

Perception + Precision: An Exploratory Process Towards Generative Site Analysis

Jack Alderman

A thesis

submitted in partial fulfillment of the  
requirements for the degree of

Master of Landscape Architecture

University of Washington

2018

Committee:

Thaisa Way

Benjamin Spencer

Program Authorized to Offer Degree:

Landscape Architecture

© Copyright 2018

Jack Alderman

University of Washington

**Abstract**

Perception + Precision: An Exploratory Process Towards  
Generative Site Analysis

Jack Alderman

Chair of the Supervisory Committee:  
Professor Thaisa Way  
Landscape Architecture

Site analysis plays a vital role in the relationship between landscape architects and the places they work to understand and enhance. As an arm of the design process, site analysis finds its place in every project. Experiential and phenomenological qualities are captured and expressed by landscape architects yet they sometimes lack consistent inclusion in site analysis. A focus on diagrammatic techniques and exploratory mapping works to integrate these qualities into more traditional site analysis methods. This thesis seeks to apply these methods to capture the ephemeral and experiential, combined with thorough analysis through perceptive and precise modes of representation.

An application of these techniques requires both an understanding of process and a testing ground. Through structured divisions of process, this thesis applies these methods to Discovery Park in Seattle, Washington. This large and complex park fulfilled the needs of diverse site conditions, rich historical significance, and a performative ecosystem. This self-reflective process merges drawing with digital tools to achieve representation that shows subjective understanding of site with the accuracy of data. The resulting mapped images show added engagement in site analysis through explanatory and dynamic representation. This representation is indicative of synthesis and interrogation of site conditions revealing latent complexities and the conceptual potentials of this more engaging analysis.



# ***PERCEPTION + PRECISION***

An Exploratory Process Towards Generative Site Analysis

Jack Alderman

# TABLE OF CONTENTS

INTRODUCTION	4
THEORY	9
SITE ANALYSIS: REVEALING OF .....	12
DIAGRAMMING COMMENSURATE WITH MAPPING .....	16
MAKE A MAP NOT A TRACING .....	19
GENERATIVE SITE ANALYSIS	22
APPLICATION	27
DISCOVERY PARK	30
DIVISIONS	32
SITE .....	36
AGGREGATE .....	38
PLOT .....	40
ARMATURE .....	42
NOTATION .....	43
ASPECT // MODE .....	45
THE EXPLORATION	48
PROCESS	85
CONTINUING PERCEPTION + PRECISION	96
REFERENCES	99
LIST OF FIGURES	103

Page Intentionally  
Left Blank

# INTRODUCTION

Site analysis is fundamental to landscape architecture. It plays a crucial role in every project. Spending time on a site and working to understand it, is vivid and immersive. It allows for what designers consider a true experience of a place. In this way, it can be understood as more than a depiction of lines or aerial imagery but as a physical and experiential place. Site analysis opens space for designers to apply value and insight to a place, to discover and understand its potentials.<sup>1</sup> The primary benefit of personally visiting a site is the connection formed between the person and the physical place.

Sites exist first as places, places that have not yet become the result of planning or design. These places exist as experiences, memories, and phenomena.<sup>2</sup> The act of representing site is at times deeply personal and subjective yet these representations maintain an ability to compare and contrast perceptions with actualities of a place. Subjective representation shows experiences of site “as not only subjects of design, but the underlying parameters that engender a projects’ poetic and spatial dynamic.”<sup>3</sup>

- 
- 1 Jonathon R. Anderson and Daniel H. Ortega, *Innovations in Landscape Architecture* (Abingdon, Oxon ; New York, NY: Abingdon, Oxon ; New York, NY : Routledge, 2016),61.
  - 2 Carol Burns and Andrea Kahn, *Site Matters : Design Concepts, Histories, and Strategies* (New York: New York : Routledge, 2005),39.
  - 3 Nadia Amoroso, *Representing Landscapes : A Visual Collection of Landscape Architectural Drawings.* (New Jersey: Taylor & Amp, 2012), 229.

My interest in this topic stems from an obsession with diagrammatic forms of representation and mapping. What components are so crucial to a site or a drawing that if only these components were left, the result is still legible. This thinking echoes the idea of the *genus loci*, the essential character of a place. Where does the line exist showing what representation can rely on perceptive images and still provide ample precision and context. In comparison where is precision redundant and thus reliant on experience and perception to engage the true nature of a site?

By reading materials surrounding landscape architecture and viewing recent projects, speculative and actual, it is clear that representation in site analysis is gaining increasing importance in our field and furthermore, should reflect the progression of theory and the tools available. However, as a student in academic settings, I have noted a trend towards an approach where site analysis is a practice that is often completed quickly and split up among participants in a studio or group project. Instead, I argue that site analysis as a process of site design should be embraced and largely expanded on to reduce the instances of site inventory or checklist style analysis.

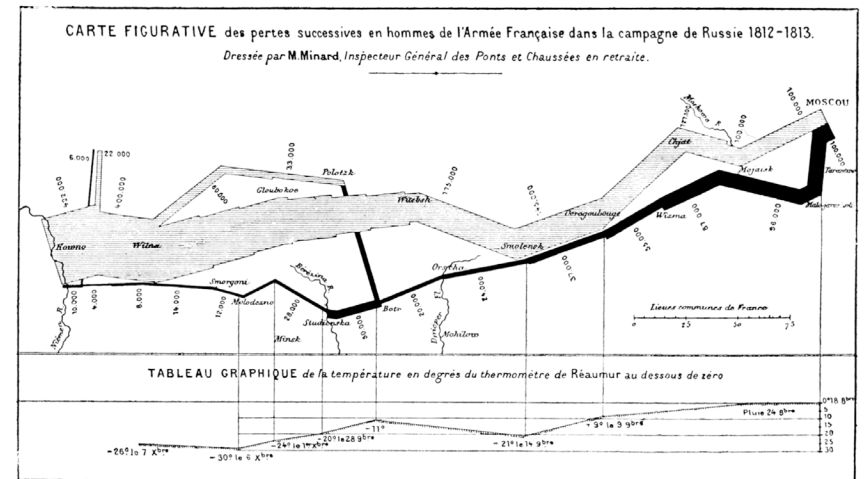
As urban planner and mental mapper Kevin Lynch states, “any standardized schedule of information must be viewed with suspicion as there simply is no universal list.”<sup>4</sup> Representation, when focused in site analysis, provides an ability to speculate and

---

4 Kevin Lynch, *Site Planning*, 3rd ed. (Cambridge, Mass.: Cambridge, Mass. : MIT Press, 1984),21.

utilize. This focus expands on analysis and changes the function of visualization from description to assessment.<sup>5</sup> There is a need for perceptive and precise analysis, and even more so the combination of the two to reinforce a designer's process and considerations. Representation produced during site analysis should be generative of solutions and understandings of existing problems and conditions rather than present them as rigid conditions of site. Site analysis should be flexible, adaptable, and explanatory.

Within representational techniques in landscape architecture, there are conventions that elicit clarity and explanation but nevertheless can lack ingenuity or intricacy. I have always been drawn to images that require time to be digested and understood, representation that has an inherent complexity and beauty but remains explanatory. [Figure 1] The function of these images is their ability to reveal personality and interrogation of subject matter. Diagramming, mapping, and exploratory analysis all represent active engagement with a problem or condition and work to tell you something. They work to compare and contrast, to juxtapose or show relationships, either existing or uncovered. These forms of representation are necessary to our profession because of the freedom and inconsistency for which they allow. Without representation such as this, the information presented becomes recycled and repeated. The importance of exploration in representation is essential to an understanding of site and process. Charles Waldheim, landscape architect, theorist, and current



John E. Irving Professor of Landscape Architecture at Harvard, emphasizes the importance of ingenuity in representation and reiterates that lack of it will result in uninterest and dumbed down data.<sup>6</sup>

Through an assimilation of theory as learned and application of a conceived process and set of methods, this thesis will serve as a self-reflective exploration to amalgamate a diversity of methods of site analysis. To assess the applicability of this approach there has been a site identified for the application and experimentation. This approach when applied will reveal latent information and narratives in Discovery Park – Seattle, Washington through the use of perceptive and precise modes of representation to greater engage in site analysis and produce generative findings and imagery. [Figure 2] Equally important to the application of this method is a focus on process. The function of process, as outlined by the following divisions – site, aggregate, plot, armature, and notation will prove to be invaluable on such an exploration. The divisions functioned as an organizing structure that maintained consistency and allowed for sorting information and resources.

As James Corner, professor at University of Pennsylvania and landscape architect, states “while the focus of attention shifts from normative modes of perception to a more liberating discovery of intertextuality between things, a precision of intent and demonstration thereof is still demanded. Analogical thinking



[Figure 2] - Map of Seattle, locating Discovery Park, circled in red.

6 Christophe Girot and Fred Truniger, *Landscape Vision Motion: Visual Thinking in Landscape Culture* (Berlin: Jovis Verlag GmbH, 2012),30.

is both intuitive and rational, and must play subjective sensibilities off and against systems of order and measure”.<sup>7</sup> Site analysis requires such intertextuality between methods of perceptive and precise representation. The explorations used in this thesis show subjective and experiential qualities assembled together with data and attention to accuracy in order to accomplish a generative site analysis. The analysis through this process culminates in design proposals, or modifications in Discovery Park. The modifications derived from this process are proposed to act as seeds with the potential to grow into something expansive and comprehensive, or to simply provide a starting point for other interventions to surround and relate to.<sup>8</sup>

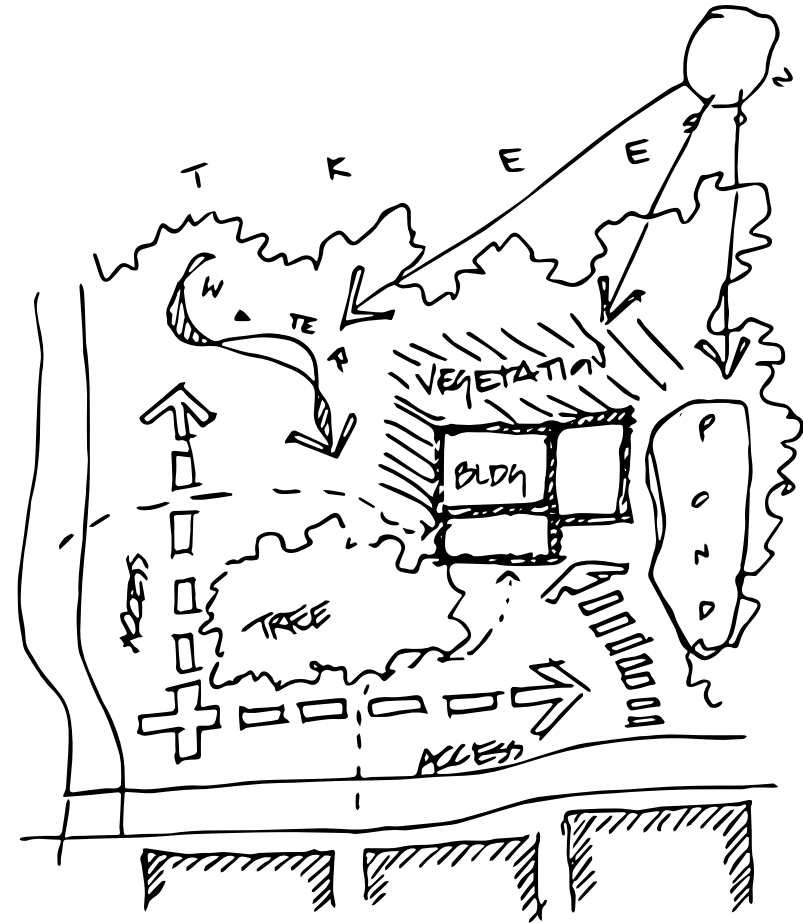
---

7 James Corner, *The Landscape Imagination : Collected Essays of James Corner, 1990-2010*, First edition. (New York: New York : Princeton Architectural Press, 2014),191.

8 Anuradha Mathur, *Soak : Mumbai in an Estuary* (New Delhi: New Delhi : Rupa & Co., 2009).

# THEORY

Landscape theorists, scholars of landscape architecture, and practicing landscape architects write extensively about site analysis and what it can achieve. Traditional literature surrounding site analysis discusses the principles and importance of analysis, and often provides how to, or checklist style information about performing site analysis in the profession. [Figure 3] Site analysis is what allows designers to go beyond inventory and identification. The process of site inventory is no longer considered analysis in many of these discussions. Making the comparison between knowledge and wisdom, professor of urban and regional planning at University of Wisconsin-Madison, James LaGro, relates site inventory to knowledge, having data that is serving primarily as a description. Site analysis, in this analogy, would be wisdom, a diagnosis that addresses specifics of a site and their functionalities. Analysis is a diagnostic process identifying contributing factors to a site's form and function.<sup>9</sup> Information collected should be integrated and synthesized to determine the site's suitability to meet the program requirements.<sup>10</sup> An approach that includes the use of data and performance allows the analysis to contain a more critical engagement, rather than the passive application of information.<sup>11</sup> Robert Beauregard, professor in urban planning at Columbia University, writes about site as a representation of space that is often conceived of apart from its complexities. A



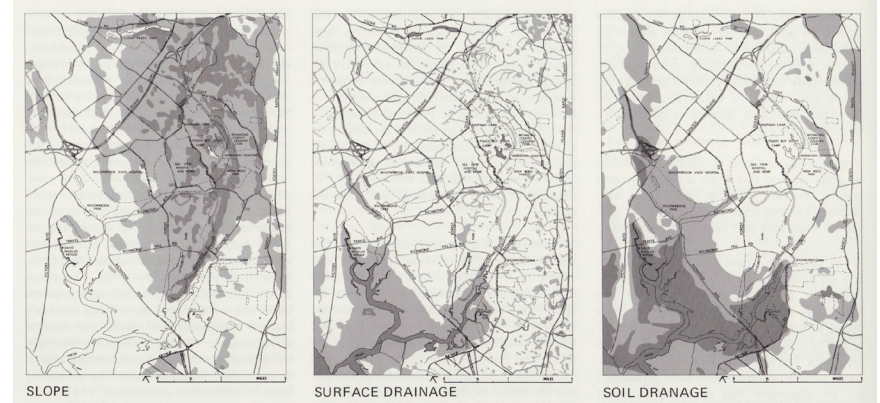
9 James LaGro, *Site Analysis* (New Jersey: John Wiley & Sons, 2013),205.  
10 Ibid,20.  
11 Jillian Walliss and Heike Rahmann, *Landscape Architecture and Digital Technologies Re-Conceptualising Design and Making* (Routledge, 2016),223.

[Figure 3] - Example of checklist style analysis, or site inventory outlining site conditions rather than investigating and interpreting them.

standardization of the site analysis process has led to designers controlling a site by removing ambiguities that would cast doubt over best and viable options. The intent is to provide ease and a sense of defined action, this process produces analysis that is reflective of what the designer knows, resulting from a certain type of repetitive situations.<sup>12</sup>

Integration and synthesis are often noted as necessary in reconfiguring the process of site analysis, however there remains a struggle to actively produce comparative or generative information.<sup>13</sup> This thesis suggests that information and analysis drawn from reading a site might reveal relationships and suggest how existing site elements are already interacting. Why they are where they are, and what processes moved through the site allowing this set of relationships or ecology to exist? Similar to the idea of physiographic determinism, which suggests that development should respond to the operation of natural processes, analysis should work congruently with existing systems to better understand and respond to them.<sup>14</sup> [Figure 4]

When discussing the importance of dynamics between theory and site, landscape architect Kristina Hill states, “The trick lies in remembering that the representation of sites in the theory of different fields has been changing, and that these changes are



12 Carol Burns and Andrea Kahn, *Site Matters : Design Concepts, Histories, and Strategies* (New York: New York : Routledge, 2005),41.

13 Ibid,132.

14 Ian L McHarg, *Design with Nature*, [1st ed.]. (Garden City, N.Y.: Garden City, N.Y., Published for the American Museum of Natural History by the Natural History Press, 1969),81.

[Figure 4] - Overlay example of physiographic determinism, natural processes prompting response in development by Ian McHarg.

significant to design.” Additionally, she reiterates, “sites matter precisely because it is in place that we can prop the windows open on the past and be specific about what is known and how. At the same time, sites allow us to gain insights about the ways things are changing in both the world and our own theories.”<sup>15</sup> Design of a site should amplify and respect current systems, working to expand on the systemic balance that is thriving on a site currently. Adapting and embracing new representational techniques in site analysis indicates a willingness to work with site instead of imposing design on top of it. As Elizabeth Meyer, professor at the University of Virginia, states in *Site Matters*, “...lenses for site-reading and making assume that plots are not empty canvases, but full spaces, full of nature and history, whose latent forms and meanings can be surfaced, and made palpable, through design.”<sup>16</sup> These “lenses” contradict “how to” site analysis and argue that through surfacing of the richness contained on a site, design can emphasize meaning and form relationally rather than by simply locating and planning to avoid sensitive areas or placing site elements for human benefits. The depth of analysis and consideration for a site can begin to show which sites are being revealed by the field of our work, the site at hand, or the ideal site?<sup>17</sup>

---

15 Burns and Kahn, *Site Matters : Design Concepts, Histories, and Strategies*,151.

16 *Ibid*,102.

17 *Ibid*,98.

# ***SITE ANALYSIS: REVEALING OF***

Professor at NC State University, Gene Bressler, regards site analysis as an armature of the planning and design process which focuses on developing knowledge to help further understand the dynamics of place.<sup>18</sup> Site analysis provides a basis of understanding and delineation of existing site characteristics and elements to be held as framework. Specifically, these dynamics help designers to analyze in order to extend the perception of how humans interact with the land, and how the designs or proposals we make for its modification will affect it for years to come.<sup>19</sup>

There is literature that mentions the potential of site analysis and representation to reveal and do more for the perceptual and ephemeral than has been traditionally described. A few predominant authors discussing this potential include James Corner, Pierre Bélanger, Robin Dripps, Edward Tufte, Dennis Cosgrove, and Christophe Girot. Their ideologies have influenced others to incorporate and expand on such potentials of site analysis. For example, in *Recovering Landscape*, the essay, *The Reclaiming of Sites*, by Sébastien Marot addresses the need “to look more deeply and more creatively at the unique specificity of sites....” He argues this allows for a process of “criticism, and inventive analysis.”<sup>20</sup>

---

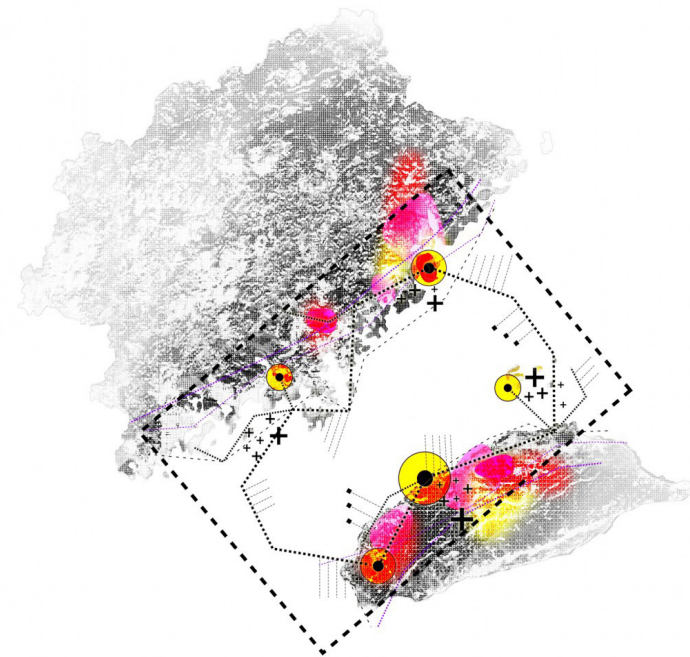
18 Gene Bressler, *Site Analysis Handbook : Prepared for Use in Conjunction with LA361, Site Analysis*, 2d ed. (Eugene, Or.]: Eugene, Or. : Dept. of Landscape Architecture, Univ. of Oregon, 1977),5.

19 Ibid.

20 James Corner, *Recovering Landscape : Essays in Contemporary Landscape Architecture* (New York: New York : Princeton Architectural Press, 1999),48-49.

The information revealed from a site is scraped from the surface. Whether this information is a categorical listing of opportunities and constraints or a comparison of benefits and hazards, the information is simply cumulated, not interpreted. Information in such a listing includes but is not limited to flood potential, earthquake potential, soil conditions, erosion susceptibility, environmentally sensitive areas, species integration, historical context.<sup>21</sup> Not to diminish the importance of the consideration of these attributes, but this thesis argues that the mapping and compared suitability of their square footages or physical locations on a site reveals nothing but the explicit observable data.

As outlined by Gene Bressler, there are various data types that could be used when analyzing a site. Base data, information obtained from a single factor, typical that it is readily available, such as existing maps or aerial photography. Inferred data stems from a single factor but is derived from other base information. Lastly there is generated data, information that is derived from a combination of two or more single factor elements.<sup>22</sup> Generated data implies interpretation and research that comes from relationships between site elements. [Figure 5] Data that is revealed through an interrogation with a site rather than an observed analysis. There is a need to embrace the aspects of site that are unseen, “...the obscured, evaded, denied, excluded, or situated knowledge has no authority, and indeed, often, has no words. The critiques delineate



21 LaGro, Site Analysis.

22 Bressler, Site Analysis Handbook : Prepared for Use in Conjunction with LA361, Site Analysis.

[Figure 5] - Example of generated data linking climate change mitigation to physical form in cities through associated relationships, by Raoul Bunschoten and CHORA.

tacit knowledge of various kinds, and all recognize the need to work on words to bring those unspoken understandings into communication.”<sup>23</sup>

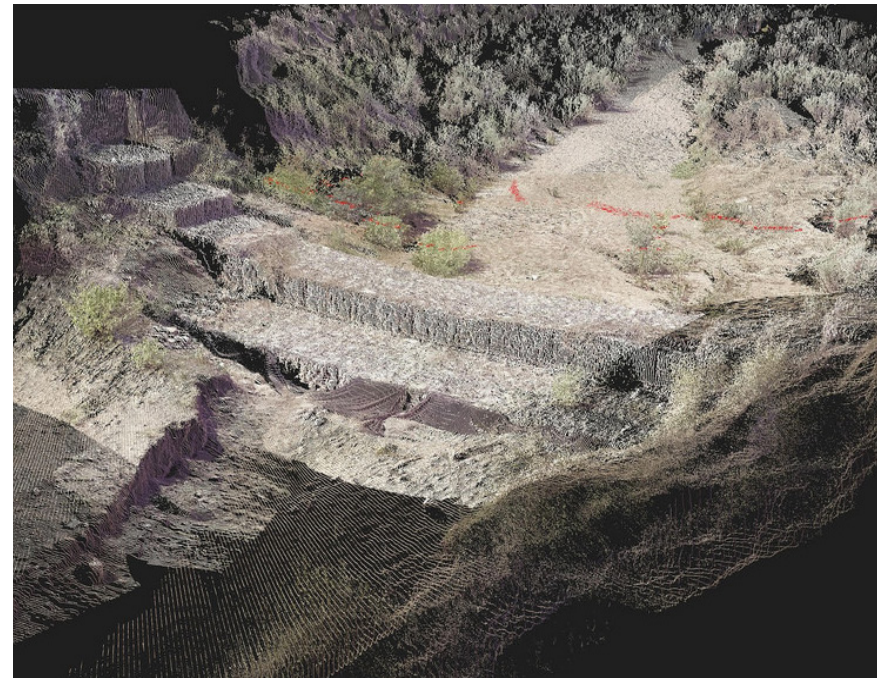
The process of site analysis appears an apt activity to embrace difficulty and complexity, to reveal the meaningful and the latent. Although with the tools available today, information is more available and easier to aggregate, too often known data and assumed analysis are simply repeated or used imprecisely. The ease of thin research, or surface level research, can lead to overexposure and a dullness or dumbed down display of the information collected.<sup>24</sup> New methods of revealing and understanding how we see site are primarily done through digital media. There is a belief that digital media detaches designers from the world. [Figure 6] This thesis argues that digital media and tools enhance and provide new understandings of the landscape. Although the patterns identified, or information gathered is produced in newer ways, the understanding of the relational qualities of site elements remain constant.<sup>25</sup> Most important, as information is gathered more quickly there should be more time for synthesis with the goal of revealing information. There is an assumed importance of representational technique that is associated with site analysis. Site analysis is important to the profession of landscape architecture as a whole, grounding and validating design decisions, but with the advancement of site analysis comes the advancement for

---

23 Burns and Kahn, *Site Matters : Design Concepts, Histories, and Strategies*,xiv.

24 Girot and Truniger, *Landscape Vision Motion: Visual Thinking in Landscape Culture*.

25 Karen M'Closkey and Keith VanDerSys, *Dynamic Patterns: Visualizing Landscapes in a Digital Age* (New York: Routledge, 2017).



[Figure 6] - LIDAR, digitally generated site model allowing for new ways to view, manipulate, and understand landscapes.

new constructs, “new and speculative techniques of mapping may generate new practices of creativity, practices that are expressed not in the invention of novel form but in the productive reformulation of what is already given.”<sup>26</sup>

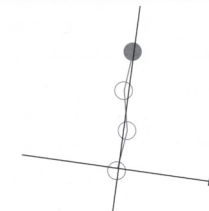
# DIAGRAMMING COMMENSURATE WITH MAPPING

A diagram is a representation that clarifies understanding within particular projects or concepts. Diagrams can provide a basis of analysis or explain new ideas or systems. They are a versatile tool that explains through bridging graphic illustration and notation.<sup>27</sup> [Figure 7] The diagram offers the designer the capacity to analyze and generate information. Its application can be used across not only the site analysis phase of design but well into the construction phase of a project. Diagrams embrace speculation, explanation, and autonomy at the cost of detail and exactitude. These types of representations can take the form of a plan or map that maintains relationships but further generalizes and edits information.<sup>28</sup> While the diagram at times transcends the traditional map, it simultaneously embodies the grounded site while abstracting the persona of place subjectively. The diagram allows the designer to identify ways to mix medium and display findings with the assistance of mapped or precise information.

A dilemma lies with the fact that in landscape architecture the two terms “mapping” and “diagramming” can at times have very similar definitions. All maps are diagrams of some form but deal with spatial composition and localization. Not all diagrams are maps. While exploring the diagram, statistician and data visualizer Edward Tufte explains, “Well-designed and thoughtfully mapped

27 Jeffrey Balmer, *Diagramming the Big Idea : Methods for Architectural Composition* (New York: New York : Routledge, 2012),1.

28 Jill; Desimini, *Cartographic Grounds : Projecting the Landscape Imaginary*, First edition. (New York: New York : Princeton Architectural Press, 2016).



**NORMAL POSITION ON GENTLE SLOPE.** The body is slightly ahead of an imaginary line which being perpendicular to the slope, passes through the ankles of the skier.

[Figure 7] - Diagram showing how to ski, emphasizing use of photography, illustration, and notation, by Pierre Boucher, how to ski “the French method.”

pictures combine the direct visual evidence of images with the power of diagrams: Image's representational, local, specific, unique, detailed qualities; Diagram's contextualizing, abstracting, focusing, explanatory qualities."<sup>29</sup> Exploration of the characteristics of imagery, between the diagram and map, further shows the ambiguity and interchangeability of the terms. Are diagrams not specific and unique, as they show specific relationships unique to the grounded sites or concepts they are working to explain. Similarly, do images [maps] not contextualize, focus, and explain?

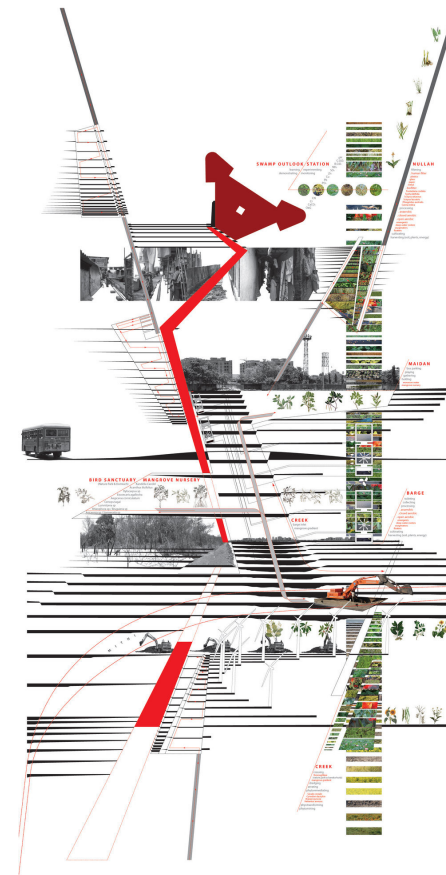
The map, when expanded and made unique to its question, becomes a diagram – an abstraction that explains qualities of a site. Landscape architect, James Corner, praising the diagrammatic abstractive qualities of mapping, explains “mapping is not subsequent to but prior to landscape and urban formations. In this sense, mapping is returned to its origins as a process of exploration, discovery and enablement. This is less a case of mapping to assert authority, stability and control, and more one of searching, disclosing and engendering new sets of possibility. Like a nomadic grazer, the exploratory mapper detours around the obvious so as to engage what remains hidden.”<sup>30</sup> Corner names this product, the exploratory map, the map that ignores the obvious to reveal the latent.

