Ckd by
Work

Survey of
JN Tape Std °F
Surveyed by
Notes Date
Indexed

F.B. 3766 Pg

Page	Job	Description
		PORTUGUESE BEND LANDSLIDE 0021.64
[illegible]	Levels	Rerun of Levels over lines 1 thru 6 Jan. & Feb. 1967
[illegible]	Levels	Rerun of Levels over lines 1 thru 6 July 1967
[illegible]	Horiz.	Angular position check of "Wayfarer Horizonal Observations July 1967 F.B. G.1229 Jan. 1968
[illegible]	Levels	Rerun of Levels over lines 1 thru 6 Jan. & Feb. 1968
[illegible]	Levels	Rerun of Levels over lines 1 thru 6 July 1968
[illegible]	Horiz.	Angular position check of "Wayfarer
[illegible]	Levels	Rerun of Levels over lines 1 thru 6 Feb. 1969
[illegible]	Rerun	Rerun from Davis to A-4 Mar. 1969
[illegible]	Loc.	Location of new Sta's. Shields Aux. 1 & San Pedro Hills K-9 Aux. 1
[illegible]	Levels	Rerun of Levels Aug. 1969
[illegible]	Horiz.	Angular position check of "Wayfarer Aug. 1969

Note: Any Additions or Changes on this Sheet [illegible] in Red [illegible] Person

LOS ANGELES [illegible]
403 Los Angeles [illegible]

[illegible] CE #310 9-67

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F.B. _____ Pg. _____

Profile	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F. B. 3766 Pg. 7
No.	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec.	Notes Chkd.	Checked	Survey by S.E. DREIER	Notes WILKS	Date 1-19-67
No.	Date	Date	Map No.	Indexed C. J. GALLI	Date

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 1 JAN. 1967 RERUN

DREIER
WILKS
SIEMANN
MCKNIGHT

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

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761-898 S & E #207—1-56

76L-[illegible] & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #1
					1965 Adj F.B. 2849-249
BM P.B. #9	5 178	409 320		404 ~~142~~ 180	BM P.B. #9 NARCISSA & ENT TO VANDER LIP ESTATE
T.P.	7 224	412 641	3 903	405 417	A C.S. MON.
BM P.I. 5B	5 293	415 428	2 506	410 ~~135~~ 72	B.M. P.I. 5B NARCISSA & SWEETBAY N. SIDE, C.S. MON
T.P.	1 718	413 287	3 859	411 569	
T.B.M. #30	1 377	406 707	7 957	405 ~~330~~ 66	T.B.M. #30 NARCISSA & GINGER ROOT N.E. COR., SPK. IN HOWALL
T.P.	6 812	406 565	6 954	399 753	
T.P.	6 300	409 354	3 520	403 045	
P.I. 4C	4 816	410 739	3 431	405 ~~[illegible]~~ 58	P.I. 4C, NARCISSA & [illegible] TREE, N.W. COR.,
T.P.	10 719	417 710	3 748	406 991	
T.P.	11 907	429 317	0 300	417 410	
T.P.	4 950	433 819	0 448	428 869	
FRUIT TREE #1	9 314	433 743	9 390	424 ~~429~~ 63	S.W. of V. END of FRUIT TREE, C.S. MON, IN THE FIELD.
T.P.	0 643	429 778	4 608	429 135	
	2 188	420 673	11 293	418 485	
	6 046	425 176	1 543	419 130	
	6 [illegible]	426 403	5 183	419 [illegible]	
T.P.	5 007	426 631	4 779	421 624	
S.A.L.G-7 R.M. #1	4 705	426 357	4 979	421 ~~6[illegible]~~ 85	STD. △ R.M. MON
" Ctr.	5 283	426 072	5 568	420 ~~789~~ 821	STD. △ MON. 1965 Adj. F.B. 2849-249
" R.M. #2	2 320	424 130	4 262	421 ~~812~~ 36	STD. △ R.M. MON.
T.P.	1 330	413 635	11 825	412 305	

F.B. 3766 Pg. 8
Job No. 0021.64 Division No. 11 Notes Red ___ Plotted ___ Profile ___
Survey of P.B. LANDSLIDE Date ___ Date ___ No. ___
Survey by DREIER Notes WILKS (1-19-67) Notes Chkd. ___ Checked ___ X-Sec. ___
Indexed C. J. GALLI Date ___ Date ___ Date ___ No. ___

76L-295 S & E #307—1-56

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Profile Notes Red ____ Plotted ____ Job No. 2021-64 Division No. 11 F. B. 3766 Pg. 9
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
No. ____ Sec. ____ Notes Chkd. ____ Checked ____ Survey by C.E. Spencer Notes WILES Date 1-19-67
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

STATION	B. S.	H. I.	F. S.	ELEV.	LINE #1	
		413 635				
T.P.	0 739	405 096	9280	404 355		
	0530	394 177	11 447	393 647		
	2 485	389 950	11 832	387 465		
T.P.	3 515	380 592	7 763	377 077		
B.M. P.I. #3A	0 908	373 887	7 603	372 979	B.M. P.I. #3A MARCISSA & FUCHSIA POST C.S.I.C.O.N.	
T.P.	0 320	362 768	11 469	362 448		
	0 621	360 891	11 078	359 270		
T.P.	0 894	3[illegible]	9 990	342 101		
B.M. P.I. #1A	2 730	336 387	9 838	333 657	B.S.W.&T. MARCISSA & FIG TREE 1965 Adj. Elev. FB 2849-250	
T.P.	0 450	3[illegible]	11 993	3[illegible]		
	0 738	313 790	11 852	3[illegible]		
	0 289	302 108	11 971	301 819		
	0 217	290 403	11 902	290 186		
T.P.	10 271	291 017	9 657	280 746		
S.B.M. Ecc.1	3 072	291 243	2851	288 171		
Ecc.3	3 033	291 234	3 042	288 201		
Ecc.2	3 008	291 245	2997	288 237		
T.P.	9 991	290 737	10 499	280 746		
T.P.	10 610	301 134	0 213	290 524		
T.P.	11 740	312 675	0 199	300 935		

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 1	
		312 575				
T.P.	11 984	324 412	0 247	312 428		
	11 484	335 657	0 239	324 173		
	0 811	334 479	1 989	333 668		
	0 350	323 186	11 643	322 [illegible]		
	0 370	312 [illegible]	11 555	31[illegible] 631		
	0 373	301 422	10 952	301 049		
	0 355	290 [illegible]	11 673	289 [illegible]		
T.P.	3 877	282 [illegible]	11 555	278 [illegible]		
P.B. # [illegible]	0 314	279 935	2 665	279 ~~[illegible]~~ 594	C.S. MON 1965 Adj. Elev FB 2849-250	
T.P.	0 180	267 321	11 791	268 [illegible]		
	0 852	257 306	[illegible] 270	256 454		
	0 429	246 [illegible]	[illegible] 107	2[illegible] [illegible]		
	0 505	235 569	11 564	23[illegible] [illegible]		
	0 412	224 841	11 [illegible]	224 429		
	3 [illegible]	216 928	11 776	213 065		
	4 556	216 661	4 [illegible]	212 105		
WF # 1	8 463	219 014	6 [illegible]	210 ~~[illegible]~~ 499	SPIC. & LEAD 1965 Adj. Elev. FB. 2849-250	
T.P.	[illegible]	217 632	[illegible]	212 309		
WAYFARER	0 400	213 846	4 186	213 ~~446~~ 385	L. & T.	
T.P.	0 587	202 805	11 628	202 218		

F. B. 3766 Pg. 10
Job No. 0021164 Division No. 11 Notes Red. Plotted Profile
Survey of P.B. LANDSLIDE Date Date No. X-Sec.
Survey by DREIER Notes WILKS 1-19-67 Notes Chkd. Checked
Indexed C. J. GALLI Date Date Date No.

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 1	
		202 805				
T.P.	0.428	191 492	11 741	191 064		
T.P.	0651	180 210	11 933	179 559		
T.P.	3 953	173 009	11 154	169 056		
T.B.M. #31			5 825	167 ~~184~~ 101	- L.&T. 1965 Adj. Elev. F.B. 2849-250	

Profile Notes Red. Plotted Job No. 0021.64 Division No. 11 F. B. 3766 Pg. 11
No. Date Date Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. Checked Survey by G.E. DREIER Notes WILKS Date 1-19-67
No. Date Date Map No. Indexed G. J. GALLI Date

F. B. 3766 Pg. 12 | 0021.64

Job No. Division No. Notes Red Plotted Profile

Survey of PORT BEND Date Date No.

Survey by Notes Notes Chkd Checked X-Sec.

Indexed Date Date Date No.

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

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76L-298 S & E #307—1.56

Profile	Notes Red	Plotted	Job No. 0021.64	Division No.	F. B. 3766 Pg. 13
No.	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date 2-6-67
No.	Date	Date	Map No.	Indexed C. J. GALLI	Date

JOB NO 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 2 FEB. 6, 1967

DREIER
WILKS
SITMANI
MCKNIGHT

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

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75L-298 S & E #307—1-56

76L-298 S & E #307—1-56

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F. B. 3766 Pg. 14 | Job No. 0021.64 | Division No. | Notes Red. | Plotted | Profile
Survey at PORTUGUESE BEND LANDSLIDE | Date | Date | No.
Survey by DREIER | Notes WILKS | Notes Chkd. | Checked | X-Sec.
Indexed C. J. GALLI | Date | Date | Date | No.

STATION	B. S.	H. I.	F. S.	ELEV.		
B.M. P.B.#9	4 207	408 349		404 ~~142~~ 80	B.M. P.B.#9 El. = 404.~~142~~ 80 (1964) Adj. Elev. FB 2849-249	
T.P.	11 298	415 505	4 142	404 207		
A.C. #3	1.599	413 212	3892	411 ~~613~~ 59	AC #3 C.E. MON	
T.P.	7 533	412 096	8 649	404 563		
P.B.#9 B	7 088	416 891	2293	409 ~~803~~ 57	BT. SPK. W. & T.	
P.B. #9A	7 509	421 691	2709	414 ~~182~~ 240	" " "	
T.P.	10 424	429 752	2363	419 328		
"	11 884	441 082	0554	429 198		
T.P.	3 867	444 605	0344	440 738		
B-1-C	0 891	442 977	2519	442 ~~086~~ 160	1965 Adj. El. F.B. 2849-249	
T.P.	0 739	432 314	11 402	431 575		
	0 738	421 921	11 131	421 183		
	2 034	412 435	11 520	410 401		
	0 840	401 427	11 848	400 587		
	8 301	398 940	10 788	390 639		
T.P.	7 499	405 968	0 471	398 469		
PT #1	2 568	403 945	4 591	401 ~~377~~ 433	BOAT SPK. W. & T.	
B-1-B ?	8 277	405 188	7034	396 ~~944~~ 64	B-1-B.? It appears the top of the mon. has been	
T.P.	1 348	396 976	9 560	395 628	knocked off & someone has put in a cement core	
T.P.	0 690	385 729	11 937	385 039	tack & tag R.E. 122	
T.P.	0 871	374 860	11 740	333 989		

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 2	2-6-67
		374 860				
T.P.	0 582	363 592	11 850	363 010		
	10 008	362 317	11 283	352 309		
	11 824	373 710	0 431	361 886		
T.P.	11 841	385 341	0 210	373 500		
DAVIS	1 497	383 536	3 302	382 ~~039~~ 72	C. E. MON	
T.P.	0 737	372 326	11 947	371 589		
T.P.	1 932	363 293	10 965	361 361		
RADIAL #1	6 628	360 504	9 417	353 ~~876~~ 901	C. E. MON	
T.P.	1 011	349 810	11 705	348 ~~799~~ 9		
	1 447	339 477	11 780	338 030		
	1 073	329 300	11 250	328 227		
T.P.	7 638	327 161	9 777	319 523		
A 3	9 708	326 439	10 430	316 ~~731~~ 43	C. E. MON	
A 4	3 187	325 447	4 179	322 ~~260~~ 70	C. E. MON	
T.P.	10 810	327 543	8 714	316 733		
	11 070	338 423	0 190	327 353		
	11 167	348 762	0 828	337 595		
	11 053	359 287	0 528	348 234		
	0 326	350 385	9 228	350 059		
	0 710	339 394	11 701	338 684		

Profile No. X-Sec. No. Notes Red. Date Notes Chkd. Date Plotted Date Checked Date Job No. 0021.64 Division No. Survey of PORTUGUESE BEND LANDSLIDE Survey by DREIER Notes WILKS Date 2-6-67 Map No. Indexed C. J. GALLI Date

F. B. ~~2849~~ 3766 Pg. 15

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #2	2-6-67
BM 50-12	6 299	340 772	4 921	334 ~~473~~ 65	BM MON.	
T.P.	0 553	329 987	11 338	329 434		
	0 199	319 326	10 860	319 127		
	0 278	307 983	11 621	307 705		
	0 510	298 204	10 289	297 694		
	0 338	286 892	11 650	286 554		
	0 219	275 201	11 910	274 982		
	0 658	264 449	11 410	263 791		
	0 364		11 180	253 269		
	0 440		11 552			
	0 720		11 750			
	1 220		11 902			
	0 265		11 639			
	4 278		8 930			
	7 598		1 061			
BM 50-13			3 172	208 ~~208~~ 148 ~~101~~	← 1965 Adj. Elev FB 2849-250 BM MON	

F. B. ~~2849~~ 3766 Pg. 16

Job No. 0821.64 Division No. Notes Red. Plotted Profile

Survey of PORTUGUESE BEND LANDSLIDE Date Date No. X-Sec.

Survey by DREIER Notes WILKS Notes Chkd. Checked Date No.

Indexed C. J. GALLI Date Date

76P526 CE # 308 3-65

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JOB NO. ~~0301.02 SURVEY OF L.A. CO. PRECISE LEVEL NET~~ 0021.64 PORTUGUESE BEND LANDSLIDE
SURVEY BY G.E. DREIER
NOTES BY
INDEXED
DATE
DATE
WEATHER
TIME
NOTES CHKD
DATE
INST. NO. 9616
ROD NO. 9819
F.B. 376 PG. 17

STATION	BACKSIGHT Right Mic.	BACKSIGHT Left	BACKSIGHT Stadia	FORESIGHT Right Mic.	FORESIGHT Left	FORESIGHT Stadia	DESCRIPTION AND REMARKS
							FROM B-1-C TO P.B. #9
B-1-C							B-1-C 1965 Adj; ELEV. 442.160 PER F.B. 2849-249
1	[illegible]	513.5	[illegible]	3.121	304.5	[illegible]	
2	298.3	299.5	298	5.550	306.5	[illegible]	(THIS IS AN ADDITION TO LINE #2)
3	293.021	594.5	300	12.80	[illegible]	20	
4	[illegible]	595.5	[illegible]	72.320	[illegible]	[illegible]	+ [illegible] − [illegible] + 012.X21 M = +33.229 FT.
5	151.243	[illegible]	[illegible]	141.618	442.5	150	TANK EL = 475.357 FT.
TANK							TANK SET [illegible] AFTER [illegible] ABOVE B-1-C
	1250.111			237.290			
6	138.021	[illegible]	[illegible]	[illegible].770	[illegible]	136	
7	29.591	330.5	42	30.742	602.5	30	
8	7.650	308.5	[illegible]	[illegible]	[illegible]	[illegible]	
9	10.229	[illegible]	[illegible]	[illegible]	585.5	[illegible]	
10	12.301	313.5	[illegible]	[illegible]	[illegible]	[illegible]	
11	39.189	390.5	[illegible]	299.500	600.5	[illegible]	
12	9.261	310.5	16	296.189	597.5	300	
	246.953			1922.563			

NOTE: — B-1C IS IN A AREA THAT APPEARS TO HAVE BEGUN TO SLIDE RAPIDLY THE PAST SEVERAL WEEKS SUGGEST USING ELEV. OF P.B. 9 AS CORRECT G.E.D.

CONT.

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STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA	FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA	DESCRIPTION AND REMARKS
	246	952		196	1922	563		190	CONT. 475.357
13	16	630	317 5	1/2 16/54 76	253	138	554 5	214/292 78	
14	36	408	337 5	1/2 36/84 96	215	953	516 5	165/265 100	+ 540.700
15	91	590	392 5	59/123 64	210	972	511 5	176/244 68	- 2709.836
16	149	120	450 5	146/152 6	+ 107	210	408 5	102/111 9	- 2169.136 = -71.166 FT
P.B. 9				438				445	
								438	P.B. 9 A.C.E. MON
	540	700			2709.836			883	AT THE ENTRANCE TO
					540.700				THE VANDERLIP ESTATE
					2169.136 M = 71.166 FT.				ELEV = ~~404.191~~ FT
									1965 Adj. = 404.180
									Per F.B 2849 - 250

SUMMATION OF RUN + DIFF. IN ELEV. IN FEET

B.M. B-1C TO "TANK" + ~~[illegible]~~ 33.229 FT

"TANK" TO P.B. 9 - 71.166 FT.

WEATHER OVERCAST INST. NO. 96716

TIME ROD NO. 9819

NOTES CHKD DATE

JOB NO. 0021.64

SURVEY OF PORTUGUES BEND LANDSLIDE

SURVEY BY G.E.D. NOTES WILKS

INDEXED C.J. GALLI DATE

F.B. 3766 PG. 18

Profile No.	Notes Red.	Plotted	Job No. 0021.64	Division No.	F. B. 3766 ~~2849~~ Pg. 19
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date
	Date	Date	Map No.	Indexed C. J. GALLI	Date

J.N. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 3

WILKS
KALLOUNDO
SIEMANN
McKNIGHT

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

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781-298 S & E #307—1-56

76L-2 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	Line #3	2-7-67
T.B.M 34-15A	0 273	231 247		231 008 ~~230 974~~	T.B.M 34-15A SPK. in curb at Ent. To Portuguese Bend Club. 1965 ADJ ELEV. Per FB 2849-250	
TP	0 221	220 828	10 640	220 607		
	2 521	212 764	10 585	210 243		
	3 493	202 564	10 693	202 071		
	0 275	191 794	11 045	191 519		
	0 369	180 866	11 297	180 497		
K-10A	4 009	176 740	8 135	172 ~~731~~ 752	B+ SPK W. & TIN	
K-10B	7212	176 828	7 124	169 ~~816~~ 835	2" IP (Flush)	
K-10C	3833	172 006	8 655	168 ~~173~~ 170	L.S.T. in So. Curb	
K-10	(3958 .930 .028)	172 128	(3836 .930)	167 ~~246~~ 257	(B+ SPK over 10 on. Add .930 FT. To Minus Rod. ~~Sub~~ Add .930 FT. To Plus Rod.)	
K-9A	7018	170 524	8622	163 ~~502~~ 579		
K-9B	8 203	170 061	8 666	161 ~~858~~ 863	2" IP. Cone Plug & SPK	
K-9	5619	165 001	10 679	159 ~~382~~ 389	3/4" IP & TAG	
K-8A	2 430	160 347	7 084	157 ~~917~~ 934	B+ SPK W. & TIN EL 157.922 MEAN OF 2 (Pg 29)	
K-8B	3862	159 379	4830	155 ~~516~~ 546	2" IP Cone Plug & SPK	
T.P	0 283	148 259	11 403	147 976		
T.P.	9 820	146 120	11 959	136 300		
K-5	10 071	146 100	10 091	136 029	S.E. Mon.	
T.P	0 274	136 574	9 800	136 300		
T.P	0 920	125 802	11 692	124 882		
T.P	0 744	115 144	11 402	114 400		

Profile No. ____ Plotted ____ Notes Red ____ Division No. ____ Job No. 0021.64
X-Sec. No. ____ Date ____ Date ____ Notes Chkd. ____ Notes ____
Survey of PORTUGUESE BEND LANDSLIDE
Survey by DREIER & GALLI Checked ____ Date ____
Indexed ____ Date ____
F. B. ~~2844~~ 3766 Pg. 20

76L-298 S & E #307—1-56

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Profile No. 7-Sec. Notes Red. Date Plotted Date Job No. 0021.64 Division No. Survey of PERTIGUESE BEND LANDSLIDE
Notes Chkd. Date Checked Date Survey by DREIER Notes J.M.M. Date 2-7-67
Map No. Indexed C. J. CALL Date
F. B. 3766 / 2849 Pg. 21

STATION	B. S.	H. I.	F. S.	ELEV.	LINE #3
		115144			
W-3	2269	112 730	4 683	110 461	C.E. MON. El = 110.448 (MEAN OF 2) Pg 29
T.P.	0904	105 612	8 022	104 708	
K-5 AUX	0428	102 230	3 810	101 802	C.E. MON.
TP	0180	97 492	7913	94 312	
T.P.	0653	84 673	10467	84 025	
	2 186	75 ~~2~~ 3 15	11 549	73 ~~6~~ 29	
K-4	2 593	68 ~~2~~ 4 34	9 274	~~65 971~~ 66 041	K-4
T.P.	4 260	60 ~~8~~ 9 42	11 752	56 632	
T.P	6 312	56 ~~8~~ 6 62	10 592	50 ~~2~~ 3 50	
TBM #28	2 470	54 854	4 278	52 ~~5~~ 3 94	TBM #28 SPK IN A ROCK
K3A ECC. 1	[illegible]	53 ~~3~~ 3 82	4 0~~85~~ 97	50 758	K3A ECC. 1 C.E. MON
T.P.	[illegible]	42 ~~2~~ 0 77	11 479	~~42 109~~ 41 903	
	4 828	35 ~~4~~ 2 99	11 606	30 ~~6~~ 4 71	
T.P.	9 751	44 ~~8~~ 6 36	2 414	~~35 085~~ 34 885	
K-2A	0 712	42 ~~7~~ 5 44	2 804	~~42 032~~ 41 832	[illegible]
T.P.	0 852	31 ~~7~~ 5 24	11 872	30 ~~8~~ 6 72	
T.P.	0 932	21 ~~5~~ 5 68	10 888	20 ~~8~~ 6 36	THESE ELEVATIONS QUESTIONABLE
T.P.	4 442	~~15 170~~ 14 970	11 040	10 ~~5~~ 5 28	SEE PAGES 25 TO 30 FOR RERUN
T.P.	5 163	15 ~~2~~ 2 58	4 875	10 ~~2~~ 0 95	
T.P.	[illegible]	7 ~~8~~ 6 30	8 706	6 ~~5~~ 5 52	

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 3	2-8-67
		7 ~~8~~30 6				
T.P.	3 360	5 ~~5~~20 3	5 670	~~2 160~~ 1 960	T.P.	SEE PAGES 25 TO 30
P.B. 6 C	3 880	5 ~~5~~78 3	3 822	1 ~~6~~98 4	P.B. 6 C, made a diligent search for P.B. 6A	
	5 357	~~8 0~~34 7 8	2 901	2 ~~6~~77 4	& could not find it. Set a large boat spike on	
	5 200	~~9 003~~ 7 803	5 231	~~3 8~~03 2 6	same reef up 0.10 ft.	
	10 088	9 390	8 501	− 0 698		
			1 148	8 242		
P.B. # 3	3 650	16 614		7 964	SPK. & Lead in Rock Wall	
T.P.	7 317	17 254	5 677	9 937	Elev. = 7.964 Per F.B. 2849-150	
	11 463	22 776	5 941	11 313		
	10 570	33 125	0 221	22 555		
	10 211	42 885	0 451	32 674		
	11 632	54 330	0 187	42 698		
	11 377	65 037	0 670	53 660		
	11 587	76 419	0 205	64 832		
	11 904	88 095	0 228	76 191		
	11 817	99 640	0 272	87 823		
	10 888	110 265	0 263	99 377		
	10 894	120 966	0 193	110 072		

F. B. 3766 Pg. 22
Job No. 002164
Division No.
Notes Red.
Plotted
Profile
Survey of PORTUGUESE Bend Landslide
Date
Date
No.
X-Sec.
Survey by DREIER
Notes J. Maldonado
Notes Chkd.
Checked
Date
Date
No.
Indexed
Date

76L-298 S & E #307—1-56

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 3
		120966			SEE PAGES 25 TO 30
T.P.	11154	131738	0332	120584	
	11320	142530	0523	131210	
	11674	153821	0383	142147	
	11806	165427	0200	153621	
	10802	175668	0561	164866	
	11431	186878	0221	175447	
	11851	198187	0542	186336	
	10696	208681	0202	197985	
	9198	216283	1596	207085	
	8637	224720	0200	216083	
	9091	232017	1794	242926	
TBM 34-15A			2583	249434	T.B.M 34-15A EL. = ~~230.974~~ SPK & Lead in Cb. =231.008 1965 Adj El. FB 2849-250

Profile Notes Red. Plotted. Job No. 0021.64 Division No. F. B. 3766 Pg. 23
No. Date. Date. Survey of Portuguese Bend Lands/Ide
X-Sec. Notes Chkd. Checked. Survey by DREIER Notes T.M.M. Date 2-8-67
No. Date. Date. Map No. Indexed Q. J. GALLI Date.

F. B. 3766 Pg. 24 Job No. 0021.64 Division No. Notes Red Plotted Profile

Survey of PORT. BEND. Date Date No.

Survey by Notes Notes Chkd. Checked X-Sec.

Indexed Date Date Date No.

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

76L-298 S & E #307—1-56

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76P526 CE # 308 3-65

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LINE # 3

STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA	FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA	DESCRIPTION AND REMARKS
W-3									W-3
1	82	300	383 5	89 / 75 14	235	975	536 5	242 / 228 14	PER PAGE 21, EL. ~~110.461 FT~~ 110.448
2	19	580	320 5	30 / 8 22 / 36	130	702	431 5	137 / 123 14 / 28	+101.880 / -366.677 / -264.797 = -8.688 FT
K-5 AUX.	101	880			366	677			K-5 AUX ELEV. 101.~~773~~ 760
					101	880			
					264	797			
3	13	814	314 5	20 / 6 14 / 50	181	810	482 5	188 / 174 14 / 42	
4	14	011	315 5	23 / 5 18 / 68	291	588	592 5	298 / 284 14 / 56	
5	3	991	304 5	½ 7 / 3 8 / 76	299	278	600 5	307 / 292 15 / 71	+231.867 / -1323.286 / -1091.419 = -35.808
6	3	770	304 5	½ 6 / 3 6 / 82	295	950	596 5	301 / 287 12 / 83	
7	196	281	497 5	199 / 193 6 / 88	254	660	555 5	258 / 250 8 / 91	
K-4	~~333~~	~~747~~			~~1689~~	~~963~~			K-4 65.~~965~~ 951
	231	867			1323	286			
					~~333~~	~~747~~			
					~~1356~~	~~216~~			
8	90	878	391 5	98 / 82 16 / 104	199	961	500 5	207 / 191 16 / 107	
9	9	854	310 5	½ 21 / 9 24 / 128	262	455	563 5	276 / 248 28 / 135	
	100	732			462	416			

JOB NO. ~~0301.02 SURVEY OF L.A. CO. PRECISE LEVEL NET~~ 0021.64 PORTUGESE BEND LANDSLIDE
SURVEY BY G.E. DREIER
NOTES BY SIEMAN DATE 2-10-67
INDEXED [illegible] GALLI DATE
WEATHER CLEAR
TIME 11:00 TO
NOTES CHKD
INST. NO. 96716
ROD NO. 9819
DATE
F.B. 3766 PG. 25

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LOS ANGELES COUNTY ENGINEER

403 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	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA	FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA	DESCRIPTION AND REMARKS FROM ____ TO ____
	100	732		128	462	416		135	CONT. 65.965
10	164	701	465 5	182 146 36	203	470	504 5	220 186 34	+ 365.537
				164				169	− 781,927
11	100	104	401 5	103 97 6	116	041	417 5	121 111 10	− 416,390 = − 13,661 FT
				170				179	
T.B.M.# 28									T.B.M. #28 ELEV. 52,~~304~~ 289
	~~699~~	~~284~~			~~781~~	~~927~~			
	365	537			~~2471~~	~~890~~			
					~~699~~	~~284~~			
					~~1772~~	~~606~~			
									+ 281.899
12	264	773	565 5	248 280 32	228	553	529 5	214 242 28	− 330,042
				202				207	− 48,143 = − 1,579 FT
13	17	126	318 5	13 21 8	101	489	402 5	105 97 8	
				210				215	
K-3A [redacted]									K-3A [redacted] N.W. ELEV 50,~~725~~ 709
	~~981~~	~~183~~			~~330~~	~~042~~			
	281	899			~~1801~~	~~732~~			
					~~981~~	~~183~~			
					~~820~~	~~749~~			
14	102	470	403 5	106 98 8	261	611	562 5	264 258 6	
				218				221	
15	5	092	306 5	½ 12 5 14	211	209	512 5	216 206 10	
				232				231	
16	13	947	314 5	½ 29 13 32	285	472	586 5	300 270 30	
				264				261	
17	59	761	360 5	78 40 38	4	800	305 5	½ 22 4 36	
	~~462~~	~~453~~		302	~~2565~~	~~024~~		297	
	181	270			763	092			

F.B. 3766 PG. 26

SURVEY OF P.B. LANDSLIDE

SURVEY BY G.E.D. NOTES SIEMANN

INDEXED [redacted] GALL DATE

JOB NO. 0021.64

WEATHER ____ INST. NO. 96716

TIME ____ ROD NO. 920

NOTES CHKD ____ DATE ____

76P526 CE # 308 3-65

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Do not extend notes this side of this line. LINE # 3

STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA		FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA		DESCRIPTION AND REMARKS
	~~162~~ 181	~~453~~ 270			302	~~2565~~ 763	~~024~~ 842			297	CONT. 50.725
18	258	567	559.5	262 / 254	8	61	378	362.5	67 / 55	12	+663.919
					310					309	~~+119.919~~
19	224	082	225.5	232 / 216	16	114	179	415.5	119 / 109	10	~~-456.000~~
					326					319	
K-2A						~~1119.919~~					K-2A
	~~1645~~ 663	~~102~~ 919				~~2740~~ ~~581~~					
						~~1645~~ ~~102~~					
						~~1095~~ 938	~~479~~ 649				
20	65	731	366.5	72 / 58	14	213	768	514.5	220 / 206	14	
					340					333	
21	17	917	318.5	21 / 11	10	294	888	595.5	302 / 286	16	
					350					349	
22	23	211	324.5	26 / 20	6	275	193	576.5	281 / 269	12	
					356					361	
23	17	943	318.5	19 / 15	4	233	559	534.5	235 / 231	4	+691.193
					360					365	- 1920.666
24	14	382	315.5	16 / 12	4	191	591	492.5	197 / 185	12	-1229.473 = -40.337 FT
					364					377	
25	248	700	549.5	290 / 206	84	164	861	465.5	200 / 128	72	
					448					449	
26	245	212	246.5	274 / 216	58	173	131	474.5	208 / 173	70	
					506					519	
27	17	785	318.5	28 / 6	22	271	596	572.5	278 / 264	14	
					528					533	P.B. 6 C
28	40	312	341.5	50 / 30	20	102	079	403.5	112 / 92	20	SET LARGE B. SPK
	691	193			548					553	
PB 6C	~~2336~~	~~295~~				~~661~~	~~247~~				ELEV. ~~1.375~~ 1.357

JOB NO. ~~0301.02~~ 002164 PORTUGUESE BEND LANDSLIDE

SURVEY BY G. DREIER

NOTES BY SIEMANN DATE 2-10-67

INDEXED C. J. GALLI DATE

WEATHER

TIME

NOTES CHKD.

INST. NO. 96716

ROD NO. 9819

DATE

F.B. 3766 Pg. 27

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STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.		BACKSIGHT STADIA		FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.		FORESIGHT STADIA		DESCRIPTION AND REMARKS
	~~2336~~ ~~691~~	~~295~~ ~~193~~				548	~~4661~~	~~247~~				553	FROM LINE #3 TO
29	266	163	567	5	288 / 244	44	30	912	331	5	49 / 11	38	CONT. 1,375
30	125	68	426	5	79 / 171	592 / 92	176	[illegible]	477	5	130 / 332	591 / 92	~~T.P. T.B.M. IN CONC. WALL~~
31	147	[illegible]	448	5	98 / [illegible]	684 / [illegible]	[illegible]	[illegible]	430	5	81 / 177	683 / 96	+ 539,421
						782						770	- 337,163
P.B. # 8												[illegible]	+ 202.258 = +6.636 FT
	~~1230~~ ~~619~~ 539	421					337	163				1561	P.B. # 8 7.992 ~~8.011~~
32	[illegible]	[illegible]	580	5	229 / [illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	97	
33	211	898	[illegible]	5	[illegible]	[illegible]	[illegible]	[illegible]	486	5	150 / 220	70	
34	245	077	546	5	226 / 264	68 / 38	7	049	308	5	½ 7 / 17	167 / 20	
35	283	480	584	5	272 / 294	206 / 22	8	240	309	5	½ 8 / 26	187 / 36	
36	255	736	556	5	238 / 272	228 / 34	6	122	307	5	½ 6 / 13	223 / 14	
37	291	122	592	5	283 / 299	262 / 16	7	153	308	5	½ 7 / 16	237 / 18	
38	301	092	602	5	½ 296 / 301	278 / 10	6	133	307	5	½ 6 / 11	255 / 10	
39	287	084	588	5	282 / 292	288 / 10	2	923	303	5	½ 2 / 10	265 / 16	
40	269	241	570	5	263 / 275	298 / 12	2	200	303	5	½ 2 / 9	281 / 14	
	2424	240				310	390	271				295	

P.B. 3766 PG. 28

SURVEY OF P.B. LANDSLIDE JOB NO. 0021.64

SURVEY BY G.E.D. NOTES SIEMANN

INDEXED [illegible] DATE

WEATHER INST. NO. 96716

TIME ROD NO. 9819

NOTES CHKD DATE

76P526 CE # 308 3-65

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STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA	FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA	DESCRIPTION AND REMARKS
	2424	340		30	390	271		[illegible]	FROM LINE # 3 TO
41	291	052	592 5	286 / 296 / 0	5	700	306 5	1/2 0 / 10 / 10	CONT. 8.014
42	290	80	591 5	285 / 295 / 10 / 320	4	789	305 5	1/2 4 / 10 / 305 / 12	
43	272	672	573 5	261 / 280 / 0 / 330	4	133	305 5	1/2 [illegible] / 18 / 317 / 28	+ 3703.976
44	230	792	531 5	217 / 241 / 24 / 346	24	341	325 5	1/2 [illegible] / 31 / 345 / 20	− 581.081
45	194	319	495 5	230 / 198 / 8 / 370	151	847	452 5	146 / 156 / 365 / 10	+ 3122.895 = +102.457 FT
				378				375	
W-3								378	W-3 ELEV. 110.~~468~~ 429
	3703	976			581	081		253	El=110.448 (MEAN OF 2) PG 20
46	152	529	453 5	156 / 158 / 12	22	500	323 5	1/2 [illegible] / 24 / 2	
47	263	322	564 5	254 / 272 / 18	3	698	304 5	1/2 3 / 15 / 24	
48	277	901	578 5	266 / 288 / 30 / 22	22	790	323 5	1/2 [illegible] / 31 / 36 / 20	+ 1532.709
49	298	431	599 5	1/2 285 / 298 / 52 / 26	7	368	308 5	1/2 7 / 20 / 56 / 26	− 85.127
50	286	248	587 5	274 / 298 / 78 / 24	3	961	304 5	1/2 3 / 11 / 82 / 22	+ 1447.582 = + 47.493 FT.
51	254	278	555 5	242 / 266 / 102 / 24	24	810	325 5	18 / 34 / 104 / 20	
				126				124	
K-8A									K-8A ELEV. ~~157.961~~ 157.894
	1532	709			85	127			El=157.922 (MEAN OF 2) PG 20

JOB NO. ~~0301.02 SURVEY OF L.A. CO. PRECISE LEVEL NET~~ 0021.64 PORTUGUESE BEND LANDSLIDE

SURVEY BY G.E. DREIER WEATHER CLEAR INST. NO. 96216

NOTES BY WILKS DATE 2-15-67 TIME ROD NO. 9519

INDEXED C. J. GALLI DATE NOTES CHKD DATE

F.B. 3766 Pg 29

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Do not extend notes this side of this line.

STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA		FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA		DESCRIPTION AND REMARKS
											FROM LINE # 3 TO
				270	26				6	124	CONT. 157.961
52	280	169	581 5	290	20	18	573	319 5	30	24	
				266	146				25	148	
53	276	090	577 5	286	20	35	796	336 5	45	20	
				278	166				5	168	
54	284	307	585 5	297	20	18	279	319 5	31	26	
				270	86				1/2 3	194	
55	280	727	581 5	290	20	3	007	304 5	16	26	
				1/2 284	206				1/2 2	220	
56	297	325	598 5	297	26	5	780	306 5	18	26	+ 2506.495
				253	232				80	246	− 277.976
57	277	560	578 5	301	48	106	302	407 5	132	52	+ 2228.519 = +73.114 FT
				190	280				12	298	
58	220	918	521 5	250	60	34	656	335 5	56	44	
				287	340				1/2 4	342	
59	287	929	588 5	297	10	4	792	305 5	14	20	
				1/2 290	350				42	362	
60	301	470	602 5	301	22	50	791	351 5	56	16	
					372					378	
T.B.M. 34-15A										372	T.B.M. 34-15A EL. = ~~231.075~~ 231.008
	2506	495				277	976			750	1965 ADJ EL
											FB 2849-250

F.B. 3766 PG. 30

SURVEY OF P.B. LANDSLIDE JOB NO. 0021.64

SURVEY BY G.E.D. NOTES D.L.W. (2-15-67)

INDEXED G. J. GALLI DATE

WEATHER CLEAR INST. NO. 96716

TIME ROD NO. 9819

NOTES CHKD DATE

F. B. 3766 PG. 31

Profile	Notes Red.	Plotted	Job No. 0021.64	Division No.
No.	Date	Date	Survey of Portuguese Bend Landslide	
X-Sec.	Notes Chkd.	Checked	Survey by Drexler	Notes Wilks Date 2-67
No.	Date	Date	Map No.	Indexed G. J. GALLI Date

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE # 4 FEB., 1967

WILKS
MALDONADO
McKNIGHT
SIEMAN

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

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76L-298 S & E #307—1-56

76L-298 S & E #307—1-56

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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.	LINE #4	2-9-67
T.B.M. 34-15A	2 900	233 874		231 008 ~~230 974~~	EL. = 231.008 ~~230.974~~	1965 Ad. El. - FB 2849-250 SPK. & LEAD IN CURB
T.P.	4 040	230 432	7 482	226 392		
T.P.	3 204	227 001	6 635	223 797		
T.P. ?	1 258	219 072	9 187	217 814		
T.B.M. ~~34-13A~~ 50-13A?	3 471	213 801	8 742	210 337	SPK. & TIN IN MACADAM CURB	
BM ~~34-13A~~ 50-13	2 774	210 854	5 721	208 ~~080~~ 101	C. E. MON	1965 Ad; El. - FB 2849 - 250
T.P.	3039	207 244	6 649	204 205		
T.P.	11 570	216 606	2 208	205 036		
T.P.	11 891	228 188	0 309	216 297		
T.P.	11 900	239 891	0 197	227 991		
T.P.	11 740	250 882	0 749	239 142		
T.P.	11 047	261 209	0 720	250 162		
T.P.	11 243	272 005	0 447	260 762		
T.P.	11 530	282 661	0 874	271 131		
T.P.	11 112	293 263	0 510	282 151		
T.P.	11 590	304 558	0 295	292 968		
T.P.	10 733	315 091	0 200	304 358		
SHIELDS	4 803	315 094	4 800	310 ~~291~~ 314	C. E. MON	
T.P.	0 272	304 630	10 736	304 358		
T.P.	0 564	293 964	11 230	293 400		
	0 749	282 788	11 925	282 039		

F. B. 3766 PG. 32
Survey of P. B. LANDSLIDE Job No. 0021164 Division No. 11 Notes Red Date Plotted Date No. Profile
Survey by DREYER Notes WILKS Notes Chkd. Date Checked Date X-Sec.
Indexed C. J. GALLI Date Date No.

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #4	12-9-67
		282 788				
T.P.	0 258	27[illegible] 766	11 300	271 488		
	0 415	260 231	11 930	259 816		
	0 [illegible]	2[illegible]8 483	11 936	2[illegible]8 2[illegible]5		
	0 603	238 006	11 080	237 403		
	0 319	226 342	11 983	226 023		
	0 408	215 310	11 440	21[illegible] [illegible]		
T.P.	1 438	20[illegible] 839	11 929	203 4[illegible]		
J-5	9 [illegible]	206 104	8 635	196 ~~[illegible]~~	[illegible]	
T.P.	8 [illegible]	2[illegible]3 947	0 267	205 837		
RADIAL 2 ECC.	11 [illegible]	214 426	10 636	203 ~~[illegible]~~ 228	3/4 I.P. [illegible] PLUG	
J-4	3 635	213 446	4 615	209 ~~811~~ 829	~~3/4 I.P. [illegible]~~	C.E. MON.
T.P.	4 628	2[illegible]8 154	9 920	203 526		
J-3	7 816	[illegible] 792	5 078	[illegible] ~~[illegible]~~		
T.P.	0 750	200 909	10 733	200 159		
J-1	11 602	203 775	8 736	~~202~~ 192 ~~173~~ 204	1" I.P. CON. PLUG	
T.P.	11 650	215 006	0 319	203 356		
T.P.	10 338	224 924	0 420	214 686		
T.P.	[illegible] 270	2[illegible] 484	0 510	224 414		
J-[illegible]	0 835	224 831	10 088	~~223 [illegible]~~ 224 029	C.E. MON.	
T.P.	0 463	213 531	11 563	213 268		

Profile Notes Red. Plotted Job No. [illegible] Division No. 11 F. B. 3766 PG. 33
No. Date Date Survey of [illegible] BEND LANDSLIDE
X-Sec. Notes Chkd. Checked Survey by [illegible] Notes [illegible] Date [illegible]
No. Date Date Map No. Indexed C. J. GALLY Date

76L-298 S & E #307—1-56

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F. B. 3766 Pg. 34 Job No. 0221.14 Division No. 11 Notes Red. Plotted Profile
Survey of P. B. LANDSLIDE Date Date No.
Survey by G. E. P. Notes D. L. W. Notes Chkd. Checked X-Sec.
Indexed G. J. GALLI Date Date No.

STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 4	2-4-67
		313 7/8				
T. P.	0 600	313 5/8	10 560	303 8/8		
T. P.	1 050	313 7/8	11 650	191 8/8		
T. P.	3 150	313 7/8	1 780	1/1 4/8		
T. P.	5 195	325 3/8	4 145	1/0 1/8	BM 34-17C (X-977) RGH 11/22/14	
BM 34-17C (X-977)	3 195	193 1/8	5 32	88 077	USC&GS 3 1/4" BRASS DISC IN TOP OF 12" □	
T. P.	4 281	193 3/8	3 [illegible]	189 5/8	CONC. BLOCK STAMPED X-977, 1964,	
T. P.	4 220	192 1/8	0 817	187 1/8	[illegible] 225 PROJ 1/8 [illegible] S. E	
T. P.	1 198	32 8/8	10 420	181 7/8	[illegible] DR. N.W. [illegible]	
T. P.	2 488	[illegible] 3/8	250	170 9/8		
[illegible]	1 409	170 [illegible]	3/8 [illegible]	8 614/577	[illegible] 1965 Rd; El. FB 2849-250	
T. P.	2 235	170 3/8	[illegible]	[illegible]		
P. B.	[illegible]	[illegible] 7/8	4 307	[illegible]	LET	
T. P.	6 230	167 3/8	3 785	[illegible]		
P. B.	7 [illegible]	170 6/8	[illegible]	[illegible]	LET	
T. P.			[illegible]	167 10 2/8	LET 1965 Rd; El. FB 2849-250	

Profile	Notes Red.	Plotted	Job No. 002164	Division No. 11	F. B. 3766	Pg. 35
No.	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE			
X-Sec.	Notes Chkd.	Checked	Survey by DREIER	Notes WILKS	Date FEB.-67	
No.	Date	Date	Map No.	Indexed	Date	

C. J. GALL

JOB No. 002164

PORTUGUSE BEND LANDSLIDE

LINE No. 5 FEB. 1967

WILKS
MALDONADO,
SIEMANN
McKNIGHT

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

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76L-298 S & E #307—1-56

F. B. 3766 Pg. 36 Job No. 0021.64 Division No. Notes Red Plotted Profile

Survey of PORTUGUESE BEND Date Date No.

Survey by Notes Notes Chkd Checked X-Sec.

Indexed Date Date Date No.

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

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76L-298 S & E #307—1-56

76P526 CE # 308 3-65

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STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA	FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA	DESCRIPTION AND REMARKS
									FROM LINE # TO 5
P.B. # 9									P.B. # 9 A C.E. MON. AT
1	158	282	459 5	119 / 297 78	62	811	363 5	22 / 102 80	ENTRANCE TO VANDERLIP ESTATE
									(EL. = 404.142)
2	171	360	472 5	146 / 196 50	291	342	592 5	½ 277 / 305 28	ELEV. PER F.B. 2849-249 404.~~145~~ 180
				128				108	
3	6	640	307 5	½ 6 / 16 20	300	352	601 5	½ 288 / 300 24	
				148				132	
4	70	602	371 5	62 / 78 16	278	771	579 5	264 / 292 28	
				164				160	
5	60	439	361 5	50 / 70 20	297	901	598 5	½ 282 / 294 22	
				184				182	− 2577.878
6	17	881	318 5	9 / 25 16	299	401	600 5	½ 290 / 299 18	+ 1015.204
				200				200	− 1562.674 M = − 51.269
7	15	329	316 5	26 22	218	813	519 5	206 / 230 24	
				222				224	
8	285	711	586 5	½ 248 / 285 74	228	800	529 5	186 / 270 84	
				296				308	
9	84	740	385 5	46 / 102 36	292	319	593 5	½ 280 / 292 24	
				332				332	
10	4	69	305 5	½ 4 / 14 20	266	478	567 5	254 / 274 20	
				352				352	
11	139	520	440 5	25 / 153 18	40	890	341 5	26 / 54 28	
				370				380	
S.B. # 3	1015	204			2577	878			B.S.W. ST IN FRONT OF HSE # 12
									EL. = 352.~~896~~ 903
12	300	342	601 5	½ 286 / 300 28	6	563	307 5	½ 6 / 18 24	
				598				408	
13	294	498	595 5	282 / 306 24	8	907	309 5	½ 8 / 18 20	
				422				424	

JOB NO. ~~0001.02 SURVEY OF L.A. CO. PRECISE LEVEL NET~~ 0021.64 PORTUGUESE BEND LANDSLIDE

SURVEY BY G.E. DREIER

NOTES BY WILKS DATE 2-14-67 WEATHER OVERCAST INST. NO. 96716

INDEXED D.J. GALLI DATE TIME ROD NO. 9819

NOTES CHKD. DATE

F.B. 3766 PG. 37

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WEATHER Overcast INST. NO. 76761
TIME ROD NO. 2E19
NOTES CHKD DATE

SURVEY OF Portuguese Bend Landslide JOB NO. 0021.68
SURVEY BY E.E.D. NOTES T. Mello Rodo 2-1-67
INDEXED C. J. GALL DATE

STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT		BACKSIGHT STADIA		FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT		FORESIGHT STADIA		DESCRIPTION AND REMARKS
													FROM LINE # TO 5
14	267	681	568	5	259 / 275	134 / 16 / 438	42	220	309	5	33 / 51	494 / 18 / 2140	+ 862.521 − 58.400 + 804.121 M = + 26,382 F. CONT. 382.876
S.B. #20	862	521					58.400						SET A LAT IN THE S.W. COR. OF DRIVEWAY TO 83 Hse # 6 EL. = 379.258
15	217	080	518	5	212 / 330	102	95.610	396	610	5	20 / 100	12 / 1122	
S.B. #2	217	080					95.610						+ 217.080 − 95.610 + 121.470 M = + 3,985 F S.B. #2 EL. = ~~383.240~~ 383.267
16	256	107	557	5	254 / 232	102 / 1228	118	391	412	5	102	12 / 428	+ 256.107 − 118.391 = + 137.716 = 4,518 F Lg. Bt. Spk. W.F.T. EL. = 387.768
S.B. # 1	256	107					118	391					
17	294	863	595	5	294 (1/2) / 230	2128	109	870	410	5	210 (1/2) / 109	202	+ 294.864 − 109.870 = + 184.994 M = + 6,069 F
WEST FIX	294	864					109	870					WEST FIX EL. = 393.837
18	111	930	412	5	212 / 111	592 / 202	297	185	598	5	297 (1/2) / 232	670 / 130	
19	291	890	592	5	291 (1/2) / 250	794 / 32	299	500	600	5	299 (1/2) / 278	802 / 42	
20	4	350	305	5	19 (1/2) / 4	876 / 12	300	322	601	5	300 (1/2) / 290	844 / 20	
21	3	190	304	5	12 (1/2) / 3	888 / 18	300	320	601	5	300 (1/2) / 284	864 / 32	
22	7	707	308	5	15 (1/2) / 7	906 / 16	252	980	553	5	265 / 239	896 / 26	
23	5	940	306	5	19 (1/2) / 5	922 / 26	299	405	600	5	299 (1/2) / 289	922 / 20	
24	34	540	335	5	39 / 29	948 / 10	294	060	595	5	301 / 288	942 / 13	
						958						955	CONT

76P526 CE # 308 3-65

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JOB NO. 0301.02 SURVEY OF L.A. CO. PRECISE LEVEL NET
SURVEY BY G.E. DREIER
NOTES BY J. Mitchell / C. J. Gall
DATE 2-14-67
WEATHER OVERCAST
INST. NO. 2761
ROD NO. 9719
INDEXED
DATE
TIME
NOTES CHKD.
DATE
F.B. 3766 PG. 37

FROM LINE # 5 TO 53

STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT		BACKSIGHT STADIA		FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT		FORESIGHT STADIA		DESCRIPTION AND REMARKS
													CONT. 393.830
25	3	200	304	5	9 (1/2) 5	958 12	298	120	599	5	298 (1/2) 293	95 10	− 2812.071
						970							+ 597.599
26	29	386	330	5	34 24	10	279	513	590	5	285 273	965 12	− 2214.472 M = − 72.653 FT.
						975						977	
26A	105	472	406	5	109 101	8	190	666	491	5	195 185	10	
H-2	597	599				988	2812	071					
27	30	217	331	5	38 (1/2) 30	16	264	495	565	5	275 253	987 22	H-2 EL. = 321.174 (93)
						1004							C.E.M.&N.
H-4	21	090	322	5	29 13	16	249	790	550	5	257 241	1009 16	− 514.285
	51	307				1020	514	285					+ 51.307
													2" IP − 462.978 M = − 15.190 FT.
													EL. = ~~305.987~~ 306.002
28	161	836	462	5	165 156	9	265	999	566	5	273 257	1025 16	
						1029						1041	
29	277	530	528	5	301 253	48	13	725	314	5	43 (1/2) 13 (1/2)	60	+ 1225.135
						1077						1101	− 394.151
30	298	852	599	5	298 278 (1/2)	40	8	802	509	5	21 (1/2) 8 (1/2)	26	+ 830.984 = + 27.263 FT
						1117						1127	
31	242	840	543	5	257 225	34	10	915	311	5	21 0	21	
						1151						1148	
PT. #5	244	077	545	5	249 239	10	94	710	395	5	100 88	12	BT. SPK. W. & T. N.E. Cor. Pepper Tree &
	1225	135				1161	394	151				1160	LIME TREE EL. = 333.289 (63)
32	10	108	311	5	22 10 (1/2)	24	300	430	601	5	300 (1/2) 290	20	− 887.065
						1185		?				1180	+ 48.154
33	12	710	313	5	22 2	20	300	302	601	5	300 (1/2) 293	14	− 838.911 = − 27.523 FT
						1205						1194	
PT. #6 Aux 3	25	336	326	5	31 19	12	286	333	587	5	297 275	22	B.S.W. & T. PEPPERTREE & KUMQUAT
	48	154				1217	887	065				1216	40 FT. E. INTER. EL. = 305.7~~47~~ (48)
34	167	930	468	5	187 (1/2) 167	40	299	431	600	5	299 (1/2) 284	30	
						1257						1246	

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INST. NO. 96761 ROD NO. 9419

WEATHER OVERCAST TIME NOTES CHKD DATE

JOB NO. 0021.64 PG. 40

SURVEY OF Portuguese Bend Landslide

SURVEY BY C.E.D. NOTES J. Maldonado

INDEXED C. J. GALLI DATE

B. 3766

STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT		BACKSIGHT STADIA		FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT		FORESIGHT STADIA		DESCRIPTION AND REMARKS FROM LINE #3 TO
BLAKESLEY	63	680	364	5	118 (1/2) 63	1257 110	259	570	560	5	298 220	1246 78	559.301 + 231.610 = 327.691 = 10.751 FT. C.E. Mon
	231	610				1367	559	301					EL. = 294.976
35	254	546	555	5	292 216	76	295	060	596	5	298 1/2 242	1324 106	
						1443							
36	28	090	329	5	34 22	12	301	900	602	5	301 (1/2) 291	1430 20	
						1455							
37	18	110	319	5	24 12	12	300	636	601	5	300 (1/2) 293	1450 14	
						1467							
38	69	644	370	5	85 53	32	296	840 ~~840~~	597	5	296 (1/2) 276	1464 40	− 3425.214
						1499							+ 579.145
39	10	800	311	5	21 10 (1/2)	22	294	292	595	5	294 (1/2) 283	1504 22	− 2846.069 − 93.375 FT
						1521							
40	8	410	309	5	16 0	16	301	815	602	5	301 (1/2) 294	1526 14	
						1537							
41	4	137	305	5	16 4 (1/2)	24	294	930	595	5	306 282	1540 24	
						1561							
42	20	971	321	5	33 7	26	298	040	599	5	298 (1/2) 287	1564 22	
						1587							
43	43	640	344	5	55 31	24	287	855	588	5	296 278	1586 18	
						1611							
44	6	922	307	5	17 1/2 6	22	299	740	600	5	299 (1/2) 283	1604 32	
						1633							
45	9	458	310	5	23 9 (1/2)	28	289	080	590	5	298 280	1636 18	
						1661							
BM "C"	104	420	405	5	107 101	6	165	026	466	5	169 161	1654 8	Rd. Dept. Brass Cap @ Villa Fran-
	579	145				1667	3425	214				1662	cesca Drive
44	92	020	393	5	99 87	10	250	303	551	5	255 245	10	EL. = 281.604
						1677						1672	

76P526 CE # 308 3-65

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STATION	BACKSIGHT RIGHT	BACKSIGHT MIC.	BACKSIGHT LEFT.	BACKSIGHT STADIA		FORESIGHT RIGHT	FORESIGHT MIC.	FORESIGHT LEFT.	FORESIGHT STADIA		DESCRIPTION AND REMARKS
											FROM LINE #5 TO 4
					1677					1672	+ 689.023 CONT. 201.60X
45	300	230	601 5	300 (1/2) 287	26	29	800	330 5	48 10	38	− 397.688
					1703					1710	+ 292.335 = ± 9.591 FT
K-1	296	773	597 5	302 290	12	117	585	418 5	129 105	24	C.E. MON. EL. = 211.193
	689	023			1715	397	688			1734	
47	76	730	377 5	88 64	24	298	100	599 5	304 292	12	
					1739					1746	
48	6	850	307 5	8 4	4	291	520	592 5	294 288	6	− 21.115 FT
					1743					1752	
X-977	13	590	314 5	30 (1/2) 13	34	151	138	452 5	162 140	22	U.S.C. & G.S. 3½" BRASS CAP MON.
					1777					1774	Elev. Palos Verdes Drive
										1777	South & Pepper Tree N.W. Cor.
	97	170				740	758			3551	ELEV. 190.077
						+ 97	170				PG. 34 = 190.077
						643	588	= − 21.115 FT			

JOB NO. 0001.02 SURVEY OF L.A. CO. PRECISE LEVEL NET

SURVEY BY G. E. DREIER WEATHER Overcast INST. NO. 96761

NOTES BY J. Maldonado DATE 2-14-67 TIME ROD NO. 9 & 19

INDEXED C. J. GALLI DATE NOTES CHKD. DATE

F.B. 3766 PG. 41

F.B. 3766 PG. 42 JOB NO. 0021.64

SURVEY OF Portuguese Bend Landslide

SURVEY BY Dreier NOTES

INDEXED DATE

WEATHER INST. NO.

TIME ROD NO.

NOTES CHKD. DATE

STATION	BACKSIGHT				FORESIGHT				DESCRIPTION AND REMARKS
	RIGHT	MIC.	LEFT.	STADIA	RIGHT	MIC.	LEFT.	STADIA	FROM ___ TO ___

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403 Los Angeles County Engineering Bldg.

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Profile	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F. B. 3766	Pg. 43
No.	Date	Date	Survey of PORT. BEND LANDSLIDE			
X-Sec.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date 1-19-67	
No.	Date	Date	Map No.	Indexed C. J. GALLI	Date	

LINE No. 6 JAN. 1967

JOB NO 0021.64

PORTUGUESE BEND LANDSLIDE

DREIER
WILKS
SIEMANN
McKNIGHT

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

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761-298 S & E #307—1-56

76L-298 S & E #307—1-56

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F. B. 3766 Pg. 44 Job No. 002164 Division No. Notes Red. Plotted Profile
Survey of PART BEND LANDSLIDE Date Date No X-Sec.
Survey by DREIER Notes DREIER 1-19-67 Notes Chkd. Checked
Indexed D. J. CALLI Date Date Date No.

STATION	B. S.	H. I.	F. S.	ELEV.	LINE No. 6		
B.M. 50-9	7 712	1007 115		999 ~~402~~ 535	B.M. 50-9	(1965 Adj. El.) MON.	FB 2849-249
T.P	0 867	996 562	11 420	995 695			
	0 276	985 236	11 602	984 960			
	0 847	974 910	11 173	974 063			
	0 298	964 236	10 972	963 938			
T.P	1331	954 799	10 768	953 468			
T.B.M. #11	2 782	950 015	7566	947 ~~32~~ 351	T.B.M. #11	1965 Adj. El. R.K. SPK. IN	FB 2849-249 ROCK WALL
T.P	2227	942 838	9404	940 611			
Z-1	0 416	935 635	7 619	935 ~~219~~ 304	B.M. Z-1	MON.	
T.P	1 324	926 597	10362	925 273			
T.P	0 261	915 115	11 743	914 854			
T.P	0 225	903 479	11 841	903 254			
T.P	0 514	892 397	11 616	891 883			
T.P.	0 213	881 773	10 837	881 560			
T.P	0 185	870 156	11 802	869 971			
B.M. 50-10	4 356	862 601	11 911	858 ~~245~~ 21	B.M. 50-10	MON	1965 Adj. El. FB 2849-249
T.P	1328	852 506	11 423	851 178			
T.P.	0 297	841 288	11 515	840 991			
T.P.	1 017	830 595	11 710	829 578			
T.P.	0 311	819 284	11 622	818 973			
			11 972	807 311			

CONT.

761-298 S & E #307—1-56

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LINE 6 CONT.

STATION	B. S.	H. I.	F. S.	ELEV.		
T.P	0653	807 964		807 311		
T.P	6 692	803 556	11 070	796 894		
Y-4	2 243	796 059	9 770	793 ~~8 6~~ 770	BM. Y-4	2" I.P.
T.P	3 930	788 209	11 786	784 273		
T.B.M. #12	7 955	785 259	10 929	777 ~~274~~ 22	T.B.M. #12	P.K. SPK 1965 Adj. Elev FB 2849-249
T.P	0 408	774 417	11 242	774 009		
T.P	0336	763 309	11 444	762 973		
T.P.	0 288	752 817	10 780	752 529		
T.P	0 433	742 482	10 768	742 049		
T.P	0232	731 099	11 615	730 867		
T.P	0388	719 826	11 661	719 438		
T.P	0488	708 527	11 797	708 039		
T.P.	0335	698 161	10 701	697 826		
T.P	0306	686 586	11 881	686 280		
T.B.M. #13	0 761	676 946	10 401	676 ~~185~~ 082	T.B.M. #13	1965 Adj. El. FB 2849-249 P.K. SPK IN RIGHT WALL
T.P	1 075	666 606	11 418	665 528		
T.P.	0 935	656 454	11 150	655 456		
B.M. 50-11			8 747	647 ~~707~~ 597	B.M. 50-11	MON. 1965 Adj. Elev. FB 2849-249

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. ____
No. ____ Date ____ Date ____ Survey of PORT END
X-Sec. Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 1-19-67
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALL Date ____

F. B. 3766 PG. 45

F. B. 3766 Pg. 46 | Job No. 0021.64 | Division No. | Notes Red | Plotted | Profile

Survey of PORTUGUESE BEND LANDSLIDE | Date | Date | No.

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

Indexed E. I. GALLI | Date | Date | Date | No.

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

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76L-298 S & E #307—1-56

Profile No.	Notes Red.	Plotted	Job No. 0021.64	Division No. 11	F. B. 3766	Pg. 47
	Date	Date	Survey of PORTUGUESE BEND LAND SLIDE			
X-Sec. No.	Notes Chkd.	Checked	Survey by: DREIER	Notes	Date JULY 1967	
	Date	Date	Map No.	Indexed C. J. GALLI	Date AUG 0 2 '67	

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LEVEL LINE NO. 1 JULY 1967

ELEVATIONS BASED ON 1965 PRECISE ADJ. PER F.B. 2849-250 & 249

DREIER
WILKS
SIEMANN
McKNIGHT

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

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761-298 S & E #307—1-56

F. B. 3766 Pg. 48 | Job No. 0021.64 | Division No. 11 | Notes Red | Plotted | Profile

Survey of PORTUGUESE BEND LANDSLIDE | Date | Date | No.

Survey by DREIER | Notes | Notes Chkd | Checked | X-Sec.

Indexed C.I.C. | Date | Date | Date | No.

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

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76L-288 S & E #307—1-56

76-L298 CE 307 3-61

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE No. 1	
B.M. P.B. #9	5 663	409 843		404 180	B.M. P.B. #9 ELEV 404.180 ADJ. PER F.B. 2849-249	
T.P.	5 520	413 987	1 376	408 467		
P.I. 5 B.	4 922	415 096	3 813	410 174	B.M. P.I. 5 B. NARCISSA DR & SWEETBAY C.E. MON.	
T.P.	1 656	410 329	6 423	408 673		
T.B.M. #30	0 452	405 817	4 964	405 365	T.B.M. #30 NARCISSA & GINGER [illegible] SPIKE IN HDWLL [illegible]	
T.P.	7 113	407 683	5 247	400 570		
P.I. 4 C	4 352	410 271	1 764	405 919	P.I. 4 C NARCISSA [illegible] & PLUM TREE RD. C.E. MON.	
T.P.	9 837	419 560	0 548	409 723		
T.P.	10 666	429 365	0 861	418 699		
T.P.	5 237	433 757	0 845	428 520		
FRUIT TREE #1	9 276	433 753	9 280	424 477	B.M. FRUIT TREE #1 N. OF NARCISSA C.E. MON.	
T.P.	0 312	427 354	6 711	427 042		
T.P.	9 083	424 774	11 663	415 691		
T.P.	5 177	425 024	4 927	419 847		
T.P.	5 620	426 592	4 052	420 972		
S.P.H. 6-7 R.M. #1	4 538	426 203	4 927	421 665	S.P.H. 6-7 R.M. No. 1	
S.P.H. 6-7	5 587	426 408	5 397	420 821 806	S.P.H. 6-7 CTR ELEV 420.821 ADJ. F.B. 2849-250	
S.P.H. 6-7 R.M. #2	1 512	423 352	4 568	421 840	" " RM No 2	
T.P.	0 101	411 844	11 609	411 743		
T.P.	0 026	401 266	10 604	401 240		
T.P.	0 498	391 211	10 553	390 713		

CONT.

Profile Notes Red ____ Plotted ____ Job No. 002164 Division No. 11 F.B. 3766 Pg. [illegible]
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by DREMAN Notes DREIER Date 7-6-67
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

76-L298 CE 307 3-61

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #1	
		391 211				
T.P.	2 008	382 430	10 7[illegible]	38[illegible]		
P.I. 3A	0 292	373 301	9 421	373 0[illegible]	P.I. 3A NARCISSA DR. & GINGER ROOT S.W. SIDE	LEMON,
T.P.	0 380	361 931	11 750	361 551		
T.P.	0 210	351 542	10 599	351 3[illegible]		
T.P.	1 575	342 506	10 611	340 931		
P.I. 1A	3 650	337 340	8 816	333 690	P.I. 1A NARCISSA DR. & [illegible] W. SIDE ROAD	SPR. DI. & T.
T.P.	0 281	325 432	12 189	325 151		
	0 220	313 663	11 989	313 443		
	0 077	301 491	12 249	301 414		
	0 208	289 935	11 764	289 727		
T.P.	9 815	290 540	9 210	280 725		
H-7A ECC. #4	4 597	292 808	2 329	288 211	S.P. HILLS H-7A ECC. #4	C.E. MON
" " #2	4 553	292 804	4 557	288 251	" " " #2	"
" " #1	3 027	291 208	4 623	288 181	" " " #1	"
T.P.	10 917	291 843	10 282	280 926		
	10 263	302 085	0 021	291 822		
	11 417	312 983	0 519	301 566		
	10 973	323 723	0 233	312 750		
	12 324	336 034	0 013	323 710		
T.P.	0 069	333 755	2 348	333 686		

CONT.

F.B. 3766 Pg. 50

Job No. 0021.64 Division No. 11 Notes Red Plotted Profile

Survey of PORTUGUESE BEND LANDSLIDE Date Date No. X-Sec.

Survey by Notes DREIER 7-6-67 Notes Chkd. Checked Date No.

Indexed C. J. GALLI Date Date

76-L.298 CE 307 3-61

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 1 JULY, 1967
		333 755			CONT.
T.P.	0 055	321 655	12 155	321 600	
	0 223	309 750	12 128	309 527	
	0 159	297 801	12 108	297 642	
T.P.	0 752	286 536	12 017	285 784	
P.B. #10	0 270	279 880	6 926	279 610	P.B. #10 C.E. MON.
T.P.	0 193	268 290	11 783	268 097	
	0 833	257 270	11 853	256 437	
	0 480	245 [illegible]	12 143	245 127	
	1 497	234 914	12 190	233 417	
	0 163	223 077	12 000	222 [illegible]	
T.P.	4 574	216 199	11 452	211 625	
W.F. #1	5 657	216 169	5 687	210 512	SQ. SPL. & LEAD ON BOTTOM STEP
T.P.	5 543	217 819	3 893	212 276	
WAYFARER	0 126	213 522	4 423	213 396	L&T @ ENTRANCE TO CHAPEL
T.P.	0 452	201 677	12 297	201 225	
"	0 042	189 756	11 963	189 714	
T.P.	0 033	177 548	12 241	177 515	
T.B.M. #31			10 432	167 116	T.B.M. #31 L.&T. ELEV 167.101 PER F.B. 2549-250

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11 F.B. 3766 Pg. 57
No. ____ Date ____ Date ____ Survey of P.B. LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by G.E. DREIFF Notes WILKS Date JULY 7, 1967
No. ____ Date ____ Date ____ Map No. ____ Indexed C.J. GALLI Date ____

F.B. 3766 Pg. 52 Job No. 002164 Division No. 11 Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND LANDSLIDE Date _____ Date _____ No. _____

Survey by ~~[illegible]~~ G. J. GALLI Notes _____ Notes Chkd. _____ Checked _____ X-Sec.

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

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76-L298 CE 307 3-61

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. V	F.B. 3-66	Pg. 53
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE			
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date 7-11-67	
	Date	Date	Map No.	Indexed C. J. GALLI	Date	

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 2

JULY 1967

DREIER
WILKS
SIEMAN
MCKNIGHT

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

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76-L298 CE 307 3-61

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F.B. 3766 Pg. 54
Job No. 0021.04 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of P.B. LANDSLIDE Date ____ Date ____ No. ____
Survey by G.E.D. Notes D.L.W. 7-11-66 Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed C. J. GALLI Date ____ Date ____ No. ____

STATION	B.S.	H.I.	F.S.	ELEV.	LINE #2	JULY, 1967
PB #9	11 972	416 152		404 180	PB #9 C.E. MON	EL. PER F.B. 2849-149
A.C. #3	2 978	414 603	4 527	411 625	A.C. #3 "	(CHECK SETUP + 12.192 - 4.750 = 7.442)
T.P.	6 945	413 869	7 679	406 924		
PB #9B	7 890	417 715	4 044	409 825	B.S.W.&T.	
PB #9A	8 358	422 573	3 500	414 215	B.S.W.&T	
T.P.	11 760	433 971	0 362	422 211		
T.P.	11 022	444 772	0 232	433 729		
B-1-C	6 572	448 162	3 104	441 590	B-1-C C.E. MON.	
T.P.	12 247	460 241	0 168	447 994		
T.P.	11 973	472 126	0 088	460 153		
T.P.	7 491	479 504	0 113	472 013		
TANK	2 159	477 702	4 083	475 343	B.S.W.&T.	
T.P.	0 301	465 943	11 860	465 642		
	0 173	452 898	12 218	453 725		
	0 321	442 092	12 127	441 771		
	1 596	431 445	12 243	429 849		
	0.447	419 894	11 998	419 447		
	1 877	409 971	11 800	408 094		
	0395	398 053	12 313	397 658		
T.P.	3 482	391 635	9900	388 153		
S.B. #2	8635	391 919	8 273	383 284		

CONT

76-L-296 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #2 JULY, 1967
		391 919			CONT.
T.P.	9 690	401 149	0 460	391 459	
T.P.	5 988	406 589	0 548	400 601	
P.T. #1	2 112	402 895	5 806	400 783	B.S. W.&T
B-1-B ?	8 502	404 534	6 863	396 032	B-1-B ? 2" I.P. CONC. PLUG & TAG.
T.P.	0 353	392 962	11 925	392 609	
	0 162	381 647	11 477	381 485	
	0 743	370 947	11 443	370 204	
	0 300	359 386	11 861	359 086	
	11 366	363 917	6 835	352 551	
	11 616	375 055	0 478	363 439	
T.P.	10 373	385 027	0 401	374 654	
DAVIS	3 928	384 131	4 824	380 203	DAVIS C. E. MON
	0 672	374 435	10 368	373 763	
	0 892	363 401	11 926	362 509	
	10 303	362 339	11 365	352 036	
RADIAL #1	5 310	363 075	4 574	357 765	RADIAL #1 5'± NLY MARKER PIPE
	4 578	358 057	9 596	353 479	
	0 362	346 676	11 743	346 314	
	1 148	336 431	11 393	335 283	
	0 527	326 307	10 651	325 780	

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11 F.B. 3766 Pg. 55
No. ____ Date ____ Date ____ Survey of P.B. LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by G.E. DEGLER Notes WILKS Date 7-11-67
No. ____ Date ____ Date ____ Map No. ____ Indexed C.J. GALLI Date ____

76-L-298 CE 307 2-63

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F.B. 3766 Pg. 52 | Job No. 0021.64 | Division No. 11 | Notes Red | Plotted | Profile
Survey of PORTUGUESE BEND LANDSLIDE | Date | No. | X-Sec.
Survey by DREIER | Notes WILKS 7-11-67 | Notes Chkd. | Checked
Indexed C. J. GALLI | Date | Date | Date | No.

