

LOCAL PROJECT CORRINATES U.S. SURVEY GROUND FEET			STATE PLANE COORDINATES U.S. SURVEY GROUND FEET		STATE PLANE COORDINATES (GRID METERS) NCS 1983 EAST ZONE		GEOGRAPHIC CORRINATES NAD 83 HARN BASED			LOCAL PROJECT CORRINATES U.S. SURVEY GROUND FEET			STATE PLANE COORDINATES U.S. SURVEY GROUND FEET		STATE PLANE COORDINATES (GRID METERS) NCS 1983 EAST ZONE		GEOGRAPHIC CORRINATES NAD 83 HARN BASED		
POINT	NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	LATTITUDE	LONGITUDE	DESCRIPTION	POINT	NORTHING	EASTING	NORTHING	EASTING	NORTHING	EASTING	LATTITUDE	LONGITUDE	DESCRIPTION
13	10443.390	9067.459	26814263.215	731780.093	8171228.679	222998.575	36°17'35.4248"	115°19'38.2123"	PIPE CONTROL	125	10039.481	9672.001	26813859.306	732384.635	8171105.594	223182.800	36°17'31.4153"	115°19'30.8418"	C/L SWALE
14	10521.866	9733.729	26814341.691	732446.363	8171252.594	223201.610	36°17'36.1832"	115°19'30.0721"	PIPE CONTROL	126	10023.364	8937.840	26813843.189	731650.474	8171100.683	222959.076	36°17'31.2752"	115°19'39.8090"	C/L SWALE
15	10019.011	9726.900	26813836.836	732439.534	8171099.356	223199.529	36°17'31.2115"	115°19'30.1719"	PIPE CONTROL	127	10091.931	8608.821	26813911.756	731321.455	8171121.578	222858.812	36°17'31.9617"	115°19'43.8253"	C/L INTERSECTION
16	10019.820	9763.755	26813839.645	732476.389	8171099.603	223210.760	36°17'31.2185"	115°19'29.7218"	PIPE CONTROL	128	10101.715	9054.456	26813921.540	731767.090	8171124.559	222994.612	36°17'32.0469"	115°19'38.3822"	C/L INTERSECTION
17	10030.950	9860.704	26813850.775	732573.338	8171102.995	223240.304	36°17'31.3260"	115°19'28.5394"	PIPE CONTROL	129	10437.967	9047.074	26814257.792	731759.708	8171227.027	222992.363	36°17'35.3717"	115°19'38.4615"	C/L
18	10031.078	9866.532	26813850.903	732579.166	8171103.034	223242.080	36°17'31.3271"	115°19'28.4661"	PIPE CONTROL	130	10551.655	9007.069	26814371.480	731719.703	8171261.671	222980.172	36°17'36.4968"	115°19'38.9464"	RADIUS POINT
19	10046.324	9878.201	26813866.149	732590.835	8171107.680	223245.636	36°17'31.4775"	115°19'28.3231"	PIPE CONTROL	131	10094.711	9646.158	26813914.536	732358.792	8171122.425	223174.924	36°17'31.9621"	115°19'31.1556"	C/L
20	10040.326	9878.332	26813860.151	732590.966	8171105.852	223245.676	36°17'31.4182"	115°19'28.3217"	PIPE CONTROL	132	10121.468	9678.531	26813941.293	732391.165	8171130.578	223184.790	36°17'32.2258"	115°19'30.7594"	C/L
21	10456.338	9657.256	26814276.163	732369.890	8171232.625	223178.306	36°17'35.5373"	115°19'31.0083"	PIPE CONTROL	133	10505.288	9912.636	26814325.113	732625.270	8171247.542	223256.129	36°17'36.0146"	115°19'27.8876"	C/L
86	9970.153	8640.423	26813789.978	731353.057	8171084.468	222868.442	36°17'30.7569"	115°19'43.4432"	W 1/16	134	10076.368	9826.698	26813896.193	732539.332	8171116.835	223229.941	36°17'31.7759"	115°19'28.9512"	C/L
101	10132.079	9841.430	26813951.904	732354.064	8171133.812	223173.484	36°17'32.3317"	115°19'31.2121"	COR RSRVR	135	10106.328	8695.092	26813926.153	731407.726	8171125.965	222885.102	36°17'32.1018"	115°19'42.7711"	BC
102	10450.836	9634.433	26814270.661	732347.067	8171230.948	223171.351	36°17'35.4835"	115°19'31.2872"	COR RSRVR	136	10081.334	8695.641	26813901.159	731408.275	8171118.349	222885.269	36°17'31.8547"	115°19'42.7652"	BC
103	10438.545	9074.568	26814258.370	731787.202	8171227.203	223000.741	36°17'35.3767"	115°19'38.1257"	COR RSRVR	137	10133.932	9041.245	26813953.757	731753.879	8171134.377	222990.587	36°17'32.3657"	115°19'38.5425"	BC
104	10119.789	9081.565	26813939.614	731794.199	8171130.067	223002.874	36°17'32.2248"	115°19'38.0505"	COR RSRVR	138	10133.401	9066.263	26813953.226	731778.897	8171134.215	222998.210	36°17'32.3598"	115°19'38.2370"	BC
105	10035.000	9999.630	26813854.825	732712.264	8171104.229	223282.639	36°17'31.3624"	115°19'26.8404"	ROW	139	10089.213	9054.519	26813909.038	731767.153	8171120.749	222994.632	36°17'31.9232"	115°19'38.3818"	BC
106	10631.077	8661.081	26814450.902	731373.715	8171285.874	222874.738	36°17'37.2911"	115°19'43.1697"	OUTSIDE CORNER BLOCK WALL	140	10112.761	9775.887	26813932.586	732488.521	8171127.925	223214.457	36°17'32.1371"	115°19'29.5706"	BC
