
The influence of the BR 364 highway on daily life and commerce in the city of Juscimeira – MT: a rhythmanalysis reflection

A influência da rodovia BR 364 no cotidiano e comércio da cidade de Juscimeira – MT: um ensaio de ritmanálise

La influencia de la BR 364 en la vida cotidiana y el comercio de la ciudad de Juscimeira-MT: una reflexión de ritmanálisis

Emanoel Anésio Andrade Ferreira ¹ <https://orcid.org/0000-0001-6587-4196>

José Roberto Tarifa ² <https://orcid.org/0000-0003-3629-0567>

¹Master. Teacher. Linked to the State Department of Education of Mato Grosso – SEDUC-MT, Juscimeira, Mato Grosso, Brazil, emanoel_aaf@hotmail.com.

²Free Lecturer. Professor. Linked to the Federal University of Rondonópolis - UFR, Rondonópolis, Mato Grosso, Brazil, jrtarifa@gmail.com.

Received on: 04/23/2021

Accepted for publication: 06/29/2021

Abstract

The presente work seeks to analyze the vehicle flow on the highway BR 163/364 and its influence on the daily life and commerce in the city of Juscimeira-MT. For a long time the City of the Juscimeira-MT did of the agrobusiness outflow route, because of your localization, that is characterized for being between the three biggest cities from Mato Grosso. Wherefore, it turns out that the road dynamics influence in the daily and comercial rhythm of thia small town, something that was verified in this research. Field work was carried out to data collection. From this research it was posible to verify that the use of the territory directly influences socioeconomic rhythm the city of Juscimeira-MT and the country.

Keywords: Business; Urban daily life; Highways in urban sectors.

Resumo

O presente trabalho busca analisar o fluxo de veículos na rodovia BR 163/364 e sua influência no cotidiano e comércio da cidade de Juscimeira-MT. Por muito tempo a cidade de Juscimeira-MT fazia parte da rota de escoamento do agronegócio, por conta de sua localização, que se caracteriza por estar entre as três maiores cidades de Mato Grosso.

Portanto, constata-se que a dinâmica rodoviária influencia no ritmo cotidiano e comercial dessa pequena cidade, algo que foi verificado nessa pesquisa. Foram realizados trabalhos de campo para o levantamento de dados. A partir desta pesquisa foi possível verificar que o uso do território influencia diretamente no ritmo socioeconômico da cidade de Juscimeira-MT e do país.

Palavras-chave: Comércio; Cotidiano Urbano; Rodovias em setores urbanos.

Resumen

El presente trabajo busca analizar el flujo de vehículos en la autopista BR 163/364 y su influencia en la vida cotidiana y el comercio en la ciudad de Juscimeira-MT. Durante mucho tiempo la Ciudad de la Juscimeira-MT hizo de la ruta de salida de agrobusiness, por su localización, que se caracteriza por estar entre las tres ciudades más grandes de Mato Grosso. Por tanto, resulta que la dinámica vial influye en el ritmo diario y comercial de este pequeño pueblo, algo que se constató en esta investigación. Se realizó trabajo de campo para la recolección de datos. A partir de esta investigación se pudo constatar que el uso del territorio influye directamente en el ritmo socioeconómico de la ciudad de Juscimeira-MT y del país.

Palabras clave: Negocios; Vida cotidiana urbana; Carreteras en sectores urbanos.

Introduction

The intensity of social activities is more accentuated in urban spaces, since it is in these places that most of the population is concentrated and in an agglomerated way, generating mix of goals. Carrying out most of the activities of various kinds, from basic services such as health and education, and alternative services such as sport and leisure, they are present with greater intensity in urban sectors. This junction, in many ways, causes countless conflicts, among which we can highlight the need for displacement, either for any purpose, in the search for carrying out their daily tasks, the population will be forced to move. This need, added to the circulation routes of vehicles coming from other locations, like on the highways, amplifies urban conflicts (SILVA JÚNIOR; FERREIRA, 2008, p. 222).

The main cooperation of this research is related to the understanding of the influence of a stretch common to two highways (BR 163 and BR 364) in the economic sector of Juscimeira-MT, therefore, from this study it is possible to base these results,

for searches elsewhere, since in Brazil there are numerous cities, which grew up on highways (IPPUC, 1991).

It is worth noting that the current moment of each city or highway, is endowed with historicity, this makes it necessary to study each specific location to have an understanding of the current state, looking for solutions to any problems. Spósito (1998, p. 11, our translation) as for cities, recommends that:

[...] space is history and in this perspective, the city of today is the cumulative result of all other cities from before, transformed, destroyed, rebuilt, finally produced by the social transformations that have occurred over time, engendered by the relationships that promote these transformations.

In reference to the relationship between the highway and cities, Milton Santos (1996), argues that the transport network (from 1950), favored so that there were investments for different sectors, such as the modernization of agriculture and industrialization, thus emerging several urban centers, attracting large population contingent.

In this sense, this work aims to understand, from fieldwork, the influence of the common stretch of BRs 163 and 364 in the daily life of the population and in the commerce of the city of Juscimeira-MT, anchored in the urban social rhythm, based on in problems listed by Trinta (2001), such as those related to mobility, accessibility, environment and also those specific to the population, such as urban segregation, visual intrusion and insecurity.

To achieve the objectives of this research, the daily, commercial and road rhythm was observed, in a certain interaction between them, based on rhythm analysis, to reach an understanding of the interaction of different factors, through rhythm analysis it is necessary to highlight theory and practice, according to Lefebvre (1974, p 235), theory is the moment when practice develops, however, the way nature reveals itself to us is through practice, being the only way to master it, in the sense of understanding it, but being possible only with the use of theory, therefore, the author highlights that "theory emerges from practice and returns to it".

If rhythm is movement, and the planet, human beings and everything that exists is in movement, we can understand that such movements will be determined by different cycles, Lefebvre (1974), argues that there is neither the beginning nor the end of a cycle, but that each cycle exists through another and that it allows the existence of others and so it follows in circular motions. The author also argues that no cycle returns to its starting point and develops in the same way that it had already been carried out, all of them present themselves differently in each development of a new cycle. As exemplified in his arguments, the author highlights that the means of production and systems exert a strong influence on rhythms, habits and customs of people, because there is always renewal in the means of production and systems, the rhythms of people influenced by these factors are always being influenced, but never in the same way all the time, but with the influence of these factors increasingly stronger.

Society is in constant movement, as much as Lefebvre argues that cycles are never the same, each individual's life and daily life has some repetition, which are inserted within these cycles, however, so that there is a change from one cycle to another, it will not occur in a very short space of time, there is a time to go until there are these significant changes in the individual's life, Tarifa (2002) argues that because there is repetition in a certain period of time, the human being perceives the change, precisely because of the repetitive nature of the phenomenon in its place of experience, as an example the aforementioned author cites the post-industrial revolution changes in the way of life, work and means of production.

