

ORANGE COUNTY SURVEYOR

SURVEY NOTES

WORK ORDER NUMBER: EF21268
SURVEY FILE NUMBER: 10/11PW-OP540005
SURVEY COMPLETED: 8-16-10

ALIGNMENT INDEX BOOK & PAGE

SURVEY NOTES PAGE 2-7 OF 7

PROJECT NAME: San Diego Creek F05 Reach 2 Scour Study

SURVEY LIMITS: Station 0+00 to Station 143+31

THOMAS BROTHERS: Pg. 860 B4,C4,D5,E5,E6,F6

PURPOSE OF SURVEY: Scour Study

SURVEY NOTE PAGE INDEX:

SURVEY EQUIPMENT:

<i>Survey Summary</i>	<i>pg. 2</i>	
<i>Scour Monument List</i>	<i>pgs. 3-4</i>	
<i>Control Scheme /Alignment</i>	<i>pgs. 5-7</i>	

HORIZONTAL DATUM:

VERTICAL DATUM

<i>NAD83 OCS 1990 Adj.</i>	<i>NGVD29 OCS 1976 adj.</i>
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HORIZONTAL CONTROL POINTS:

VERTICAL CONTROL POINTS:

1. <i>Scour monuments</i>	1. <i>Scour monuments</i>
2.	2.
3.	

REFERENCES / REMARKS

PERSONNEL:

<i>B. Klingenberg</i>	<i>PC</i>
<i>R. Elgenson</i>	<i>Inst.</i>
<i>B. Murray</i>	<i>R&C</i>

THIS SURVEY WAS PERFORMED
UNDER MY DIRECTION.

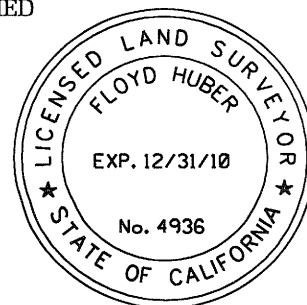
THIS SURVEY WAS PERFORMED
UNDER MY SUPERVISION.

FLOYD HUBER L.S. 4936
SENIOR LAND SURVEYOR

DATE: _____

BRITT KLINGENBERG
SURVEY PARTY CHIEF

DATE: _____



SURVEY SUMMARY

This survey was performed using two Sokkia GSR 2700 ISX GPS Rovers in conjunction with the OCRTN network and base station "TRAK" to collect cross sections on established scour stations. Local scour station monum as shown on pages 5-7 were used to insure the GPS rovers were rendering correct horizontal and vertical positions. The scour monuments were sta using Carlson SurvCE software and the Carlson Explorer 600+ data collec Horizontal positions checked within 0.15' horizontally and the H.I. was adjusted at the receiver until the elevation checked within 0.05' of th record elevation for that point. Next a different control point was sta to check that our H.I. adjustments worked with a second control point. a follow up, horizontal and vertical positioning was checked regularly other record monuments as we progressed up the channel to insure the GP unit was still getting good solutions.

Scour Stations Collected

0+00	26+00	54+00	79+00	104+61	129+00
2+00	28+00	56+00	81+00	107+14	131+00
6+00	30+00	58+00	83+02	109+00	131+91
8+00	32+00	60+00	85+00	111+00	134+66
10+00	34+00	62+50	87+25	113+00	137+14
12+00	36+00	64+50	87+88	115+00	139+00
15+00	38+00	66+00	90+42	117+00	140+90
16+00	40+00	66+72	93+00	118+30	142+52
18+00	42+00	69+28	95+00	118+82	143+31
20+00	46+00	71+00	97+00	120+85	
22+00	48+00	73+00	99+00	123+00	
23+60	50+00	75+00	101+00	125+00	
25+00	52+00	77+00	103+00	127+00	

San Diego Creek F05 Reach 2 Alignment (as shown on pgs. 5-6)

