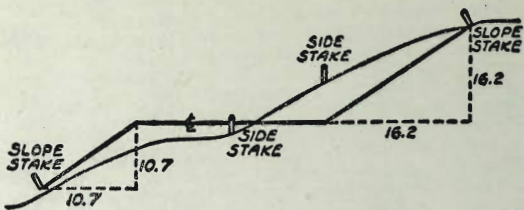


G-380



1374
93
1467

DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING
SLOPE 1 TO 1. ROADWAY OF ANY WIDTH

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 0 | 0.00 | 0.10 | 0.20 | 0.30 | 0.40 | 0.50 | 0.60 | 0.70 | 0.80 | 0.90 | 0 |
| 1 | 1.00 | 1.10 | 1.20 | 1.30 | 1.40 | 1.50 | 1.60 | 1.70 | 1.80 | 1.90 | 1 |
| 2 | 2.00 | 2.10 | 2.20 | 2.30 | 2.40 | 2.50 | 2.60 | 2.70 | 2.80 | 2.90 | 2 |
| 3 | 3.00 | 3.10 | 3.20 | 3.30 | 3.40 | 3.50 | 3.60 | 3.70 | 3.80 | 3.90 | 3 |
| 4 | 4.00 | 4.10 | 4.20 | 4.30 | 4.40 | 4.50 | 4.60 | 4.70 | 4.80 | 4.90 | 4 |
| 5 | 5.00 | 5.10 | 5.20 | 5.30 | 5.40 | 5.50 | 5.60 | 5.70 | 5.80 | 5.90 | 5 |
| 6 | 6.00 | 6.10 | 6.20 | 6.30 | 6.40 | 6.50 | 6.60 | 6.70 | 6.80 | 6.90 | 6 |
| 7 | 7.00 | 7.10 | 7.20 | 7.30 | 7.40 | 7.50 | 7.60 | 7.70 | 7.80 | 7.90 | 7 |
| 8 | 8.00 | 8.10 | 8.20 | 8.30 | 8.40 | 8.50 | 8.60 | 8.70 | 8.80 | 8.90 | 8 |
| 9 | 9.00 | 9.10 | 9.20 | 9.30 | 9.40 | 9.50 | 9.60 | 9.70 | 9.80 | 9.90 | 9 |
| 10 | 10.00 | 10.10 | 10.20 | 10.30 | 10.40 | 10.50 | 10.60 | 10.70 | 10.80 | 10.90 | 10 |
| 11 | 11.00 | 11.10 | 11.20 | 11.30 | 11.40 | 11.50 | 11.60 | 11.70 | 11.80 | 11.90 | 11 |
| 12 | 12.00 | 12.10 | 12.20 | 12.30 | 12.40 | 12.50 | 12.60 | 12.70 | 12.80 | 12.90 | 12 |
| 13 | 13.00 | 13.10 | 13.20 | 13.30 | 13.40 | 13.50 | 13.60 | 13.70 | 13.80 | 13.90 | 13 |
| 14 | 14.00 | 14.10 | 14.20 | 14.30 | 14.40 | 14.50 | 14.60 | 14.70 | 14.80 | 14.90 | 14 |
| 15 | 15.00 | 15.10 | 15.20 | 15.30 | 15.40 | 15.50 | 15.60 | 15.70 | 15.80 | 15.90 | 15 |
| 16 | 16.00 | 16.10 | 16.20 | 16.30 | 16.40 | 16.50 | 16.60 | 16.70 | 16.80 | 16.90 | 16 |
| 17 | 17.00 | 17.10 | 17.20 | 17.30 | 17.40 | 17.50 | 17.60 | 17.70 | 17.80 | 17.90 | 17 |
| 18 | 18.00 | 18.10 | 18.20 | 18.30 | 18.40 | 18.50 | 18.60 | 18.70 | 18.80 | 18.90 | 18 |
| 19 | 19.00 | 19.10 | 19.20 | 19.30 | 19.40 | 19.50 | 19.60 | 19.70 | 19.80 | 19.90 | 19 |
| 20 | 20.00 | 20.10 | 20.20 | 20.30 | 20.40 | 20.50 | 20.60 | 20.70 | 20.80 | 20.90 | 20 |
| 21 | 21.00 | 21.10 | 21.20 | 21.30 | 21.40 | 21.50 | 21.60 | 21.70 | 21.80 | 21.90 | 21 |
| 22 | 22.00 | 22.10 | 22.20 | 22.30 | 22.40 | 22.50 | 22.60 | 22.70 | 22.80 | 22.90 | 22 |
| 23 | 23.00 | 23.10 | 23.20 | 23.30 | 23.40 | 23.50 | 23.60 | 23.70 | 23.80 | 23.90 | 23 |
| 24 | 24.00 | 24.10 | 24.20 | 24.30 | 24.40 | 24.50 | 24.60 | 24.70 | 24.80 | 24.90 | 24 |
| 25 | 25.00 | 25.10 | 25.20 | 25.30 | 25.40 | 25.50 | 25.60 | 25.70 | 25.80 | 25.90 | 25 |
| 26 | 26.00 | 26.10 | 26.20 | 26.30 | 26.40 | 26.50 | 26.60 | 26.70 | 26.80 | 26.90 | 26 |
| 27 | 27.00 | 27.10 | 27.20 | 27.30 | 27.40 | 27.50 | 27.60 | 27.70 | 27.80 | 27.90 | 27 |
| 28 | 28.00 | 28.10 | 28.20 | 28.30 | 28.40 | 28.50 | 28.60 | 28.70 | 28.80 | 28.90 | 28 |
| 29 | 29.00 | 29.10 | 29.20 | 29.30 | 29.40 | 29.50 | 29.60 | 29.70 | 29.80 | 29.90 | 29 |
| 30 | 30.00 | 30.10 | 30.20 | 30.30 | 30.40 | 30.50 | 30.60 | 30.70 | 30.80 | 30.90 | 30 |
| 31 | 31.00 | 31.10 | 31.20 | 31.30 | 31.40 | 31.50 | 31.60 | 31.70 | 31.80 | 31.90 | 31 |
| 32 | 32.00 | 32.10 | 32.20 | 32.30 | 32.40 | 32.50 | 32.60 | 32.70 | 32.80 | 32.90 | 32 |
| 33 | 33.00 | 33.10 | 33.20 | 33.30 | 33.40 | 33.50 | 33.60 | 33.70 | 33.80 | 33.90 | 33 |
| 34 | 34.00 | 34.10 | 34.20 | 34.30 | 34.40 | 34.50 | 34.60 | 34.70 | 34.80 | 34.90 | 34 |
| 35 | 35.00 | 35.10 | 35.20 | 35.30 | 35.40 | 35.50 | 35.60 | 35.70 | 35.80 | 35.90 | 35 |
| 36 | 36.00 | 36.10 | 36.20 | 36.30 | 36.40 | 36.50 | 36.60 | 36.70 | 36.80 | 36.90 | 36 |
| 37 | 37.00 | 37.10 | 37.20 | 37.30 | 37.40 | 37.50 | 37.60 | 37.70 | 37.80 | 37.90 | 37 |
| 38 | 38.00 | 38.10 | 38.20 | 38.30 | 38.40 | 38.50 | 38.60 | 38.70 | 38.80 | 38.90 | 38 |
| 39 | 39.00 | 39.10 | 39.20 | 39.30 | 39.40 | 39.50 | 39.60 | 39.70 | 39.80 | 39.90 | 39 |
| 40 | 40.00 | 40.10 | 40.20 | 40.30 | 40.40 | 40.50 | 40.60 | 40.70 | 40.80 | 40.90 | 40 |
| 41 | 41.00 | 41.10 | 41.20 | 41.30 | 41.40 | 41.50 | 41.60 | 41.70 | 41.80 | 41.90 | 41 |
| 42 | 42.00 | 42.10 | 42.20 | 42.30 | 42.40 | 42.50 | 42.60 | 42.70 | 42.80 | 42.90 | 42 |
| 43 | 43.00 | 43.10 | 43.20 | 43.30 | 43.40 | 43.50 | 43.60 | 43.70 | 43.80 | 43.90 | 43 |
| 44 | 44.00 | 44.10 | 44.20 | 44.30 | 44.40 | 44.50 | 44.60 | 44.70 | 44.80 | 44.90 | 44 |
| 45 | 45.00 | 45.10 | 45.20 | 45.30 | 45.40 | 45.50 | 45.60 | 45.70 | 45.80 | 45.90 | 45 |
| 46 | 46.00 | 46.10 | 46.20 | 46.30 | 46.40 | 46.50 | 46.60 | 46.70 | 46.80 | 46.90 | 46 |
| 47 | 47.00 | 47.10 | 47.20 | 47.30 | 47.40 | 47.50 | 47.60 | 47.70 | 47.80 | 47.90 | 47 |
| 48 | 48.00 | 48.10 | 48.20 | 48.30 | 48.40 | 48.50 | 48.60 | 48.70 | 48.80 | 48.90 | 48 |
| 49 | 49.00 | 49.10 | 49.20 | 49.30 | 49.40 | 49.50 | 49.60 | 49.70 | 49.80 | 49.90 | 49 |
| 50 | 50.00 | 50.10 | 50.20 | 50.30 | 50.40 | 50.50 | 50.60 | 50.70 | 50.80 | 50.90 | 50 |

Distance of slope stake from side or shoulder stake for any width roadway, slope 1 to 1. If ground is nearly level, the cut or fill at side stake is located by the double entry method in left column and top row. The number in body of table in same row and column gives distance from side stake to slope stake. If ground is not level estimate the difference in elevation between the side stake and slope stake, lower target by this amount if cut, elevate if fill. Add this amount to cut or fill and find distance in table. Set up rod at this point, and line of sight should cut target. If it does not make the slight adjustment necessary.

MICROFILMED

APR 19 1965

[Faint, illegible text]

DIRECTIONS FOR USE OF TABLES

TABLE No. XIV

Distance of slope stake from side of road
to be found for any width roadway, slope 1 to 1
If roadway is to be 10 feet wide, the cut on each
side is indicated by the double arrow marks.

IMPROVED TABLES
AND
INFORMATION

cut larger. If it does not make the right
percentage necessary.

TABLE No. VIII

To find Tangent and External for Curve in
any oblique angle divide by degree of curve and
add constant found in column of constants.
Center of curve with a given T may be found
by dividing tangent (or external) by cosine of
given tangent (or external).

The distance from a point on the tangent to
the curve is very nearly the square of the tangent
length divided by twice the radius.

INDEX

- 1- Curve Data
- 11- Beg Channel Grades

30- Water stakes

35- Drains - Naples

45- Sewers - Weeks -

TERMINALS

g the
obtain
ion.

5° 70°

| | |
|------|------|
| 42 | .46 |
| .63 | .68 |
| .84 | .90 |
| .06 | 1.14 |
| .29 | 1.39 |
| .54 | 1.66 |
| .79 | 1.94 |
| 2.04 | 2.21 |
| 2.29 | 2.48 |
| 2.56 | 2.77 |
| 2.83 | 3.07 |
| 3.13 | 3.39 |
| 3.44 | 3.72 |
| 3.78 | 4.09 |
| 4.12 | 4.46 |
| 4.55 | 4.89 |
| 4.91 | 5.32 |
| 5.38 | 5.83 |
| 5.85 | 6.34 |
| 6.37 | 6.90 |
| 6.90 | 7.50 |
| 7.50 | 8.14 |
| 8.14 | 8.82 |
| 8.82 | 9.54 |

65° 70°

| | | |
|------|------|------|
| 17 | .018 | .020 |
| 43 | .047 | .051 |
| 70 | .076 | .083 |
| 20 | .127 | .135 |
| 70 | .179 | .188 |
| 30 | .247 | .264 |
| 90 | .315 | .341 |
| 378 | .411 | .445 |
| 467 | .508 | .550 |
| 582 | .641 | .700 |
| 697 | .774 | .851 |
| 845 | .922 | 1.01 |
| 994 | 1.08 | 1.17 |
| 13 | 1.29 | 1.39 |
| 38 | 1.50 | 1.62 |
| .62 | 1.76 | 1.91 |
| 1.87 | 2.03 | 2.20 |
| 2.18 | 2.38 | 2.58 |
| 2.50 | 2.73 | 2.96 |
| 3.35 | 3.66 | 3.96 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 110° | .265 | .300 | .335 | .370 | .405 | .440 | .475 | .510 | .545 | .580 | .615 | .650 | .685 | .720 | .755 | .790 | .825 | .860 | .895 | .930 | .965 | 1.000 | 1.035 | 1.070 | 1.105 | 1.140 | 1.175 | 1.210 | 1.245 | 1.280 | 1.315 | 1.350 | 1.385 | 1.420 | 1.455 | 1.490 | 1.525 | 1.560 | 1.595 | 1.630 | 1.665 | 1.700 | 1.735 | 1.770 | 1.805 | 1.840 | 1.875 | 1.910 | 1.945 | 1.980 | 2.015 | 2.050 | 2.085 | 2.120 | 2.155 | 2.190 | 2.225 | 2.260 | 2.295 | 2.330 | 2.365 | 2.400 | 2.435 | 2.470 | 2.505 | 2.540 | 2.575 | 2.610 | 2.645 | 2.680 | 2.715 | 2.750 | 2.785 | 2.820 | 2.855 | 2.890 | 2.925 | 2.960 | 2.995 | 3.030 | 3.065 | 3.100 | 3.135 | 3.170 | 3.205 | 3.240 | 3.275 | 3.310 | 3.345 | 3.380 | 3.415 | 3.450 | 3.485 | 3.520 | 3.555 | 3.590 | 3.625 | 3.660 | 3.695 | 3.730 | 3.765 | 3.800 | 3.835 | 3.870 | 3.905 | 3.940 | 3.975 | 4.010 | 4.045 | 4.080 | 4.115 | 4.150 | 4.185 | 4.220 | 4.255 | 4.290 | 4.325 | 4.360 | 4.395 | 4.430 | 4.465 | 4.500 | 4.535 | 4.570 | 4.605 | 4.640 | 4.675 | 4.710 | 4.745 | 4.780 | 4.815 | 4.850 | 4.885 | 4.920 | 4.955 | 4.990 | 5.025 | 5.060 | 5.095 | 5.130 | 5.165 | 5.200 | 5.235 | 5.270 | 5.305 | 5.340 | 5.375 | 5.410 | 5.445 | 5.480 | 5.515 | 5.550 | 5.585 | 5.620 | 5.655 | 5.690 | 5.725 | 5.760 | 5.795 | 5.830 | 5.865 | 5.900 | 5.935 | 5.970 | 6.005 | 6.040 | 6.075 | 6.110 | 6.145 | 6.180 | 6.215 | 6.250 | 6.285 | 6.320 | 6.355 | 6.390 | 6.425 | 6.460 | 6.495 | 6.530 | 6.565 | 6.600 | 6.635 | 6.670 | 6.705 | 6.740 | 6.775 | 6.810 | 6.845 | 6.880 | 6.915 | 6.950 | 6.985 | 7.020 | 7.055 | 7.090 | 7.125 | 7.160 | 7.195 | 7.230 | 7.265 | 7.300 | 7.335 | 7.370 | 7.405 | 7.440 | 7.475 | 7.510 | 7.545 | 7.580 | 7.615 | 7.650 | 7.685 | 7.720 | 7.755 | 7.790 | 7.825 | 7.860 | 7.895 | 7.930 | 7.965 | 8.000 | 8.035 | 8.070 | 8.105 | 8.140 | 8.175 | 8.210 | 8.245 | 8.280 | 8.315 | 8.350 | 8.385 | 8.420 | 8.455 | 8.490 | 8.525 | 8.560 | 8.595 | 8.630 | 8.665 | 8.700 | 8.735 | 8.770 | 8.805 | 8.840 | 8.875 | 8.910 | 8.945 | 8.980 | 9.015 | 9.050 | 9.085 | 9.120 | 9.155 | 9.190 | 9.225 | 9.260 | 9.295 | 9.330 | 9.365 | 9.400 | 9.435 | 9.470 | 9.505 | 9.540 | 9.575 | 9.610 | 9.645 | 9.680 | 9.715 | 9.750 | 9.785 | 9.820 | 9.855 | 9.890 | 9.925 | 9.960 | 10.000 |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|

$$\begin{array}{r} 15.2 \\ 13.5 \\ \hline 1.7 \\ 8 \\ \hline 2.5 \end{array}$$

$$\begin{array}{r} 15.2 \\ 3.7 \\ \hline 1.5 \\ 7 \\ \hline 2.2 \end{array}$$

$$\begin{array}{r} 15.2 \\ 13.6 \\ \hline 1.6 \\ 8 \\ \hline 2.4 \end{array}$$

$$\begin{array}{r} 15.1 \\ 3.6 \\ \hline 1.5 \end{array}$$

$$\begin{array}{r} 15.0 \\ 3.9 \\ \hline 1.1 \end{array}$$

$$\begin{array}{r} 58 \\ 29 \\ \hline 8.7 \end{array}$$

$$\begin{array}{r} 14.9 \\ 9.7 \\ \hline 5.2 \\ 2.4 \\ \hline 7.8 \end{array}$$

$$\begin{array}{r} 63 \\ 31 \\ \hline 9.4 \end{array}$$

$$\begin{array}{r} 52 \\ 26 \end{array}$$

$$\begin{array}{r} 14.9 \\ 7.0 \\ \hline 7.9 \\ 3.9 \\ \hline 11.8 \end{array}$$

$$\begin{array}{r} 14.8 \\ 7.1 \\ \hline 7.7 \\ 3.8 \\ \hline 11.5 \end{array}$$

$$\begin{array}{r} 70 \\ 35 \end{array}$$

$$\begin{array}{r} 7.6 \\ 3.9 \\ \hline 11.4 \end{array}$$

Morena Stakeing - Plan 3470-D - 55 Sheets - Beg. 10-31-56 - 7.0'

W.O. 22107

"C" Line - $\Delta = 28^\circ 21' 46''$ - $R = 600'$

$T = 151.62$ $L = 297.01$ - d for $1' = 2.8648$

ch-25' = ok. 49.99 For 50'

0+00 = B.C.

Φ $\Delta = 42^\circ 10' 37''$ - $R = 600'$

$L = 441.68$ - $T = 231.38$ - $d = 2.8648$

95+39.71 = B.C.

| | | | | | |
|------------------------|--------|-------------|------|---------|-------------|
| +25 | 71.62 | 1° 11' 30" | +50 | 29.48 | 0° 29' 30" |
| +50 | 143.24 | 2° 23' 15" | +75 | 101.10 | 1° 41' |
| +75 | 214.86 | 3° 34' 45" | 96 ~ | 172.72 | 2° 52' 45" |
| 1+00 | 286.48 | 4° 46' 30" | +25 | 244.34 | 4° 04' 15" |
| +25 | 358.10 | 5° 58' | +50 | 315.96 | 5° 16' |
| +50 | 429.72 | 7° 09' 45" | +75 | 387.58 | 6° 27' 30" |
| +75 | 501.34 | 8° 21' 15" | 97 ~ | 459.20 | 7° 39' 15" |
| 2+00 | 572.96 | 9° 33' | +25 | 530.82 | 8° 50' 45" |
| +25 | 644.58 | 10° 44' 30" | +50 | 602.44 | 10° 02' 30" |
| +50 | 716.20 | 11° 56' 15" | +75 | 674.06 | 11° 14' |
| +75 | 787.82 | 13° 07' 45" | 98 ~ | 745.68 | 12° 25' 45" |
| +97.01 = E.C. 69.05 | 850.87 | 14° 10' 53" | +25 | 817.30 | 13° 37' 15" |
| | | | +50 | 888.92 | 14° 49' |
| | | | +75 | 960.54 | 16° 00' 30" |
| | | | 99 ~ | 1032.16 | 17° 12' 15" |
| | | | +25 | 1103.78 | 18° 23' 45" |

| | | |
|---|---------|-------------|
| 99+50 | 1175.40 | 19° 35' 30" |
| +75 | 1247.02 | 20° 47' |
| +81.39 = EC. <small>6.39 18.31</small> | 1265.33 | 21° 05' 20" |

Req. "B" Line - $\Delta = 13^\circ 48' 51''$ - $R = 612'$

$T = 74.14$ $L = 147.55$ - $d = 2.8086$
 - 0+89.57 Bk. Morena.
 0+00. ch=25

| | | |
|---|--------|------------|
| +25 | 70.21 | 1° 10' 15" |
| +50 | 140.42 | 2° 20' 30" |
| +75 | 210.63 | 3° 30' 45" |
| 1 ~ | 280.84 | 4° 40' 45" |
| +25 | 351.05 | 5° 51' |
| <small>63.33</small> +47.55 = P.R.C. | 414.38 | 6° 54' 25" |

$\Delta = 35^\circ 06'$ $R = 376'$ $d = 4.5715$ ch=25 - 49.46
 $T = 118.91$ $L = 230.34$

| | | |
|------------------------------|--------|------------|
| 1+50 | 11.20 | 0° 11' 15" |
| <small>114.21</small> +75 | 125.49 | 2° 05' 30" |
| 2 ~ | 239.78 | 3° 59' 45" |
| +25 | 354.07 | 5° 54' |
| +50 | 468.36 | 7° 48' 15" |

| | | |
|---|---------|-------------|
| 2+75 | 582.65 | 9° 42' 30" |
| 3 ~ | 696.94 | 11° 37' |
| +25 | 811.23 | 13° 31' 15" |
| +50 | 925.52 | 15° 25' 30" |
| <small>27.50</small> +77.89 = P.R.C. | 1053.02 | 17° 33' |

$\Delta = 21^\circ 17' 09''$ $R = 424'$ $T = 79.68$ $L = 157.52$ $d = 4.0539$
ch=25 - 49.97

| | | |
|--|--------|-------------|
| 4 ~ | 89.63 | 1° 29' 45" |
| <small>101.35</small> +25 | 190.98 | 3° 11' |
| +50 | 292.33 | 4° 52' 15" |
| +75 | 393.68 | 6° 33' 45" |
| 5 ~ | 495.03 | 8° 15' |
| +25 | 596.38 | 9° 56' 30" |
| <small>42.20</small> +35.41 = EC, "B" | 638.58 | 10° 38' 35" |

\pm B.C. 101+06.18 $\Delta = 10^\circ 30' 16''$ $R = 1000$
 $T = 91.93 - L = 183.34$ $d = 1.7189$

ch = 50'

101+06.18 = B.C.

+43.82

+50

85.94

102 ~

+50

39.52

+89.52 = E.C.

8.11 Bk =

10.79 Bk =

75.32

161.26
20

247.20

315.13

14.03

18.55'

$1^\circ 15' 15''$

$2^\circ 41' 15''$

$4^\circ 07' 15''$

$5^\circ 15' 08''$

$0^\circ 14'$

$0^\circ 18' 30''$

B.C. = 113+13.82 $-\Delta = 35^\circ 22' 52''$
 $R = 2000$ $T = 637.92$ $L = 1235.03$
 $d = .85944$

113+13.82 = B.C.

