

WASHINGTON AVENUE BRIDGE:

Celebrating the Mississippi through Rhythm and Space for Bicycles and Pedestrians

HISTORICAL TIMELINE

BIOLOGICAL CULTURAL PHYSICAL

Circa 1867

Minneapolis is established as a city. Because of cheap land and easily accessible resources immigrants move into the area below where the bridge now stands. This area became known as the Bohemian Flats. Bohemian flats were developed by the immigrants who moved into the area and classified itself as separate from the city. This separation allowed the settlers to continue cultural traditions from their countries of origin. The University of Minnesota is established as a campus.

1871

The west bank contains 23 businesses including flour mills, woolen mills, iron works, a railroad machine shop, and various mills.

1945

DDT becomes a widely used agricultural pesticide. Agricultural runoff pollutes the Mississippi with pesticide and causes environmental issues.

1963

Industrial accidents cause 3.5 million gallons of soybean oil to spill into the river. This created a major ecological disaster and spurred on a national demand to control water pollution.

1967

Bald Eagle declared endangered in the U.S. A major contributor to the reduction in Bald Eagle population was from DDT.

1972

DDT banned in the United States. The Clean Water Act is passed reducing pollution sources for many of the nation's water bodies including the Mississippi river.

1993

The Fredrick R. Weisman Art Museum, a major architectural landmark designed by Frank Gehry, is completed. It is located on the East end of the bridge and overlooks the Mississippi river.

2008

The upper level of the bridge is strengthened due to safety concerns.

2010

The new Science Teaching and Student Services Building is opened to the public. This building is located on the East end of the bridge, and emphasizes technology and "interactive" classrooms. The entire building is built by LEED Gold standards.

2011

The METRO Green Line begins construction for light rail transit on the vehicular level of the bridge.

FOO

2014

The Green Line opens in June

2000 - 2002

The bridge is painted over; old paint is carefully removed to not contaminate the river with lead.

1884

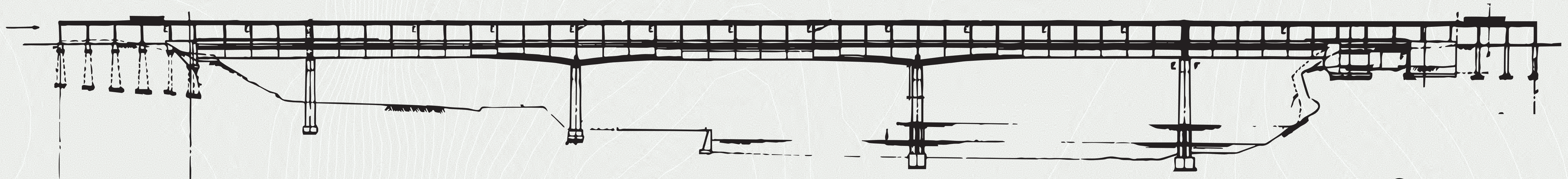
First Iron Truss Bridge built for vehicular use and pedestrian crossing.

1954

Streetcar service ended for the bridge.

