Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

SURVEY NOTES

NORTHERN AVENUE BRIDGE OVER THE NEW RIVER

CONTRACT NO. FCD 89-04

BRW

PLANNING
TRANSPORTATION
ENGINEERING
URBAN DESIGN

BRW, INC.
2700 NORTH CENTRAL AVENUE, SUITE 1000, PHOENIX, AZ 85004

FLOOD CONTROL DISTRICT of MARICOPA COUNTY

NORTHERN AVENUE BRIDGE

OVER THE NEW RIVER

Contract No. FCD 89-04

Survey Notes

BRW, Inc.
2700 North Central Avenue
Suite 1000
Phoenix, Arizona 85004

Submitted
October 10, 1989

SURVEY NOTES
NORTHERN AVENUE BRIDGE
OVER THE NEW RIVER

TABLE OF CONTENTS

SECTION	PAGE
Cross Section and Topo Notes	1 thru 12
Bench Loop	13 thru 16
Offset Control	17

S R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
10	5,462.85000	0.00000	1077	99 NTHN
11	2,837.07000	0.00000	------	103 NTHN
12	5,400.00000	20.00000	1076.84	TOPO STA
13	4,650.00000	20.00000	1069.43	TOPO STA
14	4,000.00000	20.00000	1078.73	TOPO STA
15	4,322.59500	19.99500	1077.76	TOPO STA
20	3,499.95500	1.30000	1079.75	CRWN LN
21	3,500.53000	31.89500	1079.155	EP
22	3,500.79500	45.45000	1078.865	TOE
23	3,500.54000	50.05000	1080.99	TB
24	3,500.01000	55.24500	1077.94	TOE
25	3,499.53000	104.12000	1077.145	GND
26	3,499.94000	-13.55000	1079.28	EP
27	3,499.53000	-23.79500	1078.555	TOE
28	3,499.63500	-29.05500	1080.76	TB
29	3,500.11000	-47.29500	1081.84	GB
30	3,499.37500	-100.48000	1081.33	GND
31	3,541.52000	31.81500	1079.12	●REFLECTR
32	3,549.67500	0.82000	1079.64	CRWN LN
33	3,549.70000	29.69500	1079.19	EP
34	3,550.08000	44.55500	1078.41	TOE
35	3,549.62500	50.24500	1080.765	TB
36	3,549.88500	56.07500	1077.745	TOE
37	3,551.40000	99.35000	1077.325	GND
38	3,549.24000	-14.07000	1079.24	EP
39	3,549.41000	-24.07500	1078.215	TOE
40	3,549.13000	-29.12000	1080.515	TB
41	3,548.97000	-46.51500	1081.635	GB
42	3,549.75000	-99.71500	1081.26	GND
43	3,591.15000	30.70500	1079.12	●REFLECTR
44	3,599.61500	0.28000	1079.6	CRWN LN
45	3,600.48500	28.42500	1079.18	EP
46	3,599.94000	44.22000	1078.52	TOE
47	3,600.16000	49.05000	1080.97	TB
48	3,599.83000	55.43500	1077.67	TOE
49	3,600.75000	100.51000	1077.005	GND
50	3,599.64500	-14.25000	1079.265	EP
51	3,599.26500	-20.81500	1078.96	TB
52	3,599.14000	-23.58500	1078.165	TOE
53	3,599.03000	-29.61000	1080.815	TB
54	3,598.07000	-46.51000	1081.54	GB
55	3,599.55500	-99.50500	1081.47	GND
56	3,640.57000	29.45000	1079.055	●REFLECTR
57	3,649.93500	-0.08500	1079.65	CRWN LN
58	3,649.72500	27.84000	1079.14	EP

