23

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
04	MRN	001	14.5/17.1	1	2

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

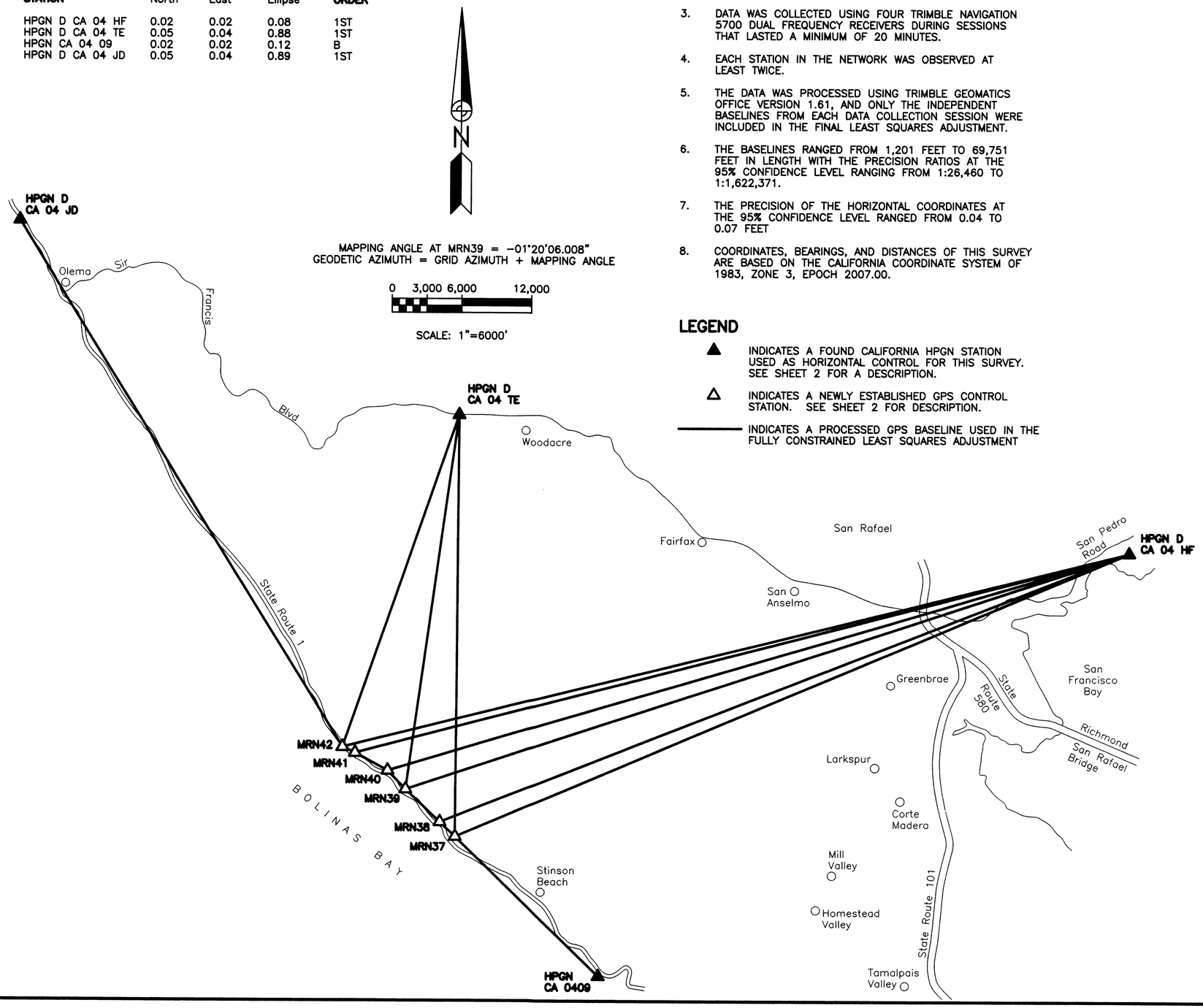
RECORD OF SURVEY

A CONTROL DIAGRAM FOR A PORTION OF STATE ROUTE 1 IN THE COUNTY OF MARIN
SHEET 1 OF 2

BASIS OF GEODETIC CONTROL

THE BASIS OF GEODETIC CONTROL FOR THIS SURVEY IS THE CALIFORNIA HIGH PRECISION GEODETIC NETWORK USING THE COORDINATES (CCS83 EPOCH 2007.00) AS PUBLISHED BY THE NATIONAL GEODETIC SURVEY FOR THE FOLLOWING STATIONS:

STATION	ACCURACY ESTIMATES (in feet) North	East	Ellipse	ORDER
HPGN D CA 04 HF	0.02	0.02	0.08	1ST
HPGN D CA 04 TE	0.05	0.04	0.88	1ST
HPGN CA 04 09	0.02	0.02	0.12	B
HPGN D CA 04 JD	0.05	0.04	0.89	1ST



NOTES

1. THE HORIZONTAL NETWORK SHOWN ON THIS RECORD OF SURVEY WAS DEVELOPED USING GLOBAL POSITIONING SYSTEM (GPS) TECHNIQUES.
2. THIS SURVEY WAS CONDUCTED IN NOVEMBER 2008.
3. DATA WAS COLLECTED USING FOUR TRIMBLE NAVIGATION 5700 DUAL FREQUENCY RECEIVERS DURING SESSIONS THAT LASTED A MINIMUM OF 20 MINUTES.
4. EACH STATION IN THE NETWORK WAS OBSERVED AT LEAST TWICE.
5. THE DATA WAS PROCESSED USING TRIMBLE GEOMATICS OFFICE VERSION 1.61, AND ONLY THE INDEPENDENT BASELINES FROM EACH DATA COLLECTION SESSION WERE INCLUDED IN THE FINAL LEAST SQUARES ADJUSTMENT.
6. THE BASELINES RANGED FROM 1,201 FEET TO 69,751 FEET IN LENGTH WITH THE PRECISION RATIOS AT THE 95% CONFIDENCE LEVEL RANGING FROM 1:26,460 TO 1:1,622,371.
7. THE PRECISION OF THE HORIZONTAL COORDINATES AT THE 95% CONFIDENCE LEVEL RANGED FROM 0.04 TO 0.07 FEET
8. COORDINATES, BEARINGS, AND DISTANCES OF THIS SURVEY ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 3, EPOCH 2007.00.

LEGEND

▲ INDICATES A FOUND CALIFORNIA HPGN STATION USED AS HORIZONTAL CONTROL FOR THIS SURVEY. SEE SHEET 2 FOR A DESCRIPTION.

△ INDICATES A NEWLY ESTABLISHED GPS CONTROL STATION. SEE SHEET 2 FOR DESCRIPTION.

——— INDICATES A PROCESSED GPS BASELINE USED IN THE FULLY CONSTRAINED LEAST SQUARES ADJUSTMENT

SURVEYOR'S STATEMENT

THIS MAP CORRECTLY REPRESENTS A SURVEY MADE BY ME OR UNDER MY DIRECTION IN CONFORMANCE WITH THE REQUIREMENTS OF THE PROFESSIONAL LAND SURVEYORS' ACT AT THE REQUEST OF THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION IN NOVEMBER 2008.

SIGNED Alvin J. Burgess
ALVIN J. BURGESS, P.L.S. 5843
LICENSE EXPIRES: 12-31-10

LICENSED LAND SURVEYOR
Alvin J. Burgess
Exp. 12-31-10
No. 5843
STATE OF CALIFORNIA

COUNTY SURVEYOR'S STATEMENT

THIS MAP HAS BEEN EXAMINED IN ACCORDANCE WITH SECTION 8766 OF THE PROFESSIONAL LAND SURVEYORS' ACT THIS 9TH DAY OF FEBRUARY, 2009.

CRAIG TACKABERY - COUNTY SURVEYOR
L.S. 7128 EXPIRES: 12-31-10

LICENSED LAND SURVEYOR
CRAIG TACKABERY
EXP 12-31-10
No. 7128
STATE OF CALIFORNIA

RECORDER'S STATEMENT

FILED THIS 13 DAY OF FEBRUARY, 2009 AT 11:02 A.M. IN BOOK 2009 OF MAPS AT PAGES 23, AT THE REQUEST OF THE COUNTY SURVEYOR.

