

## **CULTURAL IMPORTANCE ASSESSMENT OF MODERNIST BUILDINGS – THE CENTRAL LIBRARY OF UNIVERSITY OF BRASILIA**

João da Costa Pantoja

Ph.D. - University of Brasília

<https://orcid.org/0000-0002-0763-0107>

Pollyana Da Silva Bomfim

BSc - University of Brasília

<https://orcid.org/0009-0001-8122-561X>

Valmor Cerqueira Pazos

MSc. - University of Brasília

<https://orcid.org/0000-0002-8268-6514>

José Marcelo Martins Medeiros

Ph.D. - Federal University of Tocantins

<https://orcid.org/0000-0002-2554-8289>

### **Abstract**

The present study aims to critically analyze the current conservation of buildings with important values for society, which, despite not being legally listed in the cultural historical heritage category, have an important significance for the local community that enjoys the space. From this, it is understood how Brasilia's urban development has been related to the conservation and maintenance of its representative buildings, bringing as a study case the University's Central Library. Based on this, studies, and forms of conservation of these built legacies were addressed, emphasizing the application of the method Cultural Significance Index of Buildings (CSI) at the library to understand how the analyzes and verification of data related to the conservation of buildings should be. By completing the CSI table, it was possible to identify the quantitative and qualitative valuation, reaching the classification of cultural importance of the analyzed building. Thus, this theme must be deepened to maintain the identity and values of these social heritage, registered or not, preserved for future generations.

**Keywords:** Conservation, Heritage, Inspections, Value.

## 1. Introduction

The relationship between heritage and urban development gained prominence at the European Architectural Heritage Congress, held in Amsterdam in 1975. On this occasion, “integrated conservation” was proposed, that is, the essential relationship between urban projects, economic policies, and cultural heritage. (Oksman et al., 2017, p. 36). However, the reality has been different when it comes to structural and aesthetic conservation and maintenance of some buildings in Brasília.

Currently, the Brazilian capital has one of the urban complexes with the greatest heritage value in Brazil, however, unfortunately, it has been facing several problems in the conservation of the assets that form its identity and memorial value. Some guidelines have already been established to organize issues relating to cities and heritage: “[...] it is not enough to superimpose the basic planning rules on the special rules for the protection of historic buildings, without coordination”. (Cury, 2000, p. 200). However, with the lack of care for buildings, arising from various factors such as: poor use by the population, lack of state investment, disagreement with technical standards, among others, a mentality of abandonment and carelessness with a large part of the buildings was consolidated, amplifying this situation both to buildings with heritage value and to those that are culturally important but not legally listed.

Comparatively to Brasília’s formation, the urbanization plan for University of Brasília (UnB) took place, carried out by Oscar Niemeyer in 1962, which brings about the unification of the eight academic units proposed by Lúcio Costa in a single building, the Central Institute of Sciences [...] (Inojosa, 2010). Some buildings of important local value at the university recurrently suffer from temporal wear and lack of preservation, affected both by the lack of building maintenance and by the lack of care. Among the university's buildings, the Central Library (CL) stands out, one of the buildings most used by students, which is part of the Darcy Ribeiro Campus.

Conceived at the same time as Brasília, it can be said that the University of Brasília (UnB) emerged, in part, as a response to the vocation defined for the new capital, which should establish itself as a pole of cultural and intellectual irradiation. According to Cavalcante N. et al. (2015), the Central Library (figures 1 and 2), responsible for providing information to the University's Teaching, Research and Extension activities since the 1970s, when it was inaugurated, is one of the buildings which represents the vision of the capital's modern architecture and the break with the concept of other libraries.



**Figure 1** - Representation of the Central Library. Source: N. Cavalcante (2015)

Influenced by modern architecture, especially from Le Corbusier, in addition to the use of fair-faced concrete in the brise-soleils and external vertical fences, the building has its own identity and is very representative of the Campus's architectural ensemble. During the 50 years of use of the Central Library, aspects necessary for interventions in the building due to the natural wear of materials or external factors were identified. Thus, leading to the need for more frequent building inspections to assess the conservation of the building's state of use and significance values. (Oliveira, et al. 2022).



