

Connecting the Disconnected: Designing a Walkway in Arlington, Virginia

Deana Marie Brown

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
in
Architecture

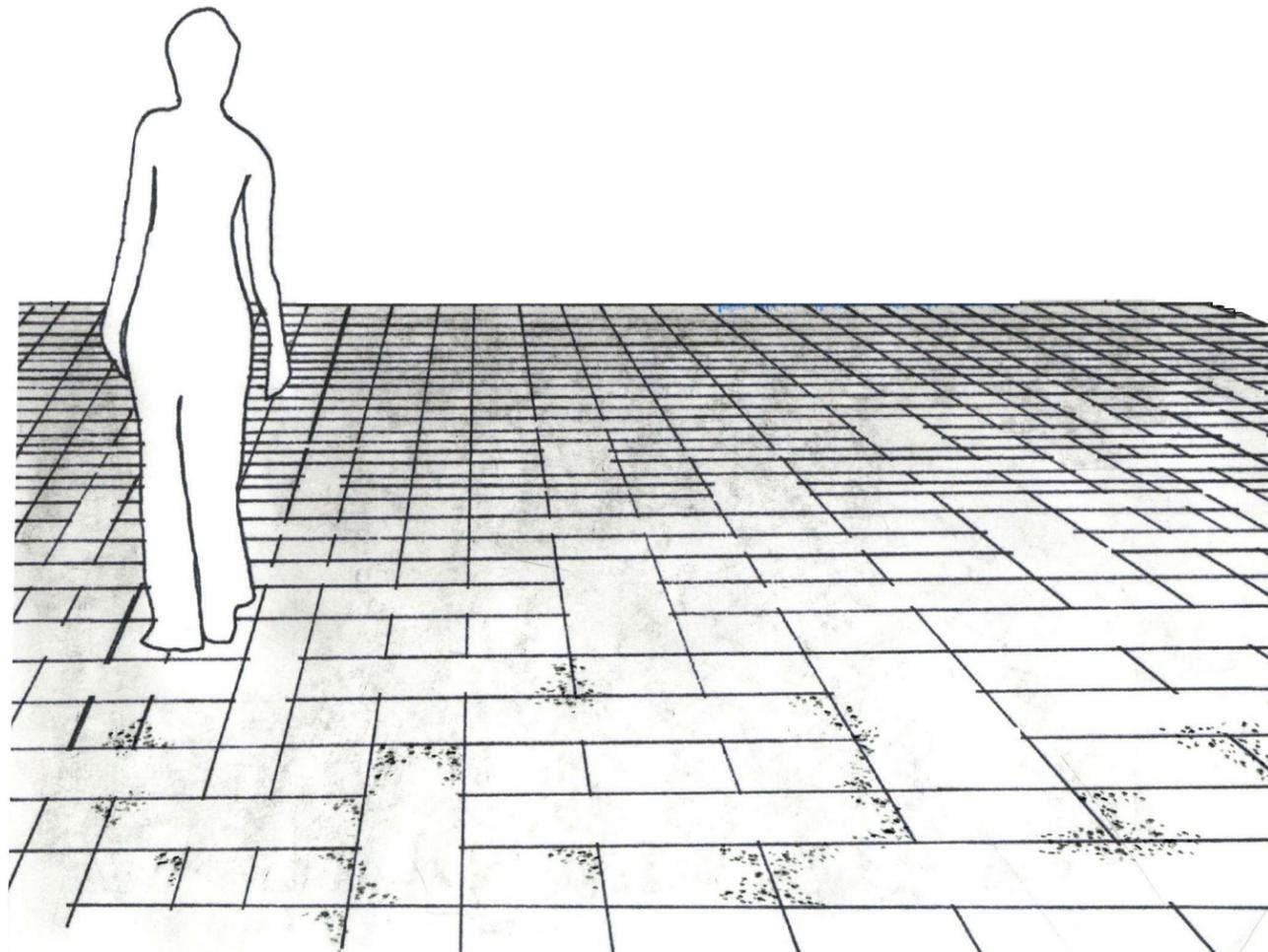
Hans C Rott, Chair

William U Galloway

H Scott Gartner

May 3, 2011
Blacksburg, Virginia

Keywords: rhythm, pattern, light, connection, walkway



Connecting the Disconnected: Designing a Walkway in Arlington, Virginia

Deana Marie Brown

Abstract

This thesis is a study of rhythm, generated by a pattern, and how it can be used to address the urban disconnect of 12th Street in Arlington, Virginia. Rhythm is a tool that can be used to connect a space. The repetition and consistency of the pattern throughout the site structures and connects the four blocks. Light and material quality are additional tools that, used consistently, create and emphasize the rhythm that connects the walkway with points, or destinations, to pause. This book is organized as a series of perspectives that walks through the four blocks, from west to east, of 12th Street.

Sited in Arlington, Virginia, 12th Street extends four blocks from the Pentagon City Metro Station to Crystal Drive. Currently the four blocks are comprised of commercial, residential, and green space. The three types of use have been constructed, developed and even left abandoned at various points throughout their histories. As such, this has created a lack of a natural flow for area residents and visitors. The underlying goal of the walkway is to create a connection between the four disconnected blocks of 12th Street, from the Pentagon City Metro Station and Crystal Drive.

In cities the points of connection between systems should be places of special emphasis and design enrichment. (35)

Design of Cities, by Edmund Bacon

Streetscapes should enhance our daily experience of the built environment. (55)

New Public Spaces, Sarah Gaventa

Urban design is about the design of a place for the whole of the people who inhabit, traverse, and use it. (176)

Urban Design and People, Michael Dobbins

Table of Contents

Title	i
Abstract	iii
Quotes	iv
Table of Contents	v
Graphics	vii
Dedication	ix
Site	1
Concept	3
Design	5
Works Cited	38

Graphics

Google site image	1	Rendered longitudinal section cut through walkway of meeting space	22
“A” Photo of site taken by Mark Vogelgesang	1	Rendered section through walkway and meeting space	22
“B” Photo of site taken by Mark Vogelgesang	1	Detail of plan walkway and meeting space connection	23
“C” Photo of site taken by Mark Vogelgesang	1	Detail of section walkway and meeting space connection	23
“D” Photo of site taken by Mark Vogelgesang	2	Section of the structure of the meeting space	24
“E” Photo of site taken by Mark Vogelgesang	2	Detail connection of meeting space to existing plaza	24
“F” Photo of site taken by Mark Vogelgesang	2	Detail location of light within meeting space	24
Charcoal of light concept	3	Plan of meeting space night lighting in charcoal	25
Charcoal of light concept	3	Section of meeting space night lighting in charcoal	25
Charcoal of light concept	3	Section of meeting space night lighting in charcoal	25
Collage	4	Axon of meeting space night lighting in charcoal	25
Pattern diagram	5	Axon of bench night lighting in charcoal	25
Exploded axonometric of the structure of the meeting spaces	6	Axon of bench night lighting in charcoal	25
Section of the meeting space structure pulled apart	6	Section of bench night lighting in charcoal	25
Section fo the structure of the meeting space	6	Rendered site plan	26
Plan of the typical structure of the meeting spaces	6	Perspective of walkway crossing S Fern Street	26
Site plan in pencil	7-8	Perspective of walkway approaching the west end of the meeting space of the second block	26
Rendered site plan	9	Plan of walkway crossing a street	27
Perspective of corridor entrance	9	Longitudinal section through walkway of street intersection	28
Perspective of metro station corridor	9	Section through walkway of street intersection	28
Rendered site plan	10	Plan of walkway tree grate	29
Perspective of the walkway from the corner of 12th Street	10	Section of structure of walkway tree grate	29
Perspective of the interior of the station from the corner	10	Rendered site plan	30
Plan of corridor connecting underground metro platform to station on the walkway	11	Perspective of walkway at west end of meeting space on block two	30
Plan of station on the walkway	12	Perspective of meeting space on block two facing west	30
Longitudinal section through corridor and station	13	Rendered site plan	31
Section through station	14	Perspective of walkway crossing S Eads Street	31
Rendered site plan	15	Perspective of walkway approaching block three meeting space	31
Perspective through the station	15	Rendered site plan	32
Perspective of walkway when exiting the station	15	Perspective of walkway in the meeting space of block three	32
Detail section of the station roof drain	16	Perspective of walkway at east end of meeting space of block three facing west	32
Detail series of the station stair structure and light location	16	Rendered site plan	33
Section of the station and corridor light location	16	Perspective of walkway at the east end of block three facing west	33
Axon of station stair night lighting in charcoal	17	Perspective of walkway crossing Army Navy Drive	33
Plan of station stair night lighting in charcoal	17	Rendered site plan	34
Section of station stair night lighting in charcoal	17	Perspective of walkway at west end of block four	34
Axon of station night lighting in charcoal	18	Perspective of walkway at west end of block four meeting space	34
Section of station night lighting in charcoal	18	Rendered site plan	35
Plan of station night lighting in charcoal	18	Perspective of walkway in middle of meeting space of block four	35
Rendered site plan	20	Perspective of walkway at east end of meeting space of block four	35
Perspective of the meeting space facing west	20	Rendered site plan	36
Perspective facing east at the end of the meeting space	20	Perspective of walkway at east end of block four facing west	36
Rendered plan of meeting space	21	Perspective of walkway at east end of block four facing Washington Monument	36
		Axon of meeting space night lighting in charcoal	37

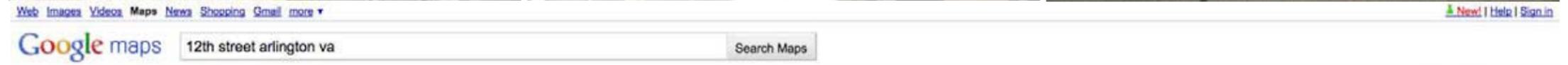
* All illustrations produced by author unless otherwise noted.

Thank you to my committee for their guidance.

Thank you to my family and friends for their encouragement and support.

Site

The walkway, located in Arlington, Virginia, is comprised of four blocks on 12th Street, from the Pentagon City Metro Station to Crystal Drive.





Concept

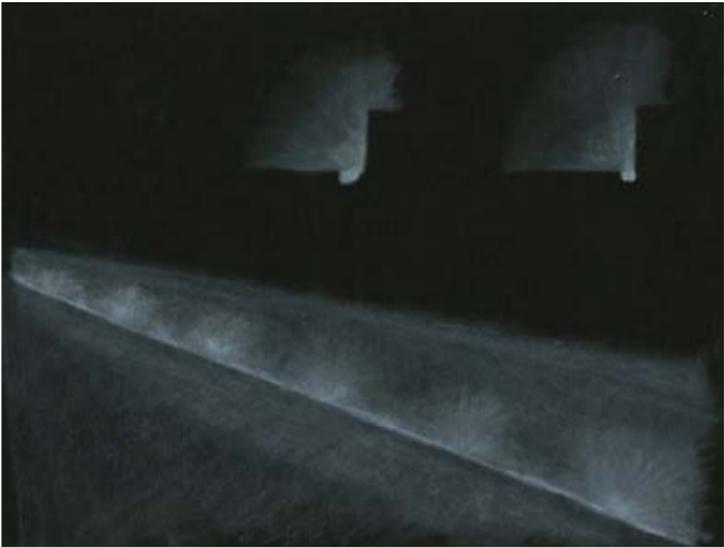
Studies, in charcoal, explored the effects of light based on the angles and location of the light feature.

A collage simplified the complex site and focused the requirements that the walkway needed to fulfill to connect the site.

