

Urban Trail – Feasibility Study and Concept Design

ADDENDUM

Technical report

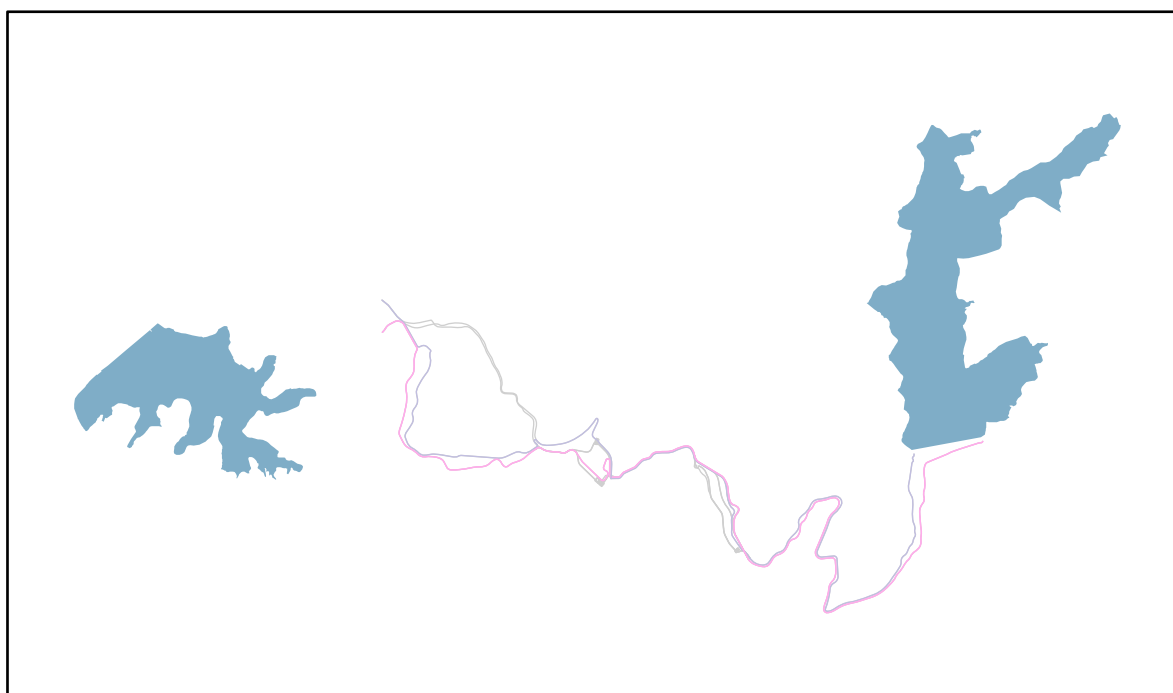


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Addendum

According to the new requirements set at meeting with the municipality, 26.01.2023, the following topics must be studied more specifically:

1.1 Entrance to the Palace of Brigades Area

- Study of a new possible entrance at the south-west corner near Wilson School.
- Inspection on site in coordination with the National Guard
- Evaluation and present the possible solution.

In a meeting with the Head of Security at the National Guard held 13. April 2023, it turned out that there's no flexibility in changing any security standard and fencing on National Guard level. Any request for a more publicly accessible concept of the Palace of Brigades Area must be directed at Ministerial level.

NEW FOCUS: Bypass – Alternatives Y and Z

Thus, the addendum study focusses on the earlier roughly evaluated alternatives Y and Z.

1.2 Elevated passage - Segment C

- Avoiding / review property issues (fuel station; Romanian Embassy)
- Study of new possible routes and overpasses
- Spiral bridge trail integration with the middle school project (up to 2 meetings with the architects/municipality)

1.3 Recreational spots

- Study and propose additional locations for recreational spots and illustration with inspirational design.

