

# Analysis of non-urban caravanserais in Iran during the reign of Shah Abbas I

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## Introduction

An early network of roads supporting the circulation of chariots and carts existed from about 500 BC in the Achaemenid Empire. It was used and expanded by Cyrus the younger for military purposes and to facilitate royal transportation. Darius I, too, used this system for royal transportation and for leisurely activities. On a Cylinder seal now at the British Museum [Figure 16], the Persian King Darius I is represented hunting from a chariot. This ancient transportation system responded to military needs and served the purpose of traveling for several centuries. However, it later lost its importance in the Persian territory. The first blow to it was of a military nature and occurred around 300 BC, when the army of Darius III was defeated by Alexander's army in the Battle of Gaugamela, which led to the fall of the Persian Empire. As is well-known, the army of Alexander simply opened their lines to let the Persian chariots pass and then attacked them from behind.

While in Europe the system of roads serving the circulation of people and vehicles pulled by animals proved sustainable, in Iranian territory – as in other Middle Eastern countries – such a system was disappearing from about the fourth century<sup>1</sup> only to be progressively replaced by a “tracks-for-caravans” network most useful for the transport of commercial goods by animals. This system dominated for a thousand years in Iranian territory on grounds of a flexible combination of natural and built environments. The most important built facilities for this long-lived infrastructural system consisted of roadside inns known as non-urban caravanserais (*karavan-saray*). This was the dominant system permitting the circulation of people and goods across Iranian territory under the Safavids. Numerous caravanserais were in fact established or expanded during this era.

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<sup>1</sup> Parviz Mohebbi, *Techniques et ressources en Iran du 7<sup>e</sup> au 19<sup>e</sup> siècle* (Tehran, 1996).

Usually, a tracks-and-caravans system is dependent on a number of elements including, beyond a network of non-urban caravanserais, reliable water sources and secure paths and tracks. All this required financial investments [Figure 17] not just to equip the caravans themselves – consisting of passengers, traders, pack animals, trading goods, provisions, and a leader to guide the caravan – but also for the facilities they used along the way.

Among the caravanserais, which were the most costly element of the system, a distinction must be made between urban and non-urban structures. Urban caravanserais have as a principal function to stock goods brought by caravan from other regions before the distribution and sale in the city's market. Urban caravanserais lodged traders and animals, and a large number of this type of building still exists and functions in the bazaars of historical cities in Iran. Non-urban caravanserais were built along the tracks in often isolated areas. Access to them was usually public, but sometimes these buildings were divided in a public and a private part. They lodged members of caravans for short periods of time (often only a night or two) and provided protection from thieves and harsh weather conditions. Usually, any non-urban caravanserai had an entrance hall, lodgings, a courtyard and stables. Other components were added to this simple form according to the architectural and technical characteristics of the period when it was constructed.

Water sources were an equally important element in the maintenance of a tracks-and-caravans system. Depending on the geographical position of the caravanserais, there were diverse ways of responding to water needs in the context of caravanserai buildings. Some structures were thus built near to a river or a lake. But most of the time this was not the case. A large number of caravanserais in Iranian territory were established in desert-like areas and far from villages or natural resources. These caravanserais, which played a vital role in the system, relied on solutions such as deep wells and a facility called *Ab-anbar*, designed to stock fresh water during long periods of time. Between the caravanserais, the tracks as such usually consisted of nothing else than the natural ground, though sometimes limited modifications were made. Occasionally, trees might also be planted along tracks to offer some shade to travellers.

The system, like any other system of transport or circulation, required investments to function well. For the tracks-and-caravans system the main investments in terms of building, maintaining and developing came from governmental bodies, some private entities, and religious foundations known as *Wafqs*. Taxes would at times be levied to support the investments. In any of these situations, construction work could not be carried out without permission granted by the state: the system as a whole thus depended on political and economic decisions and strategies.

That such an apparently less developed system should have replaced the older road system of the Persian Empire may be seen as a sign of decline, but it responded to certain needs in its own way and was far from irrational. There were obvious economic advantages due to the lower cost of the infrastructure and its maintenance. The caravan system in the Iranian territory was successful in part because of the limited maintenance costs it required in comparison with the much higher expenditure needed for a fully functional road system. Caravan tracks required very limited building materials and maintenance and were mostly self-sustained.

