



Ravanica Monastery

Program for the Preservation/Maintenance Plan and Adding of the Utility Buildings at the Inner Space of the Monastery Fortress

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Figure 1: The aerial view of the Monastery Ravanica with its fortress (1986)

Abstract

The Program for the Preservation and Maintenance Plan, which is the subject of this paper, is about all utility buildings within the fortress walls, altogether with all free spaces between. The main building of the inner monastery complex, Church of the Assumption of Christ, will not be treated at all, because it is already fully restored and conserved.

This paper will give some answers about possibilities of future micro urban development and reconstruction, maintenance and exposition of the whole ensemble.

Introduction

Background

The Situation of the Site

The Ravanica Monastery is one of the medieval orthodox living monasteries – ensemble surrounded with fortress from the same age. It is at the central Serbia at the region called Pomoravlje, about 10 km far from the Cuprija town and the main highway of Serbia. It was founded at the plateau/bank of the river Ravanica and it is surrounded by the high hills – at the location which is common for monasteries.



Figure 2: Position of Serbia State in Europe



Figure 3: Position of Ravanica Monastery in Serbia

The History of the Site

Monastery was established at the year of 1371 by Serbian medieval emperor Lazar, as his own foundation, mausoleum and the spiritual centre. Archaeological excavations confirmed that the complex was not founded at the bases of the older sacral entity.

The final shape of the monk's settlement was the fortress with the central church at the southern section. Beside the biggest solid tower on the south-east of the church, at the side of the big walls there were built smaller square towers, with the main gate within the one on the west side. That was the final shape of the monastery fortress with seven massive towers. In front of the walls of fortress and towers there

was another, less higher, wall line of defence with walking space between.

According to the spatial position and ground floor of the monastery, it is possible to set apart two, very close, different phases of building, but both medieval. There are two entities – the southern and the northern zone. The first was built the southern zone (main court) with the Church of the Assumption of Christ in its' very centre, surrounded by gate on the west, without small towers, refectory on the north-west and the biggest central tower on the north-east. Later on, the northern zone was formed (small court), with night-quarters and reception chambers, which are built on the ruins of medieval monastery economy with kitchen and other workshops, perhaps for working with metal. At the same time all towers were added beside the fortress' walls.

Nowadays, we have the conserved remains of towers and the reconstructed objects (Dionisije's night-quarters) and new added refectory and store. Outside of monastery walls, there are many utility buildings, monastery graveyard, etc. Just across the river there are interesting ancient cave and the rests of the little early medieval church.



Figure 4: General view of the Monastery fortress



Figure 5: Partly restored main west gate and tower



Figure 6: Church of Ravanica Monastery, XIV century



Figure 7: The thick walls and towers of the fortress

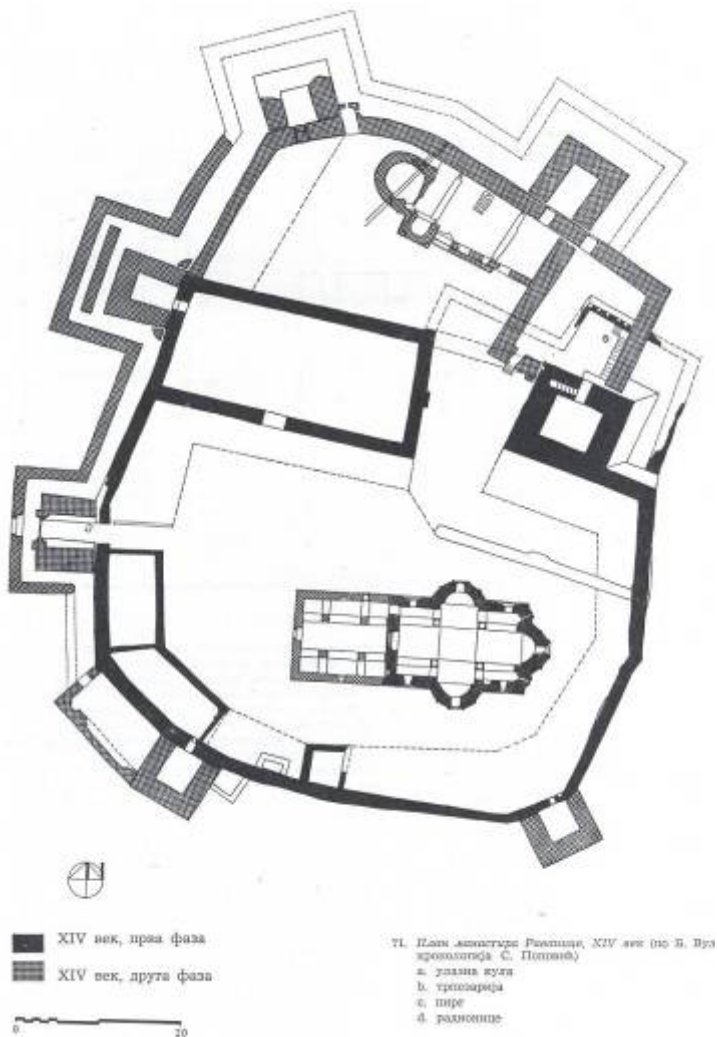


Figure 8: Ground floor – two phases of building of The Ravanica Monastery, XIV century

Previous Restoration Works

During the 70's and 80's in the last century, professor B. Vulovic from the Architectural Faculty of Belgrade University was the chief of the team whose worked at the researching on the field and taking measurements for protection and preservation of this monument, which includes archaeological excavations, many different analysis, describing, valuation and conclusions of particular values of object, within the creating technical documentation and finally plan for technical protection. That team took over full technical architectural protection of cultural good - designing projects of conservation, restoration, adaptation and presentation of this cultural monument, together with the work at the building site with the constructors for the realizations of the concrete projects.

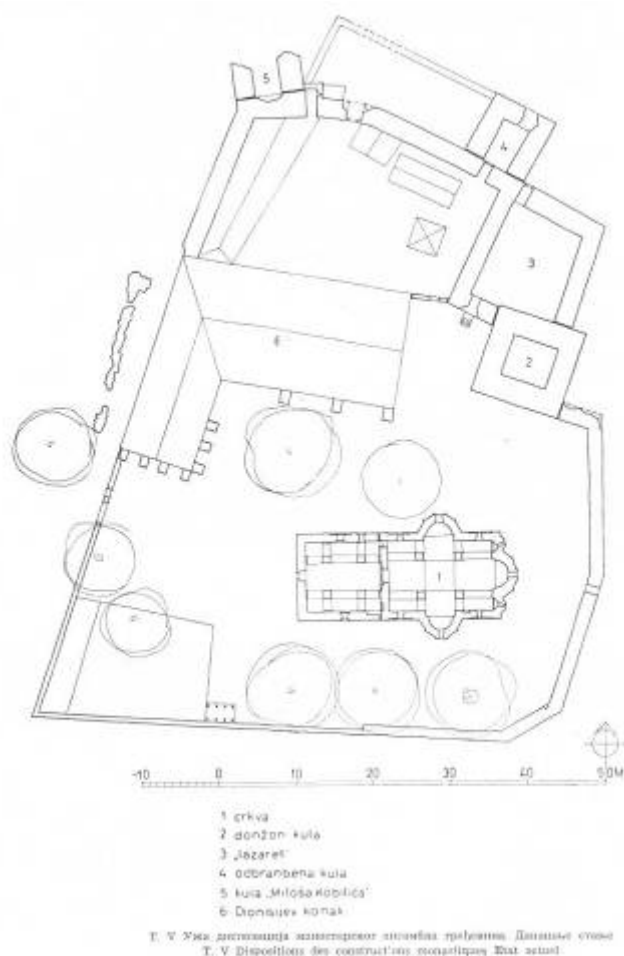


Figure 9: Ground floor of the site before the archaeological excavations (1966)

