

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN HD 1
FB 4205-278

DATE	COORDINATES	ELEV.	DIST	HORIZONTAL BEARING	MOVEMENT TIME	RATE	VERTICAL ELEV DIFF	MVNT TIME	DIP
DA MON YR	NORTH	EAST	FT	DG MN	DAYS	FT/DA		DAYS	DG MN
29 MAR 90	4018758.35	4178339.59							
			181.15						

***** TOTAL MOVEMENT VECTOR *****

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN HD 2
FB 4205-278

DATE	COORDINATES	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MOVNT TIME DAYS	DIP DG MN
29 MAR 90	NORTH 4018587.72 EAST 4178154.10	174.37							

***** TOTAL MOVEMENT VECTOR *****

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN DAVIS
FB 2899-011

PROGRAM EK11AP
09/29/93

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 8 FEB 61 TO 29 MAR 90	0641 DAYS	DIST = 314.326 FT	BEARING = S 2 11 E
VERTICAL MOVEMENT	FROM 8 FEB 61 TO 29 MAR 90	0641 DAYS	DIST = -87.54 FT	
RESULTANT	FROM 8 FEB 61 TO 29 MAR 90	0641 DAYS	DIP = 15 DEG 33 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN E FIX
FB 4445-101

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
6 SEP 83	4019069.53	4179840.22	633.30		N 90	371				
11 SEP 84	4019069.53	4179840.22			N 90	127				
16 JAN 85	4019069.53	4179840.22			N 90	182				
17 JUL 85	4019069.53	4179840.22			N 90	180				
13 JAN 86	4019069.53	4179840.22			N 90	147			1007	
9 JUN 86	4019069.53	4179840.22	633.30		N 90	114			114	
1 OCT 86	4019069.53	4179840.22	633.30		N 90	116			116	
25 JAN 87	4019069.53	4179840.22	633.30		N 90	71			71	
6 APR 87	4019069.53	4179840.22	633.30		N 90	93			93	
8 JUL 87	4019069.53	4179840.22	633.30		N 90	119			119	
4 NOV 87	4019069.53	4179840.22	633.30		N 90	124			124	
7 MAR 88	4019069.53	4179840.22	633.30		N 90	106			106	
21 JUN 88	4019069.53	4179840.22	633.30		N 90	107			107	
6 OCT 88	4019069.53	4179840.22	633.30		N 90	111			111	
25 JAN 89	4019069.53	4179840.22	633.30		N 90	152			152	
26 JUN 89	4019069.53	4179840.22	633.30		N 90	276			276	
29 MAR 90	4019069.53	4179840.22	633.30		N 90	606			606	
25 NOV 91	4019069.53	4179840.22	633.30		N 90	267			267	
18 AUG 92	4019069.53	4179840.22	633.30		N 90	377			377	
30 AUG 93	4019069.53	4179840.22	633.30		N 90					

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 6 SEP 83 TO 30 AUG 93	3646 DAYS	DIST = .000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 6 SEP 83 TO 30 AUG 93	3646 DAYS	DIST = .00 FT	
RESULTANT	FROM 6 SEP 83 TO 30 AUG 93	3646 DAYS	DIP = 0 DEG	0 MIN

COUNTY OF LOS ANGELES
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PROGRAM EK11AP
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PORT BN D 2
FB 4205-037

DATE	COORDINATES	ELEV.
DA MON YR	NORTH	EAST
17 JUL 85	4019787.71	4178486.36
15 JAN 86	4019786.71	4178481.61
9 JUN 86	4019779.49	4178486.45
1 OCT 86	4019777.25	4178486.50
25 JAN 87	4019776.15	4178486.58
6 APR 87	4019775.96	4178486.56
8 JUL 87	4019775.69	4178486.58
4 NOV 87	4019775.37	4178486.62
21 JUN 88	4019774.69	4178486.62
6 OCT 88	4019774.50	4178486.70
25 JAN 89	4019774.29	4178486.71
26 JUN 89	4019774.11	4178486.57
156 MAR 90	4019773.94	4178486.94
57 NOV 91	4019773.02	4178486.74
20 AUG 92	4019772.88	4178486.71
176 30 AUG 93	4019772.10	4178486.78

HORIZONTAL	MOVEMENT	VERTICAL	DIP
DIST FT	BEARING DG MN	ELEV DIFF	DG MN
4.854	S 78 7 W	0.320	19 39 DN
8.692	S 33 50 E	0.7193	10 17 DN
2.240	S 1 17 E	0.2352	20 16 DN
1.102	S 4 9 E	0.1140	17 13 DN
0.191	S 6 W	0.3228	71
0.270	S 4 14 E	0.0348	93
0.322	S 7 8 E	0.0325	119
0.500	S 1 9 E	0.0484	124
0.180	S 3 11 W	0.2040	106
0.206	S 22 50 E	0.2310	107
0.210	S 2 44 E	0.2270	111
0.228	S 37 52 W	0.1802	152
0.407	S 65 19 E	0.1770	276
0.368	S 12 16 W	0.1860	606
0.143	S 12 5 W	0.0640	267
0.783	S 5 8 E	0.2250	377

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 17 JUL 85 TO 30 AUG 93 DIST = 15.615 FT BEARING = S 1 32 E

VERTICAL MOVEMENT FROM 9 JUN 86 TO 30 AUG 93 DIST = -1.75 FT

RESULTANT FROM 9 JUN 86 TO 30 AUG 93 DIST = 13 DEG 18 MIN DN

$7/17/85 \text{ to } 6/8/86 = 8.22 + 1.09 = 9.31$
 $6/8/86 \text{ to } 1/25/87 = 3.34 + 1.13 = 4.47$
 $1/25/87 \text{ to } 3/7/88 = 1.28 + 0.5 = 1.78$
 $3/7/88 \text{ to } 1/25/89 = 1.58 + 1.08 = 2.66$
 $1/25/89 \text{ to } 3/29/90 = 1.35 + 1.23 = 2.58$
 $3/29/90 \text{ to } 11/5/91 = 91 + 1.20 = 92.20$
 $11/25/91 \text{ to } 8/18/92 = 1.43 + 2.67 = 4.10$
 $8/18/92 \text{ to } 8/30/93 = 7.83 + 3.77 = 11.60$
 $11.60 \times 3.65 = 42.54$

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN DAVIS
FB 2899-011

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT	RATE	VERTICAL	MVNT	DIP
	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	FT/DA	ELEV DIFF	TIME DAYS	DG MN
8 FEB 61	4019718.91	4178771.03	393.41	129.225	S 1 9 E	5480	.023	-29.82	5480	12 59 DN
10 FEB 76	4019589.71	4178773.62	363.59	5.491	S 1 21 E	248	.022			
15 OCT 76	4019584.22	4178773.75	362.63	65.168	S 2 12 E	1441	.045	-.96	248	9 55 DN
25 SEP 80	4019519.10	4178776.26		27.488	S 2 6 E	600	.045			
18 MAY 82	4019491.63	4178777.27		6.133	S 1 58 E	170	.036			
4 NOV 82	4019485.50	4178777.48		33.620	S 3 57 E	491	.068			
9 MAR 84	4019451.96	4178779.80		3.858	S 3 52 E	68	.056			
16 MAY 84	4019448.11	4178780.06		5.773	S 1 59 E	118	.048			
11 SEP 84	4019442.34	4178780.26		6.403	S 3 40 E	127	.050			
16 JAN 85	4019435.95	4178780.67		7.701	S 3 8 E	182	.042			
17 JUL 85	4019428.26	4178781.09		5.823	S 5 7 E	182	.031			
15 JAN 86	4019422.46	4178781.61		7.237	S 4 2 E	145	.049	-52.43	3524	17 13 DN
9 JUN 86	4019415.24	4178782.12	310.20	3.504	S 5 14 E	114	.030	-1.10	114	17 25 DN
1 OCT 86	4019411.75	4178782.44	309.10	2.008	S 5 9 E	116	.017	-.90	116	24 8 DN
25 JAN 87	4019409.75	4178782.62	308.20	.631	S 3 38 E	71	.008	-.60	71	43 33 DN
6 APR 87	4019409.12	4178782.66	307.60	.736	S 7 48 E	93	.007	-.30	93	22 9 DN
8 JUL 87	4019408.39	4178782.76	307.30	.833	S 5 30 E	119	.007	-.50	119	30 57 DN
4 NOV 87	4019407.56	4178782.84	306.80	.883	S 5 12 E	124	.007	-.80	124	42 9 DN
7 MAR 88	4019406.68	4178782.92	306.00	.284	S 10 7 E	106	.002	-.10	106	19 22 DN
21 JUN 88	4019406.40	4178782.97	305.90	.345	S 10 E	107	.003	-.18	107	27 32 DN
6 OCT 88	4019406.06	4178783.03	305.72	.260	S 4 24 W	111	.002	-.04	111	8 43 DN
25 JAN 89	4019405.80	4178783.01	305.68	.270	S 4 14 E	152	.001	.09	152	18 23 UP
26 JUN 89	4019405.53	4178783.03	305.77	.722	S 4 46 W	276	.002	.10	276	7 53 UP
29 MAR 90	4019404.81	4178782.97	305.87							

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN BLAKESLEY
FB 949-018

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 16 OCT 56 TO 30 AUG 93	3467 DAYS	DIST = 244.977 FT	BEARING = S 5 55 W
VERTICAL MOVEMENT	FROM 16 OCT 56 TO 30 AUG 93	3467 DAYS	DIST = -60.16 FT	
RESULTANT	FROM 16 OCT 56 TO 30 AUG 93	3467 DAYS	DIP = 13 DEG 48 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN C 1
FB 4205-037

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
17 JUL 85	4020090.12	4178271.35		3.652	S 12 10 E	182	.020			
15 JAN 86	4020086.55	4178272.12		5.148	S 10 38 E	145	.035			
9 JUN 86	4020081.49	4178273.07	332.70	2.280	S 13 11 E	114	.020	-.80	114	19 20 DN
1 OCT 86	4020079.27	4178273.59	331.90							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 17 JUL 85 TO 1 OCT 86	441 DAYS	DIST = 11.078 FT	BEARING = S 11 40 E
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIST = -.80 FT	
RESULTANT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIP = 19 DEG 20 MIN	DN

P R E F A C E

THIS REPORT CONTAINS A RECORD OF CURRENT SURVEY OBSERVATIONS BEING MADE BY SURVEY DIVISION. THE HORIZONTAL AND VERTICAL MOVEMENTS OF EACH STATION ARE COMPUTED WHERE AVAILABLE DATA PERMITS. THE ANGLE OF DIP WITH REFERENCE TO THE HORIZONTAL PLANE IS ALSO COMPUTED WHEN BOTH HORIZONTAL AND VERTICAL OBSERVATIONS ARE AVAILABLE FOR CONCURRENT DATES. THE TOTAL VECTORS ARE COMPUTED USING THE FIRST AVAILABLE DATA AND MOST RECENT DATA IN THE CORRESPONDING PLANES.

THE FOLLOWING ARE BRIEF EXPLANATIONS OF THE COLUMN HEADINGS USED IN THE REPORT:

DATE	THE DAY, MONTH, AND YEAR WHEN THE OBSERVATION WAS MADE.
COORDINATES	THE NORTHING AND EASTING OF THE STATION REFERRED TO THE CALIFORNIA COORDINATES SYSTEM, ZONE 7. WHERE THERE ARE BLANKS IMMEDIATELY FOLLOWING THE DECIMAL POINT, THE COORDINATES ARE APPROXIMATE. - SEE NOTE.
ELEVATIONS	THE ELEVATION OF THE STATION REFERRED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929. WHERE THERE ARE BLANKS IMMEDIATELY FOLLOWING THE DECIMAL POINT THE ELEVATIONS ARE APPROXIMATE. SEE NOTE.
HORIZONTAL MOVEMENT	THE COMPUTED MOVEMENT VECTOR - DISTANCE AND BEARING BETWEEN SUCCESSIVE OBSERVATIONS, THE NUMBER OF DAYS BETWEEN SUCCESSIVE OBSERVATIONS AND THE MOVEMENT RATE IN FEET PER DAY.
VERTICAL MOVEMENT	THE COMPUTED ELEVATION DIFFERENCE BETWEEN SUCCESSIVE OBSERVATIONS AND THE CORRESPONDING PERIOD IN DAYS.
DIP	THE COMPUTED VERTICAL ANGLE OF THE MOVEMENT VECTOR WITH REFERENCE TO THE HORIZONTAL PLANE WHEN BOTH HORIZONTAL AND VERTICAL DATA HAVE BEEN OBSERVED ON CONCURRENT DAYS.
TOTAL MOVEMENT VECTORS	TOTAL MOVEMENT VECTORS ARE COMPUTED USING THE FIRST APPLICABLE OBSERVATION AND THE LAST APPLICABLE OBSERVATION IN EACH OF THE TWO PLANES. *****

NOTE	THE APPROXIMATE HORIZONTAL POSITIONS AND ELEVATIONS ARE LISTED TO FACILITATE ELECTRONIC DATA RETRIEVAL. THESE APPROXIMATE VALUES ARE SHOWN WITH BLANKS IMMEDIATELY FOLLOWING THE DECIMAL POINT. THEY ARE NOT, NOR ARE THEY TO BE, USED FOR COMPUTATION.
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COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J 1
FB 4205-019

DATE	COORDINATES	ELEV.
DA MON YR	NORTH	EAST
9 MAR 84	4017803.06	4178562.97
16 MAY 84	4017799.31	4178561.51
11 SEP 84	4017793.39	4178559.41
16 JAN 85	4017783.79	4178557.43

19,27
5.54 = 20.05

0.7687"/day 23.38'/yr

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 9 MAR 84 TO 16 JAN 85 313 DAYS DIST = 20.050 FT BEARING = S 16 02 W

