

County of Orange - OC Survey

Monument Control Summary Sheet - San Diego Creek - October 2023

Narrative: The purpose of this Data is to provide Horizontal and Vertical Control in conjunction with an Exhibit and Topographic Survey. Static GPS/GNSS sessions were performed utilizing the CRTN CGPS Stations FVPK, SACY and TRAK as primary control, with SACY & TRAK being held as the Basis of Bearings . Conventional Traverse Data & supplemental GPS/GNSS Data were constrained to this Primary Control to establish Aerial Panels as Secondary Control for this project.

Field Crew: Russo/Payan **Senior Review:** M. Kubisty

CGPS STATIONS (Basis of Bearing)

Control Station Checks { } Indicates Fixed Value "*Italics*" Indicates Adjusted Value

<u>Station</u>	<u>North (ft)</u>	<u>East (ft)</u>	<u>Ellip Ht (ft)</u>	<u>Ortho Ht (ft)</u>	<u>Elevation Method</u>	<u>Δ N (ft)</u>	<u>Δ E (ft)</u>	<u>Δ Z (ft)</u>
FVPK	2188769.543	6048756.262	-35.604	80.19	3	-0.002	0.006	0.023
SACY	{2218016.191}	{6061432.266}	-34.71	80.54	3	XXX	XXX	0.099
TRAK	{2171992.613}	{6088761.216}	381.381	{495.1798}	3	XXX	XXX	XXX

Elev. Method 1: Differential Level derived elevations

Elev. Method 2: Trigonometric derived elevations using total station

Elev. Method 3: GPS/GNSS derived elevations utilizing Geoid '18

Static GPS Observed Monuments

<u>Station</u>	<u>North (ft)</u>	<u>East (ft)</u>	<u>Elevation (ft)</u>	<u>Elevation Method</u>	<u>Comb Factor</u>	<u>N σ</u>	<u>E σ</u>
1	2184168.56	6070042.36	19.80	3	0.9999739	0.0086	0.0074
2	2184244.77	6072053.61	23.22	3	0.9999738	0.0084	0.0077
3	2184298.17	6074134.02	25.82	3	0.9999737	0.0107	0.0089
4	2185256.92	6075929.49	27.11	3	0.9999739	0.0132	0.0114
5	2184483.04	6069826.28	23.87	3	0.9999738	0.0076	0.0068
6	2184594.52	6070348.28	19.08	3	0.9999741	0.0090	0.0075
7	2186825.80	6077356.61	19.70	3	0.9999746	0.0112	0.0097
8	2188305.70	6078748.64	29.55	3	0.9999746	0.0121	0.0099
9	2190273.10	6079381.53	33.10	3	0.9999749	0.0096	0.0076
10	2192171.24	6079258.03	35.24	3	0.9999754	0.0082	0.0070
11	2186080.33	6076205.36	27.37	3	0.9999741	0.0086	0.0075

Horizontal Datum = CCS NAD83, Zone VI, OCS 2017.50 Epoch Adjustment

Vertical Datum = NAVD88, 1995 OCS Adjustment

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Static GPS Observed Monuments (Cont.)								
<u>Station</u>	<u>North (ft)</u>	<u>East (ft)</u>	<u>Elevation (ft)</u>	<u>Elevation Method</u>	<u>Comb Factor</u>	<u>N σ</u>	<u>E σ</u>	
12	2187339.40	6077355.67	29.36	3	0.9999743	0.0101	0.0087	
13	2189776.34	6079002.56	33.91	3	0.9999748	0.0103	0.0089	
14	2191676.77	6079001.45	38.59	3	0.9999751	0.0109	0.0094	
15	2193065.50	6079106.97	39.89	3	0.9999754	0.0083	0.0074	
16	2193921.52	6079447.81	39.57	3	0.9999757	0.0110	0.0098	
17	2194974.02	6079634.79	40.38	3	0.9999759	0.0100	0.0081	
18	2196006.56	6080800.61	41.33	3	0.9999762	0.0107	0.0088	
19	2197257.32	6081613.47	41.39	3	0.9999766	0.0096	0.0083	
20	2198195.83	6082667.37	45.42	3	0.9999766	0.0085	0.0073	
21	2198309.36	6083268.73	51.14	3	0.9999764	0.0098	0.0083	
22	2197896.44	6084207.84	51.84	3	0.9999762	0.0088	0.0068	
23	2197352.61	6084851.85	56.66	3	0.9999759	0.0118	0.0097	
24	2196588.69	6085534.45	60.17	3	0.9999755	0.0084	0.0074	
25	2195717.49	6086742.23	70.53	3	0.9999747	0.0114	0.0103	
26	2195189.20	6087480.58	76.67	3	0.9999743	0.0103	0.0094	
27	2194780.57	6087817.98	87.62	3	0.9999736	0.0078	0.0072	
28	2194110.60	6089274.68	86.04	3	0.9999735	0.0082	0.0084	
29	2192842.73	6090405.71	95.34	3	0.9999727	0.0095	0.0071	
30	2192542.69	6092058.25	105.65	3	0.9999721	0.0139	0.0125	
31	2192151.86	6093126.69	111.06	3	0.9999718	0.0113	0.0094	
32	2191332.77	6093789.94	117.00	3	0.9999713	0.0126	0.0103	
41	2192534.52	6092055.78	107.34	3	0.9999721	0.0122	0.0105	
80	2191604.79	6079271.51	34.05	3	0.9999753	0.0089	0.0082	
2001	2184137.20	6069791.75	16.10	3	0.9999741	0.0060	0.0054	
20001	2197601.35	6082188.37	42.02	3	0.9999766	0.0079	0.0069	
20011	2196478.86	6085866.69	61.79	3	0.9999754	0.0079	0.0070	
20019	2194880.73	6088292.25	85.22	3	0.9999738	0.0072	0.0067	
20037	2192637.35	6091299.88	96.99	3	0.9999726	0.0070	0.0064	
200407	2192818.59	6079358.31	41.01	3	0.9999753	0.0060	0.0055	
200501	2184611.64	6073113.40	27.00	3	0.9999737	0.0088	0.0078	
200514	2188037.90	6078016.71	30.12	3	0.9999745	0.0060	0.0055	

Horizontal Datum = CCS NAD83, Zone VI, OCS 2017.50 Epoch Adjustment

Vertical Datum = NAVD88, 1995 OCS Adjustment

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Monument Descriptions								
Station	<u>Description</u>							
1	AT-1							
2	AT-2							
3	AT-3							
4	AT-4							
5	AT-5							
6	AT-6							
7	AT-7							
8	AT-8							
9	AT-9							
10	AT-10							
11	AT-11							
12	AT-12							
13	AT-13							
14	AT-14							
15	AT-15							
16	AT-16							
17	AT-17							
18	AT-18							
19	AT-19							
20	AT-20							
21	AT-21							
22	AT-22							
23	AT-23							
24	AT-24							
25	AT-25							
26	AT-26							
27	AT-27							
28	AT-28							
29	AT-29							
30	AT-30							

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31	AT-31
32	AT-32
41	Reach 2 CP-41
Monument Descriptions (Cont)	
Station	<u>Description</u>
80	Reach 1 CP-80
2001	FD 1" IP W/ OCS TAG R146
20001	Reach 2 CP-1
20011	Reach 2 CP-11
20019	Reach 2 CP-19
20037	FD 1" IP W/OCS TAG
200407	Description
200501	Reach 1 CP-501
200514	Reach 1 CP-514

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