EASTERN CANAL
FLOODPLAIN DELINEATION STUDY

SURVEY NOTES

Submitted to:

Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85008
(602) 506-1501

EASTERN CANAL
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SURVEY NOTES

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

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- **CHECK SECTIONS**
- **FIELD NOTES**

(DELIVERED 9/11/96)

CURVE FORMULAS

$T = R \tan \frac{1}{2} I$

$T = \frac{50 \tan \frac{1}{2} I}{\text{Sin. } \frac{1}{2} D}$

$\text{Sin. } \frac{1}{2}D = \frac{50}{R}$

$\text{Sin. } \frac{1}{2}D = \frac{50 \tan \frac{1}{2}I}{T}$

$R = T \cot. \frac{1}{2}I$

$R = \frac{50}{\text{Sin. } \frac{1}{2}D}$

$E = R \text{ ex. sec } \frac{1}{2} I$

$E = T \tan \frac{1}{4} I$

$\text{Chord def.} = \frac{\text{chord}^2}{R}$

$\text{No. chords} = \frac{I}{D}$

$\text{Tan. def.} = \frac{1}{2} \text{ chord def.}$

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

Right Angle Triangles. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. $10.10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. $25.25^2 \div 200 = 3.125$. $100 - 3.125 = 96.875$ = Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

Leveling. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574\ d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{2}{3}d^2$. The combined correction is negative.

Probable Error. If d_1, d_2, d_3, etc. are the discrepancies of various results from the mean, and if Σd^2 = the sum of the squares of these differences and n = the number of observations, then the probable error of the mean = $\pm 0.6745 \sqrt{\frac{\Sigma d^2}{n(n-1)}}$

MINUTES IN DECIMALS OF A DEGREE

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1/16	3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

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MESA ADMS
PROFILE CHECKS
JUNE 3, 1996

J. ROSS
G. ANKRUM

HOT 105~110
CALM

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25393
KARL M.
MORTENSEN
DATE SIGNED 9-11-96
ARIZONA

Field Book 5

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10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

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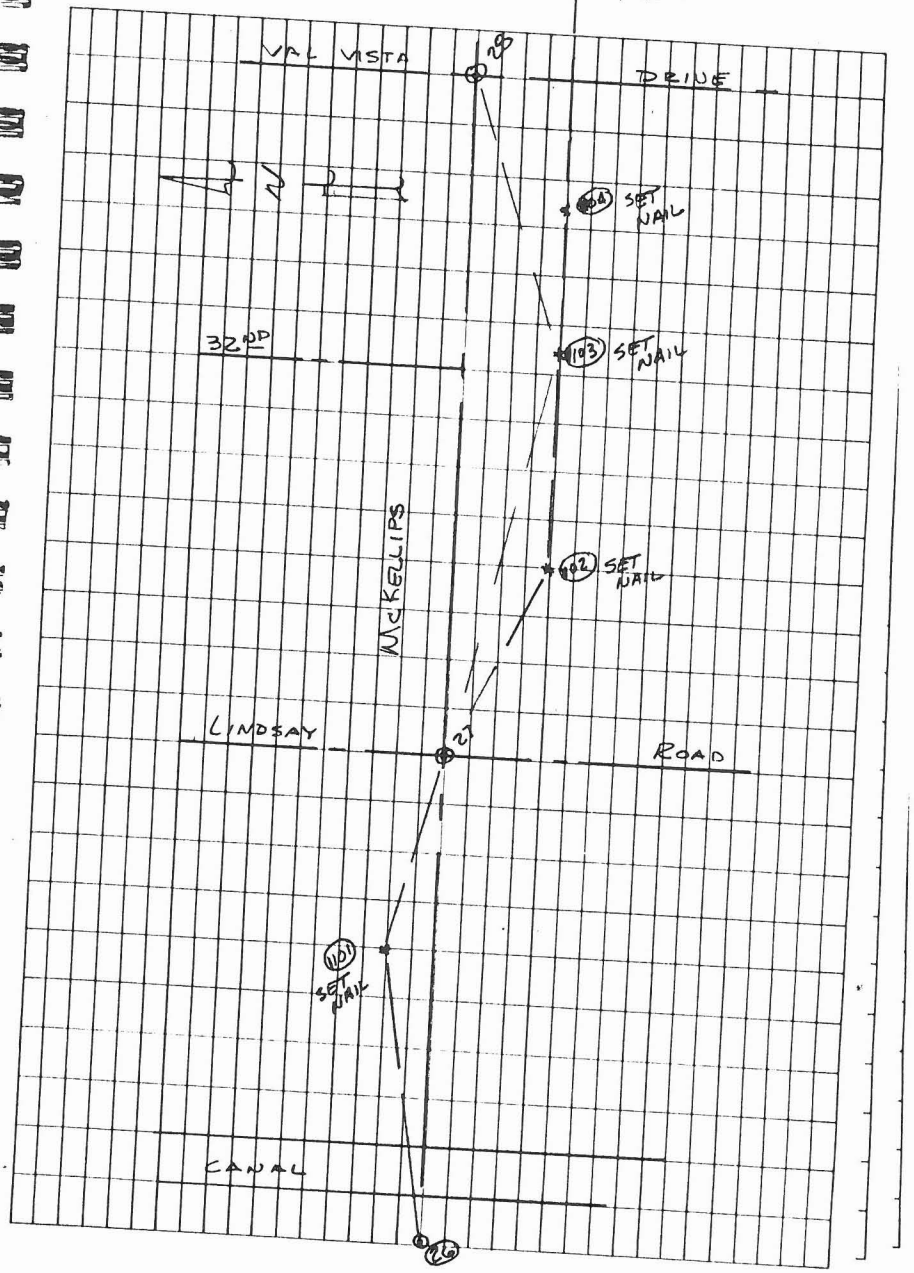
MESA ADMS
PROFILE CHECKS

JUNE 3, 1996

J. ROSS
G. ANKRUM

HOT 105~110
CALM

McKELLIPS SEE PAGE 7



S	PT#	ROD	REMARKS		
TC	1101	5.53			1295.689 [illegible]
BLS	27	7.55			
	1201	7.55	SAME AS 27		
	1202	7.55			
	1203				
	1204				
	1205				
	1206				
	1207				
	1208				
	1209				
	1210	7.55			
	1211				
	1212				
	1213				
	1214				
	1215	7.55			
	1216				
	1217				
	1218				
	1219				
	1220				
	1221				
	1222	7.55			

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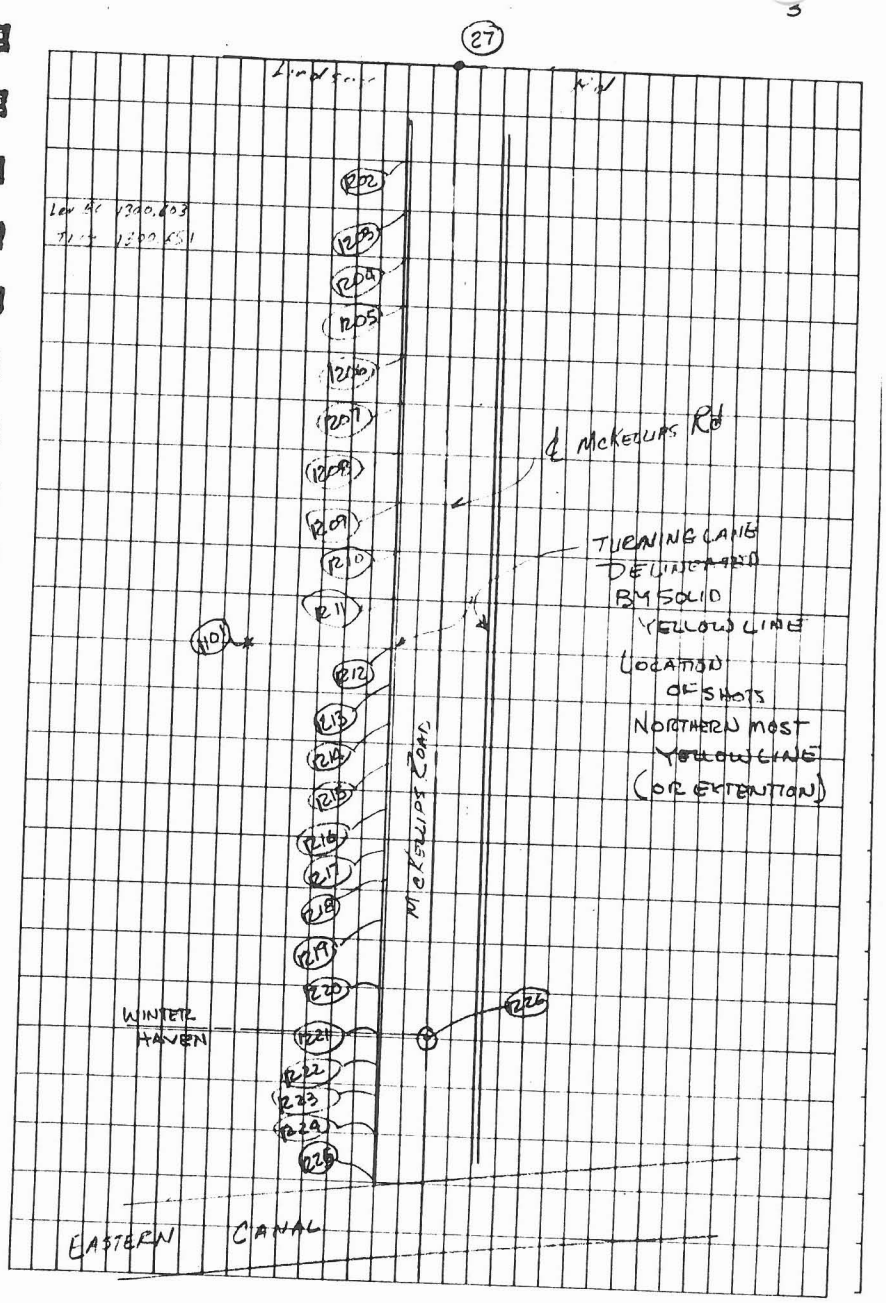
3



1223	7.55			
1224				
1225				
1226	7.55	Check	B.C (#147)	SEE BOOK 1 PG 6-7

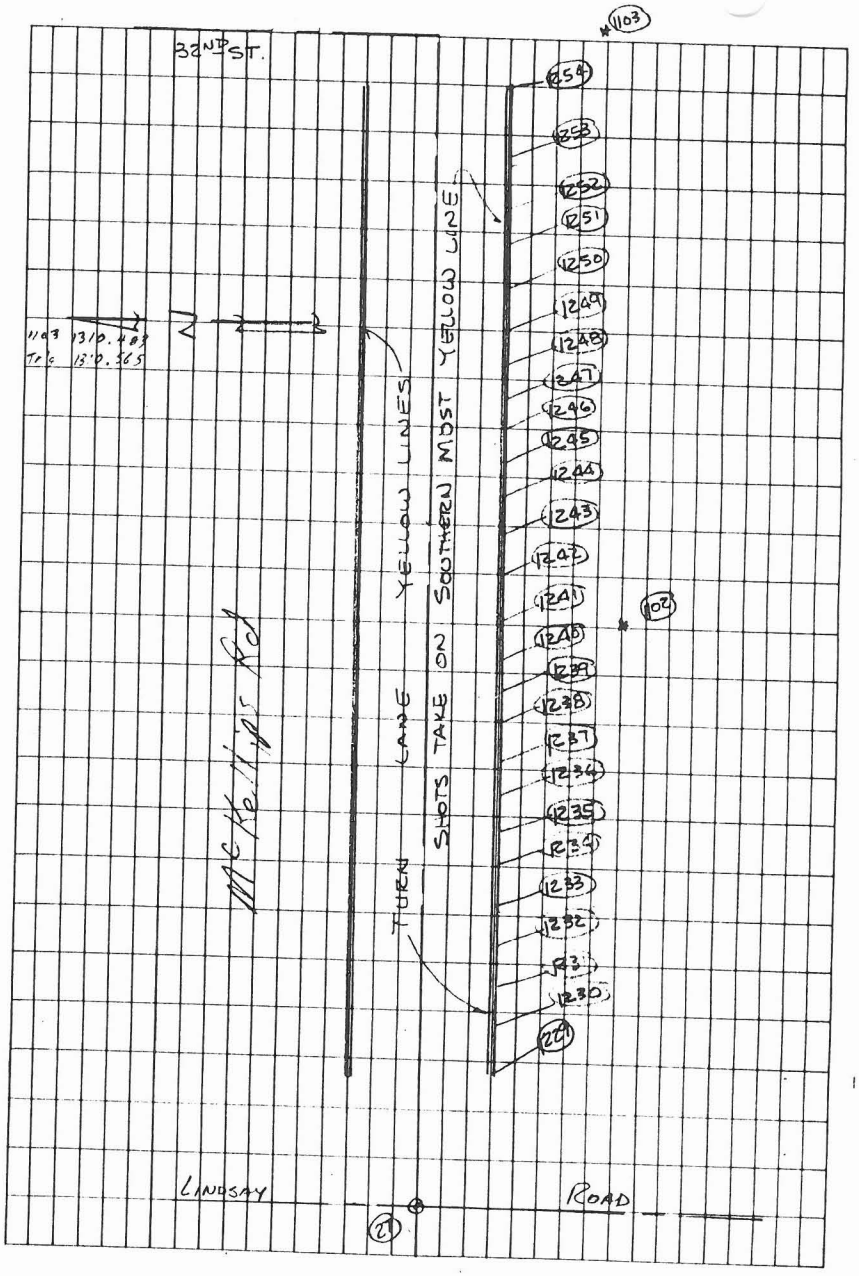
Ler BC 1292,304
Trip 1.92,797

STA	PT#	ROD	REMARKS		
⊼@	1102	5.51			1305.054 ok
BS	1103	5.60			1310.483 ok
	1227	5.60	Same as 1103		
	1228	7.55	SAME AS 27		
	1229				
	1230				
	1231				
	1232				
	1233				
	1234				
	1235	7.55			
	1236				
	1237				
	1238				
	1239				
	1240				
	1241	7.55			
	1242				
	1243				
	1244				
	1245				
	1246				
	1247				
	1248	7.55			

1103 1310.483
Trio 1310.961
Low Hi 1310.668
Trio 1310.574

SEE SKETCH
PAGE 6

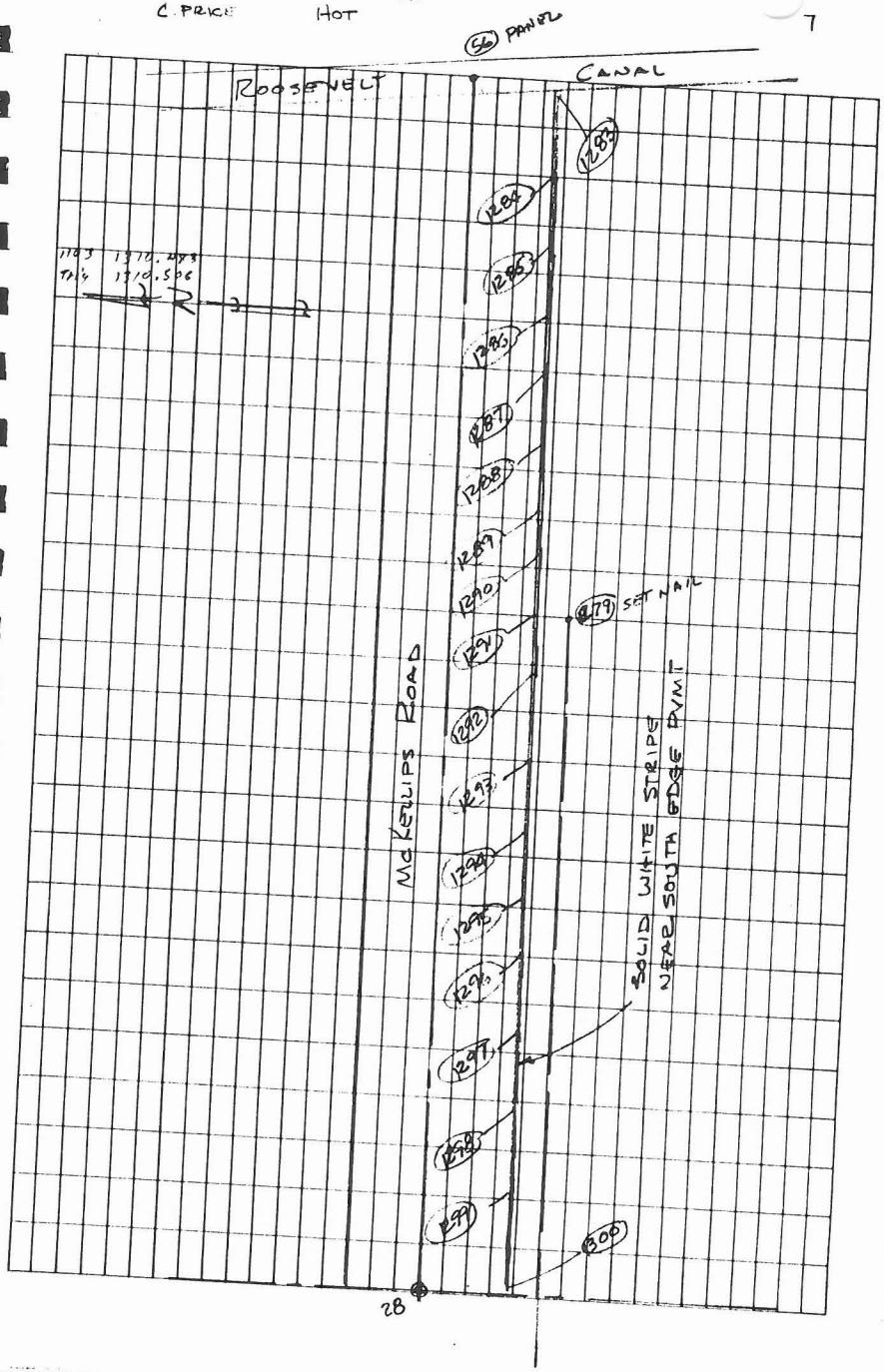
Site	PT#	Rod	Remarks		
	1249	7.55			
	1250				
	1251				
	1252				
	1253				
	1254	7.55			
	1255	V IN	SAME AS 1103		



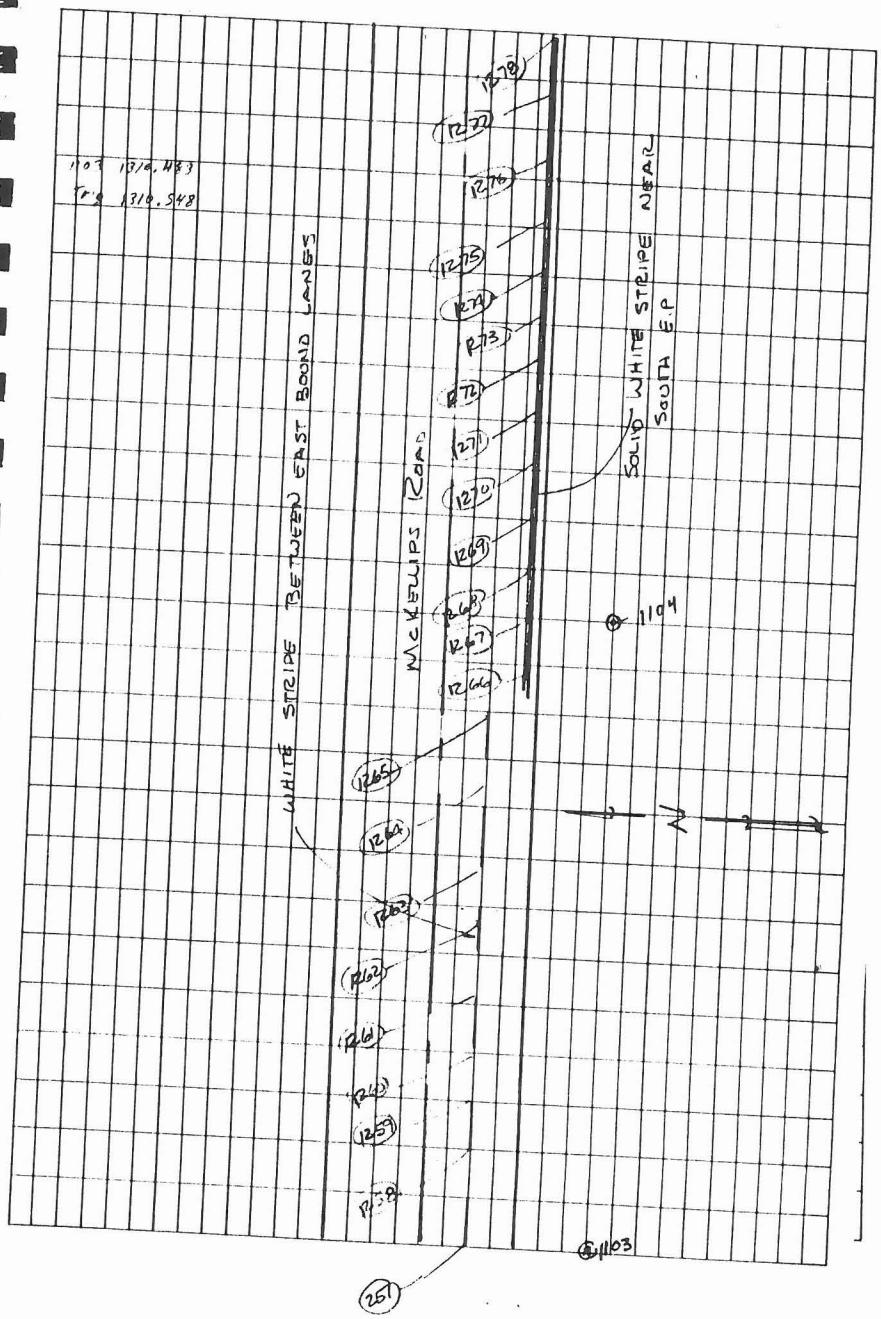
STA	Pt#	ROD	REMARKS		
↑	1104	5.62			1315.250 ok
BS	1103	5.27			1310.989 ok
	1256	5.27	SAME AS 1103		
	1257	4.84			
	1258	7.01			
	1259	7.01			
	1260	7.01			
	1261				
	1262		SEE SKETCH PAGE 8		
	1263				
	1264	7.01			
*	1265				
	1266				
	1267				
	1268				
	1269	7.01			
	1270				
	1271				
	1272				
	1273				
	1274	7.01			
	1275	7.01			
	1276	7.01			

J.ROSS
G.ANDERSON
C.PRICE

JUNE 17, 1996
HOT



STA	PT#	ROD	REMARKS
	1277	7.01	
	1278	7.01	
	1279	7.01	
	1280	5.27	CK 1103



STA	Pt#	Rod	Remarks		
TC	1279				1330.790 ok
BS	1104	5.48			1315.250 ok
	1281	4.84	ELEV. CHECK #28		
	1282	4.84	ELEV CHECK #SGPANEL		
	1283	7.37			
	1284				
	1285				
	1286				
	1287				
	1288	7.37			
	1289				
	1290				
	1291				
	1292				
	1293				
	1294	7.37			
	1295				
	1296				
	1297				
	1298				
	1299				
	1300	7.37			

Left 1329.050
Right 1329.016
Left 1351.242
Right 1351.269

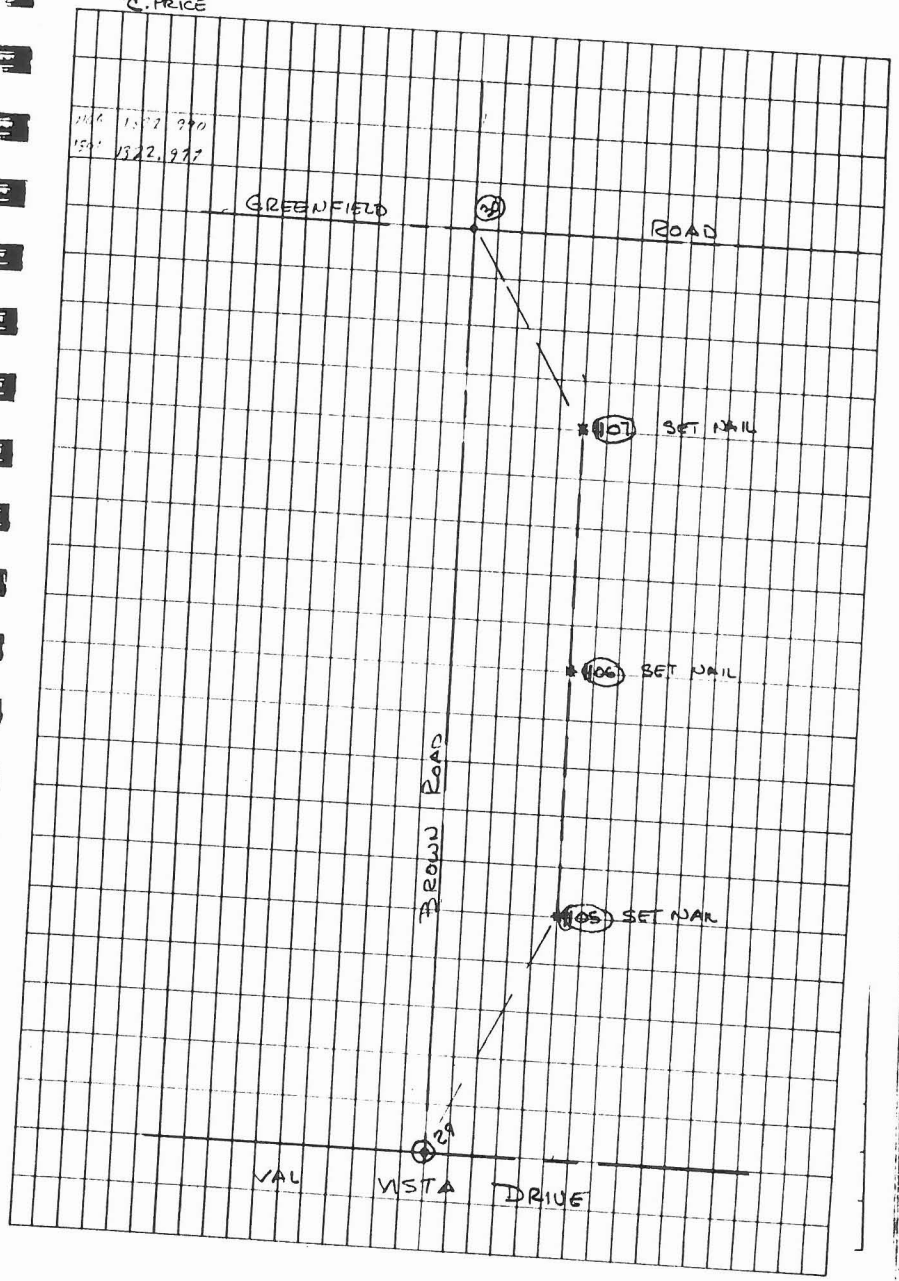
CORE
SKETCH
PAGE 9

	PT #	ROD			
A	1107	5.43			1328.995
BS	1106	5.30			1327.990
	1301	5.30	SAME AS 1106		
	1302	6.82			
	1303				
	1304				
	1305				
	1306	6.82			
	1307				
	1308				
	1309				
	1310				
	1311				
	1312	6.82			
	1313				
	1314				
	1315				
	1316				
	1317	6.82			
	1318				
	1319				
	1320				
	1321				
	1322				
	1323	6.82			

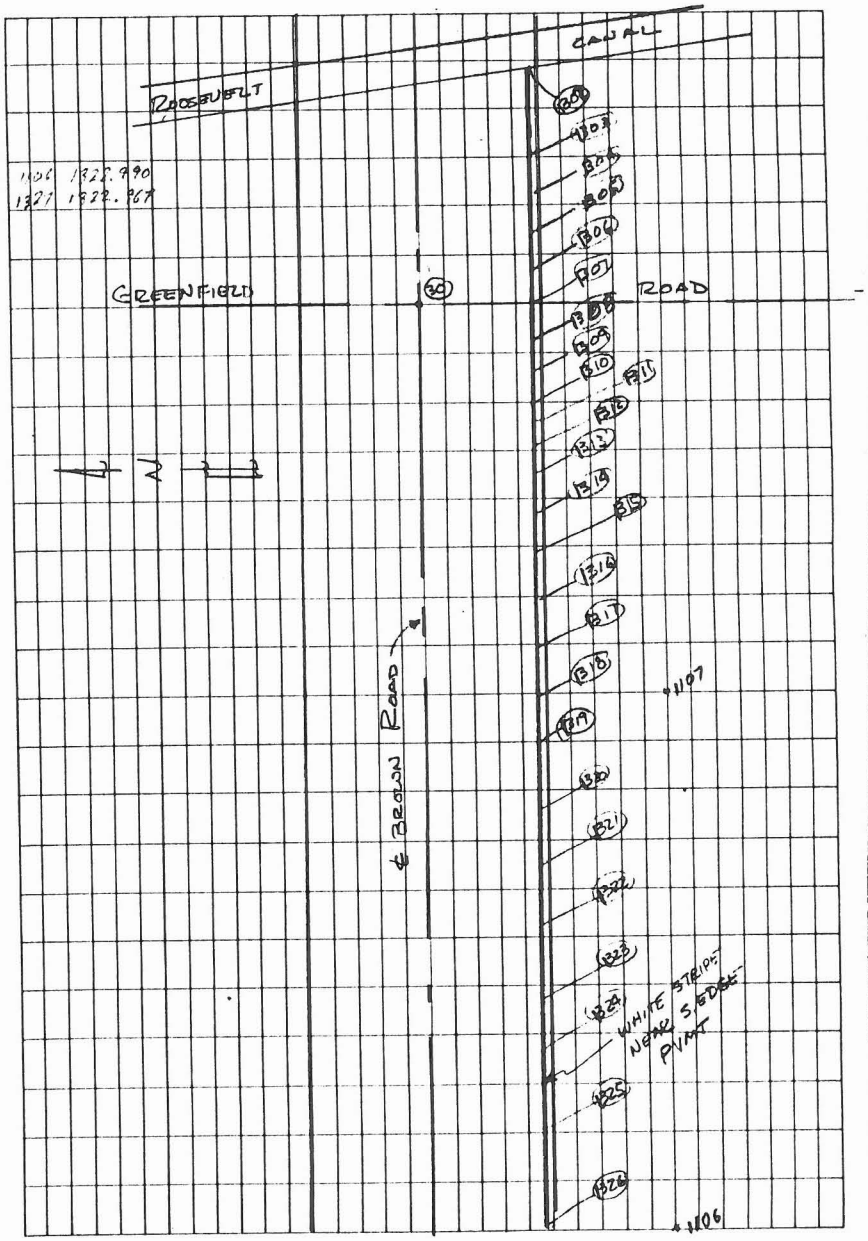
6-17-96
J. Ross
G Ankrum
C. Price

BROWN ROAD

(10)

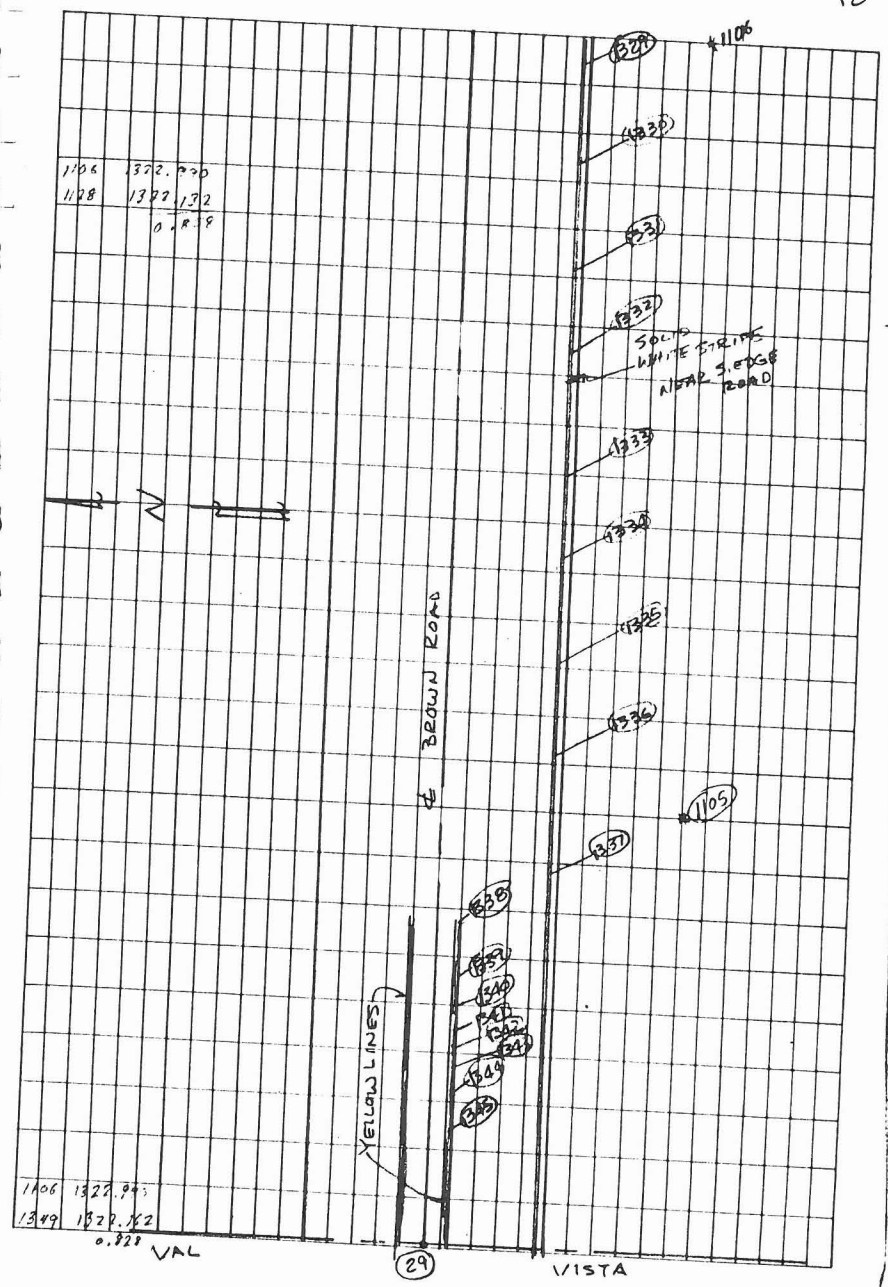


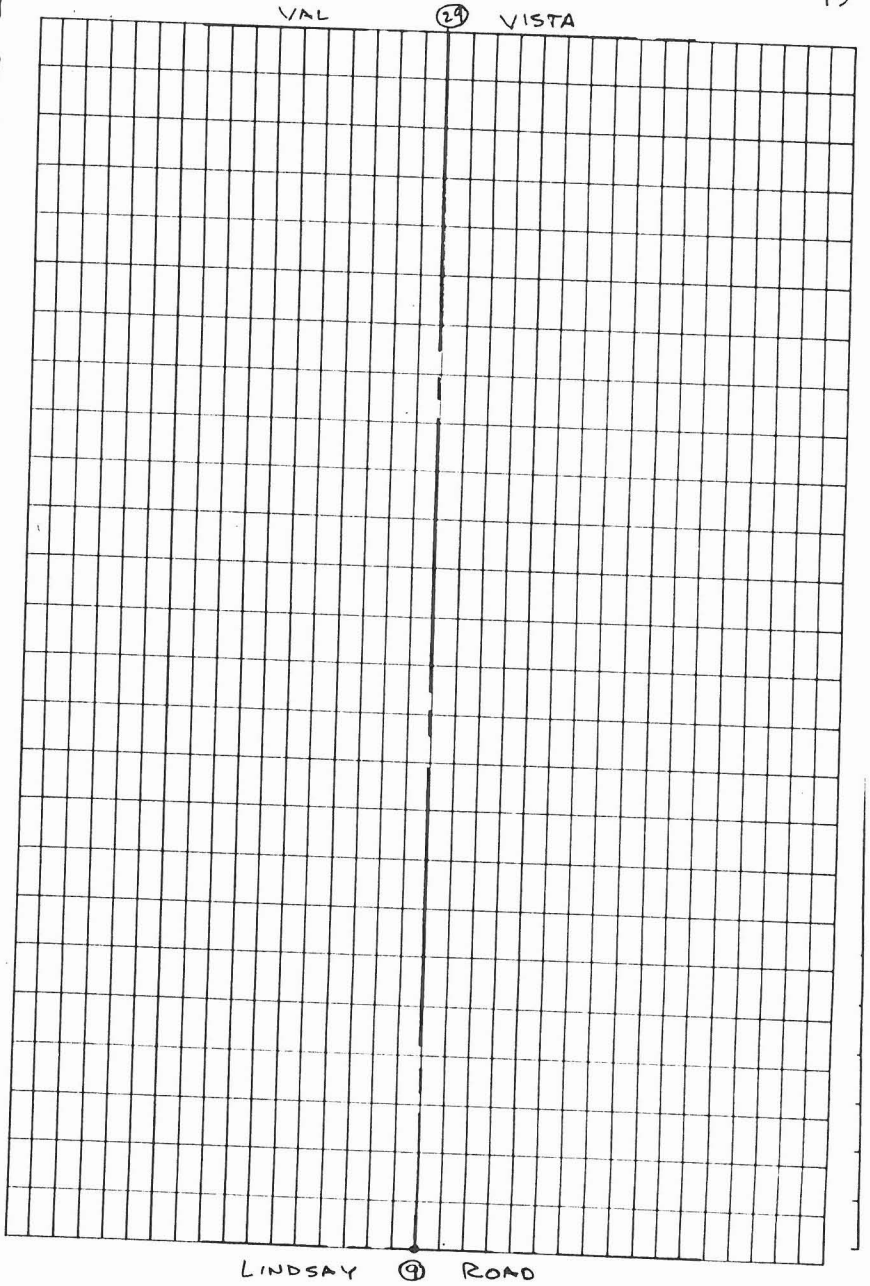
STA	PT#	ROD			
	1324	6.82			
	1325	6.82			
	1326	6.82			
	1327	5.30	CK. SAME AS 1106		



6-11-96 J. ROSS
G ANKRUM
C. PRICE
HOT 109°

STA	Pt #	Rod	Remarks		
⊼	1105	5.51			1345.777
BS	1106	5.30			1322.990
	1328	5.30	SAME AS 1106		
	1329	6.82			
	1330				
	1331				
	1332				
	1333				
	1334		Translate up 0.843		
	1335				
	1336				
	1337				
	1338				
	1339				
	1340				
	1341				
	1342				
	1343				
	1344				
	1345				
	1346				
	1347				
	1348				
	1349	5.30	SAME AS 1106		

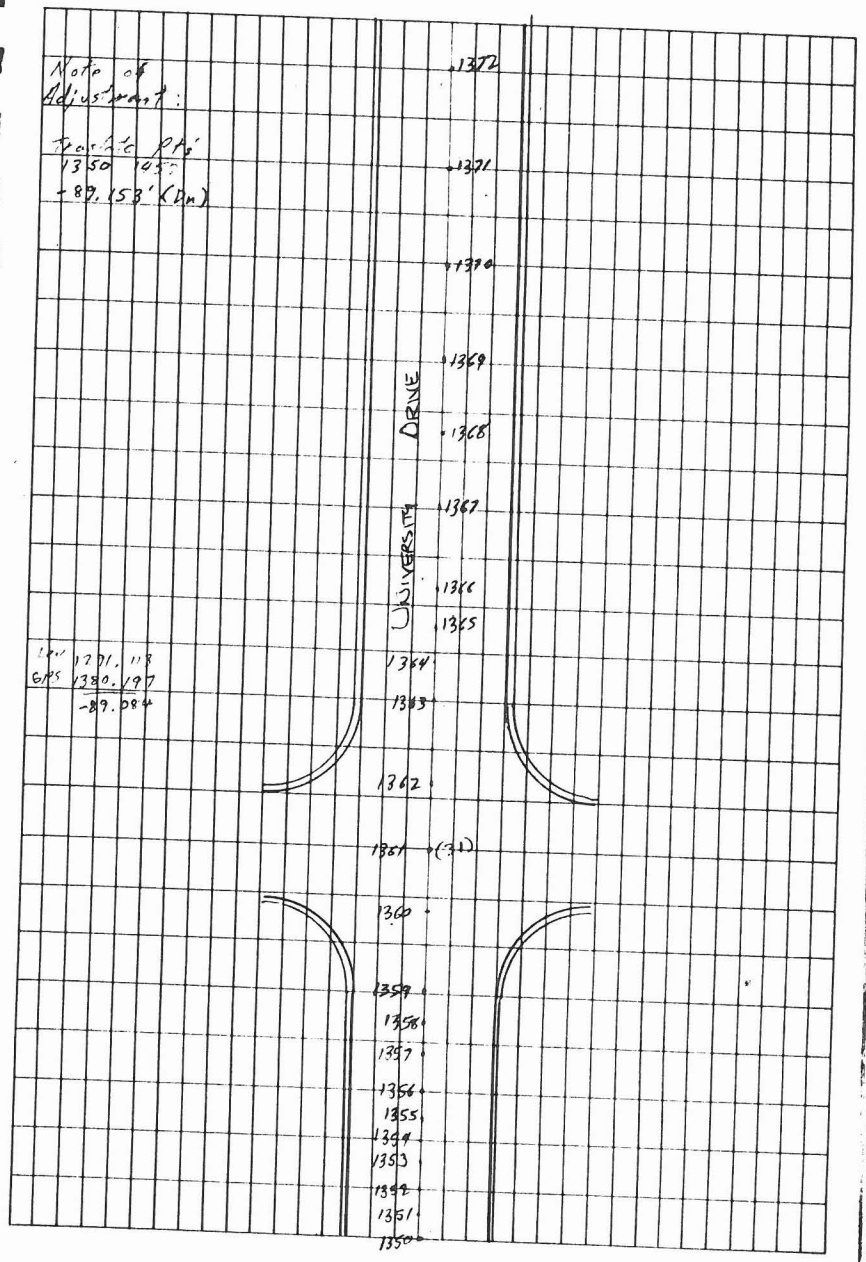



VAL
29
VISTA
LINDSAY
9
ROAD

MESA_UN

ATTRIBUTE	REMARKS		POINT COUNT	H.I.	EPOCHS
M033-BASE	PKNail	LAT 33-25-22.2538 LONG 111-43-32.1892 ELEV 410.4415 m		1.969m	
1350	℄ Point		1	2.465m	20
1351	℄ Point		2	2.465m	20
1352	℄ Point		3	2.465m	20
1353	℄ Point		4	2.465m	20
1354	℄ Point		5	2.465m	20
1355	℄ Point		6	2.465m	20
1356	℄ Point		7	2.465m	20
1357	℄ Point		8	2.041m	20
1358	℄ Point		9	2.041m	20
1359	℄ Point		10	2.041m	20
1360	℄ Point		11	2.041m	20
1361	℄ Point	(31)	12	2.041m	20
1362	℄ Point		13	2.041m	20
1363	℄ Point		14	2.041m	20
1364	℄ Point		15	2.041m	20
1365	℄ Point		16	2.041m	20
1366	℄ Point		17	2.041m	20
1367	℄ Point		18	2.465m	20
1368	℄ Point		19	2.465m	20
1369	℄ Point		20	2.465m	20
1370	℄ Point		21	2.465m	20
1371	℄ Point		22	2.465m	20
1372	℄ Point		23	2.465	20

7-10-96 MT Gardiner
Ø Edmundsen



Attribute	Remarks	Point Count	H.I.	Epochs
1373	℄ Pvmt	24	2.465m	20
1374	℄ Pvmt	25	2.465m	20
1375	℄ Pvmt	26	2.465m	20
1376	℄ Pvmt	27	2.465m	20
1377	℄ Pvmt	28	2.465m	20
1378	℄ Pvmt	29	2.465m	20
1379	℄ Pvmt - Maple (176)	30	2.465m	20
1380	℄ Pvmt	31	2.465m	20
1381	℄ Pvmt	32	2.465m	20
1382	℄ Pvmt	33	2.465m	20
1383	℄ Pvmt	34	2.465m	20
1384	℄ Pvmt	35	2.465m	20
1385	℄ Pvmt	36	2.465m	20
1386	℄ Pvmt - 39th Way (65)	37	2.465m	20
1387	℄ Pvmt	38	2.465m	20
1388	℄ Pvmt	39	2.465m	20
1389	℄ Pvmt	40	2.465m	20
1390	℄ Pvmt	41	2.465m	20
1391	℄ Pvmt - Nassau (177)	42	2.465m	20
1392	℄ Pvmt	43	2.465m	20
1393	℄ Pvmt	44	2.465m	20
1394	℄ Pvmt	45	2.465m	20
1395	℄ Pvmt	46	2.465m	20
1396	℄ Pvmt	47	2.465m	20
1397	℄ Pvmt	48	2.465m	20

Lev 1298.749
GPS 1387.702
-89.053

Lev 1301.627
GPS 1390.69[illegible]
-89.46[illegible]

Lev 1304.451
GPS 1393.571
-89.114

Attribute	Remarks	Point Count	H.I.	Epochs
1398	℄ Pvmt	49	2.465m	20
1399	℄ Pvmt - Norfolk St (178)	50	2.465m	20
1400	℄ Pvmt	51	2.465m	20
1401	℄ Pvmt	52	2.465m	20
1402	℄ Pvmt	53	2.465m	20
1403	℄ Pvmt	54	2.465m	20
1404	℄ Pvmt	55	2.465m	20
1405	℄ Pvmt	56	2.465m	20
1406	℄ Pvmt	57	2.465m	20
1407	℄ Pvmt	58	2.465m	20
1408	℄ Pvmt	59	2.465m	20
1409	℄ Pvmt	60	2.465m	20
1410	℄ Pvmt	61	2.465m	20
1411	℄ Pvmt	62	2.465m	20
1412	℄ Pvmt	63	2.465m	20
1413	℄ Pvmt	64	2.465m	20
1414	℄ Pvmt	65	2.465m	20
1415	℄ Pvmt - C.R.	66	2.041m	20
1416	℄ Pvmt	67	2.041m	20
1417	℄ Pvmt - Greenfield Rd (32)	68	2.041m	20
1418	℄ Pvmt	69	2.041m	20
1419	℄ Pvmt	70	2.041m	20
1420	℄ Pvmt	71	2.041m	20
1421	℄ Pvmt	72	2.041m	20
1422	℄ Pvmt	73	2.465m	20

Lev 1399.197
GPS 1398.340
89.143

Lev 1320.128
GPS 1409.357
-89.219

Attribute	Remarks		Point Count	H.I.	Epochs
1423	℄ Pvmt		74	2.465m	20
1424	℄ Pvmt		75	2.465m	20
1425	℄ Pvmt		76	2.465m	20
1426	℄ Pvmt		77	2.465m	20
1427	℄ Pvmt		78	2.465m	20
1428	℄ Pvmt		79	2.465m	20
1429	℄ Pvmt		80	2.465m	20
1430	℄ Pvmt		81	2.465m	20
1431	℄ Pvmt -	(179) Quinn St	82	2.465m	20
1432	℄ Pvmt		83	2.465m	20
1433	℄ Pvmt		84	2.465m	20
1434	℄ Pvmt		85	2.465m	20
1435	℄ Pvmt		86	2.465m	20
* 1436	℄ Pvmt		87	2.465m	20
* 1437	℄ Pvmt		88	2.465m	20
* 1438	℄ Pvmt		89	2.465m	20
* 1439	℄ Pvmt		90	2.465m	20
* 1440	℄ Pvmt		91	2.465m	20
1442	℄ Pvmt		92	2.465m	20
1443	℄ Pvmt		93	2.465m	20
1444	℄ Pvmt		94	2.465m	20
1445	℄ Pvmt		95	2.465m	20
1446	℄ Pvmt		96	2.465m	20
1447	℄ Pvmt -	(170) Rowlickest	97	2.465m	20
1448	℄ Pvmt		98	2.465m	20
1449	℄ Pvmt		99	2.465m	20
1450	℄ Pvmt		100	2.465m	20
1451	℄ Pvmt		101	2.465m	20
1452	℄ Pvmt		102	2.465m	20

Lev 1327.128
GPS 1416.977
-89.749

Lev 1336.994
GPS 1426.295
-89.301

Mon - BW

7-11-96

Attribute	Remarks	Point Count	H.I.	Epochs
35 - Base Sta	Lat 33-24-29.83987 Long 111-44-11.11810 Elev 396.2662		2.167m	
1453	℄ Pvmt - ℄ Canal	1	2.480m	20
1454	℄ Pvmt - East Edge Canal	2	2.480m	20
1455	℄ Pvmt	3	2.480m	20
1456	℄ Pvmt	4	2.480m	20
1457	℄ Pvmt	5	2.480m	20
1458	℄ Pvmt	6	2.480m	20
1459	℄ Pvmt (191) 40th St	7	2.480m	20
1460	℄ Pvmt	8	2.480m	20
1461	℄ Pvmt	9	2.480m	20
1462	℄ Pvmt	10	2.480m	20
1463	℄ Pvmt	11	2.480m	20
1464	℄ Pvmt	12	2.480m	20
1465	℄ Pvmt (192) Norwalk St	13	2.480m	20
1466	℄ Pvmt	14	2.480m	20
1467	℄ Pvmt	15	2.480m	20
1468	℄ Pvmt	16	2.480m	20
1469	℄ Pvmt	17	2.480m	20
1470	℄ Pvmt	18	2.480m	20
1471	℄ Pvmt	19	2.480m	20
1472	℄ Pvmt	20	2.480m	20
1473	℄ Pvmt	21	2.480m	20
1474	℄ Pvmt	22	2.480m	20
1475	℄ Pvmt	23	2.480m	20

Note of Adjustment:

Translate pts
1453 - 1554
- 89.291 (Rm)

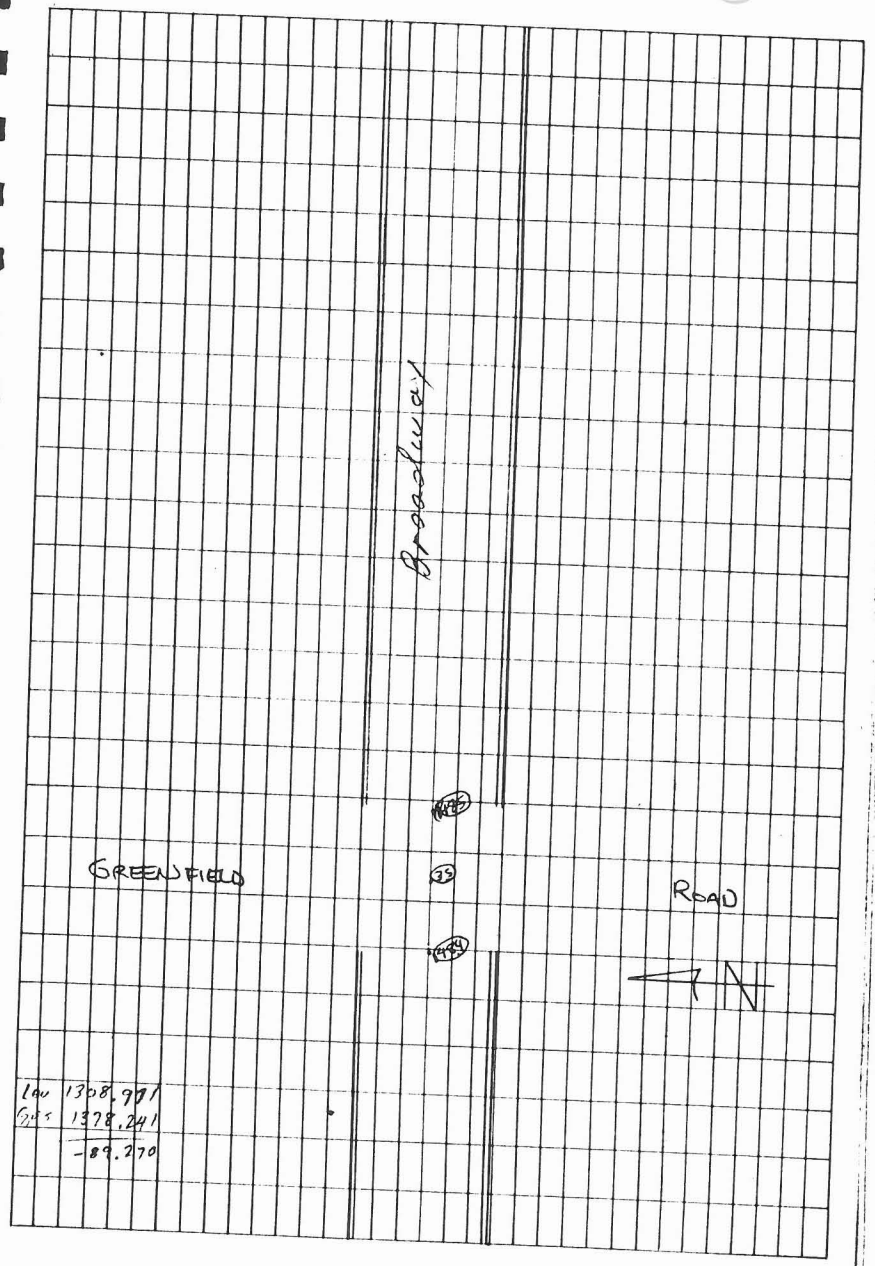
Lev 1288.123
GPS 1377.424
- 89.301

Lev 1291.684
GPS 1380.889
- 89.205

Broadway

N

A BUTE	REMARKS		POINT COUNT	H.I.	ERCHS
1476	℄ Pvmt		24	2.480m	20
1477	℄ Pvmt		25	2.480m	20
1478	℄ Pvmt		26	2.480m	20
1479	℄ Pvmt		27	2.480m	20
1480	℄ Pvmt		28	2.480m	20
1481	℄ Pvmt		29	2.480m	20
1482	℄ Pvmt		30	2.480m	20
1483	℄ Pvmt		31	2.480m	20
1484	℄ Pvmt	W of Grnfld	32	2.480m	20
1485	℄ Pvmt	E of Grnfld	33	2.480m	20
1486	℄ Pvmt		34	2.480m	20
1487	℄ Pvmt		35	2.480m	20
1488	℄ Pvmt		36	2.480m	20
1489	℄ Pvmt		37	2.480m	20
1490	℄ Pvmt		38	2.480m	20
1491	℄ Pvmt		39	2.480m	20
1492	℄ Pvmt	Parkcrest	40	2.480m	20
1493	℄ Pvmt		41	2.480m	20
1494	℄ Pvmt		42	2.480m	20
1495	℄ Pvmt		43	2.480m	20
1496	℄ Pvmt		44	2.480m	20
1497	℄ Pvmt		45	2.480m	20
1498	℄ Pvmt	(193) Quinn St	46	2.480m	20
1499	℄ Pvmt		47	2.480m	20
1500	℄ Pvmt		48	2.480m	20

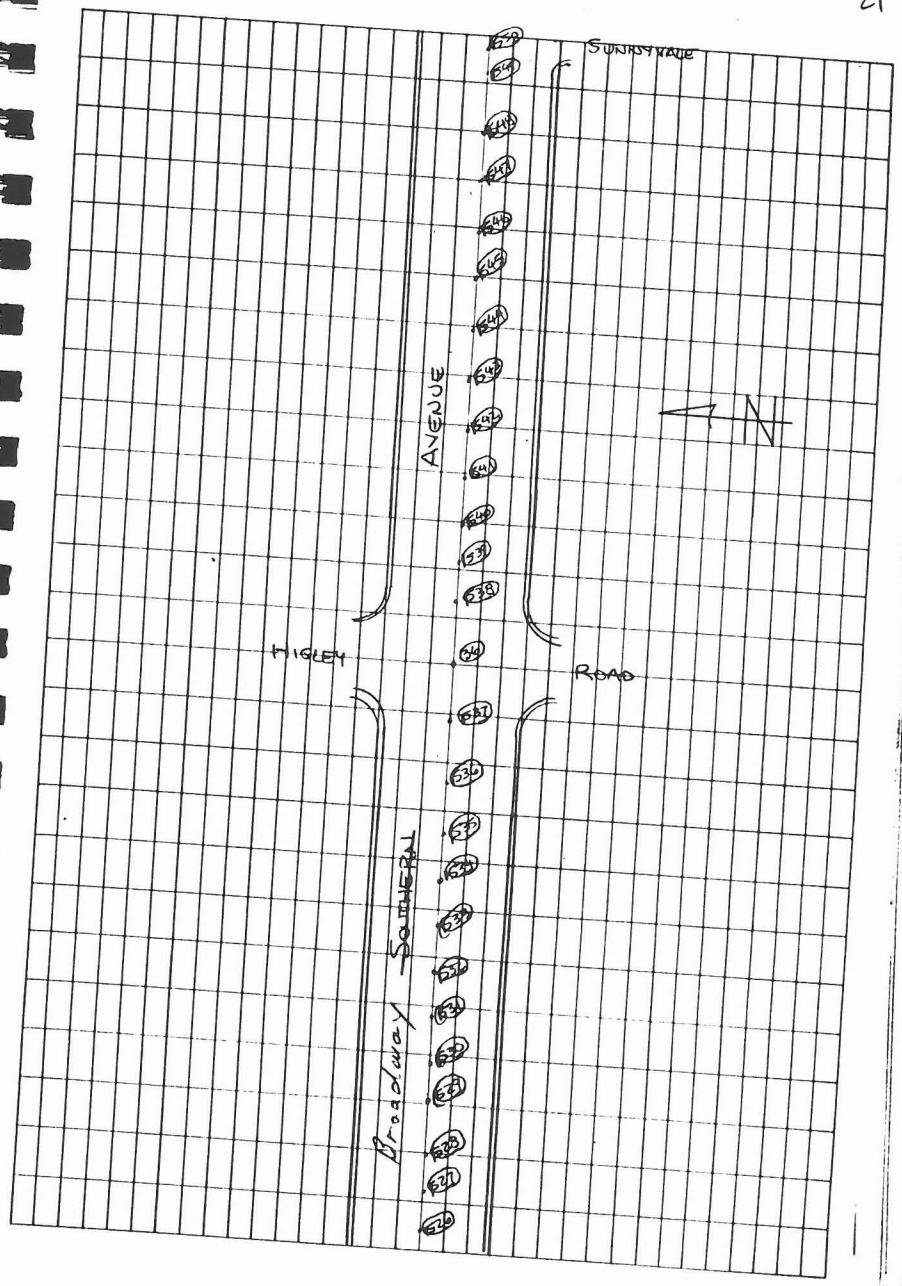


Attribute	Remarks		Point Count	H.I.	Epochs
1501	℄ Pvmt		49	2.480m	20
1502	℄ Pvmt		50	2.480m	20
1503	℄ Pvmt		51	2.480m	20
1504	℄ Pvmt		52	2.480m	20
1505	℄ Pvmt		53	2.480m	20
1506	℄ Pvmt		54	2.480m	20
1507	℄ Pvmt		55	2.480m	20
1508	℄ Pvmt		56	2.480m	20
1509	℄ Pvmt		57	2.480m	20
1510	℄ Pvmt		58	2.480m	20
1511	℄ Pvmt	(194) 48th St	59	2.480m	20
1512	℄ Pvmt		60	2.480m	20
1513	℄ Pvmt		61	2.480m	20
1514	℄ Pvmt		62	2.480m	20
1515	℄ Pvmt		63	2.480m	20
1516	℄ Pvmt		64	2.480m	20
1517	℄ Pvmt		65	2.480m	20
1518	℄ Pvmt		66	2.480m	20
1519	℄ Pvmt		67	2.480m	20
1520	℄ Pvmt		68	2.480m	20
1521	℄ Pvmt	(195) Racine	69	2.480m	20
1522	℄ Pvmt		70	2.480m	20
1523	℄ Pvmt		71	2.480m	20
1524	℄ Pvmt		72	2.480m	20
1525	℄ Pvmt		73	2.480m	20

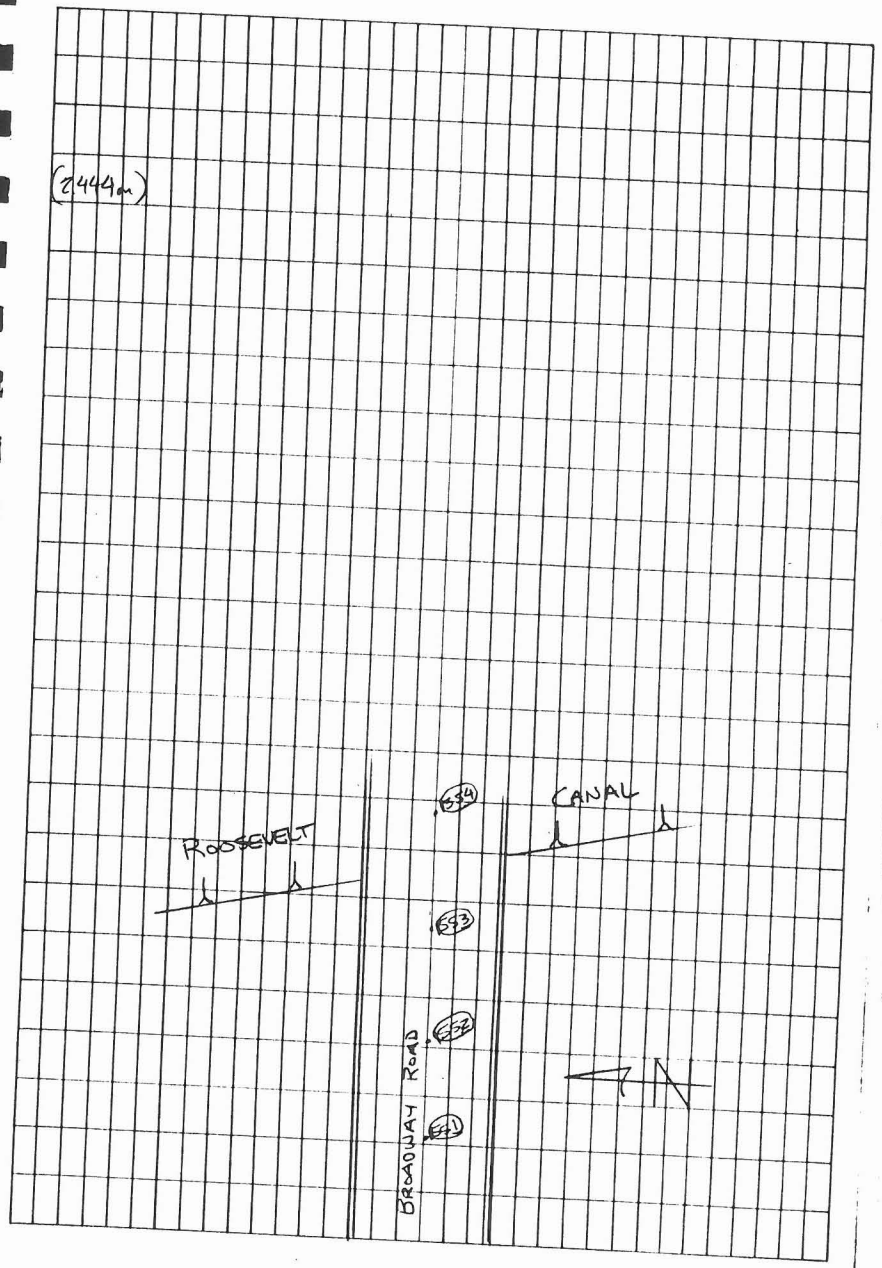
Lev 1315.597
GPS 1403.018
= 87.421

Lev 1320.723
GPS 1409.981
= 89.258

Attribute	Remarks		Point Count	H.I.	Epochs
1526	℄ Pvmt		74	2.480m	20
1527	℄ Pvmt		75	2.480m	20
1528	℄ Pvmt		76	2.480m	20
1529	℄ Pvmt		77	2.480m	20
1530	℄ Pvmt		78	2.480m	20
1531	℄ Pvmt		79	2.480m	20
1532	℄ Pvmt		80	2.480m	20
1533	℄ Pvmt		81	2.480m	20
1534	℄ Pvmt		82	2.480m	20
1535	℄ Pvmt		83	2.480m	20
1536	℄ Pvmt		84	2.480m	20
1537	℄ Pvmt	W of Higley	85	2.480m	20
1538	℄ Pvmt	E of Higley	86	2.480m	20
1539	℄ Pvmt		87	2.480m	20
1540	℄ Pvmt		88	2.480m	20
1541	℄ Pvmt		89	2.480m	20
1542	℄ Pvmt		90	2.480m	20
1543	℄ Pvmt		91	2.480m	20
1544	℄ Pvmt		92	2.480m	20
1545	℄ Pvmt		93	2.480m	20
1546	℄ Pvmt		94	2.480m	20
1547	℄ Pvmt		95	2.480m	20
1548	℄ Pvmt		96	2.480m	20
1549	℄ Pvmt		97	2.480m	20
1550	℄ Pvmt	Sunnyvale	98	2.480m	20



Attribute	Remarks		Point Count	H.I.	Epochs
1551	℄ Pvmt		99	2.480m	20
1552	℄ Pvmt		100	2.480m	20
1553	℄ Pvmt		101	2.480m	20
1554	℄ Pvmt		102	2.480m	20



Mapping

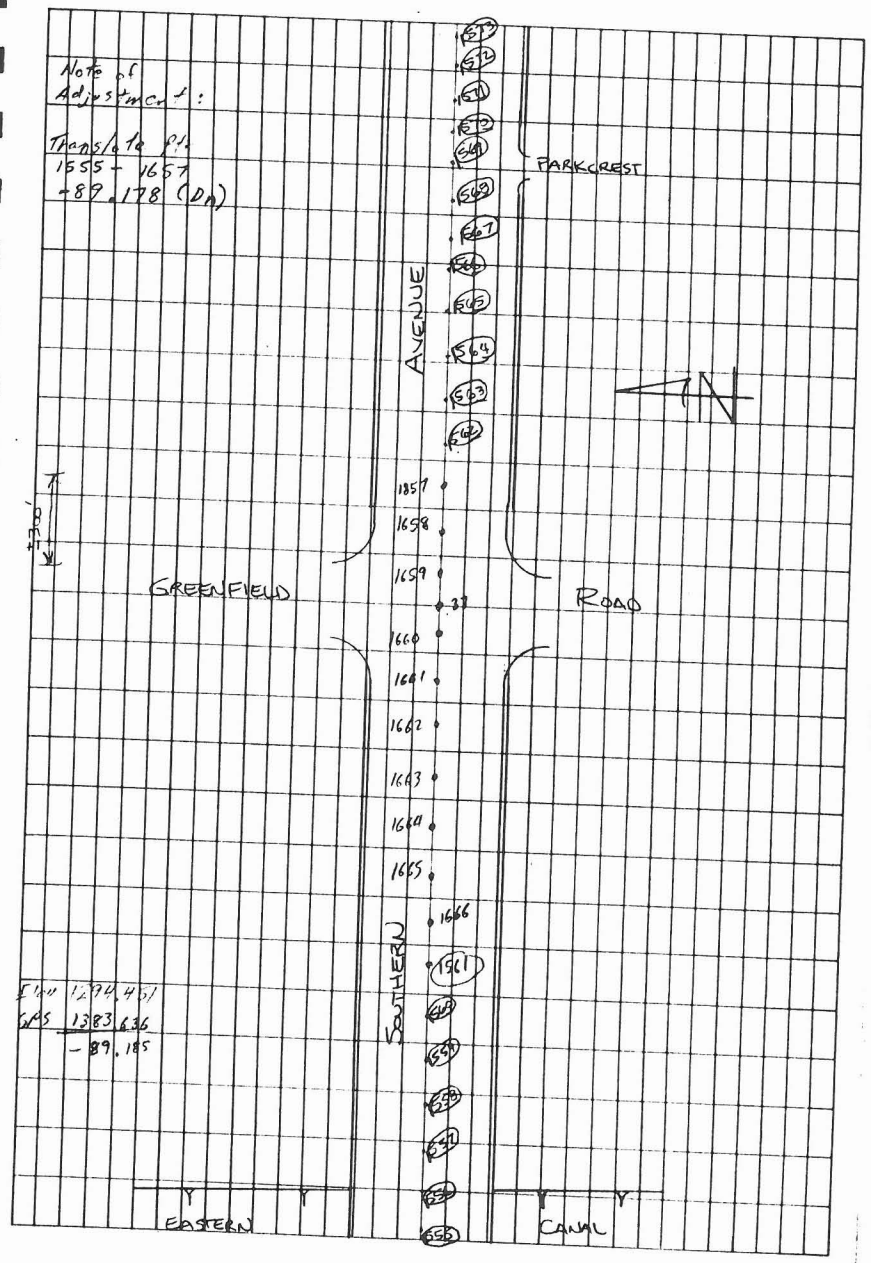
Attribute	Remarks		Point Count	H.I.	Epochs
M039-BaseSta	PK Nail	Lat 33-23-38.05034 Long 111-42-18.86897 Elev 409.1300		1.967m	
1555	℄ Pvmt	℄ Eastern Canal	1	2.010m	20
1556	℄ Pvmt	East Edge Canal	2	2.010m	20
1557	℄ Pvmt		3	2.010m	20
1558	℄ Pvmt		4	2.010m	20
1559	℄ Pvmt		5	2.010m	20
1560	℄ Pvmt		6	2.010m	0
1560	℄ Pvmt		7	2.010m	0
1560	℄ Pvmt		8	2.010m	20
1561	℄ Pvmt		9	2.010m	0
1561	℄ Pvmt		10	2.010m	20
1562	℄ Pvmt		11	2.010m	0
1562	℄ Pvmt		12	2.010m	20
1563	℄ Pvmt		13	2.010m	20
1564	℄ Pvmt		14	2.010m	20
1565	℄ Pvmt		15	2.010m	20
1566	℄ Pvmt		16	2.010m	20
1567	℄ Pvmt		17	2.010m	20
1568	℄ Pvmt		18	2.010m	20
1569	℄ Pvmt	(217) Parkcrest	19	2.010m	20
1570	℄ Pvmt		20	2.010m	20
1571	℄ Pvmt		21	2.010m	20
1572	℄ Pvmt		22	2.010m	20
1573	℄ Pvmt		23	2.010m	20

7-15-96
Cloudy, Calm, Warm 90°F

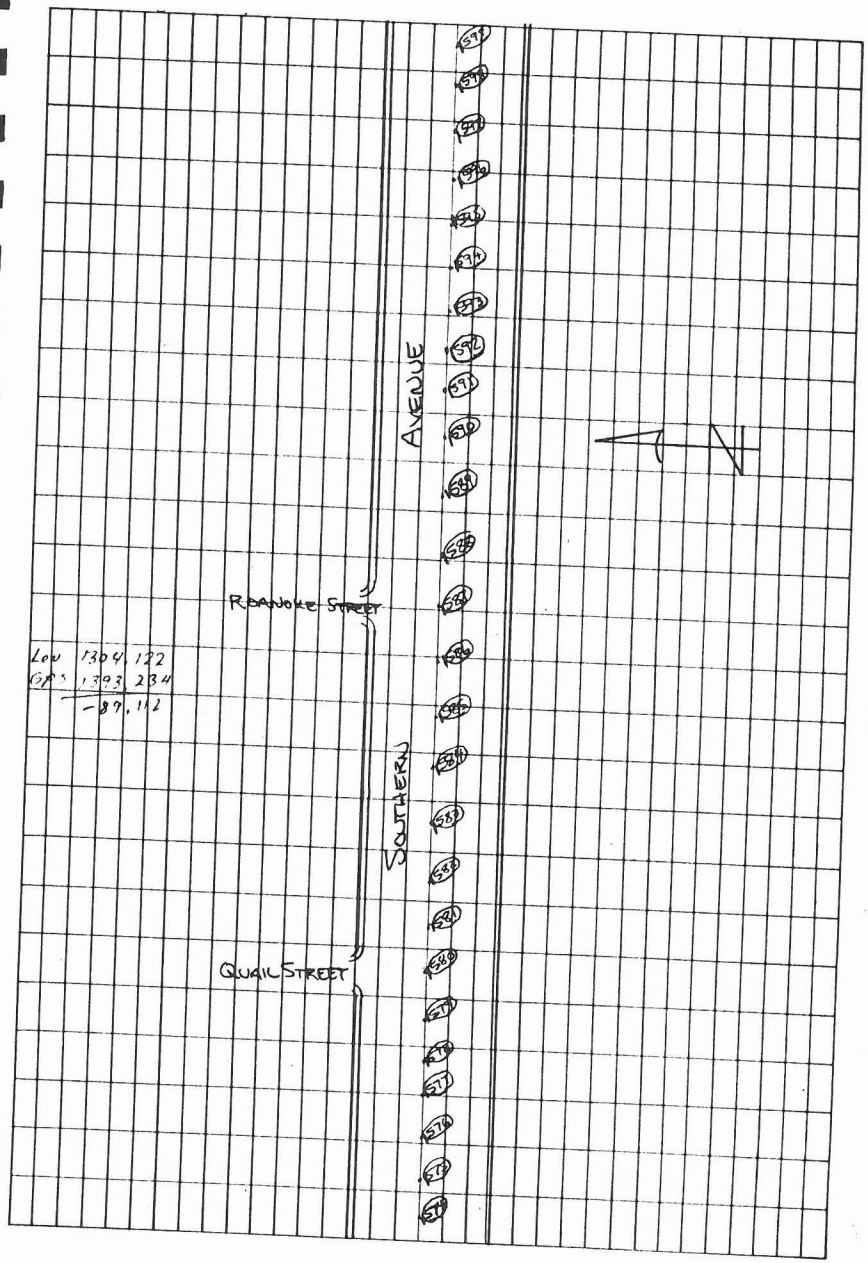
Gardner
Crace

Note of Adjustment:

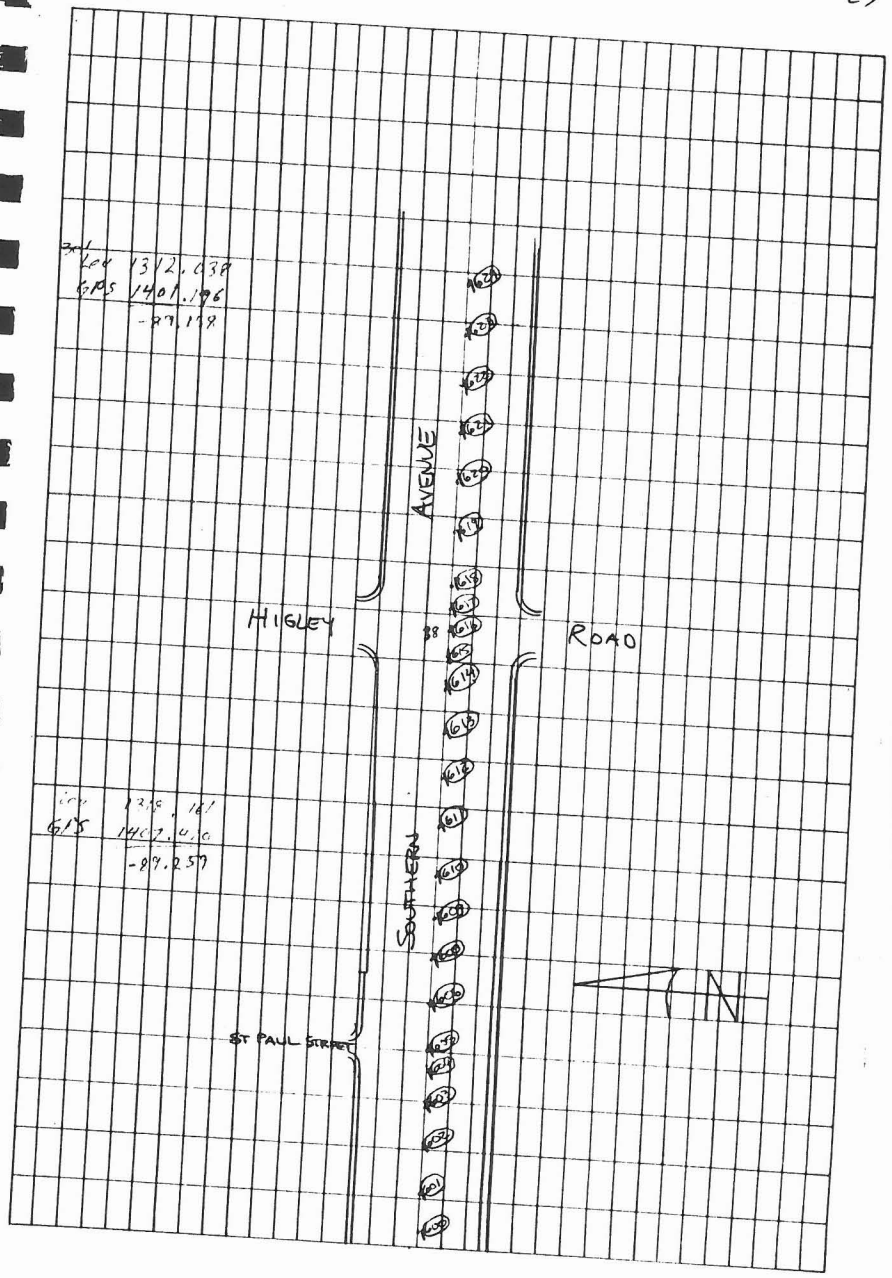
Transit to P.I.
1555 - 1657
-89.178 (DM)



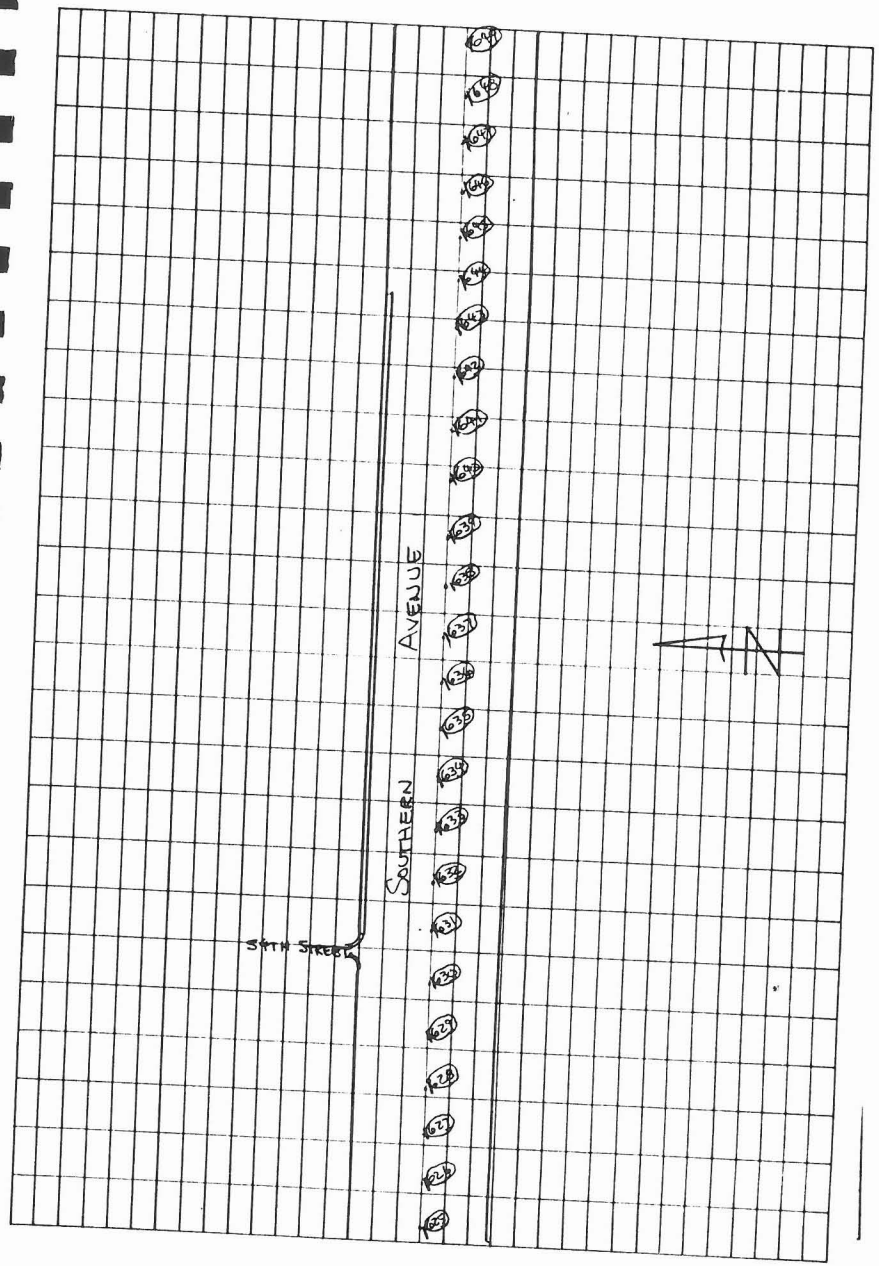
Attribute	Remarks		Point Count	H.I.	Epochs
1574	℄ Pvmt		24	2.010m	20
1575	℄ Pvmt		25	2.010m	20
1576	℄ Pvmt		26	2.010m	20
1577	℄ Pvmt		27	2.010m	20
1578	℄ Pvmt		28	2.010m	20
1579	℄ Pvmt		29	2.010m	20
1580	℄ Pvmt	Quail Street	30	2.010m	20
1581	℄ Pvmt		31	2.010m	20
1582	℄ Pvmt		32	2.010m	20
1583	℄ Pvmt		33	2.010m	20
1584	℄ Pvmt		34	2.010m	20
1585	℄ Pvmt		35	2.010m	20
1586	℄ Pvmt		36	2.010m	20
1587	℄ Pvmt	(218) Roanoke	37	2.010m	20
1588	℄ Pvmt		38	2.010m	20
1589	℄ Pvmt		39	2.010m	20
1590	℄ Pvmt		40	2.010m	20
1591	℄ Pvmt		41	2.010m	20
1592	℄ Pvmt		42	2.010m	20
1593	℄ Pvmt		43	2.010m	20
1595	℄ Pvmt		44	2.010m	20
1596	℄ Pvmt		45	2.010m	20
1597	℄ Pvmt		46	2.010m	20
1598	℄ Pvmt		47	2.010m	20
1599	℄ Pvmt		48	2.010m	20



ATTRIBUTE	REMARKS		POINT COUNT	H.I.	EPOCHS
1600	℄ Pvmt		49	2.010m	20
1601	℄ Pvmt		50	2.010m	20
1602	℄ Pvmt		51	2.010m	20
1603	℄ Pvmt		52	2.010m	20
1604	℄ Pvmt		53	2.010m	20
1605	℄ Pvmt	(219) St Paul St	54	2.010m	20
1606	℄ Pvmt		55	2.010m	20
1607	℄ Pvmt		56	2.010m	20
1608	℄ Pvmt		57	2.010m	20
1609	℄ Pvmt		58	2.010m	20
1610	℄ Pvmt		59	2.010m	20
1611	℄ Pvmt		60	2.010m	20
1612	℄ Pvmt		61	2.041m	20
1613	℄ Pvmt		62	2.041m	20
1614	℄ Pvmt		63	2.041m	20
1615	℄ Pvmt		64	2.041m	20
1616	℄ Pvmt	(38) Higley Rd	65	2.041m	20
1617	℄ Pvmt		66	2.041m	20
1618	℄ Pvmt		67	2.041m	20
1619	℄ Pvmt		68	2.041m	20
1620	℄ Pvmt		69	2.041m	20
1621	℄ Pvmt		70	2.010m	20
1622	℄ Pvmt		71	2.010m	20
1623	℄ Pvmt		72	2.010m	20
1624	℄ Pvmt		73	2.010m	20



Attribute	Remarks		Point Count	H.I.	Epochs
1625	℄ Pvmt		74	2.010m	20
1626	℄ Pvmt		75	2.010m	20
1627	℄ Pvmt		76	2.010m	20
1628	℄ Pvmt		77	2.010m	20
1629	℄ Pvmt		78	2.010m	20
1630	℄ Pvmt		79	2.010m	20
1631	℄ Pvmt	E of 54th St	80	2.010m	20
1632	℄ Pvmt		81	2.010m	20
1633	℄ Pvmt		82	2.010m	20
1634	℄ Pvmt		83	2.010m	20
1635	℄ Pvmt		84	2.010m	20
1636	℄ Pvmt		85	2.010m	20
1637	℄ Pvmt		86	2.010m	20
1638	℄ Pvmt		87	2.010m	20
1639	℄ Pvmt		88	2.010m	20
1640	℄ Pvmt		89	2.010m	20
1641	℄ Pvmt		90	2.010m	20
1642	℄ Pvmt		91	2.010m	20
1643	℄ Pvmt		92	2.010m	20
1644	℄ Pvmt		93	2.010m	20
1645	℄ Pvmt		94	2.041m	20
1646	℄ Pvmt		95	2.041m	20
1647	℄ Pvmt		96	2.041m	20
1648	℄ Pvmt		97		20
1649	℄ Pvmt		98		20



ATTRIBUTE	REMARKS	POINT COUNT	H.I.	EPOCHS
1650	[illegible]	99		20
1651	"	100		20
1652	"	101		20
1653	"	102		20
1654	"	103		20
1655	"	104		20
1656	"	105		20
1657	"	106		20

Pt					
37-↑ SA	5.8[illegible]		Brass Cap		
38-35	6.87	Hz ¥0-00w	Brass Cap		
1857 ~~657~~	[illegible]		[illegible]		
1658	"		"		
1659	"		"		
1660	"				
1661	"		"		
1662	"		"		
1663	"		"		
1664	"		"		
1665	"		"		
1666	"		"		

SEE DIAGRAM
PAGE 23

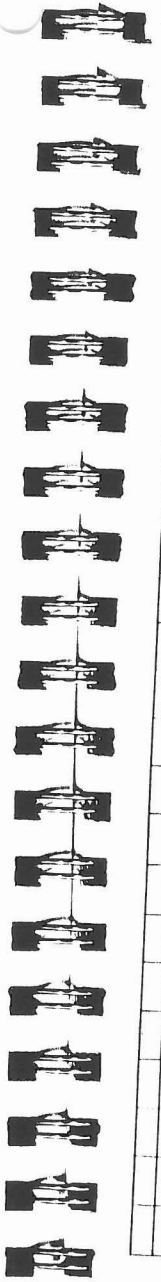
STATION	REMARKS		POINT NUMBER	H.I.	EPOCHS
M045-BASE	LAT 32 22-29.75867 LONG 111-03-04.45740 ELEV	375.5473m		1.726m	
1667	℄ Pvmt		1	[illegible]4lm	20
[illegible]	℄ Pvmt		2	2.04lm	20
[illegible]	℄ Pvmt		3	2.04lm	20
[illegible]	℄ Pvmt		4	2.04lm	20
[illegible]	℄ Pvmt		5	2.04lm	20
[illegible]	℄ Pvmt		6	2.04lm	20
1673	℄ Pvmt		7	2.04lm	20
1674	℄ Pvmt		8	2.04lm	20
[illegible]	℄ Pvmt		9	2.04lm	20
[illegible]	℄ Pvmt		10	2.04lm	20
1677	℄ Pvmt		11	2.04lm	20
1678	℄ Pvmt		12	2.04lm	20
1679	℄ Pvmt		13	2.04lm	20
1680	℄ Pvmt		14	2.04lm	20
1681	℄ Pvmt		15	2.04lm	20
[illegible]	℄ Pvmt		16	2.04lm	20
1683	℄ Pvmt		17	2.04lm	20
1684	℄ Pvmt	Rim (227)	18	2.04lm	20
1685	℄ Pvmt		19	2.04lm	20
[illegible]	℄ Pvmt	letter spindle	20	2.04lm	20
[illegible]	℄ Pvmt		21	2.04lm	20
[illegible]	℄ Pvmt		22	2.04lm	20

No [illegible]
Adjustment:

[illegible]
1667 - 1784
-89.554 (.0m)

Lev 1287.958
GPS 1377.266
-89.308

Minute	Remarks		Point Count	H.I.	Epochs
1689	℄ Pvmt		23	2.041m	20
1690	℄ Pvmt		24	2.041m	20
1691	℄ Pvmt		25	2.041m	20
1692	℄ Pvmt		26	2.041m	20
1693	℄ Pvmt		27	2.041m	20
1694	℄ Pvmt		28	2.041m	20
1695	℄ Pvmt		29	2.041m	20
1696	℄ Pvmt		30	2.041m	20
1697	℄ Pvmt		31	2.041m	20
1698	℄ Pvmt		32	2.041m	20
1699	℄ Pvmt		33	2.041m	20
1700	℄ Pvmt		34	2.041m	20
1701	℄ Pvmt		35	2.041m	20
1702	℄ Pvmt	(230) Higley Road	36	2.041m	20
1703	℄ Pvmt		37	2.041m	20
1704	℄ Pvmt		38	2.041m	20
1705	℄ Pvmt		39	2.041m	20
1706	℄ Pvmt		40	2.041m	20
1707	℄ Pvmt		41	2.041m	20
1708	℄ Pvmt		42	2.041m	20
1709	℄ Pvmt		43	2.041m	20
1710	℄ Pvmt		44	2.041m	20
1711	℄ Pvmt		45	2.041m	20
1712	℄ Pvmt		46	2.041m	20
1713	℄ Pvmt		47	2.041m	20



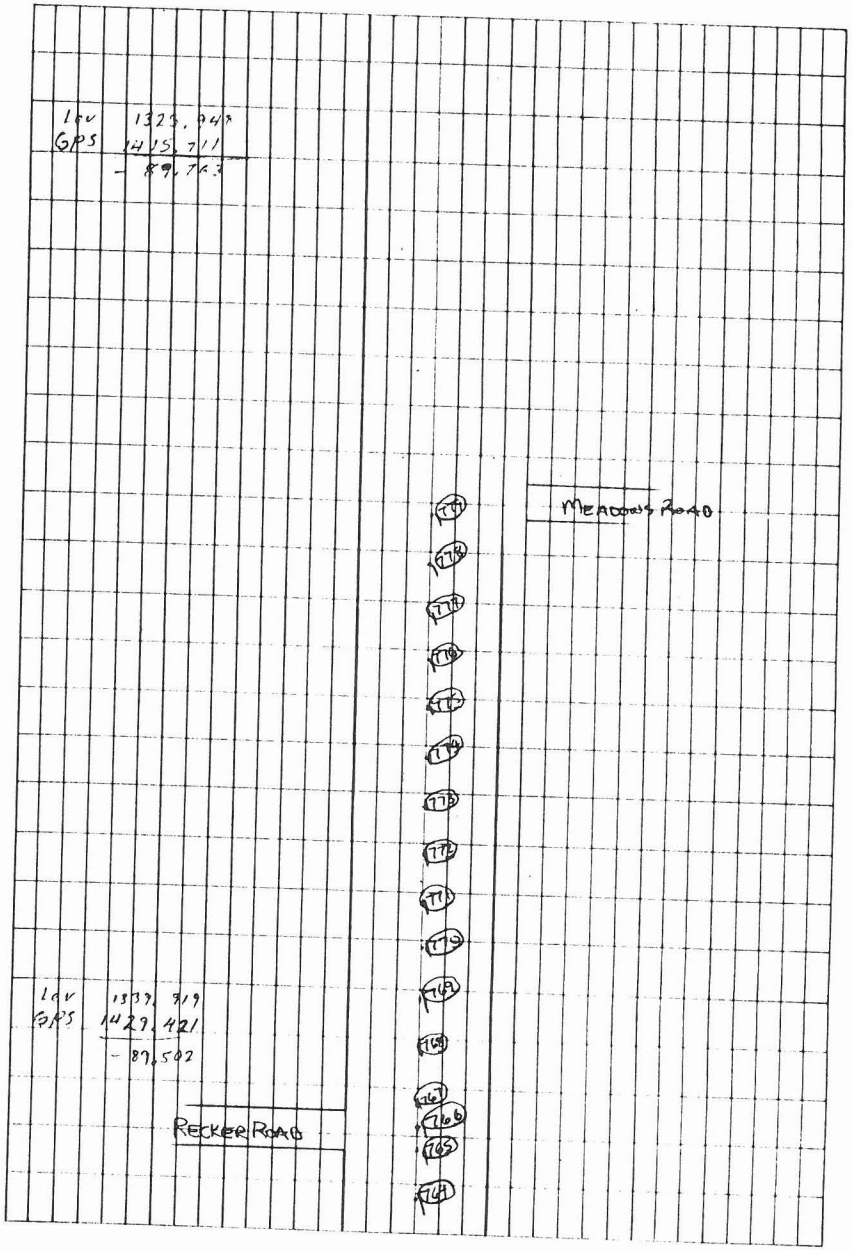
LAT 12[illegible]
GPS 1384.8911
97.423

ATTRIBUTE	REMARKS	POINT COUNT	H.I.	EPOCHS
1714	℄ Pvmt	48	2.041m	20
1715	℄ Pvmt	49	2.041m	20
1716	℄ Pvmt	50	2.041m	20
1717	℄ Pvmt	51	2.041m	20
1718	℄ Pvmt	52	2.041m	20
1719	℄ Pvmt	53	2.041m	20
1720	℄ Pvmt	54	2.041m	20
1721	℄ Pvmt	55	2.041m	20
1722	℄ Pvmt	56	2.041m	20
1723	℄ Pvmt	57	2.041m	20
1724	℄ Pvmt	58	2.041m	20
1725	℄ Pvmt	59	2.041m	20
1726	℄ Pvmt	60	2.041m	20
1727	℄ Pvmt	61	2.041m	20
1728	℄ Pvmt	62	2.041m	20
1729	℄ Pvmt	63	2.041m	20
1730	℄ Pvmt	64	2.041m	20
1731	℄ Pvmt	65	2.041m	20
1732	℄ Pvmt	66	2.041m	20
1733	℄ Pvmt	67	2.041m	20
1734	℄ Pvmt	68	2.041m	20
1735	℄ Pvmt	69	2.041m	20
1736	℄ Pvmt	70	2.041m	20
1737	℄ Pvmt	71	2.041m	20
1738	℄ Pvmt	72	2.041m	20

ATTRIBUTE	REMARKS		POINT COUNT	H.I.	EPOCHS
1739	℄ Pvmt		73	2.04lm	20
1740	℄ Pvmt		74	2.04lm	20
1741	℄ Pvmt		75	2.04lm	20
1742	℄ Pvmt		76	2.04lm	20
1743	℄ Pvmt		77	2.04lm	20
1744	℄ Pvmt		78	2.04lm	20
1745	℄ Pvmt		79	2.04lm	20
1746	℄ Pvmt		80	2.04lm	20
1747	℄ Pvmt		81	2.04lm	20
1748	℄ Pvmt		82	2.04lm	20
1749	℄ Pvmt		83	2.04lm	20
750	℄ Pvmt		84	2.04lm	20
1751	℄ Pvmt		85	2.04lm	20
752	℄ Pvmt		86	2.04lm	20
1753	℄ Pvmt		87	2.04lm	20
1754	℄ Pvmt		88	2.04lm	20
1755	℄ Pvmt		89	2.04lm	20
756	℄ Pvmt	(#234) Recov. R/S South	90	2.04lm	20
1757	℄ Pvmt		91	2.04lm	20
1758	℄ Pvmt		92	2.04lm	20
1759	℄ Pvmt		93	2.04lm	20
760	℄ Pvmt		94	2.04lm	20
1761	℄ Pvmt		95	2.04lm	20
1762	℄ Pvmt		96	2.04lm	20
1763	℄ Pvmt		97	2.04lm	20

60 330 744
GPS 14M.516
-89.760

ATTRIBUTE	REMARKS		POINT COUNT	H.I.	EPOCHS
1764	℄ Pvmt		98	2.041m	20
1765	℄ Pvmt		99	2.041m	20
1766	℄ Pvmt	(#2 Z4) Recker Rd Nat'l	100	2.041m	20
1767	℄ Pvmt		101	2.041m	20
1768	℄ Pvmt		102	2.041m	*19
1769	℄ Pvmt		103	2.041m	20
1770	℄ Pvmt		104	2.041m	20
1771	℄ Pvmt		105	2.041m	20
1772	℄ Pvmt		106	2.041m	20
1773	℄ Pvmt		107	2.041m	20
1774	℄ Pvmt		108	2.041m	20
1775	℄ Pvmt		109	2.041m	20
*1776	℄ Pvmt		110	2.041m	20
1777	℄ Pvmt		111	2.041m	20
1778	℄ Pvmt		112	2.041m	20
1779	℄ Pvmt	W of Meadows	113	2.041m	20
1780	℄ Pvmt		114	2.041m	20
1781	℄ Pvmt		115	2.041m	20
1782	℄ Pvmt		116	2.041m	20
1783	℄ Pvmt		117	2.041m	20
1784	℄ Pvmt	(P7 #43)	118	2.041m	20
			119		



MESA_BR
(Mesa_Brm)

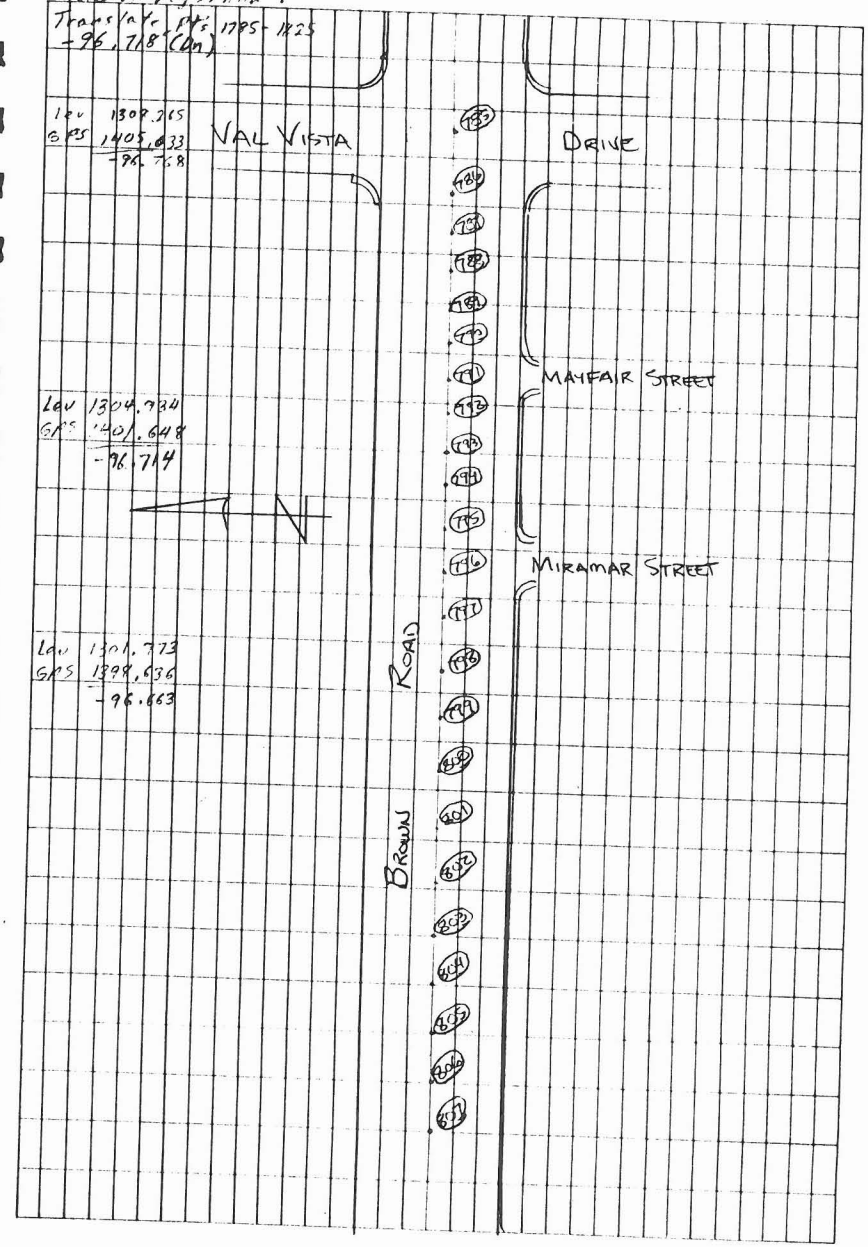
ATTRIBUTE	REMARKS		POINT COUNT	H.I.	ERRORS
30-BASE	LAT 33-26-14.13122 LONG 111-44-10.11551 ELEV 409.2839			1992 m	
1785	℄ Pvmt	(139) Val Vista Drive	1	2.041m	20
1786	℄ Pvmt		2	2.041m	20
1787	℄ Pvmt		3	2.041m	20
1788	℄ Pvmt		4	2.041m	20
1789	℄ Pvmt		5	2.041m	20
1790	℄ Pvmt		6	2.015m	20
1791	℄ Pvmt	(139) Mayfair St	7	2.015m	20
1792	℄ Pvmt		8	2.015m	20
1793	℄ Pvmt		9	2.015m	20
1794	℄ Pvmt		10	2.015m	20
1795	℄ Pvmt		11	2.015m	20
1796	℄ Pvmt	(138) Miramar	12	2.015m	20
1797	℄ Pvmt		13	2.015m	20
1798	℄ Pvmt		14	2.015m	20
1799	℄ Pvmt		15	2.015m	20
1800	℄ Pvmt		16	2.015m	20
1801	℄ Pvmt		17	2.015m	20
1802	℄ Pvmt		18	2.015m	20
1803	℄ Pvmt		19	2.015m	20
1804	℄ Pvmt		20	2.015m	20
1805	℄ Pvmt		21	2.015m	20
1806	℄ Pvmt		22	2.015m	20
1807	℄ Pvmt		23	2.015m	20

Note of Adjustment:
Transverse pts 1785-1825
-96.718 (Cm)

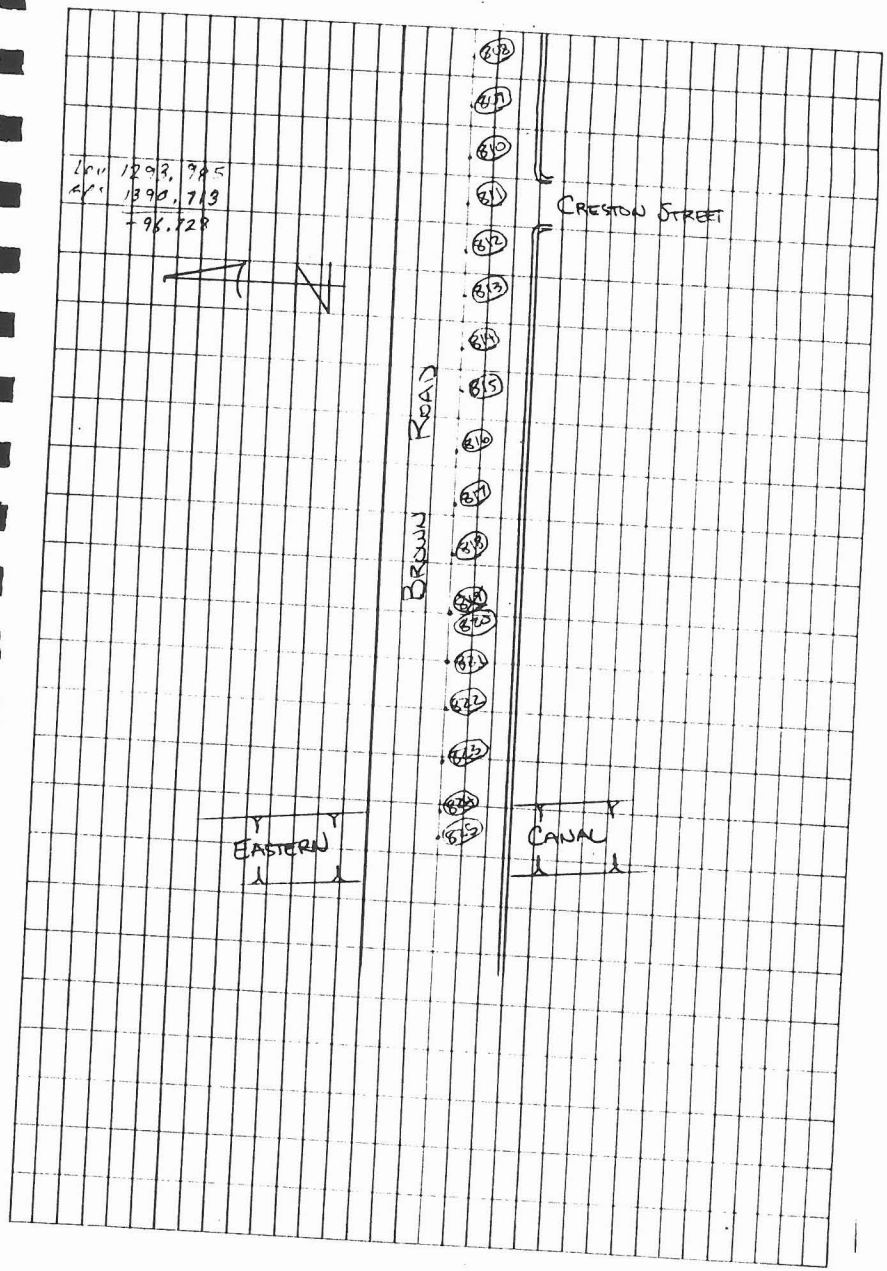
Lev 1309.765
GPS 1405.633
-96.718

Lev 1304.734
GPS 1401.648
-96.714

Lev 1301.773
GPS 1398.636
-96.663



Attribute	Remarks		Point Count	H.I.	Epochs
1808	℄ Pvmt		24	2.015m	20
1809	℄ Pvmt		25	2.015m	20
1810	℄ Pvmt		26	2.015m	20
1811	℄ Pvmt	?127? Creston	27	2.015m	20
1812	℄ Pvmt		28	2.015m	20
1813	℄ Pvmt		29	2.015m	20
1814	℄ Pvmt		30	2.015m	20
1815	℄ Pvmt		31	2.015m	20
1816	℄ Pvmt		32	2.015m	20
1817	℄ Pvmt		33	2.015m	20
1818	℄ Pvmt		34	2.015m	20
~~819~~	℄ Pvmt		35	2.015m	* 12
					Unit ~~Frobe~~



Attribute	Remarks		Point Count	H.I.	Epochs
182	℄ Pvmt		1	2.015m	20
1821	℄ Pvmt		2	2.015m	20
1822	℄ Pvmt		3	2.015m	20
1823	℄ Pvmt		4	2.015m	20
1824	℄ Pvmt	E Edge Canal	5	2.015m	20
1825	℄ Pvmt	Eastern ℄ Canal	6	2.015m	20

(1821 (used)

See Diagram Page 35

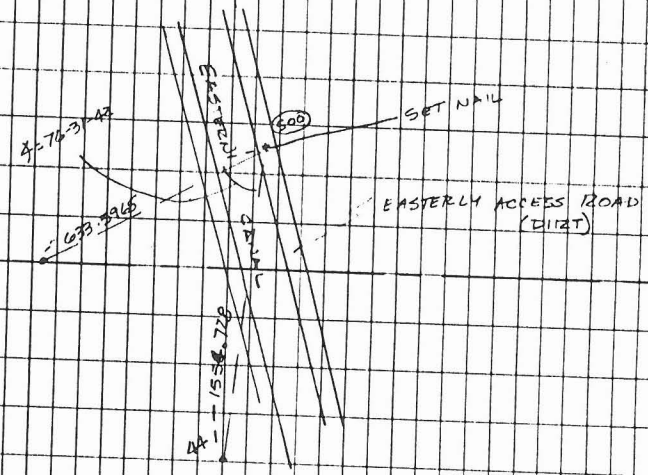
- **FIELD NOTES**

(DELIVERED 9/23/96)

SEP 12, 96

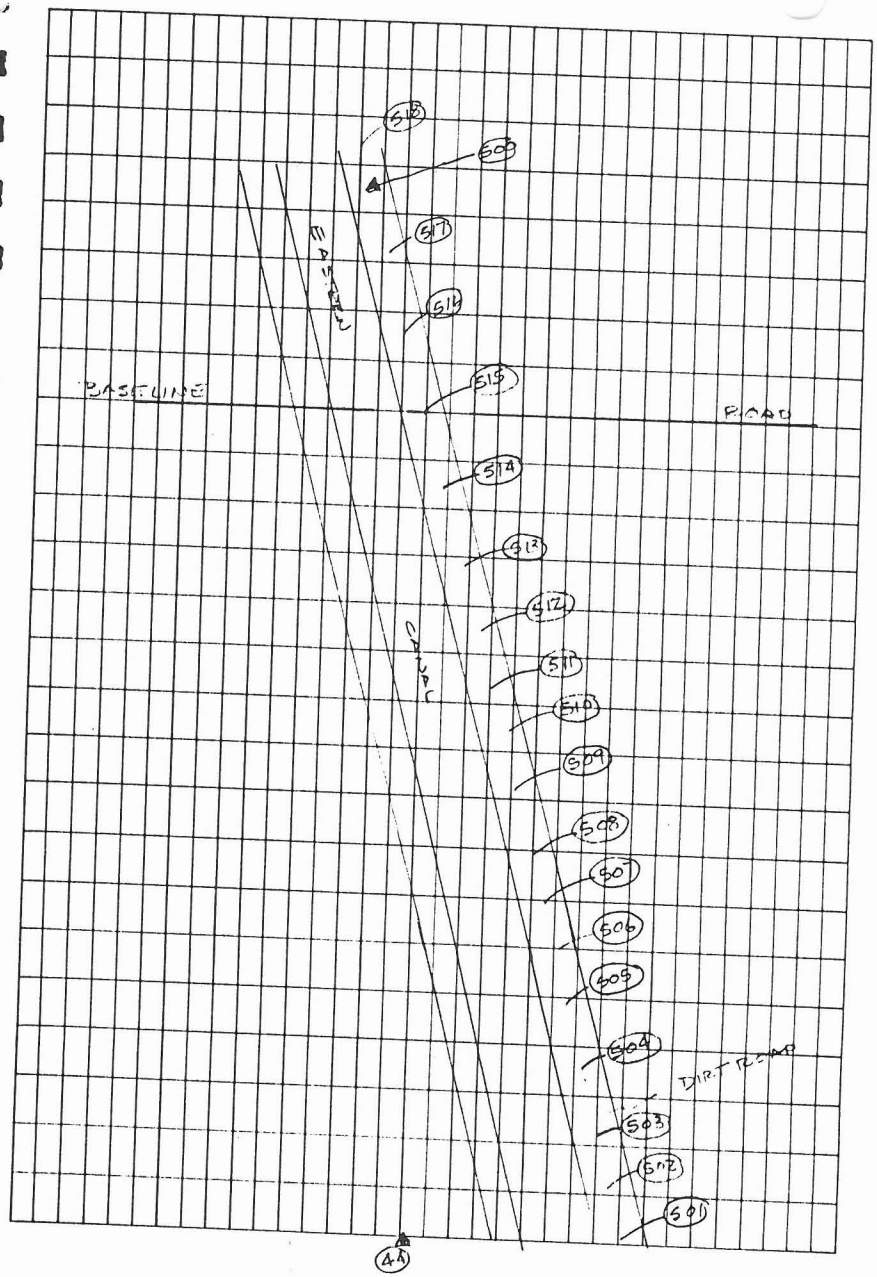
J.R.

J.H.

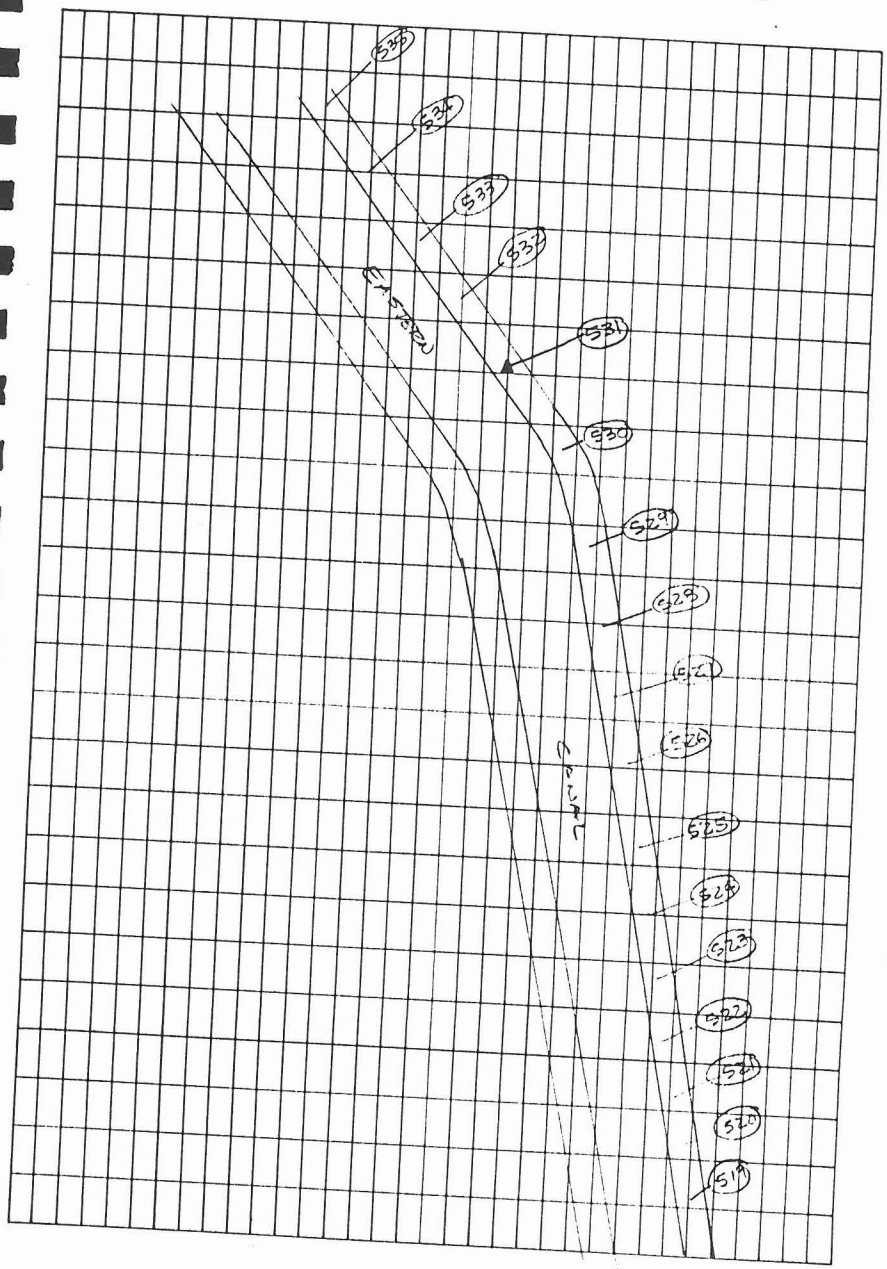


GRID FACTOR F .999841316

STA	PT#	ROD	REMARKS
π	500	5.51	
BS	44	5.70	
	501	4.85	
	502		
	503		
	504		
	505		
	506		
	507		
	508	4.85	
	509		
	510		
	511		
	512		
	513		
	514		
	515	4.85	
	516		
	517		
	518		
	519		
	520		
	521		
	522	4.85	

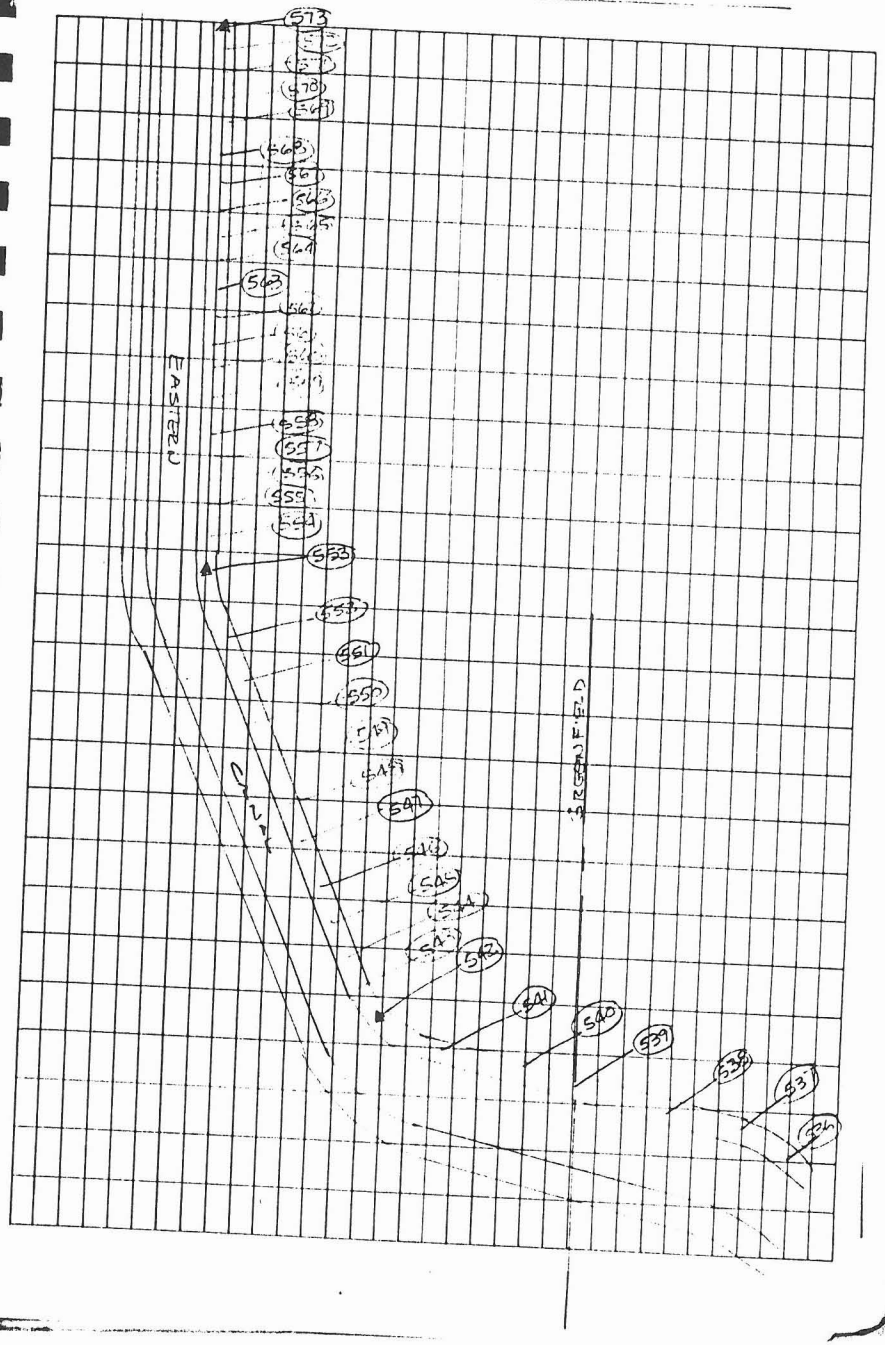


	Pt #	Rod	Remarks
	523	4.85	
	524		
	525		
	526		
	527	4.85	
	528		
	529		
	530		
	531	4.85	SET NAIL
↑	531	5.49	
BS	500	5.84	
	532	4.85	
	533		
	534		
	535		
	536		
	537		
	538		
	539		
	540		
	541		
	542	4.85	SETNAIL



Pt.	Pt #	Rod	Remarks
X	542	5.49	
	521	5.79	
	543	4.85	
	544		
	545		
	546		
	547		
	548	4.85	
	549		
	550		
	551		
	552		
	553	4.85	SET NAIL

SOUTHERN AVE



Sta	Pt	Rod	Remarks		
X	553	5.47			
35	542	5.81			
	554	4.85			
	555				
	556				
	557				
	558				
	559	4.85			
	560				
	561				
	562				
	563				
	564				
	565	4.85			
	566				
	567				
	568				
	569				
	570	4.85			
	571				
	572				
	573	4.85	SET NAIL		

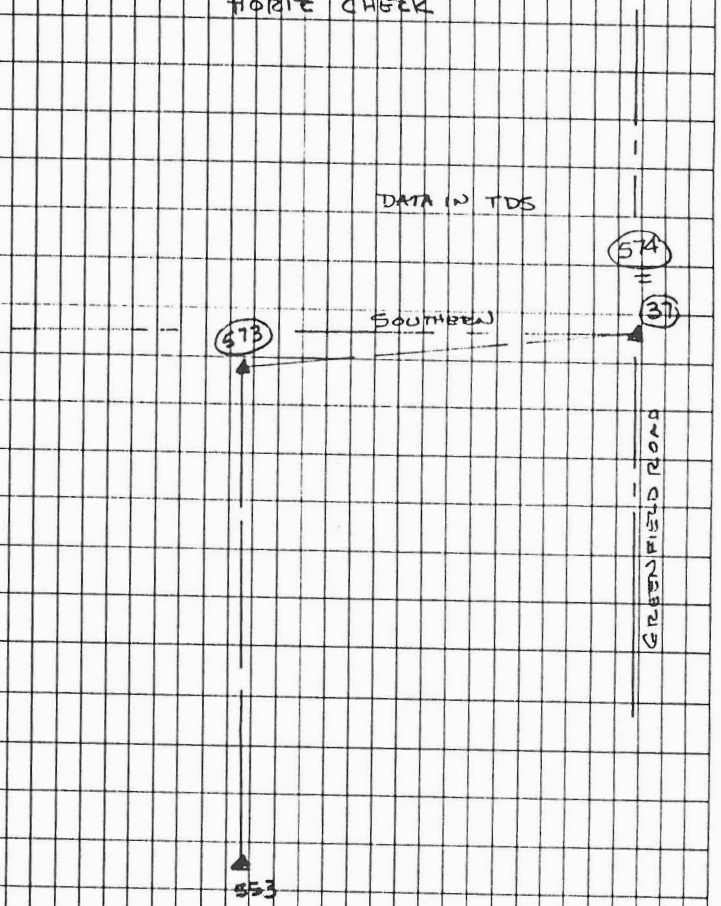
90° BEEBY CLEAR

9-13-96

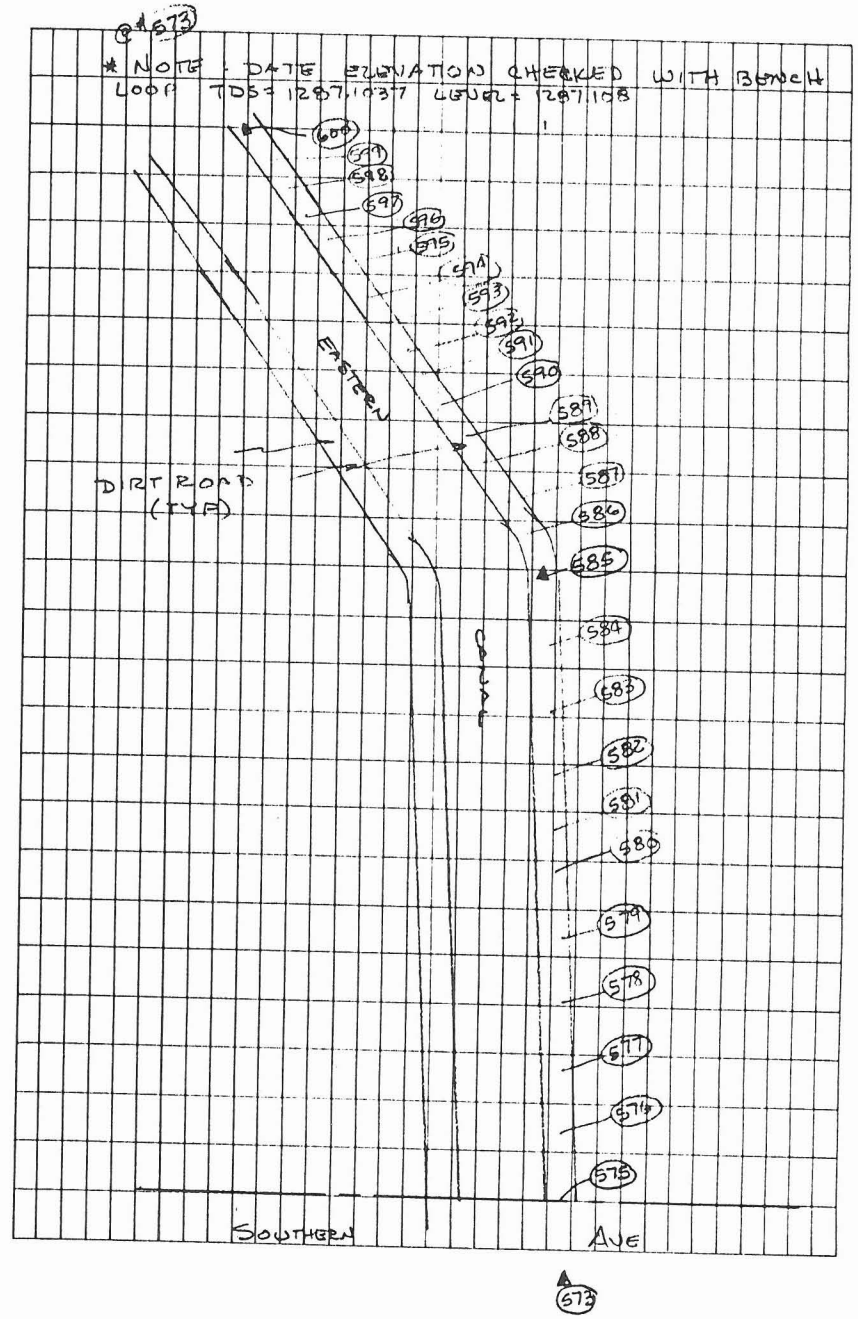
J. ROSS
D. MARTINEZ
J. EDMONDSON

HORIZ CHECK

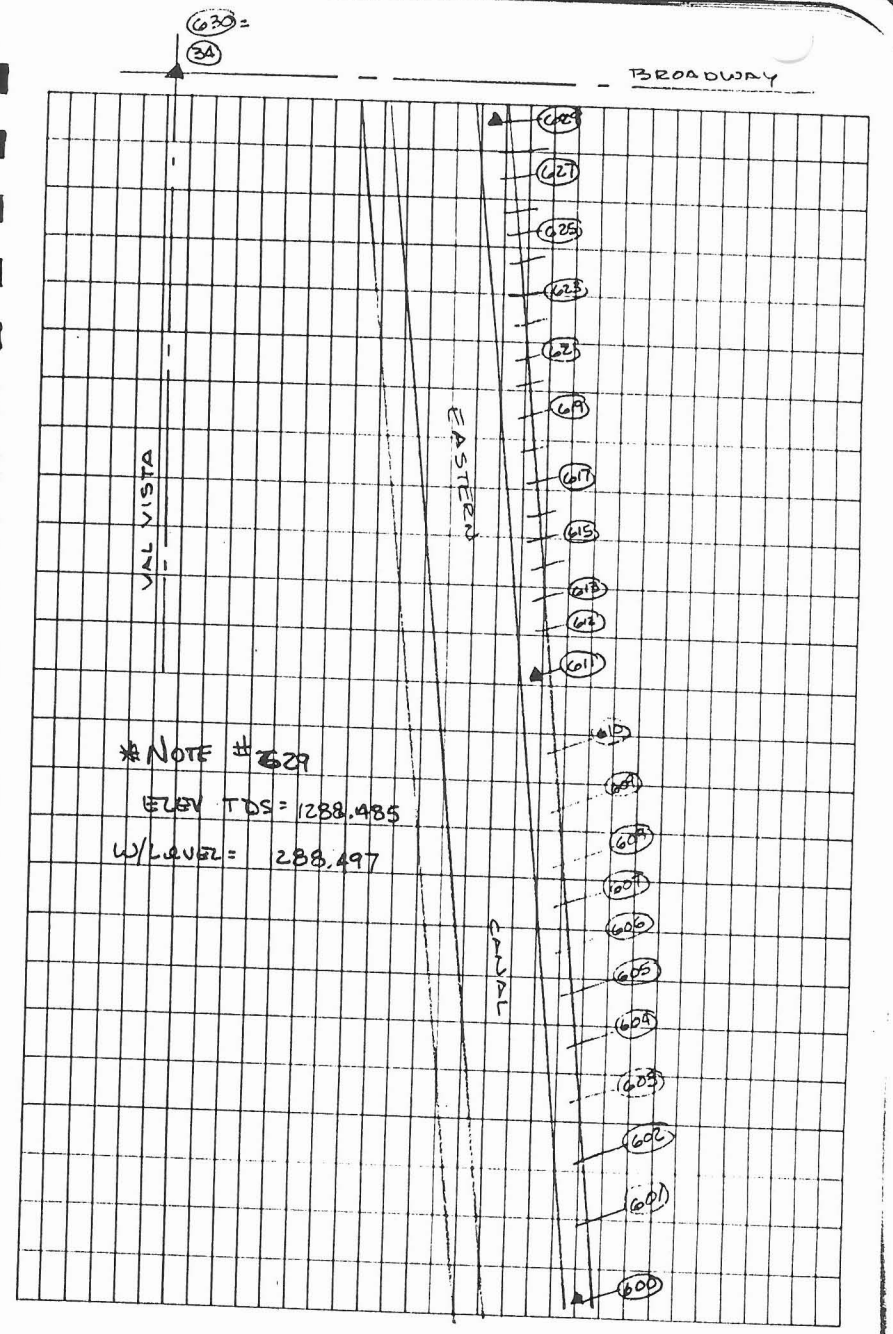
DATA IN TDS



STA	Pt#	ROD	REMARKS
⊼	573	5.52	
BS	553	5.68	
	574	4.85	SAME AS 37
	575		
	576		
	577		
	578		
	579	4.85	
	580		
	581		
	582		
	583		
	584		
	585	4.85	SET NAIL
⊼	585	5.59	
BS	573	5.67	
	586	4.85	
	587		
	588		
	589		
	590	4.85	

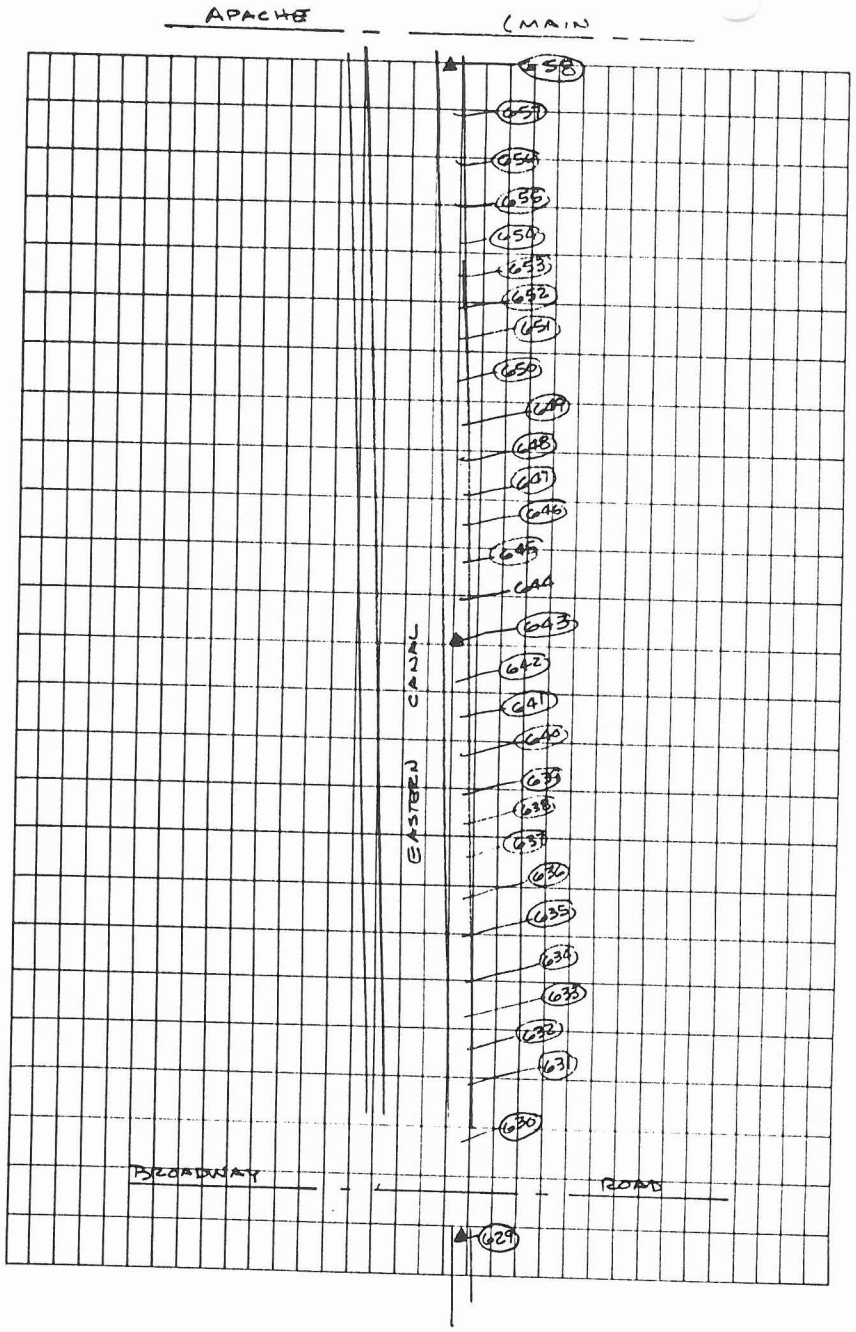


STA	PT#	ROD	REMARKS
	591	4.85	
	592		
	593		
	594		
	595	4.85	
	596		
	597		
	598		
	599		
	600	4.85	SET NAIL
↑	600	5.52	
BS	585	5.73	
	601	4.85	
	602		
	603		
	604		
	605	4.85	
	606		
	607		
	608		
	609		
	610		
	611	4.85	SET NAIL



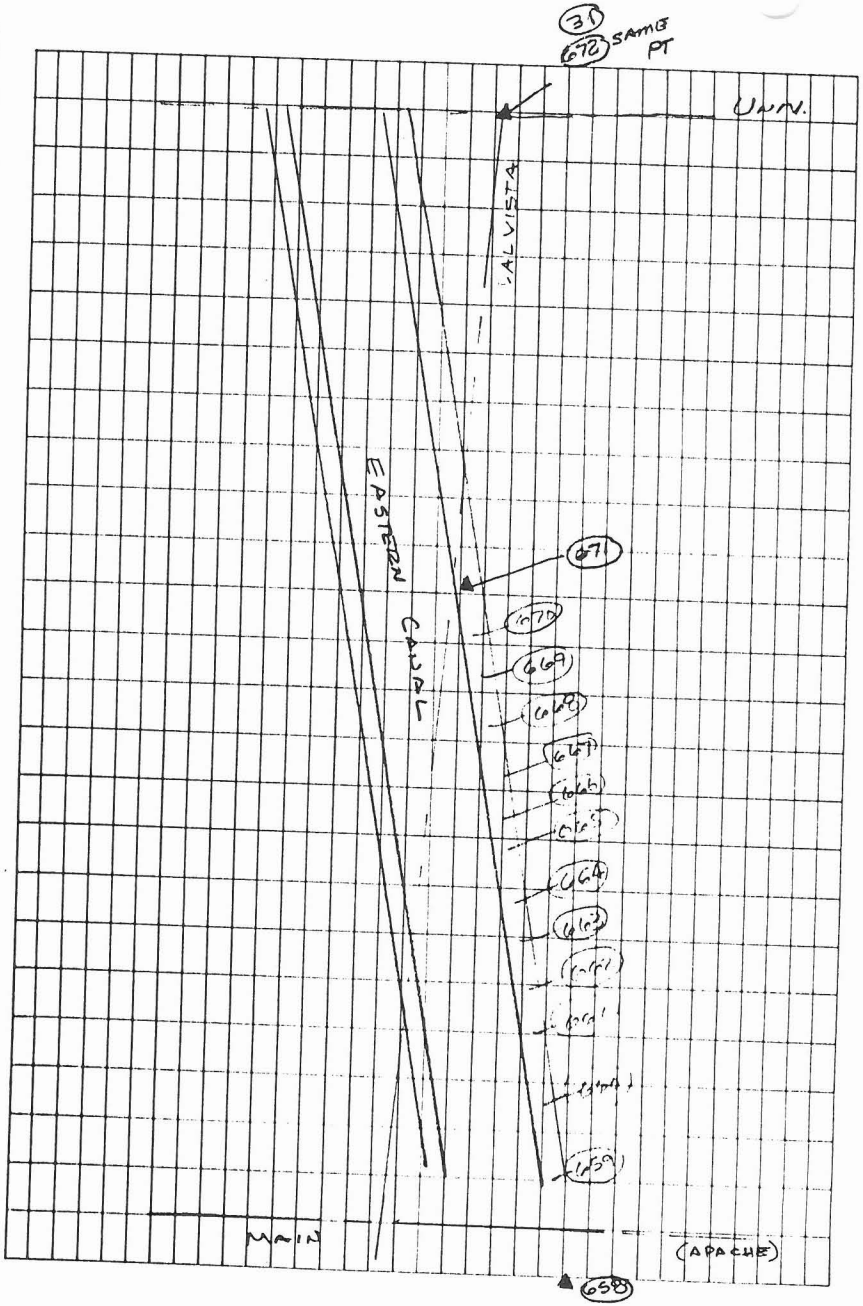
STA	PT#	ROD	REMARKS		
⊼	611	5.47			
BS	600	5.59			
	612	4.85			
	613				
	614				
	615				
	616				
	617	4.85			
	618				
	619				
	620				
	621				
	622				
	623	4.85			
	624				
	625				
	626				
	627				
	628				
	629	4.85	SET NAIL (P.K.)		

STA	Pt#	ROD	REMARKS
⊼	629	5.63	
135	611	5.66	
	630	4.85	SAME AS # 34
	631		
	632		
	633		
	634		
	635	4.85	
	636		
	637		
	638		
	639		
	640		
	641		
	642		
	643	4.85	Set NAIL

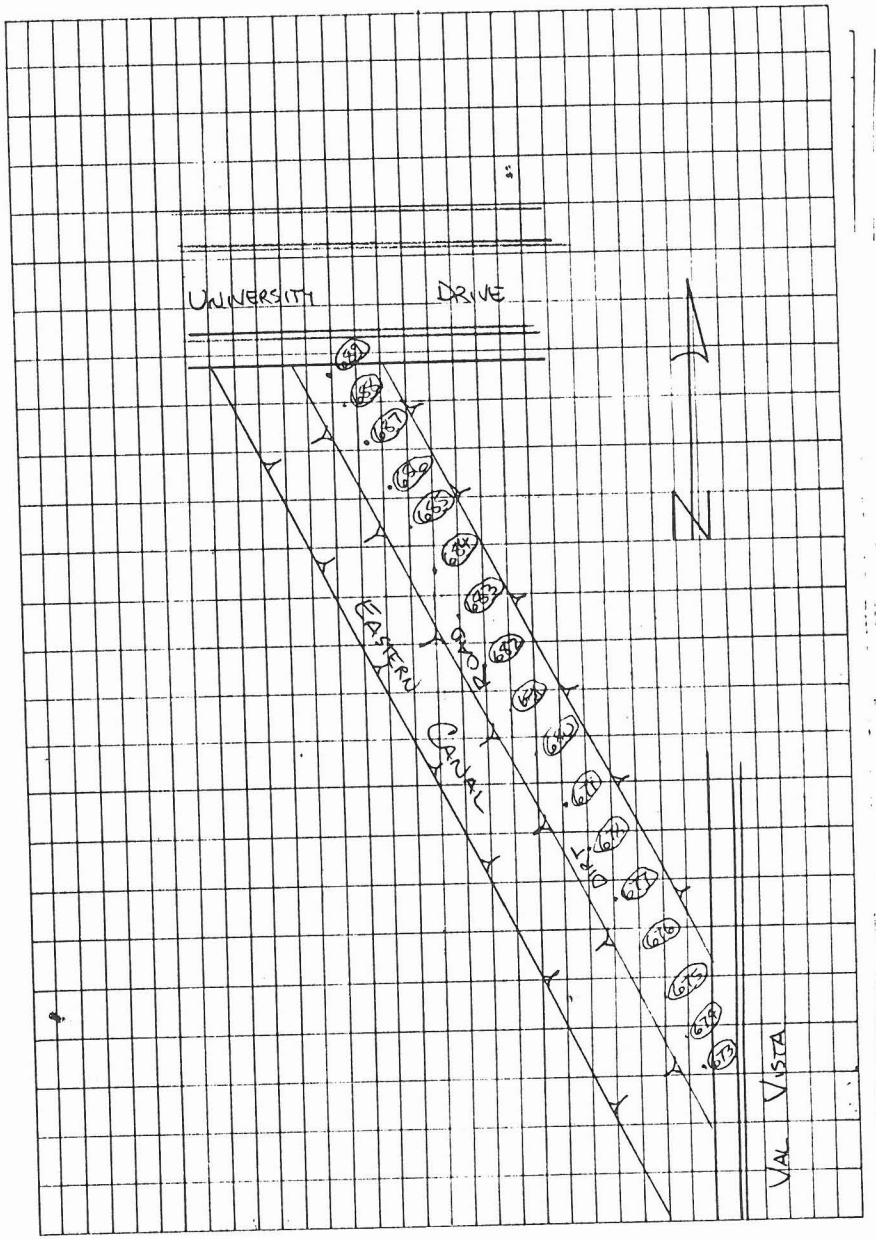


STA	PT#	ROD	REMARKS		
⋆	643	5.42			
BS	629	5.96			
	644	4.85			
	645				
	646				
	647				
	648	4.85			
	649				
	650				
	651				
	652				
	653				
	654	4.85			
	655				
	656				
	657				
	658	4.85	SET NAIL		

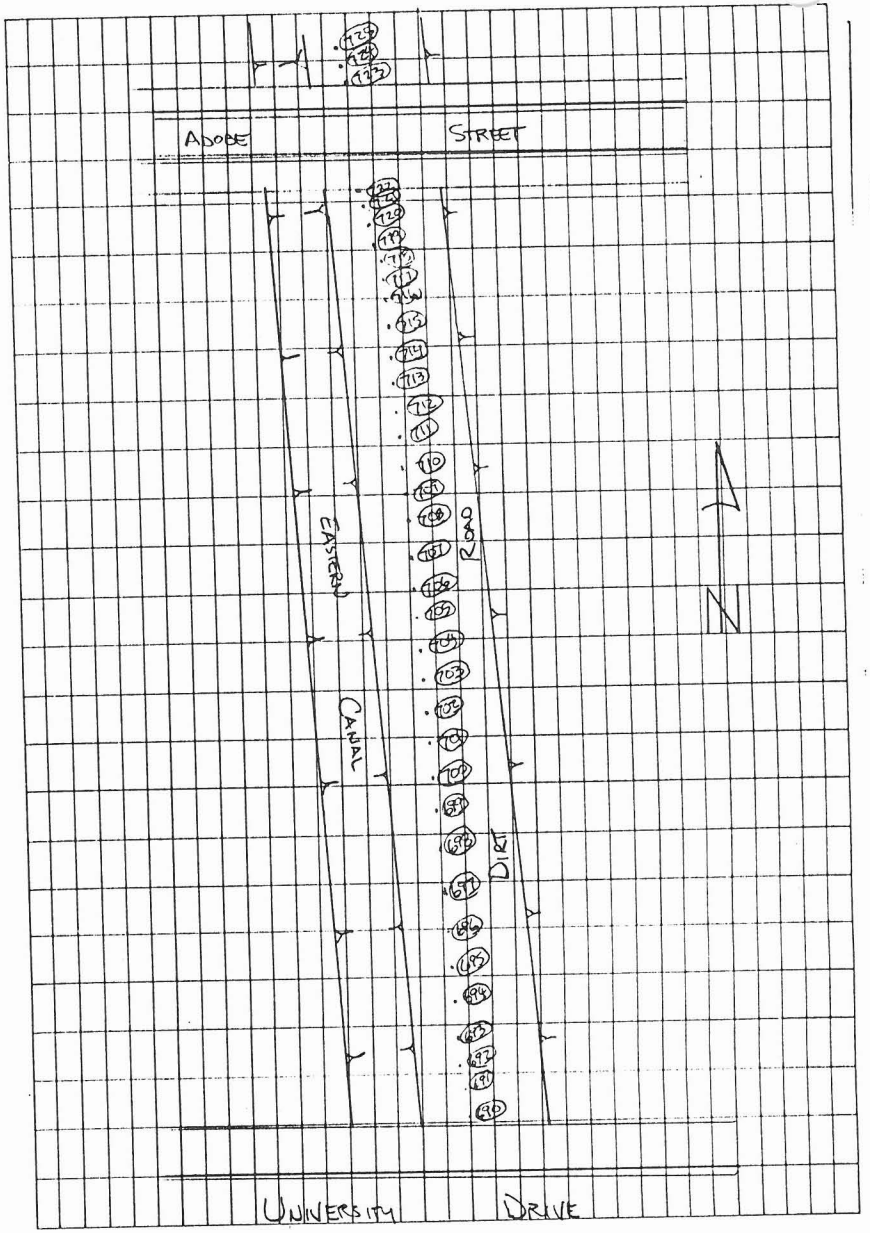
STA	PT#	ROD	REMARKS
⊼	658	5.57	
BS	643	5.75	
	659	4.85	
	660		
	661		
	662		
	663		
	664	4.85	
	665		
	666		
	667		
	668		
	669		
	670		
	671	4.85	
⊼	671	5.53	
	658	5.78	
	672	4.85	SAME AS (31)



Pt #	Rod	Remarks			
90-TS74	5.52		Set ½" Rebar		
31-BS	5.72	Hz&to ord	BC in HH		
673	5.40	NG			
674	5.40	NG			
675	5.40	NG			
676	5.40	NG			
677	5.40	NG			
678	5.40	NG			
679	5.40	NG			
680	5.26	NG			
681	5.26	NG			
682	5.26	NG			
683	5.26	NG			
684	5.26	NG			
685	5.26	NG			
686	5.26	NG			
687	5.26	NG			
688	5.26	NG			
689	5.26	NG			



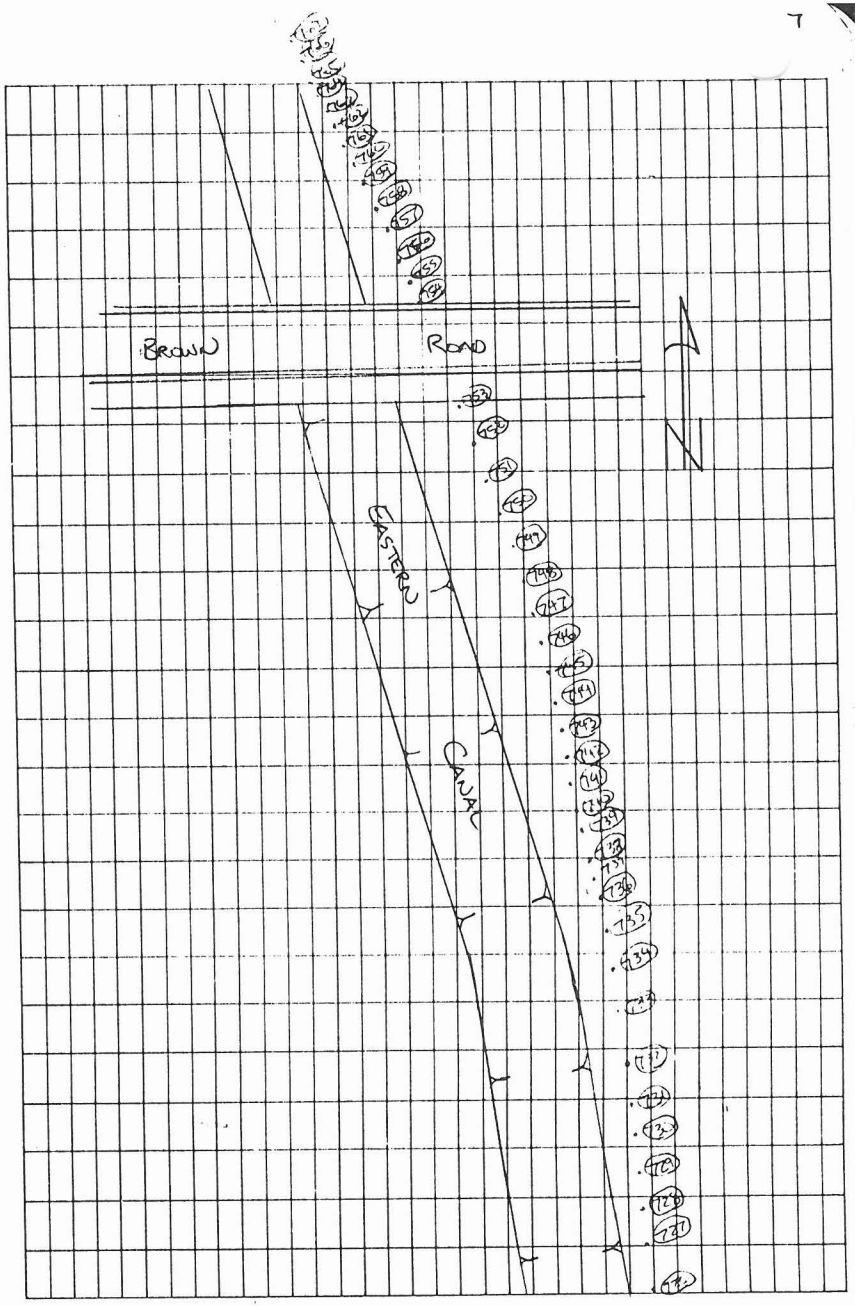
Pt#	Rod	Remarks			
690	5.26	NG			
691	5.26	NG			
692	5.26	NG			
693	5.26	NG			
694	5.26	NG			
695	5.26	NG			
696	5.26	NG			
697	5.26	NG			
698	5.26	NG			
699	5.26	NG			
700	5.26	NG			
701	5.26	NG			
702	5.26	NG			
703	5.26	NG			
704	5.26	NG			
705	5.26	NG			
706	5.26	NG			
707	5.26	NG			
708	5.26	NG			
709	5.09	NG	Set Nail		