**Figure 2** - Central Library, University of Brasília. Source: Authors, 2023.

## 2. Heritage Conservation

In Brazil, there are regulations and laws that identify the valuation of heritage assets, as in Article 216 (Brazilian Constitution of 1988). In this sense, the basic principle of critical restoration establishes that, for each study carried out on a cultural asset, its knowledge in the most in-depth way possible is essential (KÜHL, 2009). National Historic and Artistic Heritage Institute (IPHAN) corroborates conservation laws by stating that heritage is a set of ideas or goods, which has different values for a society. It can be built or not. Since then, the preservation of the built environment has become an object of more in-depth study, and concepts such as conservation, rehabilitation and restoration are current research topics, considering the constant need for buildings to be maintained. The study of the preservation of built heritage becomes increasingly important. (Guerreiro

Pio, 2016).

The Conservation Management Plan (CMP), which is a management model tool for public and private authorities for the conservation of built cultural heritage, defines the maintenance and restoration procedures for buildings, which must [...] go beyond the delivery of works or services, monitoring the management of use, as well as the wear and natural failure of its construction components. In this sense, recommendations and guidance on periodic inspection and maintenance actions stand out, as well as estimates of the costs of these procedures. These [...] must be supported by studies and knowledge of the procedures necessary for periodic inspection and maintenance routines of the materials and construction techniques to be specified. Anticipating load capacities, the useful life of materials, and risk situations must necessarily be addressed. (Tinoco, 2013). Therefore, as prescribed in the plan, inspections must be carried out with research and data collection from different parts of the building before making decisions on areas that should be taken as a priority and what actions should be taken.

The Building Inspection Standard - ABNT NBR 16747:2020 is a landmark in conservation of the built environment and the conservation of buildings, enabling research, establishing a base nomenclature for inspections, and classifying anomalies. Through this standard, visual inspection is considered a great support for the management of the built environment. Visual inspection enables efficient and cost-effective processes for the market. Maintenance and care so that its existence lasts with the original characteristics preserved is understood as something inseparable for a prolonged and lasting existence, aiming to protect and/or delay the process of deterioration or loss of value. Based on this, through sensory and visual analyses, as suggested by the standard, it was possible to value each existing attribute of the Central Library by completing the Cultural Significance Table detailed in the case study.

The Cultural Significance Index proposed by Guimarães (2021), used as a basis to conclude the local importance of a building, details and specifies valuations for the different existing parts of a building. The tool enables decision tracking, ordering priorities according to the final assessment. In line with this indicative study of cultural significance, the assessment tool, Cultural Significance Table (figure 3), is a fundamental part for analyzing the object of study and was developed in accordance with the studies and research carried out by Lira (2009) and Ferreira (2021).

Avaliação da Significância Cultural								
Atributos sugeridos para análise	Valores							Total
	Uso	Econômico	Histórico	Artístico	Cultural	Antiguidade	Simbólico	
<b>FORMA E PROJETO</b>								0
Edifício como um todo (obra de arte completa)								0
<b>COBERTURA</b>								0
Cobertura - Estrutura de Suporte								0
Cobertura - Calhas/ Rufos e coletores pluviais								0
Cobertura - Impermeabilização								0
Cobertura - SPDA (P/raios)								0
Cobertura - Juntas de dilatação								0
<b>VEDAÇÕES VERTICAIS INTERNAS E EXTERNAS - SVVIE</b>								0
SVVIE - Alvenaria								0
SVVIE - Brises Soleils de Concreto aparente								0
SVVIE - Sinalização e Corrimãos								0
SVVIE - Esquadrias								0
<b>INSTALAÇÕES HIDROSSANITÁRIAS</b>								0
Combate a Incêndios								0
Acabamentos (vasos, torneiras, ralos)								0
Drenagem								0
<b>PISO</b>								0
PISO - Interno, Externo e Rampas								0
<b>ESTRUTURA - EST</b>								0
EST - Vigas								0
EST - Lajes								0
EST - Pilares								0
<b>PAISAGISMO - PASG</b>								0
Jardins								0
<b>INTERVENÇÕES ARTÍSTICAS</b>								0
Grafite na fachada oeste								0

