

Measuring and Mapping Walkability in Bishkek

Introduction and Methodology of research

An idea to conduct this project came up after my involvement in 2021 as research assistant to the team of researchers from SILK¹ led by Rada Valentina kyzy. That project focused only on Chui Avenue and a research question also was mostly economic oriented. But in this study together with my supervisor Emil Nasritdinov we decided expand the research in the scale of entire city, and we were particularly interested in comparing walkability in three distinct types of urban communities in Bishkek: city center, micro-districts and novostroikas². The study was conducted from November of 2021 to March of 2022. During that we have collected lots of data according to thirteen indicators of walkability which we have figured out for our task.

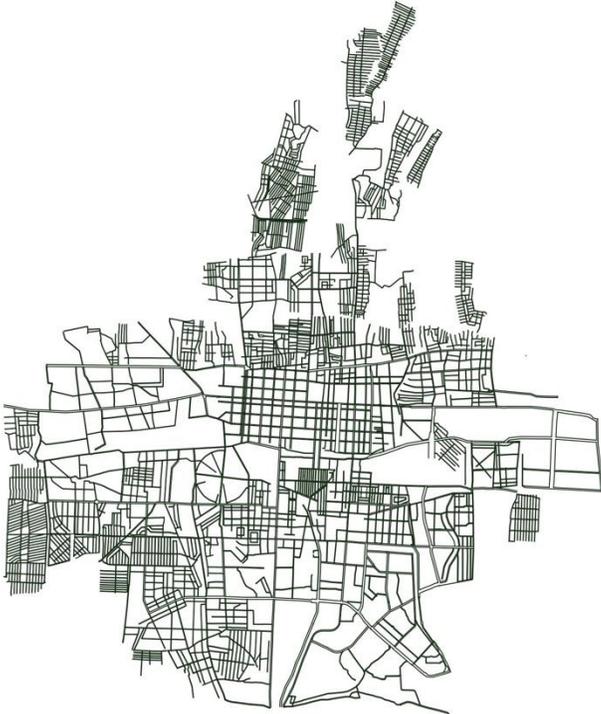
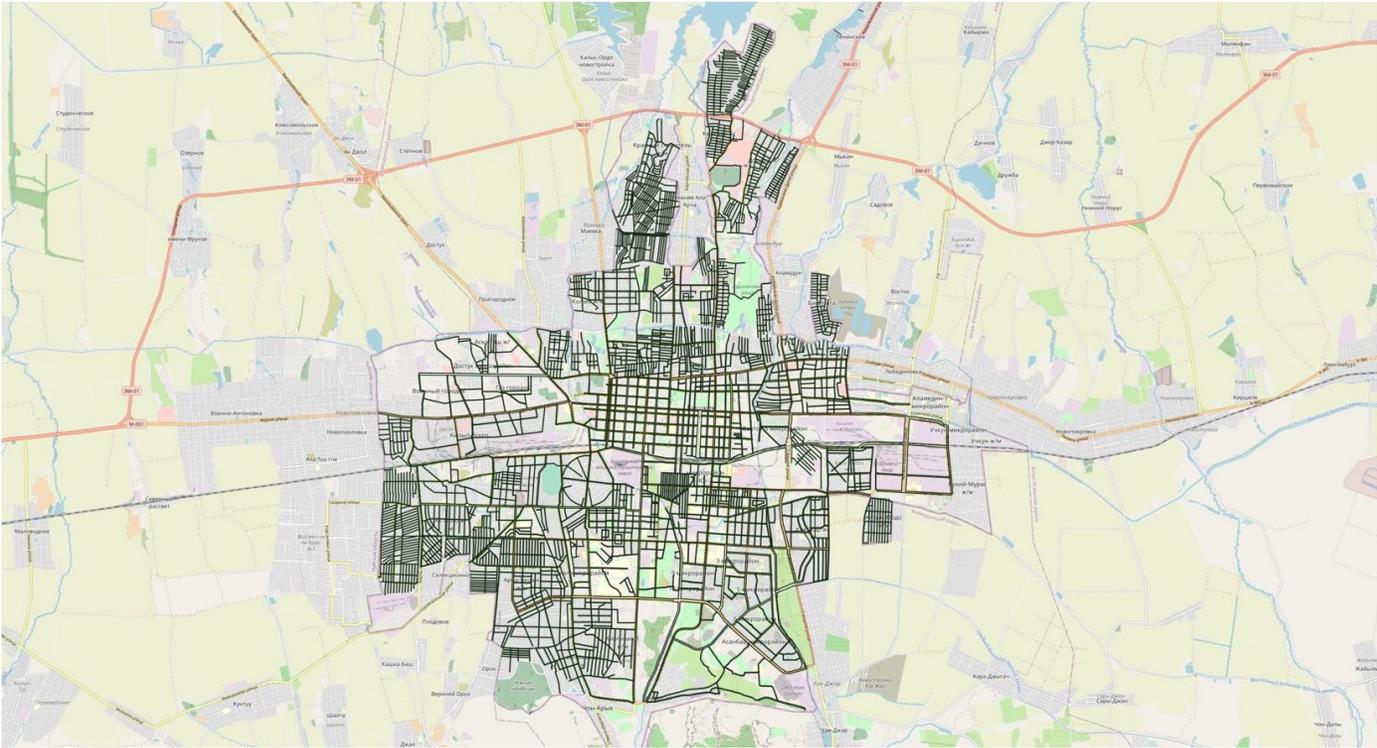
- Main road Asphalted/Grouted
- Quality of main road
- Is there a road verge
- Is there a sidewalk
- Width of sidewalk
- Type of pavement is mixed or no
- Type of pavement (asphalt, paving stone, tile and ground)
- Quality of pavement
- Sidewalk drops (number)
- Inclusiveness
- Greenery
- Lighting
- Obstacles

The main platform for processing the data which I used is QGIS – software that allows complex mapping and analysis of spatial information. "A geographic information system (GIS) is a computer

¹ Social Innovation Lab Kyrgyzstan, AUCA, https://www.auca.kg/en/dss_silk/

² Low-rise residential neighborhoods on the outskirts of Bishkek

application for managing, editing, analyzing and displaying data which is spatially referenced to the Earth". (Joel M. Caplan)



Indicators

Main road

The methods of building roads have changed a lot since the first roads were built around 4,000 BC which were made of stone and timber. Those roads were used basically for military operations by Romans. Since that construction of the modern roads gradually improved, and now roads tend to be constructed using asphalt and/or concrete. In our tasks we also have included certain indicators as a common for all streets of Bishkek, in order to see the situation between sidewalks. We just marked roads asphalted or grounded. For our purpose that is enough.

Quality of main road

Next indicator is about the quality of the main road, and it was assessed subjectively from “0” to “5” which means that “0” is worstest, and “5” is the best. In order to be assessed in the highest mark, a main road should be asphalted and without breaks or holes.

Is there a road verge and sidewalk ?

Some streets of Bishkek do not contain a road verge or sidewalks, for that reason it was important to add such indicators to the list. A road verge is not essential for pedestrians, but sidewalks are. Without sidewalks evaluating through other indicators is not required. So, it was not our research goal.

Width of sidewalk

For city residents, especially for pedestrians, width of sidewalks is one of the most significant attributes of walkability. If a sidewalk is wide enough, it is automatically perceived in a good way, at least constructing smooth and flat pavement in those sidewalks will be possible.

Type of pavement mixed, or no?

This indicator also is evaluated from “0” to “5”.

In the city of Bishkek, a sidewalk pavement differs from segment to segment. According to the local rules each individual entrepreneur must design a type of pavement by yourself. So, material of pavement fully will rely on the preference of owner's of facilities. In some cases, such a variety of pavement does not combine with each other visually or physically, which means in some segments of the street tile and paving stone cannot be attached well to each other. As a result, such pavement will not stay long.

Sidewalk drops and Obstacles

The next indicators show us how many times a pedestrian during the walking process should go up or down upon the pavement, and how many obstacles a pedestrian might meet. It can be trees, pipes or any facilities which stay on the way. Accordingly, less drops and obstacles are better.

Inclusiveness and Greenery

These indicators also are evaluated from “0” to “5”. Inclusiveness in the narrow sense means smooth and not slippery pavement with ramps, which facilitates the movement of people. Greenery is the amount of verdure in the sidewalks.

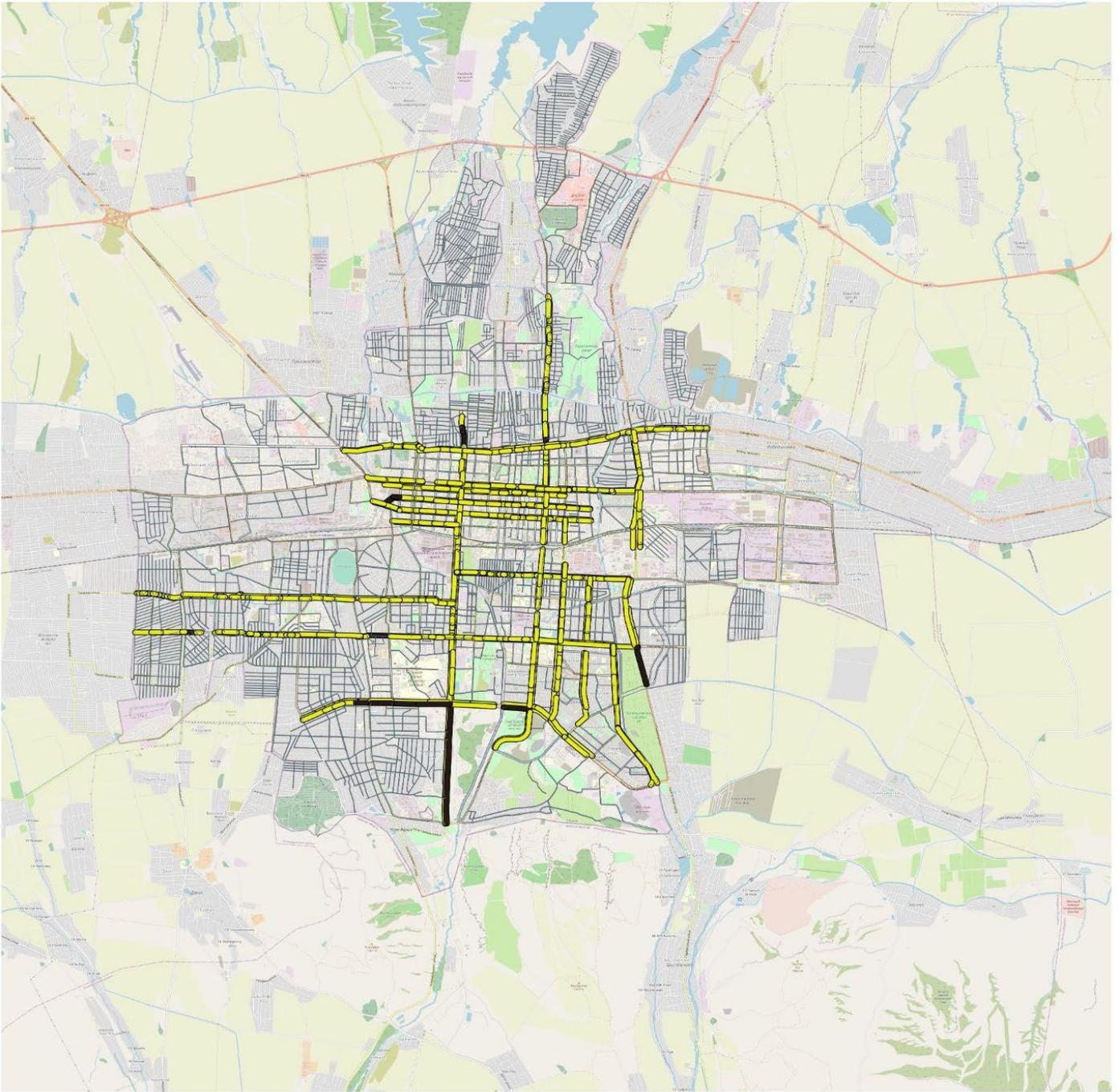
Lighting

The last indicator in our list of assessments was lighting, which is one of the most important attributes of sidewalks. At night the lighting system makes the movement of pedestrians easier and safer. Number of lightings directly correlates with how many people decide to choose a particular sidewalk.