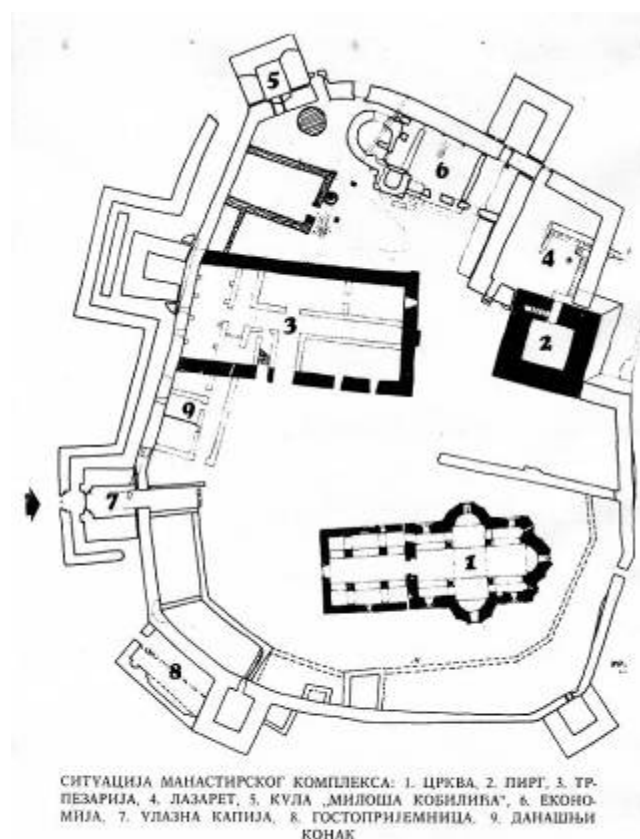


Figure 10: Ground floor of the site after the archaeological excavations (1970-2007)

At the end of previous century, the church was completely excavated, architecturally defined, reconstructed and conserved. So, today it is the most beautiful object at the monastery, with its magnificent conserved wall paintings from 14th century and specific interior equipment. The buildings of economy and night-quarters around the church were adapted and rebuilt. The fortress was partly reconstructed – the main entrance into the complex was rebuilt according to analogies from the medieval time, the towers were partly rebuilt and the main tower was even adapted for visitors, with a little museum with archaeological findings.

Status of the Site

1 Legal status

Today, The Ravanica Monastery is registered as the monument of culture of the exceptional national importance, protected by The Cultural Heritage Law of the State of Serbia. The owner of this object is Serbian Orthodox Church and it is used by nuns and many visitors.



Figure 11: View of the Dionisije's building (1985)



Figure 12: During the building of new second floor (2006)



Figure 13: View of the Dionisije's building nowadays (2008)

2 Present physical status

Although the church and the fortress were already restored and preserved, the focus will be held on the utility objects: dormitories, big monastery kitchen and dining-room, workshops, shop and stores, etc.

Now there are, like it has been mentioned, main yard on the south and small yard on the north. Among the all existing towers and the thick walls of fortress, the main yard is surrounded by the Shop (still in the process of constructing) and Dionisije's building (XIV century, rebuilt in 1852) and the small yard is surrounded by the New house (built in 1988 above the remains of the metal workshop from XIV century) and Dionisije's building (which divided whole complex).

So, the subject for this investigation will be that objects with the inner space between.



Figure 14: View of the excavated utility objects, main court west wing (1975)



Figure 15: View of the gate tower and remains of medieval objects, main court west wing (2008)



Figure 17: View of the Shop, main court southern of church (2008)



Figure 16: View of the Dionisije's building nowadays, main court south-west corner (2008)



Figure 18: View of the Shop, outside of the fortress' walls (2008)



Figure 19: View of the excavated workshops, small court north wing (1980)



Figure 20: View of the New house built in 1988 above the conserved remains of the workshops, small court north wing (2008)



Figure 21: View of the Dionisije's building, small court north wing (2008)



Figure 22: View of the former Guest house and New House, small court north-west corner (2004)



Figure 23: View of the empty space between New house and Dionisije's building (there was one floor guest house, but it was crushed), small court west wing (2008)

The Site and Utility Buildings from Technical Point of View

All utility buildings within the fortress have been constructed along the walls of fortress, stucked with one longer side to them. That model was presented because of the savings of the inner space. The result of such forms is that the objects have only one or two facades and all windows are turned to the yards.

The height of the buildings was in correspondence with the perimeter fortress' walls. After the researches of all walls and structures, according to the holes in stone masonry for wooden beams of ceilings, scientists can establish the average store height of buildings. The height of ground floor rooms was about 2,10-3,30 m, which depended of particular functional determination. In that case the whole average height of this two store buildings might be about 6,00 m, till the beginning of the roof, which was lower then the walls of fortress. There was a possibility for existing three store building, which means that their height was about 9,00 m.

Architectural style and forms of the buildings are inherited from the medieval schemas – always rectangular longitudinal form in the base, two floor buildings with wooden exterior porches and stairs, with sloping roofs (downward to the yards) and very high chimneys for various furnace (for cooking and heating). Many of original buildings were mostly reconstructed, but they've kept a lot of original elements and forms.

