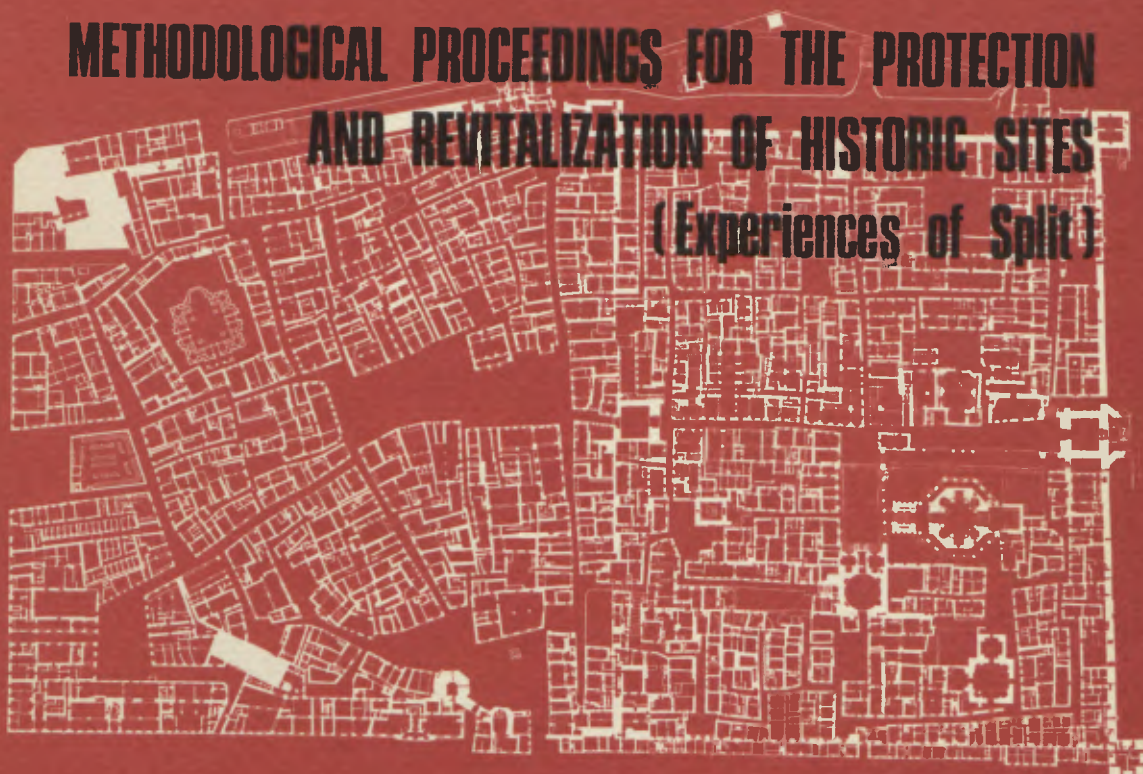


INTERNATIONAL CENTRE
FOR THE STUDY
OF THE PRESERVATION
AND THE RESTORATION
OF CULTURAL PROPERTY

FACULTY OF ARCHITECTURE
UNIVERSITY OF ROME

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METHODOLOGICAL PROCEEDINGS FOR THE PROTECTION AND REVITALIZATION OF HISTORIC SITES (Experiences of Split)



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TUTTI I DIRITTI SONO RISERVATI

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TABLE OF CONTENTS

	<i>Page</i>
I. Characteristics of Sites of Historic Value in Yugoslavia	8
II. Problems of Historic Areas	9
III. Methodological Approach	10
IV. Institutions Involved in the Protection and Revitalization of Historic Sites	12
V. Financing of Protection and Revitalization	13
VI. Experiences of Some Yugoslav Towns in the Preservation and Revitalization of Historic Areas	14
A. Recent Practice in Yugoslavia	14
B. Revitalization of the Historic Centre of Split	17
VII. Brief Summary of Methodological Procedure	30
Illustrations	41

The protection and revitalization of a historic centre, an ancient environment or site must be recognized as an integrale part of *town planning*. In this respect, the methodological proceedings for the restoration of old urban sites must be determined by the elements established by town-planning methodology.

As those areas usually contain things of historic, architectural and environmental value they must also be submitted to the rules and principles guaranteeing the *protection of cultural property*.

Therefore, the activity of town planning and monument protection should be carried out in direct, close and permanent cooperation between the institutions concerned with town planning and safeguarding monuments, with the cooperation of other organizations and specialists in different scientific fields.

Despite the recent character of planned revitalization of historic centres, a considerable number of ancient sites most of them in European towns have been submitted to this procedure, which is proving ever more useful. This is necessary for various reasons, two of which are very important: the historic, architectural and environmental property of urban tissue in ancient sites has rapidly deteriorated in the last decades: simultaneously, living conditions have gradually become worse, so that highly precious sites often appear burdened with problems of dwelling and hygienic conditions, inadequate installations, traffic, etc.

In the last few years, systematic actions of revitalization based on methodological proceedings, have been started in many towns. Naturally, as any intervention must be based on the characteristics of the site in question, *there is no unique methodological model*. However, some general rules can be adapted to various towns, and are clearly identifiable if compared to the work carried out in other places.

As a contribution to the methodology applied in the revitalization of a historic centre, I would like to introduce a summary of the work carried out in Split (Yugoslavia), in which I have taken part, during the last fifteen years.

The subject was first approached by considering various aspects of general conditions in Yugoslavia: the abundance of cultural heritage, the very heterogeneous character, the current dynamic development of urban sites with numerous problems and certain results achieved in this field in respect to organizational structure, financial sources and methods applied (1).

(1) These aspects have been treated in the report of T. MARASOVIĆ: *Maintaining historic character in the execution of urban plans and financing the revitalization of historic town centres*. European Symposium on Towns of Historic Interest, Split, Yugoslavia, October 20-23, 1971.

On the basis of these examples, a summary will follow on the methodological proceeding that — taking account of the particularities of each town, region or country — might be applied in a general proceeding of protection and revitalization of a historic site.

I - CHARACTERISTICS OF SITES OF HISTORIC VALUE IN YUGOSLAVIA

The long continuity of urban life in Yugoslavia (which in Dalmatia exceeds two thousand years) has left a very rich building heritage. According to the character of historic values, many historical urban and rural entities and individual monuments may be grouped into various classifications:

Small old towns of high intrinsic value. This category includes some very important old towns such as Dubrovnik, Korčula, Hvar, Trogir, Počitelj, Prizren and others whose historic core occupies the predominant part of the urban agglomeration.

Urban entities containing historic areas of high architectural value. This refers to larger towns which, like Split for example, form an exceptionally important historic centre as a whole (within which Diocletian's Palace is the most important), as well as those which, within the frame of the old centre, possess important entities and buildings, such as old Ljubljana, Sarajevo, Zagreb, and smaller towns as Šibenik, Kotor, Poreč, Pula, Skopje, Ohrid and many others.

Old towns of considerable environmental value. These form a very large category which includes a whole series of Dalmatian towns, as well as towns in Montenegro and Istria; agglomerations in all areas of the continental part of Yugoslavia.

Rural entities of high environmental value. These include such rural agglomerations as Primosten, St. Stefan and others which, although lacking important cultural monuments, are of great distinction because of their topography and environmental importance.

Individual buildings and complexes of cultural, historic or environmental value outside towns and settlements. This category comprises a great number of cultural and historic monuments and entities which are situated outside urban and rural settlements: numerous archeological sites, fortresses, churches and monasteries, castles and other examples of military architecture, infrastructure (remnants of old roads, bridges, water supply system) and other constructions.

A specific approach must be applied to each of these categories when planning their contemporary development.

Architectural heritage in Yugoslavia shows great variety as a result of the natural and particular historical conditions under which certain republics and regions of the Yugoslav Federation developed since the Illyrians and from the earliest Greek colonization up to the present. Along

the Adriatic coast all the way from Istria to Montenegro, there are towns and settlements of characteristic Mediterranean urban and rural typology and numerous individual monuments which belong to the ancient Mediterranean and medieval West-Europe cultural and architectural sphere. Slovenia, North Croatia, Vojvodina, and in general northern Serbian towns, settlements and individual monuments symbolize many different central European trends. In South Serbia and Macedonia there are mediaeval monuments of typical Byzantine art. In Central and South-Eastern Yugoslavia, especially Bosnia, Hercegovina and Macedonia, the towns and settlements, as well as individual monuments, have preserved the characteristics of Islamic architecture. In addition to these various elements of influence and their mutual interrelationship reflected in older buildings, a local component is also present.

Although some Yugoslav regions are relatively more developed than others, rapid social advancement, especially economic progress is characteristic of all the republics and regions. This is particularly expressed in urban development, which has been recently followed by very strong tourist pressure on both town and country. These complex situations naturally impose great demands on all public services, especially the agencies dealing with the protection of monuments and natural sites and with town and country planning. Different towns have therefore undergone different experiences in management and co-operation, in financing, methods and techniques of urban planning and designs concerning historic areas. In respect to this, some positive results have been obtained in the preservation, site clearance and rehabilitation of historic monuments. Therefore, some experiences achieved in Yugoslav historic areas might be of interest to foreign experts facing similar problems of protection and restoration of old towns and monuments in general.

II - PROBLEMS OF HISTORIC AREAS

1. Dilapidation of historic buildings

Many historic areas and individual monuments are exposed to permanent destruction caused by dilapidation and other reasons connected with either site or structure: historical, economic and social development, or human activity. Funds for protection are in general provided only for a relatively small number of more important historic monuments (mainly the outstanding ones) while the majority, being without proper maintenance and renewal, are left to gradual destruction.

2. Poor dwelling and hygienic conditions

The majority of old towns and settlements are difficult places to live in, their neglected and dilapidated houses often being damp and poorly equipped, with no water and sewage installations.

3. Inadequate use of business premises

The neglected state of old towns and rural areas is often the result of inadequate use (the ground floor of old buildings, in particular).

The old neglected centres, instead of being lived in, frequently are crowded with "dead" functions such as storages or unsuitable and inadequate business premises, existing as dead stocks.

4. Traffic problems

Traffic problems, although acutely present everywhere in towns and open spaces, are particularly difficult in historic areas. Vehicular traffic threatens historical monuments in towns where characteristic urban form and structure can hardly meet the needs of major traffic intersections, car parks and garage spaces. In a great many old centres pedestrian movement is not segregated at all, and left completely unorganized — some streets congested with it and some lacking it.

5. Inadequate and obsolete infrastructure

Old towns and settlements frequently have obsolete and incomplete infrastructure. Their streets and squares are neglected, water supply system and sewage old and unsuitable, telephone and electric networks insufficient thus spoiling the appearance of historic buildings, squares and streets.

6. Encroachment upon old centres by new and ill-considered development within or outside historic places

Intensive urbanization in recent years has frequently resulted in devastation of historic urban and rural sites as well as single monuments outside town regions. Very difficult problems have resulted from construction within historic centres. However, new development in the background of a historic site very often disturbs the harmony of an ancient site.

III - METHODOLOGICAL APPROACH

The protection of historic sites and their inclusion in contemporary urban plans is the latest chapter in the relatively long history of monument protection which has, until recently, consisted of preservation, repair and restoration of single monuments.

In Yugoslavia, primarily in the Adriatic area, there have been reflected all the theories about the protection and restoration of monuments which were accepted in West Europe in the 19th and in the first half of the 20th century, beginning with the neoclassical concepts of purification through romantic restoration and conservation up to the "scientific" protection — at first passive and finally active as they are at present.