The presence of sidewalks

Sidewalks always were and are an integral part of cities. Modern cities usually prioritize sidewalks as a central component of urban design, so in this research sidewalks also were the main aim of our concentration. In this a QGIS map below can be seen the presence of sidewalks in the city of Bishkek. A black color in the map means an absence of sidewalks, in contrast, light green is presence. In the central parts of the city sidewalks almost everywhere exist, however in the periphery zones sidewalks are not much. Big streets such as Manas, Chui, Akhunbaeva, Baityk-Batyr or Jibek-Joly are more pedestrian friendly streets, even if in some parts of these streets' sidewalks with broken pavement, narrow width and illegally parked vehicles. At least there are a space for creating sidewalks. Usually, the southern parts of the city are perceived as a pattern for the whole city, however in some streets of the south there are no sidewalks at all. Mostly, these areas are not inside micro districts, but in peripheral streets as 7-april. The eastern part of the Botanical Garden also lacks sidewalks, although garden located areas should be pedestrian oriented and might play an important role for creating enjoyable space where residents want to spend their time. Also, one might have noticed, that Mana avenue - northern part is the same, no sidewalks and other pedestrian oriented urban designs. It is a good chance for municipal services to increase the number of pedestrians outside by enhancing the quality of city sidewalks. In the case of Bishkek also might be seen that the city become more sprawled, and highways replaced sidewalks by creating significant obstacles for pedestrians. So, thinking about increasing the number of sidewalks outside of the city might be too optimistic.

Sidewalks



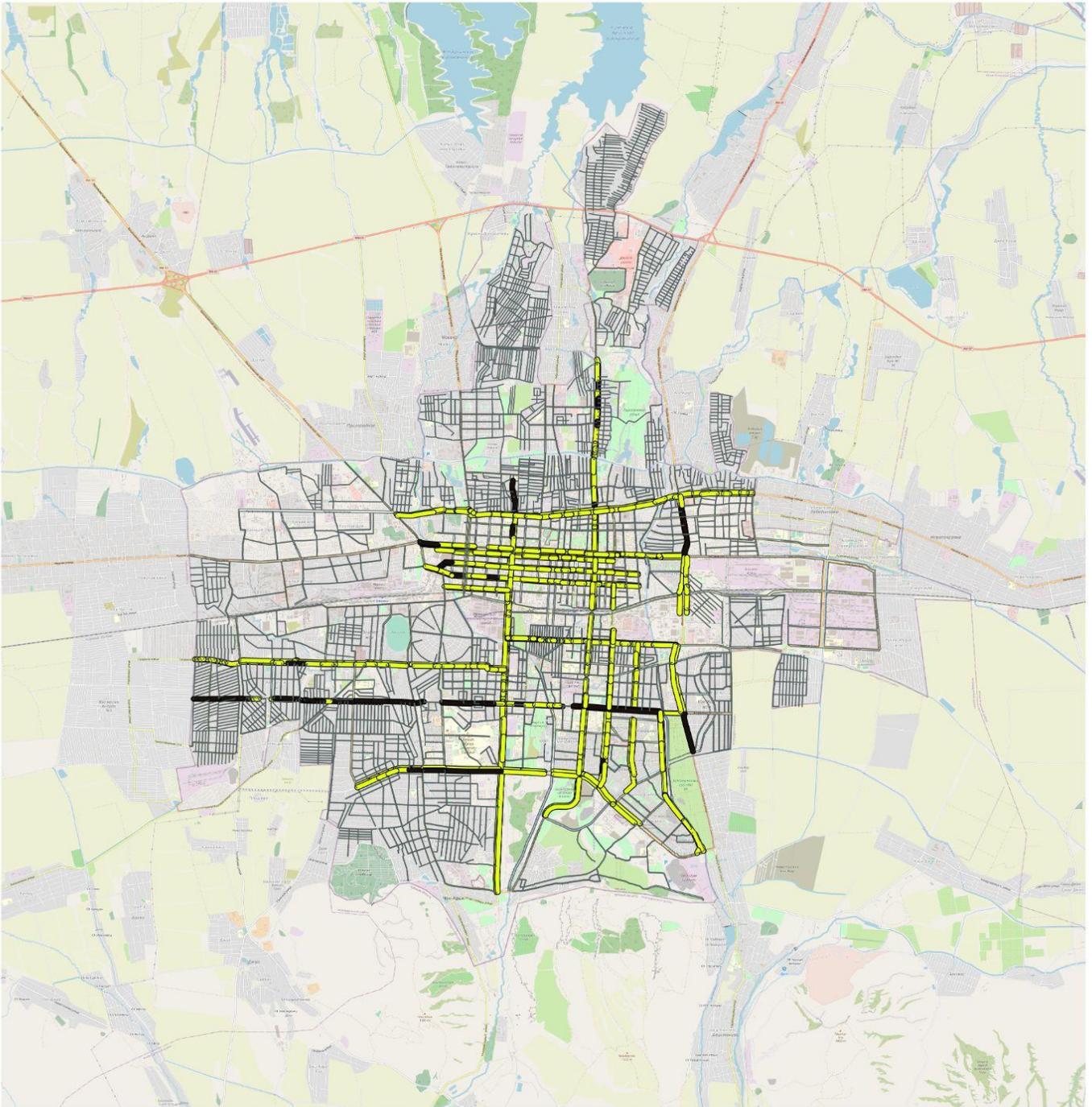
The presence of a sidewalk

- No
- Yes

Road verges

Another important indicator of pedestrian-oriented cities is a road verge. Road verge means the section between roadways and sidewalks and usually these areas are planted by trees and greenery. In the case of Bishkek, the presence of verges can be considered as commendable, including the fact that streets of Bishkek are not so wide. Usually, verges are from two to seven-eight meters. If we look at the map, we can see that road verges are not everywhere. Black lines in the map shows in which particular area of the city no road verges. In comparison with the sidewalk map, we can see an interesting picture. Chyngyz Aytmatov avenue from the first map without sidewalks, but in the second map with road verges. It is something curious. In the center parts of the city the situation is relatively good, many streets include road verges, but they are not so wide or used as illegal parking areas. Almost the whole Akhunbaeva street is without road verges which means there is not enough space for creating such an area. Even sidewalks in Akhunbaeva so wide and unremarkable. On the longest and most important streets of the city, 7-April barely has road verges. I would say if a government decides to make in 7-April Road verges and sidewalks on April 7th, it would be very rational, because of the width and significance of the street for people and the city. Areas above Jibek-Joly Avenue are not quite developed in terms of urban infrastructure. There are quite a big portion of areas without road verges. The western part of the city on Fuchiko street as a previous street is not developed. Near the Rabochiy Gorodok also streets without road verges, the presence of road verges is also good in terms of safety, a verge might secure pedestrians from cars on roads. Or a verge where planted some greenery might be used as a shield.

Road verges



The presence of a road verge

— No

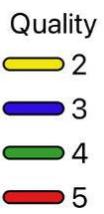
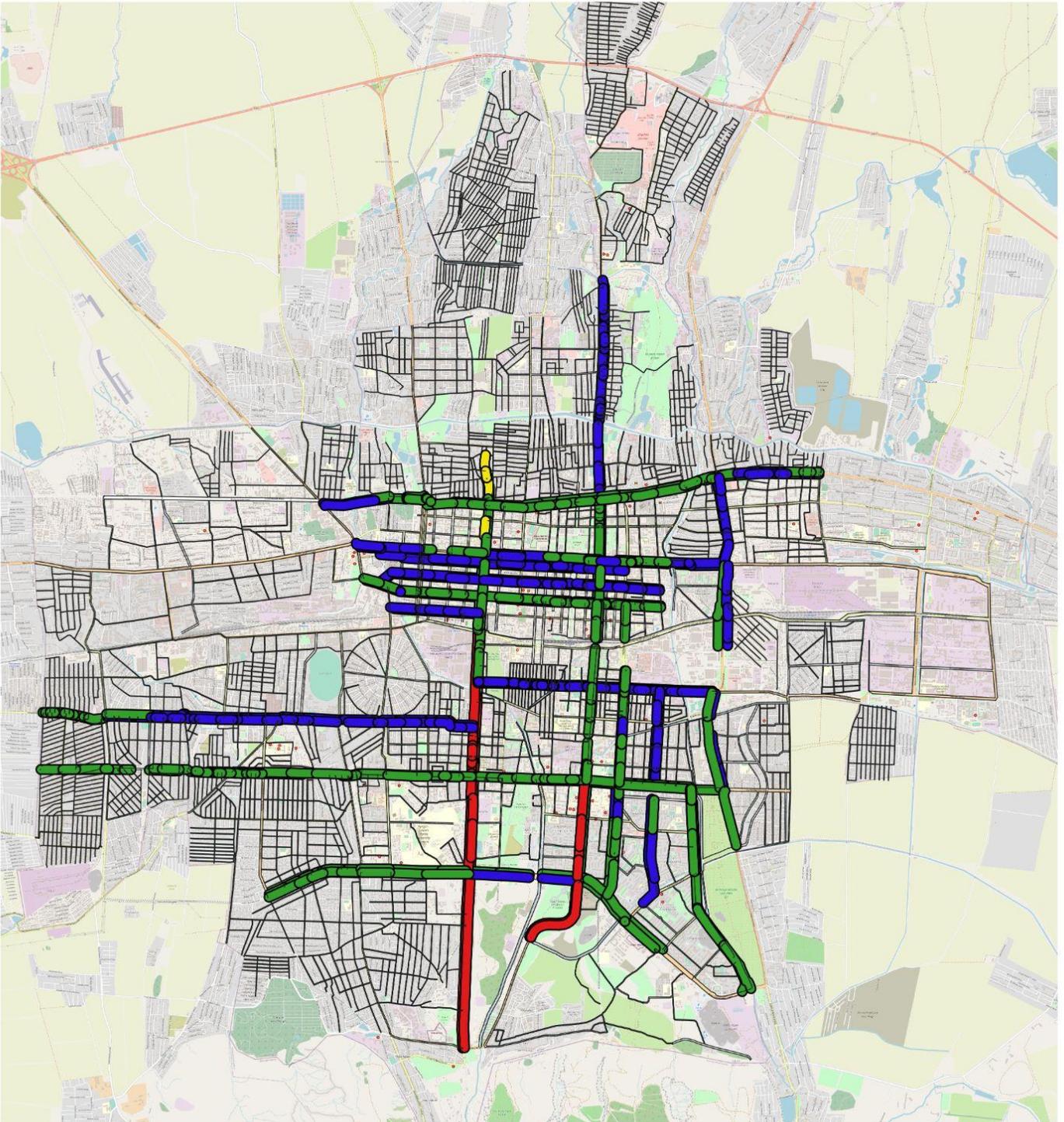
— Yes

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Quality of main roads

Next indicator is “quality of main road”. I presume, the government of Bishkek might be more interested in enhancing main roads, rather than sidewalks. From the economical perspective, the presence of good roads is more beneficial for the government. The map below shows us how the situation with quality of roads is going on. For assessing roads used scales from 0-5. However, from the map it can be seen that none of the roads were not rated zero or one, which means they are the worst among the cities of Kyrgyzstan. Predominantly the quality of roads between three and four. Central parts of the city were rated three which just show us that roads of Chui Avenue, Kievskaya, Msokovsya or Totogula should be maintained on a regular basis. Those roads are under a high pressure in terms of traffic congestion. There are some roads in Bishkek with the worst rate. That road connects to Manas from the north. Manas avenue is an interesting street, there are three different parts according to our rating, which makes the street so diverse. Close to the south of the city the roads become more advanced. For example, Manas Avenue when passing to Chyngyz Aitmatov Avenue is one of the confirmations of it. Or Baity-Batyr street, one of the best developed and pedestrian oriented, also ending segments are rated maximum - five.