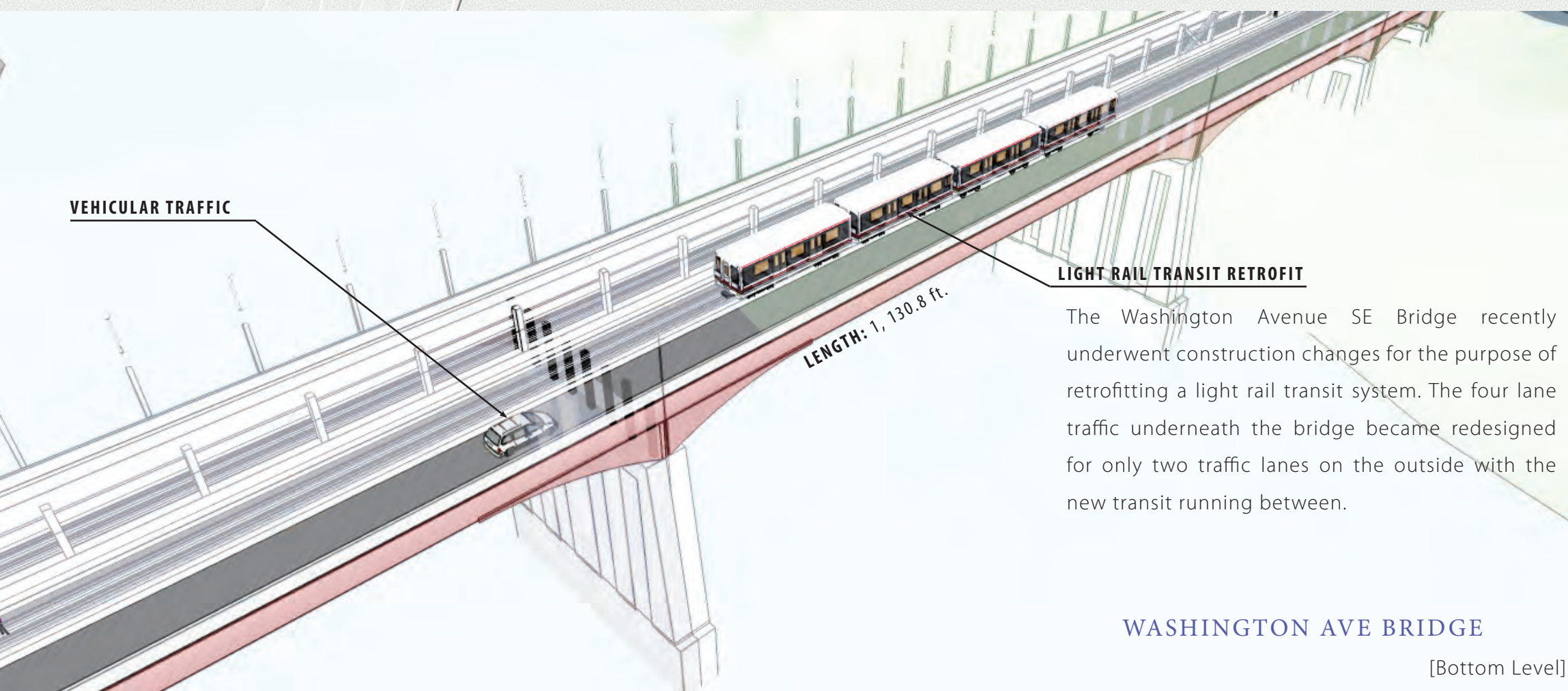
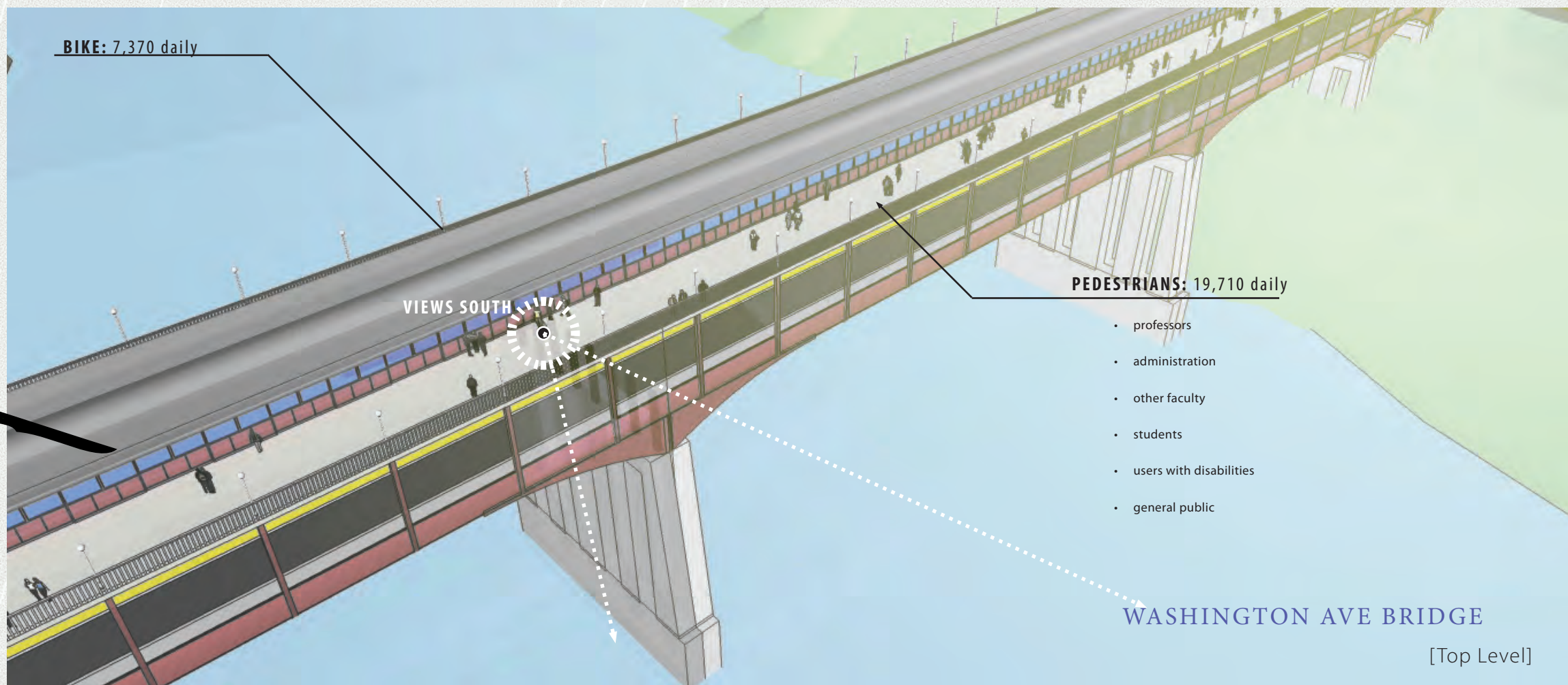
1965

Bridge is rebuilt and turned to face south.