STATION	B.S.	H.I.	F.S.	ELEV.	LINE # 2	JULY, 1967
		326 307			CONT	
A-3	10 385	327 026	9666	316 641	A-3 - leaning on a 45° + straightened up - C.E. MON.	
A-4	4 788	327 049	4 765	322 261	A-4 C-E MON.	7-14-67 RESET MON. FLUSH 0.83 FT. LOWER THAN ELEV. INDICATED
T.P.	11 863	337 832	1 080	325 969		
	10 544	348 188	0 188	337 644		
	9 314	357 187	0 315	347 873		
	0 363	345 610	11 940	345 247		
T.P.	3 845	337 492	11 963	333 647		
BM 50-12	5 189	339 208	3 473	334 019	BM 50-12 C.E. MON.	
T.P	0 360	334 117	5 451	333 757		
	0 512	323 351	11 278	322 839		
	0 593	313 481	10 463	312 888		
	1 123	303 218	11 386	302 095		
	0 428	292 513	11 133	292 085		
	0 519	281 690	11 342	281 171		
	0 953	270 742	11 901	269 789		
	0 363	259 298	11 807	258 935		
	0 742	248 197	11 843	247 455		
	0 851	237 838	11 210	236 987		
	0 747	226 707	11 878	225 960		
T.P.	0 669	215 618	11 758	214 949		

CONT.

Profile	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 57
No.	Date	Date	Survey of P.B. LANDSLIDE			
X-Sec.	Notes Chkd.	Checked	Survey by DREIER	Notes WILKS	Date 7-12-67	
No.	Date	Date	Map No.	Indexed C. J. GALLI	Date	

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #2 CONT.	JULY, 1967
		215.618				
T.P.	1.695	205.436	11.877	203.741		
T.P.	11.227	210.744	5.919	199.517		
BM 50-13			2.585	208.158	BM 50-13 EL. = 208.101 PER F.B. 2849-250	

F.B. 3766 PG. 58

Job No. 0021.64 Division No. 11 Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND LANDSLIDE Date _____ Date _____ No. _____

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

Indexed C. J. GALLT Date _____ Date _____ Date _____ No. _____

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

76-L-298 CE 307 2-63

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766 Pg. 59
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date 7-12-67
	Date	Date	Map No.	Indexed C. J. GALLI	Date

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 3

JULY 1967

DREIER
WILKS
SIEMANN
MCKNIGHT

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

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76-L-298 CE 307 2-63

76-L-298 CE 307 2-65

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F.B. 3766 PG. 60 | Job No. 0021.64 | Division No. 11 | Notes Red | Plotted | Profile
Survey of PORTUGUESE BENDLANDSLIDE | Date | No. | X-Sec.
Survey by DREIER | Notes DREIER | Date 7-12-67 | Notes Chkd. | Checked | No.
Indexed | Date | Date

STATION	B.S.	H.I.	F.S.	ELEV.	LINE #3	
B.M. 34-15A	0.257	231.265		231.008	B.M. 34-15A ELEV 231.008 SPK IN CURB	ADJ. PER F.B. 2849-260
T.P	1.154	220.826	11.593	219.672		
T.P	1.663	212.402	10.087	210.739		
T.P	1.280	202.482	11.200	201.202		
T.P	0.406	193.368	9.520	192.962		
	0.982	183.017	11.333	182.035		
K-10A	5.308	178.074	10.251	172.766	K-10A B.SPK. W&T.	
K-10B	7.131	176.759	8.446	169.628	K-10B SPK IN 2" I.P.	
K-10	6.575	174.779	(8.555 / 9.320) 9.485	(168.204) 167.274	K-10 B.SPK OVER MON.	MON 0.930 DEEP
K-10C	3.451	171.658	6.572	168.207	K-10C L&T.	
K-9A	6.305	169.821	8.142	163.516	K-9A SPK W. & T.	
K-9B	7.413	169.272	7.962	161.859	K-9B 2" I.P. CONC. PLUG & SPK.	
T.P	4.404	166.089	7.587	161.685	T.P ~~3/4" I.P. & TAG~~	
K-9	3.947	163.348	6.688	159.401	K-9 3/4" I.P. & TAG	
K-8A	1.170	159.105	5.413	157.935	K-8A SPK. W. & T.	
K-8B	3.140	158.683	3.562	155.543	K-8B. 2" I.P. CONC. PLUG & SPK.	
T.P.	1.247	149.004	10.926	147.757		
T.P	5.895	143.181	11.718	137.286		
K-5	7.178	143.202	7.157	136.024	K-5 CE. MON.	
T.P.	0.190	131.484	11.908	131.294		
T.P.	1.821	122.557	10.748	120.736		

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 3	
		122 557			CONT.	
T.P.	2474	115 315	9716	112 841	T.P.	
W-3	2976	113 410	4 881	110 434	W-3	CE. MON.
K-5 AUX	0216	101 983	11 643	101 767	K-5 AUX	CE. MON
T.P	0291	90 624	11 650	90 333		
T.P.	0700	79 527	11 797	78 827		
T.P.	2481	72 408	9 600	69 927		
K-4	1674	66 790	7292	65 116	K-4 CE. MON.	
T.P.	1910	57 822	10 878	55 912		
T.B.M. #28	7361	59 206	5977	51 845	T.B.M. #28	B SPK IN ROCK
K-3A	2807	53 188	8825	50 381	K-3A	CE. MON.
K-2A	10 700	52 962	10 926	42 262	K-2A	2" I.P.
T.P.	7627	58 019	2 570	50 392		
T.P.	8970	59 203	7 786	50 233		
T.P.	0528	57 408	2323	56 880		
T.P.	0417	46 281	11 544	45 864		
T.P.	1220	39 724	10 777	36 504		
T.P	0730	28 931	8 523	28 201		
T.P	0948	18 347	11 532	17 399		
T.P. *	5082	17 925	5 504	12 843	* (P.B. 6 C UNDER HIGH TIDE T.P. COR OF COURT TO PAGE 63)	
T.P.	5123	17 407	5641	12 284		

Profile Notes Red ____ Plotted ____ Job No. 002164 Division No. 11
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 7-12-67
No. ____ Date ____ Date ____ Map No. ____ Indexed C.J. GALL Date ____

F.B. 3766 Pg. 61

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #3 CONT	
		17 407				
T.P.	3 166	15 738	4 835	12 572		
P.B. #8	8 260	16 306	7 692	8 046	P.B. #8 SPK IN	TOP OF GROIN
T.P.	4 655	17 230	3 731	12 575		
T.P.	5 361	17 651	4 940	12 290		
T.P.	10 838	26 322	2 167	15 484		
T.P.	10 761	36 629	0 454	25 868		
T.P	10 697	46 209	1 117	35 512		
T.P	11 279	57 221	0 267	45 942		
T.P.	11 842	68 726	0 337	56 884		
T.P. K-4	11 875	77 013	3 588	65 138	K-4	
T.P.	11 750	88 439	0 324	76 689		
T.P.	11 802	99 412	0 829	87 610		
T.P.	7 436	105 234	1 614	97 798		
T.P.	11 045	112 849	3 430	101 804	K-5 AUX	
T.P.	11 623	124 023	0 449	112 400		
	11 646	135 287	0 382	123 641		SPINDRIFT DR. SLY TRAF. BUTTON E. OF
	11 040	145 798	0 529	134 758		
	10 610	155 807	0 601	145 197		
	11 997	167 385	0 419	155 388		
T.P	11 968	178 908	0 445	166 940		

CONT

F.B. 3766 PG. 62

Job No. ____ Division No. 11 Notes Red ____ Plotted ____ Profile ____

Survey of PORTUGUESE BEND LANDSLIDE Date ____ Date ____ No. ____

Survey by DREIER Notes DREIER 7-12-67 Notes Chkd. ____ Checked ____ X-Sec. ____

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76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #3 CONT
		178 908			
T.P.	11 908	190 492	0 324	178 584	
T.P	11 939	202 170	0 261	190 231	
T.P	10 888	212 888	0 170	202 000	
T.P	10 921	221 709	2 100	210 788	
T.P.	9 812	231 330	0 191	221 518	
T.B.M. 34-15A			0 289	231 041	T.B.M. 34-15A ELEV. 231.008 ADJ. PER F.B. 2849-250
					AT LOW TIDE 10:30 7-13-67
*T.P	0 272	13 115		12 843	*T.P. BOT. PAGE 61 COR. OF COURT.
	11 590	13 005	11 700	1 415	P.B. 6 C SPK PER F.B. 3766-22
			0 164	12 841	*T.P. BOT PAGE 61

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 7-13-67
Date ____ Date ____ Map No. ____ Indexed C.J. GALLI Date ____

F.B. 3766 Pg 63

F.B. 3766 Pg. 64 | 0021.64

Job No. _____ Division No. 4 Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND LANDSLIDE Date _____ Date _____ No. _____

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

Indexed C.J. GALLI Date _____ Date _____ Date _____ Date _____ No. _____

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

76-L-298 CE 307 2-63

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 65
	Date	Date	Survey of PORTUGESE BEND			
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date 7-7-67	
	Date	Date	Map No.	Indexed C. J. GALLI	Date	

JOB NO 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 4 JULY 1967

DREIER
WILKS
SIEMANN
MCKNIGHT

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

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76-L298 CE 307 3-61

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #4	
34-15A	2 540	[illegible] 546		[illegible]	B.M. 34-15A ELEV. [illegible] ADJ. PER F.B. 2849-250	
T.P.	3 365	[illegible] 568	[illegible]	225 [illegible]		
T.P.	0 112	226 840	7 340	[illegible]		
B.M. 50-13A	3 422	213 744	10 518	210 322	SPK. PT. IN SLY ASPHALT CURB.	
B.M. 50-13	1 647	209 748	5 632	[illegible]	B.M. 50-13 ELEV. 208,101 ADJ. F.B. 2849-250	C.E. MON.
T.P.	11 278	213 951	7 075	[illegible]		
T.P.	11 178	224 735	0 194	213 757		
T.P.	11 572	236 387	0 120	224 815		
T.P.	11 610	247 684	0 313	236 074		
T.P.	10 957	258 604	0 037	247 [illegible]		
T.P.	11 470	269 933	0 141	258 463		
T.P.	12 328	282 223	0 038	269 895		
T.P.	11 387	292 491	1 119	281 104		
T.P.	12 113	304 526	0 078	292 413		
T.P.	11 291	315 065	0 752	303 774		
SHIELDS	4 707	315 020	4 752	310 313	SHIELDS ELEV. 310.3[illegible]	F.B. 3766-32 CE. MON
T.P.	1 063	304 839	11 244	303 776		
T.P.	0 095	292 795	12 139	292 700		
T.P.	1 040	282 162	11 673	281 122		
T.P.	0 111	270 633	11 640	270 522		
T.P.	0 903	260 050	11 486	259 147		

CONT.

F.B. 3766 PG. 66

Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Profile ____

Survey of PORTUGUESE BEND LANDSLIDE Date ____ Date ____ No. ____

Survey by G.E. DREIER Notes G.E. DREIER 7-7-67 Notes Chkd. ____ Checked ____ X-Sec. ____

Indexed [illegible] Date ____ Date ____ No. ____

76-L298 CE 307 3-61

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STATION	B. S.	H. I.	F. S.	ELEV.			
		260 050			CONT.		
T.P.	0 139	248 120	12 069	247 981			
T.P.	0 022	236 094	12 048	236 072			
T.P.	0 006	223 804	12 296	223 798			
T.P.	0 599	214 352	10 051	213 753			
T.P	2 545	205 214	11 683	202 669			
STA. J-5	12 233	208 320	9 137	196 087	J-5		C.F. [illegible]
T.P.	5 580	213 474	0 426	207 894			
RADIAL 2 ECC 1	10 760	213 679	10 555	202 919	RADIAL 2 ECC. 1	(+ 11.387 − 3.830 = + 7.557)	202.919 = RAD. 2 ECC. 1 TO 210.476 = RAD 2 ECC 2 SET 7-17-67
T.P.	6 154	214 669	5 164	208 515			
STA. J-4	2 [illegible]	211 918	5 144	209 525	STA. J-4		[illegible]
STA. J-3	1 341	203 759	9 500	202 418	STA. J-3		[illegible]
T.P	4 158	204 944	2 973	200 786			
T.P.	2 418	197 866	9 496	195 448			
STA. J-1	10 826	202 348	6 344	191 522	STA. J-1		[illegible]
T.P.	11 683	213 078	0 953	201 395			
T.P.	11 692	223 898	0 872	212 206			
T.P.	10 811	234 481	0 228	223 670			
STA J-1A	2 321	225 848	10 954	223 527	STA J-1A		[illegible]
T.P	0 257	214 755	11 350	214 498			
T.P.	1 120	204 595	11 280	203 475			

CONT.

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. ____ F.B. 3766 Pg. 67
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by [illegible] Notes DREIER Date 7-7-67
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

76-L298 CE 307 3-61

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE 4	
		204 595			CONT.	
T.P	0 845	194 088	11 352	193 243		
T.P.	3 128	190 664	6 552	187 536		
T.P.	7843	196 720	1 777	190 877		
T.P.	4 044	194 499	6 265	190 455		
U.S.C.&G.S. X 977	[illegible]	193 877	4 535	189 964	U.S.C.&G.S. X-977 P.V. DR. & PEPPERTREE N.W. COR	
T.P.	[illegible]	193 370	[illegible]	187 282		
T.P	3 652	191 930	5 092	188 278		
T.P	0 303	180 257	11 976	179 954		
T.P	1 934	171 303	10 888	169 369		
B.M. 34-18	2 472	171 053	2 722	168 581	B.M. 34-18	
T.P	2 300	162 636	10 717	160 336		
~~T.P~~ P#3	7 503	165 549	4 590	158 046	P.#3	L & TAG
T.P.	5 789	167 785	3 553	161 996		
P 2	7 381	170 746	4 420	[illegible]	P.#2	L & TAG
T.B.M.# 31			3 651	167 095	T.B.M.# 31 P.V. DR. S. AT ENT. TO WAYFARERS ELEV. 167.101 PER F.B. 2849-250	

F.B. 3766 Pg. 68

Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Profile ____

Survey of PORTUGUESE BEND LANDSLIDE Date ____ Date ____ No. ____ X-Sec. ____

Survey by DREIER Notes G.E. DREIER 7-7-67 Notes Chkd. ____ Checked ____ No. ____

Indexed C.J. GALLI Date ____ Date ____ Date ____

Profile No.	Notes Red	Plotted	Job No. 002164	Division No. 11	F.B. 3766 Pg. 69
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date 7-16-67
	Date	Date	Map No.	Indexed C.J. GALLI	Date

JOB. NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 5

JULY 1967

DREIER
WILKS
SIEMANN
MC KNIGHT

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

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76-L-288 CE 307 2-63

76-L-298 CE 307 2-63

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F.B. 3766 PG. 70 | Job No. 0021.64 | Division No. 11 | Notes Red | Plotted | Profile No.
Survey of PORTUGUESE BEND LANDSLIDE | Date | Date | X-Sec. No.
Survey by DREIER | Notes DREIER 7-10-67 | Notes Chkd. | Checked
Indexed C.J. GALLI | Date | Date | Date | No.

STATION	B.S.	H.I.	F.S.	ELEV.	LINE #5	
S.B. #2	3.512	386.796		383.284	S.B. #2	ELEV PER PAGE 54 (BOT)
S.B. 2A	0.883	380.191	7.488	379.308	S.B. #2A	LFT. IN DRWY TO HO. #6
T.P	0.153	368.716	11.628	368.563		
T.P	2.708	360.107	11.317	357.399		
S.B #3	9.462	362.392	7.177	352.930	SWEET BAY #3	SPK & W.
T.P.	10.597	372.427	0.562	361.830		
T.P	11.241	382.907	0.761	371.666		
T.P.	10.400	391.550	1.757	381.150		
S.B #1	11.130	398.883	3.797	387.753	SWEET BAY #1	SPK & W
WEST FIX	5.008	398.901	4.990	393.893	WEST FIX	C.E. IRON.
T.P.	7.962	395.701	11.162	387.739		
T.P	0.934	386.933	9.702	385.999		
T.P.	0.323	375.469	11.787	375.146		
T.P.	2.342	365.708	12.103	363.366		
T.P	0.349	353.842	12.215	353.493		
T.P.	0.872	344.077	10.637	343.205		
T.P.	0.202	332.464	11.815	332.262		
H-2	1.212	322.116	11.560	320.904	H-2 TANGERINE LANE	C.E. IRON.
T.P.	0.803	313.668	9.251	312.865		
H-4	6.088	311.854	7.902	305.766	H-4 "	2" I.P. & TAG (6 FT. E. OF POLE)
	8.282	313.910	6.226	305.628		

CONT

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 5	
		313 910			CONT	
T.P.	10 273	321 383	2 800	311 110		
T.P.	11 886	331 782	1 487	319 896		
T.P.	5 100	335 598	1 284	330 498		
PT # 5	1 204	334 204	2 598	333 000	P.T. # 5 PEPPERTREE & LIMETREE, N.E. COR, SPK. W. & T.	
T.P.	1 577	324 008	11 773	322 431		
T.P.	0 737	312 917	11 828	312 180		
P.T. # 6 AUX 3	10 937	316 362	7 492	305 425	PT. # 6 AUX 3 PEPPERTREE & KUMQUAT SPK. W. & T. #5 & E.	
T.P.	3 552	317 975	1 939	314 423		
	5 115	311 866	11 224	306 751		
	5 697	306 091	11 472	300 394		
BLAKESLEY	10 228	304 942	11 377	294 714	BLAKESLEY	CE DION.
T.P.	2 381	296 090	11 233	293 709		
	0 473	285 016	11 547	284 543		
	0 854	274 997	10 873	274 143		
	1 450	265 042	11 405	263 592		
	0 212	255 154	10 100	254 942		
	0 581	243 788	11 947	243 207		
	1 774	233 845	11 717	232 071		
	0 273	222 458	11 660	222 185		
T.P.	1 051	212 214	11 295	211 163		

CONT.

Profile No. ____ Notes Red ____ Date ____ Plotted ____ Date ____ Job No. 0021.64 Division No. 11 Survey of PORTUGUESE BEND LANDSLIDE Survey by DREIER Notes DREIER Date 7-10-67 Map No. ____ Indexed C. J. GALLI Date ____

X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____

F.B. 3766 Pg. 71

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 5	
		212 214			CONT.	
T.P.	4 576	206 811	9 979	202 235		
B.M. "C"	4 301	205 888	5 224	201 587	B.M. "C"	RD. DEPT MON.
T.P.	3 559	208 440	1 007	204 881		
T.P.	11 543	219 267	0 716	207 724		
K-1	4 747	215 833	8 181	211 086	STA. K-1	CE. MON.
T.P	0 680	205 761	10 752	205 081		
T.P	0 697	195 427	11 031	194 730		
U.S.C.&G.S X-977			5 403	190 024	U.S.C.&G.S. X 977 PALOS VERDES DR.S. & PEPPERTREE DR. N.W. COR. CONC. MON. ELEV. PER PAGE 68 = 189.964	

F.B. 3766 Pg. 72

Job No. 0021.64 Division No. 4 Notes Red Plotted Profile

Survey of PORTUGUESE BEND LANDSLIDE Date No. X-Sec.

Survey by Notes Notes Chkd. Checked

Indexed C. J. GALLI Date Date No.

F. B. 3766 Pg. 73

Profile No. _____ Notes Red. _____ Plotted _____ Job No. 0021.64 Division No. 11

Date _____ Date _____ Survey of PORTUGUESE BEND LANDSLIDE

X-Sec. No. _____ Notes Chkd. _____ Checked _____ Survey by DREIER Notes _____ Date _____

Date _____ Date _____ Map No. _____ Indexed C. J. GALLI Date _____

JOB NO 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 6

JULY 1967

DREIER
WILKS
SIEMANN
McKNIGHT

STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 6 JULY 1967

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76L-298 S & E #307—1-56

76L-298 S & E #307—1-56

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F. B. 3766 Pg. 74 Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of P. B. LANDSLIDE Date ____ No. ____ X-Sec. ____
Survey by S. F. DRAKER Notes D. L. W. Notes Chkd. ____ Checked ____ No. ____
Indexed W. J. GALLI Date ____ Date ____

STATION	B. S.	H. I.	F. S.	ELEV.	LINE 6	
BM 50-9	10 906	1010 441		999 535	B.M. 50-9 EL. = 999.535, PER F.B. 2849 #249	
T. P.	0 652	999 333	11 760	998 681		
	0 193	987 578	11 948	987 385		
	0 308	976 013	11 873	975 705		
	0 679	965 104	11 588	964 425		
T.P.	2 720	956 188	11 636	953 468		
T.B.M. # 11	2 603	949 975	8 816	947 372	T.B.M. #11 PK. SPK. IN	ROCK WALL
T.P.	3 273	941 685	11 563	938 412		
Z-1	0 709	936 051	6 343	935 342	Z-1 C.E. MON	
T.P.	0 273	924 434	11 890	924 161		
	0 955	913 520	11 869	912 565		
	0 297	901 990	11 827	901 693		
	1 103	891 684	11 409	890 581		
	0324	880 758	11 250	880 434		
	0 419	869 489	11 688	869 070		
BM 50-10	5 236	863 472	11 253	858 236	BM 50-10	
	1 422	853 734	11 160	852 312		
	0 230	842 286	11 678	842 056		
	0472	831 157	11 601	830 685		
	0 573	819 787	11 943	819 214		
	0 457	809 131	11 113	808 674		

76L-298 S & E #307—1-56

647.60
676.08

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #6	JULY, 1967
		809 131				
T. P.	5 065	802 794	11 402	797 729		
Y-4	1 047	794 828	9 013	793 781	Y-4 2" I.P.	
T. P.	4 732	787 909	11 651	783 177		
T.B.M. #12	8 171	785 438	10 642	777 267	T.B.M. #12 PK SPK.	
T. P.	0 471	774 556	11 353	774 085		
	0 515	763 903	11 168	763 388		
	0 429	752 407	11 925	751 978		
	0 367	741 002	11 772	740 635		
	0 361	729 670	11 693	729 309		
	0 358	718 253	11 775	717 895		
	0 357	706 799	11 811	706 442		
	0 471	695 317	11 953	694 846		
T. P.	0 560	684 242	11 635	683 682		
T.B.M. #13	0 340	676 500	8 082	676 160	T.B.M. #13 PK. SPK.	IN ROCK WALL
T. P.	0 913	666 404	11 009	665 491		
T. P.	1 604	656 796	11 212	655 192		
B.M. 50-11			9 137	647 659	B.M. 50-11 MON. ELEV. 647.597 PER F.B. 2847-249	

Profile Notes Red. ____ Plotted ____ Job No. 0021.64 Division No. 11 F. B. 3766 Pg. 75
No. ____ Date ____ Date ____ Survey of R.B. LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by S.E. DREIER Notes WILKS Date 7-13-67
No. ____ Date ____ Date ____ Map No. ____ Indexed C.J. GALLI Date ____

F. B. 3766 Pg. 76 | Job No. 0021.64 | Division No. | Notes Red | Plotted | Profile

Survey of PORTUGUESE BEND LANDSLIDE | Date | Date | No.

Survey by DREIER | Notes | Notes Chkd | Checked | X-Sec.

Indexed C. J. GALLI | Date | Date | Date | No.

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

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76L-208 S & E #307—1-56

Notes Ck'd by	Survey of PORTUGUESE BEND LANDSLIDE
Map No.	JN 0021.64 Tape Std °F
Office Work	Surveyed by DREIER
Checked	Notes Date JULY 19, 1967
Date	Indexed C. J. GALLI AUG 0 2 '67

F. B. 3766 PG. 77

JOB NO 0021.64

PORTUGUESE BEND LANDSLIDE

SUPPLEMENTAL POINT FOR RADIAL 2, ECC. 1

DREIER
WILKS
SIEMANN

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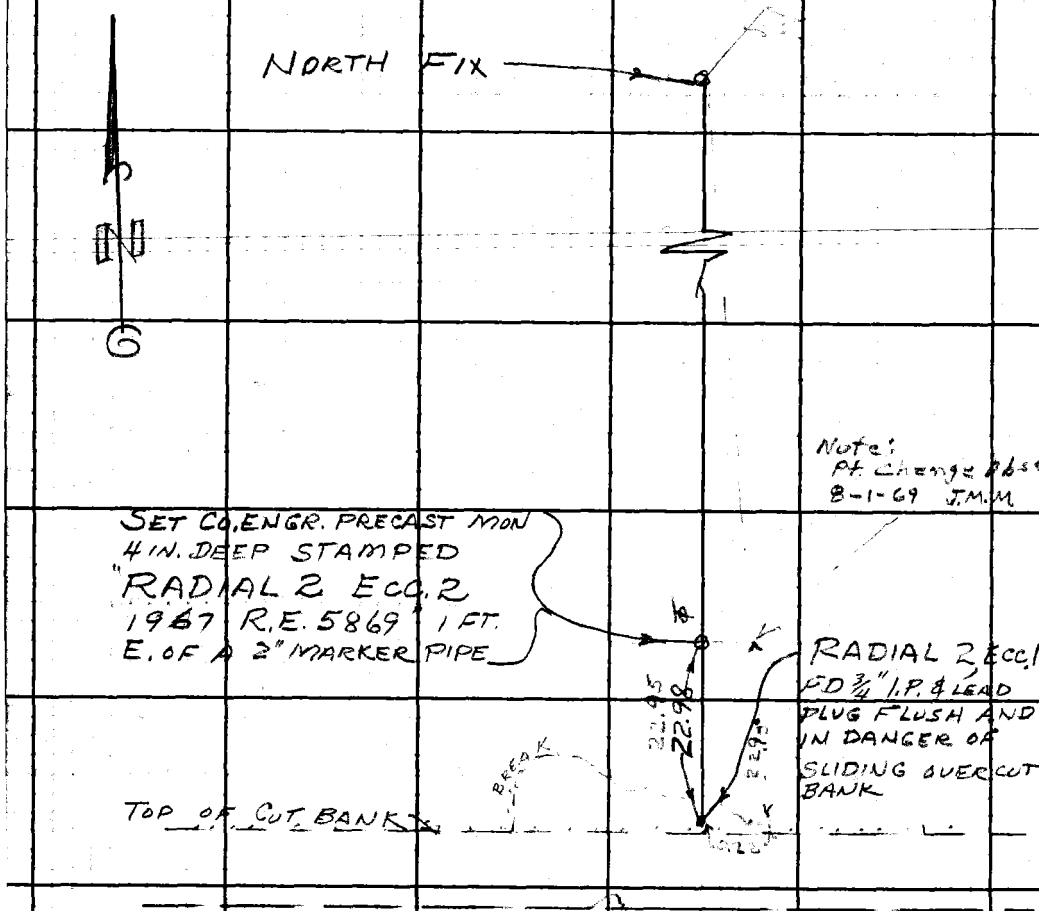
76F309S CE #310 6-62

F. B. 3766 PG 78



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Map No.	JN 0021.64 Tape Std °F
Office Work	Surveyed by DREIER
Checked	Notes Date 7-18-67
Date	Indexed C. J. GALLI AUG 02 '67

F. B. 3766 PG. 79

JOB NO 0021.64

PORTUGUESE BEND LANDSLIDE

ANGULAR POSITION CHECK OF "WAYFARER"

DREIER
WILKS
SIEMANN

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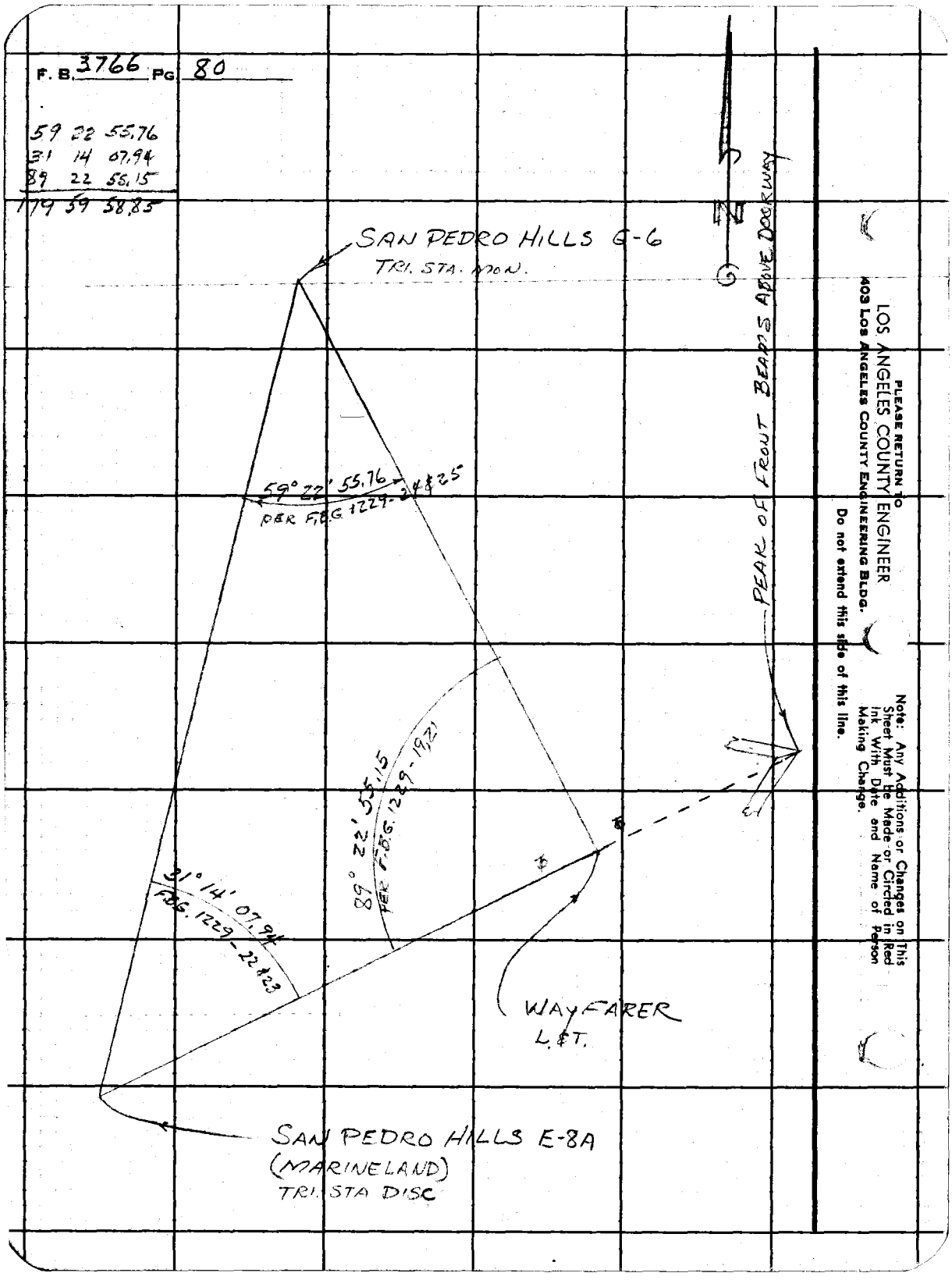
76F309S CE #310 6-62

F. B. 3766 PG 80

59 22 55.76
31 14 07.94
89 22 55.15
179 59 58.85



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Notes Ck'd by	Survey of PORTUGUESE BEND
Map No.	JN 0021.64 Tape Std °F
Office Work	Surveyed by G.E. DREIER
Checked	Notes G.E. DREIER Date 1-24-68
Date	Indexed C.J. GALLI FEB 14 '68

F.B. 3766 Pg. 81

PORTUGUESE BEND LANDSLIDE

JOB NO. 0021.64

ANGULAR POSITION CHECK OF "WAYFARER" JAN. 24 1968

DREIER
WILKS
SIEMANN
McKNIGHT

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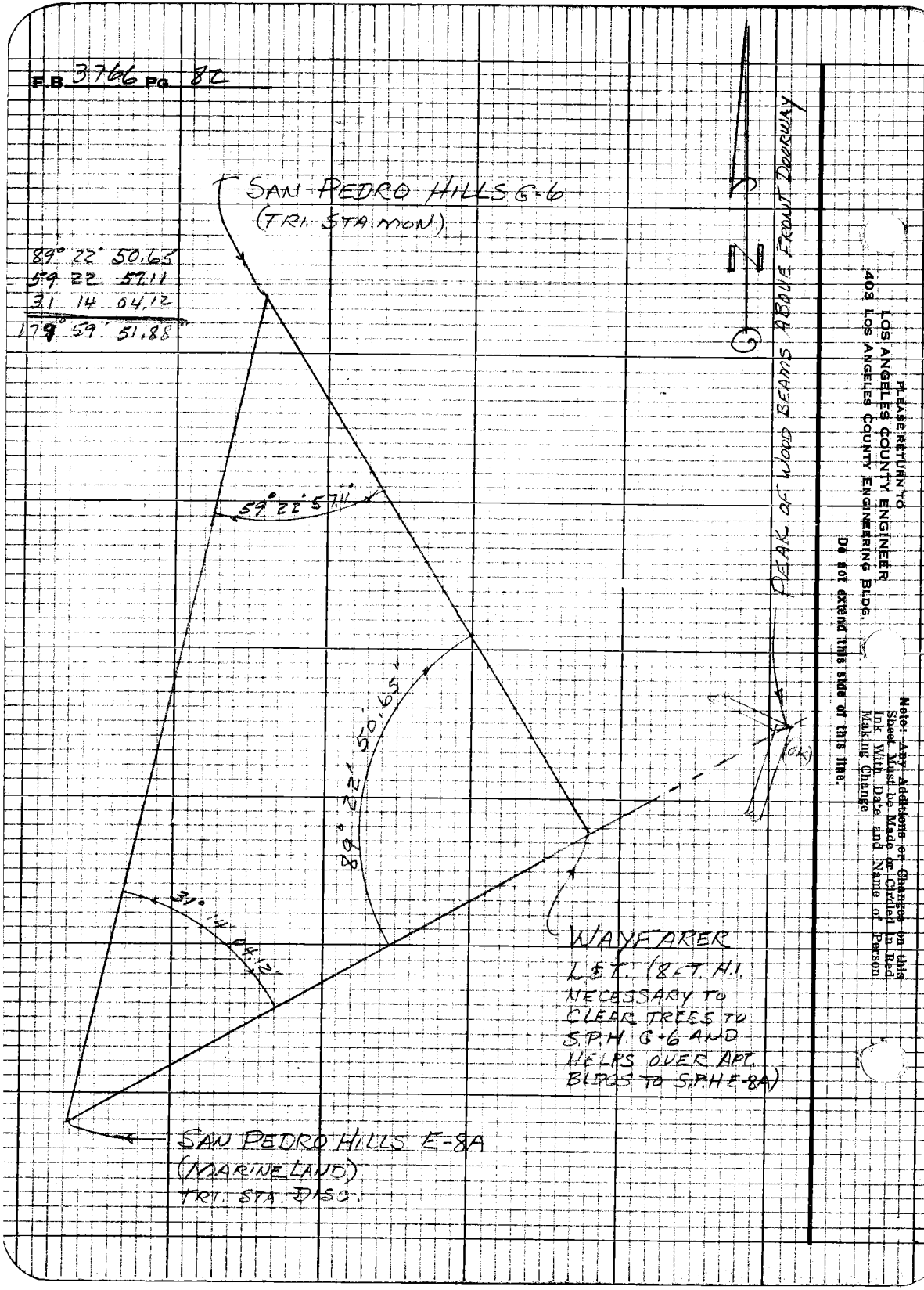
76P3098 CE #310 5-66

F.B. 3766 PG. 82



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F. B. 3766 Pg. 83

Profile No. | Notes Red. | Plotted | Job No. 0021.64 | Division No. 11
Date | Date | Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. | Notes Chkd. | Checked | Survey by DREIER | Notes | Date 1-29-68
Date | Date | Map No. | Indexed C. J. GALL | Date FB 14 68

JOB # 0021.64

PORTUGUESE BEND LANDSLIDE

LINE # 1 JAN. 1968 RERUN

DREIER
WILKS
McKNIGHT
SIEMANN

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

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761-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 1 JAN. 1968
BM P.B. #9	5340	409 520		404 180	BM P.B. # 9 ELEV. = 404.180 F.B. 2849-249
T.P	6 350	412 860	3 010	406 510	
P.I.-5B	5 003	415 179	2 684	410 176	B.M. P.I.-5B NARCISSA DR. & SWEETBAY, (N. ℄ INT) CE. MON.
T.P.	0 623	409 824	6 028	409 151	
T.B.M #30	0 468	405 848	4 444	405 380	T.B.M #30 NARCISSA DR. & N.E. COR SPKIN HDWL CIN [illegible] LANE
T.P.	6 792	407 724	4 916	400 932	
P.I. 4C	5 148	411 074	1 798	405 926	P.I.-4C NARCISSA DR & PLUMTREE RD. N.W. COR. CE. MON.
T.P.	11 171	419 920	2 325	408 749	
T.P.	10 860	430 161	0 609	419 311	
~~FRUIT TREE #1~~ T.P.	6 062	434 759	1 464	428 697	B.M. FRUIT TREE #1, N. OF NARCISSA DR., CE. MON.
FRUIT TREE #1	10 225	434 721	10 263	424 496	
T.P.	0225	426 883	8 063	426 658	
T.P.	5 538	421 613	10 808	416 075	
T.P.	6 537	425 159	2 991	418 622	
T.P.	6 048	426 589	4 618	420 541	
SPHILLS G-7	5 531	426 364	5 756	420 833	S.P. HILLS G-7 CTR STA.
R.M. 1	4621	426 317	4 668	421 696	S.P. HILLS G7 R.M. 1
R.M. 2	2 250	424 102	4 465	421 852	S.P. HILLS G7 R.M. 2
T.P	0 644	413 153	11 593	412 509	
T.P	1 137	403 818	10 472	402 681	
			10 404	393 414	

F. B. 3766 Pg. 84
Job No. 00.21.64 Division No. 11 Notes Red. Plotted Profile
Survey of P.B. LANDSLIDE Date No. X-Sec.
Survey by DREIER Notes DREIER Notes Chkd. Checked
Indexed C. J. GALLI Date Date No.