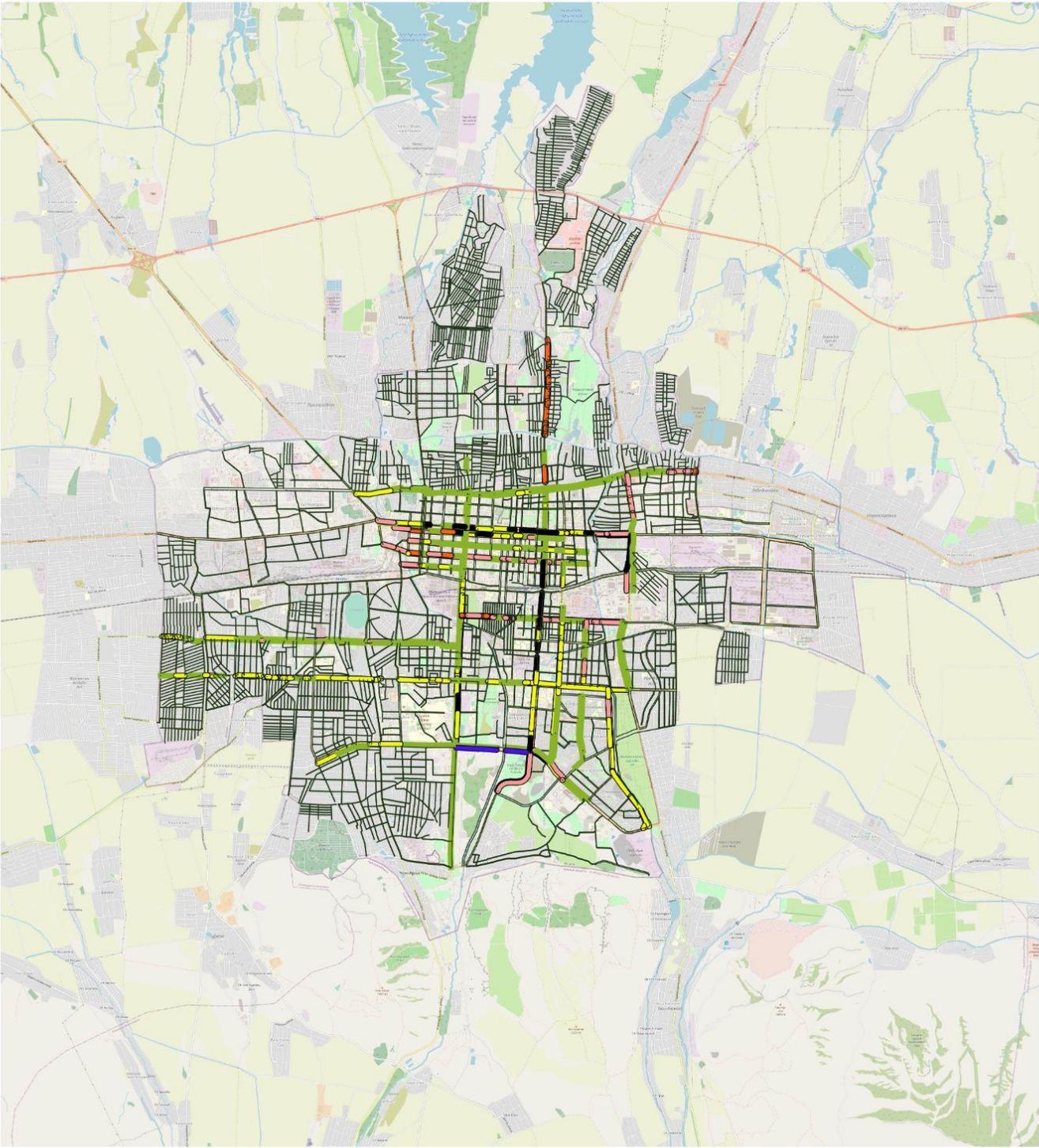
Quality of main roads



Quality of pavement

So, the next indicator is rating the quality of the pavement. That is one of the important things when we talk about sidewalks. Usually, the city of Bishkek used three different types of pavements: asphalt, tile and paving stone, and sometimes it might be just ground. Because some sidewalks are still waiting to be repaired. Through these materials we evaluated the quality of pavement. On the map we can see the situation with the pavement. Again, the quality of pavement is also rated between “0” and “5”. Here Baityk-Batyr street has the best rate, between four and five. Along with good quality pavement the street has bicycle lines for cycling, which automatically make this street modern and pedestrian- oriented. Another long street is Jibek-Joly where almost all pavement is relatively of the same quality, except only in the intersection at the beginning Sylenogradskaya or Budyonogo streets. Sidewalks there are quite wide, however without a good surface. According to the map, there are some problems in the south part of Bishkek too. There might be found the worst pavement of micro districts. On the map we can see Gagarina Street, where all segments were rated as a normal “3”. Even though the street itself is long and has a lot of intersections. Streets Gorkogo, Toktogula or Kievkaya are perceived on the same level. Another long street is Akhunbaeva which was also evaluated without jumps, every segment of the street has almost the same quality pavement.

Quality of pavement



Quality (0-5)

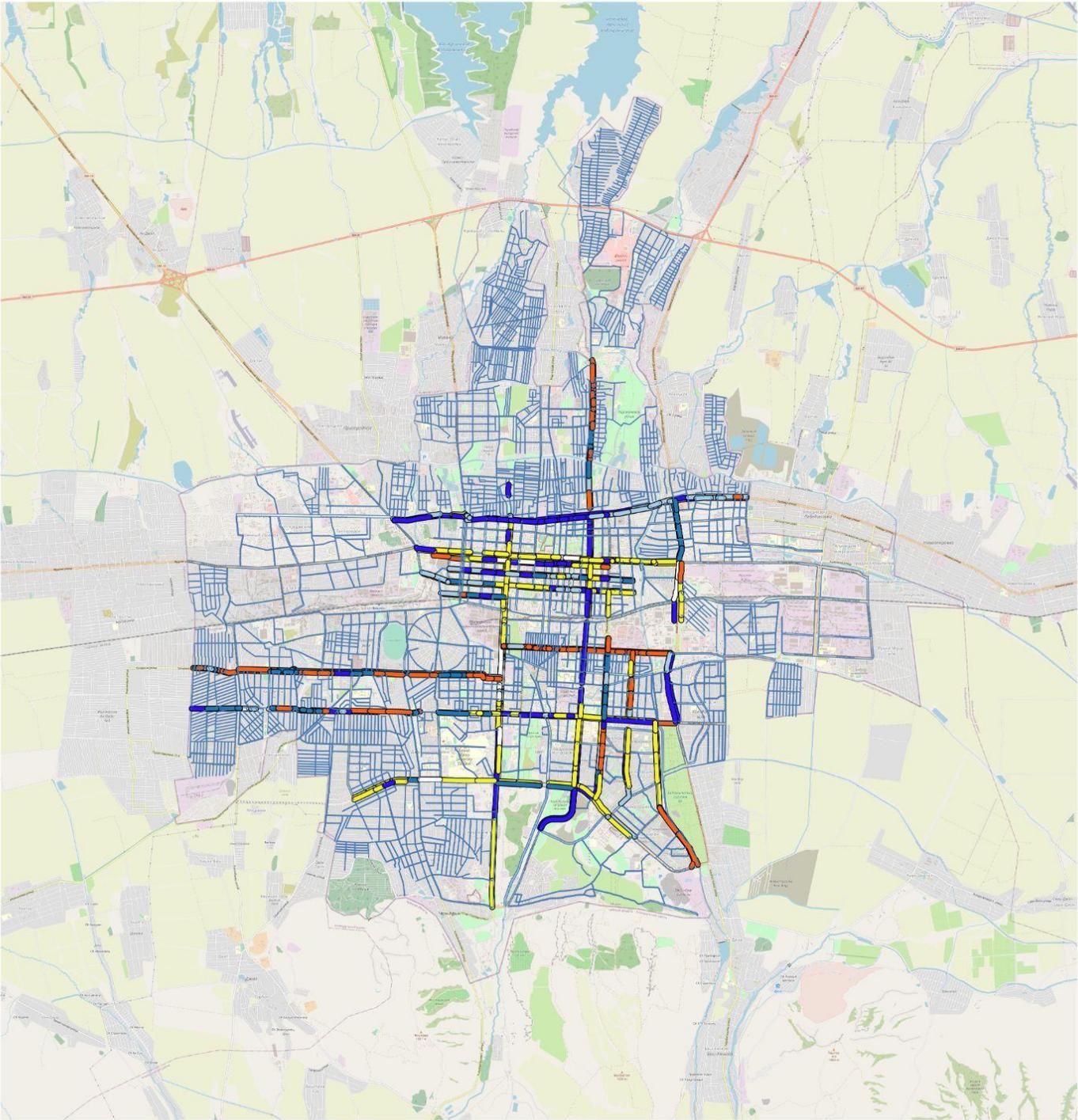
- 0
- 1
- 2
- 3
- 4
- 5
-

Green spaces

Our next indicator is the presence of green spaces in the streets of Bishkek. I would say in the case of Bishkek greenery is a very important aspect of urban design. Considering the fact that Bishkek is one of the air polluted cities in Central Asia.³ One thing should be clarified that green spaces were included only if they are located along the sidewalks. Otherwise, the south part of the city would be assessed as the best. If we look at Jibek-Joly Street it has good potential to be modified in terms of a sidewalk pavement, road quality or lightning. The street is quite wide and green. On the map we can see Jibek-Joly is rated at the middle of our scale “3”. Which is not bad and good, it's just normal. However, when you are in Jibek-Joly in hot times of year, the street is perceived as shady and chilly. In contrast, Chui Avenue which is rated between “4” and “5”, perceived as hotter than Jibek-Joly. In the case of Chui Avenue, parking areas for walking and relaxing add value to the entire street. Other streets in the central part of the city Kievskaya, Toktogula, Gorkogo are rated as normal, “3”. In terms of greenery streets from south of Bishkek, especially micro districts can be considered as advanced. The big portion of greenery is concentrated there, which adds value for everything in that part of the street. Greenery might impact the cost of an apartment and other real estate. Akhunbaeva street is quite diverse in terms of green spaces. Various parts of the street might be perceived completely differently. For example, if we cross Manas Avenue and go further there might be found segments which were “1” or “2”. Near to the Botanical Garden when the street connects to 7-April Street the situation is very positive. Some segments were ranked as “5”. Baityk-Batyr street, close to the south of the city also might be considered as a green.

