International Building Exhibition Berlin
The inner city as a place to live

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Introduction:
The city of Berlin, Germany has long worked through urban development and devastation. From its medieval roots to modern rebuilding, there have been many instances of master planning a city whose urban fabric has waned, but never fully disappeared. While large scale urban design projects throughout the world address the need for blanket changes in the way cities are perceived, the 1984 Internationale Bauausstellung Berlin emphasized the importance of the inner city as a place to reside. The human factor and desire for life in the core ultimately impacted the way in which people see their environment, prefacing the manner in which they live.

Considered the most innovative housing of the century, the exhibitions of German cities between 1927 and 1987 became examples of successful residential design both built and imagined based on contemporary trends. While the impact of war and industry changed the way that cities were used and divided, the return to a collective whole within a large neighborhood or a small housing block brought vibrancy back to urban life.

Background: Berlin:

By the late 1970's, when the International Building Exhibition was in its planning infancy, parts of Berlin were still recovering from allied bombing during World War II. Although the Allies had initially only targeted military installations, by the end of the war, they had resorted to ‘Area Bombing’ which meant that targets included anything from industrial plants and major lines of transportation, to anything that could buckle German resolve and morale. As a result, many homes and neighborhoods were destroyed. Critical reconstruction had been occurring for the last thirty
years, but large chasms were still present in the city's urban fabric.

After World War II, the city had also been split into four occupational zones, divided according to agreements by the allied powers (England, France, the Soviet Union, and the United States). In 1949 the Soviets began a failed blockade of West Berlin, which was located deep in the heart of the Soviet occupied zone of East Germany, designed to cut the half city off from the democratized world farther to the west. In 1961, the Berlin wall, essentially the physical embodiment of Cold War tensions, was erected to prevent defections from territories governed by the Soviet Union and the German Democratic Republic, the East German government formed after World War II. It wasn’t until 1989, after the 1987 IBA was complete, that the wall was eventually dismantled.

**Interbau 1957:**

Hansaviertel, located on the inner West side of Berlin, was developed in the late 19th century. Before World War II “it had tree-lined streets, stone townhouses, and a well-heeled population of several thousand people, many of them Jewish.”1 The area was almost completely destroyed during World War II and much of the area was covered in rubble. The 1957 Interbau was an exhibition that involved Walter Gropius, Alvar Aalto, Oscar Neimeyer, Sven Markelius, and others. Some accounts say that one of Le Corbusier’s *Unite d’Habitation* housing blocks was originally proposed as part of the exhibition, but the 44 acre exhibition site that eventually included 36 buildings was too small for the project.2 The original ‘Towers in the Park’ concept grew from Le Corbusier’s Radiant City design and revolved around tall buildings that were designed to create a vertical density that would also allow residents to have close access to green space.

“The City of Tomorrow” as it was called at its opening, attracted one million visitors to its quiet park-like setting in central Berlin. When the wall was built in 1961 the site was suddenly close to the periphery of West Berlin, but its residents remained. The wall finally came down, and years later the housing associated with the Interbau still has very few vacancies.

When the initial IBA ’87 process started less than thirty years after the 1957 Interbau, the ‘Towers in the

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1 Description according to Jan Otakar Fischer of the New York Times.

2 New York Times article and photo caption. The final site for the *Unite d'Habitation* was in Westend Berlin, closer to Olympic Stadium.
IBA’s challenges double. In addition, most transportation planners, which were doing the majority of the urban planning of the previous 30 years) were still following the Charter of Athens concept that city functions (industry, commerce, housing, etc.) should be segregated.

Large swathes of West Berlin were in need of repair, replacement, or redevelopment. It might have been easy for the exhibition directors to follow in the footsteps of Le Corbusier, Walter Gropius and many others involved with the International Style: finish the job that the allied bombers had started in demolition and start fresh (which East Berlin was doing), but because of their personal histories, architectural beliefs and the desire to include the general public in open discussions, they formed a different environmental identity with the 1987 International Building Exhibition.

People
Many of the successes of the International Building Exhibition can be easily traced back to two people: Josef Paul Kleihues and Hardt-Walther Andreas Hamer. In 1979 Kleihues was appointed “Director of Planning” for the IBA new building areas and Hamer earned the title “Headmaster” of the IBA City Renewal Project.

