Environmental Assessment

For

Site and Road Improvement at Hisham's Palace (Qaser Hisham) – Jericho City

Jordan Valley – West Bank

Funding Made Available by the American People Represented by The United States Agency for International Development (USAID) Through The American Near East Refugee Aid (ANERA)

In Cooperation with the Ministry of Tourism and Antiquities

Prepared by

ANERA in cooperation with Habash Consulting Engineers and Diyar Engineering Consultants

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Executive Summary

ES-1 Introduction

To support the Ministry of Tourism and Antiquities to improve the archeological site at Hisham's Palace in Jericho the United States Agency for International Development USAID through the American Near East Refugee Aid ANERA proposes to finance the construction of a new toilet unit and the rehabilitation of existing buildings on site and providing pathways and site signage in addition to improving the existing road leading to the palace.

This Environmental Assessment (EA) was conducted in May 2008 to determine the reasonably foreseeable significant social and environmental effects, both beneficial and adverse, that the proposed project can have during and after Implementation. The EA is intended to provide the decision makers with a comparison of the impacts of each alternative to enable them to make an educated decision as to if and how to proceed. The assessment includes mitigation measures to minimize any negative impacts and to maximize the positive ones.

Before the work on the Environmental Analysis began, a scoping session was held to determine the appropriate level of study to identify issues and concerns that will be the focus of the environmental assessment. The scoping session was held on Wednesday April 30, 2008 was able to draw feedback from stakeholders and thus identified all issues of concern.

Key Issues

The environmental team carefully reviewed comments received from stakeholders, and concerned agencies and determined that the following issues are relevant:

Work Access, Site Safety, Parking and Debris around existing bridge and Tall Al-Mafjar Site.

Table 1: Key Issues Considered in this Environmental Assessment

Issue	Reason for Consideration
Cultural Resources	Palace is a historical site and thus minimum disruption to the overall compound shall be caused.
Health and Safety	In addition to workers during implementation the site is frequented by visitors year round their safety is priority.

Issue	Reason for Consideration
Parking outside the Palace	Parking has one entrance point which is also the exit point. The concern is the safety of pedestrians.
Debris & wastes around the Existing Bridge	There are a lot of debris, rocks and other construction waste products that are dumped near the bridge area.
Archeological site to the east of the road	Tal Al-Mafjjar is an archeological site in the area, the concern is potential disturbance to it.

ES-2 Project Purpose

According to the Ministry of Tourism and Antiquities (MOTA) the historical site of Hisham's Palace in Jericho city in the Jordan Valley urgently needs to be provided by visitor's services: rehabilitation of its existing building and museum and the construction of a new toilet unit. Moreover MOTA identifies the road leading to the palace and the bridge as top priority and in need of immediate and urgent rehabilitation. These interventions are part of a Master Plan aimed at rehabilitating the historical site. The proposed interventions will promote and preserve Hisham's Palace status as one significant cultural heritage site, and will promote tourism and visitors to the area.

ES-3 Proposed Action

The project aims at improving the **a) Presentation of the Site** through providing signage, providing pedestrian paths, shading pergolas and landscaping works and **b) Providing visitors' services** through rehabilitating the existing building near the entrance to serve as an Interpretation Center providing an audio- visual hall, a site museum a ticketing office and a small gift shop **c) Road and Bridge Rehabilitation** through the construction of a bridge over Wadi An-Nwiemeh and the rehabilitation of the existing road including the construction of sidewalks and parking area.

ES-4 Environmental Consequences

During initial field visits and project investigation, it was found that there was a potential for significant impacts resulting from the implementation of the works related to the Road and Bridge and the Site Development, these items are discussed at length in Section 4. Section 5 discusses in detail the potential impacts to these resources as a result of implementing the works. It has been determined that there will be no impacts to the environmental and cultural resources in the area as a result of the implementation of the proposed project activity provided that mitigation measures as detailed in Section 6 are followed.

ES-5 Conclusion

This Environmental Assessment concludes that the Proposed Action is necessary to meet the objectives of MOTA in improving the overall site at Hisham's Palace in accordance with its comprehensive vision for this important historical and archeological site.

SECTION 1

Introduction

The Ministry of Tourism and Antiquities (MOTA) is interested in improving the archeological site of Hisham's Palace through undertaking site development by providing pathways, shading pergolas, plantation and site signage, also by rehabilitating the existing building on the site to serve as an Interpretation Center and improving the services provided to the visitors by replacing the existing toilet unit with a more appropriate one and a small cantina equipped with vending machines. In addition to that the rehabilitation of the existing road leading to the palace and construction of a new bridge over Wadi An-Nwiemeh. USAID has proposed to finance these interventions through the American Near East Refugee Aid (ANERA) through its JOBS Program. MOTA through discussions with ANERA and USAID has identified this project as on of the top on its list of priorities.

