

SONGLINES AND GROUND LINES:
MUSIC AND LANDFORM SHAPING EACH OTHER

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A thesis

submitted in partial fulfillment of the
requirements for the degree of

Master of Landscape Architecture II

University of Washington

2012

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Program Authorized to Offer Degree:

Landscape Architecture

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Terrarium: <http://archive.org/details/LunarGarden3Terrarium>

Music as Ecology

Analog Ecology with Jordan Bell: <http://archive.org/details/AnalogEcologyMusicWithJordanBell>

Analog Ecology with Zack Grey: <http://archive.org/details/AnalogEcologyMusicWithZackGrey>

Yakima's Flexible Urban Park

New Braid 1 Responding To: <http://archive.org/details/NewBraid1RespondingTo>

New Braid 2 Responded To: <http://archive.org/details/NewBraid2RespondedTo>

New Braid 3 Chance Overlay: <http://archive.org/details/NewBraid3ChanceOverlay>

Extras

Improved Re-Recording of New Braid 2 Responded To: <http://archive.org/details/Re-recordingOfNewBraid2RespondedTo>

New Braid Interoperations (cycles through the three variations of New Braid): <http://archive.org/details/NewBraidInteroperations>

Relational Earthwork 1: <http://archive.org/details/RelationalEarthwork1>

CHAPTER 1: MUSICIAN AND LANDSCAPE ARCHITECT

I am both a musician and an aspiring landscape architect. This thesis is the beginning of my inevitable exploration into how the two creative practices of making music and making landscape architecture are related, holding the potential to enrich and influence one another.

I have used the opportunity presented by a thesis to explore and further define my creative process. In light of this re-examination, for the course of this particular project I've chosen to distill landscape to its essence— which I define as landform. My goal for this project is to design the landform of a complex urban site. I believe the ground is the most elemental dimension of the landscape. The ground's shape directs how water moves, how wind moves, where ecosystems develop, where structures are placed, and how people move, interact, and perceive their surroundings. Its soil composition and its sculptural qualities help determine these dynamics, serving as a stable organizer for a changing landscape. Compared with plant communities, human uses, and other ephemera, landform is one of the slowest changing elements in landscape's flux. Through the design of landform, landscape architecture has the potential to program natural processes and human interactions in ways that are effective and intentional, yet open-ended and flexible. This approach to landscape architecture is more ecological than deterministic.

In a corresponding way, I am also distilling music to its foundation, by focusing on bass as an organizing element.

I am interested in the *design of places*, including both the invisible place experienced while listening to music, and the physical place experienced while walking through the landscape. As parts of places, the landform and the bass play corresponding functions in their respective realms. The design of one may therefore suggest appropriate approaches to the design of the other, through similarities in structure, process, and narrative.

This endeavor recognizes the extremely abstract nature of music as a representational medium, conceding and accepting the inherent limitation that music can only truly depict *itself*, just as each particular landscape can obviously only be itself. I am approaching music as a pure designed experience, which can be designed just as artfully as a place. I am not using music or sound as a means of representing landscape, which would make music subservient to landscape architecture. I've also made it a point in this project to avoid designing a landscape that has anything programmatically to do with music, and

to avoid soundscape design, because such emphases would blur the more abstract (and potentially richer) way I am trying to use music in my design process.

The countless potential relationships that music and landscape could have are limited only by the imagination. For the sake of reaching a depth of exploration, this thesis only establishes one such relationship: bass and landform as analogs, in an act of parallel-place-making between music and landscape architecture. These two elements will start a dialogue on composition.

The thesis begins with an introduction to my own experience in landscape architecture and how this topic came to be relevant. This is followed by a review of related work in the fields of music and the built environments, outlining where this project fits in. The project's design investigations begin in chapter 4, with a brief conceptual proposal for a site on the moon designed through a narrative evoked by a composition of music. The thesis' main body of music and landscape architectural investigations occurs through the design of a 211 acre site in Yakima, Washington, which will be introduced in chapter 5.

CHAPTER 2: WHY IS THIS MY THESIS TOPIC?

As architects, designers, and artists, we are constantly required to translate between the abstract or conceptual and the concrete, in order to bring our intentions into being. Indeed, all artistic production involves the translation of an idea or feeling into a form that speaks to others. (Thun, 103).

DESIGN ACTIVISM

At the beginning of the 21st century, our globalized culture seem to have a blurred recognition of the landscape forces which created us and which directly allow us, as a species, to exist. This loss of recognition is leading to impending crises across the globe.

The 20th century was marked by modernization, mechanization, and rational methods. Beyond fending off nature's destructive forces and fulfilling everyday needs, technology has maximized the potential for resource extraction while maintaining the market demand for it. For citizens of the world's wealthier countries, the illusion has been established that life's necessities come from a stable stream of consumer goods, as capitalist economic structures encourage competitive patterns that reward the individual in the short term. Simply put, methods for maximized resource extraction are motivated by short term incentives and vision. This pattern has been in place just long enough for its destructive repercussions to start gaining visibility, while also having become the foundation for a global society, gaining momentum. For the next generation of designers, it will be critical to find ways of sustaining the world within its means.

Professional disciplines in the built environments have the potential to wield an influence over patterns of human habitation, directly addressing these complex issues. Landscape architecture is particularly well-suited for this, due to its omni-scalar concern with landscape patterns and processes, urban systems, ecological dynamics, space, culture, aesthetics, and interdisciplinarity. This site-specific art has the important capability of acting locally, while thinking globally.

In this context, I believe that my position as a landscape architect must be one of design-activist. This differs from what I see as a passive approach, where landscape architecture exists only as a service-profession subject to a client's financial influence. Thus, I have spent the last two years in pursuit of a post-professional Master's Degree in Landscape Architecture from the University of Washington, whose program provides an exploratory

environment to cultivate the skills of the globally situated, urban-oriented design activist. I will briefly describe my path at the university, which has led me to this thesis.

COPENHAGEN

My education at the university began with Nancy Rottle's Scan | Design study tour to Copenhagen, where I experienced a dense, walkable city that is quickly re-orienting around bicycle infrastructure. Copenhagen's transformation into a human-oriented streetscape (as opposed to car-oriented) began through advocacy movements decades ago, to permanently close traffic in certain downtown streets, encourage a café culture, and foster humans' interactions with each other and their city through manipulations in the built environment. In addition to experiencing the human-oriented central city, during my two week tour I personally connected with this lively city's culture through the multiple faces of its music, from attending classical concerts of Vivaldi and Ravel's music, to an electronic DJ masquerade party and an underground European death metal festival. These experiences resonated with me as deeply as my concurrent firsthand explorations into Copenhagen's urbanism.

Following the tour, the academic application of this travel experience was to engage the re-design of Seattle's central waterfront. My class functioned as one single interdisciplinary design team, so that communication and coordination were inseparable from design. This experience convinced me of the importance of interdisciplinary collaboration, connecting across fields and sharing expertise.

TOKYO

In the Spring of 2011 I participated in the final BE Lab. The BE Labs (short for Built Environments Labs), were a series of six advanced interdisciplinary design studios offered by University of Washington's College of Built Environments, which engaged emerging problems in contemporary urbanism. The series of studios fostered exploration over instruction. The studio I took was led by Thaisa Way and Ken Oshima, and looked at climate change and uncertain futures on the Pacific Rim. Our site design was a center for urban climate change, to be located on the Ballard waterfront in Seattle. My design team, comprised of myself and two Master's of Architecture students, proposed a site design where parallel "stripes" of distinct landscape conditions relevant to the site (including stripes of forest succession, architecture, water, urban agriculture, deteriorating pavement, and earthworks) melded together as they slowly met the water's edge. The result would be an open-ended landscape of ecotones, where scientists, artists, citizens and people of all backgrounds could all engage climate change on equal ground.

To convey the imaginative possibilities of this site, our representational techniques made iterative use of laser-cut physical models, rough hand-cut models, hand drawn section-perspectives, digital sections, hand-digital hybrids, text and narration, contour plans and floor plans. Our final presentation images took influence from the drawings of Japanese architect Junya Ishigami. Around this time, the work of certain contemporary Japanese architects including Ishigami, Sou Fujimoto, Ryue Nishizawa, and Kazuyo Sejima began to catalyze my inspiration for landscape architecture, as these designers' conceptual thinking made no distinction between the design of indoor and outdoor space.

Our design studio was in fact followed by a study tour to Japan, placing Seattle's context within the Pacific Rim. Originally scheduled for the start of the studio, the trip had to be postponed because of the catastrophic events of March 11 2011, when an earthquake and tsunami took the lives of thousands of Japanese coastal dwellers and put the country on the brink of a nuclear meltdown. The terrible events forced us to reflect on urban resilience, and how the most disruptive manifestations of global climate change will most likely occur as catastrophic events of increased frequency. The value of imagination and inspiration becomes essential as designers grapple with these problems.

My inspiration to pursue music as a way of engaging landscape architecture began while I walked the streets of Tokyo with my professors and classmates. My second night in Japan, one of my classmates and I tracked down an eclectic noise-rock concert in a tiny, tucked away club in an alley in the chaotic, illuminated, bustling Shibuya district of Tokyo. The band we came to see was called "Z" and featured a drummer whom my classmate knew the work of. The three members of this band included an expressive, energetic lead singer who noisily played free-form alto saxophone, a guitarist who played angular, discordant, and repetitive chord-based melodies, and the drummer whose consistency, power, repetition, and intricate precision contrasted with the expressive lead singer's free-form chaos. This tense dynamic of the music's form was something I found extremely compelling and exciting. In the following days, as I explored Japanese gardens, metabolist architecture, and the urban fabric of Tokyo, I began to see the landscape's structure as multi-layered, textured, composed, improvised, and fluid as music. Especially in Zen gardens, where deliberate craft becomes legible, I began to see landscape and music as very similarly composed: the earth became a correlation to bass, structures were like percussion, plants a correlation to guitars, and people who move through the space were akin to the singer's voice. I noticed the detailed and carefully chosen materiality of the environment around me, and was reminded of how music has the same attention to materiality: a physically crafted instrument made of particular materials produces a distinct sonic texture, thus the musician carefully chooses his or her instruments.

As an outsider, I cannot expect to deeply appreciate the meaning behind many of the things I saw in Japan. However, I was deeply impressed during these travels by what I perceived to be an appreciation of design for art's sake, and a reverence for craft. Music echoed in my mind (when not moved to meditative silence) as my body moved through the beautifully crafted spaces of the Naoshima Art House projects, Nishizawa's Teshima Museum, Yukinori's Benesse post-industrial transformation, Kawai Kanjiro's folk-art house, and the ancient gardens of Kyoto. These experiences convinced me that I should trust the art which most intuitively speaks to me, which is music, as I pursue the publicly-interested art I'm dedicating my career to, which is landscape architecture. It became clear that the most valuable thing I could investigate with my thesis would be how I operate as a designer-musician.

LIMA

Later that summer, my studies took me to Lima, Peru, for a month. I had taken Ben Spencer's design activism studio the previous winter, which looked at life in urban slums through the development of prototypes and site designs for Lomas de Zapallal (one of Lima's slums). This summer trip, also led by Ben, was a course on participatory design with communities, building off the research from the winter design studio, and continuing University of Washington's emerging partnership with Lomas de Zapallal. This ended up being the most personally meaningful project I had undertaken in landscape architecture to that point.

It first involved a lesson in adaptability. Desert Lima initially presented itself as an alien, intimidating world of nine million people under a foggy sky; a tough, desperate city of slums, choking on car fumes. I knew it had a reputation for crime, and I spoke only a little Spanish. I needed to be careful about what to eat and drink, and I was ready to be stared at as a visible foreigner. I had spent some time in other Latin American countries before, but Lima's grit was on a scale I had never seen, as squatters' shacks densely covered the hills and disappeared into the fog, by the thousands. What astounded me, therefore, was that only two weeks after my arrival I had come to feel nearly at home and comfortable in my new surroundings. Upon our arrival to Lomas de Zapallal, my classmates and I were greeted warmly and enthusiastically; as our class began to facilitate design workshops with the community, collaborative informal drawings bridged the language barrier; as we began to form a routine of our daily work, local residents became accustomed to seeing us around; and as our collective design for a school landscape became reality, we all worked side by side to execute its construction.

This was my first time helping to facilitate community design workshops. It was also the first time a design I had substantially been involved with had been built. In the course of

four weeks, with only 5,000 dollars, we facilitated the design and construction of a greywater-fed educational garden for Lomas de Zapallal's school. The design featured a paved path to navigate the campus' sandy slope, a peaceful sitting and teaching area offering refuge during the school's chaotic recess, and a collection of labeled native and ornamental trees, fed by a subsurface irrigation system which recycled the hand-washing station's wastewater. The project was successful because of the organization, motivation, and dedication of the more than 300 parents who attended the design workshops and helped with the construction. It became fundamentally clear to me that design in the built environments is a concern of human well-being, and that meaningful projects happen because there is a community drive. This experience in Peru taught me about life in urban slums effectively but only by circumstance; the most universal and profound lesson it taught me was the great importance of designing with communities. I felt like I had used my skills as a designer to give voice to a motivated community's needs, and that if I could adapt to do it here, I could certainly engage communities in my own home country.

After the course ended, I took a quick trip into the Andes, to see Cuzco and the Inca site of Machu Picchu. The Andes had a striking beauty and color, which differed greatly from Lima's bland and ubiquitous sand and fog. The city of Machu Picchu, left abandoned for half a millennium, had become the most beautiful garden I had ever seen; a network of spaces of stone and grass was set upon a mountaintop among extremely steep, high ridges and low, lush valleys. Small clouds hovered halfway up these mountains. It was a place where alpine and rainforest ecosystems converged. Forces of entropy, with some human curation, had crafted these quiet ruins into an awe-inspiring place.

Part of me was astonished that so many Peruvians have left the rugged beauty of their ancestral Andean landscape, in order to urbanize and help build the slums of Lima. That the slum life I had just come from would be chosen over life in the Peruvian mountains evokes narratives of globalization and struggle; narratives I had barely uncovered as a visitor.

ROME

The next design studio I chose at the University of Washington took place in Rome, Italy, in the Fall of 2011. The course focused on urban history, food culture, and water infrastructure, culminating in a design proposal for a Museum of the Tiber River. My classmates and I lived in the city for about two and a half months, which was enough time to start adapting to the everyday culture of Roman life.

The transition from living briefly in the foggy, gritty slums of Lima to now living in the affluent, Mediterranean historic core of Rome was a tremendous contrast. In Rome, there was a vibrancy and a life that took place in public space. Narrow and irregular

cobblestone streets, edged by artisanal shops of all kinds, led to piazzas filled with people and musicians. There was an appreciation for food, the ingredients that go into them, where they come from, how it's prepared, and how much time is spent together sharing a meal. This liveliness seemed to come from the warm air, the exceedingly deep cultural roots, and the abundant Italian landscape of farms, hills, woods, and villages set beneath that distinctive sky captured in Michelangelo's paintings.

In many ways the time spent in Italy was a survey of urban life's finer things. Between studio work, tours, meeting Italian architects, sketching the historic city, sipping espresso, and tasting fresh pasta and glasses of wine, I spent a good deal of time crafting the plan for this thesis; conducting initial research, selecting a site to design, and establishing my goals. An inspirational morning was spent touring the American Academy in Rome, where I could imagine myself at a future point in my career pursuing music and landscape architecture as one project. Rome provided a good environment for reflection on my own creative practice and its global setting.

I will close the chapter with the following reflection on my developing thesis topic written while I was in Italy:

[Exploring the related ways in which music and landform are creatively composed, as a thesis topic] sounds kind of frivolous and crazy, maybe too artistic, after all the dead-serious urban issues I've engaged in my education. I've looked at the world's most populated city, and observed its dependence on electricity and susceptibility to rising sea level; I did a project in a city on the dire brink of climate change, where millions of its residents already live in slums, and where I learned how to design through community participation; and now I'm in the city where western civilization practically began, learning from a densely layered history how systems of food and water have shaped the city. I've done shorter trips too, looking at numerous [American] national parks, as well as at the reuse of industrial ruins and treatment of contaminated land [at Duisburg Nord in Germany]. I thought about this the other day, and thought, I bet it could sound crazy to some people that as my culmination to all this, I want to experiment with creating music to design landscape.

I didn't really try to find a rational justification for why I picked this topic, it mostly just felt right. It has to do with how music is the art form I'm most obsessed with, have the most endless attention span for, and the best intuition at creating; therefore, if there could possibly be a potential for applying musical creativity to landscape, that would be pretty much perfect for me. A thesis is the perfect way to explore this topic rigorously, in-depth, and with the most support. And when else

in my life will I have the opportunity to do a thesis project? Learning how I operate as a designer is the best thing I could possibly explore. I also know that one's work cannot be totally selfless if it's going to be personally sustaining, and so to really operate well, I have to recognize what makes me "tick" and bring that into my work.

But further; I know I want my career to engage all those issues I've experienced through my travels. And sometimes, it's all overwhelming. The other day though, I was listening to a particular song I like, and I felt this kind of inspiration I can barely describe; and it occurred to me that to really engage the urban issues I want to design for, to really rethink how things are done and radically reinvent and inject some hope into these situations, I'll have to tap into as much inspiration and rich imagination as possible, and for me, music is the way into that.

It felt great to arrive on that last thought the other day, because I hadn't been trying to rationally justify why I went with this thesis topic; and all of a sudden, I had this additional justification for it which to me seemed really rational, and really did fit as a strong personal "next step" after the themes from all my traveling. It was one of those cases where by following initial intuition, rational justification eventually makes itself clear.

CHAPTER 3: THE CONVERSATION SO FAR

I am seeking how the design of music and the design of landscape are related, and how they could each influence the other. The task I am primarily concerned with is one of translation: how can one creative act, in a certain medium, inform another creative act in an entirely different medium? My long-term goal is that through practice in the translation between music and landscape, hybridization will eventually emerge, yielding one seamless practice. The immediate goal of this thesis is to establish the beginning of the process, though an initial act of exploration.

I start by directly examining overlaps between music and landscape architecture. Published explorations into this overlap are infrequent, and none address a designer and musician as one. Next I examine literature concerning architecture and music, which has been explored more often. Following this, I open the research to include the *dynamics* shared between landscape and music which particularly interest me, including improvisation, temporality, and collaboration. I conclude with a brief review of landform as a medium, its ecological potential, and my own speculations into its relation to minimalist and punk music.

LANDSCAPE ARCHITECTURE AND MUSIC

Although I have found few explorations into music and landscape architecture influencing one another, the research contains a satisfying (if brief) range; from a band composing an experiential soundtrack for Central Park, to a landscape architect designing a garden to depict a Bach cello suite, to landscape architects and urban designers who use principles and structures from music in ordering their designs.

The music group Bluebrain have made use of new technologies to make what they call “location-aware” albums. Their 2011 album for Central Park, for example, takes the form of a smartphone app. The composers have digitally mapped out the park, and assigned custom-composed pieces of their music for specific zones of the park. Through the use of the phone’s built-in GPS, the phone recognizes which zone the listener is walking through, and plays the piece of music composed for that particular place. As the listener walks from one zone to another, these pieces of music briefly overlap. The music is composed so that the overlaps and transitions, which cannot be planned (except through the spontaneity of the listener’s walk), sound natural no matter how they occur. The result is a musical experience for the listener that the composer is not in direct control

of. Depending on how the listener walks through the park, how long they stay in each place, and which different zone they walk to next, each person who listens to Bluebrain's Central Park album will have a completely different musical experience which is precisely crafted for their specific walk through the landscape, in real time. This is a musical work differing entirely from music's current standard modes of presentation (the recorded album and the live performance). Bluebrain's work also depends entirely on a specific piece of technology (the smartphone) to be experienced. It also only works in the one specific place for which it has been composed (Central Park). This could be called landscape architecture shaping music.

Published explorations into the use of music to influence landscape architecture are virtually nonexistent. One rare example is Julie Messervy's 1999 collaboration with cellist Yo Yo Ma on the Toronto Music Garden, in which six designed garden spaces correspond to the six movements of Johann Sebastian Bach's First Suite for Unaccompanied Cello. The length of the path through these spaces is timed to align with the experience of listening to this piece of music, as the forms of the garden express the various moods and movements in their specific order. The overall approach to the design takes Bach's piece as a fixed composition, depicting the music through the permanent physical forms of a garden walk with one set path, sculpted with the level of intentionality Bach himself may have employed as he chose each note for his composition. A visitor can listen to Bach's piece on headphones and walk along the path, experiencing Messervy's spatial interpretations of the music in time (Messervy). Some of the spaces double as outdoor performance areas, incorporating music into the garden's program.

Messervy explains that her method of spatially interpreting music is the product of her personal impressions, feelings, and ideas that are inspired by the music (Messervy). Naturally, any designer working on this project would have developed a unique and differing interpretation. This speaks to the important point articulated by many creative practitioners: music is incredibly abstract.

Messervy's example may be the only well-publicized instance of a landscape architect working directly with music in shaping space. In this case the designer did not compose the music, and the designer treated the music as a fixed composition, and the designer's interpretation of the music into spatial form was personal and subjective.

Kevin Thwaites and Ian Simkins, in their 2007 book Experiential Landscape: An Approach to People, Place, and Space, explore ways of analyzing and designing the urban landscape based on how it's experienced by people on the ground, instead of treating the environment more abstractly as a system on a map. They use an analogy: "Multi-layered musical anatomy arises from the complex interplay and blending of sound

expressions at different scales working together” (Thwaites and Simkins, 39). They use this analogy to describe the interplay of different types of spaces at different scales, which together compose the urban environment (the European streetscape, especially). Thwaites and Simkins distill spatial experience to four primary elements: *center, direction, transition, and area*. The authors argue that urban spaces are experienced based on varying proportions and combinations of these four elements. This reduction and codification sets up basic principles that can be deployed towards composing rich spatial complexity, in much the same way that western music makes use of a set of basic parts (twelve notes) which can be arranged and deployed towards making rich, multi-layered, and highly experiential compositions (Thwaites and Simkins).

This kind of codification is similar to Christopher Alexander’s more comprehensive “pattern language”, and indeed Thwaites and Simkins cite Alexander in their own work. Alexander was the lead author of [A Pattern Language](#), a book of spatial typologies arranged by scale. [A Pattern Language](#) consists of design guidelines ranging from regional placement of town and road networks, the siting of buildings, the spatial layouts of rooms, the arrangement of gardens, and architectural details as small as windowsills and furniture; all based on principles of quality of life, health, the fostering of good social interactions, and efficient use of space and site. Complete with diagrams and brief, easily understandable descriptions, [A Pattern Language](#) offers a comprehensive set of basic architectural typologies, which can be utilized in any combination a designer sees fit. The work can be criticized for being simplistic and deterministic, but if taken as a distilled set of parts akin to “music notes”, the “pattern language” stands as a flexible system for human-focused spatial composition, with operability between multiple scales. This full recognition of scale is akin to music’s range of operation: from the sound of a single instrument playing a single note, to the patterns of a complete orchestra through a symphony.

Lawrence Halprin, while not a musician, was a highly influential landscape architect who used certain elements associated with music to advance his creativity in landscape architecture. The dance and choreography work of his wife, Anna Halprin, was a source of inspiration for his spatial designs. Both of the Halprins made use of the same system of written notation for directing human movement, a method developed in dance but which Lawrence adapted for designing space based on human movement. Anna’s art of human movement was often in response to music, while Lawrence’s art of human movement was in response to space. This suggests an important correlation between music and space, as realms within which human movement and experience occurs. The Halprins were both advocates for interdisciplinary creativity, offering summer programs during the 1960s in which graduate students in landscape architecture, architecture, music, and the arts and humanities would work together on experimental design

exercises (Halprin). The legacy of Lawrence Halprin's built projects, which have a significant presence in many major American cities, emerged from a design process which was inclusive of a variety of the arts. In their concern with choreography, Halprin's spaces function like music.

ARCHITECTURE AND MUSIC

Architecture has explored relationships of music and space more thoroughly and more often than landscape architecture has, and because of the related nature of building design and landscape design, this body of work provides an important perspective into music's potential for inspiring landscape architecture. It is worthwhile to open this section by mentioning Johann Wolfgang Von Goethe's oft quoted musing, that he sees architecture "as frozen music" (Goethe). Many architects who have examined the relationship of space and music have cited Goethe's brief but provocative idea.

The life work of Iannis Xenakis (1922-2001) comprises one of the most extensive explorations of the synthesis of music and architecture. A compilation of Xenakis' writings and writings about him was compiled and edited by Sharon Kanach and published in 2008. The volume is entitled Music and Architecture, and contains much of Xenakis' discourse on the relationships of these two creative fields.

As an engineer in Le Corbusier's Paris studio during the 1950s, Xenakis was appointed lead architect on a number of projects, despite his lack of a professional degree in the field. During this period, when not engaged in architectural work, Xenakis would study under composers Messiaen and Scherchen, and began to compose his own orchestral works. His first published composition, *Metastaseis*, incorporated principles learned from Le Corbusier's studio, such as the use of the Fibonacci sequence to structure parts of the work. Following his decade working under Le Corbusier, in the late 1950s Xenakis dedicated his creative pursuits entirely to music, though he occasionally completed architectural projects independently. He went on to apply his interest in mathematics to the development of electronic music, often using these new technologies to explore relationships between architecture and music (Kanach).

Metastaseis incorporates the use of *glissandi*, a technique where musicians glide between notes on their instrument, instead of transitioning directly. Xenakis used this structure to inspire the interaction of architectural surfaces on his Philips Pavilion at the 1958 World's Fair. This temporary concrete building employed ruled surfaces (warped surfaces between differently-oriented edges, often seen in tensile structures). To Xenakis, this form could be architecture's *glissandi* (Kanach, 64). He is quoted: "as in the music, here too I was interested in the question of whether it is possible to get from one point to another without breaking the continuity" (Kanach, 99). These two different kinds of work by the

same artist, composed at about the same time, link innovations in architecture to those in music.

Another important architectural work by Xenakis is *Undulating Glass Panes*. *Undulating Glass Panes* is a set of glass walls in the La Tourette monastery, where the frames holding the glass panes are spaced in clusters which gradually range from densely spaced, to spread further apart, and back again, several times. The composition features three stories of these glass undulations, stacked directly upon one another. Each surface undulates at a different rate in a different way, so that the whole composition of the three stacked glass walls displays a dynamic range of interplaying densities. His studies in musical density dynamics were occurring at this time through his composition of *Metastaseis*. Intervals employed in both *Metastaseis* and *Undulating Glass Panes* made use of principles from Le Corbusier's *Modulor*, as well as the Golden ratio and the Fibonacci sequence (Kanach, 64-65). This pair of works was an examination of density as something which can be experienced aurally or visually.

Using a principle like the Fibonacci sequence to dictate a piece of music, instead of the composer imagining a certain melody, is a precursor to Xenakis' work with stochastic music. Xenakis' musical explorations into stochasticity often created indeterminate music composed by entering variables into a program, as part of his pioneering efforts in electronic music.

Xenakis' cross-translations of music and architecture pay the most attention to similarities in structure, instead of attempting direct translations of form which is subject to the artists' personal interpretation. Xenakis' music-architecture translations attract attention because of the analytical rigor he brought into his effort, which recognized music's abstract nature. On abstraction, he writes: "Abstraction, here, is meant in the sense of conscious manipulation of laws and pure ideas, and not of concrete objects" (Kanach, 131).

Elizabeth Martin edited 1994's Pamphlet Architecture 16: Architecture as a Translation of Music, which consists of essays by herself and other musicians and architects. Her essay "Y-Condition" may provide helpful insight regarding the challenge posed by music's abstract nature, when used for architectural inspiration:

A semi-tone is a transitional sound heard during articulation linking two phonetically contiguous sounds, like the *y* sound often heard between the *i* and the *e* of quiet. I am suggesting that something similar occurs, a *y*-condition, in the middle position of music + architecture when translating one to the other (Martin, 16).

This idea of Martin's is reminiscent of Xenakis' approach, once again stating that while music and spatial form cannot directly shape one another, there still exist many commonalities *between* the two fields. This place in between music and architecture may be a starting point from which a design concept develops; a piece of music or a work of architecture could each be derived from it.

