

CALIFORNIA INSTITUTE OF TECHNOLOGY

EARTHQUAKE ENGINEERING RESEARCH LABORATORY

STRONG MOTION EARTHQUAKE ACCELEROGRAMS
INDEX VOLUME

REPORT NO. EERL 76-02

A REPORT ON RESEARCH CONDUCTED UNDER A
GRANT FROM THE NATIONAL SCIENCE FOUNDATION

PASADENA, CALIFORNIA

AUGUST 1976

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PREFACE

The purpose of the present report is to supply cross-referenced index lists which will facilitate the location of earthquake records from particular earthquakes and sites. These lists and the accompanying maps will also serve as a complete description of the location of all stations.

A secondary purpose of the report is to collect in one place various corrections, addenda, and supplementary information which should assist research workers in making use of the data.

THE STRONG MOTION ACCELEROGRAM ANALYSIS PROJECT

The first strong-motion accelerogram was obtained during the 1933 Long Beach earthquake, and it was immediately recognized that such measurements would be of fundamental importance to the newly developing field of earthquake engineering. From the very beginning of the accelerograph program, the U.S. Coast and Geodetic Survey, which initiated and maintained the work, was aware of the need for a wide distribution of this basic data and in the 1933 issue of U.S. Earthquakes began a notable series of reproductions of small-scale copies of accelerograms along with a summary of instrumental characteristics, site characteristics, and tabulation of peak accelerations, prominent wave periods, etc. Included in these reports were a number of pioneering studies of accelerograph analysis by Frank Neumann, based on such early records as the 1940 El Centro accelerogram. The importance of the work of the Seismological Field Survey of the U.S. Coast and Geodetic Survey in the development, installation, servicing of instruments, and in the collection and dissemination of data cannot be overestimated. Under the direction first of Franklin P. Ulrich and later of William K. Cloud, the Seismological Field Survey laid the indispensable foundation for later studies of strong-motion seismology.

By the late 1940's the number of significant strong-motion accelerograms had grown to several dozen, and new methods for analysis and interpretation of the records had been developed. The usefulness of response spectrum techniques to characterize the effect

of earthquake ground motion on structures had been generally accepted, and computational capabilities had rapidly advanced. In 1951 the first compilation of strong-motion records in a standard form, along with response spectrum plots, etc., was published by the California Institute of Technology. This report by Alford, Housner, and Martel, "Spectrum Analysis of Strong-Motion Earthquakes," contained information on 14 earthquake accelerograms processed by electric analog computer methods. Re-issued in 1964 with four additional accelerograms, this report received a wide distribution and was for a number of years the main source of basic information on strong-motion acceleration data.

Important advances were also being made in the integration of accelerograms to obtain ground velocity and displacement curves. It was recognized that digital computer techniques combined with long-period baseline corrections would permit an increase in accuracy over a fairly wide frequency range. In 1961 Berg and Housner presented a standard baseline correction of parabolic form which has been widely used and has only recently been superceded by more powerful digital filter techniques developed in the course of the present project.

By the late 1960's, the number of strong-motion earthquake accelerograms had grown to the point that some form of standard data processing was essential. It was also clear at that time that modern developments in data processing techniques made it practicable to extract considerably more information from past accelerograms than had been originally supposed. This made it desirable to re-work many of the older original accelerograms. These considerations

resulted in a decision in 1968 by the Earthquake Engineering Research Laboratory of the California Institute of Technology to carry out a program of digitization and data processing which would ensure a wide dissemination of the basic data in a form convenient for use by all investigators. At that time, a group of 100 accelerograms was selected from the available records to form the nucleus of such a data bank.

The objectives of this initial project as expressed in the preface to the first report (July, 1969) were as follows:

"The object of the present series is to make available accurate digitized data prepared in a uniform way for all recorded strong-motion earthquakes. This first report is the initial step in a continuing data processing program which will ultimately include all past recorded earthquakes as well as current data as it is collected. In addition to digitized ground acceleration records, certain basic calculated information such as integrated velocity and displacement curves, response spectra, and Fourier spectra, will also be issued in a standard form. The existence of this standardized data will allow all investigators to begin with the same basic numerical data, and should thus reduce the scatter of numerical results, the meaning of which has sometimes been difficult to assess.

"In addition to an improvement in the consistency of numerical results, several other advantages will be derived from the standardized data. (1) A number of earthquake records will be available which have not hitherto been analyzed in any form; (2) Vertical component data will be available for all earthquakes, digitized on a simultaneous time basis with the two horizontal components; (3) A small overall improvement in data accuracy will result from the inclusion of corrections for base-line distortion on the original record, and for timing mark variations; (4) Basic accelerogram data uncorrected for base-line adjustments will be available for research purposes, as well as corrected data using standard adjustments.

"Accurate measurements of the ground motions of destructive earthquakes form the indispensable starting point for investigations in earthquake engineering. The number of such measurements that have been made in the past is

unfortunately very small, and there is thus a need to extract the maximum possible information from the relatively few records that do exist. ...

"Some of the factors which suggest that a uniform preparation of information is now essential are: (1) The basic accelerograph itself has gone through many stages of development, and the network now contains a wide variety of devices differing considerably in mechanical, electrical, and optical details. Although the basic physical parameters are approximately equivalent, there are significant differences which sometimes can be corrected for if the proper information is at hand. (2) A wide variety of recording media and record sizes are employed in the various accelerographs, and many different techniques have been used over the years to digitize the analog photographic traces for numerical work. (3) Various important earthquake accelerograms have been studied by different investigators using different interpretive techniques. In addition, various corrective methods have been employed, and it is not always clear for a given reproduced accelerogram just how the basic data has been treated. (4) As modern digital computing techniques have been developed, there has been a continuous evolution of the data processing techniques used. For example, response spectrum calculations have been carried out by desk calculators, by analog computer methods, and by digital computers. This may complicate the comparison of old spectrum curves with more recent calculations. Integrated velocity and displacement curves are well known to be particularly sensitive to this kind of computational variation. The foregoing factors, plus the fact that highly efficient digitizing and computing facilities are now available, have provided the motive for the present undertaking."

The project as outlined above had just been well started under the auspices of the National Science Foundation, and the first two data reports had been prepared, when the 1971 San Fernando earthquake provided another 241 valuable records. This not only greatly increased the scope of the program, but provided additional justification for the feeling that to catch up with the growing backlog of records was a "now or never" proposition.

Coincident with the expanded data processing program necessitated by the San Fernando earthquake was the establishment of the "National Information Service for Earthquake Engineering" by the National Science Foundation as a joint activity of the California Institute of Technology and the University of California at Berkeley. The establishment of NISEE and several subsequent supplementary grants from the National Science Foundation made it possible to carry the data processing forward at a more rapid pace than had been originally contemplated and finally to bring the whole program to a successful conclusion.

Questions as to when and how to terminate a program of this type naturally presented themselves at an early stage. The flow of accelerograms is continually increasing as the number of instruments in the field grows, and the data processing element must of course be a permanent feature of the earthquake engineering research system. It was always supposed that after the backlog of older accelerograms had been eliminated, and the basic principles of an adequate data processing technique firmly established, the routine problems of keeping the record up to date might well be transferred from Caltech to an appropriate governmental organization. As a matter of fact, this termination and transfer process was much facilitated by the recent reorganization of several governmental agencies having various responsibilities in strong-motion seismology. As a consequence of these rearrangements, responsibility for strong-motion engineering seismology was assigned to the National Science Foundation in May, 1973. At that time, NSF agreed to provide program policy, management, and funding, and selected the U.S. Geological

Survey to be the operating agency to carry out the program through its newly formed Seismic Engineering Branch. A major function of the SEB is the installation and maintenance of the U.S. strong-motion accelerograph network, and the basic program of data processing and dissemination is thus a very logical part of their mission.

It was accordingly decided to terminate the specific data processing project at the California Institute of Technology with the final records from the San Fernando earthquake. The total number of three-component accelerograms in the uniformly-processed data bank reached the final number of 381. It will perhaps be of some interest to summarize the main characteristics of this data bank. Of the 381 records, 187 are from ground sites, mainly basements of buildings, which over the frequency range of interest can be taken as essentially free-field ground stations for most of the sites. The remaining records are for various upper floor and roof locations which can serve as the basis for various structural response calculations. The records come from 57 different earthquakes, ranging from magnitudes as small as $M = 3$ to the maximum $M = 7.7$ of the Kern County earthquake.

The 187 ground stations are located at a wide variety of site conditions. The sites were for the most part originally selected by engineers as the locations of important structures. Detailed studies of the local soil and geological conditions are available for only a small number of the stations - the completion of such studies is an important task for the future. Most site conditions can only be roughly characterized as: relatively soft, as on alluvium;

intermediate, as on sedimentary rock; and hard, as on crystalline bedrock. With this classification it may be noted that about 60% of the ground records are from soft sites, 30% from intermediate sites, and 10% from hard sites.

The station recording the largest number of earthquakes is that at El Centro, which since 1934 has produced accelerograms from 16 earthquakes. The earthquake producing the most records is of course the San Fernando earthquake of 1971, which generated 241 records, 98 of them from ground sites. Other earthquakes in the data bank producing multiple records include the Borrego Mountain of 1968 with 15 records and the Lytle Creek 1970 with 36 records.

The basic information in the data bank is available in three different forms. First, it is contained in a series of 100 reports, which include complete digital printouts, plotted curves, and supporting data on the earthquakes, the instruments, and the sites, along with considerable reference material. The reports are organized in a series of four volumes, each with 25 parts:

Volume I	Uncorrected Digitized Accelerograms - Print-outs and Computer Plots
Volume II	Corrected Accelerograms. Integrated Velocity and Displacements
Volume III	Response Spectrum Curves. Linear and Three-Way Logarithmic Plots
Volume IV	Fourier Amplitude Spectra. Linear and Logarithmic Plots.

In the index tables of the present report, the letters refer to the individual parts of each volume. Thus, for example, the complete data on the 1934 El Centro earthquake would be found in

Volume IB, Volume IIB, Volume IIIB, and Volume IVB, and in each volume it would be record no. 024.

Attention is directed to the fact that Part A of each volume contains introductory and background material which gives details on methods used, applications of the data, references, etc. Volume II, Part G contains additional information on the assessment of long period errors, and Volume IV, Part Q,R,S further studies of high frequency errors.

All of the data reports are available in either paper copy or on microfiche through the National Technical Information Service, U.S. Department of Commerce, Springfield, VA, 22151. A table in the present report gives the NTIS numbers which will facilitate ordering.

A second form in which the standard data are available is as standard punched cards. This is a convenient way in which to acquire computer-compatible information for one or a few particular earthquakes. The cards can be supplied at a nominal cost for reproduction and mailing.

A third form in which the data can be supplied is as computer-compatible digital magnetic tape. This is the most convenient arrangement for users who expect to use data from many earthquakes. The complete data for each volume, including all 381 records, is contained on one tape which can be supplied at the nominal reproduction cost of \$100 (includes postage in the U.S.).

More detailed information on any of the above forms can be obtained by writing to:

Earthquake Engineering Research Laboratory
Thomas Laboratory, 104-44
California Institute of Technology
Pasadena, California 91125

In coming to the conclusion of this program, we naturally feel very grateful to many people and to many organizations. In addition to the key role played by the National Science Foundation in all aspects of the program, the Earthquake Research Affiliates of the California Institute of Technology have also made many important contributions of financial support and general encouragement. It is hoped that the devoted services of numerous staff members have been suitably acknowledged in the various individual reports at appropriate points. It is my personal pleasure to tender special thanks to the two individuals who have been most responsible for the successful completion of the project. Professor M. D. Trifunac directed the way to major improvements in every aspect of the project, and by means of his patient labor and high critical standards, made it possible to carry out the program at a considerably higher level than had been originally planned. Dr. A. G. Brady provided the continuous careful supervision necessary to grapple with the myriad of small details involved in the computations, checking, and publication of a large mass of data. His never-failing good humor in the face of the inevitable vicissitudes of such an undertaking was a major factor in our success.

D. E. Hudson
Professor of Mechanical Engineering
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Division of Engineering and
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TABLE I

STRONG MOTION EARTHQUAKE ACCELEROGRAMS - STANDARD DATA
CHRONOLOGICAL INDEX OF EARTHQUAKES

<u>NO.</u>	<u>YEAR</u>	<u>EARTHQUAKE</u>	<u>MAG.</u>	<u>DATE</u>	<u>TIME, PST</u>	<u>DATA REPORT REF.</u>
1	1933	Long Beach, Calif.	6.3	3/10	1754	B021, V314, V315
2	1933	Los Angeles, Calif.	5.4	10/2	0110	B022, B023
3	1934	Ferndale, Calif.		7/6	1449	U294
4	1934	El Centro, Calif.	6.5	12/30	0552	B024
5	1935	Helena, Mont.	6.0	10/31	1138(MST)	B025
6	1935	Helena, Mont.		10/31	1218(MST)	U295
7	1935	Helena, Mont.		11/21	2058(MST)	U296
8	1935	Helena, Mont.		11/28	0742(MST)	U297
9	1937	Ferndale, Calif.		2/6	2042	U298
10	1938	El Centro, Calif.	3.0	4/12	0825	T274
11	1938	El Centro, Calif.	5.0	6/5	1842	T275
12	1938	El Centro, Calif.	4.0	6/6	0435	T276
13	1938	Ferndale, Calif.	5.5	9/11	2210	B026
14	1940	El Centro, Calif.	6.7	5/18	2037	A001, T277-T285
15	1941	Ferndale, Calif.	6.4	2/9	0145	B027
16	1941	Santa Barbara, Calif.	5.9	6/30	2351	U299
17	1941	Ferndale, Calif.	6.4	10/3	0813	U300
18	1941	Los Angeles, Calif.	5.4	11/14	0042	V316, V317
19	1942	El Centro, Calif.	6.5	10/21	0822	T286
20	1949	Hollister, Calif.	5.3	3/9	0429	U301
21	1949	Seattle, Wash.	7.1	4/13	1156	B028, B029 (Olympia)
22	1951	El Centro, Calif.	5.6	1/23	2317	T287
23	1951	Ferndale, Calif.	5.8	10/7	2011	A002
24	1952	Kern County, Calif.	7.7	7/21	0453	A003-A007, V318
25	1952	Tehachapi, Calif.		7/23-31	—	U302, U303, U304
26	1952	Ferndale, Calif.	5.5	9/22	0441	B030
27	1952	San Luis Obispo, Calif.	6.0	11/21	2346	V319
28	1953	El Centro, Calif.	5.5	6/13	2017	T288
29	1954	Taft, Calif.	5.9	1/12	1534	B031
30	1954	Hollister, Calif.	5.3	4/25	1233	U305
31	1954	El Centro, Calif.	6.3	11/12	0427	T289
32	1954	Eureka, Calif.	6.5	12/21	1156	A008, A009 (Ferndale)
33	1955	San Jose, Calif.	5.8	9/4	1801	A010, U306
34	1955	El Centro, Calif.	4.3	12/16	2117	T290
35	1955	El Centro, Calif.	3.9	12/16	2142	T291
36	1955	El Centro, Calif.	5.4	12/16	2207	T292
37	1956	El Centro, Calif.	6.8	2/9	0633	A011
38	1956	El Centro, Calif.	6.4	2/9	0725	A012
39	1957	Port Hueneme, Calif.	4.7	3/18	1056	V329
40	1957	San Francisco, Calif.	3.8	3/22	1048	V320
41	1957	San Francisco, Calif.	5.3	3/22	1144	A013-A017, V321
42	1957	San Francisco, Calif.	4.4	3/22	1515	V322-V327
43	1957	San Francisco, Calif.	4.0	3/22	1627	V328
44	1960	Hollister, Calif.	5.0	1/19	1926	U307
45	1960	Ferndale, Calif.	5.7	6/5	1718	U308
46	1961	Hollister, Calif.	5.7	4/8	2323	A018, U309
47	1962	Eureka, Calif.	5.0	9/4	0917	V330
48	1965	Olympia, Wash.	6.5	4/29	0729	B032, U310 (Seattle)
49	1965	Castaic, Calif.	4.0	7/15	2346	V331
50	1966	Parkfield, Calif.	5.6	6/27	2026	B033-B038, U311
51	1966	El Centro, Calif.	6.3	8/7	0936	T293
52	1966	Sacramento, Calif.	6.3	9/12	0841	V332
53	1967	Eureka, Calif.	5.8	12/10	0407	B039, U312 (Ferndale)
54	1967	Hollister, Calif.	5.2	12/18	0925	U313, V333
55	1968	Borrego Mtn., Calif.	6.4	4/8	1830	A019, A020, B040, Y370-Y381
56	1970	Lytle Creek, Calif.	5.4	9/12	0630	W334 through X369
57	1971	San Fernando, Calif.	6.4	2/9	0600	C041 through S273

TABLE II

STRONG MOTION EARTHQUAKE ACCELEROGRAMS - STANDARD DATA

GEOGRAPHICAL INDEX OF ACCELEROGRAPH SITES

I. CALIFORNIA SITES

<u>ACCELEROGRAPH SITE</u>	<u>USGS NO.¹</u>	<u>MAP</u>	<u>INST. TYPE</u>	<u>DATA REPORT REF.³</u>
ALHAMBRA				
Fremont Ave., 900 S.; Bsmnt.	482	B	SMA-1	H121
6th Fl.	483		SMA-1	H122
12th Fl.	484		SMA-1	H123
ANZA				
Post Office, Storage Rm.	103	A	RFT-250	N197
ARCADIA				
Santa Anita Reservoir, Dam Abut.	104	B	AR-240	P221, W341
BAKERSFIELD				
Harvey Aud.; Bsmnt.	1004	A	USCGS ²	P224
BEVERLY HILLS				
Oakhurst Ave., 435 N.; Bsmnt.	452	C	SMA-1	I128
5th Fl.	453		SMA-1	I129
Roof, 11th Lvl.	454		SMA-1	I130
Roxbury Dr., 450 N.; 1st Fl.	455	C	SMA-1	I131
5th Fl.	456		SMA-1	I132
10th Fl.	457		SMA-1	I133
Wilshire Blvd., 9100; Bsmnt.	416	C	MO-2	Q239
5th Fl.	417		MO-2	Q240
BORREGO SPRINGS				
Fire Department Shop; Main Fl. (2322-24 Stirrup Rd.)	105	A	RFT-250	I140
BREA				
Carbon Canyon Dam	108	B	RFT-250	N185
BUENA VISTA				
Taft CWR Site	1011	A	AR-240	P230
CASTAIC				
Old Ridge Route, CWR Site	110	B	AR-240	D056, V331, W346
CEDAR SPRINGS				
Allen Ranch, CWR Site; Grnd.	111	A	AR-240	O202, W335
CWR Site, Pump House, Dam Abut.	--- ⁵		AR-240	O203, W336
CHOLAME				
Cholame-Shandon Array No. 2	1013	A	AR-240	B033, P228
Cholame-Shandon Array No. 5	1014		AR-240	B034
Cholame-Shandon Array No. 8	1015		AR-240	B035, P229
Cholame-Shandon Array No. 12	1016		AR-240	B036
Temblor II	1097		AR-240	B037
COLTON				
So. Calif. Edison Co. Substn.; Grnd.	--- ⁵	A	USCGS	F101, W339, Y370
COSTA MESA				
666 W. 19th St.; Grnd. Fl.	114	B	AR-240	P220
EL CENTRO				
Community Hospital	412	A	RFT-250	O209
Imperial Vly. Irrigation Dist. Substn.	117		USCGS	A001, A011, A012, A019, T274-T293
EUREKA				
Federal Building; Bsmnt.	1022	D	USCGS	A008, B039, V330
FAIRMONT				
Reservoir	121	B	USCGS	O207
FERNDAL				
City Hall, Grnd. Level Pier	1023	D	USCGS	A002, A009, B026, B027, B030, U294, U298, U300

See footnotes at end of table.