Charcoal of light concept

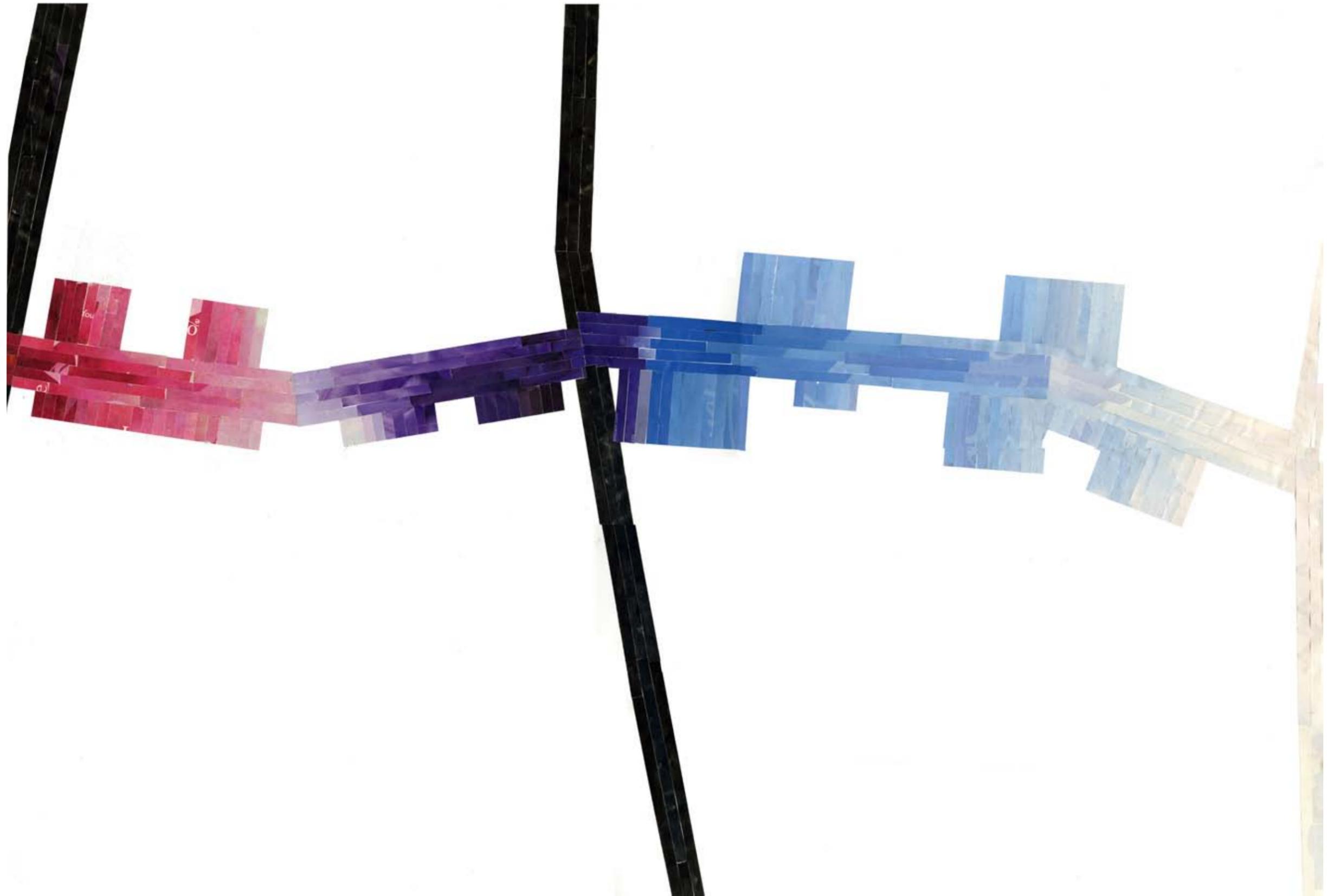


Charcoal of light concept



Charcoal of light concept

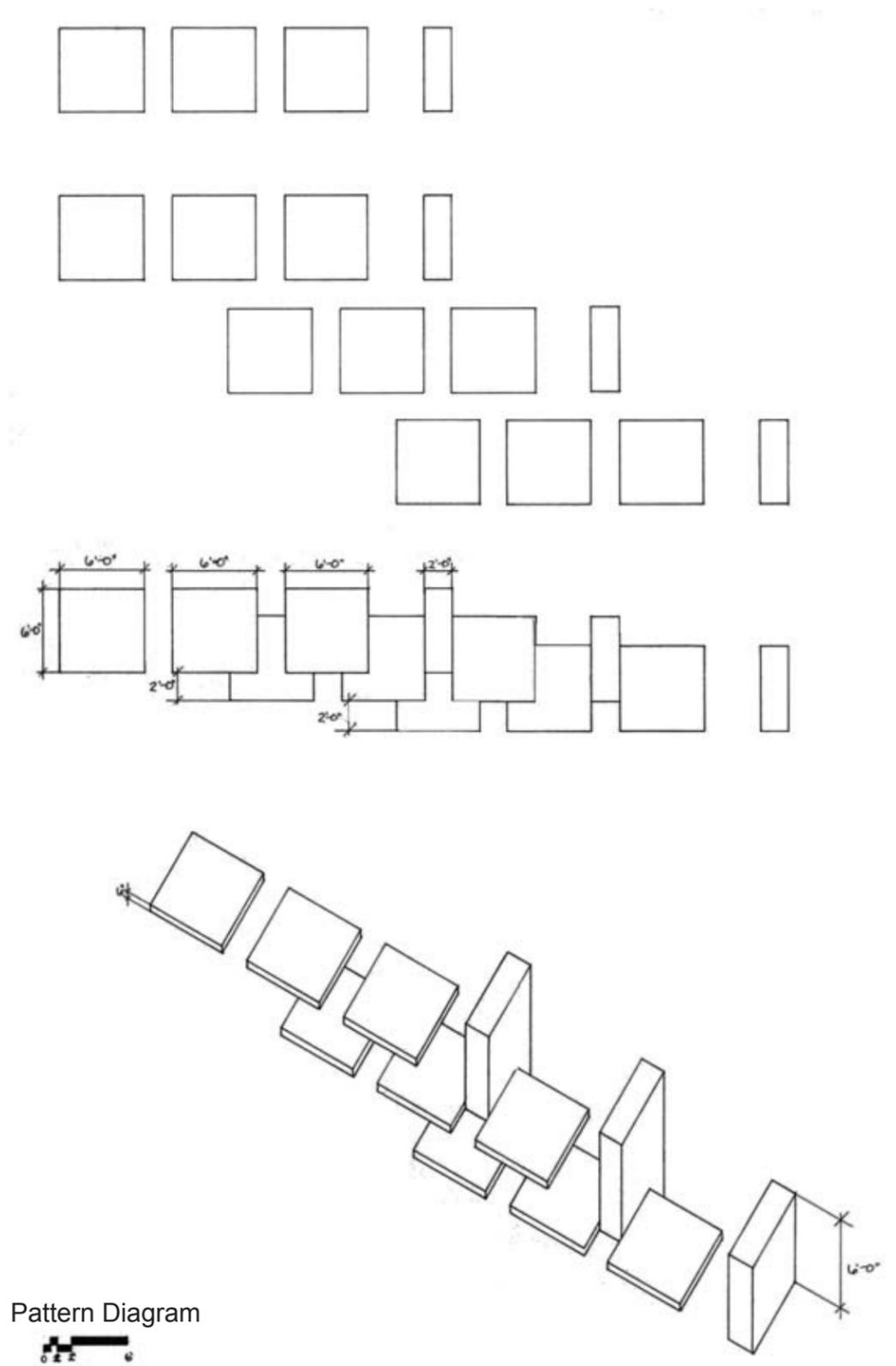


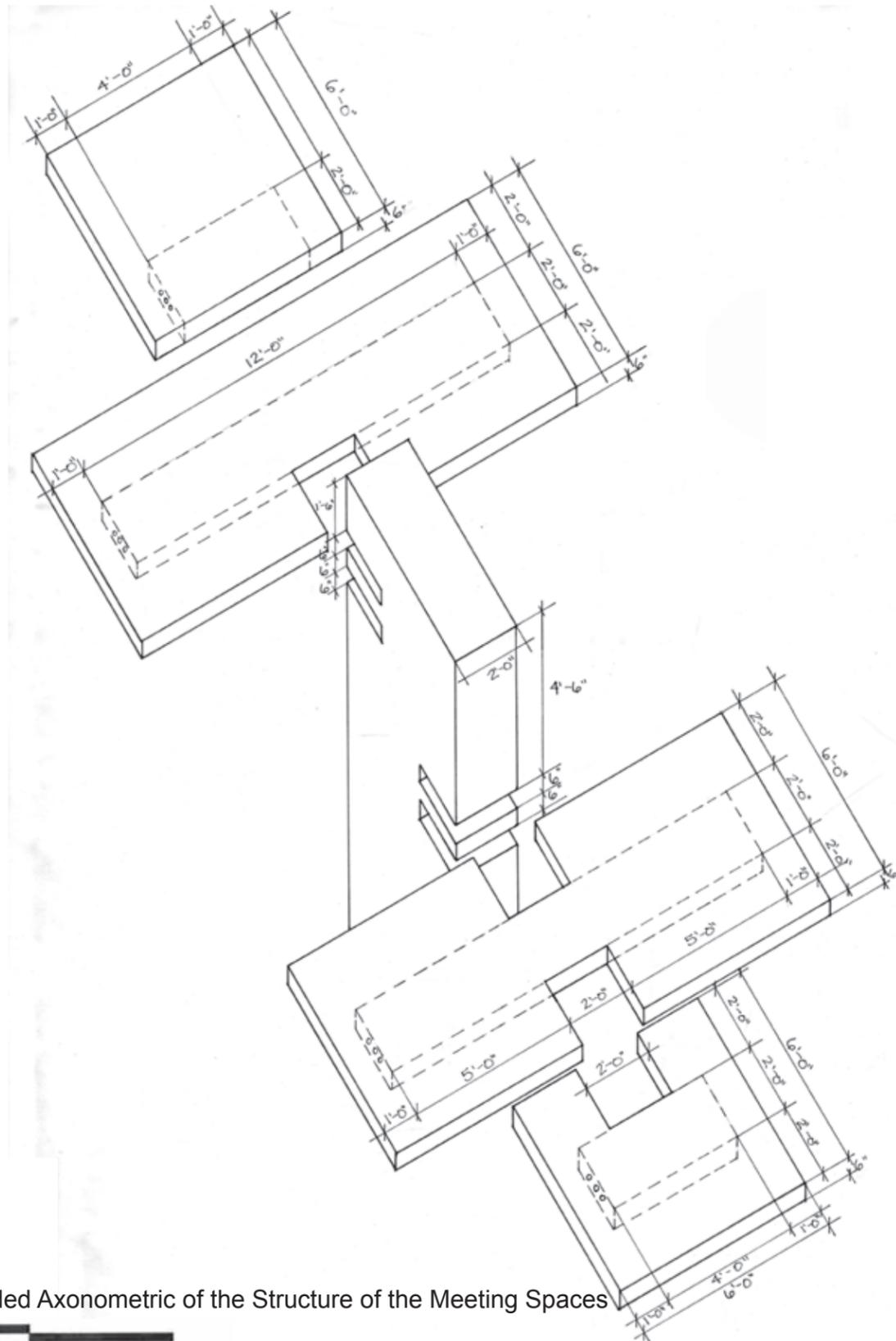


Collage

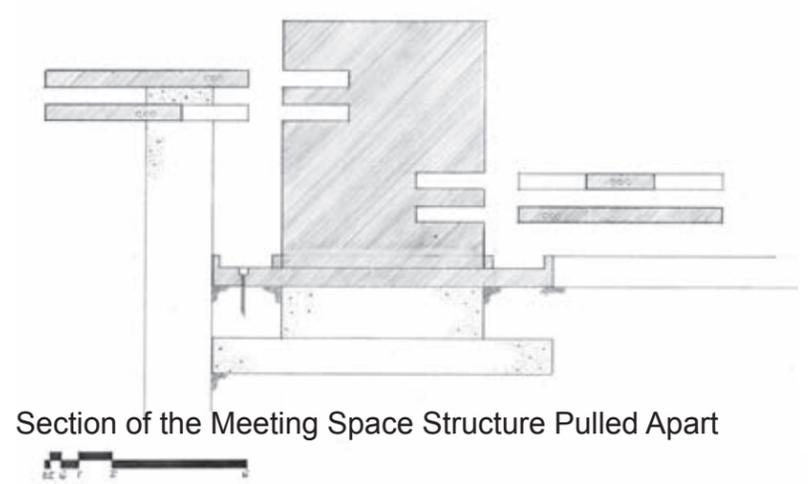
Design

The pattern, used in planar and volumetric form, is the generator of each feature of the walkway.

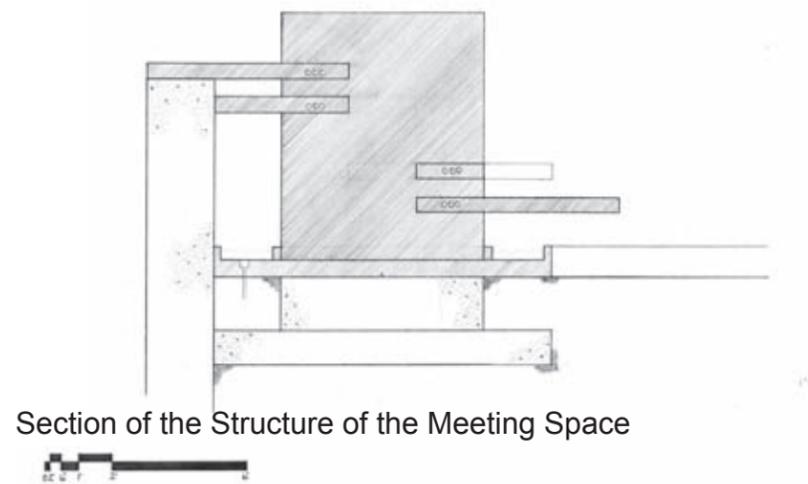




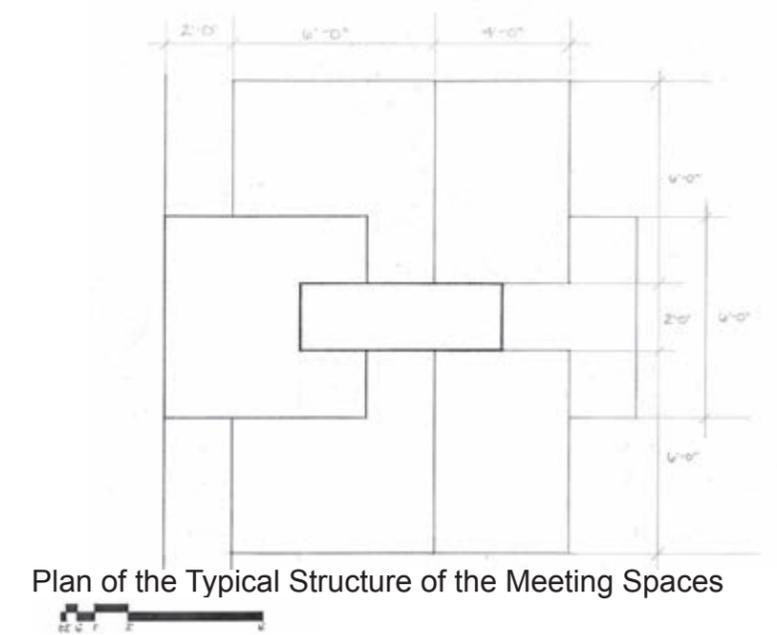
Exploded Axonometric of the Structure of the Meeting Spaces



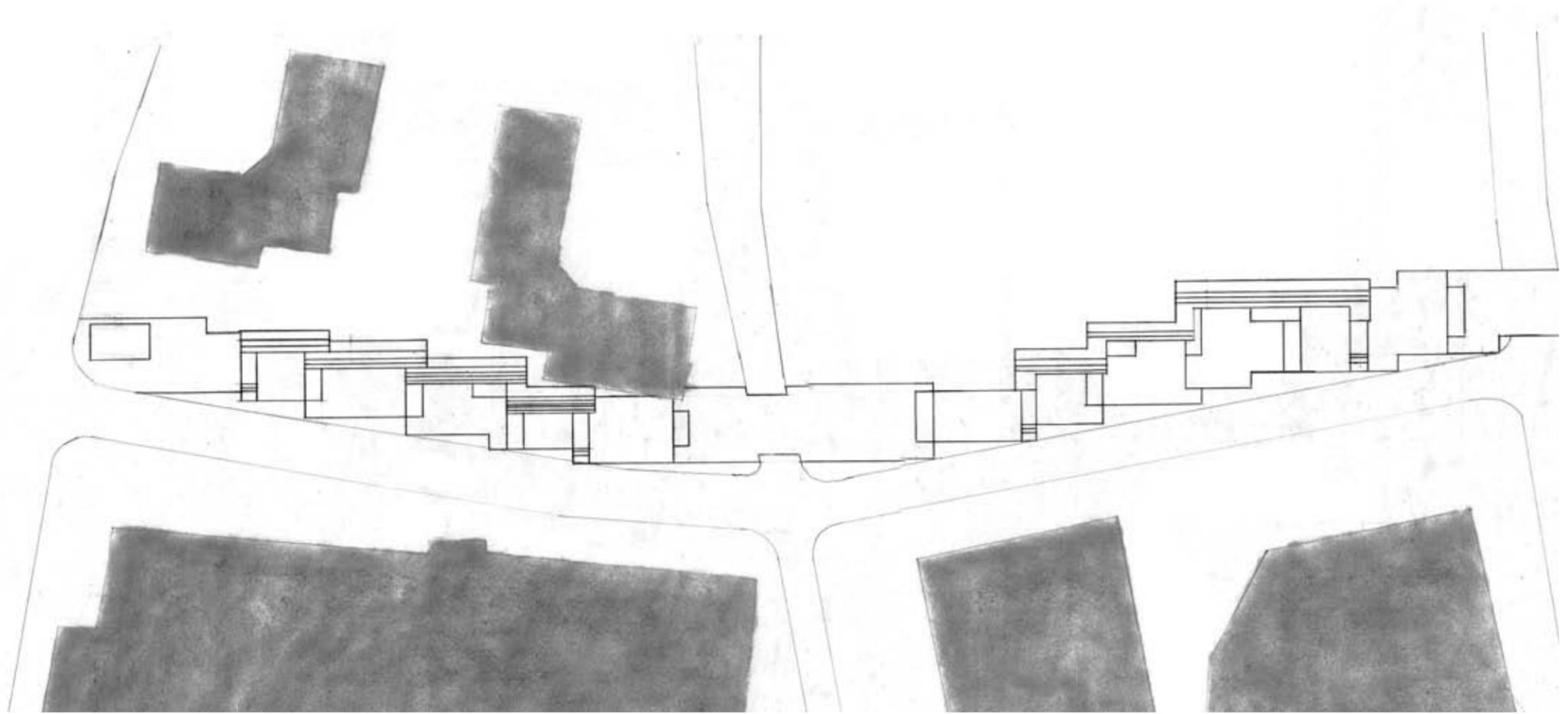
Section of the Meeting Space Structure Pulled Apart

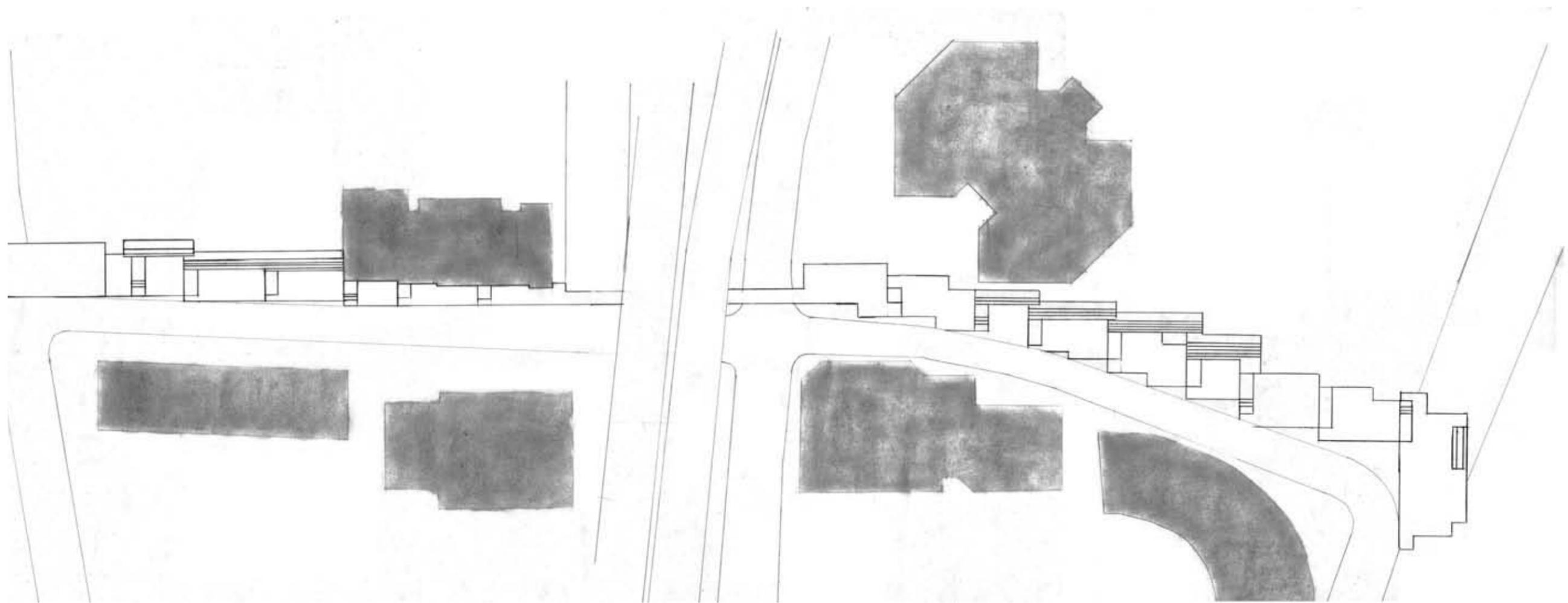


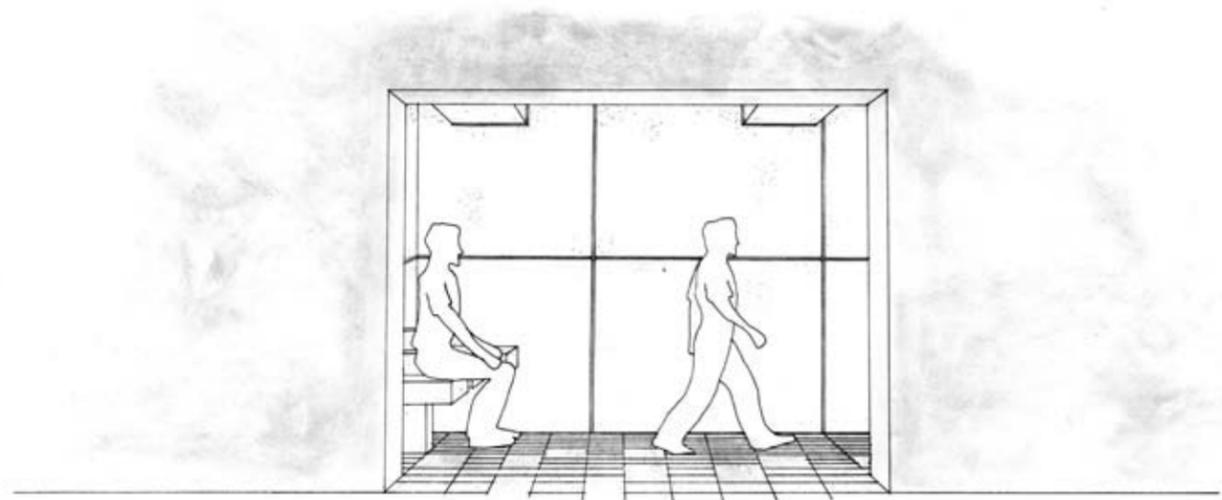
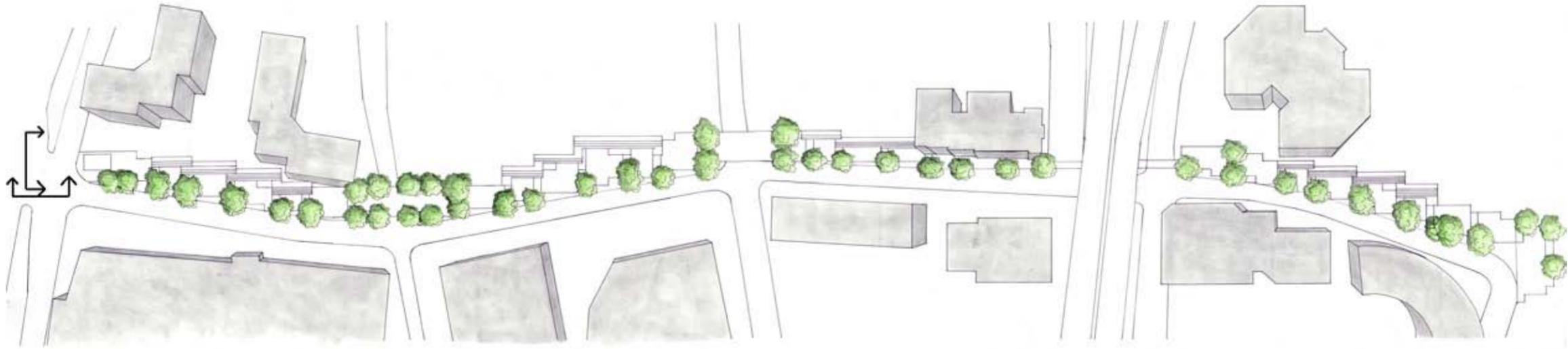
Section of the Structure of the Meeting Space



