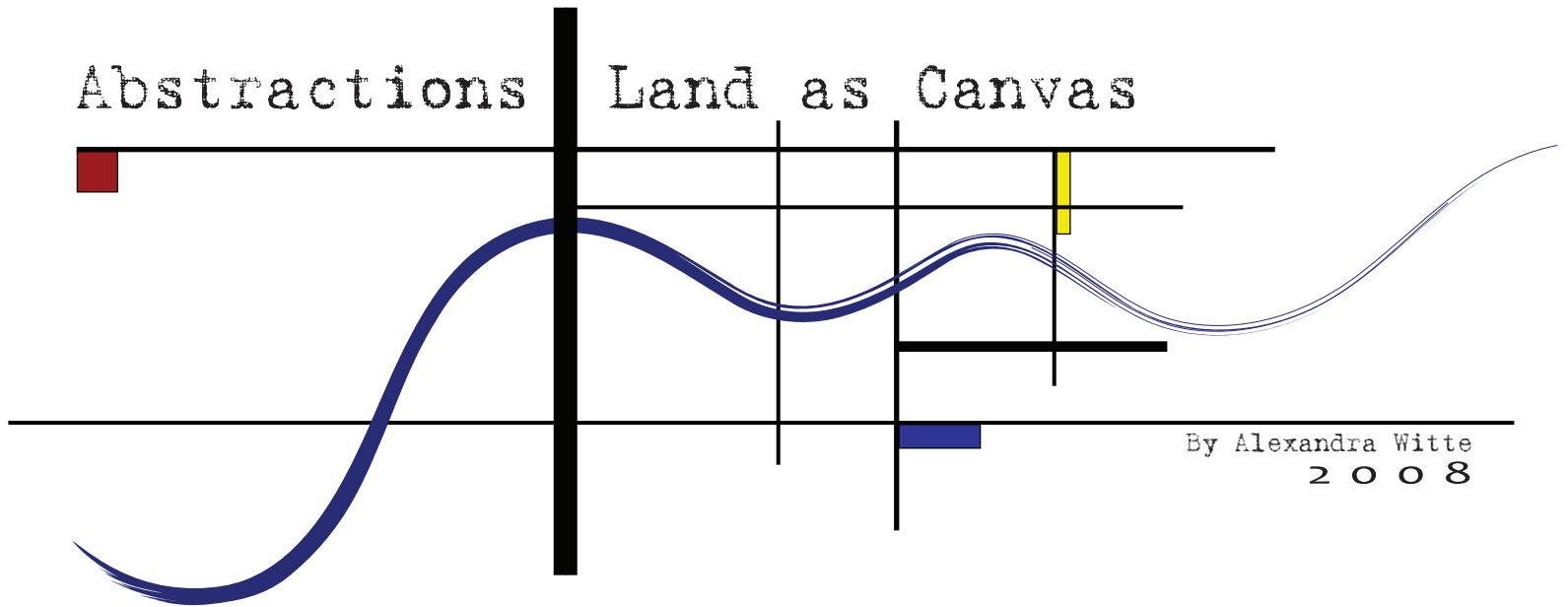


Abstractions

Land as Canvas



By Alexandra Witte
2008

Abstractions – Land as Canvas

A senior project presented to the faculty of the program of Landscape Architecture in partial fulfillment of the requirements for the degree of Bachelors of Sciences in Landscape Architecture.

Accepted and Approved by:

(Signature only on Master Document)

Patsy Eubanks Owens, Faculty Senior Project Advisor

(Signature only on Master Document)

Robert L. Thayer, Faculty Senior Project Advisor

(Signature only on Master Document)

Stephen Wheeler, Faculty Committee Member

(Signature only on Master Document)

Elizabeth Boults, Faculty Committee Member

(Signature only on Master Document)

Sofia Rosner Sella, Committee Member

By
Alexandra Witte
June, 2008

ABSTRACT

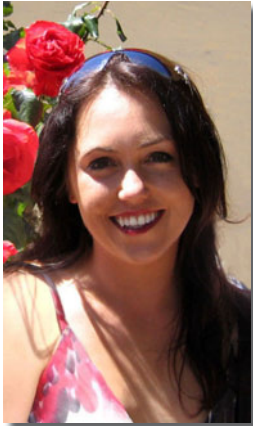


“Abstractions – Land as Canvas” is an artful exploration of design. It draws deeply from theories of prominent abstract painting styles. This project looks specifically at the structural qualities of abstract paintings, how these elements work together, and what similarities or differences can interact to create innovative, thought-provoking harmonies of form and space. The design draws from the styles of Wassily Kandinsky and Piet Mondrian—Geometric Abstraction and De Stijl, respectively. The tensions created by the compelling differences between these two painting styles inspired me to research in depth the interactions of these elements and the spaces they could create. This project explores how these forms, lines, and colors can be conceptualized into a thoughtful and creative three-dimensional landscape design. The site is located at the portion of Center Street in Berkeley, California that is being transformed into a pedestrian corridor. The natural and urban patterns of the surrounding area are artfully manipulated to mingle with one another, creating thought-provoking passive and active spaces that engage its users.

My goal is to present landscape architects with a uniquely different way of viewing the landscape, and give examples of how to implement these theories and this unique design approach using a site-specific example. I hope to show how designing with an artists approach, and using elements of abstract paintings thoughtfully organized over the landscape can create a functional and beautiful place.

This project expresses my strong desire to present the landscape in the artistic manner that I have always viewed it. There is a method to my madness, and this project sets out to find just that.

BIOGRAPHICAL SKETCH



Alexandra Witte was born in Albany, California in 1986. As an only child, her loving parents encouraged open-mindedness, adventure, following your dreams, laughing, and having as much fun with life as possible. Her life has been shaped by her well-rounded childhood and freedom of exploration in every sense. She has always had a passion for the outdoors and for the arts. She graduated from Albany High School in 2004, and entered the University of California, Davis, as a freshman the same year as an Exploratory major. After pursuing Viticulture and Enology as her major during her first year, she then discovered Landscape Architecture. She applied to the major her second year and was accepted. Landscape Architecture has proven to be the perfect combination of art and the outdoors.

Horses have always been a huge part of her life. At the age of six, she began taking English riding lessons and participating in summer camps. She continued to ride, and at the age of 10 began working as a volunteer at a horse rescue stables. Here she gained tremendous independence and strength, as well as a whole-hearted passion for these powerful animals. At 14, she owned her first horse and began riding competitively in the sport of Three-Day Eventing. She continued riding and competing nationally throughout high school and into college. At the end of her second year at Davis, she decided to specialize her riding career and shifted over to the sport of Dressage. She now rides professionally, competes, and teaches part-time throughout California.



She has been fortunate enough to travel extensively throughout her life, gaining diverse cultural knowledge and experience. She has traveled throughout parts of the United States, Canada, Mexico, Jamaica, Costa Rica, France, England, Scotland, Germany, Denmark, Sweden, Switzerland, China, Hong Kong, Japan, Singapore, Indonesia, New Zealand, and Australia. She has traveled to Indonesia on four occasions, which has given her valuable and well-rounded cultural experiences. In 2007, during her third year at Davis, she studied Landscape Architecture and Urban Planning and Design at the University of Melbourne in Australia for 6 months. Immediately after, she traveled to Europe to participate in a summer abroad program studying the sustainable cities of Northern Europe. Her travels have shaped and continue to shape her life and career by providing valuable and influential experiences that will carry through to her professional career.

DEDICATION

To both of my parents, for supporting me every step of the way,
and never saying never. And for always being the biggest kids on the block.



ACKNOWLEDGEMENTS



I would like to thank Harrison Fraker, the Dean of Environmental Design at the University of California, Berkeley, for making this project possible by providing me with the source materials. Many thanks are owed to Patsy Owens and Rob Thayer for giving me valuable advise and guidance throughout my project, and through the submission process to the American Society of Landscape Architects 2008 Student Awards. Thank you to Stephen Wheeler, Elizabeth Boults, and Sofia Sella for their excellent skills, suggestions of resources, encouragement, and always pushing me to do my best. Thank you to my roommate, Danny Bracco, for putting his impeccable English skills to work as my final editor.

Thank you to all the other Landscape Architecture students. We have stuck together, helped each other stay up during those late nights in studio, and shared experiences we'll never forget. We are the only ones who will ever fully understand how much work goes into doing what we do, and how much we simply love to do it, no matter how hard the project. I wish you all the best of luck, and look forward to when our paths cross again in the real world!

Of course, countless thanks are owed to my entire family. Parents, cousins, grandparents, aunts and uncles—you are without a doubt the most wonderful family anyone could ever have. Thank you for your support, your love, your generosity, and most importantly your smiles and humor. You are all amazing in every way!

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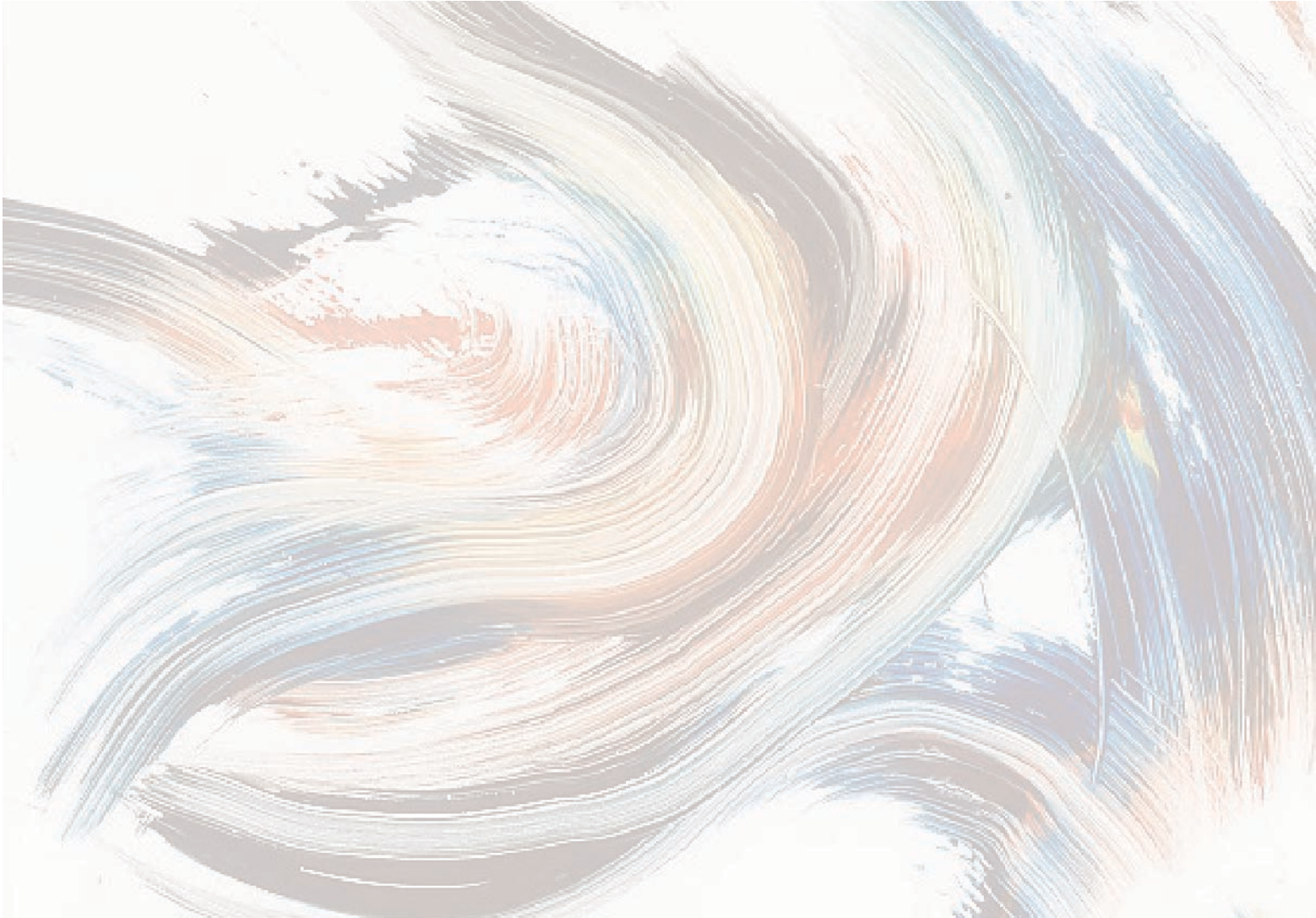
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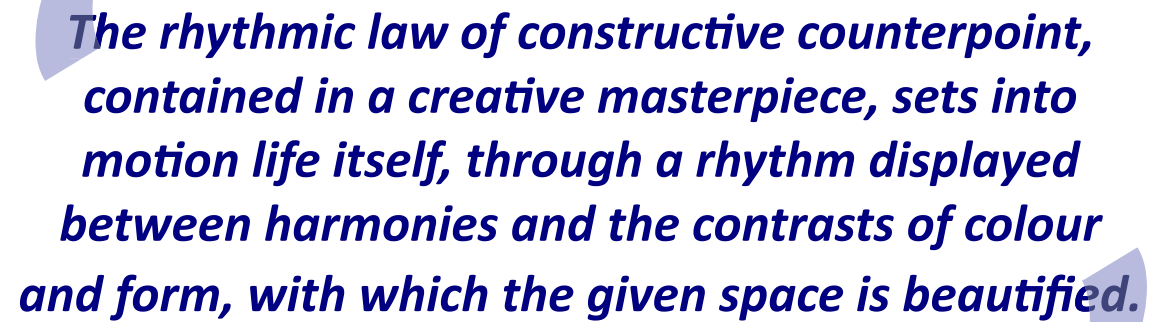
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PREFACE

I originally started this project out of my love for painting. Painting allows you to freely transform your surface using purely creative organic strokes. Each stroke possesses its own character, and it is the combination of these characters that creates the art. This can be directly applied to landscape architecture. Our hands and pens are our brushes; our colors, materials, and plants are our paints. The land is our canvas, and now we must paint.





The rhythmic law of constructive counterpoint, contained in a creative masterpiece, sets into motion life itself, through a rhythm displayed between harmonies and the contrasts of colour and form, with which the given space is beautified.

~ Wassily Kandinsky

INTRODUCTION

Design Intent:

“Abstractions – Land as Canvas” is an artful exploration of design. It draws deeply from theories of prominent abstract painting styles. This project looks specifically at the styles of Wassily Kandinsky and Piet Mondrian. It explores how these forms, lines, and colors can be conceptualized into a thoughtful and creative three-dimensional space. The natural and urban patterns of the surrounding area are artfully manipulated to mingle with one another, creating thought-provoking passive and active spaces that engage its users.

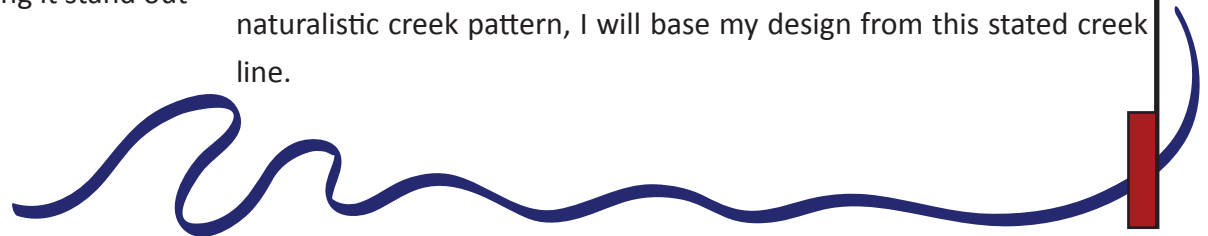
Project Location and Site Context:

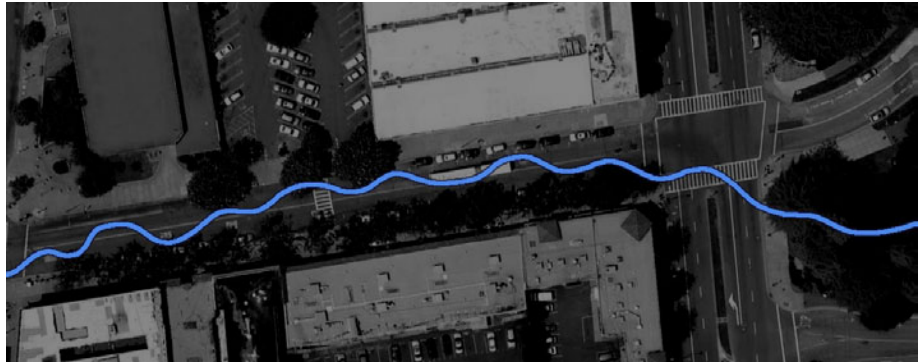
The project is located at the top (eastern end) of Center Street in Berkeley, California. This portion of Center Street sits at the western end of the University of California, Berkeley campus right by the well-known “crescent” lawn. The site sits between Shattuck Avenue and Oxford Street and acts as the main connection between the campus, the downtown BART (Bay Area Rapid Transport) station, and Downtown Berkeley. The City of Berkeley’s community values the importance of art, and the expression of free speech and actions, making it stand out among other cities.



i.1 - Site context

Strawberry Creek is an important feature in Berkeley’s landscape. Two separate forks of the creek run through the majority of the campus before they merge together and are channelized, beginning at Oxford Street at the edge of the campus. The creek runs almost directly under Center Street, and continues to run underground the majority of the way until it reaches the San Francisco Bay. “Even though buried – the creek fell at 2 percent grade – stream morphology shows that water meanders at this slope percentage” (Ecocity Builders, 2007). Restoration activists have painted a blue line onto the current street in order to generate public awareness about Strawberry Creek. The line represents what the creek might have looked like in its naturalistic meandering pattern had it not been channelized. In order to imitate a naturalistic creek pattern, I will base my design from this stated creek line.





i.2 - The stated natural pattern of Strawberry Creek as it passes under Center Street.



i.3 - The stated natural pattern of Strawberry Creek painted onto the current street.
(Photo credit: Seamans, 2007)

Center Street is currently a vehicular traffic zone, but there are plans to close the upper (eastern) portion of the street to cars making it into a pedestrian corridor. Since it is located at the west end of the campus and is a direct connection to downtown, it currently accommodates the heaviest pedestrian traffic flow in the area. “The Center and Oxford Street intersection is used by over 10,000 pedestrians each day. It is perhaps the most active and diverse intersection between the University and the community” (Preliminary Design Plans, 2007).