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
59	3,649.51500	44.49000	1078.37	TOE
60	3,648.99000	50.15000	1080.69	TB
61	3,648.15000	56.14000	1077.615	TOE
62	3,649.36000	99.34500	1077.935	GND
63	3,649.86000	-14.21500	1079.28	EP
64	3,649.61000	-20.85500	1078.765	TB
65	3,650.79000	-23.27000	1077.77	TOE
66	3,650.88500	-29.49000	1080.77	TB
67	3,650.46500	-46.13000	1081.355	GB
68	3,649.80000	-100.27000	1080.63	GND
69	3,656.83500	32.11000	1079.345	GUY TO E
70	3,684.73020	32.27217	1079.335	POL E UG
71	3,690.13500	27.84500	1079.22	REFLECTR
72	3,699.90000	0.00500	1079.69	CRWN LN
73	3,701.04500	26.77000	1079.15	EP
74	3,701.03500	44.46000	1078.375	TOE
75	3,701.01500	49.32000	1080.755	TB
76	3,702.12000	54.31000	1077.7	TOE
77	3,701.26500	87.78000	1077.25	TOE STPL
78	3,670.89000	99.50000	1077.355	TOE STPL
79	3,736.35000	18.21500	1079.435	W VALVE
80	3,736.30500	18.12500	1078.12	TOP NUT
81	3,739.92000	26.71000	1079.28	REFLECTR
82	3,750.01000	0.06500	1079.63	CRWN LN
83	3,750.19000	25.52000	1079.33	EP
84	3,750.17000	45.27500	1076.345	CL CDTCH
85	3,750.34500	51.14000	1079.835	TB
86	3,749.79500	55.22000	1077.45	TOE
87	3,749.45500	100.36000	1076.935	GND
88	3,715.72500	100.39500	1077.21	TOE STPL
89	3,789.14000	25.39500	1079.175	REFLECTR
90	3,799.80500	0.34500	1079.635	CRWN LN
91	3,799.87000	24.28500	1079.165	EP
92	3,802.84000	47.87000	1078.655	TOE
93	3,800.69000	51.29500	1080.3	TB
94	3,799.83500	56.04000	1077.715	TOE
95	3,800.00000	100.00000	1077.05	GND
96	3,799.61500	-13.71500	1079.015	EP
97	3,799.56000	-19.70000	1078.98	TB
98	3,799.48000	-23.54000	1077.29	TOE
99	3,799.50500	-30.26000	1079.86	TB
100	3,799.39000	-45.91500	1081.095	GB
101	3,799.76000	-99.89000	1080.3	GND
102	3,850.59500	-0.07500	1079.535	CRWN LN
103	3,851.33000	22.84000	1079.115	EP

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
104	3,851.66500	43.44000	1078.87	TOE
105	3,851.72500	49.23500	1081.5	TB
106	3,851.82000	55.90500	1077.965	TOE
107	3,850.66000	99.91500	1077.5	GND
108	3,850.19500	-13.88500	1079.005	EP
109	3,850.17000	-20.20500	1078.755	TB
110	3,850.12000	-24.01000	1077.325	TOE
111	3,850.08000	-30.40500	1080.015	TB
112	3,849.30500	-45.15500	1081.255	GB
113	3,849.85000	-99.94000	1079.815	GND
114	3,873.33500	-101.56500	1079.58	BEG STPL
115	3,888.51500	23.52500	1078.82	REFLECTR
116	3,900.20000	-0.04500	1079.47	CRWN LN
117	3,900.16000	22.45500	1078.815	EP
118	3,900.44500	45.44000	1076.405	CL CDTCH
119	3,900.83000	53.08500	1080.855	TB
120	3,899.02500	55.86500	1078.23	TOE
121	3,900.00000	100.16000	1077.4	GND
122	3,899.98000	-13.50000	1078.935	EP
123	3,900.21000	-19.93000	1078.695	TB
124	3,900.10000	-23.82000	1077.16	TOE
125	3,899.98000	-30.56000	1079.665	TB
126	3,899.65500	-45.43500	1080.99	GB
127	3,896.74500	-89.58000	1079.175	TOE STPL
128	3,937.78500	22.45500	1078.82	REFLECTR
129	3,950.25500	0.16000	1079.405	CRWN LN
130	3,950.72500	21.52000	1078.73	EP
131	3,951.04500	48.50000	1078.345	TOE
132	3,951.07500	51.67500	1079.9	TB
133	3,950.78500	56.30500	1077.51	TOE
134	3,950.40000	100.50000	1077.255	GND
135	3,949.94000	-13.88000	1078.91	EP
136	3,950.20000	-18.85500	1078.585	TB
137	3,950.01000	-23.27500	1077.65	TOE
138	3,950.11500	-29.78500	1079.31	TB
139	3,949.32500	-44.25500	1080.795	GB
140	3,948.92000	-85.56500	1079.045	TOE STPL
141	3,948.33000	-23.61500	1077.71	SPEED SN
142	3,961.51000	-23.60000	1077.965	FL121RCP
143	3,976.65500	-23.61000	1079.515	CL GVLDR
144	3,988.31000	-100.02000	1079.35	END STPL
145	3,999.12500	-23.34500	1077.9	FL121RCP
146	4,000.00000	-0.02000	1079.345	CRWN LN
147	4,000.00000	21.00000	1078.71	EP
148	3,999.87500	48.29500	1078.06	TOE