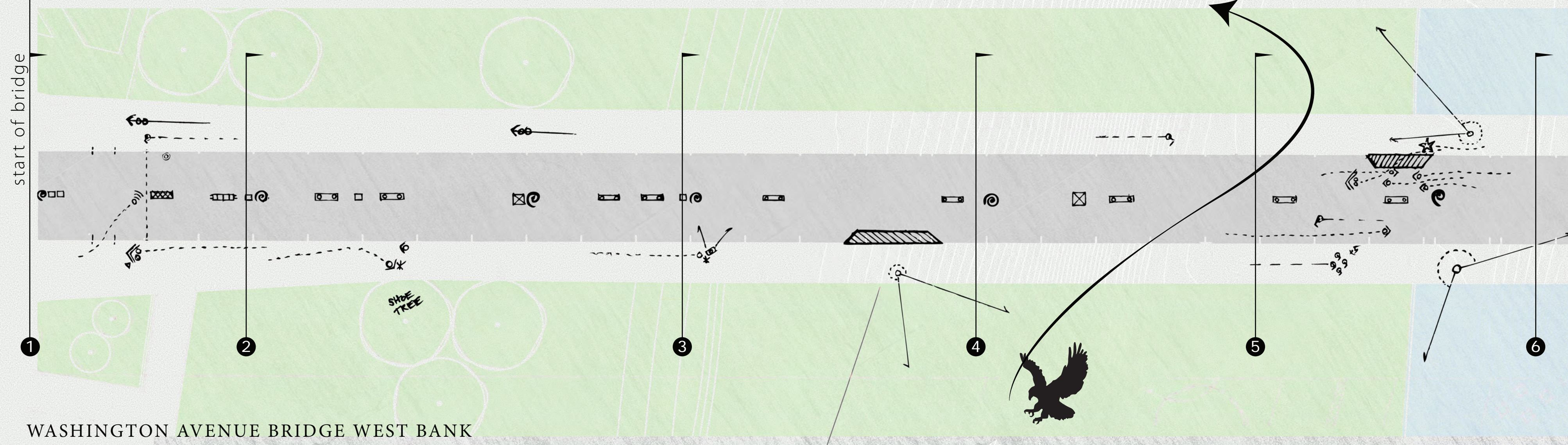
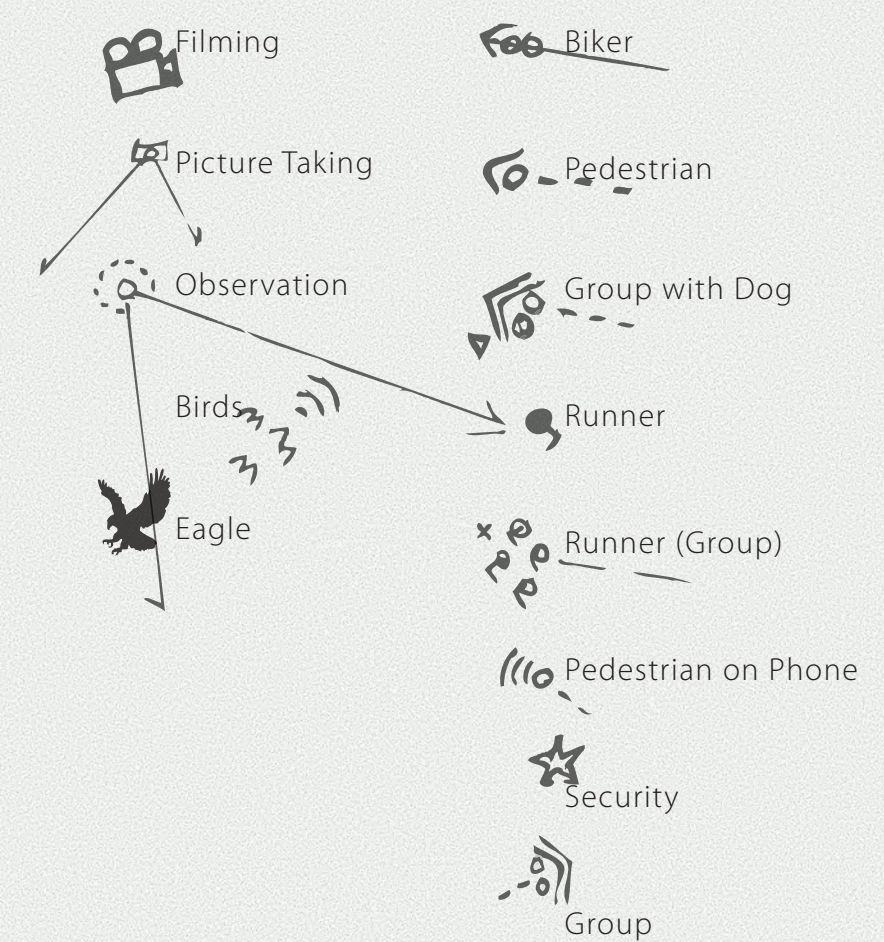


WEST END

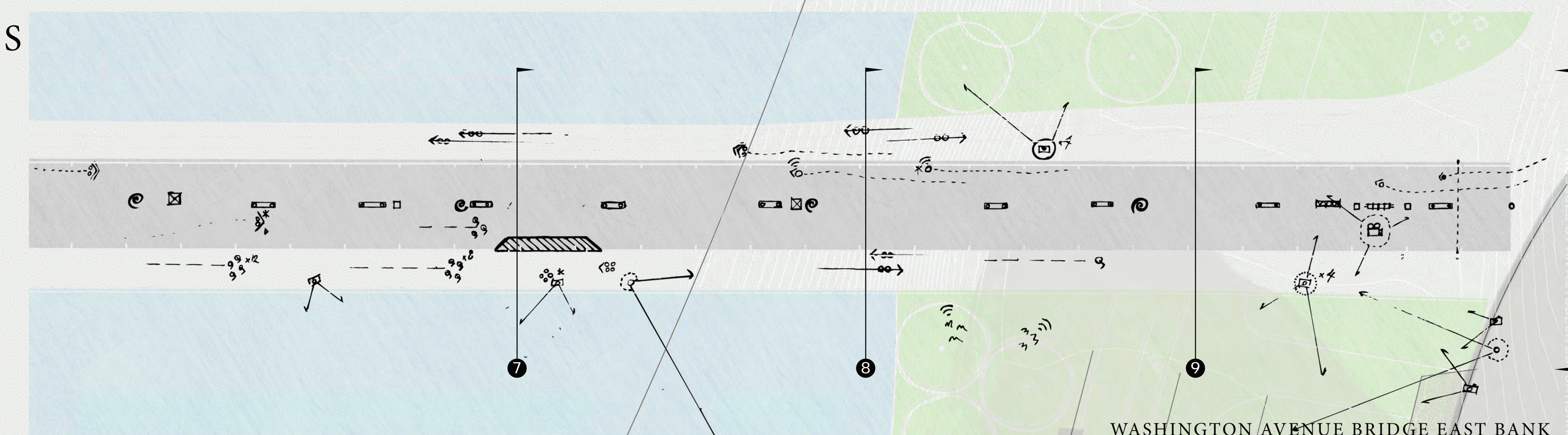
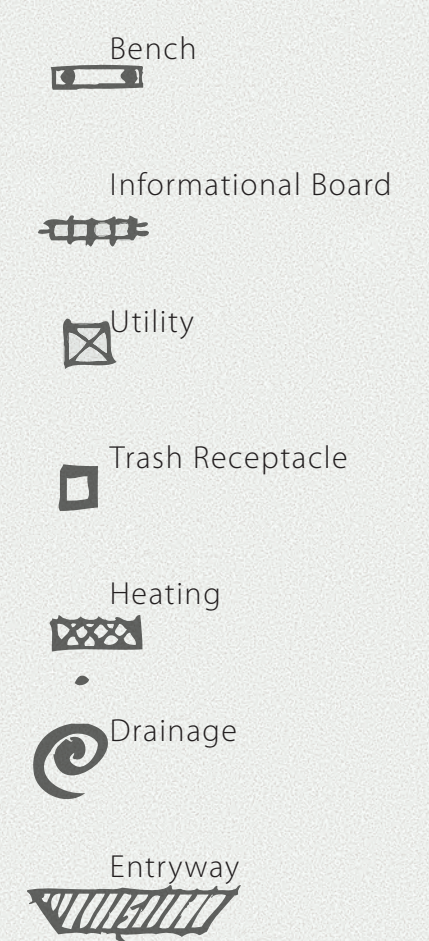
EAST END

