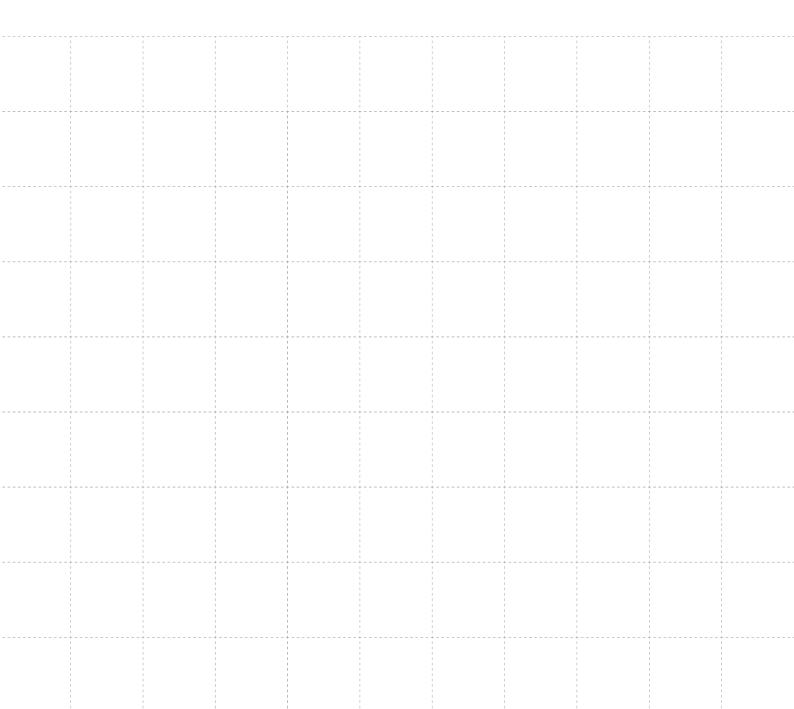


The challenge of promoting accessibility in urban public spaces consolidated: reflections from the case of the city of Niterói-RJ



153 The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ

Beatriz Cunha de Vasconcellos is an Architect, Urbanist, Ph.D, and a Professor at the Universidade Cândido Mendes (UCAM- RJ); Advisor on Accessibility, Department of Urbanism/ SSED, Municipal Government of Niterói, RJ. beatrizcvasconcellos@yahoo.com.br

Patrícia Maria Quadros Barros is an Architect and Urbanist with a Master's degree, Subsecretary of Edifications of the Department of Urbanism of the Municipal Government of Niterói, Rj. qbpatricia@gmail.com

4 The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ

ABSTRACT

The materialized space of the city presents itself as a result of what was consolidated in the environment throughout the ages. This paper deals with the challenge of establishing connections between urban layouts of different times in the pursuit of promoting more accessible spaces. Applying the normative standards of accessibility focused on spatial inclusion of people with different characteristics and abilities in the consolidated urban environment requires of the planner the ability to resolve conflicts that arise when it comes to the adaptation of existing situations to current technical standards established for the design of accessible spaces. In this context, we present the case of the city of Niterói, in the state of Rio de Janeiro, which establishes guidelines for the adequacy of sidewalks. We seek to contribute to the construction of the universal right to the city, bringing the discussion of the conflicts that arise in the treatment of mobility of pedestrians on the sidewalks of the city. This discussion begins by mapping issues associated with the implementation of normative standards and regulation of urban land use in order to promote the city for all and improve urban ambience.

Keywords: Urban design. Accessibility. Public space. Urban mobility.

his paper addresses the challenge of establishing urban accessibility in the context of consolidated public spaces in Brazilian cities. It discusses the introduction of the concept of projects of accessibility for everyone in regards to the urban environment, in order to promote the constitutional right to the city. It reflects on the Federal Decree No. 5296 of 2004, which establishes the mandatory elimination of architectural barriers in the environment of the cities, leaving it up to the Brazilian municipalities to submit new proposals aimed at the urban spatial inclusion of people with diverse range of skills and characteristics. In this sense, the paper aims at presenting some of the new paradigms that have arisen in order to meet the needs of a significant segment of the population that had not been previously considered when it came to urban design and projects. Far beyond the mere application of normative standards, the challenge is in establishing more inclusive spaces in environments that have already been consolidated in the cities, which would require of the urban planner constant, integrated planning and analysis of the dynamic and atypical interventions that occur in the urban areas. It is expected that in presenting the case of the city of Niterói, Rio de Janeiro, this paper will contribute to the treatment of the conflicts between the existing spaces and the new proposals aimed at promoting more inclusive cities.