This low-cost system was particularly well adapted to the specificities and the diversity of the Iranian territory. The natural characteristics of the landscape along with the exceptionally large distances that needed to be dealt with required an adaptable and flexible transport system. Tracks could be made to change directions without a major investment as long as enough hubs and caravanserais were in place. Mountain tracks and passes could be maintained open for animals and people at a much lower cost than if proper roads had been built.

### A historical trade and transportation system

Previous research at EVCAU (*Espace Virtuel en Architecture et Urbanisme*)<sup>2</sup> identified a vast network of non-urban caravanserais across the Iranian landscape. In view of their number (several thousands) and their historical permanence, it seemed crucial to study them in some detail.

We believe that non-urban caravanserais are the special constructions that best represent the economical, architectural and transport developments of Iran from the 8<sup>th</sup> century to the 18<sup>th</sup> century. As can be seen on the map, the presence of these constructions (non-urban caravanserais in blue) across Iran is pervasive. In order to achieve the objective of extending research into the subject we have, in a previous project,<sup>3</sup> followed a functional methodology to better compare caravanserai characteristics and functions in different periods of Iran's history. We first studied existing architectural documents of caravanserais.<sup>4</sup> We then produced a more precise digital version of these documents and plans. Afterwards, we identified functional components through a designated nomenclature. We summarized functional areas in order to describe the functionalities of specific caravanserais in various historical periods.

<sup>2</sup> Pierre Lebigre & Evangelos Thomopoulos, "Inventory of Caravanserais and Caravan Roads: Methods, Practices, Development", in *Proceedings of the Nara International Symposium for Digital Silk Roads*, ed. Kinji Ono (Tokyo, 2004), pp. 169-175.

<sup>3</sup> Vida Gholipour, "Analyse des caravanserais routiers de l'espace géo-historique iranien", Mémoire de Master professionnel «Transport et Développement durable», École des Mines de Paris (Paris, 2007).

<sup>4</sup> Wolfram Kleiss & Mohammad Y. Kiani, *Iranian caravanserais* (Tehran, 1995).



It is important to highlight that these representative samples were carefully chosen to avoid selecting exceptions and to create a representative sample that could be comparable with other samples.

### Safavid samples of caravanserais

From among the studied sample of caravanserais two Safavid caravanserais from the 16<sup>th</sup> and 17<sup>th</sup> century can be chosen to illustrate some characteristics of the system: "Riwade bostan" and "Zewareh" [Figures 18 and 19]. The functional analysis of these two samples, along with a comparison to other periods, has underlined some specifications in functional use of caravanserais during the Safavid era [Figure 20]. We have identified an important increase of equipment areas occurring in the architecture of caravanserais. These equipment areas were most likely used to stock merchandise and increase the comfort of occupants. So our major question regarding this era consists on why the Safavid dynasty invested in more areas for equipment in the caravanserais.

The first hypothesis coming to mind has to do with the improved general economic and commercial conditions during the Safavid era. The Safavid dynasty, being a religious Shiite government, also encouraged the existence of religious foundations and investments (*Waqf*) for traders and travelers to Mecca. There were more built caravanserais, and caravans could hold more merchandise and belongings. The Safavid dynasty's influence is one example of the dependency of the system on the will of the state. "Among the Safavid Shahs, 'Abbas (I) (1587-1629), was the chief architect of the modern Iranian state. He turned the kingdom into a cohesive and stable monarchy by securing the borders, establishing a central administration and bureaucracy, fortifying the economy and creating a standing army".<sup>5</sup> This stability most likely encouraged international caravans to pass through Iranian tracks.

The second hypothesis is based on our architectural study of caravanserais, and defined nomenclature of covered/non-covered spaces and types of roofs. We have here found an interesting point that may respond to our previous question. The architectural technical improvements were varied and took a distance from other periods by allowing for a greater liberty and flexibility in the formation of interior spaces. This reasoning can be easily illustrated through a comparison of accessible architectural documents. The plans of caravanserais built before the Safavid era are usually rigid and based on a system of thick walls. Construction practices and architectural progress under the Safavids helped to contribute to more flexible and com-