11.18

+25

21.486

+50

+75

114 ~

+25

+50

+75

115 ~

+25

+50

+75

116 ~

+25

+50

+75

117 ~

+25

+50

9.61

31.16

52.58

74.07

95.55

117.04

138.53

160.01

181.50

202.98

224.47

245.96

267.44

288.93

310.41

331.90

353.39

374.87

$0^\circ 09' 30''$

$0^\circ 31'$

$0^\circ 52' 30''$

$1^\circ 14'$

$1^\circ 35' 30''$

$1^\circ 57'$

$2^\circ 18' 30''$

$2^\circ 40'$

$3^\circ 01' 30''$

$3^\circ 23'$

$3^\circ 44' 30''$

$4^\circ 06'$

$4^\circ 27' 30''$

$4^\circ 49'$

$5^\circ 10' 30''$

$5^\circ 32'$

$5^\circ 53' 30''$

$6^\circ 14' 45''$

| | | | | |
|---------------|--------|-------------|-----|-----|
| 117 +75 | 396.36 | 6° | 36' | 15" |
| 118 ~ | 417.84 | 6° | 57' | 45" |
| +25 | 439.33 | 7° | 19' | 15" |
| +50 | 460.82 | 7° | 40' | 45" |
| +75 | 482.30 | 8° | 02' | 15" |
| 119 ~ | 503.79 | 8° | 23' | 45" |
| +25 | 525.27 | 8° | 45' | 15" |
| +50 | 546.76 | 9° | 06' | 45" |
| +75 | 568.25 | 9° | 28' | 15" |
| 120 ~ | 589.73 | 9° | 49' | 45" |
| +25 | 611.22 | 10° | 11' | 15" |
| +50 | 632.70 | 10° | 32' | 45" |
| +75 | 654.19 | 10° | 54' | 15" |
| 121 ~ | 675.68 | 11° | 15' | 45" |
| +08.10 +25 | 697.16 | 11° 21' 45" | 37' | 15" |
| +50 | 718.65 | 11° | 58" | 45" |
| +75 | 740.13 | 12° | 20' | 15" |
| 122 ~ | 761.62 | 12° | 41' | 30" |
| +25 | 783.11 | 13° | 03' | |
| +50 | 804.59 | 13° | 24' | 30" |

| | | | | |
|-------------------------|---------|-----|-----|-----|
| 122 +75 | 826.08 | 13° | 46' | |
| 123 ~ | 847.56 | 14° | 07' | 30" |
| +25 | 869.05 | 14° | 29' | |
| +50 | 890.54 | 14° | 50' | 30" |
| +75 | 912.02 | 15° | 12' | |
| 124 ~ | 933.51 | 15° | 33' | 30" |
| +25 | 954.99 | 15° | 55' | |
| +50 | 976.48 | 16° | 16' | 30" |
| +60 +75 | 997.97 | 16° | 38' | |
| 125 ~ | 1019.45 | 16° | 59' | 30" |
| +25 | 1040.94 | 17° | 21' | |
| +20.50 +48.85 = E.C. | 1061.44 | 17° | 41' | 26" |

Beg. 2000' Rad. Curve - Sta 141+62.02
 $\Delta = 16^\circ 00' 17''$ $R = 2000'$ $T = 281.17$ $-L = 558.67$
 $d = .85944$

| | | | | | | |
|-----------------------|-----------------------------|------------|--|---|--------|------------|
| | | | | 146 +25 | 397.90 | 6° 38' |
| 141 +62.02 = P.C. | | | | +50 | 419.38 | 6° 59' 30" |
| +75 ^{12.98} | 11.15 | 0° 11' 15" | | +75 | 440.87 | 7° 20' 45" |
| +75 ^{21.486} | | | | | | |
| 142 ~ | 32.64 | 0° 32' 45" | | 147 ~ | 462.36 | 7° 42' 15" |
| +25 | 54.12 | 0° 54' | | +20.69 = P.C.S. 480.14 ¹⁷⁷⁸ | | 8° 00' 08" |
| +50 | 75.60 | 1° 15' 30" | | Beg. Spiral - $\Delta = 9^\circ 55' 44''$ $R_c = 2000'$ | | |
| +75 ^{+66.24} | 97.09 ^{1° 29' 30"} | 1° 37' | | $L = 693.17$ $-ch = 692.25$ Total Def. = $3^\circ 18' 30''$ | | |
| 143 ~ | 118.58 | 1° 58' 30" | | Run back from P.T. | | |
| +25 | 140.07 | 2° 20' | | 147 +20.69 = P.C.S. ^{4.31} | | 3° 18' 30" |
| +50 | 161.55 | 2° 41' 30" | | +25 | | 3° 16' |
| +75 | 183.03 | 3° 03' | | +50 | | 3° 02' |
| 144 ~ | 204.52 | 3° 24' 30" | | +75 | | 2° 48' 45" |
| +25 | 226.01 | 3° 46' | | 148 ~ | | 2° 35' 45" |
| +50 | 247.50 | 4° 07' 30" | | +25 | | 2° 23' 15" |
| +75 | 268.98 | 4° 29' | | +50 | | 2° 11' 30" |
| 145 ~ | 290.47 | 4° 50' 30" | | +75 | | 2° 00' |
| +25 | 311.95 | 5° 12' | | 149 - | | 1° 49' |
| +50 | 333.44 | 5° 33' 30" | | +25 | | 1° 38' 45" |
| +75 | 354.93 | 5° 55' | | +50 | | 1° 29' 45" |
| 146 ~ | 376.41 | 6° 16' 30" | | +75 | | 1° 19' 30" |

Curve By Jelletie - \pm

6

$\Delta = 15^{\circ} 10' 25'' - R = 4057.24$

$T = 540.40 \quad L = 1074.46$

$d = .42365$

$3BK R = 4013.24$

| | |
|--------------------|----------------------|
| 150 ~ | $1^{\circ} 10' 45''$ |
| +25' | $1^{\circ} 02' 30''$ |
| +50' | $54' 45''$ |
| +75' | $47' 30''$ |
| 151 ~ | $40' 45''$ |
| +25' | $34' 30''$ |
| +50' | $28' 45''$ |
| +75' | $23' 30''$ |
| 152 ~ | $19'$ |
| +25' | $14' 45''$ |
| +50' | $11'$ |
| +75' | $08'$ |
| 153 ~ | $05' 15''$ |
| +25' | $03' 15''$ |
| +50' | $01' 45''$ |
| +75' | $0' 30''$ |
| 154 ~ | $0^{\circ} 00' 0''$ |
| +13.86 = P.T. | |
| Run Back from P.T. | |

| | | |
|--------------------|------------------|----------------------|
| 183 + 15.50 = B.C. | | |
| +50 | 34.13 | $0^{\circ} 14' 30''$ |
| 184 ~ | $49' 45'' = ch.$ | $0^{\circ} 35' 45''$ |
| +50 | | $0^{\circ} 57'$ |
| 185 ~ | | $1^{\circ} 18' 15''$ |
| +50 | | $1^{\circ} 39' 15''$ |
| 186 ~ | | $2^{\circ} 00' 30''$ |
| +50 | | $2^{\circ} 21' 45''$ |
| 187 ~ | | $2^{\circ} 43'$ |
| +50 | | $3^{\circ} 04'$ |
| 188 ~ | | $3^{\circ} 25' 15''$ |
| +50 | | $3^{\circ} 46' 30''$ |
| 189 ~ | | $4^{\circ} 07' 30''$ |
| +50 | | $4^{\circ} 28' 45''$ |
| 190 ~ | | $4^{\circ} 50'$ |
| +50 | | $5^{\circ} 11' 15''$ |
| 191 ~ | | $5^{\circ} 32' 15''$ |
| +50 | | $5^{\circ} 53' 30''$ |
| 192 ~ | | $6^{\circ} 14' 45''$ |

Cont. on P. 8

Channel - Curve - Sta. 119+48.52
 $\Delta = 68^\circ 06' 28''$ $R = 1086'$ $L = 1290.93$
 $d = 1.58275$

$0.57 = 25'$
 $1.17 = 50'$

7

119+48.52 = B.C.

| | | |
|---------|-------------|-------------|
| 120 ~ | 1° 21' 30" | 1° 29' |
| +50 | 2° 40' 30" | 2° 48' 15" |
| 121 ~ | 3° 59' 45" | 4° 07' 15" |
| +50 | 5° 19' | 5° 26' 30" |
| 122 ~ | 6° 38' | 6° 45' 30" |
| +50 | 7° 57' 15" | 8° 04' 45" |
| 123 ~ | 9° 16' 15" | 9° 24' |
| +50 = T | 10° 35' 30" | 10° 43' |
| 124 ~ | 11° 54' 30" | 12° 02' 15" |
| +50 | 13° 13' 45" | 13° 21' 15" |
| 125 ~ | 14° 32' 45" | 14° 40' 30" |
| +50 | 15° 52' | 15° 59' 30" |
| 126 ~ | 17° 11' | 17° 18' 45" |
| +50 | 18° 30' 15" | 18° 37' 45" |
| 127 ~ | 19° 49' 30" | 19° 57' |
| +50 T | 21° 08' 30" | 21° 16' 15" |
| 128 ~ | 22° 27' 30" | 22° 35' 15" |
| +50 | 23° 46' 45" | 23° 54' 30" |

| | |
|---------------|-------------|
| 129 ~ | 25° 06' |
| +50 | 26° 25' |
| 130 ~ | 27° 44' 15" |
| +50 | 29° 03' 15" |
| 131 ~ T | 30° 22' 30" |
| +50 | 31° 41' 45" |
| 132 ~ | 33° 00' 45" |
| +39.45 = E.C. | 34° 03' 14" |

| |
|-------------|
| 25° 13' 31" |
| 26° 32' 45" |
| 27° 51' 45" |
| 29° 11' |
| 30° 30' |
| 31° 49' 15" |
| 33° 08' 30" |
| 34° 27' 53" |

+38.85 - 34 Rt. of B.C.

Channel Curve:

$\Delta = 75^\circ 55' 10'' - R = 200'$
 $L = 265.01 \quad T = 156.03 - d = 8.5944$

93 + 60.87 = B.C.

94 ~

+50

95 ~

+50

96 ~

+25.88 = E.C.

$\Delta = 50^\circ 31' \quad d = 25^\circ 15' 30'' - R = 125'$

$L = 110.21 - T = 58.98 - 4 \text{ Parts.}$

97 + 19.98 = B.C.

+47.53

+75.08

98 + 02.63

+30.19 = E.C.

Cont. from P. 6

$.32 = 50'$
 $16 = 25'$

192 + 50

193 ~

+50

+89.96 = P.C.C. $\frac{39.53 = \text{ch.}}{3 \text{ BK.}}$

$\Delta = 13^\circ 41' 36'' \quad R = 3913.83' \quad T = 469.92$

$L = 935.37$

194

+50

195 -

end - +25
 ch +50

196 ~

+50

197 ~

+50

198 ~

ch = 24.72
 +25 = end.

6° 35' 45"

6° 57'

7° 18' 15"

7° 35' 15"

d = .43918

0° 04' 30"

0° 26' 30"

0° 48' 15"

1° 10' 15"

1° 32' 15"

1° 54' 15"

2° 16' 15"

2° 38' 15"

3° 00'

3° 11'

0° 59' 15"

10,032 Rad. curb. 135+59.01
 $\Delta = 4^\circ 03' 08''$ $R = 10,032'$ - Sta. on R. 10,000
 $d = .17189 = \frac{10,000}{R}$
 Run of curb line
 chord.

| | | | |
|-----------|-------|------------|--|
| 135+59.01 | 16.04 | | |
| +75 | | 0° 02' 45" | |
| 136~ | 25.08 | | |
| +25 | | 07' | |
| +50 | | 11' 15" | |
| +75 | | 15' 45" | |
| 137~ | | 20' | |
| +25 | | 24' 15" | |
| +50 | | 28' 30" | |
| +75 | | 32' 45" | |
| 138~ | | 37' 15" | |
| +25 | | 41' 30" | |
| +50 | | 45' 45" | |
| +75 | | 50' | |
| 139~ | | 54' 15" | |
| +25 | | 58' 30" | |
| +50 | | 1° 03' | |
| +75 | | 1° 07' 15" | |
| | | 1° 11' 30" | |

| | | | |
|------|-------|-----------------------------|------------|
| 140~ | 25.08 | ch. | 1° 15' 45" |
| +25 | | | 1° 20' |
| +50 | | | 1° 24' 30" |
| +75 | | | 1° 28' 45" |
| 141~ | | | 1° 33' |
| +25 | | | 1° 37' 15" |
| +50 | | | 1° 41' 30" |
| +75 | | | 1° 46' |
| 142~ | | | 1° 50' 15" |
| +25 | | | 1° 54' 30" |
| +50 | | | 1° 58' 45" |
| | | ch = 16.29 +66.24 = E.C. | 2° 01' 34" |

Lt. Lane - Littlefield - 154 + 31.45 = B.C.
 $\Delta = 1^{\circ} 57' 50''$ $R = 4000'$ $d = .42972$

500' R. Channel Curve - 101 + 96.85 10
 $\Delta = 43^{\circ} 03'$ $R = 500'$ $d = 3.4377'$
 $50' = 4998 \text{ ch.}$

154 + 31.45 = B.C.

+50 $0^{\circ} 08'$

+75 $18' 45''$

155 ~ $29' 30''$

+25 $40' 15''$

+50 $51'$

+68.56 = E.C. $0^{\circ} 58' 55''$

$R = 4035 = 3 \text{ Bk. stakes}$

154 + 31.45

+50 18.7° $0 08'$

+75 25.23 $18' 45''$

155 ~ $29' 30''$

+25 $40' 15''$

+50 $51'$

+68.56 = E.C. 18.76 $0^{\circ} 58' 55''$

101 + 96.85 = B.C.

102 ~

+25 $0^{\circ} 10' 45''$

+50 $1^{\circ} 36' 45''$

+75 $3^{\circ} 02' 45''$

103 ~ $4^{\circ} 28' 45''$

+25 $5^{\circ} 54' 30''$

+50 $7^{\circ} 20' 30''$

+75 $8^{\circ} 46' 30''$

104 - $10^{\circ} 12' 30''$

+25 $11^{\circ} 38' 15''$

+50 $13^{\circ} 04' 15''$

+75 $14^{\circ} 30' 15''$

105 ~ $15^{\circ} 56' 15''$

+25 $17^{\circ} 22'$

+50 $18^{\circ} 48'$

+72.53 = E.C. $20^{\circ} 14'$

25 ~ 1.66

125 ~ 3.22

channel Slope Stakes - Beg. N. end.

Lt.

Rt. = S.

Hinge 31.25 out.

E =
I.E.

Hinge

31.25 out.
Hinge

| | | | | | | | | | | | |
|------------|------------------------|--|------|-------------|---------------|--------------------|--------------------|------------------|---------------|---------------|-------------|
| 136 + 18.2 | 20.6 26.65 16.70 | 6.65 9.95 | 25.5 | 16.70 | 16.53 25.0 | 95.8 135 + 98.2 | $\frac{23.8}{1.8}$ | $-\frac{0.2}{5}$ | 23.34 | 3.34 16.53 | <u>4.81</u> |
| 136 + 5 | 26.34 | 6.34 16.56 9.06 -0.2 9.78 | 25.0 | 16.56 | 25.0 | $\frac{26.9}{1.9}$ | $+\frac{0.2}{5}$ | 24.99 | 4.99 16.21 | <u>8.78</u> | |
| 135 - | 24.65 15.86 | 4.65 8.79 0 26.0 1.3 | 24.7 | 15.86 | 24.7 | $\frac{25.1}{0.4}$ | $\frac{0}{5}$ | 24.62 | 4.62 15.86 | <u>8.76</u> | |
| +50 | 24.23 15.51 | 4.23 8.72 +1.7 21.6 2.4 3.6 | 24.0 | 15.51 | 24.3 | $\frac{25.7}{1.4}$ | $\frac{0}{5}$ | 24.26 | 4.26 15.51 | <u>8.75</u> | |
| 134 - | 23.33 15.16 | 3.33 8.17 -0.9 22.0 2.5 | 23.7 | 15.16 35 | 24.0 | $\frac{25.7}{1.7}$ | $-\frac{0.7}{5}$ | 23.64 | 3.64 15.16 | <u>8.48</u> | |
| +50 | 23.32 14.81 | 3.32 8.51 -0.2 24.8 1.2 | 23.6 | 14.81 | 23.6 | $\frac{23.9}{0.3}$ | $+\frac{0.5}{5}$ | 23.39 | 3.39 14.81 | <u>8.58</u> | |

133 - $\frac{298}{2298}$ $\frac{298}{14.46}$ $\frac{8.52}{5}$ $\frac{252}{C1.9}$ $\frac{1.9}{1.9}$ 23.3 14.46 23.3 $\frac{24.9}{C1.6}$ $\frac{1.6}{1.6}$ $\frac{+1.8}{5}$ 23.12 $\frac{3.12}{14.46}$ $\frac{8.66}{8.66}$

+50 $\frac{252}{225}$ $\frac{252}{14.11}$ $\frac{8.41}{5}$ $\frac{+0.5}{5}$ $\frac{22.6}{C}$ 22.6 14.11 22.9 $\frac{25.0}{C2.1}$ $\frac{2.1}{2.1}$ $\frac{+1.8}{5}$ 22.79 $\frac{2.79}{14.11}$ $\frac{8.68}{8.68}$

= T.P. 132 - $\frac{234}{2234}$ $\frac{234}{13.76}$ $\frac{8.58}{5}$ $\frac{-0.2}{5}$ $\frac{24.9}{C2.3}$ $\frac{2.3}{2.3}$ 22.6 13.76 22.6 $\frac{25.9}{C3.3}$ $\frac{3.3}{3.3}$ $\frac{+0.6}{5}$ 22.63 $\frac{2.63}{13.76}$ $\frac{8.87}{8.87}$

+50 $\frac{196}{2195}$ $\frac{196}{13.41}$ $\frac{8.54}{5}$ $\frac{-0.1}{5}$ $\frac{24.4}{C1.9}$ $\frac{1.9}{1.9}$ 22.2 13.41 22.2 $\frac{26.8}{C4.6}$ $\frac{4.6}{4.6}$ $\frac{+0.2}{5}$ 22.27 $\frac{2.27}{13.41}$ $\frac{8.86}{8.86}$

131 - $\frac{10.1}{5}$ $\frac{23.4}{C1.5}$ $\frac{1.5}{1.5}$ 21.86 13.06 22.02 $\frac{2.02}{13.06}$ $\frac{8.96}{21.86}$ $\frac{26.4}{C4.5}$ $\frac{4.5}{4.5}$ $\frac{+0.1}{5}$

+50 $\frac{10.0}{5}$ $\frac{23.2}{C1.8}$ $\frac{1.8}{1.8}$ 21.51 12.71 21.36 $\frac{1.36}{12.71}$ $\frac{8.65}{21.51}$ $\frac{26.1}{C4.6}$ $\frac{4.6}{4.6}$ $\frac{-0.0}{5}$

130 - $\frac{10.2}{5}$ $\frac{22.6}{C1.4}$ $\frac{1.4}{1.4}$ 21.16 12.36 21.2 $\frac{25.0}{C3.8}$ $\frac{3.8}{3.8}$ $\frac{-0.1}{5}$ 22.87 $\frac{2.87}{12.36}$ $\frac{10.51}{21.16}$ $\frac{24.9}{C3.7}$ $\frac{3.7}{3.7}$ $\frac{+0.2}{5}$

+50 $\frac{0}{5}$ $\frac{23.6}{C2.8}$ $\frac{2.8}{2.8}$ 20.81 12.01 20.8 $\frac{24.7}{C3.9}$ $\frac{3.9}{3.9}$ $\frac{+0.3}{5}$ 21.45 $\frac{1.45}{12.01}$ $\frac{9.44}{20.81}$ $\frac{24.8}{C4.0}$ $\frac{4.0}{4.0}$ $\frac{5}{5}$

129 - $\frac{10.1}{5}$ $\frac{23.0}{C3.1}$ $\frac{3.1}{3.1}$ 20.46 11.66 20.5 $\frac{24.2}{C3.7}$ $\frac{3.7}{3.7}$ $\frac{+0.2}{5}$ 20.80 $\frac{0.80}{11.66}$ $\frac{9.14}{20.46}$ $\frac{24.5}{C4.0}$ $\frac{4.0}{4.0}$ $\frac{-0.1}{5}$

+50 $\frac{10.5}{5}$ $\frac{24.4}{C4.3}$ $\frac{4.3}{4.3}$ 20.11 11.31 20.1 $\frac{25.3}{C5.2}$ $\frac{5.2}{5.2}$ $\frac{+0.2}{5}$ 20.17 $\frac{0.17}{11.31}$ $\frac{8.86}{20.11}$ $\frac{25.1}{C5.0}$ $\frac{5.0}{5.0}$ $\frac{+0.1}{5}$

20.90 11.31 C 8.59

| Channel | + 8.8 in Cut | | | + 8.5 in Fill | | | 13 |
|--|---|---------------------------|---------------------------------|----------------------------|---------|--|---|
| | Lt. | | | Hinge 31.25 out | ± Grade | Hinge 31.25 out | Rt. |
| 128 - | $\frac{-0.3}{5}$ $\frac{24.6}{5.6}$ 19.76 | $\frac{-0.9}{5}$ 10.96 | $\frac{-0.9}{5}$ <u>8.68</u> | $\frac{25.4}{5.6}$ 19.8 | 10.96 | $\frac{25.8}{6.0}$ $\frac{26.0}{6.0}$ 19.8 | $\frac{25.8}{6.0}$ $\frac{26.0}{6.0}$ 19.76 |
| Bank = 19.71 = B.M. = spike in +50 | 19.64 | 19.28 | 19.64 | 19.4 | 10.61 | 19.4 | 19.62 |
| | 9.28 | 8.67 | 8.67 | 19.4 | 10.61 | 19.4 | 10.96 |
| | 8.97 | 8.71 | 8.71 | 19.1 | 10.26 | 19.1 | 10.96 |
| 127 ~ | 18.97 | 8.71 | 8.71 | 19.1 | 10.26 | 19.1 | 18.93 |
| | 8.97 | 8.71 | 8.71 | 19.1 | 10.26 | 19.1 | 10.26 |
| +50 | 18.36 | 8.45 | 8.45 | 18.7 | 9.91 | 18.7 | 18.50 |
| | 8.36 | 8.45 | 8.45 | 18.7 | 9.91 | 18.7 | 9.91 |
| | 8.26 | 8.70 | 8.70 | 18.4 | 9.56 | 18.4 | 8.93 |
| 126 - | 18.26 | 8.70 | 8.70 | 18.4 | 9.56 | 18.4 | 18.27 |
| | 8.26 | 8.70 | 8.70 | 18.4 | 9.56 | 18.4 | 9.56 |
| +50 | 17.90 | 8.69 | 8.69 | 18.0 | 9.21 | 18.0 | 17.86 |
| | 8.26 | 8.69 | 8.69 | 18.0 | 9.21 | 18.0 | 9.21 |
| | 8.26 | 8.70 | 8.70 | 18.4 | 9.56 | 18.4 | 9.56 |
| 125 ~ | 17.55 | 8.69 | 8.69 | 17.7 | 8.86 | 17.7 | 17.51 |
| | 8.55 | 8.69 | 8.69 | 17.7 | 8.86 | 17.7 | 8.86 |
| +50 | 17.27 | 8.76 | 8.76 | 17.3 | 8.51 | 17.3 | 17.10 |
| | 8.27 | 8.76 | 8.76 | 17.3 | 8.51 | 17.3 | 8.51 |
| | 8.27 | 8.76 | 8.76 | 17.3 | 8.51 | 17.3 | 8.51 |
| 124 ~ | 16.69 | 8.53 | 8.53 | 16.7 | 8.16 | 17.0 | 16.87 |
| | 6.69 | 8.53 | 8.53 | 16.7 | 8.16 | 17.0 | 8.16 |
| | 6.69 | 8.53 | 8.53 | 16.7 | 8.16 | 17.0 | 8.16 |
| 123 +50 | 16.19 | 8.38 | 8.38 | 16.3 | 7.81 | 16.3 | 16.16 |
| | 6.19 | 8.38 | 8.38 | 16.3 | 7.81 | 16.3 | 7.81 |
| | 6.19 | 8.38 | 8.38 | 16.3 | 7.81 | 16.3 | 7.81 |

Channel

+8.8 in Cut

+8.5 in Fill

14

| | | | | | | Hinge 31.25' but | ±Gr. | Hinge 31.25' but | | | | | |
|-------------------|--------------|---------------------|-------------|------------------|--|---------------------|-------------|---------------------|--|------------------|--------------|---------------------|-------------|
| 123 - | 15.84 | $\frac{5.84}{7.46}$ | <u>8.38</u> | $\frac{0}{5}$ | $\frac{15.3}{F0.7}$ $\frac{1.0}{1.0}$ | 16.0 | 7.46 | 16.0 | $\frac{14.6}{F1.4}$ $\frac{2.1}{2.1}$ | $+\frac{0.1}{5}$ | 15.79 | $\frac{5.79}{7.46}$ | <u>8.33</u> |
| +50 | <u>15.45</u> | $\frac{5.45}{7.11}$ | <u>8.34</u> | $+\frac{0.1}{5}$ | $\frac{15.0}{F0.6}$ $\frac{0.9}{0.9}$ | <u>15.6</u> | 7.11 | 15.6 | $\frac{14.6}{F1.0}$ $\frac{1.5}{1.5}$ | $-\frac{0.1}{5}$ | <u>15.60</u> | $\frac{5.60}{7.11}$ | <u>8.49</u> |
| 122 - | 15.27 | $\frac{5.27}{6.76}$ | <u>8.51</u> | $\frac{0}{5}$ | $\frac{14.5}{F0.8}$ $\frac{1.2}{1.2}$ | 15.3 | <u>6.76</u> | 15.3 | $\frac{14.0}{F1.3}$ $\frac{1.9}{1.9}$ | $-\frac{0.1}{5}$ | 15.05 | $\frac{5.05}{6.76}$ | <u>8.29</u> |
| +50 | <u>15.04</u> | $\frac{5.04}{6.50}$ | <u>8.54</u> | $-\frac{0.3}{5}$ | $\frac{14.0}{F1.0}$ $\frac{1.5}{1.5}$ | 15.0 | <u>6.50</u> | 15.0 | $\frac{13.7}{F1.3}$ $\frac{1.9}{1.9}$ | $+\frac{0.1}{5}$ | 14.94 | $\frac{4.94}{6.50}$ | <u>8.44</u> |
| 121 - | 14.76 | $\frac{4.76}{6.23}$ | <u>8.52</u> | $+\frac{0.3}{5}$ | $\frac{13.9}{F0.8}$ $\frac{1.2}{1.2}$ | 14.7 | <u>6.23</u> | 14.7 | $\frac{13.8}{F0.9}$ $\frac{1.3}{1.3}$ | $-\frac{0}{5}$ | 14.80 | $\frac{4.80}{6.23}$ | <u>8.57</u> |
| +50 | <u>14.60</u> | $\frac{4.60}{5.96}$ | <u>8.64</u> | $\frac{0}{5}$ | $\frac{13.9}{F0.6}$ $\frac{0.9}{0.9}$ | 14.5 | <u>5.96</u> | 14.5 | $\frac{13.7}{F0.8}$ $\frac{1.4}{1.4}$ | $+\frac{0.3}{5}$ | 14.59 | $\frac{4.59}{5.96}$ | <u>8.63</u> |
| 120 - | 14.40 | $\frac{4.40}{5.69}$ | <u>8.71</u> | $+\frac{0.3}{5}$ | $\frac{13.7}{F0.5}$ $\frac{0.1}{0.1}$ | 14.2 | <u>5.69</u> | 14.2 | $\frac{13.3}{F0.9}$ $\frac{1.4}{1.4}$ | $-\frac{0}{5}$ | 14.26 | $\frac{4.26}{5.69}$ | <u>8.57</u> |
| 14.40 T.P. Lt. | | | | | | | | | | | | | |
| +50 | <u>14.03</u> | $\frac{4.03}{5.42}$ | <u>8.61</u> | $-\frac{0.4}{5}$ | $\frac{13.9}{G}$ | 13.9 | <u>5.42</u> | 13.9 | $\frac{13.0}{F0.9}$ $\frac{1.4}{1.4}$ | $-\frac{1.6}{5}$ | 13.90 | $\frac{3.90}{5.42}$ | <u>8.48</u> |
| +48.52 = B.C. | | | | | | | | | | | | | |
| 119 ~ | 13.79 | $\frac{5.15}{5.15}$ | <u>8.64</u> | $+\frac{0.6}{5}$ | $\frac{12.6}{F1.1}$ $\frac{1.6}{1.6}$ | 13.7 | <u>5.15</u> | 13.7 | $\frac{11.0}{F2.7}$ $\frac{4.0}{4.0}$ | $+\frac{0}{5}$ | 13.44 | $\frac{5.15}{5.15}$ | <u>8.29</u> |
| +50 | <u>13.28</u> | $\frac{4.89}{4.89}$ | <u>8.39</u> | $+\frac{1.0}{5}$ | $\frac{12.8}{F1.2}$ $\frac{1.8}{1.8}$ | 13.4 | <u>4.89</u> | 13.4 | $\frac{11.2}{F2.2}$ $\frac{3.3}{3.3}$ | $+\frac{0}{5}$ | 13.28 | $\frac{4.89}{4.89}$ | <u>8.39</u> |

15.64 = B.M. on Mt.

channel

P.K. = 4.53 = in box

Lt.