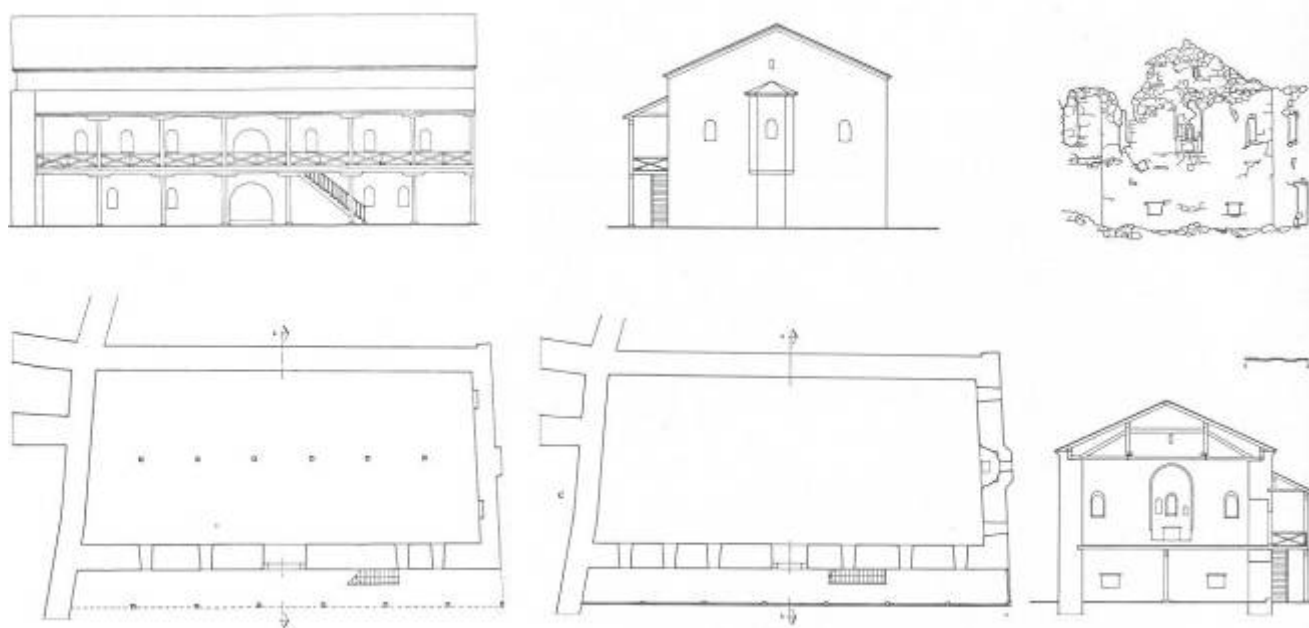


Figure 24-29: Ideal reconstruction of the original monastery refectory XIV century, today Dionisije's building, main yard north wing: south elevation, east elevation, remains from the XIV century, ground floor, first floor and cross section

The techniques of building were old – without cement or reinforced concrete, only with the stone, masonry, wood and metal rivets in the lime plaster. The construction had huge stone fundaments and the surrounding walls at the ground floor were built out of stone, the partition and walls at the upper level were made out of wooden frames with adobe filling. Elements for reinforcement were wooden beams and columns, as well as whole ceiling construction between stores. The roofs were made out of wood, covered by tiles.

In the meantime, the changes occurred and new materials were used for repairs, reconstructions and addings, such as reinforced concrete for beams and columns, new ceilings etc., cement plaster, plastic windows and doors and so long. There are new techniques of building with thinner walls at skeleton system.

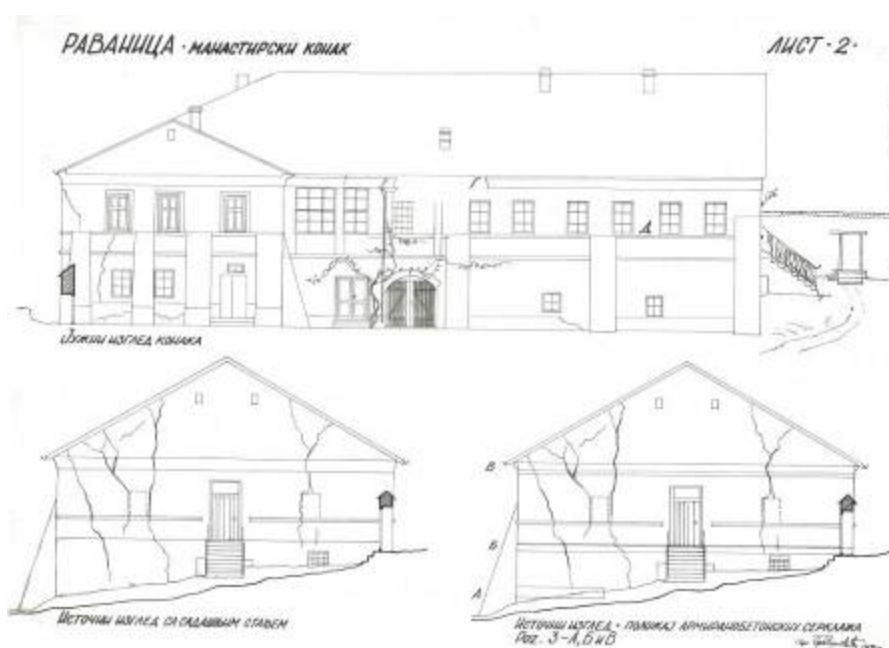


Figure 30-32: Dionisije's building - above the original walls of basement (XIV c.) first floor was added in 1852. south and east elevations in 1959., before static repairing

The Functional and Aesthetic Status of the Site and Utility Buildings

In the spatial corpus of the medieval buildings, rooms for living were mostly placed at the upper floor, till groundfloor was provided for stores, workshops and some similar functions, necessary for the everyday living of monks' community. Today, we have only the remains of ground floors, so we can't tell for sure what was the structure and arrangement of the monks' apartments - so called cells. The rule in medieval was that one cell can be made for two monks, with exception for one only in special case and permission. We only

can to presume what was the design, measurements, equipment, furniture etc. of that relatively small living spaces.

At the ground floors, there were spaces divided by the wooden columns in one or two rows, supporting the ceiling wooden beam structure or with thin stone walls. Those were spaces for work and warehouses. In such scheme there was strict obligation never ever mixing the functions from ground with upper floor. The approach to the individual room was by the exterior staircase and the porch at the upper floor, directly to cells, without extra interior corridors. The inner connections between these two floors were not allowed.

The conclusion is that the functional scheme and special needs of living in monasteries, were the main elements of determination of the architecture and aesthetic of this kind of buildings. That were picturesque, nice and warm two store houses, with stone basements and lime washed floors, with dark brown wooden elements of porches, staircases and window frames, with red tiles on the slope roofs at the courtyard facades.

Today, we lost a lot of that primary aesthetic of building, because during the previous times many destructions and rebuilding occurred. So, the beautiful wooden porches and stairs are lost, big and high chimneys, lime washed surfaces, as well as other important elements of original architecture.

Through the time the functions were changing, too. Today we have new needs and make some balance between existing physical structure and new ideas for their using. The big issue is to divide inner space on public zone (for visitors) and private zone (only for nuns) – that could be done by remodelling main south courtyard for public use only and small north yard for private use of nuns. The biggest Dionisije's building divide that two spaces, so its own function would be double: ground floor for public and other two floors for private use. The objects in the main court must be for public, and the objects in small yard for private use. Now, there are a mixture and confusion of functions - in every building we have both, public and private chambers, with some unnecessary repeating, which is not acceptable.