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
149	3,999.95500	51.77000	1080.21	TB
150	4,000.61500	57.01500	1076.87	TOE
151	3,999.82500	100.37500	1077.36	GND
152	3,999.77500	-13.72500	1078.84	EP
153	4,000.26500	-21.22000	1078.235	TB
154	3,999.97000	-23.49500	1077.67	TOE
155	3,999.96000	-30.58500	1079.635	TB
156	4,000.87000	-44.68000	1081.145	GB
157	4,001.70500	-101.87000	1079.625	GND
158	4,031.19000	67.77500	1077.285	ELEC MTR
159	4,047.67673	32.40454	1079	POL EWUG
160	4,037.38000	20.73000	1078.935	REFLECTR
161	4,049.90000	0.11500	1079.1	CRWN LN
162	4,049.96000	20.28000	1078.615	EP
163	4,051.99500	47.07500	1078.615	TOE
164	4,051.88000	50.61500	1080.185	TB
165	4,051.12000	55.14500	1077.965	TOE
166	4,050.31000	100.09000	1077.97	GND
167	4,050.04500	-13.40000	1078.66	EP
168	4,050.56000	-21.12000	1078.03	TB
169	4,050.55000	-23.56500	1077.12	TOE
170	4,050.43500	-30.29500	1079.36	TB
171	4,050.68500	-42.78500	1080.91	GB
172	4,049.94500	-99.84500	1080.31	GND
173	4,056.15000	50.41500	1078.915	END TOE
174	4,069.69500	52.81500	1078.61	CL30FGAT
175	4,096.07000	38.05000	1081.07	30ISTRIP
176	4,096.22500	36.67500	1078.89	GND
177	4,096.83000	34.56000	1078.47	YIELD SN
178	4,099.99000	-0.04500	1078.855	CL
179	4,100.60000	18.71000	1078.385	EP
180	4,100.03000	64.27000	1076.82	GB
181	4,100.73000	100.18000	1078.055	GND
182	4,099.86500	-13.69500	1078.56	EP
183	4,100.10500	-21.25500	1077.96	TB
184	4,100.25000	-23.72000	1076.835	TOE
185	4,100.27500	-30.95000	1079.24	TB
186	4,099.94000	-45.21500	1081.17	GB
187	4,099.57000	-100.03500	1080.195	GND
188	4,149.92500	0.01000	1078.715	CL
189	4,150.18500	17.81500	1078.34	EP
190	4,150.42000	61.49500	1076.535	GB
191	4,151.00500	100.78500	1077.645	GND
192	4,150.25500	-13.85000	1078.385	EP
193	4,150.31000	-21.30500	1077.84	TB

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1391

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
194	4,150.21500	-24.46500	1076.78	TOE
195	4,150.61000	-31.30000	1079.075	TB
196	4,150.39000	-47.00000	1081.075	GB
197	4,148.46000	-100.27000	1080.355	GND
198	4,199.84000	-0.06000	1078.65	CL
199	4,200.14000	17.76000	1078.18	EP
200	4,199.34500	57.20500	1076.39	GP
201	4,201.48000	104.85500	1078.33	GND
202	4,199.76000	-14.74000	1078.33	EP
203	4,199.87000	-21.34500	1077.74	TB
204	4,200.00500	-24.11000	1076.56	TOE
205	4,200.40500	-30.27000	1078.72	TB
206	4,198.90000	-46.21500	1079.77	GB
207	4,200.26000	-100.50000	1080.535	GND
208	4,245.39500	25.52000	1077.945	CL5f SIN
209	4,250.18500	0.09500	1078.525	CL
210	4,250.98500	16.71500	1078.115	EP
211	4,253.10500	57.12500	1076.65	GB
212	4,253.73000	100.75000	1074.935	GND
213	4,249.91500	-14.05000	1078.305	EP
214	4,250.38500	-20.82000	1078.065	TB
215	4,250.57000	-24.30000	1076.83	TOE
216	4,250.68000	-29.63500	1078.275	TB
217	4,250.25500	-47.24000	1078.7	GB
218	4,250.02000	-99.96000	1080.415	GND
219	4,282.49000	-24.36500	1076.615	FL24iCMP
220	4,292.67000	-24.19000	1079.045	CL16fDR
221	4,294.07500	-48.41000	1080.09	CL7fLIFT
222	4,292.51500	-48.49500	1080.085	SAN MH
223	4,297.93000	-46.67000	1080.08	2X1C BOX
224	4,297.94500	-53.42000	1079.985	ELEC BOX
225	4,301.52000	-48.74000	1082.35	LIFT STA
226	4,303.12000	-48.18500	1079.61	GND
227	4,299.95000	-0.33500	1078.2	CL
228	4,300.31500	15.18000	1077.92	EP
229	4,299.04000	47.30500	1075.17	CLCDTCH
230	4,301.04000	62.95000	1077.045	GND
231	4,302.77500	100.02500	1077.525	GND
232	4,299.96500	-14.16000	1077.885	EP
233	4,299.59500	-28.89500	1079.15	GB
234	4,300.43500	-101.31500	1080.87	GND
235	4,302.41000	-23.83000	1076.405	FL24iCMP
236	4,306.71500	25.23500	1077.715	NWRVR SN
237	4,308.40000	-46.50000	1075.315	TOP NUT
238	4,308.35500	-46.55000	1079.61	SWR VLV?