Great changes of attitude toward the protection of the architectural heritage can be noted in Yugoslavia, especially in the period after the Second World War. The protection of urban sites is increasingly under the competence of municipalities and town planners, mainly owing to the changed concept of "monument", accentuating that all buildings and groups of buildings in the old town core and historic centres in general, fall into this category. Protection could no longer come merely within the administrative domain: the new concept implies that all services concerned with town and country planning should be directly involved in preventing the destruction of historic monuments and ensuring their revitalization. This attitude, different from traditional conservation, is based on the following principles:

1. The historic centre should be thought of as an entity which has, in addition to its cultural and historic buildings and the consequent problems of conservation, many other problems, principally related to dwelling and hygienic conditions, traffic and economy of the area.
2. The preservation and organization of a historic centre being a part of the town, should be carried out in respect to the principles of urban planning based on existing documentation and detailed analyses, paying special attention to historic values within the area.
3. Each step in the protection, renewal or re-organization of a historic environment should be preceded by a study and all work done should be explained in a detailed report.
4. The most efficient way to protect monuments and historic buildings is to include them in contemporary and vital functions of the area. This should result in planning of financial and technical perspectives for their organization and revitalization.
5. During the preservation and revitalization of historic monuments it is essential to respect in principle all historic periods. When, however, some monuments are to be given a contemporary function, for the purpose of active protection, it is necessary to make an evaluation of all elements of a particular monument and choose the most significant ones, eliminating in some cases those which are detrimental to the appearance of the building.
6. In the revitalization of old parts of the town, modern and creative architectural solutions are permissible and sometimes even necessary. However, these must always take into consideration the overall harmony of the historic environment.
7. For the protection and revitalization of historic centres, it is essential to have continual cooperation between the town-planning agency and the agency dealing with conservation of monuments in all stages of work — from the first analysis to its final implementation and execution.

IV. - INSTITUTIONS INVOLVED IN THE PROTECTION AND REVITALIZATION OF HISTORIC SITES

One of the most important prerequisites for the efficient protection of historic areas is a successful organization of work carried out in this field.

In the last few years, in many European countries, co-ordination of services responsible for historic areas is improving and definite experience has been gained which, however, varies widely because of the different social, political and economic circumstances in each country.

In Yugoslavia, especially in the last few years, three services have become basically important for work on the protection and organization of historic areas: institutes for the protection of cultural monuments, town-planning institutes and housing enterprises.

Institutes for the protection of cultural monuments are legally responsible for all monuments and accordingly, for historic areas.

The most significant progress in this field in Yugoslavia, was achieved ten years ago during the decentralization of monument protection agencies, when municipal institutes were formed and entrusted with the country-wide protection of monuments.

Together with municipal institutes there are also regional institutes and Central Institutes for Protection of Monuments in each republic's capital. The latter are entrusted with certain works connected with central documentation and are, together with the Council for Protection, also responsible for work of wider interest.

Institutes for monument protection, previously mainly engaged in traditional administrative conservation work of individual monuments, are now more actively participating in the practical work on organization of historic centres, primarily by preparing documentation and all other necessary bases for urban designs.

Town-planning institutes engaged in the preparation of regional, master and detailed plans and designs are dealing increasingly with historic town centres. In some places, they have set up special groups entrusted with the rehabilitation of historic areas, i.e. preparation of detailed plans and designs submitted by consulting institutes for monument protection.

Housing enterprises are very important factors in the development of towns and they can play an active role in the revitalization of historic areas. By organizing the development of new areas and the maintenance of housing (and in some cases of business premises), such enterprises have vast possibilities of action in the old parts of towns, using money obtained from rents and other financial sources to finance new projects within historic areas.

In our view, the co-operation between these three agencies and especially between institutes for protection and town-planning institutes, is one of the decisive elements in the successful protection and revitalization of historic areas.

Besides these basic institutions, many other organizations (tourist, political) should collaborate in the protection of historic sites.

In our recent practice, mutual co-operation between towns proved very useful. This has been achieved through the Standing Conference of Yugoslav Towns in which — together with other sections — a special section deals with the protection of architectural heritage in towns and organizes consultations on the most critical questions concerning historic areas.

V. - FINANCING OF PROTECTION AND REVITALIZATION

The organization of financial resources for the revitalization of historic areas is a special problem. The relation between actual needs and present investments for this purpose is in all countries more or less discouraging (resources are far from meeting minimal needs).

The problem of funds is being solved differently in different countries; solutions range from a centralized system of budget funds to various private investments.

We are using in practice, various sources of funds, such as:

A budget from cultural funds, until recently, the main source of financing monument protection, is no longer sufficient for our needs. This budget hardly meets the needs of protective activity. When intervening in saving the more endangered monuments, the institutes for monument protection use sources from central funds for the promotion of cultural activities on the basis of projects, competing for financial support.

Resources of municipal services are used for historic town areas (reconstruction of roads, water, sewage and electrical systems, etc.). These are often valuable means to supplement funds used for interventions undertaken in specific areas.

Municipal funds assigned for urban plans are used for the preparation of documentation and analyses as a necessary basis for new urban development. Sources for financing the complete documentation of the protection should always accompany town and country plans.

Sources supplied by Housing enterprises have become ever more important in historic areas. They are used in some places for house repair within the historic parts of towns, improvements of their immediate surrounding, removal of dilapidated houses and construction of provisional dwellings for people whose buildings are being repaired and adapted.

Housing enterprises have lately shown great interest in the submission of documentation and urban plans and designs for old areas.

Funds allocated for tourism, though considerable, in general are not directly used for protective action. The funds of tourist organizations, primarily municipal, have been successfully used until now for advertising

monuments, supporting various publications and organizing protective actions connected with tourism.

Funds provided by various working organizations. Since many enterprises in Yugoslavia (of industrial, communal, economic, cultural, public health or socio-political character) are very often attracted by old buildings in historic areas, their funds are sometimes used for reconstruction. Recent practice in some towns of Yugoslavia, where a large number of buildings have been preserved and restored at the investors' expense, has shown that funds coming from this source might be sufficient to cover a complete project: from research, documentation and analyses through designs up to implementation.

International funds. In the last few years, foreign funds assigned for investigation of the cultural heritage have also been used. For several years, the American Smithsonian Institute has been involved in various archeological sites, which, through the Yugoslav Institute for International Technical Co-operation, are financed under the joint research programme of Yugoslav scientific institutions and American universities. These funds have proved valuable for certain examples of research activity connected with the presentation and modern use of the architectural heritage.

The South and Upper Adriatic projects, already completed and organized by the Yugoslav Government and United Nations Development Programme, have also been partially using United Nations funds for documentation and analyses of historic regions in connection with regional, master and detailed plans for contemporary development.

Self-financing monuments. These are growing resources in many towns based on visitors' tickets and income from renting the historically valuable areas for commercial, cultural and tourist activities. These funds are used not only for the maintenance of those financially "active" monuments, but also for the protection of others for which no admission charge can be made or some other modern use found.

Other sources. Some towns have also used other resources, for instance, Federal and State (republic) loans and various donations, and in some towns there is a tendency to form, from various resources, a permanent fund which would ensure a planned campaign to protect and revitalize historic areas.

VI. - EXPERIENCES OF SOME YUGOSLAV TOWNS IN THE PRESERVATION AND REVITALIZATION OF HISTORIC AREAS

A. Recent practice in Yugoslavia

Following new organizational and financial systems, a number of Yugoslav towns have achieved, especially in the course of the last ten years, considerable results in the protection and re-organization of their

historic centres. These towns will only be mentioned here, leaving the possibility to concentrate on those showing particular interest (2).

Ljubljana, the capital of SR Slovenia, has developed a very interesting organization of monument preservation since the foundation of a special Institute for the arrangement of old Ljubljana in 1957 (today, the Institute for the Protection of Cultural Monuments (3). In the synthesis of its studies with programming and building operatives, the Institute succeeded in carrying out the protection of the historic centre of the town as a whole and undertook a series of designs and implementations, such as: the reconstruction of the Central Market, the castle dominating the town, the City Hall, buildings in the Central Square, a solution for communication and infrastructure problems ensuring investment mainly without budget appropriation. A very successful organization of financing has enabled the Institute, with funds obtained in advanced, to perform some reconstruction primarily by adhering to the criterion of the most suitable protection and modernization, enabling the premises to be used afterwards by the most appropriate functions.

In *Zagreb*, the capital of SR Croatia, the problems of historic town areas have been treated not only by the Regional Institute for Protection of Cultural Monuments, but also by the Housing enterprise "Stanoinvest", which invests considerable sums for the arrangement of old buildings (4).

Sarajevo, the capital of SR Bosnia and Hercegovina, through its Institute for the Protection of Cultural Monuments and through other institutions (town-planning, university, etc.), is making great efforts to maintain and modernize its Baščaršija, an old trade and business centre of characteristic Islamic architecture. In 1970, the City Assembly adopted a programme for the re-organization of the area, which envisages the protection or reconstruction of dilapidated areas and reintegration of the business area as a whole and its modern use, so that this part of the town with good hygienic conditions could meet the needs of commerce, tourism and culture (5).

Beograd, the capital of Yugoslavia and SR Serbia, in the last few years, has greatly developed its activity in the protection and contemporary presentation of its historic areas, especially old Zemun and the old centre

(2) Recent Yugoslav experiences in this field have been published in "Arhitektura - Urbanizam", 64. *New and Traditional in the same town*, Beograd, 1970.

(3) V. PEKLE: *Economic and organizational conditions for the management of old Ljubljana*. Problems and Techniques of Preservation of Historic Urban Centres, International Symposium, Split 1970 (URBS), p. 213-229.

(4) D. STIPETIĆ: *Some observations with reference to financing of historic cores of Zagreb*. Problems and Techniques of Preservation of Historic Urban Centres, Split 1970 (URBS), p. 258-263.

(5) A. BEJTIĆ: *Reconstruction of historic core of Sarajevo*. Problems and Techniques of Preservation of Historic Urban Centres, Split 1970 (URBS), p. 208-210.

of Belgrade (6). The Town Institute for the Protection of Cultural Monuments organizes these activities and prepares a complete documentation: from surveys, through historic and architectural studies and reconstruction designs. The Town-Planning Institute also prepares detailed plans and designs for historic sites. In connection with obtaining the necessary financial means, the experiences of the Town Institute for the Protection of Cultural Monuments are of special interest. The Institute, through its numerous conservation activities, succeeded in collecting considerable funds from twelve different sources (Fund for the Protection and Organization of the Belgrade Fortress, Funds of the Belgrade Community for Culture, Town Assembly, Housing enterprise, Education Association, budgets of some municipalities of the larger town areas, etc. (7).

Novi Sad, the capital of the Autonomous Province of Vojvodina has successfully organized the regeneration of the old trade centre: the protection of all historically valuable buildings and the harmonization of the central area with modern constructions (8).

This approach is also the result of joint action between the Town Planning Service and the Service for the Protection of Monuments and is interesting due to its very detailed economic analyses of potentials of the old trade centre, which, financially, justifies new investment.

The experiences of a whole series of towns could be cited, such as: *Ohrid*, with the organization of the old centre area and the renewal of individual monuments; *Mostar* with examples of reconstruction and modern use of the most important group of buildings adjacent to the old bridge; *Počitelj*, with the adaptation of houses of Moslem architecture for modern catering and tourist demand; and many other towns and settlements where investigations and documentation are being undertaken as a necessary base for plans and projects.

The Town-Planning Institute of Dalmatia has recently completed the study for the revitalization of old *Primošten*, an outstanding example of an historic site of rural architecture. Involved in the larger *Primošten* area with various tasks (master plan 9, detailed plan 10, a marina design, architectural designs for tourist development, infrastructure) the Institute has, in particular, developed the methodology of protection and revitalization of the old core, based on full documentation carried out through

(6) J. SVOBODA, Z. ŠKALAMERA, A. BANOVIĆ: *Some experiences in revitalization of Belgrade and Zemun Historic Centres*. Problems and Techniques of Preservation of Historic Urban Centres, Split 1970 (URBS), p. 200-206.

(7) J. SEKULIĆ: *Some experiences of Belgrade Institute Concerning Finances for the Protection of Monuments*. Problems and Techniques of Preservation of Historic Urban Centres, Split 1970 (URBS), p. 254-257.

(8) M. SAVIĆ, D. IVKOVIĆ, M. ZLICIĆ: *The reconstruction of the Centre of Novi Sad*. Problems and Techniques of Preservation of Historic Urban Centres, Split 1970 (URBS), p. 265-270.

(9) Urbanistički zavod Dalmacije, *Generalni Plan Područja Primošten - Rogoznica*. Split 1971.

(10) Urbanistički zavod Dalmacije, *Detaljni plan Primoštena*, Split 1971.

working designs (11). It is necessary to point out that all these works have been submitted and financed by the Primošten hotel enterprise.