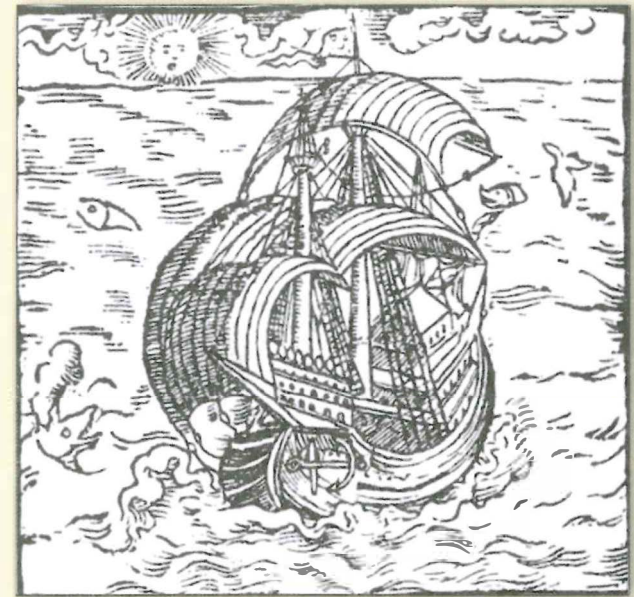
fortable caravanserai spaces. Equipment spaces ceased to simply respond to the basic needs of caravans – like providing security, a place to rest, and protection against the weather. During our period of analysis, the caravanserais, like other Safavid architectural masterpieces, contributed to a "better functional and architectural built environment".

### Summary

The study of the historical permanence of caravanserais has led us to affirm that the increase of their construction rhythm is likely dependent on an evolution of architectural forms and the improvement of methods of construction as well as the will of the state and a stable historical context encouraging investments. All of these three elements were high up in the hierarchy of priorities during the Safavid period. Construction work on caravanserais was highly dependent on the permission and influence of political authority in the country. This also allowed for a higher architectural quality of caravanserais with new types of technical and functional contributions to the comfort and security of caravans.

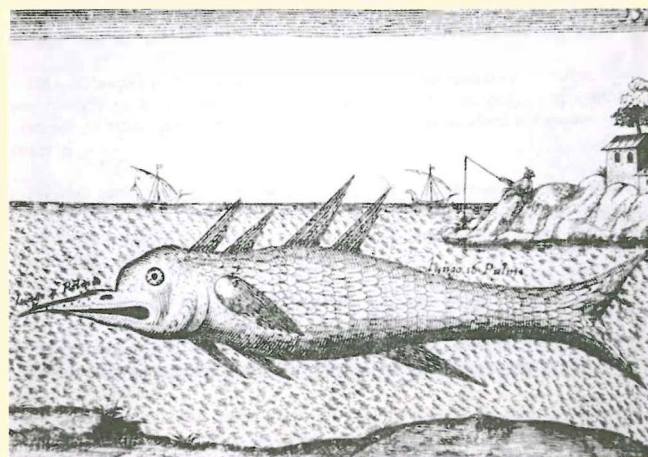
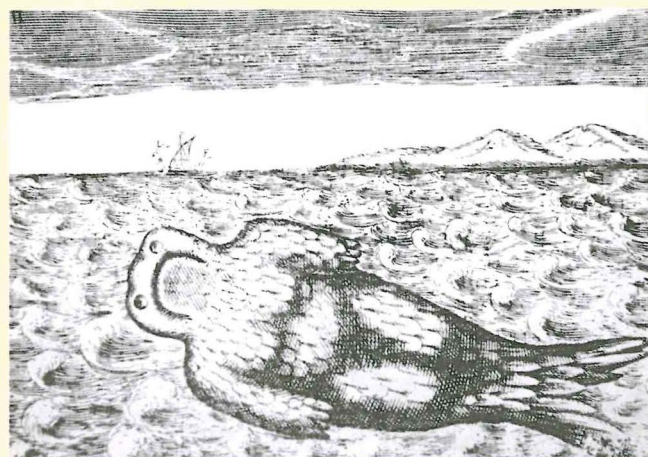
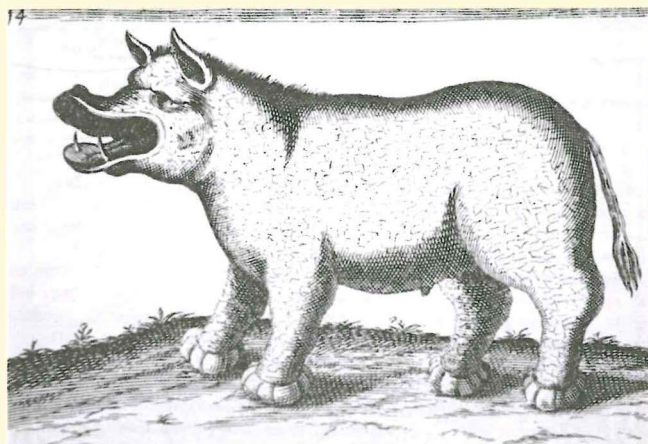
It can be concluded that the Safavid dynasty had a great influence on the development of the country's national transportation system. This development was the result of a wider progress in the economy, political stability, and developments in the construction techniques and architectural style of Iran. Commercial and cultural exchanges with other countries were another important feature of the period. Shah Abbas I was open to exchanges with European countries as well as other neighbouring areas in the region. This openness was the key to the improvement and reinforcement of a comprehensive system of tracks and caravanserais across Iran, from the far North to the far South. Governance methods in connection with the improvement of the economy and the creation of a standing army turned the kingdom into a unified and stable monarchy. This stability, in its turn, further encouraged international caravans to make use of the Iranian network.