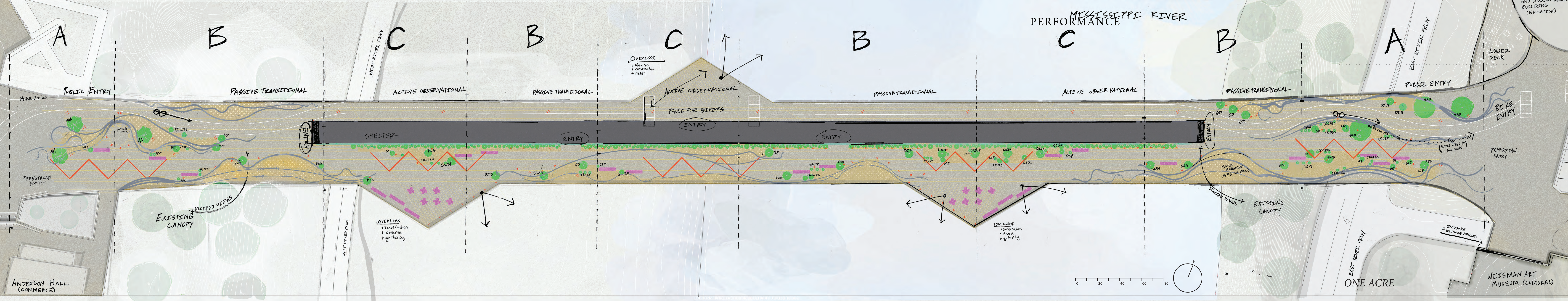


SCORES



RESOURCES





LEGEND



Plantings



Mulch



Lighting Features



Public Utilities



Curvilinear Planting Beds



Building



Oak Savannah Grasses

OWNERS

Hennepin County, MN
Minnesota Department of
Transportation

LOCATION

Washington Avenue
Bridge, County Road 122
University of Minnesota,
Minneapolis, MN 55455

CLIENT

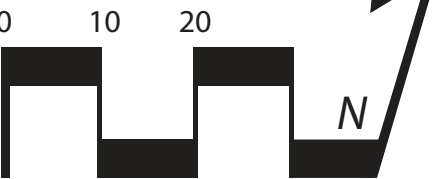
Thomas Ritzer
University of MN Campus
Landscape Architect

DESIGNER

Adam Boole

SCALE

Scale: 1" = 20'



SHEET NO.

1
OF
3

PLANTING LIST

QTY.	SYM.	COMMON NAME	SCIENTIFIC NAME	SIZE
DECIDUOUS TREES				
3	SAB	Autumn Brilliance Serviceberry	Amelanchier x grandiflora	3/4 CAL
DECIDUOUS SHRUBS				
2	DN	Diabolo Ninebark	Physocarpus opulifolius 'Monlo'	5 GAL.
9	SWN	Summer Wine Ninebark	Physocarpus opulifolius 'Seward'	5 GAL.
34	RTD	Red Twig Dogwood	Cornus sericea 'Cardinal'	5 GAL.
9	DIH	Tartarian Dogwood	Cornus alba 'Bailhalo'	5 GAL.
8	GD	Gray Dogwood	Cornus racemosa	5 GAL.
EVERGREEN SHRUBS				
3	AA	Pyramidalis Arborvitae	Thuja occidentalis 'Pyramidalis'	5 GAL.
19	CJBC	Blue Chip Juniper	Juniperus horizontalis 'Blue Chip'	5 GAL.
15	SY	Spreading Yew	Taxus x media 'Densiformis'	5 GAL.
2	CSJG	Chinese Juniper	Juniperus x pfitzeriana 'Sea Green'	5 GAL.
7	SJBF	Savin Juniper	Juniperus sabina 'Blue Forest'	5 GAL.
4	DSG	Dwarf Goldmound Spirea	Spiraea japonica 'Goldmound'	5 GAL.
7	MJ	Medora Juniper	Juniperus scopulorum 'Medora'	5 GAL.
224	CJP	Creeping Juniper	Juniperus horizontalis 'Plumosa Compacta'	5 GAL.

PERENNIAL MIX

Summer	PY	Paprika Yarrow	Achillea millefolium 'Paprika'	Red
	M	Masterwort	Astrantia major	Pink
	PC	Purple Coneflower	Echinacea pupuria	Purple
Fall	BS	Black Snakeroot	Actaea racemosa	White
	SM	Stonecrop Matrona	Sedum telephium 'Matrona'	Maroon
	A	Aster - New York	Aster novii-belgii 'alert'	Purple
	RS	Russian Sage	Perovskia atriplicifolia	Purple
Spring	GSD	Gentle Sheperd Daylily	Hemerocallis 'Gentle Shepherd'	White
	RCB	Regina Coral Bells	Heuchera 'regina'	Pink
	FFMN	False Forget Me Not	Brunnera macrophilia	Blue
	MT	Moonbeam Tickseed	Coreopsis verticillata 'Moonbeam'	Yellow

OAK SAVANNAH GRASS MIX

Junegrass	Koelaria cristata	small
Hairy Grama	Bouteloua hirsuta	small
Blue Fescue Grass	Festuca 'Elijah Blue'	small
Purple Fountain Grass	Pennisetum setaceum 'Rubrum'	medium
Switchgrass	Panicum virgatum	medium
Needlegrass	Nasella viridula	medium
Indiangrass	Sorghastrum nutans	medium
Prairie cordgrass	Spartina pectinata	medium
Sideoats grama	Bouteloua curtipendula	medium
Slender Wheat Grass	Agropyron trachycaulum	medium
Virginia Wild Rye	Elymus virginicus	large
Big Bluestem	Andropogon gerardii	large
Bluejoint Grass	Calamagrostis canadensis	large
Canada Wild Rye	Elymus canadensis	large