**Figura 3** - Cultural Significance Table adapted for Central Library's analyzes, without filling out. Source: Authors.

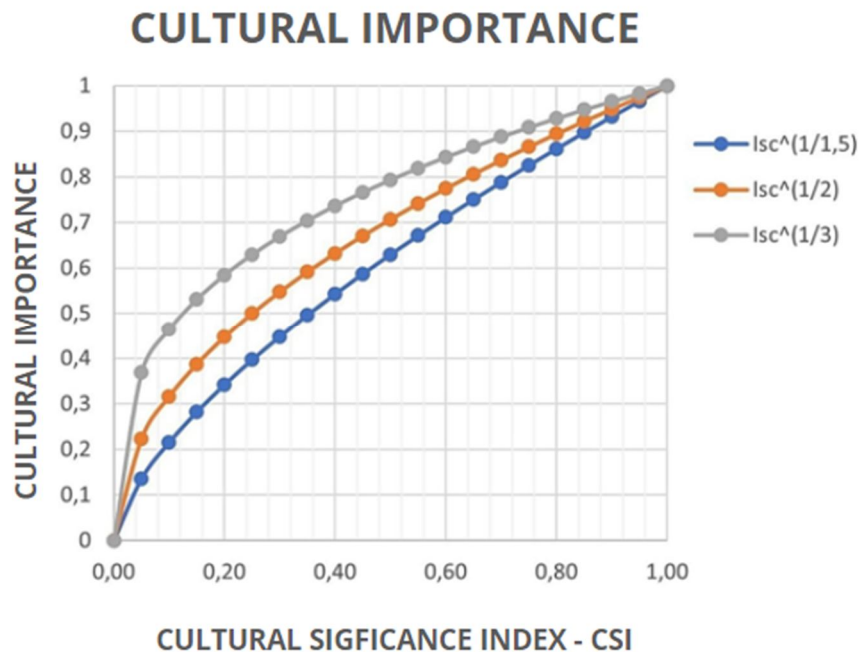
The evaluation and attribution of value is the responsibility of the professional evaluator, via indication, for each attribute, who determines the value related to it based on the information researched, the history of the building and information obtained on site. This methodology is carried out based on a more in-depth analysis of the inspected building, through photographs and the use of sensory equipment. According to the table presented in figure 3, all Library attributes are marked if they had at least one of the 7 values (Use; Economic; Historical; Artistic; Cultural; Antiquity; Symbolic).

The use value is significant in a location that meets the use's conditions of the university community and must offer adequate conditions for its good use. The Central Library receives many students every day. Economic value, on the other hand, is expressed in proposing the existence of a value concept that is not measurable in financial terms, thus making it necessary to broaden the perspective of economic professionals to perceive values related to cultural significance. The historical value refers to its status as a document of the historical development process of memory formation and the identity of the university community, whether from Brasilia or Brazil. Included here are aspects related to the development of instruments, techniques and technologies that were significant for certain periods.

Artistic value occurs when the building continues to respond to the desires of contemporary art, or that presents value from the point of view of its aesthetic function in contemporary times. Cultural value refers to historical references relating to a given community. It assesses whether the attribute or object is related to the arts, customs and institutions of a nation, people, or group and whether it has a social identity. (KERR, 2013). The value of antiquity is related to the fact that the appreciation of the building today allows us to evaluate its belonging to another era. This value can be attributed both to the fact that the work represents styles and architectural languages of the past, and to the aging process that is part of its materiality, particularly the marks left by nature and

man. Finally, the symbolic value expresses the condition of representation of certain ideas of significant cultural relevance to the university community.

By summarizing the table with the detailed values and inspecting each structural attribute of the Central Library, it is possible to define the actions necessary for its conservation and maintenance. For this, it was necessary to use specific equipment for each approach as suggested by the Building Inspection Standard - ABNT NBR 16747:2020. The Central Library inspection, therefore, took place based on the use of data already obtained through sensory and visual analyzes and thus associated with the table to finally obtain the Cultural Significance Index, which is valued through a graph, shown in Figure 4, showing the Cultural Importance value of the building.



