ON 20+00 - 25 OFFSET LT)
			39	14 7/6	10' "	
			20	16 6/5	0.0	
(TRANS. ON 10+00-25 OFF LT)			05	18 1/0	15' RT	BASE of Bank
			64	12 2/2	35' LT	
			96	9 0/9	56 "	
2°-31' T.P.	38	10.6/5	118	6 8/7	T.P. TAPE 69' "	(Calc. 69.) Water
3°-56'			78	2 8/7	94' Calc "	BRK.
4°-39'		5.6	96	1.0/0.9	106' " "	Ocean FLOOR
5°-46'		7.1	111	-0 5/6	126' " "	"
8°-16'		9.6	136	-3 0/+	170' " "	"
11°-49'		12.6	166	-6 0/+	234' " "	"

25' HAS BEEN ADDED TO Calc. DIST.

SHORE
0+00
Malibu La Costa

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg 159
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES (MALIBU)
Notes Chkd. T.M.I. Checked ____ Survey by C.V. CRUNLEY Notes C.V.C. Date 8-13-51
Date 9-14-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 5-49

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
10+00	54	198		1438	1X2 IN Hole 25' LT.	BRK.
			49	109	Sand "	SHORE ∡ 90°
TRANS. ON			32	166	12' "	
20+00 - 25' OFFSET LT			19	179	O.D.	BASE LINE
			20	18	29' RT.	
			11	177	65 "	
			05	193	82 "	FENCE LINE
			91	107	43 LT	BRK
1°-43' T.P.	20	101	117	81	T.P. TAPE 55	(Calc 55) Water
2°-50'			54	47	75' CALC. LT	
3°-23'			70	31	84' " "	BRK
4°-11'		4.8	88	13	98' " "	OCEAN FLOOR
5°-32'		5.9	99	2	122' " "	" "
7°-14'		6.8	108	-17	152' " "	" "
8°-31'		9.0	130	-39	175' " "	" "
11°-08'		10.0	140	-39	222' " "	" "
13°-36'		15.0	170	-39	267' " "	" "

25' WAS ADDED TO CALC. DIST.

SHORE
10+00
MALIBU LA COSTA

F.B. 1797 PG. 160 90
Job No. 8412 Division No.
Survey of BEACH EROSION STUDIES (MALIBU)
Survey by C.V. CRUMLEY Notes C.V.C.
Indexed A. C. Johnson Date 8-13-51
Notes Chkd. T.M.I. Date 9-14-51
Notes Red. Date
Plotted Date
Checked Date
Profile No. X-Sec. No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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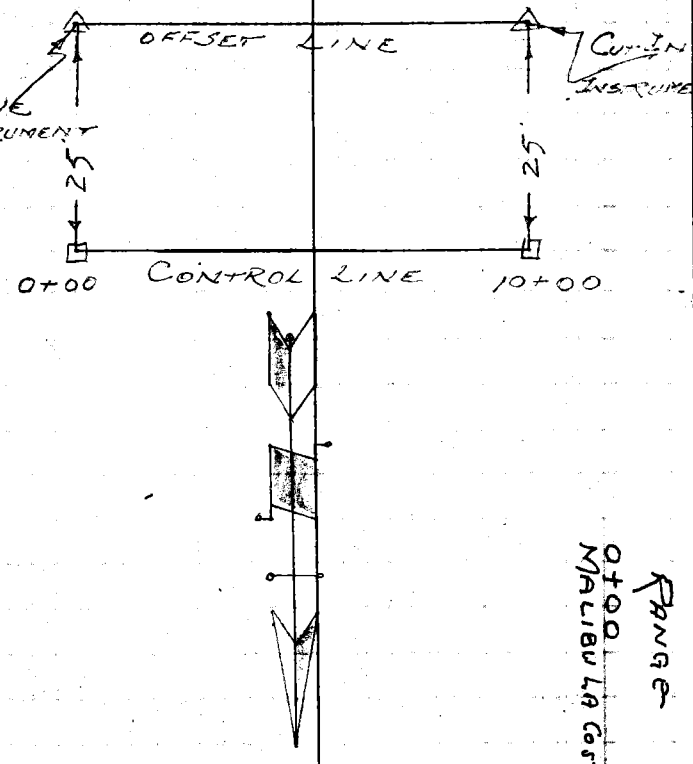
STATION		B. S.	H. I.	F. S.	ELEV.	
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks
0+00	10+00	1	R&Y	8 20	90°32	
		2	R		90°32	
		3	Y		91°18	
		4	R&Y	8 24	91 41	
		5	R		90 21	
		6	Y		90 15	
		7	R&Y	8 26	90 41	
		8	R		91 19	
		9	Y		91 21	
		10	R&Y	8 30	90 29	
		11	R		90 20	
		12	Y		90 00	
		13	R&Y	8 34	90 40	
		14	R		90°16	
		15	Y		90°37	
		16	R&Y	8:36	90°25	
		17	R	8 37	90 17	
		18	Y			
		19				
		20				



