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ARCHITECTURE + BEHAVIOR: THE BUILT ENVIRONMENT, NATURAL LANDSCAPES AND AT-RISK YOUTH
a master plan for the summer camp of the Boys and Girls Clubs of Greater Memphis

by
Jennifer L. Barker

A Thesis
Submitted in Partial Fulfillment of the
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Major: Architecture

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ABSTRACT

Barker, Jennifer L. M.Arch. The University of Memphis. August 2010. Architecture + Behavior: the built environment, natural landscapes and at-risk youth. Major Professor: Sherry Bryan, M.Arch.

There exists an interesting parallel between the power and the limits of architecture and its relationship to the human experience. This thesis proposes the question of how architecture can affect behavior in light of both the poetic and the practical in regards to the built environment. By understanding the user, incorporating the mission and goals of the client, and striving to connect aspects of the built environment to the two, architecture can act as a powerful influencer on behavior. These ideas, along with research (in camp history, play theory, young adolescent development and learning, experiential learning, environment-behavior relationships, the natural environment and place preference) are used for the planning and design of the summer camp for the Boys and Girls Clubs of Greater Memphis. The thesis serves as a guide for future development at the camp on Sardis Lake in Mississippi.

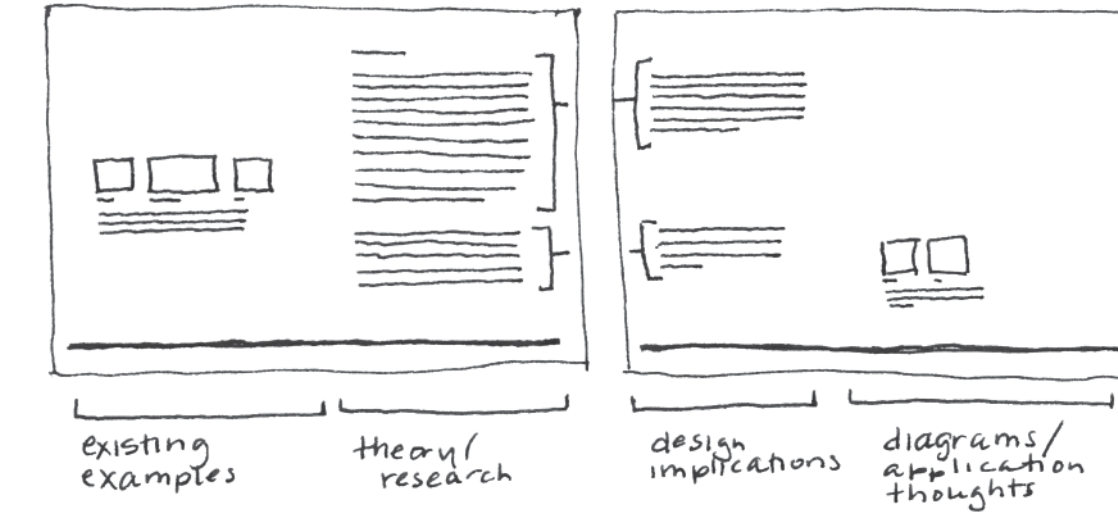


Figure 1. The Thesis Presented, A Note on How to Read It

The information contained herein is graphically presented in a format that follows the process of research, analysis and evaluation. Information on the left spread correlates to commentary, or a description of process, on the right spread.



Figure 2. Justice and Detention Center, Leoben, Austria
(<http://www.hohensinn-architektur.at/justizzentrum-leoben.php>)

Figure 3. Courtyard, Justice and Detention Center, Leoben, Austria
(<http://www.hohensinn-architektur.at/justizzentrum-leoben.php>)

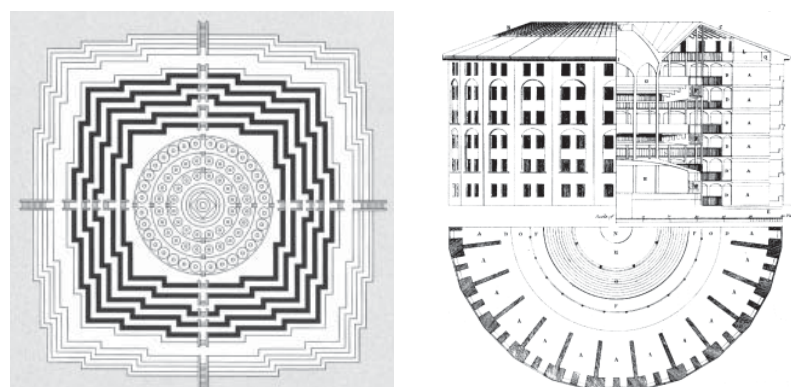


Figure 4. Mandala Plan, Buddhist Temple at Borobudur, Java
(Humphrey and Vitebsky, 1997, p. 162)

Figure 5. Panopticon Prison by Jeremy Bentham, 1791
(Pevsner, 1976, p. 163)

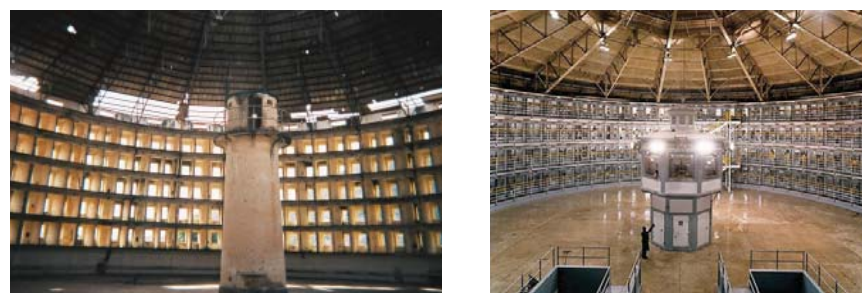


Figure 6. Presidio Modelo located in Isla de la Juventud, Cuba
(<http://www.digitalcrossrhodes.com/wp-content/uploads/2009/09/Presidio-modelo2.JPG>)

Figure 7. Statesville Correctional Center in Crest Hill, Illinois
(<http://funks2.files.wordpress.com/2010/05/stateville-interior.jpg>)

Images of correctional facilities based on Bentham's Panopticon

PREFACE

The motivation for the discussion that follows is generated from a mass e-mail that began circulating through the Internet in 2008. The text of the e-mail proposed that images contained therein were views of the Cook County Correctional Center in Chicago, Illinois and that taxpayers should be outraged that they paid for such a structure ("Cook County", 2010). As it turns out, the images are of a Justice and Detention Center (Figures 2 & 3), the justizzentrum leoben, in Leoben, Austria opened in late 2004 (Lewis, 2009). The photographs present the design by Josef Hohensinn of Hohensinn Architektur which, according to *The New York Times* article by Jim Lewis, has become a European model that is "not universally accepted, but not easily ignored either," and which acts as an "opening statement in a debate about what it means to construct a better prison" (para. 6). The organizers and members of the website adpsr.org (Architects/ Designers/ Planners For Social Responsibility) would argue that the best thing for prison construction is for it to be abolished. An entire link on their website is dedicated to boycotting prison design in an effort to find an alternative to incarceration ("ADPSR", 2010). The suggestion raises many questions, but the ones most relevant to this paper concern the role of the designer in light of a social consciousness. In what respect, and to what end, do designers have a social responsibility?

What is also of interest in this discussion is a comparative study of prison architecture with its apparent antithesis, sacred architecture. Pictorially, it is possible to draw striking similarities among the two (Figures 12-17); but in the human consciousness, they hold extremely different connotations. Sacred architecture can be described as the human attempt to connect to the divine through a specialized, dedicated space (Humphrey & Vitebsky, 1997, p. 8). One such example for consideration in correlation to prison architecture is the Hindu mandala (Figure 4). The mandala is a ground-plan diagram "that represents the structure of the universe" where an inner circle represents the celestial realm and an outer square represents "the shape of the material world on earth. The sides are oriented toward the four cardinal directions, while a dot at the centre [sic] represents Mount Meru, the cosmic mountain and axis of the universe" (p. 12). As the diagram takes built form, the central area becomes the inner sanctuary; in regards to meditation, it is the journey's destination, the point of enlightenment (p. 12). Compare to it, the penitentiary Panopticon published by Jeremy Bentham in 1791 (Figures 5-7). The principle for the design is "cells along the periphery of a circle and an observation post in the middle" (Pevsner, 1976, p. 163). Here again, the point of power is inwardly focused to the center; in its own circular confined space. The prisoner's mental state is intimately linked to the central location as a point of self-regulation and reflection. It is interesting to note that the idea was Bentham's brother's, Sir Samuel Bentham, who thought that while the design should especially be used for prisons, it might also be used "for schools, manufactories, [and] hospitals" (p. 163).

Something additional to note in regards to sacred architecture is a common theme of vertical emphasis among the typology. This thrust from earth to heavens is meant to link the two together and appears as three dominant images: the World Mountain, the Cosmic Tree and Fire, "with its column of smoke ascending to the sky" (Humphrey & Vitebsky, 1997, p. 18). The architectural pillar "often represents the archetypal cosmic axis, the centre [sic] line about which other objects rotate and to which they refer" (p. 18). Consider the following: totem pole, spire, pagoda, pyramid, ziggurat, minaret, campanile, temple, mound, obelisk (Figures 8-11).



Figure 8. Totem Pole of the Tsimshian people, British Columbia, Canada
(Tony Stone Images, as cited in Humphrey and Vitebsky, 1997, p. 19)

Figure 9. Pyramids at Giza
(Zefa, as cited in Humphrey and Vitebsky, 1997, p. 148)

Figure 10. Tower, old city of Jerusalem
(A.F. Kersting, as cited in Humphrey and Vitebsky, 1997, p. 82-83)

Figure 11. Spiral Mosque at Samarra, Iraq
(Glen Allison/Tony Stone Images, as cited in Humphrey and Vitebsky, 1997, p. 1)



Figure 12. The Monastery of Padula
 (<http://www.villaprato.com/padula.jpg>)
 Figure 13. Attica Prison
 (<http://www.docs.state.ny.us/PressRel/06CommissionerRpt/imagesH/10.jpg>)

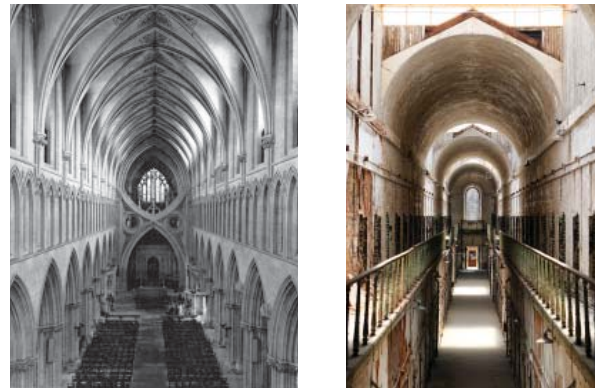


Figure 14. Nave of Wells Cathedral
 (Rene Bersier in *Living Architecture: Gothic*, 1970, p. 114)
 Figure 15. Eastern State Penitentiary Cellblock Gallery, Philadelphia, PA
 (http://www.bluejake.com/images05/misc/2005_5_eastern1.jpg)

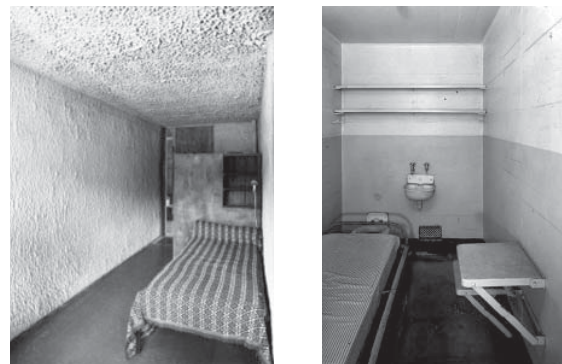


Figure 16. Monastic Cell, Sainte Marie de La Tourette, near Lyon, France
 (http://www.artandarchitecture.org.uk/assets/aa_image/320/a/8/8/4/a8841355f-743b9900e1bbe755b079530919c5541.jpg)
 Figure 17. Prison Cell, Alcatraz, San Francisco, CA
 (http://upload.wikimedia.org/wikipedia/commons/f/f6/Cell_Alcatraz_Federal_Prison.JPG)

Pictorial comparisons between sacred and prison architecture

Another, and perhaps more obvious connection can be made between prisons and monasteries, where cloisters and cells exist in each and both are dominated by an inwardly focused existence apart from the rest of society. The connection may go beyond that: "Originally imprisonment was prior to trial, or prior to execution, or for debt, or as a cruel form of revenge. Imprisonment as a form of punishment seems to have originated in the monasteries" (Pevsner, 1976, p. 160). The point of these comparisons is to introduce the notion that in some instances, the built environment is simply a background, "the material theater of human activity" where, "its truth is in its use" (Kostof, 1995, p. 3).

In regards to this paper, the images and the conversations the Justice Center generates raise questions about the purpose of architecture as it relates to human experience. Is it true what Lewis states in his article that, "we punish people with architecture" whereby, "the building is the method" (para. 12)? If it can be stated that architecture, at its most fundamental level, is the adaptation of the basic need for shelter, or even in its poetics, a metaphor likened to the body as a "shelter for the soul," then should it not be interdependent on the human body and spirit? And if so, what is the nature of the relationship between architecture and human behavior and how does that association manifest itself in the built environment? These are the questions that led to the thesis investigation and design proposal that follows.

In his article, Lewis mentions that there may be a correlation between the thoughtfully constructed design and the responding behavior of inmates:

If you trust a criminal with a better environment, will he prove trustworthy? . . .The place [Leoben Justice Center] has been open for only four years. But I noticed something as we were leaving, and in the absence of any other data it seemed significant. In the three or four hours we spent roaming all through the place, I hadn't seen a single example of vandalism. (para. 11)

It would seem then, that a notion exists - when design considerations are made for the user, the user responds in kind with respect for the physical environment (Figure 18).



Figure 18. Inmates Performing Group Dance, Maximum Security Prison, Cebu, the Philippines
 (http://farm3.static.flickr.com/2201/2295113422_7e82185873.jpg)

After the prison overseer initiated daily dance routines in the central quadrangle (shown above), he noticed changes in the behavior of the inmates; because the prisoners had a specific activity to do, they were no longer bored and engaging in negative activities. Some prisoners claim that dancing has changed their lives and inmates as well as the administration report that the general atmosphere is positive and there is a great feeling of camaraderie. This design of a central quadrangle facilitates the gathering of some 1500 persons performing organized routines (Journeyman Pictures, November 2007, retrieved from <http://www.youtube.com/watch?v=wAjltY7X0Yc&feature=fvw>). This would indicate that, though the design doesn't make positive behavior happen (negative behaviors happened in the quadrangle before the dancing was undertaken), its flexibility and size allow for a use that supports positive behavior or positive outcomes. Examples such as this further the notion that a correlation exists between architecture and behavior.

TABLE OF CONTENTS

List of Figures	xi
Introduction	1
Background	5
Research	11
A Brief History of Summer Camps	11
The Concept of Play	13
Young Adolescent Development and Learning	15
Experiential Education	21
The Designed Relationship	23
Why a Natural Setting Makes Sense	25
Place Preference	29
Design Proposal	35
The Last Child	59
Conclusions and Recommendations	61
References	63

LIST OF FIGURES

Figures	Page	Figures	Page
1. The Thesis Presented, A Note on How to Read It	v	36. Camp Pasquaney, Lodges, Concord, NH	11
2. Justice and Detention Center, Leoben, Austria	vi	37. Camp Pasquaney, Lodge Interior, Concord, NH	11
3. Courtyard, Justice and Detention Center, Leoben, Austria	vi	38. Campfire Sketch	12
4. Mandala Plan, Buddhist Temple at Borobudar, Java	vi	39. Lake Side at Camp Phoenix, Sardis Lake, MS	12
5. Panopticon Prison by Jeremy Bentham, 1791	vi	40. Play Shapes	14
6. Presidio Modelo located in Isla de la Juventud, Cuba	vi	41. Manipulation Object, Circular Stair	18
7. Statesville Correctional Center in Crest Hill, Illinois	vi	42. Manipulation Object, Door Handle	18
8. Totem Pole of the Tsimshian people, British Columbia, Canada	vii	43. Manipulation Object, Tire Swing	18
9. Pyramids at Giza	vii	44. Manipulation Object, Rope Knot	18
10. Tower, old city of Jerusalem	vii	45. Diagram, Layered Spaces	20
11. Spiral Mosque at Samarra, Iraq	vii	46. Adjacencies Diagram	26
12. The Monastery of Padula	viii	47. Cartoon	27
13. Attica Prison	viii	48. How to: A Simple Stilt Camp	32
14. Nave of Wells Cathedral	viii	49. How to: Tree-Top Houses	32
15. Eastern State Penitentiary Cellblock Gallery, Philadelphia, PA	viii	50. Aerial Map of Camp Phoenix	35
16. Monastic Cell, Sainte Marie de La Tourette, near Lyon, France	viii	51. Troop Camp, Building Placement Diagram 1	35
17. Prison Cell, Alcatraz, San Francisco, CA	viii	52. Troop Camp, Building Placement Diagram 2	35
18. Inmates Performing Group Dance, Maximum Security Prison, Cebu, the Philippines	ix	53. Process Scheme One	36
19. The Power of Architecture	2	54. Early Cabin Sketch, Elevation and Plan	36
20. The Purpose of Architecture	4	55. Early Dock Sketch, Plan	36
21. Camp Phoenix Brochure, 2009	5	56. Dining Hall Precedent 1	37
22. Camp Phoenix Diagram, Existing Conditions	6	57. Process Scheme Two	38
23. Camp Phoenix Brochure, 2010	7	58. Nature Center, Exterior	38
24. Camp Phoenix Proposal	8	59. Nature Center, Exterior Overlook	38
25. Entry Sign at Camp Phoenix	9	60. Dining Hall Precedent 2	39
26. Dining Hall at Camp Phoenix	9	61. Process Scheme Three	40
27. Cabin at Camp Phoenix	9	62. Eco-Restroom, Exterior	40
28. Oak or Pole Cabin at Camp Phoenix	9	63. Eco-Restroom, Interior	40
29. Bathhouse at Camp Phoenix	9	64. Dining Hall Precedent 3	41
30. Campfire Area at Camp Phoenix	9	65. Dining Hall Precedent 4	41
31. Cabin (oldest) at Camp Phoenix	9	66. Dining Hall Precedent 5	41
32. Nature Pavilion at Camp Phoenix	9	67. Dining Hall Precedent 6	41
33. Plaques in Dining Hall	10	68. Process Scheme Four	42
34. Camp Beckett, YMCA Camp, Massachusetts	11	69. Cabin Sketch - Elevation, Section, Plan	42
35. Camp Pasquaney, Headquarters, Concord, NH	11	70. Dock Precedent	43

Figures	Page	Figures	Page
71. Canoe Storage Precedent	43	108. Diagram, Western Cabins Layout	55
72. Floating Pier Precedent	43	109. View of Interior Porch Space, Looking Out to Boardwalk	56
73. Process Scheme Five	44	110. Cabin Wall Section	56
74. Canopy Walk	44	111. Cabin Precedent, Stilt Houses	57
75. Tent Platform Precedent 1	45	112. Cabin Precedent, Treehouse Structure 1	57
76. Tent Platform Precedent 2	45	113. Cabin Precedent, Treehouse Structure 2	57
77. Example of Tent Platform	45	114. Cabin Precedent, Treehouse Structure 3	57
78. Shower House Precedent	45	115. Cabin Precedent, Treehouse Structure, Camp Hopewell, Oxford, MS	57
79. Process Scheme Six	46	116. Intimate Space, Chapel	57
80. Process Scheme Seven	46	117. Intimate Space, Cardboard House	57
81. Camp Phoenix Master Plan	48	118. Intimate Space, Fish Camp	57
82. Camp Phoenix Entry	49	119. Intimate Space, Butterfly Porch	57
83. Camp Phoenix Gateway	50	120. Diagram, Early Treehouse Study	58
84. Water Station	51	121. Concept Diagram	58
85. Mobile Beach Buggy Diagram	51	122. Early Cabin Sketch	58
86. Mobile Beach Buggy at Lake	51	123. Roof Diagrams, Ventilation Studies	58
87. Experiential Path Diagram	51	124. View at Western Cabins	58
88. Detail at Bathhouse	52	125. View at Eastern Cabins	58
89. Section at Dining Hall	52	126. Elevated Cabin Model	58
90. Plan at Dining Hall and Bathhouse	52	127. Cibolo Nature Center, Boerne, TX	58
91. View to Lake From Proposed Dining Hall Location	52	128. Government Canyon Visitor Center, San Antonio, TX	58
92. Historical Precedent, Treehouse	53	129. Hilltop Arboretum, LSU, Baton Rouge, LA	58
93. Historical Precedent, Elevated Structure	53	130. Everyday Use, Digital Quilt	60
94. Dog-trot	54	131. Camp Phoenix Improvement, Shutters	61
95. Adapted Dog-trot	54	132. Camp Phoenix Improvement, Bunk beds	61
96. Diagram of Dog-trot Inspired Plan	54	133. Camp Phoenix Shield	62
97. Proposed Cabin Plan, Not to Scale (NTS)	54		
98. Proposed Cabin, Longitudinal Section (NTS)	54		
99. Proposed Cabin, Transverse Section (NTS)	54		
100. Treehouse Connected Cabin Structure	54		
101. Treehouse Connected Cabin Structure, Crow's Nest Detail	54		
102. Treehouse Connected Cabin Structure, Rigid Metal Bridge	54		
103. Cabin Precedent 1	55		
104. Cabin Precedent 2	55		
105. Cabin Precedent 3	55		
106. Cabin Precedent 4	55		
107. Cabin Precedent 5	55		

INTRODUCTION

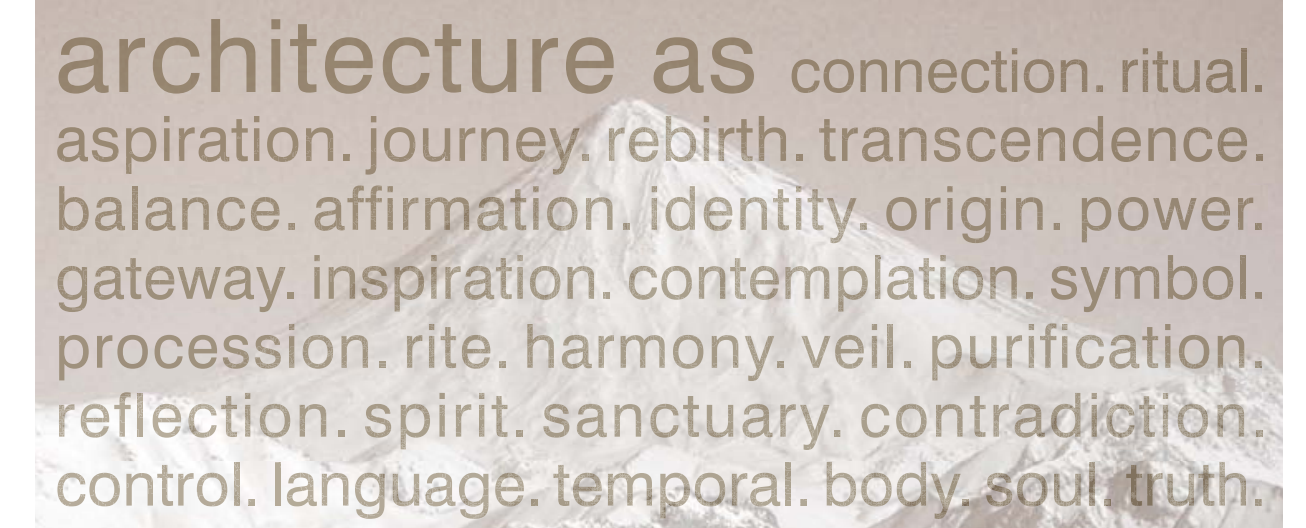
Juhanni Pallasmaa in *The Eyes of the Skin* (2005) relates the body and space as being intimately linked together; "there is no body separate from its domicile in space, and there is no space unrelated to the unconscious image of the perceiving self" (p. 40). The body is inseparable from the world that surrounds it, a part to the whole that envelops it. Likewise, the two exist within each other as much as without, a reciprocal relationship between human form and built form:

I confront the city with my body; my legs measure the length of the arcade and the width of the square; my gaze unconsciously projects my body onto the facade of the cathedral . . . sensing the size of recesses and projections; my body weight meets the mass of the cathedral door. . . I experience myself in the city, and the city exists through my embodied experience. The city and my body supplement and define each other. I dwell in the city and the city dwells in me. (p. 40)

It is this awareness that anticipates the power that architecture has on the human spirit (Figures 19 & 20). Architecture itself cannot inform without the permission of the user, but the two are interconnected: "Belief in the significance of architecture is premised on the notion that we are, for better or worse, different people in different places - and on the conviction that it is architecture's task to render vivid to us who we might ideally be" (de Botton, 1999, p. 13). If architecture is a reflection of self (and its ideal – the best of self) one must also allow that it can be the converse as well, destruction of self. "Sensitivity to architecture also has its more problematic aspects. If one room can alter how we feel, if our happiness can hang on the colour [sic] of the walls or the shape of the door, what will happen to us in most of the places we are forced to look at and inhabit?" (p. 13). As the perceiving self is a product of past and current experience, "we allude to a bitter-sweet feeling of contrast between the noble qualities written into a structure and the sadder wider reality within which we know them to exist" (p. 22). A contradiction remains between how different individuals relate to the physical environment. For instance:

It is undeniable that, in practice, farmhouses and lodges, mansions and riverside apartments have played host to innumerable tyrants and murderers, sadists and snobs, to characters with a chilling indifference to the disjunctions between the qualities manifested in their surroundings and in their lives. (pp. 19-20)

In summation of this point: "Architecture, even at its most accomplished, will only ever constitute a small, and imperfect . . . protest against the state of things" (p. 25). Though it "may well possess moral messages" it has no control or "power to enforce them"; it "offers suggestions" but "cannot prevent its own abuse" (p. 20). Does this then negate Pallasmaa's poetics of the indestructible link between body and building? No it does not. Instead it offers an important consideration and warning



architecture as connection. ritual.
aspiration. journey. rebirth. transcendence.
balance. affirmation. identity. origin. power.
gateway. inspiration. contemplation. symbol.
procession. rite. harmony. veil. purification.
reflection. spirit. sanctuary. contradiction.
control. language. temporal. body. soul. truth.

