

**Cohabiting Third Place:  
Integrating Natural Hydrology with Healing Architecture**

Sumayia Binte Samad

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Thesis submitted to the faculty of the Virginia Polytechnic Institute and  
State University in partial fulfillment of the requirements for the degree  
of

Master of Architecture

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Paul Emmons  
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Wellness, Washington DC, Combined sewer, Storm-water  
management, Third place, Community center, Public bath

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**ABSTRACT**

Washington D.C. has been ranked third among U.S. cities in terms of its percentage of youth who have reported a severe major depressive episode. Depression, stress, anxiety are the uninvited visitors of our day-to-day urban living. Most of the time we ignore our mental health unless we reach the threshold. We know nature is the best healer. The District also has reported the highest percentage of parkland but this statistic is not helping regarding Healing and Wellness. There might be a missing piece of the puzzle to reconnect with nature.

To dive deep into the missing piece, I have looked back to the basics, into the four elements of the planet, Earth, Water, Air, and Fire. This thesis is an exploration of the most important natural element, Water, along with the other three elements, as active participants in our everyday urban life, not only as a means of reconnecting with nature but also aiding with natural healing to our depressed, tired soul.

As with many other older cities, Washington D.C. mostly depends on the combined storm and sanitary sewer. During heavy rainfall, stormwater overflows the capacity of the sewage system and empties into the river with sewage. But there is an opportunity for the stormwater to be treated and reused at the site. Rainwater along with tapped groundwater as the perennial flow will be considered as the source of healing water in the dense downtown context of the District. The thesis will tell the story of the arrival of Water into the middle of the city. Water will be examined in all its forms and integrated with the Third Place, where the young working generation can come in the middle of the working day to catch a lunch break or after office rush hour to relax their stressed nerves and heal their inner soul. This design for a community learning center at First Street NE in NoMA neighborhood, Washington D.C. is an effort to trace the path of the long-lost Tiber Creek and to provide the inhabitants with a for Water and growth.

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**GENERAL AUDIENCE ABSTRACT**

Washington D.C. has been ranked third among U.S. cities in terms of its percentage of youth who have reported a severe major depressive episode. Depression, stress, anxiety are the uninvited visitors of our day-to-day city life. Most of the time we ignore our mental health unless we reach the threshold. We know nature is the best healer. The District also has reported the highest percentage of the green area but maybe only the "Green" is not enough for healing. To dive deep into the missing piece of the puzzle, I have walked back to the basics, looking into the four elements of the planet, Earth, Water, Air, and Fire. This thesis is an exploration of the most important natural element, Water, along with the other three elements, in architecture and urban design, not only as a means of reconnecting with nature but also aiding with natural healing to our depressed, tired soul.

As with many other older cities, Washington D.C. mostly depends on the combined storm and sanitary sewer. During heavy rainfall, stormwater overflows the capacity of the sewage system and empties into the river with sewage. In this research rainwater is considered as the source of healing water in the dense downtown context of the District. This thesis also examined tapping groundwater and bring it to the city street level. The thesis will tell the story of the arrival of Water into the middle of the city. This design for a community learning center at First Street NE in NoMA neighborhood, Washington D.C. is an effort to trace the path of the long-lost Tiber Creek and to provide the inhabitants with a place for Water and growth.

## ACKNOWLEDGEMENTS

Thank you to my committee chair Susan Piedmont-Palladino who has inspired me all through my graduation journey from the day when I sent her my first email about admission into WAAC and has guided me every time I felt lost in the architectural thinking process.

Thank you Paul Kelsch for being a great mentor and enchant my interest into the vast realm of Landscape architecture.

Thank you Paul Emmons for introducing me to the realm of Architectural history and all the mythology, most importantly asking the right question which has guided me to shape my idea into a concrete form.

Thank you to my partner Sidd for his constant support all through my graduation journey and encourage me every time I am stuck with design dilemma.

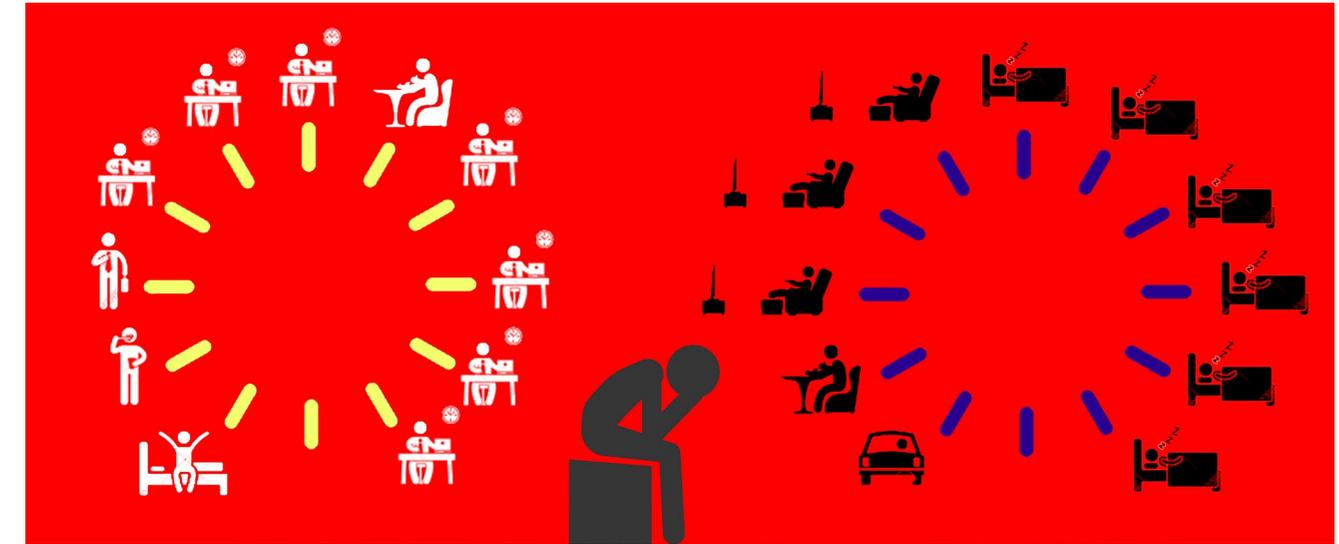
Thank you to all my family members Maa, Abbu, Saimum, and Sakib for supporting me always even not knowing what I am really into.

Thanks to all my mentors, co-workers, friends at WAAC, and BUET for always being there for me.



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People get tired and depressed from same old routine every day and night, How can we heal the distressed soul by architecture?

"In the imagination of 20th century, Water lost both its power to communicate by touch its deep seated purity and its mystical power to wash of spiritual blemish. It has become an industrial and technical detergent, feared both as a poisonous stuff and as a corrosive for the skin."

-Ivan Illich, *H2O and the Waters of Forgetfulness*

"Hydrological restoration is not an economic or technological imposition upon nature. It is just nature. Nature wants to work. It evolves to work."

-Bruce K Ferguson, *Introduction to Stormwater*

*What is the relation between Water and Human Psychology?*

*What is the impact of Water in enlivening life in public space?*

*What is the impact of four basic elements Earth, Water, Fire and Air on us?*

*Can we perceive a space which can heal wounded soul as well as wounded Mother Nature?*

# Part 01: Introduction

## The Water

This thesis is about the correlation between Water, public space, and human psychology. There is an old belief that people have come from the sea. Human blood has the same ratio of saline as seawater.<sup>1</sup> That can be a reason why we feel better around water. The gentle sound of flowing natural Water helps us to soothe our torn nerves. Water is “formless, colorless, tasteless, essential for life”.<sup>2</sup>

Water is connected with both life and death. Water not only connects or separates, but it can also create and soothe. This constructive character is the femininity of Water. On the other hand, Water can threaten and destroy which is the masculinity of water. It is soft although it can erode and soothe the hardest rock over time. Water can clean all the visible dirt and invisible sins. In my belief, water might be the ultimate idealistic component that blends us all into a “One” identity.

“We came from the Water; our bodies are largely Water; and Water plays a fundamental role in our psychology. We need constant access to Water, all around us; and we cannot have it without reverence for water in all its forms. But everywhere in cities Water is out of reach.”

-Christopher Alexander. *A Pattern Language*

“There’s plenty of Water in the universe without life, but nowhere is their life without Water.” Sylvia A. Earle, *Wise Old Sayings*



Feminine Water - healing properties of Water

# Part 01: Introduction

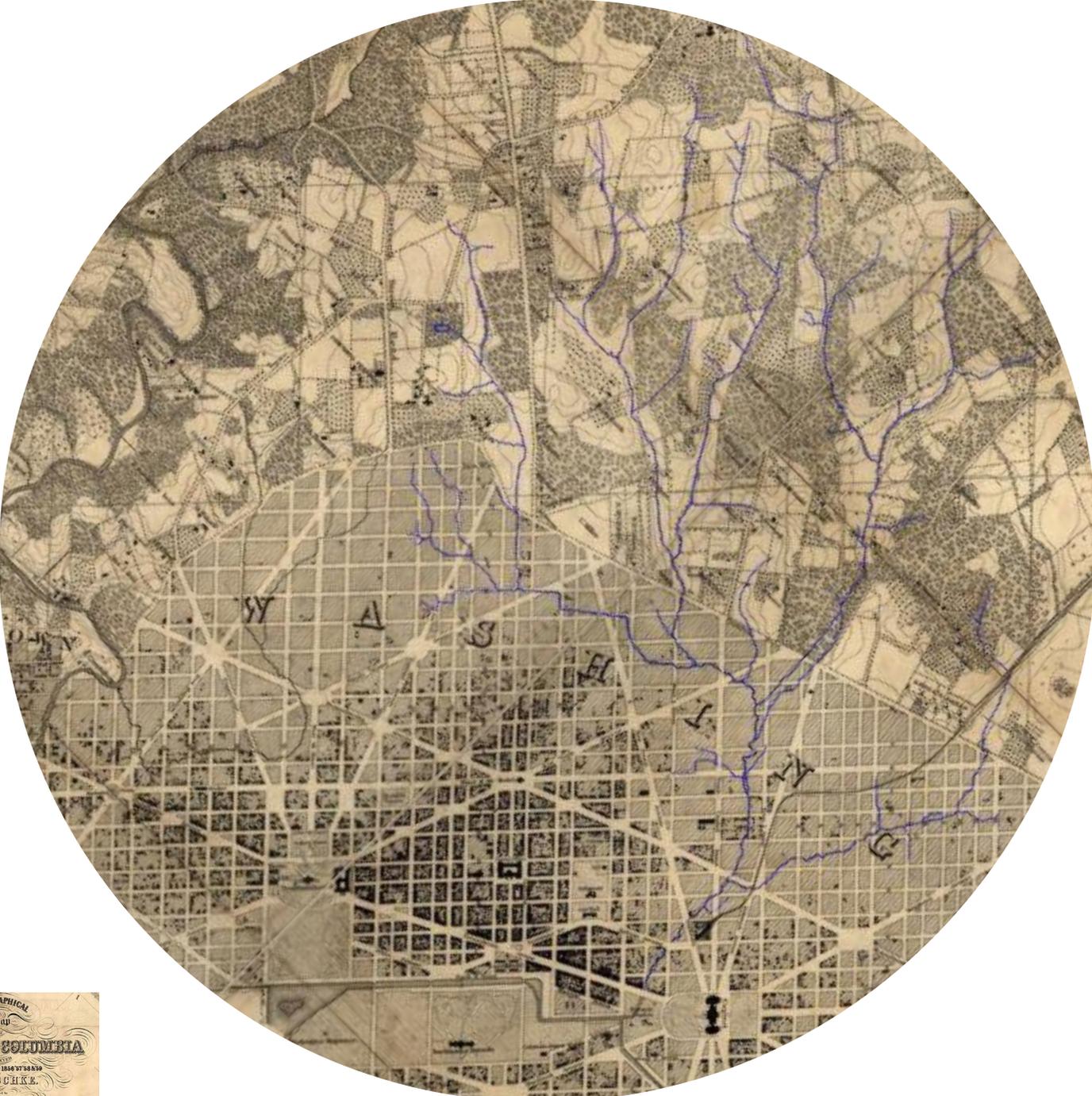
## The District

“D.C. was not always a city. The District was once farmland, drained by marshy streams and rushing creeks. Those watercourses still flow, mostly underground.”<sup>3</sup>

As with many other older cities, Washington D.C. the capital depends on the combined sewerage and stormwater system. During heavy rainfall, stormwater overflows the capacity of the sewage system and empties into the river with sewage. But the stormwater can easily be treated and reused on the urban surface as an important everyday life urban element. Letting the stormwater flow through a vegetated channel on the ground allows time, planting, and sunlight so that the water can be evaporated in the air or infiltrate into the ground soil.

Before the city has been assigned as the capital of the United States, there was a creek named “Goose Creek” used to flow through the small farms and green areas which was a part of Maryland back then. “Although small in appearance, its watershed comprised nearly half of the District’s land.”<sup>4</sup> When the planning of the District has begun Goose Creek has been renamed as “Tiber Creek” after the Tiber River in Rome. The naming was a part of the visioning of Washington D.C. as the new “Rome”.

This research has examined the possibility of daylight a part of the Tiber Creek. But as it has been buried with combined sewer pipes, the possibility has turned out unrealistic in the present context. So I have rather created a natural stormwater channel that closely traces the path of Tiber Creek to an extent.



Boschke Topographical Map of Washington D.C., 1861, showing all the creeks and streams

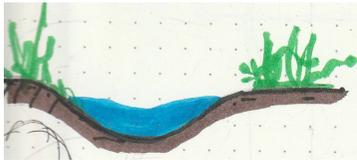
# Part 01: Introduction

## Stormwater of the City

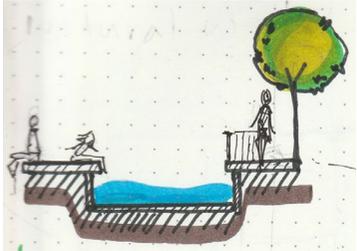
People in the city want to get closer to Water. In urban life, people are generally hydrophobic and Water is treated as a cleaning fluid and utility underground. Stormwater flows through sewer pipes underground. In the name of development and flood control, we have buried all the streams and ponds that have made access to Water in the middle of the city unthinkable.

For the development of the District, we have neighborhood-scale development plans. All of them operate individually. As a result, they don't work as a system. In this research, I have experimented with the idea of integrating stormwater channels with the city street in one neighborhood. This can work as a precedent for the adjacent neighborhoods to rethink about enlivening their street as public space incorporating the benefit of a daylighted vegetated stormwater channel.

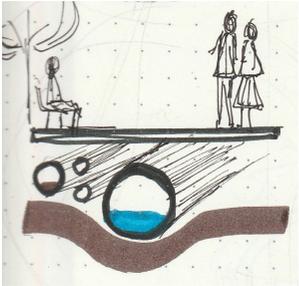
“Water is everywhere before it is somewhere. It is rain before it is in rivers, it soaks before it flows, it spread before it gathers, it blurs before it clarifies. Water at these moments in the hydrological cycle is not easy to picture in maps or contain within lines.”  
-Anuradha Mathur and Dilip Da Cunha, *Waters Everywhere*



Water in natural setting



Water in urban setting, with hard edges



Water flowing underground as utility



“In the Peter Waddell painting Tiber Creek: *The Bathers*, recreates an event from 1825 when President John Quincy Adams, a frequent swimmer in the creek discovered a leak in his boat. Together with servant Antoine Giusta and his son John, they swam to the southern shore to await rescue.”<sup>5</sup>