HORIZONTAL	MOVEMENT	RATE	VERTICAL	DIP
DIST	TIME	FT/DA	ELEV	DG MN
FT	DAYS		DIFF	
4.024	68	.059		
6.281	118	.053		
9.802	127	.077		

23.38'/yr

23.38
19.87
43.25
21.6 ft/yr

PROGRAM EK11AP
09/29/93

PORT BN J 1A
FB 4205-037

DATE		COORDINATES		ELEV.	HORIZONTAL		MOVEMENT		VERTICAL		DIP
DA	MON	YR	NORTH	EAST	DIST	BEARING	TIME	FT/DA	ELEV	DIFF	
198	X	06	= 11.88								
17	JUL	85	4017827.18	4178715.90							
			15 x .05 = .75								
19.28	15	JAN	86	4017819.37	4178713.56	8.153	S 16 41 W	182	.044	0.5376"/day	16.35 ft/day
	9	JUN	86	4017809.43	4178710.65	10.357	S 16 19 W	145	.071		
	1	OCT	86	4017804.17	4178709.04	5.500	S 17 1 W	114	.048	.30	114
20.70	9	K.045	= 4095	152.0	4.52	= 15.858'	0.7347	22.35 ft/day			3 7 UP

***** TOTAL MOVEMENT VECTOR *****

19.87/yr

HORIZONTAL MOVEMENT	FROM 17 JUL 85 TO 1 OCT 86	441 DAYS	DIST =	24.010 FT	BEARING = S 16 36 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIST =	.30 FT	
RESULTANT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIP =	3 DEG 7 MIN UP	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 1B
FB 4205-116

DATE	COORDINATES	ELEV.	HORIZONTAL	MOVEMENT	RATE	VERTICAL	DIP
DA MON YR	NORTH	EAST	DIST	BEARING	TIME	ELEV	DG MN
25 JAN 87	4017815.82	4178747.93	2.321	S 17 2 W	171	.032 - .392	71
6 APR 87	4017813.60	4178747.25	2.621	S 17 32 W	93	.028 .338	93
8 JUL 87	4017811.10	4178746.46	2.328	S 16 43 W	119	.019 .235	119
4 NOV 87	4017808.87	4178745.79	1.742	S 18 45 W	124	.014 .169	124
7 MAR 88	4017807.22	4178745.23	.322	S 29 45 W	106	.003 .036	106
21 JUN 88	4017806.94	4178745.07	.303	S 17 14 W	107	.002 .034	107
6 OCT 88	4017806.65	4178744.98	.362	S 24 27 W	111	.003 .039	111
25 JAN 89	4017805.88	4178744.66	.471	S 21 7 W	152	.003 .037	152
26 JUN 89	4017805.88	4178744.66	1.015	S 25 3 W	276	.003 .044	276
29 MAR 90	4017804.96	4178744.23	2.836	S 23 2 W	606	.004 .056	606
25 NOV 91	4017802.35	4178743.12	1.559	S 19 29 W	267	.005 .070	267
18 AUG 92	4017800.88	4178742.60	2.941	S 22 23 W	377	.007 .094	377
30 AUG 93	4017798.16	4178741.48					

6.5 3 ft/yr

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 25 JAN 87 TO 30 AUG 93	2409 DAYS	DIST =	18.801 FT	BEARING =	S 20 04 W
VERTICAL MOVEMENT	FROM 25 JAN 87 TO 30 AUG 93	2409 DAYS	DIST =	-.52 FT		
RESULTANT	FROM 25 JAN 87 TO 30 AUG 93	2409 DAYS	DIP =	1 DEG 35 MIN	DN	

1987 6.95 + 2.14/283 7272 0.308 9.38/yr
1988 2.55 + 1.96/448 2.72 0.073 2.22
1989 1.36 + 1.60/428 1.49 0.042 1.27
1990-91 2.61 1.11/606 2.84 0.056 1.71
1992 1.47 .52/267 1.56 0.071 2.13
1993 2.72 1.12/377 2.94 0.09353 2.85

12
30
31
30
31
135

18.8
20.1

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 2
FB 4205-019

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
9 MAR 84	4017474.43 4177960.58		7.693	S 9 26 W	68	.113			
16 MAY 84	4017466.84 4177959.32		12.126	S 7 35 W	118	.102			
11 SEP 84	4017454.82 4177957.72								
16 JAN 85	4017440.14 4177955.56	3429 502 = 34.60	14.838	S 8 22 W	127	.116			
17 JUL 85	4017421.74 4177952.63		18.631	S 9 3 W	313 182	.102			
15 JAN 86	4017405.94 4177949.97	3420 559 = 34.65	16.022	S 9 33 W	182	.088			
9 JUN 86	4017386.15 4177946.78	136.50	20.045	S 9 9 W	145	.138			
1 OCT 86	4017376.54 4177945.18	135.90	9.742	S 9 27 W	114	.085	-.60	114	3 31 DN
25 JAN 87	4017367.72 4177943.98	135.00	8.901	S 7 45 W	116	.076	-.90	116	5 46 DN
6 APR 87	4017361.39 4177943.08	134.10	38.696 = 38.69	S 8 5 W	71	.090	-.90	71	8 1 DN
8 JUL 87	4017355.35 4177942.14	133.20	6.112	S 8 51 W	93	.065	-.90	93	8 22 DN
4 NOV 87	4017349.53 4177941.22	132.30	5.892	S 8 59 W	119	.049	-.90	119	8 41 DN
7 MAR 88	4017341.12 4177939.76	130.50	8.535	S 9 51 W	124	.068	-1.80	124	11 54 DN
21 JUN 88	4017337.01 4177939.13	130.60	4.158	S 8 43 W	106	.039	.10	106	1 22 UP
6 OCT 88	4017334.25 4177938.74	128.85	2.787	S 8 3 W	107	.026	-1.75	107	32 7 DN
25 JAN 89	4017331.67 4177938.32	129.15	2.613	S 9 14 W	111	.023	.30	111	6 33 UP
26 JUN 89	4017327.30 4177937.64	127.54	4.422	S 8 51 W	152	.029	-1.61	152	20 DN
29 MAR 90	4017318.60 4177936.59	125.16	8.763	S 6 53 W	276	.031	-2.38	276	15 11 DN
25 NOV 91	4017295.69 4177932.09	119.87	23.347	S 11 7 W	606	.038	-5.29	606	12 46 DN
18 AUG 92	4017283.88 4177929.77	117.58	12.035	S 11 7 W	267	.045	-2.29	267	10 46 DN
30 AUG 93	4017263.43 4177924.95	114.00	21.010	S 13 15 W	377	.055	-3.58	377	9 40 DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 2
FB 4205-019

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 30 AUG 93	3461 DAYS	DIST = 213.987 FT	BEARING = S 9 35 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 30 AUG 93	2639 DAYS	DIST = -22.50 FT	
RESULTANT	FROM 9 JUN 86 TO 30 AUG 93	2639 DAYS	DIP = 10 DEG 14 MIN	DN

1984 3/9/97 To 1/16/85 = 40.41' /yr
 1985 1/16/85 To 1/15/86 = 34.75' /yr
 1986 1/15/86 To 1/25/87 = 37.65' /yr
 1987 1/25/87 To 3/7/88 = 24.15' /yr
 1988 3/7/88 To 1/25/89 = 6.08' /yr
 1989 1/25/89 To 3/29/90 = 11.24' /yr
 1990 - 91 3/29/90 To 11/25/91 = 14.06' /yr
 1992 11/25/91 To 8/18/92 = 16.45' /yr.
 1993 = 20.34' /yr

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 3
FB 4205-019

DATE	COORDINATES	ELEV.	HORIZONTAL	MOVEMENT	RATE	VERTICAL	DIP
DA MON YR	NORTH	EAST	DIST FT	BEARING DG MN	TIME DAYS	ELEV DIFF	DG MN
9 MAR 84	4017799.22	4177165.07	5.336	S 9 43 W	68		
16 MAY 84	4017793.96	4177164.17	8.725	S 10 6 W	118		
11 SEP 84	4017785.37	4177162.64	10.974	S 8 16 W	127		
16 JAN 85	4017774.51	4177161.06	14.403	S 6 32 W	182		
17 JUL 85	4017760.20	4177159.42	15.983	S 7 7 W	182		
15 JAN 86	4017744.34	4177157.44					

4,01 = 25.03

24.71

30.17 3.62 = 30.39

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 9 MAR 84 TO 15 JAN 86 677 DAYS DIST = 55.407 FT BEARING = S 7 55 W

1984 3/9/84 to 1/16/85 = 29.19
1985 = 30.47
1986 =

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J 3A
FB 4205-090

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
9 JUN 86	4017793.81	4177206.09	189.00	7.163	S 5 31 W	114	.062	-1.50	114	11 50 DN
1 OCT 86	4017786.68	4177205.40	187.50	6.365	S 5 8 W	116	.054	-2.00	116	17 26 DN
25 JAN 87	4017780.34	4177204.83	185.50	4.626	S 6 5 W	71	.065	-1.50	71	17 58 DN
6 APR 87	4017778.74	4177204.34	184.00	4.523	S 5 50 W	93	.048	-2.00	93	23 51 DN
8 JUL 87	4017771.24	4177203.88	182.00	4.270	S 5 39 W	119	.035	-1.80	119	22 51 DN
4 NOV 87	4017766.99	4177203.46	180.20	5.343	S 5 22 W	124	.043	-2.40	124	24 11 DN
7 MAR 88	4017761.67	4177202.96	177.80	1.561	S 2 34 W	106	.014	-.70	106	24 9 DN
21 JUN 88	4017760.11	4177202.89	177.10	1.301	S 2 38 W	107	.012	-.62	107	25 28 DN
6 OCT 88	4017758.81	4177202.83	176.48	1.100	S 2 5 W	111	.009	-.34	111	17 10 DN
25 JAN 89	4017757.71	4177202.79	176.14	1.810	S 1 54 W	152	.011	-.15	152	4 44 DN
26 JUN 89	4017755.90	4177202.73	175.99	4.277	S 9 25 W	276	.015	-2.81	276	33 18 DN
29 MAR 90	4017751.68	4177202.03	173.18							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 9 JUN 86 TO 29 MAR 90 1389 DAYS DIST = 42.325 FT BEARING = S 5 30 W
VERTICAL MOVEMENT FROM 9 JUN 86 TO 29 MAR 90 1389 DAYS DIST = -15.82 FT
RESULTANT FROM 9 JUN 86 TO 29 MAR 90 1389 DAYS DIP = 20 DEG 29 MIN DN

1986 21.47
1987 16.83
1988 2.71
1989 5.18

6.03
76 = 808

PORT BN J 3B
FB 4205-300

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
25 NOV 91	4017770.03	4177210.28	169.26	5.184	S 5 32 E	267	.019	-2.34	267	24 17 DN
18 AUG 92	4017764.87	4177210.78	166.92	9.807	S 2 16 E	377	.026	-5.25	377	28 9 DN
30 AUG 93	4017755.07	4177211.17	161.67							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 25 NOV 91 TO 30 AUG 93 644 DAYS DIST = 14.986 FT BEARING = S 3 24 E
VERTICAL MOVEMENT FROM 25 NOV 91 TO 30 AUG 93 644 DAYS DIST = -7.59 FT
RESULTANT FROM 25 NOV 91 TO 30 AUG 93 644 DAYS DIP = 26 DEG 51 MIN DN

1990-91
1992- 7.09
1993 9.49

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J 4
FB 4205-019

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
9 MAR 84	4017504.52	4175507.21		.269	S 31 19 W	68	.003	10475		
16 MAY 84	4017504.29	4175507.07		.536	S 14 2 W	118	.004	0545		
11 SEP 84	4017503.77	4175506.94		.443	S 14 21 W	127	.003	0419		
16 JAN 85	4017503.34	4175506.83		.604	S 16 20 W	182	.003	0398		
17 JUL 85	4017502.76	4175506.66		.607	S 20 13 W	182	.003	0400		
15 JAN 86	4017502.19	4175506.45		.856	S 14 12 W	145	.005	0708		
9 JUN 86	4017501.36	4175506.24	174.20	.221	S 18 26 W	114	.001	0233	114	61 2 DN
1 OCT 86	4017501.15	4175506.17	173.80	.143	S 24 46 W	116	.001	0148	116	54 24 UP
25 JAN 87	4017501.02	4175506.11	174.00	.253	S 9 5 W	241	.003	0428	71	21 33 DN
6 APR 87	4017500.77	4175506.07	173.90	.086	S 35 32 W	93	.000	0117	93	49 18 DN
8 JUL 87	4017500.70	4175506.02	173.80	.281	S 6 7 W	119	.002	0283	119	46 49 DN
4 NOV 87	4017500.42	4175505.99	173.50							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 4 NOV 87	1335 DAYS	DIST = 4.277 FT	BEARING = S 16 34 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIST = -.70 FT	
RESULTANT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIP = 35 DEG 44 MIN	DN

1984 (3/9/84 to 1/16/85) 1.18 + .38 = 1.24 + 313 x 365 = 1.45
 1985 (1/16/85 to 1/15/86) 1.15 + .38 = 1.21 + 364 x 365 = 1.21
 1986 (1/15/86 to 1/25/87) 1.17 + .34 = 1.22 + 375 x 365 = 1.19
 1987 (1/25/87 to 1/14/87) .60 + .12 = 0.79 + 283 x 365 = 0.79