TABLE II (Continued)

<u>ACCELEROGRAPH SITE</u>	<u>USGS NO.¹</u>	<u>MAP</u>	<u>INST. TYPE</u>	<u>DATA REPORT REF.³</u>
FULLERTON				
Nutwood Ave., 2600; Bsmt.	476	B	SMA-1	H124
Penths., Center	478		SMA-1	H125
Penths., W. Wing	477		SMA-1	H126
GLENDALE				
Broadway, 633 E.; Bsmt. (Municipal Services Bldg.)	122	B	AR-240	F088
GORMON				
Oso Pumping Plant	1052	B	AR-240	F104
GRAPEVINE				
Tehachapi (Edmonston) Pumping Plant CWR Site	--- ⁵	A	AR-240	M179
HEMET				
Fire Station, Hose Storage Rm.	123	A	RFT-250	O210
HOLLISTER				
City Hall, Publ. Libr.; Half-Bsmt.	1028	D	USCGS	A018, U301, U305, U307, U309, U313
HOOVER DAM				
Intake Tower	2003	A	USCGS	O211
Oil House	2004		USCGS	O212
1215 Gallery	2002		USCGS	O213
ISABELLA DAM				
Spillway Gallery	1035	A	RFT-250	K161
Aux. Abutment	1039		RFT-250	K162
Aux. Crest	1037		RFT-250	K163
Control Tower	1038		RFT-250	K164
Crest	1036		RFT-250	K165
LAKE HUGHES ARRAY				
Station No. 1	--- ⁵	B	AR-240	J141, X364
Station No. 4	126		RFT-250	J142
Station No. 9	127		AR-240	J143
Station No. 12	128		AR-240	J144
LONG BEACH				
Long Beach Utilities Bldg. (215 W. Broadway)	131	B	USCGS	O204, V315, V316
Long Beach State Coll.; Grnd. Lvl.	132		RFT-250	N196
Terminal Island So. Calif. Edison; Grnd.	130		USCGS	O205, Y372
LOS ANGELES				
Airport Blvd., 9841; Bsmt.	247	B	MO-2	P231
15th Fl.	249		MO-2	P232
Avenue of the Stars, 1900; Bsmt.	184	C	MO-2	R249
Roof, 29th Lvl.	186		MO-2	R250
Avenue of the Stars, 1901; Sub-basmt.	187	C	AR-240	D059
9th Fl.	188		AR-240	D060
21st Fl.	189		AR-240	D061
Beverly Drive, 1177; Bsmt.	413	C	MO-2	S261
Century Blvd., 5260; 1st Fl.	229	B	MO-2	S267
4th Fl.	230		MO-2	S268
Roof, 8th Lvl.	231		MO-2	S269
Century Park E., 1800; Bsmt.	425	C	SMA-1	I134
5th Fl.	426		SMA-1	I135
Penths., 16th Fl.	427		SMA-1	I136
Century Park E., 1880; Bsmt.	440	C	SMA-1	N188
7th Fl.	441		SMA-1	N189
Penths., 17th Fl.	442		SMA-1	N190
Century Park E., 1888; 14th Fl.	420	C	RFT-250	L174
21st Fl.	421		RFT-250	L175

TABLE II (Continued)

<u>ACCELEROGRAPH SITE</u>	<u>USGS NO.¹</u>	<u>MAP</u>	<u>INST. TYPE</u>	<u>DATA REPORT REF.³</u>
LOS ANGELES (Continued)				
Century Park E., 1888				
Parking Ramp; 5th Lvl.	423	C	RFT-250	L172
9th Lvl., Roof	424		RFT-250	L173
Chamber of Commerce Bldg. (old)	---	C	USCGS	V317
(12th & Hill St.)	⁵			
Figueroa St., 222 S.; 1st Fl.	145	C	MO-2	R244
20th Fl.	147		MO-2	R245
Figueroa St., 234 S.; Bsmnt.	148	C	MO-2	R251
Roof, 18th Lvl.	150		MO-2	R252
Figueroa St., 455 S.; Sub-bsmt.	157	C	AR-240	C054
19th Fl.	158		AR-240	C055, X365
39th Fl.	159		AR-240	X366
First St., 250 E.; Bsmnt.	151	C	AR-240	C051
8th Fl.	152		AR-240	C052
17th Fl.	153		AR-240	C053
First St., 800 W.; 1st Fl.	172	C	MO-2	Q241
16th Fl.	173		MO-2	Q242
33rd Fl.	174		MO-2	Q243
Fremont Ave., 533 S.; Bsmnt.	160	C	MO-2	R253
6th Fl.	161		MO-2	R254
Garland Ave., 750 S.; 2nd Fl.	170	C	RFT-250	K159
6th Fl.	171		RFT-250	K160
Grand Ave., 420 S.; Bsmnt.	154	C	RFT-250	K157
15th Fl.	156		RFT-250	K158
Griffith Park Observatory, Moon Rm.	141	B	RFT-250	O198
Hilgard Ave., 930; 15th Fl.	409	C	MO-2	S270
Hill St., 1150 S.; Bsmnt.	437	C	RFT-250	M176
5th Fl.	438		RFT-250	M177
10th Fl.	439		RFT-250	M178
Hollywood Storage Bldg.; Penths.	134	C	USCGS	B022, V318, Y381
(1025 N. Highland) Bsmnt.	133		USCGS	A006, B023, D057, W348
Parking Lot	---		USCGS	A007, D058, W347, Y380
Hollywood Blvd., 7080; Bsmnt.	238	C	AR-240	D068
6th Fl.	239		AR-240	D069
12th Fl.	240		AR-240	D070
Lankershim Blvd., 3838; Bsmnt.	220	B	RFT-250	L166
11th Fl.	221		RFT-250	L167
21st Fl.	222		RFT-250	L168
L.A. Water & Power Bldg.; Bsmnt.	137	C	AR-240	E078, X358
(111 S. Hope St.) 7th Fl.	138		AR-240	E079, X359
15th Fl.	139		AR-240	E080, X360
Lincoln Blvd., 8639; Bsmnt.	244	B	RFT-250	H118
6th Fl.	245		RFT-250	H119
12th Fl.	246		RFT-250	H120
Marengo St., 1640; 1st Fl.	181	B	AR-240	D062, X355
4th Fl.	182		AR-240	D063, X356
Penths., 8th Fl.	183		AR-240	D064, X357
Normandie Ave., 616 S.; Bsmnt.	431	C	SMA-1	J148
8th Fl.	432		SMA-1	J149
Roof, 18th Lvl.	433		SMA-1	J150
Olive Ave., 646 S.; Bsmnt.	166	C	AR-240	F098, X367
4th Lvl.	167		AR-240	F099, X368
Roof	168		AR-240	F100, X369
Olive Ave., 808 S.; Street Lvl.	175	C	AR-240	F089, X361
4th Lvl.	176		AR-240	F090, X362
8th Lvl.	177		AR-240	F091, X363

TABLE II (Continued)

<u>ACCELEROGRAPH SITE</u>	<u>USGS NO.¹</u>	<u>MAP</u>	<u>INST. TYPE</u>	<u>DATA REPORT REF.³</u>
LOS ANGELES (Continued)				
Olympic Blvd., 1625 W.; Grnd. Fl.	469	C	SMA-1	O199
6th Fl.	470		SMA-1	O200
10th Fl.	471		SMA-1	O201
Orchid Ave., 1760 N.; Grnd.	446	C	MO-2	Q236
2nd Fl.	447		MO-2	Q237
23rd Fl.	448		MO-2	Q238
Orion Blvd., 8244; 1st Fl.	241	B	AR-240	C048
4th Fl.	242		AR-240	C049
Roof, 8th Lvl.	243		AR-240	C050
Robertson Blvd., 120 N.; Sub-bsmt.	143	C	AR-240	F095, W352
4th Fl.	144		AR-240	F096, W353
9th Fl.	142		AR-240	F097, W354
San Vicente Blvd., 11661; 5th Fl.	251	B	MO-2	S271
11th Fl.	252		MO-2	S272
Sixth Street, 611 W.; Bsmnt.	163	C	RFT-250	G112
42nd Fl.	165		RFT-250	G113
Sixth Street, 3407 W.; Bsmnt.	199	C	AR-240	E083
4th Fl.	200		AR-240	E084
Penths., 8th Fl.	201		AR-240	E085
Southern Calif. Edison Bldg. (601 W. 5th St.)	--- ⁵	C	USCGS	Y377
Subway Terminal Sub-bsmt.	--- ⁵	C	USCGS	V314
(4th, 5th, Hill, & Olive St.); Bsmnt.	--- ⁵		USCGS	Y378
Sunset Blvd., 4867; Bsmnt.	226	C	AR-240	P214
3rd Fl.	227		AR-240	P215
8th Fl.	228		AR-240	P216
Sunset Blvd., 6430; 1st Fl.	232	C	MO-2	R248
Sunset Blvd., 6464; Bsmnt.	235	C	MO-2	R246
12th Fl.	237		MO-2	R247
Tiverton Ave., 945; Sub-bsmt.	178	C	AR-240	W349
8th Fl.	179		AR-240	L169, W350
14th Fl.	180		AR-240	L170, W351
UCLA, Boelter Hall, Reactor Lab.; Grnd.	140	C	USCGS	F105
Univ. of So. Calif., Phillips Hall (3440 University Ave.); Bsmnt.	205	C	MO-2	S258
5th Fl.	206		MO-2	S259
Roof, 13th Fl.	207		MO-2	S260
Van Owen St., 15107; Bsmnt.	458	B	RFT-250	J145
4th Fl.	459		RFT-250	J146
Roof, 8th Lvl.	460		RFT-250	J147
Ventura Blvd., 14724; 1st Fl.	253	B	MO-2	Q233
6th Fl.	254		MO-2	Q234
Penths., 13th Fl.	255		MO-2	Q235
Ventura Blvd., 15250; Bsmnt.	466	B	SMA-1	H115
7th Fl.	467		SMA-1	H116
Roof, 13th Fl.	468		SMA-1	H117
Ventura Blvd., 15433; 7th Fl.	257	B	MO-2	S273
Ventura Blvd., 15910; Bsmnt.	461	B	SMA-1	I137
9th Fl.	462		SMA-1	I138
Roof, 19th Fl.	463		SMA-1	I139
Wilshire Blvd., 2500; Bsmnt.	449	C	SMA-1	N192
8th Fl.	450		SMA-1	N193
Roof, 14th Lvl.	451		SMA-1	N194
Wilshire Blvd., 3345; Bsmnt.	196	C	AR-240	P217
2nd Fl.	197		AR-240	P218
12th Fl.	198		AR-240	P219

TABLE II (Continued)

<u>ACCELEROGRAPH SITE</u>	<u>USGS NO.¹</u>	<u>MAP</u>	<u>INST. TYPE</u>	<u>DATA REPORT REF.³</u>
LOS ANGELES (Continued)				
Wilshire Blvd., 3435; 5th Bsmnt.	202	C	MO-2	S265
Wilshire Blvd., 3470; Sub-bsmt.	208	C	AR-240	E075
5th Fl.	209		AR-240	E076
11th Fl.	210		AR-240	E077
Wilshire Blvd., 3550; Bsmnt.	211	C	MO-2	S266
Wilshire Blvd., 3710; Bsmnt.	217	C	AR-240	D065
5th Fl.	218		AR-240	D066
10th Fl.	219		AR-240	D067
Wilshire Blvd., 4680; Bsmnt.	223	C	AR-240	E072
3rd Fl.	224		AR-240	E073
6th Fl.	225		AR-240	E074
Wilshire Blvd., 5900; 'B' Pkg. Lot (Bsmnt.)	428	C	MO-2	S262
16th Fl.	429		MO-2	S263
Penth.s.	430		MO-2	S264
Wilshire Blvd., 6200; Grnd. Fl.	443	C	MO-2	S255
10th Fl.	444		MO-2	S256
17th Fl.	445		MO-2	S257
Zonal Ave., 2011; Bsmnt.	190	B	AR-240	F092
5th Fl.	191		AR-240	F093
9th Fl.	192		AR-240	F094
MARICOPA ARRAY				
Station No. 1	1041	A	RFT-250	K153
Station No. 2	1042		RFT-250	K154
Station No. 3	1043		RFT-250	K155
Station No. 4	1044		RFT-250	K156
OAKLAND				
City Hall; Bsmnt.	1049	E	USCGS	A017, V326
16th Fl.	--- ⁵		USCGS	V321, V327
ORANGE				
City Blvd., 1; Bsmnt.	472	B	RFT-250	M180
10th Fl.	473		RFT-250	M181
19th Fl.	474		RFT-250	M182
PACOLMA				
Pacoima Dam, Abutment	279	B	AR-240	C041, C042-C047
PALMDALE				
Fire Station, Storage Rm.	262	B	RFT-250	G114
PALOS VERDES ESTATES; Bsmnt.	411	B	RFT-250	N191
(2516 Via Tejon)				
PASADENA				
Athenaeum, CIT; Bsmnt.	475	B	SMA-1	A003, G107, Y376
Millikan Library, CIT; Bsmnt.	264	B	RFT-250	G108, W342, Y375
10th Fl.	265		RFT-250	G109, W343
JPL; Bsmnt.	267	B	RFT-250	G110, W344, Y373
9th Fl.	268		RFT-250	G111, W345, Y374
Seismological Lab., CIT; Bsmnt.	266	B	RFT-250	G106
PEARBLOSSOM				
Pumping Plant	269	B	AR-240	F103
PORT HUENEME				
Navy Laboratory; Grnd.	272	A	USCGS	P222, V329
SACRAMENTO				
Pacific Tel. & Tel. Bldg.; Bsmnt.	1062	D	USCGS	V332
SAN BERNARDINO				
Devil's Canyon CWR Site	116	A	AR-240	W337
Hall of Records; Bsmnt.	274		RFT-250	O206, W338

TABLE II (Continued)

<u>ACCELEROGRAPH SITE</u>	<u>USGS NO.¹</u>	<u>MAP</u>	<u>INST. TYPE</u>	<u>DATA REPORT REF.³</u>
SAN DIEGO				
San Diego Light & Power, Service Bldg.	277	A	USCGS	A020, P227
San Diego Gas & Electric Bldg.; Bsmnt.	275		RFT-250	H127
SAN DIMAS				
Puddingstone Reservoir, Dam Abutment	278	B	AR-240	P223, W340
SAN FRANCISCO				
Alexander Bldg.; Bsmnt.	1065	E	USCGS ⁴	A014, V323
11th Fl.	1066		USCGS ⁴	V324
16th Fl.	1067		USCGS ⁴	V325
Golden Gate Park	1117		USCGS ⁴	A015
Insurance Securities Bldg.; 12th Fl. (Bethlehem)	1072		USCGS	V333
Southern Pacific Bldg.; Bsmnt.	1078		USCGS	A013, V320, V322, V328
State Building; Bsmnt.	1080		USCGS	A016
SAN JOSE				
Bank of America Bldg.; Bsmnt. 13th Fl.	1081 --- ⁵	D	USCGS USCGS	A010 U306
SAN JUAN CAPISTRANO				
32010 Del Obispo, City Hall; Grnd. Fl.	465	B	RFT-250	N195
SAN LUIS OBISPO				
City Recreation Bldg.; Bsmnt.	1083	A	USCGS	B038, V319
SAN ONOFRE				
Nuclear Power Plant; Bsmnt.	280	A	AR-240	B040, L171
SANTA ANA				
Orange Cty. Engr. Bldg.; Bsmnt.	281	B	USCGS	F087, Y371
SANTA BARBARA				
Univ. of Calif., Fluid Mech. Lab.; Bsmnt.	282	A	RFT-250	O208
Court House; Bsmnt.	283		USCGS	A005, U299
SANTA FELICIA DAM (Piru)				
Outletworks	284	B	AR-240	E081
Crest	285		AR-240	E082
TAFT				
Lincoln School; Shop Roof	1094	A	AR-240	P225
Tunnel	1095		USCGS	A004, B031, P226, U311
TEHACHAPI				
Fire House (Temporary station for Kern County Earthquake)	--- ⁵	A	USCGS	U302, U303, U304
TEJON				
Fort Tejon, CWR Site	1096	A	AR-240	F102
TERMINUS DAM (Lemon Cove)				
Control Tower	1100	A, D	RFT-250	J151
Crest	1098		RFT-250	J152
UPLAND				
San Antonio Dam, Crest	287	B	RFT-250	N187
VERNON				
CMD Terminal Bldg.; Bsmnt.	288	B	USCGS	B021, F086, Y379
WHEELER RIDGE	1102	A	AR-240	E071
WHITTIER				
Whittier Narrows Dam, Crest	289	B	RFT-250	N186
WRIGHTWOOD				
Park Ave., 6074; Grnd., Temporary installtn. Bsmnt.	--- 290	B	SMA-1 RFT-250	M183 M184, W334

TABLE II (Concluded)

II. SITES OUTSIDE OF CALIFORNIA

<u>ACCELEROGRAPH SITE</u>	<u>USGS NO.¹</u>	<u>MAP</u>	<u>INST. TYPE</u>	<u>DATA REPORT REF.³</u>
HELENA, MONTANA				
Federal Building	--- ⁵	F	USCGS ²	U295, U296, U297
Carroll College; Bsmt.	2202		USCGS	B025
OLYMPIA, WASHINGTON				
Highway Test Lab.; Grnd. beside bldg.	2101	F	USCGS	B029, B032
SEATTLE, WASHINGTON				
District Engrs. Office at Army Base (Temporary Site)	--- ⁵		USCGS	B028
Federal Office Bldg.; Sub-bsmt.	2102	F	USCGS	U310

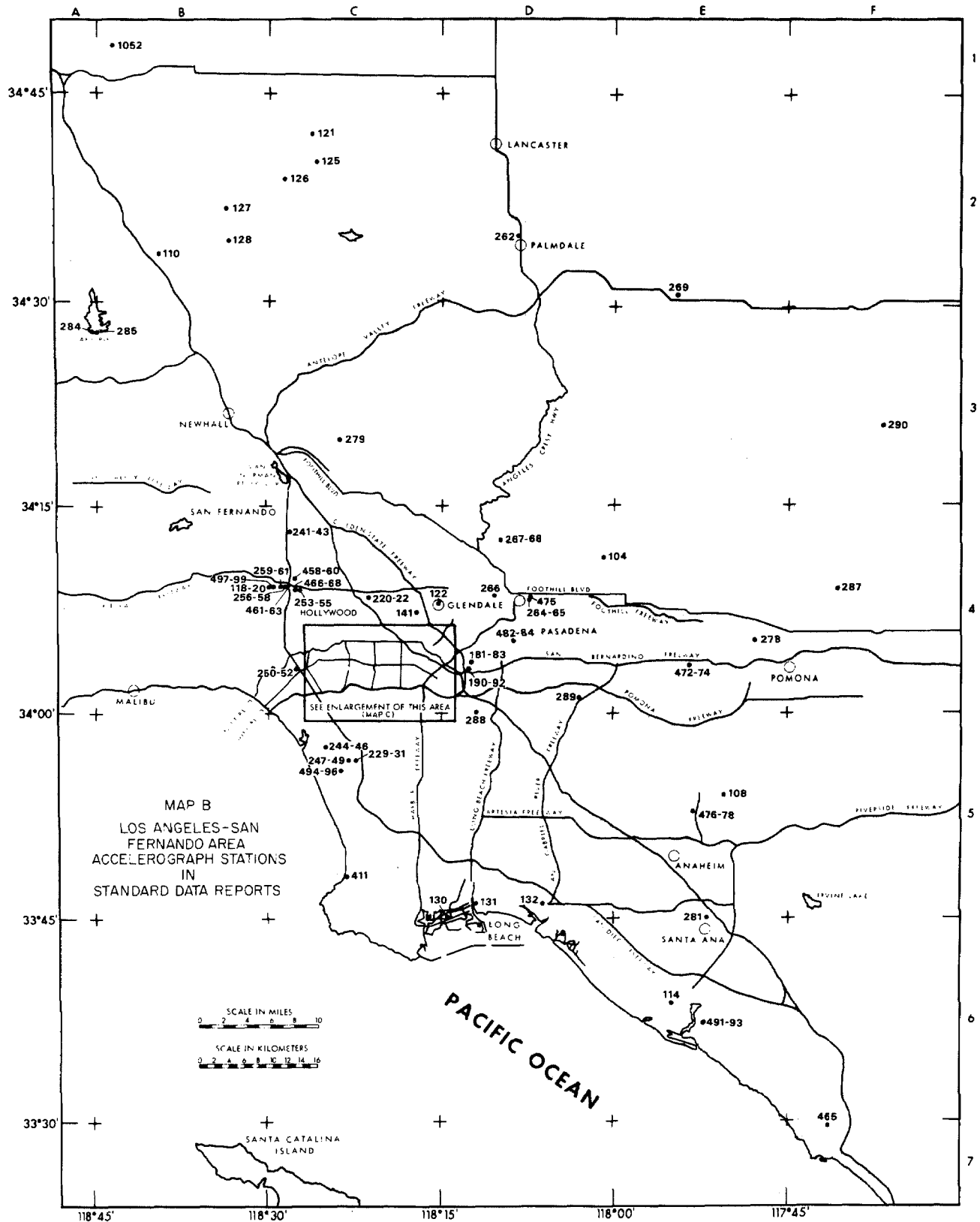
¹From "Strong-Motion Instrument Station Data," Open File Report, June 11, 1975, Seismic Engineering Branch, U.S. Geological Survey.

