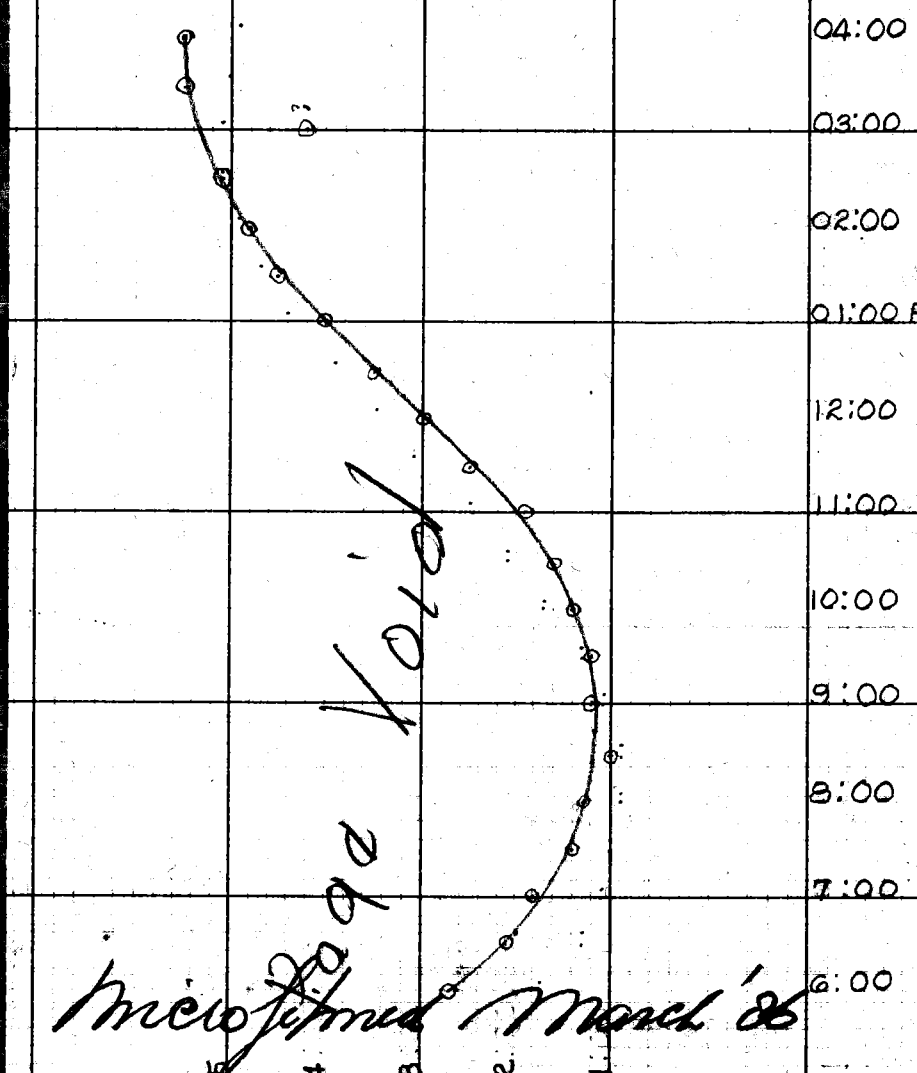
Notes Ck'd by
Map No.
Office Work J.S.H.
Checked
Date 7-25-58

Survey of Beach Erosion
W. O. Tape No. St'd. °F
Surveyed by Van Deren
Notes J.S.H. Date 7-22-58
Indexed

F. B. Pg.



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Microfilmed March '86

Profile No. ____ Notes Red. ____ Plotted ____ Job No. ____ Division No. ____ F. B. ____ Pg. ____
Date ____ Date ____ Survey of ____
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by ____ Notes ____ Date ____
Date ____ Date ____ Map No. ____ Indexed ____ Date ____

Tide Gage Reading For 7-22-58
Gage Was broken on 7-21-58

3.0 on Datum Line

Time Check gage Time = 10.35 High —
P. D. S. T. = 11.37 Low —

Station	Inst. Sight At On	# Rec. Adj. Time Hor. Ang.	Remarks	Standard Time	Reading	P.D.S.T.
				5-00 AM	2.7	6-00
				5-30 "	2.1	6-30
				6-00 "	1.8	7-00
				6-30 "	1.4	7-30
				7-00 "	1.3	8-00
				7-30 "	1.0	8-30
				8-00 "	1.2	9-00
				8-30 "	1.2	9-30
ELEV.				9-00 "	1.4	10-00
				9-30 "	1.6	10-30
				10-00 "	1.9	11-00
F. B.				10-30 "	2.5	11-30
				11-00 "	3.0	12-00
				11-30 "	3.5	12-30
H. I.				12-00 "	4.0	1-00
				12-30 PM	4.5	1-30
				1-00 "	4.8	2-00 ~~1-30~~
				1-30 "	5.1	2-30
B. B.				2-00 "	4.2	3-00 ~~2-00~~
				2-30 "	5.5	3-30 ~~2-30~~
				3-00 "	5.5	4-00 ~~3-00~~
						~~3-30~~ ~~4-00~~

Void

Page

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76298 S & E #307—7-55

76298 S & E #307—7-55

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F. B. Pg. Job No. Division No. Notes Red. Plotted Profile
Survey of Date No. X-Sec.
Survey by Notes Date Notes Chkd. Date Checked Date No.
Indexed

STATION	S. S.	H. I.	F. S.	ELEV.		
Inst. At / Sight On	#	Depth Rec. / Adj.	Time	Hor. Ang.	Remarks	

F. B. 230B Pg. 3

Readings Aug. 4

See Pg. 4 for J.H. & Etc.

Tide Gauge Reading at Los Angeles Outer Harbor

for July 21, 1958

Gauge Time	Reading	P.C.S.T.
7:00	+.5	8:00
:30	+.9	:30
8:00	+1.2	9:00
:30	+1.8	:30
9:00	+2.1	10:00
:30	+2.9	:30
10:00	+3.2	11:00
:30	+3.9	:30
11:00	+4.2	12:00
:30	+4.7	:30
12:00	+5.0	1:00
:30	+5.1	:30
13:00	+5.2	2:00

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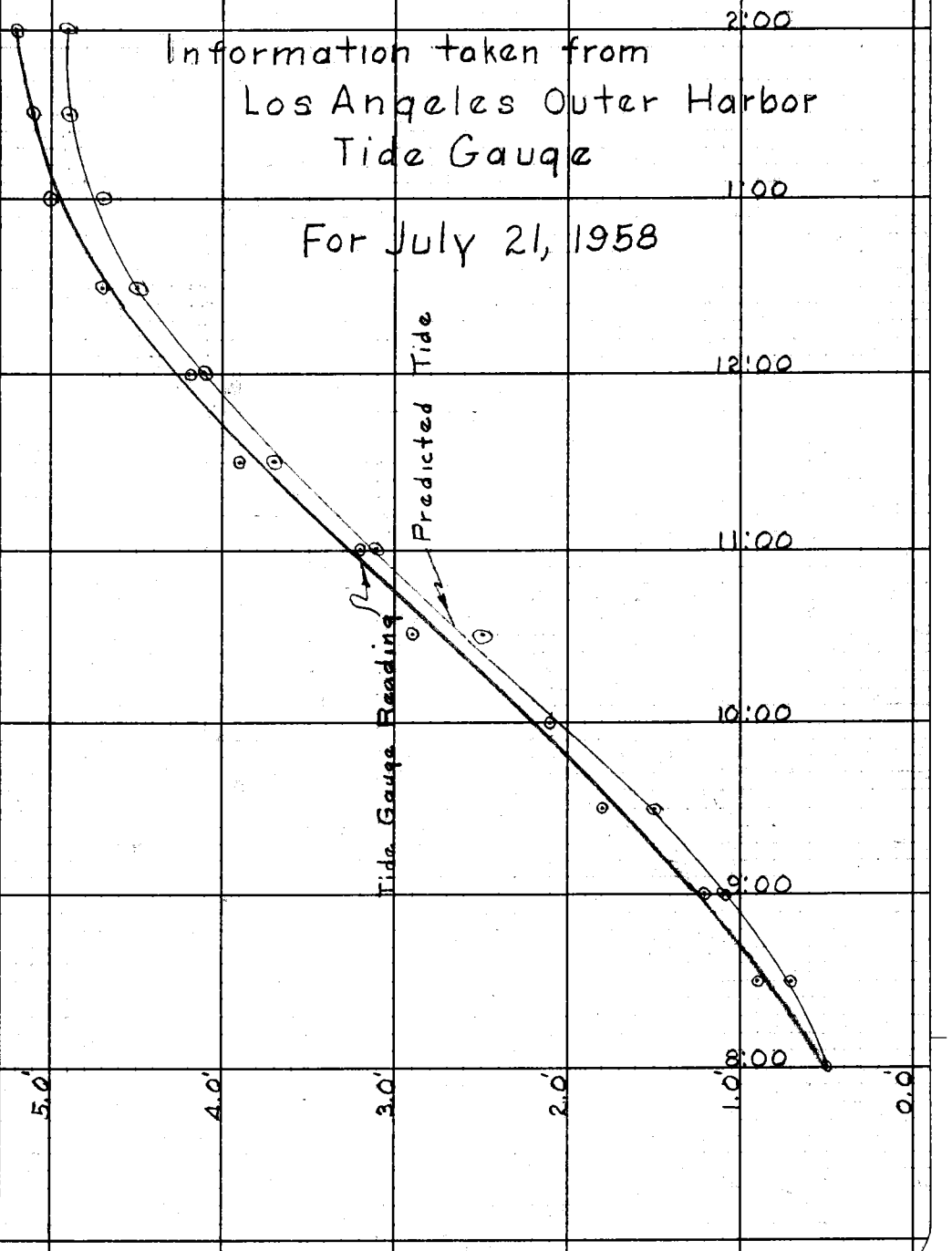
Notes Ck'd by J.S.H.	Survey of 8910.88
Map No.	JN Tape Std °F
Office Work J.S.H.	Surveyed by
Checked K.P.K.	Notes J.S.H. Date 8-4-58
Date	Indexed

F. B. 2308 Pg. 4

P.D.S.T.

Information taken from
Los Angeles Outer Harbor
Tide Gauge

For July 21, 1958



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76F3095 CE #247—3-57

Profile No.	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308 Pg. 5
	Date	Date	Survey of Beach Erosion		
X-Sec. No.	Notes Chkd.	Checked	Survey by Van Deren	Notes Van	Date 7-21-58
	Date	Date	Map No.	Indexed C. Johnson	Date 7-22-58

JN 0300.02

Beach Erosion survey on stationing Between the North Jetty of Ballona Creek & the new Jetty just North of Ballona Creek.

191+00 = N. edge of Jetty on North side of Ballona Creek

199+65 = South side of new Jetty just North of Ballona Creek

7-21-58
Van Deren
Anderson
Krammen
Bazen
Turrill
Peterson

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

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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76298 S & E #307—7-55

F. B. 2308 Pg. 6 Job No. 0300.07 Division No. 10 Notes Red. Plotted Profile

Survey of Beach Erosion Date 7-21-58 Date No.

Survey by Van Deren Notes Van Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

7-21-58

3.0 on Datum line

Time check Gage time = High=

P.D.S.T = Low=

Standard time	Reading	P.D.S.T.	
12.57	42	1.57	

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

76298 S & E #307—7-55

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STATION	B. S.	H. I.	F. S.	ELEV.		
B.M. 48-1	528	20 70		15418	B.M. 48-1	(F.B. 1369)
T.P.	-320	18 36	554	15 16	ELEV. PER F.B. 2100-173	
T.P.	506	17 41	601	12 35	SPY DISC 27-M IN 8" MON, 1'N OF N	
T.P. 190+30	174	13 06	609	11 32	EDGE OF CONC. PAV. OF 57th H. 25.5'	
					W. OF W. Cb. OF PAC. AVE.	
T.P.	982	14 29	859	4 47	192+00, 90 FT. LEFT	
T.P.	680	11 90	919	5 10	194+00, 75 FT. LEFT	
T.P.	837	13 29	698	4 92	196+00, 77 FT. LEFT	
T.P.	1158	15 70	917	4 12	198+00, 78 " "	
T.P.	643	19 32	281	12 89		
T.P.	508	20 11	429	15 03		
T.P.	506	19 71	546	14 65		
B.M. N-11			600	13 71	B.M. N-11 ELEV 13.753 F.B. 2100-174	
					4" BRASS CAP MON. IN WELL 8" BELOW	
					SURFACE OF WALK.	

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 PG. 7
Date ____ Date ____ Survey of BEACH EROSION
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Engl. Notes G.F.D. Date 7-21-58
Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76L298 S & E #307 9-54

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STATION	B. S.	H. I.	F. S.	ELEV.	Inst at 193+00	Sight on 191+00
192+00	2 71	7 18		4 47	90' L., See Pg. 7	
191+00		7 2	4 3	2 9	30° 26' 118'	Inshore 191+00
			9 1	-1 9	38° 29' 159'	
			13 3	-5 1	52° 00' 256'	
			15 8	-8 6	57° 48' 318'	
			18 0	-10 8	62° 25' 383'	

Note 740' Seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 9
No. ____ Date ____ Date ____ Survey of Beach Erosion Surv.
X-Sec. Notes Chkd. ____ Checked ____ Survey by English Notes Ed. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308 Pg. 11
No.	Date	Date	Survey of Beach Erosion		
X-Sec.	Notes Chkd.	Checked	Survey by Van Deren	Notes T.O.	Date 7-21-58
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date

RANGE LINE

191+00

N-11

Remarks

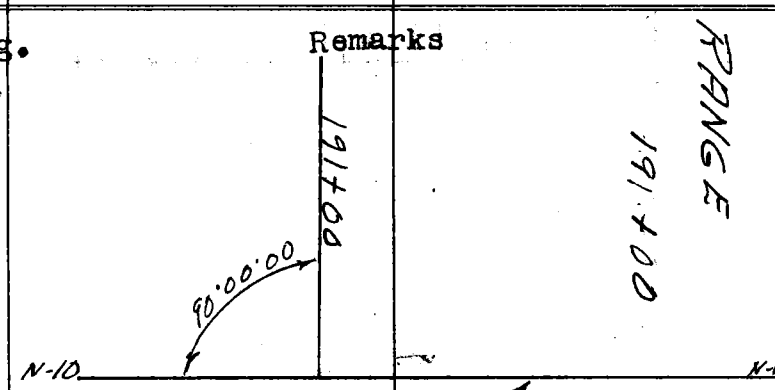
191+00

90°00'00"

740' offset line

N-10

STATION	B. S.	H. I.	F. S.	ELEV.
Inst. At 191+00 Sight On N-10	#	Depth Rec. Adj.	Time	Hor. Ang.
	1		8 35	90° 00
	2			"
	3			"
	4			"
	5			"
	6			"
	7			"
	8			"
	9			"
	10			"
	11			"
	12			"
	13			"
	14			"
	15			"
	16			"
	17			"
	18			"
	19			"



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STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
19400	N-10	20			90° 00		
		21			" "		
		22			" "		
		23			" "		
		24			" "		
		25			" "		
		26			" "		
		27			" "		
		28			" "		
		29			" "		
		30			" "		
		31			" "		
		32		8 44			

F. B. 2308 PG. 12 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date Date No.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed Date 7-21-58 Date Date No.

76298 S & E #307—7-55

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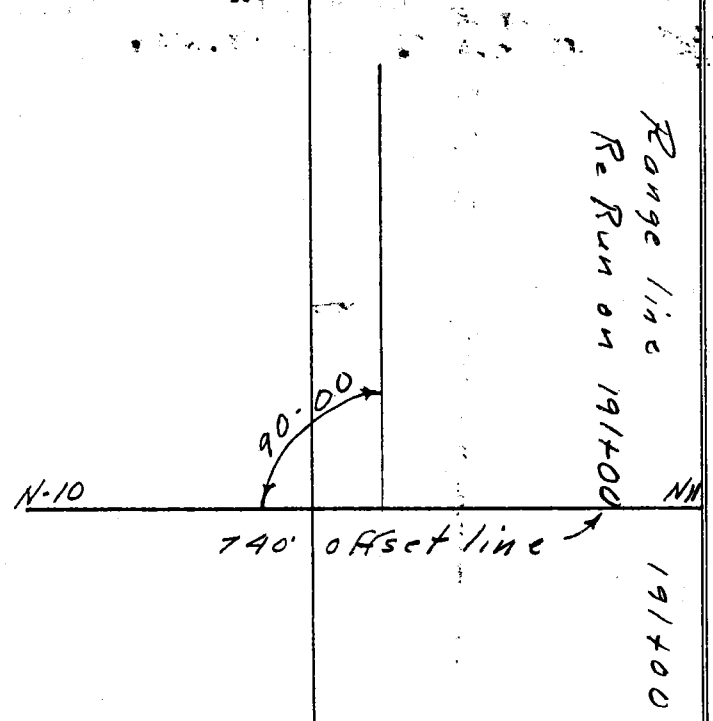
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
191+00	N-10						
		1			12.20	90 00	
		2				" "	
		3				" "	
		4				" "	
		5				" "	
		6				" "	
		7				" "	
		8				" "	
		9				" "	
		10				" "	
		11				" "	
		12				" "	
		13				" "	
		14				" "	
		15				" "	
		16				" "	
		17				" "	
		18				" "	
		19				" "	



Profile Notes Red. ____ Plotted ____ Job No. 030003 Division No. 10 F. B. 2308 Pg. 13
No. ____ Date ____ Date ____ Survey of Beach Erosion
X-Sec. Notes Chkd. ____ Checked ____ Survey by VanDeren Notes Vog Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Index Date ____
C. Johnson

F. B. 2308 Pg. 14 | Job No. 0300.02 | Division No. 10 | Notes Red. | Plotted | Profile

Survey of Beach Erosion | Date 7-21-56 | Date | No.

Survey by Van Deren | Notes Van | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | No.

76298 S & E #307—7-55

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STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On		Depth # Rec. Adj.	Time	Hor. Ang.		Remarks
19+00 N-10			12 27	90.00		

76298 S & E #307—7-55

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STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
199+65	N-10	1	30.9	31.3	8:35	67° 04'	2,045	
		2	30.3	30.7		66° 27'	1,984	Cut in Line 191 + 00
		3	29.6	30.0		66° 00'	1,943	N. Side of Ballona Creek
		4	28.6	29.0		65° 33'	1,902	
		5	28.3	28.7		64° 54'	1,847	
		6	27.5	27.9		64° 14'	1,792	
		7	26.4	26.8		63° 33'	1,739	
		8	25.9	26.3		63° 02'	1,700	
		9	25.6	26.0		62° 22'	1,652	Cut in Line 191+00
		10	25.3	25.7		61° 36'	1,600	
		11	24.6	25.0		60° 40'	1,540	
		12	23.9	24.3		59° 34'	1,472	
		13	23.0	23.4		58° 28'	1,410	
		14	19.8	20.2		57° 02'	1,334	
		15	14.5	14.9		56° 04'	1,285	
		16	9.0	9.4		55° 20'	1,251	
		17	9.4	9.8		54° 03'	1,193	
		18	9.7	10.1		53° 01'	1,149	N-10
		19	14.2	14.6		51° 50'	1,100	Note 740' seaward offset
		20	12.5	12.9		51° 10'	1,074	

Boat = +1.0'
Zero = +0.3'
Tide = -0.9'
+0.4'

199+65

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 300.03 Division No. 10 F. B. 2308 Pg. 15
X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of Beach Erosion Study Survey by Walker & Notes Cut Date 11-21-56
Date ____ Date ____ Map No. ____ Indexed ____ Date ____

76298 S & E #307—7-55

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STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. B. Time	ELEV. Hor. Ang.	Remarks
199+65	N-10	21	11.8	12.1		50° 16'	1,041
		22	—	—		49° 40'	1,019 Cut in Line 191+00
		23	17.3	17.6?		48° 55'	992
		24	17.7	18.0		47° 39'	949
		25	19.2	19.5		46° 25'	909
		26	18.6	18.9		45° 04'	867
		27	18.1	18.4		43° 54'	832
		28	17.9	18.2		42° 41'	798
		29	17.7	18.0		41° 24'	763
		30	17.7	18.0		40° 20'	734
		31	18.1	18.4		42° 09'?	730-?
		32	18.2	18.5	8:44	40° 53'?	723-?
		33					
		34					

Boat = + 1.0
Zero = + 0.3
Tide = - 1.0
+ 0.3

F. B. 2308 Pg. 16
Job No. 2300.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 7-21-58 Date No.
Survey by Van Deren Notes R.T. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

#307—7-55

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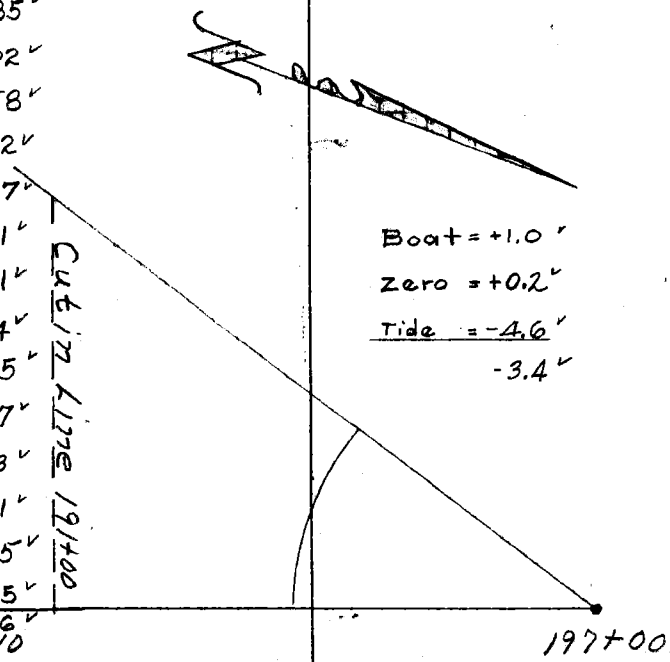
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	
197+00	N-10	1	28.2	24.8	12:20	69° 09'	1,576
		2	28.4	25.0		68° 45'	1,543
		3	28.6	25.2		68° 28'	1,520
		4	28.7	25.3		68° 00'	1,485
		5	27.4	24.0		66° 50'	1,402
		6	26.6	23.2		66° 10'	1,358
		7	23.6	20.2		65° 25'	1,312
		8	—	—		64° 07'	1,237
		9	13.7 ?	10.3 ?		62° 40'	1,161
		10	14.5	11.1		62° 16'	1,141
		11	16.1	12.7		61° 41'	1,114
		12	16.6	13.2		61° 03'	1,085
		13	15.9	12.5		60° 25'	1,057
		14	—	—		59° 51'	1,033
		15	—	—		58° 01'	961
		16	23.6	20.2		57° 19'	935
		17	—	—		53° 17'	805
		18	17.7	14.3		48° 50'	686 N-10
		19	—	—		45° 35'	613
		20	—	—	12:27	40° 39'	515

Remarks

Rerun of Cut in Line 191+00



Boat = +1.0
Zero = +0.2
Tide = -4.6
-3.4

Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 17
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deven Notes R.T. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

F. B. 2308 Pg. 18 | Job No. 0300.02 | Division No. 10 | Notes Red. | Plotted | Profile

Survey of Beach Erosion Study | Date 7-21-58 | Date | No.

Survey by Van Deren | Notes R.T. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | Date | No.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. Sight At On # Depth Rec. Adj. Time Hor. Ang.	Remarks
197+00						
N-10						
					21	
						Return of Cut in Line 191+00

76298 S & E #307—7-55

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7621

76L298 S & E #307 9-54

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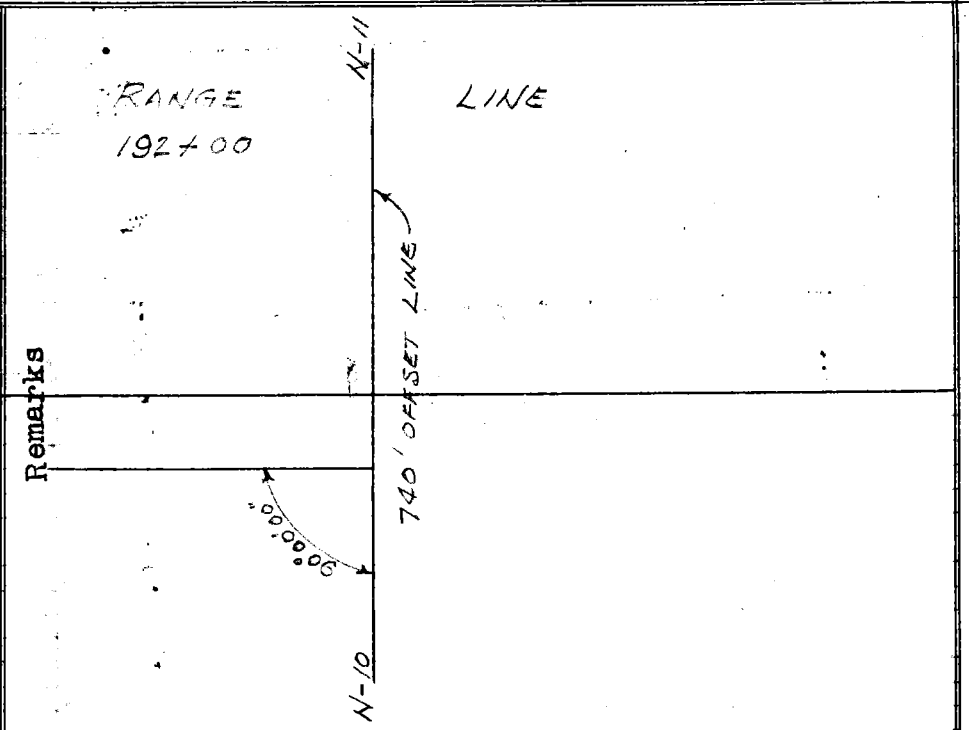
STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 193+00	Sight on 192+00
		7 18			See pg. 9	
192+00		7 2				Inshore 192+00
			2 7	4 5	42°33' 92'	
			6 9	0 3	51°23' 125'	
			9 9	-2 7	59°38' 171'	
			12 8	-5 6	[illegible] 239'	
			15 6	-8 4	69°15' 264'	
			16 4	-9 2	71°45' 303'	
			18 6	-11 4	74°52' 370'	
			19 0	-11 8	75°59' 429'	
T.P.			2 08	5 10		

Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F. B. 2308 Pg. 19
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by English Notes Edl. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

Profile No.	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308 Pg. 21
	Date	Date	Survey of BEACH EROSION		
X-Sec. No.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-21-58
	Date	Date	Map No.	Indexed C. Johnson	Date



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
192+00 N-10			8 57		

PLEASE RETURN TO
LOS ANGELES COUNTY ENGINEER
700 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.

76298 S & E #307—7-55

F. B. 2308 PG. 22 | Job No. 030002 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date _____ Date _____ No. _____

Survey by VAN DEREN Notes T.O. Notes Chkd. _____ Checked _____ X-Sec.

Indexed L. C. Johnson Date 7-21-58 Date _____ Date _____ No. _____

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

76298 S & E #307—7-55

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76298 S & E #307—7-55

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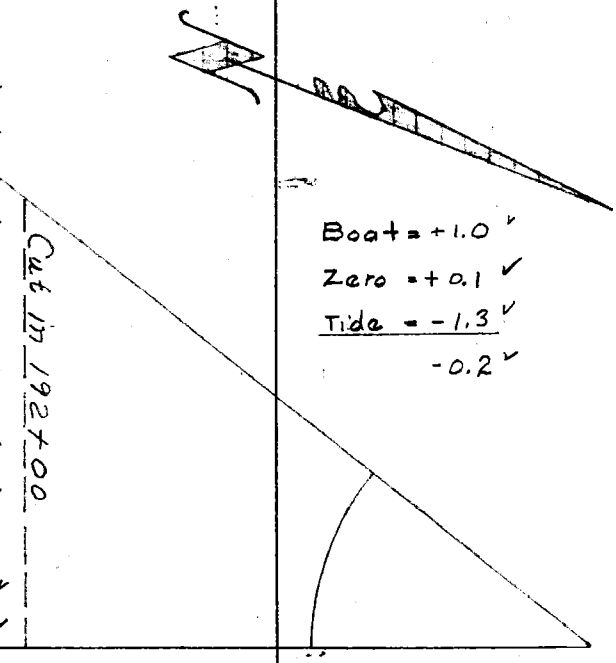
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
199+65	N-10	1	28.9	28.7	8:59	68° 17'	1,921
		2	28.3	28.1		67° 42'	1,865 Cut in Line 192+00
		3	27.4	27.2		66° 40'	1,773
		4	26.7	26.5		66° 07'	1,727
		5	26.3	26.1		65° 40'	1,691
		6	26.1	25.9		65° 00'	1,641
		7	25.3	25.1		64° 18'	1,590
		8	24.4	24.2		63° 30'	1,535
		9	24.1	23.9		62° 20'	1,459
		10	24.3	24.1		61° 35'	1,414
		11	24.1	23.9		60° 57'	1,379
		12	23.8	23.6		60° 12'	1,336
		13	23.6	23.4		59° 30'	1,290
		14	23.3	23.1		58° 26'	1,245
		15	23.2	23.0		58° 08'	1,231
		16	22.7	22.5		57° 09'	1,185
		17	22.4	22.2		56° 15'	1,145
		18	22.1	21.9		55° 06'	1,097 N-10
		19	21.8	21.6		54° 24'	1,069
		20	21.5	21.3		53° 28'	1,033



Note 740' seaward offset

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F. B. 2308 Pg. 23
Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Van Dexen Notes Fl. Date 4-21-56
Date ____ Date ____ Map No. ____ Indexed ____ Date ____

C. Johnson

76298 S & E #307—7-55

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F. B. 2308 Pg. 24 Job No. 3200.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 2-21-58 Date No. X-Sec.
Survey by Van Deren Notes RT Notes Chkd. Checked
Indexed K. C. Johnson Date Date Date No.

STATION Inst. At	Sight On	B. S. #	H. I. Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
199+65	N. 10	21	21.0	20.8		52° 05'	982	
		22	20.6	20.4		50° 33'	929	Cut in Line 192+00
		23	20.4	20.2		49° 33'	897	
		24	20.1	19.9		48° 06'	853	
		25	18.8	18.6		45° 35'	781	
		26	18.5	18.3		44° 53'	762	
		27	18.1	17.9		43° 00'	714	
		28	17.4	17.2		41° 35'	682	Boat = +1.0
		29	16.9	16.7		40° 08'	645	zero = +0.1
		30	14.9	14.7		39° 29'	585	Tide = -1.3
		31	14.5	14.3		38° 20'	562	-0.2
		32	14.1	13.9		39° 39'	528	
		33	13.8	13.6		39° 05'	519	
		34	13.5	13.3	9:07	32° 39'	490	

76L298 S & E #307 9-54

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STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 195+00	Sight on 193+00
T.P.	2.24	7 34		5 10		
193+00		7 3	1 9	5 4	20° 10' 73'v	Inshore 193+00
			10 5	-3 2	40° 00' 168'v	
			12 9	-5 6	46° 24' 210'v	
			13 3	-6 0	46° 58' 214'v	
			15 6	-8 3	51° 36 252'v	
			17 1	-9 8	55° 26 290'v	
			18 0	-10 7	58° 25 325'v	

Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 23308 Pg. 25
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by English Notes Ed. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Index No. C. Johnson

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 0	F. B. 2808	Pg. 27
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes TO	Date 7-21-58	
No.	Date	Date	Map No.	Indexed C. Johnson		

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 ENGINEER
700 LOS ANGELES COUNTY ENGINEERING BLDG.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On 193+00 N-10	#	Depth Rec. Adj.	Time	Hor. Ang.	
	1			90° 00'	
	2				
	3				
	4				
	5				
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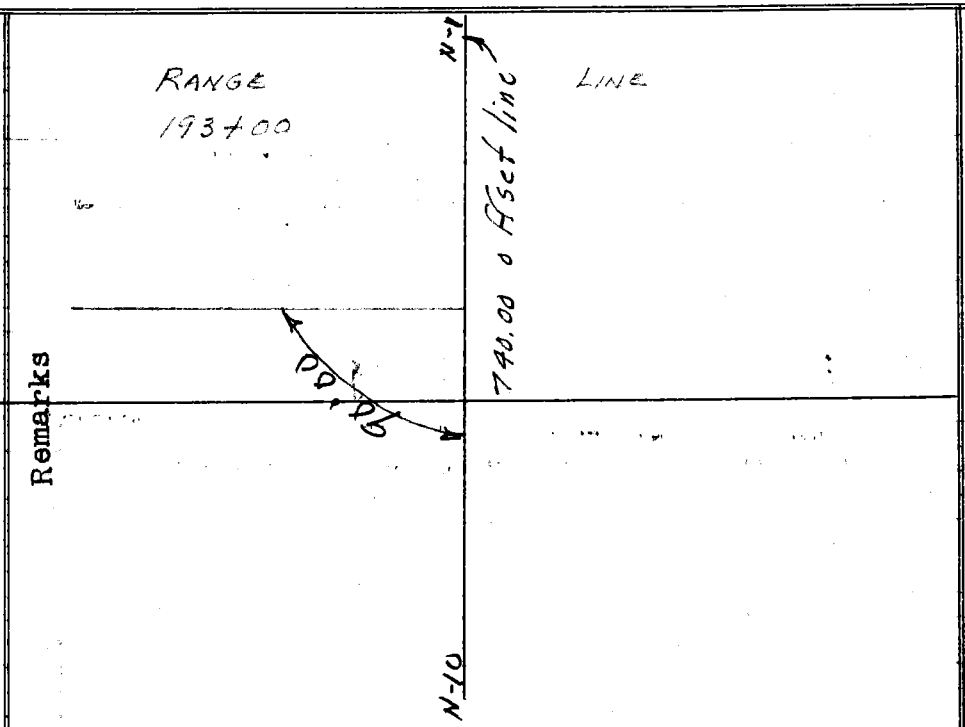

76298 S & E #307—7-55

F. B. 2308 Pg. 28 | Job No. 030002 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date _____ Date _____ No. _____

Survey by VAN DEREN Notes T.O. Notes Chkd. _____ Checked _____ X-Sec.

Indexed A. G. Johnson Date 7-21-58 Date _____ Date _____ No. _____

76298 S & E #307—7-85

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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.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
1530 X-10	20			70 00	
	21				
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76298 S & E #307—7-55

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Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
199+65	N-10	1	29.5	29.2	9:32	71° 20′	1,968	
		2	29.2	28.9		70° 46′	1,906	Cut in Line 193+00
		3	27.1	26.8		69° 44′	1,801	
		4	26.7	26.4		68° 48′	1,714	
		5	26.4	26.1		68° 14′	1,665	
		6	26.4	26.1		67° 36′	1,613	
		7	26.3	26.0		66° 57′	1,563	Boat = +1.0
		8	25.6	25.3		66° 20′	1,518	Zero = +0.5
		9	25.3	25.0		65° 42′	1,473	Tide = -1.8
		10	25.1	24.8		64° 56′	1,422	-0.3
		11	25.1	24.8		64° 12′	1,376	
		12	24.8	24.5		63° 27′	1,331	
		13	24.3	24.0		62° 36′	1,283	
		14	23.9	23.6		61° 42′	1,235	
		15	23.8	23.5		61° 11′	1,209	
		16	23.6	23.3		60° 20′	1,168	
		17	23.3	23.0		59° 34′	1,132	
		18	23.2	22.9		58° 32′	1,087	N-10
		19	22.7	22.4		58° 01′	1,065	
		20	22.3	22.0		58° 52	1,019	

Cut in Line 193+00

199+65

Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 10 Division No. 10 F. B. 2308 Pg. 28
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Dorn Notes R.T. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

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Do not extend notes this side of this line.

STATION Inst. At	STATION Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
199+65	N-10	21	21.8	21.5		55° 44	976'
		22	21.7	21.4		54° 37	936' Cut in Line 193+00
		23	21.3	21.0		53° 53'	912'
		24	20.8	20.5		52° 26'	865'
		25	20.6	20.3		51° 20'	831'
		26	20.5	20.2		49° 38'	782'
		27	20.0	19.7		48° 34'	753'
		28	19.6	19.3		46° 59'	712'
		29	19.1	18.8		46° 14'	694'
		30	18.5	18.2		44° 47'	660'
		31	18.1	17.8		43° 44'	636'
		32	17.4	17.1		41° 49'	595'
		33	16.1	15.8		40° 07'	561'
		34	14.9	14.6		38° 45'	534'
		35	13.0	12.7		35° 48'	479'
		36	12.6	12.3	9:39	34° 00	449'

Boat = +1.0'
zero = +0.5'
Tide = -1.8'
-0.3'

F. B. 2308 Pg. 30 Job No. 0300.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 7-21-58 Date No. X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked
Indexed C. Johnson Date Date No.

76L298 S & E #307 9-54

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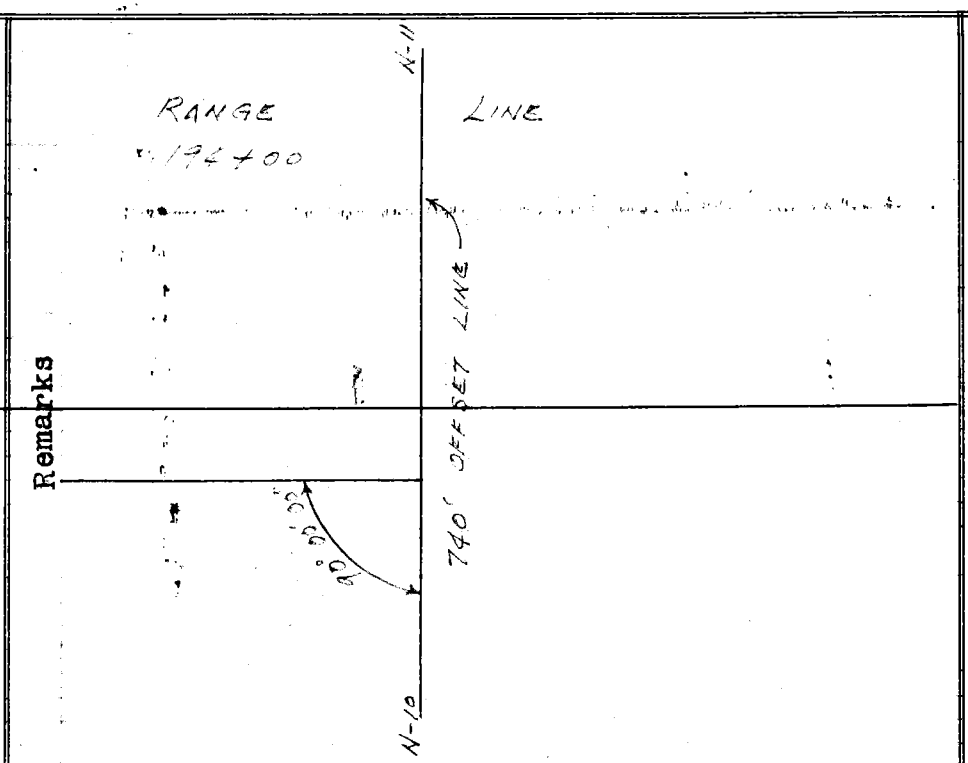
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 195+00	Sight on 194+00
		7 34				
194+00		7 3				Inshore 194+00
			0 0	7 3	30° 11' 58"	
			2 8	4 5	37° 06' 76"	
			8 2	-0 9	51° 54' 128"	
			12 1	-4 8	62° 00' 188"	
			15 0	-7 7	67° 34' 242"	
			16 9	-9 6	70° 21' 280"	
			19 0	-11 7	72° 38' 320"	
T.P.			2 42	4 92	—	

Note: 740' Seaward offset

Profile Notes Red. Plotted Job No. 0360.02 Division No. 10 F. B. 2308 Pg. 31
No. Date Date Survey of BEACH EROSION SUR.
X-Sec. Notes Chkd. Checked Survey by ENGLISH Notes ED Date 7/21/58
No. Date Date Map No. Indexed C. Johnson Date

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 33
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes TO	Date 7-21-58	
No.	Date	Date	Map No.	Indexed C. John[illegible]		



STATION Inst. At 194+00	Sight On N-10	B. S. #	H. I. Depth Rec. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1			90° 00	
		2			"	
		3			"	
		4			"	
		5			"	
		6			"	
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		8			"	
		9			"	
		10			"	
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		15			"	
		16			"	
		17			"	
		18			"	
		19			"	

PLEASE RETURN TO
LOS ANGELES COUNTY ENGINEER
700 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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76298 S & E #307—7-55

F. B. 2308 Pg. 34 | Job No. 03.00.02 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date _____ Date _____ No. _____

Survey by VAN DEREN Notes T.O. Notes Chkd. _____ Checked _____ X-Sec.