Figure 19. The Power of Architecture
(graphic composition by author, 2009; image from http://en.wikipedia.org/wiki/File:Damavand_in_winter.jpg)

to the designer that the physical environment may indeed be, as Moos (1986) concluded “the most powerful technique we have for influencing human behavior” (as cited in Banning & Strange, 2001, p. 2) but it is not the sole contributor. Architecture acts as a powerful informer in the collective environment of its user, facilitating change by supporting the mission of the client; engaging the user in awareness about self through the interaction of the two; and by being “capable of absorbing the traces of human life” (Zumthor, 2006, p. 24).

The conflicting notions about the power of architecture serve as the springboard for the master plan of Camp Phoenix, the summer camp for the Boys and Girls Clubs of Greater Memphis, by raising fundamental questions about the built environment’s ability to impact its user by effecting positive change. Research included herein offers considerations for design by covering the history of summer camps, descriptions of user profiles, the influence of experiential education, environment/behavior relationships, and the importance of the natural environment. Also included are precedent studies of similar typologies that suggest design considerations. Intertwined with the body of text are process comments that suggest design methodologies and possible implementation ideas. The book concludes with a proposed master plan including descriptions. All of the information aims to qualify the important relationship between architecture and behavior; thereby supporting the concept that the two are inherently linked and when thoughtfully developed, a positive outcome is achievable.

Peter Zumthor in *Thinking Architecture* (2006) evocatively speaks of architecture and its relationship to the human experience:

Architecture has its own realm. It has a special physical relationship with life. I do not think of it primarily as either a message or a symbol, but as an envelope and background for life which goes on in and around it, a sensitive container for the rhythm of footsteps on the floor; for the concentration of work, for the silence of sleep. (p. 12)



Figure 20. The Purpose of Architecture
(graphic composition by author, 2009; image from <http://johnbokma.com/mexit/2006/12/31/the-sand-cave.jpg>)

Camp Phoenix is an American Camping Association accredited camp. It is Boys & Girls Club's answer to life in the city. Located on 175 beautifully wooded acres on the shore of Sardis Lake in Mississippi, here's a place where a kid can really spread out and grow! It's got more trees than you can climb, more water than you can swim and more food than you can eat.

Camp Phoenix is more than just a vacation for campers ages 9 through 12 years old. It is an environmental education center. Campers participate in a variety of programs that build skills and increase knowledge of the outdoors under the leadership of our specially trained staff of adult leaders. Our program is structured to ensure full participation by every camper and flexible enough for individual campers to take advantage of optional challenges.

**Boys & Girls Clubs
Of Greater Memphis**

Ira Samelison Jr. Boys & Girls Club
894 Louisiana
324-5763

Goodwill Boys & Girls Club
990 College Park
946-8213

John Dustin Buckman Boys & Girls Club
1100 Vallentine
527-7994

Downtown Porter Boys & Girls Club
620 Lauderdale
946-9222

Hickory Hill Boys & Girls Club
4299 Boss Road
542-9604

Hardeman Co. Boys & Girls Club
206 Hope Street, Bolivar
731-658-1969

Central Office
44 S. Rembert
278-2947

Let's go to ...

Camp Phoenix

Located on the shores of beautiful Sardis Lake



Summer 2009



WHAT TO BRING
No special equipment or clothing is needed. Old clothes are best and should include:

Bring:
Shoes (2 pair)
Sandals (1 pair)
Socks (5 pair)
Long Pants (1)
Shorts (4)
Underwear (5 changes)
2 Sets Swimming Clothes
Long Sleeve shirt
T-Shirts (5)
Socks (5)
Sneakers (2)
Towel (3)
Rain Coat
Water Bottle
Combs/brush
Toothbrush & paste

Optional:
Flashlight
Insect Repellent
Sunburn Lotion
Hat
Small Day Backpack
Money
Radio
Video Games
Food
Swath Knife
Cell Phone

We Provide:
First Aid Supplies
All meals
Pillows
Fans



Through professional guidance and adult led living groups, Camp Phoenix is a place where we live, grow and share.

CAMP PROGRAM
Nature and the natural world are a very large part of our camping experience at Camp Phoenix. Camp is fun, educational and very rewarding.

Skill building activities are present in outdoor life at Camp Phoenix. The Mickey Binswanger Fishing Program, Nature Study, Archery, Marksmanship, Aquatics and Camp Craft programs provide fun and enjoyment for the campers.

Camp Phoenix offers two fun-filled programs. Challenge Camp is a traditional action-packed program for campers ages 8 to 10. Adventure Camp introduces campers ages 11 to 14 to advanced outdoor programs.

LENGTH
The five day session begins with meeting the camp staff at the Boys & Girls Club. Campers leave for Camp Phoenix at 9 a.m. the first day and return on the fifth day about 3:30 p.m.

CAMP STAFF
Camp Phoenix counselors are a majority of college students or college graduates. Each counselor goes through our six week training course before the camping season begins. Our cooks are professionals with many years of experience of satisfying campers with hearty appetites. Junior Counselors are Boys & Girls Club members. Camp Counselors sleep in living groups with their campers and lead all activities.

SCHEDULE
Let's look at a typical Camp Phoenix day!

7:00 am Order of the Phoenix Challenge / Mile Run
8:00 am Rise and Shine / Freshen up for breakfast
9:30 am Cleanup living quarters. Each camper makes their own bunk and has duty assignments.
10:00 am Planned program activities include archery, nature study & crafts, swimming, canoeing and sailing (for qualified campers) and riflery. All under adult staff leadership.
12:00 pm Games & contests at the staging area
12:30 pm Lunch of sandwiches, apples, milk, cookies / songs and cabin awards.
1:30 pm Quiet rest period in living areas (all campers off feet)
2:00 pm Planned Activities (All Camp)
4:00 pm All camp awards
5:00 pm Staging area activities
5:30 pm Supper of fried chicken, mashed potatoes, peas, carrots and milk
6:30 pm Optional group activities for living groups (Group Decision fishing, berry picking, nature hikes & Achievement Program, Foresterism, Pioneers and Trailblazer Awards)
7:30 pm Creating group flags and plaques
8:30 pm Showers
9:00 pm Taps
9:15 pm Order of the Phoenix challenge

SESSIONS

Session #1..Boys.....	June 8 - 12
Session #2..Boys.....	June 15-19
Session #3..Boys.....	June 22-26
Session #4..Co-ed.....	June 29 - July 3
Session #5..Girls.....	July 6-10
Session #6..Girls.....	July 13-17

Parents may visit Camp Phoenix on Thursday June 4th between 2 p.m.-4 p.m. to tour the camp, meet the staff and learn about the camp program. Please notify the Camp Director if you would like to take advantage of the opportunity. There will be no visiting days when your child is at camp. Only emergency calls will be arranged from camp.

ADDRESS
Camp Phoenix
1824 Hatcher Rd
Cairo, MS 38619

BACKGROUND

The Boys and Girls Clubs of Greater Memphis (BGCM) was started as the Boys Club in April of 1962 by The Phoenix Club ("Boys & Girls", 2010). From the beginning the BGCM was interested in providing "quality outdoor educational experiences" for its members (BGCM internal letter, personal communication, n.d.). Initially, members traveled to Camp Courage in Mississippi, day camps in Lakeland, TN, and trips to Horseshoe Lake in Arkansas before a permanent campsite was made available on Sardis Lake in northern Mississippi (BGCM internal letter, personal communication, n.d.). The location of a former Girl Scout camp, Camp Phoenix (Figures 22, 25-32) was leased from the U.S. Army Corps of Engineers in 1970 with funds provided by The Phoenix Club (BGCM internal letter, personal communication, n.d.). At that time there were several structures on the property including a dining hall, 6 cabins in a horseshoe grouping (located in an area known as the meadows) and 6 tent platforms (located in an area known as the ridge) (BGCM, personal communication, February 16, 2010). In 1980, the dining hall was destroyed in an accidental fire, its site directly across from where the current dining hall sits (BGCM internal letter, personal communication, n.d.). The 1980s saw the construction of more cabins and a bathhouse and the introduction of girls to the Club and to the Camp. From that point forward tents were rarely used and the final set of cabins and an additional bathhouse (the western most) were built in the mid-1990s. Today, "Camp Phoenix is an American Camping Association [ACA]-accredited residential camp located on 175 beautifully wooded acres. . . . Each summer, Camp Phoenix provides approximately 350 kids from the greater Memphis area with the opportunity to experience the great outdoors face-to-face" ("Boys & Girls", 2010).

The BGCM utilizes Camp Phoenix as an additional means of supporting their mission "to inspire and enable all young people, especially those from disadvantaged circumstances, to realize their full potential as productive, responsible and caring citizens" (BGCM business card). Additionally, the BGCM seeks, "through a variety of academic and recreational programs" to empower its "members to make productive use of their time and wise decisions in their lives" ("Boys & Girls", 2010). In accordance with this, the directors of Camp Phoenix have sought to integrate learning into the Camp curriculum. The former Camp Director implemented strategies of reality or control theory to teach campers the appropriate way of getting what they wanted (BGCM, personal communication, February 16, 2010). Accomplished through cleaning, taking ownership of environment and actions, understanding standards, evaluating behavior, and by setting and realizing achievable goals, campers were able to overcome negative or unacceptable behavior. Currently, the Camp is in a state of transition as the newest director settles in and prepares the Camp for future growth and development. The current Camp Director wishes to implement aspects of Experiential Education (defined on p. 21) (BGCM, personal communication, February 6, 2010). Holistically, experiences offered at camp should be character building; they should open up new horizons; there should be opportunities that allow for learning conflict resolution, responsibility, acceptance and respect for others (BGCM, personal communication,

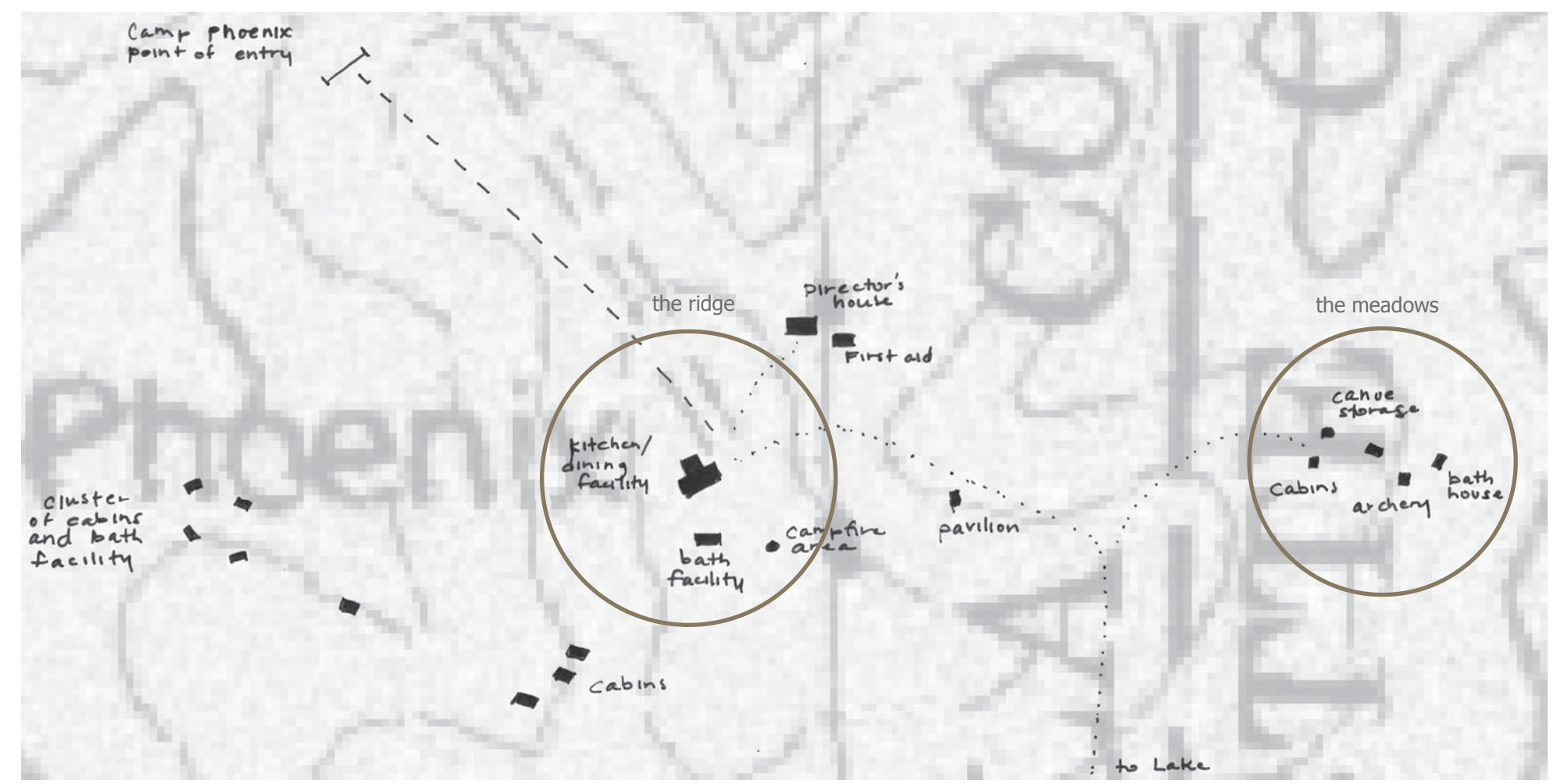


Figure 22. Camp Phoenix Diagram, Existing Conditions (by author, 2009)

Figure 21. Camp Phoenix Brochure, 2009 (BGCM, 2009)

Sign-up Deadline: May 15th

CONTACT THE CENTRAL OFFICE @ 901-278-2947 FOR DIRECTIONS TO YOUR LOCAL CLUB

All staff and counselors are fully trained and certified!

CAMP PHOENIX
BOYS & GIRLS CLUBS
Discovering New Directions

SUMMER CAMP 2010

Come to Camp Phoenix and explore the north shore of Sardis Lake in Como, MS! Located on 175 acres of wooded landscape, campers are offered unlimited opportunities to learn, discover, and grow.

Central Office
44 South Rimbert Street
Memphis, TN 38104

1826 Ed Pratcher Road
Como, MS 38619
662-526-5970

United Way

Discovering New Directions...

TRANSPORTATION
Camps are picked up from their Clubs on Monday mornings at 10:30 AM and dropped off at their Clubs the following Friday afternoon at 4:00 PM.

ACTIVITIES & CLASSES
Swimming, Canoeing, Fishing, Archery, Hiking, Arts & Crafts, Theater, Campfires, Camp-outs & much more!

MEALS
All meals are certified by the United States Department of Agriculture. An application for free/reduced price meals must be completed.

CAMP COST
Through the support and efforts of both the Phoenix & Kewanee Clubs, members of the Boys & Girls Clubs are able to attend Camp at a reduced cost.
Contact your local Club for more information.

ELIGIBILITY CRITERIA
All campers should be current members of BGCM and between the ages of 8 - 14 years.
Junior Staff must be between 15 - 17 years.
Contact your Club for information regarding the Junior Staff Program.

SESSIONS

SESSION #1	June 7 - 11
SESSION #2	June 14 - 18
SESSION #3	June 21 - 25
SESSION #4	June 28 - July 2
SESSION #5	July 6 - 9
SESSION #6	July 12 - 16
SESSION #7	July 19 - 23
SESSION #8	July 26 - 30

PHYSICAL EXAMS
Camps must have had a Physical Exam within the last two years. BGCM works with several health care organizations to have these exams done free of charge. Contact your Club for more information.

www.bgcm.org OR 278-2947 FOR MORE INFORMATION

ACCREDITED

Figure 23. Camp Phoenix Brochure, 2010 (BGCM, 2010)

February 16, 2010). Other important directives for camp include: developing positive relationships among members from different clubhouses and local areas; learning an appreciation for nature and survival skills; team-building; encouraging members to take on new risks and challenges; increasing summer membership by offering an enticing alternative to other organizations' activities (BGCM, personal communication, February 23-25, 2010). In this way, BGCM is equipping their members "with the fundamental skills and values that they also need to seize important opportunities and achieve future success" ("Boys & Girls", 2010). Members also expressed an understanding of the value in camp experiences - the ability to meet and interact with new people and the ability to engage in different activities (canoeing, fishing, swimming, archery, riflery, arts & crafts, dance competitions, obstacle course, night-hiking, movie-night, etc.) (Figures 21 & 23) (BGCM, personal communication, March 3-4, 10, 17-18, 2010). Likewise, members offered areas for improvement that the administration also addressed in their request for a proposal.

The proposal request (Figure 24) suggests a renovation of the facilities to achieve a "5 star" year 'round co-ed camp" including the following improvements: removal of existing cabins and the construction of new "barrack type" cabins; a small cabin for kitchen staff; small cabin for camp instructors; small cabin to serve as camp infirmary; small cabin for Camp Director; large recreation hall; restroom w/ showers located at lake front; campfire area; front gate/ entrance; updated dining hall; pool facility (BGCM, personal communication, October 23, 2009). Further clarification on the cabin design includes the following: bed accommodations for 10 campers, one junior counselor, and one counselor with 30 inches between beds (ACA standard) and a minimum of 25 square feet per person (Mississippi Department of Health Code); lockers or storage space including hooks and shelving per individual; a minimum of two exits (Mississippi Department of Health Code); small covered front porch; entry way/mud room with storage; desk area; operable windows; central lighting; fans; bathroom fixtures (BGCM, personal communication, October 23, 2009). Qualitatively, the administration and BGCM members voiced concerns about the current conditions that should be addressed in the proposal. These include: making cabins feel secure so that winterizing panels aren't shut, thereby cutting off ventilation; improving ventilation methods e.g., adding heating and air conditioning units; introducing lighting for comfort; design modifications that protect screens for better insect barriers; designing for flexibility, ease of maintenance, and durability; reducing places for animal or insect nesting; updating bathroom facilities to include insect barriers and a higher degree of privacy; shortening distance between dining hall, cabins, restrooms and lake front; additional new and exciting activities that are forward-focused and bridge the gap between traditional camp and the expectations of today's youth; facilities for rainy days; better equipment and storage facilities for equipment including canoe/boat storage (BGCM, personal communication, October 23, 2009, February 23-25, 2010).

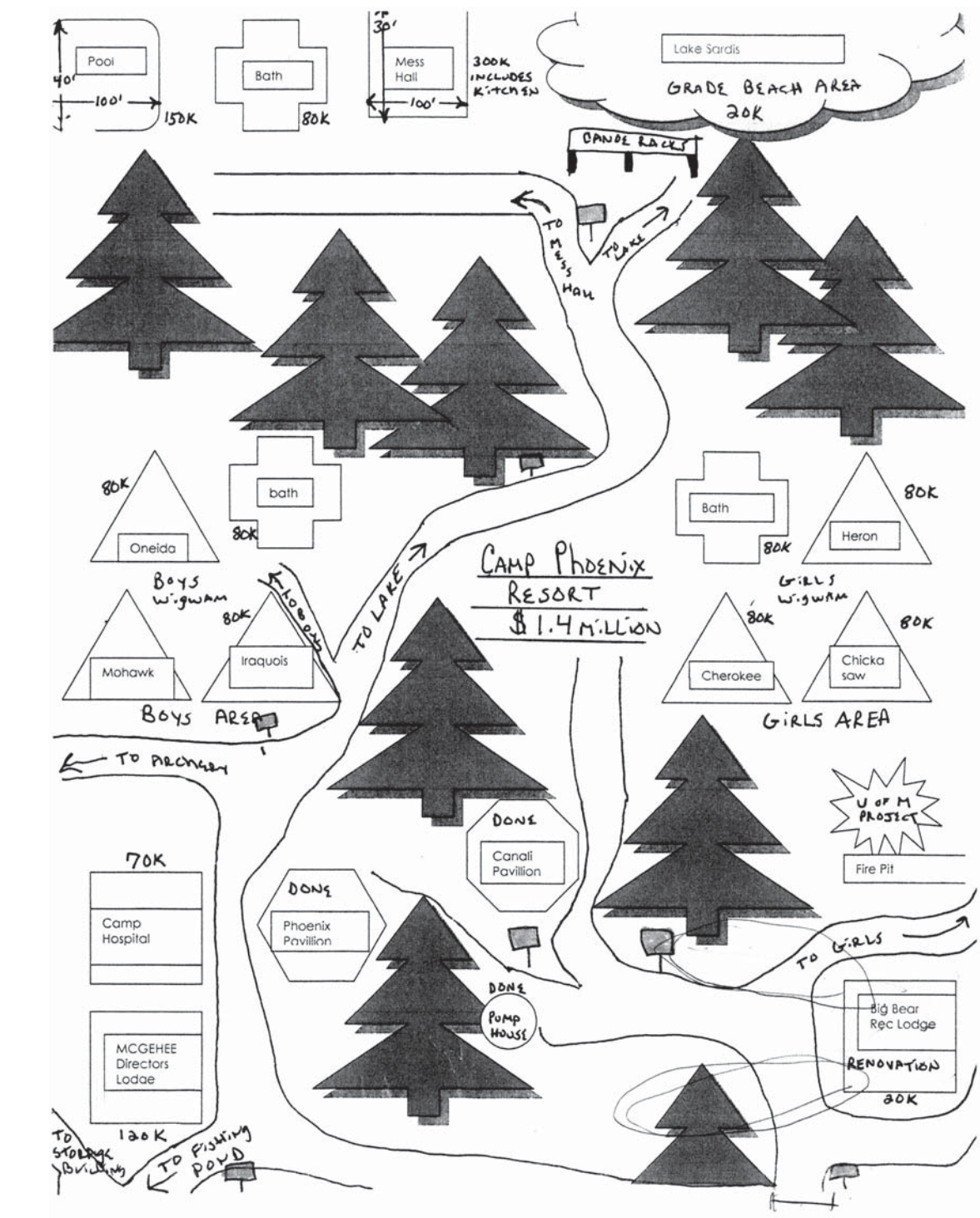


Figure 24. Camp Phoenix Proposal (BGCM, 2009)



Figure 25. Entry Sign at Camp Phoenix
(by author, 2010)

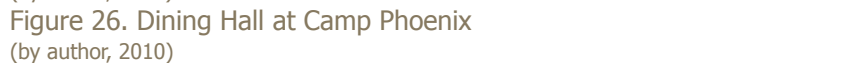


Figure 26. Dining Hall at Camp Phoenix
(by author, 2010)



Figure 27. Cabin at Camp Phoenix
(by author, 2010)



Figure 28. Oak or Pole Cabin at Camp Phoenix
(by author, 2010)



Figure 29. Bathhouse at Camp Phoenix
(by author, 2010)



Figure 30. Campfire Area at Camp Phoenix
(by author, 2009)



Figure 31. Cabin (oldest) at Camp Phoenix
(by author, 2009)



Figure 32. Nature Pavilion at Camp Phoenix
(by author, 2009)

Addressing the mentality that the camp has “outdated” facilities which reflect a perception that “just because some of our kids come from less that they will appreciate any old thing” (BGCM, personal communication, February 23-25, 2010) relates back to the previously stated notion that thoughtful design of the physical environment (designed with the user in mind) has the potential to inspire those who interact with it. This should be the prevalent thought in the evolution of the design as it strives to meet the requests for a master plan proposal.

Some additional notes to be cognizant of in the design process:

- Sardis Lake is a flood-control lake serving the surrounding farming areas - the lake front or beach area changes drastically in exposure and may change from day to day. This means that constructing permanent structures at the waterfront (docks, shade stations, a lifeguard station, etc.) is not possible. This also means that, at times when the water level is low, the camp becomes vulnerable to trespassers and vandals that enter from the lake side.
- The lowest building limit is at the 287 foot topography line.
- There is a grade change of approximately 90 feet between the upper ridge and the lake line.
- The typical camper/ BGCM member is: African American; of a single parent, female-headed household; attends a school on the State of Tennessee’s High-Risk List; qualifies for free or reduced lunch programs at school (BGCM, personal communication, February 23-25, 2010).
- Designs should account for ACA standards, the Mississippi Building Code and the Mississippi Department of Health Regulations Governing Licensure of Youth Camps.
- This thesis proposal is undertaken in cooperation with the Design/Build class in the Department of Architecture at the University of Memphis and as such will propose process ideas, sketches, designs, or implementation guidelines that would facilitate the involvement of said class.

Various people affiliated with the BGCM mentioned the existence of previous master plans, sketches or proposed building plans for Camp Phoenix. At the time of this investigation, the author was unable to locate the aforementioned drawings and, therefore, has not included that information within this document.

In the early 1980s, the tradition of plaque markers began at Camp Phoenix. Currently the plaques hang down from the Dining Hall trusses (Figure 33) where they serve as a draw for returning campers, a trace on the landscape of their having been there. Another tradition for campers is to make cabin flags. Previously, campers signed paddles from the Water and Land Carnivals held during the camp week. Finding a way to incorporate these items will be an important aspect of creating and perpetuating place and self identity by reinforcing the history and tradition of the camp.



Figure 33. Plaques in Dining Hall
(by author, 2009)

RESEARCH

A Brief History of Summer Camps

Summer camps sprang from “the long tradition of rural schools” (Maynard, 1999, p. 4) that existed in northeast America in the middle to late nineteenth century that were dedicated to removing male “youngsters” from soiled environments and placing them into pristine ones, as James McLachlan (1970) notes, separating “them from the subculture of urban delinquency” (as cited in Maynard, 1999, p. 4). Set among the transition from Transcendental to Naturalistic thought, camps offered a solution to problems with youth that were over civilized and suffering from too much mothering, a product of Victorian influence (Van Slyck, 2006, p. 9). Camps became a “characteristic feature in American life” with the ability to inculcate “in city-bred children a healthy measure of spirit for the wild” (Maynard, 1999, p. 3). Serving as a transitional world apart from civilization, camps mediated between the two; a duality that accounted for capturing the fading frontier, mediating the “anxieties about the disappearance of the wilder parts of nature” and anxieties about youth softened from city-life idleness and the feminized home (Maynard, 1999, p. 17; Van Slyck, 2006, p.4). Natural settings promoted and fostered manliness for urban youths, poor and aristocratic.