1.4 Farka water canal

- Providing a georeferenced trail plan
- Footprint coordination (between trail/canal) with the responsible engineers (up to 2 meetings)

According to the responsible body at the municipality, the part of the canal corresponding with Segment G of the trail has not been part of the reconstruction project so far. Thus, no coordination with the trail necessary.

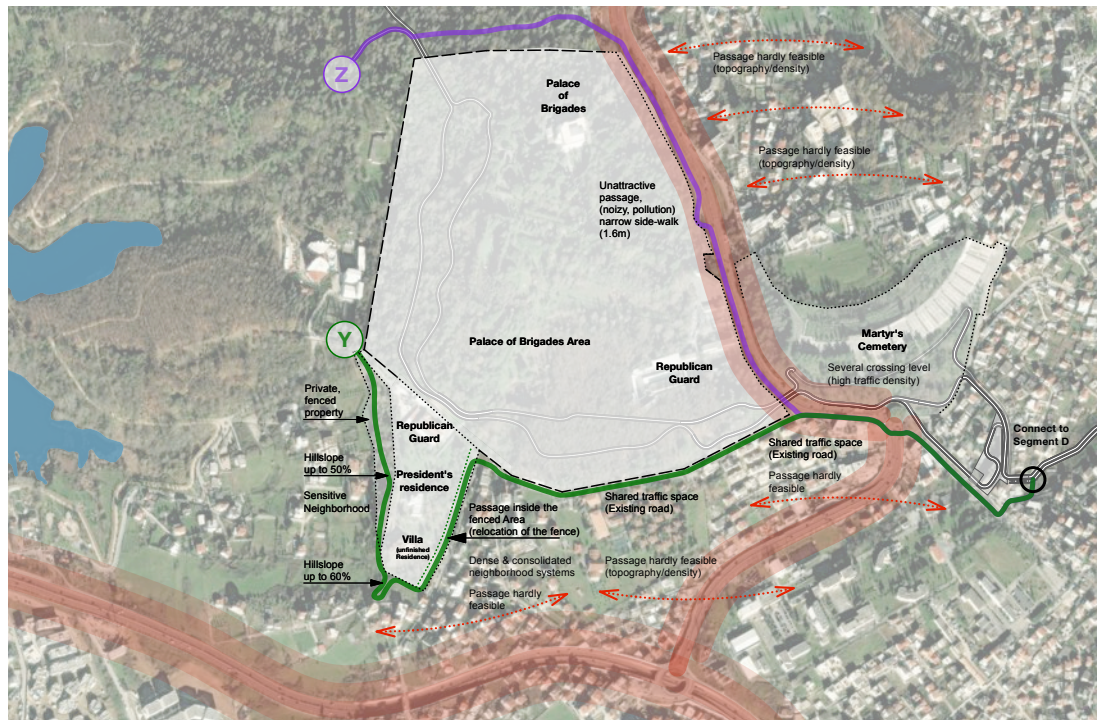
NEW FOCUS: Options in regard of the up zoning in Segment E

In segment E there may be potential conflicts with future private building developments in the newly zoned parts around the trail. Further, the trail must be coordinated with the planned road along the valley, north south direction.

It is further stated that the proposed trail bridge (Wooden Viaduct) dragging from the 'Farka Balcony' southeastwards is a central and characterizing element of this part of the trail and necessary also due to the topographic conditions.

urban move is asked to re-study segment E in regard of minimizing the expropriation surface and propose a framework as basis for negotiations with the landowner/developer nearby.

1 Palace of Brigades Area – Alternatives Y and Z



After submitting the final report, AADF has requested alternative routes for the trail, particularly in Segments A to C. This request was due to the sensitive area encompassing the Palace of Brigades. The involvement of multiple institutions and the need to follow political and administrative procedures make the approval timeframes unpredictable.