In the application of rhythm analysis, Tarifa (2002) explains about a hierarchy of orders of magnitude (space and time) so that when fragmenting the units into smaller parts, it will be possible to observe the variables and different influencing factors more significantly, for example at regional scales. However, when the processes are reduced the dimensions of space, the levels of analysis and measurement units are also changed, so it is necessary to understand the rhythms in each space unit, so that there is consistency in the analysis when returning it as a

whole. There are resources available for each dimension, regardless of the object covered.

Therefore, Tarifa and Sette (2012, p. 02, our translation) highlight rhythm analysis covering what is necessary to apply it to the object of study researched in this work, stating the following:

(...) rhythm analysis, defined as method and theory, pursues this hard millenary work of understanding the polyrhythms of bodies (breathing, circulation, desire, sleep, food) and space (physical, biological, human and social) in a systematic and theoretical, grouping very diverse practices of very different knowledges: medicine, history, climatology, cosmology, dendrochronology, poetry (poetics), music, sociology, psychology and geography.

From these elucidations that the speeds of the highway are determined by several factors and the highway itself influences the social, economic and structural rhythm, to obtain these analyzes in a relevant way, apply the idea proposed by Tarifa (2002), that it would be important removing part of the whole to analyze, later returning to the whole, but without losing the identity, would be an indicated way to analyze the daily and commercial rhythms influenced by the highway.

Seeking to understand the capitalist dynamics in southern Mato Grosso and northern Goiás, a research project based on rhythm analysis was implemented, from which this article derives.

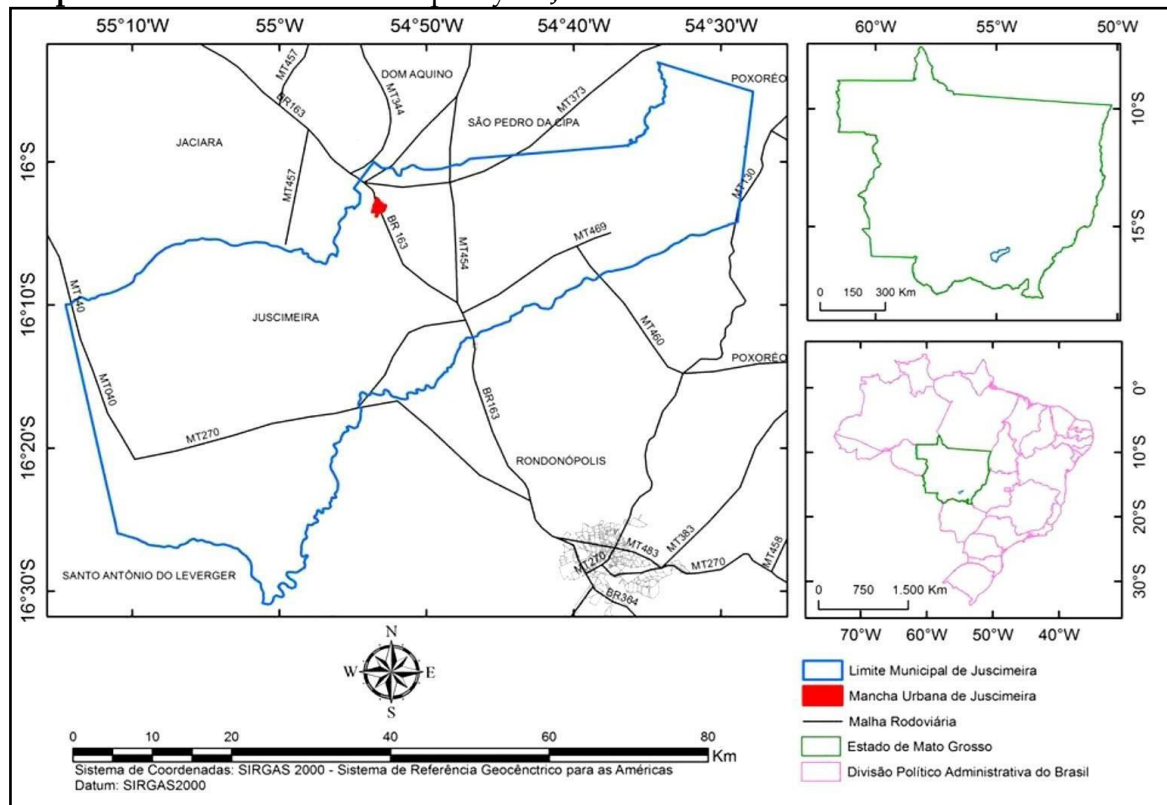
Study área

The study area corresponds to the urban perimeter of the municipality of Juscimeira (Map 1).

Juscimeira-MT is located in the southeast region of the state of Mato Grosso, latitude: 16°03'02" south and longitude: 54°53'04" west, with 158 KM of distance from capital of Mato Grosso, Cuiabá, via BR 163/364. Juscimeira borders the city of Jaciara and São Pedro da Cipa to the north; to the south, the border is with the municipality of Rondonópolis; to the east it borders Poxoréo; and to the west, Santo Antônio do Leverger.

With a total area of 2,720,481 km², it occupies the 99th position in the ranking of territorial composition, in comparison with the 141 municipalities in the state (IBGE, 2020).

Map 1 - Location of the Municipality of Juscimeira-MT



Source: SIRGAS 2000, apud Martins, 2014.

The main water course is the São Lourenço River, which drains from East to West, within the territory of the municipality of Juscimeira there is the presence of the Rio Areal, with the tributary Rio Areia cutting the city from south to north (GODOY, et al., 2016).

On the relief, there are variations of plan until the occurrence of mountain ranges, with vegetation cover composed of forest, cerrado, cerradão, campo cerrado and tropical footpath. The rock composition presents enormous variability, with the Botucatu formation and the Cuiabá group. There is the presence of sediments from the formation of the wetland and a tertiary peneplaned surface, this surface with predominantly latosolic soil development characteristics, which are mainly presented on flattened surfaces, and tall ones, with characteristics of dark red oxisols and red-yellow oxisols. There is quartz sand and in areas of lower relief, with

characteristics arising from the formation of the wetland, there are plinthosols, planosols, hydromorphic quartz sands and dystrophic red-yellow podzolic sands. In the main river, the São Lourenço, the soil is characterized by the presence of eutrophic red-yellow podzolics, eutrophic cambisols and alluvial soils (LIMA, et al., 2017, p. 63).

It is important to highlight the presence of thermal water wells in the municipality, which is one of the main characteristics in terms of visibility on the national scene. With interpretations from the study of Godoy, et al., (2016), this characteristic occurs due to some factors, such as: low altitude relief (251 m); geological structure, composed of faults in the Ponta Grossa structure, as well as in the structure of caverns related to the dynamics of tectonic plates; and occurrence of groundwater. Given the above, it is understood that the fact that the altitude of the relief is relatively low and the occurrence of faults, together with the formation of groundwater, cause this water to reach a very considerable depth inside the soil, this depth, with high temperatures, with the upwelling occurring with the temperature of the water preserved, as a result of the low relief.