# Part 02: Site Consideration

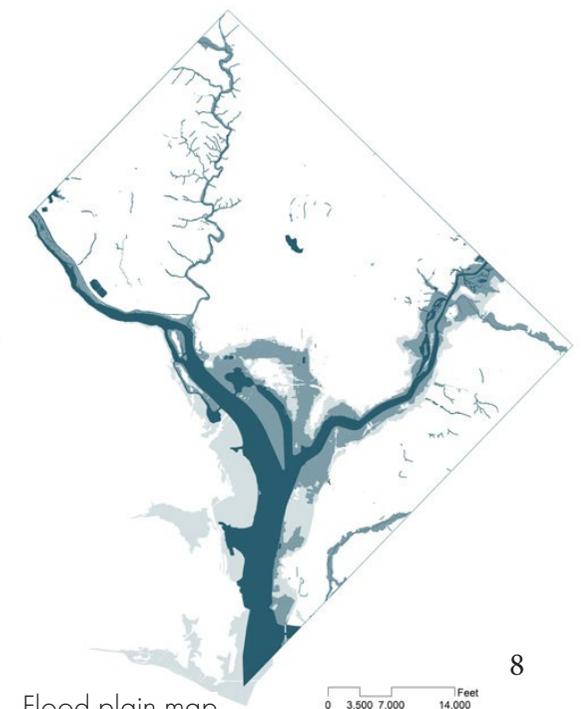
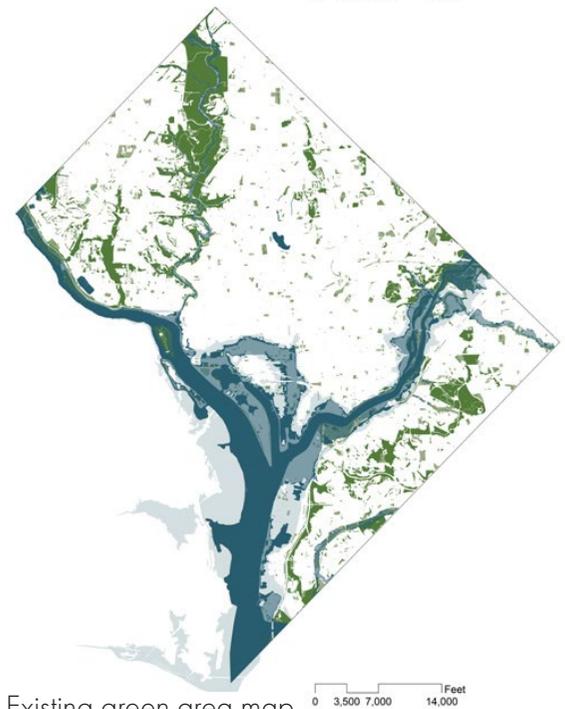
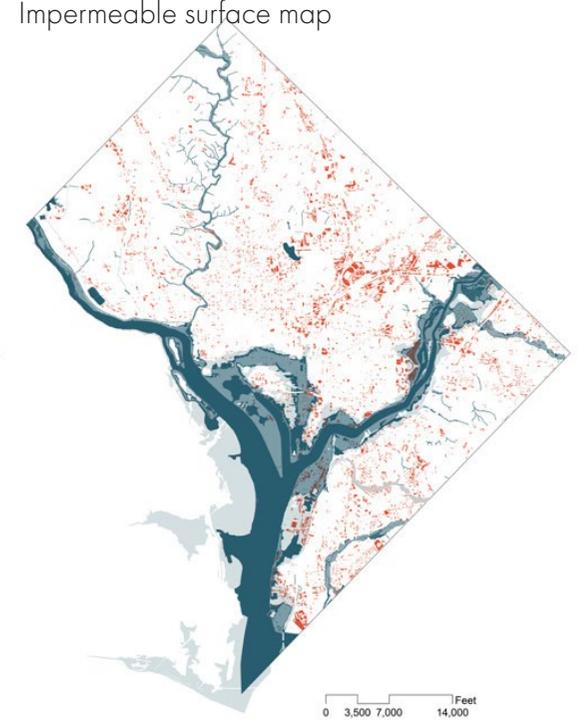
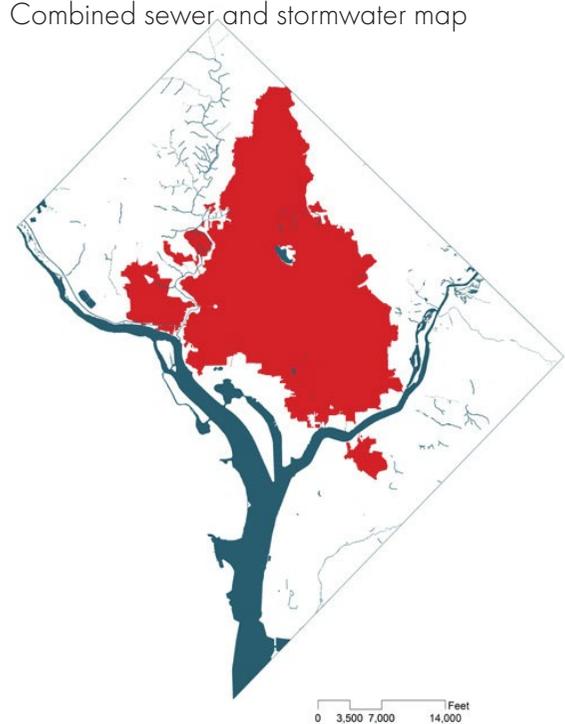
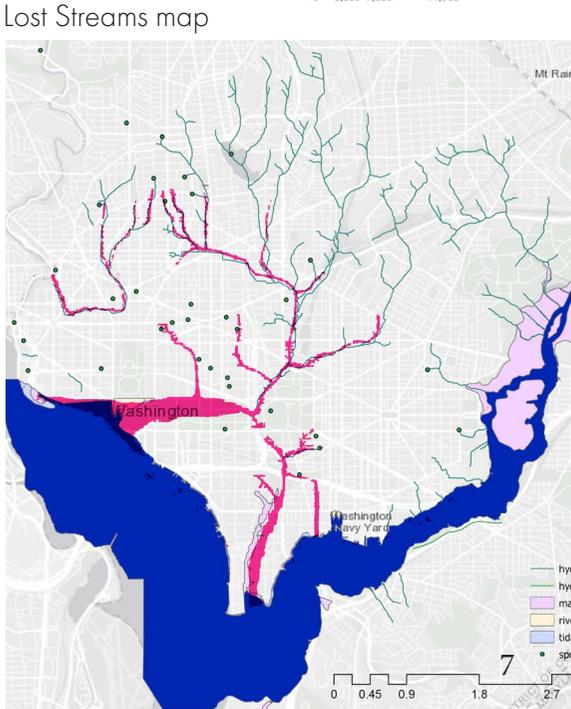
## First Stage Parameters

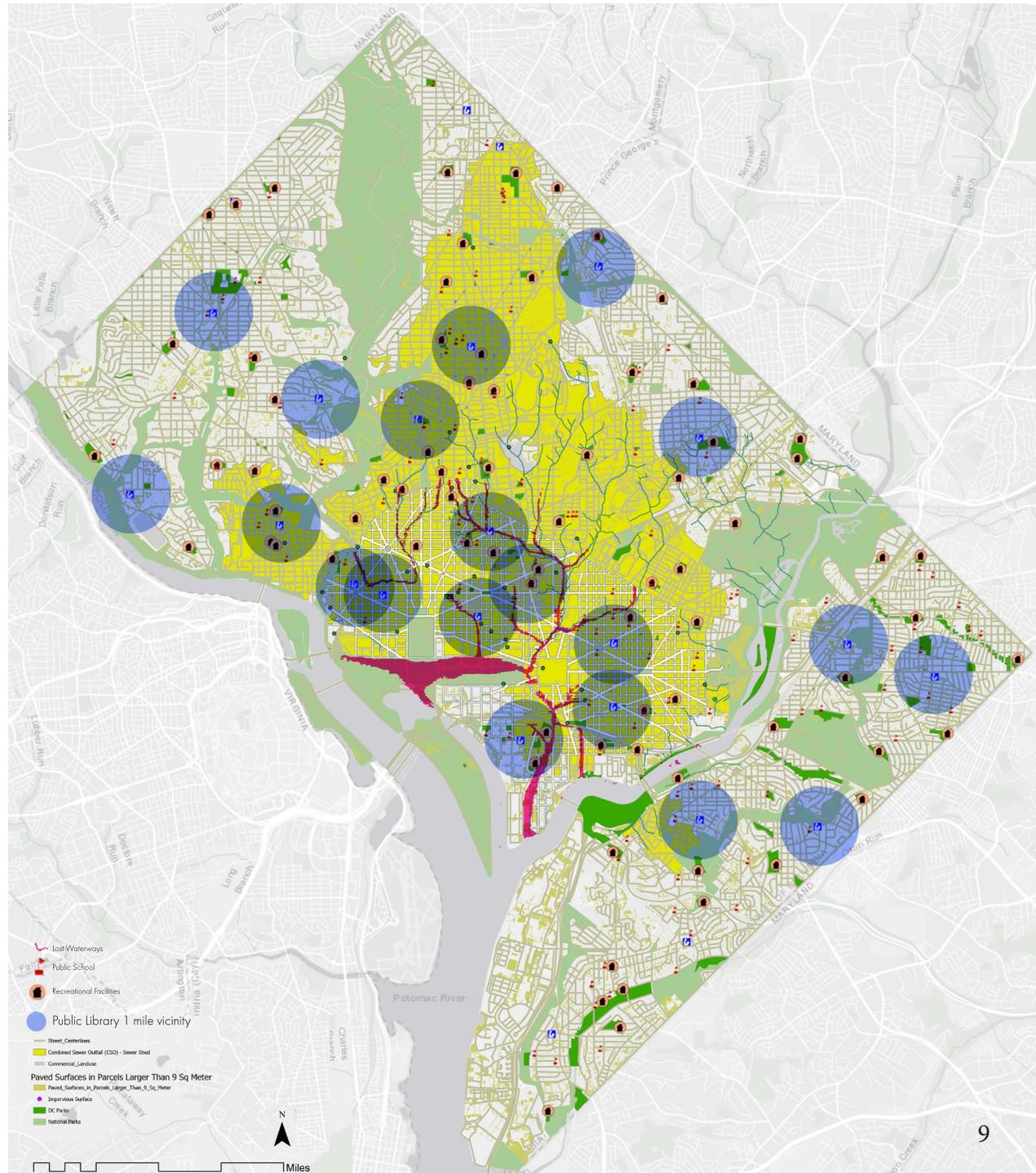
For selecting the site I have looked into a list of criteria. As I wanted to release the pressure on the combined storm and sewage water system, my first criterion was to be in the combined sewer zone in the District.

I also have looked into all the impermeable surfaces on the District map. Most of them are surface parking areas. The second criterion was the site should be on the impermeable surface which ensures that the project doesn't lessen any permeable green surface. As Christopher Alexander has mentioned in A Pattern Language that "Building should always be built on those parts of the land which are in the worst condition, not the best."

The third important parameter was to trace the lost creeks of Washington D.C. So I have closely looked into the trace of the "Tiber Creek".

I also have looked into the green network, commercial zoning map and flood plain map of the District, ensuring the site is situated in the middle of the downtown commercial area, far from the two rivers and the Rock Creek Park, where there is no easy access to nature, and out of the flood plain so there is no chance for the rainwater get trapped in the area I am dealing with.



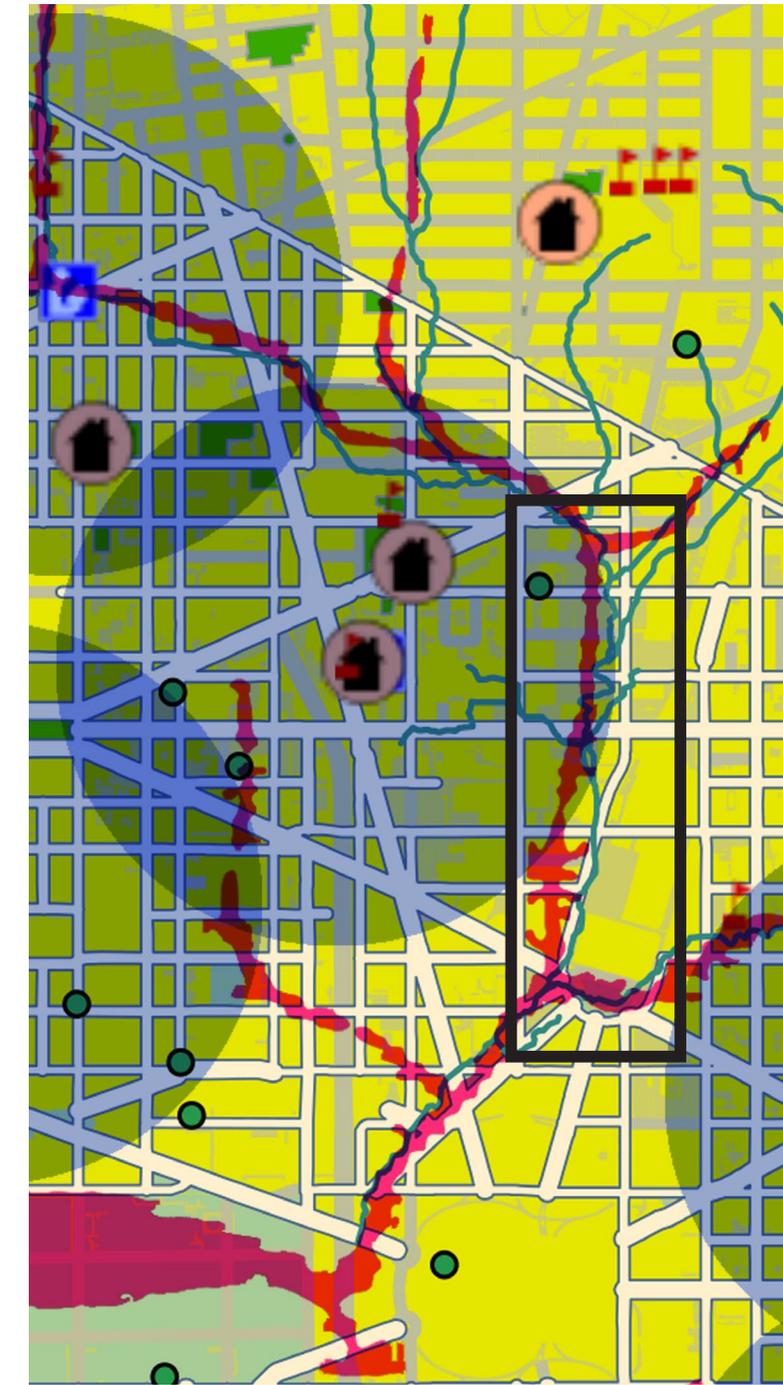


## Part 02: Site Consideration Second Stage Parameters

As for project type, I have been exploring civic facilities such as the Community Center, Recreation Center, and Library. So for the second stage of screening for the site, I have overlaid all the criteria I have mentioned above on the map of 1-mile vicinity radius of every public library and recreation center in the District.

Finally, I have narrowed the site into the edge of the neighborhood north of Massachusetts Avenue is now known as NoMa, First Street NE, especially following the trace of the long lost Tiber Creek.

As in the right side image the pink waterway path shows that in the particular area three branches of the Tiber Creek met together and flowed towards the Union Station and National Mall area afterward.

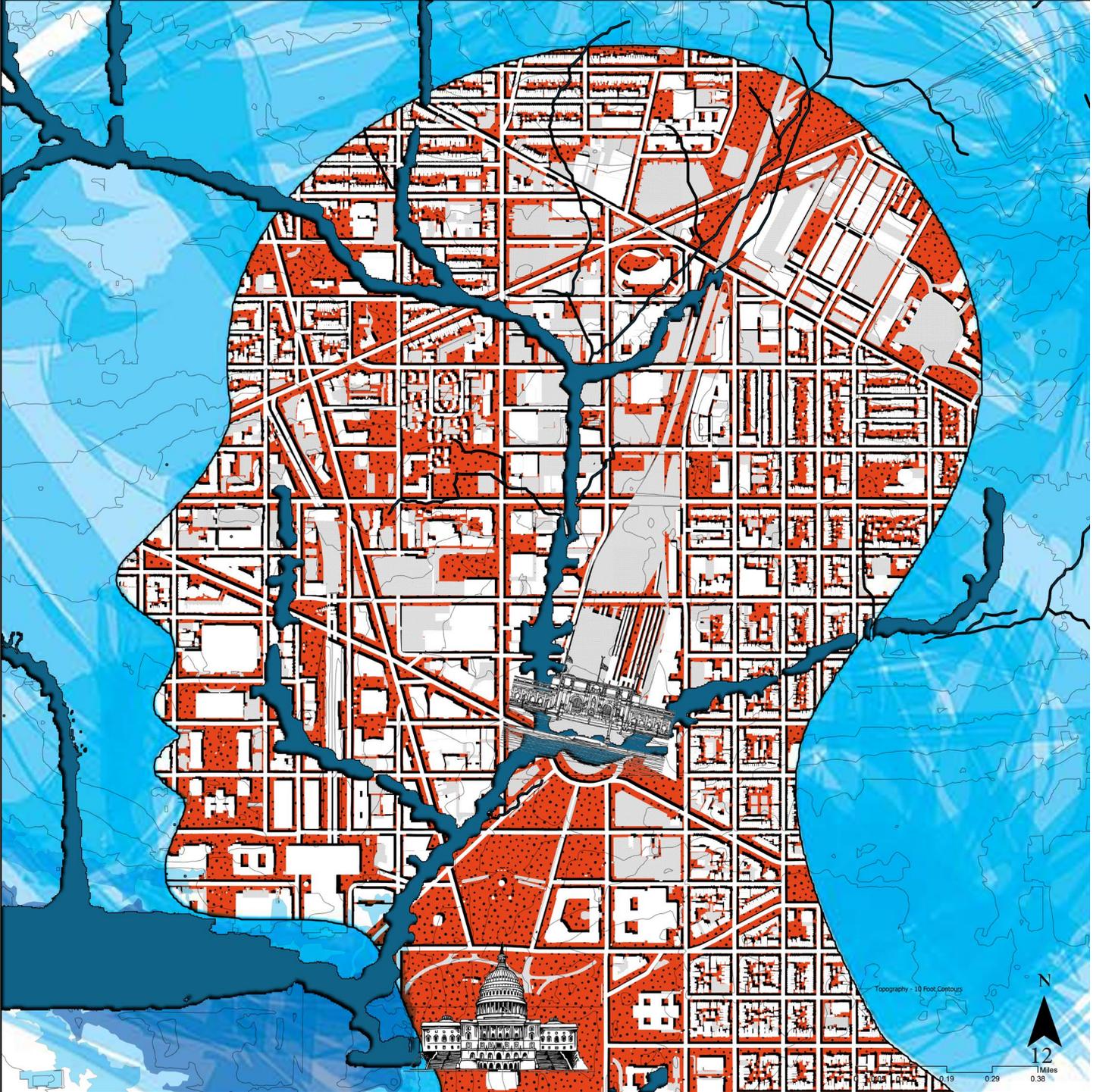


# Part 02: Site Consideration

## The Overall Perception

This drawing is an abstraction thinking the particular part of the city as a human head, expressing the lamentation of nature, where the creeks are flowing under the earth like veins, trying to breathe. The red-black dotted areas are only the unbuilt green or permeable surface showing how we have been building on earth (white and the grey areas) and blocking the veins and skins of the Mother Nature.

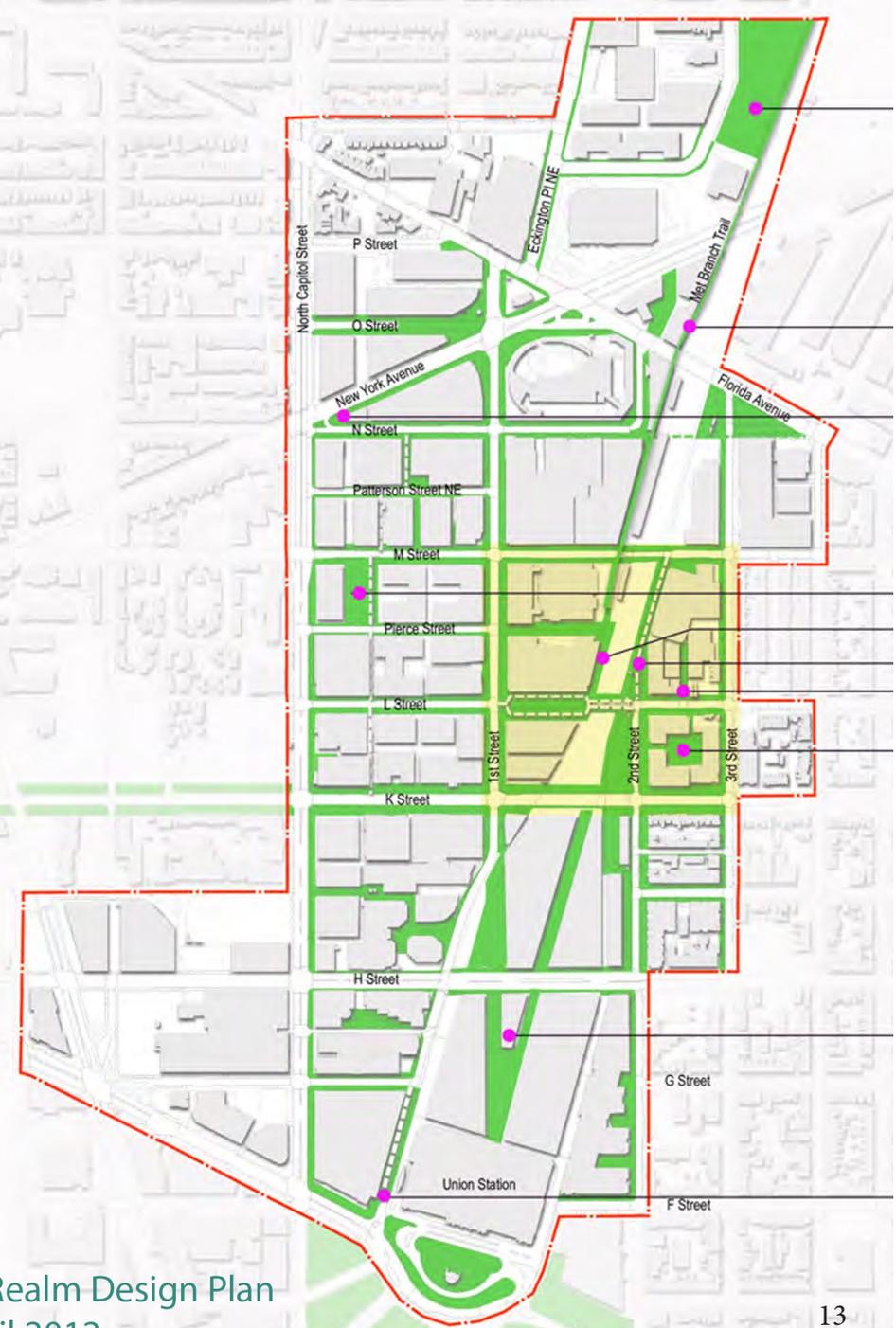
-  Tiber Creek lost Stream
-  Building footprint
-  Impermeable surface



# Part 02: Site Consideration

## The Development Plans

These are three different stage development plans for the NoMA neighborhood. The final development plan 2017 does not reflect much on the previous linear park and public realm proposal. It has been overpowered by all the commercial and mixed-use building development which is currently going on.



