

I'm Still a **Kid!**

*A Proposal for Improving Orphanages through the Integration of
Nature, Nurture, and the Senses.*

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ABSTRACT

When a child is forced to journey through life without the guidance of a mother and father, careful attention should be given to the surroundings in which a child is placed. Many, will never experience parental nurturing, for which reason the space in which an orphan is situated for long term care, ought to be cautiously designed, allowing social interaction as well as ensuring that the architecture and its surroundings will be a nurturing device for the children.

My thesis is concerned with how nurturing can be provided through integrating the senses into the architecture of a children's home by inviting the natural setting of the outdoors indoors, to inform the design. The design of a space that allows sensory stimulation and encounters with the environment is important to the well-being and healthy upbringing of children. I will be creating an environment that allows bodily engagement, playful sensory exploration, and a seamless relationship with the natural environment surrounding the site.



"Children are living beings - more living than grown-up people who have built shells of habit around themselves. Therefore it is absolutely necessary for [a child's] mental health and development that they should not have mere schools for their lessons, but a world whose guiding spirit is personal love."

-Rabindranath Tagore

Paul, Samiran Kumar, and Rabindranath Tagore. *The Complete Poems of Rabindranath Tagore's Gitanjali: Texts and Critical Evaluation*. New Delhi: Sarup & Sons, 2006. Print. p.372



[A children's home] must be a friendly house in every respect, both inside and outside. It must be a home, a home for children who for a shorter period of time- for years, maybe- will not be living with parents, who will miss their own home... on approaching our house, the child must enter it gladly; its outward appearance should ooze friendliness, beckoning to the child, as it were, to enter."

-Fran Van Meurs

153,000,000



<http://www.sos-usa.org/our-impact/childrens-statistics>

Contents

//Acknowledgements	i
// Abstract	ii
// Table of contents	vi
// Introduction	1
<hr/>	
//1 Nature Nurtures	5
<hr/>	
Children in nature	6
How can nature nurture?	7
<i>Motion</i>	7
<i>light</i>	8
<i>privacy</i>	10
<i>spiritual significance</i>	11
<i>shelter in nature</i>	11
Nature as an educational tool	13
<hr/>	
//2 The Orphanage	14
<hr/>	
Definition	15
Precedents	16
<i>Soe Ker Tie House: Thailand, 4D & D Architects</i>	17
<i>Amsterdam Orphanage: Amsterdam, Aldo Van Eyck</i>	21
<hr/>	
//3 The children- their mind & the senses	25
<hr/>	
Common psychological problems	26
Importance of sensory play	28
<i>The Hand</i>	29
<i>The Eye</i>	30
<i>The Ear</i>	32
Influence of architectural elements on an orphan's mind	34
<i>Form of space</i>	34
<i>Materiality</i>	35
Effects of interior spaces	36
<i>The in-between</i>	36
<i>Tranquility</i>	37
<i>Solitude</i>	39
<hr/>	
//4 rethinking the orphanage: the creation	41
<hr/>	
The tale of two cities	42
<i>Kolkata</i>	42
<i>Santiniketan</i>	50
Rabindranath Tagore	53
Site	54
Materiality	58
Phasing Growth	59
<i>Programming</i>	60
<i>Phase 1</i>	62
<i>Phase 2</i>	66
<i>Phase 3</i>	91
<i>Phase 4</i>	108
<hr/>	
// Postscript	123
//Appendix A	127
//Appendix B	132
// List of Illustrations	133
// Appendix B: List of Illustrations	137
// Bibliography	138
<hr/>	

Introduction

The exponential growth of orphaned and abandoned children is an unending problem, leaving them scattered, broken and overlooked in several countries worldwide. It is estimated that 153 million children, ranging from infants to teenagers, have lost one or both parents, resulting in homelessness or placement in a temporary children's shelter.¹ Most are raised not comprehending the true essence of love; they live not experiencing the embrace, the leadership and guidance of parents; they are not granted the privilege or rights to higher education, nor a guarantee towards a well-established career; most of them remain unwanted. Many, try to find joy in the little that they are given; in the companionship they receive from one another; in the few donated toys that get dropped off at the home on occasion; in the space provided to shelter their body and soul. These abandoned children live not experiencing the wonders of the senses as their sheltered bodies are restricted from embracing the beauty of touch, the sensation of smelling the various odors of nature, witnessing life beyond the gates they are confined to, listening to the simplicity of existence through the trickle of raindrops, and tasting the freshness of a home cooked meal. The mental health of orphaned children is universally forgotten and overlooked. It is an issue deserving tremendous love, care and attention for the sole purpose of improving their lives.

In the forgotten cracks and corners of one of the densest countries in the world, India, are several shelters for orphaned children. These children were placed in children's homes as a result of deceased parents or abandonment, where most, to this day remain neglected. These dwellings are ideally meant to provide more than just material assistance; they are to provide companionship, love, responsibility and a sense of permanence.² When these main ingredients are absent within such permanent settings, children may suffer from various psychological and emotional problems. The dense urban settings of these homes restrict the children solely to the space provided within the gates of the orphanage,

creating a dominant and permanent enclosure. The absence of the natural environment is prominent resulting in the lack of freedom to explore and wonder.

My site is located two hours north of Calcutta, India, in a small town called Santiniketan. This town was founded by Rabindranath Tagore- a Bengali writer who reshaped the art of literature, music and visual arts in the late 19th and early 20th centuries. He became well renowned throughout India for his unique style, which revolved around the realm of environmental learning. The theme of nature was present throughout his teaching methods in Santiniketan, where he had founded a university called Visva Bharati; an educational system that not only informed the purpose of learning, but allowed one to learn through being one with the natural environment.³

Many institutions believe that children will fulfill perfection in their future through following a strict lifestyle, when in fact; integrating nature into the design of a children's home can be a primary instrument towards the self-growth, imagination, and healing of orphaned children.⁴ An orphan's mental health is highly dependent on the environmental settings of the home. What is truly a perfect setting for an orphanage? While it might not be possible to achieve this in each instance, it is necessary to attempt to modify the setting or the architecture of the home to allow positive mental stimulation. Children's homes which are placed in the center of a high density city or an isolated town, can both trigger health issues caused by the lack of exposure to natural and child like environments.⁵

**During my visit to All Children Together Trust children home, Kolkata, the director of the home informed me that he is currently proposing an orphanage in Santiniketan that will be inspired by the natural setting as well as Rabindranath Tagore's philosophy. I was asked to update him on my design progress, as it is a possibility for my design to be considered for the future development.*

My design proposal entails re-imagining the design of orphanages to accommodate the physical and the psychological needs of a child by allowing the natural environment to inform the architecture. Several factors will be considered such as: materiality; spatial organization; the journey from infancy to adulthood; the psychological factors of colour, space and shape; the distribution of learning spaces; the integration of play into architectural elements within the home for interaction; and continuous spaces for social involvement.

The physical and psychological journey of a child will correlate closely with the architectural journey of the spaces, forming a playful narrative of their transition through life at the children's home.



FIGURE 1: Imagined Outdoor Learning Spaces

notes

1 "Children's Statistics." Worldwide Orphan Statistics. SOS Children's Villages. Web. 16 Mar. 2015. <<http://www.sos-usa.org/our-impact/childrens-statistics#sthash.BwGnH1LS.dpuf>>

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Nature Nurtures

p. 6	Children in nature
p. 7-12	How can nature nurture?
p. 7-8 p. 8-9 p. 10 p. 11 p. 11-12	<i>Motion</i> <i>light</i> <i>privacy</i> <i>spiritual significance</i> <i>shelter in nature</i>
p. 13	Nature as an educational tool

Children in nature

Nature Nurtures

Chapter 1



FIGURE 2: Improvising with tree trunks, ropes and netting.

Children have a very unique relationship with nature—one that adults in modern society have unfortunately strayed from. The extraordinary sensory diversity and variability of the natural world is unavoidable in a child’s life.¹ A child’s memory is primarily of places and sensations, rather than of people; they live delighted by the wonders of colour, light, sound and texture that surround their environment. Children are sensitive to all the qualitative aspects of a setting, especially those of the natural world.² However, research has stated that *“the genetic constitution of an organism is the result of past actions of evolutionary agents- all organisms are adapted to the past environments”*³. Consequently, orphans who were placed in poor living conditions where sensorial stimulation was limited or nonexistent might engage with difficulties while attempting to adapt to a new setting.