---

29 Edward Tufte, *Beautiful Evidence* (Cheshire, Conn.: Graphics Press, 2006).

30 Denis Cosgrove, *Mappings* (London: Reaktion Books, 1999), 225.

A diagrammatic approach to mapping expands the possibility for connections between site elements. It reveals while elucidating existing relationships. It adds layers to a cartographic image, layers that seek to explain why the information mapped is manifested in such a way. Architect, Howard Fisher writes that “The more subjects to be dealt with simultaneously, the less comprehensibility of the map as a whole or of substantial portions of the map.”<sup>31</sup> While more information equates to added complexity, this thesis argues that this does not necessarily create a lack of comprehension in such layering. Mapped images that function like diagrams include more subjects, or layers, but utilize notation to address this. [Figure 8] Notation is the adhesive that holds multiple layers of analysis together showing their relationships.<sup>32</sup> It is important that designers continue to blend the definition of map and diagram to push the limits of complexity and comprehensibility through representation. Diagrams, or mapped pictures, perform and better explain information compared to purely pictorial representations. The inclusion of additional information such as words, overlays, numbers, or scales help to create a truly explanatory image. An image that is credible and perceived to be constructed independently of a favored result.<sup>33</sup>



[Figure 8] - Example of a mapped image showing incorporation of diagrammatic themes in visual analysis describing the Rewa Fort site from Soak by Anuradha Mathur & Dilip da Cunha.

31 Howard T Fisher, Mapping Information : The Graphic Display of Quantitative Information (Cambridge, MA: Cambridge, MA : Abt Books, 1982), 268.

32 Edward R. Tufte, Visual Explanations : Images and Quantities, Evidence and Narrative, 5th print., with revisions, Jan. 2002. (Cheshire, Conn.: Cheshire, Conn. : Graphics Press, 2002), 25.

33 Tufte, Beautiful Evidence, 29.

# ***MAKE A MAP NOT A TRACING***

In advocating for more open-ended forms of creativity, philosophers Gilles Deleuze and Felix Guattari declare: “make a map not a tracing!”. Mapping has the ability to unfold potential, to do more than simply delineate and display. “The map has to do with performance, whereas the tracing always involves an ‘alleged competence’”.<sup>34</sup> There is a need in site analysis to create these types of maps, maps that involve performance and ideologies, images that do more than trace or replicate observable information. Analytical maps should show perception, interpretation, and subjectivity. Corner asserts the need to explore the potentials of maps to reveal rather than replicate, stating:

The capacity to reformulate what already exists is the important step. And what already exists is more than just the physical attributes of terrain (topography, rivers, roads, buildings) but includes also the various hidden forces that underlie the workings of a given place. These include natural processes, such as wind and sun; historical events and local stories; economic and legislative conditions; even political interests, regulatory mechanisms and programmatic structures. Through rendering visible multiple and sometimes disparate field conditions, mapping allows for an understanding of terrain as only the surface expression of a complex and dynamic imbroglio of social and natural processes. In visualizing these interrelationships and interactions, mapping itself participates in any future unfolding's. Thus, given the increased complexity and contentiousness that surrounds landscape and urbanism today; creative advances in mapping promise designers and planners greater efficacy in intervening in spatial and

---

34 Cosgrove, *Mappings*, 214.

social processes. Avoiding the failure of universalist approaches toward master-planning and the imposition of state-controlled schemes, the unfolding agency of mapping may allow designers and planners not only to see certain possibilities in the complexity and contradiction of what already exists but also to actualize that potential.<sup>35</sup>

Corner emphasizes the reworking or reformulating of what already exists. A tracing, he suggests, tells you nothing, only reiterates what you can already observe. A map, non-tracing, will reveal processes, interests, and structures that allow for understanding of the grounded site. The underlying tone and “actualization” that Corner reiterates is one of agency. Mapping provides landscape architects with agency, an inherent performative function resulting from exploration and analysis of existing conditions. This agency is a result of the mutual analog and abstract qualities of mapping and diagramming. Maps and diagrams exist as “the result of selection, omission, isolation, distance, and codification.”<sup>36</sup> The choice to show information or exclude it, allows designers focus and hierarchy but also an efficacy to show specific relationships and latent complexities on a site. Agency exists through the act of mapping as well as the representation of analysis and characteristics. “Behind each image lies an agency. Spanning different scales, this representational agency takes on many different forms and functions, indexing

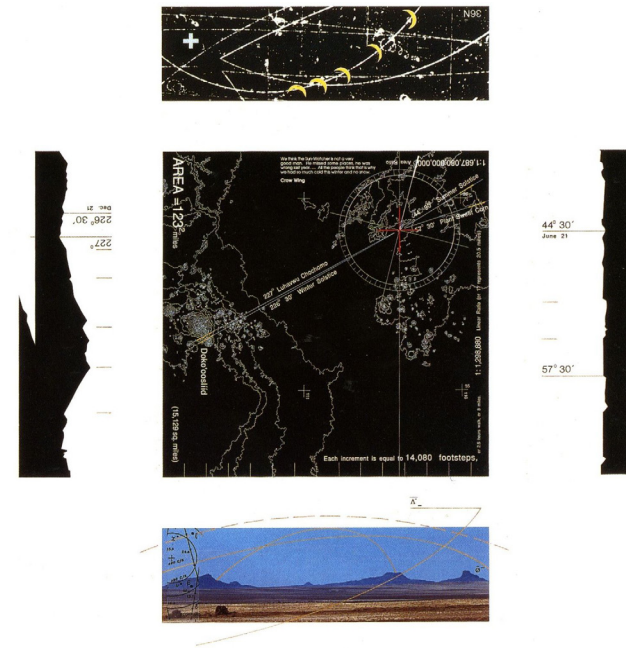
---

35 Ibid, 214.

36 Ibid, 215.

a series of different intentions and objectives.”<sup>37</sup> Additionally, mapping communicates contextual conditions and validates the appropriateness for the potential of a site.

Mapping is a diagnostic process, one that can lead to understanding a site and expressing its complexity in a legible medium.<sup>38</sup> [Figure 9] In the act of mapping, the process allows for more inclusion than exclusion. Mapping allows for “excavation and extension to expose, reveal and construct latent possibilities within a great milieu.”<sup>39</sup> The explicit information is readily available but offers no interpretation. Architect, Robin Dripps mentions the making of patterns visible so that they can be more readily engaged, stating that “patterns extend well beyond the boundaries of the site and signal connections to other resources that merit awareness.” Additionally, “these less visible patterns need to be mapped to become part of design thinking.”<sup>40</sup> Working to engage these patterns and extensions of traditional site analysis, landscape architects will achieve a more situated and rich understanding of a site’s conditions and the processes taking place.



37 Pierre Bélanger, *Landscape as Infrastructure : A Base Primer* (Abingdon, Oxon ; New York, NY: Abingdon, Oxon ; New York, NY : Routledge, 2016), 480.

38 LaGro, *Site Analysis*.

39 Cosgrove, *Mappings*, 225.

40 Burns and Kahn, *Site Matters : Design Concepts, Histories, and Strategies*, 70.

[Figure 9] - Hopi Horizon Calendar, example of diagnostic process joined with various methods of communication and notation for increased legibility by James Corner.

# GENERATIVE SITE ANALYSIS

This thesis defines generative site analysis as a specific method of analysis that requires a merging of perceptive and precise information to ultimately arrive at findings or understandings of complexity on site that can only be derived through a process of interrogation and synthesis. Generative analysis shows possibility and potential through a lens that is made up of a rich understanding of a site including its existing systems, relationships, narratives, and uses. Generative analysis provides more than obvious or explicit information. It shows findings and reveals what is not readily obvious. The production of generative analysis implies investigation, understanding, thought and consideration. It is a process that bleeds site analysis further into design and concept work. Generative site analysis allows designers to show the importance of site characteristics and subjectivity without the need for refinement. It is the culmination of thinking drawings and raw process images, showing their relationships to precise images. It reduces the potential for redundancy or reiteration letting an image be read for what it is. The power of generative analysis is the value it holds for eventual proposals, modifications of site, and design concepts allowing discussions to show indulgence, interest, and originality. “New or unrecognized relationships or ideas emerge that simulate creativity.”<sup>41</sup> Through generative analysis these concepts or proposals are deeply rooted in the narratives and systems existing on site. Congruently, much like the analysis,

---

41 Amoroso, *Representing Landscapes : A Visual Collection of Landscape Architectural Drawings*, 17.

the proposals can reveal latent processes or forms. “Furthermore, mapping engenders new and meaningful relationships amongst otherwise disparate parts.”<sup>42</sup>

Generative site analysis is as much about generation of information as it is about representation. As professor and designer Nicholas De Monchaux exclaims, “It is unthinkable, to try and communicate from one person to another information as to the complex variables existing in an urban area without the benefit of graphic display – or to communicate the facts regarding an architectural design of more than the most elementary simplicity.”<sup>43</sup> An important aspect of generative analysis is dependent on the representation of information in new, unique, or compelling ways. [Figure 10] Collectively these representations should provide an elevation of current measures, to create more inclusive images that show the potentials of interpretation and manipulation of available information.<sup>44</sup> Similar to the discussion of creating maps and not tracings, generative analysis should incorporate working methods and modes of representation that are not traditionally associated with site analysis in the practice of contemporary landscape architecture. The goal of breaking the mold of site analysis representation is to un-associate familiarity and force the viewer to engage with an image and seek to understand it. Top down, plan view analysis is often so repetitive and expected that the information is scanned and forgotten. The information as a result of



[Figure 10] - Example of compelling and iterative representation focused on graphic display of information, from Nicholas De Monchaux's Local Code.

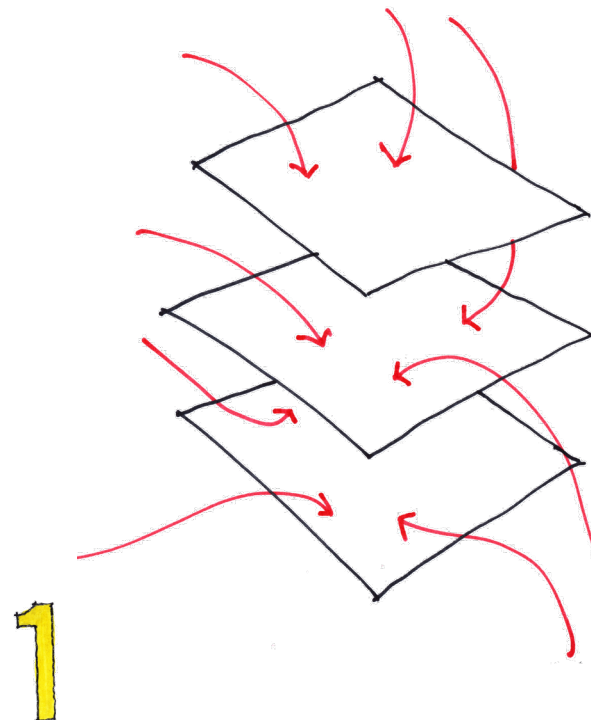
42 Cosgrove, Mappings, 229.

43 Nicholas De Monchaux, Local Code : 3,659 Proposals about Data, Design & the Nature of Cities, First edition. (New York: New York : Princeton Architectural Press, 2016), 168.

44 Corner, Recovering Landscape : Essays in Contemporary Landscape Architecture.

reproduction appears exhausted.<sup>45</sup> The earlier in the design process that untraditional modes of representation are implemented such as 3D modeling, collage, or parametrics, the more opportunity there is to deviate from site analysis norms. These images or findings are heavily rooted in analysis but include synthesis and distinctiveness from the designer. There is the potential for analysis and representation that is simultaneously analytical and generative, an approach that highlights the interaction between analytical factors and evidence based input.<sup>46</sup>

Generative analysis, as defined herein, engages many of the principles drawn from successful diagramming such as clear notation, hierarchy, scale, contrast, focus, etc.<sup>47</sup> As such, the work should be reflective of the process, it should be investigative and show thought. Generative imagery and findings should be accepting and open to critique, improvement, or expansion of ideas and methods of representation. Generative analysis can adhere to a few basic principles that allow for representation to become unique and investigative. The analysis should use multiple frameworks, this allows for inclusiveness rather than exclusion of systems existing on the site.<sup>48</sup> Multiple frameworks allow for representation to be based in multiple areas of precision and thus multiple areas of perception. Breaking conventionality leads to findings rather



Multiple frameworks allowing for inclusion of varying types of information.

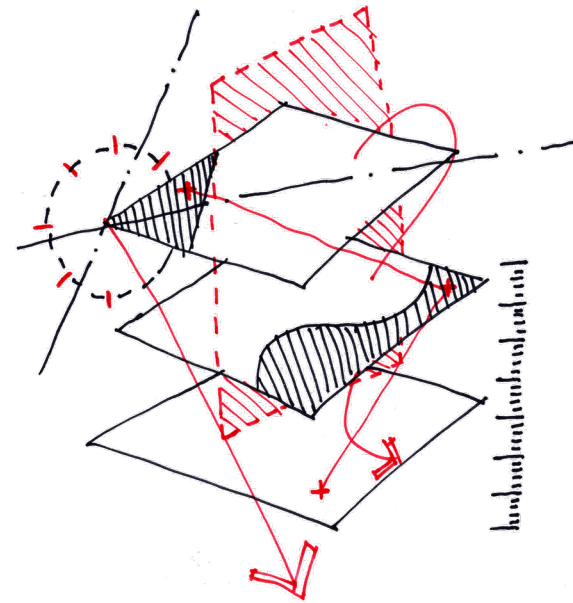
---

45 Girot and Truniger, *Landscape Vision Motion: Visual Thinking in Landscape Culture*, 30.  
46 Walliss and Rahmann, *Landscape Architecture and Digital Technologies Re-Conceptualising Design and Making*, 94.  
47 Tufte, *Beautiful Evidence*.  
48 Cosgrove, *Mappings*, 230.

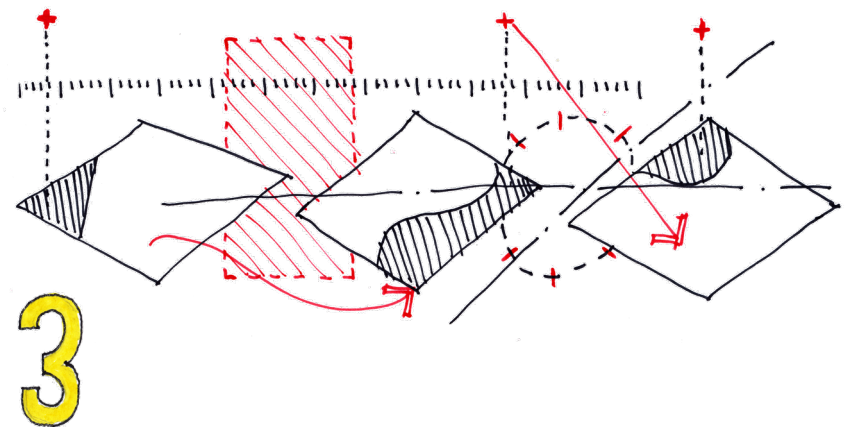
than following habit or routine<sup>49</sup>. What is being done different in these findings or images? Focusing on information and efficiency of how to show it can allow avoidance of replication and feature only essential information. It is critical to generative analysis to determine what is essential to the issue, system, or problem you are working to understand so that the representation can match the process. Work that reflects the investigation will validate your findings and serve as an explanation of process and ground the resulting representation and imagery in the sites context.

Lastly, creating a field that is non-hierarchical allows you as the explorer to give a greater breadth of conditions that can be evaluated and considered.<sup>50</sup> By reducing the restrictive scope of your analysis, you allow for more interpretation and cross comparison between existing site conditions and features that may have been thought to be previously unrelated.

Following on this work, one can move to synthesize the theoretical concepts surrounding site analysis and its generative potentials into an application that explores its feasibility.



Varying modes of perception and precision embedded in multiple frameworks.



Non-hierarchical field showing breadth of conditions evaluated.

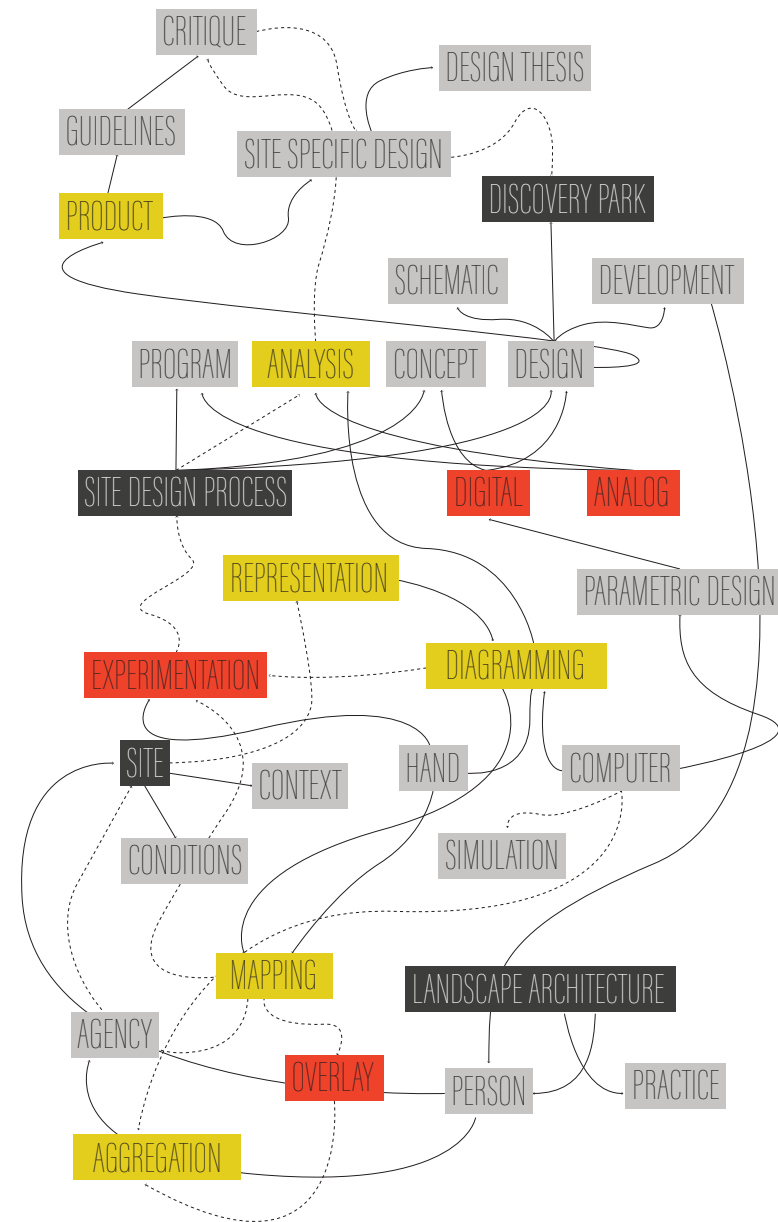
---

49 Ibid.  
50 Ibid, 230.

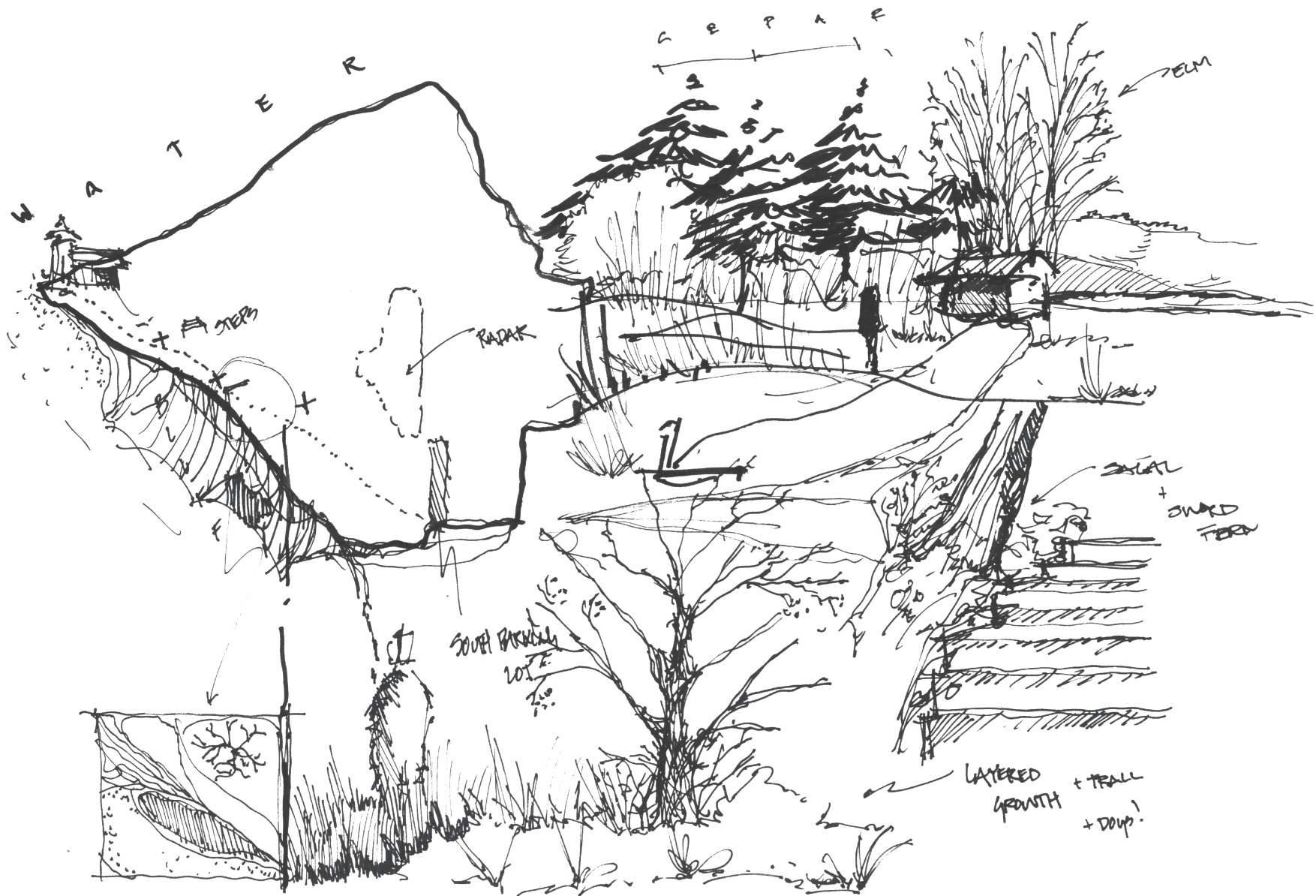
Page Intentionally  
Left Blank

# APPLICATION

Realizing the real-world implications and applicability of theory and imagination can be difficult but important to a proof-of-concept approach and to generate the appropriate additional discussion. An application of the proposed process and methods are essential to providing examples of representation that work to display an embodiment of the theoretical discourse. Additionally, an application of the proposed process allows for contextualization and information based around a real place with currently existing unique characteristics and influences. Discovery Park in Seattle, Washington was an ideal choice to demonstrate this application of theory and test the process fueling my transformation into the “exploratory mapper.”

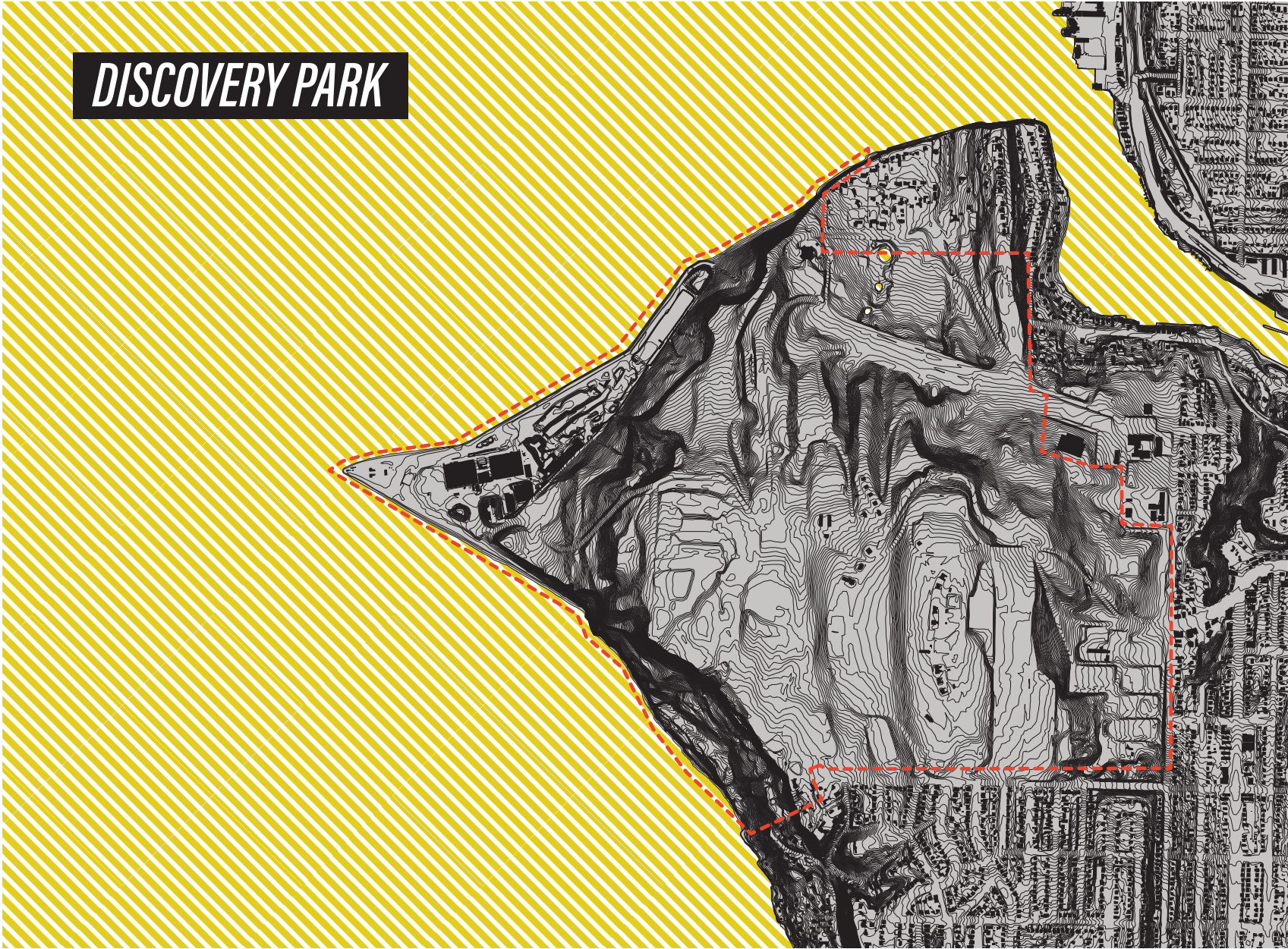


Mental map of process and potential topics and outcome for this project.



Sketch of Discovery Park, emphasizes perceptual analysis on site.

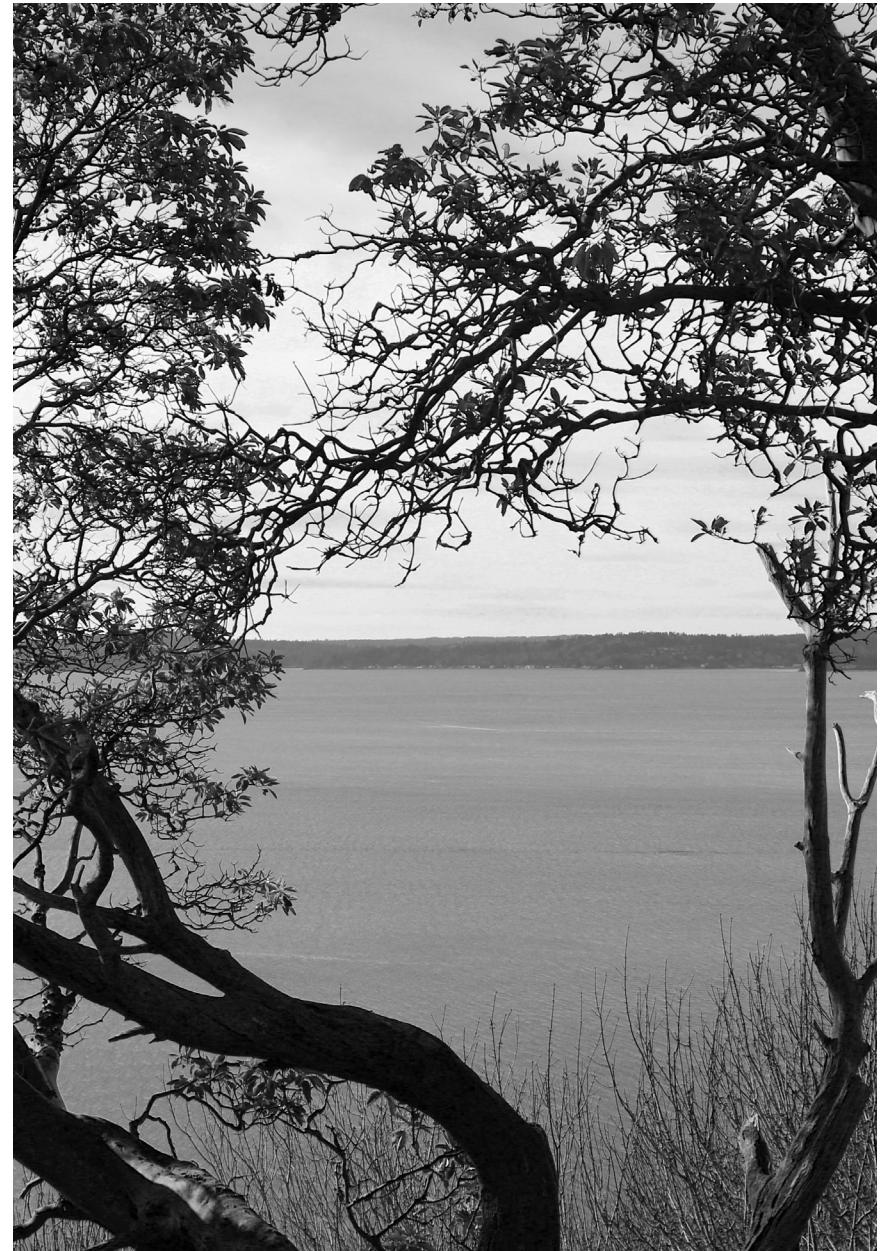
# *DISCOVERY PARK*



GIS Base map of Discovery Park, emphasizes digital representation of precise analysis of site.