The design for Steven Holl's *Stretto House*, completed in 1991, is based on Bela Bartok's *Music for Strings, Percussion, and Celeste*. Holl used this music in his design process by listening to it each day while he worked on the project. He did not attempt to make a direct translation of each detail of the music into his architecture. Rather, Holl responds to Bartok's work by organizing his building based on the structure of the music's four movements, and by responding to the mood of each piece of the music (light, dark, heavy, etc) through arrangements of the building's materiality (wood, steel, concrete, etc) (Hutchinson, 134-137). This approach is quite similar to the two aforementioned views from Xenakis and Martin: a set of descriptors having to do with structure, materiality, pattern, mood, and narrative is shared between Holl's piece of architecture and Bartok's piece of music.

Holl himself emphasizes this idea in his contribution to Martin's volume, an essay entitled "Stretto House". He criticized historical attempts to translate music into architecture as too often lingering on comparisons between "number, rhythm, notation, and performance" (Holl, 56). He suggests,

A transference of essential properties or ideas from one art to another could occur through channels not primary to either. In order to look further into transpositions along other lines, we could think of architecture and music as unknowns and solve an equation for two unknowns. Where music has a materiality in instrumentation and sound, architecture attempts an analogue in space and light (Holl, 56).

In 2006, the Architecture | Music | Acoustics conference was held in conjunction with the event soundaXis in Toronto, which celebrated and investigated the crossing of architecture and sound. The event was partly named after Iannis Xenakis, whose life work represents this under-explored territory. The focus of the conference ranged from acoustics to composition (of space and sound), and included contributions from composers, architects, sound artists, and others. Colin Ripley's 2007 book *In the Place of Sound: Architecture | Music | Acoustics* documents the conference and notes that there is no established body of literature for this kind of exploration; when scholars of architecture decide to explore space and music's overlap, they nearly always have to start their research from scratch, making progress difficult. Ripley's book attempts to gather together a foundation for this relevant research (Ripley, 1).

Tomek Smierzchalski's contribution to the book is an essay entitled "Designed by Music: An Investigation into the Process of Using Music to Design Architecture", in which he briefly outlines methods of translating music into architecture. His approach recognizes music as a designed experience: "Music- whether that of Mozart, Mobb Deep or Miles Davis- transports the listener to landscapes as rich and detailed as any painting or novel" (Smierzchalski, 63). Smierzchalski sets up a polarity to describe the range of processes of translating music into architecture: at one end is *predefined order*, which draws on critical analysis, and at the other end is *subsequent order*, which relies on subjective interpretation. To Smierzchalski, design requires both structured analysis and the intuitive responses of the artist (as another polarity, he also recognizes the use of consonance and dissonance as necessary opposites which each help define the other, at the disposal of the composer). As an exercise, he makes a linear map of the structure of John Coltrane's musical work "Giant Steps", based on how the music is experienced in-time. The resulting diagram is essentially an exaggeration of the piece's sound-wave (as seen on a computer screen). From this, he easily structures a sequence of architectural spaces, whose proportions and rhythms are exactly guided by the sonic patterns of Coltrane's music. To Smierzchalski, each person who listens to Coltrane's piece will have a completely unique interpretation of the music assembled in their own minds, based on their own experiences. He argues that the same phenomenon occurs for architecture; the architectural spaces he derived through this diagram of Coltrane's music will be completely re-interpreted by each individual who experiences them (Smierzchalski, 63-64). This design process, though fairly analytical, still requires a strong degree of artistic interpretation by the architect, especially because it could be possible that certain proportions, arrangements, or methods of ordering which successfully make a piece of music powerful may not necessarily have the same (or any) effect for a work of architecture. Therefore, the artist's subjective interpretation becomes essential in ensuring a certain *essence* of the music comes across in the architecture.

Geoffery Thun's chapter in this book speaks to this idea of artistically interpreting music's essence through architecture. His central argument is that intuition plays an extremely important role in this artistic process. Although methods of translation could be derived through music's formal structure and notation, Thun argues that music also evokes an immediate, emotional, visceral response within the listener, and that this could be harnessed for architectural translation. In 2005 he used his academic design studio at the University of Waterloo as a laboratory, where he assigned students to analyze certain passages of music and creatively interpret spatial forms from them. He did not dictate a precise methodology, but rather provided the circumstances for this creative exploration to take place. The exercise yielded results which Thun considered quite imaginative. However, when students moved on to their primary design assignment, the potential of

continuing musical interpretation risked being overshadowed by matters of program and site considerations.

“Architecture, as with all art, is fundamentally confronted with questions of human existence in space and time, expressing and relating man’s being in the world” (Lieberman, 3), Lieberman quotes Pallasmaa in the syllabus for his University of Toronto Architecture 3015 2007 Option Studio. Lieberman’s design studio has the same structure as Thun’s, starting with an exercise in which students spatially interpret a selected passage of music. To Lieberman, music and architecture both constitute passages in time, and consequently could have many similarities in their design (Lieberman, 5). Both Thun and Lieberman offered experimental studios with the same open-ended premise: music could be a poignant influencer of architectural space. Both professors offered little in the way of methodology, allowing the studios to operate as laboratories as students invented what musical inspiration for architecture could be.

Michael Chapman’s chapter in Ripley’s book is an historical analysis, linking the emergence of underground movements of punk and industrial music in the late 1970s with developments in architecture. He links punk music, conceptual art, and postmodernist architecture as concurrent movements which all attempted to critique the mainstream commoditization of their respective arts, inventing new means of expression that were independent of the record label, the art gallery, or modernist ideologies. He notes, however, that each of these movements were (ironically) often subject to the very dynamics of commoditization they sought to undermine: postmodern architecture became the new standard type for commercial skyscrapers, while punk bands gained media attention, sold records, and set fashion trends (Chapman, 89).

Chapman brings particular attention to the music of the German industrial band Einsturzende Neubauten, highlighting what he calls their efforts in “undermining architecture and the principles of normalization it upholds” (Chapman, 83). According to Chapman, Einsturzende Neubauten (whose name generally translates to “new buildings collapsing”) made political statements through place-based recordings of their music. In many instances, they deliberately made music that could not be replicated, perhaps because it consisted of recordings of the band’s on-site manipulation of a derelict industrial building, or because it was recorded with their instruments set up in a particular architectural space of political significance, or the recorded performance was a physical reaction by the musicians to the restricting confines of an architectural space. The band would often make music that could not be commoditized because it was expressly anti-musical and intended to be a “painful” instead of “pleasant” listening experience. The use of unstructured place-based sound in their music was surely influenced by the earlier work of John Cage, argues Chapman, though Neubauten may take this approach to

more confrontational ends (Chapman, 91). The band often uses architecture as a theme in their lyrics, using it to depict images of control, power, order, normalization, and hierarchy. As a creative practice, Einstürzende Neubauten merge music and architecture not by designing buildings, but by composing music that critiques societal flaws symbolized by architecture, and by directly interacting with architecture in the performance or recording of their music.

TEMPORALITY AND IMPROVISATION

Music and building architecture have a different relationship than music and landscape architecture, because of the very different approach landscape architecture takes to a spatial work's *change over time*. Because music and landscape are both fundamentally temporal, the two fields have an inherent connection. Arguably, this is an under-recognized connection. Although a greater quantity of published explorations have been made into building-architecture-and-music, these efforts might have a greater bias towards viewing both music and architecture as fixed, static compositions. This section of research focuses on temporality and improvisation through music, and how this might apply to landscape architecture.

David Brown writes about relationships between improvisational jazz and architecture in his 2006 book Noise Orders: Jazz, Improvisation, and Architecture. He examines this blurred role of composer and performer by analyzing improvisation, making connections to architects who leave the use of their designed spaces flexible. He suggests that for musicians, classical training towards performance of compositions (to the point of "perfection") makes a performer into a vehicle only for a composer's expression, whereas a musician who cultivates a fluency for improvisation can respond to given conditions on a given night of performance, acting as a direct vehicle for expression and communication then and there.

"Music and architecture have been traditionally classified as temporal and spatial arts accordingly" (Hanoch-Roe 145) writes Galia Hanoch-Roe in the opening paragraph of an essay attempting to blur this distinction, published in the *International Review of the Aesthetics and Sociology of Music* in 2003. This statement unintentionally but effectively invites landscape architecture into the discourse, as landscape architecture more readily engages in the temporal than does building architecture. Early in the essay, she outlines the role of notation in both music and architecture, highlighting the linearity of traditional musical notation; a linearity which has no equivalent in architecture, since a building can be experienced however the visitor wants to move through it. Innovations in music towards these ends, she argues, lie in the works of composers like Ligeti, Boulez, and Stockhausen, who "began to challenge the linearity of the musical score and offered the

performer a choice in the construction of the musical work” (Hanoch-Roe 147). John Cage’s *Music for Amplified Toy Pianos* illustrates this development as well. The score for this piece is printed on a number of transparent sheets with no particular order. The sheets are meant to be overlapped so that many combinations of notes are possible. Thus, the music is not experienced the same way twice, while basic parameters are in place: it is instructed that the piece be played on toy pianos outfitted with contact microphones plugged into amplifiers, so that the audience can hear them (Cage). In such scores, the performer has control over how the piece of music unfolds, taking on a role like that of the composer, while the composer has taken on a new kind of role, almost that of *programmer*.

It is here that I briefly offer a critique of Hanoch-Roe’s argument that because of the music score, music is bound to linearity, while architecture freely offers opportunities for any sequence of experience. My counter-argument is that only *recorded* music is strictly linear: music, when performed live, has the opportunity to respond to the people in the room and the mood of the musicians, to take unknown turns and improvisations, wherever the collaborators like. Even sheet music cannot be perfectly precise and has to be interpreted by the conductor and individual players. An idea of music as fixed and absolute, I argue, has been established by the relatively recent phenomena of recorded music. Cage, Stockhausen, Boulez, and Ligeti’s compositional innovations against linearity occurred during the relatively recent onset of the recording; it may be that the need for such compositional approaches was never felt prior to recorded music’s predominance. I suggest that live music is living and responsive, potentially blurring the role between performer and composer; an idea which will re-emerge during the design section of this thesis. Recorded music is akin to a still photograph of a living landscape.

John Cage’s music certainly functions as a live event. His piece *4’33”* consists exclusively of the sounds in the room in which it is performed, as the audience and performers all sit quietly together for four minutes and thirty-three seconds. The 1967 film *Sound??* provokes debates between the definitions of sound, music, performing, and listening, as it compares the indeterminate music/sound of John Cage with the improvised jazz of Rashaan Roland Kirk. Both recognize audience participation and unplanned sound as part of the music.

Returning these concerns to the built environment, Hanoch-Roe concludes her essay by quoting Lawrence Halprin, regarding the significance of such blurred roles between performer and composer. In creative works in built environments, community input into the composition is of utmost importance. This dynamic of authorship carries a moral imperative when the inhabited landscape is the creative work in question (Hanoch-Roe 159).

In the book Audio Culture: Readings in Modern Music, David Toop contributes an essay entitled “The Generation Game: Experimental Music and Digital Culture”. Brian Eno is quoted in reference to generative music, saying, “generative music is like trying to create a seed, as opposed to classical composition which is like trying to engineer a tree” (Toop 243). Many of the examples Toop cites concern explorations in open-ended compositional techniques, where the composer initiates a process within certain conditions but allows the composition to develop by itself. According to Toop, in generative music “the final organization of the music is relinquished by its maker, though the elements remain intact” (Toop 247). This is the same dynamic Xenakis helped to pioneer.

These conceptual approaches to composition are relevant to landscape architecture because they mimic the dynamics of ecology. In his 2006 essay *Terra Fluxus* in The Landscape Urbanism Reader, James Corner writes “the complexity of interaction between elements within ecological systems is such that linear, mechanistic models prove to be markedly inadequate to describe them” (Corner 29). As more landscape architects strive to design in these terms, creative processes that function ecologically can offer a great deal of insight, as this thesis intends to do by examining music. Chris Reed, in “The Agency of Ecology” published as part of 2010’s Ecological Urbanism, writes of “analog ecologies”, which he defines as “projects that attempt to model, analogously, the responsive behaviors of living systems in nonliving constructions or processes” (Reed 327). “Analog ecologies” will reappear as an important concept in my design process (see chapter 6).

In the same essay Reed also defines “structured ecologies”:

Structured ecologies refers to the strategy of working with or alongside the stuff and processes of dynamic ecologies: the actual mechanics of how plants grow, behave, and adapt; the performance requirements of wildlife habitats; the movement and dynamics of the various waters present in a landscape. Like Corner and Allen and Lister, these strategies construct a set of physical scaffolds with varying conditions (low-high, wet-dry, sheltered-exposed) that can be appropriated over time by different plant communities impregnated on the site, and by different forms of wildlife. Such strategies anticipate a number of possible futures that may emerge specifically in response to a set of potential environmental changes (global warming, sea-level rise, shifts in wind and moisture patterns, etc.)- in essence, a structuring of natural competition among plant communities in ways that will allow the larger setting and systems to respond, adapt, and be resilient to change (Reed 326-327).

Reed's concept describes the approach I will take in my design in this thesis, through the minimalist use of a sculpted ground-plane to direct the indeterminate dynamics of urban complexity. I will use landform to establish a kind of "structured ecology". I will concurrently apply his theory of "analog ecology" to the role of bass in music (see chapter 7).

An ecosystem's living nature stands in stark opposition to the classic idea of music as something tightly composed. However, music can become an exceptionally appropriate way of illustrating ecological interactions when approached as improvisation and collaboration.

DIRT: EARTHWORKS AND PUNK

Landscape architecture may arguably bear great potential for flexible, improvised, participatory, and generative designs, but the financial and cultural realities within which the landscape project normally operates dictate a fixed, stable, outcome-guaranteed, composition-oriented product from the designer. Shapers of the landscape who began to challenge this model certainly include the Land Art or Earthworks artists who began to emerge in the 1960s.

The aesthetic chosen by early earthworks artists utilized unrefined media including raw earth and industrial machinery. Earth as a medium reduces art's risk of becoming a commodity, to such a degree that the art itself can actually become generative of new processes, of plant communities, and of human uses. (Erickson, 74). If left to forces of entropy, earthworks projects easily take on a life all their own. My own travels to Machu Picchu affirmed this for me as well; the abandoned city is essentially a sculpted re-arrangement of the ridge's surface material, a spatial sculpture of structures, platforms, and enclosures from stone found on-site. The site's entropic state of decay gives rise to an ordered garden blended seamlessly with its surrounded landscape.

Projects by both Robert Smithson and Andy Goldsworthy demonstrate this, at quite opposite scales. Goldsworthy's work comes across most effectively in video. In many instances, his fragile constructions of on-site material vanish with a gust of wind, standing as photogenic "finished pieces" only momentarily after a long, tedious process of making. Goldsworthy works by arriving at a site, acquainting himself with the place and its materials, and experimenting with making, often for many patient hours or days. The sculptures he finally completes are documented through photograph or video, as the site reclaims the material. The beauty in Goldsworthy's art lies equally in the process of making, the precarious "final piece", and the natural process of reclamation (Goldsworthy).

Robert Smithson made sculpture like Goldsworthy's, in that materials from on-site or nearby were arranged into constructions that would interact with the site over time; except Smithson's time-scale is usually much longer, and his most well known sculptures were larger in scale than many of Goldsworthy's comparatively ephemeral works. With *Spiral Jetty*, Smithson built a thick, heavy, coarse jetty of rock, protruding into a remote part of the Great Salt Lake in Utah. The piece leads straight out into the water, before spiraling in on itself, taking the visitor on a walk where the expansive landscape of salt, mud, rock, algae, mountains, and water all start to spin. This experiential narrative came from Smithson's intense study and on-site absorption of the place and his interpretation of its phenomenology. The piece has a slow ephemerality in its interaction with site, in that the water level of the salt lake can sometimes rise depending on climate, submerging the piece for years at a time. *Partially Buried Woodshed* is a piece with a similarly coarse construction with long term temporal interaction. In this piece, a woodshed in Kent Ohio was half-buried with dump-truck loads of earth, left to entropy and overgrowth. Both works were constructed with industrial earth-moving machinery, and employ a temporality that is geologic in scale (Holt).

Twylene Moyer and Glenn Harper edited a volume in 2011 called The New Earthwork: Art, Action, Agency, which compiles works by contemporary earthworks artists who are pushing land art beyond Smithson's and Goldsworthy's studies in entropy and temporality, into overt territories of activism, awareness, interaction, and agency. This collection of work shows an art movement capable of utilizing natural processes as creative media, to make powerful statements about environmental, societal, and global issues.

In Nancy Holt's volume of the writings of Robert Smithson, she makes a passing comparison between the earthworks art of Smithson and the minimalist classical music of Philip Glass, without further explanation (Holt). I paused at this statement, because to me, the works of Glass and Smithson do appear to share a similarity in scale, reduction, elementality, and gradual temporal change, as well as cultural context and time period.

I argue that punk music also offers a sonic aesthetic akin to earthworks art. Punk ethics reject the commercialization of music as a consumer product. Punk is deliberately unrefined music, able to be played by anyone, and is generative of diverse sub-cultures independent of the mainstream. I argue that compositions in punk music and compositions in earthworks art have a related potential, as compositions in raw material, generative of ecological processes.

In Michael Chapman's previously mentioned chapter, he critiques punk and industrial music's susceptibility to commoditization, arguing that Einstürzende Neubauten have developed an artistic practice in resistance to this. If Chapman's critique holds true, then it may be the case that bands who are more process-oriented and less product-oriented will naturally be less susceptible to the socioeconomic forces which turn activist music into ineffective (and contradictory) entertainment commodities. An analysis of such musical practices could yield inspiration for design activist practices in built environments. Underground music as a cultural catalyst is an extensive study in and of itself, and for this review I will briefly mention two examples: the bands Fugazi and Crass.

The work of Fugazi is documented in the 1999 film *Instrument*. The band, active between 1987 and 2003, consciously controlled nearly all aspects of their operation, from recording their music, to booking shows, to selling and distributing their albums. Fugazi's singer and vocalist Ian Mackaye runs Dischord Records, an independent record label which he founded. Originally started as a way to support the punk bands emerging in Washington DC during the early 1980s, Dischord was the vehicle through which Fugazi released their records. Many of the band's concerts would raise funds for local charities, while also maintaining a policy of five-dollar admission and all-ages shows, making the music accessible to as many people as possible. Fugazi's way of operating recognized that their work is not limited to music, even though their music lay at the origin of all these efforts. Music can generate subcultures and even political and economic processes.

Fugazi would improvise their performances, deciding spontaneously which songs they would play as the concert unfolded. Each song could be played differently on a different night, as well: through musical communication on-stage between the musicians, certain parts of a song might be extended, improvised, or played differently. Although their individual songs were composed very deliberately and presented as finished pieces on their studio albums, in live performances songs were deployed spontaneously and flexibly, changing from concert to concert. Flexibility-balanced-with-intentionality has great analogue to landscape architecture's potential, and this concept will be explored through the design in this thesis.

Crass were a band with a similarly broad scope. While music lay at the core of their efforts, their work encompassed visual art, film, performance, direct action, and anarchist and environmentalist activism. In their formative years during the late 1970s, the band was open to anyone who wanted to join, and as such, they

accumulated members who could sometimes barely play an instrument, inventing ways of producing sound despite this. The band made efforts to release records very quickly so that the music's political content could remain relevant, and as a result the music is deliberately unrefined, and is dependent on the energy with which it is performed. The band itself ended in 1984, although several of the members still maintain Dial House, a collective farmhouse and permaculture landscape in the town of Essex, outside of London. Crass' ethics continue through the operations of Dial House, which maintains an open door policy, offering a space where art, music, and ideas are shared and incubated. This band's core effort of music-making opened doors for creative work on multiple fronts. It also inspired countless other people to form their own bands and engage in similar actions.

The musicians who have most catalyzed my personal inspiration for music-as-landscape-architecture (and vice versa) *aesthetically* have been those who actually combine the approach of the aforementioned punk bands with the minimalism of Philip Glass. For reference, this includes the bands My Disco and The Skull Defekts. At least in my own work, I see a potential to use this particular inspiration to create a musical process and aesthetic that functions in close partnership with my practice of landscape architecture.

Finally, I close this section by mentioning the work of a hybrid artist whose practice closely aligns with the kind of creative synthesis I seek.

Theaster Gates is an artist who brings together urban planning, revitalization, craft, and music. Trained as an urban planner, Gates uses his talent for systems thinking to maximize the generative and positive impact of his projects. Gates creates art that has direct social relevance on-the-streets with simultaneous potential for the art museum, often tapping into (and redirecting) flows of capital associated with the art world. He has used a grant for an art installation, for example, to create temporary skill-building jobs for unemployed people in his home city of Chicago, to renovate an abandoned building which then becomes not only an art piece, but a center for the creation and incubation of art thereafter. Process, economy, and community can become aspects of his art. The power of Gates' work lies in unexpected transdisciplinary syntheses. In 2012, Gates has had an exhibit in the Seattle Art Museum which transforms the viewing-oriented space of the art gallery into the rougher, louder, hands-on listening-oriented space of a specific record store (the collection of which he purchased when it was forced to close). The exhibit tests the perceptual and physical limits of a museum gallery space and how people interact with it. The stories of many of Gates' works,

including museum exhibits, have been told through music; often performed and composed by him and his collaborators (Gates).

There is no formula for his work, and no usual “type” of project Gates endeavors in. Most of his projects lack disciplinary boundaries, make strong connections, and have important empowering social motives.

I sat at a dinner table with him and faculty from University of Washington’s College of Built Environments, when he visited in the winter of 2012 to give a lecture. Upon the dean’s cue, the chatter in the room died down, and attention went to Gates, who split the silence by singing a deeply-felt blues that narrated the story of when the city tried to take his father’s store by eminent domain. The impact was strong; in this venue normally associated with polite conversation and fine dining, Gates spontaneously performed a true and sad song sung in a powerful voice. The blurring of lines between types of venue and types of communication which defines his work was plainly demonstrated here, to great effect. When polite dinner conversation resumed, the room was changed by a renewed spark of imagination.

THE PLACE WHERE THIS WORK FITS

Music has been used as a way to influence architectural composition, in ways that harness music’s abstract, multi-layered, and textural abilities to evoke impressions that fuel the designer’s intuition. Although this is quite similar to the process I seek, in architecture the product tends more towards a static composition. In scarce instances, music has been used to influence landscape architecture, but usually through fairly literal interpretations of the music, or simply programmatically. The examples which most drive this thesis’ inspiration are the hybrid practices, not easily defined.

I see a place where music’s inherent temporality can illustrate landscape architecture’s potential for process-based, ecological design. In much the same way that Roberto Burle Marx created abstract paintings as a means to illustrate his landscape innovations in form, space, and color, music could be used to convey today’s emerging innovations in landscape.

This could happen through the music’s message, the process by which it is made, the means through which it is performed, the communities and action formed around it, as well as its sonic aesthetic. Music has the potential to be as generative and catalyzing as a landscape, and as artfully composed (as a designed experience).

There is a great potential to craft a practice in contemporary landscape architecture that would use the communicative and generative power of music to help realize truly

ecological designs. Music could bring design ideas to wider audiences, it could catalyze action and community organization, and it can compellingly illustrate improvised, collaborative, and loose methods of intentional composition. Music can provide an important analogue to illustrate ecological concepts, which are often abstract and difficult to describe. Music can also play a valuable role in inspiring a designer's design concept; and because music can easily have a collaborative nature, "designer" could be one landscape architect, an interdisciplinary group of professionals, or a trans-disciplinary group of stakeholders (see chapter 9 for methodology and practice).

There also exists a corresponding potential to inspire a new music, based on innovations in landscape. If music were thought of as a landscape, what might that music be capable of? What might it sound like? This thesis will make initial steps towards this.

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CHAPTER 4: MUSIC AS NARRATIVE: LUNAR GARDEN

My process began without a pre-determined methodology, because I knew of no examples of the dual practice of music and landscape architecture, and my approach to the work was still undefined. Therefore, because invention would be my main concern, I began by giving myself the right conditions for experimentation. In January of 2012 I rented a practice space where I could write and record music. At the same time, I still made use of my landscape architecture studio space at the University of Washington. In this way, although I did not consider it ideal that they were in separate locations, I had access to workshops of both the arts I was interested in combining. I decided to give myself at least two different kinds of landscape projects to work on, one of which would be the larger, main focus of the design thesis; and that I would be open to other creative possibilities that might arise along the way.

My first design project would be a conceptual warm-up exercise: the design of a landform garden on the surface of the moon, narrated through music instead of images. My second design project would then be a larger scale, site-specific application of my emerging ideas: the design of a large park from an urban brownfield site in Yakima, Washington. This would be designed and narrated through both music and images. My goal for both projects was that the music and the landscape designs would each be able to stand as independent creative projects in their own right, while mutually enhancing an understanding of the other.

A GARDEN OF THE IMAGINATION

Because I was reexamining my creative process through this thesis, I wanted to begin with a distillation of landscape to its bare fundamentals, and re-invent my approach to design. This was why I had chosen to focus on landform design for this thesis. For my first design exercise in co-designing music and landform, I selected a site on the moon. This would be an excellent starting point, since the moon is a world composed of nothing *but* landform.

Even if I actually went to the moon and somehow constructed a landform garden, it would be virtually impossible for anyone to visit, and no one would ever see it; the garden would exist more in the realm of imagination than tangible reality. Therefore, I decided I would design the lunar garden *in music*, since the space evoked by music *is* a space of the imagination.

CONTEXT

It is easy to forget that the moon is a vast globe of land floating in space. The lunar landscape consists of nothing but ground; it lacks all the landscape process and dynamism we experience here on earth. There is no life, no water, no wind, practically no atmosphere, and no geologic activity. In such stillness, ancient craters remain uneroded and unchanging. The moon's only dynamism occurs in the sky. These phenomena are quite different from the earth's. From the perspective of someone standing on the moon, the sun takes two earth-weeks to rise over the horizon and arc across the sky before setting. This day is followed by an equally long night.

For these phenomenological reasons, the moon makes a provocative setting for viewing the earth. Because the moon always shows one face to the earth (its rotation and orbit are perfectly synchronized), in the moon's sky the earth stays in a fixed position, while quickly rotating, showing a slightly different face hour by hour. Earth's static position in the sky means that someone dwelling on the far side of the moon would never see the earth, unless they traveled over the horizon and witnessed this blue and green globe rising over the horizon, at a speed directly related to their walking pace. It would be the first time this imaginary inhabitant of the grey and black lunar landscape would see these colors. To an earth-dweller, the moon's alien quality would be strongly marked by these changed celestial patterns. The most dependable rhythms we know on earth, of day and night and the movements of celestial objects, are totally altered.

The moon is alien, still, and unresponsive to life. Its only resemblance to the earth is the surface's resemblance to our desert landscapes: soil and shapes of pure land form mountains, valleys, rock-strewn plains, expanses and horizons.

I selected as a site for a conceptual lunar landform garden the rim of the Shackleton Crater, near the moon's south pole. From this location, the earth would appear with its south pole facing up: the typical image of our planet would literally be turned upside-down, encouraging a view of our world through new eyes. Additionally, from the Shackleton Crater, earth would always appear in an unchanging location on the horizon, making the spatial sculpture of a landform garden all the more enticing for its potential to hide and reveal the blue-green globe, as the garden-stroller moved through the choreographed spaces between landforms. The crater's location by the south pole means that the sun perpetually circles the horizon, never rising into the sky, and the bottom of the Shackleton Crater never receives sunlight, while the highest parts of the rim are nearly constantly illuminated. The rest of the landscape stands in the dramatic light-and-shadow contrast of an endless sunrise.

PROGRAM

My goal was to create a designed landscape for this location, sculpted of landforms. It would serve as a place where a spacesuited visitor, brought here by exceedingly expensive means, could speculate on the nature of ground, gravity, and the fragile, self-contained earth. Instead of drawing a schematic design for this landform garden, I would try to design it in music. This was for the aforementioned reason of designing a space in the imagination, and for two other reasons: for the design's sake, the poetic nature of this place would be best expressed through the abstractions of music; and for my long-term project's sake, this would serve as a low-stakes and easily approachable introductory exercise in designing landform through music, since the complexity and dynamic context found on sites on earth are all but absent. Only the medium of land remains, while the living earth hovers on the horizon. This design would be the threshold of my music and landscape explorations.

