

THIRD TOURISM DEVELOPMENT PROJECT

SECONDARY CITIES REVITALIZATION STUDY

Jerash

Detailed description of the

city revitalisation program

Annex 1

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1. Executive summary

The main challenge that the historic core of Jerash is facing is to recover its urban centrality, address the disconnection of the two halves and be revived with a new "social and economic mission" within its regional context.

Form a **social** point of view, the revived historic core must contribute to build social cohesion amongst the different social groups providing a common federating space for the entire population, where the cultural heritage is preserved and enhanced in both its symbolic and economic role, and urban space is improved for the benefit of residents and visitors.

From an **economic** point of view, the revived historic core will contribute to addressing the current economic stagnation, boosting the existing and potential tourism activities, which are now concentrated mainly on the visit to the archeological site, re-establishing the broken relationship between the core and the archaeological site and expanding the visitors' experience on the east side of the wadi to include the East Baths complex, the suq and the main commercial spine.

Form an **urban** point of view, the focus is on the improvement of the socio-urban fabric and the improvement of the urban environment as a high quality civil space.

The project aims at achieving these objectives through a structured city revitalization program, that includes regulatory actions; physical actions; capacity building actions.

The most comprehensive actions of the program are concentrated on two urban structures. The first action is focused on the enhancement of the urban axis of the main commercial spine of King Abdullah Street, while the second development axis concerns the landscape restoration of the Wadi area, restoring its environmental integrity and transforming it in a new urban park with unifying functions both at the physical and at the social level.

The new Jerash historic core regulation will ensure the preservation of the significant characters and assets and the completion, with time, of the improvement of the public spaces.

Finally, to sustain the municipality and ensure its participation in the program, a specific capacity building action is envisaged.

ON THE RIGHT: AERIAL VIEW OF THE HISTORIC CORE OF JERASH



2. Scope of the program

2.1 JERASH

The **urban form** of Jerash is strongly marked by the vast archaeological site, of major international importance. The site faces the urban core across a wadi, with a Roman bridge (the **South Bridge**) connecting the two. The archaeological site (the Roman Decapolis City of Gerasa) is the second largest tourist destination in Jordan and an archaeological site of major international importance. The area is under the jurisdiction of the Department of Antiquities and includes the western half of the walled city, bounded by the Irbid Road, and extends southwards to include the Hippodrome and Hadrians Gate.

The **wadi** provides an environmentally significant corridor of open space that runs on a north-south axis through the heart of the historic core. The growth of the modern town was originated by the resettlement of Circassian refugees on the east bank of the wadi in 1878. They were attracted not only by the natural advantages of the site, but also the abundant supply of cut stone from the archaeological site for building houses. Their descendants still form a large part of the local population. The modern city initially developed in the immediate surrounding of the Roman Baths, basically where the mosque was also located; the site is just nearby the river feeding the thermal water system. The Circassian settlement has developed according to influences that may not be as immediately apparent as the strict lines of the Roman town planning at the heritage site, but still are not less significant. In this area, the **Old Suq** is the most significant and best-preserved focus of post-Roman historic buildings within the City, and although several buildings are in poor condition and indeed some are derelict, the area still retains the ambience of an active part of the city. The only remain of the Roman city on the west bank of the wadi is the **East Baths** complex.

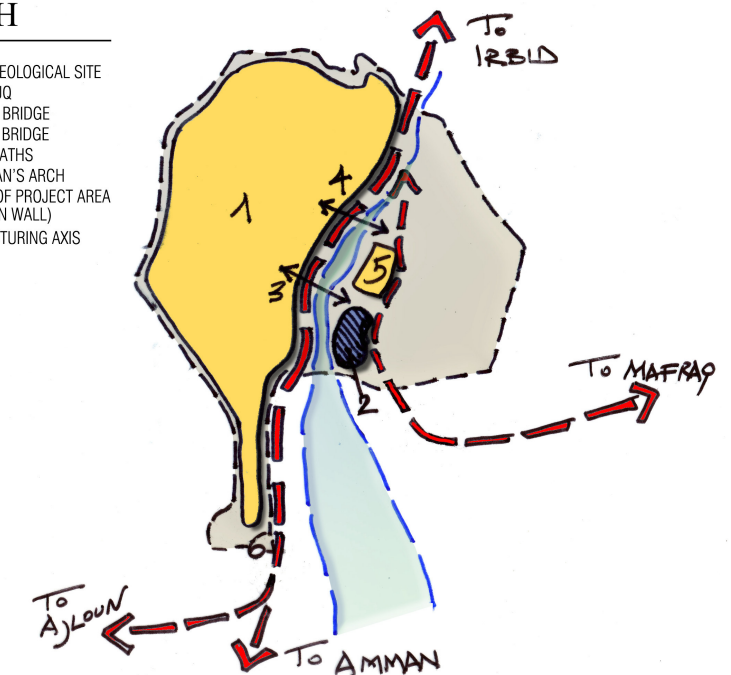
As Jerash expanded beyond the line of roman walls, through the 20th century and up to the present day, the eastern part of the Roman walled city assumed the typical urban role of the historic core, with the area around the junction of Bab Amman Street and King Abdullah Street being the focus of commercial activities.

The key feature of modern Jerash is the line of the **Roman walls** and some of the routes that lead into the core from them. Topographically the land rises to the east of the wadi and Circassian Jerash, within the walls, faces the heritage site to the west. The central commercial area includes a grid of streets bounded by King Abdullah Street to the west and King Hussein Street to the east. The ground floor of the majority of properties are retail or commercial premises with residential or commercial development above.

Jerash Governorate, which covers an area of 402 Km², is located in the northern region of Jordan. Jerash city, in Jerash Sub-District within the Qasabat Jerash District, is the main city in the Governorate. In 2004 the city counted a population of around 31,500 inhabitants and in the last decade it has experienced a demographic dynamic similar to the national one, increasing of around 25%. Furthermore, the fertility rate in Jerash is one of the highest in Jordan, standing at 5.4 children per woman, compared to 3.7 in Amman. Thus, Jerash boasts a young population: around 44% are below 19 years old and as such are school, college, or university students. The average annual household income of Jerash Sub-District is JD 4.810, the same of the Governorate as a whole; the poverty rate has declined by 10.33% from 1997.

JERASH

- 1) ARCHAEOLOGICAL SITE
- 2) OLD SUQ
- 3) SOUTH BRIDGE
- 4) NORTH BRIDGE
- 5) EAST BATHS
- 6) HADRIAN'S ARCH
- LIMIT OF PROJECT AREA (ROMAN WALL)
- ← STRUCTURING AXIS
- WADI



URBAN STRUCTURE OF JERASH

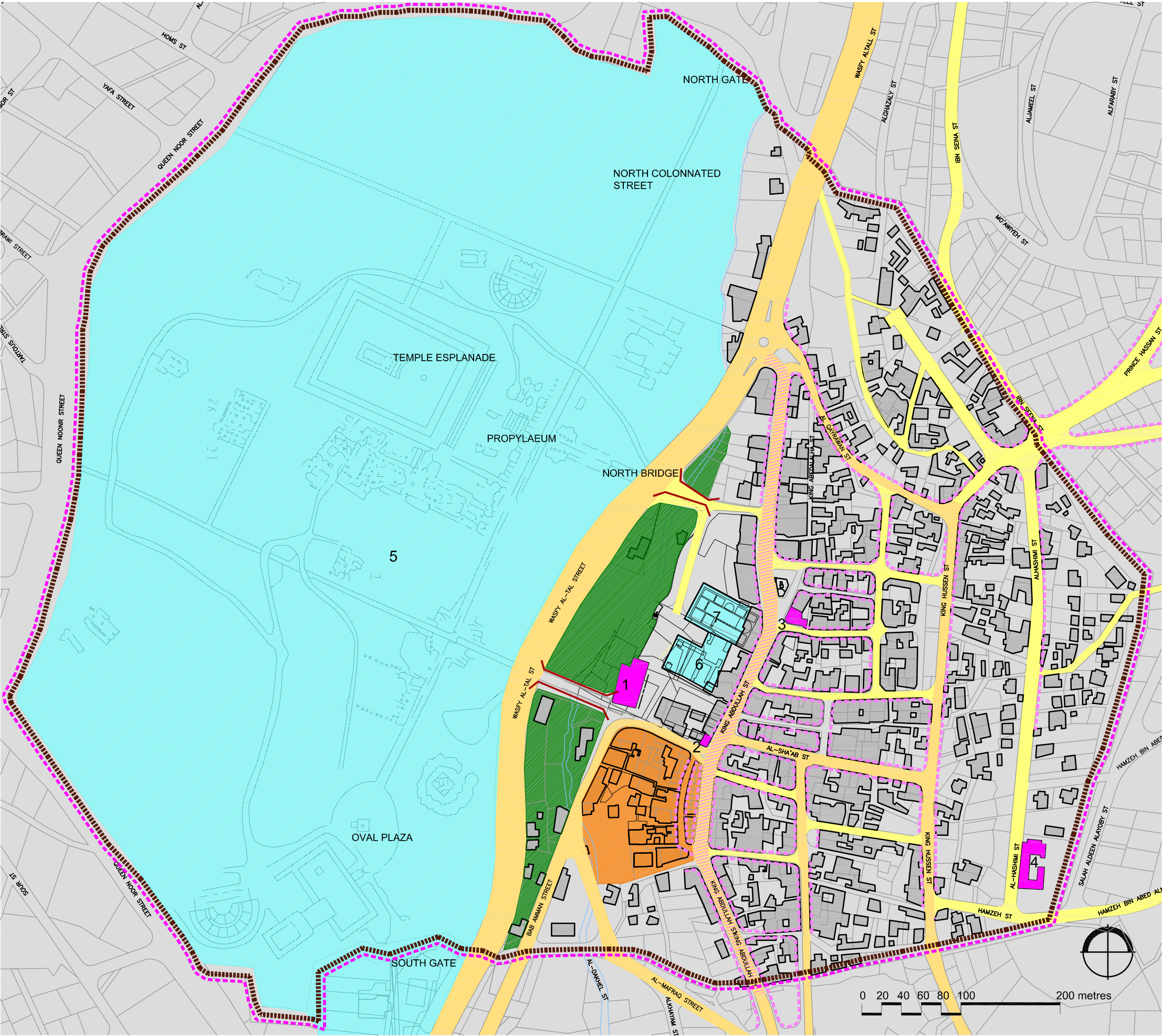


ENVIRONMENTAL DECAY OF THE WADI



VISUAL CLUTTER AT THE JUNCTION OF KING HADULLAH STREET WITH BAB AMMAN STREET

ANALYSIS OF THE PROJECT AREA



LEGEND

- CITY REVITALISATION PROGRAM PERIMETER
- MAIN STREETS
- OTHER IMPORTANT STREETS
- COMMERCIAL FRONT
- MAIN COMMERCIAL SPINE
- LANDMARK BUILDINGS
- ARCHAEOLOGICAL SITES
- WADI
- OLD ROMAN WALL (LAY-OUT)
- SOUK

LANDMARK BUILDINGS

- 1 MOSQUE
- 2 COFFEE SHOP (traditional building)
- 3 TRADITIONAL BUILDING 165
- 4 POLICE HOUSE

ARCHAEOLOGICAL SITES

- 5 ROMAN ARCHAEOLOGICAL SITE
- 6 EAST BATHS
- 7 BYZANTINE CHURCH

SCALE 1:4000

Only 35.8% of the 15+ years old population of Jarash Governorate are **economically active**, (only 9.2% of the females). This low level of activity is related to the high presence of young and the lack of work among women; in fact, the students constitute more than 1/3 of the economically inactive population, and the housewives more than a half. Also, 29.1% of the population is employed, only 6.6% of the females. The three most labor-intensive sectors are the public and armed forces sector (which employs 31% of the economically active population), the commercial sector (17.4%) and the education (12%). As such, excluding the education and public sectors and the army, the great majority of



JERASH - THE SOUTH BRIDGE TOWARDS THE MOSQUE



THE ARCHAEOLOGICAL PARK

Governorate population is employed in commercial activities. This is a clear sign of weakness of the local economic system, which has shown to be much less dynamic than the national one, which in 2004 has been able to create jobs mainly in tourism related sectors (such as hotels, restaurants, real estate and personal services).

Unemployment rate in Jerash Governorate is 18.9%, higher than the national one and have slightly increased in the last 3 years. This indicates a growing employment problem; there is a mounting discouragement among the potential workers who have become tired of seeking work: 74% of the economically inactive persons believe there are no jobs around. The unemployed are mostly educated holding diplomas or university degrees, and the trend over the past five years shows an increasing number of applicants for work in the government.

By the end of 2003, the Ministry of Labor has permitted 5,962 **foreign laborers** for work, 84% of them being Egyptians who work mainly in agriculture, construction and unskilled production.

In Jerash almost all establishments are small, employing less than 5 persons: manufacturing establishments have the biggest dimension and trade the smallest. 62% of businesses are in the commercial trade sector, mainly small retail shops, rather unattractive in their displays and in the quality of goods. Almost all stores are located in the commercial area of the historic core, in an area characterized by traffic, chaos and disorganization.

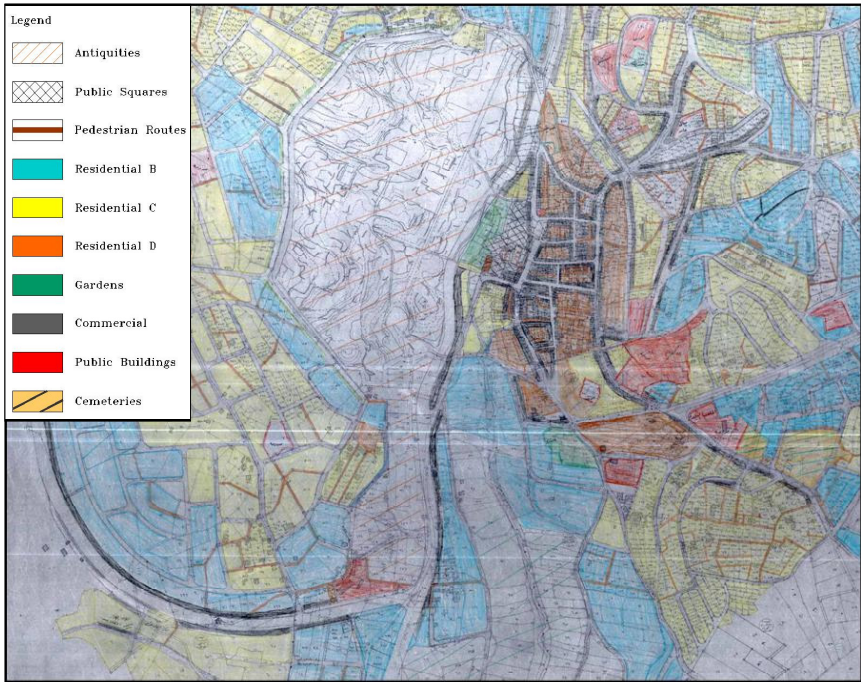
The **informal sector** is led by women aged between 25 and 45 years old who run their operation by themselves. In general, informal operators will be ready to sell away from their home at specified marketing places, even if not all are willing to attend training to enhance their product and make it more attractive. Apart from the absence of a fixed facility from where to display and sell the products in a sustainable manner, other major problems reported by informal operator are: (a) competition, mainly because they produce similar products and share the same market; (b) lack of marketing and outreach programs; and (c) lack of raw material. Besides it, finance is another need for the informal businesses. Currently in Jerash there are 5 institutions offering micro-finance to 826 informal businesses.

NGOs and CBOs play an important role in supporting the informal businesses and providing training and awareness raising. All are effective in offering specialized training in topics such as IT, sewing, food production techniques, how-to-start-your business courses, and political awareness raising. Those CBOs are the main outreach to the community, however coordination between their efforts is highly needed in order to organize the social dynamics of their work, and avoid redundancy and competition in resources.

Despite the significant tourist flows attracted by the archaeological site, **tourism related activities** are very limited, concentrated mainly in restaurants and souvenir shops located within the western side of the city, around the roman area. The archaeological site is under the jurisdiction of MOTA and the main rest house is operated by the Social Security Institution. For this reason, the two key sources of tourist income - admission ticket sales and catering - are not retained in the city. As such, the opportunities for the local community to benefit financially from the current flows of tourists are limited to the businesses generated by the craft/souvenir sales, the restaurants on the Irbid road, the petrol station and the nearby hotels, while the only employment opportunities are to

work as tourist guides, as catering or security staff and as stone masons/builders. Currently, there is no interaction between the tourists and the urban core, except when tourists stop for lunch at one of Jerash's restaurants. This is attributed to the attitude of tour operators who control tourists' path and to the non-existent link between the two parts of the city. Moreover, other aspects play a role such as the lack of appropriate tourist services and the closed attitude of the community.

The Jerash **Land Use Development Plan** reflects how "*the new town has developed accordingly to influences that may not be as immediately apparent as the strict lines of the Roman Town Planning at the heritage site, but they are no less significant*". The east bank of the Wadi, enclosed within the city walls is mainly destined to residential and commercial functions. The Residential zones are mostly of the D type while the Commercial zones are Longitudinal Commercial type. Inside the Residential D zones, narrow pedestrian paths are found, especially within the city quarters where traditional architecture is located.



THE CURRENT MASTER PLAN

A rather articulated zoning is found in the area included between the Wasfy Al-Tel Street, King Abdullah Street and Baab Amman Street. Aside the residential zone type C, the most important public area in the whole city is located; this area includes the East Baths and the Mosque. A green area (Parks and Gardens) was identified between the Wadi and the Wasfy Al - Tel Street.

Most of the areas for public buildings are located outside the Roman walls, particularly in the immediate surroundings of Hamzeh Street and Salah Aldeen Al Ayoubui Street. Outside the Roman walls, A, B, C and Residential Special zones are located aside Public Buildings and Longitudinal Commercial that are placed in the main street fronts. In the southern area, a prevalence of Residential zones type A, C and D are prevalent, alternated with Residential green, Commercial activities and Public buildings.

In Al Maggar, about 5 km east of Jerash, a light industrial zone is still to be completed. This area was created “to allow for the translocation of small industrial units from the town centre, particularly those that have harmful environmental or social impacts”.

The decline of the historical centre, the degradation of its urban and residential fabric and the crisis of its functions of centrality are strongly related to the general **weakness of the municipal institution**. The institutional assessment has shown that the weakness of the municipal institution is manifested on several interdependent levels, including (a) urban planning and management; (b) management of public spaces and urban services; (c) promotion and enforcement of sanitary and public health rules; (d) absence of coordination between the municipality and the public utility companies; (e) weakness of human resources and qualification; (f) organizational weakness; (g) weakness of financial management and of revenues generated by the municipality; and (h) absence of mechanisms of accountability and of forms of participation of the local population and stakeholders.

The condition of the **municipal infrastructure** has revealed some shortcomings, mainly concerning the storm drainage network. The existing storm water network, of a length about 1,500 m, covers the entire perimeter, mainly with 400 mm reinforced concrete and ductile iron pipes. This network needs maintenance. Moreover, additional storm water lines are needed in Al-Hashimi and in King Abdullah Street. The overall traffic situation is chaotic, and a good traffic management plan is highly needed. Parking in the historic core is not sufficient, and more parking should be provided around access roads.

2.2 KEY ISSUES

Nowadays, Jerash has to face a number of key issues affecting its social and economic development. These key issues include:

- 1) **Weakening of social cohesion.** The social fabric of Jerash is the result of a continuous immigration inflow of rural and immigrant population (mainly Circassian). The social cohesion has never been significant, and this continuous flow from outside highly contributes to further weaken the social structure of the urban community and to increase fragmentation. These elements, in turn, further undermine the local socio-economic base, and cause a new spiral of community decline.
- 2) **Break between the archaeological site and the city.** The archaeological site lives as a separate body form the rest of the urban fabric. The resident population feels this situation as a theft and a rapture. The existing tourist flows are perceived as a nuisance, and the Jerash festival is only a source of discomfort for the resident population. Disintegration of urban space. Anarchical use of space and uncontrolled urban development brings to the disintegration of the urban space, that disappeared as federating place and as pole of economic, social and urban centrality.
- 3) **Physical decay of the urban environment.** Urban space is affected by physical decay, traffic and parking congestion (with the resulting visual and acoustic pollution), lack of appropriate management and visual clutter. Urban fabrics are threatened by uncon-

trolled urban growth dissecting the traditional urban structures. Visual clutter, particularly in King Abdullah Street and the surrounding commercial area, is the result of physical decay of buildings and public spaces, presence of solid waste, uncontrolled signage and wires, traffic jams and uncontrolled parking. The wadi area, a significant potential environmental asset for the city, is affected by fragmented land use, encroachment and pollution.