Expected Needs and Main Goals

This Program has to provide proper and the best answers for the present situation and problems which have to be solved in the future period.

These are the meters of sustainability of whole complex and proper technical maintenance of existing physical structures of utility objects, solution for the optimal balance of physical structures (repairs, development and exposition), good implementation of development of new needs of users (changed and new functions, additions and technical

equipment), activation and involving local community in maintenance (new employment, investments etc.).

Analysis

Previous Steps for Collecting Necessary Data

- Collection of all existing written or drawn materials from archives (researching old maps, drawings, photos etc), written texts about complex, conversations with experts etc.
- Long history of the whole complex, according to the various materials collected during the historical research, where we can find data about original process of planning and building of the complex, as well as main ideas of importance of the site.
- Particular research about the fortress and other utilitarian buildings (except the church), which were built for the life and the special needs of monks – dormitories, kitchen, monks' dining room, guests' room, other economical buildings etc. Especially to point out the presentation of the additions during the time and model for their settlement, finding out what is the architectural design of fortress and historical model of changing physical structures during the previous centuries (tables, drawings, old photos, texts...).

Inventory of Values of the Complex

- 1 **Historical value** is the most important, because of the age of establishment and historical persons who were the founders. There we can find the various traces and signs of diverse historical periods, influences and changes – from the XIV century till nowadays.
- 2 **Identity** – the site is an unique entity with some particular elements of architecture and the whole complex, but there is some special spiritual identity, because in the very centre of the church, there is an open tomb of the saint emperor Lazar.
- 3 **Cultural, artistic/aesthetic, architectural value** as the material testimony of one time in the history of Serbian state, it represents the special school and the important movement in constructing of sacral objects in the late medieval times (located along the river Morava) so called *Moravian school of architecture*. The special artistic value is the opus of masonry – mixture of one row of stone and three rows of bricks, with carved stone elements on the facades of the main churches, usually with five domes (one main and four little).

- 4 **Value of authenticity**, because the spatial entity has to be appreciated through the idea of uniqueness, with its entire partial architectural heritage. There is only one Ravanica Monastery in the whole world.
- 5 Ravanica Monastery has an utmost **symbolic and religious value** for the whole nation, because it contains the rests of material treasure, as well as spiritual and nonmaterial essence of the myth about emperor Lazar and his own faith. That kind of symbol is universal and it is out of the common ideas of counting the real life time.
- 6 **Value of social - anthropological** aspect is also huge; there are meetings and movements constantly during the time of living. So, we can talk about various influences and mental, intellectual, spiritual, etc. aspects of social life - between monks and nuns, and visitors and other common people also.
- 7 The volume of this monument makes it very important as **landmark or spot** in its region. We can talk about this site as a crossroad and mark for right direction in every kind of meaning.
- 8 All previous values make this site a good spot for **tourism and financial** benefit. That should be the source of economical improvement for everybody – monastery, region, touristy agencies, etc.



Figure 33: Present situation in the main court, south, temporary objects



Figure 34: Present situation in the main court, north-west corner



Figure 35: Present situation in the main court, north-east corner

Main Problems and Threats for the Complex and Utility Buildings

Present situation in the complex is very complicated and needs to be solved very thoroughly. First of all it must be undertaken the detection of all physical damages and problems on each building (Dionisije's building and New house) and both courtyards (Main and Small one). There are a few viewpoints of present problems:

1 Technical problems

- lack of general urban planning – there is not any document about future micro urban development of complex
- lack or out of use all infrastructures inside the fortress
- lack and inadequate choice of urban equipment inside the fortress: pavements, fences, public drinking-fountains, general lightening, benches, flowerpots, logistical signs, garbage cans, etc.
- existing of constructions of the temporary objects due to the lack of urban planning – candle room, moveable tables etc.
- partly damaged structural quality of the buildings – damaged roofs and covers, the old wooden ceilings, fissures at the walls, damaged facades etc.

- lack of wooden windows and doors, as well as inadequate fences on facades of buildings
- lack or out of use of installations in the buildings: electrical, plumbing, piping, drainage, telephone, computer network, security networks etc.
- lack of modern equipments in the kitchens, bathrooms, cellars etc.
- lack of new furniture for all kind of chambers in the buildings

2 Functional/aesthetic/contextual problems

- bad accesses to the complex and lack of space for stationary traffic
- mixture of functions between the constant users and visitors of monastery
- lack of specific contents for tourist purposes and visitors in public spaces at Main courtyard – lack of big shop, art gallery, new treasury, candle room, vine cellar, public dining room with kitchen, public workshops etc.
- bad disposition of functions in private spaces and into the buildings – at Donisije’s building and new house – lack of small winter chapel, nuns’ dining room, big monastery kitchen, library, workshops, ambulance, nuns’ cells with separate bathrooms, guests’ rooms, etc.
- lack of authenticity and implementations of new adding, which are totally out of context
- contextual misbalance between old and new facades inside the fortress

3 Managing /financial

- lack of all kind of finances and material support
- lack of understanding between The Institute for Protection-Department for Urbanism-Local Community-investors and users-owners of the cultural good
- wrong maintenance and bad management due to the confusion of system in Monastery and Services for Protection
- lack of the professionals for long-term (yearly) or short-term (monthly, daily) or emergency interventions
- bad security system
- lack of persons for constant monitoring of the complex



Figure36: Boundary between main and small court



Figure 37: Present situation in the small court, north-west corner



Figure 38: Present situation in the small court, west side with New hose and small economical gate

Solutions – Plan of Steps and Actions

1 Preservation with repairing/maintenance

First of all the buildings within the fortress must be preserved, partly repaired, restored, adapted and fitted out. Secondly, it must be attempted arrangement and equipping all open spaces with all necessary staffs.

At the end there must be present constant maintenance, like weekly or monthly, every year or every five years etc.

2 Workmanship of new additions

The projects of new additions have to be done, for every specific building with all data about possibilities, new functions, architectural style, building techniques, materials etc., so that they can be realized in combination of old and new techniques.

3 Functional changing and development

First of all there must be done separation and changing and repositioning of functions in the frame of present physical structure (adaptation and keeping the night-quarters and other utility buildings, because there are new needs, more new sisters and occupations, new kitchen and sanitary equipment, new heating systems, etc.).

Secondly, there have to be development and adding of new necessary functions in the inner space of fortress (like museum, gallery, treasury, wine cellar, dining room for tourists etc.)

4 Constant monitoring

The last, but the most important step is constant monitoring of the whole fortified monastery and its surround, because the proper maintenance could not be carried out without that.

Proposal

Collected material and data must be analyzed, and then the necessary step is evaluation and finding out specific objectives for the preservation/maintenance program and possibilities for new additions.