1.1 Objective and Scope of Work

ANERA's JOBS program closely focuses on the continued progress toward helping communities meet their needs for basic services and implementation of such project activities in a highly labor-intensive manner. The goal of ANERA's (JOBS) program is to improve the quality of life of Palestinians in under-served communities in the West Bank and Gaza, in particular in Jericho and the Jordan Valley that are among the least developed areas.

The interventions at Hisham's Palace aims at developing conceptual designs and complete tender documents for the rehabilitation works which shall provide for an architecturally designed and archeologically integrated site. Development plans as well as appropriate access to visitors as part of an integrated plan for the development of this uniquely well-preserved Islamic cultural site.

The purpose of this EA is to evaluate the project impacts according to USAID and Palestinian environmental guidelines, and to identify mitigation measures and monitoring requirements where appropriate.

1.2 Environmental Assessment Requirements and Procedures

This report was prepared in accordance with locally adopted environmental procedures and in accordance with USAID environmental procedures found in 22 Code of Federal Regulation (CFR) Part 216. Table 1 presents a summary of these procedures.

Table 1. Summary of USAID Environmental Procedures

USAID Procedure	Description of Procedure	Remarks
Initial Environmental Examination	First review of reasonably foreseeable environmental effects of a proposed action	Not required for the proposed intervention at Hisham Palace
Threshold Decision	A formal agency decision that determines whether a proposed agency action is a major one that affects the environment	It was determined that this project requires an EA
Negative Declaration	Written declaration that the agency will not develop an EA or Environmental Impact Statement for an action	Not applicable for proposed intervention at Hisham Palace
Scope of the EA	Identification of significant action issues and determination of issues to be addressed in the EA. Based on consultation with experts, public and private agencies and host governments.	Written Scoping Statement covering key issues and scope for EA submitted for review by Bureau Environmental Officer BEO. (Scoping Statement was approved by BEO in May 2008 (ANE 08-62))
Preparation of EA	A detailed study of the reasonably foreseeable significant impact, beneficial and adverse, of a Proposed action on the environment.	Report is prepared for review and approval by BEO.
Monitoring and Mitigation	Monitoring and mitigation of impacts are an integral part of the EA.	EA will incorporate mitigation measures in bid documents
Revisions	In case of major change in the scope of work or nature of the project during implementation, the EA will be reviewed and the above procedure will be carried out again	Supplements to the EA will be required and BEO review and approval will be required.

1.3 Scoping and Approach to the EA

A Scoping Session was held in Hisham's Palace on April 30, 2008 in Jericho. The meeting covered a broad range of topics including project design, construction issues and environmental concerns. Thirty three people representing the donor, implementing agency and stakeholders, and specialists attended the session.

The attendees represented:

1. Governor of Jericho and Jordan Valley
2. MOTA- Ministry of Tourism and Antiquities
3. Jericho Municipality
4. UNESCO - United Nations Education Science and Cultural Organization
5. JICA – Japanese International Development Agency
6. USAID – United States Agency for International Development
7. ANERA – American Near East Refugee Aid
8. Diyar Consultants
9. Habash Consulting Engineers

Comments and questions from the public focused primarily on the road design and bridge, the materials used for sidewalks, pavement, the location of the proposed new toilet unit, etc. design of the shelter at the entrance of the palace and the reconstruction of the boundary wall after dismantling the existing toilet unit.

The environmental team developed a list of significant issues based on the results of the Scoping Session and site investigations. The EA team, in consultation with USAID, developed the proposed approach for evaluation of significant issues and the EA outline. A Scoping Statement that incorporates these results was subsequently reviewed and approved by USAID.

1.4 Key Issues and Issues Eliminated From Further Study

The environmental team carefully reviewed comments received from the public, stakeholders, and governmental agencies and determined that the following issues are relevant to the decisions that must be made for this project: Cultural Resources, Health and Safety, Parking outside the Palace, Debris and Wastes around Existing Bridge, Archeological Site to the East of the Road

The Natural Areas/ Wildlife Habitat/ Threatened and Endangered Species, Water Resources, Air Quality, Noise, Traffic Disruptions, Construction Materials, Waste as a Result of the Project Intervention are all considered as insignificant factors, each item was carefully considered during the scoping process.

SECTION 2

Purpose and Need

2.1 Need for the Proposed Project

The project "**Site and Road Improvement at Hisham's Palace – Jericho City**" is composed of three components: The Presentation of the Site, the Rehabilitation of the Existing Building on the Site and the Improvement of the Access Road and Parking Facilities at the Site

1. Hisham's Palace site is not well presented to the visitors. There is a lack of off sight signs that direct visitors from the different entrances and major locations of the city of Jericho to the site. On the other hand, the site lacks good informative and directive Signs that will direct the visitors on their site tour and provide them with the necessary information.

Figure 1 Existing condition at Hisham's Palace

The site also lacks basic services such as pathways, appropriate toilets, canopies and shading devices, drinking coolers, cantina, outdoor furniture: seats, trash bins, etc. Providing pathways that are also accessible by handicapped, and using rails to restrict entry to sensitive areas assist the attempts to preserve these threatened elements.