²Referred to as "SFS Standard" or "S-M" in Open File Report 1975.

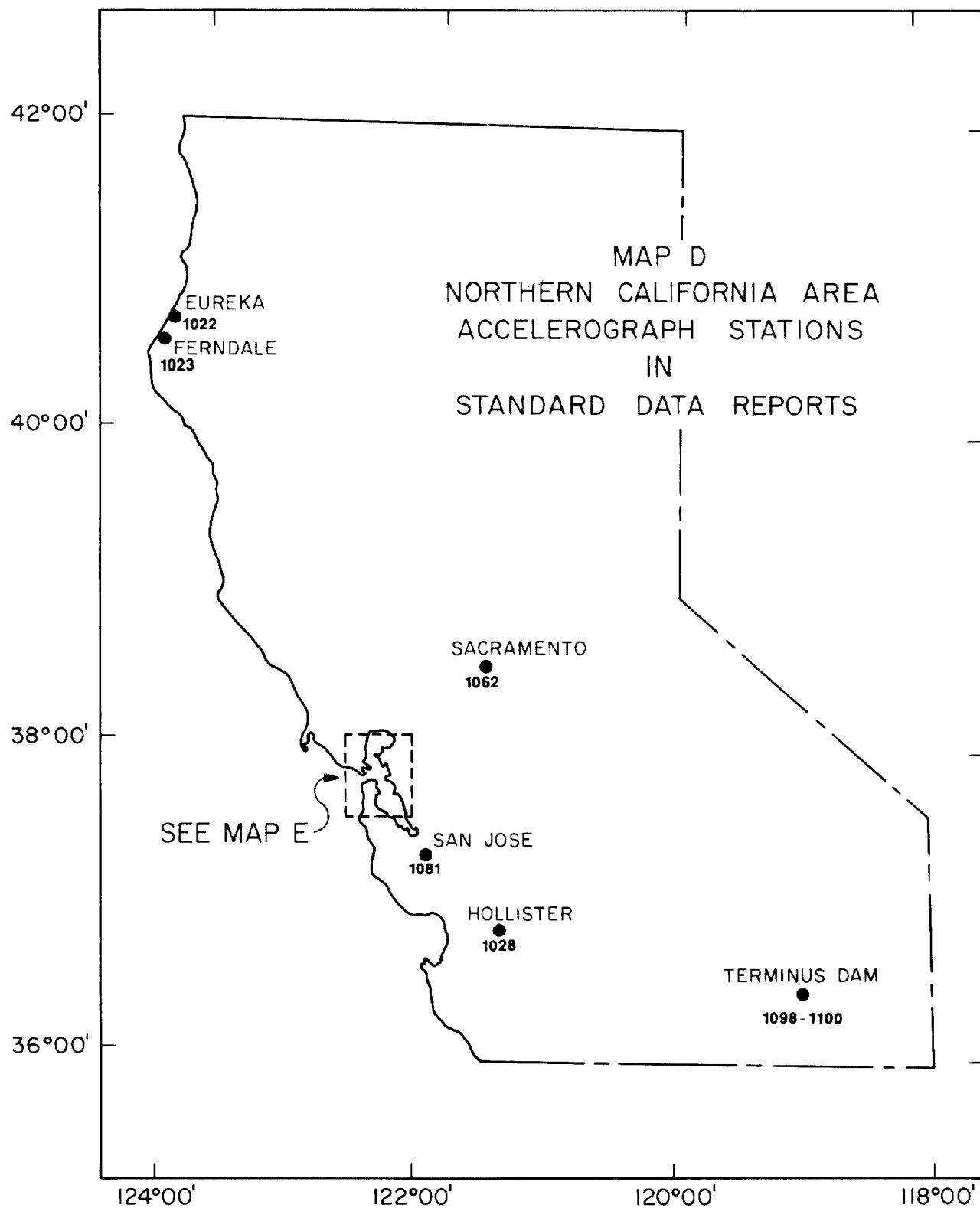
³Lettered Parts. Volume I, Uncorrected Digitized Accelerograms; Volume II, Corrected Accelerograms, and Integrated Velocity and Displacement; Volume III, Response Spectrum Curves; Volume IV, Fourier Amplitude Spectra.

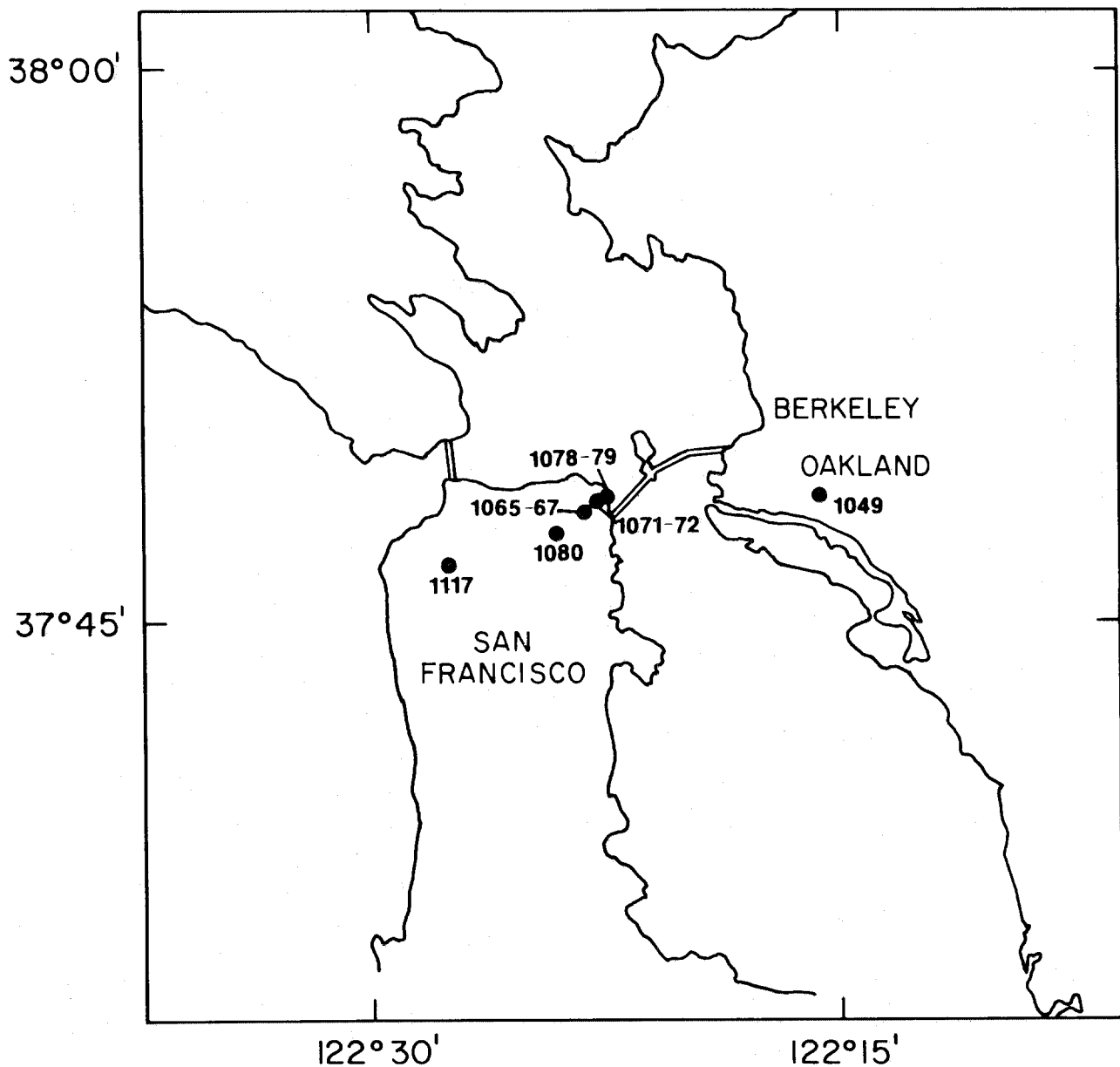
⁴Later replaced by SMA-1 accelerograph.

⁵Station removed. See p. 30.



MAP C
DOWNTOWN LOS ANGELES AREA
ACCELEROGRAPH STATIONS
IN
STANDARD DATA REPORTS





MAP E
SAN FRANCISCO BAY AREA
ACCELEROGRAPH STATIONS
IN
STANDARD DATA REPORTS

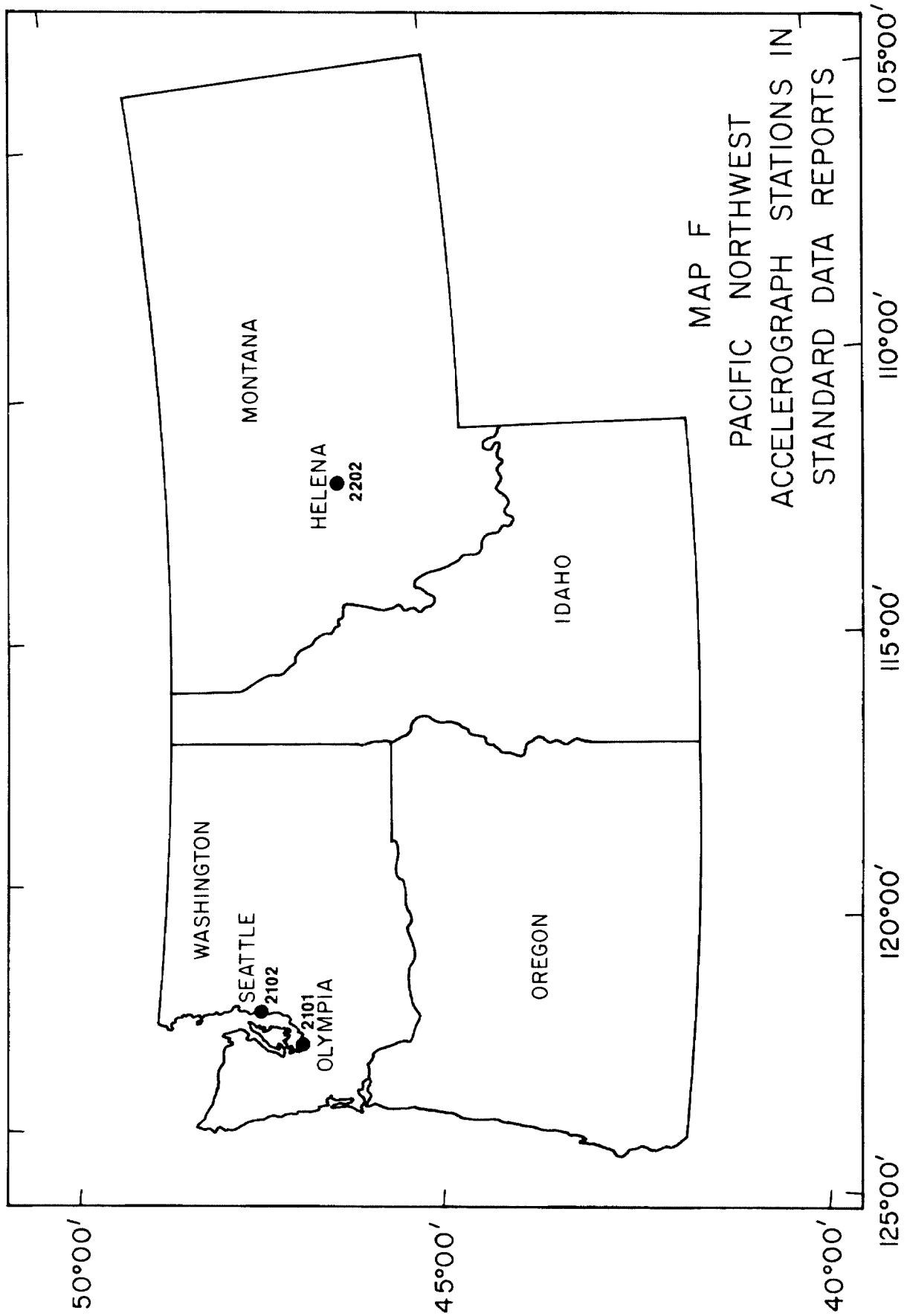


TABLE III
CROSS-INDEX OF RECORDS AND STATION NUMBERS

RECORD NO.	STATION NO.	STATION LOCATION*	
		LATITUDE N**	LONGITUDE W**
A001	117	32.79	115.55
A002	1023	40.50	124.26
A003	475	34.14	118.12
A004	1095	35.15	119.46
A005	283	34.42	119.70
A006	133	34.08	118.33
A007	135 [†]	34.08	118.33
A008	1022	40.80	124.16
A009	1023	40.58	124.26
A010	1081	37.34	121.89
A013	1078	37.79	122.40
A014	1065	37.79	122.40
A015	1117	37.77	122.48
A016	1080	37.78	122.42
A017	1049	37.80	122.27
A018	1028	36.85	121.40
A020	277	32.70	117.15
B021	288	34.00	118.20
B025	2202	46.58	112.03
B028	2102	47.60	122.33
B029	2101	47.03	122.90
B031	1095	35.15	119.46
B033	1013	35.73	120.29
B034	1014	35.70	120.33
B035	1015	35.67	120.36
B036	1016	35.64	120.40
B037	1097	35.75	120.26
B038	1083	35.28	120.66
B039	1022	40.80	124.16
B040	280	33.37	117.56
C041	279	34.34	118.40
C048	241	34.22	118.47
C051	151	34.05	118.24
C054	157	34.05	118.26
D056	110	34.56	118.66
D057	133	34.08	118.33
D058	135 [†]	34.08	118.33
D059	187	34.06	118.42
D062	181	34.06	118.21
D065	217	34.06	118.31
D068	238	34.10	118.34

TABLE III (Continued)

RECORD NO.	STATION NO.	STATION LOCATION*	
		LATITUDE N**	LONGITUDE W**
E071	1125	35.03	119.01
E072	223	34.06	118.33
E075	208	34.06	118.30
E078	137	34.05	118.25
E081	184	34.06	118.42
E083	199	34.06	118.30
F086	288	34.00	118.20
F087	281	33.75	117.87
F088	122	34.14	118.25
F089	175	34.05	118.26
F092	190	34.06	118.20
F095	143	34.08	118.38
F098	166	34.05	118.25
F101	113 [†]	34.07	117.32
F102	1096	34.87	118.92
F103	807	34.51	117.92
G106	266	34.15	118.17
G107	475	34.14	118.12
G108	264	34.14	118.13
G110	267	34.20	118.17
G112	163	34.05	118.25
G114	262	34.58	118.11
H115	466	34.15	118.46
H118	244	33.96	118.42
H121	482	34.09	118.15
H124	476	33.88	117.88
H127	275	33.72	117.16
I128	452	34.08	118.39
I131	455	34.07	118.41
I134	425	34.06	118.41
I137	461	34.16	118.48
I140	105	33.26	116.37
J141	828 [†]	34.68	118.44
J142	126	34.64	118.48
J143	127	34.61	118.56
J144	128	34.57	118.56
J145	458	34.20	118.46
J148	431	34.06	118.30
J151	1100	36.41	119.00
K153	1041	35.00	119.48
K154	1042	35.04	119.43
K155	1043	35.08	119.40
K156	1044	35.13	119.37
K157	154	34.05	118.26

TABLE III (Continued)

RECORD NO.	STATION NO.	STATION LOCATION*	
		LATITUDE N**	LONGITUDE W**
K159	170	34.05	118.27
K161	1035	35.65	118.48
K162	1036	35.65	118.48
K163	1037	35.64	118.47
K164	1038	35.64	118.47
K165	1039	35.64	118.47
L166	220	34.14	118.36
L171	280	33.37	117.56
M176	437	34.04	118.26
M179	27 [†]	34.94	118.83
M180	472	33.78	117.89
M183	290	34.36	117.63
M184	290	34.36	117.63
N185	108	33.92	117.84
N186	289	34.02	118.05
N187	287	34.16	117.68
N188	440	34.06	118.41
N191	411	33.80	118.38
N192	449	34.06	118.28
N195	465	33.49	117.67
N196	132	33.78	118.11
N197	103	33.56	116.67
O198	141	34.12	118.30
O199	469	34.05	118.27
O202	111	34.28	117.33
O203	112 [†]	34.30	117.31
O204	131	33.77	118.19
O205	130	33.76	118.23
O206	274	34.10	117.28
O207	121	34.70	118.43
O208	282	34.41	119.85
O209	412	32.78	115.57
O210	123	33.73	116.98
O211	2003	36.02	114.74
O212	2004	36.02	114.74
O213	2002	36.02	114.74
P214	226	34.10	118.29
P217	196	34.06	118.30
P220	114	33.64	117.93
P221	104	34.19	118.02
P222	272	34.15	119.20
P223	278	32.70	117.15
P224	1004	35.37	119.02
P225	1094	35.15	119.46

TABLE III (Continued)

RECORD NO.	STATION NO.	STATION LOCATION*	
		LATITUDE N**	LONGITUDE W**
P227	277	32.70	117.15
P228	1013	35.73	120.29
P229	1015	35.67	120.36
P230	1011	35.16	119.35
P231	247	33.95	118.39
Q233	253	34.15	118.46
Q236	446	34.10	118.34
Q239	416	34.07	118.39
Q241	172	34.06	118.25
R244	145	34.06	118.25
R246	235	34.10	118.33
R248	232	34.10	118.33
R249	184	34.06	118.42
R251	148	34.05	118.25
R253	160	34.05	118.26
S255	443	34.06	118.36
S258	205	34.02	118.28
S261	413	34.06	118.40
S262	428	34.06	118.36
S265	202	34.06	118.30
S266	211	34.06	118.30
S267	229	33.95	118.37
U295	---†	46.60	112.03
U299	283	34.42	119.70
U301	1028	36.85	121.40
U302	---†	39.80	118.45
U303	---†	39.80	118.45
U304	---†	39.80	118.45
U310	2102	47.60	122.33
U311	1095	34.15	119.46
V314	136†	34.05	118.25
V315	131	33.77	118.19
V316	131	33.77	118.19
V317	437†	34.04	118.26
V319	1083	35.28	120.66
V320	1078	37.79	122.40
V322	1078	37.79	122.40
V323	1065	37.79	122.40
V326	1049	37.80	122.27
V328	1078	37.79	122.40
V329	272	34.15	119.20
V330	1022	40.80	124.16
V331	110	34.56	118.66
V332	1062	38.62	121.38

TABLE III (Concluded)

RECORD NO.	STATION NO.	STATION LOCATION*	
		LATITUDE N**	LONGITUDE W**
W334	290	34.36	117.63
W335	111	34.28	117.33
W336	112 [†]	34.30	117.31
W338	274	34.10	117.28
W339	113 [†]	34.07	117.32
W340	278	34.09	117.81
W341	104	34.19	118.02
W342	264	34.14	118.13
W344	267	34.20	118.17
W346	110	34.56	118.66
W349	178	34.06	118.44
W352	143	34.08	118.38
X355	181	34.06	118.21
X358	137	34.05	118.25
X361	175	34.05	118.26
X364	828 [†]	34.68	118.44
X367	166	34.05	118.25
Y370	113 [†]	34.07	117.32
Y371	281	33.75	117.87
Y372	130	33.76	118.23
Y373	267	34.20	118.17
Y375	264	34.14	118.13
Y376	253	34.15	118.46
Y377	437 [†]	34.04	118.26
Y378	136 [†]	34.05	118.25
Y379	288	34.00	118.20
Y380	135 [†]	34.08	118.33

*From "Strong-Motion Instrument Station Data," Open File Report, June 11, 1975, Seismic Engineering Branch, U.S. Geological Survey.