This corridor, if completed, would act as one of the main pedestrian points of entry to the University. The Berkeley Art Museum has acquired part of this block as the site for their new building.



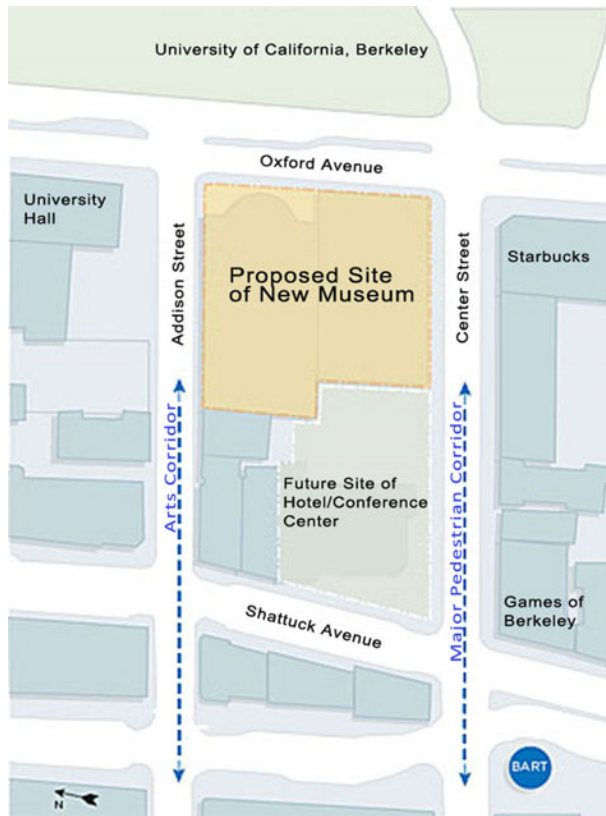
i.4 - Image of current Center Street condition looking West



i.5 - Image of current Center Street condition looking East

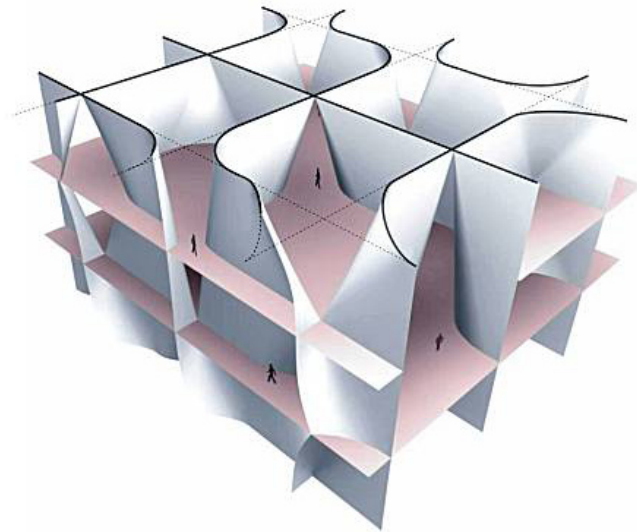
The Architect's Vision

The chosen design for the new Berkeley Art Museum/Pacific Film Archive is by the internationally renowned Japanese Architect Toyo Ito. His design “successfully translates the organic nature of this preeminent university into a structure that mirrors its greatest aspirations. Moving beyond the concept of the grid, Ito intentionally distorts the traditional box museum, and in doing so echoes Berkeley’s special awareness that knowledge is gained by going beyond linear exploration” (Preliminary Design Plans, 2007).



i.6 - Museum Location (Berkeley News, 2008)

Ito has a strong sense of the relationship between the inside and outside space, which is shown in his manipulation of the traditional grid. He allows spaces to open up and fold out to connect to the surrounding outdoor space. “In this museum building, transparency is realized in the design of fluid space. Different galleries meld and become one. The inside becomes the outside and the outside becomes the inside without you ever really noticing. In a space like this, visitors will have an opportunity to come close to one another” (Ito, Preliminary Design Plans, 2007). He emphasizes the psychological cross-section that is created by this site and the new museum. People who come primarily for the art museum will undoubtedly encounter people who are visiting the film archive, and people coming for other purposes or just passing through will also interact on some level. He aims to emphasize this interaction through his design, which he describes as an “organic mechanism realized in architecture” (Ito, Preliminary Design Plans, 2007).



from Jeanne Collins PR firm / courtesy Toyo Ito & Associates

i.7 - Architecture Concept (SF Gate, 2008)

PART ONE

What is Abstract?

The word ‘abstract’ has many different meanings and definitions. I use the term in several different forms, though they are all related. It is important for you to understand the different contexts in which I refer to it the word throughout this project.

- ‘Abstract’ used as an adjective: “a. Thought of apart from concrete realities, specific objects, or actual instances: *an abstract idea*. b. Pertaining to the nonrepresentational art styles of the 20th century.” (OED)
- ‘Abstract’ used as a noun: “a. something that concentrates in itself the essential qualities of anything more extensive or more general, or of several things; essence. b. an abstract work of art.” (OED)
- ‘Abstract’ used as a verb: “a. to consider as a general quality or characteristic apart from specific objects or instances: *to abstract the notions of time, space, and matter*.” (OED)

The title of this project, “Abstractions,” is meant to combine these meanings of the word ‘abstract’. Deeper meanings are created through *abstractions of the land and of the mind*, where the land becomes manipulated and the mind is able and allowed to think abstractly about how the space is formed.

My Approach to Landscape Architecture

I started this project as an exploration into the meaning behind the way I design. I think about landscape architecture in terms of forms and colors—creating *compositions* of the land and space. My extensive research and detailed process-oriented approach to this project has given me a strong foundation to build upon my own theories and style of design.

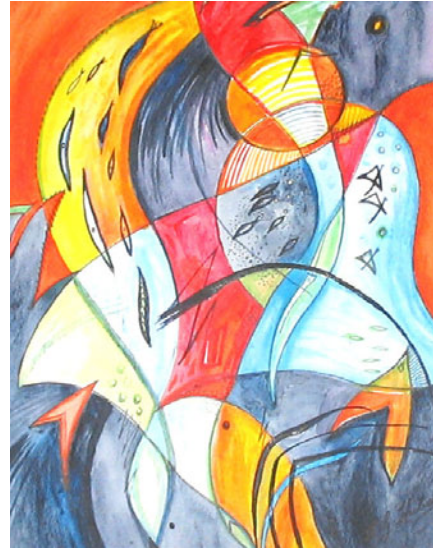
My approach to designing a space begins with thinking of the landscape as a blank canvas. First, you must paint on the natural landscape, followed by the existing and remaining infrastructure. The white spaces you are left with are your *voids*—waiting to respond to the actions you impose on them. If you try to fill in the voids completely, your design loses its strength, function, and meaning. The actions you establish on the canvas must have balance. As you are constructing actions, you must think about colors and textures, which will act to narrate your actions both in the process and in the final design.

Painting as Inspiration

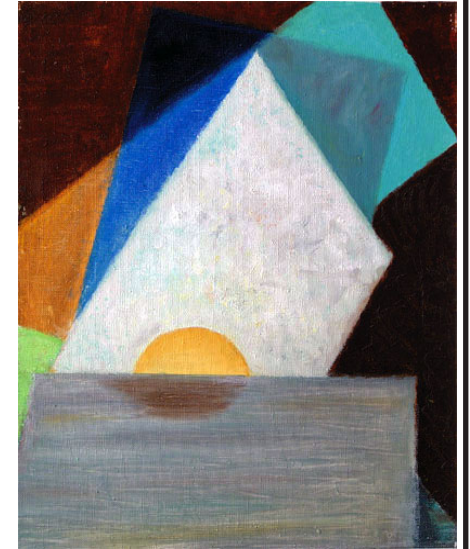
I have always been inspired by paintings. There are so many cues that we can take from the way a painting is put together. The detailed attention to the lines, colors, and composition is what makes a painting come alive.

Originally, paintings were inspired by the landscape. Natural forms were observed, analyzed, and reorganized into representational shapes and colors. It is important to realize this connection when using paintings as inspiration. As landscape architects, our job is to create a composition in context with the natural landscape. Understanding the forms that come from the landscape will help to create a fluid and artful connection when implemented into a design.

Examples of naturalistic abstract paintings (direct connection to nature):



1.2 - (Unknown Artist, Spirit Artist)



1.3 - (Verdianu, "Sunset", 1998)



1.1 - (Unknown Artist, 3D Total)



1.4 - (Simangan, "Dance of Nature", 2006)

My first glimpse into this project came when I was painting a piece I call “Fluid Dimensions.” This painting was inspired by a desire to give a new dimensionality to a canvas, taking the third dimension from my landscape designs and implementing it back onto the canvas. The combination of angular and curvilinear forms represent an abstract view of my thought process—the squares are thoughts, and the curves connect those thoughts with a fluid motion, while some reach out “in search of new ideas.”



1.5 - “Fluid Dimensions”

I consider this a “working painting,” it is not meant to be a masterpiece or anything of the sort; it is simply a step toward a new idea. I consider my design for Center Street the next step.

A painting is never finished - it simply stops in interesting places.

– Paul Gardner, (Painter)

PART TWO

Case Study – Barcelona

Parc Central de Nou Barris

Parc Central de Nou Barris, located in Barcelona, is a great example of a specific painting style and theory (in this case cubism) directly implemented onto the land. The park, designed by Arriola & Fiol—an architecture and urban design firm in Barcelona—is located on varying steep terrain, which created a unique problem to be solved for a park of such large scale. Since the land sloped in so many directions and at such different angles, the triangle was chosen as the main geometric form to impose on the land and to manipulate in the design. From this, came the idea to create a landscape based entirely off of cubism. “Their inspiration for the park design came from the early cubist and very colourful pictures of Pablo Picasso, which the young artist painted in 1909 at La Horta de San Juan (in Catalonia)” (Eurohypo AG, 2007).

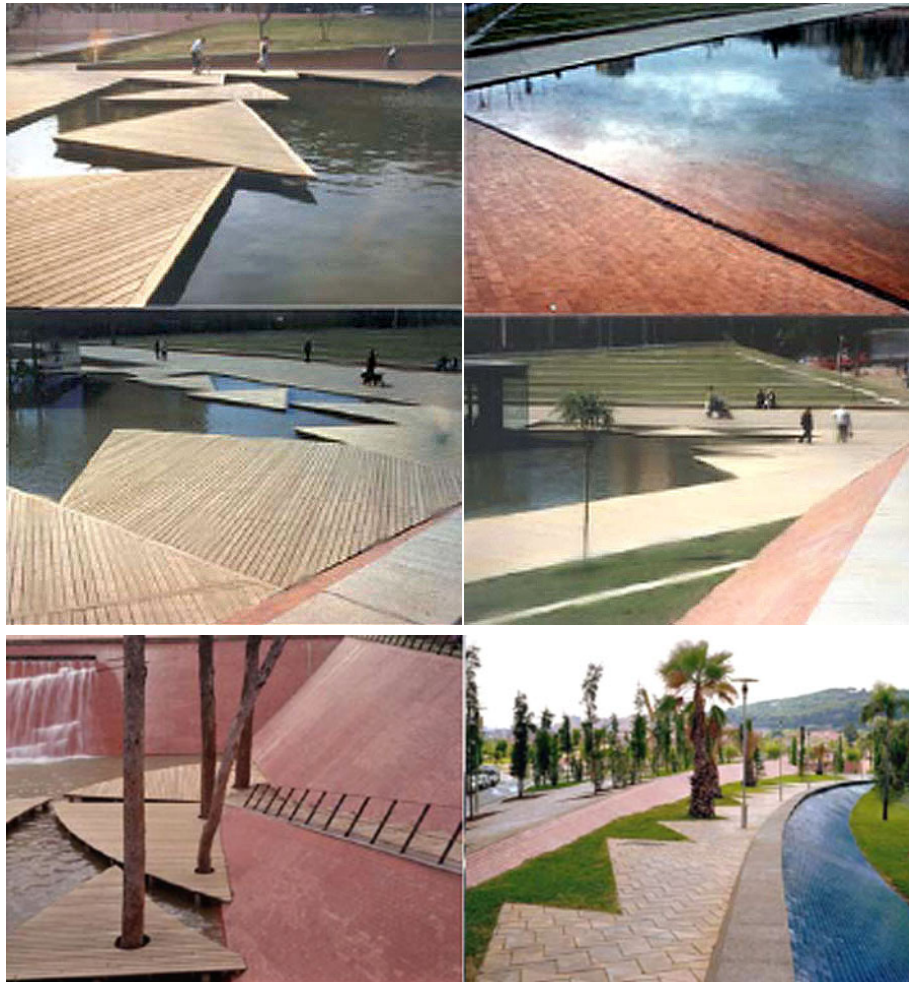


2.1 - The Cubist Concept (Arriola & Fiol, 2003)



2.2 - The Cubist park design (Arriola & Fiol, 2003)

The site is structured mainly around water, which has an important historical role. “In the nineteenth-century an aqueduct brought water from the hills . . . Remnants of the aqueduct traversed the park site and were appropriated as a feature of the new design” (Arriola & Fiol, 2003). Where the water features are day-lighted, distinct spaces are formed. These spaces, which sit level within the extreme topography, represent the main public gathering areas. Between these spaces, paths of colored paving melting into green space traverse across the landscape, creating linear connecting paths thoughtfully interrupted by the topography. “Cubist landscape, by means of formal abstraction, sums up the multiplicity of meaning and perceptions of the place and creates a new reality” (Fiol, 2003).



2.3 - Photographs of Parc Central de Nou Barris - (Arriola & Fiol, 2003)

Painting Styles and Artist Studies

I have chosen three major painting styles to focus on for the research of this project: Cubism, Neoplasticism (De Stijl), and Geometric Abstraction. I will study the theories of a major artist associated with each style, focusing on Pablo Picasso, Piet Mondrian,

and Wassily Kandinsky, respectively. These three abstract painting styles were chosen because they each have a very different approach. Through their distinct differences, I hope to find even more intriguing connections. By analyzing the overlap of these theories and ideas I hope to be inspired (and to create inspiration) through new forms that might emerge in this process.

These three styles will not necessarily all be used in the final design. However, I will include all three throughout the research process so as to gain a better understanding of a variety of styles. In order to build a wider design palette, my analysis will focus on the structural qualities of these styles, how these elements work together, and what similarities or differences can interact to create innovative, thought-provoking harmonies of form and space.

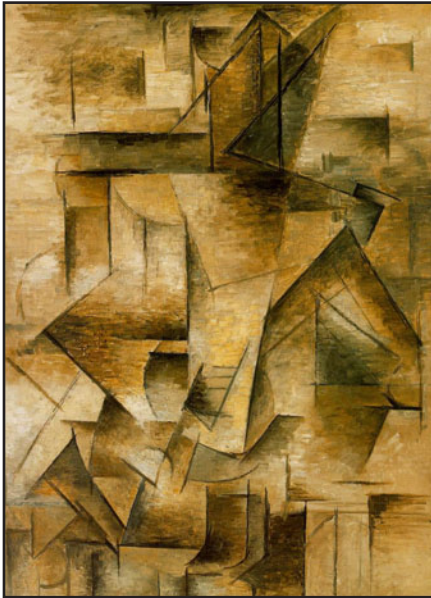
CUBISM – Pablo Picasso

Cubism is a style of art that stresses the abstract nature and structure of objects, and the landscape. Its approach is best described as displaying several views of the same object simultaneously, creating multiple viewpoints, and by fragmenting the form of depicted objects into geometric shapes. The paintings were meant to create an abstracted sense of space through the fragmentation, re-combining, and overlapping of objects inspired by the landscape.