Pt#	Northing	Easting	Station	
435	2197678.257	6082097.911	0+00.00	BC
436	2197838.831	6084212.820	23+55.76	EC
433	2197098.643	6085074.845	34+91.96	angle pt
440	2195395.121	6087060.064	61+07.89	back ***
440	2195395.121	6087060.064	61+35.06	ahead ***
441	2195107.464	6087402.296	65+82.13	BC
443	2194937.678	6087749.187	69+72.19	PRC
445	2194866.240	6087985.371	72+19.22	EC
446	2194777.431	6088210.285	74+61.04	BC
448	2194315.649	6088905.552	83+01.86	EC
449	2193872.668	6089338.813	89+21.50	angle pt
450	2193526.558	6089677.328	94+05.63	BC
452	2193238.395	6090023.711	98+57.00	EC
453	2192804.635	6090669.702	106+35.11	BC
455	2192431.773	6091841.670	118+81.56	PRC
457	2191938.247	6093176.578	133+30.85	EC
458	2191696.590	6093473.276	137+13.51	BC
460	2191510.648	6093739.523	140+38.55	EC
461	2191325.547	6094051.307	144+01.14	END

*** station equation

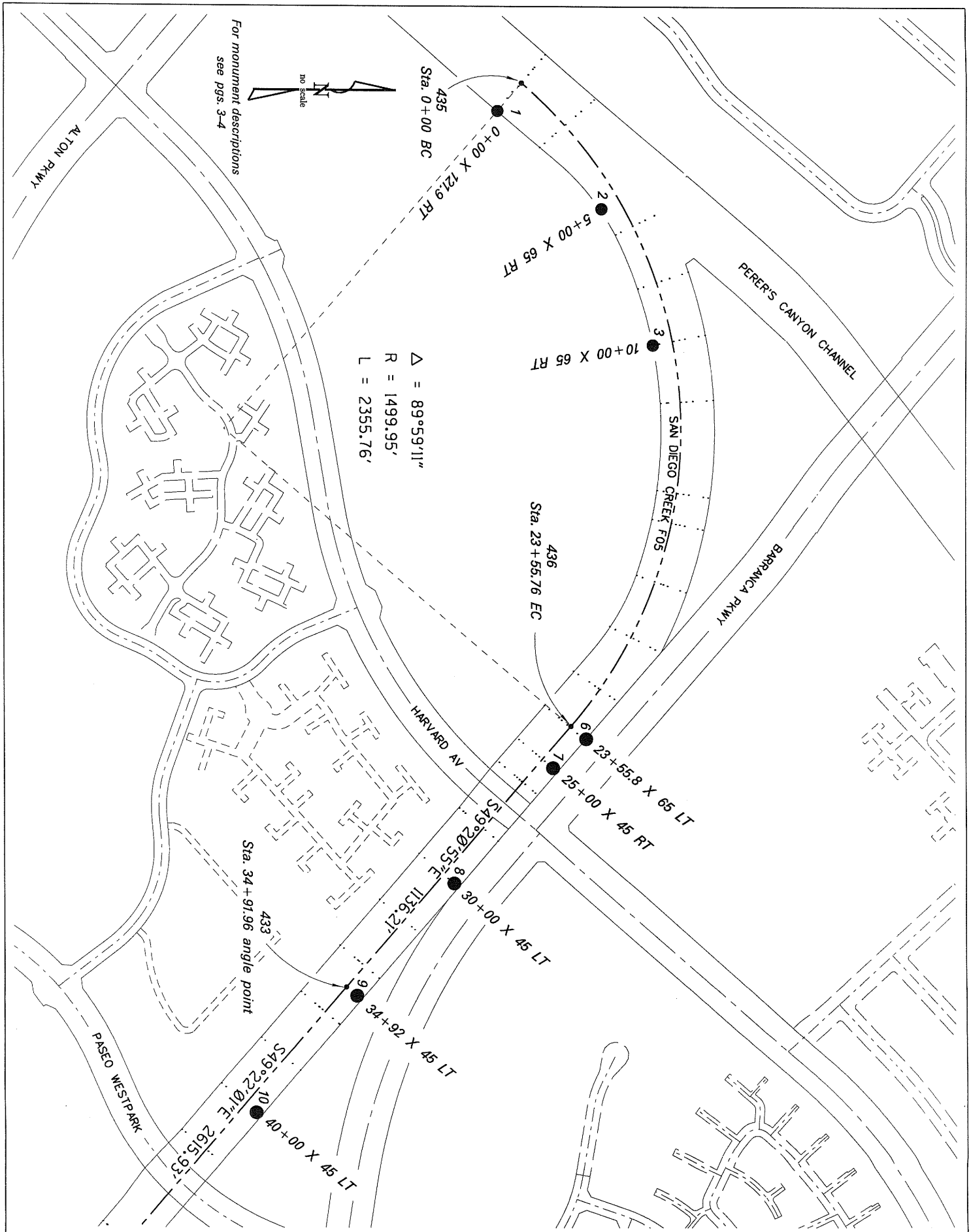
Horizontal Datum: NAD83 OCS 1990 Adj.
 Vertical Datum: NGVD29 OCS 1976 adj.