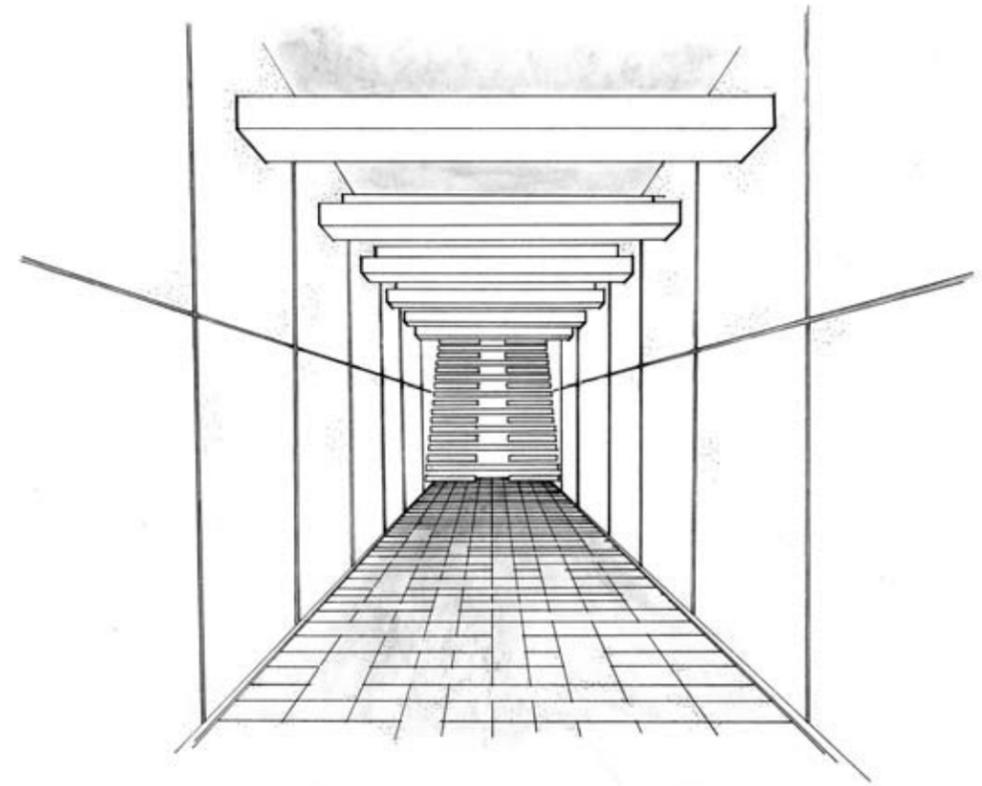
Plan of the Typical Structure of the Meeting Spaces



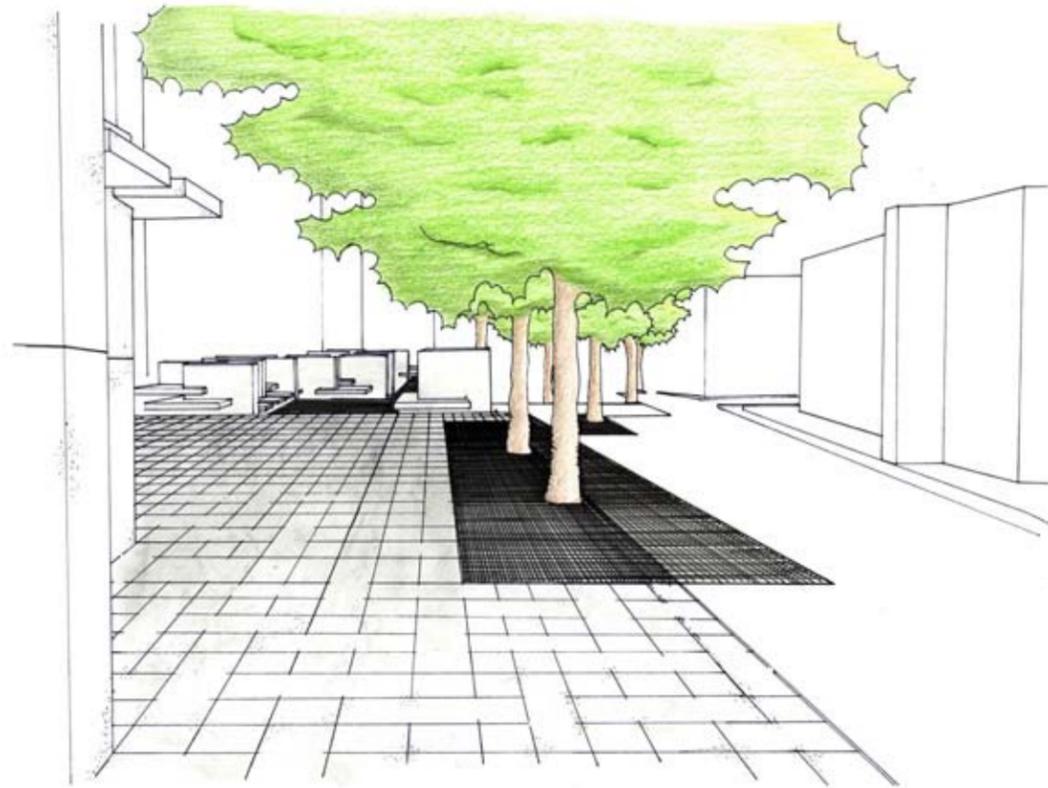
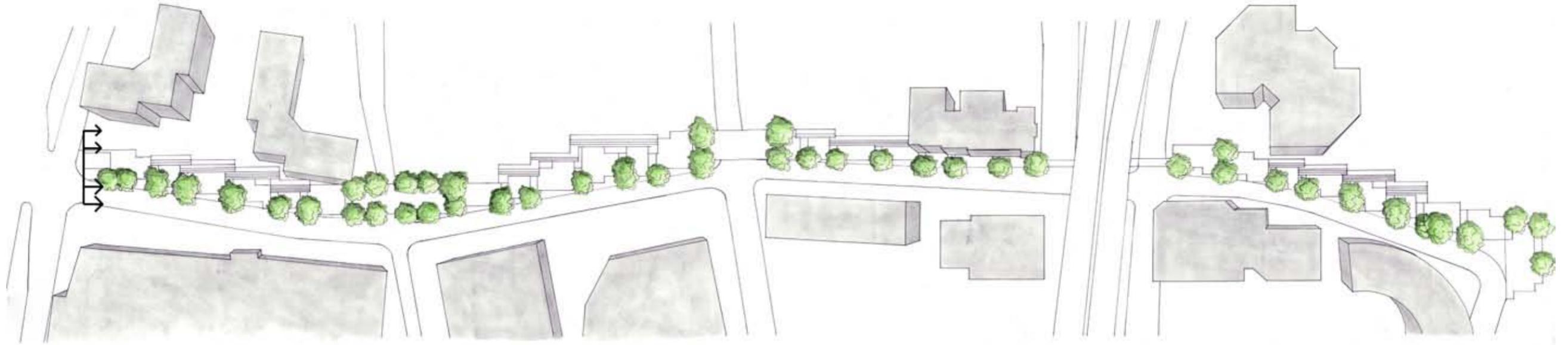




9 Perspective of corridor entrance



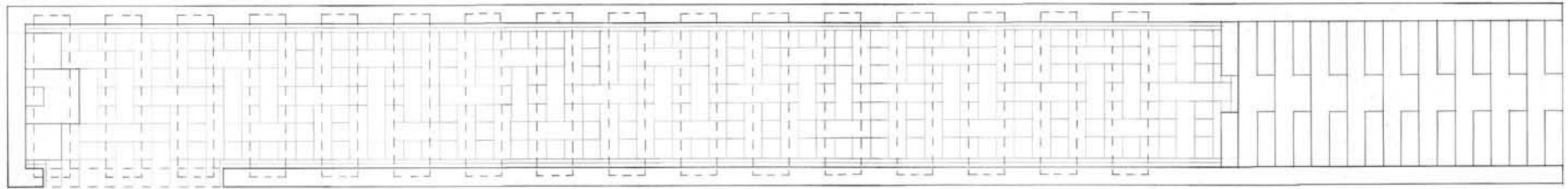
Perspective of metro station corridor



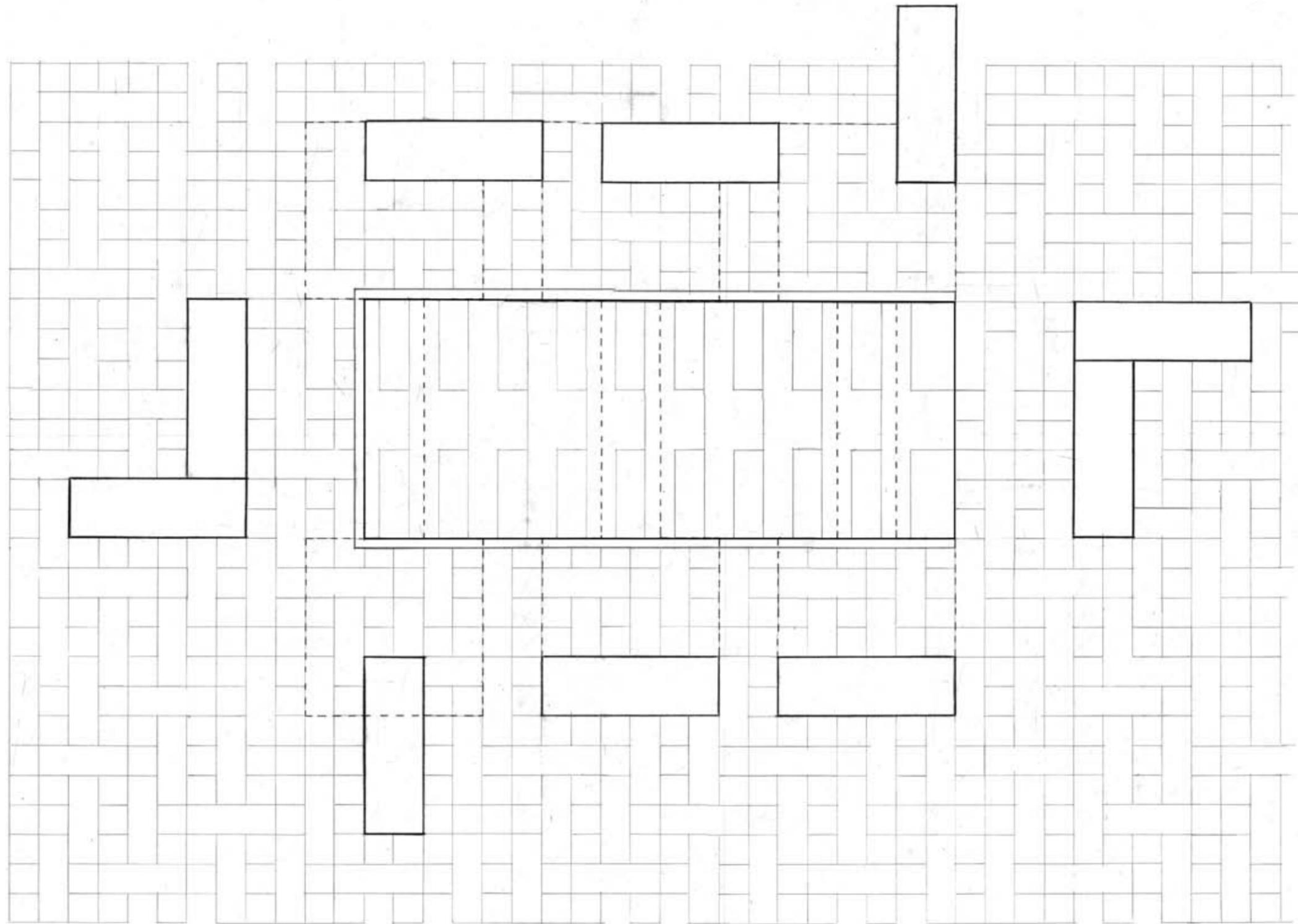
Perspective of the walkway from the corner of 12th Street



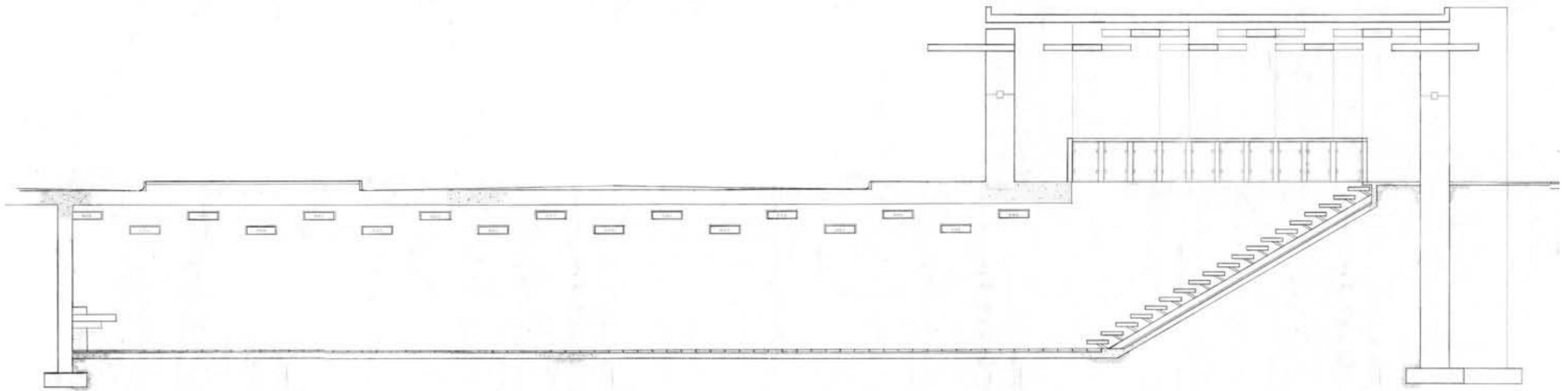
Perspective of the interior of the station from the corner



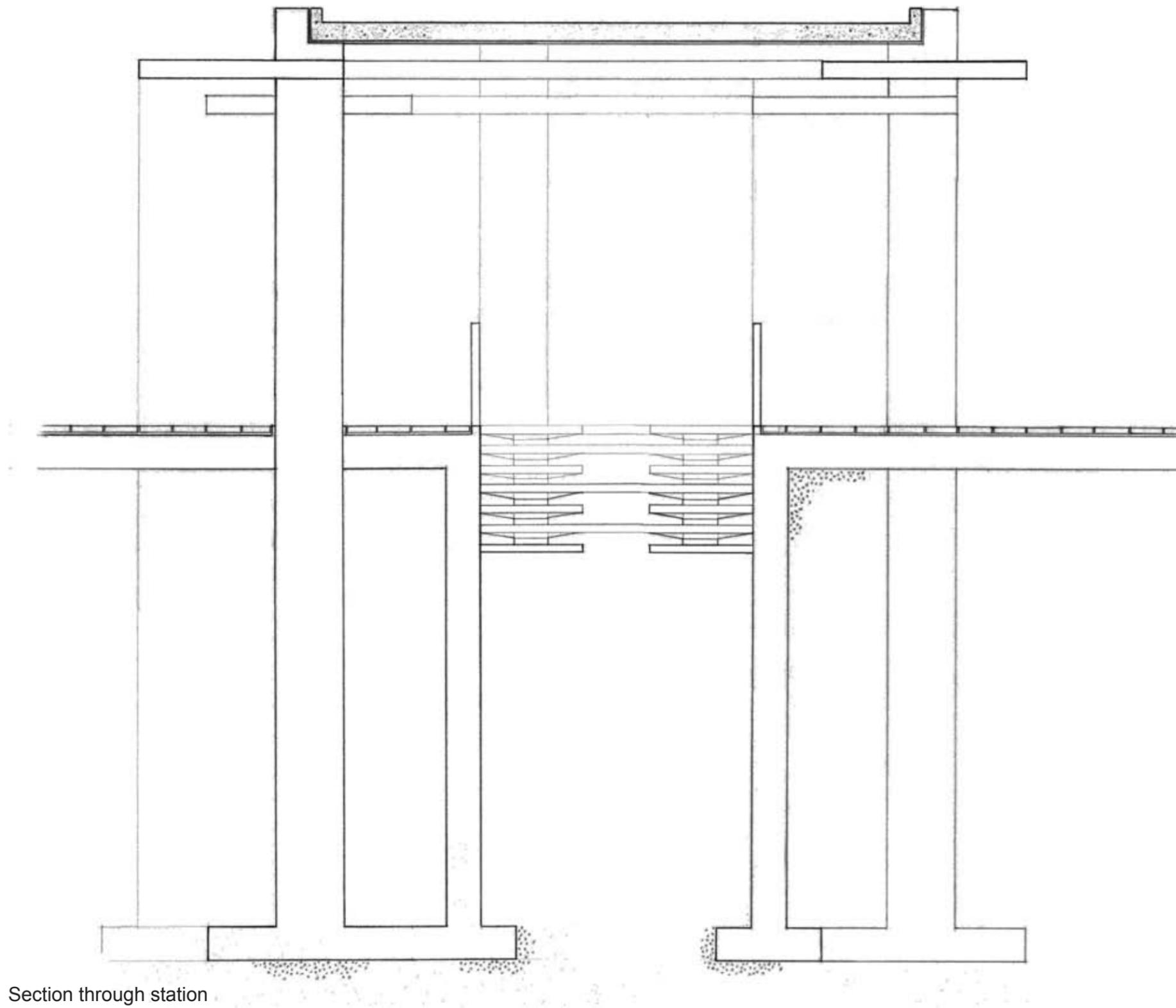
11 Plan of corridor connecting underground metro platform to station on the walkway