Indexed [redacted] C. Johnson Date 7-21-58 Date _____ Date _____ No. _____

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
194+00 N-10					
	23				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				
	32				
	33				
	34				
	35				
	36				
	37				
	38				

76298 S & E #307—7-55

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76298 S & E #307—7-55

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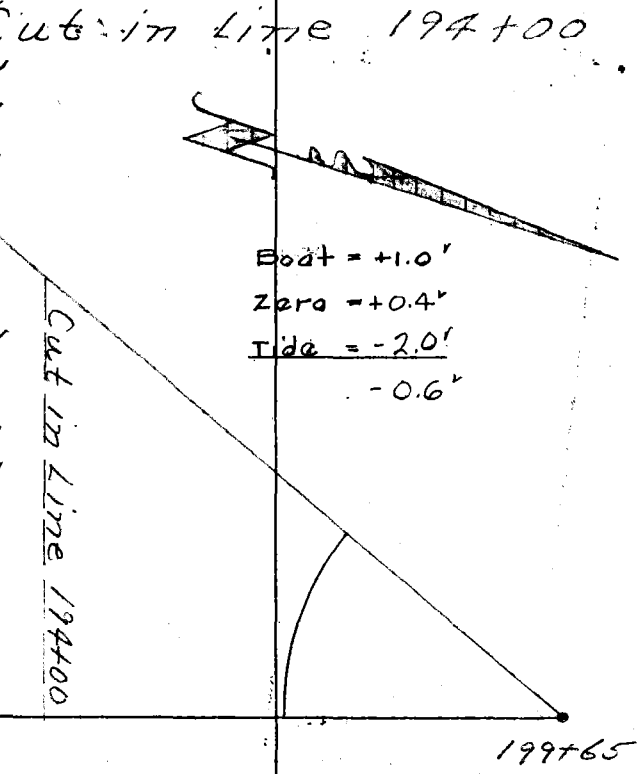
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
199+65	N-10	1	29.0	28.4	9:49	73° 19'	1,885'
		2	29.1	28.5		72° 53'	1,835'
		3	28.1	27.5		72° 20'	1,774'
		4	27.9	27.3		71° 39'	1,703'
		5	27.2	26.6		70° 50'	1,626'
		6	26.7	26.1		70° 13'	1,571'
		7	26.4	25.8		69° 36'	1,519'
		8	26.1	25.5		68° 48'	1,457'
		9	25.7	25.1		68° 00'	1,398'
		10	25.3	24.7		67° 18'	1,351'
		11	25.1	24.5		65° 56'	1,265'
		12	24.4	23.8		64° 46'	1,199'
		13	24.1	23.5		64° 08'	1,166'
		14	23.7	23.1		63° 00'	1,109'
		15	23.4	22.8		61° 50'	1,055'
		16	23.1	22.5		60° 52'	1,014'
		17	22.9	22.3		59° 43'	967'
		18	22.7	22.1		58° 37'	926' N-10
		19	22.1	21.5		57° 10'	876'
		20	21.8	21.2		56° 09'	842'



Note: 740' Seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 35
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Ind[redacted] C. Johns[redacted]

76298 S & E #307—7-55

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Do not extend notes this side of this line.

F. B. 2308 Pg. 36 | Job No. 4100.02 Division No. 10 Notes Red. Date 2-21-58 Plotted Date Profile No.
Survey of Beach Erosion Study Notes Chkd. Checked X-Sec. No.
Survey by Van Deren Notes R.T. Date Date
Indexed K. C. Johnson Date Date

STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Rec.	Depth Adj.	Time	Hor. Ang.		Remarks
1994 65	N-10	21	21.7	21.0		54° 39'	797'	
		22	21.0	20.3		53° 13'	756'	Cut in Line 194+00
		23	20.4	19.7		51° 30'	710'	
		24	19.7	19.0		49° 15'	656'	
		25	19.2	18.5		47° 56'	626'	
		26	18.6	17.9		46° 04'	586'	
		27	18.1	17.4		45° 00'	565'	Boat = +1.0'
		28	16.7	16.0		43° 20'	533'	zero = + 0.4'
		29	15.2	14.5		41° 35'	501'	Tide = -2.1
		30	14.4	13.7		40° 15'	479'	-0.7'
		31	13.7	13.0		38° 26'	449'	
		32	13.1	12.4		36° 33'	419'	
		33	11.7	11.0		33° 52'	379'	
		34	11.2	10.5	9:55	32° 30'	364'	

76L298 S & E #307 9-54

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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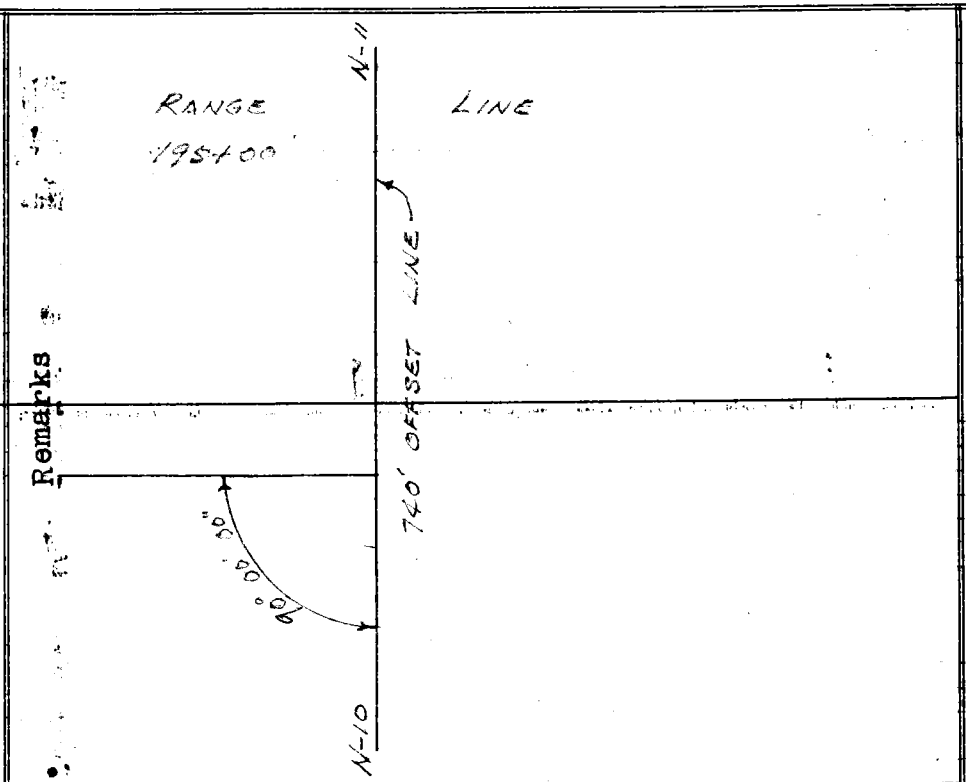
STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 197+00	Sight on 195+00
T.P.	2 96	7 88		4 92		
195+00		7 9	0 0	7 9	14° 50' 53'v	Inshore 195+00
			9 7	-1 8	33° 16' 131'v	
			11 4	-3 5	39° 37' 166'v	
			12 2	-4 3	41° 56' 180'v	
			16 0	-8 1	46° 12 209'v	
			19 0	-11 1	52° 54 264'v	

Note: 740' seaward offset

Profile Notes Red. Plotted Job No. 0300.02 Division No. 10 F. B. 1308 PG. 17
No. Date Date Survey of BEACH EROSION SUR
X-Sec. Notes Chkd. Checked Survey by ENGLISH Notes ED Date 7-21-58
No. Date Date Map No. Indexed C. Johnson Date

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 39
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-21-58	
No.	Date	Date	Map No.	Indexed C. Johnson	Date	



STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
195+00 N-10	1		10 05	90° 00'	
	2			"	
	3			"	
	4			"	
	5			"	
	6			"	
	7			"	
	8			"	
	9			"	
	10			"	
	11			"	
	12			"	
	13			"	
	14			"	
	15			"	
	16			"	
	17			"	
	18			"	
	19			"	

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76298 S & E #307—7-55

F. B. 2308 PG. 40 | Job No. 0300.02 Division No. 10 | Notes Red. | Plotted | Profile

Survey of BEACH EROSION | Date | Date | No.

Survey by VAN DEREN Notes T.O. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson Date 7-21-58 | Date | Date | No.

STATION	B.S.	H.I.	F.S.	ELEV.	
Inst. Sight At On	# Rec.	Depth Adj.	Time	Hor. Ang.	Remarks
N-10	20				

40

10/13

76298 S & E #307—7-55

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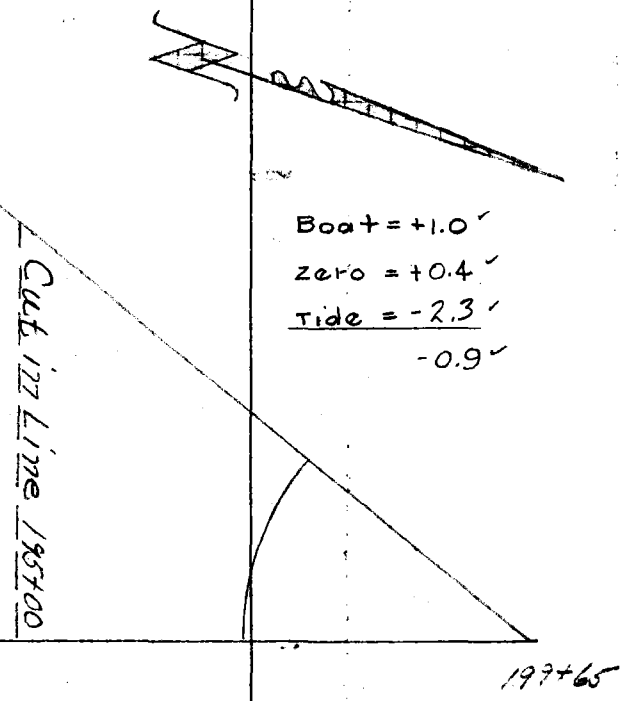
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
199+65	N-10	1	29.5	28.6	10:05	76° 15'	1,900'
		2	29.2	28.3		76° 02'	1,870' Cut in Line 195+00
		3	29.0	28.1		75° 36'	1,811'
		4	28.8	27.9		75° 25'	1,787'
		5	28.2	27.3		75° 04'	1,744'
		6	28.1	27.2		74° 48'	1,712'
		7	28.0	27.1		74° 22'	1,662'
		8	27.8	26.9		73° 57'	1,616'
		9	27.5	26.6		73° 23'	1,558'
		10	26.9	26.0		72° 49'	1,504'
		11	26.8	25.9		72° 20'	1,460'
		12	27.1	26.2		71° 47'	1,413'
		13	26.0	25.1		71° 16'	1,371'
		14	25.4	24.5		69° 51'	1,267'
		15	24.6	23.7		69° 01'	1,212'
		16	24.6	23.7		68° 04'	1,155'
		17	24.4	23.5		67° 37'	1,129'
		18	24.1	23.2		66° 43'	1,081' N-10
		19	23.7	22.8		65° 58'	1,043'
		20	23.5	22.6		65° 04'	1,000'



Note 740' Seaward offset

Profile Notes Red. Plotted Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 41
No. Date Date Survey of Beach Erosion Study
X-Sec. Notes Chkd. Checked Survey by Van Deren Notes R.T. Date 7-21-58
No. Date Date Map No. Indexed C. Johnson Date

76298 S & E #307—7-55

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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 Inst. At	STATION Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
199+65	N-10	21	23.2	22.2		64° 13'	963'
		22	23.3	22.3		63° 26'	930' Cut in Line 195+00
		23	23.1	22.1		62° 15'	884'
		24	22.8	21.8		61° 08'	844'
		25	22.6	21.6		59° 32'	791'
		26	22.3	21.3		58° 33'	760'
		27	22.0	21.0		58° 16'	752'
		28	21.8	20.8		56° 56'	714'
		29	21.4	20.4		56° 06'	692'
		30	21.2	20.2		54° 13'	645'
		31	21.0	20.0		53° 28'	628'
		32	21.1	20.1		52° 12'	599'
		33	20.4	19.4		51° 15'	579'
		34	19.6	18.6		49° 42'	548'
		35	—	—		48° 16'	521'
		36	15.0	14.0		44° 50'	462'
		37	14.3	13.3		42° 30'	426'
		38	13.4	12.4		39° 32'	384'
		39	12.6	11.6		39° 01'	377'
		40	11.8	10.8	10:13	35° 00'	326'

Boat = +1.0
Zero = +0.4
Tide = -2.4
-1.0

F. B. 2308 Pg. 42 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of Beach Erosion Study Date 7-21-58 Date X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

76L298 S & E #307 9-54

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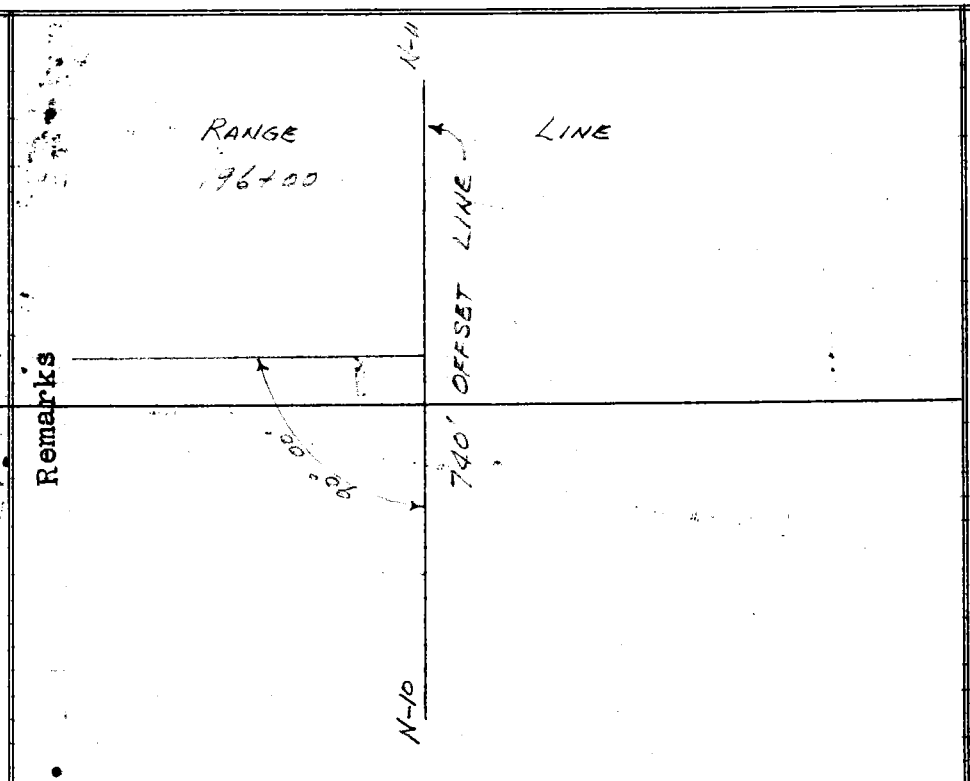
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 197+00	Sight on 196+00
		7 88				
196+00		7 9			° '	11 196+00 Inshore
			0 0	7 8	27° 46 53'	
			3 1	4 8	37° 06 76'	
			7 6	0 3	43° 54 96'	
			8 9	-1 0	51° 25 125'	
			10 0	-2 1	53° 10 134'	
			15 6	-7 7	62° 25' 191'	
			16 4	-8 5	66° 02 225'	
			19 0	-11 1	63° 05 249'	
					Note 740' seaward offset	
T.P.			3 76	4 12		

Profile Notes Red. Plotted Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 43
No. Date Date Survey of BEACH EROSION SUR.
X-Sec. Notes Chkd. Checked Survey by ENGLISH Notes ED Date 7-21-58
No. Date Date Map No. Indexed C. Johnson

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308 Pg. 45
No.	Date	Date	Survey of BEACH EROSION		
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T. O.	Date 7-21-58
No.	Date	Date	Map No.	Indexed C. Johnson	Date



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. At 196+00 Sight On N-10	#	Depth Rec. Adj.	Time	Hor. Ang.	
	1		1028	90 00	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				

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76298 S & E #307—7-55

F. B. 2308 PG. 46 | Job No. 030002 Division No. 10 | Notes Red. ______ | Plotted ______ | Profile

Survey of BEACH EROSION | Date ______ | Date ______ | No. ______

Survey by VAN DEREN | Notes T. O. | Notes Chkd. ______ | Checked ______ | X-Sec.

Indexed A. C. Johnson | Date 7-21-58 | Date ______ | Date ______ | No. ______

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

76298 S & E #307—7-55

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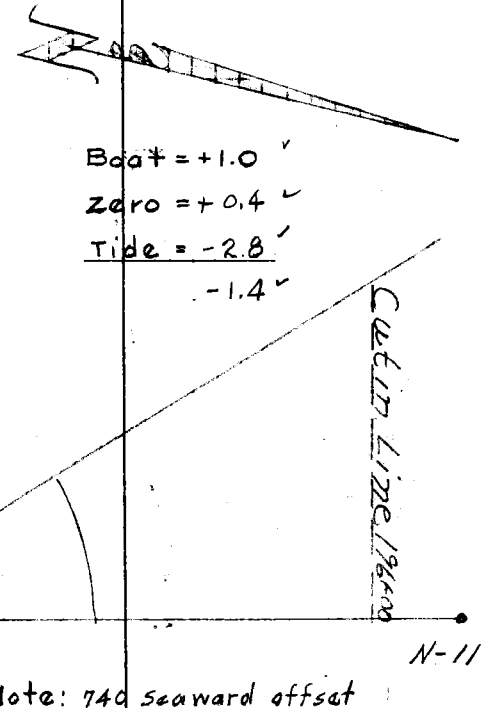
Profile No.____ Notes Red.____ Plotted____ Job No. 230002 Division No. 10 F. B. 2308 Pg. 97
X-Sec. No.____ Date____ Notes Chkd.____ Date____ Checked____ Date____ Survey of Beach & Yosemite St. Survey by Lon Dyer Notes Date 7-21-58 Map No.____ Indexed C. Johnson

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At / Sight On	#	Depth Rec. / Adj.	Time	Hor. Ang.		Remarks
	1	30.8 / 29.4	10:28	75° 50'	1,981'	
	2	29.7 / 28.3		75° 39'	1,942'	Cut in Line 196+00
	3	29.2 / 27.8		74° 52'	1,849'	
	4	28.9 / 27.5		74° 15'	1,773'	
	5	28.7 / 27.3		73° 22'	1,674'	
	6	27.6 / 26.2		71° 14'	1,472'	
	7	27.2 / 25.8		70° 17'	1,395'	Boat = +1.0
	8	26.7 / 25.3		69° 22'	1,328'	Zero = +0.4
	9	26.2 / 24.8		68° 48'	1,289'	Tide = -2.8
	10	26.1 / 24.7		67° 57'	1,235'	-1.4
	11	25.7 / 24.3		67° 04'	1,182'	
	12	25.1 / 23.7		66° 16'	1,138'	
	13	24.9 / 23.5		65° 17'	1,087'	
	14	24.6 / 23.2		64° 36'	1,053'	
	15	23.9 / 22.5		63° 46'	1,015'	
	16	23.7 / 22.3		62° 22'	955'	
	17	23.4 / 22.0		61° 22'	916'	
	18	23.3 / 21.9		60° 46'	894'	191+00
	19	23.2 / 21.8		59° 33'	851'	Note: 740 seaward offset
	20	23.1 / 21.7		58° 37'	820'	



N-11

191+00

76298 S & E #307—7-55

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STATION Inst. At	STATION Sight On	S. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
191+00	N-11	21	22.9	21.5		57° 28'	784'
		22	22.4	21.0		55° 52'	738' Cut in Line 196+00
		23	22.1	20.7		54° 23'	698'
		24	21.4	20.0		51° 17'	624'
		25	21.2	19.8		50° 18'	602'
		26	21.2	19.8		49° 04'	577'
		27	20.6	19.2		47° 35'	548'
		28	19.4	18.0		46° 08'	520'
		29	17.6	16.2		44° 30'	492'
		30	16.4	15.0		43° 01'	467'
		31	15.2	13.8		40° 45'	431'
		32	14.3	12.9		38° 51'	403'
		33	13.5	12.1		36° 12'	366'
		34	12.7	11.3		34° 54'	349'
		35	11.7	10.3		31° 57'	312'
		36	11.1	9.7		29° 42'	285'
		37	10.7	9.3	10:36	27° 35'	261'

Boat = +1.0
zero = +0.4
Tide = -2.8
-1.4

F. B. 2308 Pg. 48 Job No. 300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of Beach Erosion Study Date 7-21-58 Date X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked No.
Indexed C. Johnson Date Date Date

76L298 S & E #307 9-54

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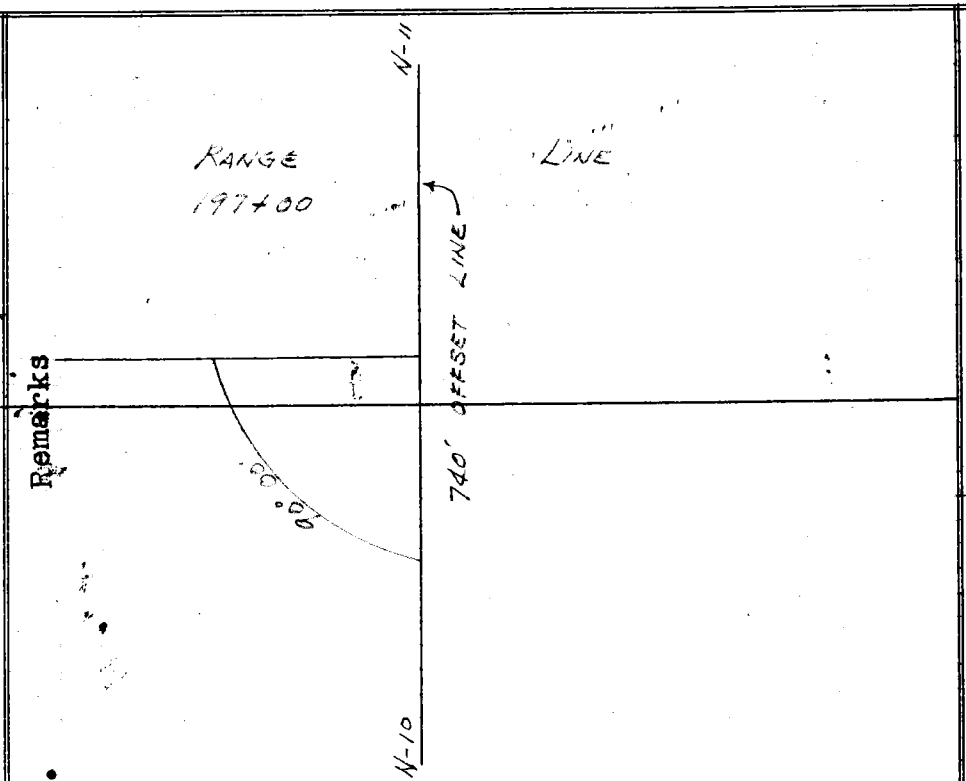
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 196+00	Sight on 197+00
T.P.	3 80	7 92		4 12		
197+00		7 9	0 0	7 9	26° 35' 50'	Inshore 197+00
			4 5	3 4	40° 43' 86'	
			96	-1 7	54° 40' 141'	
			122	-4 3	61° 01' 181'	
			159	-8 0	66° 16' 227'	
			165	-8 6	68° 45' 257'	
			186	-10 7	71° 03 291'	

Note 740 seaward offset

Profile Notes Red_____ Plotted_____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 46
No._____ Date_____ Date_____ Survey of Beach Erosion Stu. Notes English Date 7-21-58
X-Sec. Notes Chkd_____ Checked_____ Survey by Dreier
No._____ Date_____ Date_____ Map No._____ Indexed C. Johnson

Profile No.	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 51
	Date	Date	Survey of BEACH EROSION			
X-Sec. No.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-21-58	
	Date	Date	Map No.	Indexed C. Johnson	Date	



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On 197+00 N-10	#	Depth Rec. Adj.	Time	Hor. Ang.	
	1		10 46	90° 00	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				

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76298 S & E #307—7-55

76298 S & E #307—7-55

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700 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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
197+00	N-10	20					
		21					
		22					
		23					
		24					
		25					
		26					
		27					
		28					
		29					
		30		10 53			

F. B. 2308 Pg. 52 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date Date No.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date 7-21-58 Date Date No.

76298 S & E #307—7-55

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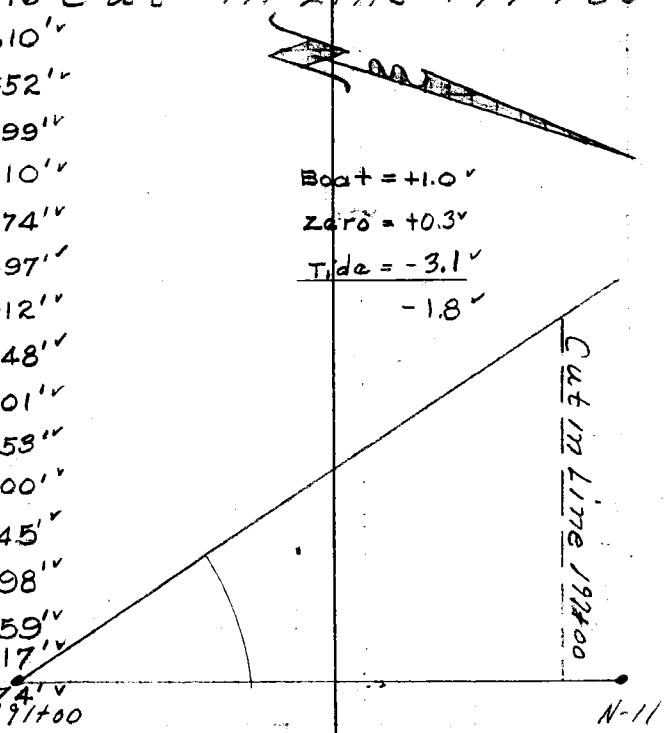
Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
191+00	N-11	1	30.8	29.0	10:46	72° 33'	1,909'
		2	30.4	28.6		71° 43'	1,816' Cut in Line 197+00
		3	28.7	26.9		69° 34'	1,610'
		4	28.3	26.5		68° 52'	1,552'
		5	27.3	25.5		66° 47'	1,399'
		6	26.4	24.6		65° 24'	1,310'
		7	26.1	24.3		62° 56'	1,174'
		8	25.8	24.0		61° 19'	1,097'
		9	25.2	23.4		59° 20'	1,012'
		10	24.9	23.1		57° 40	948'
		11	24.3	22.5		56° 21'	901'
		12	23.8	22.0		54° 53'	853'
		13	24.1	22.3		53° 09'	800'
		14	23.6	21.8		51° 08'	745'
		15	23.2	21.4		49° 20	698'
		16	22.7	20.9		47° 40'	659'
		17	22.9	21.1		45° 48'	617'
		18	22.1	20.3		43° 42'	574' 191+00
		19	20.6	18.8		41° 25'	529'
		20	19.4	17.6		40° 04'	505'

Boat = +1.0
Zero = +0.3
Tide = -3.1
-1.8



Note: 740 seaward offset

Profile Notes Red. Plotted Job No. 300.02 Division No. 10 F. B. 2308 Pg. 53
No. Date Date Survey of Beach Erosion Study
X-Sec. Notes Chkd. Checked Survey by Van Doren Notes R.T. Date 7-21-58
No. Date Date Map No. Indexed C. Johnson Date

76298 S & E #307—7-55

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Do not extend notes this side of this line.

STATION Inst. At	STATION Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		21	18.1	16.3		38° 58'	485'
		22	16.9	15.1		37° 35'	462' Cut in Line 197+00
		23	16.0	14.2		35° 59'	436'
		24	15.3	13.5		34° 17'	409'
		25	14.4	12.6		32° 13'	378'
		26	13.6	11.8		30° 09'	349'
		27	12.6	10.8		27° 06'	307'
191+00	11-11	28	11.7	9.9		25° 37'	287'
		29	11.1	9.3		23° 35'	262'
		30	10.6	8.8	10:53	22° 00'	242'
		31					
		32					
		33					
		34					
		35					

Boat = +1.0
Zero = +0.3
Tide = -3.1
-1.8

F. B. 2308 Pg. 54 Job No. 300.02 Division No. 10 Notes Red. Plotted Date 7-21-58 Date No. Profile
Survey of Beach Erosion Study Notes Chkd. Checked Date X-Sec.
Survey by Van Deren Notes R.T. Date No.
Indexed A. C. Johnson Date

76L298 S & E #307 9-54

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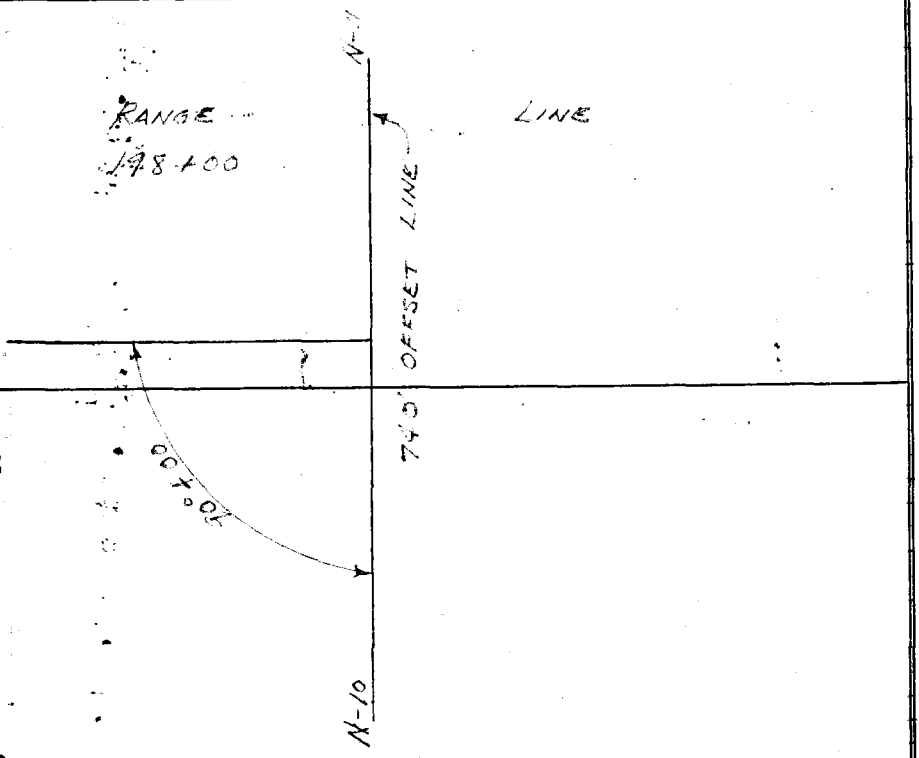
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 196+00	Sight on ~~197+00~~ 198+00
		7 92				
198+00		7 9				Inshore 198+00
			0 0	7 9	11°51'	42'
			3 8	4 1	20°32'	75'
			6 2	+1 7	26°00'	98'
			8 5	-0 6	31°44'	124'
			10 0	-2 1	36°42	149'
			14 5	-6 6	45°00'	200'
			17 0	-9 1	51°45'	254'
			19 0	-11 1	55°57	296'
						Note 740' seaward offset
T.P.			3 80	4 12		

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 55
No. ____ Date ____ Date ____ Survey of Beach Erosion Surv.
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes Entered C. Johnson Date 7-21-56
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

Profile No.	Notes Red.	Plotted	Job No. 250202	Division No. 10
	Date	Date	Survey of BEACH EROSION	
X-Sec. No.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O. Date 7-21-58
	Date	Date	Map No.	Indexed C. Johnson

F. B. 2308 Pg. 57



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
198+00 N-10	1		1.18	90° 00	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				

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F. B. 2308 Pg. 58 Job No. 0300.02 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date _____ Date _____ No. _____

Survey by VAN DEREN Notes T.O. Notes Chkd. _____ Checked _____ X-Sec.

Indexed C. Johnson Date 7-21-58 Date _____ Date _____ No. _____

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

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STATION Inst. At	Sight On	B. S. #	H. I. Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
191+00	N-11	1	31.2	28.9	11:18	68° 51'	1,810'	
		2	30.4	28.1		68° 15'	1,755'	Cut in Line 198+00
		3	29.9	27.6		69° 10'	1,663'	
		4	29.8	27.5		66° 23'	1,601'	
		5	29.2	26.9		64° 43'	1,482'	
		6	27.9	25.6		63° 51'	1,426'	
		7	27.7	25.4		62° 53'	1,367'	
		8	27.3	25.0		58° 00'	1,120'	Boat = +1.0'
		9	26.2	23.9		56° 25'	1,054'	zero = +0.3'
		10	25.6	23.3		54° 18'	974'	Tide = -3.6'
		11	25.4	23.1		51° 49'	890'	-2.3'
		12	25.3	23.0		50° 15'	841'	
		13	24.8	22.5		48° 00'	778'	
		14	24.2	21.9		45° 56'	723'	
		15	23.7	21.4		43° 11'	657'	
		16	23.3	21.0		40° 47'	604'	
		17	22.3	20.0		38° 35'	559'	
		18	20.8	18.5		35° 32'	506'	191+00 N-11
		19	18.8	15.5		32° 55'	453'	Note 740' seaward offset
		20	17.3	15.0		31° 25'	428'	

Cut in Line 198+00

Profile No. ____ Date ____ Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 59
X-Sec. No. ____ Date ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of Beach Erosion Survey Survey by Hallorem Notes F.T. Date 3-21-58 Map No. ____ Indexed C. Jones Date

76298 S & E #307—7-55

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STATION Inst. At	STATION Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		21	16.4	14.0		30° 02	405'
		22	15.7	13.3		28° 19	377' Cut in Line 198+00
		23	14.8	12.4		26° 07	343'
		24	14.1	11.7		24° 22	317'
		25	13.4	11.0		22° 32'	291'
		26	12.4	10.0		20° 34'	263'
		27	11.1	8.7		18° 35'	235'
		28	9.9	7.5	11:24	16° 46'	211'
191+00	N-11						

Boat = +1.0
Zero = +0.3
Tide = -3.7
-2.4

F. B. 2308 Pg. 60 Job No. 0300.02 Division No. 10 Notes Red. Plotted Date 7-21-58 Date No. Profile
Survey of Beach Erosion Study Date 7-21-58 Date No. X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

76L298 S & E #307 9-54

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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 198+00	Sight on 199+00
T.P.	350	762		4 12		
199+00			0 0	7 6	26°39' 50'V	Inshore 199+00
			4 1	3 5	40°37 86'V	
			8 6	-1 0	54°48' 142'V	
			14 0	-6 4	63°42 202'V	
			16 6	-9 0	68°39' 256'V	
			19 0	-11 4	70°43' 286'V	

Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 61
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes English Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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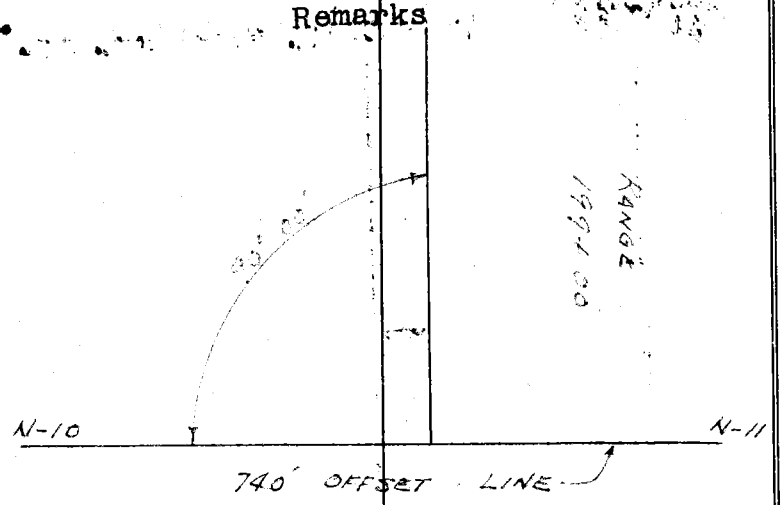
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor.	Ang.	Remarks
199+00	N-10							
		1			11 39	90	-00	
		2				"	"	
		3				"	"	
		4				"	"	
		5				"	"	
		6				"	"	
		7				"	"	
		8				"	"	
		9				"	"	
		10				"	"	
		11				"	"	
		12				"	"	
		13				"	"	
		14				"	"	
		15				"	"	
		16				"	"	
		17				"	"	
		18				"	"	
		19				"	"	



Profile Notes Red. ____ Plotted ____ Job No. C300003 Division No. 10 F. B. 2308 Pg. 63
No. ____ Date ____ Date ____ Survey of BEACH EROSION
X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
199+00	N-10	20			90 00		
		21					
		22					
		23					
		24					
		25					
		26					
		27					
		28					
		29					
		30					
		31					
		32			11 46		

F. B. 2308 Pg. 64 Job No. 030002 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-21-58 Date No.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed A. C. Johnson Date Date No.

76298 S & E #307—7-55

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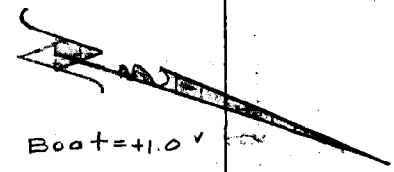
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

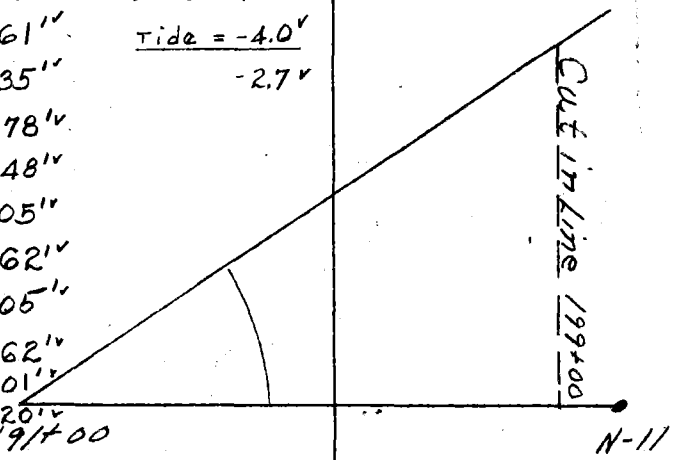
Do not extend notes this side of this line.

STATION		B. S.	H. I.		F. S.	ELEV.	
Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks
		1	30.7	28.0	11:39	65° 06'	1,723'
		2	30.0	27.3		63° 23'	1,597'
		3	29.6	26.9		62° 24'	1,530'
		4	29.4	26.7		60° 35'	1,419'
		5	28.6	25.9		59° 43'	1,370'
		6	28.1	25.4		59° 10'	1,340'
191+00	N-11	7	27.7	25.0		58° 10'	1,289'
		8	26.8	24.1		56° 56'	1,229'
		9	26.7	24.0		55° 25'	1,161'
		10	26.8	24.1		54° 49'	1,135'
		11	26.6	23.9		53° 24'	1,078'
		12	25.9	23.2		49° 51'	948'
		13	25.2	22.5		48° 31'	905'
		14	24.7	22.0		47° 08'	862'
		15	24.2	21.5		45° 11'	805'
		16	24.1	21.4		43° 36'	762'
		17	23.9	21.2		41° 14'	701'
		18	23.7	21.0		37° 46'	620' 191+00
		19	23.5	20.8		35° 17'	566'
		20	22.0	19.3		32° 53'	518'

Cut in Line 199+00



Boat = +1.0
Zero = +0.3
Tide = -4.0
-2.7



Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 65
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Lee Doran Notes R.T. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____
C. Johnson

76298 S & E #307—7-55

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Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		21	20.3	17.6		31° 30'	490'
		22	18.4	15.7		28° 46'	439' Cut in Line 199+00
		23	17.2	14.5		26° 56'	406'
		24	16.2	13.5		25° 02'	374'
		25	15.5	12.8		23° 17'	344'
		26	14.9	12.2		22° 09'	326'
		27	14.3	11.6		20° 46'	303'
191+00	N-11	28	13.7	11.0		20° 16'	295'
		29	12.9	10.2		18° 30'	268'
		30	12.3	9.6		17° 15'	249'
		31	11.7	9.0		16° 08'	231'
		32	10.6	7.9	11: 46	14° 32'	207'
		33					

Boat = +1.0
Zero = +0.3
Tide = -4.0
-2.7

F. B. 2308 Pg. 66 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of Beach Erosion Study Date 7-21-58 Date No. X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked No.
Indexed [illegible] Date Date

76L298 S & E #307 9-54

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 198+00	Sight on 199+65
		7 6 2				
199+65			0 0	7 6	11° 12'	Inshore 199+65
			3 7	+ 3 9	25° 39' 79'	
			6 8	+ 0 8	35° 36' 118'	
			9 0	- 1 4	44° 45' 164'	
			16 6	- 9 0	49° 12' 191'	
			16 4	- 8 8	52° 24' 214'	
			19 0	- 11 4	55° 43' 242'	
			20 0	- 12 4	60° 57 297'	
T.P.			350	4 12	198+00, 78' L., see pg. 7	

Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 PG. 67
No. ____ Date ____ Date ____ Survey of BEACH EROSION SUR
X-Sec. Notes Chkd. ____ Checked ____ Survey by ____ Notes ____ Date ____
No. ____ Date ____ Date ____ Map No. ____ Indexed C. JOHNSON Date ____

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308 Pg. 69
No.	Date	Date	Survey of Beach Erosion		
X-Sec.	Notes Chkd.	Checked	Survey by Van Deren	Notes Van	Date 7-21-58
No.	Date	Date	Map No.	Indexed C. Johnson	

Range Line
199+65

N-10

740' offset line

90°00'00

over rocks
at end of rocks

STATION Inst. At	Sight On	B.S. #	H.I. Depth Rec. Adj.	F.S. Time	ELEV. Hor. Ang.	Remarks
199+65	N-10	1		11 56	90-00	
		2				
		3				
		4				
		5				
		6				
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19				

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76298 S & E #307—7-55

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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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
	✓	20					
	✓	21					
	✓	22					
	✓	23					
	✓	24					
	✓	25			12 06		

F. B. 2308 Pg. 70 Job No. 0300.02 Division No. 10 Notes Red. Plotted Date 7-21-58 Date No. Profile
Survey of Beach Erosion Notes Chkd. Checked Date No. X-Sec.
Survey by Van Deren Notes Yon Date
Indexed C. Johnson Date

76298 S & E #307—7-55

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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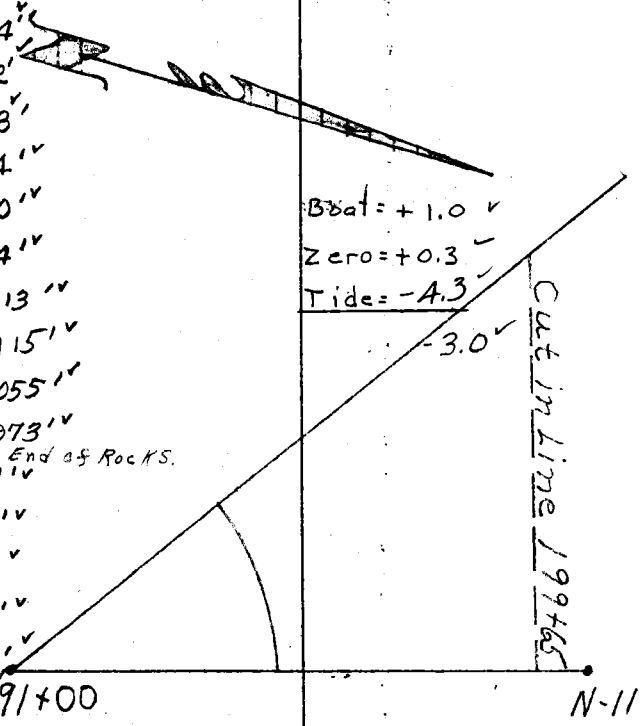
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
191+00	N-11	1	31.6	28.6	11:56	63° 49'	1,759'
		2	30.7	27.7		62° 43'	1,677'
		3	30.3	27.3		61° 58'	1,624'
		4	30.2	27.2		60° 52'	1,552'
		5	30.1	27.1		60° 00'	1,498'
		6	29.7	26.7		59° 26'	1,464'
		7	28.8	25.8		58° 39'	1,420'
		8	28.7	25.7		57° 02'	1,334'
		9	—	—		54° 30'	1,213'
		10	—	—		52° 12'	1,115'
		11	—	—		50° 39'	1,055'
		12	—	—	12:01	48° 22'	973'
		13	20.2	17.2	12:04	28° 35'	471'
		14	20.1	17.1		26° 45'	436'
		15	18.9	15.9		25° 51'	420'
		16	17.9	14.9		24° 47'	400'
		17	17.4	14.4		23° 30'	376'
		18	16.6	13.6		22° 34'	360'
		19	15.8	12.8		21° 07'	334'
		20	15.7	12.7		19° 26'	305'

Over Rocks

East End of Rocks.