- 4) **Threats to cultural heritage.** The built cultural heritage is threatened by lack of maintenance, neglect and encroachment. The archaeological site is endangered by a number of factors, ranging from adjacent light industrial workshops to unconcerned town-planning.
- 5) **Lack of socialization spaces** namely for the youth that form the majority of the population and that are lacking in cultural, educational and leisure activities.
- 6) **Decay and crisis of public spaces.** The main factors that affect the urban environment of Jerash contribute to decrease the quality of the urban space and of the experience of the city for residents, visitors and tourists.
- 7) **Economic stagnation.** The local economy is affected by a number of factors leading to economic stagnation. The archaeological site is an outstanding asset whose economic advantages do not benefit the local population, as the significant tourist flows that visit the site are not attracted to visit the historic core. The potential assets in terms of human resources, skills and culture, remain largely under-utilized.

2.3 MAIN CONCEPT OF THE CITY REVITALIZATION PROGRAM

The main challenge that the historic core of Jerash is facing is to recover its urban centrality, address the disconnection of the two halves and be revived with a new “social and economic mission” within its regional context.

Form a **social** point of view, the revived historic core must contribute to build social cohesion amongst the different social groups providing a common federating space for the entire population, where the cultural heritage is preserved and enhanced in both its symbolic and economic role, and urban space is improved for the benefit of residents and visitors.

From an **economic** point of view, the revived historic core will contribute to addressing the current economic stagnation, boosting the existing and potential tourism activities, which are now concentrated mainly on the visit to the archaeological site, re-establishing the broken relationship between the core and the archaeological site and expanding the visitors’ experience on the east side of the wadi to include the East Baths complex, the suq and the main commercial spine.

Form an **urban** point of view, the focus is on the improvement of the socio-urban fabric and the improvement of the urban environment as a high quality civil space.

The project aims at achieving this vision through a structured city revitalization program, that includes: (a) regulatory actions; (b) physical actions; and (c) capacity building actions.



THE ARCHAEOLOGICAL PARK

2.4 DESCRIPTION OF THE PROGRAM

The **target area** of the CRP is the historic core of Jerash, determined as the area circumscribed by the Roman wall. The physical action will concentrate on the portion of this area located to the east of Wasfy Al-Tal Street. This area has an extension of approximately 36 hectares.

Within this perimeter, the most comprehensive actions of the program are concentrated on two urban structures.

The first action is focused on the enhancement of the urban axis of the **main commercial spine** of King Abdullah Street. While the hypothesis of complete pedestrianization of King Abdullah Street has been discarded as premature at this stage of urban rehabilitation, a pilot parking management plan (97 parking stalls) involving the use of parking meters has been developed.

The **link of the historic core to the archaeological site** is ensured by the transversal axis that connects the junction of King Abdullah Street with Bab Amman Street, the adjacent Suq, through the South Bridge to the structuring axis of the archaeological site. The junction of the South Bridge with Wasfy Al-Tal Street is arranged with appropriate actions that will improve the visual and pedestrian continuity between the core and the archaeological site.

The second development axis concerns the **landscape restoration of the Wadi area**. The Wadi area is a highly characterizing feature of the historic core of Jerash. However, it has since now played a “separating” role. The actions aims at restoring the environmental integrity of the Wadi while transforming it in a new urban park, a new “central place” with unifying function both at the physical level (reconstructing a continuity between the core and the archaeological site) and at the social level (providing a new common federating space for the entire population).

To complement the Wadi action, the completion of the **East Baths development** has been envisaged, This action will complete the on-going development of the area and enhance the Wadi action, providing a new urban square, booths to showcase local products, and solving the condition of decay of the area near the North Bridge. The handicraft booths will showcase the traditional production, with an accent on the informal sector, thus creating an occasion for the visitors to better know the typical local products.

Finally, a development has been envisaged for the **ex-market place**. This area of 3200 sqm, located at the southern end of the Wadi, has been made available following the recent relocation of the market. Taking advantage of the morphology, the action envisages the development of a new urban square with an underlying parking to help addressing the high need for parking that characterizes the historic core.

The overall **upgrading of the street network** and of the public space involves the entire perimeter. Using different weights of intervention, this action will mark the territory of the historic core as a quality urban space, but will be limited to the “horizontal” part of the space (public property). The approach of the city revitalization program to the upgrading of the public space is two-fold. The upgrading of the “horizontal” part, typically public property, is ensured by the direct intervention of the project that will fund and implement the overall up-grading of the street network and of the public space. The upgrading of the “vertical” part (i.e. the façades of the surrounding buildings) will be facilitated by the new regulatory framework that will ensure an appropriate level of quality and sustainability of all the building activities, within the perimeter. After adoption and enforcement of the new regulatory framework, all the building activities carried on within the perimeter will contribute to the achievement of a highest quality space.

The most significant actions will concentrate on King Abdullah Street (main axis) and on other important streets such as King Hussein Street, Al Qayrawan Street, Al Sha’ab Street and Al Mafraq Street.

While the physical actions described herein will have the most immediate impact on the city, the new **Jerash Historic Core regulation** will operate in the background, gradually affecting all the aspects of the project area, ensuring: (a) the preservation of cultural heritage; (b) the continuous improvement of the urban environment; and (c) a baseline continuation over time of the city revitalization process.

The new regulations are designed to govern the land use and the building activities to ensure that these respect and are compatible with the character of the city and to provide for the protection of cultural heritage.

Since the UNESCO Chart of Venice for Cultural Heritage Protection, the concept of cultural heritage has been increasingly widened. Today, the concept of heritage is no longer confined to “monuments” but also includes approaches, extensive sites and whole urban complexes for which the criteria are no longer just architectural merit but unity, universality and urban and spatial coherence deriving from the combination of a series of elements which may be of fairly little artistic value in themselves.

It has been recognized that the preservation of historical continuity in the environment is essential for the maintenance or creation of living conditions that enable humankind to discover its identity, to find its bearings both in the historical context and in its geographical setting in the broad-

est sense (physical, ethnical, etc.) and to acquire a sense of security amid social upheaval through having fully understood the changes occurring and thus being better equipped to control their effects.

One of the most disturbing factors in Jerash urban environment is the visual clutter, particularly in the busiest commercial areas. Visual clutter could be the result of physical decay of buildings and public spaces, presence of solid waste, uncontrolled signage and wires, traffic jams and uncontrolled parking. The new regulation will contribute in keeping under control all these aspects, thus contributing to enhance the quality and livability of the urban environment within the perimeter.

Moreover, the continuous improvement of the urban environment will be further ensured by the specific norms concerning building rehabilitation works. The new regulation will keep under control the building rehabilitation and alteration activities of the private owners of buildings and will direct them in the direction of coherence with the overall city revitalization program.

Provided its institutional duties, Greater Jerash Municipality has a central role to play in the city revitalization program. For this reason, a **capacity building** action is envisaged. This action includes the resources needed for the successful implementation of the city revitalization program, including the new Jerash Historic Core Regulation.

As a result, it is expected that the improved municipal capacity will facilitate the launch and sustained continuation of the city revitalization process. Moreover, the new skills and management know-how gained by the Municipality within the context of the city revitalization program, targeted to the historic core, could be further expanded to cover the management of the whole city.

2.5 ECONOMIC SUMMARY

PROJECT ACTIONS		JD	US\$	%
J.01	Upgrading of the city core street network	1,663,606	2,348,064	28.16
J.01a	Rehabilitation of King Abdullah Street	234,328	330,738	3.97
J.02	The landscape restoration of the Wadi area	1,559,440	2,201,040	26.39
J.03	The East Baths Node	301,000	424,840	5.09
J.04	The reuse of the ex-market place for a new parking structure	1,825,936	2,577,181	30.90
Capacity building			457,650	5.49
1 JD = US\$1,41				
Total cost of Jerash CRP			8,339,513	100.00

OVERALL INVESTMENT COSTS BY ACTION

2.6 ACQUISITIONS

The acquisition of some lands/buildings, as described in the following table, is an essential pre-condition for the execution of the CRP. The Municipality will be responsible for the acquisitions within the deadline established by the implementation plan.

PROJECT ACTION	ACQUISITION OF	ESTIMATED COST
The landscape restoration of the Wadi area	Land and buildings to be demolished	450,000 JD
The East Baths Node	Existing market stalls	70,000 JD

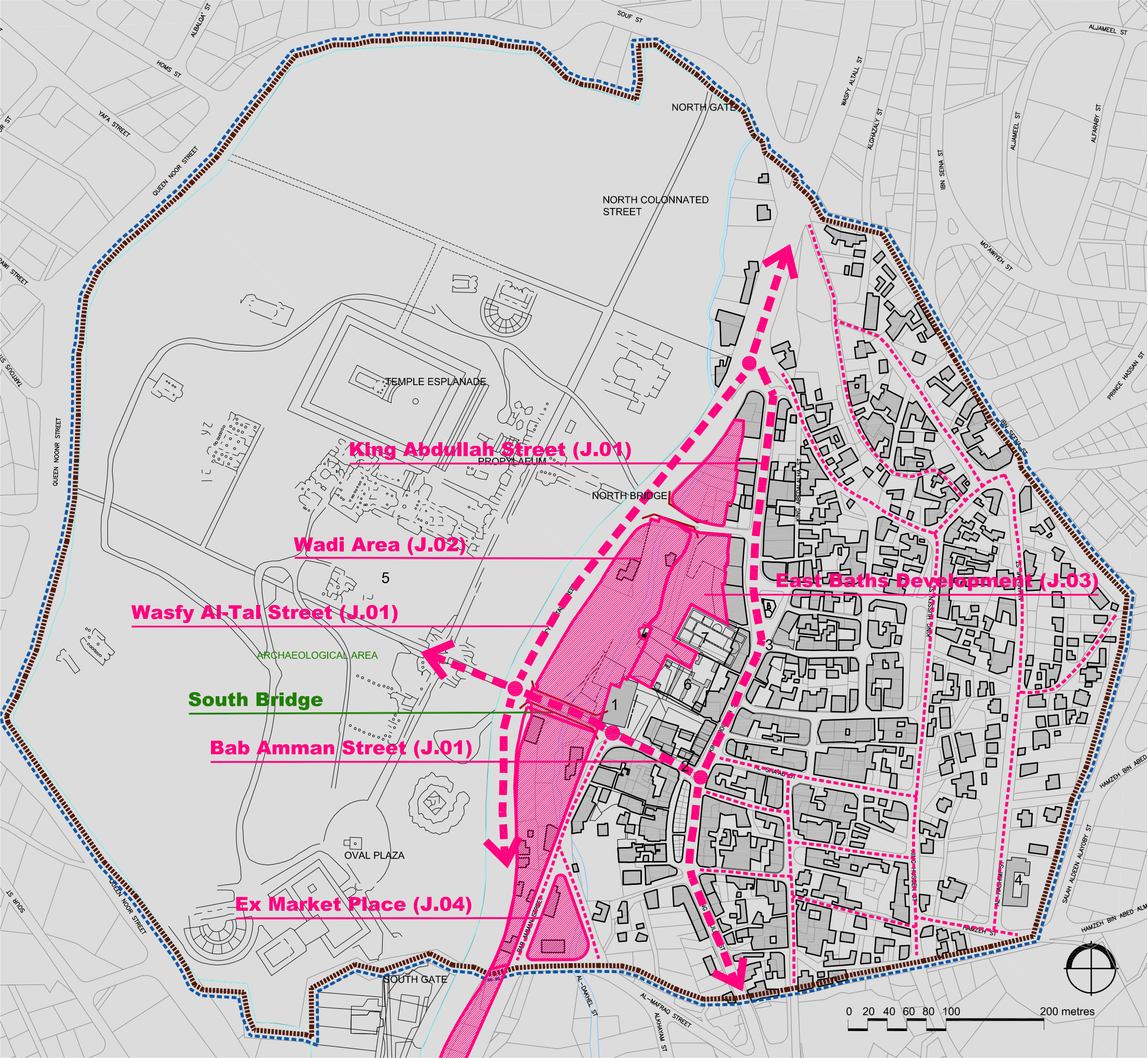
SUMMARY OF ACQUISITIONS

CITY REVITALIZATION PROGRAM

PROJECT ACTIONS

- CITY REVITALISATION PROGRAM PERIMETER
- MAIN URBAN INTERVENTION AXIS
- STREET NETWORK

- J.01 UPGRADING OF STREET NETWORK
- J.02 THE LANDSCAPE RESTORATION OF THE WADI AREA
- J.03 THE COMPLETION OF THE EAST BATHS DEVELOPMENT
- J.04 THE REUSE OF THE AVAILABLE OPEN SPACE PERTAINING TO THE EX-MARKET PLACE



SCALE 1:4000

3. The regulatory actions

3.1 JERASH HISTORIC CORE REGULATION

RATIONALE AND MAIN OBJECTIVE

Historic city centers in Jordan are a resource that can strongly participate to the improvement of the living conditions of the local communities.

However, in most cases, very little perception of this valuable asset is registered. While the identification of the causes which created the conditions for lack of awareness from the socio economic point of view will be approached and discussed in the related sections of this study, the proposed building regulations are designed to regulate the building activities and ensure that these respect and are compatible with the historic character of Jerash core city.

The regulations provide also for the protection of monuments, traditional buildings, green areas and open spaces (especially those that fit within a clearly identified archaeological/historical context). giving clear indications about the forms of intervention applicable to each context, the restrictions introduced and the level of protection to be achieved in the different cases.

Urban planning by means of zoning has been abandoned in these regulations to introduce an approach that more specifically focuses on the peculiar character of each and every component of the urban fabric. The regulations distinguish between categories of buildings and categories of interventions accordingly. The empty urban areas (lands) that are relevant to the valorization of the urban fabric are also treated and regulated in these regulations since they are to be considered an integral part of the historic city centre.

The policies set by the regulations are especially designed to maintain and protect the traditional functions by consolidating the existing multi-functionality. In all cases where buildings have a clear commercial purpose, such as those lining the King Abdullah Street, the regulatory policies confirm and reinforce this use through the rehabilitation of vacant or underused commercial structures.

Equally, the rehabilitation of residential buildings, mostly family houses, to be used as housing is strongly recommended in all cases where the original use was clearly residential.

The introduction/creation of alternative activities or the introduction of new or different functions is allowed by these regulations in the core city centre, provided that they are compatible with the characters of the traditional urban fabric. However, specific measures are indicated to dissuade or definitely forbid the introduction of activities that clearly conflict with the historic core characters or that, by introducing evident heavy changes, undermine the peculiar townscape of the core.

The objective of the new Jerash historic core regulation is to ensure protection while fostering live-ability for the residents and visitors. In line with this principle, the new regulation gives relevance to rehabilitation activities aiming at improving the living conditions of the inhabitants inside their houses, while ensuring compatibility with the required level of respect for the general aesthetic of the historic city centre.

The new historic core regulation introduces a prescriptive framework where allowed building alterations must be coherent with the constructive techniques and the urban context.

Incentives to building recovery, upgrading, conservation (that could be provided in terms of reduced or spread payments of building taxes) are highly effective and educational in determining a tendency towards emulation.

It is expected that upon an inception phase of around three months from the beginning of the CRP execution, the **Cross-Departmental Municipal Unit** (CDMU) established in each city will be able to provide the services and monitoring action that are designed for. A complete documentation with detailed information on categories of buildings and categories of interventions permitted under the **Historic Core Regulations** will be submitted by the CDMU by the end of the first six months of activity.

In the case of projects requiring an urgent implementation (i.e.: emergency conservation, private initiatives, etc.) a detailed survey and study will be carried out by a private registered professional (on behalf of the landlord). However, this will be permitted only in the case of urgent needs for the use of a specific property, either land or building. The professional in charge must own a proved experience in city revitalization planning and in conservation. A specific study must be based on the guidelines provided in this study.

LEGAL FRAMEWORK

Since the principal law governing heritage protection in Jordan stipulates that only buildings erected before 1700 AD are protected, it is important to identify alternative measures to ensure a legal framework for the protection of Madaba's built heritage.

The Cities, Villages and Buildings Planning Law no. 79/1966 provides for the adoption of a master plan, and indicates that specific regulations can be adopted for built heritage. Under this law, the municipality must declare the Madaba historic centre (historic core) a protected area in which special urban planning regulations are to be applied.

Another possibility consists in promoting legislative change that would allow buildings built after 1700 AD to be classified as heritage and thus be protected with the approval of Interim Law No. 49/2003 for the Protection of Urban and Architectural Heritage.

Anyway, a new comprehensive legislation focusing on heritage also addressing the issues concerning urban revitalization is expected it will be introduced as a result of the currently ongoing debate at the various level of the Jordanian society. However, the time necessary for issuing and enforcing a new law would by far exceed any realistic timeframe for the implementation of the CRP.

This is why guidelines are provided in this study to allow the local authorities to bypass the lack of a specific legislation by avoiding overruling the instruments of regional and urban planning currently in use in Jordan but rather making the best use of them.

This will permit the local authorities to implement the CRP based on the

current legislation without renouncing to the adoption of the currently highest international standards.

OBJECTIVES

- To identify the boundary of an action area (historic core) as a special conservation district with appropriate conservation and development control standards.
- To describe buildings or groups of buildings and urban areas to be protected, conserved or rehabilitated according to provisions that are specific for each building and work category.
- To set standards to be observed in the works of maintenance, restoration and improvements and conditions governing the new constructions.
- To introduce regulatory criteria for the improvement of public open spaces.
- To set restrictive measures (designing buffer zones) for the protection of the Archaeological Sites: identifying a special conservation zone for the ruins, like East Baths, within the Walled City; and designating a buffer zone around the Roman City, where limited development will be allowed;
- To regulate all those "factors" that could cause visual clutter including: street signage; advertising and light signs of public and private activities; public lighting; urban furniture (public toilets, benches and others seats, telephone, booths, garbage containers, clocks, automatic dispensers, etc.).

DESCRIPTION

The new regulations will apply to a very specific portion of territory referred to as the "historic core" of Jerash.

The urban morphology helps to identify a logical perimeter for the city revitalization program. This area is determined as the portion of the region circumscribed by the ancient roman wall. The west part of the area is mostly occupied by the archaeological site of the ancient Roman city of Jerash (Gerasa), which is placed under particular conservation rules referring to the National Law about Archaeological Heritage.

In fact, for the city of Jerash it must be said that the regulatory action is especially designed to favor an improvement of ties between the western side (mostly archaeological) and the eastern portion of the core city. In the meantime, specific restrictions (§ 4.7 of the Historic Core Regulations) are introduced in the core city to avoid that possible further archaeological and historic evidences on the East side of the city will be neglected or even worse get lost in the future due to an aggressive urban development process.

The main consideration behind the decision of setting restrictions on the East side of the core city arises from the results of the Archeological and Historical research conducted so far. In fact, this research, when this was made possible before interventions of urban development were carried out,

made it evident the existence of several remains on this side of the city.

Unfortunately, several remains (including ancient villas with mosaics, etc) were lost and as such the integrity of the East-West city pattern went lost as well, in the past due to the lack of a more specific regulatory policy.

In Jerash, one of the expected results to achieve with the Historic Core Regulation is that by implementing a wise policy of use of the empty lands as well as of building conservation, it will be possible through the years to favor a better [site interpretation of the ancient city as it was in its original integrity](#) not only North-South but also East-West oriented.

The historic core (east part of the Walled City) is delimited by the Amman-Irbid Street to the west, and by the Roman Wall on the other sides. This perimeter includes most of the other archaeological sites and heritage items of the city of Jerash, evidently known to date, and without any doubt the most important ones so far.

Any change to the buildings and to the urban consistency within the perimeter, must abide with general criteria of conservation, integral recovery and comprehensive urban improvement.

Special attention will be paid to the peculiarities of the specific parts of the urban fabric, of the Historic Archaeological evidences, the buildings, the open spaces and the infrastructural networks of historic, artistic and documentary interest, in total respect of the specific constructive and furnishing components that make them different. The Market Plaza around the East Baths or the Old Suq, are examples of urban areas to regenerate and improve under special regulation.

The new regulation focuses on modes of use and alteration of the buildings and related plots, and provides for specific urban and architectural prescriptions as well as implementation modalities for the city revitalization program actions.

SUMMARY OF REGULATORY PROVISIONS

- **General provisions:** context of application; core boundary; definition and classification of buildings; action project areas; role of the CDMU.
- **Operative tools** for regulatory implementation: rules for permits and release modalities; categories of intervention.
- **Building use:** public spaces; architectural requirements; prescription for street furniture.

3.2 PARKING AND TRAFFIC MANAGEMENT

PILOT PARKING METERS ACTION

The physical action J.01 - Upgrading of the street network - includes the realization of 97 parking stalls along King Abdullah Street, in order to improve the streetscape of Jerash commercial core.

The new parking stalls will be managed by the Municipality as pilot payment parking through the provision of parking meter machines to be located within the parking stalls, with a ratio of one parking meter every two stalls. The Municipality will be the only authority in charge of the management of the parking stalls, and will therefore be responsible for

enforcing the payment of the fee and for collecting the money from the machines.