Objectives of the Restoration/maintenance and New Addings

- After detailed systematic introspection and analyses of the selected objects – Dionisije's Building and New House and whole inner space of the fortress, as well as the detailed analyses from the aspects of functional needs and physical structures, we come to the valorisation of an existing status and deciding on the **advantages** (the good side, prepare for the integrative conservation) and **disadvantages** (things we should change and take certain risk in remodelling and adding new physical constructing).

- As far as the ways in which ambience and area can be protected, they are defined within the **protected entity** by means of: protection and treatment of the real estate – cultural property, protection of sight and ambience, protection of nature and natural properties, protection of the environment, etc. We can reach various acceptable forms of solutions, models, methods, regimes, actions and directives.
- Evaluation of the given options is of the utmost importance, and deciding on which of them can be regarded as acceptable for application and implementation into the existing protected zone. The architectural style and character should be preserved if it is estimated valuable. The architecture and fine-art treatment has to accompany the *genius loci* and ambient requirements and directives.
- The area of the cultural and historical entity, with its valorised heritage is therefore defined, regarded and treated with the purpose of identifying the authentic historical objects and areas, as well as their contemporary transformations, so that the monastery development can be maintained nowadays.

For the every building there is a need for designing separate projects, with all steps of action - projects of repair with partly restoring and maintenance for old building and projects of totally new objects. The content of each project must be catalogue with different drawings and schemes of object with plan of steps and actions, and also very important specific directions with:

- **Special measures** for protection,
- **Directives** for use of building materials and architectural forms,
- **Regimes** for using utility objects, free spaces etc.
- **Restrictions** for specific actions,
- **Instructions** for maintenance of complex within the fortress.

Preservation/partly Restoration and Maintenance Plan for the Present Objects inside the Fortress

1 Dionisije's Building in the Main Yard

The existing state of the object is relatively good, but before full monitoring and maintaining there have to be done some functional changes and restoration works in the ground floor according to the functional program.

Further technical program of maintaining includes all elements of building, which need to be survey during the proper time, divided by the position in building (external or internal) – everything is presented in table 1. Every floor should have the separate treatment with its own

Identity Card for registration of data of inspection and works, according the table 1.

Technical program for maintenance

- **Exterior elements:** roof cover of tiles, chimneys, wooden roof construction, roof hydro insulation, façade walls with plaster, façade stone walls, wooden façade windows and doors, facade iron plate elements, iron fences, wooden fences etc.
- **Interior elements:** wooden floors, ceramic floors, brick/stone floors, plaster walls, stone walls, brick walls, plaster ceilings, stone/brick vaults, wooden windows and doors, Venetian blinds, metal doors, wooden stairs, metal fences, equipment (electrical, plumbing, piping, phone, etc.)



Figure 39-41: Dionisije's building – project for the adding of second floor (2006) – ground floor, first floor and south –east elevation



Functional program

- **Ground floor** is a cellar and it isn't arranged yet, and it must be for public use only, for various types of visitors and tourists. The approach to this level is only from the Main Yard. There are further chambers: public refectory with kitchen, wine cellar, treasury, little baptistery, public toilets, etc.
- **First floor** is now, already adapted for semiprivate use of nuns and special guests. The approach is through the Small Yard. The content is: big new monastery kitchen, nuns' dining room, cells for

the old nuns, reception room, library, workshop, little ambulance and toilet.

- **New second floor** is for private use only, and there are nuns' cells with little bathrooms and utility chambers.

2 New House in the Small Yard

Further technical program of maintaining includes all elements of building, which need to be survey during the proper time, divided by the position in building (external or internal) – everything is presented in table 3. Every floor should have the separate treatment with its own Identity Card for registration of data of inspection and works, according the table 3.

Technical program for maintenance

- **Archaeological site – ground floor:** earth floors, remains of equipment, remains of stone walls, reinforced concrete ceilings etc.
- **Exterior elements:** roof cover of tiles, chimneys, wooden roof construction, roof hydro insulation, façade walls with plaster, façade stone walls, wooden façade windows and doors, facade iron plate elements, iron fences, etc.
- **Interior elements:** wooden floors, ceramic floors, plaster walls, stone walls, plaster ceilings, wooden windows and doors, Venetian blinds, wooden stairs, metal fences, equipment (electrical, plumbing, piping, phone, etc.)

Functional program

- **Ground floor** is actually the cellar from the medieval times with the rests of the metal workshop which was found during the archaeological excavations. That level is fully cleaned and exposed for visitors, with entrance from the Small Yard.
- **First floor** is for semiprivate use of nuns and special guests. The approach is through the Small Yard next to the Small economical gate. The content is: little monastery kitchen, big semi-public dining room, room for conversation and toilet.
- **Second floor** is for private use only, and there are nuns' cells and utility chambers.

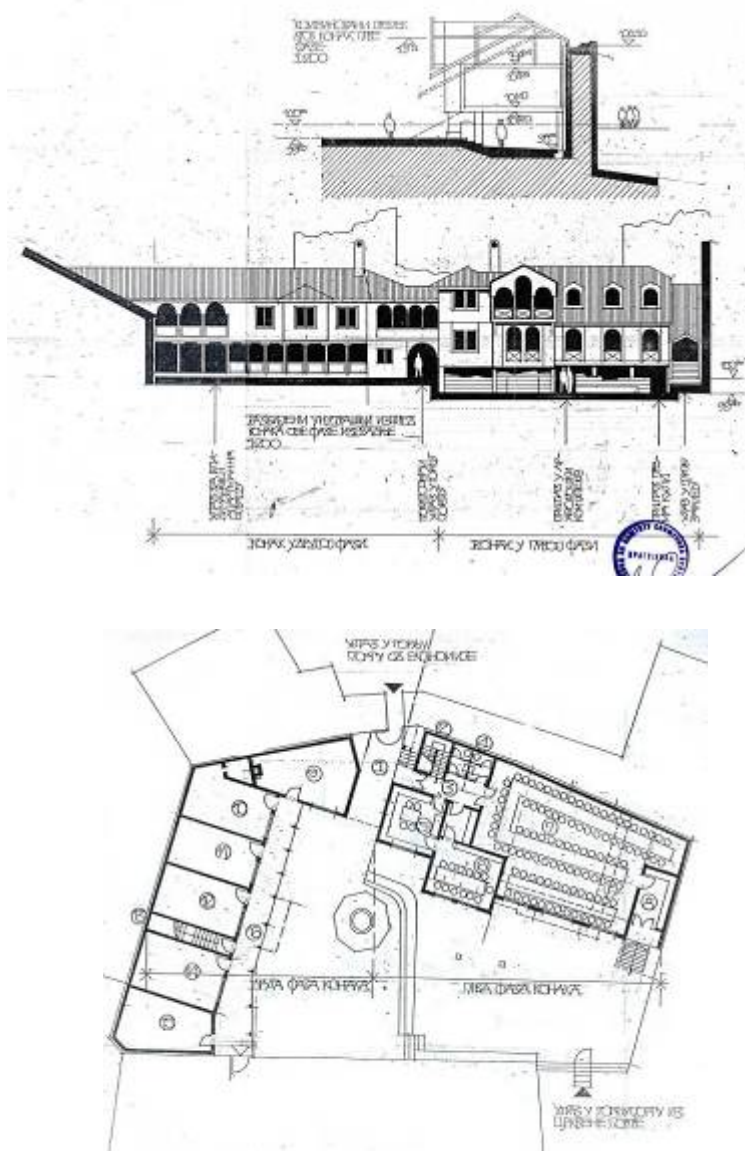


Figure 42-44: First and second phase of the New Hose in the Small Yard – project for the new adding (1993) – cross section, west and south elevation (together) and the first floor

Additions – New Objects for Modern Facilities

In this research and during the period of investigation, the solution for position of new addings has solved all by itself – the new objects have to be located along the big fortress' walls, inside the yards, at the position of the old medieval utility objects. The height of new objects must be proper, considering the look of the original ambience.