For this very reason, it is crucial to take into consideration the “transitional journey” of a child into a new environment; how can the design of an orphanage encourage a smooth and enjoyable transition into their new life at the home? Nature can play an immeasurable role in this transition as a nurturing and healing mechanism for a child.

How can nature nurture? Nature Nurtures



Finding solace in the midst of nature is a common method of escape for most human beings. There is a wondrous feeling of peace that occurs while being in the presence of the natural environment; It is as though the “stimuli of the natural environment... assaults the senses at an uncontrolled strength.”⁴ Motion, light, privacy, spiritual significance of nature and shelter are vital towards the healing process of orphaned children. If intentionally incorporated with thought and care, a child may be presented with an opportunity towards a healthy upbringing.



Figure 3: Tug of War

*Engaging in group physical activity allows for interaction and exercise.

MOTION:

Movement of Bodies:

When creating a space of healing it is important to keep in mind that spaces that do not allow any sort of mobility will fail to stimulate ones senses. Piaget states, “*movement is essential to the formation of intellect. The sensorimotor stage, the bedrock to of all intellectual development, and the pre- and concrete operational stages all involve movement and physical interaction with the concrete world.*”⁵ The act of moving is crucial towards the proper development of children. Adults form a sense of irritation towards these unpredictable playful mannerisms, which usually result in rules being enforced within homes and institutional settings. In an orphan’s daily life within an institutional setting, the ability to move freely in nature allows proper physical and mental growth.⁶ Many orphanages offer restricted space where a



Figure 4: Outdoor Play

How can nature nurture?

Nature Nurtures



child is confined to for several years, resulting in the lack of movement and exploration, which puts a halt to their physical and mental development.⁷ Certain types of movement that may seem unimportant to adults are the beginnings of exploration and discovery for children. Simple activities such as balancing on a log of varied heights and lengths, jumping over puddles, crawling up or down a slope, and climbing trees allows a child to engage with the natural setting as well as interact with the people that surround them.⁸



Figure 6: Movement of Water

Movement in Nature

The natural elements such as earth, wind, water and fire in its multitude of forms fascinate children. The formation of rocks in various sizes and textures, cool breeze on a warm summer day, the trickle of raindrops, and the warmth from a blazing bonfire, are all aspects of nature that human beings universally enjoy. These are a few natural movements that occur within the natural environment bringing comfort to adults and curiosity to children. Outdoor settings offer and promote opportunities for vigorous activity, which nourishes the senses.

LIGHT

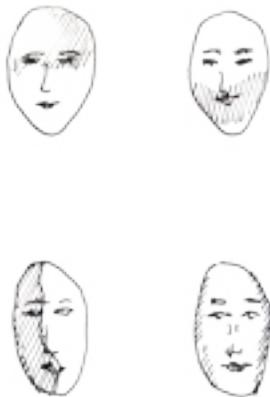


Figure 7: Light and Shade effect on the Face

Sheltering a child from daylight triggers various risk factors towards developmental problems- physical and mental. The phenomenon of light is experienced as a journey for children, which entails several types of unique explorations that trigger a child's imagination and unending curiosity. Feeling daylight is a form of touch that can be experienced and taken advantage of by simply having permission to be outdoors. Light contains biological factors that improve our health, as it is vital for calcium assimilation, Vitamin D production and liver processes, accelerates toxin elimination, and nourishes

How can nature nurture? Nature Nurtures



hormone-regulating organs, growth and balance; it is also affects our relationship to the world.⁹ If nature can be used as a tool for healing orphans, the design should allow a child to enjoy the phenomenon of nature through every season. Designing outdoor spaces that respect each of the senses will welcome a child to enjoy every aspect of the elements. For example, it is common for most adults to shelter from the rain- we often want to remain indoors. Children however, want to rejoice in the rain, jump in puddles, and enjoy the sensation of a nature's downpour. Therefore why not create outdoor spaces of shelter that allows a child to engage through sensory stimulation. Similarly, as much as children enjoy playing in daylight, they also appreciate daylight in the shade. Light is revealed in a multitude of natural ways:

“Breeze stirred shades vary in translucency as they gently move. Sunlight reflected from rippling water or refracted through breeze-twirled prisms is enlivened with rainbow colours, always moving. Wind-stirred leaves set high-light-pattern and light scatter in motion. They dance in a restful, visually undemanding way.”¹⁰

Light is an unavoidable part of nature, that if combined with architecture in an effective manner, can aid with the healing of a child. The variety of methods through which natural lighting can enter a building can be provided through the play of materiality and wall penetrations. Just as the architecture of the children's home must vary to accommodate the several programs, lighting must also be altered in different areas of the home to benefit the children's mind, body and soul.

How can nature nurture?

Nature Nurtures



PRIVACY



Figure 7: Outdoor Reading

Although being in a socially interactive space is especially healthy for raising an orphaned child, creating spaces of privacy is also vital to allow healthy development. Children enjoy being in the presence of others in their age group, but at times they also require solitude to read, to play, to draw, and sometimes be in the presence of their own thoughts.

Wolfe and Laufer, two psychologists who specialized in child psychology distinguished four types of privacy that can be applied towards the creation of healing spaces for children within the orphanage. "1. *Controlling access to spaces, and having a place of one's own.* 2. *Controlling access to information, being able to tell secrets.* 3. *Being free from distraction and the bother of others.* 4. *Being alone or by oneself.*"¹¹



Figure 8: Painting Outdoors

*Privacy also consists of enjoying time alone to do what one pleases. It may consist of partaking in activities alone, such as reading in a natural environment or painting in solitude.

These types of privacy, if implemented into the design, can certainly contribute to the proper development of a child. Several orphanages do not provide spaces of privacy; the sleeping dormitories are large rooms with several beds placed in rows. This arrangement neglects a child's need for solitude; personal spaces that every human needs to relax and reflect. Privacy can also be offered in the outdoor setting through playgrounds, outdoor classrooms, and spaces of rest. They must be designed in such a way that "*will respect the needs for personalization and solitude, so children can find the places of retreat and observation they need.*"¹²

How can nature nurture?

Nature Nurtures



SPIRITUAL SIGNIFICANCE

A natural setting can be a great tool for meditation purposes. When a child experiences significant loss, he/she may struggle with great psychological and emotional problems. Incorporating within the home, a facility that is available to children who choose to practice their spirituality would offer further opportunities to support them in the healing process.



Figure 9: Meditation

Spirituality in most cultures, is the essence of life; to be in touch with the creator, and through Him, do all things. In Psalm 96: 11-12 King David declares: *“Let the Heavens rejoice, let the earth be glad; let the sea resound, and all that is in it; let the fields be jubilant, and everything in there. Then all the trees of the forest will sing for joy!”*¹³ If these main elements were created by the Creator for the sole purpose for humans to rejoice with, it is only natural to embrace these gifts through prayer and meditation in the earths’ natural form; allowing nature to be one’s fortress. If a child is given the opportunity to meditate in prayer, and they choose to do so, it may result in finding peace in the situation they are in.

SHELTER IN NATURE



Figure 10: Bushes as method of Shelter

As children begin to explore their environment at a young age, wherever they may be, they should be motivated to seek spaces that shelter and protect. Rigid spatial boundaries limit children’s freedom, while permeable boundaries encourages a constant relationship with the geography.¹⁴ When the environment permits, children use nature as means of refuge. For example, when a shrub is large and wide enough, a child finds safety within the arms of this plant, making one feel less vulnerable to predation than playing in an open and unprotected area.¹⁵ Integrating shelter through the aid of the natural environment is an effective and important method of protection particularly when a child is focused on his/her

How can nature nurture? Nature Nurtures



activity rather than the environment that surrounds them.