SCORING THE SITE

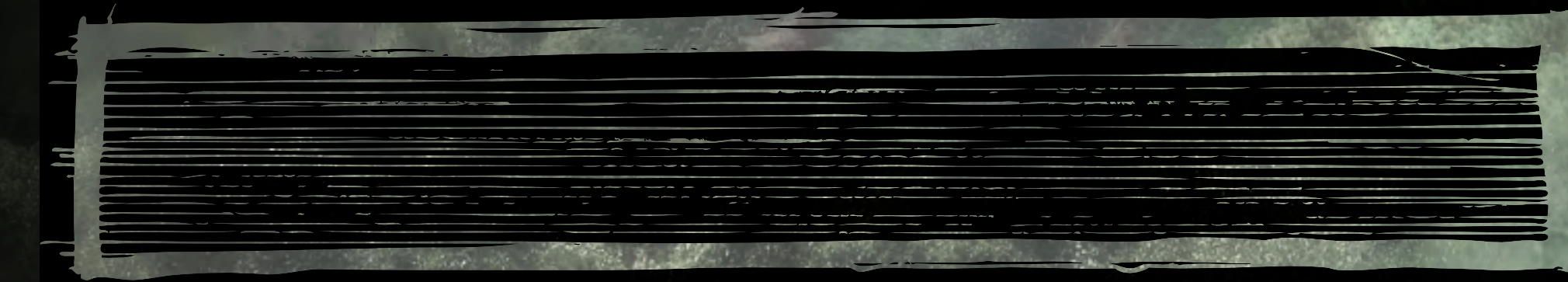
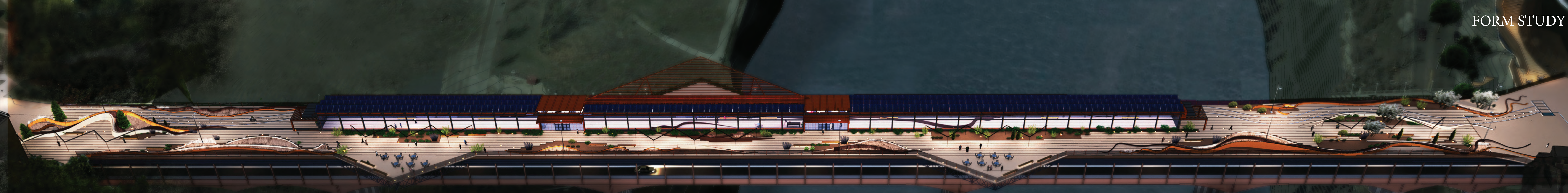
Lawrence Halprin, an influential American landscape architect, came up with a process for visualizing the various fields of art as a symbolic process. In his book *The RSVP Cycles* he documents his creative process on many of his works through “scoring”. He describes scores as “symbolizations of processes which extend over time”. This process is how music is composed, but Halprin came up with a system for extending this process to fields other than music. He explains that design, especially landscape architecture, is very much process-oriented rather than result oriented and a system of scoring can demonstrate this concept as a series of symbols.

This way of scoring inspired a way to analyze the Washington Avenue Bridge in a unique, rhythmic way. This graphic is a score of the Washington Avenue Bridge and aims to communicate the process of design. The analysis comes from rhetorical sources, website archives, and site visits.

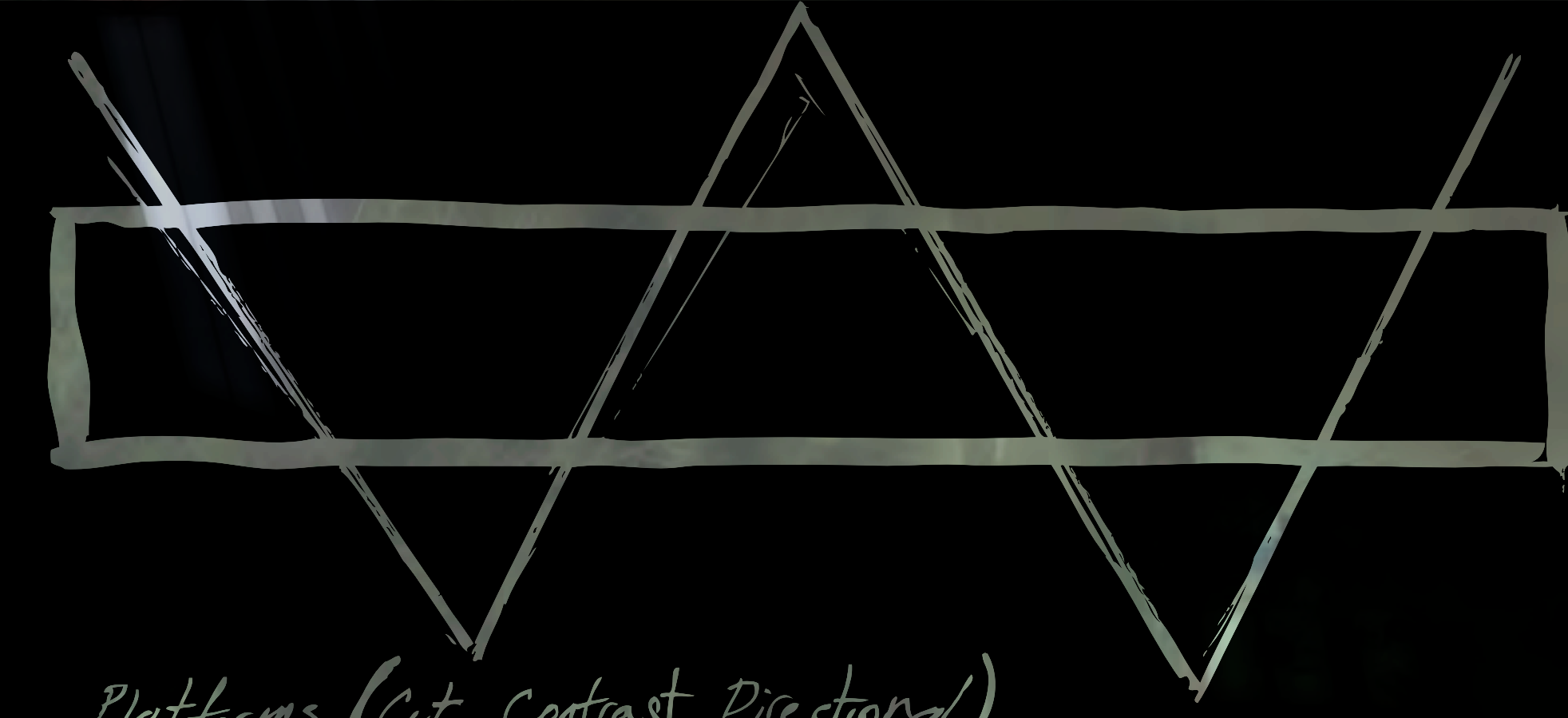
PERFORMANCE

After analyzing the sites existing features including its biological, cultural, and physical data the bridge can be divided up into different zones based on site resources and human activity. These zones are marked as Public Entry, Passive Transitional, and Active Observational. The end result is a pattern very similar to a musical composition with rhythmic spacing: ABCBCBCBA. Each space is defined by its unique biological, physical, and cultural features and these features are extended into the design space.