**Figure 4 -** Graph of Cultural Significance Index (CSI) x Cultural Importance. Source: Authors.

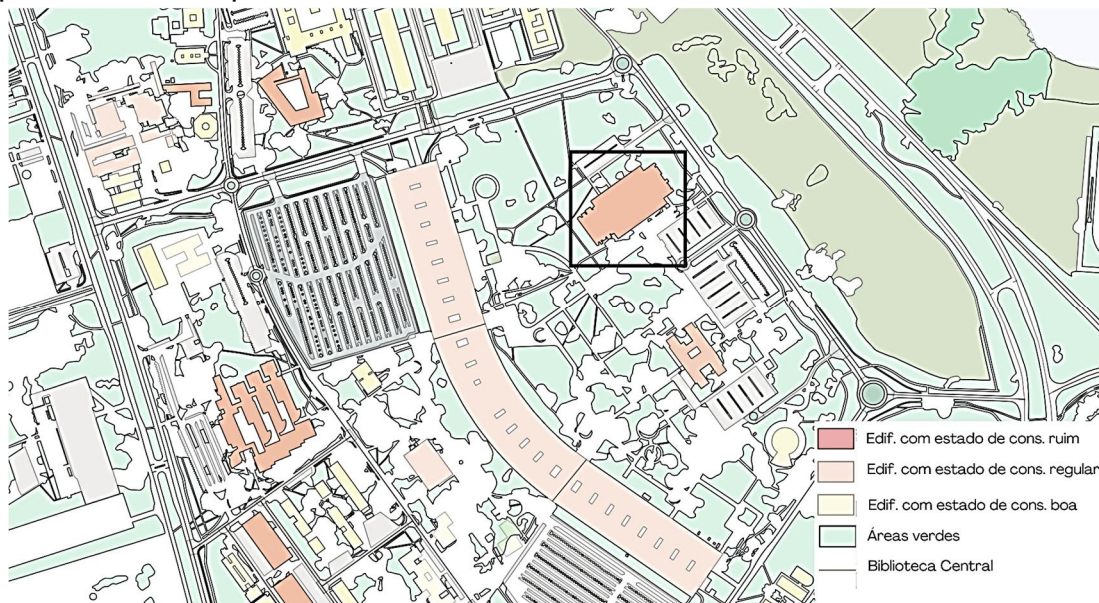
### 3. Results – Central Library Study

The Central Library of the University of Brasília is located on the Darcy Ribeiro Campus in Plano Piloto, very close to the rectory and several courses hosted at the ICC (Figure 5).



**Figure 5** - University of Brasilia's Central Library. Source: Google Earth, 2023.

The Central Library has a built area of approximately 15,200 square meters, distributed between 2 basements, ground floor and first floor. The building is largely made of reinforced concrete, featuring pillars, slabs, grilles, and brise-soleils. It was identified that this building currently does not have heritage recognition by IPHAN. However, it has valuable attributes that determine its importance and need for conservation inspections. Corresponding to the studies and inspections carried out, among the conservation levels (poor, regular and good), the library is classified as a building with an irregular state of conservation (figure 6), presenting attributes that must be requalified and adapted to the desired values.



**Figure 6** - University of Brasilia's location map, highlighted in the Central Library conservation classification. Source: Authors, 2023. OFICINA PARTICIPATIVA DO PLANO DIRETOR CAMPUS DARCY RIBEIRO. Dia

26/02/2023, no Auditório da FAU/UnB, ICC Norte. **Eixo Temático Patrimônio Histórico, Artístico e Cultural**, no contexto do Edital GRE/INFRA/DPI n. 0001/2022.

After the inspections carried out by the authors to fill in the values in the table, complementary to the studies and research assessed in the Building Diagnostic Engineering Technical Report (Projeto de Desenvolvimento Institucional, 2022), which carried out predominantly sensory inspections with the intention of identifying anomalies and apparent flaws in the Central Library, technical data analysis was obtained in the following structural parts of the building: Shape and Design, Roofing, Internal Vertical Fence System, Hydrosanitary Installations, Floor, Structure, Landscaping and Artistic Interventions, figure 7.

Avaliação da Significância Cultural								
Atributos sugeridos para análise	Valores							
	Uso	Econômico	Histórico	Artístico	Cultural	Antiguidade	Simbólico	Total
<b>FORMA E PROJETO</b>								7
Edifício como um todo (obra de arte completa)	X	X	X	X	X	X		6
<b>COBERTURA</b>								35
Cobertura - Estrutura de Suporte	X	X				X		3
Cobertura - Calhas/ Rufos e coletores pluviais	X	X				X		3
Cobertura - Impermeabilização	X	X						2
Cobertura - SPDA (P/raios)	X	X				X		3
Cobertura - Juntas de dilatação	X	X	X			X		4
<b>VEDAÇÕES VERTICAIS INTERNAS E EXTERNAS - SVVIE</b>								28
SVVIE - Alvenaria	X		X			X		3
SVVIE - Brises Soleils de Concreto Aparente	X		X	X	X	X		5
SVVIE - Sinalização e Corrimãos	X	X	X	X			X	5
SVVIE - Esquadrias	X							1
<b>INSTALAÇÕES HIDROSSANITÁRIAS</b>								21
Combate a Incêndios	X	X						2
Acabamentos (vasos, torneiras, ralos)	X		X					2
Drenagem	X		X					2
<b>PISO</b>								7
PISO - Interno, Externo e Rampas	X					X		2
<b>ESTRUTURA - EST</b>								21
EST - Vigas	X		X			X		3
EST - Lajes	X		X			X		3
EST - Pilares	X		X			X		3
<b>PAISAGISMO - PASG</b>								7
Jardins	X						X	2
<b>INTERVENÇÕES ARTÍSTICAS</b>								7
Grafite na fachada oeste				X	X		X	3
								105