Profile Notes Red. ____ Plotted (1) Job No. 8412 Division No. ✓ F. B. 1297 Pg. 161
No. ____ Date ____ Date ____ Survey of BEACH EROSION STUDIES
X-Sec. Notes Chkd. ____ Checked ____ Survey by BLANCHARD Notes M.N. Date 8-13-51
No. ____ Date ____ Date ____ Map No. ____ Indexed John Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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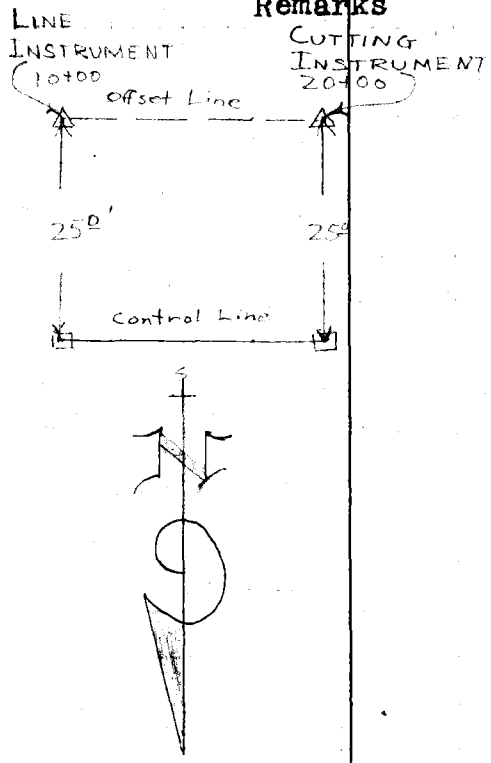
Do not extend notes this side of this line.

STATION Inst. Sight At	On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.
10+00	20+00	1	R-Y	8 51	90 35
25	25	2	R		89 55
		3	Y		89 54
		4	R-Y	8 56	90 00
		5	R		90 09
		6	Y		89 45
		7	R-Y	9:00	89 14
		8	R		89 18
		9	Y		90 03
		10	R-Y	9 02	90 12
		11	R		89 57
		12	Y		90 02
		13	R-Y	9 04	89 04
		14	R		89 54
		15	Y		89 12
		16	R-Y	9 06	89 29
		17	R		
		18	Y		
		19	R-Y		
		20	R		