The Brazilian cities and the consolidation of the universal right to the city

Brazilian cities are currently facing the challenge of establishing urban parameters aimed at the promotion of accessible urban spaces in order to consolidate the universal right to the city.

The IBGE Census 2010 indicates that 24% of the population has some level of difficulty or disability. The aging of the population of the country is also a relevant factor when it comes to the promotion of accessible urban spaces.

The publication of the Federal Decree 5296 of 2004¹ made the adaption of public spaces in order to meet the diverse range of people with physical, intellectual, sensory and motor characteristics mandatory. The decree establishes the roles and responsibilities of all the accessibility, players and stakeholders involved in the production and management of the spaces so that universal spaces may be constructed. It is up to cities, from the publication of the City Statute, to establish the foundations for a democratic model of the city as well as set standards for the use of urban property for the benefit of the collective well-being, safety and welfare of the citizens. Thus, the need has come for cities to conform to the current accessibility legislation by establishing in a municipal level updates to



^{1.} Regulates Laws Nos. 10048, from November 8, 2000, which gives priority service to certain people, and 10098 from December 19, 2000 which lays down general rules and criteria for the promotion of accessibility to people with disabilities or reduced mobility.

the urban and building legislation, especially the one before the publication of the 2004² legislations regarding the promotion of spatial accessibility.

The newly issued Federal Law No. 12,587 of January 2012 establishing the guidelines for the National Policy on Urban Mobility as an urban development policy tool, aims at the integration between the different modes of transport and an improvement in the accessibility and mobility of people and goods in the territory of the city³, reinforcing the need for the Brazilian cities to adapt to the principles of sustainable urban mobility⁴.

So, among other duties, after the decision of the City Statute, it is up to cities to legislate on matters of local interest and promote, whenever applicable, the appropriate land-use plan through the planning and control of the usage, subdivision and occupation of urban land.

The Federal Decree 5296, 2004, refers to the application of normative parameters of the Brazilian Standard NBR 9050, 2004, currently under revision. To Vasconcellos (2011), although there is an undeniable need for compliance with the technical specifications of accessibility standards, the promotion of accessibility to one's environment goes beyond the mere application of normative parameters. The standards represent an achievement and an effort to propose minimum standards within a universe of possibilities and needs of a society that is just beginning to think about promoting the spatial inclusion of people that form a tangible group of users of space. However, and from another viewpoint, the standards work as a reference, which is often difficult to put into practice, thus not being able to encompass in its entirety the environment consolidated in the city in some situations.

The urban dynamics, the outline of the cities and new paradigms

Cities are built over the centuries and present, in their public spaces, the materialization of interventions from different times in different contexts.

Barros (2007) points out that in order to understand urban spaces, one should list the definitions:

Urbanism, according to Lacaze (2001) should be studied under various dimensions, predominantly the ones referring to space, time and man. There are



^{2.} Year of the publication of the Federal Decree 5296 and of the revision of the Brazilian Norm NBR 9050.

^{3.} The National Policy on Urban Mobility aims to contribute to universal access to the city, and to the promotion and realization of conditions that contribute to the implementation of the principles, objectives and policy guidelines for urban development, through planning and the democratic management of the National System for Urban Mobility. (Art. 2°).

^{4.} This should meet the provisions in item VII of art.2 $^\circ$ and No. 40 of Law No. 10257, from July 10, 2001, the City Statute.

different methods to understand it, including, among these, that which sees it as an act of power. Concurrently, there are several constraints operating along with it, in a dynamic process where the urban design must adapt to the needs and characteristics of the present.

Thus, one may understand that urbanism monitors, in an ideological way, the events of each era. The formation, structure, and growth of the cities are intrinsically linked to the economic system and the current political environment; in other words, it ultimately reflects the spatial formation a determined city presents in each period of history.

To Mandanipous (1996), the urban design can be defined as a multidisciplinary activity, which is just as interested in the transformation process of the urban form as in the space resulting from this process. This is done by combining technical, social and aesthetical questions, with which the urban designers work in all the social-spatial development scales.

To Barros (2007), the city is not only a territory of consensus, but also one of clashes between the social and the individual, although there is the need to clarify the conflict of interests and that each segment of society expresses their expectations and objectives; however, all of these interests should aimed at the social side, taking into account what would be the best for all those involved.

The connection between understanding the social inequalities through the differences in the spatial appropriations indicates that the diversity of uses and the different types of appropriations of the urban space point to a positive aspect, enabling the differences to coexist. Thus, a dynamics based on a humanist perspective is presented, as highlighted by Janes Jacobs (1994)⁵, one that seeks to show that vitality is due, in great part, to the mix of uses and activities. This way, it is noteworthy to emphasize the importance of the "invisible views" which bestow on the urban spaces, particularly its streets, safety.