³ <https://www.iqair.com/kyrgyzstan>

Greenery



Greenery (0-5)

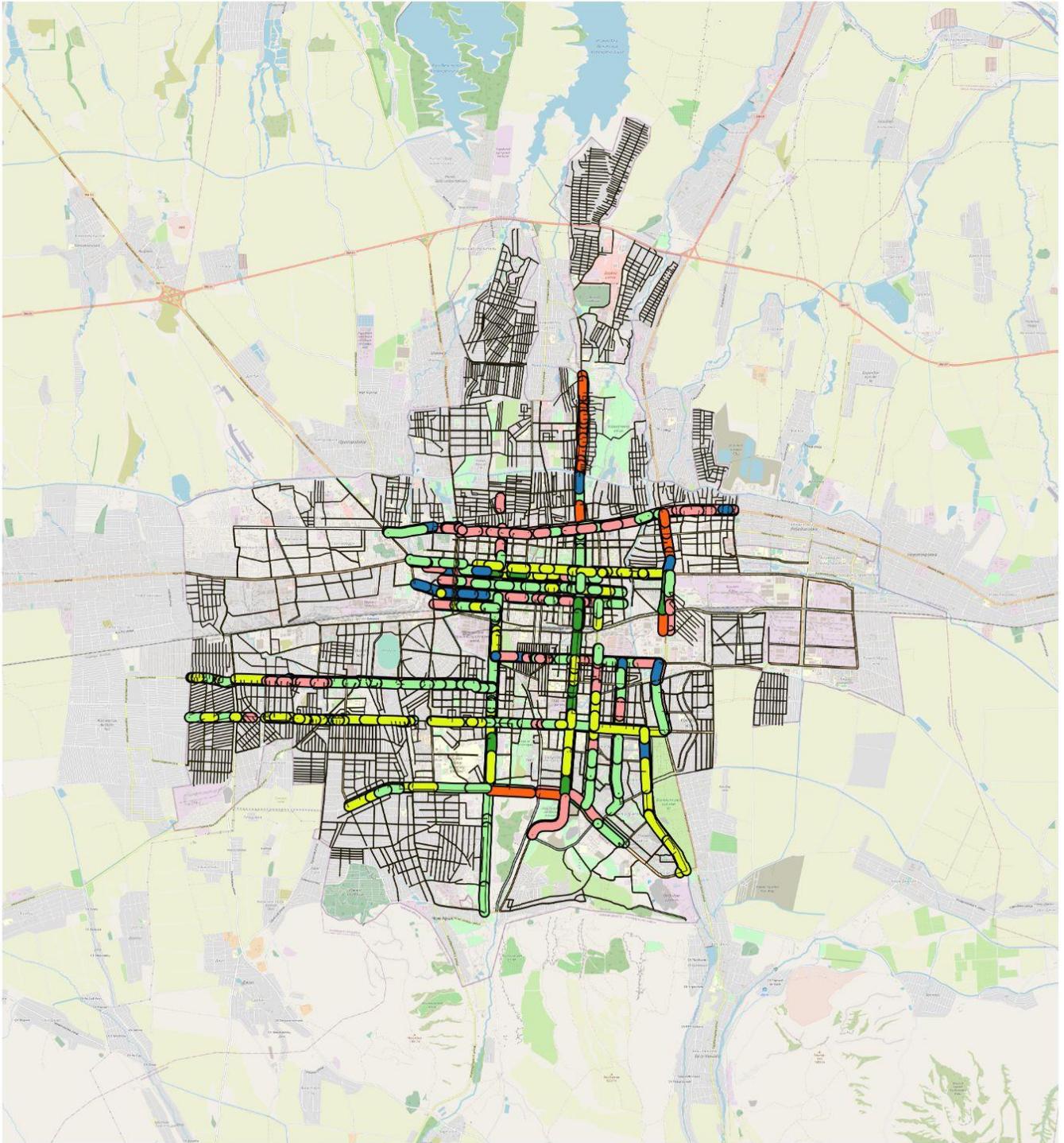
- 0
- 1
- 2
- 3
- 4
- 5

Inclusiveness

Another important indicator is inclusiveness, which is currently highly prioritized by urban planners towards their projects. The term inclusiveness means “the quality of including many different types of people and treating them all fairly and equally”.⁴ In terms of urban planning, inclusiveness just means to create urban infrastructure which will be useful for all people at the same level. So, using such indicator in this research was crucial. On the map a very diverse collection of colors might be observed. Even one street might include a rate of inclusiveness which completely differs from segment to segment. Almost all streets Manas, Akhunbaeva, Tokombaeva or Chui include segments where inclusiveness was rated as “0” or “1”. I would say the central part of Chui Avenue is relatively positive in terms of this indicator. Even underground paths there contain some equipment for people with disabilities. In our case when we measure inclusiveness at least a pavement should be appropriate. The pavement of the sidewalks is quite diverse, so the presence of ramps is so important and essential. For example, Akhunbaeva street, which is rated quite positive, does not contain many ramps. Manas and Aitmatova streets were rated between “3” and “5” also contain issues with ramps and stable and slip-resistant pavement. I assume if we continue to use tile, paving stone or asphalt as the main types of pavements, they cannot be considered as inclusive from western point of view. Baityk-Batyr street has issues, but relatively in comparing with other streets of Bishkek it is good.

⁴<https://dictionary.cambridge.org/ru/%D1%81%D0%BB%D0%BE%D0%B2%D0%B0%D1%80%D1%8C/%D0%B0%D0%BD%D0%B3%D0%BB%D0%B8%D0%B9%D1%81%D0%BA%D0%B8%D0%B9/inclusiveness>

Inclusiveness



Inclusiveness

0

1

2

3

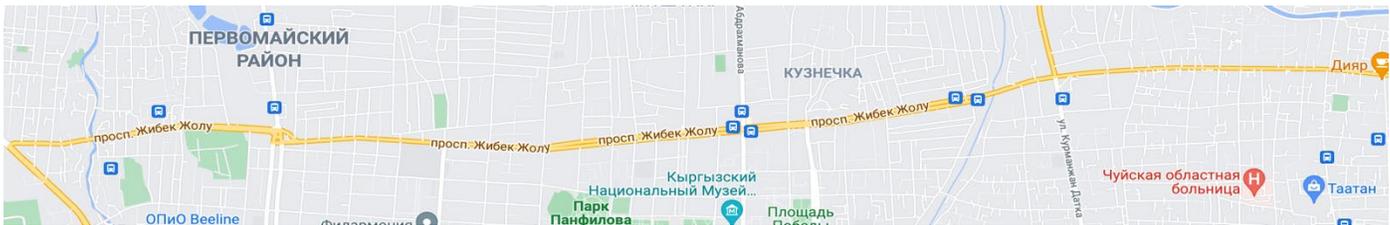
4

5

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Jibek Jolu Avenue.

Jibek Jolu Avenue is one of the most congested streets in Bishkek. It runs from east to west across territory of the Sverdlovsky, Pervomaisky and Leninsky districts of the city, crossing almost its entirety and parallel to the main Chui Avenue. Jibek Joly starts at the intersection of Pobeda Avenue and Lermontov Street, then turns left and ends at the intersection with Fuchik Street. It also intersects with the streets of Lesnaya, Kommunarov, Republican, Leskhoznaya, Dinara Asanova, Rostovskaya, Chimkentskaya, Akmuz, Kuliyeв, Malyshev, Ala-Archinskaya, Mahatma Gandhi, Atbashinskaya, Kalyk Akiev, Timiryazev, Zhurnalnaya,



Umetaliev, Shevchenko, Turusbekov, Manas, Isanov, Ashirbay Koenkozov, Togolok Moldo, Logvinenko, Panfilov, Orozbekov, Razzakov, Kasym Tynystanov, Yusup Abdrakhmanov, Shopokov, Usenbaev, Ibraimov, Gogol, Semashko, Akhmatbek Suyumbaev, Kerimov, Osmonkul, Zapadnaya, Torekul Aitmatov, Musa Jalil, Kurmanzhan Datka, Seeds of Budyonny, Parkhomenko, Kantemirovskaya, Veselaya, Cheboksary, Kurmanaliev, Tselinogradskaya; the lanes of Zavodskoy Poselok, K. Timiryazev, Shevchenko, Avangardny, Rechny and Cherkassky; Molodaya Gvardiya boulevards, Erkindik and Manas avenue. It runs parallel to the streets of Mikhail Frunze and Kurenkeev. It is an asphalted four-lane road with two-way traffic and one carriageway. and passes along the bridges over the rivers Alamedin and Ala-Archa. The length of the avenue is about 8,3 kilometers. If we look at the history of this Avenue, even during the previous centuries it was important. The street has been a commercial and business part of the city since the 19th century, and it is associated with historical and revolutionary events: demonstrations of workers took place here, the headquarters of the troops of the Semirechensk region, the editorial office of the Semirechensk peasant newspaper were located. By tradition, the Central Market (Green Bazaar) is located on the site of the Gostiny Dvor. On the street there is a shopping center "Zangar" (former Central Department Store), the House of Fabrics "Kyzyl-Tan"

(formerly the Trading House - a monument of wooden architecture, taken under state protection). In Soviet times, specialized stores were located on the street: Blue Screen, Obektiv and Sulu. In the late 1980s, traffic was blocked from Abylai Khan Street to Kunaev Street and a bridge was erected at the intersection with Furmanov Street.⁵

The avenue might be considered the doors of the city for people who are going to visit the capital of Kyrgyzstan. Along the entire length of the avenue roads fully asphalted to different degrees, has trolleybus lines, but sidewalks for pedestrians are definitely a bit neglected and should stay prioritized for the municipality rather than roads, at least for now. The avenue contains two different stations – Eastern and Western. Both played a very important role for people, many traders and just visitors from other regions used that place for coming and leaving to Bishkek. It is obvious that nearby stations are very crowded and diverse. There are also two big Bazars, near the eastern station Alamedin bazaar, and accordingly near western station is located Osh bazar. Sidewalks in those places are always under higher pressure than other places. Sidewalk pavements must be non-slip smooth but rough surfaces. The most common until recently, the type of coating was considered to be asphalt, however, more aesthetic and economical are prefabricated coatings. They are moisture permeable to prevent puddles, and can be partially disassembled and reused during repairs, which is more economical to operate. According to many sources – Bishkek is one of the most air polluted cities in the world⁶ to be more precise, it takes 8th place. One of the methods to impact air pollution is to change the way of movement. Walking and using public transportation along with bicycles should take a lasting root in the hearts and minds of people. But in this research, I am going to focus on the sidewalks of the city.

Walkability is a measure of how friendly an area is for walking and it has health, environmental and economic benefits.⁷ Also walking is the one key factor of a thriving city (Jeff Speck, 2018).

If we run through Jibek Joly avenue, sidewalks are everywhere, but quality is not appropriate for how they should be. Firstly, the width of sidewalks is really narrow. In some intersections it might be about 1 meter. For

⁵ https://en.wikipedia.org/wiki/Jibek_Joly_Street

⁶ <https://www.iqair.com/kyrgyzstan>

⁷ <https://en.wikipedia.org/wiki/Walkability>



example, sidewalks between Kalyka Akieva – Molodaya Gvardiya from 1.2-1.5 meters. I think the width of sidewalks are not enough for two people. In contrast, some intersections of Jibek Joly have very wide sidewalks. They are located near the park Mahatma Gandhi. Probably the place most suitable for walking and relaxing. If we look through indicators for walkability which we used for this research, I would say that the area near that park is the best in the whole Jibek Joly avenue. Quality of pavement of sidewalks, number of lights and green spaces, can be considered as satisfactorily in the whole avenue. Usually, a number of lights which stay for pedestrians are rare.