P#	North	East	Elev.	Station	X	Y	Out	Monument Description
1	2197598.78	6082190.28	40.04	0+00	x	121.9	RT	Fd 2" IP w/brass nail no tog flush
2	2197940.58	6082512.98	41.72	5+00	x	65	RT	Fd punched spike w/ 1 3/8" OCS tog flush in A/C
3	2198108.73	6082958.37	44.49	10+00	x	65	RT	Fd 2" IP w/ 2 1/2" OCS brass cap dn 0.1'
4	2198280.35	6083456.51	46.56	15+00	x	95	LT	Fd punched spike w/ 1 3/8" OCS tog flush in A/C
5	2198116.69	6083958.92	48.27	20+00	x	90	LT	Fd punched spike w/ 1 3/8" OCS tog flush in A/C
6	2197888.07	6084255.08	0.00	23+55.8	x	65	LT	Fd 1 1/2" IP w/ 2" "OCFCD" brass cap dn 1.4'
7	2197779.03	6084351.47	49.44	25+00	x	45	RT	Fd nail w/1 1/4" OCS tog flush
8	2197453.22	6084730.73	52.67	30+00	x	45	LT	Fd lead and nail w/ 1 3/8" OCS tog flush in A/C
9	2197132.72	6085103.99	55.58	34+92	x	45	LT	Fd 2" IP w/ 2 1/2" OCS brass cap dn 0.05'
10	2196801.83	6085489.38	57.67	40+00	x	45	LT	Fd punched spike w/ 1 3/8" OCS tog flush in A/C
11	2196476.12	6085868.74	59.71	45+00	x	45	LT	Fd lead and nail w/ 1 3/8" OCS tog flush in conc lining
12	2196150.42	6086248.07	63.89	50+00	x	45	LT	Fd punched spike w/ 1 3/8" OCS tog flush in A/C
13	2195498.96	6087006.73	71.01	60+00	x	45	LT	Fd punched spike w/ 1 3/8" OCS tog flush in A/C
14	2195344.00	6087167.08	53.33	62+50	x	30	LT	Fd lead and nail w/3/4" OCS tog flush
15	2195261.26	6087358.72	74.02	64+50	x	90	LT	Fd conc nail w/3/4" brass washer flush in conc lining
16	2195062.01	6087737.06	81.01	69+28	x	117.8	LT	Fd lead & 1 1/4" OCS tog stamped "69+28 118 LT" flush in conc
17	2195018.40	6087907.05	75.61	71+00	x	117.8	LT	Fd lead & 1 1/4" OCS tog stamped "71+00 118 LT" flush in conc
18	2194952.84	6088106.19	83.01	73+00	x	124.8	LT	Fd lead & 1 1/4" OCS tog stamped "73+00 125 LT" flush in conc
19	2194878.13	6088294.28	83.16	75+00	x	124.8	LT	Fd punched round head spike w/1 3/8" OCS tog stamped "75+00 125 LT" flush in A/C
20	2194786.61	6088485.96	83.16	77+00	x	124.8	LT	Fd punched round head spike w/1 3/8" OCS tog stamped "77+00 125 LT" flush in A/C
21	2194676.40	6088667.50	83.43	79+00	x	125	LT	Fd bolt w/ 1 1/2" brass washer stamped "79+00 125 LT" flush in A/C
22	2194548.58	6088837.19	83.44	81+00	x	125	LT	Fd punched round head spike w/1 3/8" OCS tog stamped "81+00 125 LT" flush in A/C
23	2194403.06	6088994.65	83.60	83+01	x	125.1	LT	Fd punched round head spike w/1 3/8" OCS tog stamped "83+01 125 LT" flush in A/C
24	2194261.48	6089133.17	83.72	85+00	x	125	LT	Fd punched bolt w/ 1 1/2" brass washer stamped "85+00 125 LT" flush in A/C
25	2194100.64	6089290.50	84.11	87+25	x	125.1	LT	Fd punched round head spike w/1 3/8" OCS tog stamped "87+25 125 LT" flush in A/C