**Note that these locations in decimal degrees may differ slightly from the values given in degrees, minutes, and seconds in the headings for the individual records in Volume II. In some cases the locations have been revised or corrected.

[†]See "Station Number Revisions", p. 30.

STATION NUMBER REVISIONS

The following old station numbers appearing in earlier reports of the U.S. Coast and Geodetic Survey are no longer in use (stations were temporary or otherwise eliminated):

- No. 27 Grapevine, Tehachapi Pumping Plant, removed
 (temporary CWD station) (M179)
- 112 Cedar Springs CWD site, replaced by nearby
 Nos. 557, 558 on completed dam (O203, W336)
- 113 Colton, removed (F101, W339, Y370)
- 125 Lake Hughes No. 1. Replaced by nearby station 1a
 No. 828 (J141, X364)
- 135 Hollywood Storage Parking lot - removed (new
 station to be set up about 20 ft. away) (A007,
 D058, W347, Y380)
- 136 L.A. Subway Terminal - removed (V314, Y378)

The following stations had never been assigned numbers:

- Helena, Montana, Federal Bldg. - temporary after 1935
earthquake (U295, 296, 297)
- Tehachapi Fire House - temporary after 1952 Kern County
Earthquake (U302, 303, 304)
- Southern California Edison Bldg. - removed (Y377)
- L.A. Chamber of Commerce - building removed, replaced
by Occidental Bldg. having basement station no. 437 (V317)

The following station numbers have been changed by the USGS
to achieve a more logical regional numerical classification:

No.	4	has become	No.	1004
	11			1011
	13			1013
	15			1015
	35			1035
	36			1036
	37			1037
	38			1038
	39			1039
	41			1041
	42			1042
	43			1043
	44			1044
	94			1094
	100			1100
	102			1125
	269			807 (new instrument)
	292			2002
	293			2003
	294			2004
	323			2202
	325			2101
	329			2102

SUMMARY OF CORRECTIONS AND ADDITIONS

Volume I

Vol. I, Part A. p. 15, Record IA16, change "N09E" to "S09E" and "N81W" to "S81W".

Vol. I, Part B. p. 13, Record IB21, Vernon, Mar. 10, 1933, 1754 PST, component N82W; units are seconds and G/100 instead of G/10.

Vol. I, Part C. Change orientation of record C041 (Pacoima Dam) from "S16E" to "S14W" and from "S74W" to "N76W" on pp. 3, 6, 7, 8, 9, 11, 18, 255, 256, 257, 258.

Vol. I, Part C. p. 30. The last two lines on the left half page have been blocked out. The last three lines should read:

36.355	0.038	36.387	-0.042	36.412	0.004	36.441	-0.064
36.452	-0.043	36.481	0.045	36.492	0.037	36.522	-0.010
36.536	0.007	36.562	-0.039	36.575	-0.035	36.601	0.003

Vol. I, Part C. p. 47, Record IC044, component S74W (new N76W) ordinate at 1.323 seconds is -0.020.

Vol. I, Part D. pp. 2, 5. Change address of station location for records ID059, 60, 61 from "1900 Avenue of Stars" to "1901 Avenue of Stars." On pp. 93, 100, 107, 132, 134 add the "1901" to the address in the heading.

Vol. I, Part G. p. 5, Record IG111. Jet Propulsion Laboratory, Pasadena. The upper instrument is on the roof, effectively the 10th not the 9th floor. Change "9th floor" to "roof" in headings pp. 179, 189, 200, 289.

- Vol. I, Part I. Record III131, 132, 133. Change location address from 420 N. Roxbury Dr. to 450 N. Roxbury Dr.
- Vol. I, Part M. Record IM180, 181, 182. Change location address from 4000 W. Chapman Ave. to 1 City Blvd.
- Vol. I, Part Q. Record IQ236. Interchange "SOUTH" and "EAST" components on pp. 9, 67, 74.
- Vol. I, Part Q. Record IQ238. Increase all time coordinates by the factor 1.022 (see Vol. II, Part Q, pp. 2, 3).
- Vol. I, Part S. Record IS265. On pp. 187, 191, 195 in headings, change address from 3411 Wilshire Blvd. to 3435 Wilshire Blvd.
- Vol. I, Parts T, U, V, W, X, Y. Delete the subtitle "Accelerograms from the San Fernando, California, Earthquake of February 9, 1971" from the front cover.
- Vol. I, Part V. Title on front cover should be changed from "Part V - Accelerograms IIV314 through IIV333" to "Part V - Accelerograms IV314 through IV333."
- Vol. I, Part W. Record IW334, in heading for p. 18, change "S25W" to "DOWN"; p. 23, change "DOWN" to "S25W"; p. 208, interchange accelerograms for S25W and DOWN.
- Vol. I, Part Y. p. 2, add to the location list "10. CMD Building, Vernon, California."

Volume II

- Vol. II, Part B. pp. 2-5. Note discussion of component direction definitions (see also Vol. III, Part B, p. 10).

- Vol. II, Part C. Record IIC041 (Pacoima Dam) change orientation of record from "S16E" to "S14W" and from "S74W" to "N76W" on pp. 4, 8, 9, 10, 12, 13, 15, 16, 19, 21, 22, 24, 25, 27, 28, 54, 57, 63, 64, 66, 68, 72, 74, 78, 79, 81, 83, 87, 89.
- Vol. II, Part D. Record IID056. On p. 10, heading, replace -16.5 CM/SEC by -17.2 CM/SEC; p. 11, heading, replace -27.2 CM/SEC by -27.8 CM/SEC, and 9.3 CM by 9.5 CM; p. 12, heading, replace -6.2 CM/SEC by -6.4 CM/SEC. Replace tables of pp. 55, 56, 57, 58 by tables of pp. 35, 36, 37, 38 of the present report.
- Vol. II, Part G. Note pp. 6-38 "Current Assessment of Long-Period Errors."
- Vol. II, Part H. Note pp. 4-6, summary of long-period error study.
- Vol. II, Part I. Records IIC131, 132, 133. Change location address from 420 N. Roxbury Dr. to 450 N. Roxbury Dr.
- Vol. II, Part I. Record IIC138. On pp. 46 and 137, in headings, change "BASEMENT" to "9th FLOOR".
- Vol. II, Part L, M. Records IIM180, 181, 182. Change location address from 4000 W. Chapman Ave. to 1 City Blvd.
- Vol. II, Part O, P. Note p. 13, revised epicenter location of San Fernando earthquake.
- Vol. II, Part Q, R. Record IIQ238, note pp. 2-3, time corrections.
- Vol. II, Part T. pp. 6, 7. Note information on elimination of low amplitude records.

IID056 71.007.0 SAN FERNANDO EARTHQUAKE FEB 9, 1971 - 0600 PST
 STATION NO. 110 CASTAIC OLD RIDGE ROUTE, CAL.
 INSTR PERIOD = 0.0530 SEC DAMPING = 0.592 ACCELEROGRAM IS BAND-PASS FILTERED BETWEEN 0.070 AND 25 CYC/SEC.

EPICENTER 34 24 00N, 113 23 42W
 COMP N21E 34 33 18N, 113 39 24W

PEAK VALS ACCLN = -309.4 CM/SEC/SEC AT 2.60 SEC VELO = -17.2 CM/SEC AT 1.34 SEC DISP = 4.2 CM AT 1.04 SEC

INITIAL VELO = 2.81951 CM/SEC INITIAL DISP = 0.13218 CM

3089 INSTRUMENT AND BASELINE CORRECTED DATA IN MM/SEC/SEC AT EQUALLY-SPACED INTERVALS OF 0.02 SEC.

-63	309	355	206	-195	-319	-189	-60	-22	104	245	195	4	-140	-281	-186	12	-26	-13	229
340	196	-22	-17	36	-91	-24	144	150	68	-105	-281	-206	65	154	82	-170	-223	276	399
253	245	204	86	44	-84	-428	-424	-86	-162	-583	-1030	-1126	-910	-416	-83	-218	-684	-893	-506
-60	-121	-423	-692	-914	-975	-837	-229	877	1627	1615	1420	1266	1226	1154	1117	954	435	-556	-1414
-1187	-155	-103	-728	-873	-703	-329	253	820	1113	1293	1305	1205	904	444	-36	-382	-467	-698	-1293
-1809	-1759	-649	948	1329	292	-498	-836	-1136	-1070	-413	271	564	330	-306	-680	-399	-367	-272	480
1424	1727	1556	1334	1306	1583	1606	875	-470	-1985	-3094	-2983	-2136	-1256	-650	-214	16	265	1113	1794
1694	1258	967	604	629	826	597	89	-234	-391	-475	-669	-969	-1046	-1117	-908	-208	221	205	200
334	840	1218	911	235	-386	-826	-920	-1084	-1452	-1393	-656	227	521	495	398	364	115	-202	-163
233	632	743	597	494	279	-121	-334	-352	-149	349	694	955	950	725	308	242	409	284	-201
-657	-910	-887	-578	-251	86	461	692	751	503	-78	-830	-1489	-1943	-2044	-1377	327	1255	1223	770
51	-146	139	612	761	513	-30	-369	-354	-204	54	313	620	699	269	-318	-472	-360	-174	110
319	312	-26	-427	-567	-46	737	1043	959	519	-179	-647	-831	-697	-392	-162	65	358	497	307
-83	-188	13	176	41	-281	-460	-448	-410	-382	-368	-415	-437	-331	-107	207	344	137	-96	-112
-69	-114	-41	330	719	751	444	126	-3	-40	-70	-46	-22	4	116	297	344	234	29	-210
-432	-511	-422	-197	171	533	662	561	343	175	154	199	105	-176	-483	-634	-452	-121	-42	-179
-351	-368	-136	170	240	163	136	94	34	4	59	175	282	125	-160	-323	-293	-84	289	433
223	-5	-108	-18	143	131	-166	-449	-590	-623	-483	-32	333	336	262	132	139	77	-94	-159
-75	-58	5	318	561	415	45	-121	-159	-265	-342	-233	-41	119	263	331	267	212	228	179
-8	-152	-207	-98	172	257	-59	-490	-689	-703	-480	-46	234	253	161	105	132	172	277	515
751	805	720	472	132	-142	-262	-281	-263	-243	-193	-89	-17	35	110	137	92	-17	-105	-127
-100	-113	-156	-205	-253	-294	-350	-393	-376	-334	-250	-109	-64	-159	-379	-443	-213	132	289	245
162	135	158	193	201	209	157	14	-109	-175	-144	-35	84	104	-42	-156	-40	275	552	596
470	285	130	-12	-105	-173	-177	-103	-134	-254	-191	-19	6	-83	-120	-113	-41	79	220	294
325	312	160	-107	-311	-367	-284	-152	-128	-88	-16	-33	-179	-313	-283	-99	59	57	-42	-45
50	116	130	96	7	-106	-173	-203	-145	-24	65	108	47	-132	-366	-553	-584	-230	182	434
590	582	535	534	428	81	-269	-456	-457	-259	63	197	195	171	51	-185	-384	-394	-273	-94
30	121	142	101	81	51	-69	-190	-123	131	332	459	540	473	297	97	22	-42	-204	-361
-281	15	247	324	284	140	-15	-110	-158	-211	-250	-215	-112	-73	-203	-345	-328	-228	-153	-147
-295	-225	-95	-8	-31	-6	73	94	45	-69	-222	-264	-126	130	263	249	162	18	-108	-176
-145	-35	110	221	226	97	-4	12	44	77	151	220	234	225	192	138	117	171	213	212
137	-28	-209	-240	-157	-104	-57	16	58	15	-54	-106	-90	-1	96	131	59	-64	-166	-160
-94	-120	-245	-403	-425	-425	-343	-273	-139	139	377	434	427	364	245	89	-48	-184	-316	-421
-470	-484	-468	-361	-171	43	282	405	330	245	258	349	448	438	296	148	99	55	-50	-245
-360	-253	-47	33	-63	-189	-204	-77	103	275	372	409	445	363	129	-126	-285	-274	-184	-155
-168	-167	-50	186	344	327	233	57	-153	-311	-371	-226	102	263	281	210	34	-166	-312	-392
-341	-146	18	69	45	-1	-88	-268	-406	-310	-39	241	350	355	332	308	290	249	139	-15
-166	-276	-351	-362	-261	-157	-4	95	66	-44	-177	-234	-125	103	335	509	567	511	390	255
155	75	-54	-191	-231	-151	10	200	368	420	379	222	-46	-269	-345	-280	4	342	490	406
217	27	-111	-211	-259	-220	-118	-75	-2	150	296	219	-41	-360	-601	-633	-487	-258	-120	-39

-2	-37	-148	-277	-354	-347	-256	-9	212	304	354	297	150	19	-82	-155	-161	-69	44	166
292	355	361	360	428	458	359	183	55	74	13	-93	-183	-245	-270	-276	-285	-275	-162	51
201	242	196	68	-72	-155	-163	-119	-56	-43	-92	-161	-196	-169	-105	-73	-73	-90	-39	-75
-10	69	155	214	202	88	-70	-187	-265	-270	-152	23	79	3	-127	-239	-272	-277	-303	-339
-303	-115	80	149	179	197	189	138	63	-9	-21	80	190	179	150	146	162	148	98	44
37	109	211	296	265	267	235	136	-54	-732	-267	-275	-208	-73	34	64	47	2	-54	-148
-202	-192	-137	-92	-60	-2	63	77	36	-30	-119	-164	-69	134	282	317	238	66	-120	-256
-312	-289	-225	-185	-149	-72	51	99	48	-68	-170	-228	-273	-267	-234	-181	-32	61	59	47
47	64	70	37	9	11	52	220	286	249	172	89	49	69	159	238	291	313	283	187
97	34	-6	-33	-40	-53	-92	-150	-198	-244	-297	-372	-432	-448	-440	-395	-323	-234	-138	-24
110	198	173	87	17	25	54	166	211	199	140	104	92	122	135	137	152	146	118	91
67	40	13	3	17	5	-45	-64	6	87	125	92	16	-37	61	-69	-74	-55	-9	69
118	131	121	112	123	145	157	160	165	177	197	199	149	78	20	-34	-73	-48	11	7
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-153	-64	4	20	-10	-25	-10	-10	-32	-38	-14	20	55	90	102	71	11	-53	-109	-138
-109	-61	-15	16	16	14	14	11	4	2	16	38	45	38	31	28	28	24	5	-21
-51	-81	-65	-10	37	65	52	26	-1	-26	-42	-55	-68	-80	-88	-97	-103	-107	-111	-90
-76	37	75	88	59	15	-21	-38	-27	-18	-23	-45	-56	-45	14	95	142	163	166	112
56	26	17	1	-26	-62	-112	-151	-157	-121	-74	-36	-17	-34	-85	-167	-245	-296	-295	-252
-202	-165	-156	-173	-164	-116	-40	35	66	91	93	69	54	51	51	54	62	75	82	85
89	88	83	77	72	62	51	53	76	106	137	149	134	112	99	89	66	2	-85	-125
-108	-89	-105	-146	-178	-191	-155	-101	-62	-24	16	37	9	-26	-37	-32	-11	2	-2	-22
-54	-56	-7	48	82	96	95	69	36	8	-13	-8	9	4	-11	-21	-28	-30	-20	-14
-30	-48	19	67	67	90	106	95	60	37	33	31	29	27	25	20	0	-36	-91	-140
-166	-184	-184	-139	-79	-35	-34	-48	-58	-76	-94	-95	-79	-62	-37	-9	22	56	98	137
153	137	125	117	108	99	95	101	96	82	116	162	198	191	161	131	103	96	98	70
41	36	27	15	2	-10	-23	-31	-26	9	31	31	53	50	23	1	-20	-42	-69	-99
-125	-140	-144	-143	-134	-125	-115	-105	-95	-85	-77	-69	-62	-60	-59	-60	-68	-78	-88	-97
-90	-65	-39	-9	21	51	81	99	69	18	-23	-59	-72	-76	-80	-71	-53	-36	-20	-5
14	39	68	94	97	70	56	53	45	18	-15	-42	-56	-30	3	28	31	30	27	15
-4	-25	-20	-2	24	57	80	101	120	119	100	95	112	129	140	131	107	85	63	48
46	41	27	18	20	32	43	43	15	-23	-53	-77	-100	-120	-126	-107	-86	-76	-68	-59
-51	-42	-36	-35	-44	-44	-32	-25	-25	-5	45	87	99	69	23	-22	-54	-73	-89	-93
-93	-68	-28	14	58	93	110	87	39	-8	-32	-38	-42	-42	-43	-46	-54	-60	-41	0
25	38	50	57	64	74	76	60	46	38	30	24	24	24	24	22	18	13	9	6
6	6	9	20	35	57	74	70	63	71	72	44	-2	-48	-70	-44	-12	7	0	-17
-29	-41	-51	-49	-38	-28	-18	-8	2	9	8	6	0	-10	-22	-37	-51	-51	-28	3
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-73	-51	-29	-4	24	37	20	17	27	11	-22	-30	-18	-1	23	49	61	54	36	9
-9	-6	11	30	44	52	68	80	63	38	39	52	51	41	42	29	9	0	-20	-46
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-16	26	52	55	48	30	33	48	46	25	0	-12	-16	-23	-37	-32	-14	12	44	60
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2	0	7	8	24	60	92	112	107	66	0	-41	-34	-2	36	70	82	51	-3	-38
-44	-44	-50	-49	-40	-47	-53	-43	-23	-27	-44	-40	-48	-73	-77	-62	-49	-41	-39	-37
-50	-76	-95	-103	-93	-69	-38	3	40	67	83	77	55	25	-4	-27	-34	-22	-1	24
42	44	49	51	40	37	58	95	100	62	25	3	1	4	-12	-25	-19	5	34	50