N o	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1.	Лермонтова-Целиноградская	North	2-3	2	No	2	4	1
2.	Целиноградская-Курманалиева	South	2,2-4	1	No	1	5	2
3.	Целиноградская-Курманалиева	North	1,5-2	1	No	1	3	2
4.	Эркиндик-Раззакова	South	2	3	Yes	3	0	4
5.	Раззакова-Орозбекова	South	2,1	3	Yes	3	0	4
6.	Исанова-Манас	North	1,7-2,5	3	No	2	2	3
7.	Исанова-Манас	South	2-2,5	3	No	2	0	3
8.	Манас-Турусбекова	South	1,9	3	Yes	2	0	3
9.	Манас-Турусбекова	North	2	3	No	2	4	3

10.	Кулиева-Фучика	South	2-2,2	3	No	3	0	4
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In this table can be seen some interesting intersections which cross the avenue of Jibek Joly. From the sixty-eight intersections I chose some interesting ones. The Entry point to the Jibek Joly avenue from the East starts at Lermontova-Selinogradskaya and ends with Kulieve-Fuchiko. In terms of mission, they are similar. Both are used as doors for the city of Bishkek. Erkindik-Razzakova territory is one of the most completed intersections in the whole Jibek Joly avenue. Especially the south part. If we look through indicators, this might receive a good counting mark/index. Only the width of the sidewalk might be perceived as narrow, but the quality of pavement and comfortability of the sidewalk is good. Also, I would mention that the sidewalks in Jibek Joly Avenue mostly are not for local residents who wish just to walk, relax or cycling. They are predominantly used for just entering the other inter district streets of the city. For that reason, almost the whole Jibek Joly is not well predisposed to the above-mentioned activities.



In these pictures can be seen one of the best and worst sidewalks in the Jibek Joly Avenue. In the left image almost an ideal sidewalk with asphalt pavement, it is flat without holes, but it is quite narrowed down. Also, along the sidewalk from both sides have some greenery which creates a very good view and personal relaxation for pedestrians. On the right image a sidewalk does not have a pavement and contains lots of holes, originally it was asphalted, but now it is broken and looks like many other sidewalks in Jibek Joly. In terms of walkability index itself, this definitely will take the lowest mark.

Additionally, Jibek Joly is crossed by both rivers of Bishkek: Ala-Archa and Alamedin Rivers. This picture was taken from the bridge on the street and there can be seen the whole river bank.



Chui avenue

Chui avenue runs from East to West from the territories Sverdlovsky, Pervomaysky and Leninsky districts. It crosses almost the entire city, and starts at the intersection with Fuchiko street and ends at April-7 Street. The length of the avenue is 6 kilometers. The main avenue of the city of Bishkek arose simultaneously with the foundation of Pishpek (the old name of the capital). It was originally called Kupecheskaya Street. In 1924 the street was renamed Grazhdanskaya. In 1936 - in Stalin Street, in 1961 - XXII Party Congress Street, in 1974 part of the street became an avenue and received the name of Lenin. After the independence of Kyrgyzstan Leninsky Prospekt was renamed Chui Prospekt. (Cited from Rada's report)

Chui avenue among the foreigners is the most known part of the city. Because there are several big malls such as TZUM, GUM, Dordoi Plaza and Detsky Mir. Near those shops is the most interesting place for walking and

meeting among guests of the capital. Besides those big shops there are also small outlets with seasonal traders who mostly used removable outlets. Also, Chui Avenue has Ala-Too square which is considered as the main square of Bishkek. The square was built in 1984 to celebrate the 60th anniversary of the Kirghiz Soviet Socialist Republic, at which time a massive statue of Lenin was placed (now holding a statue of Manas) in the square's center. At the northern edge of the square is the State Historical Museum.



In the territory between Manas and Turusbekova streets on Chui Avenue is located The Kyrgyz National Philharmonic. The Philharmonic is named after the national poet, komuz performer Toktogul Satylganov.

Nearby can be seen the government building, cinema Russia, many shops, cafes and the main building of the National State University. The building of the Philharmonic, whose history begins in October 1936, is an impressive architectural structure made of glass and concrete, the decoration of the main square of the city.

A territory of the Philharmonic is public, it is actively used by residents for walking and by youth for various sport activities, such as cycling, skating and rolling.

No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1.	Айтматова- 7-апреля	North	2,74	3	No	3	1	2
2.	Айтматова-7 апреля	South	3-5	3	No	4	0	4
3.	Фучика – Павлова	North	3-3,5	3	No	2	2	2
4.	Фучика – Павлова	South	6-8,5	3	No	2	1	3

5.	Турусбекова-Манаса	North	4-5	3	Yes	3	1	4
6.	Турусбекова-Манаса	South	4,5-5	4	Yes	4	0	4
7.	Абдрахманова-Шопокова	North	5	4	Yes	3	0	5
8.	Абдрахманова-Шопокова	South	4,2	2	Yes	4	0	5

In this chart can be seen some examples of intersections of Chui Avenue. Periphery intersections differ from the center part. For instance, Turusbekova-Manas is one of the most advanced intersections, where all indicators for assessing walkability are in balance. Sidewalk width along Chui Avenue varies from 2 to 11 meters (in the central square) on the southern sidewalk and from 2.7 to 9 meters on the northern sidewalk. Asphalt is a simple and not expensive sort of pavement. Regarding greenery, I would say almost all segments of Chui Avenue are well planted. There are different types of trees and greenery. But I think the northern part of Chui Avenue is better planted rather than south. In general, the quality of sidewalks, greenery, lighting and other indicators which I used in this research is advanced. Only the nearby Fuchiko street situation is different. Because of the close location to Osh bazaar, people fully crowded that segment of Chui Avenue, and sidewalks there either in the north or south are not in proper condition. Sidewalk pavements must be non-slip smooth but rough surfaces. Until recently, asphalt was considered the most common type of coating, but prefabricated coatings are more aesthetic and economical. They are permeable to moisture to avoid puddles, and can be partially dismantled and reused during repairs, which is more cost-effective in operation.



In these pictures can be observed how the main type of pavement (Paving stone) during the winter and springtime looks. If a paving stone is small, it will feel slippery and dangerous rather than an ordinary paving stone for example, 30x30. It is interesting that a tile is safe during snow, asphalt during rain.

Furthermore, that segment of Chui has some not so good connotations among residents because of Osh bazaar which is mostly occupied by people who are not local and work there illegally. Also, a large number of vernacular areas pass through Chui Avenue - mental areas allocated by residents, especially young people.

These are Turusbechka, University Yard, Ocean, TsG, Skif, Pentagon, Broadway, Derzhinka, Karpinka, Tokoldosh.



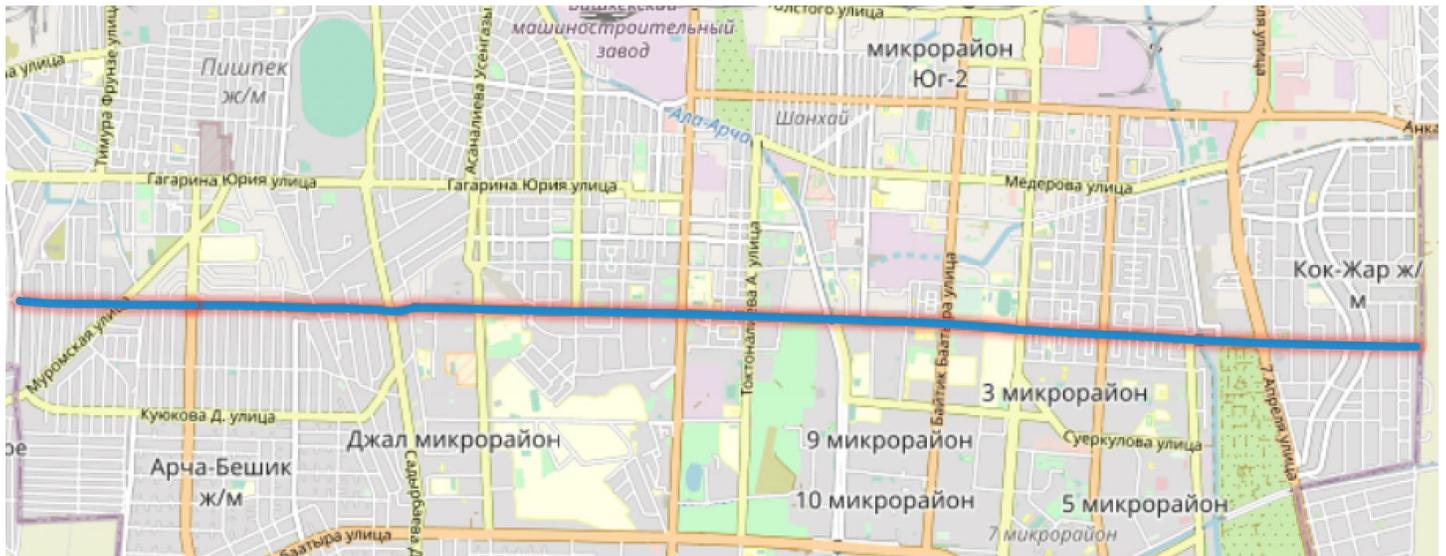
As I mentioned above, the quality of sidewalks at Chui Avenue can be used as an example. Width of sidewalks, green spaces, and quality of pavement are of high standard. Moreover, Chui has some distinctive sides. For instance, almost all floors of multi storey buildings there are occupied by shops, workshops, special services

and so on. Owners of those places already have identified good ways of making money, they usually give for renting all first floors of buildings. Sidewalks along Chui Avenue from Manas Avenue to street Abdrakhmanov are connected by two vernacular city centers - "Philharmonia" and "Tsum". The main tourist route passes between them, where the most recognizable architectural objects of the capital are located: the central city square "Ala-Too", the parliament building (White House), the state flagpole, the historical museum, two oldest cinemas, zero kilometer, and several large monuments.

Isa Akhunbaev street

Another one of the longest and most important streets of Bishkek is Isa Akhunbaeva, which runs from east to west in parallel to Chui and Jibek Joly Avenues. The street crossed from north to south by thirty different streets. A total length of Akhunbaev street is 11.5 km located in the southern part of the city, in the Oktyabrsky and Leninsky districts of Bishkek. Named in honor of Academician, first president of the Academy of Sciences of the Kirghiz SSR, corresponding member of the Academy of Medical Sciences of the USSR Isa Konoevich Akhunbaev.⁸ In the street have some publicly significant buildings: the Embassy of the Republic of Korea in the Kyrgyz Republic, the Kyrgyz State Academy of Physical Culture and Sports, a secondary school, the National Oncology Center, the National Center for Phthiology, the Kyrgyz State Medical Academy, the Interdistrict Court, the Bishkek Music and Pedagogical College, the Institute of Electronics and Telecommunications, the National center for the protection of motherhood and childhood, the Center for Family Medicine No. 2, the lyceum and the City Library. The sights include the Botanical Garden named after E.Z. Gareeva, Sports Square and Kemal Ataturk Park. The street is also crossed by the Ala-Archa and Alamedin rivers. The development is mixed - there are both multi-storey and one-storey houses.

⁸ <https://geodzen.com/kg/bishkek/akhunbayeva>



Here can be seen the whole length of Akhunbaeva street which really divides the city into pieces. This street looks to the border line of the capital between north and south parts.

Width of the main road in Akhunbaeva is not very wide, accordingly, sidewalks too. The width from 1,5 meter to 5 meter. But mostly the width between 1,8 and 2,5 meters. It is a standard width for this street. The most common type of pavement is - asphalt, a rare one is tile. At the same time, the quality of the sidewalks is mostly between 3-4, which means the average rating is high.



In the pictures you can see sidewalks which have some flaws. If pavement has holes, especially in winter time they might fill with snow and rainy water, which is not good in terms of safety for pedestrians.