The image of the entrance area needs to be improved in addition to regulating and facilitating accessibility.

Figure 2 Poor Entrance, Parking and Toilet Unit

The site needs to be cleaned from vicious plants. Existing trees and plants need to be maintained, and new trees and plants need to be added. This will result in a better microclimate especially during summer time.
The site can also be presented to the visitors by audio-visual means which requires an audio-visual hall, fully equipped for this purpose.

2. The site also lacks an Interpretation Center. The existing building could be rehabilitated to serve as an Interpretation Center that contains a site museum, an audio-visual hall and a ticketing office, a small gift shop in addition to a small cantina equipped with vending machines.

3. Improvement of Hisham's Palace Road will include reconstruction of 500m of the existing road, Wadi crossing bridge, and parking facility for the Palace visitors. The primary purpose of this project is to improve the infrastructure of the historical site of Hisham's Palace. Improving the road will lead to increase the level of service of the road, improve the accessibility to the Palace, and to reduce the potential for accidents due to the poor condition of the road and the outdated design of the existing road. The road has poor vertical and horizontal curves with poor alignment, very old pavement structure. There is no road safety measures applied, currently; no guardrails exist to protect travelers from the steep drop into the Wadi. In places the road is dangerously narrow with sharp bends that make it difficult to see oncoming traffic. The narrow lanes, lack of shoulders, limited

sight distance, sharp curves, and steep grades are major safety concerns for this route. Figure 3 shows the road's narrow width and dangerous curves. The road is a local road that serves the Palace and agricultural lands, the road leads to no urban area.

This road is the only link of Hisham's Palace to the rest of the world. Clearly, the road is very important for the tourism industry, as it will improve level of service and safety for the visitors. It is expected that this project will stimulate tourism to Hisham's Palace by providing an improved and safer road access.

Figure 3 Hisham's Palace existing access road

Furthermore, the area will be made more pleasant to tourists and local residents by the removal of the unsightly and unsafe volume of trash and debris that are currently being dumped from the road.

There is a great need for a parking facility for the visitors, to organize the tourist trips and safely park their buses. The shape and size of the parking facility will be dictated by the land available for the parking facility. A defined pedestrian passage that includes sidewalks and crosses for safely separate moving vehicles from visitors. There is the intension to plant some palm trees and bushes for improving the landscape of the surrounding.

The Wadi Bridge was architecturally designed in line with the spirit of the agrological site. The arches used were of the same kind of arches used in the Palace and at the historical Newaimeh Bridge that fail-down around 100 years ago. The bridge was designed to be wide so that it will accommodate the future

traffic. Presently, a wide sidewalk at the bridge will be landscaped to allow site seeing for the visitors.
The sidewalk along the road will allow the visitors to wonder around the site by walking from Hisham's Palace to the bridge.

SECTION 3

Proposed Action

3.1 Proposed Action

The project is located in the eastern West Bank area in the city of Jericho. The project will include the development of Hisham's Palace site including the rehabilitation of the existing building. It will not include the development of the northern part of the site as it is not excavated archeologically yet. It also includes the improvement of the access road and will be limited to 500m starting from the roundabout near the Academy to Hisham's Palace.

The work includes development of the entrance area, furbishing the existing building to serve as Interpretation Center, improving the services provided to the visitors of the site including replacing the insufficient toilet unit with a more convenient one, cleaning the site and developing pathways for the site tour, installing directive and informative signs, furnishing the site with the necessary outdoor furniture: canopies, seats and trash bins. Assessing the landscaping of the site providing a better microclimate. On the other hand installing the necessary road signs that lead visitors to the site, reconstruction of the access road, construction of a bridge and parking facility.

The presentation of the site will start from the entrances of Jericho city by installing the necessary signage advertising the site and leading visitors to its location. Then by **the improvement of the access road** including widening, reconstruction, and resurfacing of approximately 500m of existing road to improve safety and level of service. The rehabilitation work will include excavation of the damaged road, then relaying with a pulverizing and sub-base layer and one layer of base coarse material and resurfacing with a 7m wide asphalt concrete pavement with 6cm of wearing course. The asphalt and macadam layers on the existing road will be removed and reused as a sub base. Traffic signage, safety markings, sidewalks, lane marking, and drainage improvements will be provided.

It is important to note that construction will occur within the existing right-of-way and will not divert from the existing road. Private property will not be required.

In conjunction with the road improvements, the Wadi stream will be cleaned of the large volumes of garbage currently being dumped over the road edge. A new guardrail will be installed along the new road alignment to improve safety and discourage future dumping.

The Wadi Bridge will be constructed, and since the bridge is located at a cliff, whereby the downstream Wadi level is 5.5m lower the Wadi bed at the upstream, a retaining wall has to be constructed. The bridge will be supported from the downstream by this retaining wall and be laid at the bottom level of the up-steam bed level. The architecture of the bridge was designed to fit with the important archeological site and match with the shape and size of arches. The width of the bridge is 14m, 7.3m of which is paved while

the remaining width is divided as sidewalks on both sides. Those sidewalks are landscaped to form a part of the site seeing tour for the site.