Lines (Horizontal, Leading.)



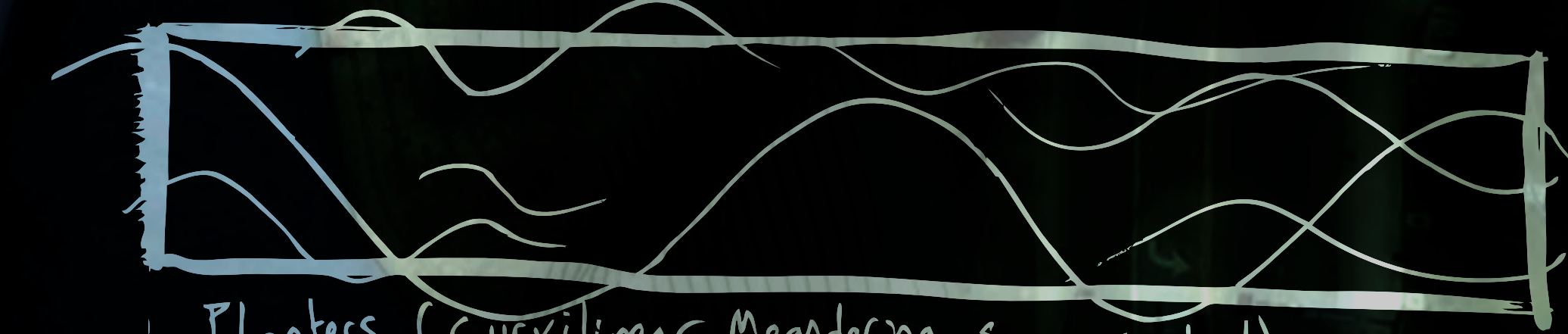
Platforms (Cut, Contrast, Directional.)