In order to design a suitable management scenario for such an action, and to correctly estimate the revenues of such an activity for the Municipality, some preliminary assumptions have been made:

- 1) the payment timeframe will be from 6 a.m. to 10 p.m., thus the parking meters will be operational 16 hours each day. Parking after 10 in the evening will be free;
- 2) parking will be free on Friday and Saturday;
- 3) the parking fees will vary according to the time length of a car stop. According to available data, currently in Jordan parking fees rise from 0.25 to 0.75 JD; as for the King Talal Street new parking stalls the fee schedule would be as follows:

0,25 JD/hour	for the first hour
0,50 JD/hour	after the first hour
0,75 JD/hour	after the second hour

- 4) a monthly subscription of 15 JD would be available;
- 5) the parking stalls users will be divided into three different categories:

50% would be people coming to the city centre for shopping, thus they will occupy the parking for 1 hour on average;

30% would be people coming to the city centre not only for shopping reasons but also for business and to reach the public administration bureaux and will therefore occupy the parking for 3 hours on average;

20% would be the owners of the many commercial activities located in the commercial core, and they will occupy the parking for 8 hours a day on average each working day; most probably, those people will buy the monthly subscriptions in order to save their money without incurring into fines.

As shown by the following table according to the hypothesis above, each parking stall will be occupied by the same car for 3 hours on average, and the hourly fee paid by each user will amount to 0.43 US\$.

Users category	Parking average length	% of total users	Hourly fee	Average hourly fee
Shoppers	1 hour	50%	0,35	0,04
City centre visitors	3 hours	30%	0,71	0,21
Shop-keepers (subscribers)	8 hours	20%	0,21	0,18
Average			0,43	

On the other side, with reference to the running costs that the Municipality would afford in order to manage the parking network, they will fall mainly under two items: personnel costs and maintenance costs.

As for personnel, considering that the 48 parking meters will function 16 hours per day, 5 public employees will be necessary in order to control and collect the money: 4 8-hour shift employees plus a supervisor. According to the cost estimates presented in Section 5 of this Annex as for the recruitment of personnel, an annual cost of 3,360 US\$ can be estimated for each public employee, thus resulting in a total cost of 16,800 US\$ per year for the personnel in charge of the management of the payment parking.

As for the maintenance, it has been estimated an annual cost of about 10,000 US\$ per year.

Annual running costs	26,800
Personnel (4 employees + 1 supervisor x 2,380 JD per year)	16,800
Maintenance	10,000

Given the above, it can be stated that the pilot payment parking action will result to be rather remunerative for Jerash Municipality, since the financial breakeven of the action will be reached with only 21% of the parking stalls normally used.

Average hourly fee	0,43
Parking hours supplied yearly (16 hours/day X 97 parking stalls X 250 days)	388,000
Breakeven	62,255
Parking stalls occupancy breakeven rate	16%

This means that if the occupancy rate of the payment parking rises to 50%, the Municipality will gain almost 56,000 US\$ per year.

TRAFFIC MANAGEMENT PROGRAM

In the medium term, a more comprehensive [traffic management program](#) is to be developed and enforced, to organize, administer, govern and rule the vehicular traffic within the historic core. The objectives of the traffic management plan will be:

- 1) to make the safest and most productive use of existing road-based transport system resources;
- 2) to adjust, adapt, manage and improve the existing transport system to meet specific objectives, including (but not limited to) the protection of the most sensible components of the urban environment;
- 3) to maximize the effectiveness of existing infrastructures, in order to avoid or minimize capital expenditures;
- 4) to improve traffic safety and protect the most vulnerable traffic components, such as pedestrians, bicycles and other non-motorized vehicles;
- 5) to reduce the impact of road traffic on the environment (i.e. to reduce pollution, noise, etc.).

The contents of the Traffic Management Program will include:

- 1) traffic regulation (junction canalizations; signing and lining; traffic signals; area traffic control; pedestrian facilities and street space management; facilities for bicycles and other non-motorized vehicles; bus priority);
- 2) demand management (parking management; control and pricing; traffic calming; pedestrian only zones);
- 3) road use and classification (functional classification of road networks; road use regulation);
- 4) road safety (institutional arrangements and practices; accident data collection and analysis and remedial engineering; enforcement and education; road user education, enforcement, including equipment and training).

4. Physical actions

4.1 J.01: UPGRADING OF THE STREET NETWORK

ABSTRACT OF THE PROPOSED PROJECT

The project's objective is that of creating a new circulation pattern within the historical city core that will rationalize the allocation of spaces dedicated to vehicular and pedestrian traffic.

In particular, the project focuses on the solution of the following site-specific problems:

- The rationalization of the pedestrian crossing connecting the South Bridge to the archaeological site (SEE SOUTH BRIDGE JUNCTION - SITE SPECIFIC ACTION).
- The enhancement of the visual connection between the western exit of the South Bridge and the archaeological site.
- The rationalization of the street section of King Abdullah Street.

The project proposes different levels of intervention depending on the location of the different streets and their role within the overall circulation dynamics within the urban fabric. The project aims at creating an integrated network of pedestrian of paths so as to allow for an overall upgrading of the urban environment and its quality of life.

Below-grade infrastructural refurbishment will be provided in connection to the proposed road works including the provision of an efficient storm water drainage system.



VIEW OF THE KING ABDULLAH STR.

Vehicular accessibility shall be maintained for the entire area.

The necessary rationalization of vehicular movement through the historic core will be accomplished through the development of an organic traffic management plan during the detailed design phase.

The enforcement of traffic regulations and the careful reshaping of the street sections with the provision wherever possible of wider sidewalks and street side parking stalls for private cars and for loading and unloading of commercial goods will be necessary contributions to the overall success of the project..

ASSESSMENT OF THE EXISTING INFRASTRUCTURAL SITUATION AND PROPOSED INTERVENTIONS

TRAFFIC

The historic core of Jerash is completely taken over by the vehicular traffic and informal car parking and the overall physical conditions of the street network are generally rather precarious. Street sections are often too narrow to allow for the provision of efficient sidewalks and/or street side parking.

Parking in the historic core is not sufficient, and a good traffic management plan is highly needed.

The two main streets in the central retail hub of Jerash, Bab Amman Street and King Abdullah Street, are characterized by dramatic traffic congestion and by the absence of proper sidewalks which creates constant conflict between pedestrian and vehicular movement. The original function of the suq as the traditional urban meeting place is therefore slowly disappearing due to the progressively decreasing areas reserved for pedestrians.

The project will cover the entire street pattern of the historic urban core.

Possible opposition from shop owners and car drivers to vehicular traffic restrictions is expected.

SOLID WASTE COLLECTION

The Municipality of Jerash is in charge of street cleaning and solid waste collection.

The Municipality is not equipped with enough vehicles for the collection of solid waste and the operative efficiency of the system is very low with dramatic consequences in terms of urban decor.

STORM WATER DRAINAGE

The existing storm water network, roughly 1.500 mts. long, covers the entire study perimeter. The network is composed primarily of 400 mm. diameter reinforced concrete & ductile iron pipes. This network needs maintenance.

Many of the street inlets of the existing system are not positioned correctly and will need to be substituted and relocated following an accurate site survey and detailed re-design of the street sections.

In particular, both Al Hashimi Street and King Abdullah Street need new 400 mm. diameter storm water drainage lines, the former for a length of about 200 mts., the latter for about 100 mts..

The lowering of Wasfi Al-Tal street will bring about the need for a new

portion of the network so as to avoid flooding of the lower portion of the street section and the discharge of storm water into the nearby wadi. The new line should employ 400 mm. pipes for a length of about 200 mts. (SEE RELATED SITE SPECIFIC ACTION).

A new, 120 mt. long 3 X 3 mt. box culvert is necessary, on the site of the ex-market place, in order to connect the two existing ones at the junctions of Al Mafrag Street with Bab Amman Street and Al Mafrag Street with Al Dakhel Street (SEE RELATED SITE SPECIFIC ACTION).

WATER SUPPLY

Water supply is provided by the Ministry of Water and Irrigation and the existing network covers the entire historic core.

The network is less than 10 years old and it employs ductile iron pipes, polyethylene and galvanized branch pipes.

The network is in good condition, therefore future road construction works should be managed so as to avoid any damage to the existing pipes.

SEWAGE

The construction of the existing network began in 1984 and it now covers the entire study perimeter.

The network is in a good condition, and maintenance is done by the Water Authority.

Substitution and relocation of the main sewer lines (500 mm./350 mm./250 mm.) may be necessary in connection with the construction of the multi-level parking facility on the site of the ex-market place (SEE RELATED SITE SPECIFIC ACTION).

Adjustment of manhole covers will be necessary as a consequence of the new street profiles.



EVERYDAY TRAFFIC ON KING ABDULLAH STR.

ELECTRICITY

The Irbid District Electricity Company supplies electrical power to the city, and the existing network covers the entire study perimeter.

70% of the total demand is provided by the Rihab power station while the remaining 30% is provided by the Al Sobehi.

An additional power station is under construction at Ishtafins, but within two years the Jerash District should be connected to the Irbid network.

PUBLIC LIGHTING

The historic core is completely served by the existing system which is none the less old and needs substantial upgrading.

TELECOMMUNICATIONS

The study perimeter is completely covered by the Jordan Telecommunication network.

COST ASSESSMENT OF INFRASTRUCTURAL UPGRADING**STORM WATER DRAINAGE**

ITEM	Quantity	Unit Rate	Total (JD)
Al-Hashimi Str. 400 mm. reinforced concrete pipes.	200 mts.	75 JD/mt.	15.000
King Abdullah str. 400 mm. reinforced concrete pipes.	100 mts.	75 JD/ mt.	7.500
Wasfi Al-Tal str. 400 mm. reinforced concrete pipes.	200 mts.	75 JD/ mt.	1.500
New inlets & man-holes.	Lump Sum		20.000
Ex - market place Box culvert 3 x 3 mt..	120 mts.	600 JD/ mt.	72.000
TOTAL			116.000

WATER SUPPLY

ITEM	Quantity	Unit Rate	Total (JD)
Repairing eventual damage caused by street rehabilitation	Lump Sum		57.900
(King Abdullah str.)	Lump Sum		9.600
TOTAL			67.500

SEWAGE

ITEM	Quantity	Unit Rate	Total (JD)
Adjustment of manholes	100 (Number.)	50 JD	5.000
Ex - market place Substitution and relocation of sewer lines			
500mm	170 mts.	200 JD/ mt.	34.000
350mm	120 mts.	150 JD/ mt.	18.000
250mm	50 mts.	140 JD/ mt.	7.000
TOTAL			64.000
FINAL COST			247.500 JD

PROJECT RATIONALE AND MAIN OBJECTIVE

As a complement to the landscape restoration of the wadi and the rationalization and visual enhancement of the connection of the Old City to the archaeological site, the improvement of the streetscape and circulation patterns enhance livability and environmental conditions in the historic core, by making pedestrian movements safer and more pleasant.

The principal project objectives are:

- Improvement of the environmental quality of the public space in the historic core through the creation of a pattern of safe pedestrian paths, linking the exit of the archaeological site at the South Bridge/East Baths junction and the various points of interest within the Jerash city core.
- Improvement of the municipal infrastructural framework through the refurbishment of damaged below-grade utilities, including the provision of an efficient storm water drainage system (SEE DETAILED ASSESSMENT).
- Re-creation of original function of the suq as the traditional urban meeting place through the integral refurbishment of the King Abdullah Street section, in connection with the provision, wherever possible, of private and commercial street side parking facilities for visitors, residents and shopkeepers.
- Re-design of the other street sections in the city core, in order to improve the architectural and functional quality of the historic streetscape and the spatial continuity of the existing network economic activities
- Reorganization of the vehicular circulation with the provision of speed reducing devices and other traffic regulation measures, according to the design and planning criteria of an organic traffic management plan to be developed during the detailed design phase.
- To encourage private owners to rehabilitate the buildings flanking the refurbished streets within the framework of the new historic core

regulation

Moreover, the action is focused on the solution of site-specific issues that include:

- the rationalization and beautification of King Abdullah Street;
- the rationalization of the pedestrian crossing connecting the South Bridge to the archaeological site.
- Main Project Elements

The project will provide the integral refurbishment of the street network of the historical core according to the following typological categories:

Type A) PRIMARY STREETS (KING ABDULLAH STR.) - This street and its connection to the South Bridge which is the city's principal infrastructural system will be provided with wider sidewalks with 30 cm. curbs, new street lighting and street side parking for private and commercial vehicles. A significant portion of the street will be provided with parking meters for a total of 51 parking stalls. Below and above grade infrastructural refurbishment will be provided. Considering the predominant commercial role played by the street and the heavy vehicular traffic which populates it on a daily basis, the carriage way will be paved in bituminous asphalt and the sidewalks will be in modular concrete elements with local natural stone curbs. The street will also be provided with storm water drainage mains, drains and traps (SEE DETAILED ASSESSMENT). Street side planting of autochthonous tree species will be provided.



VIEW OF THE NORTH BRIDGE JUNCTION

LEGEND

EXISTING TELE NETWORK

TELE NETWORK

STORM WATER NETWORK
(EXISTING+PROPOSED)

EXISTING STORM WATER LINE

— PROPOSED LINE

 PROPOSED MANHOLE PROPOSED INLET

 (1) EXISTING (3m x 3m) BOX CULVERT

② EXISTING (3m wide x 3m height) BOX CULVERT

 (3) EXISTING (3m x 3m) BOX CULVERT

===== PROPOSED (3m x 3m) BOX CULVERT GOES WITH THE PATH OF THE WADI

SEWERAGE LINES
(EXISTING+PROPOSED)

EXISTING SEWERAGE LINES UNDER THE EX-MARKET PLACE

..... PROPOSED SEWERAGE LINES







VIEW OF THE MOSQUE AND THE ADGIACENT SOUTH BRIDGE.

Type 2) **SECONDARY STREETS** - All streets which provide strategic connections with the principal tourist and cultural assets of the city or which provide access to the major concentrations of urban commercial activity. These streets will be provided, wherever possible, with wider sidewalks with 30 cm. curbs, new street lighting and street side parking for private and commercial vehicles. Wherever necessary the streets will also be provided with storm water drainage mains, drains and traps within the framework of the overall infrastructural refurbishment. Street and sidewalk paving will be realized with bituminous asphalt and concrete sidewalk curbs.

Type 3) **TERTIARY STREETS** - All remaining streets. These street sections will be redesigned so as to allow for adequate storm water surface down flow towards nearby drains. These streets will be re-paved with bituminous asphalt and provided, if possible, with sidewalks and/or protection devices for pedestrian traffic. Existing street lighting will be refurbished and/or new overhead street lighting will be provided.



VIEW OF THE MUNICIPALITY SQUARE.

PROJECT INTERVENTIONS

Type 1) PRIMARY STREETS

The intervention will consist of:

- Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- Carriageway cover with bituminous asphalt.
- Sidewalks widening and re-paving with modular concrete.
- Sidewalk curbs in local natural stone
- Refurbishment of damaged below-grade utilities (SEE DETAILED ASSESSMENT).
- Storm water drainage (WHEREVER NECESSARY/ SEE DETAILED

ASSESSMENT) - The proposed storm water drainage network will comprise a combination of surface flows within the road cross section as well as, where necessary, a buried pipe network supported by gullies located at strategic points along the principal road network

- Public lighting
- Street furniture (Garbage cans, street side seating)
- Planting of autochthonous tree species including planting grills with agricultural soil
- Signage (horizontal and vertical)

Type 2) SECONDARY STREETS

The intervention will consist of:

- Land preparation (excavations and filling, demolitions and removal

of all non required elements and debris).

- Carriageway and parking areas cover with bituminous asphalt.
- Sidewalks widening and re-paving with bituminous asphalt.
- Sidewalk curbs in concrete.
- Refurbishment of damaged below-grade utilities (SEE DETAILED ASSESSMENT).
- Storm water drainage (WHEREVER NECESSARY/ SEE DETAILED ASSESSMENT) - The proposed storm water drainage network will comprise a combination of surface flows within the road cross section as well as, where necessary, a buried pipe network supported by gullies located at strategic points along the principal road network
- Public lighting.
- Street furniture (Garbage cans, street side seating)
- Signage (horizontal and vertical)
- Planting of autochthonous tree species including planting grills with agricultural soil.

The intervention will consist of:

- Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- Carriageway cover with bituminous asphalt
- Sidewalk protection with vertical elements in metal or natural stone (75 cm high, average distance: 1.5 mt.)
- Surface sloping for storm water drainage (SEE DETAILED ASSESSMENT).
- Public lighting refurbishment and or provision of new overhead

lighting.

- Street furniture (Garbage cans)
- Signage (horizontal and vertical)

STAKEHOLDER CONSIDERATIONS

Street section refurbishments should be preventively discussed with local shop owners in order to avoid preconceived opposition and promote the positive commercial repercussions deriving from the overall upgrading of the urban environment.

FURTHER STUDIES NEEDED

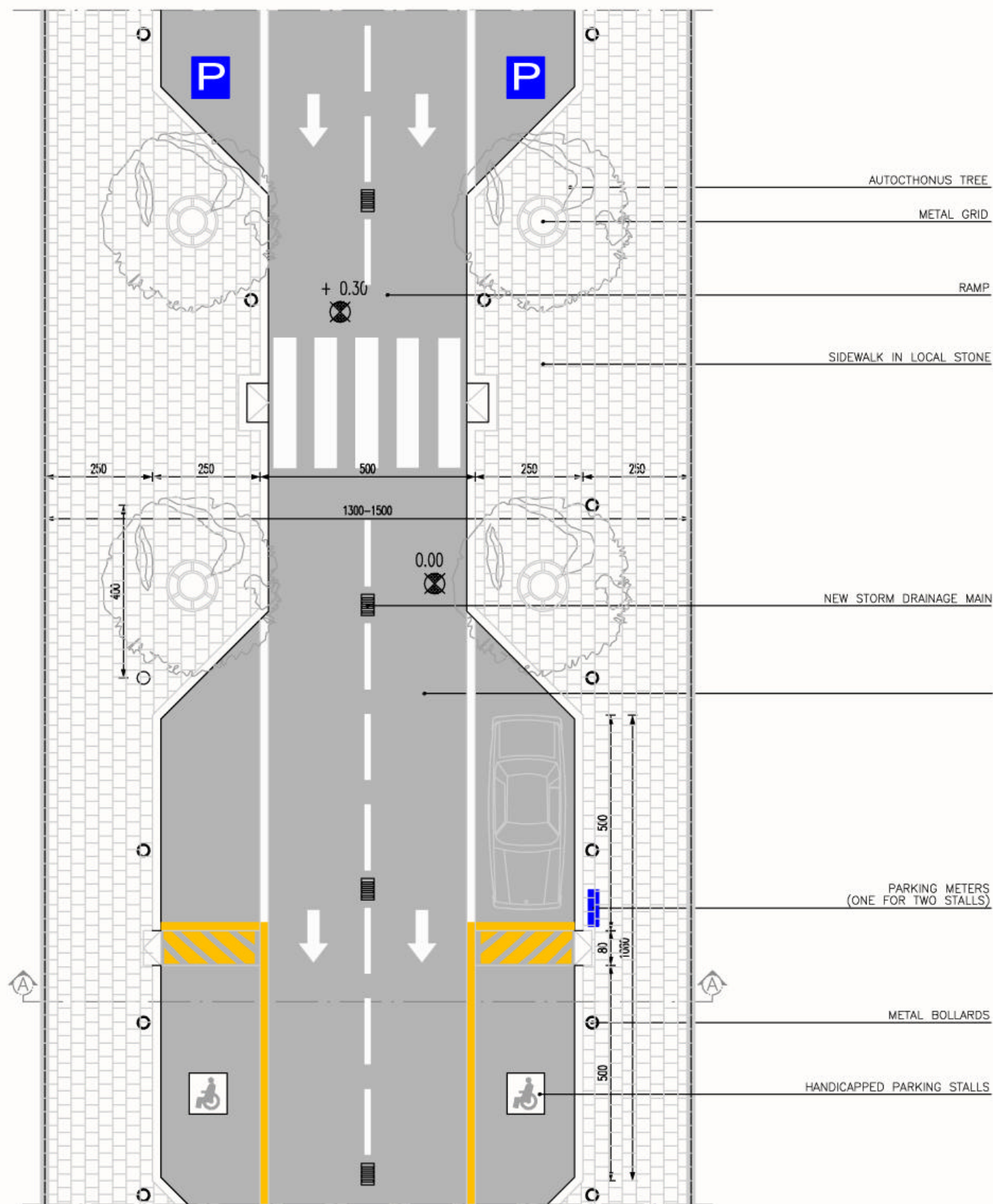
- Institutional implementation and monitoring responsibilities and agreements.
- Extensive topographical surveys; archaeological surveys and excavations.
- Extensive detailed infrastructure and utility assessment
- Architectural surveys; structural surveys, analyses and assessments.