107	10662.771	9991.983	26814482.596	732704.617	8171295.532	223280.309	36°17'37.5695"	115°19'26.9133"	OUTSIDE CORNER BLOCK WALL	141	10261.045	9907.496	26814080.870	732620.130	8171173.112	223254.563	36°17'33.5998"	115°19'27.9583"	BC
108	10035.978	9998.619	26813855.803	732711.253	8171104.527	223282.331	36°17'31.3721"	115°19'26.8527"	OUTSIDE CORNER BLOCK WALL	142	10246.877	9832.121	26814066.702	732544.755	8171168.795	223231.594	36°17'33.4617"	115°19'28.8794"	BC
109	10007.868	8718.149	26813827.693	731430.783	8171095.961	222892.128	36°17'31.1277"	115°19'42.4927"	OUTSIDE CORNER BLOCK WALL	143	10409.328	9911.012	26814229.153	732623.646	8171218.299	223255.634	36°17'35.0658"	115°19'27.9105"	BC
110	10055.715	8698.540	26813875.540	731411.174	8171110.542	222886.153	36°17'31.6013"	115°19'42.7307"	OUTSIDE CORNER BLOCK WALL	144	10519.383	9962.338	26814339.208	732674.972	8171251.837	223271.275	36°17'36.1526"	115°19'27.2801"	BC
111	10079.803	8698.012	26813899.628	731410.646	8171117.882	222885.992	36°17'31.8395"	115°19'42.7363"	OUTSIDE CORNER BLOCK WALL	145	10248.141	9828.927	26814067.966	732541.561	8171169.180	223230.620	36°17'33.4743"	115°19'28.9184"	BLDG COR
112	10107.963	8697.393	26813927.788	731410.027	8171126.463	222885.803	36°17'32.1179"	115°19'42.7430"	OUTSIDE CORNER BLOCK WALL	146	10348.678	9897.597	26814168.503	732610.231	8171199.817	223251.547	36°17'34.4665"	115°19'28.0764"	ANTENNA
113	10126.007	8696.997	26813945.832	731409.631	8171131.962	222885.682	36°17'32.2964"	115°19'42.7472"	OUTSIDE CORNER BLOCK WALL	147	10456.0170	9010.1690	26814275.8420	731722.8030	8171232.5271	222981.1166	36°17'35.5511"	115°19'38.9116"	C/L SWALE
114	10142.484	8667.459	26813962.308	731380.093	8171136.983	222876.681	36°17'32.4600"	115°19'43.1075"	OUTSIDE CORNER BLOCK WALL	148	10039.4280	8983.9930	26814318.7100	731696.6270	8171245.5905	222973.1399	36°17'35.9809"	115°19'39.2421"	C/L SWALE
115	10629.689	8924.533	26814449.514	731637.167	8171285.451	222955.020	36°17'37.2705"	115°19'39.9520"	C/L SWALE	149	10348.678	9019.3140	26813859.2530	731731.9480	8171105.5781	222983.9034	36°17'31.4319"	115°19'38.8134"	C/L X-GUTTER
116	10652.376	9877.622	26814472.201	732590.256	8171292.365	223245.460	36°17'37.4698"	115°19'28.3104"	C/L SWALE	150	10411.0040	9717.7970	26814230.8290	732430.4310	8171218.8101	223196.7552	36°17'35.0875"	115°19'30.2704"	C/L X-GUTTER
117	10555.463	9979.949	26814375.288	732692.583	8171262.832	223276.642	36°17'36.5089"	115°19'27.0638"	C/L SWALE	151	10222.0400	9997.6490	26814041.8650	732710.2830	8171161.2263	223282.0358	36°17'33.2117"	115°19'26.8585"	C/L X-GUTTER
118	10066.132	9985.130	26813885.957	732697.764	8171113.716	223278.221	36°17'31.6706"	115°19'27.0165"	C/L SWALE	152	10168.8630	9984.0420	26813988.6880	732696.6760	8171145.0214	223277.8892	36°17'32.6863"	115°19'27.0264"	C/L X-GUTTER
119	10045.925	9965.570	26813865.750	732678.204	8171107.558	223272.260	36°17'31.4713"	115°19'27.2561"	C/L SWALE	315	10000.000	10000.000	26813819.825	732712.634	8171093.563	223282.752	36°17'31.0163"	115°19'26.8370"	1/4 COR
120	10041.161	9748.528	26813860.986	732461.162	8171106.106	223206.120	36°17'31.4299"	115°19'29.9071"	C/L SWALE	500	10663.795	9992.973	26814483.620	732705.607	8171295.844	223280.611	36°17'37.5796"	115°19'26.9012"	1/64
121	10043.126	9739.424	26813862.951	732452.058	8171106.705	223203.346	36°17'31.4496"	115°19'30.0182"	C/L SWALE	501	10371.342	9758.586	26814191.167	732471.220	8171206.724	223209.185	36°17'34.6943"	115°19'29.7735"	CONTROL
122	10045.092	9730.328	26813864.917	732442.962	8171107.304	223200.574	36°17'31.4693"	115°19'30.1292"	C/L SWALE	502	10631.392	8631.739	26814451.217	731344.373	8171285.970	222865.796	36°17'37.2950"	115°19'43.5280"	1/64
123	10044.207	9690.009	26813864.032	732402.643	8171107.035	223188.287	36°17'31.4616"	115°19'30.6217"	C/L SWALE	503	10435.036	8810.688	26814254.861	731523.322	8171226.134	222920.328	36°17'35.3489"	115°19'41.3487"	CONTROL
124	10041.844	9681.007	26813861.669	732393.641	8171106.314	223185.544	36°17'31.4384"	115°19'30.7317"	C/L SWALE										