As camp methodology evolved in response to changing cultural shifts, so did the architecture and planning of the camp. Depending on the funds available, early camps were either arrangements of tents or permanent structures that featured rustic, “one –room, shingled shanties” (Maynard, 1999, p. 14) with piazzas and simple detailing derived from “family camps in the Adirondacks” (p. 12) and the English Picturesque movement (p. 15). The piazzas, or porches, (Figures 35-37) were an important aspect of camp life, serving as a transitional space between the man-made and the natural environments (p. 15). They also provided shaded, cool places to gather and offered a place to write letters and “idle away rainy days in hammocks” (p. 14). Site locations for camps took direction from aristocratic retreats, universally preferring lake side sites (Van Slyck, 2006, p. 11). “A natural body of water met pressing daily requirements for drinking, cooking and bathing, and was also essential for swimming and boating, activities that were integral to camp life from the very beginning” (p. 11). Additionally, lake sites offered distance from “adjacent land and an enhanced degree of isolation from recreating neighbors” (p. 11) as well as serving as a metaphor for spiritual rejuvenation (p. 12). The Picturesque showed up in planning as well, with organic layouts to complement nature, though camp design in the latter part of the nineteenth century on into the 1920s mimicked military encampments (Figure 34). The grid was used as a means of regulating both the natural and human landscapes (p. 18), controlling by the “military-style standardization of group behavior” (Maynard, 1999, p. 19). Eventually this led to an association with rigidity and inflexibility instead of discipline and camp planning again returned to an organic, decentralized plan where space in the natural environment was equated with the expanse of the soul (Van Slyck, 2006, p. 20). Camp design began to shift



Figure 34. Camp Beckett, YMCA Camp, Massachusetts (Van Slyck, 2006, p.2)

Image shows the rigid planning based on military encampments

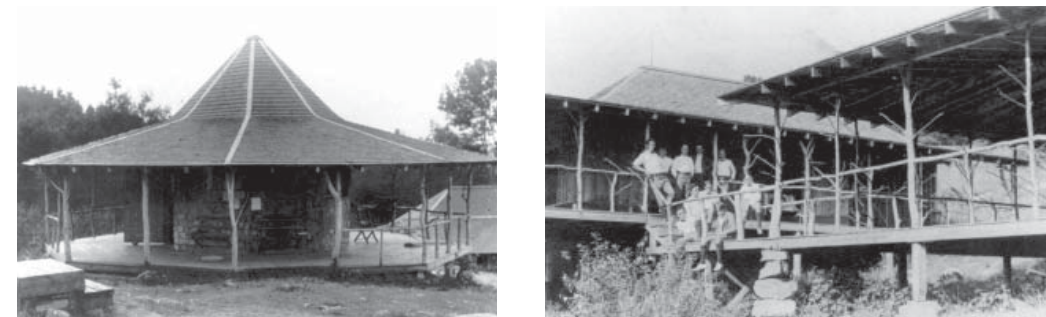


Figure 35. Camp Pasquaney, Headquarters, Concord, NH (Maynard, 1999, p.15)

Figure 36. Camp Pasquaney, Lodges, Concord, NH (Maynard, 1999, p.26)



Figure 37. Camp Pasquaney, Lodge Interior, Concord, NH (Maynard, 1999, p.27)

Rustic architecture of early camp buildings including extensive porches

Among the many topics that Van Slyck (2006) covers in her book on the history of summer camps is the metaphor of the evening campfire. Part ritual, part mysticism, it held the power to kindle “a fire in the heart of each” camper who then carried it back “to the city to light other hearts” (p. 176). Lisa Heschong (1979) also discusses the awe of the flame, describing the “general belief in the civilizing force of the warmth of fire” (p. 11). Heschong (1979) goes on to quote Vitruvius in his account of the discovery of fire by man, stating that discovery is what “originally gave rise to the coming together of men, to the deliberative assembly, and to social intercourse” (p. 12). These descriptions lend qualitative gravity to the essence of the campfire experience and offer considerations for Camp Phoenix’s design: The campfire area (Figure 38) can support the goals of the BGCM by encouraging togetherness and adaptations or behavioral modifications that are carried, like the flame, from the camp back to the everyday life of the camper.

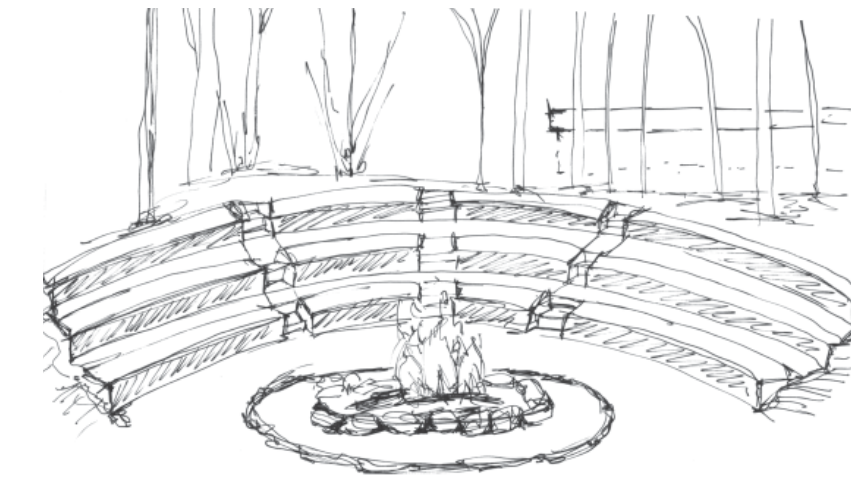


Figure 38. Campfire Sketch (by author, 2009)

Here is a historical precedent for locating much of camp life at the lake side. This suggests that buildings and other programmatic functions at Camp Phoenix might shift farther south, closer to Sardis Lake (Figure 39). The lake is a huge attraction and is of high importance to the staff and campers; while at times it may become a distraction, efforts should be made to capitalize on its accessibility (BGCM, personal communication, October 23, 2009; March 3-4,10,17-18, 2010).



Figure 39. Lake Side at Camp Phoenix, Sardis Lake, MS (by author, 2009)

in connection with suburban and superblock planning and the changing notion that “camp should not attempt to counteract the softness of modern home life, but should instead take into account the standards of comfort considered normal at home” (Van Slyck, p. 35). Throughout the design transformations that camps faced designers, planners, camp directors, and the like, “counted on their arrangement of the camp landscape to tell campers what was expected of them” (p. 167).

The Concept of Play

Among the changing variables of camp life was the integration of regulated play as part of the “recreation revolution” and a direct response to the “overdeveloped work ethic” known as “Americanitis” at the turn of the twentieth century (Van Slyck, 2006, p. 43). Camp became a summer course in recreation, a reaction to the “stultifying schoolroom” (p. 42), with changing attitudes and routines about the necessity of leisure.

Adults continued to see the countryside as an idyll for childhood, a place where - they felt - the purity of nature would protect and preserve the purity of childhood. In contrast, the urban settings in which many children spent their leisure time was particularly troubling (p. 45). . . .Where early camps had helped campers (who were admittedly older adolescents) to begin the transition to adulthood, their postwar counterparts cocooned campers (who were now younger children) in a world of recreation (p. 158) . . . [thereby considering] camp as a site for the remaking of American childhood. (p. 211)

This entailed domesticating leisure in a way that scripted the “correct” way to play and manifested itself in the physical environment by the construction of buildings in order to regulate and reduce the amount of open space (at least conceptually) (Van Slyck, 2006). Around the same time came the introduction of time-keeping related to schedules and routines, the entrance of woodworking and crafts, and the shift from imaginative and improvised play with existing conditions to the use of equipment and fields of organized sports (Van Slyck, 2006).

The importance of play is still a relevant notion today, especially in light of the nation’s growing dependence on technology. The National Institute for Play (NIFP) recognizes seven “patterns of play” as a framework for understanding behaviors: Attunement Play – an emotion based connection between persons, things, or both (e.g., the visual/verbal connection between an infant and his or her mother, whereby the emotional reaction in the brain of each is attuned to the other); Body Play and Movement – the physically based act of knowing and thinking in motion (e.g., a leaping motion in the air is a lesson in gravity and body movement); Object Play – physically based cognitive development through hands-on manipulation associated with problem solving (e.g., manipulating objects by hand including toys, building blocks, banging on pots, etc. as a child develops problem

The placement of buildings to fill and define the space that regulates areas for play is a characteristic of a built environment shaping or nonverbally-instructing behavior. How then can the built environment be informed by the multiple patterns of play? Perhaps it can reflect the shape of play (Figure 40). Stuart Brown, president of the NIFP, states that the form of a child’s body at play is a typical instinctive gesture - “play movement is curvilinear” (Henig, 2008, para. 11). He goes on to describe a child at play: “If that boy was reaching for something in a nonplay situation, his body would be all straight lines. But using the body language of play, he curves and embraces” (para. 11). Likewise, the built environment can be made to curve and embrace - in the form of a building’s section or plan, in the layout of pathways, or the layout for spaces of play (including the connection of such spaces), even in the degree of spaces and their relative connection to one another: private versus public - adjacent to, above or below the other.

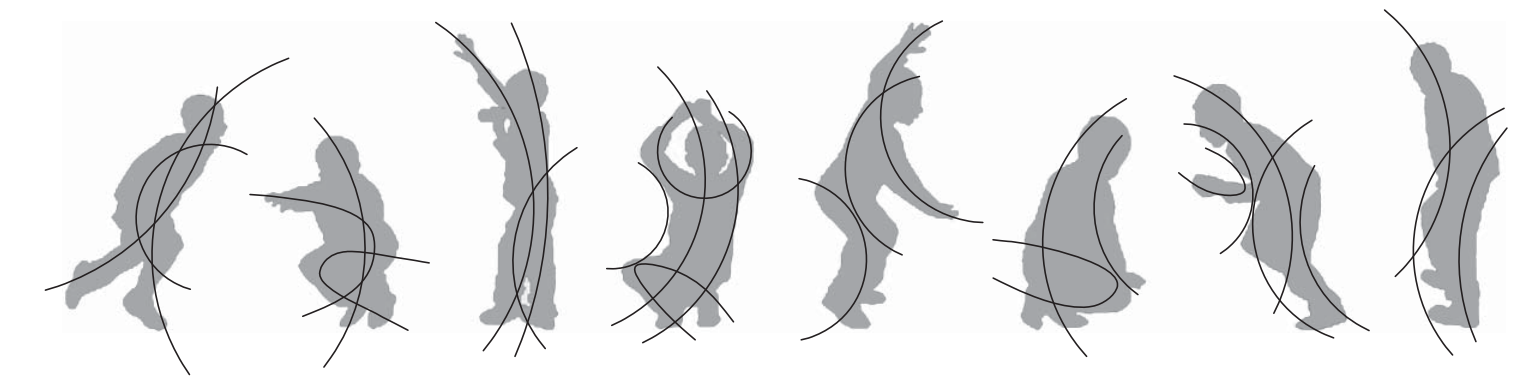


Figure 40. Play Shapes
(adapted from image, http://thumbs.dreamstime.com/thumb_41/11399369524zz3ha.jpg)

solving, or the ability to fix, used in adulthood); Social Play – the complex interaction among persons, groups, or both including physical contact and verbal sparring; Imaginative and Pretend Play – an emotionally based ability to create one’s own sense of mind which “remains key to innovation and creativity” and in the “understanding and trusting [of] others” as well as for “developing coping skills”; Storytelling-Narrative Play – an “inner stream of consciousness” that carries the elements of “a sense of timelessness, pleasure and the altered state of vicarious involvement”; Transformative-Integrative and Creative Play – the ability “to transcend the reality” of everyday life by inventing and re-inventing new ideas with the element of spontaneity which is “so important to adaptation in a changing world” (e.g., creative writing, poetry, music, architecture, etc.) (NIFP, 2010). Play is not the exclusive purview of children but is “for all people, at all ages, at all times” (Henig, 2008, para. 1). It is “a central part of neurological growth and development” and a significant way to “build complex, skilled, responsive, socially adept and cognitively flexible brains” (para. 6).

Young Adolescent Development and Learning

Kellough and Kellough (1999) in Chapter Two of their book, *Middle School Teaching*, describe the wide range of intellectual, physical, psychological, social, moral and ethical development that young adolescents, to include children ages 10-15, are categorized by; thereby indicating a “tremendous variability among individuals” (p. 37). Intellectually young adolescents are marked with intense curiosity; their thoughts and activities are dominated by personal-social concerns (p. 38). They enjoy using problem-solving skills in real-life applications and prefer active learning in groups (p. 38). Additionally, their “minds experience change from the concrete-manipulatory stage to the capacity for abstract thought” (p. 38). Physically young adolescents are concerned about their appearance to others; they are experiencing accelerated body development, fluctuations in metabolism that can effect “extreme restlessness or listlessness” and have ravenous appetites, all of which occur to individuals at varying maturation rates (p. 38). Psychologically they tend to be sensitive, easily offended, erratic and inconsistent in behavior, moody yet hopeful, exaggerative in narrative, introspective, self-conscious, and are searching “for adult identity and acceptance even in the midst of intense peer-group relationships” (p. 39). Young adolescence is also marked by psychological risk; unlike any other point in human development, children at this stage are met with overwhelming diversity in the relationship between self and others (p. 39). Socially, young adolescents depend heavily on peer groups “for standards and models of behavior” as well as giving preference to “media heroes and heroines” and leaning on parental and family authority for final decision making – though they also challenge authority figures to test what behavior is acceptable (p. 39). Peer groups and families can be a source of “traumatic conflicts” if loyalties are inconsistent between the two; there is significant emotion-based relevance to the child-adult relationship and harmful results may be likely should the child feel rejected, unaccepted or unloved (p. 39). Although children of this age may prefer same age, same sex relationships they also seek to “define sex role characteristics” by forming

How can a camp be designed to foster and encourage the multiple patterns of play? While play is spontaneous and happens regardless of the environment, there may be design elements that can make play more accessible or increase the likelihood of individuals engaging in play.

- Attunement Play - The natural environment is filled with sensory information that the camper may become attuned to. Creating areas designated for reflection that are centered in high-sensory areas (a clearing in the woods, a peak or valley, lake side, etc.) or pathways that are designed to engage multiple senses at a time may provide for enhanced play.
- Body Play and Movement - This play dominates the camp experience because most if not all camp activities involve multiple aspects of movement, including the learning of new types of body movement (e.g., dexterity in archery). Taking advantage of natural topography - including variances in height, open or heavily-filled spaces, grass or rocky conditions, and land or water conditions - can increase this type of play.
- Object Play - Object play is also pervasive in this type of environment. However, it may be increased because of new objects found in the setting, for example: skipping stones on the lake or foraging for berries, mushrooms, wildflowers, or insects in the woods.
- Social Play - Camps offer an increased amount of time focused on individual and group development in which social play becomes an essential part. Creating a layering system of gathering areas to include intimate spaces (1-2 persons), small spaces (3-15 persons), medium spaces (16-30 persons) and large spaces that can accommodate everyone, should facilitate this type of play. Additionally, anticipating dominant or popular forms of social play within a group (which may be related to race, gender, ethnic background, etc.) may also have design implications. For instance, members of the BGCM expressed that they enjoyed competition at camp, notably the talent show night that occurs at the end of the week (BGCM, personal communication, March 3-4,10,17-18, 2010). The show usually involves dance routines (which includes step shows). Therefore, gathering spaces might include stages or platforms for practicing these routines or for allowing impromptu shows. Such platforms might also allow for demonstrations of verbal sparring. In the African American community, “signifying” is a type of verbal play that “offers speakers the opportunity to demonstrate their improvisational mastery of rhyme and rhythm, as well as their capacity to improvise on the verbal play of others”

- (Andrews, Foster, & Harris, 1997 p. 665). As a culturally specific form of irony, “signifying implies the art of expressing ideas, opinions, feelings and so forth, by indirection”, channeling anger and aggression into a “relatively harmless form” (p. 665). As a type of social play it “aims at the formation of community rather than at the expression of dominance” (p. 665). Verbal play such as this can be likened to a type of “play-fighting” that introduces “variable tempo, self-handicapping and role reversals” where players “riff on one another,” thrusting and parrying; where “the smoothness of the improvisation matters as much as the gestures themselves” (Henig, 2008, para. 42-43).
- Imaginative and Pretend Play - This type of play is important for at-risk groups because it involves role-playing interaction that requires degrees of trust and introduces coping skills. Such qualities seem necessary for individuals whose home environments are dangerous or otherwise ill-affecting. In pretend play, individuals “learn to use sophisticated language, negotiate roles and exchange information” (Henig, 2008, para. 58). While imaginative play may be limited “by the roles, scripts and props of the culture” (para. 57) it also allows individuals to work through “harsh human truths” (para. 64), increasing flexibility in response to environments (para. 66). Persons able to play out both positive and negative aspects of their world, have an adaptive advantage (para. 68). The natural environment can offer a great availability for this play because individuals can project varied imaginations onto it with little interference, (i.e., nature can be anything). However, there may be some preconceived fear related to the natural environment, for instance, the threat of attack by various creatures (snakes, bears, etc.). Therefore, just as with the other forms of play, there should be a degree of spaces, some remote, others that may be located adjacent to the cabins or dining hall.
 - Storytelling-Narrative Play - Like social play, narrative play involves the individual-to-group relationship, and would, therefore, have similar design implications. In addition, spaces geared towards this type of play might contain furniture or seating arrangements conducive to telling and listening.
 - Integrative and Creative Play - This type of play seems to be a carefully controlled hybrid of all the other types of play. (The adaptation of signifying into poetry or music would be an example). It might manifest itself in the design of both indoor and outdoor rooms that facilitate creative thinking - art studios, woodshops, music rooms, etc.

positive connections with members of the opposite sex (Kellough & Kellough, 1999, p. 39; Van Krevelen, 1972). The final developmental category, moral and ethical development, is dominated by idealistic, reflective, and analytical thoughts and feelings that grasp at understanding an expanding “intellectual and emotional awareness” in light of over arching questions, for instance, regarding the meaning of life (Kellough & Kellough, 1999, p. 40). Children at this stage explore moral and ethical influences, from sources such as home and church, in daily interactions with others (p. 40).

Understanding learning abilities is also an important facet of grasping young adolescent capability. Summer camp can be thought of as specialized school in a rustic setting (Van Krevelen, 1972), therefore, it is important to give some consideration to the way this age group receives (modality) and processes (style) information. In general, “young adolescents prefer and learn best by touching objects, by feeling shapes and textures, by interacting with each other, and by moving things around” (Kellough & Kellough, 1999, p. 42). This indicates that kinesthetic and tactile learning modalities are dominant over visual and auditory ones, though the integration of them all is best. Likewise, Kellough and Kellough (1999) point to McCarthy’s (1997) work to describe multiple learning styles: imaginative learners – excel at interactions with others by “integrating the ideas of others with their own experiences”; analytic learners – place emphasis on receiving information sequentially, from experts, and are detail-oriented; common sense learners - matter-of-fact and hands-on, processing learning actively; dynamic learners – risk-takers that are hands-on and enjoy learning new things (as cited on p. 43). Additionally, learning can be seen as a phased process whereby the learner: processes information through concrete experience (exploratory hands-on phase); analyzes and evaluates the experience to formulate a “fit” for the new information (invention or concept development phase); and then applies the new learning to “situations that are relevant and meaningful to them” (expansion or concept application phase) (p. 43-44). Another way to categorize learners is by Gardner’s (1989) “learning capacities” or “multiple intelligences”:

- Bodily/kinesthetic: ability to use the body skillfully and to handle objects skillfully
- Interpersonal: ability to understand people and relationships
- Intrapersonal: ability to assess one’s emotional life as a means to understand oneself and others
- Logical/mathematical: ability to handle chains of reasoning and to recognize patterns and orders
- Musical: sensitivity to pitch, melody, rhythm, and tone
- Naturalist: ability to draw on materials and features of the natural environment to solve problems or fashion products
- Verbal/linguistic: sensitivity to the meaning and order of words
- Visual/spatial: ability to perceive the world accurately and to manipulate the nature of space, such as through architecture, mime or sculpture (as cited in Kellough & Kellough, 1999, p. 44)

Emphasis on learning through the sense of touch and physical movement can be carried into the design through hands-on interaction with building components. For instance: climbing stairs, ramps, ladders, poles, ropes etc. to move from one vertical plane to another (Figure 41); opening and closing objects such as shutters, louvers, screens, windows or doors (especially to manipulate body (thermal) comfort (Figure 42); moveable furniture or furniture that can be manipulated such as swings and hammocks (Figure 43); shading devices that can be raised or lowered by manual pulley systems or that may require being tied off with special knot configurations (Figure 44); i.e., the incorporation of operable and flexible objects (of various sizes) that are user-controlled.



Figure 41. Manipulation Object, Circular Stair
(<http://www.stairs-direct.co.uk/communities/7/004/007/189/897/images/4529206449.jpg>)

Figure 42. Manipulation Object, Door Handle
(http://images.veer.com/IMG/PIMG/CCP/CCP0005963_P.JPG)

Figure 43. Manipulation Object, Tire Swing
(http://4.bp.blogspot.com/_Oh6BIBsJdI/SQhkMUUQDAI/AAAAAAAAA5w/8dSA7BGcMZI/s320/tire-swing.jpg)

Figure 44. Manipulation Object, Rope Knot
(<http://www.highton-ridley.co.uk/monochrome/images/rope-knot.jpg>)

Generally speaking, the Naturalist learning capacity might be seen as the most successful learner in a camp environment. (However, because the natural environment offers a multitude of experiences, and there are various ways to learn, learners with different capacity strengths should be successful in this environment too.) The introduction of crafts and woodworking (or as earlier known, manual training) in the early twentieth century (Van Slyck, 2006) would have facilitated such types of learners and introduced to others, the ability to manipulate the natural environment in a utilitarian way (though crafts and woodwork weren’t strictly utilitarian). Campers were introduced to crafts “because crafts enhanced their mental development through muscular coordination

and digital dexterity” helping campers to appreciate the relationship to production and introducing hobbies that could “prevent delinquency” and later in life, “restore mental and physical health” (Van Slyck, 2006, p. 60). Additionally, crafts were used to “transport campers” into a “golden-age of self-sufficiency . . . teaching them character lessons while supplying them with an important stage in their development” thereby serving as a “portal to the preindustrial world”; because “children needed to mimic human and cultural evolution” (p.74). Craft work included the use of wood, metal and leather as well as “dyeing, batik, stenciling, woodblock printing, pottery, basketry, weaving, and rugmaking” (p. 89).

What is important to take from this presentation concerning young adolescent learning styles, stages, and capacities is that learning is dynamic and cyclical and there are varied types of learners who need multiple ways to learn (Kellough & Kellough, 1999, p. 44). Being cognizant of what individuals are dealing with and considering in what ways they learn best may help when attempting to affect behavior; "knowing the developmental level of the child provides information about the most effective reinforcers" (Van Krevelen, 1972, p. 14) and "behavior that is reinforced tends to be repeated, whereas behavior that is not reinforced tends to be abandoned" (p. 13). Reinforcers satisfy needs, either biogenic (innate based) or psychogenic (socially/culturally based) and "can be *anything* that strengthens and leads to repetition of the behavior that preceded it" (p. 14). However, "behavior must occur before it can be reinforced, and the reinforcement must follow immediately" (p. 15). Since children of this age group are role-playing, or practicing by identification or association with adult roles, they exhibit multiple personalities for multiple situations and may in turn display positive behavior that can be reinforced (Van Krevelen, 1972). It takes an attentive adult to recognize and respond in time to reinforce the behavior. Moreover, one must be aware of how negative or unacceptable behavior is being reinforced.

In the process of living, the child builds up an idea of himself based on the way others react to him, their expectations for him, and the success he has had in influencing his environment. . . .He builds up ideas of behavior roles that seem to suit the expectations of individuals with whom he has frequent dealings in different situations. Then he tends to act consistently within these roles. . . .[He] sees himself as inattentive and stupid in school and plays the role. If he is to change his behavior, he must change his picture of himself. This can be accomplished by diligently reinforcing behaviors that will destroy the picture. In this way, behavior that is attentive, cooperative, and intelligent may be gradually shaped. When [he] changes his opinion of himself, he will tend to act consistently in this new role. The camp is particularly effective in shaping desired behavior because it represents a new situation to the child. If the other campers, wise in the ways of camping, depict good camp behavior, he will use them as models and fashion his own behavior accordingly. If his counselors make their expectations clear, he will probably attempt to fulfill them. (Van Krevelen, 1972, pp. 24-25)

Camp also provides a number of opportunities to reinforce self-reliance and self-confidence (Van Krevelen, 1972). Additionally, aspects of conditioning, where "two stimuli occurring close together in time become associated, and one acquires the ability to call forth the response originally attached to the other" (Van Krevelen, 1972, p. 18), can be applied such that pleasurable emotions are created and connected while at camp and can then be called upon when the camper returns home. Learning at camp is constantly taking place in all waking moments not just in activity periods; because of their age, young adolescents are eager to "acquire information and motor skills" making camp "a very effective teaching environment. Coupled with this is the fact that, if the camper is happy in camp, the

How can the built environment facilitate the multiple role-playing that occurs in young adolescence? As in the discussion on serving multiple types of play, there should be multiple types of spaces, including size, use, and location. The architecture should not seek to be everything to everyone by trying to "role-play" all the time. It is better served by creating layered spaces (Figure 45), that are flexible and multi-purposed, leaving latitude for the user to control and manipulate. When an individual or group can access the physical environment as a tool in their role-playing, the environment becomes another object that reflects, interprets, or suggests self.