Different age groups, seek refuge in nature in distinctive ways. Children in the preschool age group (2-4) are more commonly found to enjoy the surroundings of a close knit, semi enclosed areas. Evidence also showed that this *“age group engaged in solitary play in small play structures that had a greater enclosure.”*¹⁶ Similarly, research also discovered that children between the ages of 7 to 11 thoroughly enjoy building forts and tree houses as an outdoor activity...*“the youngest children were most likely to make subtle modifications using dirt, grass, or weeds. The old children, on the other hand, built things or actively transformed vegetation to make burrow-like forts. Both older and younger children used bushes for shelter, particularly large bushes with lush canopies and an open network of branches.”*¹⁷

Since each age group reacts to nature in different ways, it is essential to provide pockets of outdoor play spaces that promote physical activity, group activity, and of course, solitary activity.



FIGURE 11: Forts in the Natural Environment

Nature as an educational tool

Nature Nurtures



FIGURE 12: Learning Outdoors

Many institutions for orphaned children create spaces that inhabit several programs under one roof. This may be due to the urban setting of the home, or due to the limited space provided. Nonetheless, in the development of children's homes, provision of sufficient outdoor space is fundamental. Outdoor space is commonly used as spaces to practice physical activity, however, it can also be used as a tool for educational purposes. Instead of constricting a child to the walls of a classroom- why not make the natural setting a classroom? Research has proven that outdoor learning settings improve *"cognitive abilities, supports multiple development domains, improves academic performance, increases physical activity and improves social relations."*¹⁸ The ideal classroom is not one that restricts bodily engagement, but rather, allows freedom in bodily movement to engage with the bodies' surroundings. Situating a classroom outdoors promotes *"first hand experiences [to get] their hands dirty...increase[ing] pupils' interest and understanding"*¹⁹ of the environment that surrounds them.

Notes

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3. *Ibid.*, p.31.
4. *Ibid.*, 139.
5. Anita Rui Olds, *Nature as a healer*. (University of Colorado. Anita Olds and Associates). http://www.colorado.edu/journals/cye/6_1/NatureAsHealer_Olds_Vol6_1.pdf (accessed November 10, 2014),p. 28.
6. *Ibid.*, p.28.
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9. Day, Christopher, and Anita Midbjer. *Environment and Children: Passive Lessons from the Everyday Environment*. Amsterdam: Architectural, 2007. Print. Pg 101.
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11. (Olds n.d.) p.30-31.
12. *Ibid.*, p.31.
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14. (Kahn and Kellert 2002), p.44.
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17. *Ibid.*, p.46.
18. (Benefits of Connecting Children with Nature: Why Naturalize Outdoor Learning Environment 2012)
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The Orphanage

p. 15

Definition

p. 16-24

Precedents

p. 17-20
p. 21-24

Soh Ker Tie House: Thailand, 4D & D Architects
Amsterdam Orphanage: Amsterdam, Aldo Van Eyck

Introduction

The Orphanage



DEFINITION

An Orphanage, also known as a children's home is a residential and educational institution that is devoted to the care of children whose parents are deceased or unable to care for them. These homes are permanent shelters for millions of children worldwide, which are ideally meant to provide security and an environment that allows positive development and self confidence in children.¹ When these essential needs are unmet, it has a negative impact on the mental and physical health of the children, which in turn, affect their learning capabilities and success in their future. As adults we try to find solutions to heal children. While doing so, it is important to keep in mind that healing will occur if the space is designed *for* the children- bearing in mind an orphans' psychology and the importance of incorporating childlike attributes to the architecture. Many of these shelters provide protection, but lack the true essence of homeliness- a space where a child should be eager to return and enjoy being in the presence of children who are living and growing together in a whimsical architectural environment that is designed specifically for them.



*This image demonstrates the linearity that was practiced in orphanages, creating an orderly and sterile environment. A child-like environment is non-existent.

Figure 13: Queen of Heaven Orphanage 1910

Precedents

The Orphanage

Chapter
2

1.



FIGURE 14

SOE KER TIE HOUSE
THAILAND, 4D & A ARCHITECTS

2.



FIGURE 15

AMSTERDAM ORPHANAGE
AMSTERDAM, ALDO VAN EYCK

Precedents

The Orphanage



SOE KER TIE HOUSE

In a small village called Noh Bo, on the Thai-Burmese Border, a small orphanage was designed by TYIN Tegnestue to house Karen refugees. The home was to shelter 24 children and aimed to grow to house almost 50. The inspiration behind this project was to provide the children with a childlike atmosphere, giving each of them *“their own private space, a home to live in and a neighborhood where they could interact and play.”*²

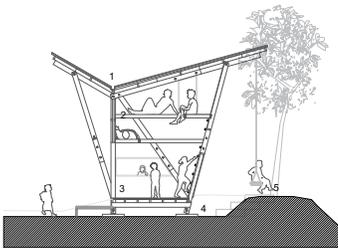


FIGURE 16: Section through Pod

The design form of the house dictated its name: *The Butterfly Houses*. Bamboo cultivation and weaving is a common trade in their community as most of the bamboo was harvested a few kilometers away from the site. Weaved bamboo is used on the sides and facades of the houses, creating a warm and welcoming feel to the architecture.



FIGURE 17: Overall View of Pod Assembly

Precedents

The Orphanage

The organization of the site is playful and takes into consideration the needs and interests of the children. There are various areas of activity scattered throughout the site, which encourages the children to be occupied and remain in constant interaction with one another.



FIGURE 18: Ruins

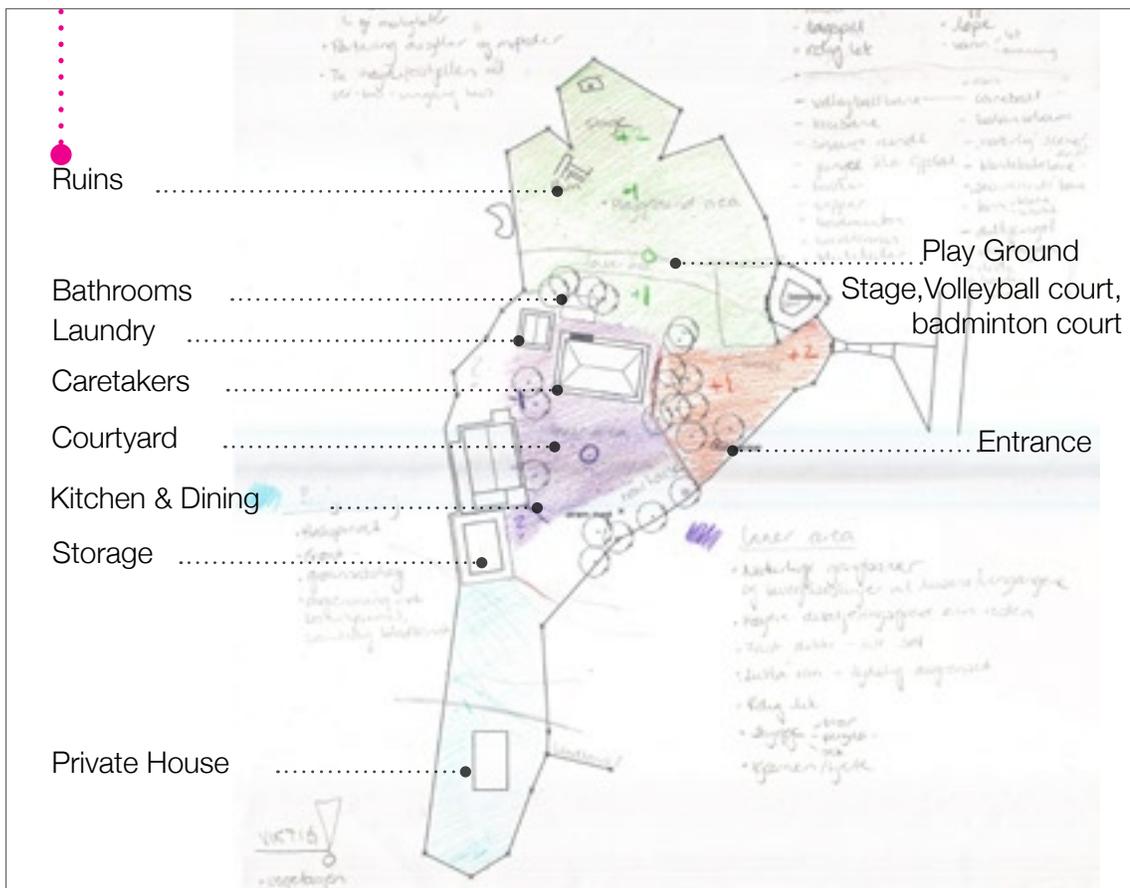


FIGURE 19: Architect's Sketch of Site Distribution

Precedents

The Orphanage



FIGURE 20: Integrated Swing

The shape of the houses allow effective natural ventilation within the units, and also aids with the collection of rainwater for the dry season.³ The Iron and wood construction is “assembled on site using bolts to ensure precision and strength.”⁴ As this part of the world can experience severe monsoon days, the pods were lifted and placed on top of concrete, which was casted within old tires.⁵

