The main theme in this study is to show the different sizes used in Underground Storage Reservoir System with the comparative and thematic behavior of its components under loads, pressure and water weight. To show the economical underground water tank, total six USR cases viz. UT1, UT2, UT3, UT4, UT5, UT6 of water storage system were created starting from 2m x 2m area to 4m x 4m area. The best case that fits the economic criteria of manual parametric approach has discussed by comparing all these six cases and final recommendations are provided that USR Case UT4 should be used that has more capability to transfer and bear the load, lesser land area required, passes all the IS codal checks and this concludes the validation of the economical underground storage reservoir project.

Key Words: Underground water tank, Vertical Loads, Water pressure, Tank size, Long walls, Short walls, Top slab, Bottom slab, Stable tank.

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I, along with Shirish Kumar Kanungo completed this entire research work.

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