Pablo Picasso was one of the main founders of the cubist movement. He developed this style because he believed that there was not just one fixed view of nature, but multiple perspectives that should be represented. Two types of cubism arose: Analytical cubism, and Synthetic cubism.

Synthetic cubism was based on pushing several objects together in order to create a ‘flattening’ of the space, and was based

on the more abstracted Analytic cubism. Analytic cubism was formed through the analysis of objects and pulling them apart into separate planes before they were re-organized and re-combined into one piece. Natural forms were separated into basic geometric shapes such as the triangle, square, and rectangle, and color was reduced to a simple monochromatic scheme encompassed mostly of grays, blues, and browns.



2.4 - (Picasso, *Le Guitariste*, 1910)



2.5 - (Picasso, *Landscape at Ceret*, 1911)

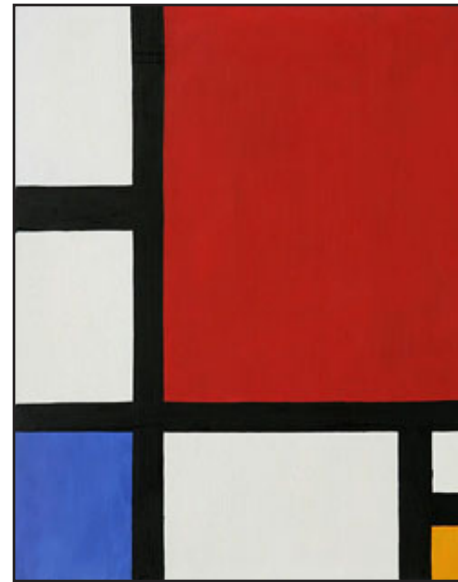
NEOPLASTICISM – Piet Mondrian

Neoplasticism, also known as De Stijl (Dutch for “the style”), was a Dutch art movement that began in 1917. Many of its originally theories were inspired by Cubism, but were modified and refined to create a more simplistic, diverse abstract style.

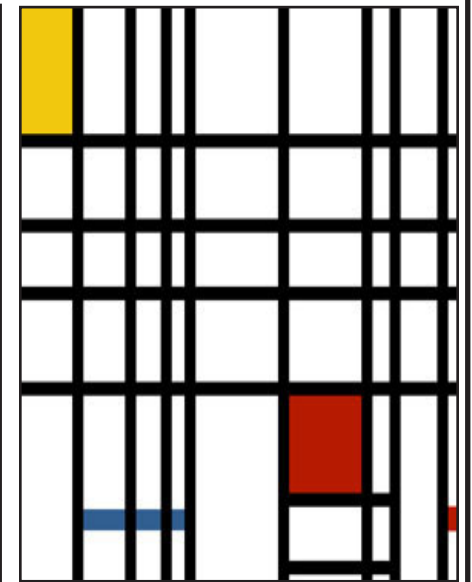
Piet Mondrian was the main founder of this style. He

explained that his style was based on “an absolute harmony of straight lines and pure colors underlying the visible world” (Mondrian, 1919). The theme of the genera was drawn from the rhythms created by urban life, which was represented using strong black lines and pure primary colors unified in intuitive patterns.

Coloration and composition are the most definitive features of Mondrian’s Neoplasticism. Coloration was always in the primary colors of red, yellow, and blue combined with the “non-colors” of black, white, and the in between of gray. Elements in the composition were always straight lines—both vertical and horizontal—that acted together to create squares and rectangles. True symmetry was avoided and balance was created through relationships of the elements.



2.6 - (Mondrian, 1919)



2.7 - *Composition with Yellow, Blue, and Red* (Mondrian, 1939)

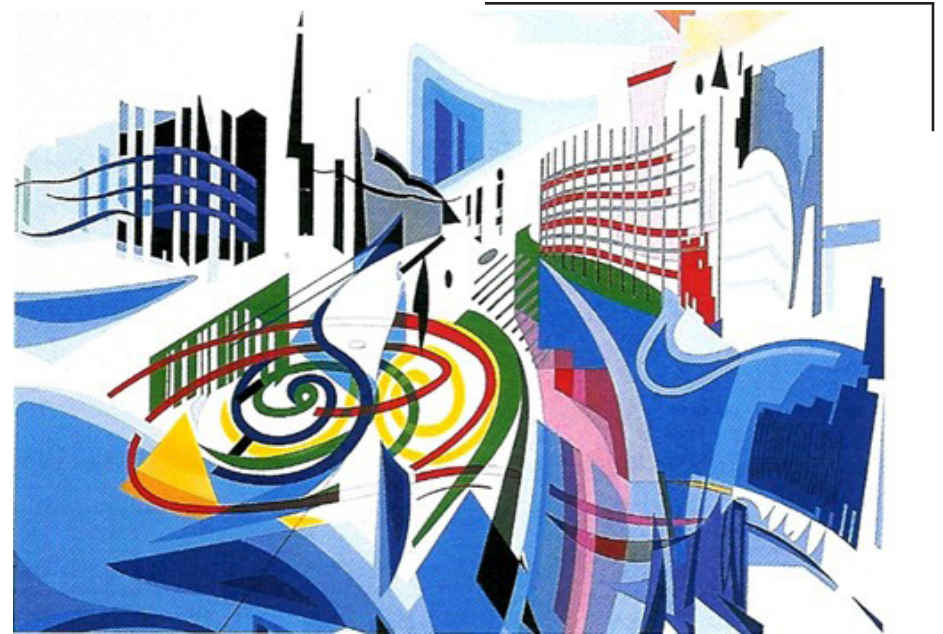
GEOMETRIC ABSTRACTION – Wassily Kandinsky

Geometric Abstraction is the style that can most closely be related to landscape architecture design. It draws directly from geometric forms that exist in our landscape, both urban and rural. More specifically, it is inspired by the shapes and lines of objects such as buildings, street patterns, rivers, waterfronts, and natural corridors. It is also influenced by patterns of movement such as dance, music, sound, water, and human patterns.

These paintings by Nadir Afonso are examples of how the cityscape can be reconstructed as geometric abstraction. Notice how these lines and forms are representational of objects and movement found within a city.



2.8 - (Afonso, *Occident*, 1966)



2.9 - (Afonso, *Moscow*, 1995)

Russian painter Wassily Kandinsky headed the geometric abstractionist art movement around the beginning of the 1900's. His paintings became centered around his theories of simple geometrical elements, particularly circles, angles, arcs, straight lines, and curves. Each of these shapes took on their own character within his paintings, possessing the inner reality not only of forms and colors, but also of their relationships with each other and to the plane (canvas). "It can be easily observed that each colour and design motive is organized in itself, while constantly reacting and playing with its form or colour opponent" (Rebay, 1977).



2.10 - (Kandinsky, On White II, 1923)

The Styles of Focus:

For the structure of this project, I have chosen to focus on the theories of Piet Mondrian and Wassily Kandinsky, using styles of De Stijl and Geometric Abstraction, respectively. These two styles have shown to be most applicable in the design of the Center Street Pedestrian corridor. The tensions created by the compelling differences between these two painting styles have inspired me to research in depth the interactions of these elements and the spaces they could create.



2.11 - (Kandinsky, Yellow, Red, Blue, 1925)

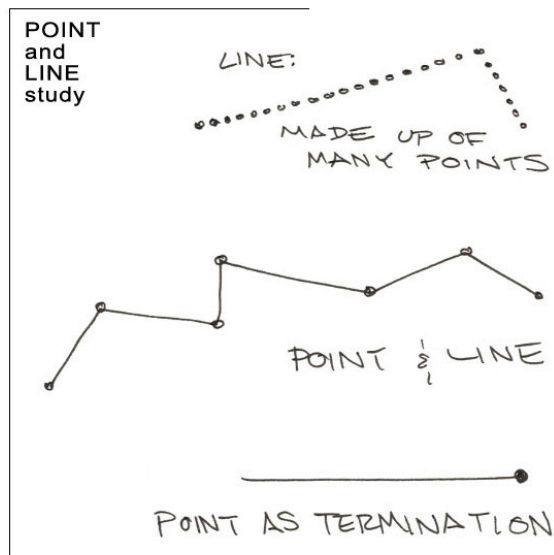
PART THREE

The Process - Element Analysis

Introduction to the Elements Used:

Point:

The point is an important element because it is the basis for the beginning and end of all forms and figures. It can be seen or used as a single element in its own context, or as the point of interaction and meeting between two separate objects. “Thus we look upon the geometric point as the ultimate and most singular union of silence and speech” (Kandinsky, 1979, 25). Silence and speech can be interpreted in various ways: space and non-space, public and private, horizontal and vertical, or even two-dimensional and three-dimensional.



3.1 – Point and Line Study

Linear Line:

The linear line consists of several forms: horizontal, vertical, and diagonal. “Movement,” can be described as the combination of tension and direction, influences all of these lines. For instance, a straight line will have continuous movement until its direction is altered, and will then be influenced by a new tension and will begin a new course of movement. This process can repeat itself to form many interesting combinations of linear lines—both simple and complex. As Kandinsky discusses in his book Point and Line to Plane, the horizontal line is a passive form and represents the potential for endless cold movement. Contrasting the horizontal, the active vertical line is created with potential for endless warm movement. Since the diagonal line represents an in-between form of vertical and horizontal, it possesses an equal union of coldness and warmth.

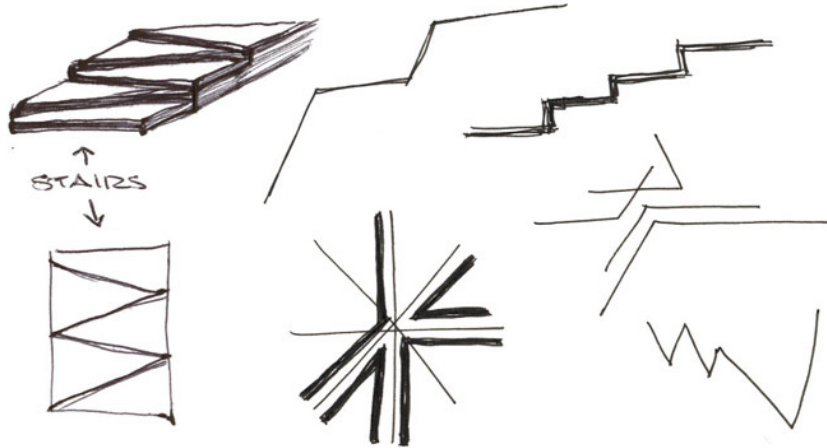
Combinations of these linear lines form one of the primary structures of my design. The playful and thoughtful use and manipulation of all three forms—horizontal, vertical, and diagonal—of these relatively simplistic elements creates a bold statement, which acts upon the site. When these linear lines are combined together or altered by tension, their joints form angles.

Angles:

Angles result from the union of straight lines. They can be acute, obtuse, or right, and each possesses a different feel. You can also think of angles as forming from the result of a linear line’s rotation around a single point. Acute angles create active space and the feeling of quick, energetic movement while suggesting vertical height. Obtuse angles create passive space and suggest slow, fluid movement. Right angles give off a colder tone by not creating specific movement, but by standing out as a bold element with a solid structure.

PASSIVE	ACTIVE	COLD
ACTIVE	PASSIVE	COLD

3.2 – Angle Movement

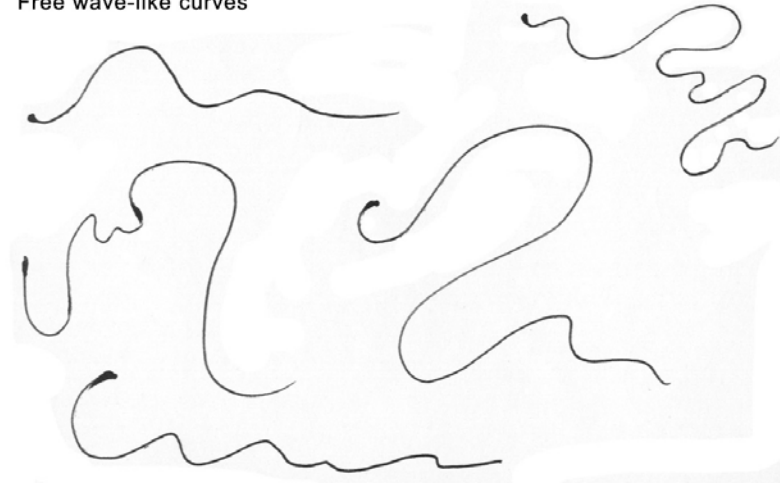


3.3 – Angle Study

Forms and elements created by playing with linear lines combined to form varying angles. Showing some of the distinct forms that can be created by the simple and slight manipulation of these elements.

Free curves are formed from an alteration of irregular tensions and can be both passive and active depending on the direction and strength of the curves.

Free wave-like curves



3.4 – Free Wave-like Curves

(Note here, a point emphasizes the statement of the beginning of each line.)

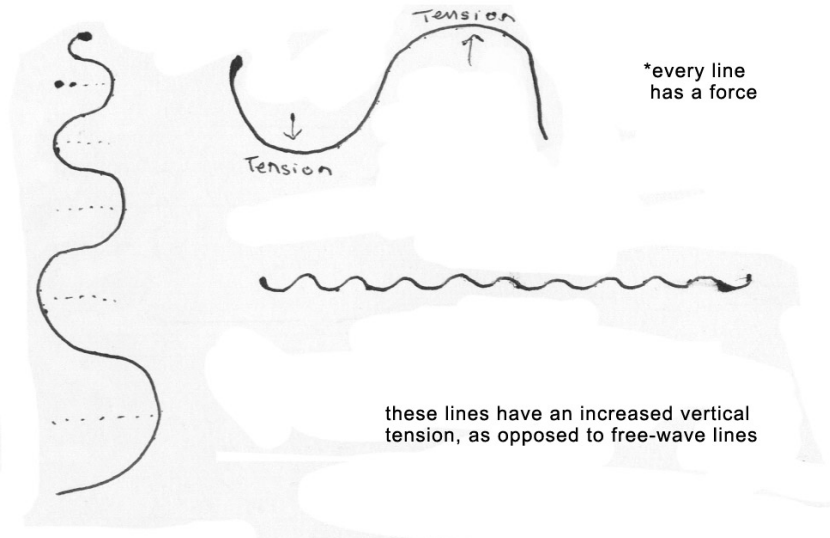
Geometric curves are formed from an equal distribution of positive and negative tensions. This creates a predictable and equally passive and active curvilinear line.

Curvilinear Line:

The curved line is simply “a straight line which has been brought out of its course by constant sideward pressure” (Kandinsky, 1979, 79). Tension is what causes the manipulation of the line, and the greater the tension the stronger the curves will become. Two types of curves can be created—free curves and geometric curves—with many variations of each.



Geometric wave-like curves



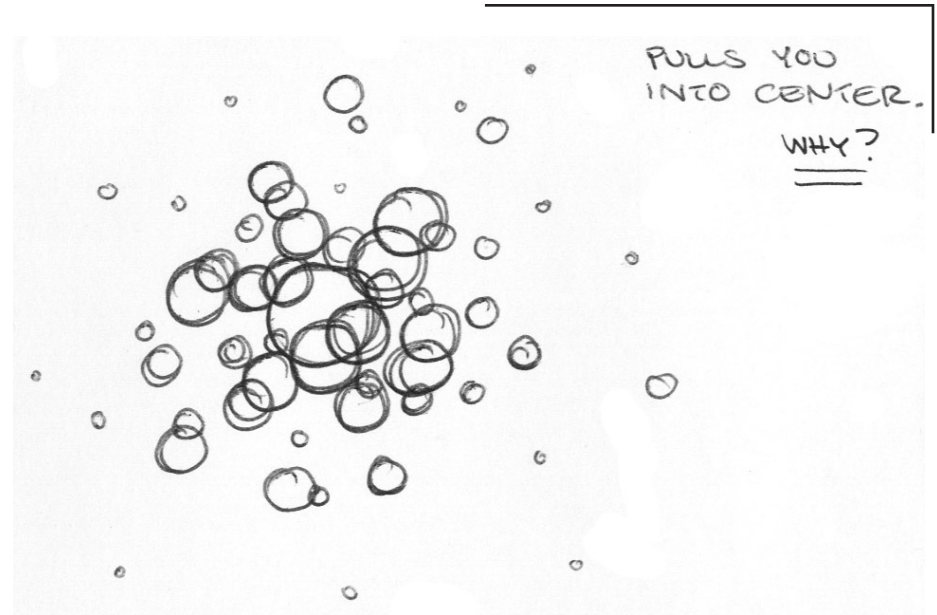
3.5 – Geometric Wave-like Curves

The other primary structure through my design is formed from two curvilinear lines acting together to create a variation of passive and active spaces. Qualities of the geometric curve are present in one of these lines, while the other performs as a free curve. This will be discussed later.