RANGE
10+00
MALIBU LA COSTA

Remarks



F.B. 1297 Pg. 162
Job No. 8412 Division No. V (2) Notes Red. Plotted Date 8-13-51 Date No. Profile
Survey of BEACH EROSION STUDIES Date 8-13-51 Date No. X-Sec.
Survey by F.H.B. Notes M.S. Notes Chkd. Checked Date No.
Indexed H. C. Johnson Date Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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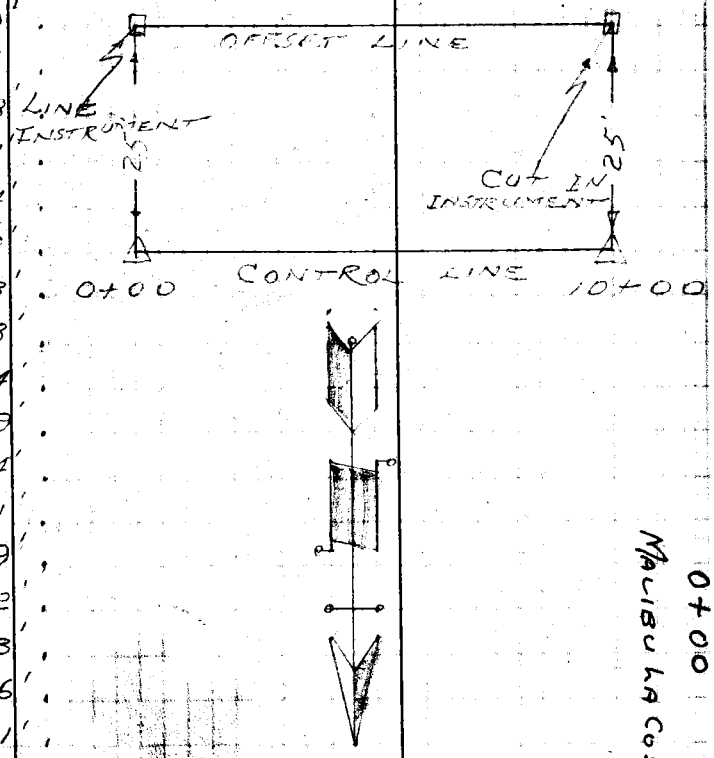
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.
Inst. Sight At On	#	Color	Time	Hor. Ang.
10+00 0+00	1	R-Y	8:20	39° 30'
25' OFF. SET	2	R		37° 31'
	3	Y		34° 38'
	4	R-Y	8:24	32° 54'
	5	R		30° 44'
	6	Y		29° 30'
	7	R-Y	8:26	27° 53'
	8	R		26° 33'
	9	Y		24° 54'
	10	R-Y	8:30	22° 29'
	11	R		20° 34'
	12	Y		19° 41'
	13	R-Y	8:34	15° 49'
	14	R		14° 02'
	15	Y		12° 33'
	16	R-Y	8:36	10° 56'
	17	R	8:37	9° 51'
	18	Y		

Remarks



Profile Notes Red. _____ Plotted _____ Job No. 8412 Division No. _____ F. B. 1297 Pg. 163
No. _____ Date _____ Date _____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. _____ Checked _____ Survey by E.H.B. Notes Shure Date 8-13-51
No. _____ Date _____ Date _____ Map No. _____ Indexed Johnson Date _____

76L298 307 4-50

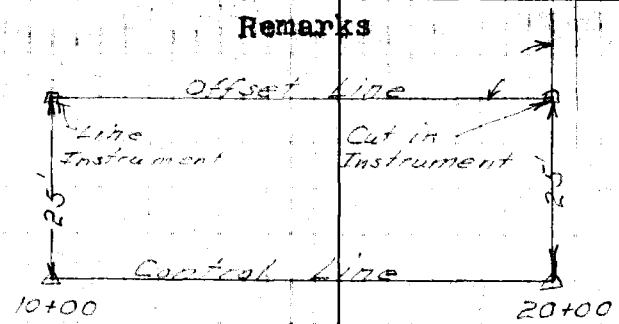
PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 164 Job No. 8412 Division No. V Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date 8-23-51 Date No. X-Sec.
Survey by F.H.B. Notes S. Hale Notes Chkd. Checked
Indexed H. C. Johnson Date Date Date No.

STATION	B. S.	H. I.	F. S.	ELEV.	
Inst. Sight At On	#	Color	Time	Hor. Ang.	Remarks
20+00 10+00	1	RY	8:52	4[illegible]°18'	
25' OFF SET	2	R		[illegible]°11'	
	3	Y		5[illegible]°24'	
	4	RY	8:57	[illegible]°03'	
	5	R		[illegible]°08'	
	6	Y		[illegible]°24'	
	7	RY	9:00	[illegible]°03'	
	8	R		[illegible]°37'	
	9	Y		[illegible]°38'	
	10	RY	9:02	[illegible]°37'	
	11	R		[illegible]°23'	
	12	Y		[illegible]°58'	
	13	RY	9:04	[illegible]°05'	
	14	R		[illegible]°20'	
	15	Y		[illegible]°51'	
	16	RY	9:06	[illegible]°16'	
	17	R			
	18	Y			



CUT IN
10+00
MALIBU LA COSTA

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	8 21 0721	29 4 / 28 2 / 29 0	28.6	4.1	24.5	
2	R		27 0 / 27 3	27.7		23.6	
3	Y		25 7 / 26 2	26.2		22.1	
4	RY	8 24 0724	24 8 / 25 3	25.3 ~~25.2~~	4.1	21.2 ~~21.1~~	
5	R		23 7 / 24 1	24.2		20.1	
6	Y		22 0 / 23 4	22.7		18.6	
7	RY	8 26 0726	21 0 / 22 3	21.8	4.1	17.7	
8	R		20 0 / 22 7	20.8		16.7	
9	Y		18 9 / 19 1	20.2		16.1	
10	RY	8 30 0730	16 9 / 18 5	17.6	4.1	13.5	
11	R		15 2 / 17 7	16.3		12.2	
12	Y		14 1 / 16 0	15.3		11.2	
13	RY	8 34 0734	12 8 / 15 3	13.9	4.0	9.9	
14	R		11 3 / 13 0	12.6		8.6	
15	Y		9 5 / 11 0	10.7		6.7	
16	RY	8 36 0736	8 5 / 10 0	9.3	4.0	5.3	
17	R	8 37 0737	7 0	8.0	4.0	4.0	