Finally, the Adriatic development programme, organized in collaboration with the United Nations and foreign planning firms, has also dealt with historic areas through several regional, master and detailed plans, accomplished in the last five years (12).

B. Revitalization of the historic centre of Split

The experience of Split should be treated in greater detail.

Split is a town of about 180,000 inhabitants, in the centre of the Adriatic eastern coast and is the main administrative, cultural and economic centre in Dalmatia. It has many cultural monuments and a rapidly developing economy, based on its industry, shipyard, harbour, commerce and tourism, both seasonal and permanent.

The main historic and architectural value is represented by Diocletian's Palace, that is the nucleus of the town (13).

It is one of the main architectural monuments of the late Roman period, well preserved in its external perimeter and in its single elements (gates, towers, Diocletian's Mausoleum, temple, peristyle, vestibule, and the large substructure area under the Emperor's apartment). Besides the Palace, Split has other historical and architectural examples of value, for instance some pre-Romanesque churches, Romanesque houses, the monuments of the cathedral and the bell-tower, some late Gothic palaces, Renaissance and Baroque buildings. However, the essential value is the urban structure itself, a harmonious combination of the mediaeval pattern created according to the Roman scheme.

Such complexity has attracted the attention of experts, not only from the point of view of studying the monument (R. Adam, G. Niemann, E. Habrard, F. Bulić, Lj. Karaman, E. Dyggve, etc.), but also from the aspect of its conservation and restoration. In this respect, protection of monuments has reflected all the conservation and restoration theories of 19th and 20th century Europe, starting with the isolation of the ancient monument according to the neoclassic concept (fortunately unrealized in the majority of cases), through romantic restorations, up to scientific conservation and later active preservation.

The last phase, which is *active protection*, whose purpose is revitalization, will be illustrated on the basis of its methodological proceeding. It started after the liberation of towns at the end of the Second World War,

(11) Urbanistički zavod Dalmacije, *Primošten - Urbanistički projekt revitalizacije starog naselja*, Split 1973.

(12) One of several reports in which problems of historic sites have been treated is *Hvar Master Plan* by Shankland, Cox and Associates and Urbanistički zavod Dalmacije, London - Split 1968.

(13) T. MARASOVIĆ: *Diocletian's Palace*. Ed. "Jugoslavija", Beograd 1969 — J. MARASOVIĆ, T. MARASOVIĆ: *Diocletian's Palace*. Ed. "Zora", Zagreb 1968.

with works undertaken by the commune under the guidance of the Superintendence of Monuments of Dalmatia, which led to clearing the northern wall, restoring the eastern gate, and beginning the excavations of the basement halls (14).

However, individual actions of conservation and restoration could not solve the serious problems of town deterioration. These were a problem that the former organization with its professional structure, methods and concepts could never solve. Besides the deterioration of monuments, there were other problems, seriously affecting the life of the historic centre. As can be seen from our analyses, these problems had various origins: bad living conditions in the congested centre, unsuitable functions of the ground floor, inadequate organization of traffic, etc.

The Split municipality charged the Town-Planning Institute with the execution of all necessary work in the centre of the town: this Institute, has established in 1954 a special section concerned with architectural heritage. It started with systematic work (15) on better organization of planning actions. The second step was the creation of a new local Institute for Monument Protection — in accordance with the tendency of decentralization of all social activities in the country — which has a competence limited to the commune territory. Contrary to previous practice, the new Institute based its activity on the analysis of the historic centre, achieving considerable results in a couple of years. The third main condition of the new organization was the collaboration of the Housing Enterprises (Poduzeće za izgradnju Splita) which gives financial support interventions.

(a) *Preservation of monuments and sites within urban planning*

Regional plan

In 1970 the Town-Planning Institute of Dalmatia completed the Regional plan for the Split region, in which considerable attention was paid to historic sites and monuments. All historic sites were registered and their main characteristics delineated.

Preliminary plan and Master plan

In 1951 the Institute submitted its Preliminary plan of urban development to the Commune Assembly, in which the treatment of historic centres

(14) C. FISKović: *Prilog Proučavanju i Zaštiti Dioklecijanove Palace*. Rad Jugoslavenske akademije, knj. 249, Zagreb 1950.

(15) T. MARASOVIĆ: *Intervento urbanistico-archeologico nel centro del Palazzo di Diocleziano a Split*. Attualità urbanistica del monumento e dell'ambiente antico, Milano 1957, p. 88-90. — J. MARASOVIĆ, T. MARASOVIĆ: *Rinnovamento del centro storico di Split*. Urbanistica 42-32, Torino 1965, p. 88-92. — *Pregled radova Urbanističkog biroa na proučavanju, zaštiti i uređenju Dioklecijanove Palace 1955-1965*. URBS 4, Split 1065, p. 14-54 (with a condensed English version).

and other historic areas was determined. The new Master plan, presently complete up to the stage of Documentation (1970) and Concept (1972), includes the outline of historic and urban development and a study on problems concerning urban heritage (16).

(b) *Detailed studies in the historic centre* (17)

1. Documentation, analyses and investigation of existing conditions.

The first stage of the methodological procedure for the preservation, organization, and revitalization of the historical centre of Split included the following measures:

1.1 Survey of the whole historic centre, individual monuments and blocks. The Institute for the Protection of Cultural Monuments has made an architectural survey of the whole historic centre. The architectural survey of the ground floor of the town was made on a scale of 1:200. Using both classical and photogrammetric methods, surveys of all four town elevations have been made. The survey programme also envisages the working out of all the elevations of street and square façades. In the meantime, the Institute for the Protection of Monuments and the Town Planning Institute have made detailed architectural surveys of a great many blocks, individual monuments, and buildings on a scale of 1:50.

1.2 Inventory of monuments in the oldest nucleus. At the beginning of work on the revitalization of the oldest part of the area (the Palace), the Town Planning Institute made a list of all buildings in that section, classifying the material under the following headings: registry data, construction data, building materials, state of preservation, living conditions, sanitary conditions, occupancy, ownership, working space, undeveloped space, potentials for architectural studies, historical, cultural, and archeological data. A sketch of the ground-plan of each apartment was included in this inventory. In future work on the inventory for other areas in the old part of town and in the revision of the list for the entire historic centre administered by the Institute for the Protection of Monuments, greater attention will be paid to sociological data, (inhabitants' origin and occupation, length of occupancy, etc.).

1.3 Analyses of the historic centre:

On the basis of the material obtained from the inventory and studies of certain individual monuments, analyses were made and presented in drawings on a scale of 1:500. The analyses covered the following fields of investigation:

(16) Generalni urbanistički plan Splita (1. Dokumentacija, 2. Konceptija), Split 1970, 1973.

(17) T. MARASOVIĆ: *Methodological procedure for the protection and revitalization of historic urban centres*. Problems and Techniques of Preservation of Historic Urban Centres, Split 1970, (URBS), p. 113-148.

1.3.1 Historic, architectural and conservation analyses.

(a) Chronology of buildings with emphasis on the main historic periods (Roman, Mediaeval, Renaissance and Baroque, and 19th and 20th century), showing their values in the historic centre.

(b) Evaluation of buildings within the following categories:

- parts of Diocletian's Palace and Mediaeval buildings of significant historic value;
- buildings of architectural and environmental value;
- buildings of average architectural value and buildings with significant elements of historic styles;
- neutral buildings and monuments;
- buildings not in harmony with their architectural environment.

(c) State of preservation of buildings according to the following categories:

- good
- partially delapidated
- delapidated
- dangerously cracked
- ruins and unfinished

This analysis revealed the existence of many dilapidated houses, some of which are in danger of collapsing.

1.3.2 Architectural and technical analyses include:

- (a) height of buildings
- (b) building materials used for the front walls
- (c) roof materials
- (d) types of open spaces and green areas.

1.3.3 Housing analysis of living and hygienic conditions. This analysis is expressed by means of a classification system divide into 8 categories, accentuating the difficult situation in the historic centre, especially in the oldest core within Diocletian's Palace. Very poor living conditions of the inhabitants are presented in drawings, with buildings of the lowest housing categories marked in darker colours or in figures indicating that in Diocletian's Palace (in 1958) there were:

- no first category apartments
- 3 second category apartments (or 0.6%)
- 14 third category apartments (or 2.9%)
- 102 fourth category apartments (or 2.8%)
- 104 fifth category apartments (or 35.0%)
- 118 sixth category apartments (or 23.8%)

- 65 seventh category apartments (or 13.1%)
- 21 eighth category apartments (or 4.2%)

The analysis of dampness completes the picture of difficult living conditions and indicates that before reconstruction work, 77.8% of the apartments in the Palace were damp and humid.

1.3.4 Demographic and sociological analysis.

This analysis has provided interesting data concerning the relationship between buildings and persons living in the historic center area. The 1958 census showed that there were 3,056 people, 859 families in 475 apartments, living in Diocletian's Palace and the buildings connected with its perimetral walls. This density of 1.73 families or 6.15 persons per apartment is much higher than the average, that is, significantly below normal living conditions.

1.3.5 Analysis of urban functions and use of business areas.

The following analyses were made for the historic centre of Split:

- (a) original purpose of buildings
- (b) present function of buildings
- (c) a special, and in this case most interesting, analysis of the use of ground-floor areas.

The following disadvantages concerning commercial use of areas within the historic centre can easily be seen in the graphic analysis or in numerous statistical data:

- in the old part of town there is a disproportionally large number of storage areas, most of them neglected and many of them concerned with business activities outside the historic centre. Inside the Palace itself, in an area of approximately 30,000 square metres, about 4,000 square meters are occupied by storage space or warehouses, 1/8 out of the total surface involved;
- in some parts of the area shops are very densely grouped, whereas other parts are completely deprived of vital functions.

The comparison of the analysis of the commercial use of space with the analysis of hygienic and living conditions has produced some interesting conclusions with regard to the revitalization programme. The most dilapidated buildings are usually found in the areas deprived of contemporary vital functions; the basements (ground-floor) of buildings are used mainly for storage, whereas shops and other business functions concerned with active life in the area are located in buildings of higher housing value.

1.3.6 Traffic analysis.

This was made on the basis of pedestrian movement during:

- (a) morning hours characterized by the highest traffic density
- (b) evening hours.

The analysis of pedestrian movement has shown the existence of another serious problem in the historic center: concentration of traffic on some streets and a decline in the use of others. Since the town has been expanding westwards, and because of other reasons we shall mention later, the transversal pedestrian path through the historic centre is seriously overloaded, whereas the longitudinal axis of Diocletian's Palace, before the beginning of the revitalization programme, had very nearly "died out" as a pedestrian path. The conclusions from a first comparison of analyses (commercial use of space with hygienic and living conditions) can now be generalized on the basis of the traffic analysis, which confirms those earlier conclusions. The intensive pedestrian flows are connected with active trade and handicraft functions located on the ground-floor level in the better and healthier premises. On the other hand, in dead areas lacking traffic and attractive functions, the apartments and buildings are left to destruction, and with them all the cultural, historic and environmental values of the historic centre.

(c) An analysis has also been prepared on ways and means of supplying shops in the historic centre, since all vehicular traffic is forbidden in that area.

1.3.7 Ownership and management.

This is an analysis of ownership with regard to certain buildings (private, public, and in particular, the category of nationalized buildings administered by the Housing Enterprise of Split). The practical potentials of interventions in buildings and areas, frequently depend upon land acquisition and ownership, that is, the legal process which has to be clarified and satisfactorily solved before beginning work.

2. Study of urban development

The investigation of the urban development of the town has been accomplished by means of accurate drawings showing certain historic periods and phases within the framework of the region, the whole town agglomeration, and the area of the historic centre itself, that is, for certain areas and blocks within the old historic core.

2.1 The study of regional development included the following periods:

(a) the first pre-historical settlements extended over three geographical zones (the coast, hinterland, and the islands) without any definite centres; these were the Illyrian settlements, belonging to the tribe of Delmatae in particular.

(b) Greek colonization, with the main town of Issa on the island of Vis, leading to the establishment of other urban centres on the mainland.