39	10	-3	1	13	23	31	46	34	-9	-48	-51	-31	-13	-16	-37	-58	-57	-38	-18
4	31	48	38	21	21	22	13	15	32	45	37	12	1	-8	-35	-58	-51	-6	54
94	89	58	25	11	-10	-46	-72	-64	-23	43	109	123	63	-1	-24	-58	12	-24	-43
-5	29	-29	-106	-120	-63	0	24	9	13	60	83	54	4	-46	-94	-90	-30	17	43
75	81	27	-40	-85	-85	-15	69	130	151	142	103	46	-21	-57	-20	18	-23	-91	-133
-121	-76	-40	-17	-26	-48	-39	8	40	13	-45	-93	-120	-123	-122	-124	-101	-61	-23	-9
-42	-65	-36	6	44	62	55	53	67	50	3	-26	-7	37	68	86	90	75	52	21
-39	-102	-125	-100	-52	-1	33	48	55	60	66	65	55	41	28	11	-6	-14	-11	6
30	59	88	114	125	104	52	7	-17	-27	-20	-5	5	-11	-30	-38	-17	20	67	101
100	68	22	-18	-61	-102	-106	-58	-3	21	21	-3	-49	-105	-136	-127	-80	-20	26	63
73	43	-3	-52	-109	-139	-139	-110	-69	-32	6	36	44	31	6	-9	-1	23	29	4
-23	-44	-70	-94	-113	-126	-117	-74	-16	42	64	37	3	-34	-74	-98	-96	-62	-6	59
111	134	125	91	35	-19	-68	-80	-33	24	53	54	34	20	17	21	29	17	-8	-14
2	36	77	102	94	82	80	70	48	21	6	24	63	87	80	55	17	7	25	35
16	-4	13	47	47	28	13	-4	-33	-78	-110	-101	-75	-41	-21	-24	-48	-53	-42	-33
-39	-58	-55	-25	6	24	10	-22	-18	-3	-5	-8	5	18	14	3	-8	-23	-26	-16
-15	-20	-33	-43	-36	-22	-29	-46	-55	-49	-17	27	64	90	85	46	7	-1	12	21
30	45	54	47	30	10	-1	-5	5	13	13	-2	-26	-40	-38	-21	9	34	36	24
13	1	-5	-6	-10	-12	-7	10	43	74	77	54	14	-21	-33	-11	22	26	-4	-31
-37	-29	-11	10	21	20	13	0	-19	-23	-9	11	34	40	21	-5	-35	-63	-70	-53
-28	-6	2	-2	-11	-20	-24	-16	-9	-14	-21	-11	9	33	51	56	50	43	36	32
31	24	12	9	6	-4	-21	-28	-22	-5	3	-1	-9	-14	-16	-11	-5	-4	-7	-3
5	6	6	8	12	19	24	16	17	23	25	24	20	6	-13	-26	-26	-10	5	16
14	5	-2	1	10	2	4	25	42	56	58	35	5	-19	-39	-57	-66	-66	-57	-49
-48	-39	-18	-11	-17	-18	-2	15	22	18	1	-19	-24	-15	-1	18	33	37	29	8
-10	-9	2	5	10	22	26	17	1	-16	-27	-24	-11	5	11	18	32	32	30	30
34	36	30	28	27	17	-2	-16	-25	-22	-12	5	24	31	20	1	-17	-26	-35	-37
-22	-2	4	-2	-14	-23	-23	-14	-4	-1	0	-3	-13	-20	-18	-12	-6	-4	-2	4
4	-5	-14	-11	2	17	20	11	0	-12	-24	-24	-10	10	25	26	18	10	10	22
33	34	33	31	28	18	1	-15	-28	-37	-34	-22	-6	10	22	23	13	3	-6	-10
1	11	6	-1	-2	6	11	9	-2	-16	-19	-15	-12	-11	-3	13	22	20	11	-1
-2	3	-5	-11	-5	-1	-9	-24	-46	-68	-67	-47	-23	0	15	24	24	18	7	-7
-12	-4	8	13	8	-2	-3	11	21	22	23	19	6	-12	-25	-31	-22	-6	5	12
15	15	12	3	-1	12	26	19	6	7	8	2	-5	0	14	23	24	17	5	-7
-15	-11	8	19	9	-5	-3	20	33	12	-9	-11	10	38	26	-16	-36	-24	3	19
33	53	74	77	58	27	-1	-9	-2	13	10	-2	10	45	43	17	6	9	12	5
-12	-29	-48	-67	-56	-22	-13	-21	-15	6	9	-11	-35	-49	-45	-28	-29	-53	-77	-74
-55	-37	-24	-12	-14	-16	-12	-23	-43	-51	-35	-16	-18	-27	-19	5	24	33	30	16
-3	-22	-37	-35	-20	-5	4	5	11	37	50	36	8	-16	-20	-3	17	19	15	15
20	26	25	18	10	4	-1	-6	-5	2	6	1	-4	-5	-4	3	12	21	31	37
31	12	-12	-31	-44	-56	-60	-55	-39	-18	0	1	-9	-12	-4	-1	1	0	-1	-6
-17	-38	-48	-36	-27	-25	-26	-24	-17	-10	13	30	14	-6	-4	4	2	-17	-40	-47
-c	39	43	4	-21	-2	35	53	44	39	41	21	-7	-21	-16	12	33	14	-2	3
8	-6	-30	-39	-39	-50	-60	-52	-28	1	27	37	37	32	23	13	9	8	4	2
32	14	19	13	15	27	23	16	17	20	12	25	-14	-27	-23	-3	19	42	56	5
-14	-31	-42	-41	0	-20	-14	-8	4	19	25	17	15	-1	0	-6	-5	-3	11	6
1	7	25	29	13	-3	-18	-22	-15	0	12	15	10	6	1	-9	-18	-19	-2	9
7	2	3	6	5	1	-2	-22	20	38	48	43	30	14	5	-4	10	19	20	6
-12	-14	-5	-3	7	5	-2	-8	9	14	2	-9	-17	-33	-20	3	-2	-24	-37	-40

-37	-37	-38	-40	-37	-32	-31	-37	-29	-10	-3	-6	-8	-13	-21	-22	-31	-43	-27	-4
-7	-24	-27	-13	7	4	-9	-4	9	18	16	21	34	43	39	22	0	-20	-26	-25
-16	-4	-27	-28	41	43	35	31	31	32	30	26	25	16	8	7	5	2	5	3
0	-12	-23	-21	-10	-7	2	22	43	47	37	27	17	12	9	-3	-2	18	36	24
19	1	-5	8	25	28	12	11	23	32	21	3	-12	-18	-15	-13	-15	-11	-3	0
-1	-4	-8	-10	-5	3	10	11	0	-17	-35	-45	-43	-35	-32	-39	-35	-21	-8	1
5	4	0	-1	6	12	13	15	14	4	-18	-39	-37	-23	-16	-14	-6	9	27	35
24	14	7	1	-4	-8	-7	-2	10	16	8	-3	-11	-10	1	12	19	16	13	11
6	-2	-13	-27	-36	-39	-35	-29	-18	-2	0	-21	-43	-45	-31	-8	13	16	10	6
6	7	10	18	17	15	12	5	-5	-2	17	34	41	36	27	27	36	37	26	15
19	26	8	-8	1	12	3	-6	2	21	35	20	-1	3	36	52	25	-1	-21	-45
-70	-71	-33	27	48	16	-9	16	31	13	-18	-54	-68	-54	-26	-8	8	31	32	-4
-55	-75	-38	37	78	54	7	-37	-41	-24	-10	11	39	48	32	1	-26	-33	-16	7
18	14	15	16	15	8	-2	-6	-2	2	7	11	6	-2	-9	-16	-20	-9	10	22
27	22	8	-7	-20	-24	-14	2	-2	2	-24	-2	-2	-2	-9	-16	-20	-9	10	22

Volume III

Vol. III, Part A. Note the corrections to component directions of Part A listed on pp. 10, 11, Vol. III, Part B.

Vol. III, Parts G through Y. Note the information on long-period errors summarized on pp. 3, 4, Vol. III, Part G. See also Vol. II, Part G.

Vol. III, Part I. Records IIII131, 132, 133. Change location address from 420 N. Roxbury Dr. to 450 N. Roxbury Dr. in Preface material.

Vol. III, Part I. Record IIII138. On pp. 142 and 143 in headings, change "BASEMENT" to "9th FLOOR".

Vol. III, Part M, N. Records IIIM180, 181, 182, change location address from 4000 W. Chapman Ave. to 1 City Blvd.

Vol. III, Part Q, R. Record IIQ238. All periods are to be multiplied by 1.022 (see Vol. II, Part Q, R, pp. 2, 3).

Vol. III, Part S. Records IIIS271, 272. Note information on timing of these records given in Vol. IV, Part Q, R, S, pp. 3, 4.

Vol. III, Part S. Record IIIS265. Change address from 3411 Wilshire Blvd. to 3435 Wilshire Blvd. in headings on pp. 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147.

Volume IV

Vol. IV, Part A. Note the component direction information for Part A given in Vol. IV, Part B, p. 10.

Vol. IV, Part A. Abstract and p. 4. Note that it was decided not to include the building transfer functions in the standard data volumes.

Vol. IV, Part A. p. 39. Note that the spectra of Vol. IV have been calculated in a different way than the Fourier spectra of Vol. III. The Vol. III spectra will be more accurate at higher frequencies than the Vol. IV spectra.

Vol. IV, Part I. Records IVI131, 132, 133. Change location address from 420 N. Roxbury Dr. to 450 N. Roxbury Dr. in Preface material.

Vol. IV, Part I. Record IVI138. In headings pp. 76 and 77, change "BASEMENT" to "9th FLOOR".

Vol. IV, Part J,K,L,M. Records IVM180, 181, 182. Change location address from 4000 W. Chapman Ave. to 1 City Blvd.

Vol. IV, Part Q,R,S. p. 3. Note information on timing of Records IVS271 and IVS272.

Vol. IV, Part Q,R,S. pp. 10-20. Note information on high frequency errors.

TABLE IV. PEAK ACCELERATIONS

The peak acceleration values which have been included in the headings of Volume II have been read from the equi-spaced data of Volume II which has a time interval of 0.02 seconds. For certain high frequency records, this time interval is not small enough to define the peak values of the original accelerogram. The digitization of Volume I, however, does include all peak values of the original records, since it has been carried out on an unequal time basis aimed at defining all significant features of the record. Table IV gives the peak acceleration values as read from Volume I and compares them with those printed in Volume II. It will be noted that the differences are usually largest in the vertical components, since they have in general higher frequency components. These Volume I peak accelerations have not been corrected for transducer response, which would increase slightly some of the higher frequency peaks.

The peak velocity and displacement data of Volume II are not subject to this difficulty, since at the lower frequencies involved the 0.02 second time interval does accurately define the peak values.

TABLE IV
PEAK ACCELERATIONS

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
A001	S00E	2.14	0.359	0.348	2.12	1.03
A001	S90W	11.46	0.224	0.214	11.44	1.04
A001	VERT	1.11	-0.278	-0.210	0.98	1.32
A002	S44W	4.14	-0.123	-0.104	4.14	1.19
A002	N46W	4.40	0.120	0.112	4.38	1.07
A002	VERT	3.01	-0.031	-0.027	3.00	1.16
A003	S00E	17.35	-0.048	-0.047	17.34	1.02
A003	S90W	16.71	-0.053	-0.053	16.70	1.01
A003	VERT	19.34	0.033	0.030	19.32	1.09
A004	N21E	9.11	0.177	0.156	9.10	1.14
A004	S69E	3.72	0.196	0.179	3.70	1.10
A004	VERT	9.76	0.123	0.105	9.76	1.17
A005	N42E	11.61	-0.090	-0.090	11.58	1.01
A005	S48E	7.00	0.135	0.131	6.98	1.03
A005	VERT	8.67	-0.051	0.044	8.12	-1.15
A006	S00W	13.29	-0.058	-0.055	13.28	1.06
A006	N90E	12.92	0.045	0.044	12.92	1.03
A006	VERT	22.00	0.024	0.023	21.98	1.03
A007	S00W	13.32	-0.062	-0.059	13.30	1.05
A007	N90E	16.51	-0.044	0.042	12.98	-1.05
A007	VERT	12.87	0.022	-0.021	18.06	-1.06
A008	N11W	4.85	0.175	0.168	4.84	1.04
A008	N79E	3.86	-0.283	-0.258	3.84	1.10
A008	VERT	0.17	-0.116	-0.083	0.16	1.40
A009	N44E	6.99	0.166	0.159	6.88	1.05
A009	N46W	7.10	0.209	0.201	7.10	1.04
A009	VERT	8.02	-0.045	-0.043	8.00	1.06
A010	N31W	1.22	-0.119	-0.102	1.20	1.17
A010	N59E	1.21	0.128	0.108	1.20	1.19
A010	VERT	1.59	-0.055	-0.045	1.58	1.22
A011	S00W	10.18	0.035	0.033	10.16	1.07
A011	S90W	6.81	-0.054	-0.051	6.80	1.06
A011	VERT	9.49	0.017	0.013	9.48	1.31
A012	S00W	0.67	0.012	-0.012	1.10	-1.04
A012	S90W	0.66	-0.017	-0.016	0.66	1.06
A012	VERT	49.99	0.004	0.004	49.98	1.17
A013	N45E	1.78	-0.048	-0.047	1.76	1.02
A013	N45W	1.76	-0.048	-0.046	1.76	1.04
A013	VERT	2.80	-0.034	-0.027	2.78	1.24
A014	N09W	2.38	0.050	0.043	2.68	1.18
A014	N81E	2.05	-0.055	-0.046	2.04	1.18
A014	VERT	0.14	-0.036	-0.031	0.14	1.19

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
A015	N10E	1.36	-0.105	-0.083	1.34	1.27
A015	S80E	1.45	-0.127	-0.105	1.44	1.21
A015	VERT	1.19	0.051	0.038	1.18	1.35
A016	S09E	1.94	0.103	-0.085	1.80	-1.21
A016	S81W	2.14	0.067	0.056	2.12	1.19
A016	VERT	1.64	-0.050	-0.044	1.62	1.13
A017	N26E	0.60	-0.047	0.040	0.48	-1.19
A017	S64E	0.90	-0.029	0.024	1.26	-1.21
A017	VERT	0.35	0.023	0.016	0.34	1.48
A018	S01W	1.06	-0.076	-0.065	1.04	1.18
A018	N89W	1.20	-0.189	-0.179	1.20	1.05
A018	VERT	1.29	0.055	0.050	1.28	1.10
A019	S00W	8.54	-0.142	-0.130	8.54	1.09
A019	S90W	15.00	-0.061	-0.057	15.00	1.06
A019	VERT	7.58	-0.036	-0.030	7.56	1.18
A020	S00W	8.55	0.032	0.030	8.54	1.08
A020	N90E	8.64	0.032	0.029	8.62	1.09
A020	VERT	10.92	-0.014	-0.013	10.90	1.10
B021	S08W	1.90	0.135	0.133	1.88	1.01
B021	N82W	2.16	-0.163	-0.154	2.14	1.06
B021	DOWN	1.03	0.150	0.152	1.00	0.98
B022	N00E	0.46	-0.047	0.044	0.20	-1.07
B022	N90E	0.49	-0.096	0.087	0.22	-1.10
B022	DOWN	0.24	-0.033	-0.027	0.22	1.21
B023	N00E	0.13	0.037	0.033	0.12	1.12
B023	N90W	0.30	-0.028	-0.027	0.28	1.03
B023	DOWN	0.37	-0.011	0.011	2.34	-1.04
B024	S00W	3.34	-0.169	-0.160	3.32	1.06
B024	S90W	15.13	-0.184	-0.183	15.12	1.01
B024	VERT	3.41	-0.074	-0.069	3.40	1.07
B025	S00W	3.07	0.141	0.146	3.04	0.96
B025	S90W	1.77	-0.156	0.145	2.42	-1.07
B025	DOWN	2.34	0.099	0.089	2.32	1.11
B026	N45E	2.28	-0.161	-0.144	2.26	1.12
B026	S45E	2.90	0.096	-0.089	2.24	-1.08
B026	DOWN	3.67	0.035	0.032	3.66	1.10
B027	N45E	5.44	-0.068	-0.062	5.42	1.10
B027	S45E	0.94	0.042	0.039	2.98	1.07
B027	DOWN	5.97	-0.020	0.020	6.28	-1.02
B028	S02W	10.48	0.071	0.068	10.46	1.05
B028	N88W	12.91	-0.072	-0.067	12.90	1.07
B028	VERT	12.18	-0.024	-0.022	12.16	1.05
B029	N04W	10.95	0.183	0.165	10.94	1.11
B029	N86E	19.64	-0.306	-0.280	19.62	1.09
B029	DOWN	0.16	0.111	0.092	0.14	1.20

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
B030	N44E	5.66	-0.059	-0.054	5.66	1.08
B030	S46E	5.11	0.081	0.076	5.10	1.07
B030	DOWN	6.24	0.033	0.030	6.22	1.10
B031	N21E	5.40	0.073	-0.065	5.54	-1.11
B031	S69E	6.42	0.076	0.068	6.40	1.12
B031	VERT	7.77	0.041	0.036	7.76	1.13
B032	S04E	7.25	0.161	0.137	7.24	1.18
B032	S86W	6.43	-0.229	-0.198	6.42	1.16
B032	VERT	0.26	-0.083	-0.061	0.24	1.35
B033	N65E	3.76	-0.509	-0.489	3.74	1.04
B033	DOWN	2.81	-0.349	-0.206	2.80	1.69
B034	N05W	7.39	-0.403	-0.355	7.40	1.14
B034	N85E	7.50	-0.467	-0.434	7.50	1.08
B034	DOWN	4.69	0.181	-0.119	6.20	-1.52
B035	N50E	4.65	-0.279	-0.237	4.64	1.18
B035	N40W	4.55	-0.276	-0.275	4.54	1.01
B035	DOWN	1.94	0.138	0.079	2.30	1.74
B036	N50E	6.66	-0.066	-0.053	6.64	1.24
B036	N40W	6.01	-0.072	-0.064	5.46	1.12
B036	DOWN	4.85	-0.061	0.045	4.78	-1.34
B037	N65W	4.01	-0.282	-0.269	4.00	1.05
B037	S25W	4.32	-0.411	-0.347	4.30	1.18
B037	DOWN	4.27	-0.165	-0.132	4.26	1.25
B038	N36W	0.50	-0.016	-0.014	0.48	1.10
B038	S54W	0.05	-0.018	0.012	3.50	-1.59
B038	VERT	4.81	-0.007	-0.006	4.80	1.19
B039	S11E	0.91	-0.022	-0.021	0.88	1.06
B039	N79E	1.00	0.022	0.020	0.98	1.11
B039	VERT	1.73	0.009	-0.008	0.98	-1.20
B040	N33E	15.80	0.042	0.041	15.78	1.03
B040	N57W	15.86	-0.048	-0.046	15.86	1.03
B040	DOWN	0.96	-0.064	-0.055	0.96	1.15
C041	S16E	7.75	-1.242	1.170	7.74	-1.06
C041	S74W	8.51	1.251	1.075	8.50	1.16
C041	DOWN	6.03	0.718	0.709	6.02	1.01
C042	S74W	4.01	-0.032	-0.028	4.00	1.15
C042	S16E	3.05	-0.026	-0.021	3.04	1.22
C042	DOWN	7.11	-0.011	-0.008	7.10	1.34
C043	S74W	2.86	0.045	-0.046	2.90	-0.98
C043	S16E	2.86	-0.059	-0.052	2.86	1.14
C043	DOWN	2.75	0.024	0.021	2.72	1.16
C044	S74W	21.04	-0.123	-0.112	21.02	1.10
C044	S16E	21.12	0.126	0.115	21.10	1.10
C044	DOWN	20.88	-0.047	-0.041	20.86	1.15

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
C045	S74W	2.42	-0.059	-0.048	2.42	1.21
C045	S16E	2.63	-0.039	-0.032	2.62	1.21
C045	DOWN	2.53	-0.017	-0.015	2.52	1.19
C046	S74W	4.77	-0.033	-0.024	4.76	1.37
C046	S16E	15.24	-0.036	0.031	4.82	-1.13
C046	DOWN	3.18	0.032	0.025	3.18	1.31
C047	S74W	3.58	-0.021	-0.019	3.58	1.12
C047	S16E	3.46	0.033	0.028	3.46	1.17
C047	DOWN	8.65	0.009	0.008	3.44	1.23
C048	N00W	12.52	-0.258	-0.255	12.52	1.01
C048	S90W	7.02	-0.140	-0.134	7.02	1.04
C048	DOWN	3.62	0.178	0.171	3.62	1.04
C049	N00W	10.22	0.204	-0.199	12.64	-1.02
C049	S90W	7.90	0.253	0.236	7.88	1.07
C049	DOWN	3.47	-0.241	-0.227	3.46	1.06
C050	N00W	9.90	-0.406	-0.383	9.90	1.06
C050	S90W	9.22	0.327	0.320	9.20	1.02
C050	DOWN	3.61	0.242	0.216	3.96	1.12
C051	N36E	3.20	0.108	0.100	3.18	1.09
C051	N54W	2.82	0.133	0.125	2.82	1.06
C051	DOWN	2.48	0.056	0.049	5.40	1.15
C052	N36E	4.70	-0.204	-0.193	4.68	1.06
C052	N54W	7.97	-0.171	-0.171	7.96	1.00
C052	DOWN	2.62	-0.077	0.063	5.42	-1.22
C053	N36E	5.09	-0.173	-0.166	5.08	1.05
C053	N54W	7.54	-0.165	-0.162	7.54	1.02
C053	DOWN	2.31	-0.186	-0.166	2.30	1.12
C054	N52W	4.74	0.150	0.150	4.72	1.00
C054	S38W	5.09	-0.130	-0.119	5.08	1.09
C054	DOWN	5.19	0.060	0.053	5.18	1.14
C055	N52W	5.19	0.204	-0.199	7.84	-1.03
C055	S38W	5.61	-0.126	-0.123	5.60	1.02
C055	DOWN	5.52	-0.114	-0.110	5.52	1.04
D056	N21E	2.61	-0.335	-0.315	2.60	1.06
D056	N69W	1.07	-0.289	-0.271	1.90	1.07
D056	DOWN	2.90	0.180	0.156	2.88	1.15
D057	S00W	4.70	0.115	0.106	4.68	1.09
D057	N90E	3.51	0.153	0.151	3.50	1.02
D057	UP	3.27	-0.058	-0.051	3.26	1.14
D058	S00W	2.76	0.187	0.171	2.76	1.10
D058	N90E	3.37	-0.217	-0.211	3.36	1.03
D058	UP	1.29	0.119	0.089	3.52	1.34
D059	N46W	0.92	0.152	0.136	0.92	1.11
D059	S44W	1.12	0.164	0.150	0.82	1.10
D059	DOWN	4.21	-0.072	-0.068	4.20	1.07