Prior to the Berlin IBA, Kleihues received his architectural education at the Technical Universities of Stuttgart and Berlin and the Ecole Nationale Superieure Des Beaux-Arts in Paris. In 1962 he formed his own practice as an architect and town planner, and in the year 1973 he became a professor of design and architectural theory at the University of Dortmund. In publications and projects leading up to the IBA he promoted architectural responses that were not aesthetically historicist or post-modern, but rather an architecture and urban design that uses historic urban patterns to break away from modern transportation planning, large scale urban redevelopment, and the modernist movement’s increasingly technocratic orthodoxy. His 1967 Ruhwald competition entry allows an early preview of many of the same principles that the Berlin IBA espoused: careful integration of old and new and historic urban block development with a mix of uses.

Hardt-Walther Andreas Hamer received his architectural education at Hochschule f. Bildende Kunste Berlin (HBK: Berlin Formative Art College) and went on to form his own office before becoming a professor of architecture as well. Prior to his appointment as the Headmaster of the Old IBA, he consulted on various projects as well as those that incorporated historic preservation. One noteworthy consultation is the preservation of the Hellerhofsiedlung by Mart Stam, an early modern architect and chair designer, during the two years leading up to his appointment as Headmaster.

In 1986 he became manager of the STERN Company, which “planned the Careful Renewal of Berlin as the successor of the city renewal project of the IBA.”

According to the company’s website they still follow principles that were derived from the IBA: “Urban renewal builds on wide participation, quality assurance and improvement of housing and industry, social peace and respect the existing city and the different interests represented here.”

Planning Strategies:
The idea of the city as residence creates a general theme for the IBA. As noisy and polluting industries continued to leave the inner city, they became inviting places to live, with infrastructure in place for easy transition to housing. Through the careful planning of new support spaces required to sustain housing, commercial nodes, education and care facilities for families were

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3 Architecture + Urbanism, p. 8.
4 Translated from German text at www.stern-berlin.com.
included in the overall scheme. While attempting to avoid the destruction of the existing character in the name of “modernization” the planning strategies looked at the historic city as program, communication, and building. Program requires a level of research and competition, while planning resulted in different architects and their respective design approaches. These designs communicated through exhibitions, publication, and public events were expressed through each submitter’s unique design bias. As many proposals were submitted for individual sites, judging to determine the best solution was required. This ultimately resulted in the city as building, with new projects being erected and remodeled in two primary waves, one in 1984 and the other in 1987.

Project Accomplishment: The 10 year project, lasting between 1979 and 1989 had major construction peaks during 1984 and 1987. Competitions were structured so that international designers played a role in projects in conjunction with German architects. After open forums and closed judging, a total of 200 design teams were named over the course of the project to master plan sites within the four project areas and to design the new housing and commercial spaces that fees alone. While the IBA resulted in the construction of 3,000 new residential units on 100 vacant or destroyed sites remaining from bombing campaigns of World War Two, the majority of residences were located in some 5,500 renovated complexes leading to 10,000 refurbished dwellings within the city. Predominately social housing, efficient construction techniques for the time were used in order to keep construction costs low and fast time scheduled met.

Figure 3 – Tegel Masterplan by Moore, Ruble, and Yudell

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6 *Americans in Berlin: Tegel Harbor: Building Types Study 668, Multifamily housing.* Architectural Record, 1989 July, v.177, no.8, p.82.
Tegel:
Located at the west edge of the city, Tegel harbor has long been considered a countryside retreat away from the city, and thus free of most urban restraints that impacted the rest of the IBA. The area was influence predominately by American designers. By taking into account the actual site which opens to the water and the forest, the master plan competition was won by Moore Ruble Yudell of Santa Monica. Their acknowledgement of the waterfront as an urban amenity is a concept that many cities and planners throughout the world have followed in the subsequent years.

While a master plan and material list was adhered to, the seven architects of the individual projects were allowed to submit designs based on their style. While those that embodied the scale and character of Tegel were better received than those who followed the contemporary post-modern approach, housing as a whole in the area was considered the most popular in the entire IBA oeuvre. The emphasis of living, leisure, and recreation became a captivating lifestyle for many who wanted to get away from the West Berlin’s urban core permanently.