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
239	4,311.13419	31.85196	1077.76	POL WN
240	4,312.49902	-32.24581	1079.085	POL NS
241	4,313.96230	-49.30425	1079.43	MPOL UGS
242	4,331.05017	-36.94429	1079.215	PV TREE
243	4,336.01500	31.69000	1077.915	BUY TO W
244	4,345.82000	32.27000	1077.62	SIGN
245	4,350.02500	0.30500	1077.76	CL
246	4,350.21000	14.90000	1077.7	EP
247	4,354.93500	39.75000	1077.46	TOE
248	4,349.68000	56.16500	1078.11	TOE
249	4,369.55000	59.05000	1077.005	TOE
250	4,358.33000	60.02000	1081.18	TB
251	4,358.69000	74.90500	1077.46	TOE
252	4,350.35500	-14.08000	1077.29	EP
253	4,350.26000	-25.95500	1075.9	TOE
254	4,350.99500	-35.77500	1079.495	TB
255	4,350.00500	-100.78500	1079.97	BND
256	4,375.32500	64.73000	1077.12	TOE
257	4,375.32000	71.62500	1079.615	TB
258	4,375.24500	78.88500	1077.37	TOE
259	4,399.84000	-0.03500	1077.135	CL
260	4,399.89000	15.88000	1076.985	EP
261	4,397.87000	59.21500	1077.05	TOE
262	4,396.97500	67.94500	1079.45	TB
263	4,396.04500	75.07500	1077.44	TOE
264	4,399.53500	-14.08500	1076.975	EP
265	4,398.73000	-24.10000	1075.075	TOE
266	4,384.50500	-35.30000	1079.645	TB AP
267	4,379.50500	-102.86500	1081.61	TB
268	4,397.62500	-102.74000	1076.14	TOE
269	4,405.17000	-32.64000	1076.84	TOE@TB
270	4,428.11000	42.29000	1077.53	TOE
271	4,428.34000	62.58500	1084.145	TB
272	4,426.61000	78.60000	1077.9	TOE
273	4,449.88500	0.46000	1076.145	CL
274	4,449.51000	15.82000	1075.985	EP
275	4,448.72500	28.06000	1075.97	TOE
276	4,450.87500	31.03500	1077.265	TB
277	4,450.37000	54.13500	1077.715	TOE
278	4,451.07500	70.77500	1085.075	TB
279	4,451.73000	82.97500	1077.04	TOE
280	4,449.88500	-13.38500	1076.225	EP
281	4,449.93000	-24.44000	1073.985	TOE
282	4,450.85000	-32.19500	1076.755	TB
283	4,450.70000	-41.60000	1075.07	TOE

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
284	4,449.31000	-109.32500	1075.965	GND
285	4,461.26500	48.39500	1075.29	PC CDTCH
286	4,499.84500	-0.01000	1075.12	CL
287	4,500.34000	16.44000	1075.09	EP
288	4,500.33000	27.26000	1074.37	TOE
289	4,500.49000	35.74500	1077.425	TB
290	4,500.63000	53.17000	1075.19	POC DTCH
291	4,500.57500	67.50500	1077.345	TOE
292	4,499.22000	82.54000	1084.86	TB
293	4,497.47000	97.46500	1077.69	TOE
294	4,500.50000	122.46500	1077.57	GND
295	4,499.79500	-13.07000	1074.98	EP
296	4,499.18000	-24.59500	1073.36	TOE
297	4,498.94500	-29.47500	1075.95	TB
298	4,497.83500	-42.75000	1074.71	TOE
299	4,501.31000	-162.96500	1075.455	GND
300	4,452.65000	13.46500	1075.935	H2O VLV
301	4,452.56000	13.48500	1074.06	NUT
302	4,448.51000	-57.33000	1075.1	NG
303	4,451.74000	-44.21000	1075.125	TOE
304	4,449.74500	-31.33000	1076.735	TB
305	4,450.05500	-24.16000	1074.06	TOE
306	4,450.31000	-13.56500	1076.25	EP
307	4,450.10000	-0.47500	1076.2	CL
308	4,451.18500	12.15000	1076.085	EP
309	4,451.02500	25.21500	1075.84	NG TOE
310	4,449.22000	31.10000	1077.25	TB
311	4,449.97000	47.98000	1078.23	TOE
312	4,449.56500	55.10000	1079.51	TB
313	4,448.38000	69.94500	1085.805	TB
314	4,445.84500	80.07000	1078.34	NG
315	4,499.00500	81.83000	1084.65	TB
316	4,500.79500	65.98500	1076.905	TOE
317	4,501.81500	53.00500	1075.46	CL C DTC
318	4,503.51000	36.66000	1077.435	TB
319	4,499.77000	26.45500	1074.315	E/CAPRN
320	4,498.48500	24.52500	1074.41	NG C
321	4,497.72000	16.38000	1075.165	EP
322	4,519.25500	14.50500	1074.285	BORE
323	4,502.29000	0.07000	1075.14	CL
324	4,501.90000	-13.57000	1074.935	EP
325	4,747.87000	18.74000	1067.57	EP
326	4,748.16000	36.88500	1063.05	TOE GUNN
327	4,728.38000	24.49500	1066.235	GAUGEUNN
328	4,710.49000	16.29000	1067.925	BORE2