## *DISCOVERY PARK*

Discovery Park is located on the western shoreline of Seattle, Washington. It is generally accessible by bus, bike, car or foot. Its proximity to my residence meant it was easy for me to visit multiple times throughout the preparation of this thesis. Location was important when evaluating my possible application sites. The park landscape has a diverse range of influences and factors that allow for many topics of discovery and analysis. Discovery Park protrudes from the shoreline of Seattle into Elliott Bay on its south beach and into Shilshole Bay on its north beach. The site is 534 acres, a size that was manageable but still large enough to remain mysterious and elusive throughout the process. Discovery Park is public land but contains a private enclosure for the West Point Wastewater Treatment Plant. This dynamic of land use brings hiking trails and bike paths together with access roads and infrastructure. The topography is drastic and undulating in many parts of the site, but flattened, graded, and controlled in others. This inventory style list of site analysis factors was important to have for the choice of a site, but ultimately was used as an outline rather than a checklist. [Figure 11] The site chosen needed to be unique and complex. The analysis would need to compliment this and avoid the “checklist” style analysis discussed in prior sections of this thesis. Discovery Park has a rich history existing not only within the site itself but also with the city of Seattle. This was important to the narrative and process of this thesis, allowing for additional layers of information to be captured with exploratory analysis.

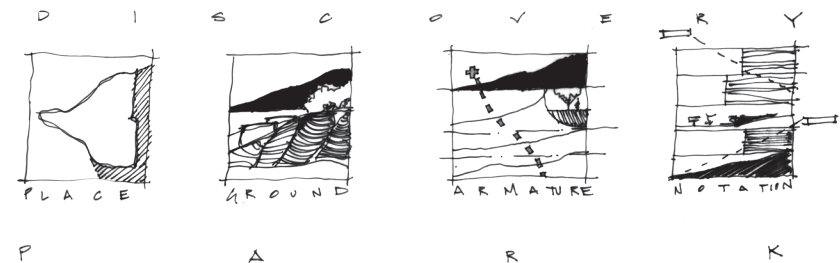


- **HYDROLOGICAL**  
Rainfall  
Drainage Patterns
- **GEOLOGICAL**  
Bedrock  
Stratification Layers
- **ECOLOGY**  
Typologies  
Flora/Fauna
- **TOPOGRAPHICAL**  
Slope  
Erosion Potential
- **HISTORICAL**  
Land Use  
Significance
- **EXISTING STRUCTURE**  
Utilities  
Porosity Percentage
- **CULTURAL**  
Significance  
Context
- **BOUNDARIES**  
Riparian  
Civic
- **SOIL**  
Acidity  
Permeability
- **VEGETATION**  
Hardiness  
Invasives
- **SUN**  
Zenith  
Exposure
- **WIND**  
Exposure  
Directions - Flows
- **INFRASTRUCTURE**  
State of Systems  
Maintenance
- **SOCIAL**  
Human Use  
Program
- **CIRCULATION**  
Pedestrian  
Bike
- **HAZARDS**  
Liquefaction  
CSO

[Figure 11] - Inventory list of analytical factors to be evaluated in Discovery Park.

# DIVISIONS

Separating this exploratory process into divisions was adapted from similar projects and literature such as *Soak* and *Mississippi Floods* by professors and landscape architects, Anuradha Mathur and Dilip da Cunha. Divisions in this thesis are designations of process. [Figure 12] They are defined as divisions because although they are separate, they are not necessarily sequential. The word division simply represents a separation of workflow through process. Much of the work in *Soak* is organized around a basic structure that locates the images and traverses in Mumbai. Their categorical display of information helps ground their proposals. Additionally, it provides consistency and legibility through a complex response to diverse and fluctuating problems.<sup>51</sup> *Mississippi Floods* shows the ability for mixed media to explain understanding of problems or conditions. The work exudes a proficiency in composition, through graphics and information. It shows an exploratory projects ability to understand magnitude, levels of control, and the adjacencies a natural system can affect when altered.<sup>52</sup> This thesis mimics their approach to achieve an in-depth analysis in conjunction with representation that reflects the process.



51 Anuradha Mathur, *Soak : Mumbai in an Estuary* (New Delhi: New Delhi : Rupa & Co., 2009).

52 Anuradha Mathur, *Mississippi Floods : Designing a Shifting Landscape* (New Haven, [Conn.] ; London, [England]: New Haven, Conn. ; London, England : Yale University Press, 2001).

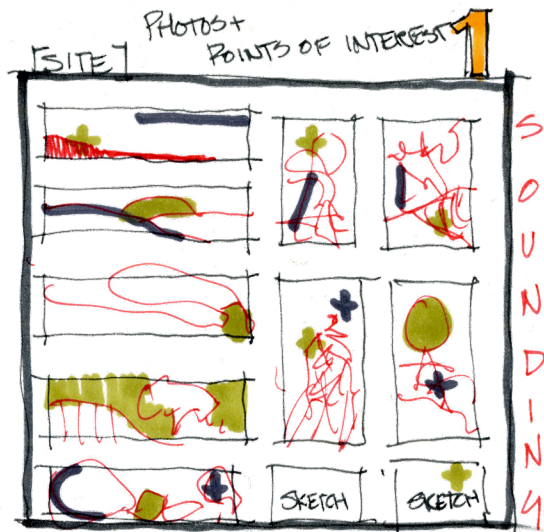
[Figure 12] - Early sketch outlining designations of process divisions in Discovery Park.

Many exploratory mappings or forms of representation have used titles for information as arrangements of measure or structure.<sup>53</sup> The divisions serve to structure the mapping and generative site analysis by providing a system and context for information uncovered. Additionally, they help to guide the creation of imagery and graphics. The divisions created are not linear, one is not subsequent to the next. Working through this thesis, each division has served as a jumping off point that guides work in a unique way. As a structure for this exploration the divisions have been crucial to organization and workflow. The importance and utility of this structure to my process was validated through literature and study of similar explorations. Each division personifies not only characteristics of a place, but also principles of representation.



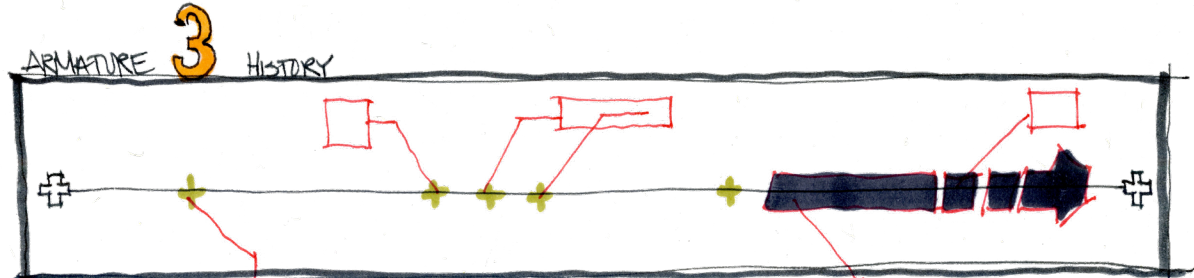
---

53 James Corner, *Taking Measures across the American Landscape* (New Haven: New Haven : Yale University Press, 1996).

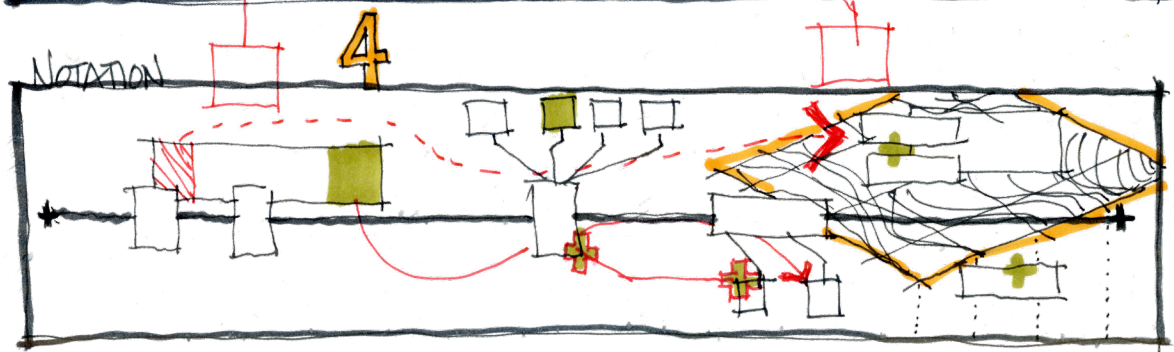


**1 SITE**  
 PHOTOS  
 - POINTS OF INTEREST

**2 AGGREGATE**  
 - GIS LAYERS (BASES)  
 - MOVEMENTS  
 - GRASSHOPPER?



**3 ARMATURE**

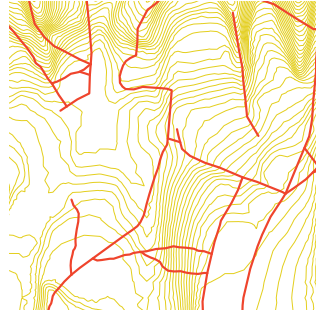


**4 NOTATION**

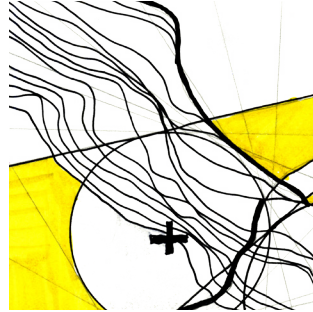
Storyboarding organization of divisions and how they might take form in a representation.



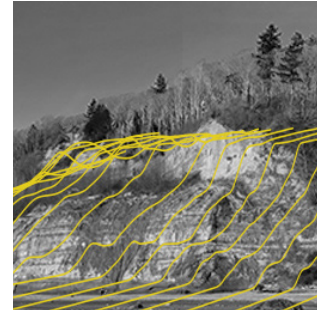
**SITE**



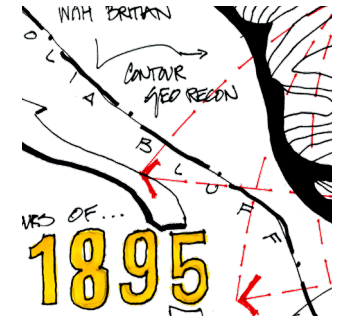
**AGGREGATE**



**PLOT**



**ARMATURE**



**NOTATION**

# SITE

Site, as a division in this thesis, embodies the medium of the place being analyzed. [Figure 13] This could be the location and context of a place as well as experiential and ephemeral aspects that can be captured. Site captures a view of what exists in time and space as conditions and factors but emphasizes initial perception. Visiting the site helps to amplify these experiences, but the nature and character of site remains intact due to the absence of precisely mapped data. Site begins with personal reconnaissance, a process that attains essential characteristics of place and provides familiarization.<sup>54</sup> Association and comfort due to time spent on the site allow for easier navigation and response in the future. Focus on site bolsters the recollection of mental images for manipulation and further analysis.<sup>55</sup> The importance of site is to form and expand on unbiased views and opinions of place. Perceptively site is the wonder and mystery of visiting a place for the first time, to retain and visualize the experiential. This allows for images or photographs that represent first impressions, what is standing out or drawing interest without prior research. What aspects of the site beg for interrogation or intrigue you. Precision exists in site through record keeping and photography. Precision also comes from mapping movement or routes taken on site to show areas of the site that have been visited.

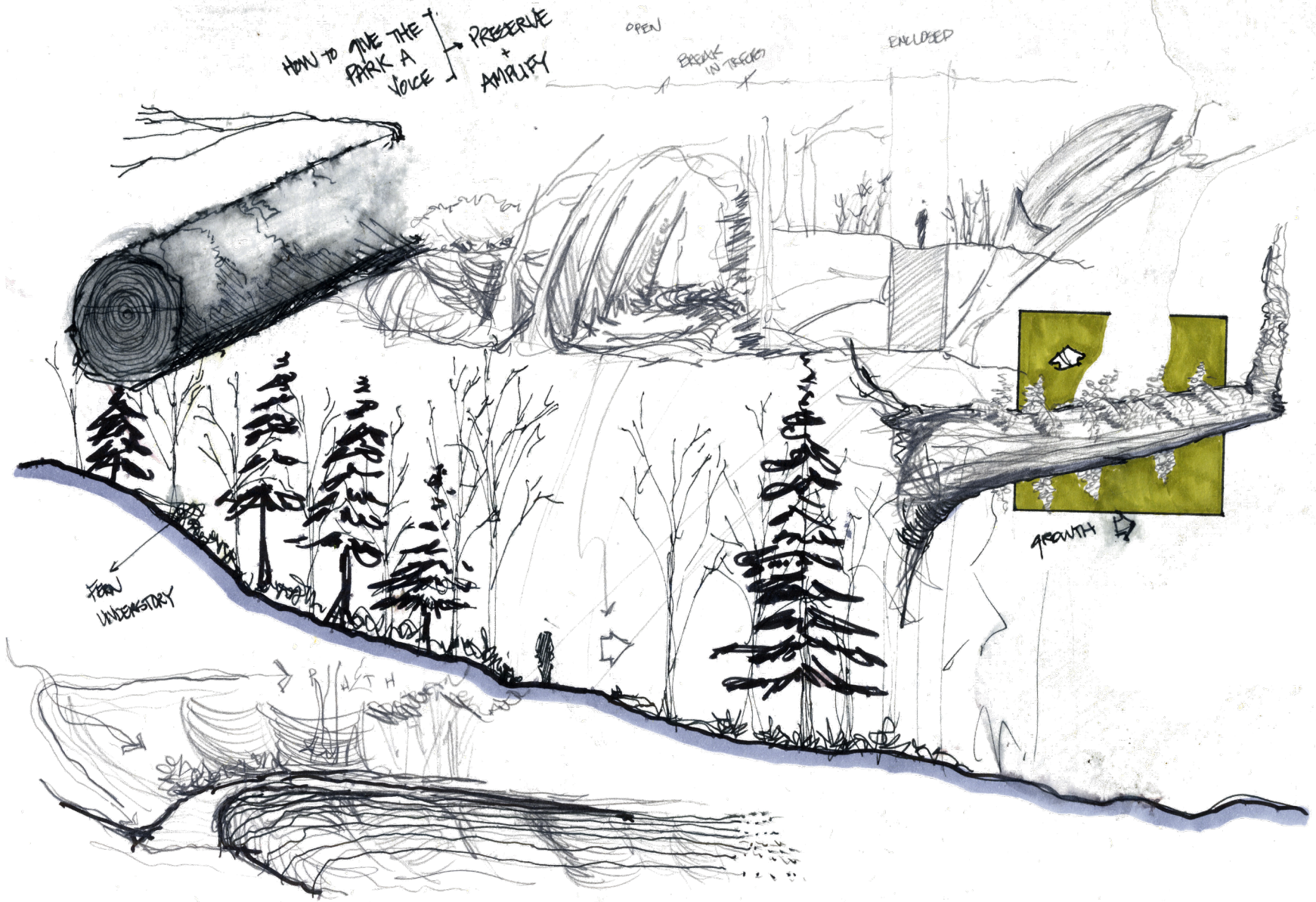


[Figure 13] - Stitched Aerial photography of Discovery Park survey, 1946.

---

54 Lynch, *Site Planning*, 5.

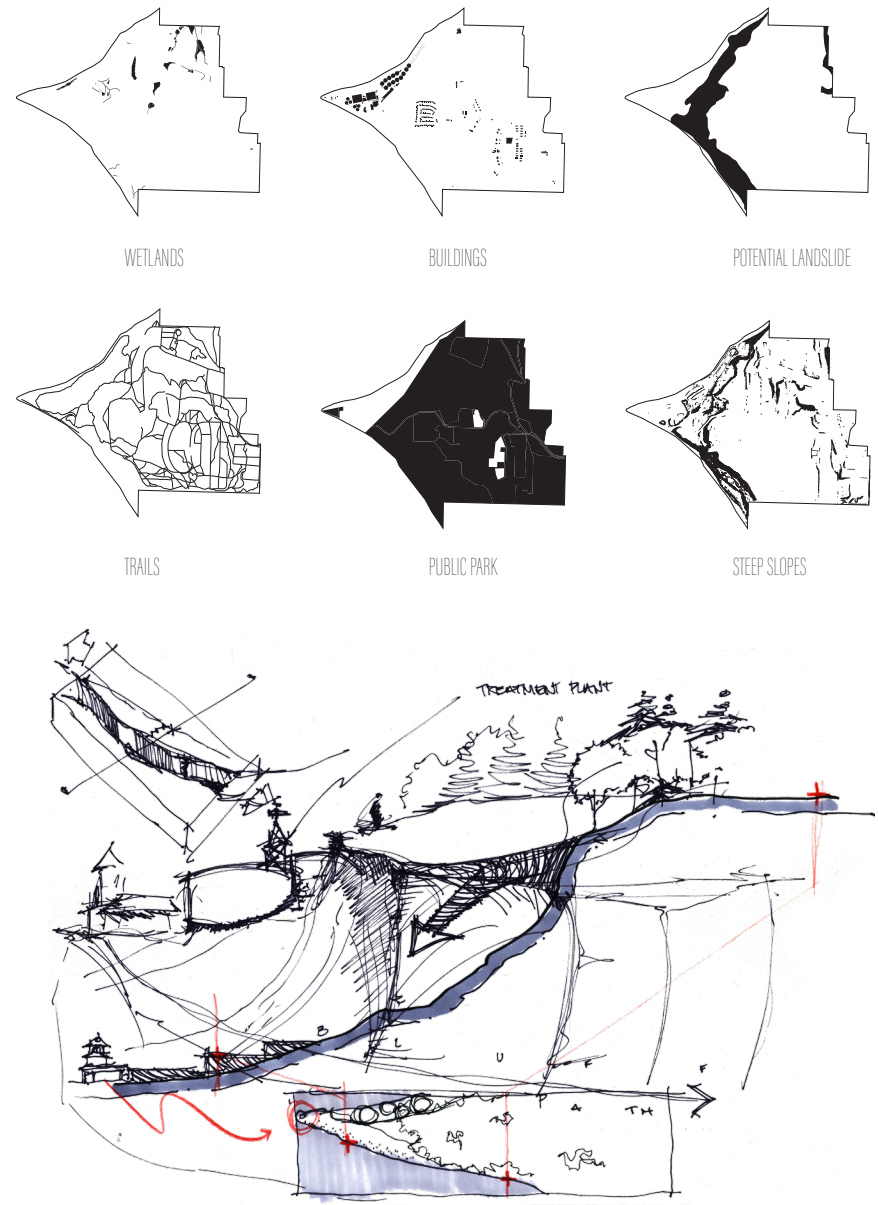
55 *Ibid.*



Perceptive sketch of texture and growth through a trail in Discovery Park.

# AGGREGATE

Aggregate is the gathering and collecting of aspects of site that exist through analytical and verified information. Information that is coming from primary sources or mapped data using GIS or google earth. This data could be geological sections, contour lines, existing ecological information, or hydrological information. Aggregate also refers to information that is perceived about the specifics that exist on site, regarding materials or textures. What can be gathered or interpreted while on site with verified information? Similar to the process of “grounding” described by chair of landscape architecture at ETH Zurich, Christoph Girot, aggregate “has to do less with the individual imagination than with careful research and analysis.”<sup>56</sup> Aggregate is a prompt for comprehending relationships. Due to the difficulty surrounding, what Howard Fisher calls – “multi-subject mapping”, it is used when showing association between subjects is required.<sup>57</sup> This process is based around the revealing of relationships and requires a gathering phase to support synthesis and manipulation. Using maps and GPS to help locate the site of sketches and track material locations or identify location of photographs taken while on site. Aggregate is an expansion of site that gives form to the initial exploration, as well as provide imagery and data that is synthesized or interpreted from verified information. Perceptively aggregate is the accumulation and gathering of materials that

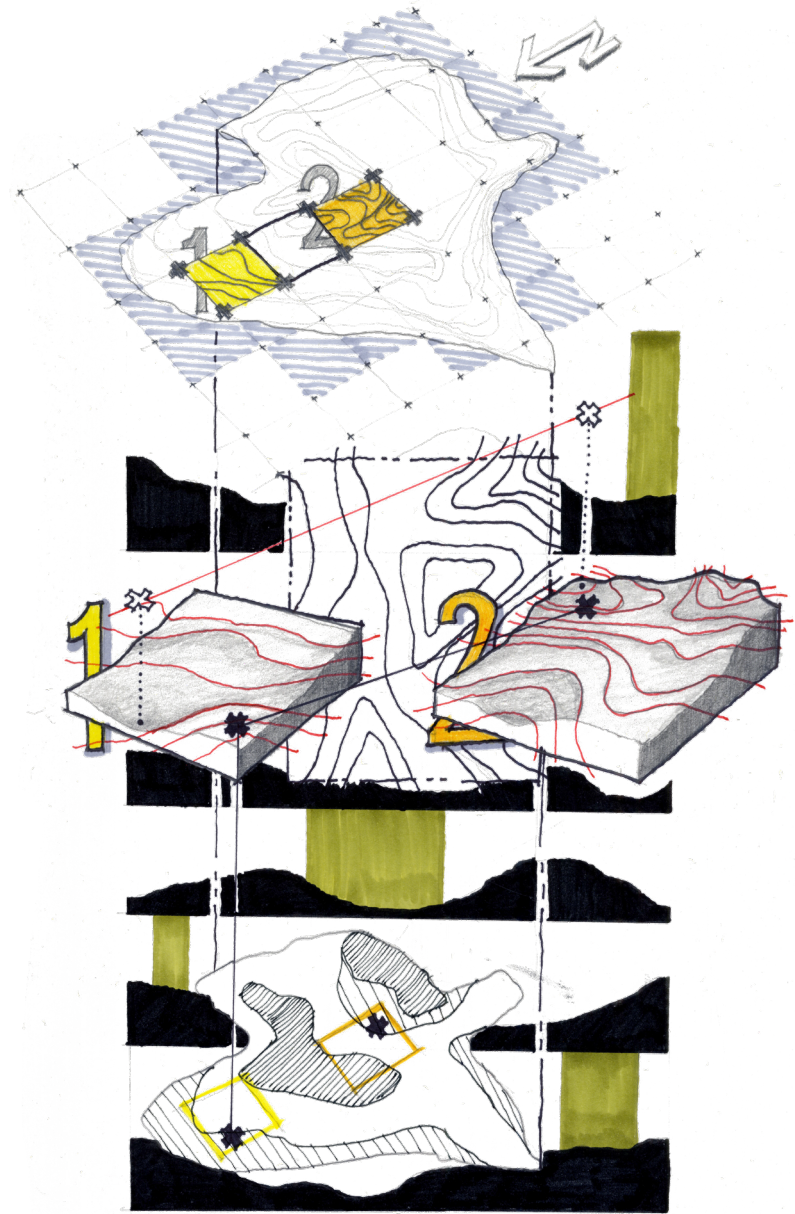


Digital [top] and drawn [bottom] representations of aggregate.

56 Christoph Girot, “Four Trace Concepts in Landscape Architecture,” in Corner, *Recovering Landscape : Essays in Contemporary Landscape Architecture*, 63.

57 Fisher, *Mapping Information : The Graphic Display of Quantitative Information*.

might lack precision but are accurate. These could be historical photos or written accounts about the location mentioning feel and character of the site. Precision in aggregate is the mapping of exact information or verification of locations or landmarks. Aggregate is a collection of materials that can guide and inform later interpretations and interrogations providing a large base of knowledge that is verified to work from.

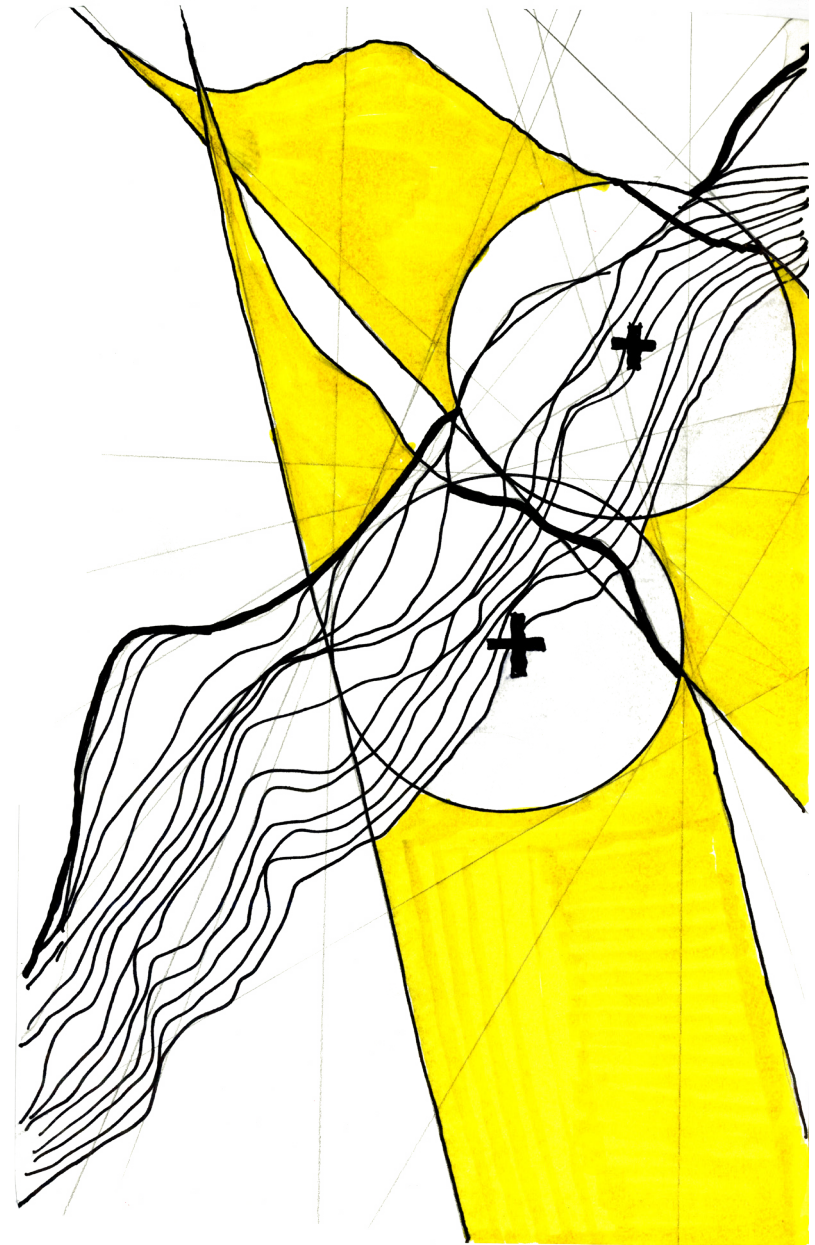


Sketch visualizing potentials for aggregate as the structure for analytical representation.