The parking facility is located adjacent to Hisham's Palace on a piece of load owned and assigned by Ministry of Tourism and Antiquities for that purpose. The parking facility was designed following the boundary of the piece of the land. It is the aim to landscape this parking facility by designing a sidewalks and pedestrian spines and passage, along with planting some trees and bushes. The parking facility will enhance safety to Hisham's Palace users and visitors.

Developing the palace premises will start from the main entrance on the southern wall to the water canal between the Palace bath and the Khan to the north as follows:

- Dismantling the toilet unit on the southern boundary wall which is inappropriate concerning its location as it is the first thing that the tourists see when they depart at Hisham's Palace in addition to their insufficient number. The work will also include filling the existing septic tank (in the location of the proposed parking lot) with earth and debris as it leaks and causes humidity in the adjacent boundary wall and the southern wall of the existing building affecting the stone and causing environmental pollution especially to the nearby cultivated lands. It will be replaced with a sealed concrete septic tank under the proposed toilet unit.
- Dismantling the existing gate and pergola and replacing them with new ones that are coherent with the theme and style of the intervention. This also includes using devices to regulate visitor's entry. The main gate will be opened & closed mechanically. Accessibility of people with special needs is taken into consideration.
- Furbishing the existing building to be used as an Interpretation Center (ticketing office with a small gift shop, audio-visual hall, museum and cantina). This includes improving the nearby microclimate by planting trees providing shaded areas and improving the humidity in the court in front of the building. Also, replacing the existing pergola with a bigger one that provides a bigger shaded area and allows the movement of hot air through it. The rehabilitation of the building includes maintenance for the existing windows providing roller blinds on them, maintenance for the tiled roof and installing thermal insulation underneath it, and providing air conditioning for the different internal spaces. All this provides a better indoor environment. Accessibility of people with special needs is taken into consideration too.
- Building a new toilet unit that provides 5 female toilets two of them are Arabic for hygienic reasons and one is for handicapped. Another 5 toilets are provided for men, two of which are also Arabic and one for handicapped in addition to 4 urinals. This raises the number of users to 14 at once. A big water tanks is provided on top of the toilet unit to insure providing the toilets with water all the time.

- Developing a tourist path through the archeological site. This includes providing the necessary signage which is designed from galvanized metal sections in different sizes and shapes to serve different uses and needs. Pathways are defined