Hinge

±
Grade

Hinge

Rt.

3125
62.50
46
67.1

15

| | | | | | | | | | | | | | |
|-------|-------|------|------|------------------|----------------------------|------|------|------|----------------------------|------------------|-------|------|------|
| 118 ~ | 12.86 | 4.62 | 8.24 | $\frac{+0.3}{5}$ | $\frac{12.5}{F0.6}$ 0.9 | 13.1 | 4.62 | 13.1 | $\frac{10.9}{F2.2}$ 3.3 | $\frac{+0.1}{5}$ | 13.25 | 4.62 | 8.63 |
| +50 | 13.00 | 4.35 | 8.65 | $\frac{+0.4}{5}$ | $\frac{12.3}{F0.6}$ 0.9 | 12.9 | 4.35 | 12.9 | $\frac{11.0}{F1.9}$ 2.8 | $\frac{-0.1}{5}$ | 12.67 | 4.35 | 8.32 |
| 117 ~ | 12.77 | 4.09 | 8.68 | $\frac{+0.7}{2}$ | $\frac{11.8}{F0.8}$ 1.2 | 12.6 | 4.09 | 12.6 | $\frac{9.5}{F3.1}$ 4.6 | $\frac{+0.1}{5}$ | 12.29 | 4.09 | 8.20 |
| +50 | 12.33 | 3.82 | 8.51 | $\frac{+0.6}{5}$ | $\frac{11.6}{F0.7}$ 1.0 | 12.3 | 3.82 | 12.3 | $\frac{9.4}{F2.9}$ 4.3 | $\frac{+1.0}{5}$ | 12.02 | 3.82 | 8.20 |
| 116 ~ | 12.13 | 3.55 | 8.58 | $\frac{+0.7}{5}$ | $\frac{11.1}{F1.0}$ 1.5 | 12.1 | 3.55 | 12.1 | $\frac{10.4}{F1.7}$ 2.5 | $\frac{+0.6}{5}$ | 11.96 | 3.55 | 8.41 |
| +50 | 11.50 | 3.28 | 8.22 | $\frac{+0.7}{5}$ | $\frac{10.8}{F1.0}$ 1.5 | 11.8 | 3.28 | 11.8 | $\frac{9.7}{F2.1}$ 3.1 | $\frac{+0.2}{5}$ | 12.09 | 3.28 | 8.81 |
| 115 ~ | 11.45 | 3.02 | 8.43 | $\frac{+0.3}{5}$ | $\frac{10.8}{F0.7}$ 1.0 | 11.5 | 3.02 | 11.8 | $\frac{13.4}{C1.6}$ 1.6 | $\frac{-0.1}{5}$ | 11.74 | 3.02 | 8.72 |
| +50 | 11.17 | 2.75 | 8.42 | $\frac{0}{5}$ | $\frac{10.8}{F0.5}$ 0.9 | 11.3 | 2.75 | 11.6 | $\frac{13.6}{C2.0}$ 2.0 | $\frac{+1.4}{5}$ | 11.36 | 2.75 | 8.61 |
| 114 ~ | 10.85 | 2.48 | 8.37 | $\frac{-0.2}{5}$ | $\frac{10.6}{F0.4}$ 0.6 | 11.0 | 2.48 | 11.3 | $\frac{15.2}{C3.9}$ 3.9 | $\frac{+0.1}{5}$ | 11.27 | 2.48 | 8.79 |
| +50 | 10.55 | 2.22 | 8.33 | $\frac{+0.7}{5}$ | $\frac{9.7}{F1.0}$ 1.5 | 10.7 | 2.22 | 11.0 | $\frac{16.8}{C5.8}$ 5.8 | $\frac{+0.2}{5}$ | 10.71 | 2.22 | 8.49 |

channel

Lt.

Rt.

16

| | | | | Hinge Gr. 31.25 out | ± Grade | Hinge Gr. 31.25 out | | | | | |
|--------|-------|-------------|------------------|---------------------------|------------|------------------------|------|----------------------------|------------------|-------|-------------|
| 113 ~ | 10.38 | 1.95 c 8.43 | $\frac{+0.8}{5}$ | $\frac{9.1}{F1.4}$ 2.1 | 10.5 | 1.95 | 10.8 | $\frac{16.7}{C5.9}$ 5.9 | $\frac{+0.2}{5}$ | 10.54 | 1.95 c 8.59 |
| +50 | 10.00 | 1.68 c 8.32 | $\frac{+0.6}{5}$ | $\frac{8.8}{F1.4}$ 2.1 | 10.2 | 1.68 | 10.2 | $\frac{9.1}{F1.6}$ 1.6 | $\frac{+1.2}{5}$ | 9.89 | 1.68 c 8.21 |
| 112 ~ | 9.29 | 1.42 c 7.87 | $\frac{+1.2}{5}$ | $\frac{8.0}{F1.9}$ 2.4 | 9.9 | 1.42 | 9.9 | $\frac{6.1}{F3.8}$ 5.7 | +0.4 | 9.35 | 1.42 c 7.93 |
| +50 | 9.10 | 1.15 c 7.95 | $\frac{+1.3}{5}$ | $\frac{8.0}{F1.7}$ 2.5 | 9.7 | 1.15 | 9.7 | $\frac{4.7}{F5.0}$ 7.5 | $\frac{+0.1}{5}$ | 8.75 | 1.15 c 7.60 |
| 111 ~ | 6.79 | 0.88 c 5.91 | $\frac{+0.8}{5}$ | $\frac{7.4}{F2.0}$ 3.0 | 9.4 | 0.88 | 9.4 | $\frac{6.6}{F2.6}$ 3.9 | $\frac{+0.2}{5}$ | 6.76 | 0.88 c 5.88 |
| +84.39 | | 0.79 | | | | | | | | | |
| +50 | | | | | 9.2 | 0.61 | 9.2? | | | | |
| +30.39 | | 0.51 | | | | $\frac{26}{95}$ | | | | | |
| 110 ~ | | | $\frac{-0.1}{5}$ | $\frac{6.1}{F2.8}$ 4.2 | 8.9 | 0.35 | 9.2 | $\frac{10.4}{C1.2}$ 1.2 | $\frac{0}{5}$ | | |
| +50 | | | $\frac{+0.4}{5}$ | $\frac{4.9}{F3.7}$ 5.5 | 8.6 | +0.08 | 8.9 | $\frac{9.2}{C0.3}$ 0.3 | $\frac{+0.2}{5}$ | | |
| 109 ~ | | | $\frac{+0.5}{5}$ | $\frac{4.5}{F3.8}$ 5.7 | 8.3 | -0.19 | 8.3 | $\frac{7.9}{F0.4}$ 0.6 | $\frac{+0.5}{5}$ | | |
| +50 | | | $\frac{+0.1}{5}$ | $\frac{6.6}{F1.4}$ 2.1 | 8.0 | -0.45 | 8.0 | $\frac{7.1}{F0.9}$ 1.3 | $\frac{+0.3}{5}$ | | |

Channel

Lt.

± Grade

Rt.

108-

$$\frac{+0.1}{5}$$

$$\frac{6.5}{F1.3} \\ 1.9$$

Hinge
Grades
7.8

31.25 out

$$-0.72$$

$$7.8$$

$$\frac{6.6}{F1.2} \\ 1.8$$

$$+0.3 \\ 5$$

+50

$$\frac{+0.1}{5}$$

$$\frac{3.7}{F3.8} \\ 5.7$$

$$7.5$$

$$-0.98$$

$$7.5$$

$$\frac{3.4}{F4.1} \\ 6.1$$

$$+0.1$$

107-

$$\frac{0}{5}$$

$$\frac{3.3}{F4.0} \\ 6.0$$

$$7.3$$

$$-1.23$$

$$7.3$$

$$\frac{4.5}{F2.9} \\ 4.2$$

$$+0.1 \\ 5$$

+50

$$\frac{+0.4}{5}$$

$$\frac{2.9}{F4.1} \\ 6.1$$

$$7.0$$

$$-1.48$$

$$7.0$$

$$\frac{4.9}{F2.2} \\ 3.3$$

$$\frac{0}{5}$$

106-

$$\frac{+1.1}{5}$$

$$\frac{3.1}{F3.7} \\ 5.5$$

$$6.8$$

$$-1.72$$

$$6.8$$

$$\frac{3.7}{F3.1} \\ 4.6$$

$$+0.1 \\ 5$$

+50

$$\frac{+1.6}{5}$$

$$\frac{2.0}{F4.5} \\ 6.7$$

$$6.5$$

$$-1.95$$

$$6.5$$

$$\frac{3.0}{F3.5} \\ 5.2$$

$$\frac{0}{5}$$

105-

$$\frac{+1.1}{5}$$

$$\frac{2.7}{F4.1} \\ 6.1$$

$$6.3$$

$$-2.17$$

$$6.3$$

$$\frac{3.2}{F3.2} \\ 4.6$$

$$+0.2 \\ 5$$

+50

$$\frac{0}{5}$$

$$\frac{3.3}{F2.8} \\ 4.2$$

$$6.1$$

$$-2.38$$

$$6.1$$

$$\frac{2.1}{F4.0} \\ 6.0$$

$$+0.5 \\ 5$$

104-

$$\frac{+0.1}{5}$$

$$\frac{1.6}{F4.3} \\ 6.4$$

$$5.9$$

$$-2.59$$

$$5.9$$

$$\frac{0.3}{F5.6} \\ 8.4$$

$$+1.2 \\ 5$$

+50

$$\frac{+0.1}{5}$$

$$\frac{1.2}{F4.5} \\ 6.7$$

$$5.7$$

$$-2.79$$

$$5.7$$

$$\frac{1.2}{F4.5} \\ 6.7$$

$$\frac{0}{5}$$

channel

Lt.

31.25 = Hinge - 8.55 - Fill
8.80 = cut.

Rt.

18

Hinge Grade
31.25 out.

Hinge Grade
31.25 out.

103 ~

$\frac{-0.2}{5}$
 $\frac{0.9}{F4.6}$
 $\frac{6.9}{6.9}$

5.5

-2.99

5.5

$\frac{0.7}{F4.3}$
 $\frac{7.2}{7.2}$
 $\frac{0}{5}$

+50

-3.19

+16.5 -3.32

102 ~

-3.39

+50

-3.59

+31.1 = -3.67

out to Top.
27.2

101 ~

$\frac{+1.2}{5}$
 $\frac{3.3}{F1.4}$
 $\frac{2.1}{2.1}$

4.7

-3.79

4.7

$\frac{3.0}{F1.7}$
 $\frac{2.5}{2.5}$
 $\frac{-0.1}{5}$

out to Top.
27.4

+50

32.2

$\frac{0.0}{5}$
 $\frac{1.3}{F3.2}$
 $\frac{4.8}{4.8}$

4.5

-3.99

4.5

$\frac{0.1}{F4.4}$
 $\frac{6.6}{6.6}$
 $\frac{+0.2}{5}$

29.8

100 ~ 99+98.3

$\frac{5.31}{C1.0}$
 $\frac{37.2}{37.2}$ to E
43.1

-4.19

100+10.6
-4.15
4.35

$\frac{5.35}{C1.00}$
 $\frac{31.8}{31.8}$ to E

99+80 = Wly of Bridge

Dist = Bottom Hinge
To E "B"

$\frac{4.73}{C9.00}$ to E
 $\frac{33.51}{33.51}$ to E

-4.27

$\frac{5.73}{C10.00}$ to E
 $\frac{36.41}{36.41}$ to E Normal to RR

Dist = Bottom
to E "B"
= 5

Line "B" = N

99+58.2 = 0+00 - 21

$\frac{+0.4}{5}$
 $\frac{1.5}{F2.7}$
 $\frac{4.0}{4.0}$

4.2

-4.29

4.2

$\frac{1.8}{F2.4}$
 $\frac{3.6}{3.6}$
 $\frac{+0.1}{5}$

2.2

+18.75 to Hinge

0+50

-28'

$\frac{0}{5}$
 $\frac{1.3}{F2.9}$
 $\frac{4.3}{4.3}$

4.2

-4.33

4.2

$\frac{0.2}{F4.0}$
 $\frac{6.0}{6.0}$
 $\frac{+0.7}{15}$

2.1

Grade for Box in Channel
Sta. 128+25

Stake at Hinge -18.75 to Bottom

I.E. Grade 20.05 ^{20.05} 11.13 · C 8.92

Dist. = N.

1+00 35 $\frac{+0.2}{5}$ $\frac{1.3}{F2.8}$ 4.2 4.1

+50 41 $\frac{0}{5}$ $\frac{1.1}{F3.0}$ 4.5 4.1

2+00 31.5 $\frac{+0.1}{5}$ $\frac{0.55}{F3.5}$ 5.2 4.05

+28.24 = 97 +19.98 ¹⁵ $\frac{+0.1}{5}$ $\frac{0.7}{F3.3}$ 4.9 4.0

Sct at 2+30
Bridge

96+25.88 = E.C. ^{30' Rt.}

96~ 1.28 -4.54 C 5.82

+50 0.29 -4.56 C 4.85

95~ 1.74 -4.60 C 6.34

+50 -30' Rt. ^{20' ↑} 0.99 -4.64 C 5.63

94~ = 20' Rt. = Beg 10' Bottom. 0.70 -4.67 C 5.37

93+60.87 1.19 -4.71 C 5.90

92~ 1.24 -4.74 C 5.98

92~ 1.14 -4.79 C 5.93

Cont. on P. 28

2.11 = Cross on M.H. Rim.

19

End channel Sect.
+ Beg. Ditch

10' Bottom - 1:1 Slope.

I.E.

= S. Dist

-4.37 4.1 $\frac{1.0}{F3.1}$ $\frac{0}{5}$ 20

4.1 -4.41 4.1 $\frac{1.1}{F3.0}$ $\frac{+0.7}{5}$ 19

4.05 -4.45 4.05 $\frac{1.95}{F2.1}$ $\frac{+0.1}{5}$ 18

4.0 -4.47 4.0 $\frac{1.9}{F2.1}$ $\frac{+2.3}{5}$ 24

Bottom & Grades - channell

| End | | | | | | |
|-----------------|-------|-------------|----------|------|-------------|--|
| 136 + 08.16 = # | 15.74 | 16.62 F0.88 | 127 - | 9.48 | 10.26 F0.78 | |
| 136 ~ | 15.65 | 16.56 F0.91 | +50 | 8.96 | 9.91 F0.95 | |
| +50 | 15.29 | 16.21 F0.92 | 126 ~ | 8.82 | 9.56 F1.04 | |
| 135 - | 14.38 | 15.86 F1.48 | +50 | 8.06 | 9.21 F1.15 | |
| +50 | 14.47 | 15.55 F1.08 | 125 ~ | 6.97 | 8.86 F1.89 | |
| 134 ~ | 13.76 | 15.16 F1.40 | +50 | 7.31 | 8.51 F1.20 | |
| +50 | 13.91 | 14.81 F0.90 | 124 + 00 | 7.09 | 8.16 F1.07 | |
| 133 ~ | 13.42 | 14.46 F1.04 | +50 | 6.68 | 7.81 F1.13 | |
| +50 | 13.12 | 14.11 F0.99 | 123 ~ | 6.64 | 7.46 F0.82 | |
| 132 ~ | 12.41 | 13.76 F1.35 | +50 | 6.13 | 7.11 F0.98 | |
| +50 | 12.45 | 13.41 F0.96 | 122 ~ | 6.06 | 6.76 F0.70 | |
| 131 ~ | 12.26 | 13.06 F0.80 | +50 | 5.83 | 6.50 F0.67 | |
| +50 | 11.92 | 12.71 F0.79 | 121 ~ | 6.03 | 6.23 F0.20 | |
| 130 ~ | 11.10 | 12.36 F1.26 | +50 | 5.24 | 5.96 F0.72 | |
| +50 | | 12.01 - | 120 ~ | 4.98 | 5.69 F0.71 | |
| 129 ~ | 9.98 | 11.66 F1.68 | +50 | 4.62 | 5.42 F0.80 | |
| +50 | 10.44 | 11.31 F0.87 | 119 ~ | 4.04 | 5.15 F1.11 | |
| 128 ~ | 9.99 | 10.96 F0.97 | +50 | 3.74 | 4.89 F1.15 | |
| +50 | 9.65 | 10.61 F0.96 | 118 | 2.98 | 4.62 F1.64 | |

4.53 = P.K. in Box

21

| | | | | | | |
|---------|-------|------------------------------|----------------------|-------|-----------------------|--------|
| 117 +50 | 3.49 | 4.35 ^{3.49} F 0.86 | 108 ~ | -2.30 | -0.72 ^{2.30} | F 1.58 |
| 117 ~ | 3.19 | 4.09 ^{3.19} F 0.90 | +50 | -2.34 | -0.98 ^{2.34} | F 1.36 |
| +50 | 2.29 | 3.82 ^{2.29} F 1.53 | 107 ~ | -2.53 | -1.23 ^{2.53} | F 1.30 |
| 116 ~ | 2.40 | 3.55 ^{2.40} F 1.15 | +50 | -2.59 | -1.48 ^{2.59} | F 1.11 |
| +50 | 2.33 | 3.28 ^{2.33} F 0.95 | 106 ~ | -2.75 | -1.72 ^{2.75} | F 1.03 |
| 115 ~ | 1.76 | 3.02 ^{1.76} F 1.26 | +72.53 = E.C. +50 | -2.99 | -1.95 ^{2.99} | F 1.04 |
| +50 | 1.49 | 2.75 ^{1.49} F 1.26 | +25 | -2.99 | -2.06 ^{2.99} | F 0.93 |
| 114 ~ | 1.42 | 2.48 ^{1.42} F 1.06 | 105 ~ | -3.32 | -2.17 ^{3.32} | F 1.15 |
| +50 | | 2.22 | +75 | -3.38 | -2.27 ^{3.38} | F 1.11 |
| 113 ~ | | 1.95 | +50 | -3.52 | -2.38 ^{3.52} | F 1.14 |
| +50 | | 1.68 | +25 | -3.67 | -2.48 ^{3.67} | F 1.19 |
| 112 ~ | | 1.42 | 104 ~ | -4.38 | -2.59 ^{4.38} | F 1.79 |
| +50 | | 1.15 | +75 | -3.93 | -2.69 ^{3.93} | F 1.24 |
| 111 ~ | | 0.88 | +50 | -3.93 | -2.79 ^{3.93} | F 1.14 |
| | | | +25 | -3.95 | -2.89 ^{3.95} | F 1.06 |
| 110 ~ | -0.82 | 0.35 ⁸² F 1.17 | 103 ~ | -4.23 | -2.99 ^{4.23} | F 1.24 |
| +50 | -0.91 | 0.08 ⁹¹ F 0.99 | +75 | -4.09 | -3.09 ^{4.09} | F 1.00 |
| 109 ~ | -1.72 | -0.19 ^{1.72} F 1.53 | +50 | -4.25 | -3.19 ^{4.25} | F 1.06 |
| +50 | -1.50 | -0.45 ^{1.50} F 1.05 | +25 | -4.20 | -3.29 ^{4.20} | F 0.91 |

Rough Grades - Buenos - Weeks to

Morena

22

Lt. = W.

Rt. = E

0+00 = N.L. Weeks.

cb. Grade

cb. Grade

| | | | | |
|--------------------------|------|---------------------|-------|--|
| +04 | | | | |
| +19 = PC. | 25.5 | 26.1 | F 0.6 | |
| +69 | 25.0 | 25.1 | F 0.1 | |
| 1+19 | 24.7 | 24.1 | C 0.6 | |
| +50 | 24.5 | ⁴ 23.4 | C 1.1 | |
| 2+00 | 24.4 | ⁴ 22.2 | C 2.2 | |
| +55.22 = PC. 20' Rad. | 23.4 | ^{3.4} 20.9 | C 2.5 | |

| | | | |
|------------|------|---------------------|-------|
| 0+04 = PC. | 28.9 | ^{8.9} 27.2 | C 1.7 |
| | 28.0 | ^{8.0} 26.9 | C 1.1 |
| | 26.1 | ^{6.1} 25.7 | C 0.4 |
| | 26.1 | ^{6.1} 24.6 | C 1.5 |
| | 23.9 | 23.9 | C |
| | 22.9 | 22.7 | C 0.2 |
| | 22.0 | ^{2.0} 21.4 | C 0.6 |

Rough Grades 30' Alley - Dorcas to Vega

| | stakes 2' BK | S | | N | | | |
|--------------------|--------------|------|------|-------|------|---------------------|-------|
| 0+00 = W.L. Dorcas | -10' BK | 16.9 | 16.5 | C 0.4 | 16.8 | 16.5 | C 0.3 |
| +50 | | 16.0 | 15.7 | C 0.3 | 16.3 | ^{6.3} 15.7 | C 0.6 |
| 1 ~ | | 14.8 | 14.9 | F 0.1 | 15.0 | 14.9 | C 0.1 |
| +50 | | 14.7 | 15.2 | F 0.5 | 15.0 | 15.2 | F 0.2 |
| 2 ~ | | 15.5 | 16.5 | F 1.0 | 17.3 | ^{7.3} 16.5 | C 0.8 |
| +50 | | 17.5 | 17.8 | F 0.3 | 18.4 | ^{8.4} 17.8 | C 0.6 |
| 3 ~ | | 18.5 | 19.0 | F 0.5 | 19.2 | 19.0 | C 0.2 |
| +50 - 1' BK | | 19.8 | 19.6 | C 0.2 | 19.7 | 19.6 | C 0.1 |
| 4 ~ | | 19.2 | 19.9 | F 0.7 | 19.9 | 19.9 | F 0.1 |
| +50 | | 20.1 | 19.7 | C 0.4 | 20.2 | 19.7 | C 0.5 |
| 5 ~ | | 19.9 | 19.3 | C 0.6 | 19.8 | 19.3 | C 0.5 |
| +50 | | 18.8 | 18.8 | G | 18.7 | 18.8 | F 0.1 |
| 6+00 = E.L. Vega | | 18.5 | 18.4 | C 0.1 | 18.5 | 18.3 | C 0.2 |

Stake 16" Water Main - Morena
 136+00 - N

24

150+36 = F.H. - 125 Bk. of cb.

cb. Grade

5' Bk. of E =

17.12 15.96 - C 1.16

| | | | | | | | |
|--------|------|--------------------|-------|-------|------|------|-------|
| | | | | 145 ~ | 13.3 | 9.0 | C 4.3 |
| 136+00 | 3.7 | 0.0 | C 3.7 | +50 | 14.2 | 9.6 | C 4.6 |
| +50 | 4.5 | 0.2 | C 4.3 | 146 ~ | 15.1 | 10.1 | C 5.0 |
| 137 ~ | 5.4 | 0.4 | C 5.0 | +50 | 15.1 | 10.5 | C 4.6 |
| +50 | 5.7 | 0.7 | C 5.0 | 147 ~ | 15.3 | 10.8 | C 4.5 |
| 138 ~ | 5.5 | 1.0 | C 4.5 | +50 | 15.1 | 11.1 | C 4.0 |
| +50 | 5.5 | 1.4 | C 4.1 | 148 ~ | 15.7 | 11.3 | C 4.4 |
| 139 ~ | 5.9 | 1.8 | C 4.1 | +50 | 16.5 | 11.3 | C 5.2 |
| +50 | 6.8 | ^{6.8} 2.1 | C 4.7 | 149 ~ | 16.1 | 11.3 | C 4.8 |
| 140 ~ | 7.0 | 2.8 | C 4.2 | +50 | 16.3 | 11.3 | C 5.0 |
| +50 | 8.0 | 3.2 | C 4.8 | 150 ~ | 17.0 | 11.1 | C 5.9 |
| 141 ~ | 7.7 | ^{7.7} 3.6 | C 4.1 | +50 | 16.4 | 11.0 | C 5.4 |
| +50 | 8.2 | 3.9 | C 4.3 | 151 ~ | 14.2 | 10.9 | 3.3 |
| 142 ~ | 8.9 | 4.5 | C 4.4 | +50 | 15.2 | 10.8 | 4.4 |
| +50 | 10.5 | 5.2 | C 5.3 | 152 ~ | 14.6 | 10.7 | 3.9 |
| 143 ~ | 11.3 | 6.0 | C 5.3 | +50 | 14.4 | 10.5 | 3.9 |
| +50 | 12.3 | 6.8 | C 5.5 | 153 ~ | 14.5 | 10.4 | 4.1 |
| 144 ~ | 12.6 | 7.6 | C 5.0 | +50 | 14.4 | 10.3 | 4.1 |
| +50 | 12.8 | 8.3 | C 4.5 | 154 ~ | 14.0 | 10.2 | C 3.8 |

Water Line

160+10.5 = F.H.