(c) The Roman period, in which the centre was transferred to the mainland, to Salona, which became the leading town of the large province of Dalmatia.

(d) The time between the 12th and 14th centuries, the period of mediaeval communes when the town of Split was the centre of this urban area.

(e) The Venetian period from the 15th to the 18th century, characterized by long Turkish wars.

(f) The period from the 19th century until the present, characterized by the growing role of Split as the centre of an ever increasing area of influence.

2.2 The study of the development of town agglomeration on the peninsula shows the town has gone through six characteristic phases of growth. It also illustrates the growth of the historic nucleus in relation to the entire town area.

(a) The Roman phase with Salona being the principal administrative, economic and religious centre with approximately 60,000 inhabitants, including the area where Diocletian's Palace was built in the 4th century.

(b) In the Middle Ages, the centre was transferred to the southern bay of the peninsula, to the town of Split which had, with all of its suburbs, approximately 5,000 inhabitants.

(c) In the period of Venetian administration (between the 15th and the 18th century) the town stagnated and at times even declined in population to a minimum of about 3,000 inhabitants.

(d) During the Austro-Hungarian administration, Split began to extend beyond its historical walls. Before World War I (1913) the town had reached the figure of 20,000 inhabitants.

(e) The development of the town continued during the pre-war period when it became the administrative, economic and cultural centre of this area. Before World War II (1940) Split had 40,000 inhabitants.

(f) During the last 25 years, after its liberation, Split has undergone the highest rate of population growth. The area of new development encircles the whole peninsula and the population has grown four times in relation to the pre-war period.

2.3 The study of the development of the historic centre shows in greater detail changes in the shape of its nucleus. This is illustrated through six phases of development:

(a) Diocletian's Palace in the well sheltered bay of Aspalathos, the oldest nucleus constructed in the period between 295 and 305 A.D.

(b) In the early Middle Ages (between the 8th and 11th century), the Palace received refugees from destroyed Salona and became a real town.

(c) With the extension of the town westwards from the Palace, Split doubled its territory and became an autonomous commune. Its rural suburbs were developing outside the walls.

(d) Between the 15th and 17th century, the walls represented the most outstanding building features of the period of Venetian administration.

(e) With the destruction of the walls in the 19th century, the historic centre and the suburbs merged into one.

(f) The existing historic centre covers only a small part of the total developed town area.

2.4 The development of the area between the Northern and Southern gates of Diocletian's Palace. The study of the development of this area was needed for the regulation of the longitudinal axis of the Palace. The development analysis shows:

(a) The condition of the original form of the Palace with the clear concept of continuous circulation through the longitudinal and transversal axis.

(b) In the Middle Ages, the Roman streets were narrowed, but communications through both main axes were retained.

(c) In the Renaissance and Baroque periods, longitudinal communication was discontinued by closing the Northern gates and the Peristyle passage.

(d) In the 19th century, the municipal government re-opened the longitudinal communication.

(e) In 1928, "esthetic" measures of conservation resulted in re-closing communications through the Peristyle.

(f) Due to recent reorganization and reconstruction of the old part of the town, communications have been opened again linking the Northern and the Southern gates of the Palace.

All these phases are analysed in detail by the survey of the development of the Peristyle.

3. The study of destructive processes and their causes within the historic centre

It was possible to discover the main causes behind the deterioration of the old part of Split through the studies carried out on present conditions — the study of historic and urban development.

3.1 The causes of the general delapidation of the old part of town as a whole, have been thoroughly studied, as well as those particularly pronounced in certain neglected areas.

3.1.1 The decay of the historic centre, in general, is connected with certain events that occurred during the development of the town. Until the end of the 18th century, the area within the old walls, today called the historic centre, represented the complete town area. In contrast to the mediaeval outskirts inhabited predominantly by farmers and fishermen, in the town, within the walls, the residents (aristocracy, tradesmen and craftsmen) have continuously repaired and maintained their houses, shops and basic living conditions. With the extension of Split in the 19th century outside the historic walls, the result of changing

war strategy as well as of sudden economic development (increasing importance of the harbour, beginning of industries, etc.), the higher-income residents frequently left the historic centre, i.e. a change in the social structure of the old nucleus took place. This area is now predominantly inhabited by lower-income families, mostly from the hinterland by origin who, unaccustomed to a higher standard of living, have not been able to maintain their flats and other premises.

3.1.2 The second reason behind the bad condition of the buildings should be sought in the technical situation, primarily caused by bad and unsolid foundations, particularly in the southern part of Diocletian's Palace.

3.2 The causes of the greater deterioration of certain areas within Diocletian's Palace, and particularly along the section between the Southern and the Northern gates, are also connected with the specific urban development of the historic centre itself. With the spreading of the town westwards, the transversal road through the Palace became the major route of communications, while, at the same time, the longitudinal axis of the Palace was completely neglected, particularly after the new western access to the municipal centre was opened at the end of the Middle Ages, and when the Peristyle functioned only as an ecclesiastic centre. This had a serious impact on the complete area around the longitudinal axis, reflecting its neglected state.

4. The programme of revitalization

On the basis of all collected elements, i.e. analyses of the conditions and studies of the development and causes of deterioration, the revitalization programme was set up in principle.

The Directive Plan of Split, approved in 1951, determined the basic function of the old part of town as a cultural centre connected with the new city centre.

On the basis of all prepared analyses, it was possible to determine more closely the framework of the protection and revitalization programme for the old part of town based on the following elements:

4.1 The protection and modern presentation of the series of buildings, facilities, their parts or details having cultural and historic value.

4.2 The reconstruction of old and dilapidated houses and their restoration and conversion either into facilities in accordance with the envisaged role of the historic centre, or into modernly equipped apartments, in relation to present population density and housing areas, considerably reduced in number.

Some of the dilapidated buildings without any historic or environmental value are to be pulled down.

4.3 Prohibiting inadequate use of ground-floor areas and creating new business and other premises for vital functions (trade, tourist, catering, cultural and educational, etc.).

4.4 The regulation of pedestrian movement by way of regenerating "dead" streets and by restriction of traffic in congested streets; regulation of supplying, construction of parking lots around the old part of the town.

4.5 The improvement of infrastructure, primarily streets and parking lots within the Palace; the solution of the sewage problem using the original sewer system in Diocletian's Palace; the reconstruction of the water supply system; the removal of electric wires which spoil the appearance of streets and buildings in the old part of Split; the solution of lighting within the historic centre as a whole and illumination of individual monuments.

5. Urban and architectural designs and realizations

During the last 15 years of systematic activity in the revitalization of the old part of the town, the Town Planning Institute of Dalmatia and the Institute for the Protection of Cultural Monuments have undertaken a number of steps towards the protection, renewal and organization of certain areas, blocks and buildings within the historic centre of the town.

The purpose of this course is to present the methodological experience. Some of the steps are therefore only listed (Cf. note 15).

5.1 The work in the old part of Split can be catalogued in three main types of action.

5.1.1 Excavations, restoration and revitalization of the substructures of Diocletian's Apartments and other areas.

The southern part of Diocletian's Palace consists in two levels: the upper one was originally occupied by the imperial apartments and was replaced by houses in the Middle Ages; the lower one, containing the apartment substructures, is well preserved but filled with waste and rubbish from the upper floors. Intervention was required for various reasons:

- utilization of a significant architectural complex of the Palace, important also from an archeological point of view: in fact, the substructures mirror the upper floor, thus revealing a complete layout of destroyed apartments;
- elimination of stratified waste, since it was a possible cause of epidemics;
- solution of technical problems in the upper houses, some of which had become dangerous due to unsolid foundations;
- creation of suitable areas within the town centre for various modern uses.

Before starting work, the whole area was filled up to the vault. The excavations started in the western part, slowly bringing to light large rooms diversely shaped (basilical, rectangular, square, circular) and their

corresponding vaults (barrel vaults, intersected vaults, cupolas). The excavations allowed new conclusions to be drawn about the position and shape of the substructures (and indirectly of Diocletian's apartments); the building technique and the Palace development. Then the excavations continued in the central part and, finally, in the eastern section, bringing to light various cross-shaped and octagonal structures and complicated problems of restoration as well. While in the western section restoration was limited to a simple stringing up of the walls, in the opposite part a partial vault restoration was required, mainly for statics reasons, that is, to support the upper structures. A complicated technical intervention requiring a drain system, solved the problem of underground water flow.

The large substructure area, containing about 50 rooms (about 40 of them have been excavated and restored) has considerable archeological and environmental value. In addition to this, revitalization of the newly discovered rooms has been reached by introducing new functions in no way inconsistent with the monument. The western part of the substructures has thus been included in the cultural life of the town, becoming an area for expositions of ancient and modern art, theatre performances, conferences or various types of entertainment. Thanks to its particular shape and position, the eastern part will become a complex of restaurants, shops, souvenir-shops, etc.

In the last five years (1968-1972) research in the southern part of Diocletian's Palace has been the subject of a joint excavation project undertaken by the Town Planning Institute of Dalmatia and the University of Minnesota (USA). The works resulted in numerous discoveries improving knowledge of the original plan of the Roman Palace, as well as the study of its development (18).

5.1.2 *Restoration of the central area (Waterfront - Peristyle).*

Intervention in this area was urgent, not only for the intolerable condition of monuments and environments deprived of their value, but also because there was no direct axial connection between the southern gate and the centre of the Palace. This fact was negatively reflected in the whole pedestrian movement, leaving the longitudinal axis almost free of traffic.

Here, we applied the unique revitalization proceeding used for the whole historic centre. An *archeological study* was the starting point.

5.1.2.1 *Critical analysis of previous studies*

The interpretation of the existing state of the Palace done by Niemann, Herrard, etc., was subject to a critical analysis, in particular, the area concerning the connection between the Peristyle and the substructures that was lacking. It was hard to accept a solution that did not allow direct communication between the southern gate and the centre. The area was

(18) J. MARASOVIĆ, T. MARASOVIĆ, SH. McNALLY, J. WILKES: *Diocletian's Palace, report on joint excavations in Southeast section, Part one*. Split 1972.

therefore submitted to *archeological tests*, carried out in the Vestibule and Peristyle substructure, with the following results:

- discovery of the original stairways proved the existence of a direct passage between the Peristyle and the substructures, thus confirming doubts about the previous assumptions;
- findings in the Vestibule substructures brought to light a different shape;
- tests carried out in the Peristyle revealed: an original floor on a hitherto unknown level; the circumference of the surrounding steps and the particular design of the southern side, with a central stairway leading to the substructures and two lateral staircases leading to the vestibule and the imperial apartments.

5.1.2.2 *Area development study* mentioned in section (2.4) has revealed the causes of deterioration of the entire zone.

5.1.2.3 *Programme*

As changes in the communications network have caused traffic problems and a general deterioration of the central area, in the programme of revitalization the restoration of direct access between the Peristyle and the substructures was given priority. In this case it seemed logical to restore the original pattern in the lower level, retaining at the same time, the mediaeval structures in the upper level.

5.1.2.4 *Design*

Through evaluation of all historic layers, it was possible to consider the restoration of the Roman architectural elements in the lower floor after the removal of deteriorated upper structures. The project proposed the preservation of the upper floor in places where buildings of different styles harmoniously co-exist.

5.1.2.5 *Execution of the work*

The intervention was divided into three phases:

- Restoration of the upper and lower part of the Vestitbule undertaken in the 1956/57 period and in 1963 — systematic excavations.
- Restoration of the floor and the southern stairways of the Peristyle, 1959/61, with systematic excavation.
- Restoration of the central basement room 1957/64 . technically complicated work, to support the buildings above the foundations being removed it was necessary to use prestressed reinforced concrete. The regeneration of the Palace's central area started after the reopening of through communications in 1964.