BOAT
0+00
MALIBU LA COSTA

Profile No. ____ Notes Red. LCWF Plotted ____ Job No. 8412 Division No. ____ F.B. 1297 Pg. 165
Date 8-20-51 Date ____ Survey of Beach Erosion Studies
X-Sec. No. ____ Notes Chkd. T.M.I. Checked ____ Survey by E.H.B. Notes Sutter Date 8-13-51
Date 2-14-51 Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
#	Color 10+00	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	851 0751	308 291	29.7	4.0	25.7	
2	R		300 281	28.7		24.7	
3	Y		[illegible] 271	27.8		23.8	
4	RY	856 0756	279 259	26.6	4.0	22.6	
5	R		267 249	25.5		21.5	
6	Y		259 239	24.6		20.6	
7	RY	900 0800	239 219	22.6	3.9	18.7	
8	R		238 201	21.3		17.4	
9	Y		209 189	19.6		15.7	
10	RY	902 0802	197 174	18.2	3.9	14.3	
11	R		185 154	16.4		12.5	
12	Y		161 141	14.8		10.9	
13	RY	904 0804	148 128	13.5	3.9	9.6	
14	R		134 113	12.0		8.1	
15	Y		130 90	10.3		6.4	
16	RY	906 0806	100 70	8.0	3.9	4.1	

BOAT 10+00

MALIBU LA COSTA

F. B. 1297 Pg. 166 Job No. 8412 Division No. Notes Red. Lew Plotted Profile
Survey of Beach Erosion Studies Date 8-20-51 Date No.
Survey by F.H.B. Notes Sutter Notes Chkd. T.M.I. Checked X-Sec.
Indexed K. C. Johnson Date 8-13-51 Date 9-14-51 Date No.

76L298 307 5-49

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
X PT 20+00	5.3	20.8		15.5	1X2 IN. Hole 25' LT.	OFFSET - (SHORE ∠ 90° TO BACK LINE)
			4.9	15.9	sand.	
			3.8	17.0	18 LT	
			2.2	18.6	4 "	
			4.1	16.7	0.0	4X4 OVER NON.
			3.7	17.1	"	Sand.
			4.7	16.1	32' RT	
TRANS. ON			4.4	16.4	53 "	
30+00 ℄			3.1	17.7	69 "	
			2.7	18.1	78 "	FENCE LINE.
			7.1	13.7	41 LT	BRK.
3°-22' T.P.	0.2	9.7	11.3	9.5	T.P. 60 (59 Calc)	
5°-00'			5.0	4.7	87 "	ocean FLOOR
5°-47'			7.4	2.3	101	
6°-38'		4.5	8.5	1.2	116	
8°-33		5.0	9.4	0.3	149	
12°-20'		8.5	12.5	-2.8	216	
15°-04		10.2	14.2	-4.5	265	
17°-31		14.0	18.0	-8.3	310	
16°-11		11.9	15.9	-5.2	286	

CALC. IN OFFICE
(RANGE LINE 90° TO BACK LINE - TRANS. SHOULD HAVE BEEN ON 10+00)

SHORE
20+00
MALIBU LA COSTA

Profile No. ___ Notes Red. ___ Plotted ___ Job No. 8412 Division No. ___ 91 Page 167
Date ___ Date ___ Survey of BEACH EROSION STUDIES (MALIBU)
Notes Chkd T.M.I. Checked ___ Survey by C.V. CRUMLEY Notes C.V.C. Date 8-13-51
Date 9-14-51 Date ___ Map No. ___ Indexed Johnson Date ___

76L298 307 5-49

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK. WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F.B. 1297 Pg. 168 | 92 Job No 8412 Division No. Notes Red. Plotted Profile No.
Survey of BEACH EROSION STUDIES (MALIBU) Date Date X-Sec.
Survey by C.V. CRUMLEY Notes C.V.C. Notes Chkd. T.M.I. Checked No.
Indexed L. C. Johnson Date 8-13-51 Date 9-14-51