DESIGN PROCESS

With this concept established, I spent a few sessions in my music studio in early January 2012, working intuitively. I was interested in minimalist and repetitive music whose dynamics, to me, evoked landscape, expanse, and indifference in their scale. This kind of music includes works by composer Philip Glass, Australian post-punk band My Disco, and to a certain extent, the Swedish experimental rock band The Skull Defekts.

To evoke something like the movements of landforms in the desolate black-and-grey lunar landscape, I wanted to compose music in as minimal a way as possible, so I wrote the first piece of music entirely on the drum set (for the following, hear *Landform* at <http://archive.org/details/LunarGarden2Landform>). The drumming began with a minimalist repetition of identical hi-hat and bass drum hits for close to thirty seconds. These established a rhythmic monotone. When the first snare and tom drum hits occur, their sounds seem to speak with a musicality, and their placement in the sequence gave the redundant monotone a sudden rhythmic definition. This evoked the sensation of now being inside something *composed*, rather than something formless; the entry into the landform garden. I played with these dynamics of percussion-melody and restraint so that the drums began to form a rhythmic poetry. I composed a full three and a half minute piece based on this.

I added a bass guitar to the piece, but only to emphasize the music I heard in the percussion (evoked perhaps by the tuning of the drums). I chose the bass instead of the guitar because I wanted to explore the potential of the low instruments which evoked "ground" in music's layering. I wrote a simple bass melody to accompany the drums, which gave the beginning of the piece an alternating sense of loneliness and familiarity, based on key changes between the two notes I had chosen (a major third). In the middle

of the piece, the drums “let go” of their driving rhythm for a moment and undergo a re-orienting, and therefore so did the bass; I had the bass wander up and back down in a simple scale, settling on a note slightly higher than where it began, and playing that note redundantly. I added a second bass guitar, playing a consistent and consonant low note during this re-orientating (2:15). One measure after the first bass had settled into its slightly higher note the second bass guitar then shifted up to another higher note, forming a nearly-dissonant chord with the first bass; just as the drums came back in with snare hits and an open hi-hat (2:24). At this point, all elements in the music seemed to *float*, in a startling uneasiness, like a strange awakening... before settling back down into a consonant, stable chord formation, again accompanied by closed hi-hats for a tighter drumbeat. The theme from the beginning of the piece (alternation between familiarity and loneliness) resumed, though slightly altered. The piece ended as it began, with a drawn-out repetition of one hit on the bass drum and hi-hat accompanied by a steady single note, evoking a return to the expanse of the natural lunar surface.

The process of creating this work of music was intuitive, and was followed by an analysis of the recorded piece, from which I derived its narrative. I decided that the beginning of the music describes walking across an expansive lunar terrain, followed by an entry into the sculpted, enclosed landform garden. While walking through the garden, its appearance as a landscape evokes a degree of familiarity, while its remoteness from the life-supporting place we call home evokes a profound loneliness. After walking through a series of spaces, the garden comes to an open place, whose edges are still built up with landform. Rounding a corner, the earth is suddenly revealed for the first time; a startling blue sphere floating on the horizon (during that moment in the music where everything seems to “float” in startling uneasiness). The enclosed spaces of the first part of the garden resume, this time oriented so that the earth remains on the horizon as we walk along, pondering our new understanding of this environment. The garden then releases us back into the expansive, natural lunar terrain. I named this piece *Landform*.

I completed this piece fairly quickly, and decided that it should stand as the second out of a series of three pieces, which together would describe different aspects of the lunar garden. I next created the first piece of the sequence to function as the introduction to the place (for the following, hear *Landing* at <http://archive.org/details/LunarGarden1Landing>). For this I decided not to repeat the sequential narrative approach and instead experimented with tone, texture, and mood as I evoked the landing and introduction to the unfamiliar, remote world of the moon. I recorded a loud drone in an open tuning on the electric guitar and electric bass, allowing the instruments to feedback, so that the sound waves emanating from the amplifiers caused the guitar strings to vibrate and rasp against the metal frets, creating the sound which was amplified (thus establishing the feedback). My goal was to depict the moon’s uninhabitability, isolation, rough texture,

cold beauty, and lack of air, by creating a piece of music that gave the listener no recognizable melody or respite from the dense, layered droning sound; a sound which nearly created itself, as I just guided the conditions for the loud feedback to occur. It was appropriate that the piece be touched-by-human-hands as little as possible. In the recording process, I layered multiple tracks over one another (including drawn-out notes in the same key on the concertina). These I blended so that the origin of the sound and precise number of instruments would be unclear to the listener. I felt satisfied with this five minute drone as the introduction to the project, and named it *Landing*.

My intent for the third piece was to describe the same sculpted garden as *Landform*. Rather than describing the linear sequence of events along a walk through the garden, I chose to describe one drawn-out moment of stillness within the garden. Therefore this piece would sound quite different from the musical passage preceding it (for the following, hear *Terrarium* at <http://archive.org/details/LunarGarden3Terrarium>). In this case, I began with the narrative and then constructed the music. It narrates the experience of lying on one's back on a steep landform, held by the gentle tug of the moon's gravity, while looking at the slowly-turning upside-down earth as it lies low in the sky. The earth appears fragile and self-contained in the cold void of space, and it becomes clear that it is our only home. The music I crafted possesses a constant low-frequency bass tone as a quiet foundation, to evoke a gentle gravity. Over this, I play a delicate, cyclical melody on a ukulele, to evoke the rotating blue globe. To convey its fragility, I recorded the ukulele in my kitchen without telling my fiancée that the computer was recording, and so the track captures background noises as she bustles around, opening cupboards and clanging dishes. The accidental noises threaten and almost disrupt the quiet ukulele melody, while simultaneously evoking the unmistakable sounds of home. As a depiction of earth, I found this to be quite effective; the interference made the melody sound fragile and nostalgic. She was crafting a terrarium, preparing a little bowl of rocks and moss which would go in our living room. The moment was captured on the recording when she said, "look at my terrarium". It was the perfect way to describe the fragile, self-contained blue globe floating in the moon's sky. I named the piece *Terrarium*.

REFLECTION

And so, my product for this brief compositional exercise consisted of three pieces: the drone introduction *Landing*, the narrative of a walk *Landform*, and the meditative and spontaneously recorded *Terrarium*. Upon reflection, this approach is reminiscent of late nineteenth century program music, where composers would create music based on a narrative beyond the immediate sound of the music itself. For example, Mussorgsky's *Pictures at an Exhibition*, although not performed in conjunction with any kind of imagery, had a narrative which listeners could follow along with as they read the

program. Although I was satisfied with the outcome of my garden-of-the-imagination designed in music, I had still not designed a tangible landscape.

I anticipated subsequent stages of this thesis, when I would design music and landscape together and with each other. It was clear to me that for these upcoming steps, I would need for the music to actually operate like a landscape, and not merely serve as a means of narration (although this is a powerful aspect of music which I would not put aside).

ACCOMPANYING ESSAY
for
A LUNAR GARDEN

DAN SHAW
JANUARY 2012

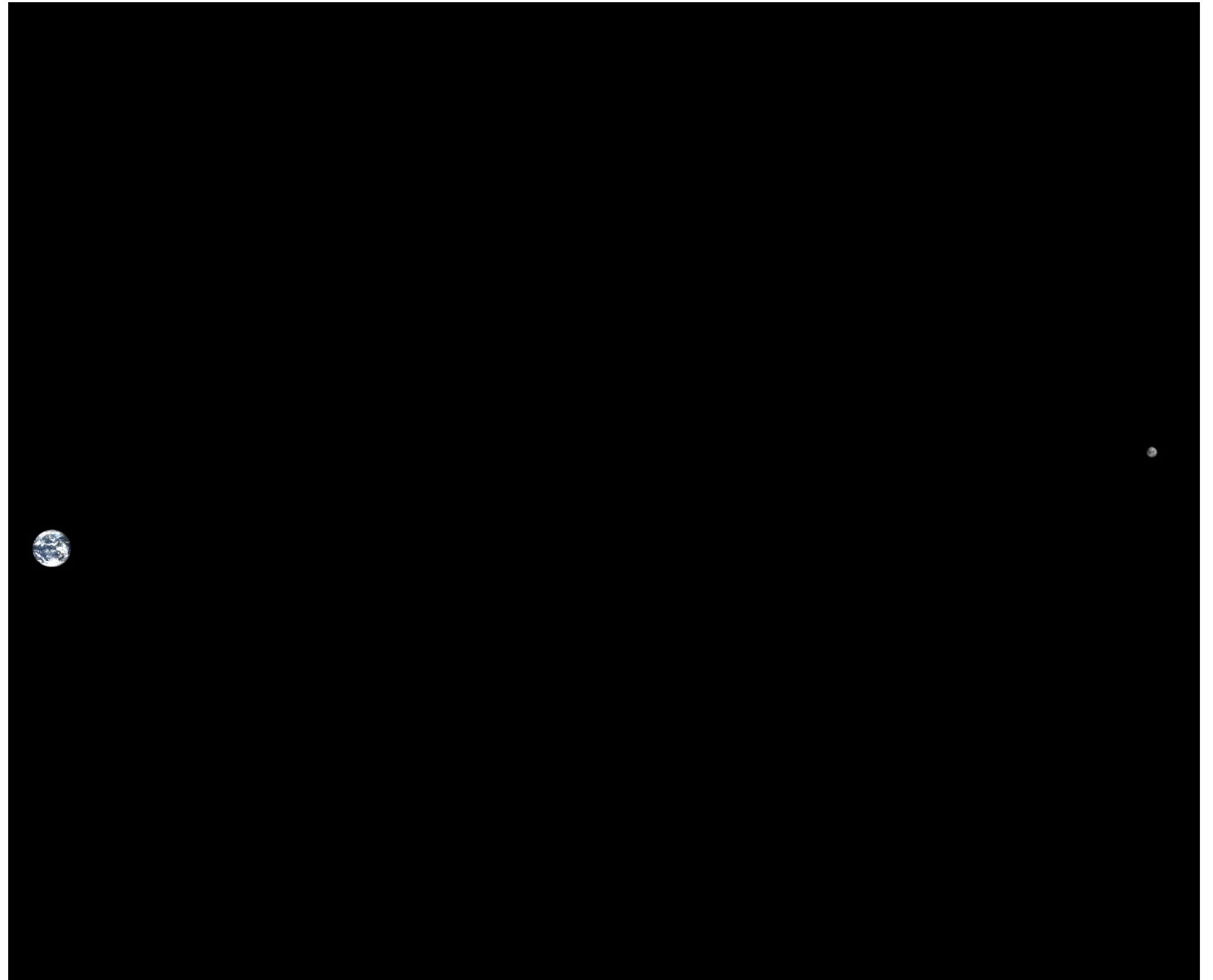
INTRODUCTION

This piece of landscape in our sky can only be experienced by people in spacesuits, brought here by exceedingly expensive, technical, energy-intensive, and resource consumptive means. The moon has nearly no atmosphere, no water or liquid, and supports no life whatsoever. Geologic processes have all but ceased, so ancient craters remain uneroded. Phenomena of the sky provide the only dynamism on this still, colorless world: the earth appears unmoving in the moon's sky, but changes its face by the hour. The sun takes nearly two weeks to pass overhead, before setting for an equally long night. The only aspect of familiarity to earth is the surface's appearance as a pure landscape, made entirely of the most elemental of landscape material: ground.

This project proposes a landform-garden made only of shaped ground, to be located near the Shackleton Crater by the south pole. From here, the sun slowly circles the horizon. Some crater bottoms have never seen sunlight, while some peaks are almost constantly illuminated. It's a landscape of high contrast. The unmoving earth, with its south pole facing up, appears or vanishes behind the horizon depending on where you walk.

The project is described through three pieces of music, explained here.

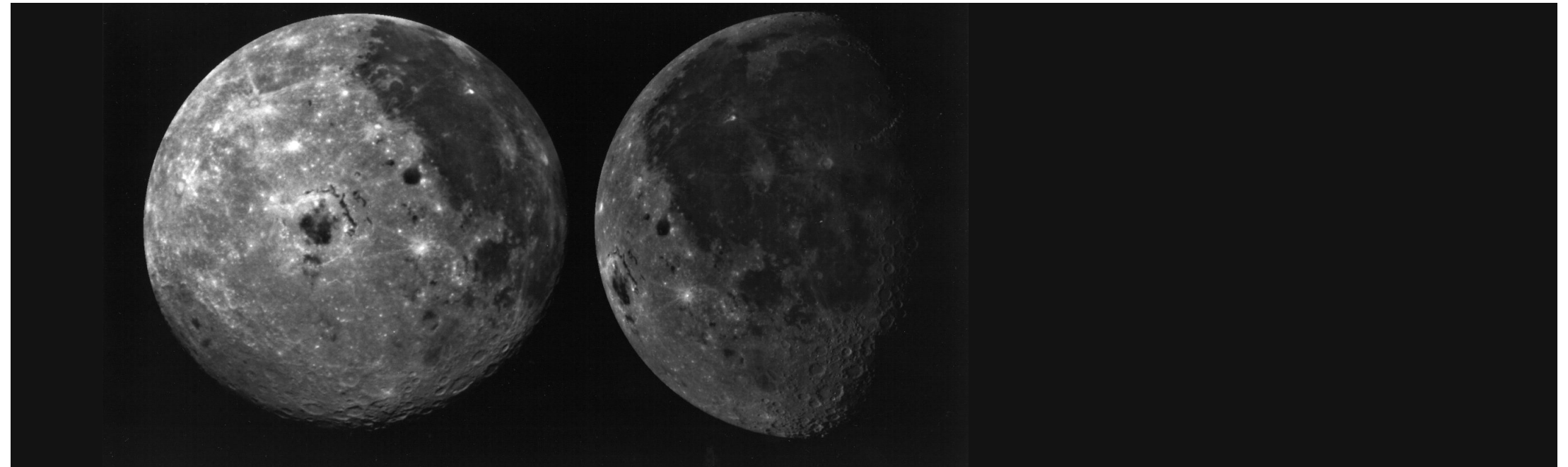
- 1 LANDING
- 2 LANDFORM
- 3 TERRARIUM



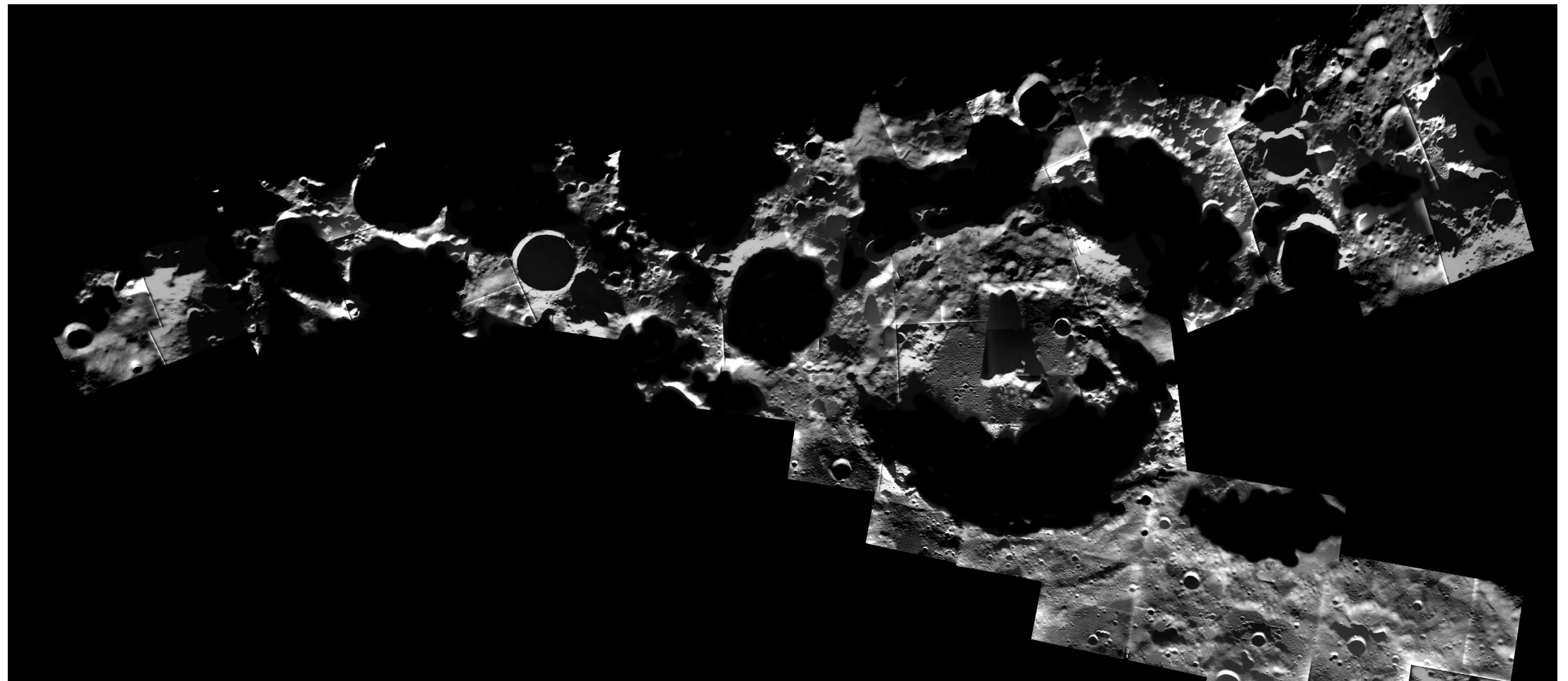
LANDING

The first piece is called "Landing". It describes both the atmosphere and geology of the moon, or, it could be said, the presence of geology in a near-complete lack of atmosphere.

This piece is a drone of one note, an E flat. Every moment is fluidly like the moment before it, and as the piece develops, the listener soon trusts that each next moment will be fluidly the same as the present moment that is being experienced. The listener starts to pick out different colors of this same note intricately intertwined, but it's unclear if the sound is coming from one source or many. Each tone is long and plays the same note and blends into the next identical note. This piece offers nothing to the listener except for density and consistency. About three quarters of the way into this 5:51 minute piece, the harsh buzzing sound relents for the first time, only for a moment. This makes legible how rough the texture of the piece has been. The smoother sonic textures take over during these brief moments. There is no clearly defined space in this music, and no change besides contrasts in textures. This is an introduction to the moon: its rough terrain, its blank and purely inhospitable nature, its emptiness, and its consistency.



CONSISTENCY, GEOLOGY, TEXTURE, (LACK OF) ATMOSPHERE, COLD, UNINHABITABILITY

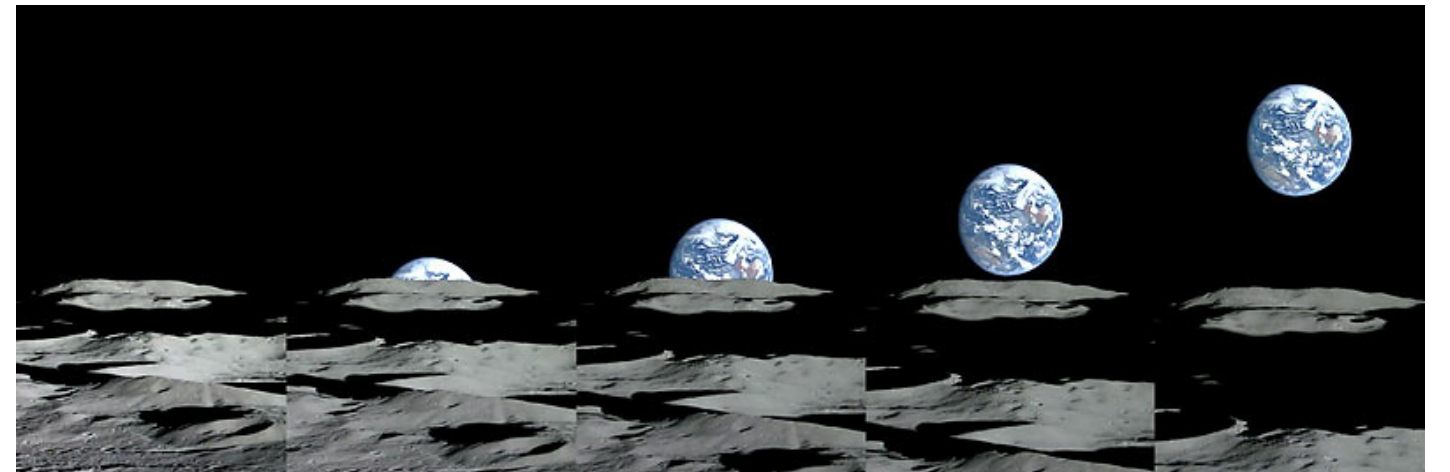
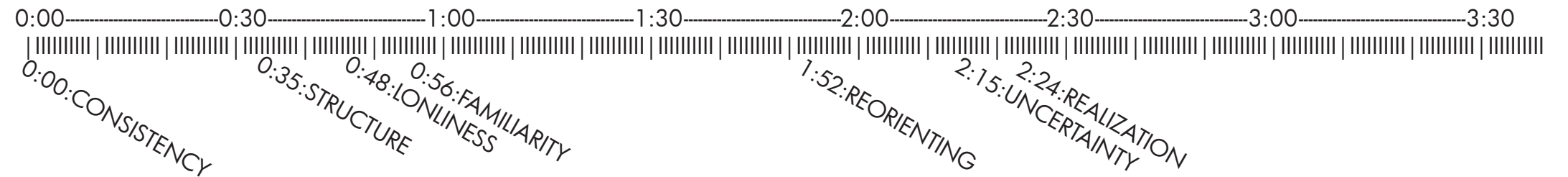


LANDFORM

“Landform” is a narrative. It depicts a sequence from the walker’s perspective, through a lunar landform garden. The piece opens with an incessantly repeated drum hit and bass guitar note (an F), establishing the base material that will be worked with to form this land garden. Its pace and repetition evoke the consistency of the geologic material we find ourselves walking on. It’s a hangover from the consistency we were trained to expect from our introduction to the lunar surface, from “Landing”. Its unrelenting repetition indicates nothing about any musical structure or patterning.

The evolution at 0:35 to a drum beat with a recognizable time signature brings the realization that we’re in something structured and composed, and the landforms around us become geometric. At 0:48, after this structure has been sufficiently introduced, the bass guitars shift down to C sharp; a sullen, low note by comparison, evoking loneliness. When the F resumes at 0:56, it then feels familiar. This is the familiarity of the lunar surface as a legible landscape of plains, hills, and landforms. An alternating dynamic is now established, where F evokes familiarity, while C sharp evokes isolation; two important simultaneous impressions during this lunar walk.

Then at 1:52 there’s a transition, the landform re-orient itself, becomes less structured, more open, and it feels like we’re “ready” now for something else to happen. At 2:15 one ridge of the garden’s constructed landform settles in position against the other in an uncertain arrangement. Then, at 2:24, in a precarious moment of realization, all at once as we turn around a landform we see the planet Earth hovering on the horizon in front of us, both fragile and powerful. We see it as a vulnerable, round piece of land, set against a horizon of grey land floating in space. We are standing on ground looking at the whole earth. This is the crucial turning point in our experience here. The structure of the garden resumes, with the Earth now in view. Its position changes in the lunar sky depending on where we walk. We walk through the rest of the garden with our new understanding, then out again into the natural terrain.



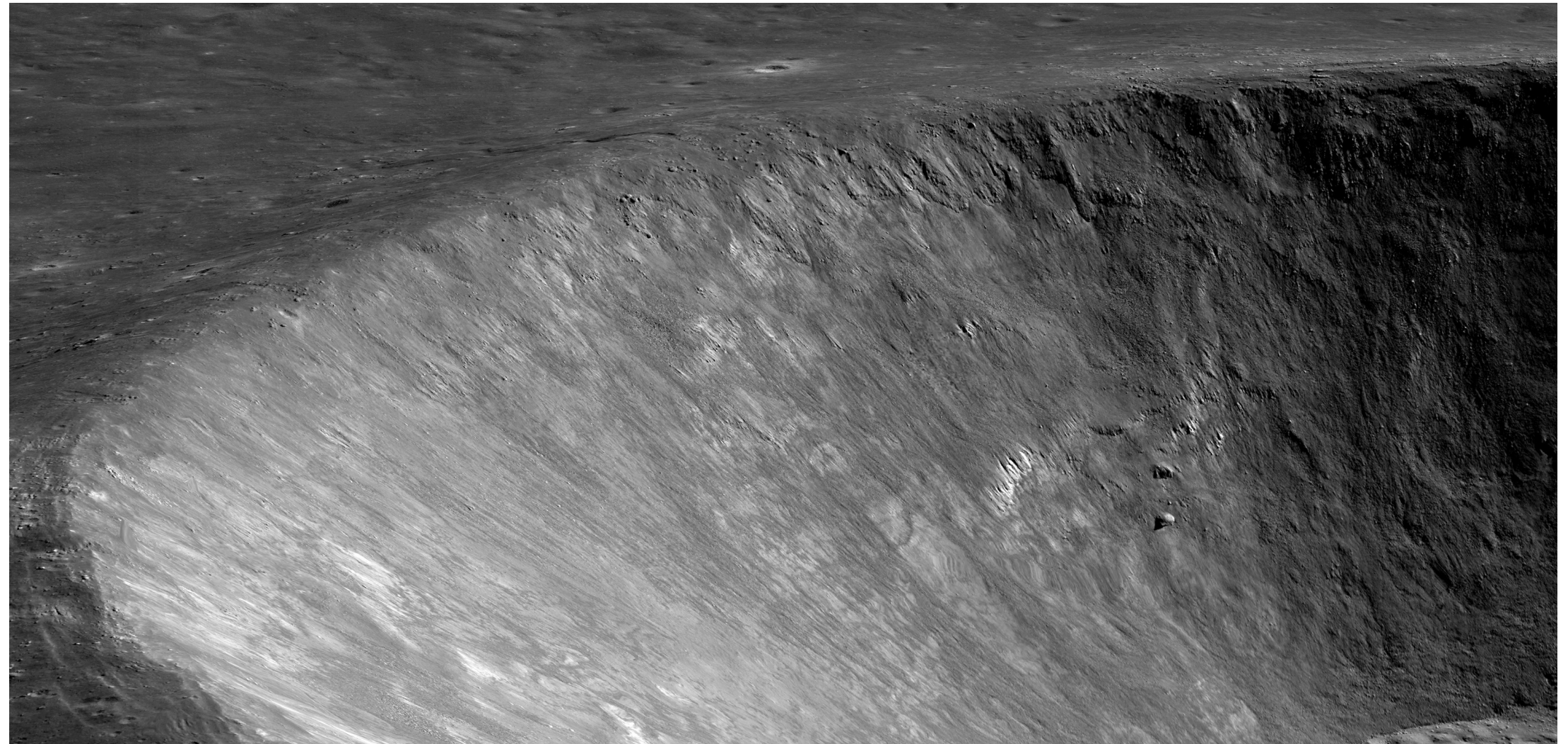
TERRARIUM

“Terrarium” is us lying on our backs on one of the slopes, looking at the earth by the horizon. We are in the same garden as “Landform”, but we’re using the space differently.

This piece’s delicate, cyclical melody is the earth appearing as a rotating, fragile blue-green circle hovering in space, never changing its position in the lunar sky, but showing us a different face by the hour. It gradually changes in illumination over the course of long earth-days and weeks, as the sun slowly moves across the lunar sky over the same course of long earth-days and weeks. The bass tone in the piece is the feeling of the moon’s gentle gravity tugging against our backs, holding us to itself, as we look at our home in space. This blue-green circle we’re gazing at is like a terrarium, a self-contained orb wherein matter has organized into life, and even self-awareness. It evokes sensations of home. It is such a rare environment in this universe.



MOTIONLESS; GRAVITY; FRAGILITY, CYCLE, HOME



IMAGES:
http://apod.nasa.gov/apod/image/0612/moonpan_apollo17_big.jpg
<http://www.sciencecentric.com/news/08031234-new-lunar-south-polar-maps-released.html>
<http://lunarnetworks.blogspot.com/2010/12/new-light-on-lunar-poles.html>
http://es.wikipedia.org/wiki/Archivo:Apollo_17_Moon_Panorama.jpg
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CHAPTER 5: THE BOISE CASCADE SITE in YAKIMA, WASHINGTON

Returning to attention to earth and temporarily disengaging from the musical space-of-the-imagination, in this chapter I introduce the site which will be the focus of the remainder of the thesis.

