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ERROR BOUNDS FOR NEWTON'S METHOD UNDER A WEAK KANTOROVICH-TYPE HYPOTHESIS

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ABSTRACT. We recently showed that the famous Kantorovich hypothesis for the convergence of Newton's method can be weakened. Moreover we proved favorable local and semilocal convergence theorems under this condition involving Lipschitz and center Lipschitz conditions. Here based on these results we obtain even finer error bounds on the distances involved.

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