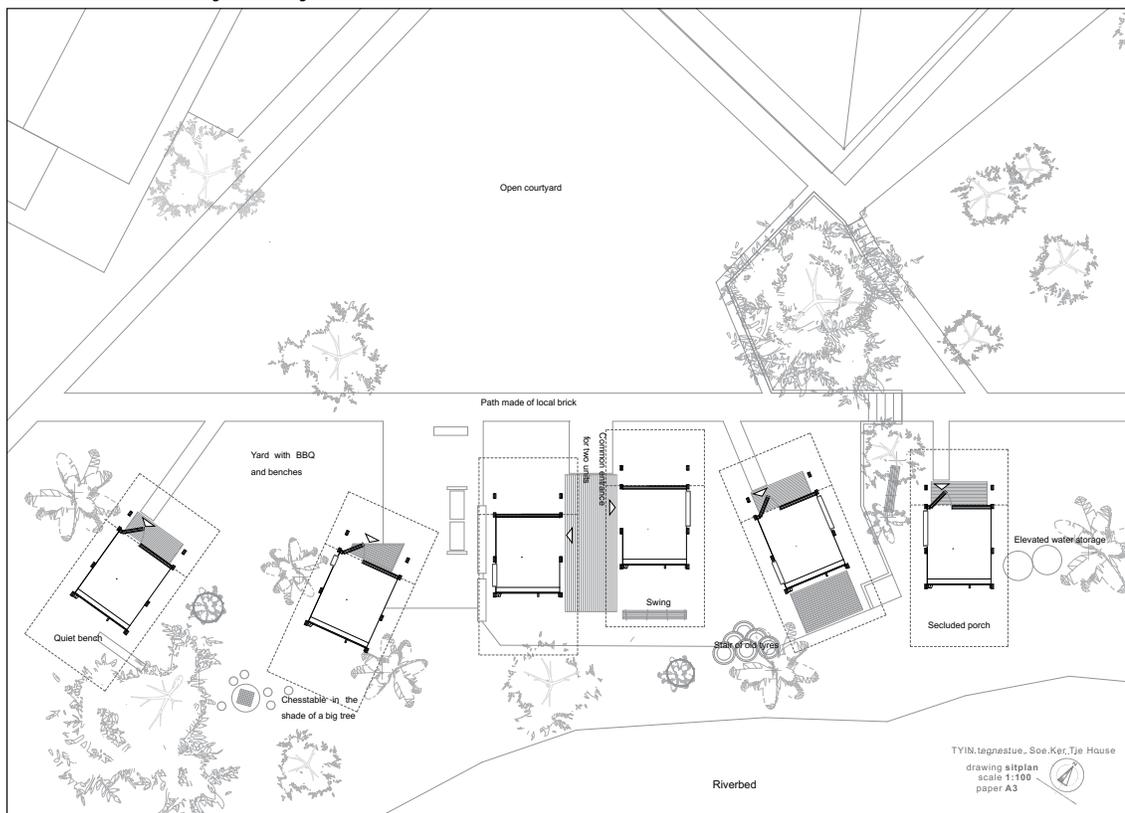


FIGURE 21: Site Plan

Precedents

The Orphanage



Since bamboo cultivation is a common trade in their community and is used for construction for local homes, it allowed easy access to the material towards the construction of Soe Ker Tie House. All the programs within the orphanage, such as the dining head quarters, bathrooms, and residential units, are distributed in a very playful manner to ensure that the children don't feel restricted within walls. Instead, interactive spaces are integrated within the architecture to keep the children active. The interiors of each pod consist of various interactive spaces that allow the children to engage in group activity, while providing areas for privacy as well. The sides of the pods open up to face the pod adjacent to it, bringing a sense of community and playful interaction between the children as well as the architecture.



FIGURE 22: Detailing of the Pods

Precedents

The Orphanage



AMSTERDAM ORPHANAGE

The Amsterdam Orphanage was designed by Aldo van Eyck and built between 1957 and 1960. It was not long after that the Dutch society introduced the foster care system, which resulted in the disuse of the orphanage and led to its abandonment. The main purpose of this orphanage according to Frans van Meurs, the director, was to “*move his orphans away from the bustle of the inner city to a small, ideal world bathed in healthy air, sunshine and greenery. Here in this microcosm they could develop in sports, play, handicraft, music, theatre and all kinds of visual expression.*”⁶ Van Meurs outlook on improving the lives of the children through architecture is highly commendable. His intentions were to design spaces that contributed to the betterment of their mental state of mind through the organization of spaces within the home.



FIGURE 23: Site Plan

Precedents

The Orphanage



FIGURE 24: Architectural Details

The architecture of the building is influenced by contemporary version of the Classical Orders, composed of columns and architraves. The distribution of rooms are based on a grid-like formation along which, *“pillars, architraves and solid walls mark off a number of well-anchored, enclosed spaces: the living rooms and adjoining patios, the festive hall, gymnasium and central court.”*⁷ All these spaces are related primarily to their center; while *“the inner court seems to be a latter-day version of a Renaissance ‘cortile’, the interior streets [resembles] Romanesque cloisters.”*⁸ Aldo Van Eyck, strongly believed that architecture, just like humans, should breathe in and out. Therefore, within this orphanage, are moments where spaces *“mark the transition between here and there, inside and outside; that provide a place, an invitation to linger between two realms.”*⁹ This is visible in the doorsteps leading from inside to outside, as well as in loggias that beckon the children to enter. Fran van Meurs desired a:

*“...friendly, open home, whose fanciful outward form and snug, well proportioned internal arrangement give the children staying there a feeling of being home, safe and sound. No endless corridors and doorways, where a child can get lost, but links between the various areas of habitation and resort... For even though the house has differing components, the highest architectural order must be to create unity, whose parts will ultimately form living constituents of a living lively whole.”*¹⁰

The architect tried to eliminate the possibility of a child feeling constricted within a space. The openness and high ceilings prevented feelings of entrapment. The Integration of activity within the architecture of the home was also undeniable. For example, columns were used for its circular formation as a track to run around, circular paddling pools were carved within the veranda space, and sandpits with impressed

Precedents

The Orphanage



circles on each corner were used to collect rainwater after a rain shower. These integrations are great methods to keep a child's mind active and distracted from feeling sorrowful, alienated or abandoned.

The materiality and form of the architecture however, was heavily influenced by the post World War II era. Although the architect had every intention to improve the lives of the orphans through spatial distribution and incorporating the notion of 'in-between' spaces, it is evident that the materiality resonates a very cold atmosphere for the upbringing of children. The use of concrete creates a sterile environment, which may prevent a child from proper sensorial play and stimulation.



FIGURE 25: Architectural Details

Precedents

The Orphanage

Chapter 2

It is important to remember that children need spaces with a range of textures, soft colours, and child-like scaled places to explore and unleash their *“frivolous or even childish pursuit [as it is] ultimately beneficial. It’s paradoxical that a little bit of ‘non-productive’ activity can make one enormously more productive and invigorated in other aspects of life.”*¹¹ While designing an orphanage, the integration of interactive architectural elements can be fundamental to improve the mental health of orphaned children, as it keeps the children constantly occupied with activity and exploration. Great inspiration can be taken from the programmatic distribution within the home to apply towards the design of future orphanages.

notes

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The Children: their mind & the senses

p.26-27	Common psychological problems
p. 28	Importance of sensory play
p. 29-30 p. 30-31 p. 32-33	<i>The hand</i> <i>The eye</i> <i>The ear</i>
p. 34	Influence of architectural elements on an orphan's mind
p. 34 p. 35	<i>Form of space</i> <i>Materiality</i>
p. 36	Effects of Interior Spaces
p. 36 p. 37-38 p. 39-40	<i>The in-between</i> <i>Tranquility</i> <i>Solitude</i>

Common Psychological Problems

The Children: Their mind & the senses



It is a natural human reaction to grieve when one experiences loss. Adults however, understand the meaning of loss; children usually do not tend to show their emotions, as they do not comprehend the finality of death. Grieving is a necessary step towards emotional recovery which many orphans unfortunately, do not experience.