<sup>5</sup> Mohammad A. Mousavi, "The Autonomous State in Iran: Mobility and Prosperity in the Reign of Shah 'Abbas the Great (1587-1629)", *Iran and the Caucasus*, vol. 12, n. 1 (2008), pp. 17-33.

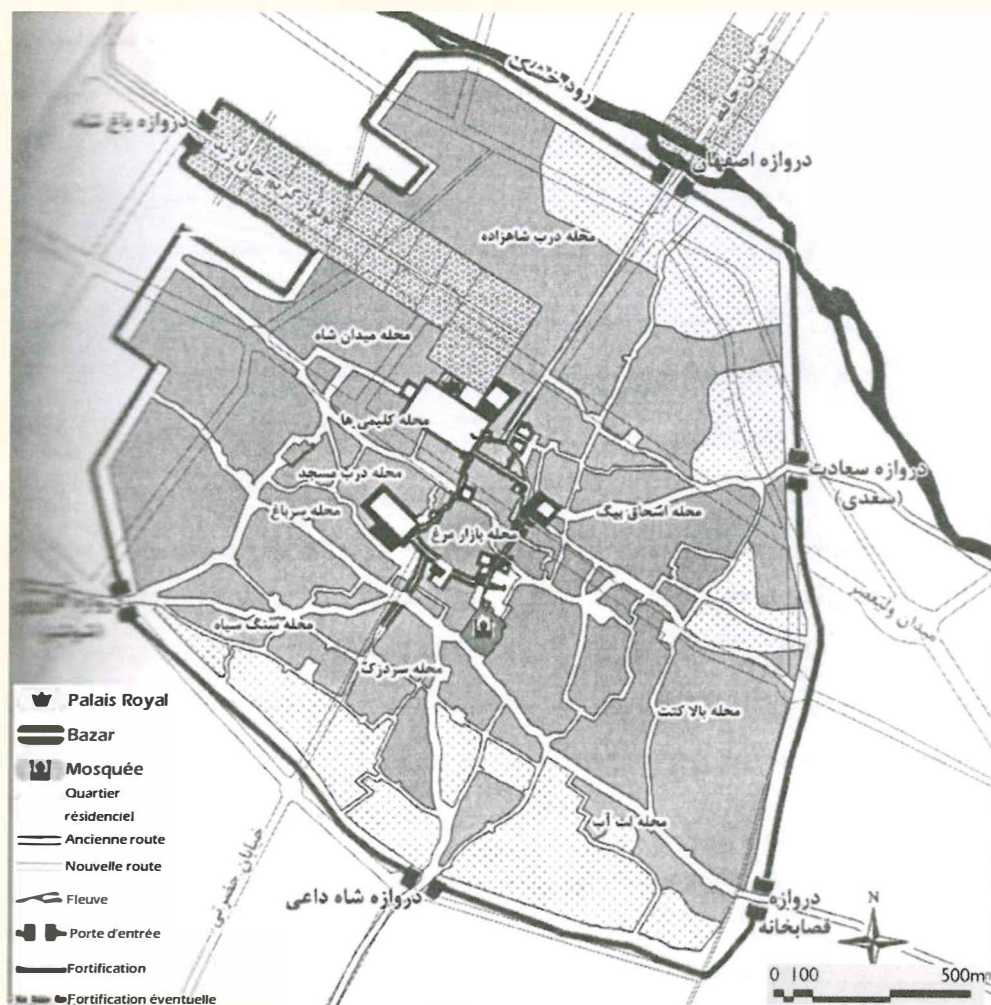


1. Embarcação a atravessar o Oceano Atlântico