Joan C. Thayer
JOAN C. THAYER - COUNTY RECORDER

BY: Don Wylie
DEPUTY

SERIAL NO. 2009-0006240

EXEMPT FROM RECORDING FEES PURSUANT TO GOVERNMENT CODE 27383

STATE OF CALIFORNIA BUSINESS, TRANSPORTATION AND HOUSING AGENCY DEPARTMENT OF TRANSPORTATION DISTRICT 04		Record of Survey		
DRAWN BY JTM	DATE NOV 2008	CO. MRN	RTE. 001	P.M. 14.5/17.1
CK'D BY AJB		NO. S-760.0		

23

DIST.	COUNTY	ROUTE	POST MILES	SHEET NO.	TOTAL SHEETS
04	MRN	001	14.5/17.1	2	2

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

RECORD OF SURVEY

A CONTROL DIAGRAM FOR A
PORTION OF STATE ROUTE 1
IN THE COUNTY OF MARIN
SHEET 2 OF 2

STATION	NORTHING	ERROR	EASTING	ERROR	ELEVATION	ERROR	LATITUDE	LONGITUDE	CGF
HPGN D CA 04 HF	2187424.78		5995011.48		6.89		37°59'09.43588"N	122°27'58.77999"W	0.99994227
HPGN D CA 04 TE	2199173.07		5937272.09		304.30		30°00'52.94876"N	122°40'03.22569"W	0.99993023
HPGN D CA 04 JD	2215820.71		5899392.68		28.81		38°03'28.54619"N	122°48'01.54276"W	0.99994714
HPGN CA 04 09	2150866.68		5949415.34		444.90		37°52'58.24562"N	122°37'17.83707"W	0.99991567
MRN37	2162892.84	0.07	5937056.33	0.05	12.98	0.04	37°54'54.31365"N	122°39'55.43201"W	0.99993773
MRN38	2164158.18	0.06	5935747.28	0.05	13.28	0.05	37°55'06.52039"N	122°40'12.12982"W	0.99993788
MRN39	2166954.10	0.06	5932778.83	0.04	10.55	0.05	37°55'33.47273"N	122°40'49.97875"W	0.99993840
MRN40	2168550.76	0.06	5931229.49	0.05	9.31	0.05	37°55'48.89654"N	122°41'09.77663"W	0.99993869
MRN41	2170031.55	0.06	5928423.45	0.05	7.80	0.05	37°56'02.88287"N	122°41'45.22533"W	0.99993898
MRN42	2170525.72	0.06	5927328.48	0.05	25.40	0.05	37°56'07.51299"N	122°41'59.03456"W	0.99993821

AZIMUTH PAIR	BEARING	DISTANCE	PRECISION RATIO
MRN37 – MRN38	N45°58'22"W	1820.63	1:35071
MRN39 – MRN40	N44°08'18"W	2224.82	1:47586
MRN41 – MRN42	N65°42'35"W	1201.32	1:26460

STATION DESCRIPTIONS

HPGN D CA 04 HF
FOUND A SURVEY DISK STAMPED "CA–HPGN–DENSIFICATION STA. 04–HF 1993" ENCASED IN A PVC PIPE WITH AN ACCESS COVER SET IN CONCRETE FLUSH WITH THE GROUND NEAR THE ENTRANCE TO THE MCNEAR BRICK YARD. FOR MORE INFORMATION SEE THE PUBLISHED NGS GEODETIC CONTROL DATA SHEET.

HPGN D CA 04 TE
FOUND A SURVEY DISK STAMPED "CA–HPGN–DENSIFICATION STA. 04–TE 1993" ENCASED IN A PVC PIPE WITH AN ACCESS COVER SET IN CONCRETE FLUSH WITH THE GROUND NEAR THE DRIVEWAY FOR 6100 AND 6200 SIR FRANCIS DRAKE BOULEVARD. FOR MORE INFORMATION SEE THE PUBLISHED NGS GEODETIC CONTROL DATA SHEET.