Note 740' seaward offset

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 71
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-21-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date

76298 S & E #307—7-55

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F. B. 2308 Pg. 72 Job No. 320.0 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 2-21-58 Date
Survey by Van Deren Notes P.T. Notes Chkd. Checked
Indexed J. C. Johnson Date Date Date

Profile No. X-Sec. No.

STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Rec.	Depth Adj.	Time	Hor. Ang.		Remarks
191+00	N-11	21	15.3	12.3		18° 10'	284'	
		22	14.8	11.8		19° 11'	267'	Cut in Line 199+65
		23	—	—		15° 49'	245'	
		24	—	—		14° 20'	221'	
		25	—	—	12:06	12° 00'	184'	
		26						Boat = +1.0'
		27						Zero = +0.3'
		28						Tide = -4.3'
		29						-3.0'
		30						
		31						
		32						
		33						

Profile	Notes Red.	Plotted	Job No. 0360.02	Division No. 10	F. B. 2308 Pg. 73
No.	Date	Date	Survey of Beach Erosion		
X-Sec.	Notes Chkd.	Checked	Survey by Van Deren	Notes Van	Date 7-22-58
No.	Date	Date	Map No.	Indexed C. Johnson	AUG 5 '58

Redondo Area

7-22-58

3.0 on Datum Line

Time Check Gage time = 10:35 High —

P. D. S. T = 11.37 Low —

Station	Inst. Sight At On	# Depth Rec. Adj. Time Hor. Ang.	Remarks	Standard Time	Reading	P. D. S. T.
				5.00 AM	2.7	6.00 AM
				5.30 "	2.1	6.30 "
				6.00 "	1.8	7-00 "
				6.30 "	1.4	7-30 "
				7.00 "	1.3	8-00 "
				7.30 "	1.0	8-30 "
				8.00 "	1.2	9-00 "
				8.30 "	1.2	9-30 "
				9.00 "	1.4	10-00 "
				9.30 "	1.6	10-30 "
ELEV.				10.00 "	1.9	11-00 "
				10.30 "	2.5	11-30 "
				11.00 "	3.0	12-00 "
				11.30 "	3.5	12-30 PM
F. B.				12.00 "	4.0	1-00 "
				12.30 PM	4.5	1-30 "
H. I.				1.00 "	4.8	2-00 "
				1.30 "	5.1	2-30 "
				2.00 "	52	3-00 "
				2.30 "	5.5	3-30 "
B. B.				3.00 "	5.5	4.00 "

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76298 S & E #307—7-55

F. B. 2308 Pg. 73-A Job No. 03000 Division No. 10 Notes Red. Plotted Profile

Survey of Beach Erosion Date 7-22-58 Date No.

Survey by Van Deren Notes Van Notes Chkd. Checked X-Sec.

Indexed L. O. Johnson Date Date Date No.

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

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76F309S CE #247—3-57

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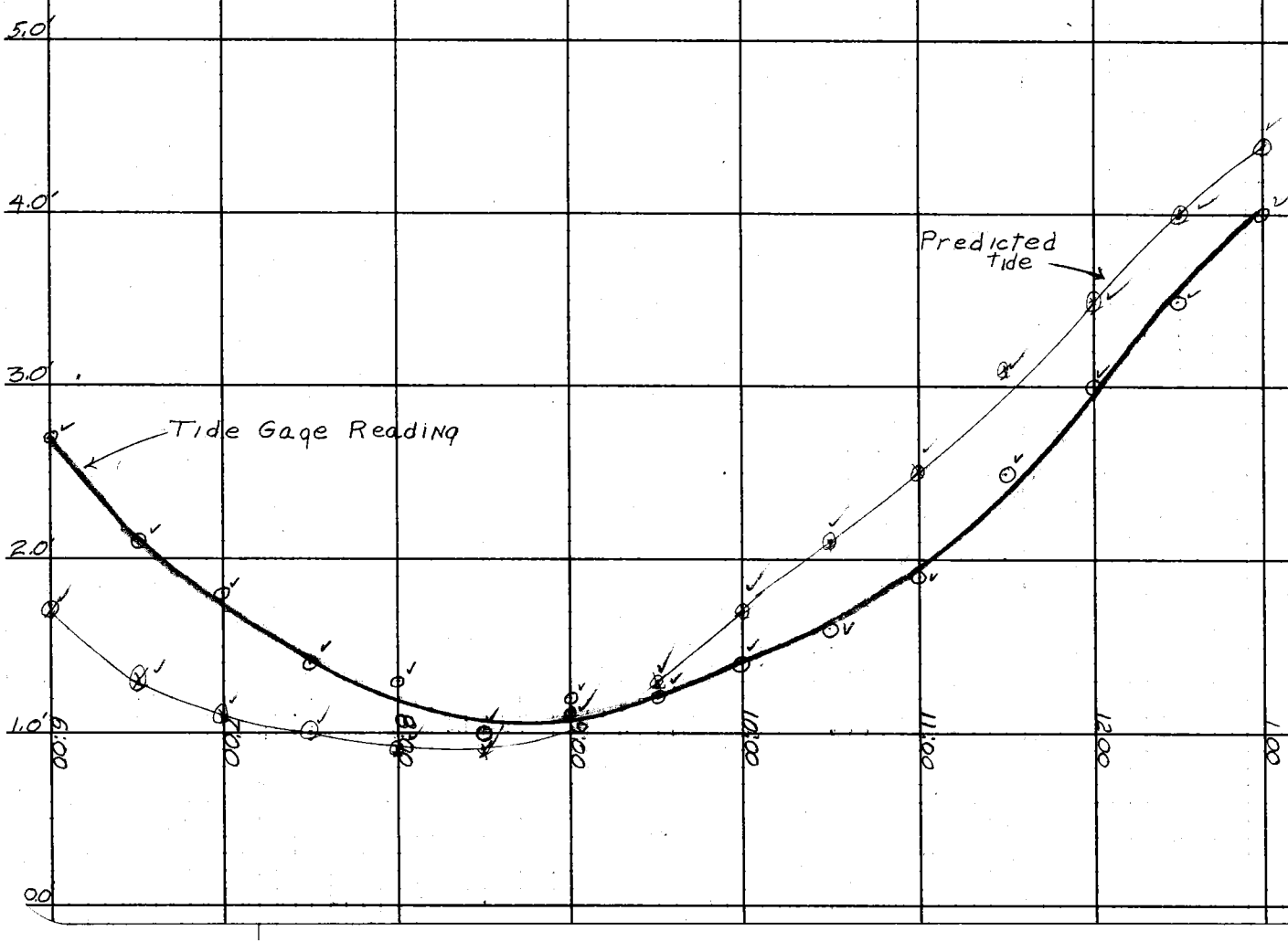

Notes Ck'd by
Map No.
Office Work L.A.M. 84-58
Checked
Date

Survey of 0300.02
JN Tape Std °F
Surveyed by
Notes Van Dereer Date 7-22-58
Indexed

F. B 2308 Pg. 74

76L298 307 10-51

4 29

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16.716
2.80

STATION	B. S.	H. I.	F. S.	ELEV.		
					BM. 21-47 ELEV. 16.716 + 2.80 = 19.516 M.L.L.W.	
B.M. 21-47	520	24 72		1952	EL PASO & CORAL WAY, 90' SLY FROM S. CURB OF	
T.P.	567	25 16	523	1949	CORAL WAY & 818' E OF E. CURB OF EL PASO	
S-17	605	25 33	588	1928	IN A WELL WITH COVER, A STD. C.S. MON., RE. 63	
300+65			544	1989	See F.B. 2100-159	
298+65			547	1986		
296+65 T.P.	488	24 75	546	1987	T.P	
294+65			542	1933		
S-16	666	25 04	637	1838		
292+65			572	1932		
290+65			429	2075		
290+65			995	1509	ON BREAK WATER ON WHITE PAINTED CROSS	ON RANGE LINE
S-15	616	27 02	421	2083	S-15 ELEV. 20.861 PER F.B. 2100-160	
288+65			959	1743		
T.P.	503	24 45	760	1942	T.P.	
286+65			1229	1216		
" "			500	~~24 45~~ 1945	16 FT RT WHITE PAINTED "X" TOP OF ROCK	
284+65			391	2054		
T.P.	230	24 09	266	2179		
S-14	563	24 44	528	1881		
280+65			509	1935		
T.P.	483	25 59	368	2076		

Profile No. ____ Notes Red ____ Plotted ____ Job No. 2301.02 Division No. 10 F.B. 2308 Pg. 75
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION
Notes Chkd ____ Date ____ Checked ____ Date ____ Survey by Dreier Notes Dreier Date 7-22-58
Map No. ____ Index C. Johnson Date Aug 5 58

76L298 307 10-51

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STATION	B. S.	H. I.	F. S.	ELEV.		
		25 59				
276+65			5 40	20 19		
T.P	5 23	20 64	10 18	15 41		
272+65 T.P	10 85	23 63	7 86	13 78	T.P	
" "			12 14	11 49	130 FT RIGHT ON RANGE LINE, 1X2 T. (BACK OF OIL WELL SHED)	
268+65			2 15	21 48		
T.P.	0 92	23 03	1 52	22 11	NEAR 268+65	
S-13	1 44	21 19	3 28	17 75	2" I.P. WITH CONC. PLUG FLUSH	
B.M. 21-40			9 53	11 66	B.M. 21-40, ELEV. 11.633 PER F.B. 2100-160 (REDONDO E-7A)	

F.B. 2308 PG. 76 Job No. 0300.02 Division No. 10 Notes Red. Plotted Date No. Profile

Survey of Beach Erosion Sur. Date Notes Chkd. Checked Date No. X-Sec.

Survey by Dreier Notes Date

Indexed C. Johnson

76L298 S & E #307 9-54

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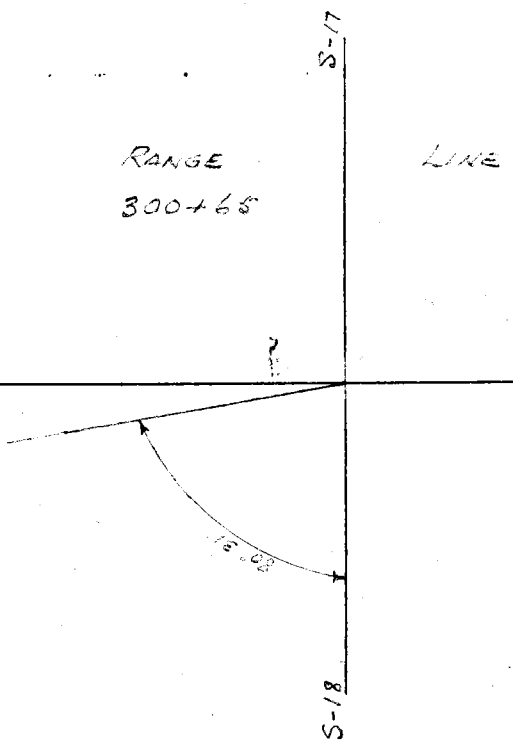
STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 298+65	Sight on 300+65
300+65	0 00	19 89		19 89	Control line	per pg 75
			5 6	14 3	10' R T. Rocks	Inshore
			17 2	2 7	35' " B. "	300+65
T.P.	0 58	5 27	15 20	4 69		
			4 4	0 9	15° 00' 57'	
			5 8	-0 5	25° 57' 107'	
			7 1	-1 3	32° 44 146'	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 Pg. 77
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes English Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 79
No.	Date	Date	Survey of Beach Erosion			
X-Sec.	Notes Chkd.	Checked	Survey by Van Deren	Notes	Date 7-22-58	
No.	Date	Date	Map No.	Indexed C. Johnson	Date	



STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
300+65 S-18	1		7 14	80° 31	
	2			"	
	3			"	
	4			"	
	5			"	
	6			"	
	7			"	
	8			"	
	9			"	
	10			"	
	11		7 [illegible]	"	
	12		7 [illegible]	"	
	13			"	
	14			"	
	15			"	
	16			"	
	17			"	
	18			"	
	19			"	

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F. B. 2308 Pg. 80 Job No. 030002 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date 7-22-58 Date _____ No. _____

Survey by VAN DEREN Notes T.O. Notes Chkd. _____ Checked _____ X-Sec.

Indexed L. C. Johnson Date _____ Date _____ Date _____ No. _____

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

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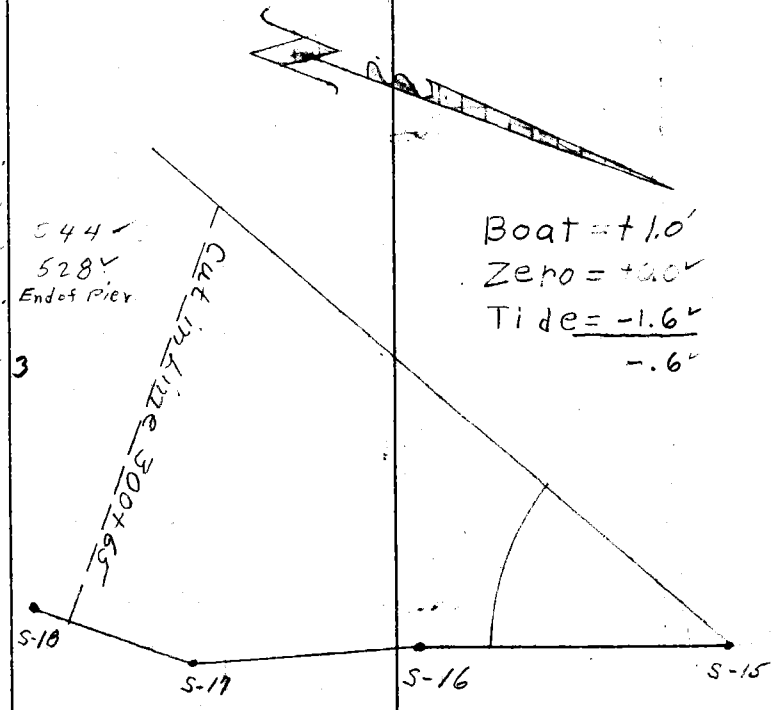
STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks	
		1	—		7:14	29° 57'		
		2	—			27° 15'	Cut in Line 300+65	
		3	—			24° 55'		
		4	—			22° 58'		
		5	—			21° 50'		
		6	—			20° 58'		
		7	—			20° 00'		
S-5	S-5	8	—			19° 38'		
		9	37.0	36.4		19° 00'	544	
		10	33.5	32.9		18° 29'	528 End of Pier	
		11	—		7:17	17° 56'		
		12			Cont	Fig. 8	3	
		13				—		
		14				—		
		15						
		16						
		17						
		18						
		19						
		20						



Profile Notes Red ____ Plotted ____ Job No. ____ Division No. ____ F. B. 2308 Pg. 81
No. ____ Date ____ Date ____ Survey of ____
X-Sec. Notes Chkd. ____ Checked ____ Survey by ____ Notes ____ Date ____
No. ____ Date ____ Date ____ Map No. ____ Index C. Johnson

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STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
		21					
		22				Cut in Line 300+65	
		23					
S-15	S-16						

F. B. 2308 Pg. 82

Job No. [illegible] Division No. 10 Notes Red. Plotted

Survey of Beach Erosion Study Date 7-22-58 Date

Survey by Van Horn Notes A.T. Notes Chkd. Checked

Indexed C. Johnson Date Date Date

Profile No. X-Sec. No.

76298 S & E #307—7-55

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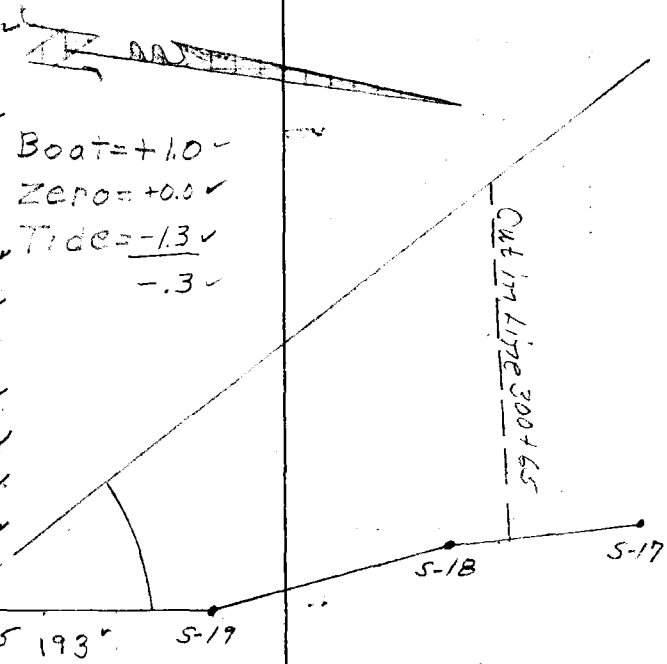
STATION Inst. At	Sight On	S. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		12	—		7:42	69° 19'	Cont. from Pg. 81
		13	—			66° 34'	537 Cut in Line 300+65
		14	32.5	32.2		62° 20'	525
		15	30.0	29.7		61° 37'	505
		16	27.8	27.5		60° 26'	470
		17	25.1	24.8		58° 18'	434
		18	21.7	21.4		56° 07'	416 Boat=+1.0
306+65	S-19	19	20.3	20.0		54° 56'	396 Zero=+0.0
		20	18.7	18.4		53° 39'	368 Tide=-1.3
		21	16.7	16.4		51° 39'	345 -.3
		22	15.2	14.9		49° 45'	317
		23	13.0	12.7		47° 49'	293
		24	11.5	11.2		45° 52'	274
		25	10.1	9.8		44° 20'	250
		26	8.7	8.4		42° 24'	225
		27	7.5	7.2		40° 15'	206
		28	6.2	5.9		38° 35'	
		29	5.2	4.9	7:46	37° 23'	306+65 193



Profile Notes Red. ____ Plotted ____ Job No. 0300-02 Division No. 10 F. B. 2308 Pg. 83
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

F. B. 2308 Pg. 64 | Job No. 0300.02 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of Beach Erosion Study Date 7-22-58 Date _____ No. _____

Survey by Van Deren Notes R.T. Notes Chkd. _____ Checked _____ X-Sec.

Indexed K. O. Johnson Date _____ Date _____ Date _____ No. _____

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

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76L298 S & E #307 9-54

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STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 300+65	Sight on 298+65
298+65	0 00	19 86		19 86	Control line per p975	Inshore
			20	17 9	12 R T. Rocks	298+65
			180	1 9	41 R B. Rocks	
T.P.	0 70	25 6	1600	3 76		
			42	0 1	16° 14' 56	
			46	0 0	25° 16 [illegible]	
			60	-1 1	35° 07 [illegible]	
			70	-2 1	42° 05 [illegible]	
			92	-4 6	50° 06 [illegible]	
			129	-7 3	58° 16 [illegible]	
			150	-10 1	63° 28 [illegible]	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 PG 65
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by Drager Notes Entered Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Jordan

Profile	Notes Red.	Plotted	Job No. [illegible]	Division No. 10	F. B. 2308	Pg. 87
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-22-58	
No.	Date	Date	Map No.	Indexed C. Johnson	Date	

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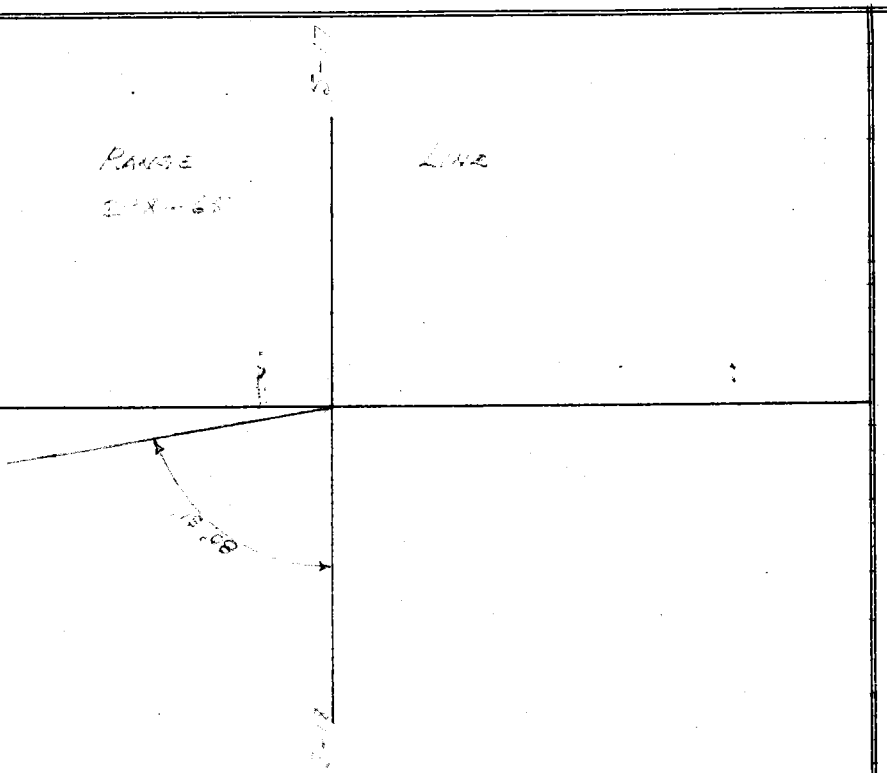
STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At On 298+65 S-18	#	Depth Rec. Adj.	Time	Hor. Ang.	
	1		8 19	80° 31	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				



76298 S & E #307—7-55

F. B. 2308 Pg. 88 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-22-58 Date No.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	Depth # Rec. Adj.	Time	Hor. Ang.		Remarks
298465	S-18	20		80° 31'		
		21		" "		
		22		" "		
		23	S 24	" "		

76298 S & E #307—7-55

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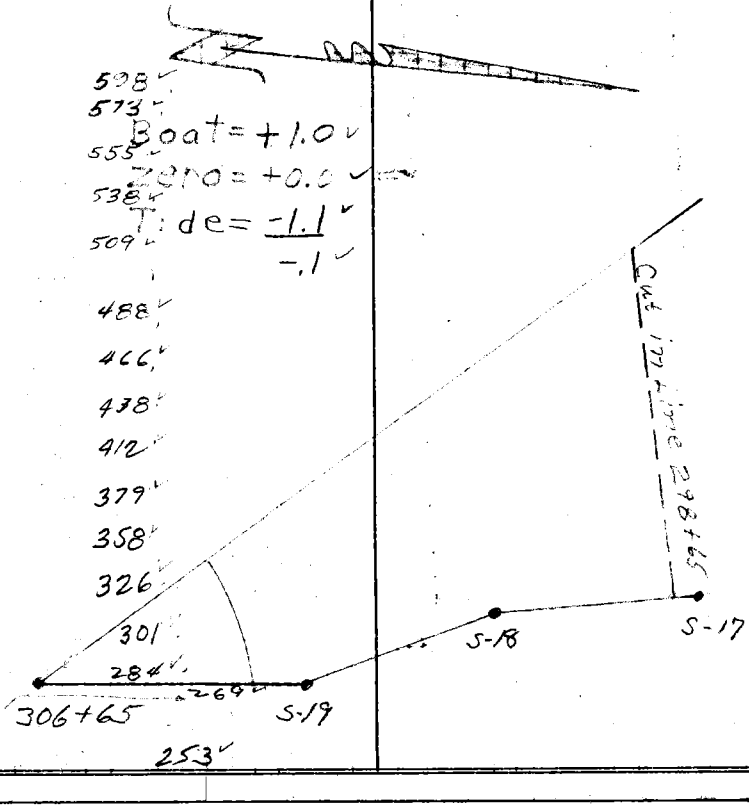
Do not extend notes this side of this line.

STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks
		1	—		8:19	70° 23'		
		2	—			67° 01'		Cut in Line 298+65
		3	—			63° 55'		
		4	—			58° 07'		
		5	32.1	32.0		55° 45'		598
		6	29.1	29.0		54° 33'		573
		7	27.2	27.1		53° 36'		555 Boat = +1.0
		8	25.2	25.1		52° 40'		538 Zero = +0.0
		9	23.0	22.9		51° 09'		509 Tide = -1.1
		10	21.4	21.3		50° 04'		488 -.1
		11	20.2	20.1		48° 45'		466
		12	18.6	18.5		47° 08'		438
		13	17.3	17.2		45° 38'		412
		14	16.8	16.7		43° 42'		379
		15	16.5	16.4		42° 18'		358
		16	14.5	14.4		40° 17'		326
		17	12.4	12.3		38° 40'		301
		18	11.1	11.0		37° 31'		284
		19	10.1	10.0		36° 33'		269
		20	9.2	9.1		35° 25'		253

306+65 S-19



Profile Notes Red. ____ Plotted ____ Job No. ____ Division No. ____ F. B. 2308 Pg. 89
No. ____ Date ____ Date ____ Survey of ____
X-Sec. Notes Chkd. ____ Checked ____ Survey by ____ Notes ____ Date ____
No. ____ Date ____ Date ____ Map No. ____ Index C. Johnson

76298 S & E #307—7-55

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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	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks	
		21	8.1	8.0		34° 16'	236	
		22	6.6	6.5		32° 47'	215 Cut in Line 298+65	
		23	5.2	5.1	3.24	31° 12'	192	
		24					Boat = +1.0'	
		25					Zero = +0.0'	
		26					Tide = -1.1'	
		27					-0.1'	
		28						
306+65	S-19							

F. B. 2308 Pg. 90 Job No. 0300.02 Division No. 10 Notes Red. Plotted Date 9-22-58 Date No. Profile
Survey of Rock Erosion Survey Notes Chkd. Checked Date X-Sec.
Survey by Van Deren Notes Date No.
Indexed C. Johnson Date

76L298 S & E #307 9-54

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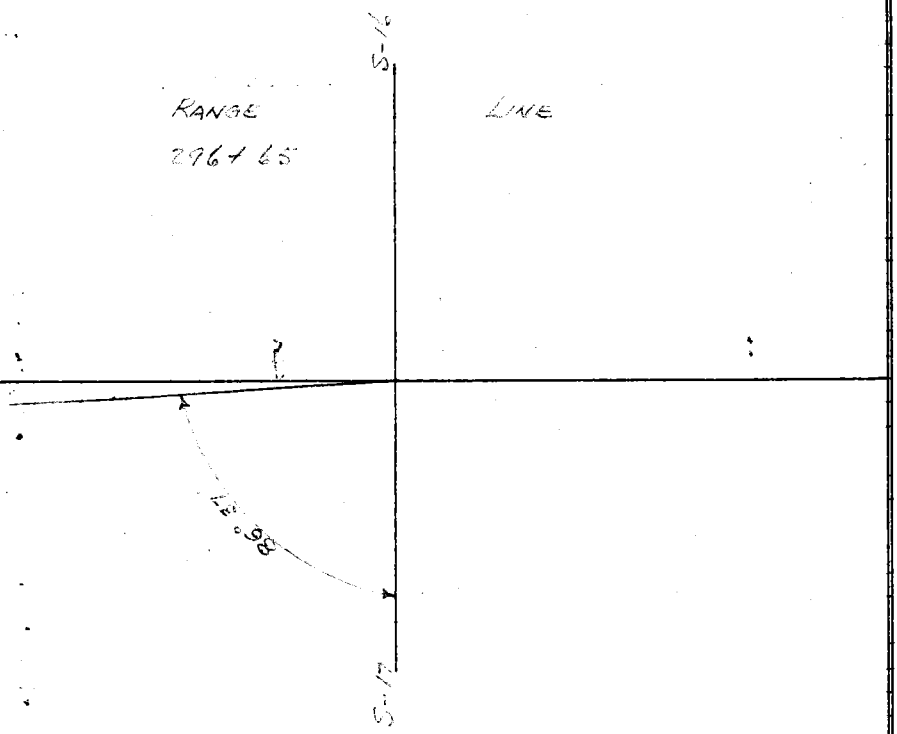
STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 300+65	Sight on S-17
296+65	0 00	19 87		19 87	Control line	per pg 75
			5 0	14 89	12' R T. Rocks	Inshore
			18 5	1 4	33' R B. "	296+65
T.P.	1 91	4 28	17 50	2 37		
			4 0	0 3	11° 26' 61'	
			5 2	-0 9	17° 51' 106'	
			6 6	-2 3	22° 24' 139'	
			9 0	-4 [illegible]	27° 32 17[illegible]	
			12 3	8 0	35° 00' 237'	
			15 8	-[illegible] 5	41° 31' 296'	
			18 0	-1 [illegible]	44° 36 327'	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 91
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes English Date 7-22-56
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

Profile	Notes Red.	Plotted	Job No. 3300.02	Division No. 10	F. B. 2304	Pg. 93
No.	Date	Date	Survey of Beach Erosion			
X-Sec.	Notes Chkd.	Checked	Survey by Van Dorn	Notes T.O.	Date 7-22-58	
No.	Date	Date	Map No.	Indexed C. Johnson	Date	



STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
296+65 S-17	1		8 44	86° 37'	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				

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F. B. 2308 Pg. 94 | Job No. 10 Division No. 0300.02 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date 7-22-58 Date _____ No. _____

Survey by VAN DEREN Notes T. O. Notes Chkd. _____ Checked _____ X-Sec.

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

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

76298 S & E #307—7-55

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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76298 S & E #307—7-55

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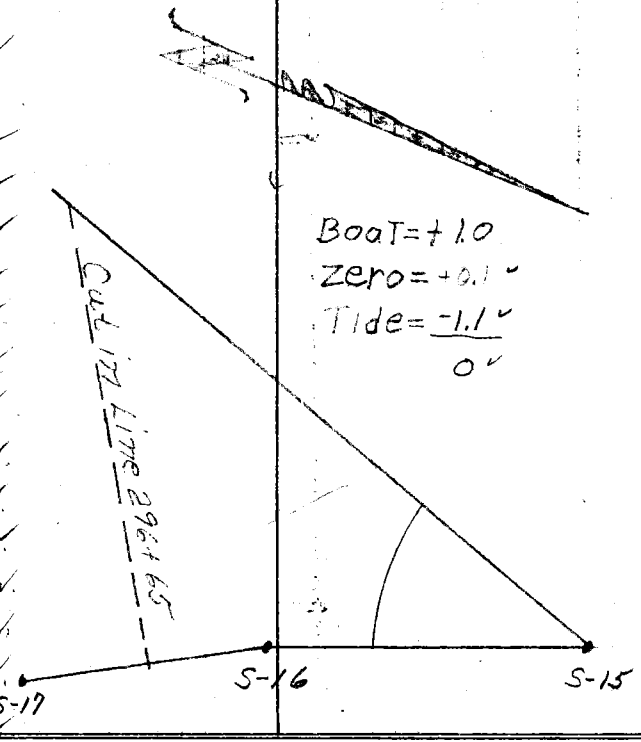
STATION Inst. At	STATION Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		8:44	42° 15'	
		2	—			39° 29'	Cut in Line 296+65
		3	—			36° 49'	
		4	—			34° 54'	
		5	33.5	33.5		34° 10'	668
		6	30.0	30.0		32° 55'	638
		7	27.5	27.5		32° 07'	613
S-15	S-16	8	26.1	26.1		31° 18'	592
		9	24.2	24.2		30° 15'	566
		10	22.9	22.9		29° 27'	548
		11	21.7	21.7		28° 30'	525
		12	20.6	20.6		27° 25'	501
		13	19.6	19.6		26° 32'	482
		14	19.0	19.0		25° 24'	457
		15	18.7	18.7		24° 16'	434
		16	18.0	18.0		23° 05'	411
		17	17.5	17.5		22° 00'	390
		18	16.8	16.8		21° 19'	377
		19	15.7	15.7		20° 34'	363
		20	13.2	13.2		19° 01'	334



Profile Notes Red. ____ Plotted ____ Job No. ____ Division No. ____ F. B. ____ Pg. 8 FJ
No. ____ Date ____ Date ____ Survey of ____
X-Sec. Notes Chkd. ____ Checked ____ Survey by ____ Notes ____ Date ____
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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F. B. 2308 Pg. 96 Job No. 300.02 Division No. 10 Notes Red. Plotted Profile No.
Survey of Beach Erosion Study Date 2-22-58 Date X-Sec. No.
Survey by Van Deren Notes P.T. Notes Chkd. Checked
Indexed R. C. Johnson Date Date Date

STATION Inst. At	Sight On	B. S. #	H. I. Rec.	Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks	
		21	13.2	13.2		17° 29'	307	
		22	12.2	12.2		16° 08'	285	Cut in Line 296+65
		23	10.6	10.6		14° 36'	260	
		24	9.4	9.4		13° 23'	240	Boat = +1.0'
		25	7.9	7.9	8:49	11° 56'	218	zero = +0.1
								Tide = -1.1
								0.0
5-15	5-16							

76L298 307 10-51

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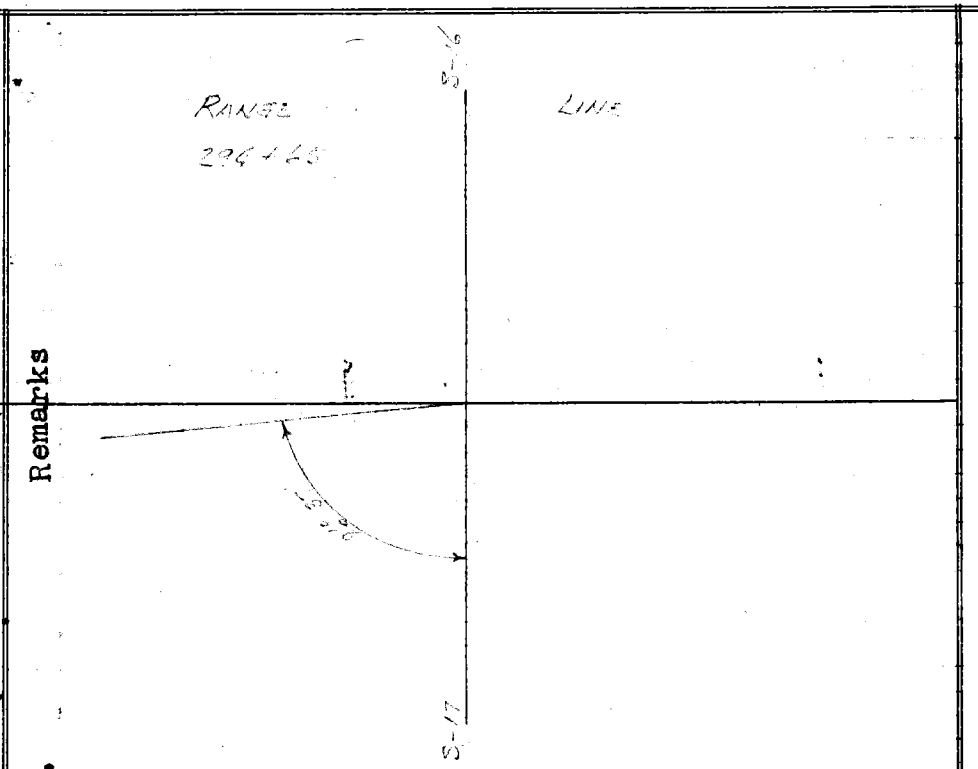
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst at 292+65	Sight on 294+65
294+65	0 00	19 33		19 33	Control line	per pg 75
			4 0	15 3	12' R T. rocks	Inshore
			16 8	2 5	34' R B. "	294+65
T.P.	3 37	5 90	16 80	2 53		
			4 9	1 0	14° 55' 54'	
			8 0	-2 1	31° 48 129'	
			11 4	-5 5	40° 40' 182'	
			15 0	-9 1	46° 50' 228'	
			18 0	-12 1	50° 45 264'	

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 Pg. 97
X-Sec. Notes Chkd. ____ Checked ____ Survey of Beach Erosion Sur.
No. ____ Date ____ Date ____ Survey by Dreier Notes English Date 7-22-58
Map No. ____ Indexed C. Johnson Date ____

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308	Pg. 99
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes TO	Date 7-22-58	
No.	Date	Date	Map No.	Indexed C. Johnson	Date	



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
294+65 S-17	1		9 17	26 57	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				

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F. B. 2308 Pg. 100 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-22-58 Date No.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.

Indexed A. C. Johnson Date Date Date No.

76298 S & E #307—7-55

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

76298 S & E #307—7-55

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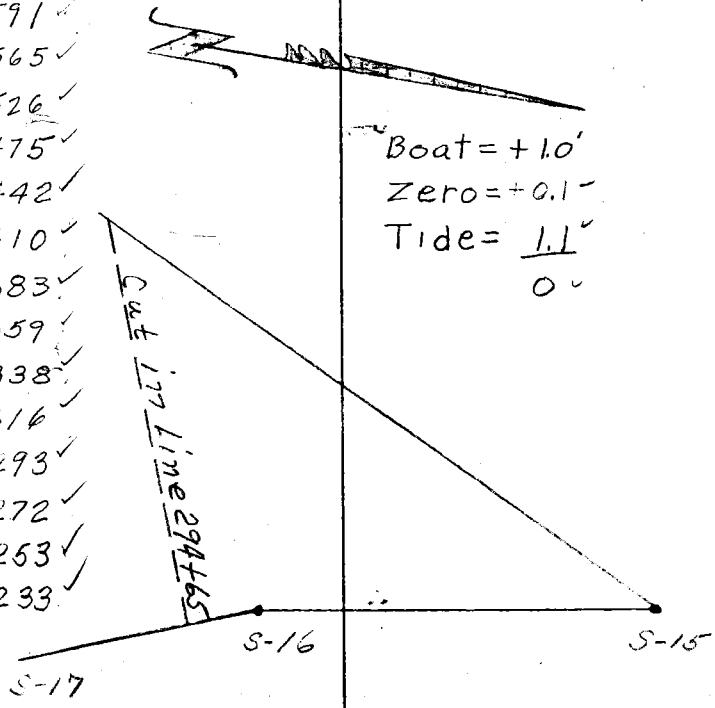
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		9:17	47° 00	
		2	—			42° 49'	Cut in Line 294+65
		3	29.3	29.3		40° 30'	605
		4	28.0	28.0		39° 55'	591
		5	25.7	25.7		38° 54'	565
		6	23.2	23.2		37° 20'	526
		7	20.3	20.3		35° 00'	475
S-15	S-16	8	19.2	19.2		33° 18'	442
		9	18.2	18.2		31° 38'	410
		10	17.2	17.2		30° 08'	383
		11	16.1	16.1		28° 42'	359
		12	14.8	14.8		27° 28'	338
		13	13.5	13.5		26° 03'	316
		14	12.1	12.1		24° 30'	293
		15	11.0	11.0		23° 05'	272
		16	9.8	9.8		21° 45'	253
		17	8.4	8.4	9:20	20° 14'	233
		18	—	boat out of		—	
		19	—	sight		—	
		20					



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 101
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Inspected C. Johnson Date ____

F. B. 2308 Pg. 102 Job No. 0300.02 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of Beach Erosion Study Date 7-22-58 Date _____ No. _____

Survey by Van Deren Notes R.T. Notes Chkd. _____ Checked _____ X-Sec.