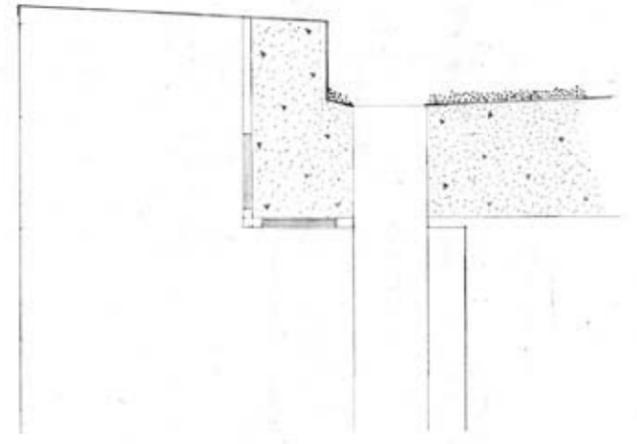
Plan of station on the walkway



13 Longitudinal section through corridor and station

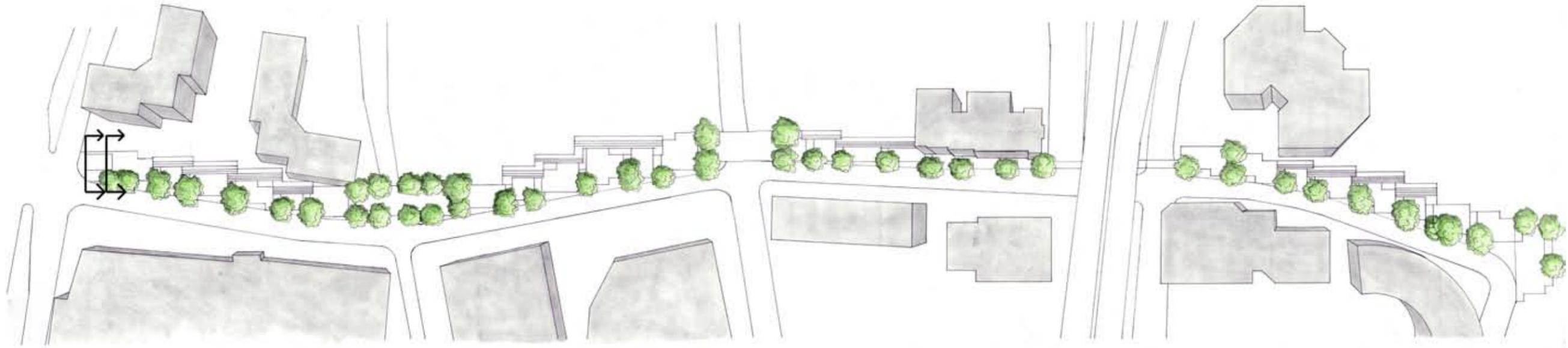


Section through station



Section of the Station Roof Drain

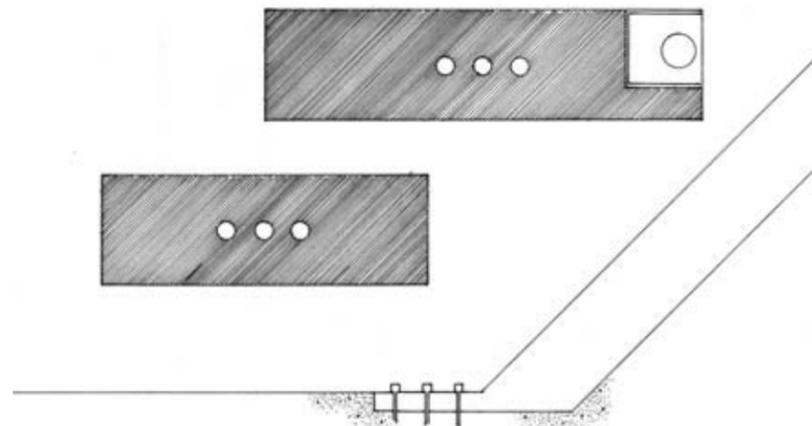
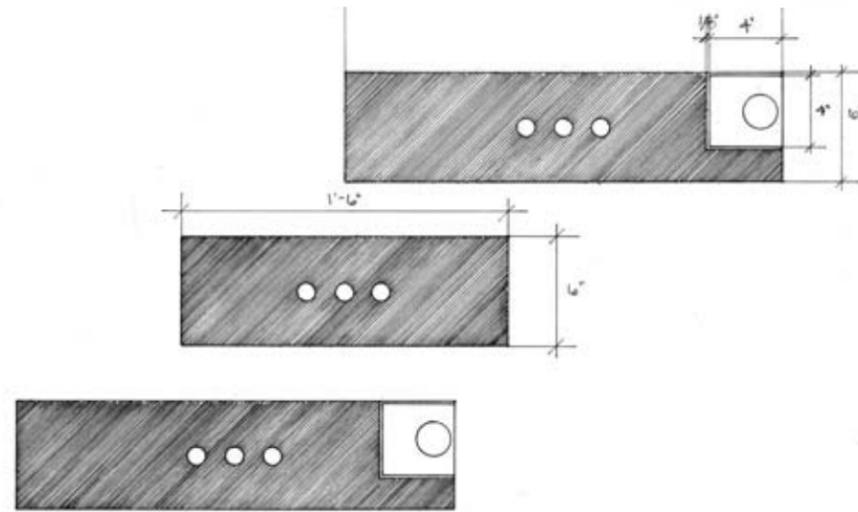
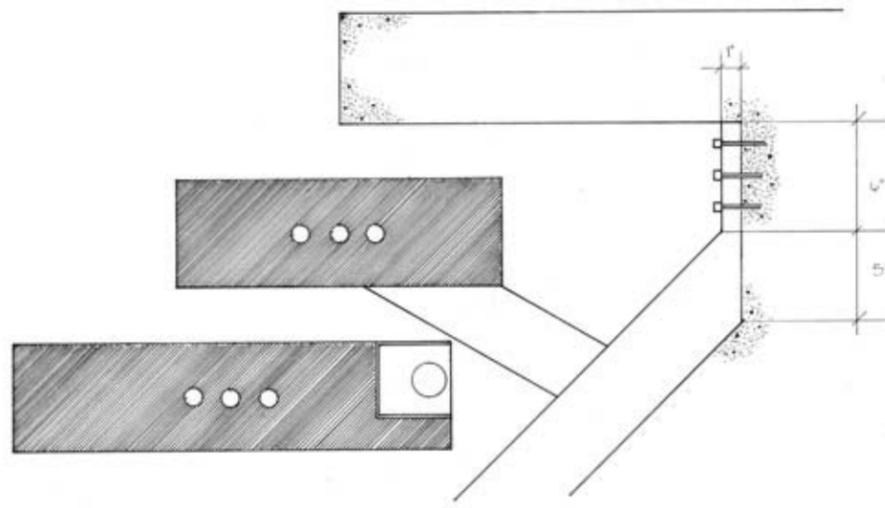




15 Perspective through the station

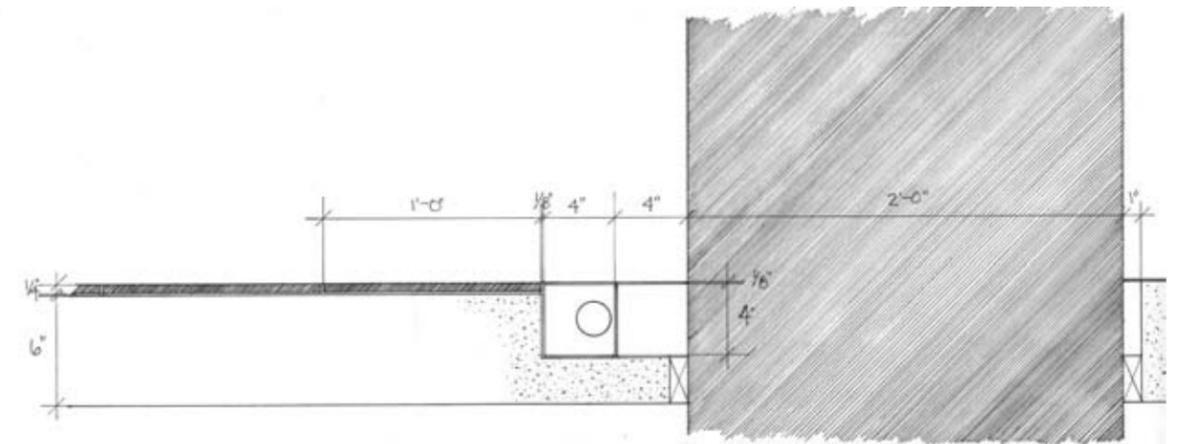


Perspective of walkway when exiting the station



Detail Series of the Station Stair Structure and Light Location

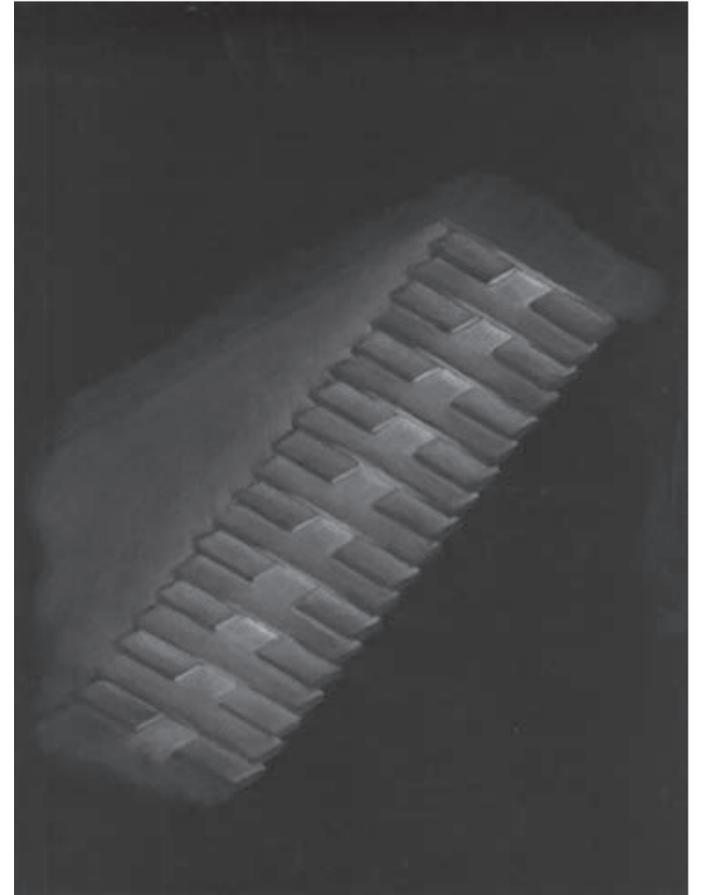
0 1' 3' 6' 1'-0"



Section of the Station and Corridor Light Location

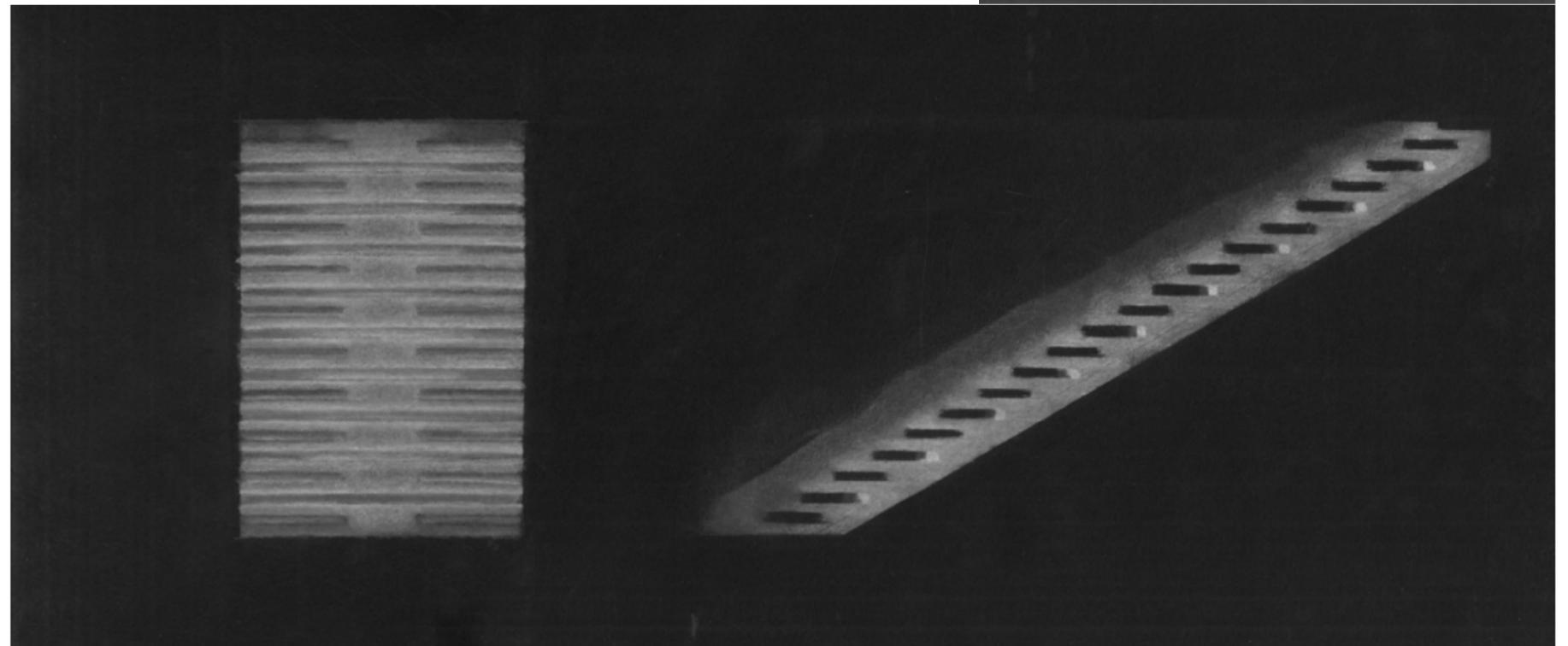
0 1' 3' 6' 1'-0"

Axon of station stair night lighting in charcoal

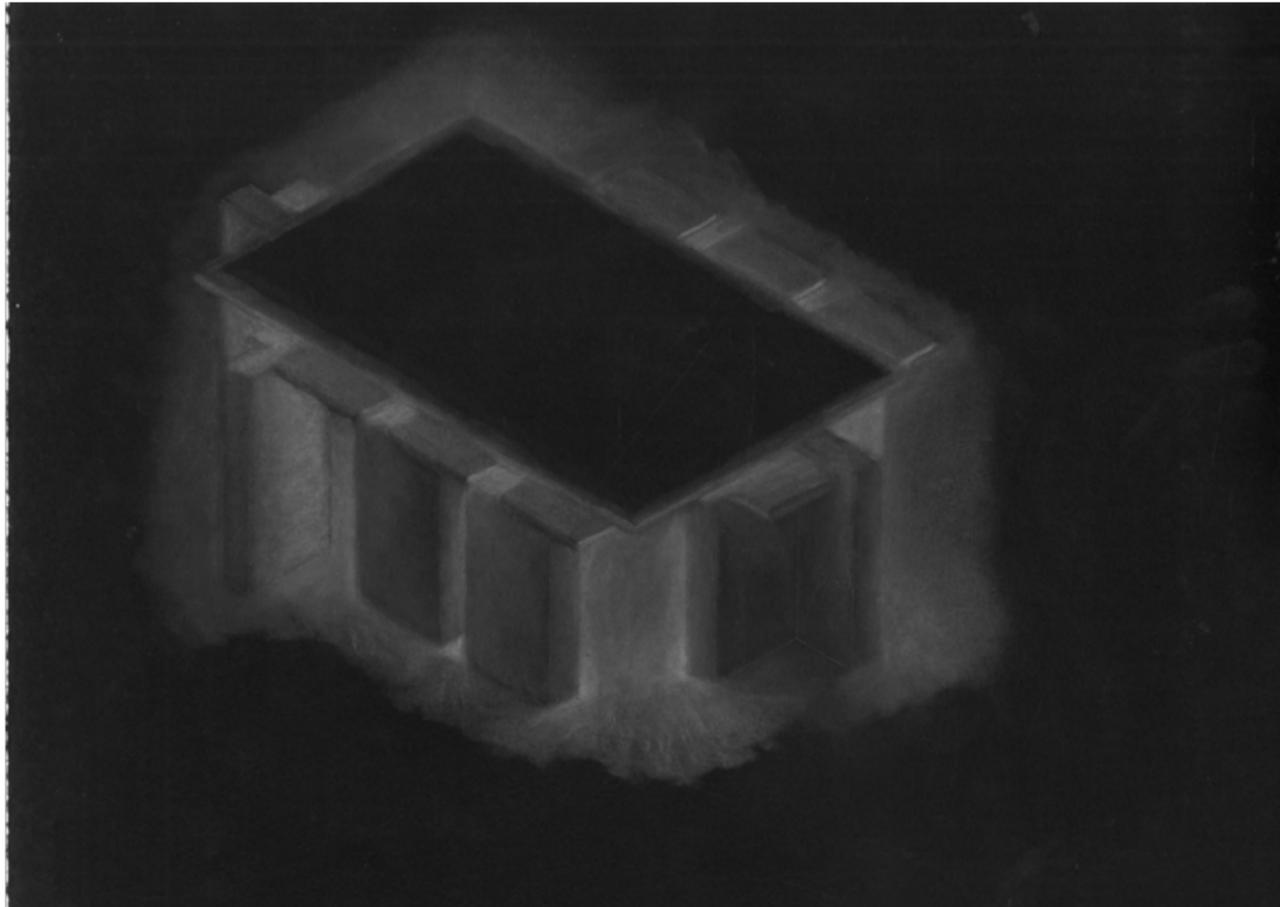


Plan of station stair night lighting in charcoal

Section of station stair night lighting in charcoal



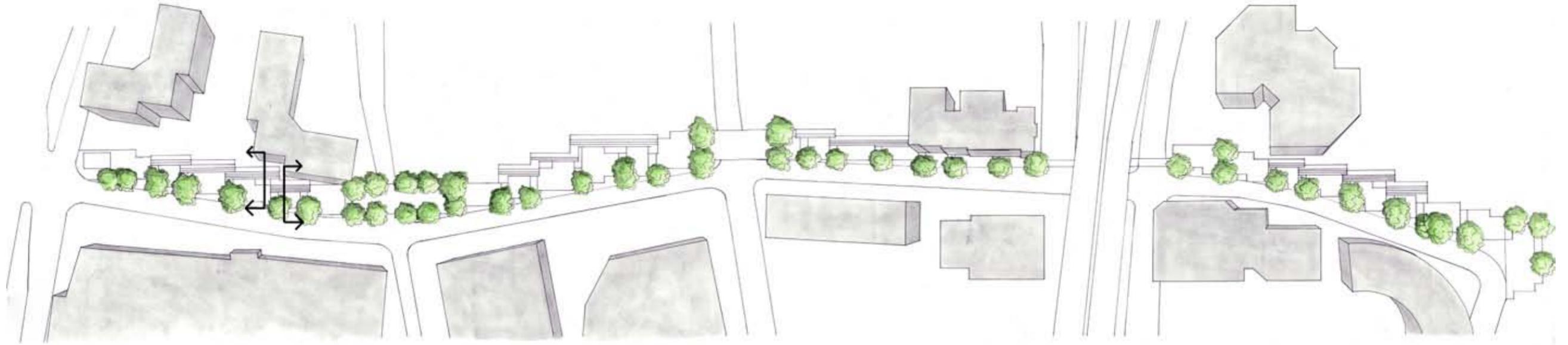
Axon of station night lighting in charcoal