165+90 = F.H. - cb =

11.81 12.28 F 0.19 25

cb = 12.39 ³⁹ 12.20
C 0.19172 ~ = F.H.
Milton - SE.cb =
12.40~~11.81~~
11.81
F 0.19

| | | | | | | | |
|--------------|------|------|-------|--------|------|---------------------|-------|
| 154+50 | 13.9 | 10.1 | C 3.8 | 164+50 | 11.8 | 6.9 | C 4.9 |
| 155 | 12.6 | 10.0 | 2.6 | 165 ~ | 12.1 | 7.1 | 5.0 |
| +50 | 14.2 | 9.8 | 4.4 | +50 | 12.1 | 7.2 | 4.9 |
| 156 ~ | 14.3 | 9.5 | 4.8 | 166 ~ | 12.2 | 7.4 | 4.8 |
| +50 | 14.4 | 9.3 | 5.1 | +50 | 11.9 | 7.6 | 4.3 |
| 157 ~ | 14.3 | 9.0 | 5.3 | 167 ~ | 12.5 | 7.7 | 4.8 |
| +50 | 14.1 | 8.7 | 5.4 | +50 | 13.4 | 7.9 | 5.5 |
| 158 ~ | 13.6 | 8.5 | 5.1 | 168 ~ | 12.5 | 8.0 | 4.5 |
| +50 | 13.3 | 8.2 | 5.1 | +50 | 12.1 | 8.0 | 4.1 |
| 159 ~ | 12.3 | 7.9 | 4.4 | 169 ~ | 12.3 | 8.0 | 4.3 |
| +50 | 12.8 | 7.6 | 5.2 | +50 | 12.1 | 7.9 | 4.2 |
| 160 ~ | 12.4 | 7.4 | 5.0 | 170 ~ | 11.9 | 7.7 | 4.2 |
| +50 | 11.1 | 7.1 | 4.0 | +50 | 11.9 | 7.5 | 4.4 |
| 161 ~ | 11.1 | 6.8 | 4.3 | 171 ~ | 11.9 | 7.3 | C 4.6 |
| +50 - 3' Rt. | 11.0 | 6.5 | 4.5 | +50 | 11.7 | 7.2 | C 4.5 |
| 162 ~ | 11.1 | 6.4 | 4.7 | 172 ~ | 11.2 | ^{11.2} 7.0 | C 4.2 |
| +50 - 3' Rt. | 11.2 | 6.4 | 4.8 | +50 | 11.0 | ^{1.0} 6.8 | 4.2 |
| 163 ~ | 11.1 | 6.5 | 4.6 | 173 ~ | 10.7 | ^{0.2} 6.2 | 4.1 |
| +50 | 11.9 | 6.6 | 5.3 | +50 | 10.5 | ^{0.5} 6.5 | 4.0 |
| 164 ~ | 11.9 | 6.8 | 5.1 | 174 ~ | 10.3 | ^{0.3} 6.3 | 4.0 |

| Line | | | | |
|--------|------|-----|-------|--|
| 176+50 | 10.2 | 6.1 | 4.1 | |
| 175~ | 10.0 | 5.9 | 4.1 | |
| +50 | 9.9 | 5.8 | 4.1 | |
| 176~ | 9.6 | 5.6 | 4.0 | |
| +50 | 9.5 | 5.4 | 4.1 | |
| 177~ | 9.1 | 5.2 | 3.9 | |
| +50 | 9.1 | 5.1 | 4.0 | |
| 178~ | 9.0 | 4.9 | 4.1 | |
| +50 | 8.7 | 4.7 | 4.0 | |
| 179~ | 9.0 | 4.6 | C 4.4 | |
| +50 | 9.3 | 4.8 | C 4.5 | |
| 180~ | 9.6 | 4.9 | 4.7 | |
| +50 | 9.6 | 5.1 | 4.5 | |
| 181~ | 10.0 | 5.4 | 4.6 | |
| +50 | 10.7 | 5.9 | 4.8 | |
| 182~ | 10.4 | 6.6 | 3.8 | |
| +50 | 11.1 | 7.3 | 3.8 | |
| 183~ | 14.1 | 8.0 | 6.1 | |
| +50 | 14.6 | 8.7 | C 5.9 | |
| 184~ | 14.2 | 9.3 | C 4.9 | |

187+5376 = Ang.

191+32.6 = F.H.

| Line | | | |
|------------------|------|------|-------|
| 184+50 | 14.3 | 9.7 | C 4.6 |
| 185~ | 14.6 | 10.3 | C 4.3 |
| +50 | 15.3 | 10.7 | C 4.6 |
| 186~ | 15.9 | 11.3 | C 4.6 |
| +50 | 16.1 | 11.7 | C 4.4 |
| 187~ | 14.2 | 12.0 | 4.2 |
| +50 | 16.4 | 12.3 | 4.1 |
| 188~ | 16.8 | 12.6 | 4.2 |
| +50 | 17.7 | 13.0 | 4.7 |
| 189~ | 17.7 | 13.4 | 4.3 |
| +50 | 17.7 | 13.7 | 4.0 |
| 190~ | 13.9 | 13.9 | G |
| +50 | 17.7 | 13.9 | 3.8 |
| 191~ | 17.8 | 13.8 | 4.0 |
| = Ang pt. +50 | 17.9 | 13.7 | 4.2 |
| 192~ | 18.6 | 14.7 | 3.9 |
| +50 | 21.2 | 15.7 | 5.5 |
| 193~ | 22.3 | 16.7 | 5.6 |
| +50 | 21.0 | 17.6 | 3.4 |
| 194~ | 21.0 | 18.2 | 2.8 |

26

water line

Stakes Log Bk. of cb. Line + 2' N
1' BK.

27

| | | | | | | | |
|---------------------------|-------|-----------------------|--------|--------|-------|----------------------|--------|
| | | | | 175+10 | 10.62 | 10.80 ₆₂ | F 0.18 |
| 194+50 | 22.7 | 18.7 ^{2.7} | 4.6 | 173+77 | 10.58 | 11.26 ₅₈ | F 0.68 |
| 195~ | 22.9 | 18.9 ^{2.9} | 4.0 | 189+85 | 17.42 | 18.83 ₄₂ | F 1.41 |
| +50 | 23.9 | 19.9 ^{3.9} | 4.0 | 158+83 | 12.96 | 12.90 | C 0.06 |
| 196 | 25.0 | 20.2 ^{5.0} | 4.8 | 158+05 | 13.78 | 13.33 ⁷⁸ | C 0.45 |
| = Ang. +67 | 27.0 | 20.3 ^{7.0} | 6.7 | 157+41 | 14.03 | 13.70 ⁴⁰³ | C 0.33 |
| 197~ | 25.2 | 20.4 ^{5.2} | 4.8 | 156+85 | 14.67 | 14.00 | C 0.67 |
| Meat | 24.8 | 20.4 ^{4.8} | C 4.4 | 153+80 | 14.96 | 15.17 ₉₆ | F 0.21 |
| Beq. Water Ser. - Morena. | | Top cb. | | 152+94 | 15.18 | 15.37 ₁₈ | F 0.19 |
| 183+11 | 13.20 | 13.11 | C 0.09 | 152+51 | 15.13 | 15.46 ₁₃ | F 0.33 |
| 182+94 | 13.99 | 12.86 ^{3.99} | C 1.13 | 151+22 | 15.55 | 15.75 ₅₅ | F 0.20 |
| 182+18 | 10.87 | 11.76 ₈₇ | F 0.89 | 149+24 | 15.94 | 16.21 ₉₄ | F 0.25 |
| 181+58.5 | 10.56 | 10.93 ₅₆ | F 0.37 | | | | |
| 179+89 | 9.63 | 9.78 ₆₃ | F 0.15 | | | | |
| 179+41 | 9.21 | 9.65 ₂₁ | F 0.44 | | | | |
| 178+93 | 8.88 | 9.55 ₈₈ | F 0.67 | 138+39 | 5.56 | 6.19 ₅₆ | F 0.63 |
| 178+06.5 | 9.13 | 9.74 ₁₃ | F 0.61 | 139+66 | 6.90 | 7.33 ₉₀ | F 0.43 |
| 177+39 | 9.56 | 10.00 ₅₆ | F 0.44 | | | | |
| 176+89 | 11.09 | 10.17 ₀₉ | C 0.92 | | | | |
| 176+01 | 9.38 | 10.48 ₃₈ | F 1.10 | | | | |

Cont. from P. 19 - Outer Channel
Stakes - 20' Rt. of Φ

28

| | Elev. stake I.F. | | | I.F. | | | | |
|-------|------------------|-------|-------|-------------------|------|-------|-------------|-------------|
| 92+50 | 1.00 | -4.83 | C5.83 | 83- | 6.35 | -5.55 | C5.90 | |
| 92- | 0.24 | 4.86 | C5.10 | +50 | 0.49 | 5.59 | C6.08 | |
| +50 | 4.94 | 4.90 | C9.84 | 82~ | 9.03 | -0.97 | 5.62 97 | |
| 91- | Not in | 4.94 | | +50 | 9.68 | -0.32 | 5.66 52 | |
| +50 | 0.09 | 4.98 | C5.07 | 81~ ^{TP} | 9.42 | -6.58 | 5.70 58 | |
| 90- | 0.00 | 5.02 | C5.02 | +50 | 9.13 | -0.87 | 5.74 87 | |
| +50 | 1.25 | 5.06 | C6.30 | 80~ | 9.58 | -0.42 | 5.78 42 | |
| 89- | 0.51 | 5.09 | C5.60 | +50 | 9.58 | -0.42 | 5.81 42 | |
| +50 | TP | 0.67 | 5.13 | C5.80 | 79~ | 9.25 | -0.75 | 5.85 75 |
| 88~ | 0.22 | 5.17 | C5.39 | +50 | 9.06 | -0.94 | 5.89 94 | |
| +50 | 1.33 | 5.21 | C6.54 | 78~ | 8.93 | -1.07 | 5.93 107 | |
| 87~ | 1.00 | 5.24 | C6.24 | +50 | 8.58 | -1.42 | 5.97 142 | |
| +50 | 1.09 | 5.28 | C6.37 | 77~ | 9.46 | -0.54 | 6.00 54 | |
| 86~ | 0.84 | 5.32 | C6.06 | +50 | 8.45 | -1.55 | 6.04 55 | |
| +50 | 0.76 | 5.36 | C6.12 | 76~ | 8.58 | -1.42 | 6.08 142 | |
| 85~ | 0.74 | 5.40 | C6.14 | +50 | 8.15 | -1.85 | 6.12 185 | |
| +50 | 9.85 | -0.15 | 5.43 | C5.28 | 75~ | 8.17 | -1.83 | 6.16 183 |
| 84~ | +0.51 | 5.47 | C5.98 | +50 | 8.18 | -1.82 | 6.19 182 | |
| +50 | 0.17 | 5.51 | C5.68 | 74~ | 8.51 | -1.49 | 6.23 149 | |

- 1.54 = 27+30 - "B" = Hub

29

Elev. Stake I.F.

| | | | | |
|-------|------|-------|------|--------|
| 73+50 | 8.02 | -1.98 | 6.27 | C 4.29 |
| 73- | 8.09 | -1.91 | 6.31 | C 4.40 |
| +50 | 8.35 | -1.65 | 6.35 | C 4.70 |
| 72~ | 8.32 | -1.68 | 6.38 | C 4.70 |
| +50 | 8.78 | -1.22 | 6.42 | C 5.20 |
| 71~ | 7.15 | -2.85 | 6.46 | C 3.61 |
| +50 | 8.31 | -1.69 | 6.50 | C 4.81 |
| 70~ | 8.34 | -1.66 | 6.50 | C 4.84 |
| 69+25 | 8.56 | -1.44 | 6.50 | C 5.06 |

Stake Water Line - New Alley
Bet. Dorcas + Vega - Sheet 31

| | | I.E. | |
|--------------------|------|------------------------|-------|
| 0-30 = Conn. | 16.6 | ^{6.6} 12.9 | C 3.7 |
| 0+00 = W.L. Dorcas | 16.6 | ^{6.6} 12.1 | 4.5 |
| +50 | 16.0 | ^{6.0} 11.3 | 4.7 |
| 1~ | 14.3 | ^{4.3} 10.5 | 3.8 |
| +50 | 14.2 | ^{4.2} 10.8 | 3.4 |
| 2~ | 15.6 | ^{5.6} 12.1 | 3.5 |
| +50 | 17.5 | ^{7.5} 13.4 | 4.1 |
| 3- | 18.7 | ^{8.7} 14.6 | 4.1 |
| +50 | 19.2 | ^{9.2} 15.2 | 4.0 |
| 4~ | 19.1 | ^{9.1} 15.5 | 3.6 |
| +50 | 20.1 | ^{0.1} 15.3 | 4.8 |
| 5~ | 19.9 | ^{9.9} 14.9 | 5.0 |
| +50 | 19.0 | ^{9.0} 14.4 | 4.6 |
| 6~ = E.L. Vega | 18.4 | ^{8.4} 14.0 | 4.4 |
| 107+50 | 22.4 | ^{2.4} 16.9 | C 5.5 |
| 108~ | 19.3 | ^{9.3} 15.2 | C 4.1 |
| +50 | 16.7 | ^{6.7} 15.4 | C 3.3 |
| +75 | 16.4 | ^{6.4} 12.2 | C 4.2 |

Water Services - Alley. opp.

30

stakes 1.82 in From S. Line - 0.9 Below top of Pavement

| | | | |
|------|------|-------------------------|-------|
| 0+01 | 16.6 | ^{6.6} 15.60 | C 1.0 |
| 0+72 | 15.9 | ^{5.9} 14.4 | C 1.5 |
| 1+70 | 14.6 | 14.8 | F 0.2 |
| 2+15 | 16.3 | 16.0 | C 0.3 |
| 2+65 | 17.8 | ⁸ 17.3 | C 0.5 |
| 3+38 | 19.3 | ^{9.3} 18.6 | C 0.7 |
| 4+70 | 20.0 | ^{20.0} 18.6 | C 1.4 |
| 5+22 | 19.5 | ^{9.5} 18.2 | C 1.3 |
| 5+54 | 18.7 | ^{8.7} 17.9 | C 0.8 |

48' Rt. of E

Req. Water Line in Weeks - Beg. 104+00

stakes 5' Lt. Cuts to I.E.

| | | | |
|------|------|------------------------|-----------|
| 104~ | 29.3 | ^{9.3} 23.2 | C 6.1 |
| +50 | 26.9 | ^{6.9} 22.4 | C 4.6 4.5 |
| 105~ | 24.6 | ^{4.6} 21.9 | C 2.7 |
| +50 | 23.8 | ^{3.8} 21.1 | C 2.7 |
| 106~ | 23.8 | ^{3.8} 20.5 | C 3.3 |
| +50 | 23.8 | ^{3.8} 19.8 | C 4.0 |
| 107~ | 23.7 | ^{3.7} 18.5 | C 5.2 |

Water Line - Weeks -

| | | | |
|---|-------|-------------------------|--------|
| 104+043 = Hyd. ^{Top cb.} | 29.2 | ^{9.2} 27.42 | C 1.8 |
| 105+71 = (W) | 24.2 | 24.3 | F 0.1 |
| 106+02 " | 24.4 | 24.0 | C 0.4 |
| 107+31 " | 23.7 | ^{3.7} 21.0 | C 2.7 |
| 107+86 " | 20.4 | ^{20.4} 19.1 | C 1.3 |
| 108+42.73 = F.H. ^{Top cb.} | 17.10 | 17.44 | F 0.34 |
| 8" Line to S. at ± Sta. 108+82.9 | | | |
| ± | 13.5 | 13.1 | C 0.4 |
| +40' | 11.3 | 12.8 | F 1.5 |
| Gross | 10.8 | ^{10.5} 8.3 | C 2.5 |
| Top cb. for Hyd. | 10.8 | 12.0 | F 1.2 |
| End. | 14.3 | ^{4.3} 9.5 | C 4.8 |
| ^{Dorcas + Weeks.} Ser. at N.W. Cor. | 15.3 | 15.1 | C 0.2 |
| E. Vault - cb. Gr. | 14.0 | ^{4.0} 13.6 | C 0.4 |
| W. Vault. " " | 12.8 | 12.9 | F 0.1 |
| Meters. | | ^{Pipe Gr.} | |
| 101+69 - 51.8 | 23.6 | 23.3 | C 0.3 |
| 102+45 52.3 | 25.5 | ^{5.5} 24.9 | C 0.6 |
| 102+81 53.1 | 26.5 | ^{6.5} 25.9 | C 0.6 |

6" W.L. - Weeks + Morena.

31

| 8" Line Morena at Cushman Conn. in | I.E. | | |
|--|------|------------------------|--------|
| Ang. | 21.9 | 18.0 | C. 3.9 |
| 52' to "T" | 20.8 | 18.5 | 2.3 |
| +33' | 20.2 | 18.3 | 1.9 |
| +66 | 20.2 | 18.0 | 2.2 |
| +106 | 21.2 | 16.7 | 4.5 |
| +128 = End. | 23.9 | 17.7 | 6.2 |
| Req. 6" line at "T" | | | |
| 1/2 To Ang. | 22.0 | ^{2.0} 17.6 | 4.4 |
| Ang. | 21.4 | ^{1.4} 17.6 | 3.8 |
| 100+50 | 21.2 | ^{1.2} 18.3 | 2.9 |
| 101- | 21.3 | 19.9 | 2.3 |
| +50 | 22.8 | 19.7 | 3.1 |
| 102~ | 24.3 | ^{4.3} 20.5 | 3.8 |
| +80 | 25.6 | ^{5.6} 21.5 | 4.1 |
| 103~ | 26.9 | ^{6.9} 22.9 | 4.0 |
| +50 | 28.6 | ^{8.6} 23.5 | 5.1 |

6" Water - Buenos - Morena to Weeks

Water Meters -

Riser - 1' Back
of cb. face

32

0+00 = Valve - 16.75 from E

168+28

13.68

³ 12.48

C 1.28

+40 21.3

^{21.3} 17.6

C 3.7

167+48.5

13.46

³ 12.78

C 0.68

+90 22.3

^{22.3} 18.8

C 3.5

166+82

12.32

12.57

F 0.25

1+40 23.3

³³ 20.0

C 3.3

166+00

12.26

³² 12.30

F 0.04

+90 24.3

⁴³ 21.1

C 3.2

163+84

11.99

²⁶ 11.61

C 0.38

2+40 25.4

⁵⁴ 22.2

C 3.2

161+82

11.03

²⁶ 11.36

F 0.33

+98 = 6"

23.0[?]

Meters - Same Sta.

Grade of pipe

- 1+86

19.41

⁴¹ 19.16

C 0.25

0+33 - W. 23.4

³⁴ 20.0

C 3.4

- 1+28

18.60

18.86

F 0.26

1+27 - W. 24.1

⁴¹ 22.2

C 1.9

11+54

22.21

⁶⁰ 22.10

C 0.11

1+47 - E. in Alley 24.0

23.1

C 0.9

Old Morena - Buenos

Top cb.

2+06 - W. 24.6

⁴⁶ 23.9

C 0.7

12+35.5 - N. Side

22.56

²⁵⁶ 23.00

F 0.44

2+45 = E. 26.3

⁶³ 25.4

C 0.9

13+05

22.28

22.96

F 0.68

Meters on N.W. Ret. Buenos & Morena.

13+68

22.81

22.65

C 0.16

E. 22.67

⁶⁷ 21.30

C 1.37

14+05.5

22.37

22.36

C 0.01

W. 22.64

⁶⁴ 21.30

C 1.34

16+32.5

22.09

⁵⁹ 20.54

C 1.55

16+70

20.46

⁶⁶ 20.24

C 0.22

17+85

19.49

⁴⁹ 19.32

C 0.17

18+32

19.26

²⁶ 18.97

C 0.29

Cont. on P. 33

Cont. from P. 32

Water Meters.

cb. Grade

18+76 18.53 18.70 F 0.17

S. Side Buenos - W.

16+17.4 24.02 20.67⁴⁰² C 3.35

16+65⁵ 22.99 20.52²⁹⁹ C 2.47

17+53 20.18 20.27¹⁸ F 0.09

17+72 19.40 20.20⁴⁰ F 0.80

18+44.5⁵ 18.78 19.90⁸⁷⁸ F 1.12

18+86 18.77 19.63⁸⁷⁷ F 0.86

Meters - E Side Morena by Napa.

on Ret.

2+94 14.82 15.57 F 0.75

| | | | | | | | |
|-------------------|-------|------|--------|------------------------------|--------------------|----------------------|------------------|
| | | | | 9+50 | 17.02 | 17.02 6.28 | 10.74 |
| 0+00 = at channel | 1.64 | 0.00 | C 1.64 | 10~ | 17.19 | 17.19 6.62 | 10.57 |
| +50 | 2.46 | 0.33 | C 1.13 | 10+56 = Cleanout | 17.50 | 17.50 7.00 | 10.50 |
| 1~ | 3.96 | 0.66 | C 3.30 | Dorcas St. | 18.16 | 7.00 | 11.16 |
| +50 | 6.30 | 0.99 | 5.31 | Req. 18" in Alley to Dorcas. | | | |
| 2~ | 8.77 | 1.32 | 7.45 | 0+00 = J Basin | 14.70 | 4.70 11.00 | C 3.70 |
| +50 | 10.80 | 1.65 | 9.15 | +35 | 15.38 | 5.38 10.76 | 4.62 |
| 3~ | 12.41 | 1.98 | 10.43 | +70 | 16.00 | 6.00 10.52 | 5.48 |
| +50 | 13.73 | 2.31 | 11.42 | 1+05 | 16.70 | 6.70 10.28 | 6.42 |
| 4~ | 15.51 | 2.64 | 12.87 | +45 = C.D. | S 16.52 F 16.58 | 10.00 | C 6.52 6.58 |
| +50 | 15.92 | 2.97 | 12.95 | +75 | 16.74 | 6.74 9.81 | 6.93 |
| 5~ | 16.58 | 3.30 | 13.28 | 2+10 | 16.67 | 6.67 9.60 | 7.07 |
| +50 | 17.20 | 3.63 | 13.57 | +45 | 16.75 | 6.75 9.39 | 7.36 |
| 6~ | 17.94 | 3.96 | 13.98 | +80 | 16.90 | 6.90 9.18 | 7.72 |
| +50 | 18.27 | 4.29 | 13.98 | 3+10 = F C.O. | 18.16 | 18.16 9.00 | 9.16 |
| 7~ | 18.19 | 4.62 | 13.57 | Req. 18" N. up Morena | 17.48 | 18.40 = top 17.48 | F 0.92 C 4.73 |
| +50 | 17.90 | 4.95 | 12.95 | 0+00 = C.O. | 18.16 | 12.75 | 5.41 |
| 8~ | 17.82 | 5.28 | 12.54 | +35 | 17.75 | 7.75 13.22 | 4.53 |
| +50 | 17.66 | 5.61 | 12.05 | +70 | 17.73 | 7.73 13.69 | 4.04 |
| 9~ | 17.13 | 5.94 | 11.19 | 1+05 | 18.31 | 8.31 14.16 | 4.15 |

| | | | |
|-------------------------|-------|--------------------------|--------|
| 1+48.45 = ± K Inlet | 18.72 | ^{8.72} 14.75 | 3.97 |
| ± inlet - 8' Bk of cb. | 18.75 | 18.73 | C 0.02 |
| 10' N. + 8' S. for Line | | | |

Beq 24" E. on Morena from C.O. at Dorcas

0+00 = ± C.O.F

| | | | |
|----------------|-------|---------------------------|--------|
| +35 | 18.27 | 7.94 = I.E. of 24" | |
| +70 | 18.61 | ^{8.27} 8.32 | C 9.95 |
| 1+00.95 = Ang. | 18.79 | ^{8.61} 8.70 | C 9.91 |
| 1+35 | 19.24 | ^{8.79} 9.03 | C 9.76 |
| +70 | 18.98 | ^{9.24} 9.38 | 9.86 |
| 2+05 | 19.56 | ^{8.98} 9.76 | 9.22 |
| +40 | 20.34 | ^{9.56} 10.14 | 9.42 |
| +75 | 20.90 | ^{0.34} 10.52 | 9.82 |
| 3+10 | 22.99 | ^{20.90} 10.89 | 10.01 |
| +45 | 23.82 | ^{22.99} 11.27 | 11.72 |
| +80 | 23.53 | ^{23.82} 11.65 | 12.17 |
| 4+15 | 23.10 | ^{23.53} 12.02 | 11.51 |
| 4+24.20 = C.O. | 22.57 | ^{23.10} 12.40 | 10.70 |
| 4+50 | 20.86 | ^{22.57} 12.50 | 10.07 |
| 4+86.86 = Lug | 21.38 | ^{20.86} 12.59 | 8.27 |
| | | ^{21.38} 12.72 | 8.66 |

on Ret.

| | | | |
|--------------------------------|---------------------------|---------------------------|--------------|
| I.E. of 4' K - | 21.80 | 17.10 | C 4.70 |
| Top = 8' Bk. - Rad. | 21.80 | 21.10 | C 0.70 |
| 5+20 | 21.39 | ^{21.39} 12.84 | 8.55 |
| 5+55 | 21.12 | ^{21.12} 12.97 | 8.15 |
| +90 | 21.27 | ^{21.27} 13.10 | 8.17 |
| 6+25 | 20.70 | ^{0.20} 13.23 | 7.47 |
| 6+44.95 = C.O. | 20.71 | ^{0.71} 13.30 | 7.41 |
| +80 | 20.80 | ^{0.80} 13.43 | 7.37 |
| 7+15 | 20.76 | ^{0.76} 13.56 | 7.20 |
| 7+50 | 20.94 | ^{0.94} 13.70 | 7.24 |
| +85 | 20.90 | ^{0.90} 13.83 | 7.07 |
| 8+20 | 20.78 | ^{0.78} 13.97 | 6.81 |
| 8+55 | 20.84 | ^{0.84} 14.10 | 6.74 |
| +96.33 = inside of Box at ± | | 14.26 = I.E. | |
| 18" at 4+24.20 | ^{20.43} 22.57 | ^{20.43} 13.40 | 7.03 9.17 |
| 0+22 | 20.99 | ^{0.99} 13.73 | 7.26 |
| +45 | 21.55 | ^{21.55} 14.07 | 7.48 |
| +74 = sly. | 22.80 | ^{2.80} 14.50 | C 8.30 |
| B-2 Box = PC | | | |
| Top - sly. | 22.80 | ^{2.80} 21.50 | C 1.30 |
| Top - Nly: | 22.93 | ^{2.93} 21.80 | C 1.13 |

(30)

Box Culvert at 189+05

10' N. } w. on cb. line - Top 14.47 15.42 F 0.95
 10' S. } for K C Inlet 15.24 15.42 F 0.18

0+00 = Beg. at W. Side = Wing Wall

0+00 - 10' S. 8.94 4.00 C 4.94

+16 = ± " 10+20-N. K Inlet 15.12 4.12 C 11.00

+35 15.13 4.27 C 10.86

+50 14.66 4.38 C 10.28

+59 = ± 16.81 F 2.06

+66 = ± Island 14.75 4.50 C 10.25

+98 18.18 4.75 C 13.43

1+30 = end at Wall 19.26 5.00 C 14.26

12' R.P. Cross to 0+00 3.22 4.00 F 0.78

Culvert - 24" R.C.P. at 133+45.9

± outlet = 0+00 0.78

+30 2.82 0.54 C 2.28

+60 3.26 0.30 C 2.96

+93 = end + Wall 3.28 0.04 C 3.24

18" from Box Culvert To U

6' x 5' Box Culvert. stake = 0+00.5 17.71
 0+00 = Nly Inside of 17.71 8.00 C 9.71

0+35 17.27 8.70 C 8.57

+70 out 9.40

1+05 17.24 10.10 C 7.14

+40 18.20 10.80 C 7.40

+75 18.44 11.50 C 6.94

2+10 18.78 12.20 6.58

+45 18.62 12.90 5.72

+75 18.33 13.50 4.83

3+01 = ± Box 17.92 14.00 3.92

6' Bk. ± Box - Rad. 18.76 14.00-13.91 4.76

= 0+00 ahead. 14.00 15.00 3.76

+35 18.93 15.42 C 3.51

+70 22.05 15.84 C 6.21

1+05 22.37 16.26 C 6.11

+40 21.21 16.68 C 4.53

1+75 21.42 17.10 C 4.32

2+10 21.10 17.52 C 3.58

+51 = ± Box 21.83 18.00 C 3.83

6' Bk ± - Rad. 22.89 18.00 C 4.89

Cont. P. 38 I.E. of Box

11.25
 15.83
 1.40

Cont. from P. 37.