- Detailed traffic management plan.
- Detailed architectural and engineering design work.
- Careful phasing of the works so as to allow for the efficient operation of the streets during the course of the works.

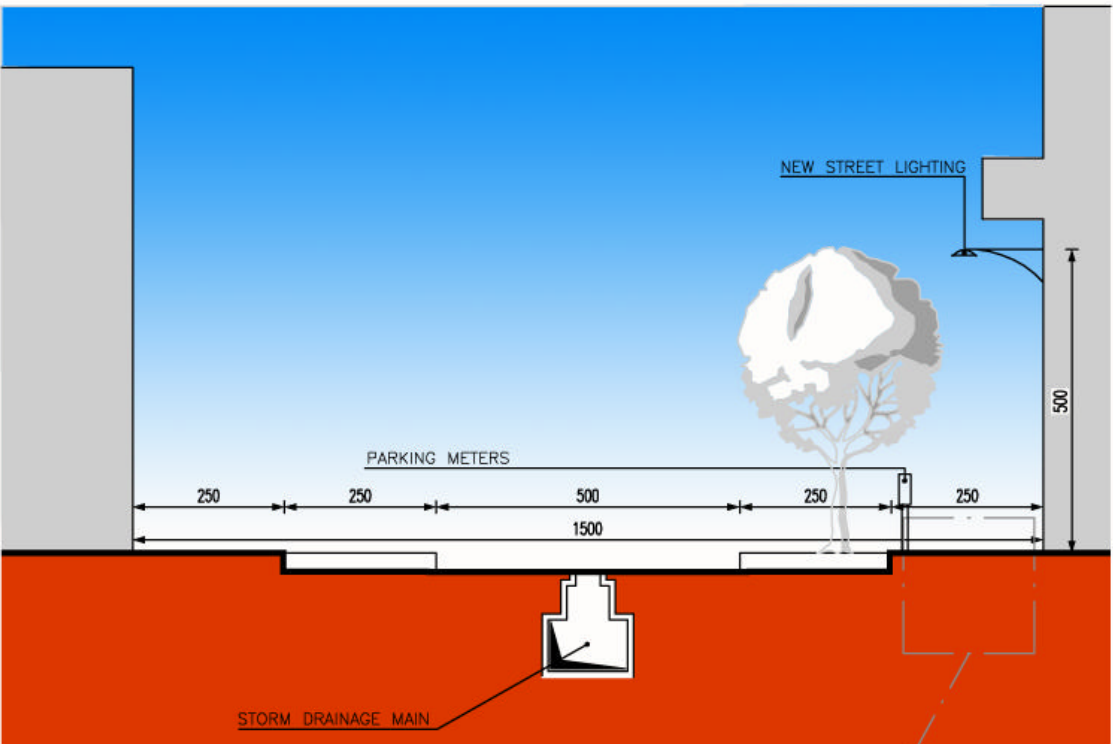


VIEW OF THE OLD SUQ

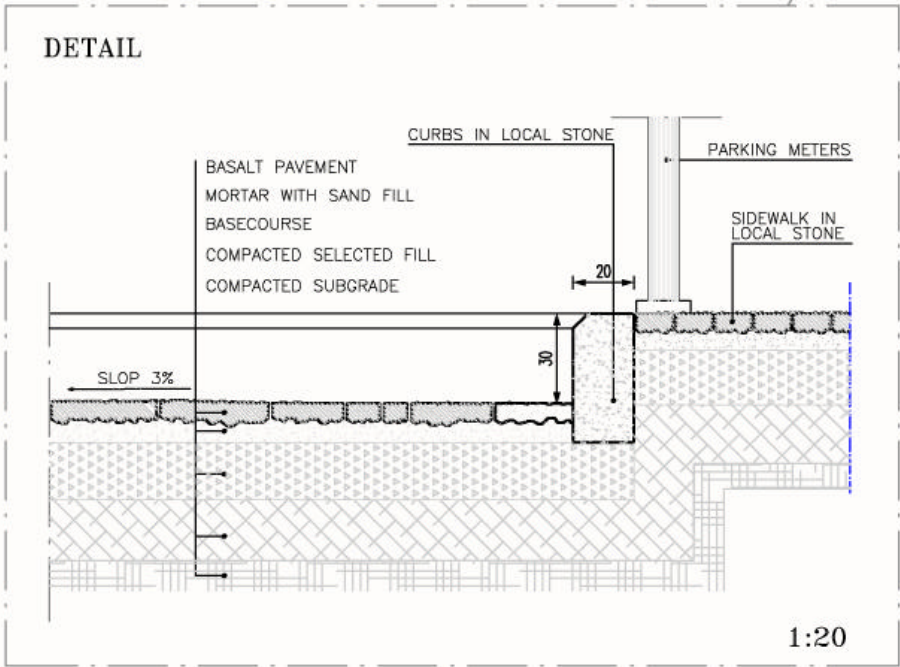
TYPOLGY A- King Abdullah str.



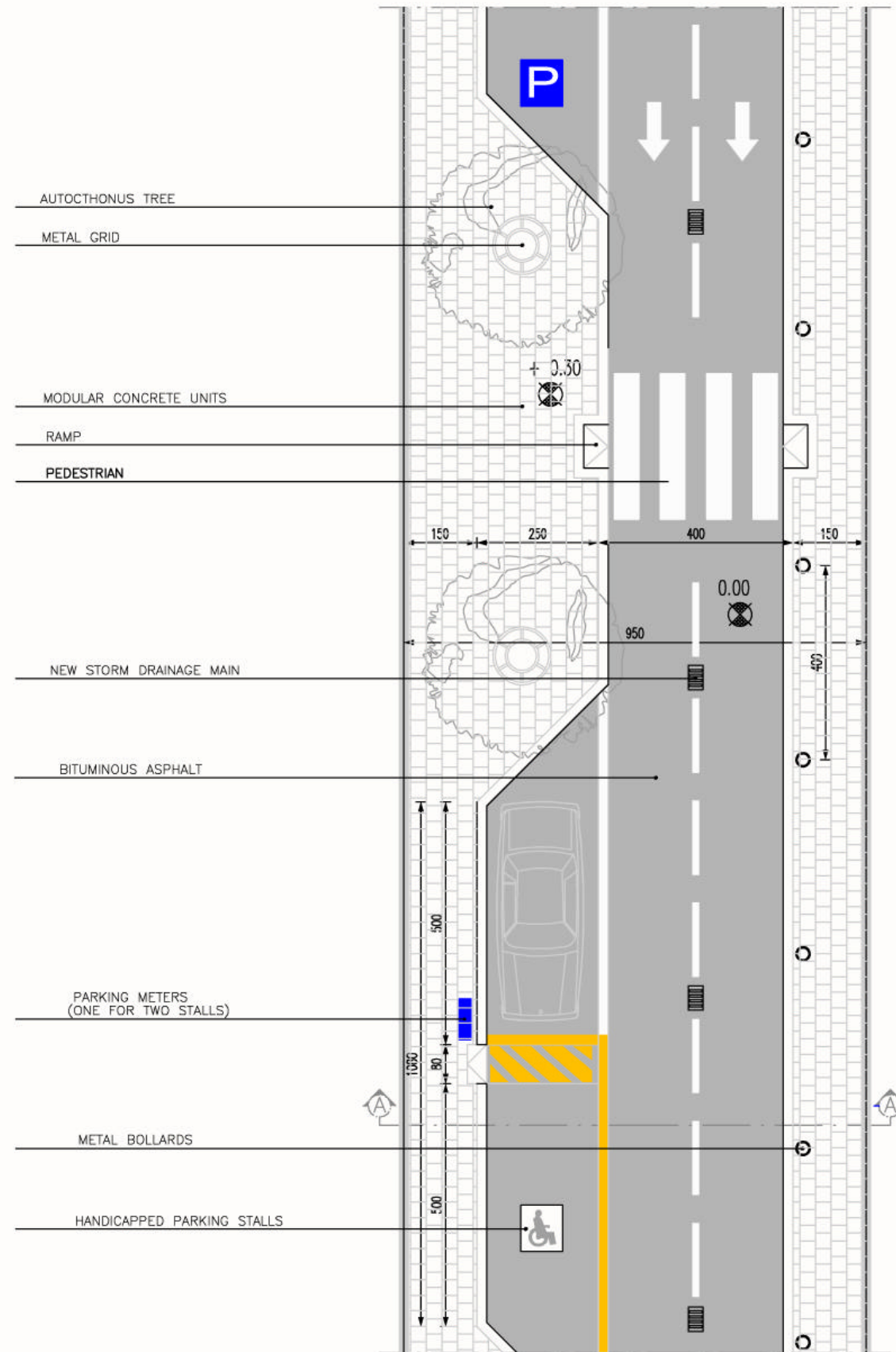
SECTION A - A



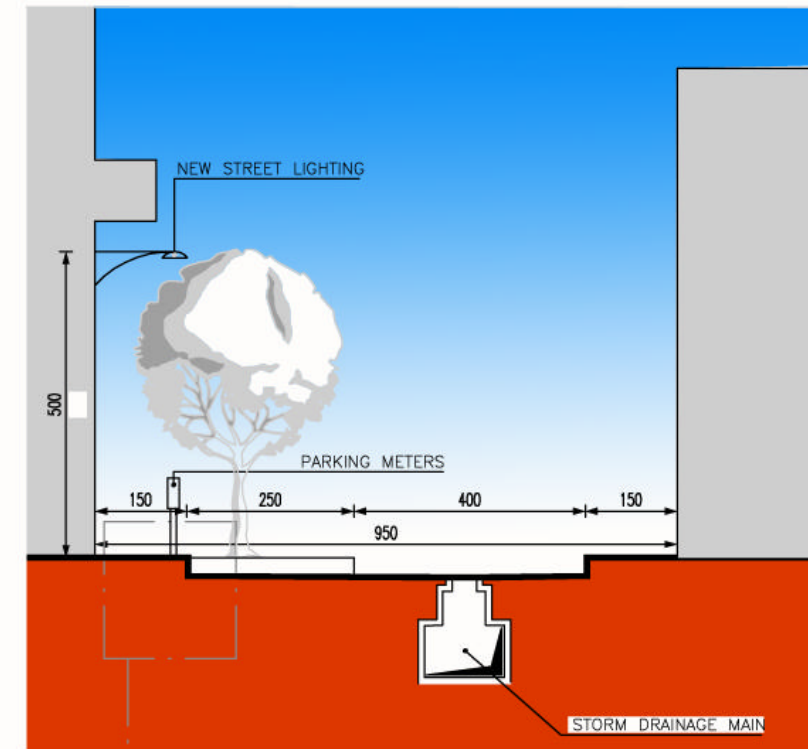
DETAIL



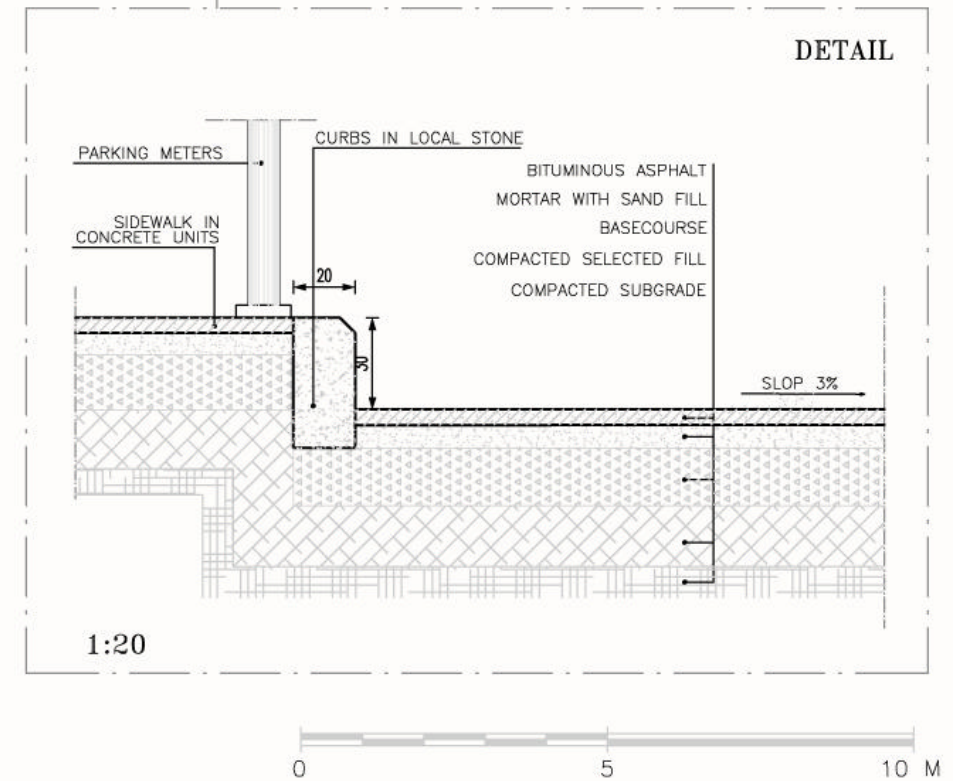
TYPICAL STREET SECTION WITH PARKING STALLS



SECTION A - A



DETAIL



COST ESTIMATES**A) WORKS**

ROAD CONSTRUCTION:	
Type B (Total area Sq. Mts 36,890 X JD/sq.mt 16)	JD 590.240
Type C (Total area Sq. Mts 23,000 X JD/sq.mt 11)	JD 257.600
UTILITIES UPGRADING (see detailed cost estimate)	JD 230.400
SOUTH BRIDGE JUNCTION - SITE SPECIFIC ACTION (Lump sum)	JD 120.000
TRAFFIC MANAGEMENT PLAN (lump sum)	JD 25.000
TOTAL COST OF THE WORKS	JD 1.223.240

B) ADDITIONAL PROVISIONS**b1) TECHNICAL EXPENSES**

Detailed design consultancy (8% of A)	JD 97.859
Construction supervision and management (8% of A)	JD 97.859
Topographical & archaeological surveys/specialistic investigations (5% of A)	JD 61.162

b2) CONTINGENCIES (15% of A) JD 183.486

TOTAL COST OF THE ADDITIONAL PROVISION JD 440.366

FINAL ACTION PROJECT COST (A+B) JD 1.663.606

King Abdullah Street upgrading**A) WORKS**

ROAD CONSTRUCTION:	
Type B - King Abdullah Str. (Total area Sq. Mts 9,700 X JD/sq.mt 16)	JD 155.200
UTILITIES UPGRADING (see detailed cost estimate)	JD 17.100
TOTAL COST OF THE WORKS	JD 172.300

B) ADDITIONAL PROVISIONS**b1) TECHNICAL EXPENSES**

Detailed design consultancy (8% of A)	JD 13.784
Construction supervision and management (8% of A)	JD 13.784
Topographical & archaeological surveys/specialistic investigations (5% of A)	JD 8.615

b2) CONTINGENCIES (15% of A) JD 25.845

TOTAL COST OF THE ADDITIONAL PROVISION JD 62.028

FINAL ACTION PROJECT COST (A+B) JD 234.328

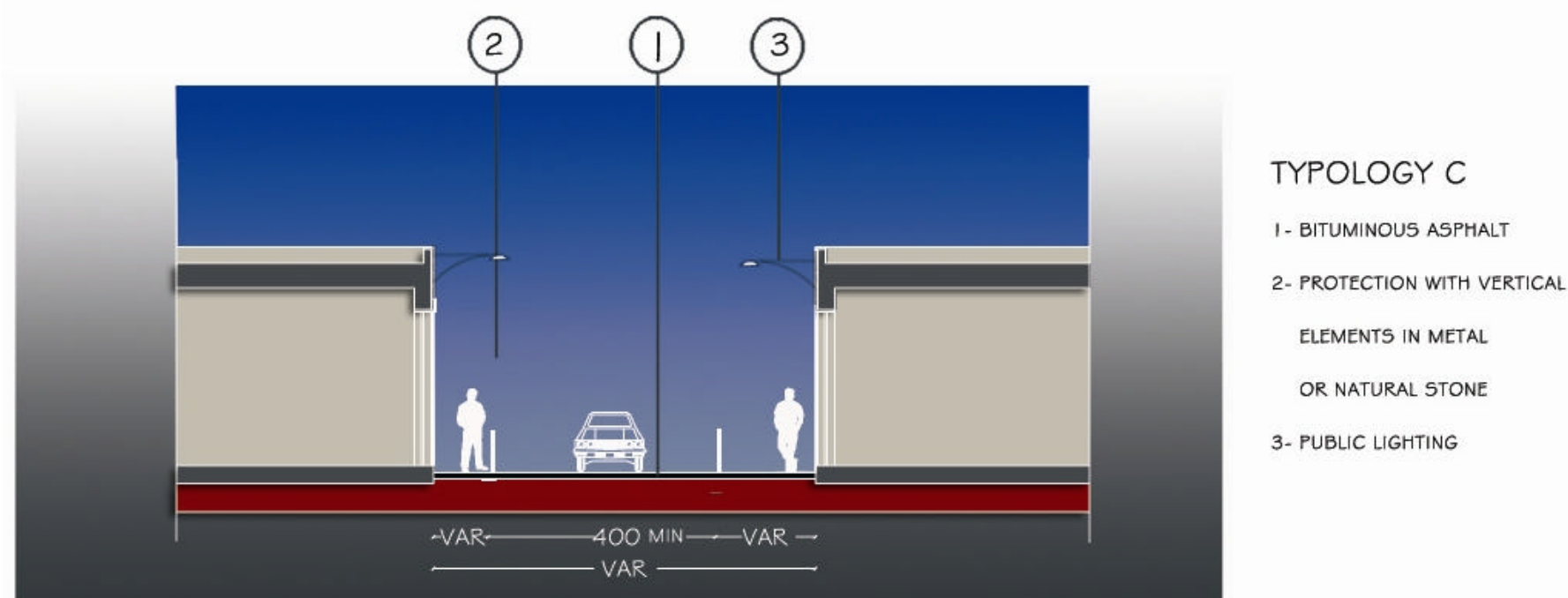
PROJECT TIMING

The time allocated for the implementation of the ring road optional action project is based on the following phasing:

Design stage – 11 months

Work stage – 18 months

Total implementation time – 29 months



SITE SPECIFIC PROJECT
THE REDISIGN OF THE SOUTH BRIDGE JUNCTION

ABSTRACT OF THE PROPOSED PROJECT

The project aims at improving the visual continuity between the exit of the South Bridge onto Wasfy Al-Tal Street and the archaeological site, whilst rationalizing the related pedestrian street crossing.

In particular, the project focuses on the solution of the following problems:

- The maximum possible lowering of the Wasfy Tal-Al Street carriage way without damaging the underlying Roman road.
- The rationalization of the Wasfy Tal-Al Street section with the introduction of speed reducing devices and a traffic light in correspondence with the South Bridge pedestrian crossing.
- The re-design of the connection between the South Bridge and Wasfy Tal-Al Street with the introduction of a hadicapped friendly pedestrian ramp .

Below-grade infrastructural refurbishment will be provided in connection to the proposed road works on the lowered portion of Wasfy Tal-Al Street including the necessary connections to the new storm water drainage system (SEE DETAILED INFRASTRUCTURAL ASSESSMENT).

Given that the only effective way to accomplish visual and spatial continuity between the archaeological site and the South Bridge would be to uncover the Roman road and divert vehicular traffic away from Wasfy Tal-Al Street, vehicular transit on the street shall nevertheless be maintained.