Section of station night lighting in charcoal

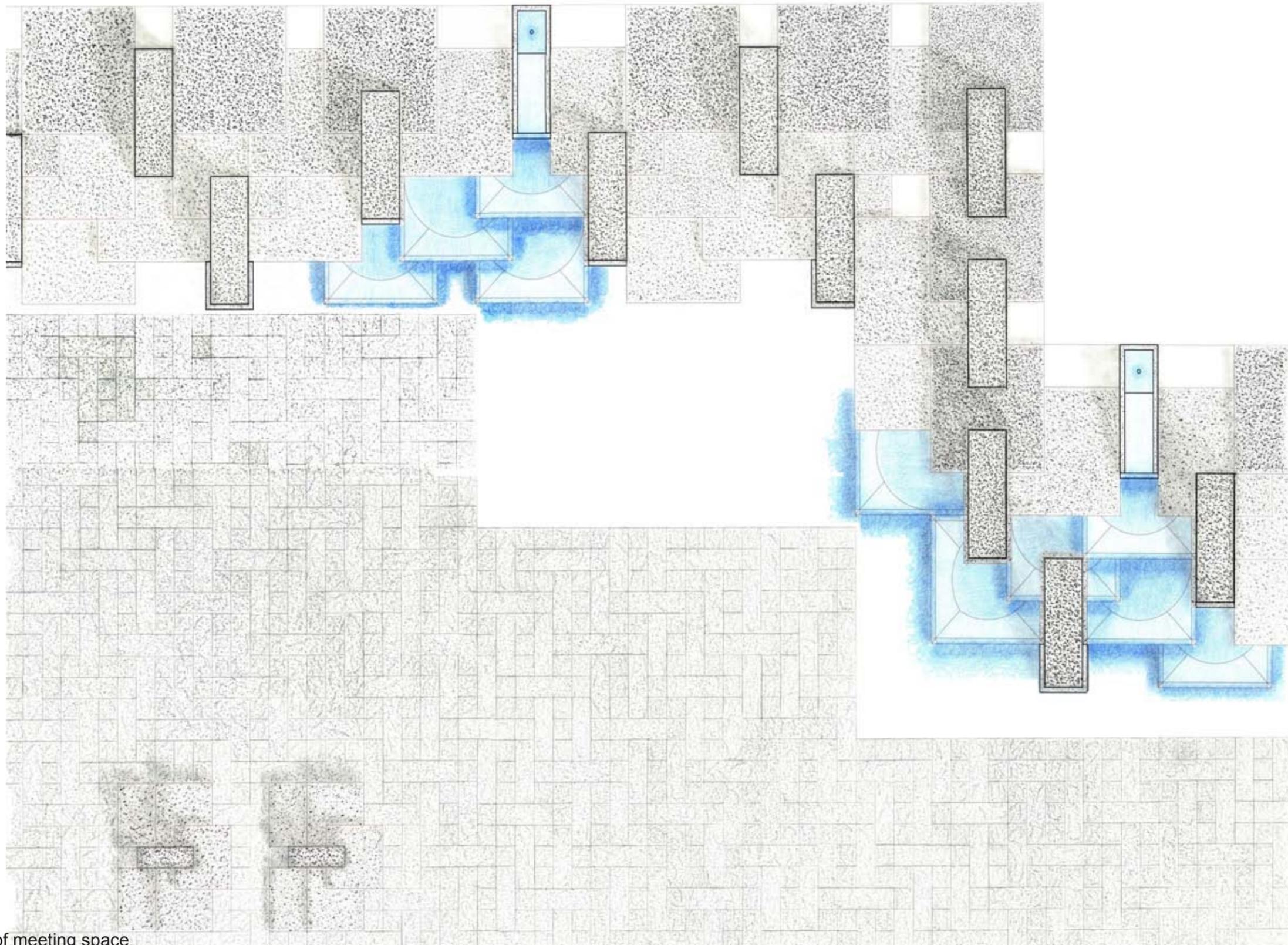


Plan of station night lighting in charcoal

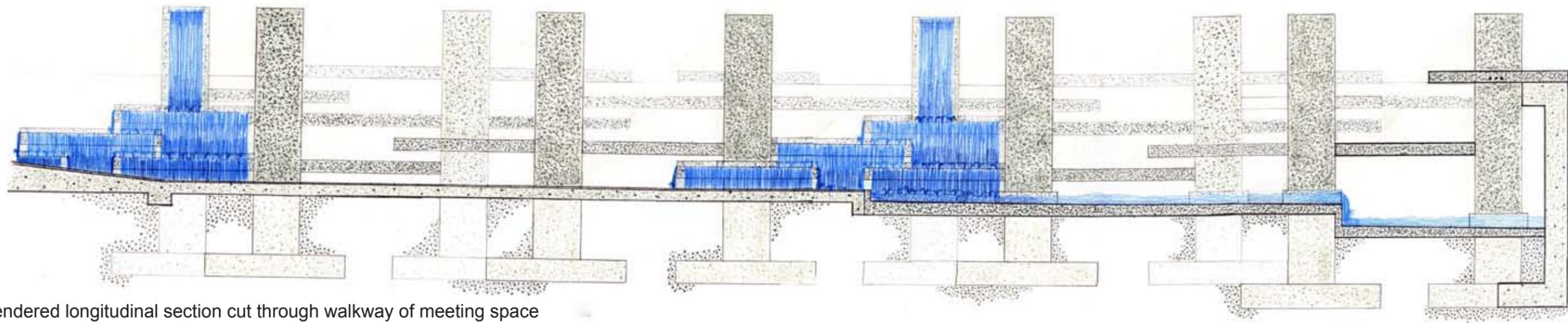


Perspective of the meeting space facing west

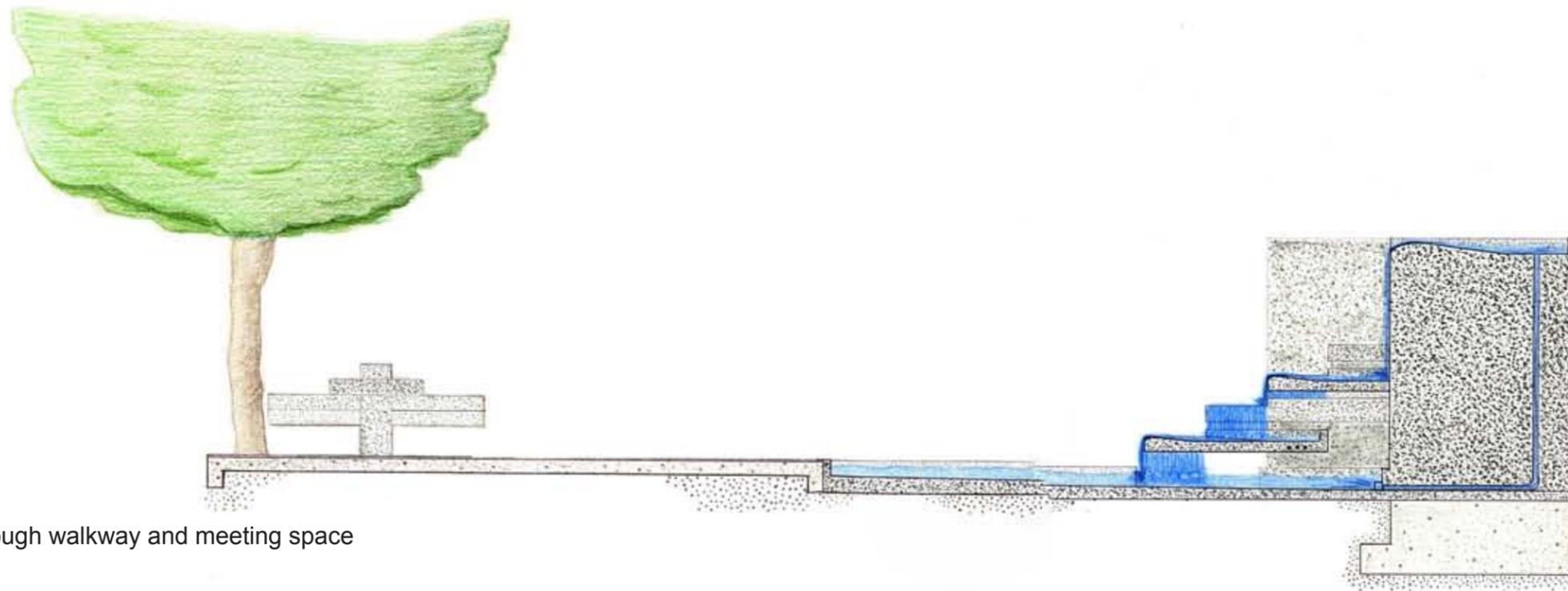
Perspective facing east at the end of the meeting space



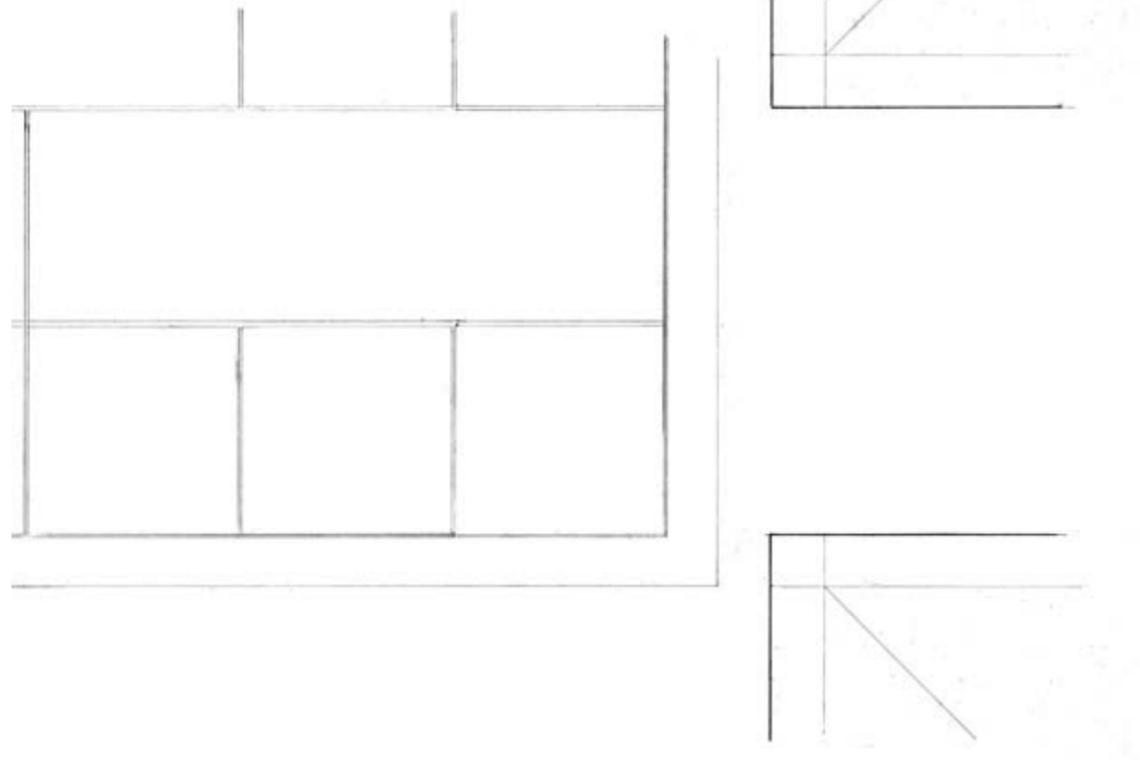
21 Rendered plan of meeting space



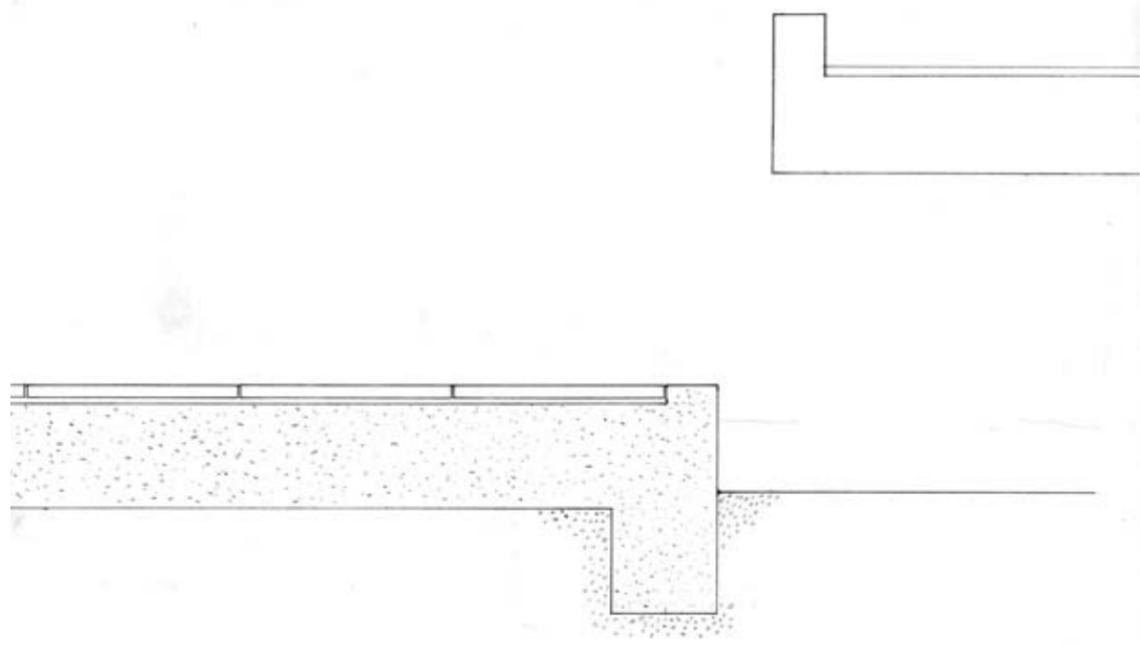
Rendered longitudinal section cut through walkway of meeting space



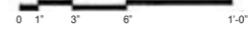
Rendered section through walkway and meeting space