Another relevant feature of the municipality is its location, which is located between the three largest cities in Mato Grosso: the capital Cuiabá, the city of Várzea Grande and Rondonópolis, with the presence of one of the most important highways in Brazil BR 163 /364, this causes the entire flow of vehicles from these cities, as well as from important cities for agribusiness nationwide, to pass through the center of Juscimeira. (JUSCIMEIRA, 2017).

The municipality currently has 11,221 inhabitants (2019), being only the 59th most populated city in Mato Grosso, and the 5th most populated in the southern Mato Grosso microregion Rondonópolis (microregion with 19 municipalities). The human development index (HDI) is also obtained, with rates of 0.714 (2010) and population density of 5.18 inhab/km² whose main economic activities are trade and agricultural production (IBGE 2012).

The city stands out as an important headquarters, which provides basic services such as health, education, sports, culture and leisure for its four districts and numerous settlements, with this rural population being about 25.66% of the inhabitants of Juscimeira.

One of the main problems faced by Juscimeira is its proximity to larger cities, which has a significant impact on the local economy, as companies and industries, which favor the economic growth of any location, choose, in most cases, to settle in these larger cities, given the structures offered, the city ends up being dependent on work and resources from other municipalities (JUSCIMEIRA, 2017).

The universe of analysis of this research also corresponds to a stretch of BR 163/364. According to the Consortium Mendes Junior, Enpa and Contécnica (2015), BR 364 is a Diagonal highway, Albano (2007, p. 03) states that diagonal highways "can present two orientation modes: Northwest-Southeast or Northeast-South-west". This highway belongs to the National Highway Plan, approved by Federal Law 5,917 of September 1973, totaling 4196 km in the Northwest-Southeast direction, starting in Limeira – SP, passing through several cities in the states of Minas Gerais, Goiás, Rondônia and Acre, until reaching the Brazil/Peru border. It is noteworthy that this highway has a stretch that coincides with BR 163, from KM 201 to KM 588 (part of the studied stretch is located between the aforementioned Km). This coincident extension is 387 KM.

It is noteworthy that at the time of the research, the highway passed through the urban perimeter of Juscimeira-MT, something that was modified from mid 2020, but the fact that this modification is recent, we understand the relevance of the work in the sense of portraying the modifications, which are defined by the capitalist dynamics and urban development.

The study area is part of the duplication project, which much of it has already been completed, as it began in 2014, with DNIT's goal of duplicating the more than 217 km between Cuiabá and Rondonópolis, with completion forecast for the year of 2021 (MATO GROSSO, 2019).

The works have numerous considerable structures, such as construction of bridges and viaducts, contours in relation to urban sectors, as well as all the safety apparatus (signage, safety rails, shoulders and others) along the researched stretch. DNIT's latest update stated that 85% of the work was already completed. The Santa Elvira district, the cities of Juscimeira and São Pedro da Cipa, are urban areas that have already been bypassed, the next steps, already in progress, aim to bypass the Jaciara city, until reaching the already duplicated part towards Jaciara Cuiabá. It is also noteworthy the duplication of the industrial sector in the capital, as part of the project (MATO GROSSO, 2019).

Methodological procedures

The data from this survey were all collected from fieldwork. This type of work is what brings the researcher closer to reality, allowing the understanding of everyday space. For this, the role of the researcher is highlighted as being inside (in), that is, witnessing the phenomenon at the time it happens, having a perception of the concrete reality, and being outside (out), this is explained by the fact that the researcher even if inserted in the phenomenon, at the time of in field research, he becomes just an observer, who absorbs the phenomenon under analysis and draws its conclusions from Tarifa (2002).

The use of field work as a methodological resource was mainly in the search to understand the influence of the road with regard to the economic factor of Juscimeira - MT, as well as the interference in the urban social rhythm.

The survey was carried out based on counts and observations of services and businesses located on the side of the road, as well as analyzes of the structure of the road to receive occupants in a comfortable way and without posing any danger either to those who pass by or to the local population.

The analysis of the results considered issues related to the presence of the highway in the urban sector, so that it was possible to investigate whether the presence of a highway in the center of a city was advantageous or not.

In relation to commerce, field work was carried out to account for the amount of commerce that exists on the side of the road. This work took place on November 3, 2019, and consisted of covering the entire length of the road, obtaining photos and footage. Subsequently, the accounting and elaboration of tables and selections of photos were carried out.

After accounting for the results, the data were compared to studies by DNIT (2010) and work carried out by the Barbato Engineering Group (2016), in order to understand whether the city center of Juscimeira-MT, which is cut by the highway, offers the necessary services listed by Barbato Engineering Group, as well as the structure emphasized by DNIT.

In order to portray the influence of the highway on local daily life, it was decided to find out if there is really contact between the population and the road. In this context, counts were carried out on how many people access the road during a week, taking into account the vehicles motor vehicles, motorcycles, cyclists and pedestrians. The accounting took place from footage and photos, which were later analyzed for data collection. From this procedure it was possible to portray the types of occupants of the road, the amount per shift, as well as relating this use to the infrastructure offered by the city. The data collection point can be better located from the image 1 chart.

Based on the image 1 chart, there were twenty-six access points to the road (highlighted in red in the image 1 chart), these being streets that give direct access to BR 163/364. Seeking feasibility of the research, it was decided to collect the data in a busier location (highlighted as "data collection point" in the image chart 1), this choice was made by the location of three access roads to BR 163/ 364 at the collection point, with the centrality of the location as another factor, since, among the access streets to the road, the chosen location is the one located closer to the center of the city, with the presence of several businesses that serve the population in different ways, it is possible to relate such situations as factors that contribute to the population coming into contact with the road.

Image 1 Letter – Juscimeira-MT (2020)



Source: adapted from Google Earth (2020)

The amount of counting time totaled 1 hour and 30 minutes per day, for seven days of the chosen week, starting on Monday, November 18, 2019, ending this fieldwork on November 24, 2019. It is important It should be noted that this week was chosen because it was the holiday of November 20, Black Consciousness Day, with this, the fact that the holiday is in the middle of the week (Wednesday), could serve as a basis for understanding the pace of displacement of the population in a more complete way, as the research covered: weekdays, weekends and holidays.

These counts were carried out in three different shifts, based on the hours of travel of people to school, work and return to their homes, so in the first count,

classified as morning, the times were from 6 am and 50 minutes to 7 am and 20 minutes, while the second time, this one classified as late, corresponded to the return of workers and students, it took place from 10 hours and 50 minutes to 11 hours and 20 minutes, finally the last time, classified as night, corresponded the return of workers and students from the afternoon shift to their homes, from 4:50 pm to 5:20 pm.

It is noteworthy that the chosen times are related to observations previously established in deductive criterion referring to the day to day, in which it was found that the longest hours of movement in the city center occur at the highlighted times, justified by the hours of commuting to work or school and return to homes, during lunch hours, and return home from work in the afternoon. These analyzes are based on the accounting of access to the road by the population residing in the municipality of Juscimeira - MT, with regard to different purposes, which may be to cross it, as well as to use it.