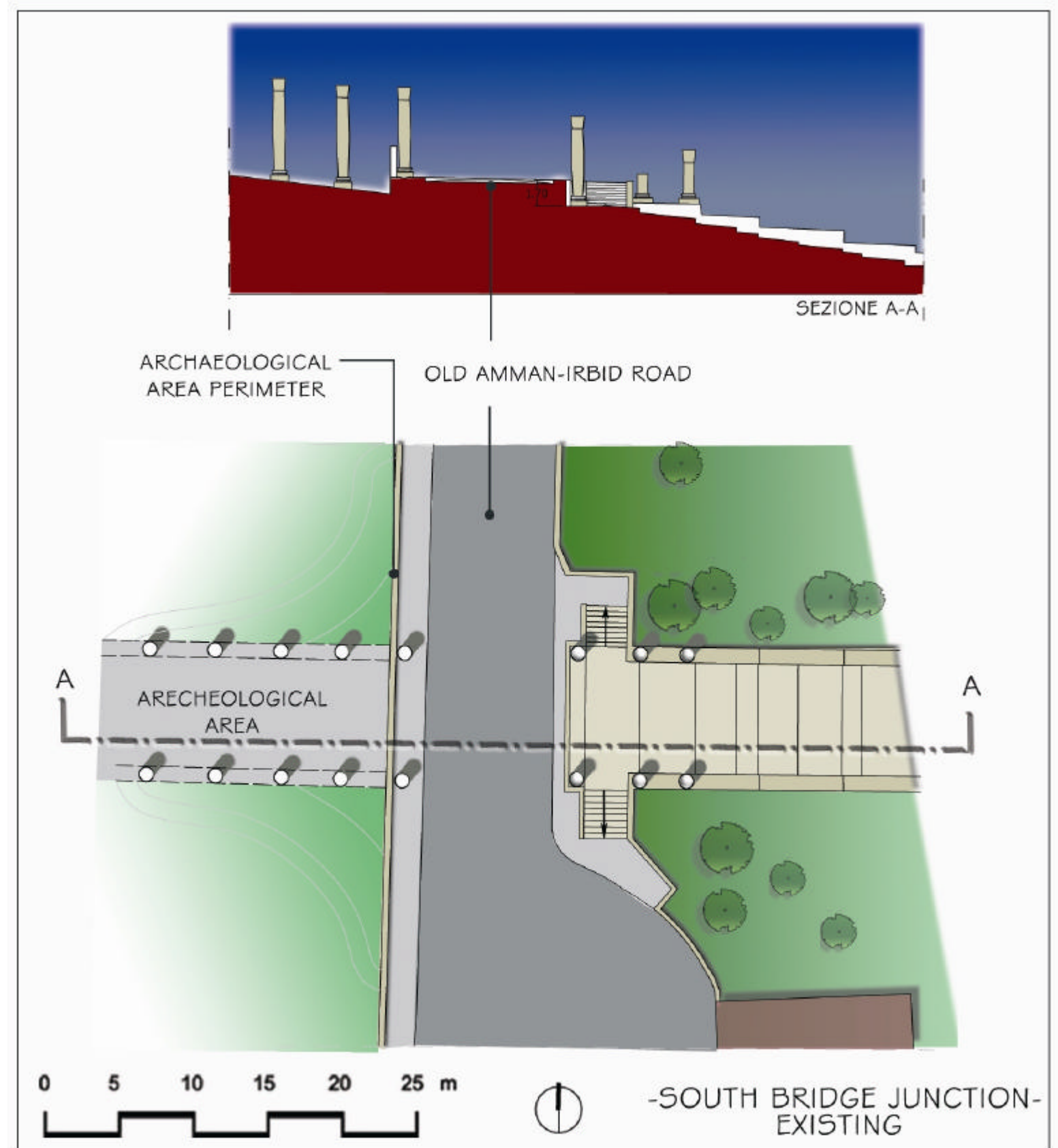
Consequently, the feasibility of the requested lowering of the carriage-way will have to be carefully assessed so as not to cause damage to the underlying Roman road.

The feasibility of the above mentioned diversion of vehicular traffic away from Wasfy Tal-Al Street will have to be assessed within the framework of an organic traffic management plan to be developed during the detailed design phase.

PRESENT STATE AND USE

The relationship between the Jerash community and its archaeological site has traditionally been rather faint. This is predominantly due to the fact that the community has not felt any tangible benefit from the tourist activity connected to the city's archaeological asset. The recent refurbishment of the South Bridge, in connection with the creation of the new exit from the archaeological site and the proposed landscape restoration of the wadi must be seen as attempts to stimulate in the local population a sense of ownership of the city's archaeological assets. Within this framework the decrease of the 1,5 mt. high barrier which obstructs the sight of the archaeological remains should promote a better integration between the two urban realities.

The site is presently in relatively good condition given the unresolved fracture between the archaeological site and the western entrance of the South Bridge.



PROJECT RATIONALE AND MAIN OBJECTIVE

As a complement to the landscape restoration of the wadi, the completion of the East Baths plaza and the improvement of the urban streetscape, the rationalization and visual enhancement of the connection of the Old City to the archaeological site, will enhance liveability and environmental conditions in the historic core, by making pedestrian movements to and from the archaeological site safer and more pleasant.

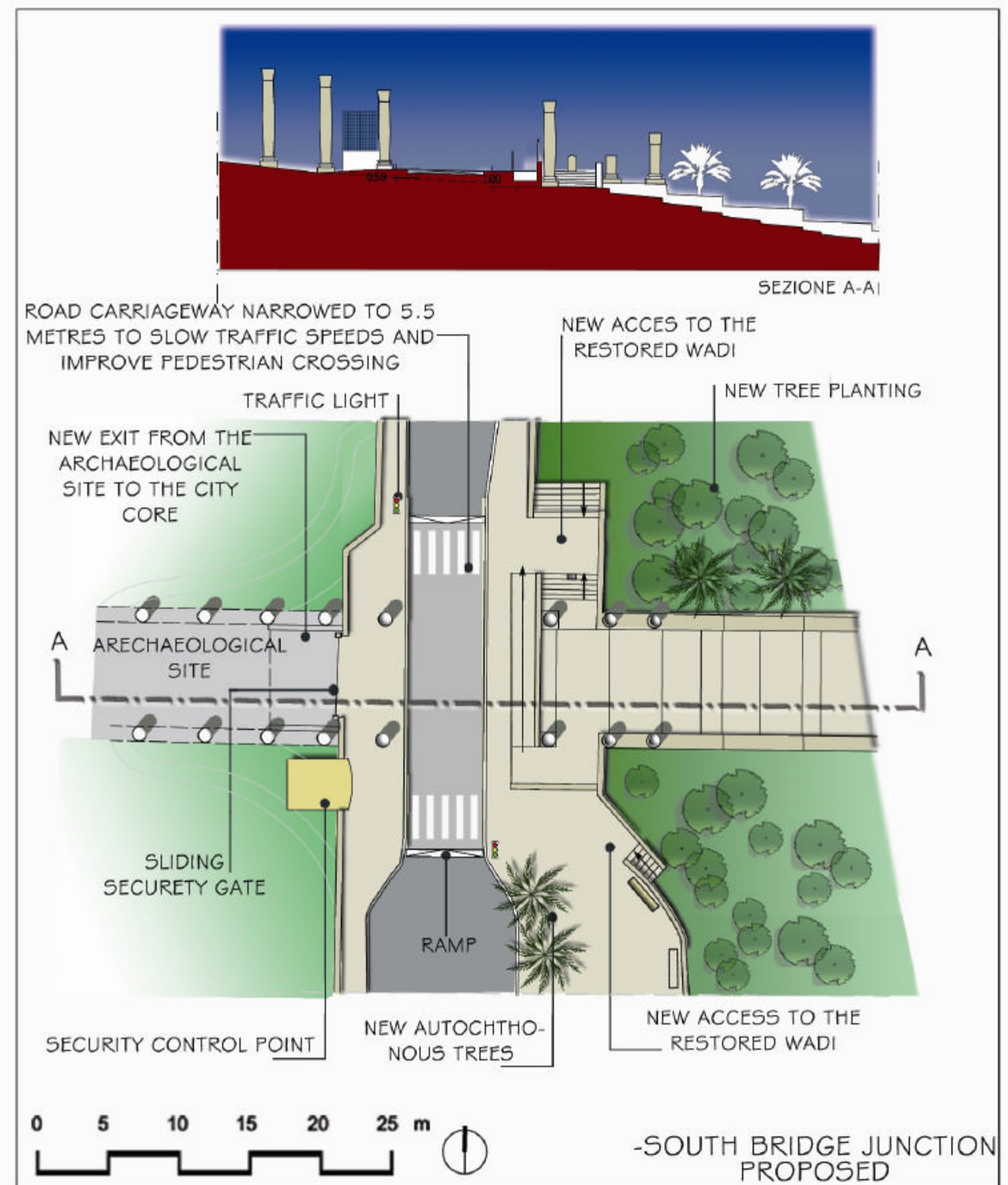
The principal project objectives are:

- Creation of a pattern of safe, and comfortable pedestrian paths, linking the exit of the archaeological site and the South Bridge/East Baths junction with the various points of interest within the Jerash city core.
- Introduction of handicapped friendly devices to allow for handicapped access to the Wasfy Al-Tal street sidewalk and road crossing.
- Improvement of the visual connection between the South Bridge pedestrian path and the archaeological site through the lowering of the Wasfy Al-Tal Street carriageway whilst safeguarding the integrity of the underlying Roman road.
- Reorganization of the vehicular circulation with the provision of speed reducing devices and other traffic regulation measures such as a traffic light to allow for safe pedestrian crossing of Wasfy Al-Tal Street (OPTION TO BE VERIFIED W/TRAFFIC MANAGEMENT PLAN DURING DETAILED DESIGN PHASE).
- Improvement of the streetscape and environment so as to create a pleasant walking and shopping experience for the local population and tourists coming from the archaeological site.
- Refurbishment of damaged above and below-grade utilities including the necessary connections to the new storm water drainage system.
- Awareness raising of the local population regarding the rehabilitation of building facades overlooking the wadi area.

MAIN PROJECT ELEMENTS

The project will provide the integral re-design of the South Bridge/Wasfy Al-Tal Street junction based on the following project elements:

- Bilateral lowering of the Wasfy Tal-Al carriage way (approx. 0.5 mt.) The operation will include the gentle sloping of the carriage way which, in order not to damage the underlying Roman road, will be constructed as a reinforced concrete slab resting on supporting beams so as to leave the necessary protective air space between it and the Roman road.
- Re-design of the western exit of the South Bridge including the construction of a pedestrian ramp for the handicapped with amply perforated metal railings so as to minimize visual obstruction. (max. slope 8%).
- Introduction of speed reducing devices coinciding with the pedestrian road crossing such as the narrowing of the carriageway and the provision of a traffic light (IF CONFIRMED BY DETAILED



TRAFFIC MANAGEMENT PLAN).

PROJECT INTERVENTIONS

The intervention will consist of:

- Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- Bridging of Roman road in reinforced concrete construction.
- Carriageway cover with bituminous asphalt.
- Sidewalk widening and re-paving with modular concrete elements.
- Sidewalk curbs in concrete.
- Storm water drainage connections and refurbishment of damaged below-grade utilities
- Public lighting.
- Street furniture (Garbage cans, street side seating)
- Planting of autochthonous tree species including planting grills with agricultural soil.
- Signage (horizontal and vertical + traffic light)

STAKEHOLDER CONSIDERATIONS

A consultation with the DOA and IFAPO departments is to be expected during all the detail phases.

FURTHER STUDIES NEEDED

- Institutional implementation and monitoring responsibilities and agreements.
- Accurate topographical surveys; archaeological surveys and excavations.
- Extensive detailed infrastructure and utility assessment
- Architectural surveys; structural surveys, analyses and assessments.
- Detailed traffic management plan
- Detailed architectural and engineering design work.
- Careful phasing of the works so as to allow for the efficient operation of the street during the course of the works.

COST ESTIMATES

See general action cost summary

PROJECT TIMING

See general action cost summary



VIEW OF THE SOUTH BRIDGE- OLD IRBID-AMMAN ROAD JUNCTION

4.2 J.02: THE LANDSCAPE RESTORATION OF THE WADI AREA

ABSTRACT OF THE PROPOSED PROJECT

The topographical cleavage of the wadi is the most characterizing landscape feature of the historical core of Jerash. Nevertheless, the presence of the wadi has been perceived through the years by the local community as more of a barrier than a transition between the urban enclave and its world famous archaeological site. The implicit negativity of such a relationship is evident when one considers the level of environmental decay which characterizes this natural site.

The project's objective is that of providing a design solution which will tackle the following site-specific issues:

- Restoring the healthiness and environmental integrity of the wadi including the expropriation and demolition of the abusive buildings located along the wadi banks .
- Transforming the wadi area into an accessible urban park.
- Providing a general urban landscape solution which will organically incorporate the East Baths plaza and the new junction between the South Bridge path and Wasfy Al-Tal Street.
- Raising awareness and sense of ownership in the local population so as to avoid in the future the abusive behaviors which have caused the wadi's progressive environmental decay.

PRESENT STATE AND USE

The wadi area is a topographical depression which runs along the eastern limit of the Wasfy Al-Tal Street which is the principal, north-south, vehicular Jerash thoroughfare. The property of the area is private. The eastern bank rises for roughly 6 mts. before reaching the East Baths plaza, while the western bank rises almost 15 mts before connecting to the Wasfy Al-Tal Street carriageway.

The site's physical integrity is severely compromised by:

- Traditional and reiterated lack of maintenance on the part of the private owners of the land.
- Abusive behaviour on the part of the local population (littering, discharge of polluting materials, etc.)
- Intrusive private housing which disrupts the physical continuity of the area whilst obstructing direct visual connection between the two banks.

PROJECT RATIONALE AND MAIN OBJECTIVE

The landscape restoration of the wadi together with the related completion of the East Baths plaza, and the rationalization and visual enhancement of the connection of the Old City to the archaeological site, will accomplish the long sought urban integration between the Jerash historic core and its prestigious archaeological asset whilst enhancing liveability and environmental conditions in the historic core, by providing

the local population with a hub of public pedestrian quality space.



SOUTH SIDE VIEW OF THE WADI



NORTH SIDE VIEW OF THE WADI

The principal project objectives are:

- Enhancement of the livability and environmental conditions in the historic core, by providing a continuous mixed use compound linking the city core to the Roman archaeological site.
- Creation of a much needed central urban public park as an ideal naturalistic complement to the East Baths development presently

- under implementation thus creating a new federating space for the entire community.
- Raising the awareness and sense of ownership of the local community for the project site through its enhanced integration in the life of the modern community.
- Providing the necessary funding for the expropriation of the privately owned plots and the demolition of the private buildings located along the wadi banks.
- Activating the necessary capacity building initiatives to ensure the Municipality's ability to maintain and manage the new wadi park (SEE RELATED CAPACITY BUILDING ACTION).

The action, that requires extensive acquisitions of land and of some intrusive buildings, will ensure a continuous, mixed-use compound, reconnecting the two separated parts of the historic core

MAIN PROJECT ELEMENTS

The landscape restoration of the Jerash wadi area is based on the interplay of the following elements:

- The needed environmental rehabilitation of the site including the provision of the necessary funding for the expropriation of the privately owned plots and the demolition of the private buildings located along the wadi banks.
- A large public green space, with autochthonous greenery and trees, including the following functions:
 - Stepped, soft landscaped terraces.
 - Hard landscaped areas for continuous pedestrian connection between the different terraces within each wadi bank.
 - Urban furnishings such as garbage containers and seating facilities.
- The needed general landscape works, including soil consolidation, land reshaping and tree planting.
- New solutions for the access to the wadi park from the East Baths plaza and from the Wasfy Al-Tal Street.

PROJECT INTERVENTIONS

The Municipality will expropriate the lands needed for this project which will function as a city park in the middle of the historic core. The principal required works in this project are:

- Preparation of the land for development including the demolition of the private buildings located along the wadi banks.
- Excavation of all archaeological and heritage remains and assessment of the impact of the landscaping works on the eventual remains.
- Storm water drainage connections and refurbishment of damaged below-grade utilities
- Preparation of the site as a public park and construction of its ele-

ments.

- Management and maintenance of the park for leisure and public occasions.

The intervention will consist of:

- Land preparation for the realisation of the leisure park and related structures (excavations and filling, demolitions and removal of all undesired elements and debris)
- Stone cladded reinforced concrete retaining walls.
- Soft landscaped, terraced areas including planting of evergreen meadows and autochthonous greeneries and trees.
- Hard landscaped areas and paths paved with local natural stone

modular units.

- Street furniture (Garbage cans, seating facilities, protective iron fencing, etc.).

STAKEHOLDER CONSIDERATIONS

The project is based on the possibility of expropriating the existing unbuilt privately owned plots and the demolition of private buildings which infringe on the visual integrity of the wadi banks. Therefore opposition from private landowners is to be expected.

A capacity building action is needed in order to ensure proper specialized maintenance and management skills on the part of the Municipality (SEE RELATED CAPACITY BUILDING ACTION).

FURTHER STUDIES NEEDED

- Institutional implementation and monitoring responsibilities and agreements.
- Topographical surveys; archaeological surveys and excavations.
- Detailed infrastructure and utility assessment.
- Architectural surveys; structural surveys, analyses and assessments.
- Detailed architectural and engineering design work.



VIEWS OF THE WADI FROM THE SOUTH BRIDGE (ON THE LEFT: INTRUSIVE PRIVATE BUILDING)