Pt#	Rod	Remarks			
709-TSTA	5.38		Nail		
90-BS	4.91	Hz Fowoo	Rebar		
710	5.49	NG			
711	5.49	NG			
712	5.49	NG			
713	5.49	NG			
714	5.49	NG			
715	5.49	NG			
716	5.49	NG			
717	5.49	NG			
718	5.49	NG			
719	5.49	NG			
720	5.49	NG			
721	5.49	NG			
722	5.49	NG			
723	5.49	NG			
724	5.49	NG			
725	5.06	NG			

SEE DIAGRAM
PAGE 4

Pt #	Rod	Remarks			
725-~~TSA~~	5.47		Nail,		
709-BS	5.26	~~Hardwood~~	Nail,		
726	5.10	NG			
727	5.10	NG			
728	5.10	NG			
729	5.10	NG			
730	5.10	NG			
731	5.10	NG			
732	5.10	NG			
733	5.10	NG			
734	5.10	NG	Set Nail		



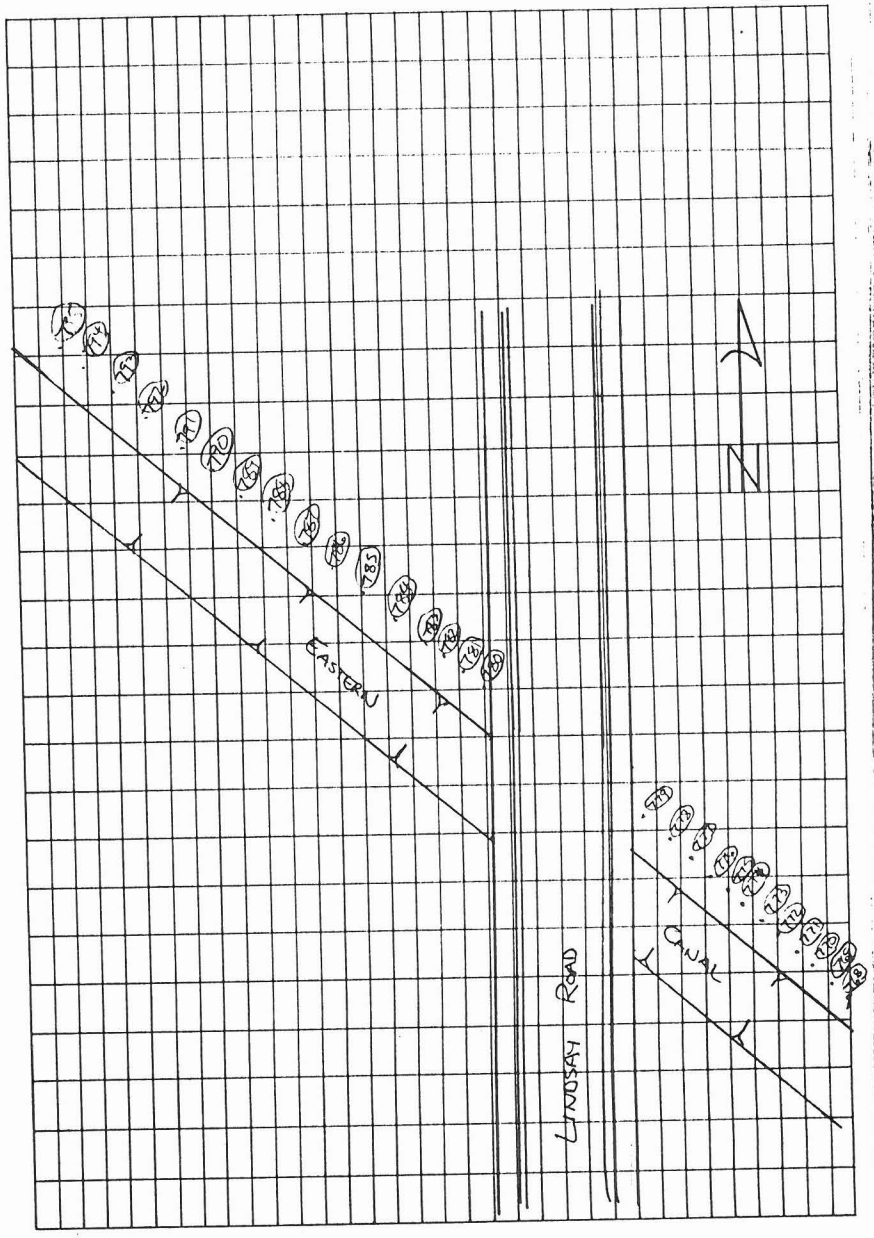
Pt#	Rod	Remarks			
734-~~A~~ STA	5.45		Nail		
725-BS	5.31	Hz ∡=0-00'10"	Nail		
735	5.10	NG			
736	5.10	NG			
737	5.10	NG			
738	5.10	NG			
739	5.10	NG			
740	5.10	NG			
741	5.10	NG			
742	5.10	NG			
743	5.10	NG			
744	5.10	NG			
745	5.10	NG			
746	5.10	NG			
747	5.10	NG			
748	5.10	NG			
749	5.10	NG			
750	5.10	NG			
751	5.10	NG			
752	5.10	NG			
753	5.10	NG	Set ½" Rebar		

See Diagram
Page 7

Pt#	Rod	Remarks			
753-⊼ Sta	5.34		Rebar		
734-BS	5.22	Hz ½-0-00	Nail		
754	5.10	B.C. in H.H. = Pt#9, See Bk 1			
755	5.10	NG			
756	5.10	NG			
757	5.10	NG			
758	5.10	NG			
759	5.10	NG			
760	5.10	NG			
761	5.10	NG			
762	5.10	NG			
763	5.10	NG			
764	5.10	NG			
765	5.10	NG			
766	5.10	NG			
767	5.10	NG	Set Nail		

See Diagram
Page 7

Pt#	ROD	REMARKS			
767-TSTA	5.37		Nail		881382
753-BS	5.35	Hz[illegible]	Rebar		881368
768	5.10	NG			
769	5.10	NG			
770	5.10	NG			
771	5.10	NG			
772	5.10	NG			
773	5.10	NG			
774	5.10	NG			
775	5.10	NG			
776	5.10	NG			
777	5.10	NG			
778	5.10	NG			
779	5.10	NG			
780	5.10	NG	Set Nail		881315

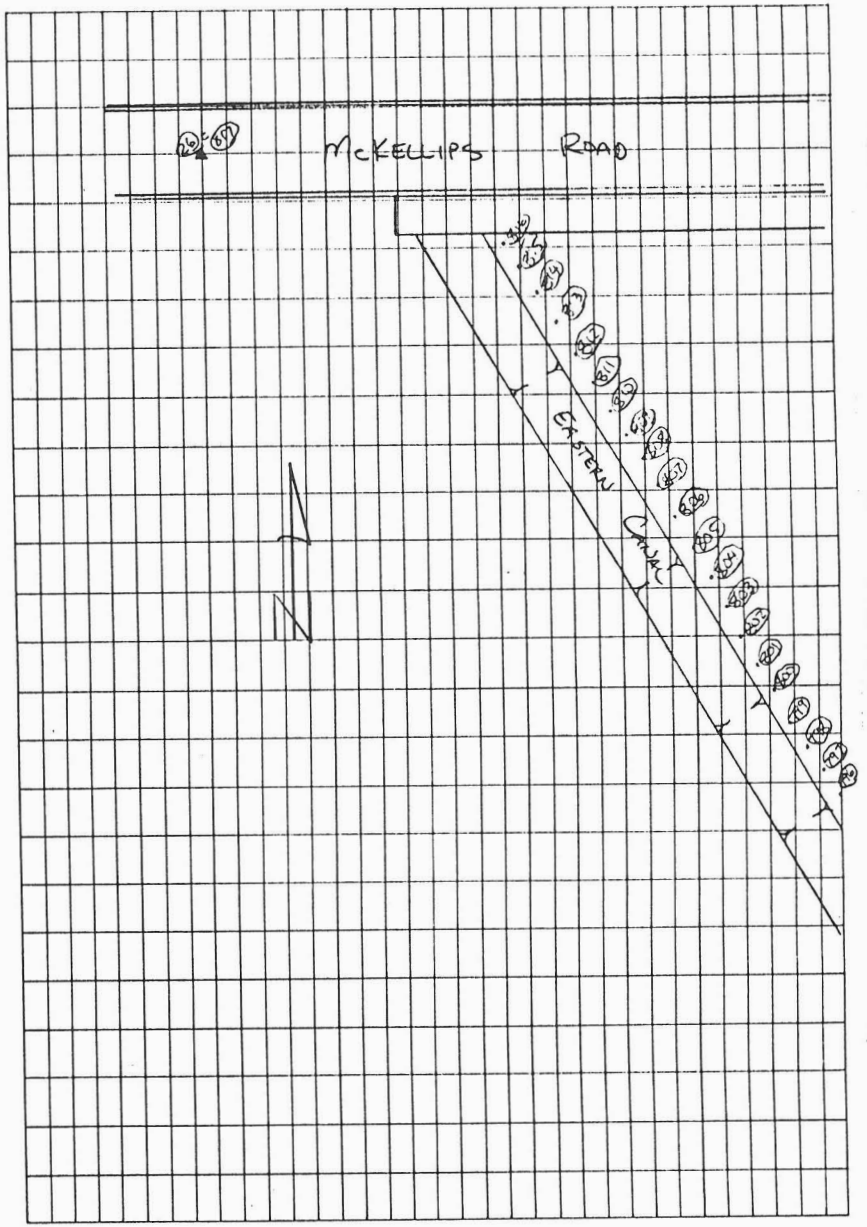


Pit	Rod	Remarks			
780 -TRSTA	5.44		Nal		881394
767-BS	5.20	Hex=0-00-00	Nal		881382
780	5.10	NG			
781	5.10	NG			
782	5.10	NG			
783	5.10	NG			
784	5.10	NG			
785	5.10	NG			
786	5.10	NG			
787	5.10	NG			
788	5.10	NG			
789	5.10	NG			
790	5.10	NG			
791	5.10	NG			
792	5.10	NG			
793	5.10	NG			
794	5.10	NG			
795	5.10	NG			

SEE DIAGRAM
PAGE 10

881288 789

Pt#	Rod	Remarks			
795 - TS STA	5.31		Nail,		
780 - BS	5.42	HZ Hardwood	Nail,		
796	5.10	NG			
797	5.10	NG			
798	5.10	NG			
799	5.10	NG			
800	5.10	NG			
801	5.10	NG			
802	5.10	NG			
803	5.10	NG			
804	5.10	NG			
805	5.10	NG			
806	5.10	NG			
807	5.10	NG			
808	5.10	NG	Set Nail		



Pt#	Rod	Remarks			
808-TSTA			Nail,		
795-BS	5.20	HZX-0-0000	Nail,		
809	5.10	NG			
810	5.10	NG			
811	5.10	NG			
812	5.10	NG			
813	5.10	NG			
814	5.10	NG			
815	5.10	NG			
816	5.10	NG			
817	5.10	SM	Brass Cap = Pt#26		

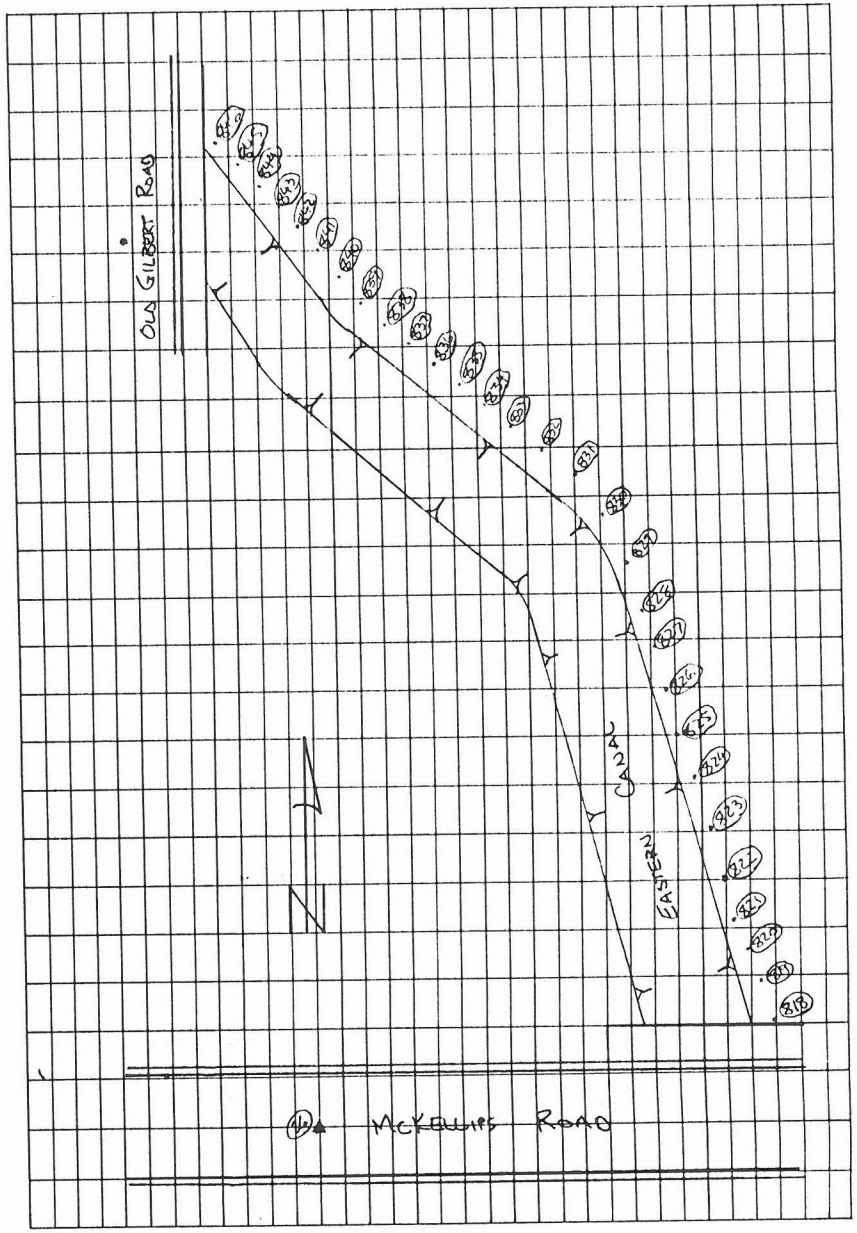
See Diagram
Page 12

581432

9-19-96
Pthly Cldy, Calm, Warm 85°F

Ø Gardner
π Price

Pt#	Rod	Remarks			
26-π Sta	5.87		BC in HH		
27-BS	5.70	~~Hz 4.0-00-00~~	BC in HH, See Book 1 Pg 7		
808	5.08	NG	Pt Check from Last File		
818	5.08	NG			
819	5.60	NG			
820	5.60	NG			
821	5.60	NG			
822	5.60	NG			
823	5.60	NG			
824	5.60	NG			
825	5.60	NG			
826	5.60	NG			
827	5.60	NG			
828	5.08	NG			



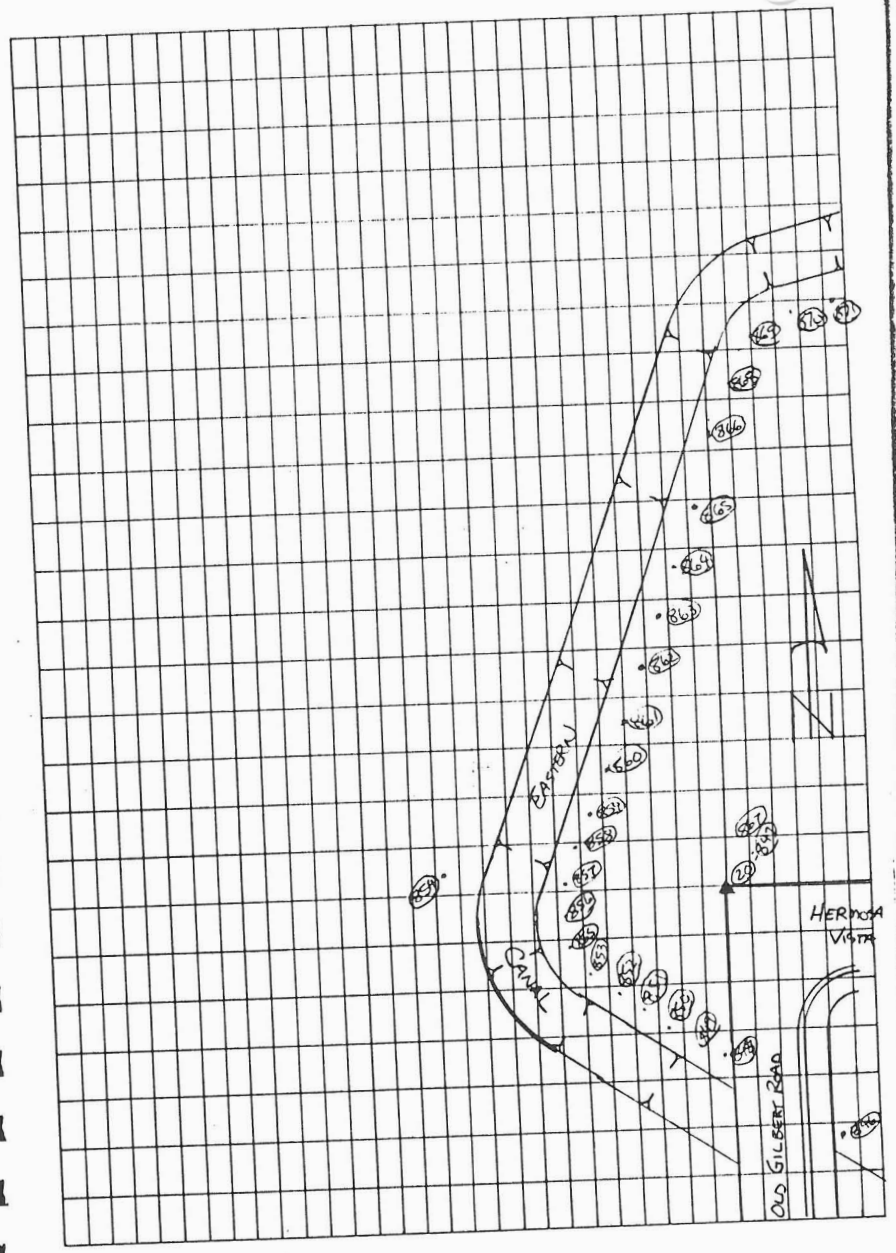
Pt#	Rod	Remarks			
828-~~A5~~TA			Nail, See Pg 14		
26-B5	5.65	Hz~~50~~-0000	BC in HH		
829	5.57	NG			
830	5.57	NG			
831	5.57	NG			
832	5.57	NG			
833	5.57	NG			
834	5.57	NG			
835	5.57	NG			
836	5.57	NG			
837	5.57	NG			
838	5.08	NG			

SEE DIAGRAM
PAGE 14

PT#	ROD	REMARKS			
838 - ~~T~~ STA	5.41		Nail, See	Pg 15	
828 - BS	5.17	Hz ~~X~~ Forward	Nail, See	Pg 14	
839	5.49	NG			
840	5.49	NG			
841	5.49	NG			
842	5.49	NG			
843	5.49	NG			
844	5.49	NG			
845	5.49	NG			
846	5.18	NG			

SEE DIAGRAM
PAGE 14

Pt #	Rod	Remarks			
846-TSA	5.56		Nail, See Pg 16		
838-BS	5.11	Hz #0.000	Nail, See Pg 5		
847	5.08	SM	Pt # 20		
848	5.46	NG			
849	5.46	NG			
850	5.46	NG			
851	5.46	NG			
852	5.46	NG			
853	5.46	NG			
854	5.08	NG	Set Nail	Westside Canal	



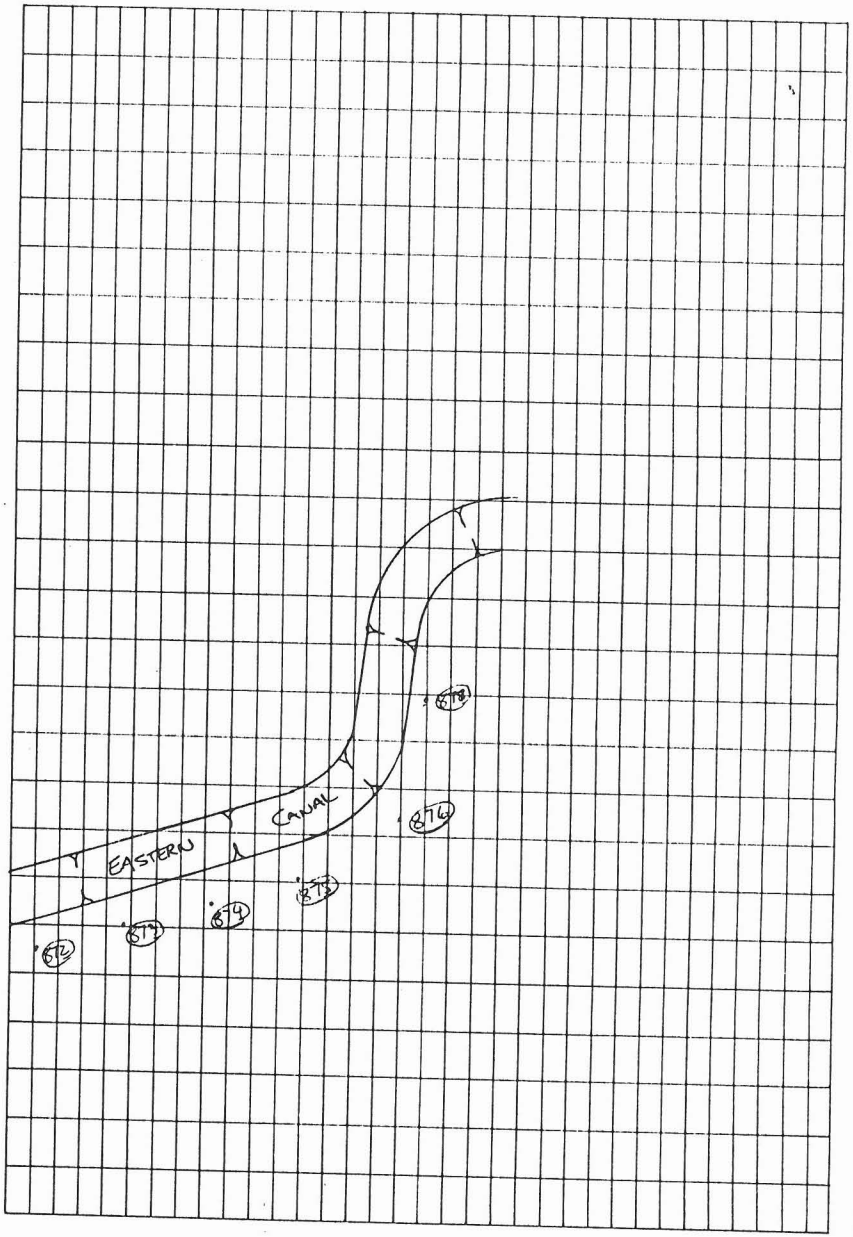
Pt#	RCO	REMARKS		
854-TSTA	5.38		Nail, See Pg 17	
846-BS	5.25	HZX=0-00-00	Nail, See Pg 16	
855	5.52	NG		
856	5.52	NG		
857	5.52	NG		
858	5.52	NG		
859	5.52	NG		
860	5.52	NG		
861	5.52	NG		
862	5.52	NG		
863	5.52	NG		
864	5.52	NG		
865	5.52	NG		
866	5.48	NG	Set Nail	

SEE DIAGRAM
PAGE 17

Pt #	Rod	Remarks			
866 – π STA	5.20		Nail, See Pg 18		
854 – BS	4.94	Hz ∡0-00-00	Nail, See Pg 17		
867	5.08	SM	Pt # 20 Check		
868	5.08	NG			
869	5.08	NG			
870	5.08	NG			
871	5.08	NG	Set Nail		

See Diagram
Page 17

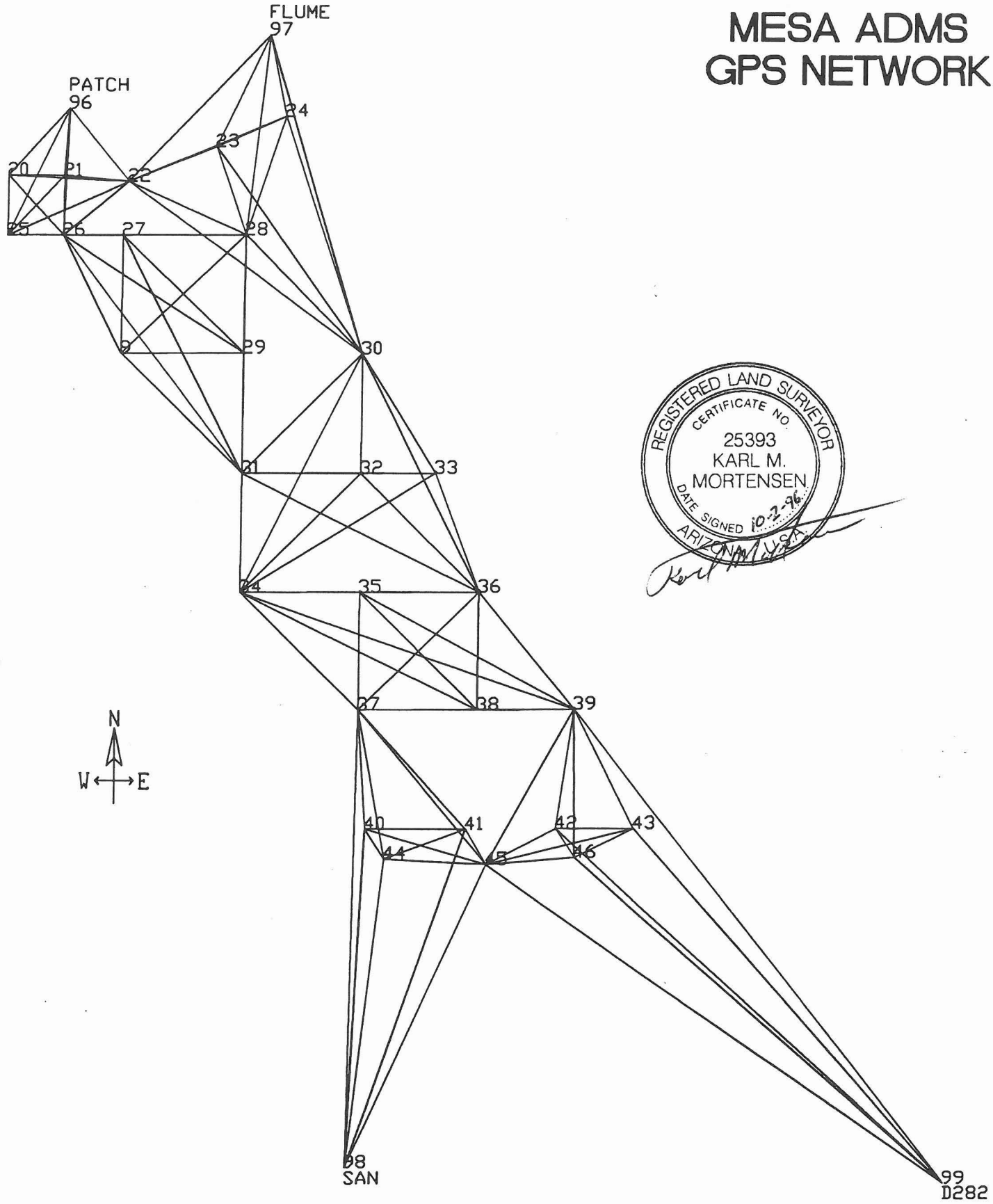
Pt#	RGO	Remarks			
871-TSTA	5.45		Nail, See Pg 19		
866-BS	5.40	HZ=0.0000	Nail, See Pg 18		
872	5.54	NG			
873	5.54	NG			
874	5.54	NG			
875	5.54	NG			
876	5.54	NG			
877	5.08	NG	Set Nail		



- **GPS NETWORK DIAGRAM**
- **OVERVIEW MAP OF AERIAL PANELS**
- **COORDINATE LISTING & ELEVATION OF MONUMENTS (NAD27-NAVD29)**
- **COORDINATE LISTING & ELEVATION OF PANELS (NAD27-NAVD29)**
- **GPS NETWORK, LATITUDE & LONGITUDE (NAD27 & NAD83)**
- **NGS HORIZONTAL CONTROL**
- **USGS VERTICAL CONTROL (NAVD88 CONVERSION MARKED)**
- **COPIES OF 4 LEVELING FIELD BOOKS**
- **COPIES OF INDIVIDUAL MONUMENT RECORDS**

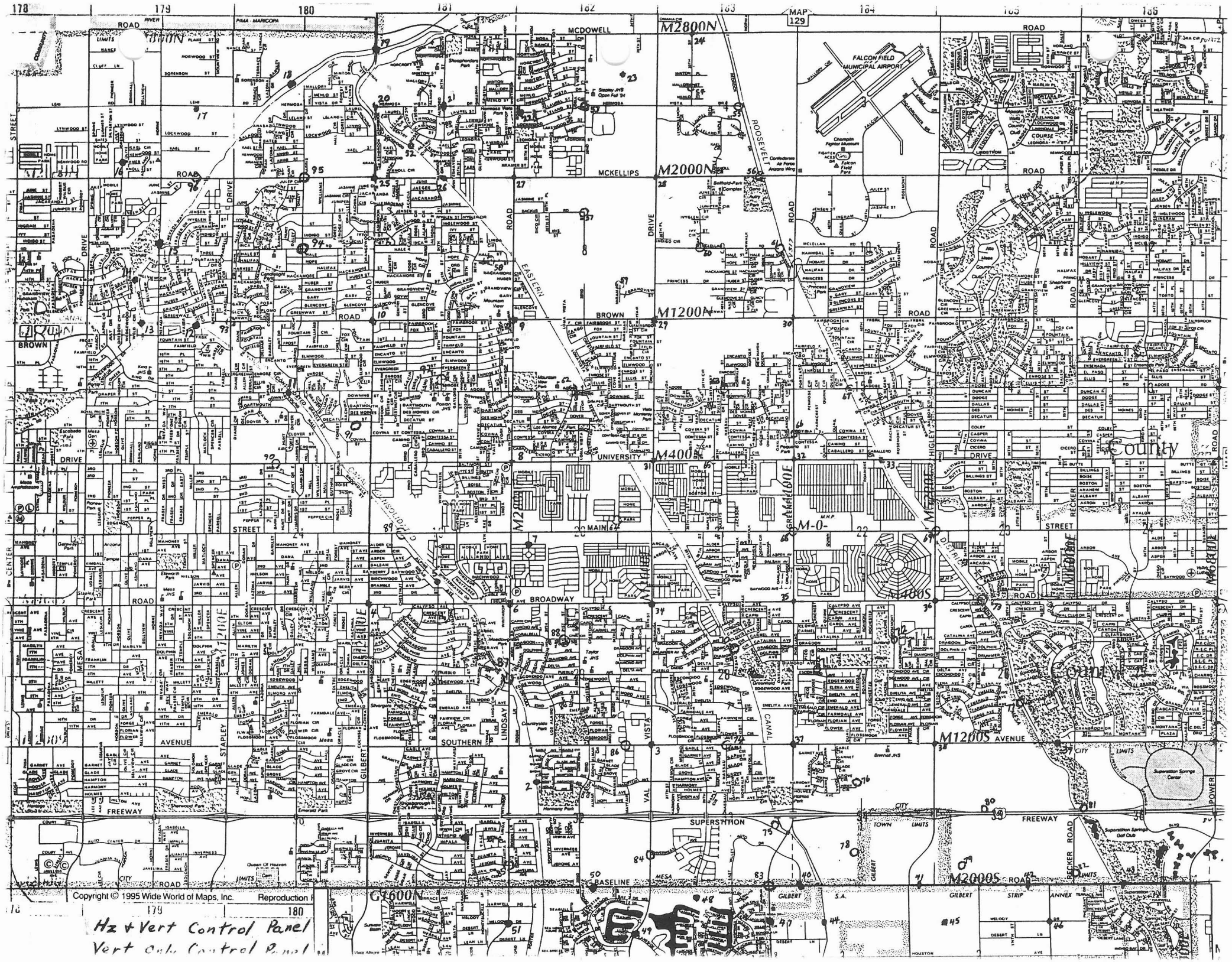
(DELIVERED 9/23/96)

MESA ADMS GPS NETWORK



REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25393
KARL M.
MORTENSEN
DATE SIGNED 10-2-96
ARIZONA, U.S.A.

PROJECT ENGINEERING CONSULTANTS, LTD.
3130 N. 35th AVENUE PHOENIX, ARIZONA 85017
PHONE (602) 484-7691



Hz + Vert Control Panel

Vert Only Control Panel

Mesa ADMS
Survey Control
NAD'27 SPC System
Precison Leveling Monument Elevations

Pt	Y Northing	X Easting	Mon. Elev.	Dist. up to Panel
09,	886601.195,	544674.460,	1281.32,	0.90
20,	894543.226,	539587.021,	1292.12,	0.72
21,	894550.344,	542097.386,	1300.33,	0.84
22,	894299.470,	544938.663,	1309.60,	0.90
23,	895857.795,	548710.598,	1328.40,	0.00
24,	897210.399,	551769.871,	1344.54,	0.58
25,	891872.496,	539564.376,	1281.92,	0.90
26,	891889.982,	542070.437,	1292.99,	0.63
27,	891896.527,	544709.983,	1300.60,	0.50
28,	891926.596,	550026.992,	1324.06,	0.55
29,	886638.732,	549965.962,	1307.11,	1.15
30,	886622.620,	555214.237,	1339.51,	0.48
31,	881335.716,	549952.698,	1290.53,	0.58
32,	881352.449,	555210.724,	1319.71,	0.43
33,	881385.202,	558506.088,	1346.59,	0.00
34,	876055.105,	549924.125,	1274.10,	0.48
35,	876081.992,	555215.269,	1300.09,	0.78
36,	876127.214,	560480.552,	1330.49,	0.59
37,	870805.551,	555193.492,	1289.79,	0.49
38,	870829.739,	560439.757,	1317.38,	0.78
39,	870865.542,	564740.668,	1342.29,	0.00
40,	865507.476,	555541.152,	1277.84,	0.49
41,	865519.458,	559973.965,	1297.17,	0.00
42,	865558.903,	563967.719,	1317.22,	0.00
43,	865572.319,	567414.280,	1339.92,	0.00
44,	864197.223,	556394.502,	1278.90,	0.00
45,	863955.840,	560888.853,	1297.73,	0.00
46,	864282.367,	564817.692,	1318.83,	0.00
52,	0.000,	0.000,	1292.10,	0.00
53,	0.000,	0.000,	1316.75,	0.00
54,	0.000,	0.000,	1338.90,	1.05
55,	0.000,	0.000,	1349.01,	0.00
56,	0.000,	0.000,	1351.24,	0.00
57,	0.000,	0.000,	1306.99,	0.00
58,	0.000,	0.000,	1283.79,	1.01
59,	0.000,	0.000,	1305.86,	0.00
60,	0.000,	0.000,	1324.34,	0.48
61,	0.000,	0.000,	1342.74,	0.00
62,	0.000,	0.000,	1282.21,	0.50
63,	0.000,	0.000,	1314.54,	0.23
64,	0.000,	0.000,	1276.58,	0.00
65,	0.000,	0.000,	1300.46,	1.18
66,	0.000,	0.000,	1322.33,	1.09
67,	0.000,	0.000,	1349.30,	0.00
68,	0.000,	0.000,	1311.70,	0.17
69,	0.000,	0.000,	1345.84,	0.00
70,	0.000,	0.000,	1280.39,	1.00

71,	0.000,	0.000,	1296.75,	0.80
72,	0.000,	0.000,	1314.92,	0.95
73,	0.000,	0.000,	1344.53,	0.00
74,	0.000,	0.000,	1274.17,	1.57
75,	0.000,	0.000,	1279.41,	0.00
76,	0.000,	0.000,	1298.89,	0.00
77,	0.000,	0.000,	1341.61,	0.00
78,	0.000,	0.000,	1289.23,	0.00
79,	0.000,	0.000,	1306.20,	0.00
80,	0.000,	0.000,	1317.14,	0.00
81,	0.000,	0.000,	1327.73,	0.00
82,	0.000,	0.000,	1327.36,	0.00

Mesa ADMS
Aerial Control
NAD'27 SPC System
Precision Leveling Panel Elevations

Pt	Y Northing	X Easting	Panel Elev.	Dist. Dn to Mon.
09,	886601.195,	544674.460,	1282.22,	0.90
20,	894543.226,	539587.021,	1292.84,	0.72
21,	894550.344,	542097.386,	1301.17,	0.84
22,	894299.470,	544938.663,	1310.50,	0.90
23,	895857.795,	548710.598,	1328.40,	0.00
24,	897210.399,	551769.871,	1345.12,	0.58
25,	891872.496,	539564.376,	1282.82,	0.90
26,	891889.982,	542070.437,	1293.62,	0.63
27,	891896.527,	544709.983,	1301.10,	0.50
28,	891926.596,	550026.992,	1324.61,	0.55
29,	886638.732,	549965.962,	1308.26,	1.15
30,	886622.620,	555214.237,	1339.99,	0.48
31,	881335.716,	549952.698,	1291.11,	0.58
32,	881352.449,	555210.724,	1320.14,	0.43
33,	881385.202,	558506.088,	1346.59,	0.00
34,	876055.105,	549924.125,	1274.58,	0.48
35,	876081.992,	555215.269,	1300.87,	0.78
36,	876127.214,	560480.552,	1331.08,	0.59
37,	870805.551,	555193.492,	1290.28,	0.49
38,	870829.739,	560439.757,	1318.16,	0.78
39,	870865.542,	564740.668,	1342.29,	0.00
40,	865507.476,	555541.152,	1278.33,	0.49
41,	865519.458,	559973.965,	1297.17,	0.00
42,	865558.903,	563967.719,	1317.22,	0.00
43,	865572.319,	567414.280,	1339.92,	0.00
44,	864197.223,	556394.502,	1278.90,	0.00
45,	863955.840,	560888.853,	1297.73,	0.00
46,	864282.367,	564817.692,	1318.83,	0.00
52,	0.000,	0.000,	1292.10,	0.00
53,	0.000,	0.000,	1316.75,	0.00
54,	0.000,	0.000,	1339.95,	1.05
55,	0.000,	0.000,	1349.01,	0.00
56,	0.000,	0.000,	1351.24,	0.00
57,	0.000,	0.000,	1306.99,	0.00
58,	0.000,	0.000,	1284.80,	1.01
59,	0.000,	0.000,	1305.86,	0.00
60,	0.000,	0.000,	1324.82,	0.48
61,	0.000,	0.000,	1342.74,	0.00
62,	0.000,	0.000,	1282.71,	0.50
63,	0.000,	0.000,	1314.77,	0.23
64,	0.000,	0.000,	1276.58,	0.00
65,	0.000,	0.000,	1301.64,	1.18
66,	0.000,	0.000,	1323.42,	1.09
67,	0.000,	0.000,	1349.30,	0.00
68,	0.000,	0.000,	1311.87,	0.17
69,	0.000,	0.000,	1345.84,	0.00
70,	0.000,	0.000,	1281.39,	1.00

71,	0.000,	0.000,	1297.55,	0.80
72,	0.000,	0.000,	1315.87,	0.95
73,	0.000,	0.000,	1344.53,	0.00
74,	0.000,	0.000,	1275.74,	1.57
75,	0.000,	0.000,	1279.41,	0.00
76,	0.000,	0.000,	1298.89,	0.00
77,	0.000,	0.000,	1341.61,	0.00
78,	0.000,	0.000,	1289.23,	0.00
79,	0.000,	0.000,	1306.20,	0.00
80,	0.000,	0.000,	1317.14,	0.00
81,	0.000,	0.000,	1327.73,	0.00
82,	0.000,	0.000,	1327.36,	0.00

Mesa ADMS Aerial
NAD'27 SPC System
AZ, Central Zone
GPS Network

POINT	NORTHING-Y	EASTING-X	ELEV/FEET	LATITUDE	LONGITUDE	CONVERGENCE	SC.FACT	EL.FACT
PATC	897543.375	542299.727	1300.565	33 28 02.21484	111 46 40.649890	0 04 35.37	0.99990205	0.99993779
FLUM	900822.370	551035.715	1354.682	33 28 34.53133	111 44 57.459160	0 05 32.36	0.99990298	0.99993521
_SAN	850381.913	554754.352	1277.301	33 20 15.38519	111 44 14.582110	0 05 54.70	0.99990343	0.99993891
D282	849729.696	581124.353	1369.525	33 20 08.37503	111 39 03.767270	0 08 45.49	0.99990754	0.99993450
M009	886601.195	544674.460	1281.274	33 26 13.91547	111 46 12.798140	0 04 50.50	0.99990229	0.99993872
M020	894543.226	539587.021	1292.120	33 27 32.56466	111 47 12.717670	0 04 17.63	0.99990179	0.99993820
M021	894550.344	542097.386	1300.319	33 27 32.60308	111 46 43.085460	0 04 33.97	0.99990203	0.99993781
M022	894299.470	544938.663	1309.597	33 27 30.08222	111 46 09.551530	0 04 52.45	0.99990231	0.99993736
M023	895857.795	548710.598	1328.406	33 27 45.44586	111 45 25.000110	0 05 17.05	0.99990272	0.99993646
M024	897210.399	551769.871	1344.538	33 27 58.78113	111 44 48.861240	0 05 37.01	0.99990307	0.99993569
M025	891872.496	539564.376	1281.887	33 27 06.13947	111 47 13.024320	0 04 17.41	0.99990179	0.99993869
M026	891889.982	542070.437	1292.976	33 27 06.28056	111 46 43.445240	0 04 33.72	0.99990203	0.99993816
M027	891896.527	544709.983	1300.591	33 27 06.30957	111 46 12.290820	0 04 50.89	0.99990229	0.99993779
M028	891926.596	550026.992	1324.069	33 27 06.52848	111 45 09.534140	0 05 25.49	0.99990287	0.99993667
M029	886638.732	549965.962	1307.150	33 26 14.20878	111 45 10.352810	0 05 24.91	0.99990286	0.99993748
M030	886622.620	555214.237	1339.531	33 26 13.96326	111 44 08.418620	0 05 59.04	0.99990349	0.99993593
M031	881335.716	549952.698	1290.532	33 25 21.73828	111 45 10.607850	0 05 24.64	0.99990286	0.99993827
M032	881352.449	555210.724	1319.732	33 25 21.81765	111 44 08.568289	0 05 58.82	0.99990349	0.99993688
M033	881385.202	558506.088	1346.644	33 25 22.08331	111 43 29.685730	0 06 20.24	0.99990392	0.99993559
M034	876055.105	549924.125	1274.115	33 24 29.48958	111 45 11.042960	0 05 24.28	0.99990285	0.99993906
M035	876081.992	555215.269	1300.060	33 24 29.66895	111 44 08.622809	0 05 58.65	0.99990349	0.99993782
M036	876127.214	560480.552	1330.512	33 24 30.02149	111 43 06.507300	0 06 32.85	0.99990419	0.99993636
M037	870805.551	555193.492	1289.797	33 23 37.46136	111 44 08.987860	0 05 58.31	0.99990349	0.99993831
M038	870829.739	560439.757	1317.383	33 23 37.60623	111 43 07.107470	0 06 32.37	0.99990418	0.99993699
M039	870865.542	564740.668	1342.320	33 23 37.87665	111 42 16.377250	0 07 00.29	0.99990480	0.99993580
M040	865507.476	555541.152	1277.842	33 22 45.03323	111 44 04.996400	0 06 00.37	0.99990353	0.99993888
M041	865519.458	559973.965	1297.146	33 22 45.07210	111 43 12.719680	0 06 29.13	0.99990412	0.99993796
M042	865558.903	563967.719	1317.229	33 22 45.38536	111 42 25.620180	0 06 55.05	0.99990469	0.99993703
M043	865572.319	567414.280	1339.915	33 22 45.44763	111 41 44.974350	0 07 17.41	0.99990520	0.99993591
M044	864197.223	556394.502	1278.902	33 22 32.05396	111 43 54.960190	0 06 05.86	0.99990364	0.99993883
M045	863955.840	560888.853	1297.760	33 22 29.58356	111 43 01.965670	0 06 35.00	0.99990425	0.99993793
M046	864282.367	564817.692	1318.859	33 22 32.73756	111 42 15.627090	0 07 00.50	0.99990481	0.99993692

NATIONAL GEODETIC SURVEY
GP TO PC PROGRAM
1983 DATUM

Mesa ADMS Aerial NAD'83 SPC
GPS Network

VERSION 1.0

THE INTERNATIONAL FOOT WAS USED IN CONVERTING COORDINATES!

NAME	LATITUDE	LONGITUDE	NORTH(Y) METERS	EAST(X) METERS	NORTH(Y) FEET	EAST(X) FEET	ZONE	CONVERGENCE	SCALE
PATC	33 28 2.37816	111 46 43.15266	273585.504	226188.071	897590.236	742086.847	AZ C	0 4 33.99	0.99990203
FLUM	33 28 34.69440	111 44 59.95935	274584.948	228850.818	900869.252	750822.894	AZ C	0 5 30.98	0.99990296
_SAN	33 20 15.56323	111 44 17.07320	259210.658	229984.368	850428.668	754541.890	AZ C	0 5 53.34	0.99990341
D282	33 20 8.55540	111 39 6.25115	259011.874	238021.963	849776.490	780911.952	AZ C	0 8 44.13	0.99990750
M009	33 26 14.08197	111 46 15.29813	270250.314	226911.924	886648.012	744461.693	AZ C	0 4 49.12	0.99990226
M020	33 27 32.72820	111 47 15.22041	272671.041	225361.250	894590.030	739374.180	AZ C	0 4 16.25	0.99990178
M021	33 27 32.76696	111 46 45.58749	272673.216	226126.412	894597.165	741884.554	AZ C	0 4 32.59	0.99990201
M022	33 27 30.24658	111 46 12.05269	272596.757	226992.437	894346.316	744725.843	AZ C	0 4 51.07	0.99990229
M023	33 27 45.61033	111 45 27.50042	273071.745	228142.124	895904.675	748497.782	AZ C	0 5 15.67	0.99990269
M024	33 27 58.94564	111 44 51.36090	273484.027	229074.590	897257.306	751557.054	AZ C	0 5 35.63	0.99990304
M025	33 27 6.30376	111 47 15.52664	271857.000	225354.353	891919.291	739351.552	AZ C	0 4 16.03	0.99990177
M026	33 27 6.44520	111 46 45.94684	271862.336	226118.203	891936.798	741857.621	AZ C	0 4 32.34	0.99990201
M027	33 27 6.47459	111 46 14.79166	271864.337	226922.740	891943.363	744497.178	AZ C	0 4 49.51	0.99990227
M028	33 27 6.69422	111 45 12.03345	271873.514	228543.370	891973.471	749814.206	AZ C	0 5 24.11	0.99990284
M029	33 26 14.37599	111 45 12.85129	270261.767	228524.779	886685.587	749753.212	AZ C	0 5 23.53	0.99990283
M030	33 26 14.13122	111 44 10.91559	270256.868	230124.459	886669.514	755001.506	AZ C	0 5 57.66	0.99990346
M031	33 25 21.90700	111 45 13.10548	268645.402	228520.748	881382.552	749739.987	AZ C	0 5 23.27	0.99990283
M032	33 25 21.98708	111 44 11.06443	268650.514	230123.399	881399.324	754998.028	AZ C	0 5 57.44	0.99990346
M033	33 25 22.25318	111 43 32.18092	268660.504	231127.830	881432.100	758293.406	AZ C	0 6 18.86	0.99990389
M034	33 24 29.65978	111 45 13.53976	267035.866	228512.050	876101.923	749711.450	AZ C	0 5 22.91	0.99990283
M035	33 24 29.83987	111 44 11.11810	267044.073	230124.796	876128.848	755002.612	AZ C	0 5 57.28	0.99990346
M036	33 24 30.19311	111 43 9.00109	267057.868	231729.660	876174.108	760267.913	AZ C	0 6 31.48	0.99990416
M037	33 23 37.63378	111 44 11.48232	265435.808	230118.169	870852.388	754980.869	AZ C	0 5 56.94	0.99990346
M038	33 23 37.77934	111 43 9.60042	265443.192	231717.237	870876.614	760227.156	AZ C	0 6 31.00	0.99990415
M039	33 23 38.05034	111 42 18.86897	265454.114	233028.159	870912.448	764528.081	AZ C	0 6 58.92	0.99990477
M040	33 22 45.20718	111 44 7.48992	263820.950	230224.148	865554.298	755328.570	AZ C	0 5 59.00	0.99990351
M041	33 22 45.24665	111 43 15.21193	263824.612	231575.274	865566.312	759761.398	AZ C	0 6 27.76	0.99990409
M042	33 22 45.56044	111 42 28.11127	263836.643	232792.575	865605.784	763755.167	AZ C	0 6 53.67	0.99990465
M043	33 22 45.62318	111 41 47.46446	263840.740	233843.090	865619.226	767201.739	AZ C	0 7 16.04	0.99990517
M044	33 22 32.22840	111 43 57.45324	263421.585	230484.253	864244.045	756181.932	AZ C	0 6 4.48	0.99990361
M045	33 22 29.75867	111 43 4.45740	263348.021	231854.136	864002.694	760676.299	AZ C	0 6 33.63	0.99990422
M046	33 22 32.91312	111 42 18.11774	263447.555	233051.650	864329.249	764605.151	AZ C	0 6 59.13	0.99990478

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1       National Geodetic Survey,   Retrieval Date = JULY 21, 1992

DU2252 ***********************************************************************
DU2252  DESIGNATION -  PATCH
DU2252  PID         -  DU2252
DU2252  STATE/COUNTY-  AZ/MARICOPA
DU2252
DU2252  HORZ DATUM  -  NAD 83
DU2252  VERT DATUM  -  NGVD 29
DU2252
DU2252  POSITION    -  33 28 02.37816(N)    111 46 43.15266(W)     ADJUSTED
DU2252  83 minus 27 -       +00.16332            +02.50277        NADCON
DU2252
DU2252  HEIGHT      -       396.1    (meters)    1300.     (feet)  VERT ANGLE
DU2252 ***********************************************************************
DU2252  LAPLACE CORR-         2.28                                 DEFLEC90
DU2252  GEOID HEIGHT-       -29.63                                 GEOID90
DU2252
DU2252  HORZ ORDER  -  FIRST
DU2252
DU2252.THE HORIZONTAL COORDINATES WERE ESTABLISHED BY GPS OBSERVATIONS
DU2252.AND ADJUSTED BY THE NATIONAL GEODETIC SURVEY IN SEPTEMBER 1989
DU2252.THE ORTHOMETRIC HEIGHT WAS DETERMINED BY GPS OBSERVATIONS.
DU2252
DU2252;                    North         East       Scale         Converg.
DU2252;SPC AZ C    -    273,585.504   226,188.071 0.99990203     +0 04 34.0  MT
DU2252;UTM  12     -  3,703,367.969   427,646.437 0.99966454     -0 25 45.9  MT
DU2252
DU2252_STATION MARK IS A SURVEY DISK
DU2252_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
DU2252
DU2252  HISTORY     - Year Condition           Recov. By
DU2252  HISTORY     - 1986 STATION MONUMENTED  AZ DEPT OF TRANSP
DU2252
DU2252                          STATION DESCRIPTION
DU2252
DU2252'DESCRIBED BY ARIZONA DEPARTMENT OF TRANSPORTATION 1986 (HW )
DU2252'THE STATION IS LOCATED ABOUT 7.3 KM (4.5 MI) NORTHEAST OF MESA,
DU2252'ARIZONA.
DU2252'
DU2252'TO REACH THE STATION FROM THE INTERSECTION OF VAL VISTA DRIVE AND
DU2252'MCDOWELL ROAD, GO WEST ON MCDOWELL ROAD FOR 2.35 KM (1.45 MI) TO
DU2252'THE STATION ON THE RIGHT JUST AFTER CROSSING THE CANAL.
DU2252'
DU2252'THE STATION IS A STANDARD A&S DISK
DU2252'STAMPED---PATCH 1986---,
DU2252'SET INTO THE TOP OF A ROUND CONCRETE MONUMENT
DU2252'25 CM IN DIAMETER PROJECTING 5 CM ABOVE GROUND.  LOCATED
DU2252'1.22 METERS (4.0 FT) NORTHWEST FROM A WITNESS POST AND SIGN,
DU2252'1.22 METERS (4.0 FT) SOUTHEAST FROM A WITNESS POST AND SIGN,
DU2252'28.83 METERS (94.6 FT) NORTH-NORTHWEST FROM A BRASS CAP ON THE
DU2252'CENTERLINE OF MCDOWELL ROAD,
DU2252'23.68 METERS (77.7 FT) NORTH FROM THE EDGE OF MCDOWELL ROAD,
DU2252'31.85 METERS (104.5 FT) NORTHWEST FROM THE NORTHWEST CANAL HEADWALL
DU2252'ON MCDOWELL ROAD,
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1        National Geodetic Survey,   Retrieval Date = JULY 21, 1992

DU2242 ***********************************************************************
DU2242  DESIGNATION -  FLUME
DU2242  PID         -  DU2242
DU2242  STATE/COUNTY-  AZ/MARICOPA
DU2242
DU2242  HORZ DATUM  -  NAD 83
DU2242  VERT DATUM  -  NGVD 29
DU2242
DU2242  POSITION    -  33 28 34.69440(N)    111 44 59.95935(W)     ADJUSTED
DU2242  83 minus 27 -       +00.16307            +02.50019         NADCON
DU2242
DU2242  HEIGHT      -       412.6    (meters)    1354.     (feet)  VERT ANGLE
DU2242 ***********************************************************************
DU2242  LAPLACE CORR-         2.77                                  DEFLEC90
DU2242  GEOID HEIGHT-       -29.57                                  GEOID90
DU2242
DU2242  HORZ ORDER  -  FIRST
DU2242
DU2242.THE HORIZONTAL COORDINATES WERE ESTABLISHED BY GPS OBSERVATIONS
DU2242.AND ADJUSTED BY THE NATIONAL GEODETIC SURVEY IN SEPTEMBER 1989
DU2242.THE ORTHOMETRIC HEIGHT WAS DETERMINED BY GPS OBSERVATIONS.
DU2242
DU2242;                    North         East       Scale         Converg.
DU2242;SPC AZ C    -    274,584.948   228,850.818 0.99990296     +0 05 31.0  MT
DU2242;UTM  12     -  3,704,343.644   430,317.258 0.99965986     -0 24 49.3  MT
DU2242
DU2242_STATION MARK IS A SURVEY DISK
DU2242_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
DU2242
DU2242  HISTORY     - Year Condition            Recov. By
DU2242  HISTORY     - 1986 STATION MONUMENTED   AZ DEPT OF TRANSP
DU2242
DU2242                          STATION DESCRIPTION
DU2242
DU2242'DESCRIBED BY ARIZONA DEPARTMENT OF TRANSPORTATION 1986 (HW )
DU2242'THE STATION IS LOCATED ABOUT 9.7 KM (6.0 MI) NORTHEAST OF THE CITY
DU2242'OF MESA, ARIZONA.
DU2242'
DU2242'TO REACH THE STATION FROM THE INTERSECTION OF MCKELLIPS ROAD AND
DU2242'VAL VISTA DRIVE, GO NORTH ON VAL VISTA DRIVE FOR 1.54 KM (0.95 MI)
DU2242'TO THE INTERSECTION OF MCDOWELL ROAD AND VAL VISTA DRIVE.  CONTINUE
DU2242'NORTH ON VAL VISTA DRIVE FOR 0.97 KM (0.6 MI) TO A BLADED ROAD ON THE
DU2242'RIGHT.  TURN RIGHT ALONG THE SOUTH SIDE OF THE CANAL FOR 0.16 KM
DU2242'(0.1 MI) AND CONTINUE ON THE ROAD FOR ANOTHER 0.16 KM (0.1 MI) TO
DU2242'THE TOP OF A HILL AND THE STATION ON THE LEFT.
DU2242'
DU2242'THE STATION IS A STANDARD AGS DISK
DU2242'STAMPED---FLUME 1986---,
DU2242'SET INTO THE TOP OF A ROUND CONCRETE MONUMENT
DU2242'25 CM IN DIAMETER PROJECTING 2.5 CM ABOVE GROUND.  LOCATED
DU2242'1.46 METERS (4.8 FT) NORTHEAST FROM A WITNESS POST AND SIGN,
DU2242'2.8 METERS (9.2 FT) NORTH-NORTHWEST FROM AN UNSTAMPED B.M. WITH A
DU2242'BRASS CAP,
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1 National Geodetic Survey, Retrieval Date = JULY 21, 1992

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DU2258 ***********************************************************************
DU2258  DESIGNATION -  SAN
DU2258  PID         -  DU2258
DU2258  STATE/COUNTY-  AZ/MARICOPA
DU2258
DU2258  HORZ DATUM  -  NAD 83
DU2258  VERT DATUM  -  NGVD 29
DU2258
DU2258  POSITION    -  33 20 15.56323(N)    111 44 17.07320(W)     ADJUSTED
DU2258  83 minus 27 -       +00.17804            +02.49109        NADCON
DU2258
DU2258  HEIGHT      -       388.9    (meters)    1276.     (feet)  VERT ANGLE
DU2258 ***********************************************************************
DU2258  LAPLACE CORR-         2.01                                 DEFLEC90
DU2258  GEOID HEIGHT-       -29.81                                 GEOID90
DU2258
DU2258  HORZ ORDER  -  FIRST
DU2258
DU2258.THE HORIZONTAL COORDINATES WERE ESTABLISHED BY GPS OBSERVATIONS
DU2258.AND ADJUSTED BY THE NATIONAL GEODETIC SURVEY IN SEPTEMBER 1989
DU2258.THE ORTHOMETRIC HEIGHT WAS DETERMINED BY GPS OBSERVATIONS.
DU2258
DU2258;                   North         East       Scale          Converg.
DU2258;SPC AZ C    -    259,210.658   229,984.368 0.99990341     +0 05 53.3  MT
DU2258;UTM  12     -  3,688,963.722   431,315.090 0.99965816     -0 24 20.3  MT
DU2258
DU2258_STATION MARK IS A SURVEY DISK
DU2258_WITH SETTING: SET IN A MAT FOUNDATION OR CONCRETE SLAB OTHER THAN
DU2258
DU2258  HISTORY     - Year Condition           Recov. By
DU2258  HISTORY     - 1986 STATION MONUMENTED  AZ DEPT OF TRANSP
DU2258
DU2258                         STATION DESCRIPTION
DU2258
DU2258'DESCRIBED BY ARIZONA DEPARTMENT OF TRANSPORTATION 1986 (HW )
DU2258'THE STATION IS LOCATED ABOUT 6.5 KM (4.0 MI) SOUTHWEST OF GILBERT,
DU2258'ARIZONA.
DU2258'
DU2258'TO REACH THE STATION FROM THE INTERSECTION OF GILBERT ROAD AND
DU2258'WARNER ROAD, GO EAST ON WARNER ROAD FOR 4.9 KM (3.0 MI) TO THE
DU2258'INTERSECTION OF WARNER ROAD AND GREENFIELD ROAD, TURN LEFT AND GO
DU2258'NORTH ON GREENFIELD ROAD FOR 0.19 KM (0.12 MI) TO THE BRIDGE OVER
DU2258'THE EASTERN CANAL AND THE STATION ON THE RIGHT IN THE EAST ABUTMENT
DU2258'OF THE BRIDGE.
DU2258'
DU2258'THE STATION IS A STANDARD AGS DISK
DU2258'STAMPED---SAN 1986---,
DU2258'SET INTO A DRILL HOLE IN THE CONCRETE OF A BRIDGE CURB.
DU2258'LOCATED 7.6 METERS (25 FT) NORTHEAST FROM THE SOUTHEAST END OF THE
DU2258'EAST BARRIER,
DU2258'14.0 METERS (46 FT) EAST FROM THE CENTERLINE OF GREENFIELD ROAD,
DU2258'2.59 METERS (8.5 FT) NORTHWEST FROM THE CENTERLINE OF THE SOUTHEAST
DU2258'CANAL ROAD,
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1       National Geodetic Survey,   Retrieval Date = JULY 21, 1992

DU0695 ***********************************************************************
DU0695  DESIGNATION -  D 282
DU0695  PID         -  DU0695
DU0695  STATE/COUNTY-  AZ/MARICOPA
DU0695
DU0695  HORZ DATUM  -  NAD 83
DU0695  VERT DATUM  -  NGVD 29
DU0695
DU0695  POSITION    -  33 20 08.55540(N)    111 39 06.25115(W)     ADJUSTED
DU0695  83 minus 27 -      +00.18037            +02.48388         NADCON
DU0695
DU0695  HEIGHT      -      417.791  (meters)    1370.70   (feet)  ADJ UNCHK
DU0695 ***********************************************************************
DU0695  LAPLACE CORR-        3.32                                  DEFLEC90
DU0695  GEOID HEIGHT-      -29.66                                  GEOID90
DU0695
DU0695  HORZ ORDER  -  FIRST
DU0695  VERT ORDER  -  FIRST     CLASS 2
DU0695
DU0695.THE HORIZONTAL COORDINATES WERE ESTABLISHED BY GPS OBSERVATIONS
DU0695.AND ADJUSTED BY THE NATIONAL GEODETIC SURVEY IN AUGUST 1988
DU0695.THE ORTHOMETRIC HEIGHT WAS KEY ENTERED FROM PRINTED DOCUMENTS
DU0695.AND NOT KEY VERIFIED.
DU0695
DU0695;                    North         East       Scale          Converg.
DU0695;SPC AZ C    -    259,011.874   238,021.963 0.99990750     +0 08 44.1  MT
DU0695;UTM  12     -  3,688,694.344   439,348.588 0.99964535     -0 21 29.4  MT
DU0695
DU0695_STATION MARK IS A BENCH MARK DISK
DU0695_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
DU0695_THE MARK IS STAMPED: D 282 1948
DU0695
DU0695  HISTORY     - Year Condition           Recov. By
DU0695  HISTORY     - 1948 STATION MONUMENTED  COAST AND GEODETIC SURVEY
DU0695  HISTORY     - 1967 GOOD                NATIONAL GEODETIC SURVEY
DU0695  HISTORY     - 1992 GOOD                NATIONAL GEODETIC SURVEY
DU0695
DU0695                         STATION DESCRIPTION
DU0695
DU0695'DESCRIBED BY NATIONAL GEODETIC SURVEY 1967
DU0695'TEXT WAS SUPERSEDED BY LATER RECOVERY.
DU0695
DU0695                         STATION RECOVERY (1992)
DU0695
DU0695'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1992
DU0695'9.8 KM (6.10 MI) NORTHERLY ALONG ELLSWORTH ROAD FROM THE POST OFFICE
DU0695'IN QUEEN CREEK, THENCE 1.5 KM (0.95 MI) WESTERLY ALONG WARNER ROAD,
DU0695'10.8 M (35.4 FT) SOUTH OF AND LEVEL WITH THE ROAD CENTERLINE, 4.7 M
DU0695'(15.4 FT) SOUTHWEST OF A UTILITY POLE, 2.1 M (6.9 FT) SOUTH OF A
DU0695'FENCE, 0.3 M (1.0 FT) WEST OF A WITNESS POST, AND THE MONUMENT
DU0695'PROJECTS 0.3 M (1.0 FT) ABOVE THE GROUND SURFACE.
```

Post-it® Fax Note 7671	Date 5-28-97	# of pages ▶ 4
To Bob Davies	From	
Co./Dept.	Co. PEC	
Phone #	Phone #	
Fax #	Fax #	

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DU2317 ******************************
DU2317  DESIGNATION -  A 518
DU2317  PID         -  DU2317
DU2317  STATE/COUNTY-  AZ/MARICOPA
DU2317  USGS QUAD   -  MESA (1983)
DU2317
DU2317  HORZ DATUM  -  NAD 83
DU2317  VERT DATUM  -  NAVD 88
DU2317
DU2317  POSITION    -  33 24 56.     (N)    111 45 33.     (W)     SCALED
DU2317  83 minus 27 -       +00.                  +02.            NADCON
DU2317
DU2317
DU2317  HEIGHT      -        388.720  (meters)    1275.32   (feet)  ADJUSTED
DU2317  88 minus 29 -         +0.534  (+/- 2 cm)                    VERTCON
DU2317  DY minus 88 -         -0.460                                COMPUTED
DU2317. (NOTE - For assistance in applying shifts see file readme.dat)
DU2317 ******************************************************************
DU2317
DU2317  GEOID HEIGHT-          -29.56                               GEOID93
DU2317  MODELED GRAV-      979,442.8                                NAVD88
DU2317
DU2317
DU2317  VERT ORDER  -  FIRST     CLASS 2
DU2317
DU2317
DU2317.The horizontal coordinates were scaled from a topographic map and have
DU2317.an estimated accuracy of +/- 6 seconds.
DU2317
DU2317.The orthometric height was determined by differential leveling
DU2317.and adjusted by the National Geodetic Survey in November 1993.
DU2317
DU2317.The dynamic height is computed by dividing the NAVD 88
DU2317.geopotential number by the normal gravity value computed on the
DU2317.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DU2317.degrees latitude (G = 980.6199 gals.).
DU2317
DU2317.The geoid height was determined by GEOID93.
DU2317
DU2317.The modeled gravity was interpolated from observed gravity values.
DU2317
DU2317;                      North         East        Estimated Accuracy
DU2317;SPC AZ C     -      267,850.      228,010.    (+/- 180 meters Scaled)
DU2317
DU2317_STATION MARK IS A METAL ROD
DU2317_WITH SETTING: STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)
DU2317_THE MARK IS STAMPED: A 518 1992
DU2317_STABILITY: A - MOST RELIABLE AND EXPECTED TO HOLD
DU2317+STABILITY: POSITION/ELEVATION WELL
DU2317_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DU2317+SATELLITE: SATELLITE OBSERVATIONS - 1992
DU2317_ROD/PIPE-DEPTH: 5.5  meters
DU2317
DU2317  HISTORY     - Year Condition            Recov. By
DU2317  HISTORY     - 1992 STATION MONUMENTED   NATIONAL GEODETIC SURVEY
DU2317
```