# PLOT

Plot refers to the initial compilation and comparative analysis of aggregate and site. Plot is an important merging of information that searches for connection, pattern, relationship, comparison, or juxtaposition within the analysis. Plot personifies the finding aspect of the process, it is both mental and physical. Mentally, plot draws connections and is the conception of ideas while physically the manipulation and maneuvering of material and data gathered can help distinguish an appropriate setting for framing the finding. “[Plot] entails the act and process of searching as well as the outcome, the thing discovered. It is both an activity and an insight. What is found can result from either a surprise discovery or some painstaking, methodical quest.”<sup>58</sup>

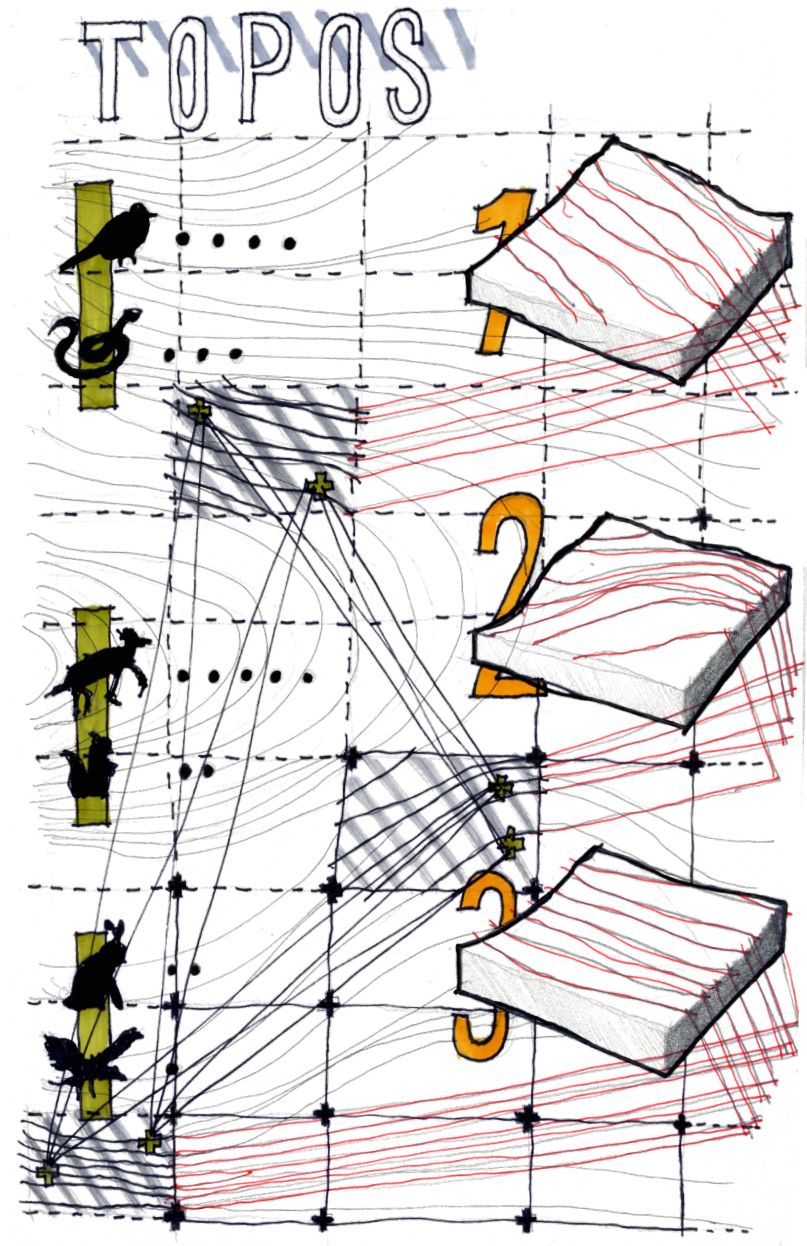
Though plot typically handles information that has been perceived or gathered, due to the non-linearity of this process, plot could very well find its place prior to the start of the exploration. Perceptions of site exist once a place is seen or experienced, therefore connections and findings, though hypothesized, do exist. The introduction of plot at a later time in the process is the tying together of ideas and comparisons that were yet to be actualized. Perceptively plot is the action of finding and configuring the structure or form the exploration and representation will take. Experience and intangibles are considered for their connections and possible correlations to precise data and the way these



Exploratory sketch using plot to organize sections and contours with points of interest.

58 Christoph Girot, “Four Trace Concepts in Landscape Architecture,” in Corner, Recovering Landscape : Essays in Contemporary Landscape Architecture, 63.

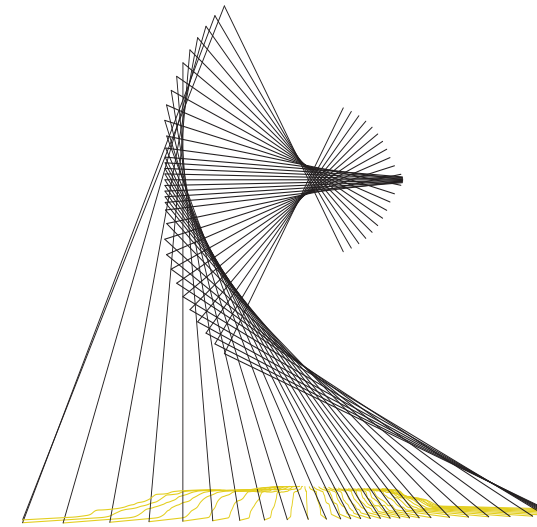
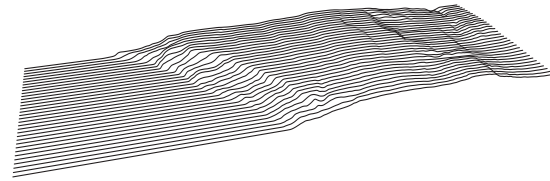
connections might take form. Precision in plot is derived from the layout and meticulous organization that is initiated during this process. Precision in this division refers to the storyboarding and facilitation of layout whether digital or analog.



Sketch explaining layout and organization of typology and fauna in Discovery Park.

# ARMATURE

Armature is a framework or system that exists on the site. Armature is the framework that structures the exploration, setting a datum for cohesion.<sup>59</sup> Site and an understanding of aggregated information accompany an armature and situate it within an exploration. Armature can be derived separately from site, aggregate and plot, creating a shift in understanding but not devaluing the process. Armature is composed of inferred data, data that is derived from an understanding of more than one set of aggregated or perceived site information. Within an exploration and the process of uncovering there must be a systematic structure for analysis of evidence.<sup>60</sup> Structure is what dictates the basis for comparison. Armature allows for connections and relationships to form by linking areas or points of interest through base data. Armature provides a frame of reference for information to fall under. Perception in armature is the envisioning and connection imagined and then realized through modes of representation. Loose frameworks are drawn that begin to inform where verified and mapped information will fall in an exploration. Precision in armature is mapping known points on site. Though their connection might be perceived or need elaboration, the real locations and contexts of these points can show relationship, pattern, or juxtaposition. Armature as precision is the measured and verified information that reiterates the conceived framework.

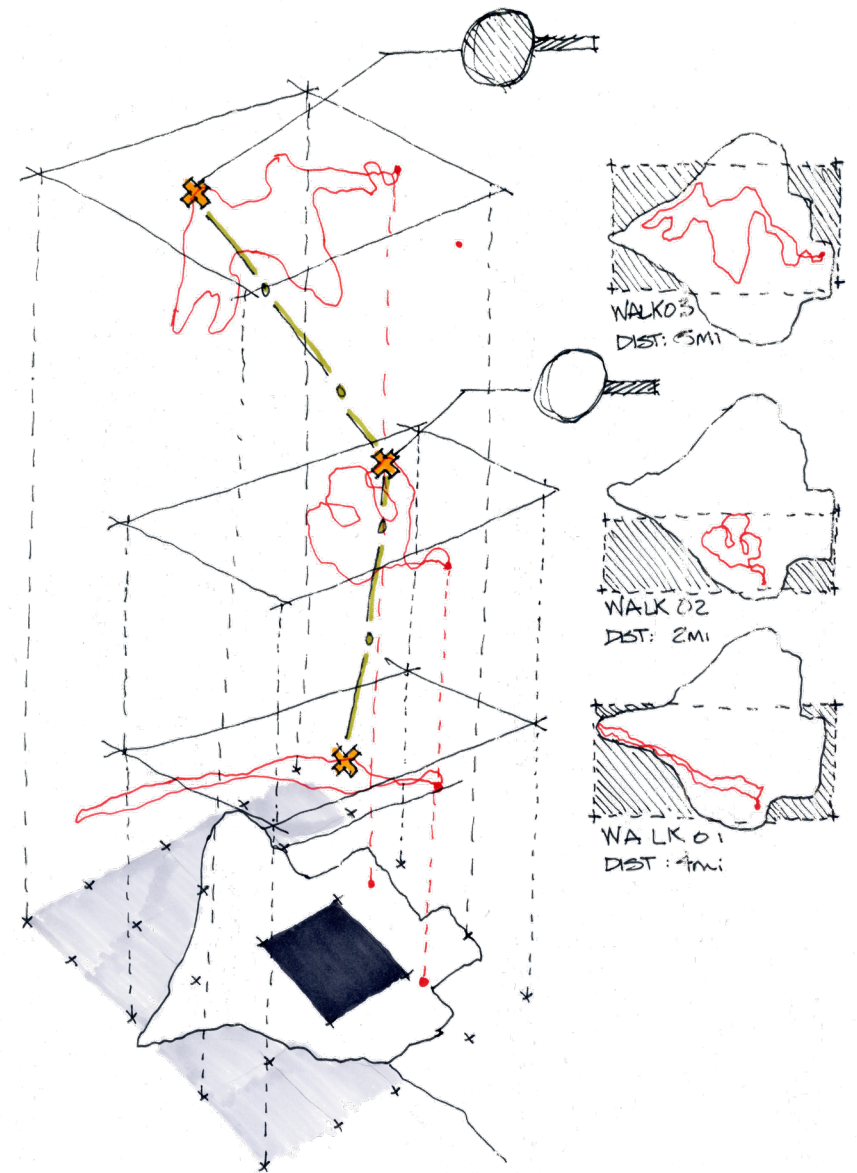


Section profiles arrayed to explore a panoramic elevation as armature over the bluff.

59 Mathur, Soak : Mumbai in an Estuary.  
60 Tufte, Beautiful Evidence, 128.

# NOTATION

“Notation systems in landscape architectural design are not only useful for their communicative and translatory status, but also because they enable one to consider the simultaneity of different layers of experience, including movement and time”.<sup>61</sup> Notation describes and bridges the gap between data analyzed and expanded on, and imagery that captures perception. Notation is the use of graphic principles combined with information that can localize the context of big data or large-scale analysis. Notation in process serves “to specify the essential properties of a particular work in order for it to be translated with minimum ambiguity.”<sup>62</sup> Congruently notation allows for imagery to shift scales physically or temporally. Explanatory notation focuses the data derived through this process and links context and meaning. Notation utilizes the elements of design such as color, line weight, and symbology to show hierarchy, movement, and relationship. Notation works to contextualize and elucidate each division of the process. Notation is integral in each division but stands alone when synthesizing information. Iterations or repetitions of key maps or information, although derived from aggregated data, serve as notation for graphically compiling an image. It is essential to provide movement and clarity through an image. Perceptively this division refers to annotation that comes from experiential qualities of a place, lines or arrows that express motion or connection. The looseness associated with sketching or collage is a large part of



Organization and initial notation concepts for site route mapping.

61 Corner, *The Landscape Imagination : Collected Essays of James Corner, 1990-2010*, 174.  
62 *Ibid*, 174.

perceptive notation and shows character of place with a sense of understanding between designer and site. Precision in notation is accurate use of locating mechanisms such as longitude and latitude or identification and annotation of landmarks or documented roads or paths. Notation precisely refers to the use of color digitally and line weight that can show hierarchy and depth under very fine margins within an image.

## *ASPECT // MODE*

Each division was evaluated to better understand aspects that could be captured and modes that each division can be communicated by. It was important to this thesis to use the divisions to distinguish what could be accomplished by each one. Varying modes of representation cater better to certain divisions, more strongly personifying the aspects they embody. What modes function as tools of communication and explanation? What modes serve to explore and speculate?<sup>63</sup> Aspects are qualities of place or experiences that can be revealed through the process. Each division has unique aspects but inherently because of the overlapping nature of these divisions many aspects exists in multiple divisions, though represented differently. Mode refers to the methods of representation or explanation used. Defining these modes helps to visualize the tools available and where they are most applicable. Initial organization and allocation of these modes by division is evidence that our thought process is defined by what we have learned or seen by example. The following divisions and explanations are the result of both observed and created trial and error.

---

63 Amoroso, *Representing Landscapes : A Visual Collection of Landscape Architectural Drawings*, 55.

NOTATION ARMATURE PLOT AGGREGATE SITE

ASPECT

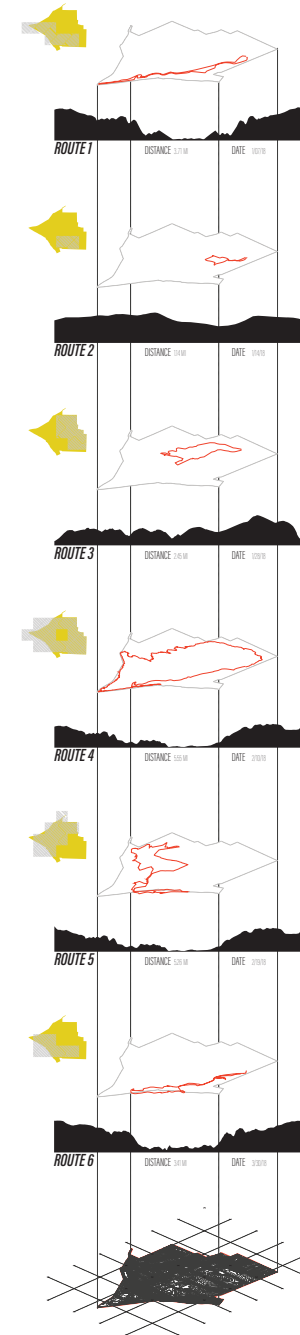
MODE

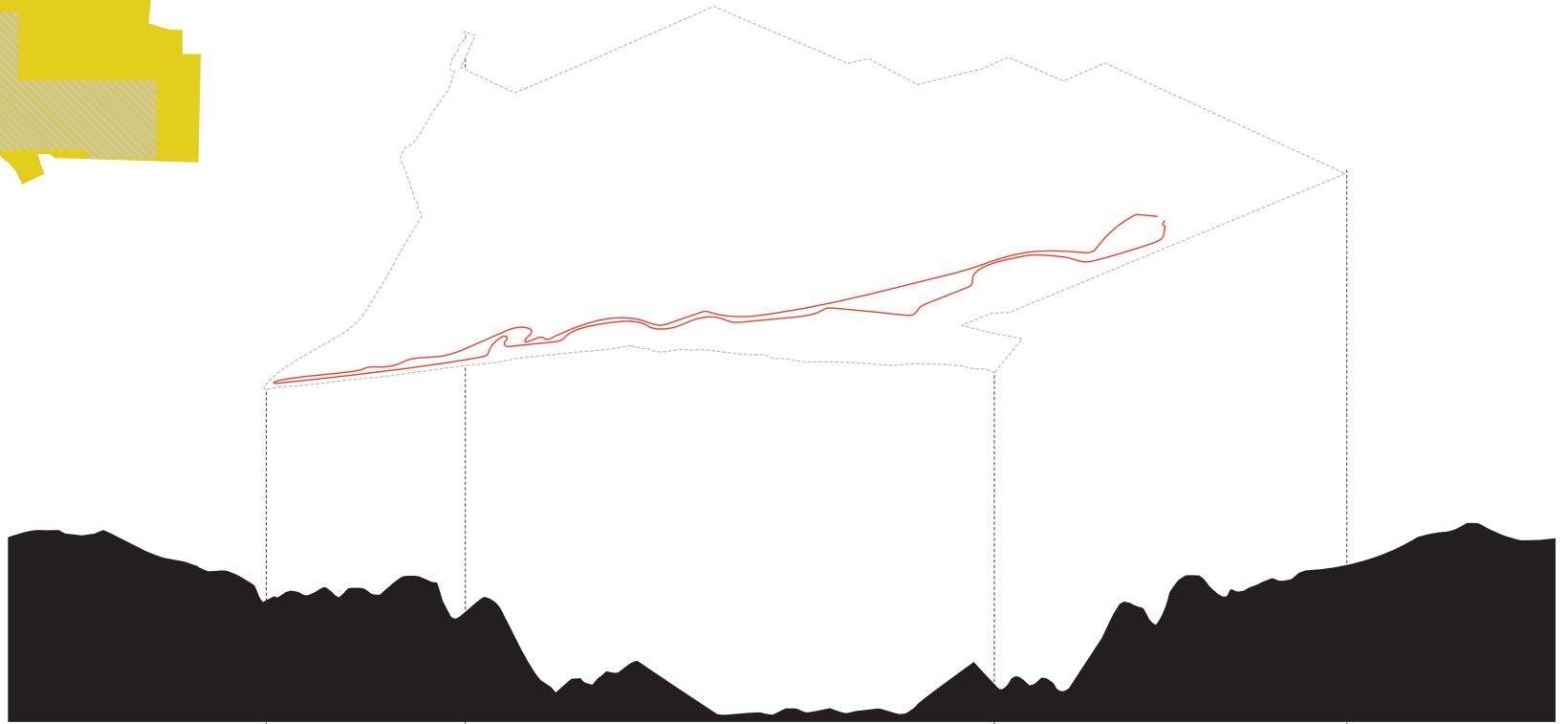
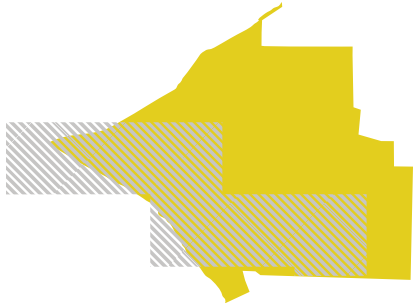
- Base Information
- Clarity
- Cohesion
- Compilation
- Connection
- Contextualize
- Emotion
- Experience
- Explain
- Focus
- Grounding
- Heirarchy
- Identify
- Layers
- Motion
- Narrative
- Observable data
- Organization
- Pattern
- Relate
- Relationship
- Scale Shift
- Sensation
- Temporality
- Traced locations
- Color
- Cross reference
- GIS
- Google earth
- Journal
- Layout
- Line weight
- Linework
- Map
- Material Gathering
- Mental Map
- Model
- Overlay
- Parametric Framework
- Photograph
- Point cloud
- Resize
- Sketch
- Sound Recording
- Storyboard
- Timeline
- Topography
- Topology
- Video
- Writing

Page Intentionally  
Left Blank

# THE EXPLORATION

Exploration refers to the application of the above mentioned categorical process and the organizing divisions. The first site visit took place on January 7th, 2018. It was the first time I had been to Discovery Park and I had planned to just walk the site with no prior research of trails or points of interest. This was a unique opportunity I made the most of. The exploration resulted in six total site visits, each one with increased understanding of the site. This led to a focus of navigation. The wandering novelty of the site faded but site complexities began to reveal themselves and become understood. The site walks were categorized by route, each route containing the total distance covered, the date the route took place on, and a tracing of the route over the site boundary. Additionally, an elevational profile of the route was created using a GPS running app that tracked the change in elevation as I moved through the site. The profiles are relative to the route, meaning the shorter the path, the less drastic the display of change in elevation. The longer routes show a more exaggerated change in elevation due to the breadth of the site covered. A key locator is used for each route that shows proportion of the site covered across a uniform grid.

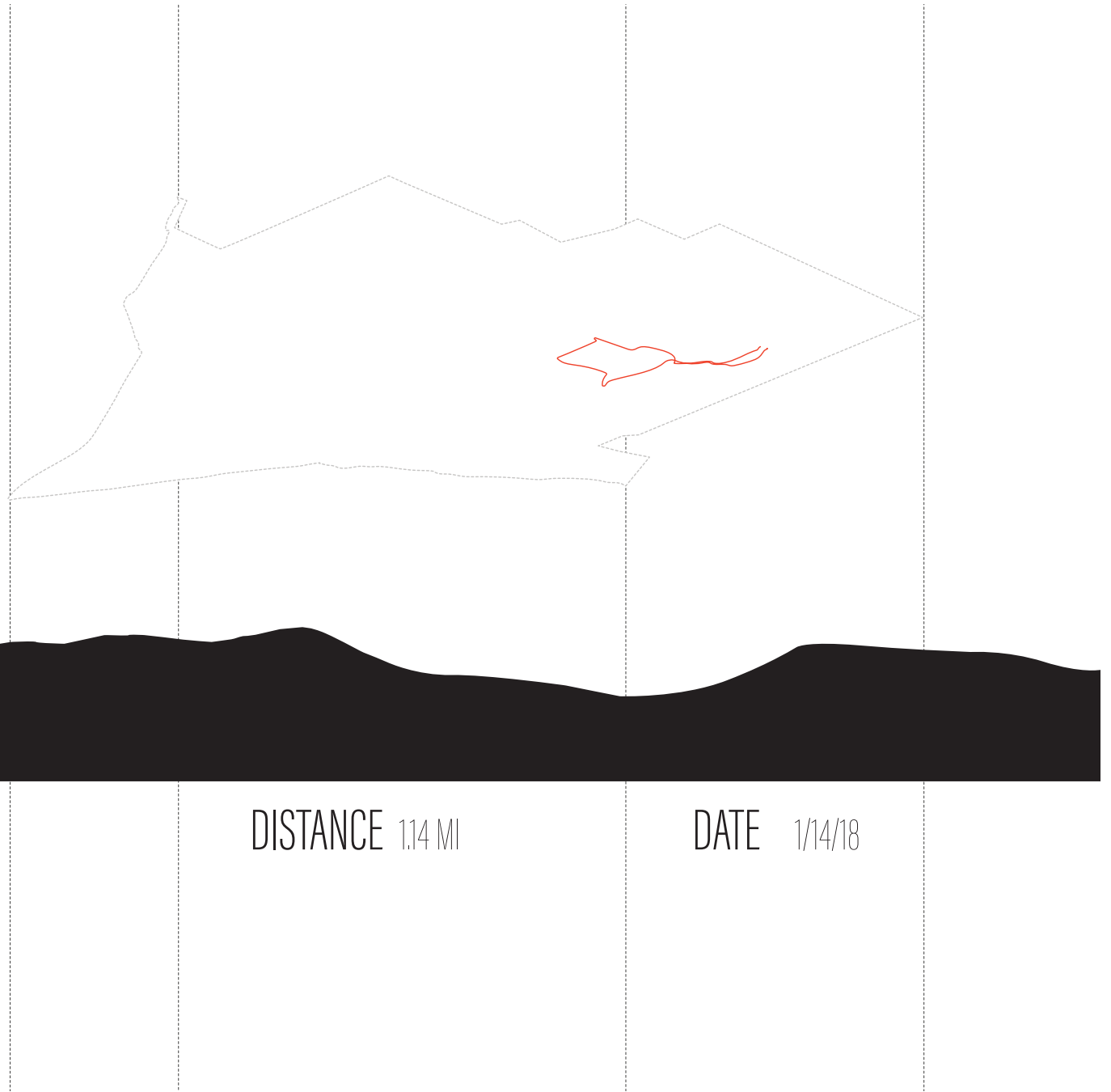




***ROUTE 1***

DISTANCE 3.71 MI

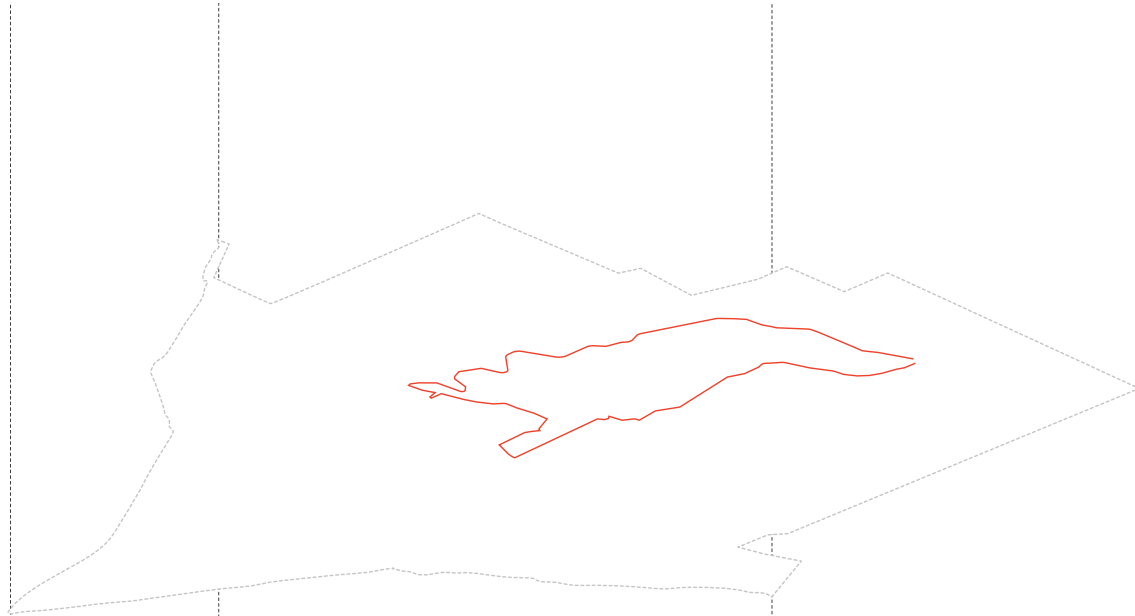
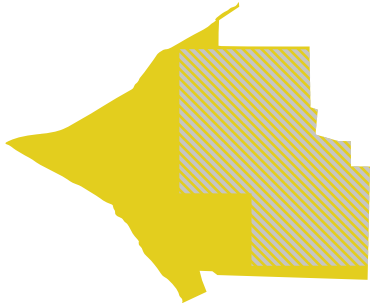
DATE 1/07/18



***ROUTE 2***

DISTANCE 1.14 MI

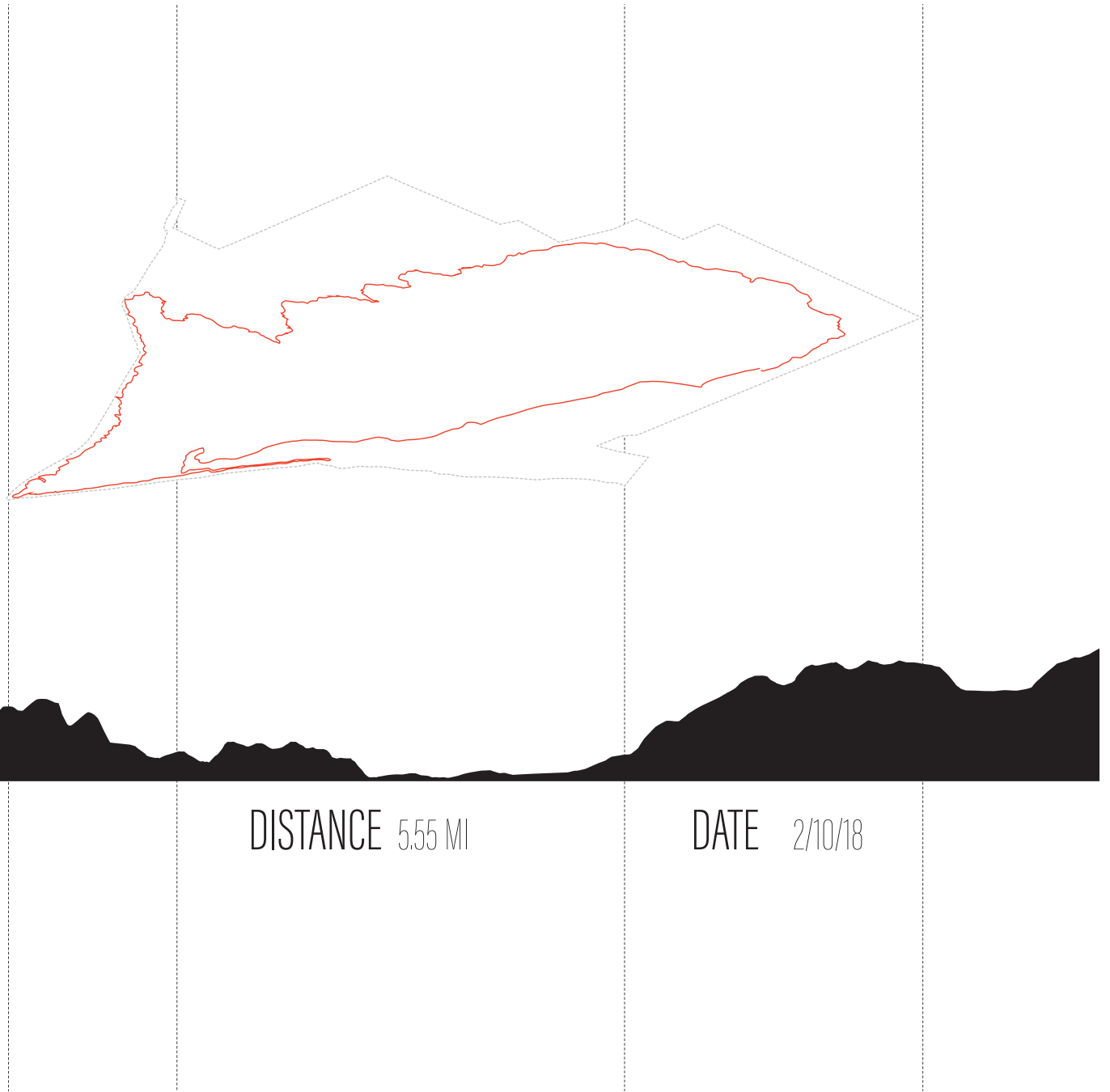
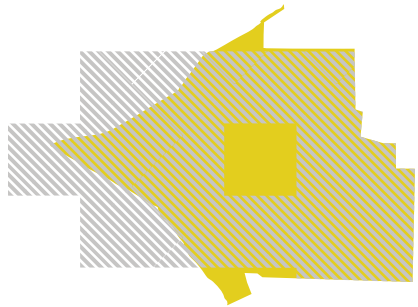
DATE 1/14/18



