

TABLE 1
Stray Current Investigation
Rosette Test Data (Millivolts)

Direction	Test Location (Station Number)				
	2+00	14+50	29+50	39+50	4+75(*)
0 Degrees	-24.0	+11.1	-10.6	-60.1	+9.8
45 Degrees	-15.4	+0.1	-21.7	-34.3	-3.0
90 Degrees	-18.3	-6.5	-94.0	+33.9	-8.9
1 35 Degrees	-20.5	-12.3	-19.0	+125.4	-3.3
1 80 Degrees	-25.2	-9.8	+6.6	+92.2	+2.4
225 Degrees	-16.3	+9.5	-3.4	-16.1	+7.9
270 Degrees	-14.8	+18.8	-1.1	-118.0	+9.9
31 5 Degrees	-27.0	+17.6	-2.6	-122.5	+14.9
RESULTANT	3.2	63.8	118.9	463.4	41.3
DIRECTION	327.8°	123.7°	81.0°	317.3°	107.7°

(*) On 16-inch lateral.

Analysis of the above data indicates that significant stray current effects exist along the proposed water main alignment.

5.2 Field Soil Resistivity

The ability of an electrolyte to conduct current is primarily governed by resistivity, which is expressed in ohm-centimeters. Generally, the lower the resistivity, the more corrosive the environment. More specifically, resistivities below 2,000 ohm-centimeters are very corrosive to ferrous metals, whereas values above 10,000 ohm-centimeters are mildly corrosive. Common soil resistivity classifications are shown in Table 2.