TABLE IV (Continued)

IN G'S						
RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
D060	S44W	7.07	0.111	0.110	7.06	1.01
D060	N46W	1.15	0.149	0.140	1.16	1.06
D060	DOWN	0.66	-0.145	-0.144	0.64	1.00
D061	N46W	0.43	0.098	0.094	3.96	1.04
D061	S44W	2.54	0.096	0.098	2.54	0.98
D061	DOWN	0.77	0.042	0.039	0.78	1.07
D062	N38W	7.83	-0.139	-0.120	7.82	1.15
D062	S52W	8.60	0.147	-0.133	11.10	-1.11
D062	DOWN	8.41	-0.086	-0.076	8.40	1.13
D063	N38W	8.38	0.199	0.191	8.38	1.04
D063	S52W	7.99	-0.261	-0.245	7.98	1.07
D063	DOWN	3.47	-0.109	-0.097	3.46	1.13
D064	N38W	8.47	0.247	0.234	8.46	1.05
D064	S52W	7.91	-0.426	-0.420	7.90	1.02
D064	DOWN	3.47	-0.139	-0.105	8.64	1.32
D065	S00W	2.85	-0.154	-0.150	2.84	1.03
D065	S90W	3.20	-0.163	-0.159	3.20	1.03
D065	DOWN	2.76	-0.077	-0.075	2.76	1.03
D066	S00W	3.27	-0.161	-0.156	3.26	1.03
D066	S90W	2.81	0.274	0.259	2.80	1.06
D066	DOWN	2.99	0.096	-0.088	3.20	-1.10
D067	N90E	2.60	-0.365	-0.352	2.60	1.04
D067	S00W	2.90	0.228	0.228	2.88	1.00
D067	DOWN	2.88	0.173	0.153	2.88	1.13
D068	N00E	5.19	-0.087	0.083	5.32	-1.06
D068	N90E	2.96	-0.102	-0.100	2.96	1.03
D068	DOWN	3.84	-0.062	-0.058	3.84	1.07
D069	S00W	5.58	0.121	0.111	5.56	1.08
D069	S90W	3.13	0.192	0.185	3.12	1.04
D069	DOWN	2.79	-0.148	-0.143	2.78	1.03
D070	N00E	3.49	0.121	-0.116	5.36	-1.04
D070	N90E	3.32	-0.213	-0.209	3.32	1.02
D070	DOWN	2.87	-0.222	-0.195	2.86	1.14
E071	S00W	2.91	-0.034	-0.027	2.90	1.25
E071	N90E	1.56	0.028	0.026	1.56	1.07
E071	DOWN	1.65	-0.015	-0.013	1.16	1.15
E072	N75W	2.17	-0.088	-0.084	2.16	1.05
E072	N15E	3.02	0.125	0.117	3.02	1.07
E072	DOWN	1.49	0.084	0.066	1.48	1.27
E073	N15E	4.07	0.216	0.183	4.06	1.18
E073	N75W	4.13	0.187	0.171	4.12	1.09
E073	DOWN	0.01	-0.124	-0.088	0.0	1.41
E074	N15E	3.02	-0.241	-0.243	3.00	0.99
E074	N75W	5.56	-0.293	-0.284	5.56	1.03
E074	DOWN	0.02	-0.160	-0.138	0.0	1.16

TABLE IV (Continued)

IN G'S						
RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
E075	N00E	2.79	-0.142	-0.136	2.78	1.04
E075	S90W	1.79	0.117	0.114	1.78	1.03
E075	DOWN	3.47	0.057	-0.048	6.04	-1.18
E076	N00E	2.83	-0.216	-0.210	2.82	1.03
E076	N90E	4.29	-0.235	-0.227	4.28	1.04
E076	DOWN	3.41	-0.098	-0.089	3.40	1.10
E077	N00E	7.32	-0.244	-0.241	7.30	1.01
E077	N90E	3.16	-0.221	-0.216	7.00	1.02
E077	DOWN	3.40	-0.149	-0.124	3.40	1.20
E078	N50W	4.21	0.137	0.129	4.20	1.06
E078	S40W	5.41	-0.188	-0.172	5.40	1.09
E078	DOWN	5.36	-0.078	-0.069	5.36	1.14
E079	N50W	7.31	0.170	0.166	7.30	1.02
E079	S40W	4.72	0.128	-0.119	3.62	-1.07
E079	DOWN	6.58	0.091	0.086	6.58	1.06
E080	N50W	7.68	0.161	0.156	7.68	1.03
E080	S40W	11.90	0.128	0.129	11.92	1.00
E080	DOWN	6.59	0.169	0.161	6.58	1.05
E081	S08E	0.21	0.231	0.217	0.20	1.07
E081	S82W	0.41	0.231	0.202	0.40	1.14
E081	DOWN	0.18	0.087	-0.065	0.24	-1.34
E082	S15E	5.21	-0.211	-0.207	5.20	1.02
E082	S75W	5.13	0.184	0.177	5.12	1.04
E082	DOWN	5.88	0.070	0.066	5.88	1.06
E083	S00W	2.44	-0.168	-0.161	2.44	1.04
E083	N90E	3.21	0.182	-0.165	1.70	-1.10
E083	DOWN	4.28	-0.066	-0.057	4.28	1.17
E084	S00W	5.38	-0.209	0.209	2.60	-1.00
E084	N90E	3.34	0.209	0.191	3.34	1.09
E084	DOWN	4.75	-0.094	-0.086	4.74	1.10
E085	S00W	7.15	0.285	0.279	7.14	1.02
E085	N90E	7.99	-0.215	-0.210	7.98	1.03
E085	DOWN	4.66	0.254	0.219	4.46	1.16
F086	N83W	7.39	0.111	0.107	7.36	1.04
F086	S07W	6.13	0.085	0.082	6.12	1.04
F086	UP	5.36	0.047	-0.044	3.04	-1.08
F087	S04E	5.10	0.029	0.027	5.08	1.07
F087	S86W	2.63	0.029	0.029	2.62	1.02
F087	UP	2.52	0.020	0.017	2.52	1.18
F088	S70E	5.09	0.274	0.271	5.08	1.01
F088	S20W	5.58	-0.227	-0.213	5.56	1.06
F088	DOWN	6.25	0.142	0.134	6.24	1.06
F089	S53E	8.38	-0.141	-0.134	10.22	1.05
F089	S37W	10.10	-0.152	-0.142	10.08	1.07
F089	DOWN	8.42	0.083	0.077	8.42	1.08

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
F090	N37E	7.32	0.149	-0.133	8.58	-1.12
F090	S53E	10.44	-0.265	-0.249	10.44	1.06
F090	DOWN	8.63	0.187	0.167	8.62	1.12
F091	S53E	10.44	0.439	0.412	8.54	1.07
F091	S37W	8.59	-0.246	-0.224	8.58	1.10
F091	DOWN	8.59	0.238	0.193	8.58	1.23
F092	S62E	2.66	-0.071	0.065	0.66	-1.09
F092	S28W	4.07	0.083	0.081	4.06	1.03
F092	DOWN	1.66	0.060	-0.050	3.24	-1.21
F093	S62E	3.54	-0.163	-0.153	3.52	1.07
F093	S28W	5.79	0.147	0.138	0.32	1.06
F093	DOWN	0.99	0.075	0.064	0.98	1.16
F094	S62E	3.46	-0.197	-0.188	3.46	1.04
F094	S28W	6.45	0.204	0.202	6.44	1.01
F094	DOWN	0.29	0.102	0.095	0.28	1.07
F095	S88E	4.42	-0.100	-0.098	4.40	1.02
F095	S02W	5.93	-0.091	0.086	5.78	-1.06
F095	DOWN	8.48	0.031	-0.027	6.18	-1.14
F096	S88E	4.90	0.188	-0.165	5.64	-1.14
F096	S02W	5.83	0.179	0.168	5.82	1.07
F096	DOWN	4.82	-0.160	-0.125	4.80	1.28
F097	S88E	4.74	0.261	0.255	4.74	1.02
F097	S02W	8.66	0.327	0.319	8.64	1.03
F097	DOWN	8.88	0.113	0.104	8.86	1.09
F098	S53E	10.60	-0.252	-0.241	10.60	1.04
F098	S37W	10.45	-0.206	-0.196	10.44	1.05
F098	DOWN	10.85	0.081	0.071	10.84	1.15
F099	S53E	10.61	-0.251	-0.250	10.60	1.01
F099	S37W	8.35	-0.241	-0.227	8.34	1.06
F099	DOWN	6.17	0.125	0.091	6.38	1.37
F100	S53E	10.67	-0.483	-0.449	10.66	1.08
F100	S37W	9.98	0.391	0.363	9.92	1.08
F100	DOWN	8.99	-0.245	-0.174	8.98	1.41
F101	S00W	2.11	0.039	0.038	2.10	1.03
F101	N90E	3.02	-0.034	-0.031	3.00	1.11
F101	UP	4.64	-0.026	-0.020	4.64	1.31
F102	N00E	0.19	-0.028	-0.025	0.18	1.14
F102	N90E	0.80	-0.023	-0.021	2.02	1.10
F102	DOWN	0.40	0.018	0.016	0.40	1.17
F103	N00E	1.00	-0.103	-0.093	0.98	1.10
F103	N90W	1.43	-0.148	0.123	1.00	-1.21
F103	DOWN	3.63	-0.056	-0.048	0.64	1.16

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
F104	N00E	0.55	-0.087	-0.087	0.54	1.01
F104	N90W	0.18	0.112	0.105	0.16	1.06
F104	DOWN	0.37	0.041	0.036	0.36	1.13
F105	S00W	3.06	0.095	0.085	3.04	1.13
F105	N90E	2.97	0.089	0.079	2.96	1.13
F105	UP	3.72	-0.072	-0.068	3.70	1.05
G106	S00W	5.15	-0.096	-0.089	5.14	1.08
G106	S90W	5.79	-0.204	-0.192	5.78	1.06
G106	DOWN	5.69	0.093	0.085	5.68	1.09
G107	N00E	7.67	0.103	0.095	7.66	1.09
G107	N90E	7.89	-0.114	-0.109	7.90	1.04
G107	DOWN	8.30	-0.106	-0.095	8.28	1.12
G108	N00E	7.13	-0.206	-0.202	7.12	1.02
G108	N90E	7.25	-0.189	-0.185	7.24	1.02
G108	DOWN	7.54	-0.108	-0.093	7.52	1.16
G109	N00E	7.92	-0.331	-0.311	7.92	1.06
G109	N90E	10.98	-0.358	-0.347	10.98	1.03
G109	DOWN	6.74	-0.144	-0.122	7.56	1.18
G110	S82E	5.10	0.215	0.212	5.10	1.01
G110	S08W	5.16	0.160	0.142	5.16	1.13
G110	DOWN	5.07	-0.146	-0.129	5.06	1.14
G111	S82E	5.34	0.387	0.382	5.34	1.01
G111	S08W	5.99	-0.217	-0.210	5.98	1.03
G111	DOWN	4.16	0.274	0.253	4.16	1.09
G112	N38E	7.72	0.106	0.104	7.70	1.02
G112	N52W	7.67	0.088	0.080	7.66	1.10
G112	DOWN	5.57	0.058	0.054	5.56	1.07
G113	N52W	4.71	-0.112	-0.111	4.70	1.01
G113	N38E	2.91	0.187	0.181	2.90	1.03
G113	DOWN	3.87	0.132	0.131	3.86	1.01
G114	S60E	5.49	0.118	0.113	5.48	1.04
G114	S30W	1.11	0.150	0.139	1.10	1.08
G114	DOWN	4.06	-0.105	-0.088	4.06	1.19
H115	N11E	6.97	0.225	0.225	6.96	1.00
H115	N79W	8.94	-0.152	-0.149	8.94	1.02
H115	DOWN	7.69	-0.108	0.096	7.56	-1.12
H116	N11E	7.54	0.272	0.260	7.54	1.05
H116	N79W	9.55	-0.249	-0.242	9.56	1.03
H116	DOWN	7.60	0.189	0.155	7.60	1.22
H117	N11E	7.30	0.283	0.288	7.30	0.98
H117	N79W	31.53	0.214	0.199	31.52	1.08
H117	DOWN	5.49	-0.163	-0.144	5.48	1.13

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
H118	S45E	8.20	0.035	0.034	8.20	1.02
H118	S45W	11.98	0.034	-0.033	11.46	-1.03
H118	DOWN	4.82	-0.047	-0.042	4.82	1.12
H119	S45W	7.27	0.089	0.088	7.26	1.01
H119	S45E	10.30	-0.099	-0.098	10.30	1.02
H119	DOWN	4.82	-0.053	-0.052	4.82	1.02
H120	S45W	7.24	0.129	0.130	7.24	0.99
H120	S45E	10.23	-0.122	-0.121	10.22	1.01
H120	DOWN	4.81	-0.067	-0.063	4.80	1.07
H121	S90W	8.38	-0.121	-0.122	8.38	0.99
H121	S00W	8.02	0.117	0.114	8.94	1.02
H121	DOWN	9.18	-0.084	-0.081	9.18	1.04
H122	S90W	16.60	-0.149	-0.142	16.58	1.05
H122	S00W	14.06	-0.154	-0.147	14.06	1.04
H122	DOWN	9.91	0.125	0.114	9.90	1.09
H123	S90W	18.13	-0.184	-0.184	18.12	1.00
H123	S00W	13.96	-0.143	0.140	12.96	-1.03
H123	DOWN	7.41	0.182	0.167	7.40	1.09
H124	S90W	13.51	-0.035	-0.036	13.50	1.00
H124	S00W	33.05	0.040	-0.035	12.48	-1.15
H124	DOWN	13.48	0.017	0.015	13.48	1.11
H125	S90W	17.68	-0.097	-0.093	17.68	1.04
H125	S00W	16.64	-0.150	-0.147	16.64	1.02
H125	DOWN	11.33	0.029	0.025	11.32	1.16
H126	S00W	16.59	-0.148	-0.143	16.58	1.04
H126	S90W	17.59	-0.108	-0.104	17.58	1.03
H126	DOWN	13.17	0.040	0.037	13.16	1.08
I128	N00E	10.44	-0.062	-0.062	10.44	1.00
I128	S90W	8.72	-0.099	-0.093	8.72	1.07
I128	DOWN	10.99	0.039	-0.037	10.82	-1.06
I129	N00E	10.84	0.128	-0.124	11.18	-1.04
I129	S90W	7.01	-0.137	0.135	11.06	-1.02
I129	DOWN	5.82	-0.054	-0.045	11.18	1.19
I130	N00E	11.15	-0.258	-0.256	11.14	1.01
I130	S90W	8.80	-0.255	-0.245	8.80	1.04
I130	DOWN	6.26	0.098	0.096	6.26	1.03
I131	N50E	7.60	-0.202	-0.188	7.58	1.08
I131	N40W	7.68	-0.170	-0.164	7.68	1.04
I131	DOWN	7.18	-0.042	-0.038	11.58	1.10
I132	N50E	8.28	-0.215	-0.215	8.28	1.00
I132	N40W	8.50	-0.224	-0.207	8.48	1.08
I132	DOWN	8.09	-0.101	0.092	7.76	-1.10
I133	N50E	12.46	-0.299	-0.296	12.46	1.01
I133	N40W	9.38	-0.217	0.211	9.82	-1.03
I133	DOWN	8.44	-0.147	-0.122	8.42	1.21

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
I134	N54E	8.82	-0.103	-0.100	11.90	1.04
I134	S36E	9.60	-0.090	-0.084	9.58	1.08
I134	DOWN	7.40	-0.079	-0.064	7.40	1.24
I135	N54E	11.96	-0.243	-0.240	11.96	1.01
I135	S36E	8.01	-0.224	-0.214	8.02	1.04
I135	DOWN	8.36	-0.161	-0.155	8.36	1.04
I136	N54E	12.13	-0.284	-0.284	12.14	1.00
I136	S36E	7.86	-0.287	-0.281	7.86	1.02
I136	DOWN	7.75	-0.349	0.275	8.20	-1.27
I137	S81E	10.26	-0.148	0.143	10.64	-1.03
I137	S09W	8.18	-0.135	-0.131	8.16	1.02
I137	DOWN	9.24	-0.120	-0.102	9.24	1.18
I138	S81E	9.82	-0.142	-0.131	9.82	1.08
I138	S09W	19.27	0.177	0.178	19.26	1.00
I138	DOWN	10.65	-0.222	-0.205	10.64	1.08
I139	S81E	24.76	-0.226	-0.225	24.76	1.00
I139	S09W	16.30	0.235	0.220	16.30	1.07
I139	DOWN	3.24	0.209	0.201	3.24	1.04
J141	N21E	4.33	-0.152	-0.148	4.32	1.03
J141	S69E	5.30	0.115	0.111	5.28	1.03
J141	DOWN	1.62	-0.102	-0.095	4.26	1.08
J142	S69E	3.86	0.200	0.171	3.86	1.16
J142	S21W	3.93	0.159	-0.146	3.44	-1.09
J142	DOWN	3.40	0.170	0.154	3.40	1.10
J143	N21E	1.11	0.147	0.122	2.22	1.21
J143	N69W	1.55	-0.131	-0.112	1.54	1.17
J143	DOWN	2.23	0.089	0.073	2.22	1.23
J144	N21E	1.49	-0.374	-0.353	1.48	1.06
J144	N69W	1.76	0.288	0.283	1.76	1.02
J144	DOWN	1.46	-0.164	-0.107	1.46	1.53
J145	S00W	7.89	0.118	0.116	7.90	1.01
J145	S90W	6.61	0.111	0.105	6.60	1.05
J145	DOWN	5.58	-0.111	-0.108	5.58	1.02
J146	S00W	12.78	-0.264	-0.260	12.76	1.02
J146	S90W	7.39	0.223	0.218	7.38	1.02
J146	DOWN	5.57	-0.206	-0.193	5.56	1.07
J147	S00W	14.75	-0.386	0.379	14.32	-1.02
J147	S90W	10.45	-0.327	-0.317	10.44	1.03
J147	DOWN	4.85	0.174	0.162	4.84	1.07
J148	N00E	11.26	-0.116	-0.110	11.24	1.06
J148	S90W	6.03	0.117	0.114	6.04	1.02
J148	DOWN	6.34	-0.061	-0.053	6.34	1.15