Public Realm Design Plan  
2012  
2012 proposal of public realm design



FUTURE  
LINEAR PARKS  
2014 proposal of linear park



2017 development Plan

# Part 02: Site Consideration

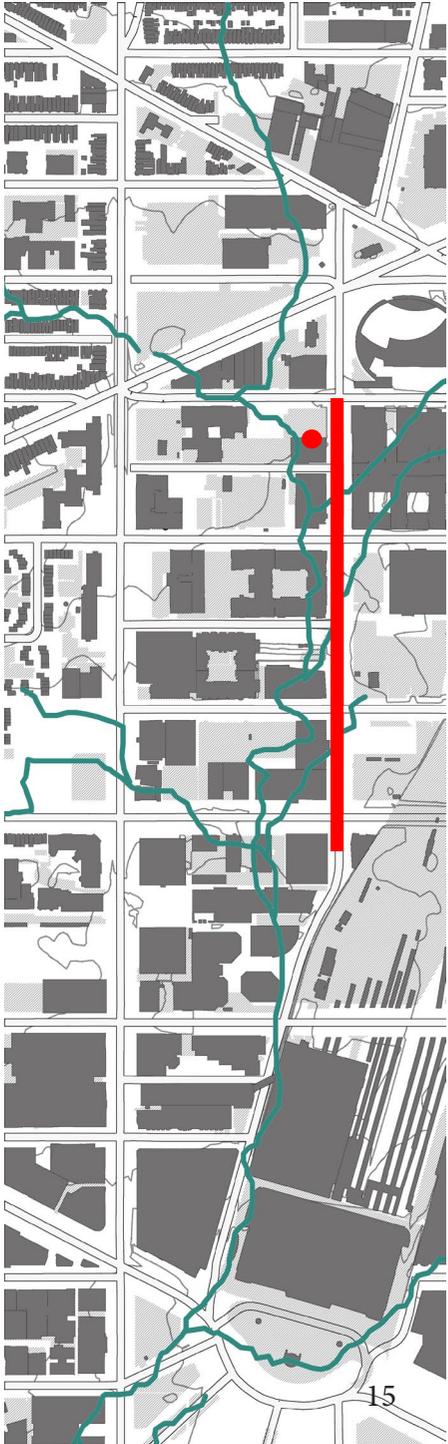
## The Street and Site Photos

I have focused on the linear park proposal on First Street NE and decided to enliven this street incorporating the stormwater channel with the street section. I have chosen the site for the building along the street which was located between N Street and P Street where there was a parking lot and an abandoned night club single-story structure. Also, the site was chosen following the proximity from the metro station which is just two blocks away.

The existing character of the First Street NE is very interesting as a neighborhood street. There is generally a row of food trucks where people wait in line to buy their lunch, and they sit on the planter walls to eat or rest. As the North Capital Street, parallel to this one is the high-density vehicular road, First Street NE, is mostly used as a neighborhood street.



The red marked area is the site I have worked on. This satellite image is the perfect illustration of how heavily built the area is. It shows all the hard impermeable surfaces around, and only breathable space is the pedestrian path by two sides of the streets.



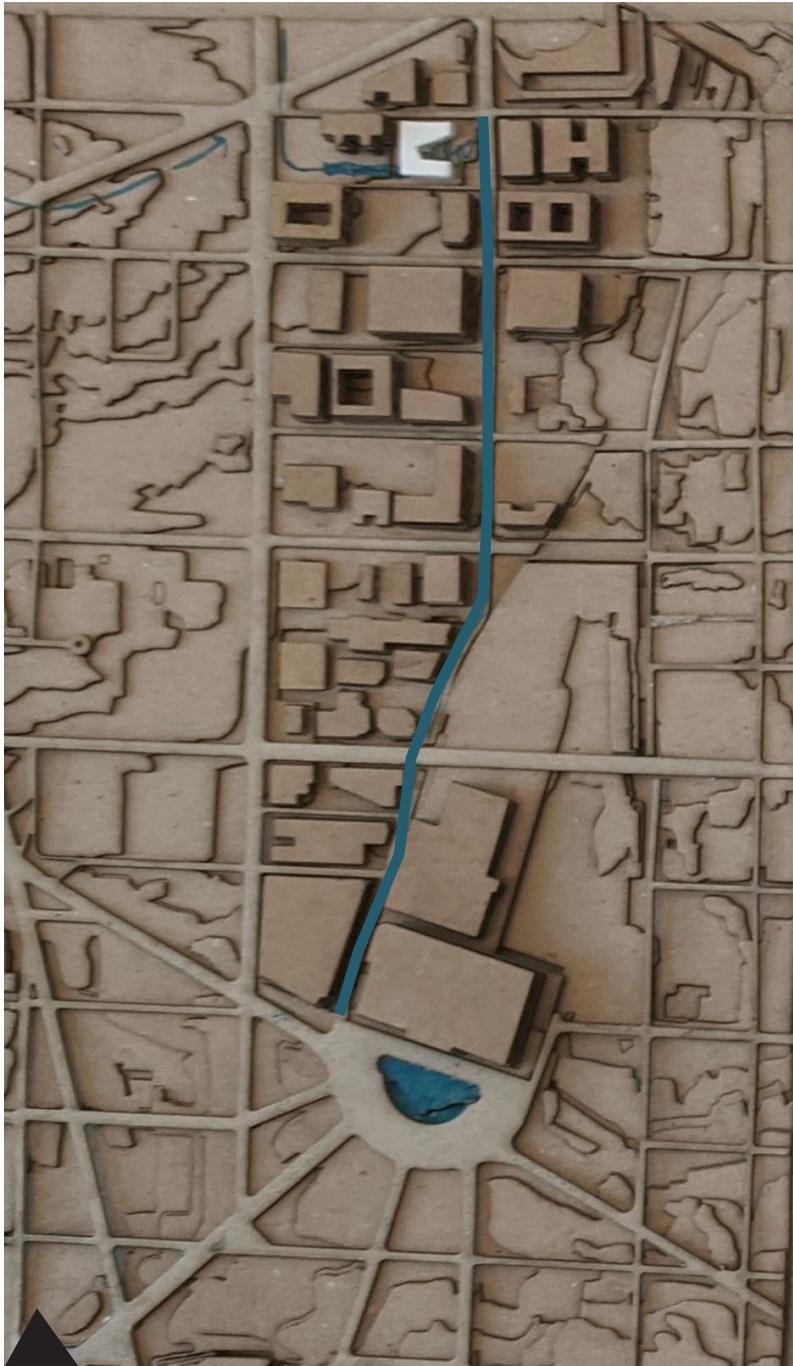
1. Site image looking from First Street NE.  
 2. Site image looking from the intersection of N Street and First Street NE.  
 3. The character of First Street NE, weekday, lunchtime.  
 4. Food trucks row in First Street NE.  
 5. People waiting in a long line to buy lunch in First Street NE.



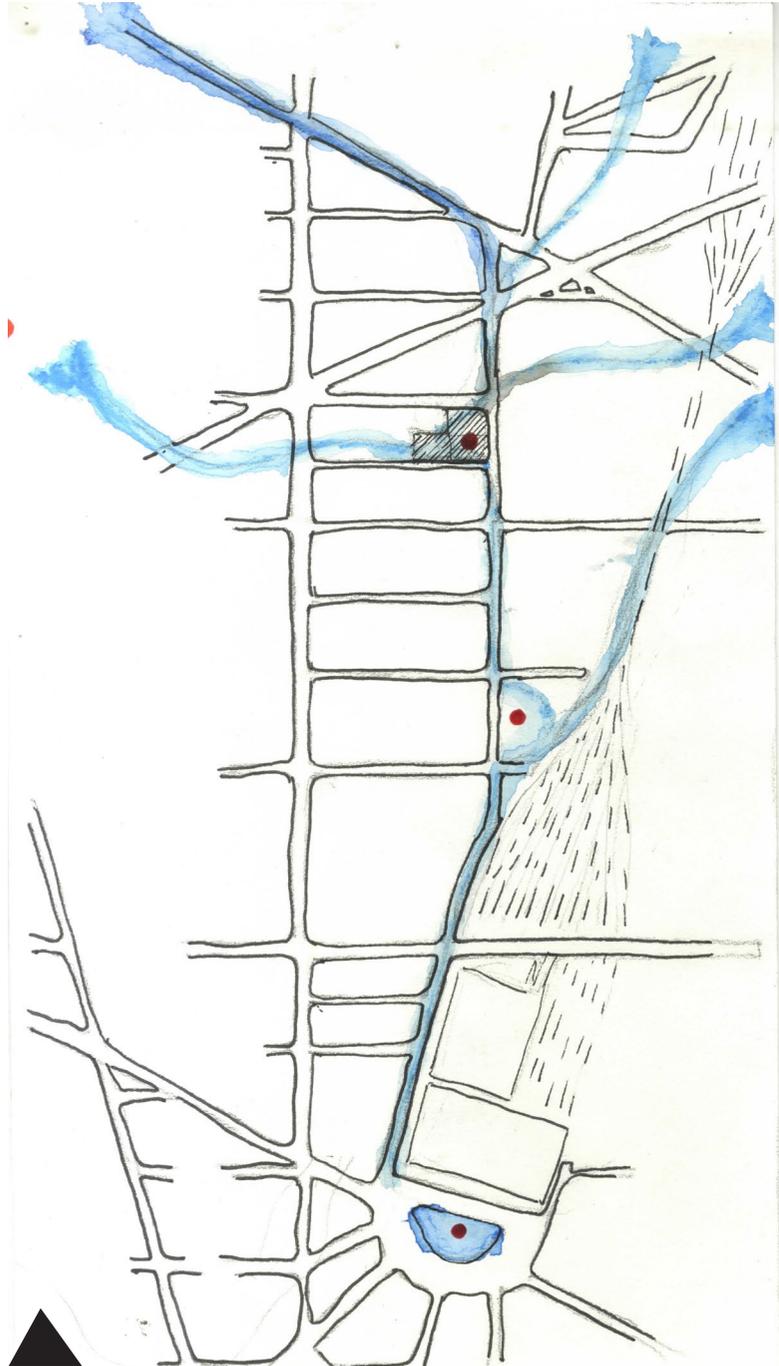
# Part 03: The Proposal

## Water Boulevard

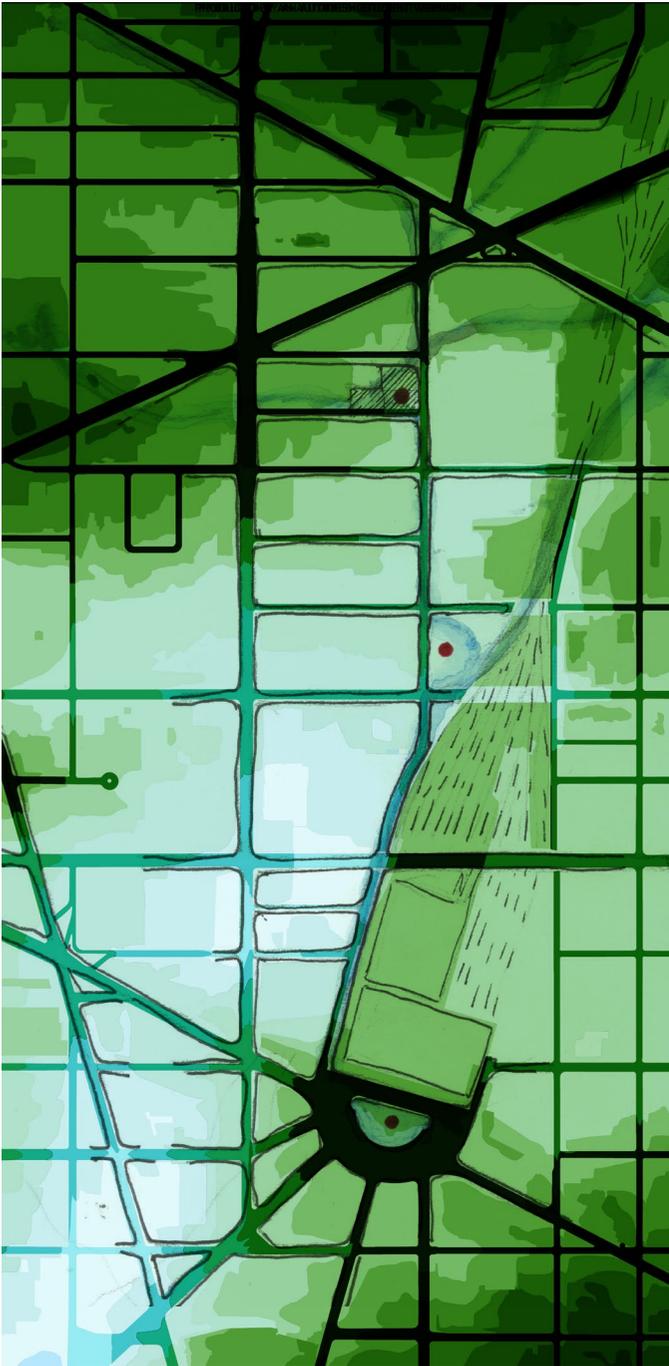
Tracing the natural contour of the site shows the chosen site is in comparatively lower terrain from the surroundings. That brings the opportunity of bringing the storm-water from the neighboring areas into the site, treat the Water with natural vegetation, and let the Water flow through a vegetated day lightened channel through the First Street NE conceiving the street as a Water Boulevard. The Water boulevard would flow towards the Columbus Circle in front of the Union Station. Here Water will reach the city scale from the neighborhood scale. Historically the Columbus Circle was actually low land. So this proposal will rejuvenate the swampy character of the area creating a city-scale Water celebration point in front of the station.



Site topographic model showing water boulevard path on the surface 17



The path of emerging stormwater from surrounding area



The path of emerging stormwater from surrounding area on overlaid terrain map of the area 18