Indexed _____ Date _____ Date _____ Date _____ No. _____

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. Sight At On # Rec. Depth Adj. Time Hor. Ang.	Remarks
					S-15	
					S-16	
					21	
					22	
					23	
					24	
						Cut in line 29+65

76298 S & E #307—7-55

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76L298 307 10-51

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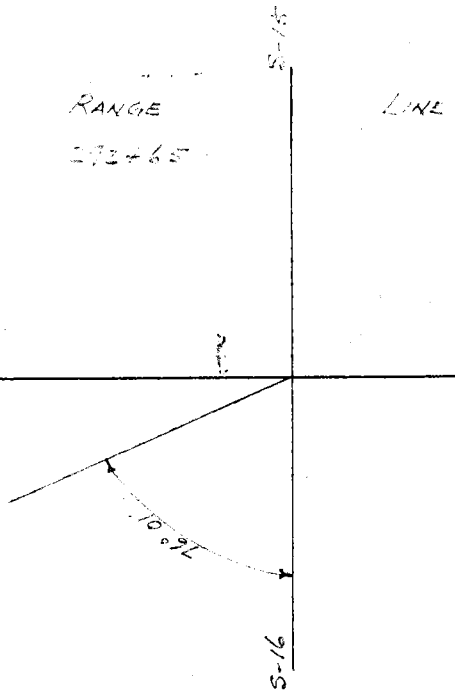
STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at S-16	Sight on 292+65
292+65	0 00	19 32		19 32	Control line per pg 75	
			5 6	13 7	47° 03' 127 T. rocks	Inshore 292+65.
T.P.	13 00	15 32	17 00	2 32	—	
T.P.	1.25	3 27	13 30	2 02	—	
			11 7	-8 4	73° 49' 279' B. rocks	
			13 7	-10 4	77° 25' 318'	
			15 6	-12 3	80° 18' 357'	
			18 0	-14 7	81° 42' 381'	

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 Pg. 103
X-Sec. Date ____ Notes Chkd. ____ Date ____ Survey of Beach Erosion Sur
No. ____ Date ____ Checked ____ Date ____ Survey by Dreier Notes English Date 7-22-58
Map No. ____ Indexed C. Johnson Date ____

Profile No.	Notes Red.	Plotted	Job No. 230002	Division No. 10	F. B. 2308 Pg. 105
	Date	Date	Survey of BEACH EROSION		
X-Sec. No.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-22-58
	Date	Date	Map No.	Indexed A. C. Johnson	Date



STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
292+65 S-16	1		9 35	76° 01'	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				

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F. B. 2308 PG. 106 Job No. 030002 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-22-58 Date No.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.

Indexed C. JOHNSON Date Date Date No.

76298 S & E #307—7-55

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

76298 S & E #307—7-55

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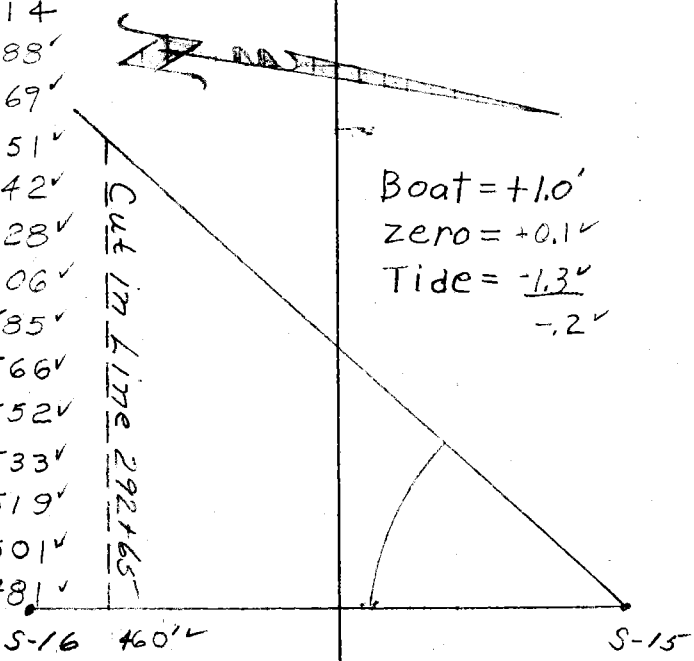
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
S-15	S-16	1	—		9:35	59° 21'	
		2	—			58 07'	Cut in Line 292+65
		3	—			55° 12'	
		4	34.5	34.3		54° 02'	714
		5	32.4	32.2		53° 22'	688
		6	30.3	30.1		52° 53'	669
		7	28.5	28.3		52° 24'	651
		8	27.3	27.1		52° 05'	642
		9	25.5	25.3		51° 43'	628
		10	24.5	24.3		51° 02'	606
		11	23.4	23.2		50° 18'	585
		12	22.8	22.6		49° 41'	566
		13	22.2	22.0		49° 11'	552
		14	22.2	22.0		48° 30'	533
		15	21.7	21.5		47° 56'	519
		16	21.0	20.8		47° 13'	501
		17	20.2	20.0		46° 20'	481
		18	19.7	19.5		45° 22'	S-16 460'
		19	19.1	18.9		44° 38'	447
		20	18.7	18.5		43° 40'	426



Boat = +1.0'
zero = +0.1
Tide = -1.3
-.2

Profile Notes Red. Plotted Job No. 030002 Division No. 10 F. B. 2308 Pg. 107
No. Date Date Survey of Beach Erosion Study
X-Sec. Notes Chkd. Checked Survey by Van Ekron Notes Date 9-22-58
No. Date Date Map No. Indexed C. Jonnson Date

76298 S & E #307—7-55

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F. B. 2308 Pg. 108 Job No. 0300.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 2-22-58 Date No. Profile
Survey by Van Deren Notes A.T. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

STATION Inst. At	STATION Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks	
		21	17.8	17.6		42° 19'	399	
		22	16.1	15.9		40° 53'	375 Cut in Line 292+65	
		23	14.5	14.3		39° 13'	348	
		24	12.7	12.5		37° 31'	324 Boat = +1.0'	
		25	11.2	11.0		36° 11'	303 Zero = +0.1'	
		26	10.2	10.0		34° 53'	287 Tide = -1.3'	
		27	—		9:39	34° 17'	-0.2'	
S-15	S-16							

76L298 307 10-51

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TP. 15.09

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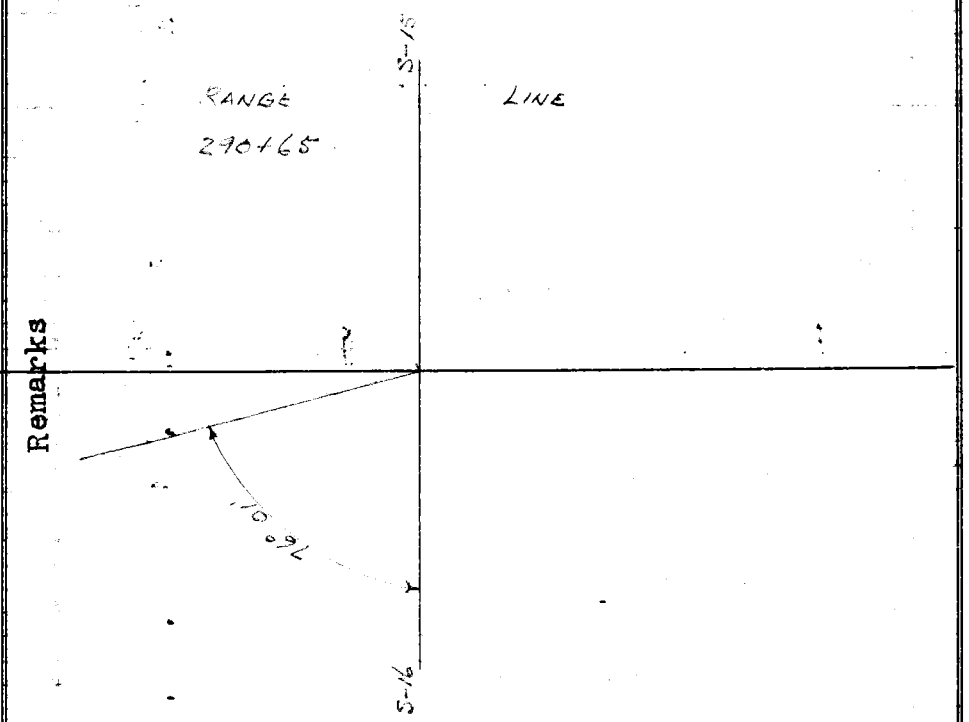
STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at S-16	Sight on 290+65
290+65	1 55	2.2 30		20 75	Control line per pg 75	
			2 0	20 3	45' R T.B.	Inshore 290+65
			20 2	2 1	80' " B. rocks	
T.P.	1 40	7 50	16 20	6 10		
T.P.	1 34	3 29	5 60	1 90		
		3 2	4 8	-1 6	15° 50' 94'	
			9 3	-6 1	19° 49' 118'	
			10 2	-7 0	25° 15' 151'	
			13 2	-10 0	33° 18' 201'	
			15 9	-12 7	39° 30' 244'	
			16 4	-13 2	45° 21 288'	
			17 3	-14 1	48° 49 317'	
			17 3	-14 1	52° 33 351' Bot. rocks	
T.P.	0 00	15 09		15 09	See pg.	
			0 0	15 1	56° 53' 396' Top of rocks	
			0 0	15 1	58° 30' 414' " " "	
T.P.	1 3	4 6	11 80	03 29	65° 03' 500'	
			17 8	-13 2	Bot. rocks	

Check This page 9-18-58

Profile
No. ____ Date ____ Notes Red ____ Date ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 Pg. 109
X-Sec. No. ____ Date ____ Notes Chkd. ____ Date ____ Checked ____ Survey of Beach Erosion Sur. Survey by English Notes Eng. Date 7-22-58
Map No. ____ Indexed ____ Date ____

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 111
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes [illegible]	Date 7-22-58	
No.	Date	Date	Map No.	Indexed	Date	



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
290+65 S-16	1		10 02	76° 01'	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17			10 05	

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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76298 S & E #307—7-55

F. B. 2308 Pg. 112 Job No. 030002 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-22-58 Date No.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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

76298 S & E #307—7-55

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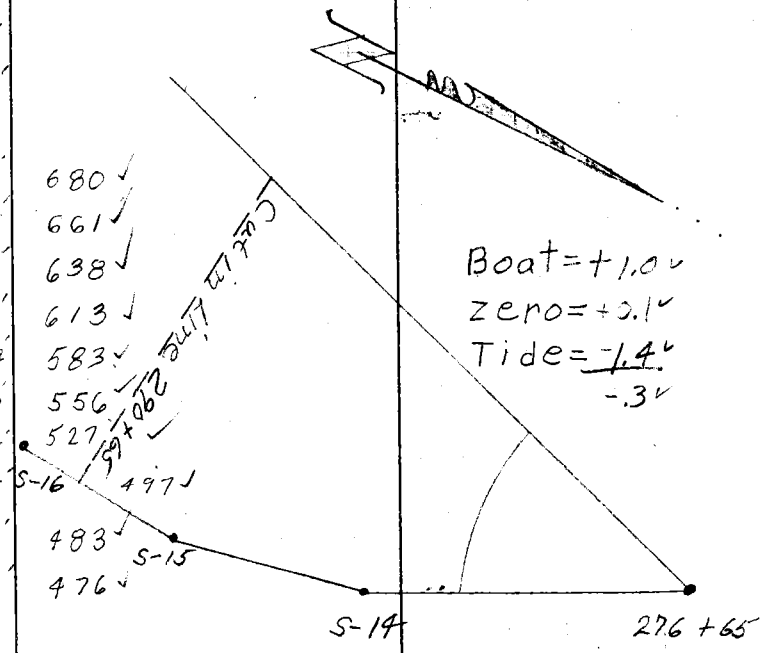
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor.	ELEV. Ang.	Remarks
		1	—		10:02	42°	58'	out side of Breakwater
		2	39.0	38.7		42°	04'	1013 Cut in Line 290+65
		3	37.1	36.8		40°	26'	948
		4	—			38°	59'	
		5	—			36°	55'	
		6	—			34°	45'	
276+65	S-14	7	—			33°	11'	
		8	26.5	26.2		32°	20'	680
		9	25.7	25.4		31°	45'	661
		10	25.0	24.7		30°	58'	638
		11	24.0	23.7		30°	07'	613
		12	22.0	21.7		29°	04'	583
		13	20.8	20.5		28°	10'	556
		14	20.2	19.9		27°	08'	527
		15	18.1	17.8		26°	06'	497
		16	14.2	13.9		25°	33'	483
		17	—		10:05	25°	21'	476
		18						
		19						
		20						



Profile Notes Red. Plotted Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 113
No. Date Date Survey of Beach Erosion Study
X-Sec. Notes Chkd. Checked Survey by Van Veren Notes P.T. Date 7-22-58
No. Date Date Map No. Indexed C. Johnson Date

F. B. 2308 Pg. 114 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of Beach Erosion Study Date 7-22-58 Date No.

Survey by Van Deren Notes R.T. Notes Chkd. Checked X-Sec.

Index C. Johnson Date Date Date No.

76298 S & E #307—7-58

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STATION	B. S.	H. I.	F. S.	ELEV.	Inst. Sight At On # Depth Rec. Adj. Time Hor. Ang.	Remarks
276+65						
S-14						
					21	
					22	
					23	
						Cut in line 290+65

76L298 307 10-51

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ENGINEERING BLDG.

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STATION	B. S.	H. I.	F. S.	ELEV.		
288+65	3 2	20 63		17 43	Control line per pg 75	
			2 2	18 4	10' R T. rocks	Inshore
			2 2	18 4	25' " " "	288+65
T.P.	3 1	9.03	14 7	5 93		
			9 7	-0 7	65' R Bot. "	
			120	-3 0	81' R	

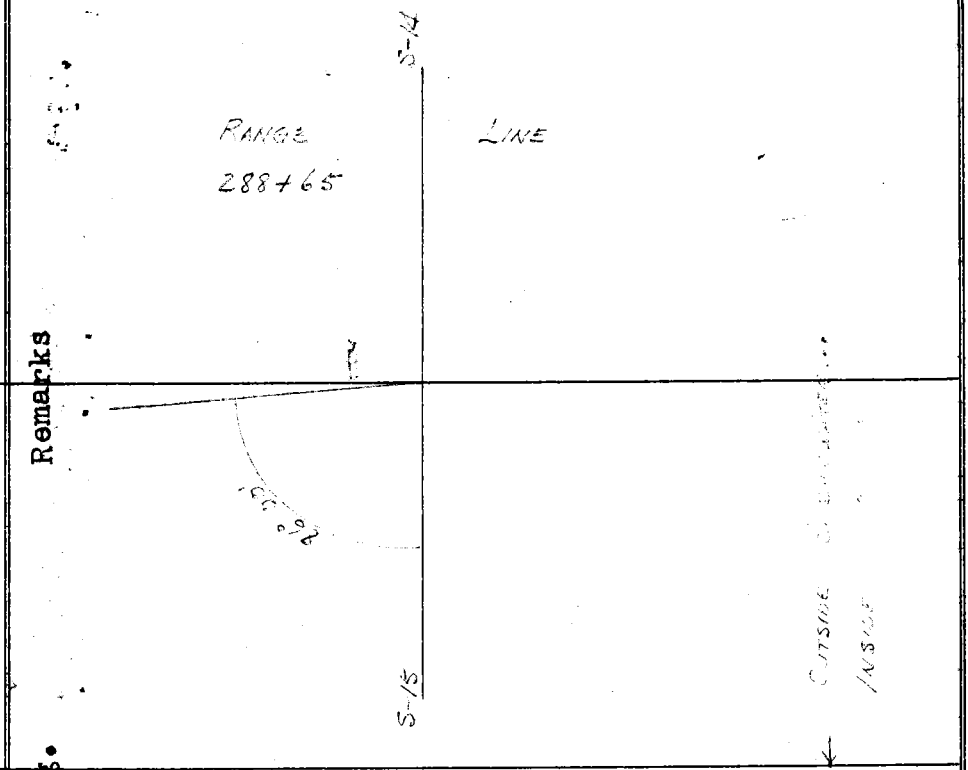
Profile Notes Red ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 Pg. 115

No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.

X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes English Date 7-22-58

No. ____ Date ____ Date ____ Map No. ____ Index [redacted] C Johnson

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308 Pg. 117
No.	Date	Date	Survey of BEACH EROSION		
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-22-58
No.	Date	Date	Map No.	Indexed C. Johnson	Date



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
288+65 S-15	1		10 31	26° 00'	
	2			"	
	3			"	
	4			"	
	5			"	
	6			"	
	7			"	
	8			"	
	9			"	
	10			"	
	11			"	
	12			"	
	13			"	
	14			"	
	15			"	
	16			"	
	17			"	
	18			"	
	19			"	
	20			"	

OUTSIDE
INSIDE

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76298 S & E #307—7-55

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STATION		S. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
288+65	S-15	21			[illegible]		
		22			" "		
		23			" "		
		24			" "		
		25			" "		
		26			" "		
		27			" "		
		28			" "		
		29			" "		
		30			" "		
		31			" "		
		32			" "		
		33			" "		
		34			" "		
		35			" "		
		36			" "		
		37			" "		
		38			" "		
		39			" "		
		40			" "		

F. B. 2308 PG. 118 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-22-58 Date No.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
288+65	S-15	41				86° 00'	
		42				" "	
		43				" "	
		44				" "	
		45				" "	
		46				" "	
		47				" "	
		48				" "	
		49				" "	
		50				" "	
		51				" "	
		52				" "	
		53				" "	
		54				" "	
		55				" "	
		56				" "	
		57			10 49	" "	

Profile Notes Red. ____ Plotted ____ Job No. 03000 Division No. 10 F. B. Pg. 119
No. ____ Date ____ Date ____ Survey of BEACH EROSION
X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. John

F. B. 2308 Pg. 120 Job No. 330002 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date 7-26-58 Date _____ No. _____

Survey by VAN DEREN Notes 70. Notes Chkd. _____ Checked _____ X-Sec.

K. C. JOHNSON

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

76298 S & E #307—7-55

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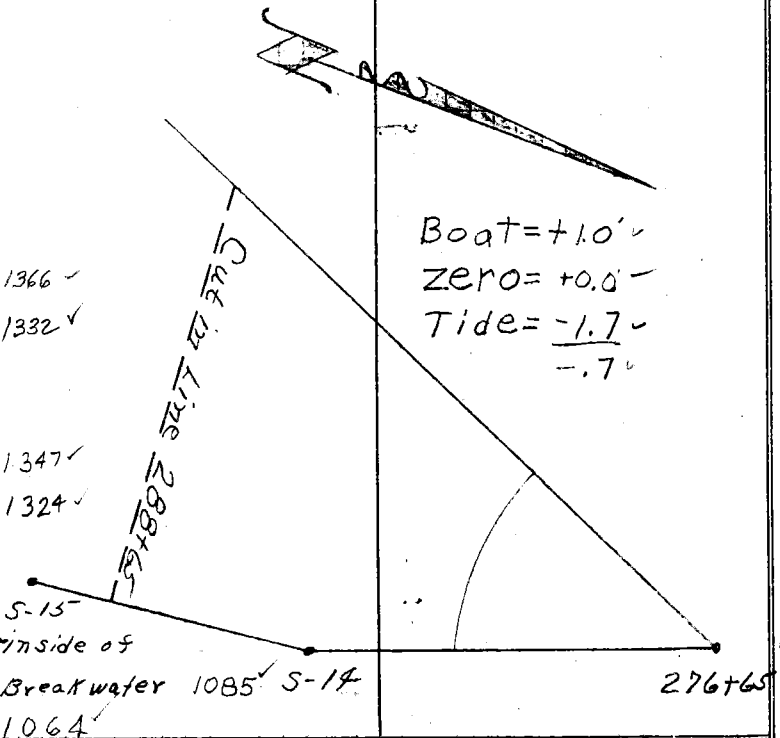
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		10:31	70° 30'	outside of Breakwater
		2	—			69° 35'	Cut in Line 288+65
		3	—			67° 53'	
		4	—			66° 24'	
		5	—			64° 24'	
		6	—			62° 07'	
		7	—			59° 24'	
		8	—			56° 43'	
276+65	S-14	9	—			55° 01'	
		10	44.7	44.0	—	53° 56'	1366
		11	44.9	44.2		53° 15'	1332
		12	—			52° 45'	
		13	—		10:37	51° 15'	
		14	44.3	43.6	10:40	53° 34'	1347
		15	44.5	43.8		53° 03'	1324
		16	—			52° 32'	
		17	—		10:41	51° 58'	S-15
		18	—		10:43	48° 00'	inside of
		19	27.0	26.3		47° 23'	Breakwater 1085 S-14
		20	29.5	28.8		46° 47'	1064



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 121
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Index C. Johnson

76298 S & E #307—7-55

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F. B. 2308 Pg. 122 Job No. 0300.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 7-22-58 Date No. X-Sec.
Survey by Vanderen Notes R.T. Notes Chkd. Checked Profile
Indexed C. Johnson Date Date Date No.

STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Rec.	Depth Adj.	Time	Hor. Ang.		Remarks
		21	—			45° 49'		
		22	—			44° 40'		Cut in Line 288+65
		23	30.2	29.4		44° 05'	966	
		24	30.2	29.4		43° 23'	942	Boat = +1.0
		25	30.3	29.5		42° 36'	912	zero = +0.0
		26	30.3	29.5		41° 47'	889	Tide = -1.8
		27	30.1	29.3		41° 05'	867	-.8
		28	29.7	28.9		40° 30'	849	
		29	29.2	28.4		39° 35'	820	
288+65	S-14	30	28.7	27.9		38° 49'	797	
		31	28.2	27.4		38° 13'	779	
		32	27.7	26.9		37° 19'	752	
		33	27.2	26.4		36° 32'	730	
		34	26.5	25.7		35° 48'	710	
		35	26.6	25.8		35° 09'	691	
		36	26.3	25.5		34° 23'	669	
		37	25.6	24.8		32° 54'	631	
		38	25.3	24.5		31° 58'	607	
		39	24.7	23.9		30° 53'	576	
		40	23.5	22.7		30° 00'	555	Cont Pg.

76298 S & E #307—7-55

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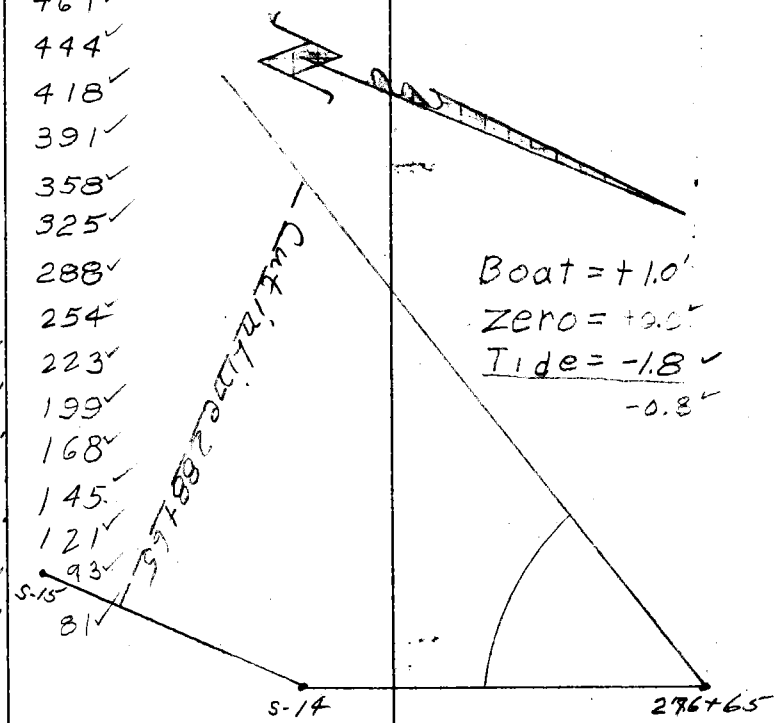
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	22.5	21.7		29° 03'	531 Cont. from Pg.
		42	22.6	21.8		28° 00'	504 Cut in Line 288+65
		43	21.3	20.5		26° 15'	461
		44	20.1	19.3		25° 31	444
		45	19.4	18.6		24° 26	418
		46	18.6	17.8		23° 16	391
		47	18.2	17.4		21° 50	358
276+65	S-14	48	17.3	16.5		20° 23	325
		49	16.6	15.8		18° 40	288
		50	15.1	14.3		17° 11'	254
		51	13.7	12.9		15° 45'	223
		52	12.7	11.9		14° 34'	199
		53	11.7	10.9		13° 13'	168
		54	10.8	10.0		12° 07	145
		55	9.8	9.0		10° 58	121
		56	7.1	6.3		09° 37'	93
		57	—		10:49	09° 03'	81



Boat = +1.0'
Zero = +0.0
Tide = -1.8
-0.8

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 123
Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-22-58
Date ____ Date ____ Map No. ____ Indexed C. Jonnson

F. B. 2308 Pg. 124 | Job No. 8300.02 Division No. 10 | Notes Red. | Plotted | Profile

Survey of Beach Erosion Study | Date 7-22-58 | Date | No.

Survey by Van Doren | Notes R.T. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | Date | No.

76298 S & E #307—7-55

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

76L298 307 10-51

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
286+65	5 2	17 36		12 16	Control line perpgs	
			05	16 89	10' R T. rocks	Inshore
			05	16 89	20' R " "	286+65
T.P.	0 0		11 7	5 66	44' R	
			16 5	09	70' R Bot. rocks	

Profile No. ____ Date ____ Notes Red ____ Date ____ Plotted ____ Date ____
X-Sec. No. ____ Date ____ Notes Chkd ____ Date ____ Checked ____ Date ____
Job No. 03000.02 Division No. 10 F.B. 2308 Pg. 125
Survey of Beach Erosion Sur.
Survey by Dreier Notes English Date 7-22-58
Map No. ____ Indexed ____ Date ____ C. Johnson

76298 S & E #307—7-55

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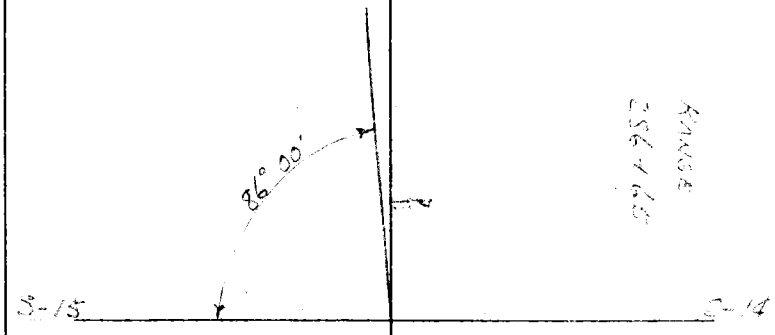
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
286465	S-15	1			11 01	86° 00'	
		2				" "	
		3				" "	
		4				" "	
		5				" "	
		6				" "	
		7				" "	
		8				" "	
		9				" "	
		10				" "	
		11				" "	
		12				" "	
		13				" "	
		14				" "	
		15				" "	
		16				" "	
		17			11 04	" "	OUTSIDE DRAWAGE
		18			11 06	" "	INSIDE "
		19				" "	
		20				" "	



Profile Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F. B. 2308 Pg. 127
No. ____ Date ____ Date ____ Survey of BEACH EROSION
X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

F. B. 2308 Pg. 128 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-22-58 Date No.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.

Indexed A. C. Johnson Date Date Date No.

76298 S & E #307—7-55

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STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	Depth # Rec. Adj.	Time	Hor. Ang.		Remarks
286465	S-15			860 00		
	21			"		
	22			"		
	23			"		
	24			"		
	25			"		
	26			"		
	27			"		
	28			"		
	29			"		
	30			"		
	31			"		
	32			"		
	33			"		
	34			"		
	35			"		
	36			"		
	37			"		
	38			"		
	39			"		
	40			"		

76298 S & E #307—7-55

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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 Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
226+65	S-15	41				86° 00	
		42				" "	
		43				" "	
		44				" "	
		45				" "	
		46				" "	
		47				" "	
		48				" "	
		49				" "	
		50				" "	
		51				" "	
		52			11 15	" "	

Profile Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F. B. 2308 Pg. 129
No. ____ Date ____ Date ____ Survey of BEACH EROSION
X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Index [illegible] C. Johnson

F. B. 2308 Pg. 130 | Job No. 0300.02 Division No. 10 | Notes Red. | Plotted | Profile

Survey of BEACH EROSION | Date 7-22-58 | Date | No.

Survey by VAN DEREN Notes T.O. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | Date | No.

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

Do not extend notes this side of this line.

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76298 S & E #307—7-55

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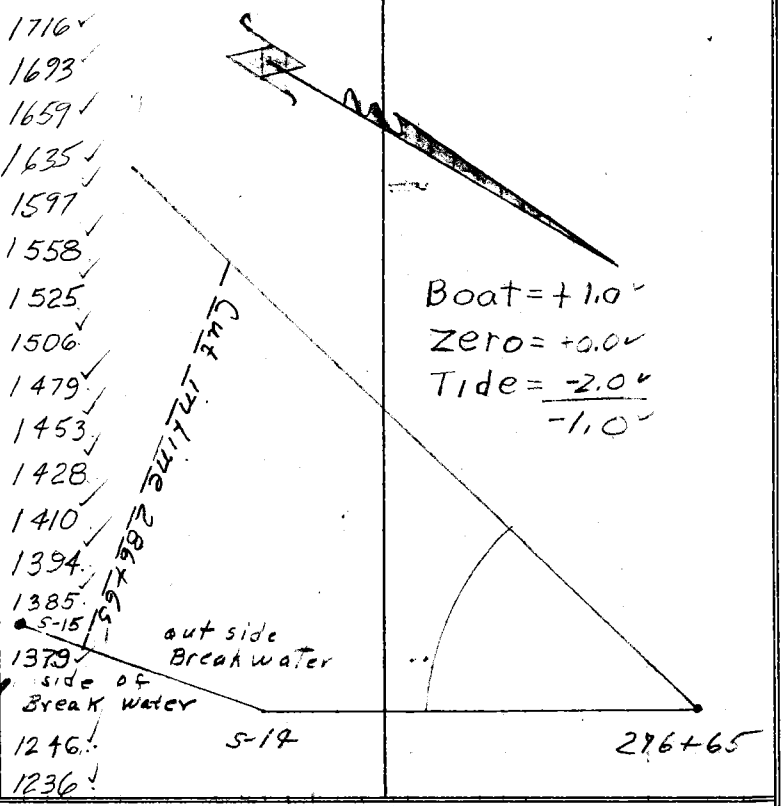
Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		11:01	66° 44'	out side of Break water
		2	47.7	46.7		65° 38'	1774 Cut in Line 286+65
		3	46.5	45.5		64° 50'	1716
		4	46.8	45.8		64° 30'	1693
		5	46.8	45.8		63° 56'	1659
		6	45.7	44.7		63° 36'	1635
		7	45.3	44.3		62° 58'	1597
276+65	S-14	8	43.7	42.7		62° 18'	1558
		9	43.2	42.2		61° 45'	1525
		10	42.3	41.3		61° 24'	1506
		11	41.2	40.2		60° 57'	1479
		12	41.7	40.7		60° 30'	1453
		13	41.3	40.3		59° 59'	1428
		14	38.5	37.5		59° 37'	1410
		15	31.0	30.0		59° 20'	1394
		16	28.0	27.0		59° 08'	1385
		17	—		11 04	59° 02'	1379
		18	—		11:06	56° 15'	side of Break water
		19	13.5	12.5		56° 10'	1246
		20	19.0	18.0		55° 58'	1236



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 131
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Kr Deren Notes K.T. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Index C. Johnson

76298 S & E #307—7-55

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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	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks
276+65	S-14	21	26.8	25.7		55° 19'	1207	
		22	36.5	35.4		54° 48'	1186	Cut in Line 286+65
		23	36.3	35.2		54° 18'	1165	
		24	35.2	34.1		53° 54'	1153	Boat=+1.0'
		25	33.8	32.7		53° 18'	1127	zero= +0.0
		26	32.7	31.6		52° 21'	1088	Tide= -2.1
		27	32.0	30.9		51° 04'	1042	-1.1
		28	31.6	30.5		49° 52'	1000	
		29	31.2	30.1		49° 03'	971	
		30	31.3	30.2		47° 45'	929	
		31	30.6	29.5		46° 13'	881	
		32	—			44° 48'		
		33	—			43° 05'		
		34	28.2	27.1		41° 56'	759	
		35	27.5	26.4		40° 54'	732	
		36	26.5	25.4		39° 23'	691	
		37	—			37° 34'		
		38	—			35° 31'		
		39	—			33° 21'		
		40	22.8	21.7		31° 46'	512	Cont. Pg.

F. B. 2308 Pg. 132 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of Beach Erosion Study Date 2-22-58 Date X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked No.
Indexed C. Johnson Date Date Date

76298 S & E #307—7-55

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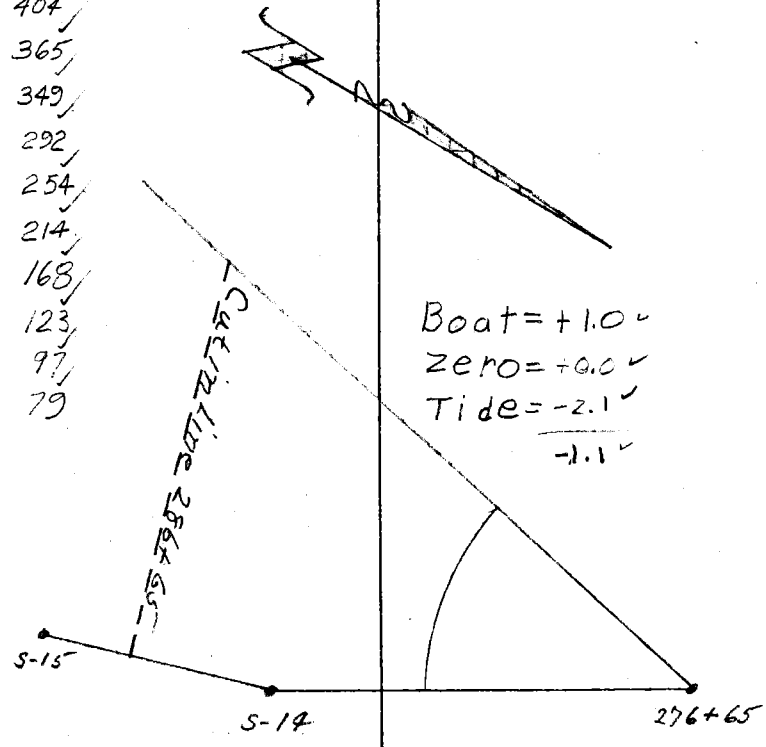
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	21.8	20.7		29° 53'	472 Cont. from Pg.
		42	20.9	19.8		28° 16'	439 Cut in Line 286 + 65
		43	20.5	19.4		26° 32'	404
		44	20.1	19.0		24° 32'	365
		45	19.2	18.1		23° 45'	349
		46	18.2	17.1		20° 46'	292
		47	17.5	16.4		18° 45'	254
276+65	S-14	48	16.3	15.2		16° 27'	214
		49	—			14° 00'	168
		50	14.5	13.4		11° 26'	123
		51	13.0	11.9		09° 57'	97
		52	11.2	10.1	11:13	08° 56'	79



Boat = +1.0
Zero = +0.0
Tide = -2.1
-1.1

Profile Notes Red. ____ Plotted ____ Job No. 03000-2 Division No. 10 F.B. 2308 Pg. 133
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by VanDeren Notes P.T. Date 7-22-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

F. B. 2308 Pg. 134 | Job No. 0.700.02 Division No. 10 | Notes Red. | Plotted | Profile

Survey of Beach Erosion Study | Date 7-22-58 | Date | No.

Survey by Van Dreen Notes R.T. | Notes Chkd. | Checked | X-Sec.

Indexed A. C. Johnson Date | Date | Date | No.

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

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Profile No.	Notes Red.	Plotted	Job No. 0300-02	Division No. 10	F. B. 2308	Pg. 135
	Date	Date	Survey of Beach Erosion			
X-Sec. No.	Notes Chkd.	Checked	Survey by VanDercen	Notes Van	Date 7-23-58	
	Date	Date	Map No.	Indexed C. Johnson		

7-23-58 Redondo Breakwater Area

3.0 on Datum Line

Time Check Gage time = 10.07 High —

P.D.S.T = 11.10 Low —

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks	standard Time	Reading	P. D. S. T.
						5.00 AM	2.8	6.00
						5.30 "	2.5	6.30
						6-00 "	2.3	7-00
						6-30 "	2.0	7-30
						7-00 "	1.8	8-00
						7-30 "	1.7	8-30
						8-00 "	1.7	9-00
						8-30 "	1.7	9-30
						9-00 "	1.8	10-00
						9-30 "	2.2	10-30
						10-00 "	2.6	11-00
						10-30 "	3.0	11-30
						11-00 "	3.5	12-00
						11-30 "	3.9	12-30
						12-00 "	4.2	1-00
						12-30 PM	4.7	1-30
						1-00 "	5.1	2-00
						1-30 "	5.3	2-30
						2-00 "	5.6	3-00

Inst. Sight At On # Depth Rec. Adj. Time Hor. Ang.

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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76298 S & E #307—7-55

F. B. 2306 Pg. 135A Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of Beach Erosion Date 7-23-58 Date No.

Survey by Van Deren ~~C. Johnson~~ Notes Van Notes Chkd. Checked X-Sec.

Indexed Date Date Date No.

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

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76F309S CE #247—8-57

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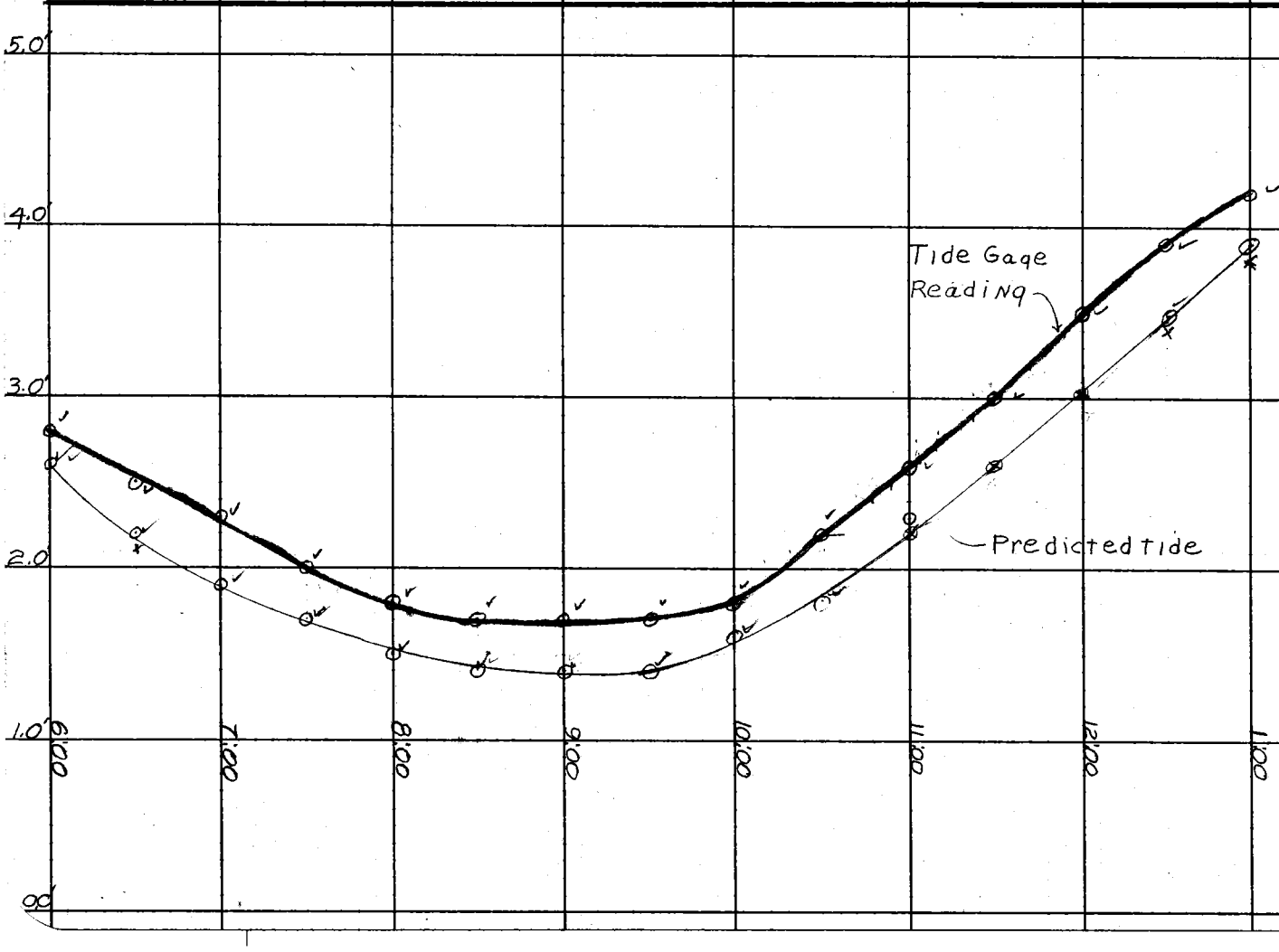

Notes Ck'd by
Map No.
Office Work L. Manley
Checked J. S. H.
Date

Survey of 0300.02
JN Tape Std °F
Surveyed by Van Daran
Notes Date 7-23-58
Indexed

F. B. 2308 Pg. 136

76L298 307 10-51

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726 LOS ANGELES COUNTY
ENGINEERING BLDG.