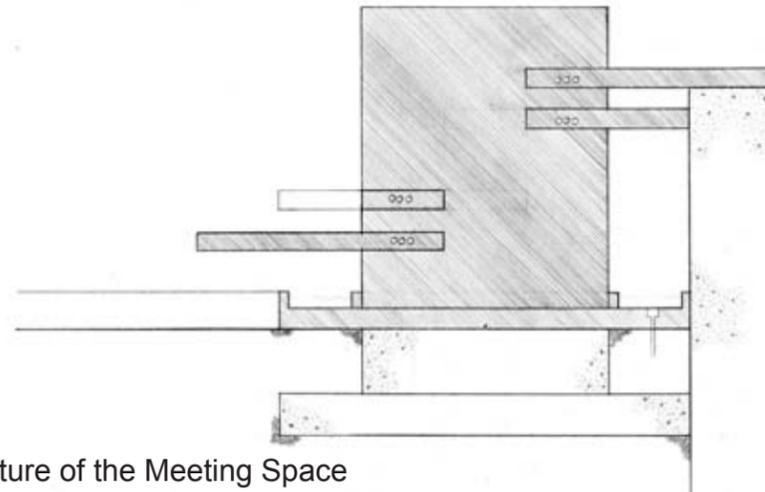


Detail of plan walkway and meeting space connection

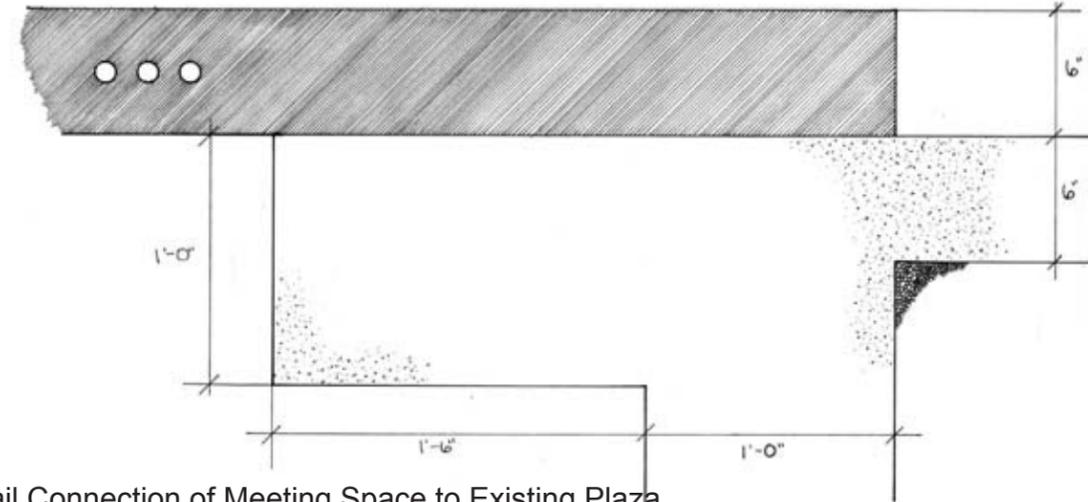


Detail of section walkway and meeting space connection

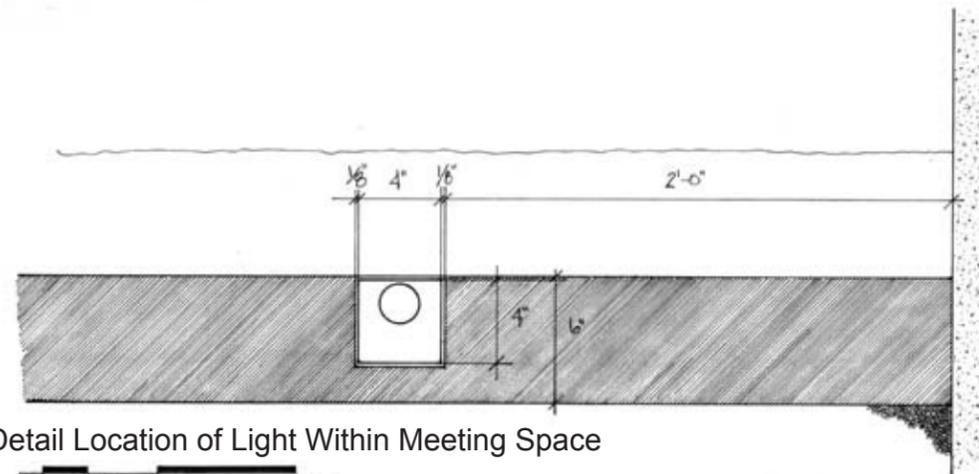




Section of the Structure of the Meeting Space



Detail Connection of Meeting Space to Existing Plaza

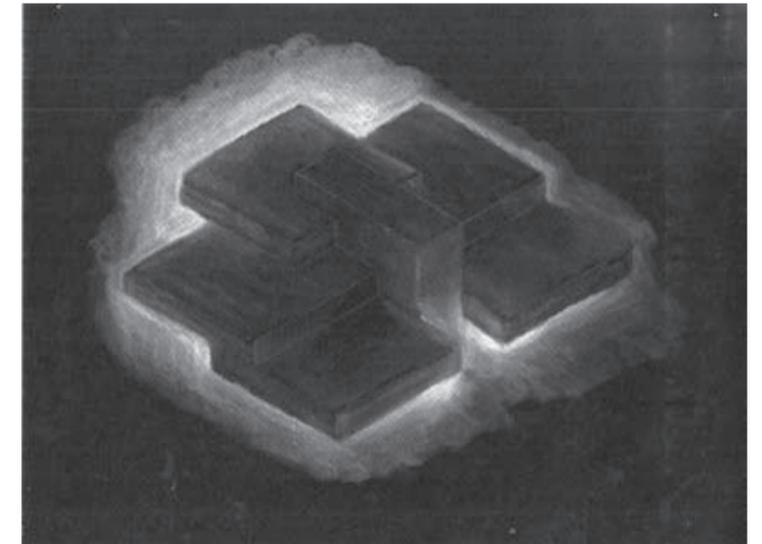


Detail Location of Light Within Meeting Space

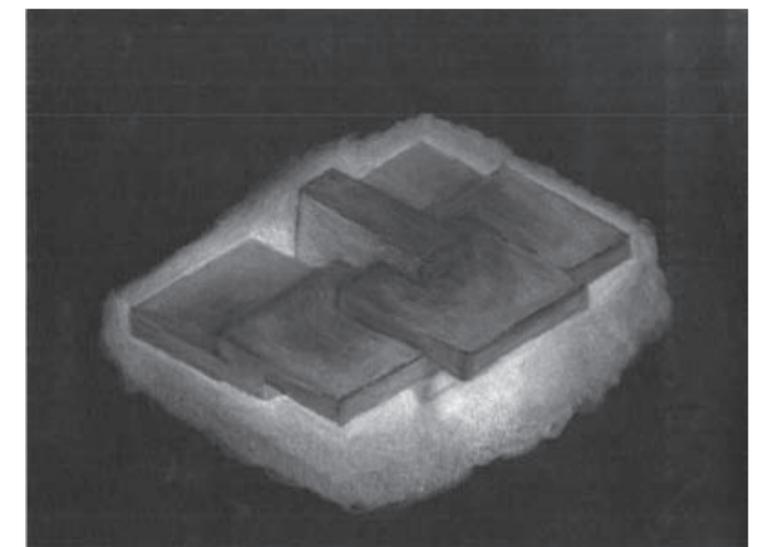




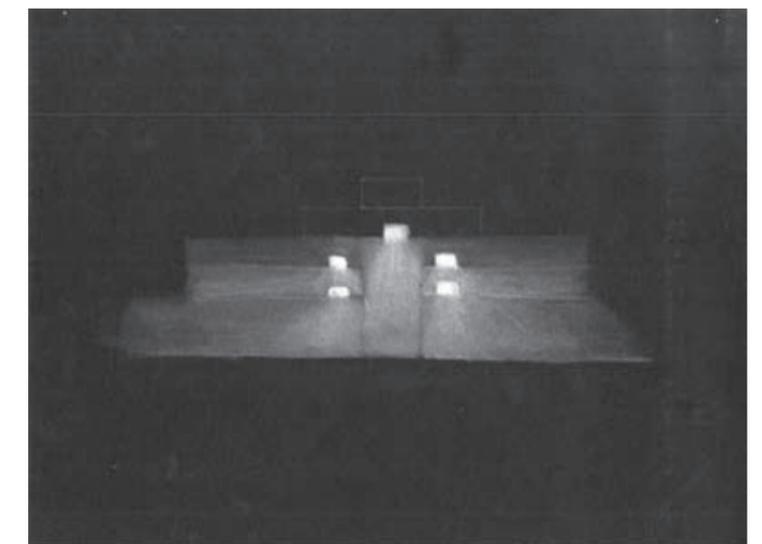
Axon of bench night lighting in charcoal



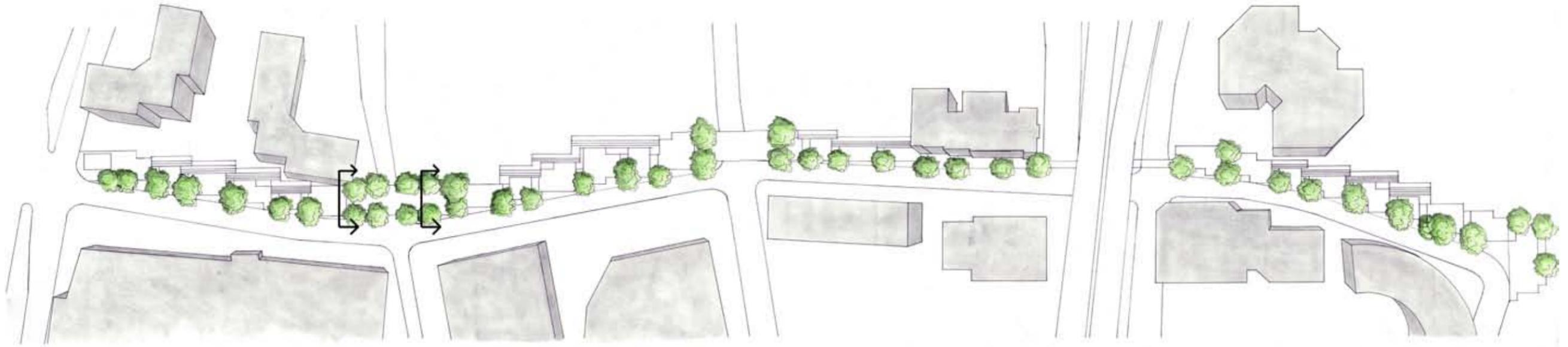
Axon of bench night lighting in charcoal



Section of bench night lighting in charcoal



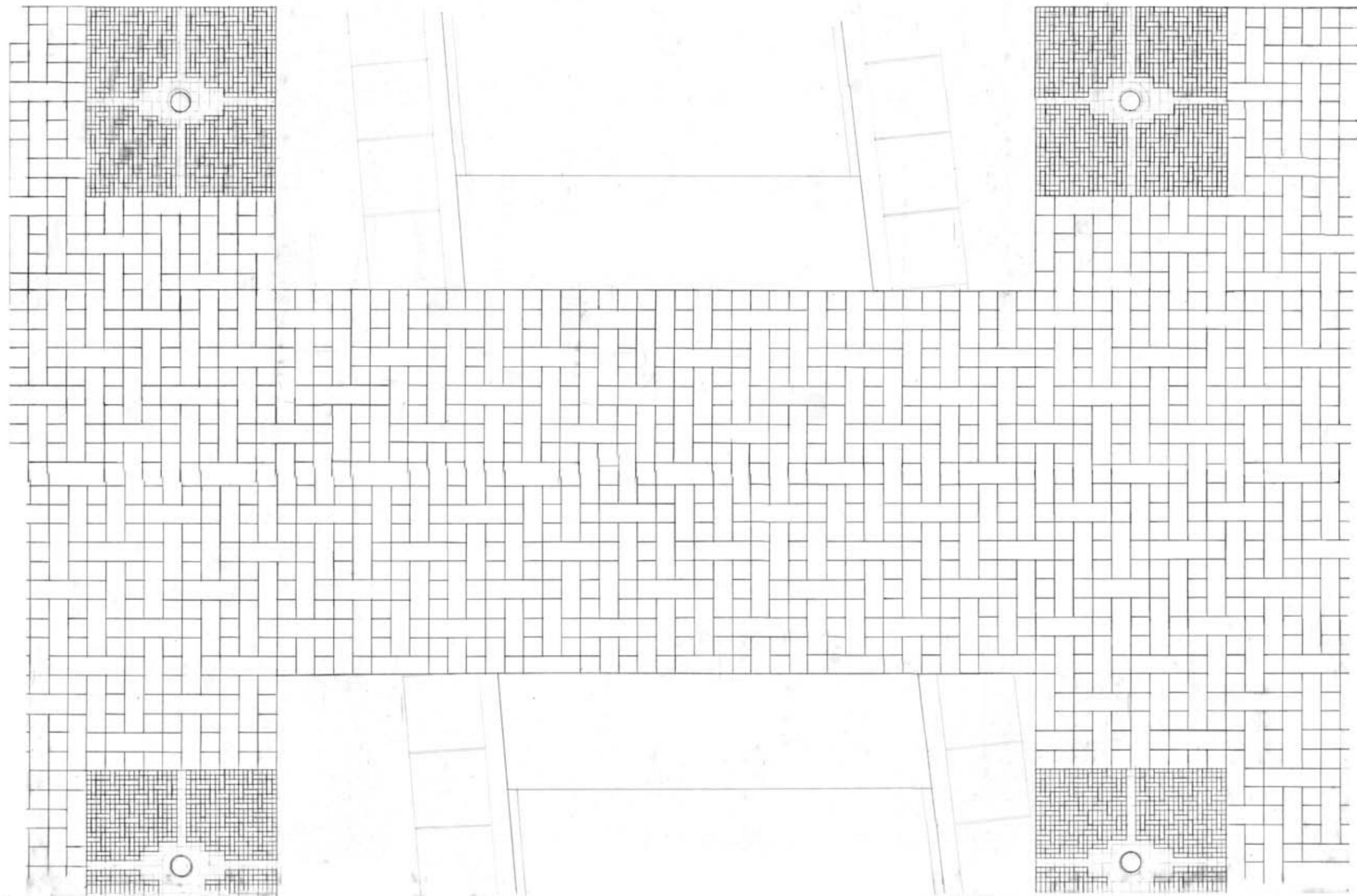
Far left
Plan of meeting space night lighting in charcoal
Top Left
Section of meeting space night lighting in charcoal
Middle Left
Section of meeting space night lighting in charcoal
Left
Axon of meeting space night lighting in charcoal



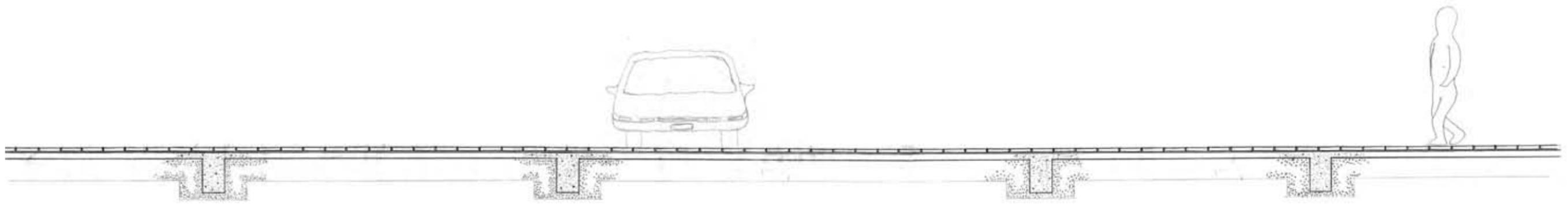
Perspective of walkway crossing Fern Street



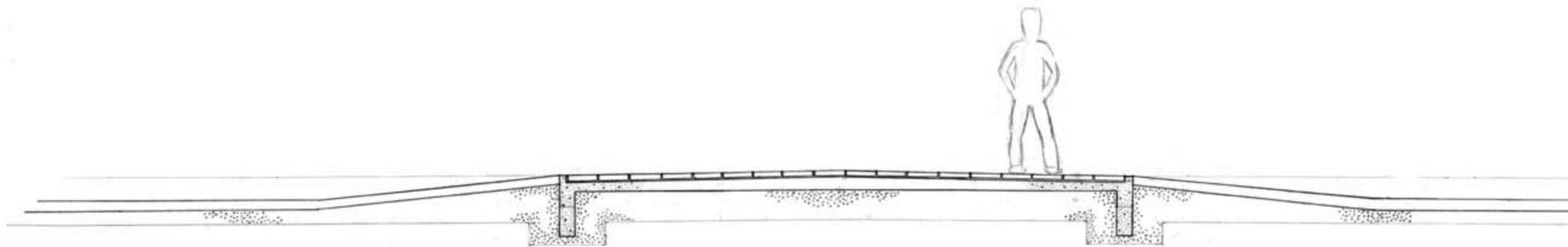
Perspective of walkway approaching the west end of the meeting space of the second block



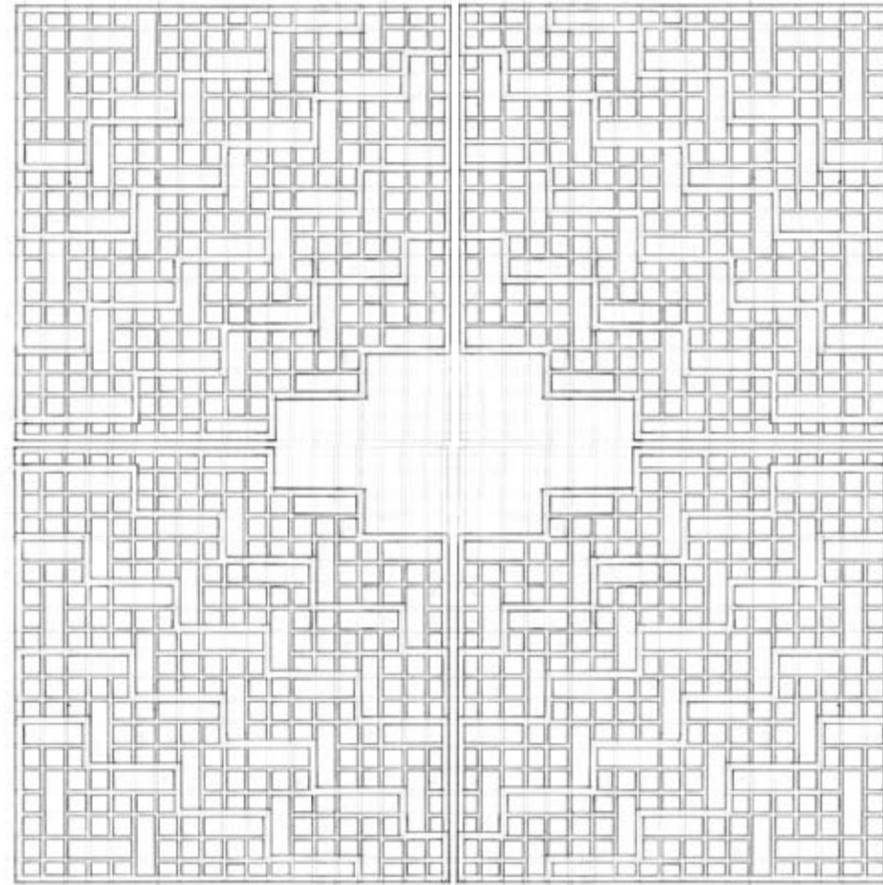
27 Plan of walkway crossing a street



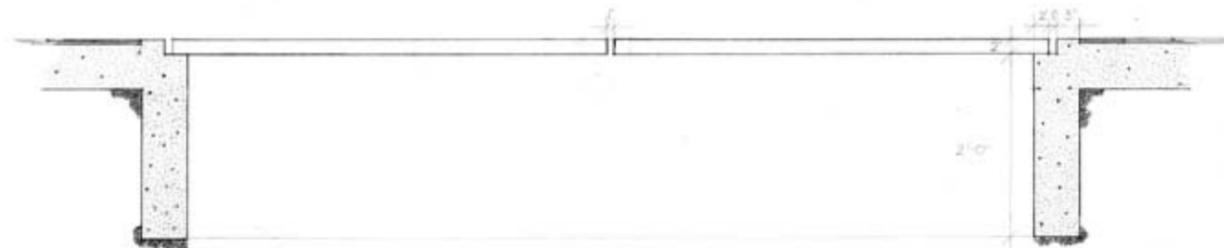
Longitudinal section through walkway of street intersection