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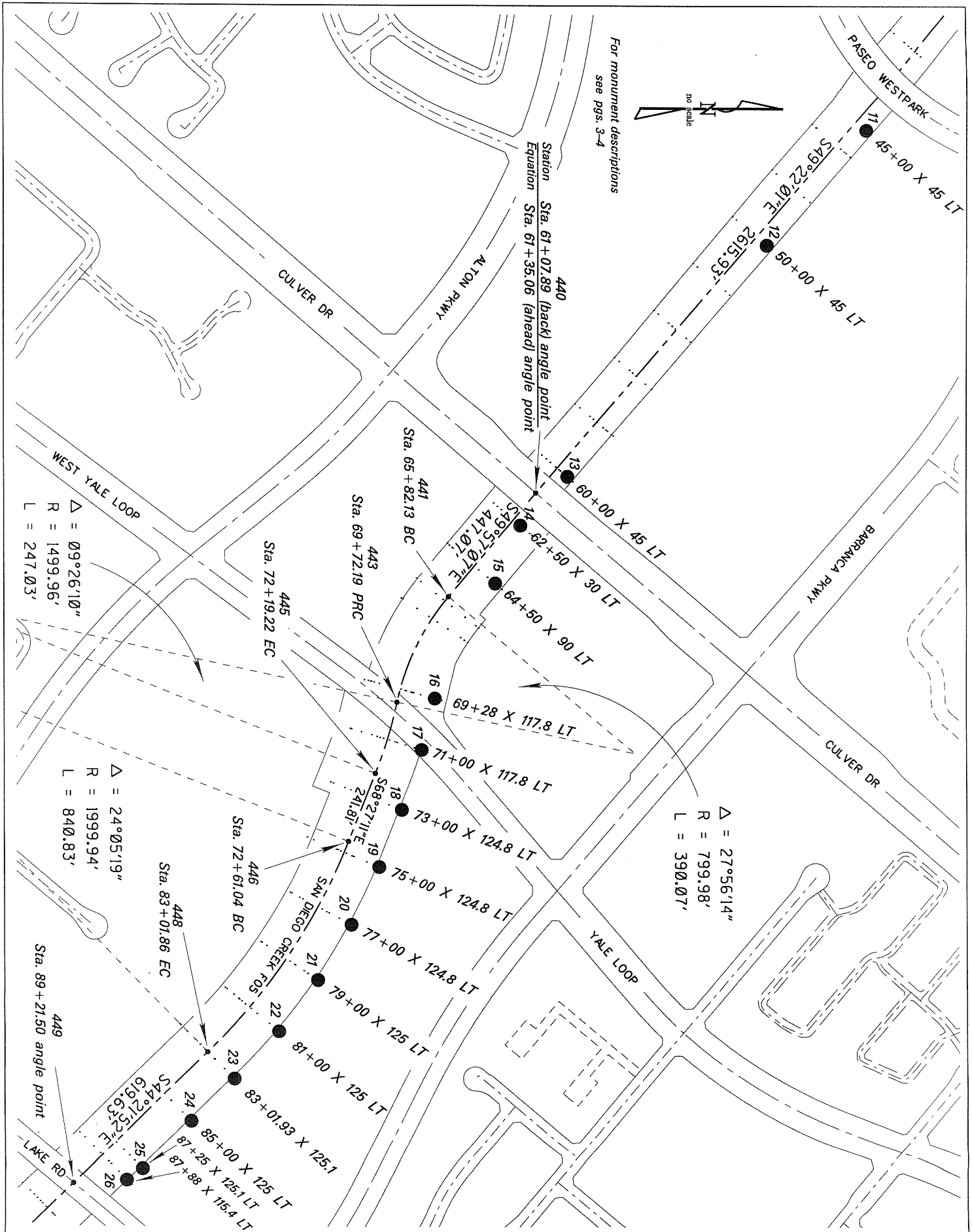
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Pt#	Northing	Easting	Elev.	Station	X	Out	Monument	Description
26	2194048.45	6089328.01	87.16	87+88	x	115.4 LT	Fd nail w/ DCS 1 1/4" tag	
27	2193866.80	6089505.58	92.64	90+42	x	115.2 LT	Fd nail w/ DCS 1 1/4" tag	
28	2193681.91	6089684.67	89.46	93+00	x	114 LT	Fd 2" IP w/tag stamped "93+00 114 LT" flush	
29	2193425.27	6089970.10	89.97	97+00	x	120 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "97+00 120 LT" flush in A/C	
30	2193314.19	6090125.95	89.59	99+00	x	120 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "99+00 120 LT" flush in A/C	
31	2193202.64	6090292.12	90.79	101+00	x	120 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "101+00 120 LT" flush in A/C	
32	2193087.00	6090455.27	91.46	103+00	x	115 LT	Fd 2" IP w/ 1 1/4" DCS tag tag stamped "103+00 115 LT" down 0.2'	
33	2192997.80	6090588.79	93.37	104+61	x	115.1 LT	Fd nail w/ 1 1/4" DCS tag tag	
34	2192859.54	6090796.66	98.83	107+14	x	114.9 LT	Fd nail w/ 1 1/4" DCS tag tag	
35	2192777.61	6090952.04	95.53	109+00	x	119.9 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "109+00 120 LT" flush in A/C	
36	2192699.64	6091124.25	95.11	111+00	x	120 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "111+00 120 LT" flush in A/C	
37	2192637.55	6091302.77	95.08	113+00	x	119.9 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "113+00 120 LT" flush in A/C	