STATION	B. S.	H. I.	F. S.	ELEV.		
3+00	11	19.8			12 on 3+00 N	SHORE ∡ 90°
			37		Sand	
			36		48' RT.	
			19		61 "	
			29		79 "	
TRANS. ON			26		90 "	
40+00 ℄			21		108 "	FENCE
			44		4' LT	
			60		19 "	
X's			99		41 "	
2°-51' T.P.	20	100.2	116		T.P. 51 "	(Calc 50') Water
4°-17'			53		75' calc "	BPK
5°-18'			73		93' " "	OCEAN FLOOR
5°-32'		37	77		97' " "	" "
6°-15'		4.3	83		110' " "	" "
7°-06'		4.8	88		125' " "	
7°-54'		5.7	97		139' " "	
9°-26		6.3	103		166' " "	
11°-38'		8.4	124		206 " "	
12°-19'		8.6	126		218 "	" "
12°-53'		9.0	130		229 " "	
13°-33'		9.5	135		241 " "	
14°-15'		10.0	140		254 "	" "
15°-19'		11.0	150		274 " "	" "

SHORE
BOTOO
MALIBU LA COSTA

76L298 307 4-50

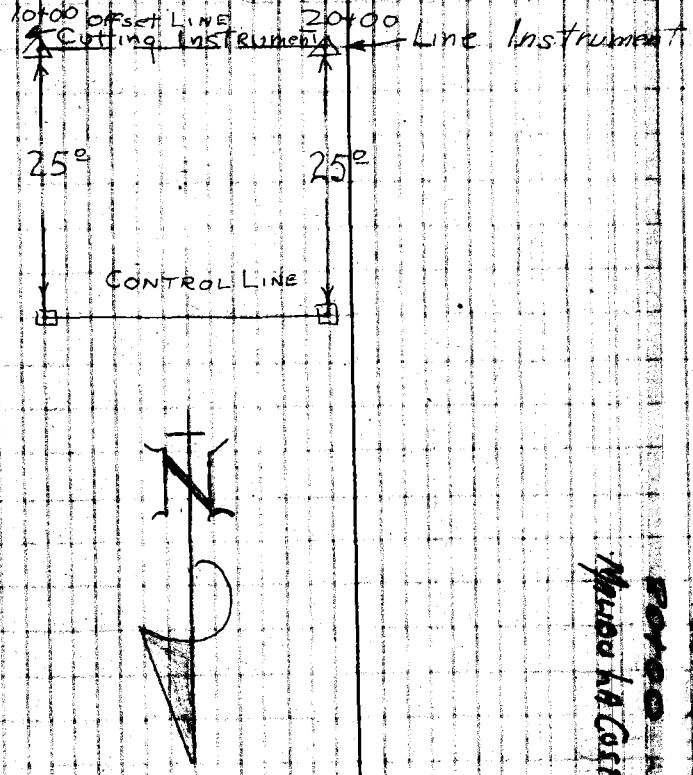
PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.
Inst. Sight At On	#	Color	Time	Hor. Ang.
20+00 10+00	1	R-Y	9:19	89° 18'
25' Off Set	2	R		90° 22'
	3	Y		89° 50'
	4	R-Y	9:25	89° 43'
	5	R		89° 43'
	6	Y		89° 43'
	7	R-Y	9:27	89° 43'
	8	R		89° 08'
	9	Y		89° 14'
	10	R-Y	9:29	89° 55'
	11	R		89° 55'
	12	Y		89° 55'
	13	R-Y	9:31	89° 55'
	14	R		90° 30'
	15	Y		90° 58'
	16	R-Y	9:34	89° 54'
	17	R	9:35	90° 50'
	18	Y		
	19	R-Y		

Remarks



Range
Potrero
Malibu LA Costa

Profile Notes Red. Plotted (3) Job No. 8412 Division No. V F.S. 1297 Pg. 169
No. Date Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. Checked Survey by E.H.B. Notes Shure Date 8-13-51
No. Date Date Map No. Indexed C. Johnson Date

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

F. B. 1297 Pg. 70 | Job No. 8412 | Division No. V | Notes Red | Plotted | Profile
Survey of Beach Erosion Studies | Date 8-13-51 | Date | No.
Survey by E.H.B. | Notes Shore | Notes Chkd | Checked | X-Sec.
Indexed | Date | Date | Date | No.