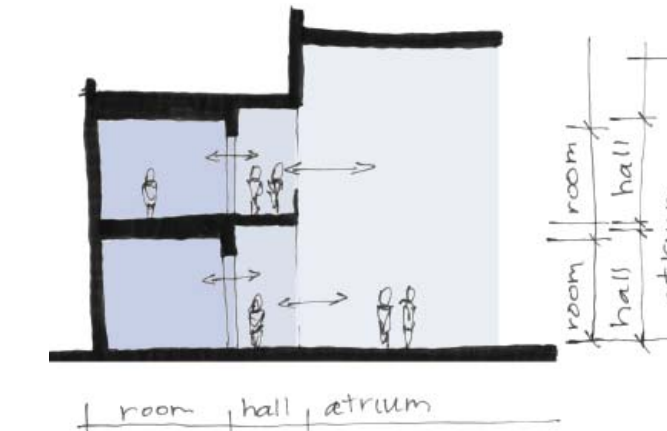


Figure 45. Diagram, Layered Spaces
(by author, 2010)

Section diagram showing how spaces can flow into one another, providing connections that don't interrupt the intimacy of the space while including multiple individuals at the same time.

Implementing building features or play components that offer a sense of risk and adventure (even simply by perception) that are accessible and navigable by any individual may increase one's self confidence and sense of accomplishment. For example: bridges at varying heights, uncommon steps or ladders, swings of varying sizes and among varying landscapes, or any other task that provides a new or different experience than is commonly found in the camper's home environment.

Positive experiences through stimuli that include commonalities between the home and camp environment may include: *music* that is played during an activity period where campers are successful at performing a task and feel confident; partaking in *food* in a group environment that manifests feelings of kinship, inclusion, and camaraderie; the *smell* of the woods when hiking or biking that elicits feelings of excitement, exploration, wonderment, and achievement.

power of emotional conditioning and secondary reinforcement is particularly potent” (Van Krevelen, 1972, p. 109). Difficulties in learning may occur when what has been learned previously interferes or inhibits later learning – known as negative transfer or proactive inhibition (pp. 69-71). Also, the principle of primacy may come into play where, “what is learned first results in the strongest or more long-lasting habit” (p. 72). Again, this necessitates the careful monitoring of campers, who now may be faced with disparities between what they know and what they must learn in order to exist in a new environment. Support must be present in order for the campers to develop new responses; “anything the [staff] can do to make the camp situation different from the situation in which the camper learned bad habits will be of benefit” (p. 81). Where time is limited to one or two weeks, “it is necessary to take advantage of every opportunity”; realizing that “in even as short a time as a week, [a camper] may have experiences that are impressive and have long-range effects on his [or her] self-image” (p. 31).

Camps offer a unique experience to facilitate self to other interactions because they require active participation but allow for times of reflection whereby the camper perceives their relationship to the group as well as being conscious of their own person (Van Krevelen, 1972). The camper has the ability to search for independence but can also see that the group, as a collection, becomes a whole greater than the sum of its parts (Van Krevelen, 1972). This makes the camper think about the free expression of their individual desires in relationship to the shared goals of the group and gives them the ability to make choices which can lead to feelings of accomplishment and increased confidence (Van Krevelen, 1972). Opportunity for self realization, or self actualization, the process by which an individual becomes aware of their own talents and abilities, is an important part of personal development. A good camp experience enhances this development while a poor one can interfere with development (Van Krevelen, 1972, p. 98).

Experiential Education

Experiential education (of which adventure education is a part) is a learning methodology where “experience serves as the central source for learning” (Gass & Priest, 1997, p. 142). It involves using direct and purposeful experiences, where the learner is actively engaged, with real and perceived risks that foster and motivate change and instill the want to retain change (Gass & Priest, 1997). The learning is personal, where the learner is held accountable, has present and future relevance and offers opportunities for synthesis and reflection (Gass & Priest, 1997, p. 137). On their website, the Association for Experiential Education explains that “learners are engaged intellectually, emotionally, socially, soulfully and/or physically. This involvement produces a perception that the learning task is authentic” (AEE, 2010).

Regardless of the type of camp, the staff are the “functional unit” in camp operations; “equipment and physical facilities can limit or promote activities” but no amount of equipment “can make up for the deficiencies” in staff. They are “the link between the goals of the camp and the camper” (Van Krevelen, 1972, p. 116). Richard Louv (2008) agrees that adults are an important part of the child-to-nature connection:

Most of all, children need adults who understand the relationship between boredom and creativity, adults willing to spend time in nature with kids, adults willing to set the stage so that kids can create their own play and enter nature through their own imaginations. (p. 170).

The built environment can facilitate individual to group understanding (as with role-playing) through the architecture and relationship of the building types that occupy the camp landscape. One individual building can, through a specific or significant type of design, be set apart from the remaining buildings. If this is a building that houses group or gathering functions, such as a dining hall, it can support the relationship between an individual (the building’s form) and a group (the building’s function). Likewise, if the remaining buildings have a similar design to one another, but a different, less significant design than the group building, the dichotomy of individual to group remains. The relationship can be broken down even further in individual buildings such as the cabins; though they may look like the other cabins, each internally allows for different types of gathering and the ability to individually personalize a space.

Discernment through direct experience supports the developmental and learning abilities of the young adolescent (as previously mentioned). Therefore, it would seem experiential education is a good fit for this age group, as simultaneously, this type of involvement includes feelings of achievement and success. However, to be ultimately effective, all parts of the learning process must be included, especially the synthesis and reflection portions. Providing areas that aid in this part of the learning process will be valuable in furthering camper’s transformations. Making these areas directly adjacent to where the direct experience happens is suggested.

However, it is important to note:

A child from the inner city may find the mere trauma attached to living out-of-doors so great that anxiety reactions related to his physical surroundings overwhelm him. He is likely to experience many fears: fears of going off into the woods alone, even as far as a wash house, fear of the water, fear of the sounds of nature (Van Krevelen, 1972, p. 104).

This is where the built environment can help support staff, by offering a certain level of comfort, suggesting a sense of place that is like “home” and engaging the mind of the camper by inspiring wonderment and awe through encouraging controlled risk and adventure.

Experiential learning is also based on the belief that change occurs when people are placed outside a position of comfort and into a *state of dissonance*, or the difference between the current situation and the desired future. In such a state, people are challenged by the adaptations necessary to reach a new state of equilibrium, yet are also supported through such processes. (Gass & Priest, 1997, p. 136)

The camp setting offers an opportunity for carrying out such experiences because it stands in contrast to the “home” environment with which the children are familiar. “The difference between these environments allows [children] to receive valuable information from two sources: the elements they overlook in their familiar environments and the elements present in the adventure environment that do not exist in their familiar environments” (Gass & Priest, 1997, p. 140). Experiential education and its counterpart adventure education offer youth the “chance to take risks” in a “supportive and productive environment” (Moore, 1990, p. 376). Such challenges can be pivotal for children and adolescents because it offers them the chance to do “something they thought they had no chance of accomplishing (376). The accomplishment of such tasks (ropes and obstacle courses, mountaineering, orienteering, group climbing, trust falls, etc.) “instills a sense of mastery or competence” in participants that “gives them insights into behaviors they can transfer to their home environments” (Gass & Priest, 1997, p. 141).

The Designed Relationship

Banning and Strange (2001) articulate that the human environment consists of the characteristics of a person, the characteristics of the environment, and includes four key components:

- Physical condition, design, and layout
- Characteristics of the people who inhabit them
- Organizational structures related to their purposes and goals
- Inhabitants’ collective perceptions or constructions of the context and culture of the setting (p. 5)

They also note three distinct ways in which the physical environment can be seen as influencing behavior. First, architectural determinism or “environmentalism” proposes that “behavior to a large extent is determined in a direct, casual, and mechanistic manner by the physical environment” (Ellen, 1982, as cited in Banning & Strange, 2001, p. 13). Second, architectural possibilism proposes that the physical environment passively affects behavior by suggesting but not restricting behavior (Banning & Strange, 2001, p. 13). Lastly, architectural probabilism proposes that thoughtfully constructed physical environments make certain behaviors more likely but not guaranteed (p. 14). It is the latter proposal with which this thesis investigation is concerned. Physical environments can provide clues

Can the built environment create a state of dissonance? If buildings, while suggesting some degree of former understanding, also suggest possibilities of risk, adventure, or otherwise challenge preconceptions, can they promote change? How exactly can the buildings stand in contrast to the home environment (i.e., not merely sitting in a new environment, the woods instead of the city)? Differences may occur in the exterior design (including the use of new materials, or common materials in a new way), siting of the building (placement relative to the landscape), or the inclusion of features that exemplify sustainable practices, fostering a new appreciation or consideration for the environment. For example: water harvesting through rainwater collection and roof runoff; natural ventilation systems to include evaporative cooling, stack and cross ventilation; plumbing systems that utilize composting and graywater; power from solar, wind, or water energy.

Alain de Botton (2007) - whose deliberations on architecture and its relationship to the human spirit are considered in the introduction of this thesis - states that, “good architecture is a suggestion about good behavior but nothing more nor less than that” (Philosophy Bites). This acknowledgement seems to align with architectural possibilism with a small inclination towards architectural probabilism. That is, architecture

offers merely a suggestion about behavior but can do no more than that and yet the suggestion it offers is about good behavior and no less than that. The quote reiterates both the power and the limits of architectural design and cautions the reader and the author about preconceived expectations and outcomes.

for behavior settings, functioning “like a nonverbal mnemonic device where encoded messages in the physical component of the behavioral setting serve to remind participants what behaviors are expected” (Rapaport, 1982, as cited in Banning & Strange, 2001, p. 19). The settings can be both supportive and antagonistic, thereby “making some behaviors more or less likely” (Banning & Strange, 2001, p. 20). Additionally, proxemics serve as a link between physical environments and behavior (p. 21); this includes spatial zones, or culturally acceptable spaces between people, the location of buildings to one another and the distance a person must travel or is willing to travel to reach a building or physical environment. Because people activate physical environments, they are inherently linked to, and have the ability to influence them. It makes sense, therefore, for the physical environment to allow, if possible, for the persons that will come into contact with it. Additionally the physical environment, if only programmatically, is formed to meet requirements of the client which may or may not take into account the user, especially if over time the two are not evaluated for compatibility. Behavior can also be facilitated by environments that include persons to membership in a setting. This is done by creating a sense of security and inclusion, including mechanisms for involvement and an experience of community through environments that have: human-scale, are flexible and provide connections visually and physically; involve history, tradition and culture; that show commonality or a form of interdependence among individuals; and allow for space in which to exist and carry out functions, including taking risks (Banning & Strange, 2001).

Why A Natural Setting Makes Sense

Taking into account what has been mentioned up to this point, it would seem that, like summer camps in the nineteenth century, the natural environment remains an opportune place to affect behavior, albeit in a similar yet different manner and for a different purpose than when they first began. Richard Louv, chairman of the Children & Nature Network, in his 2008 book *Last Child in the Woods*, cites Hoffman’s (1992) finding that “most transcendent childhood experiences happen in nature” (p. 294). Louv (2008) states that “direct experience in nature is the most important aspect of the camp experience”, exposing the opportunity for greatness through “self-confidence in situations of controlled risk” (p. 228). Indeed, it is through nature that one senses there is something beyond one’s own self (Louv, 2008). The ability to be absorbed in nature, to become a part of something greater, creates a long-lasting positive impression: “Immersion in the natural environment cuts to the chase, exposes the young directly and immediately to the very elements from which humans evolved: earth, water, air and other living kin” (Louv, 2008, p. 98). Louv (2008) writes the book to encourage others to seek what he calls the “third frontier” which is his answer to “nature-deficit disorder”, a non-clinical term he uses to describe the growing gap between how today’s children experience nature (or don’t experience nature; Figure 47) in relationship to previous generations. He relates attachment theory as a way to describe the loss that children will feel should they not make a meaningful and belonging relationship to nature, a feeling of detachment and loss of place

Proxemics (including adjacency studies; Figure 46) becomes a significant decision maker in how the camp layout develops. The distance between all the programmatic functions should be choreographed for function (storage areas should be easily accessible but remain visually camouflaged) as well as for narrative (there should be a celebrated progression: entry, drop off point, cabins or dining hall, main feature - the lake). The end result would ideally combine the necessities with the poetics to form a maintainable yet inspiring adventure.

In connection with proxemics is how the arrangements of buildings will reinforce community and membership in the setting. This is tangent to the ideas discussed earlier in the context of role-playing and self-to-group interaction: multiple spaces that invite interaction; ability to transpose self to environment; elements included for comfort; meeting the user’s needs. This is not only about the human component, but also the architecture component: How will the buildings sit next to each other? How will they be connected? Do aspects of city planning carry over into the design? Are there street-like spaces? Sidewalk spaces? Porch-like spaces? What are the defining aspects of interior versus exterior spaces or is it continuous?

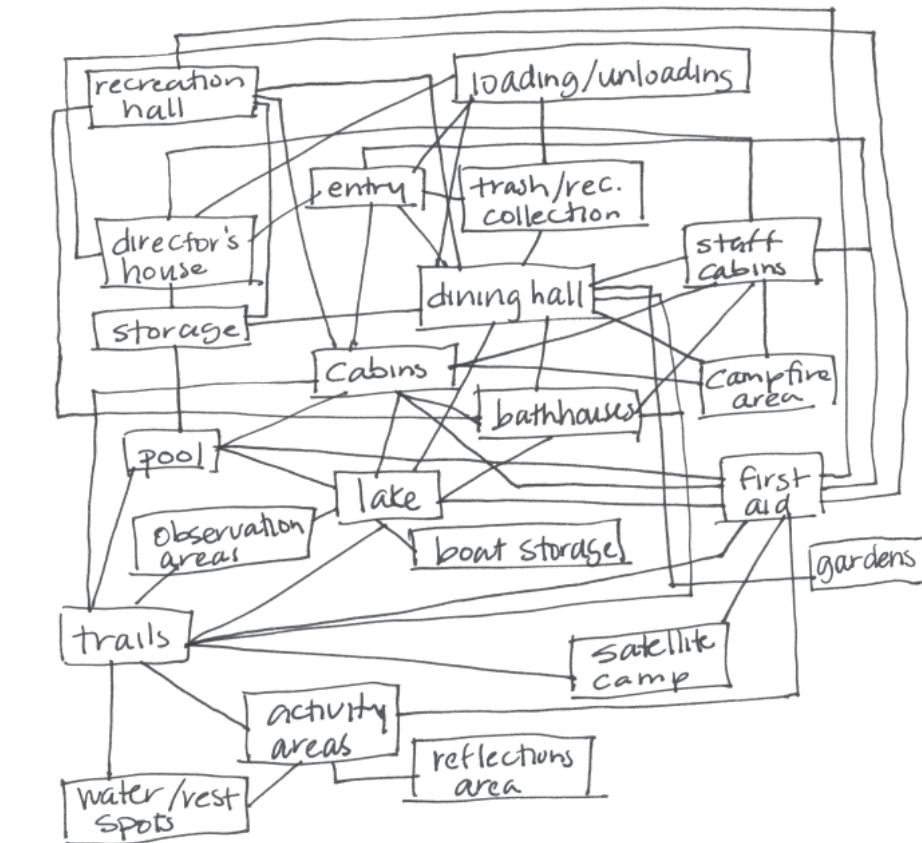


Figure 46. Adjacency Diagram (by author, 2010)

Louv (2008) provides a description that acknowledges the individual-to-group or self-to-other association in a different way than has been previously mentioned here. He points out that the natural environment, because of its long standing role in human evolution and transformation (used here as a metaphorical description rather than as a scientific concept), calls to an individual on a level beyond their singular person. This connection to the greater world may serve to ground a child in an atmosphere of security and confidence in accordance with his or her surroundings. As a new experience that includes learning a new way in which to see the world, direct exposure in the natural environment supports the mission and goals of the BGCM.



Figure 47. Cartoon
(<http://blogs.indystar.com/varvelblog/sketch062207.jpg>)

(pp. 158-159). He fears that “as the young spend less and less of their lives in natural surroundings, their senses narrow, physiologically and psychologically, and this reduces the richness of human experience” (Louv, 2008, p. 3). It is nature that “introduces children to the idea – to the *knowing* – that they are not alone in this world, and that realities and dimensions exist alongside their own” (p. 296). The visual environment “profoundly affects” physical and mental well-being (p. 46). Louv (2008) points to studies that show the symptoms of Attention Deficit Hyperactivity Disorder (ADHD) may be reduced upon exposure to nature (greener settings equal greater relief) and that “direct exposure to nature is essential for physical and emotional health”, improving “all children’s cognitive abilities and resistance to negative stresses and depression” (p.35).

An accumulating body of evidence supports the notion that natural environments provide restorative benefits. Following negative antecedents such as stress or attentional deficit, natural settings compared to built environments produce larger physiological changes toward relaxation, for example, in muscle tension and blood pressure, and larger reductions in negative feelings such as fear, anger, and sadness, and they effectively hold attention and produce higher levels of restorative experiences labeled *fascination*, *being away*, *coherence*, and *compatibility*. (Korpela, 2002, p. 367)

The natural environment also offers relief for children living in destructive homes or neighborhoods; “it serves as a blank slate upon which a child draws and reinterprets the culture’s fantasies” (Louv, 2008, p.7). The absence of billboards and television ads allows for self-identity apart from the marketed and materialistic images that are pervasive therein (Louv, 2008). American genius, he claims, is a product of nature nourishment; because of the country’s vast amount of physical space, large amounts of mental space exist for creativity and exploration. “What happens to the nation’s intrinsic creativity, and therefore, the health of our economy, when future generations are so restricted that they no longer have room to stretch” (Louv, 2008, p. 97)? Louv (2008) considers that lack of interest in the outdoors may be a reflection of media presentation, educating but “overwhelmingly dramatic and extreme” (p. 171). As a result children may exhibit “ecophobia”, a disconnection that inspires either idealization or fear (p. 134). Children may also associate the outdoors with violence or danger; “inner-city kids of all ethnic backgrounds show similar responses . . . some have never been to the mountains or the beach – or the zoo, even though it is in sight of their homes. . . .They associate nature with the neighborhood park, which is controlled by gangs” (p. 145). Louv (2008) believes that nature can help “instill instinctual confidence” by activating all the senses to their full capacity thereby providing “a child’s primal first line of defense” (p. 180). Frank Ashley (1990) in an article on minority involvement in adventure programs relates an interaction with a colleague to explain why there might be a lack of desire to participate in outdoor programs:

Some consideration should be given to what happens prior to camp. How is the camp presented to the members of the BGCM? How is the experience built up so that the perception *before* campers arrive to camp is one of excitement and adventure? Are there instructional meetings that present the realistic aspects of nature, that include combating aspects of media representations that lead to insecurity or fear?

The six clubhouses that comprise the largest part of the BGCM organization have access to parks or green spaces near each of their Memphis locations. Some clubhouses have adjacent greenspaces to their buildings, while others utilize nearby parks. In the majority of instances, the parks and greenspaces are easily accessible, relatively safe with good equipment. In the other instances, the parks are not as accessible, the equipment is old or outdated, and there are concerns about safety (BGCM, personal communication, April 13-14, 2010).

In the context of all that the natural environment offers, including what the following section on place preference introduces, it might be important to keep in mind the following statement; if only to remind the reader and the author that there are some individuals who may, even after their experience in the camp, and after all the planning based on the research contained in this thesis, will still prefer the home environment and the behaviors it may promote:

Most people like their home environment, however unattractive or dangerous it may appear to outsiders. They become attached not only to their companions, but to the scenery and to the way of life that the scenery dictates. (Ross, 1974, p. 153)

This does not negate what this thesis is trying to do, it only serves to point out what has been previously mentioned: in some instances, what has been learned first, in a previous situation, interferes with and may override, new learning.

'Why would someone raised in Brooklyn, New York, want to go out in the woods with mosquitoes, no bathroom, and no air conditioning? There's no logical reason to. Why sleep on the ground outside or risk breaking your neck climbing on the side of a mountain?' After explaining the concept of adventure to him he then asked, 'Why do you need adventure? Growing up black in Brooklyn was all the adventure you needed for the rest of your life!' This reaction is not uncommon for many minorities. Some individuals feel that they do not need these kinds of experiences as challenges. To many of them, being a minority and trying to survive the challenges of everyday life is an adventure in itself. (p. 372)

Louv (2008) may have been aware of this argument or thinking, as he provides a counterpoint:

Ideally, a child learns to negotiate both city and country. Mastering each environment builds the senses and common sense (p. 186). . . .In the city or suburb, much of our energy is spent blocking sounds and stimulants. . . .A child could gain the same kind of experience and ability to assess a dangerous environment in a city, riding a bus or a subway . . . [however] nature's life-instruction provides a mysterious and probably irreplaceable quality. . . .[The] kinesthetic original experience of risk-taking in the natural world is closer to the natural organic way we've learned for millennia . . . the other experiences don't reach as deeply. (p. 187)

Furthermore, Louv (2008) points to studies that show a link between public parks and recreation facilities to reductions in crime, specifically a reduction in juvenile delinquency (p. 179). Studies also show gains for at-risk youth involved in educational outdoor programs (Louv, 2008, p. 208). Louv (2008) makes the point that recreation programs such as summer camps are "godsend" for single parents, and that "a good summer program can literally mean survival for some children who live in rough neighborhoods" (p. 170). Perhaps though, it is not about the survival skills that may be learned in either the natural or the child's home environment, but instead it is about all the other positive aspects (as previously mentioned) that the natural environment supports, encourages, and enhances, or even about a new experience in and of itself.

Place Preference

Place preference studies show that "favorite places" have strong emotional attachments for children and that outdoor environments are among those places that hold significance for them (Korpela, 2002). Unlike other favorite places, though, outdoor spaces have a greater emotional significance relative to the actual time spent in them (Korpela, 2002, p. 363). Within the outdoor environment hiding places, lookout places, woods, and hills are attractive as special places (Korpela, 2002); children are "drawn to the rough edges of such parks, the ravines and rocky inclines, the natural vegetation" (Louv, 2008, p. 117). Adolescents value outdoor places that offer freedom and

By the conclusion that outdoor spaces hold greater significance in proportion to the little amount of time spent in them, this passage reinforces the idea that even in as short a time as a week change is possible. This can happen if a camper is able to locate a favorite place within the camp environment, use that place to build self-awareness, and call upon the favorite place in the home environment as a means to impart confidence, control, calm or any other positive feeling or behavior.

control; “they long for solitary places as well as places for interaction . . . [because] such settings are one of the best places to go for feeling better and getting things in perspective” (Korpela, 2002, p. 364). There is a direct connection between the individual and the choice of environment:

The development of place preferences is tied to the development of self-identity, needs of privacy, and social affiliations. Middle childhood, ages 6 to 11, is characterized by expansive local exploration, cooperation with others in exploring and in games, a self-identity determined by physical strength and dexterity, and creation of playhouses and forts in the nearby environment. . . .Place preferences during childhood and adolescence are assumed to provide support for the developing self-identity, the need for security, social attachments to caregivers and to the peer group, and the practice of social roles. (p. 365)

Also, there are variables that affect favorite place selection:

- Prior exposure to different environments
- Rural versus urban upbringing
- Parental restrictions on environmental exploration
- Vicarious familiarity with diverse environments through the media
- Peers’ preferences (p. 366)

Moreover, within an environment, choice may be a reflection of emotion. In a camp setting, it is suggested that campers “with higher levels of negative emotion” chose places that offer solitude, while “happier” campers chose social spaces with opportunities for interaction (p. 366). This suggests that adolescents “regulate their own development by selecting and shaping outer contexts”; the physical environment, the choice of the favorite place, regulates “the experience of self and emotion” (p. 367). The ability to control, or to possess a sense of control is what helps with stress and depression (Korpela, 2002). The ability to personalize a private space also helps children and adolescents by providing them “with tangible signs that they are unique and different from others” (Korpela, 2002, p. 369). Favorite places are a means to achieve the goals that people strive for: “cognitive integration and consistency, anxiety reduction, and self-esteem maintenance” (p. 370).

Place identity is fundamentally formed by the experiences and cognitions in places that have a role in a person’s emotion and self-regulation. Thus, place attachment is implicit in place identity. Attachments are formed to places that fulfill people’s emotional needs and enable them to develop and maintain their identities (p. 369).

The emphasis on creating playhouses, forts, intimate shelters and treehouses (Figures 48 & 49) as a way to explore and participate in the outdoors is a common theme in books such as Louv’s, that discuss the importance of the natural environment, as well as in camp planning books. Daniel Beard, one of the founders of the Boy Scouts in America states in his 1914 book, *Shelter, Shacks and Shanties*, that “the most important thing . . . is that a tree-house is always a source of delight to the young people” (2008, p. 76).

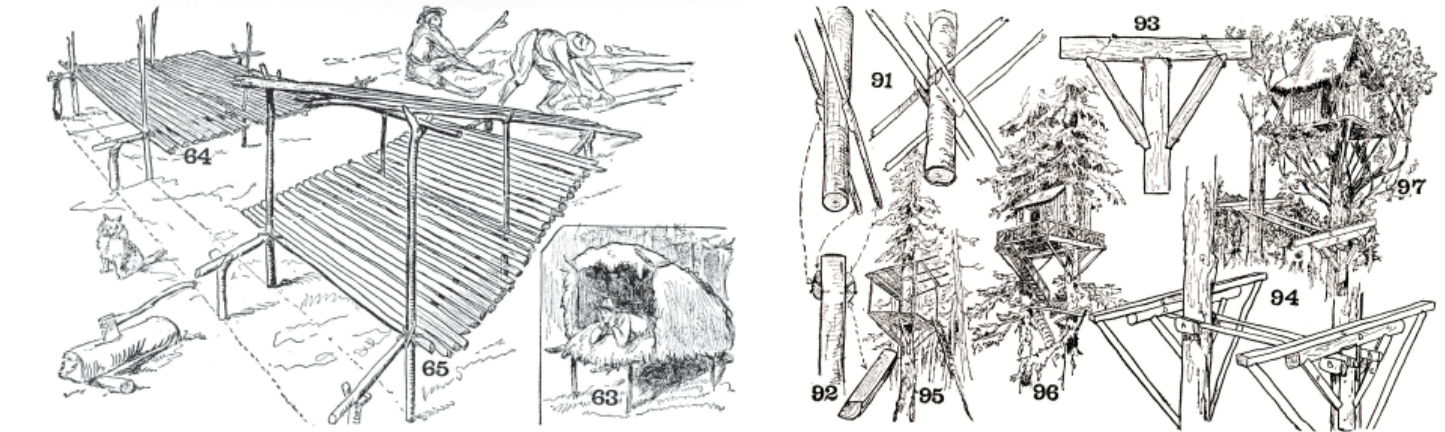


Figure 48. How to: A Simple Stilt Camp (Beard, 2008, p. 53)
Figure 49. How to: Tree-Top Houses (Beard, 2008, p. 73)

The plaques and flags, as mentioned earlier, in addition to camp rituals that require campers to originate cabin names, songs, or dances are all examples of personalization. Incorporating these objects into the design, (e.g., showcasing the flags at the entry point or hanging the plaques in the cabins and dining hall) is a reinforcement and acknowledgement of a camper’s ability to control or otherwise influence their environment. Furthermore, granting the campers the ability to individualize their space in cabins is important. This may be as simple as providing a dedicated space for storage that is reserved for each camper (which might include an area for a name plate, or a chalkboard, whiteboard or the like, where campers can add a personal touch).