**Figure 7 - Cultural Significance Assessment Table filled with analyzed attributes. Source: Authors,2023.**

In terms of Form and Project, the building was analyzed as a complete work of art, verifying the presence of all values, except the symbolic, due to it being a building with a formalized identity, without current or representative interference, to which the architects José Galbinski and Miguel Pereira designed the project, figures 8 and 9. In the Coverage attribute, structural parts with main values in use were inspected; economic and antique, in which, except for the waterproofing, it did not present an antique value because it did not belong to another era, this being a part of the building that needs to be constantly updated and attention must be paid to inspections and properly checked to avoid possible damage.





**Figure 8** - Front facade. Source: Authors.



**Figure 9** - Concrete brise-soleils. Source: Authors.



**Figure 10** - Library rooftop photo. Source: Authors.

The Internal and External Vertical Seals has an important emphasis on exposed concrete brise-soleils, which together with the signs and handrails have 5 values. The use value was the main one in all the attributes of the fences, as they all meet the conditions of use of the university community, followed by the historical value, which in both cases was due to being related to the development of significant instruments, techniques, and technologies. According to Silva (2022), the use of Unmanned Aerial Vehicles (UAVs) has proven to be an excellent solution for generating photographic products due to their greater flexibility, lower operational costs, and reduced susceptibility to human intervention errors compared to traditional models. This is because algorithms of a technology are employed in these processes for product generation. In the water/sanitary installations, it gave the value of use in all, and the economic value only in the fire-fighting instruments, as these tools can prevent medium to large material damage to the building, and, without them, there could be a total loss of the material assets.

The Floor had use and antiquity value, as it represents something complementary to the building, with the presence of the aging process that is part of its materiality. While the value of use, history and antiquity was highlighted in the structure, as it is understood that the existence of the place is necessary and refers to other times, thus bringing temporal marks to some components. Landscaping, represented by the surrounding gardens, has a symbolic ideal for community use. Finally, in terms of Artistic Interventions, graffiti was painted on the west facade of the library, giving artistic, cultural, and symbolic values to the place.

#### 4. Cultural Significance Index (CSI)

It was noted that the Central Library, despite not being categorized as heritage, has importance and values that reflect the need to be treated as such. Therefore, among the 3 CSI models, measured using the averages that each model has, as shown in figure 11, the regional reference model (blue) was identified as being the most appropriate to obtain the Cultural Importance value, as it does not have so much amplitude variation in its value, figure 12.

MEDIA_0	PESO1	MEDIA 1	PESO2	MEDIA 2
0,857	0,300	0,257	0,200	0,171
0,857				
0,286	0,100	0,029	0,150	0,043
0,086				
0,086				
0,057				
0,086				
0,114				
0,500	0,250	0,125	0,250	0,125
0,107				
0,179				
0,179				
0,036				
0,286	0,050		0,100	0,029
0,095				
0,095				
0,071				
0,286	0,200	0,057	0,200	0,057
0,286				
0,429	0,100	0,043	0,100	0,043
0,143				
0,143				
0,286	0,050	0,014	0,100	0,029
0,286				
0,429	0,050	0,021	0,050	0,021
0,429				
0,440	1,000	0,525	1,000	0,468
I		II		III

Figura 11- Weights and averages of each model that can be used in the CSI Table. Source: Authors, 2023.

After completing the table, using the average of the regional reference model (blue), the final valuation obtained was 0.44, denoting a value of reasonable cultural

importance. This classification can be little, medium, reasonable, a lot or high, according to the table in figure 12. In addition to denoting the 4 types of reference that a building can be classified, namely: Local Reference, for example a shopping mall or low-rise building knowledge; Regional reference, such as the Brasília Hotel; National Reference, such as the National Library in Rio de Janeiro; and, finally, International Reference, such as the Brasilia’s Cathedral. The Central Library fits in because it is a regional reference building.