STATION At	STATION On	B. S. #	H. I. Color	F. S. Time	ELEV. Hor. Ang.	Remarks	
30+000	40+00	1	R-Y	10:05	90°12'	Line Instrument	Cutting Instrument
True	Line	2	R		89°40'	30+00	40+00
		3	Y		89°40'	Control Line	
		4	R-Y	10:08	90°10'		
		5	R		90°10'		
		6	Y		90°10'		
		7	R-Y	10:12	90°25'		
		8	R		90°25'		
		9	Y		90°25'		
		10	R-Y	10:16	90°25'		
		11	R		90°09'		
		12	Y		90°09'		
		13	R-Y	10:19	90°42'		
		14	R		88°01'		
		15	Y	10:20	91°00'		
		16	R-Y				
		17	R				
		18	Y				

RANGE
30+00
MALIBU LA COSTA

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

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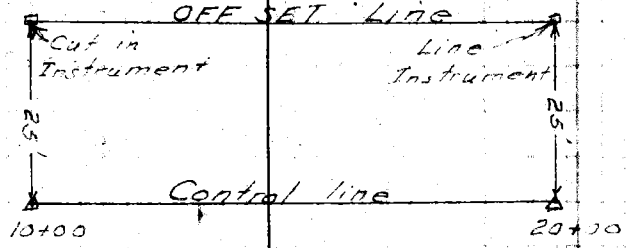
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.
Inst. Sight At On	#	Color	Time	Hor. Ang.
10+00 20+00	1	RY	9:20	41°20'
25' OFFSET	2	R		38°29'
	3	Y		35°14'
	4	RY	9:25	31°24'
	5	R.		29°57'
	6	Y		27°08'
	7	RY	9:27	26°07'
	8	R		24°18'
	9	Y		22°49'
	10	RY	9:29	21°02'
	11	R		19°37'
	12	Y		17°35'
	13	RY	9:31	16°01'
	14	R		15°26'
	15	Y		14°28'
	16	RY	9:34	13°24'
	17	R.	9:35	12°22'

Remarks



CUT IN
20+00
MALIBU LA COSTA

Profile Notes Red ____ Plotted ____ Job No. 8412 Division No. V F.B. 1297 Pg. 171
No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.H.B. Notes E.R.V. Date 8-13-51
No. ____ Date ____ Date ____ Map No. ____ Indexed Johnson Date ____

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
40+00	30+00	1	RY	10:06	41°05'		
		2	R		3[illegible]°07'		
		3	Y		3[illegible]°03'		
		4	RY	10:09	34°19'		
		5	R		31°50'		
		6	Y		27°03'		
		7	RY	10:13	23°58'		
		8	R		2[illegible]°15'		
		9	Y		21°11'		
		10	RY	10:17	19°37'		
		11	R		17°44'		
		12	Y		16°14'		
		13	RY	10:19	15°27'		
		14	R		13°52'		
		15	Y	10:21	1[illegible]°00'		
		16	RY				

CUT IN
30+00
MALIBU LA COSTA

F. B. 1297 Pg. 172
Job No. 8412 Division No. V Notes Red. Plotted Profile
Survey of Beach Erosion Studies Date Date No. X-Sec.
Survey by F.H.R. Notes E.R.V. Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION 20+00		B. S.	H. I.	F. S.	ELEV.		
#	Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth	Remarks
1	RY	919 0819	310 290 298	29.7	3.9	25.8	
2	R		280 294	28.6		24.7	
3	Y		260 270	27.1		23.2	
4	RY	925 0825	242 251	25.1	3.8	21.3	
5	R		231 241	23.8		20.0	
6	Y		221 229	22.8		19.0	
7	RY	927 0827	203 212	21.2	3.8	17.4	
8	R		190 200	19.7		15.9	
9	Y		179 179	18.6		14.8	
10	RY	929 0829	162 167	16.8	3.8	13.0	
11	R		150 150	15.6		11.8	
12	Y		132 140	13.8		10.0	
13	RY	932 0832	119 125	12.6	3.8	8.8	
14	R		109 106	11.4		7.6	
15	Y		90 90	9.5		5.7	
16	RY	934 0834	70 83	7.7	3.8	3.9	
17	R	935 0835	60	6.8	3.8	3.0	