The influence of BR 163/364 on commerce and daily life in Juscimeira-MT

Based on studies carried out by the Barbato Engineering Group (2016), it was found that the main services that are of great value to road users are: fuel supply, 24 hour tire service, restaurant and cafeteria, market, bakery and ATM. Table 01 below makes relationship between the services listed by the engineering group and the services present in the city of Juscimeira-MT.

Table 1 - Service and Commerce Providers (2019)

SERVICE PROVIDERS AND TRADE	the amount
Banks	3
rubber shop	2
Trade in perishable products (grocers, markets and supermarkets, warehouses, gas, meat house, conveniences, bakeries)	18
Pharmacies	4
Hotel	2
Snack bars and ice cream parlors	5
Vehicle mechanics	2
Fruit point of sale by self-employed sellers	1

Gas stations	2
Restaurant	4

Source: the authors (2019)

From the data collected, it was found that the services that are found in commercial establishments along the highway that can be used by road users totaled 43 establishments in general, with regard to the tire repair shop, only one operates twenty-four hours, for the sale of perishable products, it includes grocery stores, markets, supermarkets, gas warehouses, meat houses, convenience stores and bakeries.

It is noteworthy that most establishments on the side of the highway are not aimed at the public who use the highway (see table 2).

Table 2 - Service providers and businesses for the location (2019)

SERVICE PROVIDERS AND TRADE FOR THE SITE	the amount
Academies	2
Driving school	1
bars	5
Trade of non-perishable products (clothes, furniture, bed, table and bath, household items, stationery, cosmetics)	20
Everyday concerts (clothing, electronics, refrigeration)	4
Bus parking	1
Aesthetics (hairdresser)	8
Internet, computer and internet service providers	2
churches	3
vehicle washers	2
Lottery and credit brokers	2
maintenance and manufacturing of industrial equipment and facilities	3
Construction Materials	1
Metallurgy	1
Public agency	2
Health service providers (dentist, psychologist)	4
Specific service providers (accountants, lawyers)	4
Services aimed at agribusiness (sale of cattle, seeds, feed production, veterinary)	3
motorcycle mechanics	3

Source: the authors (2019)

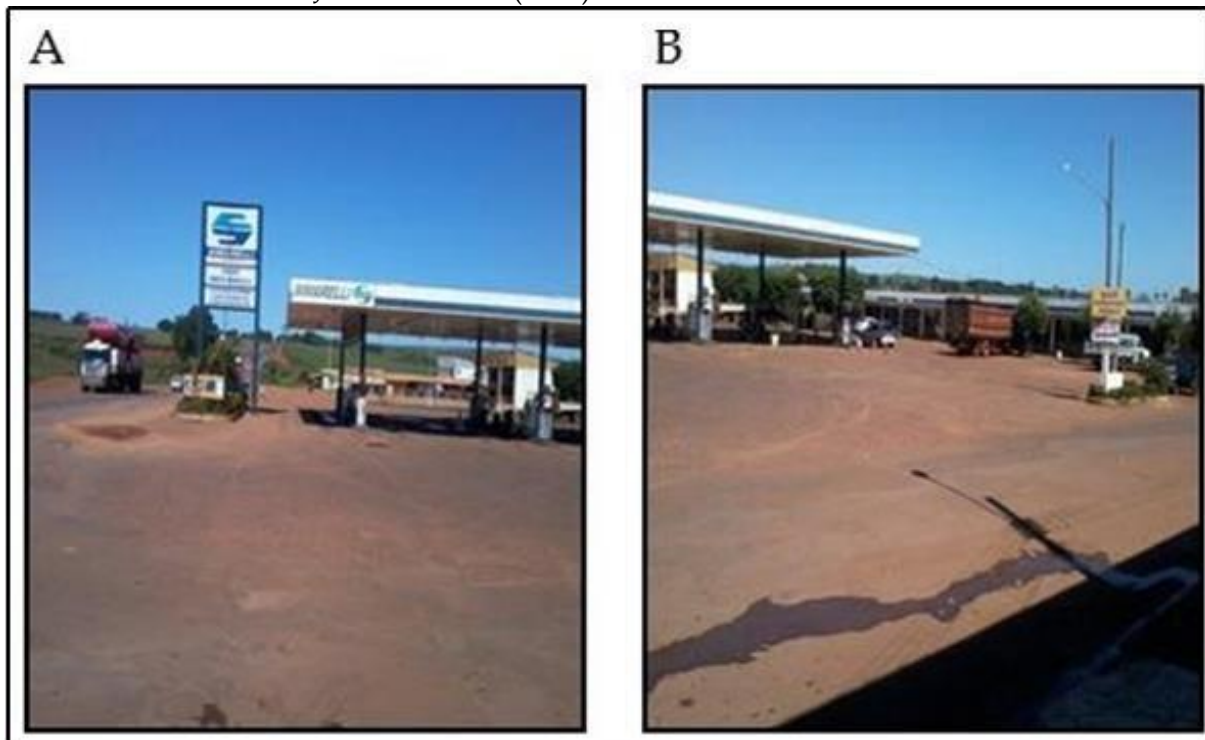
When related to commercial establishments and service providers, it was registered that there is the presence of 71 establishments that work with segments

aimed at serving the local population. It is noteworthy that there are also 88 residences on the side of the highway, which are located next to commercial establishments and service providers, being most often owned by the owner of the commercial establishment.

The structure of the city of Juscimeira-MT as a determining factor for the use of the site by road occupants

Based on the data explained in the previous topic, it was noted that gas stations and tire repair shops are the establishments that profit most from the presence of the road, as they are the only places that offer support for the stopping of vehicles. It is noteworthy, however, that the local posts do not work with services aimed at food (see panel 1).

Panel 1 – Gas station in Juscimeira-MT (2020)



Source: Photographed by Ferreira, January 2020

With regard to the "A" side of panel 1, it is possible to observe the proximity of the road in relation to the installation of the fuel station, being easily accessible, on the "B" side, there is another part of the structure of the station, it is understood, therefore, that at this station there is structure to be a stopping point for highway

users, however, analyzing the services already mentioned by the studies of the Barbato Engineering Group (2016), it is considered that some services are provided in the environment, however, in the city of Juscimeira-MT, no gas station has food service provision. Regarding the other services, there are some aspects that do not contribute to the use of road users (see panel 2).