5.1.3 The adaptation and renewal of several buildings for different purposes. This has largely contributed to the protection and revitalization of historically valuable buildings, bringing in new functions to replace dilapidated apartments. To date a number of buildings have been renewed, the following being, in particular, worth mentioning:

- a series of mediaeval buildings in the southeastern part of the Vestibule, now housing the Town Planning Institute of Dalmatia;
- the mediaeval building west of the Peristyle, adapted for the General Education Centre of the Workers' University;
- the block of mediaeval houses near the Golden gate, now housing the Cultural Centre of the Workers' University;
- the new residential building on Usred Geta street, in place of a collapsed house;
- the office-building on the Peristyle, with a café on the ground-floor, in place of a house destroyed during the war;
- groundfloor premises restored mostly for shops, in various parts of the historic centre;
- the southeastern tower of the Palace, renewed and converted into a conference hall for the Split/Zagreb Motorway Enterprise, one of the most recent adapted buildings in the old part of town;
- a few adaptation designs are being prepared for some other facilities, including the design for a big store on the groundfloor of the Palace and a restaurant on the upper floor.

5.2 In all the above projects the methodological procedure containing the following elements has been applied:

5.2.1 A survey of existing conditions. — Detailed architectural surveys of buildings which include precise drawings of every single stone, the basis, together with the photosurvey, of the study of existing conditions and projects for renewal. Drawings are prepared on a scale of 1:50, and details on a scale of 1:10.

5.2.2 Building investigations. — Include detailed historical and architectural analyses with additional investigations (excavations, detaching plaster from walls, etc.). The investigations are completed with the study of historic sources and other data connected with the origin and construction of buildings. All this enables the preparation of accurate drawings showing the original shape and construction phases of buildings, i.e. of the urban entity.

5.2.3 Static analysis. — As we deal here mostly with delapidated buildings within the old part of the town, static analysis of every single building is carried out before actual intervention, together with the reconstruction proposal.

5.2.4 Design. — The programme submitted by the investor and accepted if in harmony with the general programme of rehabilitation of the historic centre as a whole, is followed by a series of designs in different stages (sketch, pilot and final designs). The design is generally on a scale of 1:50 and contains all absolute spot-heights; this has proved useful in a complex situation of gradual construction over various historic epochs,

since it enables coupling of individual buildings into one entity. Particular attention is paid to the reconstruction of details and style elements.

5.2.5 Implementation. — In the course of reconstruction within the historic part of Split, some experience has been obtained on various possibilities of organizing the work (by a working group, under supervision of an investigator and designer, by various construction enterprises with adequate supervision). It was found that the best way of organizing the work is to have working groups in which the workers gain necessary experience by long practice in excavations and reconstruction within a historic environment (19).

VII - BRIEF SUMMARY OF METHODOLOGICAL PROCEDURE (20)

The protection, restoration and revitalization of historic sites is a characteristic town-planning discipline; and subject to this, the methodology applied to the task should be basically identical to the methodology of urban studies concerning physical planning and design in towns, settlements and wider areas.

The specific nature of the methodology applied to historic sites results from their specific character compared to areas with no relevant cultural and historic value, i.e. it is the result of particular methodological procedures accompanying the protection and evaluation of cultural and historic environments and monuments. This specific urban and preservation methodology, applied to more or less similar treatment in many other old towns and settlements, herewith illustrated in only one of its aspects, namely restoration of Split's historic nucleus, is summarized here in three basic levels.

1) The protection of historic sites within wider areas and regional plans;

2) The protection of historic cores in towns and other environmentally significant areas within master plans;

3) The protection, restoration and revitalization of historic sites within detailed plans and urban and architectural designs.

At the first and second level, protection and revitalization of cultural and historic heritage is only one item of the complex town-planning synthesis. This methodological summary thus states only the methods concerning the protection, evaluation and restoration of the cultural and historic heritage.

The third level (detailed plans and projects of historic sites) covers

(19) The works described in the historic centre of Split have been accomplished under the direction of Jerko Marasović, architect in chief of the Department of Urban Heritage, Town Planning Institute of Dalmatia, Split.

(20) T. MARASOVIĆ: *Methodological procedure for the protection and revitalization of historic urban centres*, Split 1970, (URBS), p. 113-148.

the whole area. This stage therefore comprises the full contents of methodological procedure, from initial studies to implementation.

1. Protection of historic sites within wider areas and regional plans

1.1 *Inventory of historic environments and separate historic buildings.*

1.1.1 International system of inventory.

In 1965, the European Council agreed on the application of a single system of inventory based on the studies and experiences of outstanding experts at the International Council for Monuments and Sites (ICOMOS). According to this system (named I.P.C.E.) a classification was prepared for areas (natural, historic, scientific, urban, miscellaneous) and architectural monuments (religious, military, public, private, industrial). Very concise questionnaires were prepared for the basic inventory, and published in the special issue edited by the European Council (21).

This international system of inventory for cultural properties concerning either historic sites within a region or state or separate monuments within a town, contains in addition to evaluation aspects, basic and substantial data on architectural heritage, i.e. the degree of protection based on the objective adopted, thus giving the whole system a specific value because of its direct application in regional and national physical plans.

1.1.2 Inventory within national range.

The majority of countries have their own system of inventory of cultural monuments. It appears that the IPCE system would more or less correspond to the requirements of national physical planning and thus, should equally be applied in all countries. Central institutions for protection of monuments or, if this concerns urban heritage, central town-planning institutions should be responsible for national inventories. The basic objective of an inventory in national terms is a comprehensive survey of the extent of cultural properties, useful both for area and regional plans and various others (economic, touristic) wherein cultural and historic resources should be given an important place.

1.1.3 Regional physical plans could also use international inventory data, either for separate monuments and buildings within settlements or larger environmental units, towns and settlements. Regional inventory is carried out by central, regional and intercommunal institutions for protection, i.e. corresponding town-planning institutions.

1.2 *Maps and drawings.*

1.2.1 Old drawings usually represent very important sources when studying cultural properties. Subject to the rapid pace of urbanization,

(21) Protective Inventory of the European Cultural Heritage (I.E.C.H.), based on the Palma Recommendation, Council of Cultural Co-operation, text presented by Mr. Gabriel Alomar, Mr. Francis Sorlin and Mr. Pietro Gazzola.

many historic areas have been gradually losing their original character which has been recorded by various documents (old drawings illustrating towns, their surrounding areas and landscape). The study of old drawings in town and regional physical plans enables conclusions and statements to be made concerning classification of settlements and even the evaluation of topographic elements; and finally, draws our attention to old communication routes and elements of infrastructure in general, which must also be evaluated in physical plans.

1.2.2 As a source of information about old settlements, towns and communications, old plans are particularly valuable (besides their other functions) when studying historic and urban development of areas dealt with by the plan.

1.2.3 Aerial photogrammetry and panoramic photographs.

While old drawings and plans are documents of past conditions of historic unity, new photographs, primarily aerial views, are an important base for studies of the existing state and the potential for protection and evaluation.

Aerial photogrammetric views, together with modern planimetry, are the most complete basis for studies of urban units and settlements, their typologic classification within region, and studies of communications and landscape values.

1.3 *Classification of historic sites within regions and wider areas.*

Classification of historic environments, towns and settlements is carried out on the basis of basic plans and other studies, and according to the following divisions:

1.3.1 Morphologic classification;

1.3.2 Typologic classification;

1.3.3 Historic classification, that is, historic development surveys.

1.3.4 Various other studies.

1.4 *Evaluation and protection proposals.*

All the above studies result in evaluations of architectural heritage and proposals for protection, i.e. for treatment of historic environments and isolated, separate monuments outside settlements.

1.5 *Participation in further preparation of the plan.*

With the completion of documentation and inventory, studies and evaluation of historic areas, the role of protection i.e. the role of the experts in architectural heritage in the overall preparation process of regional plans, should not cease. On the contrary, their presence is permanently required at all stages, from the first concepts to the final version of the plan.

2. Protection of historic, urban and rural centres or environmentally significant areas within master plans.

Except in the case of smaller historic units where the historic site covers almost an entire or at least a significant part of a town, with master plans prepared for larger or medium size agglomerations, the protection and organization of historic centres or historically significant environmental units in towns are only one item of complex town-planning. Yet, the role of protecting the historic heritage is much greater and more responsible in this stage than when it acts in regional plans.

2.1 Technical documentation.

Being an integral part of the whole urban territory which is dealt with by master plans, the historic centre and other historically significant areas are shown on corresponding planimetric maps needed for the definition of historically significant zones and the marking of separate cultural monuments for protection.

Examination of old plans and drawings (old ground-plans, drawings, land-register maps) is useful both for studying the historic development of towns, and for defining the historic values of sites incorporated within existing urban patterns. Photographic documents have particular significance in the collection of technical documentation and materials. Aerial photogrammetric views are necessary for studying environmental values of a unit, whilst panoramic photographs show the most important views, separate environments and buildings.

2.2 Inventory of historic buildings within town areas.

Master plans inevitably require a survey of the architectural heritage of the whole area. It is therefore necessary that the inventory of protection contain all basic information on buildings and proposals for protection and treatment.

2.3 Analysis of town areas.

Detailed analyses of historic town areas (chronological, architectural and technical, residential, traffic, etc.) will be given in the chapter on detailed plans and urban designs. Master plans require the preparation of a visual analysis of the whole town or settlement, external views, internal views, projections of landscapes, elements in relation to the town and the town in relation to the landscape, investigation of relations between historic centres and new developments, etc.

2.4 Evaluation of architectural heritage and proposals for protection.

The master plan requires evaluating the basic town area and the separate historic units in order to be able to advance proposals for

protection. The proposals should provide adequate treatment of separate town zones.

2.5 Studies of urban development in towns.

Urban development studies constitute a substantial section of master plans, not only from a scientific view point, but also as a necessary base for certain conclusions which directly guide further development from economic, demographic and other aspects. When dealing with the destruction of certain historic cores or their sections, studies on urban development supported by corresponding plans, sometimes indicate the causes of destruction and other phenomena. At the master plan stage it is useful to consider development of a town area in wider, regional terms (bearing in mind relations with neighbouring agglomerations; communications between them, etc.) as well as the immediate town. The town area and its extension, possible lines of fortifications, major accesses and communications, should be shown in each planning stage.

2.6 Analysis of causes of destruction of architectural heritage.

Basic studies of causes of town destruction should be prepared at the master plan stage. On the basis of previous studies of urban development, research work on historic and economic development, social and other studies, causes of destruction could be analysed in relation to the whole territory covered by the plan.

2.7 Programme of the protection of historic sites within master plans.

All the studies and documents previously mentioned should result in the preparation of a programme for the protection and organization of historic town areas within the master plan. At this stage the following should be given precedence:

2.7.1 Overall guidelines for the protection and organization of old sites in towns (definition of the sites, their treatment, function of historic centres and other old sections, traffic control, etc.).

2.7.2 Preventive protection preceding a detailed plan (various zones of protection with particular type of treatment and necessary explanations).

2.8 Participation in final preparation of master plan.

Besides the aforementioned stages of work, institutions for the protection of cultural properties, i.e. experts in architectural heritage should permanently participate in all stages of master plan preparations — from first concepts to the projection of the plan and its implementation.

3. Protection, restoration and revitalization of historic areas within detailed urban plans and designs.

3.1 *Study of the existing state as the first stage of detailed planning (of urban design) comprises the following elements:*

3.1.1 Existing plans and photographs. Study of the existing state could start on the basis of existing technical documentation:

- old land-register plans, which are usually precious sources of information about previous conditions;
- recent planimetry;
- aerial photogrammetry (photographs);
- panoramic views (from air and land).

3.1.2 New surveys of the area concerned are important documents of the existing state for analysis, plan, programme and design. They are produced in the following ways:

- direct method;
- photogrammetric method;
- combined method;

and they include:

3.1.2.1 New planimetry on an adequate scale with the given inner pattern. It is very useful to make ground-plans of historic areas, on each existing level.

3.1.2.2 Façades and sections of historic sites, namely of complete old centres, streets, squares.

3.1.2.3 Detailed technical documentation accompanies the preparation of architectural photographs.

3.1.3 Inventory of buildings within a historic site.

3.1.3.1 Possible questionnaires previously prepared and the collection of all bibliographic data represent useful material before new classification.

3.1.3.2 The new inventory prepared for detailed plans and designs (in contrast to the inventory of protection, this should be called "inventory of regeneration") contains considerably more information than the inventory of monuments required for physical and master plans. Inventories for this purpose should contain questions which produce comprehensive demographic and sociological data: historical, artistic and architectural descriptions; data concerning construction; equipment of buildings; state of repair and other elements which fully illustrate the condition of an historic urban area. The list might also contain a proposal for protection.