BOAT
20+00
MALIBU LA COSTA

Profile Notes Red. Blue Plotted Job No. 8412 Division No. F.B. 1297 Pg. 173
No. Date 8-20-51 Date Survey of Beach Erosion Studies
X-Sec. Notes Chkd. T.M.I. Checked Survey by F.H.B. Notes Sutter Date 8-13-51
No. Date 2-14-51 Date Map No. Indexed Johnson Date

76L298 307 4-50

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
30+00						
#	Color	Time	Meas. Depth	Bottom Tide	Adj. Depth	Remarks
			302			
1		1006 0906	289	29.3	3.7	25.6
2			279	28.3		24.6
3			267	27.2		23.5
4		1009 0909	264 252	25.8	3.7	22.1
5			239	24.3		20.6
6			224 216	21.9		18.2
7		1013 0913	212 201	20.5	3.7	~~17.0~~ 16.8
8			196 183	18.7		15.0
9			180 165	17.0		13.3
10		1017 0917	160 142	14.8	3.7	11.1
11			128 112	11.7		8.0
12			117 107	11.0	3.7	7.3
13		1019 0919	104 89	9.4	3.7	5.7
14			90 72	7.8	3.6	4.2
15		1021 0921	75 55	6.2	3.6	2.6

BOAT
30+00
MALIBU LA COSTA

F. B. 1297 Pg. 174
Job No. 8412 Division No. Notes Red. LCMC Plotted Profile
Survey of Beach Erosion Studies Date 8-20-51 Date No.
Survey by E.H.B. Notes Sutter Notes Chkd. T.M.L. Checked X-Sec.
Indexed C. Johnson Date 8-13-51 Date 9-14-51 Date No.

5-40

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
40+00	44	188		144	1X2 ON BEACH FL.	SHORE ∡ 90°
			44	144	28' RT	
			39	149	44 "	
			32	156	57 "	
TRAK'S OK			36	152	77 "	
30+00 ±			41	147	100 "	
			3.0	158	125 "	
			1.3	175	132' "	Fence
			41	147	25 LT.	
			6.0	128	46 "	
—			85	103	72 "	
5°-41' T.P.	26	9.4	120	68	T.P. TAPE 100. " (calc 100')	Water
6°-44'			47	47	118' calc.	
8°-25'			73	21	148 "	BRK
8°-48'		3.5	78	16	155' "	OCEAN EDGE
10°-26		4.8	88	06	184 "	" "
12°-12'		6.0	100	-3.6	216 "	" "
14°-25'		7.6	116	-2.2	257' "	" "
16°-52'		9.7	137	-4.3	303' "	" "
18°-42		12.0	160	-6.6	338' "	" "

SHORE
Aoroo
MALIBU 49 (KTTV)

Profile No. ____ Notes Red. ____ Date ____ Plotted ____ Date ____ Job No. 5412 Division No. ____ Survey of BEACH EROSION STUDIES (MALIBU)
X-Sec. No. ____ Notes Chkd. TMI Date 9-14-51 Checked ____ Date ____ Survey by C.V. CRUMLEY Notes C.V.C. Date 8-13-51
Map No. ____ Indexed by ____ Date ____

93 F.B. 297 Pg. 175

F.B. 1297 PG. 176

Job No._____ Division No._____ Notes Red._____ Plotted_____ Profile No._____

Survey of_____ Date_____ Date_____

Survey by_____ Notes_____ Notes Chkd._____ Checked_____ X-Sec.

Indexed_____ Date_____ Date_____ Date_____ No._____

STATION	B. S.	H. I.	F. S.	ELEV.	

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

Do not extend notes this side of this line.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK. WITH DATE AND NAME OF PERSON MAKING CHANGE.

76L298 307 5-49

76L298 307 4-50

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
40+00	30+00	1	R-Y	10:33	90°28		
		2	R		89°47		
		3	Y		90°12		
		4	R-Y	10:38	90°12		
		5	R		90°17		
		6	Y		90°17		
		7	R-Y	10:42	90°17		
		8	R		90°17		
		9	Y		90°06		
		10	R-Y	10:44	91°-00		
		11	R		90°20		
		12	Y		90°35		
		13	R-Y	10 47	90°23		
		14	R		90 52		
		15	Y		91 00		
		16	R-Y	10 48	89°32		
		17	R				
		18	Y				
		19	R-Y				
		20	R				