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.		
						LINE #1 JAN 1968
T.P. Cont.	0497	393 911		393 414	CONT.	
T.P.	1 908	383 953	11 866	382 045		
T.P.	4246	380 153	8 046	375 907		
B.M. M-3A	0240	373 275	7 118	373 035	P.I. 3A NARCISSA DR. & GINGER ROOT	SW SIDE
T.P.	1 678	364 551	10 402	362 873		
T.P.	2 104	355 506	11 149	353 402		
T.P.	0 680	344 603	11 583	343 923		
P.I. 1A	2 229	336 337	10 875	335 708	P.I. 1A NARCISSA DR. & [illegible]	[illegible]
T.P.[1]	0 368	325 049	11 656	324 681		
T.P.[2]	0 372	314 582	10 839	314 [illegible]		
T.P.	0 514	303 146	11 950	302 632		
T.P.	1 [illegible]	292 151	11 003	291 143		
T.P.	10 829	291 426	11 554	280 597		
S.P.H.H-7A Ecc 1	3 039	291 238	3 227	288 199	S.P. HILLS H-7A Ecc 1	
" " Ecc 4	3 026	291 255	3 009	288 229	" " Ecc. 4	
" " Ecc 2	2 843	291 109	2 989	288 266	" " Ecc. 2	
T.P.	10 786	291 383	10 512	280 597		
T.P.	11 909	302 [illegible]	0 513	290 870		
T.P.	11 974	314 564	0 189	302 590		
T.P.	11 573	325 895	0 242	314 322		
	11 550	336 237	1 208	324 687		

Profile No. X-Sec. No. Notes Red. Date. Plotted Date. Job No. 002164 Division No. 11 Survey of P.B. LANDSLIDE Notes Chkd. Checked Survey by DREIER Notes GEDREY Date 1-29-68 Date Date Map No. Indexed E.J. GALLI Date

F. B. 3766 Pg. 85

76L-296 S & E #307—1-56

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F. B. 3766 Pg. 86 Job No. 0221649 Division No. 11 Notes Red ____ Notes Chkd ____ Plotted ____ Profile ____
Survey of P.B. LANDSLIDE Date ____ Date ____ No. ____ X-Sec. ____
Survey by DREIER Notes DREIER Checked ____ Date ____
Indexed C.J. GALLI Date ____ Date ____ No. ____

STATION	B. S.	H. I.	F. S.	ELEV.		LINE 1
		336 237				
T.P.	0322	334 634	2 525	[illegible]	P-4	
T.P	0343	322 585	11 989	[illegible]		
T.P.	1 069	311 744	11 910	310 675		
			9 552	302 192	SET B. SHK. ST. ON	S ELY EDGE OF PAV.
					+ T.P. 5.00	− P-4 5.05 − 0.05
					+ T.P. 5.21	− P-4 5.40 − 0.09
			—	046	+ P-4 5.84	− T.P. 5.85 = −0.01
					+ P-4 4.95	− T.P. 4.97 = −0.02
P - 4				302152		4 \ .17 / .04
T.P.	1 066	303 258		302 192	B. SHK. ST	
T.P.	0 915	292 555	11 618	291 640		
T.P.	1 931	284 102	10 384	282 171		
P.B. 10	1 220	280 870	4 452	279 650	P.B. # 10	DRN.
T.P.	0519	270 618	10 771	270 099		
T.P.	0 239	260 245	10 612	260 006		
T.P.	1612	251 086	10 771	249 474		
T.P.	1232	241 553	10 765	240 321		
T.P.	0447	231 460	10 540	231 013		
T.P.	0785	222 098	10 147	221 313		

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.		LINE 1 JAN 1968
		222 098				
T.P.	5 625	217 296	10 427	211 67[illegible]		
W.F. #1	9 205	219 [illegible]	6 710	210 586	W.F. #1 SQ STK IN BOT. STEP AT N. PARKING LOT ENT.	
T.P.	5 282	2[illegible] 5[illegible]	6 477	[illegible]		
"WAYFARER"	1 349	[illegible]	5 138	213 455	WAYFARER L.&T. IN FRONT ENTRANCE	
T.P.	1 133	214 318	[illegible] 622	203 185		
T.P.	1 06[illegible]	194 4[illegible]	[illegible]	193 326		
T.P.	0 770	[illegible]	[illegible] 798	183 619		
T.P.	2 159	17[illegible] 9[illegible]	11 760	[illegible] 69[illegible]		
T.B.M. #31			7 651	167 1[illegible]	T.B.M. #31 [illegible] PA[illegible]	[illegible]

Profile Notes Red. ____ Plotted ____ Job No. 002464 Division No. 11 F. B. 3766 Pg. 87
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 1-29-68
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

F. B. 3766 Pg. 88 | Job No. 0021.64 | Division No. 11 | Notes Red | Plotted | Profile

Survey of P.B. LANDSLIDE | Date | Date | No.

Survey by DREIER | Notes | Notes Chkd | Checked | X-Sec.

Indexed C.J. GALLY | Date | Date | Date | No.

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

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76L-298 S & E #307—1-56

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F. B. 3766	Pg. 89
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE			
X-Sec. No.	Notes Chkd.	Checked	Survey by REELER	Notes WILKS	Date 2-1-68	
	Date	Date	Map No.	Indexed C. J. GALLI	Date	

J.N. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE # 2

FEB. 1968

WILKS
SIEMANN
McKNIGHT

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

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 2	FEB. 1968
PB # 9	11 972	416 152		404 180	PB #9 ELEV. = 404.18	F.B. 2849 - 149
AC #3	0 870	412 509	4 513	411 639	C.E. MON	
T.P.	7 335	412 124	7 720	404 789		
T.P.	6 221	414 450	3 895	408 229		
PB # 9B	9 390	419 210	4 630	409 820	B.S. W&T	
PB # 9A	8 163	422 391	4 982	414 228	B.S. W&T	
T.P.	11 085	431 151	2 325	420 066		
T.P.	11 551	442 172	0 530	430 621		
B-1-C	5 993	446 562	1 603	440 569	C.E. MON	
T.P.	11 612	457 993	0 181	446 381		
T.P.	11 639	469 432	0 200	457 793		
T.P.	10 823	479 684	0 571	468 861		
TANK	4 061	479 393	4 352	475 332	B.S.W.&T	
T.P.	0 292	468 020	11 665	467 728		
	0 621	456 659	11 982	456 038		
	0 485	445 411	11 733	444 926		
	0 265	434 069	11 607	433 804		
	0 220	422 434	11 855	422 214		
	0 625	411 151	11 908	410 526		
	0 277	400 339	11 089	400 062		
T.P.			9 278	391 061		

F. B. 3766 PG. 90
Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of P.B. LANDSLIDE Date No. X-Sec.
Survey by DREYER Notes WILKS Notes Chkd Checked
Indexed G. J. GALLI Date Date No.

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 2	FEB. 1968
T.P.	1 891	392 952		391 061		
S.B. # 2	10 288	393 580	9 660	383 292	B.S.W.&T	ELEV. TO BEGIN LINE 5 PAGE 108
T.P.	7 643	400 809	0 414	393 166		
T.P.	4 462	404 571	0 700	400 109		
P.T. # 1	2 630	402 439	4 762	399 809	B.S.W.&T	
B-1-B	7 830	402 349	7 920	394 519	2" I.P. CON. P&T	?
T.P.	0 306	394 675	7 980	394 369		
	0 215	383 570	11 320	383 355		
	0 225	371 835	11 960	371 610		
	0 580	360 993	11 422	360 413		
	11 771	369 220	3 544	357 449		
T.P.	11 969	380 934	0 255	368 965		
DAVIS	1 720	380 774	1 880	379 054	C.E. MON.	
T.P.	0 450	371 092	10 132	370 642		
T.P.	0 373	359 915	11 550	359 542		
T.P.	10 264	364 348	5 831	354 084		
RADIAL 1	5 228	358 046	11 530	352 818	WOW! C.E. MON	
	0 256	346 742	11 560	346 486		
	0 270	336 552	10 460	336 282		
	0 630	325 912	11 270	325 282		
A-3			10 681	315 231	C.E. MON	

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 0021.64 Division No. 11
X-Sec. No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
Notes Chkd. ____ Checked ____ Survey by DREIER Notes WILKS Date 2-1-68
Date ____ Date ____ Map No. ____ Indexed G.J. GALLI Date ____

F. B. 3766 Pg. 91

76L-298 S & E #307—1-56

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F. B. 3766 Pg. 92 Job No. 022164 Division No. 11 Notes Red. Plotted. Profile
Survey of PORTUGUESE BEND LANDSLIDE Date. Date. No. X-Sec.
Survey by DEFER Notes WILKES Notes Chkd. Checked. No.
Indexed C. J. WALL Date. Date. Date.

STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 2	FEB. 1968
A-3	10648	325 879		315 231		
A-4	3 850	326 109	3620	322 259	C.E. MON	"STABLE"
T.P.	11 700	326 935	10 874	315 235		
	11 501	338 053	0 383	326 552		
	11 671	349 398	0 326	337 727		
	10 645	358 471	1 572	347 826		
	0 990	352 613	6 848	351 623		
T.P.	0305	341 190	11 728	340 885		
BM 50-12	7 350	340 749	7 791	333 399	C.E. MON	
T.P.	0 292	330 056	10 985	329 764		
	0820	319261	11 615	318 441		
	0 561	307 912	11 910	307 351		
	0 282	296 503	11 691	296 221		
	0 330	285 063	11 770	284 733		
	0 195	273 580	11 678	273 385		
	0 424	262 737	11 267	262 313		
	0700	258 474	4 963	257 774		
	0198	247 311	11 361	247 113		
	0255	235 582	11 984	235 327		
	0 326	224 683	11 225	224 357		
T.P.			10 968	213 715		

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.		
T.P	0 533	214 248		213 715		
	3 470	205 875	11 843	202 405		
	1 880	202 531	5 224	200 651		
T.P.	9 323	209 786	2 068	200 463		
B.M. 50-13		~~1 60~~	1 600	208 186	C.E. [illegible] ELEV. =	208.10' F.B. 2849-250

Profile Notes Red. Plotted Job No. 002464 Division No. 11 F. B. 3766 PG. 93
No. Date Date Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. Checked Survey by DREIER Notes WILKS Date 2-1-68
No. Date Date Map No. Indexed C. J. GALLI Date

F. B. 3766 Pg. 94 | Job No. 0021.64 | Division No. | Notes Red | Plotted | Profile

Survey of PORTUGUESE BEND LANDSLIDE | Date | Date | No.

Survey by DREIER | Notes | Notes Chkd | Checked | X-Sec.

Indexed C.J. GALL | Date | Date | Date | No.

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

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76L-298 S & E #307—1-56

Profile No.	Notes Red.	Plotted	Job No. 0021.64	Division No. 11	F. B. 3766 Pg. 95
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes WILKS	Date 1-31-68
	Date	Date	Map No.	Indexed E. J. GALLI	Date

JOB # 0021.64

PORTUGUESE BEND LANDSLIDE

LINE # 3

JAN. 1968

WILKS
SIEMANN
McKNIGHT

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

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76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #3 JAN. 1968	
BM 34-15A	0 369	231 377		231 008	BM 34-15A ELEV. = 231.008	F.B. 2849-25
T.P.	0 236	219 915	11 698	219 679		
	2 920	212 054	10 781	209 134		
	0 321	203 507	8 868	203 186		
	0 200	192 361	11 346	192 161		
T.P.	0 250	180 930	11 681	180 680		
K-10 A	4 803	177 551	8 182	172 748	S.W. ET.	
K-10 B	6 870	176 488	7 933	169 618	2" I.P.	
			8 308	168 180	SPK OVER MON	
K-10	4 440	172 620	930 9 238	167 250	C.E. MON 0.93	Below THE SPK.
K-10 C	3 092	171 285	4 427	168 193	LET	
K-9 A	6 232	169 748	7 769	163 516	S.W. ET.	
K-9 B	7 628	169 476	7 900	161 848	2" I.P.	
T.P.	6 520	167 475	8 521	160 955		
K-9	5 877	165 282	8 070	159 405	3/4" I.P.	
K-8A	1 761	159 698	7 345	157 937	SPK. WET.	
K-8B	2 480	158 032	4 146	155 552	2" I.P.	
T.P.	0 669	146 806	11 895	146 137		
"	7 158	142 242	11 722	135 084		
K-5	6 009	142 031	6 220	136 022	C.E. MON	
T.P.	0 324	135 408	6 947	135 084		
T.P.	0 223	123 794	11 837	123 571		

F. B. 3766 PG. 96
Job No. 0021.64 Division No. 11 Notes Red. Plotted Profile
Survey of P.B. LANDSLIDE Date Date No.
Survey by DREIER Notes WILKS Notes Chkd Checked X-Sec.
Indexed C.J. GALLI Date Date Date No.

76L-298 S & E #307—1-56

64.3

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #3 JAN. 1968
		123 794			
T.P.	1 648	115 757	9 685	114 109	
W-3	1 271	111 680	5 348	110 409	C. E. MON
K-5 Aux.	0 675	102 434	9 921	101 759	" "
T.P.	0 262	91 484	11 212	91 222	
T.P.	0 220	80 046	11 658	79 826	
T.P.	0 905	69 202	11 749	68 297	
T.P.	0 228	58 930	10 500	58 702	LOOKED FOR BUT DIDNOT FIND K-4
T.P.	3 892	55 173	7 649	51 281	
T.B.M. #28	4 628	55 798	4 003	51 170	B.S. IN A ROCK
K-3A	[illegible]	51 950	5 761	50 037	C.E. MON
K-2A	11 032	54 032	8 950	43 000	2" I.F.
T.P.	5 990	56 027	3 995	50 037	
	5 450	57 318	4 159	51 868	
	0 518	56 521	585	55 733	
	0 309	44 770	11 790	44 461	
	0 260	33 562	11 468	33 302	
	0 932	22 764	11 730	21 832	
	6 484	19 027	10 221	12 543	* P.B. 6C IS UNDER LOTS OF WATER
T.P.	2 540	14 182	7 385	11 642	WILL RETURN AT LOW TIDE!
P.B. #8	6 920	14 979	6 123	8 059	SPK. IN TOP OF GROIN

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 00164 Division No. 11 F. B. 3766 Pg. 97
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes WILKS Date 1-31-68
Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

76L-298 S & E #307—1-56

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LINE #3 JAN. 1968

STATION	B. S.	H. I.	F. S.	ELEV.
		14 979		
T.P.	7 967	19 413	3 533	11 446
	11 601	24 154	6 860	12 553
	10 820	34 407	0 567	23 587
	11 370	44 685	1 092	33 315
	11 950	56 426	0 209	44 476
	11 904	68 128	0 202	56 224
	11 850	79 414	0 564	67 564
	11 832	90 693	0 553	78 861
T.P.	11 935	102 423	0 205	90 488
K-5 AUX.	11 186	112 969	0 640	101 783
T.P.	11 900	124 589	0 280	112 689
	11 503	135 894	0 198	124 391
	11 554	147 203	0 245	135 649
T.P.	11 848	158 699	0 352	146 851
K-8A	10 795	168 758	0 736	157 963
T.P.	11 457	179 531	0 684	168 074
	11 955	191 145	0 341	179 190
	11 585	202 296	0 434	190 711
	10 833	212 626	0 503	201 793
T.P.			0 550	212 076

F. B. 3766 Pg. 98
Job No. 0021.64 Division No. 11 Notes Red. Plotted Profile
Survey of P.B. LANDSLIDE Date Date No. X-Sec.
Survey by DREIER Notes WILKS Notes Chkd. Checked
Indexed C.J. GALLI Date Date Date No.

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #3	JAN. 1968
T.P.	11 238	223 314		212 076		
T.P.	8 562	231 516	0360	222 954		
TBM 34-15A			0488	231 028	TBM 34-15A ELEV. = 231.008	F.B. 2849 250
	0 198	12 741		12 543	* SEE PG. 97	
PB 6C	11 751	13 190	11 302	1 439	SPK IN THE REEF	
			0640	12 550		

Profile No. X-Sec. No. Notes Red. Date Notes Chkd. Date Plotted Date Job No. 002164 Division No. 11 Survey of PORTUGUESE BEND LANDSLIDE Survey by DREIER Notes WILKS Date 1-31-68 Map No. Indexed G. J. GALLI Date

F. B. 3766 PG. 99

F. B. 3766 Pg. 100 Job No. 002164 Division No. 11 Notes Red _____ Plotted _____ Profile

Survey of P.B. LANDSLIDE Date _____ Date _____ No. _____

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

Indexed E.J. GALLI Date _____ Date _____ Date _____ No. _____

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

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76L-298 S & E #307—1-56

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 101
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE			
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes SIEMANN	Date 2-1-68	
	Date	Date	Map No.	Indexed C.J. GALLI	Date	

JOB # 0021.64

PORTUGUESE BEND LAND SLIDE

LEVEL LINE NO. 4 FEB., 1968

WILKS
SIEMANN
MC KNIGHT

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

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76-1-298 CE 307 2-63

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE # 4
T.B.M. 34-15A	3 230	234 238		231 008	T.B.M. 34-15A ELEV. 231.008 ADJ.
T.P.	4 388	231 201	7 425	226 816	PER F.B. 2849-250
T.P.	2 413	227 208	6 406	224 795	
T.P.	1 458	218 808	9 858	217 350	
BM.50-13A	3 428	213 746	8 490	210 318	B.M. 50-13A SPK & T. IN SLY ASPHALT CURB C.E. MON.
B.M.50-13	1 616	209 737	5 625	208 121	B.M. 50-13 ELEV. 208.101 ADJ. F.B. 2849-250
T.P.	10 810	213 899	6 648	203 089	
T.P.	11 871	225 407	0 363	213 536	
T.P.	11 310	236 031	0 686	224 721	
T.P.	11 431	246 393	1 069	234 962	
T.P.	11 502	256 387	1 508	244 885	
T.P.	11 786	267 025	1 148	255 239	
T.P.	11 383	277 330	1 078	265 947	
T.P.	11 680	288 689	0 321	277 009	
T.P.	10 539	297 934	1 294	287 395	
T.P.	11 622	308 922	0 634	297 300	
T.P.	8 687	315 136	2 473	306 449	
SHIELDS	4 835	315 177	4 794	310 342	SHIELDS ELEV 310.314 C.E. MON. PER F.B. 3766-32
T.P.	1 847	308 296	8 728	306 449	
T.P.	0 210	297 504	11 002	297 294	
T.P.	0 826	287 546	10 784	286 720	

F.B. 3766 Pg. 102 Job No. 0021.64 Division No. 11 Notes Red. Plotted Profile
Survey of PORTUGUESE BEND LANDSLIDE Date 2-2-68 Date No. X-Sec.
Survey by DREIER Notes SIEMANN Notes Chkd. Checked
Indexed C.J. GALLI Date Date Date No.

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 4	
		287 546				
T. P	0557	277 456	10 647	276 899		
T. P	0600	267 604	10 452	267 004		
T. P	0 433	256 107	11 930	255 674		
T. P	0 228	246 030	10 305	245 802		
T. P	0 352	234 545	11 837	234 193		
T. P	0 467	223 572	11 440	223 105		
T.P.	0 716	213 052	11 236	212 336		
T.P.	2 652	204 445	11 259	201 793		
STA. J-5	10 014	205 932	8 527	195 918	J-5 C. E. MON	
T. P.	7 813	213 327	0 418	205 514		
RADIAL 2 ECC. 2	5 420	215 439	3 308	210 019	C. E. MON. USED IN PLACE OF ECC. 1	
J-4	0 505	209 660	6 284	209 155	C. E. MON	
J-3	6 045	207 463	8 242	201 418	C. E. MON.	
T. P.	0 173	203 060	4 576	202 887		
T. P	5 387	197 345	11 102	191 958		
J-1	11 918	202 398	6 865	190 480	J-1. 3/4" I.P.	
T. P.	11 309	213 455	0 252	202 146		
T. P	11 460	224 323	0 592	212 863		
T.P.	11 962	235 946	0 339	223 984		
T.P.	11 713	247 343	0 316	235 630		

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021644 Division No. 11 F.B. 3766 Pg. 103
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes SIEMAN Date 2-2-68
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

76-[illegible] 398 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE NO. 4
		247 343			
T.P.	11 218	257 942	0 619	246 724	
T.P.	10 898	268 253	0 587	257 355	
T.P.	11 775	279 141	0 887	267 366	
T.P.	11 080	289 767	0 454	278 687	
T.P.	7 002	295 003	1 766	288 001	
BLAKESLY	0 535	294 669	0 869	294 134	BLAKESLEY C.E. MON. (PREVIOUSLY IN LINE 5)
T.P.	0 192	284 104	10 757	283 912	
T.P.	0 424	272 935	11 593	272 511	
T.P.	1 051	262 609	11 377	261 558	
T.P.	0 497	251 273	11 833	250 776	
T.P.	1 028	240 708	11 593	239 680	
T.P.	1 104	230 646	11 166	229 542	
STA. J-1A	2 437	225 255	7 828	222 818	STA. J-1A C.E. MON.
T.P.	0 264	214 122	11 397	213 858	
T.P.	0 484	203 356	11 250	202 872	
T.P.	4 234	197 045	10 545	192 811	
T.P.	2 244	189 571	9 718	187 327	
T.P.	8 614	196 575	1 610	187 961	
T.P.	5 405	195 162	6 818	189 757	
BM 34-17C (U.S.C.&G.S. X977)	4 474	194 352	5 284	189 878	BM 34-17C (U.S.C.&G.S. X977 P.U. DR.) KGH 11/24/74

F.B. 3766 Pg. 104

Job No. 002164 Division No. 11 Notes Red. Plotted Profile

Survey of PORTUGUESE BEND LANDSLIDE Date 2-2-68 Date No. X-Sec.

Survey by DREIER Notes SIEMANN Notes Chkd. Checked No.

Indexed C.J. GALLI Date Date Date No.

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.		
		194 352				
T. P.	5786	192816	7322	187030		
T. P.	6402	192866	6352	186464		
T. P.	1032	183352	10546	182320		
T. P	0243	172039	11556	171796		
B.M. 34-18	2190	170801	3428	168611	B.M. 34-18	
T. P	1493	162422	9872	160929		
T.P.	4062	163352	3132	159290		
P#3	7177	165260	5269	158083	P#3 L & TAG	
T. P.	5511	167539	3232	162028		
P#2	7303	170704	4138	163401	P#2 L & TAG	
T.B.M.#31			3567	167137	T.B.M.#31 P.V. DR. S. AT ENTRANCE TO WAYFARER ELEV 167.101 PER FB. 2849-250	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11 F.B. 3766 Pg. 105
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes SIEMANN Date 2-2-68
Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

F. B. 3766 Pg. 106 Job No. 0021.64 Division No. " Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND LANDSLIDE Date _____ Date _____ No. _____

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

Indexed C. J. GALLI Date _____ Date _____ Date _____ No. _____

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

76-L.298 CE 307 2-63

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766 Pg. 107
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by G.E.D.	Notes	Date 2-5-68
	Date	Date	Map No.	Indexed C. J. GALLI	Date

JOB # 0021.64

PORTUGUESE BEND LANDSLIDE

LINE # 5

FEB. 1968

DREIER
WICKS
SIEMANN
McKNIGHT

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

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76-L-208 CE 307 2-63

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #5
S.B. #2	3 162	386 454		383 292	S.B. #2 ELEV. = 383.292 F.B. 3766-97
S.B #2A	0 576	379 893	7 137	379 317	L.&T.
	1 400	370 091	11 202	368 691	
	2 127	360 631	11 587	358 504	
S.B. #3	10 252	363 186	7 697	352 934	S.B. 3, B.SPK. W.&T.
	11 956	374 855	0 287	362 899	
	11 508	385 513	0 850	374 005	
	6 614	391 717	0 410	385 103	
S.B. #1	11 700	399 340	4 077	387 640	S.B. 1 B SPK. W.&T.
WEST FIX	5 435	399 298	5 477	393 863	W. FIX, MON.
T.P.	4 729	392 372	11 655	387 643	
T.P.	0 357	391 650	1 079	391 293	
T.P.	0 175	380 043	11 782	379 868	
"	0 579	368 646	11 976	368 067	
"	1 094	359 030	10 710	357 936	
"	1 014	348 626	11 418	347 612	
"	0 670	338 043	11 253	337 373	
"	1 918	329 049	10 912	327 131	
H-2	1 017	321 439	8 627	320 422	H-2
T.P.	0 524	311 992	9 971	311 468	
H-4	6 149	311 484	6 657	305 337	H-4

F.B. 3766 Pg. 108
Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of P.B. LANDSLIDE Date Date No.
Survey by G.E.D. Notes G.E. DREIER Notes Chkd. Checked X-Sec.
Indexed C.J. GALLI Date Date No.

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 5	
T.P	1 200	311 484 301 400	11 284	300 200	CONT.	
T.P	10 861	302 369	9 892	291 508		
T.P	11 528	313 448	0 449	301 920		
T.P	8 937	321 846	0 539	312 909		
T.P.	11 187	331 605	1 428	320 418		
T.P	4 744	334 917	1 432	330 173		
P.T. #5	0 711	333 196	2 432	332 485	P.T. #5 N.E. COR. B SPK W&T	PEPERTREE & LIME TREE
T.P	0 958	323 294	10 860	322 336		
	0 734	312 860	11 168	312 126		
P.T. #6 AUX 3	1 055	304 986	7 929	304 931	P.T. #6 AUX 3 B. SPK W. & T.	HOFTE. PEPER TREE & KUMQUAT
T.P	0 815	294 930	11 871	294 115		
"	0 388	284 816	10 502	284 428		
"	3 384	276 848	11 352	273 464		
"	0 567	266 850	10 565	266 283		
	0 258	256 039	11 069	255 781		
	1 032	245 291	11 780	244 259		
	0 796	234 276	11 811	233 480		
	0 579	222 993	11 862	222 414		
	1 904	214 378	10 519	212 474		
	3 998	207 514	10 862	203 516		
B.M.C.			6 036	201 478	B.M.C	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021.64 Division No. ____
X-Sec. No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND
Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 2-5-68
Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

F.B. 3766 Pg. 109

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #5	
B.M. C	2 902	204 380		201 478	CONT.	
T.P.	11 483	212 919	2 944	201 436		
K-1	1 978	212 959	1 938	210 981	K-1	
T.P	0 954	202 383	11 530	201 429		
T.P.	3 799	196 669	9 513	192 870		
U.S.C.&G.S. X-977			6 738	189 931	U.S.C.&G.S. X-977 ALSO	SEE PAGE 104

F.B. 3766 PG. 110 Job No. 0021.64 Division No. Notes Red Plotted Profile
Survey of PORTUGUESE BEND LANDSLIDE Date Date No. X-Sec.
Survey by DREIER Notes DREIER Notes Chkd. Checked
Indexed Date Date Date No.

F. B. 3766 Pg. 171

Profile No. Notes Red. Plotted Job No. 00264 Division No. 11
Date Date Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. Notes Chkd. Checked Survey by DREIER Notes C. J. GALLI Date 1-30-68
Date Date Map No. Indexed Date

JOB NO. 00264
PORTUGUESE BEND LANDSLIDE
LINE NO. 6
JAN. 1968

DREIER
WILKS
SIEMANN
MCKNIGHT

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

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761-298 S & E #307—1-56

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE No. 6 JAN 1968
B.M. 50-9	8 067	1007 602		999 535	B.M. 50-9 ELEV. 999.535 PER F.B. 2849-249
T.P.	0 925	997 605	10 922	990 680	
T.P.	0 623	986 978	11 250	986 355	
T.P.	0 433	975 749	11 664	975 314	
T.P.	0 221	964 471	11 499	964 250	
T.P.	1 825	955 661	11 635	953 836	
T.B.M. # 11	4 374	951 735	8 300	947 361	T.B.M. # 11 PK. SPK. IN ROCK WALL, W. SIDE CRENSHAW 7.3 S.W. OF STEP DOWN
T.P.	1 064	943 181	9 618	942 117	
Z-1	0 796	936 140	7 837	935 344	Z-1 C.E. MON.
	0 903	927 053	9 990	926 150	
	1 340	918 623	9 770	917 283	
	0 900	909 141	10 382	908 241	
	0 298	899 387	10 042	899 099	
	0 328	889 037	10 678	888 709	
	0 426	878 978	10 485	878 552	
	0 548	869 412	10 114	868 864	
B.M. 50-10	6 023	864 278	11 156	858 256	B.M. 50-10
	0 664	854 831	10 112	854 167	
	0 414	844 486	10 759	844 072	
	0 856	834 345	10 997	833 489	
	0 318	822 830	11 833	822 512	

F. B. 3766 Pg. 112
Job No. 0021.64 Division No. 11 Notes Red. Plotted Profile
Survey of P.B. LANDSLIDE Date Date No.
Survey by DREIER Notes DREIER Notes Chkd. Checked X-Sec.
Indexed C.J. GALLI Date Date Date No.

76L-298 S & E #307—1-56

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STATION	B. S.	H. I.	F. S.	ELEV.		LINE 6
		822 230				
T.P.	1 582	814 066	10 346	812 484		
T.P.	0 478	804 294	10 250	803 816		
Y-4	0 707	794 5[illegible]	10 47[illegible]	793 8[illegible]	Y-4 2" I.P. & B.[illegible]	
T.P.	4 727	787 851	11 403	783 [illegible]		
T. BM #12	10 432	787 731	10 552	777 [illegible]	T.B.M. #12	
T.P.	0 768	782 80[illegible]	5 692	782 039		
	1 301	772 857	[illegible] 251	771 556		
	0 698	762 955	10 602	762 255		
	0 387	752 466	10 874	752 079		
	0 329	742 486	10 309	742 157		
	0 168	731 770	10 884	731 6[illegible]		
	0 [illegible]	721 119	10 860	720 910		
	0 419	[illegible]	11 339	709 780		
	0 329	698 568	11 960	698 [illegible]		
	0 341	686 897	12 012	686 556		
T.B.M. 13	0 268	676 477	10 688	676 209	T.B.M. #13	
T.P.	0 482	664 974	11 985	664 49[illegible]		
T.P.	1 204	655 188	10 990	653 984		
B.M. 50-11			7 467	647 721	B.M. 50-11	

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 002464 Division No. 11 F. B. 3766 Pg. 113
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 1-30-68
Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date FEB 1[illegible]

F. B. 3766 Pg. 114

Job No. 0021.64 Division No. 11 Notes Red. Plotted Profile

Survey of P.B. LANDSLIDE Date Date No.

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

Indexed C. J. GALLI Date 1 4 88 Date Date No.

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

76L-298 S & E #307—1-56

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No.
	Date	Date	Survey of PORTUGUESE BEND	
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes Date 7-16-68
	Date	Date	Map No.	Indexed C. J. GALLI Date AUG 12 '68

F.B. 3766 Pg. 115

JOB No. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE No. 1, JULY 1968, RELEVELING

DREIER
WILKS
SIEDMANN
MCKNIGHT
MOORE, R.A

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

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76-L-298 CE 307 2-63

76-L-298 CE 307 2-63

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F.B. 3766 Pg. 116 Job No. 0221.6 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of PORTUGUESE BEND LANDSLIDE Date ____ No. ____ X-Sec. ____
Survey by DAKER Notes SIEMANN Notes Chkd. ____ Checked ____
Indexed C. J. GALLI Date ____ Date ____ No. ____

STATION	B.S.	H.I.	F.S.	ELEV.	LINE #1 JULY, 1968	
B.M. P.B. 9	4386	408566		404180	B.M. P.B. 9, EL. 404.180	F.B. 2849-249
T.P.	6552	410655	4463	404103		
T.P.	5024	413284	2395	408260		
P.I. 5B	5034	415212	3106	410178	B.M. P.I. 5B NARCISSA DR. & SWEETBAY	CEMON
T.P.	1145	411410	4947	410265		
T.B.M. #30	0858	406215	6053	405357	T.B.M. #30 NARCISSA DR. N.E. COR. & CINAMIN LANE	SPK. IN HEADWALL
T.P.	6192	406193	6214	400001		
T.P.	5965	408751	3407	402786		
P.I. 4C	4349	410287	2813	405938	P.I. 4C NARCISSA DR. & N.W. COR. FRUIT TREE RD.	C.E. MON.
T.P.	9867	419668	0486	409801		
T.P.	10740	427316	1092	418576		
T.P.	7802	436414	0704	428612		
FRUIT TREE #1	11934	436444	11904	424510	B.M. FRUIT TREE #1 N. OF NARCISSA DR.	C.E. MON.
T.P.	0398	429012	7830	428614		
T.P.	5756	423562	11206	417806		
T.P.	7023	425240	5345	418217		
T.P.	5885	426065	5060	420180		
R.M. #1	4631	426338	4358	421707	B.M. S.P. HILLS G-7. R.M. #1	
S.P. HILLS G-7	5467	426312	5493	420845	B.M. S.P. HILLS G-7 CTR. STA.	
R.M. #2			4452	421860	B.M. S.P. HILLS G-7	

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.		
					LINE NO. 1	JULY 1968
B.M. #2	0345	422.205		421.860	S.P. HILLS G-7 B.M. #2	CONT. LINE #1
T.P.	0403	414.920	7.685	414.517		
T.P.	1074	407.112	8.882	406.038		
T.P.	0261	397.030	10.343	396.769		
T.P.	0268	386.847	10.451	386.579		
T.P.	2859	382.368	7.338	379.509		
B.M. P.I. 3.A.	0227	373.249	9.346	373.022	B.M. P.I. 3.A. NARCISSA OR	S.W. SIDE GINGERROOT C.E. MON.
T.P.	0269	361.856	11.662	361.587		
T.P.	2126	352.045	11.937	349.919		
T.P.	0609	342.565	10.089	341.956		
B.M. P.I. 1.A.	3284	336.987	8.862	333.703	B.M. P.I. 1.A. NARCISSA DR	SPRUCE & GINGERROOT R.R. W.S.C.E.
T.P.	1152	326.607	11.532	325.455		
T.P.	1037	316.875	10.769	315.838		
T.P.	0212	306.879	10.208	306.667		
T.P.	0282	295.321	11.840	295.039		
T.P.	2462	286.099	11.684	283.637		
T.P.	10903	291.063	5.939	280.160		
H-7A ECC. 4	3347	291.587	2.825	288.238	B.M. S.P. HILLS H-7A	ECC. 4
ECC. 2	3302	291.579	3.310	288.277		ECC. 2
ECC. 1			3.368	288.211		ECC. 1

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 00216 Division No. 11
X-Sec. No. ____ Date ____ Date ____ Survey of P.B. LANDSLIDE
Notes Chkd. ____ Checked ____ Survey by DEBUS Notes SEPTEMBER Date 7-16-68
Date ____ Date ____ Map No. ____ Indexed G.J. GALLI Date ____

F.B. 3766 Pg. 117

76-L-298 CE 307 2-63

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10349

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE # 1	
ECC. #1	4311	292522		288211	B.M. S.P. HILLS H-7A ECC #1	CONT. LINE 1
ECC #3	4177	292459	4240	288282	B.M. ECC. #3	
S.P.H. H-7A	4007	292384	4082	288377	B.M. S.P. HILLS H-7A CRT. STA.	
T.P	7529	288047	11866	280518		
T.P.	11519	299131	0435	287612		
T.P.	11301	309320	1112	298019		
T.P.	10774	319607	0485	308833		
T.P.	11272	329994	0885	318724		
T.P.	10442	340192	0254	329740		
B.M. P.I. 1A	0614	334313	6485	333699		
T.P.	0245	323782	10776	323537		
T.P.	0278	312531	11529	312253		
			10349	302182		
					WEST ↑ BT. SPK. +4.96 −5.15 −0.19	EAST ↑ +6.25 −6.32 −0.07
						W. +5.32 −5.42 −11
						E. +5.65 −5.67 −0.02
P-4				−0.10 302.07	−0.13	−0.065 MEAN = 0.10
				CONT.		