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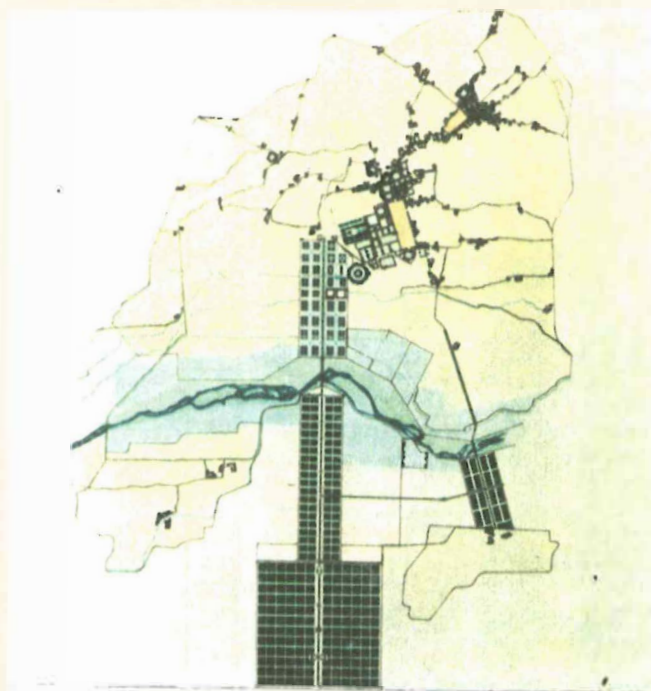
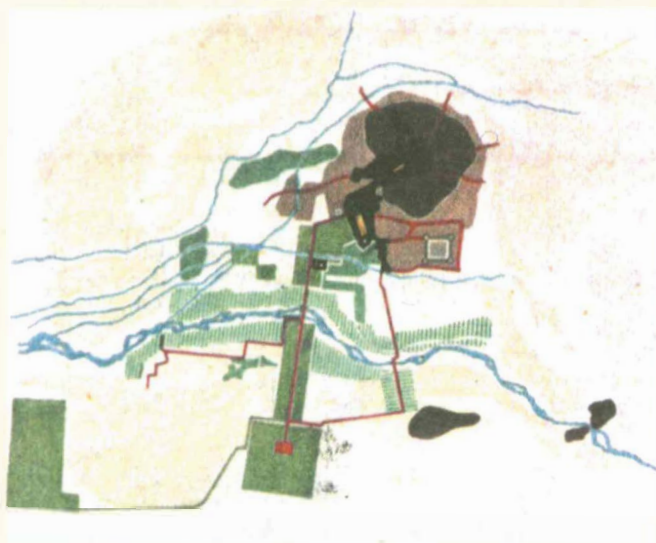
- 3. Peixe-cavalo ou cavalo-marinho (hipopótamo)
- 4 - 5. Animais aquáticos e serpentes
- 6. Golfinhos-malhados (*Stenella attenuata*)