RANGE
40+00
MALIBU LA COSTA

Profile Notes Red. _____ Plotted _____ Job No. 8412 Division No. V
No. _____ Date _____ Date _____ Survey of BEACH EROSION STUDIES
N-Sec. Notes Chkd. _____ Checked _____ Survey by F.H.B. Notes M.S. Date 8-13-57
No. _____ Date _____ Date _____ Map No. _____ Date _____

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	

F. S. 1297 Pg. 178

Job No. ____ Division No. ____ Notes Red. ____ Plotted ____ Profile ____

Survey of ____ Date ____ Date ____ No. ____

Survey by ____ Notes ____ Notes Chkd ____ Checked ____ X-Sec. ____

Indexed ____ Date ____ Date ____ Date ____ No. ____

76L298 307 4-50

PLEASE RETURN TO
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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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Do not extend notes this side of this line.

STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Color	Time	Hor. Ang.	Remarks	
30+00	40+00	1	RY	10:34	41°10'		
		2	R		40°46'		
		3	Y		39°09'		
		4	RY	10:38	36°11'		
		5	R		33°58'		
		6	Y		28°04'		
		7	RY	10:43	26°33'		
		8	R		24°37'		
		9	Y		23°36'		
		10	RY	10:45	21°09'		
		11	R		21°05'		
		12	Y		19°21'		
		13	RY	10:48	18°08'		
		14	R		17°08'		
		15	Y		16°55'		
		16	RY	10:49	16°03'		

Cut in
40+00
Malibu LA Costa

Profile Notes Red. ____ Plotted ____ Job No. 8412 Division No. V F.B. 1297 Pg. 179
No. ____ Date ____ Date ____ Survey of Beach Erosion Studies
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.H.B. Notes E.R.V. Date 8-13-51
No. ____ Date ____ Date ____ Map No. ____ Indexed E. C. Johnson Date ____

B. 1297 Pg. 180

Job No. _____ Division No. _____ Notes Red. _____ Plotted _____ Profile

Survey of _____ Date _____ Date _____ No. _____

Survey by _____ Notes _____ Notes Chkd. _____ Checked _____ X-Sec.

Indexed _____ Date _____ Date _____ Date _____ No. _____

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Color	Time	Hor. Ang.	

Do not extend notes this side of this line.

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

7EL298 307 4-50

76L298 307 4-50

PLEASE RETURN TO
LOS ANGELES COUNTY SURVEYOR
726 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

Profile No. ____ Date ____ Notes Chkd. T.M.L. Date 9-19-51
X-Sec. No. ____ Date ____ Checked ____ Date ____
Notes Red ____ Plotted ____ Date ____ Map No. ____ Date ____
Job No. 8412 Division No. ____
Survey of Beach Erosion Studies
Survey by F.H.B. Notes Sutter Date 7-13-51

STATION	B. S.	H. I.	F. S.	ELEV.			
40+00							
# Color	Time	Meas. Depth	Bottom	Tide	Adj. Depth		Remarks
		293					
1 RY	10 33	280	28.4	3.6	24.8	✓	
	0933	280					
2 R		270	27.3		23.7	✓	
		275					
3 Y		258	26.4		22.8	✓	
		258					
4 RY	1038	245	24.9	3.6	21.3	✓	
	0938	250					
5 R		235	24.0		20.4	✓	
		230					
6 Y		216	22.1		18.5	✓	
		210					
7 RY	1042	205	20.8	3.5	17.3	✓	
	0942	197					
8 R		185	18.9		15.4	✓	
		181					
9 Y		171	17.4		13.9	✓	
		160					
10 RY	1044	140	14.7	3.5	11.2	✓	
	0944	139					
11 R		122	12.8		9.3	✓	
		120					
12 Y		105	11.0 ~~10.5~~		7.5	✓	
		104					
13 RY	1047	90	9.5	3.5	6.0	✓	
	0947	97					
14 R		80	8.6		5.1	✓	
		90					
15 Y		70	7.7		4.2	✓	
		73					
16 RY	1049	60	6.4	3.5	2.9	✓	
	0949						

Best
Marlow Halcrow

LOS

7

...ONS OR CHANGES
...UST BE MADE OR
..., WITH DATE AND
...MAKING CHANGE.

STATION	B. S.	H. I.		ELEV.		
#	Color	Time	Meas. Depth	Bottom Tide	Adj. Depth	Remarks

Notes Red. Plotted
Date Date
Notes Chkd. Checked
Date Date