Numerous countries have strong cultural beliefs that children simply do not suffer through emotional or psychological difficulties.¹ Unfortunately, this mindset can severely damage an orphan's emotional and psychological journey through life. It is important to understand the severity of these problems and ensure integration of proper individual and group care within an orphanage setting throughout the child's stay at the home.

One of the most likely explanations for the wide range of developmental problems observed among children exposed to institutional settings, is caused by the *"deprived environment ...[that] does not provide adequate experience to scaffold normal brain development."*² Therefore, when a child is forced to adapt into a new social setting, they may show symptoms of confusion, anxiety, depression and behavioral disabilities, which if not rectified, may transition into learning difficulties.³ How can design aid a child towards a simple yet playful transition into a new environment? Van Meirs, the founder of the Amsterdam Orphanage mentioned, *"On approaching a new environment, the child must enter it gladly; its outward appearance should ooze friendliness, beckoning to the child, as it were, to enter."*⁴ The environment, in which orphans are placed, should be thought out profusely; with careful consideration of the homes' surroundings, form, size, texture and colour.

Common Psychological Problems

The Children: Their mind & the senses



Journal Entry 1

Having lived in Calcutta, India till the age of ten, children on the streets went unnoticed. To many, the children became a part of their everyday lives; the begging, the weeping, the crying, and their laughter was overlooked. The clear picture of these children, never faded and the heavy burdening question of "how can society allow these children lead lives that eventually end in despair?" lingered in my mind- continuously. I then realized, it takes one person to do something good- and maybe, just maybe, others will eventually follow.

Importance of Sensory Play

The Children: Their mind & the senses



The act of play is indeed, much different from one's bodily experience of sensorial play. Early childhood educators emphasize the importance of sensory stimulation in a child's life, by providing intentional opportunities for children to explore and actively use all their senses.⁶ It has been proven that *"stimulating the senses sends signals to children's brains that help to strengthen neural pathways important for all types of learning."*⁷ For example, as children start exploring the sense of touch through discovering new materials and textures, they soon start to understand and identify the differences between materials, which is an important step towards brain development.⁸ Introducing sensory play in a child's life will benefit their cognitive development, emotional development, social skills, physical skills, and communication skills.⁹ Before children are capable of speaking, they develop a sense of understanding through distinguishing the difference between things they touch. The integration of play also allows opportunities to grow in a social setting rather than in isolation. It allows interaction, sharing of ideas and building new relationships. Unfortunately, institutions for orphaned children in our present day society continue to segregate the sensorial experiences from the notion of play. The vitality of these two aspects coexisting- is essential to the proper development of orphaned children.

Importance of Sensory Play

The Children: Their mind & the senses



THE MYSTERIOUS HAND: THE SENSE OF TOUCH

"The skin is the oldest and most sensitive of our organs, our first medium of communication, and our most efficient protector. Even the transparent cornea of our eye is overlain by a layer of modified skin. Touch is the parent of our eyes, ears, nose, and mouth. It is the sense which became differentiated into the others. A fact that seems to be recognized in the age-old evaluation of touch as 'the mother of the senses.'"¹⁰

When a child loses his/her parents, the fundamental element of parental touch disappears. It often becomes a foreign sensation that many, never experience again. This deprivation can cause severe psychological issues, which may lead to several developmental problems. The lack of physical touch, that is universally known to be inviting and compassionate, *"enables us to experience borders and divisions between our own bodies and the external world. This experience is fundamental to an awareness of and certainty in our existence."*¹¹ When a child is unable to familiarize him/herself with this sensation, they become disconnected from the world around them, as every aspect of life involves the body. The journey of traveling home after school can become a dreadful experience; it's a common misconception that 'home' is irrelevant to the sense of touch. In fact, *"There is a strong identity between naked skin and the sensation of home. The experience of home is essentially an experience of intimate warmth...the space of ultimate intimacy and comfort... Home and the pleasure of the skin turn into a singular sensation."*¹² Orphaned and abandoned children are first hand victims to the lack of sensory exposure. Various textured surfaces, with interactive spaces can provide great opportunity for sensorial stimulation and cognitive development. Education also plays an important role towards the cultivation of a child's ability to imagine; however,

Importance of Sensory Play

The Children: Their mind & the senses



*“prevailing values of culture tend to discourage fantasy, suppress the senses, and petrify the boundary between the world and the self. Sensory literacy and sensory thinking... has an irreplaceable value in all areas of human activity,”*¹³ especially in the lives of children. The essence of ‘home’ can most certainly be integrated into children’s homes. Instead of designing large, institutional buildings, the careful assimilation of pod-like environments into a community in which orphaned children dwell, can be a far more powerful method of sheltering for children, for their mind, body and spirit.

THE EYE: THE SENSE OF VISION

“The hands want to see, the eyes want to caress” Johann Wolfgang Von

As a shelter for the parentless- with an aim to heal, the home should not merely be about physical appearance; rather, spaces for children that are designed with depth and sincerity for the sole purpose of healing and promoting proper development. In several Western countries *“architecture has adopted the psychological strategy of advertising and instant persuasion; buildings have turned into image products detached from existential depth and sincerity.”*¹⁴ This strategy may be successful in the design of corporate buildings, however, when designing spaces of habitation for children, every aspect of existence must be considered. This includes what the children can or cannot see within the home.

Importance of Sensory Play

The Children: Their mind & the senses



The sense of touch and sight correlate very closely to each other. If the texture of a certain object is meant to stimulate a child, the visionary aspect of it too, should ooze playfulness so the child would want to approach it out of pure delight and curiosity. While designing a children's home, one must remember, *"vision reveals what the touch already knows. We could think of the sense of touch as the unconscious of vision. Our eyes stroke distant surfaces, contours and edges, and the unconscious tactile sensation determines the agreeableness or unpleasantness of the experience."*¹⁵ Therefore, when considering materiality choices for a children's home, one must remember to think of its sensorial qualities and how it can benefit the life of a child. Creating spaces for a child to daydream is also an important part of child development as it stimulates the creative part of their brain. The phenomenon of daydreaming is a part of the sensory realm involving sight, and the architecture *"...shelters day-dreaming, the house protects the dreamer, the house allows one to dream in peace... but even more, an architectural space frames, halts, strengthens and focuses our thoughts, and prevents them from getting lost. We can dream and sense our being outdoors, but we need the architectural geometry of a room to think clearly. The geometry of thought echoes the geometry of the room."*¹⁶

Incorporating materiality that stimulates both, visual and tactile senses can be achieved quite simply. For example, bamboo is a very flexible material that can be used for structural support, furniture, wall panels, and various detailed components within a home. When assembled with precision and detail, bamboo can create a very home-like and warm atmosphere, which is what is missing from several children's homes. Implementing materiality that penetrate a feeling of warmth and invitation, can allow a child to feel as though they belong.