1 Second part of New Hose in the Small Yard

Position of this object should be on the west side of the Small Yard, between New House and Dionisije's Building. It needs to have two stores and they must be connected, by the warm corridor, with the first

phase of the New House and with Dionisije's Building also, at the ground floor and at the upper floor, too.

Technical program for constructing

- Architecture should be simple, with forms and elements of medieval, ethnographic and local manner and style, but with some elements from the existing object – First phase.
- It is recommended the usage of contemporary materials – reinforced concrete, new brick, glass, etc. for building new structure and no visible elements of building.
- Slope roofs are necessary, with one or two plane, covered by tiles.
- Chimneys must be out of brick, finished with lime mortar.
- Wooden porches with wooden columns and inner wooden stairs must be implemented in this architectural style.
- The facades must be with mortar and finally lime washed.
- All façade doors and windows must be carried out of the best oak wood. The shape of the windows and doors must be rectangular.
- The interiors must be modern, with the proper equipment for every kind of function – wooden and ceramic floors, white coloured walls and ceilings, with modern furniture.
- New object have to have all new installations – electrical, plumbing and piping system, fire fighting system, security system, computer and phone network, etc.

Functional program

- **Ground floor** should be for private use of nuns and special guests. The approach is through the Small Yard next to the Small economical gate. The content should be: room for conversation, workshop and toilet.
- **Second floor** is for private use only, and there are nuns' cells with the separate bathrooms.

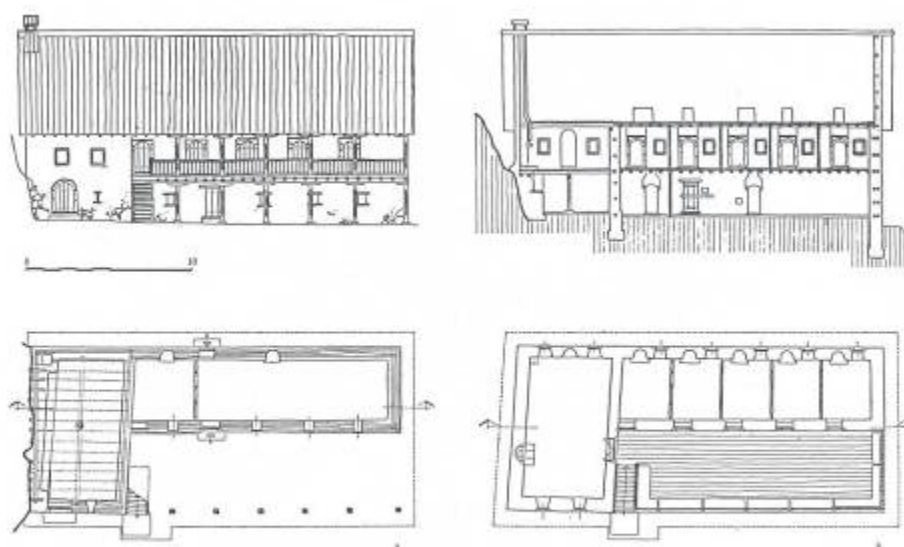
2 Shop/candle room in the Main Yard

Position of this object should be on the south side of the Main Yard, near the church, along the big walls, but outside of the fortress (that model is took from medieval position at that very spot). It needs to have two stores.

Technical program for constructing

- Architecture should be simple, with forms and elements of medieval, ethnographic and local manner and style, but contemporary.

- It is recommended the usage of contemporary materials – reinforced concrete, new brick, glass, etc. for building new structure and no visible elements of building.
- Slope roofs are necessary, with one or two plane, covered by tiles.
- There have to be one long wooden porch with wooden columns, that's the most important element of the main façade.
- The main façade could be the combination of rows of yellow stone and red brick, with lime mortar.
- All façade doors and windows must be carried out of the best oak wood. The shape of the windows and doors could be oval with bigger glass surfaces.
- The interiors must be modern, with the proper equipment for every kind of function – wooden and ceramic floors, white coloured walls and ceilings, with modern furniture.
- New object have to have all new installations – electrical, plumbing and piping system, fire fighting system, security system, computer and phone network, etc.



100. Идејна реконструкција трговнице у манастиру
Св. Николи у Палковцима, XV век (по С. Поповић)
а. основа приземља; б. основа спрата

Figure 45-48: Medieval examples - Possibilities for projecting new object with new functions - shops,

Functional program

- **Basement** should be for private use of nuns and working stuff, and it supposed to be the warehouse for goods, which would be sold in the shop. The content should be: two rooms for stores and toilet. The possible approaches are by the stairs from upper floor and outside the fortress.
- **Ground floor** should be for public use, and there would be big shop and separate candle room (chamber where people can light candles).

3 Gallery in the Main Yard

Position of this object should be on the west side of the Main Yard, just across the church, along the big walls, inside of the fortress, located on remains of medieval object. It needs to have just one store, because if it would be higher, then the church should not be visible.

Technical program for constructing

- Architecture should be simple, but very modern, only with medieval forms and just a few elements of medieval manner and style.
- It is recommended the usage of contemporary materials – reinforced concrete, metal, glass, etc. for building new structure and even visible elements of building.
- Slope roofs are necessary, with one or two plane, covered by tiles.
- Chimneys must be out of brick, finished with lime mortar.
- There is no need for porches or new front columns.
- The facades must be mostly out of glass, with brick/stone columns or even metal ones.
- All façade doors and windows could be carried out of the best oak wood or even thin metal frames. The shape of the windows and doors must be rectangular, with full height of one store.
- The interiors must be modern, with the proper equipment for every kind of function – wooden and stone floors, white coloured walls and ceilings, with modern furniture.
- New object have to have all new installations – electrical, fire fighting system, security system, computer and phone network, etc.

Functional program

- **Ground floor** should be for public use only, and there would be gallery of orthodox icons and other items of art, teashop etc.