345
62
297
15
312

174.34
878

212, 0203

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 4A
FB 4205-199

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
7 MAR 88	4017499.92	4175505.95	170.50	.536	S 8 35 W	106	.005	.061	106	10 34 DN
21 JUN 88	4017499.39	4175505.87	170.40	.130	S 22 37 W	107	.001	.046	107	74 13 DN
6 OCT 88	4017499.27	4175505.82	169.94	.144	S 33 41 W	111	.001	.056	111	15 30 UP
25 JAN 89	4017499.15	4175505.74	169.98	.220	S 5 12 W	152	.001	.074	152	75 26 UP
26 JUN 89	4017498.93	4175505.72	170.83	.492	S 12 54 W	276	.001	.214	276	34 37 DN
29 MAR 90	4017498.45	4175505.61	170.49	.421	S 15 30 W	606	.002	.281	606	31 10 DN
25 NOV 91	4017497.08	4175505.23	169.63	1.887	S 5 10 W	267	.007	.880	267	22 43 DN
18 AUG 92	4017495.20	4175505.06	168.84	1.913	S 14 50 W	377	.005	.689	377	54 UP
30 AUG 93	4017493.35	4175504.57	168.87							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 7 MAR 88 TO 30 AUG 93 2002 DAYS DIST = 6.713 FT BEARING = S 11 52 W

VERTICAL MOVEMENT FROM 7 MAR 88 TO 30 AUG 93 2002 DAYS DIST = -1.63 FT

RESULTANT FROM 7 MAR 88 TO 30 AUG 93 2002 DAYS DIP = 13 DEG 39 MIN DN

1988 (3/7/88 to 1/25/89) .77 + .21 = 0.80 ÷ 32.4 x 365 = 0.90
 1989 (1/25/89 to 3/29/90) .70 + .13 = 0.71 ÷ 42.8 x 365 = 0.61
 1990-91 (3/29/90 to 11/25/91) = 1.421 ÷ 606 x 365 = 0.86
 1991-92 (11/25/91 to 8/18/92) = 1.887 ÷ 267 x 365 = 2.58
 1992-93 (8/18/92 to 8/30/93) = 1.913 ÷ 377 x 365 = 1.85

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J 5
FB 4205-019

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
9 MAR 84	4017790.26	4176150.53		.158	S 34 42 W	68	.002			
16 MAY 84	4017790.13	4176150.44		.281	S 16 30 W	118	.002			
11 SEP 84	4017789.86	4176150.36		.171	S 6 42 E	127	.001			
16 JAN 85	4017789.69	4176150.38		.395	S 16 8 W	182	.002			
17 JUL 85	4017789.31	4176150.27		.092	S 49 24 W	182	.000			
15 JAN 86	4017789.25	4176150.20		.320	S 14 28 W	145	.002			
9 JUN 86	4017788.94	4176150.12	218.80	.100	S	114	.000	-.40	114	75 58 DN
1 OCT 86	4017788.84	4176150.12	218.40	.050	S 36 52 W	116	.000	.40	116	82 52 UP
25 JAN 87	4017788.80	4176150.09	218.80	.101	S 11 19 W	71	.001	-.10	71	44 26 DN
6 APR 87	4017788.70	4176150.07	218.70							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 6 APR 87	1123 DAYS	DIST = 1.626 FT	BEARING = S 16 26 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 6 APR 87	301 DAYS	DIST = -.10 FT	
RESULTANT	FROM 9 JUN 86 TO 6 APR 87	301 DAYS	DIP = 22 DEG 11 MIN	DN

DATE		COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP
DA	MON YR	NORTH	EAST		DIST FT	BEARING DG MN					
8 JUL 87		4017788.85	4176149.92	218.40	.050	S 11 19 E	119	.000	-.40	119	82 44 DN
4 NOV 87		4017788.80	4176149.93	218.00	.090	S 6 20 E	124	.000	-.10	124	47 50 DN
7 MAR 88		4017788.71	4176149.94	217.90	.060	S 9 28 W	106	.000	-.20	106	73 5 DN
21 JUN 88		4017788.65	4176149.93	217.70	.031	S 18 26 W	107	.000	-.14	107	77 16 DN
6 OCT 88		4017788.62	4176149.92	217.56							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM	8 JUL 87 TO	6 OCT 88	456 DAYS	DIST =	.230 FT	BEARING =	S 0 00
VERTICAL MOVEMENT	FROM	8 JUL 87 TO	6 OCT 88	456 DAYS	DIST =	-.84 FT		
RESULTANT	FROM	8 JUL 87 TO	6 OCT 88	456 DAYS	DIP =	74 DEG 41 MIN	DN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 58
FB 4205-221

DATE	COORDINATES	ELEV.	HORIZONTAL	MOVEMENT	RATE	VERTICAL	DIP
DA MON YR	NORTH	EAST	DIST	BEARING	TIME	ELEV	DG MN
			FT	DG MN	DAYS	DIFF	DG MN
25 JAN 89	4017788.62	4176150.29	218.11				
26 JUN 89	4017788.61	4176150.22	218.84				

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 25 JAN 89 TO 26 JUN 89 152 DAYS DIST = .070 FT BEARING = S 81 52 W
 VERTICAL MOVEMENT FROM 25 JAN 89 TO 26 JUN 89 152 DAYS DIST = .73 FT
 RESULTANT FROM 25 JAN 89 TO 26 JUN 89 152 DAYS DIP = 84 DEG 28 MIN UP

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 5C
FB 4205-275

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
29 MAR 90	4017789.02 4176150.25	217.89	.150	N 86 11 W	606	.000	-.11	606	36 12 DN
25 NOV 91	4017789.03 4176150.10	217.78	.520	S	267	.001	-.35	267	33 56 DN
18 AUG 92	4017788.51 4176150.10	217.43	.254	S 25 33 W	377	.000	.11	377	23 20 UP
30 AUG 93	4017788.28 4176149.99	217.54							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 29 MAR 90 TO 30 AUG 93	1250 DAYS	DIST =	.784 FT	BEARING = S 19 21 W
VERTICAL MOVEMENT	FROM 29 MAR 90 TO 30 AUG 93	1250 DAYS	DIST =	-.35 FT	
RESULTANT	FROM 29 MAR 90 TO 30 AUG 93	1250 DAYS	DIP =	24 DEG 3 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 7
FB 4205-019

DATE		COORDINATES		ELEV.	HORIZONTAL		MOVEMENT		RATE FT/DA	VERTICAL		DIP
DA	MON YR	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	TIME DAYS		ELEV DIFF	TIME DAYS	
12.97	9 MAR 84	4018049.60	4176880.38		2.463	S 10 45 W	68		.036	.4346		
	16 MAY 84	4018047.18	4176879.92		4.077	S 10 27 W	118		.034	.4146		
	11 SEP 84	4018043.17	4176879.18		4.489	S 9 21 W	127		.035	.4242		
	16 JAN 85	4018038.74	4176878.45		5.825	S 10 23 W	182		.032	.3841		
	17 JUL 85	4018033.01	4176877.40		4.632	S 11 27 W	182		.025	.3054		
	15 JAN 86	4018028.47	4176876.48		6.756	S 2 33 W	145		.046	.5591		
	9 JUN 86	4018021.72	4176876.18	200.30	3.792	S 25 37 W	114		.033	.3992	114	
	1 OCT 86	4018018.30	4176874.54	200.30	2.634	S 10 30 W	116		.022	.2725	116	
	25 JAN 87	4018015.71	4176874.06	199.90	1.590	S 11 14 W	71		.022	.1287	71	8 38 DN
	6 APR 87	4018014.15	4176873.75	199.80	1.649	S 10 50 W	93		.017	.2128	93	3 36 DN
	8 JUL 87	4018012.53	4176873.44	199.80	1.530	S 9 24 W	119		.012	.1543	119	11 5 DN
	4 NOV 87	4018011.02	4176873.19	199.50								

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 4 NOV 87	1335 DAYS	DIST = 39.244 FT	BEARING = S 10 33 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIST = -.80 FT	
RESULTANT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIP = 4 DEG	7 MIN DN

$31 \times 16 = 504$
 $10.626 \times 16 = 170.016$
 $13.007 \times 16 = 208.112$
 $6.003 \times 16 = 96.048$
 $57 \times .012 = .684$

3/9/84 To 1/16/85 10.86 + 1.93 11.03 313 6.423 12.86
 1/16/85 To 1/15/86 10.37 + 1.97 10.555 364 0.348 10.58
 1/15/86 To 1/25/87 12.76 + 2.42 12.987 375 0.416 12.64
 1/25/87 To 1/4/87 4.69 + 0.87 4.77 283 0.202 6.15

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 7A
FB 4205-200

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF		MVNT TIME DAYS	DIP DG MN
	NORTH	EAST										
7 MAR 88	67x.004 = 268 4018009.41	4176873.01	198.70	.480	S 12	W	106	.004	.0543		106	
21 JUN 88	4018008.94	4176872.91	198.70	.451	S 5	4 W	107	.004	.05058	-.22	107	25 58 DN
6 OCT 88	4018008.49	4176872.87	198.48	.424	S 8	8 W	111	.003	.0458	-.04	111	5 23 DN
25 JAN 89	4018008.07	4176872.81	198.44	.562	S 12	18 W	152	.003	.0444	.59	152	46 21 UP
26 JUN 89	4018007.52	4176872.69	199.03	1.016	S 15	24 W	276	.003	.0442	-.21	276	11 40 DN
29 MAR 90	4018006.54	4176872.42	198.82	-2.210	S 10	57 W	606	.003	.0438	-.42	606	10 45 DN
25 NOV 91	4018004.37	4176872.00	198.40	1.739	S 5	56 W	267	.006	.0782	-.22	267	7 12 DN
18 AUG 92	4018002.64	4176871.82	198.18	2.824	S 10	12 W	377	.007	.0899	-.04	377	48 DN
30 AUG 93	4017999.86	4176871.32	198.14									
123 x .006 = .738												

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIST =	9.698 FT	BEARING = S 10 02 W
VERTICAL MOVEMENT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIST =	-.56 FT	
RESULTANT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIP =	3 DEG 18 MIN	DN

1988 - 317.188 Jb 1/25/89 434 + 126 1.3548 324 0.050 1.53
 1989 - 1/25/89 Jb 3/29/90 1.53 + 39 1.579 428 0.044 1.35
 1990 - 3/25/90 Jb 11/25/91 2.17 + 42 2.21 606 0.044 1.33
 1992 - 11/25/91 Jb 8/18/92 1.73 1.739 267 0.078 2.38
 1993 - 8/18/92 Jb 8/30/93 2.78 .50 2.824 377 0.090 2.73

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 6
FB 4205-019

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL		DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN			ELEV FT	DIFF	
9 MAR 84	4018162.26	4177889.10		5.144	S 10 59 W	68	.075	1908		
16 MAY 84	4018157.21	4177888.12		8.473	S 8 58 W	118	.071	1862		
11 SEP 84	4018148.84	4177886.80		10.419	S 9 3 W	127	.082	1984		
16 JAN 85	4018138.55	4177885.16		13.618	S 9 33 W	182	.074	1898		
17 JUL 85	4018125.12	4177882.90		11.557	S 9 28 W	182	.063	1762		
15 JAN 86	4018113.72	4177881.00		14.856	S 8 36 W	145	.102	1229		
9 JUN 86	4018099.03	4177878.78	197.70	7.834	S 8 53 W	114	.068	1825		5 50 DN
1 OCT 86	4018091.29	4177877.57	196.90	5.795	S 8 38 W	116	.049	1599		7 51 DN
25 JAN 87	4018085.56	4177876.70	196.10	3.268	S 8 48 W	71	.046	1552		8 42 DN
6 APR 87	4018082.33	4177876.20	195.60	3.363	S 9 14 W	93	.036	1434		8 27 DN
8 JUL 87	4018079.01	4177875.66	195.10	3.136	S 8 48 W	119	.026	1316		7 16 DN
4 NOV 87	4018075.91	4177875.18	194.70							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 4 NOV 87	1335 DAYS	DIST = 87.464 FT	BEARING = S 9 09 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIST = -3.00 FT	
RESULTANT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIP = 7 DEG 18 MIN	DN

1984 3/9/84 to 1/16/85 23.71+3.94 24.035 days 313 0.92'/day 28.03'/y
 1985 1/16/85 to 1/15/86 24.83+4.16 25.176 364 0.830'/day 25.25'/y
 1986 1/15/86 to 1/25/87 28.16+4.30 28.486 375 0.912'/day 27.73'/y
 1987 1/25/87 to 1/4/87 9.65+1.52 9.769 283 0.414'/day 12.60'/y
 1986 - 42 hours I guessing at end of 1986

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 6A *pb11*
FB 4205-200

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP
	NORTH	EAST		DIST FT	BEARING DG MN					
7 MAR 88	4017992.29	4177870.51	188.40	.859	S 8 42 W	106	.008	.097	106	6 38 DN
2,769	21 JUN 88	4017991.44	188.30	.775	S 6 40 W	107	.007	.087	107	13 4 DN
—	6 OCT 88	4017990.67	188.12	.682	S 10 59 W	111	.006	.074	111	9 9 DN
2,566	25 JAN 89	4017990.00	188.01	1.023	S 12 24 W	152	.006	.081	152	6 8 UP
—	26 JUN 89	4017989.00	188.12	1.921	S 6 16 W	276	.006	.084	276	12 2 DN
3,172	29 MAR 90	4017987.09	187.71	4.870	S 10 25 W	606	.008	.096	606	13 17 DN
3,004	25 NOV 91	4017982.30	186.56	3.205	S 7 10 W	267	.012	.144	267	9 2 DN
4,33	18 AUG 92	4017979.12	186.05	5.728	S 11 41 W	377	.015	.182	377	9 31 DN
5,965	30 AUG 93	4017973.51	185.09							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIST =	19.054 FT	BEARING = S 9 44 W
VERTICAL MOVEMENT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIST =	-3.31 FT	
RESULTANT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIP =	9 DEG 51 MIN	DN

days inches/d ft/yr

3/7/88 to 1/25/89 2.29 + .22 = 2.30 324 0.085 2.59

1/25/89 to 3/12/90 2.91 + .43 2.94 428 0.82 2.51

3/12/90 to 11/25/91 4.79 + .88 4.87 606 0.096 2.93

11/25/91 to 8/18/92 3.18 + .40 3.205 267 0.144 4.38

8/18/92 to 8/30/93 5.61 + 1.16 5.728 377 0.182 5.55

2.550

19.05

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 8
FB 4205-019

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
9 MAR 84	4018347.86	4178514.58		3.932	S 16 32 W	68	.057			
16 MAY 84	4018344.09	4178513.46		6.524	S 14 23 W	118	.055			
11 SEP 84	4018337.77	4178511.84		8.501	S 13 24 W	127	.066			
16 JAN 85	4018329.50	4178509.87		10.853	S 13 48 W	182	.059			
17 JUL 85	4018318.96	4178507.28		8.923	S 13 40 W	182	.049			
15 JAN 86	4018310.29	4178505.17		11.302	S 13 43 W	145	.077			
9 JUN 86	4018299.31	4178502.49	145.20	5.842	S 14 22 W	114	.051	-.40	114	3 55 DN
1 OCT 86	4018293.65	4178501.04	144.80							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 1 OCT 86	936 DAYS	DIST = 55.875 FT	BEARING = S 14 01 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIST = -.40 FT	
RESULTANT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIP = 3 DEG 55 MIN	DN

$$\frac{55.875}{936} = .0608 \text{ inch/day}$$

COUNTY OF LOS ANGELES
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PORT BN J 8A
FB 4205-117