Ditch from Inlet of Box 38
 Culvert at 189+05 - 6' Bottom + 1:1 sides

| | | | |
|----------------------------|-------|--|--------|
| 4' K Inlet Box = 0+00 | 22.89 | $\begin{array}{r} 22.89 \\ 18.50 \\ \hline \end{array}$ | C 4.39 |
| 0+25 | 21.36 | $\begin{array}{r} 21.36 \\ 18.75 \\ \hline \end{array}$ | C 2.61 |
| 0+51.27 = gut Line | 20.84 | $\begin{array}{r} 20.84 \\ 19.00 \\ \hline 1.84 \end{array}$ | C 1.84 |
| E. Island 4" Pipe | | | |
| 4' K Inlet - 3 to 1 - Top. | 18.77 | $\begin{array}{r} 18.77 \\ 18.43 \\ \hline \end{array}$ | C 0.34 |
| 765' Bk cb. - Rad. | | | |
| 4' K - NE Cor. - 2+5 Top = | 22.89 | 22.84 | C 0.05 |
| 194+48 = E. gut. | | | |
| 4' K in Island - Top = 5. | 20.79 | $\begin{array}{r} 22.60 \\ 0.79 \\ \hline \end{array}$ | F 1.81 |

| | | | |
|----------------------------|--|------|--|
| 0+00 = 4' inlet - 6x5' Box | 5.03 | | |
| | | | Grade = I.E. |
| | | | 4' Elev. |
| + 25 | $\begin{array}{r} 20.1 \\ C 13.7 \\ \hline 13.7 = 16.7 \text{ To } \Phi \end{array}$ | 20.2 | 6.38 |
| | | | Elev. of stake $\begin{array}{r} 21.3 \\ C 14.9 \\ \hline 14.9 \text{ To Hinge} \end{array}$ = 12.9 To E |
| + 65 | $\begin{array}{r} 14.5 \\ \text{To } \Phi \\ C 11.5 \\ \hline 11.5 \end{array}$ | 20.4 | 8.59 |
| | | | $\begin{array}{r} 21.3 \\ C 12.7 \\ \hline 12.7 \end{array}$ - 15.7 to Φ |
| 1+05 | $\begin{array}{r} 12.9 \\ \text{To } \Phi \\ C 9.9 \\ \hline 9.9 \end{array}$ | 20.2 | 10.80 |
| | | | $\begin{array}{r} 20.1 \\ C 9.3 \\ \hline 9.3 \end{array}$ - 12.3 To Φ |
| + 45 = end | | 14.3 | 13.00 |
| | | | $\begin{array}{r} 14.7 \\ C 1.7 \\ \hline 1.7 \end{array}$ - 4.7 To Φ |
| 42 To Φ | $\begin{array}{r} 14.7 \\ C 1.2 \\ \hline 1.2 \end{array}$ | | |

18" at 155+02.25 - little field.

+58 = .13' High ~ 10.93

= face of wall
0+00 = Outlet.

Top = 10' N.
= K inlet

0+10.9 = W. cb. line

0+40
No stake
+51.3 = E

+64

+76
= K inlet

+92.3 = E. cb. line

Top = Cross 10's.

Inlets + Drains at 161+42 = Ashton

Top.
SE. Cor. Ashton

0+00 = E Inlet.

0+35

+70

+95

1+19 = E. K. inlet

+50

+85

14.08
3.50
10.58 = Top
- .83
2.5
3.1
5.6

14.08
1.84
12.24 = Top Gas

8' bk - Rad.
SE. Cor. Napier
Top of Inlet.

2+13.67 = E Inlet.

+45

+80

N.E. Cor. Napier
3+16.32 = E Inlet.

Top Inlet

24" at 161+42

E. Side = 1+19
0+00 = E Inlet - Top = S.

+20

+50

+83.65 = cb.

+96.55 = wall

IE. of Pipe at RR.

Top of Inlet - S. 10'

+83.65
gut.

Lip.

1.80
1.81
1.83
12.64

S. - 4.60
N. - 4.55

39

11.04 11.21 F 0.17

11.34 11.34
5.40 5.94

11.28 11.28
5.73 5.55

11.23 11.23
6.11 C 5.12

11.90 11.90
6.50 C 5.40

11.93 11.48 C 0.45

11.31 11.47 F 0.16

11.21 11.21
4.17 7.04

10.27 10.27
3.70 6.57

9.72 9.72
3.17 6.55

7.76 7.76
3.14 4.62

3.13

8.92 11.19 F 2.27

8.92 10.36 F 1.44

8.92 10.56 F 1.64

| | | | |
|------------------------|------|-------|------------------------------|
| 18" at Asher - 150 +30 | | | |
| stake 10's. | Top. | 16.59 | ^{6.59} 15.97 C 0.62 |
| | I.E. | 16.59 | ^{6.59} 12.50 C 4.09 |
| E. cb. | | | |
| 0+00 = Beg. Pipe | | 16.69 | ^{6.69} 12.50 C 4.19 |
| 0+34 = W. edge Pavc | | 15.82 | ^{5.82} 12.19 C 3.63 |
| +65 | | 16.49 | ^{6.49} 11.91 C 4.58 |
| +88 = end | | 12.72 | ^{2.72} 11.70 C 1.02 |

| | | | |
|----------------------------|-----------------------------------|------|---|
| 18" at 126 +50 | | | 40 |
| 10's. | | 7.08 | 8.70 F 1.62 |
| 10' N - & Box on Gut. Line | | 7.15 | 8.70 F 1.55 |
| 126 +50 - E | 3.57 w. = cb. line Island. = 0+00 | | |
| 0+00 = w. cb. | | 6.97 | ^{6.97} 4.80 ^{4.63} C 2.17 |
| 0+30 | | 8.82 | ^{8.82} 4.29 C 4.53 |
| 0+46 = end + Wall | | 4.70 | 4.00 C 0.70 |

| | | | |
|--|--|-------|------------------------------|
| = face of Hd. wall | | | |
| 18" at ^{= cb. on E.} 178 +85 - To 178 +73 = cb. on W. | | | |
| 0+00 = cb. face on W. | | 9.17 | ^{9.17} 4.00 C 5.17 |
| +30 | | 7.83 | ^{7.83} 4.54 C 3.29 |
| +55 | | 8.91 | ^{8.91} 4.99 C 3.92 |
| +82.94 = cb. line | | 7.09 | ^{7.09} 5.50 C 1.59 |
| on E. 6' ahead on line | | 9.82 | ^{9.82} 5.50 C 4.32 |
| 10' BK of E. cb. face on E of Box = 178 +85 | | | |
| 10' BK. - Top. | | 10.17 | ^{10.17} 9.56 C 0.61 |

| | | | |
|-------------------------|--|------|------------------------------|
| 18" at 124 +60 - Radial | | | |
| = face of wall | | | |
| 0+00 = & outlet. | | 2.68 | ^{-2.87} 3.00 F 0.32 |
| +20. | | 9.41 | ^{9.41} 3.23 C 6.18 |
| +53.6 = E | | | |
| +55 | | 7.02 | ^{7.02} 3.63 C 3.39 |
| E. Side | | | |
| +87.6 = cb. line | | 7.94 | ^{7.94} 4.00 C 3.94 |
| Top of Box - N. | | 8.03 | 7.83 C 0.20 |
| on cb. line | | | |
| - 10' from E. S. | | 7.88 | 7.83 C 0.05 |

18" at 115+00 - Vega

| | | | |
|---------------------------|------|-------------------------|--------|
| 7K on N. cb. | 8.15 | ^{8.15} 7.75 | C 0.40 |
| 7' Bk. of cb. on E of Box | 8.15 | ^{8.15} 4.50 | C 3.65 |
| 10' E. on cb. Line = Top. | 6.83 | ^{6.83} 7.75 | F 0.92 |

| | | | |
|--------------------|------|-------------------------|--------|
| 4' K-1 in E Island | 9.83 | ^{9.83} 9.64 | C 0.19 |
|--------------------|------|-------------------------|--------|

| | | | | |
|-------------------------------|------|------|------|--------|
| 10' S. of S. gut. line = I.E. | 4.11 | 9.83 | 4.30 | C 5.53 |
|-------------------------------|------|------|------|--------|

| | | | |
|------------------------------|------|-------------------------|--------|
| 10' E. of E Box on gut. Line | 8.94 | ^{8.94} 9.64 | F 0.70 |
|------------------------------|------|-------------------------|--------|

| | | | | |
|------------------------|------|------|-------------------------|--------|
| E Box = E weeks = 0+00 | 4.05 | 8.59 | ^{8.59} 4.30 | C 4.28 |
|------------------------|------|------|-------------------------|--------|

| | | | |
|------|------|-------------------------|--------|
| 0+35 | 9.64 | ^{9.64} 3.75 | C 5.89 |
|------|------|-------------------------|--------|

| | | | |
|-----|------|-------------------------|--------|
| +70 | 9.41 | ^{9.41} 3.20 | C 6.21 |
|-----|------|-------------------------|--------|

| | | | |
|------|------|-------------------------|--------|
| 1+05 | 9.76 | ^{9.76} 2.65 | C 7.11 |
|------|------|-------------------------|--------|

| | | | |
|-----|------|-------------------------|--------|
| +40 | 9.78 | ^{9.78} 2.10 | C 7.68 |
|-----|------|-------------------------|--------|

| | | | |
|-----|-------|--------------------------|---------|
| +95 | 12.35 | ^{12.35} 1.55 | C 10.80 |
|-----|-------|--------------------------|---------|

| | | | |
|---------------------|------|-------------------------|--------|
| 2+10.87 = E outlet. | 6.86 | ^{6.86} 1.00 | C 5.86 |
|---------------------|------|-------------------------|--------|

| | | | |
|---------------------|--|--|--|
| 117+00 - 57 ft of E | | | |
|---------------------|--|--|--|

| | |
|--------------|-----|
| Top water at | 0.6 |
| gr. at | 1.3 |

18" at Jelletto to 6x5 Box 41

4" K Inlet at S.E. Cor. Jelletto

| | | | |
|-------------|-------|-------|--------|
| Top = 5 Bk. | 16.16 | 16.08 | C 0.08 |
|-------------|-------|-------|--------|

| | | | |
|------|-------|--------------------------|--------|
| I.E. | 16.16 | ^{16.16} 9.30 | C 6.86 |
|------|-------|--------------------------|--------|

4" K Inlet = N.E. Cor.

| | | | |
|-------------|-------|---------------------------|--------|
| Top = 5 Bk. | 16.70 | ^{16.70} 16.47 | C 0.23 |
|-------------|-------|---------------------------|--------|

| | | | |
|------|-------|--------------------------|--------|
| I.E. | 16.70 | ^{16.70} 8.80 | C 7.90 |
|------|-------|--------------------------|--------|

E = 0+00

| | | | |
|--------------|-------|--------------------------|------|
| 0+38.8 = 1/2 | 15.59 | ^{15.59} 8.40 | 7.19 |
|--------------|-------|--------------------------|------|

4" K-1 = E. cb. Island - Sta. 185+77

| | | | |
|--------------|-------|-------|--------|
| Top - 10' N. | 14.20 | 14.60 | F 0.40 |
|--------------|-------|-------|--------|

| | | | |
|------|-------|--------------------------|--------|
| I.E. | 14.20 | ^{14.20} 8.00 | C 6.20 |
|------|-------|--------------------------|--------|

| | | | |
|------------|-------|--------------------------|--------|
| 0+34 = 1/2 | 14.59 | ^{14.59} 7.65 | C 6.94 |
|------------|-------|--------------------------|--------|

| | | | |
|-------------------------------|--|-------------------------|--------|
| 7" K = W. cb. - 186+23 = I.E. | | ^{4.07} 7.30 | C 6.77 |
|-------------------------------|--|-------------------------|--------|

| | | | |
|--------------|-------|--------------------------|--------|
| Top = 10' S. | 14.07 | ^{4.07} 13.52 | C 0.55 |
|--------------|-------|--------------------------|--------|

| | | | |
|-----------------------|-------|--------------------------|--------|
| I.E. = 0+01.5 - 8 ft. | 14.71 | ^{14.71} 7.30 | C 7.41 |
|-----------------------|-------|--------------------------|--------|

| | | | |
|------|-------|--------------------------|--------|
| 0+35 | 15.12 | ^{15.12} 7.02 | C 8.10 |
|------|-------|--------------------------|--------|

| | | | |
|-----|-------|--------------------------|--------|
| +70 | 15.13 | ^{15.13} 6.72 | C 8.41 |
|-----|-------|--------------------------|--------|

| | | | |
|------|-------|--------------------------|--------|
| 1+05 | 15.17 | ^{15.17} 6.42 | C 8.75 |
|------|-------|--------------------------|--------|

| | | | | | |
|------------------------------|-------|---------------------|---------------------------------|------|---------------------|
| 1+40 | 14.68 | 4 68 6.13 C 8.55 | | | |
| +75 | 14.41 | 4 41 5.83 C 8.58 | + Headwall 8'w. | | |
| 2+10 | 14.72 | 4 72 5.54 C 9.18 | 0+00 = \pm outlet. | 2.04 | 0.00 C 2.04 |
| +45 | 14.75 | 4 75 5.24 C 9.51 | 8' Rt | 3.17 | 0.00 C 3.17 |
| +73.45 = sly. inside of Box. | 15.14 | 4 75 5.14 | \pm 7' K inlet | | |
| Top of steel. | | 5.00 C 10.14 | 0+10.9 = cb. | | |
| | | | Top = 10' S. | 3.93 | 4.63 F 0.70 |
| | | | I.E. | 3.93 | 3.93 0.40 C 3.53 |
| | | | 0+32 | 4.72 | 4.72 0.56 C 4.16 |
| | | | +62 | 4.94 | 4.94 0.78 C 4.16 |
| | | | \pm 7' K inlet 8' BK on line | | |
| | | | +92.38 = cb. | 4.59 | 1.00 C 3.59 |
| | | | 10' S. = Top. | 4.88 | 4.88 4.74 C 0.14 |
| | | | I.E. | 4.88 | 1.00 C 3.88 |
| | | | 0+00 = Nly. \pm inside of Box | | |
| | | | 0+30 | 4.78 | 4.78 1.16 C 3.62 |
| | | | +60 | 4.93 | 4.93 1.33 C 3.60 |
| | | | +90 | 4.21 | 4.21 1.49 C 2.72 |
| | | | \pm - sly. \pm Box | | |
| | | | 1+09.50 = | | |
| | | | 8' BK = I.E. | 4.79 | 4.79 1.60 C 3.19 |
| | | | 10' W. = Top | 4.30 | 4.74 F 0.44 |
| | | | New Top | 5.14 | 5.14 4.74 C 0.40 |

18" - Morena - Knoxville to Bridge

36" at 128+28

43

4' K on S. cb. - 34+22.33 = ±

10' W. - Top.

I.E.

1/2 - 8' Rt.

4' - K on 20' Rad.

8' Bk. cb. = Rad. - Top

I.E.

8.68 9.42 F 0.74

8.68 4.50 C 4.18

8.70 4.25 C 4.45

8.18 8.63 F 0.45

8.18 4.00 C 4.18

10' S.
0+00 = W. face of wall

of ±
on line 10' N.

0+32 - 8' S.
0+50 = ± at 128+28

0+64

10' S.
+96 = E. face of wall

10' N.

4.20 4.20 C 2.40

5.02 5.02 C 3.22

6.08 6.08 C 4.15

6.00 6.00 C 3.93

4.40 4.40 C 2.20

6.19 6.19 C 3.99

stakes 5' Rt.

30" Morena + Dorcas W. from "F" Cleanout

0+35 8.90 3.80 C 5.10

+70 9.27 3.60 C 5.67

1+05 9.38 3.40 C 5.98

+40 9.12 3.20 C 5.92

+75 = end. 3.00 C 4.11

+70 5.19 3.03 C 2.16

8' Lt.

0+00 = ± C.O.

+ 29.33

+ 58.66

+ 88.00 = end.

18.45 9.00 C 9.45

18.90 9.66 C 9.24

18.10 10.33 C 7.77

18.71 11.00 C 7.71

± 0+25 - 17.7

30" at channel - Sta - 129+30

| | | | |
|---------------------|-------|-----------------------|---------|
| 0 - 07.90 = end 30" | 18.17 | 18.17 | |
| 0+00 | 18.72 | ⁸⁷ 17.72 | C 1.0 |
| +25 | 18.10 | ⁸¹⁰ 16.30 | C 1.80 |
| +50 | 24.38 | ²⁴³⁸ 15.10 | C 9.28 |
| +75 | 24.87 | ²⁴⁸⁷ 14.50 | C 10.37 |
| 1+00 | 24.53 | ²⁴⁵³ 14.08 | C 10.45 |
| +25 | 24.67 | ²⁴⁶⁷ 13.66 | C 11.01 |
| +50 = edge | 19.49 | ⁹⁴⁹ 13.24 | C 6.25 |

Ditch - Bet Weeks + R.R. - 18" to 24"

| | | | |
|--------------------------------------|-----|---------------------|-------|
| sta. 117+00 Lt. 0+00 - end of 18" | | +0.62 | |
| +50 | 7.7 | ⁷⁷ 0.34 | C 7.4 |
| 1 ~ | 7.9 | ⁷⁹ 0.06 | C 7.8 |
| +50 | 6.5 | -0.22 | C 6.7 |
| 2 ~ | 4.1 | -0.50 | C 4.6 |
| +50 | 2.7 | -0.78 | C 3.5 |
| 3 ~ | 2.7 | ²⁷ -1.06 | C 3.8 |
| +50 | 3.6 | ³⁶ -1.34 | C 4.9 |
| 4 ~ | 3.2 | ³² -1.62 | C 4.8 |
| +23 = end 24" by channel. | | -1.76 | |

24" Under old Bridge - Morena 44
Sta. 38+15 - stakes - 6 Lt.

| | | | |
|--|------|---------------------|--------|
| Sly. Row Line 0+00 = ± at | 5.36 | ⁵³⁶ 3.70 | C 1.66 |
| +36 | 5.72 | ⁵⁷² 4.14 | C 1.58 |
| 0+72 = end | 7.25 | ⁷²⁵ 4.58 | C 2.67 |
| Ditch - from 42" at channel to 18" at 126+50 | | | |
| 126+50 0+00 = Nly. 18" | | 3.85 | |
| +50 | 5.0 | ⁵⁰ 3.56 | C 1.4 |
| 1 ~ | 4.7 | ⁴⁷ 3.28 | C 1.4 |
| +50 | 4.3 | ⁴³ 3.00 | C 1.3 |
| 124+60 +93 = 18" | | 2.76 | |
| 2+50 | 4.6 | ⁴⁶ 2.65 | C 2.0 |
| +50 | 4.5 | ⁴⁵ 1.88 | C 2.6 |
| 3 ~ | 3.9 | ³⁹ 1.11 | C 2.8 |
| +50 | 3.3 | ³³ 0.34 | C 3.0 |
| 4 ~ | 3.2 | ³² -0.43 | C 3.6 |
| +50 | 3.2 | ³² -1.20 | C 4.4 |
| +79 = end 42" | | -1.65 | |

Stake Sewers - M.H. 6-7-8

45

| | | | | | | | |
|--------------------|----------------|--------------------------|--------|------------------|-------|--------------------------|------|
| 0+00 = Exist. M.H. | By R.R. - 0.06 | -3.07 | C 3.01 | 3+11.50 = M.H. 7 | 3.74 | ^{3.74} -0.38 | 4.12 |
| +35 | 1.91 | ^{1.91} -2.95 | 4.86 | 0+35 | 5.64 | ^{5.64} -0.08 | 5.72 |
| +70 | 2.40 | ^{2.40} -2.82 | 5.22 | +70 | 7.26 | ^{7.26} +0.22 | 7.04 |
| 1+05 | 2.83 | ^{2.83} -2.69 | 5.52 | 1+05 | 6.75 | ^{6.75} 0.52 | 6.23 |
| +40 | 2.77 | ^{2.77} -2.56 | 5.33 | +40 | 7.30 | ^{7.30} 0.82 | 6.48 |
| +75 | 1.40 | ^{1.40} -2.43 | 3.83 | +75 | 9.60 | ^{9.60} 1.12 | 8.48 |
| 2+10 | 0.46 | ^{0.46} -2.30 | 2.76 | 2+10 | 9.83 | ^{9.83} 1.42 | 8.41 |
| +45 | 0.82 | ^{0.82} -2.17 | 2.99 | +45 | 10.66 | ^{10.66} 1.72 | 8.94 |
| +80 | 0.99 | ^{0.99} -2.04 | 3.03 | +80 | 10.84 | ^{10.84} 2.01 | 8.83 |
| 3+15 | 1.04 | ^{1.04} -1.91 | 2.95 | 3+05 | 10.65 | ^{10.65} 2.21 | 8.44 |
| +50 | 1.34 | ^{1.34} -1.78 | 3.12 | +24.73 = M.H. 8 | 11.02 | ^{11.02} 2.37 | 8.65 |
| +80.50 = M.H. 6 | 2.38 | ^{2.38} -1.67 | 4.05 | | | | |
| 0+35 | 2.95 | ^{2.95} -1.52 | 4.47 | | | | |
| +70 | 3.27 | ^{3.27} -1.38 | 4.65 | | | | |
| 1+05 | 2.82 | ^{2.82} -1.23 | 4.05 | | | | |
| +40 | 2.84 | ^{2.84} -1.09 | 3.93 | | | | |
| +75 | 3.45 | ^{3.45} -0.94 | 4.39 | | | | |
| 2+10 | 4.33 | ^{4.33} -0.80 | 5.13 | | | | |
| +45 | 4.88 | ^{4.88} -0.65 | 5.53 | | | | |
| +80 | 4.30 | ^{4.30} -0.51 | 4.81 | | | | |

Stake Sewer - Siphon - W. of Hwy. = M.H. 1 + 2

BM = 3.11 = Cross on W. Rim of M.H. - old.