To Harvey (2000), this relationship between the diversity of uses and the spaces can be also be seen as a growing monitoring of the socioeconomic needs of a society materialized in a determined space and time and may also be seen as a criticism to the functional – rational – urbanism and the negative monotony produced by this organization in space.

In the sense of granting the users the right to use and remain in the spaces with conditions of safety and autonomy⁶, Vasconcellos (2011) highlights that the built environment may constitute itself as a facilitating or inhibiting element of the possibility for the participation and experience of the users. And, in the case of the ones with physical, sensorial, intellectual and motor restrictions, the effort, difficulties and the emotional impact that come from the ex-

^{5.} In her classical book "The Death and Life of Great American Cities".

^{6.} Conditions recommended by the concept of accessibility presented in ABNT NBR 9050/2004 and Decree 5296/2004.

perience of the spatial inaccessibility may compromise the whole citizenship process and even the claim to their rights.

To Duarte and Cohen (2006), the impossibility of a person experiencing a space the same way another one may experience it, represents a barrier to the relationship, which may prove to be considerably higher than the physical constraints of the building⁷. In this sense, the concept of Spatial Exclusion⁸ in the spaces represents the materialization of the segregation practices and the view of the world and the society is reinforced. Thus inaccessible spaces work as players of a silent apartheid, creating in people with physical restrictions, the feeling of belonging to an excluded minority of the society.

The design for all (universal design) is a proposal that is already included in the text of the Brazilian legislation. To the Platform for Sustainable Cities, urban planning encompasses conceptions, plans and programs of public policy management in an urban area defined by actions that allow for harmony between the interventions in the urban space and the needs of the population. Therefore, the universal design is justified in the urban environment of the Brazilian cities.

The Niterói case

Aiming to meet the stipulations of the federal decree, which refers to technical standards of the ABNT NBR 9050/2004 regulation, Niterói is currently in the process of adjusting their pedestrian walkways (sidewalks) to urban accessibility standards. In order to do so, the revision and adaptation of the current municipal legislation is being held, a process that is currently taking place in several Brazilian cities⁹.

Niterói, with an area of 131.8 km² and an estimated population of 487,592 inhabitants (IBGE, 2010) has a territory which is considered 100% urban, being the fourth most populous city in the Metropolitan Region of Rio de Janeiro. It borders the cities of Maricá and São Gonçalo. The city is in third place in the Human Development Index (HDI)¹⁰ ranking in the country and the first in the state.

On the city-planning scale, the Master Plan divides the city into five planning regions, which are divided into sub-regions, then subsequently, into neighborhoods, while these are subdivided into urban fractions, the latter being the smallest fractions established for the determination of the parameters for the use and occupation of the urban soil of the city.



^{7.} In an approach to the study of the school environment, being that the concept is applicable to the built environment in general.

^{8.} Duarte and Cohen, 1995.

^{9.} Several Brazilian cities are in the process of adjusting to urban standards of accessibility, and São Paulo with the Free Sidewalk Program is one of the forerunners, and is currently a benchmark for other cities going through this process.

^{10.} Human Development Index (HDI) calculated by the United Nations Development Program (UNDP), which is based on three pillars: income, longevity (and health) and education.

Picture 1

Density Chart of the

Km²⁾ Census 2010]

neighborhoods of Niterói.

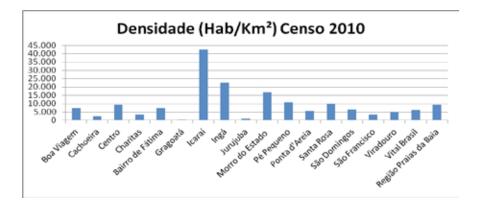
Source: Designed with data

from IBGE 2010 - SMU-PMN.

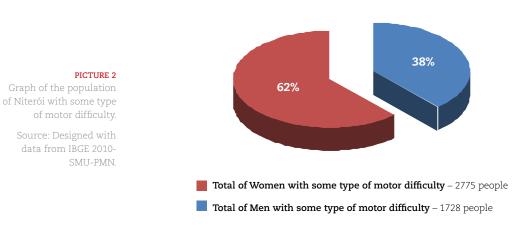
The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ

The following table [Picture 1] shows the density of the neighborhoods of the city, observing that the neighborhood of Icaraí is more dense, followed by the Ingá and Morro do Estado, which makes them interesting for the evaluation of this study, due to our observing that the increased demand for adequate accessibility standards occurred in the neighborhood of Icaraí, where there is the greatest density, one of the best neighborhoods in the city and with large numbers of senior citizens.