Panel 2 – Distribution of laneside businesses (2020)

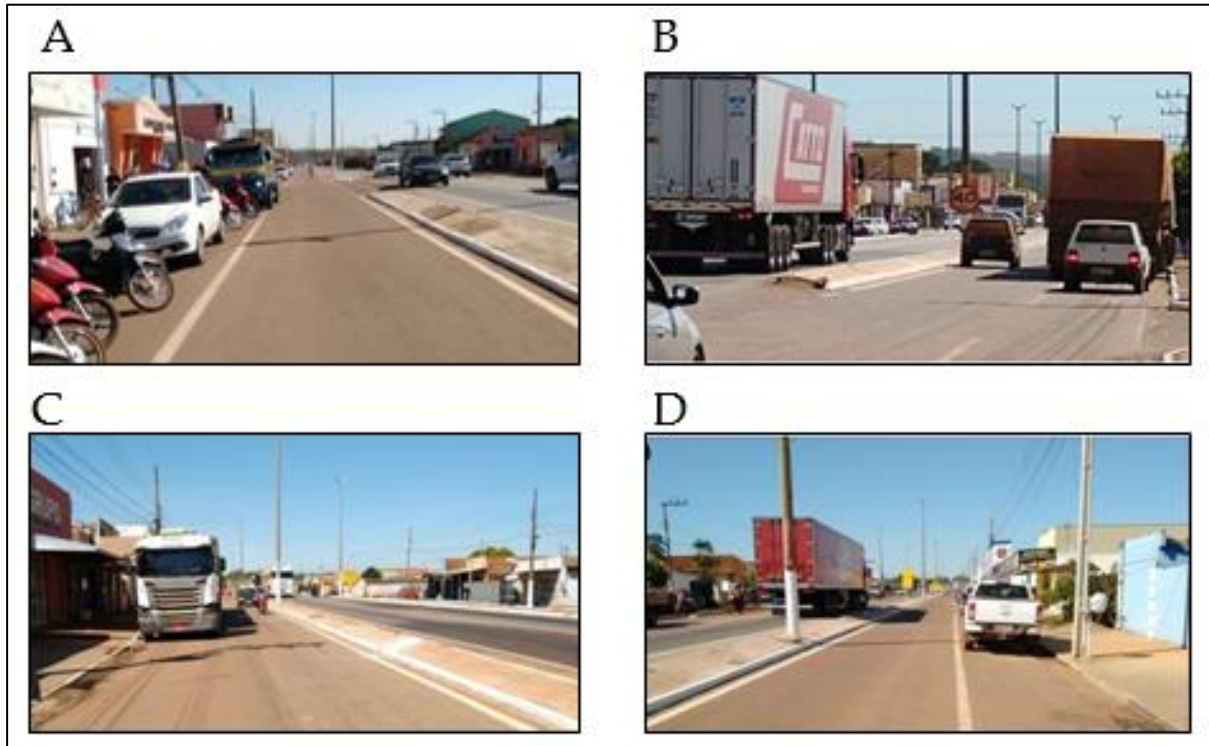


Source: Photographed by Ferreira, January 2020

In reference to the “A” and “B” sides of the panel, it is possible to observe that the premises of the stores are close to the road. As for the structure to receive road occupants, panel 3 allows for some checks

In the presented panel, there is a division into four different images, represented by the letters A, B, C and D, in the first images represented by the letters “A” and “B” there is the representation of the parallel on the west side, in both directions (Juscimeira-MT – Cuiabá-MT, Juscimeira-MT – Rondonópolis-MT), in the last images represented by the “C” and “D” side, there are representations of the parallel referring to the east side of the road, also in both directions. It is observed, therefore, that the structure of the road throughout the entire urban area is the same.

Panel 3 - The structure for parking in stores (2020)



Source: Photographed by Ferreira, January 2020

According to studies by the Barbato Engineering Group (2016) and highway development projects in reference to the basic guidelines prepared by DNER (BRAZIL, 2001), found that in Juscimeira-MT there is the presence of all services listed in the studies as necessary for the convenience of road users (fuel supply, 24-hour tire service, restaurant and cafeteria, market, bakery and ATM), however, based on the images in panel 3, it can be inferred that there is no necessary structure, both for mobility and for parking vehicles, especially for large vehicles.

DNIT (2005), in its technical studies, argues that in projects to support mobility, as well as stop, it is necessary to take into account some aspects, such as: the width of the vehicles which will use the road, influencing the structure of the roadway and shoulder; you also have to consider the wheelbase, which influences the width of the track; the length of the vehicles must also be taken into account, as this directly influences the flowerbeds and extension of the storage lanes, as this directly influences the flowerbeds and extension of the storage lanes, the weight of the vehicles that may eventually occupy the lane must also be taken into account, in

order to program yourself to build maximum allowable ramp size, as well as any additional climb lanes (third lane).

Based on the studies mentioned, it was found that the location does not offer a structure to accommodate the occupants of the road, because, as shown in the panel, there is no parking structure, stops and roundabouts. From panel 2, it was observed that there are many establishments that could provide services to road occupants, although, the structure of the parallels that could provide stops are not favorable to the occupation of many vehicles using the road. From this context, it was found that commercialization could be enhanced, in case there was enough structure in place to support the users. Such factors are depicted in part "C" and "D" of panel 3, which make clear the widths of the local parallels, not allowing the use of services provided in Juscimeira-MT for possible use by the occupants of the road, making clear the understanding that most of the profit from the trade that borders the BR 163/364 comes from the local population.

The influence of BR 163/364 on the daily lives of the population of Juscimeira-MT

The presence of the road in urban sectors can bring advantages and disadvantages, in this topic, it was verified that the Juscimeirense population has daily contact with the road, therefore, the studies were carried out considering the problems that may occur during contact with the route, or any benefits, it should be noted that each location has its own characteristics, therefore, there may be problems that are common to numerous places, however, problems may occur that are unique to a particular location. (DNER, 2001, apud BRASILEIRO, et al., 2014, p. 06).

There are the mobility issues, which are caused by the reduction of speed in the course of the road, this is due to the number of vehicles that travel on the road in urban areas, producing a joint flow of vehicles that are owned by the local population and vehicles that pass through the city, mostly in service. This brings inconvenience to all occupants Trinta (2001). Brasileiro et al. (2014), they attribute these problems to deficient signage and the absence of adequate technical standards.

There are also issues related to accessibility, Brasileiro et al. (2014), claim that the problem is due to poor management in urban development policy and transport planning for the local population, relating the problem to poor location of road accesses, returns in inappropriate locations and poorly structured entry and exit locations.

With regard to problems regarding the population, there is the occurrence of urban segregation, as highlighted by Negri (2008), this phenomenon occurs due to the fragmentation of the urban space, in the sense of the presence of highways, it is related to a decrease in the number of trips or a decrease in the number of daily activities performed, due to the risk of contact with the highway, which often forces the resident to cross it (DNER, 2001).

There is another type of interpretation on the aforementioned phenomenon, and the term used is segregation of communities, which refers to infrastructure works that are carried out on highways, such as duplication, which oblige residents in a given community to travel significant distances if compared to those that ran before the works (ULYSSEIA NETO; DIAS, 2003, p.03).

In Mouette's (1998) conception, three levels are highlighted, the primary being: the direct consequences of the transport system and refer to changes in accessibility and mobility; NIM: changes in accessibility and mobility altering travel patterns and the behavior of affected individuals; in tertiary it refers to changes in the urban structure, as depending on the city, part of the structure will be implemented so that it is possible to transport transportation from other regions.

