



## ABSTRACT SUBMISSION

# Investigating Methods of Stone Extraction and Transportation in the Achaemenid period: a Case Study of Identified Stone Quarries in Marvdasht

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## Abstract

The construction of Persepolis's required a large amount of stone, however, the mountainous location of this historical site provided easy access to abundant stone resources. This research exaquares the stone extraction and transportation methods during the Achaemenid period and analyzes the challenges related to these processes. The main research question is how the stones were extracted from the quarries and transported to Takht-e Soleym?n. It is assumed that the Achaemenians used traditional techniques and precise engineering to extract and transport stones. The research method includes field studies, archaeological data analysis, and historical sources related to Achaemenid engineering. The results show that stone extraction from Mount Rahmat, Mount Hossein, and Majdabad quarries was mainly done in two ways: (1) by creating channels with a width of 50 to 80 cm using stone wedges; (2) by digging holes 8 to 10 cm deep using metal or expanding clay wedges similar to bentonite. Stone transportation methods depended on the topography of the area and included the use of roads, carts, and pack animals. This study rejects the hypothesis of transporting stone through the Sivand River and shows the high precision and skill of the Achaemenians in this field.

## Keywords

Achaemenid, quarrying, stone extraction , transportation, Persepolis

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