The previous explanation underscores what Juhanni Pallasmaa (2005) believes is "the task of art and architecture"; to "reconstruct the experience of an undifferentiated interior world in which we are not mere spectators, but to which we inseparably belong" (p. 25). Indeed, the excerpt reaffirms the notion that there is an inherent, intimate link between an individual's internal world - their intellectual, psychological, and moral self - and their physical surroundings. Thoughtfully taking into consideration a person's characteristics - their developmental stage, learning capacities, etc. - while considering the characteristics of the environment of which they will inhabit - the history, setting, etc. - allows for a more holistic and user-centered design. In this way, architecture becomes "life-enhancing" because it addresses "all the senses simultaneously" and fuses the "image of self" with one's "experience of the world" (p. 11). It is the "essential mental task" of architecture to accommodate and integrate the "experiences of being-in-the-world", thereby strengthening one's "sense of reality and self" (p. 11).

The conclusory paragraph places a significant task on the master plan design: to facilitate young adolescent development (all aspects) by creating an environment (the integration of the natural and built) that allows individuals to recognize the greatest of themselves in their surroundings. By taking into account all that has been presented and discussed in the Research section (basis for design) and comparing it to the Background information (rules for design) the designer should be able to informatively make design decisions that support the design task. In this way, the design will back the mission and goals of the BGCM and provide an experience to its members that will reinforce good behaviors that can then be carried throughout their youth and into adulthood. Additionally, the care and deliberate thought of planning an environment to specifically facilitate member's growth will reinforce the self-worth and self-confidence of those that come into contact with it and should in turn create a reciprocal sense of care for the environment.



Figure 50. Aerial Map of Camp Phoenix (aerial photograph retrieved from Google maps)

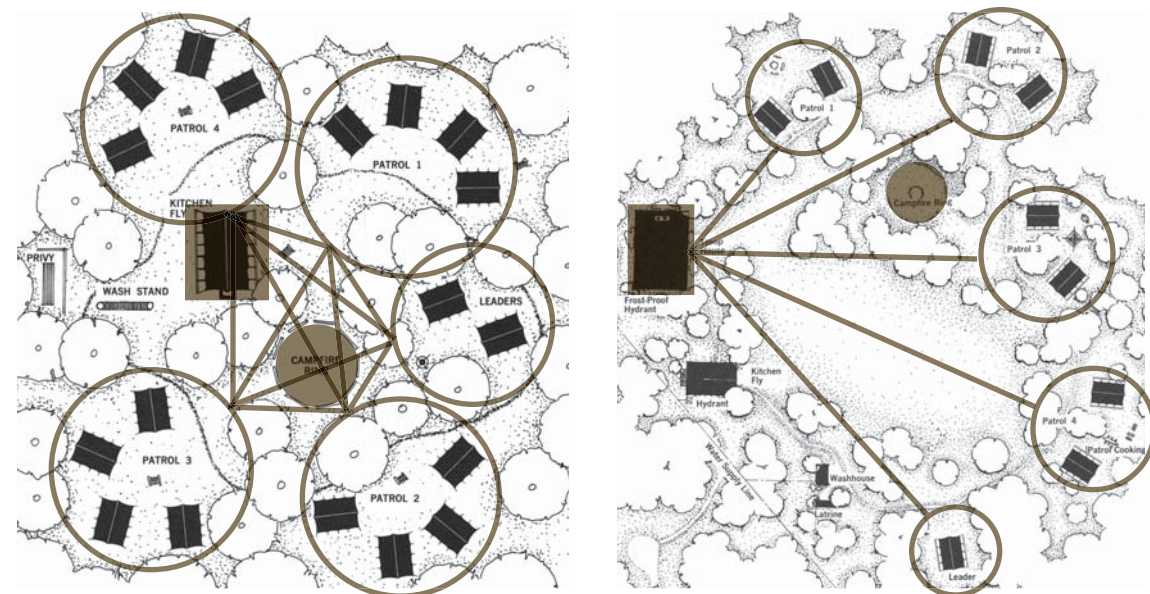


Figure 51. Troop Camp, Building Placement Diagram 1 (diagram by author, 2010; image from Salomon, 1948, p. 34)

Figure 52. Troop Camp, Building Placement Diagram 2 (diagram by author, 2010; image from Salomon, 1948, p. 14)

DESIGN PROPOSAL

Process Scheme One

Figure 53 shows the first process scheme for the Camp Phoenix (Figure 50) master plan. In this proposal, the dining room is renovated, or replaced with a new structure, but remains in its current location. Attached with a continuous boardwalk are rows of small cabins and bathhouses under a shared roof (Figure 54), forming a complex that resembles an interior street with sidewalks and houses. The interior street serves as a controlled play space where campers can engage in multiple forms of play and still be supervised. The meadow area becomes a satellite camp that utilizes the existing cabins and remains as a more traditional camping experience. The idea is that campers would be welcomed to the initial complex as a “home base.” Their daily routines would take them out into the adjacent woods and down to the lake, but at days end they would return to “home” where the gathering/reflection space would be the campfire area; accessible by way of the boardwalk. Throughout the week, campers would become familiar and comfortable with the new environment and would feel able to take the “risk” of staying overnight at the satellite camp as a finale experience.

To negotiate the tedious walk to the lake, interactive stations are placed along the path at convenient distances. These could be informal activity areas that provide shade, water, a place to sit, and a “look for” information or game board (e.g., Can you locate an example of these native plants or animals? or simply, local plant and animal life identifiers, etc.). The walk would also be bound by edge conditions, or the mediating low-scale vegetation that transitions grass area to woods, where animals forage. In this way, the length of the walk is broken by activity - learning through play.

Provided at the lake are shade stations, restrooms, boat storage and, within view and sound, the pool. Swimming tests could be conducted in the pool as could initial canoe or boating demonstrations. By being adjacent to the lake, campers could make a connection between the small body of water (the pool) to the large body of water (the lake) and transfer what they learn in the pool to the lake. The plan also suggests a sweeping dock that protects the swimming area and provides a partial boundary (Figure 55). However, because of the changing water levels, the dock would need to be carefully designed with floating levels, hinging connections and of a length to be usable; most likely a permanent structure is not feasible.

This design scheme is a direct response to the concern for security and enclosure. It is based on the idea that by reflecting the density of an urban environment, the camper will feel an immediate comfort upon arrival and will be more willing to adventure and take risks in the new environment.

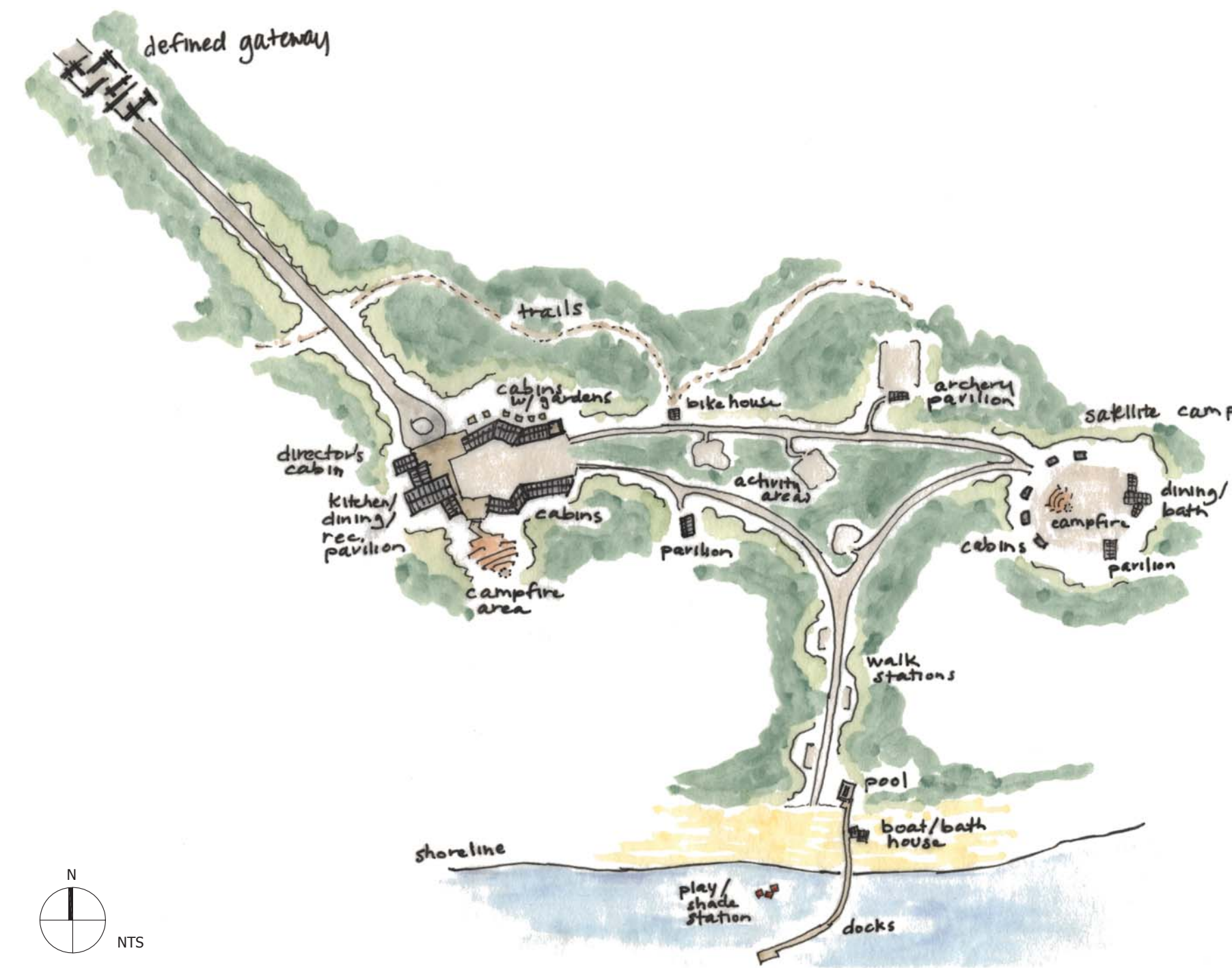


Figure 53. Process Scheme One (by author, 2010)

While this scheme aims to form enclosure, the central complex may be too insular, becoming restrictive rather than integrative.

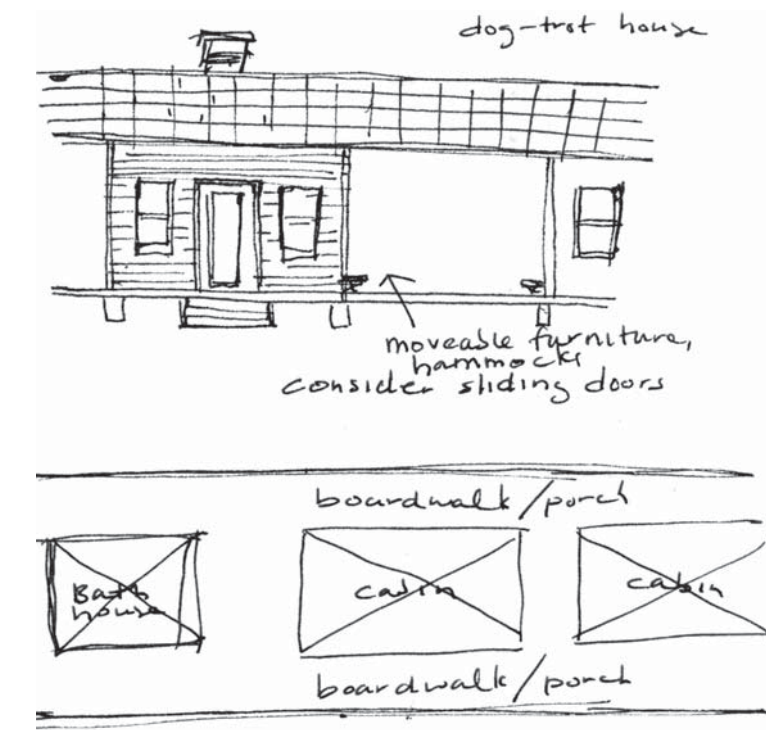


Figure 54. Early Cabin Sketch, Elevation and Plan, NTS (by author, 2010)

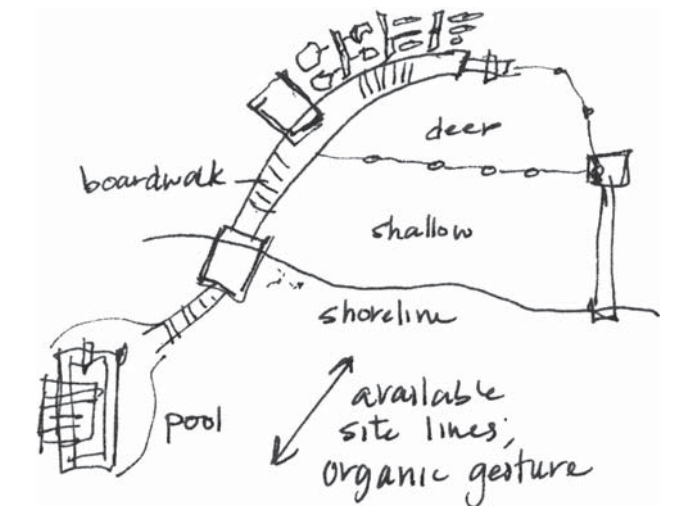


Figure 55. Early Dock Sketch, Plan, NTS (by author, 2010)

Process Scheme Two

Figure 57 shows the second process scheme for the Camp Phoenix master plan. In this proposal, the complex presented in Scheme 1 opens up and stretches the cabin arms outward, embracing play areas that now face the woods. The dining hall becomes a mediator between the cabin groups, acting as a control point for cabins that serve girls on one side, boys on the other, or younger children on one side, older children on the other. The campfire area is on axis with the dining hall and provides a convenient gathering area. In this location, it is accessible during the day and at night. All paths of entrance or departure are generated from the complex.

Activity areas are placed along the path to the satellite camp (which provides the same service as proposed in Scheme 1) and are isolated to provide for focused attention and reflection at each event.

A new path is made connecting the complex to the swimming area, shortening the travel distance. The pool, boat house, and bathhouse are located along this path, adjacent to the lake as in Scheme 1. Also, as in Scheme 1, shade stations and a long dock are located at the waterfront.

This design scheme is an adaptation of the previous one that seeks to better integrate the dining-living complex into the surrounding environment and provide more separation between the cabin groups.

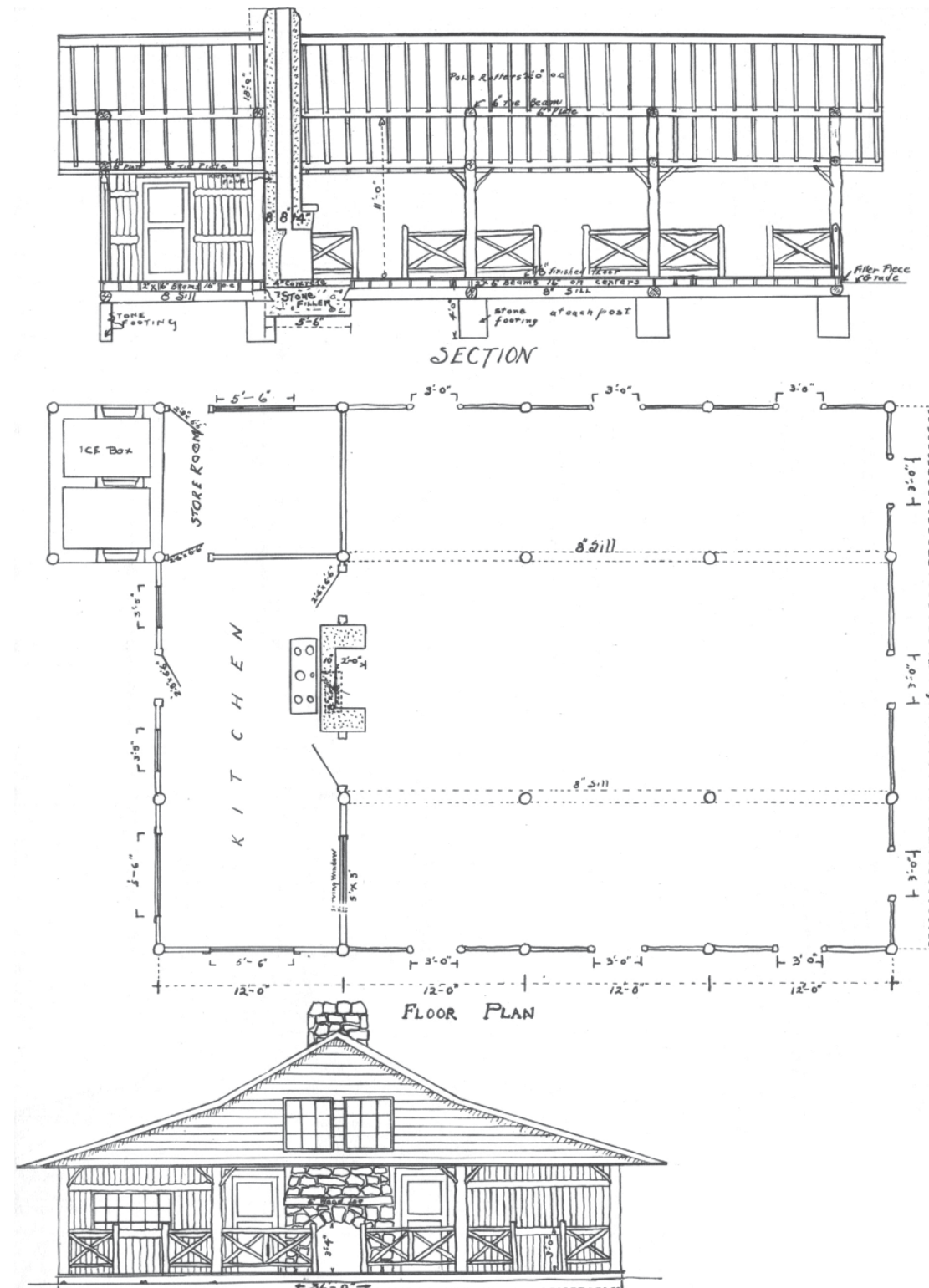


Figure 56. Dining Hall Precedent 1
("Boy Scouts", 1927)



Figure 57. Process Scheme Two
(by author, 2010)

This scheme, while better integrated into the environment, still lacks connection.



Figure 58. Nature Center, Exterior
(Ward, 2009)

Figure 59. Nature Center, Exterior Overlook
(Ward, 2009)

Case Study: Mercer Slough Environmental Education Center in Bellevue, WA.

- immerses visitors in natural surroundings with little impact to environment by elevating above the forest floor and threading through open spaces in forest canopy
- "the kid inside everybody enjoys a treehouse"
- boardwalks connect buildings and serve as overlooks and teaching spaces
- light color reflective roofs and extensive tree cover shade and cool the air surrounding the buildings thereby serving as "air-conditioners" (Ward, 2009)

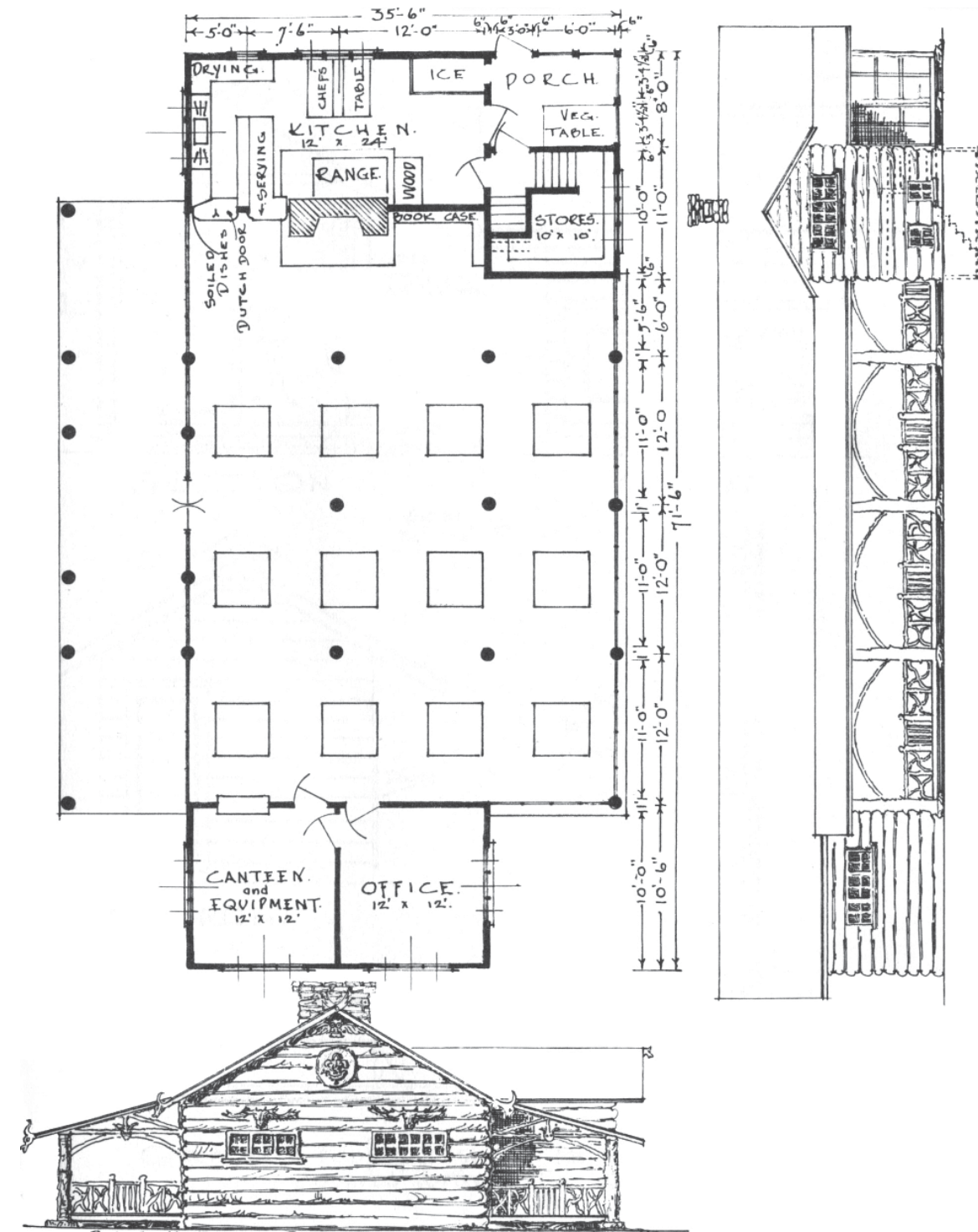


Figure 60. Dining Hall Precedent 2
("Boy Scouts", 1927)

Process Scheme Three

Figure 61 shows the third process scheme for the Camp Phoenix master plan. In this proposal, the ideas from the two previous schemes are transferred onto existing site conditions. The western sets of cabins are renovated and connected by a raised and covered boardwalk. The campfire area is enlarged with permanent seating and a fixed fire pit. The dining hall is renovated, but remains in place. The meadow remains the same as does the path to the archery area. The path to the lake incorporates the interactive or rest stations proposed in Scheme 1. In addition, activity alcoves are positioned incrementally along the path. The pool, pool pavilion, bathhouse and boathouse are located on a rise that looks out over the lake. Still visually connected, this group of buildings allows for a secondary gathering area closer to the lake. The swimming area is designated by moveable floating docks instead of a permanent structure.

This scheme serves as a transitional plan and suggests how the camp might change through phases. Consideration would need to be given to connecting the bathhouses with the cabins and proposing a second, more direct route from the western cabins to the lake.