DU2317 STATION DESCRIPTION
DU2317
DU2317'DESCRIBED BY NATIONAL GEODETIC SURVEY 1992
DU2317'7.5 KM (4.65 MI) EASTERLY ALONG U.S. HIGHWAY 60 (MAIN STREET) FROM
DU2317'THE JUNCTION OF STATE HIGHWAY 87 (COUNTRY CLUB DRIVE) IN MESA, 10.0 M
DU2317'(32.8 FT) NORTH OF AND LEVEL WITH THE CENTER OF THE WESTBOUND LANES
DU2317'OF THE HIGHWAY, 9.2 M (30.2 FT) WEST OF THE CENTER OF CYPRESS ESTATES
DU2317'MOBILE HOME PARK ENTRANCE ROAD, 1.2 M (3.9 FT) NORTH OF THE SOUTH END
DU2317'OF A BRICK WALL, 0.5 M (1.6 FT) WEST OF THE WALL, AND 0.3 M (1.0 FT)
DU2317'SOUTH OF A WITNESS POST. NOTE--ACCESS TO THE DATUM POINT IS THROUGH
DU2317'A 5-INCH LOGO CAP.

```
DU2319 ***********************************************************************
DU2319  DESIGNATION -  C 518
DU2319  PID         -  DU2319
DU2319  STATE/COUNTY-  AZ/MARICOPA
DU2319  USGS QUAD   -  MESA (1983)
DU2319
DU2319  HORZ DATUM  -  NAD 83
DU2319  VERT DATUM  -  NAVD 88
DU2319
DU2319  POSITION    -  33 24 56.     (N)    111 47 02.     (W)     SCALED
DU2319  83 minus 27 -        +00.                   +03.            NADCON
DU2319
DU2319
DU2319  HEIGHT      -        382.634  (meters)    1255.36   (feet)  ADJUSTED
DU2319  88 minus 29 -         +0.542  (+/- 2 cm)                    VERTCON
DU2319  DY minus 88 -         -0.453                                COMPUTED
DU2319. (NOTE - For assistance in applying shifts see file readme.dat)
DU2319 ***********************************************************************
DU2319
DU2319  GEOID HEIGHT-         -29.59                                GEOID93
DU2319  MODELED GRAV-     979,443.5                                 NAVD88
DU2319
DU2319
DU2319  VERT ORDER  -  FIRST     CLASS 2
DU2319
DU2319
DU2319.The horizontal coordinates were scaled from a topographic map and have
DU2319.an estimated accuracy of +/- 6 seconds.
DU2319
DU2319.The orthometric height was determined by differential leveling
DU2319.and adjusted by the National Geodetic Survey in November 1993.
DU2319
DU2319.The dynamic height is computed by dividing the NAVD 88
DU2319.geopotential number by the normal gravity value computed on the
DU2319.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DU2319.degrees latitude (G = 980.6199 gals.).
DU2319
DU2319.The geoid height was determined by GEOID93.
DU2319
DU2319.The modeled gravity was interpolated from observed gravity values.
DU2319
DU2319:                      North          East        Estimated Accuracy
DU2319;SPC AZ C     -      267,040.       225,710.    (+/- 180 meters Scaled)
DU2319
DU2319_STATION MARK IS A VERTICAL CONTROL DISK
DU2319_WITH SETTING: SET IN THE ABUTMENT OR PIER OF A LARGE BRIDGE
DU2319_THE MARK IS STAMPED: C 518 1992
DU2319_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
DU2319_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DU2319+SATELLITE: SATELLITE OBSERVATIONS   1992
DU2319
DU2319  HISTORY     - Year Condition              Recov. By
DU2319  HISTORY     - 1992 STATION MONUMENTED     NATIONAL GEODETIC SURVEY
DU2319
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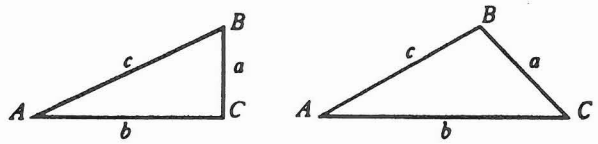
DU2319 STATION DESCRIPTION
DU2319
DU2319'DESCRIBED BY NATIONAL GEODETIC SURVEY 1992
DU2319'5.2 KM (3.25 MI) EASTERLY ALONG U.S. HIGHWAY 60 (MAIN STREET) FROM
DU2319'THE JUNCTION OF STATE HIGHWAY 87 (COUNTRY CLUB DRIVE) IN MESA, IN TOP
DU2319'OF AND 0.2 M (0.7 FT) SOUTHEAST OF THE NORTHWEST END OF THE NORTHEAST
DU2319'CONCRETE ABUTMENT OF THE HIGHWAY BRIDGE SPANNING THE CONSOLIDATED
DU2319'CANAL, 2.1 M (6.9 FT) NORTH OF THE NORTH CURB OF THE HIGHWAY, 0.4 M
DU2319'(1.3 FT) NORTH OF THE BRIDGE RAILING, AND 0.3 M (1.0 FT) ABOVE THE
DU2319'LEVEL OF THE HIGHWAY.

FORMULAE FOR SOLVING RIGHT TRIANGLES



$\text{Sin } A = \frac{a}{c} = \text{Cos } B \qquad \text{Cot } A = \frac{b}{a} = \text{Tan } B$

$\text{Cos } A = \frac{b}{c} = \text{Sin } B \qquad \text{Sec } A = \frac{c}{b} = \text{Cosec } B$

$\text{Tan } A = \frac{a}{b} = \text{Cot } B \qquad \text{Cosec } A = \frac{c}{a} = \text{Sec } B$

Given	Required	Solution
A, c	B, a, b	$B = 90° - A, a = c \sin A, b = c \cos A.$
A, b	B, a, c	$B = 90° - A, a = b \tan A, c = \frac{b}{\cos A}.$
A, a	B, b, c	$B = 90° - A, b = a \cot A, c = \frac{a}{\sin A}.$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)}$
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2}$

FORMULAE FOR SOLVING OBLIQUE TRIANGLES

Given	Required	Solution
A, a, b	B, c	$\sin B = \frac{b \sin A}{a}, c = \frac{a \sin C}{\sin A}$
A, B, a	b	$b = \frac{a \sin B}{\sin A}$
a, b, C	A, c	$A + B = 180° - C, c = \frac{a \sin C}{\sin A}$
a, b, c	Area	side $\frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

MADE IN U.S.A.

MESA ADMS
Book 1
Levels

Prime BM's.
PT 315 Bk.3 p.17
PT 360 Bk.4 p.29

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25393
KARL M.
MORTENSEN
DATE SIGNED 10-2-96
ARIZONA U.S.A.

Project Engineering
3131 N 35th Ave
Phoenix AZ

BENCH LOOPS

	PAGE	POINTS
Loop 1	3	1, ~~21~~ 20
Loop 2	4-5	25, ~~26~~ 147, 101, 102, 103
Loop 3	6-7	27, ~~52~~ 21, 104, 105, 106, 107, 108, 109, 110, 111, 112
Loop 4	8-10	53, 28, 113, 114, 115, 116, 117, 118, 119, 120
Loop 5	11-13	121 - 127
Loop 6	14-15	128 - 131, 54
Loop 7	16-18	132 - 142, 29
Loop 8	19	143
Loop 9	20	32
Loop 10	21-22	144 - 146, 30, 148 - 149
Loop 11	23	150
Loop 12	24-27	151 - 171, 63
Loop 13	28	172 - 174, 60, 61
Loop 14	29-31	175 - 181, 31, 65, 32
Loop 15 - 16	32-35	182 - 188, 68

Loop 1

10-2-95
Clear, Calm, Warm 85°F

Gardiner
M Mortensen

3

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	100			~~1296.91~~	1295.401	Fd Maricopa County Engineering Brass Cap flush w/ concrete sidewalk, Westside Old Gilbert Road ±3' South of ℄ Eastern Canal; Stamped "BENCHMARK ELEV. 1296.91 DATE 1-19-73"
		4.062				
TP1	~~21~~ 20		7.338	~~1293.034~~	1292.124	Fd City of Mesa Brass Cap in Handhole (0.72' below rim) @ NW Cor Pvmt @ intersection of Old Gilbert Road & Hermosa Vista
		7.255				
END 2	100		3.978	~~1296.910~~	1295.401	POB

Loop 2

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	100			~~1296.910~~	1295.401	Brass Cap, See Page 3
		3.670				
TP1			8.081	~~1292.499~~		Paint Spot T/C Eastside Gilbert Road
		4.522				
TP2			7.393	~~1289.628~~		Paint Spot SE C.R. Gilbert Rd & Lockwood St East
		4.811				
TP3			6.183	~~1288.256~~		Paint Spot T/C Eastside Gilbert Road
		4.577				
TP4			6.543	~~1286.293~~		Paint Spot T/C Eastside Gilbert Road
		4.561				
TP5			6.200	~~1284.653~~		Paint Spot T/C Eastside Gilbert Road
		4.628				
TP6	25		5.848	~~1283.433~~	1281.923	Fd County Dept Brass Cap in Handhole (0.90' below rim) @ intersection of Gilbert Road & McKellips Road
		6.772				
TP7			5.198	~~1285.007~~		Paint Spot T/C Northside McKellips Road
		5.690				
TP8			5.057	~~1285.640~~		Paint Spot T/C Southside McKellips Road
		5.902				
TP9			4.356	~~1287.186~~		Paint Spot T/C Southside McKellips Road
		5.627				
TP10			4.890	~~1287.922~~		Paint Spot T/C Southside McKellips Road
		6.157				
TP11			4.164	~~1289.916~~		Paint Spot T/C Southside McKellips Road
		5.968				
TP12	101		5.277	~~1290.607~~	1289.103	Fd City of Mesa Brass Cap in Handhole (1.30' below rim) @ intersection of McKellips Road & 24th Street

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		7.432				
TP13	102		3.669	~~1295.370~~	1293.867	Fd Salt River Project Brass Cap flush w/concrete of West Wingwall South Side of McKellips Road Bridge over Canal
		4.720				
TP14	~~26~~ 147		6.283	~~1293.807~~	1292.304	Fd City of Mesa Brass Cap in Manhole (0.64' below rim) @ intersection of McKellips Road & Winterhaven
		6.847				
TP15			5.142	~~1295.511~~		Nail in Dirt
		5.532				
TP16			5.637	~~1295.407~~		Nail in Dirt
		4.885				
TP17	103		5.093	1295.200	1293.697	Set 1/2" Rebar flush w/ East Edge Concrete Lining of Canal ±1200' North of McKellips Road
		5.573				
TP18			4.663	~~1296.110~~		Nail in Dirt
		5.427				
TP19			5.151	~~1296.386~~		Nail in Dirt
		5.326				
TP20			5.286	~~1296.427~~		Nail in Dirt
		5.172				
TP21			5.203	~~1296.396~~		Nail in Dirt
		5.189				
END22	100		4.683	~~1296.502~~ (.008)	1095.401	POB

Loop 3

10-3-
Clear, Calm, Warm 55°F

T Gardner
O Lowe
✓ M Mortensen

6

STA	Pt #	BS+	FS-	ELEV	ADJ EL	
POB	~~21~~ 20			~~1293.634~~	1292.124	Brass Cap, See Page 3
		6.329				
TP1			4.721	~~1297.243~~		Paint Spot EP Hermosa Vista
		6.323				
TP2			4.987	~~1296.579~~		Nail in Dict Hermosa Vista
		5.943				
TP3	104		5.491	~~1297.030~~	1295.522	Fd City of Mesa Brass Cap in Handhole @ intersection of Hermosa Vista & Acacia
		6.635				
TP4			4.290	~~1299.375~~		Paint Spot T/C Northside Hermosa Vista
		5.517				
TP5	105		5.730	~~1299.162~~	1297.654	Fd City of Mesa Brass Cap in Handhole @ intersection of Hermosa Vista Drive & Rose
		6.173				
TP6	106		5.157	~~1300.178~~	1298.671	Fd City of Mesa Brass Cap in Handhole (0.56' below rim) @ intersection of Hermosa Vista Drive & Alamo
		6.436				
TP7			4.410	~~1302.204~~		Paint Spot T/C Southside Hermosa Vista
		5.456				
TP8	~~52~~ 21		5.820	~~1301.840~~	1300.333	Fd City of Mesa Brass Cap in Handhole (0.84' below rim) @ intersection of Hermosa Vista Drive & 24th Street
		6.240				
TP9			4.194	~~1303.886~~		Paint Spot T/C Southside Hermosa Vista
		5.815				
TP10			3.985	~~1305.715~~		Paint Spot T/C Southside Hermosa Vista
		6.266				
TP11	107		6.265	~~1305.716~~	1304.212	Fd City of Mesa Brass Cap in Handhole (0.93' below rim) @ intersection of Hermosa Vista Drive & 26th Street North
		7.016				
TP12			4.532	~~1308.281~~		Paint Spot E.P. Hermosa Vista Drive

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		5.924				
TP13			4.181	~~1310.023~~		Nail in Dirt
		5.731				
TP14	108		4.704	~~1311.050~~	1309.547	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ intersection of Hermosa Vista Drive & Lindsay Road
		3.750				
* TP15			6.136			Nail in Dirt
		4.638				
TP16	107		6.447	~~1307.057~~	1305.554	Fd City of Mesa Brass Cap in Handhole (0.87' below rim) @ intersection of Lindsay Road & Leonora Street West
		5.284				
TP17	110		6.604	~~1305.737~~	1304.234	Fd City of Mesa Brass Cap in Handhole (0.93' below rim) @ intersection of Lindsay Road & Leonora Street East
		5.112				
TP18	111		6.741	~~1303.708~~	1302.406	Fd City of Mesa Brass Cap in Handhole (0.95' below rim) @ intersection of Lindsay Road & Kenwood Street
		5.677				
TP19	112		6.443	~~1303.143~~	1301.641	Fd City of Mesa Brass Cap in Handhole (0.31' below rim) @ intersection of Lindsay Road & Kramer Street
		4.622				
TP20	27		5.661	~~1302.103~~	1300.603	Fd City of Mesa Brass Cap in Handhole (0.50' below rim) @ intersection of Lindsay Road & McKellips Road
		4.474				
TP21			6.789	~~1297.809~~		Nail in Dirt
		4.380				
TP22			6.719	1297.470		Paint Spot T/C Southside McKellips Road
		4.039				
TP23			5.747	1295.762		Nail in Dirt
		3.834				
TP24			5.412	1294.183		Paint Spot T/C Southside McKellips Road
		4.998				
END 25	~~26~~ 147		5.374	~~1293.50X~~	1292.304	Brass Cap, See Page 5

Loop 4

Sta	Pt #	BS+	FS−	Elev	Adj El	Remarks
POB	108			~~1311.050~~	1309.547	Brass Cap, See Page 7
		5.910				
TP1	113		5.427	~~1311.533~~	1310.029	Fd City of Mesa Brass Cap in Handhole (0.46' below rim) @ intersection of Hermosa Vista Drive & Robin Lane North
		7.294				
TP2			4.175	1314.653		Paint Spot T/C Southside Hermosa Vista Drive
		6.300				
TP3	114		5.470	~~1315.483~~	1313.977	Fd City of Mesa Brass Cap in Handhole (1.01' below rim) @ intersection of Hermosa Vista Drive & Los Alamos
		7.451				
TP4			4.448	~~1318.486~~		Paint Spot T/C Southside Hermosa Vista Drive
		6.194				
× TP5	115		5.862	~~1318.818~~	1317.311	Fd City of Mesa Brass Cap in Handhole (0.84' below rim) @ intersection of Hermosa Vista Drive & Loma Vista
		7.168				
TP6	116		5.458	~~1320.527~~	1319.021	Fd City of Mesa Brass Cap in Handhole (0.56' below rim) @ intersection of 32nd Street & Hermosa Vista Drive West
		5.632				
TP7	117		7.013	~~1319.146~~	1317.640	Fd City of Mesa Brass Cap in Handhole (0.51' below rim) @ intersection of 32nd Street & Laurel Circle
		5.759				
TP8	53		6.648	~~1318.257~~	1316.751	Fd City of Mesa Brass Cap in Handhole (0.98' below rim) @ intersection of 32nd Street & Hermosa Vista Drive East
		8.064				
TP9			3.998	~~1322.322~~		Paint Spot T/C Northside Hermosa Vista Drive
		6.563				
TP10			4.142	~~1324.744~~		Paint Spot T/C Northside Hermosa Vista Drive
		5.850				
TP11	118		4.667	~~1325.925~~	1324.418	Fd "X" chiseled in T/C @ East End of Curb & Sidewalk Southside of Hermosa Vista Drive ±1300' East of 32nd Street, ±20' East of East ℄ O.S. Stapley Junior High School
		6.316				
TP12			4.271	~~1327.970~~		Nail in Dirt

STA	HT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.82				
TP13			3.916	~~1330.877~~		Nail in Dirt
		6.167				
TP14	119		3.951	~~1333.043~~	1331.584	Fd Cotton Spindle in Handhole (0.68' below rim) @ intersection of Hermosa Vista Drive & Val Vista Drive
		4.132				
TP15			5.938	~~1331.286~~		Nail in Dirt
		4.012				
TP16			6.084	~~1329.215~~		Nail in Dirt
		5.171				
TP17			6.533	~~1327.852~~		Nail in Dirt
		4.714				
TP18			5.709	~~1326.657~~		Nail in Dirt
		4.802				
TP19			5.601	~~1325.858~~		Paint Spot EP Westside Val Vista Drive
		5.658				
TP20	28		5.948	~~1325.368~~	1324.060	Fd City of Mesa Brass Cap in Handhole (0.55' below rim) @ intersection of Val Vista Drive & McKellips Road
		4.000				
TP21			6.083	~~1323.485~~		Nail in Dirt
		4.089				
TP22			6.601	~~1320.973~~		Nail in Dirt
		3.981				
TP23			6.780	~~1318.174~~		Nail in Dirt
		3.766				
TP24			6.289	1315.651		Paint Spot T/C Northside McKellips Road
		3.989				

STA	Pt#	BS+	FS -	ELEV	ADJ EL	REMARKS
TP25			6.795	~~1312.845~~		Paint Spot T/C Northside McKellips Road
		4.660				
TP26	120		5.947	1311.564	1310.048	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ intersection of McKellips Road & 32nd Street
		4.571				
TP27			6.482	1309.654		Paint Spot T/C Northside McKellips Road
		4.348				
TP28			6.116	1307.886		Paint Spot T/C Northside McKellips Road
		4.452				
TP29			6.719	1305.419		Paint Spot North E.P. McKellips Road
		4.227				
TP30			5.644	1304.003		Paint Spot T/C Northside McKellips Road
		4.827				
TP31			5.946	1302.883		Paint Spot T/C Northside McKellips Road
		5.419				
ENG32	27		6.173	~~1302.129~~ (.026)	1300.603	Brass Cap, See Page 7

10-4-05
Clear, Cloudy, Warm

Cone
Coyne
M Mortensen

STA	Pt#	BS+	FS−	ELEV	ADJ EL	REMARKS
POB	11[illegible]			~~1333.093~~	1331.584	Cotton Spindle, See Page 7
		6.053				
TP1			5.094	~~1334.052~~		Nail in Dirt
		5.705				
TP2			5.156	~~1334.601~~		Nail in Dirt
		6.444				
TP3			4.378	~~1336.667~~		Nail in Dirt
		5.360				
TP4			4.412	~~1337.916~~		Nail in Dirt
		5.478				
TP5			5.137	1337.936		Nail in Dirt
		5.781				
TP6	121		4.909	~~1338.808~~	1337.302	Fd City of Mesa Brass Cap in Handhole (0.63' below rim) @ intersection of McDowell Road & Val Vista Drive
		6.504				
TP7			4.677	~~1340.644~~		Nail in Dirt
		6.583				
TP8			5.058	~~1342.165~~		Nail in Dirt
		6.493				
TP9			4.017	1344.642		Nail in Dirt
		6.717				
TP10			4.295	1347.063		Nail in Dirt
		7.216				
TP11			3.645	1350.635		Nail in Dirt
		8.887				
TP12	122		3.816	1355.705	1354.203	Fd Maricopa County Highway Dept Brass Cap flush w/concrete on ℄ McDowell Road, ± 1/2 Mile East of Val Vista Drive, ±15' West of ℄ Roosevelt Canal

STA	Pt #	BS +	FS -	ELEV	ADJ EL	REMARKS
		3.581				
TP 13	123		3.586	~~1356~~.201	1354.698	Fd Maricopa County Engineering Dept Brass Cap Flush w/Concrete in Top of S/W, Northside McDowell Road ℄ Roosevelt Canal", Stamped "BENCH MARK ELEV. 1355.02 DATE 1-19-73"
		2.815				
TP14			6.387	~~1352~~.629		Nail in Dirt
		4.940				
TP15			5.450	~~1352~~.118		Nail in Dirt
		6.015				
TP16			5.485	1352.648		Nail in Dirt
		5.514				
TP17			5.886	1352.276		Nail in Dirt
		5.180				
TP18			5.634	~~1351~~.822		Nail in Dirt
		5.114				
TP19	124		5.963	~~1350~~.973	1349.470	Fd "X" chiseled in Concrete NE Cor SRP Irrigation Structure ± 1/2 Mile South of McDowell Road (Hermosa Vista Drive Extended), ± 75' West of West Edge Roosevelt Canal
		6.935				
TP20			6.193	1351.715		Nail in Dirt
		5.157				
TP21			5.565	~~1351~~.307		Nail in Dirt
		5.813				
TP22			5.821	~~1351~~.300		Nail in Dirt
		5.344				
TP23			5.965	1350.679		Nail in Dirt
		5.924				
TP24			5.956	~~1350~~.647		Nail in Dirt
		6.313				

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25	125		3.789	~~1352.770~~	1351.465	Fd "X" chiseled in concrete NW Cor Sidewalk of Bridge over Roosevelt Canal, Southside McKellips Road
		2.397				
TP26			9.601	~~1345.766~~		Nail in Dirt
		3.692				
TP27			6.684	~~1342.773~~		Nail in Dirt
		3.559				
TP28	126		6.352	~~1339.980~~	1338.476	Fd Maricopa County Engineering Dept Brass Cap in Pothole (0.24' below pvmt) @ M McKellips Road, ±1/2 Mile East of Val Vista Drive, ±400' East of Maple St North
		4.172				
TP29			6.734	~~1331.418~~		Paint Spot T/C Northside McKellips Road
		4.935				
TP30	127		5.978	~~1336.395~~	1334.871	Fd City of Mesa Brass Cap in Handhole (0.43' below rim) @ intersection of 39th Street & McKellips Road
		3.816				
TP31			6.405	~~1333.786~~		Nail in Dirt
		4.207				
TP32			7.145	~~1330.848~~		Nail in Dirt
		4.306				
TP33			6.684	~~1328.470~~		Nail in Dirt
		4.167				
TP34			6.325	~~1326.313~~		Nail in Dirt
		5.500				
END35	28		6.247	~~1325.566~~ .002	1324.060	Brass Cap, See Page 9

LOOP 6

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	119			~~1333.093~~	1331.584	Cotton Spindle, See Page 9
		6.057				
TP1			4.522	~~1334.628~~		Nail in Dirt
		6.438				
TP2			4.407	~~1336.659~~		Nail in Dirt
		6.327				
TP3	128		4.635	~~1338.351~~	1336.840	Fd City of Mesa Brass Cap in Handhole (0.30' below rim) @ intersection of Hermosa Vista Drive & 38th Street
		6.671				
TP4	129		5.666	~~1339.356~~	1337.844	Fd City of Mesa Brass Cap in Handhole (0.88' below rim) @ intersection of Menlo Street & 38th Street
		6.569				
TP5	54		5.515	~~1340.410~~	1338.898	Fd City of Mesa Brass Cap in Handhole (1.05' below rim) @ intersection of Mallory Street & 38th Street
		6.675				
TP6	130		5.528	~~1341.557~~	1340.044	Fd City of Mesa Brass Cap in Handhole (1.03' below rim) @ intersection of Minton Place & 38th Street
		6.778				
TP7			5.475	~~1342.859~~		Nail in Dirt
		5.819				
TP8			4.739	~~1343.940~~		Nail in Dirt
		5.517				
TP9			5.190	~~1344.267~~		Nail in Dirt
		5.548				
TP10	131		3.584	~~1346.231~~	1344.715	FA "X" chiseled in concrete SW Cor Irrigation Headwall 1300' East of Val Vista Drive, Southside of McDowell Road; 38th Street Extended North; Marked As "S&T TBM 1346.07"
		5.016				
TP11			4.436	~~1346.811~~		Nail in Dirt
		5.768				
TP12			4.322	~~1348.258~~		Nail in Dirt

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.106				
TP13			4.636	~~1349.728~~		Nail in Dirt
		9.877				
ENG14	123		3.387	~~1356~~.218 (.017)	1354.698	

10-5-95
Clear, Breezy, Cool 85°F

Gail
D. Mortensen

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	27			~~1302.103~~	1300.603	Brass Cap, See Page 7
		4.402				
TP1			6.373	~~1300.132~~		Paint Spot T/C Eastside Lindsay Rd
		4.361				
TP2	132		6.503	~~1297.998~~	1296.498	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ intersection of Lindsay Road & Jasmine Street
		5.007				
TP3	133		6.442	~~1296.563~~	1295.063	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ intersection of Lindsay Road & Backus Road
		4.799				
TP4			5.954	~~1295.408~~		Paint Spot T/C Eastside Lindsay Rd
		4.080				
TP5			5.678	~~1293.810~~		Paint Spot T/C Eastside Lindsay Rd
		4.492				
TP6			5.101	~~1293.201~~		Paint Spot T/C Westside Lindsay Rd
		7.717				
TP7	134		6.041	~~1294.878~~	1293.377	Fd Salt River Project Brass Cap flush w/ concrete in Top of SW Wingwall of Bridge over Eastern Canal on Lindsay Rd; Stamped "31.0 E 4.6 N 1993"
		3.113				
TP8			4.772	~~1293.219~~		Nail in Dirt
		2.291				
TP9			2.353	~~1293.158~~		Nail in Dirt
		2.009				
TP10	135		5.950	~~1289.216~~	1287.715	Set ½" Rebar flush w/ ground ± 1000' North of Brown Road, ± 45' West of West Edge Eastern Canal, ± 3' East of Block Wall
		5.675				
TP11			1.734	~~1293.157~~		Nail in Dirt
		2.011				
TP12			2.328	~~1292.840~~		Nail in Dirt

STA	Pt #	BS+	FS−	ELEV	ADJ EL	REMARKS
		4.658				
TP13			4.254	~~1293.245~~		Nail in Dirt
		5.467				
TP14	136		4.864	~~1293.847~~	1292.346	Fd Maricopa County Highway Dept. Brass Cap Flush w/concrete in ℄ Sidewalk Southside Brown Road, West Edge of Bridge over Eastern Canal Stamped "1293.98"
		4.677				
TP15			6.843	1291.681		Nail in Dirt
		6.433				
TP16			5.325	~~1292.788~~		Nail in Dirt
		7.103				
TP17	137		4.757	1294.935	1293.435	Fd City of Mesa Brass Cap in Handhole (0.55' below rim) @ intersection of Brown Road & Creston Street
		6.873				
TP18			4.742	1297.066		Nail in Dirt
		7.326				
TP19			4.457	1299.935		Nail in Dirt
		7.316				
* TP20			4.594	~~1302.657~~		Nail in Dirt
		5.874				
TP21	138		5.658	~~1302.874~~	1301.373	Fd City of Mesa Brass Cap in Handhole (0.60' below rim) @ intersection of Brown Road & Miramar Street
		6.801				
TP22			4.690	~~1304.985~~		Nail in Dirt
		6.087				
TP23	131		5.238	1305.835	1304.334	Fd City of Mesa Brass Cap in Handhole (0.60' below rim) @ intersection of Brown Road & Mayfair Street
		6.676				
TP24	29		3.895	~~1308.616~~	1307.115	Fd City of Mesa Brass Cap in Handhole (1.15' below rim) @ intersection of Brown Road & Val Vista
		6.327				

STA	Pt#	BS+	FS−	ELEV	ADJ EL	REMARKS
TP25			4.640	~~1310.303~~		Nail in Dirt
		6.462				
TP26	140		4.849	~~1311.916~~	1310.411	Fd City of Mesa Brass Cap in Handhole (0.46' below rim) @ intersection of Val Vista Dr & Grandview Street
		6.904				
TP27			5.030	~~1313.790~~		Nail in Dirt
		6.087				
TP28			4.910	~~1314.967~~		Nail in Dirt
		6.238				
TP29			4.144	1317.061		Paint Spot T/c Westside Val Vista Drive
		5.547				
TP30	141		5.272	1317.336	1315.824	Fd City of Mesa Brass Cap in Handhole (0.50' below rim) @ intersection of Val Vista Drive & Mc Lellan Road
		5.839				
TP31	142		4.288	1318.886	1317.374	Fd City of Mesa Brass Cap flush w/ pvmt @ intersection of Val Vista Drive & Indigo Circle
		5.172				
TP32			4.622	1319.436		Nail in Dirt
		6.135				
TP33			4.469	~~1321.101~~		Nail in Dirt
		5.181				
TP34			4.047	~~1322.235~~		Nail in Dirt
		5.742				
TP35			4.172			Nail in Dirt
		5.834				
END36	28		4.061	~~1325.577~~	1324.060	Brass Cap, See Page 9
				.009		

Loop 3

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	140			~~1311.916~~	1310.411	Brass Cap, See Page 18
		5.164				
TP1			6.370	~~1310.709~~		Paint Spot Point Grandview Street
		3.595				
TP2			5.915	1308.389		Paint Spot on Manhole Grandview Street
		4.069				
TP3	143		5.959	1306.499	1304.988	Fd City of Mesa Brass Cap Flush w/ point @ intersection of Grandview Street & Miramar Street
		5.903				
TP4			4.008	~~1308.394~~		Same As TP2
		5.631				
TP5			3.310	~~1310.715~~		Same As TP1
		6.452				
END6	140		5.239	1311.928	1310.411	POB
				.012		

Loop 9

STA	PT#	BS+	FS−	ELEV	ADJ EL	REMARKS
POB	113			~~1311.533~~	1310.029	Brass Cap, See Page 8
		5.231				
TP1	22		5.662	~~1311.102~~	1309.597	Fd City of Mesa Brass Cap in Handhole (0.90' below rim) @ intersection of Robin Lane & Laurel Street
		5.444				
END2	108		5.493	~~1311.052~~ (.002)		Brass Cap, See Page 7

LOOP 10

10-9-15
Clear, Breezy, Warm 70°F

Gardner
Coyne
M Mortensen

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	125			1352.970	1351.465	"X" in Concrete, See Page 13
		2.830				
TP1			5.307	1350.493		Nail in Dirt
		5.352				
TP2			5.573	1350.272		Nail in Dirt
		4.861				
TP3			4.618	1350.523		Nail in Dirt
		4.944				
TP4			5.376	1350.091		Nail in Dirt
		4.961				
TP5			4.959	1350.032		Nail in Dirt
		6.363				
TP6	144		6.386	1350.009	1348.504	Set "+" in concrete @ NE Cor Conc Irr Box ± ½ Mile South of Nickellips Road, Westside Roosevelt Canal
		6.344				
TP7			5.680	1350.633		Nail in Dirt
		5.059				
TP8	145		5.260	1350.431	1348.925	Fd National Geodetic Survey Brass Cap Flush w/ concrete @ West Abutment on Westside of Greenfield Road - Stamped "V517 1992" Lat 33°25'5" Long 111°44.2'
		6.093				
TP9	146		9.132	1347.393	1345.886	Fd City of Mesa Brass Cap in Handhole (0.64' below rim) @ intersection of Greenfield Road & Hackamore Street
		3.358				
TP10			6.477	1344.274		Nail in Dirt
		4.308				
TP11			6.367	1342.215		Nail in Dirt
		5.079				
* TP12	~~147~~ 35		6.270	1341.324	1339.514	Fd City of Mesa Brass Cap in Handhole (0.48' below rim) @ intersection of Greenfield Road & Brown Road

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		4.135				
TP13			8.121	~~1337.038~~		Nail in Dirt
		3.882				
TP14			6.956	~~1333.964~~		Nail in Dirt
		4.090				
TP15			7.089	~~1330.965~~		Nail in Dirt
		3.937				
TP16	148		7.024	~~1327.878~~	1326.359	Fd City of Mesa Brass Cap in Handhole (0.58' below rim) @ intersection of Brown Road & Norwalk Drive
		4.163				
TP17			6.557	~~1325.484~~		Nail in Dirt
		4.577				
TP18	149		6.554	~~1323.484~~	1321.984	Fd City of Mesa Brass Cap in Handhole (0.65' below rim) @ intersection of Brown Road & 40th Street
		4.345				
TP19			7.105	~~1320.747~~		Nail in Dirt
		4.028				
TP20			7.106	~~1317.670~~		Nail in Dirt
		4.240				
TP21			7.139	~~1314.771~~		Nail in Dirt
		4.244				
TP22			6.556	~~1312.459~~		Nail in Dirt
		4.513				
TP23			6.751	~~1310.221~~		Nail in Dirt
		5.277				
END 24	29		6.847	~~1308.652~~ (.036)	1307.115	Brass Cap, See Page 17

Sta.	Pt#	BS+	FS-	Elev	Adj El	Remarks
POB	133			~~1296.563~~	1295.063	Brass Cap, See Page 16
		6.606				
TP1			4.875	~~1298.295~~		Nail in Dirt
		6.551				
TP2			4.879	~~1300.028~~		Nail in Dirt
		6.532				
TP3			4.497	~~1302.062~~		Nail in Dirt
		6.409				
TP4			4.563	1303.909		Nail in Dirt
		6.477				
TP5			4.034	~~1306.352~~		Nail in Dirt
		7.068				
TP6	150		4.343	1309.077	1307.572	Set 1/4" in concrete @ NW Cor Conc Irr Structure, ±3' South of South E.P. Backus Road, Eastside 32nd Street
		4.155				
TP7			6.879	~~1306.354~~		Same As TP5
		4.017				
TP8			6.539	1303.912		Same As TP4
		4.990				
TP9			6.838	~~1302.064~~		Same As TP3
		4.571				
TP10			6.604	~~1300.031~~		Same As TP2
		4.662				
TP11			6.392	1298.302		Same As TP1
		4.868				
END 12	133		6.597	~~1296.572~~	1295.063	POB

Loop 12

Sta	Pt#	BS+	FS-	Elev	Adj El	Remarks
POB	136			~~1293.847~~	1292.346	Brass Cap, See Page 17
		3.756				
TP1	151		4.775	~~1292.828~~	1291.327	Fd Salt River Project Brass Cap flush w/concrete on West Edge of Gate Structure, ±75' South of M Brown Road; Stamped "B.M."
		4.747				
TP2			5.537	~~1292.038~~		Nail in Dirt
		4.973				
TP3			4.462	~~1292.549~~		Nail in Dirt
		4.742				
TP4			5.097	~~1292.194~~		Nail in Dirt
		5.532				
TP5			5.759	~~1291.967~~		Nail in Dirt
		4.963				
TP6			5.384	~~1291.546~~		Nail in Dirt
		5.061				
TP7	152		4.061	~~1292.546~~	1291.050	Fd Salt River Project Brass Cap flush w/concrete & West Wingwall Northside Adobe Street, Westside Eastern Canal; Stamped "31.4 E 3.5 N 1993"
		5.456				
TP8			7.344	~~1290.658~~		Paintspot T/C Southside Adobe Street
		4.577				
TP9			4.196	~~1291.039~~		Paint Spot T/C Southside Adobe Street
		5.315				
TP10	153		5.174	~~1291.179~~	1289.684	Fd City of Mesa Brass Cap in Handhole (0.53' below rim) @ intersection of Adobe Street & Helms
		6.497				
TP11	154		5.547	~~1292.130~~	1290.633	Fd City of Mesa Brass Cap in Handhole (0.86' below rim) @ intersection of Adobe Street & Citrus Cove
		7.614				
TP12	155		5.901	~~1293.842~~	1292.347	Fd City of Mesa Brass Cap in Handhole (1.34' below rim) @ intersection of Adobe Street & Miramar

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
		8.001				
TP13			4.317	~~1297.526~~		Paint Spot T/C Southside Adobe Street
		5.614				
TP14	156		5.574	~~1297.565~~	1296.070	Fd City of Mesa Brass Cap in Handhole (0.54' below rim) @ intersection of Adobe Street & Mayflair Street
		6.880				
TP15	157		5.604	~~1298.841~~	1297.346	Fd City of Mesa Brass Cap in Handhole (1.28' below rim) @ intersection of Adobe Street & Orchard Street
		7.473				
TP16	158		6.171	~~1300.142~~	1298.648	Fd City of Mesa Brass Cap in Handhole @ intersection of Adobe Street & Val Vista
		8.061				
TP17			3.290	~~1304.913~~		Paint Spot T/C Southside Adobe Street
		6.791				
TP18			4.345	~~1307.359~~		Paint Spot T/C Southside Adobe Street
		6.659				
TP19			4.175	~~1309.844~~		Paint Spot T/C Southside Adobe Street
		6.201				
TP20			3.081	~~1312.965~~		Paint Spot T/C
		6.485				
TP21			3.860	~~1315.589~~		Paint Spot T/C
		6.020				
TP22	63		5.575	~~1316.035~~	1314.538	Fd City of Mesa Brass Cap in Handhole (0.23' below rim) @ intersection of Adobe Street & 40th Street
		5.727				
TP23	159		6.200	~~1315.561~~	1314.065	Fd City of Mesa Brass Cap in Handhole (0.47' below rim) @ intersection of Adobe Street & Nassau Street
		7.221				
TP24			4.021	1318.761		Paint Spot T/C Northside Adobe Street
		6.464				

10-11-95
Clear, Calm, Warm

M Gardner
Coyle
M Mortensen

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25	160		4.926	~~1320.298~~	1318.803	Fd City of Mesa Brass Cap in Handhole (0.48' below rim) @ intersection of Adobe Street & Norfolk Street
		7.541				
TP26	161		5.018	~~1322.821~~	1321.326	Fd City of Mesa Brass Cap in Handhole (0.76' below rim) @ intersection of Adobe Street & Ogden Circle
		7.747				
TP27			4.167	~~1326.399~~		Paint Spot T/C Northside Adobe Street
		6.325				
TP28	162		5.362	~~1327.363~~	1325.866	Fd City of Mesa Brass Cap in Handhole (0.48' below rim) @ intersection of Adobe Street & Oakland Street
		6.991				
TP29	163		5.255	~~1329.100~~	1327.602	Fd City of Mesa Brass Cap in Handhole (0.40' below rim) @ intersection of Adobe Street & Orlando Circle
		6.970				
TP30	164		5.275	~~1330.795~~	1329.297	Fd City of Mesa Brass Cap in Handhole (0.46' below rim) @ intersection of Adobe Street & Greenfield Road
		7.241				
TP31	165		4.975	~~1333.060~~	1331.563	Fd City of Mesa Brass Cap in Handhole (0.54' below rim) @ intersection of Adobe Street & Portland Street
		7.275				
TP32	166		5.280	~~1335.056~~	1333.558	Fd City of Mesa Brass Cap in Handhole (0.57' below rim) @ intersection of Adobe Street & Penrose Circle
		6.550				
TP33	167		4.795	~~1336.810~~	1335.312	Fd City of Mesa Brass Cap in Handhole (0.52' below rim) @ intersection of Adobe Street & Parkcrest Circle
		6.539				
TP34	168		4.456	~~1338.893~~	1337.395	Fd City of Mesa Brass Cap in Handhole (0.55' below rim) @ intersection of Adobe Street & Quinn Circle
		6.574				
TP35	169		4.882	~~1340.585~~	1339.087	Fd City of Mesa Brass Cap in Handhole @ intersection of Adobe Street & 46th Street