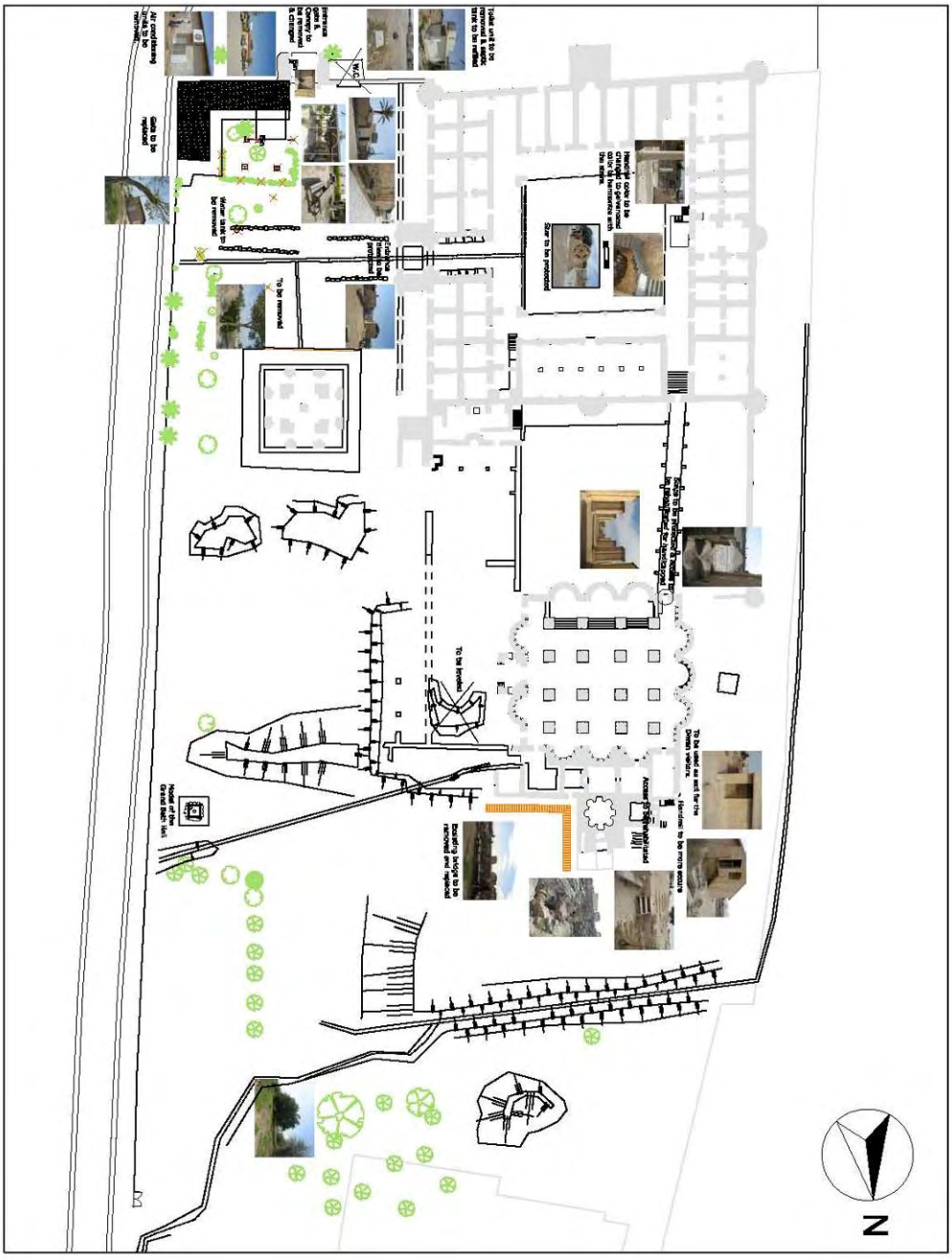

Figure 4 Existing Site Plan

by existing elements on site using directive signs or, by installing galvanized metal pathways for people to walk on without causing any harm to the stone tiling in sensitive areas. These metallic paths are provided with handrails to regulate people's movement through them protecting other displays.