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STATION	B. S.	H. I.	F. S.	ELEV.		
284+65	270	23 24		20 54	Control line	- T. Rocks
			106	12.6	13' L B. rock	Inshore
			0 8	22.4	13½' R T. rock	284+65
T.P.	1 6	9 8	150	08 2		
			156	-5 8	64' R. B. rocks	

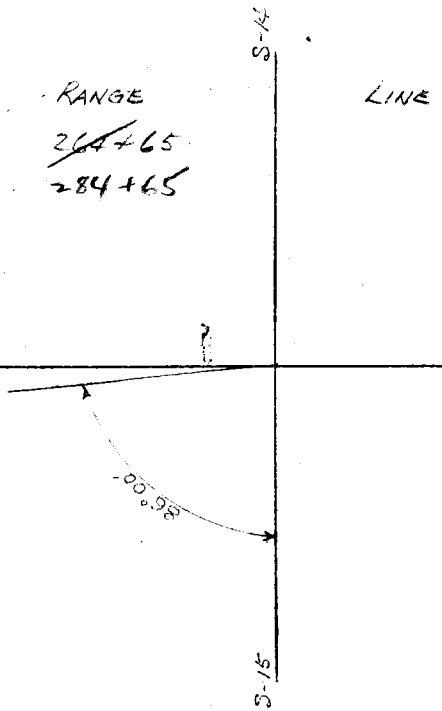
Profile No. ____ Date ____ Notes Red ____ Date ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 Pg. 137

X-Sec. No. ____ Date ____ Notes Chkd. ____ Date ____ Checked ____ Survey of Beach Erosion Sur

Survey by Dreier Notes Landa Date 7-23-58

Map No. ____ Date ____ Indexed C. Jan Date ____

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308 Pg. 139
No.	Date	Date	Survey of BEACH EROSION		
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-23-58
No.	Date	Date	Map No.	Indexed C. Johnson	Date



STATION Inst. At	Sight On	B. B. #	H. I. Depth Rec. Adj.	F. B. Time	ELEV. Hor. Ang.	Remarks
~~264~~+65	S-15	1		7 23	86° 00'	
284+65		2			" "	
		3			" "	
		4			" "	
		5			" "	
		6			" "	
		7			" "	
		8			" "	
		9			" "	
		10			" "	
		11			" "	
		12			" "	
		13			" "	
		14			" "	
		15			" "	
		16			" "	
		17			" "	
		18			" "	
		19			" "	
		20			" "	

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STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
264+65	S-15	21			96 "		
		22			" "		
		23			" "		
		24			" "		
		25			" "		
		26			" "		
		27			" "		
		28		7 35	" "	OUTER EDGE BREAKWATER	
		29		7 34	" "	INNER " "	
		30			" "		
		31			" "		
		32			" "		
		33			" "		
		34			" "		
		35			" "		
		36			" "		
		37			" "		
		38			" "		
		39			" "		
		40			" "		

F. B. 2308 Pg. 140 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of BEACH EROSION Date 7-23-58 Date X-Sec.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked No.
Indexed K. C. Johnson Date Date Date

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STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
264465	3-15	41				86° 00	
		42				" "	
		43				" "	
		44				" "	
		45				" "	
		46				" "	
		47				" "	
		48				" "	
		49				" "	
		50				" "	
		51				" "	
		52				" "	
		53				" "	
		54				" "	
		55				" "	
		56				" "	
		57				" "	
		58				" "	
		59				" "	
		60				" "	

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 141
Date ____ Date ____ Survey of BEACH EROSION
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-23-58
Date ____ Date ____ Map No. ____ Indexed C. Johnson

F. B. 2308 Pg. 192 Job No. 030002 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-23-58 Date No.

Survey by VAN DEREN Notes T.O Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

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STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.		Remarks
264+65 S-15	61			86 00		
	62			"		
	63			"		
	64			"		
	65			"		
	66			"		
	67		7 41	"		

76298 S & E #307—7-55

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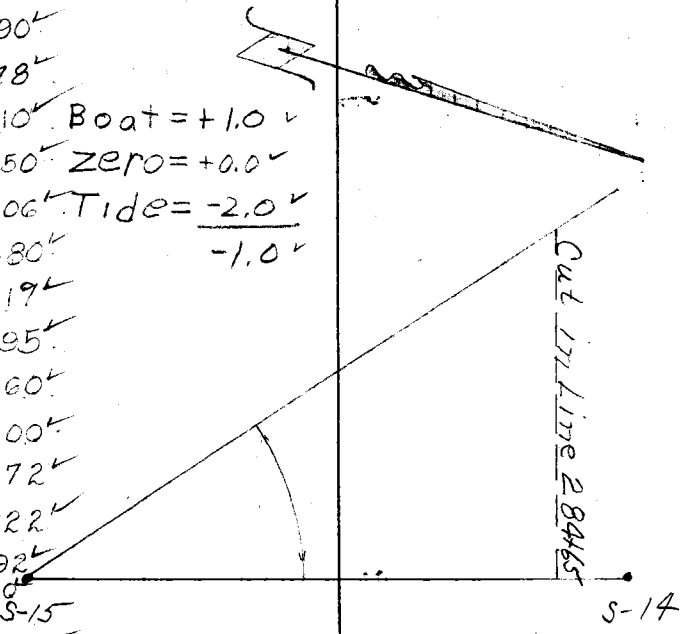
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		7:23	82° 46'	
		2	48.7	47.7		82° 28'	2,330 Cut in Line 284+65
		3	48.1	47.1		82° 15'	2,281
		4	47.7	46.7		82° 00'	2,232
		5	47.2	46.2		81° 48'	2,190
		6	46.6	45.6		81° 37'	2,178
S-15	S-14	7	46.0	45.0		81° 18'	2,110 Boat = +1.0
		8	45.2	44.2		80° 55'	2,050 Zero = +0.0
		9	44.3	43.3		80° 38'	2,006 Tide = -2.0
		10	44.3	43.3		80° 24'	1,980 -1.0
		11	43.6	42.6		80° 04'	1,919
		12	43.2	42.2		79° 52'	1,895
		13	42.7	41.7		79° 37'	1,860
		14	42.4	41.4		79° 14'	1,800
		15	42.0	41.0		78° 55'	1,772
		16	41.3	40.3		78° 34'	1,722
		17	40.4	39.4		78° 17'	1,692
		18	39.0	38.0		78° 00'	1,660
		19	38.8	37.8		77° 52'	1,653
		20	38.6	37.6		77° 41'	1,629



Profile No. ____ Notes Red. ____ Plotted ____ Job No. 2308-02 Division No. 10 F. B. 2308 Pg. 143
X-Sec. No. ____ Date ____ Date ____ Survey of Beach Erosion Study
Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 9-23-58
Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

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F. B. 2308 Pg. 144 Job No. 302.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 7-23-58 Date
Survey by Notes Chkd. Checked
Indexed Notes Date Date
Profile No. X-Sec. No.

STATION Inst. At	Sight On	B. S. # Rec	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
		21	38.4 37.4		77° 28'	1,609	
		22	38.6 37.6		77° 15'	1,584	Cut in Line 284+65
		23	38.6 37.6		77° 03'	1,563	
		24	—		76° 51'		Boat=+1.0
		25	—		76° 37'		zero=+0.0
		26	—		76° 26'		Tide=-2.0
		27	—		76° 18'		-1.0
		28	—	7:30	76° 08'		outside of Breakwater
S-15	S-14	29	—	7:34	74° 26'		inside of Break Water
		30	—		74° 13'		
		31	—		73° 58'		
		32	—		73° 45'		
		33	32.8 31.8		73° 30'	1,277	
		34	32.4 31.4		73° 11'	1,259	
		35	31.9 30.9		72° 42'	1,229	
		36	31.4 30.4		72° 16'	1,208	
		37	30.6 29.6		71° 26'	1,159	
		38	29.7 28.7		70° 39'	1,118	
		39	29.3 28.3		69° 38'	1,067	
		40	28.2 27.2		68° 24'	1,009	

76298 S & E #307—7-55

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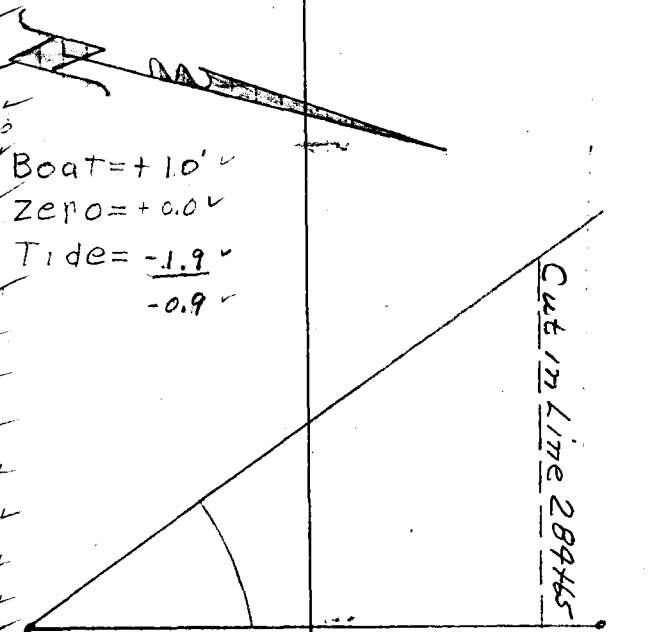
STATION Inst. At	Sight On	S. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	27.6	26.7		67° 47'	986
		42	26.6	25.7		66° 20	927 Cut in Line 284+65
		43	25.8	24.9		65° 08	882
		44	25.1	24.2		64° 04'	847
		45	24.7	23.8		62° 47	805
		46	24.5	23.6		61° 23'	765
		47	24.0	23.1		60° 02	729 Boat = +1.0'
S-15	S-14	48	23.5	22.6		58° 58'	701 Zero = +0.0
		49	22.8	21.9		57° 41	671 Tide = -1.9
		50	22.5	21.6		56° 09	636 -0.9
		51	22.0	21.1		54° 05	591
		52	21.2	20.3		51° 56	551
		53	20.4	19.5		49° 17	505
		54	19.9	19.0		46° 54	468
		55	19.2	18.3		44° 30'	433
		56	18.6	17.7		41° 58'	398
		57	17.8	16.9		38° 42	357
		58	17.2	16.3		35° 30	320 290 S-15
		59	16.4	15.5		32° 14	285
		60	15.6	14.7		28° 37	248



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 145
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Index Fd. C. Johnson

76298 S & E #307—7-55

PLEASE RETURN TO
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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	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks	
		61	14.7	13.8		24° 36	209		
		62	14.1	13.2		20° 03	168	Cut in	284 +65
		63	12.7	11.8		17° 05	141		
		64	11.5	10.6		14° 00	115	Boat = +1.0	
		65	10.0	9.1		11° 27	94	Zero = +0.0	
		66	8.8	7.9		09° 39'	79	Tide = -1.9	
		67	8.0	7.1	7: 41	08° 29'	69	0.9	
S-15	S-14								

F. B. 2308 Pg. 146 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of Beach Erosion Study Date 1-23-58 Date X-Sec.
Survey by Van Dorsen Notes R.T. Notes Chkd. Checked No.
Indexed C. Johnson Date Date Date

76L298 S & E #307 9-54

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
280+65	0 50	19 85		19 35	Control line, Top of Rocks	
			1 0	18 8	12' L Btm. of Rocks	Inshore
			2 1	17 7	13.5' R, Top of Rocks	280+65
T. P.	0 0	8 45	11 40	8 45		
			15 4	-7 0	53' Rt. to Btm. of Rocks	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 147
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes Landa Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. [illegible]

76298 S & E #307—7-55

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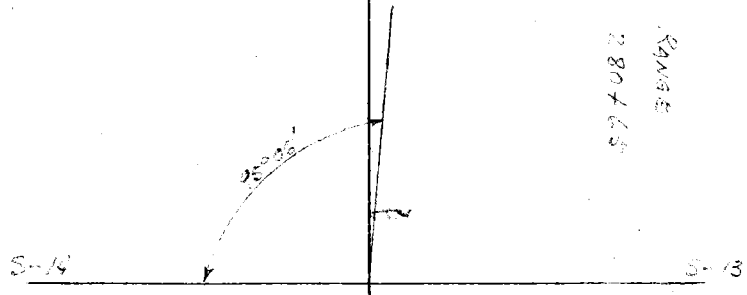
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
280+64	S-14	1			7 56	95° 06'	
		2					
		3					
		4					
		5					
		6					
		7					
		8					
		9					
		10					
		11					
		12					
		13					
		14					
		15					
		16					
		17					
		18					
		19					
		20					



RANGE 280+65

LINE

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 03000 Division No. 10 F. B. 2308 Pg. 199

X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey of BEACH EROSION Survey by VAN DEREN/Notes T.O. Date 7-23-58 Map No. ____ Indexed ____ C. Johnson Date ____

76298 S & E #307—7-55

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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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
280+65	S-14	21			95° 06'		
		22			" "		
		23			" "		
		24			" "		
		25			" "		
		26			" "		
		27			" "		
		28		8 01		OUTSIDE BREAKWATER	
		29		8 08	"	INSIDE "	
		30			" "		
		31			" "		
		32			" "		
		33			" "		
		34			" "		
		35			" "		
		36			" "		
		37			" "		
		38			" "		
		39			" "		
		40			" "		

F. B. 2308 Pg. 156 Job No. 03 00 02 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-23-58 Date No. X-Sec.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308	Pg. 151
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-23-58	
No.	Date	Date	Map No.	Indexed C. Johnson	Date	

76298 S & E #307—7-55

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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.

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STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
280465 S-14	41			95° 06'	
	42				
	43				
	44				
	45				
	46				
	47				
	48				
	49				
	50				
	51				
	52				
	53				
	54				
	55				
	56				
	57				
	58				
	59				
	60				

F. B. 2308 Pg. 152 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-23-58 Date No.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On	Depth # Rec. Adj.	Time Hor. Ang.				Remarks
280+65 3-14	61	9 3				

76298 S & E #307—7-55

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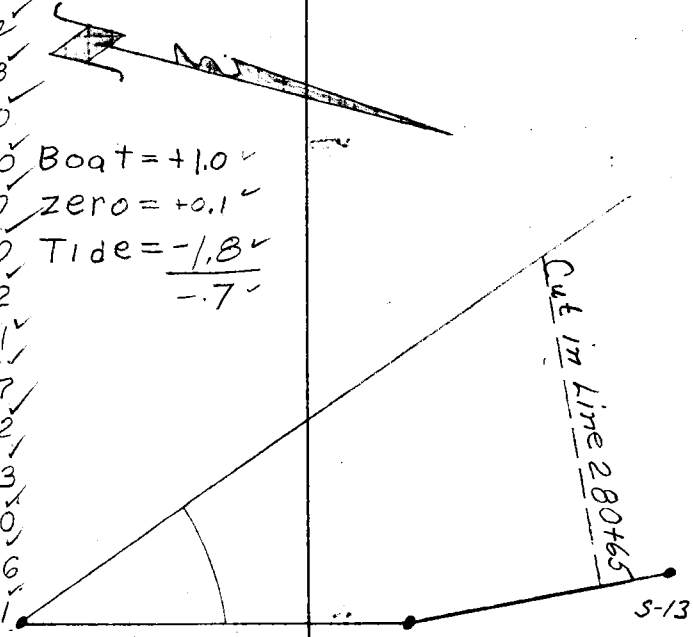
Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		7:56	75° 26	
		2	—			74° 44	Cut in Line 280+65
		3	45.3	44.6		74° 30'	2484
		4	44.7	44.0		74° 18'	2452
		5	44.5	43.8		74° 00	2418
		6	44.0	43.3		73° 43'	2380
		7	43.7	43.0		73° 29	2350 Boat = +1.0
		8	43.3	42.6		73° 07	2310 zero = +0.1
S-15	S-14	9	43.0	42.3		72° 42'	2260 Tide = -1.8
		10	42.2	41.7		72° 18	2212 -.7
		11	41.8	41.1		72° 00	2181
		12	41.0	40.3		71° 33	2137
		13	40.5	39.8		71° 10'	2102
		14	39.6	38.9		70° 49	2063
		15	39.7	39.0		70° 29	2030
		16	39.2	38.5		70° 00	1986
		17	38.8	38.1		69° 37	1951
		18	38.6	37.9		69° 18	1920
		19	37.2	36.5		68° 54	1890
		20	37.2	36.5		68° 38	1871



Profile Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F. B. 2308 Pg. 153
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-23-53
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

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STATION Inst. At	STATION Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		21	36.7	36.0		68° 04'	1821
		22	36.7	36.0		67° 41'	1797 Cut in Line 280+65
		23	36.5	35.8		67° 24'	1777
		24	—			67° 15'	Boat=+1.0
		25	—			67° 08'	zero=+0.1
		26	—			67° 00'	Tide=-1.8
		27	—			66° 50'	-.7
S-15	S-14	28	—		8:01	66° 34'	outside of Break water
		29	—		8:08	64° 57'	inside of Breakwater
		30	—			64° 50'	
		31	—			64° 15'	
		32	32.1	31.4		63° 20'	1502
		33	30.6	29.9		62° 03'	1434
		34	30.0	29.3		61° 03'	1378
		35	29.5	28.8		60° 01'	1328
		36	28.5	27.8		58° 09'	1242
		37	28.0	27.3		57° 10'	1199
		38	27.0	26.3		55° 38'	1136
		39	26.1	25.4		54° 05'	1078
		40	25.4	24.7		52° 33'	1024

F. B. 2308 Pg. 154 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of Beach Erosion Study Date 7-23-58 Date X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked No.
Indexed C. Johnson Date Date Date

76298 S & E #307—7-55

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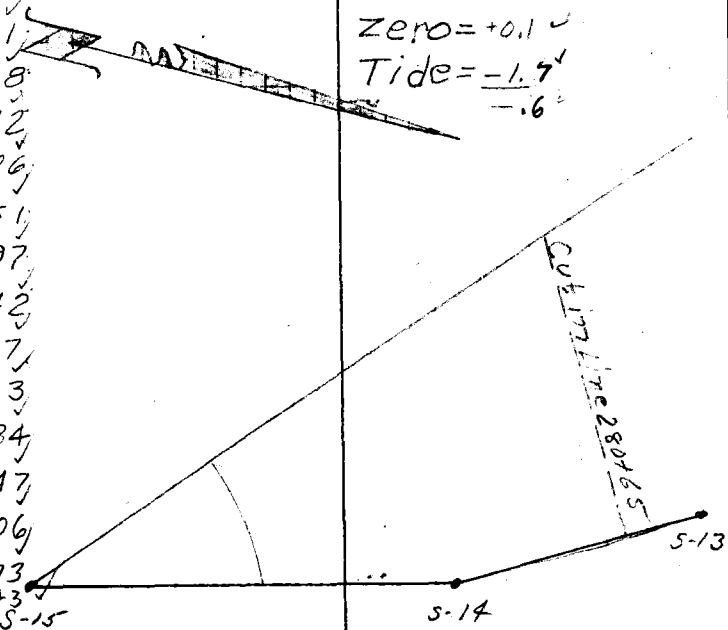
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor.	ELEV. Ang.	Remarks
S-15	S-14	41	24.8	24.2		50°	55'	967
		42	24.2	23.6		49°	13'	915
		43	23.7	23.1		47°	28'	865
		44	23.0	22.4		45°	33'	811
		45	22.3	21.7		44°	00'	771
		46	21.8	21.2		41°	56'	718
		47	21.0	20.4		40°	00'	672
		48	20.2	19.6		37°	04'	606
		49	19.5	18.9		34°	28'	551
		50	18.7	18.1		31	47'	497
		51	17.9	17.3		28°	45'	442
		52	17.2	16.6		25°	44'	387
		53	16.1	15.5		22°	36'	333
		54	15.2	14.6		19°	42'	284
		55	14.2	13.6		17°	17'	247
		56	13.4	12.8		14°	46'	206
		57	12.0	11.4		12°	37'	173
		58	10.8	10.2		10°	39'	143
		59	9.5	8.9		09°	02	118
		60	8.3	7.7		07°	22	93

Cut in Line 280 + 65

Boat = +1.0
Zero = +0.1
Tide = -1.7
-.6



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 155
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deven Notes N.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date

76298 S & E #307—7-55

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F. B. 2308 Pg. 154 Job No. 0310.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 2-23-58 Date Profile No.
Survey by Van Deren Notes R.T. Notes Chkd. Checked X-Sec.
Indexed J. C. Johnson Date Date Date No.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At / Sight On	#	Depth Rec. / Adj.	Time	Hor. Ang.		Remarks
	61	7.8 / 7.2	8:13	06° 33	80	Cut in Line 280 + 65
5-15 / 5-14						Boat = +1.0 zero = +0.1 Tide = -1.7 -.6

76L298 S & E #307 9-54

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
276+65	1 90	22 09		20 19	Control line, Top of Rocks	Inshore 276+65
			52	16 9	7.5' L. to Btm. of	
			13	~~10.8~~ 20.8	16° R To Top of Rocks	
T.P.	00	13 09	9 00	13 09		
			16 8	- 37	69' Rt. To Btm. of Rocks	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 157
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes Lanch Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

F. B. 2308 Pg. 158 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of Beach Erosion Sur Date Date No.

Survey by Orgler Notes Landa Notes Chkd. Checked X-Sec.

Indexed X C. Johnson Date Date Date No.

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

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726 LOS ANGELES COUNTY ENGINEERING BLDG.

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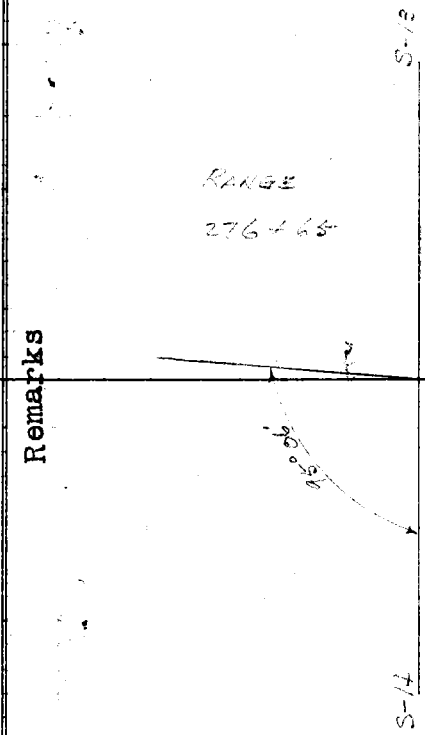
76L298 S & E #307 9-54

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 159
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-23-58	
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date	



STATION Inst. Sight At On	B. S. #	H. I. Depth Rec. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
276+65 S-14	1		7 25	95°06'	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				

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76298 S & E #307—7-55

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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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
276+65	S-14	21			95° 06'		
		22			" "		
		23		8 29	" "	OUTSIDE BREAKWATER	
		24		8 35	" "	INSIDE "	
		25			" "		
		26			" "		
		27			" "		
		28			" "		
		29			" "		
		30			" "		
		31			" "		
		32			" "		
		33			" "		
		34			" "		
		35			" "		
		36			" "		
		37			" "		
		38			" "		
		39			" "		
		40			" "		

F. B. 2308 Pg. 160 Job No. 030002 Division No. 10 Notes Red. Plotted No. Profile
Survey of BEACH EROSION Date 7-23-58 Date X-Sec.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked No.
Indexed C. Johnson Date Date Date

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 161
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-23-58	
No.	Date	Date	Map No.	Indexed	Date	

A. C. JOHNSON

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
2767.65 S-14	41			95°06'	
	42			"	
	43			"	
	44			"	
	45			"	
	46			"	
	47			"	
	48			"	
	49			"	
	50			"	
	51			"	
	52			"	
	53			"	
	54			"	
	55			"	
	56			"	
	57			"	
	58			"	
	59			"	
	60			"	

76298 S & E #307—7-55

F. B. 2308 PG. 162 Job No. 030002 Division No. 10 Notes Red. ____ Plotted ____ Profile

Survey of BEACH EROSION Date 7-23-58 Date ____ No. ____

Survey by VAN DEREN Notes T. O. Notes Chkd. ____ Checked ____ X-Sec.

Indexed L. C. Johnson Date ____ Date ____ Date ____ No. ____

STATION	B.S.	H.I.	F.S.	ELEV.	
Inst. At • Sight On	# Depth Rec. Adj.		Time	Hor. Ang.	Remarks

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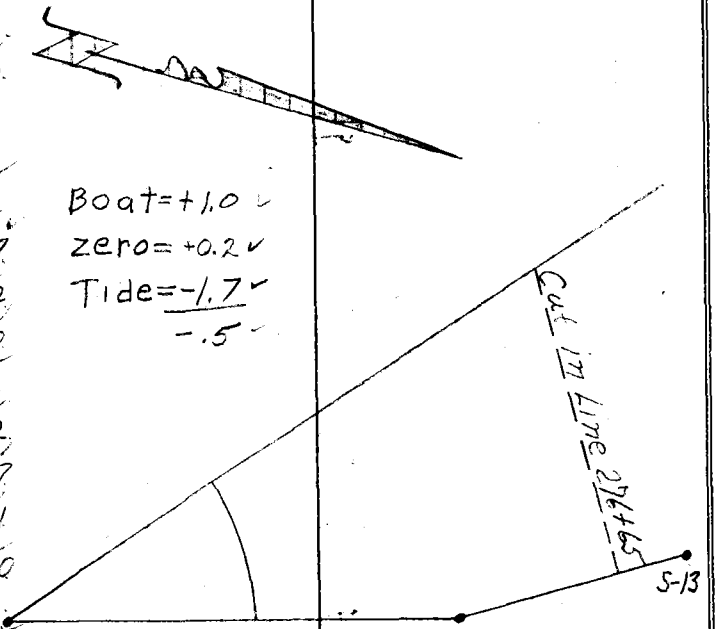
STATION Inst. At	Sight On	S. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
		1	—		8:25	68° 35'		
		2	43.0	42.5		67° 33'	2548	Cut in Line 276+65
		3	42.4	41.9		67° 09'	2505	
		4	42.0	41.5		66° 49'	2468	
		5	41.7	41.2		66° 28'	2430	
		6	—			66° 07'		
		7	—			65° 40'		
S-15	S-14	8	39.7	39.2		65° 12'	2310	Boat=+1.0
		9	39.5	39.0		64° 48'	2267	zero=+0.2
		10	39.1	38.6		64° 20'	2222	Tide=-1.7
		11	38.5	38.0		63° 55'	2190	-.5
		12	38.0	37.5		63° 31'	2152	
		13	37.5	37.0		63° 04'	2112	
		14	37.1	36.6		62° 42'	2087	
		15	36.6	36.1		62° 24'	2061	
		16	36.1	35.6		62° 07'	2040	
		17	35.6	35.1		61° 50'	2016	
		18	35.5	35.0		61° 34'	1998	
		19	35.4	34.9		61° 15'	1973	
		20	—			60° 58'	1949	



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 163
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Voorn Notes K.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

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700 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. 2308 Pg. 164 Job No. 300.02 Division No. 16 Notes Red. Plotted
Survey of Beach Erosion Study Date 2-23-58 Date
Survey Notes R.T. Notes Chkd. Checked
Indexed Date Date Date
Profile No. X-Sec. No.

STATION Inst. At	Sight On	B. S. #	H. I. Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.				Remarks
		21	—			60° 36'				
		22	—			60° 20'				Cut in Line 276+65
		23	—		8:29	60° 02'				out side Breakwater
		24	—		8:35	58° 34'				inside of Break Water
		25	—			58° 16'		Boat	Zero Tide	Total
		26	31.0	30.5		57° 58'	1744	+1.0	+0.2	-1.7 = -.5
		27	—			57° 29'				
		28	—			56° 56'				
S-15	S-14	29	31.2	31.1		56° 22'	1650	"	+0.6	-1.7 = -.1
		30	30.7	30.5		55° 45'	1612	"	+0.5	-1.7 = -.2
		31	30.5	30.3		55° 08'	1577	"	"	-1.7 = -.2
		32	30.2	29.9		54° [illegible]	1532	"	+0.4	-1.7 = -.3
		33	29.9	29.6		53° 44'	1502	"	"	-1.7 = -.3
		34	—			53° 04'	1467			
		35	28.2	28.3		52° 00'	1412	"	+0.8	-1.7 = +.1
		36	28.1	27.9		51° 20'	1379	"	+0.5	-1.7 = -.2
		37	27.7	27.5		50° 36'	1343	"	"	-1.7 = -.2
		38	27.2	27.0		49° 45'	1305	"	"	-1.7 = -.2
		39	26.5	26.3		48° 46'	1262	"	"	-1.7 = -.2
		40	26.1	25.9		47° 53'	1223	"	"	-1.7 = -.2

76298 S & E #307—7-55

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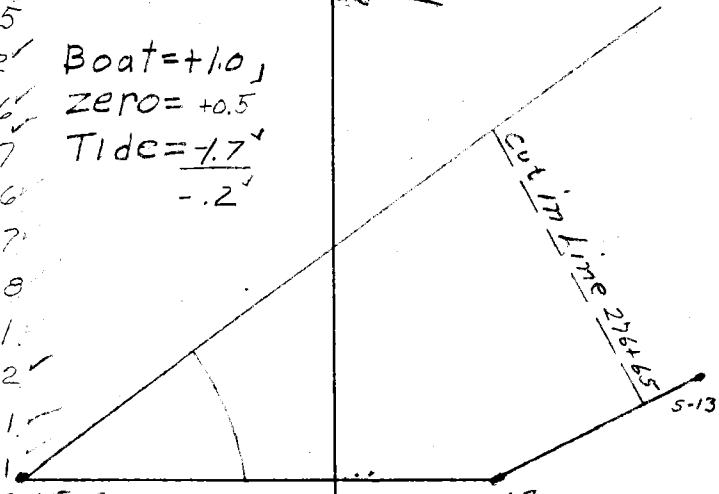
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	25.7	25.5		46° 53'	1183
		42	25.1	24.9		45° 48'	1139 Cut in Line 276+65
		43	24.7	24.5		44° 30'	1088
		44	24.1	23.9		43° 07'	1037
		45	23.6	23.4		41° 28'	975
		46	22.7	22.5		39° 35'	912
		47	22.1	21.9		38° 10'	865
S-15	S-14	48	21.5	21.3		36° 34'	812
		49	20.9	20.7		34° 22'	746
		50	20.5	20.3		33° 04'	707
		51	19.6	19.4		31° 10'	656
		52	18.7	18.5		29° 00'	597
		53	18.0	17.8		26° 50'	538
		54	17.2	17.0		24° 32'	481
		55	16.3	16.1		22° 10'	422
		56	15.6	15.4		20° 05'	371
		57	14.8	14.6		18° 22'	331
		58	14.0	13.8		16° 42'	291
		59	13.1	12.9		15° 27'	262
		60	11.7	11.5		13° 54'	228

Boat = +1.0
Zero = +0.5
Tide = -1.7
-.2



Profile Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F.B. 2308 Pg. 165
No. ____ Date ____ Date ____ Survey of Beach Erosion
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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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	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks
		61	10.6	10.4		12° 38	198	
		62	9.6	9.4		11° 27	172	Cut in Line 276+65
		63	8.6	8.4		10° 30	151	
		64	7.2	7.0		09° 08	118	Boat = +1.0
		65	6.0	5.8		08° 02	94	Zero = +0.5
		66	5.8	5.6	8:43	07° 28	82	Tide = -1.7
								-.2
S-15	S-14							

F. B. 2308 Pg. 166 Job No. 0300.02 Division No. 10 Notes Red. Plotted Date 7-23-58 Date No. Profile
Survey of Beach Erosion Study Date X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked Date No.
Indexed Date

76L298 S & E #307 9-54

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.		
272+65	1 50	14 28		12 78	Control line; 1x2 flush grnd.	
			0 8	13 5	24' Rt. Btm. of Top Rocks	Inshore
			0 5	13 8	31' Rt. Top of Rocks	272+65
[illegible]	3. 20	8 78	8 7	5 58		
			16 6	-7.8	41' Rt. To Btm. of Rocks	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 167
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes Land Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

PLEASE RETURN TO
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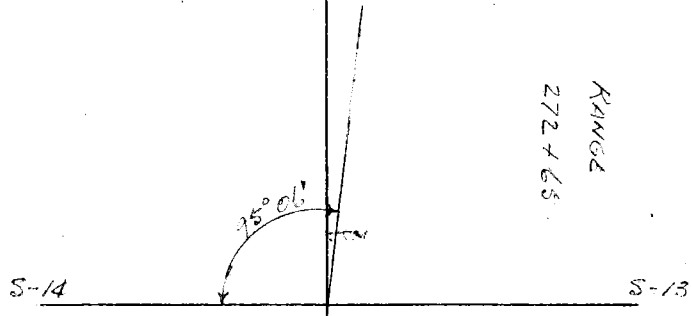
700 LOS ANGELES COUNTY ENGINEERING BLDG.

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. Depth Rec. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
272+65	S-14	1		9 06	95° 06'	
		2			" "	
		3			"	
		4			" "	
		5			" "	
		6			" "	
		7			"	
		8			"	
		9			"	
		10			"	
		11			"	
		12			"	
		13			" "	
		14		9 11	"	OUTSIDE BREAKWATER
		15		9 37	" "	INSIDE "
		16			" "	
		17			"	
		18			"	
		19			" "	
		20			" "	



Profile No. ____ Notes Red. ____ Plotted ____ Job No. 03002 Division No. 10 F. B. 2308 Pg. 169
Date ____ Date ____ Survey of BEACH EROSION
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes TO Date 7-23-58
Date ____ Date ____ Map No. ____ Inspected C. Johnson Date ____

F. B. 2308 Pg. 170 Job No. 03 00.02 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-23-58 Date No.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

PLEASE RETURN TO

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700 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	#	Depth Rec. Adj.	Time	Hor. Ang.		Remarks
272+65 S-14	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					
	32					
	33					
	34					
	35					
	36					
	37					
	38					
	39					
	40					

76298 S & E #307—7-55

PLEASE RETURN TO
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700 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	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks	
[illegible]	[illegible]	[illegible]						
		[illegible]						
		[illegible]						
		43						
		44						
		45						
		46						
		[illegible]						
		48						
		49						
		50						
		51						
		52			9 15			

Profile Notes Red. _____ Plotted _____ Job No. [illegible] Division No. 10 F. B. 2386 Pg. 171

No. _____ Date _____ Date _____ Survey of Bench Erosion

X-Sec. Notes Chkd. _____ Checked _____ Survey by Van Deren Notes T.O. Date 7-23-58

No. _____ Date _____ Date _____ Map No. _____ Indexed by [illegible]

F. B. 2308 Pg. 172 Job No. 030002 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date 7-23-58 Date _____ No. _____

Survey by VAN DEREN Notes T.O Notes Chkd. _____ Checked _____ X-Sec.