		9.798				
TP36			0.387	1349.996		Paint Spot T/C Northside Adobe Street
TP37	170		5.169	~~1351.025~~	1349.527	Set "+" in concrete Top of South Edge of Northwest Wingwall of Bridge over Roosevelt Canal, Northside of Adobe Street

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		3.007				
TP 38			5.202	~~1348.829~~		Nail in Dirt
		5.809				
TP39			5.301	~~1349.337~~		Nail in Dirt
		5.585				
TP40			5.567	~~1349.355~~		Nail in Dirt
		5.678				
TP41			5.387	~~1349.644~~		Nail in Dirt
		5.573				
TP42			5.469	~~1349.748~~		Nail in Dirt
		5.514				
TP43	171		2.321	~~1352.942~~	1351.435	Fd ADOT Highway Division Brass Cap Flush w/concrete @ Top of West Edge Barrier Wall at Bridge over Roosevelt Canal, Northside Brown Road Stamped "1352.26"
		0.935				
TP44			9.920	~~1343.957~~		Nail in Dirt
		3.260				
END 45	30		6.194	~~1344.023~~ (.001)	1339.514	Brass Cap, See Page 21

Loop 13

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	141			~~1317.336~~	1315.824	Brass Cap, See Page 18
		6.704				
TP1			4.058	~~1319.982~~		Nail in Dirt
		6.556				
TP2			4.166	~~1322.372~~		Nail in Dirt
		7.994				
TP3			4.600	~~1325.765~~		Paint Spot T/C Northside McLellan Road
		5.590				
TP4	60		5.503	~~1325.853~~	1324.338	Fd City of Mesa Brass Cap in Handhole (0.35' below rim & 0.48' below point) @ intersection of McLellan Road & Maple Street
		7.026				
TP5			3.940	~~1328.939~~		Nail in Dirt
		7.018				
TP6	172		2.999	~~1332.958~~	1331.442	Fd City of Mesa Brass Cap in Handhole (0.46' below rim) @ intersection of McLellan Road & 40th Street
		6.819				
TP7			4.460	1335.317		Nail in Dirt
		6.724				
TP8	173		4.954	~~1337.087~~	1335.570	Fd City of Mesa Brass Cap in Handhole (0.48' below rim) @ intersection of McLellan Road & Norwalk Street
		6.803				
TP9			4.198	1339.692		Nail in Dirt
		6.558				
TP10	174		5.060	1341.191	1339.672	Fd City of Mesa Brass Cap in Handhole (0.35' below rim) @ intersection of McLellan Road & Ogden Street South; ±19.1' West of Brass Cap in Handhole for Ogden Street North
		7.731				
TP11	61		4.658	1344.263	1342.744	Fd City of Mesa Brass Cap flush w/ point @ intersection of McLellan Road & Orlando Street
		7.034				
END 12	144		1.274	~~1350.023~~	1348.504	"+" in Concrete, See Page 21
				(.014)		

Loop 14

Sta	Pt#	BS+	FS-	Elev	Adj El	Remarks
POB	152			~~1292.546~~	1291.050	Brass Cap, See Page 24
		3.754				
TP1			5.113	~~1291.187~~		Nail in Dirt
		5.174				
TP2			5.878	~~1290.483~~		Nail in Dirt
		3.980				
TP3			5.913	~~1288.550~~		Nail in Dirt
		5.167				
TP4			5.088	~~1288.630~~		Nail in Dirt
		5.111				
TP5			3.226	~~1290.515~~		Nail in Dirt
		5.121				
TP6			5.061	~~1290.575~~		Nail in Dirt
		6.014				
TP7	175		6.728	~~1289.862~~	1288.367	Fd Salt River Project Brass Cap Flush w/ concrete on West Edge Eastern Canal Irr Structure ±70' South of ℄ University Drive; Stamped "31.6E 3.0N"
		5.745				
TP8			5.469	~~1290.138~~		Paint Spot T/C Northside University Drive
		5.894				
TP9			4.328	~~1291.703~~		Paint Spot T/C Southside University Drive
		5.643				
TP10	31		5.321	~~1292.025~~	1290.533	Fd City of Mesa Brass Cap in Handhole (0.58' below rim) @ intersection of University Drive & Val Vista Drive
		6.802				
TP11			4.862	~~1293.965~~		Paint Spot T/C Southside University Drive
		6.422				
TP12			4.340	~~1296.047~~		Paint Spot T/C Southside University Drive

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.848				
TP13			4.395	~~1298.500~~		Paint Spot T/C Southside University Drive
		5.854				
TP14	176		5.168	~~1299.186~~	1297.699	Fd City of Mesa Brass Cap in Handhole (1.5' below rim) @ intersection of University Drive & Maple Street
		7.497				
TP15			4.430	~~1302.253~~		Paint Spot T/C Southside University Drive
		5.962				
TP16	65		6.273	~~1301.943~~	1300.457	Fd City of Mesa Brass Cap in Handhole (1.18' below rim) @ intersection of University Drive & 30th Way
		7.741				
TP17	177		4.523	~~1305.160~~	1303.677	Fd City of Mesa Brass Cap in Handhole (0.78' below rim) @ intersection of University Drive & Nassau Street
		7.278				
TP18			3.634	~~1308.805~~		Paint Spot T/C Southside University Drive
		6.766				
TP19	178		5.342	~~1310.229~~	1308.747	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ intersection of University Drive & Norfolk Street
		7.060				
TP20			4.105	~~1313.184~~		Paint Spot T/C Southside University Drive
		6.826				
TP21			3.698	~~1316.313~~		Paint Spot T/C Southside University Drive
		6.864				
TP22			3.034	~~1320.142~~		Paint Spot T/C Northside University Drive
		6.383				
TP23	32		5.340	1321.185	1319.708	Fd City of Mesa Brass Cap in Handhole (0.43' below rim) @ intersection of University Drive & Greenfield Road
		6.957				
TP24			3.480	1324.662		Paint Spot T/C Southside University Drive
		6.798				

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25			3.777	~~1327.683~~		Paint Spot T/C Southside University Drive
		5.961				
TP26	179		5.623	~~1328.021~~	1326.548	Fd City of Mesa Brass Cap in Handhole (1.18' below rim) @ intersection of University Drive & Quinn Street
		7.876				
TP27			3.841	~~1332.056~~		Paint Spot T/C Southside University Drive
		6.515				
TP28			3.490	~~1335.081~~		Paint Spot T/C Southside University Drive
		7.021				
TP29	180		4.779	~~1337.324~~	1335.854	Fd City of Mesa Brass Cap in Handhole (1.14' below rim) @ intersection of University Drive & Roanoke Street
		8.638				
TP30			0.498	~~1345.464~~		Paint Spot T/C Northside University Drive
		6.956				
TP31	181		3.578	~~1348.842~~	1347.374	Set "+" in Concrete in Top of NW Cor Barrier Wall (with Handrail) Northside of Bridge over Roosevelt Canal on University Drive
		4.329				
TP32			5.610	~~1347.561~~		Nail in Dirt
		5.871				
TP33			5.465	~~1347.966~~		Nail in Dirt
		5.644				
TP34			5.659	~~1347.951~~		Nail in Dirt
		5.618				
TP35			5.498	~~1348.071~~		Nail in Dirt
		5.936				
TP36			5.817	~~1348.190~~		Nail in Dirt
		5.727				
TP37			3.957	~~1350.008~~		Nail in Dirt
		5.802				
END 38	170		4.811	~~1351.000~~	1349.527 (.025)	"+" in Concrete, See Page 26

Loop 15

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	175			~~1289.862~~	1288.367	Brass Cap, See Page 29
		5.880				
TP1			5.447	~~1290.294~~		Nail in Dirt
		5.459				
TP2			5.208	~~1290.545~~		Nail in Dirt
		5.240				
TP3			5.030	~~1290.755~~		Nail in Dirt
		5.356				
TP4	182		5.284	~~1290.827~~	1289.328	Fd "X" in concrete @ West Edge of Sidewalk on Eastside Val Vista Drive on Southerly Edge of Bridge over Eastern Canal
		4.801				
TP5			5.781	~~1289.847~~		Nail in Dirt
		5.806				
TP6			5.593	~~1290.060~~		Nail in Dirt
		4.979				
TP7	183		4.989	~~1290.051~~	1288.548	Fd Arizona Highway Department Brass Cap flush w/concrete ±6' North of S/W Northside Main Street, ±7' West of ℄ Eastern Canal; Stamped "ELEV 1289.65 STA 217+70 1935"
		5.292				
TP8			4.515	~~1290.827~~		Paint Spot North T/C Main Street
		5.682				
TP9	184		4.821	~~1291.688~~	1290.182	Set "+" in concrete T/C @ NE Curb Return Main Street & 38th Street, Northside Main Street
		6.822				
TP10			3.809	~~1294.701~~		Paint Spot North T/C Main Street
		6.336				
TP11			4.071	~~1296.966~~		Paint Spot North T/C Main Street
		5.738				
TP12	185		4.489	~~1298.216~~	1296.702	Fd Salt River Project Brass Cap flush w/sidewalk ±4' North of B/C Northside Main Street, ±100' East of ℄ Sulley Street; Stamped "△" (TRI STATION)

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.150				
TP13			3.999	~~1300.366~~		Paint Spot North T/C Main Street
		6.745				
TP14			3.470	~~1303.641~~		Paint Spot North T/C Main Street
		5.060				
TP15			2.961	~~1305.740~~		Paint Spot North T/C Main Street
		6.667				
TP16			3.836	~~1308.570~~		Paint Spot North T/C Main Street
		6.505				
TP17			3.759	~~1311.316~~		Paint Spot North T/C Main Street
		6.637				
TP18	68		4.723	~~1313.230~~	1311.704	Fd ¾" Iron Pipe in Pothole (0.17' below print) @ intersection of Main Street & Greenfield Road
		4.614				
TP19	186		4.959	~~1312.885~~	1311.358	Fd Salt River Project Brass Cap flush w/ T/C ±5' West of Curb Return @ NW Cor. Main Street & Greenfield Road Stamped "CHILCOAT 33.06 2.5N 1993"
		6.679				
TP20			3.700	~~1315.864~~		Paint Spot North T/C Main Street
		7.385				
TP21			3.294	~~1319.955~~		Paint Spot North T/C Main Street
		7.157				
TP22			3.908	~~1323.204~~		Paint Spot North T/C Main Street
		6.838				
TP23			3.517	1326.526		Paint Spot North T/C Main Street
		7.207				
TP24			4.046	~~1329.687~~		Paint Spot North T/C Main Street
		6.954				

STA	PT #	BS+	FS−	ELEV	ADJ EL	REMARKS
TP25	187		5.926	~~1330.914~~	1329.172	Fd City of Mesa Brass Cap in Handhole (0.93' below rim) @ intersection of Main Street & 48th Street
		7.434				
TP26			4.313	~~1333.835~~		Paint Spot North T/C Main Street
		6.412				
TP27			3.816	~~1336.431~~		Paint Spot North T/C Main Street
		6.776				
TP28			3.851	~~1339.356~~		Paint Spot North T/C Main Street
		6.525				
TP29			3.656	1342.225		Paint Spot North T/C Main Street
		7.182				
TP30	188		4.618	1344.789	1343.235	Fd Arizona Highway Dept Brass Cap in Conc. Pedestal ±1' High ±1' SE of Angle Iron R/W Marker; ±75' North of ℄ Main Street, ±75' West of ℄ Roosevelt Canal; Stamped "313+29.44 1963"

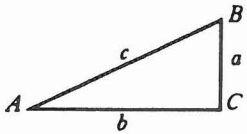
Loop 16

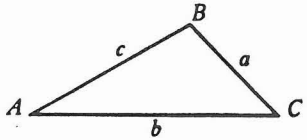
10-23-95
Clear, Calm, Cool 80°F

M T Gardiner
M Mortensen

STA	Pt#	BS+	FS-	ELEV	ALT EL	REMARKS
PO3	188			~~1344.789~~	1343.235	Brass Cap, See Page 34
		7.086				
TP1			5.348	~~1346.527~~		Nail in Dirt
		5.528				
TP2			5.577	~~1346.478~~		Nail in Dirt
		6.028				
TP3			5.551	~~1346.755~~		Nail in Dirt
		5.560				
TP4			5.669	~~1346.846~~		Nail in Dirt
		5.758				
TP5			5.908	~~1346.696~~		Nail in Dirt
		5.834				
TP6			4.044	~~1348.486~~		Nail in Dirt
		3.596				
EN07	181		3.148	~~1348.934~~ .092	1347.374	"+" in Concrete, See Page 31

FORMULAE FOR SOLVING RIGHT TRIANGLES





$\text{Sin } A = \frac{a}{c} = \text{Cos } B \qquad \text{Cot } A = \frac{b}{a} = \text{Tan } B$

$\text{Cos } A = \frac{b}{c} = \text{Sin } B \qquad \text{Sec } A = \frac{c}{b} = \text{Cosec } B$

$\text{Tan } A = \frac{a}{b} = \text{Cot } B \qquad \text{Cosec } A = \frac{c}{a} = \text{Sec } B$

Given	Required	Solution
A, c	B, a, b	$B = 90° - A, a = C \sin A, b = C \cos A.$
A, b	B, a, c	$B = 90° - A, a = b \tan A, C = \frac{b}{\cos A}.$
A, a	B, b, c	$B = 90° - A, b = a \cot A, C = \frac{a}{\sin A}.$
a, c	A, B, b	$\sin A = \frac{a}{c}, \cos B = \frac{a}{c}, b = \sqrt{(c+a)(c-a)}$
a, b	A, B, c	$\tan A = \frac{a}{b}, \cot B = \frac{a}{b}, c = \sqrt{a^2 + b^2}$

FORMULAE FOR SOLVING OBLIQUE TRIANGLES

Given	Required	Solution
A, a, b	B, c	$\sin B = \frac{b \sin A}{a}, c = \frac{a \sin C}{\sin A}$
A, B, a	b	$b = \frac{a \sin B}{\sin A}$
a, b, C	A, c	$A + B = 180° - C, C = \frac{a \sin C}{\sin A}$
a, b, c	Area	side $\frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

MADE IN U.S.A.

Mesa ADMS

Levels

Book 2

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25393
KARL M.
MORTENSEN
DATE SIGNED 10-2-96
ARIZONA, U.S.A.

Karl Mortensen

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Line 17

10-23-95
Clear, Calm, Cool 80°F

T Gardner
M Mortensen

STA	Pt #	BS+	FS−	ELEV	ADJ EL	REMARKS
POB	183			~~1290.051~~	1288.548	Brass Cap, See Book 1 Page 32
		4.718				
TP1	189		4.461	~~1290.308~~	1288.805	Fd Arizona Highway Dept Brass Cap flush w/ concrete @ B/W Southside Main Street, Eastside Eastern Canal; Stamped "ELEV 1289.91 STA 218 x 52.6 1958"
		4.276				
TP2			5.279	~~1289.305~~		Nail in Dirt
		3.609				
TP3			3.397	1289.517		Nail in Dirt
		4.463				
TP4			4.606	1289.374		Nail in Dirt
		4.108				
TP5			4.450	~~1289.032~~		Nail in Dirt
		4.451				
TP6			4.772	~~1288.711~~		Nail in Dirt
		4.313				
TP7			3.848	~~1289.176~~		
		5.979				
TP8	190		5.177	~~1289.977~~	1288.477	Set "+" in concrete @ SW Cor of West Wingwall of Broadway Road Bridge over Eastern Canal, Northside Broadway Road
		5.087				
TP9	191		6.590	~~1289.474~~	1286.973	Fd City of Mesa Brass Cap in Handhole (1.15' below rim) @ intersection of 4th Street & Broadway
		7.295				
TP10			3.368	~~1292.401~~		Paint Spot T/C Southside Broadway Road
		5.305				
TP11	192		5.801	1291.905	1290.404	Fd City of Mesa Brass Cap in Handhole (1.12' below rim, 1.28' below point) @ intersection of Broadway Road & Norwalk St
		7.556				
TP12			3.565	~~1295.896~~		Paint Spot T/C Northside Broadway Road

10-24-95
Pilgrim Cod 66°F

T Gardner 4
M Mortensen

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		8.434				
TP13			4.298	~~1300.033~~		Paint Spot T/C Northside Broadway Road
		5.903				
TP14			4.903	~~1301.033~~		Paint Spot T/C Southside Broadway Road
		5.923				
TP15	35		5.366	~~1301.590~~	1300.086	Fd City of Mesa Brass Cap in Handhole (0.78' below rim) @ intersection of Greenfield Road & Broadway Road
		6.325				
TP16			3.127	~~1304.788~~		Paint Spot T/C Southside Broadway Road
		5.938				
TP17			3.540	1307.186		Paint Spot T/C Southside Broadway Road
		6.944				
TP18	193		4.694	~~1307.436~~	1307.931	Fd City of Mesa Brass Cap in Handhole (1.04' below rim) @ intersection of Broadway Road & Quinn Street
		7.265				
TP19			3.757	~~1312.944~~		Paint Spot T/C Southside Broadway Road
		6.428				
TP20			3.689	1315.684		Paint Spot T/C Southside Broadway Road
		5.733				
TP21	194		4.434	~~1316.982~~	1315.477	Fd 1/2" Rebar in Pothole (0.12' below pavement) @ West Edge of Intersection Broadway Road & 48th Street
		6.240				
TP22			3.596	~~1319.626~~		Paint Spot T/C Southside Broadway Road
		6.551				
TP23	195		4.818	1321.359	1319.853	Fd City of Mesa Brass Cap in Handhole (0.87' below rim) @ intersection of Broadway Road & Racine Street
		7.099				
TP24			3.535	1324.923		Paint Spot T/C Southside Broadway Road
		6.928				

10-24-95
Pdy Cldy, Calm, Cool

STA	Pt#	BS+	FS-	ELEV	ADJ EL	
TP25			3.286	~~1328.565~~		Paint Spot T/C Southside Broadway Road
		7.137				
TP26			3.354	~~1332.349~~		Paint Spot T/C Southside Broadway Road
		5.270				
TP27	36		5.621	1331.999	1330.495	Fd Maricopa County Highway Dept Brass Cap in Handhole (0.59' below rim) @ intersection of Broadway Road & Higley Road
		7.080				
TP28			4.274	~~1334.805~~		Paint Spot T/C Southside Broadway Road
		6.363				
TP29			3.389	1337.779		Paint Spot T/C Southside Broadway Road
		7.624				
TP30			0.983	1344.420		Paint Spot T/C Southside Broadway Road
		6.222				
TP31	196		4.931	~~1345.711~~	1344.209	Set "+" in concrete @ NW Cor of S/W @ East Edge of D/W westside of Roosevelt Canal, Southside of Broadway Road
		3.430				
TP32			2.691	1346.450		Nail in Dirt
		5.532				
TP33			4.881	~~1347.102~~		Nail in Dirt
		5.228				
TP34			5.285	~~1347.046~~		Nail in Dirt
		5.378				
TP35			5.038	~~1347.385~~		Nail in Dirt
		5.478				
TP36			4.871	1347.992		Nail in Dirt
		5.183				
TP37			6.965	~~1346.210~~		Nail in Dirt

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
		5.485				
* TP38	~~189~~		5.273	~~1346.423~~		Nail in Dirt
		4.479				
END 37	188		6.163	~~1344.739~~ .05	1343.235	Brass Cap, See Book 1 Page 34

Loop 18 (Check of Loop 16)

STA	Pt #	BS+	FS-	ELEV	ADJEL	REMARKS
POB	188			~~1344.731~~	1343.235	Brass Cap, See Book 1 Page 34
		6.808				
TP#1			5.068	~~1346.529~~		Nail in Dirt
		5.128				
TP#2			5.180	~~1346.478~~		Nail in Dirt
		5.694				
TP#3			5.210	~~1346.962~~		Nail in Dirt
		5.295				
TP#4			5.402	~~1346.855~~		Nail in Dirt
		5.396				
TP#5			5.547	1346.705		Nail in Dirt
		5.549				
TP#6			3.759	~~1348.494~~		Nail in Dirt
		3.674				
END7	181		3.227	~~1348.942~~	1347.374	"+" in concrete, See Book 1 Page 31

Loop 19

10-25-95
Sunny, Clear, Warm 85°F

⊠ T Gardner
⊘ Coyne
⊘ M Mortensen

Sta	Pt #	BS+	FS-	Elev	Adj El	Remarks
POB	190			~~1281.177~~	1228.477	"t" in Concrete, See Page 3
		4.461				
TP1			5.325	~~1289.112~~		Nail in Dirt
		5.375				
TP2			5.585	~~1288.702~~		Nail in Dirt
		5.257				
TP3			5.833	~~1288.325~~		Nail in Dirt
		5.966				
TP4			5.097	~~1287.194~~		Nail in Dirt
		4.803				
TP5			5.097	~~1286.900~~		Nail in Dirt
		5.089				
TP6			5.329	~~1288.660~~		Nail in Dirt
		5.446				
TP7	197		5.861	~~1288.244~~	1286.743	Fd Salt River Project Brass Cap flush w/ concrete 1½ Mile South of Broadway Road, Westside Eastern Canal @ NW Cor Irr Canal Structure, Stamped "32.6 E 1.6 N BM 1973"
		2.880				
TP8			12.365	~~1278.759~~		Nail in Dirt
		11.481				
TP9			1.182	~~1289.057~~		Paint Spot Con Lt Pole Base
		5.034				
TP10	198		7.266	~~1286.825~~	1285.325	Fd City of Mesa Brass Cap in Handhole (1.18' below rim) @ intersection of Diamond Street & Norwalk Street
		7.997				
TP11			4.470	~~1290.352~~		Paint Spot T/c Southside Diamond Street
		5.963				
TP12	199		6.298	~~1290.016~~	1288.[illegible]18	Fd City of Mesa Brass Cap in Handhole (1.20' below rim) @ intersection of Diamond Street & Oakland Street

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		7.788				
TP13			4.879	~~1292.905~~		Paint Spot T/C Southside Diamond Street
		6.688				
TP14	200		5.265	~~1294.328~~	1292.830	Fd City of Mesa Brass Cap in Handhole (1.10' below rim) @ intersection of Greenfield Road & Diamond Street
		5.982				
TP15	201		5.681	~~1294.630~~	1293.131	Fd City of Mesa Brass Cap in Handhole (0.89' below rim) @ intersection of Diamond Street & Pico Circle
		7.452				
TP16	202		6.059	~~1296.023~~	1294.524	Fd City of Mesa Brass Cap in Handhole (0.87' below rim) @ intersection of Diamond Street & Penrose Circle
		7.337				
TP17	203		5.822	~~1297.537~~	1296.040	Fd City of Mesa Brass Cap in Handhole (0.87' below rim) @ intersection of Diamond Street & Parkcrest Street
		7.076				
TP18	T1		6.369	~~1298.244~~	1296.747	Fd City of Mesa Brass Cap in Handhole (0.80' below rim) @ intersection of Parkcrest Street & Delta Avenue
		8.085				
TP19	204		6.274	~~1300.055~~	1298.558	Fd City of Mesa Brass Cap in Handhole (0.57' below rim) @ intersection of Delta Avenue & Quinn Street
		7.521				
TP20			4.208	~~1303.369~~		Paint Spot T/C Southside Delta Ave
		6.899				
TP21			4.141	~~1306.126~~		Paint Spot T/C Northside Delta Ave
		6.659				
TP22	205		5.147	~~1307.638~~	1306.142	Fd City of Mesa Brass Cap in Handhole (0.90' below rim) @ intersection of Delta Avenue & Roanoke Street
		7.311				
TP23	206		5.583	~~1309.366~~	1307.870	Fd City of Mesa Brass Cap in Handhole (0.96' below rim) @ intersection of Delta Avenue & Rochester Street
		7.687				
TP24			3.030	~~1314.023~~		Paint Spot T/C Northside Delta Ave
		6.042				

Stn	Pr #	BS+	FS-	Elev	Adj El	Remarks
TP25	207		6.129	~~1313.935~~	1312.441	Fd City of Mesa Brass Cap in Handhole (0.95' below rim) @ intersection of Delta Avenue & Rosemont Street
		7.040				
TP26			4.932	~~1316.044~~		Paint Spot T/C Eastside Rosemont
		5.973				
TP27			5.317	~~1316.699~~		Paint Spot T/C Eastside Rosemont
		5.826				
TP28	72		6.170	~~1316.416~~	1314.923	Fd City of Mesa Brass Cap in Handhole (0.95' below rim) @ intersection of Rosemont Street & Racine Street
		7.072				
TP29			4.946	~~1318.542~~		Paint Spot T/C Eastside Rosemont
		5.867				
TP30			4.599	~~1319.810~~		Paint Spot T/C Eastside Rosemont
		5.626				
TP40	208		4.876	~~1320.559~~	1319.069	Fd City of Mesa Brass Cap flush w/pavement @ intersection of Rosemont Street & Calypso Street
		5.312				
TP41	209		6.703	~~1319.168~~	1317.679	Fd City of Mesa Brass Cap in Handhole (0.80' below rim) @ intersection of Racine Street & Calypso Street
		7.839				
END 42	195		5.665	~~1321.342~~ (.017)	1319.853	Brass Cap, See Page 4

Loop 20

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	32			~~1321.185~~	1319.708	Brass Cap, See Book 1 Page 30
		6.585				
TP1			4.795	~~1322.975~~		Paint Spot East T/C Greenfield Road
		5.980				
TP2	210		5.058	~~1323.897~~	1322.420	Fd City of Mesa Brass Cap in Handhole (0.44' below rim) @ intersection of Greenfield Road & Contessa Street
		5.881				
TP3	66		5.966	~~1323.812~~	1322.335	Fd City of Mesa Brass Cap in Handhole (1.09' below rim) @ intersection of Greenfield Road & Covina Street
		7.333				
TP4			4.314	~~1326.831~~		Paint Spot East T/C Greenfield Road
		6.569				
TP5			4.485	1328.915		Paint Spot East T/C Greenfield Road
		6.523				
TP6	164		4.663	~~1330.775~~ (.020)	1329.297	Brass Cap, See Book 1 Page 26

Line 21

12-4-95
Clear, Calm, Warm 80°F

MT Gordon
& Crew

STA	Pt #	BS+	FS-	ELEV	ADJ. EL	REMARKS
POB	207			~~1313.935~~	1312.441	Brass Cap, See Page 10
		6.695				
TP1	211		7.249	~~1313.381~~	1311.886	Fd City of Mesa Brass Cap in Handhole (1.05' below rim) @ intersection of Edgewood & Rosemont
		6.084				
TP2			4.181	~~1315.283~~		Paint Spot T/C Southside Elena Avenue
		6.988				
TP3			4.034	~~1318.237~~		Paint Spot T/C Southside Elena Avenue
		6.680				
TP4			4.025	~~1320.892~~		Paint Spot T/C Southside Elena Avenue
		7.980				
TP5	212		6.111	~~1322.761~~	1321.266	Fd City of Mesa Brass Cap in Handhole (0.31' below rim) @ intersection of Elena Avenue & Higley Rd
		5.991				
TP6			4.950	~~1323.802~~		Paint Spot West T/C Higley Road
		5.581				
TP7	213		5.529	~~1323.854~~	1322.358	Fd City of Mesa Brass Cap in Handhole (0.51' below rim) @ intersection of Delta Avenue & Higley Road
		5.951				
TP8			4.242	1325.564		Paint Spot North T/C Delta Avenue
		6.726				
TP9			4.249	~~1328.041~~		Paint Spot North T/C Delta Avenue
		7.664				
TP10	214		5.926	1329.778	1328.280	Fd City of Mesa Brass Cap in Handhole (0.76' Below Rim) @ intersection of Delta Avenue & Sunnyvale
		7.071				
TP11			4.772	1332.077		Nail in Dirt
		7.008				
TP12			3.366	1335.719		Nail in Dirt

12-5-95
Mstly Sunny, Calm, Warm 75°F

Gardiner
Cayne

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		8.540				
TP13			1.448	~~1342.812~~		Nail in Dirt
		5.752				
TP14	215		3.835	~~1344.728~~	1343.229	Set "+" in Concrete Irr Gate, Westside Roosevelt Conservation Canal ± ½ Mile South of Broadway Rd
		3.646				
TP15			5.478	~~1342.896~~		Nail in Dirt
		5.289				
TP16			5.009	~~1343.176~~		Nail in Dirt
		5.321				
TP17			5.354	~~1343.142~~		Nail in Dirt
		5.858				
TP18			5.228	~~1343.772~~		Nail in Dirt
		5.100				
TP19			5.993	1342.879		Nail in Dirt
		6.247				
END 20	196		3.416	~~1345.710~~ (.001)	1344.209	"+" in S/W, See Page 5

Line 22

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	197			~~1288~~.244	1286.743	Brass Cap, See Page 8
		5.124				
TP1			5.061	~~1288~~.306		Nail in Dirt
		5.224				
TP2			5.673	~~1287~~.858		Nail in Dirt
		5.613				
TP3			5.333	~~1288~~.139		Nail in Dirt
		5.200				
TP4			4.958	~~1288~~.381		Nail in Dirt
		4.915				
TP5			4.541	~~1288~~.754		Nail in Dirt
		5.154				
TP6	216		6.573	~~1287~~.335	1285.828	Fd Salt River Project Brass Cap flush w/concrete @ Northwest Cor of Catwalk over Spillway, Westside Eastern Canal, ±75' North of ℄ Southern Ave
		5.307				
TP7			5.072	~~1287~~.570		Nail in Dirt
		5.426				
TP8			2.517	~~1290~~.479		Nail in Dirt
		6.219				
TP9	37		5.404	~~1291~~.294	1289.787	Fd City of Mesa Brass Cap in Handhole (0.49' below rim) @ intersection of Southern Avenue & Greenfield Road
		6.065				
TP10			3.739	~~1293~~.620		Nail in Dirt
		7.353				
TP11	217		5.616	1295.357	1293.851	Fd City of Mesa Brass Cap in Handhole (0.60' below rim) @ intersection of Southern Ave & Parkcrest Dr
		6.840				
TP12			3.267	1298.930		Paint Spot T/C Southside Southern Ave

1285.828
6.573
1292.401
5.333

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.530				
TP13			4.125	~~1301.335~~		Paint Spot T/c Southside Southern Avenue
		6.080				
TP14			3.675	~~1303.740~~		Paint Spot T/c Southside Southern Avenue
		6.093				
TP15	218		5.295	~~1304.538~~	1303.032	Fd City of Mesa Brass Cap in Handhole (1.09' below rim) @ intersection of Southern Avenue & Roosevelt
		7.310				
TP16			3.937	~~1307.911~~		Paint Spot T/c Southside Southern Avenue
		6.120				
TP17			3.370	~~1310.661~~		Paint Spot T/c Southside Southern Avenue
		6.234				
TP18	219		4.552	~~1312.343~~	1310.838	Fd Brass Cap in Handhole (1.20' below rim) @ intersection of Southern Avenue & St. Paul
		6.824				
TP19			3.308	~~1315.858~~		Paint Spot T/c Southside Southern Avenue
		7.092				
TP20	38		4.065	~~1318.886~~	1317.381	Fd City of Mesa Brass Cap in Handhole (0.78' below rim) @ intersection of Southern Avenue & Hayley Road
		6.568				
TP21			4.205	~~1321.248~~		Nail in Dirt
		6.680				
TP22			4.602	~~1323.326~~		Nail in Dirt
		6.221				
TP23	220		5.252	~~1324.295~~	1322.792	Fd City of Mesa Brass Cap in Handhole (0.91' below rim) @ intersection of Southern Avenue & 54th Street
		7.126				
TP24			4.138	1327.283		Nail in Dirt
		6.479				

12-6-95
Partly Cloudy, Calm, Cool 73°F

M π Gardiner
Ø Coyne

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25			3.924	~~1329~~.838		Nail in Dirt
		6.764				
TP26	221		4.822	~~1331~~.780	1330.271	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ Southern Avenue, ±1/2 Mile East of Higley Road - 1/4 Corner
		5.982				
TP27			4.654	~~1333~~.108	1341.710	Nail in Dirt
		6.186				
TP28			1.421	~~1337~~.874		Nail in Dirt
		8.609				
TP29	222		3.270	~~1343~~.213		Fd Maricopa County Hwy Dept Brass Cap flush w/concrete sidewalk Southside of Southern Avenue, ±3' East of West Edge Roosevelt Canal
		5.014				
TP30			4.456			Nail in Dirt
		5.472				
TP31			4.611	~~1344~~.633		Nail in Dirt
		5.433				
TP32			5.696	~~1344~~.370		Nail in Dirt
		4.968				
TP33	223		5.164	~~1344~~.174	1342.670	Set "+" in Concrete Irrigation Gate (5-3/4M C-W) ±15' South of Pump Site ±1/4 Mile North of Southern Avenue, Westside Roosevelt Canal
		4.250				
TP34			4.693	~~1343~~.731		Nail in Dirt
		5.443				
TP35			4.669	~~1344~~.505		Nail in Dirt
		5.082				
TP36			5.124	~~1344~~.463		Nail in Dirt
		4.722				
END 37	215		4.452	1344.733	1343.229	"+" in Concrete, See Page 13
				(.005)		

Line 23

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	216			~~1287.335~~	1285.828	Brass Cap, See Page 14
		4.823				
TP1			6.900	~~1285.258~~		Nail in Dirt
		4.887				
TP2			5.132	~~1285.015~~		Nail in Dirt
		4.464				
TP3			4.725	~~1284.753~~		Nail in Dirt
		4.697				
TP4			5.227	~~1284.225~~		Nail in Dirt
		5.202				
TP5	224		3.946	~~1285.481~~	1283.974	Set "+" in Concrete SE Cor of Conc Hdwll ± 200' North of WB OnRamp U.S.60 @ Greenfield Rd ± 15' West of West Edge Eastern Canal
		4.648				
TP6			5.348	1284.781		Nail in Dirt
		3.959				
TP7	225		3.586	~~1285.154~~	1283.646	Set "+" in Concrete Headwall ± 200' South of EB Lanes U.S.60, ± 30' East of East Edge Eastern Canal
		3.731				
TP8			3.173	~~1285.712~~		Nail in Dirt
		6.087				
TP9	226		4.726	~~1287.073~~	1285.565	Fd ADOT Brass Cap Flush w/concrete @ T/c Eastside Greenfield Road ± 75' North of EB Offramp U.S.60
		2.979				
TP10			5.923	1284.129		Nail in Dirt
		5.050				
TP11			4.917	~~1284.262~~		Nail in Dirt
		5.114				
TP12			5.470	1283.905		Nail in Dirt

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		5.895				
TP13			5.764	~~1284.036~~		Nail in Dirt
		4.804				
TP14	227		4.320	~~1284.526~~	1283.017	Fd "x" in Concrete @ NW Wingwall Northside of Baseline Road, Westside Eastern Canal
		3.042				
TP15			2.982	~~1284.586~~		Nail in Dirt
		5.861				
TP16	228		4.323	~~1286.123~~	1284.615	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.33' below rim) @ Baseline Road, ± 1/2 Mile East of Greenfield Road (N 1/4 Cor)
		5.247				
TP17			4.007	~~1287.364~~		Nail in Dirt
		6.024				
TP18	229		4.340	~~1289.048~~	1287.538	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.42' below rim) @ Baseline Road ± 2000' West of Higley Road (S 1/4 Cor)
		5.491				
TP19			3.979	~~1290.560~~		Nail in Dirt
		6.254				
TP20			4.012	~~1292.802~~		Nail in Dirt
		6.439				
TP21			3.662	~~1295.579~~		Nail in Dirt
		5.526				
TP22	230		4.594	~~1296.511~~	1295.001	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.37' below rim) @ intersection of Baseline Road & Higley Road
		6.049				
TP23			3.997	~~1298.563~~		Nail in Dirt
		6.289				
TP24	231		4.325	1300.526	1299.016	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.29' below rim) @ Baseline Road, ± 1300' East of Higley Road

12-7-95
Cloudy, Brzy, Cool 60°F

Π Gardiner
Ø Coyne

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.051				
TP25			3.680	~~1302.897~~		Nail in Dirt
		6.492				
TP26			4.105	~~1305.284~~		Nail in Dirt
		6.344				
TP27			4.118	~~1307.510~~		Nail in Dirt
		6.081				
TP28	232		4.618	~~1308.973~~	1307.463	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.46' Below Rim) @ ℄ Baseline Road ± ½ Mile East of Higley Road (N¼ Cor)
		6.763				
TP29			3.511	1312.225		Nail in Dirt
		6.663				
TP30	233		4.261	~~1314.627~~	1313.116	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.45' below rim) @ ℄ Baseline Road ± 3000' East of Higley Road (S¼ Cor)
		6.271				
TP31			4.358	~~1316.539~~		Nail in Dirt
		6.039				
TP32			4.081	1318.497		Nail in Dirt
		6.402				
TP33			4.402	~~1320.496~~		Nail in Dirt
		6.413				
TP34	234		4.646	~~1322.263~~	1320.754	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.30' below rim) @ intersection of Baseline Road & Recker Road South
		6.009				
TP35			3.697	1324.575		Nail in Dirt
		6.624				
TP36	235		3.741	1327.458	1325.748	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.22' below rim) @ intersection of Baseline Road & Recker Road North
		5.933				

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP37			4.239	~~1329.152~~		Nail in Dirt
		6.478				
TP38			2.936	~~1332.694~~		Nail in Dirt
		6.993				
TP39	236		4.450	~~1335.237~~	1333.727	Fd Town of Gilbert Brass Cap in Handhole (0.47' below rim) @ intersection of Baseline Road & Meadows Drive
		8.312				
TP40	237		3.544	~~1340.005~~	1338.495	Set "+" in Concrete NW Wingwall of Bridge over Roosevelt Canal, North side of Baseline Road, Westside of Canal
		4.549				
TP41			5.106	~~1339.447~~		Nail in Dirt
		5.298				
TP42			5.339	~~1339.406~~		Nail in Dirt
		5.133				
TP43			5.702	~~1338.837~~		Nail in Dirt
		5.910				
TP44			5.463	~~1339.284~~		Nail in Dirt
		5.245				
TP45			5.142	~~1339.387~~		Nail in Dirt
		5.024				
TP46	238		4.629	1339.782	1338.272	Set "+" in Conc SW Cor Irrigation Gate Structure ±30' SE of Recker Road North ±100' South of EB Lanes U.S.60, ±30' West of West Edge Roosevelt Canal
		5.446				
TP47			4.054	1341.174		Nail in Dirt
		5.262				
TP48	239		3.691	1342.745	1341.235	Set "+" in Concrete Base East Side of Steel Power Pole, ±260' North of WB Lanes U.S.60, ±30' West of West Edge Roosevelt Canal
		3.801				
TP49			5.001	~~1341.744~~		Nail in Dirt

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		5.637				
TP50			5.290	~~1341.832~~		Nail in Dirt
		5.118				
TP51			5.113	~~1341.838~~		Nail in Dirt