Circle:

Circles create a passive disruption of space and form. They can be thought of as a point, or as a curved line that is being influenced by pressure from only one direction, causing the line to close on itself. Circles have a tendency to establish direction in a passive manner. As a result, they are excellent conductors of space and can react positively with both straight and curvilinear lines.

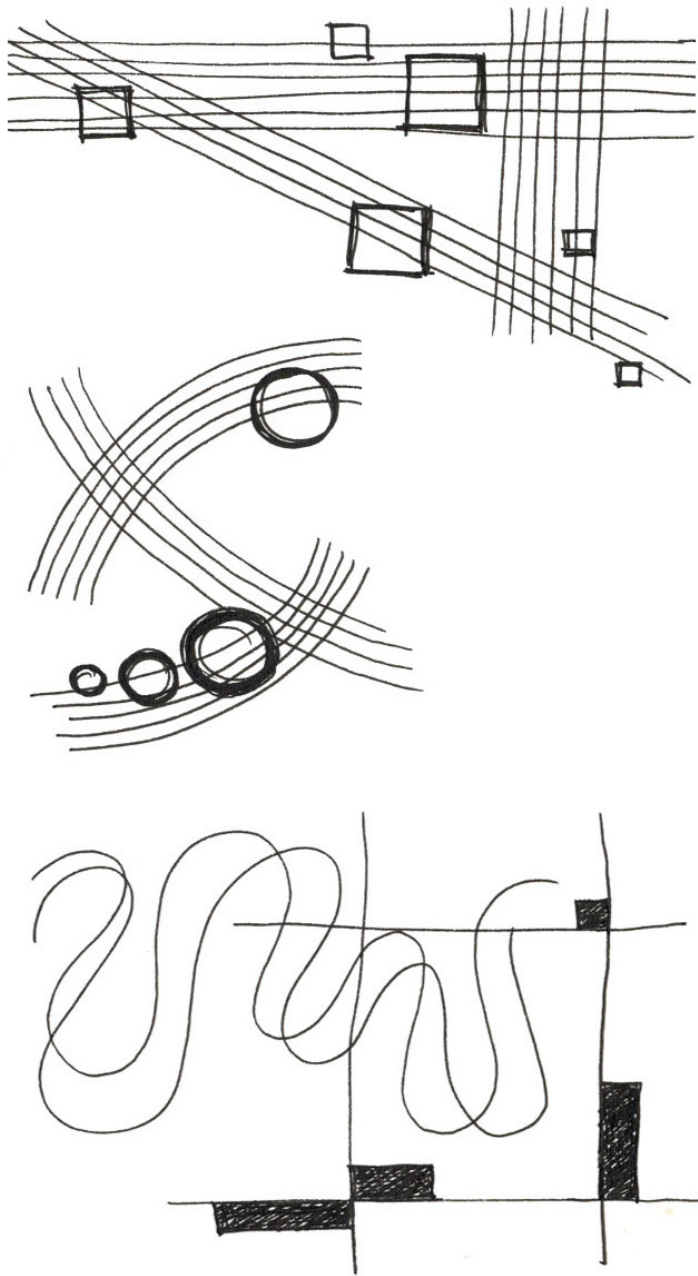
The use of circles in my design acts to soften lines and edges, and creates moments of passive travel at various places throughout the site.



3.6 – Action of Circular Form

Investigation and Manipulation of Form:

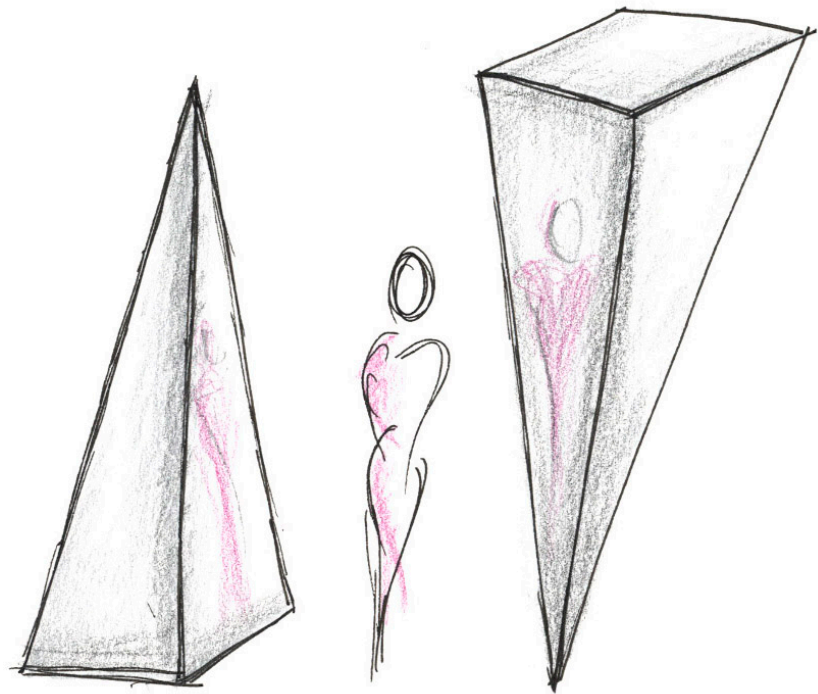
After looking deeply into each individual element, I began to analyze the effects of combination these elements had on each other. I looked at how the combinations of these elements each could create a different feel and, therefore, a different space.



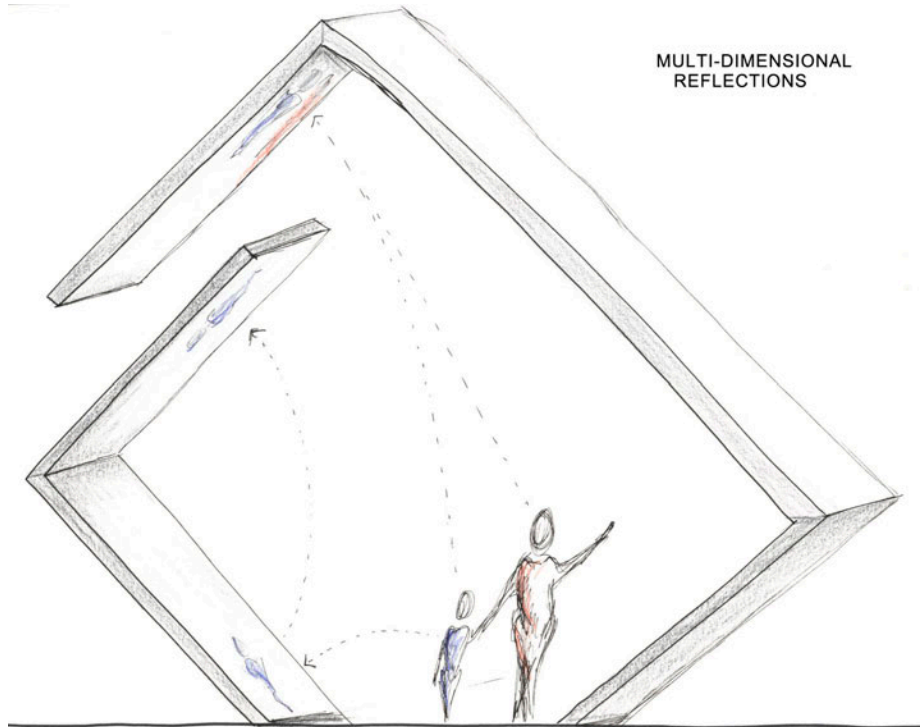
3.7 – Combination of Simple Elements

Study of Reflection:

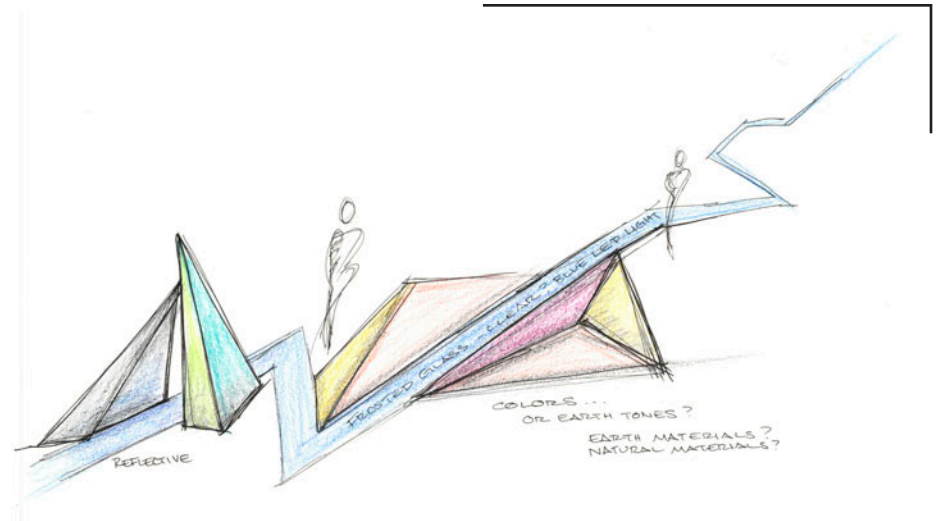
My exploration into the properties of reflection stemmed from Cubism, using the notion of representing multiple viewpoints—the foundation of the style. Even though I am not focusing on Cubism as a structure for this project, I feel that it is important to represent this portion of my process because several of my final ideas stemmed from the character that reflection possesses and creates.



3.8 - Altering angled reflections



3.9 – Multi-Dimensional Reflections – Effects of reflecting reflections.

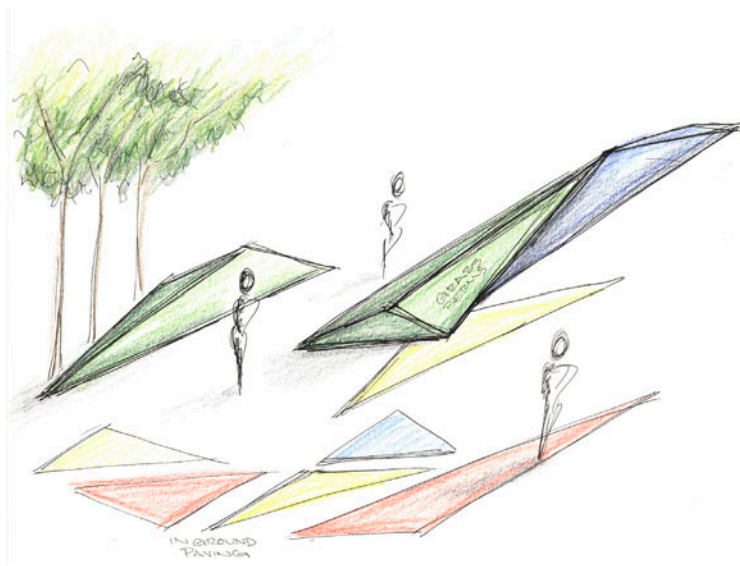


3.11 – Cubist River Concept

Multiple viewpoints cause objects to be reconstructed in the viewers mind. This causes the space to be experienced differently by different people and depending on the intensity and angle of light. Reflective properties can also cause a two dimensional object to be interpreted as a three-dimensional object by allowing it to be reconstructed in the viewers mind onto any plane.

Beginning to Think in Three Dimensions:

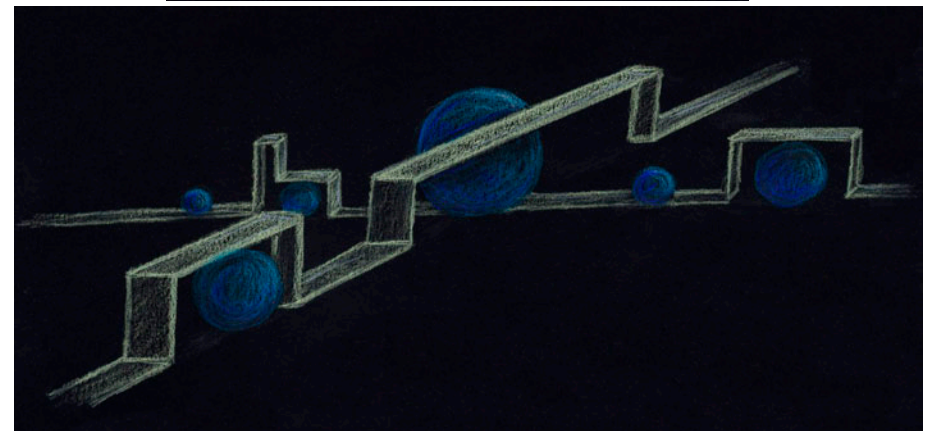
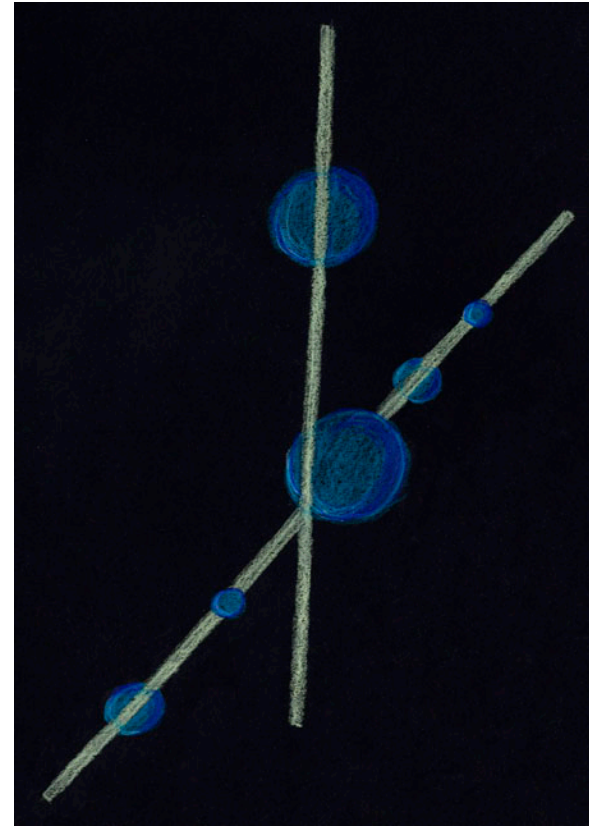
I began to study even more in depth, the relationships of these objects and the interactions they had on one another. This next step looks at how different elements of these styles can be manipulated in the three-dimensional plane.