Of the population presented, 81,636 residents are senior citizens (IBGE, 2010), which corresponds to 16.74% of the inhabitants. This number is expected to grow due to the increased life expectancy. Approximately 4503 people have some sort of motor difficulty (IBGE, 2010), as shown in [Picture 2], along with a significant number of people with other types of difficulties or restrictions. The other picture [pic.3] shows the elderly population divided by neighborhoods.



For the treatment of the sidewalks in the city, new urban standards aimed at design and project specific to the city were established. These are a set of general guidelines for the design and project, in line with current legislation on the topic, and in accordance with local specificities. These are presented in the document "Manual for Accessible Sidewalks," which also has as one of its aims,



Total of the Population with some type of motor difficulty (4503 people)



The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ

Niterói/RJ - 81636 people

Praias da Bais 1952; 595 Decenirca; 8351; 105 Decenirca; 105 Decenirca; 105 Decenir

Demographic Census 2010 - Resident Population (60 years or more)

PICTURE 3

Graph of the Population with more than 60 years of age – Niterói.

Source: Designed with data from IBGE 2010-SMU-PMN

> bringing the new concepts and standards to public knowledge in order to guarantee the right to the city, social inclusion and improved urban mobility.

Pendotiba; 6494; 8%

For the application of the current guidelines, the "Technical Notebook: Instructions for the approval for accessible sidewalk projects" was developed, a document aimed at professionals of the area and at contractors, due to the large number of approvals for multifamily, single-family, and commercial projects which were taking place owing to the booming real estate market in the city. The subsequent step of this process is the preparation of an ordinance to legitimize the new standard, which is already being implemented in the city.

To achieve the new standards for urban sidewalks, new procedures are introduced into the routine of the city when accessible sidewalks are included in the scope of projects for analysis, making it one of the conditions for obtaining the construction permit. The analysis of the projects for sidewalks is based on the observance of the guidelines established for the county, following the method developed to guide its implementation, considering the whole urban context of the city of Niterói.

And, to support the analysis of accessible space, criteria that take into account part of the composition of the legislative and regulatory framework associated with the analysis of accessible sidewalks were developed. These criteria aim at jointly addressing the suture of the consolidated urban fabric with the new interventions that occur within the city. Thus, they seek to clear up some antagonisms: old versus new, public versus private, in a dynamic and fragmented process, which are the interventions that occur within a city. Fragmented, because the sidewalks, while being public roads, are usually the responsibility of the owner of the lot or its occupant¹¹. This makes interventions on public roads occur in a segmented manner, starting at the front of the lots, and at different

^{11.} In the case of the city of Niterói, Law No. 2624, from December 29, 2008, chapter III.



times, except in the case of specific projects where they can work on the sidewalks of various properties in an integrated manner at the same time.

Interface integration between accessible sidewalk projects and other urban issues

The proposition for urban standards of accessibility in the city raises interface integration issues between the design of sidewalks and other relevant issues to be considered in the urban context, such as: the design of accessible sidewalks and some environmental issues; a mapping of interferences in the urban layout to designs and projects for sidewalks, making the parameterization of the urban space difficult; integration between specific sidewalk projects and designs for specific areas of the city; the case of properties in areas of historic preservation and registered historic properties¹²; the sidewalk projects and their connections to the various intermodal urban transportation (motorized and non-motorized).

The accessible sidewalk projects and some specific environmental issues

Among the identified interfaces between the design for sidewalks and landscaping and environmental issues is the preservation of existing trees, which creates the need for compatibility and integration of accessible routes to the local situation. There is also the introduction of restrictions regarding the planting of vegetation on the sidewalks, in terms of which species are allowed as well as their positioning on the road, so as not to compromise urban mobility and the safety of the pedestrians¹³. There are the cases of adapting the urban areas where green sidewalks predominate. These cases are often grass paths interspersed with irregular stones, which do not match the current regulatory standards for sidewalk paving. Still regarding the environmental interface, in specifying types of sidewalk paving, it should be considered, in an integrated manner, not only its capacity for absorbing rainwater, but also of soil drainage and permeability aspects associated with the urban accessibility characteristics determined by Brazilian Norm NBR 9050/2004 for accessible urban sidewalk paving (non-slippery and non-shaking under any conditions)

Interferences in the urban layout for the drawing and design of sidewalks.

The design of sidewalks undergoes interference due to the urban layout having been added and modified through time, which makes trying to establish connections between the mapping and the promotion of accessible routes in order to adapt to the normative standards of accessibility a major challenge.