F.B. 3766 Pg. 118

Job No. 002164 Division No. 11 Notes Red ____ Plotted ____ Profile ____

Survey of P.B. LANDSLIDE Date ____ Date ____ No. ____

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

Indexed C.J. GALLI Date ____ Date ____ No. ____

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 1 CONT.	
T.P.	0 284	302 466		302 182	BT. SPK.	LINE # 1 CONT.
T.P.	0 421	291 145	11 742	290 724		
T.P.	1 262	283 779	8 628	282 517		
B.M. P.B.10	0 516	280 167	4 128	279 651	B.M. P.B. 10. C.E. MON	
T.P.	0 325	269 184	11 308	268 859		
T.P.	0 178	257 754	11 608	257 576		
T.P.	0 261	247 383	10 632	247 122		
T.P.	0 640	237 515	10 508	236 875		
T.P.	0 225	227 244	10 496	227 019		
T.P.	0 812	217 564	10 492	216 752		
T.P.	4 922	214 875	7 611	209 953		
T.P.	5 928	215 532	5 271	209 604		
W.F. # 1	7 988	218 560	4 960	210 572	W.F. # 1 SQ. SPK. IN BOT. STEP AT N PARKING LOT FWY.	
T.P.	5 101	217 625	6 036	212 524		
WAYFARER	0 578	214 035	4 168	213 457	WAY FARER L.&T. IN FRONT ENTRANCE	
T.P.	0 547	202 722	11 860	202 175		
T.P.	0 687	192 390	11 019	191 703		
T.P.	0 489	181 579	11 300	181 090		
T.P.	5 130	176 315	10 394	171 185		
T.B.M. # 31			9 120	167 195	T.B.M. # 31 L&T. PALOS VERDES DR. AT ENTRANCE TO WAY FARER CHAPEL	

Profile No. ___ Notes Red ___ Date ___ Plotted ___ Date ___ Job No. 202164 Division No. 11
X-Sec. No. ___ Notes Chkd. ___ Date ___ Checked ___ Date ___ Survey of P.B. LANDSLIDE
Survey by DREIER Notes SIEMANN Date 7-17-66
Map No. ___ Indexed C.J. GAL Date ___

F.B. 3766 Pg. 119

F.B. 3766 Pg. 120 | Job No. 002164 Division No. 11 Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND Date _____ Date _____ No. _____

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

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

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

76-L-298 CE 307 2-63

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766 Pg. 121
	Date	Date	Survey of PORTUGUESE BEND		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date
	Date	Date	Map No.	Indexed C. J. GALLI	Date AUG 1 2 '68

JOB # 0021.64

PORTUGUESE BEND LANDSLIDE
LINE NO. 2, JULY 1968

DREIER
WILKS
SIEMANN
MOORE, RA.

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

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76-L-288 CE 307 2-63

76-L-298 CE 807 2-63

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F.B. 3766 Pg. 122 Job No. 02214 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of P.B. LANDSLIDE Date ____ Date ____ No. ____ X-Sec. ____
Survey by G.E.D. Notes DON (7-18-68) Notes Chkd. ____ Checked ____ No. ____
Indexed C.J. GALLI Date ____ Date ____

LINE #2 JULY, 1968

STATION	B.S.	H.I.	F.S.	ELEV.	
PB # 9	11.955	416.135		404.180	PB#9 EL = 404.180 F.B. 2849-249
AC # 3	0.781	412.416	4.500	411.635	C.E. MON.
T.P.	7.613	412.807	7.222	405.194	
PB # 9B	8.055	417.867	2.995	409.812	B.S.W.&T.
PB # 9A	9.010	423.208	3.669	414.198	B.S.W.&T.
T.P.	11.741	430.699	4.250	418.958	
T.P.	11.850	442.214	0.335	430.364	
B-1-C	5.924	445.513	2.625	439.589	C.E. MON.
T.P.	11.892	457.085	0.320	445.193	
T.P.	11.342	467.862	0.565	456.520	
T.P.	8.950	476.460	0.352	467.510	
TANK	1.110	476.400	1.170	475.290	B.S.W.&T.
T.P.	0.237	466.116	10.521	465.879	
	0.608	455.604	11.120	454.996	
	0.373	444.284	11.693	443.911	
	0.432	433.645	11.071	433.213	
	0.568	422.438	11.775	421.870	
	0.732	411.316	11.854	410.584	
	0.340	399.906	11.750	399.566	
T.P.	3.423	392.539	10.790	389.116	
S.B. # 1			5.049	387.490	B.S.W.&T.

76-L-298 CE 307 2-63

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	LINE #2 JULY, 1968
S. B. #1	4 140	391 630		387 490	
S. B. #2	11 067	394 356	8 341	383 289	B.S.W.&T.
T.P.	8 241	401 374	1 223	393 133	
P.T. #1	2 140	401 084	2 430	398 944	B.S.W.&T.
B-1-B	6 741	400 075	7 750	393 334	2" I.P. CON. PLUG.
T.P.	1 032	397 412	3 695	396 380	
	0 450	386 150	11 712	385 700	
	0 188	375 190	11 148	375 002	
	0 243	363 511	11 922	363 268	
	1 595	353 665	11 441	352 070	
	8 222	361 397	0 490	353 175	
	11 980	372 585	0 792	360 605	
T.P.	11 010	382 892	0 703	371 882	
DAVIS	4 600	382 515	4 977	377 915	C.E. MON
T.P.	0 769	371 695	11 589	370 926	
	1 94	361 202	11 687	360 008	
	11 487	361 062	11 627	349 575	
T.P.	3 350	361 182	3 230	357 832	
RADIAL 1	6 410	358 612	8 980	352 202	
T.P.	0 190	347 748	11 054	347 558	
T.P.			11 566	336 182	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by G.E. DREIER Notes DON Date 7-18-68
Date ____ Date ____ Map No. ____ Indexed C.J. GALLI Date ____

F.B. 3766 Pg. 123

76-L-298 CE 307 2-63

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403 LOS ANGELES COUNTY ENGINEERING BLDG.

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F.B. 3766 PG. 124 Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of P.B. LANDSLIDE 7-18-68 Date ____ Date ____ No. ____
Survey by G.E.D. Notes D.L.W. Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed C.J. GALLI Date ____ Date ____ No. ____

STATION	B.S.	H.I.	F.S.	ELEV.	LINE #2
T.P.	0 348	336 530		336 182	
T.P.	0 335	325 397	11 468	325 062	
A-3	11 440	326 188	10 649	314 748	C.E. MON
A-4	3 867	326 100	3 955	322 233	C.E. MON
T.P.	11 882	326 634	11 348	314 752	
	11 015	336 988	0 661	325 973	
	11 830	345 656	3 162	333 826	
	10 532	355 551	0 637	345 019	
	0 522	344 565	11 508	344 043	
T.P.	3 789	336 636	11 718	332 847	
B.M.50-12	7 190	340 016	3 810	332 826	C.E. MON.
T.P.	0 220	333 011	7 225	332 791	
	0 366	321 994	11 383	321 628	
	0 289	311 651	10 632	311 362	
	1 161	300 901	11 911	299 740	
	0 903	291 706	10 098	290 803	
	0 301	281 018	10 889	280 817	
	0 986	270 445	11 559	269 459	
	0 405	260 121	10 729	259 716	
	0 249	249 237	11 133	248 988	
T.P.			11 757	237 480	

76-L-298 CE 307 2-63

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Do not extend notes this side of this line.

STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 2	
T. P.	0.248	237.728		237.480		
	0.370	226.818	11.280	226.448		
	0.532	215.665	11.685	215.133		
	0.403	204.347	11.721	203.944		
	1.915	201.982	4.280	200.067		
	8.024	207.[illegible]8	2.288	199.[illegible]		
T. P.	5.820	210.096	3.[illegible]2	204.276		
B.M. 50-13			1.945	208.151	C. E. MON.	END OF THE LINE

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11 F.B. 3766 Pg. 125
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by G. E. DREIER Notes DON Date 7-18-68
Date ____ Date ____ Map No. ____ Indexed C. J. GRIFFIN Date ____

F. B. 3766 Pg. 126 | Job No. 0021.64 Division No. _____ Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND. Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

76-L-298 CE 307 2-63

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Profile No.	Notes Red	Plotted	Job No. 002164	Division No. 11	F.B. 3766 Pg. 127
	Date	Date	Survey of P.B. LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes SIEMANN	Date 7-19-68
	Date	Date	Map No.	Indexed C. J. GALLI	Date AUG 12 '68

JOB # 0021.64

PORTUGUESE BEND LANDSLIDE

LINE #3

JULY 1968

DREIER
WILKS
SIEMANN
MC KNIGHT
MOORE

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

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Do not extend notes this side of this line.

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76-L-298 CE 307 2-63

76-L-298 CE 307 2-63

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Do not extend notes this side of this line.

STATION	B.S.	H.I.	F.S.	ELEV.	LINE # 3
B.M. 34-15A	0 342	231 350		231 008	B.M. 34-15A EL = 231.008 F.B. 2849-250
T.P.	0 547	220 925	10 972	220 378	
T.P.	3 590	212 829	11 686	209 239	
T.P.	2 884	208 956	6 757	206 072	
T.P.	0 316	197 329	11 943	197 013	
T.P.	0 241	186 697	10 873	186 456	
T.P.	3 423	178 532	11 588	175 109	
K-10 A	5 770	178 528	5 774	172 758	K-10 A SPK W & T
K-10 B	7 388	177 013	8 903	169 625	K-10 B 2" I.P.
K-10	8 842	177 024	8 831	168 182 0 930 167 252	SPK. OVER MON. K-10 C.E. MON. 0.930 BELOW SPK.
K-10 C	2 732	170 936	8 820	168 204	K-10 C L & T
K-9 A	3 494	167 007	7 423	163 513	K-9 A SPK. W. & T.
K-9 B	5 148	167 004	5 151	161 856	K-9 B. 2" I.P.
T.P	3 255	166 887	3 372	163 632	
K-9	4 135	163 552	7 470	159 417	K-9 3/4" I.P.
K-8 A	3 470	161 418	5 604	157 948	K-8 A SPK. W. & T.
K-8 B	2 116	157 671	5 863	155 555	K-8 B. 2" I.P.
T.P	1 406	148 671	10 406	147 265	
T.P	5 120	142 450	11 341	137 330	
K-5	6 385	142 425	6 410	136 040	K-5 C.E. MON.
T.P.			5 080	137 345	

F.B. 3766 PG. 128
Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of P.B. LANDSLIDE Date No.
Survey by DREIER Notes SIEMANN Notes Chkd. Checked
Indexed C. J. GALLI Date Date No.

76-L-298 CE 307 2-63

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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.	LINE NO. 3
T.P.	0382	137 727		137 345	
T.P	0380	126 322	11 785	125 942	
T.P.	0283	116 921	9 684	116 638	
W-3	1624	112 038	6 507	110 414	W-3 C.E. MON.
K-5 AUX	0523	102 285	10 276	101 762	K-5 AUX C.E. MON.
T.P.	0859	91 315	11 829	90 456	
TP	0804	80 855	11 264	80 051	
T.P.	0380	69 992	11 243	69 612	DID NOT FIND K-4
T.P.	0512	58 662	11 842	58 150	
T.P.	2548	54 243	6 967	51 695	
T.B.M. # 28	7 378	57 913	3 708	50 535	T.B.M. #28 BT. SPK. IN ROCK
K-3A	4590	54337	8 166	49 747	K-3A C.E. MON.
K-2A	10 483	54177	10 643	43 694	K-2A 2" I.P.
T.P.	6433	56 326	4 284	49 893	
T.P.	0990	50 159	7 157	49 169	
T.P.	2106	41 457	10 808	39 351	
T.P.	0731	36 965	5 223	36 234	
T.P.	4 806	29 881	11 890	25 075	
T.P.	0328	19 298	10 911	18 970	
T.B.M.	0 431	9 494	10 235	9 063	T.B.M. TOP OF ROCK AT S.E. COR. ROCK WALL
TP			4 993	4 501	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 202164 Division No. 11 F.B. 3766 Pg. 129
Date ____ Date ____ Survey of P.B. LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes SIEMANN Date 7-19-68
Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

76-L-298 CE 307 2-63

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F. B. 3766 Pg. 130 Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of P.B. LANDSLIDE Date ____ Date ____ No. ____
Survey by PREIER Notes SIEMANN 7-19-68 Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed C. J. GALL Date ____ Date ____ No. ____

STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 3
T.P.	3 920	8 421		4 501	T.P. CONT. LINE # 3
T.P	5 388	8 779	5 030	3 391	
T P	5 602	9 623	4 758	4 021	
P.B. # 8	1 459	9 508	1 574	8 049	P.B. # 8
T.P.	4 490	8 510	5 488	4020	
T.P.	4 302	8 621	4 191	4319	
T.P.	8 360	12 708	4 273	4 348	
T.B.M	3 166	12 232	3 642	9 066	T.B.M. TOP OF ROCK A
P.B.&C.	10 753	12 345	10 640	1 592	
T.P.	11 602	22 404	1 543	10 802	
T.P	12 000	31 378	3 026	19 378	
T.P.	11 137	42 298	0 217	31 161	
T.P.	8 515	49 774	1 059	41 259	
T.P.	8 863	58 005	0 632	49 142	
T.P.	4 742	54 614	8 233	49 872	
T.B.M. 28	5 526	56 017	4 023	50 491	
	8 542	60 372	3 947	52 070	
	11 534	71 564	0 282	60 030	
	11 866	81 965	1 465	70 099	
	11 500	93 223	0 242	81 723	
	10 850	102 693	1 380	91 843	

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #3
		102 693			
K-5 AUX.	11 713	113 475	0 931	101 762	
T.P.	11 373	124 596	0 252	113 223	
	11 890	135 325	1 161	123 435	
	11 591	146 448	0 468	134 857	
	11 979	158 206	0 207	146 241	
	12 000	168 261	1 959	156 261	
	8 085	175 202	1 144	167 117	
	11 900	184 687	2 415	172 787	K-10A
	11 840	196 312	0 185	184 502	
	11 353	207 118	0 580	195 762	
	7 532	212 557	2 090	205 025	
	11 188	222 793	0 952	211 605	
	10 617	233 211	0 279	222 514	
B.M. 34-15A			2 190	231 021	B.M. 34-15A

Profile Notes Red ____ Plotted ____ Job No. 6021.64 Division No. 11 F.B. 3766 Pg. 131
No. ____ X-Sec. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
No. ____ Notes Chkd. ____ Checked ____ Survey by PREIER Notes ZON Date 7-19-66
Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

F.B. 3766 PG. 132

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

Survey of _____ Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

76-L-298 CE 307 2-63

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 133
	Date	Date	Survey of P.B. LANDSLIDE			
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes SIEMANN	Date 7-18-68	
	Date	Date	Map No.	Indexed C. J. GALLI	Date AUG 12 68	

JOB # 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 4

JULY 1968

DREIER
WILKS
SIEMANN
MCKNIGHT
MOORE

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

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76-L-298 CE 307 2-63

76-L-298 CE 307 2-63

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408 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.	LINE # 4
T.B.M. 34-15A	3 725	234 733		231 008	T.B.M. 34-15A EL. = 231.008 ADJ. PER F.B. 2849-250
T.P	4 306	232 291	6 748	227 985	
T.P.	2 892	228 883	6 300	225 991	
T.P.	2 660	223 375	8 168	220 715	
T.P.	2 965	216 657	9 683	213 692	
B.M. 50-13A	3 440	213 762	6 335	210 322	B.M. 50-13A. SPK. & T. IN S'LY. ASPHALT CURB.
B.M. 50-13	1 795	209 922	5 635	208 127	B.M. 50-13 EL. = 208.101 C.E. MON. ADJ. F.B. 2849-250
T.P.	2 290	205 358	6 854	203 068	
T.P	11 650	212 928	4 080	201 278	
T.P.	11 584	223 055	1 457	211 471	
T.P.	11 687	234 173	0 569	222 486	
T.P.	11 601	245 484	0 290	233 883	
T.P.	11 207	255 731	0 960	244 524	
T.P.	11 190	266 716	0 205	255 526	
T.P.	11 590	277 651	0 655	266 061	
T.P.	11 561	288 371	0 841	276 810	
T.P	11 352	298 518	1 205	287 166	
T.P	11 460	309 799	0 179	298 339	
T.P.	4 990	313 190	1 599	308 200	
T.P	4 741	314 851	3 080	310 110	
SHIELDS			4 520	310 331	CONT.

F.B. 3766 Pg. 134 Job No. 022164 Division No. 11 Notes Red. Plotted Profile
Survey of P.B. LANDSLIDE Date Date No. X-Sec.
Survey by DREIER Notes SIEMANN & DREIER Notes Chkd. Checked
Indexed C.J. GALLI Date Date Date No.

76-L-298 CE 307 2-63

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LINE # 4 CONT.

STATION	B.S.	H.I.	F.S.	ELEV.	
SHIELDS	4 560	314 891		310 331	CONT.
T.P.	5 781	314 774	5 898	308 993	
T.P.	0 250	303 024	12 000	302 774	
T.P.	0 535	292 509	11 050	291 974	
T.P.	0 858	282 693	10 674	281 835	
T.P.	0 745	271 601	11 837	270 856	
T.P.	0 388	262 018	9 971	261 630	
T.P.	0 632	251 250	11 400	250 618	
T.P	0 265	239 994	11 521	239 729	
T.P	0 445	228 561	11 878	228 116	
T.P	0 330	217 296	11 595	216 966	
T.P.	0 765	208 086	9 975	207 321	
T.P.	4 968	204 534	8 520	199 566	
J-5	9 860	205 617	8 777	195 757 ✓	MON.
	9 564	214 163	1 018	204 599	
RADIAL Ecc 2	4 851	214 384	4 630	209 533	MON.
J-4	1 497	210 140	5 741	208 643	MON.
J-3	6 270	206 700	9 710	200 430	MON.
T.P.	0 232	199 166	7 766	198 934	
J-1	11 989	201 425	9 730	189 436	¼ IP.
T.P.			1 076	200 349	

Profile Notes Red. ____ Plotted ____ Job No. 0021.64 Division No. ____
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND
X-Sec. Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 7-29-68
No. ____ Date ____ Date ____ Map No. ____ Indexed C. I. GALL Date ____

F.B. 3766 Pg. 135

76-L-298 CE 307 2-63

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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.	LINE #4		
T.P.	11 790	212 139		200 349			
T.P	11 630	223 440	0 329	211 810			
T.P.	10 953	233 892	0 501	222 939			
J-1A	11 765	233 854	11 803	222 089	MON.		
T.P.	11 720	245 209	0 365	233 489			
T.P.	11 700	255 901	1 008	244 201			
T.P.	11 310	266 859	0 352	255 549			
T.P.	10 978	277 246	0 591	266 268			
T.P	10 955	287 622	0 579	276 667			
T.P.	10 818	298 141	0 299	287 323			10 964
BLAKSLEY	8 220	301 865	4 496	293 645	MON.	11.788 +10.027 1.761	8220
T.P	3 510	294 411	10 964	290 901			
T.P.	0 616	287 697	7 330	287 081			
T.P.	0 466	276 182	11 981	275 716			
T.P.	0 342	264 569	11 955	264 227			
T.P.	0 301	253 870	11 000	253 569			
T.P.	0 368	242 423	11 815	242 055			
T.P	0 211	230 748	11 886	230 537			
T.P.	0 925	219 775	11 898	218 850			
T.P.	0 738	209 841	10 672	209 103			
B.M. C			8 545	201 296	RD. DEPT. MON		

CONT.

F.B. 3766 Pg. 136 Job No. 0021.64 Division No. Notes Red Plotted Profile
Survey of PORTUGUESE BEND Date 7-30-68 Date No. X-Sec.
Survey by DREIER Notes DREIER Notes Chkd. Checked No.
Indexed C.J. GALLI Date Date Date No.

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #4
B.M.C.	1040	202.336		201.296	LINE
T.P.	5182	196.069	11.449	190.887	
~~BM 34-17S~~ U.S.C.&G.S. X-977)	2.270	192.041	6.270	189.771	U.S.C.&G.S. MON. = BM 34-17C RCH 11/2/14
T.P	4970	191.598	5.413	186.628	
T.P	3911	192.129	3.380	188.218	
T.P.	1.322	181.621	11.830	180.299	
T.P.	2.822	172.443	12.000	169.621	
B.M. 34-18	2963	171.601	3.805	168.638	MON
T.P.	1507	162.638	10.470	161.131	
P-3	7195	165.316	4.517	158.121	L & TAG IN CURB
T.P.	6047	167.548	3.815	161.501	
T.P.	6.401	168.721	5.228	162.320	
P-2	7470	170.903	5.288	163.433	L & TAG IN CURB
T.B.M. #31			3.735	167.168	T.B.M. #31 ELEV. 167.101 PER F.B. 2849-250 PALOS VERDES DR., STA. DIV. AT ENTRANCE TO WAYFARERS CHAPEL

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. ____ F.B. 3766 Pg. 137
No. ____ X-Sec. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
No. ____ Notes Chkd. ____ Checked ____ Survey by ____ Notes ____ Date ____
Date ____ Date ____ Map No. ____ Indexed C.J. GALLI Date ____

F.B. 3766 PG. 138 | 0021.64

Job No. Division No. Notes Red Plotted Profile

Survey of PORTUGUESE BEND Date Date No.

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

Indexed Date Date Date No.

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

76-L-298 CE 307 2-63

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No.	F.B. 3766 Pg. 139
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date 7-30-68
	Date	Date	Map No.	Indexed C. J. GALLI	Date AUG 12 '68

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 5

JULY 1968 RELEVELING

DREIER
WILKS
SIEMANN
MOORE, R.A.

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

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76-L-298 CE 307 2-63

76-L-298 CE 207 3-60

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F.B. 3766 Pg. 140 | Job No. 002164 | Division No. | Notes Red | Plotted | Profile No.
Survey of PORTUGUESE BEND | Date 7-20-66 | Date | X-Sec. No.
Survey by DREIER | Notes G.E. DREIER | Notes Chkd | Checked | Date | No.
Indexed C.J. GALLI | Date | Date

STATION	B.S.	H.I.	F.S.	ELEV.	LINE # 5	
S.B. #2	3 308	386 597		383 289	S.B. #2 ELEV. 383 289 PER F.B. 3766 - 123	
S.B. 2A	6 215	379 516	7 296	379 301	S.B. 2A L & T.	
T.P	0 644	368 738	11 322	368 194		
T.P	2 321	361 229	9 830	358 908		
S.B. 3	11 568	364 489	8 308	352 921	S PK W. & T	
T.P	11 902	375 315	1 076	363 413		
T.P	11 987	387 005	0 297	375 018		
T.P.	5 796	392 096	0 705	386 300		
S.B. #1	11 610	399 140	4 566	387 530	SPKW. & T.	
WEST FIX	5 430	399 276	5 306	393 840	MON.	
T.P.	4 570	392 105	11 735	389 535		
T.P.	0 428	391 910	0 623	391 482		
T.P.	0 552	380 502	11 960	379 950		
T.P.	0 576	369 170	11 908	368 594		
T.P.	0 537	358 057	11 650	357 520		
T.P.	1 165	347 850	11 372	346 685		
T.P	0 250	336 708	11 392	336 458		
T.P	2 555	327 391	11 872	324 836		
H-2	1 453	321 417	7 427	319 964	MON.	
T.P.	1 760	311 412	11 765	309 652		
H-4			6 503	304 909	2" I.P. CONT.	

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 5	
H-4	6 379	311 288		304 909	CONT	
T.P	0 402	299 725	11 965	299 323		
	11 989	304 341	7 373	292 352		
	11 528	315 664	0 205	304 136		
	8 180	323 443	0 401	315 263		
T.P	10 765	333 631	0 577	322 866		
P.T. # 5	0 405	332 439	1 597	332 034	P.T. # 5 PEPPERTREE & LIMETREE N.E COR B.SPK.W/T	
T.P	0 243	320 727	11 955	320 484		
T.P	1 762	310 875	11 614	309 113		
P.T. 6 AUX 3	1 970	306 425	6 420	304 455	PT. #6 AUX 3 PEPPERTREE & KUMQUAT B.SPK.W/T 46 FT. E.	
T.P	0 649	296 263	10 811	295 614		
	0 235	284 513	11 985	284 278		
	4 197	277 647	11 063	273 450		
	0 588	266 944	11 291	266 356		
	4 218	259 722	11 440	255 504		
T.P.	0 323	253 925	6 120	253 602	*	
	0 340	242 294	11 971	241 954		
	0 730	231 054	11 970	230 324		
	1 308	221 238	11 124	219 930		
T.P	6 710	211 496	10 452	210 786		
B.M.C			10 163	201 333	CONT.	

Profile Notes Red ____ Plotted ____ Job No. 00 21.64 Division No. 11
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 7-31-68
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

F. B. 3766 Pg. 141

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.		
B.M. "C"	1 040	202 373		201 333	CONT	
T.P.	5 182	196 106	11 449	190 924		
T.P.	11 621	201 429	6 298	189 808		
T.P.	11 862	212 897	0 394	201 035		
K-1	2 102	213 008	1 991	210 906	MON.	
T.P.	0 300	201 340	11 968	201 040		
U.S.C.&G.S. X 977			11 528	189 812	U.S.C.&G.S. X 977	
					PALOS VERDES DR. S. & PEPPERTREE	N.W. COR.

F. B. 3766 Pg. 142 | Job No. 0021.64 | Division No. | Notes Red | Plotted | Profile
Survey of PORTUGUESE BEND LANDSLIDE | Date | Notes Chkd. | Date | Checked | Date | No. | X-Sec. | No.
Survey by DREIER | Notes DREIER | Date
Indexed C. J. GALLI | Date

Profile No.	Notes Red	Plotted	Job No. 002164	Division No.	F.B. 3766	Pg. 143
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE			
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes	Date	
	Date	Date	Map No.	Indexed C. J. GALLI	Date AUG 12 '68	

JOB No. 002164

PORTUGUESE BEND LANDSLIDE

LINE NO. 6

JULY 1968 RELEVELING

DREIER
WILKS
SIEMANN
MOORE

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

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76-L-298 CE 307 2-63

76-L-295 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.		
B.M. 50-9	11 473	1011 008		999 535	B.M. 50-9 ELEV. 999.535 PER F.B. 2849-249	
T.P.	0 381	999 911	11 478	999 530		
T.P.	0 241	988 708	11 444	988 467		
T.P.	0 310	977 156	11 862	976 846		
T.P.	1 487	967 019	11 624	965 532		
T.P.	1 178	957 749	10 448	956 571		
T.B.M. # 11	7 573	954 960	10 362	947 387	T.B.M. #11, W. SIDE OF CRENSHAW, P.K. SPK. IN ROCK WALL	73' S.W. OF STEP DOWN
T.P.	0 278	944 770	10 468	944 492		
Z-1	1 051	936 401	9 420	935 350	Z-1 MON	
T.P.	1 119	926 559	10 961	925 440		
T.P.	0 299	916 385	10 473	916 086		
T.P.	0 310	904 702	11 993	904 392		
T.P.	0 801	894 696	10 807	893 895		
T.P.	0 870	884 318	11 248	883 448		
T.P.	0 494	874 313	10 499	873 819		
T.P.	1 974	864 312	11 975	862 338		
B.M. 50-10	5 623	863 872	6 063	858 249	B.M. 50-10	
T.P.	0 432	852 540	11 764	852 108		
T.P.	0 548	841 928	11 160	841 380		
T.P.	0 274	830 252	11 950	829 978		
			11 963	818 289	CONT.	

F.B. 3766 Pg. 1434 Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of PORTUGUESE BEND LANDSLIDE Date ____ No. ____ X-Sec. ____
Survey by DREIER Notes ____ Notes Chkd. ____ Checked ____ Date ____ No. ____
Indexed K. J. GALLI Date ____ Date ____

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE 6 CONT	
T.P	0 649	818 938		818 289		
T.P.	1 489	808 776	11 651	807 287		
T.P	6003	804 021	10 758	798 018		
Y - 4	9202	802 961	10262	793 759	Y-4	2" I.P.
T.P.	0 563	791 800	11 724	791 237		
T.P.	5057	786 940	9 917	781 883		
T.B.M.# 12	9 687	786 972	9 655	777 285	T.B.M.# 12	SPK
T.P	0 345	775 356	11 961	775 011		
T.P.	0 246	763 596	12 006	763 350		
T.P	0 229	752 175	11 650	751 946		
T.P.	0 953	741 206	11 922	740 253		
T.P	0 287	730 045	11 448	729 758		
T.P.	1 242	719 407	11 880	718 165		
T.P.	0 622	708 469	11 560	707 847		
T.P.	0 376	696 977	11 868	696 601		
T.P.	0 706	686 164	11 519	685 458		
T.B.M.# 13	0 355	676 535	9 984	676 180	T.B.M.# 13	SPK IN HDWL.
T.P.	0 533	665 340	11 728	664 807		
T.P.	0 978	655 158	11 160	654 180		
B.M. 50-11			7 465	647 693	B.M. 50-11	MON.

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021.64 Division No. ____ F.B. 3766 Pg. 143B
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 8-1-68
Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date ____

F.B. 3766 Pg. 144 Job No. 0021.64 Division No. _____ Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND LANDSLIDE Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

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78-L-298 CE 307 2-63

Notes Ck'd by	Survey of PORTUGUESE BEND
Map No.	JN 0021.64 Tape Std °F
Office Work	Surveyed by G.E. DREIER
Checked	Notes G.E.D. Date JULY 1968
Date	Indexed J. GALLI AUG 3 2 '68

F.B. 3766 PG. 145

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

ANGULAR POSITION CHECK OF WAFARER

JULY 25, 26, 1968

DREIER
WILKS
SIEMANN
MOORE, R.A.

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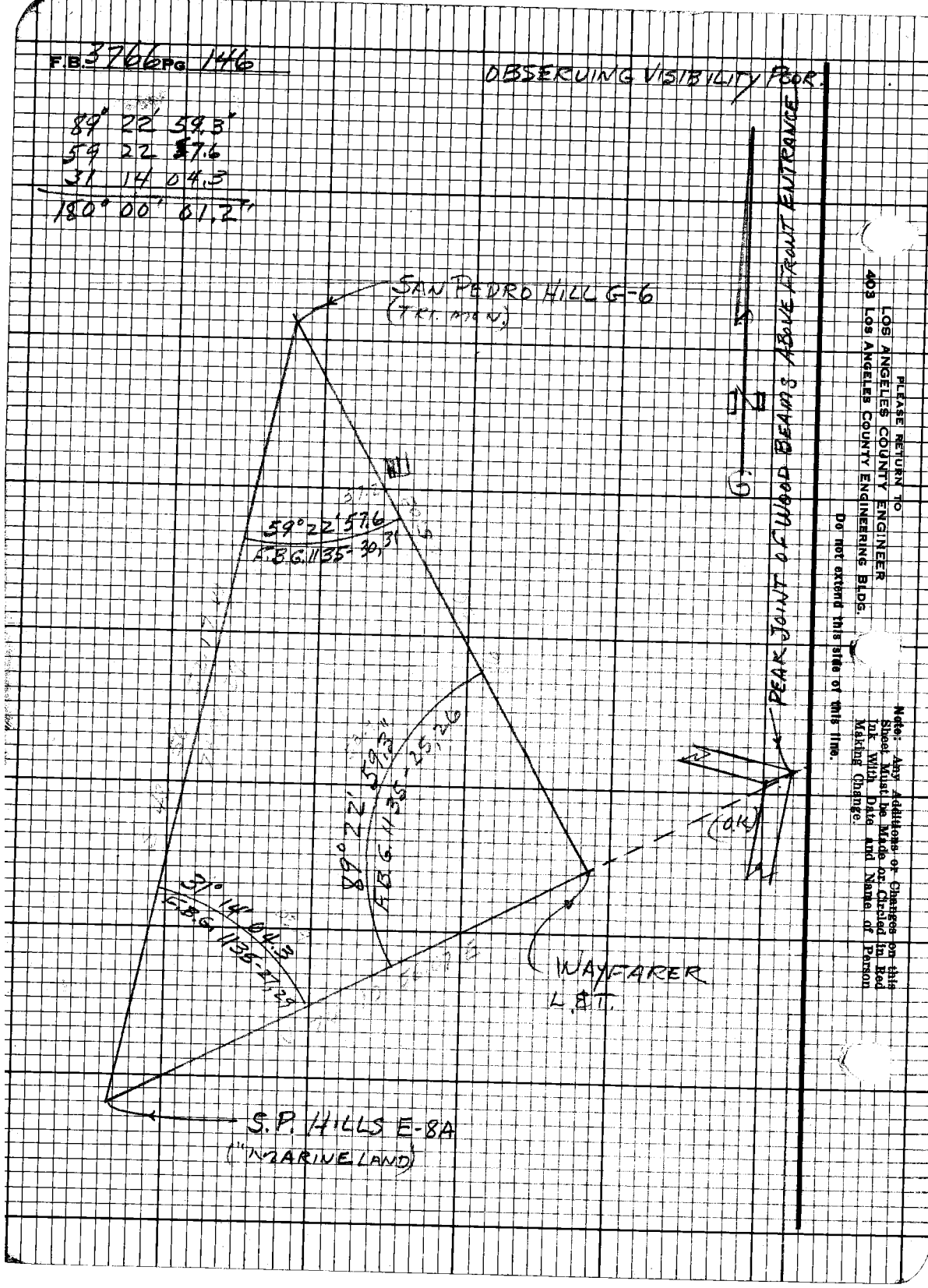
75F3098 CE# 310 9.67

F.B. 3766 Pg. 146

OBSERVING VISIBILITY POOR.