The construction of infrastructural and public amenities is not considered as successful. At the end of the IBA only the public library and phosphate elimination facility were completed, with the rest of the projects left to local funding and coordination. While galleries, schools and community centers were later introduced, the “small scale cohesiveness” ultimately made the plan a success in keeping Tegel as Tegel.

Prager Platz:
At its height in the 1920s, Prager Platz was a cultural center for Berlin’s bourgeoisie, predominately inhabited by the artistic and intellectual elite. Designed to express the splendors of class while “camouflaging the sins of the

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7 Americans 82.
8 Americans 83.
9 Americans 84.
10 Americans 84.
the seven cornered court consisted of wide thoroughfares and small blocks containing dense residences and services. Sometimes compared to the ideals of Jane Jacobs or Kevin Lynch, Prager Platz was considered a harmonious and picturesque urban entity in the city.\textsuperscript{13}

The onset of World War One and World War Two resulted in many public centers and buildings being bombed out during attacks on the city, Prager Platz being no exception. While some were rebuilt after the war, many were left derelict due to lack of funds or vision for repair. The 87 IBA, held 80 years after the original plan of Prager Platz was designed, called upon Gottfried Böhm’s critical reconstruction retraced the historical layout and suggested a modern interpretation of the primary building faces on the center, rather than an exact reproduction of the original facades.\textsuperscript{14} The layout, geometrics and materials to be used were all decided upon by the design team in order to ensure continuity among architects and planners working within the area.

The final component sanctioned by the IBA was completed in June 2002. Prager Passage includes 17 industrial units and a fitness club for residents.\textsuperscript{15} Designed to match the existing architectural style, the project suggests the important recognition of maintaining the overall ideals of the IBA, even after its disbanding.

South Friedrichstadt: Located at the edge of what was once the Berlin Wall and containing iconic spaces such as Checkpoint Charlie, the reconstruction of South Friedrichstadt aimed to adhere to the original Baroque plan of the city while emphasizing housing and amenities for families.\textsuperscript{16} While this strategy appeared appropriate for the location conceptually, in reality the underlying urban fabric was no longer present. View corridors that the axial streets once framed no longer contained their “points de vue”, as they were either destroyed by warfare or obstructed by the wall.\textsuperscript{17} In order to address the high demand of housing for new residents, sites that

\textsuperscript{13} International 57. 
\textsuperscript{14} International 60. 
\textsuperscript{15} Berlin.de n.p. 
\textsuperscript{16} International 145. 
\textsuperscript{17} International 145.
previously held civic functions were remodeled into multifamily buildings.

Perhaps the most successful aspect of the South Friedrichstadt plan was the inclusion of public in the design phase. Architects such as Herman Hertzberger looked to the likely residents of his complex for answers in both large and small design decisions. Doing so ensured that everyone involved had their voice applied to the final result. While the concept of public interaction was not a new one at the time of the IBA, the scale in which individuals were included was a novel approach.

Kreuzberg & SO 36:

The Kreuzberg and SO 36 neighborhoods of Berlin formed the IBA district farthest to the East. In fact, the Kreuzberg, particularly the SO 36 area, was almost completely enclosed by the Berlin wall, with its perimeter being walled off on three sides. As a home to a high percentage of Berlin’s industry, the district was hit especially hard by allied bombs in the last years of World War II. Cheap housing in the district invited many students and emigrants into the neighborhood after the war. By the beginning stages of the 1987 IBA, the district had become run down and a less desirable part of town. The primary goal of the Old IBA, which was in charge of restoring and rehabilitating the district, was to retain the social structure of the neighborhood while investing in the housing stock. Hart-Walther Andres Hamer, the director of the Old IBA, was instrumental in deciding that the Exhibition should attempt to help the residents in whatever way they saw fit. Some aspects of the project involved as little as rebuilding the plumbing and rewiring apartment buildings. Other aspects required much more energy and effort, but the public was involved in every step throughout the process.

Restoration & 12 Principles: The restoration in Kreuzberg strictly followed a set of 12 principles of careful urban renewal, as follows:

1. Careful urban renewal is a factor of the needs and interests of the present residents and businesspeople of the district. Existing structures will be used wherever possible, not destroyed. For economic, political and social reasons there is no alternative to this concept. It admits of developments over a longer term.

