

# Accessibility In Public Space: The case of public squares in Fortaleza

SANTIAGO, Zilsa Maria Pinto <sup>1</sup>, SANTIAGO, Cibele Queiroz de <sup>2</sup>, SOARES, Thais Silveira <sup>3</sup>

Av. da Universidade, 2890 - Benfica, Fortaleza ,Ceará, Brazil, 60020-181

<sup>1</sup>zilsasantiago@gmail.com , <sup>2</sup>cibeleqsantiago@gmail.com, <sup>3</sup>thaissilveirasoaes@gmail.com

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## 1 Context

In Brazil, according to the 2010 Census Research, 23% of the resident population had at least one of the investigated deficiencies: visual, auditory, mental, motor or intellectual. The northwest region showed the major rate of people who have at least one of the deficiencies – 26,62% and in Ceará the rate was 27,69%, which generates an expectation of the population of greater implementation of actions aimed at improving accessibility, and therefore a strengthening of citizenship. Given this Given this situation, we started actions in teaching, research and extension of the Architecture and Urbanism course of the Federal University of Ceará (UFC) to analyze the accessibility conditions in public space, focusing on plazas and social equipment to present diagnostic and prognostic as technical reports aiming to spread in the society and for the municipal administration agencies the necessary actions in conformity with current regulations. In addition to the dissemination of specific knowledge of accessibility and universal design in the development and performance of future professionals Architecture, Urban Planning and Design.

To define the studied area were selected four significant areas in Fortaleza city: Fátima, Benfica, Center and Aldeota. The choice of these four neighborhoods was purposeful because of its peculiarities, as well as the importance of them in the city, which justifies the intention to analyze all the squares of these neighborhoods, not just a sample.

## 2 Method

The method used to perform these inspections was the observation and investigation *in loco* and the application of checklists with pre-established accessibility criteria based on Universal Design principles (PREISER 2001, CAM-BIAGHI, 2007; CEPAM 2008 ), and other concepts such as spatial exclusion (DUARTE; Cohen et al, 2013)having as parameters the rules and laws about this subject (Decree 5,296 / 2004; NBR 9050/2004; CEARÁ, 2009).

We developed a set of evaluation criteria and their evolution over the tests that were done with modifications aiming to improve the analysis process, considering the necessary peculiarities as the first visits were carried out. The preparation of records with evaluation criteria was actualized three times until the current version, with criteria based in laws, in the layout of the square for a better comprehension of the space, and in subjective perceptions which were based in sensations and impressions that researchers felt about the square.

### **3 Results**

For this article, we present some of the results (Fátima and Benfica neighborhoods) for: route free of obstacles, lowered guides, tactile floor, vegetation, flooring type and conservation status. These results were compiled in tables generated from the accessibility criteria adopted for evaluation of the squares, which were quantified and the percentages were obtained regarding the amount of square in each neighborhood.

As an analysis of the results, we can say that there is a route free of obstacles in the most visited places, however, there is a directional tactile signage or continuous guide that provides a visually impaired person to understand the movement of conditions, to guide and getting through some signaling. The curbside cutouts, for example, exist in most places, but in none of them these guides were properly performed as recommended in the NBR 9050/2004. Sometimes we find guides with greater inclination to recommended, sometimes we find guides demoted without the inclined tabs and still no tactile signage warning or this, but implemented incorrectly.

Regarding the subjective analysis of the sensations and impressions that researchers felt about the square, we find that the largest squares offer more conditions of coexistence and stay, however the access conditions are not fully met.

### **4 Conclusions**

On the analysis of data collected we can say that the situation of the visited squares is positive for some established accessibility criteria, such as: route free of obstacles, lowered guides crossings, proper vegetation, type of flooring. A more detailed analysis, however, points to an implementation and / or project uncommitted with the ABNT that bring recommendations on the subject, as is the case of NBR 9050/2004. Moreover, we can see that the supervision of the Municipality in relation to the works shows fault with regard to accessibility questions. It seems to us that it is not just a matter of compliance with laws and regulations, but still lack a culture of inclusion, in which the perception of the real needs of people with disabilities and / or reduced mobility may be met in its entirety. Therefore, it is necessary to continue studying and researching, including the participation of people with disabilities and reduced mobility for projects,

works and inspections are aligned in line with the standards and laws. And they can be expanded and will contribute increasingly to the construction of urban spaces less excludentes.

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