I chose the 211 acre former Boise Cascade Mill site in Yakima, Washington as the subject of the primary design for this thesis, because it fit the criteria I was looking for in a site. Because this project takes a new look at my design process, I wanted a site that was representative of the kinds of sites I anticipate encountering in my emerging career as a landscape architect. I was especially interested in the periurban, the transitional, and the post-industrial, since this is where the growth and transformation of urban landscapes is increasingly occurring. I also wanted a site that was sufficiently far from my familiar home city of Seattle, so that I couldn't make assumptions based on familiarity with its context; while at the same time the site should be within driving distance for day-trips. The eastern side of the Cascades represented this close-by "other world". A classmate of mine introduced me to this site as a thesis option, and I chose the site for my design explorations because it fit the above criteria.

Before visiting Yakima, I met with architect Dan Stettler, whose client owns this site. Dan had been hired to develop a master plan for the site, and through his process of analysis and design, he had accumulated extensive knowledge of the site, its context, and its history. He shared his knowledge on the site with me and this directed most of my site research. Shortly after this meeting, I made a site visit with Iain Robertson, and notes from this visit can be found in appendix III. I made another visit to the site in early March with Dan Stettler. Page 45 graphically displays my site analysis.

BACKGROUND

The Boise Cascade Mill operated for much of the 20th century on its large 211 acre site in the northeast edge of Yakima, along the Yakima River and Route 82 Interstate. On a clear day, Mount Rainier and Mount Adams are visible from here. The McDougal brothers, owners of sixty or seventy other mill sites, bought the site in 2006. These new landowners decided to close the fully operating plywood mill, and the 600 employees were either laid off or had to have their jobs transferred. The landowners' wanted to re-develop the site with a mixed-use infill master plan, which Dan Stettler was hired to design. The project received a state LIFT grant, which stands for Local Infrastructure

Financing Tool. The grant estimates the total federal tax income that a development will generate over time, and provides that money to the developer in advance to install its infrastructure and groundwork. However, with no progress made, the project is currently stalled (as of 2012); and there isn't strong advocacy or momentum for developing this site at the moment, even though the city is enthusiastic about the plan's prospect for revenue generation and job creation.

Before the site was developed as a lumber mill in the 1920s, the site was the Cascade Ranch. When it became a mill, its operators retained the old ranch's water rights, enabling them to flood the site's large central basin to facilitate floating and storing logs. This was accomplished by a constructed slough, to the north of the site, which diverts Yakima River water. The slough and its associated infrastructure are still in place.

CURRENT CONDITIONS

Like much of the city, the site is located in the Yakima River floodplain, and because most of it was used for log storage, the majority of it is remarkably flat. Much of the site is covered with decomposing wood debris, which has been piled and is sold as mulch. On a small number of occasions since the mill's closing, piles of decomposing mulch have spontaneously combusted, spreading into significant fires. As a result, a layer of charred woody debris is mixed across much of the site.

The site has a distinct set of topographical conditions. Drainage ditches exist along the eastern edge and through portions of the central area. The ditches flow to the site's northeastern edge, where along with spillover water from the slough, the water is diverted back to the Yakima River through a highway underpass. Interstate 82 runs north-south along the site's eastern edge, and sits upon a 10 to 20 foot high embankment, which divides the site and the city from the Yakima River. The low point of the site is in the southeast corner. This southern area and the drainage ditches along the east constitute the lowest terrain of the site, roughly 10 feet below much of the site's main flat expanse. The high point of the site, towards the northwest, is only about 30 feet higher than the low point, with nearly 10 feet of this grade change concentrated right around the low point. Over 211 acres, this remaining 20 foot grade change happens very gradually and is nearly imperceptible, except along the southern and eastern edges where changes in topography are more pronounced.

The site's overall soil composition is a visible record of its riparian and industrial history, consisting of silts and organics mixed with rounded river stones, charred woody debris, and old loose trash scattered in the landfill area. This region of Washington has never been glaciated, so soils are much older here than in western Washington.

The southern 80 acres of the site are a municipal landfill which was active until the early 1970s and is now capped with a shallow layer of earth, but not sealed. As a result, the topsoil here contains a light mix of decades-old trash. The surface of the landfill only stands a few feet higher in elevation than the rest of the site's flat expanse. The 12 to 20 foot-deep landfill leaches some methane into the ground, which has caused concern among residents but hasn't yet proved to pose major groundwater hazards.

In the central-western edge of the site, adjacent to the northeast neighborhood, sits the campus of six former manufacturing buildings with tertiary structures. This includes a large warehouse-sized building clad in plywood, where manufacturing once took place. The building had an adjacent twin which recently burned down. Its large concrete foundation now accumulates weeds, edged by the charred stubs of its old framing. South of this, two metal-frame towers stand slightly higher than telephone poles. West of these small towers, on the edge of the site stands a large covered parking shelter for vehicles and large equipment, currently used by a towtruck company. South of this parking area, at the convergence of H Street and I Street is the towtruck company's office, in a smaller wood building with a pitched roof. Directly south-east of the small towers, very near the site entrance from the neighborhood, is a complex structure of metal tanks, pipes, scaffolding, and machinery, with a small building attached to its west side. This structure features an approximately four-story tall metal smokestack off of its north side, which is visible throughout the surrounding area of the site. To the southwest of this structure is a metal scrapyards, and to the southeast across the railroad is a large warehouse-sized building slated for demolition. This large building housed many of the site's manufacturing operations and has the largest footprint of the buildings. Its blank walls have a bland appearance from the outside. Throughout the area of buildings there stand small paved platforms, former building footprints, driveways, mulch and earth stockpiles, and various utilities. Among this overall area of buildings, there exist a few isolated patches of PAH contamination in the soil, requiring remediation.

Interstate 82 defines the site's eastern border, and just beyond it lays the Yakima River. The Highway divides the site, and the city of Yakima, from the river. The two highway interchanges to the north and south of the site don't serve Yakima to their full potential, and are fairly confusing to navigate. The highway itself dominates the site with the loud sound of traffic, and has a visual presence by being elevated upon a 20 foot tall berm. The site has direct access to two underpasses beneath the highway. One is centrally located, along the small rail line that divides the landfill from the rest of the site. The other underpass is at the northern end, where water is diverted back to the river. A road through this northern underpass also provides vehicular access to the Yakima River Greenway.

Across the river to the east is the semi-suburban community of Terrace Heights. To the South of Yakima is Union Gap, named after the gap in the ridge. Yakima originally developed here, but when the railroad refused to put their station at Union Gap, the developing city effectively relocated around the railroad station a few miles to the north, and developed its urban grid along the orientation of the railroad (a slight diagonal off from north-south, in order to align straight between the two mountain passes). This formed the present city of Yakima. Today that railroad is still very active, and it is surrounded by apple-packing warehouses.

A spur of the railroad traverses the site, but it is only ever used every two months by one individual to transfer waste material to a site in Moxee City. This minimal use maintains its status as “active railroad”.

East-west running Yakima Ave is an easily walkable stretch of the city’s downtown core. The southern extent of the Boise Cascade Site is about eight blocks north of this central avenue, which includes active businesses, vacant storefronts, the city’s tallest building, and a new convention center. Highway 97, which extends from California to Canada, is called 1st Street while it runs north-south through Yakima following the railroad. It is edged by automobile-oriented commercial development.

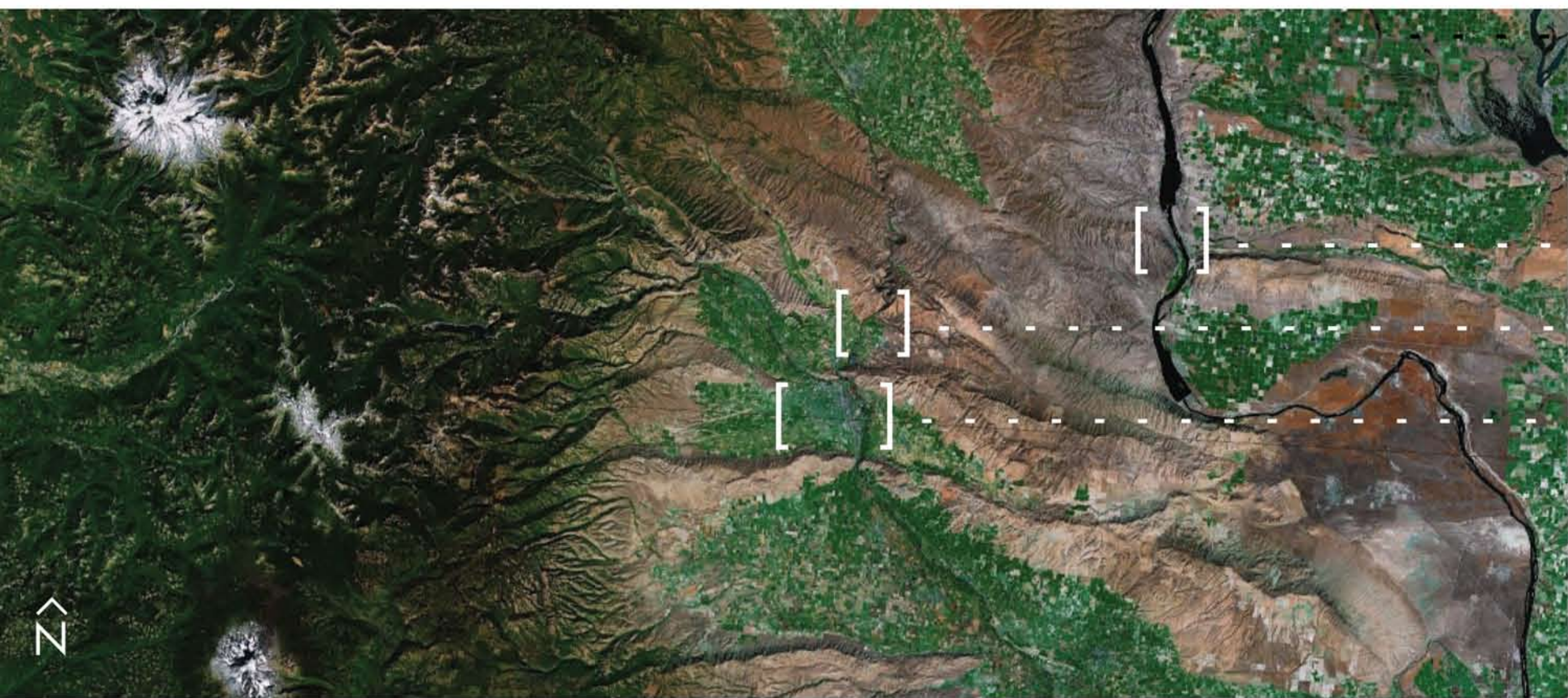
The neighborhood along the west of the mill site is called Northeast. Formerly it was modest housing for mill workers. In recent years its population has shifted to about a 50% Hispanic population, consisting largely of agriculture and service-profession workers. Many residents are recent immigrants. Excerpted from my notes:

There’s a disconnect between this neighborhood and the western, wealthier part of the city. There’s a neighborhood school on N 3rd, and trailer parks north of that. Dan had a student who was sitting there sketching once, and a policeman came by and told her it’s not a good idea to be there, but Dan doesn’t feel that way. There’s a corner store by 8th and D St run by Said (sigh-EED), an Arabic man who sells international grocery items including Latin American food. You notice people giving you “what are you doing here” looks, and there are some boarded up houses. By D and 3rd, family services and corner stores, mixed use. It’s a walkable neighborhood but no one really has anywhere to walk, so you don’t see that many people walking. 1st Ave is like 99 in Seattle, it’s car-oriented. Once you’re in a block or two it’s more walkable. There’s a tight Hispanic subculture. A sheriff from a nearby city said Yakima is one of the best ways for drugs to come from Mexico.

Indeed, multiple cultures coexist in this part of Washington and certainly in the city of Yakima. While the Northeast neighborhood lives with low incomes and gang activity, wealthier parts of the city lie across the railroad and warehouse corridor.

Culture and landscape productivity come together in Yakima's historic apple industry, as well as its emerging wine culture. The growing of grapes and production of wines is on the rise as a culture and industry in Yakima. Walla Walla, now renowned for its wines, could have been compared to present-day Yakima 20 years ago in that regard. Especially in the wealthy western part of town, viticulture, gastronomic, and "foodie" culture is emerging. It could be possible that Yakima has the same potential as Walla Walla, minus the disadvantage of isolation. The towns downstream from Yakima, 5 or 10 miles through the Yakima Valley to Toppenish, have an even stronger wine culture, while Ellensburg to the north has a smaller wine culture. Historically the area has been known for apple production. In the 1990s apple production was less encouraged, and viticulture may have the potential to replace some of that industry (Stettler). Overall, the region's most important crops include hops, cherries, wheat, grapes and apples.

There are numerous shifting forces in Yakima, including demographics, industry, agriculture, and land use. A design as large-scale as the former Boise Cascade site must be contextually sensitive while taking into account Yakima's many voices and its uncertain future.

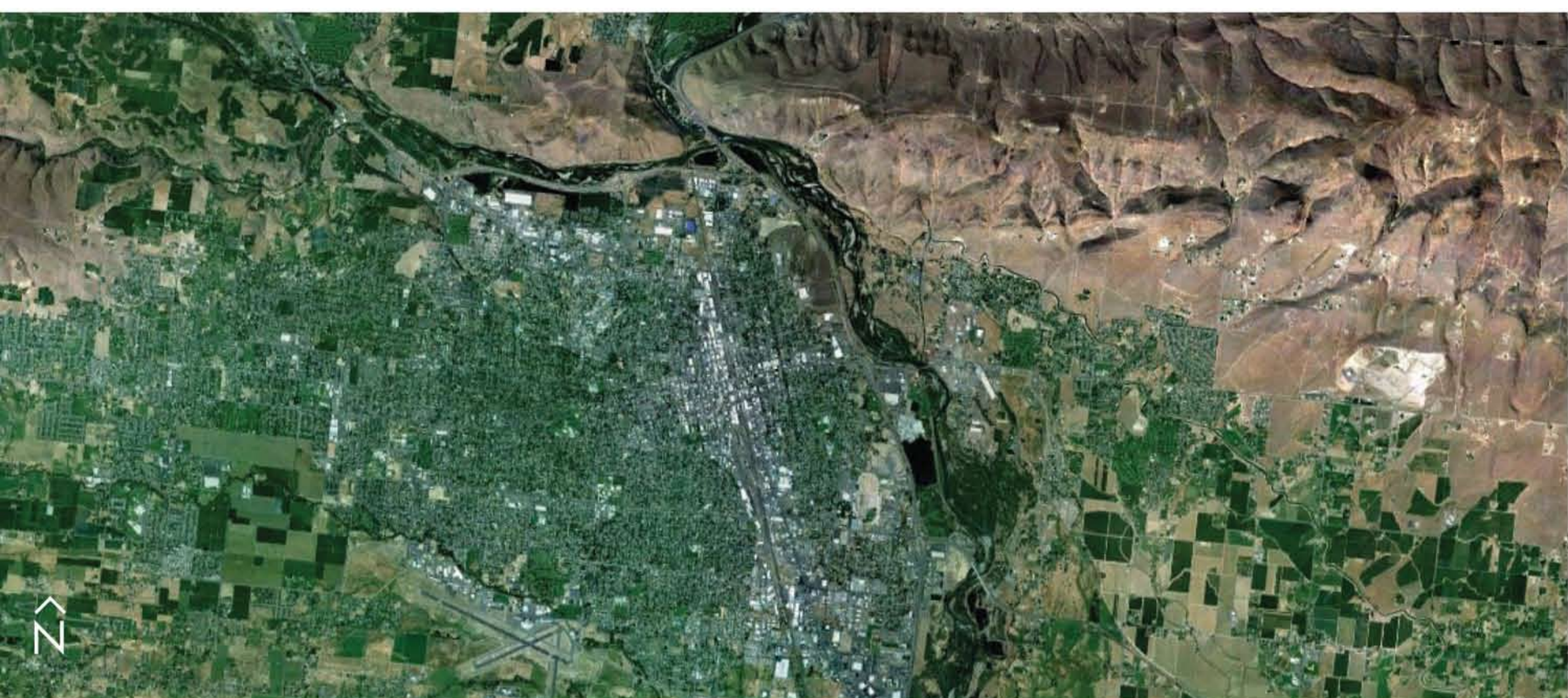


THE REGION
 YAKIMA VALLEY
 Between Cascade mountains and Columbia River
 145 mi SE of Seattle, 200 mi SW of Spokane

- Columbia River
- Yakima River
- YAKIMA

CROPS: hops, wheat, cereal grains, apples, grapes, cherries, pears, hay, vegetables, others

SITE CONDITIONS



THE CITY
 YAKIMA, WASHINGTON
 Pop 91,067 (2010 Census)

- County seat
- 9th largest city in Washington
- Median household income: \$39,706
- Persons below poverty level: 21.3%



THE DISTRICT

- YAKIMA RIVER: Disconnected from city, by I-82
- THE SITE: Former Boise Cascade plywood mill
- THE NORTHEAST NEIGHBORHOOD: Issues: 12% vacancy rate, gangs, low income, disconnected, lack of jobs, need for economic identity and community, high immigrant population
- INDUSTRY: Rails and warehouses
- THE DOWNTOWN: Yakima Ave



THE SITE
 Former Boise Cascade plywood mill, closed 2006
 211 acres

- GREENWAY: Yakima River Greenway park, adjacent but separate
- SLOUGH: Directs some river water into site. Site has water rights.
- PUNCTURE: Underpass access to Yakima River Greenway
- HIWAY: Interstate 82, elevated above site, LOUD!
- SOIL STRATA: Wood debris, decomposed organic debris
 Silts with 20% organics
 Rounded river gravels with sand
 Isolated areas of PAH contamination
- STOCKPILES: Gravel, earth, mulch
- PUNCTURE: Rarely used rail underpass, access to river
- REMNANTS: Architectural evidence of industrial process; some hydrocarbon soil contamination
- LANDFILL: 20 acres; closed in early 1970s; capped, not lined; methane; low levels of chemicals in groundwater





City of Yakima. *Determination of Significance and Scoping Notice*. Yakima. Jan 20, 2011.

<http://www.yakimawa.gov/services/planning/2011notice/DS%20SEPA%20Cascade%20Mill.pdf>

Stettler, Dan. Personal interview. Jan 20, 2012.

CHAPTER 6: MUSIC AS ECOLOGY

Following my initial research and visit to Yakima, I began forming interpretations of the place as well as intuitive design impulses. However, I wanted my first formal creative response to occur in music. The day following my site visit, with impressions fresh in my mind I went to my music studio.

Because my lunar garden design used music as a way of relating a narrative, I wanted to experiment with music's more living, spontaneous, multi-layered nature in my next design. I wanted to have music itself function as a landscape, ideally like the landscape I had just observed. I created conditions for an improvisation in my music studio, setting up my drum set and plugging in two amplifiers, one for a bass and the other for an unattended feedbacking guitar. To ensure spontaneity I invited a friend to collaborate with me (classmate Jordan Bell). He and I would play or tinker with the bass and drums; I "knew how" to play both instruments but he did not. Between us this ensured a wide range of sound production: me, a musician with conventional skills and Jordan, who had no musical skills but could still manipulate the instruments as sound-producing objects; and we were joined by the mindless system of the guitar feeding back in response to resonant notes the bass guitarist might play, whose tuning could be configured for a loose amount of control. The three of us set off into an unfolding, spontaneous music.

We recorded two takes. In the first, I play the drums with consistency while Jordan makes free-form noise and notes on the bass and the guitar. The second take involved me on the bass and Jordan on the drums, with the guitar feeding back as a constant drone. For this recording, hear *Analog Ecology Music with Jordan Bell* at <http://archive.org/details/AnalogEcologyMusicWithJordanBell>. The notes I played on the bass were responsive to the tones of the guitar, deliberately deploying relative consonance or dissonance. I crafted a melody based on the feedback while Jordan's percussion served as texture and punctuation. At times I struck the open-vibrating guitar strings with the head of the bass I was playing, disrupting the drone, which usually settled back to the same tone after a moment. The takes were long and highly experimental, but there were moments in each that I enjoyed and isolated post-recording. Each take required a few minutes of open-ended exploration before settling into a well-formed musical structure. It wasn't necessarily clear to me how the unfolding music had any relation to the Yakima site I had just visited; it may be likely that it had none. However, I was trying to convey impressions of the place, including openness, distance, and expanse through the musical

aesthetic of my contribution to the improvisation. I trusted in free-experimentation, wondering if the music's structure might later yield a design concept.

I tried this same approach a few nights later with my friend Zack Grey. For this recording, hear *Analog Ecology Music with Zack Grey* at <http://archive.org/details/AnalogEcologyMusicWithZackGrey>. Zack is a musician with whom I've played in several bands over many years, so we were familiar with the instruments we were playing and with each other's style of music-making. He played the drums while I played the bass, and once again I let the unattended guitar feedback in an open tuning, producing a dynamic drone we could respond to and interact with. The result was not altogether dissimilar from Jordan's and my previous session, in that the sonic aesthetic was the result of the same instruments, amplifier settings, and recording method. It also had the same collaborative conditions— a friend on drums, me on bass, and the guitar feeding back. Thus the only condition that varied was each individual's contribution. The resulting music was quite different between the sessions. Zack and I knew how to respond to one another musically, how to play more complex structures together, and how to change and transition to different parts. Therefore this session featured more development and complexity between the improvising bass and drums, whereas the session with Jordan featured a more consistent, slow-changing structure between the bass and the more minimal drums, which I found less predictable than Zack's drumming. I find the music recorded with Jordan more meditative, while the music with Zack contains more complexity and energy (or at least more experienced communication).

What struck me most about both sessions was that the music composition was not totally in the hands of any particular member of the group. We all contributed parts to a living, changing system of music. This approach to composition appears to be very similar to the ecological dynamics of landscape, as opposed to the more static, formal compositional method I employed for most of my lunar garden. This new approach was oriented towards process rather than product, to the extent that there was no goal for its product. This music never would have been created without the unpredictable input from my collaborators; and if we tried to replicate it, we could probably approximate it, but the exact outcome would be different. With this realization, the first seed of my design concept had been quietly planted.

I see these interactions as an instance of what Chris Reed calls *analog ecologies*. These musical experiments were a human-made model of the responsive nature of living systems. Perhaps any jam-session between musicians could be described in this way, but what made the ecological parallel legible in this case was the collaboration of the feeding back guitar. The range of inputs and instruments (especially in the session with Jordan) mimicked the complexity of interactions in an ecosystem. As a whole, this

experiment demonstrated a key potential of music in its relation to landscape: it can relate narrative while *a/so* modeling process and relationships.

This is an idea I had reflected on previously. From my own writing the previous fall:

Creating music by improvising, especially with other musicians, is a lot like ecological succession, where on the disturbed (or maybe you could call it “energized”) blank slate, first strong dull generalist species, opportunists, take over, and as they grow, they form numerous environments for more and increasingly fragile species, over time developing a complex relationship of living, growing things. I’ve noticed this from improvising music too, where very simple strong repetitive starting points morph to allow subtler things to occur and fill in, forming a more complex overall piece, living and growing and moving.

Representation is a key topic for landscape architecture because of how things CHANGE. Well, music seems fitting, doesn’t it? Modernists, like Burle Marx, made steps forward in their art by basing landscapes off paintings. I think today, basing landscapes off songs is much more relevant.

Crafting the song (with which to inspire the landscape) is integral to this process. My goal would be to incorporate improvisation, collaboration, and open-endedness along with deliberate composition, narrative, and basic structure, together as a single song or landscape. I knew the next step would be to combine the compositional approach taken by my lunar garden songs with the compositional approach of these recent collaborative sonic experiments, and see what kind of landscape it evokes.

CHAPTER 7: DESIGNING THE FLEXIBLE LARGE PARK

ESTABLISHING PROGRAM: FLEXIBLE LARGE PARK

Inspired by my collaborative experiment in music as an analog ecology, and informed by my site analysis work, I decided that my design for the Yakima site should be one over which I do not have full authorship. Rather, I would set up the conditions for a collaborative improvisation in the landscape, between myself as the designer, nature, and the surrounding community. My contribution would be landform, the design of the ground plane.

I decided on a program for the site: *flexible large park*. These 211 acres are adjacent to the heart of Yakima and are an integral piece of the urban surface, and I felt that they couldn't be relegated to being a mere pastoral landscape park. The landscape I generate will have the potential to be developed, shaped, and populated as the people of Yakima see fit, while serving as a public park. My design will provide the starting point for this evolution.

URBAN RIPARIAN ZONE

Early on I saw the opportunity for the site to become an urban riparian landscape. The Yakima River, which is a great recreational resource for the city, is completely disconnected from the city by Route 82's large embankment, which runs all along the eastern edge of the city. The slough in the north of the site draws water from the river briefly into the city-side of the highway, before returning it to the river through the site's northern highway underpass. I saw the opportunity to extend the slough through the site's expanse, having the water exit through the southern highway underpass, just before the contaminated landfill area.

POINT OF ORIGIN

As seen on the map, the site is located between the Northeast neighborhood and the edge of Yakima, with "its back against the wall" of Route 82. The city's urban fabric collides here, where two differently-oriented street grids come together at about the middle of the site. About eight blocks to the south lies downtown Yakima Ave, and a similar distance to the west lies First Ave, the major north-south industrial and commercial corridor. These conditions present a potential to invert the site's peripheral state, transforming it into the "starting point" of the urban fabric. From this perspective,

the site could possess the potential to be a place where river and city coexist, from which the city grids “radiate out” rather than “collide”.

My impression upon visiting the city, from reading about it, and from the story of the city’s desire to commercially develop this site, was that this part of Yakima lacked a place-based economic identity and associated vibrancy. I also felt that due to climate change, Yakima’s growth in coming decades might be less rapid or more unpredictable than other medium-sized cities in Washington because increasingly dry weather or reduced Cascade mountains snowpack could stress Yakima’s agricultural productivity, which is the region’s primary industry. In a more active, growing city, a designer’s or planner’s impulse might be to set aside this 211 acre expanse of open land as valuable park space. However the aforementioned climate change context and the city’s setting in the already-expansive American West suggested a different view of this large open space site than had it been located in my much more densely populated home city of Seattle. Consequently, I thought it appropriate to allow for different kinds of development—architectural, agricultural, or some other kind of functional landscape; while retaining areas supporting more naturalistic ecosystems.

My approach to achieving this goal was to divide the site into zones through sculpted topography. I would shape the landforms, making places for strolling, play, and relaxation, places for water to flow, places where buildings could be built, places of agricultural productivity, and places where habitat could emerge and develop. Additionally, I could sculpt landforms along the site’s eastern edge to muffle adjacent highway sounds, which currently dominate the site.

IMPROVISING FORM

My process for writing music has always begun by improvising on an instrument until something provocative emerges, which I then develop into a full piece of music. With my program for the site established, I decided to apply this improvisational approach to my initial form-making endeavors. I used a method of plan-view collaging taking Google Earth screenshots of the surrounding Yakima Valley landscape and stitching these aerial photos together in Photoshop to make provocative visual compositions. This helped gauge the scale of the site: how many city blocks could fit here? How would a large hill fit here? How would a braid of the Yakima River fit here? How much forest or steppe could fit? What would these look like in various combinations?

From these visual exercises, I developed a strategy for how to proportion the spaces of the design. The design centers on a sculpted extension of the slough, meandering through the site, and exiting via the rail underpass. Because it is closer to downtown, the landfill area of the site could be stabilized for future buildings. The manufacturing

buildings along the western edge of the site could be the core of the recreational park, making sculptural use of these industrial relics. The northern end of the site could accommodate agricultural or productive uses, while the eastern edge of the site, between the new slough and the highway, could become habitat.