38	2192601.74	6091488.23	96.64	115+00	x	129.9 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "115+00 130 LT" flush in A/C	
39	2192573.09	6091674.22	101.10	117+00	x	129.9 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "117+00 130 LT" flush in A/C	
40	2192551.85	6091844.47	101.19	118+82	x	120 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "118+81.75 120 LT" flush in A/C	
41	2192531.89	6092057.82	104.93	120+85	x	115.1 LT	Fd lead & tag stamped "120+85.2 115.1 LT" on conc wall	
42	2192518.80	6092285.93	106.39	123+00	x	140 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "123+00 140 LT" flush in A/C	
43	2192464.13	6092491.39	105.76	125+00	x	140 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "125+00 140 LT" flush in A/C	
44	2192391.00	6092691.07	105.73	127+00	x	140 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "127+00 140 LT" flush in A/C	
45	2192200.34	6093071.92	108.25	131+00	x	150 LT	Fd punched round head spike w/1 3/8" DCS tag stamped "131+00 150 LT" flush in A/C	
46	2192117.02	6093132.54	105.44	131+91	x	115.4 LT	Fd nail w/1 1/4" DCS tag flush on conc wall	
47	2191942.79	6093353.56	110.98	134+66	x	115.2 LT	Fd nail w/1 1/4" DCS tag flush on conc wall	
48	2191501.26	6093981.81	111.34	142+52	x	115.5 LT	Fd nail w/1 1/4" DCS tag flush on conc wall	
49	2191424.68	6094028.86	113.57	143+31	x	73.64 LT	Fd nail w/1 1/4" DCS tag flush on conc wall	