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
329	4,742.46500	90.20500	1062.745	FL RVR
330	4,743.79500	140.14500	1063.15	TOE
331	4,732.13000	175.80000	1062.88	TOE
332	4,762.74500	182.48500	1077.895	TB
333	4,799.36500	115.66500	1078.025	TB
334	4,800.51500	115.57000	1078.095	FNC NS
335	4,847.69500	52.75500	1080.57	TB
336	4,851.69500	52.29000	1080.285	FNC APES
337	4,906.27000	41.62000	1080.035	TB
338	4,904.88000	23.18000	1071.53	TOE
339	4,883.52000	27.27500	1071.215	TOE SIGN
340	4,848.87500	26.72500	1067.35	E GUNN
341	4,828.69500	33.37500	1064.915	E GUNN
342	4,797.05500	69.98500	1065.07	TOE
343	4,787.89000	20.02500	1067.76	NW CAPRN
344	4,828.74000	19.11500	1068.655	NE CAPRN
345	4,803.75500	37.97500	1066.55	SE CAPRN
346	4,796.23000	34.87000	1066.52	SW CAPRN
347	4,777.13500	36.15000	1063.36	TOE GUNN
348	4,802.70500	44.10000	1063.565	TOE CNC
349	4,818.36500	38.67000	1064.45	TOE CNC
350	4,798.92000	42.43500	1063.475	FL2FCMP
351	4,796.05000	41.19000	1063.48	FL2FCMP
352	4,803.34500	-20.65500	1067.335	BORE1
353	4,799.48000	-0.35000	1068.405	CL
354	4,799.37500	-14.38000	1068.13	EP
355	4,799.48000	-30.80500	1067.53	TB
356	4,802.54000	-76.20000	1066.03	FL RVR
357	4,802.57000	-123.83000	1067.71	NB
358	4,843.97500	-122.86500	1067.505	FL RVR
359	4,855.51000	-123.31500	1069.09	TB
360	4,846.79000	-80.36500	1068.485	TOE
361	4,847.90000	-44.72500	1067.83	TOE
362	4,849.83000	-34.79000	1071.39	TB
363	4,850.88500	-26.80000	1068.315	TOE
364	4,850.15500	-14.50000	1069.415	EP
365	4,850.24500	-0.66500	1069.71	CL
366	4,850.74500	18.56500	1069.385	EP
367	4,838.12000	-42.47500	1064.655	FL2FCMP
368	4,835.52000	-43.55000	1064.65	FL2FCMP
369	4,840.05000	-41.55000	1065.26	TOE CNC
370	4,828.55000	-44.62000	1065.385	TOE CNC
371	4,824.47500	-38.09500	1066.58	TOE CNC
372	4,826.08500	-35.27000	1067.59	SW CAPRN
373	4,829.68500	-39.41500	1067.57	NW CAPRN

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
374	4,838.58000	-35.81500	1067.635	NE CAPRN
375	4,900.96500	20.50500	1071.295	EP
376	4,899.05000	-0.90500	1071.69	CL
377	4,898.41000	-14.75000	1071.34	EP
378	4,895.80000	-27.32500	1069.69	TOE
379	4,899.13000	-32.00000	1072.305	TE
380	4,895.61000	-98.39500	1073.185	NG
381	4,914.23000	-92.37000	1076.275	GB
382	4,863.99000	-86.31000	1073.215	TB
383	4,856.37000	-36.36500	1071.635	INT TB
384	4,894.84000	18.87000	1071.17	WV
385	4,894.90500	19.07500	1069.33	NUT
386	4,947.77500	38.57500	1078.705	FNC
387	4,948.38500	34.87000	1079.13	TB
388	4,947.83500	21.93500	1073.28	TOE
389	4,949.58500	11.62500	1073.74	EP
390	4,927.73500	11.77000	1072.845	EP AP
391	4,947.88000	-0.99000	1073.77	CL
392	4,949.33500	-14.62500	1073.77	EP
393	4,948.46000	-25.65500	1072.3	TOE
394	4,948.66500	-34.16500	1076.615	TB
395	4,953.62000	-35.59000	1076.555	MEQUITE
396	4,948.07500	-42.49500	1074.4	TOE
397	4,943.06500	-80.34000	1075.01	NG
398	4,943.55000	-89.62500	1077.28	TB
399	4,685.67000	15.88000	1068.455	H2O EW
400	4,997.94000	38.26500	1077.655	FNC
401	4,997.13000	30.07000	1077.645	TB
402	4,996.19000	21.74000	1074.77	TOE
403	4,996.08500	11.03000	1075.285	EP
404	4,994.86500	-1.15500	1075.595	CL
405	4,994.26500	-14.87500	1075.45	EP
406	4,993.03000	-27.68000	1074.65	TOE
407	4,993.01000	-33.55000	1075.45	TB
408	4,992.97000	-93.35000	1076.395	NG
409	5,042.30000	-97.67500	1077.005	NG
410	5,049.98500	-33.56000	1076.38	TB
411	5,050.33000	-27.59500	1075.73	TOE
412	5,050.20000	-15.68500	1076.545	EP
413	5,050.19500	-1.07000	1076.51	CL
414	5,049.60000	10.35000	1076.22	EP
415	5,049.30000	22.37000	1075.625	TOE
416	5,049.58500	30.07500	1076.645	TB
417	5,049.58500	38.27000	1076.63	FNC
418	5,100.41500	37.89500	1076.755	FNC