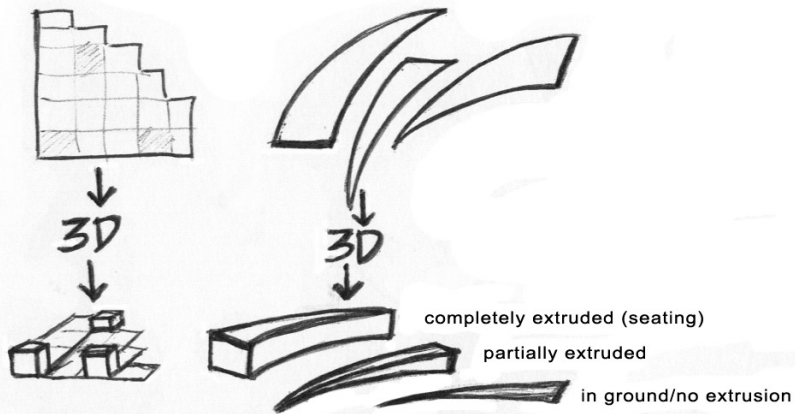
3.10 – Cubist Space Concept



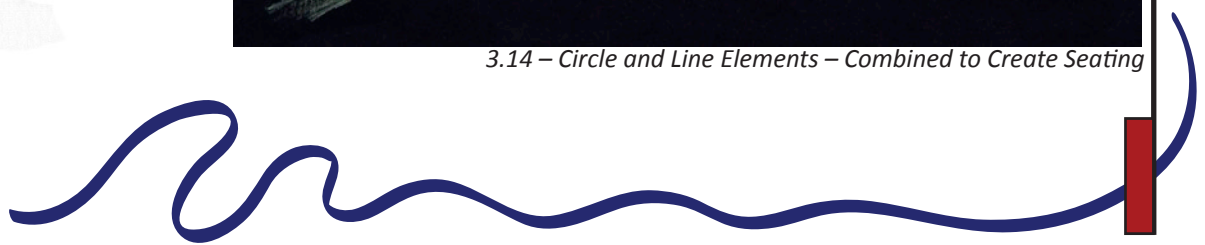
3.12 - Forms influenced by Kandinsky



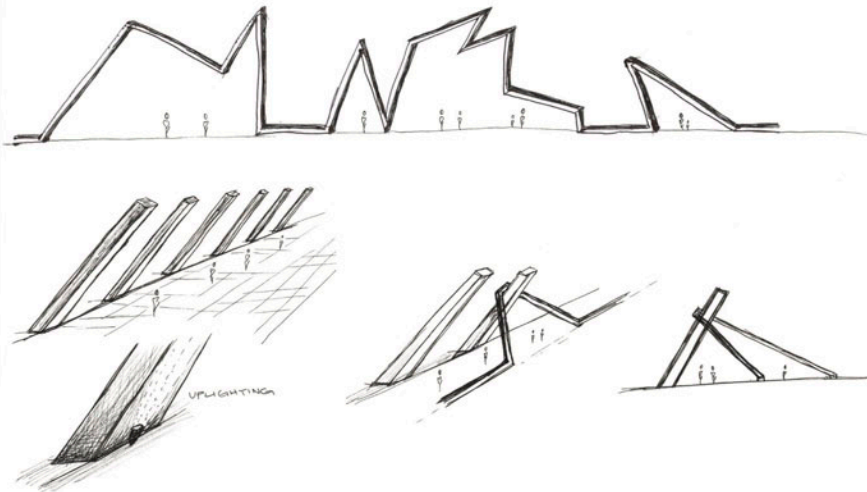
3.14 - Circle and Line Elements - Combined to Create Seating



3.13 - Three-Dimensional Kandinsky Study



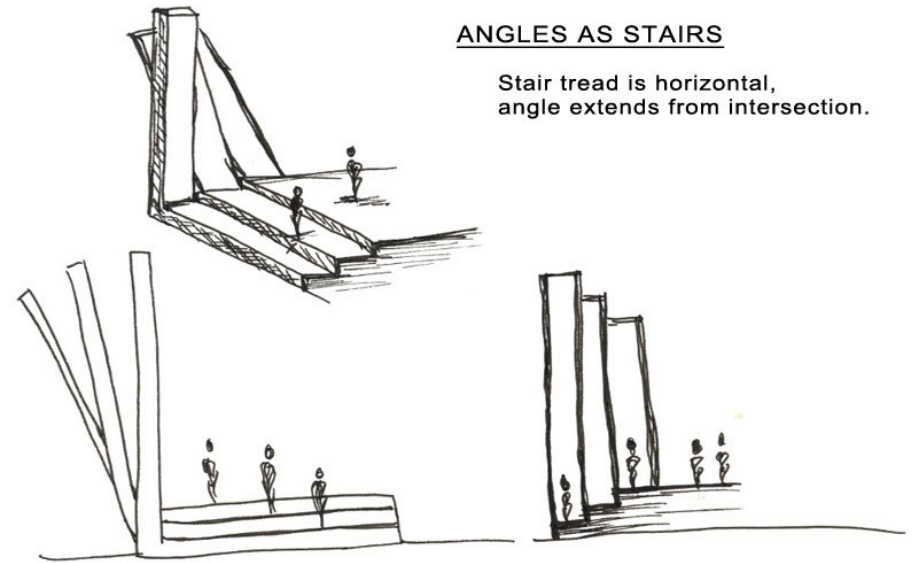
ANGLES visualized in creative space-making



3.15 – Angles Visualized in Creative Space-making

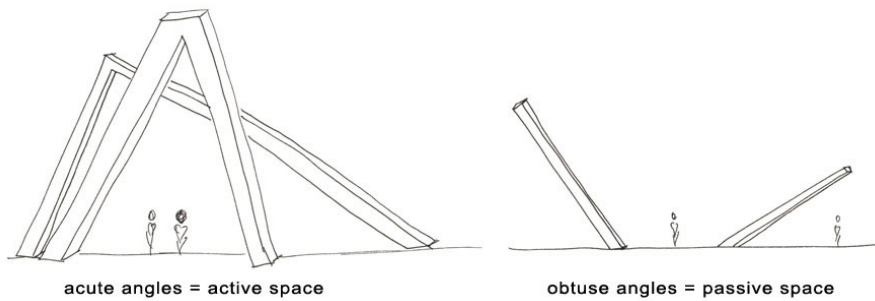
ANGLES AS STAIRS

Stair tread is horizontal, angle extends from intersection.



3.17 – Angles as Stairs

ANGLES as active and passive 3D forms



3.16 – Angles as Active and Passive 3D Forms

Investigation of Color:

Color is extremely important to consider when designing. Color will have a strong influence on how people react to a space and how they use it. This is because colors are able to produce both a physical and psychological effect on a person.

The following is the Color Theory according to Wassily Kandinsky abstracted from his book “Concerning the Spiritual in Art”.

• **Yellow**

“Warm,” “cheeky and exciting,” “disturbing for people,” “typical earthly color,” “compared with the mood of a person it could have the effect of representing madness in color.”

Sound: loud, sharp trumpets, high fanfares

• **Blue**

Deep, inner, supernatural, peaceful “Sinking towards black, it has the overtone of a mourning that is not human.” “Typical heavenly color”

Sound: light blue: flute, darker blue: cello, darkest blue of all: organ

• **Green**

Mixture of yellow and blue, stillness, peace, but with hidden strength, passive

Sound: quiet, drawn-out, middle position violin

• **White**

“It is not a dead silence, but one pregnant with possibilities.”

Sound: “Harmony of silence”, “pause that breaks temporarily the melody”

• **Black**

“Not without possibilities [...] like an eternal silence, without future and hope.” Extinguished, immovable.

Sound: “final pause, after which any continuation of the melody seems the dawn of another world”

• **Gray**

Mixture of white and black, “Immovability which is hopeless.”

Sound: Soundless

• **Red**

Alive, restless, confidently striving towards a goal, glowing, “manly maturity”

Light warm red: strength, energy, joy; vermilion: glowing passion, sure strength

Light cold red: youthful, pure joy, young

Sound: “sound of a trumpet, strong, harsh.” Fanfare, Tuba, deep notes on the cello.

Color can also suggest certain shapes or forms and create or emphasize feelings for forms that already exist. Black represents a silent color, and therefore tends toward the horizontal. Blue is a mellow, passive color that represents forms such as an obtuse angle or a circle. Red can represent both cold and warm and is depicted as a right angle or right-angled figure such as a box/cube. Yellow is the most active color and therefore represents the most active form—the acute angle.

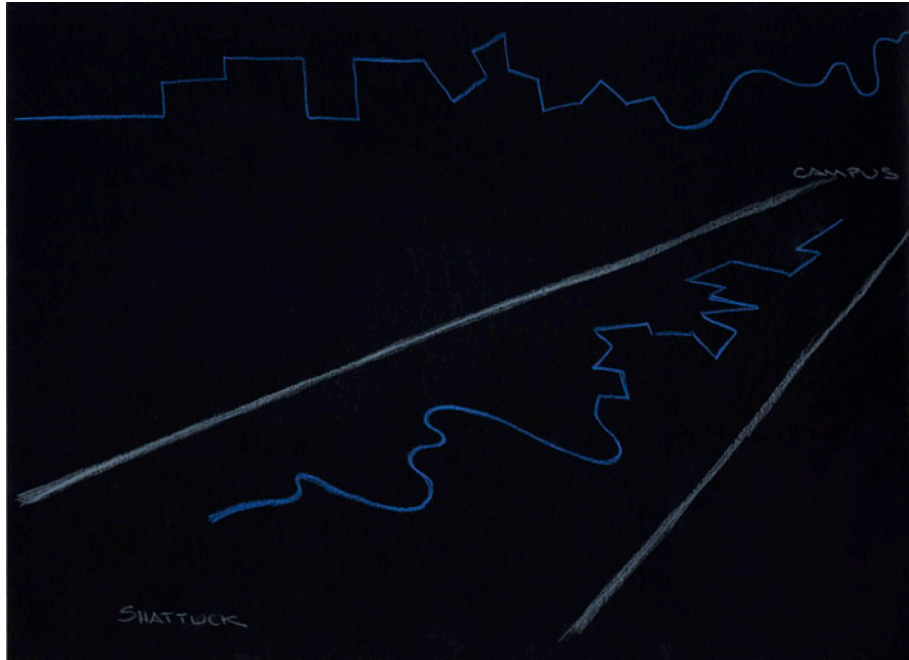
Preliminary Concepts:

Through the investigation of elements and studies of three-dimensional manipulation, I came up with many preliminary design concepts. Some of these concepts translated to the final design and others were reworked to form a similar idea off of the same concept.

One of my first concepts was about a line that would represent an abstract manipulation of Strawberry Creek. The thought was that this line would represent the structure of each style (De Stijl, Cubism, and Geometric Abstraction) as it traveled down the street from the Campus to Shattuck Avenue. This line was later reworked many times.

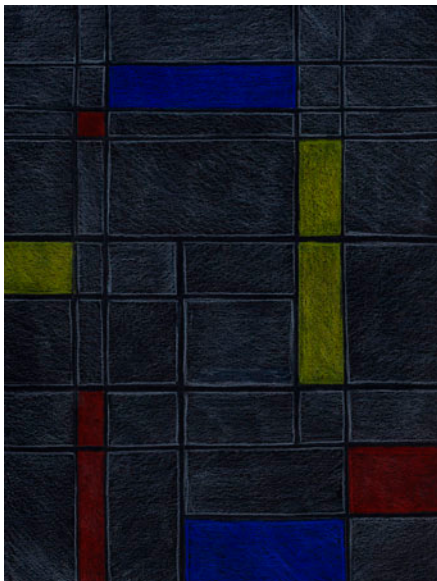
(Kandinsky, 1977, 37-41)





3.18 – Abstract Creek Manipulation

Another concept was to extrude the square and rectangular elements of Mondrian's painting style as three-dimensional seating.

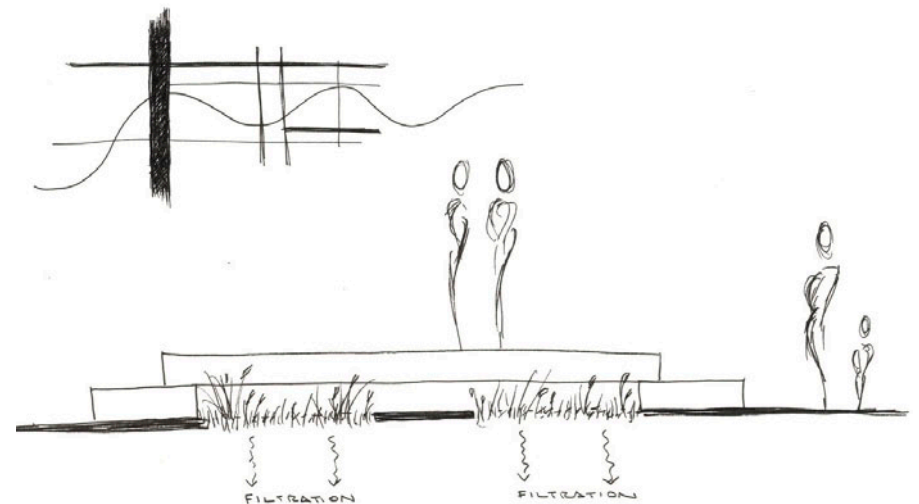


3.19 – Mondrian's Framework in Planview



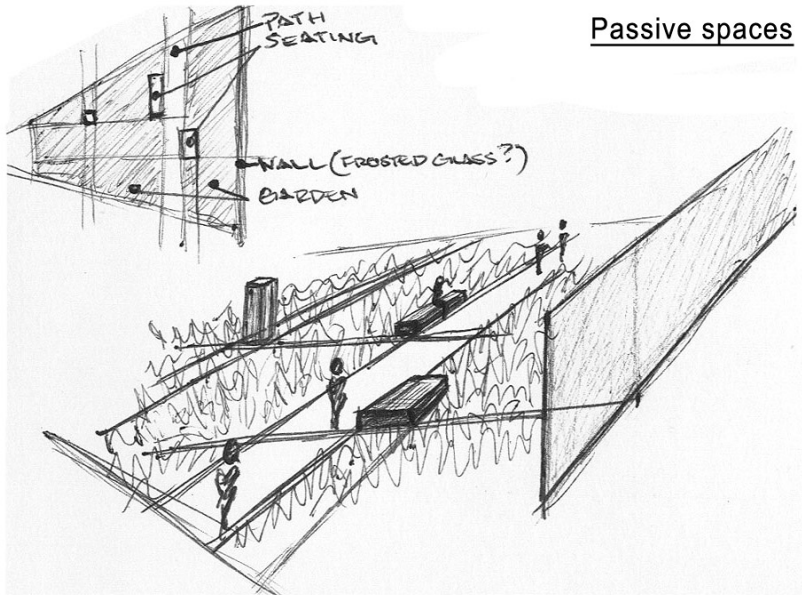
3.20 – Extruded Rectangular Elements

The concept of overlapping straight and curvilinear lines to create interesting interactions was implemented into the design. Here, a bold black line travels along the surface and then "jumps" over the curvilinear (creek) line, creating a crossing point.



3.21 – A Crossing Point

The concept of combining elements to create passive spaces was reworked into several different designs and implemented in multiple places throughout the site.



Passive spaces

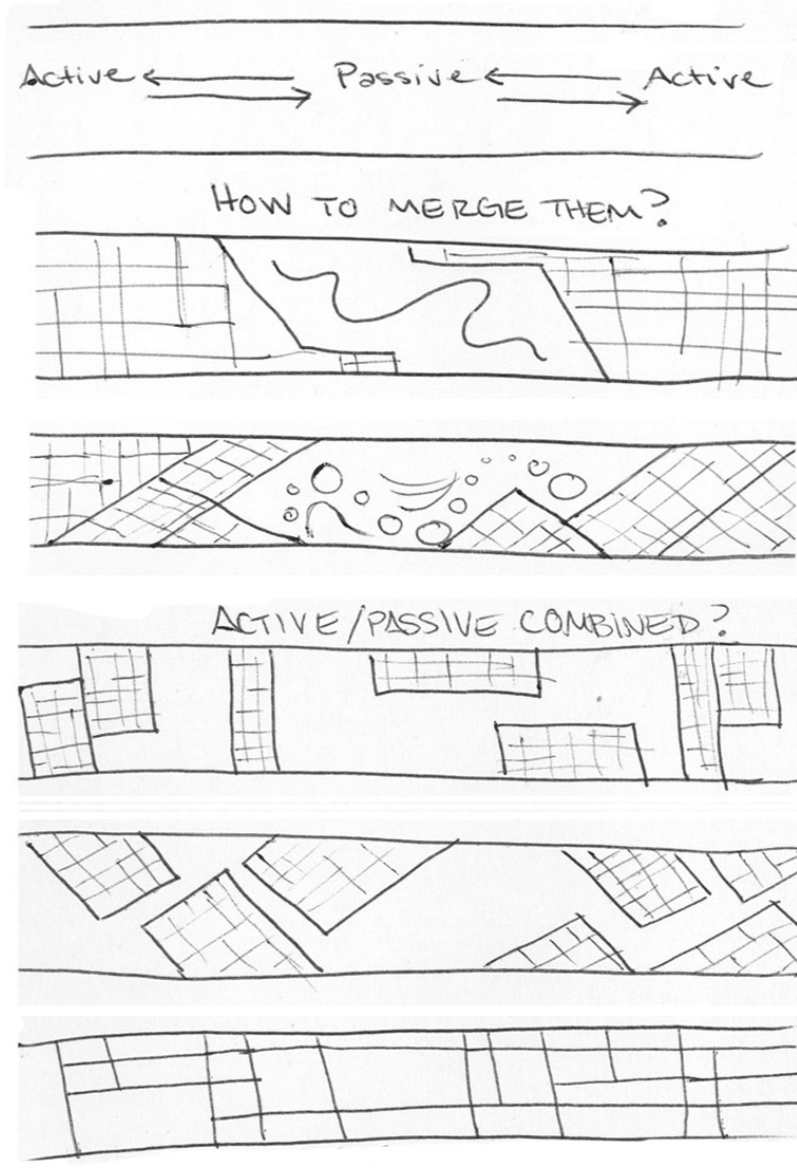
3.22 – Passive Spaces

Merging the Styles

Merging the overall structure of the styles was an important step to thinking of the space as a whole. I wanted to construct a framework for the design that would act to connect the spaces in between.

