

In the column headed "Longitude for one range" is given the number of seconds of time to be applied to a chronometer to correct it for the longitude gained in going west from one corner of the township to the other. In other words, if a watch or chronometer be carried westward across a township it will be that number of seconds faster, if it has no gaining or losing rate of its own.

TABLE IV.

This table gives for correction lines the chord azimuths, deflection and deflection offsets for running the chords along the *south* side of the road allowance. To run the *north* side it is necessary to apply the correction given in Table VI.

The table also gives the length of one range on the *north* and *south* sides of the road allowance. The length on the north side is the distance included on the correction line, between two meridians from the base next north of the correction line. The longitude covered by this length is of course the same as that covered by one range on the next base north, and is given in the last column of Table III. Similarly for the south side.

The difference between the lengths of one range on the north and south sides of the road allowance is the "jog."

Half the jog is very nearly the narrowing or extension of one range in going north or south from a base to a correction line.

One twenty-fourth of the jog is the "convergence or divergence" of the meridians for one quarter section on the correction lines. This is a correction which must be applied to every half mile on the correction line in order to distribute the convergence or divergence of meridians equally all along the line. For the township line midway between the base and correction line, this correction must be divided by two.

TABLE V.

Gives chains in decimals of a township for convenience of computation of azimuth, &c.

TABLE VI.

Gives quantities required for running along the north side of the road on correction lines, and also the "correction to width of the road on account of curvature." On account of the curvature of the earth, the road allowance along a correction line is of unequal width. If the south side of the road is being run; if it is required to plant a township corner on the north side, the quantity taken from the table is *subtractive* from the width (1.50 chs.) of the road allowance. If the north side is being run, to plant a township corner on the south side, the correction must be added to the width of the road.

TABLE VII.

The township side being a chord of the circle of latitude, it lies north of the parallel at all points except the township corners. Hence, the true latitude of any intermediate post on the chord is equal to the tabulated latitude of the base or correction line, plus the quantity given in the table.

This table is to be used in tying in and correcting a line at an Astronomical Station.

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