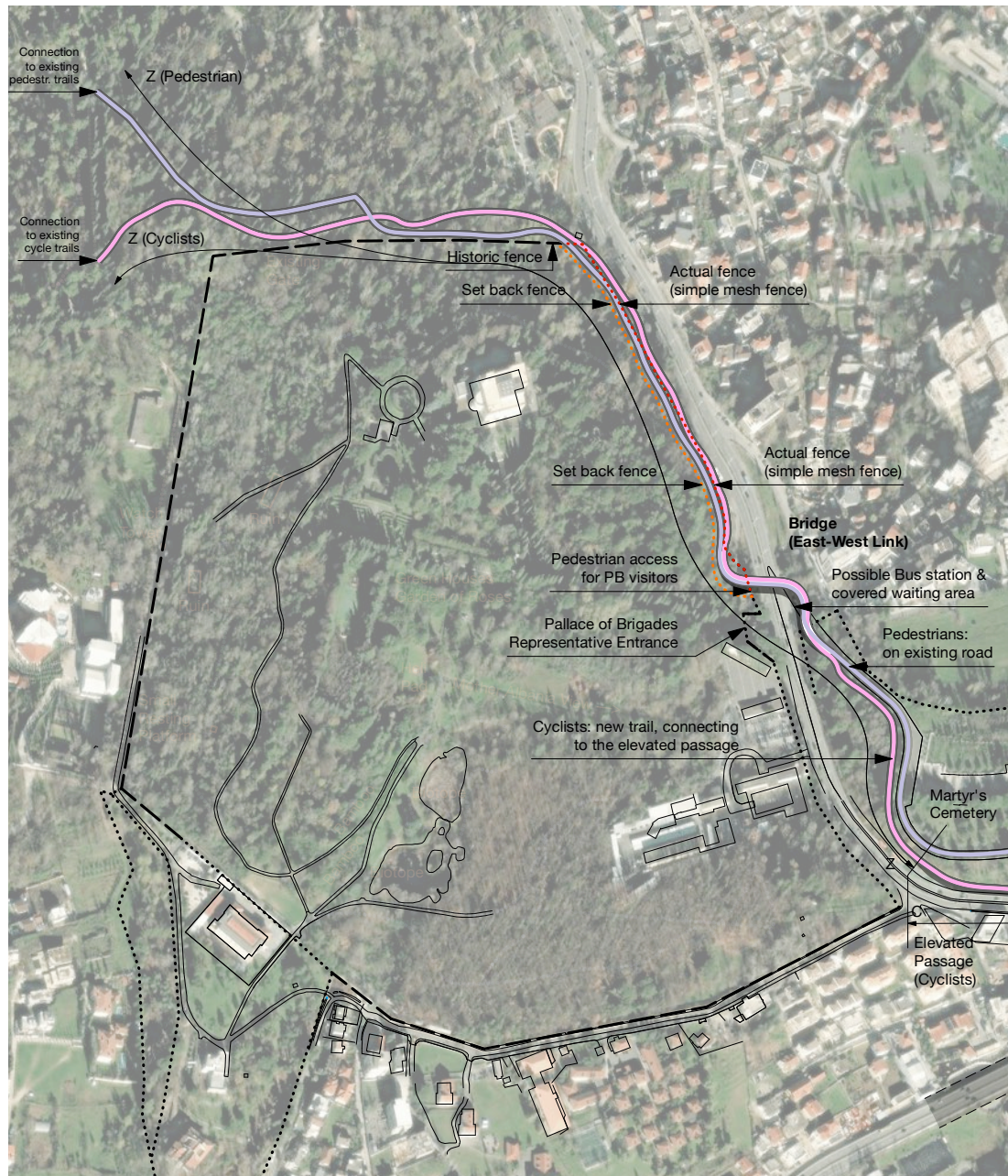
Various options around the Palace of the Brigades were considered but ultimately discarded for several reasons.