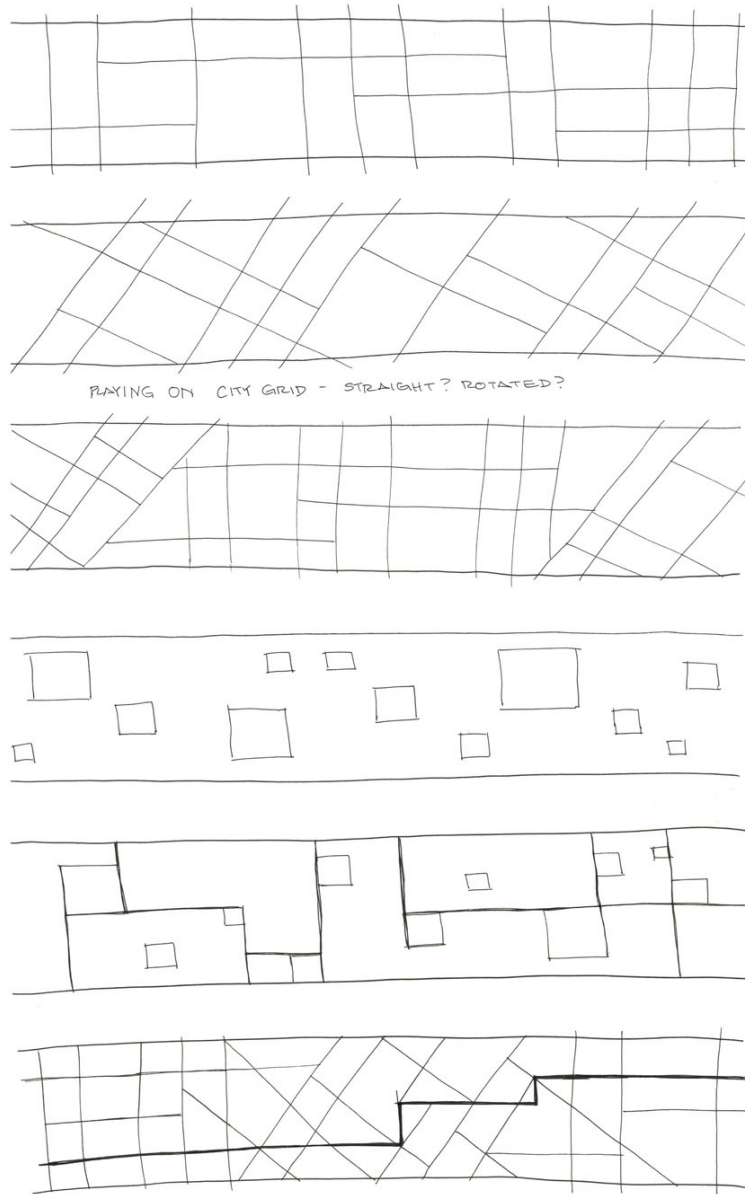
Based on the styles of Mondrian and Kandinsky, I explored many combinations of structure for the street in an attempt to find a pattern that would harmonize the design to the architecture and its surroundings.

Exploring the combination of the styles' basic structure to apply to the length of the street



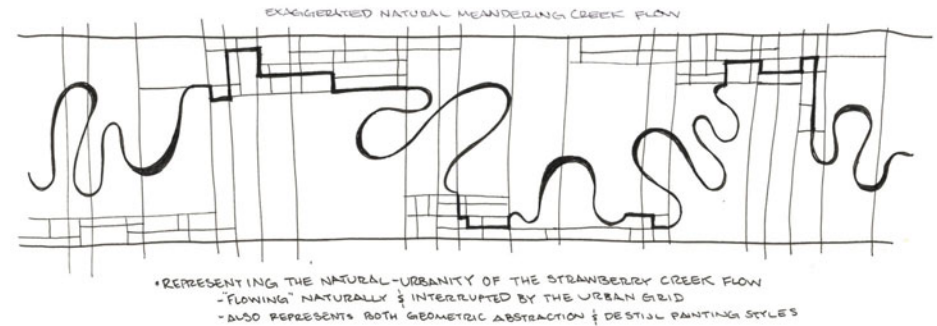
3.23 – Merging of Styles

Framing the Space
Further exploration of structure



3.24 – Framing of Space

I began to finalize the idea of using Mondrian’s De Stijl style as the overall framework pattern and Kandinsky’s Geometric Abstraction as the core element through the site. The result was a series of structural lines varying in width, and a curvilinear line that travels across the site representing an abstract manipulation of the creek.




3.25 – Original Framework Concept

This framework shows the abstract concept behind the design before it was simplified and reworked to provide the basis for a functional space. Here, the linear path of the street is interrupted by tension, which turns from active space to passive space. At the ends where site meets either Oxford or Shattuck, the curvilinear line is manipulated by vertical tension, allowing it to remain as active space. At the center of the site, the curvilinear line is manipulated by diagonal tensions in order to instill a subtle sense of enclosure that will encouraging people to slow down and enjoy the space.



***The straight line and the curved line represent
the primary contrasting pair of lines.***



~ Wassily Kandinsky

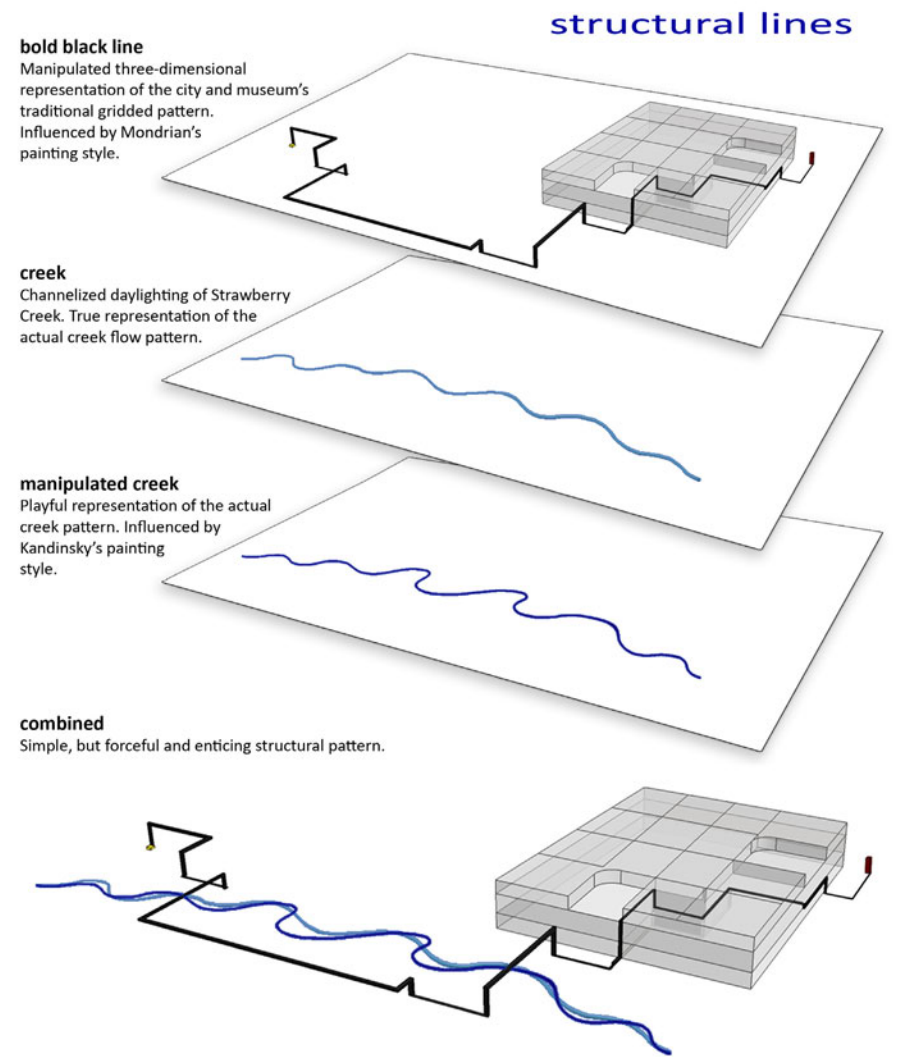
PART FOUR

The Design Structure

The Structural Lines:

The structural lines of the site create an interruption of linearity by tension. The main black line dynamically connects the architecture of the museum (which is based on an organic manipulation of the city and campus grid pattern) to the design. This creates an active enclosure and framing of the space, yet does not interrupt the flow of the high-density pedestrian street.

There are two curvilinear lines. One pertains to the indicated natural flow pattern of the underground, culverted Strawberry Creek. This line is a representation of the creek, slightly sunken into the ground with shallow water cycling through over varying granite textures. This creek creates a natural setting within its artistic and urban surroundings while acting as a continuous interactive water feature throughout the site for users of all ages. The second curvilinear line represents an abstract manipulation of the natural creek. This line is created from the combination of passive and active pressures that act upon it. The rotation of the grid toward the diagonal at the center of the design creates elements that push and pull the line into deeper curves. Its playful shape creates curiosity and a desire to explore. Space created between the lines is softened and naturalized with riparian plantings.



4.1 – The Structural Lines

Connecting Architecture to Land

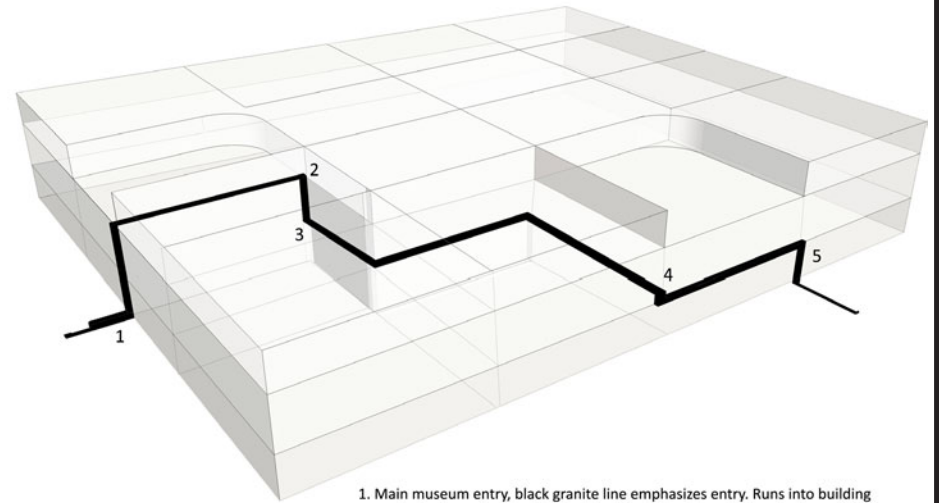
There exists a disconnection between buildings and outdoor space in most of today's cities. Even though they are thought of as two separate entities—and are often designed as such—they have so much in common, and it is essential to consider the architectural design when creating a space.

The Architect's design is very pure and organic, so without ruining the integrity of the building I have ventured to create a strong but connected contrast to the surrounding landscape design. Taking structure from the strong black lines throughout the site design, I have chosen to pull one three-dimensional black granite line right through the building. This will create a strong contrast to the white museum building, and strengthen the connection of the architecture to the street.

This line is a continuation of the main structural line, which runs through the site. The vision is that the line will run into the building at the main entry and shoot vertically up the side. It dynamically continues running throughout the building, shooting through floors and walls. These actions cause the line to seemingly disappear at that moment, only to be rediscovered arbitrarily at a different point of one's journey through the museum. The line exits the building by running horizontally as an edge to one of the balconies and then shooting back down to the ground, framing the secondary entry/exit. The line has dimensions of 2'x2', and would double as seating, connecting people to the architecture and to the design by heightening their curiosity about this abstract and distinct feature. This connection is based on "the idea of harmonizing architecture and environment and the precise, modular manipulation of space" (Amidon, 2001, 8).

CONNECTING ARCHITECTURE TO LAND

creating a strong connected contrast to the surrounding landscape design



1. Main museum entry, black granite line emphasizes entry. Runs into building and shoots up the front to the third floor, then travels through the roof terrace.
2. Shoots down through floor.
3. Travels along second floor, following room patterns. Also creates seating.
4. Acts as edge for second floor glass-walled space.
5. Shoots down to ground-level and becomes outdoor space once again.

4.2 – Connecting Architecture to Land

The Three-Dimensional Blocks

The three-dimensional blocks are all primary colors based from Mondrian's painting style. They are formed at the intersections and endpoints of the black lines. In plan view, they closely represent the style's structure. They are then realized in three dimensions by being extruded from the surface at varying heights, creating some as seating elements and others as columns and visual components of the landscape.

The Design Content

Materials

Granite is chosen as one of the main materials because of its historical background with California, and because of its strength and diversity. The structural lines are all formed from different colors and textures of granite. The black line is polished black granite, creating a slightly reflective surface that portray the site differently to users throughout the day as the light changes. The bed of the representative creek is lined with varying rough textured granite to create a minor rippling effect as the water flows slowly downhill. The edges of this channel are overlapped with granite tiles to soften the look and to hide lighting that is placed underneath the tiles. The abstract manipulated creek is represented with large slabs of lightly textured (to prevent slipping) blue granite inlayed in the paving. Inlayed within the blue granite is another thin line filled with pieces of crushed recycled blue glass, coated with a clear coating to make it even with the granite surface. The glass line is illuminated at night by LED lights under the glass, creating a brilliant blue curvilinear line highlighting the edges of the curve.

Base site paving varies from concrete in highly traveled areas, to permeable paving in lightly traveled areas. Lightly textured black granite lines, inlayed at varying widths, break up the base paving. Thin strips of inlayed steel, though more inconspicuous, also create small visual divisions (which double as expansion joints) in the paving.

The red, yellow, and blue (primary colored) three-dimensional forms are created from a carbon fiber and steel blended material (called carbon fiber steel). This material is lightweight but very strong, and allows light to transfer through its surface so it can be illuminated from the inside at night.

Addressing Environmental Concerns – Runoff

The city of Berkeley had been researching the possibility of daylighting Strawberry Creek with the hopes of moving the “greening Berkeley” movement forward. However, due to engineering factors, elevation, and other concerns, it was decided by the city of Berkeley in part with Ecocity Builders of Berkeley, CA, that an entirely natural restoration of the creek could not be realized for this site.

Instead of the natural creek flow being fully restored, I am proposing that the pattern of the creek be represented as a linear fountain. This granite-lined channel would be constructed to circulate water through the length of the street, acting as an interactive water feature, which would allow people to enjoy and celebrate the water.

Woven between the represented river and the manipulated river there are riparian planting areas that act as water collection and filtration for the site. Some of the planted rectangular forms also act as bio-swales, and are planted with native grasses that are able to withstand both heavy moisture and harsh drought. These bio-swales are placed mostly along the edges to collect roof runoff, minimizing the amount of water that must travel over impervious paving to reach the riparian area. The site is currently sloped at 2%, and would need to be re-graded slightly so water is directed toward the center of the street, rather than remaining on the edges. This would allow the riparian areas to catch the remaining runoff that is not collected by the bio-swales.

Once the water is collected, it is filtered through bioremediation, then collected below the surface and returned as clean water to Strawberry Creek. This system will allow all runoff water from the site and immediate surroundings to remain on-site until it is clean and can be returned to the creek free of urban pollutants.

Plant List

Most of the plants chosen for the site are native to California, and all are non-invasive. They were chosen for their texture and color as well as functionality. The plants compliment the bold lines of the design by being primarily soft in texture. The colors are mostly soft and calm, but splashes of vibrant colors appear yearlong. Plants were chosen to be tolerant of both moist and dry conditions, requiring little need for summer watering. Plants with qualities that attract butterflies, birds (especially Hummingbirds), and bees throughout the year were also chosen.