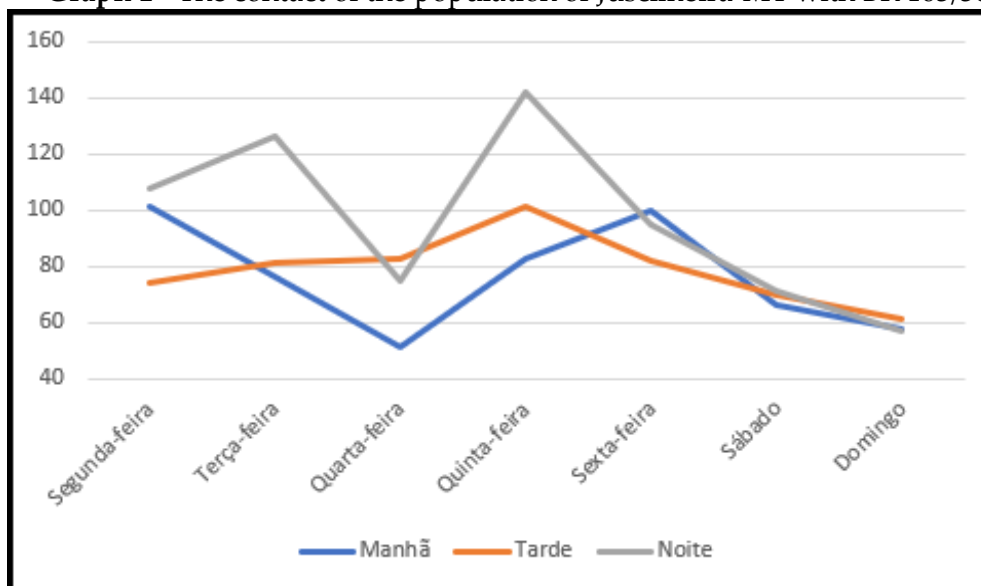
Regarding safety, the first factors analyzed are traffic accidents, because on the highway located in an urban sector the number of cars and people using the road increases considerably. This set arising from the intra- and long-distance relationship increases the number of accidents. These are some of the most recurrent problems in places with the presence of highways in urban areas, there may also be some other cases that could be developed in the long term, such as respiratory diseases and

deterioration of the architectural heritage and urban landscape (PIRES et al., 1997, p. 245).

The displacement of the local population is related to the need to reach work, school and all public agencies, as well as to meet the needs of basic and daily services (FERREIRA, 2019). It so happens that the city center, the part where the largest number of commercial establishments are found, is located on the margins of BR 163/364, another contributing factor is that the city has developed on both sides of the road, this factor conditions that there are establishments able to serve the population on both sides of the road, however, there is not always the presence of a certain service distributed equally between the sides of the road, this entails the need to access the road to reach these places.

Therefore, from the understanding of these phenomena that can occur due to the presence of the highway, the interaction of different factors is highlighted, with the flow of vehicles being intensified by the use of the territory on a national scale, the use of urban land as an option for locating commerce on the side of the road because it is a more busy for profit and the need for a social nature to access these services (FERREIRA, 2019). Based on this understanding, the following chart (1) presents the results.

Graph 1 - The contact of the population of Juscimeira-MT with BR 163/364



Elaborated by the author (2020)

Based on the data, it was found that in the morning shift there were 101 accesses to the road, this on Monday, on Tuesday and Wednesday, this value decreased, since 76 accesses were recorded on Tuesday and 51 on the Wednesday, the numbers registered on Thursday and Friday grew exponentially, totaling 83 on Thursday and 100 on Friday, while the weekend registered decreases with 66 on Saturday and 58 on Sunday. It is noteworthy, therefore, that the day with the lowest number in the morning during the counting time was on Wednesday with 51 accesses, whereas the one with the highest number of accesses was on Monday with a total of 101.

In the afternoon shift, Monday began with a record of 74 accesses to the road, subsequently there was sequential growth until Thursday, as Tuesday registered 81, Wednesday 93, and finally in the sequence of growth there was the largest record, with 101 records, the highest value for this shift throughout the week, after this sequence of growth, there was a reverse sequence, with decreases, on Friday it recorded 82 accesses, Saturday 70 and Sunday 61 records, with Sunday being the day with the lowest record for this shift.

In the period classified as night, the records on Monday resulted in 108 accesses to the road, subsequently, there was a growth totaling 126, on Wednesday the number decreased again, totaling 75, on Thursday the number increased, totaling 142, being the highest value registered compared to the other days of the week. Subsequently, from Friday to Sunday there were sequential decreases, since on Friday the record was 82, Saturday 70 and Sunday closes with 57. It is noteworthy that Sunday was the day when the lowest number of access to the track in that shift.

Based on the above, it appears that in the period classified as night, the highest values occurred on most days of the week analyzed, with only lower values on the following days: on Wednesday, as the afternoon shift registered the highest value, and on Friday, with records lower than in the morning shift, on Sunday, the value recorded in this shift was lower than the two other periods verified.

In reference to the afternoon shift, it appears that this has smaller variations, as only two sequences occur in it, one of increase and the other of decrease, it is noteworthy, therefore, that on most days of that week, the results were higher when compared to the morning shift, being contrary to these statements only on Monday and Friday. It is also verified that on Wednesday and Sunday the highest values were attributed to this shift.

In the morning, the lowest values are verified on most of the days observed, with the exception of the following: Monday, as the afternoon registered the lowest numbers of access to the road (at night the highest); Friday, on that day the highest records were attributed to this period; and on Sunday, therefore, the records obtained were higher than the night shift, but lower than the afternoon.

Observing data from DNIT (2017) on the traffic count, it was found that the flow of vehicles until Saturday had a large volume with cars of various types. Regarding the urban sector of Juscimeira-MT, the conditions are different, since in the Saturday the flow starts to decrease, this is conditioned to the daily rhythm, to the which is intense during the week and in contrast to the days of the weekend, the intensity of this flow has decreased considerably.

The different types of vehicles that access the BR 163/364

The totals presented in the previous topic refer to different types of ways for the population to move, including automobiles, motorcycles, bicycles and pedestrians. According to these specifications, it was found that the number of people who daily accessed the road in the center of Juscimeira-MT corresponded to a higher number than those observed, since generally there was not only one occupant in the related vehicles, from this context, this topic aimed to investigate the different types of vehicles in different shifts (see table 2).