As I began to sculpt the ground in plan and section, I was concurrently writing exploratory music, seeking to develop relationships among the instrumentation and the landscape's different layers. Connections between landscape and music started to become unclear to me at this point; the landscape design process was starting to form on its own, whether or not I engaged in music design. Some days I would go to my music studio and freely write and record, wondering if a spark of inspiration would come as I recorded a drum track, overlaid a bass track, and overlaid a guitar track. Music began to feel like a distraction; the metaphor was wearing thin, and the landscape design seemed perfectly able to develop without the need for musical inspiration.

Quite suddenly, about three weeks before my deadline and final review, the building in which I rented my music practice space closed down and I found myself without a space to play and record music. However, I did have the recordings from hours of my previous sessions, ranging from nearly finished multi-instrumental pieces, to exploratory improvisations on a single instrument. I also still had access to a place where I could play a bass guitar. A parallel narrative emerged: the Boise Cascade mill had been in full operation, producing plywood, before it was suddenly shut down. The landscape architect is left to design with the site's expansive blank log storage landform, in relation to remnants from its industrial history. Likewise, my music practice space was in full operation, producing music, when it was suddenly shut down. As a musician, I could still craft music on the bass guitar, to complete the unfinished pieces of music I had previously recorded. As a result of this limitation, a satisfying wave of creativity emerged.

A SATISFYING WAVE OF CREATIVITY

I took one of my unfinished pieces of drum and guitar music I particularly liked and wrote a new bassline for it. The guitar in this original recording was fairly repetitive and droning, in an attempt to evoke the expanse of the site. The new bassline gave the composition depth and three-dimensionality; it ended up being the musical narrative in this otherwise droning composition. I was very satisfied with this adapted composition (hear *New Braid 1 Responding To* at <http://archive.org/details/NewBraid1RespondingTo>).

I liked this new bassline so much that I isolated it in a new recording, and composed a new guitar track for it. Though it had the same bassline, this piece felt like a completely different song, (hear *New Braid 2 Responded To* at <http://archive.org/details/NewBraid2RespondedTo>).

I tried a third approach pairing the isolated bassline with a previous recording of noisy guitar feedback, in a chance overlay to see what kinds of unplanned relationships might occur. I found this recording to be the most pure articulation of the bassline itself, since it was the piece's only conventionally musical element (hear *New Braid 3 Chance Overlay* <http://archive.org/details/NewBraid3ChanceOverlay>).

From this process I took away an important narrative for the Boise Cascade site. The bassline was originally written in response to a previously recorded musical remnant. It could represent the shape of the ground, sculpted by the landscape architect in response to existing site conditions. Then, the sculpted bassline was responded to by another musical composition, giving it different meaning while retaining intact the designer's original narrative. Even chance noise was held together by this bassline, which provided structure and narrative to the piece. This could represent the landform design being enriched by users of the site who re-purpose these compelling forms in previously unimagined ways. Even plant growth or entropy will have certain forms and compositions because of the intentional underlying shape of the ground. The process between these three pieces of music came to illustrate the process intended by my site design.

I used the music both to inspire site process and design, and to inspire the narrative of the spatial experience of moving through the design. I listened to the music carefully many times, writing and drawing the impressions evoked by each portion of it. The impressions had a definite progression, which I captured in a written narrative. I then used this narrative to structure how the landscape would be experienced by visitors.

REFLECTION ON THIS PROCESS

Translation from music to landform occurred qualitatively, at the level of this narrative. I could have taken a more quantitative approach: I could have developed a way of transcribing measured changes of pitch over an interval of time (in the music) into vertical feet in a horizontal cross section (through the landscape); but such technically obsessive translation would be tedious and irrelevant to my goal, which was to harness music's more evocative, invisible inspiration. Literal depiction of landscape architecture is already well served by methods of visual representation including plans, cross-sections, diagrams, models, and vignettes. My use of music does not attempt to replace or even add to such literal modes of representation. Music's unique communicative power resides in its abstraction and impressionism, which catalyzes the intuition. This can make music an intimidating tool to work with, unless the artist has a comfortable and confident relationship with musical intuition.

Reflecting on the process has also revealed the importance of collaboration and creative constraints. Adapting to the unexpected closing of my music studio turned out to be a

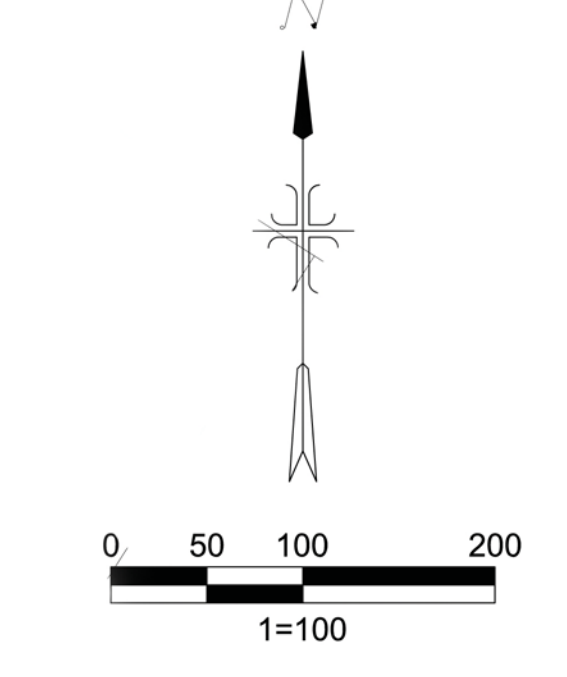
crucial contribution to the outcome of my design. This catalyzing hiccup in my design process, this unplanned event which forced a creative response, required me to improvise, just as when I collaborate with other musicians. Because I was working alone in this design, finding ways of responding to unplanned inputs proved necessary. Compelling design, in music or in landscape, did not happen for me before this event.

REFINING THE DESIGN

I presented the design and its associated pieces of music at the end of the winter quarter 2012, to my classmates, guests, and a panel of reviewers including Grant Stewart, Brice Maryman, Nate Cormier, Laura Haddad, Ben Spencer, Luanne Smith, Thaisa Way and Iain Robertson. I communicated my goals, the site context, my design with music, and my design of the landscape clearly and concisely enough to provoke a satisfying and productive discussion and set of critiques. My posters for this presentation are mixed together on two boards, on pages 56 and 57.

At the beginning of the spring quarter 2012, I revised the design through an iterative process between writing text, editing and listening to my music, manipulating the technical drawings and digital model of the design, creating rough charcoal sketches, and creating diagrams and collage; all in no prescribed order, but cyclically between the media, over a course of several weeks. Sketches from this period are on pages 58 to 64. The final design for the former Boise Cascade Mill site is described in the following chapter.

THE LANDFORM SCORE
Composed for bulldozer and shovel,
to be performed at the Boise-Cascade site
in Yakima, Washington.

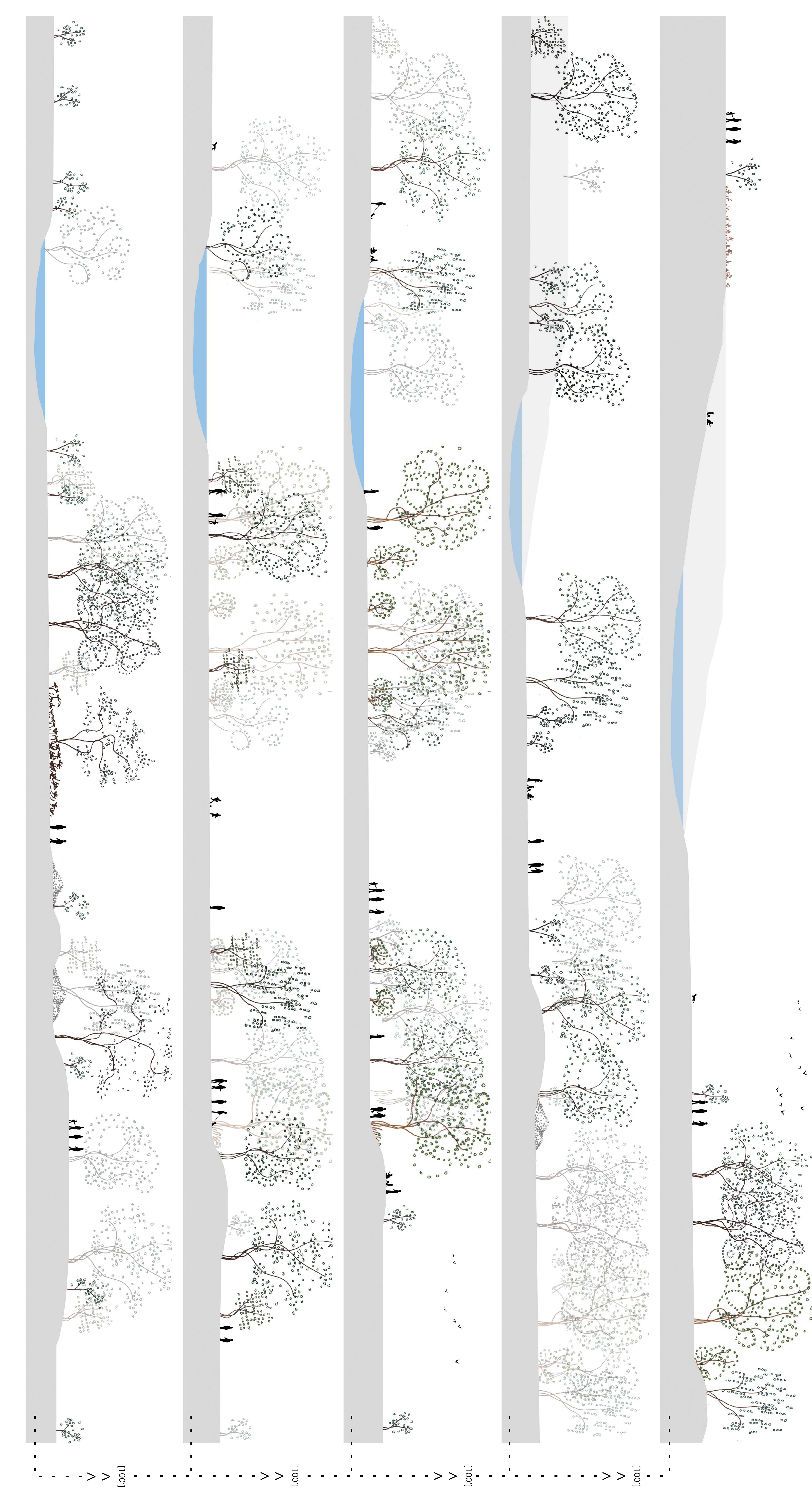


This design for the ground is both intentional and indeterminate. The sculpted ground plane brings a braided of the Yakima River into the city, connecting the Northeast neighborhood and the Yakima River Greenway, to form a FLEXIBLE LARGE PARK that can be shaped by the people of this city.

The design is organized as a CURRENT THROUGH EDGES AND FIELDS. Because the site is large and relatively flat, topography lines are gathered together to form rich edges between open surfaces. The sequence of outdoor rooms is held together by the SLOUGH, a braided of the Yakima River.

For the people who live here, this shape for the ground will offer spaces to play and recreate, spaces to establish a riparian ecosystem, sound protection from interstate 82, opportunities to found productive urban space, space to reflect on industrial and urban history, and opportunities to build a new urban district that is integrated with its landscape.

This score recognizes that the landscape architect is not the only designer; the design is an ongoing IMPROVISATIONAL COLLABORATION with history, nature, and the community. These players have their own parts.



**MEANDERS:
A CURRENT THROUGH
EDGES AND FIELDS**

Scale: 1" = 10'

The design of the landscape is a series of interconnected spaces that respond to the sequence of cross sections. Open surfaces are defined by the edges of the landscape, which are gathered together to form rich edges between open surfaces. The sequence of outdoor rooms is held together by the SLOUGH, a braided of the Yakima River.

DEFINING PROGRAM

The site's program is FLEXIBLE LARGE PARK. The Yakima River Greenway and the city meet here; this park is part of both. It is a starting point for the city.

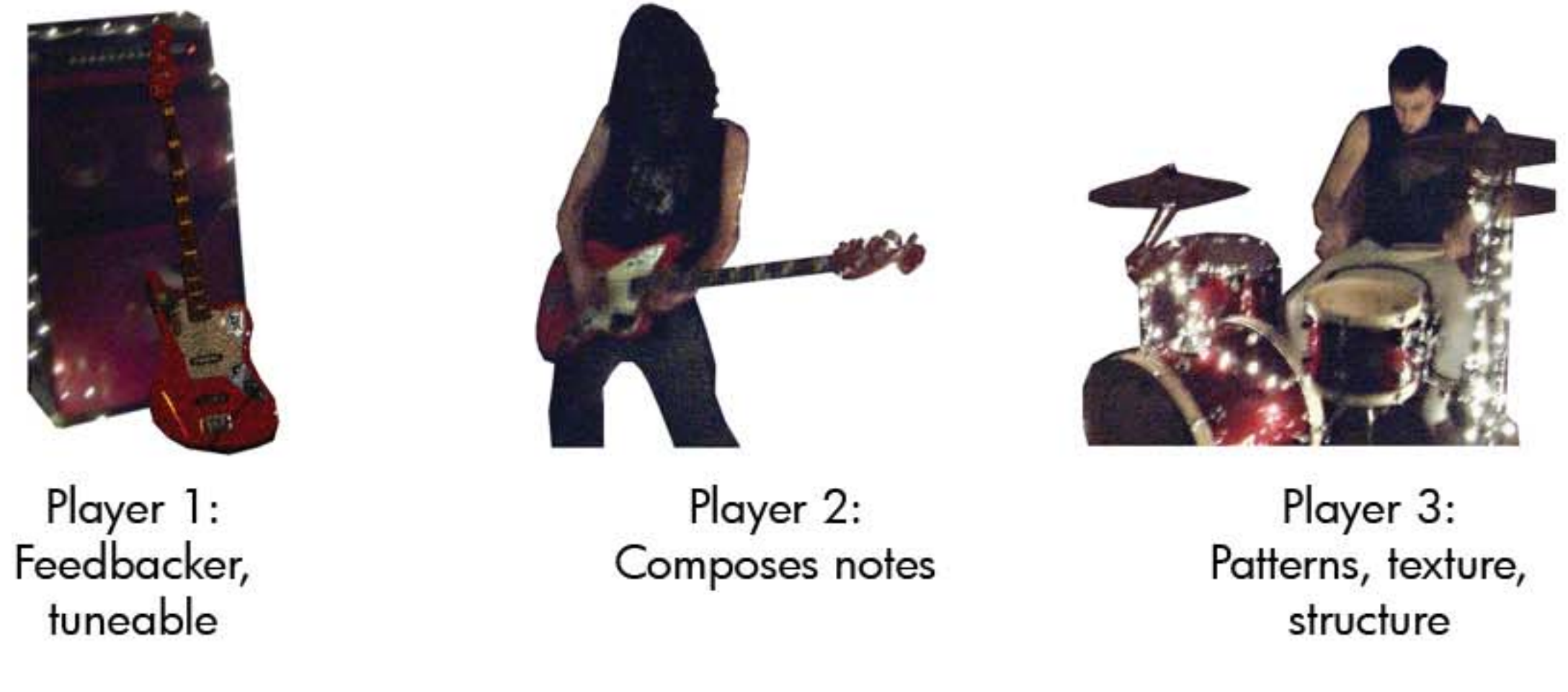
NAVIGATING MUSIC AND LANDFORM:

NARRATIVE: We experience music linearly, as an unfolding story; like a sequenced walk through a landscape. The landscape has stories to tell, just like the music.

PLACES: For this project, landscapes and pieces of music are both considered "places". Each place only represents itself, though they may have similarities. Music is not a literal tool to describe a landscape (that's what drawing is for). We can analyze music as "places" to learn about landscape.

IMPROVISATION: The piece is composed with intention, but is flexible. There is just enough composition and structure to allow for unpredictable inputs.

AN ANALOG ECOLOGY:



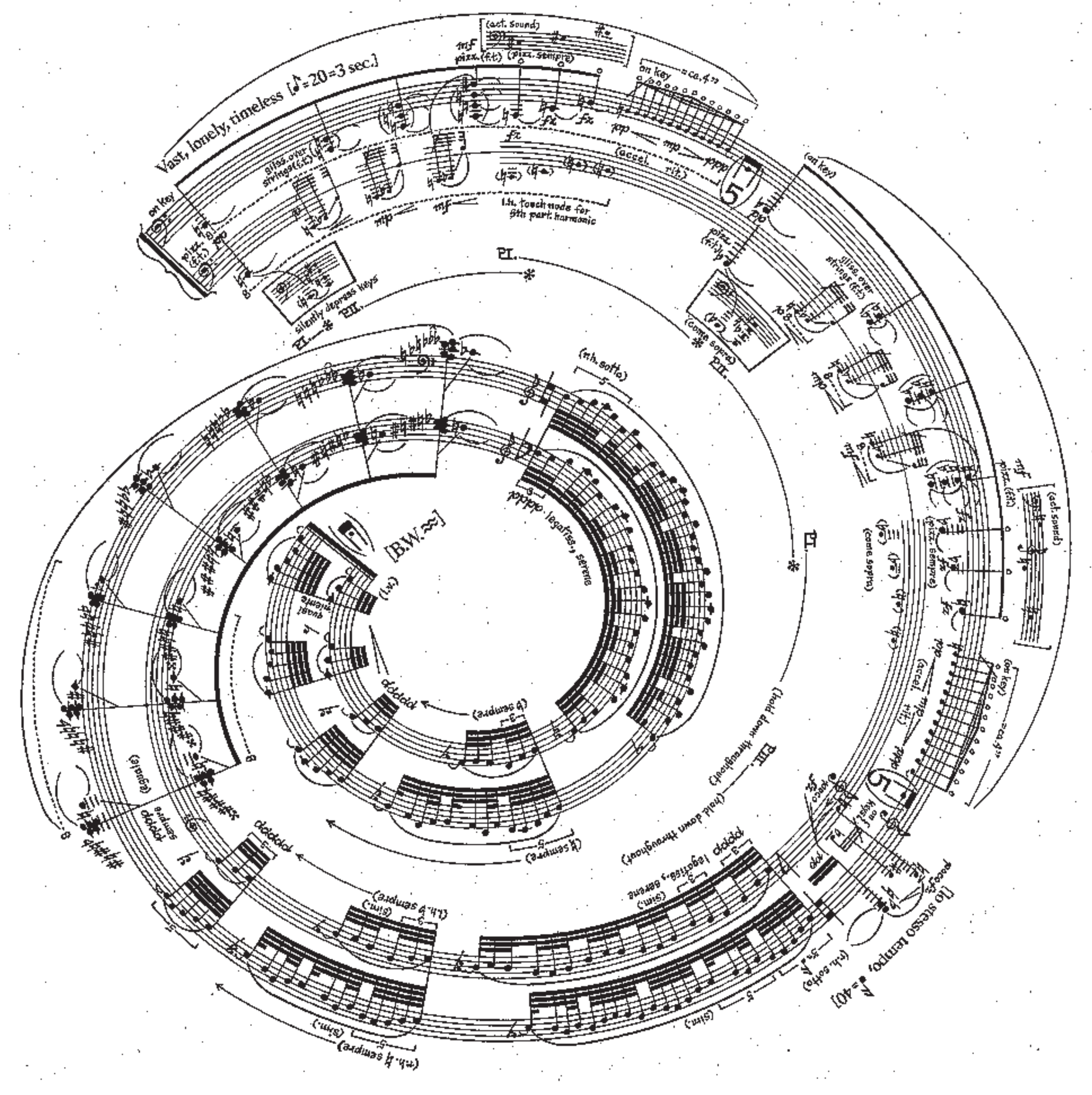
COLLABORATION: The landscape architect is not the only designer, just as the bass guitar player is not the only musician. Other players include nature, community, and site history.

RESPONSE: The landscape design responds to what the site's history presents. Nature and the users then respond to the designed site, continuing its evolution, re-writing the composition.



CRAFTING SCORES

A score is a set of instructions for the players. Pictured is an excerpt from George Crumb's score for "Black Angels".





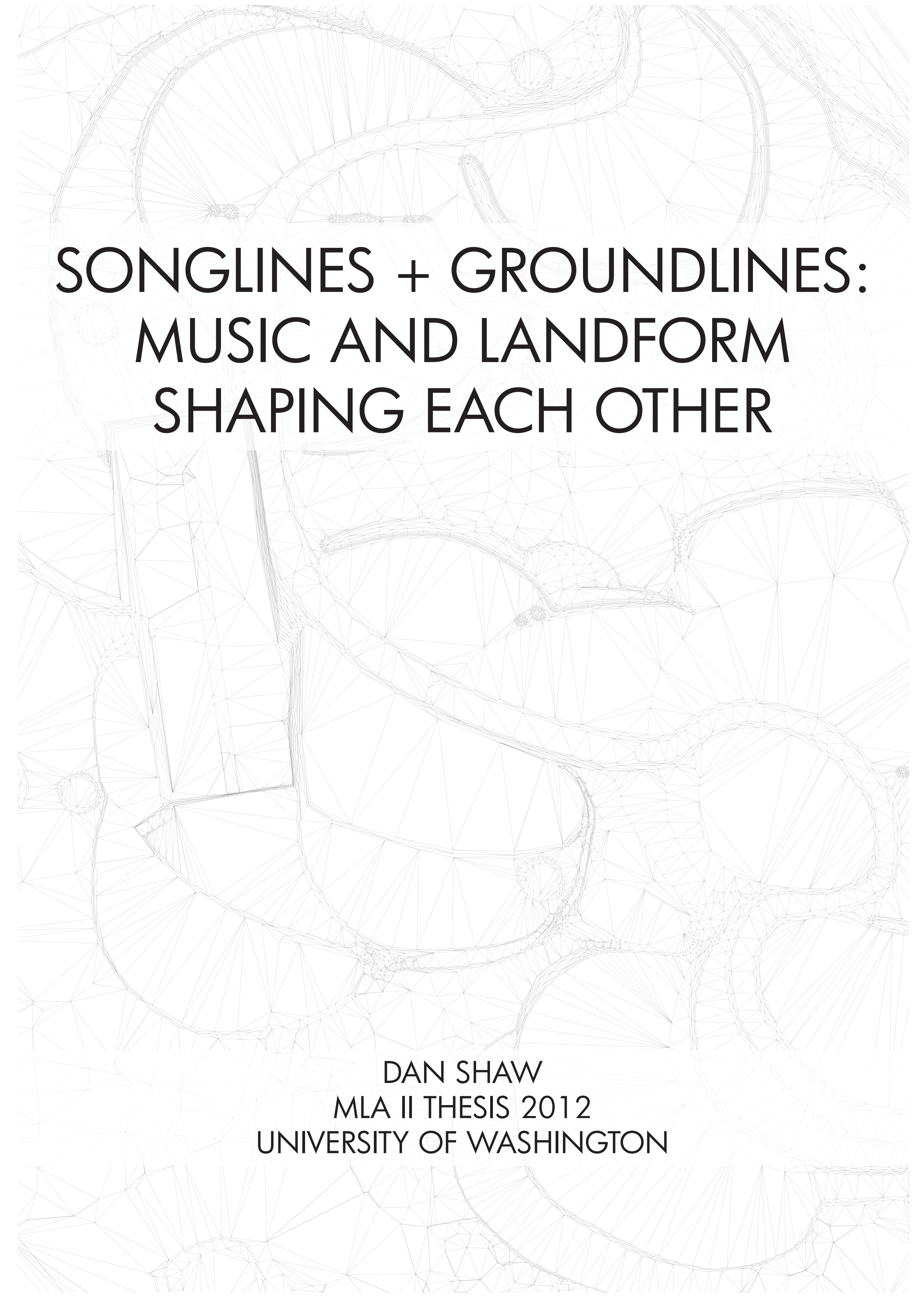
LANDFORM
Scale: 1"=200'



A POSSIBLE FUTURE
Scale: 1"=200'



A POSSIBLE FUTURE
Scale: 1"=200'