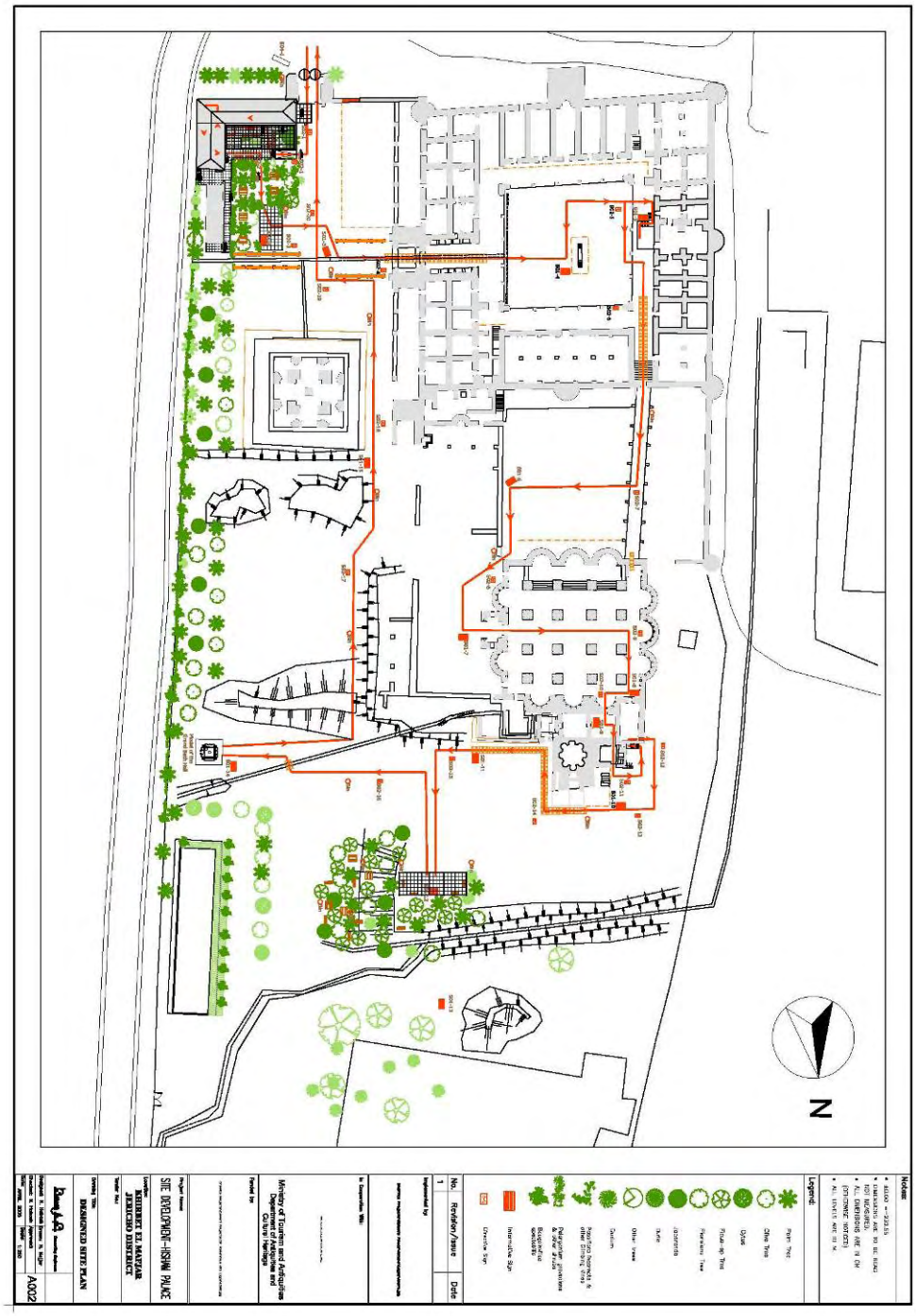

Figure 5 Site after intervention

Other shorter metal rails are used to prevent people from entering sensitive areas either to protect the archeological remains or for their safety. The visitors will be provided with audio devices to get information about the palace's different parts. Outdoor furniture will be provided along the path for their convenience such as benches, pergolas and trash bins. Accessibility of people with special needs is taken into consideration when possible.

- Landscaping of the site includes cleaning the site from any undesired leftovers and getting rid of vicious plants, in addition to increasing the green cover providing a better microclimate. The number of trees will be increased and more climbing plants and vines will be planted.

3.2 No-action Alternative

Under the No-action Alternative there will be no improvement to the archeological site of Hisham's Palace and the access road. The site won't be presented in an appropriate manner, it will continue to lack basic services specially toilets and refreshments. Visitors won't be easily lead to the site and guided on a tour through the site. The site will still lack shading devices and benches for visitors to stop and rest.

The road will continue to deteriorate and be characterized by unsafe narrow lanes and poor visibility. The large volumes of trash and debris will remain, creating a degraded environment and contributing to the pollution of the area.

SECTION 4

Affected Environment

This chapter describes the present condition of the environment within the project area. The key issues generated through the scoping process define the general scope of the environmental concern for the project.

4.1 Field Study

Field activities involved a site visit and meeting on the 16th of April 2008 by MOTA team (archaeologists, architect, engineer), ANERA, USAID, the two engineering offices' teams (architects, engineers), and the environmental expert, to determine the need for an environmental assessment and to identify significant environmental issues that should be studied during the environmental assessment process, several site visits followed. The field activities focused on examining the location of the suggested new building (toilet unit) and check whether there were any hazards or complications that might result from the construction of the toilet unit or the septic tank. Also, we walked though the suggested tourist path and checked whether there was any harm to the archeological remains or safety hazards to the visitors. The accessibility of construction materials and small equipment and the potential areas to be used as storages for materials was also examined.

The situation and location of the access road, bridge and parking area was also examined in this visit. Afterwards, several field visits were conducted by the project team to study and examine specific components among which are the archeological remains, the plantation and the access road and bridge.

A scoping session was also held on the site on the April 30, 2008.

4.2 Cultural Resources

The site is a historical site with a high cultural heritage value. Thus it is sensitive to any intervention that might take place within or around its area.

Hazards might be summarized as follows: Damage might be practiced against the archeological remains especially if they were not excavated yet, handling the archeological remains in an aggressive way, access of heavy machinery or construction equipment or vehicles into the site, conducting construction works or installment of different project components close to the ruins, harm as a result of vibrations caused by heavy machinery or construction equipments, delivery and storage of building materials during the construction period might disturb the site and cause intersection with the visitor's circulation, image of the site might be changed from a historical site to a construction site.

Because Hisham Palace has one access road any construction has the ability to

change traffic patterns, impede traffic and impact the visitors, employee of Hisham palace, local farmers. The existing road is very narrow and the only link between Hisham Palace and the rest of the world and supports all the traffic from buses to small vehicles.

4.3 Health and Safety

The primary purpose of this project is to improve the level of service and to reduce the potential for accidents due to the existing poor condition of the site and access road and the outdated design of the existing route. The road is in disrepair and is characterized by substandard vertical/horizontal geometrics. In places the road is dangerously narrow with a sharp drop into the adjacent valley. There are no guardrails on the existing road. The narrowness of the road and visibility deficiencies is major safety concerns for this road.

Again, large volumes of debris have been dumped alongside the road and into the Wadi creating a nuisance and posing a significant risk to public health.

Health and safety for workers and the visitors may be affected during construction activities. Movement of heavy machinery and construction materials, and increased dust and noise pose a risk to both workers and the visitors. Workers may be affected by prolonged exposure to sun and heat and by exposure to the solid waste during cleanup activities.

4.4 Parking outside the palace

Visitors and employees use the area along the southern boundary of the palace as a parking area now. The proposed parking occupies the same area as it is the land that could be offered by MOTA for the time being to be used for this purpose.
Hazards are caused by the provision by one access to this area that is used as an entrance and exit at the same time. Moreover, it is crossing the pedestrian entrance to the site.

Figure 6 Existing parking area

4.5 Debris and wastes around the existing bridge

The improper handling of solid waste in Palestine has been identified as a major cause of water quality deterioration, land degradation, air pollution, and aesthetic degradation (MnEA 2000). Most of the excavated material and residual of construction waste are usually dumped on the side of the roads, Hisham's palace road was not an exception. Palestinian regulations prohibit random dumping, however, these regulations are rarely enforced. Random dumping of waste is frequent and has, historically, been caused by a lack of designated dumping sites.