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
419	5,100.20500	30.04500	1076.425	TB
420	5,099.97500	24.01500	1075.41	TOE
421	5,099.81000	10.27500	1076.64	EP
422	5,099.20000	-1.62500	1076.865	CL
423	5,098.50500	-13.60500	1076.685	EP
424	5,097.39000	-27.17000	1076.265	TOE
425	5,096.67500	-34.59000	1076.925	TB
426	5,098.37500	-94.81000	1077.21	NG
427	5,152.47000	-96.40000	1077.43	NG
428	5,152.01500	-34.48500	1077.03	TB
429	5,150.63000	-27.52500	1076.225	TOE
430	5,151.35500	-14.66000	1077.02	CL
431	5,151.50500	-1.73500	1077.17	CL
432	5,150.41500	10.49500	1076.75	EP
433	5,150.37500	23.98000	1075.435	TOE
434	5,151.10000	31.62500	1076.61	TB
435	5,150.92000	37.76500	1076.92	FNC
436	5,199.01000	37.81000	1077.045	FNC
437	5,199.96500	28.55000	1076.525	TB
438	5,199.82500	22.84500	1075.64	TOE
439	5,204.40000	20.66000	1075.92	BLNDSIGN
440	5,199.50000	10.40500	1077	EP
441	5,199.39500	-1.67500	1077.185	CL
442	5,199.40500	-13.55500	1077.04	EP
443	5,199.42000	-27.30000	1076.4	TOE
444	5,198.81000	-34.49500	1077.18	TB
445	5,200.11500	-107.77000	1077.475	NG
446	5,231.05000	-26.61000	1076.94	SIGN
447	5,389.47500	17.01000	1076.85	WV
448	5,389.37000	17.18000	1075.43	NUT
449	4,421.60000	18.11500	1072.455	EWH2OTOP
525	4,501.99000	-24.38000	1073.3	EP
526	4,501.19500	-29.82000	1076.405	TB
527	4,502.48500	-40.48500	1074.98	TOE
528	4,501.60000	-83.02000	1075.045	NG
529	4,552.88000	-89.25500	1074.595	NG
530	4,558.59000	-47.16000	1074.075	TOE
531	4,560.68000	-33.97000	1074.66	TB
532	4,549.56000	-24.62000	1072.03	TOE
533	4,549.77000	-13.36000	1073.82	EP
534	4,550.29000	0.18000	1073.94	CL
535	4,550.75500	17.91000	1073.715	EP
536	4,551.75000	25.66500	1072.895	E CAPRN
537	4,551.48000	27.34000	1072.43	TOE
538	4,555.85500	23.13000	1073.055	NG

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1591

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
539	4,551.73500	42.77500	1077.03	TB
540	4,546.08500	68.07500	1076.1	END CDTH
541	4,552.09000	98.21500	1077.175	TOE
542	4,542.73500	126.74000	1095.445	TB
543	4,577.27500	127.42000	1077.385	TOE
544	4,600.26000	129.75000	1076.68	TB
545	4,611.58500	144.83500	79.605	.5IRBAR
546	4,596.26000	64.62000	1078.565	TB
547	4,601.71000	54.95000	1073.83	TOE
548	4,601.33500	45.38000	1073.415	TB
549	4,598.65500	37.00000	1068.88	TOE
550	4,580.15000	25.24000	1072.105	SE CAPRN
551	4,580.57000	20.04000	1072.565	NE CAPRN
552	4,598.27000	19.80500	1071.86	EP
553	4,598.54500	0.01000	1072.18	CL
554	4,597.53000	-13.99500	1071.94	EP
555	4,596.26500	-27.57500	1069.4	TOE
556	4,595.60500	-32.70500	1071.985	TB
557	4,591.76000	-77.92000	1073.74	NG
558	4,614.77500	-18.00000	1070.42	BORE
559	4,624.47000	-14.27000	1070.735	SW CAPRN
560	4,659.87000	-20.38000	1068.925	NE CAPRN
561	4,663.77000	-14.20500	1069.16	SE CAPRN
562	4,631.57500	-20.85500	1069.66	NW CAPRN
563	4,641.91000	-42.74000	1065.56	FL2fCMP
564	4,645.08000	-43.17500	1065.555	FL2fCMP
565	4,638.99000	-52.23500	1068.355	TOE
566	4,640.35500	-96.71500	1070.515	TOE
567	4,617.46500	-99.26000	1075.115	TB
568	4,617.38500	-144.04000	1075.105	TB
569	4,624.42000	18.98500	1070.715	NW CAPRN
570	4,640.43500	37.16500	1067.89	SW CAPRN
571	4,648.91000	37.07500	1067.755	SW CAPRN
572	4,662.62500	19.48500	1069.14	NE CAPRN
573	4,663.97500	33.76000	1065.035	TOE CNCN
574	4,652.23000	41.46500	1064.665	TOE CNCN
575	4,633.19000	40.90500	1065.51	TOE CNCN
576	4,623.81000	38.33000	1066.235	TOE CNCN
577	4,643.36500	42.20000	1064.76	FL2fCMP
578	4,646.47500	42.26500	1064.66	FL2fCMP
579	4,642.35500	65.98500	1063.83	TOE
580	4,641.08500	115.50000	1062.7	TOE
581	4,639.80500	154.64000	1062.155	TOE
582	4,691.42500	160.68000	1062.86	BED
583	4,706.42000	102.66500	1062.73	BED