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
J149	N00E	7.64	-0.226	0.212	12.14	-1.07
J149	S90W	8.79	-0.177	-0.155	8.78	1.15
J149	DOWN	9.10	-0.121	-0.101	9.08	1.20
J150	N00E	12.98	-0.320	-0.320	12.98	1.00
J150	S90W	12.79	0.228	0.222	12.78	1.03
J150	DOWN	8.42	0.199	0.181	8.42	1.10
K157	S53E	8.48	-0.179	-0.172	8.48	1.04
K157	S37W	5.86	0.124	0.118	5.86	1.05
K157	DOWN	3.62	-0.073	-0.058	3.62	1.26
K158	S53E	8.77	-0.318	-0.315	8.76	1.01
K158	S37W	6.52	-0.231	-0.226	6.50	1.02
K158	DOWN	1.93	-0.229	-0.207	1.92	1.11
K159	N60W	9.36	-0.164	-0.155	9.34	1.06
K159	S30W	8.16	-0.216	-0.215	8.14	1.01
K159	DOWN	6.09	0.107	-0.096	7.92	-1.12
K160	N60W	9.89	0.233	0.229	9.88	1.02
K160	S30W	10.56	0.325	0.309	10.54	1.05
K160	DOWN	7.83	-0.149	-0.125	7.82	1.20
L166	N00E	4.52	-0.181	-0.167	4.52	1.08
L166	S90W	4.57	0.154	0.150	4.56	1.02
L166	DOWN	4.68	-0.085	-0.071	7.34	1.20
L167	N00E	0.18	-0.019	0.017	1.20	-1.10
L167	S90W	0.0	-0.029	-0.028	0.0	1.01
L167	DOWN	10.73	-0.025	-0.022	10.72	1.18
L168	N00E	7.51	-0.110	-0.110	7.52	1.00
L168	S90W	5.04	0.186	0.183	5.04	1.02
L168	DOWN	0.26	-0.255	-0.208	4.34	1.23
L169	N78W	5.57	-0.123	-0.117	5.56	1.05
L169	S12W	3.35	0.225	0.219	3.34	1.03
L169	DOWN	5.08	0.102	0.092	5.08	1.11
L170	N78W	4.72	-0.142	-0.138	4.70	1.03
L170	S12W	6.24	0.180	0.171	6.24	1.05
L170	DOWN	0.21	-0.146	0.134	5.14	-1.09
L171	N33E	10.40	0.014	0.012	10.40	1.13
L171	N57W	5.15	0.016	-0.016	4.16	-0.99
L171	DOWN	7.96	-0.012	-0.010	6.34	1.13
L172	N54E	5.29	-0.133	-0.123	5.28	1.08
L172	S36E	3.01	0.173	0.164	3.00	1.06
L172	DOWN	6.44	-0.094	0.081	3.30	-1.17
L173	N54E	3.20	0.373	0.340	3.20	1.10
L173	S36E	3.41	0.312	0.298	3.40	1.05
L173	DOWN	4.07	0.119	-0.097	3.30	-1.23
L174	N54E	7.53	-0.144	-0.137	7.52	1.05
L174	N36W	2.34	0.073	0.067	2.32	1.10
L174	DOWN	3.10	0.199	0.183	3.10	1.09

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
L175	N54E	8.07	-0.152	-0.151	8.06	1.01
L175	N36W	13.93	-0.087	-0.088	13.92	0.99
L175	DOWN	3.03	-0.361	-0.353	3.02	1.02
M176	N37E	7.85	-0.088	-0.085	7.84	1.03
M176	S53E	5.41	-0.123	-0.118	5.40	1.04
M176	DOWN	0.96	-0.052	0.042	3.78	-1.22
M177	N37E	8.01	-0.108	-0.095	8.00	1.14
M177	S53E	6.28	-0.108	-0.105	6.26	1.03
M177	DOWN	6.02	-0.092	-0.083	6.00	1.11
M178	N37E	10.24	-0.120	-0.120	10.24	1.01
M178	S53E	8.06	-0.143	-0.142	8.06	1.01
M178	DOWN	6.00	-0.154	-0.152	6.00	1.01
M179	S00W	0.51	0.026	0.021	0.50	1.22
M179	N90E	0.46	-0.057	-0.048	0.46	1.20
M179	DOWN	0.74	-0.047	-0.039	0.72	1.20
M180	S00W	5.57	-0.026	0.024	3.14	-1.05
M180	S90W	7.63	0.033	0.030	7.64	1.07
M180	DOWN	4.88	0.020	0.019	4.88	1.06
M181	S00W	3.30	0.051	-0.049	3.98	-1.03
M181	S90W	18.00	0.051	0.050	18.00	1.03
M181	DOWN	7.44	0.028	0.026	7.44	1.09
M182	S00W	7.41	0.075	0.073	7.40	1.02
M182	S90W	18.57	-0.092	-0.081	18.56	1.14
M182	DOWN	7.08	0.040	0.036	7.08	1.13
M183	N65W	9.12	0.047	0.043	9.10	1.09
M183	N25E	7.87	0.057	0.057	7.86	1.01
M183	DOWN	4.39	-0.037	0.023	11.28	-1.60
M184	S65E	6.50	-0.052	-0.044	6.48	1.18
M184	S25W	5.29	-0.063	-0.058	5.28	1.09
M184	DOWN	1.31	-0.034	-0.025	1.30	1.33
N185	S50E	7.57	0.075	0.069	7.56	1.09
N185	S40W	6.24	0.070	0.069	3.48	1.02
N185	DOWN	4.04	-0.046	-0.042	4.04	1.08
N186	S37E	3.24	0.104	0.098	3.22	1.07
N186	S53W	4.68	-0.115	-0.099	4.66	1.16
N186	DOWN	0.0	0.056	0.060	0.0	0.94
N187	N15E	6.05	-0.058	-0.057	6.04	1.03
N187	N75W	3.41	0.081	0.077	3.40	1.05
N187	DOWN	4.62	-0.032	-0.029	4.62	1.10
N188	N54E	11.49	-0.117	-0.117	11.48	1.00
N188	N36W	12.42	0.129	0.129	6.18	1.00
N188	DOWN	7.46	-0.076	-0.064	7.46	1.19
N189	N54E	12.30	-0.099	-0.102	12.28	0.96
N189	N36W	6.97	0.121	0.124	6.96	0.97
N189	DOWN	7.63	0.135	0.123	7.62	1.09

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
N190	N54E	12.72	-0.114	-0.115	12.70	0.99
N190	N36W	10.27	0.128	0.128	10.26	1.00
N190	DOWN	7.72	-0.293	-0.270	7.72	1.09
N191	N65E	3.53	-0.025	-0.025	3.52	1.01
N191	S25E	5.47	-0.043	-0.041	5.46	1.05
N191	DOWN	1.55	0.020	0.019	1.54	1.05
N192	N29E	6.23	0.104	0.099	6.22	1.05
N192	N61W	4.92	-0.107	0.101	7.00	-1.06
N192	DOWN	9.52	0.045	0.043	9.52	1.04
N193	N29E	7.79	-0.128	-0.123	7.78	1.04
N193	N61W	9.54	0.152	0.151	9.52	1.01
N193	DOWN	7.24	-0.068	-0.063	8.68	1.09
N194	N29E	9.13	-0.209	-0.207	9.12	1.01
N194	N61W	10.03	-0.193	-0.190	10.02	1.01
N194	DOWN	3.66	-0.130	-0.119	3.66	1.09
N195	N33E	14.06	-0.044	-0.042	14.04	1.07
N195	N57W	19.93	0.034	-0.032	19.18	-1.07
N195	DOWN	16.52	0.022	0.021	16.52	1.04
N196	N76W	6.30	0.036	0.036	6.30	1.00
N196	S14W	2.39	-0.038	-0.032	2.38	1.18
N196	DOWN	9.05	0.027	0.026	9.04	1.03
N197	N45E	10.12	-0.029	-0.026	10.12	1.10
N197	N45W	11.65	-0.037	-0.036	11.64	1.03
N197	DOWN	11.89	0.015	0.014	11.88	1.07
O198	S00W	6.23	-0.188	-0.180	6.22	1.04
O198	S90W	5.35	-0.180	-0.171	5.34	1.05
O198	DOWN	4.11	-0.138	-0.123	4.10	1.12
O199	N28E	9.85	0.144	0.141	9.84	1.03
O199	N62W	9.46	0.259	0.243	9.46	1.07
O199	DOWN	12.38	0.164	0.151	12.38	1.09
O200	N28E	13.07	-0.181	-0.180	13.06	1.01
O200	N62W	11.75	-0.226	-0.231	11.76	0.98
O200	DOWN	11.78	0.140	0.131	11.78	1.06
O201	N28E	11.60	0.234	0.226	11.60	1.03
O201	N62W	12.43	-0.283	-0.279	12.44	1.01
O201	DOWN	12.60	0.227	0.200	12.60	1.13
O204	N00E	5.39	-0.028	-0.027	5.38	1.06
O204	N90E	17.67	0.021	0.021	17.68	0.99
O204	UP	1.22	-0.015	-0.013	1.20	1.20
O205	N21W	11.64	-0.029	-0.029	11.64	1.01
O205	S69W	1.96	-0.030	-0.029	1.94	1.03
O205	UP	6.80	-0.016	-0.017	6.78	0.99
O206	N00E	7.94	0.039	0.038	7.94	1.03
O206	N90E	8.72	-0.047	-0.045	8.72	1.04
O206	DOWN	8.90	-0.019	-0.019	8.90	0.99

TABLE IV (Continued)

IN G'S

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
O207	N56E	1.26	-0.068	-0.066	1.26	1.04
O207	N34W	0.90	0.103	-0.099	1.26	-1.04
O207	UP	0.03	-0.043	-0.034	0.90	1.29
O208	N42E	3.91	-0.017	-0.017	3.90	1.01
O208	S48E	12.35	0.019	0.017	12.34	1.07
O208	UP	6.81	0.011	0.011	6.82	0.96
O210	S45E	7.10	0.044	0.036	7.08	1.23
O210	S45W	7.56	0.040	0.039	7.56	1.03
O210	DOWN	3.38	-0.027	-0.026	8.84	1.06
O213	S45E	15.06	-0.001	-0.001	15.04	1.12
O213	S45W	1.48	-0.001	-0.001	1.48	1.06
O213	UP	9.30	-0.001	-0.001	9.30	0.98
P214	S89W	6.80	0.162	0.157	6.78	1.03
P214	S01E	3.63	0.167	0.159	3.62	1.05
P214	DOWN	6.93	0.134	0.118	6.92	1.13
P215	N89E	6.85	-0.214	-0.210	6.84	1.02
P215	S01E	6.77	-0.294	-0.276	6.76	1.07
P215	DOWN	2.24	-0.128	0.091	7.04	-1.41
P216	S01E	6.82	0.451	0.421	6.80	1.07
P216	S89W	3.28	-0.444	-0.434	3.28	1.02
P216	DOWN	3.66	0.199	0.157	0.0	1.27
P217	S00W	2.47	-0.122	-0.110	4.32	1.11
P217	N90E	7.62	-0.097	-0.090	7.62	1.08
P217	DOWN	4.06	0.070	0.061	4.06	1.14
P218	S00W	2.48	-0.162	-0.147	2.48	1.10
P218	N90E	5.20	-0.109	-0.103	7.64	1.06
P219	S00W	8.79	-0.200	-0.197	8.78	1.01
P219	N90E	5.83	0.260	0.256	5.82	1.02
P219	DOWN	2.25	0.123	0.105	2.24	1.17
P220	S00W	9.58	-0.026	-0.025	9.58	1.05
P220	N90E	1.27	0.036	0.035	1.26	1.02
P220	DOWN	6.60	0.009	0.009	6.60	1.00
P221	N03E	4.17	-0.172	-0.140	4.16	1.23
P221	N87W	4.08	-0.223	-0.169	4.08	1.32
P221	DOWN	3.04	-0.070	-0.049	0.74	1.44
P222	S00W	9.44	-0.027	-0.026	9.44	1.03
P222	S90W	16.99	0.026	0.026	17.00	1.01
P222	UP	5.70	0.011	0.011	5.68	1.03
P223	N55E	3.72	-0.078	-0.071	3.70	1.10
P223	N35W	3.88	0.059	0.054	3.86	1.08
P223	DOWN	3.49	-0.039	-0.039	3.48	1.00
P231	N00E	7.27	0.045	0.042	7.26	1.07
P231	S90W	5.01	-0.041	0.039	5.88	-1.06
P231	UP	1.57	-0.025	-0.018	1.56	1.39

TABLE IV (Continued)

RECORD NUMBER	COMP.	IN G'S				
		VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
P232	N00E	11.16	-0.099	-0.094	11.16	1.06
P232	S90W	6.22	0.094	0.093	6.20	1.01
P232	UP	0.04	0.051	0.051	0.04	1.00
Q233	S12W	7.90	0.263	-0.248	7.68	-1.06
Q233	N78W	6.73	0.207	0.201	6.72	1.03
Q233	UP	6.68	0.101	0.099	6.68	1.02
Q234	S12W	10.49	-0.394	-0.382	10.48	1.03
Q234	N78W	10.97	-0.288	-0.293	10.96	0.98
Q234	UP	5.93	0.110	0.096	5.92	1.14
Q235	S12W	7.59	0.403	0.375	7.58	1.07
Q235	N78W	10.82	-0.265	-0.255	10.82	1.04
Q235	UP	7.62	-0.182	-0.162	7.60	1.13
Q236	SOUTH	8.06	-0.172	-0.171	8.06	1.01
Q236	EAST	7.00	0.130	0.125	7.00	1.04
Q236	UP	5.85	-0.081	-0.075	7.50	1.09
Q237	SOUTH	8.71	-0.089	-0.080	8.72	1.12
Q237	EAST	8.18	-0.140	-0.133	8.16	1.05
Q237	UP	5.84	0.141	0.133	5.82	1.06
Q238	SOUTH	8.35	-0.116	-0.114	6.96	1.02
Q238	EAST	8.69	0.203	0.201	8.68	1.01
Q238	UP	5.70	0.192	0.187	5.70	1.02
Q239	SOUTH	9.08	0.126	0.122	9.08	1.04
Q239	EAST	6.13	0.171	0.165	6.12	1.03
Q239	UP	7.58	0.041	0.041	7.58	1.00
Q240	SOUTH	11.04	0.154	0.153	11.04	1.00
Q240	EAST	6.18	0.142	0.137	6.18	1.04
Q240	UP	4.84	0.076	0.069	4.84	1.10
Q241	N37E	11.44	0.096	0.088	11.44	1.08
Q241	N53W	9.27	0.143	0.141	9.26	1.02
Q241	UP	10.58	0.066	0.062	10.58	1.06
Q242	N37E	9.16	-0.130	-0.129	9.14	1.01
Q242	N53W	13.61	-0.186	-0.184	13.60	1.01
Q242	UP	10.45	0.160	0.156	10.44	1.03
Q243	N37E	16.94	-0.184	0.184	18.56	-1.00
Q243	N53W	14.05	-0.292	-0.290	14.04	1.01
Q243	UP	5.46	0.236	0.215	5.46	1.10
R244	N53W	8.21	0.156	0.152	8.20	1.02
R244	S37W	8.49	-0.132	-0.129	8.48	1.02
R244	UP	4.67	0.047	0.044	4.66	1.07
R245	N53W	12.54	0.412	-0.385	11.92	-1.07
R245	S37W	8.54	-0.314	-0.308	8.54	1.02
R245	UP	10.58	0.086	0.081	12.74	1.06
R246	SOUTH	9.17	-0.119	-0.118	9.16	1.01
R246	EAST	6.65	-0.110	-0.109	6.66	1.01
R246	UP	8.63	0.085	-0.076	7.76	-1.12

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
R247	SOUTH	15.35	0.232	0.232	15.30	1.00
R247	EAST	10.11	0.254	0.253	10.08	1.01
R247	UP	8.04	-0.271	-0.269	8.04	1.01
R248	SOUTH	10.70	0.192	0.188	10.70	1.02
R248	EAST	8.46	-0.230	-0.178	8.46	1.29
R248	UP	5.71	0.118	0.091	5.72	1.30
R249	N44E	6.86	-0.084	-0.081	6.86	1.03
R249	S46E	6.39	-0.093	-0.086	8.30	1.08
R249	UP	7.03	-0.058	-0.059	7.02	1.00
R250	N44E	11.66	-0.141	-0.139	11.66	1.02
R250	S46E	17.33	0.108	0.110	17.32	0.98
R250	UP	6.70	0.363	0.359	6.70	1.01
R251	N37E	6.61	0.208	0.199	6.60	1.04
R251	S53E	8.68	-0.189	-0.192	8.68	0.99
R251	UP	8.50	-0.062	-0.069	8.50	0.91
R252	N37E	5.82	0.513	0.496	5.82	1.03
R252	S53E	6.37	0.446	0.427	6.36	1.04
R252	UP	6.30	0.117	0.105	6.30	1.11
R253	N30W	11.91	0.256	0.247	11.90	1.04
R253	S60W	9.32	-0.232	-0.225	9.32	1.03
R253	UP	8.95	0.085	0.083	8.94	1.03
R254	N30W	12.03	0.340	0.312	12.02	1.09
R254	S60W	9.37	-0.304	-0.274	9.36	1.11
R254	UP	9.01	0.168	0.154	9.58	1.09
S255	N08E	1.48	0.129	0.126	1.48	1.02
S255	N82W	6.73	-0.131	-0.131	6.72	1.00
S255	UP	5.34	0.049	0.048	5.34	1.03
S256	N08E	4.83	0.298	0.292	4.82	1.02
S256	N82W	7.24	-0.194	-0.191	7.24	1.02
S256	UP	7.07	-0.066	0.062	5.44	-1.08
S257	N08E	4.64	0.293	0.292	4.64	1.01
S257	N82W	7.07	-0.255	-0.254	7.06	1.00
S257	UP	7.07	-0.088	-0.083	7.06	1.06
S258	N29E	14.21	0.063	-0.057	10.10	-1.10
S258	S61E	10.37	-0.086	-0.085	10.36	1.01
S258	UP	7.56	0.052	0.056	7.56	0.94
S259	N29E	11.86	-0.137	-0.132	11.86	1.04
S259	S61E	8.05	-0.130	-0.125	8.04	1.04
S259	UP	9.04	-0.080	-0.059	9.04	1.35
S260	N29E	14.55	0.226	0.219	14.54	1.03
S260	S61E	9.26	-0.234	-0.233	9.26	1.00
S260	UP	4.53	0.078	0.078	4.54	1.00
S261	N59E	2.57	0.102	-0.100	0.34	-1.03
S261	N31W	0.41	-0.111	-0.110	0.40	1.01
S261	UP	2.85	0.071	0.066	2.84	1.08

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
S262	N83W	5.63	-0.071	-0.070	5.62	1.01
S262	S07W	4.87	0.097	0.096	4.86	1.02
S262	UP	6.21	-0.034	-0.034	6.20	1.01
S263	N83W	27.38	0.102	0.104	27.38	0.99
S263	S07W	20.22	-0.093	-0.096	20.22	0.97
S263	UP	5.80	-0.089	-0.082	5.80	1.08
S264	N83W	21.50	0.157	0.159	21.50	0.99
S264	S07W	17.27	0.163	0.156	17.26	1.05
S264	UP	6.17	0.143	0.138	6.16	1.04
S265	SOUTH	8.95	-0.111	-0.106	8.96	1.04
S265	WEST	6.15	0.132	0.128	6.14	1.04
S265	UP	4.58	0.061	0.055	4.58	1.11
S266	NORTH	8.73	0.167	0.157	8.74	1.07
S266	WEST	8.40	-0.135	-0.132	8.40	1.02
S266	UP	3.94	0.070	0.055	5.28	1.27
S267	NORTH	17.21	0.058	0.057	17.22	1.02
S267	EAST	9.79	0.069	0.063	9.78	1.09
S267	UP	4.49	0.028	-0.026	2.68	-1.09
S268	NORTH	17.24	0.076	0.074	17.24	1.02
S268	EAST	13.43	-0.046	-0.046	13.42	1.01
S268	UP	11.66	-0.041	-0.041	11.66	1.00
S269	NORTH	22.86	0.062	0.062	22.86	0.99
S269	EAST	20.26	-0.094	-0.094	20.26	1.00
S269	UP	8.77	0.098	0.090	8.76	1.09
S270	N14E	12.16	-0.191	-0.174	12.16	1.09
S270	N76W	6.65	0.157	0.155	6.64	1.02
S270	UP	6.70	-0.205	-0.181	6.70	1.13
S271	N35W	9.90	-0.088	-0.087	9.90	1.02
S271	S55W	12.71	0.098	0.098	12.70	1.01
S271	UP	9.82	0.107	0.100	9.82	1.08
S272	N35W	9.63	-0.108	-0.112	9.62	0.96
S272	S55W	11.65	0.110	0.106	11.64	1.04
S272	UP	9.77	0.156	0.149	9.76	1.05
S273	N12E	8.60	0.238	-0.224	8.16	-1.06
S273	N78W	5.83	0.173	0.168	5.82	1.03
S273	UP	4.18	-0.148	-0.138	4.18	1.08
T274	NORTH	0.08	0.040	0.029	0.06	1.38
T274	EAST	0.05	-0.057	-0.050	0.04	1.15
T274	UP	0.04	-0.027	-0.022	0.02	1.26
T275	NORTH	0.23	0.043	0.034	0.22	1.27
T275	EAST	0.28	-0.030	-0.027	0.26	1.13
T275	UP	0.15	-0.018	-0.013	0.12	1.38
T276	NORTH	0.0	-0.009	-0.009	0.0	1.06
T276	EAST	0.06	0.014	0.013	0.04	1.12
T276	UP	1.42	0.006	-0.004	0.50	-1.41