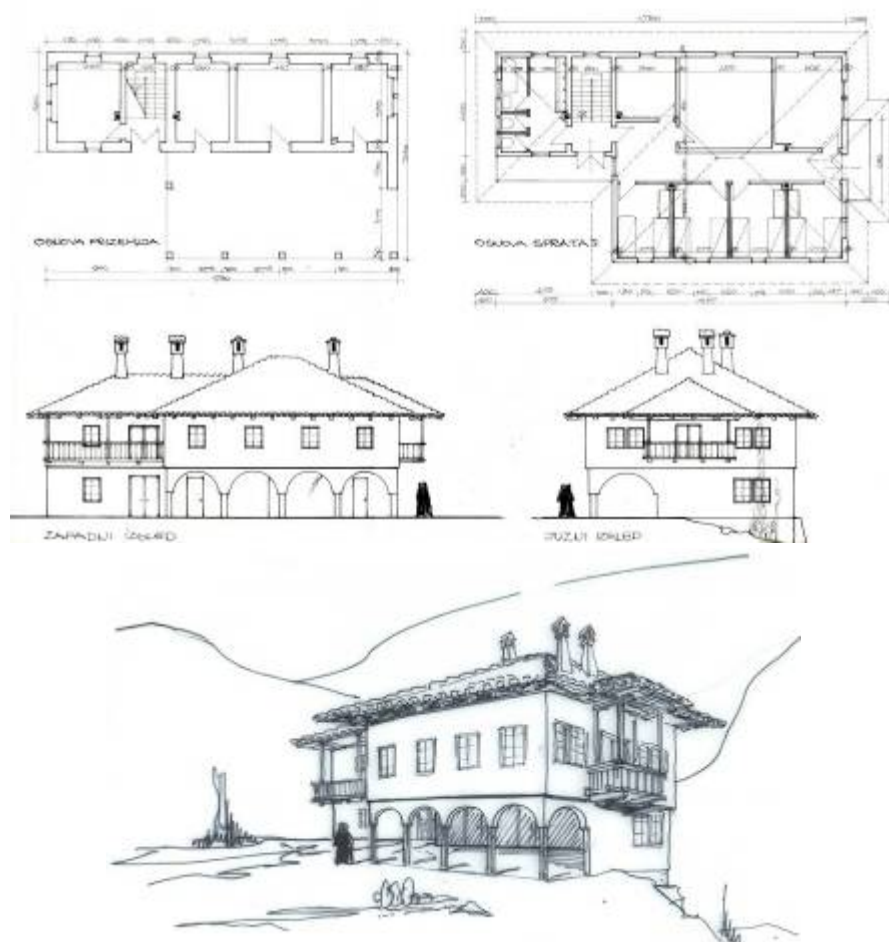


Figure 49-53: Medieval examples - Possibilities for projecting new object with new functions - gallery, teashop, museum, treasury etc.

Method

The main job is the permanent keeping and observing the whole monument / ensemble of buildings with fortress and everything within protected area. The main person is the house-keeper who should have full time job, and he must monitoring whole complex and gathering the information about current new damages. Then he should inform proper services for undertaking certain actions.

On the other hand, the experts and researchers from the field of protection of cultural heritage must have constant survey and right information for designing new and the projects of emergency. The plans and projects should contain the information about estimate costs for repairing and maintaining of certain elements.

Every building, which is the subject of monitoring, should have its own Identity Card with catalogue of elements divided by floors or exterior/interior and all data about repairing – project/institution,

architect/restaurateur, time of repairing, costs, experts who does the work/firm etc.

Work plan and schedule

The Plan should be realized in short-terms and long-terms. For those terms the responsibilities are shared among various persons:

1 Short-term plan – daily, weekly and monthly caretaking of objects.

Housekeeper does the job of monitoring and informs the important services. In that time some of the experts could take out the emergency repairs, also the engineers and restaurateurs could survey the state of problems and gathering necessary data.

This plan is obligation for taking care of some current maintenance, as we can see in table 1 and 3.

2 Long-term plan – yearly, every 2 – 10 years caretaking.

Those plans define the priorities for reparation and preservation with definition of main parts of objects (divided by floors), responsibilities for particular activities – sharing between the different investors, specific needs for the implementation of work plan: experts, craftsman, materials, etc.

Taking out of all planned actions could be through one year or longer – 2, 5 or more years, which depends of type and method of process of maintaining. The various teams and experts must be include in this kind of specialist jobs, like we can see in table 1 and 3.

Financial plan

Cost estimate of the main priorities for the appliance of plans – short or long-term, should be present in every particular plan, so we could be sure how much money we need, for example, every year take care or for 5 years work. In the table 2 there is an example for estimate costs of take caring the two existing buildings in one year.

Also, there should be present the division of the investments – who does finance certain parts of the plan. In the case of Ravanica Monastery the investors of the maintaining could be: monastery, donors, local community, district community, Ministry of Culture, Ministry of Religions. There is a presentation of sharing one year costs for maintaining of two existing buildings.



Figure 54: Stone carving - the symbol of Ravanica Monastery

Results/Current Status of the Work

If the project is completed, the inner spaces of Ravnica's fortress will be improved and well organized in every point of view – technically, functionally, aesthetically, contextually etc. The cultural monument will be exposed in new light and in full beauty. The current problems will be solved and new financial potentials must be used for constant maintenance of the complex.

This Program and Plan will be put into a group of projects of Institute for Protection of Cultural Monuments in Kragujevac, as well as The National Institute for Protection in Belgrade. That would be a team work with correspondence of different experts in the field of protection of cultural monuments. We'll see the results in the next years of realisation of all presumed tasks and obligations.

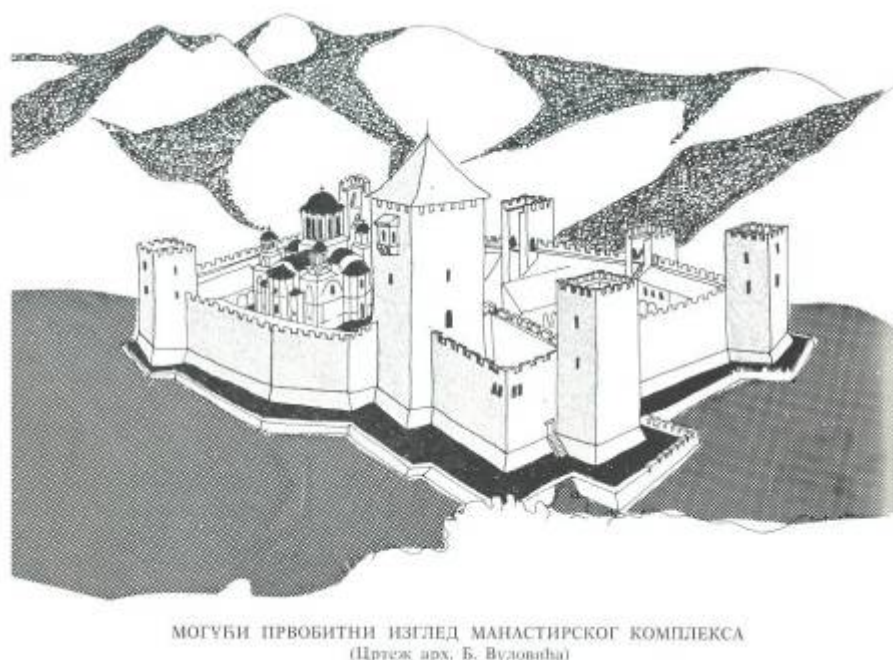


Figure 55: Ideal reconstruction of the Monastery complex, according to prof. arch. B. Vulovic