B R W Inc. Engineering and Land Surveying
2700 North Central Suite 1000 Phoenix, AZ 85004 Ph.234-1551

Project : NORTHERN AVE BRIDGE TOPO
Printed by MIKE on September 07, 1989

Pt#	Northing	Easting	Elevation	Description
584	4,697.85000	35.65500	1063.55	E/GUNN
585	4,699.95000	23.94000	1066.755	NAT GAS
586	4,700.13000	19.55000	1067.84	EP
587	4,700.82500	0.16500	1068.54	CL
588	4,701.37500	-14.11000	1068.22	EP
589	4,700.93500	-29.43000	1067.76	TOE
590	4,701.00500	-33.77500	1068.04	TB
591	4,701.94500	-42.70000	1066.415	TOE
592	4,702.04500	-50.15500	1067.265	GB
593	4,701.97500	-98.19500	1069.05	NG
594	4,718.34000	-98.23000	1067.665	FL20fCHL
595	4,706.27000	-46.28000	1066.265	FL20fCHL
596	4,755.77000	-93.86500	1068.31	NG
597	4,749.37500	-43.78500	1066.25	TOE
598	4,750.05000	-31.89500	1067.435	TB
599	4,749.16500	-13.96000	1067.83	EP
600	4,748.80500	-0.02000	1068.035	CL

/

BENCH LOOP

8-22-89

AERHI B2A CIETZ LEVEL
FRANK # 78733

+	HI	−	ELEV	
			1093.16	BM: BC IN HH OLIVE & 99TH AVE (EXTENDED) NE COR SEC. 33 T3N, R1E
4.90	1098.06			
		5.42	1092.64	TP
4.66	1097.30			
		6.62	1090.68	TP
5.26	95.94			
		5.79	1090.15	TP
4.22	94.37			
		5.92	1088.45	TP
3.49	91.94			
		5.91	1086.03	TP
4.04	90.07			
		5.26	1084.81	TP
3.62	89.43			
~~3.14~~		6.15	1082.28	TP
3.14	85.42			
		5.72	1079.70	TP
3.54	83.24			
		6.27	1076.97	TBM BC IN HH 99TH AVE & NORTHERN DOWN 0.3 (ADJ TO 99AVE & GERALD)
			ADJ 1077.00	
4.89	81.86			
		6.01	1075.85	TP

8-22-99

+	HI	−	ELEV	
3 79	79 64	~~3 79~~		~~TP~~
		4 80	1074 84	TP
5 71	~~78~~ 55			
		5 88	1074 57	TP
4 52	79 09			
		5 09	1074 09	TP
4 90	~~78~~ 90			
		4 81	1074 09	TP SRV/WUA BC SO. END IRS, STR.
3 32	77 41			
		5 15	1072 26	TP
4 27	76 53			
		4 82	1071 71	TP
5 19	76 90			
		5 00	1071 90	TP
2 46	74 36			
		6 03	1068 33	TP
4 11	72 44			
		5 43	1067 01	BM BC FLUSH INTER. x 99TH AVE & GLENDALE ELEV 1067.04 E=0 03