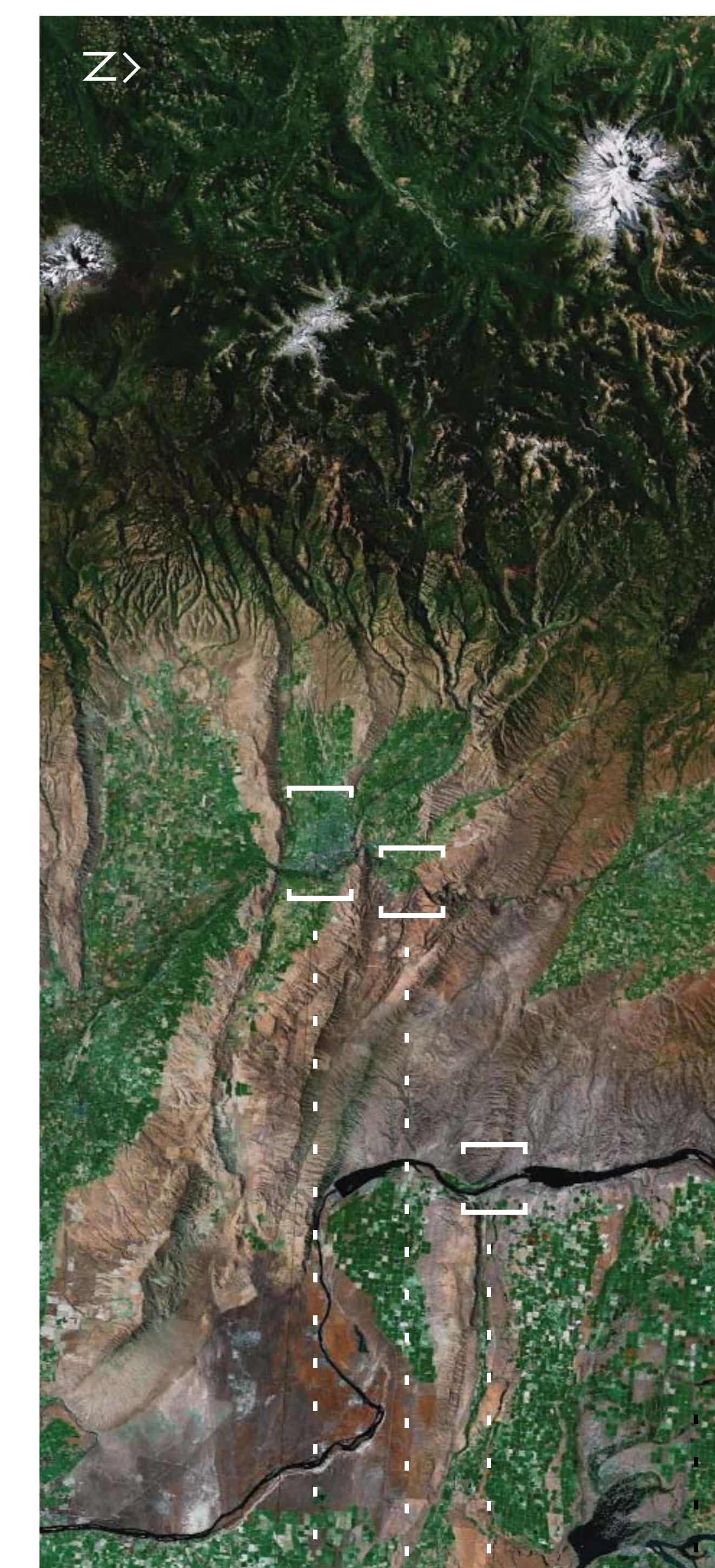
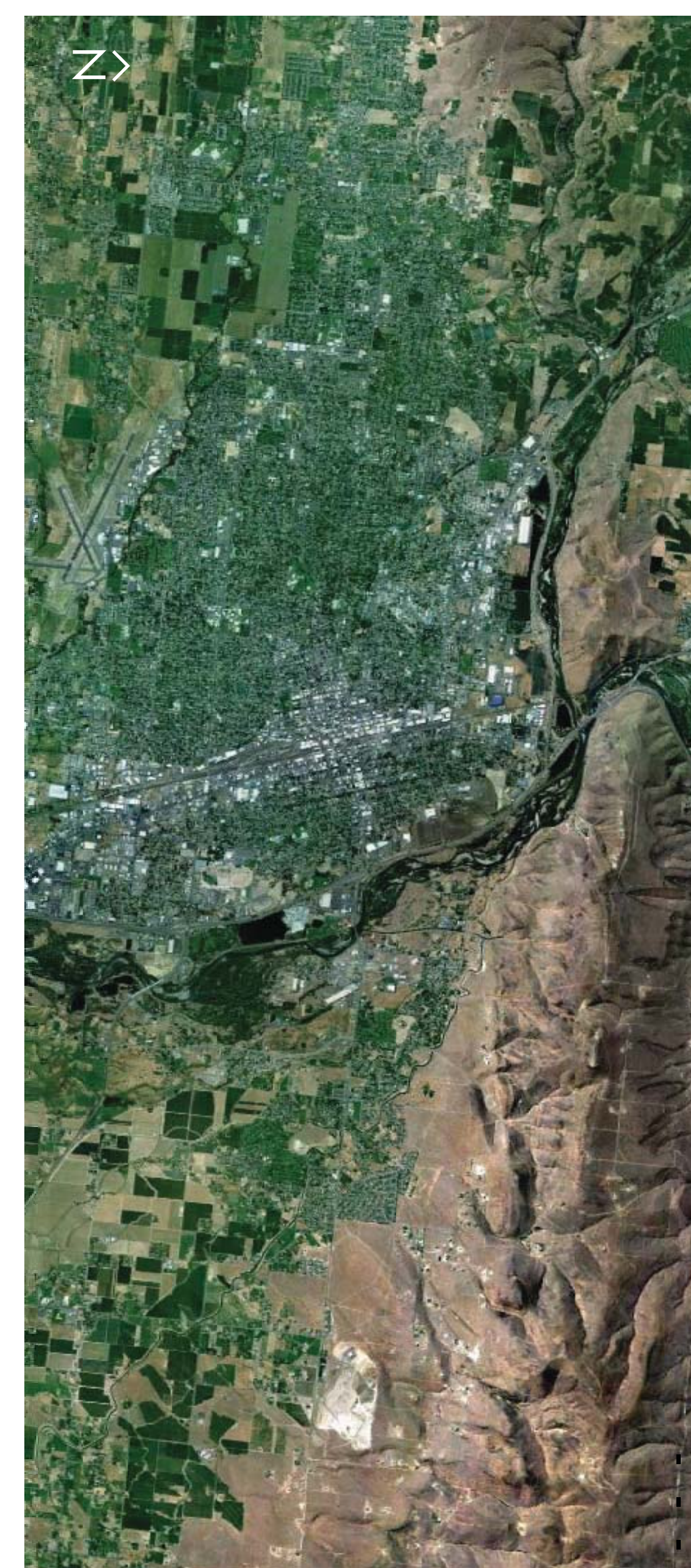
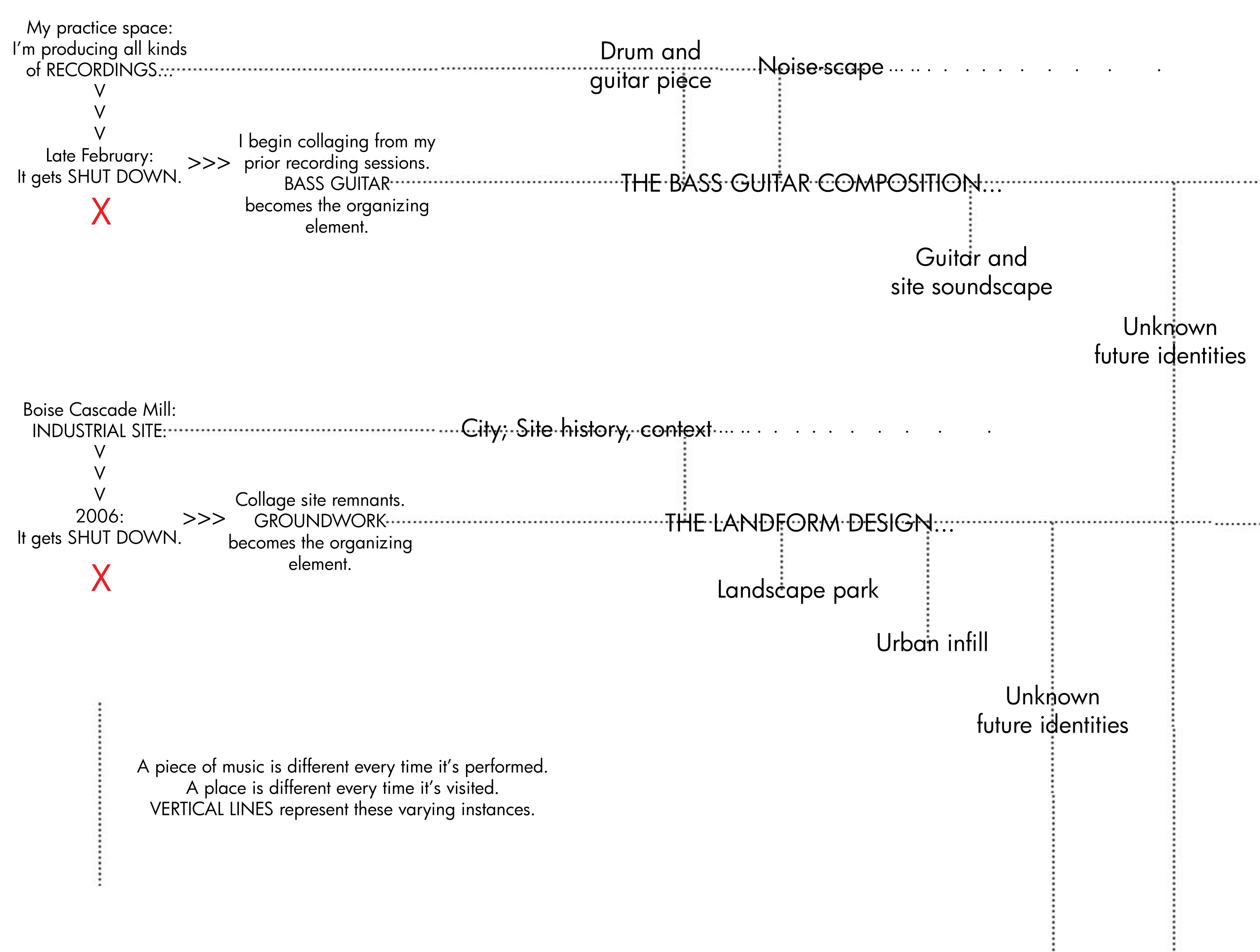


SONGLINES + GROUNDLINES:
MUSIC AND LANDFORM
SHAPING EACH OTHER

DAN SHAW
MLA II THESIS 2012
UNIVERSITY OF WASHINGTON



PROCESS



THE REGION
Between Cascade mountains and Columbia River
YAKIMA VALLEY
145 mi SE of Seattle, 200 mi SW of Spokane

COLUMBIA RIVER

YAKIMA RIVER

YAKIMA

THE CITY
YAKIMA, WASHINGTON
Pop. 91,067 (2010 Census)
County seat
9th largest city in Washington
Median household income: \$39,706
Poorest below poverty level: 21.3%

THE DISTRICT
YAKIMA RIVER: Disconnected from city by 1922

THE SITE: former Boise Cascade plywood mill

THE NORTHEAST NEIGHBORHOOD: Issues: 12% vacancy rate, grunge, low income, disconnected, all of class, need (local economic identity) and community, light industrial population

INDUSTRY: Bolls and warehouses

THE DOWNTOWN: Yakima Ave

THE SITE
Former Boise Cascade plywood mill, closed 2006
211 acres

GREENWAY: Yakima River Greenway park, adjacent but separate

SLOUGH: Ditches some river water into site

PUNCTURE: Underpass access to Yakima River Greenway

HIWAY: Interstate 82, elevated above site, I-501

SOIL STRATA: Wood debris, decomposed organic debris
Silt with 20% organics
Isolated areas of Pstl contamination

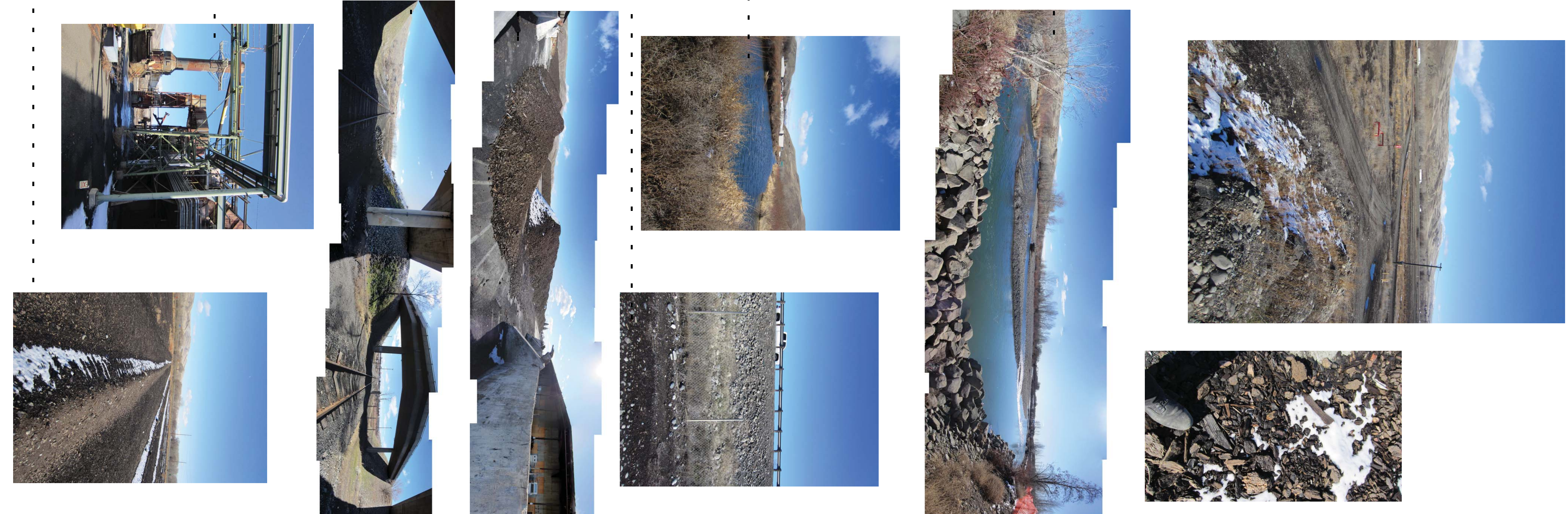
STOCKPILES: Gravel, earth, mulch

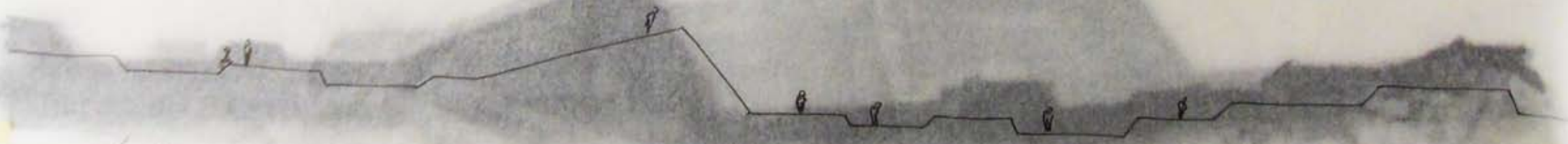
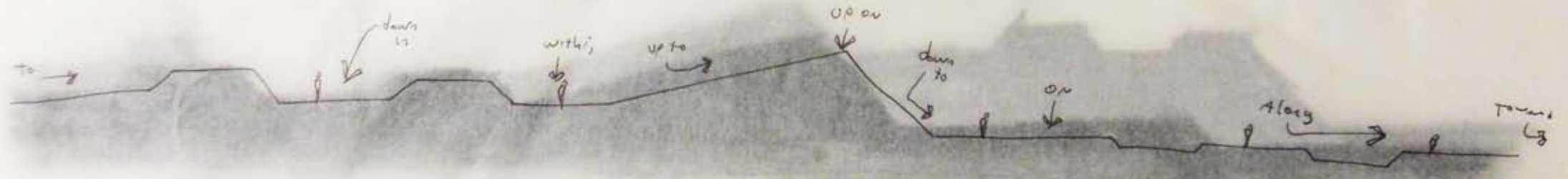
POINCTURE: Rawly used rail underpass, access to river

REMANANTS: Architectural evidence of industrial process; some hydrocarbon soil contamination

LANDFILL: 20 acres, dated in early 1970s; capped, not lined; methane; low levels of chemicals in groundwater

SITE CONDITIONS

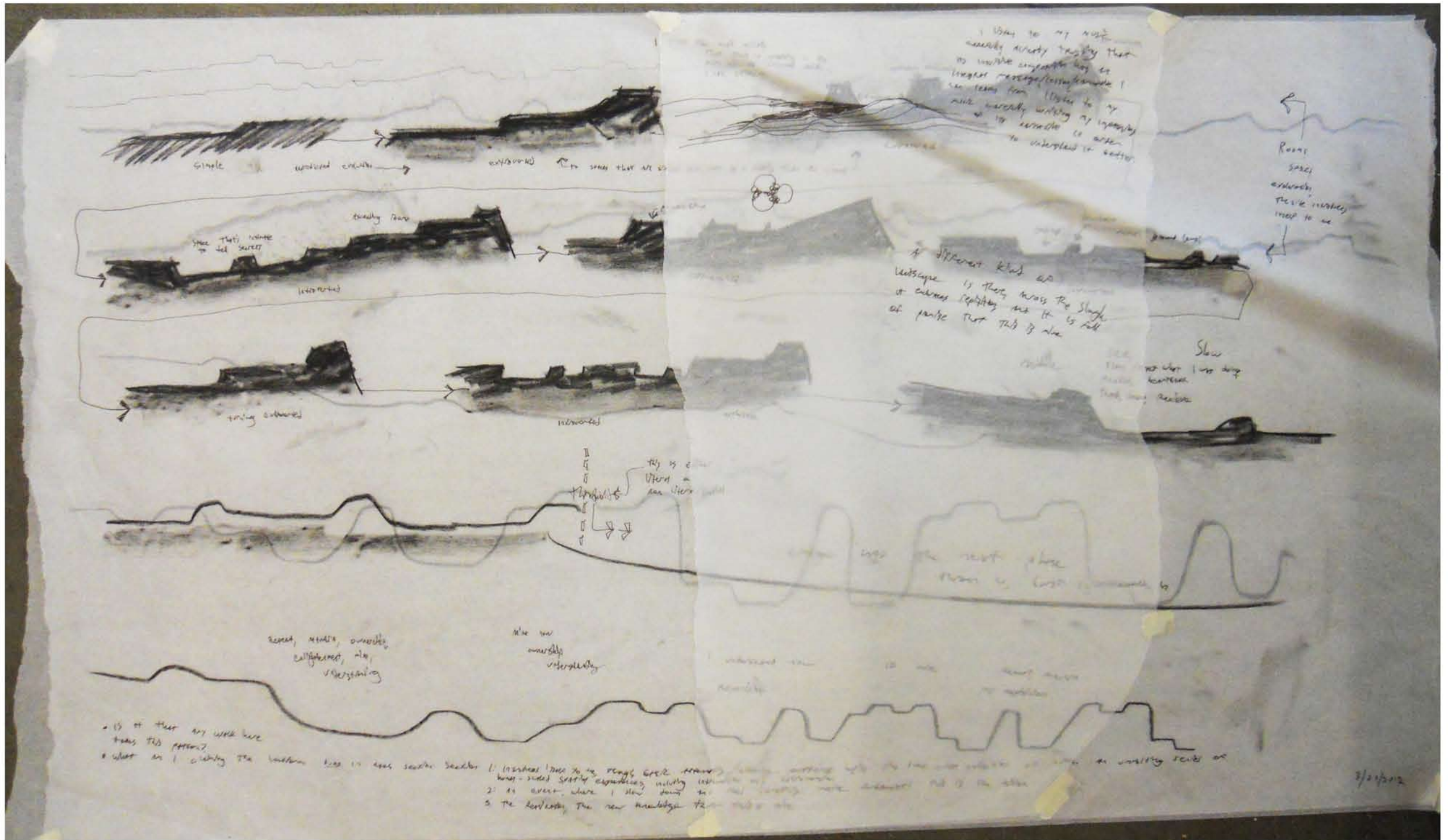




3/27/2012

SECTIONAL STUDIES 3/27/2012

These studies in landform edge conditions between open areas were drawn in charcoal, while listening to "New Braid 2 Responded To". They are in response to critiques at the winter 2012 final thesis design review, that more attention must go towards the design of experiencing landform at a bold human scale.



SECTIONAL STUDIES

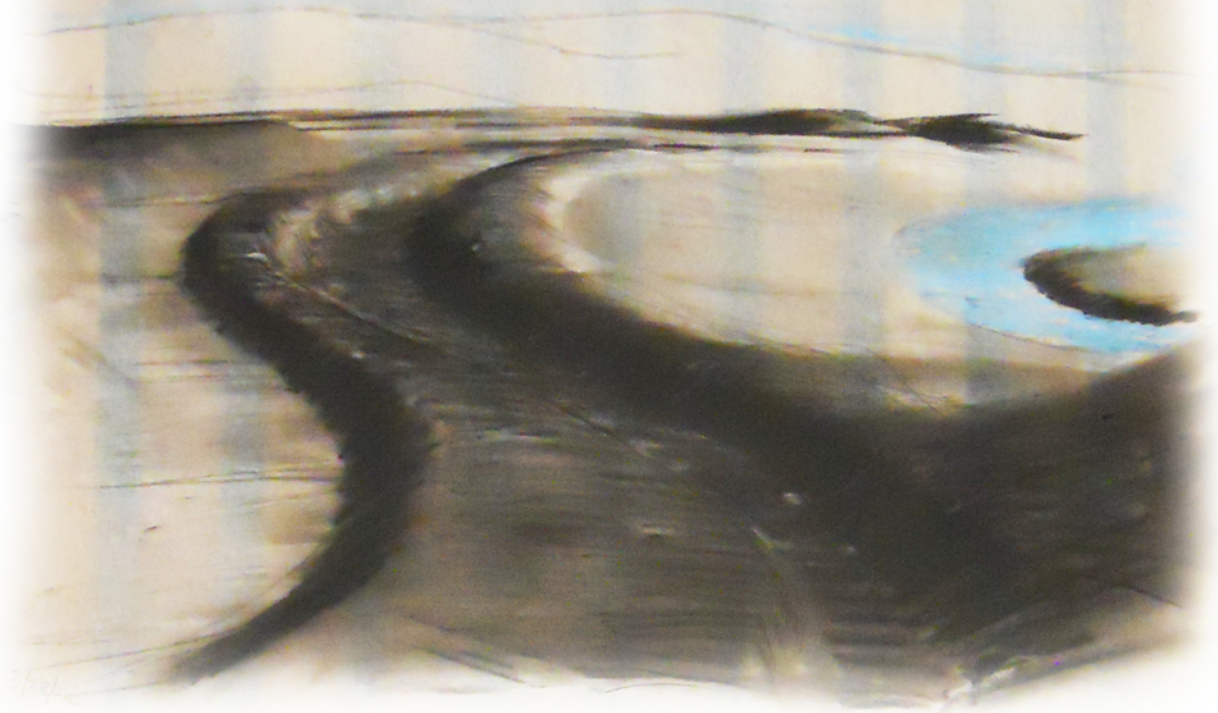
3/27/2012

These charcoal cross sections are an intuitive study of rise-and-fall, based on a repeated and careful listening to the first half of "New Braid 2 Responded To".



RIVER-CARVED LANDFORM STUDIES
3/28/2012

This study in charcoal helped to establish form and sense of space based on carving actions of river meanders.



RIVER-CARVED LANDFORMS

This study in charcoal helps establish the design's formal language, wherein spaces are shaped as if carved by meandering water over time.



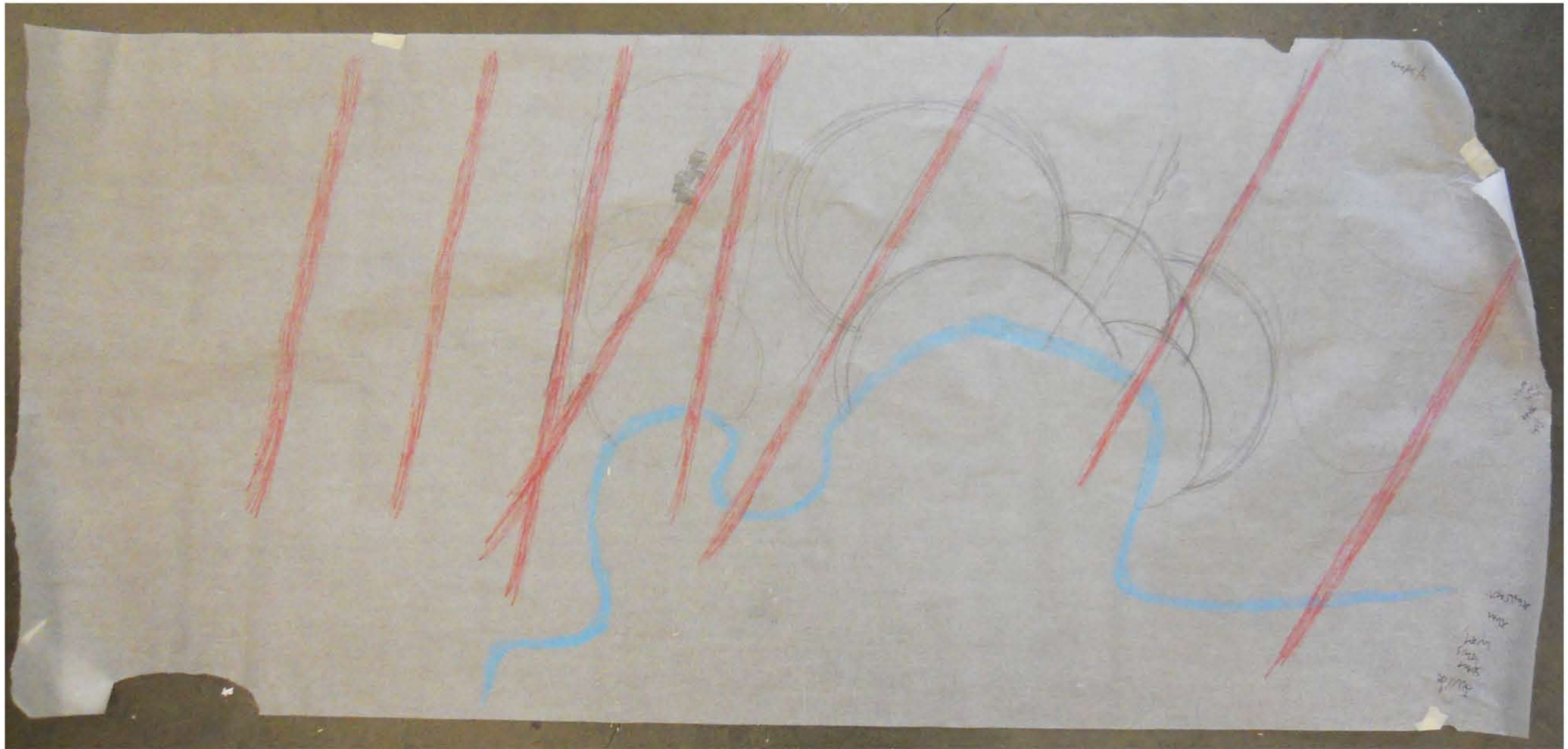
CHARCOAL STUDIES

A hybrid study of plan-view strategies and cross sections begins a revision to the design following the final review in the winter.



LANDFORM PLAN STUDY

This study in charcoal bears the essence of the final design I reached in the thesis, establishing a plan-view resolution between the park's distinct zones, threaded together by a new river braid. South-west is facing up.



PATHS AND BRAID OVERLAY

This study in colored pencil traces overlay patterns of the emerging braid-form and strategic extensions of the street grid. Southwest is facing up.

CHAPTER 8: RIPARIAN ORIGIN: A FLEXIBLE URBAN PARK

A new piece of the city will grow from this urban riparian zone. The designer's topography plan is a score written for the bulldozer and shovel, to be performed on the former Boise Cascade site in Yakima, Washington. The score is on page 71. The resulting composition will be formed improvisationally with other players— nature and the community. The design creates a place of collaboration, where agency, ownership, and connections are fostered.

PROGRAM

This large park is an urban extension of the Yakima River Greenway. It is a flexible site where the lives and actions of Yakima residents can help determine its use and function. In this park, landform is made experiential and legible. Rather than dictating program through a highly specified design, the park's sculpted topography directs natural and cultural phenomena. Distinct areas of the landform park lend themselves towards either agricultural production, vegetative colonization, the flow of water, framing industrial relics, gathering space, habitat emergence, or the construction of buildings. The park is sculpted to become an urban riparian zone, where a braid of the Yakima River is diverted into the boundary of the city and becomes easily accessible to Yakima residents. It is my hope that the site will be perceived as the city's "point of origin", as the meeting place of street grids and river meander, visible from the highway upon approaching from the north; the place from which the street grids radiate out, and downtown soon emerges. The park requires a management structure (beyond the scope of this thesis project) which will allow for controlled architectural development in parts of the site, in ways that maintained its function as a public landscape overall.

FORMAL STRATEGY

The design is organized as a "current through edges and fields". The site only contains 20 feet of grade change over most of its 211 acres and is very flat. In the design I have chosen to concentrate contours into steep edges between flat surfaces. The slough is extended through the site, shaped like a braid of the Yakima River. Since water carves and deposits earth, the water channel is the binding element of the site's form: the "fields between edges" are shaped as if carved by this meandering braid.

As depicted on page 73, the site is arranged into four zones based on topography: Dry Hill, Near Northeast, Fertile North, and Inner Workings. These zones are held together

by the new river braid and by a pedestrian and bicycle circulation system. This is illustrated in the comprehensive collage on page 72.

CIRCULATION AND CONNECTION

Important street corridors of Yakima's urban grid extend into the site as straight paths overlaid upon the site's curving, river-carved forms. The paths are defined by their paving and by their flat grade, which cut through mounds and steep slopes and bridge over the new river braid in five places. The contrasting juxtaposition of these straight paths and curving ground-forms heighten each other's legibility. Although the walker is not obligated to follow them, the straight paths navigate the site in a way that suggests the linearity of musical experience; they can be points of departure and reference while exploring the park. The paths form a network which includes the two underpasses beneath route 82, connecting this park with the rest of the Yakima River Greenway.

The streets which extend into the site as paths also pull the park into the urban fabric, as linear parks or boulevards through the neighborhood along these street corridors. These linear parks are defined by curving swales, edged by gathering spaces and small sculptural mounds, running alongside the street and sidewalk. Moisture will collect in the swales and vegetation will grow. Trees can be planted or take seed. These boulevards act as the park's "watershed", drawing people to the large park, while establishing urban ecological infrastructure by offering habitat, shade and cooling, and neighborhood public space.

DRY HILL

The 80 acre landfill in the southern portion of the park consists of fill from the excavation required to extend the slough. This creates a significant grade change and increases the topographical contrast between this area and the new braid, while further stabilizing the landfill to make suitable building sites. This is illustrated on page 77. This area is legible as the high point, with drier and coarser ground than the surrounding landscape. It also affords views over the park. Dry Hill is marked by "stockpile berms", mounds of aggregate for future construction projects, arranged to form temporary landscape spaces. Visually, these berms use the large ridges across the river as borrowed scenery, since both appear the same size from the walker's perspective.

NEAR NORTHEAST

The western side of the park is directly adjacent to the Northeast neighborhood, and feels most like a neighborhood park, offering spaces for walking, recreation, exploration, and relaxation. Its surface is graded as playfields or outdoor rooms that are defined by swales and berms. The topographical folds between flat spaces will accumulate vegetation,

further defining these spaces. Intact manufacturing structures and building foundations will define spaces, while less stable industrial structures and large scale machinery will be dismantled and placed throughout the site as sculptures evocative of the site's shifting industrial identity. This is illustrated on page 76.

FERTILE NORTH

The north side of the park is lower in elevation. A pre-existing drainage ditch becomes a "tributary" of the new braid, which can be used for irrigation, opening the possibility for agricultural production here. This is shown on page 75.