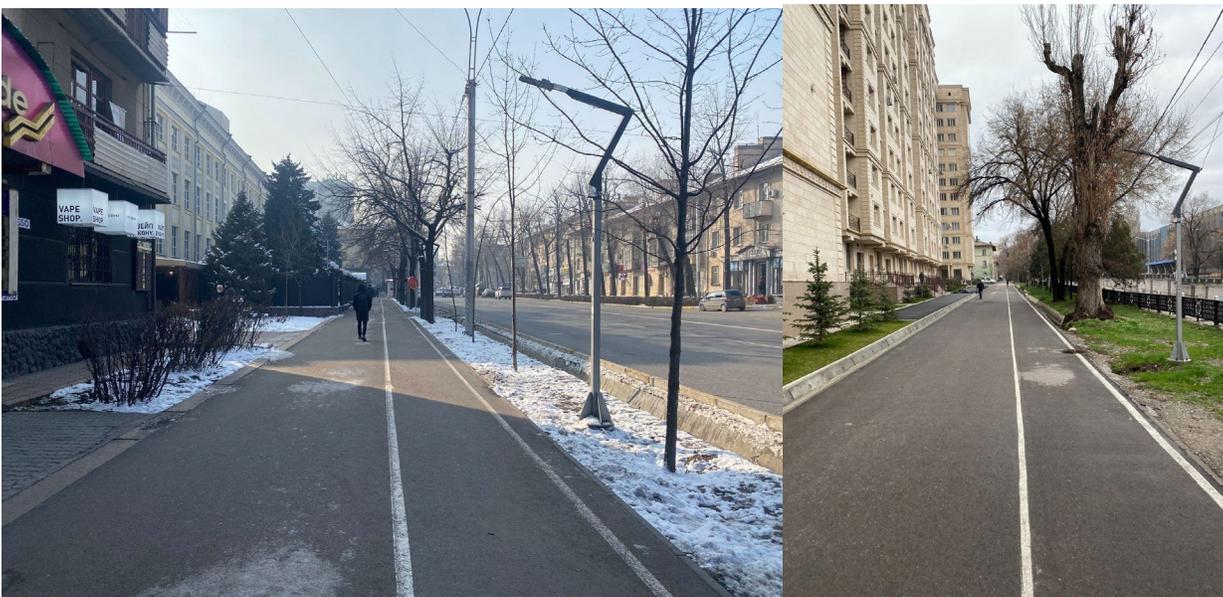
No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1.	Молдыбаева-Молодежная	North	1,5-2	0	Yes	3	3	3
2.	Молодежная-Душанбинская	North	2-2,5	1	No	4	0	3
3.	Душанбинская-Манас	North	2-2,5	1	No	3	4	3

Here are some examples of intersections which are well known among people, because the street has some important buildings. If we go through all indicators, it might be noted that only “greenery” is low marked. There are not many trees. This is mainly due to the fact that the street is not wide and there is almost no space for it. Because of the wideness of the sidewalks, holding it up in good condition is easier. Inclusiveness of the street also was rated between 3 and 4. The inclusiveness of pedestrian spaces is a principle which allows all people to use this space, regardless of their age, build and health status. Inclusion is especially important for senior citizens, people with disabilities and citizens with children in wheelchairs. Inclusiveness within the study was assessed according to the following criteria: (without) sidewalk barriers and the availability of ramps that meet the standards. According to the standards, the slope of the ramp should be from 5 ° to 10 °, the width should be at least one meter. This means walking in the street will be predisposed for mothers with prams or for people with disabilities.



Aitmatova/Manas Avenue

For me personally, Manas Street is the most welcoming and cozy street in the whole Bishkek. The total length of the avenue is 3 km and it is located in the central part of the city, in the Pervomaisky district of Bishkek. Manas is the largest Kyrgyz epic and the name of its main character, the hero who united the Kyrgyz. It used to be called Belinsky Avenue. The avenue starts at the intersection of Leo Tolstoy Street and Chingiz Aitmatov Avenue, and ends at the intersection of Zhibek-Zholy. It also intersects with the streets of Zhumabek, Mikhail Frunze, Toktobolot Abdumomunov, Ryskulov, Kievskaya, Toktogul, Moskovskaya, Chokmorova, Bokonbaev and Chui Avenue. It runs parallel to Isanov and Turusbekova streets, and an asphalted four-lane road with two-way traffic and one carriageway. In addition, Manas Street has a special line for cycling, which is completely different from other streets. Publicly significant buildings include the Kyrgyz National University, the Union of Architects of Kyrgyzstan, the City Children's Library, the Embassy of the Russian Federation in the Kyrgyz Republic, the Institute social development and entrepreneurship, the Department of Health System Provision, the post office and the station of the young technician. Sights include the Alley of Youth, the Statue of Manas and the Botanical Garden of the Kyrgyz National University named after Zhusup Balasagyn. Also on the avenue is the Kyrgyz National Philharmonic named after Toktogul Satylganov. The development is mixed - there are both multi-storey and one-storey houses.



No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1.	Горького-Новая	West	2-2,5	5	Yes	5	0	5
2.	Горького-Бокомбаева	East	2,8-3	4	Yes	4	1	4
3.	Бокомбаева- Московская	East	2,8-3	4	Yes	4	0	4
4.	Московская-Токтогула	East	2,8-3	4	Yes	4	0	4
5.	Токтогула-Киевская	East	2,8-3	4	Yes	4	0	4
6.	Киевская-Чуй	East	3,5-4	4	Yes	4	1	4
7.	Чуй-Рыскулова	East	2,8-3	4	No	4	0	4
8.	Горького-Бокомбаева	East	2,8-3	4	Yes	4	1	4
9.	Бокомбаева- Московская	East	2,8-3	4	Yes	4	0	4
10.	Московская-Токтогула	East	2,8-3	4	Yes	4	0	10

The table shows the most interesting intersections of the avenue. Firstly, should be marked the overall rate, most of them between 4 and 5, which is maximum, average value of width between 2,5-3,5 which is really good. The avenue is quite wide and there is enough space for sidewalks along with bicycle lines. Type of pavement is asphalt, which is relatively newly laid. Trees and other greenery are fully covering the avenue.

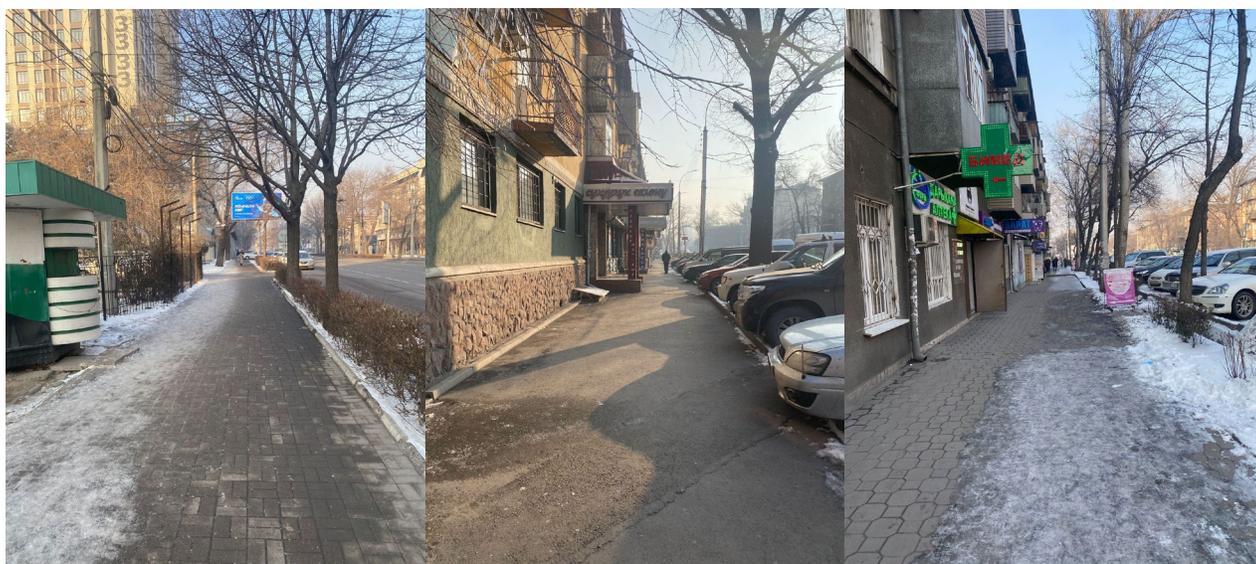
Also, the table includes some central streets, such as Chui, Kievskaya and Toktogula, which are considered crowded and haunted streets. There are almost no obstacles, and bikes or scooters might do uninterrupted trips. But this is only applicable to eastern part of the sidewalk. On the western part the pavement is not fit for bicycle cycling.



Kievskaya street

Kievskaya is a street with a total length of about 4,6 km, and it is located in the central part of the city - in Sverdlovsky, Pervomaisky and Leninsky districts. Previously, the street used to be called Dungan Street, but from 1954 it was renamed as Kievskaya street. It starts at the intersection with Gogol Street and ends at the intersection with Julius Fucik Street. It also intersects with the streets of Kuliev, Byubyusary Beishenalieva, Kalyk Akiev, Timiryazev, Umetaliev, Shevchenko, Turusbekov, Isanov, Togolok Moldo, Logvinenko, Panfilov, Orozbekov, Razzakov, Kasym Tynystanov, Yusup Abdrakhmanov, Shopokov, Ibraimov, Kerimbekov, Koenkozov; Young Guard boulevards, Erkindik and Manas Avenue. It runs parallel to Toktogul Street and Chuisky Avenue. It is an asphalted six-lane road with two-way traffic and one carriageway. Toward the end, the street becomes a four-lane street. There are a lot of publicly significant buildings such as the Republican Diagnostic Center, the Kyrgyz-Russian Slavic University, the State Commission for Religious Affairs, the Ministry of Agriculture, the Department of Tourism, the Document Acceptance Center of the Consular Service Department, the State Inspectorate for Veterinary and Phytosanitary Security, the State Tax Service of the Kyrgyz Republic , Clinical Hospital of the Office of the President and Government of the Kyrgyz

Republic, Children's Music School, National Institute for Strategic Studies of the Kyrgyz Republic, Kyrgyz National University, Chamber of Commerce and Industry of the Kyrgyz Republic, Flight Military School, Regional Treasury Department, School-Gymnasium, School of Innovation, Dental Polyclinic and City Library. Sights include Young Guard Square and Ala-Too Square. Also on the street are the Monuments to Batken Warriors and Chyngyz Aitmatoves. At the end of the Kievskaya crossed by the river Ala-Archa. The development is mixed - there are both multi-storey and one-storey houses. Close to the “Bishkek Park” mall, first floors of multi-storey buildings used as shops for various purposes. Bus and trolleybus lines are laid along the street. But in terms of sidewalks the street is at the middle level.



In these pictures can be seen that old soviet multi-storey buildings are located next to the sidewalks, which means there almost no spaces for pedestrians. If buildings have some shops or services that automatically cut from the sidewalk a half. Pavement is also diverse; most commons are asphalt and paving stone.

No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1.	Манас-Турусбекова	South	2,5-4	4	Yes	4	5	4
2.	Турусбекова-Манас	North	2,5-3	5	No	5	0	5
3.	Розакова-Бульвар Эркиндик	North	3-3,5	1	No	3	0	3
4.	Бульвар Эркиндик-Тыныстанова	North	2,8-3	4	No	3	0	3
5.	Тыныстанова-Советская	North	1,5-2,5	4	No	3	0	3

6.	Советская-Шопокова	North	3,5-4	4	No	2	0	2
7.	Шопокова-Советская	South	3,5-4	1	No	3	4	3
8.	Советская-Тыныстанова	South	3,5-4	4	No	2	1	2
9.	Тыныстанова-Бульвар Эркиндик	South	3,5-4	4	No	2	0	2
10.	Бульвар Эркиндик-Панфилова	South	4-5	3	No	4	0	4

From this table it can be seen that a main problem on Kievskaya street is lack of lighting system along the sidewalks. Especially, in winter time it might be a crucial reason for pedestrians whether they go or not through those sidewalks. One of the important streets which crosses Kievskaya is Manas Avenue. That part of the intersection used to be crowded any time of year and foot traffic is always large. Manas street itself is considered as a significant chain which connects different districts of the city. Moreover, in the Manas-Kievskaya intersection is located "Bishkek Park " mall and other shops, that really increase foot traffic. An average width of sidewalks between 2,5-4 meters with an expected quality of pavement. Pavement is mostly asphalt and paving stone. Number of green infrastructures depends on which particular part you are in. Because of the close location of multi-storey buildings to the sidewalks, in Kievskaya lack of space for planting. The intersection Sovetskaya-Shopokova is also as crowded as the above-mentioned spot. Close location to TSUM, the reason for it. Most of the greenery is passing through Boulevard Erkindik.