89°	22'	59.3"
59	22	57.6
31	14	04.3
180°	00'	01.2"



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F.B. 3766 Pg. 147

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No.
	Date	Date	Survey of Portuguese Bend	
X-Sec. No.	Notes Chkd.	Checked	Survey by Dreier	Notes J.M.M. Date 2-4-69
	Date	Date	Map No.	Indexed [redacted] Date [redacted]

JOB NO. 0021.64

PORTUGUSE BEND LANDSLIDE

LINE NO. 1, FEB. 1969 RELEVELING

Dreier
Maldonado
Siemann
McKnight
Stroud

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

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76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #1 Feb. 1969
BM P.B #9	6247	410427		404180	BM P.B. 9, El. 404.180 F.B. 2849-249
T.P.	6220	413779	2868	407559	
BM P.I. 5B	5015	415201	3593	410186	BM P.I. 5B Narcissus Dr. & Sweet Bay C.E.Mon
T.P.	3095	410307	7989	407212	
T.B.M. #30	1390	406749	4948	405359	T.B.M #30 Narcissa Dr. & Cinnamin Lane N.E. Cor.
T.P.	7292	407097	6944	399805	SPK in Hd. wall
	6258	409603	3752	403345	
P.I. 4C	5371	411301	3673	405930	P.I. 4C Narcissa Dr. & Plum Tree Rd. N.W. Cor. C.E.Mon
T.P.	9359	419811	0849	410452	
T.P.	10660	430155	0316	419495	
T.P.	6170	436033	0292	429863	
BM Fruit Tree	11441	435934	11540	424493	BM Fruit Tree #1 N. of Narcissa Dr. C.E.Mon
T.P.	0423	429060	7297	428637	
T.P.	4399	421490	11969	417091	
T.P.	8005	425117	4378	417112	
T.P.	5880	425770	5227	419890	
T.P.	5827	426873	4724	421046	
RM #1	4862	426546	5189	421684	B.M. S.P. Hills G-7 RM #1
S.P. Hills G-7					BM S.P. Hills G-7 Ctr. Sta. Destroyed J.M.M
RM #2			4707	421839	BM S.P. Hills G-7 R.M. #2

F.B. 3766 PG. 148
Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of Portuguese Bend Landslide Date Date No. X-Sec.
Survey by G.E. Dreier Notes Maldonado Notes Chkd. Checked
Indexed G.L. GALLI Date Date No.

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	Line No. 1	Feb. 1969
RM #2	0.932	422.771		421.839	S.P. Hills 8-7 RM #2	Cont. Line #1
T.P.	0.292	412.843	10.220	412.551		
T.P.	1.632	407.457	7.019	405.825		
T.P.	0.448	396.626	11.279	396.178		
T.P.	1.444	386.261	11.809	384.817		
T.P.	3.764	382.053	7.972	378.289		
BM P.I. 3-A	0.730	373.753	9.030	373.023	BM P.I. 3-A Narcissa Dr. & Ginger Root S.W. Side	
T.P.	0.433	362.716	11.470	362.283		
T.P.	0.668	351.930	11.454	351.262		
T.P.	1.123	342.086	10.967	340.963		
BM P.I. 1-A	5.362	339.064	8.384	333.702	BM P.I. 1-A Narcissa Dr. & Fig Tree Rd. W. Side	
T.P.	1.199	329.121	11.142	327.922		
T.P.	0.527	318.623	11.025	318.096		
T.P.	0.250	307.239	11.634	306.989		
T.P.	0.465	295.884	11.820	295.419		
T.P.	3.617	287.809	11.692	284.192		
T.P.	10.250	290.706	7.353	280.456		
Ecc #4			2.517	288.189	H 7-A, Ecc. #4	
Ecc #2			2.488	288.218	H 7-A, Ecc. #2	
Ecc #1	2.881	291.034	2.553	288.153	H 7-A, Ecc. #1	
Ecc #3			2.744	288.290	Ecc #3	

Profile No. ____ Notes Red. ____ Plotted ____ Job No. 8021.04 Division No. 11
X-Sec. No. ____ Date ____ Date ____ Date ____ Survey of Portuguese Bend Landslide
Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey by Dreier Notes JMM Date 2-4-69
Map No. ____ Indexed ____ Date ____

F.B. 3766 Pg. 149

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	
S.P. Hills H-7A Ecc 3	2.688	290.978		288.290	S.P. Hills H-7A Ecc. #3
S.P. Hills H-7A	0.629	288.959	2.648	288.330	S.P. Hills H-7A Ctr. Sta.
T.P.	7.451	288.324	8.086	280.873	
T.P.	10.483	298.437	0.370	287.954	
T.P.	10.718	308.742	0.413	298.024	
T.P.	10.468	318.963	0.247	308.495	
T.P.	10.831	329.604	0.190	318.773	
T.P.	10.711	340.068	0.247	329.357	
T.P.	0.414	334.110	6.372	333.696	P.I. 1A
T.P.	0.653	322.786	11.977	322.133	
T.P.	0.923	312.146	11.563	311.223	
T.P.			9.994	302.152	W. ↑ E. ↑
					B.S.K. +4.96 − 6.47
					P-4 −5.19 +6.51
				−0.135	− .23 + .04
P-4				302.027	MEAN = −0.135
T.P.	0.532	302.684		302.152	
T.P.	0.810	291.542	11.952	290.732	
T.P.	2.744	282.323	11.963	279.579	
P.B. 10			2.682	279.641	P.B. 10 C.E. man

.23
.04
2 | .27
−.135

F.B. 3766 Pg. 150

Job No. 0021.64 Division No. 11 Notes Red Plotted Profile

Survey of PORTUGUESE BEND LANDSLIDE Date No. X-Sec.

Survey by DRF Notes Checked

Indexed B.H. GALLI Date Date No.

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE 1
P.B 10	1.739	281.380		279.641	
T.P	0.592	270.213	11.759	269.621	
T.P.	0.408	259.188	11.408	258.780	
T.P.	1.238	249.832	10.594	248.594	
T.P	0.326	241.027	9.131	240.701	
T.P.	0.819	230.056	11.760	229.237	
T.P	0.222	218.420	11.555	218.198	
T.P.	11.528	216.335	6.413	2.2007	
T.P.	3.764	216.150	3.949	212.386	
W.F. 1	7.082	217.582	5.650	210.500	W.F #1 SQ SPK IN BOT. STEP
T.P	5.089	217.368	5.303	212.279	
WAYFARER	0.342	213.720	3.990	213.378	
T.P	0.613	202.725	11.608	202.112	
T.P.	0.313	191.242	11.796	190.929	
T.P.	0.379	179.647	11.974	179.268	
T.P	5.771	174.879	10.539	169.108	P.V.DR. SO. & ENT. TO WAF. CHAP.
T.B.M. #31			7.748	167.131	T.B.M. #31 L.& T. IN CTR. DIV.

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.E. DREIER Notes DREIER Date 2-18-69
No. ____ Date ____ Date ____ Map No. ____ Indexed [redacted] Date ____

F.B. 3766 Pg. 157

F.B. 3766 Pg. 152 | Job No. 0021.64 | Division No. | Notes Red | Plotted | Profile

Survey of PORTUGUSE BEND | Date | Date | No.

Survey by DREIER | Notes | Notes Chkd. | Checked | X-Sec.

Indexed | Date | Date | Date | No.

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

76-L-298 CE 307 2-63

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F.B. 3766 Pg. 153

Profile No.	Notes Red	Plotted	Job No. 0021.64 Division No. 11
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER Notes SIEMAN Date 2-13-69
	Date	Date	Map No. Indexed [illegible] Date

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 2 FEB. 13, 1969

DREIER
MALDONADO
MCKNIGHT
SIEMAN
STROUD

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

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76-L-298 CE 307 2-63

76-L-298 CE 327 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE #2	
B.M. P.B. #9	10759	414939		404180	B.M. P.B. #9 EL. = 404.180	1965 ADJ. EL.
T.P.	4212	415451	3700	411239	PER F.B. 2849 - 249	
A.C. #3	1382	413009	3824	411627	C.E. MON.	
T.P.	7245	412124	8130	404819		
T.P.	6120	414369	3875	408249		
P.B. #9 B	7242	417069	4542	409827	BT. SPK. W. & T.	
P.B. #9 A	8318	422521	2866	414203	BT. SPK. W. & T.	
T.P.	10532	432701	0352	422169		
T.P.	10048	442396	0353	432348		
B-1C	3968	442571	3773	438623	C.E. MON.	
T.P.	9838	452026	0403	442188		
T.P.	11104	462933	0197	451829		
T.P.	7481	469896	0518	462415		
T.P.	9968	479503	0361	469535		
TANK	1136	476529	4160	475343	BT. SPK. W. & T.	
T.P.	0602	465646	11485	465044		
T.P.	0353	455251	10748	454898		
T.P.	0280	443968	11563	443688		
T.P.	0643	434063	10548	433420		
T.P.	0479	423104	11438	422625		
T.P.			11885	411219		

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

Plotted ____ Date ____ Checked ____ Date ____

Notes Red. ____ Date ____ Notes Chkd. ____ Date ____

Division No. ____ Job No. 202166 Notes SIEMON 2-13-69 Date ____

Survey of POLITGUESE BEND LANDSLIDE

Survey by DREIER

Indexed [redacted]

P.B. 3766 Pg. 154

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 2	CON'T.
T.P.	1051	412270		411219		
T.P.	1020	401432	11858	400412		
	2538	392270	11700	389732		
S.B. # 1	4459	391869	4860	387410	BT. SPK. & W. & T.	
S.B. # 2	9623	392920	8572	383297	BT. SPK. & W. & T.	
T.P.	7157	399847	0230	392690		
P.T. #	2481	400460	1868	397979		
T.P.	5089	396551	8993	391462		
B- 1B.	8601	400550	4602	391949	2" I.P. CONC. PLUG	
T.P.	2958	395347	8161	392389		
T.P.	0857	384694	11510	383837		
T.P.	1017	374111	11600	373094		
T.P.	0683	364165	10629	363462		
T.P.	0753	353043	11875	352290		
T.P.	9865	354058	8850	344193		
T.P.	8178	361366	0870	353188		
T.P.	11238	370499	2105	359261		
T.P.	8848	379102	0245	370254		
DAVIS	1982	378604	2480	376622	C.E. MON.	
T.P.	0690	368209	11085	367519		
T.P.	0768		10212	357997		

Profile Notes Red ____ Plotted ____ Job No. 2021.64 Division No. ____
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LAND SLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by DREIER Notes SIGNOR Date 2-13-69
No. ____ Date ____ Date ____ Map No. ____ Indexed R.L. GALLI Date ____

F.B. 3766 Pg. 155

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE # 2	CONT.
T.P.	0768	358 765				
T.P.	4788	357 243	6310	352 455		
RADIAL # 1	6658	358 173	5722	351 515	C.E. MON.	See Re Run 3-6-69
T.P.	1293	348362	11 104	347 067	ERROR OF 1 FT	
T.P.	1130	332 180	11 312	337 050		
T.P.	0415	326765	11 830	326 350		
A-3	11 543	326 708	11 600	31~~5 165~~ 4 302 ✓	C.E. MON	
A-4	3 365	326 668	3 405	~~323 303~~ ✓	C.E. MON. 322 440	
T.P.	11 508	326 666	11 510	315 158		
T.P.	10 948	337 424	0 190	326 476		
T.P.	10 662	347 758	0 328	337 096		
T.P.	4 358	351 384	0 732	347 026		
T.P.	3 218	354 181	0 421	350 963		
T.P.	0 333	342 817	11 697	342 484		
T.P.	6 990	338 325	11 482	331 333		
B.M. 50-12	7 953	341 288	4 990	~~333 335~~ ✓ 332.472	C.E. MON	
T.P.	0 462	330 292	11 458	329 830		
T.P.	0 388	319 056	11 624	318 668		
T.P.	0 391	307 615	11 832	307 224		
T.P.	0 182	296 675	11 122	296 493		
T.P.			11 702	284 973		

F.B. 3766 Pg. 156

Job No. 0021.64 Division No. ____ Notes Red ____ Plotted ____ Profile ____

Survey of PORTUGUESE BEND LANDSLIDE Date 2-13-69 Date ____ No. ____ X-Sec. ____

Survey by DREIER Notes SIEMANN Notes Chkd ____ Checked ____ No. ____

Indexed [redacted] Date ____ Date ____

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE # 2	CON'T.
	1 077	286 070				
T. P.	0 968	276 623	10 415	275 655		
T. P.	1 888	266 861	11 650	264 973		
T. P.	1 106	257 225	10 742	256 119		
T. P.	1 515	247 [illegible]	11 700	245 525		
T. P.	1 0[illegible]	2[illegible]	11 3[illegible]	235 708		
T. P.	1 485	228 2[illegible]	10 0[illegible]	226 803		
T. P.	0 972	217 432	11 828	216 460		
T. P.	1 164	207 971	10 625	206 807		
T. P.	4 723	205 374	7 3[illegible]	200 651		
T. P.	7 489	210 465	2 398	202 97[illegible]	208.310	
B.M. 50-13			1 292	~~[illegible] 173~~	C.A. MON. 208.096	1965 ADJ. END OF LINE # 2

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. ____
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by DREIER Notes SIEMAND Date 2-13-69
No. ____ Date ____ Date ____ Map No. ____ Indexed [redacted] GALLI Date ____

F.B. 3766 Pg. 157

F. B. 3766 Pg. 158 | Job No. 0021.64 Division No. _____ Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

76-L-298 CE 307 2-63

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F.B. 3766 Pg. 159

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE	
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes SIEMANN Date 2-18-69
	Date	Date	Map No.	Indexed E.H. GAELI Date

JOB # 0021.64

PORTUGUESE BEND LANDSLIDE

LINE NO. 3 FEB. 1969

DREIER
MALDONADO
SIEMANN
MACKNIGHT
STROUD

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

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B.B. 3766 Pg. 160 Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Page ____

Survey of PORTUGUESE BEND LANDSLIDE Date 2-18-67 Date ____ No. ____

Survey by OLFELT Notes SIEMANN Checked ____ Date ____

Indexed ____ Date ____

STATION	B.S.	H.I.	F.S.	ELEV.	LINE #3	
B.M. 34-15A	0201	231 209		231 008	B.M. 34-15A EL=231.008	REF. B.B. 3766-256
T.P.	0471	220060	11620	219589		
T.P.	2741	212 774	10027	210033		
T.P.	0460	204 875	8359	204415		
T.P.	0805	193 825	11855	193020		
T.P.	0341	182 536	11630	182195		
K-10A	5901	178 655	9782	172 754	K-10A	SPK. W.E.T.
K-10B	2922	172 588	8989	169 666	K-10B	2" I.P.
K-10					K-10	NOT FOUND.
K-10C	3890	172 088	4390	168 198	K-10C	L.E.T.
K-9A	4924	166 435	8511	163511	K-9A	SPK. W.E.T.
K-9B	6668	168 518	6585	161850	K-9B	2" I.P.
T.P.	0639	164 168	4989	163529		
K-8B	8487	164 055	8600	155568	K-8B	2" I.P.
K-9	5494	164 910	4639	159416	K-9	3/4" I.P.
K-8A	0191	158 138	6963	157947	K-8A	SPK. W.E.T.
T.P.	0630	147 017	11751	146387		
T.P.	10418	146 575	10860	136157		
K-5	10279	146 343	10511	136064	K-5	C.E. MON
T.P.	0522	136 667	10198	136145		
T.P.			11842	124825	CONT.	

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE #3 CONT.
T.P.	0.850	125.675		124.825	
T.P.	0.747	114.772	11.650	114.025	
W-3	2.250	112.132	4.890	109.882	W-3 C.E. MON.
K-5 AUX	0.266	102.031	10.367	101.765	K-5 AUX. C.E. MON.
T.P.	0.669	92.158	10.542	91.489	
T.P.	0.410	82.020	10.548	81.610	
T.P.	0.788	71.136	11.672	70.348	K-4 NOT FOUND
T.P.	0.232	60.015	11.358	59.786	
T.P.	0.419	54.249	6.188	53.830	
T.B.M. #28	6.239	55.983	4.500	49.744	T.B.M. #28 BT. SPK. IN ROCK
K-3A	6.525	55.965	6.548	49.440	K-3A C.E. MON.
K-2A	11.601	56.198	11.368	44.597	K-2A 2" I.P.
T.P.	6.439	55.858	6.779	49.419	
T.P.	0.717	51.555	5.020	50.838	
T.P.	4.328	44.214	11.669	39.886	
T.P.	0.699	41.134	3.779	40.435	
T.P.	1.629	30.967	11.796	29.338	
T.P.	0.701	19.906	11.262	19.605	
T.P.			7.380	12.526	T.P. SQ. SPK. AT N.W. COR. TENNIS COURT

P.B. 6C NOT RECOVERED, HIGH TIDES & EXTREME SURF

Profile Notes Rel. Checked Division No. 11 Job No. 8 Survey of PORTWINKLE BEND & WINDSLIDE
No. Date Date Date Survey by DREILER Notes SIEWARD Date 2-19-67
Notes Chkd. Checked Map No. Indexed [redacted] Date
No. Date Date Date

F.B. 3766 Pg. 161

76-L-298 CE 307 2-63

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F.B. 3766 PG. 162 | Job No. 0021.64 | Division No. 11 | Notes Red ____ | Plotted ____ | Profile ____
Survey of PORTUGUESE BEND LAND SLIDE | Date ____ | No. ____ | X-Sec. ____
Survey by DREISER | Notes SIEMANN 2-19-69 | Notes Chkd. ____ | Checked ____
Indexed [redacted] | Date ____ | Date ____ | No. ____

STATION	B.S.	H.I.	F.S.	ELEV.		
T.P.	6.374	18.900		12.526	T.P. SPK. IN PAVT.	AT N.W. COR. TENNIS COURT
T.P.	6.878	18.068	7.710	11.190		
P.B. #8	9.950	17.993	10.025	8.043	P.B. #8 SPK. IN ROCK GROIN	
T.P.	7.905	19.095	6.795	11.190		
T.P.	9.948	22.465	6.578	12.517		
T.P.	11.970	33.745	0.690	21.775		
T.P.	11.545	44.441	0.849	32.896		
T.P.	11.791	55.742	0.490	43.951		
T.P.	11.943	67.227	0.456	55.284		
T.P.	11.757	78.234	0.750	66.477		
T.P.	11.858	89.647	0.445	77.789		
T.P.	11.677	100.918	0.406	89.241		
T.P.	6.827	105.183	2.562	98.356		
K-5 AUX	10.920	112.669	3.434	101.749	K-5 AUX. C.E. MON.	
T.P.	11.220	123.490	0.399	112.270		
T.P.	10.849	133.917	0.422	123.068		
T.P.	11.809	143.735	1.991	131.926		
T.P.	11.748	154.835	0.648	143.087		
			0.358	154.485		

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE NO. 3	CONT.
T.P.	10 141	164 626		154 485		
T.P.	10 911	174 526	1 011	163 615		
K-10 A	10 832	183 585	1 773	172 753	K-10 A SEAL W ST	
T.P.	10 110	193 330	0 365	183 220		
T.P.	11 770	204 918	0 182	193 148		
T.P.	8 250	212 660	0 508	204 410		
T.P.	7 260	216 588	3 332	209 328		
T.P.	10 162	226 248	0 502	216 086		
T.P.	7 751	233 759	0 240	226 008		
B.M. 34-15 A			2 755	231 004	B.M. 34-15 A	
					END OF LINE	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 002164 Division No. 11 F.B. 3766 Pg. 163
X-Sec. No. ____ Date ____ Date ____ Survey of FORTUNATE BEND LANDSLIDE
Notes Chkd. ____ Checked ____ Survey by [illegible] Notes [illegible] Date 2-19-69
Date ____ Date ____ Map No. ____ Indexed B.E. GALLI Date ____

F. B. 3766 Pg. 164 Job No. _____ Division No. _____ Notes Red _____ Plotted _____ Profile

Survey of _____ Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

76-L-298 CE 307 2-63

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F.B. 3766 Pg. 165

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11
	Date	Date	Survey of P.B. Landslides	
X-Sec. No.	Notes Chkd.	Checked	Survey by Dreier	Notes J.M.M Date 2-14-69
	Date	Date	Map No.	Indexed [illegible] GALLI Date

JOB # 0021.64

Portuguese Bend Landslides

Line No. 4

February 1969

Dreier

Maldonado

Siemann

McKnight

Stroud.

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

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STATION	B.S.	H.I.	F.S.	ELEV.	Line #4	
TBM 34-15A	2984	233 992		231 008	T.B.M. 34-15A El. = 231.008 ADJ. Per F.B. 2849-250	
T.P.	3145	229 809	7328	226 664		
T.P.	1214	223 890	7 153	222 676		
T.P.	3692	217 701	9881	214 009		
BM 50-13A	3557	213 855	7 399	210 302	BM 50-13A SPK. & T. in S'ly. Asphalt Curb.	
BM 50-13	1450	209 571	5734	208 121	BM 50-13 El. 208.101 Adj. Per F.B. 2849-250 C.E.Mo.	
T.P.	11 982	213 291	8262	201 309		
T.P.	11 332	224 026	0597	212 694		
T.P.	11 926	235 450	0502	223 524		
T.P.	11 421	245 990	0881	234 569		
T.P.	11 207	256 567	0630	245 360		
T.P.	10 499	266 089	0977	255 590		
T.P.	10 732	276 098	0733	265 366		
T.P.	10 909	285 981	1 026	275 072		
T.P.	11 962	296 301	1 642	284 339		
T.P.	11 388	306 901	0 788	295 513		
T.P.	9 798	315 566	1 133	305 768		
Shields	5 129	315 495	5 200	310 366	Shields	
T.P.	0 200	304 214	11 481	304 014		310 000
T.P.	0 763	293 495	11 482	292 732		
T.P.			10 390	283 105	Cont.	

F.B. 3766 PG. 166

Job No. 0021.64 Division No. 11 Notes Red Plotted Profile

Survey of P.B. Landslides Date Date No.

Survey by Drews Notes Maldonado Notes Chkd. Checked X-Sec.

Indexed Date Date No.

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	Line #4	Cont.
T.P	1 341	284 446		283 105	Cont.	
T.P	0 690	274 496	10 640	273 806		
T.P.	0 350	263 848	10 998	263 498		
T.P.	0 224	252 483	11 589	252 259		
T.P.	0 967	241 463	11 987	240 496		
T.P	0 332	230 035	11 760	229 703		
T.P.	0 346	219 507	10 924	219 111		
T.P	0 923	209 673	10 757	208 750		
T.P.	4 296	203 424	10 845	199 128		
J-5	8 302	204 569	7 757	195 667	J-5	
T.P.	11 141	210 161	5 541	199 020		
Rad 2 Ecc. 2	4 635	218 618	1 178	208 983	Rad 2 Ecc. 2 Mon.	
J-4	1 911	210 207	5 322	208 296	J-4 Mon.	
J-3	10 552	210 022	10 737	199 470	J-3 Mon.	
T.P.	0 220	199 069	11 173	198 849		
J-1	11 371	199 817	10 623	188 446	J-1 3/4" AP	
T.P.	11 028	210 547	0 298	199 515		
T.P.	11 493	220 946	1 091	209 456		
T.P	10 621	231 267	0 300	220 646		
J-1A	11 980	233 366	9 881	221 386	J-1A	
T.P.			0 222	233 144	Cont.	

Profile No. ____ Notes Red ____ Plotted ____ Date ____
X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____
Job No. 0021.64 Division No. 11
Survey of P.B. Landslides
Survey by Draper Notes J.M.M. Date 2-14-69
Map No. ____ Indexed R.E. GALLI Date ____

F.B. 3766 Pg. 167

76-L-298 CE 307 2-63

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F.B. 3766 Pg. 16 8 | Job No. 2021.6 | Division No. 11 | Notes Red | Plotted | Profile
Survey of P.B. Zamudio | Date | No.
Survey by Preier | Notes Malaga Mado | Notes Chkd. | Checked | X-Sec.
Indexed [redacted] GALLY | Date | Date | Date | No.

STATION	B.S.	H.I.	F.S.	ELEV.	Line #4	Cont.
T.P	11.921	245.065		233.144	T.P. Cont.	
T.P.	11.963	256.735	0.293	244.772		
T.P	10.015	266.144	0.604	256.131		
T.P.	11.195	275.636	1.705	264.441		
T.P.	11.587	286.470	0.753	274.883		
T.P.	9.954	296.076	0.343	286.122		
Blakesley	7.842	300.962	2.956	293.120	Blakesley mon.	
T.P	3.841	295.144	9.659	291.303		
T.P	0.730	284.596	11.278	283.866		
T.P	0.180	273.599	11.177	273.419		
T.P	1.840	263.570	11.869	261.730		
T.P	0.651	252.558	11.663	251.907		
T.P	0.681	241.771	11.468	241.090		
T.P	0.223	230.234	11.760	230.011		
T.P	0.820	219.174	11.880	218.354		
T.P	2.333	209.677	11.830	207.344		
B.M.C.	0.472	201.571	8.578	201.099	B.M.C. Rd. Dept Mon	
T.P	4.011	195.814	9.768	191.803		
BM 34-17C (Mon X-977)	4.611	194.123	6.302	189.512	U.S.C. & G.S. X-977 Mon. = BM 34-17C	
T.P	5.223	191.556	7.790	186.333		
T.P.			4.227	187.329	Cont.	

76-L-298 CE 307 2-63

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403 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.	Line # 4	Cont
T.P	4265	191 594		187 329	T.P Cont	
T.P.	1572	181 838	11 328	180 266		
T.P	1 682	172 213	11 304	170 531		
BM 34-18	2 242	170 773	3 682	168 531	BM 34-18 Mon	
T.P.	3676	162 968	11 481	159 292		
T.P.	4818	164 175	3611	159 357		
P-3	7950	165 957	6 168	158 007	P-3 L & Tag in Cb	
T.P.	5944	167 724	4 177	161 780		
P-2	7499	170 821	4 402	163 322	P-2 L. & Tag in Cb	
T.B.M #31			3760	167 061	T.B.M. #31 Elev.: 167.101 per F.B. 2844-250	
					Palos Verdes Dr., Ctr. Div. @ Entrance to	
					Wayfarers Chapel	

Profile No. ____ Notes Red ____ Date ____ Plotted ____ Date ____ Job No. 0021.64 Division No. 11 Survey of P.B. Landslides

X-Sec. No. ____ Notes Chkd. ____ Date ____ Checked ____ Date ____ Survey by Dreier Notes J.Mm Date 2-14-69 Map No. ____ Indexed ____ Date ____

F.B. 3766 Pg. 169

F.B. 3766 Pg. 170

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

Survey of _____ Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

76-L-298 CE 307 2-63

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F.B. 3766 Pg. 171

Profile No.	Notes Red Date	Plotted Date	Job No 002164	Division No.
			Survey of PORTUGUESE BEND LANDSLIDE	
X-Sec. No.	Notes Chkd. Date	Checked Date	Survey by DRELICK	Notes SIEMAN Date 2-14-69
			Map No.	Indexed [redacted] Date

JOB NO. 002164

PORTUGUESE BEND LANDSLIDE

LINE NO 5

FEB. 1969 RELEVELING

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

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76-L-298 CE 307 2-63

76-L-298 CE 807 2-63

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403 LOS ANGELES COUNTY ENGINEERING BLDG.

297
289
8

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F.B. 3766 Pg. 172 Job No. 0021.6 Division No. _____ Notes Red _____ Plotted _____ Profile
Survey of PORTUGUESE BEND LANDSLIDE Date 2-14-69 Date _____ No. _____ X-Sec. _____
Survey by R.K.F. & B. Notes SUPERVISION Notes Chkd. _____ Checked _____ No. _____
Indexed C.E. GALL Date _____ Date _____

STATION	B.S.	H.I.	F.S.	ELEV.	LINE #5	
S.B. # 2	3279	386 576		383 297	S.B. #2 ELEV. 383.297	PER F.B. 3766-155
S.B. # 2A	0638	379 948	7266	377 310	S.B. #2A LST	
T.P.	0769	368 654	11 865	368 085		
T.P.	2762	359 597	11 817	356 835		
S.B. # 3	11 620	364 572	6 645	352 952	S.B. 3 SPK. W. & T.	
T.P	10 930	375 299	0203	364 369		
T.P	11 770	386 800	0269	375 030		
T.P.	8 204	394 151	0853	385 947		
T.P	3 571	397 011	0711	393 440	PIPE	
T.P	11 679	397 041	11 649	385 362		
WEST FIX	2 019	395 887	3 173	393 868	MON.	
T.P.	0 256	385 615	10 522	385 365		
T.P.	0 719	385 143	1 191	384 424		
T.P	0 602	374 305	11 440	373 703		
T.P	1 341	364 766	10 880	363 425		
T.P	0 198	353 190	11 774	352 992		
T.P.	0 603	342 094	11 699	341 491		
T.P	0 252	331 543	10 803	331 291	ON TANGERINE	
T.P	2 101	321 742	11 902	319 641		
H.Z	1 399	320 870	2 271	319 471	MON.	
T.P			8 627	312 243		

76-L-298 CE 307 2-63

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE 5	
T.P CONT.	1 805	314 048		312 243		
T.P.	3 672	307 284	10 436	303 612		
H-4	2 696	307 155	2 825	304 459	2" I.P.	(E. OF P.P.)
T.P.	0 653	305 980	1 828	305 327		
T.P.	1 196	295 269	11 907	294 073		
T.P	11 819	306 066	1 022	294 247		10.671 -0.622 [illegible]
T.P.	11 989	317 292	0 763	305 303		
T.P	11 378	326 827	1 843	315 449		
T.P	10 166	334 083	2 910	323 917		
P.T. #5	1 039	332 602	2 520	331 563	P.T. #5 B. SPK W. & T.	(22 FT. S.W. OF P.P.)
T.P	0 733	322 186	11 149	321 453		
T.P	0 642	310 908	11 920	310 266		
P.T. #6 AUX 3	0 832	304 793	6 947	303 961	PT. #6 AUX 3. B. SPK,	(40 FT. E. INTER.)
T.P.	0 760	293 883	11 670	293 123		
T.P	0 918	283 828	10 973	282 910		
T.P.	2 650	275 254	11 224	272 604		
	0 910	264 212	11 952	263 302		
	0 430	252 639	12 003	252 209		
	1 448	244 928	9 159	243 480		
	1 016	234 206	11 738	233 190		
			11 943	222 263		

Profile No. ____ Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11 F.B. 3766 Pg. 173
Date ____ Date ____ Survey of PORTUGUESE BEND LANDSLIDE
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by G.E. DREIER Notes DREIER Date 2-17-69
Date ____ Date ____ Map No. ____ Indexed R.L. GALLI Date ____

76-L-298 CE 307 2-63

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F.B. 3766 PG. 174 | Job No. 0021.64 | Division No. 4 | Notes Red. | Plotted | Profile
Survey of PORTUGUESE BEND LANDSLIDE | Date | No. | X-Sec.
Survey by G.E. DREIER | Notes G.E. DREIER | Notes Chkd. | Checked | No.
Indexed D.L. GALL | Date | Date | Date

STATION	B.S.	H.I.	F.S.	ELEV.	LINE 5
T.P.	0915	223178		222263	CONT
	0411	212328	11261	211917	
B.M. "C"	0452	201654	11126	201202	B.M. C
T.P	1420	192249	10825	190829	
T.P.	11614	202970	0893	191356	
T.P.	11632	214280	0322	202648	
K-1	3566	214169	3677	210603	K-1 MON.
T.P	0600	203246	11523	202646	
T.P	1516	195642	9120	194126	
B.M. U.S.C.&G.S. X977			6022	189620	U.S.C.&G.S. X977 PEPPERTREE & P.V. DRIVE S, N. W. COR

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766 Pg. 175
	Date	Date	Survey of PORTUGUESE BEND LANDSLIDE		
X-Sec. No.	Notes Chkd.	Checked	Survey by DREIER	Notes DREIER	Date 2-17-69
	Date	Date	Map No.	Indexed G.L. GALLI	Date

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

FEB. 1969 RELEVELING LINE NO. 6

DREIER
MALDONADO
SIEMANN
STROUD

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

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76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE 6	
B.M. 50-9	8 650	1008 185		999 535	B.M. 50-9 ELEV. 999.535 PER F.B. 2849-249	
T.P.	0 591	997 238	11 538	996 647		
T.P	0 398	986 188	11 448	985 790		
T.P	0 730	975 110	11 808	974 380		
T.P.	0 477	964 165	11 422	963 688		
T.P	2 923	955 279	11 809	952 356		
T.B.M. #11	5 183	952 552	7 910	947 369		
T.P	0 602	945 030	8 124	944 428	T.B.M. #11 P.K. SPK	(7³ S.W. OF STEP DOWN)
Z-1	0 379	935 706	9 703	935 327	Z-1 MON.	
T.P.	1 120	925 646	11 180	924 526		
T.P.	0 259	915 145	10 760	914 886		
T.P	0 312	903 927	11 530	903 615		
T.P.	0 240	893 023	11 144	892 783		
T.P.	0 647	882 427	11 243	881 780		
T.P.	0 208	871 644	10 991	871 436		
T.P	5 051	865 344	11 351	860 293		
B.M. 50-10	5 082	863 343	7 083	858 261	MON	
T.P	0 368	853 922	9 789	853 554		
T.P	0 455	842 910	11 467	842 455		
T.P	0 429	831 639	11 700	831 210		
T.P			11 866	819 773	CONT	

F.B. 3766 Pg. 176 Job No. 0021.64 Division No. 11 Notes Red. Plotted Profile
Survey of PORTUGUESE BEND LANDSLIDE Date Date No. X-Sec.
Survey by G.E. DREIER Notes DREIER Notes Chkd. Checked
Indexed C.J. GALLI Date Date Date No.