INNER WORKINGS

The eastern side of the park, across the new braid, is farthest away from the urban fabric. Because of its comparatively remote setting, this area is left largely to ecological succession, directed by a gradual topographic gradient from water's edge to higher elevation. It will provide riparian habitat, with stands of cottonwoods emerging along the water and sheltering other species. This is illustrated on page 80.

ROUTE 82

The eastern edge of this area, along the highway, features a sequence of sound-modulating berms. This is shown on page 81. Depending on wind direction, these landforms may mute the sound of the highway by diverting wind and sound waves. Seen from the highway, this series of berms will be like a filmstrip or flipbook, appearing to "wag" back and forth due to their shifting orientation as they run north to south. The berms become land art from the perspective of drivers on the highway, evoking the living nature of ground. They transform a drive on the highway into a part of the site experience, and the raised highway is now another piece of the park's landform dynamism, forming a gateway out to the Yakima River. Route 82 is no longer the noisy wall which separated the city from the river.

NEW BRAID

The extended slough is primarily one carved meandering channel, with a few braided meanders at slightly higher elevations which will fill during wetter times of the year. The low-lying land around these meanders will function as wetlands year round, fostering riparian habitat. An illustration of this is on page 79. The braid fluctuates in width between roughly 20 to 50 feet wide, creating faster-moving water at the narrower places and slower-moving water at the wider places. The main channel descends twelve feet total, between the original slough and the southern underpass. The first six feet of grade change happen in a shorter distance in the northern part of the site, before the first curve

in the braid; giving the water momentum to sometimes carve into the curving lowland space at the bend. The remaining meander of the braid is slower, with a much gentler grade. The final stretch of the new braid, on the east side of Route 82, descends down at a steeper grade again as the water returns to the Yakima River; as a result, although the middle length of the new braid descends at a less than 1% slope, water is pushed into the channel by the initial drop, and drawn out by the final descent back to the river. Land along the braid's curves displays the carve-and-deposit sectional signature of rivers' edges, with steeper slopes, deeper water, and coarser material on the outside of the curve due to erosion, and gradual slopes, shallower water, and finer material along the insides of the curves, due to deposition. By initially shaping the new braid in this way, the natural processes of a river will be better encouraged to develop.

THE SITE'S PROCESSES ONCE BUILT

Taken together, these zones form a single large park with only a loosely-defined program that will evolve over time. Initial topographical "moves" will draw people into the site. These include the linear void of streets extended as paths, "street-scale" landforms extending into neighborhood boulevards, the visible hill upon the landfill, its temporary landform spaces, land sculpture visible along the highway, and especially, the new proximity of moving water. Over time, ecological succession of riparian trees and shrubs will further define the spaces and zones carved by land, as plant communities colonize the low points and wet areas, contrasting with the rough and open higher, wind-swept, or more expansive spaces. As residents begin to use the park, certain places will invite distinct activities. Community efforts to organize urban agriculture, festivity, maintenance, development, or transformation of spaces may occur. The remote eastern area will be conducive to habitat, and the southern area may encourage expansion of downtown mixed-use development. The western side will develop the functions of a city park and the northern area will lend itself to urban agriculture. However, none of these uses are strictly programmed, phased, or guaranteed. This design provides an initial ground surface sculpture to be engaged by nature and the community.

AN ACT of PARALLEL PLACE-MAKING

The parallel narrative through music and landscape experience are diagrammed on page 74. The landform was sculpted in response to pre-existing site conditions, including its industrial history, its flat expanse, and its proximity to a neighborhood and a river. Once these new forms are established, new site conditions can be invented in relation to these ground shapes. This is illustrated through the three iterations of music, entitled *New Braid*.

New Braid 1 "Responding To": <http://archive.org/details/NewBraid1RespondingTo>

New Braid 2 "Responded To": <http://archive.org/details/NewBraid2RespondedTo>

New Braid 3 "Chance Overlay": <http://archive.org/details/NewBraid3ChanceOverlay>

Improved Re-Recording of New Braid 2 "Responded To": <http://archive.org/details/Re-recordingOfNewBraid2RespondedTo>

New Braid Interoperations (this collage cycles through the three variations of New Braid and is a good way to compare the three different versions of this music):

<http://archive.org/details/NewBraidInteroperations>

Each piece of music in the *New Braid* series uses the same bassline. The line of music played on the bass guitar is the deliberately composed narrative, which proves to be flexible, even accommodating quite unpredictable accompaniment. The composition of this bassline is akin to the composition of the sculpted earth of the large park, in process as just described, and in narrative.

NEW BRAID NARRATIVE

The music's narrative is roughly as follows: as a three and a half minute piece (average), the bassline of the *New Braid* series has three sections in order, which correspond to important zones of the park: 1) the edge all along the urban fabric, including Fertile North, Near Neighborhood, and Dry Hill, 2) the new river braid, and 3) Inner Workings, an area conducive to habitat, reached only by crossing the new braid. As a narration of a walk through the site, the bassline gives a distinct mood to each of these three sequentially-experienced landscape layers. A walk along any of the straight overlaid paths, especially those that cross the braid, could give a version of this narrative (other walks on the site could evoke related but less developed narratives, as conveyed through this closely related, repetitious, but different composition from the same recording session, entitled *Relational Earthwork*: <http://archive.org/details/RelationalEarthwork1>).

From any site entrance, first the post-industrial park introduces itself, opening simply; before presenting a variety of spaces with varying degrees of enclosure and elevation. This is evoked by the *New Braid* bass opening with two simple notes, and then cycling through a sequence of melodies within that key.

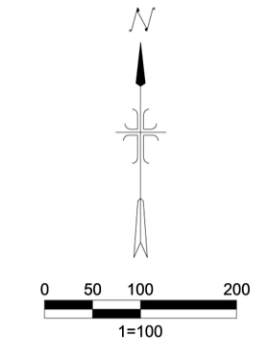
Next, the river braid is encountered, either energetically or calmly flowing in a deeper channel of earth. This is revealed as the "main event" of the site, giving form to the surrounding land. This site feature is evoked by the brief middle section of *New Braid*, wherein the bass subtly changes its pattern, incorporating the lowest note so far (as the low point is naturally where water will be directed). This part of the music promises that something different is taking place, following the piece's initial progression.

Finally, upon crossing the braid the visitor walks through the innermost zone of the site, which develops on its own as natural habitat. This is evoked by the final stretch of bass in *New Braid*, which cycles a new melody in repetition. Repetition evokes meditation; listeners soon trust that this new melody, occurring now at an advanced stage into the music's progression, will continue to repeat. But there is no true repetition in listeners' experiences, since their thoughts and impressions evolve as each cycle of music reaches the ears and is assembled in their minds. Repetitive music can heighten self-awareness, providing space for understanding, interpretation, and ownership. The music's creator, be it the composer or musician, can not claim full ownership over the music as it assembles in each listener's mind. And so this piece of music concludes in meditative repetition, a narration of the innermost interior zone of the park, where ecosystems emerge on their own. The visitor's understanding of this park is at its highest here, and human construction is least perceived.

REFLECTION ON THE RESULTING MUSIC

The music produced during this process is as flexible as the park. The array of straight paths through the park suggests that there is no definitive version of this music. The bassline is a musical surface for others to engage; my own accompaniments which I have composed are demonstrations as to how it could work, but there is no determined composition beyond the notes on the bass. The best use of this music would be to perform it with different musicians and let collaborators decide how to respond to it.

To me, the music evokes an impression of how I imagine the park to feel, while the process of making the music relates to the process of designing and inhabiting this park. This makes music useful as a personal design tool; however I do not yet know how the resulting music would communicate to others. Taken in isolation as a finished product, the music might not evoke any landscape narrative, since the process of making it contains so much of the story. The subject of a future exploration should involve presenting this landscape-music to others, through live performance and recorded artifacts (album with artwork).

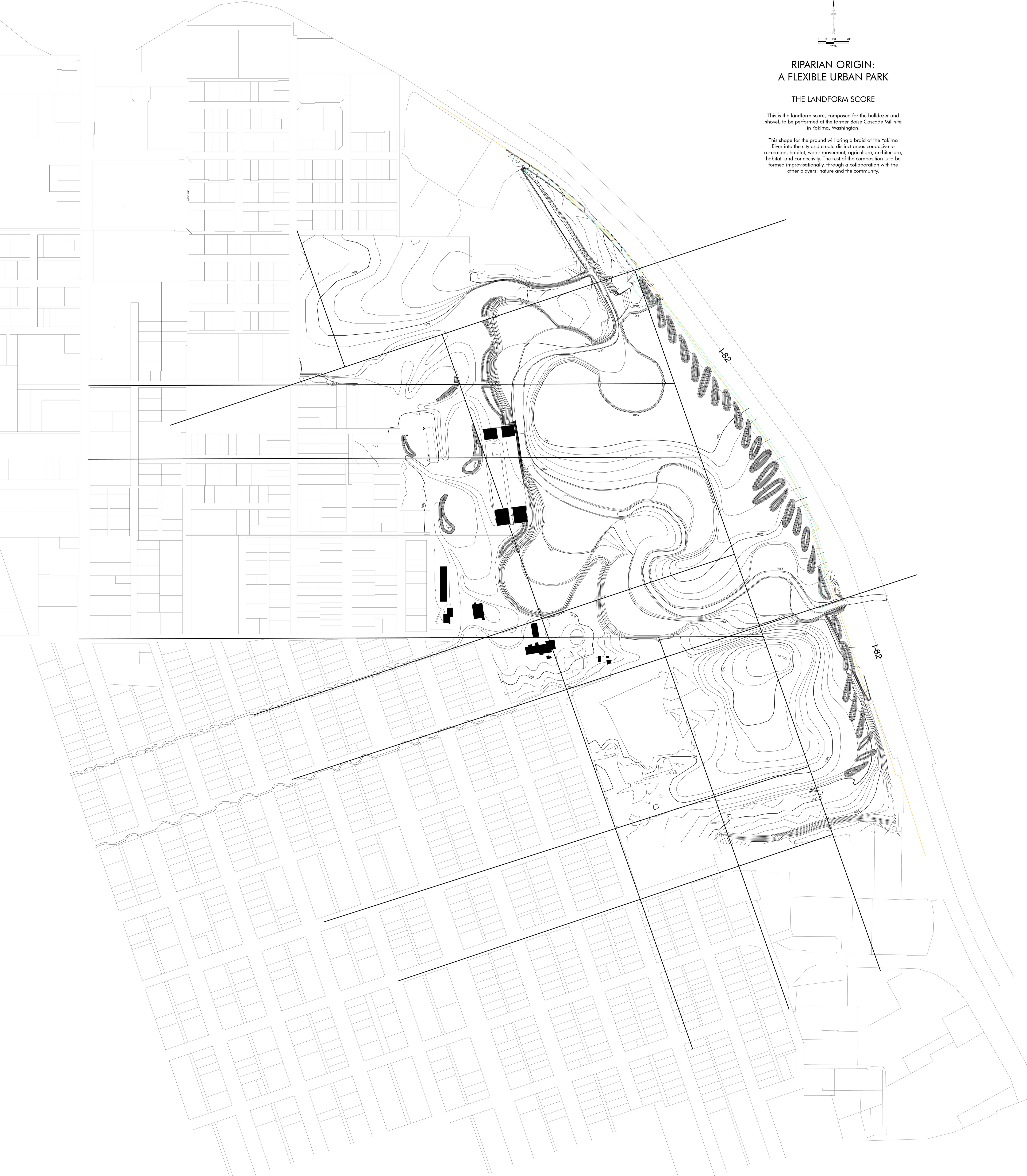


RIPARIAN ORIGIN: A FLEXIBLE URBAN PARK

THE LANDFORM SCORE

This is the landform score, composed for the bulldozer and shovel, to be performed at the former Boise Cascade Mill site in Yakima, Washington.

This shape for the ground will bring a braid of the Yakima River into the city and create distinct areas conducive to recreation, habitat, water movement, agriculture, architecture, habitat, and connectivity. The rest of the composition is to be formed improvisationally, through a collaboration with the other players: nature and the community.





NAVIGATING THE NEW BRAID

The site is navigated by a system of straight paths (in red). Their straight projection is based on the linear experience of music, while their multiplicity and openness expresses the idea that the musical composition is only a starting point for improvisation and multiple experiences.

The paths are strategic extensions of the urban street grid. They curve through landforms and slopes at even grades. They orient visitors entering from the urban edge, leading through the various zones of the site and out to the Yakima River Greenway, connecting this park to the broader Yakima River landscape.

The paths extend into the urban fabric, as linear parks and boulevards. These act as the park's extended "watershed", drawing in people from the neighborhood while offering the neighborhood ecological infrastructure through shading, pedestrian amenity, habitat corridors and public green space.



Fertile North

Inner Workings

Route 82

Near Northeast

New Braid

Dry Hill

ZONES

The park is experienced in five distinct zones of topographic condition, organized as three layers. The outermost layer along the urban edge includes Fertile North, Near Northeast, and Dry Hill. The middle layer is the New Braid. The innermost layer is Inner Workings.

PARALLEL PLACE-MAKING

SURFACE TYPES

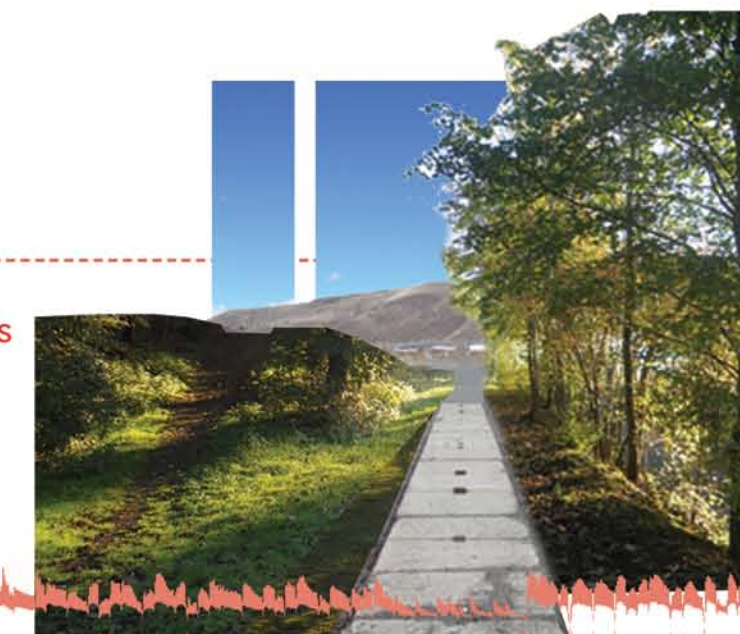
- Paths
- Fertile North
- Near Northeast
- Dry Hill
- New Braid
- Inner Workings
- Route 82

A Walk... →

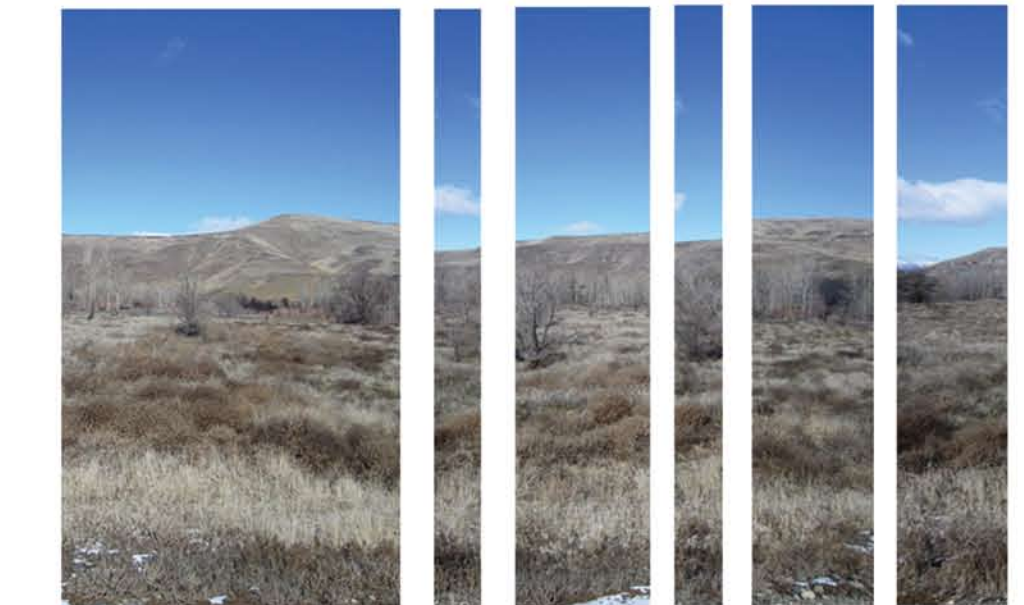


Fertile North

Near Northeast



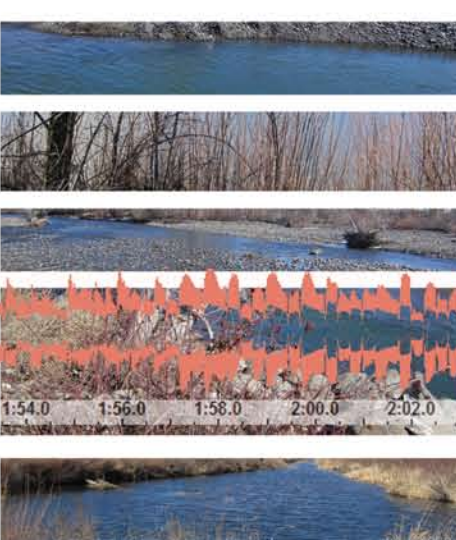
Paths



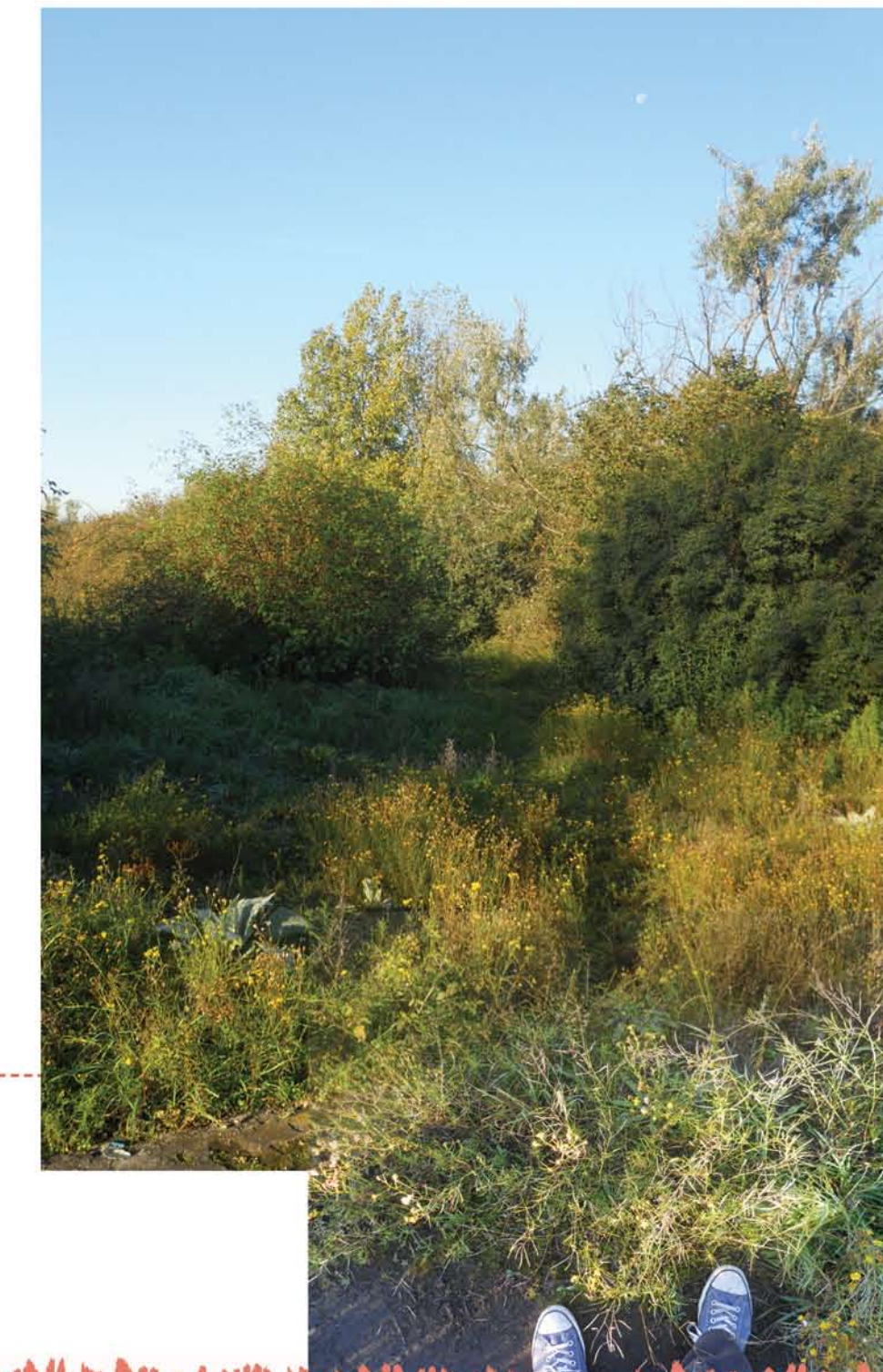
Dry Hill



New Braid

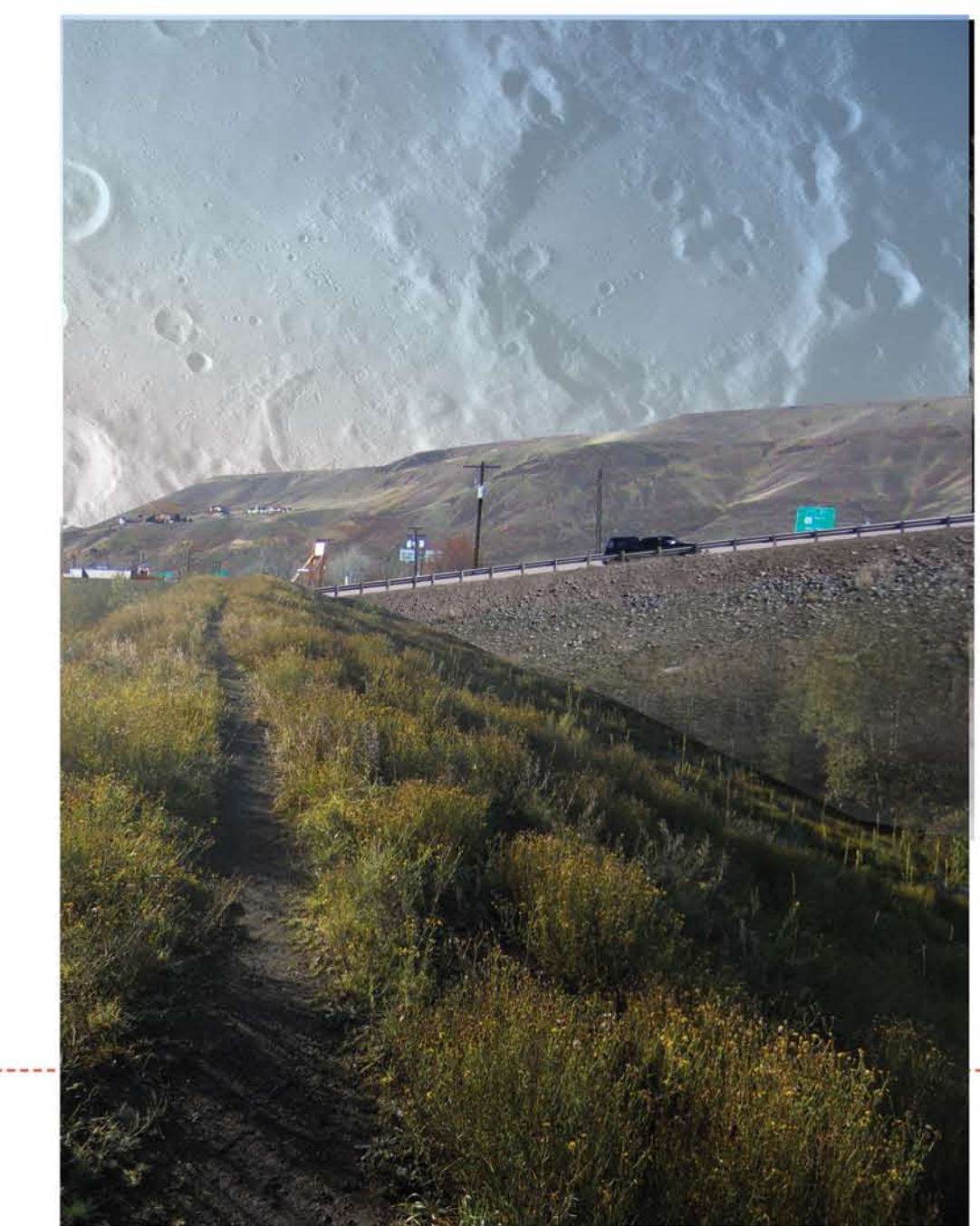


HEIGHTENED AWARENESS
Crossing the river
The form-maker



Inner Workings

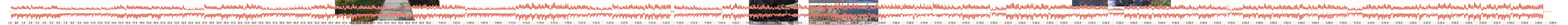
OWNERSHIP
Habitat
Contemplation
Repetition



Route 82

Shared narrative between
a walk and a listen

AN INTRODUCTION
Various conditions,
related to the urban edge



Soundwave:
Bass composition → A Listen...

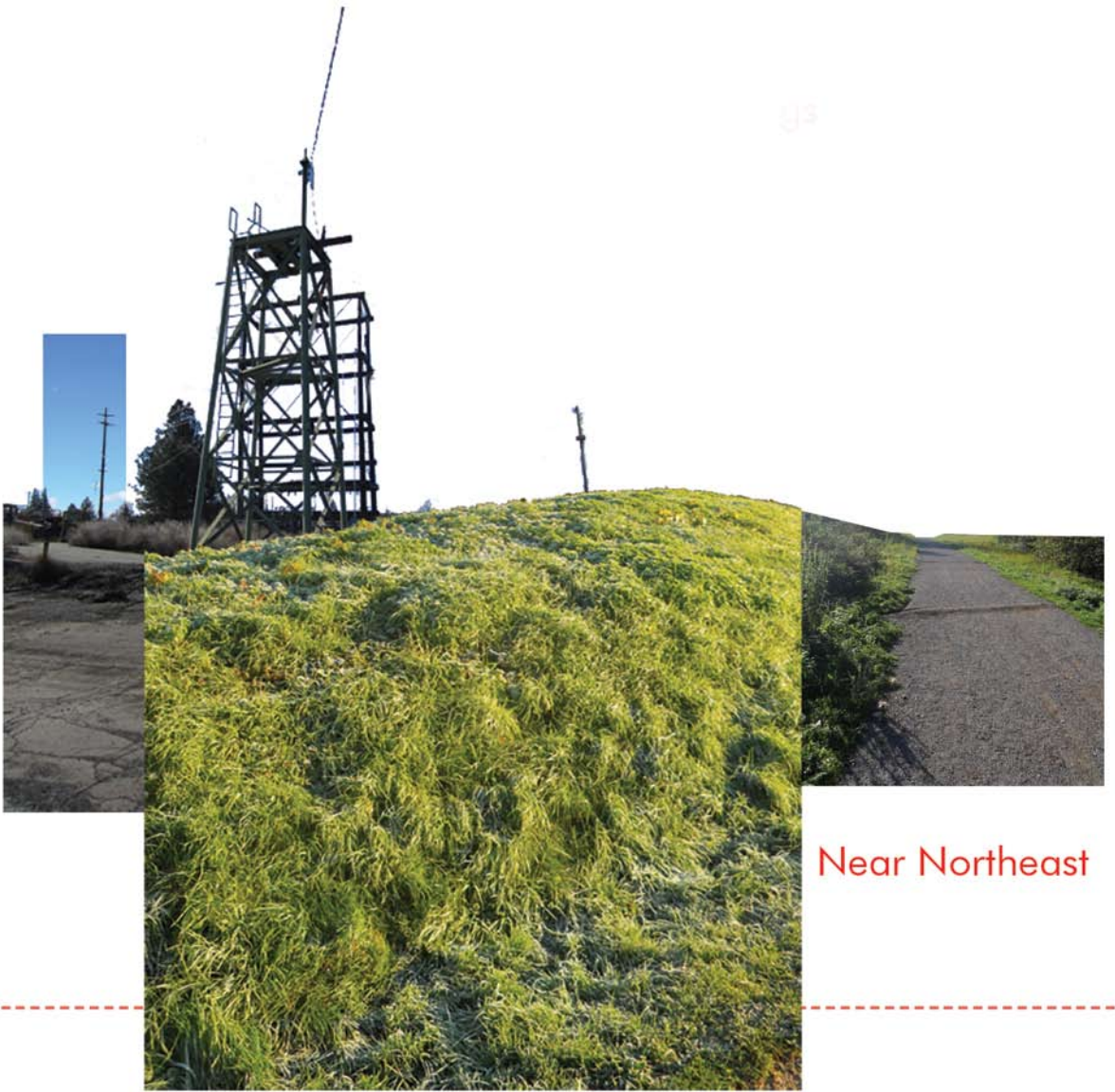
Open with two notes; variations within that key

Low note + change

Mantra/repetition...