- Firstly, constructing the trail along the existing road system posed safety risks due to traffic and crossing levels.
- Secondly, passing the trail through consolidated neighborhood systems would have required more expropriations, resulting in higher costs and political sensitivity.
- Thirdly, aligning the trail along the highway or its feeder roads would expose users to noise and pollution, reducing its attraction as a connection and posing health risks.
- Lastly, leading the trail around the walls and fences of the sensitive area could create perceptions of exclusion and reinforce class society dynamics, as well as encourage conspiracy theories.

Considering these factors, the alternative routes had to be examined again in order to address the cost and sensitivity concerns associated with the proposed bridges and overpasses, while still ensuring a safe and enjoyable trail experience.

All alternatives seem not to be attractive because of the limited width of the space available, and the safety of users is not given due to the traffic. There is also a question mark and big risk of the cost-effectiveness ratio. Due to a low attractiveness, the usage could be also very low. Consequently, alternative Y was dismissed due to the technical, construction and traffic safety considerations. Thus, only Alternative Z was examined more specifically.

1.1 Alternative Z



The proposed paths, represented by violet line (pedestrians) and pink line (cyclists), starts by the existing paths in the Grand Park, and run through the forest, closely along the historic fence – the northern border of the Palace of Brigades area. Along the Elbasan Road (eastern border of the area), the concept involves setting back the existing mesh fence a few meters into the Palace of Brigades area. In this part, the characteristic historic fence has already been destroyed/removed during the widening of the Elbasan Road in 2012-2013.

The trail takes advantage of the topographical conditions by elevating it above Elbasan Road, creating a vertical offset. This vertical distance, which exceeds 2 meters, serves multiple purposes. Firstly, it enhances safety by separating cyclists and pedestrians from the motorized traffic, reducing the risk of accidents. Secondly, it creates a perception of being in the forest environment rather than feeling like a part of the traffic.

Opportunities have been created to ensure pedestrian access, particularly next to the main entrance to the Palace of Brigades.

To effectively connect these two parts of the city, an East-West Link has been incorporated in the design of a bridge. This 160 m long overpass allows pedestrians and cyclists to cross together, providing a safe and seamless transition to the other side in front of the Martyrs Cemetery's main entrance. The bridge is designed to create a floating effect, enhancing the overall experience. Additionally, the space underneath the bridge, offers the possibility to integrate a bus station with a covered waiting area.

This alternative route not only provides a practical connection but also presents an opportunity for creative design and functional integration, considering both pedestrian and cyclists needs.

It is advisable to thoroughly examine it during the subsequent planning phases.



The historic fence (northern border of the Palace of Brigades area.



Vertical offset situation



Mesh fence and an abandoned trail (Palace of Brigades trail system).



Across from the Martyrs Cemetery's main entrance, where the Bridge (East-West Link) will cross Elbasan Road.

2 Elevated passage - Segment C

Considering the expanded requirements, a thorough review of the available alternatives has been conducted to ensure comprehensive analysis and evaluation. The aim is to carefully assess each option's suitability and feasibility. This detailed examination will provide a more informed basis for making a well-rounded decision regarding the most suitable action.

See *Annex A_Illa* for a comparison table.

2.1 Segment C - Option 1:



The revised route includes an elevated section that spans from the roundabout to the southern sidewalk of Elbasan Road. From there, it extends up to the opposite side of the middle school plot and then crosses over Elbasan Road. Next, there is a spiral bridge that descends to street level and continues further down to reach the underpass beneath the street Haxhi Alija, connecting to Segment D.

It offers numerous advantages: it aligns with the desired route, ensuring coherence and uniformity. The trails provide uninterrupted, direct paths with a moderate conflict potential for pedestrians and no conflict potential for cyclists. They prioritize comfort, safety, and connectivity, while the attractive design and presence of greenery enhance the overall appeal. This requires less land acquisition and offers the possibility of extension to other neighborhoods. Additionally, the trails serve as landmarks, provide orientation, and have the potential to attract tourism. Overall, the option 1 maximizes efficiency, aesthetics, and user satisfaction while considering various factors such as land usage, safety, and environmental considerations.