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

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

76298 S & E #307—7-55

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76298 S & E #307—7-55

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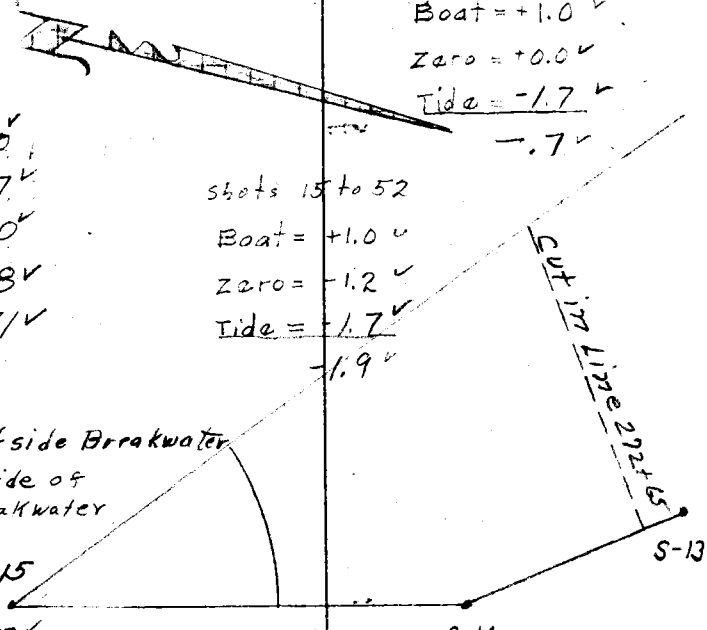
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
S-15	S-14	1	44.2	43.5	9:06	63° 19'	2770
		2	43.3	42.6		62° 48'	2712 Cut in Line 272+65
		3	42.7	42.0		62° 20'	2665
		4	—			61° 16'	
		5	—			60° 06'	
		6	—			59° 22'	
		7	38.2	37.5		58° 11'	2270
		8	37.7	37.0		57° 45'	2237
		9	36.7	36.0		57° 05'	2180
		10	36.3	35.6		56° 29'	2138
		11	36.0	35.3		55° 40'	2071
		12	—			54° 52'	
		13	—			54° 03'	
		14	—		9:11	53° 29'	outside Breakwater
		15	—		9:37	51° 56'	inside of Breakwater
		16	—			51° 51'	
		17	—			51° 45'	
		18	30.1	28.2		51° 30'	1783
		19	32.5	30.6		51° 04'	1754
		20	32.7	30.8		50° 53'	1742

Shots 1 to 14
Boat = +1.0
Zero = +0.0
Tide = -1.7
-.7

Shots 15 to 52
Boat = +1.0
Zero = -1.2
Tide = -1.7
-1.9



Profile Notes Red. ____ Plotted ____ Job No. 2300-02 Division No. 10 F. B. 2308 Pg. 173
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by [illegible] Notes [illegible] Date 9-23-56
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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F. B. 2308 Pg. 174 Job No. 2300.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 2-23-58 Date No. X-Sec.
Survey by Van Dexen Notes R.T. Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Rec.	Adj.	Time	Hor. Ang.		Remarks
		21	32.7	30.8		50° 45'	1736	
		22	32.9	31.0		50° 13'	1705	Cut in Line 272+65
		23	32.7	30.8		49° 02'	1633	
		24	31.3	29.4		48° 08'	1582	Boat=+1.0'
		25	30.7	28.8		47° 16'	1535	zero=-1.2'
		26	30.3	28.4		46° 29'	1491	Tide=-1.7'
		27	29.8	27.9		45° 37'	1448	-1.9'
S-15	S-14	28	29.2	27.3		44° 38'	1399	
		29	28.7	26.8		43° 43'	1351	
		30	28.0	26.1		42° 50'	1310	
		31	27.5	25.6		41° 45'	1258	
		32	27.0	25.1		40° 18'	1192	
		33	26.2	24.3		38° 46'	1123	
		34	25.7	23.8		37° 20'	1063	
		35	24.9	23.0		35° 52'	998	
		36	24.2	22.3		34° 15'	940	
		37	23.6	21.7		32° 41'	881	
		38	22.7	20.8		30° 49'	811	
		39	22.2	20.3		29° 15'	755	
		40	21.7	19.8		27° 45'	704	

76298 S & E #307—7-55

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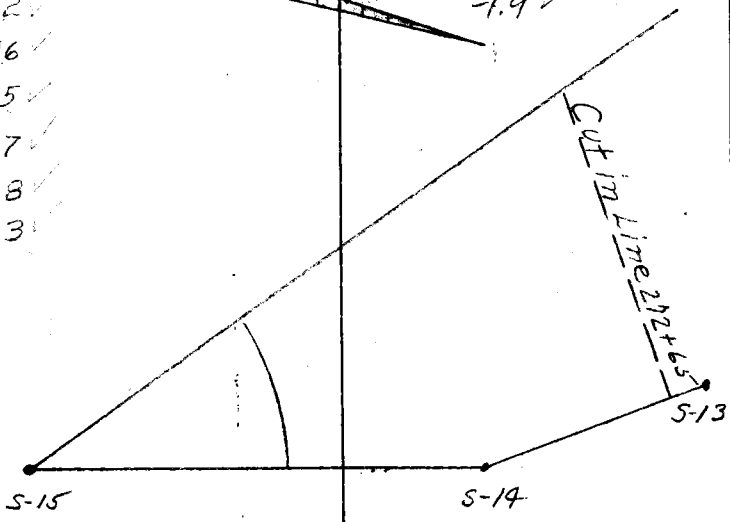
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	20.7	18.8		26° 09'	648
		42	20.1	18.2		24° 27'	591
		43	19.4	17.5		22° 46'	536
		44	18.6	16.7		21° 08'	483
		45	18.0	16.1		19° 36'	434
		46	17.2	15.3		18° 06'	389
		47	16.2	14.3		16° 54'	352
S-15	S-14	48	14.8	12.9		15° 24'	306
		49	13.6	11.7		14° 22'	275
		50	14.0	12.1		13° 26'	247
		51	13.2	11.3		12° 27'	218
		52	12.7	10.8	9:45	11° 56'	203

Cut in Line 272+65

Boat=+1.0
Zero=-1.2
Tide= -1.7
-1.9



Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 175
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

F. B. 2308 Pg. 176 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of Beach Erosion Study Date 7-23-58 Date No.

Survey by Van Deren Notes R.T. Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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LOS ANGELES COUNTY ENGINEER

700 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 # Depth Rec. Adj. Time Hor. Ang.	Remarks
S-15						
S-14						
						Cut in line 272+65
						Boat=+1.0
						Zero=
						Tide=

76L298 S & E #307 9-54

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

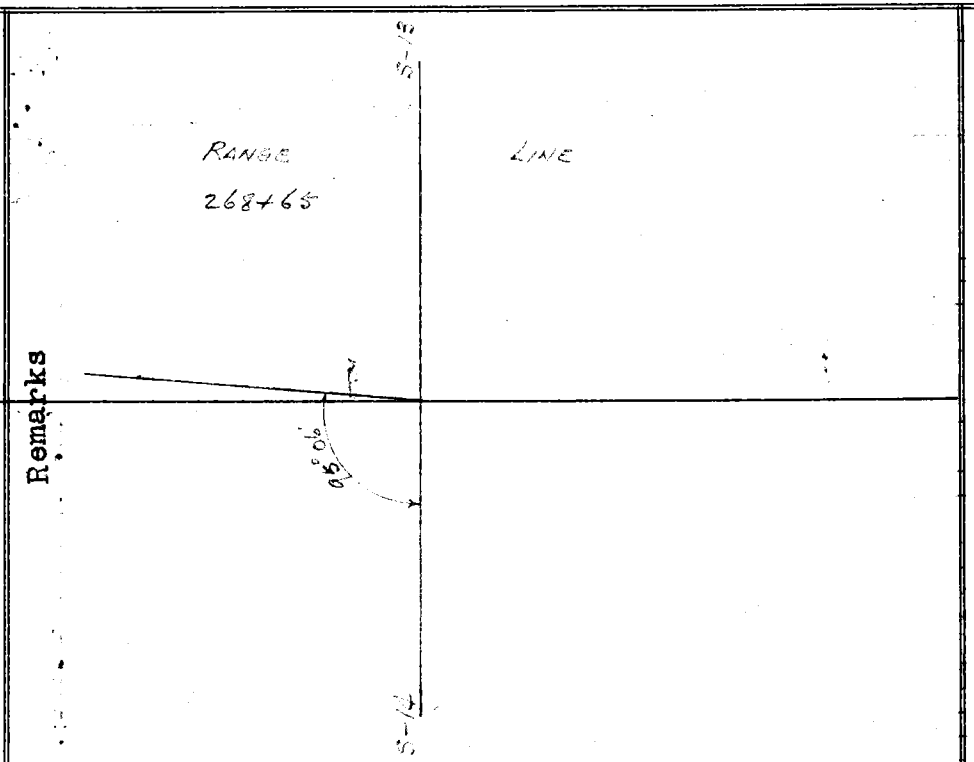
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
268+65	1 10	22 58		21 48	Control line	
			9 8	12 8	16.5' L. Btm.	Inshore 268+65
			1 4	21 2	7.5' L. Top	
			1 3	21 3	8.0' Rt. Top	
T.P.	2 90	9 48	16 00	6 58		
			0 48	9 0	47' Rt To Btm of Rocks	
			-0 5	10 0	64' Rt To Sand Btm.	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 177
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by Dreier Notes Lancla Date 7-23-53
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308	Pg. 179
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O	Date 7-23-58	
No.	Date	Date	Map No.	Indexed C. JOHNSON		



STATION		B. S.	H. I.	F. B.	ELEV.	Remarks
Inst. At	Sight On	#	Depth Rec. Adj.	Time	Hor. Ang.	
268+65	S-14	1		10 10	95° 06'	
		2				
		3				
		4				
		5				
		6				
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19				
		20				

PLEASE RETURN TO
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700 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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76298 S & E #307—7-55

76298 S & E #307—7-55

PLEASE RETURN TO
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700 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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
268+65	S-14	21			95° 36'		
		22					
		23					
		24					
		25					
		26					
		27					
		28					
		29					
		30					
		31		10 [illegible]		OUTSIDE BREAKWATER	
		32		10 25		INSIDE "	
		33					
		34					
		35					
		36					
		37					
		38					
		39					
		40					

F. B. 2308 Pg. 180 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-23-58 Date No.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

PLEASE RETURN TO
LOS ANGELES COUNTY ENGINEER
700 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. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks	
268+65	S-14	41				95° 02'		
		42						
		43						
		44						
		45						
		46						
		47						
		48						
		49						
		50						
		51						
		52						
		53						
		54						
		55						
		56						
		57						
		58						
		59						
		60						

Profile Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F. B. 2308 PG. 161

No. ____ Date ____ Date ____ Survey of BEACH EROSION

X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-23-58

No. ____ Date ____ Date ____ Map No. ____ [illegible] Date ____

F. B. 2308 Pg. 182 Job No. 030002 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-23-58 Date No.

Survey by VAN DEREN Notes T. O. Notes Chkd. Checked X-Sec.

Indexed K. C. Johnson Date Date Date No.

76298 S & E #307—7-55

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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	Depth # Rec. Adj.		Time Hor. Ang.			Remarks
268+65 S-14	61			75° 31'		
	62			"		
	63			"		
	64			"		
	65			"		
	66		10 35	"		

76298 S & E #307—7-55

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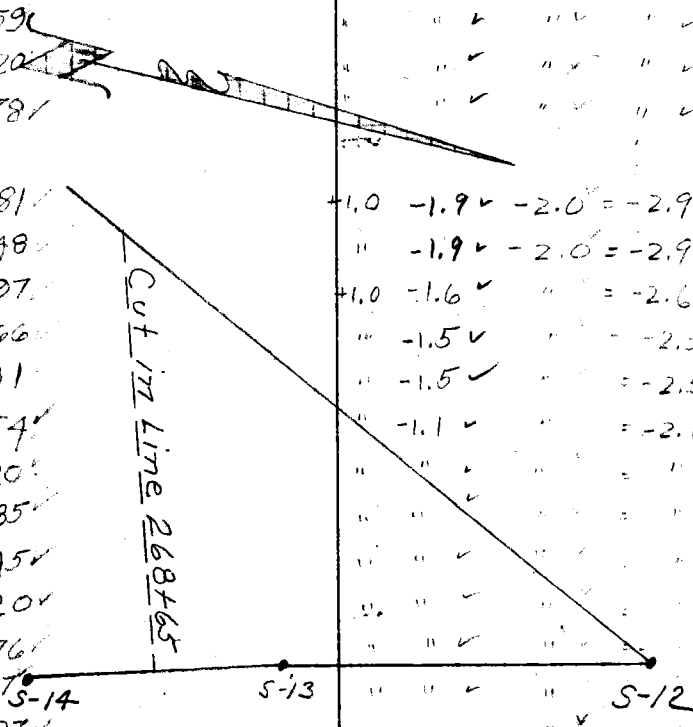
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
							Boats Zero Tide Total
		1	48.9	46.4	10:10	63° 52' 3086	+1.0 -1.5 -2.0 = -2.5
		2	48.7	46.2		63° 27' 3030	Cut in Line 268+65
		3	46.7	44.2		62° 20' 2890	" " -2.0 = -2.5
		4	46.6	44.1		62° 04' 2859	" " " "
		5	46.6	44.1		61° 45' 2820	" " " "
		6	45.8	43.3		61° 22' 2778	" " " "
		7	—			61° 06'	
S-12	S-13	8	44.8	41.9		60° 33' 2681	+1.0 -1.9 -2.0 = -2.9
		9	44.3	41.6		60° 10' 2648	" -1.9 -2.0 = -2.9
		10	44.4	41.8		59° 41' 2597	+1.0 -1.6 " = -2.6
		11	43.3	40.8		59° 22' 2566	" -1.5 " = -2.5
		12	42.5	40.0		59° 02' 2531	" -1.5 " = -2.5
		13	40.8	38.7		58° 17' 2454	" -1.1 " = -2.1
		14	40.2	38.1		57° 55' 2420	" " " "
		15	40.1	38.0		57° 31' 2385	" " " "
		16	39.7	37.6		57° 05' 2345	" " " "
		17	38.9	36.8		56° 45' 2320	" " " "
		18	38.1	36.0		56° 16' 2276	" " " "
		19	38.2	36.1		55° 51' 2247	" " " "
		20	37.4	35.3		55° 24' 2207	" " " "



Profile Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F.B. 2308 Pg. 183
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Neren Notes R.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

76298 S & E #307—7-55

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700 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. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		21	37.2	35.1		55° 02'	2174
		22	36.7	34.6		54° 39'	2150 Cut in Line 268+65
		23	36.6	34.5		54° 16'	2118
		24	36.2	34.1		53° 47'	2078 Boat = +1.0
		25	35.6	33.5		53° 15'	2040 Zero = -1.1
		26	34.6	32.5		52° 47'	2005 Tide = -2.0
		27	33.6	31.5		52° 16'	1971 -2.1
		28	33.5	31.4		51° 58'	1940
S-12	S-13	29	33.4	31.3		51° 26'	1910
		30	—			51° 01'	
		31	—		10:19	50° 37'	outside Breakwater
		32	—		10:25	49° 00'	inside of Breakwater
		33	—		10:29	48° 38'	
		34	26.9	24.6		48° 30'	1727 Boat = +1.0
		35	29.7	27.4		48° 18'	1715 Zero = -1.1
		36	30.4	28.1		47° 54'	1691 Tide = -2.2
		37	30.4	28.1		47° 12'	1650 -2.3
		38	30.2	27.9		45° 45'	1571
		39	29.6	27.3		44° 39'	1516
		40	29.1	26.8		43° 43'	1469

F. B. 2308 Pg. 184 Job No. 0300.02 Division No. 10 Notes Red. Plotted Date 7-23-58 Date No. X-Sec.
Survey of Beach Erosion Study Notes Chkd. Checked Date No.
Survey by C. Johnson Notes Date
Indexed Date

76298 S & E #307—7-55

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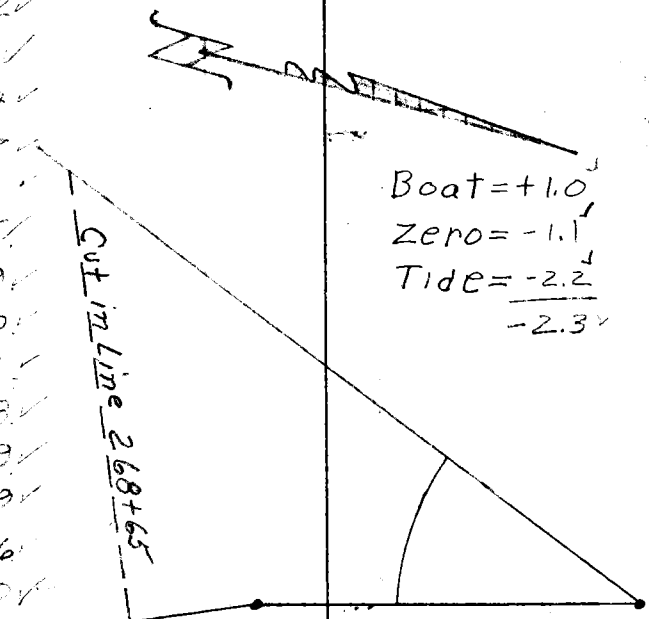
700 LOS ANGELES COUNTY ENGINEERING BLDG.

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. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor.	ELEV. Ang.	Remarks
		41	28.7	26.4		42°	05'	1389
		42	27.7	25.4		40°	33'	1317 Cut in Line 268+65
		43	27.5	25.2		39°	04'	1252
		44	26.6	23.3		37°	29'	1182
		45	26.1	23.8		35°	25'	1098
		46	25.7	23.4		34°	30'	1064
		47	25.1	22.8		33°	33'	1027
S-12	S-13	48	24.6	22.3		32°	02'	971
		49	24.0	21.7		30°	27'	915
		50	23.6	21.3		29°	07'	869
		51	23.0	20.7		27°	40'	820
		52	22.6	20.3		26°	13'	771
		53	21.8	19.5		24°	14'	708
		54	21.2	18.9		22°	20'	649
		55	20.4	18.1		20°	39'	599
		56	19.8	17.5		18°	53'	546
		57	19.3	17.0		16°	57'	490
		58	18.3	16.0		14°		407
		59	17.7	15.4		13°	26'	392
		60	16.8	14.5		11°	02'	326



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 185
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Inst. C. Johnson

76298 S & E #307—7-55

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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F. B. 2308 Pg. 186 | Job No. 0200.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 2-2 3-58 Date
Survey by R.T. Notes Chkd. Checked
Indexed Notes Date Date
Profile No. X-Sec. No.

STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	# Rec.	Depth Adj.		Time	Hor. Ang.		Remarks
		61	15.6	13.3		08° 38'	261	
		62	14.0	11.7		06° 42'	210	Cut in Line 268+65
		63	12.6	10.3		05° 23'	174	
		64	10.1	7.8		04° 02'	141	Boat=+1.0
		65	8.2	5.9		03° 00'	113	zero=-1.1
		66	7.2	4.9	10:35	01° 54'	84	Tide=-2.2
								-2.3
S-12	S-13							

76L298 307 10-51

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.		
B.M. 21-40	10 00	21 68		11 68	B.M. 21-40 ELEV. 11.683 M.LLW. PER F.B. 2100-160 (TORRANCE E-7A) HARBOR DR. ~~HERMOSA AVE~~ & 6th ST.	INSHORE 264+65
264+65			2 83	24 51		
			2 5	19 2	35 FT RT. END OF DIRT, BEGIN OF ROCKS	
			3 4	18 3	47 " " BRK	
T.P	0 5	6 52	15 66	6.02	71 " " ON ROCKS	
			7 4	- 0 9	89 " " Btm of Rocks	
			10 0	- ~~2 5~~ 3 5	119 " "	
			10 5	- 4 0	139 " "	
			11 5	- 5 0	171 " "	

Profile
No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 0301.02 Division No. 10 F.B. 2308 PG. 187
X-Sec. Date ____ Date ____ Survey of BEACH EROSION
No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey by DREIER ENGLISH Notes G.E.D Date 7-23-58
Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76296 S & E #307—7-55

PLEASE RETURN TO
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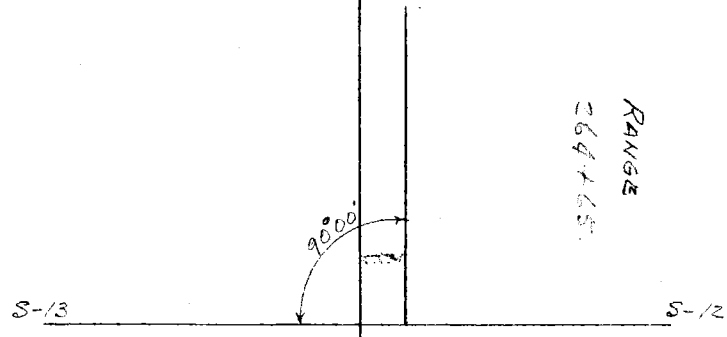
700 LOS ANGELES COUNTY ENGINEERING BLDG.

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. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
264+65	S-13	1			10 48	90° 00'	
		2				"	
		3				"	
		4				"	
		5				"	
		6				"	
		7				"	
		8				"	
		9				"	
		10				"	
		11				"	
		12				"	
		13				"	
		14				"	
		15				"	
		16				"	
		17				"	
		18				"	
		19				"	
		20				"	



Profile Notes Red. ____ Plotted ____ Job No. 03000 Division No. 10 F. B. 2308 PL. 169
No. ____ Date ____ Date ____ Survey of BEACH EROSION
X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date

76298 S & E #307—7-55

PLEASE RETURN TO
LOS ANGELES COUNTY ENGINEER
700 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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
264+65	S-13	21		10 54	90° 00	OUTSIDE BREAKWATER	
		22		11 03	" "	INSIDE "	
		23					
		24			" "		
		25			" "		
		26			" "		
		27			" "		
		28			" "		
		29			"		
		30					
		31					
		32					
		33					
		34					
		35					
		36			"		
		37			"		
		38					
		39					
		40					

F. B. 2308 Pg. 190 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-23-58 Date No.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

Profile	Notes Red.	Plotted	Job No. [illegible]	Division No.	F. B. 2308	Pg. 191
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes TO	Date 7-23-58	
No.	Date	Date	Map No.	Index C. Johnson	Date	

76298 S & E #307—7-55

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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 Inst. At	Sight On	B. B. #	H. I. Depth Rec. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
264+65	S-13	41			90° 00'	
		42			" "	
		43			" "	
		44			" "	
		45			" "	
		46			" "	
		47			" "	
		48			" "	
		49			" "	
		50			" "	
		51			" "	
		52			" "	
		53			" "	
		54			" "	
		55			" "	
					10	

F. B. 2308 Pg. 192 | Job No. 030002 Division No. 10 | Notes Red. | Plotted | Profile

Survey of BEACH EROSION | Date 7-23-58 | Date | No.

Survey by VAN DEREN Notes T. O. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | Date | No.

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

76298 S & E #307—7-58

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76298 S & E #307—7-55

PLEASE RETURN TO
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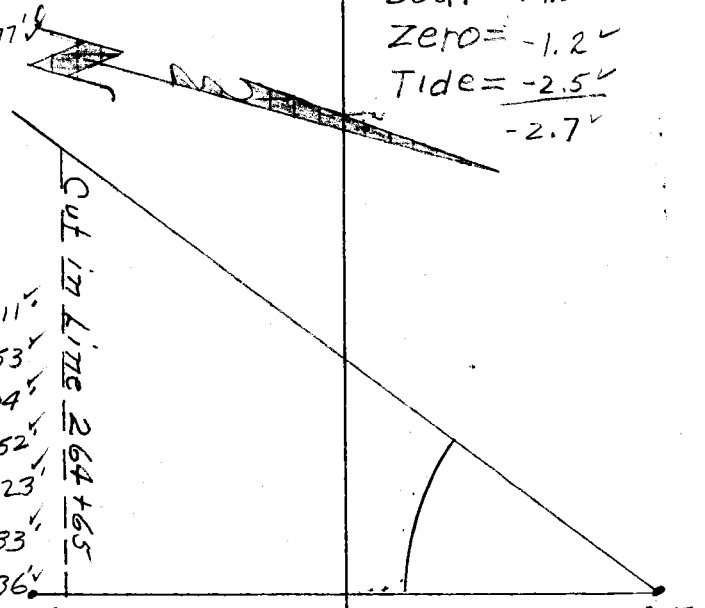
700 LOS ANGELES COUNTY ENGINEERING BLDG.

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. Rec.	Depth Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
5-12	5-13	1	42.7	40.0	10:48	67° 17'	2628'	
		2	42.4	39.7		67° 06	2604'	Cut in Line: 264+65
		3	41.8	39.1		66° 49'	2559'	
		4	—			66° 25'		
		5	42.8	40.1		67° 40'	2677'	
		6	—			67° 18'		
		7	—			66° 29'		
		8	—			65° 49'		
		9	—			64° 50'		
		10	—			64° 05'		
		11	36.9	34.2		63° 33'	2211'	
		12	35.8	33.1		62° 56	2153'	
		13	34.8	32.1		62° 29	2104'	
		14	34.3	31.6		61° 48	2052'	
		15	33.3	30.6		61° 28'	2023'	
		16	32.3	29.6		60° 59'	1983'	
		17	31.0	28.3		60° 29	1936'	
		18	29.9	27.2		60° 01'	5-13 1906'	
		19	29.2	26.5		59° 36'	1876'	
		20	—			59° 13'		

Boat = +1.0
Zero = -1.2
Tide = -2.5
-2.7



Profile Notes Red ____ Plotted ____ Job No. 0308.02 Division No. 10 F. B. 2308 Pg. 193
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes F.T. Date 2-23-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

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F. B. 2308 Pg. 194 Job No. 2300.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 1-23-58 Date
Survey by Van Deren Notes R.T. Notes Chkd. Checked
Indexed K. C. Johnson Date Date
Profile No. X-Sec. No.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. At / Sight On	#	Rec. / Depth Adj.	Time	Hor. Ang.		Remarks
	21	—	10:54	58° 54'		outside Breakwater
	22	—	11:03	56° 54'		Cut in Line 264+65
	23	29.1	26.1	56° 36'	1669'	inside of Breakwater
	24	—		57° 21'		
	25	—		56° 52'		Boat = +1.0
	26	[illegible]	26.2	56° 24'	1656'	Zero = -1.3
	27	[illegible]	26.5	55° 48'	1619'	Tide = -2.7
5-12 / 5-13	28	[illegible]	26.5	55° 09'	1580'	-3.0
	29	[illegible]	26.2	54° 22'	1535'	
	30	28.7	25.7	53° 14'	1472'	
	31	[illegible]	25.3	52° 21'	1426'	
	32	[illegible]	24.6	51° 26'	1379'	
	33	[illegible]	24.2	50° 29'	1330'	
	34	27.0	24.0	49° 07'	1271'	
	35	26.4	23.4	48° 09'	1224'	
	36	26.2	23.2	46° 56'	1177'	
	37	25.4	22.4	44° 51'	1095'	
	38	25.0	22.0	43° 32'	1045'	
	39	24.5	21.5	41° 43'	980'	
	40	24.0	21.0	40° 00'	923'	

76298 S & E #307—7-55

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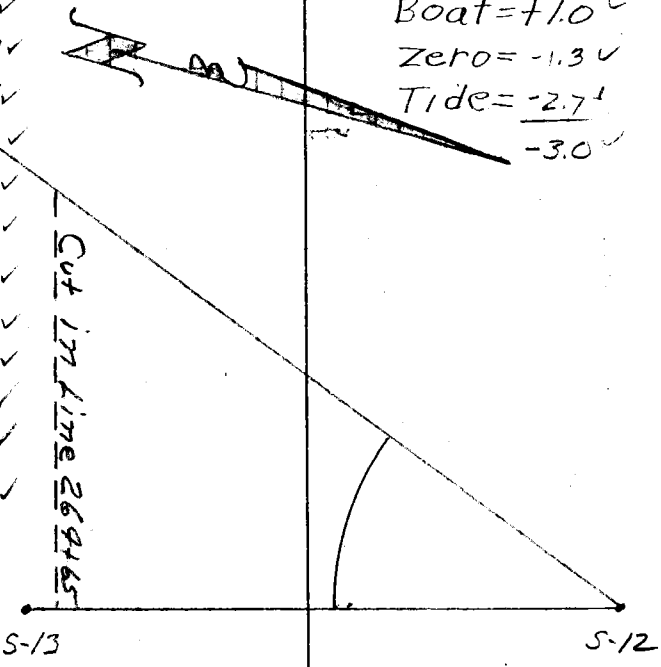
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	[illegible]	20.2		37° 42'	850'
		42	22.3	19.3		34° 21'	751'
		43	21.3	18.3		32° 02'	689'
		44	20.2	17.2		29° 21'	618'
		45	[illegible]	16.2		26° 38'	551'
		46	18.5	15.5		24° 55'	512'
S-12	S-13	47	17.7	14.7		23° 00'	466'
		48	17.0	14.0		20° 27'	410'
		49	16.0	13.0		17° 56'	356'
		50	15.	12.1		15° 08'	297'
		51	14.3	11.3		13° 11'	257'
		52	12.7	9.7		10° 53'	211'
		53	8.2	6.2		08° 37'	167'
		54	7.0	4.0		07° 11'	139'
		55	5.8	2.8	11:10	06° 09'	119'
		56					

Cut in Line 264+65

Boat = +1.0
Zero = -1.3
Tide = -2.7
-3.0



Profile No. ____ Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 F. B. 2308 Pg. 195
X-Sec. No. ____ Date ____ Date ____ Survey of Beach Erosion Study
Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-23-58
Date ____ Date ____ Map No. ____ Indexed P. Johnson Date ____

F. B. 2308 Pg. 196 Job No. 0300.03 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of Beach Erosion Study Date 7-23-58 Date _____ No. _____

Survey by Van Deren Notes R.T. Notes Chkd. _____ Checked _____ X-Sec.

Indexed [redacted] Date _____ Date _____ Date _____ No. _____

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
S-12					
S-13					

Inst. At / Sight On / # / Depth Rec. / Adj. / Time / Hor. Ang.

76298 S & E #307—7-55

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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76L298 307 10-51

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726 LOS ANGELES COUNTY
ENGINEERING BLDG.

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STATION	B. S.	H. I.	F. S.	ELEV.		
B.M. 21-40	10 00	21 68		11 68	B.M. 21-40	
262+65			5 26	16 42	℄ ON WALK	INSHORE 262+65
			5 25	16 43	4.5 FT, RIGHT, EDGE CONC. WALK	
			5 5	16 2	5.0 " " DIRT	
			6 6	15 1	30 " "	
			6 8	14 9	100 " "	
			7 0	14 7	128 " " END OF DIRT BEGIN ROCKS	
			7 4	14 3	140 " " BRK ON ROCKS	
T.P.	0 50	5 84	16 34	5 34	161 " " ON ROCKS	
			5 4	0 4	169 " " Btmot "	
			7 9	-2.1	193 " "	
			8 0	-2.2	217 " "	
			9 0	-3.2	238 " "	
			10 8	-5.0	261 " "	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 PG. 197
X-Sec. No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
Notes Chkd. ____ Checked ____ Survey by Dreier Notes Landa Date 7-23-58
Date ____ Date ____ Map No. ____ Indexed C. Johnson

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308	Pg. 199
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.D.	Date 7-23-58	
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date	

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700 Los Angeles County Engineering Bldg.

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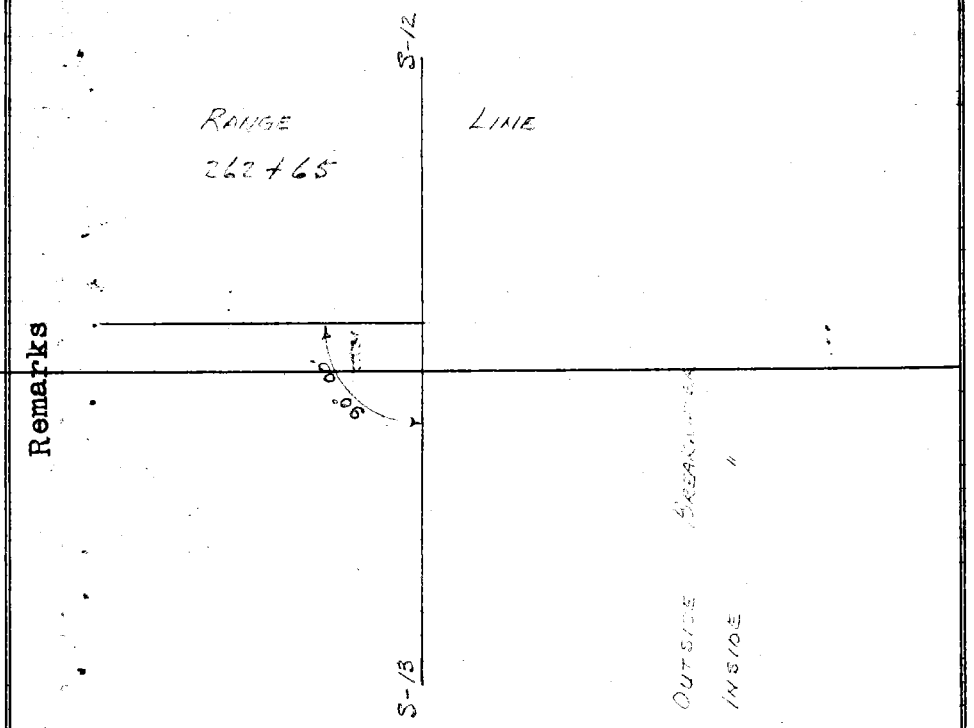
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
262+65	S-13	1		11 22	90° 00'	
		2			"	
		3			"	
		4			"	
		5			"	
		6			"	
		7			"	
		8			"	
		9			"	
		10			"	
		11			"	
		12			"	
		13			"	
		14		11 28	"	OUTSIDE BREAKWATER
		15		11 36	"	INSIDE "
		16			"	
		17			"	
		18			"	
		19			"	
		20			"	



76298 S & E #307—7-55

F. B. 2308 PG. 200 | Job No. 0300.02 | Division No. 10 | Notes Red. | Plotted | Profile

Survey of BEACH EROSION | Date 7-23-58 | Date | No.

Survey by VAN DEREN | Notes T.O. | Notes Chkd. | Checked | X-Sec.

Indexed | Date | Date | Date | No.

STATION	B. S.	H. I.	F. S.	ELEV.	
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks
	21			70° 00'	
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				
	32				
	33				
	34				
	35				
	36				
	37				
	38				
	39				
	40				

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76298 S & E #307—7-55

76298 S & E #307—7-55

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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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
262+65 5-13	41			90° 00'		
	42			" "		
	43			" "		
	44		11 41	" "		

Profile Notes Red. ____ Plotted ____ Job No. 08000 Division No. 10 F. B. 2308 Pg. 201
No. ____ Date ____ Date ____ Survey of BEACH EROSION Notes T.O. Date 7-23-58
X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. Date ____

F. B. 2308 Pg. 202 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-23-58 Date No.

Survey by VAN DEREN Notes T. O. Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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

76298 S & E #307—7-55

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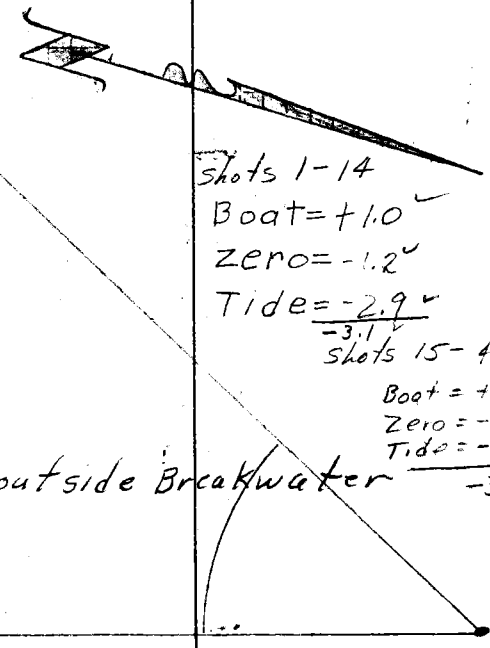
Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
S-12	S-13	1	—		11:22	70° 10'		
		2	40.7	37.6		70° 14'	2505'	Cut in Line 262+65
		3	39.5	36.4		69° 27'	2401'	
		4	38.5	35.4		68° 50'	2325'	
		5	37.3	34.2		68° 29'	2273'	
		6	36.1	33.0		67° 39'	2189'	
		7	35.3	32.2		67° 13'	2143'	Shots 1-14
		8	34.3	31.2		66° 40'	2086'	Boat = +1.0
		9	33.3	30.2		66° 10'	2038'	Zero = -1.2
		10	32.2	29.1		65° 33'	1979'	Tide = -2.9 / -3.1
		11				65° 02'		Shots 15-44
		12				64° 23'		Boat = +1.0
		13				63° 54'		Zero = -1.2
		14	—		11:28	63° 38'		Tide = -3.1 / -3.3 outside Breakwater
		15	15.5	12.2	11:36	61° 51'	1682'	
		16	20.3	17.0		61° 46'	1676'	
		17	23.4	20.1		61° 45'	1675'	
		18	25.3	21.9		61° 26'	1653'	S-13
		19	28.7	25.4		59° 53'	1552'	Inside of Breakwater
		20	28.8	25.5		59° 15'	1513'	



Profile Notes Red. ____ Plotted ____ Job No. 8300.02 Division No. 10 F. B. 2308 Fil. 203
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Doren Notes R.T. Date 9-23-58
No. ____ Date ____ Date ____ Map No. ____ Index [redacted] C. Johnson

76298 S & E #307—7-55

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F. B. 2308 Pg. 204 Job No. 200.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 2-23-58 Date No. X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked
Index C. Johnson Date Date Date No.

STATION Inst. At	Sight On	B. S. #	H. I. Rec.	Depth Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
		21	28.9	25.6		58° 50'	1488'	
		22	28.8	25.5		57° 17'	1401'	Cut in Line 262+65
		23	28.1	24.8		53° 29'	1309'	
		24	27.3	24.0		54° 09'	1246'	Boat = +1.0
		25	26.2	22.9		53° 06'	1199'	Zero = -1.2
		26	25.3	22.0		51° 35'	1135'	Tide = -3.1
		27	24.3	21.0		[illegible]	1076'	-3.3
		28	23.5	20.2		48° 39'	1022'	
S-12	S-13	29	22.7	19.4		46° 16'	958'	
		30	22.0	18.7		44° 54'	897'	
		31	20.9	17.6		43° 00'	840'	
		32	19.4	16.1		40° 50'	778'	
		33	18.2	14.9		38° 44'	722'	
		34	17.1	13.8		36° 40'	670'	
		35	16.6	13.3		34° 35'	620'	
		36	16.4	13.1		31° 58'	562'	
		37	16.1	12.8		29° 08'	501'	
		38	15.8	12.5		26° 18'	445'	
		39	15.3	12.0		23° 27'	391'	
		40	14.7	11.4		21° 13'	349'	

76298 S & E #307—7-55

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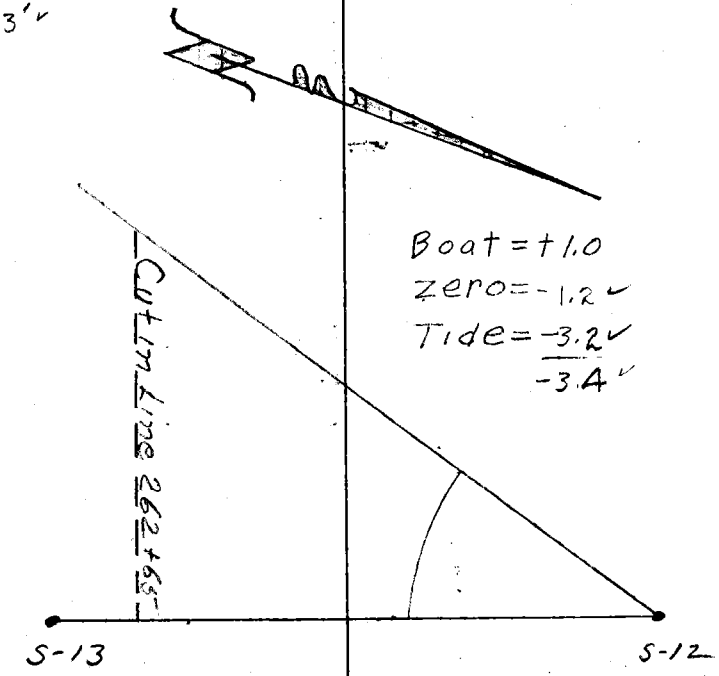
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	13.3	9.9		18° 18'	298'
		42	9.7	6.3		15° 46'	254' Cut in Line 262+65
		43	7.6	4.2		14° 00'	224'
		44	6.5	3.1	11:41	12° 44	203'



Boat = +1.0
zero = -1.2
Tide = -3.2
-3.4

S-12

S-13

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 205
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes P.T. Date 7-23-58
No. ____ Date ____ Date ____ Map No. ____ Index [illegible] C. Johnson

F. B. 2308 Pg. 206 | Job No. 2300.02 | Division No. 10 | Notes Red. | Plotted | Profile

Survey of Beach Erosion Study | Date 7-23-58 | Date | No.

Survey by Van Deren | Notes R.T. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | Date | No.

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
S-12					
S-13					

Inst. Sight At On # Rec. Adj. Depth Time Hor. Ang.

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76298 S & E #907—7-55

Profile	Notes Red.	Plotted	Job No. 0300.02	Division No. 10	F. B. 2308	Pg. 207
No.	Date	Date	Survey of Beach Erosion			
X-Sec.	Notes Chkd.	Checked	Survey by Van Deren	Notes Van	Date 7-24-58	
No.	Date	Date	Map No.	Index C. John		

Redondo Area

7-24-58

3.0 on Datum Line

Time Check Gage Time = 9:43 High —

P.D.S.T. = 10:45 Low —

Station	Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	Standard Time	Reading	P.D.S.T.
							5-00 AM	3-5	6-00
							5-30 "	3-4	6-30
							6-00 "	3-3	7-00
							6-30 "	3-1	7-30
							7-00 "	2-1	8-00
							7-30 "	2-7	8-30
							8-00 "	2-4	9-00
							8-30 "	2-2	9-30
							9-00 "	2-1	10-00
							9-30 "	2-0	10-30
ELEV.							10-00 "	2-3	11-00
							10-30 "	2-4	11-30
							11-00 "	2-7	12-00
F. B.							11-30 "	3-0	12-30
							12-00 "	3-2	1-00
							12-30 PM	3-6	1-30
H. I.							1-00 "	4-1	2-00
							1-30 "	4-5	2-30
							2-00 "	4-9 ok	3-00
B. B.									
STATION									

"Note" hour marker broken on gage hours For all readings Except 2:00 Standard Time are approximate

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76298 S & E #307—7-55

F. B. 2308 Pg. 201-A Job No. 030002 Division No. 10 Notes Red. Plotted Profile

Survey of Beach Erosion Date 7-24-58 Date No.

Survey by VanDeren Notes Van Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

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

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76298 S & E #307—7-55

76F309S CE #247—3-57

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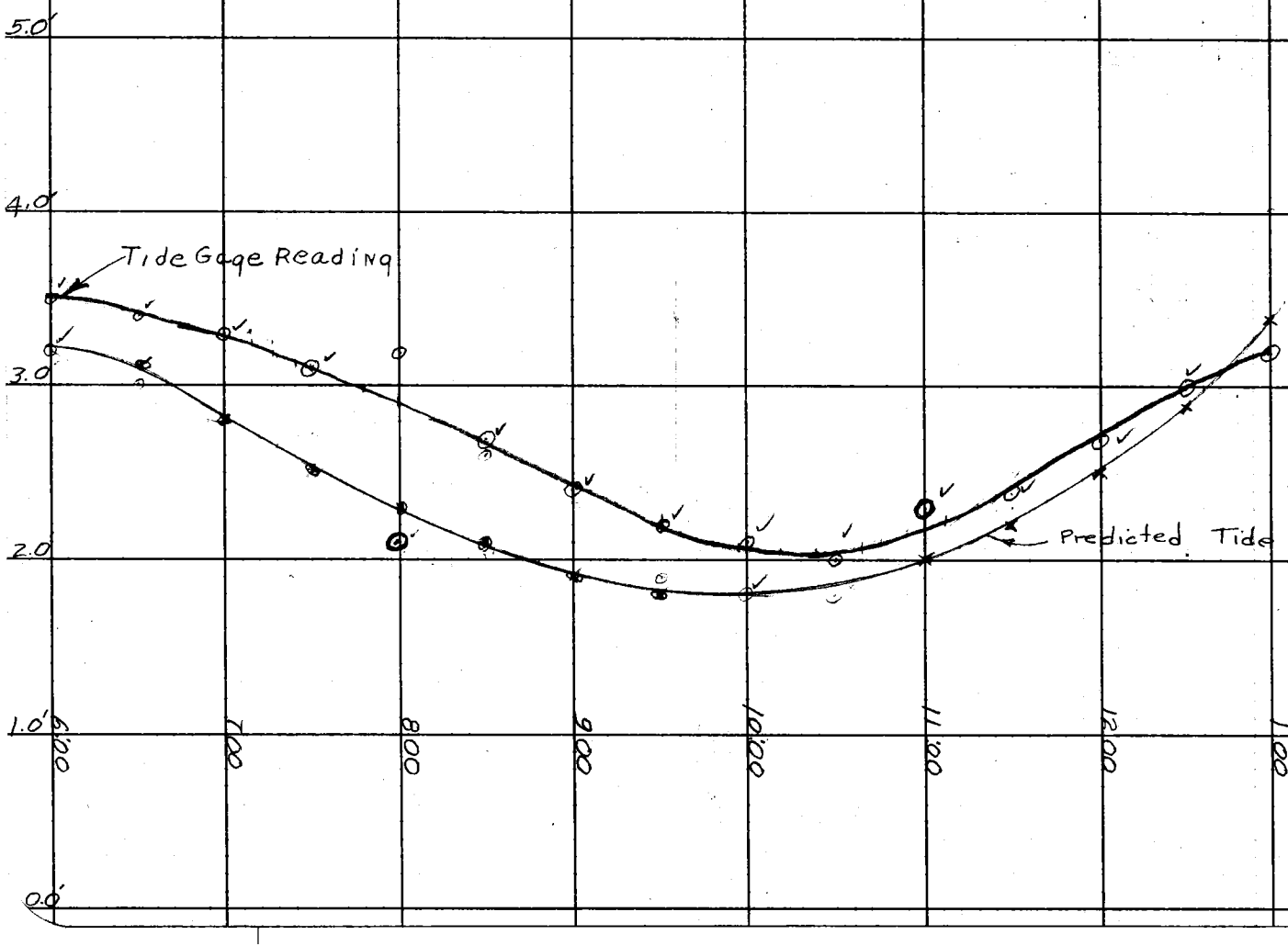

Notes Ck'd by
Map No.
Office Work L. Manley
Checked J.S.B.
Date

Survey of 2300.02
JN Tape Std °F
Surveyed by Van Duran
Notes Date 7-24-58
Indexed

F. B. 2308 PG. 20

76L298 307 10-51

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ENGINEERING BLDG.