Fertile North



Near Northeast



Dry Hill



Paths

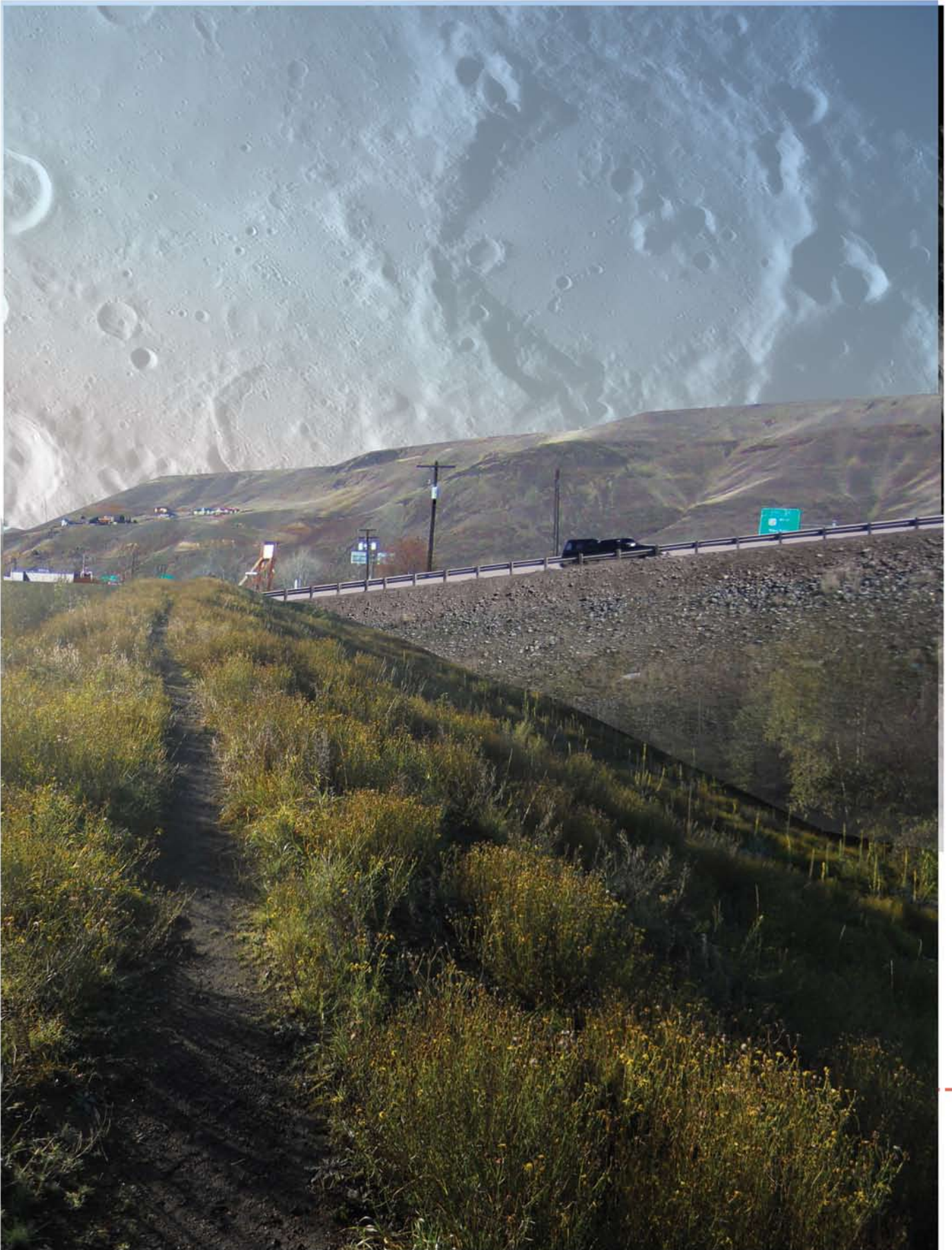




New Braid



Inner Workings



Route 82

CHAPTER 9: MAKING A PRACTICE

There are countless ways in which music could be used to inspire creativity in landscape architecture, and countless ways in which landscapes could inspire new kinds of music. This thesis explores some of these possibilities, and in this chapter I distill the methodology I developed during my design process. This methodology does not attempt to provide a definitive process for translating between landscape architecture and music. Rather, I conclude by speculating on potential: what could this creative approach achieve beyond the thesis? How might a hybrid practice operate?

FIVE COMMON THREADS

Five threads run through the design processes described earlier: the intuitive trust in music and landscape as analogues, treatment of landscape and music both as “places” of designed experience, collaborating with others, improvisation, and narrative.

THREAD 1: TRUST IN INTUITION

A trust in music and landscape as analogues of one another could also be described as an initial intuition. This intuition, that music and landscape are somehow keenly related, kept me moving forward with this process even when logical reasoning seemed completely absent. Because music is inherently abstract yet powerfully artful, I trust that the inspiration it provides is likely to be quite intuitive; and hopefully it possesses artful potential. This intuitive process lacks a reliable logical, step-by-step, defined methodology, since the experience of music is subject to interpretation. The prospect of having no prescribed methodology, no “how-to” for translating music into landscape architecture, had to first be confidently accepted.

THREAD 2: PARALLEL PLACE-MAKING

The treatment of both landscape architecture and music both as “places” of designed experience, was perhaps the most significant initial choice I made regarding my creative endeavors. I called this “parallel place-making”. Through manipulations of pitch, timbre, instrumentation, rhythm, duration, sequences of notes, and changes in key, a distinct “place” may be evoked in the listener’s imagination by music. This is a place of moods and impressions. Likewise, through manipulations of landform, plants, water, structures, space, programming, and materials, landscape creates a place that may be physically experienced, a place of the body. I theorized that practice in composing spaces of the

imagination, in music, could enhance a musically-oriented designer's practice in composing landscape spaces, and vice versa. Music's highly abstract nature suggested that it would be absurd, if not impossible, to use it to literally represent landscapes; besides, visual images and models already accomplish this perfectly well. Drawing traditionally has a literal subject; in fact historical innovations in drawing have included abstraction and movement away from subject, while music has always been an abstract expression. Sound, which is different from music, could be used to design a site's soundscape (i.e. the aural experience one would encounter in the landscape), but this is not what interested me about music. Additionally, I was unconvinced that landscape could literally represent music in any meaningful way, in terms of one to one direct translation of elements. Instead, music and designed landscape stand as equally valid composed experiences. Both must be independent of one another, although they can relate analogously or metaphorically.

THREAD 3: COLLABORATION

The third thread is collaboration. My most fruitful instances of creativity occurred when I had a collaborator to provide unpredictable inputs requiring a creative response. By contrast, my process became uninspired or difficult when my work became too isolated. Even during phases of the design process where I had no human collaborator, there were occasions when circumstance itself intervened to provide unpredictability that required a creative response, triggering a new understanding or inspiration into my design. My music studio unexpectedly shutting down is an example of this. While not an interpersonal collaboration, this provoked a collaboration with circumstance. It illustrates the importance of spontaneity and unpredictability in the creative process. Collaboration is extremely important to this process, and since I worked alone on this project, its potential was not satisfactorily explored here.

THREAD 4: IMPROVISATION

Improvisation is closely related to collaboration, since both involve unpredictable inputs into the creative process. Whereas collaboration generates such inputs, improvisation describes how artists might respond to it. Improvisation is an open experimentation that can happen alone or in collaboration. My designs of landscapes and of the music both began with improvisation based on loose ideas, framed within certain contexts established through site analysis. However, to be truly inspiring, original, or artful, a final design cannot be a mere derivative of rational analysis. Improvisation is closely related to the first thread, trust in intuition.

THREAD 5: NARRATIVE

The fifth thread is narrative. Both music and landscape can be composed to suggest a story (or many stories at once), through manipulations of their respective elements (pitch, timbre, rhythm, etc, and space, landform, plants, materials, etc). Spoken or sung words literally dictate a musical narrative, just as landscape narrative can be written literally as signage or conveyed through overt programming. However, if literal communication is absent, then the story is given to the audience in the form of suggestive raw material, of the composed landscape or instrumental music itself (“instrumental” in this case can include poetic words or lyrics, open to some degree of interpretation). The assembling and interpreting of narratives from the raw material is done internally by each person, from which ownership and personal narratives arise. In this way, audiences become collaborators– a key concept of this thesis. There are multiple experiences of the same music.

However, music also provides a fluid and intuitive way of directly crafting a narrative. Music can express complex relationships and emotions in ways that offer provocative “raw material” to become many individuals’ narratives. This is why I began by creating music intuitively, followed by a personal analysis and distillation of its narrative into words.

ITERATIVE PROCESS

I employed these five threads throughout an iterative process between media and modes of music and landscape design representation– this meant changing media frequently. It was important to me that I not spend days on end working on a technical AutoCAD model without revisiting collage diagrams, making a rough charcoal sketch, or analyzing and distilling narrative from a piece of my recorded music. It was also important to frequently test rough concepts against site data and measured drawings. My computer desktop often had all of the following open at once: a topo model in AutoCAD, a plan-view schematic collage in Photoshop, a piece of music in Media Player, and a text narrative in Word, with a set of recent charcoal cross-sections on the desk nearby and site analysis info and graphics pinned up on the wall next to my desk. There is no “finished product” in the ever evolving, living landscape; therefore, conceptual work in rough media can still happen during an iteration of the design process where technical schematic drawings or 3D modeling and rendering are underway.

In previous chapters I describe how creating music worked much the same way. A piece could be written on the drums, bass, or guitar, and augmented or revised through the addition of another instrument. Just as with landscape, I never consider a piece of music to be finished; it can change each time it is performed. Iterative processes are key to this approach.

CONCLUSION PART 1: METHODOLOGY AND PRACTICE

What might my process look like when I do another project like this?

I would begin with analysis and site visits. I would speak with as many and diverse people as possible who are involved with the place in different capacities. I would examine the place's hydrology, topography, ecology, geology, soils, climate, history, land use, geographic setting, cultural context, urban context, and energy and material flows. I would overlay these, and study and explore how these factors interrelate. As the story of the place began to form, I might start by crafting music that evoked, for me, parts of the emerging narrative.

I might respond to this music with another piece, a piece of music that begins to answer to or adapt the emerging narrative in a new way. I would collaborate with musician-designers, and possibly any members of the community or people closely tied to the site. Concurrently, I would be drawing and modeling my rough responses to the site, forming design concepts.

From this point my collaborators and I would start crafting a design, through an iterative process, working back and forth between digital models, pen or charcoal sketches, cross sections, plans, physical models, Photoshop collages, diagramming, as well as music recordings and text. We would continue to craft the music, adding other instruments, refining melody and instrumentation, making recordings, and experimenting with collaborations and improvisations. As we proceed, we would reflect on the music's emerging mood and narrative, articulating and adjusting the site's design concept accordingly. I would examine the ecology of how the music has been made, to see if the relationships between creative forces and layering of instrumentation had any applicable ecological analogies. I would strive to design a site "as compelling as music". We would also periodically check-in with the client and community.

My collaborators and I would refine our final design, producing schematic or construction documents to build the landscape (which will then continue to evolve on its own). We might produce a final musical recording, if appropriate releasing a record or CD; although live performance and rough recordings would probably suffice in most cases. Certainly we would arrive at a musical arrangement which could be performed and dynamically adapted.

Ambitious multi-media work of this sort would require collaboration between many creative individuals with a variety of talents.

A HYBRID PRACTICE

There are three things I didn't have on this project: interpersonal creative collaboration, the right studio space, and a community with which to engage. Therefore this thesis stands as isolated and frustratingly self-referential, but it has planted a seed in me for what to do next.

I would love to find a group of the right like-minded collaborators to start a musician landscape architects collective. Such a creative group could also include planners, architects and civil engineers.

I would establish a hybrid working space, where models, soil samples, amplifiers, charcoal drawings, computers, recording equipment, a drumset, drafting desks, bookshelves, guitars, speakers, a work table, chairs, a printer and plotter, pin-up walls and a small kitchen could co-exist for a small group working together on projects. The space would have windows and one soundproofed room.

Creative work needs projects with invested clients and motivated communities. It needs to interact with people, and to make products and processes for people. The people for and with whom the work occurs should be more than mere audiences and clients. The work would strive to be transdisciplinary in operation, where designers and stakeholders are both authors on a more level playing field. This conviction is strongly inspired by my experiences of community-based design-build in Lima (see chapter 2).

Just as the designed landscape is given over to the people for whom it is designed, so too could the music that's created. The music crafted by this collective would be very place-based, potentially helping to give voice to place-based concerns of the particular communities.

The creative group of collaborators would be unafraid to experiment, exploring any relevant relationships music and landscape might have. It would not always follow the methodology outlined in this thesis, nor would the group be obligated to always make its musical output and its site designs directly align.

The work of Theaster Gates (chapter 3) provides another model for how such an interdisciplinary creative operation can look.

CONCLUSION PART 2: MUSIC FOR LANDSCAPE ARCHITECTURE

From the perspective of my efforts in this thesis, I offer a concise explanation of music's relevance to landscape architectural creativity.

Music is an intuitive tool that can help generate a design's narrative. Because it is abstract yet powerfully evocative, it is particularly conducive to generating narratives that

are raw material to be finished and interpreted by the audience or site user. This is an empowering dynamic, inviting the site users to become collaborators, interpreters, and owners of the landscape.

Music is also a tool that can model ecological processes and interrelationships, through the dynamics of its creation.

And finally, the regular practice of concurrently producing music and site design could inspire the landscape architects to create places that are “as compelling as music”.

CONCLUSION PART 3: LANDSCAPE ARCHITECTURE FOR MUSIC

Landscape architecture offers a dynamic way to look at music. Music can be thought of as a place, a place of impressions and emotions that exists in the imagination. Landscape architecture is an art of taking some creative ownership of outdoor places; and as nature and communities help shape the landscape, it is clear that a designer is not solely responsible for its authorship. Through analogy, this can lead to a confidence in making music that is not the sole authorship or property of the composer. Music is already heading in this direction, as the dominance of commercially-sold recorded music subsides and internet sharing and live performance take over. When music takes inspiration from the landscape, this can lead to process-based music with multiple authors and an increasingly empowering potential. It can also inspire rich musical experiences, if the musician strives to compose a music that feels like being in a landscape.

WHAT GOOD DOES THIS THESIS DO?

Primarily, this thesis will enable me to establish a music-landscape hybrid practice without starting completely from scratch. As soon as a song is shared, a site is constructed, or a person is empowered by being listened to, this thesis will have begun to do good. But also, if this thesis inspires anyone to make creative connections across disciplinary boundaries in pursuit of what they love, this too will have made my efforts worthwhile.

APPENDIX I: Why Couldn't This Be a Landscape Project?

On a winter day in early January of 2012, I held a certain album by a certain band in my hands; an artifact of recorded music on compact disc, wrapped in packaging and graphic design. The music it contained had the promise being something completely unexpected and experimental, I was sure. My classmate who had lent me the album had told me that it was an experimental metal band or something like that, so I had at least a little preconception about this piece of art I was holding; but still, this unknown album could sound like anything, for all I knew.

As I held this artfully presented piece of recorded music, as I turned it over in my hands and looked at the artwork and the unfolding cover, and as I took the CD out of its tray, anticipating what strange sonic experience I was about to encounter, I asked: why couldn't this be a landscape project?

The visual presentation of an album makes this easy to imagine. Couldn't the artwork on the front and back, and on the unfolding cover, and in the booklet inside, simply be the images and diagrams so often associated with the landscape project? On the way to the piece of plastic inscribed with music, I'm presented with layers of visual art, and since the landscape project is nearly always communicated through visual art, this could be where we encounter images or diagrams concerning the landscape that's being analyzed or designed. Making the album art would be a relatively simple piece of the landscape-album project.

And what might be in the recording itself? What sounds, and what music, might I imagine encountering? Of course, this is the open question that this thesis will explore. But for right now, what might I imagine the sound to be, when the CD starts spinning and the stereo makes its first sounds? I think it would be the *designed experience* (which the graphic art could only try to represent). Actually listening to the music of an album is like actually walking through the designed landscape, after reading about it and seeing pictures of it.

As I write this, I'm listening to an Australian band called "My Disco" who's influenced me during this thesis' conception. They're a trio of musicians on guitar, bass, and drums, who play minimalist post-punk. Their songs often explore repetition, restraint, transformation, noise, rhythm, complexity through simplicity, and duration. Sometimes their music can step past the boundary of someone's attention span. For this reason, the music evokes in me the feeling of expansiveness that a landscape has. Knowing that they come from Australia, I can't help but envision the desert and the sky and an indifferent sun-drenched expanse of dry land. And so in my imaginary landscape-album, when the music comes out of the stereo for the first time, I could well imagine such a sonic description of landscape itself, perhaps indifferent to humanism. Single notes might occur at the scale of endlessly repeating spruce trees, or a drumbeat might mimic the impossibly long duration of a walk through sagebrush steppe. This music wouldn't be completely alienating, though. It would have some aspect of the sweetness that draws us to landscapes. In this case, I imagine that to be the texture of the music itself; a pleasing, intriguing, or satisfying

arrangement of notes, rhythms, and instrumentation, pleasing as a moment, but “landscape” in scale and duration. Maybe this would be the first piece on my landscape-album, describing the setting within the larger landscape.

The second piece might be more human in nature. It could have words, describing human and cultural characteristics of our landscape in focus. It could tell a narrative of the place and its people. It could tell simultaneous narratives, even. The complexity of the site’s human narrative could be suggested through denser harmonies or collaged sound, in parts. This piece would be a study in the human side of music that we instantly connect to: the voice, the story, the situation. There could be multiple pieces of this kind on the album, telling different stories.

There could be another type of piece, to convey qualities of the built landscape in the city, as we approach the site. Yet another typology could be a sonic collage, akin to the visual diagrams used in the landscape project to convey complex information.

And I should not fail to speculate on performance! Performance is music’s most direct and “living” form. How would the landscape-album be conveyed as a landscape-music-performance? I should go to a show sometime soon and as I absorb the experience, ask as I did with the album, “what if this experience were a landscape project?”. In fact, if there were to be a single identifiable moment which planted the seed of this thesis in my mind, it would be a show I went to in Tokyo, Japan in May 2011, to see a band called “Z”. They were a three person band, of drums, guitar, and singer/saxophone. Their music was jarring and discordant and their performance was energetic, and the drummer played intricate and steady drum beats, fast and hard and consistently.

APPENDIX II: Notes During Lunar Garden Design Process

This thing I made is fast. It's completely simple, the drums do a lot of the initial talking. I expect the note to go on forever, and it's surprising and pleasant when it drops in key. Then it returns. This return feels like real repetition. The key change is like relief, and this second time it's kind of predictable. The back and forth is a little redundant, then suddenly it's interrupted just as I thought it would go on like that forever. It climbs a little and settles on a weird note, which then the OTHER bass gives unexpected definition to. It turns and rises with weird, weird confidence. The melodic part just after that is actually pretty forgettable and is a drag, but the very end, returning to the original chord, and the notes immediately before it, are very good. If I listen to it once it's pretty good, but if I listen to it too much it starts to sound too forcefully somber. I'm tempted to have it depict a lunar landscape because it's sparse and bare enough to resemble this, but a lunar landscape would be more useless than this.

A lunar landscape would explore the qualities of materials themselves, set in a radically unfamiliar phenomenology, and it would be alienating and useless. It would have something to do with "knowing it's there", or perhaps would serve a scientific purpose.

I'm exploring how to make music a landscape. Time, repetition, and duration are important for the listener to make the piece their own, and explore it themselves. I call each piece a "land" now. This takes a lot of imagination and inspiration. This piece might be too geometric and repetitive. I should probably compose pieces that aren't too terribly delicate and can stand other musicians' interpretations played over them.

Listen to "Decades", "Little Joy", and "Skull Defekts". Why do I want them to describe landscapes? I'm zeroing in on something more definite. I want to compose a kind of minimalist, bare music that can be like landscapes. But music is a little more like the weather. Any piece of music could be paired with a place and give it a distinct mood. I can't help but think this has something akin to "soundtracks".

Yes, of course that's how it works. But Corner's piece, about how we can design spaces by designing how they're *perceived*, is key. There are certainly landscapes that are associated with certain kinds of music. I think this has something to do with what I'm after.

My Disco's music really takes you for a walk. It's so much less afraid of repetition than I was. Their song "Sun Bear" is about texture. The way the chords advance and evolve is subtle.

MUSIC IS SUCH A MYSTERY.

This idea has to be digested into something people can understand easily.

The way music can design landscapes is by coloring our perception of landscapes.

A picture can be grasped all at once. Music, however, demands time to be understood, and so does landscape.

APPENDIX III: Impressions upon Visiting Yakima for the First Time

Site Speculations

On Sunday January 29, 2012, Iain Robertson and I took his car to Yakima, via I-90, over Snoqualmie Pass and down Route 82.

Snoqualmie Pass was rainy and cloudy and showed great evidence of recent storms, through countless broken trees mixed in to the woods, and even a landslide visible in one place. After the pass, there is a large dammed lake beside the highway, whose outflow is the beginning of the Yakima River. Through this area Iain and I discussed trees a lot; we talked about how Alders populate disturbed sites, and so that's why we saw so many of them by the edge of the highway and the edge of the river. As we went around each mountain, as I'd experienced before in the summer, each slope became more thinly forested than the one prior, until at once, a hill gave way to a rolling expanse cradled between distant foothills, of a white landscape marked by white windmills slowly turning in a blue haze set against a rugged patchy sky.

I had never seen a landscape like that. It was blue and white and blonde, with sagebrush and grass showing out of the snow that covered naked mountains like an Antarctic expanse. There was a blue haze in the air. The distances between things were long. The farm fields, if they were there, were largely covered over; but it was apparent that the land was covered greatly by sagebrush blankness for the most part anyway. I think a lot of this was because of a military area between Ellensburg and Yakima.

Yakima sneaked up, after the pass. All at once we were navigating past a weird interchange. In my memory, raised highway lanes, river, and ridges were all there together tangled into the pass, and once through this, the Boise Cascade site lay visible from the road. We took the exit to Yakima Ave and drove in along the edges of the site. The Northeast neighborhood was really poor, from the looks of things. We didn't see too many people outside, but it seemed like they all spoke Spanish whenever anyone was around. The place was cold and quiet, with dirty snowbanks pushed off the street amongst small houses fenced with low chainlink, a scattering of cars and trucks and various trees and telephone poles. It was really small workers' housing, I think. Many of the edges had views to the site. The site has quite a campus of large industrial buildings, which I haven't documented at this time. I suspect that's the part that's more guarded.

We went to the downtown and walked around. It was chilly and a little windy and there was dirty snow on the ground, and it was the kind of weather where no one liked to be outside, and so there weren't very many people out and about. A lot of the storefronts were for rent or for sale, like the houses in the neighborhood. I had seen a good many boarded up houses in the neighborhood, and some had gang territory graffiti on them, I think.

After the convention center, there were many hotels. There are many hotels by the highway, between it, the convention center, and the site. It's a little strange how many there are.

We walked through the neighborhood a little and looked at the site and noticed that a connection could be made from it to the downtown along the street grid. We noticed not many people were out but that the area in front of the big church (on the street behind the mall) was overrun with parked cars, and there were some people preparing food on a table out on the sidewalk in front of this church, and so we figured there must be a lot of people inside that church, especially with it being Sunday and all. We noticed too how the mall spanned two blocks, cutting off this street from downtown, and that this mall was also closed down. We eventually made our way back to the car, and after driving through a car-oriented-grained unglamorous uncrowded paved urban landscape of warehouses and parking lots and railroad tracks for awhile, we settled on a Mexican restaurant called El Mirador for lunch. It was incredibly warm and colorful inside, and pretty active and busy for 2:30 on a Sunday afternoon, and it made me realize how lively the city might be inside the buildings right now: how many scenes like this had we passed by as we trudged through snowbanks on deserted streets faced by small houses with rough exteriors? There's probably a lot of unseen life here.

The Mexican food was good and authentic, I think. It was soupier and soggier than tex-mex stuff I usually encounter.

Then we drove through the Northeast neighborhood again, to the north end of the site, where there was no fence, and we walked into the expansive field, and heard the "crunch crunch" of our feet on the endless snow, and the incessant wind-howl of rubber tires drumming along on the highway surface echoing all together and rolling as one sound throughout the wide open landscape. We found various waterways intersecting along the site in various ways, and speculated on the changes in elevation and the direction of water flow and the age of emergent vegetation. For the most part, the ground was very flat and manipulated by machinery. The soil was very soft and organic, made of decomposed wood chips and that kind of debris, with round smooth river stone mixed in here and there. This used to be a floodplain.

After a long crunch crunch walk through the howl we came to the slough, and looked at it and its controls and speculated on its elevation. Why was it so much higher than the water next to it at its bottom end, which after a spillway off the slough's side, returned to the Yakima River (under the highway)? What part of the site floods when the slough is allowed to spill? What shape emerges in water from the micro-grading, or is that resolution gone with years of stockpiling and decomposition?

We walked into the most expansive center part of the site, across acres and acres of flat land with strange organic soil. We didn't go towards the buildings very far because it was getting late and I thought they might be guarded. I examined piles of river stones and wood chips.

I wonder about the expanse of this site, and the incessant highway noise. I wonder what to do with it. Will a big-box redevelopment just suck more life out of downtown? But does the city need more landscape-park when it's got the greenway along the river? Probably, the city needs jobs; good, productive, fulfilling, place-based jobs. Can landscape create jobs? Can topography create jobs?

What good does a park do for a community like this? Would a large landscape park, unprogrammed and mostly for strolling, represent a rude act of heinously ignoring the community I perceive here?

This site is rugged and flat. Its expanse is indifferent to the scale of human attention. Things in the distance take a long time to reach. You could fit an entire neighborhood into the site. It could be seen as a blank slate. It could also be seen for what it is. These would be two entirely different ways of seeing this particular site.

I want to design an urban landscape. I want to design an urban landscape that responds to the community adjacent to it. I want it to acknowledge and support the downtown, which teeters at the edge of vibrancy. I want the community to “seed” the landscape. I want the landscape to express itself. This includes its history (ranch, lumbermill), its setting (a floodplain, some riparian, some wetland, by a highway, backdropped by ridges), and its composition (river-made stones, human-made soil layer). Could it be a landscape the people here could seed, making jobs for this neighborhood? Could this seeding range be connected to that downtown, which is so close, by the street grid? Could gang activity signal a potential energy that can be harnessed for something else?

I was in a piece of music today. This whole project is to make a piece of music. What I’m writing about here is what the music is going to be about. Tomorrow, I am going to go to my practice space and make music about the site. The music will tell a story of my impressions today. It will provide a platform I can build from. It will depict openness, flatness, hugeness, within a defined set of dramatic confines (the mountains, the noisy highway, the life giving river, the community). The site is not just openness and mind-numbing expanse, either. It includes a collection of grotesque buildings in one place, a surviving single-use railroad, and an embedded, hidden water system.

How will I make music which itself is vast and open, but is defined by its edges? Tomorrow I will try to make music that is vast and open, but defined by its distinct edges.