(Note: Scientific names are not noted unless a specific species distinction is needed)

- Larger Trees:

- Magnolia (*Magnolia grandiflora*)
- 'Chanticleer' Callery Pear
- Big Leaf Maple

- Riparian Area Trees: [drought tolerant but found in riparian habitats]

- Mountain Alder
- Scouler Willow

- Smaller trees and shrubs:

- Vine Maple
- Horse Mint (*Agastache urticifolia* 'Summer Breeze')
- Western Redbud
- Salal
- Wild Azalea
- Fuchsia flowering gooseberry
- Chaparral Bush Mallow

- Grasses, small plants, and groundcovers: [tolerant of both moist and dry conditions]

- Yarrow (white, yellow, pink & purple varieties)
- Wild Snapdragon
- White Goat's Beard (*Aruncus dioicus*)
- California Aster
- Blue Gramma Grass
- Berkeley Sedge
- Deer Grass
- Purple Needlegrass
- Foothill Sedge
- California Fuchsia
- California Poppy
- California Fescue
- Idaho Fescue
- Red Fescue
- Coral Bells hybrid (*Heuchera*)
- Monkeyflower
- Penstemon (*azureus* & *eatonii*)
- Western Sword Fern
- Hummingbird Sage
- Yerba Buena
- Blue-eyed Grass
- Western Goldenrod



4.3 - Plants

PART FIVE

The Final Design

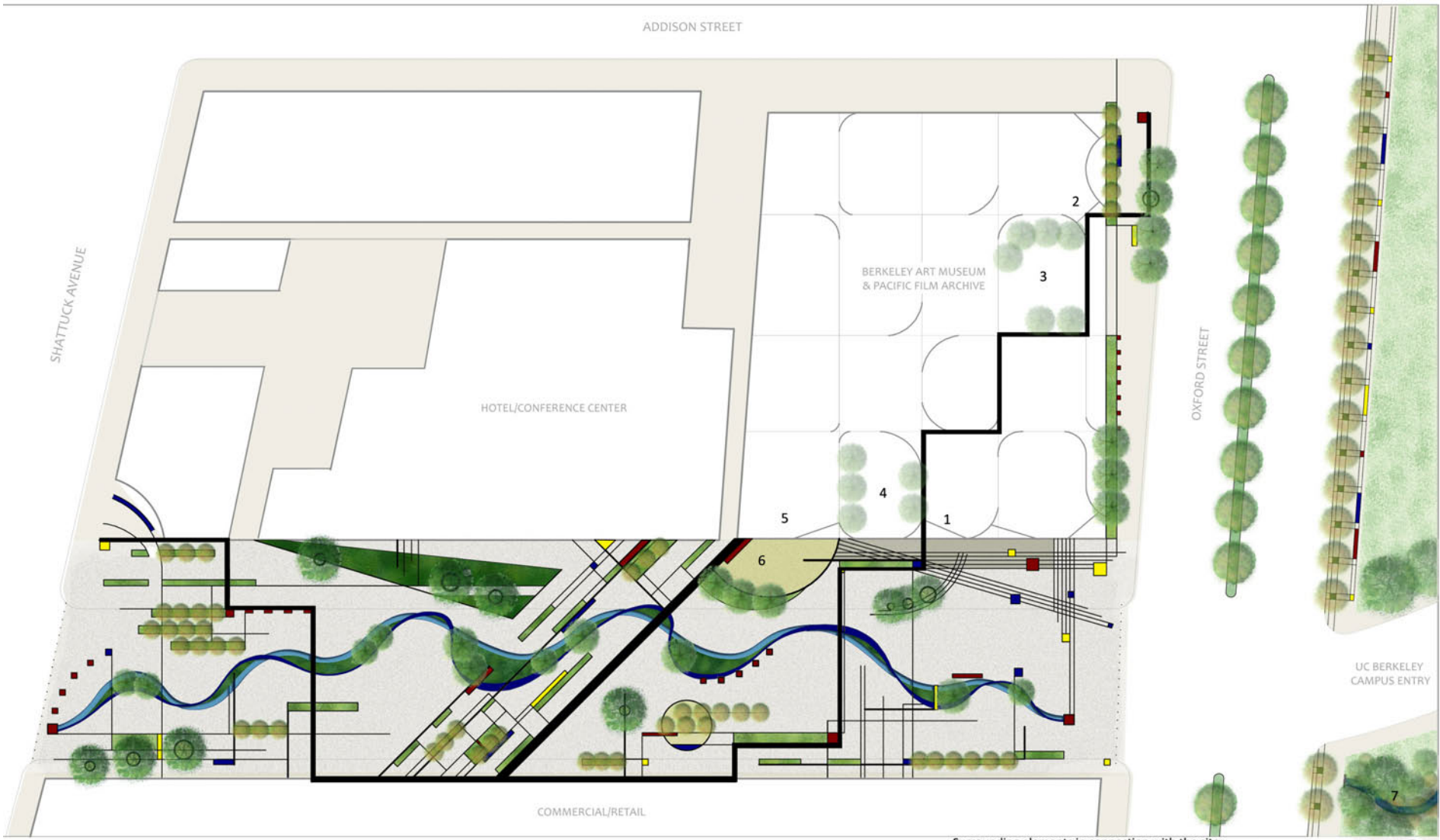
The master plan draws from the surrounding context as well as the design for the new Berkeley Art Museum/Pacific Film Archive.



5.1 - Master Plan Context

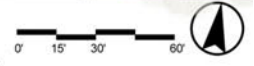
There are numerous images on the following pages that represent the resulting product of my extensive research and process-oriented approach. Please note that descriptive information lies below each image.





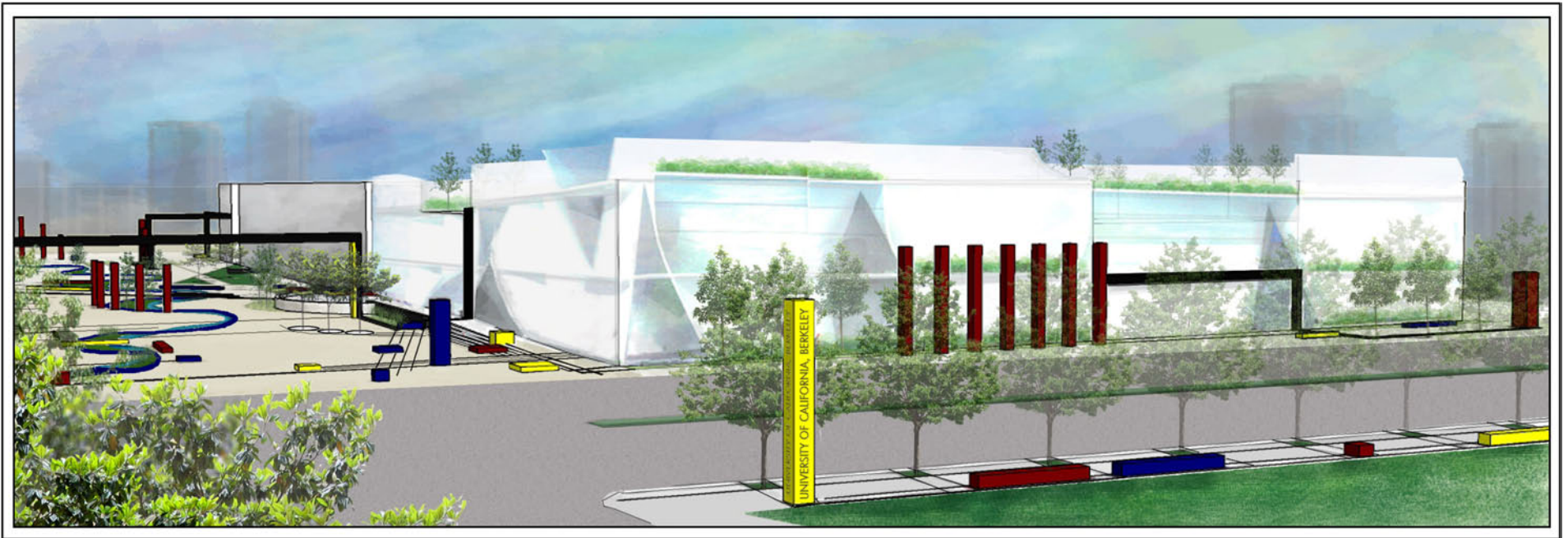
Surrounding elements in connection with the site:

- 1. Main museum entry
- 2. Second entry
- 3. Roof garden/terrace
- 4. Roof garden/terrace
- 5. Museum cafe
- 6. Cafe outdoor seating
- 7. Natural Strawberry Creek before becoming canalized underground



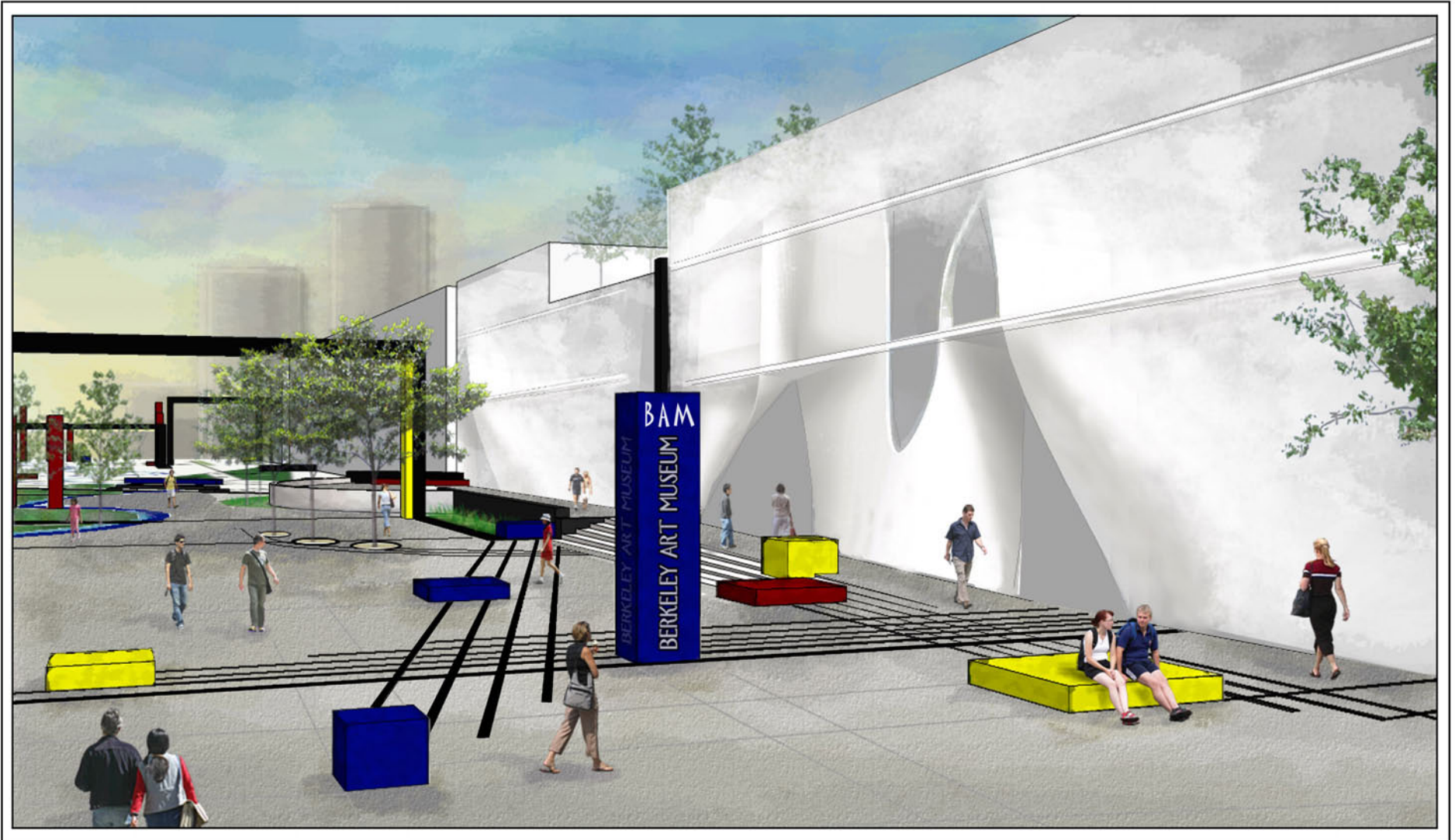
5.2 - Master Plan

Visualizing the Design in Three-Dimensions



Whole view of Center Street Pedestrian Plaza and proposed new Berkeley Art Museum. Viewpoint from main entry of University of California, Berkeley.

5.3 - Overall Perspective View



Main entry to Berkeley Art Museum. Carbon fiber steel cubes illuminate at night throughout the site, keeping its vibrancy even in the evening hours. Black granite inset into paving at varying widths creates striking contrast on the surface, and acts to connect and define elements of the site.

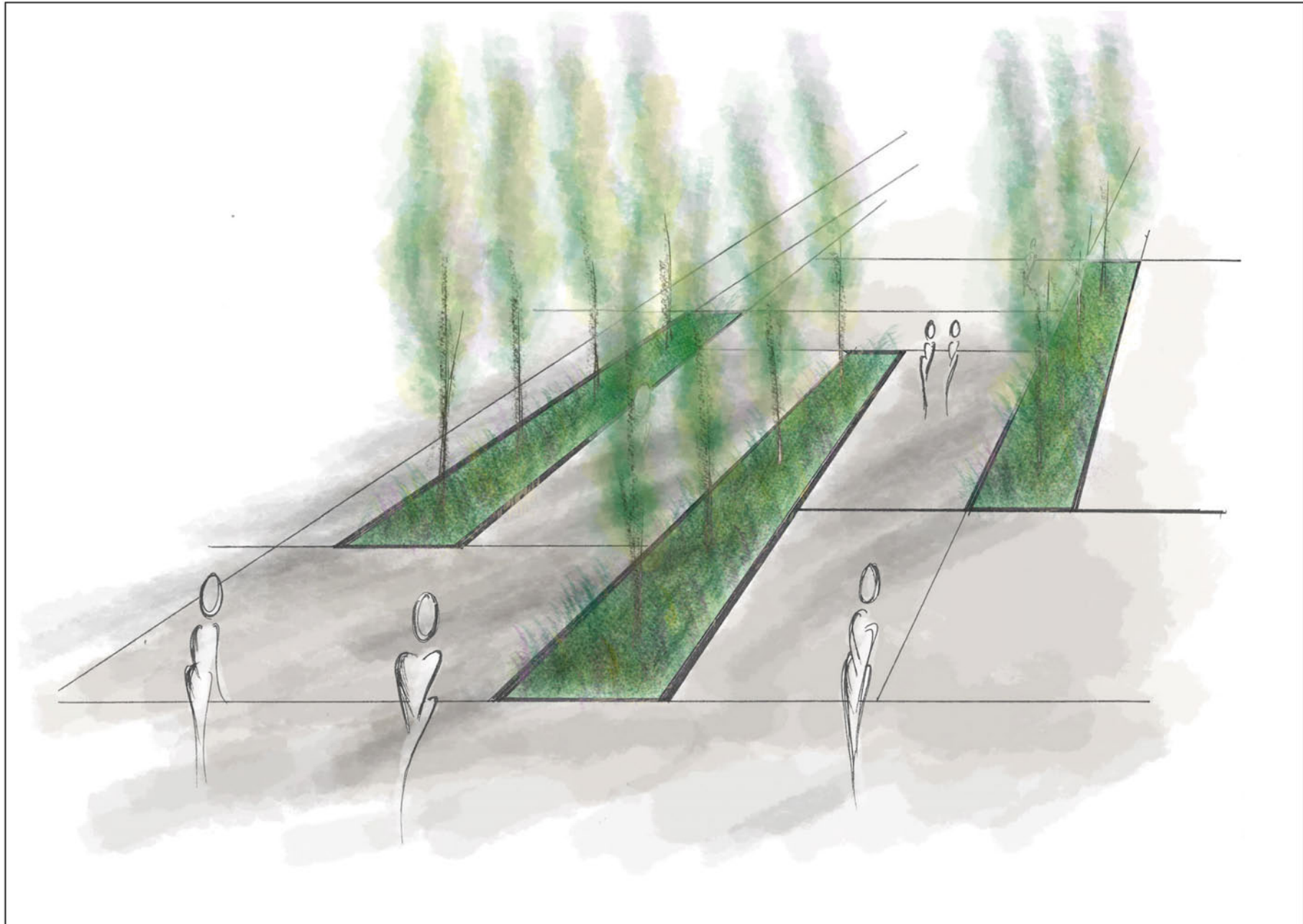
(Site slopes slightly downhill - note stairs remaining level as site slopes, also creates ADA point of entry)

5.4 - Entry Perspective

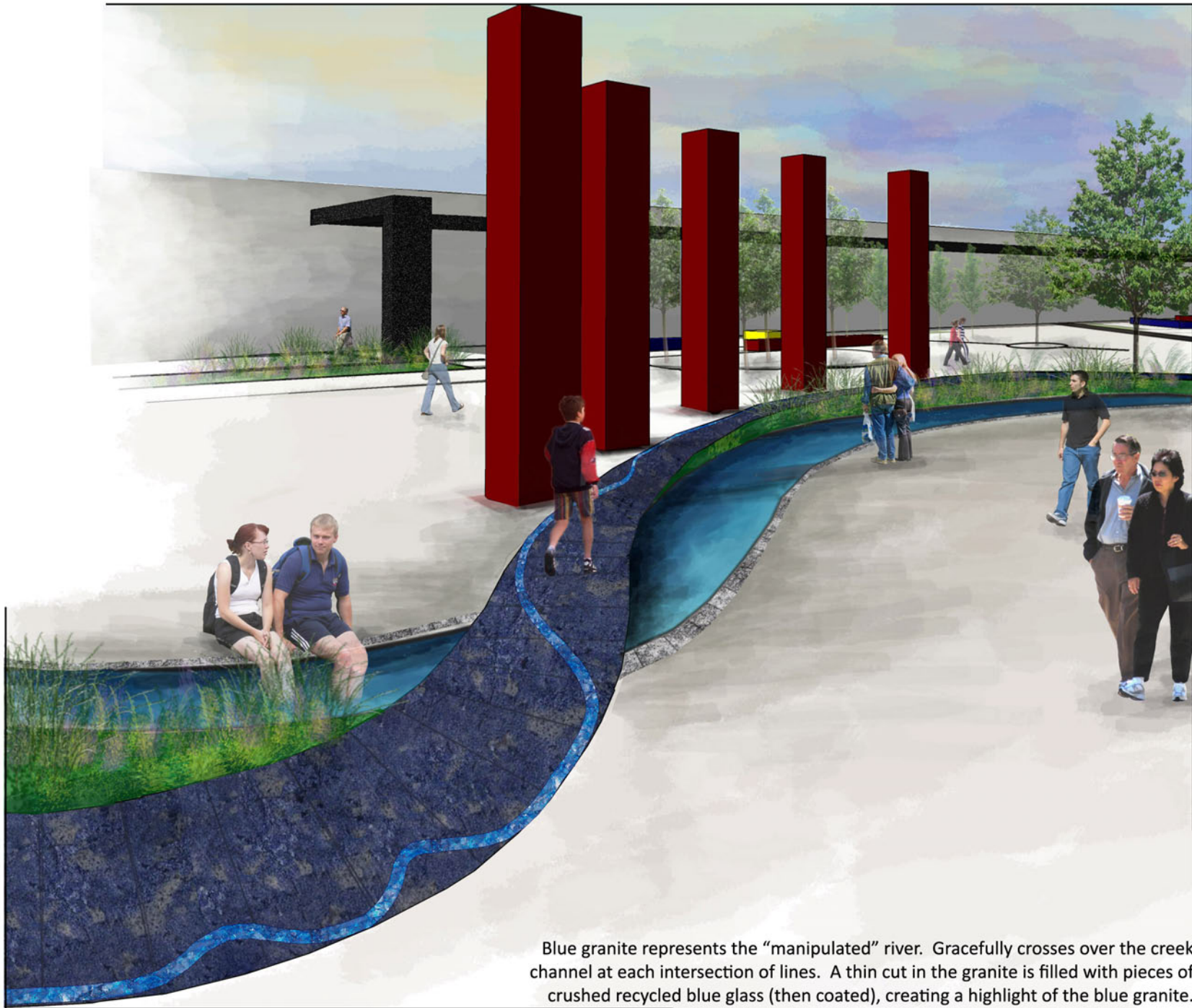


As the main black granite line travels away from the museum, it creates multiple “frames” of the site. It shoots back down to the ground, travels along the surface, then jumps back up and over to the retail/commercial. After traveling along the frontages, it jumps off the building and shoots across to the hotel/conference center, ending on the corner of Shattuck Avenue.