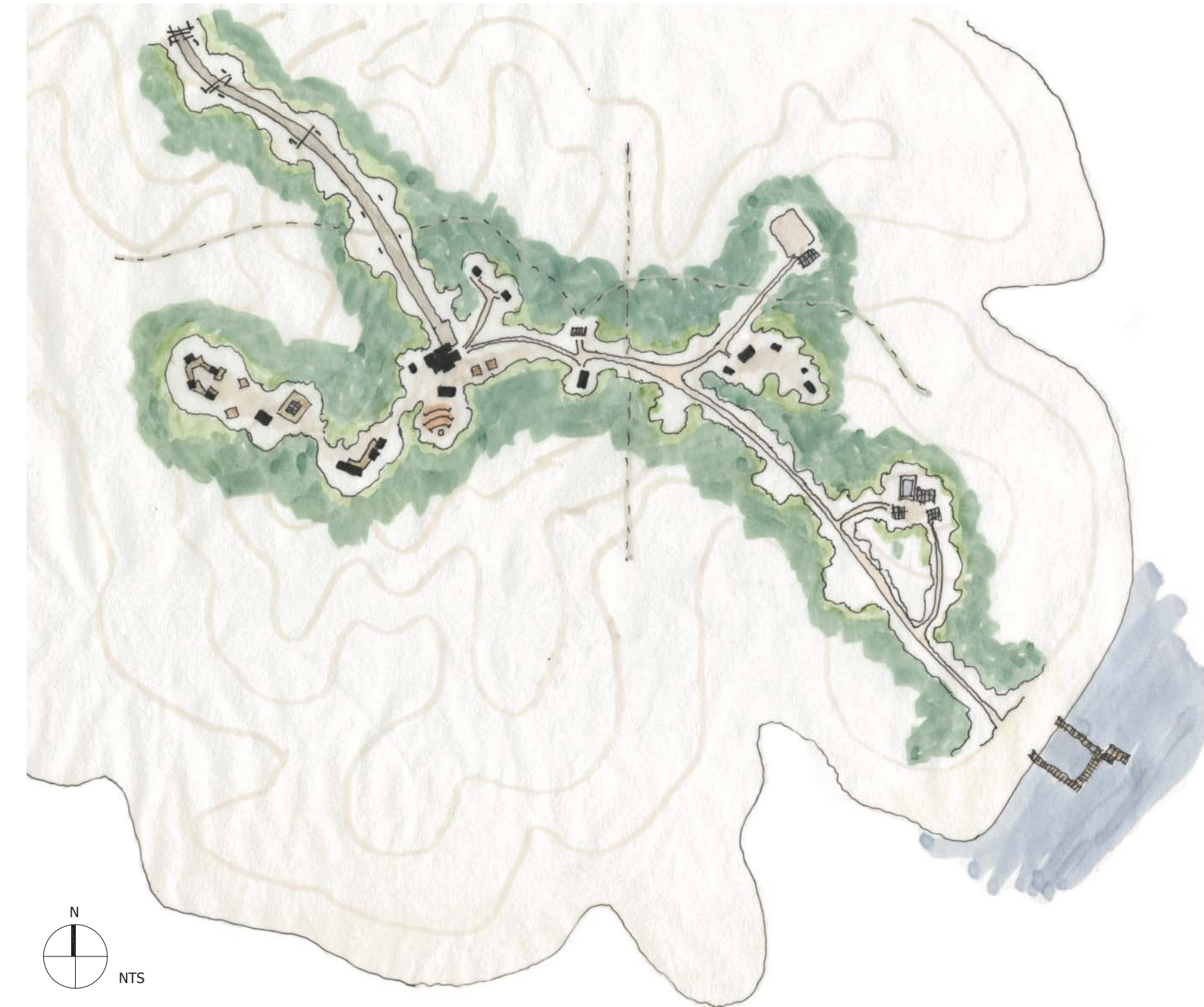


Figure 61. Process Scheme Three
(by author, 2010)



Figure 62. Eco-Restroom, Exterior
(Grant, 2009)
Figure 63. Eco-Restroom, Interior
(Grant, 2009)

Case Study: Wildlife Conservation Society's Eco-Restroom in Bronx, NY.

- "features a Clivus Multrum composting toilet system that conserves water and prevents waste from becoming a source of pollution" by "using a mixture of biocompatible soap and water" for foam-flush toilets" (which uses "99% less water than a conventional toilet")
- "structure's footprint covers a site previously occupied by a pre-existing" restroom
- graywater garden "provides biofiltration for wastewater from the hand-washing sinks"
- design incorporates skylights to bring in natural light and features "high recycled content" materials such as the slate floor (Grant, 2009)



Figure 64. Dining Hall Precedent 3 (Salomon, 1948, p. 116)

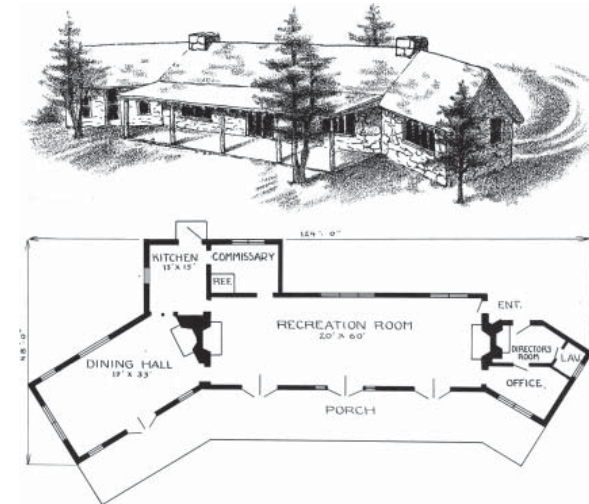


Figure 65. Dining Hall Precedent 4 ("Camp Fire Girls", 1946, p. 17)

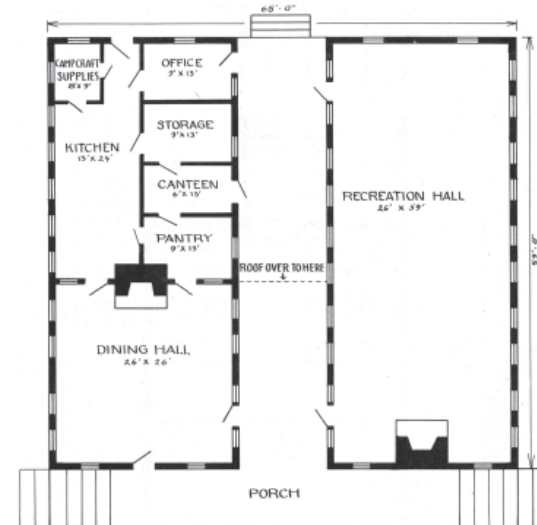


Figure 66. Dining Hall Precedent 5 ("Camp Fire Girls", 1946, p. 13)

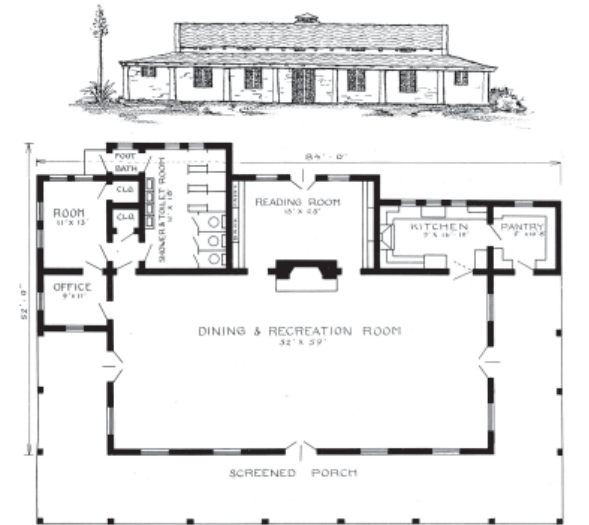


Figure 67. Dining Hall Precedent 6 ("Camp Fire Girls", 1946, p. 15)

Process Scheme Four

Figure 68 shows the fourth process scheme for the Camp Phoenix master plan. In this proposal, there is a major shift, with the buildings - including the dining hall and cabins - pushed towards the lake. The current dining hall becomes a recreation hall connected to the bathhouse. The western cabins and bathhouse, the buildings at the meadows, and the director's house and TLC cabin are removed. The path to the lake, moving south, includes storage buildings for bikes, the current pavilion, an arts and crafts cabin, the camper cabins, the campfire area, the dining hall and the pool area.

As in Scheme 1, the cabins are positioned across from each other to form a street. The cabins shown in this plan are elevated off the ground (Figure 69) and include bridges that cross over the path. At the end of the northern cabin structures are bathhouses that serve to divide the two groupings. Also in between the two cabin groupings in the campfire area which leads to the dining hall and pool. Those two, the dining hall and pool, occupy the high point.

This scheme reintroduces the satellite camp, but this time it is a grouping of tent platforms (Figures 75-77) positioned on a western ridge. The platforms are located in a clearing under a high canopy of pine trees. This scheme, like the previous ones, also incorporates the idea of a gateway and a series of portals/thresholds that announce the campsite.



Figure 68. Process Scheme Four (by author, 2010)

This scheme capitalizes on the asset of the lake by positioning buildings closer to the swimming area.

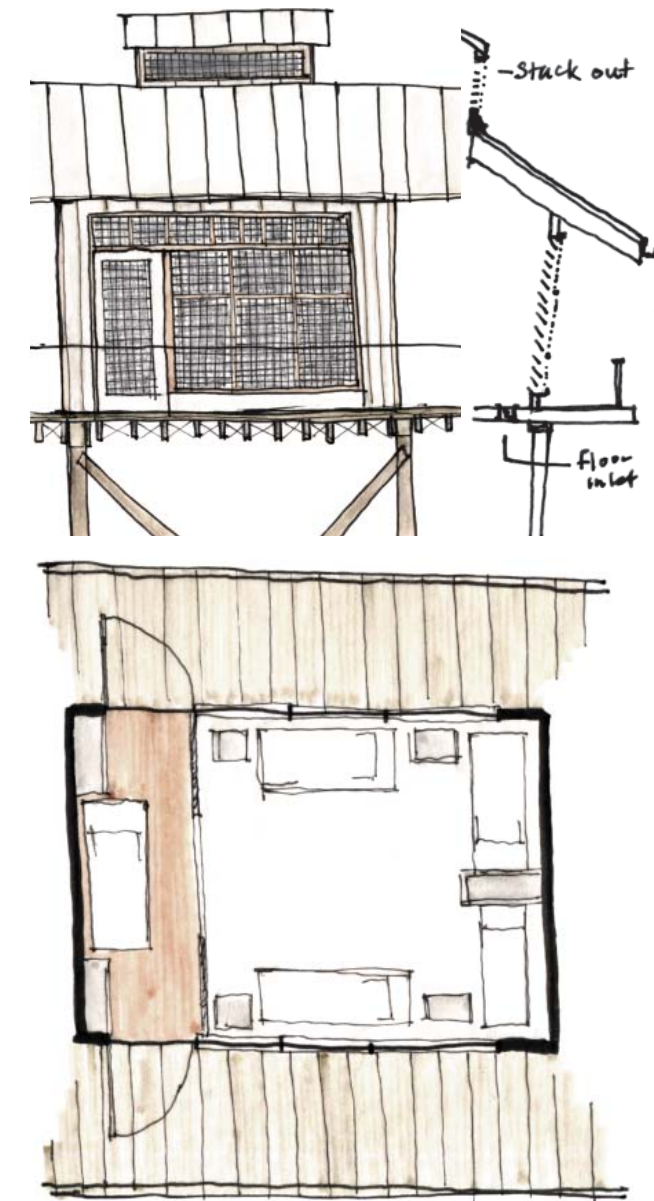


Figure 69. Cabin Sketch - Elevation, Section, Plan (by author, 2009)

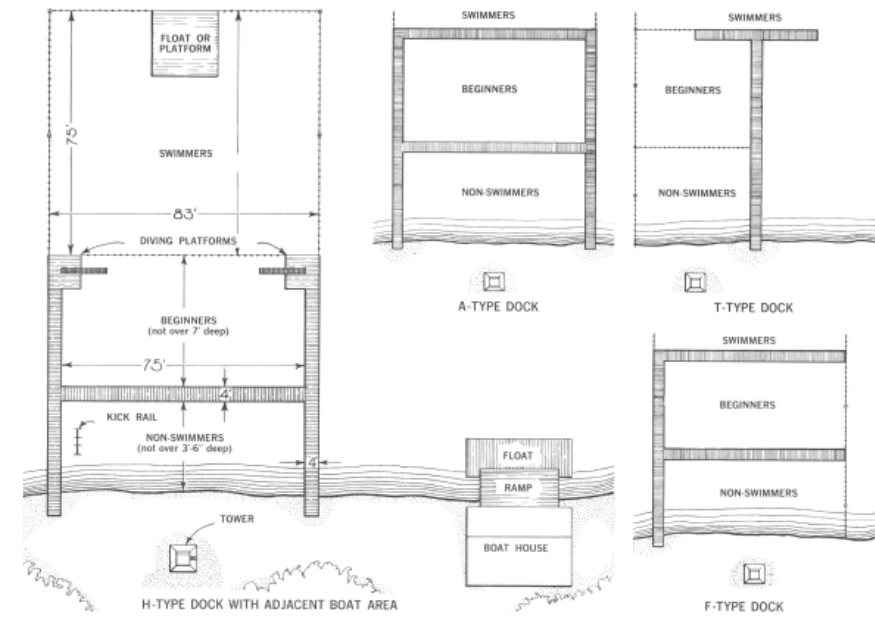


Figure 70. Dock Precedent
(Salomon, 1948, p. 134)

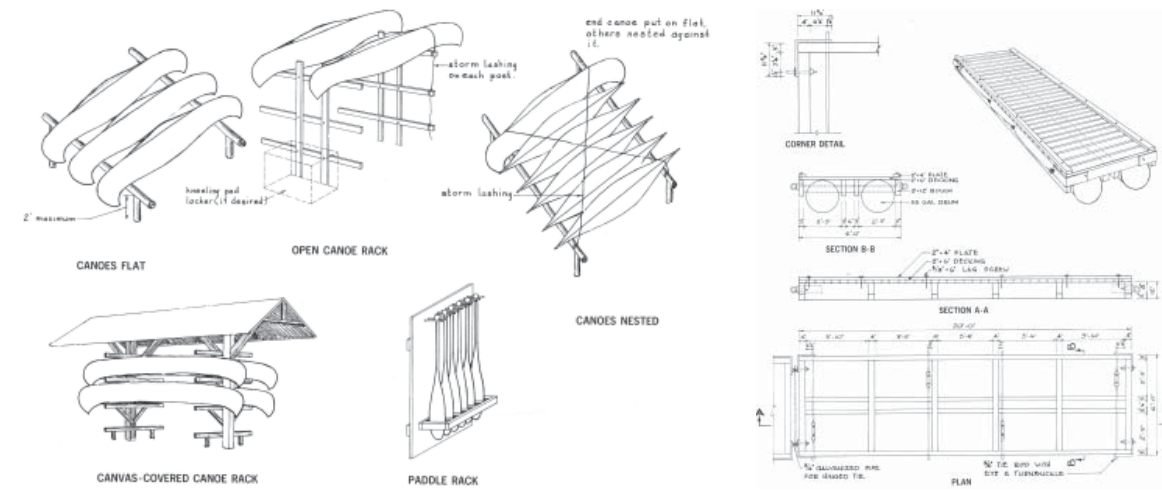


Figure 71. Canoe Storage Precedent
(Salomon, 1948, p. 140)

Figure 72. Floating Pier Precedent
(Salomon, 1948, p. 137)

Process Scheme Five

Figure 73 shows the fifth process scheme for the Camp Phoenix master plan. This proposal is a refinement of Scheme 4, incorporating an existing secondary swimming area. Modifications on this plan were developed from site visits. In this plan, the Camp Director's house is sited at the point of entry, as is a hiking/biking trail. The current dining hall becomes a less significant building in this plan, yet still remains, as do some of the other buildings that the previous scheme omitted.

Along the path to the secondary swimming area is a rest station and activity areas that contain a team climbing wall and a ropes course. The archery area remains as previously designated.

In this plan, the pool shifts to the open area of the meadows, and the campfire shifts to become a node, the connection point for various paths. There are only two sets of connected cabins, but they remain across from each other, without a bridge. The boardwalk shifts from being the container for the cabins to merely a connection that carries through each cabin. The bathhouses are moved to the dining hall, which still rests on the high point.

At the lake front, a line of floating docks is shown. These docks are connected to the pilings that are currently in the water. To the west of that is a small campfire area that may be used at night. From there a path continues to a marshy area where campers may go to listen to bullfrogs croaking in the evening.

This plan also incorporates clearings that might be used for play or reflection. Where the western cabins are currently located are two clearings, and two additional clearings are shown to the south under the tree canopy.

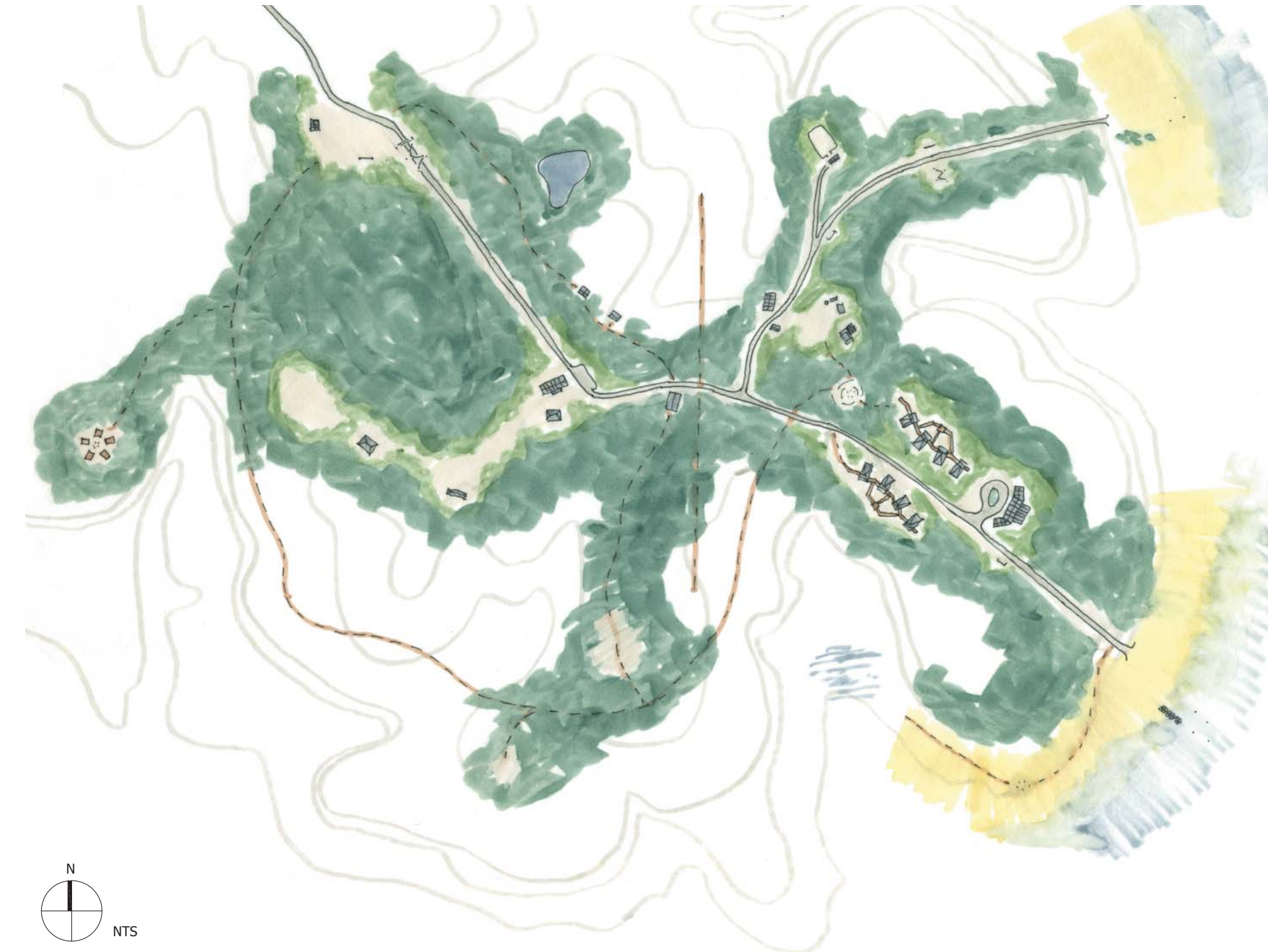


Figure 73. Process Scheme Five
(by author, 2010)



Figure 74. Canopy Walk
(Paul Warchol, cited in Bernard, 2010)

Case Study: Morris Arboretum, University of Pennsylvania, Philadelphia, PA.

- "sought to attract a younger audience, but getting kids excited about trees is no easy feat. However, focus groups revealed that intersecting elements of risk and danger pique children's interest, and a canopy walk proved the ideal solution"
- "ADA-accessible 450-foot walkway" where "trees guide the form of the canopy walk"
- "views shift with the seasons; trees form a solid wall in the summer, but winter brings clear perspectives of the valley and creek beyond"
- minimized pilings (supports) to "micropiles", 6-inch-diameter pipes driven as much as 100 feet into the earth"
- to protect the trees during construction, "protective wood slat casings were installed" and "extensive layers of mulch with stabilizing fabric insulated many of the roots" (Bernard, 2010)

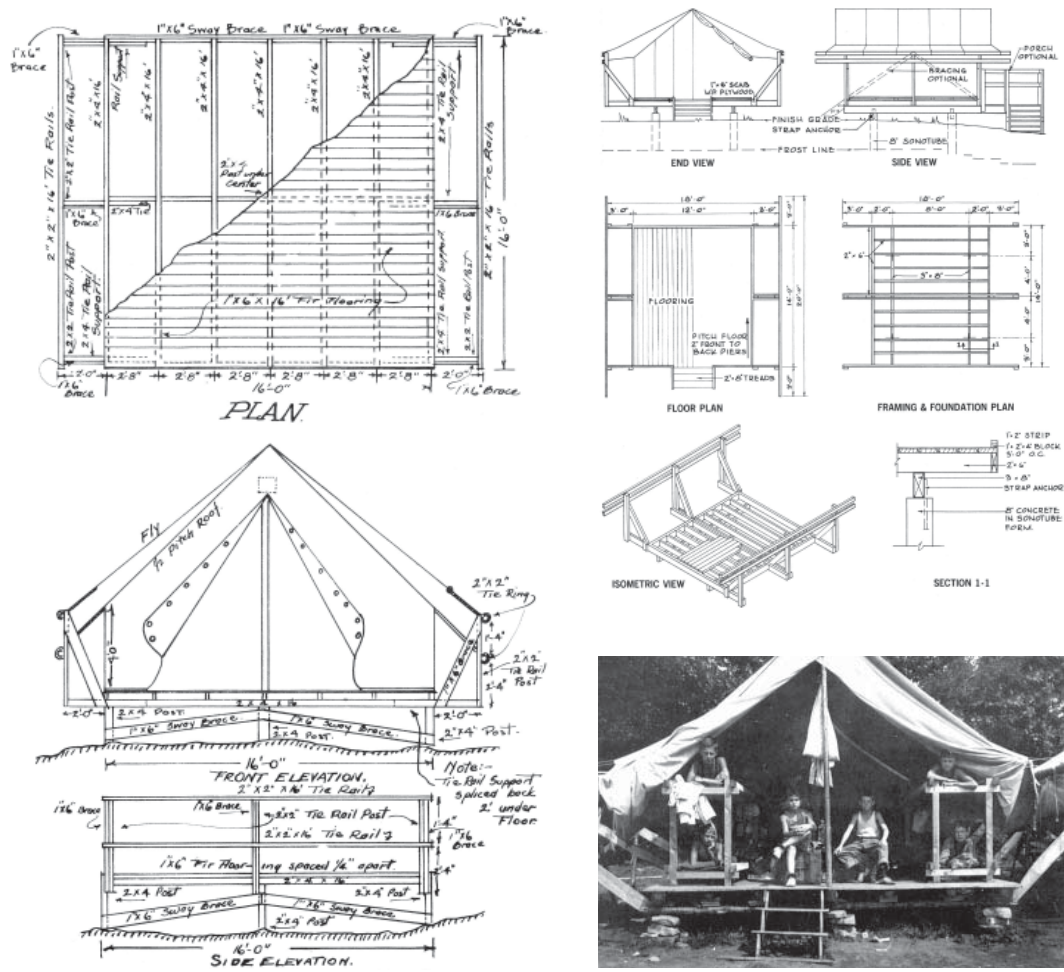


Figure 75. Tent Platform Precedent 1 ("Boy Scouts", 1927)
 Figure 76. Tent Platform Precedent 2 (Salomon, 1948, p. 67)
 Figure 77. Example of Tent Platform (Van Slyck, 2006, p. 100)



Figure 78. Shower House Precedent ("Camp Fire Girls", 1948, p. 47)

Process Scheme Six

Figure 79 shows the sixth process scheme for the Camp Phoenix master plan. This proposal is a variation of Scheme 5 that suggests moving one of the cabin groups to the west in a clearing. The campfire shifts to be the meeting point between the two groups. Positioning the cabins apart allows one group to be more adventurous. (Younger campers may prefer to be in the cabins that are closest to the dining hall.)

Process Scheme Seven

Figure 80 shows the seventh and final process scheme for the Camp Phoenix master plan. This proposal is another version of Scheme 5, whereby the secondary swimming area becomes the primary swimming area. In this scheme, the cabins shift to the path of the new swimming area while the dining hall remains. The activity areas shift to the western clearing. The new site for the cabins is somewhat flatter than the previous sites. In this plan, more than any other, the built area is stretched across much of the site.



Figure 79. Process Scheme Six (by author, 2010)



Figure 80. Process Scheme Seven (by author, 2010)

Proposed Master Plan

Figure 81 shows the proposed master plan for Camp Phoenix - a compilation of the seven previous schemes, the information provided by the BGCM and the research shown herein. Each identification below is followed by a description that details qualitative aspects of the building, place or object. The description is followed by categories to which the building, place or object can be ascribed.

- 1. Camp Director's House:** locating the house at the point of entry allows the director to monitor vehicles coming onto the site (functional; programmatic)
- 2. Gateway: (Figure 82-83)** celebrating the point of entry as a threshold into camp and the path to new experiences; signs may contain words describing positive characteristics, paintings done by campers, or other memorabilia from past campers that speaks to tradition and offers something for returning campers to look for; emphasis is placed on the arrival to camp (experiential learning; history; tradition)
- 3. Renovated Recreation Center and Bathhouse:** renovating existing dining hall to become indoor recreation center; to include evaporative cooling towers w/fan assist, skylights, monitors or light wells and other possible solutions to increase natural light and improve natural ventilation; space to include office area; may include nurse's station; kitchen, laundry and cooler to remain; loading dock to remain here, check for ample storage as this will serve as distribution area for camp; improvements include porte cochere attachment to renovated bathhouse (functional; programmatic; history; thermal)
- 4. Renovated Cabins and Bathhouse for Staff: (Figure 88)** renovations to cabins include improvements to screen/window system, addition of porch, increased natural light, skylight repair or lantern/stack ventilation, rodent protection, improved bedding and storage; bathhouse to be renovated to increase privacy, natural light and ventilation; buildings may also be used for camper activities, nurse's station or storage (functional; programmatic; history; thermal)
- 5. Meadows Play Field and Nature Pavilion:** maintain existing buildings and open space for current use (functional; programmatic; history; play; place preference)
- 6. Archery Pavilion:** maintain existing archery area with new shade pavilion to include storage for archery equipment (functional; programmatic; history; experiential learning; developmental; play)
- 7. Water Station: (Figure 84)** implement water stations at these locations to include a simple shading device, platform for water dispenser and seating; may also include a misting or fan system similar to beach buggy (functional; thermal)
- 8. Trust Platform:** maintain and add to existing structure to implement multiple platforms for trust fall; remote/ distant location allows for group focus without distraction (experiential learning; developmental; play)
- 9. Adventure/Ropes Course:** install low or high ropes course, climbing wall, and/ or other individual/team building equipment; remote/ distant location allows for group focus without distraction (experiential learning; developmental; play)
- 10. Secondary Swimming Area:** maintain previous swimming area including poles for floating docks; this area may provide more beach with less rocky hazards if water level is acceptable, but view and water depth are not as appealing as primary beach access (functional; history)
- 11. Obstacle Course:** maintain and repair as needed at current site, add additional obstacles along path (former county road) (experiential learning; developmental; play)
- 12. Elevated Camper Cabins: (Figure 96-99, 109, 124-126)** build and install new cabin design including attached walkways, necessary access paths, stairs, etc.; incorporate performance platforms, gathering spaces, etc. (programmatic; tradition; thermal; experiential learning; developmental; play; place preference)

Additional improvements include: low-level lighting in areas for safety or security (solar-powered if possible); a public-address system that can be heard throughout the camp; and ample storage facilities located across camp.