		6.473				
TP52			5.392	~~1342.919~~		Nail in Dirt
		4.873				
EJ0053	222		4.570	~~1343.222~~ .009	1341.710	Brass Cap, See Page 16

Line 24

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	217			~~1295.357~~	1293.851	Brass Cap, See Page 14
		6.800				
TP1			3.226	~~1298.931~~		Paint Spot T/C Southside Southern Aven.
		6.591				
* TP2	241		6.403	~~1299.119~~	1297.605	Set "+" in T/C Westside Median Curb Quail Street ±90' South of Gable Circle
		4.500				
TP3			5.585	~~1298.033~~		Paint Spot T/C Westside Median Quail Street
		4.348				
TP4			5.726	~~1296.655~~		Paint Spot T/C Westside Quail Street
		4.804				
TP5	240		5.688	1295.772	1294.253	Fd City of Mesa Brass Cap Flush w/ pvmt @ intersection of Quail Street & Harmony Circle
		5.639				
TP6			4.758	~~1296.653~~		Same As TP4
		5.658				
TP7			4.276	1298.035		Same As TP3
		5.461				
TP8	241 *		4.367	~~1299.129~~	1297.605	Same As TP2

12-14-95
Partly Cldy, Calm, Cool 70°F

Gardner
Coyle

STA	Pt# (Line 25)	BS+	FS-	ELEV	ADJ EL	REMARKS
~~TP8~~ POB	241			~~1299.129~~	1297.605	"+" in Concrete, See Page 22
		4.910				
TP~~4~~1			3.404	~~1300.635~~		Paint Spot T/C Westside Quail Street
		4.760				
TP~~5~~2			6.441	~~1298.954~~		Same As TP1
		3.256				
END~~#~~3	217		6.828	~~1295.382~~	1293.851	POB

Line 16

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	239			~~1342.745~~	1341.235	"+" in Concrete, See Page 20
		1.078				
TP1			11.285	~~1332.538~~		Nail in Dirt
		4.308				
TP2			7.493	~~1329.353~~		Nail in Dirt
		3.706				
TP3			6.795	~~1326.264~~		Nail in Dirt
		4.368				
TP4			4.971	~~1325.662~~		Nail in Dirt
		2.361				
TP5			6.566	~~1321.457~~		Nail in Dirt
		5.417				
TP6	242		4.037	~~1322.836~~	1321.328	Set "+" in North side Conc Base of Steel Power Pole ±300' North of WB Lanes U.S. 60, ± ½ Mile East of Higley Road -- P.P. # 3012-045-11
		3.911				
TP7			5.290	~~1321.456~~		Same As TP5
		6.756				
TP8			2.550	~~1325.663~~		Same As TP4
		5.007				
TP9			4.466	~~1326.264~~		Same As TP3
		6.852				
TP10			3.770	~~1329.346~~		Same As TP2
		7.498				
TP11			4.311	~~1332.533~~		Same As TP1
		12.833				
END12	239		2.625	~~1342.741~~	1341.235	POB

Loc 17

STA	Pt#	BS+	FS-	ELEV	ADJEL	REMARKS
POB	234			~~1322.263~~	1320.754	Brass Cap, See Page 19
		5.035				
TP1			5.771	~~1321.528~~		Nail in Dirt
		5.328				
TP2			5.784	~~1321.071~~		Nail in Dirt
		4.792				
TP3	243		5.905	~~1319.959~~	1318.447	Set ¼" in conc. North Edge of Headwall @ Northwest Corner of Reiter Road & Melody Road
		5.760				
TP4			4.647	~~1321.071~~		Same As TP2
		5.639				
TP5			5.184	~~1321.527~~		Same As TP1
		6.021				
END6	234		5.280	~~1322.228~~	1320.754	POB

Line 28

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	227			~~1284.526~~	1283.017	"+" in Concrete, See Page 18
		5.843				
TP1			6.706	~~1283.662~~		Nail in Dirt
		5.144				
TP2			5.556	~~1283.251~~		Nail in Dirt
		4.903				
TP3	244		3.525	~~1284.629~~	1283.119	"+" in Conc Hdwl Irr Gate West Edge of Eastern Canal, ± 1/4 Mile South of Baseline Road (Southern "+" of 2 on Headwall)
		3.470				
TP4			4.853	~~1283.246~~		Same As TP 2
		5.590				
TP5			5.174	~~1283.662~~		Same As TP1
		6.529				
END6	227		5.723	~~1284.529~~	1283.017	POB

LINE 29

12-20-95
Ptly Cldy, Calm, Cool 55°F

Gardiner
Coyne
Tourian

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	100			~~1296.91~~	1295.401	Brass Cap, See Book 1 Page 3
		5.754				
TP1			4.801	~~1297.863~~		Nail in Dirt
		4.845				
TP2			5.524	~~1297.184~~		Nail in Dirt
		5.170				
TP3			5.142	~~1297.212~~		Nail in Dirt
		5.500				
TP4			5.405	~~1297.308~~		Nail in Dirt
		6.333				
TP5			5.278	~~1298.362~~		Nail in Dirt
		1.918				
TP6			12.767	~~1287.513~~		Nail in Dirt
		1.229				
TP7			10.549	~~1278.193~~		Nail in Dirt
		0.318				
TP8	245		8.017	~~1270.494~~	1268.770	Fd Maricopa County Eng Dept Brass Cap flush w/ concrete sidewalk, Westside of Gilbert Road, ±1' North of South Edge of Bridge over Consolidated Canal; Stamped "ELEV 1270.07 DATE 12 74"
		1.851				
TP9			13.216	~~1259.129~~		Nail in Dirt
		2.144				
TP10			7.481	~~1253.792~~		Nail in Dirt
		5.814				
TP11			6.032	~~1253.574~~		Nail in Dirt
		5.435				
TP12			5.417	~~1253.592~~		Nail in Dirt

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		4.766				
TP13			5.336	~~1253.022~~		Nail in Dirt
		5.699				
TP14			5.688	~~1253.033~~		Nail in Dirt
		3.870				
TP15	246		7.468	~~1249.435~~	1247.937	NW Bolt of Fire Hydrant ± 40' North of Lehi Road in front of House @ 1560 E Lehi
		4.329				
TP16			5.306	~~1248.459~~		Nail in Dirt
		4.793				
TP17			5.603	~~1247.648~~		Nail in Dirt
		4.631				
TP18			9.694	~~1242.585~~		Nail in Dirt
		4.239				
TP19			6.492	~~1240.331~~		Nail in Dirt
		5.208				
TP20	247		6.265	1239.274	1237.777	Fd ½" Rebar in Pothole (0.16' below point) @ intersection of Lehi Road & Stapley Drive
		4.367				
TP21			5.751	1237.890		Nail in Dirt
		4.982				
TP22			5.618	~~1237.254~~		Nail in Dirt
		5.400				
TP23	248		4.339	1238.314	1236.818	NE Bolt of Fire Hydrant ± 40' North of ℄ Lehi Road in front of House @ 1010 E. Lehi Road
		4.279				
TP24			5.678	1236.915		Nail in Dirt
		5.208				

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25			5.966	~~1236.157~~		Nail in Dirt
		5.247				
TP26	249		6.142	~~1235.261~~	1233.766	Fd Maricopa County Eng Dept Brass Cap in Handhole (0.67' below rim) ±30' South of Intersection of Lehi Road & Horne
		5.112				
TP27			6.054			Nail in Dirt
		5.367				
TP28			5.853	~~1233.833~~		Nail in Dirt
		4.678				
TP29			5.705	~~1232.807~~		Nail in Dirt
		5.610				
TP30	250		6.686	~~1231.731~~	1230.235	Fd City of Mesa Brass Cap in Handhole (1.13' below rim) @ intersection of Kenwood & Horne
		6.237				
TP31			4.931	~~1233.037~~		Paint Spot in Pvmt
		5.010				
TP32	251		6.624	~~1231.423~~	1229.929	Fd Maricopa County Eng Dept Brass Cap in Handhole (0.80' below rim) @ intersection of McKellips Road & Horne
		6.405				
TP33			4.753	~~1233.074~~		Nail in Dirt
		6.051				
TP34			3.148	~~1235.977~~		Nail in Dirt
		11.887				
TP35			1.731	~~1246.133~~		Paint Spot in Pvmt
		12.454				
TP36			0.043	~~1258.543~~		Paint Spot in Pvmt
		8.679				
TP37	252		5.236	~~1261.986~~	1260.494	Fd Maricopa County Eng Dept Brass Cap flush w/Concrete on SW Wingwall of Consolidated Canal Bridge over McKellips Road

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		9.171				
TP38			2.636	~~1268.521~~		Paint Spot on Pvmt
		7.206				
TP39			5.228	~~1270.499~~		Paint Spot South T/C McKellips Road
		6.218				
TP40	253		5.383	~~1271.334~~	1267.845	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.03' below rim) @ intersection of McKellips Road & Stapley Drive
		6.116				
TP41			4.947	~~1272.504~~		Paint Spot in Pvmt
		6.221				
TP42	254		5.838	~~1272.887~~	1271.399	Fd City of Mesa Brass Cap in Handhole (0.90' below rim) @ intersection of McKellips Road & Doran
		7.123				
TP43			5.197	~~1274.813~~		Paint Spot on Pvmt
		5.961				
TP44	255		6.606	~~1274.168~~	1272.682	Fd Maricopa County Hwy Dept Brass Cap in Handhole (1.22' below rim) @ intersection of McKellips Road & Lazona
		7.359				
TP45	256		6.084	~~1275.442~~	1273.958	Fd City of Mesa Brass Cap in Handhole (0.78' below rim) @ intersection of McKellips Road & Barkley
		6.501				
TP46	257		5.861	~~1276.082~~	1274.598	Fd City of Mesa Brass Cap in Handhole (0.54' below rim) @ intersection of McKellips Road & Hunt Circle
		6.511				
TP47	95		4.733	~~1277.860~~	1276.377	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.06' below rim) @ intersection of McKellips Road & Harris Drive
		5.663				
TP48			4.314	~~1279.210~~		Paint Spot North T/C McKellips Road
		5.859				
TP49			4.629	~~1280.440~~		Paint Spot North T/C McKellips Road
		5.574				

12-21-15
Clear, Calm, all 45°F

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP50			4.256	~~1281.758~~		Paint Spot North T/C McKellips Road
		5.728				
TP51			4.257	~~1283.229~~		Paint Spot North T/C McKellips Road
		5.998				
END52	25		5.826	1283.400	1281.923	Brass Cap, See Book 1 Page 4
				(.033)		

LINE 30

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	100			~~1296.91~~	1295.401	Brass Cap, See Book 1 Page 3
		5.254				
TP1			10.318	~~1291.846~~		Paint Spot West T/C Gilbert Road
		5.542				
TP2	258		4.523	~~1292.864~~	1291.354	Set "+" T/C @ Southwest Curb Return Gilbert Road & Hermosa Vista Drive, Southside of Hermosa Vista Drive
		4.223				
TP3	259		6.300	~~1290.787~~	1287.277	Fd City of Mesa Brass Cap in Handhole (0.56' below rim) @ intersection of Hermosa Vista Drive & Kachina Drive
		5.216				
TP4	260		6.542	~~1289.461~~	1287.250	Fd City of Mesa Brass Cap in Handhole (1.20' below rim) @ intersection of Hermosa Vista Drive & Forest Drive
		5.881				
TP5			6.981	~~1288.361~~		Nail in Dirt
		3.640				
TP6			7.172	~~1284.828~~		Nail in Dirt
		4.991				
TP7	261		7.100	~~1282.719~~	1281.209	Fd City of Mesa Brass Cap in Handhole (0.85' below rim) @ intersection of Hermosa Vista Drive & Hill Street
		6.531				
TP8	262		6.165	~~1283.085~~	1281.573	Fd City of Mesa Brass Cap in Handhole (below rim) @ intersection of Hermosa Vista Drive & Harris Street
		6.447				
TP9			4.581	~~1284.951~~		Paint Spot East T/C Hill Street
		5.690				
TP10	263		5.881	~~1284.760~~	1283.246	Fd City of Mesa Brass Cap in Handhole (0.82' below rim) @ intersection of Harris Street & Mallary Drive
		5.375				
TP11			12.142	~~1277.993~~		Nail in Dirt
		0.172				
TP12			9.703	~~1268.462~~		Top of Concrete Post

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
		0.584				
TP13			12.427	~~1256~~.618		Nail in Dirt
		0.285				
TP14			6.081	~~1250~~.821		Nail in Dirt
		4.002				
END 15	246		5.373	~~1249~~.451 (.016)	1247.837	Bolt on Fire Hydrant, See Page 28

LINE 31

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	250			~~1231~~.731	1230.235	Brass Cap, See Page 29
		5.708				
TP1	264		7.270	~~1230~~.170	1228.672	Fd City of Mesa Brass Cap in Handhole (1.18' below rim) @ intersection of Kenwood & Ashland
		6.217				
TP2			6.085	~~1230~~.302		Paint Spot South T/C Kenwood Jt
		5.247				
TP3	265		7.020	~~1228~~.529	1227.028	Fd City of Mesa Brass Cap in Handhole (0.89' below rim) @ intersection of Kenwood & Olive
		6.716				
TP4	266		6.311	1228.933	1227.433	Fd City of Mesa Brass Cap in Handhole (0.89' below rim) @ intersection of Kenwood & Kael Circle
		6.475				
TP5	267		5.665	~~1229~~.744	1228.242	Fd City of Mesa Brass Cap in Handhole (0.91' below rim) @ intersection of Kenwood & Bates
		6.283				
TP6			4.957	~~1231~~.071		Paint Spot T/C
		4.281				
TP7	268		4.202	1231.150	1229.645	SW Bolt on Fire Hydrant ±40' North, ±30' East of Northeast Corner of Building 12 Windscape Apartments, 550 E. McKellips Road
		3.752				
TP8			5.291	~~1229~~.610		Paint Spot T/C
		4.863				
TP9			5.699	~~1228~~.774		Paint Spot T/C Southside McKellips Road
		5.306				
TP10			4.380	1229.700		Paint Spot T/C Southside McKellips Road
		5.744				
TP11			3.915	1231.530	1229.929	Paint Spot T/C Southside McKellips Road
		5.456				
END12	251		5.546	1231.440		Brass Cap, See Page 29
				(.017)		

LINE 32

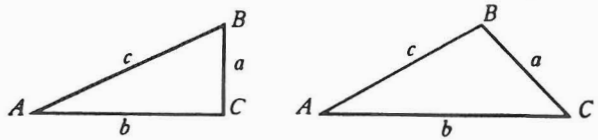
12-26-95
Clear, Breezy, Cool 55°F

Gardiner
Coyne
Chavez

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	252			~~1261.996~~	1260.494	Brass Cap, See Page 29
		8.191				
TP1			3.295	~~1266.882~~		Nail in Dirt
		9.685				
TP2			8.427	~~1268.140~~		Nail in Dirt
		2.582				
TP3			8.509	~~1267.214~~		Nail in Dirt
		5.841				
TP4			3.004	~~1265.051~~		Nail in Dirt
		6.056				
TP5			5.518	~~1265.589~~		Nail in Dirt
		4.677				
TP6			7.206	~~1263.060~~		Nail in Dirt
		6.446				
TP7	269		5.193	~~1264~~.313	1262.813	Fd Salt River Project Brass Cap Flush w/concrete @ NE Wingwall of Consolidated Canal Bridge on Horne Road
		5.746				
TP8			4.541	~~1265~~.518		Nail in Dirt
		3.204				
TP9			6.031	~~1262~~.691		Nail in Dirt
		3.953				
TP10			5.616	~~1261~~.028		Nail in Dirt
		6.924				
TP11			6.412	~~1261~~.539		Nail in Dirt
		4.989				
TP12	270		5.842	~~1260~~.686	1259.182	Set "X" in Concrete Irr Headwall on West Edge Consolidated Canal ± 1300' North of Brown Road

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.102				
TP13			5.293	~~1261.476~~		Nail in Dirt
		4.886				
TP14			5.949	~~1260.434~~		Nail in Dirt
		5.592				
TP15	271		4.338	~~1261.688~~	1260.179	Set Nail in East Face of Wood PP
		1.742				
TP16			5.473	~~1257.957~~		Nail in Dirt
		5.225				
TP17	272		3.686	~~1259.496~~	1257.785	Set "□" on SW Wingwall of Consolidated Canal Bridge on Home Road, ≈ 1000' North of Brown Road
		4.120				
TP18			6.384	~~1259.232~~		Nail in Dirt
		4.900				
TP19			5.090	~~1257.043~~		Nail in Dirt
		5.662				
TP20			5.380	~~1257.326~~		Nail in Dirt
		7.137				
TP21	273		5.140	1259.322	1257.806	Fd Salt River Project Brass Cap Flush w/ Concrete Sidewalk on Consolidated Canal Bridge, Southside of Brown Road, West Edge of Canal
		4.250				
TP22			5.928	~~1257.644~~		Paint Spot T/C Northside Brown Road
		5.505				
TP23	274		6.722	~~1256.427~~	1254.909	Fd City of Mesa Brass Cap in Handhole (1.15' below rim) @ intersection of Brown Road & Spencer Road
		6.153				
TP24	93		6.194	~~1256.385~~	1254.867	Fd Arizona Highway Dept Brass Cap in Handhole (0.59' below rim) @ intersection of Brown Road & Stapley Drive
		5.921				
TP25	275		5.774	~~1256.533~~		Fd City of Mesa Brass Cap in Handhole (1.03' below rim) @ intersection of Brown Road & Diane Drive

FORMULAE FOR SOLVING RIGHT TRIANGLES



$$\text{Sin } A = \frac{a}{c} = \text{Cos } B \qquad \text{Cot } A = \frac{b}{a} = \text{Tan } B$$

$$\text{Cos } A = \frac{b}{c} = \text{Sin } B \qquad \text{Sec } A = \frac{c}{b} = \text{Cosec } B$$

$$\text{Tan } A = \frac{a}{b} = \text{Cot } B \qquad \text{Cosec } A = \frac{c}{a} = \text{Sec } B$$

Given	Required	Solution
A, c	B, a, b	$B = 90° - A, a = c \sin A, b = c \cos A.$
A, b	B, a, c	$B = 90° - A, a = b \tan A,\ c = \frac{b}{\cos A}.$
A, a	B, b, c	$B = 90° - A, b = a \cot A,\ c = \frac{a}{\sin A}.$
a, c	A, B, b	$\sin A = \frac{a}{c} = \cos B, b = \sqrt{(c+a)(c-a)}$
a, b	A, B, c	$\tan A = \frac{a}{b} = \cot B, c = \sqrt{a^2 + b^2}$

FORMULAE FOR SOLVING OBLIQUE TRIANGLES

Given	Required	Solution
A, a, b	B, c	$\sin B = \frac{b \sin A}{a}, c = \frac{a \sin C}{\sin A}$
A, B, a	b	$b = \frac{a \sin B}{\sin A}$
a, b, C	A, c	$A + B = 180° - C,\ c = \frac{a \sin C}{\sin A}$
a, b, c	Area	side $\frac{a+b+c}{2}$, area $= \sqrt{s(s-a)(s-b)(s-c)}$
A, b, c	Area	area $= \frac{bc \sin A}{2}$
A, B, C, a	Area	area $= \frac{a^2 \sin B \sin C}{2 \sin A}$

MADE IN U.S.A.

Mesa ADMS

Levels

Book 3

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25393
KARL M.
MORTENSEN
DATE SIGNED 10-2-96
ARIZONA, U.S.A.

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Lo - 32 (Cont'd)

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.750				
TP26			5.473	~~1257.809~~		Paint Spot T/C Southside Brown Road
		6.027				
TP27			5.201	~~1258.635~~		Paint Spot T/C Northside Brown Road
		6.005				
TP28	276		6.514	~~1258.126~~	1256.611	Fd City of Mesa Brass Cap in Handhole (1.16' below rim) @ intersection of Brown Road & Barkley Street
		7.151				
TP29			5.343	~~1259.934~~		Paint Spot T/C Southside Brown Road
		6.293				
TP30			5.434	~~1260.793~~		Paint Spot T/C Northside Brown Road
		5.883				
TP31	277		6.056	~~1260.620~~	1259.108	Fd City of Mesa Brass Cap in handhole (1.04' below rim) @ intersection of Brown Road & Harris Street
		6.675				
TP32			4.451	~~1262.844~~		Paint Spot T/C Northside Brown Road
		5.686				
TP33			4.045	~~1264.485~~		Paint Spot T/C Southside Brown Road
		5.120				
TP34	278		5.942	~~1263.663~~	1262.154	Fd City of Mesa Brass Cap in Handhole (1.33' below rim) @ intersection of Brown Road and Forest Street South
		6.857				
TP35			4.764	~~1265.756~~		Paint Spot T/C Southside Brown Road
		6.175				
TP36			4.744	~~1267.187~~		Paint Spot T/C Northside Brown Road
		6.103				
TP37	10		6.523	~~1266.767~~	1265.261	Fd Maricopa County Hwy Dept Brass Plug in Handhole (0.85' below rim) @ intersection of Brown Road & Gilbert Road
		7.322				

12-27-95
Clear, Calm, Cold 50°F

Gardner
Coyne

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP38			5.104	~~1268.986~~		Paint Spot T/C Northside Brown Road
		5.886				
TP39			4.647	~~1270.224~~		Paint Spot T/C Southside Brown Road
		5.993				
TP40	279		6.172	~~1270.040~~	1268.542	Fd City of Mesa Brass Cap in Handhole (1.26' below rim) @ intersection of Brown Road & 27nd Street
		6.855				
TP41			4.884	~~1272.017~~		Paint Spot T/C Southside Brown Road
		5.819				
TP42	280		5.910	~~1271.926~~	1270.423	Fd City of Mesa Brass Cap in Handhole (1.22' below rim) @ intersection of Brown Road & 23rd Street
		6.710				
TP43			4.710	~~1273.926~~		Paint Spot T/C Southside Brown Road
		5.794				
TP44	281		5.984	1273.737	1272.235	Fd City of Mesa Brass Cap in Handhole (1.24' below rim) @ intersection of Brown Road & 24th Street
		6.379				
TP45	282		3.131	~~1276.985~~	1275.483	Fd S.R.V.W.U.A. Brass Cap flush w/conc on Top of West Side Irr Box @ SW Cor Brown Road & Gaylord Street, Stamped "Elev 1277.19"
		3.171				
TP46			4.128	~~1276.028~~		Paint Spot T/C Northside Brown Road
		5.845				
TP47	283		5.676	1276.197	1274.697	Fd City of Mesa Brass Cap in Handhole (1.04' below rim) @ intersection of Brown Road and 25th Street
		6.805				
TP48			4.424	~~1278.579~~		Paint Spot T/C Northside Brown Road
		6.076				
TP49	284		4.894	~~1279.761~~	1278.262	Fd City of Mesa Brass Cap in Handhole (0.42' below rim) @ intersection of Brown Road & Hale Street
		6.410				
TP50			4.388	1281.783		Paint Spot T/C Northside Brown Road

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.220				
TP51	9		5.189	~~1282.814~~	1281.317	Fd City of Tulsa Brass Cap in Handhole (0.90' below rim) @ intersection of Brown Road & Lindsay Road
		6.738				
TP52			4.031	~~1285.521~~		Paint Spot T/C Southside Brown Road
		6.527				
TP53			3.339	~~1288.711~~		Paint Spot E.P. Southside Brown Road
		9.999				
END54	136		4.870	~~1293.840~~ (.007)	1292.346	Brass Cap, See Book 1 Page 17

LINE 33

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	134			~~1294.878~~	1293.377	Brass Cap, See Book 1 Page 16.
		5.111				
TP1	285		8.176	~~1291.814~~	1290.311	Fd City of Mesa Brass Cap in Handhole (1.11' below rim) @ intersection of Lindsay Road & Hope Street
		4.821				
TP2			8.642	~~1287.993~~		Paint Spot T/C Southside Hope Street
		4.549				
TP3	58		7.248	~~1285.293~~	1283.792	Fd City of Mesa Brass Cap in Handhole (1.01' below rim) @ intersection of Hope Street & 2nd Cul-de-Sac West of Lindsay Road. (3rd Street West of Lindsay Road)
		7.123				
TP4			4.425	~~1287.971~~		Same As TP2
		8.490				
TP5	285		4.670	~~1291.811~~	1290.311	Same As TP1
		8.223				
END6	134		5.157	~~1294.877~~	1293.377	POB
				(.001)		

LINE 34

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	277			~~1260.620~~	1259.108	Brass Cap, See Page 3
		6.040				
TP1			4.303	~~1262.357~~		Paint Spot T/C Eastside Harris Street
		5.383				
TP2	286		5.448	~~1262.292~~	1260.780	Fd City of Mesa Brass Cap in Handhole (0.84' below rim, 0.87' below point) @ intersection of Harris Street & Gary Street
		6.797				
TP3			4.459	~~1264.629~~		Paint Spot T/C Westside Harris Street
		5.844				
TP4			3.845	~~1266.628~~		Paint Spot T/C Eastside Harris Street
		5.937				
TP5			4.873	~~1267.692~~		Paint Spot T/C Eastside Harris Street
		5.647				
TP6			3.850	~~1269.489~~		Paint Spot T/C Eastside Harris Street
		5.915				
× TP7	94		5.923	~~1269.481~~	1267.970	Fd City of Mesa Brass Cap in Handhole (0.79' below rim) @ intersection of Harris Street & McLellan Road
		6.155				
TP8	287		4.965	~~1270.671~~	1269.159	Fd City of Mesa Brass Cap in Handhole (0.40' below rim) @ intersection of Harris Street & Indigo Street
		6.268				
TP9	288		5.466	~~1271.474~~	1269.961	Fd City of Mesa Brass Cap in Handhole (0.83' below rim) @ intersection of Harris Street & Inyglen Street
		7.247				
TP10	289		5.564	1273.157	1271.644	Fd City of Mesa Brass Cap in Handhole (0.90' below rim) @ intersection of Harris Street & Jensen Street
		6.889				
TP11			4.810	~~1275.236~~		Paint Spot T/C Eastside Harris Street
		5.724				
TP12			4.072	1276.888		Paint Spot T/C Eastside Harris Street
		5.944				
END13	95		4.972	1277.881	1276.377	Brass Cap, See Book 2, Page 30

Gardiner
Petr
Chavez

LINE 35

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	93			~~1256.385~~	1254.867	Brass Cap, Sec Book 2 Page 36
		5.713				
TP1			6.323	~~1255.775~~		Paint Spot T/C Westside Stapley Drive
		5.885				
* TP2			4.790	~~1256.870~~		Paint Spot T/C Eastside Stapley Drive
		5.221				
TP3	290		4.802	~~1257.289~~	1255.766	Fd Maricopa County Engineering Dept Brass Cap flush w/concrete & sidewalk on Eastside Stapley Drive, Southside of Bridge over Consolidated Canal
		5.309				
TP4			5.463	1257.135		Nail in Dirt
		4.894				
TP5			5.727	1256.302		Nail in Dirt
		4.991				
TP6			4.650	1256.644		Nail in Dirt
		5.690				
TP7			5.662	1256.671		Nail in Dirt
		5.632				
TP8			5.816	~~1256.486~~		Nail in Dirt
		5.518				
TP9	291		4.112	~~1257.813~~	1256.358	Fd Salt River Valley Water Users Assoc Brass Cap flush w/ concrete on top of Irrigation Box Northwest Side, ± 30' North of ℄ 8th Street, ± 50' West of West Edge Consolidated Canal
		5.585				
TP10			6.698	~~1256.779~~		Paint Spot T/C Southside 8th Street
		5.328				
TP11			5.314	1256.793		Paint Spot T/C Southside 8th Street
		5.995				
TP12	292		6.679	~~1256.109~~	1254.574	Fd City of Mesa Brass Cap in Handhole (1.38' Below Rim) @ intersection of 8th Street & Williams Circle

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
		7.264				
TP13			5.229	~~1258.144~~		Paint Spot T/C Northside 8th Street
		5.963				
TP14	293		7.181	~~1256.926~~	1255.390	FJ City of Mesa Brass Cap in Handhole (1.06' below rim) @ intersection of 8th Street & Forest Street South
		7.547				
TP15			4.745	~~1259.529~~		Paint Spot T/C South side 8th Street
		5.932				
TP16			4.831	~~1260.630~~		Paint Spot T/C Southside 8th Street
		6.064				
TP17	294		5.896	1260.798	1259.266	FJ Maricopa County Hwy Dept Brass Cap in Handhole (0.76' below rim) @ intersection of Gilbert Road & 8th Street (Same As Adobe Street)
		6.420				
TP18	295		5.562	~~1261.656~~	1260.123	FJ City of Mesa Brass Cap in Handhole (0.63' below rim) @ intersection of Adobe Street & Ashbrook Street
		6.949				
TP19			4.847	~~1263.758~~		Paint Spot T/C Southside Adobe Street
		6.041				
TP20			4.014			Paint Spot T/C Southside Adobe Street
		6.168				
TP21			5.195	~~1266.758~~		Paint Spot T/C Southside Adobe Street
		6.096				
TP22			5.178	~~1267.676~~		Paint Spot T/C Southside Adobe Street
		5.797				
TP23	296		3.321	~~1270.152~~	1268.616	FJ S.R.V.W.U.A. Brass Cap flush w/concrete on top of Westside of Irrigation Box ± 10' West of ℄ 24th Street, ± 30' South of ℄ Adobe Street
		4.028				
TP24			5.429	~~1268.750~~		Paint Spot T/C Southside Adobe Street
		5.674				

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25			4.530	~~1269.894~~		Paint Spot T/C Southside Adobe Street
		6.055				
* TP26			5.136	~~1270.813~~		Paint Spot T/C Southside Adobe Street
		6.261				
TP27			5.215	~~1271.871~~		Paint Spot T/C Southside Adobe Street
		6.251				
TP28			5.032	~~1273.079~~		Paint Spot T/C Southside Adobe Street
		6.391				
TP29	297		4.250	~~1275.220~~	1273.681	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.70' below rim) @ intersection of Lindsay Road & Adobe Street
		5.905				
TP30			4.080	~~1277.045~~		Paint Spot T/C Southside Adobe Street
		6.953				
TP31	208		5.204	~~1278.794~~	1277.254	Fd City of Mesa Brass Cap in Handhole (0.54' below rim) @ intersection of Adobe Street & Rock Street
		7.142				
TP32			4.829	~~1281.106~~		Paint Spot T/C Southside Adobe Street
		6.570				
TP33			4.710	~~1282.966~~		Paint Spot T/C Southside Adobe Street
		6.347				
TP34	62		5.563	~~1283.750~~	1282.209	Fd City of Mesa Brass Cap in Handhole (0.50' below rim) @ intersection of Los Alamos Street & Alamo Street
		7.144				
TP35			4.522	1286.373		Paint Spot T/C Southside Adobe Street
		11.218				
END36	152		4.998	1292.594	1291.050	Brass Cap, See Book 1 Page 24
				(.048)		

LINE 36

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	296			~~1270.152~~	1268.616	Brass Cap, See Page 9
		3.487				
TP1	92		5.434	~~1268.204~~	1266.666	Fd City of Mesa Brass Cap in Handhole (0.85' below rim) @ intersection of 24th Street & Enrose Street
		5.315				
END 2	296		3.362	~~1270.157~~	1268.616	POB

Line 57

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	293			~~1256.926~~	1255.390	Brass Cap, See Page 9
		6.094				
TP1	299		6.010	~~1257.011~~	1255.472	Fd City of Mesa Brass Cap Flush w/ pvmt @ Forest Street & 400' South of 8th Street @ P.C.
		5.410				
TP2			5.652	~~1256.770~~		Paint Spot T/c Eastside Forest Street
		4.772				
TP3	300		6.704	~~1254.837~~	1253.293	Fd City of Mesa Brass Cap in Handhole (0.85' below rim) @ intersection of Forest Street & Decatur Street
		7.025				
TP4			4.822	~~1257.040~~		Paint Spot T/c Southside Decatur Street
		5.812				
TP5			4.668	~~1258.184~~		Paint Spot T/c Northside Decatur Street
		5.873				
TP6	301		5.930	~~1258.127~~	1256.577	Fd City of Mesa Brass Cap in Handhole (0.63' below rim) @ intersection of Gilbert Road & Decatur Street
		6.297				
TP7			5.203	~~1259.221~~		Paint Spot T/c Westside Gilbert Road
		6.154				
TP8			5.390	~~1259.986~~		Paint Spot T/c Eastside Gilbert Road
		6.687				
END 9	294		5.850	~~1260.822~~	1259.266	Brass Cap, See Page 9
				(.024)		

LINE

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	291			~~1257.893~~	1256.385	Brass Cap, See Page 8
		4.073				
TP1			6.035	~~1255.931~~		Nail in Dirt
		5.950				
TP2			5.971	~~1255.909~~		Nail in Dirt
		5.286				
TP3			5.562	~~1255.633~~		Nail in Dirt
		5.888				
TP4			5.422	~~1256.099~~		Nail in Dirt
		5.520				
TP5			5.988	~~1255.632~~		Nail in Dirt
		5.481				
TP6			5.516	~~1255.976~~		Nail in Dirt
		5.182				
TP7			5.948	~~1254.830~~		Nail in Dirt
		5.684				
TP8	302		4.357	~~1256.157~~	1254.612	Fd Salt River Project Brass Cap flush w/ T/C Northside University Drive @ West Edge of Bridge over Consolidated Canal; Stamped "29.8 E 3.0 N."
		4.731				
TP9			5.676	~~1255.213~~		Paint Spot T/C Southside University Drive
		5.668				
TP10	303		3.701	~~1257.179~~	1255.633	Fd Salt River Valley Water Users Assoc Brass Cap flush w/ the Westside Jtr Box ±50' South of ℄ University Drive, ±200' West of ℄ Gilbert Road
		4.189				
* TP11	337		5.756	~~1255.612~~	1254.066	Fd City of Mesa Brass Cap in Handhole (0.57' below, in) @ intersection of Gilbert Road & University Drive
		6.280				
TP12			5.217	1256.675		Paint Spot T/C Southside University Drive

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
		5.196				
TP13			4.423	~~1257.448~~		Paint Spot T/C Southside University Drive
		5.990				
TP14			5.363	~~1258.076~~		Paint Spot T/C Southside University Drive
		6.032				
TP15	304		5.745	~~1258.362~~	1256.815	Fd City of Mesa Brass Cap in Handhole (1.07' below rim) @ intersection of University Drive & 22nd Place South
		6.924				
TP16			4.711	~~1260.576~~		Paint Spot T/C Southside University Drive
		6.093				
TP17	305		5.323	~~1261.346~~	1259.797	Fd City of Mesa Brass Cap in Handhole (1.02' below rim) (1/4 Corner) & University Drive ±600' East of 23rd Street, in line with block wall to south
		6.438				
TP18			4.654	~~1263.131~~		Paint Spot T/C Northside University Drive
		5.458				
TP19	306		5.263	~~1263.326~~	1261.775	Fd City of Mesa Brass Cap in Handhole (0.72' below rim) @ intersection of University Drive & 25th Street
		5.999				
TP20			4.739	~~1264.585~~		Paint Spot T/C Northside University Drive
		5.984				
TP21			4.663	~~1265.906~~		Nail in Pavement
		5.898				
TP22	307		5.631	~~1266.173~~	1264.622	Fd City of Mesa Brass Cap in Handhole (0.73' below rim) @ intersection of University Drive & Yale Street
		6.338				
TP23			4.822	~~1267.690~~		Paint Spot T/C Southside University Drive
		6.514				
TP24	8		5.561	~~1268.634~~	1267.083	Fd City of Mesa Brass Cap in Handhole (0.78' below rim) @ intersection of University Drive & Lindsay Road
		6.948				

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25			4.538	~~1271.045~~		Paint Spot T/C Northside University Drive
		5.795				
TP26	308		5.661	~~1271.179~~	1269.626	Fd City of Mesa Brass Cap in Handhole (0.65' below rim) @ intersection of University Drive & Roca Street
		6.520				
TP27			4.370	~~1273.309~~		Paint Spot T/C Northside University Drive
		6.538				
TP28	309		6.360	~~1273.486~~	1271.933	Fd City of Mesa Brass Cap in Handhole (1.40' below rim) @ intersection of University Drive & Los Alamos
		7.373				
TP29			4.442	~~1276.418~~		Paint Spot T/C Northside University Drive
		6.580				
TP30			4.124	~~1278.874~~		Paint Spot T/C Northside University Drive
		5.620				
TP31	310		6.426	~~1278.068~~	1276.513	Fd City of Mesa Brass Cap in Handhole (1.15' below rim) (1/4 Corner) & University Drive ±200' East of Loma Vista Street, in line with block wall to north
		7.757				
TP32			4.359	~~1281.466~~		Paint Spot T/C Southside University Drive
		6.524				
TP33			4.343	~~1283.648~~		Paint Spot T/C Southside University Drive
		6.690				
TP34			3.859	~~1286.478~~		Paint Spot T/C Southside University Drive
		9.546				
END35	175		6.101	~~1289.922~~ (.060)	1288.367	Brass Cap, See Book 11 Page 29

LINE 39

1-8-96

MT Gilmore
Ø Turner
Ø Chavez

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	302			~~1256.157~~	1254.612	Brass Cap, See Page 13
		1.578				
TP1			6.131	~~1251.605~~		Paint Spot T/c Northside University Drive
		4.501				
TP2	311		5.993	~~1250.113~~	1248.567	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.54' below rim) @ intersection of University Drive & Williams Street
		5.047				
TP3	312		6.261	~~1248.899~~	1247.353	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.58' below rim) @ intersection of University Drive & Hardy Street South
		5.247				
TP4			5.489	~~1248.657~~		Paint Spot T/c Northside University Drive
		4.995				
TP5	313		6.554	~~1247.097~~	1245.552	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.61' below rim) @ intersection of University Drive & Hunt Drive North
		6.427				
TP6			4.869	~~1248.657~~		Same As TP4
		5.683				
TP7			4.974	~~1249.366~~		Paint Spot T/c Northside University Drive
		5.773				
TP8			4.686	~~1250.453~~		Paint Spot T/c Northside University Drive
		5.924				
TP9			5.072	~~1251.305~~		Paint Spot T/c Northside University Drive