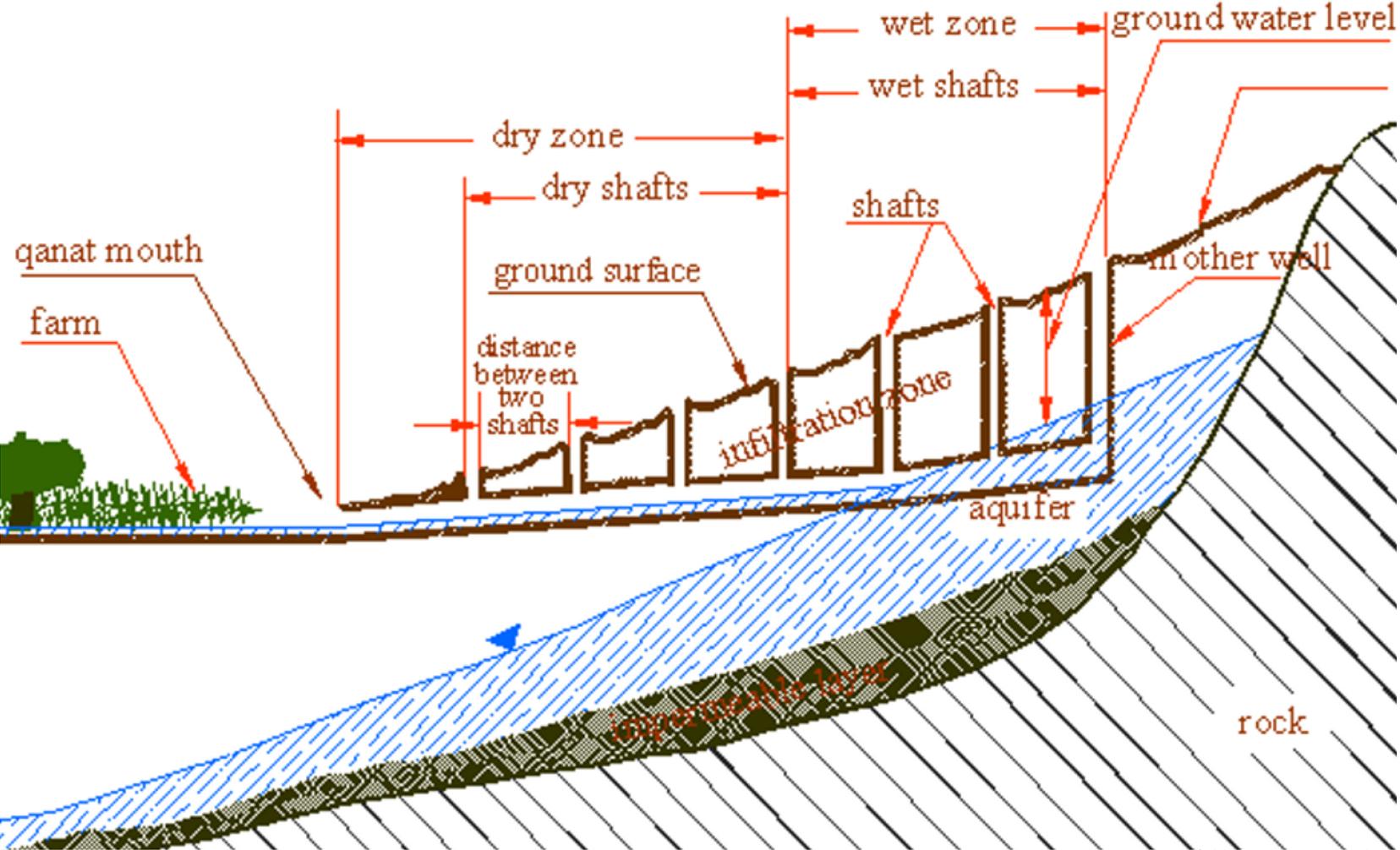
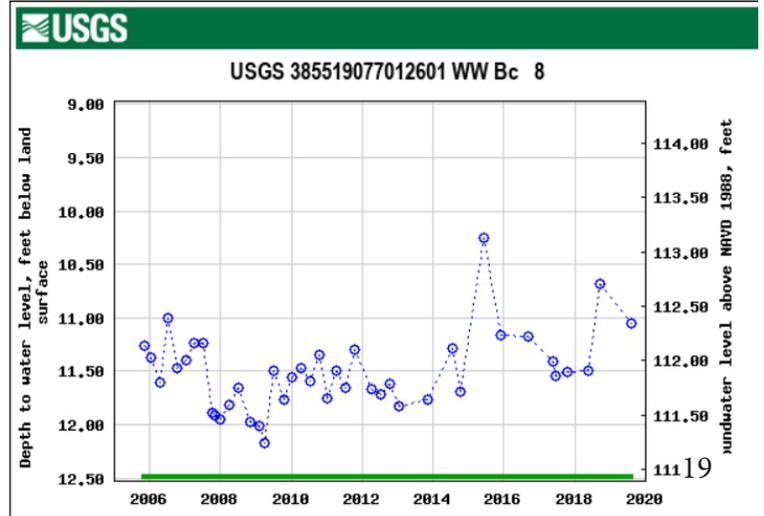
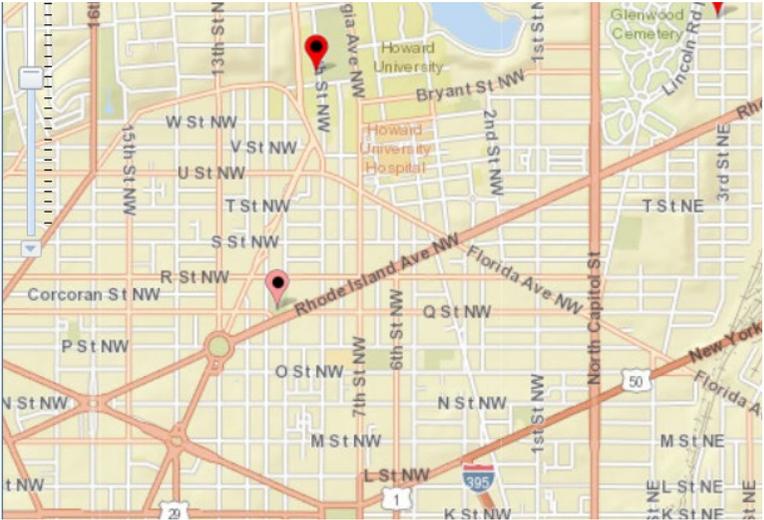
# Part 03: The Proposal

## Background Data

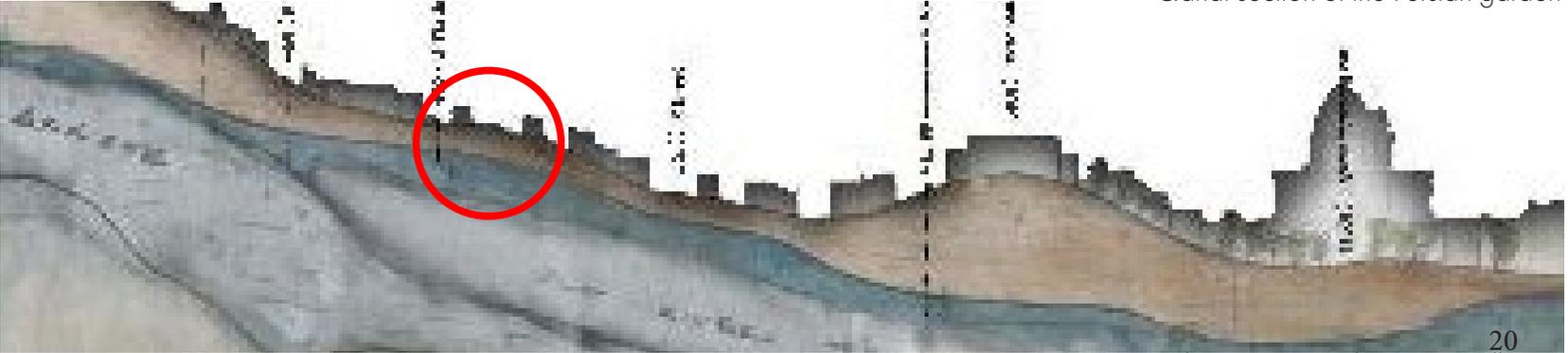
So this water channel will only activate and work during the rainy days and a few days after rain. But my goal was to ensure constant access to water for the inhabitants of the city. That inspired me to look into the "Qanat section" of the Persian garden.<sup>7</sup> The Qanat was the way to tap groundwater through an underground water channel to a water feature in a wealthy person's garden, generally who is the one who had paid for it.

I also have looked into the groundwater table of the district in USGS. In the Bloomingdale neighborhood near Florida Avenue, I found a point where the groundwater level is very close to the surface level which is 10ft to 11 ft below land surface. And this location is 1.5 miles from my site. So I have developed a Qanat section which will bring Water on the surface of the city.

USGS ground water table with location map



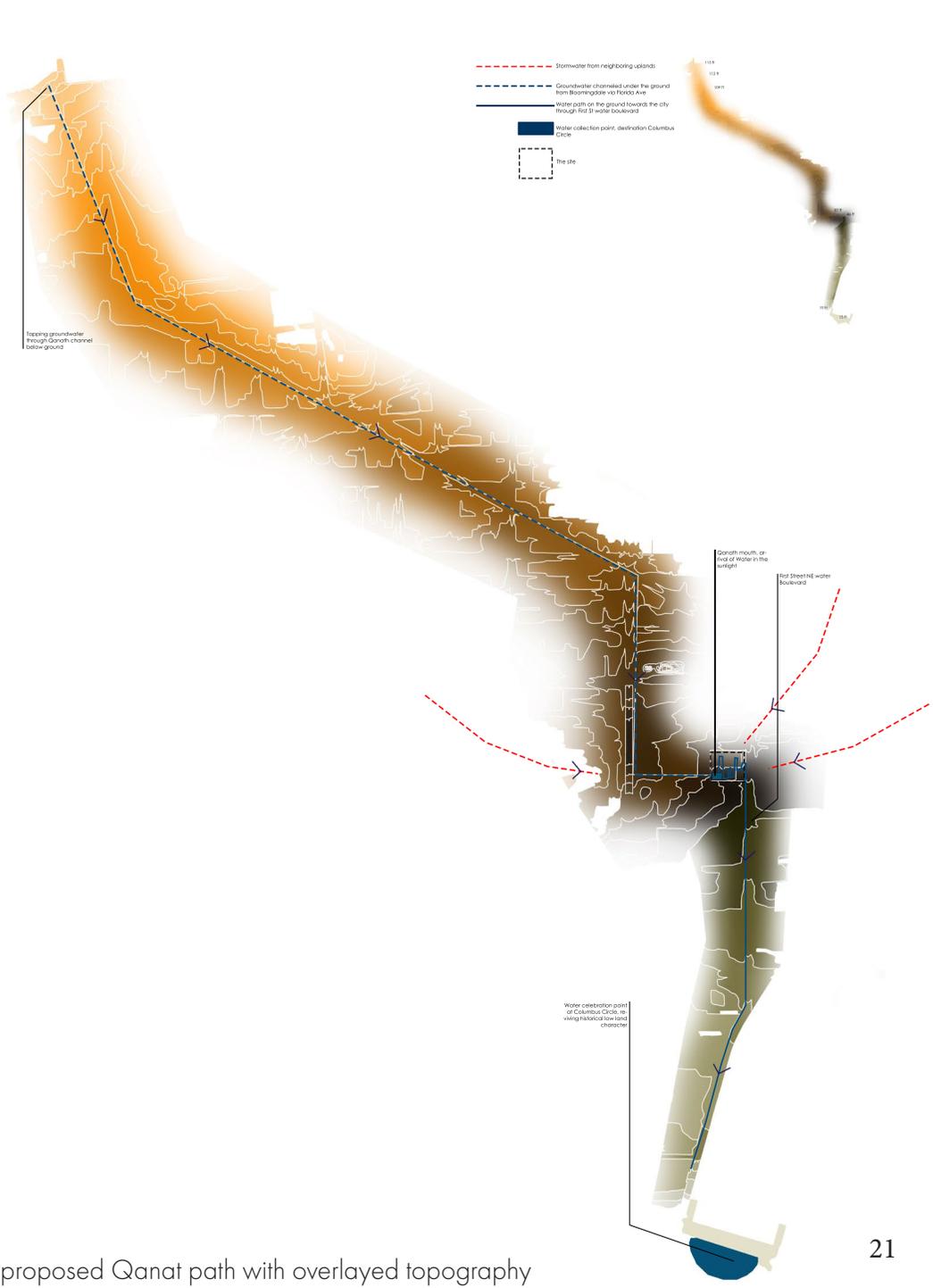
Qanat section of the Persian garden



Ground water section by Curtis Millay



Overlay of proposed Water Boulevard path on the old trace of Tiber Creek from Bosche Map

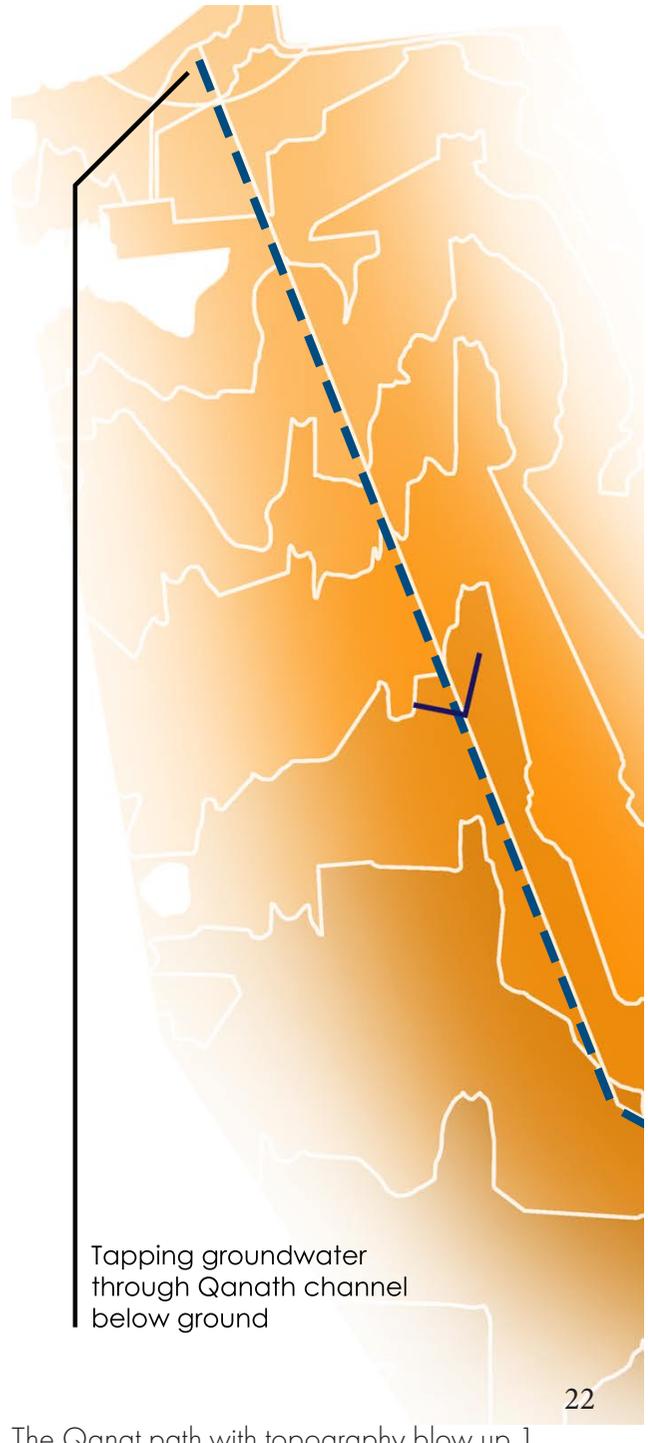


proposed Qanat path with overlaid topography

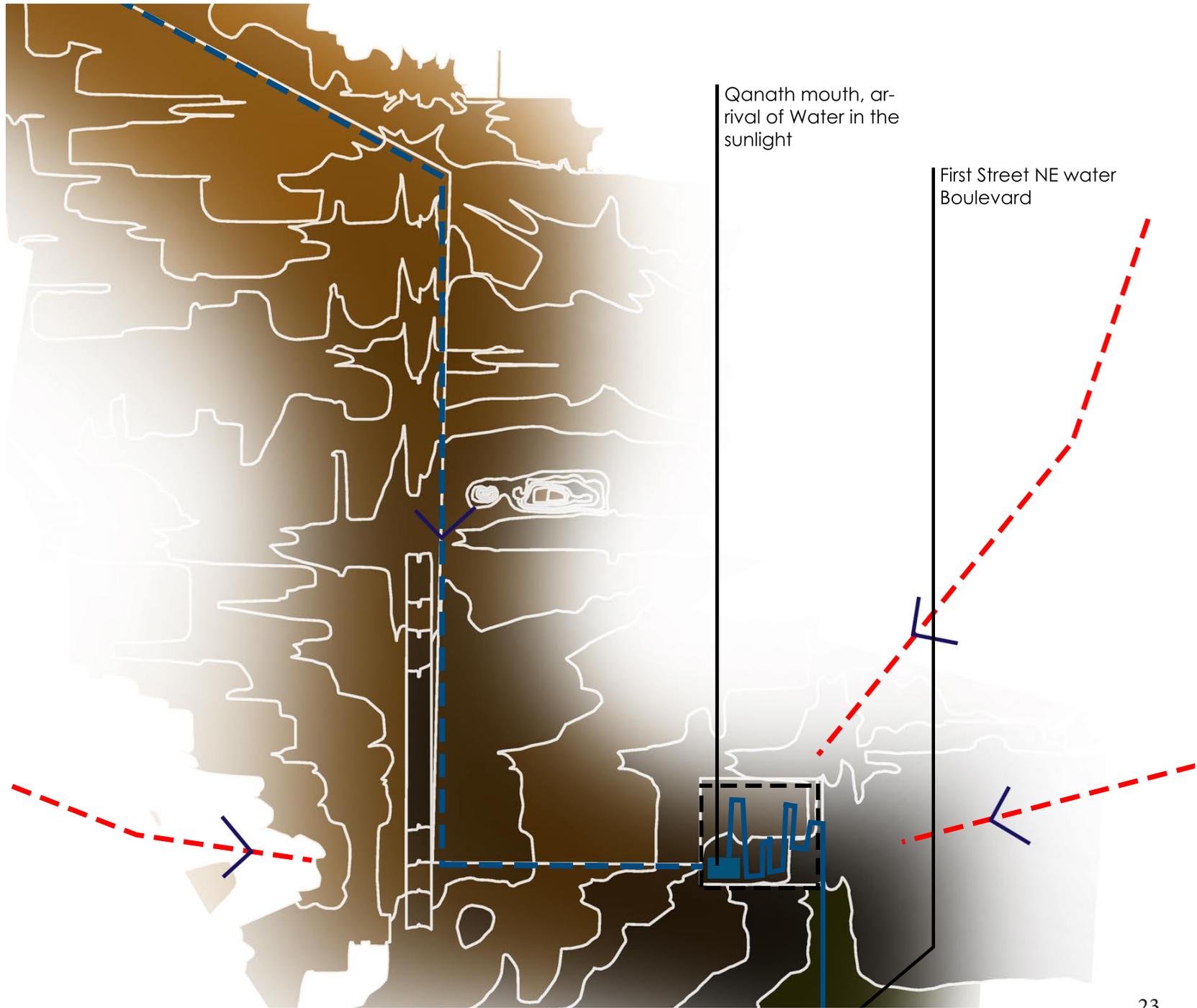
### PART 03: The Proposal The American Qanat

The American version of Qanat will serve the people and street life of the capitol rather than serving an individual. This drawing shows how the groundwater has been tapped at Bloomingdale, how the Water emerges with the stormwater from the surrounding area into a water reservoir in my site, and its journey through the water boulevard at First Street NE, towards Columbus Circle in front of the station.