The issue of the solid waste was brought-up during the scoping meeting, during which the UNISCO representative spoke on the subject.

Figure 7 Debris along the access road

The project will clean and remove the solid waste**.**

4.7 Archeological site to the east of the road

There is a hazard that the archeological site of Tall New'meh to the east of the access road be affected by the development of the road and the bridge. This point was raised during the scooping session.

However, site excavation carried out by MOTA has shown that the Right-Of-Way of the road runs on the western side of the historical site just outside the archeological site. MOTA has reported that the current ROW will not damage the site but rather the contrary will help them in developing the site.

SECTION 5

Environmental Consequences

This chapter describes the changes that may be expected by implementing the proposed action. Cumulative effects are also discussed in this section. Cumulative effects result from incremental impacts of proposed activities when added to other past, present, and reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

5.1 Cultural Resources

Proposed Action – By implementing the proposed project, the overall environment of the site will be improved to a large extent. The site will be presented to the visitors in a better way. They will be directed to the site from the different locations in Jericho by using street signs. They will be welcomed by a safer parking, and served by better facilities especially the sufficient number of toilets and the provision of coolers and refreshments. The visitors will get explanation about the site in the Interpretation center where they can attend an audio-visual presentation and visit the site museum. They can get some refreshments and use the toilets. Then they will be guided through the site getting the necessary information about its different components. The guided tour helps reduce the harm that is practiced by the visitors especially school children to the archeological remains. It will also assist in protecting the stone tiling and stone walls in sensitive areas by using special galvanized steel pathways and railing. The proposed intervention will also improves the microclimate at certain locations in the site by planting more trees and vines to provide shade and humidity. Canopies and pergolas are also added for the same reason and outdoor furniture is provided for the convenience of the visitors. The site will be rehabilitated for people with special needs where they can visit most of its parts.

No-action Alternative - Under the No-action Alternative the site will remain poorly served and protected. Visitors will not be easily directed to the site and guided through the site. They won't get the necessary information and required services. People with special needs won't be able to move around easily.

5.2 Health and Safety

Proposed Action – With proper planning and mitigation, there will be no negative impacts to the health and safety of workers or to the general public during construction. During construction, safety measures will be implemented to protect people from injury and adjacent property from damage. Workers will be protected with proper training and knowledge of the equipment/machinery they are handling. Implementation of an active safety program and provision of safety equipment will be required and will provide further protection. Measures will be provided to define and isolate construction zones by using warning signs, pylons, fencing, and ribbon barriers. During construction, the provision of a comprehensive safety plan and traffic

plan, in addition to appropriate safety equipment, and proper training, will minimize risk and protect workers and the public. The Contractor is required to comply with all U.S. and local safety standards stated in their contract. See Section 6 for the mitigation measures that will be implemented during construction.

By widening and improving the road, this project will result in significant improvements to public health and safety. The road is dangerously narrow near with limited sight distance around curves. No guardrail exists to protect drivers from the steep drop into the Wadi. The Proposed Action will widen the road, improve sight distance, and install a guardrail providing significant safety benefits to the drivers using the road. Furthermore, the cleanup of the large volumes of trash/debris from the roadside and the Wadi will also provide significant health benefits. Again, these benefits will be temporary if the local communities continue to allow illegal dumping and fail to enforce Palestinian environmental regulations.

No-action Alternative - Under the No-action Alternative the road will continue to be very unsafe with narrow lanes, poor visibility, and an unprotected drop into the Wadi. The large volumes of trash/debris will remain, and the benefits to public health will not occur.

5.4 Parking outside the palace

Proposed Action – Since the site of the parking is adjacent to Hisham Palace the parking was designed to improve the surrounding and arrange the car parking. The parking will be landscaped with trees and bushes, sidewalks will be clearly laid with hand rail at the entrance.

To eliminate the disadvantage of having one entrance to the parking especially that buses were assigned to park, pedestrians were separated away from vehicles with sidewalks and entrances. Car parking for the employee is assigned at the entrance, while the bus and visitors parking were separated.

No-action Alternative - Under the No-action Alternative the parking will be a mess, buses park everywhere mixed with visitors and employees cars. There will be no landscape at the locations where the buses and cars parks, which will cause danger to Hisham's Palace users.

5.5 Debris and wastes around the existing bridge

Proposed Action – The Proposed Action will have a significant positive impact on the solid waste management problem along the road. The area will be cleared of solid waste and a new guardrail will be installed discourage future dumping. It will be the responsibility of the local communities to maintain these improvements. To be successful, it will be very important that the local communities work together to implement a stronger solid waste management program with better oversight and quality control. Solid waste must be taken to a controlled dump sites in the area, it is

the responsibility of Jericho Municipality to allocate those dumping sites. To change the practice of illegal dumping, the public must be made aware of the risks associated with the practice and be encouraged to behave in a more responsible manner. Palestinian Law prohibits random dumping; the law needs to be enforced so that the frequency of the action is reduced.