ENVELOPING EXTERIOR CONTROL

THE FOLLOWING GEODETIC CONTROL POINTS WERE USED TO DERIVE THE STATE PLANE COORDINATES USED FOR THIS SURVEY.

NAME	LOCAL PROVENANCE
CLARK COUNTY GIS POINT 801	RECORD OF SURVEY FILE 88 PAGE 53
CLARK COUNTY GIS POINT 806	RECORD OF SURVEY FILE 88 PAGE 53

TRANSFORMATION / CONVERSION FACTORS:

1. PROJECT COMBINED FACTORS:
GROUND TO GRID: 0.99978281;
GRID TO GROUND: 1.00021724
2. EAST OF CENTRAL MERIDIAN ROTATIONAL PARAMETER: 00°00'00" CLOCKWISE FROM THIS PROJECT CARTESIAN COORDINATE SYSTEM TO THE STATE PLANE GRID SYSTEM.
3. ENGLISH/METRIC CONVERSIONS:

METERS = $\frac{3937}{1200}$ = U.S. SURVEY FEET
U.S. SURVEY FEET X $\frac{1200}{3937}$ = METERS

2D CONFORMAL TRANSFORMATION PARAMETERS

- EQUATIONS: $ax - by + Tx = X2 + vx$; $bx + ay + Ty = Y2 + vy$
1. WHERE: (X2,Y2) ARE STATE PLANE VALUES AND (x,y) ARE PROJECT COORDINATES.
2. $a = 0.99978281$; $b = -0.00000001$; $Tx = 722555.6880$; $Ty = 26797998.3034$
WHERE Tx AND Ty ARE GRID TRANSFORMATIONAL FACTORS
3. ROTATION = 00°00'00"
4. SCALE: 0.99978281
5. v = PRECISION FOR A COMMON SET OF MEASUREMENT DATA (VARIANCE).

Avoid cutting underground utility lines. It's costly.

Call before you Dig

1-800-227-2600

Avoid overhead power line contact. It's costly.

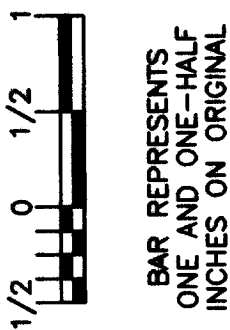
Call before you OVERHEAD

1-702-593-6111

CLV DWG # 565-413
CLV CIVL SHT 11 OF 33

LAS VEGAS VALLEY WATER DISTRICT

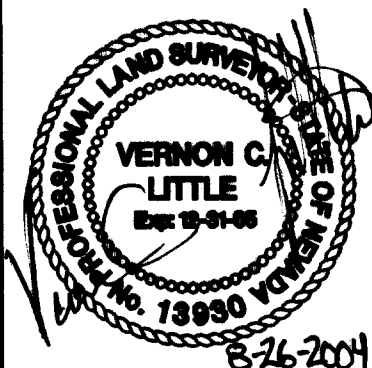
VERIFY SCALE



HORIZONTAL CONTROL COORDINATES

ELKHORN 2975 ZONE RESERVOIR AND 3090 ZONE AND 3205 ZONE PUMPING STATIONS

DRAWN BY: J. BENZA	04/15/04
CHECKED BY: V. LITTLE	04/15/04
RECOMMENDED BY: JOSEPH Y. LIN	DATE
ACCEPTED BY: PETER J. JAUCH	DATE



CONTRACT NUMBER

C1107
DRAWING NUMBER SV 4
SHEET 11 OF 224

SCALE

F:\388-892\dwg\improv\CIVL\C1107-008-SV4.dwg 03-12-04 10-43-03 ranger

G.C. WALLACE, INC.
Engineers/Planners/Surveyors
1555 SOUTH RAINBOW BLVD./LAS VEGAS, NEVADA 89146
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