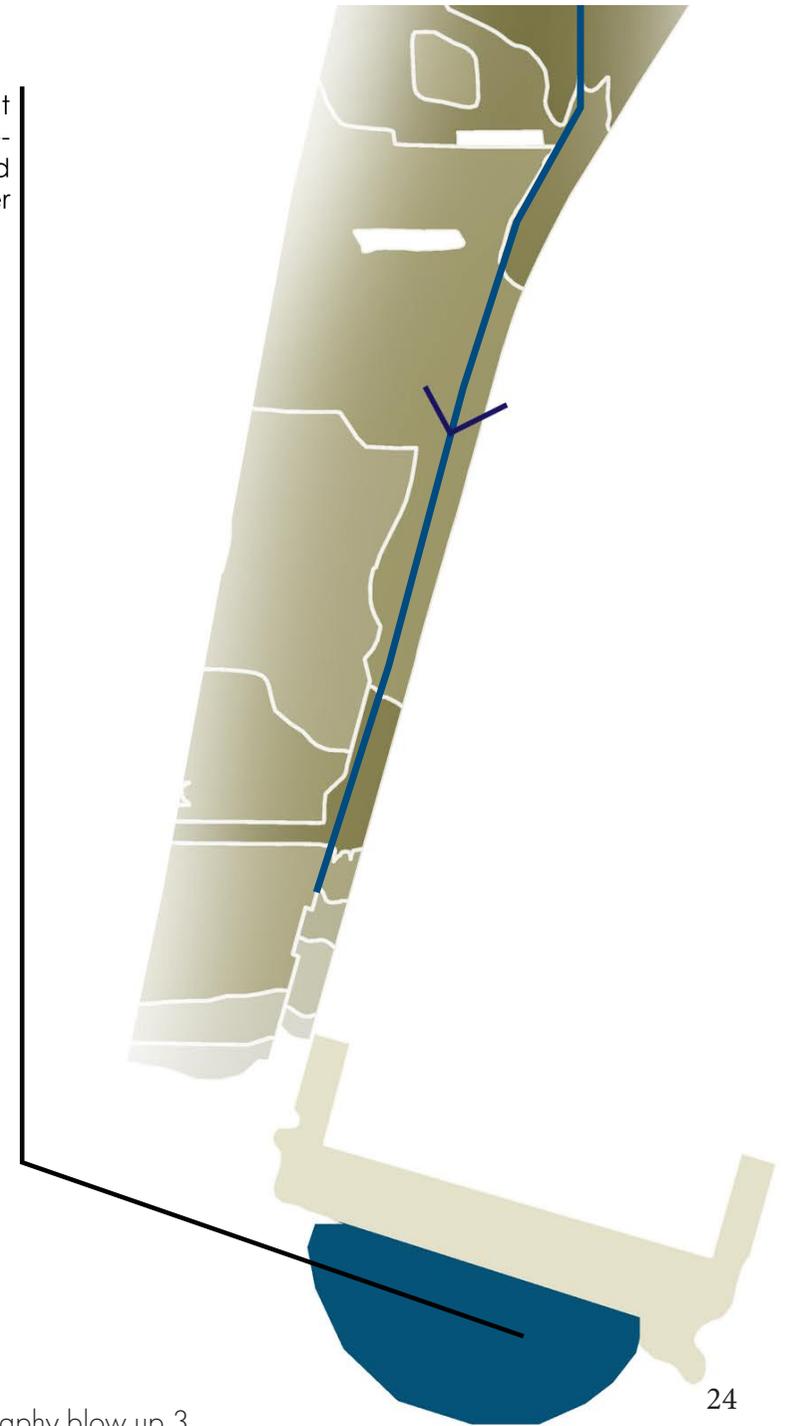
The dotted blue line portions show the water channel underground, dotted red lines are the stormwater channels underground, and the solid blue line portion shows the water channel on the surface level. The water channel in the form of water boulevard is designed closely tracing the path of the Tiber Creek through First Street NE to the Union Station. That will bring back "the memory of a lost stream"



The Qanat path with topography blow up 1

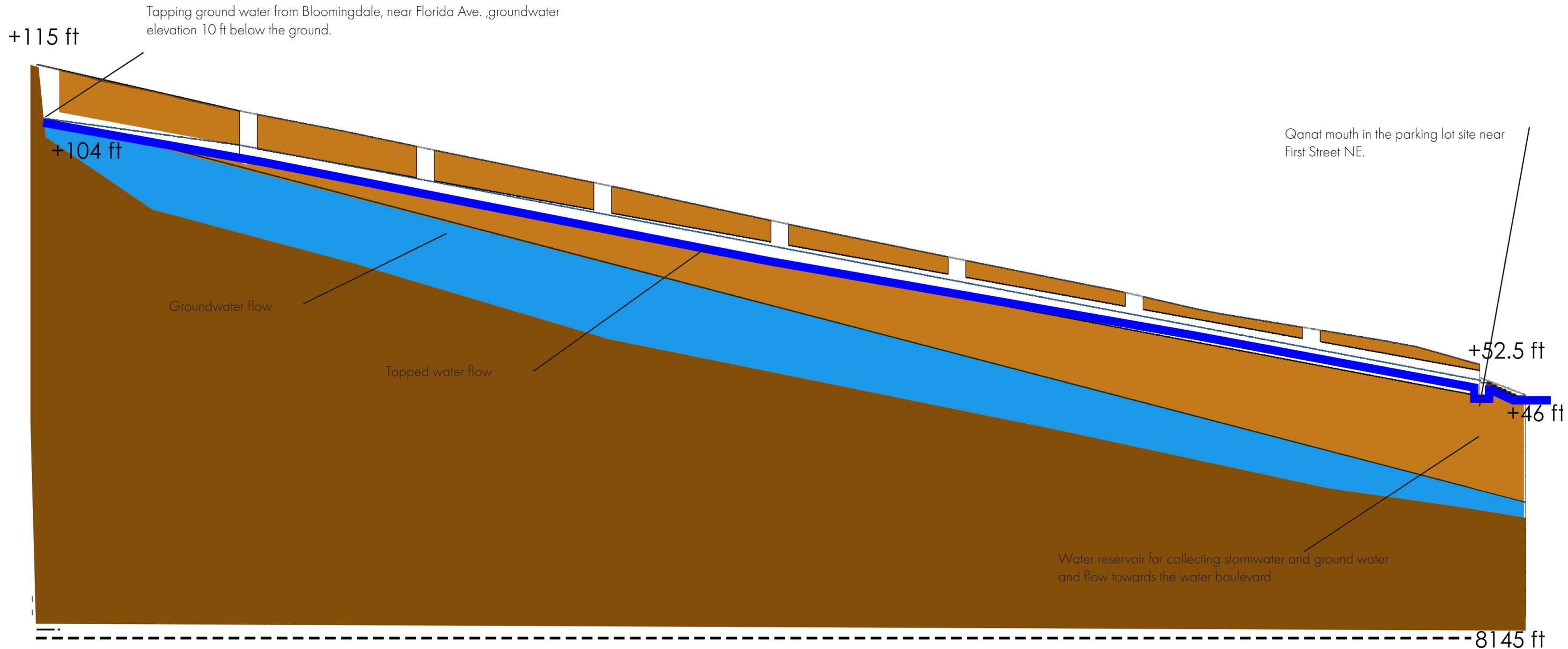


Water celebration point  
at Columbus Circle, re-  
viving historical low land  
character



The Qanat path with topography blow up 2

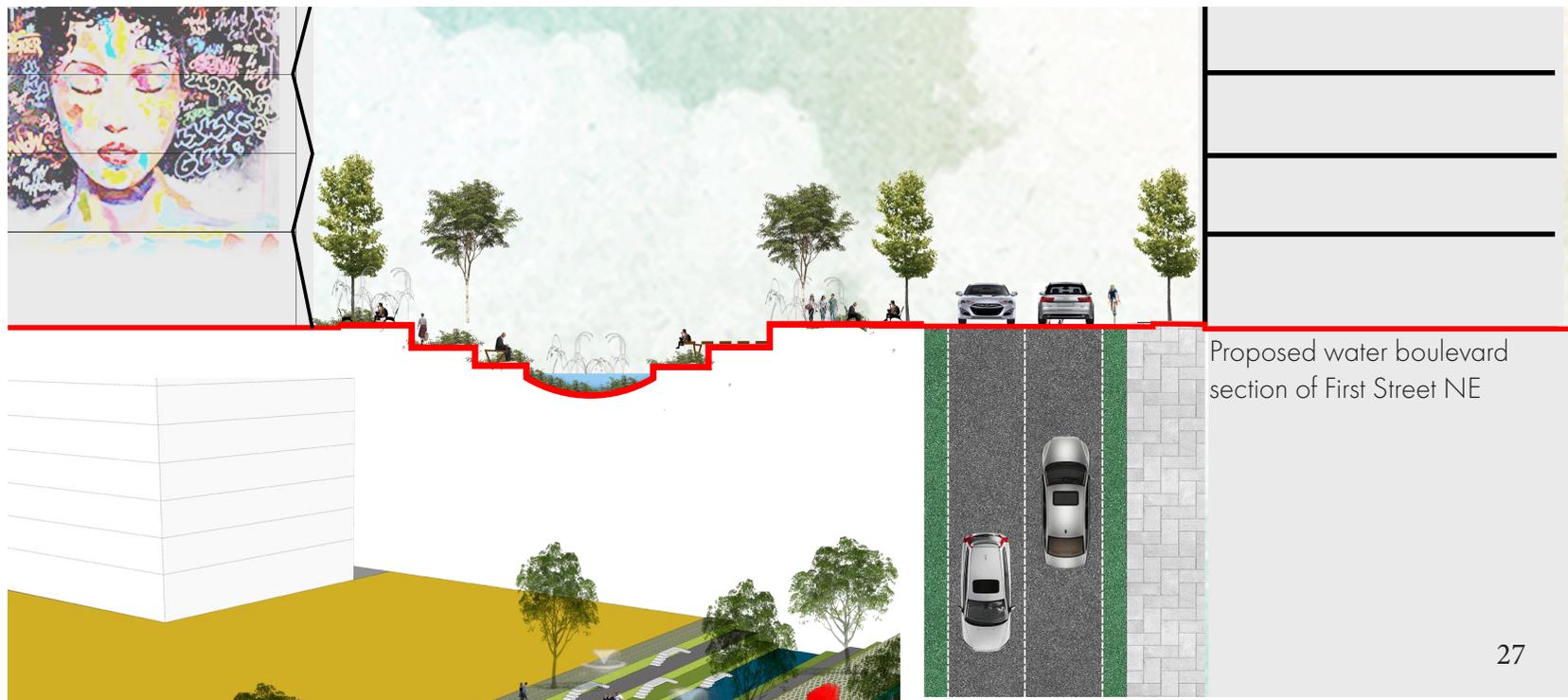
The Qanat path with topography blow up 3



The Qanat simplified section



Existing street section of First Street NE



Proposed water boulevard section of First Street NE

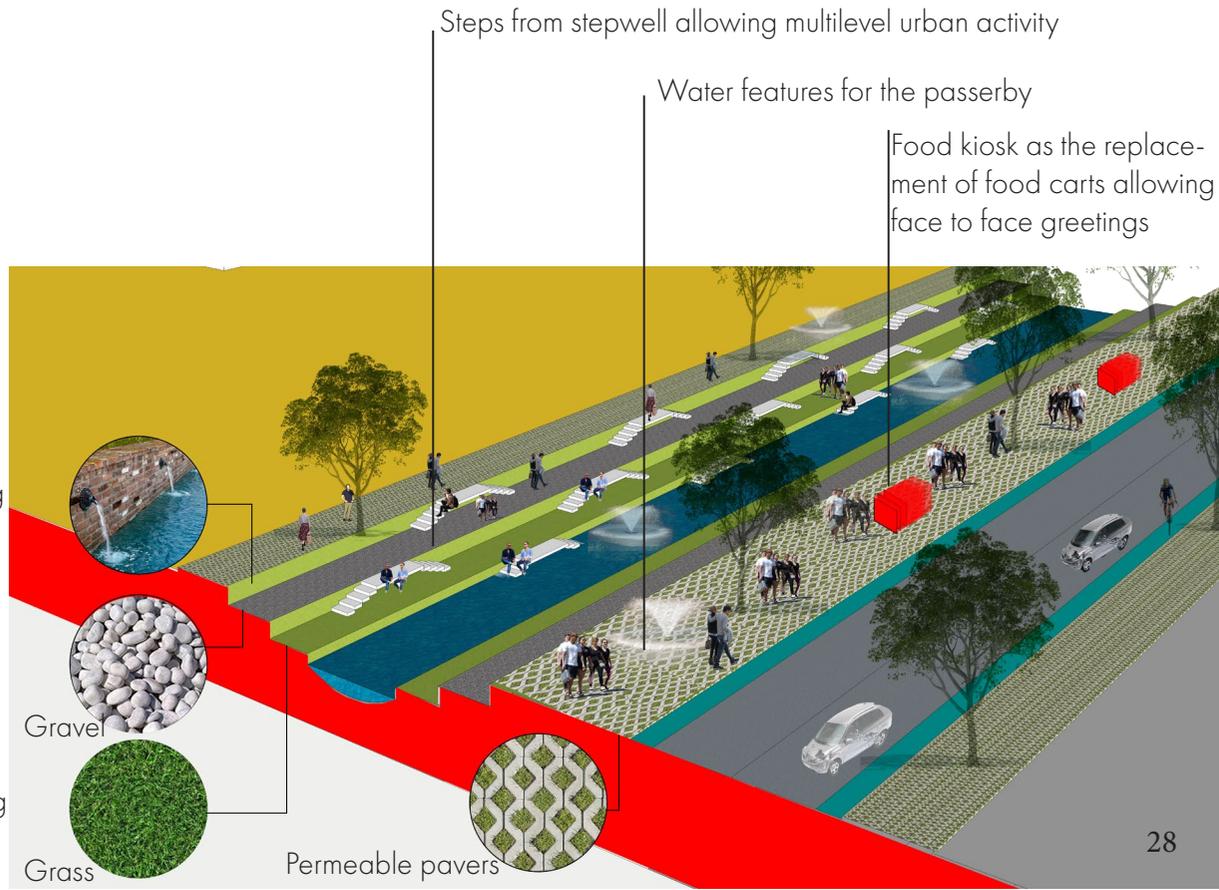
### Part 03: The Proposal The Water Boulevard at First St NE

After bringing the Water to daylight, it would be cured and cleaned through a vegetated channel where the natural cleansing plants would be planted. Finally, the water channel would be integrated from my site into First Street NE, creating a water boulevard. The street section has been transformed creating a multi-level water channel. There are three different levels of the permeable surface containing permeable paving blocks, gravel, and grass. The access of the levels is ensured through steps adapted from Indian Stepwells. The multilevel channel allows more space for the water to accommodate bank-full conditions and the flood condition still allowing people to access the upper level as public activity space. The middle lane of the water boulevard is a 20 ft wide plaza which allows water features like water fountains and food kiosk as the replacement of food cart accommodating face to face greetings among the public.



Bank-full condition (2 years storm)

Flood condition



Steps from stepwell allowing multilevel urban activity

Water features for the passerby

Food kiosk as the replacement of food carts allowing face to face greetings

Gravel

Grass

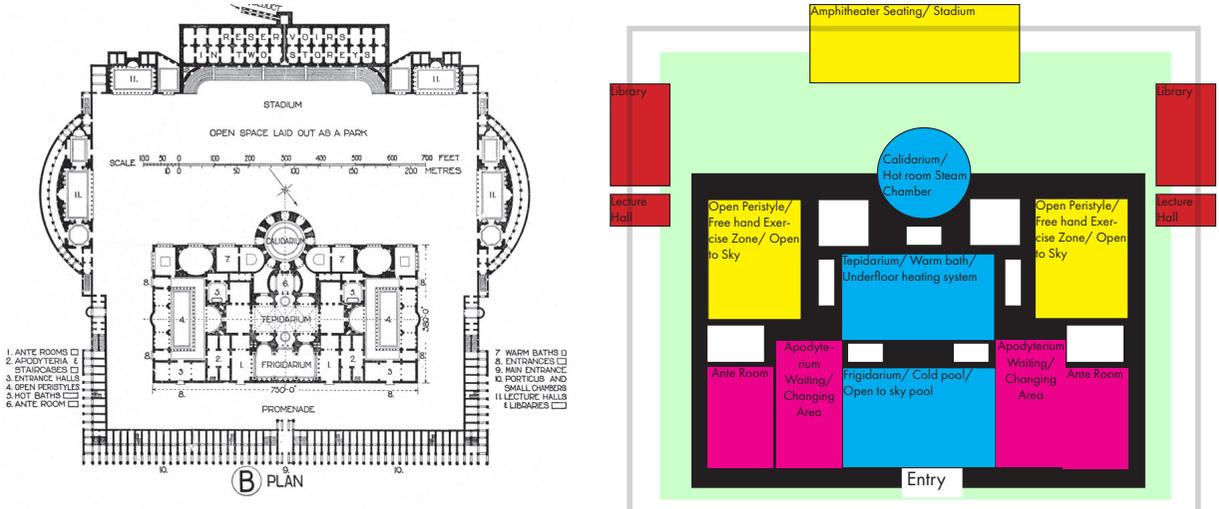
Permeable pavers

# Part 04: Case Study

## Roman Bath of Caracalla

Looking back to the history of community buildings, The Roman Bath of Caracalla was a great example of the perception of ancient times. Analyzing the plan of the ancient Roman bath gives a sense of the programming which includes warm (Tepidarium) and cold water (Frigidarium) pool, steam area (Caldarium), library, lecture hall, open peristyle air exercise area, amphitheater, Dining- all these programs into a single complex. Designing a complex with a variety of programming allows the mingling of the public of all ages and classes.

The heavy stone walls separating the programs allow poche spaces in between the wall accomodating service and transition from one space to another.

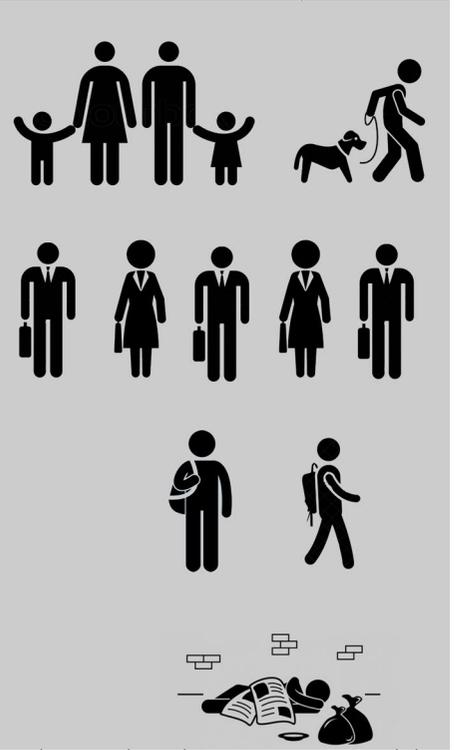


# Part 05: The Programming

Now zooming into the site between N Street and P Street by the side of water boulevard at First Street NE, firstly I have tried to understand the need of the community. What are the programs the community would mostly need in a community center? The land-use map of a one-mile radius shows lots of commercials, mixed-Use, and residential housing. That follows lots of neighborhood people, people coming for office and business, school and college kids, and also the homeless people who would need a community learning facility within walking distance.