PHOTO 1

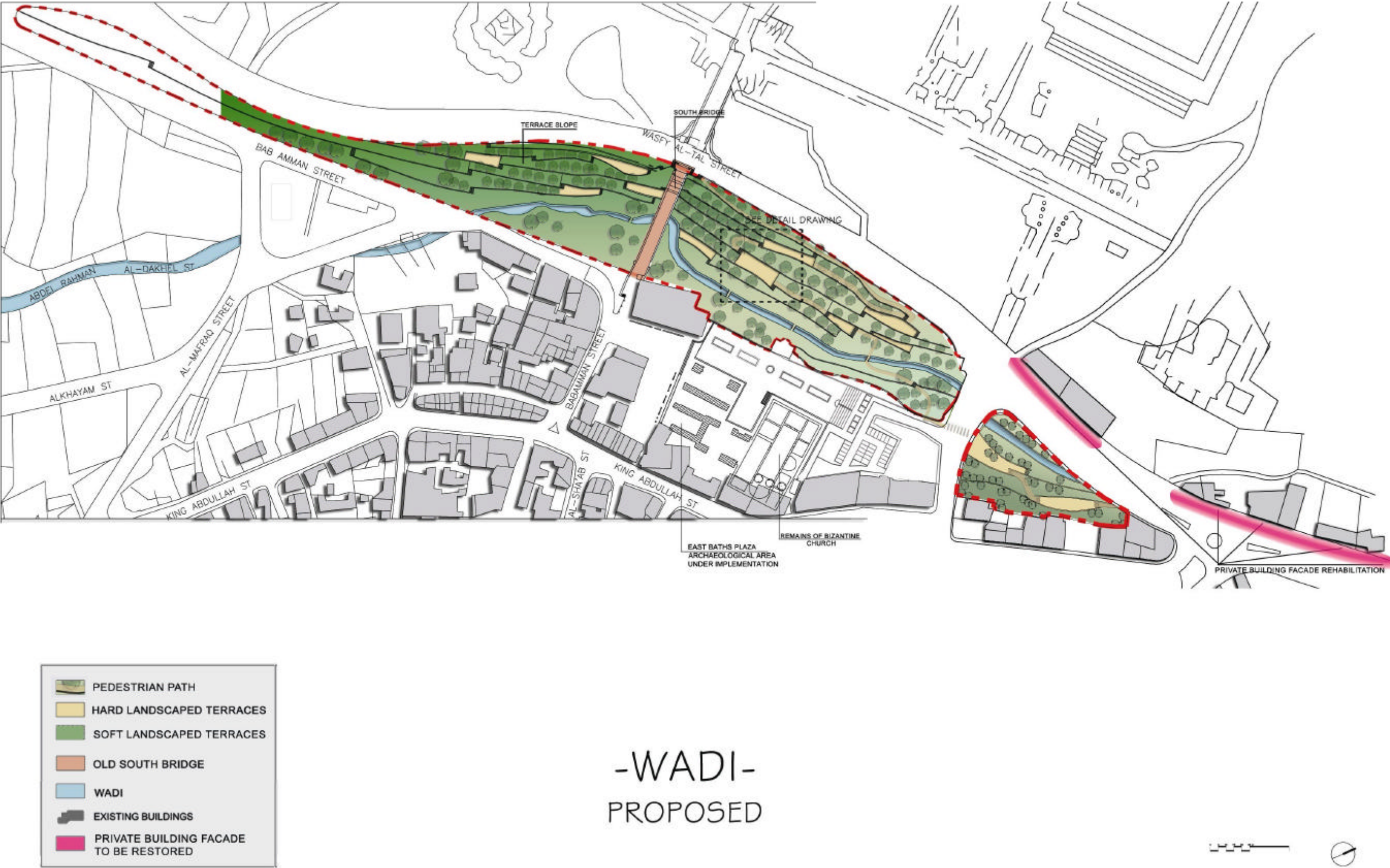


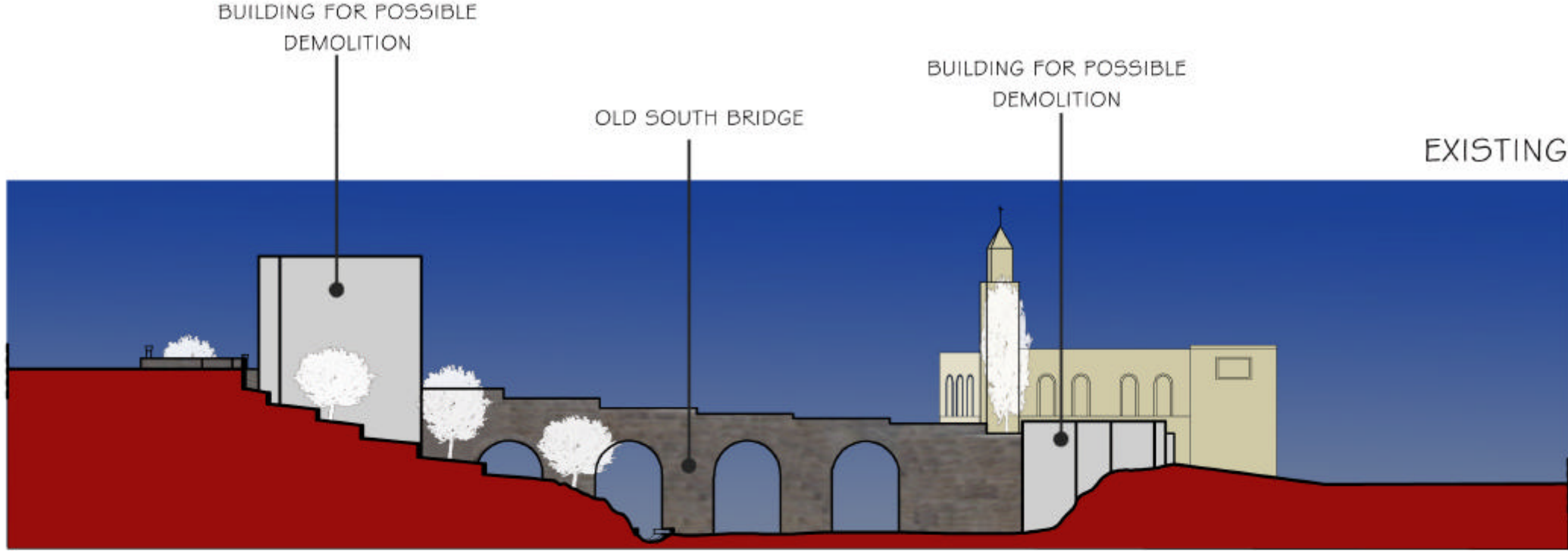
PHOTO 2

- ACTION BOUNDARY
- ARCHAEOLOGICAL AREA
- BUILDINGS FOR POSSIBLE DEMOLITION
- EXISTING BUILDINGS
- MARKET STALLS

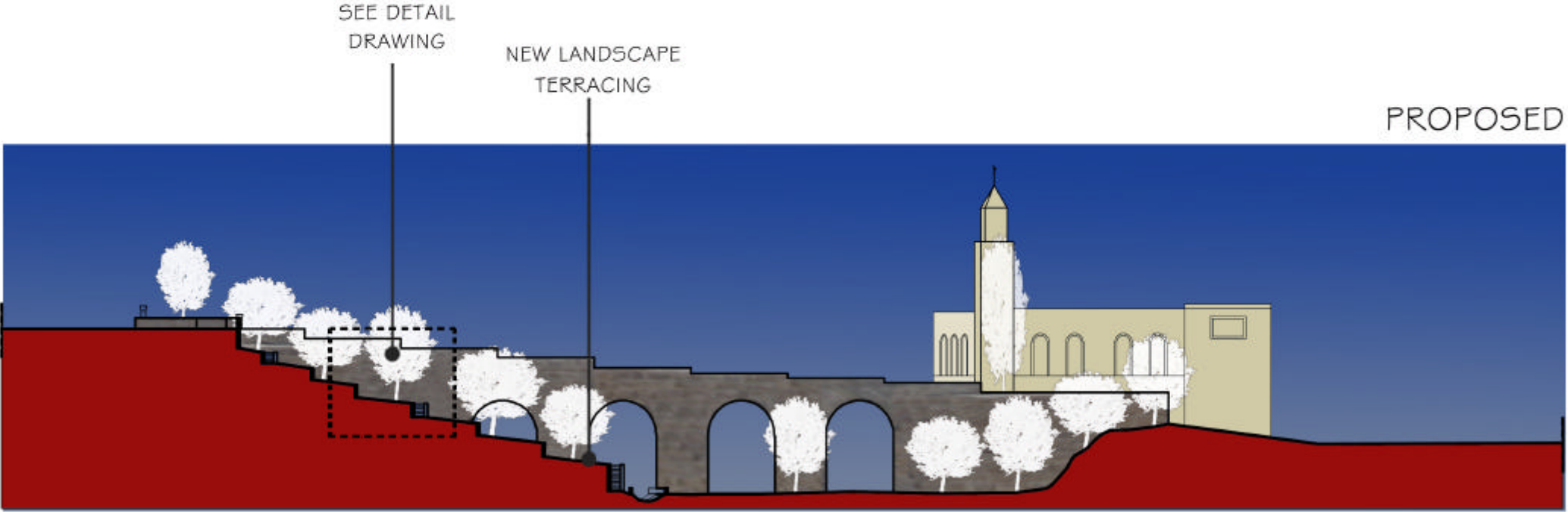
-ACTION J.02: THE WADI AREA-
EXISTING



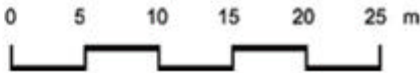


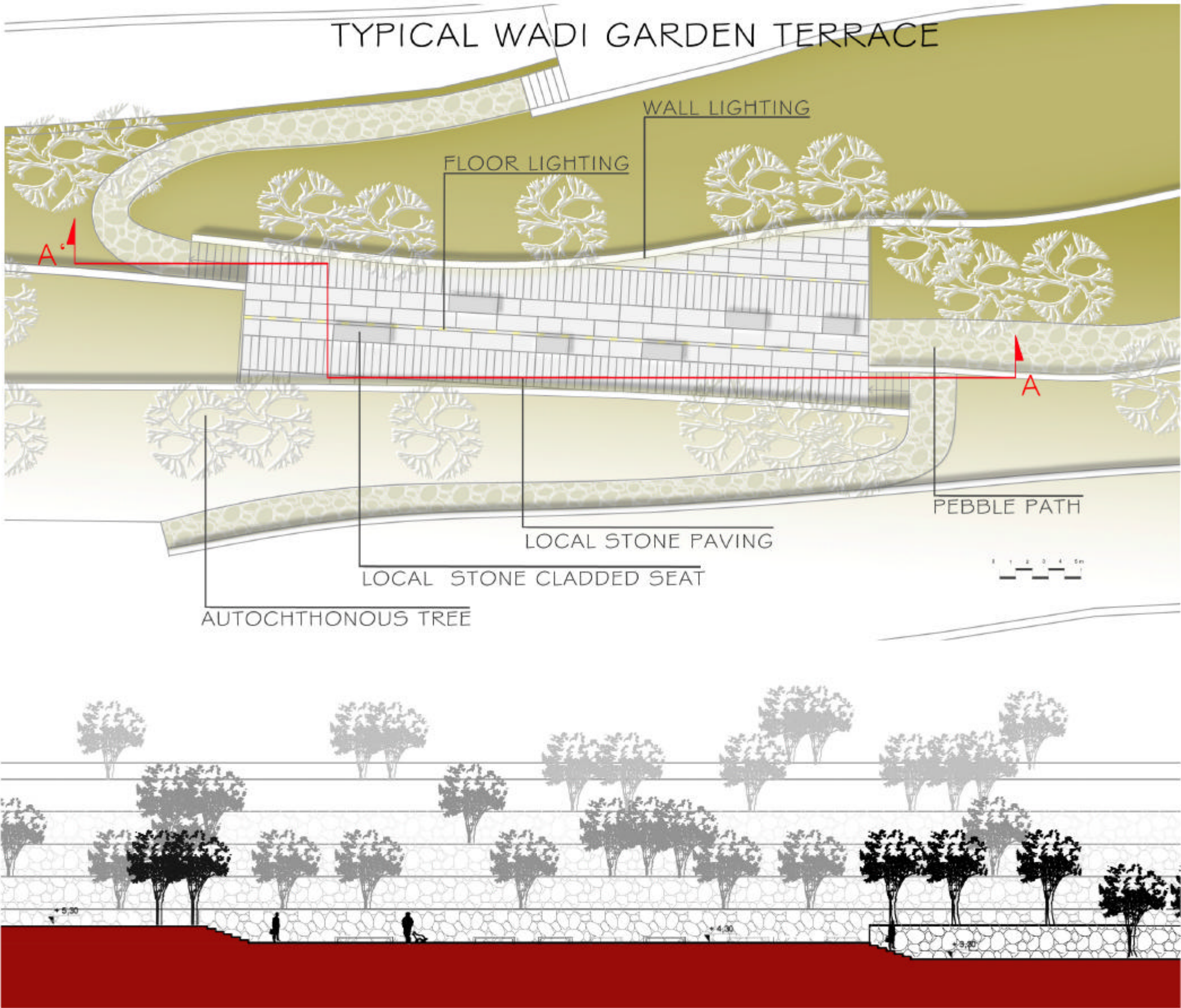


SEZIONE A-A



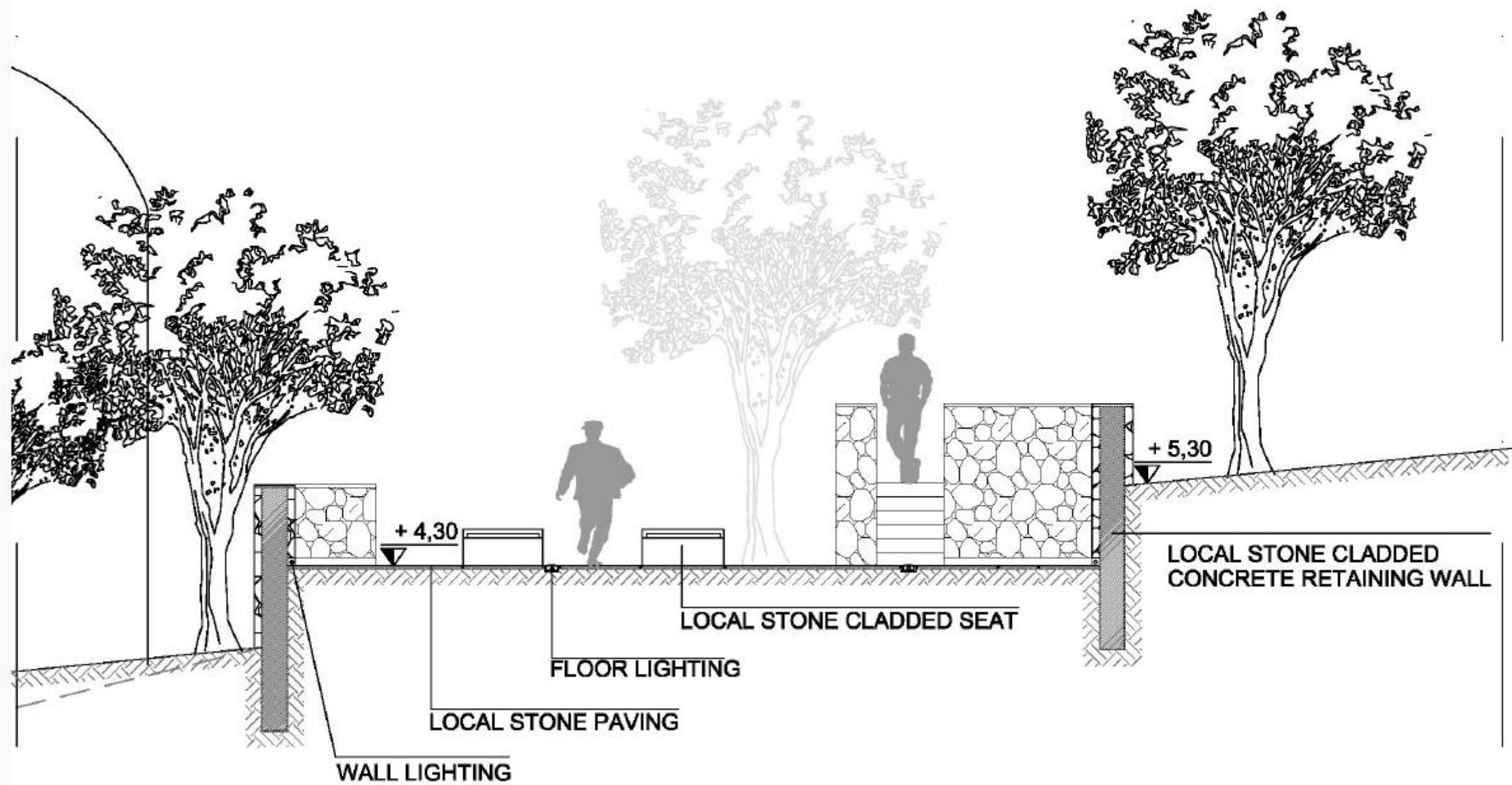
-SOUTH BRIDGE JUNCTION-





SECTION A-A'

TYPICAL GARDEN TERRACE SECTION



COST ESTIMATES**A) WORKS**

hard landscape (Total area Sq. Mts 4,500 X JD/sq.mt 30)	JD	135.000
soft landscape (Total area Sq. Mts 28,000 X JD/sq.mt 23)	JD	644.000
COST OF THE WORKS	JD	779.000

B) ADDITIONAL PROVISIONS**b1) TECHNICAL EXPENSES**

Detailed design consultancy (8% of A)	JD	62.320
Construction supervision and management (8% of A)	JD	62.320
Topographical & archaeological surveys/specialistic investigations (5% of A)	JD	38.950

b2) CONTINGENCIES (15% of A)	JD	116.850
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COST OF THE ADDITIONAL PROVISION	JD	280.440
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TOTAL ACTION PROJECT COST (A+B)	JD	1.059.440
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C) LUMP SUM FOR PRIVATE BUILDINGS FACADE REHABILITATION	JD	50.000
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D) LAND ACQUISITION (Lump sum)	JD	400.000
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E) BUILDINGS DEMOLITION (Lump sum)	JD	50.000
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FINAL ACTION PROJECT COST (A+B+C+D+E)	JD	1.559.440
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PROJECT TIMING

The time allocated for the implementation of the action project is based on the following phasing:

Design stage –	10 months
Land acquisition –	3 months
Work stage –	11 months
Total implementation time –	24 months



VIEW OF THE PRIVATE BUILDINGS WHICH NEED FAÇADE REHABILITATION



4.3 J.O3: THE COMPLETION OF THE EAST BATHS DEVELOPMENT

ABSTRACT OF THE PROPOSED PROJECT

Modern Jerash, originally the Graeco-Roman city of Gerasa, was developed in the late 1800 's on the east side of the wadi by Circassian refugees, victims of the Ottoman oppression, over the remains of the earlier Roman settlement which had concentrated on the west side of the wadi the majority of its ceremonial and administrative buildings and on the east side most of its domestic and residential functions as testified by the remains of the thermal facilities still visible in the proximity of the South Bridge eastern exit. The two urban compounds were linked through two bridges spanning the wadi, The North and the South Bridges.

The descendants of the original Circassian settlers still form a consistent part of the social structure of the city and traces of the original Circassian settlement are still visible in the Old Suq area in the recently restored compound known as the Circassian quarter.

The impressive archaeological site of the Roman city on the west side of the wadi is a national monument which attracts large numbers of tourists from all over the world who nevertheless are never encouraged to extend their stay beyond the time strictly necessary for their archaeological excursion because of the lack of amenities and appeal of the modern city.

The already implemented Jerash East Baths development consists of a vast stone paved plaza which extends from the South Bridge to the North Bridge thus providing the city with the central pedestrian quality space it is lacking. The plaza, which is in direct visual contact with the archaeological site on the other side of the wadi, incorporates the remains of a Roman thermal facility and those of a Byzantine church.

The project's objective is that of completing the recent East Baths Plaza Development by establishing a new entrance and connection to the contemporary urban fabric in the area of the North Bridge. The new entrance solution includes the removal of the decayed and intrusive market stalls which are presently obstructing the connection between the plaza compound and the North Bridge. The market stalls will be sub



VIEW OF THE REMAINS OF THE ROMAN THERMAL FACILITY

stituted by architecturally and morphologically integrated booths for the commercial promotion of local products and handicrafts to be designed and specified during the detailed design phase. These structures will be lightweight and removable so as to ensure the necessary management flexibility for events taking place within the plaza compound.

The project also aims at providing a landscaped filter between the plaza itself and the surrounding line of constructions whose poor architectural quality and evident overall decay infringe on the integrity of the plaza.

Moreover, the project introduces new elements of landscape design in the plaza compound including a "water chain" along the new North Bridge entrance stairway, areas for greenery and tree-planting, new seating facilities and new public lighting.

The project is a part of a wider initiative of landscape rehabilitation of the wadi extending from the Wasfy Al-Tal Street / Souf Street junction to the north and the Wasfy Al-Tal Street / Bab Amman street junction to the south.



VIEW OF THE ACCESS AT THE PLAZA

PRESENT STATE AND USE

The already implemented Jerash East Baths development consists of a vast stone paved plaza which extends from the South Bridge to the North Bridge thus providing the city with the central pedestrian quality space it is lacking. The plaza, which is in direct visual contact with the archaeological site on the other side of the wadi, incorporates the remains of a Roman thermal facility and those of a Byzantine church.

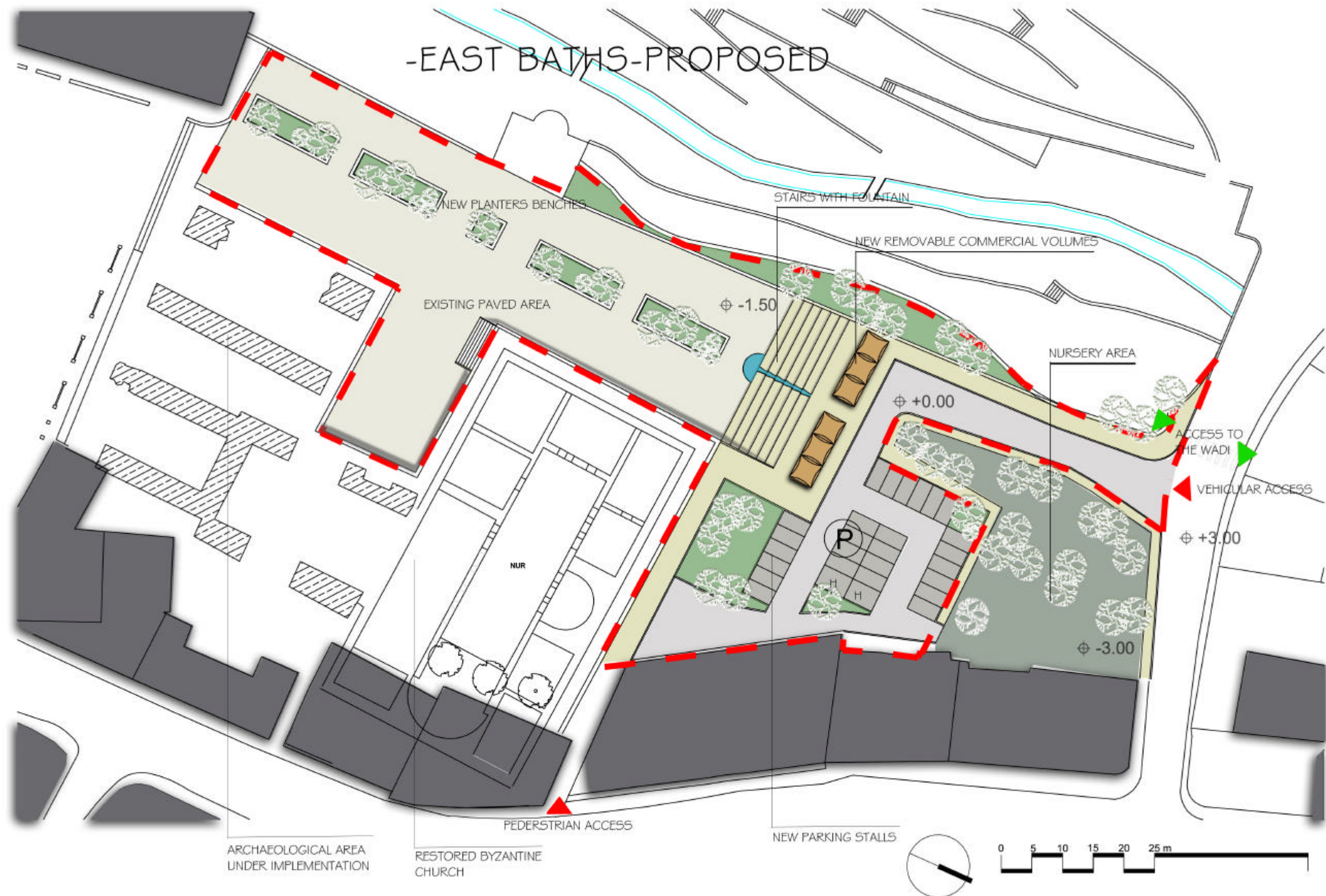
The project site's integrity is at the moment severely compromised by the presence of a number of market booths which impede its natural exit in the vicinity of the North Bridge area. Moreover, the site is characterized by the presence of a small new building, whose original project function was that of a café, contained within the topographical relief of the east wadi bank, which has in the end been destined to public toilets.