Table 2 - Vehicles accessing BR 163/364 in the center of Juscimeira-MT (2019)

morning	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Vehicles	54	31	28	42	50	26	32
motorcycle	27	21	12	15	24	20	9
Cyclists	5	6	6	10	15	11	8
pedestrians	15	13	5	16	11	9	9

Total	101	71	51	83	100	66	58
Evening	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Vehicles	30	33	30	39	47	38	36
motorcycle	23	37	36	37	24	18	12
Cyclists	7	4	5	6	9	6	2
pedestrians	14	7	12	19	2	8	11
Total	74	81	83	101	82	70	61
Night	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Vehicles	45	56	36	54	48	37	34
motorcycle	31	38	24	40	23	16	11
Cyclists	6	16	6	14	11	6	4
pedestrians	26	16	9	34	13	12	8
Total	108	126	75	142	95	71	57

Elaborated by the author (2019)

In order to explain the different types of road occupation, it was found that most of the days and periods analyzed, the road occupants used vehicles with the exception of only the afternoon shift on Tuesday and Wednesday, days which the quantities of motorcycles were superior to the number of vehicles. It is noteworthy that motorcycles appeared only behind the vehicle number when compared to the other forms of locomotion verified.

With regard to pedestrians and cyclists, there were fluctuations between the days of the week and the period analyzed, however there was a greater number of pedestrians. It was also found that the results of the data were counted only the numbers of vehicles, motorcycles and bicycles, not counting the number of occupants of the same vehicle.

For a more detailed understanding, the different types of means of transport were analyzed, for a more detailed analysis of which vehicle was most often used by citizens, follow table 4.

Table 4 - Different types of vehicles per shift (2019)

morning	Total	Evening	Total	Night	Total
Vehicles	263	Vehicles	253	Vehicles	310
motorcycle	128	motorcycle	187	motorcycle	183
Cyclists	61	Cyclists	39	Cyclists	63
pedestrians	78	pedestrians	73	pedestrians	118
Total morning	530	Total evening	552	Total Night	674

Elaborated by the author (2019)

From the data collected, it was possible to verify that in the total of the morning it presents the lowest values, since the night value is superior to all other shifts, with a difference of 100 vehicles more.

The number of people who occupy the road daily in Juscimeira-MT was large, because, taking into account the general total of accesses during the time the fieldwork was carried out, there were 1756 accesses, it was found that the access values were totaled to the road in all twenty-six possible access points to the BR 163/364, 24 hours a day, the total would be higher than the results contained in the survey.

From the above, it was concluded that it is necessary to have ways of structuring providers, especially security for the occupants of the road.

From field observations, it is possible to observe numerous aspects that can contribute to users' insecurity, such as the lack of signage and the lack of security structure. In studies carried out by DNIT (2010), there were a kind of guidelines of what needs to be structured to provide the minimum structure to the occupants, from this context the considerations about the entire structure of an urban highway were emphasized. At first, considerations about support for cars were analyzed: shoulders and curbs:

shoulders are desired on any highway, including urban arterials. Properly designed shoulders provide areas for broken or accidented vehicles, can be used for bicycle traffic and provide additional area for maneuvering or recovering vehicles (DNIT, 2010, p. 126, our translation).

Based on this study, it was found what should be considered to support cars and motorcyclists: the geometry of the road, so that it is possible to offer improvement in repair works; traffic control devices and systems to better attend to needs; characteristics of the surface of the pavement, to control the durability of the pavement; and characteristics of the side areas, for possible structures such as shoulders.

Regarding cyclists, the study pointed out that these users should be separated from the flow of vehicles, as it is not conducive to safety in the midst of these vehicles, as well as large ones, such as buses and cargo vehicles. It was also verified the explanations about the structuring of the road such as: flowerbeds and marginal

areas, in these considerations it was pointed out that the strategic location should be chosen so that there is no construction of these or other structures serving as obstacles for the occupants of the road.

In reference to pedestrians, DNIT (2010), finds that on urban roads, places for sidewalks should be built on both sides of the road, offering greater security to access commercial areas, the explanation that there is the need to structure ways to cross the road, such as the use of walkways and crosswalks.

In the study, several points were verified, some of which apply and others do not apply to the local reality, however, it is understood that there are considerations mentioned that are pertinent to the daily life of the local society, based on this it is noteworthy that it is necessary to do as Silva Júnior and Ferreira (2006) argue, when they mention that each location has its respective reality and that studies should be carried out to know the location and apply the adjustments based on the guidelines obtained from competent bodies, such as the DNIT, it is noteworthy that even if it is not possible to apply all the guidelines, it is necessary to do as much as possible. On these considerations, the DNIT report (2010) explains that when it is not possible to adapt the minimum structure, bringing safety to pedestrians, cyclists, occupants of motor vehicles, as well as road users, the situation is considered to be critical.

It is noteworthy that in Juscimeira-MT there is no study on improving the structure, there are no safety components, there are not enough signs, from this scenario it was found that one of the main problems regarding the presence of the road in the city center is related to security, as, as already described, the population accesses and crosses it every day, throughout the length of the road in the urban sector at practically every time of day. This high number of residents' contact with the road is in line with what Ferreira (2019) explains, the presence of public agencies on both sides of the road and the number of businesses and service providers that are located along the BR 163/ 364, make the citizen in a certain need obliged to enter into a contract with the road.

Final considerations

The location of the stretch in common with BRs 163 and 364 studied, as part of the product flow route, directly influences the city's daily life, especially in the location of commerce, which is concentrated in this busiest place, bringing one more local consequence arising from external factors.

From this research, it was possible to conclude that the highway does not play the role main with regard to the commercial income of Juscimeira-MT, as it comprises it should be noted that local commerce is not mostly aimed at the presence of the highway, since most establishments are service providers to the local population, but even so there are a considerable number of merchants who have part of their profit related to the presence of the highway, as is the case of gas stations, hotels and tire repair shops.

Regarding daily life, it is noteworthy that the data survey was carried out in 2019, the year in which the highway was still present in the center of Juscimeira-MT, therefore, the pace was different from the current one, which started to change as of August 2020, however, in reference to the year studied, it was observed that the influence of the road in everyday life is based on some situations such as: the feeling of insecurity, mobility disorders and urban segregation.

From the context explained, it was found that many phenomena are intertwined, such as: the economic rhythm and the historical context that guided the current state, as well as society in urban areas, these interactions lead us to conclude that the extent to which changes occurred, the influence exercised occurred in several factors, therefore, there is a need for all measures taken, whether social or environmental policies, should be worked on by the authorities as a whole, since the influence is not restricted to the areas of interest.

The main difficulty in carrying out this research was the removal of the highway from the urban perimeter of Juscimeira-MT, this factor ended up giving the work a research status of the past, it is noteworthy that when the project was defined, in early 2019, there was no forecast for this process of removal from the highway to

take place, something that only happened more than 1 year and a half later, on August 1, 2020, with this research already in its final phase.

However, since the removal of the BR is recent and the population is still adapting to the new pace of the city, we think that the research which will seek to understand this new pace will be carried out in the future, with more formed and conclusive evidence and opinions, being possible make comparisons with ours research resulting in complete studies for the understanding of where this important structure, which is BR 163/364, influenced and still influences according to the subjectivity of the local population.

References

ALBANO, J. F. A organização rodoviária. Porto Alegre. UFRGS. 2007. P. 03. Disponível em: http://www.producao.ufrgs.br/arquivos/disciplinas/420_04-organizacao_rodoviaria.pdf. Acesso em: 05/11/2020.