HPGN CA 04 09
FOUND A SURVEY DISK STAMPED "HPGN–CALIF. STA. 04–09 1990" ENCASED IN A PVC PIPE WITH AN ACCESS COVER SET IN CONCRETE FLUSH WITHE GROUND ALONG STATE ROUTE 1 AT POST MILE 10.62 AT A GRADED TURN OUT AND THE STATION OUT ON A ROCK OUTCROP. FOR MORE INFORMATION SEE THE PUBLISHED NGS GEODETIC CONTROL DATA SHEET.

HPGN D CA 04 JD
FOUND A SURVEY DISK STAMPED "CA–HPGN–DENSIFICATION STA. 04–JD 1993" ENCASED IN A PVC PIPE WITH AN ACCESS COVER SET IN CONCRETE FLUSH WITH THE GROUND ALONG STATE ROUTE 1 AT POST MILE 28.00 SOUTH OF THE CALTRANS MAINTENANCE STATION. FOR MORE INFORMATION SEE THE PUBLISHED NGS GEODETIC CONTROL DATA SHEET.

MRN37
SET A 1"X30" IRON PIPE IN CONCRETE WITH A 2" CALIF. DEPT. OF TRANSPORTATION BRASS DISK STAMPED "MRN 37" ALONG THE NORTHBOUND SHOULDER OF STATE ROUTE 1; 185 FEET NORTHERLY OF POST MILE MARKER 14.41; 145 FEET SOUTHERLY OF A "TURNOUT – NO PARKING ANY TIME" SIGN AND 12.7 FEET EASTERLY OF THE EDGE OF PAVEMENT.

MRN38
SET A 1"X30" IRON PIPE IN CONCRETE WITH A 2" CALIF. DEPT. OF TRANSPORTATION BRASS DISK STAMPED "MRN 38" ALONG THE SOUTHBOUND SHOULDER OF STATE ROUTE 1; 220 FEET NORTHERLY OF POST MILE MARKER 14.77; 20 FEET NORTHERLY OF A YELLOW CURVE TO THE LEFT SIGN; 4.4 FEET WESTERLY OF THE EDGE OF PAVEMENT AND 3.4 FEET NORTHEASTERLY OF A CARSONITE WITNESS POST.

MRN39
SET A 1"X30" IRON PIPE IN CONCRETE WITH A 2" CALIF. DEPT. OF TRANSPORTATION BRASS DISK STAMPED "MRN 39" ALONG THE SOUTHBOUND SHOULDER OF STATE ROUTE 1; 80 FEET NORTHERLY OF POST MILE MARKER 15.67 AND 8.0 FEET WESTERLY OF THE EDGE OF PAVEMENT.

MRN40
SET A 1"X30" IRON PIPE IN CONCRETE WITH A 2" CALIF. DEPT. OF TRANSPORTATION BRASS DISK STAMPED "MRN 40" ALONG THE SOUTHBOUND SHOULDER OF STATE ROUTE 1; 100 FEET NORTHERLY OF POST MILE MARKER 16.19 AND 18.0 FEET WESTERLY OF THE EDGE OF PAVEMENT.

MRN41
SET A 1"X30" IRON PIPE IN CONCRETE WITH A 2" CALIF. DEPT. OF TRANSPORTATION BRASS DISK STAMPED "MRN 41" ALONG THE SOUTHBOUND SHOULDER OF STATE ROUTE 1; 225 FEET SOUTHERLY OF POST MILE MARKER 16.95; 20 FEET SOUTHERLY OF A "BICYCLE – SHARE THE ROAD" SIGN AND 4.8 FEET WESTERLY OF THE EDGE OF PAVEMENT.

MRN42
SET A 1"X30" IRON PIPE IN CONCRETE WITH A 2" CALIF. DEPT. OF TRANSPORTATION BRASS DISK STAMPED "MRN 42" ALONG THE SOUTHBOUND SHOULDER OF STATE ROUTE 1; 95 FEET NORTHERLY OF A "TURNOUT – NO PARKING ANY TIME" SIGN AND 60 FEET SOUTHERLY OF A POWER POLE.

STATE OF CALIFORNIA BUSINESS, TRANSPORTATION AND HOUSING AGENCY DEPARTMENT OF TRANSPORTATION DISTRICT 04		Record of Survey		
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