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN					
25 JAN 87	4018293.48	4178500.69	172.00	2.382	S 15 5 W	71	.033	-.20	71	4 48 DN
6 APR 87	4018291.18	4178500.07	171.80	2.576	S 15 46 W	93	.027	-.20	93	4 26 DN
8 JUL 87	4018288.70	4178499.37	171.60	2.342	S 14 20 W	119	.019	-.40	119	9 41 DN
4 NOV 87	4018286.43	4178498.79	171.20	1.758	S 13 29 W	124	.014	-.40	124	12 49 DN
7 MAR 88	4018284.72	4178498.38	170.80	.210	S 31 26 W	106	.001	-.10	106	25 22 DN
21 JUN 88	4018284.54	4178498.27	170.70	.384	S 8 58 W	107	.003	.02	107	2 58 UP
6 OCT 88	4018284.16	4178498.21	170.72	.303	S 17 14 W	111	.002	-.09	111	16 31 DN
25 JAN 89	4018283.87	4178498.12	170.63	.496	S 25 1 W	152	.003	.08	152	9 9 UP
26 JUN 89	4018283.42	4178497.91	170.71	1.025	S 23 34 W	276	.003	.12	276	6 40 UP
29 MAR 90	4018282.48	4178497.50	170.83	2.802	S 21 21 W	606	.004	-.51	606	10 19 DN
25 NOV 91	4018279.87	4178496.48	170.32	1.777	S 20 4 W	267	.006	-.07	267	2 15 DN
18 AUG 92	4018278.20	4178495.87	170.25	3.140	S 23 3 W	377	.008	-.15	377	2 44 DN
30 AUG 93	4018275.31	4178494.64	170.10							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 25 JAN 87 TO 30 AUG 93 2409 DAYS DIST = 19.150 FT BEARING = S 18 25 W

VERTICAL MOVEMENT FROM 25 JAN 87 TO 30 AUG 93 2409 DAYS DIST = -1.90 FT

RESULTANT FROM 25 JAN 87 TO 30 AUG 93 2409 DAYS DIP = 5 DEG 40 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 9
FB 4205-019

DATE	COORDINATES	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP
DA MON YR	NORTH	EAST							
9 MAR 84	69 x .088 = 5.54 4019206.45	4178048.89	5.476	S 6 36 E	68	.080			
16 MAY 84	4019201.01	4178049.52	8.843	S 4 13 E	118	.074			
11 SEP 84	4019192.19	4178050.17	10.863	S 6 11 E	127	.085			
16 JAN 85	16 x .085 = 1.36 4019181.39	4178051.34	13.804	S 4 36 E	182	.075			
17 JUL 85	25.06 4019167.63	4178052.45	11.493	S 4 59 E	182	.063			
15 JAN 86	15 = .06 = 0.90 4019156.18	4178053.45	14.686	S 4 3 E	145	.101			
9 JUN 86	25.21 4019141.53	4178054.49	7.758	S 3 59 E	114	.068	-1.30	114	9 31 DN
1 OCT 86	4019133.79	4178055.03	5.159	S 3 26 E	116	.044	-.90	116	9 54 DN
25 JAN 87	4019128.64	4178055.34	2.604	S 3 31 E	71	.036	-.40	71	8 44 DN
6 APR 87	27.54 4019126.04	4178055.50	2.711	S 2 7 E	93	.029	-.40	93	8 23 DN
8 JUL 87	4019123.33	4178055.60	2.602	S 2 38 E	119	.021	-.50	119	10 52 DN
14 NOV 87	4019120.73	4178055.72							

57 x .02 = 1.14 - 7.91
38 = 7.92

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 4 NOV 87	1335 DAYS	DIST = 85.991 FT	BEARING = S 4 33 E
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIST = -3.50 FT	
RESULTANT	FROM 9 JUN 86 TO 4 NOV 87	513 DAYS	DIP = 9 DEG 32 MIN	DN

1984 29.36'
1985 25.37
1986 26.87
1987 10.21

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J 9A
FB 4205-200

DATE	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT	RATE	VERTICAL	MTNT	DIP
DA MON YR	NORTH	EAST		DIST	BEARING	TIME	FT/DA	ELEV	TIME	
				FT	DG MN	DAYS		DIFF	DAYS	DG MN
$67 \times .006 = 4.02$										
7 MAR 88	4019120.73	4178055.71	278.20	.674	S 6 49 E	106	.006	.10	106	8 26 UP
21 JUN 88	4019120.06	4178055.79	278.30	.595	S 7 43 E	107	.005	-.15	107	14 8 DN
6 OCT 88	4019119.47	4178055.87	278.15	.596	S 8 40 E	111	.005	-.07	111	6 41 DN
$25 \times .005 = 1.25$										
25 JAN 89	4019118.88	4178055.96	278.08	.732	S 4 42 E	152	.004	.23	152	17 26 UP
$25 \times .005 = 1.25$										
26 JUN 89	4019118.15	4178056.02	278.31	1.430	S 1 36 W	276	.005	10.06	276	81 54 UP
$38 \times .005 = 1.9$										
29 MAR 90	4019116.72	4178055.98	288.37	3.676	S 5 28 E	606	.006	-10.83	606	71 15 DN
$277 \times .005 = 1.38$										
25 NOV 91	4019113.06	4178056.33	277.54	2.460	S 5 22 E	267	.009	-.31	267	7 11 DN
$56 \times .006 = 3.4$										
18 AUG 92	4019110.61	4178056.56	277.23	4.498	S 3 34 E	377	.011931	-.53	377	6 43 DN
$135 \times .008 = 1.08$										
30 AUG 93	4019106.12	4178056.84	276.70							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIST = 14.653 FT	BEARING = S 4 25 E
VERTICAL MOVEMENT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIST = -1.50 FT	
RESULTANT	FROM 7 MAR 88 TO 30 AUG 93	2002 DAYS	DIP = 5 DEG 50 MIN	DN

12.2
1.3
13.5

1988 2.10
1989 1.84
1990-91 2.21
1992 3.36
1993 4.35

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J10
FB 4205-019

DATE DA MON_YR	COORDINATES NORTH	EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL ELEV DIFF	DIP DG MN
9 MAR 84	4019846.45	4177516.68		1.930	S 8 20 E	68	.028			
16 MAY 84	4019844.54	4177516.96		3.079	S 4 28 E	118	.026			
11 SEP 84	4019841.47	4177517.20		3.103	S 7 2 E	127	.024			
16 JAN 85	4019838.39	4177517.58		3.672	S 4 41 E	182	.020			
17 JUL 85	4019834.73	4177517.88	382.30	2.163	S 6 22 E	182	.011	-.30	182	7 53 DN
15 JAN 86	4019832.58	4177518.12	382.00	2.965	S 5 48 E	145	.020	-.50	145	9 34 DN
9 JUN 86	4019829.63	4177518.42	381.50	1.446	S 5 33 E	114	.012	.10	114	3 57 UP
1 OCT 86	4019828.19	4177518.56	381.60	.913	S 5 1 E	116	.007	-.40	116	23 39 DN
25 JAN 87	4019827.28	4177518.64	381.20	.194	S 11 53 W	71	.002		71	
6 APR 87	4019827.09	4177518.60	381.20	.183	S 29 21 E	93	.001	.10	93	28 35 UP
8 JUL 87	4019826.93	4177518.69	381.30	.294	S 9 47 E	119	.002	-.30	119	45 33 DN
4 NOV 87	4019826.64	4177518.74	381.00	.160	S 3 35 E	124	.001	-.30	124	61 53 DN
7 MAR 88	4019826.48	4177518.75	380.70	.165	S 25 1 E	106	.001	-.10	106	31 8 DN
21 JUN 88	4019826.33	4177518.82	380.60	.191	S 6 E	107	.001	-.10	107	27 38 DN
6 OCT 88	4019826.14	4177518.84	380.50	.156	S 26 34 E	111	.001	.14	111	41 49 UP
25 JAN 89	4019826.00	4177518.91	380.64	.240	S 4 46 E	152	.001	.50	152	64 17 UP
26 JUN 89	4019825.76	4177518.93	381.14	.268	S 63 26 W	276	.000	.17	276	32 21 UP
29 MAR 90	4019825.64	4177518.69	381.31	.502	S 31 9 E	606	.000	-.35	606	34 51 DN
25 NOV 91	4019825.21	4177518.95	380.96	.329	S 14 2 E	267	.001	-.02	267	3 28 DN
18 AUG 92	4019824.89	4177519.03	380.94	.693	S 26 34 E	377	.001	.07	377	5 46 UP
30 AUG 93	4019824.27	4177519.34	381.01							

1990-91 - 0.30
1991-92 0.45
1992-93 0.67

1984 (3/19/84 to 1/16/85) = 9.46
1985 (1/16/85 to 1/15/86) = 5.85
1986 (1/15/86 to 1/25/87) = 5.17
1987 () = 0.73
1988 () = 0.57
1989 () = 0.36

5.5
5.5

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J10
FB 4205-019

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 30 AUG 93	3461 DAYS	DIST = 22.338 FT	BEARING = S 6 50 E
VERTICAL MOVEMENT	FROM 17 JUL 85 TO 30 AUG 93	2966 DAYS	DIST = -1.29 FT	
RESULTANT	FROM 17 JUL 85 TO 30 AUG 93	2966 DAYS	DIP = 6 DEG 58 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J10A
FB 4205-

DATE	COORDINATES	ELEV.	DIST	HORIZONTAL BEARING	MOVEMENT TIME	RATE	VERTICAL ELEV DIFF	MVNT TIME	DIP
DA MON YR	NORTH EAST		FT	DG MN	DAYS	FT/DA		DAYS	DG MN
30 AUG 93	4019824.61 4177519.31	379.44							

***** TOTAL MOVEMENT VECTOR *****

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J11
FB 4205-019

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVMT TIME DAYS	DIP DG MN
9 MAR 84	4020408.59 4177093.76		.020	S	68	.000			
16 MAY 84	4020408.57 4177093.76		.090	S 6 20 W	118	.000			
11 SEP 84	4020408.48 4177093.75		.114	S 74 45 E	127	.000			
16 JAN 85	4020408.45 4177093.86		.142	S 50 43 W	364	.000			
15 JAN 86	4020408.36 4177093.75		.063	S 18 26 E	145	.000			
9 JUN 86	4020408.30 4177093.77	416.10	.070	S	114	.000		114	
1 OCT 86	4020408.23 4177093.77	416.10	.063	S 18 26 W	116	.000	.10	116	57 41 UP
25 JAN 87	4020408.17 4177093.75	416.20	.089	N 63 26 W	71	.001		71	
6 APR 87	4020408.21 4177093.67	416.20	.072	S 74 3 E	93	.000		93	
8 JUL 87	4020408.19 4177093.74	416.20	.044	S 63 26 E	119	.000	-.30	119	81 31 DN
4 NOV 87	4020408.17 4177093.78	415.90	.028	N 44 60 E	124	.000	-.50	124	86 46 DN
7 MAR 88	4020408.19 4177093.80	415.40	.036	S 33 41 W	106	.000	-.10	106	70 11 DN
21 JUN 88	4020408.16 4177093.78	415.30							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 9 MAR 84 TO 21 JUN 88 1565 DAYS DIST = .430 FT BEARING = S 2 40 E
 VERTICAL MOVEMENT FROM 9 JUN 86 TO 21 JUN 88 743 DAYS DIST = -.80 FT
 RESULTANT FROM 9 JUN 86 TO 21 JUN 88 743 DAYS DIP = 80 DEG 3 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J12
FB 4205-019