76-L-298 CE 307 2-63

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LINE #6 CONT

STATION	B. S.	H. I.	F. S.	ELEV.	
T.P	0289	820062		819773	
T.P.	0541	809499	11104	808958	
T.P	2468	800700	11267	798232	
Y-4	0230	794041	6889	793811	Y-4 2" I.P. & B. SPK
T.P	2320	788421	7940	786101	
T.B.M. #12	9540	786813	11148	777273	T.B.M. #12 P.K. SPK
T.P.	0495	775536	11772	775041	
T.P	0228	763784	11980	763556	
	0192	752619	11357	752427	
	0330	741431	11518	741101	
	0305	731312	10424	731007	
	0349	720221	11440	719872	
	0190	710093	10318	709903	
	0408	698725	11776	698317	
T.P	0282	689039	11968	686757	
T.B.M. #13	0322	676539	10822	676217	T.B.M. #13 P.K. SPK
T.P	0441	665125	11855	664684	
T.P	1409	654799	11735	653390	
B.M. 50-11			7041	647758	B.M. 50-11 MON

Profile Notes Red. ____ Plotted ____ Job No. 0021.64 Division No. 11
No. ____ X-Sec. ____ Date ____ Date ____ Survey of PORTUGUESE BEND
Notes Chkd. ____ Checked ____ Survey by DREIER Notes DREIER Date 2-17-69
No. ____ Date ____ Date ____ Map No. ____ Indexed B.B. GALLI Date ____

F.B. 3766 Pg. 177

F.B. 3766 PG. 178 | Job No. 0021.64 Division No. _____ Notes Red _____ Plotted _____ Profile

Survey of PORTUGUESE BEND Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

76-L.298 CE 307 2-63

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F.B. 3766 PG. 179

Profile No. _____ Notes Red _____ Plotted _____ Job No. 0021.64 Division No. _____
Date _____ Date _____ Survey of PORTUGUESE BEND LAND SLIDE
X-Sec. No. _____ Notes Chkd. _____ Checked _____ Survey by P. WILSON Notes ADAMS Date 3-6-69
Date _____ Date _____ Map No. _____ Indexed [redacted] Date [redacted]

PORTUGUESE BEND
LAND SLIDE

LEVELS
RERUN FROM DAVIS
TO A4

J.N. 0021.64
3-6-69

WILSON
ADAMS
COCKERHAM
FISHER

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

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76-L-296 CE 307 2-63

76-L-298 CE 307 2-63

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STATION	B.S.	H.I.	F.S.	ELEV.		
DAVIS				376.622	FD C.E. MON. STAMPED "DAVIS" ELEV = 376.622 PER F.B. 3766-155	
T.P.	3.807	380.429	11.807	368.622		
"	1.020	369.642	10.851	358.791		
RADIAL 1	0.758	359.549	7.910	351.639	FD C.E. MON STAMPED RADIAL 1 ELEV = 351.515 PER FB 3766-156	
T.P.	7.000	358.639	11.458	347.181		
"	0.675	347.856	11.545	336.311		
"	0.330	336.641	11.660	324.981		
A - 3	1.024	326.005	11.703	314.302	F.D. C.E. MON STAMPED "A-3" ELEV = 315.165 PER F.B. 3766-156	
A - 4	10.253	324.555	1.937	322.618	FD C.E. MON STAMPED "A-4" ELEV = 323.303 PER F.B. 3766 PG 156	

F.B. 3766 Pg. 180 Job No. 002164 Division No. Notes Red Plotted Profile
Survey of PORTUGUESE BEND LAND SLIDE Date 3-6-69 Date No. X-Sec.
Survey by R. WILSON Notes ADAMS Notes Chkd. Checked No.
Indexed [redacted] Date Date Date

76-L-298 CE 307 2-63

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FB 3766

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RE-RUN REC. 3-18-69

STATION	B.S.	H.I.	F.S.	ELEV.		
DAVIS				376.622	FD C.E. MON. STAMPED "DAVIS" ELEV = 376.622 PER F.B. 3766-155	
T.P.	3807	380429	11.807	368622		
"	1020	369642	10851	358791		
RADIAL 1	0758	359549	7910	351639	FD C.E. MON STAMPED RADIAL 1 ELEV = 351.515 PER FB 3766-156	
T.P.	7000	358639	11458	347181		
"	0675	347856	11545	336311		
"	0330	336641	11660	324981		
A-3	1024	326005	11703	314302	F.D. C.E. MON STAMPED "A-3" ELEV = 315.165 PER F.B. 3766-156	
A-4	10253	324555	1937	322618	FD C.E. MON STAMPED "A-4" ELEV = 323.303 PER F.B. 3766 PG 156	

F.B. 3766 PG. 180A

Job No. 0021.64 Division No. Notes Red Plotted Profile

Survey of PORTUGUESE BEND LAND SLIDE Date 3-6-69 Date No. X-Sec.

Survey by R. WILSON Notes ADAMS Notes Chkd. Checked

Indexed Date Date Date No.

Notes Ck'd by	Survey of PORTUGUESE BEND
Map No.	JN 0021.64 Tape 175 Std 84 °F
Office Work	Surveyed by JG Randall
Checked	Notes XGR Date Mar. 69
Date	Indexed D.B. GALLI NOV 13 '69

F. B 3766 PG. 181

SETTING OF:

SHIELDS

AUX. 1

PORTUGUESE BEND

LANDSLIDE STUDY

J.N. 0021.64

Randall
Dover
Pyle
Barnett

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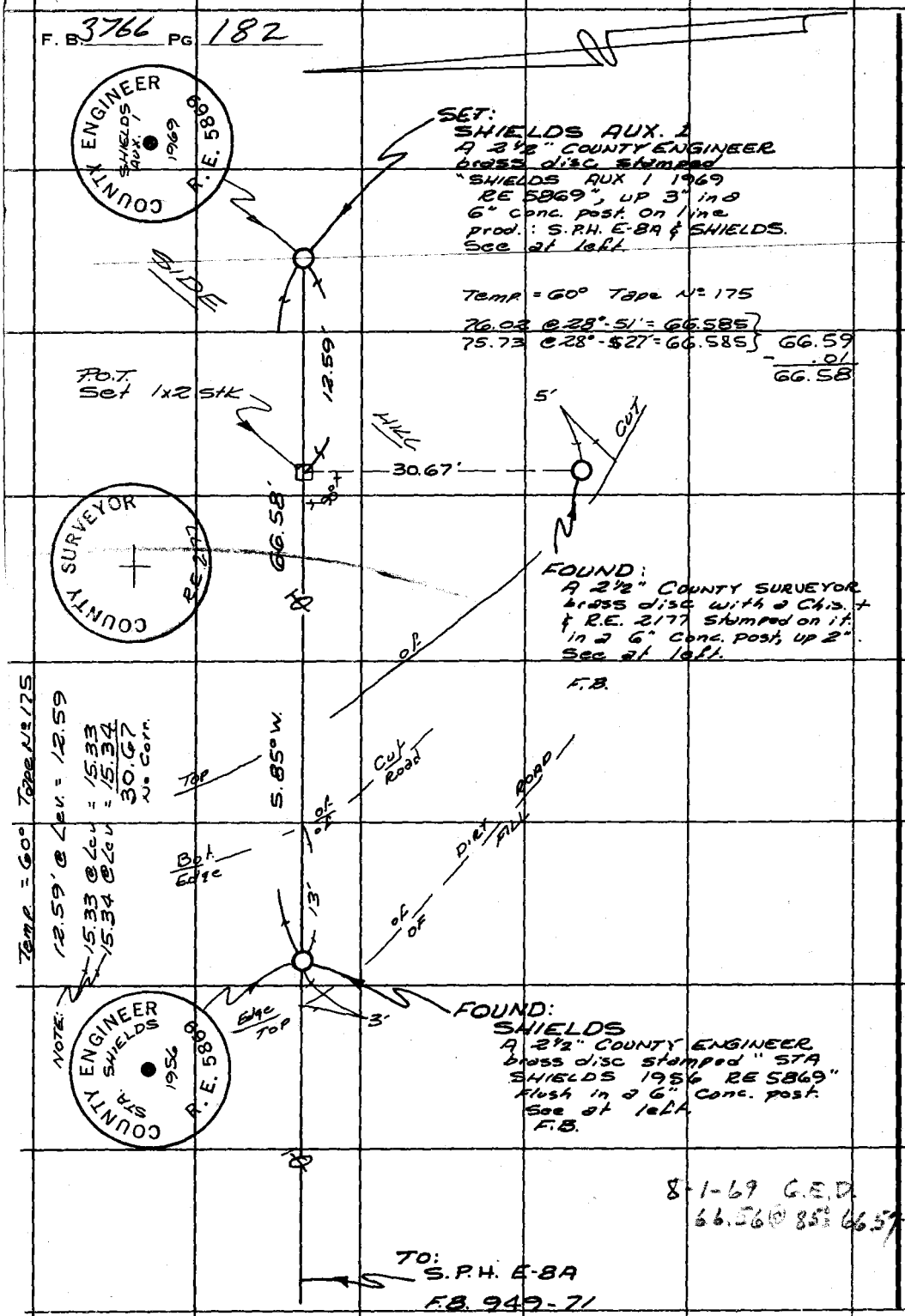
76F3095 CE#310 3-68

F. B. 3766 PG 182



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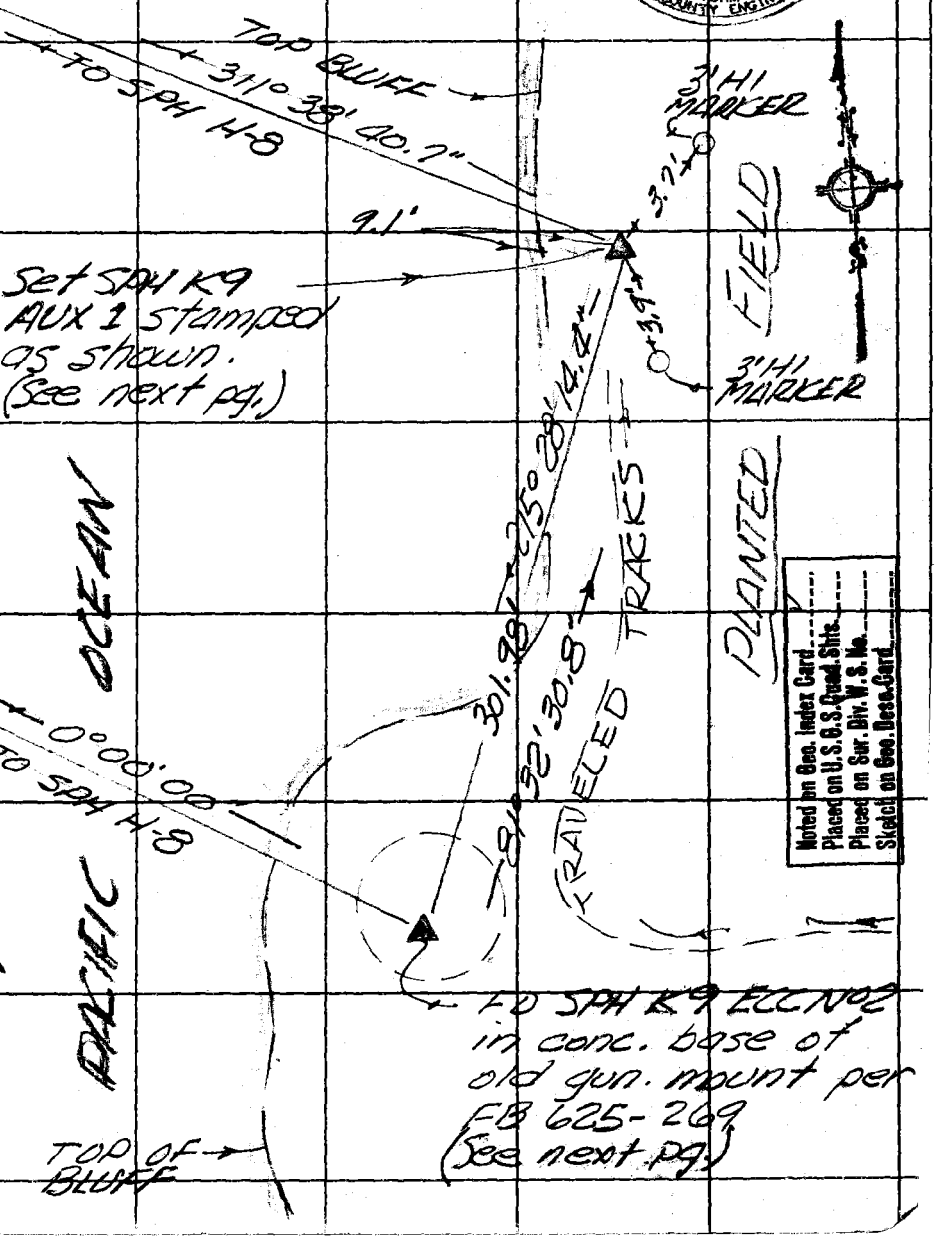
GEODETIC CONTROL

Notes Ck'd by	Survey of PORT BEND
Map No.	JN 202164 Tape Std °F
Office Work	Surveyed by R. C. Wilson
Checked	Notes R. C. Wilson Date
Date	Indexed D. L. GALLI

F. B. 3766 Pg. 183

L. A. COUNTY SURVEY CONTROL SYSTEM
TRIANGULATION STATION
SAN PEDRO HILLS K-9 AUX 1

L. A. COUNTY SURVEY CONTROL SYSTEM
TRIANGULATION STATION
SAN PEDRO HILLS K9 AUX 1
1969
SET BY
RE 5869
FOR INFORMATION
LOS COUNTY ENGINEER



Noted on Geo. Index Card
Placed on U.S.G.S. Quad. Shts.
Placed on Sur. Div. W.S.N.
Sketch on Geo. Desc. Card

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DEPARTMENT OF COUNTY ENGINEER
403 LOS ANGELES COUNTY ENGINEERING BLDG.

16F309S CE#310 3-68

GEODETIC CONTROL

F. B. 3766 PG 184

L. A. COUNTY SURVEY CONTROL SYSTEM
TRIANGULATION STATION

SAN PEDRO HILLS K-9 AUX 1

MEASUREMENTS

300' TAPE NO 221 @ 62° TEMP.

297.585' @ -3°30' = 296.93' = 296.94'
~~297.42' @ -3°06' = 296.94'~~ 5.04'
5.04' @ ∠ = 5.04' 301.98'

AREA: THIS TRIANG. STATION IS LOCATED IN L.A. COUNTY IN THE SAN PEDRO HILLS AREA, 4250'± W & 650'± SO. OF THE INTERSECTION OF P.V. DRIVE EAST & P.V. DRIVE SOUTH, 300'± NLY FROM CONC. ROAD & 9.1' EAST OF TOP OF OCEAN BLUFF.

ROUTE: FROM THE INTER. OF P.V. DRIVE EAST & P.V. DRIVE SOUTH, TRAVEL 2.4 MILE WLY ON P.V. DRIVE SOUTH TO A DIRT RD ON THE LFT & GAS STATION ON THE RT: TURN LFT ONTO DIRT RD & TRAVEL SLY 0.2 MILE TO A RD TO THE RT: THENCE RT (SWLY) 0.4 MILE ON DIRT RD TO A CONC. ROAD @ EDGE OF BLUFF: THENCE NLY 300'± ALONG EDGE OF BLUFF TO THE STATION.

STATION MARKS:

SPH K-9 ECC 2: A 4" L.A. CO. SUR. CONT. SYS. BRASS TRIANG. DISC STAMPED "SAN PEDRO HILLS K9 1953 ECC NO 2 COUNTY SURVEYOR RE 63" CEMENTED FLUSH IN CONC. ROAD

SPH K-9 AUX 1: A 4" L.A. CO. SUR. CONT. SYS. BRASS TRIANG. DISC STAMPED "SAN PEDRO HILLS K9 AUX 1 1969 RE 5869" UP 4" AND SET IN A 7" CONC. POST. NO SUB-SURFACE MARK SET.

REFERENCE MARKS: NONE SET

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DEPARTMENT OF COUNTY ENGINEER
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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3966 Pg. 165
	Date	Date	Survey of Portuguese Bend Landslide		
Sec. No.	Notes Chkd.	Checked	Survey by FE Brook	Notes FEB	Date 4 Aug 69
	Date	Date	Map No.	Indexed C. J. GALLI	Date 2 1 [illegible]

SN 0021.64

PORTUGUESE BEND LANDSLIDE.

Level Line A.

Note: A error in subtraction occured on TP#4 on pg. 186, and was not discovered for some time. Lines B-C-D were run off elevations established by line A. Line A. was rerun from BM 50-7 to BM 50-9 To check known error and suspected error. All established elevations were then corrected +0.114 the error that was made on pg. 186.

FE Brooks 15 Aug 1969

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

FE Brooks
N. Smith
R Siemann
R Moore
R Massey

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76L-298 CE 307 11-58

76L-298 CE 807 11-58

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Profile No. ____ X-Sec. No. ____ Plotted ____ Date ____ Checked ____ Date ____
Notes Red ____ Date ____ Notes Chkd. ____ Date ____
Division No. 11 Job No. 2214 Notes FEB Date ____
Survey of Portuguese Bend Land Slide N. Smith
Survey by F.E. Brink
Indexed ____ Date ____
Page No. 182

STATION	B.S.	H.I.	F.S.	ELEV	LINE "A"	
BM 50-7	5.845	1207.383		1201.538	BM 50-7 Elev. 1201.538	1965 Crenshaw Blvd
					and Crest Rd. 92.5' E. of ctr Crenshaw Blvd.	
TP #1	0.455	1196.118	11.720	1195.663	40.0' N. of ctr of Crest Rd. L.A. Co Engr	
TP #2	0.368	1184.566	11.920	1184.198	Button Brass Cap set in 12" sq conc post	
TP #3	0.390	1173.154	11.802	1172.764	4" above ground Ref	F.B. 2400-13
TP #4	5.592	1166.924	11.686	1161.462 ~~1161.332~~		
TBM C-1	8.124	1168.763	6.285	1160.753 ~~1160.639~~	TBM C-1 Crenshaw Blvd and	
					Whitley Collins Dr. N.W. Cor. Sm. Bt.	
T.P	9.118	1177.245	0.636	1168.127	Spk in S.E. Cor. of S. Calif Edison Box	
T.P	9.496	1185.691	1.050	1176.195	45.5' W. of W. end. C.R.	
T.P	4.772	1186.653	3.870	1181.881		
BM 50-8	3.598	1185.771	4.480	1182.287 ~~1182.173~~	BM 50-8 ELEV 1182.108	1956 SEA CREST DRE CRENSHAW BLVD.
					6.0 SOUTHERLY P.P# 1035202 MON. DN 8"	
T.P.	2.605	1178.946	9.430	1176.341		
T.P.	2.574	1172.817	8.703	1170.243		
T.P.	0.287	1161.381	11.723	1161.094		
T.P.	0.832	1151.878	10.335	1151.046		
T.P.	0.728	1140.731	11.875	1140.003		
T.P.	0.395	1130.500	10.626	1130.105		
T.P.	0.261	1119.235	11.526	1118.974		

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STATION	B.S.	H.I. 1119.235	F.S.	ELEV.	LINE "A"
TP	0.977	1109.379	10.833	1108.402	
T.P.	0.852	1098.863	11.368	1098.011	
TBM C-2	0.330	1091.603	7.590	1091.387 ~~1091.273~~	TBM C-2 CRENSHAW BLVD 0.3± MI SOUTHERLY, EAST SIDE GRAVEL RD. LARGE BOAT SP
T.P.	0.335	1080.053	11.885	1079.718	IN BOULDER.
T.P	1.767	1071.080	10.740	1069.313	
T.P.	0.180	1060.664	10.596	1060.484	
T.P.	1.468	1050.779	11.353	1049.311	
T.P	1.202	1040.241	11.740	1039.039	
T.P	1.588	1030.413	11.416	1028.825	
T.P.	0.553	1021.471	9.495	1020.918	
T.P.	0.223	1011.428	10.266	1011.205	999.347 – 1956
BM 50-9	11.967	1011.429	11.966	999.570 ~~999.462~~	BM 50-9 ELEV. 999.535 PER F.B 2849-49
T.P	0.313	1001.796	9.946	1001.483	
T.P	0.912	990.905	11.803	989.993	
T.P	0.376	979.919	11.362	979.543	
T.P	0.610	968.842	11.687	968.232	
T.P	0.246	957.526	11.562	957.280	
TBM E-11			10.225	947.415 ~~947.301~~	TBM E-11 W. SIDE CRENSHAW P.K. SP. IN ROCK WALL 7.3 S.W OF STEP DOWN

E

Profile Notes Red ____ Plotted ____ Job No. 002164 Division No. 11 F.B. 3766 Pg. 18
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LAND SLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.E. BROOK Notes N.S. Date AUG 5 '69
No. ____ Date ____ Date ____ Map No. ____ Indexed C.J. GALLY Date AUG 21 '69

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F.B. 3766 Pg. 188 Job No. 002164 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of PORTUGUESE BEND LAND SLIDE Date ____ Date ____ No. ____ X-Sec. ____
Survey by F.E.B. Notes NORM. SMITH Notes Chkd. ____ Checked ____ No. ____
Indexed ____ Date AUG 5 1969 Date ____ Date ____

STATION	B.S.	H.I.	F.S.	ELEV	
				~~947.301~~ 947.415	LINE "A"
	6.137	953.438		~~947.301~~	
T.P	1.083	944.079	10.442	~~937.996~~ 935.355	
Z-1	1.620	936.861	8.838	~~935.241~~	Z-1 C.E. MON W. SIDE GRAVEL RD.
T.P.	1.235	927.906	10.190	926.671	
T.P.	1.166	919.744	9.328	918.578	
T.P.	0.222	909.022	10.944	908.800	
T.P.	0.212	897.377	11.857	897.165	
T.P.	0.382	886.346	11.413	885.964	
T.P.	0.498	876.376	10.468	875.878	
T.P.	2.009	867.648	10.737	865.639	
BM 50-10	6.230	864.412	9.466	~~858.182~~ 858.246	BM 50-10 MON.
T.P	1.012	854.716	10.708	853.704	
T.P.	0.620	843.696	11.640	843.076	
T.P.	0.247	832.385	11.558	832.138	
T.P	0.888	821.593	11.680	820.705	
T.P	0.263	810.848	11.008	810.585	
T.P.	3.147	802.005	11.990	798.858	
Y-4			8.314	~~793.691~~ 793.805	Y-4 2" IP CONC. PLUG

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE "A"
Y-4	10.532	804.223		793.805 ~~793.691~~	Y-4 2" IP CONC. PLUG
T.P.	0.233	792.494	11.962	792.261	
T.P	6.798	789.050	10.242	782.252	
T.B.M #12	9.174	786.391	11.833	777.331 ~~777.217~~	T.BM #12 P.K. IN HEADWALL
T.P.	0.493	775.526	11.358	775.033	
T.P.	0.508	764.242	11.792	763.734	
T.P.	1.038	754.594	10.686	753.556	
T.P.	0.377	743.713	11.258	743.336	
T.P.	0.876	733.157	11.432	732.281	
T.P.	0.516	721.773	11.900	721.257	
T.P.	0.377	710.366	11.784	709.989	
T.P.	0.326	698.735	11.957	698.409	
T.P.	0.205	688.212	10.728	688.007	
T.P.	2.972	680.294	10.890	677.322	
T.BM #13	1.420	677.580	4.134	676.274 ~~676.160~~	T.BM #13 P.K. COR. HEADWALL
T.P.	0.723	666.545	11.758	665.822	
T.P	0.703	656.238	11.010	655.535	
BM 50-11			8.537	647.815 ~~647.701~~	B.M. 50-11

Profile Notes Red. ____ Plotted ____ Job No. 0021.04 Division No. 11 F.B. 3766 Pg. 19
No. ____ X-Sec. ____ Date ____ Date ____ Survey of BURTPGUESE BEND STORLAND SLOPE
No. ____ Notes Chkd. ____ Checked ____ Survey by E.E.B. Notes N.S. Date AUG 5 '49
Date ____ Date ____ Map No. ____ Indexed G.J. GALLI Date [redacted]

2

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STATION	B.S.	H.I.	F.S.	ELEV	LINE "A"
B.M 50-11	1.635	649.336		647.815 ~~647.701~~	BM 50-11 MON.
T.P.	0.244	639.566	10.014	639.322	
T.P.	0.663	628.987	11.242	628.324	
T.P.	0.410	618.825	10.572	618.415	
T.P.	0.466	608.041	11.250	607.575	
T.P.	0.625	598.681	9.985	598.056	
T.P.	1.197	589.391	10.487	588.194	
T.P.	0.478	579.497	10.372	579.019	
T.P.	0.978	569.549	10.926	568.571	
T.P.	3.938	562.264	11.223	558.326	
T.B.M.	0.174	555.265	7.173	555.091	ON ROCK
T.P.	0.796	545.009	11.052	544.213	
T.P.	0.484	533.861	11.632	533.377	
T.P.	0.943	522.920	11.884	521.977	
T.P.	0.430	512.544	10.806	512.114	
T.P.	0.618	501.996	11.166	501.378	
T.P.	1.103	491.231	11.868	490.128	
T.P.	0.070	480.626	10.675	480.556	
T.P.	5.295	480.455	5.466	475.160	
TANK			4.955	475.614 ~~475.500~~	TANK S.W.C.T. PAV. 20± FROM WATER TANK

F.B. 3766 Pg. 190
Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of PORTUGUESE BEND LAND SLIDE Date Date No. X-Sec.
Survey by F.E.B. Notes N.S. Notes Chkd. Checked
Indexed C. J. GALLI Date AUG 5/69 Date Date No.

76L-298 CE 307 11-58

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE "A"
TANK	1.792	477.292		475.614 ~~475.500~~	"TANK" S.W.C.T. IN PAV. 20'± FROM WATER TANK
T.P.	1.172	467.129	11.335	465.957	
T.P.	0.421	455.959	11.591	455.538	
T.P.	0.512	445.551	10.920	445.039	
T.P.	4.397	441.206	8.742	436.809	
STA B-1-C	3.344	439.780	4.770	436.550 ~~436.436~~	B-1-C MON. IN CRACK 12' BELOW SURFACE DEFINITE MOVEMENT
T.P.	0.601	433.978	6.403	433.377	
T.P.	0.803	423.730	11.051	422.927	
T.P.	0.754	413.049	11.435	412.295	
T.P.	0.213	401.934	11.328	401.721	
T.P.	1.443	391.572	11.805	390.129	
S.B. #2	9.306	392.769	8.109	383.577 ~~383.463~~	SWEET BAY #2 S.W.C.T. IN PAV. SEE ALSO LINE "B"
T.P.	7.041	398.329	1.481	391.288	
P.T. #1	1.169	397.883	1.615	396.828 ~~396.714~~	P.T. #1 S.W.C.T. IN PAV.
B-1-B	9.725	399.799	7.809	390.188 ~~390.074~~	B-1-B 2" IP CONC. PLUG RE 122
T.P.	1.668	393.417	8.050	391.749	

Profile Notes Red ____ Plotted ____ Job No. 062164 Division No. 11 F.B. 3766 Pg. 191
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LAND SLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.E.B. Notes H.S. Date AUG 7 '69
No. ____ Date ____ Date ____ Map No. ____ Indexed C.T. GALLI Date [illegible]

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STATION	B.S.	H.I. 393.417	F.S.	ELEV	LINE	"A"
T.P.	0.568	383.287	10.698	382.719		
T.P.	1.572	373.531	11.328	371.959		
T.P	0.611	362.640	11.502	362.029		
T.P.	0.228	352.125	10.743	351.897		
T.P.	7.024	354.504	4.645	347.480		
D-2	3.877	355.268	3.113	~~351.391~~ 351.505	D-2 MON. 13.3 FROM STYLSEN TRANSMITTER	
T.P.	11.840	366.016	1.092	354.176		
T.P.	10.629	376.069	0.576	365.440		
T.P	5.535	380.006	1.598	374.471		
DAVIS	3.933	378.902	5.037	~~374.969~~ 375.083	DAVIS C.E. MON.	AUG 8/69
T.P	0.209	367.842	11.269	367.633		
T.P.	0.334	356.941	11.235	356.607		
T.P.	10.745	356.190	11.496	345.445		
T.P	6.009	361.418	0.781	355.409		
RADIAL #1	5.503	356.009	10.912	~~350.506~~ 350.620	RADIAL #1 C.E. MON.	
T.P.	0.519	345.588	10.940	345.069		
T.P.	0.319	334.272	11.635	333.953		
T.P.	0.268	323.403	11.137	323.135		

F.B. 3766 Pg. 192 Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of PORTUGUESE BEND LAND SLIDE Date Date No. X-Sec.
Survey by F.E.B. Notes N.S. MITH Notes Chkd. Checked
Indexed C. J. GALLI Date AUG 7/69 Date Date No.

76L-298 CE 307 11-58

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STATION	B.S.	H.I. 323.403	F.S.	ELEV.	LINE "A"
A-3	11.960	325.249	10.114	313.403 ~~313.289~~	"A-3" C.E. MON. 10± WEST EDGE GULLY
A-4	2.670	325.059	2.860	322.503 ~~322.389~~	"STA A-4" C.E MON 30± EAST EDGE GULLY
T.P.	11.882	325.162	11.779	313.280	
T.P.	10.918	335.843	0.237	324.925	
T.P	11.149	346.740	0.252	335.591	
T.P.	8.461	352.193	3.008	343.732	
T.P.	6.573	351.826	6.940	345.253	
T.P.	1.217	341.713	11.330	340.496	
T.P	3.544	333.905	11.352	330.361	
BM 50-12	9.894	341.311	2.488	331.531 ~~331.417~~	350.593 1956 B.M 50-12 C.E MON S. SIDE RD.
T.P.	0.670	330.166	11.815	329.496	
T.P.	0.915	319.306	11.775	318.391	
T.P.	1.028	308.471	11.863	307.443	
T.P.	0.564	297.050	11.985	296.486	
T.P.	0.712	286.712	11.050	286.000	
T.P.	0.398	275.290	11.820	274.892	
T.P.	0.474	263.927	11.837	263.453	
T.P.	0.493	253.515	10.905	253.022	
T.P.			7.590	245.925	

Profile Notes Red ____ Plotted ____ Job No. 0021-64 Division No. 11 F.B. 376C Pg. 193
No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LAND SLIDE
X-Sec. Notes Chkd. ____ Checked ____ Survey by F.P.B. Notes N.S. Date AUG 8 1969
No. ____ Date ____ Date ____ Map No. ____ Indexed C.L. GALLI Date [illegible]

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STATION	B.S.	H.I.	F.S.	ELEV	LINE A
T.P.	1317	247242		245925	CONT.
T.P.	0630	236432	11440	235802	
T.P.	0461	225502	11391	225041	
T.P.	0741	215033	11.210	214292	
T.P.	0978	204613	11.398	203635	
T.P.	6525	205473	5.665	198948	
T.P.	7940	212063	1350	204123	208.086 1965
B.M.50-13	4112	212441	3734	208.443 ~~208329~~	C.E.MON. P.V.D. & PP. #A8633Y
T.P.	6575	214478	4538	207905	
B.M.50-13A	7640	218143	3975	210.617 ~~210503~~	SP.&T. IN ASPHALT CURB. S. SIDE P.V.D.
T.P.	7515	223513	2145	215998	
T.P.	7040	228483	2070	221443	
T.P.	6005	231313	3175	225308	
T.P.	5830	234073	3070	228243	
T.P.	5895	235048	4920	229153	231.027 1965
B.M.34-15A			3842	231.320 ~~231206~~	SPK. IN LEAD AT GATE TO P.B. CLUB.
					END LINE A

F.B. 3766 Pg. 194 Job No. 002164 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of PORTUGUESE BEND LAND SLIDE Date ____ No. ____ X-Sec. ____
Survey by F.E.B. Notes N.S. Notes Chkd. ____ Checked ____
Indexed D.J. GALLI Date AUG 8/69 Date ____ No. ____

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 195
	Date	Date	Survey of Portuguese Bend Land Slide			
X-Sec. No.	Notes Chkd.	Checked	Survey by FEBrooks	Notes FEB	Date 11 Aug 69	
	Date	Date	Map No.	Indexed [redacted] GALLI	Date [redacted]	

S.N. 0021.64

PORTUGUESE BEND LANDSLIDE

Level Line B.

STATION	B.S.	H.I.	F.S.	ELEV.
			FE Brooks	
			N. Smith	
			R Moore	
			R Massey	

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STATION	B.S.	H.I.	F.S.	ELEV	Line "B"
SB #2	8367	391.830		383.577 ~~383.463~~	Sweet Bay #2 S.W. & T in pav.
SB #1	1512	388926	4416	387.528 ~~387.414~~	Sweet Bay #1 S & T. in pav.
TP #1	0603	377809	11720	377.206	
TP #2	1180	367461	11528	366.281	
TP #3	3.799	359998	11262	35[illegible].199	
SB #3	11366	364487	6877	353.235 ~~353121~~	Sweet Bay #3 S.W. & T in pav.
TP #4	11.955	375938	0504	363.983	
TP #5	10443	386117	0264	375.674	
TP #6	8358	391820	2655	383.462	
TP #7	8067	395167	4720	387.100	
TP #8	9362	392874	11655	383.512	
TP #9	7346	398.733	1487	391.387	
West Fix	4367	398380	4720	394.127 ~~394013~~	C.E. Mon.
T.P. #10	1.198	388.666	10912	387468	
T.P. #11	1.317	378.573	11.410	377.256	
T.P. #12	0.326	367.505	11.394	367.179	
T.P. #13	3718	362.645	8578	358927	
TP #14	0.245	358.832	4058	358587	
T.P. #15	0512	347.488	11.856	346.976	
TP #16	0.832	336.698	11.622	335.866	
T.P. #17	0.705	326.246	11.157	325.541	

F.B. 3766 Pg. 196
Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of Portuguese Bend Land Slide Date Date No. X-Sec.
Survey by F.E.Brooks Notes F.E.B. Notes Chkd. Checked
Indexed C. J. GALLI Date Date Date No.

76L-298 CE 307 11-58

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STATION	B.S.	H.I. 326.246	F.S.	ELEV.	LINE "B"
H-2	1.280	320.152	7.374	318.986 ~~318.872~~	H-2 C.E. MON. DN 6"
T.P.	0.652	310.950	9.854	310.298	
H-4	4.046	307.948	7.048	304.016 ~~303.902~~	H-4 2" I.P. CONC PLUG & TAG 6.0± FROM P.P# 1036718E
T.P.	0.770	297.135	11.583	296.365	
T.P.	11.734	302.107	6.762	290.373	
T.P.	11.930	313.573	0.464	301.643	
T.P.	10.710	324.066	0.217	313.356	
T.P.	10.141	333.699	0.508	323.558	
P.T. #5	0.966	331.975	2.690	331.123 ~~331.009~~	P.T. #5 S.W. CT INT. LIMETREE & PEPPERTREE DR.
T.P.	0.428	320.925	11.478	320.497	
T.P.	1.814	310.865	11.874	309.051	
P.T. 6-B	0.869	304.244	7.490	303.489 ~~303.375~~	P.T. #6-B S.W. CT 45'± S. INT. KUMQUAT LANE & PEPPERTREE DR.
T.P.	0.591	292.857	11.978	292.266	
T.P.	0.982	282.485	11.354	281.503	
T.P.	0.514	271.761	11.238	271.247	
T.P.	0.607	261.255	11.113	260.648	
T.P.	0.202	249.713	11.744	249.511	
T.P.	0.602	238.673	11.642	238.071	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 002164 Division No. 11 F.B. 3766 Pg. 197
X-Sec. No. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LAND SLIDE
Notes Chkd. ____ Checked ____ Survey by F.E.B. Notes N.S. Date AUG 11 1969
Date ____ Date ____ Map No. ____ Indexed [illegible] Date [illegible]

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STATION	B.S.	H.I. 238.673	F.S.	ELEV	LINE "B"
T.P	0.702	227.645	11.730	226.943	
T.P	0.268	216.488	11.425	216.220	
T.P.	3.305	208.213	11.580	204.908	
"C"	1.138	202.297	7.054	201.273 ~~201.159~~	"C" RD. DEPT. DISC. ON PEPPERTREE DR. OPPOSITE DRIVEWAY TO #1 PEPPERTREE VILLA FRANCESCA
T.P.	10.968	209.750	3.515	198.782	
T.P.	8.104	217.430	0.424	209.326	
K-1	6.530	217.081	6.879	210.665 ~~210.551~~	K-1 C.E MON.
T.P.	0.336	205.834	11.583	205.498	
T.P.	2.383	196.838	11.379	194.455	BM 34-17 C RGH 11/22/74
(U.S.C.&G.S. B.M X 977) BM 34-17C	2.442	191.957	7.323	189.629 ~~189.515~~	U.S.C.&G.S. X 977 N.W. COR. PEPPERTREE DR &
T.P.	3.262	189.044	6.175	185.782	P.V. DR. SOUTH BEHIND BLOCK WALL
T.P.	8.050	194.309	2.785	186.259	
T.P.	0.681	186.501	8.489	185.820	
T.P.	0.590	177.196	9.895	176.606	
T.P.	3.935	173.247	7.884	169.312	168.614 1965
BM 34-18	2.200	170.971	4.476	168.885 ~~168.771~~	BM 34-18. Palos Verde Dr. S. & Narcissa Dr. N.E.
T.P.	2.250	162.555	10.666	160.305	Cor. Co Engr button brass cap 1" dn.
P-3	6.638	164.895	4.298	158.371 ~~158.257~~	P-3 L & Co. Engr Tag N. curb.
T.P.			3.908	160.987	

F.B. 3766 Pg. 198
Job No. 002164 Division No. 11 Notes Red Plotted Profile
Survey of PORTUGUESE BEND LAND SLIDE Date Date No.
Survey by F.E.B. Notes N.S. Notes Chkd. Checked X-Sec.
Indexed C. L. GALLI Date AUG 11/69 Date No.