### Who are they?



Understanding the community and their need

Landuse around one mile radius of the site

What do they need?	Indoor Area	Outdoor Area
Weekend Socialization Space	After-school Care	Aquatic Garden
Evening Socialization Space	Lounge Area	Community Garden
Day Care space	Multipurpose Hall	Weekend Market
Inner Peace	Multi-level Indoor pool with Aqua-therapy	
Quick Stress Relief	Gymnasium	
Mental Healing	Small Library	
Meet other young People	Aqua-Healing Center	
Extra- Curricular Activity	Calm Room	
After-school Activity	Computer Lab	
Employment opportunity	Pottery Classroom	
	Dance Classroom	
	Music Classroom	
	Art Classroom	
	Yoga space	
	Service Area	

# Part 05: The Programming Program Collage



# Part 05: The Programming Program Grouping

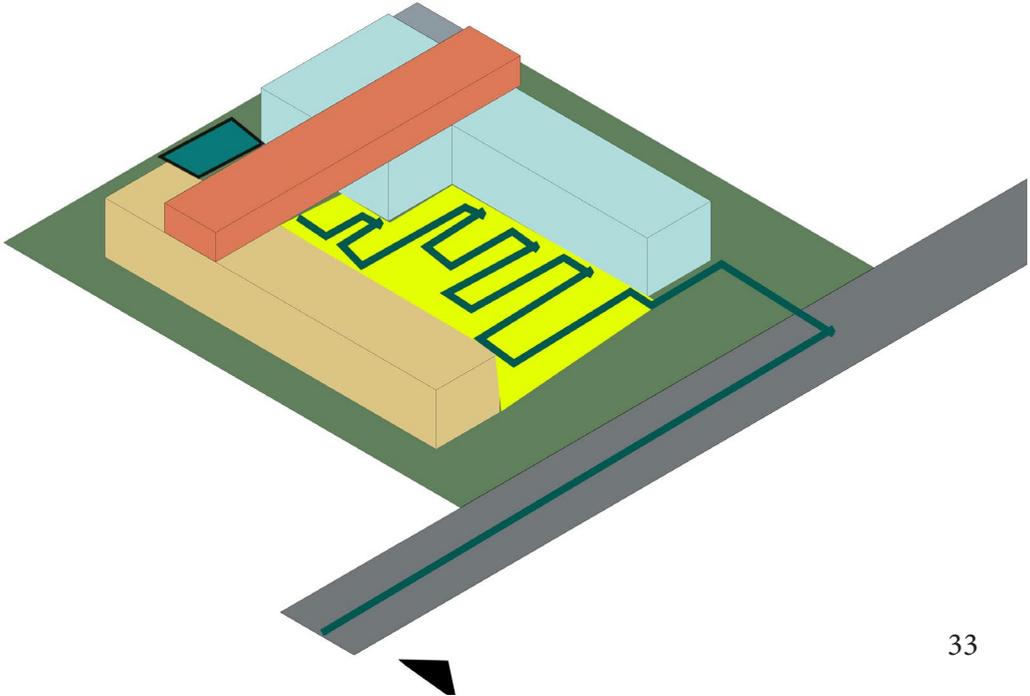
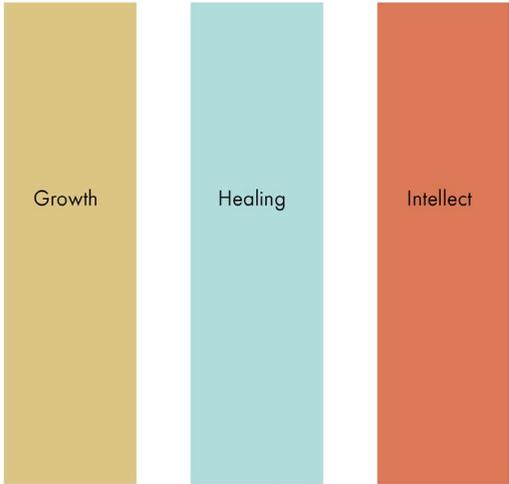
On the left page, there is a collage of the program developed from the ancient Roman bath and the need of the community. On this page, all the programs have been grouped into 3, Growth, Healing, and Intellect. And the binder of all three would be a courtyard which would announce the arrival of Water into the city.



# Part 06: The Concept

## The Zoning

After grouping the programs, they have been laid on the site as blocks. The idea was Healing block to the north side, Growth block on the south side, and they are united by the Intellect block which is the library governing a courtyard in the middle bringing Water to the water boulevard.

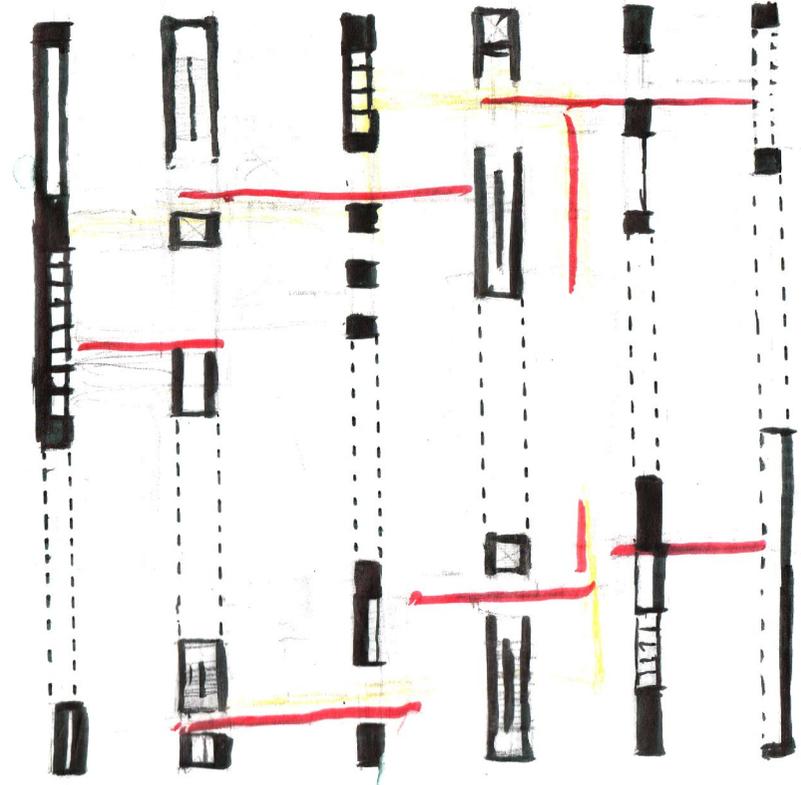


# Part 06: The Concept

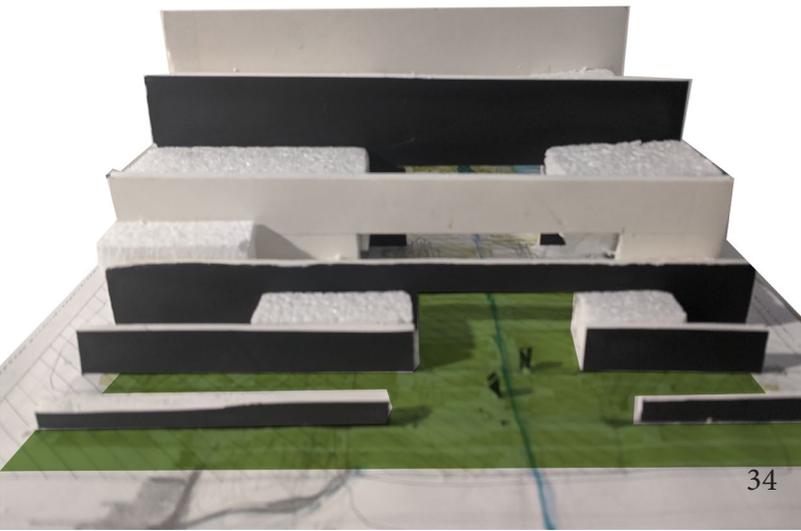
## The Structure

A series of thick walls containing service ducts and vertical circulation into it will be both the separator and connector between the programs. The red lines are showing the shifted circulation in between the sheer walls. The dotted black lines are the overhead connection of the two sides as a guide into the courtyard.

Poche spaces in between thick walls containing the service



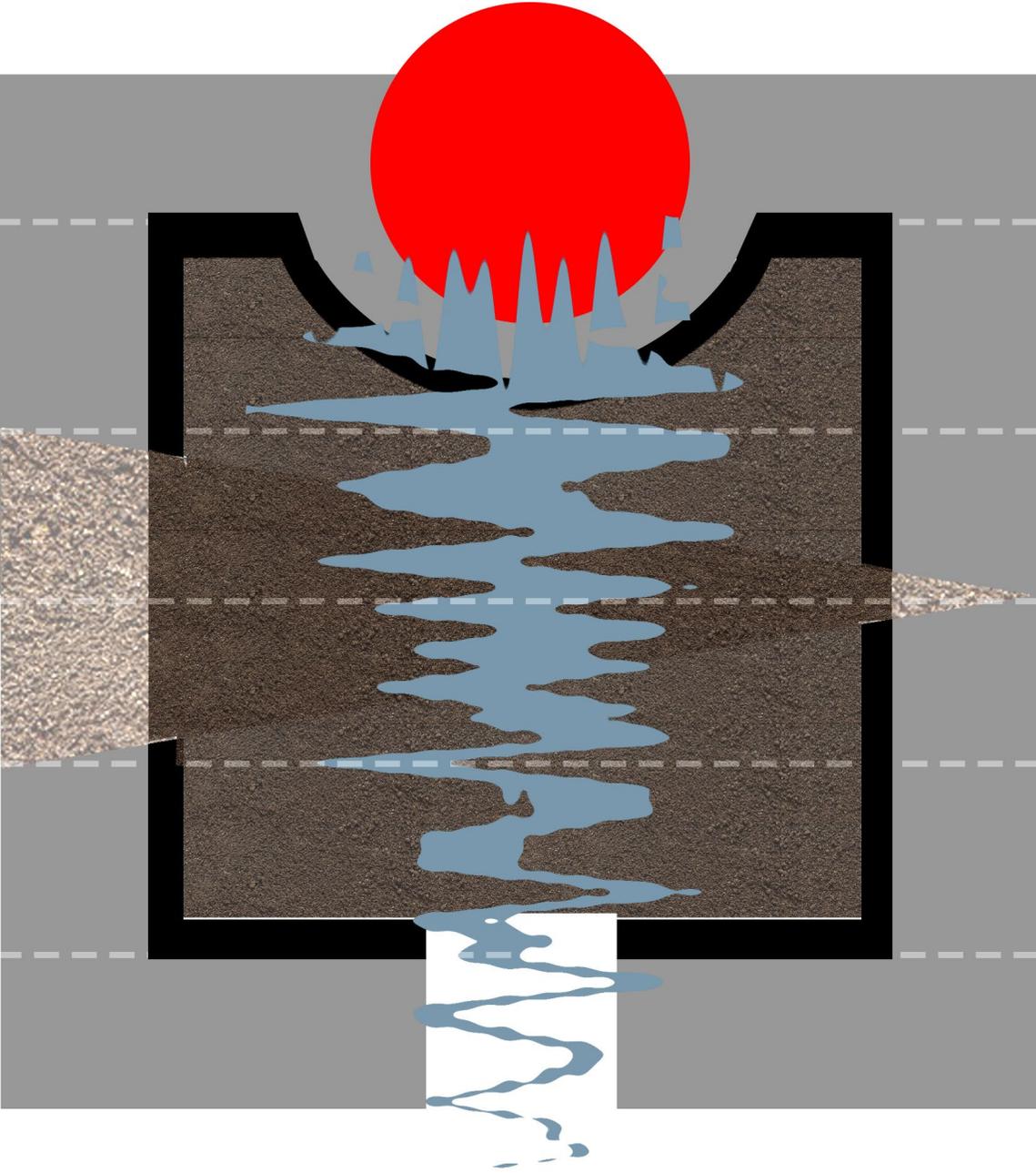
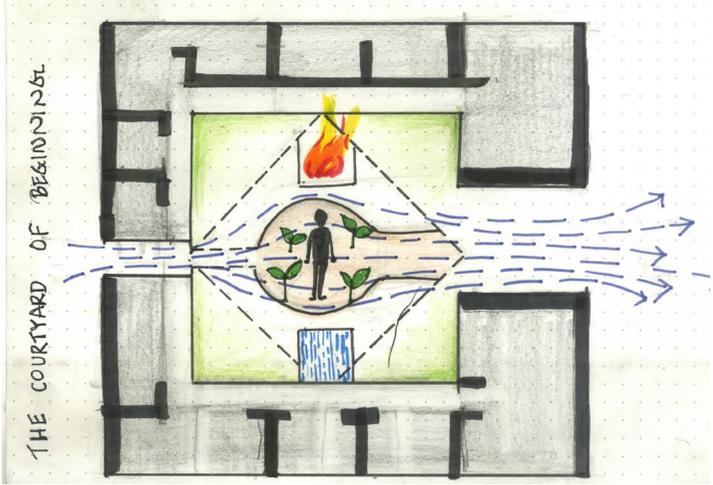
Series of walls as guide towards the water courtyard



# Part 06: The Concept

## The Courtyard

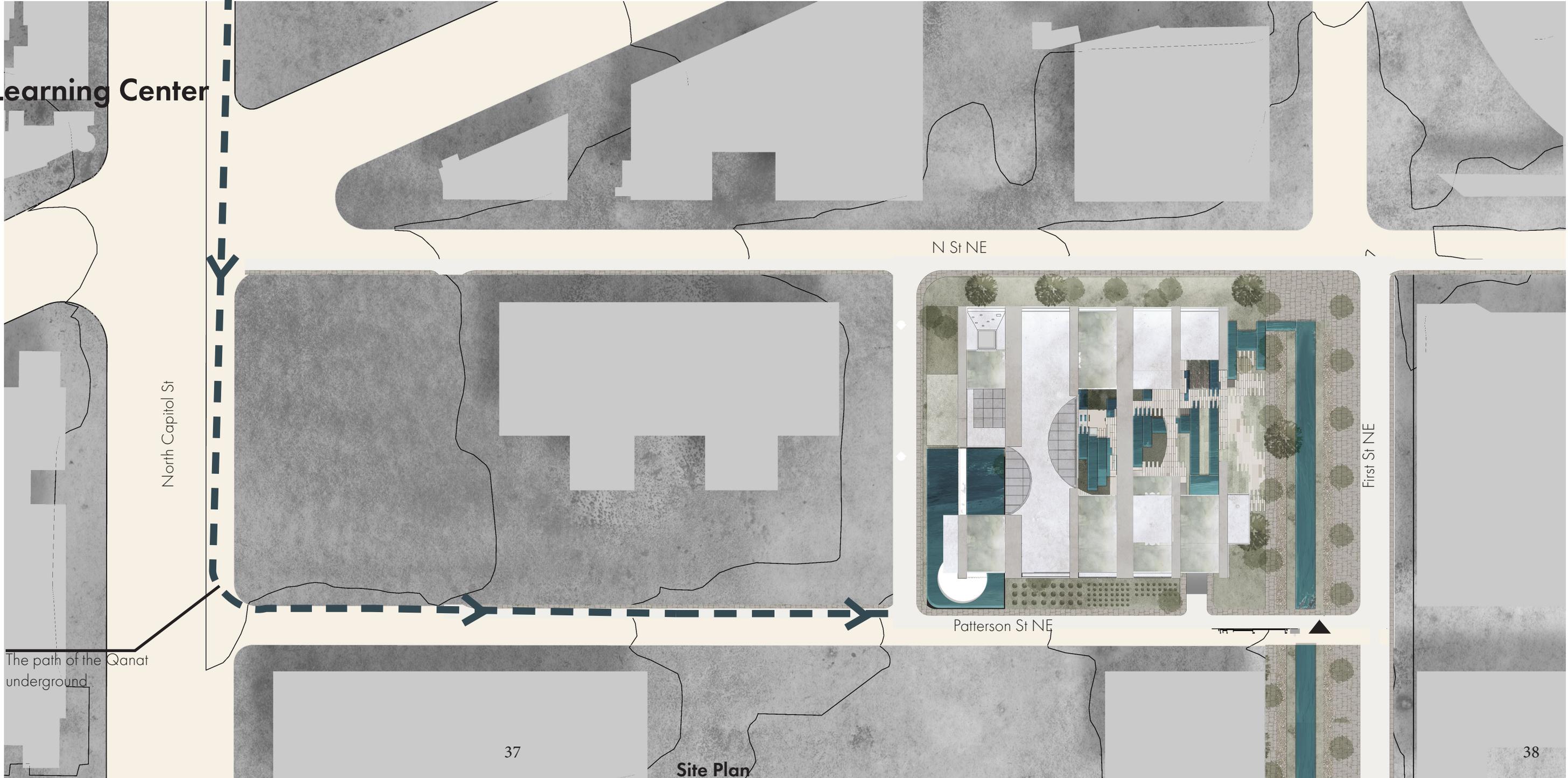
The courtyard integrating all the programs on the site would also bring water into the city. So the courtyard bears a great deal of civic importance. To think about the courtyard that will announce the importance of nature into our urban life, I have decided to integrate the rest of the basic elements Earth, Air, and Fire in the presence of Water. All four basic elements will act as healing agents so that the people coming to the site can have a biophilic refreshment in the active presence of nature. The Water here will be the stormwater and tapped groundwater. The fire has been represented by the mighty sun. The courtyard carries earth and grass in the heart, a cascade of Water flowing gently into it, allowing three-dimensional space for air to circulate, and a form to stimulate the sun as fire into the courtyard.