Sovetskaya/Baytik Baatyr Street

Baytik-Baatyr is a street with a total length of about 6.7 km, located in the southwestern part of the city, in the Oktyabrsky district of Bishkek. Named in honor of the Supreme Leader of the Solto tribe, the son of the famous leader of the Solta tribe, Kanai-baatyr. Previously, it was called Sovetskaya, and until 1924 Bazarnaya Street. Even now, most local residents use the former name of this street - Sovetskaya. It is more usual. The street starts at the intersection of Balyk-Kumar and Rysmendeev streets, then turns right and ends at the intersection of Tugolbai Ata and Yusup Abdrakhmanov streets. It also intersects with the streets of Leo Tolstoy, Kulatov, Gorky, Kusein Karasaev, Mederov, Radishchev, Skryabin, K. Dzhantoshev, Isa Akhunbaev,

Suerkulov, Samanchin, Ala-Archa and the avenues of Absamat Masaliev, Aaly Tokombaev. Moreover, the street runs parallel to Zhukeev-Pudovkin and Abai Kunanbaev streets. Publicly significant buildings include the Central Psychiatric Hospital, the State Customs Service, the Children's Art School, the State Communications Agency of the Kyrgyz Republic, hospital, Oktyabrskaya District Administration, Research Institute of Preventive Medicine, Center for State Sanitary and Epidemiological Surveillance, Professional Lyceum and Pervomaisky District Court. Also on the street are the Fizkulturny Square and Victory Park. The river Ala-Archa flows parallel to the street on the even side. The development is mixed - there are both multi-storey and one-storey houses. It is an asphalted four-lane road with two-way traffic and one carriageway. From the interesting intersections can be observed following ones:

No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1.	Киевская-Чуй	East	2,8-3	4	Yes	3	0	3
2.	Чуй-Фрунзе	East	2,8-3	4	No	4	0	4
3.	Фрунзе-Жумабек	East	2,5-3	4	No	3	0	3
4.	Жумабек-Жибек Жолу	East	2,8-3	4	No	3	14	3
5.	Жибек Жолу-Жумабек	West	2-3	3	No	3	1	3
6.	Жумабек-Фрунзе	West	2,5-3	3	No	4	0	4
7.	Фрунзе-Абдумомунова	West	2-2,5	3	No	3	0	3
8.	Абдумомунова-Чуй	West	2-3,5	4	No	3	0	4
9.	Чуй-Киевская	West	2,5-3,5	3	Yes	3	3	3
10	Киевская-Токтогула	West	3,2-3,5	4	Yes	5	1	5

For example, Jibek Joly Avenue is the street from where everyday lots of people go to the center and southern parts of Bishkek for working or just visiting bazaars. That's why the intersection is busy and overpopulated, considering the fact there are also passing through a bicycle line from the western side of the sidewalk. Due to

the lack of bicycle paths in Bishkek, lines in Manas and Sovetskaya streets are actively used for cycling. The overall width of the paths is about 3,5 meters, which is not wide by the standards of European countries. Along the main road of Sovetskaya street are multi-storey buildings. I think that streets are the only place where the number of living facilities is tremendous.



Gorkogo street

Gorkogo street is named in honor of Maxim Gorky who is Russian and Soviet writer, poet, playwright, founder of socialist realism literature, initiator of the creation of the Union of Writers of the USSR and the first chairman of the board of this union.⁹ The total length of the street is about 4 km, which is located in the southern part of the city in Pervomaisky and Oktyabrsky districts of Bishkek. It starts at the intersection of 7-April and Ankara streets and ends at the intersection with Chingiz Aitmatov Avenue. The street also intersects with the streets of Pozharsky, Minin, Kara-Kulskaya, Orenburgskaya, Aydaraliev, Oshskaya, Ashkhabadskaya, Chekhov, Panfilov, Temirov, Shoorukov, Lebedev-Kumach, Abay Kunanbaev, Igemberdiev, Fatyanov, Kasym Tynystanov, Radishchev, Baitik-Baatyr, Elebaev, Zhukeev-Pudovkin, Matrosov, Ziyash Bektenov,

⁹ <https://ria.ru/20180328/1517309441.html>

Yunusaliyev, Belorusskaya, Karadarya and Novosibirsk, Orenburg, Osh, Ashkhabad, Aktobe, Tunguska, Novy Oktyabrsky, Arasansky, Maikopsky lanes. It runs parallel to Mederov and Kulatov streets. Gorkogo as a previous street is an asphalted four-lane road with two-way traffic and one carriageway. Towards the end, the street splits into two lanes. The numbering of houses on the odd side goes from house 1 and ends with house 137, and on the even side from house 2 to house 192. The socially significant buildings include the Sports Complex, the gymnasium, the exhibition center, the traffic police and the Professional Lyceum. Gorky street which other parallel streets cross by the Alamedin River. The sights include the Gareev Botanical Garden.



No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusivene ss 0-5	Obstacles	Quality of pavement 0-5
1	Манас-Мамино	North	1,5-2	1	No	1	0	1
2	Мамино-Манас	South	2-2,4	1	No	2	0	2
3	Байтык Баатыра-Тыннстанова	South	2,4-3	1	No	3	0	3
4	Тыннстанова-Байтык Баатыра	North	2-2,5	1	No	3	2	3
5	Байтик Баатыра-Элебаева	North	2,3-2,5	1	No	3	0	2
6	Байтык Баатыра-Элебаева	South	2,3-2,5	1	No	2	0	3

In this table, it can be seen that the index of segments of Gorkogo street is not high, which means the overall rate is not appropriate. In the whole street the rate of “greenery” is one, although there is a Goreev Botanical Garden. For residents that is not enough, people should pass more than three km in order to get the garden. Even the quality of pavement is also between one and three. The Baytk Batyra-Tynnstanova segment is the most crowded place. The development in the whole Gorky Street is mixed - there are both multi-storey and one-storey houses. Bus and trolleybus routes of public transport are laid along the street. In terms of proximity the street is very connected, considering the fact that Gorky is not used by people as a specific street of Bishkek for going somewhere. Width of the sidewalks is between 1,5-3 that is not too much, so people prefer vaster segments. Only one indicator in Gorkogo street might be considered highly rated - obstacles. The street is almost without obstacles which can be considered as an advantage.

Moskovskaya street

Another street which still uses a Russian name - is Moskovskaya street. The total length of the street is 5,1 km, and it is located in the central part of the city - in Leninsky, Pervomaisky and Sverdlovsky districts of Bishkek. It got its name in 1954. Before that it was called Pioneer Street. It starts at the intersection with Osmonkula street, then turns right and ends at the intersection of Fuchik, Dimitrov streets. It also intersects with the streets of Toktogul, Kuliev, Byubyusara Beishenaliyeva, Kalyk Akiev, Kalyk Akiev, Turusbekov, Tabyshaliyev, Isanov, Ashirbay Koenkozov, Togolok Moldo, Logvinenko, Panfilov, Orozbekov, Kasym Tynystanov, Yusup Abdrakhmanov, Usenbaev, Shopokov, Ibraimov, Gogol, Akhmatbek Suyumbaev; Young Guard boulevards and Erkindik, Manas Avenue. It runs parallel to Kievskaya and Chokmorova streets. The street is an asphalted four-lane road with two-way traffic and one carriageway. The numbering of houses on the odd side goes from house 1 and ends with house 239, and on the even side from house 2 to house 268. Socially significant buildings include the District Police Station, the Republican Educational and Methodological Center for Aesthetic Education, the City Library, a secondary school, Kyrgyzpatent, The Embassy of the Republic of Turkey, the Bishkek Bar Association, the polyclinic of the Ministry of Internal Affairs, the Embassy of Iran, the

Bishkek Choreographic School, the Center for Andrology and Urology, the National Hospital, the Ministry of Health of the Kyrgyz Republic, the Vocational Lyceum, kindergartens, the Embassy of the Republic of Belarus, the Leninsky District Prosecutor's Office and the Leninsky District Department of Internal Affairs. It is interesting that Moskovskaya street has several embassies, which means the street was important. Also on the street is a square named after Togolok Moldo. The Ala-Archa River crosses the street towards the end. The development is mixed - there are both multi-storey and one-storey houses.



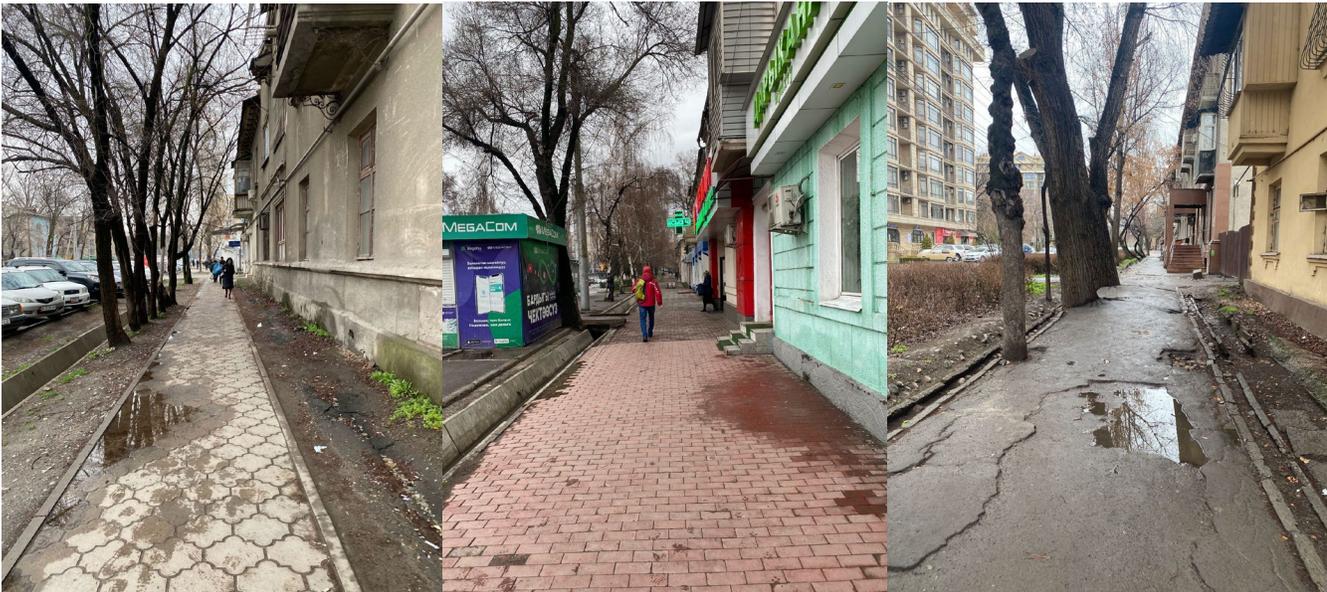
In the pictures can be observed examples of sidewalks with different types of pavements. For example, in Moskovskaya street the most common type of pavement is asphalt which is not expensive, cheap to maintain and comfortable for walking.