While there are advantages, several disadvantages should be taken into account. These include a moderate gradient that may pose challenges for some users, the need for calming measures to address high speeds (crossing level pedestrian path), potential restrictions and conflicts at junctions for pedestrians, possible disruptions to public transport connections due to calming measures, construction costs, and the requirement for challenging serpentine to overcome changes in altitude. These disadvantages should be carefully considered and mitigated through proper design, traffic management strategies, accessibility considerations, and cost-effective solutions into the next project phase.

2.2 Segment C - Option 2:



As the trail progresses, the descent towards street level occurs across from the middle school plot, with a crossing designed to prioritize pedestrians and bicycles, incorporating significant traffic calming measures for Elbasan Road. Once on-site, the descent continues towards the underpass at the street Haxhi Alija, leading to the connection with Segment D.

It aligns with the desired route, ensuring coherence and uniformity. The conflict potential is moderate for the pedestrian path, and the design promotes safety and awareness at junctions. It allows potential extension to other neighborhoods, requires less land acquisition, and has the lowest land requirement for the ramp and underpass. Integration possibilities with the school project exist, and the trail can serve as landmark, with points of guidance, and attract tourism. The construction costs are lower than in option 1.

Disadvantages associated with the proposed design for the pedestrian and cycling trails include the presence of stops along the routes, a lack of continuity in the paths, the need for significant calming measures to manage high-speed traffic, potential restrictions and conflicts at junctions, the possibility of disruptions to public transport due to calming measures, a high volume of traffic load, and a moderate quality of the bike line and pedestrian path. Additionally, the design of junctions can result in additional costs. It is important to carefully consider and address these disadvantages during the planning and implementation stages to ensure a well-functioning and safe infrastructure.

2.3 Segment C - Option 3:



Starting from the roundabout, the route follows the sloped terrain alongside Shefqet Ndroqi Road, running parallel until it reconnects with the pedestrian trail. During this stretch, there is a crossing at street level with robust measures to slow down traffic, prioritizing pedestrians and bicycles. The journey then continues through a widened shared traffic space or car-free zone on Haxhi Alija Street. As for the bike trail, it descends from the northern corner of the middle school plot towards the south, leading to the underpass and the connection point with Segment D

Several advantages: it includes landmarks that serve as points of guidance and attract tourism. The construction costs are low, and the gradient of the trail is favorable. A single stop for both pedestrians and cyclists, minimizing disruptions. There is a low land requirement for the underpass, and the integration possibilities with the school project are promising. Additionally, the redesign of the street creates an attractive environment, especially for children.

There are several disadvantages associated with the proposed option 3. These include the fact that they do not align with the desired line, resulting in a lack of directness. The trails may not be as attractive due to their location behind the neighborhood, which reduces potential usage. Significant calming measures are needed, both in the design of the junction and the street, which can be costly and potentially disruptive. There are restrictions and conflict potential at junctions, and it requires land acquisition, potentially leading to the demolition of houses. These disadvantages should be carefully considered and addressed during the planning and implementation stages to ensure a well-designed and functional infrastructure.

Recommendation:

Based on considerations related to urban planning and traffic planning, it is strongly recommended to proceed with the implementation of option 1. As a planner, we recommend implementing of this variant for its positive impact on urban and traffic planning. It aligns with the desired goals and objectives, taking into account various factors such as pedestrian and cyclist safety, traffic flow management, and the overall urban landscape. Its implementation is expected to result in improved efficiency, accessibility, and the overall quality of the urban environment.