***ROUTE 3***

DISTANCE 2.45 MI

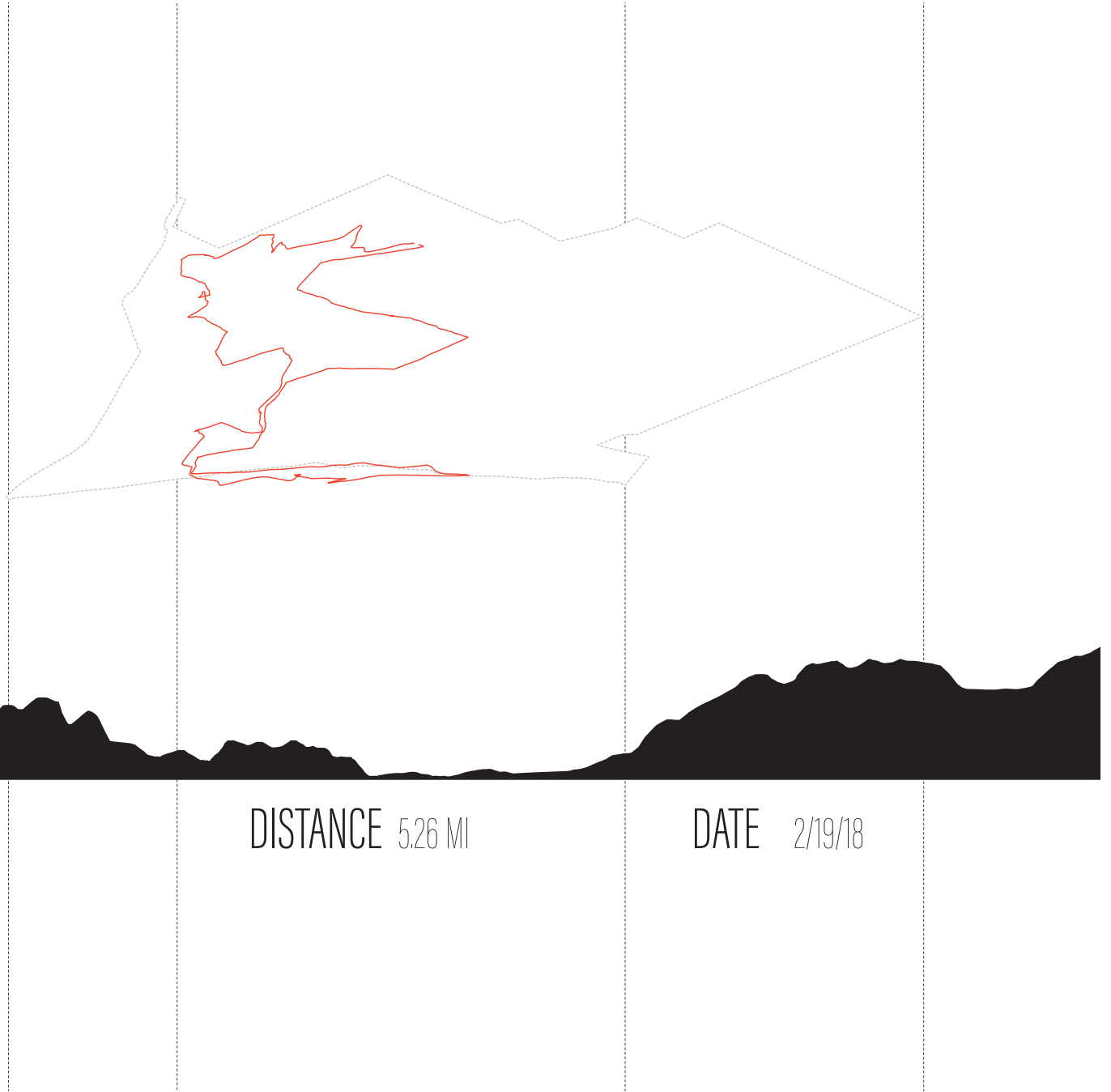
DATE 1/28/18



**ROUTE 4**

DISTANCE 5.55 MI

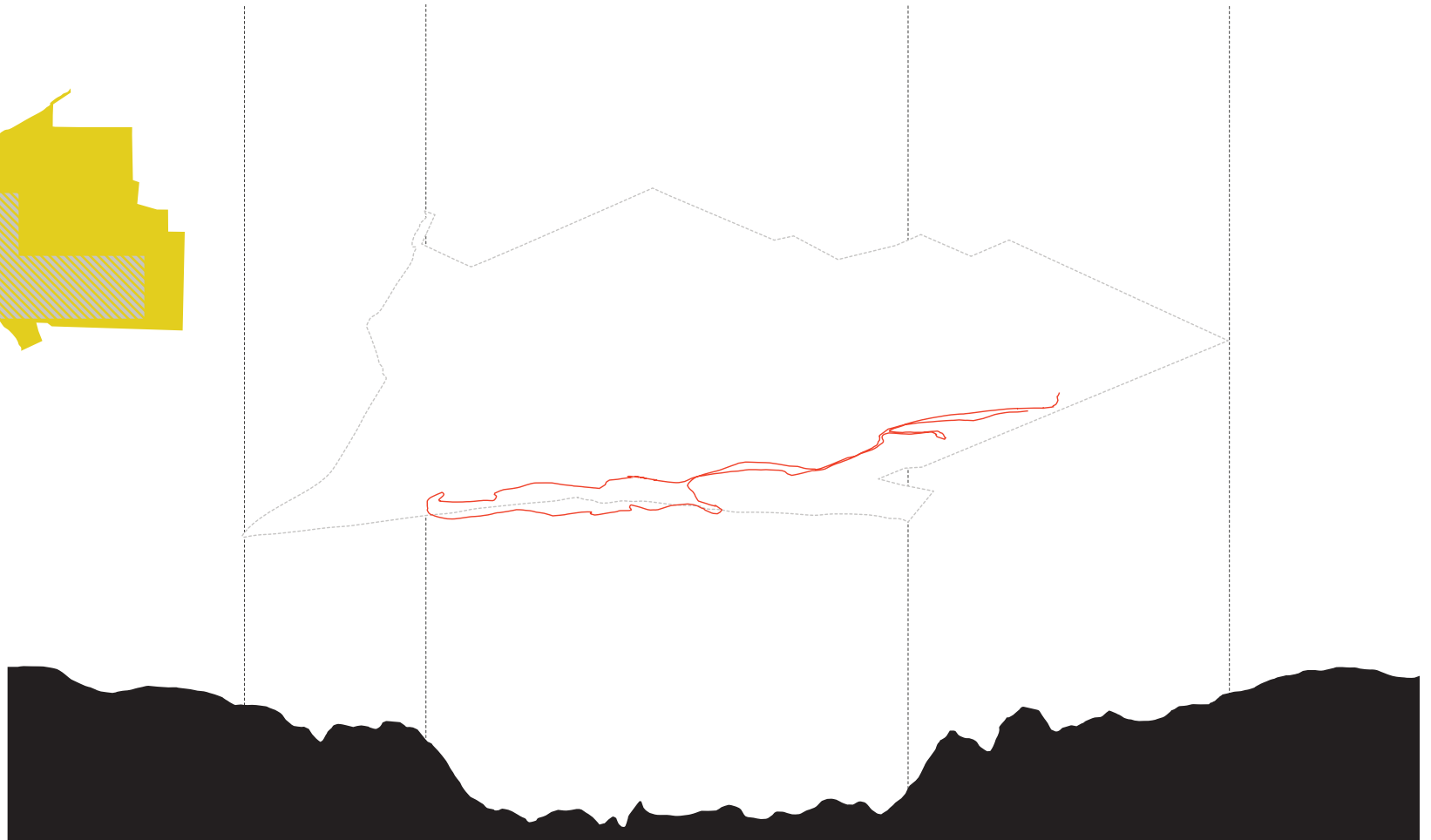
DATE 2/10/18



***ROUTE 5***

DISTANCE 5.26 MI

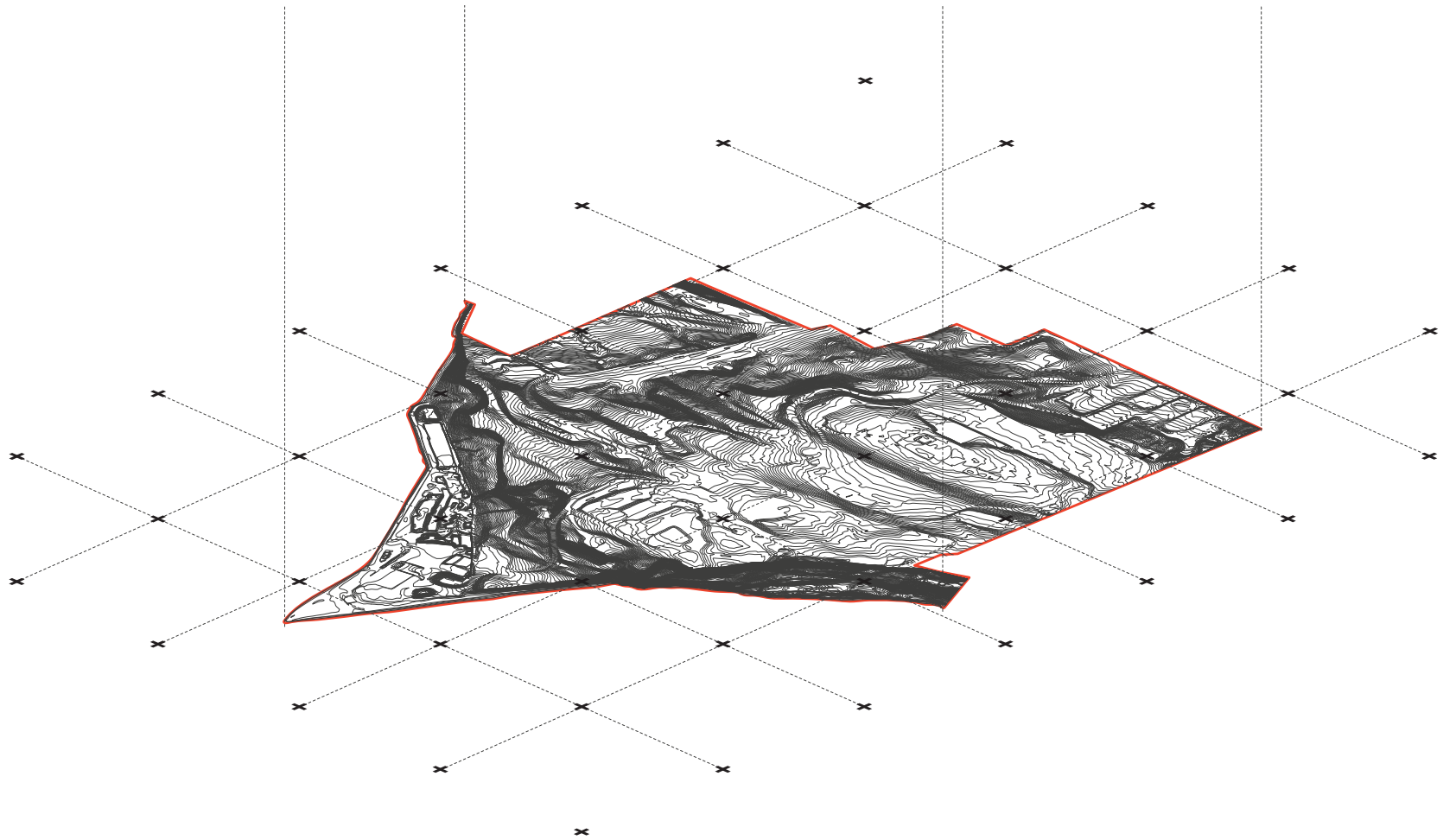
DATE 2/19/18



***ROUTE 6***

DISTANCE 3.41 MI

DATE 3/30/18



Discovery Park is contextualized by identifying its former use and designation as a coastal fort, Fort Lawton. Fort Lawton is listed in addition to other forts that were more closely related to the date established and size of the fort along the west coast. It was important to understand the uniqueness of this site and the larger setting this park typology sits within. However, in this network, Fort Lawton was the largest at 703 acres. The network locates Discovery Park in the state of Washington and provides a size comparison for other sites similar to itself.

*Fort Casey, WA* 467 ACRE 1899



*Fort Worden, WA* 433 ACRE 1900



*Fort Lawton, WA* 703 ACRE 1900



*Fort Colombia, WA* 593 ACRE 1898



*Fort Stevens, OR* 542 ACRE 1836



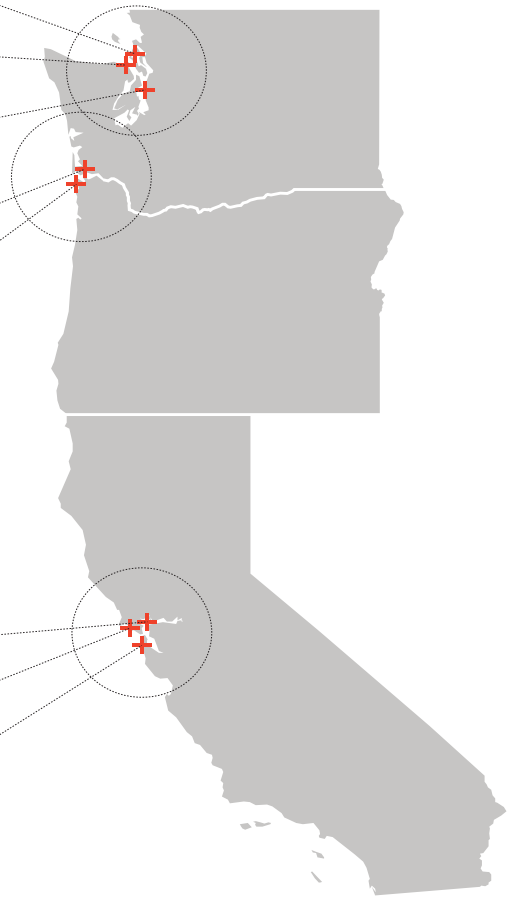
*Fort McDowell, CA* 595 ACRE 1901



*Fort Miley, CA* 54 ACRE 1898



*Fort Barry, CA* 477 ACRE 1905



The history of the site was apparent from the first time I experienced Discovery Park. There are old military buildings and relics of former use spread throughout the park. Analyzing the timeline of the park lead to a designation of major periods in the history of Discovery Park, the first being Pka'dzEltcu. This is the Salish name describing the location of this site as “thrust far out”. This name comes from the pointed landform that protrudes into Puget Sound.<sup>64</sup>

The second period in the sites history is Magnolia Bluff. Magnolia bluff refers to a period of European colonization and original claiming of the wild territory existing on this site. The official name Magnolia Bluff was given mistakenly in 1865 after a United States Coast Survey misidentified the madrona trees along the bluff as magnolias. Their leaves are quite similar.<sup>65</sup> The next period in the site’s history is Fort Lawton. Fort Lawton was identified for this location because of its precarious overlooks and strong strategic military advantage. The elevation of the cliff allowed reconnaissance to be able to scout any approaching threats while artillery benefited from the additional trajectory. The site,

being extended out on a point into the sound, also benefitted from ease of fortification on the land behind the cliff.<sup>66</sup> The fort was occupied in 1900 and was in use until around 1941.

Discovery Park is the last period and it takes us into the current year. Discovery Park represents what the site has become due to a process of contested claims with community, city, and tribal involvement.<sup>67</sup> The park now offers an incredible 534-acre swath of nature in a very dense city. It is a remarkable place and the rich history showing the progressions that shaped it only add a level of appreciation to this place.

Each period helped to influence trails of analysis through the process and showed the importance of the site and the potentials of this exploration. The wonder and sublime quality of the bluff when approaching from the sea, the precarious nature and advantage of the bluff from a military standpoint. Lastly, the importance of the city’s involvement in securing this land for the public. After exploring the history of the site and understanding how its form was derived, the performance of the site became of interest.

---

64 T. T. Waterman, “The Geographical Names Used by the Indians of the Pacific Coast,” *Geographical Review* 12, no. 2 (1922): 175–94, doi:10.2307/208735.

65 Robert E Kildall, “How Magnolia Got Its Name,” *Magnolia Historical Society*, n.d., 27–31.

---

66 Robert E Kildall, Seattle (Wash.). Department of Parks and Recreation, and Wash.) *Friends of Discovery Park* (Seattle, Discovery Park 1972 Original Master Plan : Commemorative Edition Reissued 1992, Commemorative ed. (Seattle, Wash.: Seattle, Wash. : The Friends, 1992).

67 Duane Denfeld, “Fort Lawton to Discovery Park,” *History Link*, September 23, 2008.

< 1850

Salish people lived in the area surrounding Elliott Bay, the bluff referred to as Pkaldzlitcu, "thrust far out" - referencing the cape that protrudes into Elliott Bay

+ 1853

Dr. Henry A. Smith staked a claim on land claim of 160 acres at the south end of Magnolia bluff

1896

Secretary of War selects Magnolia as fort site for allocated funds to build expense post in Seattle

+ 1899

The first soldiers arrived. The first seven buildings were occupied by 1900, with another 18 permanent structures, including a hospital, eventually ringing the oval parade ground

1927

Initial legislation drafted, but denied, to offer the Fort for park purposes

1938

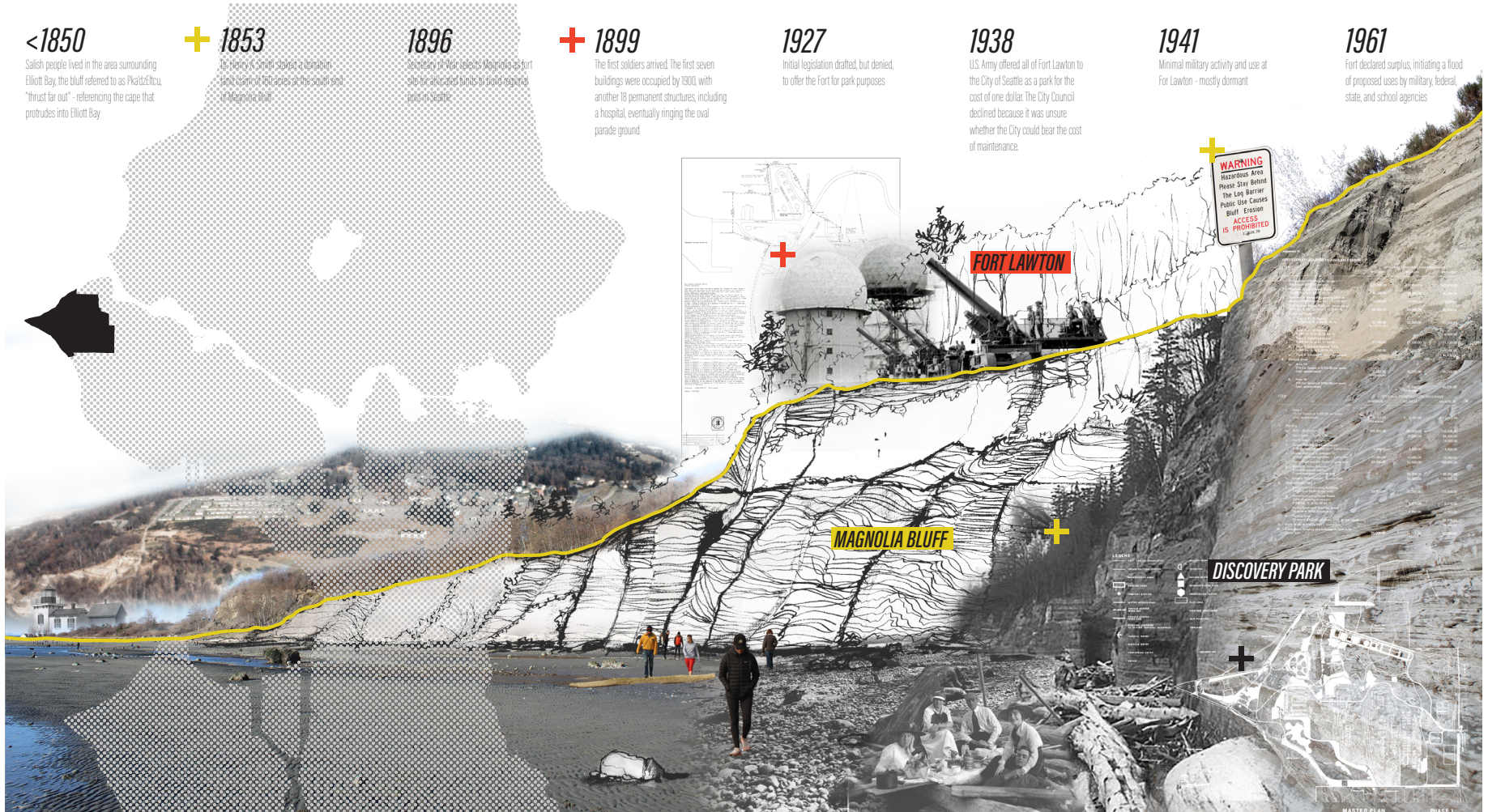
US Army offered all of Fort Lawton to the City of Seattle as a park for the cost of one dollar. The City Council declined because it was unsure whether the City could bear the cost of maintenance.

1941

Minimal military activity and use at Fort Lawton - mostly dormant

1961

Fort declared surplus, initiating a flood of proposed uses by military, federal, state, and school agencies



1968

A citizens group, Citizens for a Fort Lawton Park, formed in June 1968 to fight the proposed ABM base and to advance the park cause. Voters approved a Forward Thrust Park Bond Issue that included \$3 million for a Fort Lawton park

1969

U.S. Senator Jackson (D-WA) introduced a bill enabling cities to acquire surplus Federal lands at no cost for park and recreational purposes. President Nixon signed it in October 1970

1970

The United Indians of All Tribes presented a claim to all lands that might be declared surplus. The City negotiated an agreement to lease 17 acres to the organization for an Indian Cultural Center

+ 1972

Fort Lawton Park (Discovery) Master Plan was submitted to the City. U.S. Senator Henry Jackson dedicated Discovery Park in honor of the British sloop HMS Discovery, commanded by Captain George Vancouver during the first European exploration of Puget Sound in 1792

1975

Voters rejected proposal for West Point Golf Course at Discovery Park

1977

Daybreak Star Cultural education center opened, a culture center celebrating native heritage in the region

1986

The 1986 Development Plan also restated its commitment to preserving the 1891 Lighthouse, which is listed on the National Register of Historic Places. This feature, the plan stated, is to be welcomed as part of the park interpretive program and protected

2005

Base Realignment and Closure Commission (BRAC) 2005 determined that the 70th Regional Support Command headquarters would close, one of 10 RSC Major Subordinate Commands of the U.S. Army Reserve Command

The performance of the park refers to the ecological and the social performance of the site. Discovery Park offers twelve miles of trails, it is home to over 270 species of birds and features 250 feet of elevational change. The site offers a multitude of activities such as biking, hiking, trail running, dog walking, and nature programs through the visitor's center. Additionally, the park features a diverse wildlife management plan for the many species of fauna on the site. As a result of the elevational change, the park also provides many varying ecotypes such as dune grasses, meadow, mixed forest, scotch broom, and lawn.<sup>68</sup> The representation of the performance shows the site as a series of sectional slices that provide a template for locating fauna, human activity, and ecotypes congruently. The sectional slices are overlaid with species and potential paths for these activities highlighting what species you might encounter while engaging the site. The images of the site move from right to left showing the forested progression down to the open beach and dune landscape. Extracted within the image is a network of predators and prey. This web shows a ladder that connects the varying elevations of the site through species interaction and food chain. Included in this web are migratory species, where Discovery Park plays an integral role. The park is an important site because of the value it holds for migratory species including the rufous hummingbird, red tail hawk, black throated warbler, and chinook

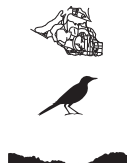
---

68 Robert Mindick, Discovery Park Wildlife Management Plan, Discovery Park Wildlife Plan (Seattle, Wash.]: Seattle, Wash. : Seattle Parks and Recreation, 1983).

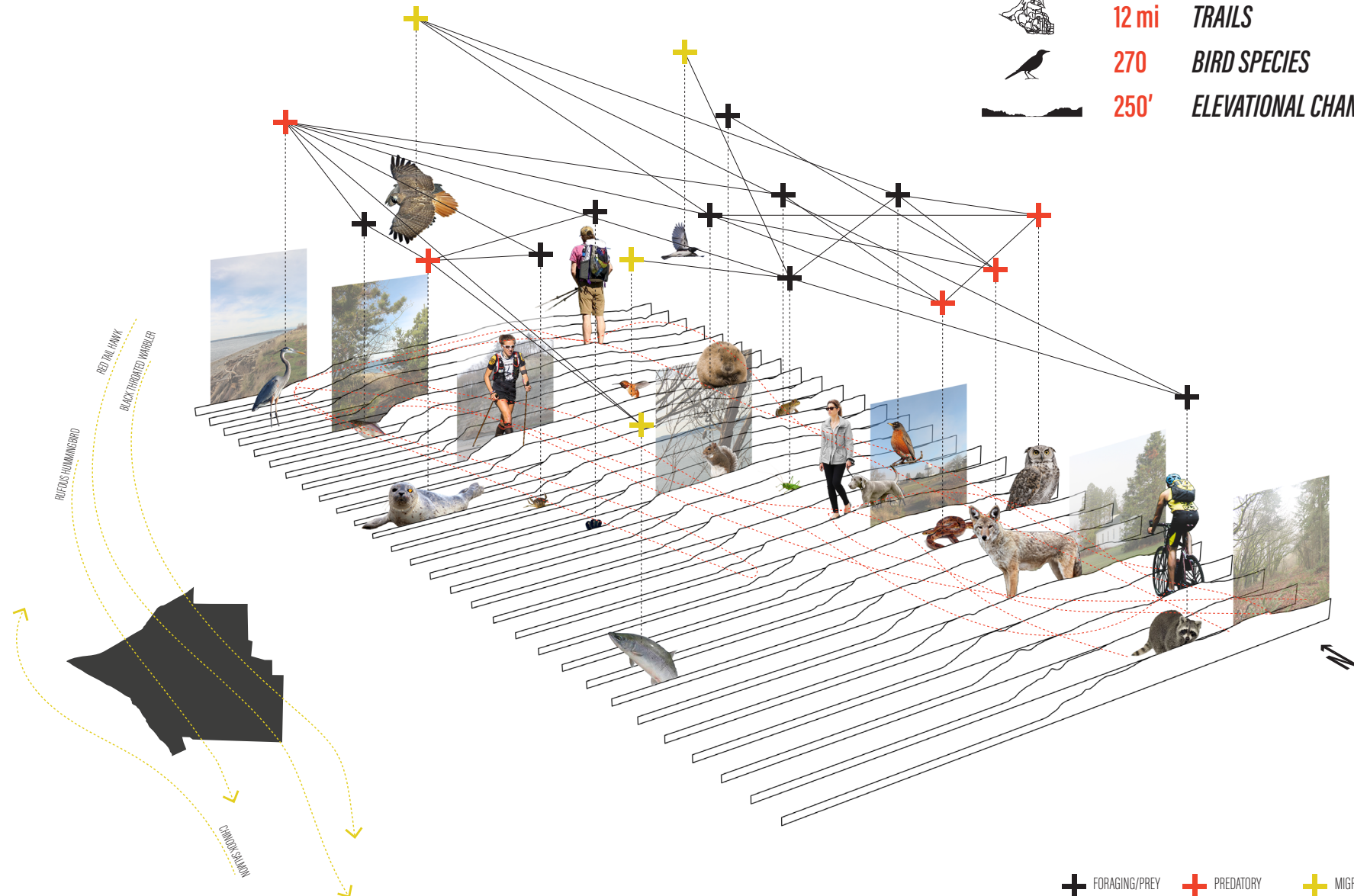
salmon.<sup>69</sup> Working to understand the performance of the park prompted me to wander through the site, guided and unguided. The wanderings had a few consistent nodes that lead to the next representation locating these nodes specifically on the site.