$\Delta = 22^\circ 32' 42''$ - R = 358.1 - L = 140.91

15' offset - R = 373.1 - ch = 10.48 - Run on offset

| | def. | | I.E. | |
|-------------|-------------------|-------|--------|--------|
| M.H. 1 = 0 | 10" to E. | 2.12 | -4.84 | C 6.96 |
| | | | -5.53 | C 7.65 |
| 1 | 0° 48' 15" - "rt. | 2.79 | -7.30 | 10.09 |
| 2 | 1° 36' 30" | 3.50 | -8.80 | 12.30 |
| 3 | 2° 25' | 3.84 | -9.90 | 13.74 |
| 4 | 3° 13' 15" | 5.15 | -10.80 | 15.95 |
| 5 | 4° 01' 30" | 3.69 | -11.50 | 15.19 |
| 6 | 4° 49' 45" | 0.67 | -11.80 | 12.47 |
| 7 | 5° 38' 15" | 0.41 | -12.10 | 12.51 |
| 8 | 6° 26' 30" | -0.09 | -11.80 | 11.71 |
| 9 | 7° 14' 15" | 0.16 | -11.50 | 11.66 |
| 10 | 8° 03' | 0.18 | -10.80 | 10.98 |
| 11 | 8° 51' 30" | 0.33 | -9.90 | 10.23 |
| 12 | 9° 39' 45" | 0.59 | -8.20 | 8.79 |
| 13 | 10° 28' | 0.94 | -7.20 | 8.14 |
| 14 = M.H. 2 | 11° 16' 15" | 1.01 | -5.41 | C 6.42 |

Cont. from P. 54

cb. Grade

S. = Lt.

Rt. = N.

| | | | |
|---------------------------------|-----|--------------------|-------|
| 113 + 50 ⁴⁶ - 5' Bl. | 5.0 | 5.4 | C 0.1 |
| 114 ~ 46' " | 6.1 | 5.0 | C 1.1 |
| + 50 - 47' " | 6.1 | ^{6.1} 4.7 | C 1.4 |
| 115 ~ 48' " | 5.1 | ^{5.1} 4.3 | C 0.8 |
| + 50 49' " | 4.6 | 4.0 | C 0.6 |
| 116 ~ 50' " | 4.0 | 3.6 | C 0.4 |
| + 50 51' " | 4.1 | ^{4.1} 3.3 | C 0.8 |
| 117 ~ ⁵¹ = end. " | 1.1 | 2.9 | F 1.8 |

4.8

4.4

4.1

3.7

3.4

3.0

2.7

2.3

50

Grades - E. Side Morena - Beg. at Napa.
Rough

93.11' Curb. Rad. - 4 - Parts

| | | | |
|----------------|------|------|-------|
| End. | | | |
| P.C. = 4+15.70 | 14.2 | 14.8 | F 0.6 |
| 4~ | 14.2 | 14.9 | F 0.7 |
| +50 | 14.2 | 15.2 | F 1.0 |
| 3~ | 14.6 | 15.6 | F 1.0 |
| +50 | 15.2 | 16.0 | F 0.8 |
| 2~ | 13.7 | 13.5 | F 2.8 |
| +50 | 14.5 | 16.9 | F 2.4 |
| 1~ | 15.9 | 17.3 | F 1.4 |
| +50 | 16.0 | 17.8 | F 1.8 |
| 0+00 | 15.7 | 18.2 | F 2.5 |
| - 0+50 | 17.1 | 18.5 | F 1.4 |
| - 1~ | 18.1 | 18.8 | F 0.7 |
| - 1+50 | 18.7 | 19.0 | F 0.3 |
| - 2+00 | 19.2 | 19.3 | F 0.1 |
| - 2+50 | 19.4 | 19.7 | F 0.3 |
| - 3+00 | 20.2 | 20.2 | G |
| - 3+50 | 20.6 | 21.0 | F 0.4 |
| - 4+00 | 21.3 | 21.6 | F 0.3 |

West. Side Beg. at 0+89.57 51
 = B.C. of "B" Line

| | | | |
|------------------------|-------|-------|-------|
| 0+89.57 = B.C. | 17.3 | 17.1 | C 0.2 |
| 1+50 | 17.1 | 16.8 | C 0.3 |
| 2~ | 16.3 | 16.5 | F 0.2 |
| +50 | 15.5 | 16.1 | F 0.6 |
| 3~ | 15.1 | 15.6 | F 0.5 |
| +50 | 14.6 | 15.2 | F 0.6 |
| 4~ = Brk. | 14.2 | 15.0 | F 0.8 |
| +50 | 14.4 | 14.9 | F 0.5 |
| +79.49 = P.C. 20' Rad. | 14.1 | 14.8 | F 0.7 |
| end = Meet. = gut. | 13.53 | 13.68 | |
| S. side of Sherman | | | |
| end = Meet. | | | |
| 20' Rad. | | | |
| 5+54.79 = P.C. | | | |
| 6~ | | | |
| +50 | | | |
| 7 | | | |
| +50 | | | |
| 8~ | | | |
| +50 | | | |

W. Side - Sherman - South

| | | | |
|---------------------|------|------|-------|
| 9- | | | |
| +50 | | | |
| 10- | | | |
| +50 | | | |
| 11- | | | |
| +50 | | | |
| 12- | | | |
| +50 | | | |
| 13- | | | |
| +50 | | | |
| 14- | | | |
| +27 = Meet. | | | |
| Bridge | | | |
| P-51 for B.C. | | | |
| Beq. "B" Line | | | |
| 0+50 | 17.3 | 17.3 | G |
| 1~ | 19.0 | 17.6 | C 1.4 |
| = 0+00 "C" - 5' BK. | | 9.9 | |
| 1+47.55 = E.C. "B" | 19.1 | 18.0 | C 1.1 |
| +50 | 21.9 | 18.6 | C 3.3 |
| 1~ | 22.0 | 19.2 | C 2.8 |

Turnaround - Bet. Weeks + Alley 52
at Cushman - inside Line

| | | | |
|------------------------------|------|------|-------|
| End of cb. - at Alley | | 20.5 | |
| P.C. | 21.1 | 20.5 | C 0.6 |
| 1/2 | 21.1 | 20.5 | C 0.6 |
| P.C.C. - 40' Rad. | 21.8 | 20.6 | C 1.2 |
| 1/2 | 22.4 | 20.9 | C 1.5 |
| P.C.C. - 300' Rad. | 21.8 | 21.4 | C 0.4 |
| 1/2 | 21.0 | 22.1 | F 1.1 |
| E.C. = 100 + 65' 98 - Weeks. | 20.9 | 22.7 | F 1.8 |

cont "C" Line

| | | | |
|-----------------|------|------|-------|
| 1+50 | 19.5 | 19.8 | F 0.3 |
| 2~ | 20.1 | 20.5 | F 0.4 |
| +50 5' BK | 22.3 | 21.3 | C 1.0 |
| +97.01 = E.C. | 20.9 | 22.3 | F 1.4 |
| Beq. Weeks Sta. | | 0.9 | |
| 100 + 50 - 67.2 | 20.9 | 23.3 | F 2.4 |
| lt. 101~ 67.2 | 20.5 | 24.3 | |
| +50 - See P. 53 | | 0.5 | |

102~

+50

103~

20.5
F 3.8
57
+0.3
5

Reg. Weeks

Sta.

Lt. = 5.

Lt. = 5.

Rt. = N.

53

101 ~ 67.2

101 + 50 67.2

102 ~ 66.5

+ 50 66

103 ~ 66

+ 50 66

+ 80.28 = P.C.

1/21 = Ret.

E.C. = 0 + 89.58

+ 50

105 ~ 5' Bk.

+ 50 "

106 ~ 58' To #.

+ 50

107 ~

+ 50 - 58'

108 ~ 57.52

+ 50 53.62

109 ~ 52.24

+ 50 50.86

Cont. on P. 55

20.8 25.4

26.3

26.9

27.0

25.7 26.8

26.4 26.5

27.0 26.2

26.9 25.9

23.9 24.4

22.7 23.8

21.3 22.8

18.8 21.8

18.6 20.7

17.9 19.7

16.4 18.5

17.3

16.3

15.2

$$\frac{20.8}{F4.6} + \frac{0.3}{5}$$

$$\frac{21.5}{F4.8} + \frac{0.1}{5}$$

$$\frac{22.5}{F4.1} - \frac{0.2}{5}$$

$$\frac{23.0}{F4.0} + \frac{0.1}{5}$$

F 1.1

F 0.1

C 0.8

C 1.0

F 0.5

F 1.1

F 1.5

F 3.0

F 2.1

F 1.8

F 2.1

$$\frac{12.3}{F5.0} + \frac{0.3}{5}$$

$$\frac{9.7}{F6.6} + \frac{0}{5}$$

$$\frac{9.7}{F5.5} - \frac{0.2}{5}$$

101 ~

21.1

22.7

24.3

25.5

26.8

28.7

29.2

25.5

25.2

24.9

24.7

25.0

24.9

24.9

22.5

19.7

15.6

23.2

23.9

24.7

25.9

27.3

27.9

27.4

26.1

26.2

26.0

25.4

24.9

24.1

22.9

21.2

19.5

15.2

F 2.1

F 1.2

F 0.4

F 0.4

F 0.5

C 0.8

C 1.8

F 0.6

F 1.0

F 1.1

F 0.7

C 0.1

C 0.8

C 2.0

C 1.3

C 0.2

C 0.4

5' Bk.

Buenos Aires

| | | | | |
|--------------------|------------------------------|-----------|------|-------|
| 1+25 | S' Bk. | 26.0 | 25.7 | C 0.3 |
| +75 | " | 25.7 | 25.0 | C 0.7 |
| 2+25 | " | 24.1 | 24.1 | C |
| +73.26 = end. | " | 23.4 | 23.1 | C 0.3 |
| 105 + 89.96 = P.C. | S' Bk | 21.6 | 22.2 | F 0.6 |
| 106 + 50 | " | 19.3 | 20.2 | F 0.6 |
| 107 ~ | " | 17.0 | 18.5 | F 1.2 |
| +50 | " | 16.0 | 16.7 | F 0.4 |
| 108 | " | 15.3 | 15.0 | C 0.6 |
| +50 | " | 13.2 | 13.2 | C 0.3 |
| 109 ~ | " | 9.7 | 11.2 | F 1.5 |
| +50 - ok | " | 9.8 | 19.7 | F 0.9 |
| 110 ~ | Hinge = 46 from weeks. Hinge | 7.2 | 8.4 | F 1.2 |
| +50 | " | 6.6 | 7.6 | F 1.0 |
| 11 ~ | " | 6.3 | 7.1 | F 0.8 |
| +50 | " | 5.2 | 6.8 | F 1.6 |
| 112 ~ | " | 4.6 | 6.4 | F 1.8 |
| +50 | " | 4.5 | 6.1 | F 1.6 |
| 113 ~ | " | T.P. 6.00 | 5.7 | C 0.3 |

Cont. on P. 50

| | | | | | |
|--------------------|----------|-------|-------|---------|----|
| 80' Rad. - Dorcas | P.C. = S | 17.34 | 17.44 | F 0.1 | 54 |
| | E.C. = N | | 16.5 | C 0.8 | |
| 40' Rad. Dorcas | P.C. | 16.94 | 16.74 | - C 0.2 | |
| | E.C. | | 16.0 | - C 0.9 | |
| | Rt. = N. | | | | |
| = 1/2 Curve S' Bk | | 23.4 | 24.7 | F 1.3 | |
| = P.C. | | 22.8 | 24.3 | F 1.5 | |
| 1/2 | | 21.8 | 23.1 | F 1.3 | |
| Sly 17.5 Rad. | | 21.2 | 23.1 | F 1.9 | |
| 105 + 95.79 = P.C. | " | 21.4 | 21.3 | C 0.1 | |
| S' Bk. | | 18.4 | 19.6 | F 0.9 | |
| " | | 17.5 | 17.9 | F 0.1 | |
| " | | 17.9 | 16.1 | C 2.1 | |
| on Hinge | | 16.7 | 14.4 | C 2.6 | |
| | | | 12.3 | | |
| | | | 10.6 | | |
| | | | 10.9 | | |
| | | | 9.1 | | |
| +75 | | | 7.8 | | |
| | | | 7.0 | | |
| | | | 6.5 | | |
| | | | 6.2 | | |
| | | | 5.8 | | |
| | | | 5.5 | | |
| | | | 5.1 | | |

± to Hinge

| | | Lt. | Hinge Grade | Dist | Dist | Hinge Grade | Rt. |
|-------|------------------|--|-------------|-------|------|-------------|--|
| 110 ~ | | $-\frac{0.1}{5}$ $\frac{7.8}{F6.6}$ $\frac{7.8}{9.9}$ | 14.4 | 49.5 | 40' | 14.3 | $\frac{13.3}{F1.0}$ $+\frac{0.5}{5}$ $\frac{13.3}{1.5}$ |
| +50 | $\frac{0}{5}$ | $\frac{7.0}{F7.0}$ $\frac{7.0}{10.5}$ | 14.0 | 48.11 | " | 13.3 | $\frac{11.7}{F1.6}$ $+\frac{0.3}{5}$ $\frac{11.7}{2.4}$ |
| 111 ~ | | $-\frac{0.1}{5}$ $\frac{6.2}{F6.9}$ $\frac{6.2}{10.4}$ | 13.1 | 46.73 | | 12.4 | $\frac{11.3}{F1.1}$ $+\frac{0.8}{5}$ $\frac{11.3}{1.6}$ |
| +50 | $-\frac{0.1}{5}$ | $\frac{5.6}{F7.1}$ $\frac{5.6}{10.6}$ | 12.7 | 45.32 | | 11.6 | $\frac{10.5}{F1.1}$ $+\frac{0.3}{5}$ $\frac{10.5}{1.6}$ |
| 112 ~ | | $-\frac{0.3}{5}$ $\frac{6.2}{F6.2}$ $\frac{6.2}{9.3}$ | 12.4 | 44 | | 10.9 | $\frac{12.3}{C1.4}$ $+\frac{0.4}{5}$ $\frac{12.3}{1.4}$ |
| +50 | $-\frac{0.2}{5}$ | $\frac{7.6}{F4.6}$ $\frac{7.6}{6.9}$ | 12.2 | 42.6 | | 10.2 | $\frac{13.5}{C3.3}$ $+\frac{0.3}{5}$ $\frac{13.5}{3.3}$ |
| 113 ~ | | $-\frac{0.4}{5}$ $\frac{7.9}{F4.7}$ $\frac{7.9}{6.3}$ | 12.1 | 41.22 | | 9.5 | $\frac{14.0}{C4.5}$ $+\frac{0.4}{5}$ $\frac{14.0}{4.5}$ |
| +50 | $-\frac{0.5}{5}$ | $\frac{6.9}{F5.2}$ $\frac{6.9}{7.4}$ | 12.1 | 40' | 40' | 8.8 | $\frac{15.5}{C6.7}$ $+\frac{0.5}{5}$ $\frac{15.5}{6.7}$ |
| 114 ~ | | $-\frac{1.0}{5}$ $\frac{5.7}{F6.5}$ $\frac{5.7}{9.7}$ | 12.2 | | | 8.3 | $\frac{16.0}{C7.7}$ $+\frac{0.3}{5}$ $\frac{16.0}{7.7}$ |
| +50 | $+\frac{1.3}{5}$ | $\frac{2.1}{F10.0}$ $\frac{2.1}{15.0}$ | 12.1 | | | 8.0 | $\frac{15.8}{C7.8}$ $+\frac{0.3}{5}$ $\frac{15.8}{7.8}$ |
| 115 ~ | | $+\frac{1.4}{5}$ $\frac{0.7}{F11.4}$ $\frac{0.7}{17.1}$ | 12.1 | | | 7.9 | $\frac{15.3}{C7.4}$ $+\frac{0.4}{5}$ $\frac{15.3}{7.4}$ |
| +50 | $+\frac{2.0}{5}$ | $\frac{1.9}{F10.3}$ $\frac{1.9}{15.4}$ | 12.2 | | | 8.1 | $\frac{13.0}{C4.9}$ $+\frac{0.3}{5}$ $\frac{13.0}{4.9}$ |
| 116 ~ | | $+\frac{0.1}{5}$ $\frac{3.9}{F8.5}$ $\frac{3.9}{12.7}$ | 12.4 | | | 8.3 | $\frac{7.9}{F0.4}$ $+\frac{0.3}{5}$ $\frac{7.9}{0.6}$ |
| +50 | | $\frac{4.9}{F8.3}$ $\frac{4.9}{21}$ To Hinge | 12.6 | | | 8.6 | $\frac{8.2}{F0.4}$ $+\frac{0.2}{5}$ $\frac{8.2}{0.6}$ |
| 117 ~ | | $\frac{0}{5}$ $\frac{1.3}{F11.6}$ $\frac{1.3}{17.4}$ | 12.9 | | | 8.8 | $\frac{-0.1}{F8.9}$ $+\frac{1.3}{10}$ $\frac{-0.1}{13.3}$ |
| +50 | $+\frac{0}{5}$ | $\frac{-0.2}{F13.3}$ $\frac{-0.2}{19.9}$ | 13.1 | | | 9.1 | $\frac{0.2}{F8.8}$ $\frac{0.2}{32}$ To Hinge |
| 118 ~ | | $+\frac{0.1}{5}$ $\frac{-0.1}{F13.5}$ $\frac{-0.1}{20.2}$ | 13.4 | | | 9.3 | $\frac{-0.7}{F10.0}$ $+\frac{0.1}{5}$ $\frac{-0.7}{15.0}$ |
| +50 | $+\frac{0.1}{5}$ | $\frac{0.2}{F13.3}$ $\frac{0.2}{20.0}$ | 13.5 | | | 9.5 | $\frac{0.0}{F9.5}$ $-\frac{0.2}{5}$ $\frac{0.0}{14.2}$ |
| 119 ~ | | $-\frac{0.6}{5}$ $\frac{1.2}{F12.5}$ $\frac{1.2}{18.7}$ | 13.7 | | | 9.6 | $\frac{0.5}{F9.1}$ $\frac{0}{5}$ $\frac{0.5}{13.6}$ |

to Hinge

RH =

| | | | Grade | Dist | Dist | Grade | | |
|--------|------------------|----------------------|-------|------|------|-------|---------------------|--------------------|
| 119+50 | | $\frac{+0.1}{5}$ | 13.7 | 40 | 40 | 9.6 | $\frac{0.4}{F9.2}$ | $\frac{+0.5}{5}$ |
| 120~ | $\frac{+0.5}{5}$ | $\frac{11.3}{F12.4}$ | 13.7 | | | 9.6 | | $\frac{0.8}{F8.8}$ |
| +50 | | $\frac{3.8}{F9.8}$ | 13.6 | | | 9.6 | $\frac{1.0}{F8.6}$ | $\frac{-0.1}{5}$ |
| 121~ | | $\frac{4.2}{F9.5}$ | | | | | | |
| +50 | | $\frac{2.8}{F9.8}$ | 13.4 | | | 9.3 | $\frac{1.7}{F7.6}$ | $\frac{-0.6}{5}$ |
| 122~ | $\frac{-1.2}{5}$ | $\frac{4.6}{F8.8}$ | 13.1 | | | 9.0 | $\frac{3.9}{F5.1}$ | $\frac{-1.2}{5}$ |
| +50 | | $\frac{1.1}{F11.8}$ | 12.9 | | | 8.8 | $\frac{2.1}{F6.7}$ | $\frac{2.7}{F6.1}$ |
| 123~ | $\frac{+0.2}{5}$ | $\frac{0.9}{F11.7}$ | 12.6 | | | 8.6 | $\frac{1.1}{F11.8}$ | $\frac{-0.4}{5}$ |
| +50 | | $\frac{2.0}{F10.4}$ | 12.4 | ✓ | ✓ | 8.3 | $\frac{2.6}{F5.7}$ | $\frac{2.5}{F6.1}$ |
| 124~ | $\frac{0}{5}$ | $\frac{2.1}{F10.1}$ | 12.2 | ✓ | ✓ | 8.1 | $\frac{2.6}{F5.7}$ | $\frac{2.8}{F5.3}$ |
| +50 | | $\frac{2.7}{F9.2}$ | 11.9 | ✓ | ✓ | 8.0 | $\frac{3.2}{F4.8}$ | $\frac{2.7}{F6.1}$ |
| 125~ | $\frac{-0.1}{5}$ | $\frac{3.0}{F8.4}$ | 11.4 | ✓ | ✓ | 8.0 | $\frac{3.2}{F4.8}$ | $\frac{2.5}{F6.1}$ |
| +50 | | $\frac{3.4}{F7.4}$ | 10.8 | ✓ | ✓ | 8.2 | $\frac{3.3}{F4.9}$ | $\frac{3.0}{F5.0}$ |
| ✓126~ | $\frac{-0.1}{5}$ | $\frac{3.5}{F6.7}$ | 10.2 | ✓ | ✓ | 8.2 | $\frac{3.3}{F4.9}$ | $\frac{3.0}{F5.0}$ |
| ✓+50 | | $\frac{3.8}{F5.8}$ | 9.6 | ✓ | ✓ | 8.1 | $\frac{3.3}{F4.8}$ | $\frac{3.7}{F4.5}$ |
| ✓127~ | $\frac{0}{5}$ | $\frac{3.9}{F5.1}$ | 9.0 | ✓ | ✓ | 7.8 | $\frac{3.3}{F4.8}$ | $\frac{2.6}{F5.2}$ |
| +50 | | $\frac{3.9}{F4.5}$ | 8.4 | ✓ | ✓ | 7.6 | $\frac{4.6}{F3.0}$ | $\frac{2.6}{F5.2}$ |
| 128~ | $\frac{-0.7}{5}$ | $\frac{6.0}{F1.8}$ | 7.8 | ✓ | ✓ | 7.4 | $\frac{4.6}{F3.0}$ | $\frac{4.9}{F2.5}$ |
| +50 | | $\frac{7.1}{F0.2}$ | 7.3 | ✓ | ✓ | 7.2 | $\frac{6.3}{F0.9}$ | $\frac{4.9}{F2.5}$ |

| | | | Hinge Grade | cb. Grade | Hinge | Hinge | cb. Grade | Hinge Grade | | | |
|------|------------------|--------------------|--------------------|-----------|-------|-----------------|-----------|-------------|--------------------|---------------------|------------------|
| 129~ | | $\frac{+0.2}{5}$ | $\frac{4.4}{F2.5}$ | 6.9 | | 45.5 | 40' | 6.9 | $\frac{4.7}{F2.2}$ | $\frac{+0.1}{5}$ | |
| +50 | $\frac{0}{5}$ | $\frac{5.4}{F1.3}$ | $\frac{3.7}{3.7}$ | 6.7 | | 46.3 | | 6.7 | $\frac{4.6}{F2.1}$ | $\frac{-0.2}{5}$ | |
| 130~ | | $\frac{+0.4}{5}$ | $\frac{4.5}{F2.0}$ | 6.5 | | 47.0 | | 6.5 | $\frac{4.3}{F2.2}$ | $\frac{+0.1}{5}$ | |
| +50 | $\frac{+0.6}{5}$ | $\frac{5.0}{F1.0}$ | $\frac{3.0}{3.0}$ | 6.1 | | 47.7 | | 6.1 | $\frac{4.7}{F1.4}$ | $\frac{-0.3}{2}$ | |
| 131~ | | $\frac{-0.1}{5}$ | $\frac{5.0}{F1.0}$ | 6.0 | | 48.4 | | 6.0 | $\frac{4.0}{F2.0}$ | - Fence | |
| +50 | $\frac{-0.8}{5}$ | $\frac{4.5}{F1.3}$ | $\frac{1.5}{1.5}$ | 5.8 | | 49.2 | | 5.8 | $\frac{3.9}{F1.9}$ | - | |
| 132~ | | $\frac{+0.6}{5}$ | $\frac{3.0}{F2.6}$ | 5.6 | | 49.9 | | 5.6 | $\frac{3.7}{F1.9}$ | - Fence | |
| +50 | | $\frac{3.6}{F1.7}$ | $\frac{2.5}{2.5}$ | 5.3 | | 50.6 | | 5.3 | $\frac{3.9}{F1.4}$ | $\frac{+1.3}{5}$ | |
| 133~ | | $\frac{+0.6}{5}$ | $\frac{5.1}{0.0}$ | 5.1 | | 51.3 | | 5.1 | $\frac{5.1}{0.0}$ | $\frac{+0.4}{5}$ | |
| +50 | $\frac{-0.3}{5}$ | $\frac{3.0}{F2.0}$ | $\frac{3.0}{3.0}$ | 5.0 | | 52.1* | | 5.0 | $\frac{3.8}{F1.2}$ | $\frac{+0.6}{5}$ | |
| 134~ | | $\frac{-0.2}{5}$ | $\frac{4.9}{0.0}$ | 4.9 | | 52.8 | | 4.9 | $\frac{4.7}{F0.2}$ | $\frac{+0.2}{5}$ | |
| +50 | $\frac{-1.9}{5}$ | $\frac{4.6}{0.0}$ | | 4.6 | | 53.4 | 40 - PC. | 4.9 | $\frac{4.3}{F0.6}$ | $\frac{+0.2}{5}$ | |
| 135~ | | $\frac{-1.1}{3}$ | $\frac{4.8}{0.0}$ | 4.8 | | 53.8 | | | | | |
| +50 | $\frac{-2.0}{5}$ | $\frac{4.9}{0.0}$ | | 4.9 | | 54.0 | | | | | |
| 136~ | | $\frac{+0.1}{5}$ | $\frac{4.3}{F0.7}$ | 5.0 | 4.93 | of cb. 6 bk. | 6 | 47 | | | |
| +50 | $\frac{-1.2}{5}$ | $\frac{2.9}{F2.3}$ | $\frac{2.4}{2.4}$ | 5.2 | 5.10 | " | 6 | 47 | 5.10 | 5.2 | |
| 137~ | | $\frac{0}{5}$ | $\frac{0.7}{FA.7}$ | 5.4 | 5.32 | " | 6 sh. | 47 | 5.32 | 5.4 | |
| +50 | $\frac{-0.4}{5}$ | $\frac{1.9}{F3.8}$ | $\frac{5.7}{5.7}$ | 5.7 | 5.59 | " | 8 sh. | 49 | 5.59 | 5.8 | |
| 138~ | | $\frac{-0.3}{5}$ | $\frac{3.7}{F2.9}$ | 6.0 | 5.91 | " | 8 - 49' | 5.91 | 6.1 | $\frac{10.8}{C4.7}$ | $\frac{+0.4}{5}$ |

 $\frac{6.1}{C0.9}$
6 to cb.

 $\frac{8.1}{C2.3}$
9.0 to cb.