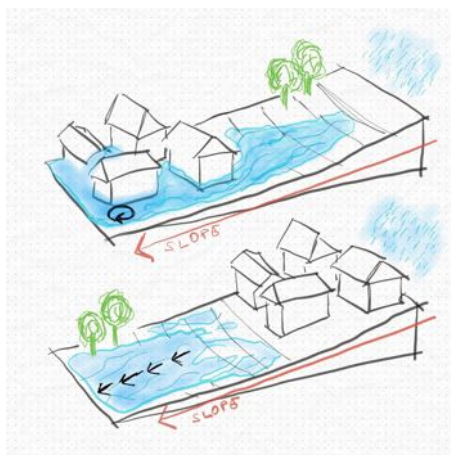
3 Wooden Viaduct - Segment E

The Municipality has expressed the importance of ensuring that the planned road along the valley minimizes disruption to the canal's space in order to minimize the need for expropriations.

However, from the perspective of the team, there is a significant community benefit in preserving the canal in its natural state. By doing so, the canal can serve as a resilient feature during extreme events and be integrated into an urban park. This approach promotes the ecological value of the canal and creates a more harmonious and sustainable environment for the community. It can serve as a valuable asset to the community. Creating an urban park around the canal provides opportunities for recreational activities, enhances ecological diversity, and contributes to the overall well-being and livability of the area.

The team's proposal entails implementing a climate resilient landscape design at the bottom of the valley. This specific area of the valley will function as a natural rainwater retention basin, primarily aimed at mitigating rapid drainage during heavy rainfall events. By doing so, the potential for flooding in lower parts of the valley can be significantly reduced. During most of the year, when rainfall is not prevalent, the basin transforms into a park and playground, providing a recreational space for the community to enjoy.

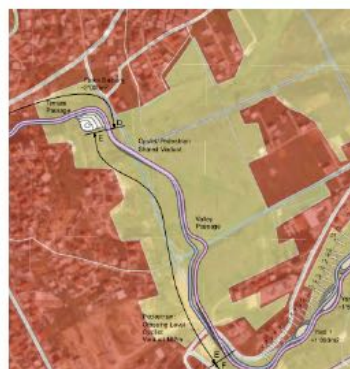
This approach not only serves the practical purpose of flood prevention but also embraces sustainable and climate-resilient principles.



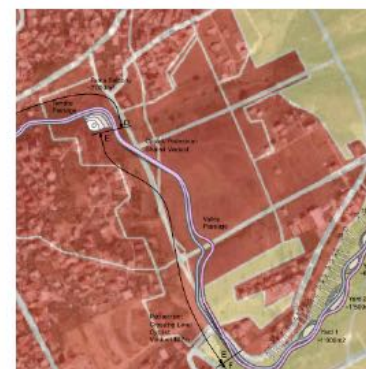
Developments along the urban trail segment