Section through walkway of street intersection

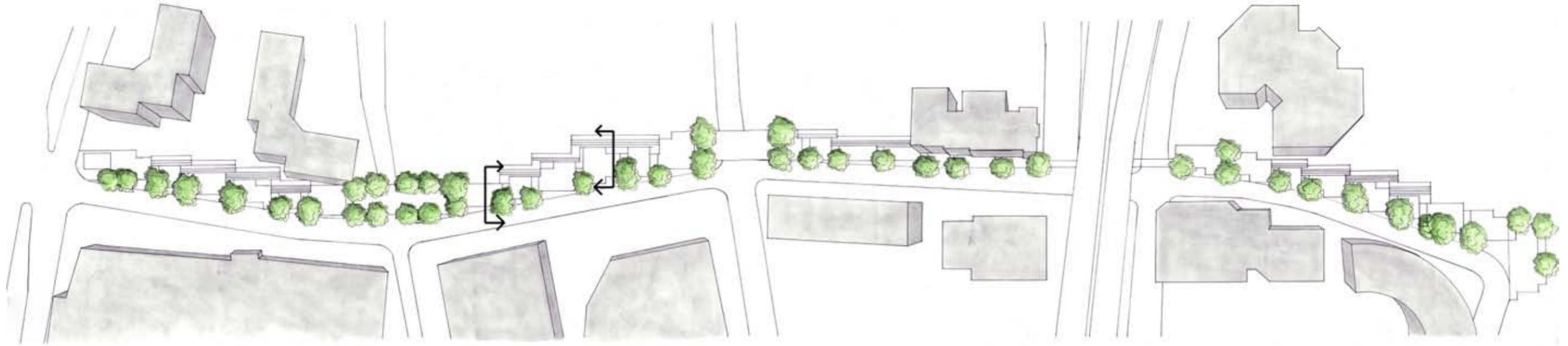


Plan of Walkway Tree Grate



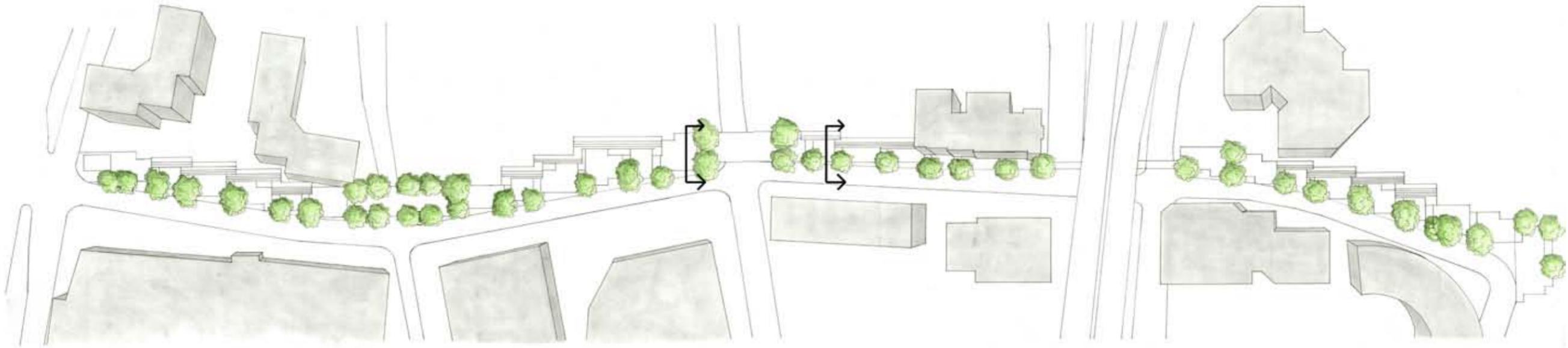
Section of Structure of Walkway Tree Grate



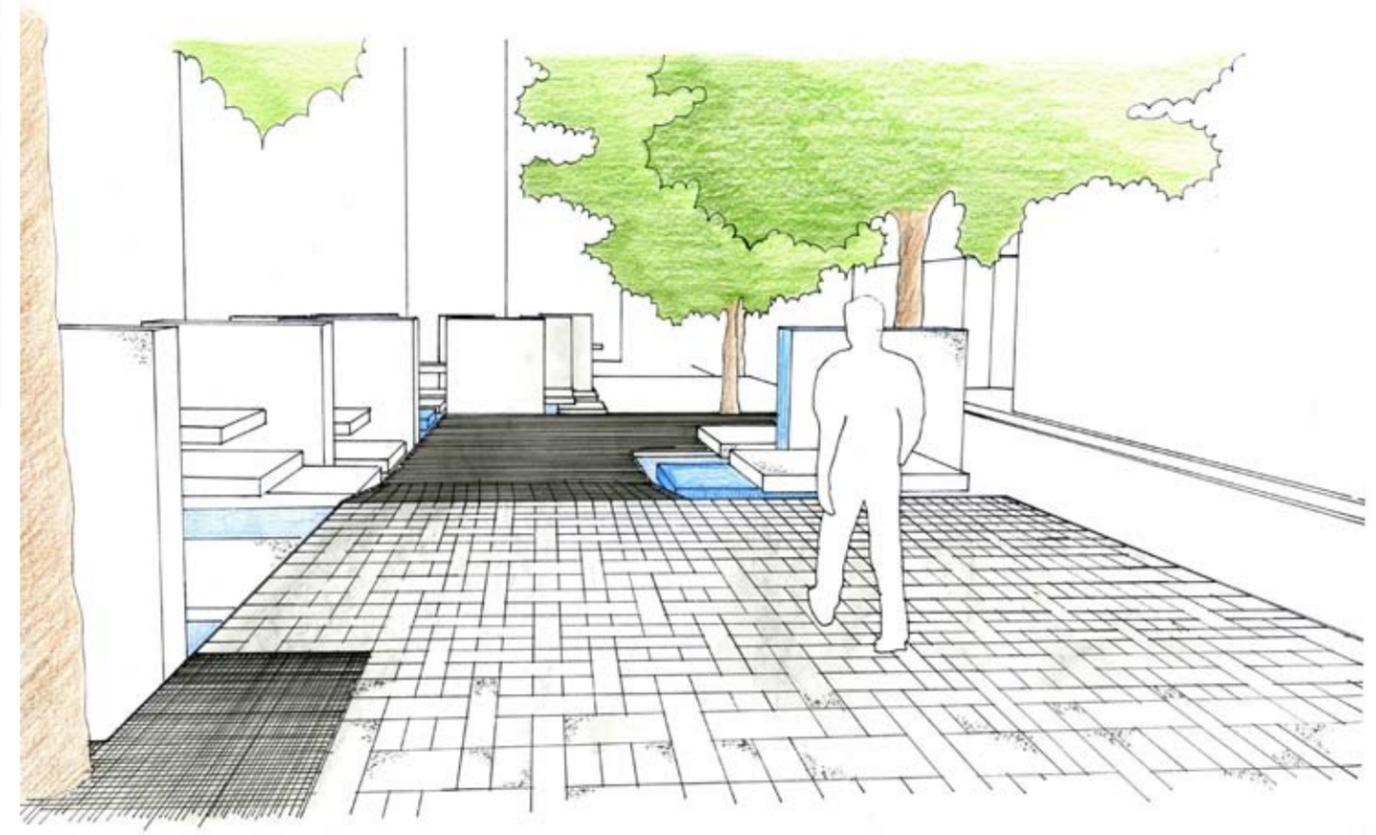


Perspective of walkway at west end of meeting space on block two

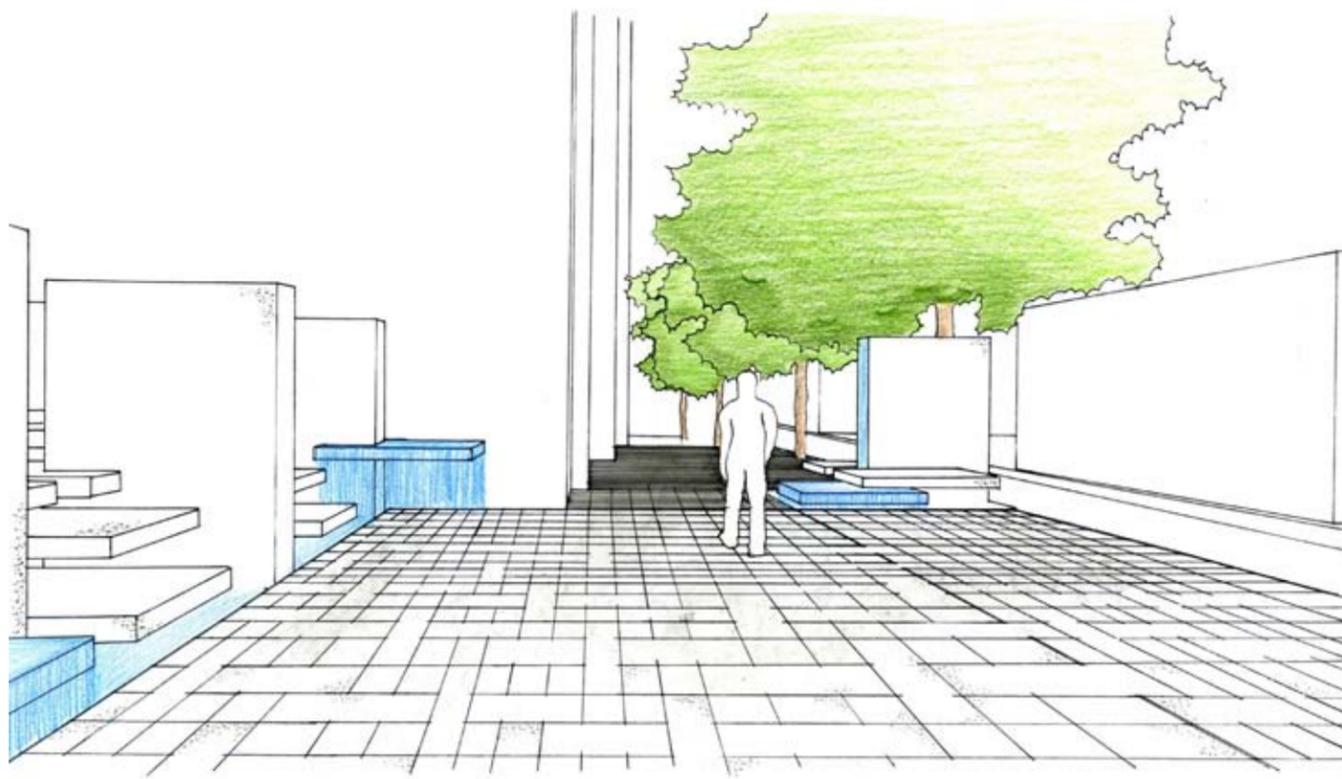
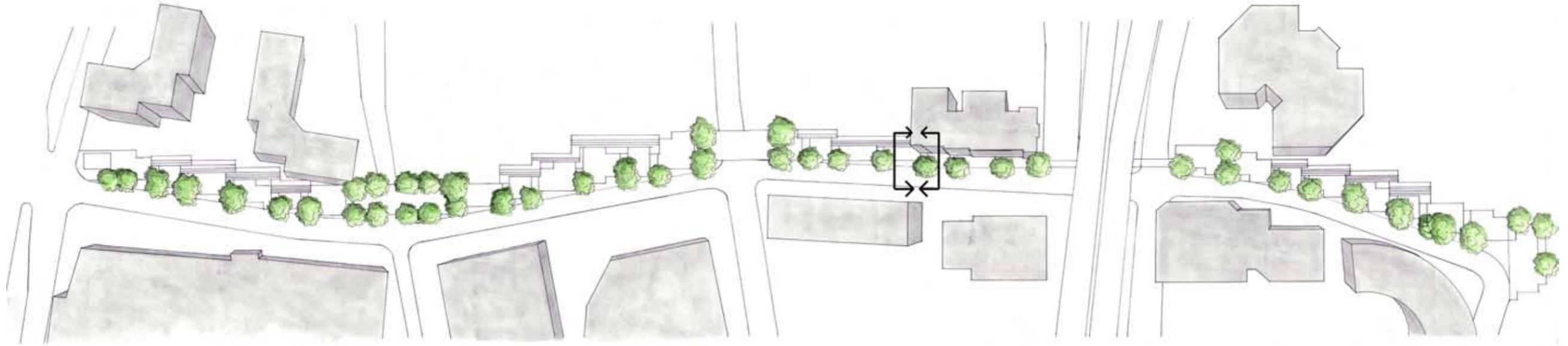
Perspective of meeting space on block two facing west



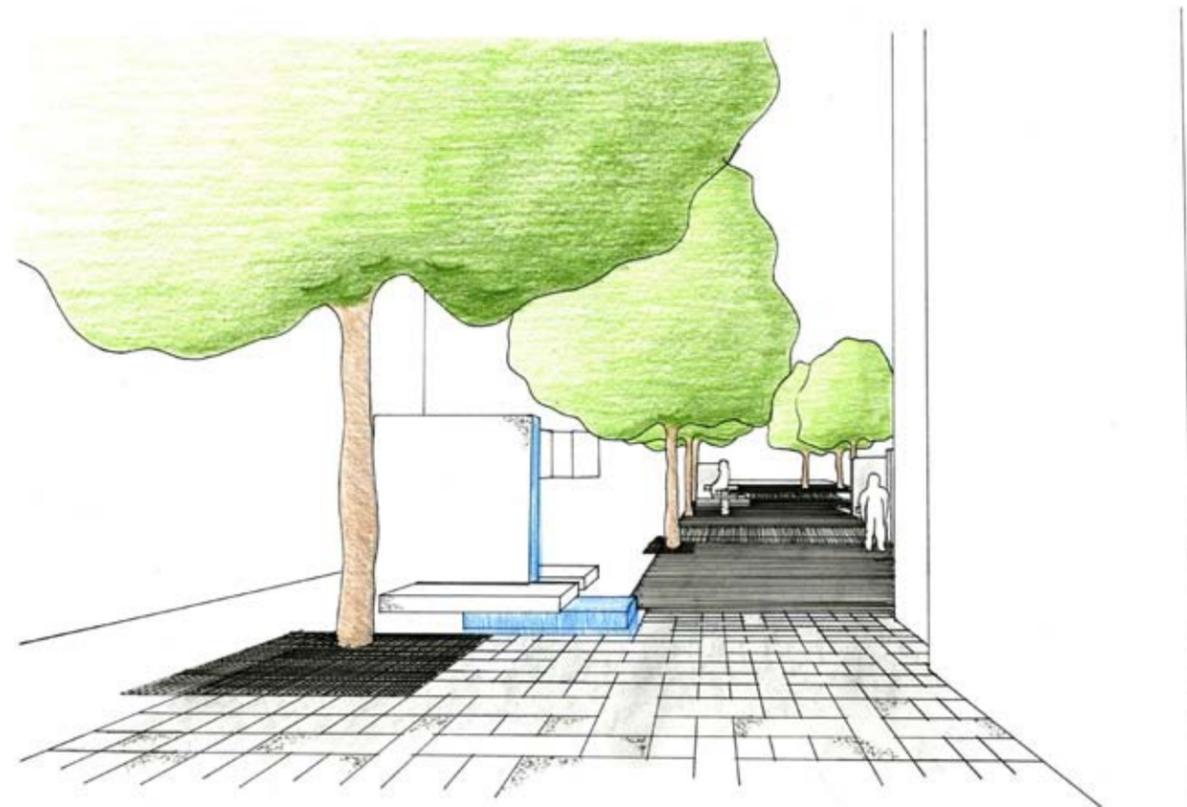
31 Perspective of walkway crossing S Eads Street



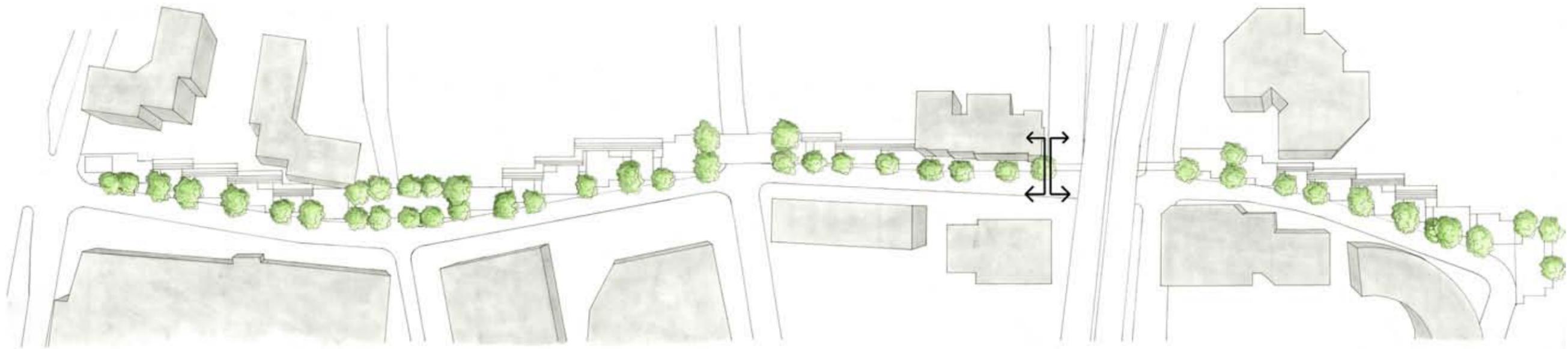
Perspective of walkway approaching block three meeting space



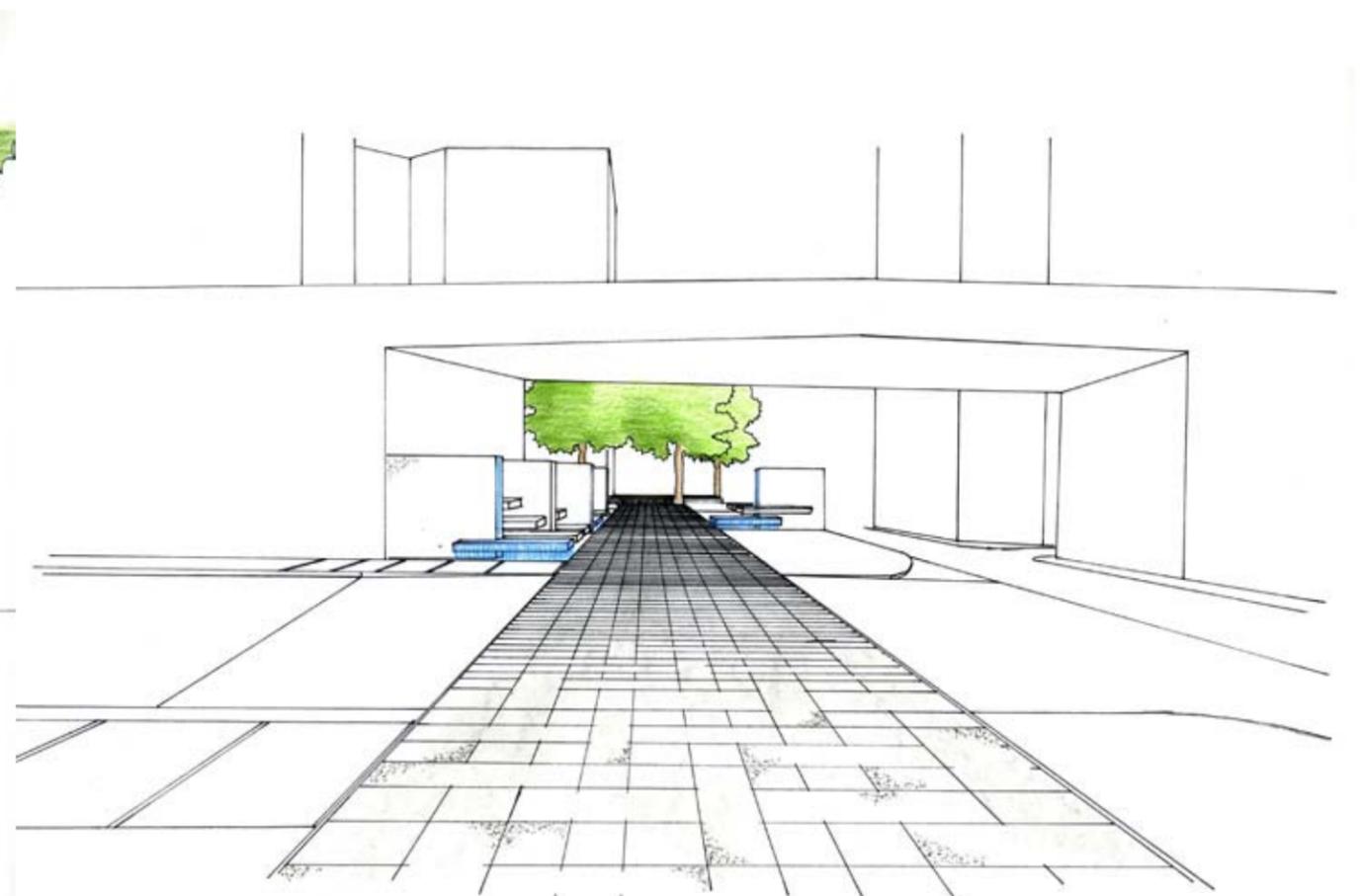
Perspective of walkway in the meeting space of block three