---

69 Ibid.

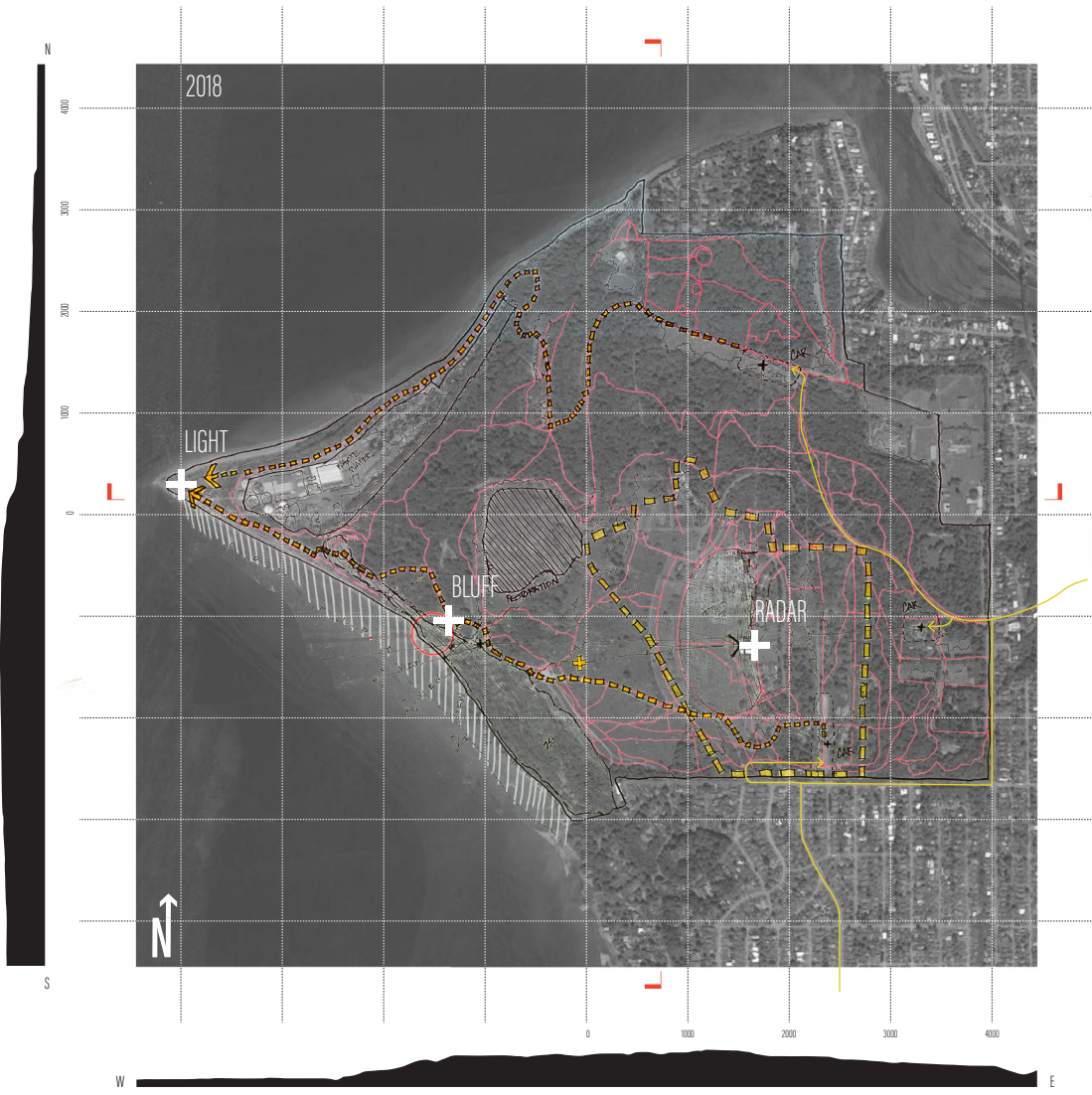


**12 mi** TRAILS  
**270** BIRD SPECIES  
**250'** ELEVATIONAL CHANGE

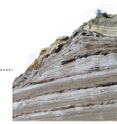


**+** FORAGING/PREY    **+** PREDATORY    **+** MIGRATORY

The boundary of the site is marked with a chain link fence generally all the way around the site. Most of the current site boundary follows the original lines of the land given to the military and then given back. There are two major points of access by car but multiple openings for pedestrians or cyclists. The site has a complex network of trails, bike paths, and roads. Maneuvering on the site is clearly marked but there remains the opportunity to wander or explore. Navigating the site became focused around three major nodes in the landscape. The West Point Light house, the radar tower, and the bluff. This representation shows where these nodes exist in the profile of the site and in the network of roads and trails that move around and through them. These nodes were chosen because of their prominence in my own site walks and in the history of the site. Each node sparked further exploration and provided a platform that allowed for other analytical factors. The following series shows the use of a precise base and perceptual interrogation to understand varying analytical factors as they relate to the three nodes.



4000 W, 250 N



1200 W, 1050 S



1700 E, 1100 S

1946

SECTION 11  
TOWNSHIP 13 N  
RANGE 11 E

SECTION 12  
TOWNSHIP 13 N  
RANGE 11 E

SECTION 13  
TOWNSHIP 13 N  
RANGE 11 E

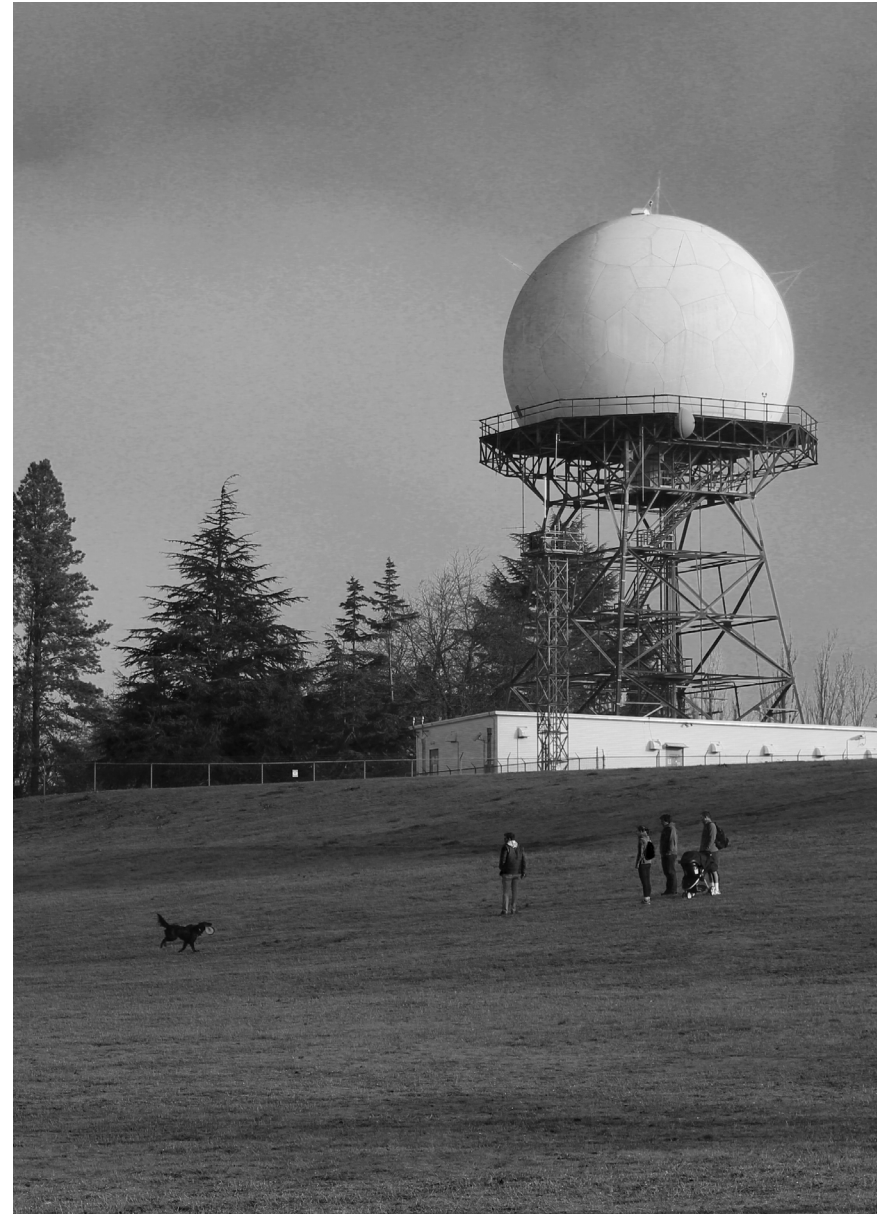
SECTION 14  
TOWNSHIP 13 N  
RANGE 11 E

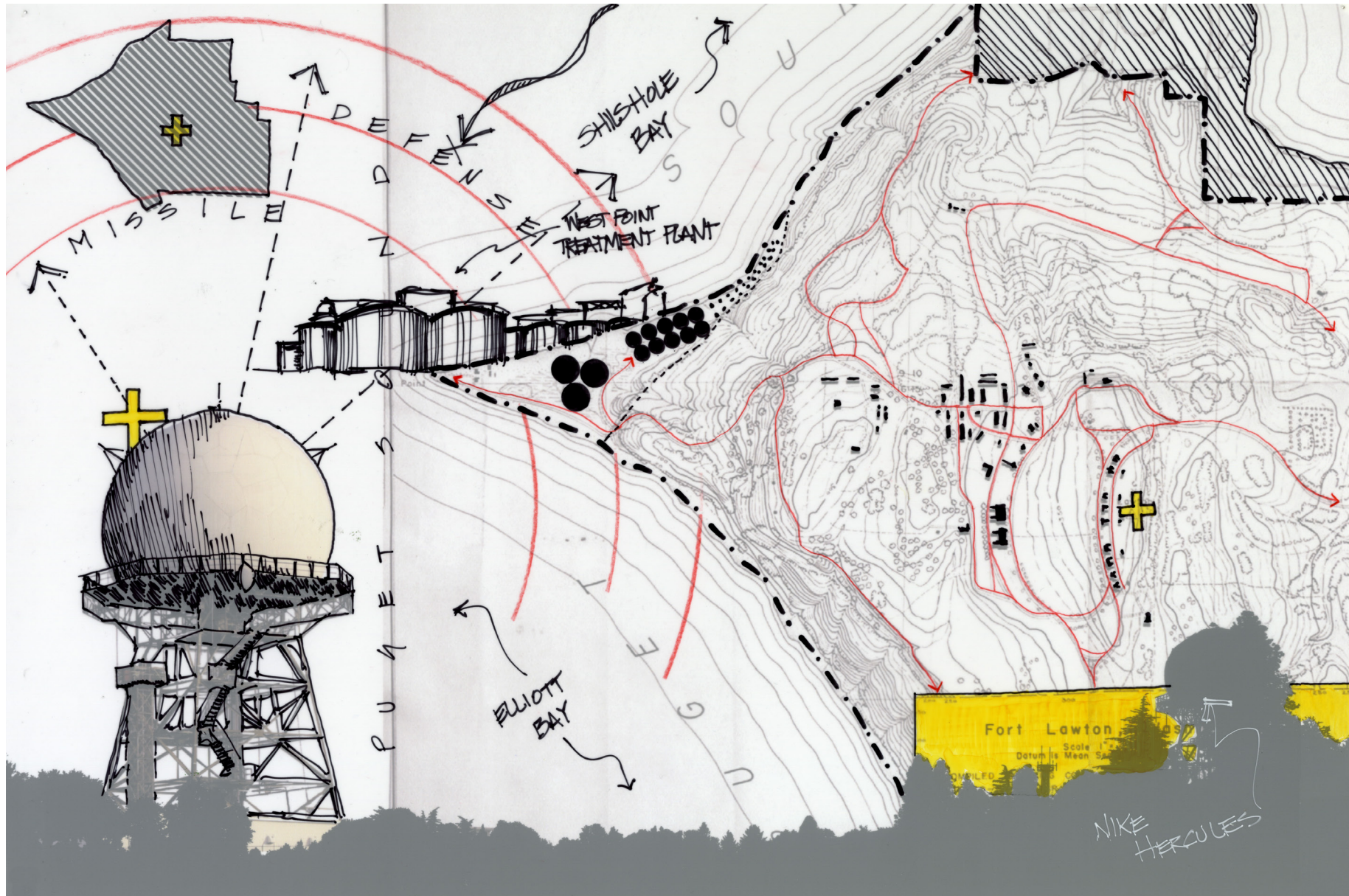
The West Point Lighthouse provided a base for looking at the shoreline and the sites relationship to the sea. This representation shows the acknowledgment of marine life, shipping routes, wind exposure and direction, human use and program. Each of the main trails existing on the site terminate at this location, so it was consistently encountered on site visits.





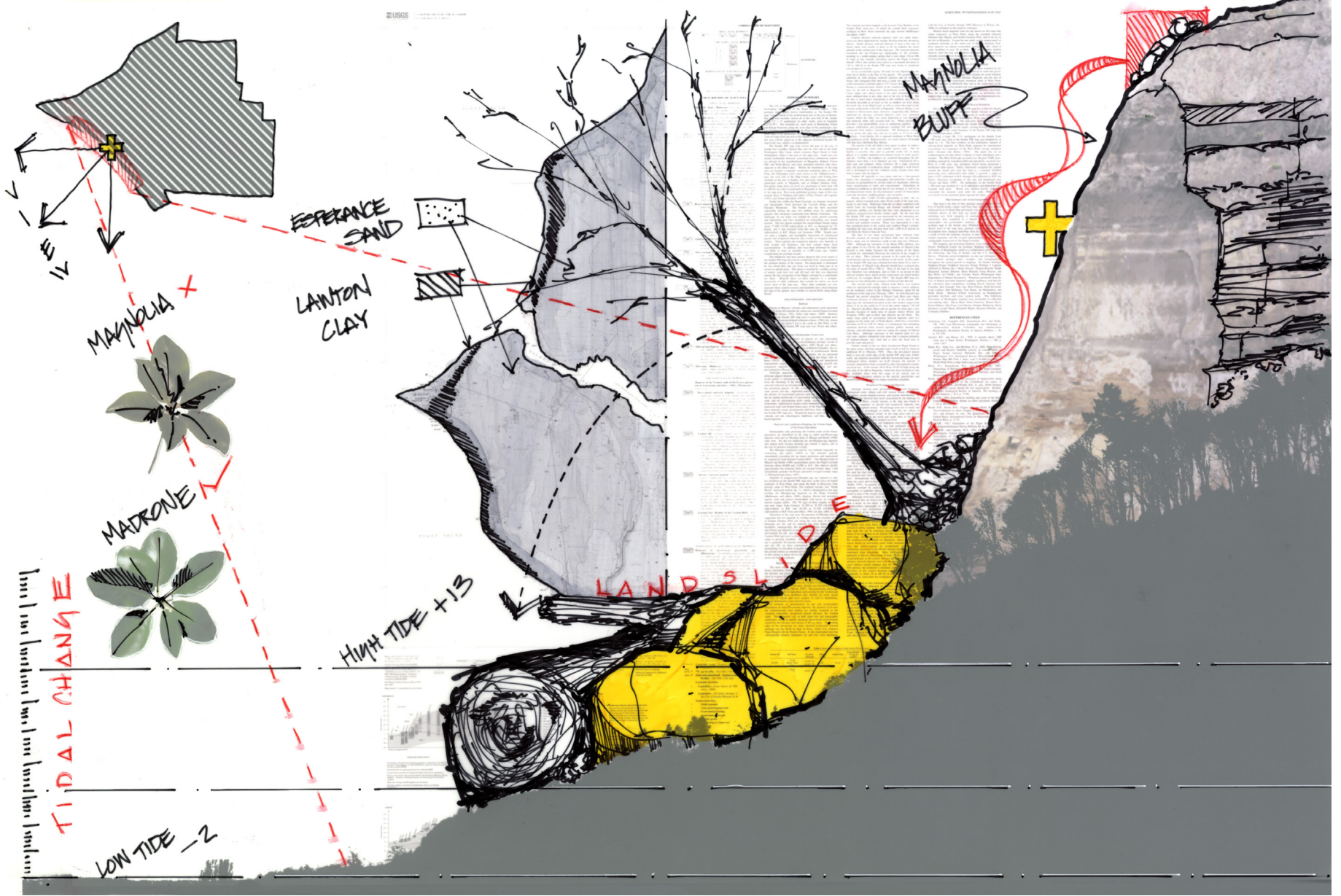
The radar tower provided a base for looking into land use in the park. Discovery Park is majority public land but still contains private infrastructure such as the West Point Treatment plant and Fort Lawton housing. This representation shows designation of private and public land. Additionally, it shows infrastructure and other built elements on site. One element specifically, the radar tower, shows what this structure meant for the site and for the city of Seattle.





Lastly the bluff provided a base for looking at the geological layers existing on the site and the importance of the sites stratification. This also brought to light some of the hazards it poses. The majority of the bluff is prone to landslides and is reliant on a delicate balance between two major soil compositions. The bluff also provides a great datum for tidal flux and for the potentials of sea level rise, possibly one day removing the ability to visit the astounding beach.

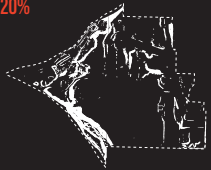




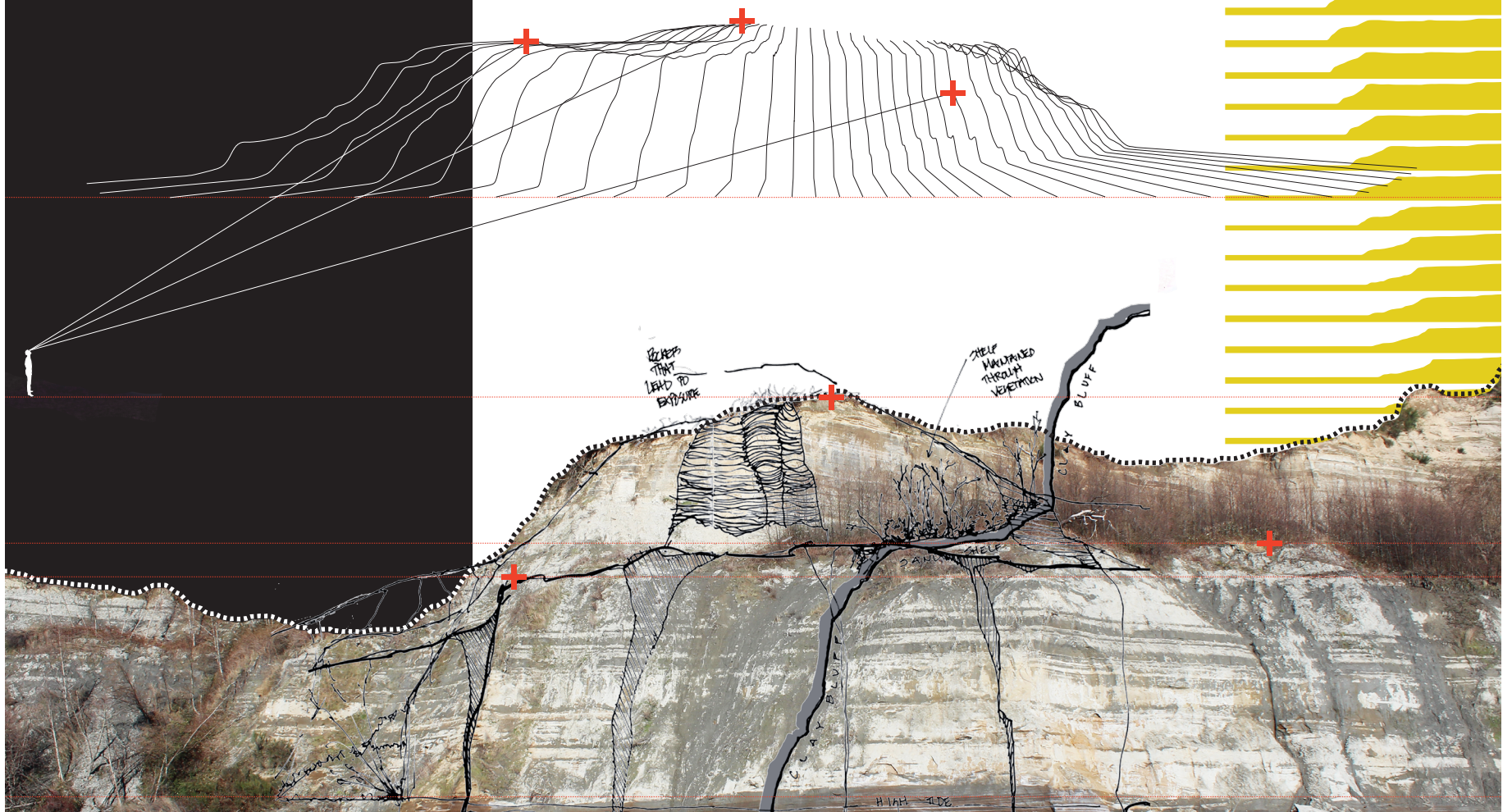
Ultimately each of the images combine perceptual analysis with precise information to allow focus within such a complex site. This strategy was generative of a fascination with the bluff as well as its relationship to the site as a whole. It was uncovered that the bluff ties into almost all aspects of the site I had looked at so far. The bluff was very important early in history as such a prominent landform. From a military standpoint, the bluff was greatly appreciated for the advantage the topography allows. The nature of the bluff provides a typology that teems with ecological systems and diverse food chains. Lastly, the bluffs stratification and geological make up create a distinguished landform and expansive beach. This next series reflects the interest in the bluff and highlights representation that focuses on this landform with its relationships and complexities.

The bluff has a sublime quality to it. This representation shows initial perception of the bluff and the experience of walking below it looking up. This iteration also focuses on proportions of the bluff and information surrounding it. The landform creates a striking line in the sky as well as in the horizontal plane against the expansive and flat beach. This perception fueled an interest in the stability of the bluff and its shape. The majority of the bluff is at a slope greater than 40% and entirely exists in an area deemed prone to landslides. Proportionally, 20% of Discovery Park is sloped greater than 40% while 15% of the site is considered prone to landslides.

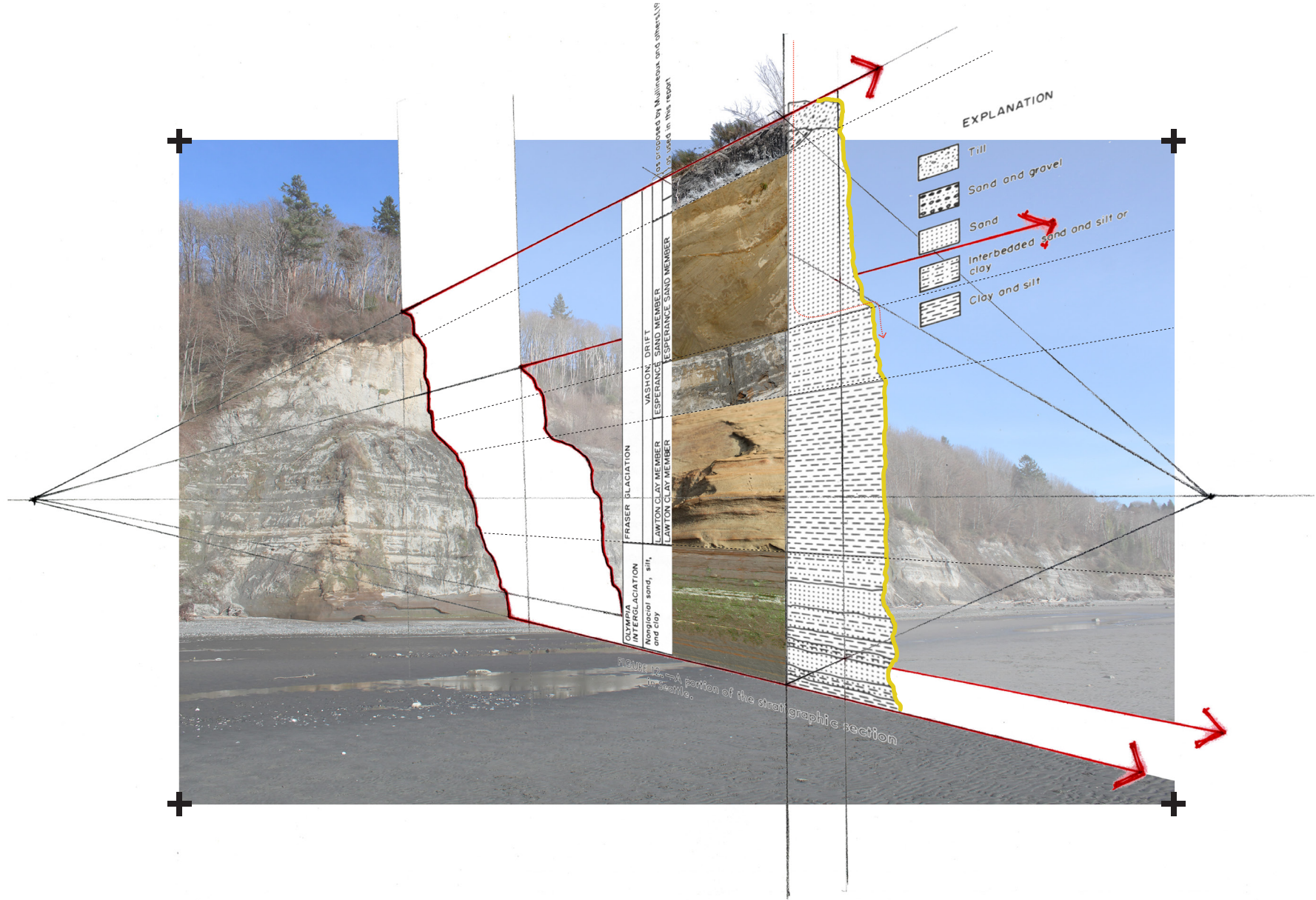
STEEP SLOPES  
20%



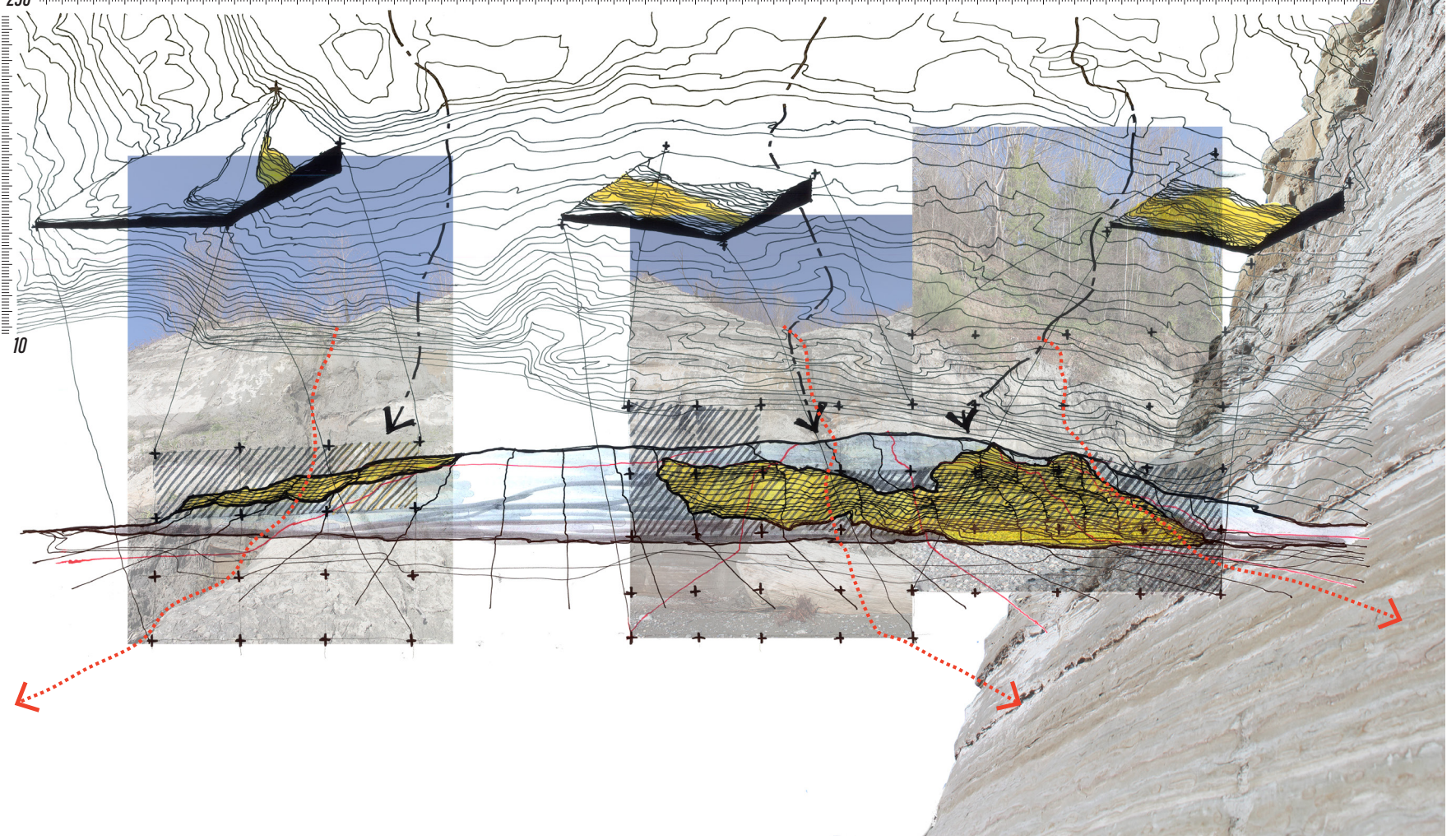
POTENTIAL LANDSLIDE  
15%



Working through information gathered about the bluff and drawing to understand it made me wonder what would representing a slice of the bluff look like? What if the bluff were to be split open? What information would it reveal and would the process be successful? This representation shows the removal and analysis of a section of the bluff and the existing geological layers. This graphic reveals the process that created this landform and emphasizes how it is ever changing. As water seeps through a layer of Esperance sand, it is stopped by a layer of Lawton Clay. The impermeable nature of the clay causes the water to begin moving horizontally. Over time, enough water washes out the bottom of the layer of sand causing it to slide. This leads to accumulation of sand supporting the growth of the beach and further exposure of the clay faces on the bluff.



This representation expands on the exposure of the clay faces on the bluff, tracing the path of water through this landform. Water helps to shape and erode the bluff causing rivulets to form in the clay marking the inevitable and subtle power of hydrology. The exposed clay is a result of the combined geological and hydrological process. The relationship between these processes leaves scars through the clay showing the path of the water as it is guided down from the top of the bluff and returned to the sea. These systems result in starch exposed clay faces made up of many layers of compression juxtaposed against the vegetation that helps to keep the remaining pockets of stability in place.