During the project, all trash/debris removed from the area during cleanup, and any construction debris generated that is not reused, will be disposed of in a designated disposal site in an environmentally safe manner. Because of its proximity to the project, Jericho Municipality will be responsible for assigning a dumping site for the contractors.

The intent of the project is to reuse excavated material to the greatest extent possible. Mitigation measures will protect the sensitive environmental concerns in the area from impacts from construction-generated waste.

No-action Alternative – Under the No-action Alternative the large volumes of trash/debris will remain degrading the environment and posing a risk to public health.

5.6 Archeological Site "Tall Al-Mafjjar"

Proposed Action – The design of the road takes into consideration the presence of this site, the proposed width of asphalt and the affected work area are clear off and quite a distance away and is somewhat naturally isolated from the proposed work site. The construction of the Wadi crossing bridge allows for the accessibility to the site without blocking the water in Wadi allowing it to flow underneath it hence protecting the Archeological Site "Tall Al-Mafjjar from any water flooding.

No-action Alternative – The Archeological Site "Tall Al-Mafjjar will still be threatened by water flooding caused by any blockage of the existing water culvert by the debris thrown in the Wadi.

SECTION 6

Mitigation & Monitoring Plan

The following mitigation procedures will be implemented during construction to minimize or eliminate impacts.

Issue	Mitigation
Cultural Resources	Archeologists from MOTA will be based on site during the implementation of the project in order to monitor handling the archeological remains and give instructions for the working team. In case of any new remains found, work will be stopped and MOTA will study the particular situation and decide upon its importance. Alternative locations will be assigned immediately in case of any expected harm. A workshop will be conducted at the start of works for the contractor and all the workers explaining to them the importance and sensitivity of the site and give them instructions. Each area subjected to intervention will be closed for the period of implementing the works then opened for public. No work is implemented in areas that are not archeologically excavated yet. Light machinery and hand tools and equipment shall be used, no heavy machinery is allowed to be used. Heavy vehicles are not allowed into the site, installments have to be carried manually or using small vehicles like bobcats. The construction and rehabilitation works are limited to the south east corner of the site adjacent to the road. This allows for serving the works from outside the site without disturbing it. Materials will be stored outside the site and the contractor's office and equipment will also be located outside the site. The guided tour will lessen the harm that might be practiced against the site.
Health and Safety	Safety Plans will be prepared for both public safety and worker safety. Traffic Plan will be prepared to minimize potential for accidents. Construction zones will be clearly defined with warning signs, pylons, fencing and ribbon barriers. Adequate hearing protection, helmets, safety goggles, brightly colored vests and other appropriate safety equipment will be provided for workers.
Parking outside the Palace	During construction works, a special area will be assigned for the visitors and employees to be used as an alternative parking until the construction works in the parking finishes. This location won't interfere with the working plan. Upon completion of the works

	site will be thoroughly cleaned and fully operational as intended in the designs.
Debris and Waste Around the existing Bridge	The existing waste and construction disposal will be cleaned as part of the project. Moreover, the construction spoil piles and waste material will be stored, management temporarily at designated protected areas. All waste material will be disposed of at designated disposal sites in an environmentally safe manner. The nearest controlled disposal site will be assigned by Jericho Municipality. Excavated material will be reused to the greatest extent possible.
Archeological site ” Tall Al- Mafjjar”	Consultations and field investigations indicated that there is no effect to the archeological site and thus No mitigation measures are required as the site is far from the intervention area and from the visitor’s tour.

SECTION 7

Conclusion

This Environmental Assessment concludes that the Proposed Action is necessary to upgrade the site and provide the visitors with better informative and directive tools. It also improves safety and efficient travel from and to Hisham's palace. This action will also improve the natural and human environment by providing a better microclimate at certain areas in the site and by the removal of the trash/debris illegally dumped along the road. The Proposed Action will have no significant adverse social, economic, or environmental impacts at levels that would warrant an Environmental Impact Statement as long as Palestinian engineering practices, codes, and regulations are adhered to, and mitigation measures are implemented during construction. Unless significant impacts are identified as a result of agency review, this process will require no further environmental

SECTION 8

Consultations and List of Preparers

8.1 Consultations

During the course of preparing the EA, the team members consulted with the following governmental and non-governmental agencies through the Public Scoping Meeting and individual consultations:

The Municipality of Jericho
The Ministry of Tourism and Antiquities
The United States Agency for International Development

8.2 List of Preparers

1. Anan Masri	USAID Mission Environmental Officer
2. Jamal Al-Aref	Civil Engineer/Programs Director - ANERA
3. Jubran Said	Civil Engineer/Program Manager – ANERA
4. Ahmad Irjoob	Archeologist – MOTA
5. Ihab Daoud	Architect – MOTA
6. Dr. Abdulhalim Tumaizi	Environmentalist
7. Nadia Habash	Senior Architect
8. George Odeh	Transportation Engineer

Attachment 1 – Environmental Scoping Statement