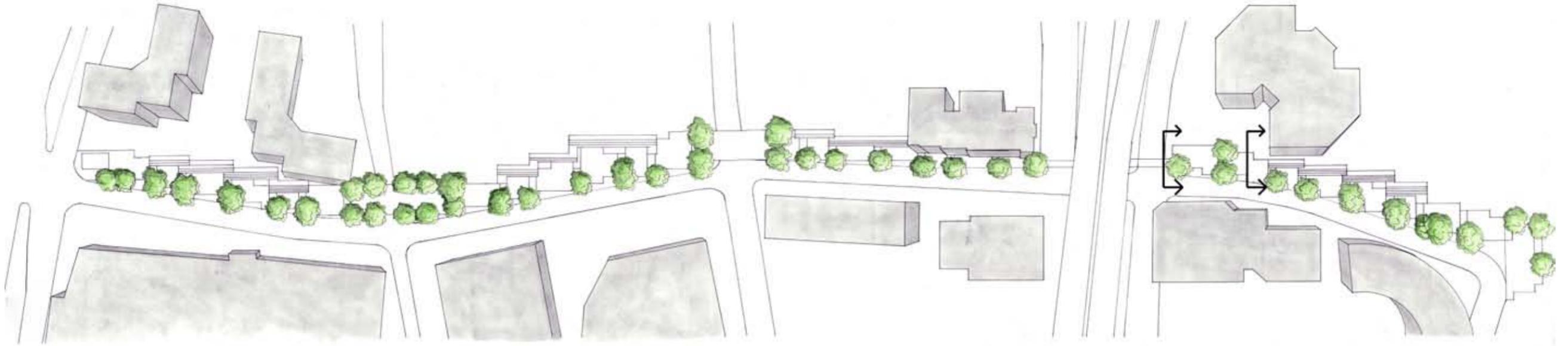
Perspective of walkway at east end of meeting space of block three facing west



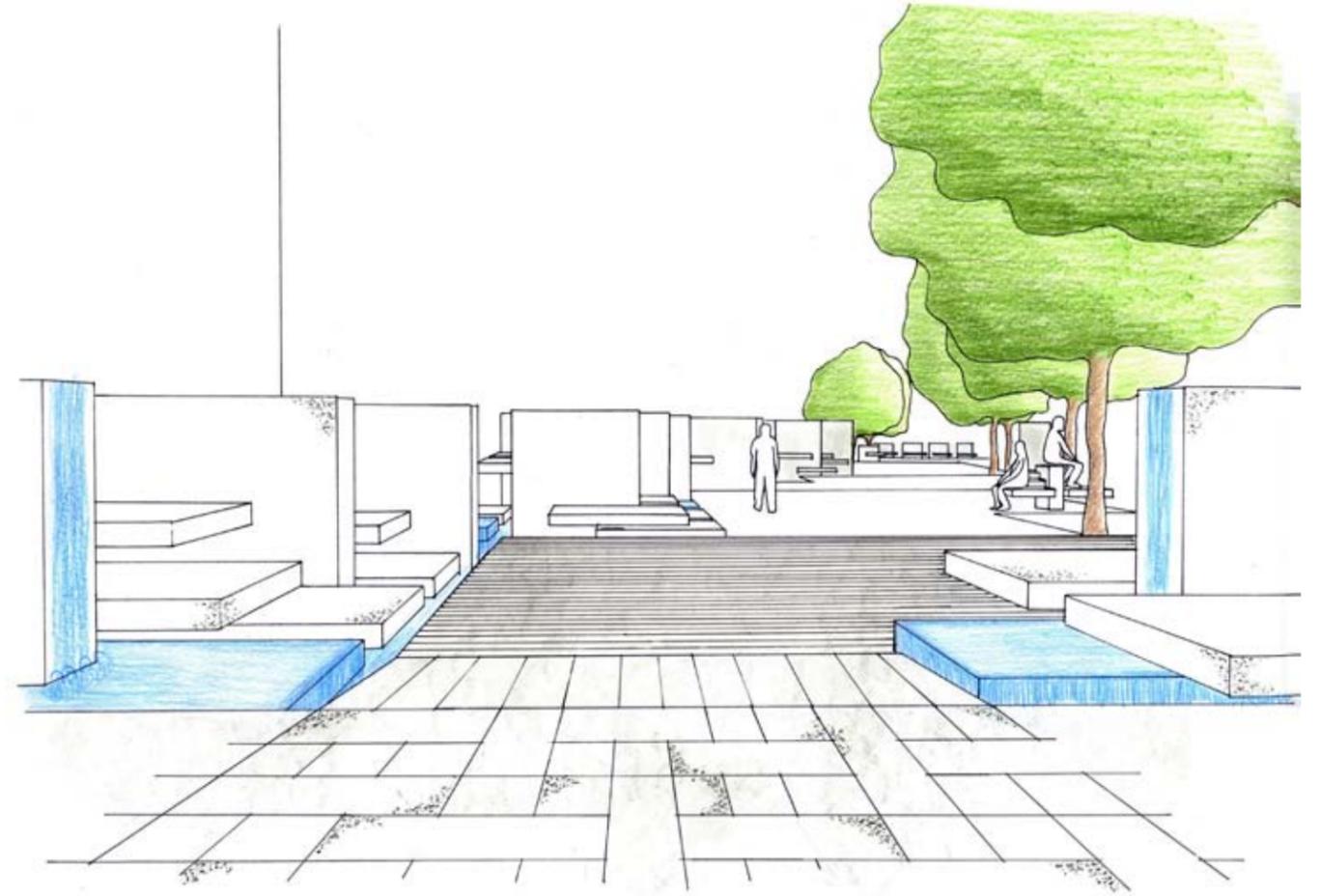
33 Perspective of walkway at the east end of block three facing west



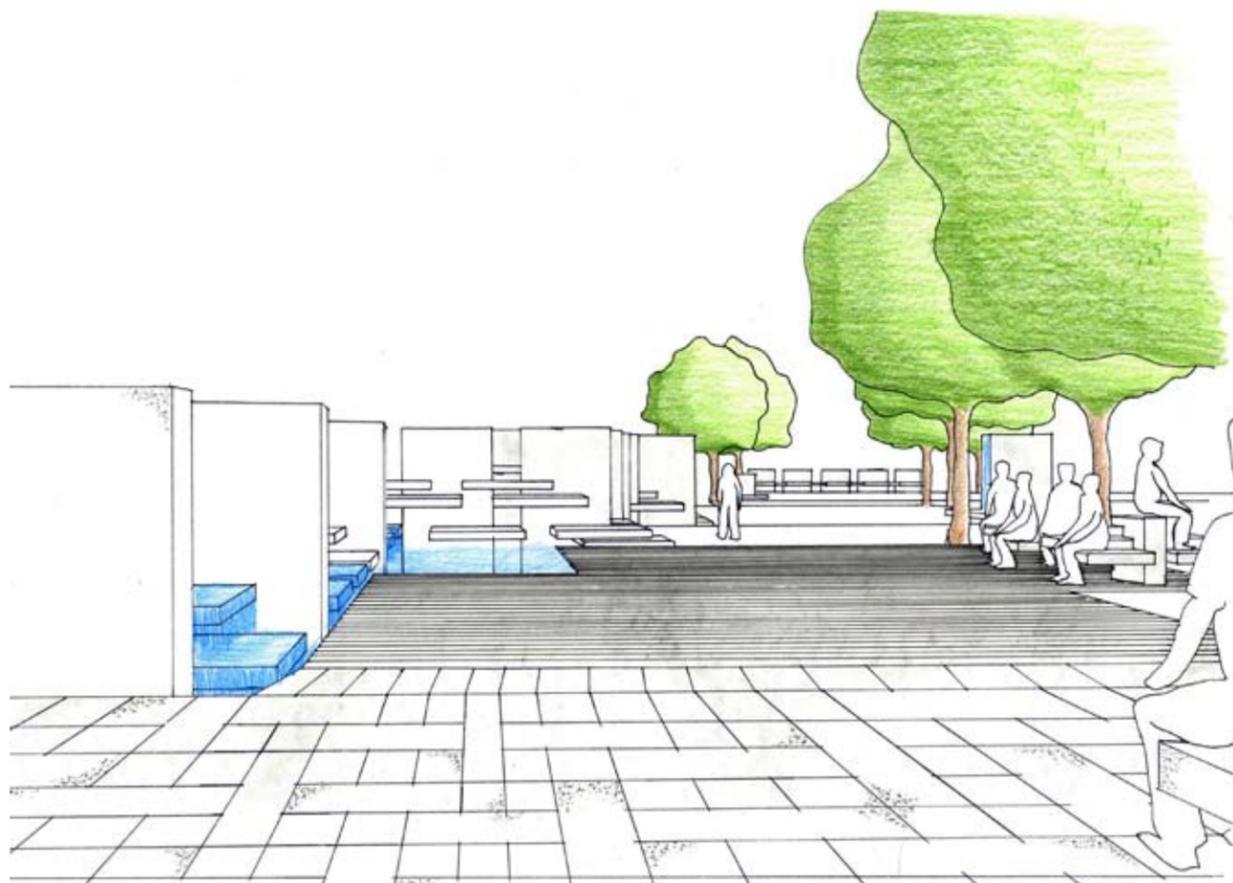
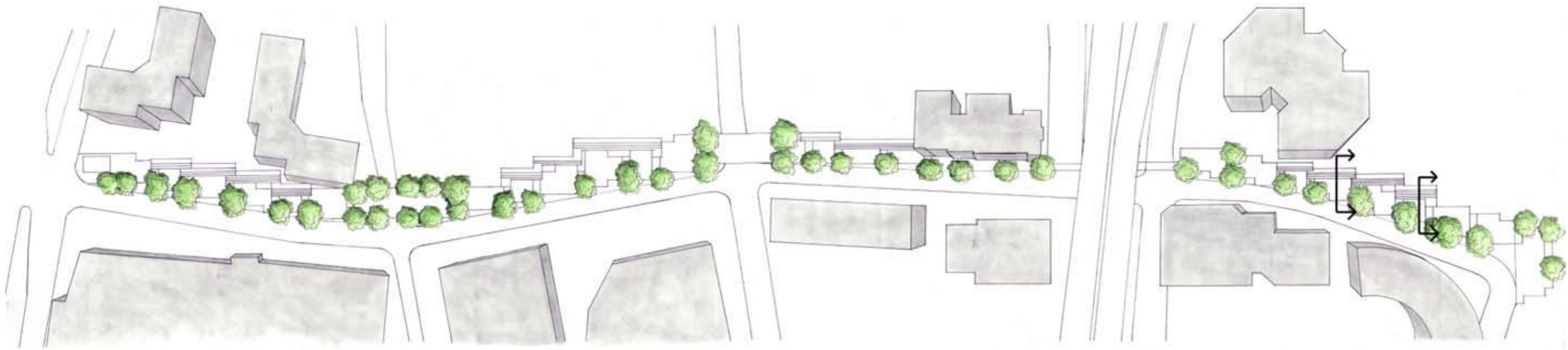
Perspective of walkway crossing Army Navy Drive



Perspective of walkway at west end of block four



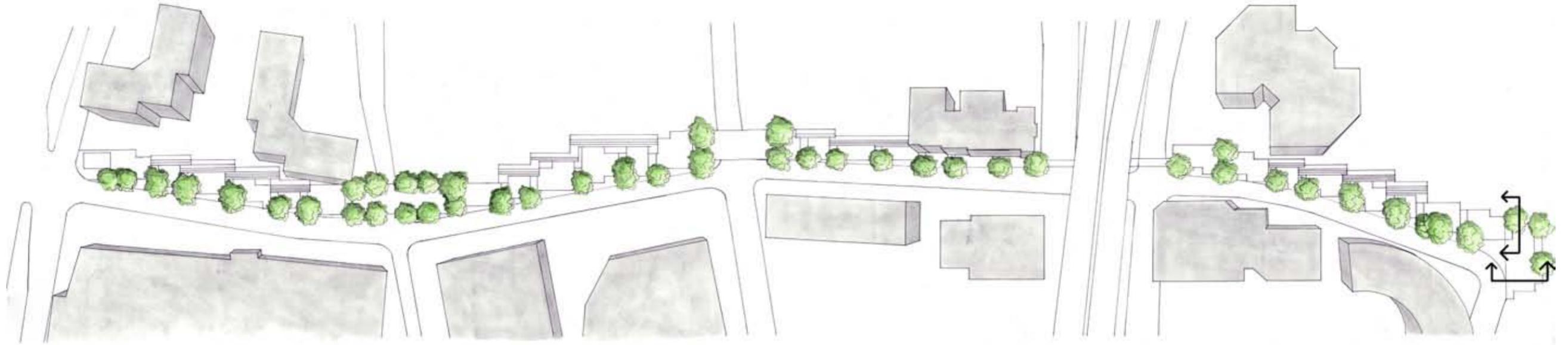
Perspective of walkway at west end of block four meeting space



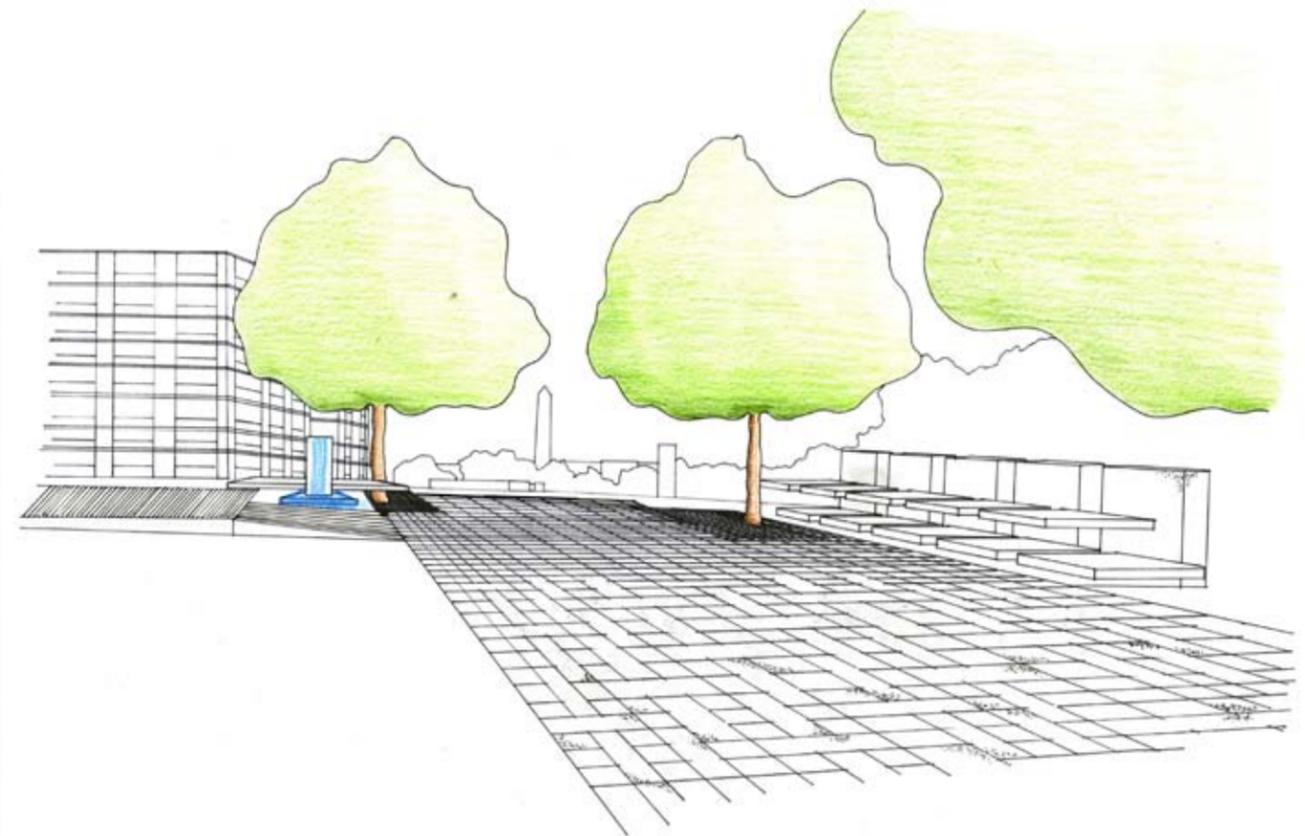
35 Perspective of walkway in middle of meeting space of block four



Perspective of walkway at east end of meeting space of block four



Perspective of walkway at east end of block four facing west



Perspective of walkway at east end of block four facing Washington Monument

In cities the points of connection between systems should be places of special emphasis and design enrichment. (35)

Design of Cities, by Edmund Bacon



Axon of meeting space night lighting in charcoal

Works Cited

Bacon, Edmund N. *Design of Cities*. New York: Penguin, 1976. Print.

Dobbins, Michael. *Urban Design and People*. Hoboken, NJ: Wiley, 2009. Print.

Gaventa, Sarah. *New Public Spaces*. London: Mitchell Beazley, 2006. Print.

Google Maps. 2011. Web. 23 May 2011. <<http://maps.google.com>>.