
**Optimal Location of Multi-level Parking Services for the Purposes of
Urban Sustainable Development
(Case study: the Historic Zone of Birjand)**

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Abstract

Today, as the core of cities, their historic tissues face various economic, social, physical and access problems. Strategies to deal with these problems, in a postmodern context, attempt to preserve and rehabilitate these historic centers. Putting the worn out/time worn urban zones into maximum efficiency is one of the basic principles of urban sustainable development. As one of these strategies, multi-level parking services reduce traffic jam in downtown areas. Due to Birjand's centrality and its socio-political, economic and academic importance, transportation planning in the central and historical parts of the city needs special attention. The present study seeks to spot locations for multi-level parking lots in downtown area of Birjand by using GIS and computational models such as hierarchical analysis. This is a descriptive – analytical research based on the field data collected in the city and the relevant organizations in order to create layers of information. Analysis of maps based on AHP method is based on paired comparison. The results show that the most important factor in finding the optimal location for the multi-level parking lot is the distance from the administrative centers with the ultimate weight of 0.38. After adapting the final map with the land use reality, lots with areas over 2000 m² which did not have any potential for creating green spaces, nor had public parking

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services were considered appropriate for constructing multi-level parking lots in downtown area in Birjand.

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