^{12.} The preservation of buildings is an administrative act carried out by the government in order to preserve, through law enforcement, properties of historical, cultural, architectural and environmental value for the population, preventing them from being destroyed and/or uncharacterized.

^{13.} The parameters established by the Norm NBR 9050/2004 regarding the need for spatial accessibility aren't found in afforestation guides previous to 2004.

The fragmented production of sidewalks compromises urban mobility in spaces used as public passageways. In areas where urban projects are developed by the municipality, a joint effort can be constructed through an integrated analysis of the entire area which will be subjected to intervention; however, when a specific sidewalk project is specified for each of the buildings, the possibilities for integration of accessible routes is hindered.

The legislation of the municipality, through the Code of Postures¹⁴ lays the responsibility for the implementation and maintenance of sidewalks on the owners of the lots bordering them, despite their being part of a public area, thus constituting a public space, as was already mentioned.

For Santos, this issue is perceived as: "The sidewalks belong to the houses, but this does not mean they are part of the property. Their public character, sometimes, contrasts with the way they are circumstantially used "(SANTOS, 1988, p. 51).

The misperception from the viewpoint of the owners or occupants of the properties that sidewalks are an extension of their property may impede their function as public passageways intended for the mobility of pedestrians.

Misappropriation of the public space of the sidewalk

The privatization as well as the appropriation of the public space of the sidewalk is a constant process and to which the inhibiting mechanisms have not responded adequately. However, the concept regarding the uses of city spaces must be clear so that there is no privatization of public space, as usually occurs with sidewalks.

The case of properties in areas of historic preservation and registered properties

In Niterói, there is the case of the properties placed in the *Área de Preservação do Ambiente Urbano* (APAU)15, areas for the protection and conservation of streets, squares and other public sites, and their volumetrics. These can be classified into: preserved properties, preservation and partial preservation of properties of interest and properties subject to renewal.

In these properties, a discussion with stakeholders responsible for the management of the city and the aforementioned properties so that more accessible spaces be built is necessary.

The design of sidewalks and their connections to various intermodal urban transport

The projects for sidewalks should be integrated into the whole road system, both on a local scale, such as connections to ramps, bus stops, taxis, parking spots, etc., as in a metropolitan scale, taking into consideration their integra-



^{14.} Code of Conduct of Niterói, Law No. 2624, from December 29, 2008 - Title V - Chap. IV - Section I.

^{15.} translator's note: APAU - Urban Environment Preservation Area

tion to all intermodal constant urban transport in a metropolitan planning scale (Vasconcellos, 2011). This requires that the designs and projects address the situations of conflicts between pedestrian and vehicular flows, pedestrians and cyclists flows, etc.

For the treatment of non-motorized transport routes - cyclists and pedestrians - in the city projects, it was observed that the transit system still presents limitations when it comes to the treatment of spaces where there are conflicts between the flow of cyclists and pedestrian. It was observed that in these spaces, the pedestrian population, especially people with disabilities and reduced mobility, are still exposed to constant risks.

Practical application of the criteria for the stitching of the urban fabric

In the development and construction process of a new urban design that takes into consideration the mobility of pedestrians and human diversity when designing and projecting sidewalks, a systematic evaluation and discussion process was created based on the constant daily demand for projects for sidewalks and urban interventions occurring dynamically throughout the city.

Establishing connections in the previously mapped out urban plan raises the difficulty in establishing fixed parameters for determining accessible routes. This lays the decision on choosing the best route on the designer, which requires a greater preparedness on the part of the professionals who deal with such issues.

One of the criteria adopted by the city is the requirement that the sidewalk project be developed and run by professionals with professional registration.

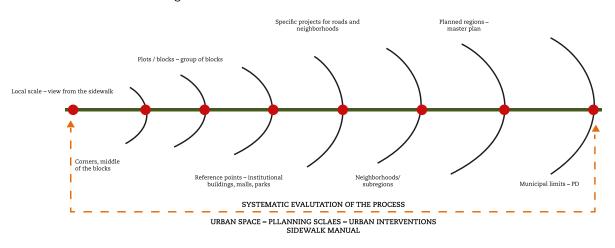
Another adopted criterion concerns the application of different scales of urban planning for the analysis of specific studies. Vasconcellos (2011) highlights that for the promotion of spatial accessibility in the environment of the cities, urban design should be appropriate to the human scale, providing comfortable conditions for the mobility of pedestrians, which is the first parameter for the promotion of Accessible Routes. He also points out that the analysis of urban mobility to promote accessible space must contemplate three different scales: the human scale for specific analysis, the local scale that refers to the block or reference polygon for the analysis of the environment next to the edification and the metropolitan scale, which refers to the analysis of the space in the metropolitan context to which it belongs. Applying these concepts, the accessible block is then analyzed in its four corners, and integration between the modes of transport is then a factor taken into consideration in the analysis.