3.1.4 Analyses of the actual state (prepared through drawings, tables, reports, photographs) should provide the most complete image

possible of historic sites in the towns or settlements concerned. These are as follows:

3.1.4.1 Building analyses.

3.1.4.1.1 Historic, aesthetic and architectural analyses (characteristic historic periods) including chronological development of the area, location of archeological remains, architectural typology of buildings and other similar information.

3.1.4.1.2 State of repair (classified as good, medium, bad, ruins).

3.1.4.1.3 Combined architectural and technical analyses of buildings and open spaces comprise: number of storeys, types of façade elements, internal constructions, types of roof, types of surfacing and open spaces. Analyses of residential buildings and categories of flats are specially important.

3.1.4.1.4 Visual analyses of architectural and physical features (accesses, major views, scale, etc.).

3.1.4.1.5 Functions and spaces are set out for the entire building (predominant function) and for each separate floor (for the ground-floor in particular) showing both the original and present function.

3.1.4.1.6 Analyses of infrastructure including the survey of all public utility services in town and their state of repair (waterworks, sewage, electricity, telephones, roads, squares, open spaces, etc.)

3.1.4.2 The group of analyses on inhabitants comprises demographic and sociological analyses denoting the number of inhabitants in each separate building and flat; population density per hectare; number of families, age and sex structure and other relevant data. Special analyses should denote the social structure of the population living in the historic area; occupations, origin, living and working conditions, recreation and leisure.

3.1.4.3 Economic analyses particularly important for the programme of regeneration.

3.1.4.4 Property and legal relations.

This group of analyses denotes the ownership of buildings (public, communal, private, social).

3.1.4.5 Analyses of traffic, including:

— pedestrian movement within historic centres (shown in different seasons and day-periods);

— vehicular movement, servicing of shops, parking, etc.

3.1.4.6 Green areas within historic centres. Conditions and types of plants.

3.2 *Evaluation of architectural heritage and proposals for protection.*

3.2.1 Evaluation of architectural and environmental values, i.e. their classification usually depends on the specific character of the area concerned. It appears that the following categories should be taken into consideration:

- outstanding value of the area;
- significant value of the area;
- moderate value of the area;
- insignificant value or the area with no value;
- significant details;
- pseudo-historic buildings;
- buildings inconsistent with their environment;
- successfully restored buildings;
- unsuccessfully restored buildings;
- buildings with unsuccessfully restored details.

3.2.2 The quoted evaluation enables the preparation of proposals for protection and accentuates the following categories:

- complete protection;
- protection with potentials for conversion;
- protection with potentials for restoration;
- transformation of façade details allowed;
- existing height should be respected;
- demolition and new construction required;
- only demolition required;
- areas where construction is prohibited.

3.3 *Development of historic areas.*

Analogous to studies of development of the whole area within master plans, detailed plans and urban designs also require the preparation of a study on the development of the historic area concerned. In this instance, development (including technical surveys) of the immediate town area requires a thorough survey of the whole town development.

3.4 *Studies concerning causes of destruction of immediate town area.*

Studies of the causes of destruction are primarily based on studies of urban development. They could be classified into the following major groups (22):

3.4.1 Causes depending on the location of a town or settlement.

(22) The classification is based on the lessons of Prof. G. De Angelis D'Ossat: *Guide to the methodical study of monuments and causes of their deterioration*. Courses of specialization in the conservation and the restoration of historic monuments and sites, Rome 1966.

This group includes geological conditions (sliding of terrain, earthquakes), geographic conditions (climate), floods, etc.

3.4.2 Causes dependent on construction.

This group includes the materials and construction of buildings, infrastructure, the manner of their construction, basements, etc.

3.4.3 Causes dependent on historic, economic and social development. Studies concerning causes of destruction or degeneration of cultural monuments because of immigration, i.e. overcrowding, emigration, i.e. abandoning of dwellings and whole settlements, impoverishment of population, epidemics, etc.

3.4.4 Causes of destruction dependent on human activity. This includes wars and devastations, fires, vibrations, air pollution, demolition of historic monuments and groups, this being the result of careless or ill-considered intervention; deterioration of scale and internal views resulting from new development.

3.5 *Programme of protection and revitalization.*

The programme is the result of studies collected throughout all mentioned stages. Its objective is to define technical and economic projects within the protection of the historical heritage, to prevent the destruction of historic areas and to encourage their restoration and regeneration. The programme defines the level of protection, restoration of residential buildings, business premises, infrastructure; and preparation of detailed traffic plans. The programme should define protection, treatment and function of each separate building within the historic core of the town concerned.

3.6 *Protection design and regeneration of monuments and historic environments.*

Methodological procedure of design mainly repeats (but in greater detail) all the stages mentioned when discussing historic areas. This procedure begins with:

3.6.1 Detailed study of the existing state which includes:

3.6.1.1 The studying of monuments from the aspects of history, form, structure and function for the whole monument, its separate parts and its relation to the environment (23).

3.6.1.2 This study is based on detailed and accurate surveys made by direct, photogrammetric or combined methods. Surveys should illustrate the whole monument, all of its sections and details.

(23) See note No. 22.

3.6.1.3 Studies are accompanied by detailed photographic documentation.

3.6.2 Studies of the original state and development are based on analysis of the monument itself and on studies of written and drawn sources. It is useful to have drawings and maps of:

3.6.2.1 Overlay (original appearance) monuments (buildings) on drawings showing the existing state;

3.6.2.2 and changes in the building throughout all major stages shown on characteristic drawings.

3.6.3 Studies of destruction of historic units and separate buildings should take into account all mentioned causes, primarily those related to the location and construction of the building (statics).

3.6.4 Evaluation and treatment.

Evaluations of historic, architectural and environmental values and treatment proposals follow studies of the original state and subsequent development of the building concerned.

3.6.5 Programme of the protection and restoration of separate buildings.

Starting with the evaluation of the building and a global programme of its function prepared for the whole historic urban area, we come to a final definition of the detailed programme of restoration. It should primarily satisfy demands for the protection and presentation of cultural and historic values as well as new functions.

3.6.6 Programme study: sketch and final designs.

Satisfying all elements of construction and shaping, a protective design for separate buildings must take into account, in all stages (from programme study to final design), the specific character of designing within historic environments, particularly accentuating the essential character of the monument concerned. Sketch and programme studies should take into account possible modifications in the final form effected by each separate new discovery during the process of implementation. Special attention is required while designing details in the process of protection and restoration.

3.7 *Implementation.*

The success of the overall protection and revitalization of historic urban areas and separate buildings greatly depends on the success of implementation which thus requires special attention. It is therefore desirable to have an experienced working team, particularly precious during investigation, designing and restoration activities thus guaranteeing permanent supervision of work by investigators and designers.

The implementation process should also be accompanied by a com-

prehensive documentation (notes, photographic and technical documentation).

3.8 *Publishing of results.*

Those responsible for investigations, detailed plans, protection designs and reconstruction must publish their results in the form of preliminary and final reports. This is beneficial both for the scientific "moment" of investigation of architectural heritage and for the presentation of the methodology and results in public.

* * *

In conclusion, it is worth mentioning, that an essential element for the general success of work performed within the highly complex conditions of historic areas — in addition to the adequate organization and professional approach of the institution or agency involved — is to obtain wide support from the municipality as a whole; its administration, political organizations, and finally, public interest.

In this respect, a document accepted by the European Conference of Local Authorities, at the Meeting held in Split under the auspices of the European Council (October 1971), and bearing the name "Declaration of Split," is very important. It has encouraged the local authorities in various countries to support efforts for the preservation and rehabilitation of historic sites.

Complete success is possible only if it is commonly realised that the urban and architectural heritage in a town or settlement is not only a matter of the past, but also — if properly presented and adequately used — an equally significant element of the present and future.

ILLUSTRATIONS

TABLE I

HISTORIC SITES IN YUGOSLAVIA: VARIOUS CATEGORIES



Mediaeval Dalmatian town of outstanding historic value: *Korčula*



A Bosnian town of historic significance: *Jajce*



Small Islamic town of outstanding value: *Počitelj*



A Dalmatian rural settlement of outstanding topographic and environmental value: *Primosten*



Significant historic core within an urban area: *Diocletian's Palace* and mediaeval *Split*



An archeological site: mediaeval *Stari Bar* in Montenegro



Historic core within the larger urban area of *Ljubljana*, capital of Slovenia



A group of rural houses on the Dalmatian island of *Hvar*

TABLE II



Engraving of Split area in the 17th century



SPLIT - HISTORIC SITES WITHIN THE LARGER URBAN AREA

Historic monuments within Split urban area

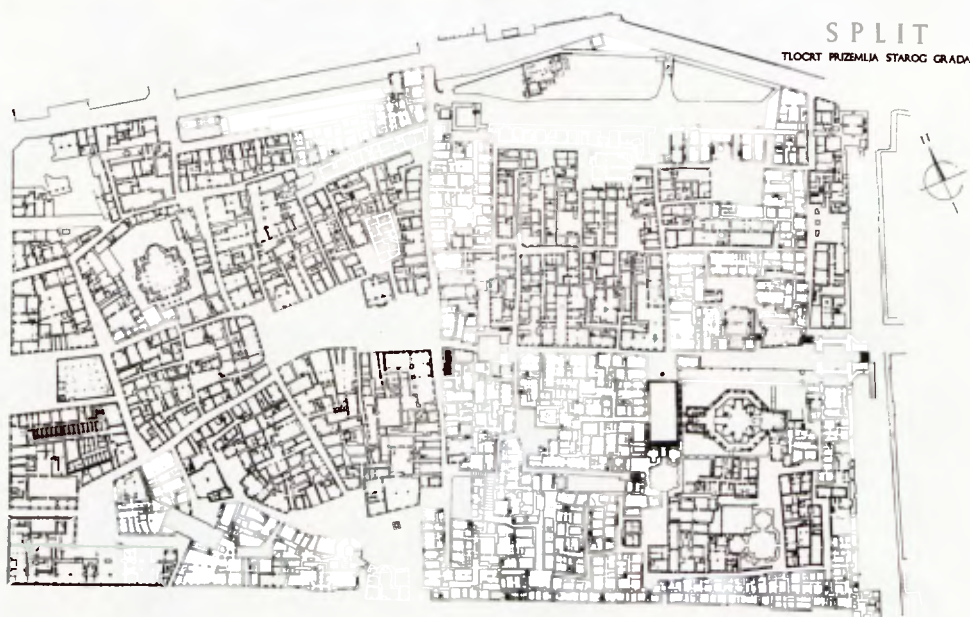
SPLIT REGION



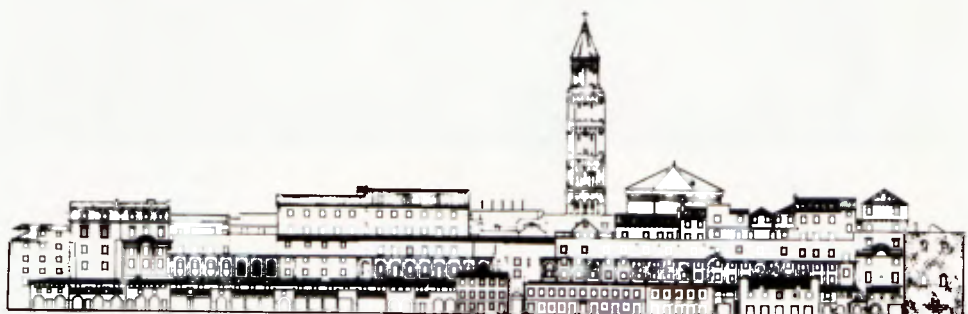
TABLE III



Airview of Diocletian's
Palace, the oldest
nucleus of Split
(photo: Z. Buljević)