The courtyard of Earth, Water, Air and Fire

# Part 07: The Community Learning Center

The Drawings



The path of the Qanat underground

North Capitol St

N St NE

Patterson St NE

First St NE

37

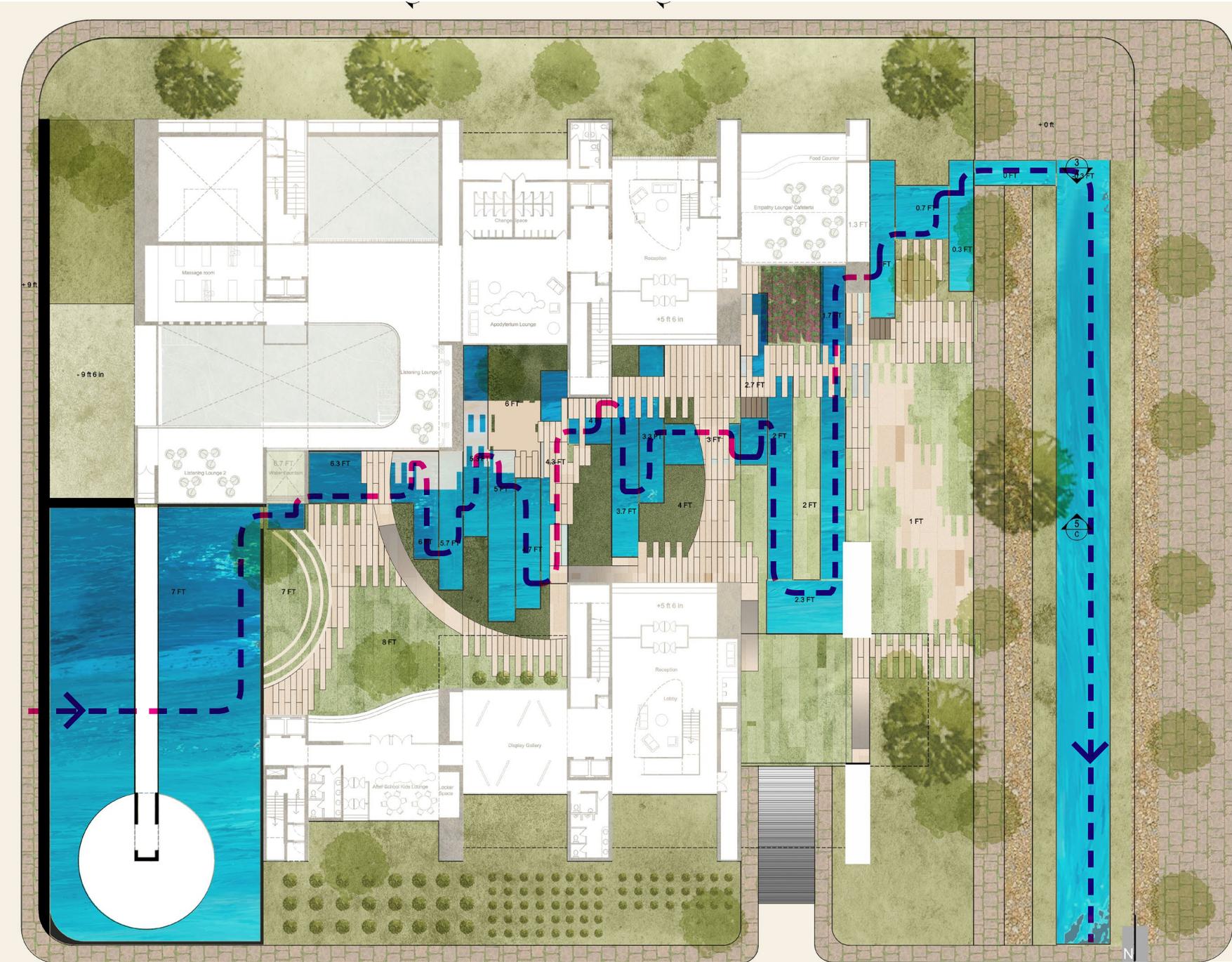
Site Plan

38

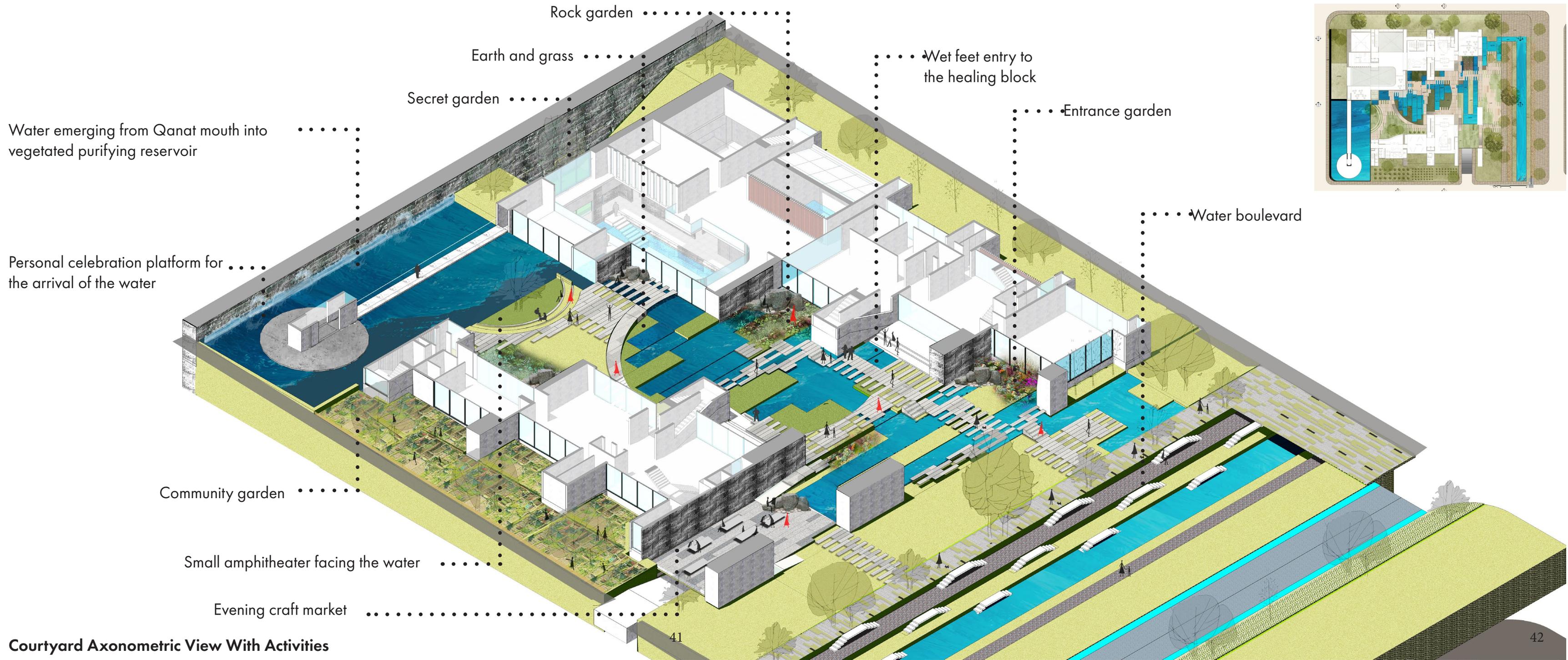
# Part 07: The Community Learning Center

The courtyard plan shows the water reservoir collecting rainwater and groundwater and treat them with heavy vegetation. Then the Water would be released following natural terrain, where the west end of the site is +9ft and the east side where the water boulevard starts, is +0ft level. So the cascade of Water has been designed as water steps each 4 inches lower than the previous. The channel has been spread through the courtyard allowing more space for the water to stay in daylight to get evaporate in the sun or soaked into the earth.

The west boundary of the site has been conceived as a thick stone wall with planter and creepers allowing a punch at the +9 ft level to let the groundwater emerge.



Level 01 Courtyard Plan



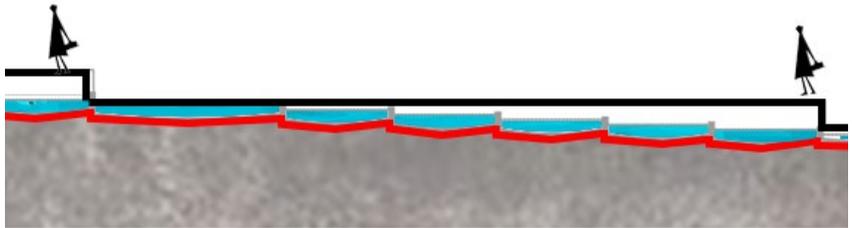
Courtyard Axonometric View With Activities



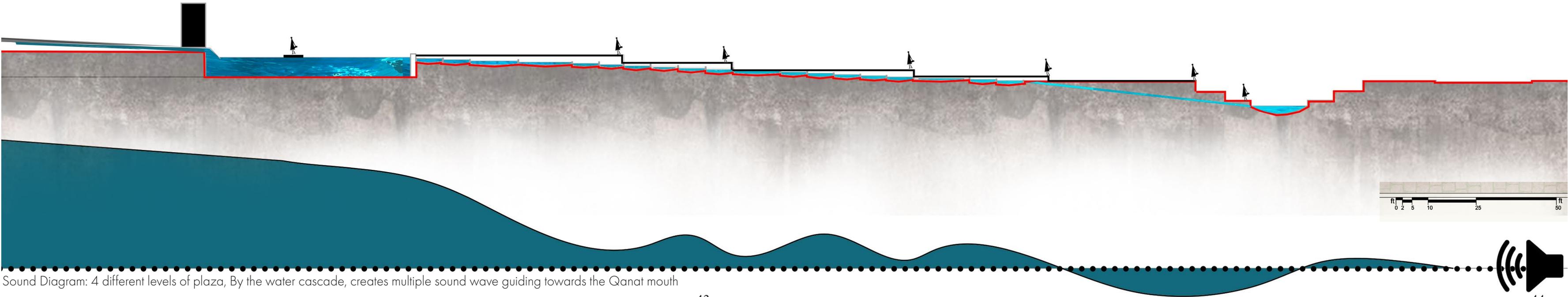
Water channel section with retaining wall and vegetation



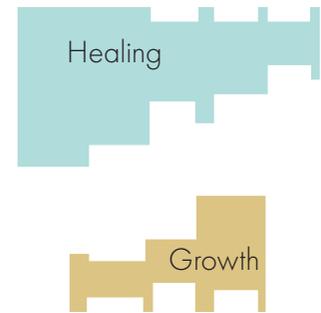
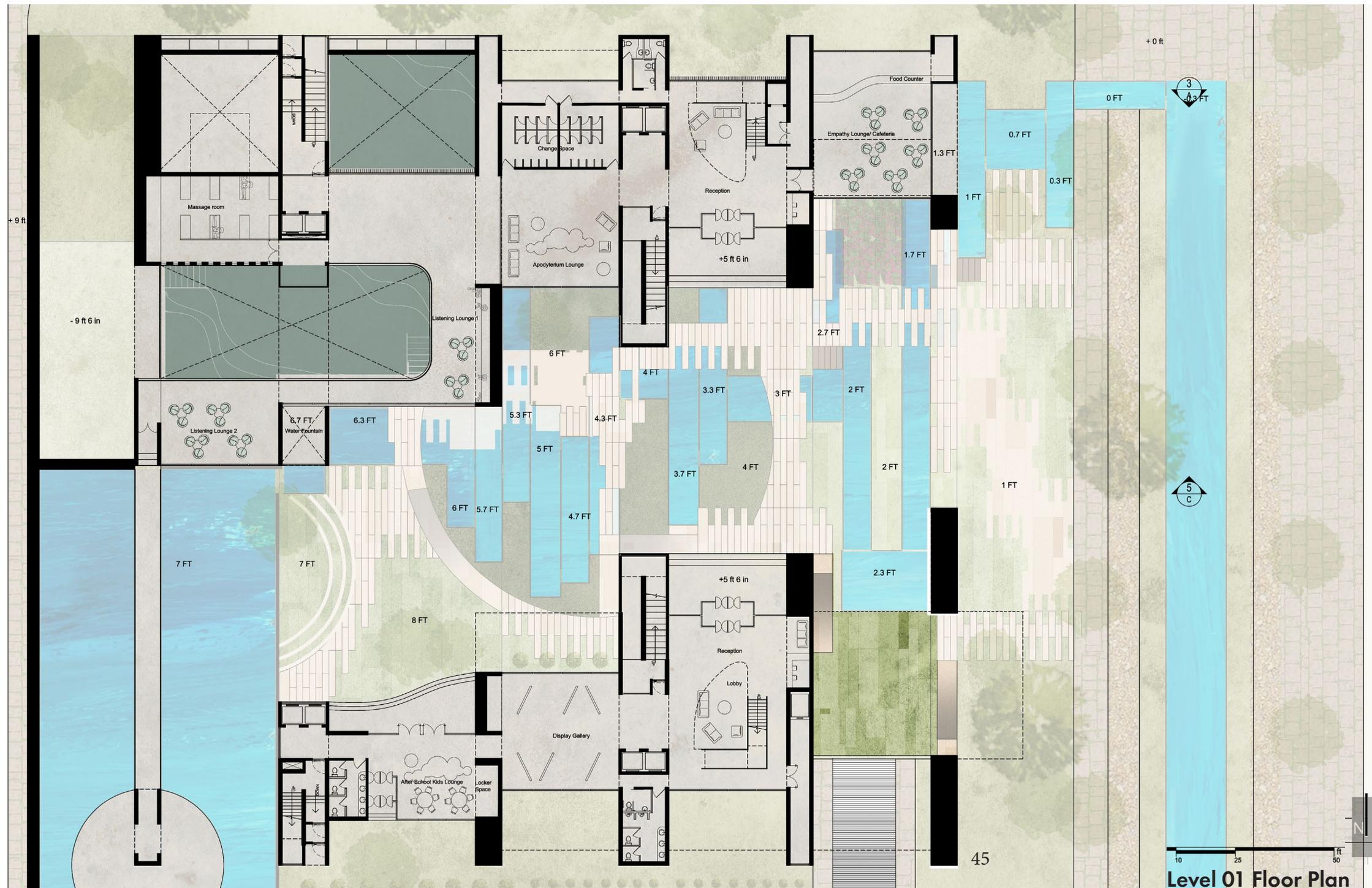
Water channel detail example



Sound graph showing one single level of plaza and associated water channel

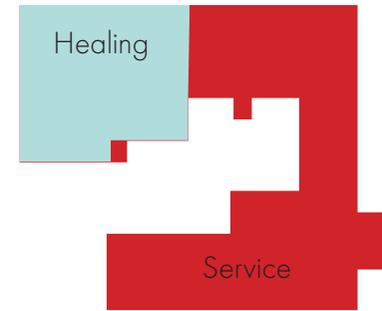


Sound Diagram: 4 different levels of plaza, By the water cascade, creates multiple sound wave guiding towards the Qanat mouth

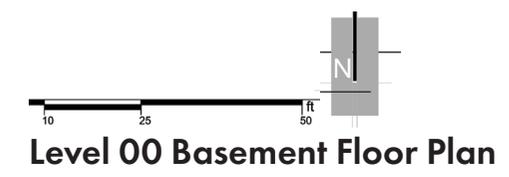


The entrance in the Healing block provides an opportunity for wet feet entry to the block as this block contains all the wet functions. The zoning has been inspired by the Roman bath of Caracalla, Where the entrance guide towards the cafeteria or empathy lounge in one side and Apoditerium (lounge with general notice of new performance postings and change area). Through the change Area, people can walk towards the massage room and listening lounges where people can share and care in a small group around the loft view towards the pool downstairs. There is a bridge connection at the end of this block which offers a journey towards the edge of the Water. People can take the experiential staircase with 4" risers to the downstairs pool area.

On the other side, the Growth block offers dry feet entry as the programs are all dry. It offers a lobby and lounge area, display area, and afterschool kids zone, which will be directly connected to the outside community garden area.



Level 00 basement floor offers the continuation of the journey towards the pool area. There are Caldarium (Steam Room), Frigidarium (Cold pool), and Tepidarium (Warm pool.) All of them can be accessed from a common lobby. There is a secret garden that can be accessed only from this level for the users of the pool facilities. This level also contains a service connection between the two blocks with all the necessary services and parking area.