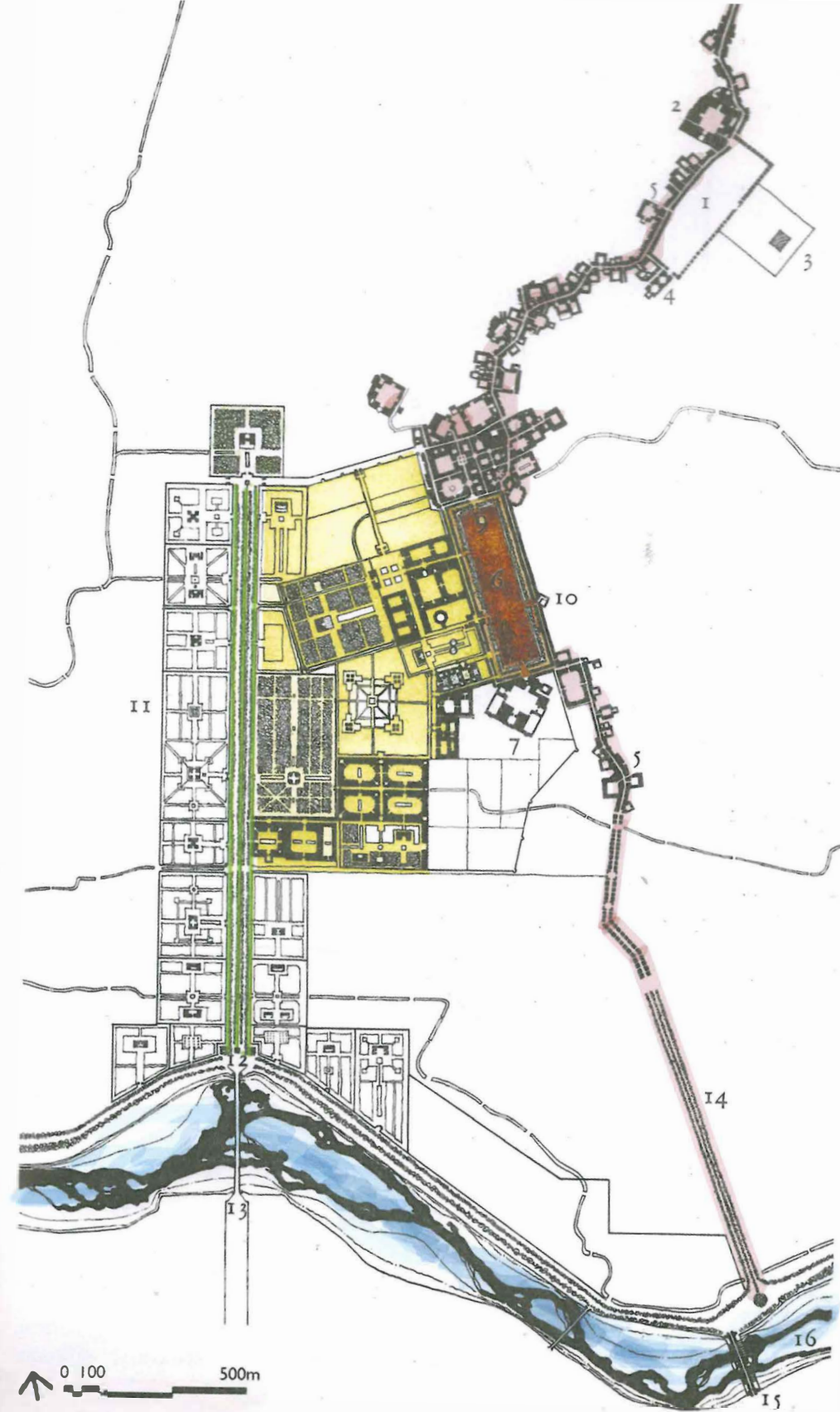
7. La ville de Chiraz à l'époque des Séfévides  
8. La structure principale d'Ispahan sous les Séfévides