Change in Zoning 2022-2023



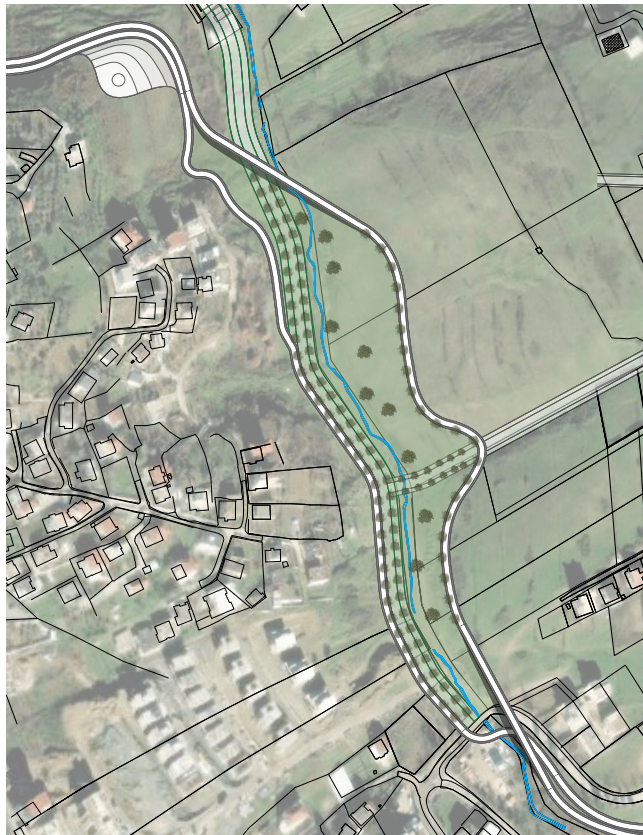
Zoning 2022



Zoning 2023

*The area red shaded recently changed
from agricultural to building zone.*

3.1 Segment E - Option 1:



- The cycling viaduct is 183 m
- The Park between the trails is 2,4 ha

The proposed option includes a pedestrian trail that runs along the slope on the western part of the canal. This trail is designed to provide a dedicated pathway for pedestrians, allowing them to enjoy the scenic views and natural surroundings of the canal. The cycling trail, on the other hand, remains unchanged, ensuring a designated route for cyclists to navigate through the area.

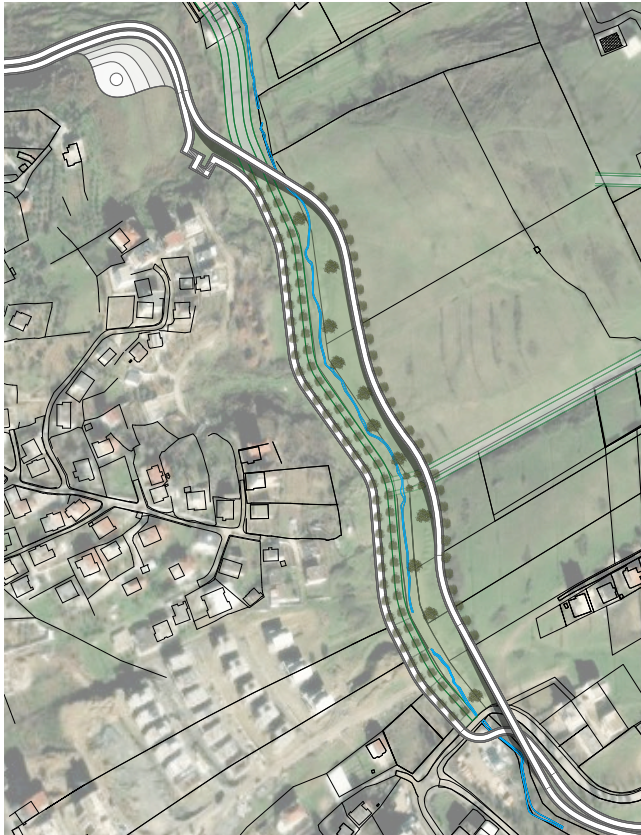
Both trails contribute to the creation of a distinct area between them, which is specifically designated for the development of an urban park. This area can be designed and utilized as a recreational space, providing opportunities for leisure activities, green spaces, and amenities for the community to enjoy.

Advantages: Pedestrians and cyclists are kept separate, ensuring high levels of comfort and safety. The design, including a wooden bridge, provides an attractive appearance, while the potential for extension to other neighborhoods offers increased connectivity. The quality of the bike line and pedestrian path is high, with no conflicts between users. Greenery along the path provides shade and enhances orientation, while serving as a habitat for flora and fauna. The paths can serve as landmarks and points of guidance for both locals and tourists. Additionally, the paths offer a comfortable way to overcome changes in altitude.

However, there are also some disadvantages to consider. The paths do not align with the desired line like in the original idea/design, resulting in a lack of coherence and uniformity. The land acquisition required is high, which can lead to additional costs and potential disruptions. The slope of the pedestrian path may be steep, potentially affecting accessibility. Finally, the construction costs are higher due to the need for separate paths and engineering structures (support walls).

See *Annex A_IVa* for a comparison table.