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STATION	B. S.	H. I.	F. S.	ELEV.		
B.M. 21-40	10 00	21 68		1168		
T.P.	4 60	19 84	6 44	15 24		INSHORE 258+65
T.P.	5 08	21 71	3 21	16 63		
258+65			5 02	16 69	℄ ON WALK	
			5 03	16 68	4 FT RT. EDGE OF WALK	
			5 7	16 00	6 " " DIRT GUTTER	
			4 4	17 3	12 " " TOP DIR RIDGE	
			5 1	16 6	17 " " DIRT PARKING	
			5 4	16 3	100 " " " "	
			5 9	15 8	135 " "	
			6 2	15 5	200 " "	
			13 4	8 3	225 " " BEGIN OF BEACH SAND	
T.P.	0 36	4 12	17 95	3 76	292 " " T.P.	
			4 2	-1 9	340 " "	
			5 5	-1 4	362 " "	
			6 7	-2 6	380 " "	
			9 0	-4 9	392 " "	
			9 4	-5 3	412 " "	
			10 0	-5 9	433 " "	

Profile No. ____ Date ____ Notes Red ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 PG. 209

X-Sec. No. ____ Date ____ Notes Chkd ____ Date ____ Checked ____ Date ____ Survey of Beach Erosion Sur Survey by Dreier Notes E. Lancia Date 7-23-56

Map No. ____ Indexed C. Johnson

Profile	Notes Red.	Plotted	Job No. C30002	Division No. 10	F. B. 2308	Pg. 211
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O. C. Johnson	Date 7-24-58	
No.	Date	Date	Map No.	Indexed	Date	

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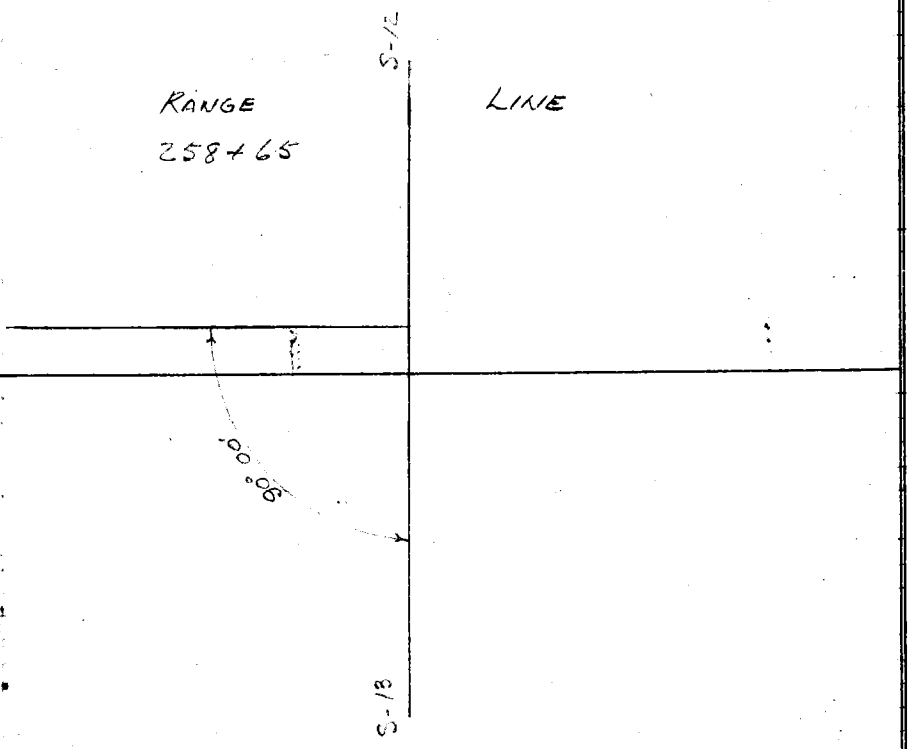

STATION Inst. At	Sight On	B.S. #	H.I. Depth Rec. Adj.	F.S. Time	ELEV. Hor. Ang.	Remarks
258+65	S-13	1		7 09	90°00'	
		2				
		3				
		4				
		5				
		6				
		7				
		8				
		9				
		10				
		11				
		12				
		13				
		14				
		15				
		16				
		17				
		18				
		19				
		20				

76298 S & E #307—7-55

76298 S & E #307—7-55

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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	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
258+65	S-13	21			90° 00		
		22		7 16	" "	OUTSIDE BREAKWATER	
		23		7 25	" "	INSIDE "	
		24			" "		
		25			" "		
		26			" "		
		27			" "		
		28			" "		
		29			" "		
		30			" "		
		31			" "		
		32			" "		
		33			" "		
		34			" "		
		35			" "		
		36			" "		
		37			" "		
		38			" "		
		39			" "		
		40			" "		

F. B. 2308 Pg. 212 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of BEACH EROSION Date 7-24-58 Date X-Sec.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked No.
Indexed C. Johnson Date Date Date

Profile No.	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308	Pg. 213
	Date	Date	Survey of BEACH EROSION			
X-Sec. No.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-24-58	
	Date	Date	Map No.	Index C. Johnson		

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	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	

76298 S & E #307—7-55

F. B. 2308 Pg. 214 | Job No. 030003 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-24-58 Date No.

Survey by VAN DEREN Notes T. O. Notes Chkd. Checked X-Sec.

Indexed C. JOHNSON Date Date Date No.

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

76298 S & E #307—7-55

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76298 S & E #307—7-55

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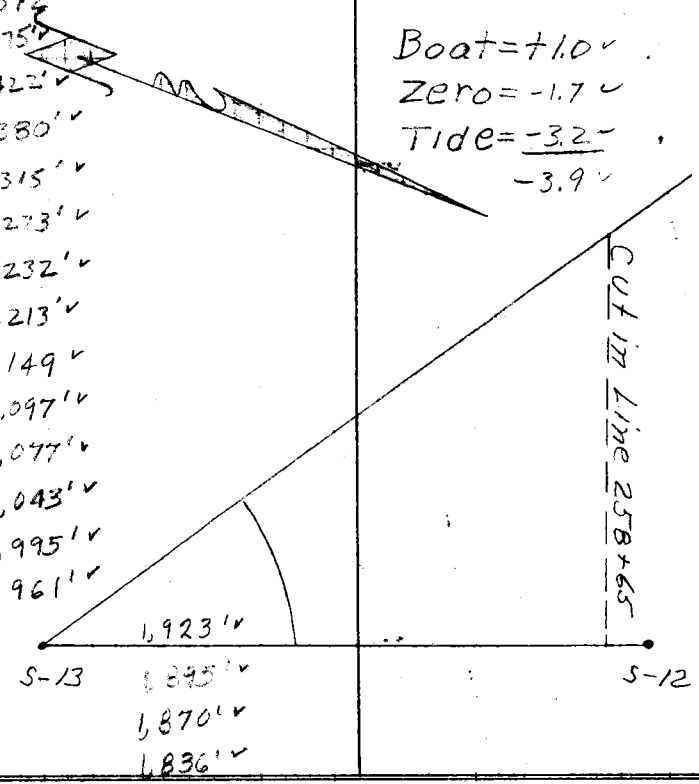
STATION Inst. At	Sight On	S. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
S-13	S-12	1	42.4	38.5	7:09	76° 30'	2628'
		2	41.4	37.5		75° 59'	2528' Cut in Line 258+65
		3	41.2	37.3		75° 54'	2512'
		4	40.6	36.7		75° 42'	2475'
		5	39.7	35.8		75° 24'	2422'
		6	39.1	35.2		75° 09'	2380'
		7	37.9	34.0		74° 45'	2315'
		8	37.5	33.6		74° 29'	2273'
		9	36.7	32.8		74° 13'	2232'
		10	35.6	31.7		74° 05'	2213'
		11	34.4	30.5		73° 38'	2149
		12	33.3	29.4		73° 15'	2,097'
		13	32.8	28.9		73° 06'	2,077'
		14	32.0	28.1		72° 50'	2,043'
		15	31.3	27.4		72° 27'	1,995'
		16	30.3	26.4		72° 10'	1,961'
		17	28.9	25.0		71° 50'	
		18	28.2	24.3		71° 35'	
		19	27.7	23.8		71° 21'	
		20	—	—		71° 02'	



Profile Notes Red. ____ Plotted ____ Job No. 2300.02 Division No. 10 F. B. 2308 Pg. 215
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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Do not extend notes this side of this line.

F. B. 2308 Pg. 216 | Job No. 2300.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 7-24-58 Date No.
Survey by Van Deren Notes R.T. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No. Profile

STATION Inst At	Sight On	#	B. S. Rec	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		21	—			70° 40'	Outside of Breakwater
		22	—		7:16	70° 30'	Cut in Line 258+65
		23	7.6	3.8	7:25	69° 26'	1,482' ← Inside of Breakwater
		24	9.0	5.2		69° 26'	1,582'
		25	14.0	10.2		68° 48'	1,627'
		26	14.9	11.1		68° 33'	1,606'
		27	15.5	11.7		68° 23'	1,593'
		28	15.4	11.6		68° 00'	1,562'
5-13	5-12	29	15.1	11.3		67° 20'	1,511' Shots 23-53
		30	15.2	11.4		66° 48'	1,472' Beach = +1.0
		31	16.3	12.5		66° 15'	1,434' Zero = -1.7
		32	17.5	13.7		65° 20'	1,374' Tide = -3.1
		33	18.5	14.7		64° 33'	1,326' -3.8'
		34	19.3	15.5		63° 05'	1,243'
		35	19.3	15.5		62° 02'	1,188'
		36	19.2	15.4		60° 43'	1,125'
		37	19.0	15.2		59° 32'	1,073'
		38	18.4	14.6		58° 31'	1,030'
		39	17.6	13.8		57° 10'	978'
		40	16.8	13.0		55° 44'	926'

76298 S & E #307—7-55

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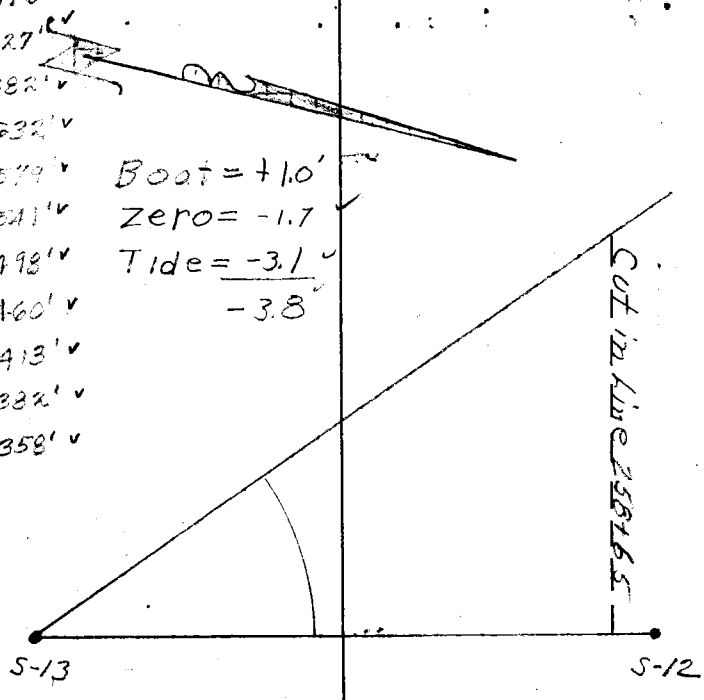
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	16.2	12.4		54° 05	871'
		42	15.6	11.8		52° 43'	829'
		43	15.1	11.3		50° 53'	776'
		44	14.6	10.8		49° 03'	727'
		45	14.1	10.3		47° 14'	682'
		46	13.6	9.8		45° 03'	632'
		47	12.8	9.0		42° 34'	579'
S-13	S-12	48	12.4	8.6		40° 35'	541'
		49	11.7	7.9		38° 17'	498'
		50	11.1	7.3		36° 06'	460'
		51	9.5	5.7		33° 10'	413'
		52	7.1	3.3		31° 13'	382'
		53	5.8	2.0	7:30	29° 35'	358'

Cut in Line 258+65



Boat = +1.0'
Zero = -1.7
Tide = -3.1
-3.8

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 217
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes [illegible] Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed ____ Date ____

F. B. 2308 Pg. 218 | Job No. 030.02 Division No. 10 | Notes Red. | Plotted | Profile

Survey of Beach Erosion Study | Date 7-29-58 | Date | No.

Survey by Van Deren | Notes R.T. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | Date | No.

76298 S & E #307—7-55

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

76L298 307 10-51

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ENGINEERING BLDG.

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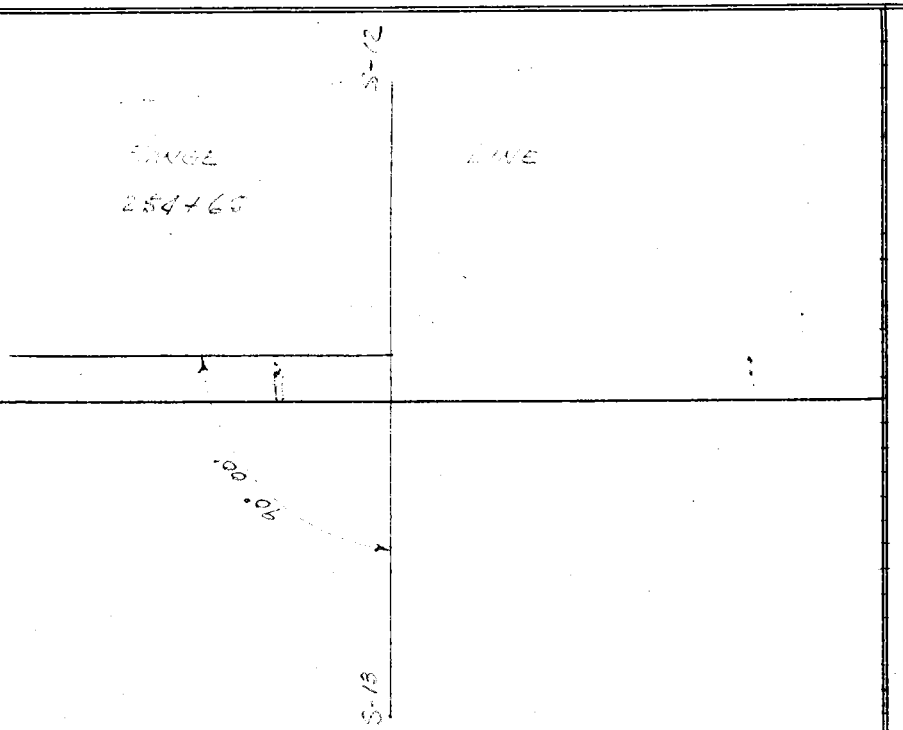
STATION	B. S.	H. I.	F. S.	ELEV.		
T.P.	508	2171		1663	T.P. CONT. FROM 258+65	
T.P.	274	1956	489	1682		INSHORE 254+65
			257	1699	℄ ON WALK	
			259	1697	4 FT. RT EDGE OF WALK DIRT FLUSH	
			42	1544	60 " " PARKING AREA, DIRT	
			52	1444	100 " " " " "	
			60	1360	150 " " " " "	
			76	1200	200 " " " " "	
			107	899	300 " " " "	
			101	955	350 " " SAND	
			90	1066	400 " " "	
			77	1194	465 " " " TOP BRK	
			105	91	500 " "	
			118	78	530 " "	
T.P.	217	548	1625	331	600 " "	
			47	+0 ~~78~~ -14	644 " "	
		55	69	-0 ~~6~~	689 " "	
			81	-26	718 " "	
			91	-36	755 " "	
			105	-50	788 " "	
			109	-54	817 " "	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 Pg. 219
Date ____ Date ____ Survey of BEACH EROSION SUR.
X-Sec. No. ____ Notes Chkd ____ Checked ____ Survey by English & Dreier Date 7-23-58
Date ____ Date ____ Map No. ____ Indexed ____ Notes ____

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308	Pg. 221
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T. O.	Date 7-24-58	
No.	Date	Date	Map No.	Index C. Johnson		



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
254+65 S-13	1		7 49	90° 00'	
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76298 S & E #307—7-55

F. B. 2308 Pg. 222 | Job No. 030002 | Division No. 10 | Notes Red. | Plotted | Profile

Survey of BEACH EROSION | Date 7-24-58 | Date | No.

Survey by VAN DEREN | Notes T. O. | Notes Chkd. | Checked | X-Sec.

Index A. C. Johnson | Date | Date | Date | No.

76298 S & E #307—7-55

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STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
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Profile	Notes Red.	Plotted	Job No. [illegible]	Division No. 10	F. B. 2305	Pg. 223
No.	Date	Date	Survey of Beach Erosion			
X-Sec.	Notes Chkd.	Checked	Survey by Van Deren	Notes T.O.	Date 7-24-58	
No.	Date	Date	Map No.	Index [illegible] C. Johnson		

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 ENGINEER
700 LOS ANGELES COUNTY ENGINEERING BLDG.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.		Remarks
[illegible]	[illegible]			[illegible]		
	[illegible]					
	[illegible]					
	[illegible]		[illegible]			
	[illegible]					

76298 S & E #307—7-55

F. B. 2308 Pg. 224 | Job No. 030002 | Division No. 10 | Notes Red. | Plotted | Profile

Survey of BEACH EROSION | Date 7-24-58 | Date | No.

Survey by VAN DEREN | Notes T.O. | Notes Chkd. | Checked | X-Sec.

Index C. JOHNSON | Date | Date | Date | No.

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

76298 S & E #307—7-55

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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.

76298 S & E #307—7-55

PLEASE RETURN TO
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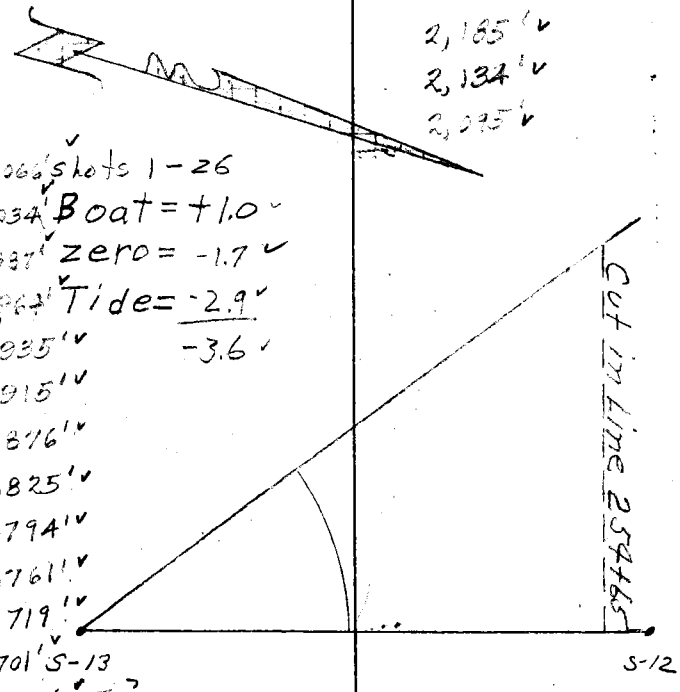
700 LOS ANGELES COUNTY ENGINEERING BLDG.

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. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		7:49	66° 25'	
		2	—			65° 47'	Cut in Line 254+65
		3	—			65° 23'	
		4	36.2	32.6		64° 44'	2,185'
		5	35.2	31.6		64° 13'	2,134'
		6	34.7	31.1		63° 48'	2,095'
		7	33.7	30.1		63° 29'	2,066' shots 1-26
S-13	S-12	8	32.3	28.7		63° 07'	2,034' Boat = +1.0
		9	31.5	27.9		62° 34'	1,987' zero = -1.7
		10	30.6	27.0		62° 18'	1,964' Tide = -2.9
		11	30.1	26.5		61° 57'	1,935' -3.6
		12	29.3	25.7		61° 42'	1,915'
		13	28.3	24.7		61° 13'	1,876'
		14	27.3	23.7		60° 32'	1,825'
		15	25.8	22.2		60° 07'	1,794'
		16	25.0	21.4		59° 39'	1,761'
		17	24.3	20.7		59° 02'	1,719'
		18	23.9	20.3		58° 47'	1,701' S-13
		19	23.1	19.5		58° 25'	1,677' ?
		20	22.3	18.7		58° 05'	1,656' ?



Profile Notes Red. Plotted Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 225
No. Date Date Survey of Beach Erosion Study
X-Sec. Notes Chkd. Checked Survey by Wm Dever Notes R.H. Date 7-24-58
No. Date Date Map No. Indexed C. Johnson

76298 S & E #307—7-55

PLEASE RETURN TO
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700 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	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks	
		21	24.4	20.8		59° 00'	1,716'	
		22	23.4	19.8		58° 35'	1,688'	Cut in Line 254+65
		23	22.4	18.8		58° 04'	1,655'	
		24	21.8	18.2		57° 30'	1,619'	
		25	—			57° 02'		
		26	—		7:59	56° 47	outside of Breakwater	Radio Trouble
		27	—		9:01	54° 04'	inside of Breakwater	
		28	5.4	2.3		53° 39'	1,401'	Shots 27-45
5-13	5-12	29	5.5	2.4		52° 48'	1,359'	Boat = +1.0
		30	6.3	3.2		51° 48'	1,310'	Zero = -1.7
		31	8.2	5.1		50° 58'	1,271'	Tide = -2.4
		32	9.1	6.0		50° 18'	1,242'	-3.1
		33	9.6	6.5		49° 29'	1,206'	
		34	10.2	7.1		48° 27'	1,163'	
		35	10.7	7.6		47° 23'	1,121'	
		36	11.0	7.9		46° 30'	1,087'	
		37	11.0	7.9		45° 40'	1,056'	
		38	11.5	8.4		44° 44'	1,022'	
		39	12.1	9.0		43° 40'	985'	
		40	11.2	8.1		42° 25'	942'	

F. B. 2308 Pg. 226 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 7-24-58 Date No. X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked
Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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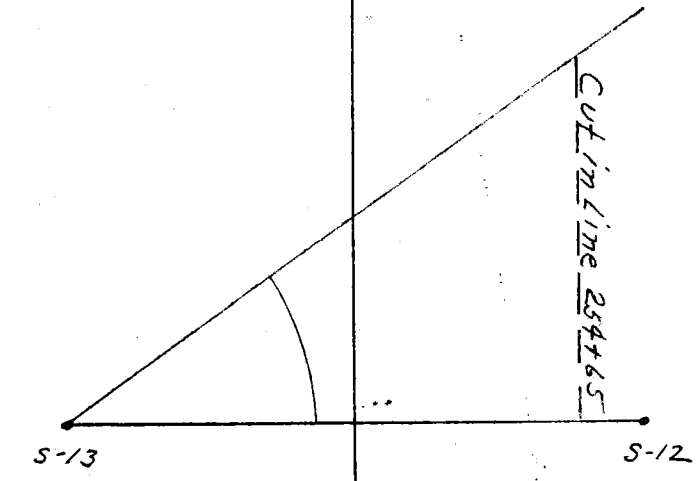
LOS ANGELES COUNTY ENGINEER
700 LOS ANGELES COUNTY ENGINEERING BLDG.

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	S. S. #	H. I. Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		41	10.2	7.1		41° 17'	905'
		42	9.4	6.3		40° 17'	974' Cut in Line 254+65
		43	9.1	6.0		39° 16'	843'
		44	8.9	5.8		38° 12'	811'
		45	8.6	5.5	9:05	39° 16'	785'
S-13	S-12						

Boat = +1.0'
zero = -1.7'
Tide = -2.4'
-3.1'



Profile Notes Red. Plotted Job No. 3200.00 Division No. 10 F. B. 2308 Pg. 227
No. Date Date Survey of Beach Erosion Study
X-Sec. Notes Chkd. Checked Survey by Van Dover Notes P.T. Date 7-24-58
No. Date Date Map No. Index C. Johnson

F. B. 2308 Pg. 228 | Job No. 8300.02 Division No. 10 | Notes Red. | Plotted | Profile

Survey of Beach Erosion Study | Date 2-24-58 | Date | No.

Survey by Van Deren | Notes R.T. | Notes Chkd. | Checked | X-Sec.

Indexed C. Johnson | Date | Date | Date | No.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. Sight At On # Rec. Depth Adj. Time Hor. Ang. Remarks
S-13					
S-12					

76298 S & E #307—7-55

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76L298 307 10-51

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 247+50	Sight on 253+10
T.P.	2 74	19 56		16 82	CONT. FROM LINE 2, 254+65	INISHORE
B.M. S-12	6 13	23 17	2 52	17 04	B.M. S-12, ELEV. 17.038 F.B. 2100-161	253+10
253+10			6 17	17 00	℄ ON CONC WALK	
			6 28	16 89	6 FT RT. EDGE OF WALK, DIRT FLUSH	
			4 0	19 2	30 " " DIRT PARKING AREA	
			4 7	18 5	100	
			4 6	18 6	150	
			5 0	18 2	200	
			6 3	16 9	275 " " TOP BRK, W. SIDE DIRT	
			10 8	12 4	290 " " BOT. BRK, E. SIDE BEACH SAND	
			10 9	12 3	300 " "	
			11 0	12 2	400 " " TOP BRK.	
			13 6	9 6	445 " " BOT "	
			13 3	9 9	500 " "	
			13 6	9 6	515 TOP BRK	
			17 0	~~5 2~~ 6 2	600	
T.P.	0 8	6 1	17 92	5 25	605± (T.P. ON LARGE ROCK)	
			3 5	2 6	48° 26' 632'	
			1 1	5 0	50° 40' 683'	
			6 3	-0 2	52° 47 738'	
			7 8	-1 7	54° 48 794'	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0300002 Division No. 10 F.B. 2308 Pg. 229
X-Sec. No. ____ Date ____ Date ____ Survey of BEACH EROSION Notes G.E.D. Date 7-23-58
Notes Chkd ____ Checked ____ Survey by G.E. DREIER
Date ____ Date ____ Map No. ____ Indexed C. Johnson

76L298 307 10-51

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 247+50	Sight on 253+10
253+10		6 1	9 7	-3 6	57° 06' 866'	
			10 8	-4 7	58° 46' 923'	
			12 3	-6 2	60° 38 995'	
			14 6	-8 5	62° 44 1,086'	
			16 3	-10 2	63° 53 1,142'	

F.B. 2308 PG. 236

Job No. 03 00.02 Division No. 10 Notes Red. Plotted

Survey of Beach Erosion Sur. Date Date No.

Survey by English & Dreier Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

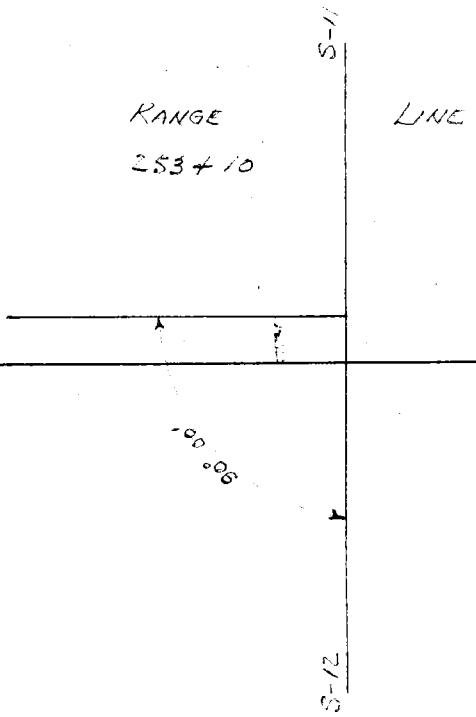
Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308 Pg. 231
No.	Date	Date	Survey of BEACH EROSION		
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T. O.	Date 7-24-58
No.	Date	Date	Map No.	Indexed ~~K. O. Johnson~~	Date

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 ENGINEER
700 LOS ANGELES COUNTY ENGINEERING BLDG.

Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
253+10 S-12	1		9 29	90° 00'	
	2			"	
	3			"	
	4			"	
	5			"	
	6			"	
	7			"	
	8			"	
	9			"	
	10			"	
	11			"	
	12			"	
	13			"	
	14			"	
	15			"	
	16			"	
	17			"	
	18			"	
	19			"	
	20			"	



76298 S & E #307—7-55

76298 S & E #307—7-55

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LOS ANGELES COUNTY ENGINEER
700 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		S. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
253+10	S-12	21			90° 00		
		22			" "		
		23			" "		
		24			" "		
		25			" "		
		26			" "		
		27			" "		
		28			" "		
		29			" "		
		30			" "		
		31			" "		
		32			" "		
		33			" "		
		34			" "		
		35			" "		
		36			" "		
		37		9 38	" "		

F. B. 2308 Pg. 232 Job No. 030003 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-24-58 Date No.
Survey ~~N. J.~~ VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed Date Date Date No.

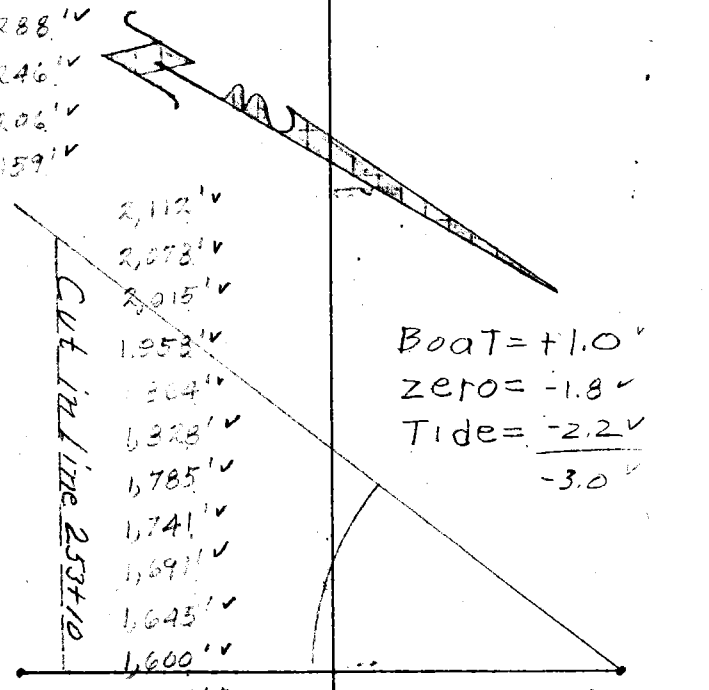
76298 S & E #307—7-55

PLEASE RETURN TO
LOS ANGELES COUNTY ENGINEER
700 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. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		9:29	54° 25'	
		2	—			52° 47'	Cut In Line 253+10
		3	37.8	34.8		51° 39'	2,288'
		4	37.3	34.3		51° 08'	2,246'
		5	37.0	34.0		50° 38'	2,206'
		6	36.0	33.0		50° 02'	2,159'
235+00	S-12	7	35.3	32.3		49° 25'	2,112'
		8	34.6	31.6		48° 56'	2,078'
		9	33.8	30.8		48° 04'	2,015'
		10	32.7	29.7		47° 16'	1,958'
		11	30.4	27.4		45° 50'	1,804'
		12	29.8	26.8		45° 17'	1,828'
		13	28.4	25.4		44° 35'	1,785'
		14	27.8	24.8		43° 54'	1,741'
		15	26.3	23.3		43° 03'	1,691'
		16	25.2	22.2		42° 16'	1,645'
		17	23.7	20.7		41° 29'	1,600'
		18	23.5	20.5		40° 57'	1,571'
		19	22.8	19.8		40° 25'	1,542'
		20	21.8	18.8		39° 51'	1,511'



Boat = +1.0
zero = -1.8
Tide = -2.2
-3.0

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 233
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes RT Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Index N. C. Johnson

76298 S & E #307—7-55

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700 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	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks	
		21	21.2	18.2		39° 17'	1,481'	
		22	20.5	17.5		38° 38'	1,446'	Cut in Line 253+10
		23	19.9	16.9		38° 04'	1,417'	
		24	19.1	16.1		37° 19'	1,379'	Boat = +1.0
		25	18.4	15.4		36° 37'	1,345'	zero = -1.8
		26	17.6	14.6		35° 49'	1,307'	Tide = -2.2
		27	16.6	13.6		35° 06'	1,272'	-3.0
		28	16.1	13.1		34° 16'	1,233'	
235+00	5-12	29	15.3	12.3		33° 33'	1,200'	
		30	—			32° 30'		
		31	—			31° 22'		
		32	—			30° 19'		
		33	—			29° 07'		
		34	—			28° 00'		
		35	—			27° 17'		
		36	—			26° 38'		
		37	—		9:38	26° 09'		
		38						
		39						
		40						

F. B. 2308 Pg. 234 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 7-24-58 Date No. X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked
Indexed C. Joonson Date Date Date No.

76298 S & E #307—7-55

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700 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 245+00	Sight on 250+00
B.M. S-12	247	1951		1704	BM. S-12 ELEV. 17.038	F.B. 2100-161
250+00			213	1738	℄ ON WALK	INSHORE 250+00
			219	1732	5 FT. RT EDGE OF WALK	
			24	171	29 " "	SAND, E. SIDE OF 4' BLOCK PLANTER
			12	183	29 " "	
			307	1644	33 " "	
			413	1538	85 " "	LOW OF ASPHALT PARKING AREA
			398	1553	100 " "	
			415	1536	149.5 " "	W. EDGE CONC. WALK BACK OF BLDG.
			47	148	150 " "	SAND AT W. EDGE " " " "
			48	147	200 " "	
			66	129	260 " "	BOT. BRK
			67	128	300	
			67	128	350	TOP BRK
			90	105	375	BOT BRK
			93	102	400	
			107	88	430	TOP BRK
T.P.	16	65	146	49	487	
			~~45~~	~~20~~		
			~~58~~	~~07~~	See Other side	
			~~17~~	~~102~~	of this Page	

Profile Notes Red. ____ Plotted ____ Job No. 9300.02 Division No. 10 F. B. 2308 Pg. 235
No. ____ Date ____ Date ____ Survey of [illegible] Sub
X-Sec. Notes Chkd. ____ Checked ____ Survey by [illegible] & Dreier Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

PLEASE RETURN TO
LOS ANGELES COUNTY ENGINEER
700 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.

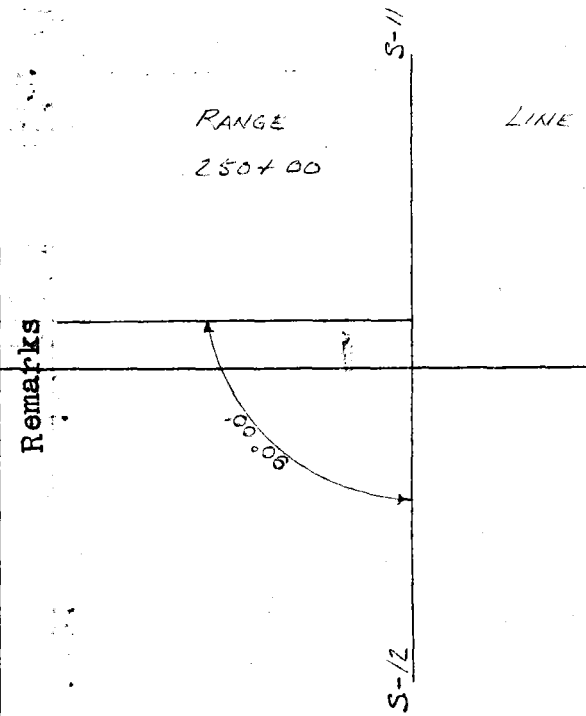
Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 245+00			Sight on 250+00
250+00		6 5	8 [illegible]	-1 [illegible]				
			9 7	-3 2				
			11 6	-5 1				
			13 5	-7 0				
			15 7	-9 2				
			17 6	-11 1				
		6 5	4 8	1 7	62°45'	971'	543'	47°20'
			5 7	0 8	60°45'	893'	580'	49°15'
			7 5	-1 0	59°20'	843'	623'	51°15'
			9 5	-3 0	57°51'	796'	704'	54°36'
			11 7	-5 2	54°36'	704'	796'	57°51'
			13 4	-6 9	51°15'	623'	843'	59°20'
			16 0	-9 5	49°15'	580'	893'	60°45'
			17 1	-10 6	47°20'	543'	971'	62°45'

Angles obviously reversed

F. B. 2308 Pg. 236 Job No. 030002 Division No. 16 Notes Red. Plotted Profile
Survey of Beach Erosion Sur. Date Date No.
Survey by Frelish Notes Drafter Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308	Pg. 237
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O	Date 7-24-58	
No.	Date	Date	Map No.	Indexed A. C. Johnson	Date	



STATION	B.S.	H.I.	F.S.	ELEV.	Remarks
Inst. Sight At On 250+00 S-12	#	Depth Rec. Adj.	Time	Hor. Ang.	
	1		9 57	90° 00	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				

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76298 S & E #307—7-55

76298 S & E #307—7-55

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks	
250+00	S-12	21				90° 00'		
		22				" "		
		23				" "		
		24				" "		
		25				" "		
		26				" "		
		27				" "		
		28				" "		
		29				" "		
		30				" "		
		31			10 11	" "		

F. B. 2308 Pg. 238

Job No. 030002 Division No. 10 Notes Red. Plotted No. Profile

Survey of BEACH EROSION Date 7-24-58 Date X-Sec.

Survey by VAN DEREN Notes T.O. Notes Chkd. Checked No.