Importance of Sensory Play

The Children: Their mind & the senses



AUDITORY HAVEN : THE SENSE OF HEARING

Healthy child development also consists of *“a rich environment full of a variety of noises and of language sounds. Deficiencies or excesses in this field may lead to various problems.”*¹⁷ In present day society, the beauty and simplicity behind peaceful sounds have been forgotten; our ears have been blinded. Pallasmaa observes that *“... our cities have lost their echo altogether. The wide, open spaces of contemporary streets do not return sound, and in the interiors of today’s buildings echoes are absorbed and censored.”*¹⁸ A child’s journey of auditory learning is quite a spectacular aspect and can most definitely be affected negatively when abandoned or orphaned. It can result in the inability to cry; they simply don’t know how. The lack of playful sensorial stimulation leaves a child unaware of their surroundings, their needs, and physical state. This leaves them bound to their cots, where many live and die.¹⁹

The integration of a healthy sound environment can be achieved through various methods. Allowing architecture to embrace nature’s elements can provide children with opportunities to play and unite with nature, or simply observe. For example, playing in the rain and splashing in puddles created by the downpour, is a common act of ‘play’ that children enjoy universally. A children’s home should not prevent a child from being in the presence of the elements. Allowing them to enjoy the rain, playing with rocks outdoors, learning to control kites by understanding the direction of the wind, and enjoying the warmth of a bonfire on a cold night- are simple, yet powerful ways to engage a child with their natural surroundings. *“Experiencing the [elements] reconnects us with our archetypal roots, nourishing us. Their absence starves the soul.”*²⁰ It helps them raise questions as to how things work, keeping their mind occupied and senses stimulated.

Importance of Sensory Play

The Children: Their mind & the senses



Involving the community with music is another method of creating a healthy sound environment for orphaned children as “[M]usical surroundings also offers them an escape, allowing them to forget everyday problems and worries.”²¹ Musical training was introduced within an orphanage setting in the 17th century in Europe, where people from all over Europe would travel to watch the choirs perform. This tradition continued in various orphanages in Italy as it taught the children discipline as well as emphasizing the importance of working in a group setting to achieve a common goal.²² The reappearance of this tradition proves that directors of these orphanages “found that music helped to soothe the sadness which surely, at time, overcame these children, deprived of parents by tragedy or abandoned because of poverty.”²³ Similarly, present day orphanages must consider implementing this as an activity into their everyday lives. Music can soothe, relax and even excite children; it can bring joy in their lives. Orphanages don’t need an extraordinary amount of resources to incorporate musical activity into the home; instruments can easily be made with existing objects, and children can create an ensemble by uniting their voices.

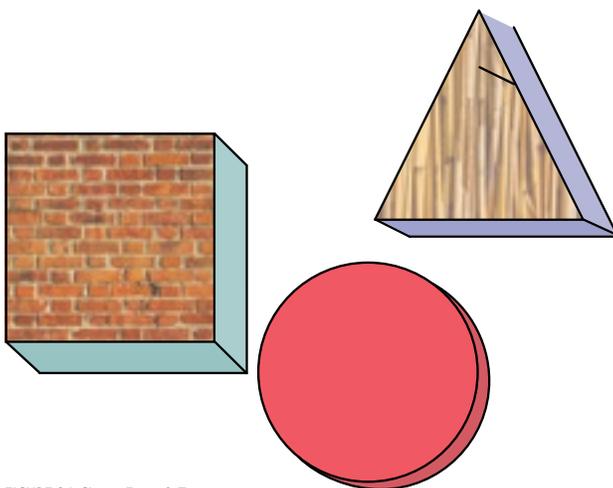


FIGURE 26: Shape, Form & Texture

Influence of Architectural Elements on an Orphan's Mind

The Children: Their mind & the senses

FORM + SPACE

The shape and form of a space plays a key factor in the design development of a children's home. Proportions can dictate its use and usability; one cannot feel at ease in a space with an overwhelming vertical presence, nor when the ceilings are too low. Scale is a fundamental constant in our life, that is relative to age and growth; therefore, spaces designed for adults is very different from those designed for children.

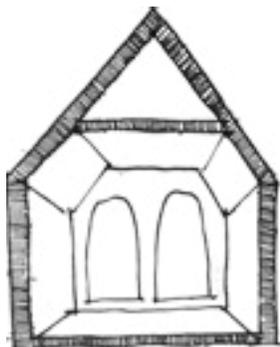


FIGURE 26: High Ceilings



FIGURE 27: Low Ceilings

Spatial qualities have the power to affect ones mood and emotions.²⁴ For example, spaces that are composed of strong geometry such as *“right-angled corners...are internally cramping [and trapping]... Curves [however,] bring planes into more gentle meetings with each other...”*²⁵, making it more suitable for younger children who are still developing mentally. Designers should promote wellness by creating physical surroundings that are ‘psychologically supportive’ as the effects of design influence the process of recovery.²⁶ While small children live in continuous physical activity, teenagers are more involved with the thought process. Therefore, when designing a children's home, gestures should be incorporated according to the developmental stages of a child; fluidly soft for the younger children, to organized rooms for the older children.²⁷

The forms and spaces, which contain the heart of social life within the orphanage, must differ in quality compared to the other, more private and programmed spaces. The place that envelops communal interaction must be so that it accommodates for all ages- with pockets of spaces of differing sizes and textures, and inbuilt areas that promote all sorts of activity. An amphitheater for example, allows groups of children as well as adults to perform; however it also provides a space for outdoor games, exhibitions, and solitary play.

MATERIALITY + TEXTURE

Materiality and texture are present in every aspect of being. It has influential qualities that can draw or withdraw a person to or from spaces. They can also affect one's perception of *"tastes, smells, sounds, and memories of previous sensations..."*²⁸ When a child is removed from the environment they had become accustomed to, it can be very difficult for them to adapt to a new setting. The orphanage must take into consideration the psychological state of mind of the children, and provide accordingly. This includes taking into consideration how materials and textures can affect their mood, evoke emotions, and alter their behavior. *"Cold, hard materials, such as steel or large sheets of glass, make buildings feel unfriendly; they're products of machines, not life...Wood is touch-friendly, warm and alteration-tolerant. It permits wide mood range, from cozy enclosure to extensively glazed openness. Masonry is in-between. Though [it is] cold and hard; it [can be] visually and texturally warm, and not too difficult to alter."*²⁹ In addition, the inclusion of greenery softens industrial, unfriendly or domineering materials, making the space more approachable and less intimidating for children.³⁰ Architectural elements must intrigue a child, gesturing them to approach without hesitation and explore the space with glee and excitement. The materials used within a space should remove any sense of fear a child may be feeling upon entering, and bring forth an aura of friendliness through its childlike architectural behavior.

THE IN-BETWEEN: WHEN ARCHITECTURE BREATHES IN AND OUT

Within orphanages, distinctive rooms are given particular functions. However the roles of an in-between space is also crucial. The significance of the journey from one space to another, is essential for a child's well being. It is necessary that the orphanage has *"no endless corridors and doorways, where a child can get lost, but links between the various areas of habitation and resort...which do nothing to disrupt the conviviality of a communal dwelling. For even though the [community] has different components, the...architectural order must nonetheless be to create unity, whose parts will ultimately form living constituents of a living, lively, whole."*³¹

The journey must be so that the children have full ability to transition from one space to another with ease and little hesitation, as it can truly affect a child's interest and decision to make the next step to enter. The journey through a threshold should ideally be welcoming and should appease human uncertainty. Stairs for example, are an essential architectural element, allowing transition from one space to another. Adults tend to notice the qualitative aspects and make judgments based on structure and durability, while children will notice its playfulness (shape, colour and texture) and its ability to entice them to enter with sheer excitement and lack of hesitation.

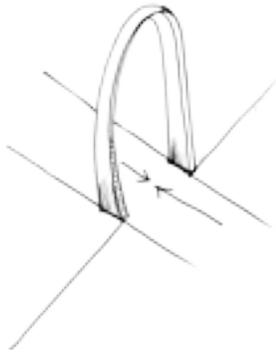


FIGURE 28: The In-Between

Aldo van Eyck had successfully integrated the notion of 'here and there', through the use of *"solid circular or curved doorsteps that mark the transition between... inside and outside; that place, an invitation to linger between two realms."*³² Transitions must be inviting; therefore, introducing colour coordinated spaces or curvilinear geometry that leads a child from one space to the next, are subtle, yet effective methods of promoting wellness in an orphan's life.

TRANQUILITY: EFFECTS OF COLOUR

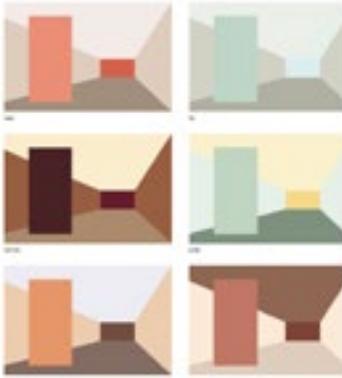


FIGURE 29: Effects of Colour

People encounter colour on a daily basis; it surrounds human beings, affecting mood, behavior and environment. Colours are fundamental elements for our visual perception and environmental experience; they are the substance of how we experience our surroundings.³³ It is present in every realm of existence—imaginary, virtual, spiritual and of course, the natural realm.