		6.502				
END 10	302		1.648	~~1256.159~~	1254.612	POB
				.002		

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
P03	302			~~1256.157~~	1254.612	Brass Cap, See Page 13
		4.056				
TP1			4.902	~~1255.311~~		Nail in Dirt
		4.724				
TP2			5.121	~~1254.914~~		Nail in Dirt
		5.067				
TP3			5.390	~~1254.591~~		Nail in Dirt
		5.055				
* TP4			4.424	~~1255.222~~		Nail in Dirt
		5.753				
TP5	314		5.141	~~1255.835~~	1254.285	Fd Arizona Hwy Dept Brass Cap flush w/ T/C Westside Gilbert Road, South Edge Bridge over Consolidated Canal
		3.430				
TP6			5.685	~~1253.580~~		Nail in Dirt
		4.882				
TP7			4.670	~~1253.791~~		Nail in Dirt
		4.481				
TP8			5.177	~~1253.094~~		Nail in Dirt
		5.460				
TP9			4.787	~~1253.767~~		Nail in Dirt
		5.811				
TP10	315		4.442	~~1255.136~~	1253.583	Fd National Geodetic Survey Brass Cap Flush w/ concrete on NE Wingwall at Main Street Bridge over Consolidated Canal; Stamped "Vertical Control Mark ~~CH5A~~ C518 1992 The Direction" NGS NAD 29 Rec Elev = 1253.583 (1st order)
		5.001				
TP12"			6.391	~~1253.745~~		Paint Spot T/C Southside Main Street
		5.876				
TP13"			5.110	~~1254.511~~		Paint Spot T/C Northside Main Street

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
		6.683				
x TP ~~14~~ 13	316		5.490	~~1255.704~~	1254.146	Fd Salt River Project Brass Cap flush w/concrete sidewalk @ B/W Southside Main Street ±½ Mile East of Gilbert Road in Front of Mesa Awning @ 2403 E. Main Street Stamped "RM2 Δ"
		5.988				
TP ~~15~~ 14			5.066	~~1256.626~~		Paint Spot South T/C Main Street
		6.177				
TP ~~16~~ 15	317		5.294	~~1257.509~~	1255.947	Fd Arizona Hwy Dept Brass Cap flush w/ T/C Southside Main Street, ± 40' East of ℄ Whiting Street North
		5.653				
TP ~~17~~ 16			4.540	~~1258.622~~		Paint Spot South T/C Main Street
		6.038				
TP ~~18~~ 17	318		4.767	~~1259.893~~	1258.327	Fd Arizona Highway Dept Brass Cap in Handhole (0.67' below rim) @ intersection of Main Street & Lyn Rae; Brass Cap in ±7' North of another Brass Cap in Handhole
		5.948				
TP ~~19~~ 18			4.902	~~1260.939~~		Paint Spot South T/C Main Street
		6.967				
TP ~~20~~ 19	319		5.205	~~1262.701~~	1261.131	Fd Unmarked Brass Cap in Handhole (0.44' below rim) @ intersection of Lindsay Road & Main Street
		6.579				
TP ~~21~~ 20			4.810	~~1264.470~~		Paint Spot South T/C Main Street
		5.998				
TP ~~22~~ 21			4.349	~~1266.119~~		Paint Spot South T/C Main Street
		6.366				
TP ~~23~~ 22			5.187	~~1267.298~~		Paint Spot South T/C Main Street
		6.404				
TP ~~24~~ 23			4.709	~~1268.993~~		Paint Spot South T/C Main Street
		5.973				
TP ~~25~~ 24			4.302	~~1270.664~~		Paint Spot South T/C Main Street
		6.895				

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP ~~26~~ 25			4.781	~~1272.777~~		Paint Spot T/C Southside Main Street
		6.863				
TP ~~27~~ 26			4.997	~~1274.643~~		Paint Spot South T/C Main Street
		7.019				
TP ~~28~~ 27			3.611	~~1278.051~~		Paint Spot South T/C Main Street
		7.458				
TP ~~29~~ 28			4.465	~~1281.044~~		Paint Spot South T/C Main Street
		6.750				
TP ~~30~~ 29			4.525	~~1283.270~~		Paint Spot South T/C Main Street
		6.118				
TP ~~31~~ 30	320		5.567	~~1283.822~~	1282.250	Fd Stone in Handhole @ intersection of Main Street & Val Vista Road
		6.999				
TP ~~32~~ 31			4.196	~~1286.625~~		Paint Spot South T/C Main Street
		8.258				
TP ~~33~~ 32	183		4.762	~~1290.120~~ (067)	1288.548	Brass Cap, See Book 1 Page 32

STA	HI	BS	FS	ELEV	ADJ EL	REMARKS
* P33	315 ~~314~~			~~1255.136~~ ~~1255.835~~	1253.583	Brass Cap, See Page 17
		4.117				
TP1			5.619	~~1254.334~~		Nail in Dirt
		4.949				
TP2			6.212	~~1253.071~~		Nail in Dirt
		5.275				
TP3			5.388	~~1252.957~~		Nail in Dirt
		5.319				
TP4			5.274	~~1253.001~~		Nail in Dirt
		6.073				
TP5			5.959	~~1253.115~~		Nail in Dirt
		4.960				
TP6			5.411	~~1252.664~~		Nail in Dirt
		5.495				
TP7			5.255	~~1252.904~~		Nail in Dirt
		6.126				
TP8	321		5.361	~~1252.170~~ ~~1253.669~~	1251.424	Fd Salt River Project Brass Cap flush w/ concrete 150' North of ℄ Broadway Road @ West Edge Consolidated Canal @ SW Corner of Conc Walkway over Irrigation Headgate Stamped "30.7 E 2.0 N"
		6.322				
TP9			5.666	~~1254.325~~		Paint Spot South ℄ Broadway Road
		5.138				
TP10	322		6.809	~~1251.955~~ ~~1252.654~~	1250.411	Fd City of Mesa Brass Cap in Handhole (1.55' below rim) @ intersection of Broadway Road & Windsor
		7.245				
TP11			5.311	~~1254.588~~		Paint Spot South ℄ Broadway Road
		5.916				
TP12	6		4.717	~~1255.088~~ ~~1255.787~~	1253.547	Fd City of Mesa Brass Cap in Handhole (0.86' below rim) @ intersection of Lindsay Road & Broadway Road

STA	Ft*	BS+	FS-	ELEV	ADJEL	REMARKS
		6.408				
			4.506	~~1257.689~~		Top of Rock
TP13						
		5.938				
			4.535	~~1259.092~~		Paint Spot South T/C Broadway Road
TP14						
		6.128				
			5.668	~~1258.853~~ ~~1259.552~~	1257.308	Fd City of Mesa Brass Cap in Handhole (0.93' below rim) @ intersection of 30th Street & Broadway Road
TP15	323					
		6.770				
			4.878	~~1261.643~~		Paint Spot South T/C Broadway Road
TP16						
		6.425				
			4.776	~~1263.292~~		Paint Spot North T/C Broadway Road
TP17						
		6.053				
			5.712	~~1262.935~~ ~~1263.634~~	1261.391	Fd City of Mesa Brass Cap in Handhole (0.84' below rim) @ intersection of 32nd Street & Broadway Road
TP18	324					
		6.976				
			4.457	~~1266.152~~		Paint Spot North T/C Broadway Road
TP19						
		6.222				
			5.544	~~1266.131~~ ~~1266.830~~	1264.586	Fd City of Mesa Brass Cap in Handhole (0.32' below rim) @ intersection of Broadway Road & Almar Street
TP20	325					
		6.981				
			4.078	~~1269.034~~ ~~1269.733~~	1267.487	Fd City of Mesa Brass Cap in Handhole (below rim) @ intersection of Broadway Road & 34th Street
TP21	326					
		6.607				
			4.402	~~1271.938~~		Paint Spot South T/C Broadway Road
TP22						
		6.514				
			4.562	1273.890		Paint Spot South T/C Broadway Road
TP23						
		6.578				
			4.120	1275.649 ~~1276.348~~	1274.099	Fd City of Mesa Brass Cap in Handhole (0.49' below rim) @ intersection of Broadway Road & Val Vista Road
TP24	34					
		6.479				

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25			4.876	~~1277.951~~		Paint Spot South T/C Broadway Road
		6.344				
TP26			4.185	~~1280.110~~		Paint Spot South T/C Broadway Road
		6.221				
TP27			3.362	~~1282.969~~		Paint Spot South T/C Broadway Road
		6.843				
TP28	327		4.043	~~1285.071~~ ~~1285.770~~	1283.516	FD City of Mesa Brass Cap in Handhole (0.8' Below rim) @ intersection of Broadway Road & Maple Street
		9.784				
End 29	190		4.822	~~1290.034~~ ~~1290.733~~	1288.477	"+" in concrete, See Book 2 Page 3
				.366		
				.057		

LINE 42

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	317			~~1262.701~~	1261.131	Brass Cap, See Page 18
		4.486				
TP1			6.467	~~1260.719~~		Paint Spot West T/c Lindsay Road
		4.217				
TP2	328		6.287	~~1258.649~~	1257.076	@ City of Mesa Brass Cap in Handhole (0.83' below rim) @ intersection of Lindsay Road & Allred Avenue
		5.243				
TP3			5.962	~~1257.931~~		Paint Spot West T/c Lindsay Road
		4.728				
TP4	329		6.547	~~1256.113~~	1254.534	@ City of Mesa Brass Cap in Handhole (1.29' below rim) @ intersection of Lindsay Road & Bramble Street
		5.796				
TP5			5.785	~~1256.123~~		Paint Spot East T/c Lindsay Road
		5.245				
END 6	6		6.240	~~1255.128~~	1253.547	Brass Cap; See Page 20
				~~(.004)~~		
				(.040)		

LINE 43 (LINE 41 CHECK)

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
* POB	~~314~~ 315			~~1255.835~~	1253.583	Brass Cap, See Page 17
		3.976				
TP1			5.455	~~1254.355~~		Nail in Dirt
		5.199				
TP2			5.933	~~1253.622~~		Nail in Dirt
		5.530				
TP3			5.285	~~1253.867~~		Nail in Dirt
		5.103				
TP4			6.197	~~1252.773~~		Nail in Dirt
		6.393				
TP5			5.434	~~1253.732~~		Nail in Dirt
		5.126				
TP6			6.304	~~1252.553~~		Nail in Dirt
		6.112				
TP7			5.122	~~1253.543~~		Nail in Dirt
		5.408				
TP8	321		5.283	~~1252.769~~ ~~1253.668~~	1251.424	Brass Cap, See Page 20
		6.169				
TP9			5.655	~~1254.182~~		Paint Spot South T/C Broadway Road
		5.237				
TP10	322		6.763	~~1251.707~~ ~~1252.656~~	1250.411	Brass Cap, See Page 20
		7.081				
TP11			4.918	~~1254.819~~		Paint Spot South T/C Broadway Road
		5.930				
TP12	6		4.956	~~1255.895~~ ~~1255.794~~	1253.547	Brass Cap, See Page 20

LINE 44

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	321			~~1252.970~~	1251.424	Brass Cap, See Page 20
		3.817				
TP1	330		7.166	~~1249.630~~	1248.071	Fd City of Mesa Brass Cap in Handhole (1.07' below rim) @ intersection of Broadway Road & Alpine Street
		5.220				
TP2	331		6.804	~~1248.036~~	1246.482	Fd City of Mesa Brass Cap in Handhole (1.00' below rim) @ intersection of Broadway Road & 24th Street
		4.929				
TP3			5.963	~~1247.001~~		Paint Spot North T/C Broadway Road
		4.533				
TP4	332		6.357	~~1245.178~~	1243.618	Fd City of Mesa Brass Cap in Handhole (1.18' below rim) @ intersection of Broadway Road & Acacia Street
		5.880				
TP5			5.674	~~1245.384~~		Paint Spot North T/C Broadway Road
		4.368				
TP6			5.871	~~1243.880~~		Paint Spot North T/C Broadway Road
		4.832				
TP7	4		5.981	~~1242.732~~	1241.174	Fd City of Mesa Brass Cap in Handhole (0.89' below rim) @ intersection of Gilbert Road & Broadway Road
		5.829				
TP8			4.674	~~1243.886~~		Same As TP6
		5.963				
TP9			4.843	~~1245.006~~		Paint Spot South T/C Broadway Road
		6.068				
TP10	332		5.901	~~1245.173~~	1243.618	Same As TP4
		7.014				
TP11			5.076	~~1247.111~~		Paint Spot South T/C Broadway Road
		6.327				
TP2	331		5.394	~~1248.044~~	1246.482	

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
		7.076				
TP13	330		5.482	~~1249.638~~		Same As TP1
		7.261				
END14	321		3.705	~~1252.794~~ (.024)	1251.424	POB

LINE 4

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	331			~~1248.036~~	1246.482	Brass Cap, See Page 25
		6.283				
TP1			4.806	~~1249.514~~		Paint Spot West ℄ 24th Street
*		5.133				
TP2	5		5.586	~~1249.060~~	1247.504	Fd Unmarked Brass Cap in Handhole (0.67' below rim) @ P.I. of 24th St & Alpine Avenue ± 700' North of Broadway Road
		5.459				
TP3			5.008	~~1249.511~~		Same As TP1
		4.791				
END 4	331		6.262	1248.040	1246.482	POB
				.004		

LINE 46

1-17-95

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
PUB	321			~~1252.970~~	1251.424	Brass Cap, See Page 20
		6.302				
TP1			5.916	~~1253.356~~		Nail in Dirt
		5.969				
TP2			6.899	~~1252.466~~		Nail in Dirt
		5.261				
TP3			5.165	~~1252.522~~		Nail in Dirt
		5.554				
TP4			6.050	~~1252.026~~		Nail in Dirt
		4.851				
TP5			5.774	~~1251.104~~		Nail in Dirt
		5.520				
TP6			5.206	~~1251.418~~		Nail in Dirt
		5.239				
TP7			5.001	~~1251.656~~		Nail in Dirt
		8.157				
TP8	333		5.377	~~1254.435~~	1252.896	Fd Salt River Project Brass Cap Flush w/concrete & Wingwall Southside Consolidated Canal 78' East of Sidewalk Eastside Lindsay Road
		3.013				
TP9			6.171	~~1251.278~~		Nail in Dirt
		5.069				
TP10			5.634	~~1250.713~~		Nail in Dirt
		5.528				
TP11			5.532	~~1250.708~~		Nail in Dirt
		5.778				
TP12			5.377	~~1251.110~~		Nail in Dirt

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
		5.916				
TP13			4.922			Nail in Dirt
		5.759				
TP14	334		5.788	~~1252.075~~	1250.540	Fd Salt River Project Brass Cap Flush w/concrete & Wingwall Westside Consolidated Canal ±10' North of North Edge B/W Northside Southern Avenue ; Stamped "31.2E 1.0 N"
		4.987				
TP15			6.795	~~1250.266~~		Paint Spot South T/C Southern Avenue
		5.320				
TP16			4.852	~~1250.734~~		Paint Spot South T/C Southern Avenue
		6.250				
TP17			4.814	~~1252.170~~		Paint Spot South T/C Southern Avenue
		6.390				
TP18			4.994	1253.565		Paint Spot South T/C Southern Avenue
		6.514				
TP19	335		4.508	1255.571	1254.042	Fd City of Mesa Brass Cap in Handhole (1.01' below rim) @ intersection of 32nd Street & Southern Avenue
		6.648				
TP20			4.528	~~1257.691~~		Paint Spot South T/C Southern Avenue
		6.046				
TP21	336		5.581	~~1258.156~~	1256.628	Fd City of Mesa Brass Cap in Handhole (0.43' below rim) @ intersection of Southern Avenue & Helms
		6.734				
TP22			4.458	~~1260.432~~		Paint Spot South T/C Southern Avenue
		6.143				
TP23	86		5.658	~~1260.916~~	1259.391	Fd City of Mesa Brass Cap in Handhole (0.48' below rim) ±1300' West of Val Vista Drive @ & Southern Ave @ & Drive at East Entrance Vista Greens Apartments (Northside Southern Ave) and & Drive of West Entrance
		6.513				
TP24			4.805	~~1262.625~~		Nail in Dirt
		6.319				

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
* TP25	~~337~~ 3		3.751	~~1265.193~~	1263.669	Fd City of Mesa Brass Cap in Handhole (0.60' below rim) @ intersection of Southern Avenue & Val Vista Drive
		6.507				
TP26			4.367	1267.332		Paint Spot South T/c Southern Avenue
		5.560				
TP27	338		5.139	~~1267.754~~	1266.231	Fd City of Mesa Brass Cap in Handhole (0.58' below rim) @ intersection of 37th Street & Southern Avenue
		6.286				
TP28	339		4.859	~~1269.180~~	1267.659	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ intersection of Southern Avenue & Menno Street
		7.153				
TP29			4.703	1271.630		Paint Spot South T/c Southern Avenue
		5.956				
TP30	340		5.503	~~1272.083~~	1270.563	Fd City of Mesa Brass Cap in Handhole (0.50' below rim) @ intersection of Southern Avenue & 39th Street
		6.524				
TP31			4.822	~~1273.785~~		Paint Spot South T/c Southern Avenue
		6.044				
TP32			3.678	1276.150		Paint Spot South T/c Southern Avenue
		5.687				
TP33	341		6.002	~~1275.835~~	1274.318	Fd City of Mesa Brass Cap in Handhole (0.50' below rim) S1/4 Cor Sec 28 @ ℄ Southern Avenue ±200' West of Nassau Street, ±30' East of N-S Power Lines
		5.842				
TP34	74		5.986	~~1275.691~~	1274.174	Fd City of Mesa Brass Cap in Handhole (1.57' below rim) @ intersection of Southern Avenue & Nassau Street
		7.069				
TP35			3.864	~~1278.896~~		Paint Spot North T/c Southern Avenue
		6.130				
TP36	342		3.554	~~1281.472~~	1279.957	Fd City of Mesa Brass Cap in Handhole (0.49' below rim) @ intersection of Southern Avenue & Norfolk Street
		10.014				
TP37			3.242	~~1288.244~~		Paint Spot North T/c Southern Avenue
		5.789				
ENG38	216		6.691	~~1287.342~~ .007	1285.828	Brass Cap, See Book 2 Page 14

LINE 47

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	323			~~1258.953~~	1257.308	Brass Cap, See Page 21
		6.072				
TP1			5.995	~~1258.929~~		Paint Spot West T/C 30th Street
		4.303				
TP2			5.616	~~1257.617~~		Paint Spot West T/C 30th Street
		4.197				
TP3			5.492			Paint Spot West T/C 30th Street
		4.729				
TP4	343		6.170	~~1254.882~~	1253.331	Fd City of Mesa Brass Cap in Handhole (0.80' below rim) @ intersection of 30th Street & Coralbell Avenue
		7.167				
TP5	344		6.321	~~1255.788~~	1254.176	Fd City of Mesa Brass Cap in Handhole (0.93' below rim) @ intersection of Albe Circle & Coralbell Avenue
		7.063				
TP6	88		6.261	~~1256.529~~	1254.977	Fd City of Mesa Brass Cap in Handhole (0.97' below rim) @ intersection of 31st Street & Coralbell Avenue
		7.151				
TP7	345		5.577	~~1258.103~~	1256.549	Fd City of Mesa Brass Cap in Handhole (0.47' below rim) @ intersection of Longhorn Circle & Coralbell Avenue
		7.122				
TP8	346		5.630	~~1259.575~~	1258.040	Fd City of Mesa Brass Cap in Handhole (0.45' below rim) @ intersection of 32nd Street & Coralbell Avenue
		7.162				
TP9	347		5.671	~~1261.087~~	1259.530	Fd City of Mesa Brass Cap in Handhole (0.44' below rim) @ intersection of Carol Circle & 32nd Street
		6.358				
TP10	348		5.637	~~1261.808~~	1260.250	Fd City of Mesa Brass Cap in Handhole (0.44' below rim) @ intersection of Capri Circle & 32nd Street
		6.605				
TP11			5.176	~~1263.236~~		Paint Spot East T/C 32nd Street
		6.012				
END 12	324		6.297	1262.952	1261.391	Brass Cap, See Page 21
				(017)		

LINE 43

STA	PT#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	334			~~1252.075~~	1250.540	Brass Cap, See Page 29
		5.603				
TP1			7.160	~~1250.519~~		Nail in Dirt
		5.475				
TP2			4.618	1251.375		Nail in Dirt
		5.436				
TP3			5.308	1251.503		Nail in Dirt
		5.467				
TP4			6.215	~~1250.754~~		Nail in Dirt
		5.459				
TP5			5.431	~~1250.783~~		Nail in Dirt
		6.003				
TP6	349		4.320	~~1252.466~~	1250.931	Set 1/2" Rebar flush w/ground @ North Edge of Base of Concrete Slope Beneath U.S. 60 Freeway, ±15' West of West Edge Consolidated Canal
		4.578				
TP7			6.193	~~1250.852~~		Nail in Dirt
		5.286				
TP8			6.438	~~1249.700~~		Nail in Dirt
		5.773				
TP9			5.110	~~1250.364~~		Nail in Dirt
		5.340				
TP10			6.452	~~1249.252~~		Nail in Dirt
		6.700				
TP11			5.618	1250.334		Nail in Dirt
		6.260				
TP12	350		4.077	1252.517	1250.981	Fd Salt River Project Brass Cap flush w/ northwest corner conc s/w of Bridge over Consolidated Canal, Southside Lindsay Road; Stamped "△ Rm2"

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
		3.597				
TP13			6.123	~~1249.141~~		Nail in Dirt
		5.769				
TP14			4.127	~~1251.633~~		Paint Spot South T/C Baseline Road
		5.846				
TP15	351		5.316	~~1252.164~~	1250.627	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.72' below rim) (Y4 Cor) @ intersection of 32nd Street & Baseline Road
		6.542				
TP16			4.743	~~1253.962~~		Paint Spot South T/C Baseline Road
		6.528				
TP17			4.504	~~1255.987~~		Paint Spot South T/C Baseline Road
		5.888				
TP18	352		4.750	~~1257.125~~	1255.588	Fd Maricopa County Hwy Dept Brass Cap flush w/ pavement @ intersection of Baseline Road & Mirpamar Street
		5.882				
TP19			4.189	~~1258.817~~		Paint Spot South T/C Baseline Road
		6.000				
TP20			4.769	~~1260.048~~		Paint Spot South T/C Baseline Road
		5.648				
TP21	353		5.510	~~1260.187~~	1258.650	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.54' below rim) @ intersection of Baseline Road & Val Vista Drive
		5.704				
TP22			3.797	~~1262.094~~		Paint Spot South T/C Baseline Road
		6.000				
TP23			4.191	~~1263.903~~		Paint Spot South T/C Baseline Road
		5.561				
TP24			3.937	~~1265.526~~		Paint Spot South T/C Baseline Road
		5.638				

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
TP25	354		5.067	~~1266.098~~	1264.56	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.32' below rim) @ intersection of Baseline Road & 39th Street
		5.491				
TP26	355		5.555	~~1266.034~~	1264.497	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.42' below rim) & Baseline Road ± 75' East of & 39th Street
		5.730				
TP27			4.268	~~1267.496~~		Paint Spot South T/C Baseline Road
		5.805				
TP28	356		4.797	~~1268.504~~	1266.967	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.42' below rim) & Baseline Road ± 500' West of East Valley Auto Drive, ± 100' East of N-S Power Lines, (1/4 Cor)
		6.051				
TP29	357		4.198	~~1270.356~~	1268.821	Fd Maricopa County Hwy Dept Brass Cap flush w/ pvmt @ intersection of Baseline Road & East Valley Auto Drive West of Greenfield Road
		5.354				
TP30			4.071	~~1271.640~~		Paint Spot South T/C Baseline Road
		5.823				
TP31			4.385	~~1273.079~~		Paint Spot South T/C Baseline Road
		5.578				
TP32	83		5.176	~~1273.481~~	1271.944	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.40' below rim) @ intersection of Baseline Road & Greenfield Road; Brass Cap is 1' North of another MCHD Brass Cap that is flush w/ pvmt
		5.926				
TP33			3.689	~~1275.719~~		Paint Spot North Edge CLD Southside Baseline Road
		5.629				
TP34	358		3.822	~~1277.525~~	1275.988	Fd Maricopa County Hwy Dept Brass Cap in Handhole (0.45' below rim) & Baseline Road ± 700' East of intersection of Baseline Road & Greenfield Road
		5.445				
TP35	40 ~~359~~		3.590	~~1279.380~~	1277.843	Fd City of Mesa Brass Cap in Handhole (0.49' below rim) @ intersection of Baseline Road & East Valley Auto Drive East of Greenfield Road
		6.503				
TP36			2.272	~~1283.611~~		Nail in Dirt
		6.628				
END37	227		5.685	~~1284.554~~		"+" in Concrete, See Book 2 Page 18
				.032		

LINE 47

12-20-[illegible]
Cloudy, Cold [illegible]

MT Gardner
Ø Chavez

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	320			~~1283.822~~	1282.250	Stone in Handhole, See Page 19
		4.804				
TP1			6.378	~~1282.248~~		Paint Spot T/C Northside Main Street
		4.364				
TP2			6.987	~~1279.625~~		Paint Spot T/C Northside Main Street
		3.561				
TP3			7.345	~~1275.841~~		Paint Spot T/C Northside Main Street
		5.761				
TP4			5.094	~~1276.508~~		Paint Spot in Rmt 1st Street
		7.000				
TP5	64		5.362	~~1278.146~~	1276.581	Set ½" Rebar flush w/ground ±50' East of East Lane, ±50' South of 1st Street @ SW Cor of Cypress Meadows Mobile Home Park
		5.262				
TP6			6.901	~~1276.507~~		Same As TP4
		4.435				
TP7			5.100	~~1275.842~~		Same As TP3
		6.761				
TP8			2.986	1279.617		Paint Spot T/C Northside Main Street
		6.700				
TP9			4.079	~~1282.238~~		Paint Spot T/C Northside Main Street
		6.321				
END 10	320		4.752	~~1283.808~~	1282.250	POB
				(.014)		

LINE 5

STA	Pt #	BS+	FS -	ELEV	ADJ EL	REMARKS
POB	118			1325.925	1324.418	"X" in Concrete @ T/C, See Book 1 Page 9
		5.755				
TP1			4.996	1326.684		Nail in Dirt
		6.841				
TP2			5.173	1328.351		Nail in Dirt
		6.252				
TP3	23		4.698	1329.905	1328.399	Set ½" Rebar Flush w/ground ± 1320' North of Hermosa Vista Drive, ± 1320' West of Val Vista Drive @ NE Cor Stapley Jr High School ± 15' East of Fence, ± 15' South of Fence
		4.593				
TP4			6.147	1328.351		Same As TP2
		5.135				
TP5			6.801	1326.685		Same As TP1
		4.969				
END6	118		5.730	1325.925	1324.418	POB
				(.000)		

CURVE FORMULAS

$T = R \tan \frac{1}{2} I$

$T = \frac{50 \tan \frac{1}{2} I}{\text{Sin. } \frac{1}{2} D}$

$\text{Sin. } \frac{1}{2} D = \frac{50}{R}$

$\text{Sin. } \frac{1}{2} D = \frac{50 \tan \frac{1}{2} I}{T}$

$R = T \cot. \frac{1}{2} I$

$R = \frac{50}{\text{Sin. } \frac{1}{2} D}$

$E = R \text{ ex. sec } \frac{1}{2} I$

$E = T \tan \frac{1}{4} I$

$\text{Chord def.} = \frac{\text{chord}^2}{R}$

$\text{No. chords} = \frac{I}{D}$

$\text{Tan. def.} = \frac{1}{2} \text{ chord def.}$

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.) and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance. Multiply the angle by .01745, and the product by the distance.

GENERAL DATA

Right Angle Triangles. Square the altitude, divide by twice the base. Add quotient to base for hypotenuse.

Given Base 100, Alt. $10.10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. $25.25^2 \div 200 = 3.125$. $100 - 3.125 = 96.875 =$ Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

Leveling. The correction for curvature and refraction, in feet and decimals of feet is equal to $0.574\ d^2$, where d is the distance in miles. The correction for curvature alone is closely, $\frac{2}{3} d^2$. The combined correction is negative.

Probable Error. If d_1, d_2, d_3, etc. are the discrepancies of various results from the mean, and if Σd^2 = the sum of the squares of these differences and n = the number of observations, then the probable error of the mean = $\pm 0.6745 \sqrt{\frac{\Sigma d^2}{n(n-1)}}$

MINUTES IN DECIMALS OF A DEGREE

1'	.0167	11'	.1833	21'	.3500	31'	.5167	41'	.6833	51'	.8500
2	.0333	12	.2000	22	.3667	32	.5333	42	.7000	52	.8667
3	.0500	13	.2167	23	.3833	33	.5500	43	.7167	53	.8833
4	.0667	14	.2333	24	.4000	34	.5667	44	.7333	54	.9000
5	.0833	15	.2500	25	.4167	35	.5833	45	.7500	55	.9167
6	.1000	16	.2667	26	.4333	36	.6000	46	.7667	56	.9333
7	.1167	17	.2833	27	.4500	37	.6167	47	.7833	57	.9500
8	.1333	18	.3000	28	.4667	38	.6333	48	.8000	58	.9667
9	.1500	19	.3167	29	.4833	39	.6500	49	.8167	59	.9833
10	.1667	20	.3333	30	.5000	40	.6667	50	.8333	60	1.0000

INCHES IN DECIMALS OF A FOOT

1/16	3/32	1/8	3/16	1/4	5/16	3/8	1/2	5/8	3/4	7/8
.0052	.0078	.0104	.0156	.0208	.0260	.0313	.0417	.0521	.0625	.0729

1	2	3	4	5	6	7	8	9	10	11
.0833	.1667	.2500	.3333	.4167	.5000	.5833	.6667	.7500	.8333	.9167

Elan Publishing Co., Inc. Meredith, N.H. 03253

1

Mesa ADMS

Levels

Book 4

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
25393
KARL M.
MORTENSEN
DATE SIGNED 10-2-96
ARIZONA, U.S.A.

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LINE 51

STA	Pt #	BS+	FS−	ELEV	ADJ EL
POB	124			1350.973	1349.470
		4.565			
TP1	55		5.029	~~1350.509~~	1349.005
		4.922			
END 2	124		4.457	1350.973	1349.470
				.000	

REMARKS

"X" in Conc Cur SRP Structure, See Book 1 Page 12

Set 1/2" Rebar Flush w/ground & Hermosa Vista Drive Extended, ±70' West of West Edge Roosevelt Canal

POB

LINE 52

STA	PT#	BS+	FS-	ELEV	ADJ EL
POB	223			~~1344.174~~	1313.116
		4.380			
TP1	77		5.439	~~1343.115~~	1341.611
		5.344			
END 2	223		4.285	~~1344.174~~	1313.116

REMARKS

1" in Conc Irr Gate, See Book 2 Page 16

Set 1/2" Rebar flush w/ground ± 1/4 Mile North of Southern Ave, ±15' West of West edge Roosevelt Canal, ±20' North of North Fence Line of Pump Site

POB

LINE 53

STA	Pt #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	238			~~1331.782~~	1338.272	"+" in Conc Irr Gate, See Book 2 Page 20
		6.921				
TP1			11.952	~~1334.751~~		Nail in Dirt
		3.651				
TP2	81 ~~82~~		9.158	~~1329.244~~	1327.734	Set ½" Rebar flush w/ground ± 125' East of Roosevelt Canal, ± 100' North of U.S. 60 in center of bottom of retention area
		8.867				
TP3			3.359	~~1334.752~~		Same As TP1
		12.097				
END4	238		7.067	~~1339.781~~ (.001)	1338.272	POB

LINE 54

STA	Pt#	BS+	FS-	ELEV	ADJ EL
POB	244			~~1284.629~~	1283.119
		3.798			
TP1	44		8.013	~~1280.413~~	1278.903
		7.847			
END2	244		3.631	~~1284.630~~	1283.119

2-23-96
Ptly Cldy, Calm, Warm 70°F

Gardner
Coyne

REMARKS

"+" in Concrete, See Book 2 Page 26

Set ½" Rebar ± 1320' South of Baseline Road, ± 30' West of West Edge Eastern Canal, ± 6' West, ± 4' North of Concrete Lined Ditch

POB

LINE 55

STA	PT#	BS+	FS-	ELEV	ADJ EL
* POB	229 ~~233~~			1299.048 ~~1314.627~~	1287.538
		5.861			
TP1			4.277	~~1316.211~~	
		6.191			
TP2			4.205	~~1318.177~~	
		5.632			
TP3			4.850	~~1318.979~~	
		4.542			
TP4	78		7.200	~~1316.320~~	1289.229
		7.095			
TP5			4.436	~~1318.979~~	
		4.879			
TP6			5.660	~~1318.198~~	
		3.865			
TP7			5.847	~~1316.216~~	
		4.190			
* END 8	229 ~~233~~		5.773	~~1314.634~~	1287.538
				1007	

REMARKS

Brass Cap in Handhole, See Book 2 Page 18

Nail in Dirt

Nail in Dirt

Nail in Dirt

Set ½" Rebar Flush w/ground ±1320' North of Baseline Road, ±2000' West of Highly Road

Same As TP3

Same As TP2

Same As TP1

POB

LINE 56

STA	PT#	BS+	FS-	ELEV	ADJ EL
POB	230			~~1296.511~~	1295.001
		6.211			
TP1	41		4.046	~~1298.676~~	1297.166
		3.897			
END2	230		6.063	~~1296.510~~	1295.001

REMARKS

Brass Cap in Handhole, See Book 2 Page 18

Set PK Nail in Plant

LINE 57

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	231			1300.526	1299.016	Brass Cap in Handhole, See Book 2 Page 18
		5.197				
TP1			5.002	1300.722		Nail in Dirt
		4.944				
TP2			5.438	1300.227		Nail in Dirt
		4.756				
TP3			5.328	1299.655		Nail in Dirt
		5.313				
TP4	45		5.813	1299.235	1297.734	Fd ½" Rebar w/yellow cap
		5.560				
TP5			5.140	1299.655		Same As TP3
		5.572				
TP6			5.003	1300.224		Same As TP2
		5.772				
TP7			5.292	1300.704		Same As TP1
		4.914				
END8	231		5.109	1300.509	1299.016	POB
				.017		

LINE 58

STA	HT #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	231			~~1300.526~~	1299.016	Brass Cap in Handhole, See Book 2 Page 18
		4.407				
TP1			4.428	~~1300.504~~		Nail in Dirt
		7.174				
TP2			3.667	~~1304.012~~		Nail in Dirt
		6.236				
TP3			3.719	~~1306.529~~		Nail in Dirt
		5.699				
TP4	79		4.523	~~1307.705~~	1306.199	Set ½" Rebar flush w/ground ± 2000' East of Higley Road, ± 1300' North of Baseline Road
		4.693				
TP5			5.870	~~1306.528~~		Same As TP3
		3.932				
TP6			6.453	~~1304.007~~		Same As TP2
		3.927				
TP7			7.437	1300.497		Same As TP1
		4.366				
END 8	231		4.344	~~1300.519~~	1299.016	POB
				.007		

Line 37

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	243			1319.959	1318.447	1/4" in Concrete, See Book 2 Page 25
		5.699				
TP1	46		5.318	1320.341	1318.829	Set PK Nail in Root
		5.182				
END 2	243		5.565	1319.958	1318.447	POB
				(.001)		

LINE 60

STA	Pt#	BS+	FS-	ELEV	ADJ EL
POB	237			~~1340.005~~	1338.495
		6.700			
TP1	43		5.276	~~1341.429~~	1339.919
		5.138			
END 2	237		6.562	~~1340.006~~	1338.495
				.001	

REMARKS

"+" in Concrete, See Book 2 Page 12

BC Flush

POB

LINE 61

STA	PT #	BS+	FS-	ELEV	ADJ EL
POB	235			~~1327.458~~	1325.948
		5.887			
TP1	82		4.475	~~1328.870~~	1327.361
		4.295			
END2	235		5.708	~~1327.457~~	1329.948
				.001	

REMARKS

Brass Cap in Handhole, See Book 2 Page 19

Set PK Nail in center of pavement Recker Road ± 700' North of Baseline Road

POB

LINE 62

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	234			~~1322.263~~	1320.754	Brass Cap in Hardhole, See Book 2 Page 19
		3.052				
TP1			6.096	1319.220		Nail in Dirt
		4.899				
TP2	42		5.382	~~1318.937~~	1317.220	Set PK in Pvmt
		5.244				
TP3			4.759	1319.222		Same As TP1
		6.260				
END4	234		3.204	1322.279 (.016)	1320.754	POB

LINE 63

STA	Pt #	BS+	FS-	ELEV	ADJ EL
POB	242			~~1322.836~~	1321.328
		1.979			
TP1			5.769	~~1319.046~~	
		5.259			
TP2	80		5.658	~~1318.647~~	1317.139
		5.781			
TP3			5.381	~~1319.047~~	
		5.875			
END4	242		2.086	~~1322.835~~ .001	1321.328

REMARKS

1/4" in Concrete, See Book 2 Page 24

Nail in Dirt

Set 1/2" Rebar flush w/ground ±100' North of U.S. 60 Westbound, ±200' East of Higley Road

Same As TP1

POB

LINE 64

STA	PT#	BS+	FS-	ELEV	ADJ EL
POB	222			~~1343.213~~	1341.710
		4.767			
TP1	39		4.187	~~1343.794~~	1342.290
		4.067			
END2	222		4.648	~~1343.213~~	1341.710

REMARKS

Brass Cap, See Book 2 Page 16.

Set PK Nail in Pavement

POB

LINE 65

STA	Pt #	BS	FS-	ELEV	ACT EL
POB	240			~~1295.772~~	1294.253
		7.280			
TP1			3.711	~~1299.342~~	
		6.200			
TP2	76		5.133	~~1300.408~~	1298.888
		4.941			
TP3			6.006	~~1299.343~~	
		3.720			
END4	240		7.289	~~1295.774~~	1294.253
				.002	

2-26-[illegible]
Cloudy, Brezy, Cool 45°F

π Carolina Coyne
Ø

REMARKS

Brass Cap, Set Book 2 Page 22

Paint Spot South T/c Harmony Circle

Set PK Nail in Pvmt ℄ Harmony Circle ± 30' South of Center of Median @ End of Street

Same As TP1

POB

LINE 66

STA	PT #	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	197			~~1288.244~~	1286.743	Brass Cap, See Book 1 Page 8
		4.942				
TP1			9.840			Paint Spot North T/C Pueblo Street
		4.097				
TP2			6.534	~~1280.909~~		Paint Spot East T/C Nassau Street
		6.050				
TP3			4.496			Paint Spot West T/C Nassau Street
		5.796				
TP4	70		6.366	~~1281.892~~	1280.393	Fd City of Mesa Brass Cap in Manhole (1.00' below rim) @ Intersection of Nassau Street & Dorsey Circle