PANORAMIC VIEW OF THE EAST BATHS BEFORE THE RESTORATION OF THE ROMAN THERMAL FACILITY AND THE PEDESTRIANIZATION OF THE PLAZA



EAST BATHS -EXISTING





VIEW OF THE EXISTING EAST BATHS PLAZA

PROJECT RATIONALE AND MAIN OBJECTIVE

The completion of the East Baths plaza, together with the landscape restoration of the wadi and the rationalization and visual enhancement of the connection of the Old City to the archaeological site, will enhance liveability and environmental conditions in the historic core, by providing the local population with a hub of public pedestrian quality space.

The principal project objectives are:

- Creation of a much needed central urban public space which will act as the heart of the social life of the community of modern Jerash.
- Raising of the awareness and sense of ownership of the local com-

munity for the Roman archaeological site through its enhanced integration in the life of the modern community.

- Re-establishment of the design integrity of the original East Baths development project through the following operations:
 - Removal of the severely decayed market booths scattered along the northern boundary of the project site and provision for new removable, light weight, yet architecturally and morphologically integrated volumes in which to showcase local products and handicrafts .
 - Design of a new access to the site from the North Bridge

and introduction of natural landscape design elements within the confines of the plaza.

- Enhancement of the plaza as the new center of the Jerash City Core through its integration in the vaster design initiative concerning the restoration of the wadi and the modification of the exit of the South Bridge onto Wasfy Al Tal Street.
- To contribute in attracting the existing tourist flows on the east bank of the wadi, towards the historic core.
- To give economic benefits to the city by creating a place to showcase the local handicraft and typical products and improving the local skills.

MAIN PROJECT ELEMENTS

The completion of the East Baths Plaza is based on the following design criteria:

- Expropriation and removal of the market stalls obstructing the northern boundary of the plaza compound.
- Creation of a new ramped access to the plaza flanking the existing North Bridge including a decorative "water chain", new architecturally qualified commercial spaces and the provision of a public parking area,.
- Design of internal shaded landscaped areas for the planting of autochthonous greeneries and trees, including the provision of urban furniture (seating facilities, garbage cans, protective fencing for the archaeological remains and of the wadi slope, etc.) and of a green filter along the rear facades of the private buildings along the eastern boundary of the plaza compound.

PROJECT INTERVENTIONS

The intervention will consist of:

- Land preparation (excavations and filling, demolitions and removal of all non required elements and debris)
- Stepped access ramp in reinforced concrete clad in modular elements of local natural stone.
- Water chain clad in local natural stone.
 - New removable, light weight, commercial volumes.
 - Outdoor parking facility paved with bituminous asphalt.
- Sidewalk curbs in local natural stone.
- Storm water drainage connections and refurbishment of damaged below-grade utilities
- Public lighting.
- Street furniture (Garbage cans, seating facilities, protective iron fencing, etc.).
- Planting of autochthonous tree species including planting grills with agricultural soil.

- Signage (horizontal and vertical)

STAKEHOLDER CONSIDERATIONS

The project is based on the possibility of removing the existing abusive structures which obstruct the northern exit of the compound. Expropriation must be enforced by the Municipality.

Stakeholder opposition must be expected on the part of commercial booth owners.

FURTHER STUDIES NEEDED

- Institutional implementation and monitoring responsibilities and agreements.
- Topographical surveys; archaeological surveys and excavations.
- Detailed Infrastructure and utility assessment.
- Architectural surveys; structural surveys, analyses and assessments.
- Detailed architectural and engineering design work.

COST ESTIMATES

A) WORKS		
PUBLIC PIAZZA AND GARDEN (Total area Sq. Mts 3,800 X JD/sq. mt 23)	JD	87.400
PARKING LOTS (Total area Sq. Mts 300 X JD/sq. mt 17)	JD	5.100
SPECIAL STRUCTURES AND FURNISHINGS (Lump sum)	JD	70.000
COST OF THE WORKS	JD	162.500
B) ADDITIONAL PROVISIONS		
b1) TECHNICAL EXPENSES		
Detailed design consultancy (8% of A)	JD	13.000
Construction supervision and management (8% of A)	JD	13.000
Topographical & archaeological surveys/specialistic investigations (5% of A)	JD	8.125
b2) CONTINGENCIES (15% of A)	JD	24.375
COST OF THE ADDITIONAL PROVISION	JD	58.500
FINAL ACTION PROJECT COST (A+B)		
	JD	221.000
C) MARKET STALLS ACQUISITION (Lump sum)	JD	70.000
D) MARKET STALLS DEMOLITION (Lump sum)	JD	10.000
FINAL ACTION PROJECT COST (A+B+C)	JD	301.000

PROJECT TIMING

The time allocated for the implementation of the action project is based on the following phasing:

Design stage –	8 months
Land acquisition –	4 months
Work stage –	4 months
Total implementation time –	16 months

J.04: THE NEW PARKING STRUCTURE IN THE EX-MARKET PLACE

ABSTRACT OF THE PROPOSED PROJECT

The recent relocation of the Jerash market place has freed a 3200 sq. mt. triangular plot of land adjacent to the Bab-Amman Street, for public development. The consolidated lack of outdoor meeting places for the local community, together with the proven necessity to reach a better integration of the archaeological site within the urban structure of modern Jerash, makes the development of the ex-vegetable market site a good opportunity to provide the city with a new urban plaza besides the pedestrian hub of the East Baths development.

The new urban plaza, like in the case of the East Baths, is positioned along the western front of modern Jerash close to the line of the wadi, thus reiterating the strategic value of this urban front as the "locus" of urban regeneration projects which seek to promote urban and social integration of the archaeological site within the life of the Jerash community.

The topographical level of the plot's eastern boundary, along Al-Wade Street is some 8 mts. lower than that of the nearby Bab-Amman/Al-Shallal Street junction, thus allowing for the exploitation of the topographical difference for three levels of public parking. The consequential placing of the pedestrian plaza atop the public parking structure enhances its strategic position as a quality urban space adjacent to the southern gateway to the Jerash city core, whilst providing the city with a precious parking reservoir.

The project aims at the realization of a quality pedestrian public space within the confines of the Jerash city core, together with the provision of a low-cost, low-impact parking structure as a service to the local community and to the visitors. The planned parking structure is to be considered a significant opportunity for a public/private partnership (SEE RELATED COST ASSESSMENT).

PRESENT STATE AND USE

The project site consists of municipal vacant land located between Bab-Amman Street, Al-Shallal Street and Al-Wade Street, along the principal urban approach route from the south and adjacent to the line of the ancient city walls.

The site is characterized by a topographical articulation which sees it descend with a **rather steep** slope from the Bab-Amman/Al-Shallal Street junction to Al-Wade Street. The plot is in direct contact with the East Baths development through the final portion of Bab-Amman Street which, after descending towards Al-Wade Street starts rising again until it reaches the eastern exit of the South Bridge and the East Baths plaza before penetrating the urban fabric of the city core.

PROJECT RATIONALE AND MAIN OBJECTIVE

Due to its location, the project aims at becoming a meeting point for the local population and, at the same time, a significant design statement welcoming visitors and citizens alike.

Moreover, considering its position within the urban fabric, the new pedestrian plaza is the first episode of a sequence of quality spaces, which the visitor encounters upon arriving to Jerash from Amman, comprising the South Bridge/East Baths compound, the restored wadi park and terminating with the Circassian quarter and the refurbished King Abdullah Street.

The project will also provide a significant supply of parking tightly related to the new urban park of the wadi whilst providing the opportunity for a public-private partnership, in which the public partner will provide the land, and the private partner will ensure the realization and management of the new facility.

It is assumed that the PPP model will increase the sense of ownership of the local population towards the entire City Regeneration Program.

MAIN PROJECT COMPONENTS

The following elements will be included within urban design layout:

A three-level parking facility in reinforced concrete post and beam construction with stone-cladded perimeter walls and ample post to post openings protected by steel grills for the planting of creeping greeneries, so as to minimize the structure's environmental impact. The parking facility will be accessible exclusively from Al-Wade Street and will be

served by an internal vehicular ramp connecting the three parking levels and by pedestrian connections providing direct access to the roof-top pedestrian plaza. Direct pedestrian access to the plaza is also possible from the nearby Bab-Amman/Al-Shallal Street junction.

A furnished urban plaza including hard landscaped areas for pedestrian movement and socialization, soft landscaped areas for the planting of autochthonous trees and greeneries, and a playground for children.

PROJECT INTERVENTIONS

The intervention will consist of:

- Land preparation for the construction of the three-level parking facility (excavations and filling, demolitions and removal of all undesired elements and debris.).
- Reinforced concrete retaining walls
- A reinforced concrete parking structure clad in local natural stone and provided with grilled openings for the growth of creeping greeneries.
- Soft landscaped areas including planting of evergreen meadows and autochthonous greeneries.



PANORAMIC VIEW OF THE EX-MARKET AREA

- Sand paved playground area for children.
- Hard landscaped areas and paths paved with local natural stone modular units.
- Urban furnishings including garbage containers, seating elements and stone clad planters.
- Public lighting

STAKEHOLDER CONSIDERATIONS

No resettlement of activities or population is foreseen.

No land expropriation is needed for the realization of the proposed pro-

ject.

A public-private partnership can be sought for the private realization of the project connected to the concession for the temporary private commercial exploitation of the parking facility (SEE RELATED COST ASSESSMENT).

FURTHER STUDIES NEEDED

- Institutional implementation and monitoring responsibilities and agreements.
- Accurate geological and geotechnical analyses.
- Extensive topographical surveys; archaeological surveys and exca-

vations.

- Detailed infrastructure and utility assessment
- Architectural surveys; structural surveys, analyses and assessments.
- Detailed traffic management plan.
- Detailed architectural and engineering design work.
- Careful phasing of the works so as to allow for the efficient operation of the streets during the course of the works.



VIEWS FROM THE ROOF TOP URBAN PLAZA

COST ESTIMATES**A) WORKS**

PUBLIC PIAZZA AND GARDEN (Total area Sq. Mts 3,200 X JD/sq. mt 23)	JD 73.600
PARKING STRUCTURE (Total parking stall = 270 X JD/parking stall 4,700)	JD 1.269.000
COST OF THE WORKS	JD 1.342.600

B) ADDITIONAL PROVISIONS**b1) TECHNICAL EXPENSES**

Detailed design consultancy (8% of A)	JD 107.408
Construction supervision and management (8% of A)	JD 107.408
Topographical & archaeological surveys/specialistic investigations (5% of A)	JD 67.130
b2) CONTINGENCIES (15% of A)	JD 201.390
COST OF THE ADDITIONAL PROVISION	JD 483.336

FINAL ACTION PROJECT COST (A+B)	JD 1.825.936
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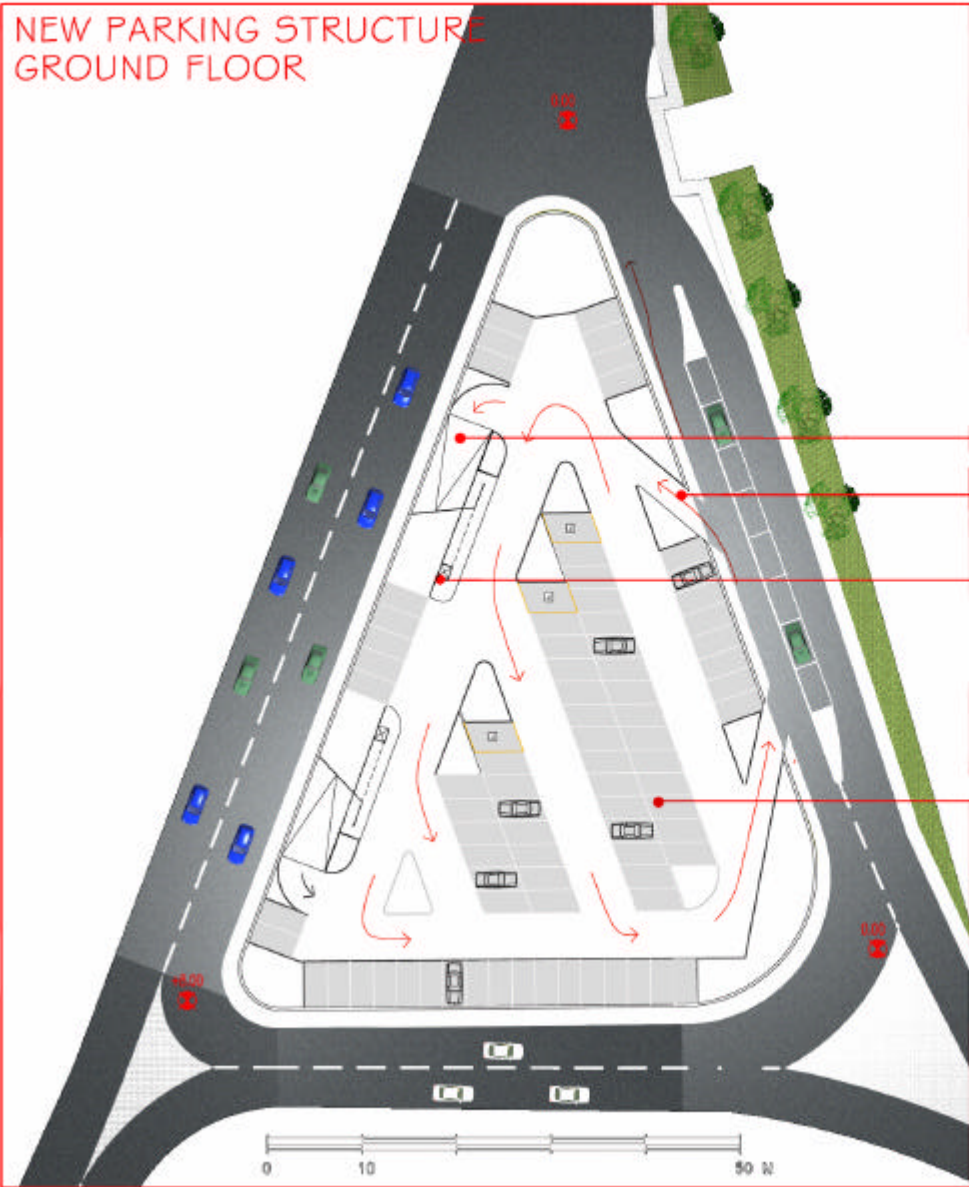
PROJECT TIMING

The time allocated for the implementation of the action project is based on the following phasing:

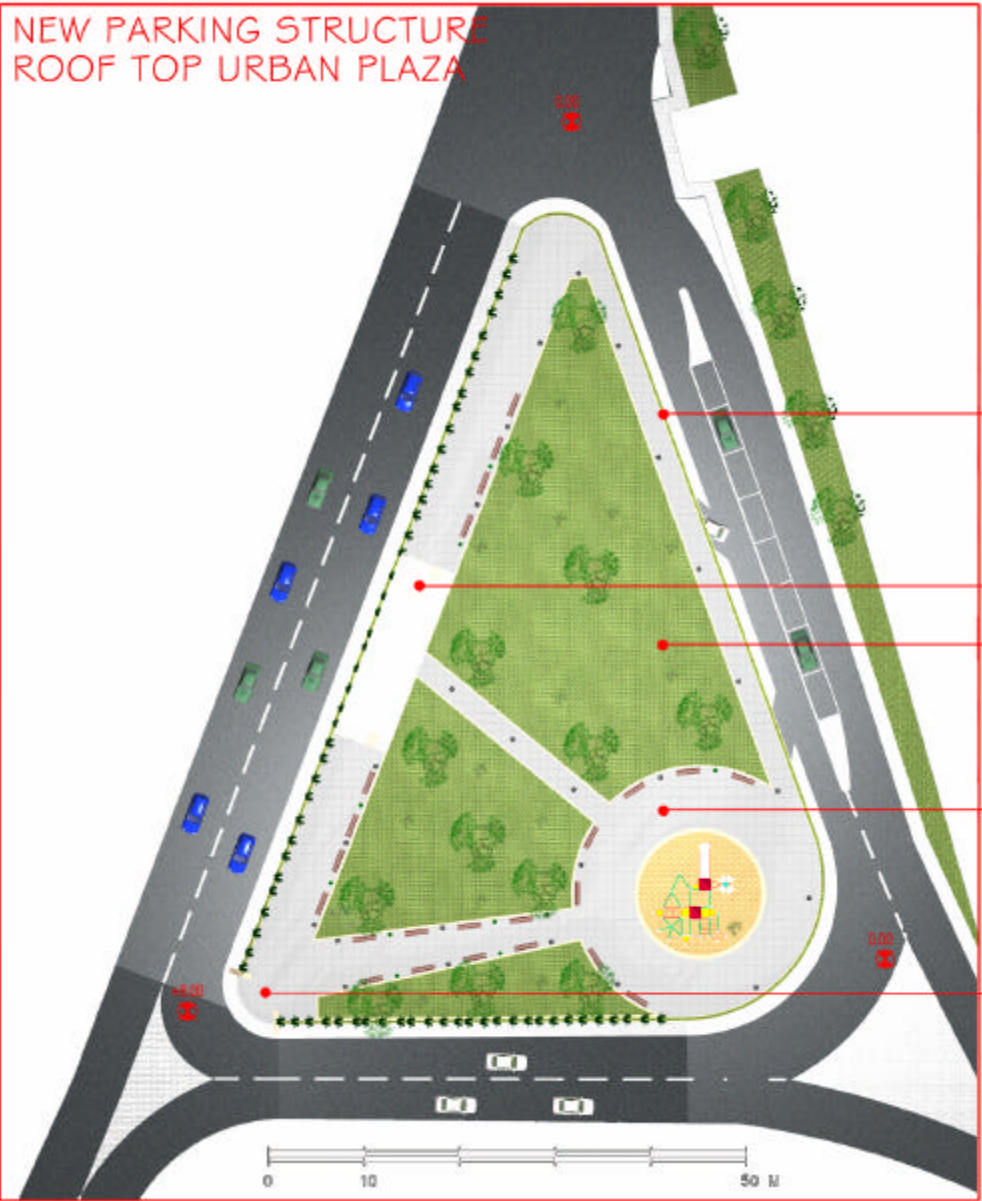
Design stage –	10 months
Work stage –	8 months
Total implementation time –	18 months



VIRTUAL VIEWS OF THE NEW PARKING STRUCTURE



RAMP
VEHICULAR ACCESS
ELEVATOR
PARKING STALLS



CONTINUOUS SEATING
PROTECTED ELEVATOR ARRIVAL
SOFT LANDSCAPE AREA
HARD LANDSCAPE AREA
IN LOCAL NATURAL STONE
DIRECT PEDESTRIAN ACCESS



VIEW OF THE EXISTING AREA



VIRTUAL VIEW OF THE NEW PARKING STRUCTURE



4.4 COST SUMMARY OF THE PHISICAL ACTION

JERASH ACTION PROJECTS - COST SUMMARY								
PROJECT ACTIONS			COST OF WORKS & ADDITIONAL PROVISIONS	COST FOR DEMOLITIONS	COST FOR LAND ACQUISITIONS AND DEMOLITIONS	PRIVATE SECTOR	TOTAL COST	
ALTERNATIVE A								
1	J.01: Upgrading of the street network.	JD	1.663.606				1.663.606	
1	J.01a: Upgrading of King Abdullah Str.	JD	234.328				234.328	
2	J.02:The Wadi area	JD	1.109.440	50.000	400.000		1.559.440	
3	J.03:The East Baths Node	JD	221.000	10.000	70.000		301.000	
4	J.04:The reuse of the available open space pertaining to the ex-market place	JD				1.825.936	1.825.936	
TOTAL COST			JD	3.228.374	60.000	470.000	1.825.936	5.584.310



5. The capacity building actions

5.1 CONTEXT AND MAIN ISSUES

The decline of the historical centre, the degradation of its urban and residential fabric and the crisis of its functions of centrality are strongly related to the general weakness of the municipal institution.

Conversely, the success and the sustainability of the program of revitalization and development of the historical centre are strongly conditioned by the commitment and the capacity of the municipality, and by the improvement of its capacity to mobilize the local resources and to play its role effectively, in particular in the fields of urban planning and management, in the provision of urban services of better quality and in the social and economic development of the city.

The institutional assessment shows that the weakness of the municipal institution is manifested on several interdependent levels:

- **Urban planning and management:** the municipality has very low capacity to provide for structural and strategic planning and management, to determine in a suitable way the location of the various commercial and urban activities and to put in place and to enforce urban regulations for construction and use of public spaces. This situation has resulted in an anarchistic and uncontrolled urban development and in the degradation of the environment and urban fabric of the historical center in particular.