It is a common experience for one to be affected by colour; therefore concluding that colour has a direct effect on one's emotions. Consequently, colours used in an environment for children should be taken into careful consideration. The type of activity that will be held in designated spaces will determine the spatial aesthetics, which should ideally be integrated to suit the audience and the program. For example, indoor play areas are common spaces within an orphanage; therefore, the colours used must accommodate the age group, the size of the room and its emotional impact on the children. Colour can also be used to influence the effect of proportions within a room, such as width, height, and depth. For instance if *“light blue [is chosen to be painted] on a ceiling, [it] does not in itself appear light in weight if it is next to a white wall; but it would appear light in weight in relation to a sand-colored or dark wooden wall.”*³⁴

Although paint can be an expensive method of adding liveliness within a home in various parts of the world, an alternative method is choosing a material that evokes a feeling of warmth, invitation, and homeliness. Materials such as bamboo and brick are inexpensive, yet effective in eliminating a rigid and sterile environment due to their warm colour.

Effects of Interior Spaces

The Children: Their mind & the senses



Gerhard Meerwein, a colour psychologist, “the following table lists basic feelings elicited by color effects in architectural space, summarized from many decades of experience in teaching interior design and educating color designers. Of course, feelings deviating from these that are based on individual experiences are also possible.”³⁵

*This table elaborates on the effects of different colours when applied to architectural elements

	Floor	Wall	Ceiling
	Sandy, light	Warning, expanding	Light, closing
	Not resonant, emotionally arousing	Arousing to irritating	Shining
	Resonant, earthy, sure-footed	Oppressive, restrictive	Burdensome
	Flowery, light, soft	Warning, stimulating	Light, closing
	Arousing to irritating, provocative, garish	Shining, warning to heated, aggressive	Exciting, irritating
	Supportive, secure, familiar	Shining, restrictive	Exciting, aggressive to burdensome
	Foreign, delicate, charming	Delicately scorned, flowery	Oppressive, warm
	Festive, majestic	Dominant	Obscuring, burdensome
	Noble, enforcing, variable	Decisive	Symbolic, intentional
	Bottomless, charming	Fragrant, flowery	Delicate, scorned
	Valuable, majestic	Mystical, artificial	Mysterious
	Luxurious	Magical, mysterious	Reserved
	Floating, icy	Cold, retreating, calming	Ice-like, cool to airy
	Refreshing, watery	Cold, foreign, distanced	Heavy, cramped
	Deepening, bottomless	Deactivating, distanced	Cooling, burdensome, powerful
	Floating	Expanding	Neutral, closing
	Natural, safe	Circumscribing	Closing, oppressive
	Sure-footed, solid	Decisive	Oppressive
	Bottomless, foreign, empty	Neutral, free	Open, wide, light
	Deepening, abstract	Restrictive	Oppressive, burdensome
	Sure-footed, neutral, solid	Deactivating, passive	Cooling, oppressive

FIGURE 30: Effects of Colour*

SOLITUDE: SPACES OF REST

Rest can be achieved in numerous ways in a children's home. Apart from their personal sleeping corners, spaces of solitude are essential to the proper psychological growth of a child. Bedrooms are personal realms; however, "*attics, cellars, storerooms and garden sheds are full of mysterious things to stimulate inventive play, but have very different moods.*"³⁶ Sheridan Bartlett states that if a house is built solely for children, the home would only consist of "*all attic and eaves, huge closets and little doors, cubbies and alcoves and dark shadowy places, laundry chutes...settings for mystery and exploration.*"³⁷ These spaces do not need extravagant thinking; children can turn simple elements within an architectural setting into new whimsical creations. Ledges, landings and deep windowsills are a few architectural gestures that provide children with the space they need for ideal solitary 'play-nests'.

Similarly, places of rest can also be provided in the outdoor setting. Outdoor space, filled with plantation, carved out grounds, boulders to climb, swings hanging from trees, tree houses, and sand to play with, are only a few characteristics of the outdoors that children enjoy. If these aspects are genuinely considered, and incorporated into a home for abandoned children, it will not only provide adequate activity for their distressed minds, but will also provide mental and physical nourishment.

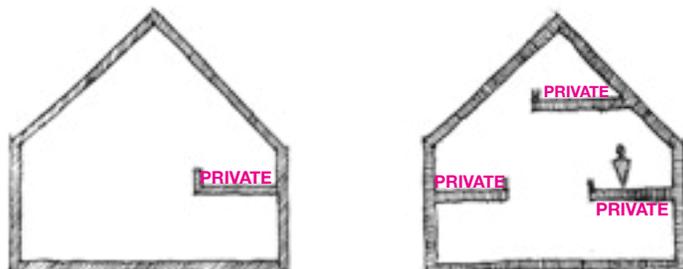


FIGURE 31: Variation of Privacy

Journal Entry 2

Having worked in a community center with young children for a short while- I was able to witness some of their innocent and quirky behavior. After the children had eaten their snacks, they were asked to go to the main hall for group activity. It turned out there were two kids missing. The last I remembered seeing them was in the dance studio (where snack is served). I went back inside, hoping to find them sitting in a corner, until I saw the cupboards under the sink slightly opened. As I moved closer I heard whispering voices discussing the books that each of them were reading. As I opened the door to the cupboards- they looked at me with wide eyes, dismayed that I found them, but with a glimpse of mischief in their smile.

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The Creation: rethinking the orphanage

p. 42-52	The Tale of Two Cities
p. 42-49 p. 50-52	<i>Kolkata Santiniketan</i>
p. 53	Rabindranath Tagore
p. 54-57	Site
p. 58	Materiality
p. 59-122	Phasing Growth
p. 60-61 p. 62-65 p. 66-90 p. 91-107 p. 108-122	<i>Programming Phase 1 Phase 2 Phase 3 Phase 4</i>

KOLKATA

Kolkata, formerly known as Calcutta, is the capital of West Bengal State, and former capital of British India (1772-1911). As one of India's largest cities, it is the home to one of the countries largest ports; it is "*centered on the east bank of the Hooghly River, once the main channel of the Ganges River, about 96 miles upstream from the head of Bay of Bengal; the port city developed as a point of transshipment from water to land and from river to sea.*"¹ The city of Calcutta flourished into a city of commerce, transport and manufacture, becoming the dominant center of Eastern India.² Throughout the years the city has become an attraction to several tourists; a puzzling experience for many, while others found beauty and enjoyment in the hidden gems scattered throughout the city.



FIGURE 32: The Streets



FIGURE 33: Victoria Memorial

Having flourished under European tradition and influences, Calcutta has now become a home to 4,486,679 people; ranging from the wealthiest to the poorest who dwell in unfortunate living conditions. 1.06M of the population are victims of poverty; many of which are children.³ These children do not have the means to earn an education, for which reason, most work under the authority of the privileged to help provide for their family. Most of the children who live in slums are not given the opportunity to go to school; they barely experience the wonders of childhood. Orphaned children who are taken in by institutions in Calcutta receive shelter and nourishment; however, they are restricted to the space provided within the gates of the homes. The density of the city confines them to the space provided within the walls of the orphanage, restricting the children from exploring the outdoors and stimulating the senses.

The tale of two cities

Chapter 4

The Creation: rethinking the orphanage

Journal Entry 3

December 2012:
I remember walking through my neighborhood to a local tailors shop with my mother to have a blouse tailored to match my sari. It was quite a chilly evening- the sun had long past set, but the streets remained lively. In the midst of the hustle and bustle of the streets I noticed the glimmering of a street lamp, under which, sat a boy who looked to be around six or seven years of age. He seemed to be quite concentrated; it wasn't until I turned the corner that I noticed he was trying to complete his schoolwork. I realized that he probably didn't have a place of his own to study, or enough light at home to do his homework, for which reason he was taking advantage of the very little light produced by the street lamp. The sight of this left me heartbroken- not only for the child who so longingly desired an education- but for the western society where many take schooling for granted. The unfortunate reality is that this little boy may make it through elementary and middle school, but the likeliness of completing any higher education is slim due to high school fees, or obligation to provide for his family.