G'sh. = from cb. line - \pm Dist. Varies
To 143+0-

| | | Hinge Grade | | cb. | | Hinge | | cb. | | RT. | |
|-------------|------------------|-------------|---------------------------|-------|-------|-----------|-------|-------|-------|---------------------|-------------------|
| | | Lt | Grade | Hinge | Grade | Hinge | Grade | Hinge | Grade | | |
| 138+50 | | | | | | | | | | | |
| | $-\frac{0.4}{5}$ | | $\frac{4.0}{F2.4}$ | 6.4 | 6.28 | 6' Bk | | | | $\frac{13.5}{27.1}$ | $-\frac{0.2}{5}$ |
| 139~ | $-\frac{0.2}{5}$ | | $\frac{3.9}{F2.9}$ | 6.8 | 6.70 | | 49 | 6.28 | 6.4 | $\frac{13.4}{6.5}$ | $+\frac{0.2}{5}$ |
| +50 | $+\frac{0.1}{5}$ | | $\frac{2.7}{F4.6}$ | 7.3 | 7.19 | | " | 6.70 | 6.9 | $\frac{13.6}{6.3}$ | $\frac{0}{5}$ |
| 140- | $+\frac{0.1}{5}$ | | $\frac{2.6}{F5.4}$ | 8.0 | 7.89 | | " | 7.17 | 7.3 | $\frac{13.0}{5.2}$ | $+\frac{0.8}{5}$ |
| +50 | $\frac{0}{5}$ | | $\frac{2.4}{F6.5}$ | 8.9 | 8.82 | | " | 7.68 | 7.8 | $\frac{11.1}{2.8}$ | $+\frac{0.2}{5}$ |
| 141~ | $+\frac{0.2}{5}$ | | $\frac{2.2}{F7.8}$ | 10.0 | 9.83 | | " | 8.12 | 8.3 | $\frac{10.2}{1.6}$ | $+\frac{0.1}{5}$ |
| +50 | $+\frac{0.2}{5}$ | | $\frac{1.2}{F9.8}$ | 11.0 | 10.89 | | " | 8.48 | 8.6 | $\frac{10.4}{1.8}$ | $+\frac{0.2}{5}$ |
| 142~ | $-\frac{0.4}{5}$ | | $\frac{2.3}{F9.8}$ on MH | 12.1 | 12.0 | | 49 | 8.84 | 9.0 | $\frac{11.7}{2.2}$ | $+\frac{0.2}{5}$ |
| +50 | $-\frac{0.5}{5}$ | | $\frac{2.7}{F10.6}$ | 13.3 | 13.15 | 6' Bk end | " | 9.37 | 9.5 | $\frac{13.4}{3.2}$ | $+\frac{0.3}{5}$ |
| 143~ | $-\frac{0.1}{5}$ | | $\frac{6.3}{F8.2}$ | 14.5 | 14.33 | 37 | " | 10.08 | 10.2 | $\frac{14.6}{3.6}$ | $-\frac{0.2}{5}$ |
| +50 | $-\frac{4.0}{5}$ | | $\frac{15.7}{C0.3}$ to db | 15.2 | 15.42 | 31 | " | 10.87 | 11.0 | $\frac{20.3}{8.5}$ | $-\frac{7.5}{15}$ |
| 144~ | $-\frac{4.0}{5}$ | | $\frac{16.8}{C0.5}$ - cb | | 16.31 | | " | 11.67 | 11.8 | $\frac{21.9}{7.3}$ | $-\frac{0.8}{5}$ |
| +50 | $-\frac{1.1}{5}$ | | $\frac{17.5}{C0.4}$ to db | | 17.06 | | " | 12.47 | 12.6 | $\frac{22.0}{8.6}$ | $-\frac{0}{5}$ |
| 145~ | $+\frac{0.1}{5}$ | | $\frac{22.4}{C4.4}$ | 18.0 | 17.74 | 43.5 | " | 13.22 | 13.4 | $\frac{38.5}{24.4}$ | $-\frac{0}{5}$ |
| +50 | $\frac{0}{5}$ | | $\frac{23.2}{C4.6}$ | 18.6 | 18.32 | " | " | 13.90 | 14.1 | $\frac{36.6}{22.0}$ | $+\frac{0.2}{5}$ |
| Now 146~ | $\frac{0}{5}$ | | $\frac{23.2}{C4.1}$ | 19.1 | 18.82 | " | " | 14.48 | 14.6 | $\frac{34.3}{19.2}$ | $+\frac{0.1}{5}$ |
| +50 | $+\frac{0.2}{5}$ | | $\frac{22.4}{C2.9}$ | 19.5 | 19.24 | " | " | 14.98 | 15.1 | $\frac{31.5}{15.9}$ | $+\frac{0.3}{5}$ |
| 147~ | $-\frac{0.1}{5}$ | | $\frac{21.5}{C1.7}$ | 19.8 | 19.58 | 43.5 | " | 15.40 | 15.6 | $\frac{28.1}{12.2}$ | $+\frac{0.3}{5}$ |
| +50 | $-\frac{0.6}{5}$ | | $\frac{19.9}{0}$ | 19.9 | 19.78 | 37 | 49 | 15.74 | 15.9 | $\frac{24.4}{8.2}$ | $+\frac{0.4}{5}$ |
| | | | | | | | | 15.99 | 16.2 | | |

| | | | | Hinge | Hinge | | | |
|------|------------------|--------------------|--------------------------------------|----------|-------------------|------|------------------------------------|------------------------------------|
| 148~ | | | | 37' | 49' | 16.2 | $\frac{22.3}{6.1} + \frac{0.2}{5}$ | |
| +50 | $-\frac{0.1}{5}$ | $\frac{14.5}{7.5}$ | $-\frac{0.4}{5}$ $\frac{16.7}{4.5}$ | 19.7 | " | 16.3 | | $\frac{20.1}{3.8} + \frac{0.2}{5}$ |
| 149~ | | | | 37' | 49' | 16.3 | | |
| +50 | $-\frac{0.5}{5}$ | $\frac{13.2}{8.1}$ | $-\frac{0.4}{5}$ $\frac{13.7}{8.1}$ | 19.5 | " | 16.3 | $\frac{19.3}{3.0} + \frac{0.3}{4}$ | |
| 150~ | | | | " | " | 16.2 | | C 2.3 - 5' Bk. |
| +50 | $-\frac{0.4}{5}$ | $\frac{12.3}{7.8}$ | $-\frac{0.3}{5}$ $\frac{13.0}{7.6}$ | 18.6 | " | 16.1 | | C 1.9 " |
| 151~ | | | | 37' | 49' | 15.9 | | C 1.2 " |
| +50 | $+\frac{0.2}{5}$ | $\frac{12.0}{6.7}$ | $+\frac{0.1}{5}$ $\frac{11.4}{8.2}$ | 17.5 | " | 15.8 | | F 0.2 " |
| 152~ | | | | 6 Bk. of | 47' | 15.7 | | G " |
| +50 | $-\frac{0.4}{5}$ | $\frac{11.0}{7.3}$ | $-\frac{1.2}{10}$ $\frac{11.9}{6.4}$ | 16.9 | " | 15.6 | | F 0.3 " |
| 153~ | | | | " | " | 15.5 | | G " |
| +50 | $-\frac{1.7}{5}$ | $\frac{12.0}{5.2}$ | $-\frac{0.6}{5}$ $\frac{11.5}{6.3}$ | 15.9 | " | 15.5 | | C 0.1 " |
| 154~ | | | | " | 47' | 15.4 | | F 0.2 |
| +50 | $+\frac{0.4}{5}$ | $\frac{11.0}{6.0}$ | $-\frac{0.3}{5}$ $\frac{10.6}{6.9}$ | 15.7 | " | 15.2 | | F 0.2 |
| 155~ | | | | " | 49' | 15.1 | | G |
| +50 | $+\frac{0.1}{5}$ | $\frac{12.1}{3.6}$ | $\frac{0}{5}$ $\frac{12.1}{3.9}$ | 15.2 | " | 15.1 | | G |
| 156~ | | | | " | " | 15.0 | | |
| +50 | | | | 14.7 | " | 14.9 | | |
| 157~ | | | | 14.5 | of cb. 6 Bk. c | 14.7 | | |
| +50 | | | | 14.3 | 47' | 14.4 | | |
| | | F 1.4 | 12.9 | 14.0 | " | 14.2 | | |
| | | F 0.9 | 13.1 | 13.7 | " | 13.9 | | |
| | | F 0.5 | 13.2 | | 49' | | | |

| | | | cb. Grade | ± T H nge | cb. Grade | |
|--------------------------|-------|------|--------------|-----------------|--------------|------|
| 157 +50 | G | 13.4 | 13.4 | 47 | 49 | 13.7 |
| 158 ~ | F 0.2 | 12.9 | 13.1 | | | 13.4 |
| +50 | F 0.3 | 12.5 | 12.8 | | | 13.1 |
| 159 ~ | F 0.7 | 11.8 | 12.5 | | | 12.8 |
| +50 | F 0.4 | 11.7 | 12.1 | | | 12.6 |
| ^{6'sh} 160 ~ | F 0.4 | 11.4 | 11.8 | | 8'sh | 12.3 |
| +50 | F 1.5 | 10.0 | 11.5 | | | 12.0 |
| 161 ~ | F 3.4 | 7.7 | 11.1 | | | 11.7 |
| +50 | F 2.3 | 8.6 | 10.9 | | | 11.5 |
| 162 ~ | F 4.3 | 6.6 | 10.9 | | | 11.3 |
| +50 | F 3.2 | 7.7 | 10.9 | | | 11.3 |
| 163 ~ | F 3.1 | 7.9 | 11.0 | | | 11.4 |
| +50 | F 2.8 | 8.3 | 11.1 | | | 11.5 |
| 164 ~ | F 3.5 | 7.8 | 11.3 | | | 11.7 |
| +50 | F 3.6 | 7.8 | 11.4 | | | 11.8 |
| 165 ~ | F 4.1 | 7.5 | 11.6 | | | 12.0 |
| +50 | F 3.3 | 8.4 | 11.7 | | | 12.2 |
| 166 ~ | F 4.0 | 7.9 | 11.9 | | | 12.3 |
| +50 | F 3.7 | 8.4 | 12.1 | 47 | 49 | 12.5 |

Lt. = W.

Rt. = E.

61

| | | | cb. Grade | ± Hinge | To qe | cb. Grade |
|------|-------|------|--------------|------------|----------|--------------|
| 167~ | F 2.2 | 10.0 | 12.2 | 47 | 49 | 12.6 |
| +50 | F 1.9 | 10.5 | 12.4 | | | 12.8 |
| 168~ | F 1.1 | 11.4 | 12.5 | | | 12.9 |
| +50 | F 0.6 | 11.9 | 12.5 | | | 13.0 |
| 169~ | F 0.6 | 11.9 | 12.5 | | | 12.9 |
| +50 | F 0.2 | 12.2 | 12.4 | | | 12.8 |
| 170~ | C 0.3 | 12.5 | 12.2 | | | 12.6 |
| +50 | C 0.4 | 12.4 | 12.0 | | | 12.4 |
| 171~ | C 0.7 | 12.5 | 11.8 | | | 12.2 |
| +50 | C 1.4 | 13.1 | 11.7 | | | 12.1 |
| 172~ | C 1.0 | 12.5 | 11.5 | | | 11.9 |
| +50 | C 2.0 | 13.3 | 11.3 | | | 11.7 |
| 173~ | C 2.1 | 13.2 | 11.1 | | | 11.5 |
| +50 | C 0.6 | 11.6 | 11.0 | | | 11.4 |
| 174~ | C 1.5 | 12.3 | 10.8 | | | 11.2 |
| +50 | C 0.4 | 11.0 | 10.6 | | | 11.0 |
| 175~ | C 0.3 | 10.7 | 10.4 | | | 10.8 |
| +50 | F 0.4 | 9.9 | 10.3 | | | 10.7 |
| 176~ | F 1.2 | 8.9 | 10.1 | 47 | 49 | 10.5 |

154 ~ 13.9

154
3.8 F 1.6

cb.
Grade

$\frac{L}{T_0}$
Hinge

cb.
Grade

Rt. = E

62

| | | | |
|------|-----|------------|-------|
| 9.9 | 47' | 49 | 10.3 |
| 9.7 | | | 10.1 |
| 9.6 | | | 10.0 |
| 9.4 | | | 9.8 |
| 9.3 | | | 9.6 |
| 9.4 | | | 9.6 |
| 9.5 | | | 9.7 |
| 9.6 | | | 9.8 |
| 9.9 | | | 10.0 |
| 10.2 | | | 10.4 |
| 10.5 | | | 10.8 |
| 10.8 | | | 11.5 |
| 11.1 | | | 12.2 |
| 11.4 | | ish 49' | 13.0 |
| 11.7 | | | 13.73 |
| 12.0 | 47' | | |
| 12.4 | " | | |
| 12.7 | " | | |
| 13.0 | 47' | | |

+57.35 = end cb.

8

185 ~

c 1.2 13.9

12.7

+50

c 0.1 13.1
c 0.7 13.7

13.0

47'

42 - 9.6 10.6 F 1.0

+50 10.9 11.3 F 0.4

143 12.2 12.1 C 0.1

+50+65 12.6 13.2 F 0.6

144 ~+35 13.7 14.3 F 0.6

~~+50~~
145 ~ 14.1 15.2 F 1.1

+50 14.6 15.7 F 1.1

146 15.7 16.2 F 0.5

+50 16.5 16.7 F 0.2

147 - 17.5 17.0 C 0.5

+50 17.8 17.2 C 0.6

148 ~ 18.3 17.4 C 0.9

149 - 17.9 17.5 C 0.4

150 16.2 17.2 F 1.0

151 - 14.8 16.8 F 2.0

152 - 14.5 16.4 F 1.9

153 - 14.3 15.9 F 1.6

Lt. = W

Rt. = E

62

| | | | cb. Grade | $\frac{L}{T_0}$ Hinge | cb. Grade | |
|-----------------|----------------|--------------|--------------|--------------------------|--------------|------------------|
| 176 +50 | F 0.3 | 9.6 | 9.9 | 47' 49' | 10.3 | |
| 177 ~ | F 1.6 | 8.1 | 9.7 | | 10.1 | |
| +50 | F 1.3 | 8.3 | 9.6 | | 10.0 | |
| 178 ~ | F 2.5 | 6.9 | 9.4 | | 9.8 | |
| +50 | F 2.2 | 7.1 | 9.3 | | 9.6 | |
| 179 ~ | F 3.0 | 6.4 | 9.4 | | 9.6 | |
| +50 | F 2.7 | 6.8 | 9.5 | | 9.7 | |
| 180 ~ | F 2.3 | 7.3 | 9.6 | | 9.8 | |
| +50 | F 2.6 | 7.3 | 9.9 | | 10.0 | |
| 181 ~ | F 2.2 | 8.0 | 10.2 | | 10.4 | |
| +50 | F 2.9 | 7.6 | 10.5 | | 10.8 | |
| 182 ~ | F 2.4 | 8.4 | 10.8 | | 11.5 | |
| +50 | F 2.1 | 9.0 | 11.1 | | 12.2 | |
| 183 ~ 6' sh. | F 0.8 | 10.6 | 11.4 | 8' sh. 49' | 13.0 | |
| +50 | F 0.5 | 11.2 | 11.7 | | 13.73 | +57.35 = end cb. |
| 184 ~ | C 0.2 | 12.2 | 12.0 | 47' | | 8 |
| +50 | F 0.4 | 12.2 | 12.4 | " | | |
| 185 ~ | C 1.2 | 13.9 | 12.7 | " | | |
| +50 | C 0.1 C 0.7 | 13.1 13.7 | 13.0 | 47' | | |

| | Lt. = W. | | E To Hinge | | cb. Grade | | Rt. = E | |
|---------------|----------|------|------------|-----------------|-----------|----------|------------------------------------|------------------------------------|
| 186 - | C 0.4 | 13.8 | 13.4 | 47 | | | | |
| +50 | F 0.4 | 13.0 | | | | | | |
| | C 0.1 | 13.8 | 13.7 | | 16.63 | +58.80 = | end cb. | |
| 187 - | C 0.5 | 14.5 | 14.0 | 55 | 16.9 | -17.0 | $\frac{20.5}{3.5} - \frac{0.2}{5}$ | |
| +50 6 | F 1.2 | 13.9 | 14.4 | 47 | 55 | 17.2 | 17.3 | $\frac{20.7}{3.4} + \frac{0.5}{5}$ |
| 188 - 5 | F 0.7 | 14.0 | 14.7 | 46 | 8 Bk. | 17.5 | 17.6 | $\frac{20.6}{3.0} + \frac{0.3}{5}$ |
| +50 4 | F 0.6 | 14.5 | 15.1 | 45 | " | 17.9 | 17.9 | 19.6 = C 1.7 - 5' Bk. of Hinge |
| 189 - 3 | F 1.7 | 13.7 | 15.4 | 44 | | 18.3 | 14.9 | F 3.4 |
| +50 | F 6.3 | 9.4 | 15.7 | " | 8 Bk. | 18.7 | 17.9 | F 0.8 |
| 190 - | F 3.0 | 13.1 | 16.1 | | | 18.9 | 15.8 | F 3.1 |
| +50 | F 1.0 | 15.4 | 16.4 | | | 18.8 | 15.0 | F 3.8 |
| 191 - | F 0.9 | 16.0 | 16.9 | = O.K. | | 18.7 | 17.1 | F 1.6 |
| +50 | F 0.9 | 16.5 | 17.4 | 0 + 00 | | 18.7 | 17.7 | F 1.0 |
| 192 - | F 0.9 | 17.1 | 18.0 | 0 + 50 | | 18.4 | 18.4 | - G |
| +50 | F 0.7 | 18.0 | 18.7 | 1 + 00 = P.C.C. | | 18.9 | 19.3 | - C 0.4 |
| 193 - | F 0.3 | 19.0 | 19.3 | +25.92 | -8' Bk. | 19.8 | 21.1 | - C 1.3 |
| +50 | C 1.0 | 21.0 | 20.0 | +51.84 | | 21.1 | 23.9 | - C 2.8 |
| 194 - | C 1.3 | 21.9 | 20.6 | +77.76 | | 22.8 | 26.5 | - C 3.7 |
| +50 | C 2.3 | 23.4 | 21.1 | 2 + 03.68 | | 24.8 | 28.2 | - C 3.4 |
| 195 - 3 | C 2.1 | 24.0 | 21.9 | +29.60 | | 26.9 | 28.7 | C 1.8 |
| +25 = end cb. | C 1.9 | 24.1 | 22.2 | +55.53 = P.C.C. | | 28.8 | 29.4 | C 0.6 |

Lt. = w.

cb.
Grade

±
To
Hinge

195+50

196-

+50

197-

+50

198~

+25 = End.

30.9

8' Bk.

3 + 15.21 = E.C. 32.25^{18'} = end cb.

Req. N.E. curb.

cb.
Grade

2 + 16.7 = Meet.

27.49
27.55 = cb.

1 + 7.5

25.9

+ 26.10 = P.C.

24.5

= 0 + 0.0

+ 22.24

23.9

+ 44.48

23.3

+ 66.72

22.9

= ± Inlet.

+ 88.96

22.8

1 + 11.21 = P.C.C.

23.2

+ 42.59 = end cb.

23.9

+ 73.98

24.7

= E.C. = 195 + 30.61

P.O.C. ±

Hinge

195 + 50

25.3

196 -

26.1

+ 50

26.8

197 -

27.4

23.8
F.O.7
1.0
23.9
G

31.2
C 7.9 + 0.5
7.9

30.5
C 7.6 + 0.6
7.6

31.4
C 8.6 + 0.2
8.6

31.2
C 8.0 - 0.1
8.0

31.4
C 7.5 + 0.1
7.5

31.9
C 7.2 + 0.1
7.2

31.8
C 6.5 + 0.3
6.5

31.8
C 5.7 + 0.2
5.7

32.0
C 5.2 + 0.3
5.2

33.2
C 5.8 + 0.4
5.8

197+50

198 ~

$$\begin{array}{r} 35.5 \\ \underline{11.5} \\ 28.0 \end{array}$$

$$+0.5 \\ \underline{} \\ 5$$

28.0

28.7

$$\begin{array}{r} 36.6 \\ \underline{17.9} \\ 28.7 \end{array}$$

$$+0.7 \\ \underline{} \\ 5$$

Paue Stakes - Alley - E. of Buenos.
Sheet 3495-D.

= 11.75 + 0.4

Stakes 2 BK of Paue - unless N Marked.

| | | | | |
|----------------------|------------|-------|-----------------------|--------|
| 0 + 00 = E.L. Buenos | | 2396 | 24.10 _{3 76} | F 0.14 |
| +25 | | 23.82 | 23.82 | Grade |
| +50 | | 23.87 | 23.54 ⁸⁷ | C 0.33 |
| +75 | | 23.85 | 23.26 ^{3 85} | C 0.59 |
| 1 + 00 | | 23.78 | 22.98 ^{3 48} | C 0.30 |
| +25 | | 23.09 | 22.70 ^{3 09} | C 0.39 |
| +50 | | 22.89 | 22.42 ⁸⁹ | C 0.47 |
| +75 | | 21.97 | 22.14 ^{1 97} | F 0.17 |
| 2 + 00 | 1BK | 24.35 | 21.86 ^{3 35} | F 0.51 |
| +25 | PK 0.75 BK | 21.44 | 21.58 ⁴⁴ | F 0.14 |
| +50 | 1BK | 21.34 | 21.30 | C 0.04 |
| +75 | 1BK | 21.20 | 21.02 | C 0.18 |
| 3 + 00 | 1BK | 20.94 | 20.80 | C 0.14 |
| +25 | 2BK | 21.15 | 20.65 ^{1 15} | C 0.50 |
| +50 | -RP. | | 20.55 | |

66

S.

| | | | | |
|--|--------------|-------|-----------------------|--------|
| | | 2400 | 24.18 | F 0.18 |
| | | 23.87 | 23.82 ^{4 11} | C 0.05 |
| | | 2411 | 23.54 ^{4 50} | C 0.57 |
| | PK 0.92 BK | 24.50 | 23.26 ^{4 07} | C 1.24 |
| | PK 0.97 BK | 24.07 | 22.98 ^{6 10} | C 1.09 |
| | Nail 0.75 BK | 26.10 | 22.70 ^{5 61} | C 3.40 |
| | X 1BK | 25.61 | 22.42 ^{5 30} | C 3.19 |
| | X 1BK | 25.30 | 22.14 ⁹⁵ | C 3.16 |
| | P.K. 2BK | 21.95 | 21.86 ^{2 40} | C 0.09 |
| | | 22.40 | 21.58 | C 0.82 |
| | 1BK | 21.50 | 21.30 | C 0.20 |
| | Nail 1.10 BK | 22.56 | 21.02 | C 1.54 |
| | 2BK | 20.98 | 20.74 | C 0.24 |
| | 22.43 RP. | 20.98 | 20.46 ⁹⁸ | C 0.52 |
| | cb. | | 20.48 | |

Stakes - 2' Bk. of Edge = 1675 Tot

S

N.

| | | | | | | | |
|---------------------|-------|-----------------------|--------|------|-------|-----------------------|--------|
| 0+00 = W.L. Dorcas. | 16.51 | 16.50 | C 0.01 | | 16.77 | 16.50 ⁷⁷ | C 0.27 |
| +25 | 16.29 | 16.10 | C 0.19 | | 16.36 | 16.10 | C 0.26 |
| +50 | 15.97 | 15.70 ⁹⁷ | C 0.27 | | 16.23 | 15.70 ²³ | C 0.53 |
| +75 | 15.53 | 15.30 ⁵³ | C 0.23 | | 17.01 | 15.30 ^{7 01} | C 1.71 |
| 1+00 | 14.80 | 14.90 | F 0.10 | | 15.15 | 14.90 ^{5 15} | C 0.25 |
| +25 - +24 | 14.98 | 14.76 ⁹⁸ | C 0.22 | | 15.04 | 14.76 ^{5 04} | C 0.28 |
| +50 | 14.71 | 15.17 | F 0.46 | | 15.05 | 15.17 | F 0.12 |
| +75 | 14.32 | 15.83 ^{4 32} | F 1.51 | | 16.21 | 15.83 ^{6 21} | C 0.38 |
| 2+00 | 15.48 | 16.50 ^{8 48} | F 1.02 | | 17.30 | 16.50 ^{7 30} | C 0.80 |
| +25 | 16.98 | 17.17 ^{6 98} | F 0.19 | out. | | 17.17 | |
| +50 | 17.43 | 17.83 ^{4 33} | F 0.40 | | 18.33 | 17.83 ^{8 33} | C 0.50 |
| +75 | 17.91 | 18.45 ^{7 91} | F 0.54 | | 19.03 | 18.45 ^{9 03} | C 0.58 |
| 3+00 | 18.58 | 18.95 ^{8 58} | F 0.37 | | 19.21 | 18.95 ^{9 21} | C 0.26 |
| +25 - 4' Bk. | 19.00 | 19.34 | F 0.34 | | 19.38 | 19.34 | C 0.04 |
| +50 - 1.42 Bk. | 19.75 | 19.63 ⁷⁵ | C 0.12 | | 19.67 | 19.63 | C 0.04 |
| +75 | 19.44 | 19.81 ⁴⁴ | F 0.37 | | 19.76 | 19.81 ⁷⁶ | F 0.05 |
| 4+00 | 19.39 | 19.88 ³⁹ | F 0.49 | | 19.80 | 19.88 | F 0.08 |
| +25 | 19.64 | 19.85 ⁶⁴ | F 0.21 | | 19.86 | 19.85 | C 0.01 |
| +50 | 20.02 | 19.70 ^{0 02} | C 0.32 | | 20.11 | 19.70 ^{0 11} | C 0.41 |

S

N.

| | | | | | | | |
|------------------------|-------|---------------------|--------|----------|-------|---------------------|--------|
| 4+75 | 19.70 | 19.49 ⁷⁰ | C 0.21 | 1' BK. | 20.28 | 19.49 ²⁸ | C 0.79 |
| 5+00 | 19.88 | 19.28 ⁸⁸ | C 0.60 | 1' BK. | 19.67 | 19.28 ⁶⁷ | C 0.39 |
| +25 | 19.19 | 19.06 ¹⁹ | C 0.13 | | 19.24 | 19.06 ²⁴ | C 0.18 |
| +50 | 18.79 | 18.84 ⁷⁹ | F 0.05 | | 18.80 | 18.84 | F 0.04 |
| +75 | 18.48 | 18.62 ⁴⁸ | F 0.14 | | 18.31 | 18.62 ³¹ | F 0.31 |
| 6+00.23 = E.L. of Vega | 18.49 | 18.40 | C 0.09 | 0.65 BK. | 18.94 | 18.33 ⁴⁹ | C 0.61 |

curb stakes - Morena - 26+25 - 27+50
 2' out from ab. face

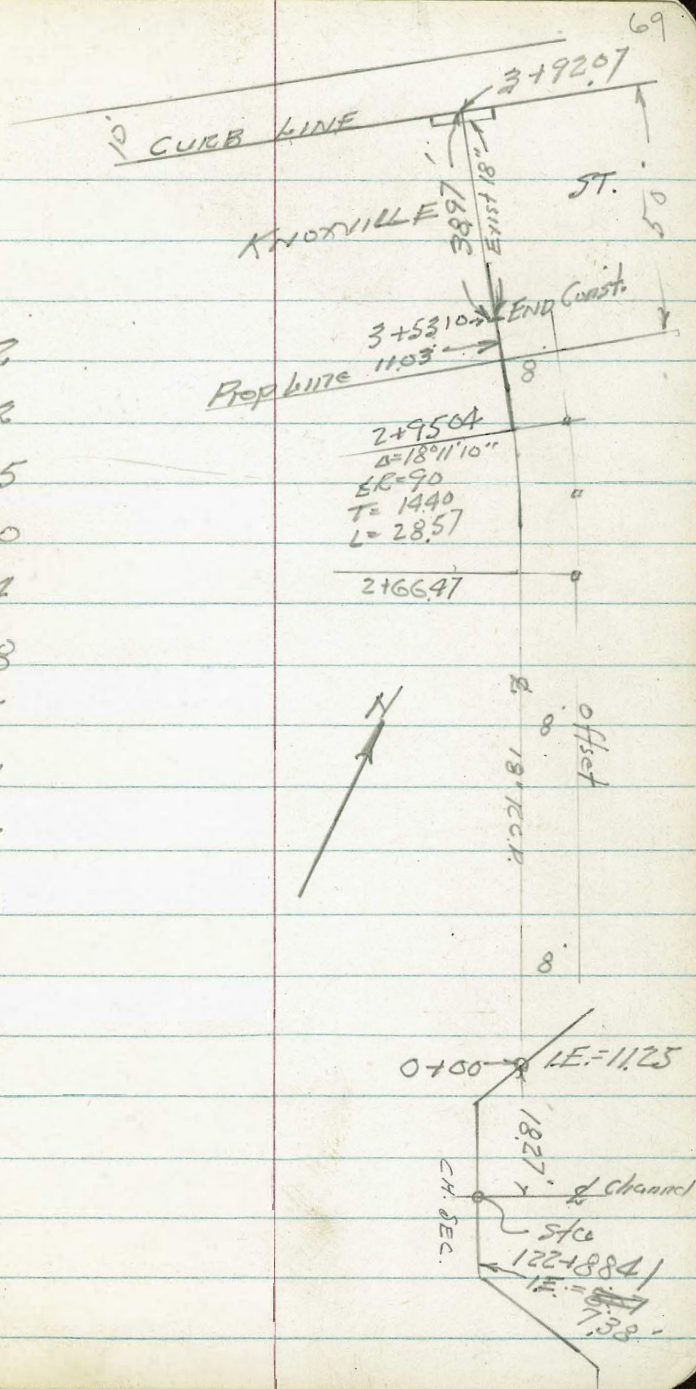
| | | | |
|-------|-------|---------------------|--------|
| 26+25 | 20.39 | 20.37 | C 0.02 |
| +50 | 20.97 | 20.49 ⁹⁷ | C 0.48 |
| +75 | 21.10 | 20.61 ¹⁰ | C 0.49 |
| 27+00 | 21.17 | 20.73 ¹⁷ | C 0.44 |
| +25 | 21.18 | 20.81 ¹⁸ | C 0.37 |
| +50 | 20.95 | 20.83 ⁹⁵ | C 0.12 |

Walker
 Taylor
 Spuckey
 Meyer
 8-5-57

GRADE 5-18" CULVERT
 Left of 122+884/1 TECOLUTE CHANNEL
 Plan 3504-D MD 22107

3+92.07 Chk. Flow Rd. to be → 13.00

| | | Elev. | Invert | Cuts. |
|-----------------------------|-------|-------|--------|-------|
| 3+53.10 = END of New Const. | 16.16 | 12.84 | 13.00 | 3.32 |
| 3+30 | 16.37 | 12.89 | 12.89 | 3.62 |
| 2+95.04 = EC. | 18.24 | 12.71 | 12.71 | 5.65 |
| +80.75 = POC. | 15.13 | 12.64 | 12.64 | 2.60 |
| 2+66.47 = B.C.L. | 12.80 | 12.57 | 12.57 | 0.34 |
| +45 | 16.35 | 12.47 | 12.47 | 3.98 |
| 2+10 | 15.26 | 12.30 | 12.30 | 3.05 |
| 1+75 | 15.42 | 12.12 | 12.12 | 3.37 |
| +40 | 15.26 | 11.95 | 11.95 | 3.37 |
| 1+05 | 15.43 | 11.78 | 11.78 | 3.70 |
| 0+70 TR | 15.15 | 11.60 | 11.60 | 3.58 |
| 0+35 | 16.81 | 11.43 | 11.43 | 5.40 |
| 0+00 | 11.96 | 11.25 | 11.25 | 0.71 |



Rough Grades - Morena Dorcas to

N.