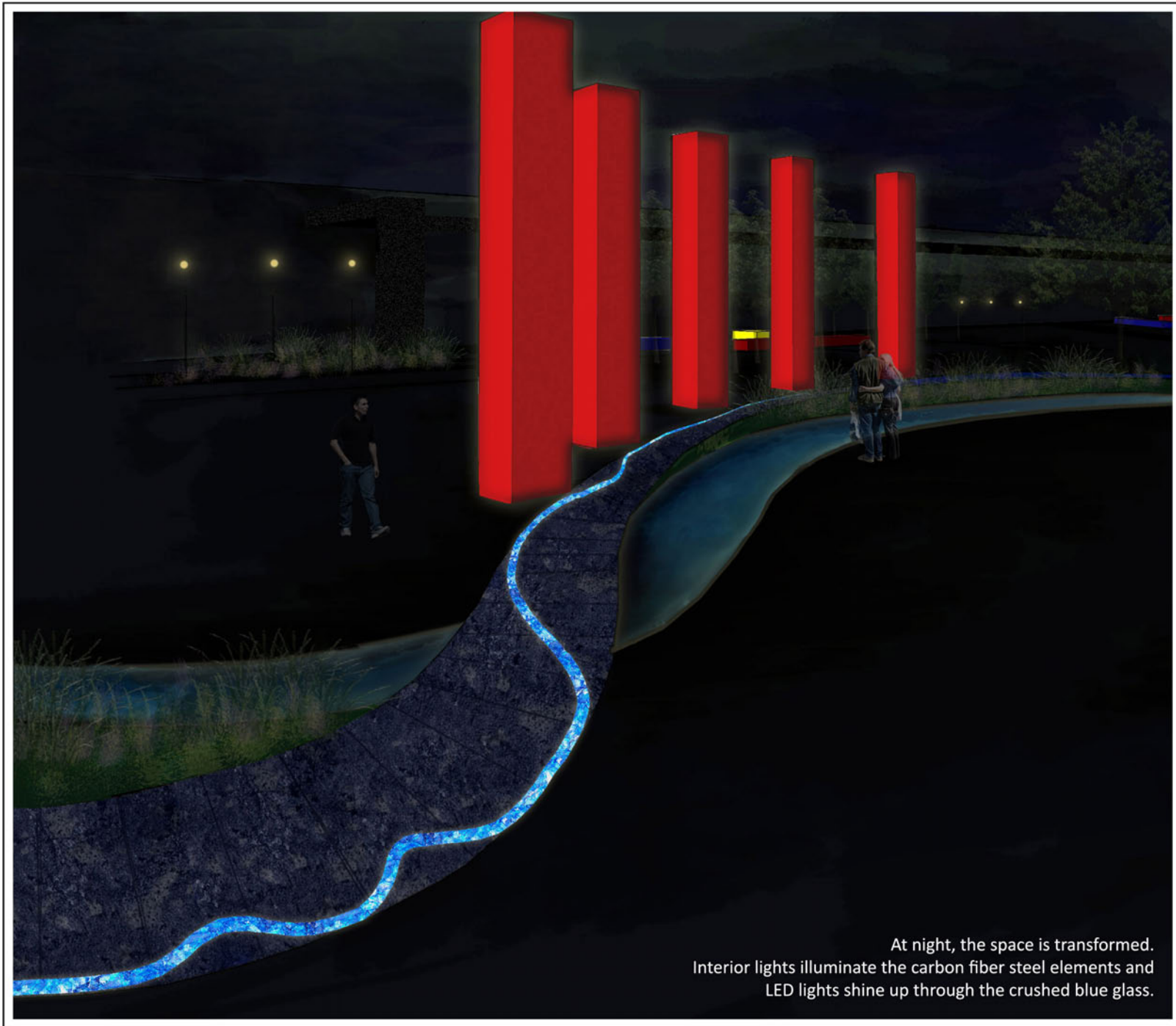
5.5 - Black Line and Frontages Perspective



Linear active space. Similar patterns echoed throughout the site.
Some in-ground with tree (flowering pear with columnar habit) plantings. Others are planted with native grasses and act as bio-filtration swales.

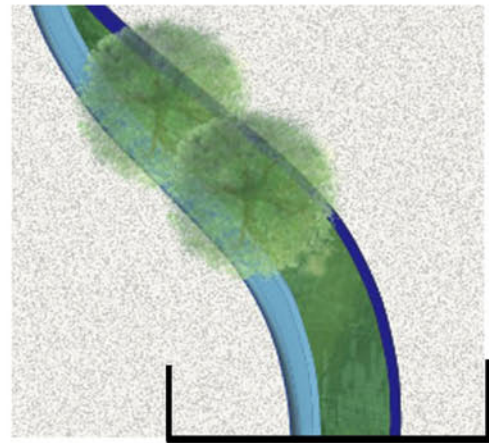


Blue granite represents the “manipulated” river. Gracefully crosses over the creek channel at each intersection of lines. A thin cut in the granite is filled with pieces of crushed recycled blue glass (then coated), creating a highlight of the blue granite.

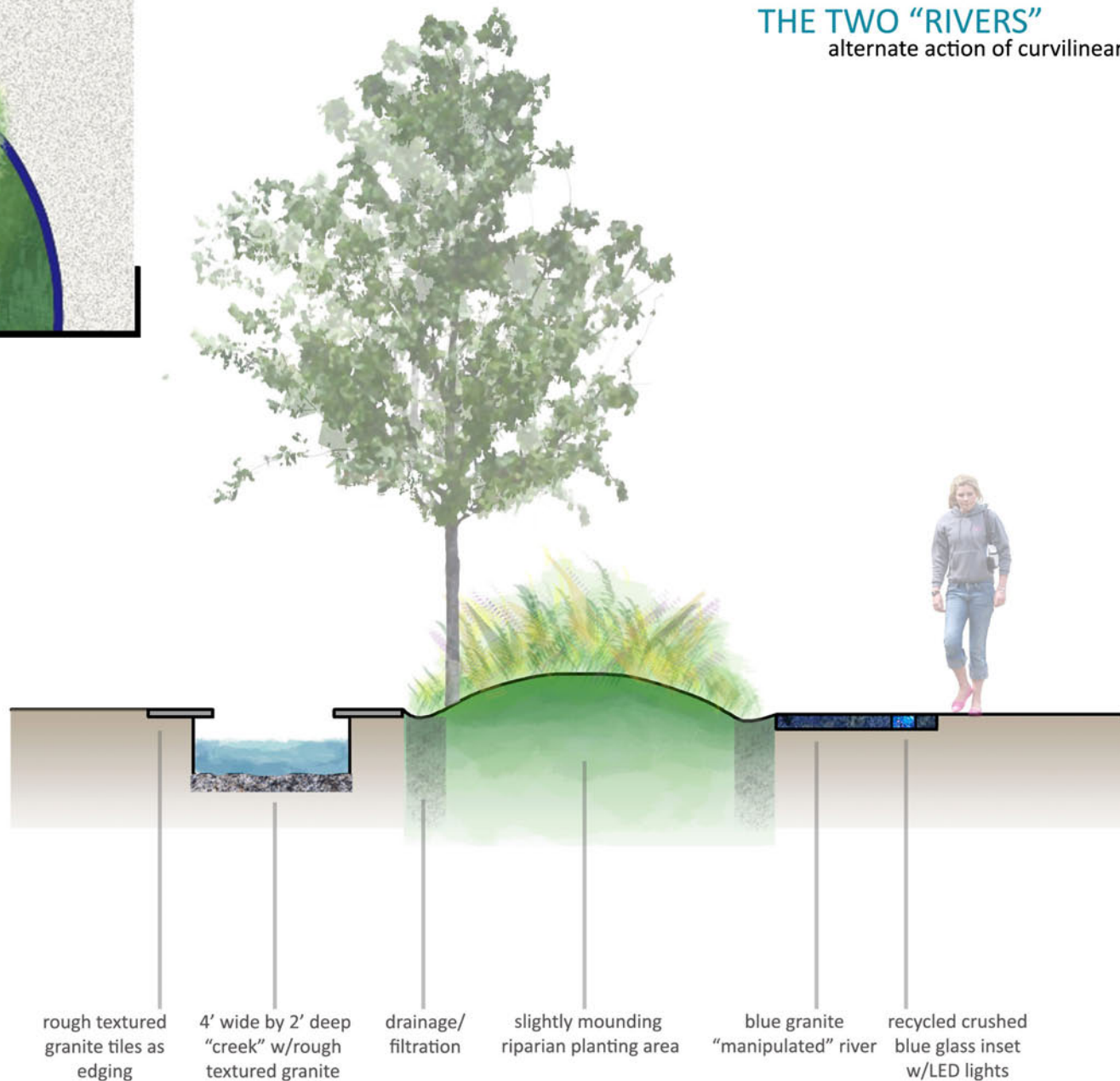


At night, the space is transformed. Interior lights illuminate the carbon fiber steel elements and LED lights shine up through the crushed blue glass.

5.8 - Crossing Creeks Night View



THE TWO "RIVERS"
alternate action of curvilinear lines



rough textured granite tiles as edging

4' wide by 2' deep "creek" w/rough textured granite creating rippling effect

drainage/ filtration

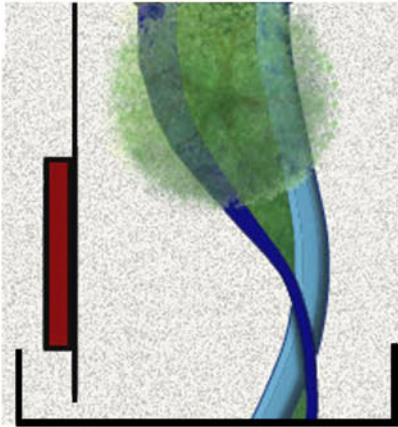
slightly mounding riparian planting area

blue granite "manipulated" river

recycled crushed blue glass inset w/LED lights

5.9 - Alternate Action of Curvilinear Lines

THE TWO "RIVERS" - a crossing point
simultaneous action of curvilinear lines



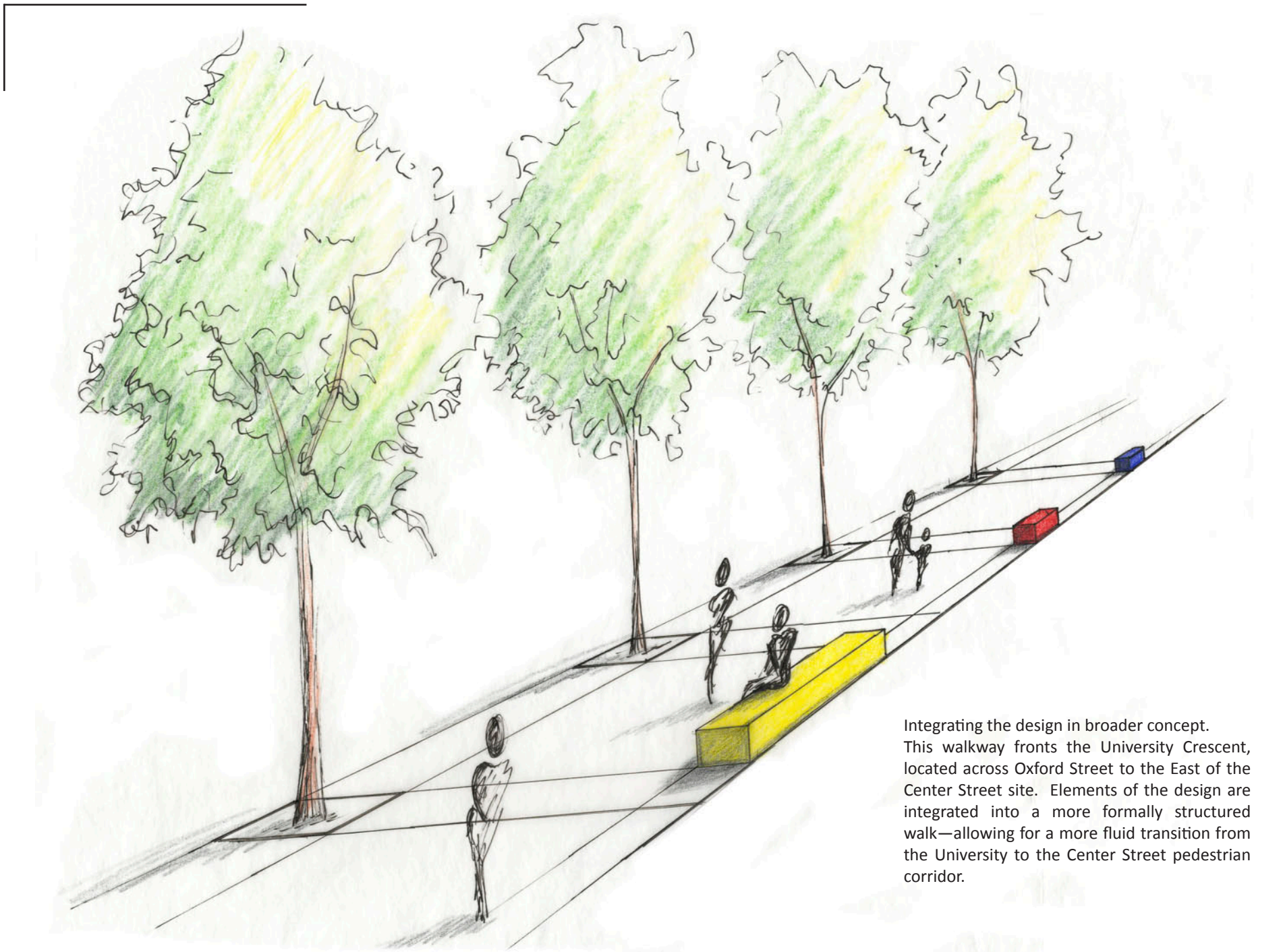
carbon fiber steel
seat wall element
(illuminated at night
from inside - glows)

inset black
granite line

blue granite
inset in paving
creates seamless
crossing of the
creek


4' wide by 2' deep
"creek" w/rough
textured granite
creating rippling
effect

recycled crushed blue
glass inset w/LED lights



Integrating the design in broader concept. This walkway fronts the University Crescent, located across Oxford Street to the East of the Center Street site. Elements of the design are integrated into a more formally structured walk—allowing for a more fluid transition from the University to the Center Street pedestrian corridor.

5.11 - University Crescent Walkway



***Art is not only what you see,
but what you make others see.***

- Edgar Degas

CONCLUSIONS

Even though there are no plans to further the physical process of this design, the mental process is something that will progress from this point forward throughout my entire professional career. This project created a solid basis of artistic design theory that I will be able to build from to continue to create bold, and thought-provoking designs.

I hope that, as you were reading this, some piece of this project struck you—through form, color, theory, or design—and inspired you in a new way. My intent of this project was to find a deeper meaning behind the way I typically design. I sincerely believe that I have successfully strengthened this meaning, and brought my approach toward design to a new creative level.

This final project marks a new path, and new beginnings in my life. I look forward to uncovering new skills, insights, and ideas as I embark upon this life-long learning process.

***Whatever you do, or dream you can, begin it.
Boldness has genius and power and magic in it.***

- Johann Wolfgang von Goethe

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