2. Careful urban renewal requires a very large degree of agreement on objectives and methods between residents and businesspeople and the developers or sponsors of projects. Technical and social planning and execution must go hand in hand.

3. The inherent vitality of the quarter, its typical features, the correlations between

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living and working in a downtown area must be preserved and developed, confidence and optimism must be promoted. The security of residents and businesspeople requires firm, long-term tenancy agreements and leases. The structural safety of the buildings calls for the immediate repair of roof, façade and cellar defects that endanger the fabric.

4. The renewal of houses and apartments will be carried out in progressive phases. The basic phase – repair of all defects, provision of adequate riser mains, installation of inside toilets and in most cases of baths and showers – can be followed up later by further modernization work. Do-it-yourself measures on the part of the residents will also play a role in the programme.

5. The existing residential superstructure will be explored for opportunities to create new dwelling forms, for example, by adaption and reorganization of ground plans.

6. The surroundings of the dwellings will be improved step by step via ‘minor’ strategies, such as provision of greenery in interior courtyards, embellishment of facades and fireproof walls by decorative measures and plantings, and in exceptional cases via the demolition of buildings.

7. Public facilities must be renewed and added to. Streets, squares and parks are to be brought into trim and modified, avoiding drastic measures, so that the area will gain in beauty, usefulness and variety, and one is more easily able to identify with it.

8. A prerequisite for careful urban renewal is the establishment of generally binding principles for social planning. These will define affected persons’ rights to be heard and their rights to material compensation.

9. The procedure of discussing and taking decisions on objectives and measures to be taken, programme planning and control should not go on behind closed doors. Delegations of interested parties will have more rights; decision-making commissions will meet locally.

10. A programme of careful urban renewal should enjoy the confidence of all concerned. This necessitates that funding for the district in question be guaranteed for a period of several years. The funds must be made available promptly according to the requirements of each case (programme flexibility).

11. The new working procedures require that the agencies and firms responsible for the renewal programme develop new organizational structures. Advisory and supportive functions (sponsors) need to be kept separate from construction-related functions (operative agents). All involved will have their tasks and functions clearly laid down. All new contracts and modifications of existing ones must conform to this principle.

12. Careful urban renewal is a continuous process. All measures taken must be so designed as to permit further urban renewal on the lines of this concept after a particular date (1987).”

“A pilot project in Charlottenburg brought about a shift in the policy,” continues Hämer. ‘We were given the opportunity to renew 400 residential units in ‘Block 118’. During the process, we worked closely with the residents. We carried out a study showing that renewal was in fact cheaper than demolition and rebuilding. The project became a source of inspiration for a completely different approach to large-scale renewal. This was the first project of its kind and visitors from Kreuzberg thought it was just the model they needed. The parallel study turned out to be important because it provided a detailed description of the approach that took the residents into consideration…”19

“After the IBA Alt [also known as the Old IBA], this approach became policy in the whole of West Berlin and then in East Germany’...The principles elaborated by Hämer and his working group were used in Berlin for eight years. They were gradually integrated into the more general approach and became the official strategy adopted by the Lower House. The next step was taken with the drafting of the Stadtvertrag (City Convention) for Berlin in 1992, which granted an important position to the principles.”

Essentially, these principles form the basis of a more fine grained approach to redevelopment and restoration that includes local resident participation and piece by piece decisions, not broad brushstrokes that lead to complete demolition.

Conclusive Summary:
Perhaps one of the most peculiar aspects of the Berlin IBA is the lack of analysis of what is noted as one of the largest contemporary urban design projects in the world. Almost 20 years after its disbanding, there is little discussion of the project areas today aside from the state of the post modern architecture style prevalent in many of the designs. Yet the overall success or failure of the project should not be determined by stylistic qualities, but the overall urban plan they are part of. The involvement of architects and planners from global agencies ultimately created a heterogeneous urban fabric in Berlin that would be difficult to recreate at the same scale today. The enormity of the project, as Kleihues expressed, was ambitious for the time, and yet a consistency among all components remained.20

19 ErasmusPC interview with Hamer.

20 Blake 51.
The IBA is best a model for cities that have a similar urban language. Cities that are still organized around historical patterns are more suited to the practices used in Berlin. While techniques could have a global application, socioeconomic and political strategies are uniquely European.\(^2\) The 12 principles, incorporated specifically for the project could be translated to similar communities focusing on renovation and the social implications resultant when upsetting slums and derelict neighborhoods that very much contain their own civic culture. However while the integration of local traditions may be embodied, future projects should also address experimentation in construction and technology, a cited downfall of the IBA\(^2\). Going beyond traditional methods and customs of housing types may result in a more diverse community and progressive urban core.