Barros (2012) translates to the city planning scale, the scales proposed by Vasconcelos (2011), as seen below in the schematic guideline developed for the study.

In this continuous process of urban redesign for spatial inclusion through the application of the new guidelines, it was necessary to start the registration of



existing projects and new interventions with the mapping and identification of areas that had already undergone sidewalk interventions in order to guide the study, the organization and integration of the urban fabric of the city in the right direction.



PICTURE 4

Planning Scale and Urban Interventions

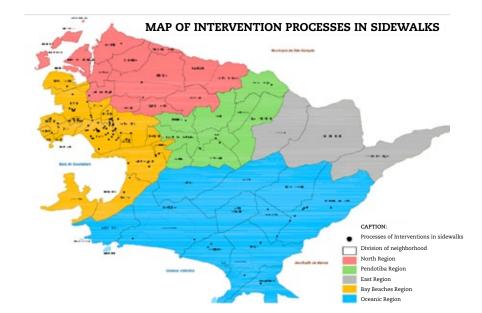
Source: The authors, based on studies of the methodology to be applied In the development and construction of this study of the city, it was sought with the production of the Accessible Sidewalk Manual to create a systematic and ongoing discussion through the daily demand for projects for sidewalks and urban interventions that occur in a dynamic way in the city. The following map of the city of Niterói, points out the main interventions of projects divided by planning regions and districts, according to the Master Plan. These interventions relate to projects for urban sidewalks and specific projects, as will be shown later.

All of these interventions at a local scale are then evaluated according to the local issues that affect the proposal for accessible routes, such as the different alignments of the lots and the different sidewalk widths within the same block, as seen in the illustrations below. The illustrations also show examples of light posts on very narrow sidewalks, trees in circulation areas, and fences that create gardens and privatize the space that should be for public use. The dashed borderline in the illustrations shows possibilities for the flow of people¹⁶

^{16.} In the case of the alignment of the paths, this subject is initially treated in the Alignment Plan Law (AP) - Law 1595/97 and subsequently the APs were incorporated into the Urban and Regional Plans - URPs developed for each planning region in the city.



The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ



PICTURE 5

Basis for studies for the planning and integration of interventions

Source: Prepared by the authors

All the sidewalk projects will then incorporate the new guidelines: segmenting of sidewalks into strips (free-strip, service strip and in some cases a transition strip); adaptation to technical standards for accessibility, such as specific types of pavement; tactile signalization; the adaptation of inclination and levels; deployment ramps and especially the establishment of accessible routes¹⁷.

PICTURE 6

Different alignments and sidewalks widths

Source: By the authors based on satellite images

PICTURE 7

The layout of pedestrian routes and alignments of buildings

Source: By the authors based on satellite images.





^{17.} All guidelines are presented in the document: Manual for Accessible Sidewalks: Guidelines for design and project, and summarized in the Technical Notebook, which is targeted to professionals and technicians for the implementation of the new standards.



The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ

PICTURE 8

Property in APAU (Urban Environment Preservation Area), where we can observe a different alignment from the Alignment Design of the road and the privatization of the public space of the sidewalk for the building of gardens.

Source: By the authors based on satellite images.



Specific projects for the city are the ones that deal with areas designed for a particular activity. In these projects, the sidewalks are designed under specific standards, in order to meet local demands within the new guidelines. These are the following projects:

The Project for the Gastronomic Center¹⁸ aims at the organization of a residential area where there is a concentration of restaurants, which gives it a unique characteristic. The pedestrian pathways are organized, and the tables and chairs allowed near the sidewalks are treated by introducing the compulsory preservation of free-strips the implementation of accessible routes, combining the spaces of urban furniture, circulation and parking areas. The Project for the organization of the street vendors and peddlers¹⁹ and the opening of the Visconde de Uruguai Street in the City Center aims at improving the mobility and urban ambiance in the center of the city. The project for extending the Icaraí Beach sidewalk²⁰ contemplates the coast, which is a leisure and recreation area in a dense neighborhood with multifamily buildings with an average of 12 floors. It provides for universal toilet facilities for the bathers, and the integration of the waterfront promenade sidewalk pathway with the transport system, the BRT bus stops, the bike path, the crossings and the interconnections to other blocks along the waterfront; The Project for the San Francisco Beach plans for the insertion of various conveniences to the area, such as a gastronomic area near the edge of the beach. The intervention project includes the BRT bus stops and the Jaime Lenner Project for the city, the implantation of lanes, crossings and parking lots that are currently a problem in the area. The Project for the Coastal Pathway in Boa Viagem Beach²¹ is the extension of a pathway that covers a large portion of the coast of the city. This project sought to better meet the accessibility conditions

18. Specific design, consisting of a polygon, where activities with gastronomic characteristics are held and a visual identity is developed.