Discussion & Conclusions

The value of this historic monument is in the material testimony of its architectural heritage, traces and signs of diverse historical periods, specific social, cultural, anthropological and geographical ties and continuity, established between the individual historical buildings and

the existing urban context. The authenticity of the spatial entity has to be appreciated through the idea of the union, with its entire architectural heritage. The monastery is a multi-functional organism, with its residential, social, political and economic values, too. The area of the cultural and historical entity, with its valorised heritage is therefore defined, regarded and treated with the purpose of identifying the authentic historical objects and areas, as well as their modern transformations, so that the monastery development can be maintained nowadays.

The main problem is how to divide so similar actions, which means when we have to work on restoration or just repairing of some elements, we are still doing at some kind of maintenance. Sometimes if we change certain functions it could be very difficult and we have to undertake some extra steps, which we didn't plan. It is very difficult to decide should new architecture be a copy of medieval aesthetic in all its elements, or it is possible to involve some new modern elements in the existing context.

Carrying out the realization of any Plan of maintenance and preservation is a huge issue, and has to be dealt with cooperatively, not only by the municipal authorities, but by the inhabitants of monastery and local community as well, which have to take on an active role in such matters. Cooperation on every level of the social structure is more than necessary, as well as linking the experts to work on matters of a mutual goal. But, unfortunately, we can't say that this whole procedure is taken successfully in Serbia, so far.

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- Institute for Protection of Cultural Monuments in Kragujevac

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Appendix 1

Table 1: Schedule for maintenance of specific elements of Dionisije's Building and type of expert who does the work in proper time

| | elements for maintenance | daily | weekly | monthly | every year | every 2 yeras | every 5 years | every 10 years |
|-------------------|---|-------|--------|---------|------------|---------------|---------------|----------------|
| exterior elements | roof cover of tiles | | | | | | src | |
| | chimneys | | | | cs | | m | |
| | wooden roof construction | | | | | | | c |
| | roof hydro insulation | | | | | shi | | |
| | façade walls with plaster | | | | hp | m | | |
| | façade stone walls | | | | | m | | |
| | wooden façade windows and doors | | | | hk | hp | c | |
| | façade iron plate el. | | | | t | | t | |
| | iron fences | | | | | m | b | |
| | wooden fences | | | | hp | c | | |
| interior elements | wooden floors | | cl | hk | | | c, hp | |
| | ceramic floors | cl | | | hk | | | |
| | brick/stone floors | | cl | hk | m, hp | | | |
| | plaster walls | | | | hp | | m | |
| | stone walls | | | | hp | m | | |
| | brick walls | | | | hp | m | | |
| | plaster ceilings | | | | hp | | m | |
| | stone/brick vaults | | | | hp | m | | |
| | wooden windows and doors | | | | | hp | c | |
| | Venetian blinds | | cl | | hk | | | |
| | metal doors | | | | | hp | l | |
| | wooden stairs | | cl | | hk | hp | c | |
| | metal fences | | cl | | hk | | l | |
| | equipment (electrical, plumbing, piping, phone, etc.) | | | hk | es | | | |

Legend: **m** – mason, **c** – carpenter, **t** – tinsmith, **hp** – house-painter, **cs** - chimney-sweeper, **src** – specialist for roof coverings, **shi** - specialist for hydro insulations, **b** – blacksmith, **hk** – house keeper, **cl** – cleaner, **l** – locksmith, **es** – equipment specialists

Appendix 2

Table 2: Cost estimate – preliminary budget (per one year in euros) for the maintaining of Dionisije's Building and New House in the Small Yard and who does the financing

| | | m | d | lc | dc | mc | mr | Σ/ year |
|------------------------------------|---------------------------------|-------|-------|-------|-------|-------|-------|------------|
| Dionisije's Building | exterior elements | 2.000 | 1.000 | | | 4.000 | 4.000 | 24.000 € |
| | interior elements | 4.000 | 2.000 | 1.000 | 2.000 | | 4.000 | |
| New House in the Small Yard | ground floor archeological site | | | | | 2000 | | 13.000 € |
| | exterior elements | 1000 | | 1000 | | 2000 | 2000 | |
| | interior elements | 2000 | 1000 | | 1000 | | 1000 | |

Legend: **m** – monastery, **d** – donors, **lc** – local community, **dc** – district community, **mc** – Ministry of Culture, **mr** – Ministry of Religions

Appendix 3

Table 3: Schedule for maintenance of specific elements of New House in the Small Yard and type of expert who does the work in proper time

| | elements for maintenance | daily | weekly | monthly | every year | every 2 years | every 5 years | every 10 years |
|------------------------------------|---|-------|--------|---------|------------|---------------|---------------|----------------|
| ground floor archeological site | earth floors | | | c | hk | | | |
| | remains of equipment | | | | hk, c | ssr | | |
| | remains of stone walls | | | | hk | c | m | |
| | reinforced concrete ceilings | | | | c | hp | | |
| exterior elements | roof cover of tiles | | | | | | src | |
| | chimneys | | | | cs | | m | |
| | wooden roof construction | | | | | | | c |
| | roof hydro insulation | | | | | shi | | |
| | façade walls with plaster | | | | hp | m | | |
| | façade stone walls | | | | | m | | |
| | wooden façade windows and doors | | | | | hp | c | |
| | façade iron plate el. | | | | t | | t | |
| | iron fences | | | | | m | b | |
| interior elements | wooden floors | | cl | hc | | | c, hp | |
| | ceramic floors | cl | | | hk | | | |
| | plaster walls | | | | hp | | m | |
| | stone walls | | | | hp | m | | |
| | plaster ceilings | | | | hp | | m | |
| | wooden windows and doors | | | | | hp | c | |
| | Venetian blinds | | cl | | hk | | | |
| | wooden stairs | | cl | | hk | hp | c | |
| | metal fences | | cl | | hk | | l | |
| | equipment (electrical, plumbing, piping, phone, etc.) | | | hk | es | | | |

Legend: m – mason, c – carpenter, t – tinsmith, hp – house, cs - chimney-sweeper, src – specialist for roof coverings, shi - specialist for hydro insulations, b – blacksmith, hk– house keeper, cl – cleaner, l – locksmith, ssr - specialist for stone restoration, es – equipment specialists