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
T277	NORTH	5.37	0.026	0.023	5.36	1.16
T277	EAST	5.40	-0.026	0.025	10.40	-1.07
T277	UP	5.72	0.012	0.010	5.70	1.20
T278	NORTH	9.66	-0.012	-0.012	9.62	0.99
T278	EAST	6.58	0.015	0.015	6.56	1.05
T278	UP	3.10	-0.012	-0.010	3.08	1.26
T279	NORTH	6.01	-0.014	-0.012	5.98	1.23
T279	EAST	6.20	0.021	0.019	6.18	1.13
T279	UP	3.57	-0.012	-0.008	3.54	1.60
T280	NORTH	8.38	-0.025	-0.023	8.36	1.10
T280	EAST	9.50	-0.011	-0.010	9.48	1.09
T280	UP	2.32	0.008	0.006	2.30	1.41
T281	NORTH	7.95	0.009	0.007	7.92	1.34
T281	EAST	8.03	-0.013	0.011	7.92	-1.22
T281	UP	3.27	-0.020	-0.018	3.26	1.12
T282	NORTH	25.37	-0.004	0.003	1.00	-1.13
T282	EAST	10.63	0.004	0.004	10.60	1.11
T282	UP	5.57	0.002	0.002	5.54	1.57
T283	NORTH	6.94	-0.074	-0.065	6.92	1.14
T283	EAST	6.69	0.082	0.079	6.66	1.04
T283	UP	2.80	0.056	0.044	2.78	1.28
T284	NORTH	5.29	-0.017	0.012	5.20	-1.45
T284	EAST	5.31	-0.024	-0.016	5.28	1.49
T284	UP	2.00	0.013	0.011	1.98	1.24
T285	NORTH	7.88	-0.058	-0.052	7.86	1.11
T285	EAST	8.17	0.082	0.072	8.14	1.14
T285	UP	2.21	0.015	0.013	2.20	1.17
T286	NORTH	2.85	-0.071	-0.060	2.82	1.19
T286	EAST	6.25	-0.050	-0.047	6.22	1.06
T286	UP	4.68	0.036	-0.026	4.76	-1.39
T287	NORTH	0.97	-0.034	0.031	1.16	-1.09
T287	EAST	12.90	-0.031	-0.028	12.88	1.10
T287	UP	0.19	-0.021	0.014	0.40	-1.57
T288	NORTH	26.48	-0.008	-0.007	26.46	1.04
T288	EAST	7.36	0.041	0.036	7.56	1.13
T288	UP	0.03	-0.024	-0.017	0.92	1.39
T289	NORTH	17.87	-0.025	-0.025	17.84	1.01
T289	EAST	15.21	0.031	0.028	15.20	1.13
T289	UP	16.11	0.009	0.007	16.10	1.38
T290	NORTH	0.26	-0.033	-0.031	0.26	1.07
T290	EAST	5.22	-0.019	-0.016	5.22	1.16
T290	UP	1.12	0.009	0.007	1.12	1.34
T291	NORTH	0.33	0.008	-0.007	0.22	-1.23
T291	EAST	4.89	-0.008	-0.007	4.88	1.13
T291	UP	0.71	0.006	0.006	0.70	1.09

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
T292	NORTH	0.34	0.070	-0.064	0.0	-1.10
T292	EAST	0.0	-0.078	-0.072	0.0	1.08
T292	UP	0.0	-0.060	-0.058	0.0	1.05
T293	NORTH	11.72	-0.015	-0.014	11.70	1.08
T293	EAST	5.86	-0.015	-0.015	5.84	1.02
T293	UP	8.73	-0.005	-0.005	8.72	1.10
U294	N45W	11.77	0.016	0.015	15.38	1.10
U294	S45W	12.80	-0.016	-0.015	12.78	1.05
U294	UP	13.68	-0.007	-0.006	13.66	1.18
U295	NORTH	2.06	0.032	0.030	2.04	1.08
U295	EAST	2.10	-0.027	-0.026	2.08	1.06
U295	UP	1.87	0.009	-0.007	2.18	-1.19
U296	NORTH	0.34	0.008	-0.007	0.46	-1.02
U296	EAST	0.36	0.011	0.011	0.34	0.95
U296	UP	0.09	-0.006	-0.005	0.08	1.28
U297	NORTH	10.49	0.076	-0.076	1.16	-1.00
U297	EAST	10.43	-0.088	-0.085	10.42	1.04
U297	UP	1.23	-0.042	-0.032	1.20	1.30
U298	N45W	5.65	0.044	0.039	4.86	1.11
U298	S45W	5.39	0.041	0.037	5.38	1.13
U298	UP	6.44	0.016	0.014	8.22	1.10
U299	N45E	0.25	0.239	0.238	0.24	1.00
U299	S45E	0.57	-0.190	0.176	0.34	-1.08
U299	UP	1.89	0.080	0.070	1.86	1.14
U300	N45W	8.64	-0.123	-0.121	8.62	1.02
U300	S45W	8.69	0.115	0.116	8.68	1.00
U300	UP	9.57	-0.039	-0.038	9.56	1.03
U301	N89W	4.22	-0.223	-0.197	4.22	1.13
U301	S01W	3.54	0.135	0.122	3.54	1.11
U301	UP	4.21	-0.083	-0.071	4.20	1.17
U302	N10E	0.32	-0.090	-0.065	0.32	1.38
U302	S80E	1.82	-0.075	-0.063	1.82	1.19
U302	UP	0.10	0.050	0.037	0.10	1.33
U303	N10E	2.31	-0.057	-0.048	2.28	1.17
U303	S80E	1.55	-0.063	-0.058	1.54	1.08
U303	UP	3.64	-0.038	-0.033	2.60	1.13
U304	N10E	0.12	0.014	-0.011	0.22	-1.25
U304	S80E	0.10	-0.025	-0.019	0.10	1.35
U304	UP	1.25	-0.008	0.008	1.66	-1.06
U305	N89W	4.02	0.054	0.053	4.00	1.02
U305	S01W	2.52	0.052	0.050	2.52	1.05
U305	UP	0.07	-0.025	-0.024	0.06	1.06
U306	N59E	0.92	0.079	0.066	0.92	1.20
U306	N31W	1.13	0.135	0.129	1.12	1.05
U306	UP	0.91	0.125	0.120	0.90	1.04

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
U307	N89W	1.08	-0.058	-0.057	1.06	1.02
U307	S01W	0.65	-0.040	-0.036	0.64	1.10
U307	UP	1.29	0.025	0.024	1.28	1.06
U308	N46W	2.85	0.063	0.059	2.84	1.06
U308	S44W	7.10	0.089	0.075	7.08	1.18
U308	UP	7.75	-0.016	-0.015	7.74	1.06
U309	N89W	0.0	0.178	0.172	0.0	1.04
U309	S01W	2.94	-0.080	-0.076	2.92	1.04
U309	UP	0.07	-0.067	-0.061	0.06	1.10
U310	S32E	10.75	-0.057	-0.053	10.74	1.07
U310	S58W	9.98	-0.081	-0.079	9.96	1.03
U310	UP	6.13	0.041	0.033	6.10	1.26
U311	N21E	8.09	0.008	-0.008	1.30	-1.01
U311	S69E	1.78	0.012	0.011	1.76	1.07
U311	UP	2.64	0.007	0.006	2.62	1.21
U312	N46W	6.58	0.135	0.105	6.66	1.28
U312	S44W	6.61	-0.278	-0.237	6.60	1.17
U312	UP	8.18	0.034	0.033	8.16	1.03
U313	N89W	8.11	-0.015	-0.013	8.10	1.11
U313	S01W	5.06	0.017	0.017	5.04	1.02
U313	UP	1.19	-0.011	0.010	4.90	-1.06
V314	N39E	13.64	0.064	0.064	3.36	1.01
V314	N51W	7.51	0.100	0.097	7.50	1.02
V314	UP	3.82	-0.049	0.065	5.34	-0.76
V315	SOUTH	3.00	0.216	0.196	2.98	1.10
V315	WEST	1.23	-0.183	-0.159	2.68	1.15
V315	UP	2.18	0.223	0.285	3.22	0.78
V316	NORTH	5.94	0.041	0.040	5.92	1.01
V316	EAST	8.87	-0.054	-0.055	8.88	1.00
V316	UP	1.06	-0.010	-0.009	1.04	1.18
V317	S50E	9.08	-0.015	-0.015	9.08	1.01
V317	S40W	9.79	0.012	0.011	9.76	1.04
V317	UP	0.02	-0.007	-0.007	0.0	1.08
V318	SOUTH	18.76	-0.118	-0.115	18.76	1.03
V318	WEST	12.76	-0.156	-0.148	12.74	1.05
V318	UP	12.52	-0.060	-0.053	12.50	1.12
V319	N36W	1.59	0.059	0.054	1.58	1.10
V319	S54W	1.61	0.042	-0.036	2.06	-1.17
V319	UP	2.03	-0.029	-0.027	2.02	1.09
V320	N45E	0.13	-0.002	-0.002	0.12	1.23
V320	N45W	0.0	0.002	0.002	0.0	0.98
V320	UP	0.03	0.002	0.002	0.94	1.31
V321	N26E	0.84	-0.089	-0.090	0.84	0.99
V321	N46W	1.19	-0.063	-0.061	1.20	1.03
V321	UP	0.70	-0.101	-0.098	0.70	1.03

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
V322	N45E	3.07	0.009	0.009	3.06	1.02
V322	N45W	1.29	-0.026	-0.025	1.26	1.02
V322	UP	4.09	0.007	-0.006	5.26	-1.06
V323	N81E	0.05	-0.018	-0.016	0.04	1.14
V323	N09W	0.03	0.019	0.019	0.02	1.00
V323	UP	1.15	-0.007	-0.006	1.14	1.15
V324	N81E	0.76	-0.015	-0.012	1.10	1.28
V324	S09E	0.23	-0.015	-0.014	0.22	1.11
V324	UP	1.20	-0.016	-0.013	1.18	1.24
V325	S09E	0.28	-0.037	-0.036	0.28	1.01
V325	S81W	0.35	0.042	0.040	0.34	1.03
V325	UP	1.17	-0.016	-0.018	1.16	0.91
V326	N26E	0.15	0.003	0.003	0.14	1.08
V326	S64E	0.43	0.004	-0.004	0.20	-1.21
V326	UP	0.31	0.003	0.002	0.28	1.14
V327	N26E	0.67	-0.009	-0.008	0.66	1.13
V327	N64W	2.96	-0.015	-0.015	2.96	1.02
V327	UP	0.76	-0.006	0.006	2.54	-1.08
V328	N45E	0.37	0.002	0.002	0.34	1.07
V328	N45W	0.60	-0.009	-0.009	0.60	0.98
V328	UP	2.15	-0.003	0.003	2.92	-0.98
V329	SOUTH	0.26	-0.171	-0.167	0.24	1.02
V329	WEST	0.13	0.093	0.089	0.10	1.05
V329	UP	1.01	-0.027	-0.025	1.00	1.08
V330	N79E	4.45	-0.046	-0.046	4.44	1.00
V330	S11E	4.32	-0.049	-0.048	4.30	1.02
V330	UP	4.52	0.016	0.013	4.50	1.19
V331	SOUTH	0.22	-0.052	-0.041	0.22	1.27
V331	EAST	0.31	-0.043	-0.037	0.30	1.19
V331	DOWN	0.41	0.032	0.027	0.40	1.20
V332	SOUTH	10.78	0.015	0.015	10.78	1.02
V332	EAST	7.03	-0.013	-0.013	7.02	1.04
V332	UP	7.01	-0.009	-0.008	7.00	1.07
V333	NORTH	1.17	0.010	-0.010	0.42	-1.07
V333	WEST	3.68	0.006	-0.006	0.80	-1.06
V333	UP	0.57	0.011	0.010	0.58	1.09
W334	S65E	1.97	0.146	0.142	1.96	1.03
W334	S25W	2.09	0.205	0.198	2.08	1.03
W334	DOWN	0.93	-0.076	-0.054	0.92	1.40
W335	S85E	0.49	0.086	-0.071	0.66	-1.20
W335	S05W	0.77	-0.057	0.056	0.44	-1.02
W335	DOWN	0.22	0.093	0.060	0.20	1.53
W336	S54E	0.77	0.062	0.057	0.76	1.09
W336	S36W	0.80	-0.073	-0.071	0.78	1.04
W336	DOWN	0.55	0.044	0.038	0.54	1.17

TABLE IV (Continued)

RECORD NUMBER	COMP.	VOLUME I		VOLUME II		I/II
		TIME	ACCEL.	ACCEL.	TIME	
W338	NORTH	1.08	-0.119	-0.116	1.06	1.03
W338	EAST	1.09	0.065	-0.059	0.94	-1.12
W338	DOWN	1.36	-0.055	-0.054	1.36	1.02
W339	SOUTH	0.50	-0.045	-0.041	0.04	1.10
W339	EAST	0.55	0.039	-0.036	0.98	-1.09
W339	UP	0.65	-0.042	-0.034	0.64	1.23
W342	NORTH	4.05	-0.020	-0.020	4.04	1.03
W342	EAST	1.15	0.023	0.019	1.14	1.23
W342	DOWN	2.09	-0.015	-0.013	2.08	1.19
W343	NORTH	2.04	-0.061	-0.055	2.04	1.11
W343	EAST	2.03	-0.038	-0.035	2.02	1.07
W343	DOWN	0.61	-0.023	-0.020	0.60	1.17
W344	S82E	3.02	0.017	-0.015	2.22	-1.14
W344	S08W	1.47	0.025	0.025	1.48	1.01
W344	DOWN	3.31	-0.017	-0.016	3.32	1.11
W345	S82E	3.25	0.026	0.026	3.24	1.02
W345	S08W	1.68	0.038	0.038	1.68	1.01
W345	DOWN	3.41	0.041	0.038	3.40	1.08
Y370	SOUTH	9.76	-0.024	-0.022	8.96	1.10
Y370	EAST	14.18	0.031	0.029	14.14	1.10
Y370	UP	12.09	-0.022	-0.022	12.06	0.99
Y371	S04E	25.62	0.013	-0.013	24.40	-0.98
Y371	S86W	23.67	0.012	0.012	23.66	1.04
Y371	UP	38.93	-0.006	-0.006	0.08	1.10
Y372	N21W	13.84	0.010	0.009	36.70	1.08
Y372	S69W	20.59	0.010	0.010	20.58	1.02
Y372	UP	27.05	0.006	0.005	27.04	1.10
Y373	S82E	3.12	0.008	0.008	3.12	1.11
Y373	S08W	0.30	-0.008	-0.007	5.00	1.09
Y373	DOWN	2.88	-0.005	-0.005	2.88	0.98
Y374	S82E	4.52	0.032	0.031	4.52	1.03
Y374	S08W	14.94	0.024	0.023	11.46	1.02
Y374	DOWN	6.61	-0.007	-0.007	8.54	1.05
Y375	NORTH	20.55	0.011	0.010	20.54	1.10
Y375	EAST	20.64	-0.011	-0.010	20.62	1.10
Y375	DOWN	24.64	-0.007	-0.007	24.64	1.07
Y376	SOUTH	16.33	-0.007	-0.007	33.60	1.04
Y376	WEST	20.91	0.010	0.010	20.90	1.02
Y376	UP	23.24	-0.004	-0.004	23.22	1.08
Y377	N52W	21.91	-0.009	0.008	22.62	-1.21
Y377	S38W	12.97	-0.013	-0.012	12.96	1.05
Y377	UP	15.86	-0.005	-0.004	23.18	1.24

TABLE IV (Concluded)

<u>RECORD NUMBER</u>	<u>COMP.</u>	IN G'S				
		VOLUME I		VOLUME II		<u>I/II</u>
		<u>TIME</u>	<u>ACCEL.</u>	<u>ACCEL.</u>	<u>TIME</u>	
Y378	S52E	1.14	0.008	0.007	1.14	1.07
Y378	S38W	1.31	-0.012	-0.012	1.32	1.01
Y378	UP	10.49	0.005	0.006	10.50	0.98
Y379	N83W	1.84	0.019	0.019	1.82	1.01
Y379	S07W	3.24	-0.019	-0.019	3.24	1.03
Y379	UP	17.87	0.008	0.007	17.88	1.07
Y380	SOUTH	23.97	-0.012	-0.011	29.64	1.05
Y380	EAST	26.62	-0.013	-0.013	26.60	1.04
Y380	UP	30.27	0.005	0.005	30.26	1.06
Y381	SOUTH	35.04	-0.032	-0.031	35.06	1.03
Y381	WEST	26.64	0.036	0.036	26.62	1.00
Y381	UP	27.18	-0.010	-0.009	27.18	1.09

TABLE V

The following standardized data reports from the Earthquake Engineering Research Laboratory can be obtained from the National Technical Information Service, Springfield, Virginia, 22121.

PART	VOLUME I	VOLUME II	VOLUME III	VOLUME IV
A	PB-287 847	PB-208 283	PB-212 602	PB-212 603
B	PB-196 823	PB-220 161	PB-221 256	PB-220 837
C	PB-204 364	PB-220 162	PB-223 025	PB-222 514
D	PB-208 529	PB-220 836	PB-227 469/AS	PB-223 969/AS
E	PB-209 749	PB-223 024	PB-227 470/AS	PB-229 240/AS
F	PB-210 619	PB-224 977/9AS	PB-227 471/AS	PB-229 241/AS
G	PB-211 357	PB-229 239/AS	PB-231 223/AS	PB-231 224/AS
H	PB-211 781	PB-231 225/AS	PB-231 319/AS	PB-232 327/AS
I	PB-213 422	PB-232 316/AS	PB-232 326/AS	PB-232 328/AS
J	PB-213 423	PB-233 257/AS	PB-236 110/AS	PB-236 111/AS
K	PB-213 424			
L	PB-215 639	PB-237 174/AS	PB-236 400/AS	
M	PB-220 554			
N	PB-223 023	PB-236 399/AS	PB-238 102/AS	PB-241 554/AS
O	PB-222 417	PB-239 586/AS		
P	PB-227 481/AS			
Q	PB-232 315/AS	PB-239 587/AS	PB-240 688/AS	PB-243 493/AS
R	PB-239 585/AS			
S	PB-241 551/AS	PB-241 552/AS	PB-241 553/AS	
T	PB-241 943/AS	PB-242 433/AS	PB-243 698/AS	
U	PB-242 262/AS	PB-242 949/AS	PB-242 950/AS	
V	PB-243 483/AS	PB-242 948/AS	PB-242 951/AS	PB-243 494/AS
W	PB-243 497/AS	PB-243 719	PB-243 492/AS	
X*	PB-243 594/AS			
Y	PB-242 947/AS			

*Part X deleted from Volumes II, III and IV (large distances from small earthquake, so signals too small to process).

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