- 13. Meditation/Reflection Areas:** designated for group or individual reflection, gathering, storytelling, play, etc. for topography (vertical platforms), space clear of brush yet beneath tree canopy, relationship to lake or other structures; to include edge conditions for nature/ animal observations; may include seating elements (natural - large rocks) or observation towers; may also be ideal location for campfire area or secondary campfire areas (experiential learning; developmental; play; place preference)
- 14. Dining Hall: (Figure 89-91)** build new dining facility with attached kitchen, eating porch with fire pit, small office/sleeping area for director, staff, cook, or guest, necessary storage and bathhouse; nurse's station may be located here; to be designed with ample natural light, cross and stack ventilation and views to lake (programmatic; tradition; thermal)
- 15. Campfire Area:** install fire pit and seat surrounds; at this location, seating to be built into existing topography; incorporates view of lake (programmatic; tradition; thermal; play; place preference)
- 16. Boat Barn:** build storage building for canoes, paddle boats, fishing boat, all-terrain vehicles, beach buggy, etc. located just above flood/building line for easy access to water/swimming area (functional; programmatic)
- 17. Mobile Beach Buggy: (Figure 85-86)** build platform on trailer chassis or similar; to include life-guard seat, shading; may include misting-fan/ cooling system powered by solar panels (functional; programmatic; thermal)
- 18. Primary Swimming Area:** maintain existing area including pilings for floating docks; allow for campfire area (may use large shale pieces for seating), make/clear path for evening/night travel to mud flats/ravine or for star gazing; sharp changes in water elevation make permanent fixtures (docks, swimming dividers and platforms, life guarding stations, boat house) improbable; consider providing removable decking top for floating docks, for comfort in use as jumping, viewing, boat loading/unloading platform (functional; programmatic; tradition; thermal; experiential learning; developmental; play; place preference)
- 19. Satellite Camp:** build tent platforms or designate area for tent locations on ridge; site specified is remote to the rest of camp and offers ample clear space under a high canopy (history; tradition; thermal; experiential learning; play)
- 20. Bike/Hiking Trails:** maintain existing natural paths for biking and hiking; create edge conditions for nature/animal observations (programmatic; history; tradition; thermal; experiential learning; developmental)
- 21. Experiential/Night Trail: (Figure 87)** these paths are designated by loose gravel or similar type paving (consider using shale rocks from beach as border) and include plantings with distinct smells; this is meant to be a path that can be explored with all senses, such that it can be navigated at night with low or no light; a person may depend on the sound of the rocks under their feet, the feel of different stones or the certain smell of a flower or plant (honeysuckle, jasmine, wisteria, wild roses, etc., something common to the home environment) to guide them along the way (experiential learning; developmental; play; place preference)
- 22. Pool:** likely the last piece of program to be implemented; ideally located, both visually and audibly, within range of the lake, enabling campers to make a connection between the two bodies of water; a secondary location, because of its relatively flat topography, may be the meadows area (programmatic; thermal; developmental; play; place preference)



Figure 81. Camp Phoenix Master Plan
(by author, 2010)



Figure 82. Camp Phoenix Entry
(by author, 2010)



Figure 83. Camp Phoenix Gateway
(by author, 2010)

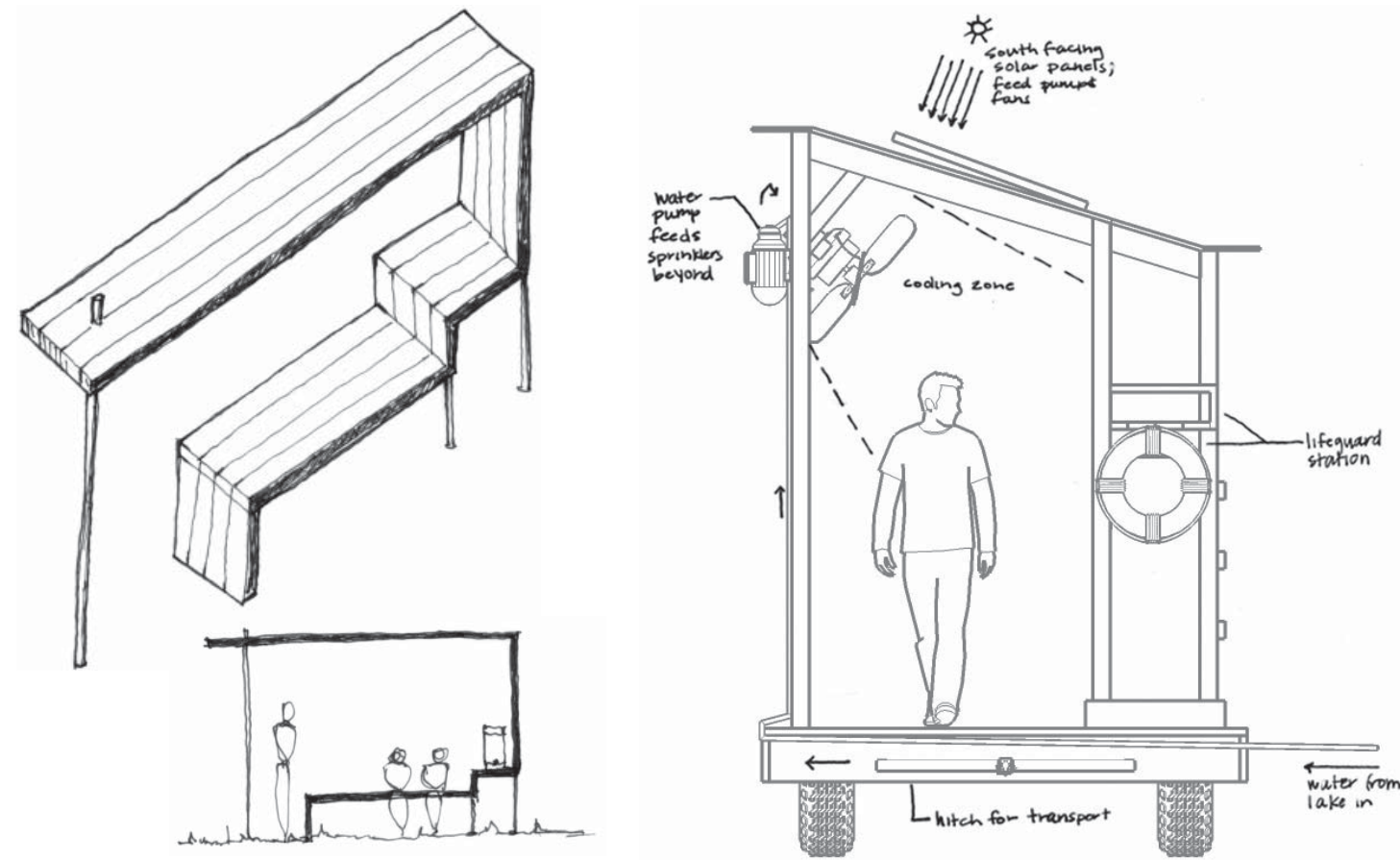


Figure 84. Water Station
 (by author, 2010)
 Figure 85. Mobile Beach Buggy Diagram
 (by author, 2010)
 Figure 86. Mobile Beach Buggy at Lake

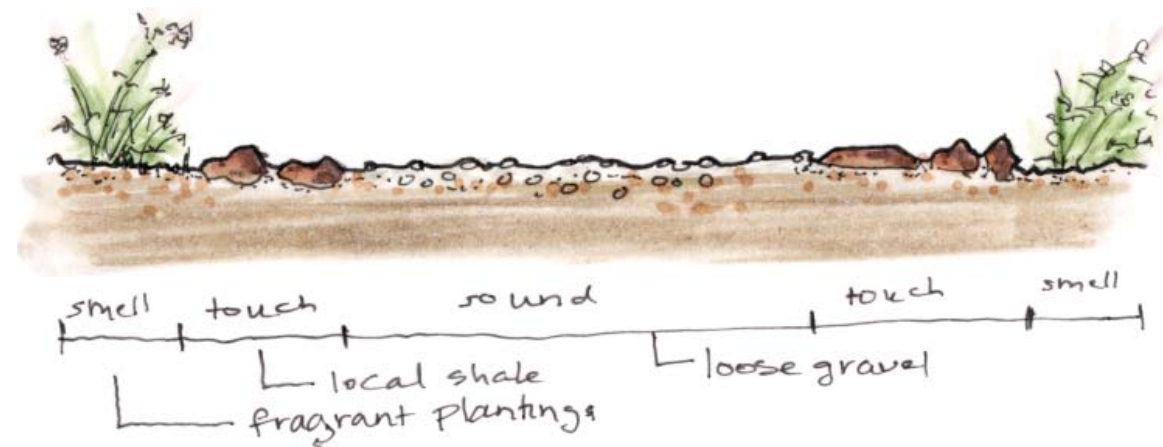
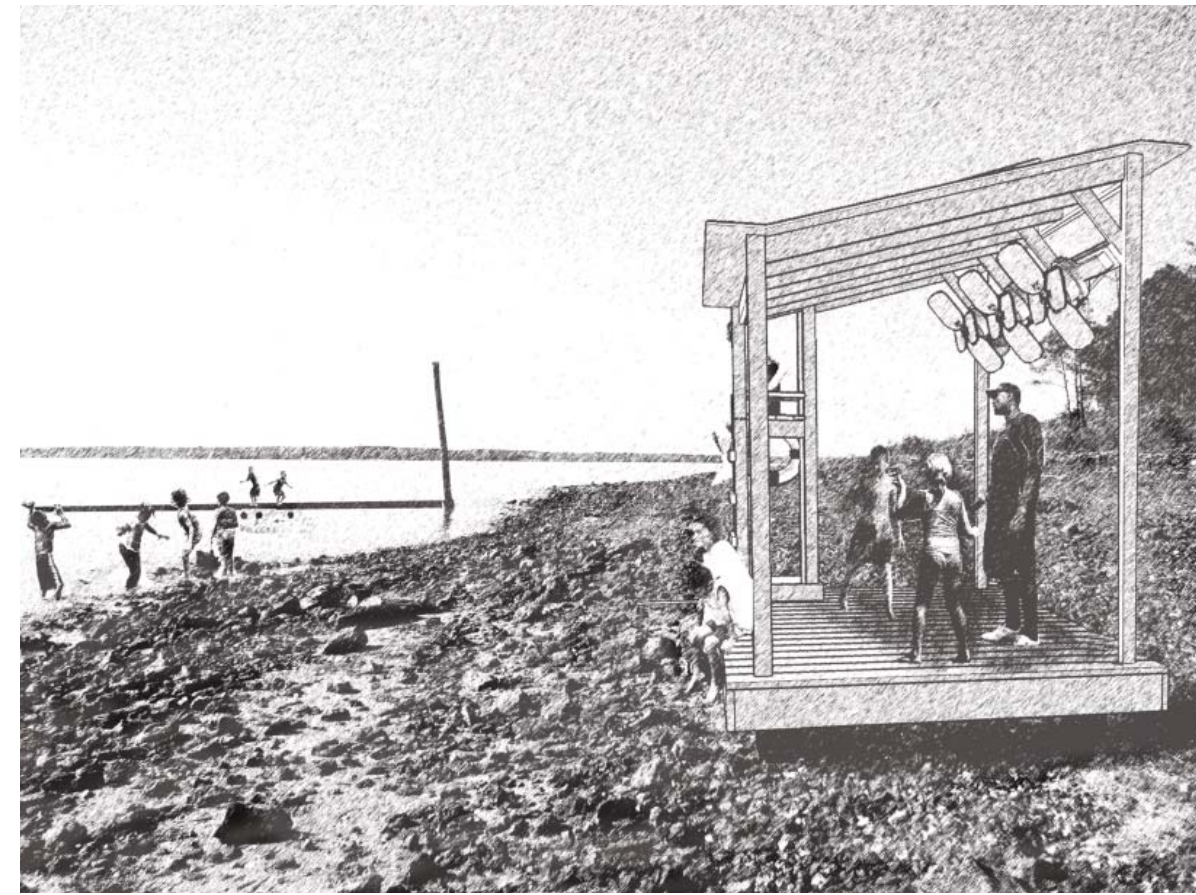


Figure 87. Experiential Path Diagram
 (by author, 2010)

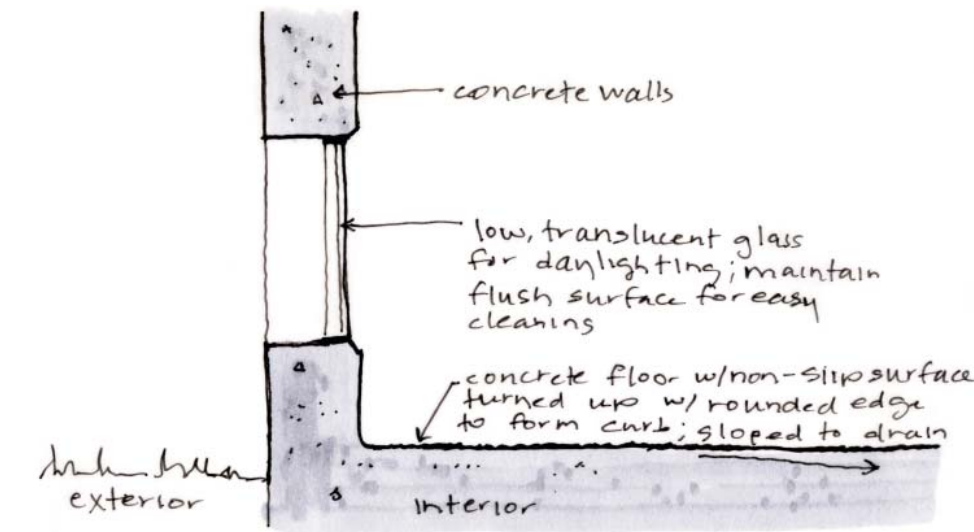


Figure 88. Detail at Bathhouse
 (by author, 2010)

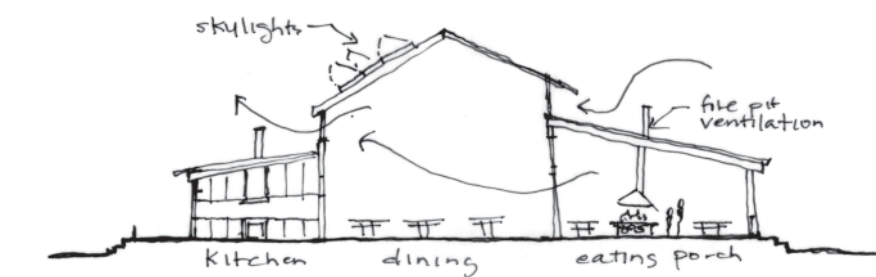


Figure 89. Section at Dining Hall
 (by author, 2010)

Figure 90. Plan at Dining Hall and Bathhouse
 (by author, 2010)

Figure 91. View to Lake From Proposed Dining Hall Location
 (by author, 2010)

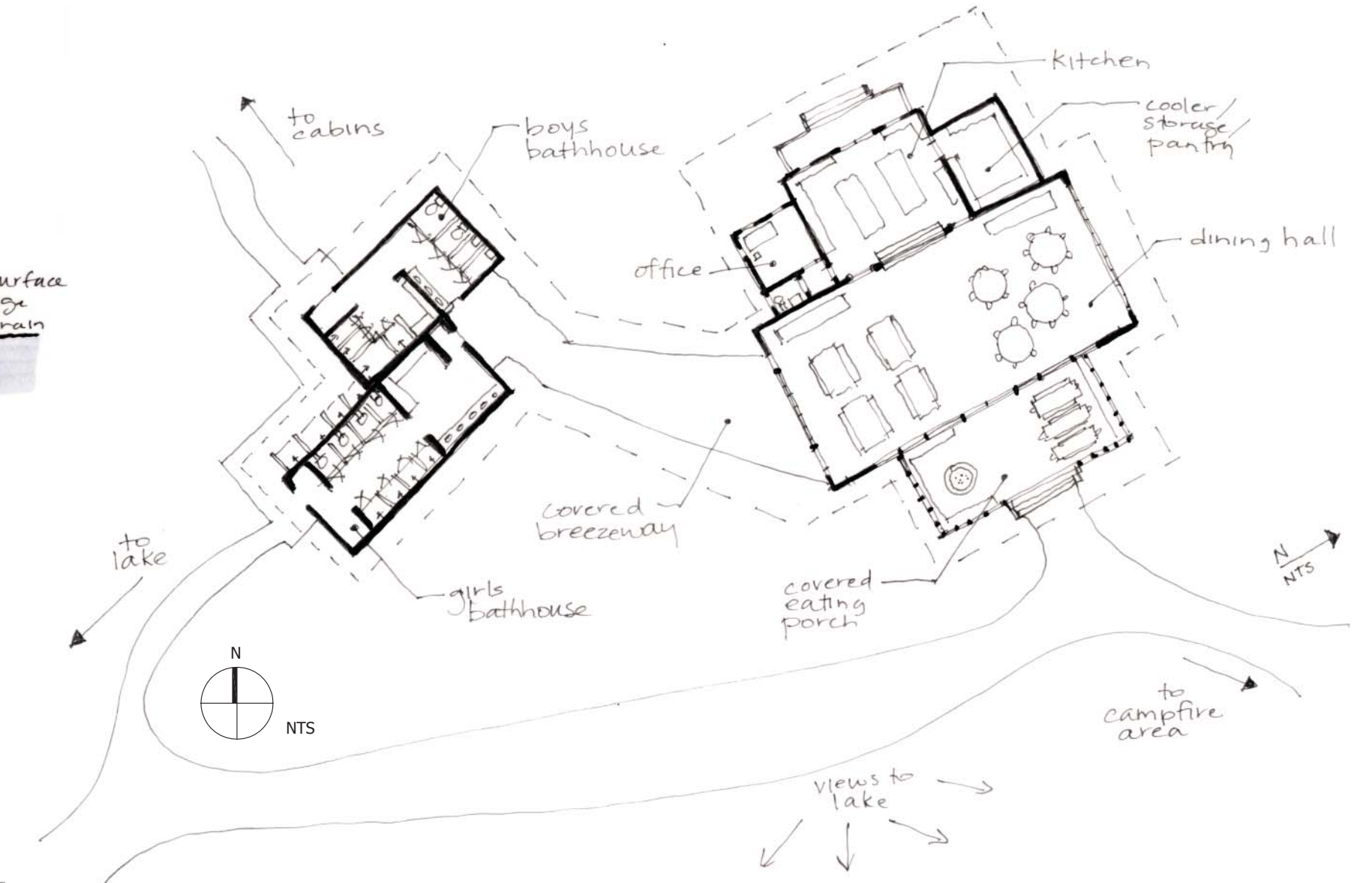




Figure 92. Historical Precedent, Treehouse
(Van Slyck, 2006, p. 186)

Bluebird's Nest, Camp Wohelo, Sebago Lake, Maine, 1913. "A romantic alternative to the tent, they [the camp directors] turned . . . to nature itself, housing the youngest campers in the 'Bluebird's Nest,' a tent built on a platform six feet off the ground" (Van Slyck 2006, p.186).

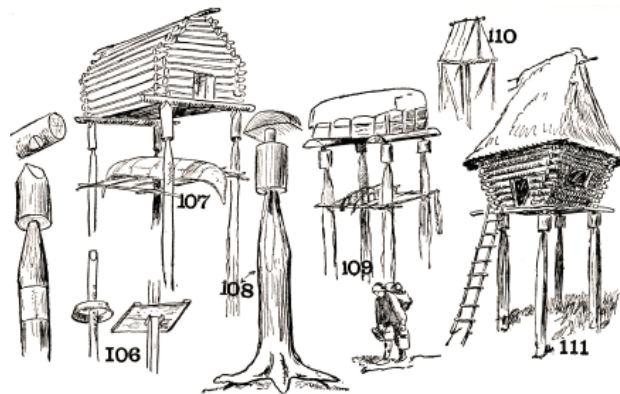


Figure 93. Historical Precedent, Elevated Structure
(Beard, 2008, p. 81)

Elevated Camper Cabins

Given the research, the case studies (Figures 58-59, 62-63, 74, 100-102), various precedent studies (Figures 51-52, 56, 60, 64-67, 70-72, 78, 92-93, 103-107, 111-119, 127-129), and the background information, focusing design on the camper cabins seems a logical step in the development of the thesis. All points of the research converge in this building type, and the formation of the building group (Figure 108). Combining the aspects of history, experiential education, play, place preference and program, the cabins can serve a pivotal role in positive behavior development. Resting below a high tree canopy, they immerse the user in the natural environment; because of their elevated status, the cabins and connecting walkways provide a sense of security and control, while also inspiring excitement and adventure.

The plan and form for the cabins is derived from the dog-trot house (Figures 94-95), a southern vernacular housing typology. In the Boy Scouts of America's 1927 publication, *Camp Site Development Plans*, the author(s) offers that camp buildings should take into account the type of architecture in the surrounding area. For the central south, the saddle bag, or dog-trot, is suggested ("Boy Scouts", 1927). The author(s) further encourages designing with a notion of the historical adapted for the modern ("Boy Scouts", 1927). Vernacular building traditions show thermal adaptation using forms and materials that moderate "prevailing climatic conditions" (Heschong, 1979, p. 8). The dog-trot is one such example because it offers a covered, centrally-located open space. Furthermore, the open porch space serves as a gathering space; "places with desirable thermal qualities naturally tend to become social spaces as people gather to take advantage of the comfort found there" (p. 44).

Elevating the cabins further increases thermal capabilities (cooling) as does placing the structures under the tree canopy (Figures 120-123). Consideration has been given to the development of a wall system that facilitates natural ventilation for thermal comfort by implementing a layered screen and louver system that is user controlled (Figure 110). The thought process for this design is roughly based on primitive structures in hot, humid climates where dwellings were constructed to reduce thermal mass by "using light materials . . . to avoid reradiation of heat" (Heschong, 1979, p. 9). In the same structures, "ventilation was maximized to increase the potential for evaporative cooling by placing large openings in the walls or by eliminating walls altogether" (p. 9). The cabins are also designed to be easily constructed and maintained using typical framing materials and screen doors available at most home improvement stores. Additionally, details - including the absence of overhangs - are meant to reduce or limit insect and rodent nesting; or at the very least, make it easier to keep areas clear of them. If the natural ventilation system fails to meet client or user requirements, components can be switched out and heating and cooling equipment can be placed in the storage area. All of these design qualities meet the functional objectives of thermal comfort, flexibility, enclosure, and durability.