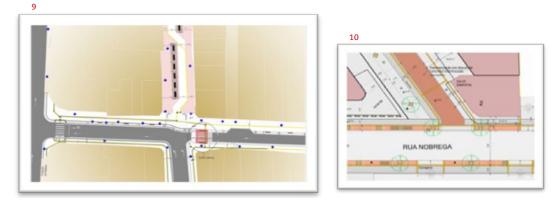
19. Planning proposal through urban interventions, considering new projects for sidewalks and rental of the tents.

20. Project proposal to improve the ambience, integrating the various urban projects for the beach, including road accessibility, taking into consideration the scenic beauty of the place

^{21.} Project developed to integrate the urban projects from the AEIU from Fluminense Federal University, with other areas of the city, road and sidewalk improvements, taking into consideration the scenic beauty of the place.

The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ

for the pedestrian crossings along the ocean and the integration with other paths in the city. We tried to incorporate sidewalks, bike lanes and highways, aligning the accesses to the Federal Fluminense University, in the Gragoatá Campus. The Project for the requalification Moreira Cesar Street, a commercial area, aimed at improving the ambience and creating an identity for the area, including new standards of accessibility for the sidewalks. The Joaquim Távora Street²², a road which connects and integrates two neighborhoods as well as different areas of the city, presents a heavy flow of traffic. In this project, the sidewalks are treated for the establishment of an accessible route. There are also other projects, such as the interventions in parks and interfaces with urban mobility projects contemplated in the architect Jaime Lenner's Project for the city - a project for transportation corridors with the restructuring of lines and terminals and adjustments of road relevant to this intervention.

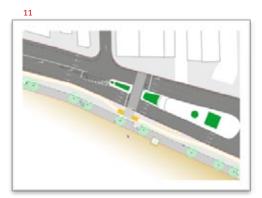


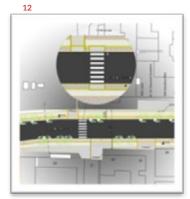
PICTURES 9 and 10

Organizations of the street vendors (Center) and the Gastronomic area (Santa Rosa)

PICTURES 11 and 12

The Coastal Road (São Domingos) and the Requalification of the Joaquim Távora Street (Icaraí)



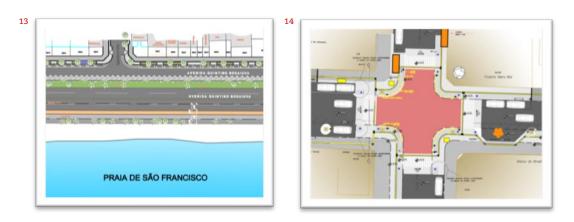


Final Considerations

22. Project for the roads, taking into consideration local characteristics, as well as accessibility and the improvement of the local ambience.



The challenge of promoting urban accessibility in consolidated public spaces: reflections from the case of the city of Niterói-RJ



PICTURES 13 and 14

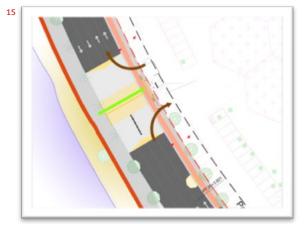
São Francisco Beach Pathway and Moreira César Street

Source: SSED/UDU Archives-Sub secretary of Edifications/ Department of Urbanism, City Hall of Niterói.

PICTURE 15

Icarai Beach

Source: SSED/UDU Archives-Sub secretary of Edifications/ Department of Urbanism, City Hall of Niterói.



About the Niterói case

There are several conditions that interact when urban planning, specifically with regard to the promotion of accessible sidewalks: the temporality of interventions, the alignment plans, the lack of harmony between the utility services and the preservation of pedestrian pathways, the integration of the urban planning scales with local interventions, and issues of social and environmental nature.

In the analysis of each intervention project, there is the exercise and implementation of the proposed guidelines as to the best practices and solutions adopted.

There are questions and concerns regarding the stitching and integration of the urban fabric during specific analysis, making the evaluation and constant reflection on the whole process a necessity. The positive and negative aspects of interventions and urban and social gains should be reassessed so that they evolve as urban adaptation procedures that are part of a broad and systematic process.