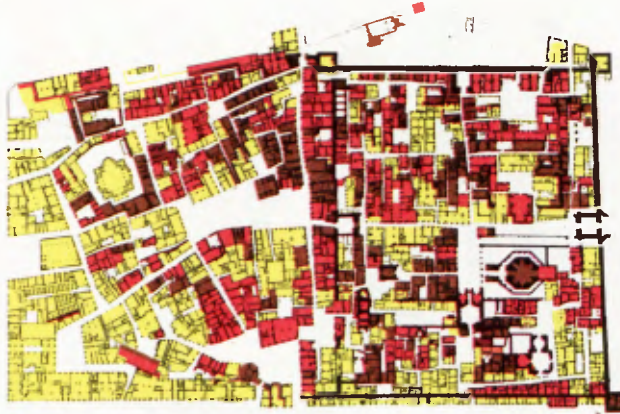


Ground-plan of the historic centre of Split (survey: Zavod za zaštitu spomenika kulture, Split)



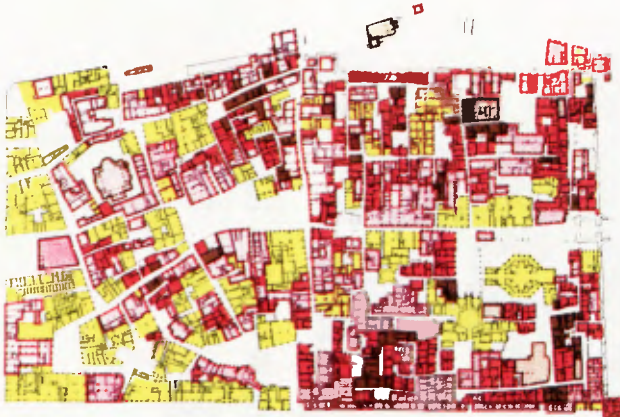
Southern facade of the historic centre (survey: Zavod za zaštitu spomenika kulture, Split)

TABLE IV



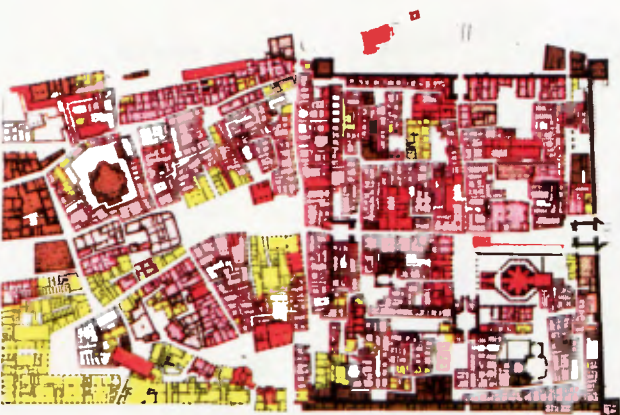
a) CHRONOLOGY

1. IV century
2. VII-XV century
3. XVI-XVIII century
4. XIX-XX century



b) STATE OF PRESERVATION

1. Good
2. Partially dilapidated
3. Dilapidated
4. Cracks and sags
5. Ruins



c) EVALUATION

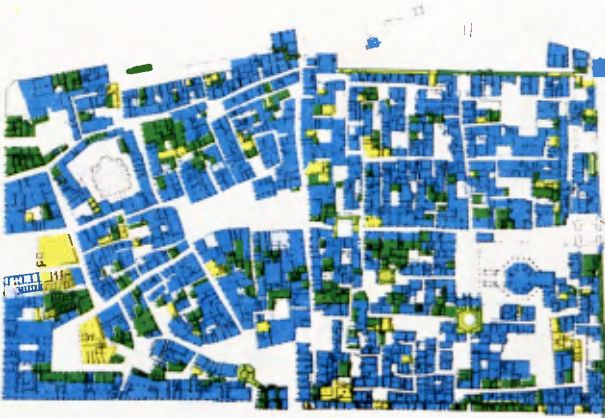
1. Remains of Diocletian's Palace - outstanding architectural value
2. Mediaeval and later erected buildings of outstanding architectural value
3. Areas of environmental value
4. Buildings of modest architectural value with single style elements
5. Nondescript buildings
6. Buildings inconsistent with environment

TABLE V



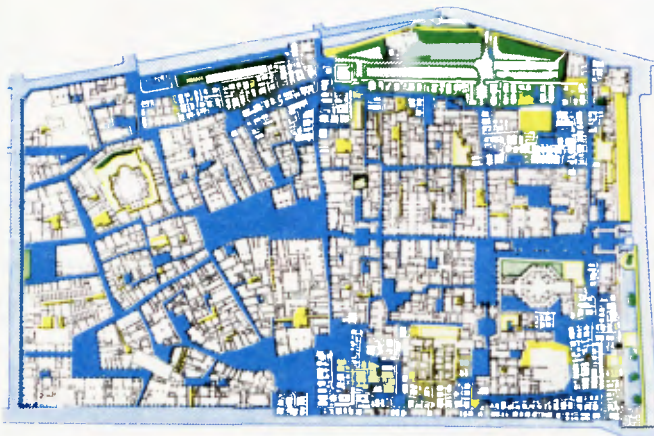
d) HEIGHT OF BUILDINGS

1. Ground floor
2. Ground floor+1 storey
3. Ground floor+2 storeys
4. Ground floor+3 storeys
5. Ground floor+4 storeys
6. Walls, towers, etc.
7. Excavations



e) ROOF MATERIAL

1. Stone slabs
2. Roman tiles
3. Tiles
4. Asbestos-cement
5. Concrete
6. Asphalt



f) OPEN SPACES

1. Asphalt
2. Cobblestone
3. Pavement
4. Concrete
5. Stone and earth

PLANTED AREAS

6. Grass
7. Trees
8. Gardens

TABLE VI



g) ORIGINAL FUNCTION

- 1. Dwellings
- 2. Public area
- 3. Business area
- 4. Churches
- 5. Walls and fortresses
- 6. Ancillary facilities



h) EXISTING FUNCTION

- 1. Dwellings
- 2. Public area
- 3. Business area
- 4. Churches
- 5. Remains of walls and fortresses out of function
- 6. Ancillary facilities



i) OWNERSHIP

- 1. Buildings administrated by the Housing Enterprise of Split
- 2. Other buildings publicly owned
- 3. Private property
- 4. Ecclesiastical property

TABLE VII



**PEDESTRIAN MOVEMENT
(IN THE MORNING)**

1. 1 pedestrian / 2 minutes



**PEDESTRIAN MOVEMENT
(IN THE EVENING)**

1. 1 pedestrian / 2 minutes



VEHICULAR MOVEMENT

- 1. Two-way vehicular traffic
- 2. One-way vehicular traffic
- 3. Temporary movement of service vehicles
- 4. Service carts

TABLE VIII
DEVELOPMENT OF SPLIT REGION

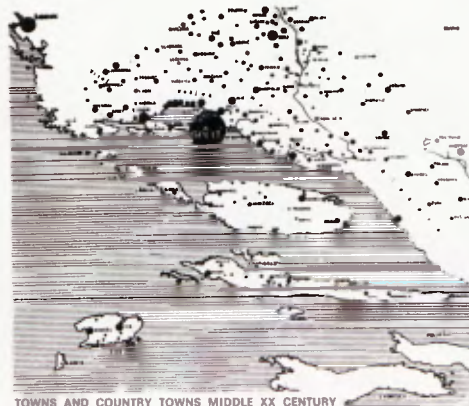
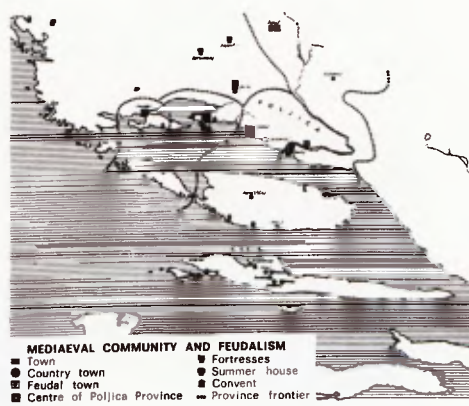
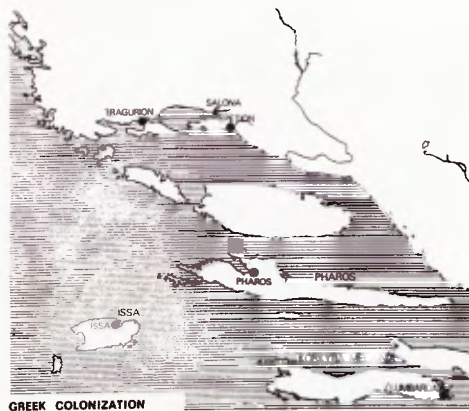
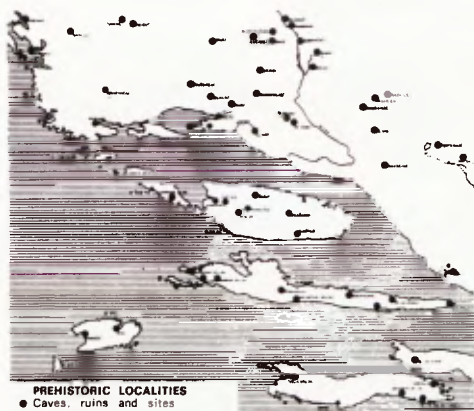
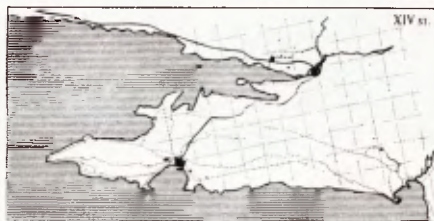


TABLE IX
DEVELOPMENT OF THE SPLIT PENINSULA
(Architect-in-chief: J. Marasović)

Salona and Diocletian's Palace



Mediaeval Community



Late Venetian period



Split before World War I



Split after Word War II



Split of Today

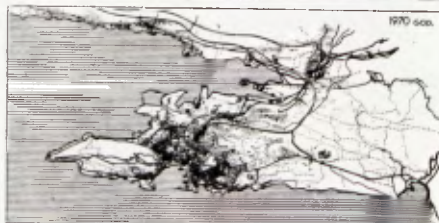
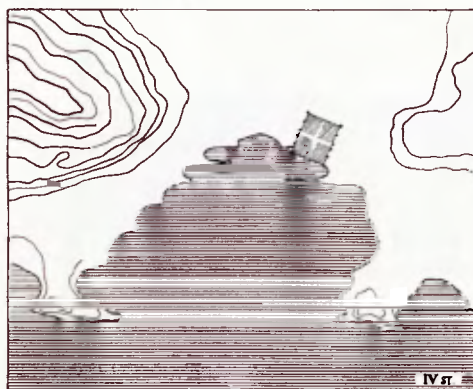


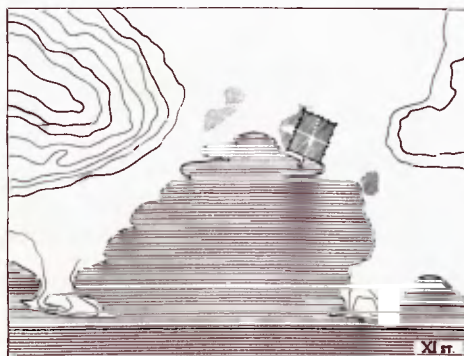
TABLE X

DEVELOPMENT OF THE HISTORIC CENTRE OF SPLIT

(Architect-in-chief: J. Marasović)



Diocletian's Palace



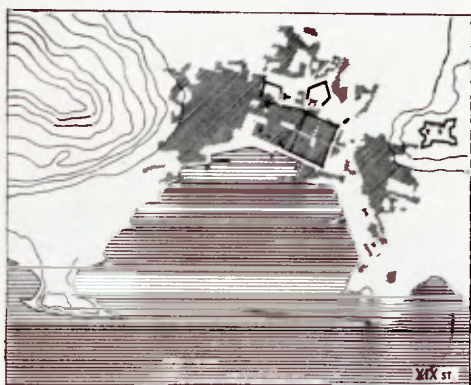
Early Mediaeval Town



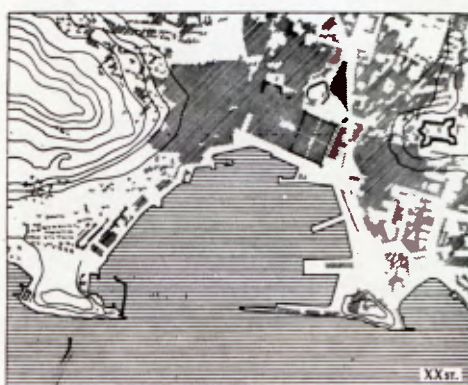
Mediaeval Community



Late Venetian period

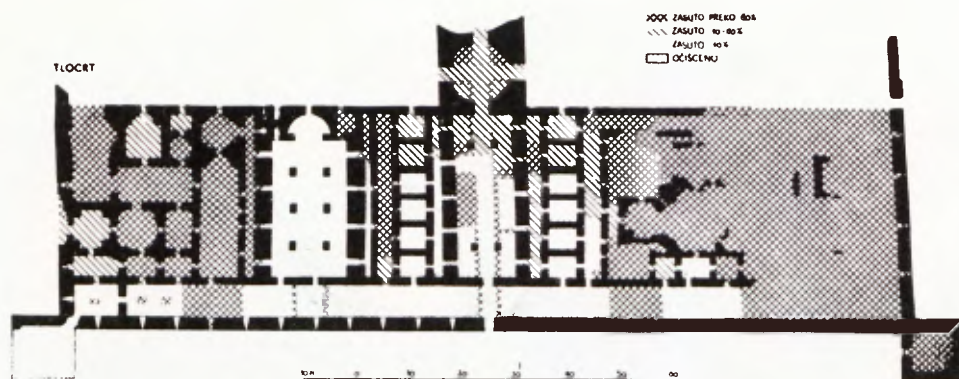


The old part of Split in the 19th c.