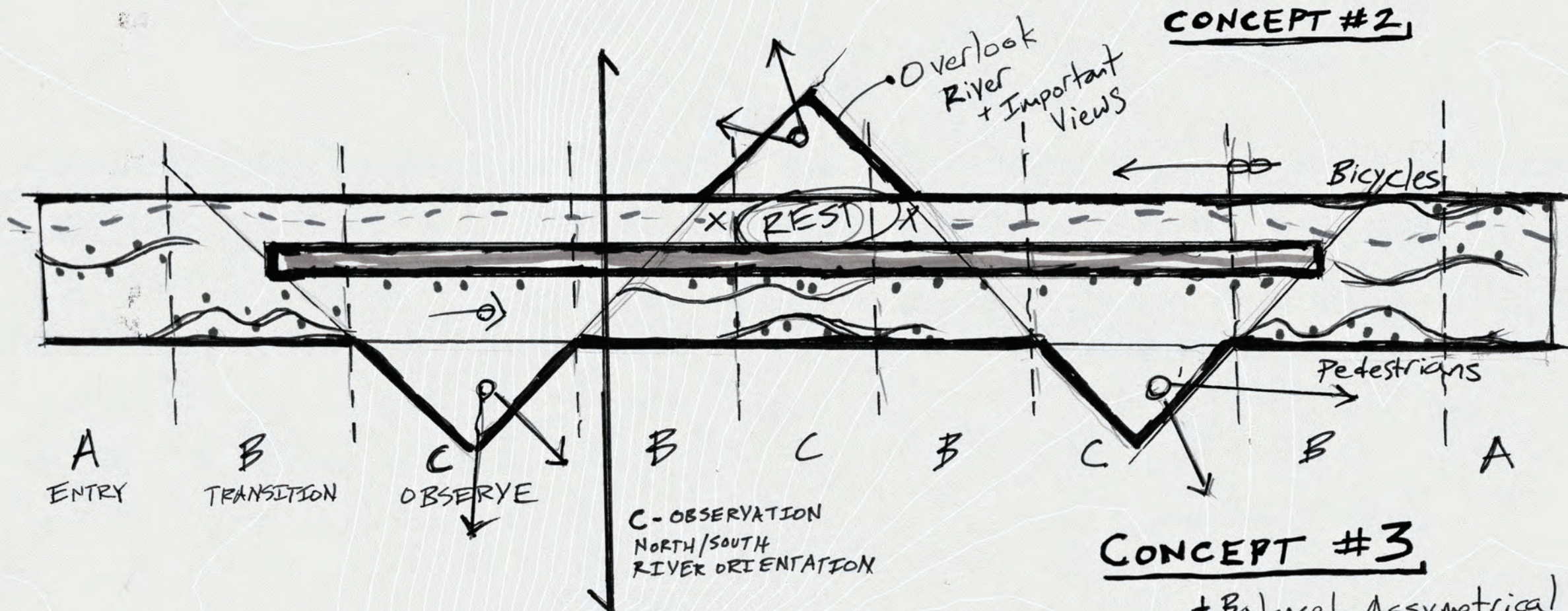
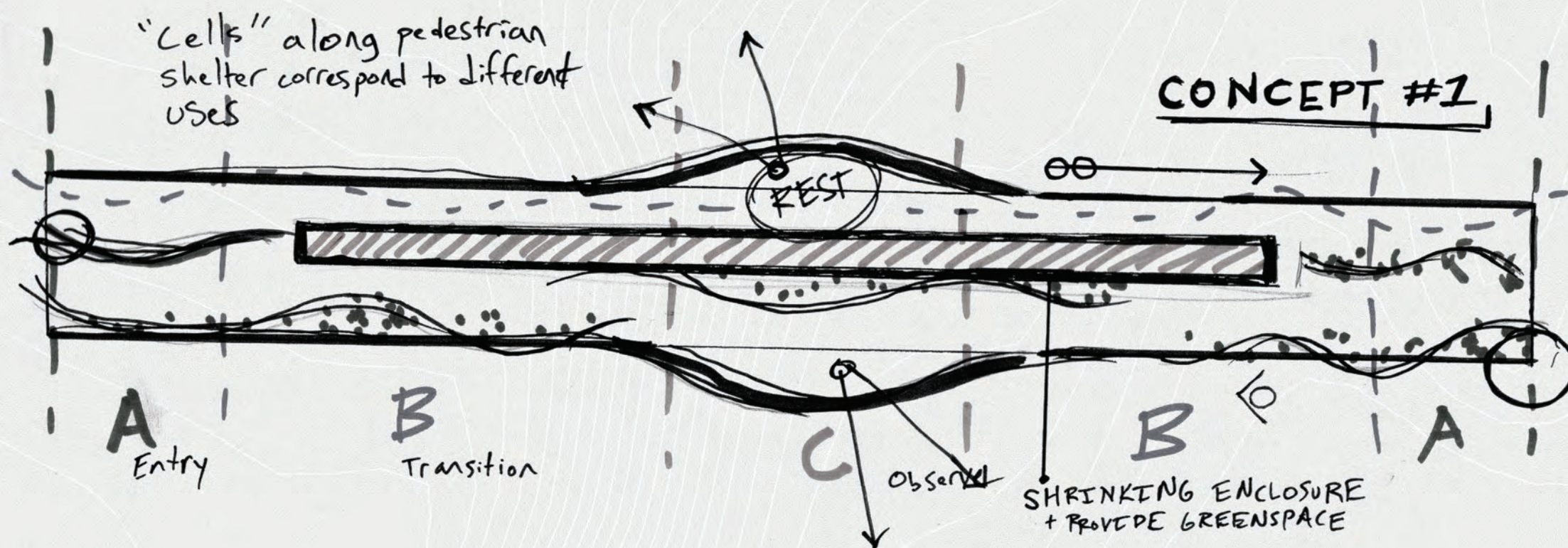
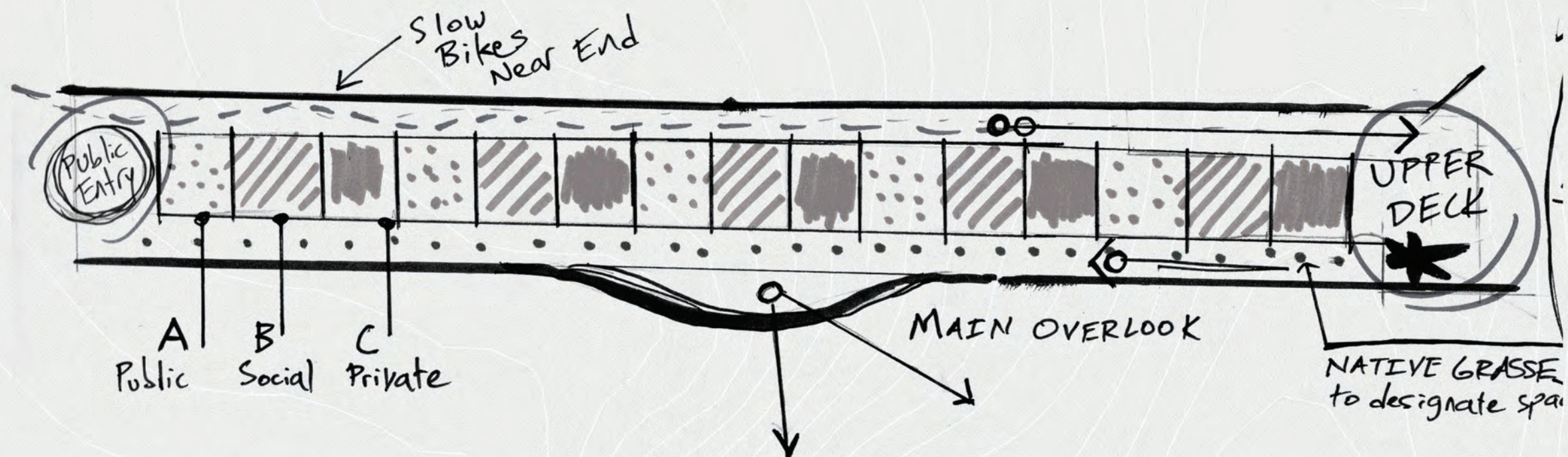
Benches, Tables, Plants (Accents, Action)



Lighting (Accents, Contrast, Direction)



Planters (Curvilinear, Meandering, Space Control)