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVMT TIME DAYS	DIP DG MN
9 MAR 84	4019728.98	4177803.36		2.620	S 1 19 E	68	.038			
16 MAY 84	4019726.36	4177803.42		4.070	S 1 16 W	118	.034			
11 SEP 84	4019722.29	4177803.33		4.210	S 24 E	127	.033			
16 JAN 85	4019718.08	4177803.36		4.974	S 2 18 W	182	.027			
17 JUL 85	4019713.11	4177803.16		3.030	S 45 W	182	.016			
15 JAN 86	4019710.08	4177803.12		4.400	S 15 E	145	.030			
9 JUN 86	4019705.68	4177803.14	378.20	2.090	S 16 W	114	.018			
1 OCT 86	4019703.59	4177803.13	377.80	1.140	S	116	.009			
25 JAN 87	4019702.45	4177803.13	377.50	.271	S 6 20 W	71	.003			
6 APR 87	4019702.18	4177803.10	377.50	.320	S 1 47 E	93	.003			
8 JUL 87	4019701.86	4177803.11	377.40	.276	S 12 32 E	119	.002			
4 NOV 87	4019701.59	4177803.17	377.30	.420	S 1 22 W	124	.003			
7 MAR 88	4019701.17	4177803.16	376.70	.152	S 11 19 E	106	.001			
21 JUN 88	4019701.02	4177803.19	376.70	.390	S 13 19 E	107	.003			
6 OCT 88	4019700.64	4177803.28	376.65	.114	S 74 45 W	111	.001			
25 JAN 89	4019700.61	4177803.17	376.58	.223	S 10 18 E	152	.001			
26 JUN 89	4019700.39	4177803.21	377.03	.496	S 9 16 W	276	.001			
29 MAR 90	4019699.90	4177803.13	377.14	.391	S 4 24 W	606	.000			
25 NOV 91	4019699.51	4177803.10	376.68	.271	S 6 20 E	267	.001			
18 AUG 92	4019699.24	4177803.13	376.71	.690	S 2 29 W	377	.001			
20 AUG 93	4019698.55	4177803.10	376.50							

1993 8/18/92 to 8/30/93 $690 \div 377 \times 365 = 0.67$

$10.90 + 0.00$
 313
 $8.00 + 0.21$
 364
 $7.63 + 0.01$
 375
 $1.28 + 0.03$
 407
 $.56 + 0.01$
 324
 $.71 + 0.04$
 428
 $.39 + 0.03$
 327
 $.69 + 0.03$
 377
 $1984 \quad 3/9/84 \text{ to } 1/16/85 = 10.90 \div 313 \times 365 = 12.71$
 $1985 \quad 1/16/85 \text{ to } 1/45/86 = 8.02$
 $1986 \quad 1/15/86 \text{ to } 1/25/87 = 7.43$
 $1987 \quad 1/25/87 \text{ to } 3/7/88 = 11.15$
 $1988 \quad 3/7/88 \text{ to } 1/25/89 = 0.69$
 $1989 \quad 1/25/89 \text{ to } 3/29/90 = 0.61$
 $1990-91 \quad 3/29/90 \text{ to } 11/25/91 = 0.37$

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

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09/29/93

PORT BN J12
FB 4205-019

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 30 AUG 93	3461 DAYS	DIST = 30.431 FT	BEARING = S O 29 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 30 AUG 93	2639 DAYS	DIST = -1.70 FT	
RESULTANT	FROM 9 JUN 86 TO 30 AUG 93	2639 DAYS	DIP = 13 DEG 25 MIN	DN

PORT BN J13
FB 4205-019

DATE		COORDINATES		ELEV.	HORIZONTAL		MOVEMENT		VERTICAL		DIP
DA	MON YR	NORTH	EAST		DIST	BEARING	TIME	RATE	ELEV	TIME	
					FT	DG MN	DAYS	FT/DA	DIFF	DAYS	DG MN
9 MAR 84	4018829.08	4178785.14			7.230	S 43 W	68	.106			
16 MAY 84	4018821.85	4178785.05			11.409	S 3 22 W	118	.096			
11 SEP 84	4018810.46	4178784.38			13.819	S 2 7 W	127	.108			
16 JAN 85	4018796.65	4178783.87			17.364	S 3 4 W	182	.095			
17 JUL 85	4018779.31	4178782.94			14.406	S 2 45 W	182	.079			
15 JAN 86	4018764.92	4178782.25			18.125	S 3 34 W	145	.125			
9 JUN 86	4018746.83	4178781.12			9.343	S 3 8 W	114	.081			
1 OCT 86	4018737.50	4178780.61							-2.70	114	16 7 DN

***** TOTAL MOVEMENT VECTOR *****

	FROM	TO	DAYS	DIST	BEARING
HORIZONTAL MOVEMENT	9 MAR 84	1 OCT 86	936 DAYS	91.691 FT	2 50 W
VERTICAL MOVEMENT	9 JUN 86	1 OCT 86	114 DAYS	-2.70 FT	
RESULTANT	9 JUN 86	1 OCT 86	114 DAYS	16 DEG 7 MIN	DN

$$\frac{91.691 \text{ ft}}{936 \text{ days}} = 1.176 \text{ inches/day}$$
$$1984 \quad 32.45 \div 313 \times 365 = 37.84$$

580

31.77

1986. — 3811

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J13A
FB 4205-117

DATE		COORDINATES		ELEV.	HORIZONTAL		MOVEMENT		RATE FT/DA	VERTICAL		MVNT TIME DAYS	DIP DG MN
DA	MON YR	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	ELEV DIFF					
25	JAN 87	4018737.38	4178780.41	189.90	2.457	S 18 30 W	.71		.034	-.60		71	13 43 DN
6	APR 87	4018735.05	4178779.63	189.30	2.670	S 16 32 W	93		.028	-.60		93	12 40 DN
8	JUL 87	4018732.49	4178778.87	188.70	2.517	S 14 15 W	119		.021	-.70		119	15 32 DN
4	NOV 87	4018730.05	4178778.25	188.00	1.660	S 17 53 W	124		.013	-.50		124	16 45 DN
7	MAR 88	4018728.47	4178777.74	187.50	.219	S 43 9 W	106		.002			106	
21	JUN 88	4018728.31	4178777.59	187.50	.371	S 27 15 W	107		.003	-.05		107	7 40 DN
6	OCT 88	4018727.98	4178777.42	187.45	.339	S 42 37 W	111		.003	-.07		111	11 38 DN
25	JAN 89	4018727.73	4178777.19	187.38	.456	S 37 52 W	152		.003	-.04		152	5 1 DN
26	JUN 89	4018727.37	4178776.55	187.34	1.080	S 36 20 W	276		.003	-.06		276	3 11 DN
28	MAR 90	4018726.50	4178776.27	187.28	2.771	S 32 2 W	606		.004	-1.06		606	20 56 DN
25	NOV 91	4018724.15	4178774.80	186.22	1.764	S 32 58 W	267		.006	-.45		267	14 18 DN
18	AUG 92	4018722.67	4178773.84	185.77	3.240	S 34 49 W	377		.008	-.87		377	15 2 DN
30	AUG 93	4018720.01	4178771.99	184.90									

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 25 JAN 87 TO 30 AUG 93	2409 DAYS	DIST =	19.303 FT	BEARING =	S 25 52 W
VERTICAL MOVEMENT	FROM 25 JAN 87 TO 30 AUG 93	2409 DAYS	DIST =	-5.00 FT		
RESULTANT	FROM 25 JAN 87 TO 30 AUG 93	2409 DAYS	DIP =	14 DEG 31 MIN	DN	

1987 8.34
1988 1.07
1989 1.31
1990-91 1.67
1992 -2.41
1993 -3.14

13
30
31
31
30
31
135

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J14
FB 4205-019

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MOVNT TIME DAYS	DIP DG MN
9 MAR 84	402017.55	4178377.84		3.631	S 20 8 W	68	.053			
16 MAY 84	4020214.14	4178376.59		5.733	S 20 31 W	118	.048			
11 SEP 84	4020208.77	4178374.58		6.816	S 20 37 W	127	.053			
16 JAN 85	4020202.39	4178372.18		9.459	S 22 57 W	182	.051			
17 JUL 85	4020193.68	4178368.49		5.975	S 23 15 W	182	.032			
15 JAN 86	4020188.19	4178366.13		7.577	S 24 14 W	145	.052			
9 JUN 86	4020181.28	4178363.02		3.114	S 13 22 W	114	.027			
-1 OCT 86	4020178.25	4178362.30						-1.30	114	22 39 DN

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 1 OCT 86	936 DAYS	DIST = 42.260 FT	BEARING = S 21 34 W
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIST = -1.30 FT	
RESULTANT	FROM 9 JUN 86 TO 1 OCT 86	114 DAYS	DIP = 22 DEG 39 MIN	DN

1984 3/9/84 to 1/16/85 = 18.93 ft/yr
1985 1/16/85 to 1/15/86 = 15.44 ft/yr
1986 1/15/86 to = 15.01 ft/yr

13
22
52

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J15
FB 4205-019

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
9 MAR 84	4020656.39	4178260.27		.070	N 90 E	68	.001			
16 MAY 84	4020656.39	4178260.34		.010	S	118	.000			
11 SEP 84	4020656.38	4178260.34		.114	S 74 45 E	127	.000			
16 JAN 85	4020656.35	4178260.45		.022	S 26 34 W	364	.000			
15 JAN 86	4020656.33	4178260.44		.082	S 14 2 W	145	.000			
9 JUN 86	4020656.25	4178260.42	486.20	.028	S 44 60 E	114	.000	-.10	114	74 13 DN
1 OCT 86	4020656.23	4178260.44	486.10	.070	S	116	.000	.10	116	55 UP
25 JAN 87	4020656.16	4178260.44	486.20	.106	S 48 49 W	71	.001		71	
6 APR 87	4020656.09	4178260.36	486.20	.134	N 41 59 E	93	.001	.10	93	36 37 UP
8 JUL 87	4020656.19	4178260.45	486.30	.070	S 8 8 W	119	.000	-.30	119	76 44 DN
4 NOV 87	4020656.12	4178260.44	486.00	.044	S 26 34 W	124	.000	-.20	124	77 24 DN
7 MAR 88	4020656.08	4178260.42	485.80	.036	N 56 19 E	106	.000		106	
21 JUN 88	4020656.10	4178260.45	485.80							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 9 MAR 84 TO 21 JUN 88 1565 DAYS DIST = .341 FT BEARING = S 31 49 E

VERTICAL MOVEMENT FROM 9 JUN 86 TO 21 JUN 88 743 DAYS DIST = -.40 FT

RESULTANT FROM 9 JUN 86 TO 21 JUN 88 743 DAYS DIP = 69 DEG 4 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J16 R-1 PB19
FB 4205-117

DATE		COORDINATES		ELEV.	HORIZONTAL		MOVEMENT		RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP
DA	MON YR	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS					
25	JAN 87	4020237.26	4177825.21	367.70	.241	S 7 8 E	71	.003	.20		71	39 35 UP
6	APR 87	4020237.02	4177825.24	367.90	.261	S 46 33 E	93	.002	-.10		93	20 54 DN
8	JUL 87	4020236.84	4177825.43	367.80	.349	S 23 38 E	119	.002	-.30		119	40 40 DN
4	NOV 87	4020236.52	4177825.57	367.50	.421	S 31 26 E	124	.003	-.30		124	35 25 DN
7	MAR 88	4020236.16	4177825.79	367.20	.117	S 19 59 E	106	.001	-.20		106	59 40 DN
21	JUN 88	4020236.05	4177825.83	367.00	.252	S 33 41 E	107	.002	-.13		107	27 15 DN
6	OCT 88	4020235.84	4177825.97	366.87	.193	S 21 15 E	111	.001			111	
25	JAN 89	4020235.66	4177826.04	366.87	.198	S 49 5 E	152	.001	.61		152	71 59 UP
26	JUN 89	4020235.53	4177826.19	367.48	.614	S 16 4 E	276	.002	.09		276	8 20 UP
29	MAR 90	4020234.94	4177826.36	367.57								

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 25 JAN 87 TO 29 MAR 90 1159 DAYS DIST = 2.589 FT BEARING = S 26 22 E
VERTICAL MOVEMENT FROM 25 JAN 87 TO 29 MAR 90 1159 DAYS DIST = -.13 FT
RESULTANT FROM 25 JAN 87 TO 29 MAR 90 1159 DAYS DIP = 2 DEG 52 MIN DN

$$\begin{aligned}
 & 365 \quad 1987 \quad 1.24 \div 407 \times 365 = 1.12 \\
 & 29 \quad 1988 \quad 0.56 + 324 \times 365 = 0.63 \\
 & 407 \quad 1989 \quad 0.79 \div 428 \times 365 = 0.67
 \end{aligned}$$

$$\begin{array}{r}
 365 \\
 - 28 \\
 \hline
 337 \\
 41 \\
 \hline
 324
 \end{array}$$

$$\begin{array}{r}
 365 \\
 28 \\
 29 \\
 \hline
 422
 \end{array}$$

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J17
FB 4205-174

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MOVNT TIME DAYS	DIP DG MN
4 NOV 87	4021319.57	4177716.55	602.90	.145	S 15 57 W	124	.001	-.40	124	69 60 DN
7 MAR 88	4021319.43	4177716.51	602.50	.098	N 23 58 E	106	.000	.40	106	76 10 UP
21 JUN 88	4021319.52	4177716.55	602.90	.044	S 26 34 E	370	.000	.06	370	53 18 UP
26 JUN 89	4021319.48	4177716.57	602.96							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM	4 NOV 87 TO 26 JUN 89	600 DAYS	DIST =	.092 FT	BEARING =	S 12 32 E
VERTICAL MOVEMENT	FROM	4 NOV 87 TO 26 JUN 89	600 DAYS	DIST =	.06 FT		
RESULTANT	FROM	4 NOV 87 TO 26 JUN 89	600 DAYS	DIP =	33 DEG	3 MIN	UP

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J18
FB 4205-216

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
6 OCT 88	4019212.20	4177434.55	315.14	.380	S 3 1 E	111	.003	.03	111	4 30 UP
25 JAN 89	4019211.82	4177434.57	315.17	.480	S	152	.003	.29	152	31 8 UP
26 JUN 89	4019211.34	4177434.57	315.46	1.035	S 6 5 W	276	.003	.07	276	3 52 UP
29 MAR 90	4019210.31	4177434.46	315.53							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 6 OCT 88 TO 29 MAR 90	539 DAYS	DIST = 1.892 FT	BEARING = S 2 44 W
VERTICAL MOVEMENT	FROM 6 OCT 88 TO 29 MAR 90	539 DAYS	DIST = .39 FT	
RESULTANT	FROM 6 OCT 88 TO 29 MAR 90	539 DAYS	DIP = 11 DEG 39 MIN	UP