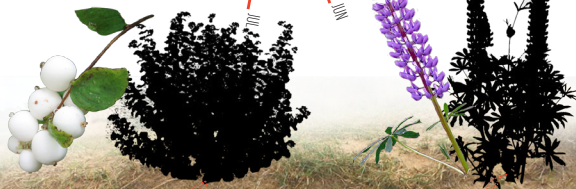
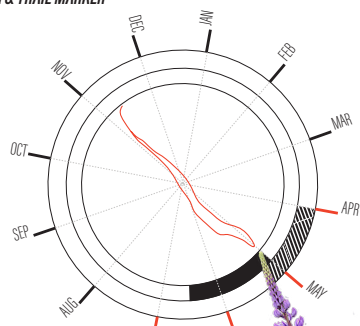
Each graphic has helped to be generative of relationships existing in the site as well as providing information and representation that is needed to expand on the narrative of the site. This process was generative of ideas and concepts that could compliment and amplify the experience of visiting Discovery Park and the processes that shape it. This representation shows a step towards amplification combining three diagrammatic glimpses into these amplifications. While the amplifications are relatively minimal, they would hope to act like seeds with the potential to grow into something expansive or comprehensive with possibilities extending in more than one direction.<sup>70</sup> Even without the expanse of these amplifications it was important to entertain the ideas and concepts generated during this process to validate the greater engagement in site analysis and concepts derived through it.

The three amplifications focus on visualizing or elucidating latent processes or narratives existing on site. Each modification was expressed as a diagram to explain the basic process that drove the amplification. In conjunction with the diagram, a rendering was created to show how the concept takes shape on the site. This also helped show the experiential qualities that would be created from an amplification such as the ones indicated.

---

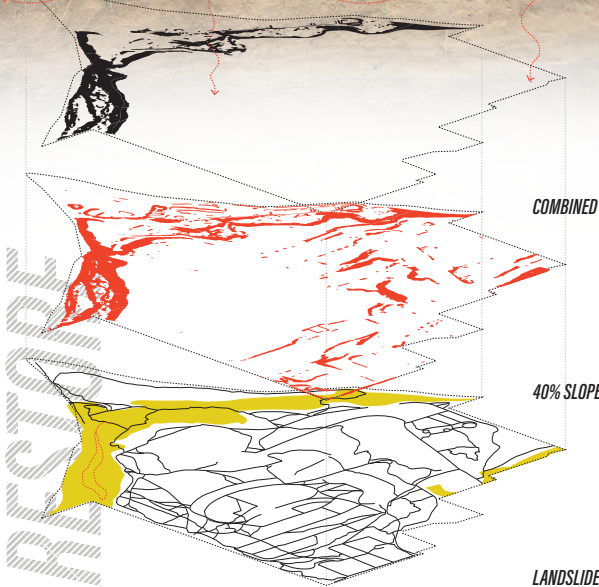
70 Mathur, Soak : Mumbai in an Estuary.

**BLOOM CALENDAR & TRAIL MARKER**

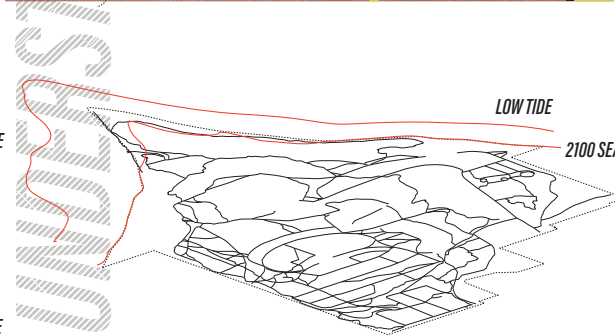
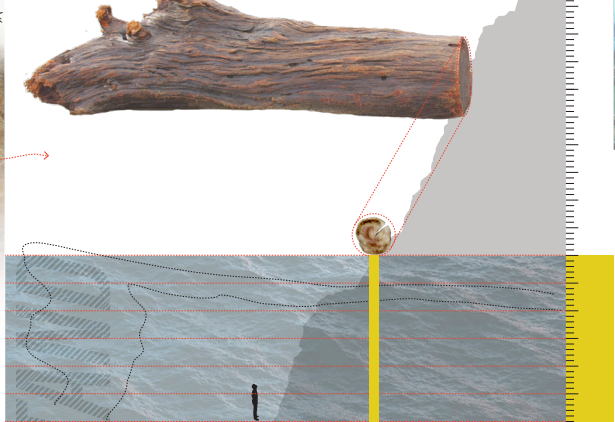
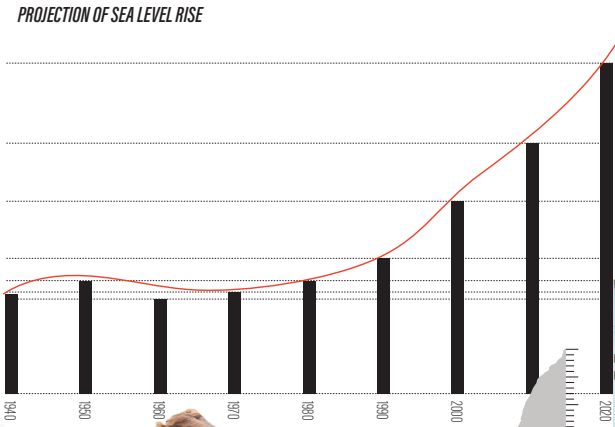


*SYMPHORICARPOS ALBUS*

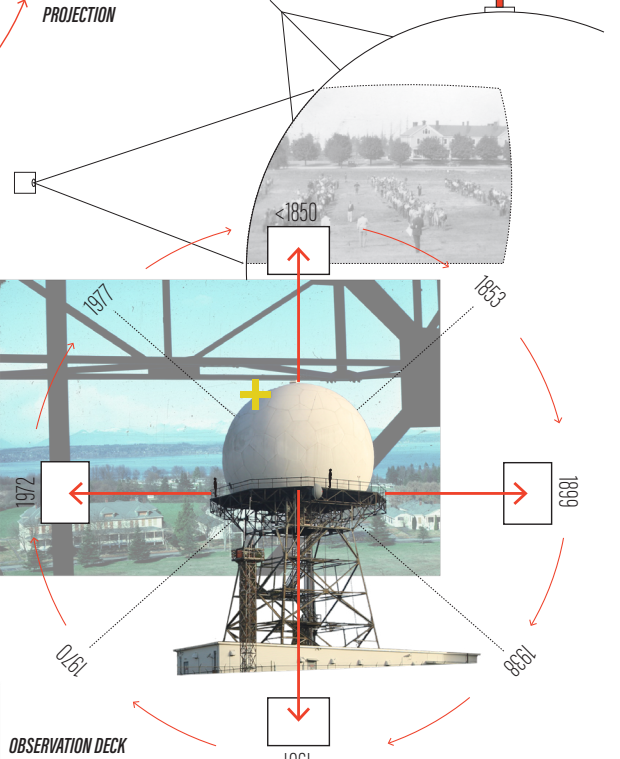
*LUPINUS POLYPHYLLUS*



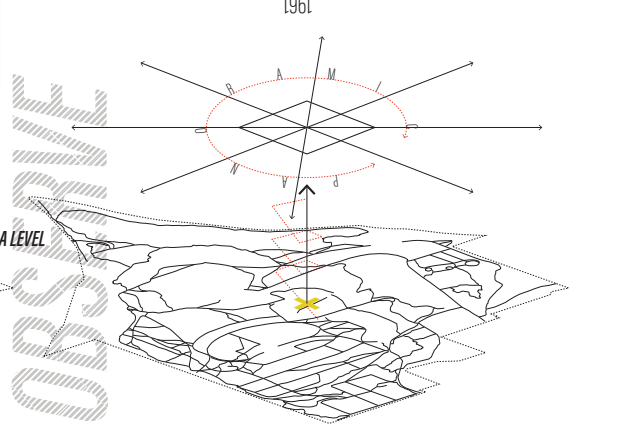
**PROJECTION OF SEA LEVEL RISE**



**PROJECTION**

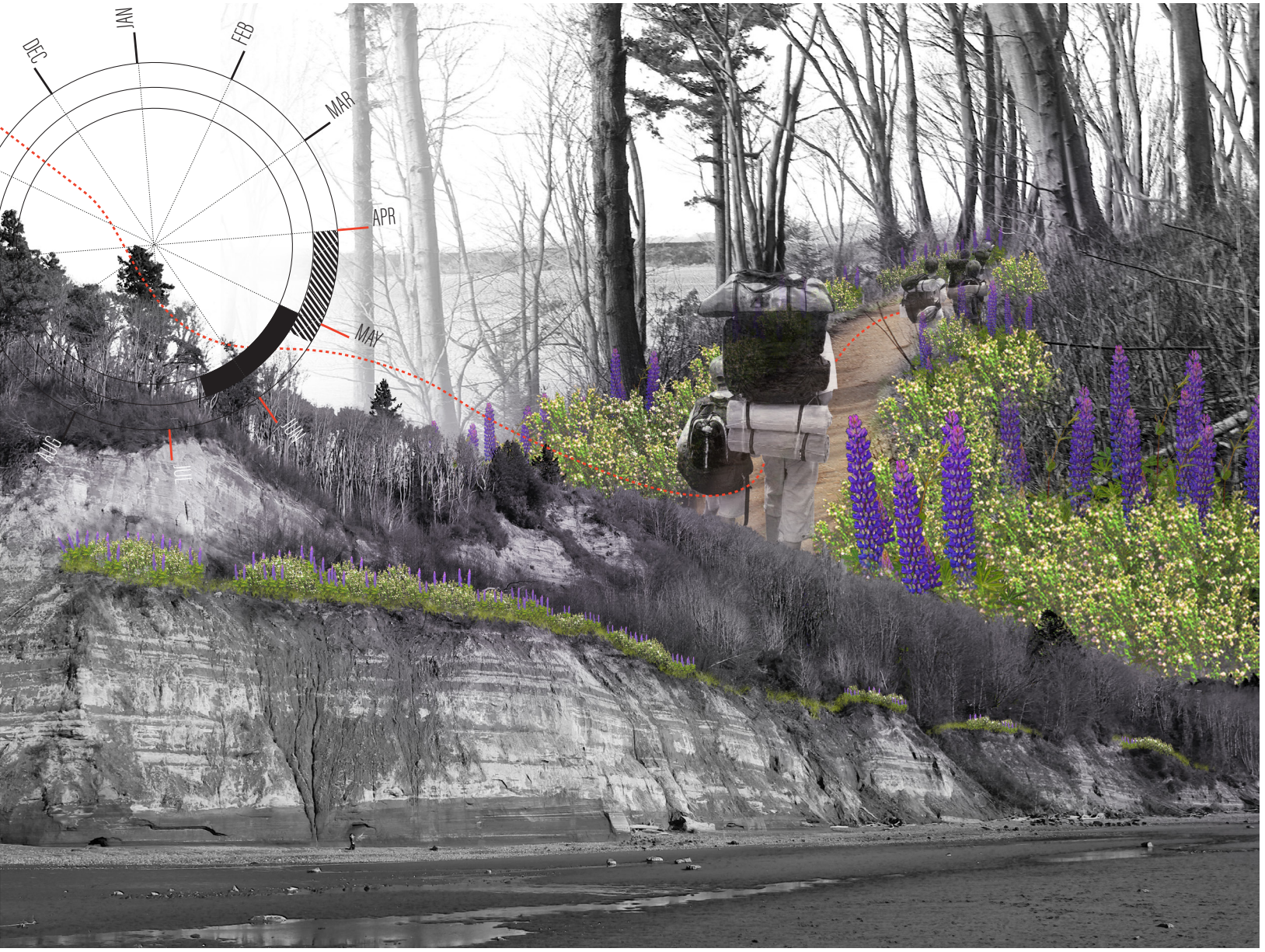
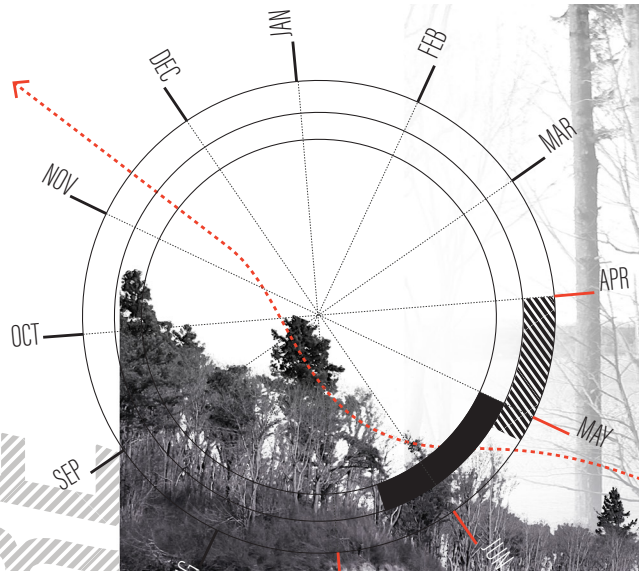


**OBSERVATION DECK**



The first amplification is titled “restore”. Restore is a planting concept that works to highlight the remaining pockets of stable vegetation along the bluff. This concept would focus on planting *Symphoricarpos albus* (Snowberry) and *Lupinus polyphyllus* (Big Leaf Lupine) throughout these pockets on the bluff. Each of these species have quick running and expansive rhizomes that thrive in sandy soil, the composition of the pockets of the bluff. The nature in which these species grow would help to stabilize parts of the bluff while creating a temporal event, the yearly blooming of the species. Snowberry blooms from May until mid June, while Big leaf lupine blooms from April until early May. This event would create a cyclical spectacle rich with identifying color that could be appreciated and celebrated by all visitors of the park. Another possibility for the concept arises from the added stabilization of the bluff. As pockets of the bluff are stabilized and linked together through continued growth and erosion control, access could be a potential. This concept could result in the opening of a trail that after a few years that would be accessible only during the bloom time, helping to limit the human impact on the newly stabilized bluff while creating a vivid experience of walking among the bright purple and white flora.

# TRIP



The second amplification is titled “understand”.

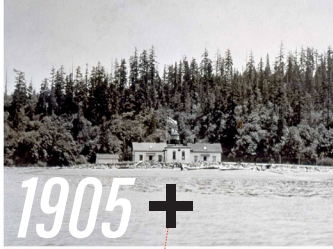
Understand is a representational intervention that works to illuminate the magnitude of sea level rise due to climate change. The drastic difference between high and low tide at Discovery Park is already a spectacle and as a result has deposited huge monolithic pieces of driftwood along the bluff and beach. Driftwood is the symbol chosen to represent the mark of this rise in sea level.

Driftwood is a material already found on the beach and would support an amplification comprised of naturalistic materials. A large driftwood log would be mounted into the bluff at a height representing the most drastic predictions of sea level rise potentials by 2100. The location of the driftwood would be accompanied by a cor-ten steel marker that would show tick marks by feet. This large marker would act as a ruler to measure not only daily tidal change, but the long term effects of sea level rise. This amplification would employ exploration and intrigue on the beach but could be accompanied by visual explanations in other parts of the site. This would lead visitors around the site letting them experience Discovery Park as whole, but with an eventual goal of uncovering this intervention in the end.



The last amplification is titled “observe”. Observe would renovate an existing site structure, the radar tower, modifying it so that the landmark can now be engaged with. This would provide a point of not only visual interest but also interaction on the site. The radar tower is an elevated structure that is capable of a viewing platform to bring activation and panoramic views to the park. Additionally, the dome of the radar tower could provide a surface for projection from the adjacent lawn. The projections could be of historical images of the park, artists installations, or old footage of Fort Lawton. This type of intervention could provide a nightlife for Discovery Park and activation later into the day. The top of the observation platform would feature large binoculars that would be aimed at specific locations in the park. Rather than showing an enhanced view of the site, the binoculars would show historical imagery related to the aimed location. This would help to ground visitors in the history of the site, its former uses, and its changing nature.

30 YEARS

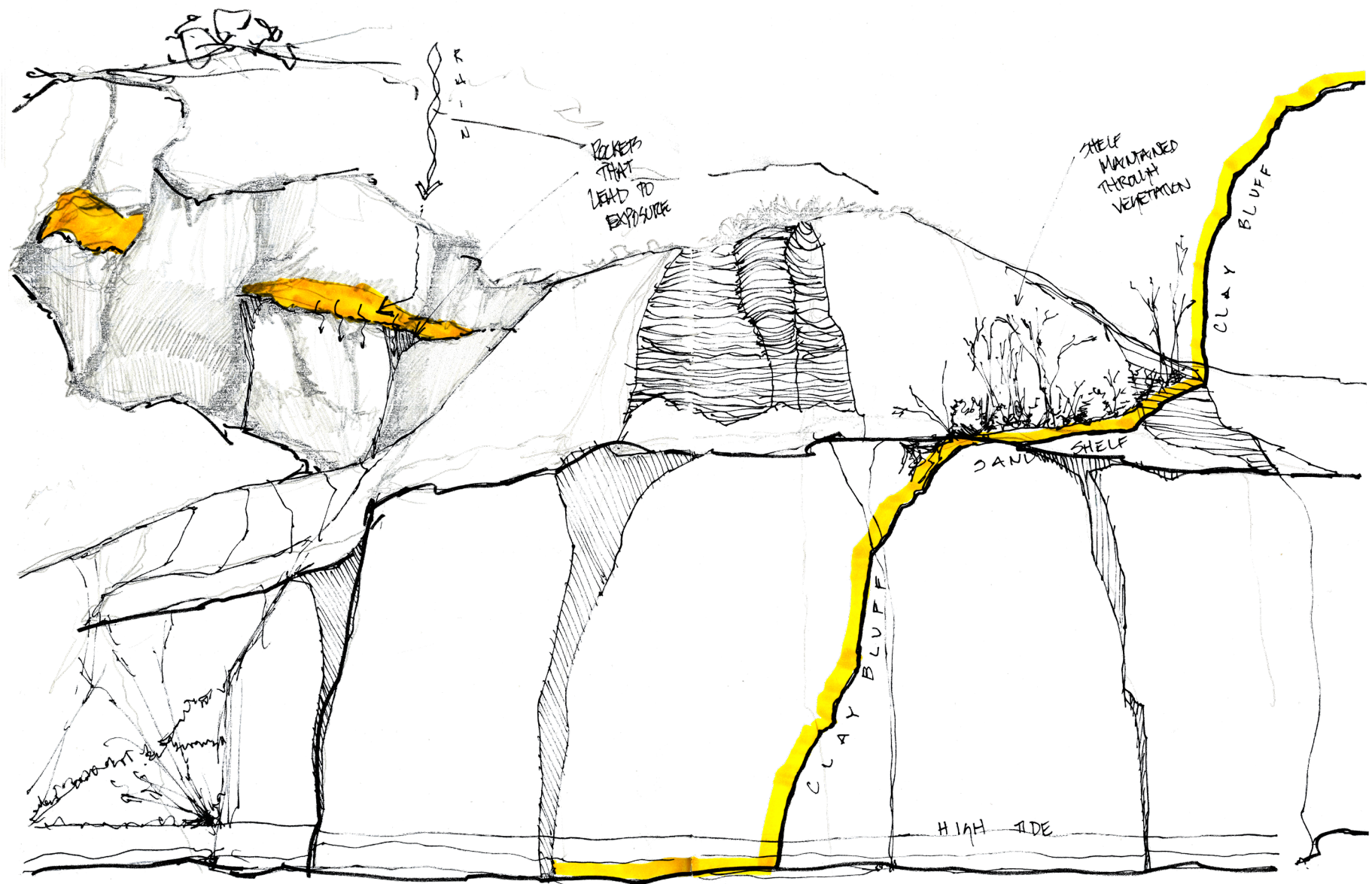


Page Intentionally  
Left Blank

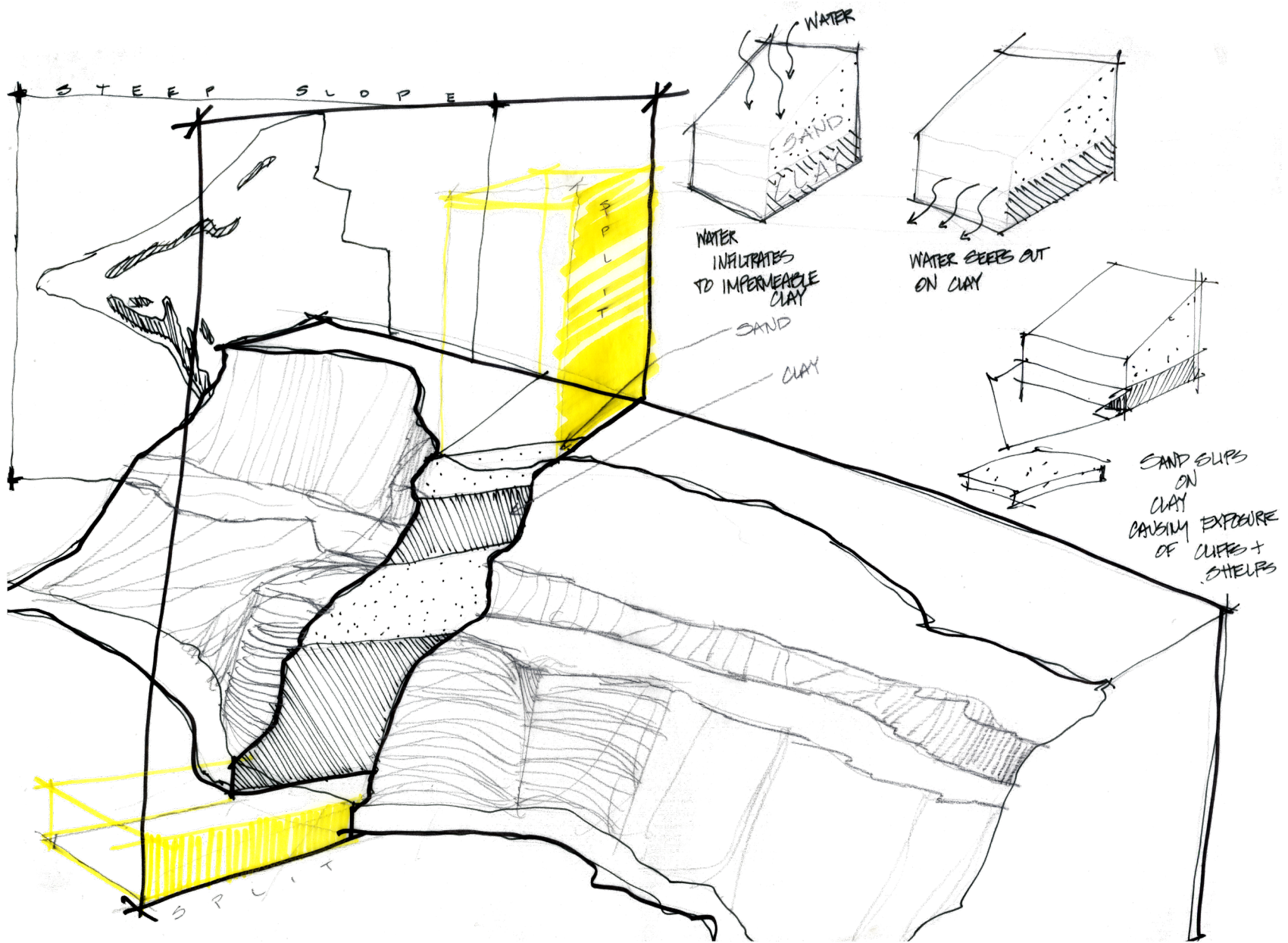
# *PROCESS*

Initially imagining a process of merged perception and precision appeared natural for me. Once I began the explorations into Discovery Park, visiting the site and gathering information, I began sketching and photographing to capture initial experiences and visuals from the park. By using a GPS running service I was able to track my routes on the site and obtain an elevational analysis from each route that would help evaluate the profile of the route and assist in locating and contextualizing photographs and sketches. As I began to put some of the information together in representations and combined images of the site, I was looking for structure. The divisions discussed help to organize this process, but I was relying on them too heavily and regarded the final image incomplete if it failed to include information from each division. A key shift in the thinking and production of imagery was realizing the divisions were not boxes to be checked in the exploration but rather support of process and findings. This change in thinking allowed me to work more fluidly while maintaining a “defined” process.

I was searching for connections between site factors and would try to explicate these systems or processes to find relationships and patterns. This procedure was leading me down dead-end paths of information. I was able to find in depth information for certain existing factors on site in the park. For the factors I couldn't, I was struggling to compensate for the lack of precise information in the representation. I shifted my thinking



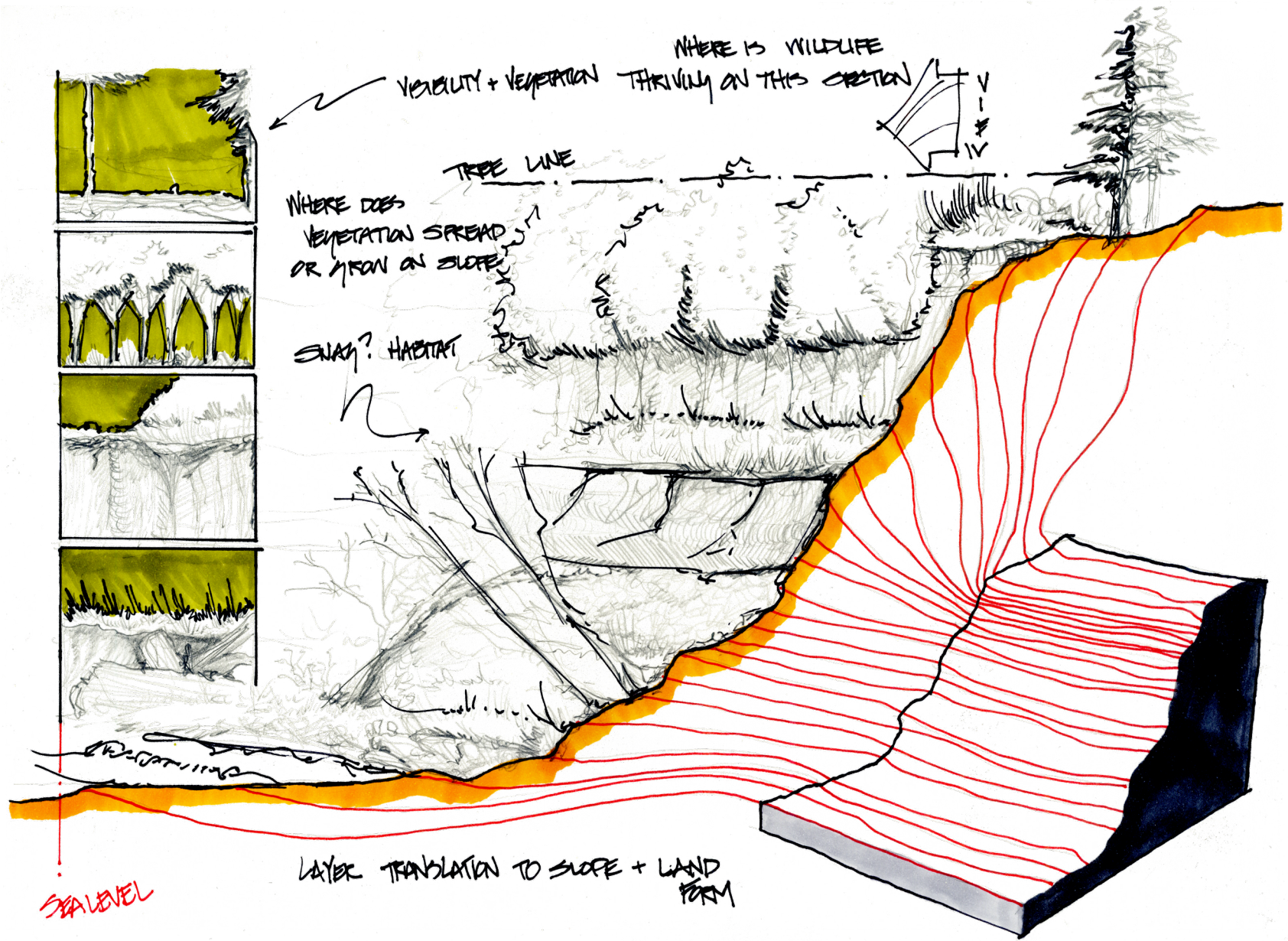
Sketch that provided the base for sublime representation, analyzing proportion and location of stabilized pockets of vegetation.