3-25-99 AA CF

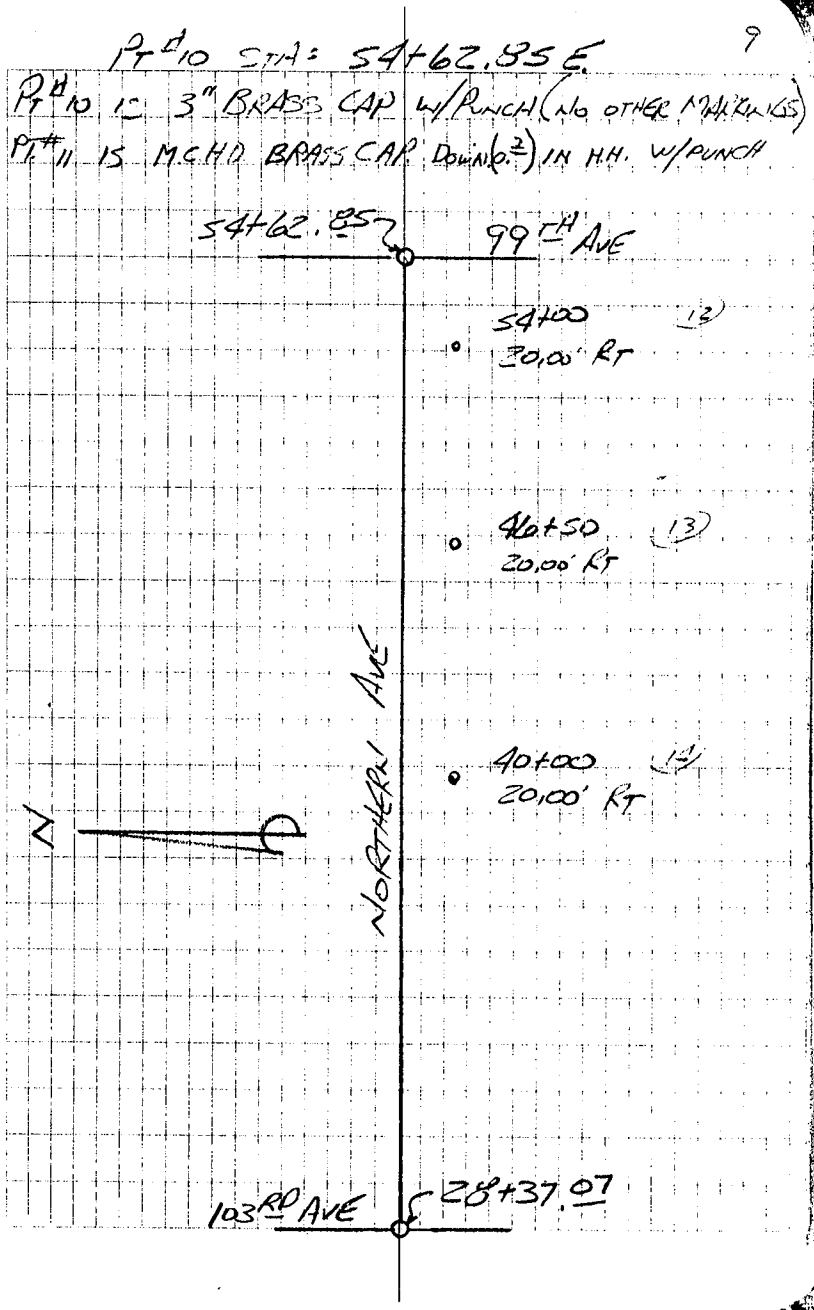
	+	HI	-	ELEV	
				1077.00	BC w/ HI 99th AVE & NORTHERN (P. 2)
	5.09	82.09			
SS			5.25	1076.84	SIDESHOT TOP PK. STA 00 30' RT
			6.31	1075.78	TP
	0.42	1076.20			
			6.77	1069.43	TP TOP PK. STA. 46+50 20' RT
	11.15	1080.58			
			1.85	1078.73	TP TOP PK. STA. 10+00 30' RT
	3.42	81.15			
			11.73	1069.42	TP
	7.03	76.45			
			0.66	1075.79	TP
	6.19	81.98			
SS			5.13	1076.85	SS TOP PK. STA 00 30' RT
			4.98	1077.00	START BC w/ HI
				E = 0.00	

TO BC IN HH (Pt # 10) 99TH AVE & NORTHERN
0°00'00" SIGHT Pt # (11) NORTHERN & 103RD AVE

Pt # 10 STA: 54+62.85 E

Pt # 10 IS 3" BRASS CAP W/PUNCH (NO OTHER MARKINGS)
Pt # 11 IS M.C.H.D. BRASS CAP DOWN (0.2') IN H.H. W/PUNCH

#	∡ Pt	DIST	REMARKS
(11)	0°00'00"	H.D. 2625.78 S.D. 2625.80 D.E. +8.44	
	(1) 342-20-53	65.96	SET NAIL FOR TOP STA.
	(2) 324-41-59		54+00.00
	m 342-21-00		RT. 20.00
	~~(1) 358-40-20~~	~~863.08~~	
	(2)		
	m		
	(1) 358-35-26	813.10	SET NAIL FOR TOPO STA.
	(2) 357-10-36		46+50.00
	m 358-35-18		RT. 20.00
	(1) 359-13-00	1462.99	SET NAIL FOR TOPO STA.
	(2) 358-26-08		40+00.00
	m 359-13-04		RT. 20.00



17