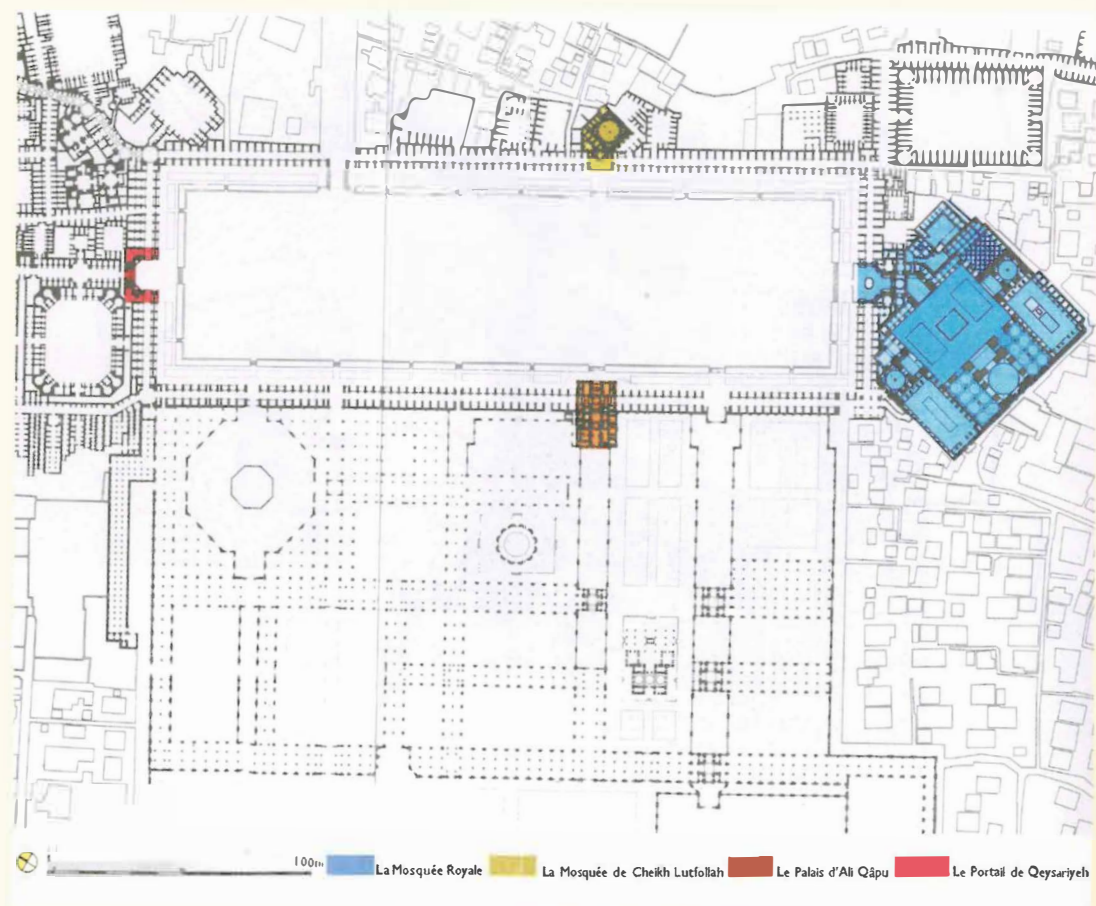




9. Le développement de la ville d'Ispahan  
 10. La dominance du nouvel axe de la ville d'Ispahan  
 11. Le nouvel urbanisme de la ville d'Ispahan