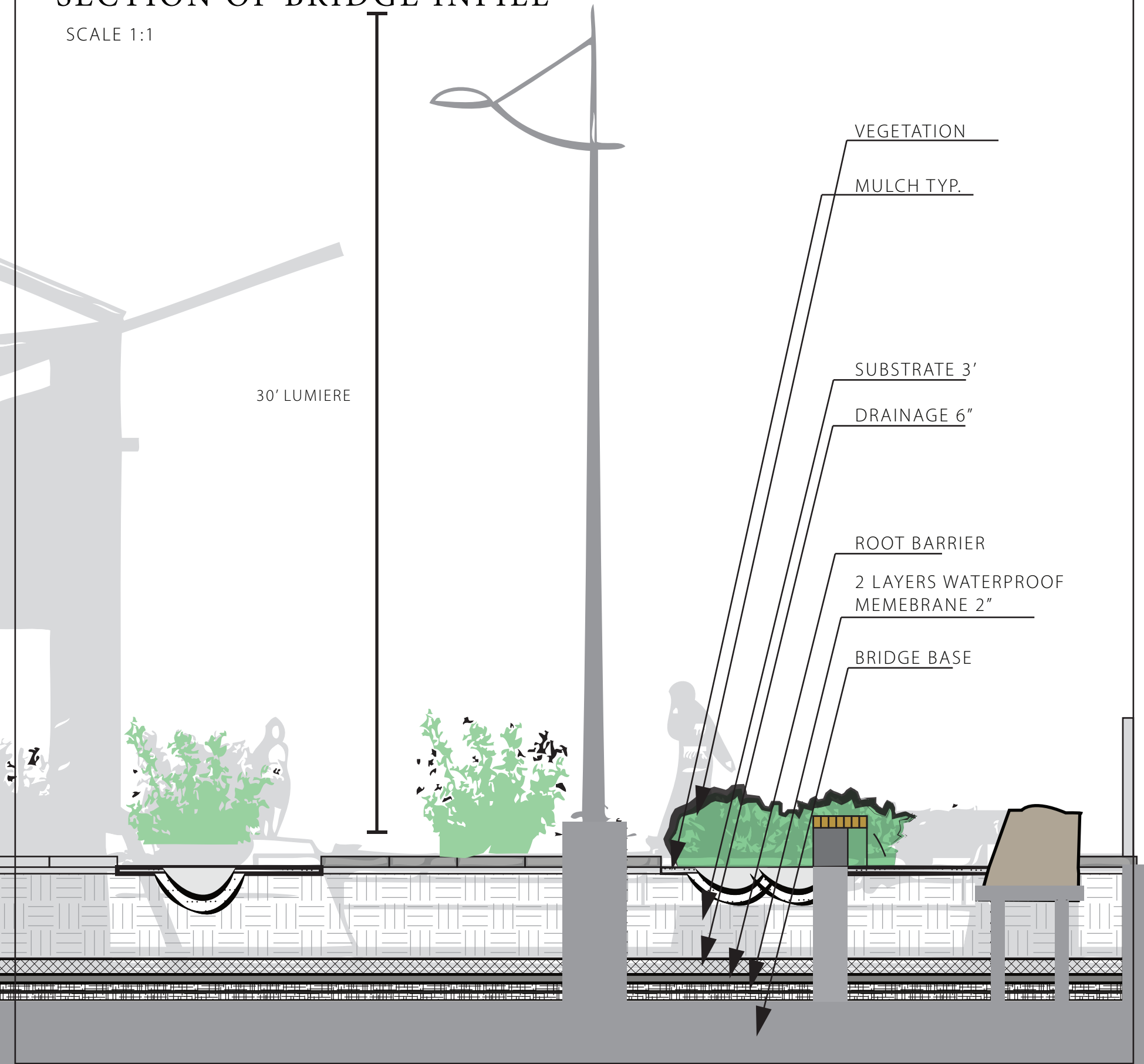


CONCEPT #3

- + Balanced Assymetrical
- + Balanced Symetrical (Forms)

SECTION OF BRIDGE INFILL

SCALE 1:1





INTERIOR OF PEDESTRIAN ENCLOSURE

[ART SHOW]

DESIGN DISCUSSION

The forms were inspired by the motation study which reflects Halprin's work in the RSVP cycles. The design is largely rhythm based as the experience is modeled after analyzed trends happening on site. These trends were marked by observing the motation of people, where they would stop along the bridge, where they would take photographs and video, where people would enter and exit the pedestrian walkway, etc. Observing people and noting site resources allowed me to come up with different zones for the bridge where different activities would take place. These zones are marked ABCBCBCBA, and stand for Public Entry, Active Observational, and Passive Transitional. A common theme throughout the design is connecting the user to the Mississippi river.

A . PUBLIC ENTRY

The public entry spaces are marked by curvilinear forms and the jagged edges of the light features. This effectively offers the user samples of both experiences in the passive transitional areas and active observational areas. The pathways are curvilinear as well, this helps to break up speed and reduce bicycle and pedestrian collisions. The collisions are reduced because the meandering trail forces bikers to face both directions before the pedestrian crossways.

The planters are made out of the various rock formations of the Mississippi. These planters curve and cut through the site. The natural grain of the stone is a unique feature that adds texture and beauty to the planter beds. These formations include the St. Peter Sandstone, Glenwood Shale, and Platteville Limestone. Each planter is filled with grasses native to the Oak Savannah region hinting towards the historical Mississippi biome. The inexpensive version of this is to create the curvilinear forms with cement instead and color them accordingly.

The curvilinear forms offer the user an abstract connection to the river while at the same time concealing views to the river. This is an important design feature because it creates identity for the bridge by concealing views and then offering the best views. This rhythm is similar to how a musical score will contain a crescendo to the main verse.



B . PASSIVE TRANSITIONAL

These were areas where people were least likely to stop. It is marked by few seating elements (never exceeds 2) and the ability to transition between the interior and exterior. The curvilinear forms are more expressive in nature directing the user into the next area and containing more bottlenecks to focus pedestrian mobility. The plantings are prairie grass dominant, alluding to the natural biome of the Mississippi and limiting visibility of the river itself to preserve the greatest views for the active observational areas.

The lighting is also mainly underlighting. The lighting itself is a rhythm with the underlighting being very accented and sharp creating distinct accents in the landscape. The goal is to emphasize certain features like the curvilinear planters furthering the expression of curvilinear forms. It also places emphasis on certain formal plantings and give them the feel of being separated and specimen-like.



C . ACTIVE OBSERVATIONAL

These were areas people would often stop to observe. Originally, these areas were transition spaces to the outside and inside on the southern part of the enclosure. Seating elements were concentrated around the entrances. The views in these areas included great views of the river, the Weismann art museum, and the city of Minneapolis (North side of bridge). This is what originally defined the space.

Now the space is designed with only one transition from the inside to the outside, located on the northern part where the bike trail goes. The space has been reduced as a transitional area and emphasized as an active area.

This is achieved by adding cantilevers which point north and south in each of these zones marked by 'C'. These cantilevers draw attention to the river by literally pointing in the direction of the rivers flow. This experience is further enhanced by site features including benches which face the most interesting views and tables for seating and stopping along the bridge. These tables are useful as a space for the user to stop, socialize, and/or eat while enjoying the social dominant spaces the cantilevers offer. The most important feature these cantilevers offer is a space for students and the general public to stop along the bridge and enjoy the river's beauty. Another reason to the jagged rhythms in the active observational areas is because they contrast well with the curvilinear forms in the transitional areas, further defining the space as a separate entity and independent rhythm that coexists with the whole.

The lighting plan is mixed, but dominated by the jagged lights which also point north and south towards the river. These lights are overhead and serve to not only contrast the curvilinear planters, but draw the person from the zone B into the current zone C. The lights are also set back towards the enclosure to not distract from the rivers beauty.