168



Through an initial assessment while developing this paper, the observations already show that some parts of the city tend to develop and implement new standards for sidewalks more quickly due to the dynamic construction of new projects and the influences of the housing market compared to other regions and districts, in which there is less interest from the housing market and the purchasing power of the population is smaller. This is the case of the neighborhood Icaraí, in the Bay region and the Fonseca neighborhood in the northern region. The areas of Special Social Interest present poor accessibility conditions due to the peculiar characteristics of these neighborhoods. In order to have a constant monitoring and care of these areas, Barros (2007) proposes the Family Architects model. These areas still lack a specific study and should be subject to adjustments and interventions that would suit the specific local conditions that hinder the implementation of technical standards regulations.

It is expected that this whole process for the development of the guideline proposals generate reflections and create the necessary feedback for improving the process and proposals. The participation of the users is fundamental in order for this to happen.

About the Brazilian case

For the construction of a more accessible city, the establishment of accessible routes in the pedestrian pathways and good pedestrian mobility is fundamental. For this to happen, it is necessary to consider the environment in its local urban context and its connections in the general framework.

There is the need to adapt the spaces to meet the technical standards taking local specificities into consideration. In the consolidated city, ideal conditions for the projects are not always found; and in this case, it is up to the designer to apply the situations compatible to the local scenario for the benefit of all.

With the increasing urban population in this century, a great part of the population is now living in cities. According to UN projections for 2050, the urban population (the world urbanization rate) will reach 6 billion. Given this situation, there is much relevance in building universal spaces that cater to everyone. Therefore, the Project for All is fundamental to good urban ambience, including meeting the demands of an increasingly higher elderly population worldwide.

It is up to the government to establish the involvement and cohesion of the sectors involved and to work with the city in order to supervise these projects, which are essential to ensure that pedestrians have good mobility on roads. Society in general should also be mobilized towards guaranteeing their right to come and go.

Making the city accessible by applying the normative standards of accessibility in Brazilian Norm NBR 9050/2004 or another official technical standard norm



in lieu thereof, constitutes the beginning of a process of thinking about urban space as an important place for interaction of all citizens.

The construction of a city that all may enjoy is everyone's responsibility.

References

ASSOCIAÇÃO BRASILEIRA DE NORMAS TÉCNICAS. NBR 9050: Acessibilidade a edificações, mobiliário, espaços e equipamentos urbanos, Acessibility to buildings, equipment and the urban environment. Rio de Janeiro: ABNT, 2004.

BRASIL: DECRETO Nº 5.296 DE 2 DE DEZEMBRO DE 2004. - **Regulamenta as Leis nos 10.048, de 8 de novembro de 2000**, que dá prioridade de atendimento às pessoas que especifica, e 10.098, de 19 de dezembro de 2000, que estabelece normas gerais e critérios básicos para a promoção da acessibilidade das pessoas portadoras de deficiência ou com mobilidade reduzida, e dá outras providências.

BARROS, Patrícia Maria Quadros. **Política Habitacional em Niterói: Avaliação das normas e ações públicas nos últimos 20 anos**. Niterói, UFF 2007. Dissertação (mestrado). UFF/EGEU, 2007.

DUARTE, Cristiane Rose de Siqueira ; COHEN, R. Proposta de Metodologia de Avaliação da Acessibilidade aos Espaços de Ensino Fundamental. In: Anais NUTAU 2006: Demandas Sociais, Inovações Tecnológicas e a Cidade. São Paulo, USP: 2006.

JACOBS, Jane. Morte e vida nas grandes cidades. São Paulo: Martins Fontes, 2000.

LACAZE, Jean Paul. Os mátodos do Urbanismo. Campinas, SP:Papirus, 1993.

HARVEY, David. A condição Pós-Moderna. São Paulo: Edições Loyola, 1989.

PREFEITURA MUNICIPAL DE NITERÓI. LEI Nº 2624, de 29 de dezembro de 2008 - Institui o **Novo Código de Posturas do Município de Niterói** e dá outras providências.

_____. LEI Nº 1595 de 18 de Setembro de 1997: Dispõe sobre os projetos de alinhamento das vias do Município. Prefeitura Municipal de Niterói.

SANTOS, Milton. A urbanização brasileira consciência universal. 5. ed. São Paulo: Editora da Universidade de São Paulo. 2000.

SOUZA , Marcelo Lopes de , Mudar a Cidade, uma introdução crítica ao planejamento e à gestão urbana. Rio de Janeiro. Bertrand Brasil, 2002.

VASCONCELLOS, Beatriz Cunha de. A Construção de um Método para Avaliação do Ambiente Construído. Tese de Doutorado. Programa de Pós-Graduação em Engenharia Civil. Universidade Federal Fluminense. Niterói, 2011.