No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1	Манас-Турусбекова	South	2,3-2,5	4	No	4	0	4
2	Кулиева-Фучика	South	1,5-3	2	No	1	0	3
3	Фучика-Кулиева	North	1,5-2,5	2	No	1	0	2
4	Турусбекова-Манас	North	1,7-2,5	4	No	3	4	3
5	Ибраимова-Шопокова	South	1,8-2,5	4	No	3	0	3
6	Шопокова- Ибраимова	North	1,8-2	3	No	3	0	3

In the table are some examples of streets: an average width between 2-3 meters. In the intersection of Manas-Turusbekova almost all indicators are advanced, the problem is only absence of lighting. In general, lack of lighting for pedestrians is a common case. Greenery in intersections is not under the deficit, but it also does not mean that the natural environment is close to your house. If we look at the Shopokova-Ibraimova intersection which is located at the center of the city, there is a very crowded intersection. Close location to the city center impacts it.

Bokonbaeva street

Bokonbaev, another interesting street which is passing through along the railway line and with a total length of about 4.4 km. The street is located in the central part of the city - Pervomaisky, Leninsky and Sverdlovsky districts of Bishkek. Named after the Kyrgyz poet and playwright Dzhoormart Bokonbaev. Until 1944 it was called “Verxniy”. The street starts at the intersection with Herzen Street, ends at the intersection with Kuliev Street. It also intersects with Molodaya Gvardiya and Erkindik boulevards; streets of Kalyk Akiev, Timiryazev, Umetaliev, Shevchenko, Turusbekov, Tabyshaliev, Kerimbekov, Isanov, Ashirbai Koenkozov, Logvinenko, Panfilov, Orozbekov, Razzakov, Kasym Tynystanov, Yusup Abdrakhmanov, Usenbaev, Shopokov, Ibraimov and Gogol; lanes Sverdlovsky, Belinsky and Manas Avenue. It runs parallel to Chokmorova and Chuikov streets. It is an asphalted four-lane road with two-way traffic and one carriageway. The numbering of houses on the odd side goes from house 1 and ends with house 253, and on the even side from house 2 to house 238. Publicly significant buildings include the National Commission for the State Language, the gymnasium, the boarding school for gifted children, the City Tuberculosis Control Center, the Delegation ICRC in Kyrgyzstan, French Embassy, Bishkek City Employment Promotion Department, post office, State Committee for Industry, Energy and Subsoil Use and a kindergarten. Also on the street are the square of Togolok Moldo and the monument to Kubanychbek Malikov. At the end of the street crosses the river Ala-Archa. The development is mixed - there are both multi-storey and one-storey houses. Bus routes of public transport, the same as previous examples, are laid along the street.



This street also might be considered as a typical Bishkek style center street with related attributes. The first floors of multi-storey buildings converted to shops and various services such as pawnshops, beauty salons, etc. Near the houses there are some trees and other greenery. Facilities and green spaces are located very densely which reduces usable space for sidewalks. In these pictures can be seen different types of pavements such as tile, asphalt and paving stone. In terms of maintenance, paving stones are simple material. Broken parts easily might be replaced. In the case of asphalt, repairing and maintaining is more complicated, but general comfort for pedestrians is better. Even in winter periods of time walking over this pavement is a pleasure.

No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1	Шопокова-Ибраимова	North	2-2,5	3	No	2	0	2
2	Ибраимова-Шопокова	South	2-2,5	1	No	2	0	2
3	К Акиева-Молодая Гвардия	South	1,8-2	1	No	4	0	4
4	Молодая Гвардия-К Акиева	North	0,9-1,1	0	No	3	0	3
5	Панфилова-Логвиненко	South	2,2-3	4	No	3	0	3
6	Логвиненко-Панфилова	North	1,3-1,5	2	No	1	0	2

In the table are some examples of intersections through which might be analyzed Bokonbaeva street. An average width of sidewalks between 2-3, however, the narrowest part less than one meter, and that is not

enough for two pedestrians to turn around in one sidewalk. Amount of greenery in Bokonbaeva is small. In the intersection Molodaya Gvardiya-Akieva greenery is rated zero, considering that Molodaya Gvardiya is a boulevard. Quality of pavement is rated between 2-4. On the internet there are several news articles about how residents of Bokonbaeva street complain about vehicle roads. That is not a new phenomenon on the streets of Bishkek.

Toktogula street

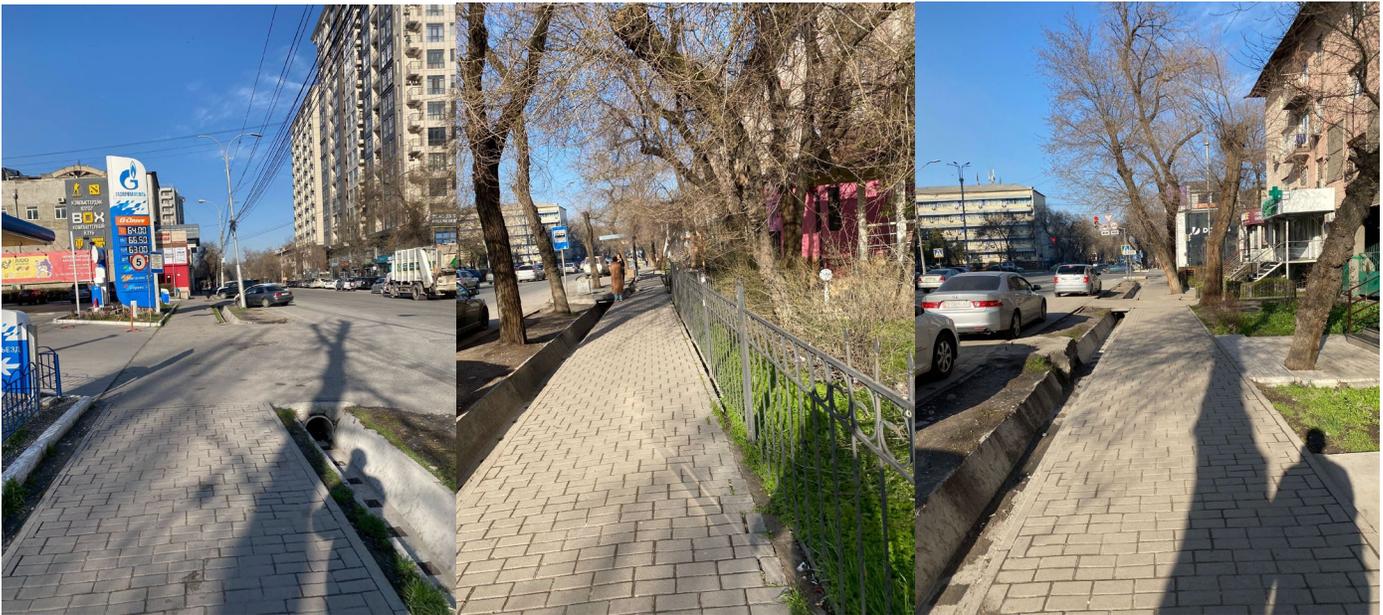
Toktogula is a street with a total length of about 5 km, located in the central part of the city, in the Sverdlovsk, Pervomaisky and Leninsky districts of Bishkek. Named in 1938 in honor of Akyn Toktogul Satylganov. Until 1924, the street was called Gryaznovskaya, then it was renamed Demyan Bedny Street. It starts at the intersection with Aitmatov Street, then turns left and ends at the intersection with Moskovskaya Street. It also intersects with the streets of Osmonkul, Akhmatbek Suyumbaev, Gogol, Ibraimov, Kuibyshev, Shopokov, Usenbaev, Yusup Abdrakhmanov, Kasym Tynystanov, Razzakov, Orozbekov, Panfilov, Logvinenko, Togolok Moldo, Ashirbay Koenkozov, Isanov, Turusbekov, Umetaliev, Timiryazev, Kalyk Akiev, Byubusary Beishenaliyeva, Kuliev; Boulevards Erkindik, Young Guard and Manas Avenue. It runs parallel to Kievskaya and Chokmorova streets. It is an asphalted four-lane road with two-way traffic and one carriageway as usual as other streets of Bishkek nearby. The numbering of houses on the odd side goes from house 1A and ends with house 259, and on the even side from house 2B to house 256. Public buildings include the Post Office, the Bishkek City Department for the Promotion of Employment under the Ministry of Labor and Social Development of the Kyrgyz Republic, the Osmonov Gymnasium, Department of Architecture and Urban Planning of the City Hall, University of Central Asia, Unit-Reactive-Pharma Medical and Diagnostic Center, State Archives of the Kyrgyz Republic, Consulate of the Kingdom of Thailand, National Computer School-Gymnasium and Department of Internal Affairs. Sights include the Kyrgyz State Museum of Literature and Arts named after Toktogul Satylganov. At the beginning, the street is crossed by the Alamedin River, and at the end by the Ala-Archa River. The development is mixed - there are both multi-storey and one-storey houses.

Bus routes of public transport are laid along the street. The Bishkek-2 railway station is located on Erkindik

Boulevard at a distance of about 1.5 km. Toktogula street is perceived as a central street of Bishkek.

No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1	Бейшеналиева-Кулиева	South	-					
2	Кулиева-Бейшеналиева	North	-					
3	Молодая Гвардия-Акиева	North	2,7-3	3	No	3	0	4
4	Акиева-Молодая Гвардия	South	2,3-2,5	2	No	3	0	3
5	Исанова-Манас	Nort	2,5-3	1	No	3	0	3
6	Манас-Исанова	South	3	1	No	3	0	3

In the table above some intersections of Toktogula street. Although Toktogula is a central street, in the intersection Beyshenaliyeva-Kuliyeva there are no sidewalks from both sides north and south. Manas- Isanova, an interesting intersection of the street, the Department of the Architect and Urban Planning of the city located there. As usual in this street also can be seen four types of pavements. The rare one is a tile, which is not popular now among the owners of shops, cafes and different services. The most popular pavement is a paving stone with simple forms, usually a rectangle, square or other simple shape. In these photos below is the most common type of paving stone pictured. Photos were taken in the intersection Isanova-Manas which might be considered as crowded due to the close location to Bishkek Park Mall. The main road in the whole street is not wide, and there is not quite much greenery. Multi-storey buildings in the Toktogula street mostly inherited form



Soviet period, and they are not high, max five floors. In fact, almost all trees near those buildings are regularly cut in order to let in a lot of light for residents.

Masalieva/ Jayl Baatyra

The “South Highway” or Masalieva is a new road in Bishkek that connects Baha Street, Jal Microdistrict, Mira Avenue and Shabdan Baatyr Street. On this highway near the intersection of Absamat Masaliev Street and Chingiz Aitmatov Avenue is the Embassy of the United States of America and the Kyrgyz-Korean Center. At the eastern end of the Southern Highway, the largest enterprise for the production of reinforced concrete products and non-metallic materials in the Kyrgyz Republic, Kum-Shagyl OJSC, is located.

Below are some examples of streets and photos.

No	Segment of street	Side	Width of sidewalk (m)	Greenery 0-5	Lighting	Inclusiveness 0-5	Obstacles	Quality of pavement 0-5
1	Токтоналиева-Б Баатыра	South	2,9-3	3	Yes	5	0	5
2	Каралалиева-7 Апреля	South	1,5-2,5	4	Yes	3	0	3
3	7 Апреля-Каралалиева	North	1,8-2,5	2	Yes	3	0	3
4	Чортокова-Арча Бешик	North	-					
5	Арча Бешик-Селекцион	South	-					

6	Айлчиева-Садырбаева	South	1,9-2	3	No	3	0	3
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If we look at the table, an intersection Archa-Beshik - Seleksion does not contain sidewalks at all. Archa-Beshik is considered as Novostrikas which was built recently. The width of pavement in those segments is also not wide, usually it is between 1,5-3 meters, which is not considered as normal. In these pictures taken in Tokombaeva street we can see examples of sidewalks. They are wide, but pavement is broken, during the snow or rain we can see how holes on the surface might look. But in terms of greenery Tokombaeva is very positive. Number trees and other greenery in that part of the city is big and diverse.

Bibliography

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