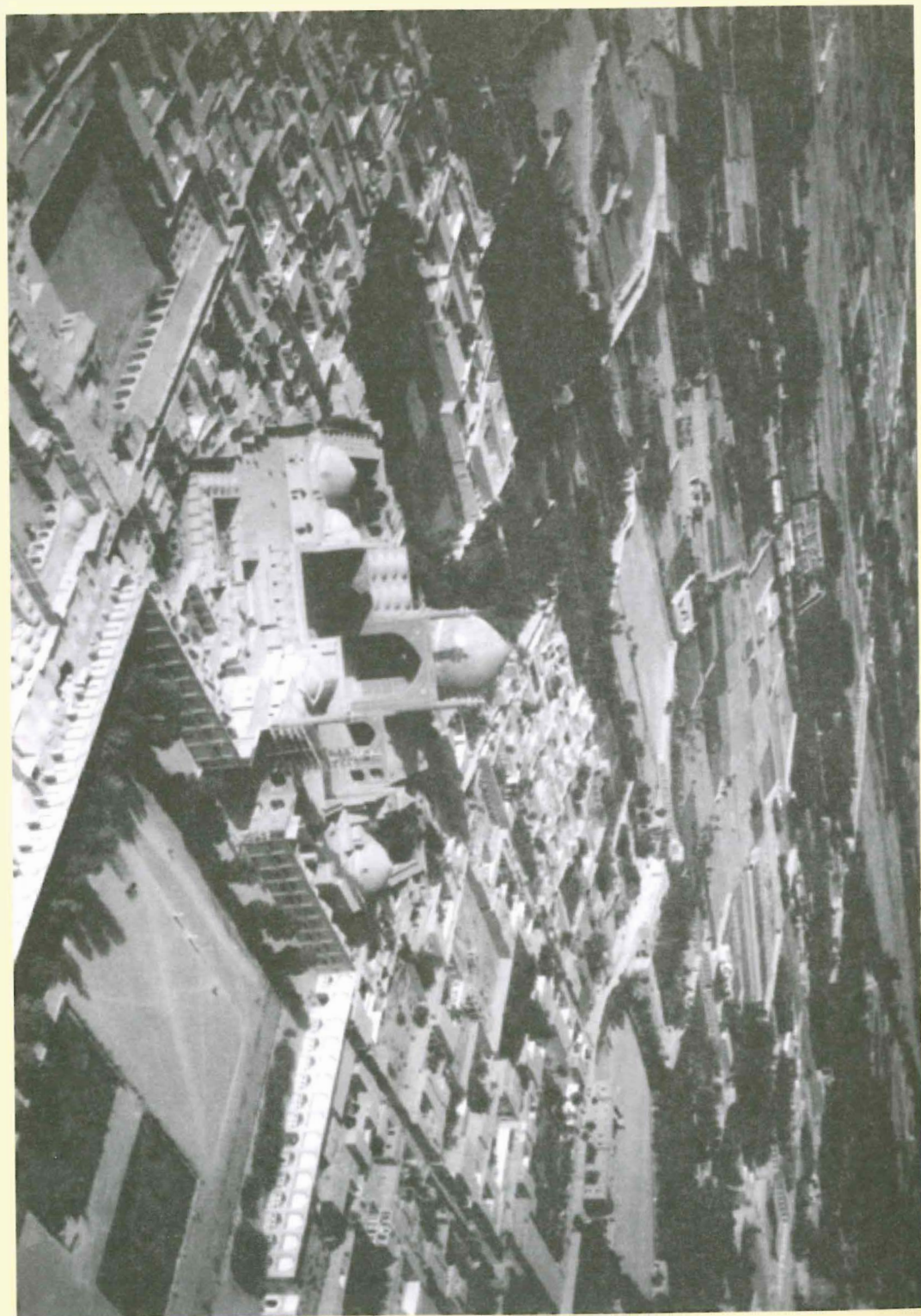




12. Le plan de la place centrale d'Ispahan  
13. La place centrale d'Ispahan à l'époque des Séfévides

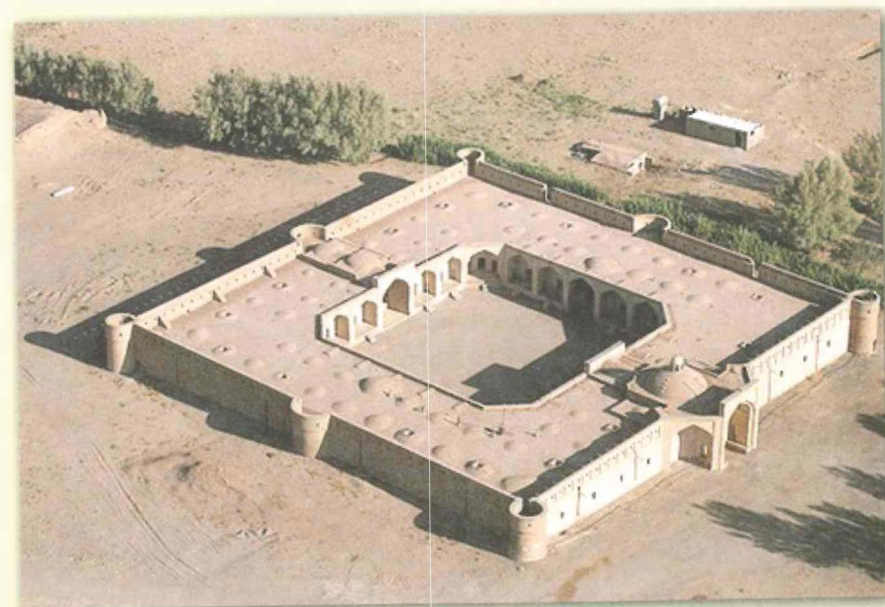






14. Photographie aérienne de la ville d'Ispahan  
 15. Vue du Meidân de la ville d'Ispahan





16. Cylinder seal with Persian king Darius (I)  
 17. Maranjab Caravanserai, Isfahan Province, Iran  
 18. Riwade bostan non-urban caravanserai, Iran  
 19. Zewareh non-urban caravanserai, Iran