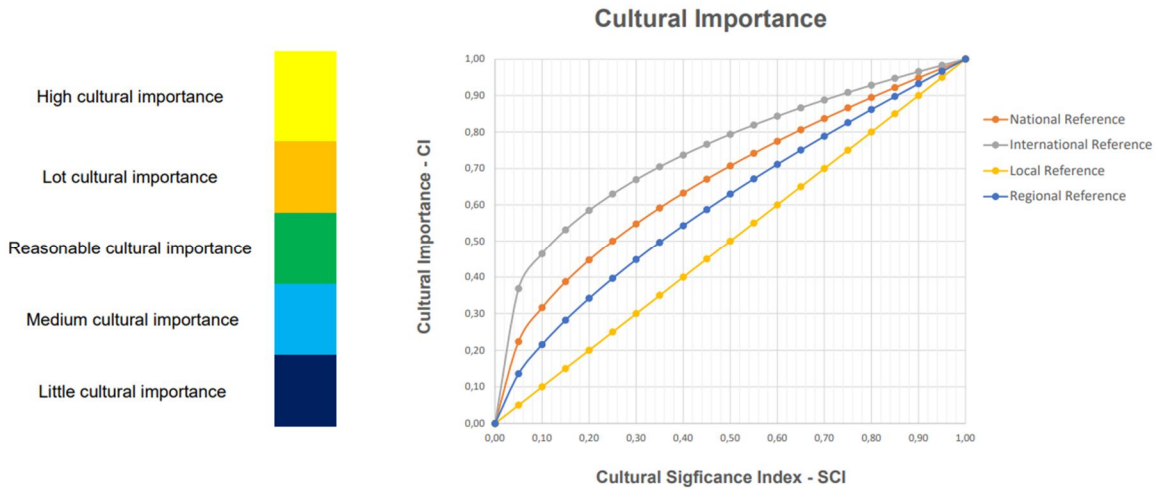


Figure 12 - Relationship between the Significance Index and Cultural Importance.

In figure 13 graph, the comparative variation of the attributes investigated in Central Library was identified, demonstrating the significance of each attribute as described and filled in the table.

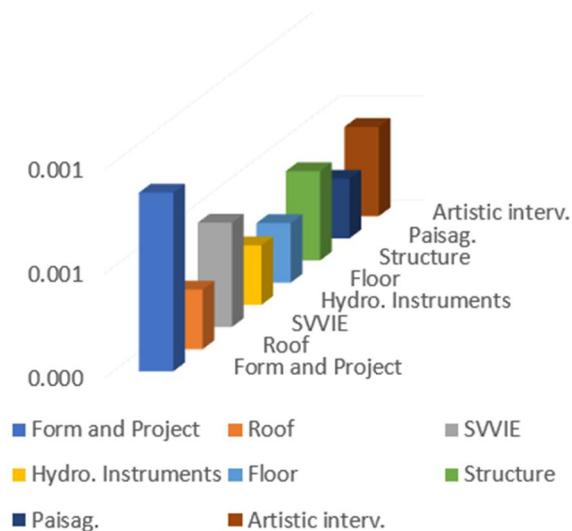


Figure 13 - Comparison of values in the analysis model. Source: Authors, 2023.

Thus, studies and inspections proved that the building was identified in need of conservation and care due to its registered importance.

## 5. Conclusion

This article presented research aimed at understanding the preservation and conservation of buildings with important values for a community, such as the University of Brasilia's Central Library. When analyzed, several values were identified that are being lost and deteriorated by temporal or human action, but which have often gone unnoticed.

In this way, the relevant investigation of preservation and building inspections at Central Library was emphasized, which was verified through the Cultural Significance Index (CSI) table, values that classify it as a building of reasonable heritage value. From this, its values can be inferred to be preserved to maintain the identity of the building. An architecture that was not listed, but has values of heritage importance.

However, the perception of this situation must be the responsibility of not only professionals in the field, but also the general community. In conclusion, there is a need for more formalized and rigorous inspection processes, through qualified tables and instruments that identify the priority of actions in the structural parts of the building to be restored, but, mainly, care by the community, who will enjoy the space and must understand its importance.