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J19
FB 4205-216

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN					
6 OCT 88	4017162.86	4176602.55	92.99	.431	S 3 59 W	111	.003	.08	111	10 31 UP
25 JAN 89	4017162.43	4176602.52	93.07	.898	S 20 51 W	152	.005	.74	152	39 28 UP
26 JUN 89	4017161.59	4176602.20	93.81	1.515	S 20 28 W	276	.005	-.74	276	26 1 DN
29 MAR 90	4017160.17	4176601.67	93.07	4.181	S 19 34 W	606	.006	.26	606	3 33 UP
25 NOV 91	4017156.23	4176600.27	93.33	4.075	S 11 45 W	267	.015	-.35	267	4 54 DN
18 AUG 92	4017152.24	4176599.44	92.98	6.248	S 12 57 W	377	.016	.38	377	3 29 UP
30 AUG 93	4017146.15	4176598.04	93.36							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 6 OCT 88 TO 30 AUG 93	1789 DAYS	DIST = 17.307 FT	BEARING = S 15 06 W
VERTICAL MOVEMENT	FROM 6 OCT 88 TO 30 AUG 93	1789 DAYS	DIST = .37 FT	
RESULTANT	FROM 6 OCT 88 TO 30 AUG 93	1789 DAYS	DIP = 1 DEG 13 MIN	UP

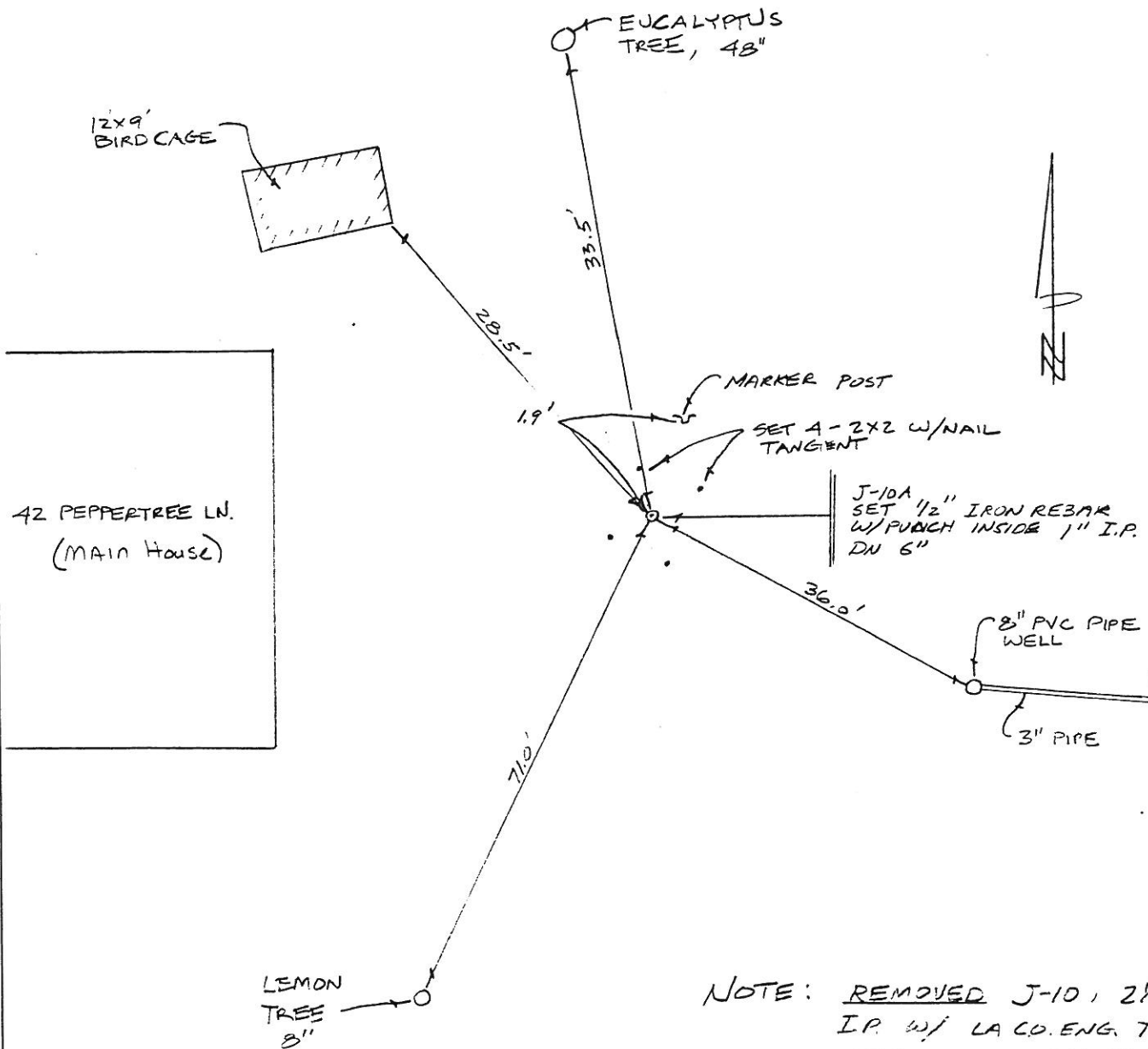
1989 2.06
1990-91 2.52
1992 5.57
1993 6.05

JOB NO. 5904647

SURVEY NOTES

Replacement of J-10

Portugues Bend Slide Area



NOTE: REMOVED J-10, 2 1/2" I.P. w/ LA CO. ENG. TAG. REPLACED WITH J-10A

(Location of Site in Back Yard Area of House #42 Peppertree Lane in the Gated Community of Portuguese Bend.)



COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT RADIAL R 1
FB 949-009

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN					
17 OCT 56	4019437.09	4178422.18	365.18	230.049	S 6 40 W	7055	.032	-24.15	7055	5 59 DN
10 FEB 76	4019208.60	4178395.44	341.03	7.121	S 4 26 W	251	.028	-1.16	251	9 15 DN
18 OCT 76	4019201.50	4178394.89	339.87	108.537	S 2 2 W	1438	.075			
25 SEP 80	4019093.03	4178391.05		52.572	S 33 E	601	.087			
19 MAY 82	4019040.46	4178391.56		12.112	S 1 11 E	169	.071			
4 NOV 82	4019028.35	4178391.81		61.485	S 1 38 E	491	.125			
9 MAR 84	4018966.89	4178393.57		6.677	S 2 45 E	68	.098			
16 MAY 84	4018960.22	4178393.89		10.840	S 29 E	118	.091			
11 SEP 84	4018949.38	4178393.98		13.157	S 1 58 E	127	.103			
16 JAN 85	4018936.23	4178394.43		16.764	S 1 18 E	182	.092			
17 JUL 85	4018919.47	4178394.81		14.014	S 1 28 E	182	.077			
15 JAN 86	4018905.46	4178395.17		17.850	S 23 E	145	.123	-52.77	3521	9 33 DN
9 JUN 86	4018887.61	4178395.29	287.10	9.270	S 48 E	114	.081	-2.00	114	12 10 DN
1 OCT 86	4018878.34	4178395.42	285.10							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 17 OCT 56 TO 1 OCT 86 0941 DAYS DIST = 559.390 FT BEARING = S 2 44 W

VERTICAL MOVEMENT FROM 17 OCT 56 TO 1 OCT 86 0941 DAYS DIST = -80.08 FT

RESULTANT FROM 17 OCT 56 TO 1 OCT 86 0941 DAYS DIP = 8 DEG 9 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT RADIAL R 1A
FB 4205-117

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL		DIP
	NORTH	EAST		DIST FT	BEARING DG MN			ELEV DIFF	MVNT TIME DAYS	
25 JAN 87	4018878.29	4178395.34	255.80	2.722	S 2 19 W	71	.038	-.60	71	12 26 DN
6 APR 87	4018875.57	4178395.23	255.20	2.997	S 4 1 W	93	.032	-.60	93	11 19 DN
8 JUL 87	4018872.58	4178395.02	254.60	2.801	S 1 50 W	119	.023	-.60	119	12 5 DN
4 NOV 87	4018869.78	4178394.93	254.00							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 25 JAN 87 TO 4 NOV 87 283 DAYS DIST = 8.519 FT BEARING = S 2 45 W
 VERTICAL MOVEMENT FROM 25 JAN 87 TO 4 NOV 87 283 DAYS DIST = -1.80 FT
 RESULTANT FROM 25 JAN 87 TO 4 NOV 87 283 DAYS DIP = 11 DEG 56 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN SHIELDS
FB 949-022

DATE	COORDINATES	ELEV.	DIST	HORIZONTAL BEARING	MOVEMENT TIME	RATE	VERTICAL ELEV	VERTICAL DIFF	BEARING	DIP
DA MON YR	NORTH	EAST	FT	DG MN	DAYS	FT/DA	DIFF	DG MN		
18 AUG 92	90	24	310.32							
30 AUG 93	4018302.94	4179107.25	310.32	.041 N 14 2 E	377	.000				

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 21 MAR 57 TO 30 AUG 93	3311 DAYS	DIST =	2.419 FT	BEARING =	S 26 47 W
VERTICAL MOVEMENT	FROM 21 MAR 57 TO 30 AUG 93	3311 DAYS	DIST =	.02 FT		
RESULTANT	FROM 21 MAR 57 TO 30 AUG 93	3311 DAYS	DIP =	0 DEG 28 MIN	UP	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN TBM J 1A
FB 4205-

DATE	COORDINATES	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
DA MON YR	NORTH EAST								
18 AUG 92		205.25							
30 AUG 93	4017785.76 4179011.29	205.25						377	

***** TOTAL MOVEMENT VECTOR *****

VERTICAL MOVEMENT FROM 18 AUG 92 TO 30 AUG 93 377 DAYS DIST = .00 FT

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN W FIX
FB 949-079

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL MVNT TIME DAYS	DIP DG MN
2 OCT 56	4019180.07	4176333.83		.237	S 22 15 W	7070	.000			
10 FEB 76	4019179.85	4176333.74	393.89	.104	N 16 42 W	456	.000		456	
11 MAY 77	4019179.95	4176333.71	393.89	.596	S 13 34 W	1371	.000			
10 FEB 81	4019179.37	4176333.57		.198	S 49 5 W	420	.000			
6 APR 82	4019179.24	4176333.42		.022	N 26 34 E	41	.000			
17 MAY 82	4019179.26	4176333.43		.036	N 56 19 W	171	.000			
4 NOV 82	4019179.28	4176333.40			N 90	16				
20 NOV 82	4019179.28	4176333.40		.133	S 12 59 E	290	.000			
6 SEP 83	4019179.15	4176333.43		.072	S 56 19 W	185	.000			
9 MAR 84	4019179.11	4176333.37		.022	S 63 26 E	68	.000			
16 MAY 84	4019179.10	4176333.39		.094	S 32 W	118	.000			
11 SEP 84	4019179.02	4176333.34		.092	N 49 24 E	129	.000			
18 JAN 85	4019179.08	4176333.41		.116	S 30 58 W	180	.000			
17 JUL 85	4019178.98	4176333.35		.050	N 11 19 E	180	.000			
13 JAN 86	4019179.03	4176333.36		.101	S 11 19 E	147	.000	.31	3316	16 7 UP
9 JUN 86	4019178.93	4176333.38	394.20	.070	N 81 52 W	114	.000	-.20	114	70 32 DN
1 OCT 86	4019178.94	4176333.31	394.00	.117	S 19 59 E	116	.001		116	
25 JAN 87	4019178.83	4176333.35	394.00	.042	N 44 60 W	71	.000		71	
6 APR 87	4019178.86	4176333.32	394.00	.036	N 33 41 W	93	.000	.23	93	81 6 UP
8 JUL 87	4019178.89	4176333.30	394.23	.063	S 18 26 W	119	.000	-.44	119	81 49 DN
4 NOV 87	4019178.83	4176333.28	393.79	.085	S 20 33 E	124	.000	-.09	124	46 29 DN
7 MAR 88	4019178.75	4176333.31	393.70	.089	N 26 34 E	106	.000	.10	106	48 11 UP
21 JUN 88	4019178.83	4176333.35	393.80	.100	S	107	.000	-.08	107	38 40 DN
6 OCT 88	4019178.73	4176333.35	393.72	.102	N 29 3 W	111	.000	-.04	111	21 14 DN
25 JAN 89	4019178.82	4176333.30	393.68	.041	N 75 58 E	152	.000	.01	152	13 38 UP
26 JUN 89	4019178.83	4176333.34	393.69							

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN W FIX
FB 949-079

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
26 JUN 89	83	34	393.69	.050	S 53 8 W	276	.000	.33	276	81 23 UP
29 MAR 90	4019178.80	4176333.30	394.02	.031	N 18 26 W	606	.000	.11	606	73 58 UP
25 NOV 91	4019178.83	4176333.29	394.13	.010	S	267	.000	-.04	267	75 58 DN
18 AUG 92	4019178.82	4176333.29	394.09	.022	S 26 34 W	377	.000	-.11	377	78 31 DN
30 AUG 93	4019178.80	4176333.28	393.98							

4018862.80
-316.46
2506.52
78839.80

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 2 OCT 56 TO 30 AUG 93 3481 DAYS DIST = 1.383 FT BEARING = S 23 25 W
VERTICAL MOVEMENT FROM 10 FEB 76 TO 30 AUG 93 6411 DAYS DIST = .09 FT
RESULTANT FROM 10 FEB 76 TO 30 AUG 93 6411 DAYS DIP = 4 DEG 29 MIN UP