BRASIL. Estatuto da cidade: Lei n. 10.257, de 10 de julho de 2001, que estabelece diretrizes gerais da política urbana. Brasília/DF. Câmara dos Deputados, Coordenação de publicações. 2001.

BRASILEIRO, A. Et al. A influência de rodovias na área urbana. Revista Nacional de Gerenciamento de Cidades, Tupã, SP, v. 02, n. 13, pp. 01-14, 2014.

CONSÓRCIO MENDES JUNIOR; ENPA; CONTÉCNICA. Projeto executivo de engenharia para as obras de restauração e adequação de capacidade da rodovia BR 163/364/MT. Brasil. DNIT. SREMT. 2015.

DNER. Projeto de Ampliação de Capacidade Rodoviária das Ligações com os Países do Mercosul – BR 101: Florianópolis (SC) – Osório (RS), Projeto Básico Ambiental. Brasília. Programa de Melhoria das Travessias Urbanas. Ministério dos Transportes. 2001. 50p.

DNIT. Manual de projeto e práticas operacionais para segurança nas rodovias. Rio de Janeiro/RJ. Diretoria executiva. Instituto de Pesquisas Rodoviárias. Projeto técnico. 2010.

DNIT. Manual de Projeto de interseções. Rio de Janeiro/RJ. Instituto de Pesquisas Rodoviárias. Projeto técnico. 2ª Ed. 2005.

FERREIRA, E. A. A. Impactos negativos à população relacionados à presença da rodovia BR 163/364 em Juscimeira-MT. In: Anais da XXX semana acadêmica de geografia - "A geografia do século XXI: das condições da natureza, as relações

- sociais". Anais...Rondonópolis (MT) UFR, 2019. Disponível em: <<https://www.even3.com.br/anais/saguf/220709-impactos-negativos-a-populacao-relacionados-a-presenca-da-rodovia-br-163364-em-juscimeira-mt>>. Acesso em: 15/06/2020.
- GODOY, L. P. Aspectos geológicos da região do polo turístico das águas termais de São Lourenço, MT. São Paulo: UNESP, Geociências, v. 35, n. 1, p.110-125, 2016.
- GRUPO DE ENGENHARIA BARBATO. Relatório de impacto no trânsito: posto rodoviário graal sem limites. Bauru/SP. Barbato estudos de engenharia. 2016.
- IBGE. Frota de veículos Mato Grosso. 2020. Disponível em: <https://cidades.ibge.gov.br/brasil/mt/pesquisa/22/28120>. Acesso em: 05/11/2020.
- IBGE. Rondonópolis Mato Grosso MT. Brasília. Biblioteca digital. 2012. Disponível em: <https://biblioteca.ibge.gov.br/visualizacao/dtbs/matogrosso/rondonopolis.pdf>. Acesso em: 05/11/2020.
- IPPUC. BR Vida: Pojeto BR-116. Curitiba/PR. Prefeitura Municipal. 1991.
- JUSCIMEIRA. Distritos de Juscimeira. Juscimeira. Prefeitura Municipal de Juscimeira. 2017. Disponível em: <https://www.juscimeira.mt.gov.br/distritos/>. Acesso em: 05/11/2019.
- LEFEBVRE, H. La production de l'espace. Paris: Éditions Anthropos, 1974, p. 235.
- LIMA, E. B. N. R.; FILHO, P. M.; MOURA, R. M. P. Plano municipal de saneamento básico: Juscimeira – MT. Cuiabá/MT. Universidade Federal de Mato Grosso. Projeto técnico. 2017.
- MARTINS, B. C. R. Formação socioespacial e expansão urbana da cidade de Juscimeira – MT. Trabalho de conclusão de curso. UFMT. 2014.
- MATO GROSSO. Há 46 anos, Cuiabá se ligou ao restante do país por rodovias. Cuiabá. Imprensa. 2019. Disponível em: <http://www.mt.gov.br/-/11725820-ha-46-anos-cuiaba-se-ligou-ao-restante-do-pais-por-rodovias>. Acesso em: 05/11/2020.
- NEGRI, S. M. O processo de segregação sócio-espacial no contexto do desenvolvimento econômico da cidade de Rondonópolis –MT. (Tese de Doutorado em Geografia). Instituto de geociências e ciências exatas. Rio Claro: UNESP, 2008.
- OLIVEIRA, B. da S. Performances políticas e potencialidades econômicas de desenvolvimento local o município de Juscimeira MT. 2008 Dissertação (mestrado) – Universidade Católica Dom Bosco, Programa de Pós-Graduação em Desenvolvimento Local. 2008.
- PIRES, A. B.; VASCONCELLOS, E. A.; CAMARGO E SILVA, A. (Coord.). Transporte Humano: cidades com qualidade de vida. São Paulo: ANTP, 1997.

SANTOS, M. A Urbanização Brasileira. São Paulo/SP. Editora Hucitec 3. ed. 1996.

SILVA JÚNIOR, S. B.; FERREIRA, M. A. G. Rodovias em áreas urbanizadas e seus impactos na percepção dos pedestres. Uberlândia/MG. Revista Sociedade e Natureza. V. 20, n. 1, pp. 221-237, 2008.

SILVA JÚNIOR, S. B. Rodovias em áreas urbanizadas e seus impactos, na percepção dos pedestres. 2006. 156 f. Dissertação (Mestrado em Engenharia Urbana). São Carlos/SP. Universidade Federal de São Carlos. 2006.

SILVA JÚNIOR, S. B. A rodovia na cidade: o espaço lindeiro à BR-050 em Uberlândia, MG. 2003. Uberlândia/MG. Monografia (Bacharelado em Geografia) - Instituto de Geografia, Universidade Federal de Uberlândia. 2003.

SPÓSITO, M. E. B. Capitalismo e Urbanização. São Paulo: Contexto, 1998.

TARIFA, J. R. Os climas nos maciços litorâneos da Juréia-Itatins: um ensino de ritmanálise. Tese de livre Docência. DG.FFLCH. USP. 2002.

TRINTA, Z. A. Contribuição ao Estudo das Travessias Urbanas de Pequeno e Médio Porte por Rodovias de Longo Curso. Dissertação (Mestrado em Engenharia de Transportes) – Coordenação dos Programas de Pós – Graduação em Engenharia –

ULYSSÉA NETO, I.; DIAS, L. M. M. de V. Identificação e caracterização dos efeitos de segregação de comunidades em projetos de duplicação de rodovias. Rio de Janeiro/RJ. In: CONGRESSO DE PESQUISA E ENSINO EM TRANSPORTE, 18, 2003. Anais... ANPET, 2003.

Non-scholarship authors

Authors' contribution: Emanuel Anésio Andrade Ferreira: elaboration, discussion of results, research bibliographic, field research, data tabulation. José Roberto Tarifa: Supervision, final analysis of results, text revision, translation to the English language.