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STATION	B. S.	H. I.	F. S.	ELEV.	LINE 'B'	
T.P.	6192	167.179		160.987		
T.P.	5692	168.279	4592	162.587		
P-2	6918	170.500	4697	~~167.582~~ 163.696	P-2 L&C. Engr Tag N. curb. opp Tower of church.	
TBM 31	6107	173.432	3195	~~167.325~~ 167.439	TBM 31 L&T S. curb E. island at entrance to Wayfarers chapel	
T.P.	6575	175.240	4917	168.665		
T.P.	5970	176.351	4859	170.381		
BM 34-19A			3465	~~172.886~~ 173.000	BM 34-19A C. Engr Brass Cap cemented in to back edge of S.D. C.B. S. side of Palos Verde Dr. S. at Station 2+32	
					End of LINE 'B'	

Profile Notes Red. ____ Plotted ____ Job No. 0021-69 Division No. 11 F. B. 3766 Pg. 19
No. ____ X-Sec. ____ Date ____ Date ____ Survey of PORTUGUESE BEND LAND SLIDE
No. ____ Date ____ Notes Chkd. ____ Checked ____ Survey by FEB Notes FJS Date AUG 69
Date ____ Map No. ____ Indexed C. J. GALLI Date [redacted]

F. B. 3716 Pg. 200

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

Survey of _____ Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 201
	Date	Date	Survey of Portuguese Bend Land slide			
X-Sec. No.	Notes Chkd.	Checked	Survey by FEBrooks	Notes FEB N.S.	Date 12 Aug 69	
	Date	Date	Map No.	Indexed [redacted]	Date AUG 21 [redacted]	

J.N. 0021.64

PORTUGUESE BEND LANDSLIDE

Level Line D

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

FE Brooks
N Smith
R Moore
R Massey

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3117

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STATION	B.S.	H.I.	F.S.	ELEV	LINE 'D.'
BM 50-13	3.850	212.179		208.443 ~~208.329~~	BM 50-13 Co Engr Mon. Palos Verdes Dr. S.
T.P.	4.165	208.444	1.900	204.279	and P.P. # A 86335.
T.P.	11.160	219.169	0.435	208.009	
T.P.	11.019	229.666	0.522	218.647	
T.P.	10.712	239.051	1.327	228.339	
T.P.	11.149	249.733	0.467	238.584	
T.P.	11.227	257.843	3.117	246.616	
T.P.	11.753	269.173	0.423	257.420	
T.P.	11.120	279.891	0.402	268.771	
T.P.	10.599	290.269	0.221	279.670	
T.P.	11.268	300.735	0.802	289.467	
T.P.	11.587	310.310	2.012	298.723	
T.P.	5.825	314.648	1.487	308.823	
"SHIELDS"	3.820	314.373	4.095	310.667 ~~310.553~~	"SHIELDS" C.E. MON.
T.P.	1.044	309.807	5.610	308.763	
T.P.	1.859	300.582	11.084	298.723	
T.P.	0.445	290.169	10.858	289.724	
T.P.	0.252	279.199	11.222	278.947	
T.P.	0.393	269.344	10.248	268.951	
T.P.	0.267	258.273	11.338	258.006	

F.B. 3766 PG. 202

Job No. 00 Division No. 11 Notes Red Plotted Profile

Survey of Portuguese Bend Landslide Date Date No. X-Sec.

Survey by F.E. Brooks Notes F.E.B. Notes Chkd. Checked

Indexed: [illegible] Date AUG 13/69 Date Date No.

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STATION	B.S.	H.I. 25x.223	F.S.	ELEV.	LINE "D"
T.P	0.623	247.934	10.962	247.311	
T.P.	0.588	237.320	11.202	236.732	
T.P.	0.948	227.466	10.802	226.518	
T.P	0.377	216.134	11.709	215.757	
T.P	0.663	205.489	11.308	204.826	
T.P	4.683	204.303	5.869	199.620	
J-5	7.168	202.746	8.725	195.692 ~~195.578~~	J-5 C.E. MON UP 4" 30'± W. CRENSHAW & 200'± N. OF P.V. DR. S. 25'0'± S.W 3.0 EUCLY TREE
T.P.	11.845	211.526	3.065	199.681	
Rad 2 Ecc 2	5.980	214.186	3.320	208.320 ~~208.206~~	Co. Engr Mon. 9" E. of marker pipe 30' N. of edge of Palos Verdes Dr. S.
S-4	1.088	208.915	6.358	207.942 ~~207.828~~	Co. Engr Mon. 15' E. of Top of draw
T.P.	3.266	200.603	11.578	197.337	
J-3	2.168	200.180	2.591	198.126 ~~198.012~~	C.E. MON. J-3 25.0'± W. DEEP GULLY UNDER BUSH
T.P	4.369	200.649	3.920	196.260	
T.P.	4.317	194.246	10.720	189.929	
S-1	7.248	194.236	7.258	187.102 ~~186.988~~	1" I.P. 5' N. of edge of pav. l'dn. near 4" water pipe
T.P.	10.842	203.823	1.255	192.981	
T.P.	10.814	213.858	0.779	203.044	
TP.			0.552	213.306	

Profile No. ____ Notes Red ____ Plotted ____ Job No. 20-1-16 Division No. 11 F.B. 376 Pg. 23
X-Sec. No. ____ Date ____ Date ____ Survey of PALOS VERDES BEND LAND SURVE
Notes Chkd ____ Checked ____ Survey by F.E.B. Notes N.S. Date AUG 13 '58
Date ____ Map No. ____ Indexed ____ Date ____

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STATION	B.S.	H.I.	F.S.	ELEV	LINE 'D'
T.P.	11795	225.101		213.306	
T.P.	7060	231.611	0550	224.551	
SIA	11183	231.529	11265	~~220.346~~ 220.460	Co. Engr Mon. Flush mound of rocks around mon. aprox 50' S.W. of edge of pvmt.
T.P.	11857	242.515	0871	230.658	
T.P.	10531	252.637	0407	242.106	
T.P.	10884	263054	0467	252.170	
T.P.	10127	272913	0268	262.786	
T.P.	10918	283581	0250	272.663	
T.P.	11854	295.065	0.370	283.211	
T.P.	7446	302053	0.458	294.607	
Blakesley	11625	304138	9.540	~~292.513~~ 292.627	Co. Engr Mon. 6" up 3½' N. of marker pipe on spur of hill.
T.P.	1082	298838	6.382	297.756	
T.P.	0758	288193	11.403	287.435	
T.P.	0448	277.398	11243	276950	
T.P.	0448	266218	11628	265770	
T.P.	0747	255220	11745	254473	
T.P.	1189	244717	11692	243.528	
T.P.	0697	234056	11358	233359	
T.P.			11910	222146	

F.B. 3766 Pg. 204 Job No. 002164 Division No. 11 Notes Red ____ Plotted ____ Profile
Survey of PORTUGUESE BEND LAND SLIDE Date ____ Date ____ No. ____ X-Sec.
Survey by FEBrooks Notes F.E.B. Notes Chkd. ____ Checked ____ No. ____
Indexed [illegible] Date ____ Date ____ Date ____

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE 'D'
T.P.	0920	223 066		222 146	
TP	1024	212 622	11 468	211598	
"C"			11460	201.276 ~~201 162~~	"C" Rd Dept. Disc. on Peppertree Dr. opp. drive To #1 Peppertree Villa Francesca

Profile No. ____ Notes Red ____ Plotted ____ Job No. 02164 Division No. 11 F.B. 3766 Pg. 205
X-Sec. No. ____ Date ____ Date ____ Survey of Portuguese Bend Landslide
Notes Chkd. ____ Checked ____ Survey by FF Brooks Notes FF B. Date 13 Aug 69
No. ____ Date ____ Date ____ Map No. ____ Indexed C. J. GALLI Date [illegible]

F. B. 3766 PG. 206 Job No._____ Division No._____ Notes Red_____ Plotted_____ Profile

Survey of_____ Date_____ Date_____ No._____

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

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

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Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3768 Pg. 201
	Date	Date	Survey of Portuguese Bend Landslide		
X-Sec. No.	Notes Chkd.	Checked	Survey by FE Brooks	Notes FEB	Date 14 Aug 69
	Date	Date	Map No.	Indexed C.J. GALLI	Date AUG 21 '69

S.N. 0021.64

PORTUGUESE BEND LANDSLIDE.

LINE C

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

FE Brooks
N. Smith
R Moore
R Massey

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411.629

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STATION	B.S.	H.I.	F.S.	ELEV	LINE 'C'
Tank	1551	477051		475.614 ~~475.500~~	Tank SW&T Pav. 20±' from water Tank
T.P.	1744	467380	11415	465636	
T.P.	0295	458615	9060	458320	
T.P.	0294	446919	11990	446625	
T.P.	0487	435422	11984	434935	
T.P.	0486	424211	11697	423725	
T.P.	3390	421042	6559	417652	P.K. spk.
PB-9A	3010	417354	6698	414.458 ~~414344~~	Bt. spk & W in pav. 20' E. of drive to house #84
PB-9B	3165	413128	7391	410.077 ~~409963~~	Bt. spk & W in pav. 67±' E. of drive to house #80
T.P.	3.750	410418	6460	406668	
T.P.	8756	413294	5880	404538	
AC-3	1219	412936	1577	411.831 ~~411717~~	Co. Engr Mon. 5" up. 45' N of edge of pav.
T.P.	4050	408414	8572	404364	
PB-9	5254	409563	4105	404.423 ~~404309~~	Co. Engr Mon. 2" up 10' N. of edge of pav.
T.P.	7042	412576	4029	405534	at Vandor lip driveway
P.I. 5B.	5108	415411	2273	410417 ~~410303~~	Narcissa Dr. and Sweetbay Co. Engr Mon. 2" up. 7' N. of edge of pav.
T.P.	0722	411563	4570	410841	
T.P.			7182	404381	

F.B. 3766 Pg. 208

Job No. 0021.64 Division No. 11 Notes Red Plotted Profile

Survey of Portuguese Bend Landslide Date Date No. X-Sec.

Survey by F.E. Brock Notes F.E.B. Notes Chkd. Checked Date No.

Indexed B. J. GALLI Date Date

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405.930

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE 'C'
T.P.	2607	406 988		404 381	
TBM #30	1028	406 511	1505	405.597 ~~405 483~~	Narcissa Dr. & Cinnamon Lane N.E. Cor. bt. spk
T.P.	7425	407 534	6402	400109	in headwall
TP	5573	409 491	3616	403 918	
PI 4C	5570	411 587	3474	406.131 ~~406 017~~	Narcissa Dr. & Plum Tree N.W. Cor. Co. Engr Mon.
T.P.	9720	419 717	1590	409 997	4" up. 10' back of edge of pav.
TP	11858	430 574	1001	418 716	
T.P.	4070	434 444	0200	430374	
Fruit Tree #1	11778	436 440	9782	424.776 ~~424662~~	Fruit Tree #1 N. of Narcissa Dr. 55'± E. of Fruit Tree Rd. Co. Engr mon Flush
T.P.	0820	425553	11 707	424733	
T.P.	8063	422 700	10916	414637	
T.P.	2844	423 609	1935	420765	
T.P.	4839	426 862	1586	422023	
RM 1	4553	426 369	5046	421.930 ~~421 816~~	4" brass disc in 12" sq conc post 2" up on edge of horse training field
S.P. Hills G.7	5664	426 329	5704	420.779 ~~420665~~	4" brass disc in 12" sq conc post Flush on edge of horse training field
RM 2	4405	426 389	4345	422.098 ~~421 984~~	4" brass disc in 12" sq conc post 4" up. on edge of horse training field.
T.P.	0379	415 106	11 662	414727	
TP.			11 210	403896	

Profile No. ___ Notes Red ___ Plotted ___ Job No. 0021.64 Division No. 11 F.B. 3766 Pg. [illegible]
Date ___ Date ___ Survey of Portuguese Bend Landslide
X-Sec. No. ___ Notes Chkd. ___ Checked ___ Survey by FEBrooks Notes FEB Date 14 Aug 69
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Pg. 210 Job No. 10 Ri. 6 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of Portuguese Bend of Landslide Date ____ Date ____ No. ____ X-Sec. ____
Survey by F.E.B. Brooks Notes F.E.B. Notes Chkd. ____ Checked ____
Indexed [redacted] Date ____ Date ____ No. ____

STATION	B.S.	H.I.	F.S.	ELEV	LINE 'C'	
T.P.	0219	404115		403 896		
T.P.	0300	392 745	11670	392445		
T.P.	2462	385172	10035	382 710		
T.P.	1990	379489	7673	377499		
P.I. 3 A	0869	374039	6319	~~373.470~~ 373.284	Narcissa Dr. & Ginger Root Ln. Bo Engr button brass cap 2" up. 5' S. of edge of pvmt.	
T.P.	0225	362504	11760	362279		
T.P.	0911	351597	11818	350686		
T.P.	0734	340519	11812	339785		
P1 1A	2925	336762	6682	~~333.837~~ 333.951	Narcissa Dr. & Fig tree Rd. W. side spk w of berm of road.	
T.P.	0654	325928	11488	325274		
T.P.	0602	314608	11922	314006		
T.P.	0550	303 551	11607	303 001		
T.P.	0399	292340	11590	291961		
T.P.	4422	286093	10669	281671		
T.P.	7275	292394	0974	285 119		
S.P. Hills H-9A	3888	292353	3929	~~288.465~~ 288.573 288.424	2" Brass cap mon on Pvr.	30' W of road
Ecc-1	4268	292578	4043	~~288.710~~ 288.518	" " " " "	50' W. of road
Ecc-2	4142	292546	4174	~~288.404~~ 288.478	" " " " "	55 " " "
Ecc-4			4182	~~288.364~~	" " " " "	60 " " "

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE 'C'
ECC-4	3350	291714		288.478 ~~288.364~~	
T.P.	11895	292932	10677	281037	
T.P.	11854	304276	0510	292422	
T.P.	11523	315473	0326	303950	
TP	11812	326814	0471	315002	
TP	11045	337529	0330	326484	
T.P.	1064	334911	3682	333847	
TP	0495	323538	11868	323043	
T.P.	1111	312711	11938	311600	
T.P.			10402	302.423 ~~302.309~~	spk & T on SE edge pvmt
					W.T. + 4.207 B.S. − 4.400 F.S. − .193
					E. SETUP. + 5.550 BACKSIGHT − 5.450 FORE + 0.100
				− 0146	MEAN = 21.293 .193 .100 − .146
				302 277 ~~163~~ P.H	MOW
T.P.	0823	303132		302 423 ~~302.309~~	spk & T on SE edge pvmt
T.P.	1250	292614	11768	291364	
TP	1089	282245	11458	281156	
PB 10	1194	281008	2431	279.928 ~~279814~~	Narcissa Dr. W. side at end of rock wall Co Engr Mon.
T.P.	0671	270164	11515	269493	
TP			11727	258437	

Profile Notes Red ____ Plotted ____ Job No. 0021.64 Division No. 11 F.B. 3766 Pg. 211
No. ____ Date ____ Date ____ Survey of Portuguese Bend Landslide
X-Sec. Notes Chkd. ____ Checked ____ Survey by FE Brooks Notes FEB Date 14 Aug 69
No. ____ Date ____ Date ____ Map No. ____ Indexed C.L. GALLIS Date [illegible]

76L-298 CE 307 11-58

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STATION	B.S.	H.I.	F S.	ELEV		
T.P.	0496	258 933		258 437		
T.P.	0890	248 368	11 455	247 478		
T.P.	0703	237 750	11 321	237 047		
T.P.	0188	226 120	11 818	225 932		
T.P.	1460	216 590	10 990	215 130		
T.P.	4425	216 218	4 797	211 793		
WF #1	4708	215 418	5 508	210.824 ~~210 710~~	Sq spk in bottom step at parking lot.	
TP	4888	217 546	2 760	212 658		
Wayfarer	0658	214 314	3 890	213.770 ~~213 656~~	L&T at front door.	
T.P.	0286	203 065	11 535	202 779		
T.P.	0301	192 397	10 969	192 096		
T.P.	0908	181 697	11 608	180 789		
T.P.	2030	172 352	11 375	170 322		
TBM 31			4938	167.528 ~~167 414~~	L&T S. curb. E. island at entrance to Wayfarers Chapel.	

F.B. 3766 Pg. 212 Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of Portuguese Bend Land slide Date Date No. X-Sec.
Survey by F.F. Brooks Notes F.F.B. Notes Chkd. Checked
Indexed C. J. GALLI Date Date Date No.

Profile	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 213
No.	Date	Date	Survey of Portuguese Bend Land slide			
X-Sec.	Notes Chkd.	Checked	Survey by FE Brooks	Notes FEB	Date 15 Aug 69	
No.	Date	Date	Map No.	Indexed C. L. GALLI	Date AUG 21 '69	

S.N. 0021.64

PORTUGUESE BEND LANDSLIDE.

LINE A RERUN

From BM 50-7

To BM 50-9

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

F.E. Brooks
N. Smith
R Moore

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STATION	B.S.	H.I.	F.S.	ELEV	LINE A.
BM 50-7	6002	1207540		1201538	BM 50-7 Elev. 1201.538 Crenshaw Blvd and
					Crest Rd. 92.5' E. of ctr. Crenshaw Blvd 40.0
T.P.	1032	1197374	11198	1196342	N. of ctr. of Crest Rd. L.A. Co. Engr Button
T.P.	0833	1186515	11692	1185682	Brass Cap set in 12" sq conc post 4" above
T.P.	0601	1175307	11809	1174706	ground Ref. F.B. 2400-13
T.P.	3612	1167189	11730	1163577	
TBM C-1	8200	1168956	6433	1160756	TBM C-1 Crenshaw Blvd and Whitley
T.P.	9930	1177548	1338	1167618	Collins Dr. N.W. Cor. Sm Bt. spk
T.P.	8777	1185865	0460	1177088	in S.E. Cor. of S. Calif Edison Box
TP	4008	1186586	3287	1182578	45.5' W. of W end C.R.
BM 50-8	4210	1186498	4298	1182288	BM 50-8 Elev. 1182.108 Sea Crest Dr. and
					Crenshaw Blvd. 6' S'lly P.P. #1035202 Mon
T.P.	1864	1179856	3506	1177992	dn 8" Ref. FB 2400-14
T.P.	2428	1173919	8365	1171491	
T.P.	1118	1165328	9709	1164210	
TP	0802	1154471	11659	1153669	
TP	0509	1143731	11249	1143222	
TP	0345	1132434	11642	1132089	
TP	0752	1121319	11867	1120567	
T.P.			11352	1109967	

F.B. 3766 Pg. 214 Job No. 0021.64 Division No. 11 Notes Red ____ Plotted ____ Profile ____
Survey of Portuguese Bend Land Slide Date ____ Date ____ No. ____
Survey by F.E. Brooks Notes FEB Notes Chkd. ____ Checked ____ X-Sec. ____
Indexed B.R. GALLI Date ____ Date ____ No. ____

76L-298 CE 307 11-58

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STATION	B.S.	H.I.	F.S.	ELEV.	LINE 'A' RERUN
T.P.	0808	1110775		1109967	
T.P.	0661	1099656	11780	1098995	
TBM C-2	0430	1091831	8255	1091401	TBM C-2 Crenshaw Blvd. 0.3± mi. s'ly
T.P.	0740	1080675	11896	1079935	of Sea Crest Dr. Lg Bt. spk in boulder on
TP	0558	1069408	11825	1068850	E side of gravel rd.
T.P.	0558	1057976	11990	1057418	
T.P.	0601	1046687	11890	1046086	
T.P.	0827	1035570	11944	1034743	
T.P.	1231	1024789	12012	1023558	
T.P.	1660	1015830	10619	1014170	
T.P.	3765	1009298	10297	1005533	
BM 50-9			9708	999590	BM 50-9 C.E. Mon. W. side Crenshaw Blvd.
					Elev. 999.535 per F.B. 2849-49

Profile No. ____ Notes Red ____ Plotted ____ Job No. 00 21.69 Division No. 11 F.B. 3766 Pg. 215
Date ____ Date ____ Survey of Portuguese Bend Landslide
X-Sec. No. ____ Notes Chkd. ____ Checked ____ Survey by F.E. Brooks Notes F.E.B. Date 15 Aug 69
Date ____ Date ____ Map No. ____ Indexed [illegible] GALLI Date [illegible]

F. B. 3766 Pg. 216

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

Survey of _____ Date _____ Date _____ No. _____

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

Indexed _____ Date _____ Date _____ Date _____ No. _____

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

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76L-298 CE 307 11-58

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 217
	Date	Date	Survey of Portuguese Bend Landslide			
X-Sec. No.	Notes Chkd.	Checked	Survey by FE Brooks	Notes F.E.B.	Date 15 Aug 69	
	Date	Date	Map No.	Indexed G. J. GALLI	Date AUG 21 '69	

S. N. 0021.64

PORTUGUEZE BEND LANDSLIDE

PICKUP of K-6 FROM LINE A

STATION	B.S.	H.I.	F.S.	ELEV.
		FE Brooks N Smith R Moore		

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76L-298 CE 307 11-58

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210.617

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STATION	B. S.	H. I.	F S.	ELEV		
BM 50-13	3662	212105		208 443	BM 50-13 C.E. Mon. Palos Verde Dr. S.	
T.P.	10632	220285	2452	209653	at PP # A 86339	
T.P.	11659	231406	0538	219747		
TP	9745	240828	0323	231083		
K-6	4065	240788	4105	236723	Co. Engr Mon. 3" up on top of cut bank	
T.P.	1213	230961	11040	229748	5' from cor of fence.	
T.P.	3417	223317	11061	219900		
T.P.	3830	215485	11662	211655		
BM 50-13 A			4873	210612	Sq hd spk & T at W. end of	
					of asphalt curb S side of st.	

F. B. 3766 Pg. 218 Job No. 0021.64 Division No. 11 Notes Red Plotted Profile
Survey of Portuguese Bend Landslide Date Date No. X-Sec.
Survey by F.E. Brooks Notes F.E.B. Notes Chkd. Checked
Indexed [illegible] Date Date Date No.

Profile No.	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F.B. 3766	Pg. 24
	Date	Date	Survey of Portuguese Bend Landslide			
X-Sec. No.	Notes Chkd.	Checked	Survey by	Notes	Date	
	Date	Date	Map No.	Indexed [illegible]	Date [illegible]	

JOB # 0021.64

PORTUGUESE BEND

LANDSLIDE

LINE "E"

August 1969

Dreier
Maldonado
McKnight
Stroud
Lieber

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

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76L-296 CE 307 11-58

PGL-200 CE

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	B.S.	H.I.	F.S.	ELEV	LINE E.		
[illegible]	0.698	231.706		231.008	BM. 3415A	231.027 1965	ELEV PER F.B. 2849-250
T.P.	0.417	220.305	11.818	219.888			
T.P.	3.717	213.684	10.438	209.967			
T.P.	4.108	210.957	6.735	206.849			
T.P.	0.304	202.518	8.743	202.214			
T.P.	0.851	191.641	11.728	190.790			
T.P.	0.867	182.373	10.135	181.506			
K-10 A	4.154	176.927	9.600	172.773	K-10 A	SPK. W.&T.	
K-10 B	7.555	177.174	7.308	169.619	K-10 B	2" I.P.	
K-10 C	4.055	172.264	8.965	168.209	K-10 C	L&T.	(1)
	2.881		4.092	168.172	SPK.		
				0.930			
K-10		171.053	5.022	167.242	K-10	C.E. Mon	0.930 below SPK.
K-9 A	3.388	166.910	7.531	163.522	K-9 A	SPK. W.&T.	
K-9 B	5.085	166.913	5.082	161.828	K-9 B	2" I.P.	
T.P.	2.654	166.174	3.393	163.520			
K-9	4.095	163.579	6.750	159.424	K-9	3/4" I.P.	
K-8 A	3.634	161.596	5.557	157.962	K-8 A	SPK. W.&T.	
K-8 B	1.883	157.453	6.026	155.570	K-8 B	2" I.P.	
T.P.	0.389	146.362	11.960	145.973			
T.P.			9.814	136.548			

76-L298 CE 307 3-61

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Profile No. 164 Plotted Date
X-Sec. No. Scale Date
Page No. Checked Date

Job No. 2-1.6X Division No. 11
Survey of Portuguese Bend
Survey by Dreier Notes TMM Date 8-18-69
Map No. Indexed Date

F.B. 3766 Pg. 221

STATION	B.S.	H.I.	F.S.	ELEV.	Line E Cont.	
	0465	137013		136548		
T.P.	1085	126273	11825	125188		
T.P.	0450	116756	9967	116306		
T-P	4576	113962	7370	109386	W 3	C.E. Mon
T.P	7721	120003	0680	113282	SPK in Guy Pole	
T.P.	11283	131395	0891	120112		
T.P.	10247	138325	3317	128078		
K-5	1323	137366	2280	136045	K-5	C.E. Mon
T.P	0227	126500	11095	126273		
T.P	0337	115062	11775	114725		
T.P.	1585	105430	11217	103845		
K-5 AUX.	0345	102122	3653	101777	K-5 AUX.	C.E. Mon
T.P.	0810	91047	11882	90237		
T.P	0183	79448	11784	79265		
T.P	1354	69585	11197	68251		
T.P	1054	62361	8278	61307		
T.P.	5025	56958	10428	51933	K-4 Not Fd. (Undoubtedly buried [illegible])	
T.P	4181	51711	9428	47530		
T.B.M. # 28	5868	54546	3033	48678	T.B.M # 28 ⊡ SPK. in Rock	
T.P	3427	52199	5779	48772	K-3A	C.E. Mon
T.P			10503	41696		

76-L298 CE 307 3-61

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STATION	B. S.	H. I.	F. S.	ELEV.	Line E	Cont.
T.P	1233	42929		41696		
T.P	9116	42355	9690	33239		
T.P	7323	47790	1888	40467		
K-2A	2350	47720	2420	45370	K-2A 2" I.P	
T.P	1049	36881	11885	35832		
T.P	6070	31517	11434	25447		
T.P.	11942	42814	0645	30872		
T.P.	10461	53072	0203	42611		
T.P	7610	56,999	3683	49339		
T.P	0247	52666	4580	52419		
T.P	1271	42732	11205	41461		
T.P	4121	34960	11893	30839		
T.P.	0975	23991	11944	23016		
T.P. Sq. SPK	5008	17582	11417	12574	T.P. Sq. SPK. @ N.W. Cor. of Tennis Court	
T.P	3884	17088	4378	13204		
T.P	5265	18201	4152	12936		
T.P	2755	17841	3115	15086		
B.B. #8			9784	8057	P.B. #8 SPK. in Rock Groin	ELEV. ± 8.00

F.B. 3766 Pg. 222 Job No. 002164 Division No. 11 Notes Red Plotted Profile
Survey of Portuguese Bend Landslide Date Date No. X-Sec.
Survey by Dreier Notes Maldonado Notes Chkd. Checked No.
Indexed G. J. GALLI Date Date Date

F.B. 3766 PG. 223

Notes Ck'd by
Map No.
Office Work
Checked
Date

Survey of PORTUGUESE BEND
JN 0021.64 Tape Std °F
Surveyed by BROOKS
Notes DREIER Date 8-6-69
Indexed C. J. GALLI AUG 21 '69

JOB NO. 0021.64

PORTUGUESE BEND LANDSLIDE

ANGULAR POSITION CHECK OF WAY FARER

AUGUST 6, 1969

DREIER
BROOKS
SMITH, N
SIEMANN
MASSEY
MOORE,

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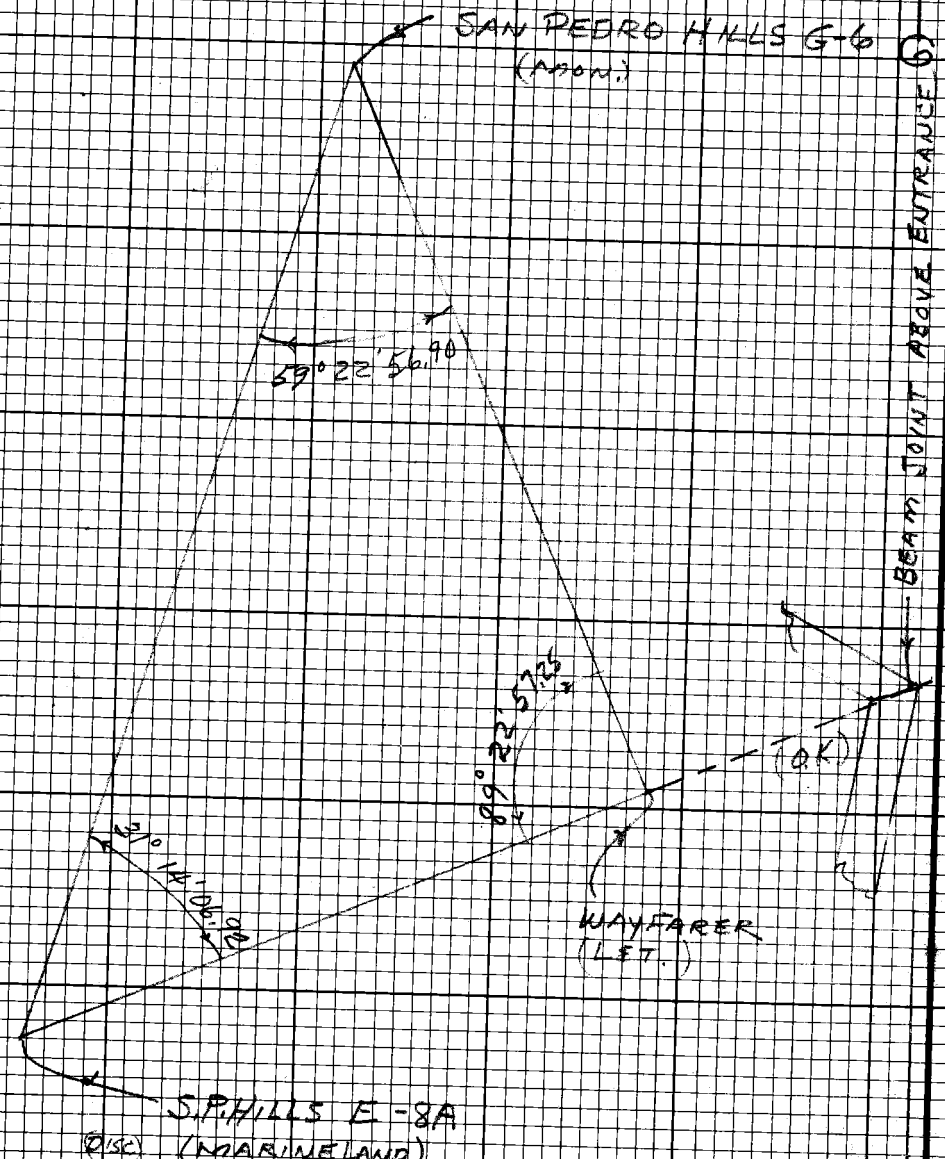
76F3098 CE# 310 9/67

F.B. 3766 Pg 224

ANGLES IN F.B.G. 1134-27 TO 32

89°	22'	57.25
59	22	56.90
31	14	06.92
180°	00'	01.07" ✓



BEAM JOINT ABOVE ENTRANCE ⑥

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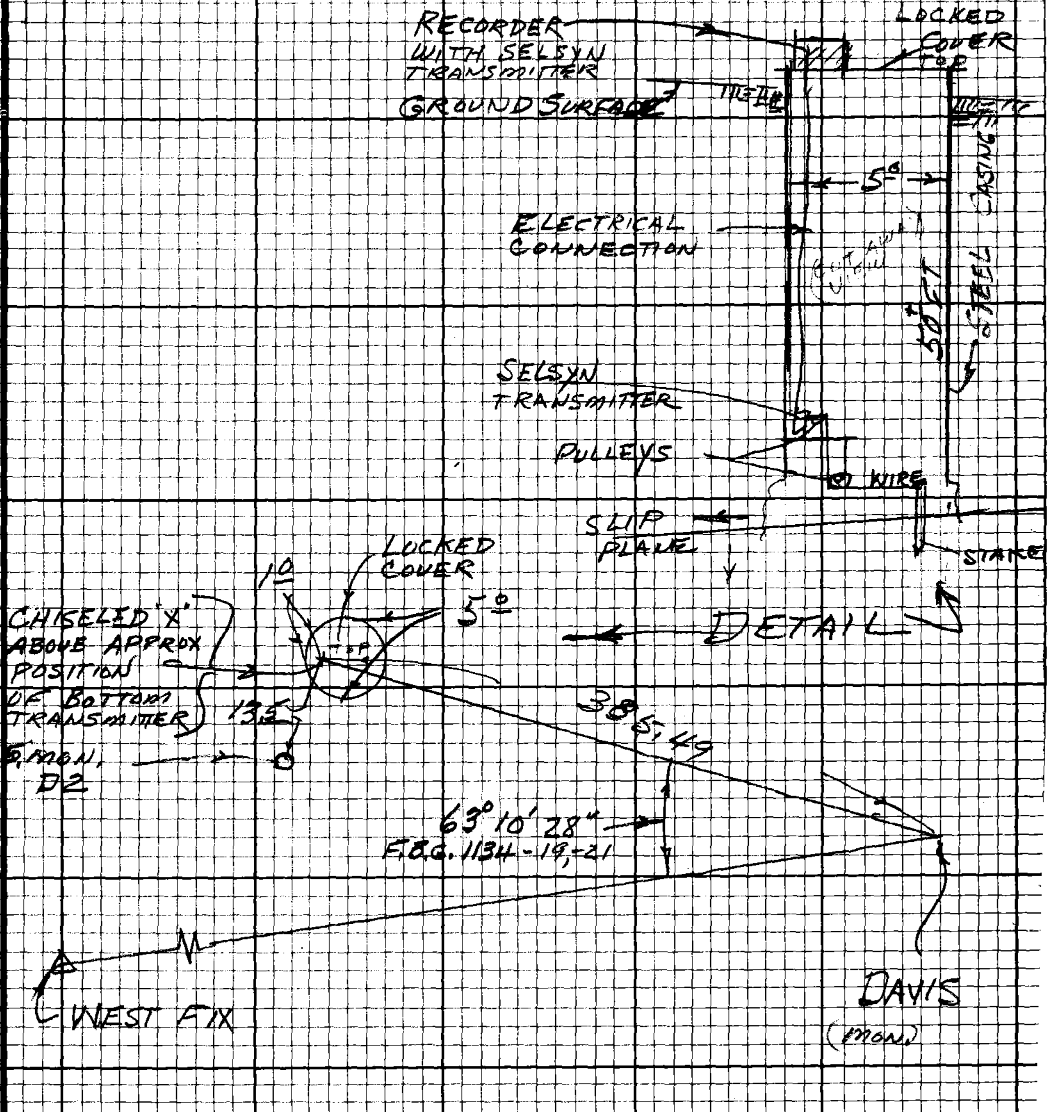
Notes Ck'd by	Survey of PORTUGUESE BEND
Map No.	JN 602164 Tape Std °F
Office Work	Surveyed by DREIER
Checked	Notes DREIER Date 8-6-69
Date	Indexed CALLI AUG 21 '69

LOCATION OF PALOS VERDES PROPERTIES RECORDER



76E309B CE#310 9-67

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F.B. 3766 PG 226

Profile	Notes Red	Plotted	Job No. 0021.64	Division No. 11	F. B. Pg.
No.	Date	Date	Survey of Portuguese Bend Landslide		
X-Sec.	Notes Chkd	Checked	Survey by G.E. Dreier	Notes [illegible]	Date
No.	Date	Date	Map No.	Indexed	Date

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

76L-295 S & E #307—1-55

F. B. Pg.

Job No. Division No. Notes Red Plotted

Survey of Date Date

Survey by Notes Notes Chkd Checked

Indexed Date Date Date