		6.259				
TP5			5.688	~~1282.463~~		Same As TP3
		4.510				
TP6			6.066	~~1280.907~~		Same As TP2
		6.659				
TP7			4.222	~~1283.345~~		Same As TP1
		9.636				
END8	197		4.739	~~1288.243~~	1286.743	POB
				.001		

LINE 67

STA	PT#	BS+	FS-	ELEV	ADJ EL
POB	196			~~1345.711~~	1344.209
		5.524			
TP1	73		5.200	~~1346.034~~	1344.529
		5.066			
END 2	196		5.383	~~1345.717~~	1344.209
				.006	

REMARKS

"+" in Concrete, See Book 2 Page 5

Set PK Nail in Center of Runt Broadway Road @ Center of Roosevelt Canal

POB

LINE 68

STA	PT #	BS+	FS-	ELEV	ADJ EL
POB	188			~~1344.789~~	1343.235
		7.593			
TP1	69		4.990	~~1347.391~~	1345.838
		4.922			
END2	188		7.526	1344.787	1343.235
				.002	

REMARKS

Brass Cap, See Book 1 Page 34

Set PK Nail in Plant ± 50' West of ℄ Hyley Road, ± 4' East of Bullnose & Median on Main Street

POB

LINE 69

STA	Pt#	BS+	FS-	ELEV	ADJ EL	REMARKS
POB	181			~~1348.842~~	1347.374	"4" in Concrete, See Book 1 Page 31
		4.166				
TP1	33		4.947	~~1348.061~~	1346.593	Set PK
		4.820				
END2	181		4.038	~~1348.842~~	1347.374	POB
				.000		

LINE 10

STA	PT #	BS+	FS-	ELEV	ADJ EL
PUB	170			~~1351.025~~	1349.527
		5.259			
TP1	67		5.485	~~1350.798~~	1349.298
		5.359			
END 2	170		5.128	~~1351.029~~	1349.527
				.004	

REMARKS

"+" in Concrete, See Book 1 Page 26

Set PK Nail in Point 2.15' South of ℄ Adobe Street ±20' East of East Edge Roosevelt Canal

LINE 11

STA	PT#	BS+	FS-	ELEV	ADJ EL
POB	125			~~1352.770~~	1351.465
		4.750			
TP1	56		4.973	~~1352.747~~	1351.242
		4.877			
END2	125		4.654	~~1352.969~~	1351.465
				.001	

REMARKS

"X" in concrete, See Book 1 Page 13

Set PK Nail in Point ℄ McKellips Road ±20' West of West Edge Roosevelt Canal

POB

LINE 72

STA	PT#	BS+	FS-	ELEV	ADJ EL
POB	131			~~1346.231~~	1344.715
		4.135			
TP1	24		4.308	~~1346.058~~	1344.541
		4.079			
END2	131		3.904	~~1346.233~~	1344.715
				.002	

REMARKS

"X" in Concrete, See Book 1 Page 14

Fd City of Mesa Brass Cap in Handhole (0.58' Below R.i.)
@ intersection of 38th Place & McDowell Road

POB

LINE 73

STA	PT #	BS+	FS-	ELEV	ADJ EL
POB	103			~~1295.200~~	1293.697
		5.757			
TP1	52		7.358	~~1293.599~~	1292.096
		7.298			
END 2	103		5.696	~~1295.201~~	1293.697
				.001	

REMARKS

Cotton Spindle, See Book 1 Page 5

Set 1/2" Rebar Flush w/ground ±1300' North of McCullips Road, ±30' East of East Edge of Eastern Canal

POB

LINE 74

STA	Pt #	BS+	FS−	ELEV	ADJ EL
POB	102			~~1295.370~~	1293.867
		5.686			
Tr1	26		6.560	~~1294.496~~	1292.992
		6.402			
END2	102		5.526	~~1295.372~~	1293.867
				.002	

REMARKS

Brass Cap, See Book 1 Page 5

FI BC in HH (0.30 Below Rim & 0.63 Below Pave)
±½ Mile East of Gilbert Road & McKellips Road

POB

LINE 76

STA	PT#	BS+	FS-	ELEV	ADJ EL
POB	143			~~1306.499~~	1304.988
		5.920			
TP1	59		5.053	~~1307.366~~	1305.856
		4.970			
END2	143		5.839	~~1306.497~~	1304.988
				(.002)	

REMARKS

Brass Cap, See Book 1 Page 19

Set PK Nail in Point ±250' Northwest Grandview Street, ± 8' East of ℄ Minuter Street

POB

LINE 77

STA	PT #	BS+	FS-	ELEV	ADJ EL
* POB	360 ~~500~~			~~1273.576~~	1373.576
		6.260			
TP1			3.643	~~1276.192~~	
		6.800			
TP2			3.545	~~1279.447~~	
		6.753			
TP3			4.371	~~1281.829~~	
		5.966			
TP4	320 ~~68~~		5.551	~~1282.244~~	1282.250
		4.888			
TP5			6.500	~~1280.632~~	
		3.987			
TP6			7.434	~~1277.185~~	
		3.736			
TP7			6.638	~~1274.283~~	
		5.198			
END 8	360 ~~500~~		5.919	~~1273.562~~	1373.576
				.004	

REMARKS

Fd Metal Rail in Handhole (0.06' below r.m.) ± 30.2' West of ℄ Entrance to Cypress Estates Mobile Home Park, ± 3.9' North of South End Brick Wall North side Main Street, ± 1000' West of ~~[illegible]~~ NGS First Order Leveling Monument A-518"

Rec NAD 27 Elev = 1273.576

Paint Spot South T/C Main Street

Paint Spot South T/C Main Street

Paint Spot South T/C Main Street

Stone in Handhole (Int' Vs Visit + Map.)

Paint Spot North T/C Main Street

Paint Spot North T/C Main Street

Paint Spot North T/C Main Street

POB

LINE 78

STA	Pt#	BS+	FS-	ELEV	ADJ EL
POB	225			~~1283.646~~	1283.646
		4.277			
TP1	75		8.514	1279.409	1279.408
		8.454			
END2	225		4.215	~~1283.448~~ (.302)	1283.646

REMARKS

"+" in Headwall, See Book 2 Page 17

Set ½" Rebar flush w/ground ± 50' North of EB US 60 Onramp for Greenfield Road, ± 200' West of Greenfield Road

POB

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. "Flume

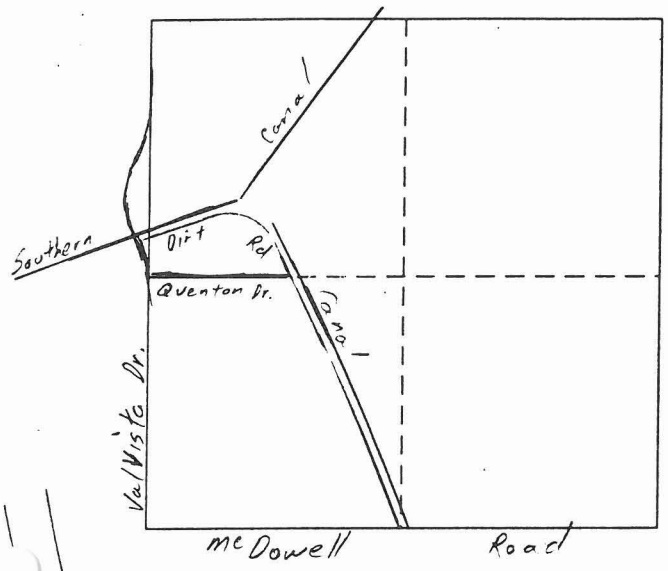
Project Mesa ADMS

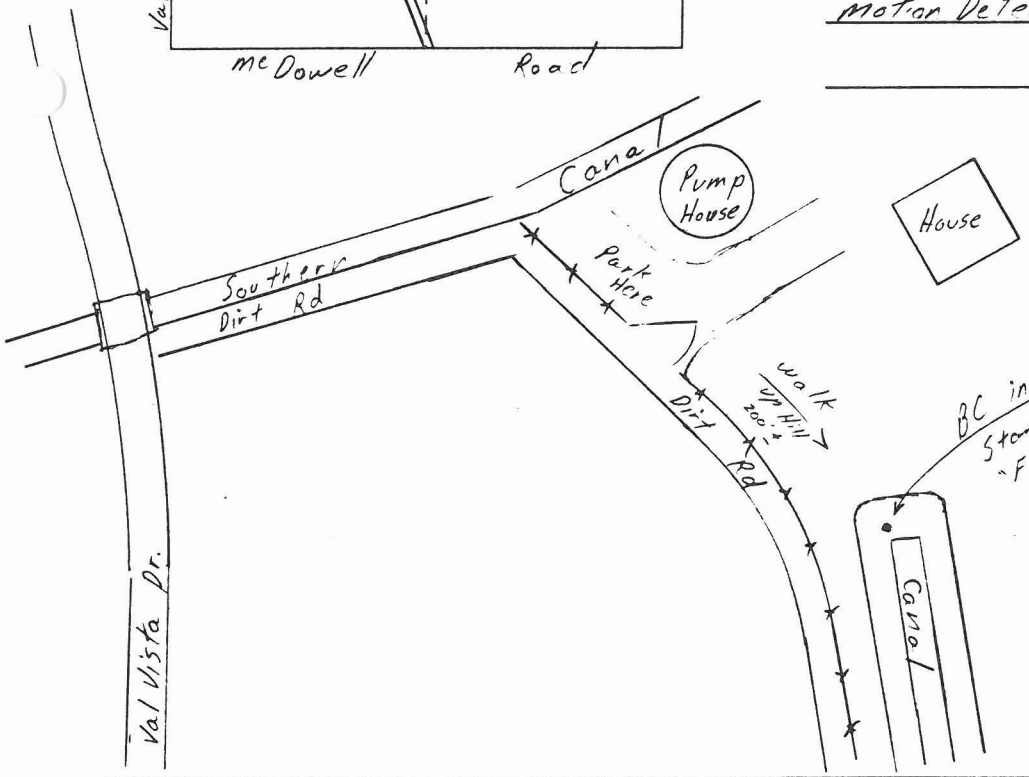
Rec. by: KM

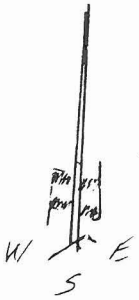
Sec 33 T 2N R 6E

Date: 2-19-96

Mon. Desc. Fd BC in Conc. Stamped "FLUME" (ADOT PtM ?) Residence Said Gate will be left open for PEC. If dog comes - Just give a command to "Go Home", he will not bite. Do not Go near the Pump House because it will set off a motion Detection Alarm







Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. PATCH

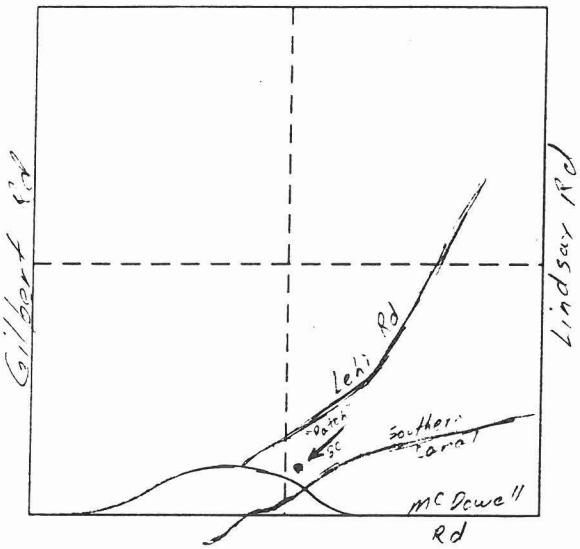
Project Mesa ADMS

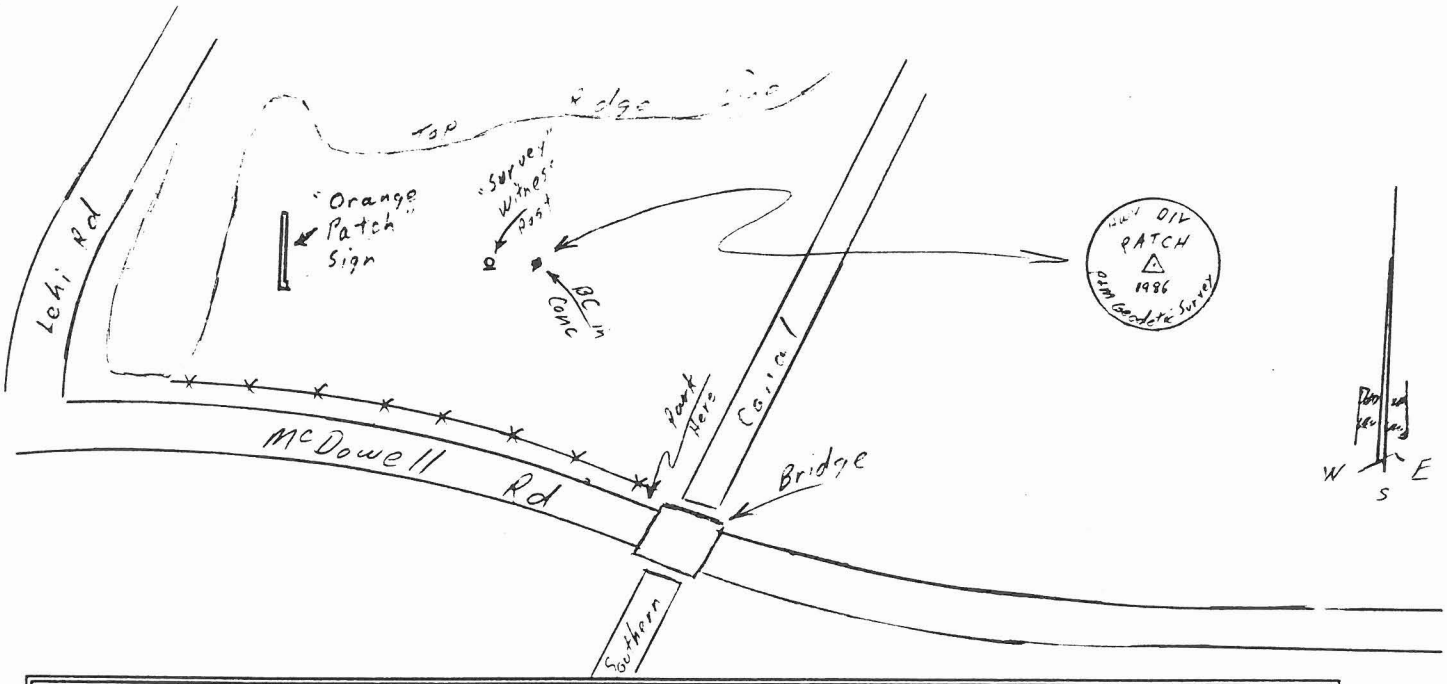
Rec. by: KM

Sec 31 T 2N R 6E

Date: 2-19-96

Mon. Desc. Fd BC in Conc
Stamped "PATCH 1985"
(Apost P.M. Point)
30' ± N of Barbwire Fence
84' ± E of "Orange Patch" Sign
105' NW of Bridge





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. SAN

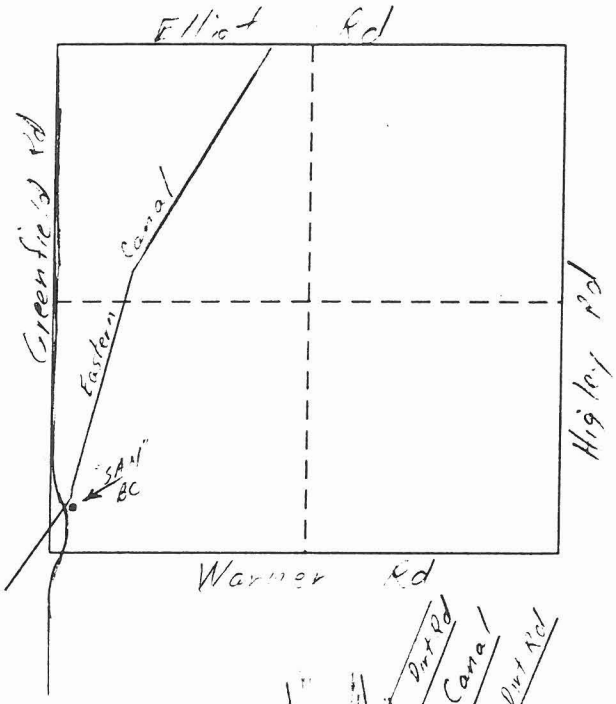
Project Mesa ADMS

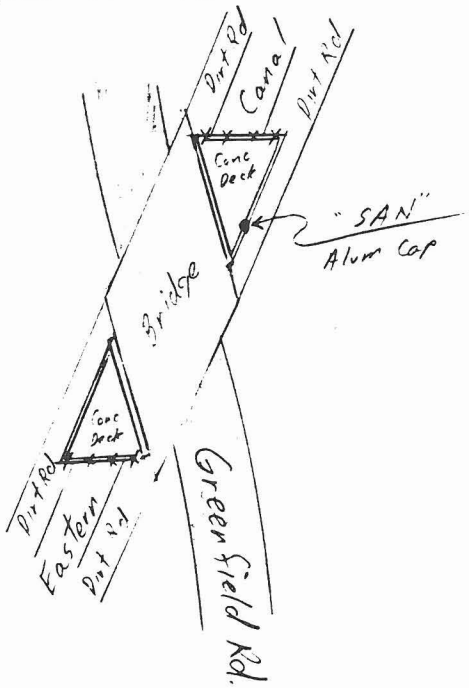
Rec. by: KM

Sec 15 T 1S R 6E

Date: 2-19-96

Mon. Desc. Fd Alum Cap in Conc Boarder of Bridge Deck (ADOT P+M P+)





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

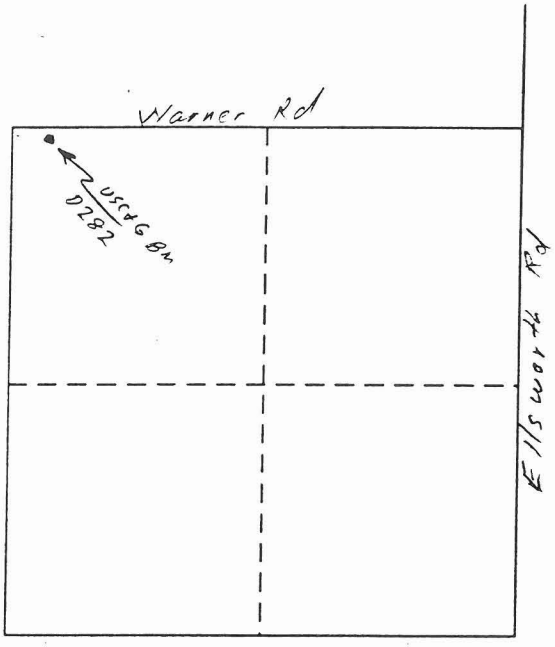
Point No. D282

Project Mesa ADMS

Rec. by: KM

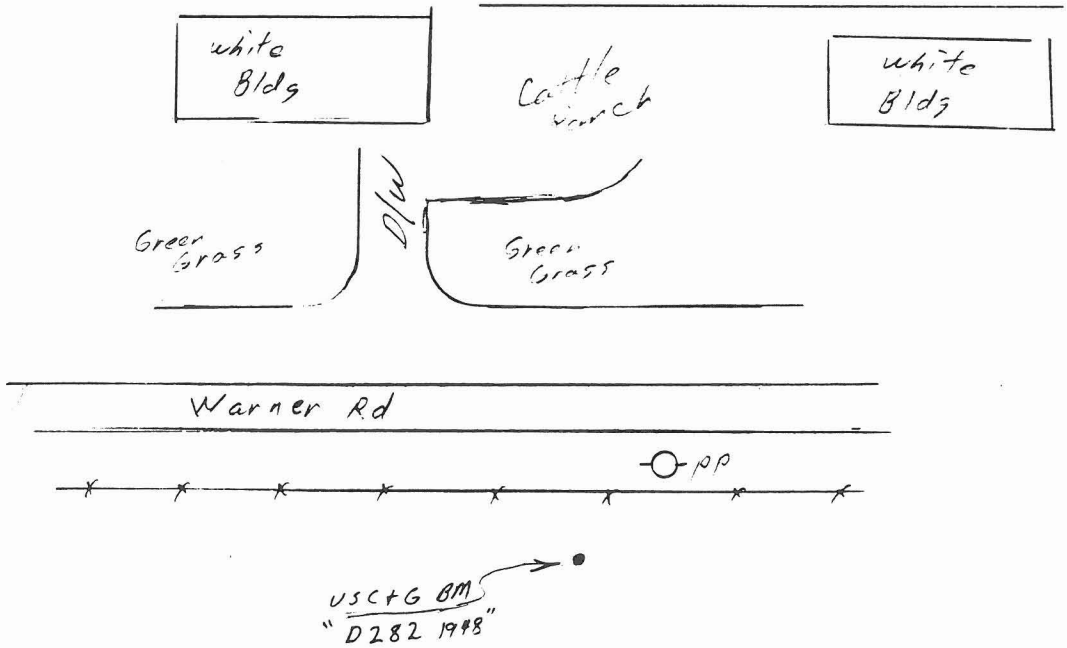
Sec 21 T 15 R 7 E

Date: 2-19-96



Mon. Desc. Fd USC+G BC in Conc
BC stamped "D282 1948"
7'± S of Fence Line and
0.95 mi W. of Ellsworth Rd

(Access Pt from Ellsworth Rd)



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

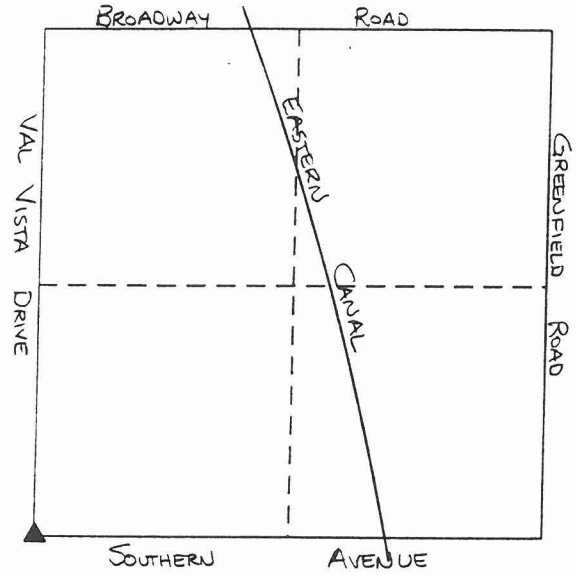
Point No. 3

Project MESA ADMS

Rec. by: C GARDINER

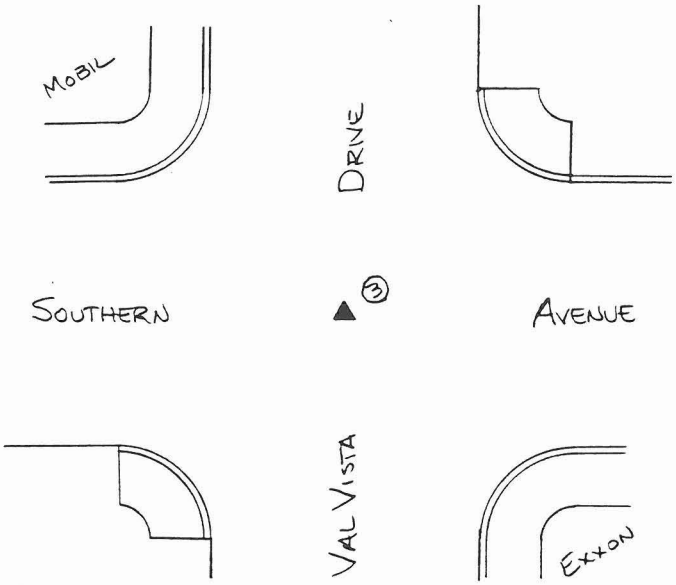
Sec 28 T 1N R 6E

Date: 2-12-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.60' below rim) @ intersection of Southern Avenue & Val Vista Drive

#3
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
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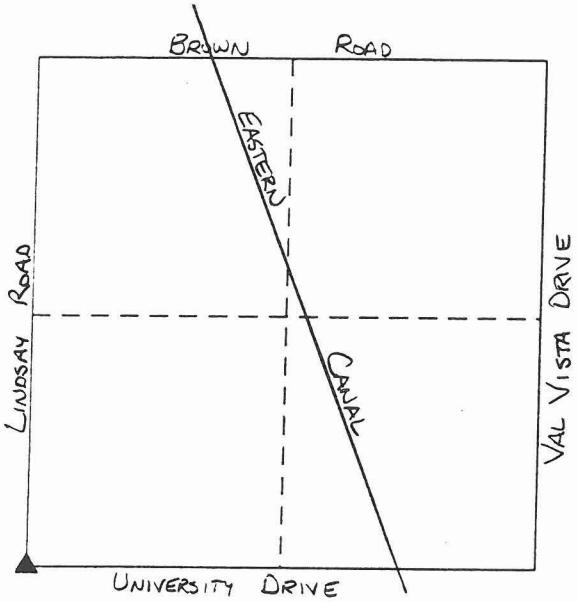
Point No. 8

Project MESA ADMS

Rec. by: C GARDINER

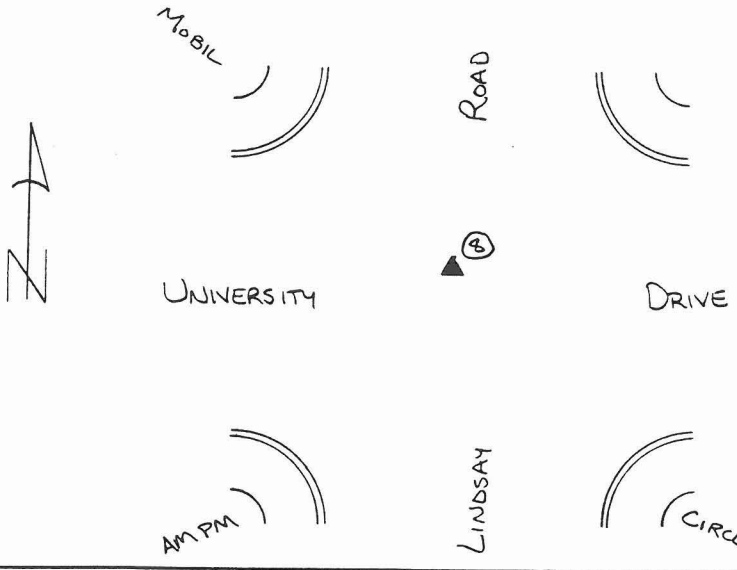
Sec 17 T 1N R 6E

Date: 2-12-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.98' below rim) @ intersection of Lindsay Road & University Drive

#8
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

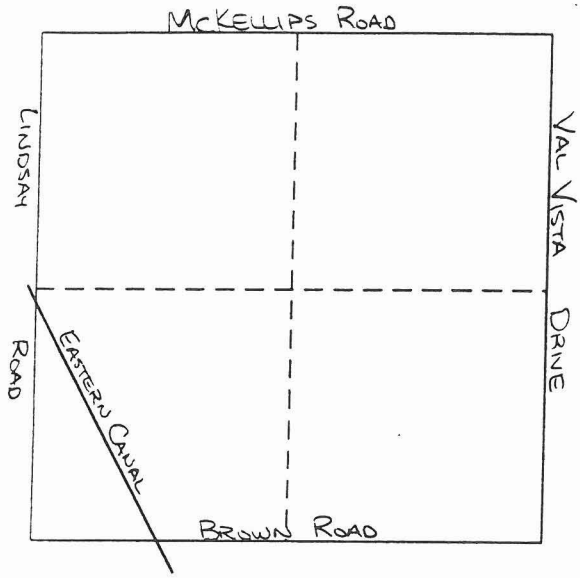
Point No. 9

Project MESA ADMS

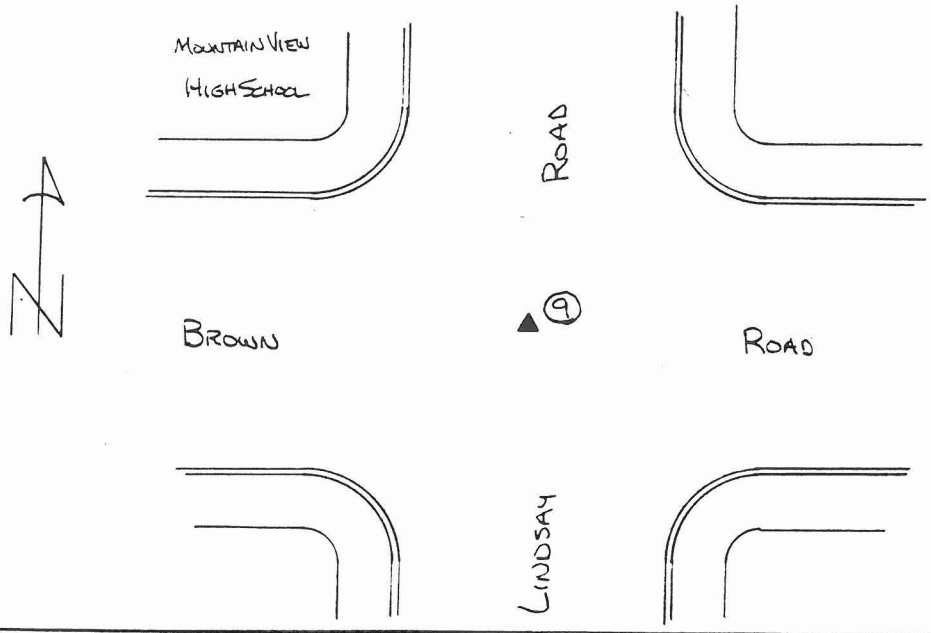
Rec. by: C GARDINER

Sec 8 T 1N R 6E

Date: 2-9-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.90' below rim) @ intersection of Brown Road & Lindsay Road



#9
BRASS CAP DETAIL

Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

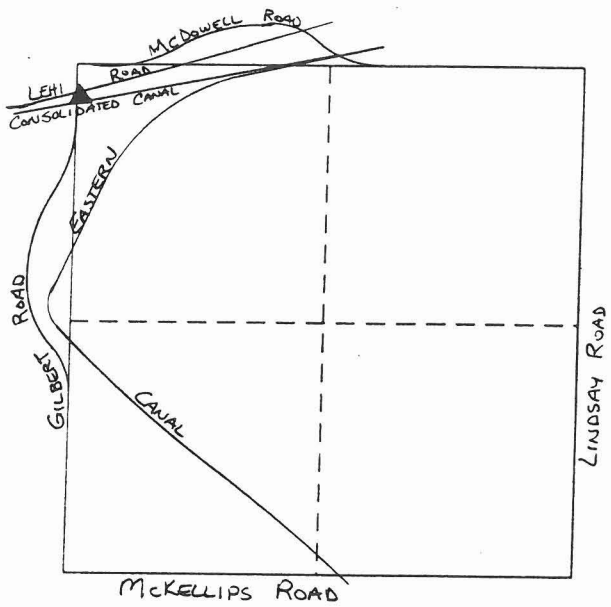
Point No. 19

Project MESA ADMS

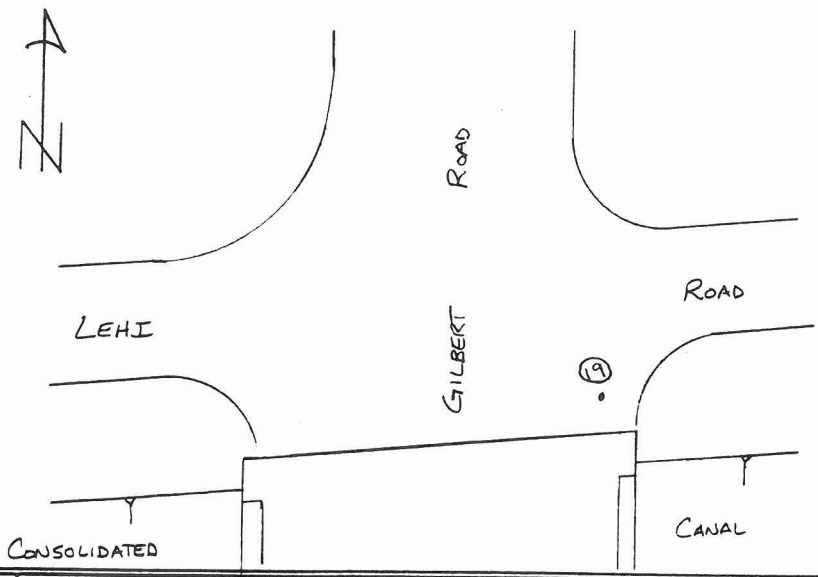
Rec. by: C GARDINER

Sec 6 T 1N R 6E

Date: 2-12-96



Mon. Desc. Set P.K. Nail in Pavement ±30' North of ℄ Consolidated Canal, ±25' East of ℄ Gilbert Road, ±10' South of South E.P. Lehi Road



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
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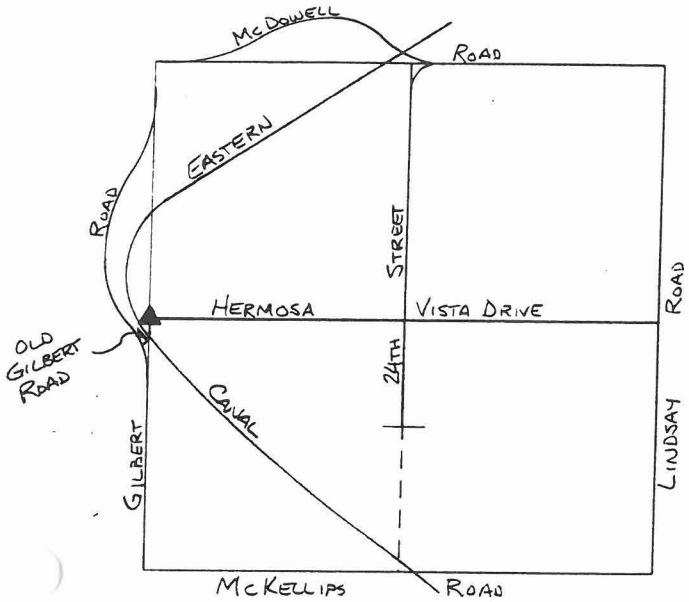
Point No. 20

Project MESA ADMS

Rec. by: C GARDINER

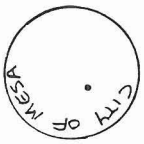
Sec 6 T 1N R 6E

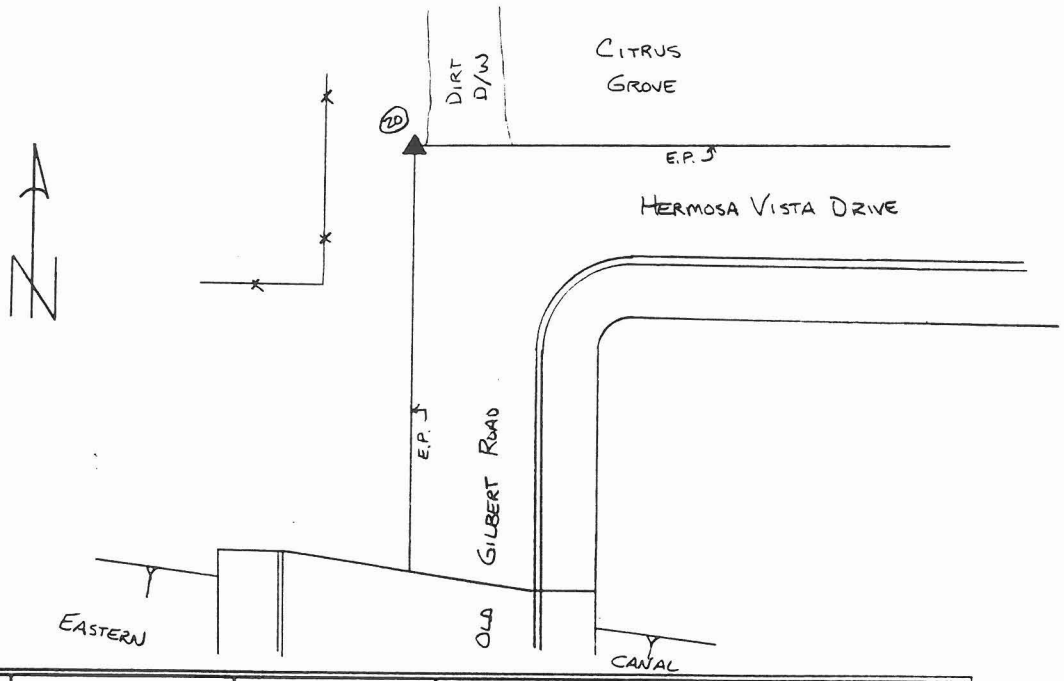
Date: 2-12-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.72' below rim) @ intersection of Hermosa Vista Drive & Old Gilbert Road

#20
BRASS CAP DETAIL





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

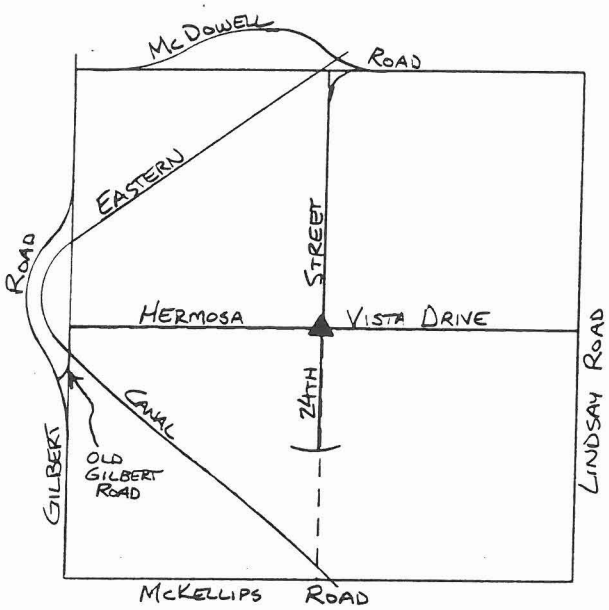
Point No. 21

Project MESA ADMS

Rec. by: C GARDINER

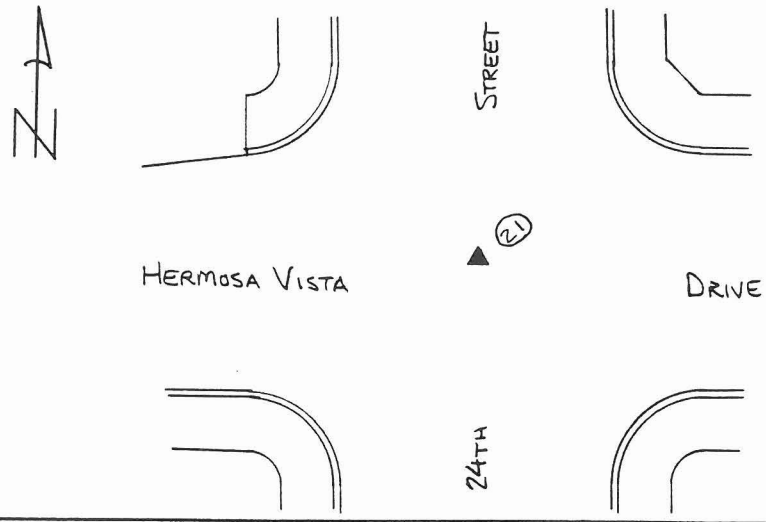
Sec 6 T 1N R 6E

Date: 2-12-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.84' below rim) @ intersection of Hermosa Vista Drive & 24th Street

#21
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 22

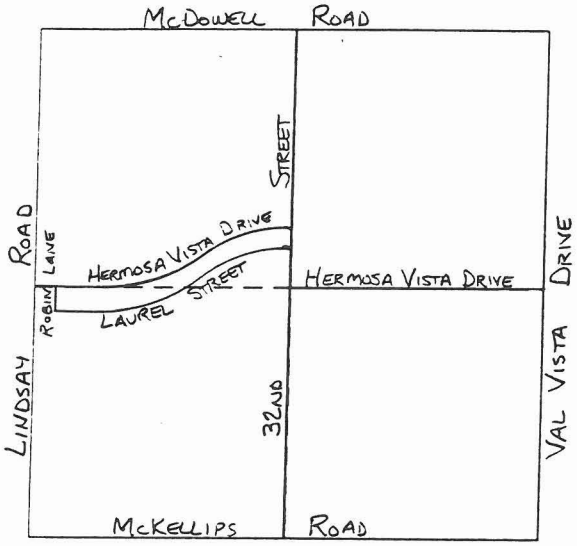
Project MESA ADMS

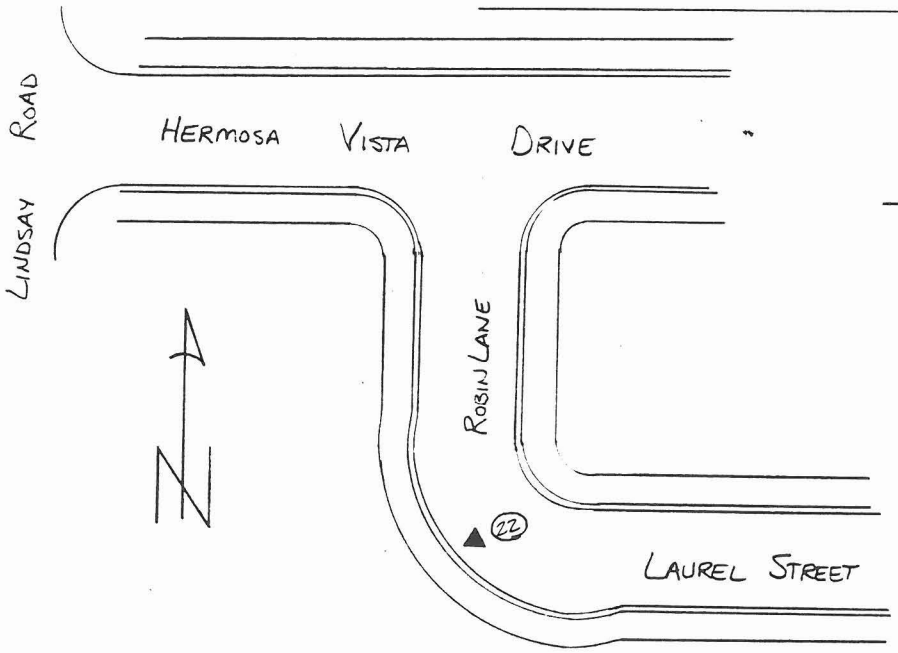
Rec. by: C GARDINER

Sec 5 T 1N R 6E

Date: 2-12-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.90' below rim) @ intersection of Robin Lane & Laurel Street





#22
BRASS CAP DETAIL

Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

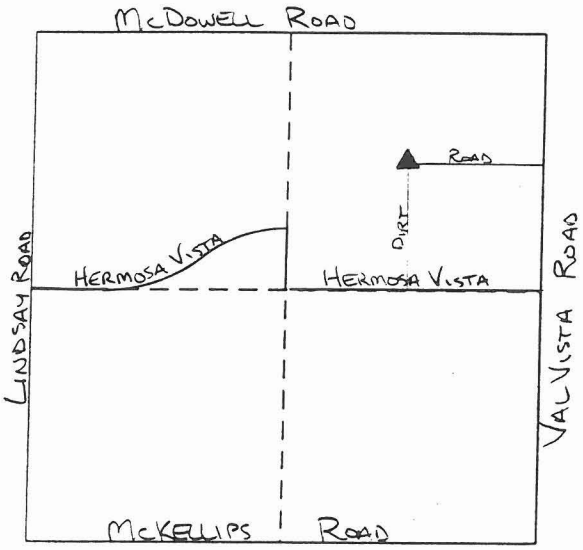
Point No. 23

Project MESA ADMS

Rec. by: C GARDINER

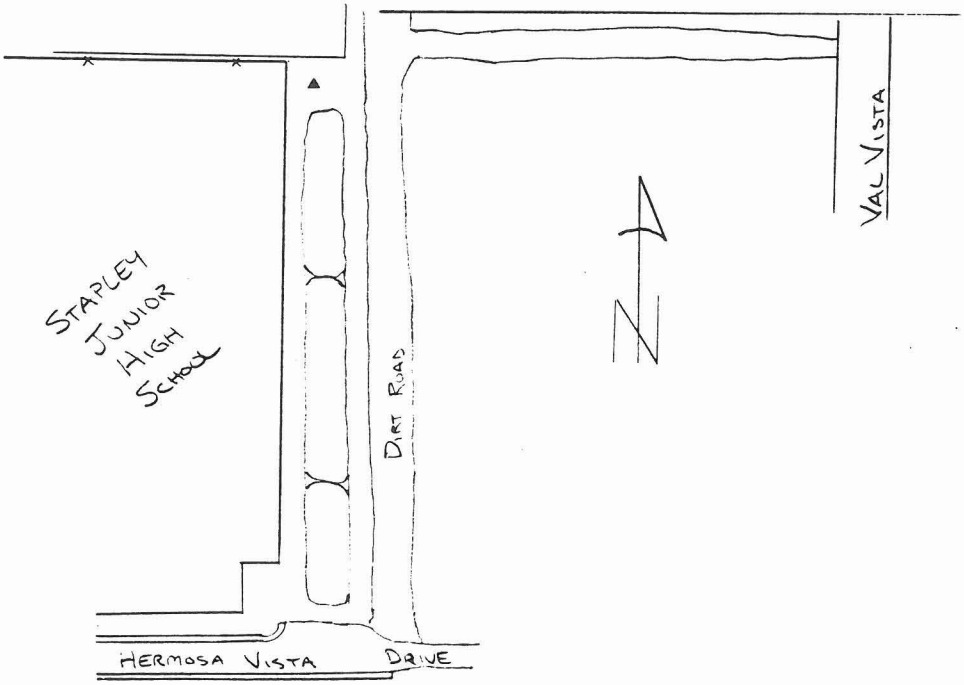
Sec 5 T 1N R 6E

Date: 2-19-96



Mon. Desc. Set ½" Rebar flush w/ground ±1320' West of Val Vista Road, ±1320' North of Hermosa Vista Drive, ±15' East of 8' Chain Link Fence, ±33' South of 4' Wire Fence

** MIGHT ONLY BE DRIVEN TO FROM VAL VISTA ROAD (IF CHAIN IS UNLOCKED)



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

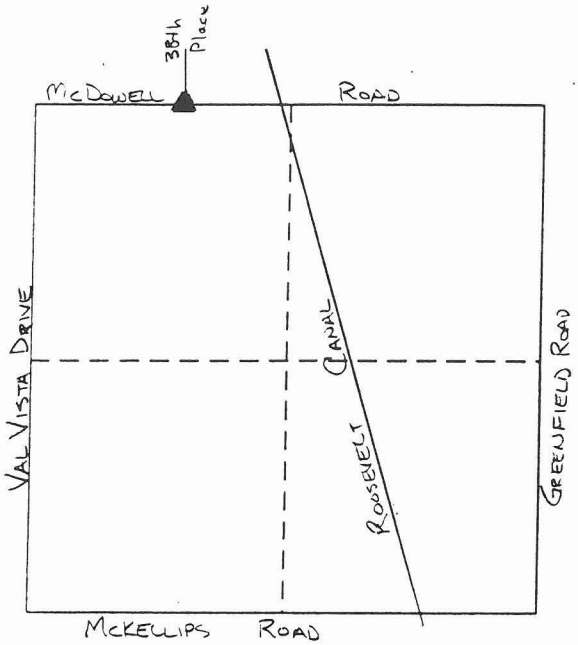
Point No. 24

Project MESA ADMS

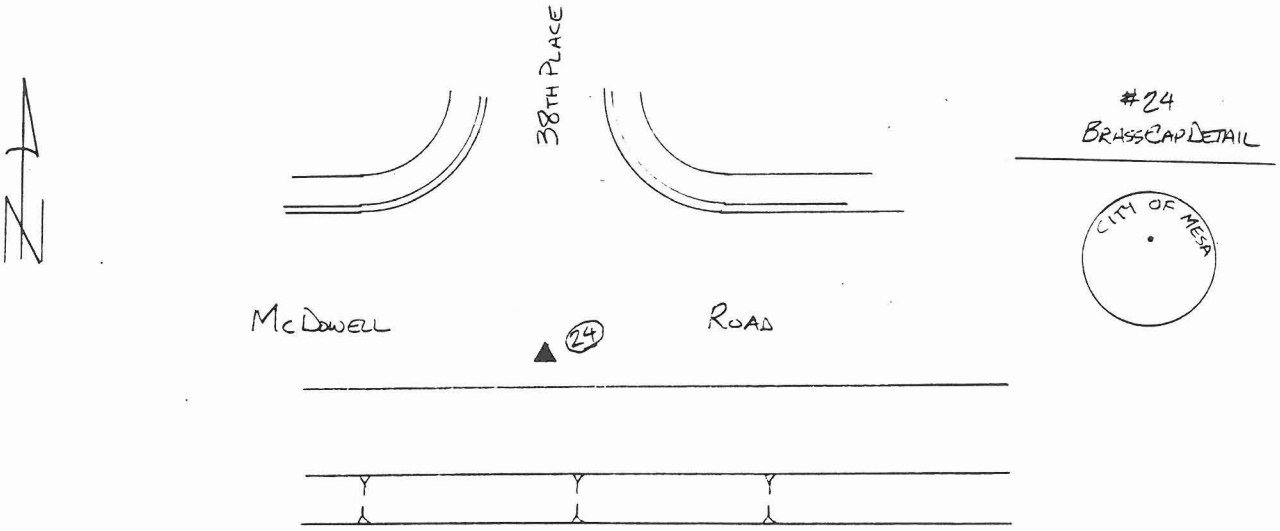
Rec. by: C GARDINER

Sec 4 T 1N R 6E

Date: 2-21-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.58' below rim) @ intersection of 38th Place & E McDowell Road



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

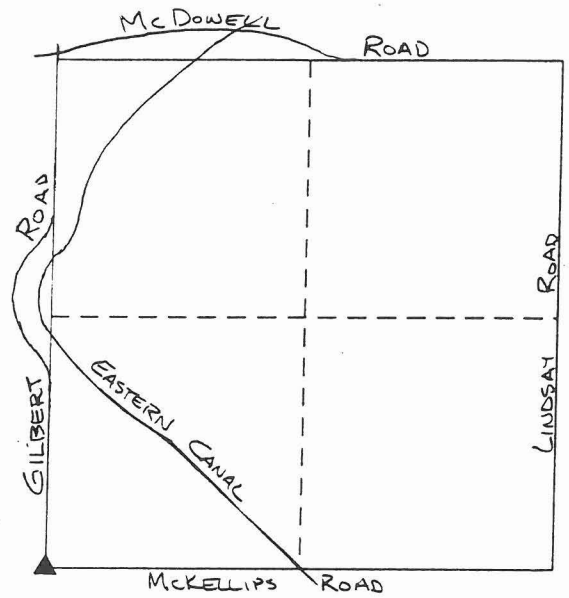
Point No. 25

Project MESA ADMS

Rec. by: C GARDINER

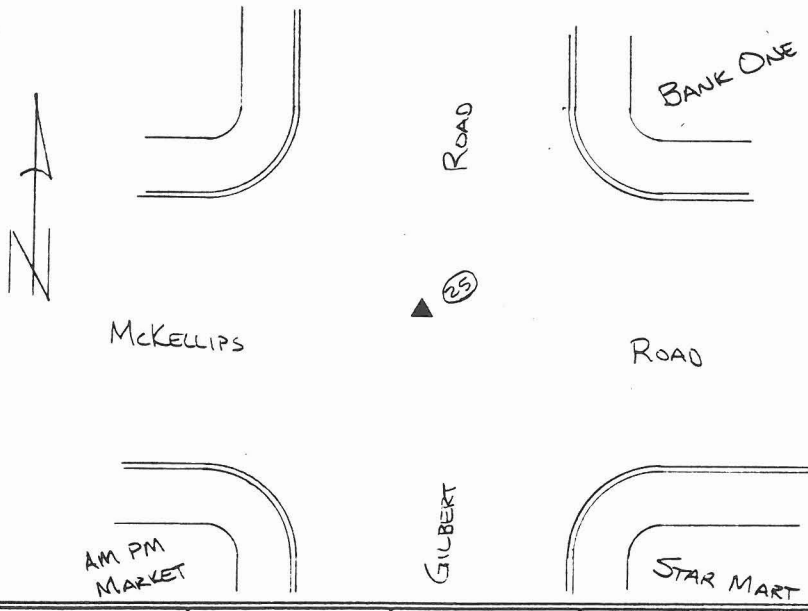
Sec 6 T 1N R 6E

Date: 2-12-96



Mon. Desc. Fd Maricopa County Highway Dept Brass Cap in Handhole (0.90' below rim) @ intersection of Gilbert Road & McKellips Road

#25
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 26

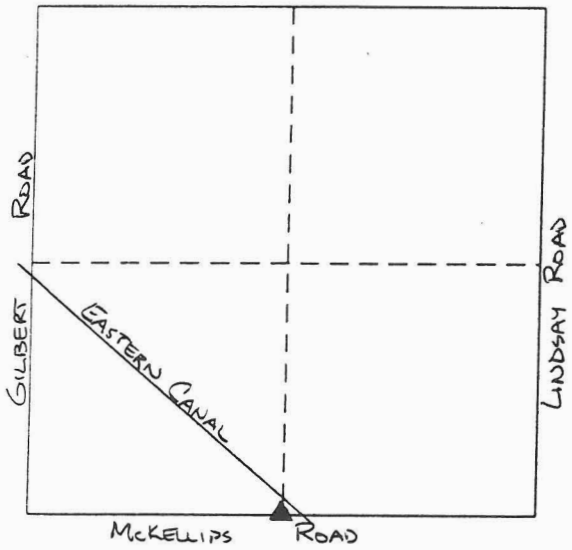
Project MESA ADMS

Rec. by: C GARDINER

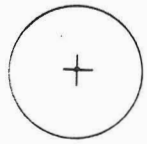
Sec 6 T 1N R 6E

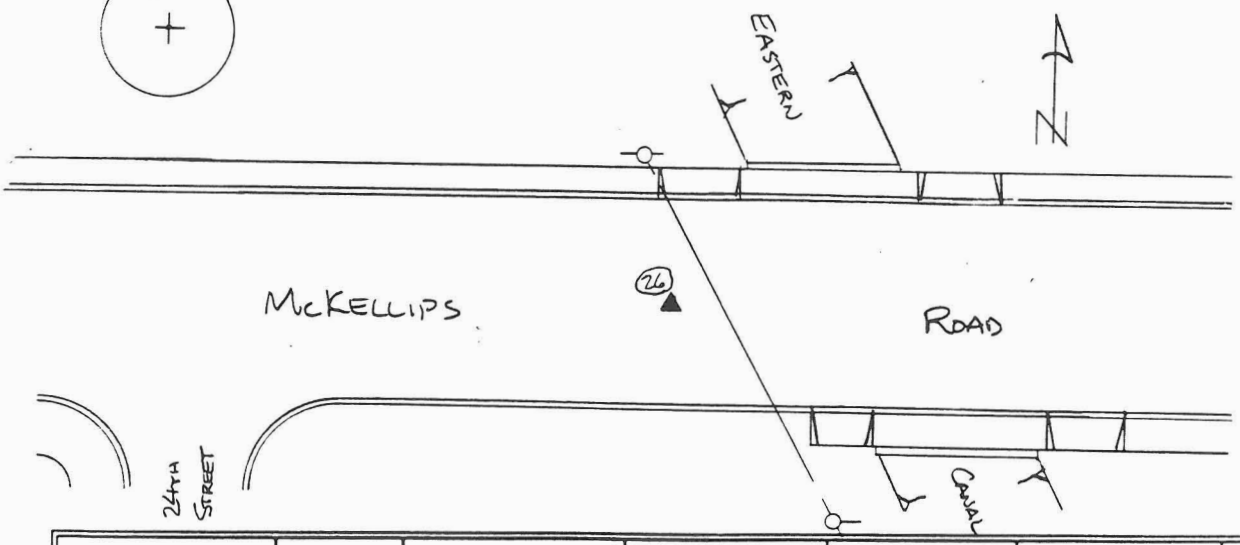
Date: 2-12-96

Mon. Desc. Fd Unmarked Brass Cap in Handhole (0.30' below rim, 0.63' below pavement) in ℄ McKellips Road, ± ½ Mile East of Gilbert Road, ±100' West of ℄ Eastern Canal, ±300' East of 24th Street



#26
BRASS CAP DETAIL





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 27

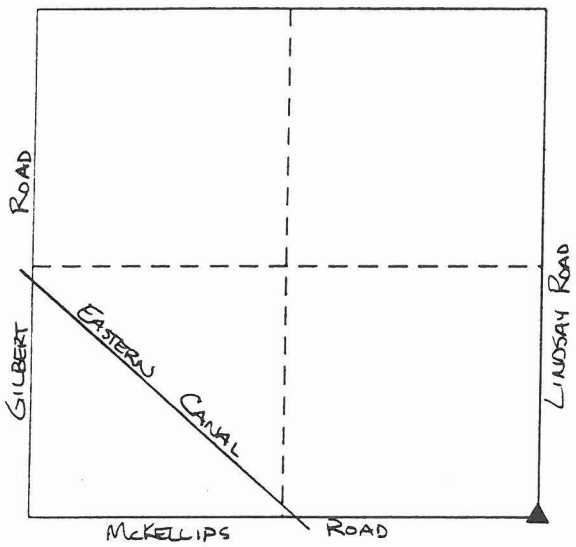
Project MESA ADMS

Rec. by: C GARDINER

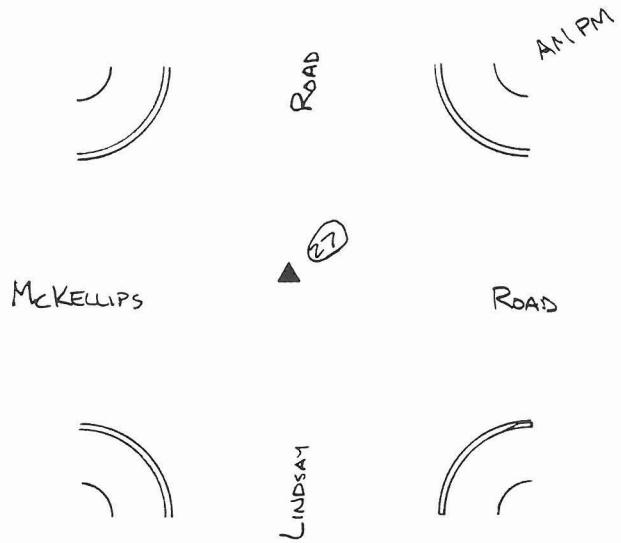
Sec 6 T 1N R 6E

Date: 2-12-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.50' below rim) @ intersection of Lindsay Road & McKellips Road



#27
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 28

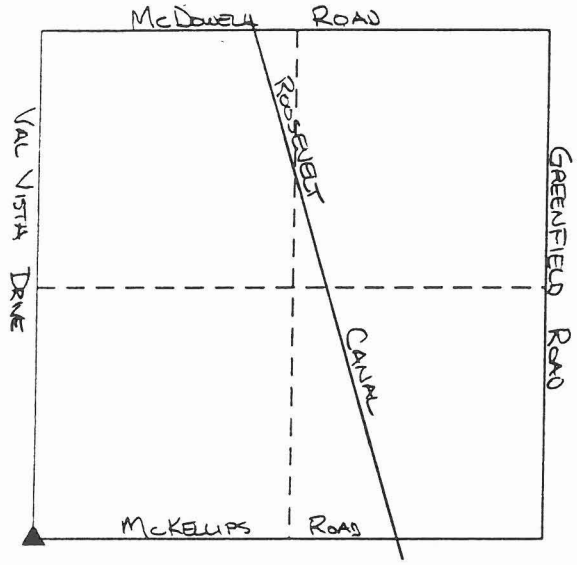
Project MESA ADMS

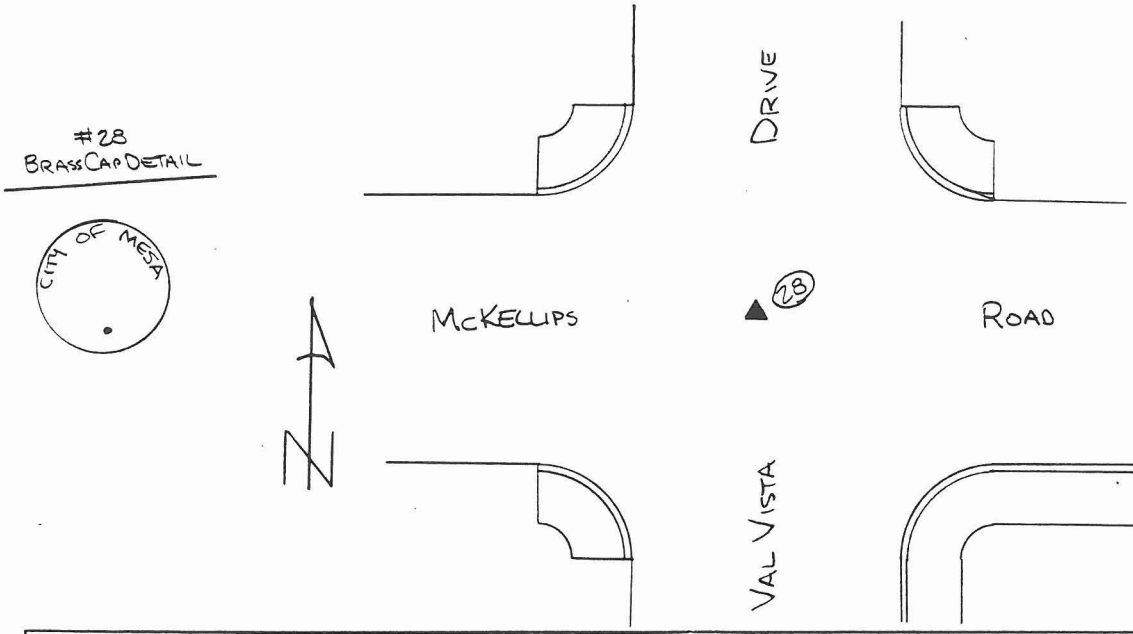
Rec. by: C GARDINER

Sec 4 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.55' below rim) @ intersection of McKellips Road & Val Vista Drive





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 29

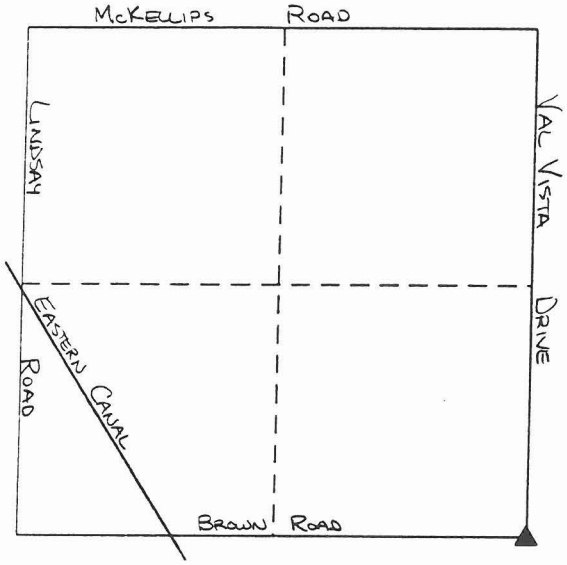
Project MESA ADMS

Rec. by: C GARDINER

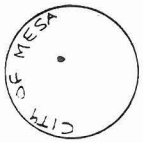
Sec 8 T 1N R 6E

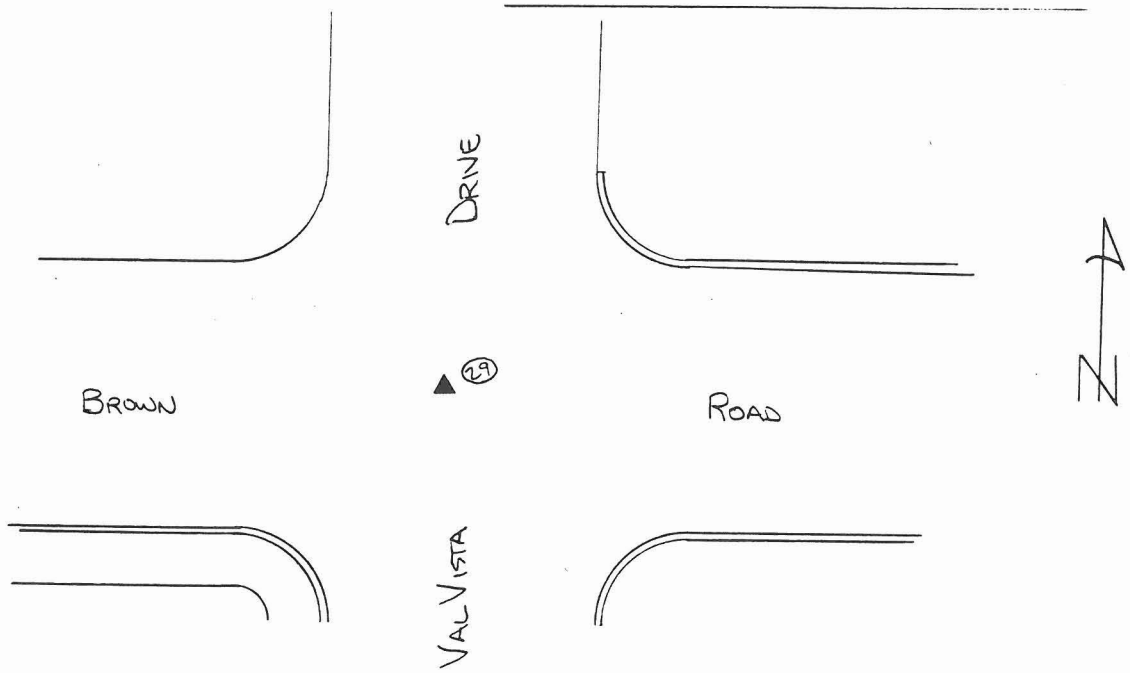
Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (1.15' below rim) @ intersection of Brown Road & Val Vista Drive



#29
BRASS CAP DETAIL





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
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Point No. 30

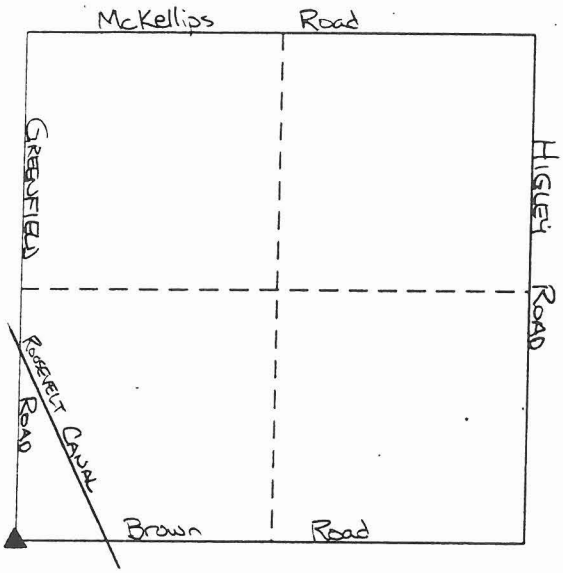
Project MESA ADMS

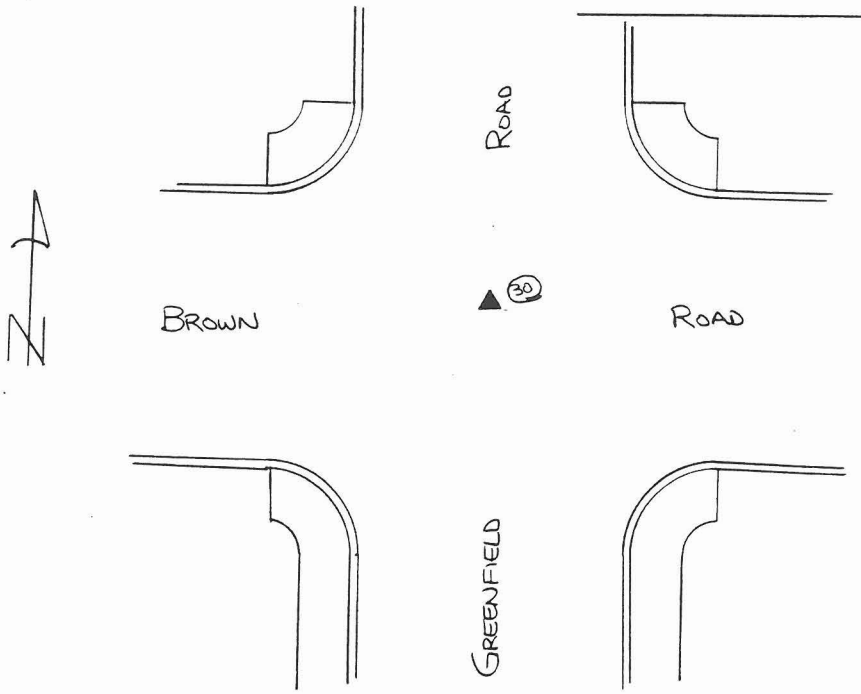
Rec. by: C GARDINER

Sec 10 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.48' below rim) @ intersection of Brown Road & Greenfield Road





#30
BRASS CAP DETAIL

Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 31

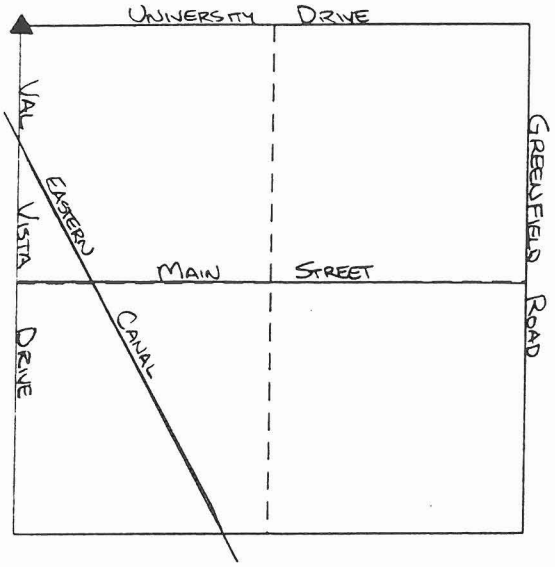
Project MESA ADMS

Rec. by: C GARDINER

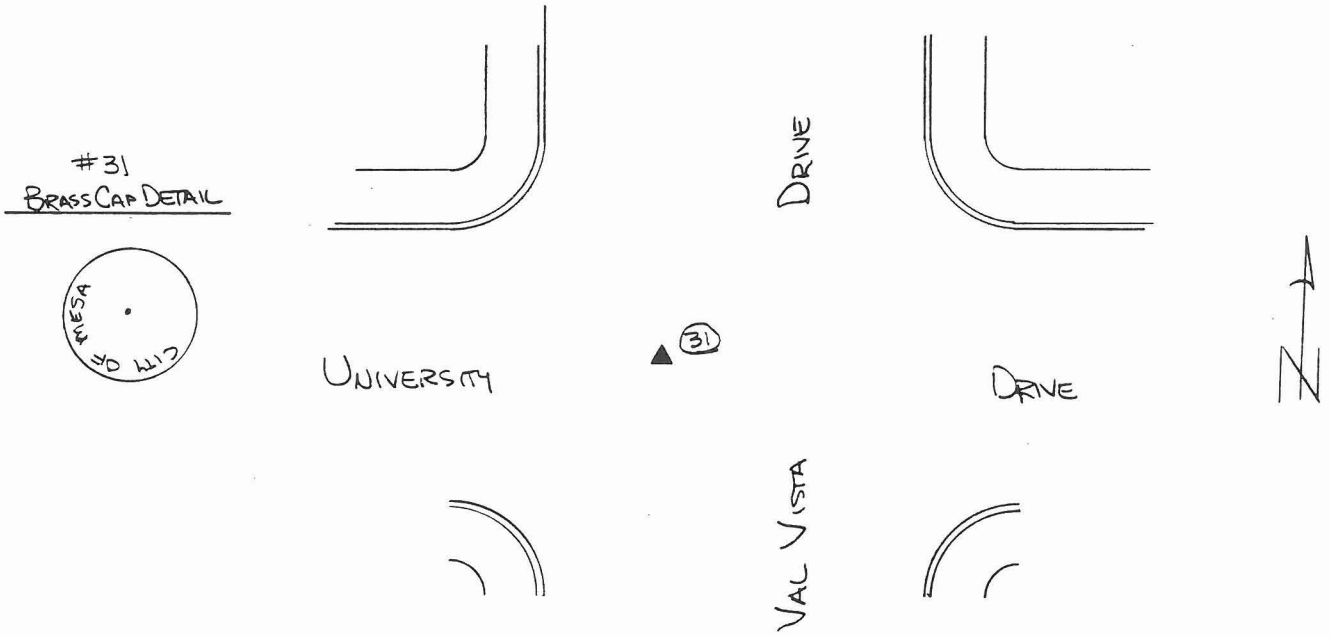
Sec 21 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.58' below rim) @ intersection of University Drive & Val Vista Drive



#31
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

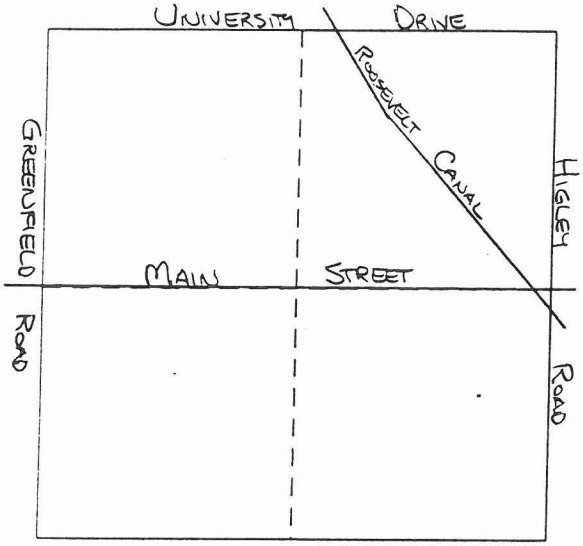
Point No. 32

Project MESA ADMS

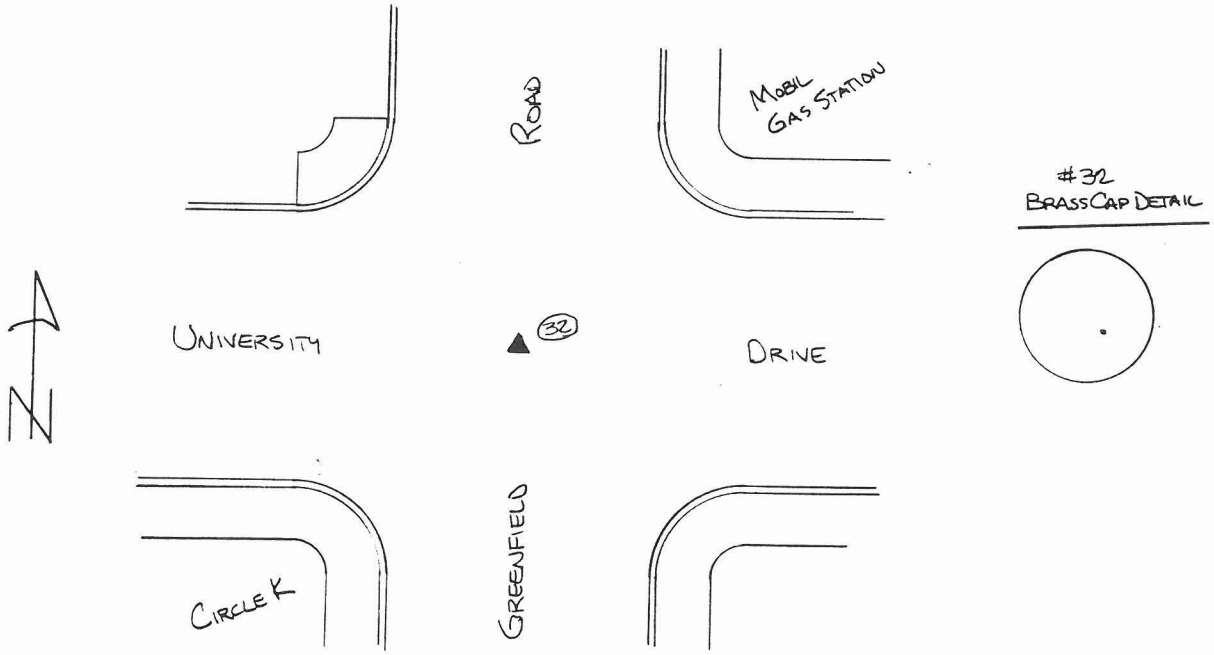
Rec. by: C GARDINER

Sec 22 T 1N R 6E

Date: 2-9-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.43' below rim) @ intersection of University Drive & Greenfield Road



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 33

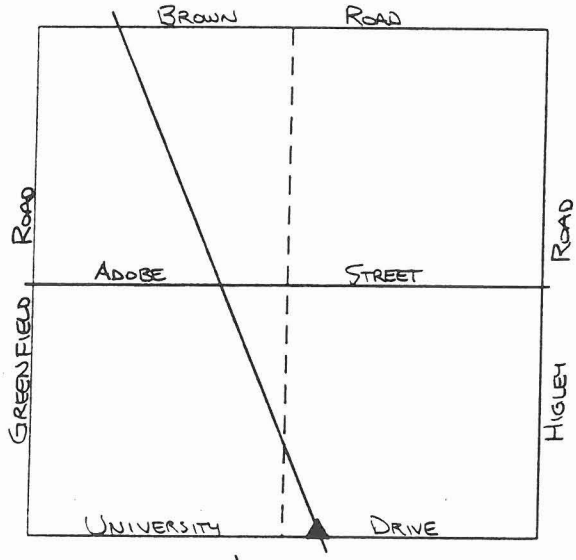
Project MESA ADMS

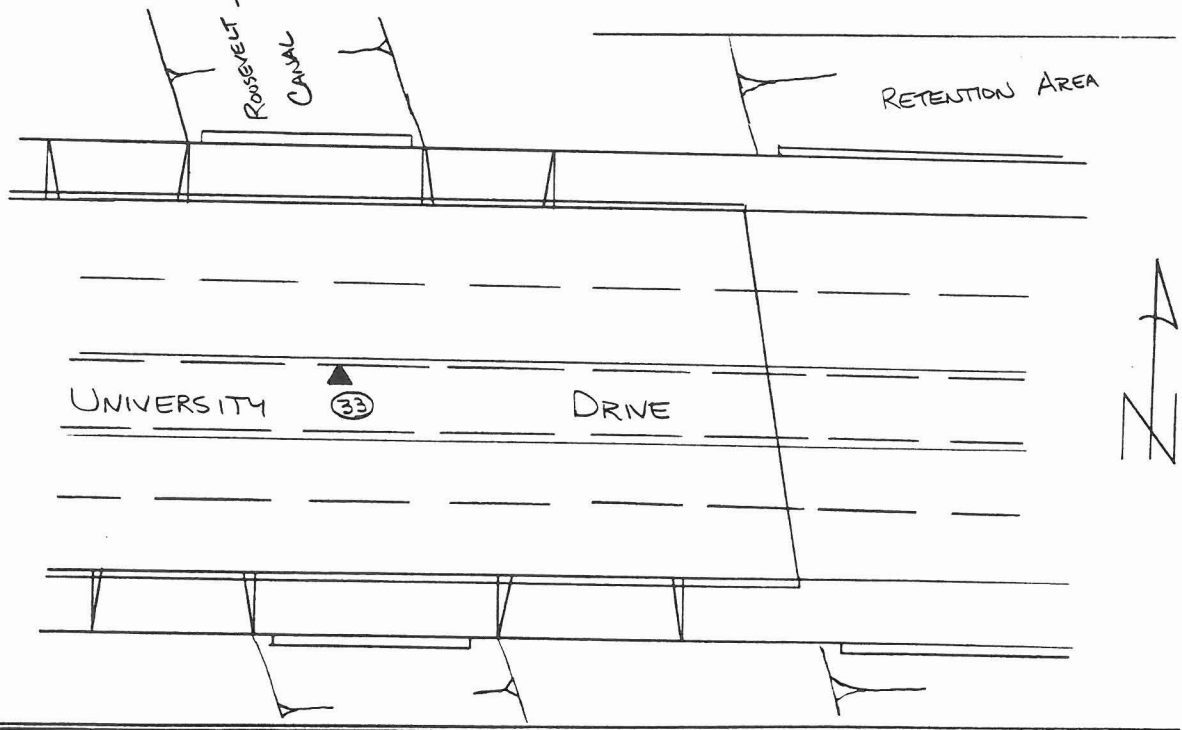
Rec. by: C GARDINER

Sec 15 T 1N R 6E

Date: 2-9-96

Mon. Desc. Set PK Nail in Pavement ±4' North of ℄ University Drive @ approximate center of Roosevelt Conservation Canal





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

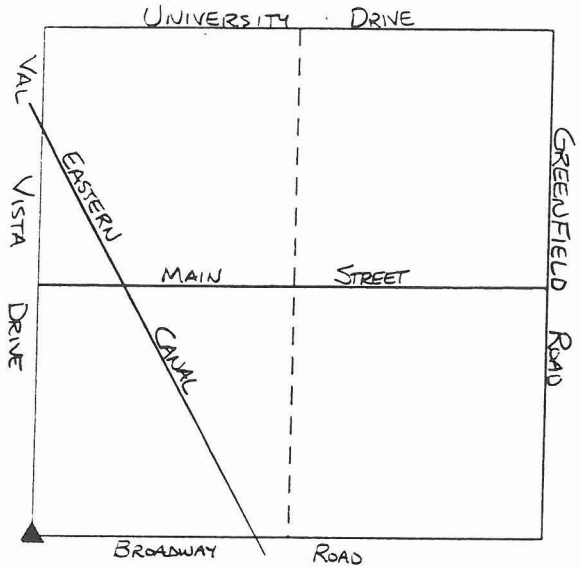
Point No. 34

Project MESA ADMS

Rec. by: C GARDINER

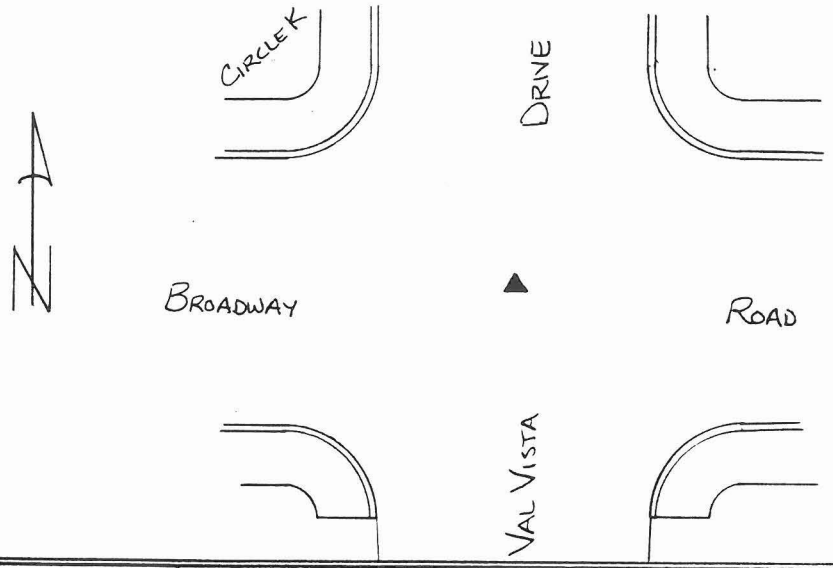
Sec 21 T 1N R 6E

Date: 2-12-96



Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.48' below rim) @ intersection of Val Vista Drive & Broadway Road

#34
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 35

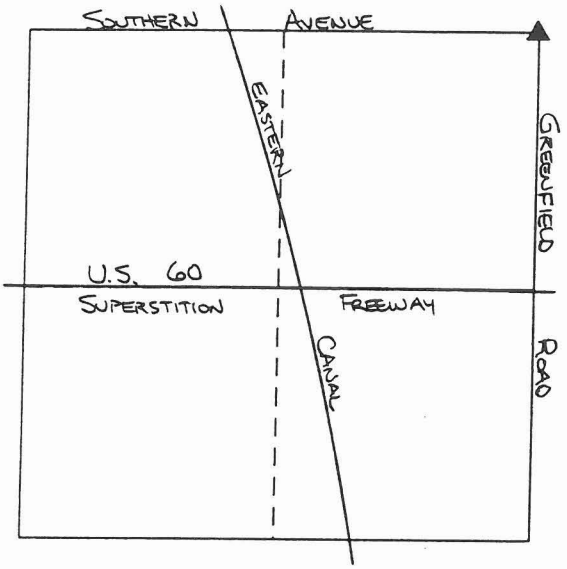
Project MESA ADMS

Rec. by: C GARDINER

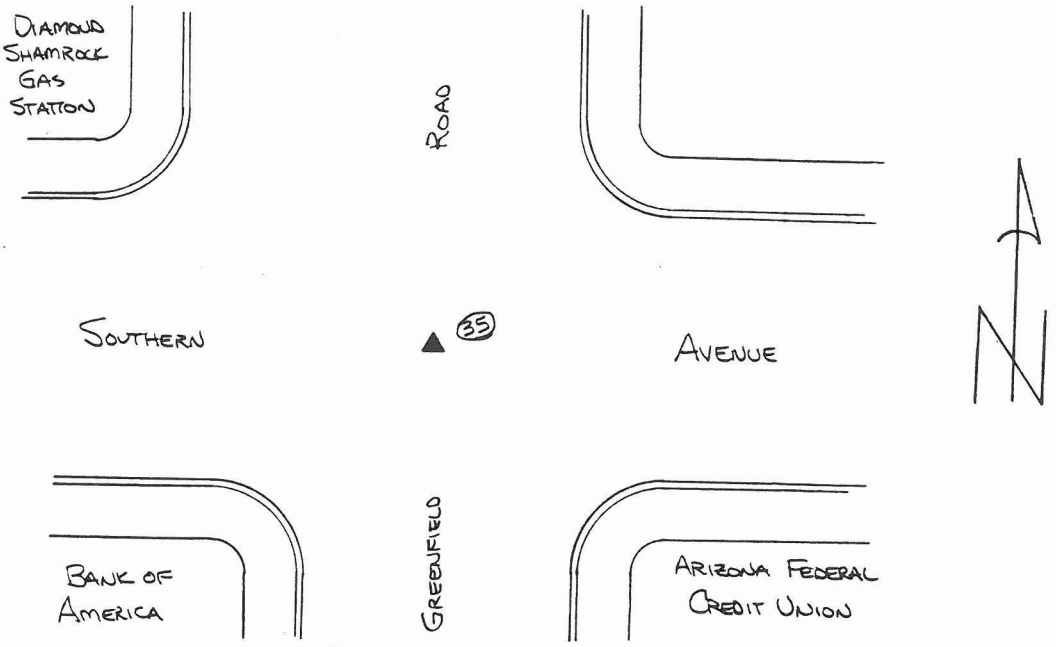
Sec 28 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.78' below rim) @ intersection of Southern Avenue & Greenfield Road



#35
BRASS CAP DETAIL



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 36

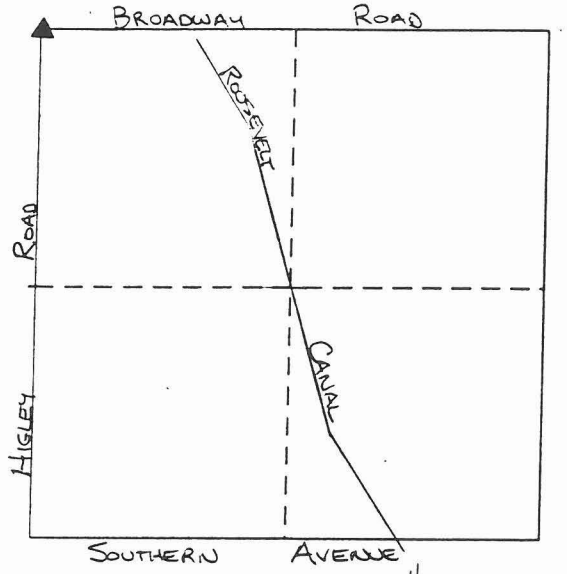
Project MESA ADMS

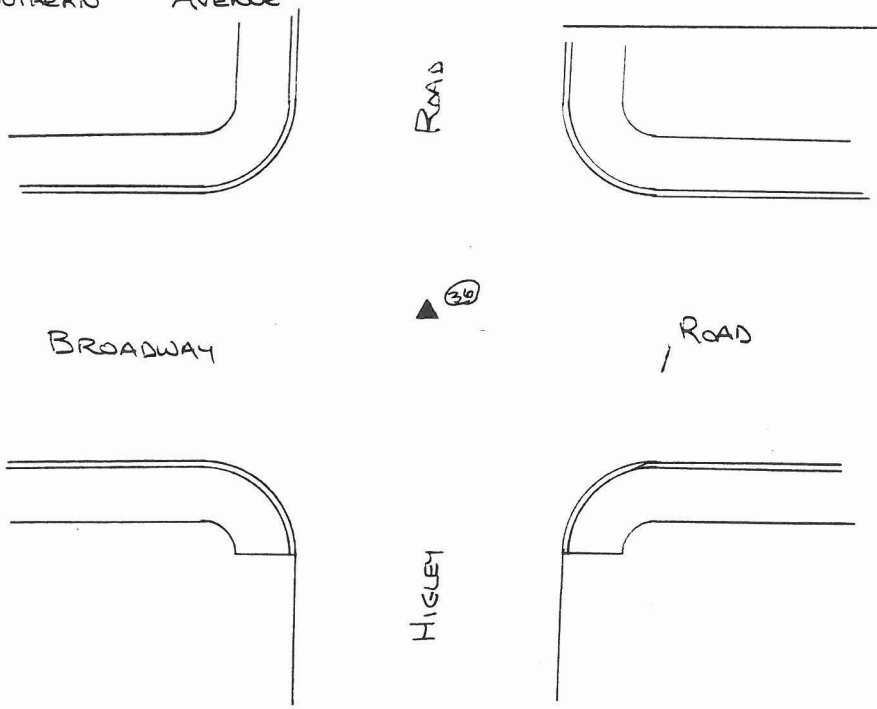
Rec. by: C GARDINER

Sec 26 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd Maricopa County Highway Dept Brass Cap in Handhole (0.59' below rim) @ intersection of Broadway Road & Higley Road





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 37

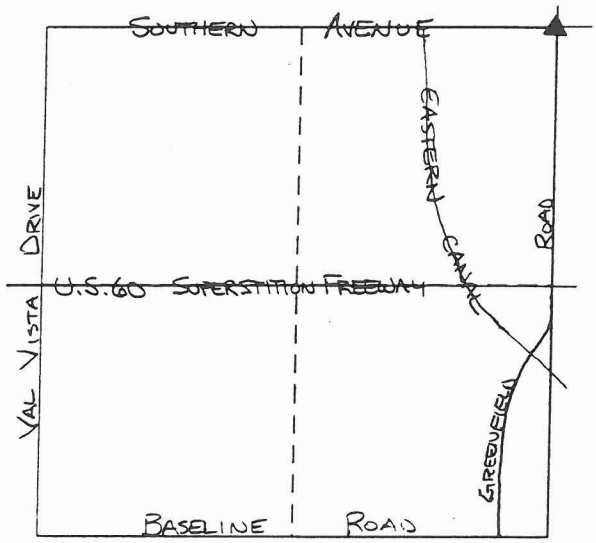
Project MESA ADMS

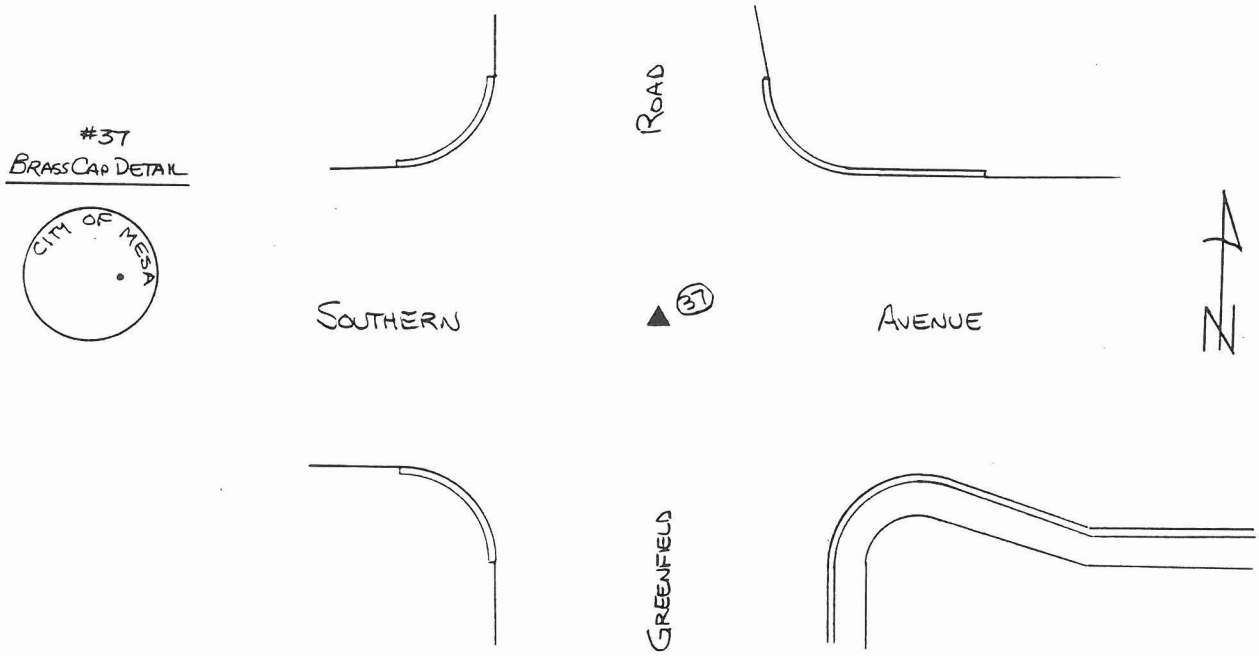
Rec. by: C GARDINER

Sec 34 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.49' below rim) @ intersection of Southern Avenue & Greenfield Road





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 38

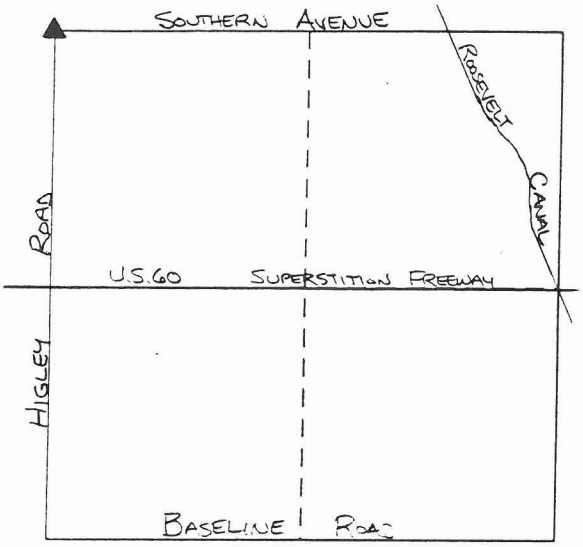
Project MESA ADMS

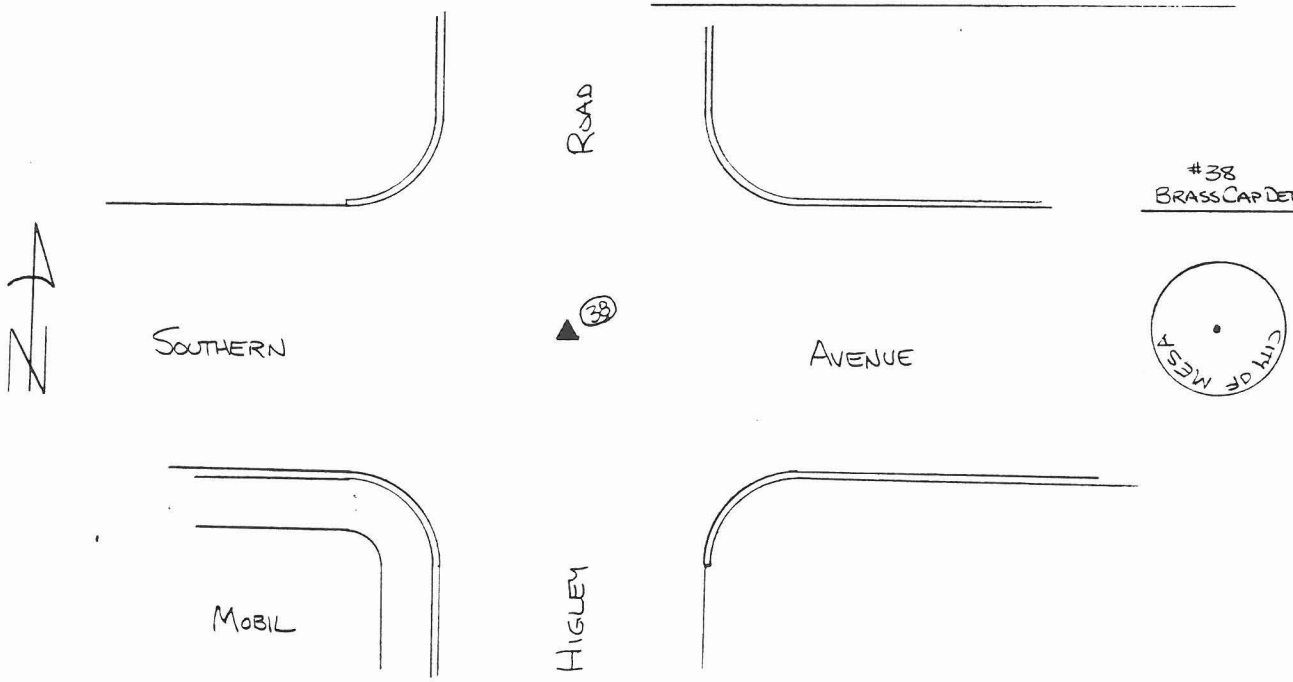
Rec. by: C GARDINER

Sec 35 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Hand hole (0.78' below rim) @ intersection of Southern Avenue & Higley Road





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

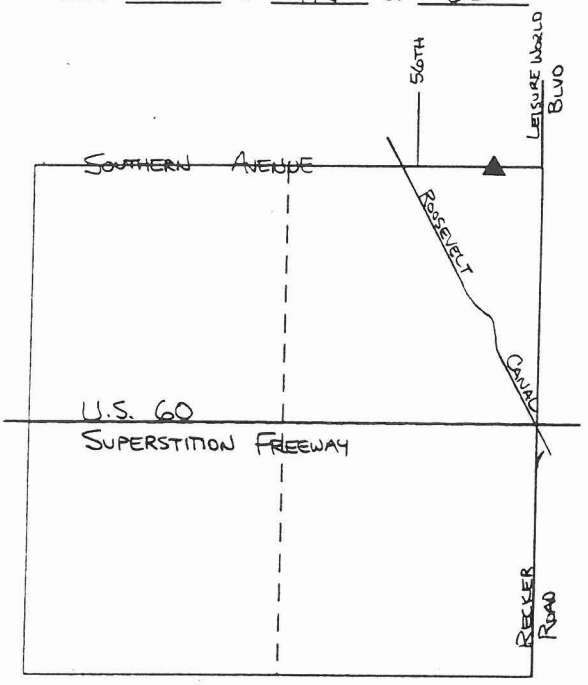
Point No. 39

Project MESA ADMS

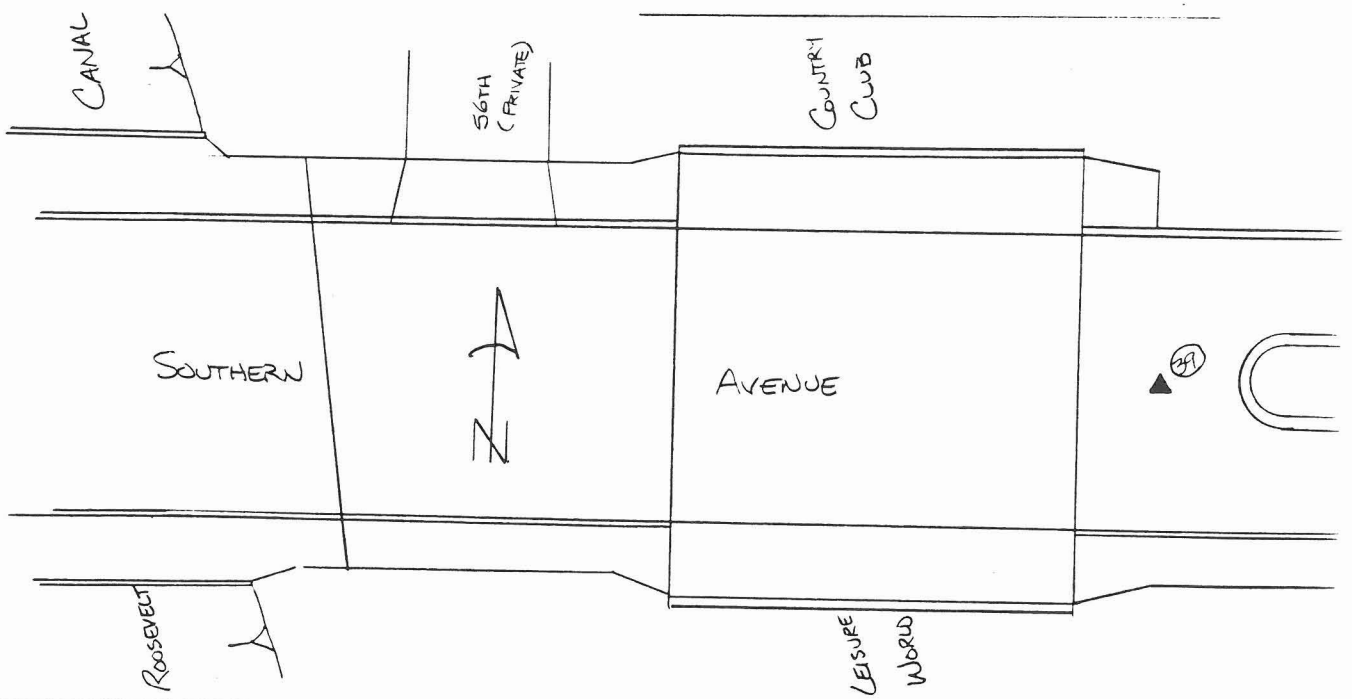
Rec. by: C GARDINER

Date: 2-9-96

Sec 35 T 1N R 6E



Mon. Desc. Set PK Nail in approximate ℄ Southern Avenue ±300' East of Roosevelt Conservation Canal, ±5' East of East Edge Bridge over Leisure World Country Club Golf Course, ±5' West of Bullnose & Median Curb



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 40

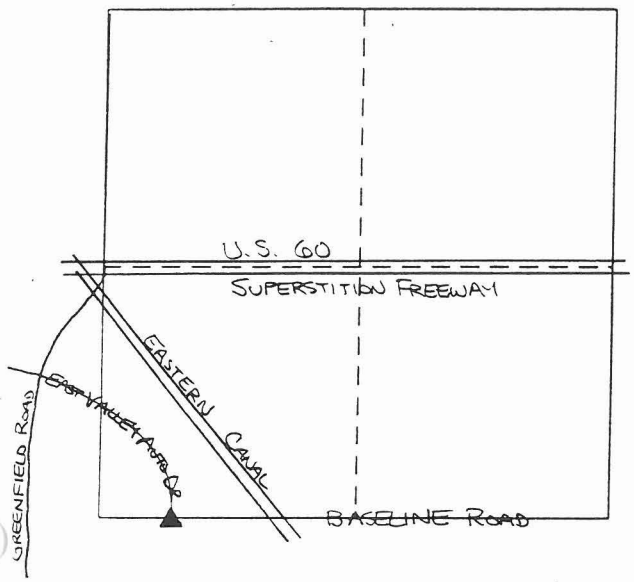
Project MESA ADMS

Rec. by: C GARDINER

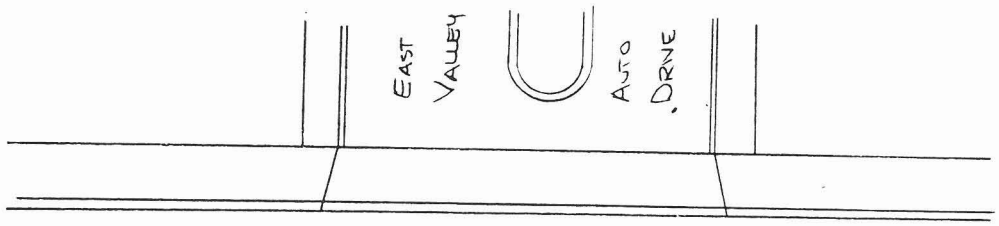
Sec 34 T 1N R 6E

Date: 2-9-96

Mon. Desc. Fd City of Mesa Brass Cap in Handhole (0.49' below rim) @ intersection of Baseline Road & East Valley Auto Drive, East of Greenfield Road



#40
BRASS CAP DETAIL



BASELINE ▲ 40 ROAD

N

E.P.

Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

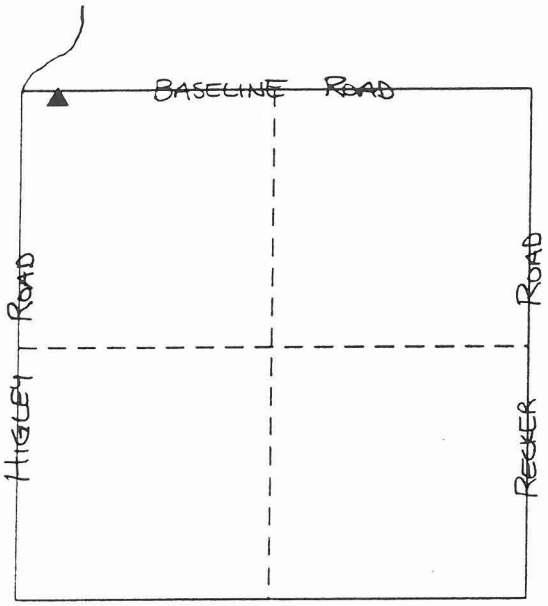
Point No. 41

Project MESA ADMS

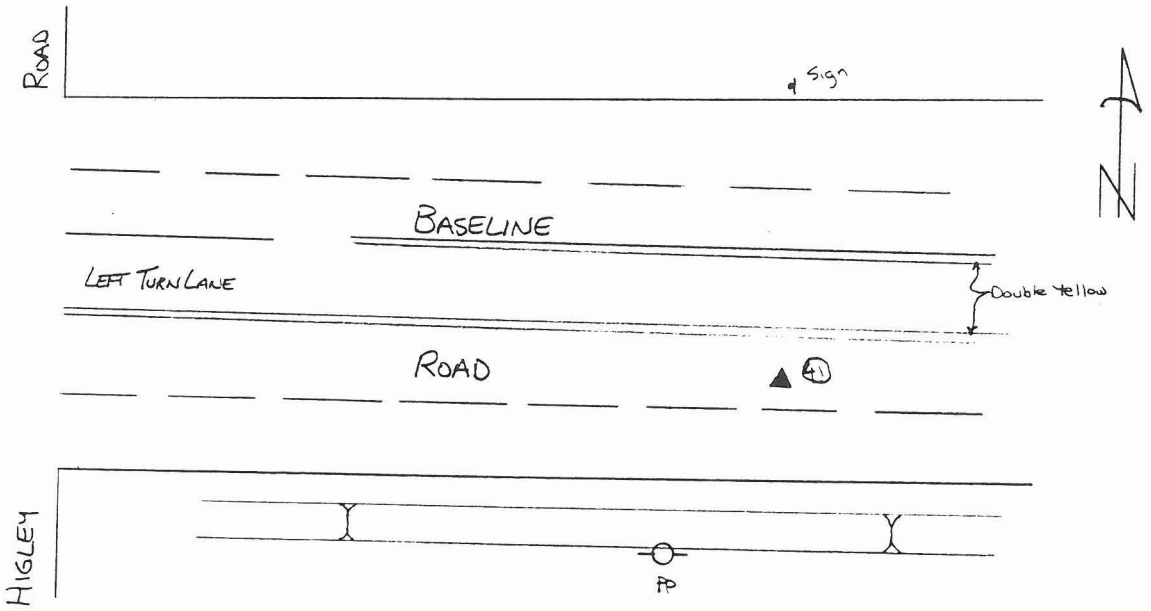
Rec. by: C GARDINER

Sec 2 T 1S R 6E

Date: 2-9-96



Mon. Desc. Set PK nail in Pavement in center of north Eastbound Lane of Baseline Road ±450' East of Higley Road; ±30' East of Wood Power Pole on Southside Baseline Road; opposite of "Stop Ahead" Sign on Northside Baseline Road



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

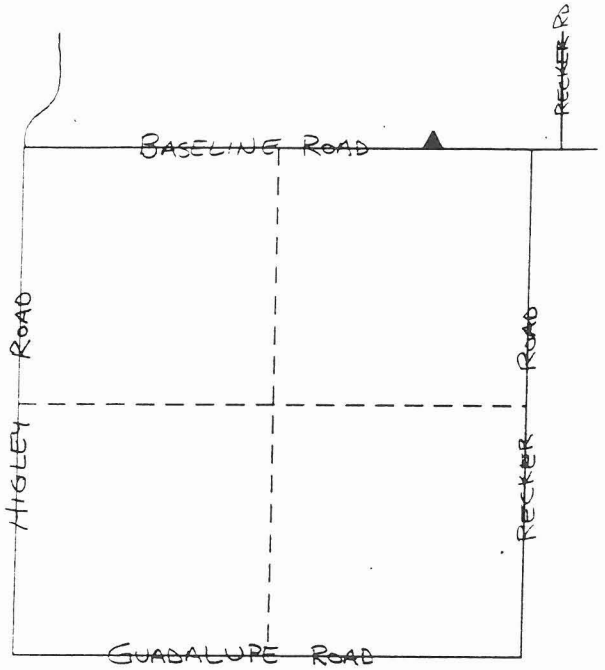
Point No. 42

Project MESA ADMS

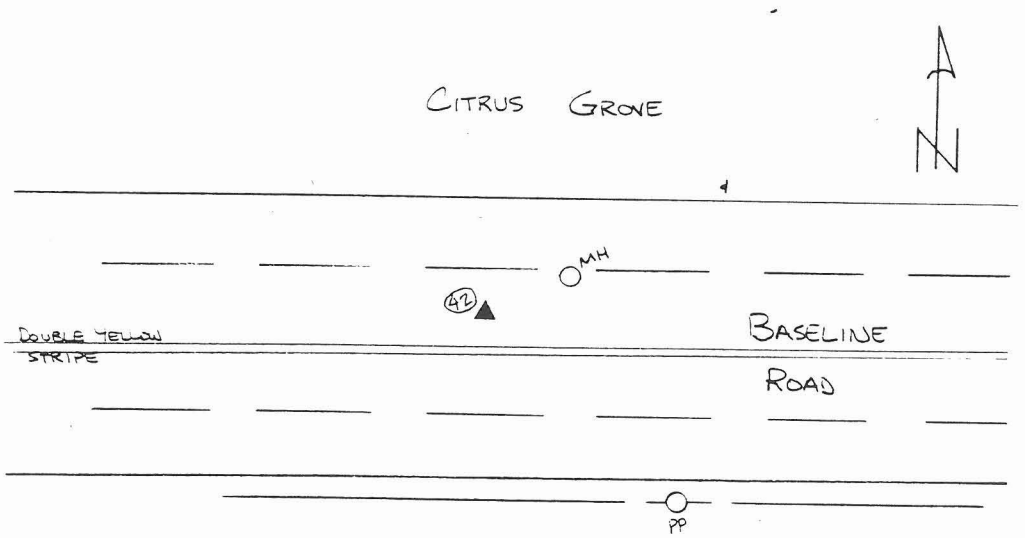
Rec. by: C GARDNER

Date: 2-9-96

Sec 35 T 1N R 6E



Mon. Desc. Set PK Nail in Pavement in center of south westbound lane of Baseline Road ±800' West of Recker Road South; ±30' West of Wood Power Pole on South side of Baseline Road; ±15' West, ±4' South of Sanitary Sewer Manhole



FARM FIELD

Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 43

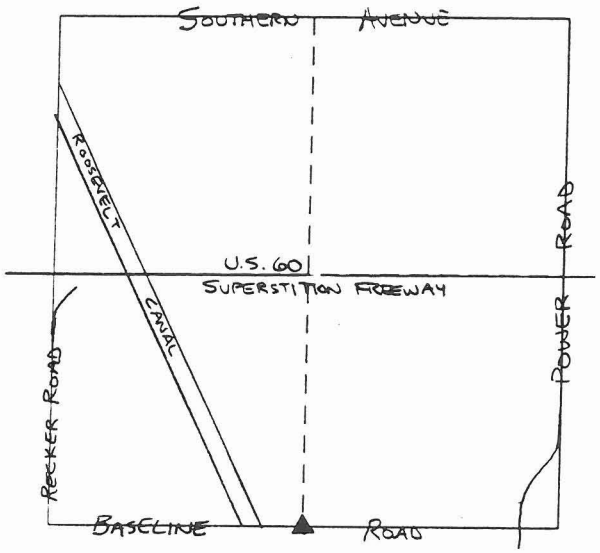
Project Mesa ADMS

Rec. by: C Gardiner

Sec 36 T 1N R 6E

Date: 2-8-96

Mon. Desc. Fd Maricopa County Hwy Dept Brass Cap flush w/concrete ℄ Baseline Road ± ½ Mile West of Power Road, ± 150' East of Roosevelt Conservation Canal in center of Concrete Bridge over Golf Course (Superstition Springs Golf Club)



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

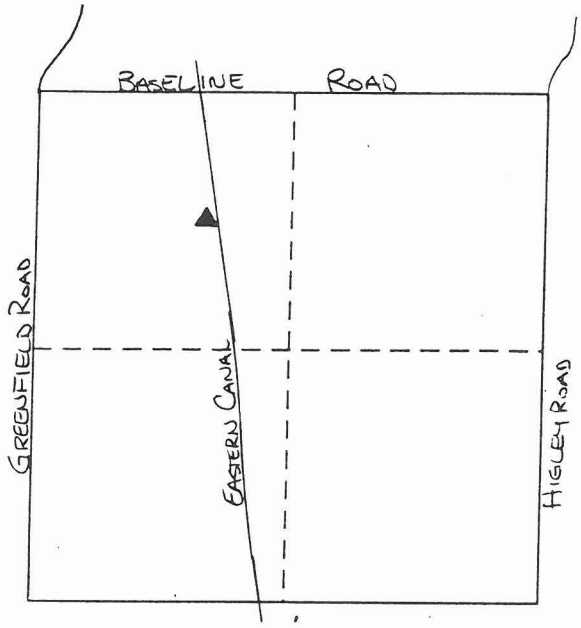
Point No. 44

Project MESA ADMS

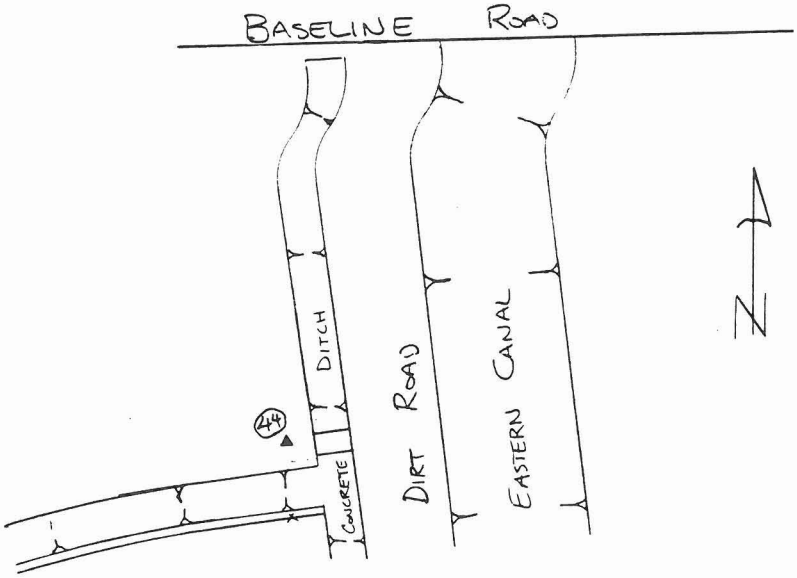
Rec. by: C GARDINER

Sec 3 T 1S R 6E

Date: 2-19-96



Mon. Desc. Set ½" Rebar flush w/ground ±1300' South of Baseline Road, ±25' West of East Edge Eastern Canal, ±5' West of Concrete Ditch, ±5' North of Concrete Ditch



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

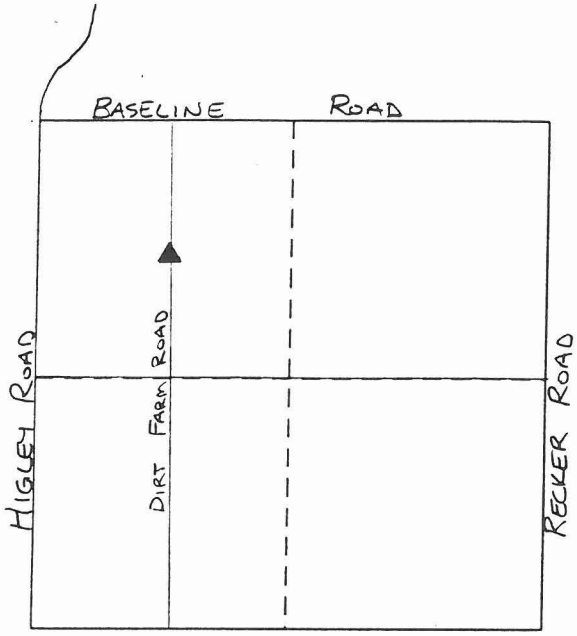
Point No. 45

Project MESA ADMS

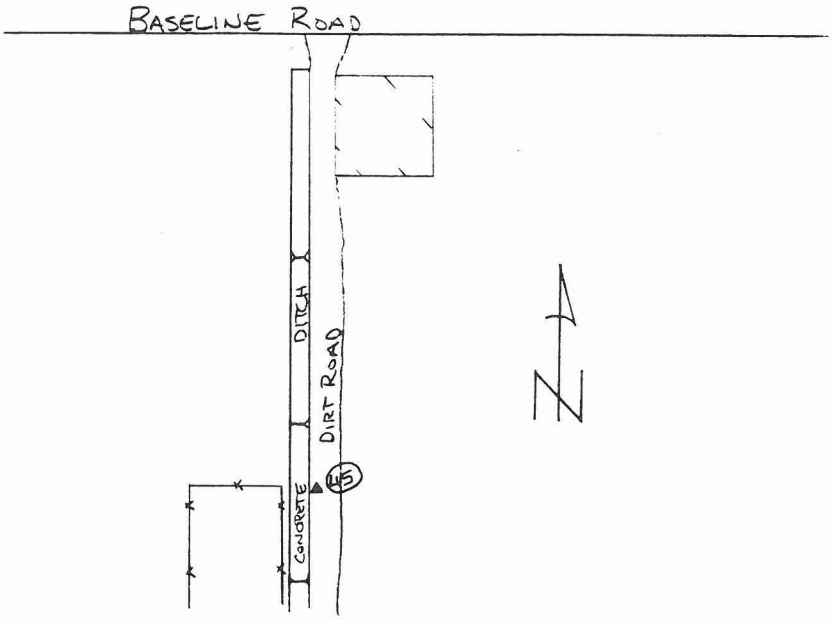
Rec. by: C GARDINER

Sec 45 T 1S R 6E

Date: 2-19-96



Mon. Desc. Fd 1/2" Rebar w/ Yellow Cap Stamped "NAU LS9083" ±1320' South of Baseline Road, ±1320' East of Higley Road, ±10' East of East Edge of Concrete Ditch, in line with 6' Fence to West



Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

MONUMENT RECORD

PROJECT ENG. CONSULT.
3130 N. 35th AVE.,# 1
PHOENIX, AZ 85017
(602)484-7691

Point No. 46

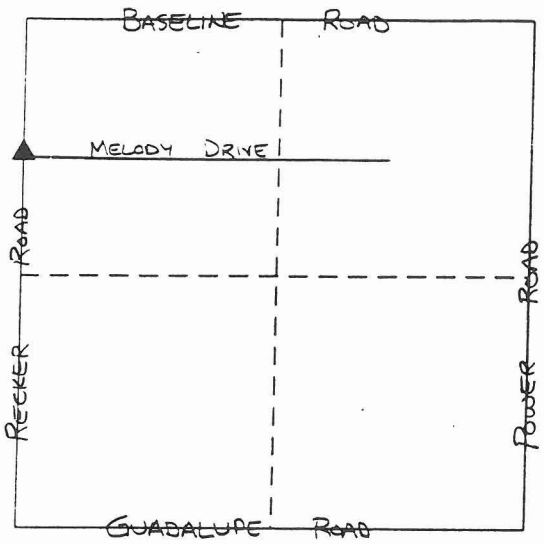
Project MESA ADMS

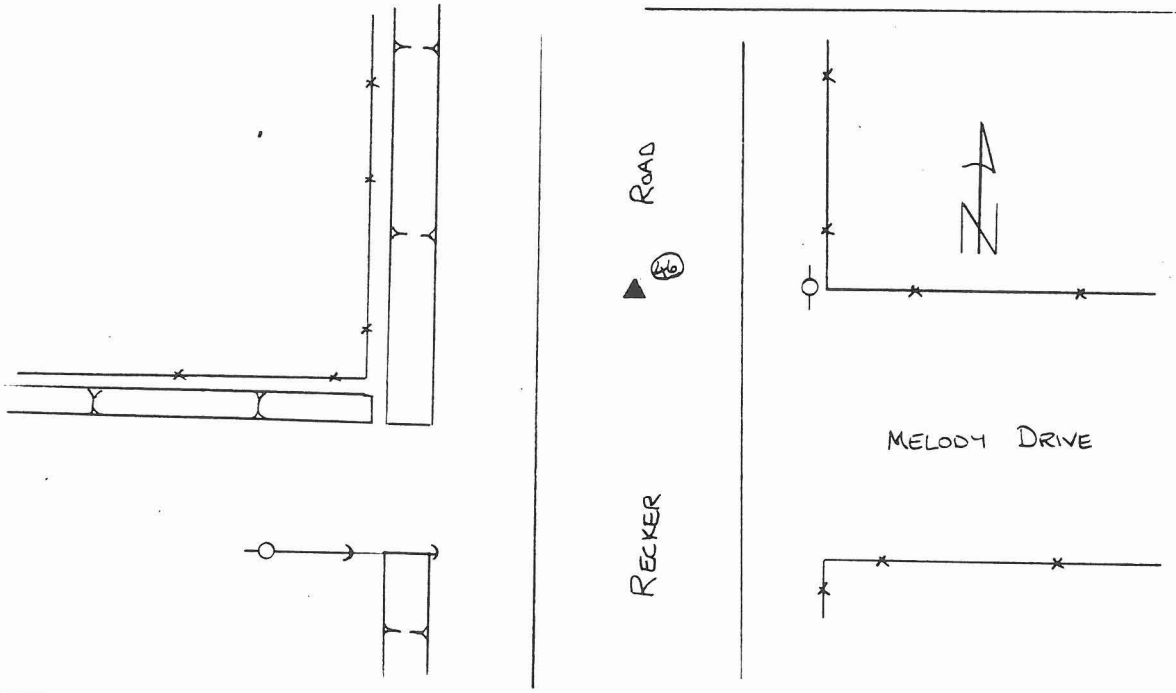
Rec. by: C Gardiner

Sec 1 T 1S R 6E

Date: 2-9-96

Mon. Desc. Set PK nail in Pavement at approximate ℄ Recker Road ±1320' South of Baseline Road; in line with 4' Wood Fence to East on northside Melody Drive





Date	Sess	H.I. Ant.	Time On	Time Off	Operator	RCV

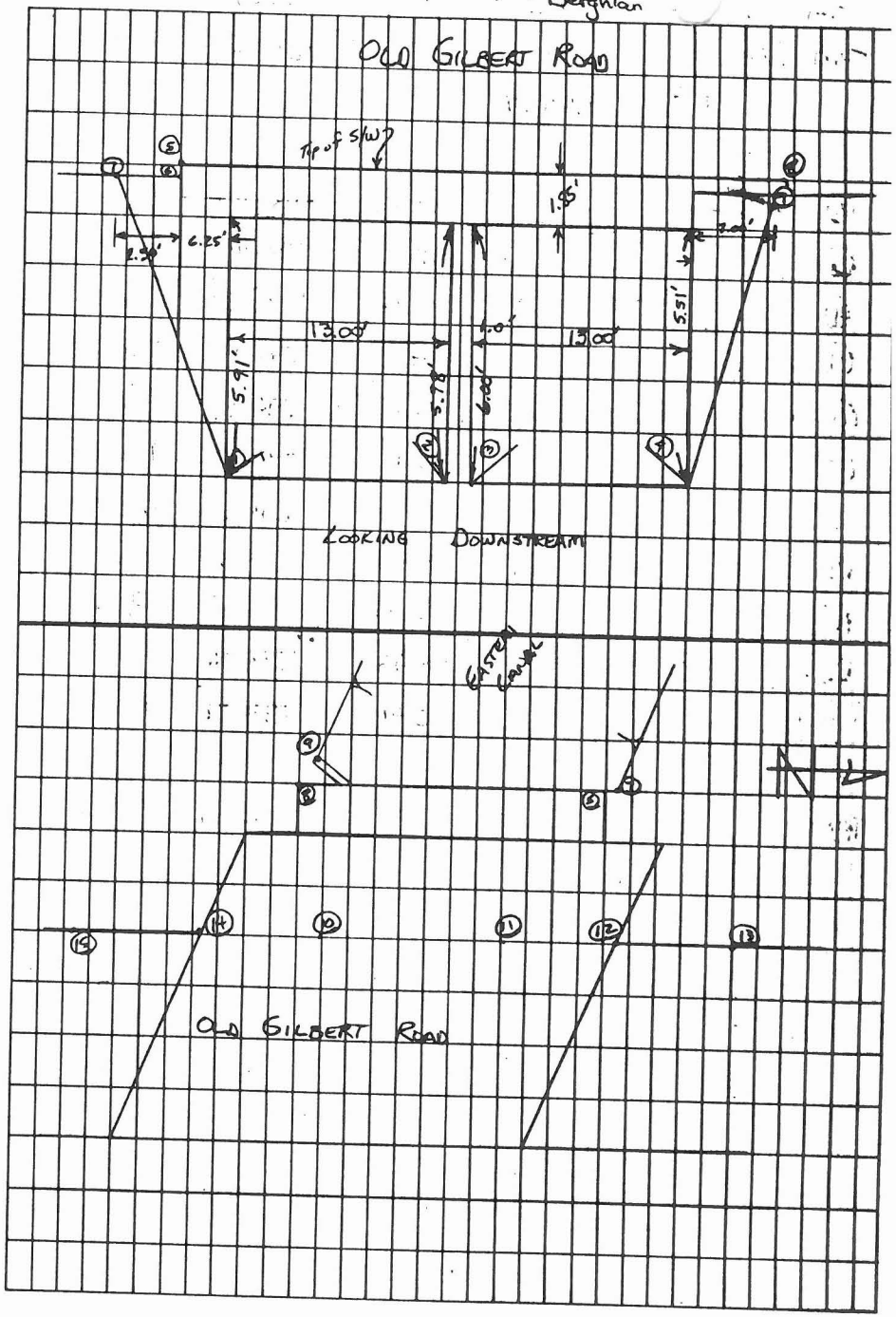
- **FIELD NOTES OF CULVERT MEASUREMENTS & INVERTS ALONG THE EASTERN CANAL**

(DELIVERED 1/17/97)

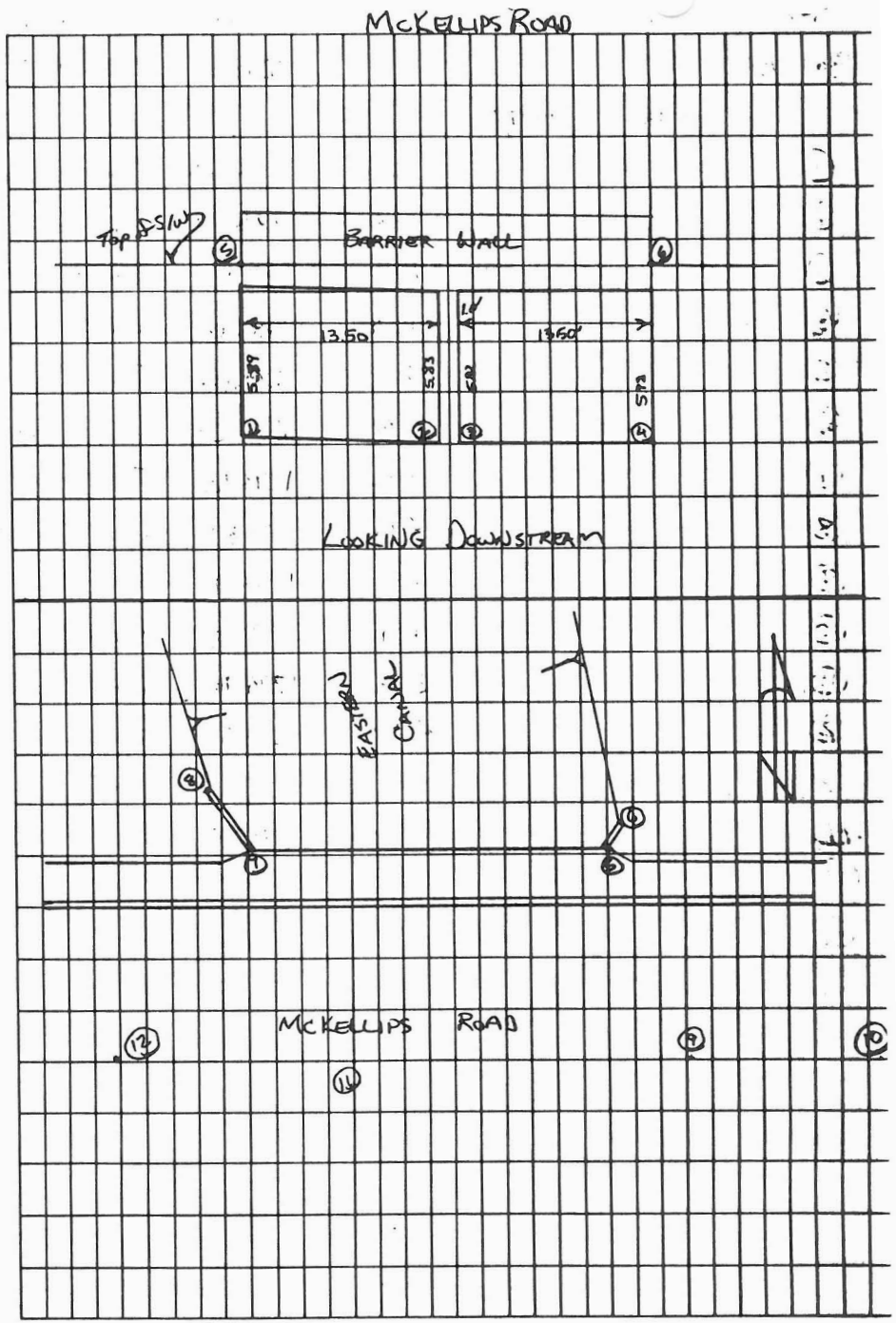
Clear, Calm, Cold 45°F

Gardiner
Mortensen
Berghian

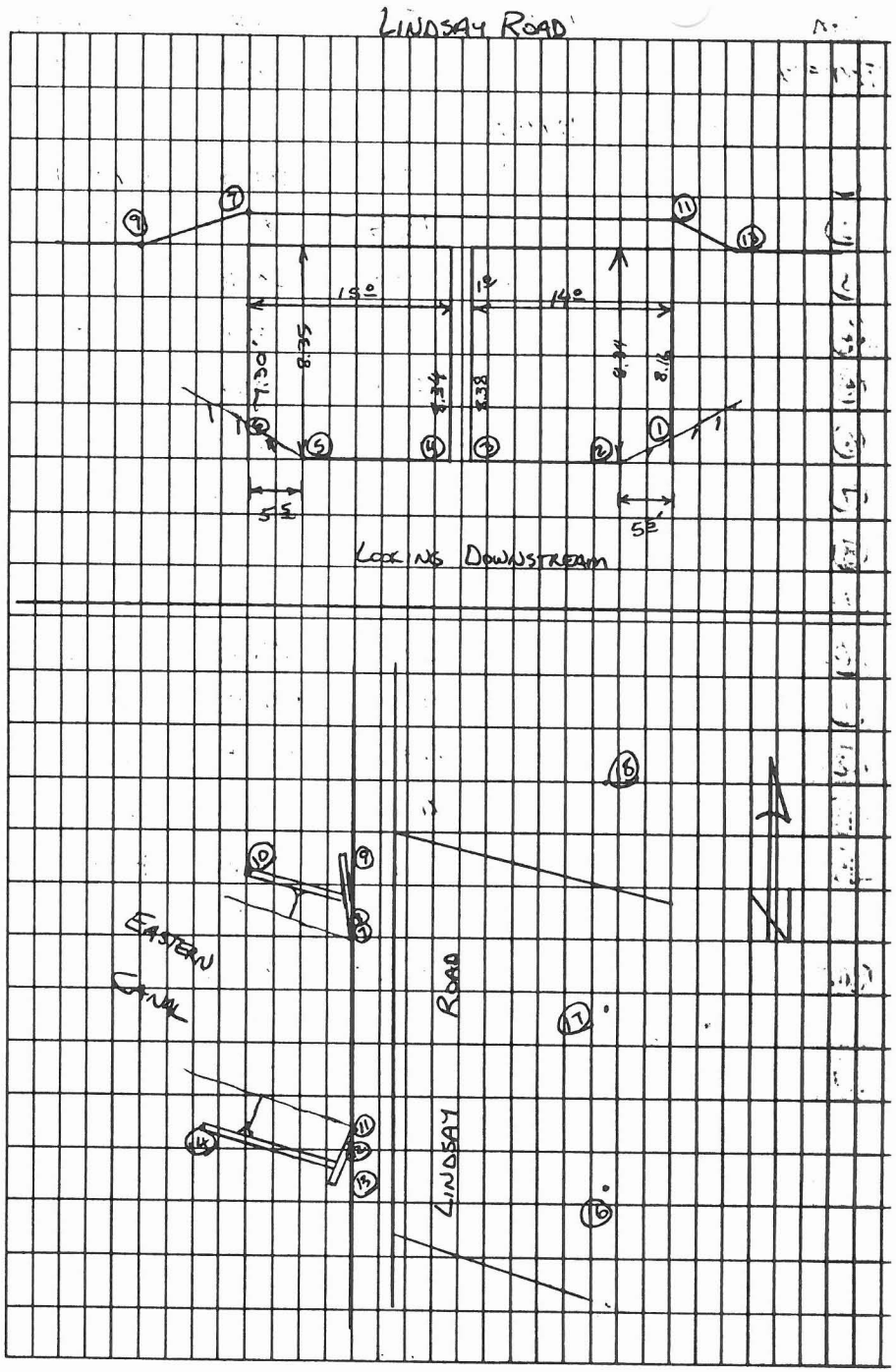
STA		H.I.	FS-	ELEV	Pt #
TBM #100				1295.401	B.C.
	4.68	1300.08			
1			12.45	1287.63	Invert @ Toe
2			12.67	1287.41	Invert
3			12.65	1287.43	Invert
4			12.12	1287.96	Invert @ Toe
5			4.78	1295.30	T/W
6			5.50	1294.58	℄
7			5.50	1294.58	Top of Bank
8			4.63	1295.45	T/W
9			5.50	1294.58	Top of Bank @ Wingwall
10			5.26	1294.82	M
11			5.34	1294.74	M
12			5.29	1294.79	M @ E.C.
13			5.56	1294.52	M @ E.P.
14			5.26	1294.82	M @ E.C.
15			6.11	1293.97	E.P.
TBM 100			4.68	1295.40	✓



STA	S+	H.I.	FS-	ELEV	REMARKS
TBM 102				1293.867	SRP B.C.
	5.30	1299.17			
1			12.44	1286.73	Invert @ Wingwall
2			12.72	1286.45	Invert
3			12.73	1286.44	Invert
4			12.88	1286.29	Invert @ Wingwall
5			4.85	1294.32	T/W @ Wall
6			4.82	1294.35	Top of Wingwall
7			5.15	1294.02	T/W @ Wall
8			5.16	1294.01	Top of Wingwall
9			5.40	1293.77	Pvmt
10			5.49	1293.68	Pvmt
11			5.43	1293.74	Pvmt
12			5.46	1293.71	Pvmt
TBM 102			5.30	1293.87	✓

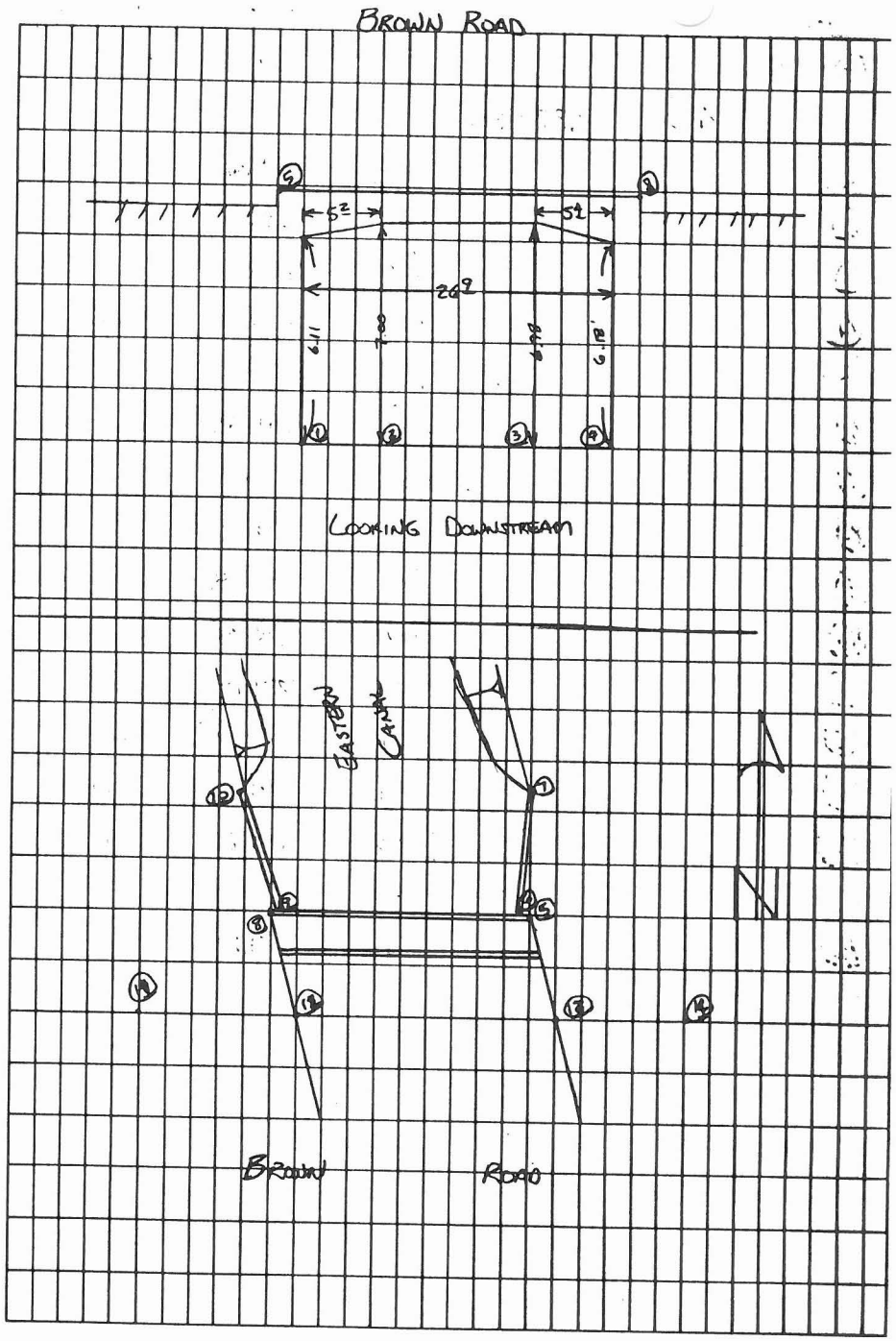


STA	35+	H.I.	FS-	ELEV	REMARKS
TBM #134				1293.377	SRP B.C.
	4.14	1297.52			
1			12.19	1285.33	Inv @ Wingwall
2			12.44	1285.08	Inv @ Toe
3			12.33	1285.19	Invert
4			12.46	1285.06	Invert
5			12.43	1285.09	Inv @ Toe
6			11.42	1286.10	Inv @ Wingwall
7			3.80	1293.72	Top of S/W
8			4.15	1293.37	Top of Wingwall
9			4.33	1293.19	Top of S/W
10			4.01	1293.52	Top of Wingwall
11			3.38	1294.14	Top of S/W
12			4.17	1293.35	Top of Wingwall
13			4.15	1293.37	Top of S/W
14			5.22	1292.30	Top of Wingwall
15			3.95	1293.57	Pvmt
16			3.92	1293.60	Pvmt
17			4.00	1293.52	Pvmt
18			3.99	1293.53	Pvmt
TBM #134			4.14	1293.38	✓

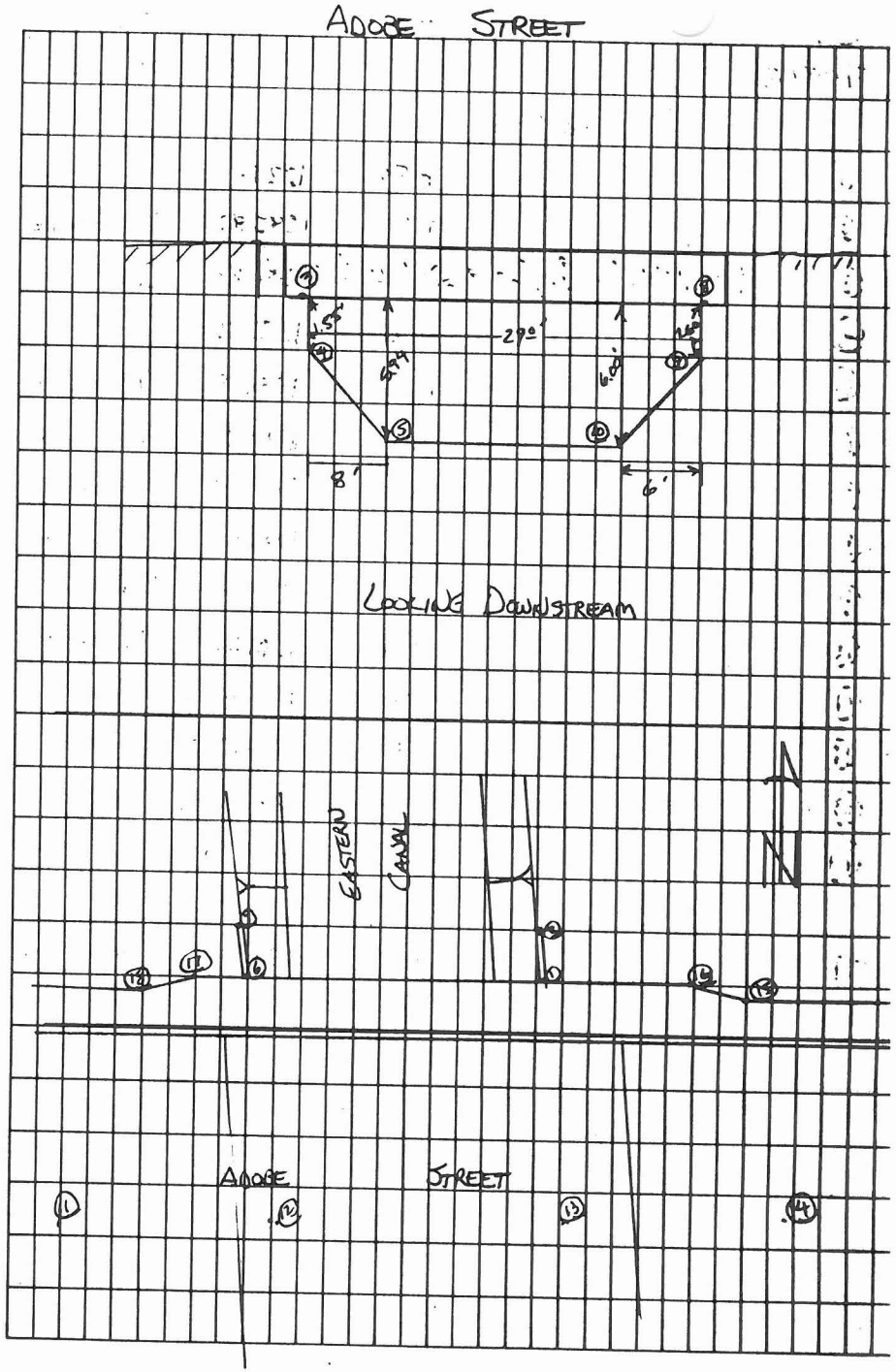


15.

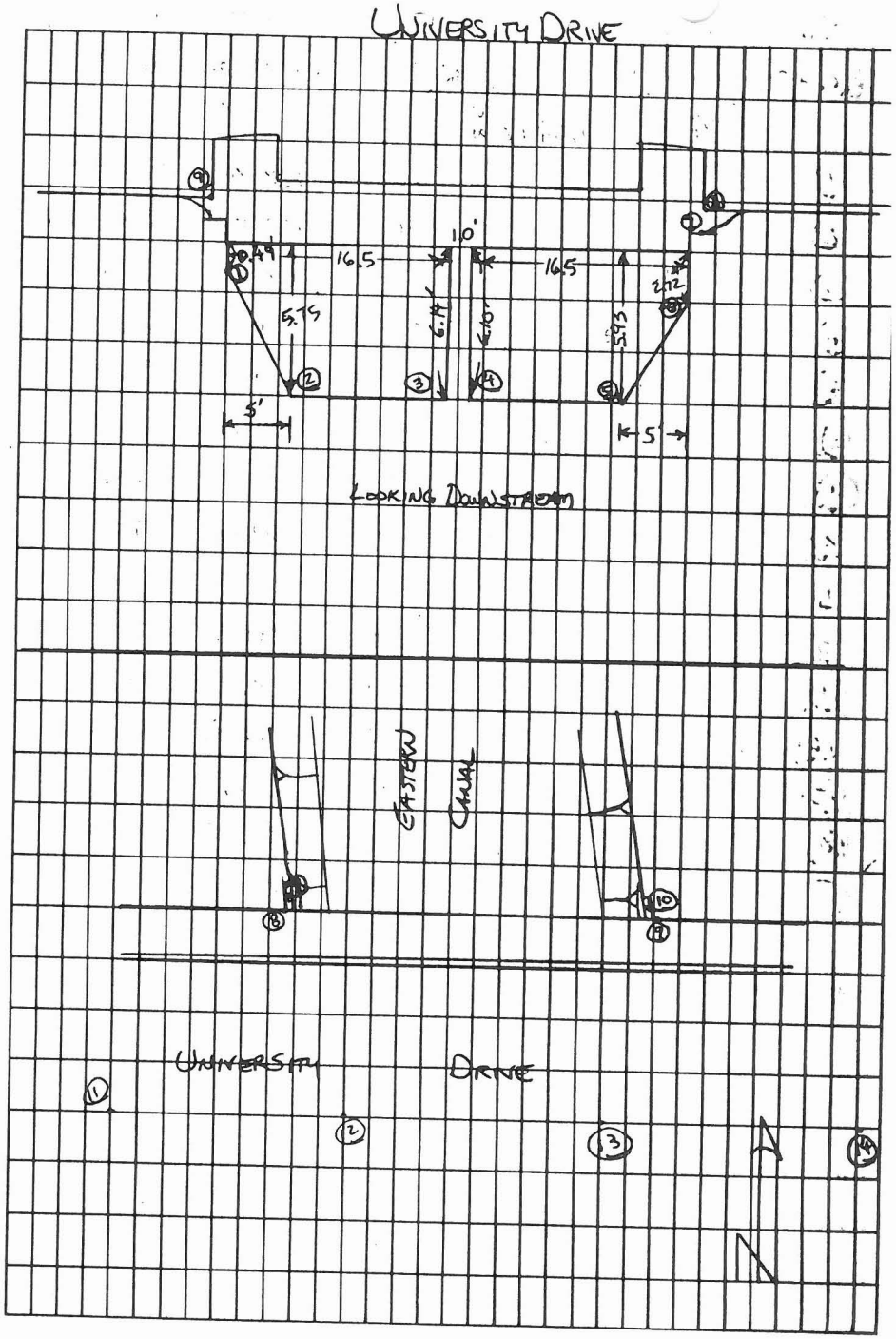
STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM #136				1292.346	MCHD BC.
	5.10	1297.45			
1			12.87	1284.68	Inv @ Wingwall
2			13.15	1284.30	Invert
3			13.05	1284.40	Invert
4			13.00	1284.45	Invert @ Wingwall
5			4.01	1293.44	Top of Conc
6			5.13	1292.32	Top of Wingwall
7			5.60	1291.85	Top of Wingwall
8			4.39	1293.06	Top of Conc
9			5.10	1292.35	Top of Wingwall
10			5.69	1291.76	Top of Wingwall
11			4.73	1292.72	Point
12			4.74	1292.71	Point
13			4.60	1292.85	Point
14			4.64	1292.81	Point
TBM #136			5.10	1292.35	✓



STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM#152				1291.050	SRP B.C.
	4.05	1295.10			
1			3.95	1291.15	Top of Wingwall
2			4.27	1290.83	Top of Wingwall
3			5.83	1289.27	Top of Abutment
4			7.38	1287.72	Top of Brk @ Abutment
5			11.53	1283.57	Toe of Slope
6			4.07	1291.03	Top of Wingwall
7			4.32	1290.78	Top of Wingwall
8			5.81	1289.29	Top of Abutment
9			7.41	1287.69	Top of Brk @ Abutment
10			11.66	1283.44	Toe of Slope
11			3.92	1291.18	Pvmt
12			3.53	1291.57	Pvmt
13			3.55	1291.55	Pvmt
14			3.83	1291.27	Pvmt
15			3.36	1291.74	B/W
16			3.93	1291.17	B/W
17			4.05	1291.05	B/W
18			3.55	1291.55	B/W
TBM#152			4.04	1291.06	✓



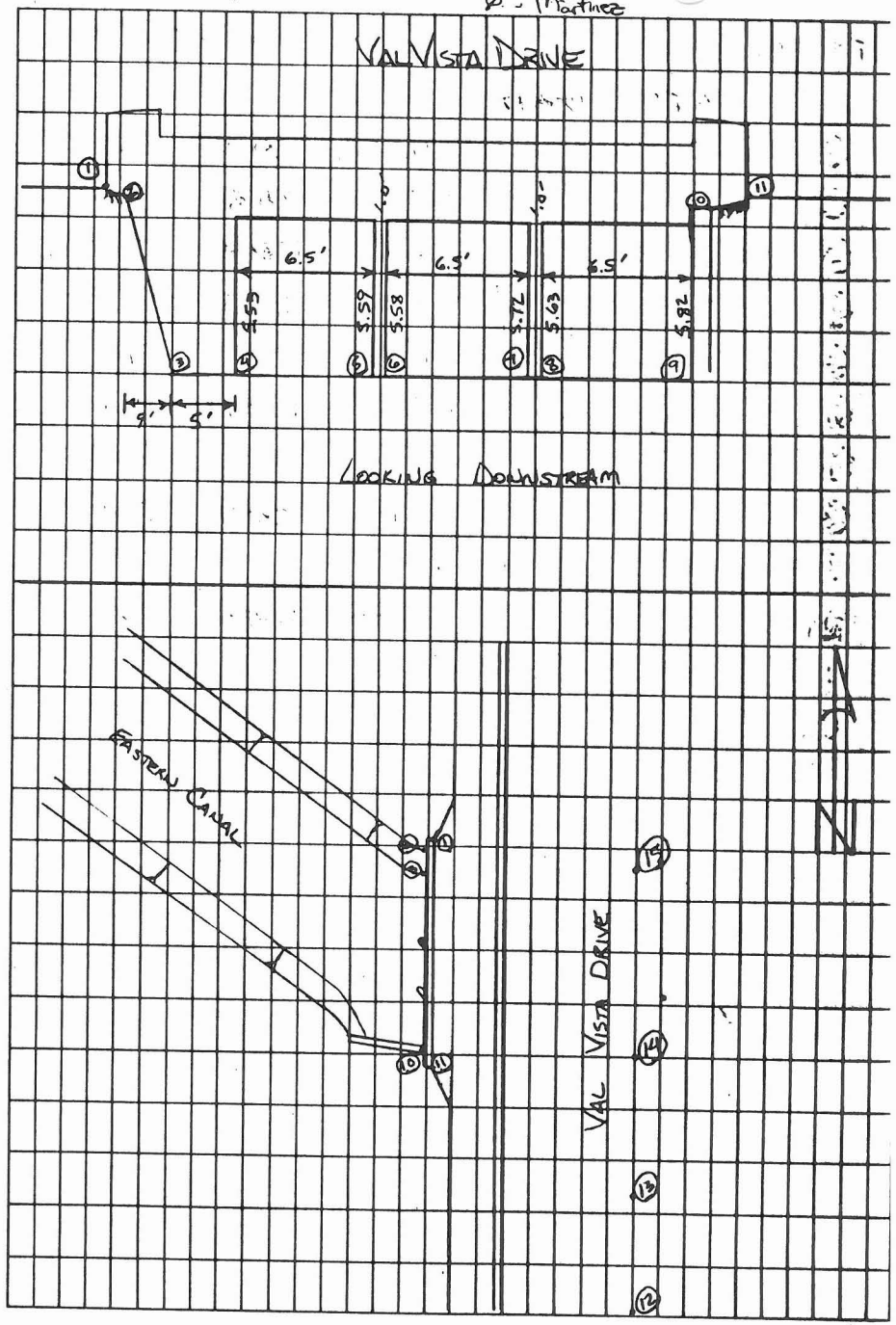
Sta	S+	H.I.	FS-	Elev	Remarks
TBM#175				1288.367	SRP BC.
	6.01	1294.38			
1			6.59	1287.79	Top of Slope
2			11.86	1282.52	Toe of Slope
3			12.24	1282.14	Invert
4			12.30	1282.08	Invert
5			12.12	1282.26	Toe of Slope
6			9.00	1285.38	Top of Slope
7			5.37	1289.01	Abutment
8			4.78	1289.60	B/W
9			4.67	1289.71	B/W
10			5.22	1289.16	Abutment
11			5.07	1289.31	Pvmt
12			4.87	1289.51	Pvmt
13			4.84	1289.54	Pvmt
14			4.87	1289.51	Pvmt
TBM#175			6.01	1288.37	✓



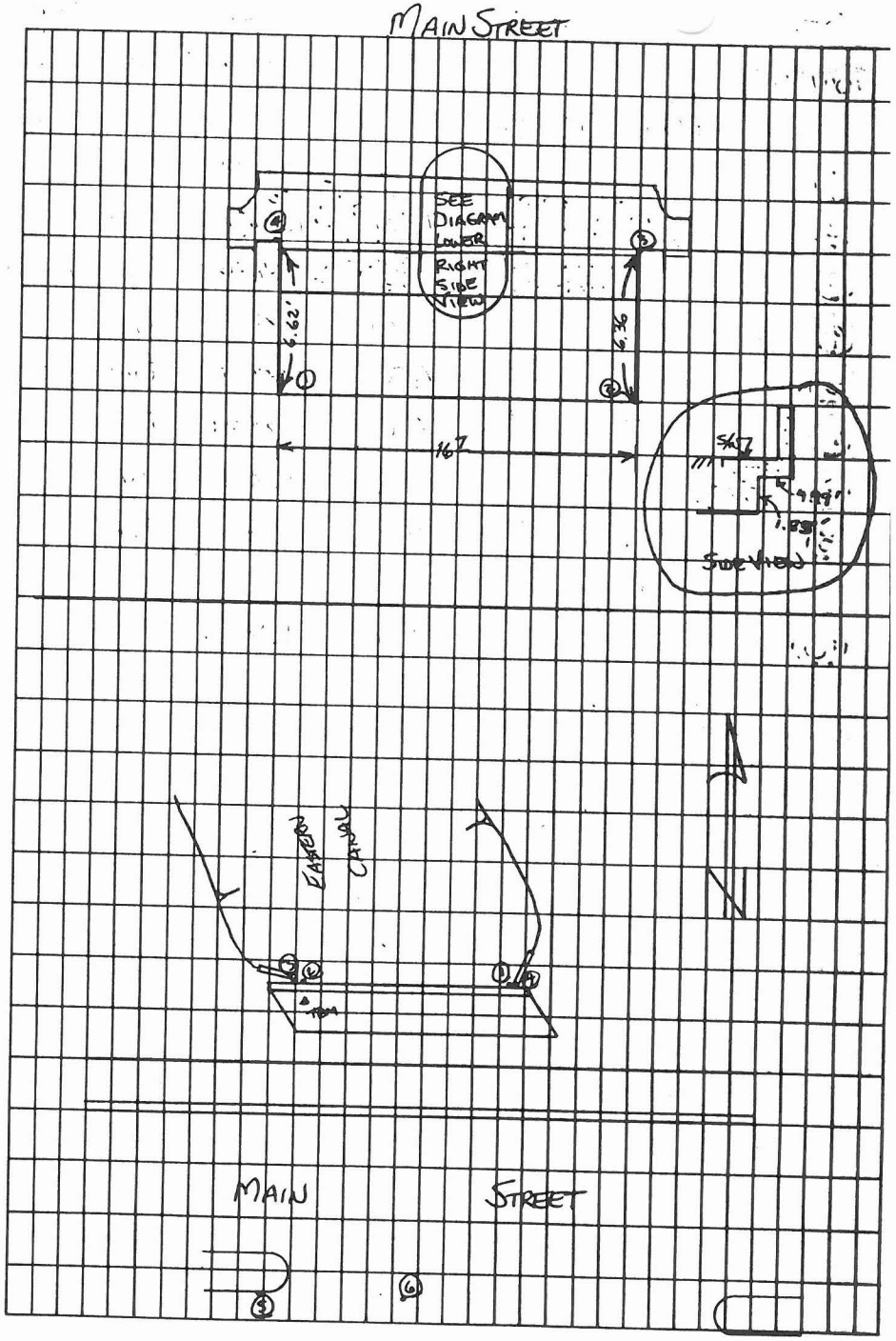
STA	St	H.I.	FS-	ELEV	REMARKS
TBM #182				1289.328	"X" in Concrete
	4.79	1294.12			
1			4.69	1289.43	B/W
2			5.60	1288.52	Top of Bank
3			12.11	1282.01	Toe of Slope
4			12.19	1281.93	Inv
5			12.23	1281.89	Inv
6			12.18	1281.94	Inv
7			12.19	1281.93	Inv
8			12.14	1281.98	Inv
9			12.16	1281.96	Inv
10			5.37	1288.75	Top of Wingwall
11			4.71	1289.41	B/W
12			4.87	1289.25	Pvmt
13			4.85	1289.27	Pvmt
14			4.80	1289.32	Pvmt
15			4.78	1289.34	Pvmt
TBM #182			4.78	1289.34	✓

1-10-97
Clear, Calm, Cold 50°F

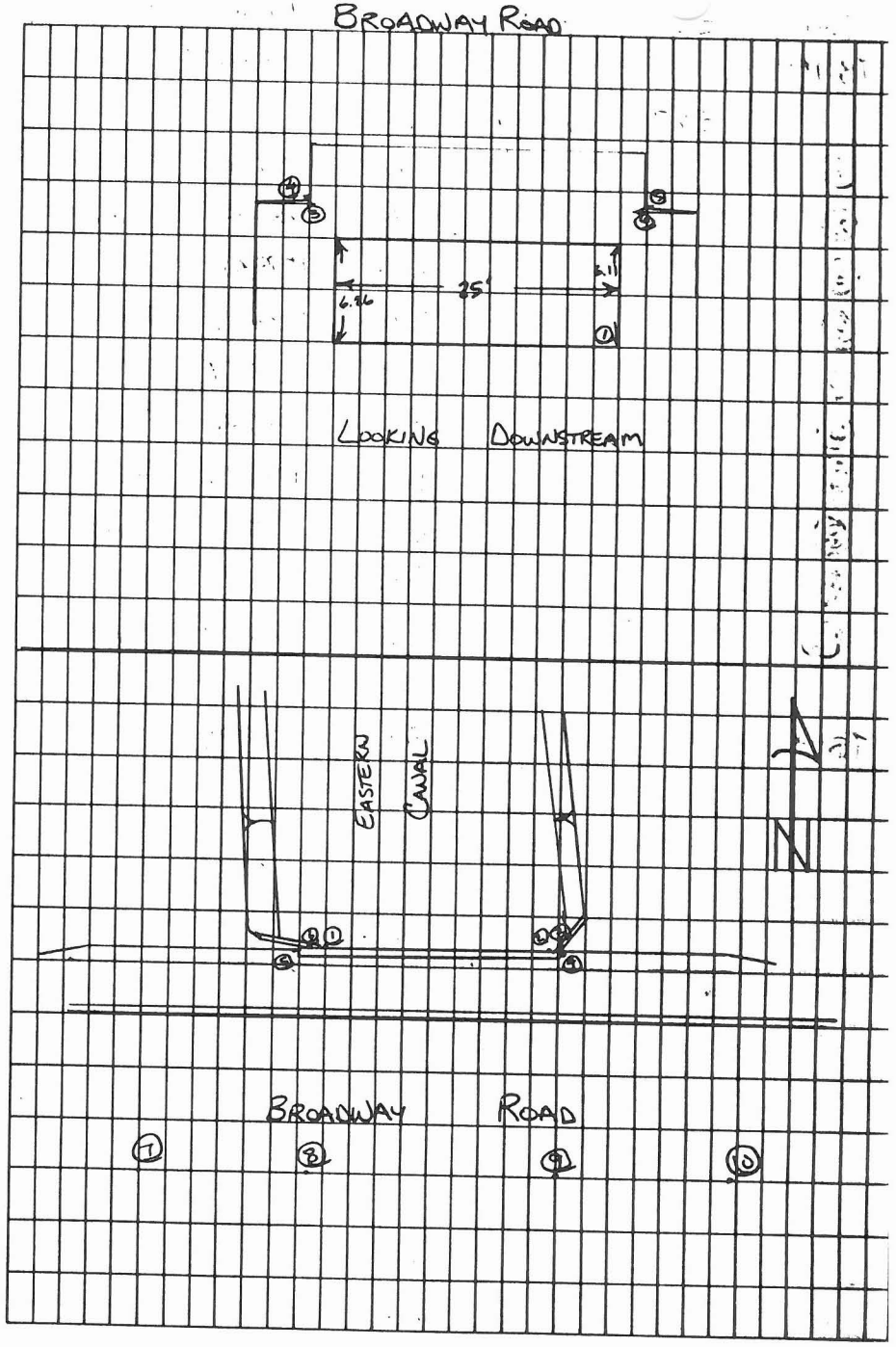
Gardiner
Mortensen
Berghian
Martinez



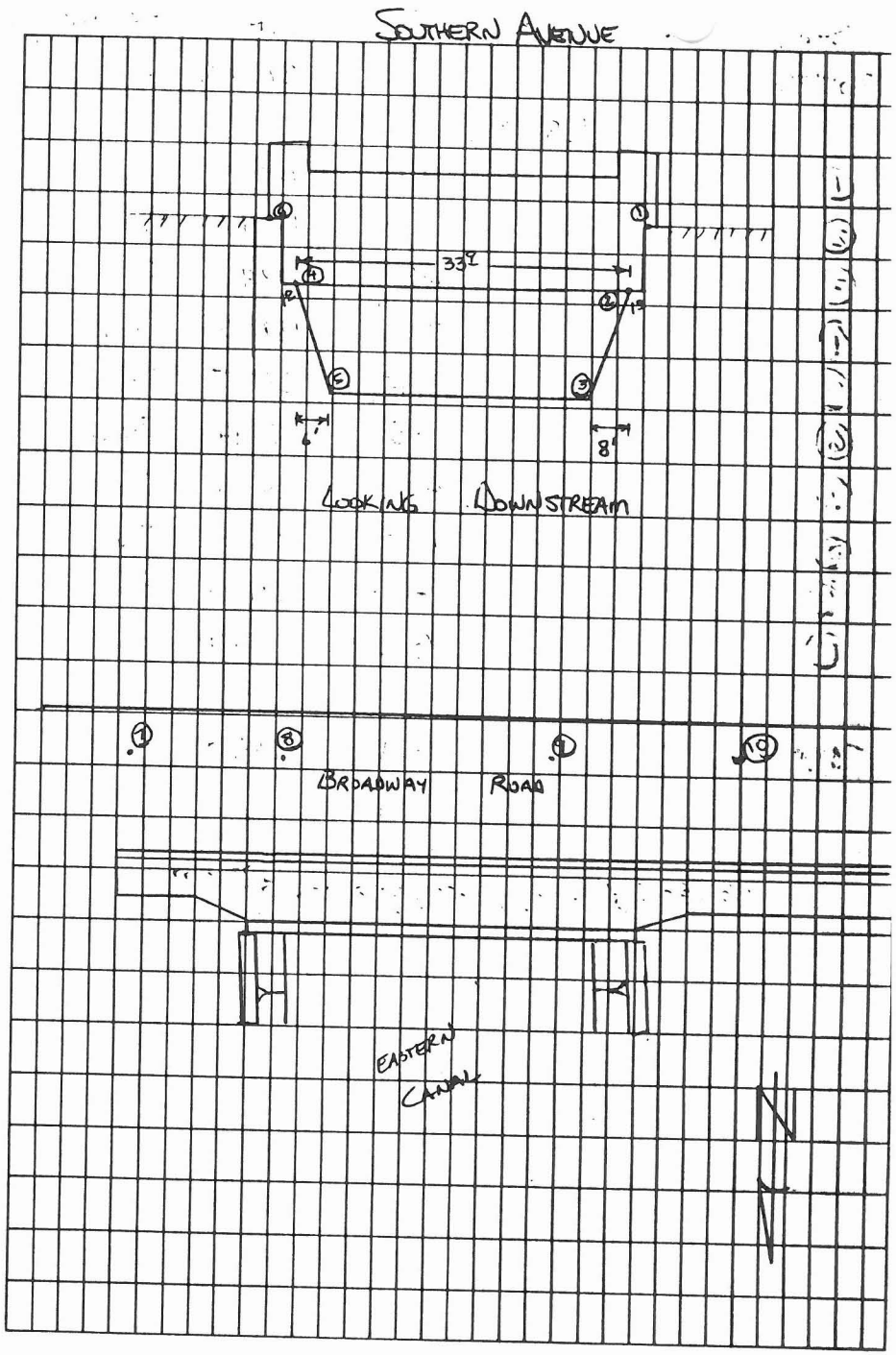
STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM #183				1288.548	AHD B.C.
	5.57	1294.12			
1			12.33	1281.79	Invert
2			12.36	1281.76	Invert
3			5.58	1288.54	Top of Wingwall
4			5.41	1288.71	Top of Wingwall
5			6.39	1287.73	Pvmt
6			6.15	1287.97	Pvmt
7			6.06	1288.06	Pvmt
8			5.78	1288.34	Pvmt
TBM #183			5.56	1288.56	✓



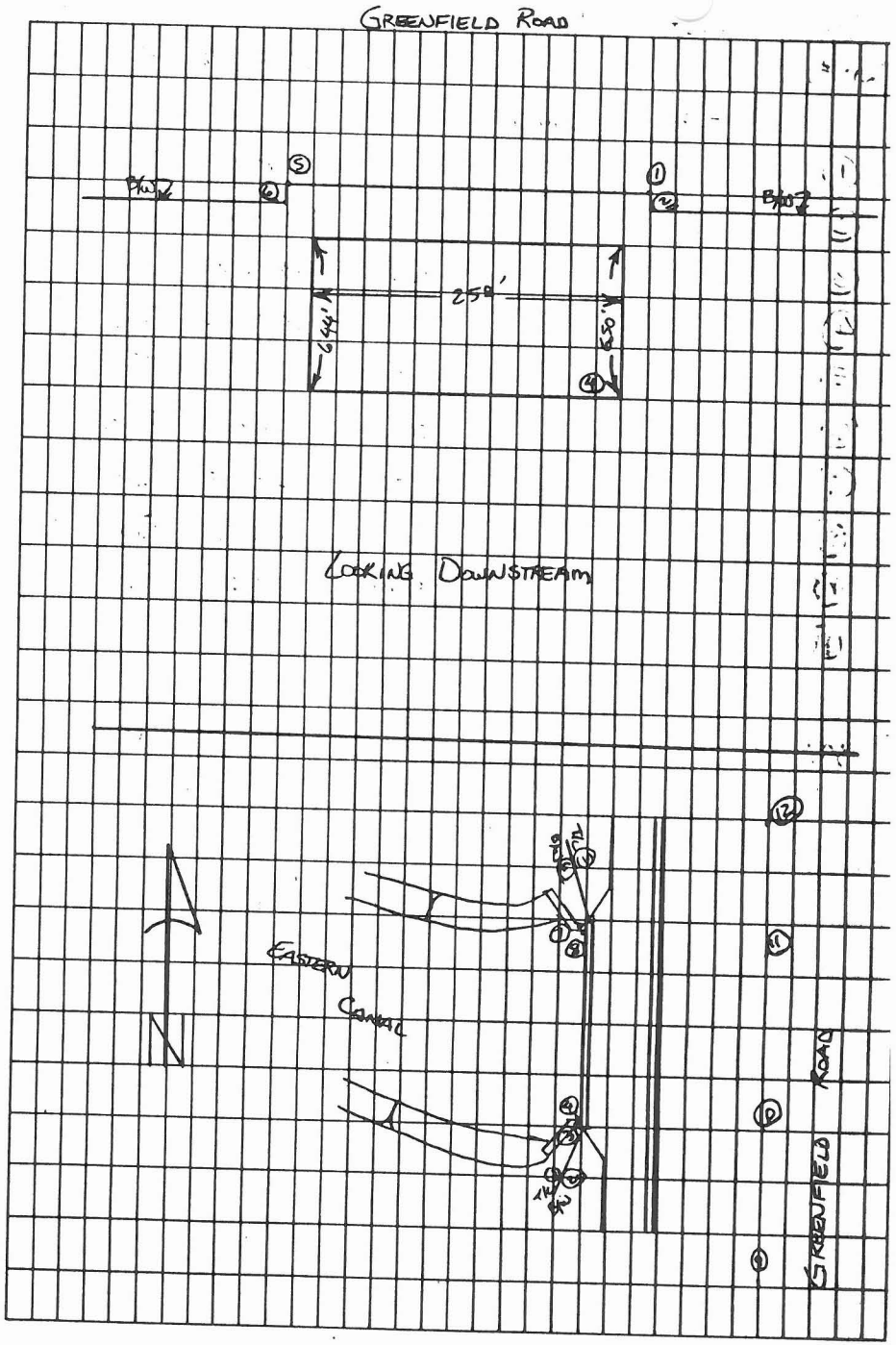
STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM #190				1288.477	"+" in Conc
	4.60	1293.08			
1			12.30	1280.78	Invert
2			12.24	1280.84	Invert
3			4.60	1288.48	Top of Wingwall
4			4.31	1288.71	B/W
5			4.30	1288.78	B/W
6			4.60	1288.48	Top of Wingwall
7			4.30	1288.78	Pvmt
8			4.51	1288.57	Pvmt
9			4.50	1288.58	Pvmt
10			4.51	1288.57	Pvmt
TBM #190			4.60	1288.48	✓



STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM#216				1285.828	SRP B.C.
	5.87	1291.70			
1			4.49	1287.21	Top of Wingwall
2			7.75	1283.95	Top of Abutment
3			12.90	1278.80	Toe of Slope
4			7.65	1284.05	Top of Abutment
5			12.63	1279.07	Toe of Slope
6			4.36	1287.34	Top of Wingwall
7			4.92	1286.78	Pvmt
8			4.70	1287.00	Pvmt
9			4.93	1286.77	Pvmt
10			5.06	1286.64	Pvmt
TBM#216			5.87	1285.83	✓

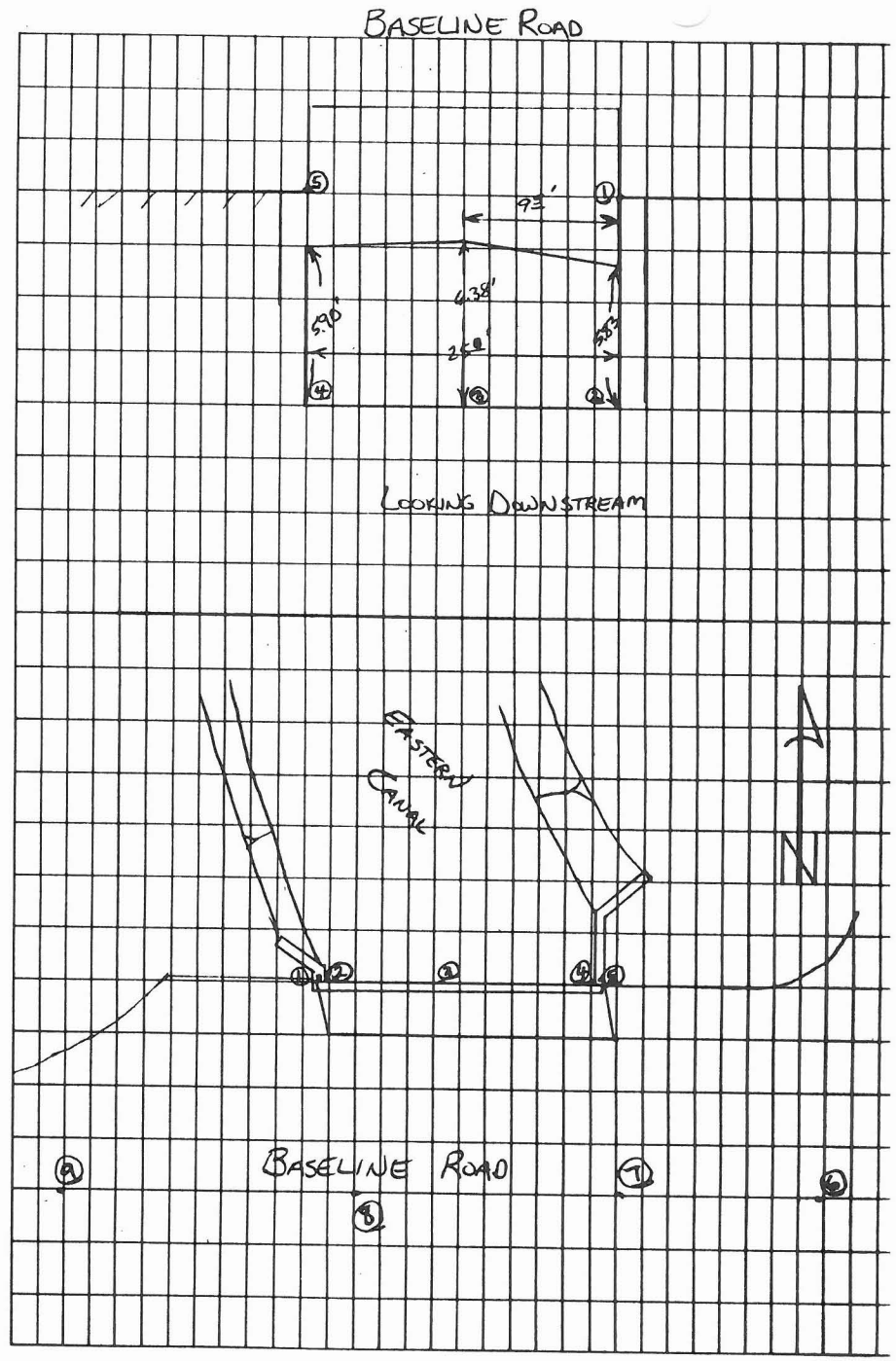


STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM#75				1279.408	Rebar
	9.51	1288.92			
1			3.60	1285.32	T/C
2			3.96	1284.96	B/W
3			4.60	1284.32	Top of Wingwall
4			12.56	1276.36	Invert
5			3.55	1285.37	T/C
6			3.96	1284.96	B/W
7			4.54	1284.38	Top of Wingwall
8			12.53	1276.39	INV
9			4.27	1284.65	Pvmt
10			4.20	1284.72	Pvmt
11			4.13	1284.79	Pvmt
12			4.11	1284.81	Pvmt
TBM#75			9.52	1279.40	✓



STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM #227				1283.017	"4" in Concrete
	4.98	1288.00			
1			4.98	1283.02	Top of Wingwall
2			12.55	1275.45	Inv
3			12.62	1275.38	Inv
4			12.54	1275.46	Inv
5			5.00	1283.00	Top of Wingwall
6			3.92	1284.08	Pvmt
7			3.70	1284.30	Pvmt
8			3.74	1284.26	Pvmt
9			4.16	1283.83	Pvmt
TBM #227					✓

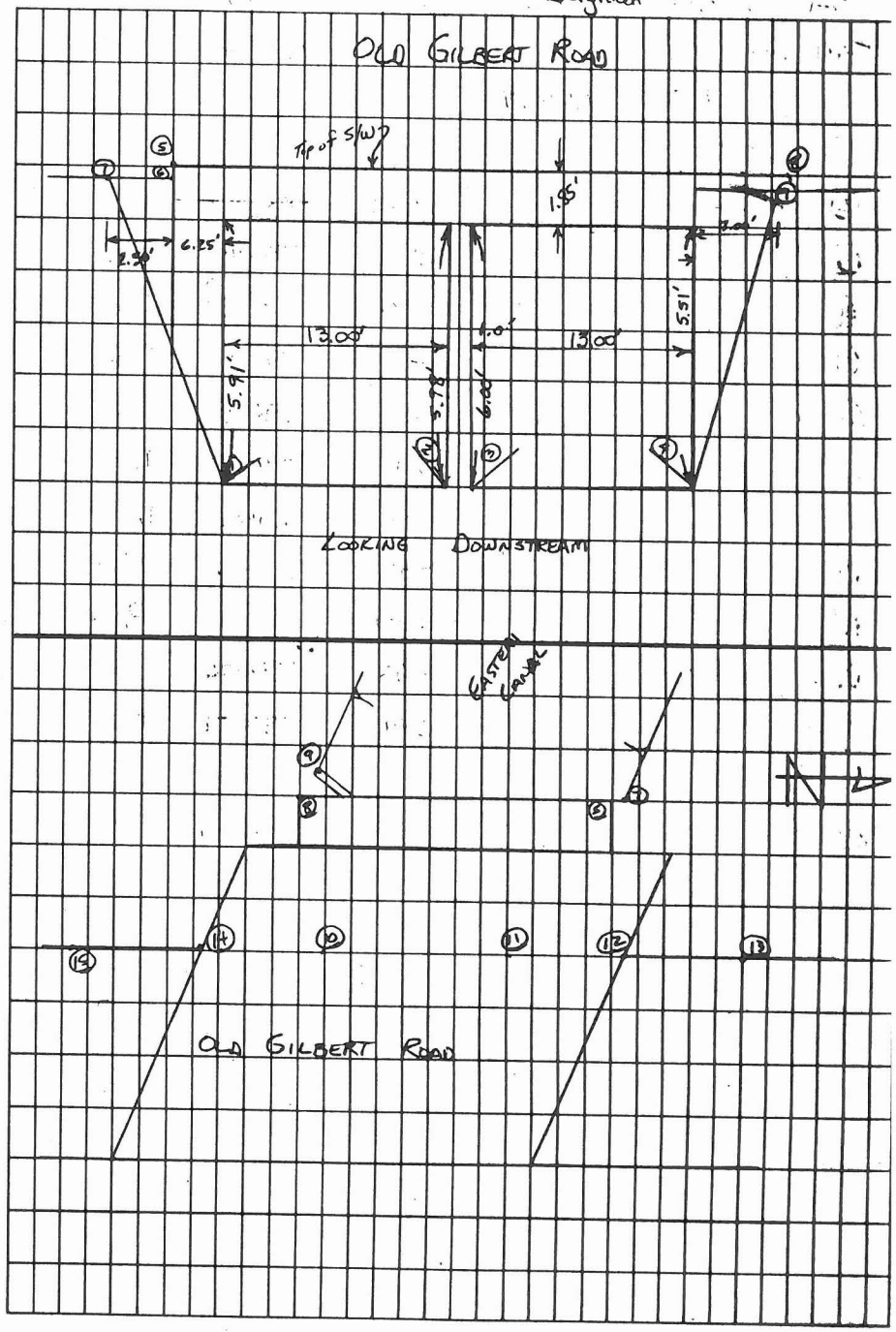
Backsight 4.98 on Wingwall
4.17 on S/W



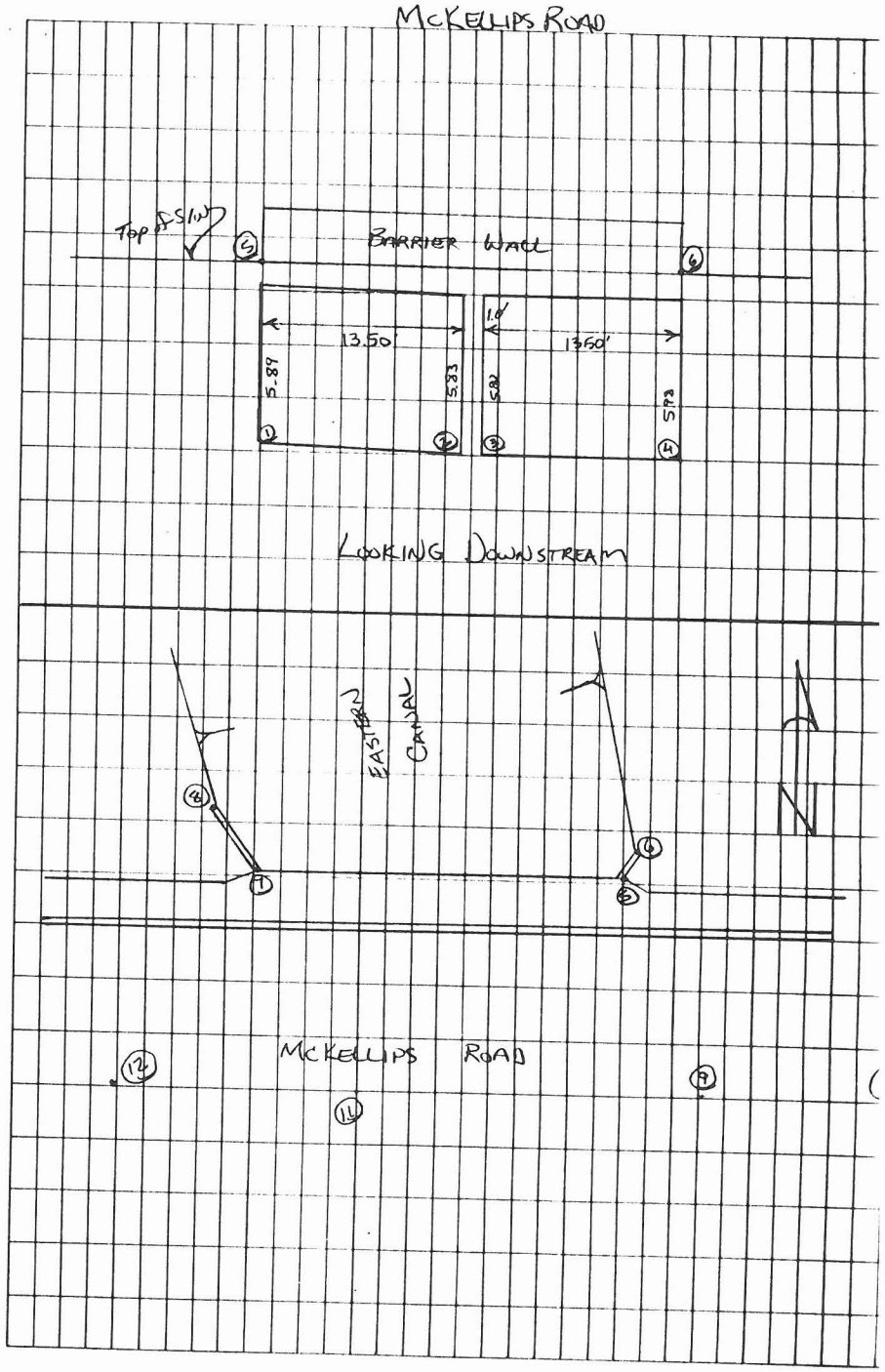
STA	BS+	H.I.	FS−	ELEV	Pt #
TBM #100				1295.401	B.C.
	4.68	1300.08			
1			12.45	1287.63	Invert @ Toe
2			12.67	1287.41	Invert
3			12.65	1287.43	Invert
4			12.12	1287.96	Invert @ Toe
5			4.78	1295.30	T/W
6			5.50	1294.58	℄
7			5.50	1294.58	Top of Bank
8			4.63	1295.45	T/W
9			5.50	1294.58	Top of Bank @ Wingwall
10			5.26	1294.82	M
11			5.34	1294.74	M
12			5.29	1294.79	M @ E.C.
13			5.56	1294.52	M @ E.P.
14			5.26	1294.82	M @ E.C.
15			6.11	1293.97	E.P.
TBM 100			4.68	1295.40	✓

1-8-97
Clear, Calm, Cold 45°F

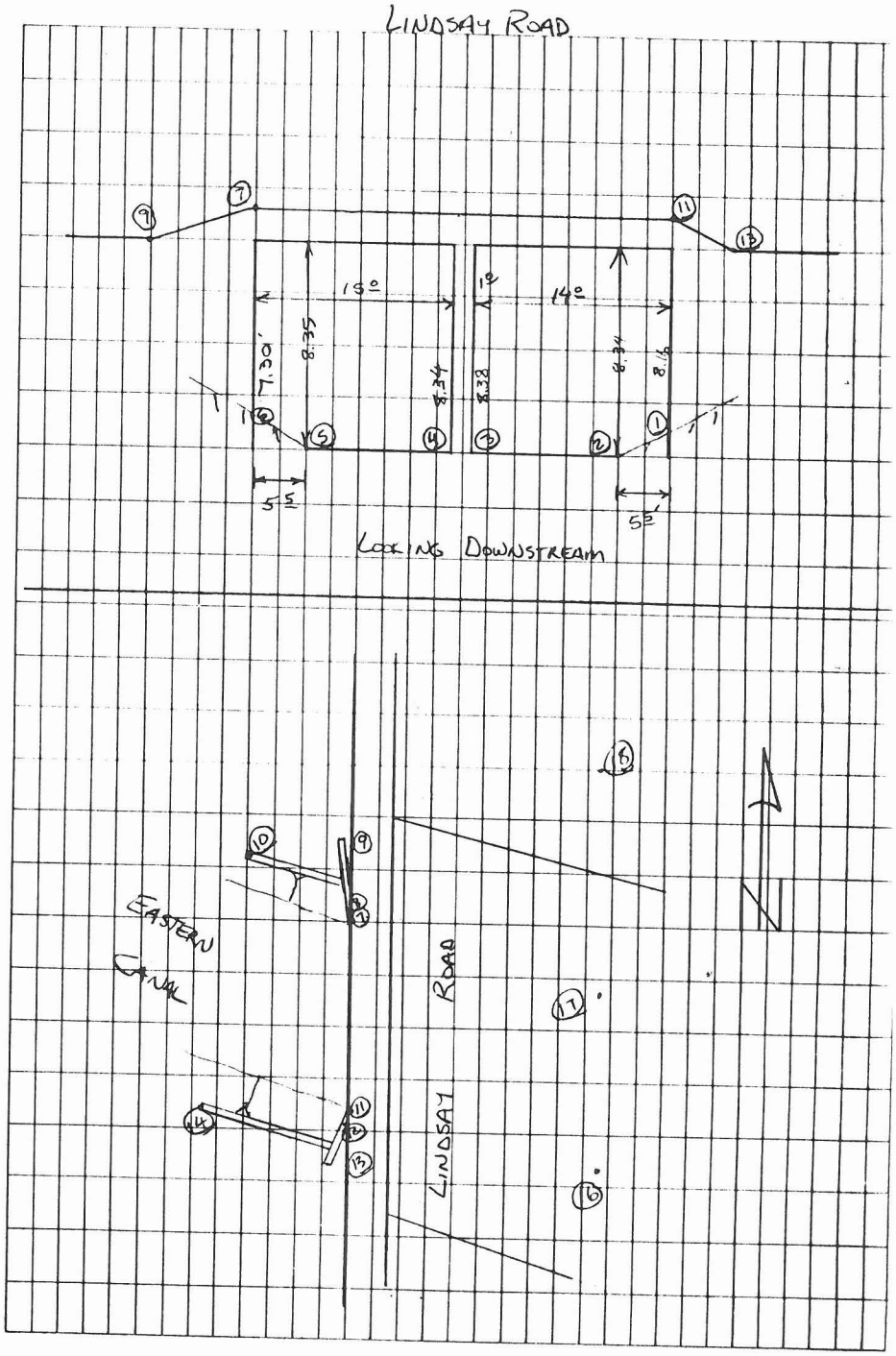
Gardiner
Mortensen
Berghian



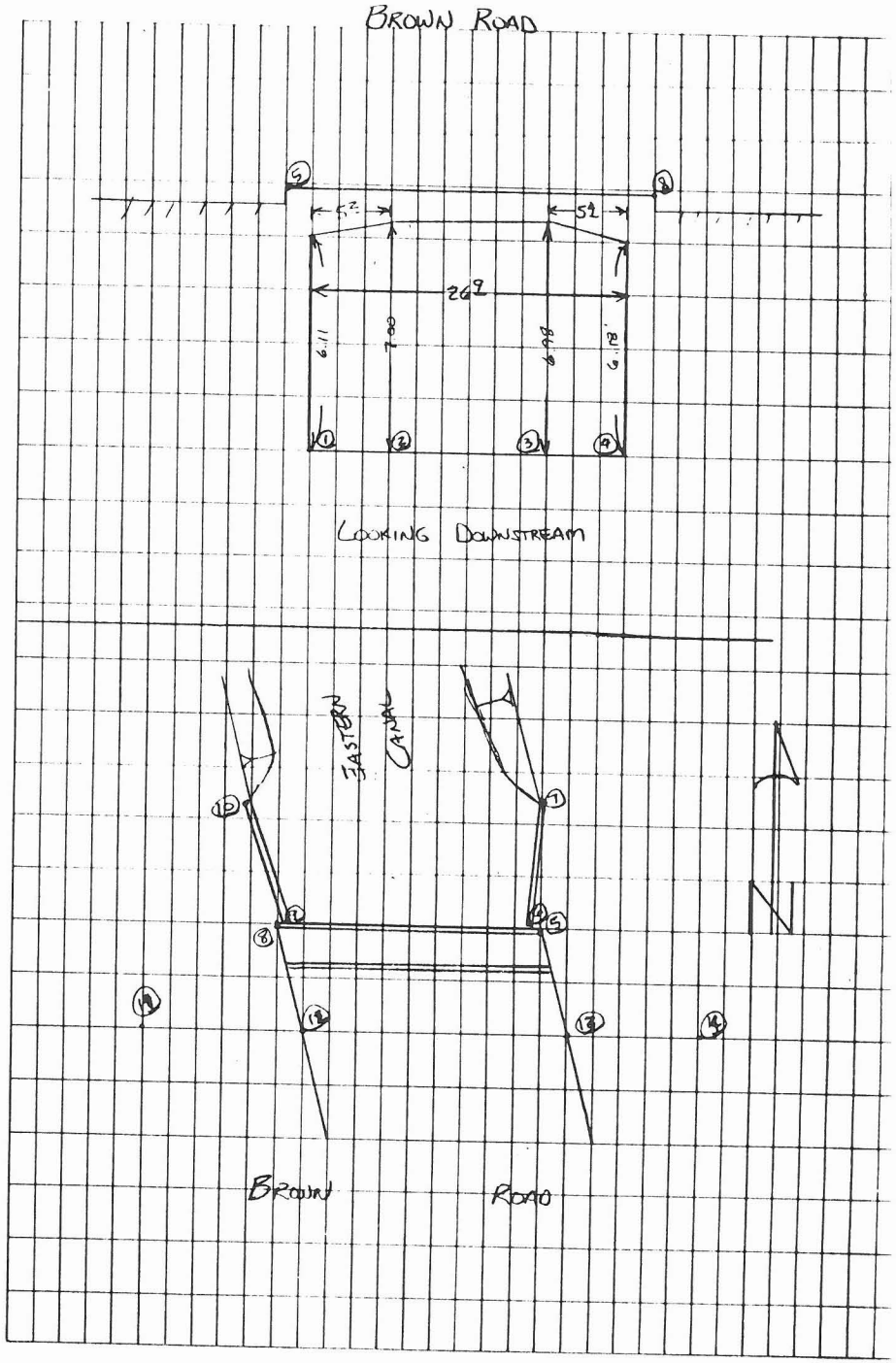
STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM 102				1293.867	SRP B.C.
	5.30	1299.17			
1			12.44	1286.73	Invert @ Wingwall
2			12.72	1286.45	Invert
3			12.73	1286.44	Invert
4			12.88	1286.29	Invert @ Wingwall
5			4.85	1294.32	T/W @ Wall
6			4.82	1294.35	Top of Wingwall
7			5.15	1294.02	T/W @ Wall
8			5.16	1294.01	Top of Wingwall
9			5.40	1293.77	Pvmt
10			5.49	1293.68	Pvmt
11			5.43	1293.74	Pvmt
12			5.46	1293.71	Pvmt
TBM 102			5.30	1293.87	✓



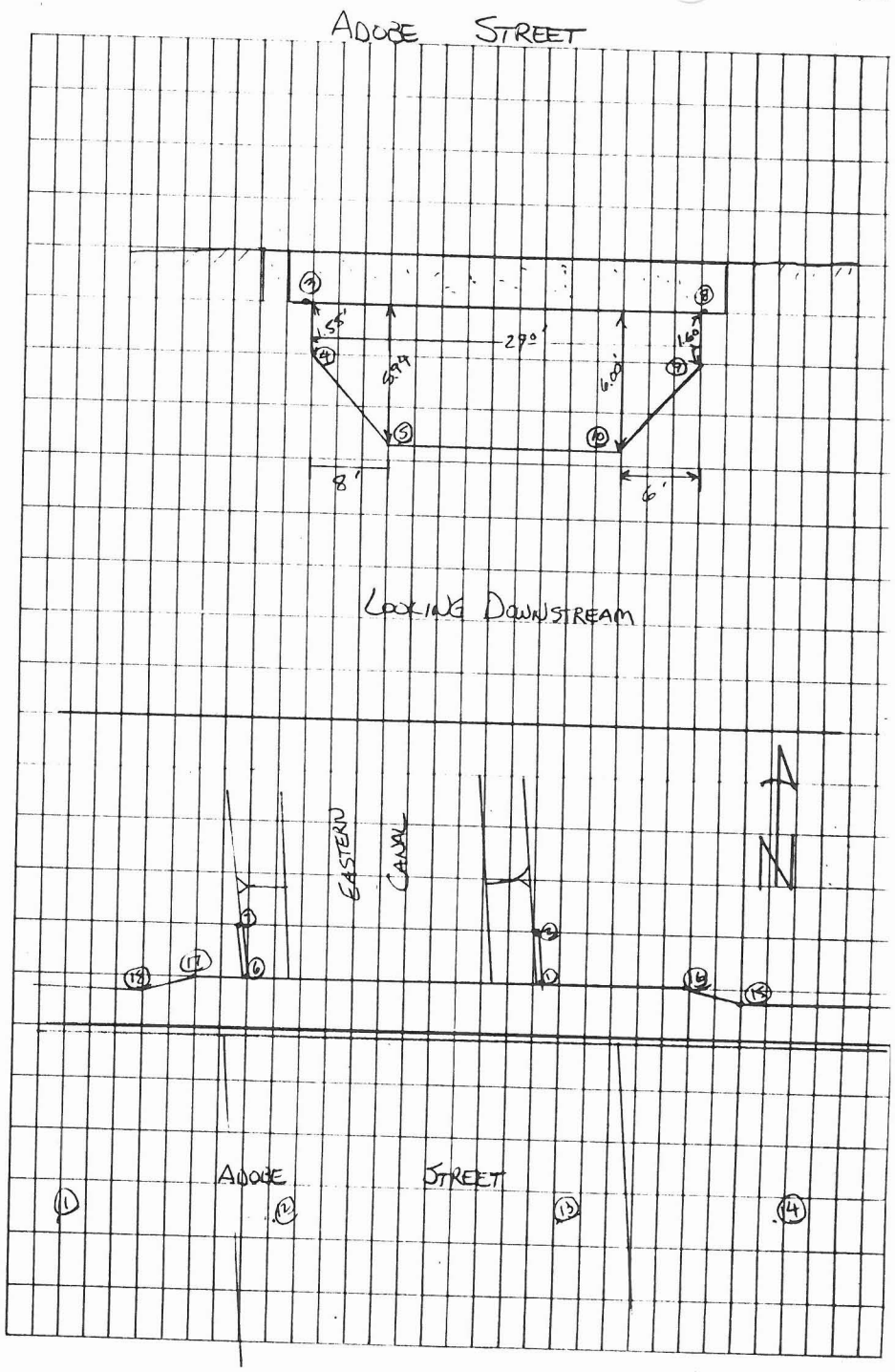
STA	BS +	H.I.	FS -	ELEV	REMARKS
TBM #134				1293.377	SRP B.C.
	4.14	1297.52			
1			12.19	1285.33	Inv @ Wingwall
2			12.44	1285.08	Inv @ Toe
3			12.33	1285.19	Invert
4			12.46	1285.06	Invert
5			12.43	1285.09	Inv @ Toe
6			11.42	1286.10	Inv @ Wingwall
7			3.80	1293.72	Top of S/W
8			4.15	1293.37	Top of Wingwall
9			4.33	1293.19	Top of S/W
10			4.01	1293.52	Top of Wingwall
11			3.38	1294.14	Top of S/W
12			4.17	1293.35	Top of Wingwall
13			4.15	1293.37	Top of S/W
14			5.22	1292.30	Top of Wingwall
15			3.95	1293.57	Pvmt
16			3.92	1293.60	Pvmt
17			4.00	1293.52	Pvmt
18			3.99	1293.53	Pvmt
TBM #134			4.14	1293.38	✓



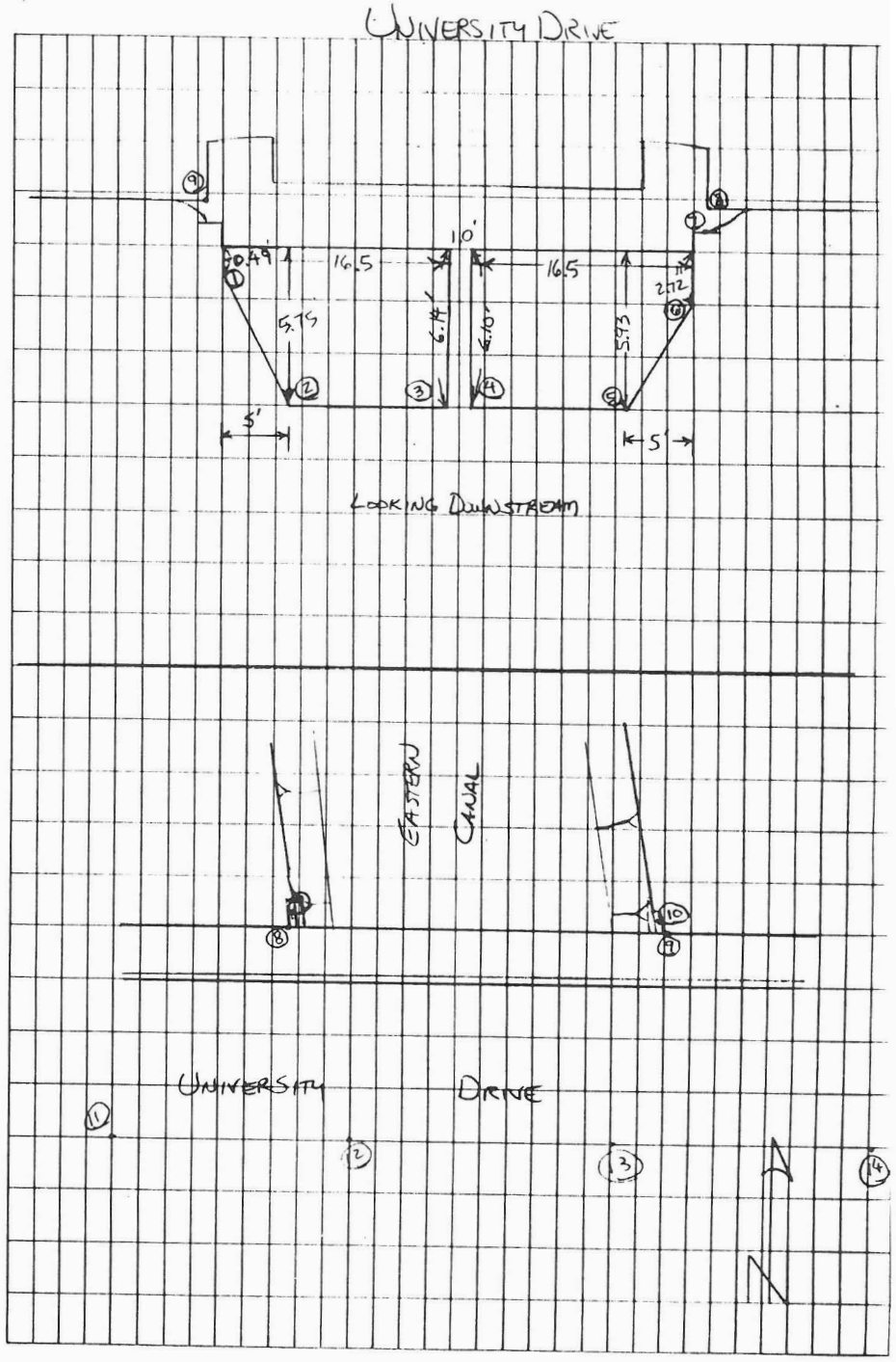
STA	BS +	H.I.	FS -	ELEV	REMARKS
TBM #136				1292.346	MCHD B.C.
	510	1297.45			
1			12.87	1284.68	Inv @ Wingwall
2			13.15	1284.[illegible]	Invert
3			13.05	1284.40	Invert
4			13.00	1284.45	Invert @ Wingwall
5			4.01	1293.44	Top of Conc
6			5.13	1292.32	Top of Wingwall
7			5.60	1291.85	Top of Wingwall
8			4.39	1293.06	Top of Conc
9			5.10	1292.35	Top of Wingwall
10			5.69	1291.76	Top of Wingwall
11			4.73	1292.72	Pvmt
12			4.74	1292.71	Pvmt
13			4.60	1292.85	Pvmt
14			4.64	1292.81	Pvmt
TBM #136			5.10	1292.35	✓



STA	D St	H.I.	FS-	ELEV	REMARKS
TBM #152				1291.050	SKP B.C.
	4.05	1295.10			
1			3.95	1291.15	Top of Wingwall
2			4.27	1290.83	Top of Wingwall
3			5.83	1289.27	Top of Abutment
4			7.38	1287.72	Top of Bnk(~) Abutment
5			11.53	1283.57	Toe of Slope
6			4.07	1291.03	Top of Wingwall
7			4.32	1290.78	Top of Wingwall
8			5.81	1289.29	Top of Abutment
9			7.41	1287.69	Top of Bnk(~) Abutment
10			11.66	1283.44	Toe of Slope
11			3.92	1291.18	Pvmt
12			3.53	1291.57	Pvmt
13			3.55	1291.55	Pvmt
14			3.83	1291.27	Pvmt
15			3.36	1291.74	B/W
16			3.93	1291.17	B/W
17			4.05	1291.05	B/W
18			3.55	1291.55	B/W
TBM#152			4.04	1291.06	✓



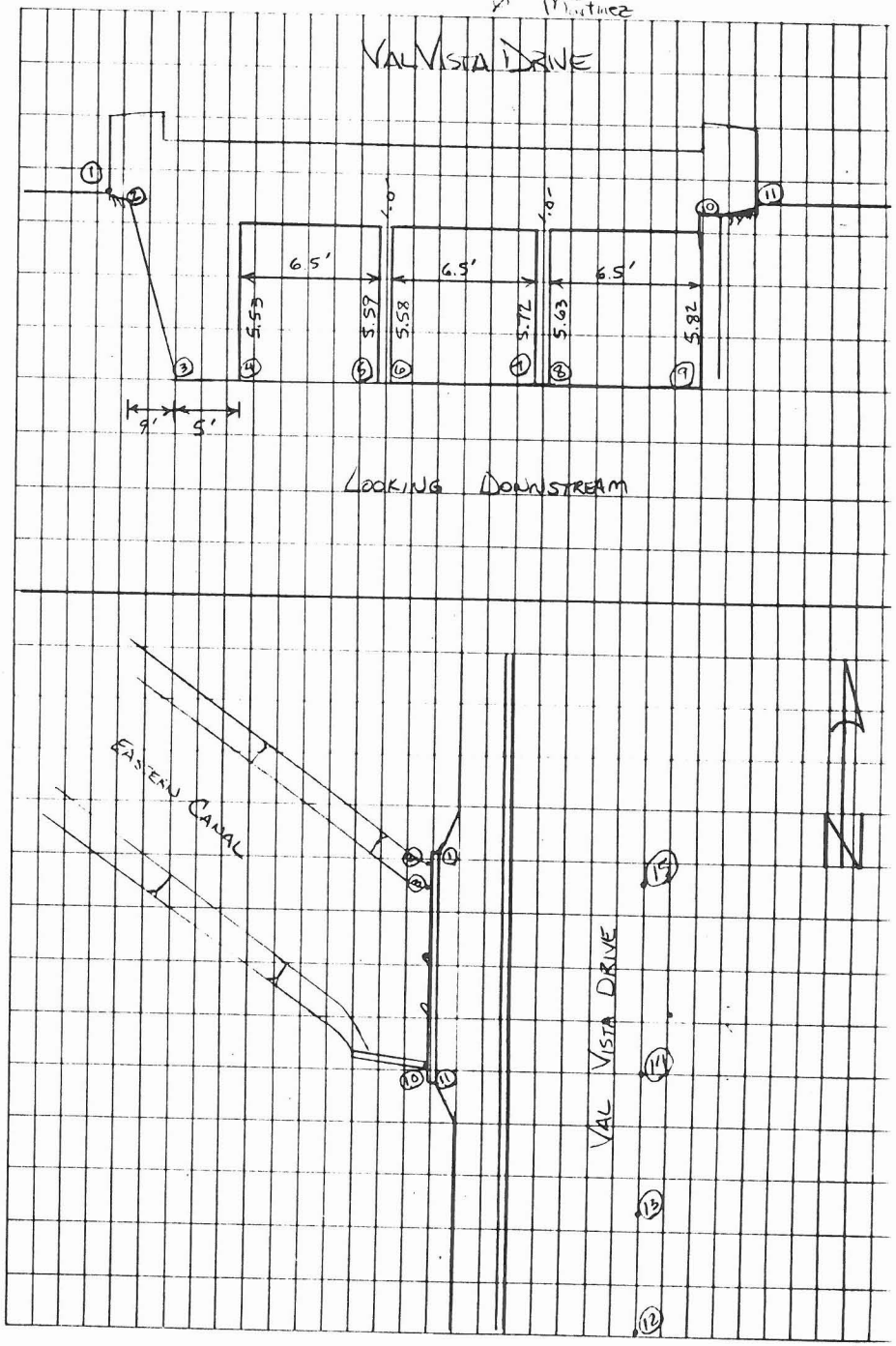
STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM#175				1288.367	SRP B.C.
	6.01	1294.38			
1			6.59	1287.79	Top of Slope
2			11.86	1282.52	Toe of Slope
3			12.24	1282.14	Invert
4			12.30	1282.08	Invert
5			12.12	1282.26	Toe of Slope
6			9.00	1285.38	Top of Slope
7			5.37	1289.01	Abutment
8			4.78	1289.60	B/W
9			4.67	1289.71	B/W
10			5.22	1289.16	Abutment
11			5.07	1289.31	Pvmt
12			4.87	1289.51	Pvmt
13			4.84	1289.54	Pvmt
14			4.87	1289.51	Pvmt
TBM#175			6.01	1288.37	✓



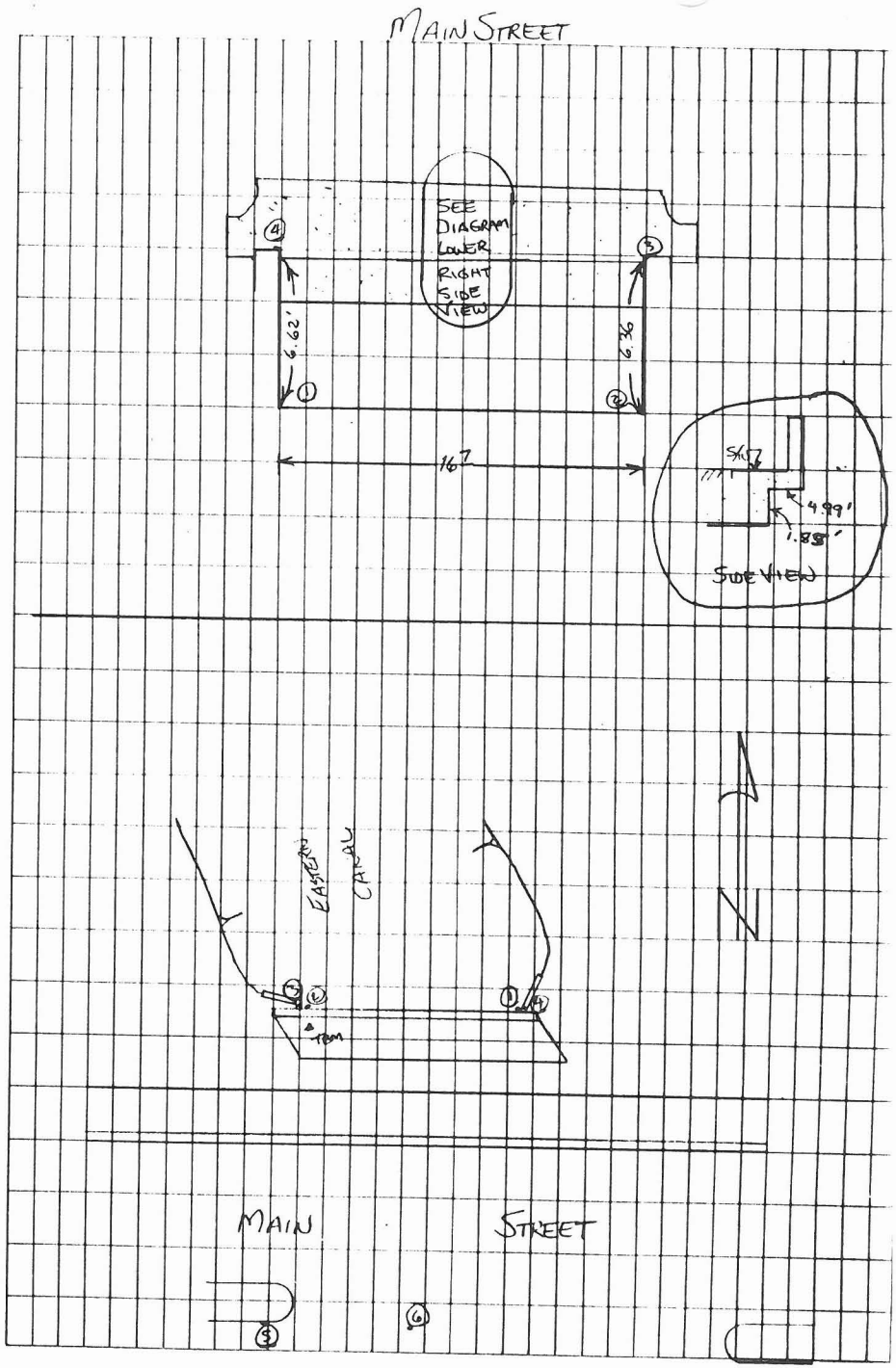
STA	BS	H.I.	FS	ELEV	REMARKS
TBM #182				1289.328	"X" in Concrete
	4.79	1294.12			
1			4.69	1289.43	B/W
2			5.60	1288.52	Top of Bank
3			12.11	1282.01	Toe of Slope
4			12.19	1281.93	Inv
5			12.23	1281.89	Inv
6			12.18	1281.94	Inv
7			12.19	1281.93	Inv
8			12.14	1281.98	Inv
9			12.16	1281.96	Inv
10			5.37	1288.75	Top of Wingwall
11			4.71	1289.41	B/W
12			4.37	1289.25	Pvmt
13			4.85	1281.27	Pvmt
14			4.80	1289.32	Pvmt
15			4.78	1289.34	Pvmt
TBM #182			4.78	1289.34	✓

1-10-97
Clear, Calm, Cold 50°F

Gardner
Mortensen
Berghian
Martinez

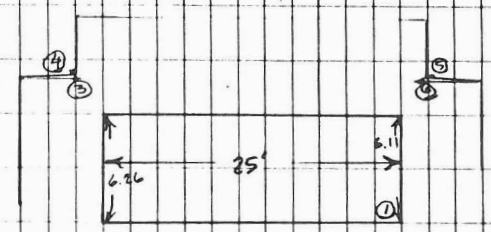


STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM #183				1288.548	AHD BC.
	5.57	1294.12			
1			12.33	1281.79	Invert
2			12.36	1281.76	Invert
3			5.58	1288.54	Top of Wingwall
4			5.41	1288.71	Top of Wingwall
5			6.39	1287.73	Pvmt
6			6.15	1287.97	Pvmt
7			6.06	1288.06	Pvmt
8			5.78	1288.34	Pvmt
TBM #183			5.56	1288.56	✓

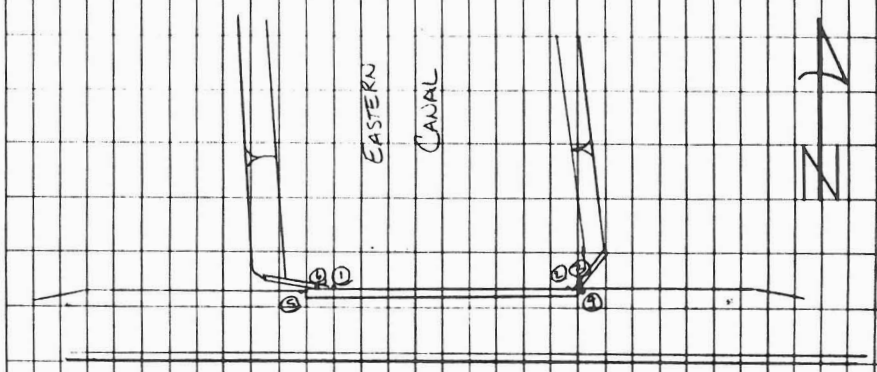


STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM #190				1288.477	"+" in Conc
	4.60	1293.08			
1			12.30	1280.78	Invert
2			12.24	1280.84	Invert
3			4.60	1288.48	Top of Wingwall
4			4.31	1288.71	B/W
5			4.30	1288.78	B/W
6			4.60	1288.48	Top of Wingwall
7			4.30	1288.78	Pvmt
8			4.51	1288.57	Pvmt
9			4.50	1288.58	Pvmt
10			4.51	1288.57	Pvmt
TBM #190			4.60	1288.48	✓

BROADWAY ROAD



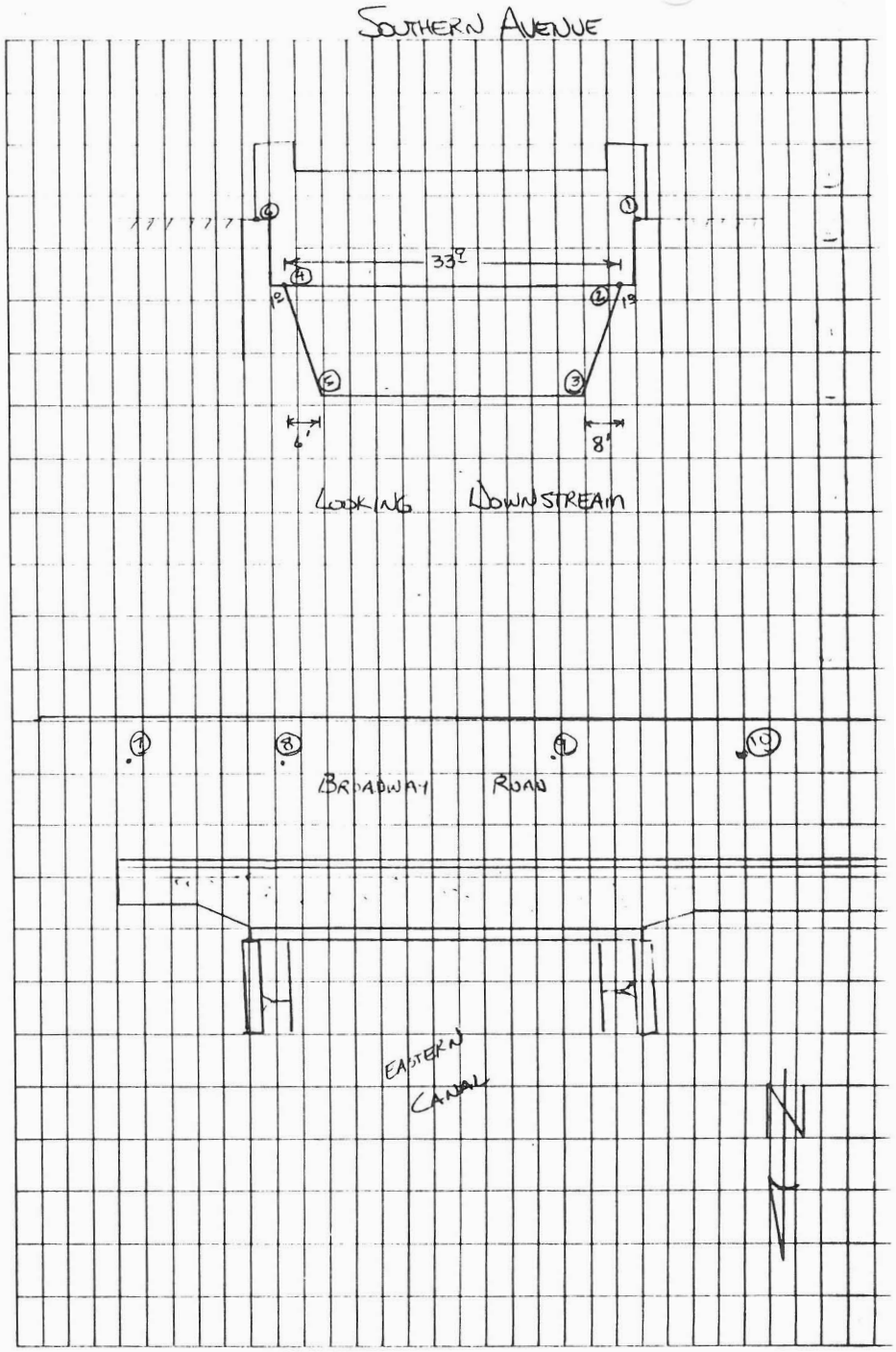
LOOKING DOWNSTREAM



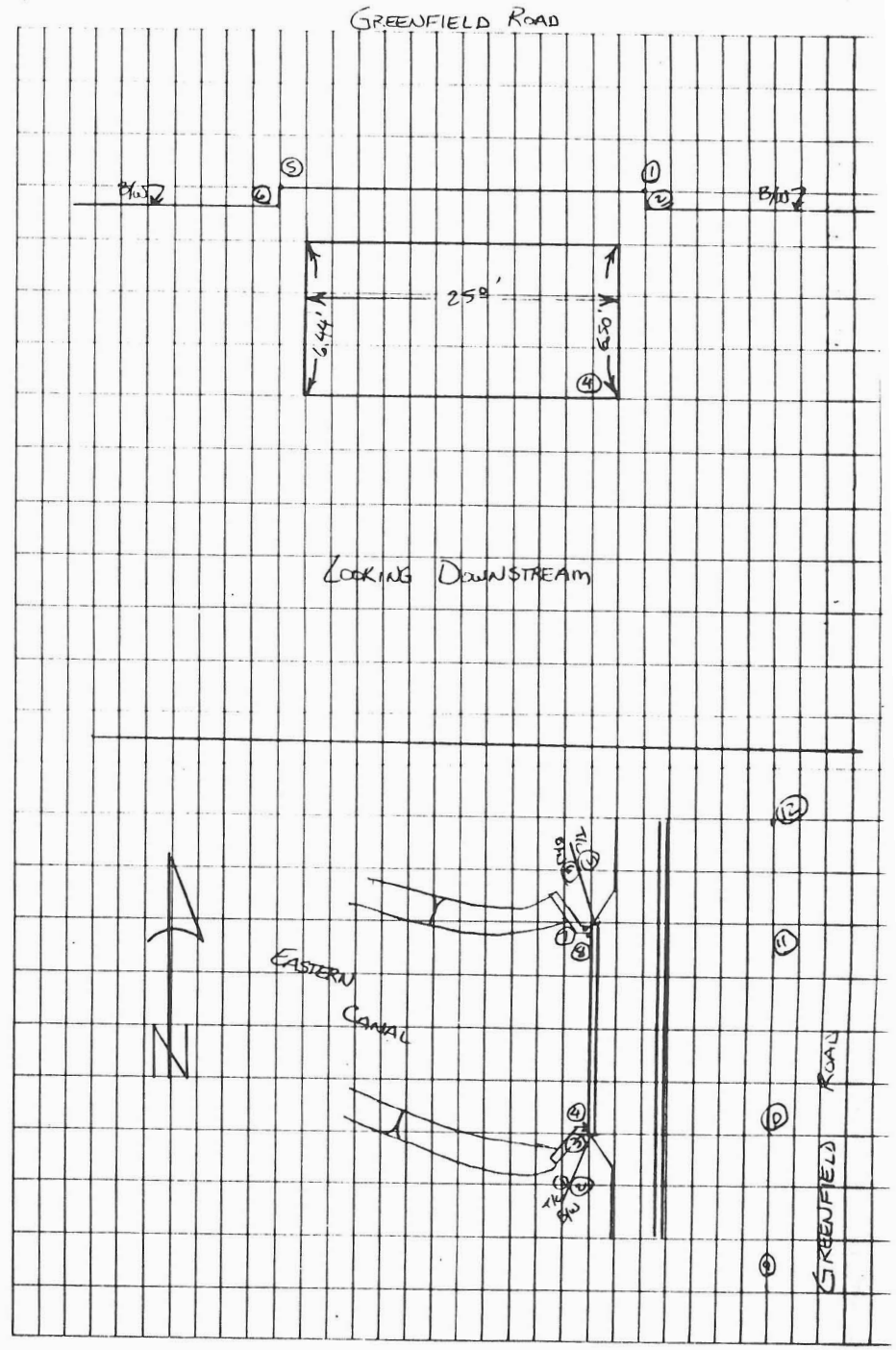
BROADWAY ROAD

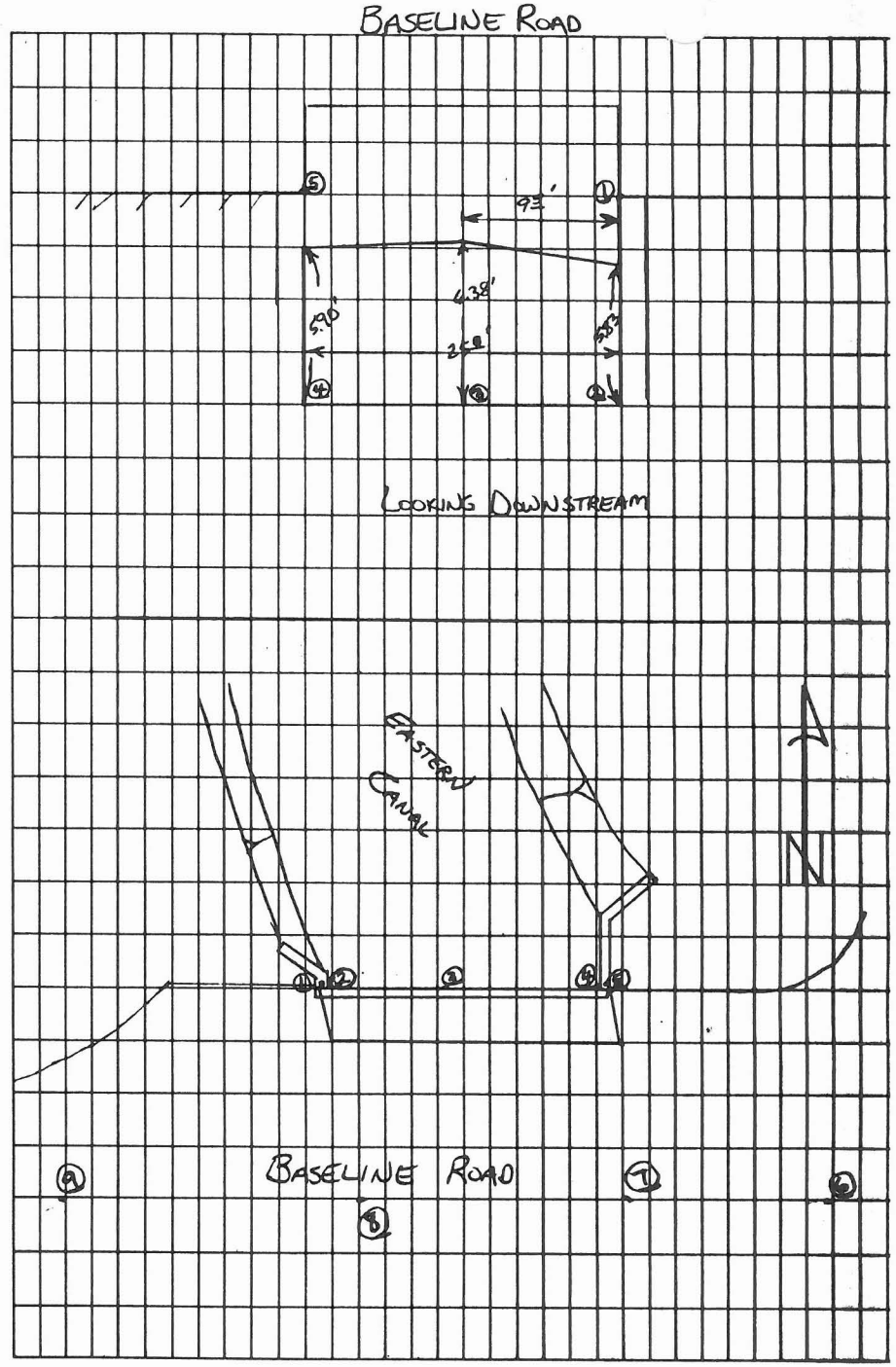
7 8 9 10

STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM#216				1285.828	SRP B.C.
	5.87	1291.70			
1			4.49	1287.21	Top of Wingwall
2			7.75	1283.75	Top of Abutment
3			12.90	1278.80	Toe of Slope
4			7.65	1284.05	Top of Abutment
5			12.63	1279.07	Toe of Slope
6			4.36	1287.34	Top of Wingwall
7			4.92	1286.78	Pvmt
8			4.70	1287.00	Pvmt
9			4.93	1286.77	Pvmt
10			5.06	1286.64	Pvmt
TBM#216			5.87	1285.83	✓



STA	BS+	H.I.	FS-	ELEV	REMARKS
TBM #75				1279.408	Rebar
	9.51	1288.92			
1			3.60	1285.32	T/C
2			3.96	1284.96	B/W
3			4.60	1284.32	Top of Wingwall
4			12.56	1276.36	Invert
5			3.55	1285.37	T/C
6			3.96	1284.96	B/W
7			4.54	1284.38	Top of Wingwall
8			12.53	1276.39	INV
9			4.27	1284.65	Pvmt
10			4.20	1284.72	Pvmt
11			4.13	1284.79	Pvmt
12			4.11	1284.81	Pvmt
TBM #75			9.52	1279.40	✓



STA	+	H.I.	FS-	ELEV	REMARKS
TBM #227				1283.017	"4" in Concrete
	4.98	1288.00			
1			4.98	1283.02	Top of Wingwall
2			12.55	1275.45	Inv
3			12.62	1275.38	Inv
4			12.54	1275.46	Inv
5			5.00	1283.00	Top of Wingwall
6			3.92	1284.08	Point
7			3.70	1284.30	Point
8			3.74	1284.26	Point
9			4.16	1283.83	Point
TBM #227					✓

Backsight 4.98 on Wingwall
4.17 on S/W