70

| stakes on Prop. Line | ht. | | |
|----------------------|-------|------|-------|
| 21+00 inlet | 18.73 | | |
| +50 | 17.8 | 18.8 | F 1.0 |
| 22- | 18.5 | 18.8 | F 0.3 |
| +50 | 18.8 | 19.0 | F 0.2 |
| 23- | 19.1 | 19.2 | F 0.1 |
| +50 | 19.1 | 19.4 | F 0.3 |
| 24- | 19.0 | 19.6 | F 0.6 |
| +50 | 19.1 | 19.4 | F 0.3 |
| 25~ | 20.6 | 19.3 | C 1.3 |
| +50 | 20.8 | 20.2 | C 0.6 |
| 26- | 19.9 | 20.3 | F 0.4 |
| +50 | 20.0 | 20.5 | F 0.5 |
| 27- | 20.9 | 20.7 | C 0.2 |
| +50 | 20.9 | 20.8 | C 0.1 |
| 28- | 20.6 | 20.7 | F 0.1 |

| | | | | |
|--------|------|----------------------|-------|-------|
| 187+50 | 17.7 | ^{17.4} 17.2 | C 0.5 | |
| 188~ | 17.7 | ^{17.7} 17.5 | C 0.2 | F 0.3 |
| 189~ | 17.8 | ^{17.8} 18.3 | F 0.5 | F 0.3 |
| 190~ | 17.2 | ^{17.7} 18.9 | F 1.7 | F 0.1 |
| 191~ | 18.4 | ^{18.4} 18.7 | F 0.3 | C 0.4 |
| | | | | C 0.3 |
| | | | | C 0.1 |
| | | | | C 0.2 |
| | | | | C 0.1 |
| | | | | F 1.9 |
| | | | | 0.6 |
| | | | | 0.5 |

± Gesnev

15 } P.K.
21 |

Disk in tie

8.68

666
334

738
-262

558
+42

607
393

607
293

577
423

591
409

575
425

580
420

5228
69
3158

16

72

67

86
69
11

9012

69

6202

1843

1827
69

1760

2981

69

2912

52

Rough Grades - Morena Dorcas to

N.

70

| Stakes on Prop. Line | Ht. | | Rt. | |
|----------------------|-----------|-------|------|-------|
| 21+00 inlet | 18.73 | | 18.9 | F 0.3 |
| +50 | 17.8 18.8 | F 1.0 | 19.0 | F 0.3 |
| 22~ | 18.5 18.8 | F 0.3 | 19.6 | F 0.1 |
| +50 | 18.8 19.0 | F 0.2 | 20.5 | C 0.4 |
| 23~ | 19.1 19.2 | F 0.1 | 20.7 | C 0.3 |
| +50 | 19.1 19.4 | F 0.3 | 20.6 | F 0.2 |
| 24~ | 19.0 19.6 | F 0.6 | 22.5 | C 1.4 |
| +50 | 19.1 19.4 | F 0.3 | 21.4 | F 0.2 |
| 25~ | 20.6 19.3 | C 1.3 | 22.1 | C 0.3 |
| +50 | 20.8 20.2 | C 0.6 | 22.3 | C 0.1 |
| 26~ | 19.9 20.3 | F 0.4 | 22.8 | C 0.2 |
| +50 | 20.0 20.5 | F 0.5 | 23.0 | C 0.1 |
| 27~ | 20.9 20.7 | C 0.2 | 21.6 | F 1.9 |
| +50 | 20.9 20.8 | C 0.1 | 22.8 | F 0.6 |
| 28~ | 20.6 20.7 | F 0.1 | 23.2 | F 0.5 |

Rough Grades - S. Side Morena
stakes 5' BK. of Prop.

Buenos to Dorcas.

71

| | | | |
|------------------|------|--------------------------------|-------|
| 15 + 68.4 = F.C. | 23.8 | ³ 20.8 ⁴ | C 3.0 |
| 16 ~ | 24.3 | ⁴ 20.7 ³ | C 3.6 |
| +50 | 24.1 | ⁴ 20.6 ¹ | C 3.5 |
| 17 ~ | 22.5 | ² 20.4 ⁵ | C 2.1 |
| +50 | 20.7 | ⁷ 20.3 | C 0.4 |
| 18 ~ | 18.6 | ² 18.6 ⁶ | F 1.5 |
| +50 | 18.3 | ⁴ 19.9 ³ | F 1.6 |
| 19 ~ | 19.2 | ² 19.6 | F 0.4 |
| +49.5' = P.C. | 17.8 | 18.8 | F 1.0 |

Rough Grades - w. side - sherman

S. to Bridge

72

14.57 = B.M. in Pole

14.77 = Inlet
16.56 = Pole

sherman

5 + 54.79 = P.C.

15.1 15.2 F 0.1

6 ~

13.7 15.2 $\frac{F 1.5}{2.2}$

+ 50

13.6 15.2 $\frac{F 1.6}{2.4}$

7 ~

13.6 15.1 $\frac{F 1.5}{2.2}$

+ 50

13.9 15.0 $\frac{F 1.1}{1.6}$

8 ~

7.0 14.9 $\frac{F 7.9}{11.8}$ $\frac{+0.2}{5}$

+ 50

7.1 14.8 $\frac{F 7.7}{11.5}$ $\frac{+0.2}{5}$

9 ~

8.3 14.6 $\frac{F 6.3}{9.4}$ $\frac{+1.2}{5}$

+ 50

9.1 14.3 $\frac{F 5.2}{7.8}$ $\frac{-0.1}{5}$

10 ~

8.6 14.4 $\frac{F 5.8}{8.7}$ $\frac{-0.1}{5}$

+ 50

9.3 14.5 $\frac{F 5.2}{7.8}$ $\frac{+0.2}{10}$

11 ~

7.8 14.8 $\frac{F 7.0}{10.5}$ $\frac{+0.8}{5}$

+ 50

9.6 15.6 $\frac{F 6.0}{7.0}$ $\frac{-0.1}{5}$

12 ~

9.3 16.9 $\frac{F 7.6}{11.4}$ $\frac{-0}{5}$

+ 50

17.6 18.3 $\frac{F 0.8}{1.2}$

13 ~

19.0 19.9 $\frac{F 0.9}{1.3}$

+ 50

20.71 21.35 F 0.7 = 3' out

14 ~

21.94 22.67 F 0.8

Br.

2337 = Top.

22.50

Stakes For Access Road.

New Grades - 3488-AD

• 73

"A" - 3-57

109 ~ = Same Sec. P. 54 s. Side - 5' BK of Hinge

| | | | |
|--------------|-----|-----|-------|
| +50 | 8.6 | 9.6 | F 1.0 |
| 110 ~ | 7.3 | 8.5 | F 1.2 |
| +50 | 6.7 | 7.9 | F 1.2 |
| 111 ~ | 6.4 | 7.5 | F 1.1 |
| +50 | 5.5 | 7.2 | F 1.7 |
| 112 ~ | 5.2 | 6.8 | F 1.6 |
| +50 | 4.7 | 6.5 | F 1.8 |
| 113 ~ | 5.6 | 6.1 | F 0.5 |
| +50 | 5.5 | 5.8 | F 0.3 |
| 114 ~ | 6.0 | 5.4 | C 0.6 |
| +50 | 6.1 | 5.1 | C 1.0 |
| 115 ~ | 5.1 | 4.7 | C 0.4 |
| +50 | 4.6 | 4.4 | C 0.2 |
| 116 ~ | 4.0 | 4.0 | G |
| +50 | 4.1 | 3.7 | C 0.4 |
| 117 ~ = end. | 11 | 3.3 | F 2.2 |

Rough Grades - Dorcas.

± = 20' from W. Prop. - stakes - 20' Both ways

W.

E.

0+39.26 = P.C. on E.

+50

16.3 16.1 C 0.2

17.2

16.6

C 0.6

1+00

16.8 16.3 C 0.5

17.1

16.8

C 0.3

+50.13 = ± Alley - E

cb. Gr.

16.4 16.6 F 0.2

Alley - Prop

16.6

C 0.4

cb =

17.0

17.0

G

2+00

16.7 16.9 F 0.2

17.2

17.4

F 0.2

+50 - 4' Bk.

17.4 17.3 C 0.1

17.2

17.9

F 0.7

+75.50 = P.C. - E

Rough Grades - Vega.

50' st. 7' cbs. - Stakes on Prop.

W.

E.

| | | | | | | |
|-----------------------|------|------|------|------|------|------|
| 0+35.08 = cb. face | 12.9 | 16.1 | F3.2 | 16.8 | 16.6 | C0.2 |
| +85.08 | 18.2 | 17.5 | C0.7 | 18.2 | 18.0 | C0.2 |
| 1+35.08 | 18.5 | 17.8 | C0.7 | | | |
| +85.08 | 17.7 | 17.4 | C0.3 | 18.2 | 17.9 | C0.3 |
| 2+35.08 | 16.7 | 16.5 | C0.2 | 17.5 | 17.0 | C0.5 |
| +85.08 = S.L. Naples. | 15.8 | 15.6 | C0.2 | 16.6 | 16.5 | C0.1 |

= cb. + gut.

Curve Data - Sly Lane + Island - Clairemont

$$\Delta = 14^{\circ} 33' 50'' - R = 250' \quad L = 63.55'$$

$$D = 7^{\circ} 16' 55'' \quad T = 31.95 \quad d = 6.8755'$$

$$1 + 38.37 = B.C.$$

11.63

+50

$$+75 \quad ch = 24.99$$

2+00

$$+01.92 = E.C.$$

1° 20'

4° 11' 45"

7° 03' 45"

7° 16' 55"

Curve Data - S.E. Curb - Clairemont.

N.E. Curb.

$T = 50.46$

$R = 300'$

$ch = 25$

$T = 62.15$

$\Delta = 63^\circ 43' 14'' - R = 100' \quad ch = 22.19$

$\Delta = 19^\circ 06'$
 $= 191 + 31.62 = P.O.C. - \&$

$B.C. = 0 + 00$

$1 + 26.10$ Clairemont Sta. = $0 + 00$

+25

$2^\circ 23' 15''$

$0 + 22.24$

$6^\circ 22' 15''$

+50

$4^\circ 46' 30''$

+44.48

$12^\circ 44' 45''$

+75

$7^\circ 09' 45''$

+66.72

$19^\circ 07'$

$1 + 00 = P.C.C.$

$9^\circ 33'$

+88.96

$25^\circ 29' 16''$

$\Delta = 68^\circ 33' - R = 130$

$T = 88.60$

$ch = 25.87$

$1 + 11.21 = P.C.C.$

$31^\circ 51' 37''$

$1 + 25.92$

$5^\circ 42' 45''$

$\Delta = 9^\circ 02' 20''$

$ch = 31.39$

+51.84

$11^\circ 25' 30''$

$1 + 42.59$

$2^\circ 15' 35''$

+77.76

$17^\circ 08' 15''$

+73.98 = E.C.

$4^\circ 31' 10''$

$2 + 03.68$

$22^\circ 51'$

$= 195 + 30.61 = P.O.C. \&$

+29.60

$28^\circ 33' 45''$

+55.53 = P.C.C.

$34^\circ 16' 30''$

$\Delta = 8^\circ 33'$

$T = 29.90$

$R = 400'$

$ch = 29.84$

1 $12^\circ 44' 45''$

$2 + 85.37$

$2^\circ 08' 15''$

2 $25^\circ 29' 15''$

$3 + 15.21 = E.C.$

$4^\circ 16' 30''$

38 14

50 58 30

63 43' 15''

Grades - 21" Sewer Siphon - channel

I.E.

| | | | |
|-----------------|-------|---------------------------|---------|
| 0+00 = New M.H. | | | 13.93 |
| +10 | | | 12.72 |
| +20 | | | 11.54 |
| +30 | 23.90 | ^{23.90} 10.35 | C 13.55 |
| +40 | 24.18 | ^{24.18} 9.17 | 15.01 |
| +50 | 24.06 | ^{24.06} 7.99 | 16.07 |
| +60 | 24.29 | ^{24.29} 6.98 | 17.31 |
| +70 | 24.27 | ^{24.27} 6.25 | 18.02 |
| +80 | 24.22 | ^{24.22} 5.71 | 18.51 |
| +90 | 24.16 | ^{24.16} 5.43 | 18.73 |
| 1+00 | 24.11 | ^{24.11} 5.39 | 18.72 |
| +10 | 24.15 | ^{24.15} 5.58 | 18.57 |
| +20 | 24.23 | ^{24.23} 6.00 | 18.23 |
| +30 | 24.36 | ^{24.36} 6.67 | 17.69 |
| +40 | 24.38 | ^{24.38} 7.57 | 16.81 |
| +50 | 24.51 | ^{24.51} 8.73 | 15.78 |
| +60 | 24.50 | ^{24.50} 10.12 | 14.38 |
| +70 | 24.36 | ^{24.36} 11.76 | 12.60 |
| +80 | 24.48 | ^{24.48} 13.54 | 10.94 |
| +90 = old M.H. | 24.66 | ^{24.66} 15.23 | 9.43 |

Mon. ties - Morena - N. of Balboa

City Mon - N. end of Siding

Line = Pipe 2" LS 2201

R.P. Hub by fence RR. = 34'

+ 52.30 = Disk in Siding Track tie

4.0 = Bottom

3.75 = Top

7.27 =

10.2
1.7
11.9

F.L. wood

9.4 = gr.

18.58

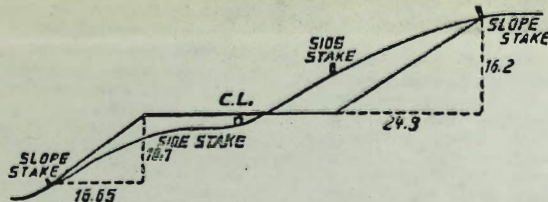
10.75

3.00

1.17
7.83

+ 22

3.00



DISTANCES FROM SIDE STAKES FOR CROSS-SECTIONING.

SLOPE 1/2 TO 1. ROADWAY OF ANY WIDTH.

| | 0 | .1 | .2 | .3 | .4 | .5 | .6 | .7 | .8 | .9 | |
|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|
| 0 | 0.00 | 0.15 | 0.30 | 0.45 | 0.60 | 0.75 | 0.90 | 1.05 | 1.20 | 1.35 | 0 |
| 1 | 1.50 | 1.65 | 1.80 | 1.95 | 2.10 | 2.25 | 2.40 | 2.55 | 2.70 | 2.85 | 1 |
| 2 | 3.00 | 3.15 | 3.30 | 3.45 | 3.60 | 3.75 | 3.90 | 4.05 | 4.20 | 4.35 | 2 |
| 3 | 4.50 | 4.65 | 4.80 | 4.95 | 5.10 | 5.25 | 5.40 | 5.55 | 5.70 | 5.85 | 3 |
| 4 | 6.00 | 6.15 | 6.30 | 6.45 | 6.60 | 6.75 | 6.90 | 7.05 | 7.20 | 7.35 | 4 |
| 5 | 7.50 | 7.65 | 7.80 | 7.95 | 8.10 | 8.25 | 8.40 | 8.55 | 8.70 | 8.85 | 5 |
| 6 | 9.00 | 9.15 | 9.30 | 9.45 | 9.60 | 9.75 | 9.90 | 10.05 | 10.20 | 10.35 | 6 |
| 7 | 10.50 | 10.65 | 10.80 | 10.95 | 11.10 | 11.25 | 11.40 | 11.55 | 11.70 | 11.85 | 7 |
| 8 | 12.00 | 12.15 | 12.30 | 12.45 | 12.60 | 12.75 | 12.90 | 13.05 | 13.20 | 13.35 | 8 |
| 9 | 13.50 | 13.65 | 13.80 | 13.95 | 14.10 | 14.25 | 14.40 | 14.55 | 14.70 | 14.85 | 9 |
| 10 | 15.00 | 15.15 | 15.30 | 15.45 | 15.60 | 15.75 | 15.90 | 16.05 | 16.20 | 16.35 | 10 |
| 11 | 16.50 | 16.65 | 16.80 | 16.95 | 17.10 | 17.25 | 17.40 | 17.55 | 17.70 | 17.85 | 11 |
| 12 | 18.00 | 18.15 | 18.30 | 18.45 | 18.60 | 18.75 | 18.90 | 19.05 | 19.20 | 19.35 | 12 |
| 13 | 19.50 | 19.65 | 19.80 | 19.95 | 20.10 | 20.25 | 20.40 | 20.55 | 20.70 | 20.85 | 13 |
| 14 | 21.00 | 21.15 | 21.30 | 21.45 | 21.60 | 21.75 | 21.90 | 22.05 | 22.20 | 22.35 | 14 |
| 15 | 22.50 | 22.65 | 22.80 | 22.95 | 23.10 | 23.25 | 23.40 | 23.55 | 23.70 | 23.85 | 15 |
| 16 | 24.00 | 24.15 | 24.30 | 24.45 | 24.60 | 24.75 | 24.90 | 25.05 | 25.20 | 25.35 | 16 |
| 17 | 25.50 | 25.65 | 25.80 | 25.95 | 26.10 | 26.25 | 26.40 | 26.55 | 26.70 | 26.85 | 17 |
| 18 | 27.00 | 27.15 | 27.30 | 27.45 | 27.60 | 27.75 | 27.90 | 28.05 | 28.20 | 28.35 | 18 |
| 19 | 28.50 | 28.65 | 28.80 | 28.95 | 29.10 | 29.25 | 29.40 | 29.55 | 29.70 | 29.85 | 19 |
| 20 | 30.00 | 30.15 | 30.30 | 30.45 | 30.60 | 30.75 | 30.90 | 31.05 | 31.20 | 31.35 | 20 |
| 21 | 31.50 | 31.65 | 31.80 | 31.95 | 32.10 | 32.25 | 32.40 | 32.55 | 32.70 | 32.85 | 21 |
| 22 | 33.00 | 33.15 | 33.30 | 33.45 | 33.60 | 33.75 | 33.90 | 34.05 | 34.20 | 34.35 | 22 |
| 23 | 34.50 | 34.65 | 34.80 | 34.95 | 35.10 | 35.25 | 35.40 | 35.55 | 35.70 | 35.85 | 23 |
| 24 | 36.00 | 36.15 | 36.30 | 36.45 | 36.60 | 36.75 | 36.90 | 37.05 | 37.20 | 37.35 | 24 |
| 25 | 37.50 | 37.65 | 37.80 | 37.95 | 38.10 | 38.25 | 38.40 | 38.55 | 38.70 | 38.85 | 25 |
| 26 | 39.00 | 39.15 | 39.30 | 39.45 | 39.60 | 39.75 | 39.90 | 40.05 | 40.20 | 40.35 | 26 |
| 27 | 40.50 | 40.65 | 40.80 | 40.95 | 41.10 | 41.25 | 41.40 | 41.55 | 41.70 | 41.85 | 27 |
| 28 | 42.00 | 42.15 | 42.30 | 42.45 | 42.60 | 42.75 | 42.90 | 43.05 | 43.20 | 43.35 | 28 |
| 29 | 43.50 | 43.65 | 43.80 | 43.95 | 44.10 | 44.25 | 44.40 | 44.55 | 44.70 | 44.85 | 29 |
| 30 | 45.00 | 45.15 | 45.30 | 45.45 | 45.60 | 45.75 | 45.90 | 46.05 | 46.20 | 46.35 | 30 |
| 31 | 46.50 | 46.65 | 46.80 | 46.95 | 47.10 | 47.25 | 47.40 | 47.55 | 47.70 | 47.85 | 31 |
| 32 | 48.00 | 48.15 | 48.30 | 48.45 | 48.60 | 48.75 | 48.90 | 49.05 | 49.20 | 49.35 | 32 |
| 33 | 49.50 | 49.65 | 49.80 | 49.95 | 50.10 | 50.25 | 50.40 | 50.55 | 50.70 | 50.85 | 33 |
| 34 | 51.00 | 51.15 | 51.30 | 51.45 | 51.60 | 51.75 | 51.90 | 52.05 | 52.20 | 52.35 | 34 |
| 35 | 52.50 | 52.65 | 52.80 | 52.95 | 53.10 | 53.25 | 53.40 | 53.55 | 53.70 | 53.85 | 35 |
| 36 | 54.00 | 54.15 | 54.30 | 54.45 | 54.60 | 54.75 | 54.90 | 55.05 | 55.20 | 55.35 | 36 |
| 37 | 55.50 | 55.65 | 55.80 | 55.95 | 56.10 | 56.25 | 56.40 | 56.55 | 56.70 | 56.85 | 37 |
| 38 | 57.00 | 57.15 | 57.30 | 57.45 | 57.60 | 57.75 | 57.90 | 58.05 | 58.20 | 58.35 | 38 |
| 39 | 58.50 | 58.65 | 58.80 | 58.95 | 59.10 | 59.25 | 59.40 | 59.55 | 59.70 | 59.85 | 39 |
| 40 | 60.00 | 60.15 | 60.30 | 60.45 | 60.60 | 60.75 | 60.90 | 61.05 | 61.20 | 61.35 | 40 |
| 41 | 61.50 | 61.65 | 61.80 | 61.95 | 62.10 | 62.25 | 62.40 | 62.55 | 62.70 | 62.85 | 41 |
| 42 | 63.00 | 63.15 | 63.30 | 63.45 | 63.60 | 63.75 | 63.90 | 64.05 | 64.20 | 64.35 | 42 |
| 43 | 64.50 | 64.65 | 64.80 | 64.95 | 65.10 | 65.25 | 65.40 | 65.55 | 65.70 | 65.85 | 43 |
| 44 | 66.00 | 66.15 | 66.30 | 66.45 | 66.60 | 66.75 | 66.90 | 67.05 | 67.20 | 67.35 | 44 |
| 45 | 67.50 | 67.65 | 67.80 | 67.95 | 68.10 | 68.25 | 68.40 | 68.55 | 68.70 | 68.85 | 45 |
| 46 | 69.00 | 69.15 | 69.30 | 69.45 | 69.60 | 69.75 | 69.90 | 70.05 | 70.20 | 70.35 | 46 |
| 47 | 70.50 | 70.65 | 70.80 | 70.95 | 71.10 | 71.20 | 71.40 | 71.55 | 71.70 | 71.85 | 47 |
| 48 | 72.00 | 72.15 | 72.30 | 72.45 | 72.60 | 72.75 | 72.90 | 73.05 | 73.20 | 73.35 | 48 |
| 49 | 73.50 | 73.65 | 73.80 | 73.95 | 74.10 | 74.25 | 74.40 | 74.55 | 74.70 | 74.85 | 49 |
| 50 | 75.00 | 75.15 | 75.30 | 75.45 | 75.60 | 75.75 | 75.90 | 76.05 | 76.20 | 76.35 | 50 |

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