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN POINT 82
FB 4205-019

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
9 MAR 84	4016614.34	4176084.68			N 90	68				
16 MAY 84	4016614.34	4176084.68			N 90	118				
11 SEP 84	4016614.34	4176084.68			N 90	122				
11 JAN 85	4016614.34	4176084.68			N 90	187				
17 JUL 85	4016614.34	4176084.68			N 90	182				
15 JAN 86	4016614.34	4176084.68			N 90	145				
9 JUN 86	4016614.34	4176084.68	125.50		N 90	114		.20	114	90 UP
1 OCT 86	4016614.34	4176084.68	125.70		N 90	116		-.20	116	90 DN
25 JAN 87	4016614.34	4176084.68	125.50		N 90	71		-.10	71	90 DN
6 APR 87	4016614.34	4176084.68	125.40		N 90	93		.20	93	90 UP
8 JUL 87	4016614.34	4176084.68	125.60		N 90	119		-.30	119	90 DN
4 NOV 87	4016614.34	4176084.68	125.30		N 90	124		.10	124	90 UP
7 MAR 88	4016614.34	4176084.68	125.40		N 90	106			106	
21 JUN 88	4016614.34	4176084.68	125.40		N 90	107		-.29	107	90 DN
6 OCT 88	4016614.34	4176084.68	125.11		N 90	111		.09	111	90 UP
25 JAN 89	4016614.34	4176084.68	125.20		N 90	152		.89	152	90 UP
26 JUN 89	4016614.34	4176084.68	126.09		N 90	276		-.46	276	90 DN
29 MAR 90	4016614.34	4176084.68	125.63		N 90	606		-.44	606	90 DN
25 NOV 91	4016614.34	4176084.68	125.19		N 90	267		.21	267	90 UP
18 AUG 92	4016614.34	4176084.68	125.40		N 90	377		.04	377	90 UP
30 AUG 93	4016614.34	4176084.68	125.44		N 90					

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN POINT 82
FB 4205-019

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 9 MAR 84 TO 30 AUG 93	3461 DAYS	DIST = .000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 9 JUN 86 TO 30 AUG 93	2639 DAYS	DIST = -.06 FT	
RESULTANT	FROM 9 JUN 86 TO 30 AUG 93	2639 DAYS	DIP = 90 DEG	0 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN N FIX
FB 4445-101

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	VERTICAL ELEV DIFF	DIP DG MN
		NORTH	EAST							
6 SEP 83	4021386.50	4178643.71			N 90	185				
9 MAR 84	4021386.50	4178643.71			N 90	68				
16 MAY 84	4021386.50	4178643.71			N 90	118				
11 SEP 84	4021386.50	4178643.71			N 90	127				
16 JAN 85	4021386.50	4178643.71			N 90	182				
17 JUL 85	4021386.50	4178643.71			N 90	180				
13 JAN 86	4021386.50	4178643.71			N 90	147				
9 JUN 86	4021386.50	4178643.71			N 90	114				
1 OCT 86	4021386.50	4178643.71			N 90	116				
25 JAN 87	4021386.50	4178643.71			N 90	71				
6 APR 87	4021386.50	4178643.71			N 90	93				
8 JUL 87	4021386.50	4178643.71			N 90	119				
4 NOV 87	4021386.50	4178643.71			N 90	124				
7 MAR 88	4021386.50	4178643.71			N 90	106				
21 JUN 88	4021386.50	4178643.71			N 90	107				
6 OCT 88	4021386.50	4178643.71			N 90	111				
25 JAN 89	4021386.50	4178643.71			N 90	152				
26 JUN 89	4021386.50	4178643.71			N 90	276				
29 MAR 90	4021386.50	4178643.71			N 90	606				
25 NOV 91	4021386.50	4178643.71			N 90	267				
18 AUG 92	4021386.50	4178643.71			N 90	377				
30 AUG 93	4021386.50	4178643.71			N 90					

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN N FIX
FB 4445-101

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 6 SEP 83 TO 30 AUG 93 3646 DAYS DIST = .000 FT BEARING = N 90 00

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN K 5
FB 949-Q59

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL		MVNT TIME DAYS	DIP	
	NORTH	EAST		DIST FT	BEARING DG MN			ELEV DIFF	DG MN			
26 JUN 64	4017412.40	4178835.22	135.99	.280	S 2 3 E	2772	.000			2772		
28 JAN 72	4017412.12	4178835.23	135.99	2.181	S 12 26 W	4486	.000			4486		
10 MAY 84	4017409.99	4178834.76	135.99	.110	S	124	.000					
11 SEP 84	4017409.88	4178834.76		.041	N 75 58 W	127	.000					
16 JAN 85	4017409.89	4178834.72		.170	S 3 22 E	376	.000					
27 JAN 86	4017409.72	4178834.73		.189	S 18 26 W	363	.000	-.24		990	27 36	DN
25 JAN 87	4017409.54	4178834.67	135.75	.192	S 38 40 W	407	.000	-.25		407	52 28	DN
7 MAR 88	4017409.39	4178834.55	135.50	.126	S 71 34 W	1358	.000	.18		1358	54 54	UP
25 NOV 91	4017409.35	4178834.43	135.68	.067	S 26 34 E	267	.000			267		
18 AUG 92	4017409.29	4178834.46	135.68	.123	S 14 2 W	377	.000	.05		377	22 1	UP
30 AUG 93	4017409.17	4178834.43	135.73									

Handwritten:
 $.24 = 144 \times 10^{-2} = 1.44$
 $.37$

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 26 JUN 64 TO 30 AUG 93	0657 DAYS	DIST =	3.325 FT	BEARING =	S 13 44 W
VERTICAL MOVEMENT	FROM 26 JUN 64 TO 30 AUG 93	0657 DAYS	DIST =	-.26 FT		
RESULTANT	FROM 26 JUN 64 TO 30 AUG 93	0657 DAYS	DIP =	4 DEG 28 MIN	DN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN K 6
FB 949-059

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
17 OCT 56	4017389.05 4179321.16	236.	.044	N 26 34 W	1359	.000			
7 JUL 60	4017389.09 4179321.14	236.	1.458	N 51 24 W	5696	.000			
10 FEB 76	4017390.00 4179320.00	236.42	1.885	S 12 34 E	1689	.001			
25 SEP 80	4017388.16 4179320.41		.126	S 71 34 W	599	.000			
17 MAY 82	4017388.12 4179320.29		.188	N 57 60 E	175	.001			
8 NOV 82	4017388.22 4179320.45		.334	S 51 4 W	549	.000			
10 MAY 84	4017388.01 4179320.19		.036	S 33 41 W	124	.000			
11 SEP 84	4017387.98 4179320.17		.040	N	127	.000			
16 JAN 85	4017388.02 4179320.17		.050	S 11 19 E	365	.000			
16 JAN 86	4017387.97 4179320.18		.078	S 39 48 W	374	.000			
25 JAN 87	4017387.91 4179320.13	236.32	.050	S 53 8 W	407	.000	-.10	4002	2 44 DN
7 MAR 88	4017387.88 4179320.09	236.30	.072	N 74 3 W	1358	.000	-.02	407	21 48 DN
25 NOV 91	4017387.90 4179320.02	236.29	.010	S	267	.000	-.01	1358	7 49 DN
18 AUG 92	4017387.89 4179320.02	236.34	.089	S 63 26 E	377	.000	.05	267	78 41 UP
30 AUG 93	4017387.85 4179320.10	236.36					.02	377	12 36 UP

1.4 feet

.14 .09 .2'

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 17 OCT 56 TO 30 AUG 93 3466 DAYS DIST = 1.601 FT BEARING = S 41 27 W
VERTICAL MOVEMENT FROM 10 FEB 76 TO 30 AUG 93 6411 DAYS DIST = -.06 FT
RESULTANT FROM 10 FEB 76 TO 30 AUG 93 6411 DAYS DIP = 1 DEG 36 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN ROPE
FB 4319-199

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
28 AUG 80	4017651.74	4179838.85	313.62	.120	S	61	.001	.02	61	9 28 UP
28 OCT 80	4017651.62	4179838.85	313.64	.044	S 63 26 W	100	.000	-.02	100	24 6 DN
5 FEB 81	4017651.60	4179838.81	313.62	.070	S 44 60 W	47	.001		47	
24 MAR 81	4017651.55	4179838.76	313.62	.085	N 20 33 E	126	.000	.04	126	25 5 UP
28 JUL 81	4017651.63	4179838.79	313.66	.050	N 11 19 E	251	.000	-.02	251	21 25 DN
5 APR 82	4017651.68	4179838.80	313.64	.090	S 83 40 W	214	.000	-.02	214	12 27 DN
5 NOV 82	4017651.67	4179838.71	313.62	.044	S 26 34 E	305	.000	.01	305	12 36 UP
6 SEP 83	4017651.63	4179838.73	313.63	.070	N 90 W	253	.000			
16 MAY 84	4017651.63	4179838.66	313.	.028	S 44 60 W	118	.000			
11 SEP 84	4017651.61	4179838.64		.040	N 90 W	122	.000			
11 JAN 85	4017651.61	4179838.60	313.	.064	N 38 40 E	370	.000	-.07	863	36 25 DN
16 JAN 86	4017651.66	4179838.64	313.56	.085	S 20 33 W	374	.000	-.02	374	13 10 DN
25 JAN 87	4017651.58	4179838.61	313.54	.053	S 68 12 W	407	.000	.06	407	48 6 UP
7 MAR 88	4017651.56	4179838.56	313.60	.092	N 40 36 W	1358	.000	-.02	1358	12 14 DN
25 NOV 91	4017651.63	4179838.50	313.58	.020	S	267	.000	.03	267	56 19 UP
18 AUG 92	4017651.61	4179838.50	313.61	.072	S 33 41 E	377	.000		377	
30 AUG 93	4017651.55	4179838.54	313.61							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 28 AUG 80 TO 30 AUG 93 4750 DAYS DIST = .363 FT BEARING = S 58 30 W

VERTICAL MOVEMENT FROM 28 AUG 80 TO 30 AUG 93 4750 DAYS DIST = -.01 FT

RESULTANT FROM 28 AUG 80 TO 30 AUG 93 4750 DAYS DIP = 1 DEG 35 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN SHIELDS
FB 949-022

DATE DA MON YR	COORDINATES NORTH	EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
21 MAR 57	4018305.10	4179108.34	310.30	.304	S 41	W 4374	.000	.08	4374	14 42 UP
12 MAR 69	4018304.87	4179108.14	310.38	.407	S 27 49	W 3158	.000	-.03	3158	4 13 DN
3 NOV 77	4018304.51	4179107.95	310.35	.860	S 19 42	W 1057	.000			
25 SEP 80	4018303.70	4179107.66		.327	S 12 20	W 600	.000			
18 MAY 82	4018303.38	4179107.59		.094	N 32	W 171	.000			
5 NOV 82	4018303.46	4179107.54		.180	S 33 41	W 490	.000			
9 MAR 84	4018303.31	4179107.44		.031	S 18 26	W 68	.000			
16 MAY 84	4018303.28	4179107.43		.080	S 7 8	W 118	.000	-.05	2504	2 1 DN
11 SEP 84	4018303.20	4179107.42	310.30	.031	S 71 34	E 122	.000			
11 JAN 85	4018303.19	4179107.45		.041	S 14 2	E 187	.000		309	
17 JUL 85	4018303.15	4179107.46	310.30	.050	N 90	W 182	.000		182	
15 JAN 86	4018303.15	4179107.41	310.30	.060	S 9 28	W 145	.000		145	
9 JUN 86	4018303.09	4179107.40	310.30	.056	S 44 60	W 114	.000	.08	114	54 44 UP
1 OCT 86	4018303.05	4179107.36	310.38	.010	N 90	W 116	.000		116	
25 JAN 87	4018303.05	4179107.35	310.38	.036	S 33 41	W 71	.000	-.05	71	54 12 DN
6 APR 87	4018303.02	4179107.33	310.33	.022	S 26 34	W 93	.000	-.01	93	24 6 DN
8 JUL 87	4018303.00	4179107.32	310.32	.053	S 21 48	W 119	.000		119	
4 NOV 87	4018302.95	4179107.30	310.32	.010	S	124	.000	-.02	124	63 26 DN
7 MAR 88	4018302.94	4179107.30	310.30	.031	N 18 26	E 106	.000		106	
21 JUN 88	4018302.97	4179107.31	310.30	.070	S	107	.000	-.02	107	15 57 DN
6 OCT 88	4018302.90	4179107.31	310.28	.041	N 14 2	W 111	.000	-.01	111	13 38 DN
25 JAN 89	4018302.94	4179107.30	310.27	.044	N 26 34	E 152	.000		152	
26 JUN 89	4018302.98	4179107.32	310.27	.082	S 75 58	W 276	.000	.03	276	19 59 UP
29 MAR 90	4018302.96	4179107.24	310.30	.031	N 18 26	W 606	.000	.04	606	51 40 UP
25 NOV 91	4018302.99	4179107.23	310.34	.090	S 6 20	E 267	.000	-.02	267	12 27 DN
18 AUG 92	4018302.90	4179107.24	310.32							