Thus, several problems could still be highlighted:

- **The weakness of competences and technical capacities** of the department of urban planning and management, which, at present, exists only in an embryonic state and has very few qualified and trained personnel;
- **The weakness in regulations:** Absence of regulations defining the commercial activities in the various urban zones and more particularly in the historical center; absence of regulations related to construction, modification or restoration of buildings in the historical center; weakness of the functions of control and application of regulations related to the use of public pathways and spaces, and to the construction and compliance with the rules of town planning;
- **The absence of information and essential data** starting from available and updated base cartography, concerning streets and roadway systems, urban infrastructure, commercial buildings and activities, existing constructions and their conformity with regulations, properties and their limits, existing utilities networks etc, in the historical center as well as in the other parts of the city.
- **The absence of technical tools** necessary for urban management and planning (data-processing tools, GIS, databases, etc.)
- **Weakness of the functions of management and maintenance of public spaces, and of the quality of urban services.** The sustainability of the program of urban revitalization requires the improvement of the level and the quality of urban services and the maintenance of public spaces (maintenance of storm drainage and sewer-

age, street lighting; better management of garbage collection and cleanliness of public spaces and places such as the road station and markets; better maintenance of the roadway system; improvement of traffic management and better control of the parking issue, control over signage and shop windows etc.)

- **Weakness of the capacities to promote and enforce the compliance with sanitary and public health rules.** At present, the municipality monitors and enforces the compliance with the sanitary regulations, in particular those related to the marketing of foodstuffs. However, the municipality does not have sufficiently qualified and trained personnel to assume this responsibility. Even though, this is an imperative to protect the health of the local population, it is still of primordial importance from the point of view of the development of the touristic potentials of the city.
- **Absence of coordination between the municipality and the public utility companies.** This problem manifests on multiple levels and undermines the effectiveness of the majority of municipal services. It is in particular the case of the companies of Water and Electricity, which, often, carry out work without any form of dialogue or coordination with the municipal departments.
- **The great weakness of human resources and qualification.** In spite of a significant overstaffing and of the fact that an important part of the expenditure is devoted to the staff expenses, the municipality is heavily handicapped by the very low qualification and training level of its personnel and their weak engagement in the duties requested of them.
 - The scarcity of technicians and of qualified personnel, of which all municipal departments and services suffer, constitutes today an obstacle for the organizational restructuring and improvement of the institutional capacities of the municipality. The new municipal professionals (primarily engineers) who were for their majority designated or detached by the Ministry of Municipal Affairs following the fusion of the municipalities have, undoubtedly, attenuated the problem without solving it because the majority of them were new graduates without experience.

In addition, the skills required for the management of historic cores and heritage buildings are very specific, and require trained architects and urban planners.

Moreover this problem is accentuated by the difficulty of retaining qualified personnel because of the low pay and the working environment, which is little motivating.
 - The large majority of the personnel consists of employees who have a very low qualification and training level. Moreover, having been often recruited on the basis of clientelism, the majority of these employees is little motivated and continues to see employment with the municipality as a source of income, which demands little or no return in terms of work and involvement.

Thus, the Mayor considers that the solution should combine the setting up of effective and adapted training schemes, the restructuring and reorganization of administration, the establishment of an equitable and transparent system of evaluation of competences and a follow-up of the work of employees including incentives, sanctions and dismissal.

- **An organizational problem.** To face the organizational weakness and the lack of coordination between the various services, the municipality started to set up plans for reorganization based on a general outline conceived by the Ministry of Municipal Affairs. However, the municipality considers that these plans remain insufficiently adapted to its needs and problems, and that it needs technical assistance based on specific analysis in order to be able to restructure and improve its services and functions.
- **Weakness of financial management and of revenues generated by the municipality.** The financial situation of the municipality improved during the last three years thanks to the increase in the revenues transferred by the State, to a better collection of revenues and local taxes, and to a better management of its expenditure. However, in spite of this effort, the financial situation remains marked by many weaknesses, particularly:
 - Weakness of financial resources in comparison to the expenditure and especially in comparison to the needs for improving the local services and for developing the municipal action, in particular in the field of management and town planning;
 - Very limited revenue autonomy. The decrease of the share of own revenues as a percentage of total revenues of the municipality (in spite of the increase of their absolute value) has strengthened the dependence of municipal financing on the governmental transfers;
 - Weak efficiency of the collection of municipal revenues: the collection of the majority of taxes and fees is still far from reaching the potential optimum level;
 - Weakness of the revenues generated by the income-generating projects;
 - Irregularities and variation in the revenues from year to year;
 - Low capital investment
 - Salaries and wages eat up a big part of the budget;
 - High payment on interests;

Without taking here into account the structural factors which determine municipal finances (fields of competences and definition of the rights of the municipalities as regards taxes, nature of the relationship between the municipal institution and the State, etc), and while limiting the discussion to taxes and revenues which the municipalities have currently the right to locally collect, one can underline sev-

eral problems which block the optimization of the resources and the improvement of the financial management of the municipality:

- Weakness of technical expertise and competences necessary for a good financial management;
- Absence of performing means and tools of management (computer tools) which would make it possible to improve to a significant degree the collection of taxes and fees and the management of municipal finances;
- Absence of a database and an information system allowing the identification of taxpayers, the evaluation and determination of taxes, fees and infringements which must be paid, and the monitoring of payments. It is the case for example of the Job Licensing tax, the revenues from planning and development, Fruits and vegetables fees, sign and announcement boards fees, car park fees, etc...
- Low effectiveness of the procedures of evaluation of the Land and Building Tax (Musakafat) that the State currently collects for and in the name of the municipality, but which the municipality should take care of in the coming years. It should be stressed also that the optimization of the collection of this tax could not be done in the absence of a census and of a system of addressage of streets, buildings and land, and without the installation of a performing database and of procedures of evaluation and of collection;
- Weakness or inexistence of procedures for the control and monitoring of the process of collection of taxes and revenues;
- Lack of accountability mechanisms, low transparency of the procedures of evaluation and taxation, and inequality in the treatment of taxpayers because of clientelism;
- Insufficiency of the effectiveness and of the quality of services rendered by the municipality and consequently, of its "legitimacy" to impose the application of regulations and of payment of taxes.
- **The absence of mechanisms of accountability and of forms of participation of the local population and stakeholders.** The population currently has little information on the municipal actions and decisions and tends to perceive the municipality as a simple administration on which the citizens have little influence. This lack of participation and involvement of the population weaken in multiple ways the capacity of the municipality to co-produce with the users services of quality, to make them accept its decisions and its orientations, to make them respect the regulations and the standards of use of public services and spaces, and to obtain the approval and the collaboration of the local citizens in collecting municipal taxes. It also weakens the capacity of the municipality to continue to be the framework where the interests of and the rapports between the various social groups are negotiated and, consequently, to play its part in the construction and the reinforcement of social cohesion. However, the municipality recognizes the importance of this issue, in particular mobilizing the local resources necessary for the success and the sustainability of the program of urban revitalization, and therefore plans to set up local committees for consultation.

5.2 DESCRIPTION OF THE CAPACITY BUILDING ACTION

GENERAL OBJECTIVE

The general objective the action aims at is improving the organizational and institutional capacity of the municipality in order (i) to play its role within the context of the City Revitalization Program, and to manage and preserve in a sustainable way the historical centre, (ii) to improve its performance in service delivery; and (iii) to play an increased role in the reinforcement of social cohesion, urban integration, and social and economic development of the city.

The actions of capacity building approached here are limited to those which are strictly related to the implementation of the program of revitalization of the historical center. However, the success of these actions in ensuring the sustainability of the objectives of the program of urban revitalization depends on their articulation with other general and transversal activities aiming at reinforcing the capacities of the various municipal departments in various fields on the totality of the municipal territory, in particular in the fields of planning and urban management, organization and management of personnel, budgetary and financial management, the mobilization of resources and the improvement of local taxes collection.

SPECIFIC OBJECTIVES OF THE PROGRAM

- 1) Development of the technical and institutional capacity of the municipality to implement, monitor and ensure the sustainability of the core city revitalization plan, including the capacity building actions;
- 2) Strengthening the technical and institutional capacity of the municipality to enforce the new Historic Core Regulation, and to promote, assist, and monitor the conservation and the rehabilitation of the urban and architectural heritage;
- 3) Reinforcement of the institutional and organizational capacities of the municipality in urban planning and management, particularly in the historical core;
- 4) Improvement of the capacity of the municipality to provide urban services of better quality, in particular in the field of maintenance and management of urban public space of the historic core;
- 5) Improvement of the transparency and accountability of municipal management and reinforcement of the forms of participation of the population and local stakeholders.

The capacity building action plan for reinforcing the municipal capacities will be put in place, as much as possible, jointly by the four municipalities concerned (Madaba, Jerash, Salt and Karak). This will make it possible (i) to carry out an economy of scale and (ii) to institute a process of collaboration and transfer of competences between them.

DESCRIPTION OF THE PROGRAM

1) Development of the technical and institutional capacity of the municipality to implement, monitor and ensure the sustainability of the core city revitalization plan, including the capacity building actions.

The efficient implementation and the sustainability of the core city revitalization plan require the **adoption of an organizational scheme and of an integrated transversal approach** that allows:

- To closely connect the urban physical actions with the institutional capacity building actions;
- To integrate the core city revitalization as well as the functions of urban planning and management of the historical center in a strategy aiming at the modernization of all municipal departments and the improvement of the service delivery over the totality of the municipal territory.

This approach could be achieved by **setting up a "cross-departmental municipal unit"** under the direct authority of the Mayor and with the participation of the chief of the "technical support unit" (see 2), the person in charge of the department of urban planning, as well as those in charge of the various municipal departments concerned with the provision of services.

This "cross-departmental municipal unit" would have the authority and the responsibility for supervising the implementation of the program of urban revitalization of the historical core and the municipal capacity building, including planning and urban management and the improvement of the quality and effectiveness of the municipal services.

In other words, this unit would materialize the concept of "**Administration de mission**" and would be in charge, by mobilizing and coordinating the various municipal departments and their actions in the historical core, of accomplishing the functions of:

- Coordination with the other institutional partners of: putting in place, monitoring and evaluation of the physical actions of the program of revitalization of the historical core;
- Setting up, monitoring and evaluation of the actions of capacity building;
- Identification or definition of the needs for scheduling, in terms of urban management, the provision of urban services in the historical center according to a timetable and a given level of quality;
- "Maîtrise d'ouvrage" or overall supervision of all actions aiming at improving the services as well as other actions and work related to the program of urban revitalization of the historical center,
- Monitoring and evaluation (including the definition of the criteria of performance) of the provision of services and the urban management of the historical center.

Admittedly, the "cross-departmental municipal unit" should focus initially on the revitalization of the historical center and its management. However, the transversal approach and the mobilization of all municipal departments will permit to make of this program of revitalization a ground of experimentation and of building municipal capacities, so that the improvement of the services and urban management of the historical center could extend gradually to the totality of the territories of the city¹.

2) Development of the technical and institutional capacity of the municipality to enforce the new Historic Core Regulation, and to promote, assist, and monitor the conservation and the rehabilitation of the urban and architectural heritage.

This can be translated into action through the **creation of a “technical support unit”** that will supervise the overall process and actions of conservation and restoration of the urban and the architectural heritage, and will achieve more particularly the following specific objectives:

- To facilitate the access to clear, correct and detailed information about the urban revitalization plan by the local community (information & communication action, publication of the new regulations related to the historical core on different supports including the Internet - this is particularly important for professionals like architects, town planners, etc.)
- To orient both beneficiaries and stakeholders in the interpretation/implementation of the core city revitalization plan regulations;
- To provide technical assistance to the lower income strata of the local communities in the identification, design, approval of projects for the recovery, conservation, and upgrading of historic buildings in the core city;
- To authorize/ deny building licenses and permits (i.e.: new constructions, old building restoration and conservation, demolitions) according to core city center regulatory discipline;
- To coordinate with both local and national institutions such as DOA, MOTA, etc. on matters that are in their specific institutional competences (i.e. Archaeological site protection and promotion; Heritage and Environmental protection, etc.)
- To monitor the implementation of all restoration, conservation, refurbishing and upgrading projects regarding the historic buildings stock;
- To work closely with the municipal urban planning department in order to improve the urban planning and management of the Historic Core;
- To participate actively in the effort to ensure a better coordination between municipal departments in order to improve the delivery of urban services in the historical core;
- To secure harmonization between actions targeting public spaces and properties and actions targeting private buildings (i.e.: streets, urban supplies networks, private buildings);
- To report irregularities and violations to rules and regulations concerning the core city revitalization to the local authorities responsible for the application of sanctions.

This technical support unit will consist of: 1 senior architect, 1 Architect Conservator; 1 Structural engineer specialized in building consolidation; and 3 Surveyors. The staff of this unit should be trained on the use of GIS.

3) Reinforcement of the institutional and organizational capacities of the municipality in urban planning and management, particularly in the historic core.

- Reinforcement of human resources of the department of town planning by employing professionals having technical expertise (1 architect specialized in urban planning/management and 1 GIS specialist who will work closely with the technical support unit);
- Staff training of this department;
- Equipping the municipality with the tools and technical instruments necessary for planning and urban management (data-processing tools, GIS, databases, aerial digital maps, etc.);
- Assisting the municipality in starting to collect information and essential data concerning the historic core and to organize them in the form of databases (cadastral data and land information system, inventory of and addressage of streets and buildings, and of commercial buildings and activities, data on existing constructions and their conformity with regulations, intelligent mapping and inventories of urban networks and infrastructures, etc.) These databases that will be built for the historical center could be enlarged thereafter to include the whole city.
- Mobilization of the resources and the competences of the different municipal departments in order to enforce the respect of regulations and to set up mechanisms of control to deal with violations (land use, zoning and building regulations; commercial activities regulations; signs and announcement boards, parking and use of pavements and public spaces, etc.)

4) Improving the capacity of the municipality to provide urban services of better quality, in particular in the field of maintenance and management of the urban space of the historical center.

- Reinforcement and improvement of the quality of maintenance of public spaces (maintenance of sanitary networks and drainage; street lighting; garbage collection and cleanliness of public spaces and places such as the road station and markets; maintenance of the street network; traffic road management, and control of parking - both free and paid, etc.) This improvement could be achieved through a four-level intervention:
 - Staff training;
 - Improvement of human resource management and setting up of evaluation and control procedures;
 - Implementation of information tools, monitoring and evaluation relating to urban services and to the functions of management and maintenance of public spaces.
- Setting up a mechanism of coordination and cooperation between the municipality and the public sector companies and the public utility providers, in particular the Water Authority and the Electricity Company for a better programming and organization of their work in the city, particularly in the historic core.
 - Creation, under the authority of the Governor, of a working group in order to reach and to set up a **formal agreement between the municipality and the public utility providers**. This

agreement should define the obligations and duties of each party and precise the conditions of intervention of these companies in the historic core and in the municipal territory, and the modalities of coordination with the municipal services.

5) Improvement and reinforcement of the forms of participation of the local population and stakeholders.

- Establish a local committee of consultation and follow-up of revitalization formed from local stakeholders (associations, representative of shopkeepers and traders...).

¹ Another approach of “**territorial management**” would have been possible. But the risks, which it presented, made us prefer a transversal approach. That approach would have consisted of creating a “**municipal unit for specific management**” which would have had the responsibility of supervising the totality of the program of urban revitalization of the historical core.

Such a unit would have been given the responsibility of:

- The functions of coordination, with the other institutional partners, of the unit of the plan of revitalization of the historical core;
- The specific functions of applying the new regulation concerning the historical center, of the conservation and rehabilitation of the architectural and urban heritage;
- The functions of planning and urban management of the historical center;
- The definition of the needs in terms of urban services (maintenance, etc); the mobilization of the different municipal departments and the coordination of their interventions to ensure the supply of these services in the historical center according to a timetable and level of quality defined by this unit of management; the follow-up and the evaluation of the provision of services as well as all other work and interventions in the perimeter of the historical center.

In other words, this option would have led to a territorialisation of the municipal action and would have given to this “management unit of the historical center” a certain autonomy vis-à-vis the other municipal departments whose role, in the perimeter of the historical core, would have been limited to a role of execution.

This option presents several risks and disadvantages:

- It reduces the benefits in terms of capacity building of the plan of revitalization of the historical center, in particular the physical actions, insofar as it limits the role and the participation of the various municipal departments in putting in place these actions;
- The improvement of urban management and the quality of the municipal services in the historical center could be accompanied by a stagnation and even by a deterioration of the quality of these services in the other zones of the city.
- This approach could, consequently, create and reinforce urban fragmentation and the inequality of access to the municipal services of the populations of the various zones of the city.
- It could also create a gap and an inequality, in terms of means, capacity, and efficiency, between the unit in charge of the management of the historical center and the other municipal departments. Such a gap would inevitably result in internal tensions and conflicts, which would, in the long run, put at risk the sustainability of the improvement in the management and provision of services concerning the historical center.
- On the financial level, this option could not be sustained because the improvement of management and the municipal services supposes the reinforcement of the capacity for financial management and collection of revenues. However, the improvement in the collection of these revenues could neither be made nor accepted locally without the municipality improving the effectiveness and the quality of the services, which it renders to the whole of the population.

5.3 ESTIMATED COST OF CAPACITY BUILDING ACTIONS

The estimated cost takes into account:

- The economy of scale related to the coordinated realization of the actions for the four towns
- The collaboration and partnership with the CVDB in particular for the training and technical assistance
- The un-accounted for time-salary of the municipal staff participating in these actions

RECRUITMENT OF PERSONNEL

Action	Objective	Modalities/Means	Schedule	Cost
Creation of a "technical support unit"	Development of the technical and institutional capacity of the municipality: • to enforce the new Historic Core Regulation; • to promote, assist , and monitor the conservation and the rehabilitation of the urban and architectural heritage.	Recruitment of 8 people: 1 senior architect 1 Architect conservator 1 Structural engineer specialized in building consolidation 3 Surveyors	Year 1	3,360 US\$ per person per year
Reinforcement of capacities of the municipality in urban planning and management, particularly in the historic core.	• to ensure a better urban planning and management of the historic core.	1 architect specialized in urban planning/management 1 GIS specialist	Year 1	3,360 US\$ per person per year
Total		8 people		134,400 US\$ (for the 5 years)

TRAINING

Action	Objective	Modalities/Means	Nb of days for each municipality	Nb of days for 4 municipalities	Cost for each municipality
Training on : • Historic Core Regulations • Conservation and restoration of historic buildings	Development of the technical and institutional capacity of the municipality to enforce the new Historic Core Regulations , and to promote, assist and monitor the conservation and the rehabilitation of the urban and architectural heritage .	Training of 6 people from the "Technical support unit" and/ or from the Urban planning department	15	15	15*1,800/4= 6,750 US\$
Training on : • The use of GIS and other tools (aerial digital maps, databases) for urban planning and management	Reinforcement of the capacities of the municipality in urban planning and management , particularly in the historic core.	Training of 6 people from the Technical support Unit and from the Urban Planning department	15	15	15*1,800/4= 6,750 US\$
Training on the maintenance and management of urban services and spaces: • Sanitary networks and drainage • Maintenance of the street network; • Traffic road management	Improving the capacity of the municipality to provide urban services of better quality, in particular in the field of maintenance and management of the urban space.	Training of 6 to 9 people from different technical services • 2 or 3 persons from Sanitary networks and drainage; • 2 or 3 from Maintenance of the street network; • 2 or 3 from Traffic road management	15 (5 days for each service)	15	15*1,800/4= 6,750 US\$
Total		26 people	45	45	20,250 US\$

NB: The training will be organized by group of people from the 4 municipalities (maximum 24 persons). The cost for each municipality is calculated on the basis of the number of days per group divided by 4. The cost of one day training is estimated, on average, at 1,800 US\$ which includes:

- 1,300 US\$: trainer fees for the 1 international trainer + 1 local trainer (including preparation of the training materials, DSA and transport expenses)
- 150 US\$: training material
- 150 US\$: transportation and catering of the trainees
- 200 US\$: organization

MUNICIPAL INFORMATION SYSTEM

Action	Objective	Modalities /Means	Schedule	Cost
“Adressage”	Improvement of urban planning and management of the historic core	Pilot operation for the Historic core including • Surveys • Codification • Cartography • construction of a database	Year 1	40, 000 US\$
		Installation of signs with names of streets and buildings	Year 2	

TECHNICAL ASSISTANCE

The training should be complemented by specific technical assistance of a limited duration. An assistance group, made up of consultants, could be established under the responsibility of the MOTA and in collaboration with the Ministry of Municipalities and the CVDV. Such a group could assist the four municipalities in:

- Enforcement of the new Historic Core Regulation
- Improvement of the urban management of the historic core
- Conception of the “Addressage”
- Setting up of indicators for the monitoring and evaluation of the urban service delivery

Cost : 40, 000 US\$

IN-KIND ASSISTANCE

- GIS tools for the department of Urban Planning and Technical Support Unit
- Software for the management of databases for the Technical Support Unit
- Plotter, printers, etc. digital camera, etc. (20,000)
- 10 Computers, printers for the Technical Support Unit (8 x 10,000 + 2 x 4,000)
- Satellite imagery and aerial cartography for the Technical Support Unit and the department of Urban Planning (7,000)

Partial renovation of the equipment at the fourth year.

Cost : 223,000

Total Cost for the municipality: 457,650 US\$