## 6. References

BRASIL. Article nº 216, May 11th, 1989. **Brazilian Constitution of 1988**. Available at: <<https://www25.senado.leg.br/web/atividade/legislacao/constituicao-federal>>. Access on: 10/08/2023.

CAVALCANTE, Neusa Cavalcante *et al.* **Ceplan: 50 anos em 5 tempos: O Tempo da Consolidação**. In: CEPLAN: 50 anos em 5 tempos. [S. l.: s. n.], 2015. cap. Biblioteca Central.

CURY, Isabelle (org). **Cartas Patrimoniais**. Rio de Janeiro: IPHAN, 2000

Google Earth Maps. Available at: <<https://www.google.com.br/intl/pt-BR/earth/>>. Access in 2023.

GUERREIRO PIO, M. **MEMÓRIA COMO DESENCADEANTE DA REINVENÇÃO ARQUITETÓNICA UMA PROPOSTA DE REABILITAÇÃO E RECONVERSÃO DE USO DO EDIFÍCIO DO SEMINÁRIO DE GAVIÃO**. [s.l.] Universidade de Lisboa, 2016.

GUIMARÃES, L. R. N. (2021). **Avaliação de bens patrimoniais via modelos acoplados de depreciação e significância cultural: O caso do CEF Metropolitana, Núcleo Bandeirante - Df**. Dissertação - Universidade de Brasília, 2021.

INOJOSA, Leonardo da Silveira Pirillo. **O Sistema Estrutural na Obra de Oscar Niemeyer**. Dissertação de Mestrado FAU UNB. Brasília, 2010.

**IPHAN** - National Historic and Artistic Heritage Institute. Portal IPHAN, Brasília, DF. c2014. Available at: <<http://portal.iphan.gov.br/>>. Access on: 13/08/2023.

KERR, J. S. **THE SEVENTH EDITION CONSERVATION PLAN AUSTRALIA ICOMOS**. [s.l.: s.n.].

KÜHL, Beatriz M./SALVO, Simona. **Ciclo de palestras sobre preservação: Preservação da arquitetura moderna e metodologia de restauro**. Pós: Revista do programa de pós-graduação em arquitetura e urbanismo da FAUUSP, nº x, p. 198-210, 2006.

LIRA, F. B. **PATRIMÔNIO CULTURAL E AUTENTICIDADE: Montagem de um sistema de indicadores para o monitoramento**. Tese Doutorado MDU/ UFPE. Recife, 2009.

LUIZA, A.; SMOLKA, B. **A memória em questão: uma perspectiva histórico-cultural**. [s.l.] Educação & Sociedade, 2000. v. 71

OFICINA PARTICIPATIVA DO PLANO DIRETOR CAMPUS DARCY RIBEIRO. Dia 26/02/2023, no Auditório da FAU/UnB, ICC Norte. **Eixo Temático Patrimônio Histórico, Artístico e Cultural**, no contexto do Edital GRE/INFRA/DPI n. 0001/2022.

OKSMAN, Silvio. **Contradições na Preservação da Arquitetura Moderna. 2017.** 115p. Tese Doutorado - FAUUSP, 2017.

OLIVEIRA IBERÊ, João PANTOJA, Leonardo INOJOSA. **Modelos para análise quantitativa da Degradação do Ambiente Construído: Biblioteca Central da UnB. 2022.** 13p. Artigo Científico (XVIII Congresso Internacional sobre Patologia e Reabilitação das Construções) - Universidade de Brasília, 2022.

SILVA, Lenildo Santos; ZANONI, Vanda Alice Garcia; PAZOS, Valmor Cerqueira; SANTOS, Lara Monalisa Alves dos; JUCÁ, Tatiana Renata Pereira. **Fotogrametria com imagens adquiridas com drones: do plano de vôo ao modelo 3D.** 1. ed. Brasília: LaSUS FAU - Editora Universidade de Brasília, 2022. v. 1. 75p. Disponível em: <<https://livros.unb.br/index.php/portal/catalog/book/202>> Acesso em: 26 agosto 2023.

Projeto de Desenvolvimento Institucional. **BUILDING DIAGNOSTIC ENGINEERING TECHNICAL REPORT.** Campus Universitário Darcy Ribeiro s/n - Asa Norte, Brasília - DF. 2022. 167p.

TINOCO, Jorge E. L. **Plano de Gestão da Conservação para edificações de valor cultural, USP.** Revista CPC, São Paulo, n.17, p. 001-205, nov-13/ abr-14.