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/27/93

RPV 4
FB 4205-093

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT	RATE	VERTICAL	MOVNT	DIP
	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	FT/DA	ELEV DIFF	TIME DAYS	DG MN
19 JUN 86	4019696.86	4179262.52	470.67	.200	N 90 E	104	.001			
1 OCT 86	4019696.86	4179262.72		.416	S 65 54 W	116	.003	.07	220	15 47 UP
25 JAN 87	4019696.69	4179262.34	470.74	.082	N 75 58 W	71	.001	.11	71	53 9 UP
6 APR 87	4019696.71	4179262.26	470.85	.165	S 25 1 W	212	.000	-.14	212	40 13 DN
4 NOV 87	4019696.56	4179262.19	470.71	.101	S 78 41 W	124	.000	.01	124	5 36 UP
7 MAR 88	4019696.54	4179262.09	470.72	.110	S 84 48 W	213	.000	-.11	213	44 53 DN
6 OCT 88	4019696.53	4179261.98	470.61	.090	N 83 40 W	263	.000	.30	263	73 12 UP
26 JUN 89	4019696.54	4179261.89	470.91	.041	N 14 2 E	276	.000	-.01	276	13 38 DN
29 MAR 90	4019696.58	4179261.90	470.90	.080	S 60 15 W	606	.000	-.20	606	68 3 DN
25 NOV 91	4019696.54	4179261.83	470.70	.111	S 63 26 W	267	.000	-.01	267	5 7 DN
18 AUG 92	4019696.49	4179261.73	470.69	.122	S 55 W	377	.000	.04	377	18 9 UP
30 AUG 93	4019696.42	4179261.63	470.73							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 19 JUN 86 TO 30 AUG 93	2629 DAYS	DIST =	.992 FT	BEARING = S 63 42 W
VERTICAL MOVEMENT	FROM 19 JUN 86 TO 30 AUG 93	2629 DAYS	DIST =	.06 FT	
RESULTANT	FROM 19 JUN 86 TO 30 AUG 93	2629 DAYS	DIP =	3 DEG 27 MIN	UP

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN K 1
FB 949-060

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
6 MAY 57	4017544.22 4176075.44	213.69	73.307	S 26 42 W	6854	.010	-5.19	6854	4 3 DN
10 FEB 76	4017478.73 4176042.50	208.50	1.621	S 29 34 W	252	.006	-.24	252	8 25 DN
19 OCT 76	4017477.32 4176041.70	208.26	15.815	S 28 43 W	1437	.011			
25 SEP 80	4017463.45 4176034.10		.872	N 63 26 W	596	.001			
14 MAY 82	4017463.84 4176033.32		2.965	S 11 5 W	171	.017			
1 NOV 82	4017460.93 4176032.75		3.661	S 29 5 W	989	.003			
17 JUL 85	4017457.73 4176030.97		.282	S 44 60 W	182	.001			
15 JAN 86	4017457.53 4176030.77		.418	S 33 19 W	145	.002	-2.26	3520	5 36 DN
9 JUN 86	4017457.18 4176030.54	206.00	.134	S 26 34 W	114	.001	-.40	114	71 28 DN
1 OCT 86	4017457.06 4176030.48	205.60	.171	S 6 42 W	116	.001	-.20	116	49 26 DN
25 JAN 87	4017456.89 4176030.46	205.40	.098	S 44 60 W	71	.001	-.20	71	63 40 DN
6 APR 87	4017456.82 4176030.39	205.20	.056	N 44 60 W	93	.000	.10	93	60 30 UP
8 JUL 87	4017456.86 4176030.35	205.30	.101	S 11 19 W	119	.000	-.40	119	75 42 DN
4 NOV 87	4017456.76 4176030.33	204.90							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 6 MAY 57 TO 4 NOV 87 1139 DAYS DIST = 98.408 FT BEARING = S 27 17 W

VERTICAL MOVEMENT FROM 6 MAY 57 TO 4 NOV 87 1139 DAYS DIST = -8.79 FT

RESULTANT FROM 6 MAY 57 TO 4 NOV 87 1139 DAYS DIP = 5 DEG 6 MIN DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J20
FB 4205-300

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT		RATE FT/DA	VERTICAL		DIP
	NORTH	EAST		DIST FT	BEARING DG MN	TIME DAYS	ELEV DIFF		MVNT TIME DAYS		
25 NOV 91	4019520.56	4178721.32	316.43	260	S 2 12 E	267	.000		-.07	267	15 3 DN
18 AUG 92	4019520.30	4178721.33	316.36	880	S 39 E	377	.002			377	
30 AUG 93	4019519.42	4178721.34	316.36								

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIST = 1.140 FT	BEARING = S 1 00 E
VERTICAL MOVEMENT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIST = -.07 FT	
RESULTANT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIP = 3 DEG 30 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN J21
FB 4205-300

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL		MVNT TIME DAYS	DIP
	NORTH	EAST		DIST FT	BEARING DG MN			ELEV DIFF	DG MN		
25 NOV 91	4019392.14	4178895.52	283.01	.390	S 1 28 E	267	.001,0175	-.07	267	10 10	DN
18 AUG 92	4019391.75	4178895.53	282.94	1.014	S 5 5 E	377	.002,0323	-.05	377	2 49	DN
30 AUG 93	4019390.74	4178895.62	282.89								

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIST = 1.403 FT	BEARING = S 4 05 E
VERTICAL MOVEMENT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIST = -.12 FT	
RESULTANT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIP = 4 DEG 53 MIN	DN

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

SPH H 8
FB 4445-101

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL DIST FT	BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
6 SEP 83	4016759.48	4174623.86	114.22		N 90	199			199	
23 MAR 84	4016759.48	4174623.86	114.22		N 90	172				
11 SEP 84	4016759.48	4174623.86			N 90	122				
11 JAN 85	4016759.48	4174623.86			N 90	383			677	
29 JAN 86	4016759.48	4174623.86	114.22		N 90	131				
9 JUN 86	4016759.48	4174623.86			N 90	114				
1 OCT 86	4016759.48	4174623.86			N 90	116				
25 JAN 87	4016759.48	4174623.86			N 90	71				
6 APR 87	4016759.48	4174623.86			N 90	93				
8 JUL 87	4016759.48	4174623.86			N 90	119				
4 NOV 87	4016759.48	4174623.86			N 90	124				
7 MAR 88	4016759.48	4174623.86			N 90	106				
21 JUN 88	4016759.48	4174623.86			N 90	107				
6 OCT 88	4016759.48	4174623.86			N 90	111				
25 JAN 89	4016759.48	4174623.86			N 90	152			1244	
26 JUN 89	4016759.48	4174623.86	114.22		N 90	276			276	
29 MAR 90	4016759.48	4174623.86	114.22		N 90	606			606	
25 NOV 91	4016759.48	4174623.86	114.22		N 90	267			267	
18 AUG 92	4016759.48	4174623.86	114.22		N 90	377			377	
30 AUG 93	4016759.48	4174623.86	114.22		N 90					

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 6 SEP 83 TO 30 AUG 93	3646 DAYS	DIST =	.000 FT	BEARING = N 90 00
VERTICAL MOVEMENT	FROM 6 SEP 83 TO 30 AUG 93	3646 DAYS	DIST =	.00 FT	
RESULTANT	FROM 6 SEP 83 TO 30 AUG 93	3646 DAYS	DIP =	0 DEG 0 MIN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

SPH H 8A
FB 4445-101

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL		DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN			ELEV DIFF	MVNT TIME DAYS	
6 SEP 83	4017150.31	4174472.86	137.51	.050	N	371	.000			
11 SEP 84	4017150.36	4174472.86		.050	S	122	.000		493	
11 JAN 85	4017150.31	4174472.86	137.51	.053	N 21 48 W	383	.000		383	
29 JAN 86	4017150.36	4174472.84	137.51		N 90	131				
9 JUN 86	4017150.36	4174472.84			N 90	230			361	
25 JAN 87	4017150.36	4174472.84	137.51		N 90	407			407	
7 MAR 88	4017150.36	4174472.84	137.51		N 90	476			476	
26 JUN 89	4017150.36	4174472.84	137.51		N 90	276			276	
29 MAR 90	4017150.36	4174472.84	137.51		N 90	606			606	
25 NOV 91	4017150.36	4174472.84	137.51		N 90	267		-.27	267	90 DN
18 AUG 92	4017150.36	4174472.84	137.24		N 90	377		.01	377	90 UP
30 AUG 93	4017150.36	4174472.84	137.25		N 90					

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM	6 SEP 83 TO 30 AUG 93	3646 DAYS	DIST =	.053 FT	BEARING =	N 21 48 W
VERTICAL MOVEMENT	FROM	6 SEP 83 TO 30 AUG 93	3646 DAYS	DIST =	-.26 FT		
RESULTANT	FROM	6 SEP 83 TO 30 AUG 93	3646 DAYS	DIP =	78 DEG 18 MIN	DN	

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/29/93

PORT BN BLAKESLEY
FB 949-018

DATE DA MON YR	COORDINATES NORTH EAST	ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
16 OCT 56	4018436.32 4176660.68	305.70	119.534	S 5 13 W	7056	.016	-20.31	7056	9 39 DN
10 FEB 76	4018317.28 4176649.82	285.39	3.572	S 6 25 W	254	.014			
21 OCT 76	4018313.73 4176649.42	284.50	38.157	S 7 23 W	1435	.026			13 59 DN
25 SEP 80	4018275.89 4176644.51		15.086	S 8 16 W	595	.025			
13 MAY 82	4018260.96 4176642.34		3.460	S 8 48 E	172	.020			
1 NOV 82	4018257.54 4176642.87		35.530	S 5 6 W	989	.035			
17 JUL 85	4018222.15 4176639.71		4.426	S 4 55 W	182	.024			
15 JAN 86	4018217.74 4176639.33		6.258	S 5 30 W	145	.043			
9 JUN 86	4018211.51 4176638.73	253.40	2.905	S 8 54 W	114	.025	-31.10	3518	16 50 DN
1 OCT 86	4018208.64 4176638.28	252.20	2.287	S 10 20 W	116	.019	-1.20	114	22 26 DN
25 JAN 87	4018206.39 4176637.87	251.50	1.348	S 10 31 W	71	.020	-70	116	17 1 DN
6 APR 87	4018204.99 4176637.61	250.90	1.369	S 9 40 W	119	.011		71	22 51 DN
8 JUL 87	4018203.68 4176637.29	250.30	1.366	S 11 23 W	124	.011		93	23 59 DN
4 NOV 87	4018202.33 4176637.06	249.70						119	23 39 DN
7 MAR 88	4018200.99 4176636.79	248.90						124	30 20 DN
21 JUN 88	4018200.56 4176636.74	248.60	.432	S 6 38 W	106	.004		106	34 43 DN
6 OCT 88	4018200.19 4176636.73	248.33	.370	S 1 33 W	107	.003		107	36 6 DN
25 JAN 89	4018199.82 4176636.64	248.16	.380	S 13 40 W	111	.003		111	24 3 DN
26 JUN 89	4018199.27 4176636.55	248.15	.557	S 9 17 W	152	.003		152	45 8 UP
29 MAR 90	4018198.38 4176636.33	248.39	.916	S 13 53 W	276	.003		276	19 48 DN
25 NOV 91	4018196.59 4176635.91	247.31	1.838	S 13 12 W	606	.003		606	30 26 DN
18 AUG 92	4018194.94 4176635.81	246.44	1.653	S 3 28 W	267	.006		267	27 45 DN
30 AUG 93	4018192.65 4176635.40	245.54	2.326	S 10 9 W	377	.006		377	21 9 DN

8.28' / yr 85

11.08' / yr 85

1.82' = 5.46

1.13' = 1.47

1.33' = 7.66

1.82' = 1.82

2.25' / yr

4.90' / yr

3.24' = 1.34' / yr

4.28' = 1.26' / yr

1.10' / yr

2.26' / yr

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PORT BN J22
FB 4205-300

DATE DA MON YR	COORDINATES		ELEV.	HORIZONTAL		MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
	NORTH	EAST		DIST FT	BEARING DG MN					
25 NOV 91	4018654.44	4177787.08	243.11	2.343	S 6 7 W	267	.008	-.31	267	7 32 DN
18 AUG 92	4018652.11	4177786.83	242.80	4.354	S 7 15 W	377	.011	-.46	377	6 2 DN
30 AUG 93	4018647.79	4177786.28	242.34							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIST =	6.697 FT	BEARING =	S 6 52 W
VERTICAL MOVEMENT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIST =	-.77 FT		
RESULTANT	FROM 25 NOV 91 TO 30 AUG 93	644 DAYS	DIP =	6 DEG 33 MIN	DN	

1992
1993

31
28

COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS

PROGRAM EK11AP
09/27/93

RPV 3
FB 4205-094

DATE DA MON YR	COORDINATES		ELEV.	DIST FT	HORIZONTAL BEARING DG MN	MOVEMENT TIME DAYS	RATE FT/DA	VERTICAL ELEV DIFF	MVNT TIME DAYS	DIP DG MN
19 JUN 86	4019195.69	4180922.78	647.90	2.141	S 49 10 W	104	.020	-.49	104	12 53 DN
1 OCT 86	4019194.29	4180921.16	647.41	1.539	S 49 29 W	116	.013	-.17	116	6 18 DN
25 JAN 87	4019193.29	4180919.99	647.24	2.603	S 46 52 W	283	.009	-.54	283	11 43 DN
4 NOV 87	4019191.51	4180918.09	646.70	.923	S 56 29 W	124	.007	-.38	124	22 22 DN
7 MAR 88	4019191.00	4180917.32	646.32	3.020	S 80 40 W	213	.014	-1.13	213	20 31 DN
6 OCT 88	4019190.51	4180914.34	645.19	1.224	S 47 19 W	263	.004	-.09	263	4 12 DN
26 JUN 89	4019189.68	4180913.44	645.10	.910	S 54 23 W	276	.003	-.15	276	9 21 DN
29 MAR 90	4019189.15	4180912.70	644.95	.837	S 49 51 W	606	.001	-.52	606	31 50 DN
25 NOV 91	4019188.61	4180912.06	644.43							

***** TOTAL MOVEMENT VECTOR *****

HORIZONTAL MOVEMENT FROM 19 JUN 86 TO 25 NOV 91 1985 DAYS DIST = 12.846 FT BEARING = S 56 33 W
VERTICAL MOVEMENT FROM 19 JUN 86 TO 25 NOV 91 1985 DAYS DIST = -3.47 FT
RESULTANT FROM 19 JUN 86 TO 25 NOV 91 1985 DAYS DIP = 15 DEG 7 MIN DN

STATE OF (DEPARTMENT OF W

373 1 890 000 FF FR (5) ; 1/400000 F