3.2 Segment E - Option 2:



- The cycling viaduct is 400 m
- The Park between the trails is 1,6 ha

The cycling trail is designed as a 400m long elevated passage in order to allow more crossing flexibility from the planned developments to the urban park.

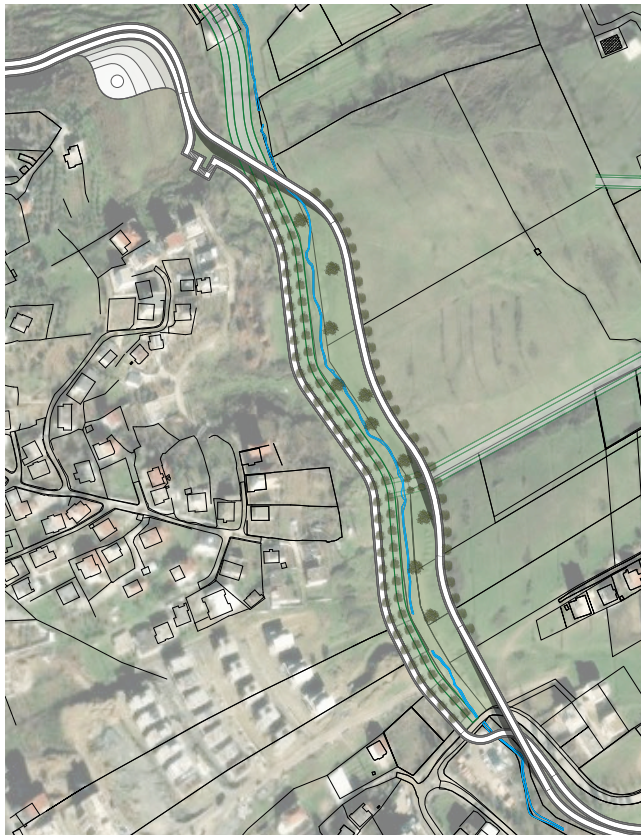
The open space under the wooden bridge also offers biotope possibilities. Additionally, the land acquisition needed is lower compared to option 1.

The pedestrian trail is designed to descent directly to the canal and combine from there with the sidewalk of the planned street. It may be less attractive due to the presence of the inevitable stairs.

The length of the wooden bridge can increase construction costs. Furthermore, the separation of paths can also contribute to higher construction costs.

See *Annex A_IVa* for a comparison table.

3.3 Segment E - Option 3:



- The cycling viaduct is 143 m
- The Park between the trails is 1,6 ha

While designing the wooden viaduct to touch ground earlier, the slope results considerably steeper. This may pose challenges for some users.

The pedestrian trail has the same design as option 2, descending to the canal and combining with the sidewalk of the planned street.

When the trail is predominantly designed on the ground, it restricts the available space and makes it more difficult for the wildlife to evolve the habitat.

See *Annex A_IVa* for a comparison table.

Recommendation:

Based on considerations related to urban planning and traffic planning, it is strongly recommended to proceed with the implementation of the originally proposed trail. It is recommended to further evaluate and address the potential challenges associated with land acquisition, path quality, construction costs, and possible conflicts between pedestrians and cyclists. By addressing these issues effectively, the proposed alternative route can provide a desirable and attractive pathway for both pedestrians and cyclists, enhancing the overall trail experience.

Considering the extensive developments intended in this area, it is crucial that the integration of the trail is planned very carefully, in order to achieve high quality of coexistence (trail users and residents), allowing a maximum of synergies.

4 Recreational spots

Several potential locations have been identified for the installation of recreational areas. These spaces can range from simple setups featuring shady benches to more extensive infrastructures designed as picnic spots. Additionally, some of these locations present opportunities for combining recreational facilities with various business ventures. This includes the inclusion of playgrounds for children, kiosks, or even bars and restaurants, creating a multifunctional space that caters to both leisure activities and commercial activities.

See also Annex A_V