Yet there is a timelessness to the Berlin IBA that is unique to urban design. While professionals play a key role in the project, it is the successful integration of local people who will make the neighborhoods places to live, even years after the IBA has ended. While the notion of the house can be easily expressed, the connectivity of these enclosures with one another and to the city as a whole is unique to the people who continue to design them. Unlike other major urban design projects that result in new infrastructure and innovative design techniques, the seamless integration with the past and the character of the inner city as a place to live is what has made a Berlin a success.

\(^1\) Etessam 250.  
\(^2\) Americans 82.
Appendix I: 
Design Charette

As part of the exploration and examination of the 1987 Berlin IBA we participated in an urban design charette, with the outline listed below for reference. Rather than repeat many of the IBA’s challenges and accomplishments, this appendix will focus on the urban design charette and its results.

Many of the IBA sites were remnants of World War II located in West Berlin, and although there weren’t many close-in areas of Berlin that appeared vacant or derelict, we chose an industrial site currently along one of the canals splits from the Spree on the west side of the central city. For the sake of the charette, we assumed the industrial buildings were no longer needed at that particular location in Berlin and that there was a lack of housing in the city.

Our urban design strategy, in keeping true to the principles of the 1987 IBA, was to employ selective urban infill while reusing existing buildings as possible. Through adaptive reuse, we were able to convert some of the industrial buildings into civic structures, which could be either public gathering spaces or city service buildings. A few of the other design guidelines are the inclusion of interwoven, smaller-scale greenspaces and a building height limit of 60 feet. We also re-introduced the city street pattern into the former industrial sites to keep the blocks of the development in scale with the surrounding context. Lastly, in the spirit of Daniel Burnham, we “made no small plans,” and decided to partially bury the train lines that ran East-West through the site in an attempt to unite all the residents into one common neighborhood.

To follow the IBA guidelines fully, we would have promoted strong public participation and open design competitions to increase the number of designers and therefore the diversity of spatial characteristics.

Outline:

1. Objective. The charette is a 6-8 hour design exercise that enables you to test and apply the urban design theories and concepts used in your case study. By taking what you have learned through the readings and applying it to a hypothetical project, you will better understand the theory from the viewpoint of the designers, city officials and other actors. This should help you develop a critical perspective of the approach: how it works on a real site, how it could be improved.

2. Charette Process. A charette is an intensive design project that forces design decisions within a short time frame. It is similar to “brainstorming” in that one tries to generate many creative ideas in a limited amount of time. The process is often used in community design workshops (including AIA Regional Urban Design Assistance Teams), by professional offices who want to generate many design options in a short time, and by design teams who want to make progress on difficult projects that have stalled. In education, charettes are helpful to learn specific concepts and theories: “learning by doing” rather than simply reading about it.

Suggested steps (adjust this to your particular project as you wish).

1 Briefly identify and list the problems and key issues faced in your project (For example, Barcelona’s seafront edge was consumed by aging and polluting industry and railroad tracks, separating most of the city from the sea. There were few public open spaces in the city and little or no seafront open space nor beaches for the public). It would be good to summarize this in a brief bulleted list.

3 What was the urban design approach? Theories, values, urban design principles. (The article "Ten Points to an Urban Methodology" is an example). (Bulleted list).

4 Since very few urban design projects are ever complete, there are opportunities to extend your case study by adding another project. Find a specific site (Google Earth or other data source) in your overall study area that is opportune for development. The site can be large or small as long as it exemplifies the overall urban design program.

5 Formulate a reasonable development program for the site. (For example, 500 units of housing with ground floor retail, community services).

6 List your design objectives and develop a sketch design proposal. This is primarily a site plan and 3-D building envelope design. You could design your
proposal in one of two ways: (1) Use the urban design theory or approach as it was used in your case study. In other words, follow the same methodology. Or (2) Take what you have learned from the methodology, modify it based on your critical review of the process, and design your project with a revised / modified process. If you do this, briefly describe (bulleted statement) how you changed the approach.
Annotative Bibliography of Works Consulted

“Americans in Berlin: Tegel Harbor: Building Types Study 668, Multifamily housing.” Architectural Record. 1989 July, v.177, no.8, p.82 [95].