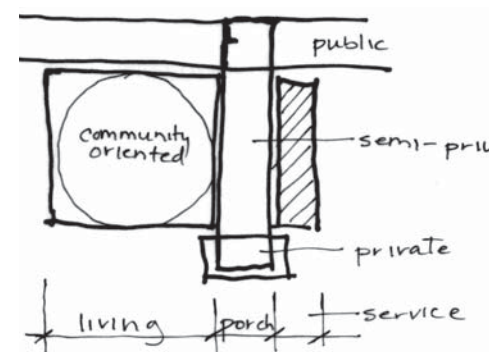
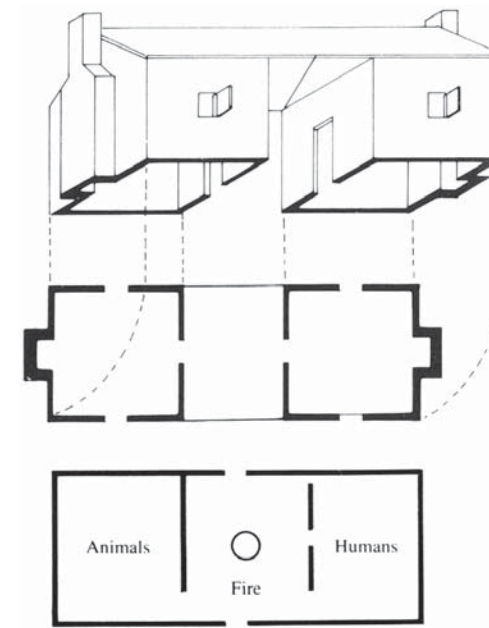


Figure 94. Dog-trot
("Pamphlet", 1998, p.)
Figure 95. Adapted Dog-trot
(Slavid, 2009, p. 203)
Figure 96. Diagram of Dog-trot Inspired Plan
(by author, 2010)

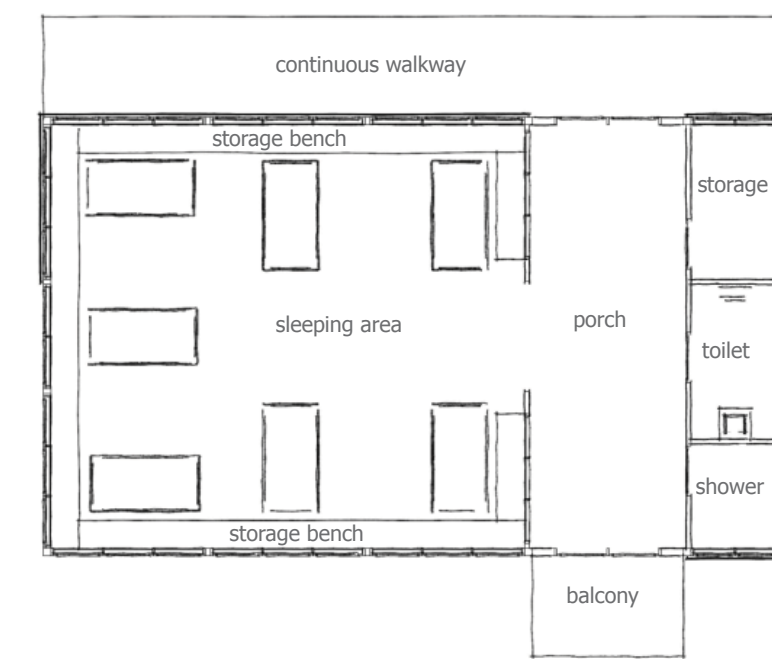


Figure 97. Proposed Cabin Plan, Not to Scale (NTS)
(by author, 2010)

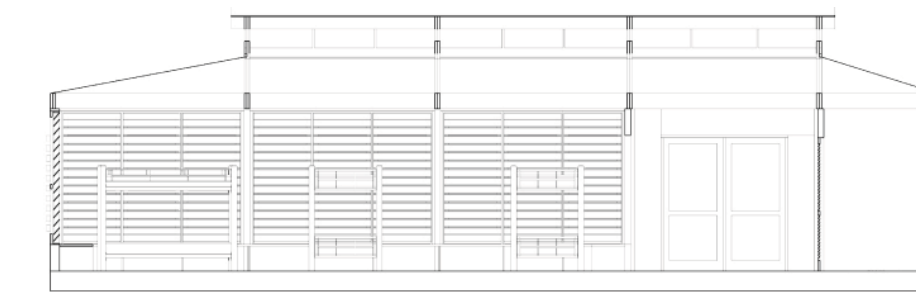


Figure 98. Proposed Cabin, Longitudinal Section (NTS)
(by author, 2010)

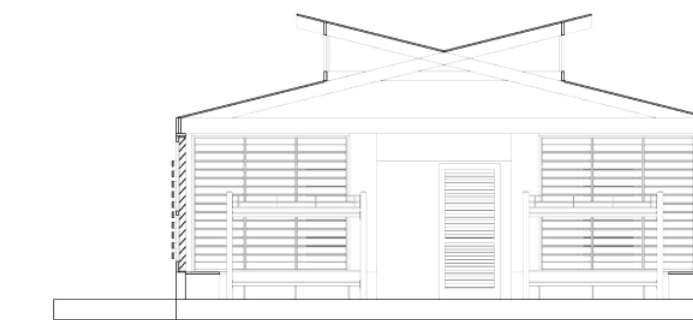


Figure 99. Proposed Cabin, Transverse Section (NTS)
(by author, 2010)



Figure 100. Treehouse Connected Cabin Structure
(Kara Pegg, 2010)
Figure 101. Treehouse Connected Cabin Structure, Crow's Nest Detail
(Kara Pegg, 2010)
Figure 102. Treehouse Connected Cabin Structure, Rigid Metal Bridge
(Kara Pegg, 2010)

- Case Study: Camp T.L. James, Boy Scout Camp, Downsville, LA.
- structure attached to trees with three 10 x 12 cabins (approximate) and a pavilion, connected by two metal, simple suspension bridges and one metal rigid bridge
 - deck to ground distance is between 11 and 12 feet
 - used mostly by Cub Scouts, but also used by visiting groups including high school groups and groups involving inner-city kids
 - non-rigid bridges cause heavy torque loads on connecting members
 - trees have needed replacing due to lightning strikes and pine beetle infestations
 - similar climate, tree species, insect species, etc. to Camp Phoenix

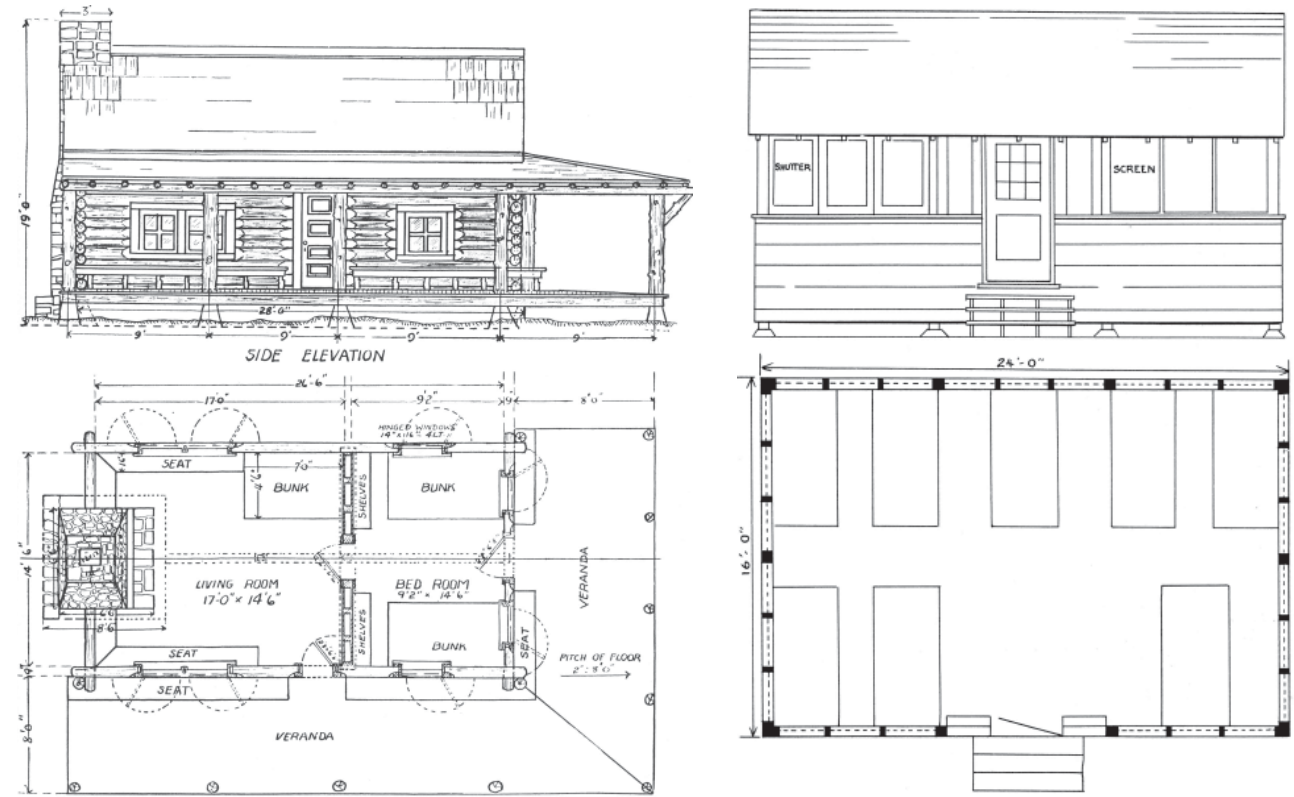


Figure 103. Cabin Precedent 1
("Boy Scouts", 1927)
Figure 104. Cabin Precedent 2
("Camp Fire Girls", 1946, p. 26)



Figure 105. Cabin Precedent 3
("Camp Fire Girls", 1946, p. 31)
Figure 106. Cabin Precedent 4
("Camp Fire Girls", 1946, p. 29)
Figure 107. Cabin Precedent 5
(Salomon, 1948, p. 70)

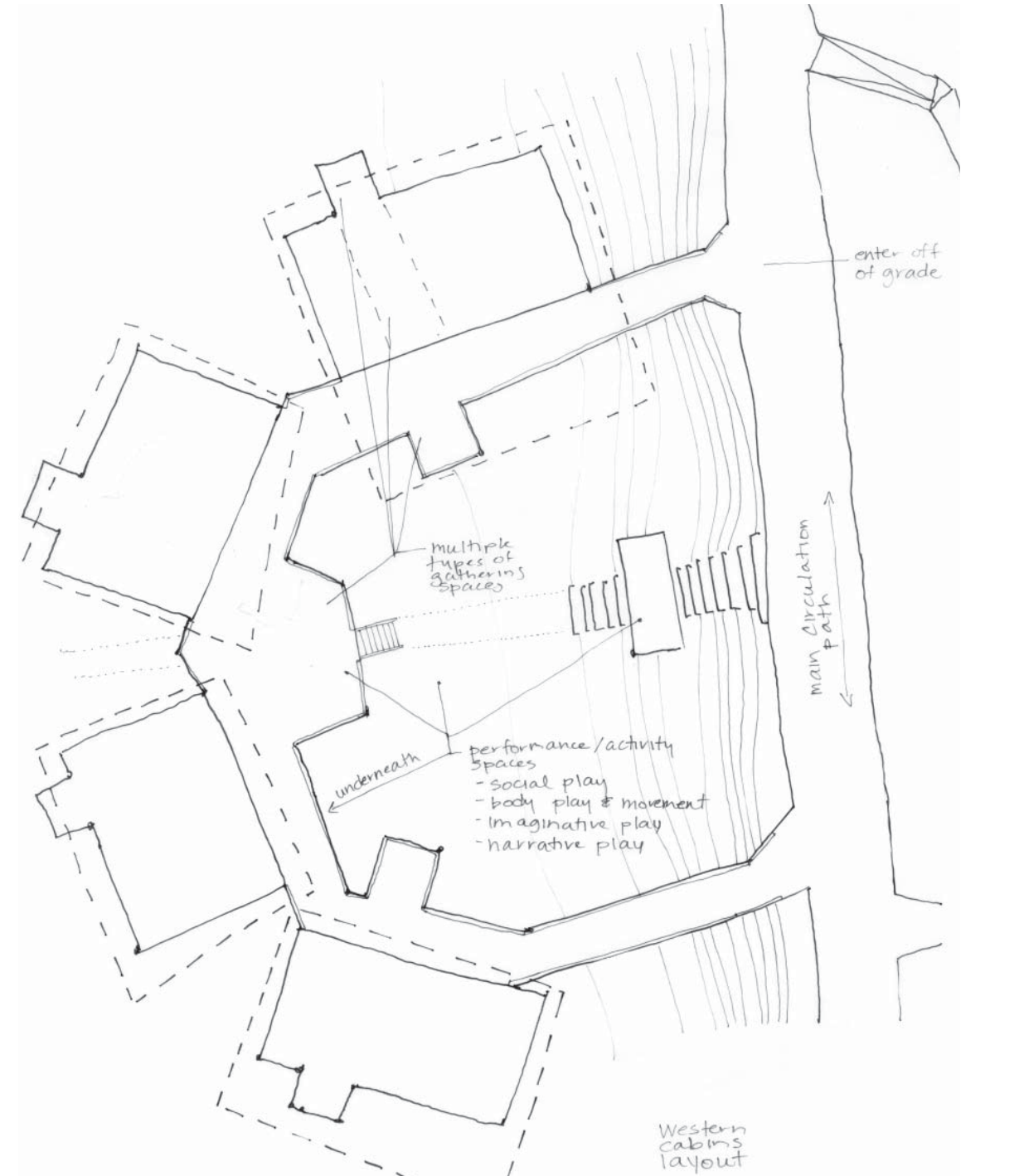


Figure 108. Diagram, Western Cabins Layout
(by author, 2010)

This layout speaks to the research about play shapes (curvilinear in form), gathering spaces (circles naturally evoke community), and patterns of play. Occupiable space exists on two levels: the cabins and connecting boardwalk and underneath. The lower zones provide a second level of thermal comfort - covered play spaces that provide a cool, shaded place close to the earth, that can also be used when it rains.



Figure 109. View of Interior Porch Space, Looking Out to Boardwalk
(by author, 2010)

The porch inside the cabin provides a cool, shaded space for gatherings, including types of play: imaginative, body movement, social, narrative, etc. The semi-public space also offers a rainy day area to gather, as well as a place to meet with members of other cabins. The balcony adjacent to this space is a private space, offering enough room for small gatherings, that may be used as a reflection area.

Also seen in this image are the trusses that support the roof system above. The trusses help to delineate space and offer face attachments for room dividers or hanging storage boxes/baskets. Dividers may occur in the sleeping area between each bunk bed, or between camper and counselor bunks; they may also be rigid or flexible (e.g., a curtain).

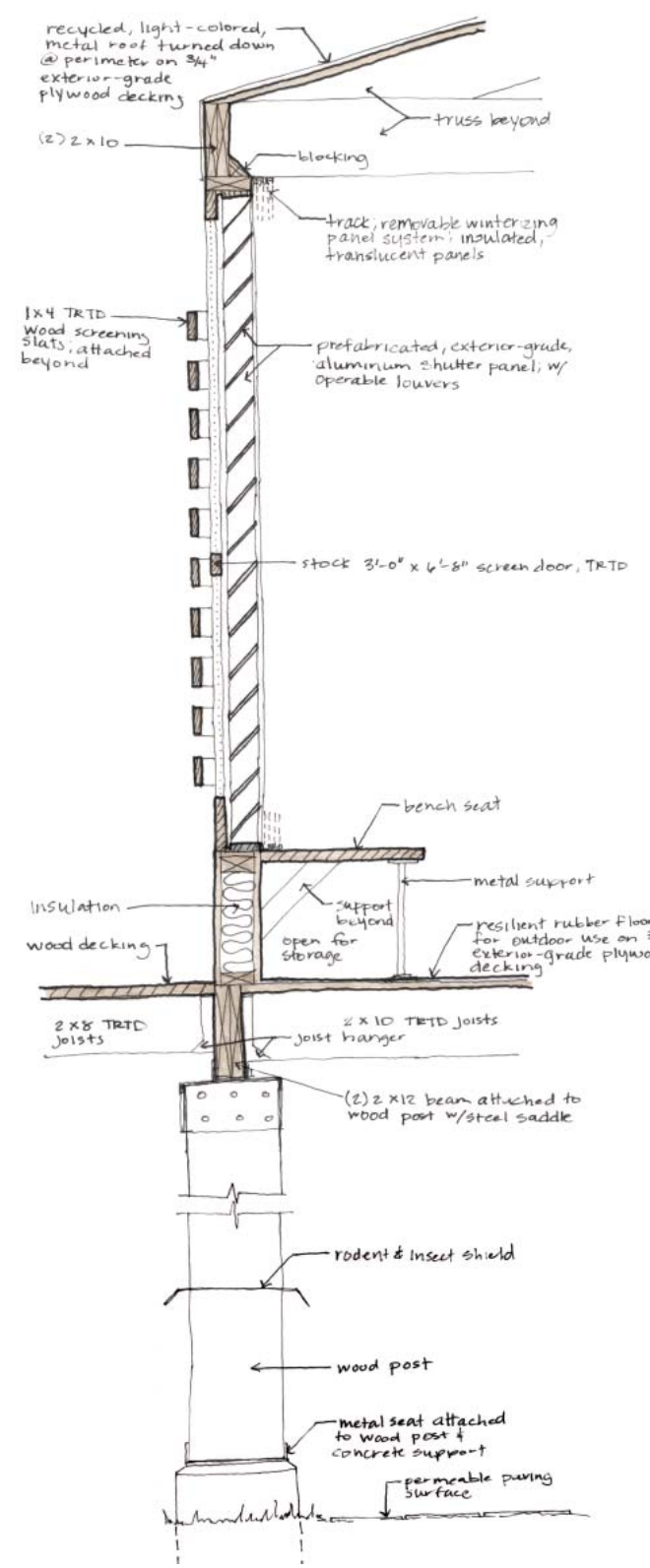


Figure 110. Cabin Wall Section
(by author, 2010)



Figure 111. Cabin Precedent, Stilt Houses
(Nelson, 2009, p. 216)

Figure 112. Cabin Precedent, Treehouse Structure 1
(Nelson, 2009, p. 140)

Figure 113. Cabin Precedent, Treehouse Structure 2
(Nelson, 2009, p. 98)

Figure 114. Cabin Precedent, Treehouse Structure 3
(Nelson, 2009, p. 14)

Figure 115. Cabin Precedent, Treehouse Structure, Camp Hopewell, Oxford, MS
(<http://www.camphopewell.com/facilities/tree-house.php>)



Figure 116. Intimate Space, Chapel
(Slavid, 2009, p. 81)

Figure 117. Intimate Space, Cardboard House
(Slavid, 2009, p. 109)

Figure 118. Intimate Space, Fish Camp
(Slavid, 2009, p. 149)

Figure 119. Intimate Space, Butterfly Porch
(Slavid, 2009, p. 191)

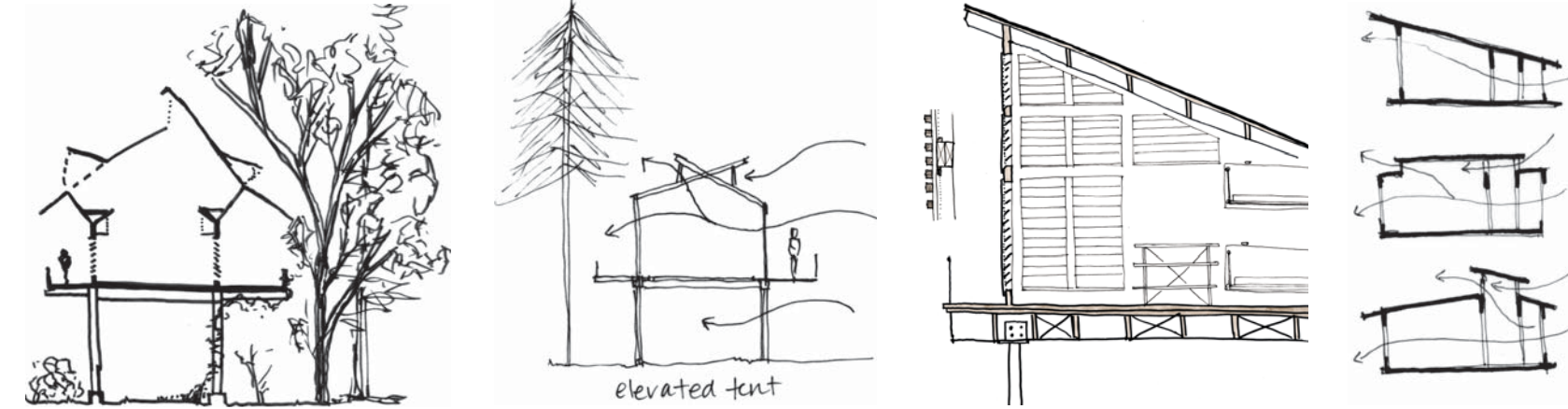


Figure 120. Diagram, Early Treehouse Study
(by author, 2009)

Figure 121. Concept Diagram
(by author, 2010)

Figure 122. Early Cabin Sketch
(by author, 2009)

Figure 123. Roof Diagrams, Ventilation Studies
(by author, 2010)

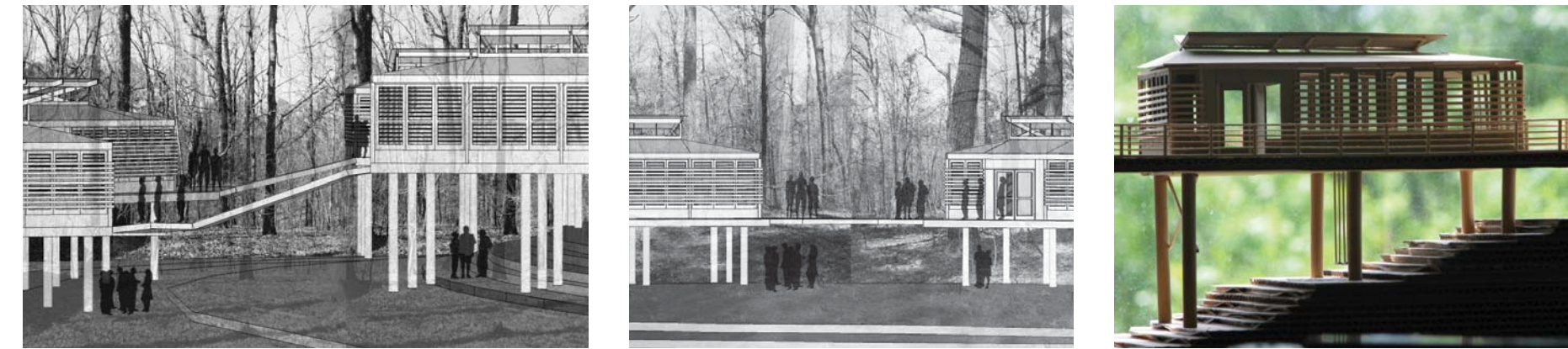


Figure 124. View at Western Cabins
(by author, 2010)

Figure 125. View at Eastern Cabins
(by author, 2010)

Figure 126. Elevated Cabin Model
(by author, 2010)



Figure 127. Cibolo Nature Center, Boerne, TX
(Chris Cooper, Lake Flato Architects; <http://www.lakeflato.com/projects/cibolo-nature-center/>)

Figure 128. Government Canyon Visitor Center, San Antonio, TX
(Chris Cooper, Lake Flato Architects; <http://www.lakeflato.com/projects/government-canyon-visitor-center/#>)

Figure 129. Hilltop Arboretum, LSU, Baton Rouge, LA
(Neil Alexander, Lake Flato Architects; <http://www.lakeflato.com/projects/hilltop-arboretum/#>)

THE LAST CHILD

I imagine being 'a swinger of birches';
I imagine climbing the boughs of a great oak tree
to perch, quietly, atop the glory that is nature
and to peer, just beyond that horizon,
where I can see, to where I can be, anything.

I imagine the red berries of holly bushes
to be the divine fruit of a mystical brew, and
as I stir it together with various seeds and wildflowers
it becomes whatever dreams are.

I look just beyond the window pane,
(beyond the inside, to the outside)
to where my pine straw floor plans lay
scattered across the yard, great columns of
ancient Greece and the precepts of modernism
arise from the dirt –
contrasting lines against the darkening sky.

I take these memories and stitch them together
a quilt of promises to my children and to theirs'
and so on and so on and so on . . .
I spread them out before me and
sink to the coolness of the earth;
with my hands folded behind my head, I recline
to the grass laden floor, to the moments when
among everything that must be accomplished today –
(in one day, at one time) this moment becomes . . .
'all the difference.'

I look up to the dancing sky,
to the passing of the clouds and of time, and
I imagine.

(poem by author, 2010; 'swinger of birches' and 'all the difference'
allude to poems by Robert Frost - "Birches" (1916) and "The Road
Not Taken" (1916), respectively.)

In her short story "Everyday Use" (1973) Alice Walker tells the story of the varied relationship between a mother and her two daughters. The eldest daughter, Dee, returns to her rural home to visit her mother and younger sister, Maggie - who is withdrawn and reserved beneath the shadow of her elder sister. Dee is concerned with acquiring various items from her mother's house that she feels have historical significance. She gathers a churn and dasher that were made by her uncle with plans to display them. In the process of collecting items, she comes across quilts that were pieced from her grandmother's dresses which also included a small piece of fabric from her great-grandfather's Civil War uniform. She asks her mother if she can take the quilts along with the churn. Her mother suggests that she choose another quilt because she has promised those particular ones to Maggie. To this Dee responds, "Maggie can't appreciate these quilts! . . . She'd probably be backward enough to put them to everyday use" (Baym, 1998, p. 2279). Her mother responds, "I hope she will"; because that is what the quilts were meant for - use - and because Maggie knows how to quilt, she can mend them, or piece new ones if need be (p. 2279).

Louv's (2008) concern for the growing distance between children and nature relates to Walker's short story (Figure 130). He offers that nature is for everyday use, not to remain on display, untouched, unengaged: "No child can truly know or value the outdoors if the natural world remains under glass, seen only through lenses, screens, or computer monitors" (p. 195). Stuart Brown, president of the National Institute for Play, would most likely agree; "a true sense of 'interpersonal nuance' can be achieved only by a child who is engaging all five senses by playing in the three-dimensional world" (Henig, 2008, para. 3).



Figure 130. Everyday Use, Digital Quilt
(composed by author, 2010; images by BGCM members, 2010)

CONCLUSIONS AND RECOMMENDATIONS

Given the research included herein, it is anticipated that implementing the master planning ideas and design elements as mentioned will impact behavior in a positive way. To what extent behavior will be affected is undeterminable at this point in time. While the theories stated in this document seem to show, not only that behavior modification is possible but that it is probable, application and assessment of the actual design will be the most telling factor. Some modifications have been made to the existing camp cabins by the University of Memphis, Department of Architecture, Design/ Build Studio (shutters for security that don't inhibit ventilation and new bunk beds with connected storage) and have been well received (Figures 131-132). However, time will show to what extent the design impacts the user's experience.

To further study the impact this built environment will have on the user, it is suggested that pre-assessment interviews, post assessment interviews or both be implemented. These may be administered in the camp environment, the home environment or both, though considerations in processing the information should factor the place into account. Additionally, the amount of time after or before the interview is given, relative to the time of the camp experience, should be taken into account when evaluating the responses. In this way, the administrators of the camp and the designer will know how best to proceed and where to make modifications, if necessary.

The implementation of the design might occur in phases, with priority given to the most crucial element(s) (e.g., the restroom facilities, the cabins, the dining hall, etc.). In the process of conversation with the administration of the camp, the suggestion of closing the camp for a summer to rebuild was suggested. This idea should be given further consideration. If the camp complex were constructed at one time, the strategies holistically planned in the design may have more effect and greater impact.

One last note: The idealism and metaphor suggested by the name, Camp Phoenix (Figure 133), should be called upon in the imagery of the camp program, as is intended in the built environment. The concepts of transformation, inner excellence and beauty, and restoration support the mission of the BGCM. Promoting a healthy sense of self, whether through play, place preference, developmental achievement or experiential learning, increases the display of good behavior and the likeliness of retaining good behavior.



Figure 131. Camp Phoenix Improvement, Shutters
(Kara Pegg, 2010)
Figure 132. Camp Phoenix Improvement, Bunk beds
(Kara Pegg, 2010)



Figure 133. Camp Phoenix Shield
(photo by author, 2010)

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