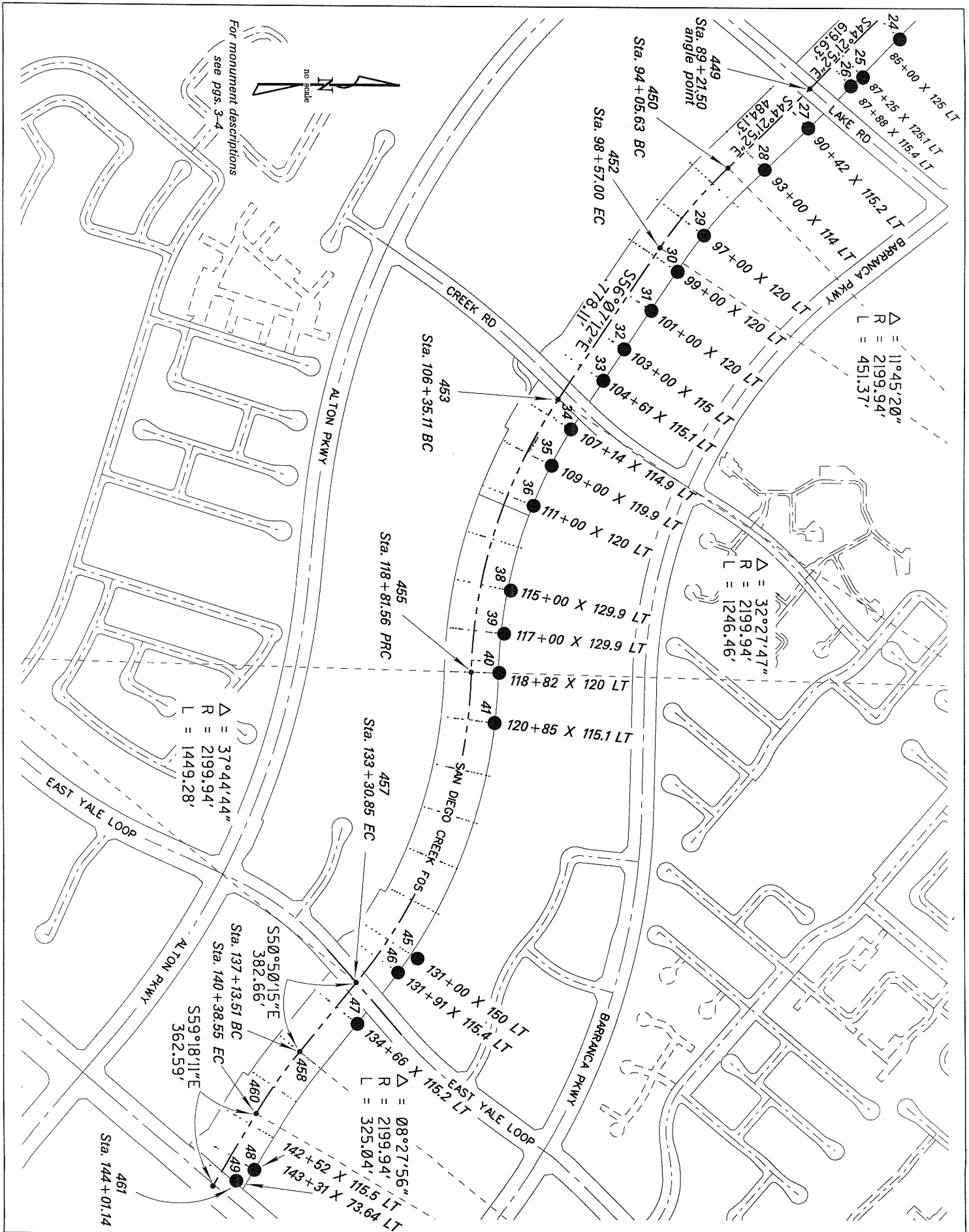
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