“Examples from IBA by Tigermann and McCurry Architects, Robert A.M. Stern Architects and John Hejduk.”


This publication addressed the IBA up to 1983. The rebuilding of West Berlin is discussed from the projects inception in 1978 to the time of the publication, when controversy surrounding entrants and controlled city planning was at its height. The deeply political process of rebuilding a European City suggests an emphasis on ‘residence’ rather than ‘living’ results in an overall thinness of design.


This booklet is an overview of the Berlin IBA beginning with the development of Berlin from settlement to an urban city divided by politics and later a wall. The 1987 Exposition outlined the programmatic guidelines for the residential inner city as the rehabilitation of neglected areas and the reconstruction of demolished sites. 12 reconstructive objectives were emphasized throughout the city. Besides housing, other civic projects were scheduled including the reconstruction of the congress hall and railway station and the construction of a chamber music hall.


Information on the history, development, and contemporary setting of Prager Platz.


A periodical containing a collection of narratives and graphics regarding IBA projects. While active projects are reviewed, the publication also contain proposals for complementary designs as well as new construction not sponsored by the IBA.


“On the IBA as a paradigm.”

An assessment of the IBA project after the completion of construction and period of use. Given the desire to mend the urban fabric through the work of different designers, the project assures variety in its completion.


“The author demonstrates the change in attitude toward contextual urban design by the examples of large-scale housing projects built for the Berlin IBA exhibitions in 1957 (Hansaviertel) and 1987 (Infill housing design).”


Give a significant portion of the Berlin IBA regarded the renewal of existing structures this source details new methods of handling urban development. The general concept of the IBA details the “City as a Place to Live” in three categories, the city as program, the city as communication, and the city as building. The relationship between these components sets the framework in which the designs are judged. The presence of research, public presentation and citizen involvement in each urban renewal area ultimately affect the outcome of the projects.


General introduction to the 1984 IBA program. Plans for the Kreuzberg area are specifically included.


“Berlin architecture and design today. Includes interview with Josef Kleihues, director of the IBA.”


Publication of selected projects in the IBA categorized into project areas. Each block is divided into buildings where the program, project aims, advanced planning strategies, and architects are listed. Maps, drawings, and existing conditions are included as well.


This periodical addresses the attempt to build urban areas with overlapping themes in Berlin while solving contemporary issues in residential areas. Considered a ‘guide book’ to the IBA it details the important projects in each renewal area of the city.

An overall scope of work built for the IBA, both new construction and redevelopment. While there is an emphasis on projects actually completed, the editors also suggest the importance of conceptual designs. Graphics and photographs are included.


“Discusses the influence of the IBA on reconstruction projects in West Berlin, principally the Fasanenstrasse zone.”


While there is a divide between the new construction projects and urban rehabilitation, this article suggests that new construction is “a shell over standardized apartments” and renewal projects rarely produce new community living arrangements. The ultimate struggle in urban design is for identity during the Cold War era.


“The author leads a study tour of recent housing projects in Berlin, including the IBA developments of the 1980s, and "Stadtquartiere" of the 1990s, which are discussed in some detail.”


Plans and models of the IBA.

http://www.stern-berlin.com/
http://www.erasmuspc.com/index.php?id=18108&type=article
Image Credits:

Figure 1 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 85.

Figure 2 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 140.

Figure 3 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 37.

Figure 4 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 40.

Figure 5 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 45.

Figure 6 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 64

Figure 7 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 64.

Figure 8 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 64.

Figure 9 - Berlin.de. “Prager Platz” 1 June 2008 http://www.berlin.de/ba-charlottenburg-wilmersdorf/ Path: Glossary; Prager Platz. n.p.

Figure 10 - Berlin.de. “Prager Platz” 1 June 2008 http://www.berlin.de/ba-charlottenburg-wilmersdorf/ Path: Glossary; Prager Platz. n.p.


Figure 12 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 195.

Figure 13 - “International Building Exhibition Berlin 1987” A+U architecture and urbanism. 1987. p. 189.