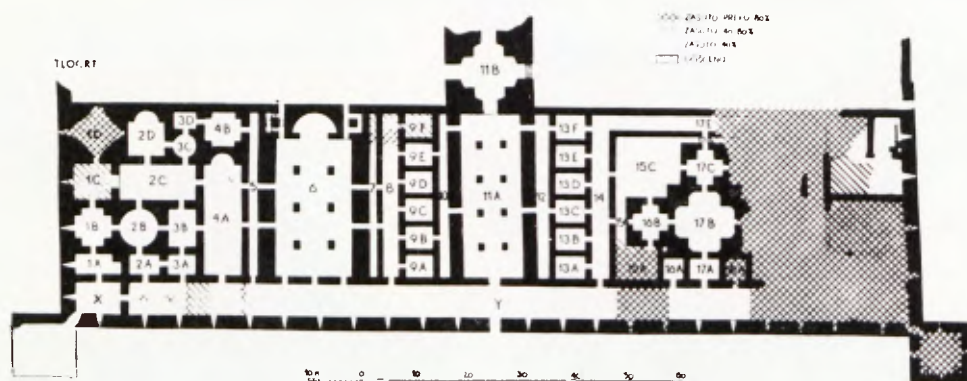


The old part of Split in the 20th c.

TABLE XI



Basement area of Diocletian's Palace before excavation



Basement area of Diocletian's Palace in 1972

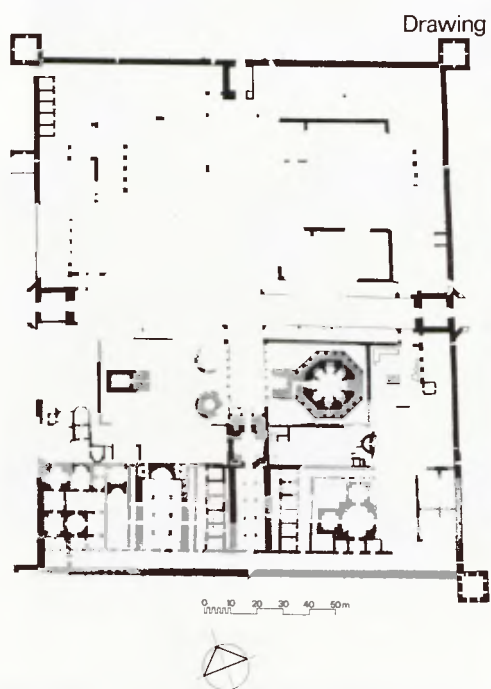


A basement hall of Diocletian's Palace before excavation



An excavated basement hall of Diocletian's Palace used for the exhibition of mediaeval frescos

TABLE XII



Diocletian's palace plan of existing Roman walls



Roman baths discovered in 1969-1970

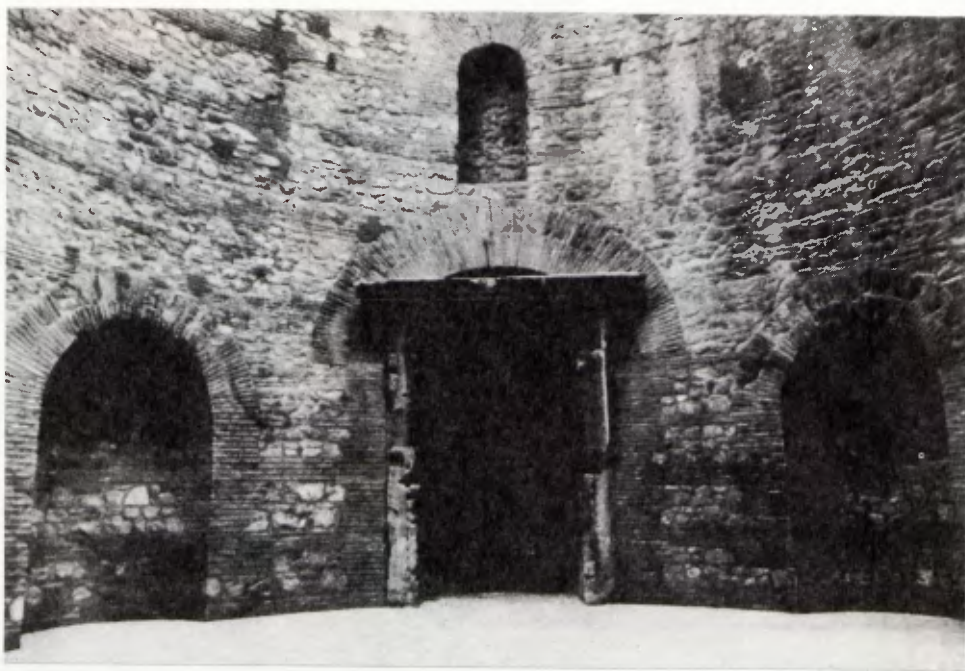


Roman mosaic discovered in 1968



Partially excavated Roman basement hall (joint American-Jugoslav research project, 1968-74)

TABLE XIII



Upper part of Vestibule after restoration (*Architect-in-chief: J. Marasović*)



Lower part of Vestibule after restoration (*Architect-in-chief: J. Marasović*)

TABLE XIV

ADAPTATION OF HISTORIC BUILDINGS FOR CONTEMPORARY USES
(Architect-in-chief: J. Marasović)



Workers' University before and after restoration (*15th century palace*)

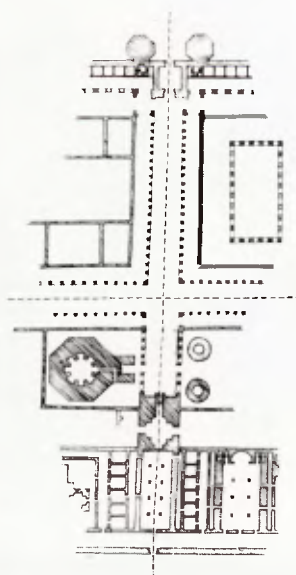


South-east tower of Diocletian's Palace before and after restoration

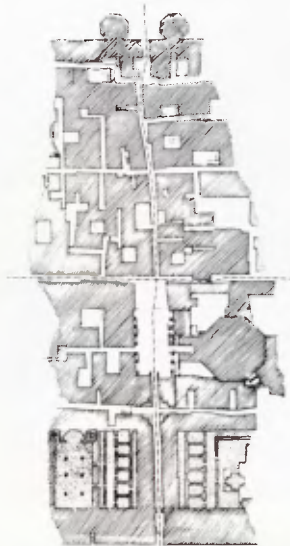
TABLE XV

DEVELOPMENT OF THE AREA ALONG THE LONGITUDINAL AXIS OF
DIOCLETIAN'S PALACE

(Architect-in-chief: J. Marasović)



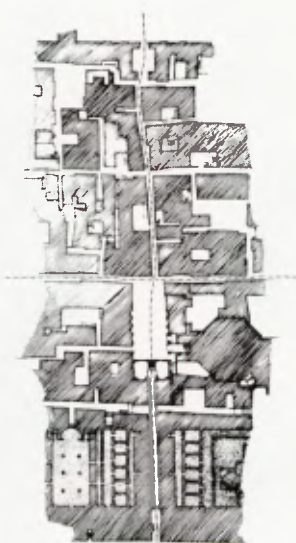
IV c.



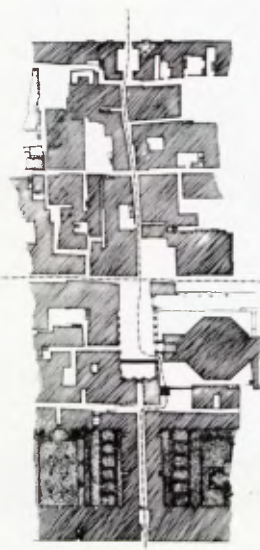
XIV c.



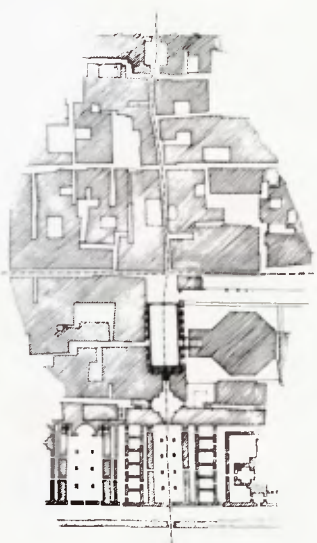
XVII c.



XIX c.



1929

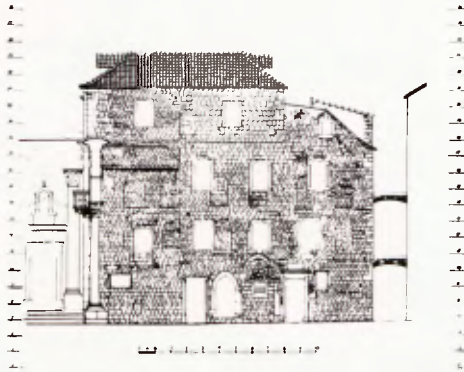


1970

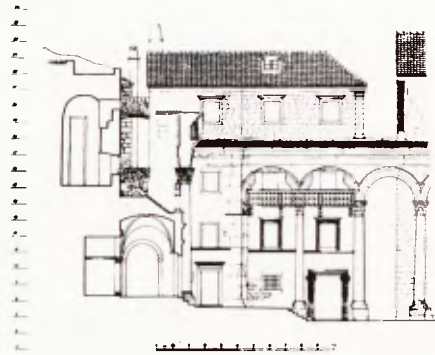
TABLE XVI

**ADAPTATION OF A GROUP HOUSES WEST OF THE PERISTYLE IN SPLIT FOR
THE CENTRE OF GENERAL EDUCATION OF THE WORKERS' UNIVERSITY**

(Architect-in-chief: J. Marasović)



Architectural survey of the North façade



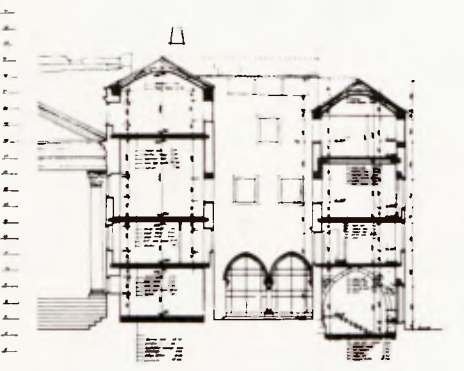
Architectural survey of the East façade



Assumed appearance of the North façade
in the 14th c.



Restoration design of the East façade



Final restoration design, East-West section

FINITO DI STAMPARE
MAGGIO 1975