Level 00 Basement Floor Plan



Secret garden

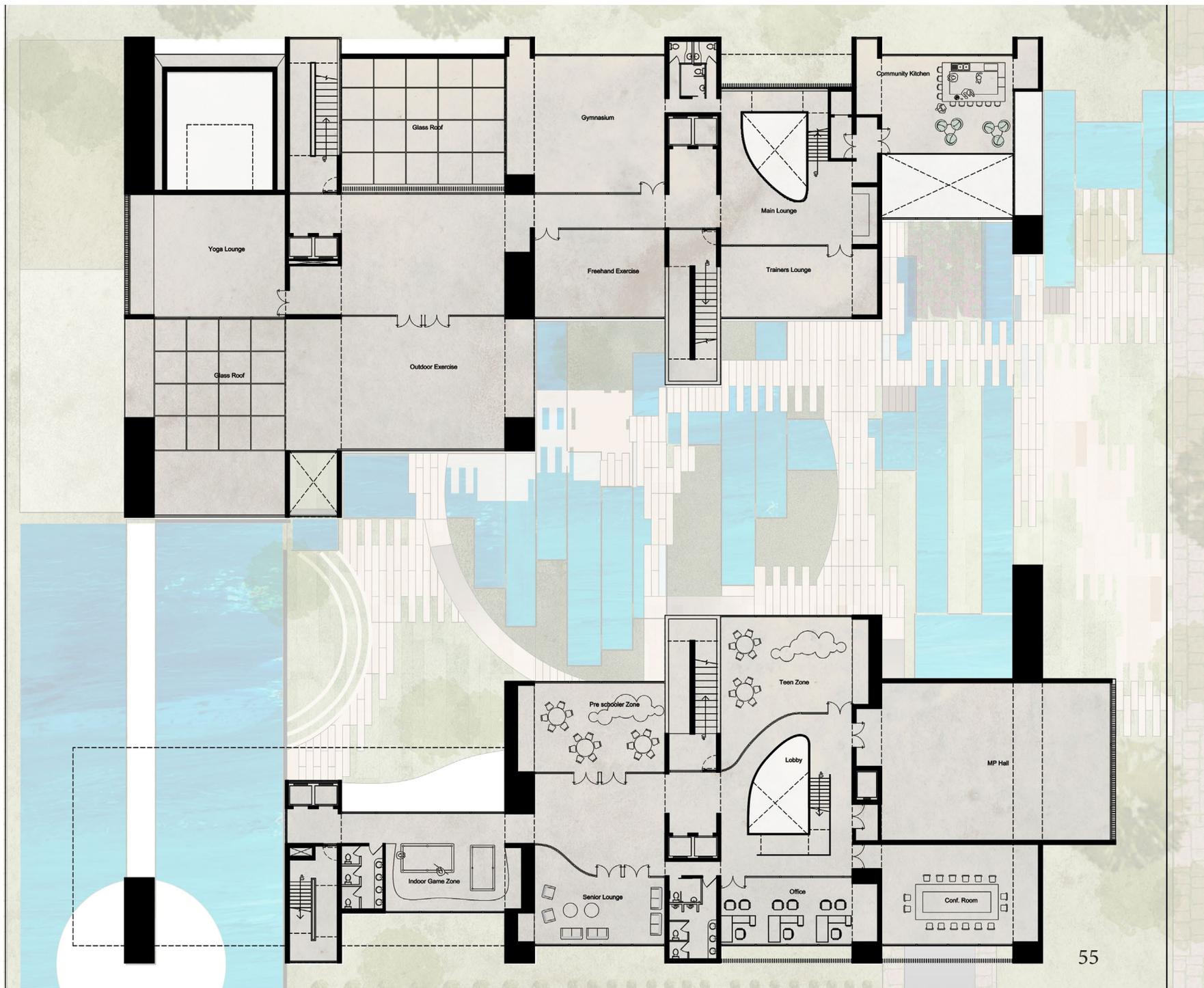


View towards the Tepidarium- warm pool

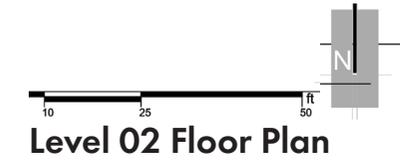


View towards the Frigidarium(cold pool) and the secret garden





55

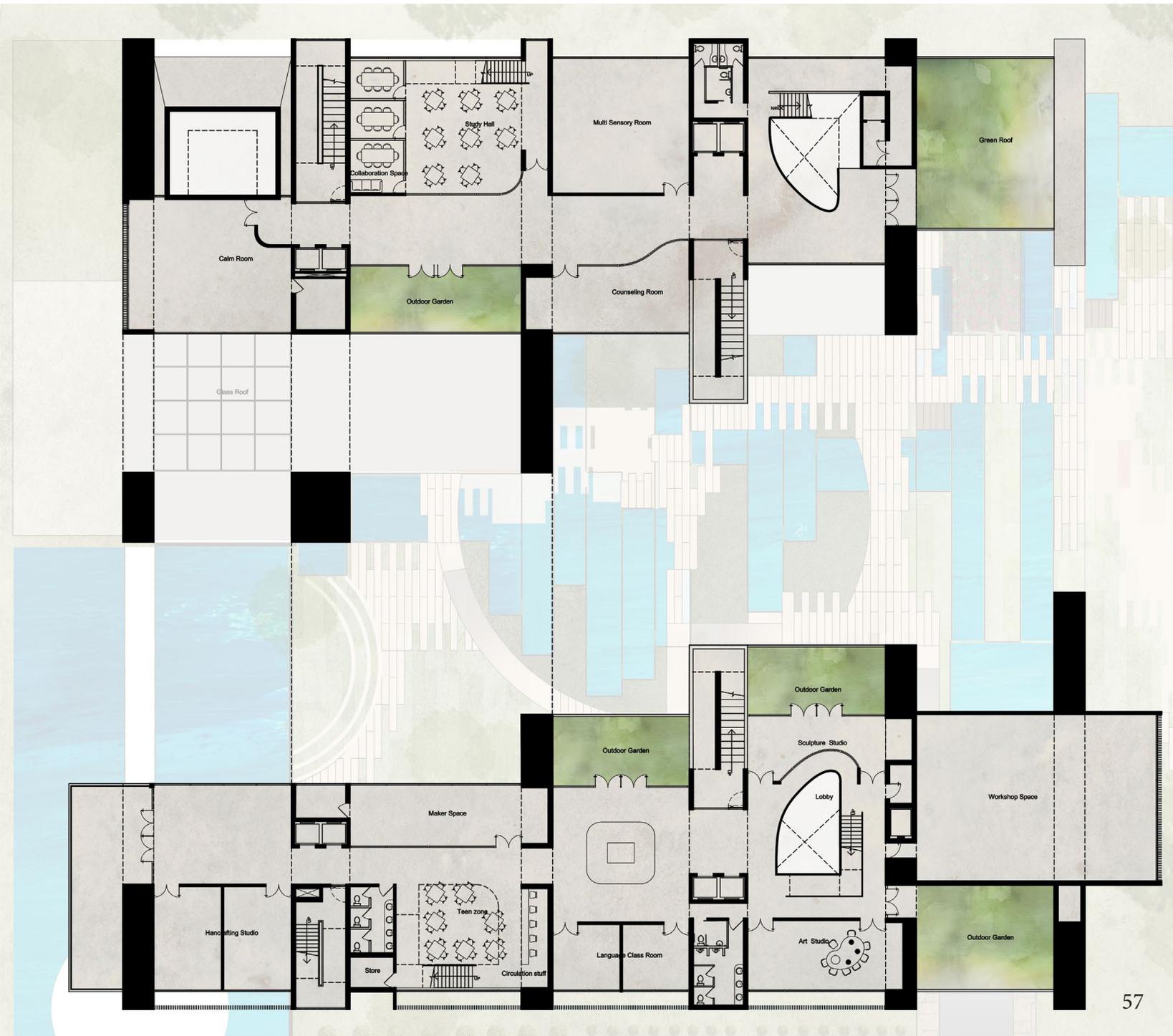


Level 02 Floor Plan



Level 02 Healing block contains a community kitchen and communal dining area for the members on one side which is visually connected with the cafeteria downstairs. On the left side of the lobby area, there are yoga zone, gymnasium, and open-air exercise area. All these exercise areas are visually connected to the lower level of the pool area similar to the functional arrangement of the Roman bath of Caracalla.

The Growth side in Level 02 offers the multi-purpose hall for big community celebration and performance spaces and separate lounge spaces for kids, teens, and seniors. They can also meet in the common lounge where the teenagers and the kids would be enlightened with the wisdom of the elderly.



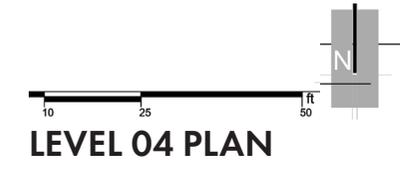

  
 10 25 50 ft
   
**Level 03 Floor Plan**



Level 03 Healing block contains all the healing therapy spaces as the multi-sensory room, calm room, counseling chambers. The Growth side in Level 02 offers all the workshop and class areas as handcrafting, art, music, sculpture, language, and a large workshop area for preparation.



Level 04 contains the Intellect block which unites both the healing and growth together. The Intellect block contains the neighborhood library area with study hall and reading areas on the north side with diffused light and the collection area in the most south side. The middle area contains a semi-circular opening in the wall and the ceiling, which will bring the sun (as fire) into the courtyard of four elements. This area will observe the trace of changing sunlight from east to west throughout the day with mostly casual sitting and lounging. The library has access to outside reading areas in summer days as the roof of the building is mostly green roof.

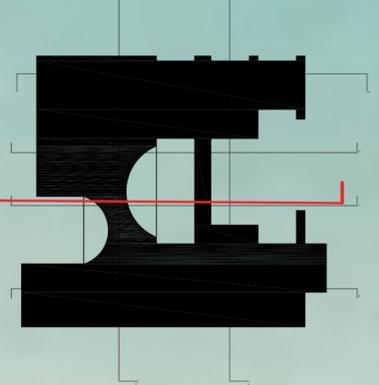


LEVEL 04 PLAN

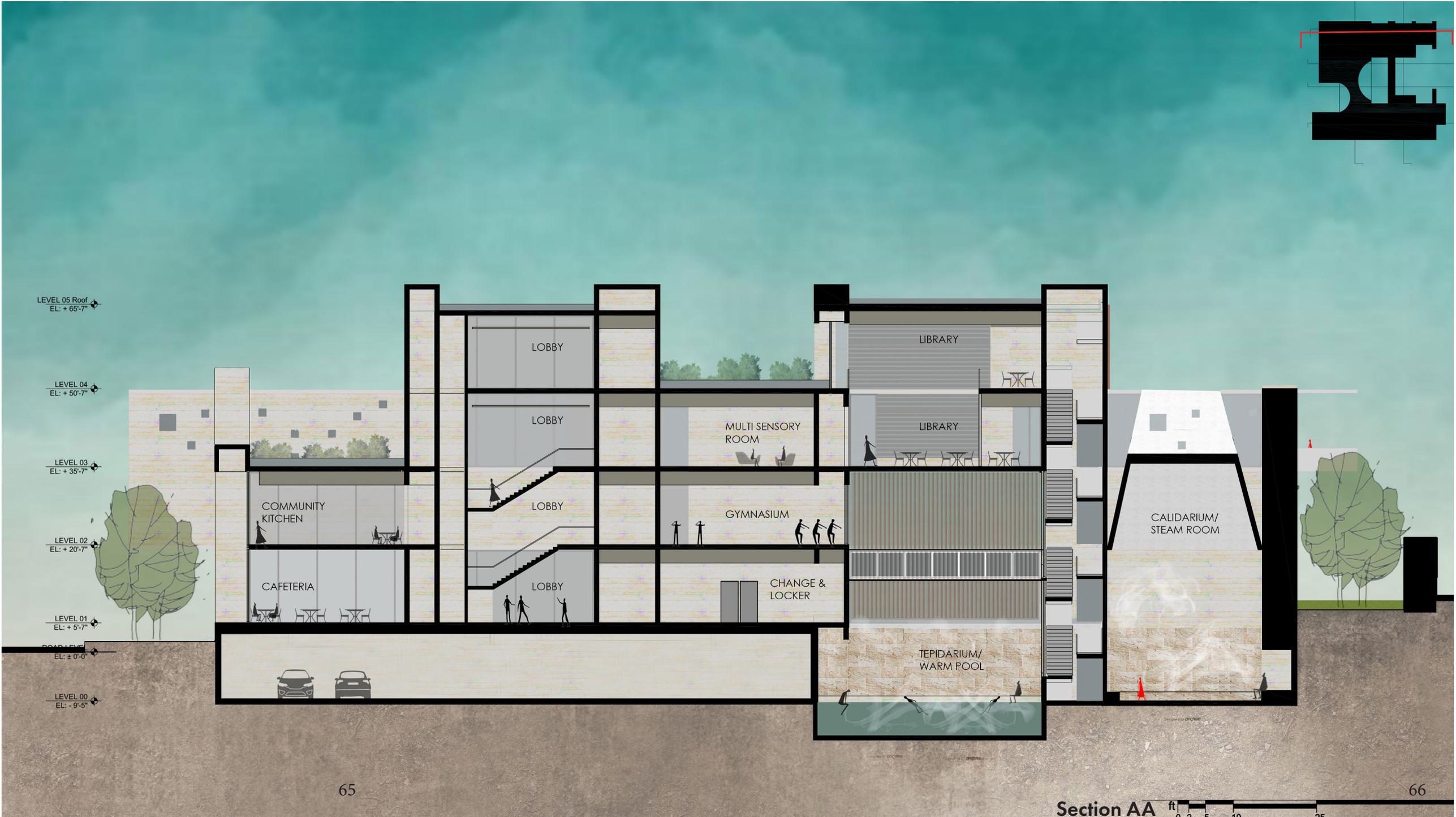




The midsection of the site "Section CC" narrates the story of the courtyard of four elements. It demonstrates the flowing water channel and the water boulevard, the driveway underground, and the water reservoir underground which will collect the excess water during heavy rain.

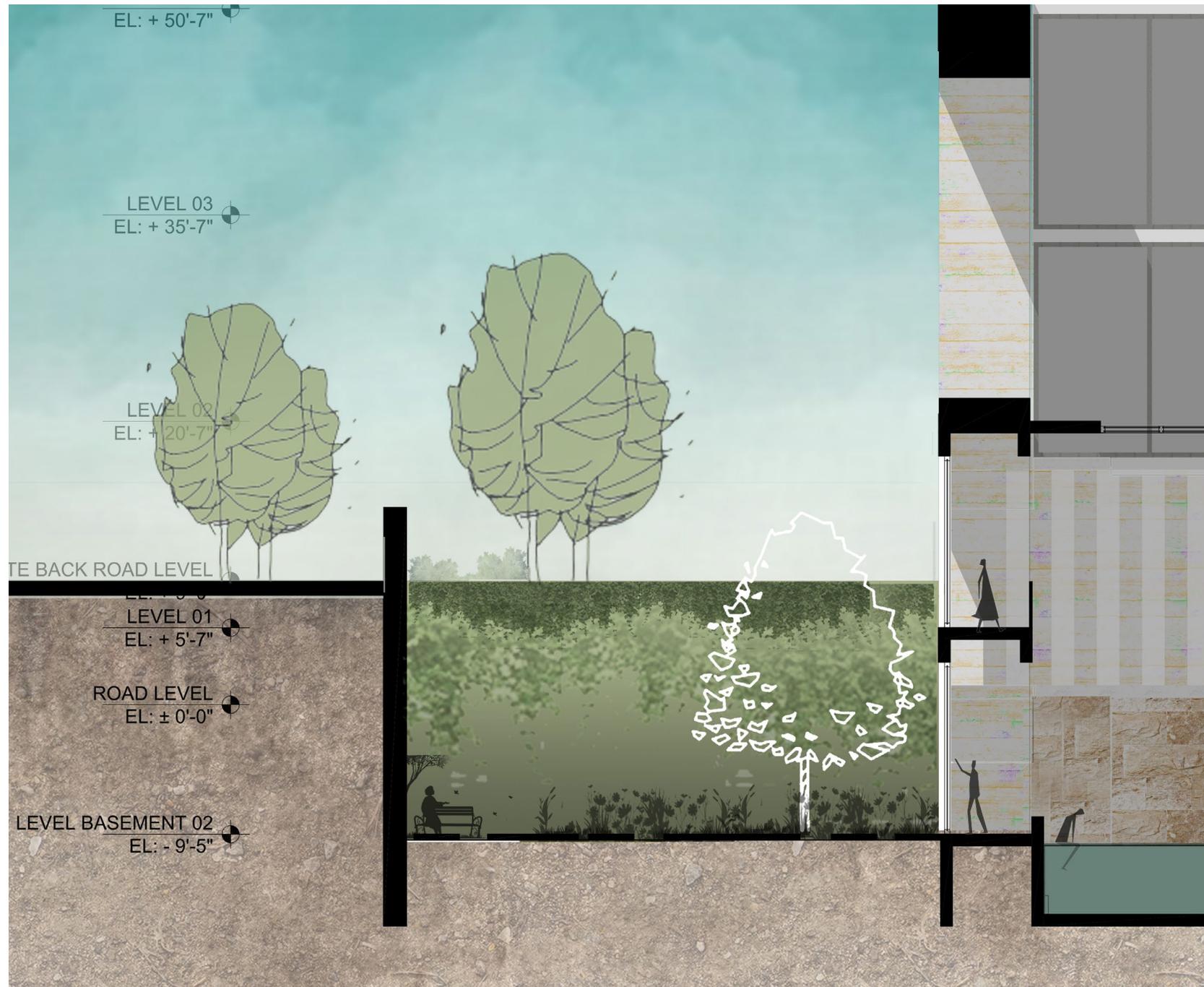


Section AA through the Healing block shows the lightwell in the Caldarium, The visual connection from the gymnasium to the Tepidarium, the double-height study hall at the Library.

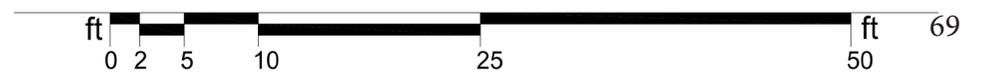


The transverse Section YY shows longitudinal functional arrangement through the library, The suncatcher in the outside wall, and the emerging Water from the stone wall into the courtyard.





Detail Section EE -Secret Garden



LEVEL 02  
EL: + 20'-7"

LEVEL 01  
EL: + 5'-7"

LEVEL BASEMENT 02  
EL: - 9'-5"



Detail Section FF -Water Feature Wall



The detail Section EE shows the connection between the secret garden and pool area in the Level 00 basement Level.

Section FF shows the water feature in the Basement level where the users get the chance to enjoy the outside water coming into the building outside while resting in the indoor pool area. This water will be collected and reused in the building for the service area and watering the green roofs of the building.



Personal journey towards the edge of Water



View from the water boulevard

# Part 07: The Community Learning Center

## The Material Palette



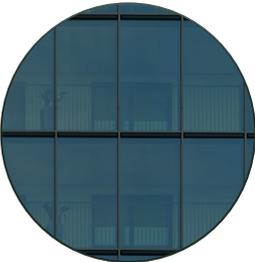
Exterior concrete wall with the brownish tint of D.C. buildings



Level 01 and interior wall stone cladding in pool area where "touch" is important



Vertical wooden louver in east and west facade, horizontal louver in south facade for controlled natural light



Glass with dark tint inspired from the surrounding commercial building of the site.



Grass



Water



Permeable paver



View from the water boulevard at First Street NE to the Courtyard of four elements



Birds eye view of the water boulevard and the center emerging with the neighborhood

# Part 08: Conclusion

This research is an experiment of integrating stormwater into the urban fabric. It has demonstrated how Water can be an integral part of each neighborhood plan of the District creating a network and thus be integrated into our everyday life. Also, Water can act as the connector in the “Third place” both in urban and building scale. This is an argument against “the transformation of H2O to a cleaning fluid or industrial detergent.”<sup>8</sup>

As Gaston Bachelard wrote in *Water and Dreams*, “Their water fulfills an essential psychological function to absorb shadows, to offer a daily tomb to everything that dies within us every day”<sup>9</sup>, this research has convinced me about the truth of Water. Water heals us because it has only present, no past or future. And that is what our life has to offer us at the best. The water boulevard idea offers food for thought about the traditional stormwater management system, demonstrates a possible path of transforming it into an urban hydrologic solution. On the other hand, the community learning center criticizes the idea of segregating every program into different buildings and generates rather a co-ordinated complex for people of all ages and classes with the chance of more interaction and mingling. The proposal of water boulevard and Community center proves the power of integrative design. Proposing one green building might not have a lot of impact on the eco-system. But one building with a biophilic design approach and sustainable vision of Urban Design and Landscape Architecture can positively impact the ecosystem and our everyday life.

“The water I speak of is the water needed for dreaming city as a dwelling place”

-Ivan Illich, *H2O and the Waters of Forgetfulness*

“We now know about integrative design, about regenerative design—where you’re not trying to do a green building but a building that heals the ecosystem and the social system that you’re dropping it into. It turns it away from being the object [and] into the relationship.”

-Jerome Partington, *Biophilic Design Guidebook*



“Learn from Water..... Only present exists in water. There is no shadow of the past or of the future. Water is the sound of life and the sound which generates forever.”

-Herman Hesse, *Shiddhartha*

## End Notes

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- 2 Josep Lluís Mateo and Florian Sauter, *The Four Elements and Architecture: Earth Water Air Fire*, (Actar Publisher, 2014), 65
- 3 <http://knowledgecommonsdc.org/classes/liquid-assets-bike-tour/>
- 4 <https://hiddenwatersblog.wordpress.com/2016/03/21/tiber-creek-washington-d-c>
- 5 <https://www.whitehousehistory.org/photos/tiber-creek-the-bathers-by-peter-waddell>
- 6 Christopher Alexander, Murray Silverstein and Sara Ishikawa, *A Pattern Language*, (Oxford University Press, 1977), 558
- 7 John Brookes, *Gardens of Paradise: The History and Design of the Great Islamic Gardens* (New Amsterdam New York, n.d) 28
- 8 Ivan Illich, *H2O and the Waters of Forgetfulness*, (Marion Boyars Publishers, 1986), 75
- 9 Gaston Bachelard, *Water and Dreams*, (The Pegasus Foundation, Dallas, 1983), 55

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