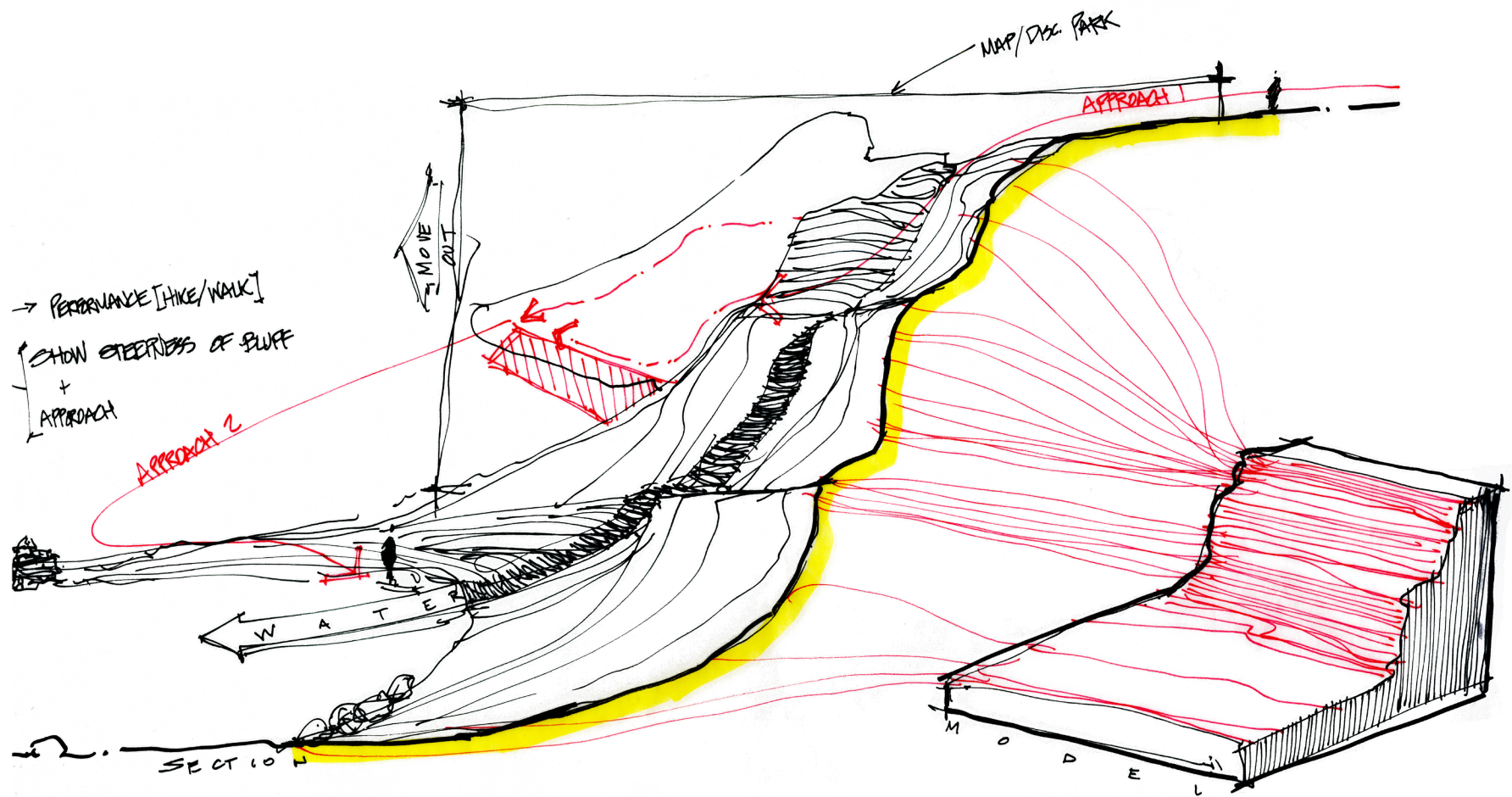
Exploratory sketch visualizing the removal of a slice of the bluff highlighting geology and water movement.

again, away from the combination of the individual and towards the understanding of greater themes that existed on site. The imagery and representation of these findings could now take the form of themes on the site and include information from multiple site factors but remain cohesive under the guidance of a larger milieu. The realization shifted not only my analytical and precise process work, but also my perceptive and exploratory understanding. The representation was now of my perception of Discovery Park as it existed in front of me and in my mind. I was representing the imaginary as a drawing that had only a small degree of precision, but it was enough to be complimented with merged analytical information to increase the readability and legibility of the drawing. How do you maintain a degree of artistic expression and personal perception while searching for validation of something being revealed?

The transition from theory to application was an extremely thought provoking, but frustrating part of this thesis. Of the theoretical themes and concepts discussed, many of them resonated with me and seemed to appropriately apply to the analysis I was attempting. They proved more difficult to attempt than expected. Discussion of mapping and process, understanding of performative and relational qualities of site is something that exists in the mind of most designers, but can struggle to take an evocative form once realized as a representation of an actual site. Struggle and frustration is natural in the exploratory process and without it many break-through discoveries and forms of representation would not exist. Exploratory and analytical process by itself is difficult



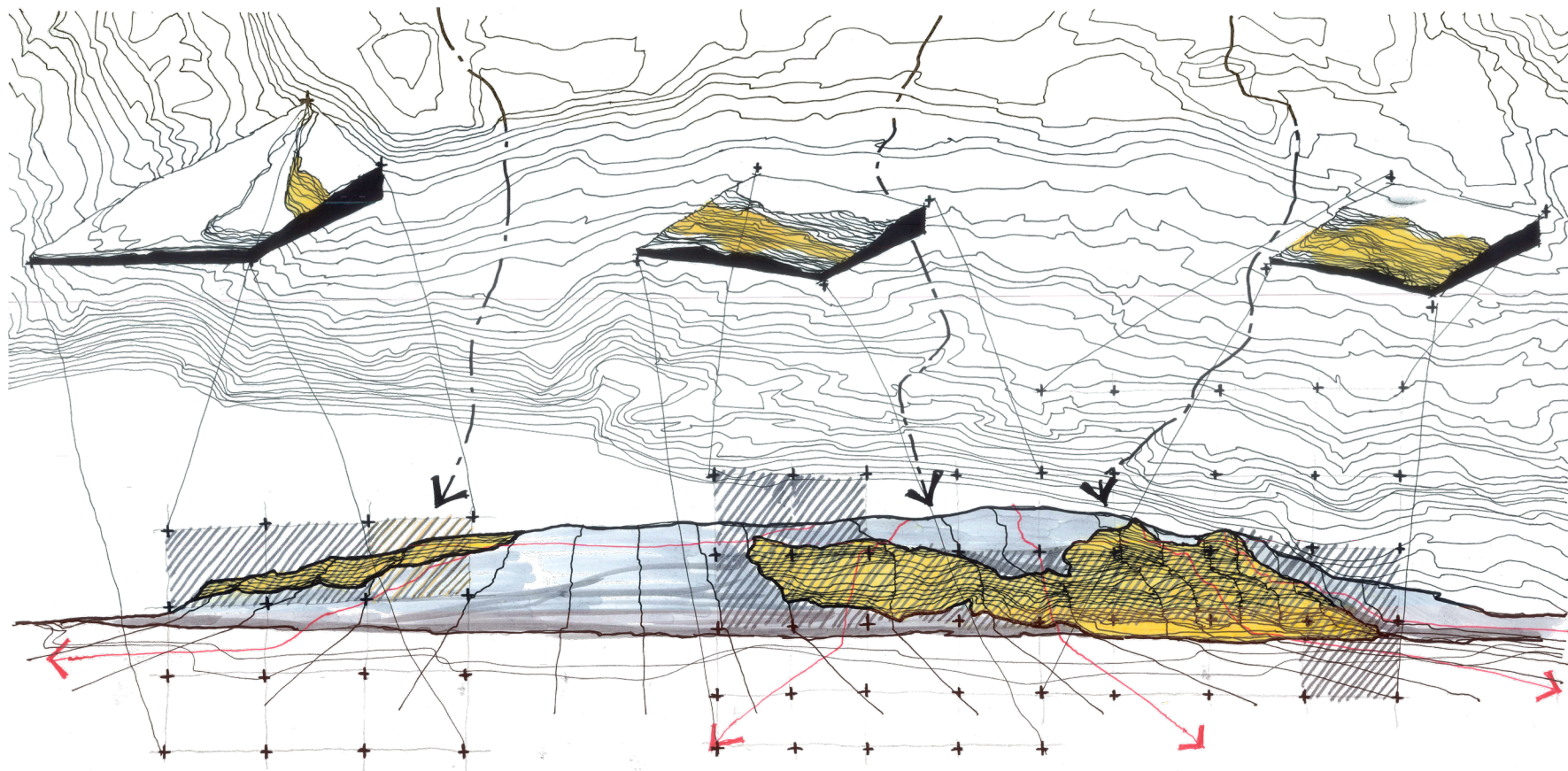
Sectional sketch connecting three dimensional views with perspective, highlighting visibility and vegetation layers as they relate to contour lines.



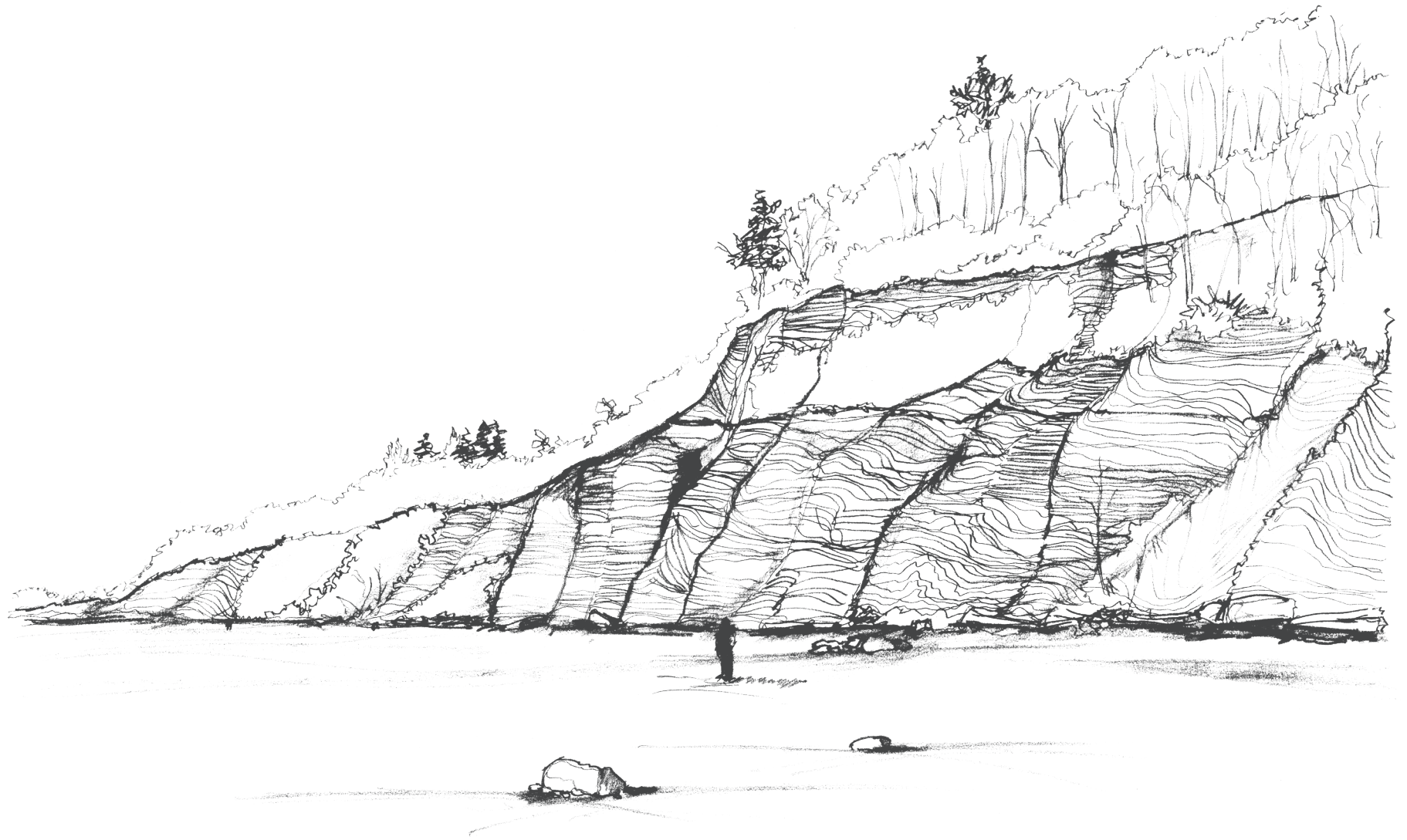
Sectional sketch looking at three dimensional profile with approach to the bluff and the hydrology and flow down the land form.

to combine. The perceptive and the precise do not always merge easily. The iterative nature of this process forces designers to be messy and open minded. It involves a loose approach and lack of sacredness or attachment. Without these traits, becoming content with simple and replicative representation is inevitable.

Much of the literature and discourse surrounding exploratory representation speaks of relationship, pattern, dynamics, systems, and performative qualities. All conditions and diagrammatic themes that surely exist in site analysis. The difficulty in using these themes is that they are rarely readily available or even exist through base data. These concepts are to be derived and conceived, part of the beauty of the exploratory process. The same site, explored and analyzed by two different designers would, with certainty, reveal different discoveries. Why is this, and what is the importance of the precise information informing these explorations and discoveries? When does perception become sufficient for explanation and when is the precise redundant? Ideally representation in exploratory and generative analysis would use the unfiltered, untethered looseness and character of perception with the rigid, analytical, and informative structure of precision. I believe that the two modes of representation need each other, and the process of merging the two will further engage in site analysis and create generate findings unique to site and the exploration. This is what I set out to accomplish with Discovery Park, engaging the site and enduring an investigative analysis that was generative of latent relationships and information.



Base sketch informing exploration of hydrology and exposure of clay faces along profile of the bluff.

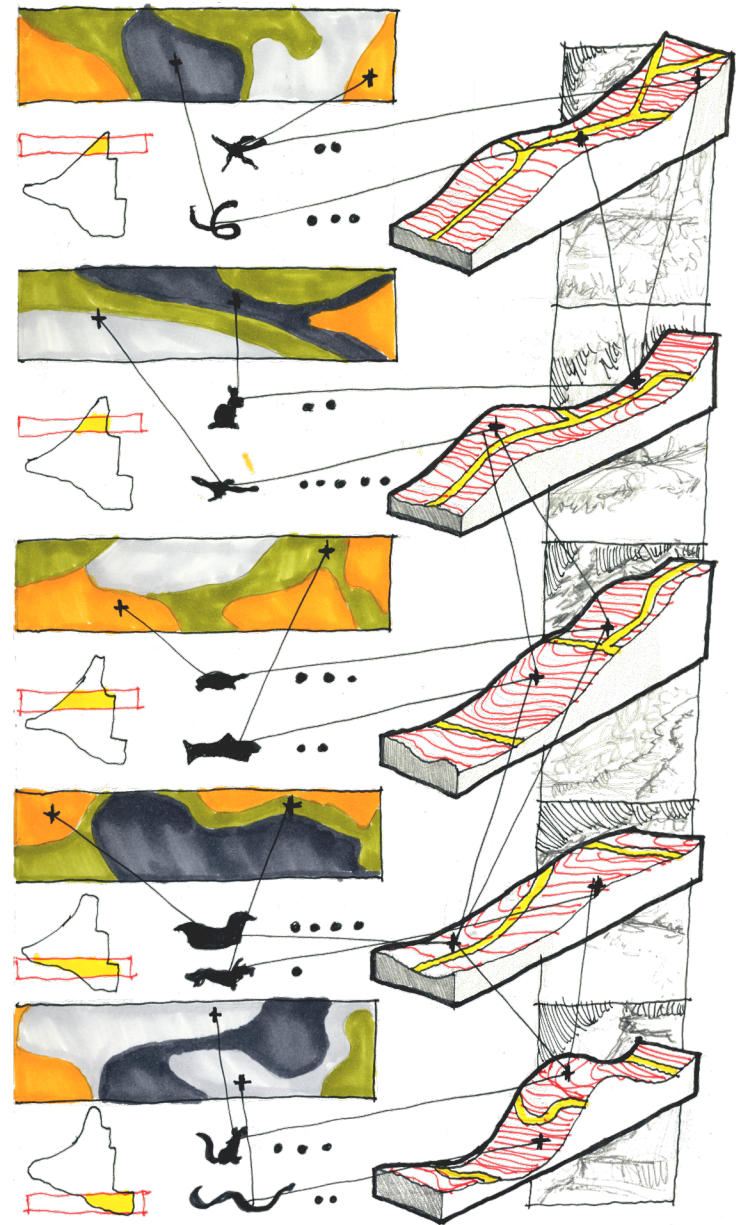


Sketch of the bluff that provided a perceptual base for other explorations.

I had been picturing the perceptive as being reinforced or confirmed by the precise. This assumption was wrong, and repressive of my process. The finding part of this process was beginning to revolve around the precise information I had and serve as a jumping off point, rather than a reference or justification. This question remained in my mind while working through this process, when does perception become sufficient for explanation and when is precision redundant? Rather than replicate the perceptive with precise information and simply using the first iteration as a mock up, I was expanding on the perceptive and beginning to acknowledge that more information was not always necessary. Often, the inclusion of more verified data reduced the imagery to the very thing I was trying to avoid, the replication of information. The imagery was beginning to take the shape of a merged process of perception and precision, helping to answer the question of engagement in site analysis.

The most critical and releasing shift in thinking through this process came as a result of a question. While showing two images, a precise representation of performance in the park and the sketch that greatly informed it – I was asked, why did you feel the need to even recreate what you had already sketched, what did you learn by doing this? At the time, I was unsure of how to answer this other than stating “I thought it would look cleaner produced by the computer.” Fundamentally this question opened new doors into this exploration. I was now repeating this question with every sketch or digital manipulation, entirely engrossed on learning and revealing information about Discovery Park. I began

to see the value in what perceptive modes of representation were accomplishing. There was no need to repeat this information digitally, I was falling victim to the prescribed trap of repetition and redundancy. The only way to truly expand and learn from these rough sketches and perceptive representations was too elaborate with them, not reproduce them more precisely. What is the next step that this graphic is prompting, or what isn't it showing? Once I had consistently considered these questions, the representations of Discovery Park became actualizations of merged perceptive and precise modes. The mapped images were compositions of information, data, and drawings that relied on each other to express an idea or reveal something not readily observable.



Sketch of performance in Discovery park, represented through transects highlighting ecotypes and fauna locations.

## *CONTINUING PERCEPTION + PRECISION*

Site analysis is tremendously important to the design process. I had an interest in analysis driven design and the functionality of diagramming. This thesis was a way for me to further explore these tools and their potential for growth. I wanted to reach outside of my normative modes of operation to accomplish this thesis. I was reassured through the project that there is equal value in struggling with difficult problems regardless of measurable success. The focus on process was invaluable to this thesis. Understanding my own process allowed me to reflect on my work subjectively. This provided a constant influx of ideas and new forms of representation generated. The value of process could not be ignored after working on a project such as this, and it will certainly remain constant in my future work. Working to understand how a quality from a site can be represented and determining the visuals of how it should be represented, create a unique problem to solve. It required analysis of similar projects, to understand how to gauge and frame an exploration but also how to play with modes of representation to achieve something unique to that exploration.

A project balancing theory and application was necessary for the subject of merging perceptive and precise modes of representation. Applying theoretical concepts of site analysis to an actual site confirms the need for capturing both experiential and measured qualities. The nature of Discovery Park is messy, it has rigid boundaries and edges but the character and experience of the site shows winding trails and thriving ecology. Perceptive



interpretation and analysis of site must become more standardized among landscape architecture. It allows for the expansion of ideas and relationships existing in drawings or photographs. It provides an ability to hypothesize and imagine the potentials of site before precise information has begun to mold a more predetermined outcome. The importance of this thesis comes in the form of self growth. I believe I now have a more grounded understanding of not only representation in site analysis but also its potentials as a tool. Perceptive modes of representation exemplify looseness, creativity, and speculation. Precise modes of representation inform, measure, and dictate. Merging these two modes allows for a liberated process capable of revealing complexity and furthering understanding.<sup>71</sup> This process is validated in the required data to inform and guide analysis. The product, a result of these traits, is engaging and generative of findings and representation that reflects the input process.

---

71 Corner, *The Landscape Imagination : Collected Essays of James Corner, 1990-2010*.

Page Intentionally  
Left Blank

# REFERENCES

Allen, Stan. *Points + Lines : Diagrams and Projects for the City*. 1st ed. *Points and Lines*. New York: New York : Princeton Architectural Press, 1999.

Amoroso, Nadia. "Creative Mapping." *Canadian Architect*, March 1, 2012.

———. *Representing Landscapes : A Visual Collection of Landscape Architectural Drawings*. New Jersey: Taylor & Amp, 2012.

Anderson, Jonathon R., and Daniel H. Ortega. *Innovations in Landscape Architecture*. Abingdon, Oxon ; New York, NY: Abingdon, Oxon ; New York, NY : Routledge, 2016.

Arnheim, Rudolf. *Visual Thinking*. 35th anniversary print. Berkeley: Berkeley : University of California Press, 1997.

Balmer, Jeffrey. *Diagramming the Big Idea : Methods for Architectural Composition*. New York: New York : Routledge, 2012.

Bélanger, Pierre. *Landscape as Infrastructure : A Base Primer*. Abingdon, Oxon ; New York, NY: Abingdon, Oxon ; New York, NY : Routledge, 2016.

Berrizbeitia, Anita. *Inside/Outside : Between Architecture and Landscape*. Gloucester, Mass.: Gloucester, Mass. : Rockport, 1999.

———. "On the Limits of Process: The Case for Precision in Landscape." *Harvard GSD*, April 19, 2016.

Bressler, Gene. *Site Analysis Handbook : Prepared for Use in Conjunction with LA361, Site Analysis*. 2d ed. Eugene, Or.]: Eugene, Or. : Dept. of Landscape Architecture, Univ. of Oregon, 1977.

Burns, Carol, and Andrea Kahn. *Site Matters : Design Concepts, Histories, and Strategies*. New York: New York : Routledge, 2005.

Carter, Colette. *Discovery Park : Revised Draft Supplemental E.I.S. : North Beach Trail*. North Beach Trail. Seattle, Wash.: Seattle, Wash. : The Dept., 1982.

Chance, David H. *The Evolution of Intent at Fort Lawton*. Seattle, Wash.: Seattle, Wash. : Geo-Recon International, 1984.

Corner, James. *Recovering Landscape : Essays in Contemporary Landscape Architecture*. New York: New York : Princeton Architectural Press, 1999.

———. *Taking Measures across the American Landscape*. New Haven: New Haven : Yale University Press, 1996.

———. *The Landscape Imagination : Collected Essays of James Corner, 1990-2010*. First edition. New York: New York : Princeton Architectural Press, 2014.

Cosgrove, Denis. *Mappings*. London: Reaktion Books, 1999.

Cureton, Paul. *Strategies for Landscape Representation : Digital and Analogue Techniques*. New York, NY: New York, NY : Routledge, 2017.

Czerniak, Julia. *Large Parks*. New York : Cambridge, Mass.: New York : Princeton Architectural Press ; Cambridge, Mass. : in association with the Harvard University Graduate School of Design, 2007.

De Monchaux, Nicholas. *Local Code : 3,659 Proposals about Data, Design & the Nature of Cities*. First edition. New York: New York : Princeton Architectural Press, 2016.

Dee, Catherine. *Form and Fabric in Landscape Architecture : A Visual Introduction*. London ; New York: London ; New York : Spon Press, 2001.

Denfeld, Duane. "Fort Lawton to Discovery Park." *History Link*, September 23, 2008.

Denny, Eric Allen. *Studies in Descriptive Cartography and the Ordering of Landscape : A Center for Urban Ecology at Fort Lawton in Discovery Park*. Thesis (M. Arch.)--University of Washington,1993, 1993.

Desimini, Jill; *Cartographic Grounds : Projecting the Landscape Imaginary*. First edition. New York: New York : Princeton Architectural Press, 2016.

Fisher, Howard T. *Mapping Information : The Graphic Display of Quantitative Information*. Cambridge, MA: Cambridge, MA : Abt Books, 1982.

Griot, Christophe. "Immanent Landscape." *Harvard Design Magazine, Landscape Architecture's Core*, no. 36 (2013): 184.

———. *Topology : Topical Thoughts on the Contemporary Landscape*. Berlin: Jovis Verlag GmbH, 2013.

Griot, Christophe, and Fred Truniger. *Landscape Vision Motion: Visual Thinking in Landscape Culture*. Berlin: Jovis Verlag GmbH, 2012.

Kildall, Robert. "How Magnolia Got Its Name." *Magnolia Historical Society*, n.d., 27–31.

Kildall, Robert E, Seattle (Wash.). Department of Parks and Recreation, and Wash.) Friends of Discovery Park (Seattle. Discovery Park 1972 Original Master Plan : Commemorative Edition Reissued 1992. Commemorative ed. Seattle, Wash.: Seattle, Wash. : The Friends, 1992.

LaGro, James. Site Analysis. New Jersey: John Wiley & Sons, 2013.

Lupton, Ellen. Graphic Design the New Basics. 1st ed. New York : Baltimore: New York : Princeton Architectural Press ; Baltimore : Maryland Institute College of Art, 2008.

Lynch, Kevin. Site Planning. 3rd ed. Cambridge, Mass.: Cambridge, Mass. : MIT Press, 1984.

Martin, Bella. Universal Methods of Design : 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions. Digital ed. 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions. Beverly, MA: Beverly, MA : Rockport Publishers, 2012.

Mathur, Anuradha. Mississippi Floods : Designing a Shifting Landscape. New Haven, [Conn.] ; London, [England]: New Haven, Conn. ; London, England : Yale University Press, 2001.

———. Soak : Mumbai in an Estuary. New Delhi: New Delhi : Rupa & Co., 2009.

McHarg, Ian L. Design with Nature. [1st ed.]. Garden City, N.Y.: Garden City, N.Y., Published for the American Museum of Natural History by the Natural History Press, 1969.

McCloskey, Karen, and Keith VanDerSys. Dynamic Patterns: Visualizing Landscapes in a Digital Age. New York: Routledge, 2017.

Meishar, N. "In Search of Meta-Landscape Architecture: The Ethical Experience and Jaffa Slope Park's Design." *Journal of Landscape Architecture* 7, no. 2 (2012): 40–45.

Mindick, Robert. Discovery Park Wildlife Management Plan. Discovery Park Wildlife Plan. Seattle, Wash.]: Seattle, Wash. : Seattle Parks and Recreation, 1983.

Misrach, Richard. Petrochemical America. First paperback edition. New York: New York : Aperture, 2014.

Pevzner, Nicholas, and Sanjukta Sen. "Preparing Ground: An Interview with Anuradha Mathur and Dilip Da Cunha." *Places Journal*, June 2010.

Reed, Chris, and Nina-Marie Lister. "Ecology and Design: Parallel Genealogies." *Places Journal*, April 2014. doi:<https://doi.org/10.22269/140414>.

Shoshan, Malkit. *Atlas of the Conflict : Israel-Palestine*. Rotterdam: Rotterdam : 010 Publishers, 2010.

Sipes, James L., and Mark S. Lindhult. *Digital Land: Integrating Technology into the Land Planning Process*. New Jersey: John Wiley & Sons, 2007.

Smout, Mark, Laura Allen, and Smout Allen. *Augmented Landscapes*. 1st ed. New York: New York : Princeton Architectural Press, 2007.

Tedeschi, Arturo. *AAD, Algorithms-Aided Design : Parametric Strategies Using Grasshopper*. First edition. Brienza, Italy: Brienza, Italy : Le Penseur Publisher, 2014.

Treib, Marc. *Representing Landscape Architecture*. London ; New York: London ; New York : Taylor & Francis, 2008.

Tschumi, Bernard. *The Manhattan Transcripts*. 2nd ed. London : New York, NY: London : Academy Editions ; New York, NY : Distributed to the trade in the USA by St. Martin's Press, 1994.

Tufte, Edward. *Beautiful Evidence*. Cheshire, Conn.: Graphics Press, 2006.

Tufte, Edward R. *Visual Explanations : Images and Quantities, Evidence and Narrative*. 5th print., with Revisions, Jan. 2002. Cheshire, Conn.: Cheshire, Conn. : Graphics Press, 2002.

Vogt, Günther. *Landscape as a Cabinet of Curiosities*. Zurich: Lars Müller Publishers, 2015.

Walliss, Jillian, and Heike Rahmann. "Experimental Nature of Simulation." *LA+, Interdisciplinary Journal of Landscape Architecture*, 2016.

———. *Landscape Architecture and Digital Technologies Re-Conceptualising Design and Making*. Routledge, 2016.

Waterman, T. T. "The Geographical Names Used by the Indians of the Pacific Coast." *Geographical Review* 12, no. 2 (1922): 175–94. doi:[10.2307/208735](https://doi.org/10.2307/208735).

# *LIST OF FIGURES*

Figure 1: Charles Minnard's Napoleon's March. Source: Wikimedia Commons

Figure 2: Map of Seattle, locating Discovery Park. Source: Author, Data from GIS Portal

Figure 3: Site Inventory. Source: Author

Figure 4: Physiographic Determinism. Source: Ian McHarg's "Design with Nature," 1969.

Figure 5: Taiwan Straits Climate Change Incubator. Source: Chora, <http://www.spatialagency.net/database/chora>

Figure 6: LIDAR derived data collected in Tributary of Babocomari River. Source: Flickr

Figure 7: How to ski the "French Method" by Pierre Boucher. Source: Edward Tufte's "Beautiful Evidence," 2006.

Figure 8: Mapped image of Rewa Fort. Source: Anuradha Mathur & Dilip da Cunha's "Soak," 2009.

Figure 9: Hopi Cosmography. Source: James Corner's "Taking Measure Across the American Landscape," 1996.

Figure 10: Pages of iterative process and graphic display of information. Source: Nicholas De Monchaux's "Local Code : 3,659 Proposals about Data, Design & the Nature of Cities," 2016.

Figure 11: Inventory list of analytical factors in Discovery Park. Source: Author

Figure 12: Early sketch outlining designations of process divisions in Discovery Park. Source: Author

Figure 13: Stitched Aerial photography of Discovery Park survey. 1946. Source: University of Washington, Map Library