Indexed C. Johnson Date Date Date

76298 S & E #307—7-55

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STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		9:57	56° 15'	
		2	—			55° 49'	Cut in. Line 250+00
		3	—			54° 35'	
		4	—			51° 31'	Boat=+1.0'
		5	—			48° 14'	Zero=-2.0'
		6	—			46° 16'	Tide=-2.1'
		7	—			43° 43'	-3.1'
		8	—			39° 39'	
235+00	S-12	9	18.8	15.7		38° 31'	1,194-?
		10	21.3	18.2		40° 45'	1,293-?
		11	20.4	17.3		39° 36'	1,271-?
		12	—			44° 22'	
		13	22.0	18.9		40° 45'	1,315'
		14	20.6	17.5		40° 13'	1,269'
		15	19.8	16.7		39° 24'	1,232'
		16	18.8	15.7		38° 12'	1,181'
		17	17.7	14.6		37° 15'	1,140'
		18	17.0	13.9		36° 31'	S-12 1,110'
		19	16.6	13.5		35° 49'	1,083'
		20	15.7	12.6		35° 11'	1,058'

Cut in. Line 250+00

235+00

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 239

No. ____ Date ____ Date ____ Survey of Beach Erosion Study

X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-24-58

No. ____ Date ____ Date ____ Map No. ____ Indexed R. Johnson

76298 S & E #307—7-55

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STATION		B. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks
235+00	S-12	21	15.0	11.9		34° 25'	1028'
		22	14.4	11.3		33° 37'	998' Cut in Line 250+00
		23	13.4	10.3		32° 51'	969'
		24	12.6	9.5		32° 31	956' Boat = +1.0'
		25	12.0	8.9		31° 47'	930' zero = -2.0'
		26	11.8	8.7		31° 08'	906' Tide = -2.1'
		27	10.9	7.8		30° 12'	873' -3.1'
		28	10.2	7.1		29° 27'	848'
		29	9.3	6.2		28° 23'	810'
		30	8.7	5.6		28° 00'	798'
		31	8.2	5.1	10: 11	29° 16'	773'
		32					
		33					
		34					
		35					

F. B. 2308 Pg. 240 Job No. 0300.02 Division No. 10 Notes Red. Plotted Date 7-24-58 Date No. X-Sec.
Survey of Beach Erosion Study Notes Chkd. Checked Date No.
Survey by Van Deren Notes R.T. Date
Indexed C. [illegible] Date

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STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 240+00	Sight on 245+00
B.M. S-12	2 47	19 51		17 04		
T.P.	5 39	22 30	210	17 41		INSHORE 245+00
T.P.	5 55	22 81	5 54	17 26		
B.M. 21-38	3 64	20 24	6 18	16 63	30+ B.M. 21-38 ELEV. 16.599 PER CB 2100-161 (TORRANCE E-6A) THE STRAND & LYDON ST	
245+00			2 98	17 26	℄	
			3 09	17 15	5 FT. RT WALK TO E. OF BLOCK WALL	
			3 2	17 0	6 " " SAND TO W. " " "	
			2 1	18 1	40 " " TOP HUMP	
			3 6	16 6	100 " "	
			5 6	14 6	150 " "	
			8 0	12 2	200 " " BOT. DIP.	
			7 6	12 6	290 " " TOP BRK	
			8 7	11 5	300 " "	
			9 2	11 0	305 " " BOT. BRK	
			9 2	11 0	350 " " TOP "	
			13 3	6 9	400 " "	
T.P.	0 3	5 8	14 7	5 54	420 " "	
			3 8	2 0	42° 52' 464'	
			5 5	0 3	44° 55' 499'	
			6 3	-0 5	48° 07 558'	
			7 5	-1 7	50° 05 598'	

Profile Notes Red ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 741
No. ____ Date ____ Date ____ Survey of Engineering Survey Date 7-24-58
X-Sec. Notes Chkd. ____ Checked ____ Survey by Engineering Survey Date ____
No. ____ Date ____ Date ____ Map No. ____ Indexed by Tabulated by

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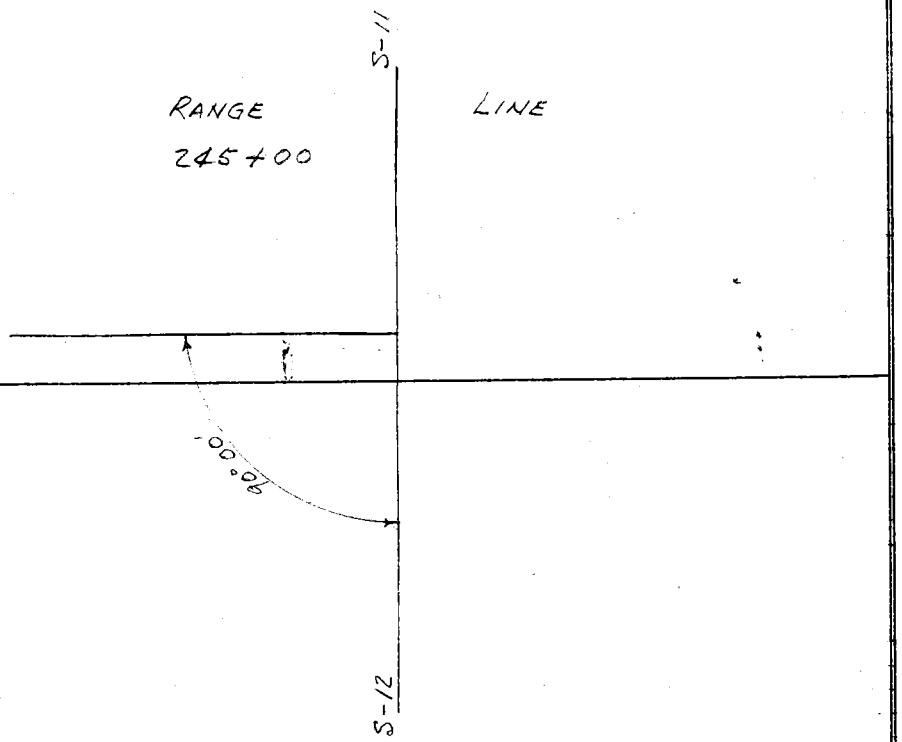
STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 240+00	Sight on 245+00
		5 8	9 5	-3 7	52° 25' 650'	
			11 4	-5 6	54° 34' 703'	
			14 1	-8 3	56° 50' 765'	
			15 4	-9 6	58° 24 813'	
			18 0	-12 2	60° 34 886'	

F. B. 2308 PG. 242 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Svr. Date Date No.
Survey by English & Drexler Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

Profile	Notes Red.	Plotted	Job No. 030000	Division No. 10	F. B. 2308	Pg. 243
No.	Date	Date	Survey of BEACH EROSION			
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-24-58	
No.	Date	Date	Map No.	Indexed C. Johnson	Date	



STATION	B.B.	H.I.	F.B.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
245+00 S-12	1		10 23	90° 00'	
	2			" "	
	3			" "	
	4			" "	
	5			" "	
	6			" "	
	7			" "	
	8			" "	
	9			" "	
	10			" "	
	11			" "	
	12			" "	
	13			" "	
	14			" "	
	15			" "	
	16			" "	
	17			" "	
	18			" "	
	19			" "	
	20			" "	

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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	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks
245+00	S-12	21				90° 00'		
		22				" "		
		23				" "		
		24				" "		
		25				" "		
		26				" "		
		27				" "		
		28				" "		
		29				" "		
		30				" "		
		31				" "		
		32				" "		
		33			1029	" "		

F. B. 2308 Pg. 244 Job No. 030002 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-24-58 Date No.
Survey by VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed C. JOHNSON Date Date Date No.

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STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		1	—		10:23	63° 15'	
		2	34.5	31.5		62° 40'	1,935' ✓ Cut in Line 245+00
		3	33.6	30.6		62° 01'	1,882' ✓
		4	32.9	29.9		61° 28'	1,839' ✓ Boat = +1.0 ✓
		5	31.8	28.8		60° 48'	1,789' ✓ Zero = -2.0 ✓
		6	31.3	28.3		60° 14'	1,749' ✓ Tide = -2.0 ✓
235+00	5-12	7	31.0	28.0		59° 40'	1,709' ✓ -5.0 ✓
		8	30.4	27.4		58° 46'	1,629' ✓
		9	29.4	26.4		58° 00'	1,600' ✓ Cut in Line 245+00
		10	28.4	25.4		57° 15'	1,555' ✓
		11	27.7	24.7		56° 24'	1,505' ✓
		12	27.5	24.5		55° 31'	1,456' ✓
		13	26.6	23.6		54° 32'	1,402' ✓
		14	—			53° 24'	
		15	—			51° 45'	
		16	23.7	20.7		50° 41'	1,221' ✓
		17	22.7	19.7		49° 48'	1,183' ✓
		18	22.0	19.0		48° 54'	5-12 1,146' ✓ 235+00
		19	21.2	18.2		47° 54'	1,107' ✓
		20	20.7	17.7		47° 09'	1,072' ✓

Profile Notes Red. _____ Plotted _____ Job No. 230002 Division No. 10 F. B. 2308 Pg. 245
No. _____ Date _____ Date _____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. _____ Checked _____ Survey by VanDeren Notes R.T. Date 7-24-58
No. _____ Date _____ Date _____ Map No. _____ Indexed C. Johnson

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STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks
		21	19.9	16.9		46° 18'	1046'	
		22	18.9	15.9		45° 24'	1,014'	Cut in Line 245+00
		23	17.4	14.4		44° 28'	982'	
		24	16.2	13.2		43° 47'	958'	Boat = +1.0
		25	15.6	12.6		42° 48'	926'	Zero = -2.0
		26	14.9	11.9		42° 09'	905'	Tide = -2.0
		27	14.2	11.2		41° 32'	886'	-3.0
235+00	S-12	28	13.2	10.2		40° 32'	855'	
		29	12.6	9.6		39° 36'	827'	
		30	11.7	8.7		38° 51	805'	
		31	10.9	7.9		38° 09'	786'	
		32	10.4	7.4		37° 10'	758'	
		33	—		10:29	36° 30'		

F. B. 2308 Pg. 246 Job No. 0300.02 Division No. 10 Notes Red. Plotted No. Profile
Survey of Beach Erosion Study Date 7-24-58 Date X-Sec.
Survey by Van Deren Notes R.T. Notes Chkd. Checked No.
Indexed C. Johnson Date Date Date

76298 S & E #307—7-55

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STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 235+00	Sight on 240+00
B.M. 21-38	364	2024		1660	B.M. 21-38 ELEV 16.599 ✓ PER F.B. 2100-161 (TORRANCE E-6A)	
T.P.	550	2268	306	1718		INSHORE 240+00
240+00 T.P.	300	2011	557	1711		
			307	1704	4 FT. RT W. EDGE OF WALK	
			33	168	5 " " SAND TO W. OF WALL	
			31	170	50 " "	
			37	164	100 " "	
			70	131	200 " "	
			74	127	265 " " TOP BRK	
			88	113	280 " " BOT "	
			93	108	300	
			111	91	335 TOP BRK	
T.P.	11	61	1510	501	381	
			45	16	40° 47' 431' ✓	
			56	05	43° 15 470' ✓	
			68	-07	45° 33 510' ✓	
			77	-16	48° 11' 559' ✓	
			103	-42	50° 44 612' ✓	
			120	-59	52° 45' 658' ✓	
			140	-79	54° 47 708' ✓	
			156	-95	56° 37 759' ✓	
			178	-117	58° 42 822' ✓	

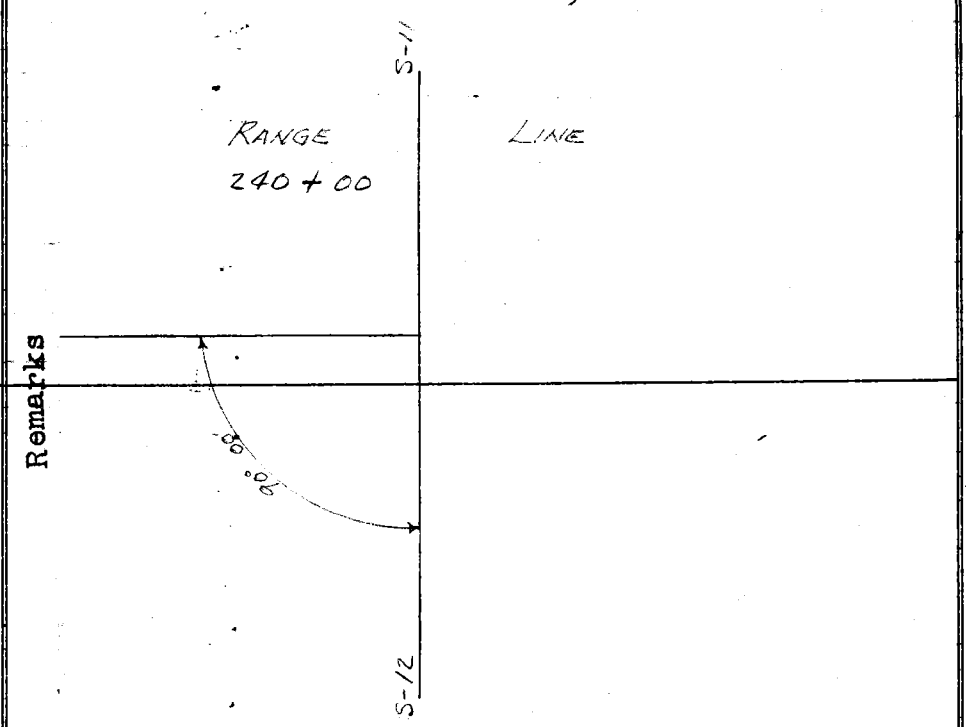
Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 247
No. ____ Date ____ Date ____ Survey of BEACH Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by English & Dreiss Date 7-24-58
No. ____ Date ____ Date ____ Map No. 1 Indexed C. Johnson Date ____

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 030002 Division No. 10 | F. B. | Pg. 249

Date ____ Date ____ Survey of BEACH EROSION

X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 1-24-58

Date ____ Date ____ Map No. ____ Indexed C. Johnson



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
240+00 S-12	1		10 39	90° 00'	
	2			"	
	3			"	
	4			"	
	5			"	
	6			"	
	7			"	
	8			"	
	9			"	
	10			"	
	11			"	
	12			"	
	13			"	
	14			"	
	15			"	
	16			"	
	17			"	
	18			"	
	19			"	
	20			"	

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F. B. 2308 PG. 250 Job No. 030002 Division No. 10 Notes Red. _____ Plotted _____ Profile

Survey of BEACH EROSION Date 7-24-58 Date _____ No. _____

Survey by VAN DEREN Notes T.O. Notes Chkd. _____ Checked _____ X-Sec.

Indexed _____ Date _____ Date _____ Date _____ No. _____

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STATION	B. S.	H. I.	F. S.	ELEV.		
Inst. Sight At On	Depth # Rec. Adj.		Time	Hor. Ang.		Remarks
240+00 S-12	21			90° 00'		
	22			" "		
	23			" "		
	24		1044	" "		

76298 S & E #307—7-55

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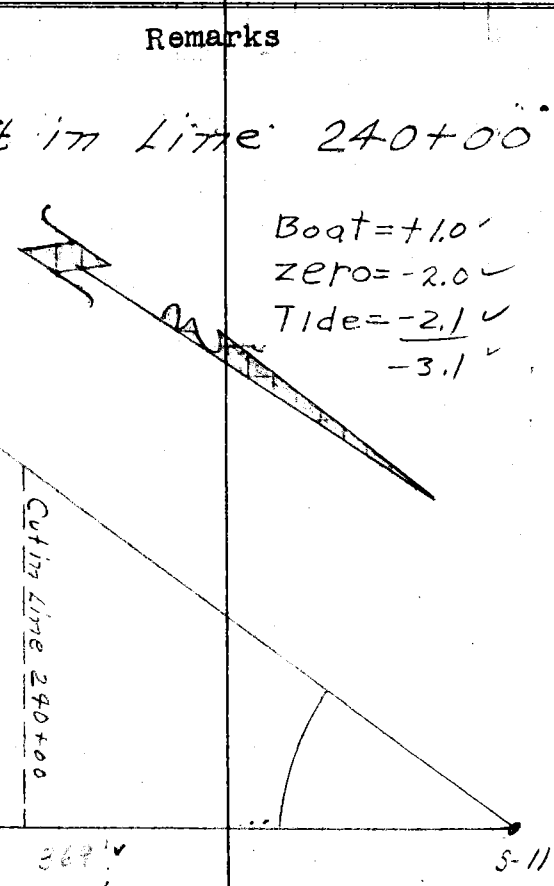
STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Depth Adj.	F. S. Time	ELEV. Hor. Ang.		Remarks
11-S	12-S	1	30.9	27.8	10:39	62° 32'	1,697' ✓	
		2	30.6	27.5		61° 07'	1,632' ✓	Cut in Line 240+00
		3	29.9	26.8		50° 13'	1,572' ✓	
		4	28.9	25.8		59° 20'	1,519' ✓	
		5	28.2	25.1		58° 20'	1,459' ✓	
		6	26.8	23.7		56° 27'	1,357' ✓	
		7	25.9	22.8		55° 32'	1,311' ✓	
		8	25.2	22.1		54° 38'	1,268' ✓	
		9	24.3	21.2		53° 06'	1,199' ✓	
		10	23.3	20.2		52° 11'	1,159' ✓	
		11	22.3	19.2		50° 52'	1,106' ✓	
		12	21.7	18.6		49° 58'	1,071' ✓	
		13	20.8	17.7		48° 58'	1,034' ✓	
		14	19.7	16.6		47° 56'	997' ✓	
		15	18.3	15.2		46° 28'	948' ✓	
		16	17.4	14.3		45° 34'	918' ✓	
		17	16.5	13.4		44° 45'	892' ✓	
		18	15.7	12.6		44° 00'	S-12 369' ✓	S-11
		19	14.5	11.4		42° 47'	933' ✓	
		20	13.5	10.4		41° 19'	991' ✓	



Boat = +1.0'
zero = -2.0 ✓
Tide = -2.1 ✓
-3.1 ✓

Profile Notes Red. ____ Plotted ____ Job No. 300.32 Division No. 10 F. B. 2308 Pg. 251
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Leo Deren Notes F.T. Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

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STATION		B. S.	H. I.		F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks
		21	12.8	9.7		40° 25	767'	
		22	11.4	8.3		38° 48	724'	Cut in Line 240+00
		23	10.8	7.7		37° 42	696'	
		24	10.6	7.5	10:44	36° 35	668'	Boat = +1.0
								Zero = -2.0
								Tide = -2.1
								-3.1
S-11	S-12							

F. B. 2308 Pg. 252 Job No. 3300.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 7-24-58 Date No.
Survey by Van Deren Notes K.T. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

PLEASE RETURN TO
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700 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 (S-11) 231+00	Sight on 235+00
T.P. 240+00	300	2011		1711	CONT. FROM 240+00	INSHORE 235+00
T.P.	543	2236	318	1693		
T.P. 235+00	268	1960	544	1692	℄	
			281	1679	3 FT. RT. EDGE OF	WALK
			29	167	4 " " SAND TO	W. OF WALL
			28	168	14 " " BOT. BRK	
			02	194	31 " " TOP BRK	
			21	175	55 " " DIP	
			43	153	100 " "	
			69	127	140 " " BOT. BRK	
			72	124	200 " "	
			70	126	235 " " TOP	
			87	109	265 " " BOT	
			87	109	290 " " TOP	
			93	103	300 " "	
			110	86	325 " " BRK	
T.P.	05	53	1480	480	363 " "	
			41	12	45°37' 409'	
			56	-03	48°00' 444'	
			64	-11	52°20' 518'	
			99	-46	57-09 620'	

Profile Notes Red. ____ Plotted ____ Job No. 6300.02 Division No. 10 F. B. 2308 Pg. 253
No. ____ Date ____ Date ____ Survey of Beach Erosion Sur.
X-Sec. Notes Chkd. ____ Checked ____ Survey by English & Dreick Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson

76298 S & E #307—7-55

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Just at		Sight on 235+00
235+00		5 3	11 8	-6 5	59° 10'	670'	
			13 5	-8 2	60° 27'	706'	
			15 8	-10 5	61° 35'	739'	
			16 1	-10 8	62° 42'	775'	
			17 6	-12 3	64° 29'	838'	

F. B. 2308 Pg. 254 | 0300.02 Job No. Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Sur Date Date No.
Survey by ~~G. Johnson~~ Notes Dreier Notes Chkd. Checked X-Sec.
Indexed Date Date Date No.

76298 S & E #307—7-55

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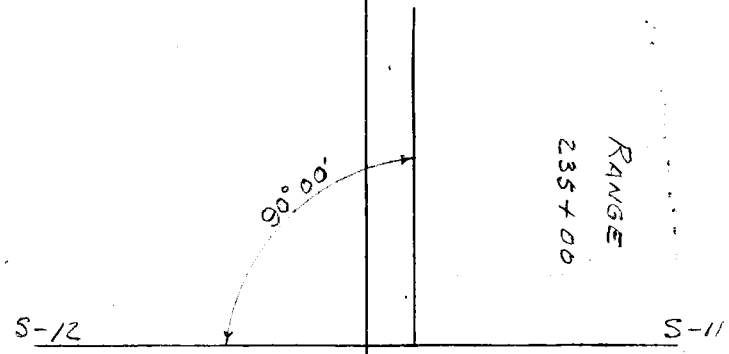
Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.
235+00	S-12	1	28.7		10 54	90° 00'
		2	28.5			" "
		3	27.7			" "
		4	26.3			" "
		5	25.7			" "
		6	25.4			" "
		7	24.8			" "
		8	24.3			" "
		9	23.8			" "
		10	22.7			" "
		11	21.6			" "
		12	20.5			" "
		13	19.5			" "
		14	18.7			" "
		15	17.1			" "
		16	15.7			" "
		17	15.0			" "
		18	14.3			" "
		19	13.5			" "
		20	13.2			" "

Remarks



Profile Notes Red. Plotted Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 255
No. Date Date Survey of BEACH EROSION
X-Sec. Notes Chkd. Checked Survey by VAN DEREN Notes T.O. Date 7-24-58
No. Date Date Map No. Indexed C. Johnson

F. B. 2308 Pg. 256 Job No. 030003 Division No. 10 Notes Red. Plotted Profile

Survey of BEACH EROSION Date 7-24-58 Date No.

Survey by VAN DEREN Notes T. O. Notes Chkd. Checked X-Sec.

Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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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	#	Depth Rec. Adj.	Time	Hor. Ang.		Remarks
235+00 S-12	21	12.6		105 00		
	22	11.7				
	23	10.8				
	24	10.2				
	25	9.9				
	26	9.4	10 59			

76298 S & E #307—7-55

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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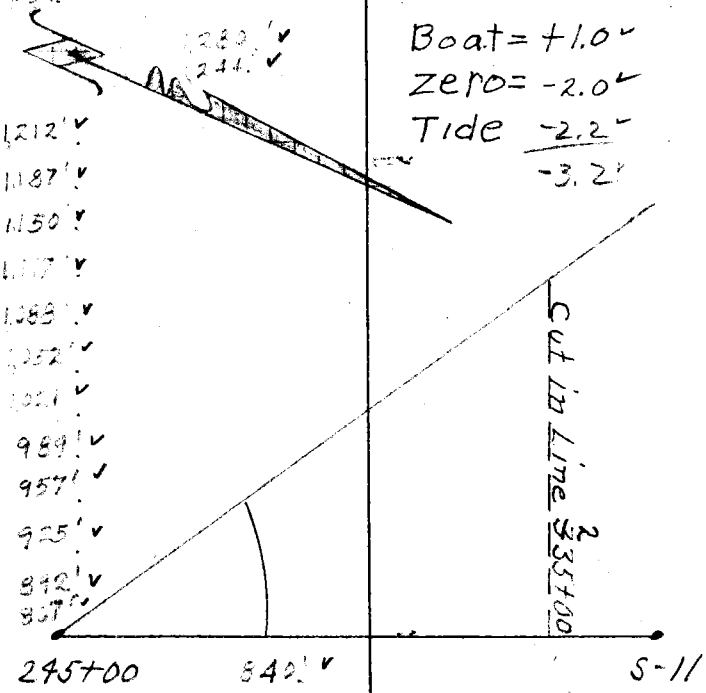
Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
245+00	S-11	1	28.8	25.6	10:54	55° 37'	1,461'
		2	28.4	25.2		54° 11'	1,386' Cut in Line 235+00
		3	27.7	24.5		53° 08'	1,334'
		4	26.3	23.1		52° 00'	1,280'
		5	25.7	22.5		51° 12'	1,244'
		6	25.4	22.2		50° 29'	1,212'
		7	24.9	21.7		49° 53'	1,187'
		8	24.3	21.1		49° 00'	1,150'
		9	23.8	20.6		48° 09'	1,117'
		10	22.8	19.6		47° 24'	1,088'
		11	21.4	18.2		46° 27'	1,052'
		12	20.6	17.4		45° 36'	1,021'
		13	19.5	16.3		44° 41'	989'
		14	18.7	15.5		43° 45'	957'
		15	17.2	14.0		42° 46'	925'
		16	15.7	12.5		41° 44'	892'
		17	15.1	11.9		40° 55'	867'
		18	14.3	11.1		40° 01'	840'
		19	13.6	10.4		38° 52'	806'
		20	13.2	10.0		38° 06'	784'



Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 257
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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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.

F. B. 2308 Pg. 258 Job No. 4300.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 1-29-58 Date No.
Survey by Van Perch Notes R.T. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No. Profile

STATION Inst. At	Sight On	B. S. #	H. I. Rec.	Depth Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
		21	12.8	9.6		37° 13'	760'
		22	11.7	8.5		36° 08'	730' Cut in Line 235+00
		23	10.8	7.6		35° 04'	702'
		24	10.3	7.1		34° 03'	676' Boat = +1.0
		25	9.9	6.7		33° 06'	652' ZONE = -2.0'
		26	9.5	6.3	10:59	32° 00'	633' Tide = -2.2'
							-5.2'
235+00	S-11						

76298 S & E #307—7-55

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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 225+00 Sight on 230+00
T.P. 235+00	2 68	1960		1692	CONT. FROM 235+00
T.P.	4 79	2228	211	1749	INSHORE 230+00
B.M. 21-37	3 52	1961	615	1673	B.M. 21-37 ELEV. 16.095 (TORRANCE E-68) PER F.B. 2100-161
230+00			303	1658	℄ ON WALK
			311	1650	3 FT ST. EDGE OF WALK
			30	166	35 " " SAND
			16	180	25 " " TOP BREAK
			61	135	100 " "
			66	130	115 " "
			76	120	200 " " TOP. BRK.
			92	104	225 " " BOT "
			92	104	270 " " TOP
			115	81	300 " "
T.P.	1 6	5 9	1530	431	348 " "
			4 5	1 4	37°47' 388'
			6 2	-0 3	40°49 432'
			7 2	-1 3	45°50' 515'
			9 1	-3 2	48°08 558'
			11 2	-5 3	50°49 613'
			13 2	-7 3	53°02 664'
			14 4	-8 5	55°37 704'

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 159
No. ____ Date ____ Date ____ Survey of BEACH EROSION SURV.
X-Sec. Notes Chkd. ____ Checked ____ Survey by ENGINEERING DIVISION Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date

76298 S & E #307—7-55

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	Inst. at 225+00	Sight on 230+00
230+00		5 9	15 9	10 0	55° 26' 726'	
			16 2	10 3	57° 28' 784'	

F. B. 2308 Pg. 260 | 0300.02 Job No. Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Sur. Date Date No. X-Sec.
Survey by English & Dreier Notes Chkd. Checked
Indexed C. Johnson Date Date No.

76298 S & E #307—7-55

PLEASE RETURN TO
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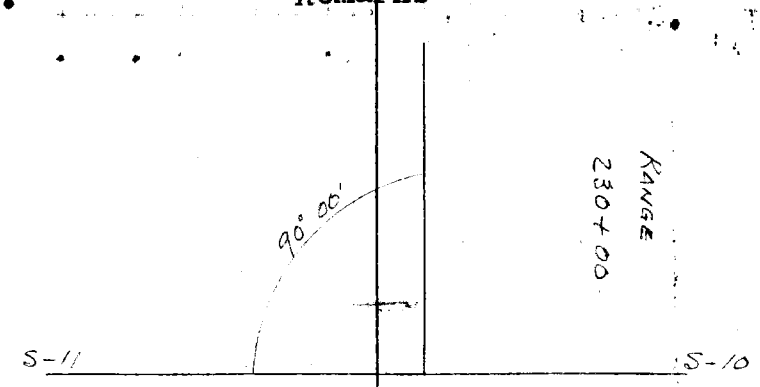
700 LOS ANGELES COUNTY ENGINEERING BLDG.

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. Depth Rec.	Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
230+00	S-11	1			11 08	90° 00'	
		2				" "	
		3				" "	
		4				" "	
		5				" "	
		6				" "	
		7				" "	
		8				" "	
		9				" "	
		10				" "	
		11				" "	
		12				" "	
		13				" "	
		14				" "	
		15				" "	
		16				" "	
		17				" "	
		18				" "	
		19				" "	
		20				" "	



Profile Notes Red. ____ Plotted ____ Job No. 03000 Division No. 10 F. B. 2308 PG. 161
No. ____ Date ____ Date ____ Survey of BEACH EROSION
X-Sec. Notes Chkd. ____ Checked ____ Survey by VAN DEREN Notes T.O. Date 7-29-58
No. ____ Date ____ Date ____ Map No. ____ Index C. Johnson Date

76298 S & E #307—7-55

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700 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		S. S.	H. I.	F. S.	ELEV.		
Inst. At	Sight On	#	Depth Rec. Adj.	Time	Hor. Ang.	Remarks	
230+00	S-11	21			90° 00		
		22			" "		
		23			" "		
		24			" "		
		25		11 12	" "		

F. B. 2308 Pg. 262 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of BEACH EROSION Date 7-24-58 Date No.
Survey ~~of~~ VAN DEREN Notes T.O. Notes Chkd. Checked X-Sec.
Indexed Date Date Date No.

76298 S & E #307—7-55

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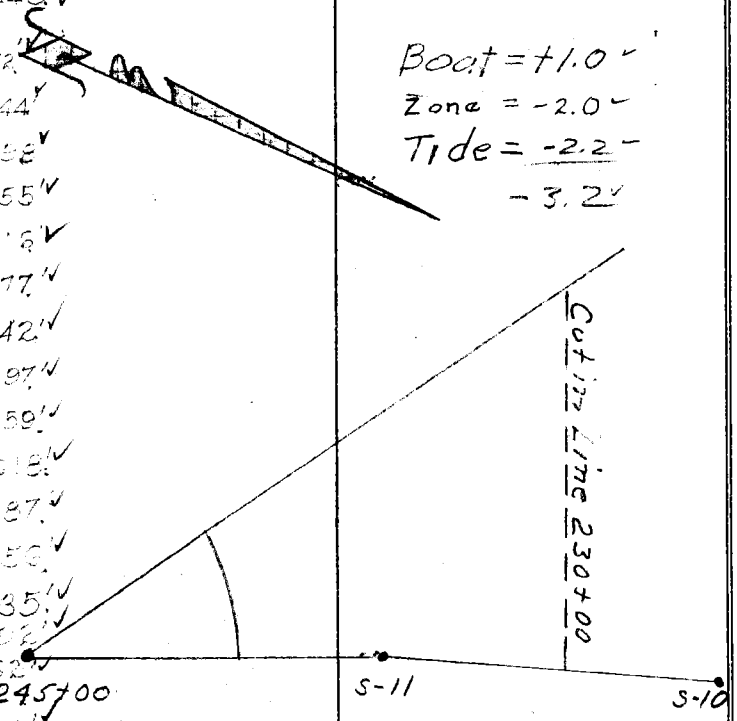
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
245+00	S-11	1	30.6	27.4	11:08	44° 31'	1,608'
		2	29.7	26.5		43° 33'	1,549'
		3	28.3	25.1		41° 47'	1,449'
		4	27.1	23.9		40° 20'	1,372'
		5	26.4	23.2		39° 45'	1,344'
		6	25.8	22.6		38° 50'	1,298'
		7	25.4	22.2		37° 56'	1,255'
		8	24.9	21.7		37° 08'	1,216'
		9	24.3	21.1		36° 18'	1,177'
		10	23.4	20.2		35° 27'	1,142'
		11	22.9	19.7		34° 25'	1,097'
		12	22.4	19.2		33° 34'	1,059'
		13	21.1	17.9		32° 33'	1,018'
		14	20.1	16.9		31° 47'	987'
		15	19.2	16.0		31° 00'	956'
		16	18.4	15.2		30° 25'	935'
		17	17.4	14.2		29° 20'	892'
		18	16.3	13.1		28° 33'	852'
		19	15.3	12.1		27° 39'	831'
		20	14.4	11.2		26° 55'	804'

Cut in Line 230+00



Boat = +1.0
Zone = -2.0
Tide = -2.2
-3.2

Profile Notes Red. ____ Plotted ____ Job No. 0000 Division No. 10 F. B. 2308 Pg. 263
No. ____ Date ____ Date ____ Survey of Beach Erosion Study
X-Sec. Notes Chkd. ____ Checked ____ Survey by Van Deren Notes R.T. Date 7-24-58
No. ____ Date ____ Date ____ Map No. ____ Indexed C. Johnson Date ____

76298 S & E #307—7-55

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700 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	#	Depth Rec.	Adj.	Time	Hor. Ang.		Remarks
		21	13.8	10.6		26° 04	773	
		22	13.1	9.9		25° 24	750	Cut in Line 230+00
		23	12.3	9.1		24° 27	718	
		24	11.5	8.3		23° 54	699	Boat = +1.0
		25	10.8	7.6	11:12	22° 50	667	Zero = -2.0
								Tide = -2.2
								-3.2
245+00	5-11							

F. B. 2308 Pg. 264 Job No. 0300.02 Division No. 10 Notes Red. Plotted Profile
Survey of Beach Erosion Study Date 7-24-58 Date No.
Survey by Van Deren Notes R.T. Notes Chkd. Checked X-Sec.
Indexed C. Johnson Date Date Date No.

76298 S & E #307—7-55

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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 220+00	Sight in 225+00
					B.M. 21-37 ELEV 16.095, F.B. 2100-161	
B.M. 21-37	3 52	19 61		16 09	(TORRANCE EGB)	INSHORE 225+00
T.P.	5 52	22 19	2 94	16.67		
T.P. 225+00	3 07	19 76	5 50	16 69	℄ ON WALK	
			3 18	16 58	4.5 FT. RT. W. EDGE OF WALK	
			3 6	16.2	5 " " SAND	TO W. OF WALL
			3 4	16 4	15. " " BOT	BRK
			1 3	18 5	35. " " TOP	"
			1 8	18 0	60. " " TOP	"
			5 6	14 2	100. " " BOT	BRK
			7 2	12 6	180 " " TOP	"
			9 9	9 9	200 " "	
			8 9	10 9	220 " " BOT	"
			9 0	10 8	265 " " TOP	"
			11 1	8 7	300 " "	
T.P.	1 0	6 0	1480	4 96	351 " "	
			3 6	2 4	37° 18' 388'	
			6 1	-0 1	41° 36 444'	
			7 1	-1 1	45° 55' 516'	
			9 4	-3 4	49° 13 580'	
			10 2	-4 2	50° 06 598'	
			12 2	-6 2	52° 32 652'	

Profile Notes Red. ____ Plotted ____ Job No. 0300.02 Division No. 10 F.B. 2308 PG. 265
No. ____ Date ____ Date ____ Survey of BEACH EROSION Date 7-24-58
X-Sec. Notes Chkd. ____ Checked ____ Survey by BREIER Notes ____
No. ____ Date ____ Date ____ Map No. ____ Index No. C. Johnson

F. B. 2308 PG. 270 | 0300.02 Job No.___ Division No. 10 Notes Red.___ Plotted___ Profile No.___

Survey of Beach Erosion Sur Date___ Date___ X-Sec.

Survey by English & Notes Dreier Notes Chkd.___ Checked___

Indexed A. C. Johnson Date___ Date___ Date___ No.___

STATION	B.S.	H.I.	F.S.	ELEV.	
225+00		60°	139'	-7.8 -7.9	58°14' 694'
			163	-10	3 58°09' 746'

Inst. at 220+00 Sight on 225+00

Do not extend notes this side of this line.

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700 LOS ANGELES COUNTY ENGINEERING BLDG.

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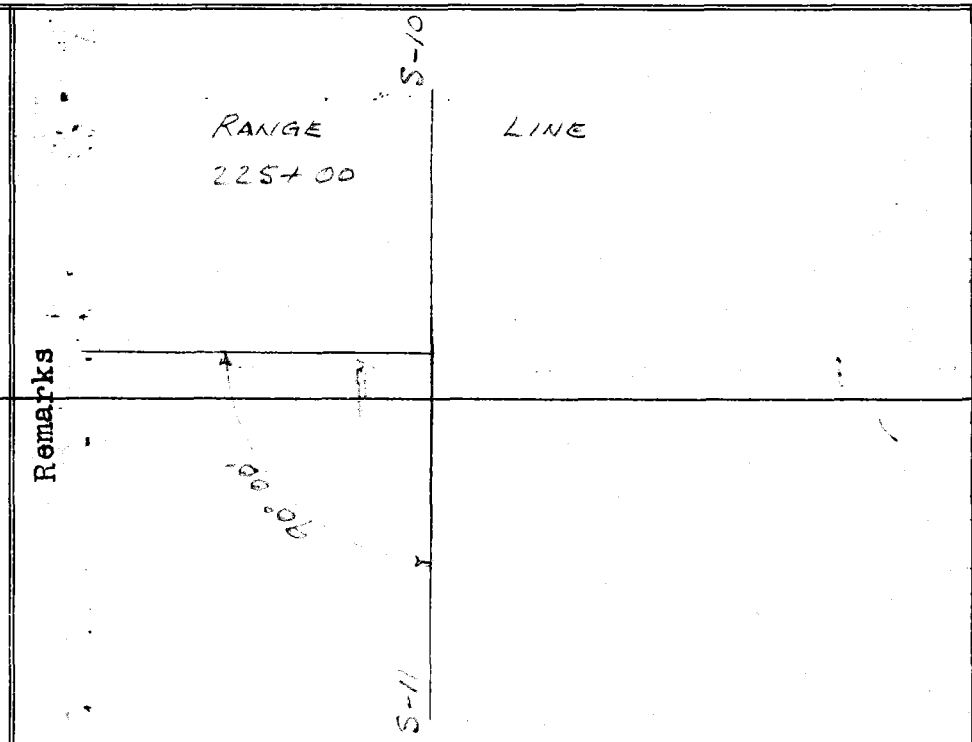
76298 S & E #307—7-55

Profile	Notes Red.	Plotted	Job No. 030002	Division No. 10	F. B. 2308 Pg. 271
No.	Date	Date	Survey of BEACH EROSION		
X-Sec.	Notes Chkd.	Checked	Survey by VAN DEREN	Notes T.O.	Date 7-24-58
No.	Date	Date	Map No.	Indexed C. Johnson	



STATION	B. S.	H. I.	F. S.	ELEV.	Remarks
Inst. Sight At On	#	Depth Rec. Adj.	Time	Hor. Ang.	
225+00 S-11	1		11 24	90° 00'	
	2				
	3				
	4				
	5				
	6				
	7				
	8				
	9				
	10				
	11				
	12				
	13				
	14				
	15				
	16				
	17				
	18				
	19				
	20				

PLEASE RETURN TO
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700 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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76298 S & E #307—7-55

F. B. 2308 Pg. 172 | Job No. 030003 | Division No. 10 | Notes Red. | Plotted

Survey of BEACH EROSION | Date 7-24-58 | Date

Survey by VAN DEREN | Notes T. O. | Notes Chkd. | Checked

Indexed L. C. Johnson | Date | Date | Date

Inst. At	Sight On	#	Depth Rec.	Adj.	Time	Hor. Ang.	Remarks
22 5+00	S-11	21				90° 00'	
		22				"	
		23				"	
		24				"	
		25				"	
		26				"	
		27			22	"	

76298 S & E #307—7-55

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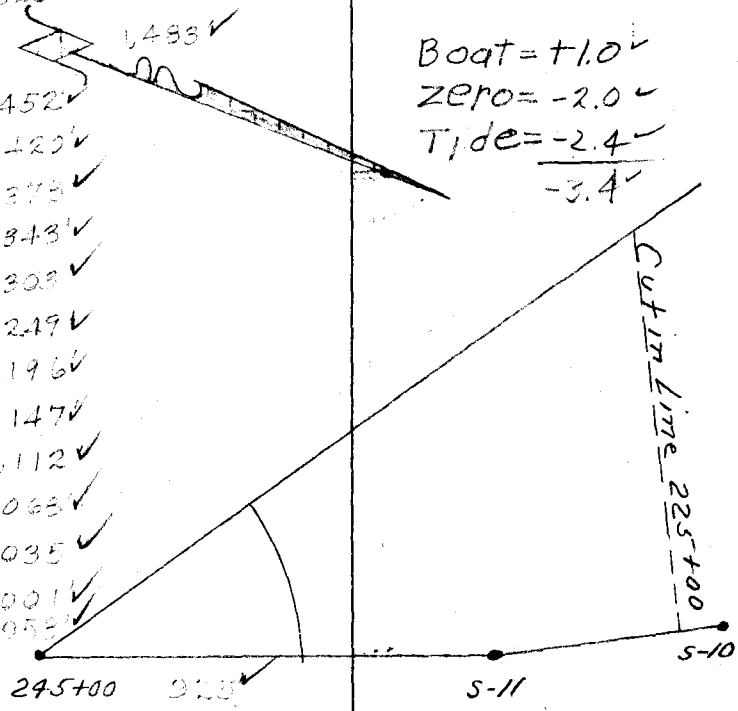
NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE OR CIRCLED IN RED INK, WITH DATE AND NAME OF PERSON MAKING CHANGE.

Do not extend notes this side of this line.

STATION Inst. At	Sight On	B. S. #	H. I. Depth Rec.	H. I. Adj.	F. S. Time	ELEV. Hor. Ang.	Remarks
245+00	S-11	1	30.2	26.8	11:24	36° 28'	1,626
		2	29.3	25.9		35° 42'	1,576
		3	28.0	24.6		34° 48'	1,520
		4	28.1	24.7		34° 08'	
		5	27.7	24.3		33° 35'	1,452
		6	27.2	23.8		33° 00'	1,420
		7	26.9	23.5		32° 15'	1,373
		8	26.2	22.8		31° 35'	1,343
		9	25.5	22.1		30° 50'	1,303
		10	25.2	21.8		29° 47'	1,249
		11	24.1	20.7		28° 42'	1,196
		12	23.2	19.8		27° 43'	1,147
		13	22.7	19.3		27° 00'	1,112
		14	21.8	18.4		26° 05'	1,068
		15	20.9	17.5		25° 23'	1,035
		16	20.0	16.6		24° 37'	1,001
		17	18.7	15.3		23° 39'	958
		18	17.6	14.2		22° 55'	
		19	16.2	12.8		22° 11'	892
		20	15.4	12.0		21° 20'	854



Profile Notes Red. Plotted Job No. 0300.02 Division No. 10 F. B. 2308 Pg. 173
No. Date. Date. Survey of Beach Erosion Study
X-Sec. Notes Chkd. Checked Survey by Van Deren Notes R.T. Date 7-24-58
No. Date. Date. Map No. Indexed C. Johnson

F. B. 2308 Pg. 274 Job No. 0300.02 Division No. 10 Notes Red. Plotted
Survey of Beach Erosion Study Date 7-24-58 Date
Survey by Van Deven Notes R.T. Notes Chkd. Checked
Indexed R. O. Johnson Date Date Date

PLEASE RETURN TO
LOS ANGELES COUNTY ENGINEER
700 LOS ANGELES COUNTY ENGINEERING BLDG.

NOTE: ANY ADDITIONS OR CHANGES ON THIS SHEET MUST BE MADE ON THE SHEET IN THE FIELD, WITH THE ORIGINAL SIGNATURE OF PERSON MAKING CHANGE.

Do not [illegible] this side of this line.

STATION		S.B.	H.I.		F.B.	ELEV.	
Inst. At	Sight On	#	Depth Rec.	Depth Adj.	Time	Hor. Ang.	Remarks
		21	14.3	10.9		20° 24	816
		22	13.7	10.3		19° 39	783 Cut in Line 225+00
		23	12.4	9.0		18° 43	744
		24	11.8	8.4		18° 10	723 Boat = +1.0
		25	10.9	7.5		17° 22	690 Zero = -2.0
		26	10.0	6.6		16° 23	649 Tide = -2.4
		~~27~~			11:29	15° 28	-3.4
245+00	S-11						