For privileged families, raising children in the city is not a problem. The lives of orphaned children however, follow the same course if not taken in by a proper children's home; they start begging or working at local shops, markets, or trades at a very young age. Some are also taken in by families to work as nannies, cooks, or chauffeurs.

KOLKATA

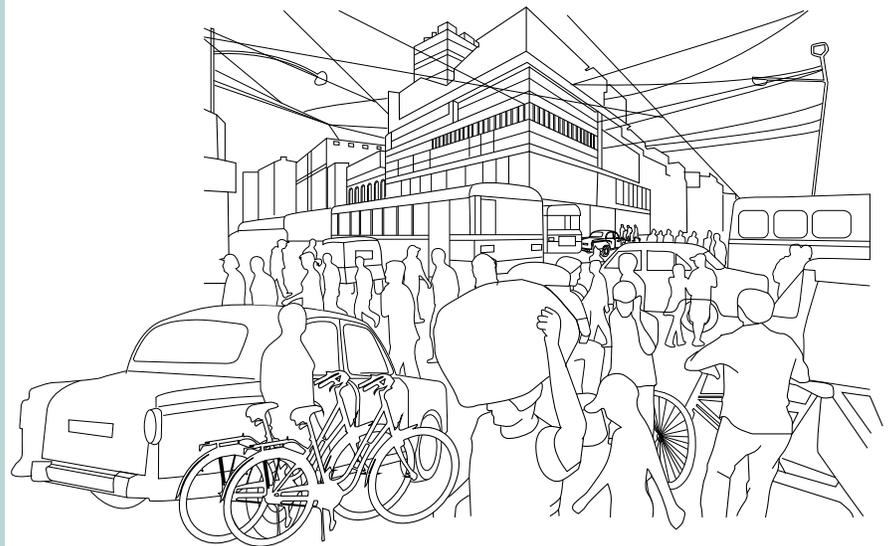


FIGURE 34: Kolkata Street Life



FIGURE 35: Travel Map

December 5th- January 12th

A site visit was required to further enhance my design proposal. During the two week trip, I volunteered at two orphanages in Calcutta, India, which made me realize the importance of the physical environment that surrounds a child. During my visit, I also traveled to Santiniketan, where the site for my proposed orphanage, *Little Dwellings Children's Home* is located. The integration of the arts and learning with the natural environment is the most prominent and respected tradition practiced to date.

The tale of two cities

Chapter
4

The Creation: rethinking the orphanage

KOLKATA



FIGURE 36: Volunteer Itinerary

The tale of two cities

The Creation: rethinking the orphanage



All Bengal Women's Union



All Bengal Women's Union children's home is located in an extremely busy part of town and currently houses 163 children. Upon entering the gates, one will notice a cluster of buildings and a large central courtyard where children play. The buildings are large and consist of several types of programs. Various activities are provided for the children to participate in; however it was easy to notice that the children were affected by the lack of love and attention provided by caretakers. *Mita Roy*, a member of ABWU mentioned that many seek attention through physical embrace or by being deliberately destructive. The thought of being unwanted is implanted in their minds, causing them to seek attention in negative ways.

FIGURE 37: Volunteer Experience

The tale of two cities

The Creation: rethinking the orphanage

Chapter
4

All Bengal Women's Union



FIGURE 38: Volunteer Experience

The tale of two cities

The Creation: rethinking the orphanage



All Children Together Trust



All Children Together Trust Children's Home, houses 24 girls and 47 boys. The home is relatively smaller in size, feeling less institutional and more like a home. The atmosphere created for the children radiate happiness and positivity, allowing the children to grow with a positive mindset on life. Education and the arts are the basis of this orphanage as most of the children are involved with creative arts classes, and many proceed to pursue a post secondary degree. The home is however, located in a dense neighborhood that requires the home to be part of a gated community. Although various field trips are organized, the children are constricted to the space provided within the walls of the home on a daily basis.



FIGURE 39: Volunteer Experience

The tale of two cities

The Creation: rethinking the orphanage



All Children Together Trust



Question:

If you were given one day to do what you felt like doing or be where you wanted to be, could you draw it?

Answer: For most, it involved being in the presence of nature



FIGURE 40: Volunteer Experience

The Creation: rethinking the orphanage

SANTINIKETAN



FIGURE 41: Community Artwork in Santiniketan

Three hours north of Kolkata, is a town called Santiniketan, which was founded by Maharshi Devendranath Tagore, the father of Rabindranath Tagore- a Nobel Prize winner for poetry and literature. The town was originally built as an ashram for Maharshi Tagore; however, Rabindranath Tagore flourished the town into a place where education and nature was the core of being.⁴ The town today *“represents the distillation of Rabindranath Tagore’s life, philosophy and greatest works through his lifetime and the continuing legacy of his unique model of education and internationalism through a living institution and architectural ensemble.”*⁵

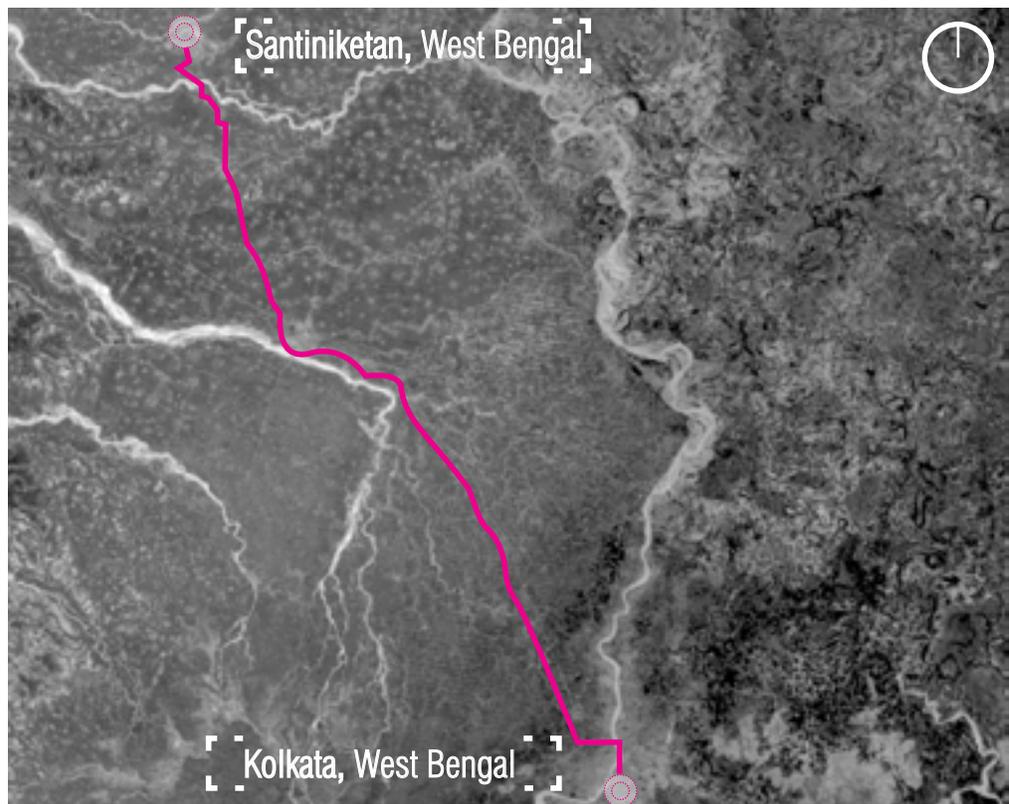


FIGURE 42: Kolkata to Santiniketan

The tale of two cities

The Creation: rethinking the orphanage

Chapter
4

Site Visit

Santiniketan developed into a university town, where the methods and ideologies of Tagore's teaching are still used to this day. It was always Santiniketan's objective to "*establish in the child a sense of oneness with nature.*"⁶ Ever since he established his schooling systems he wanted his students to be one with the environment by communicating with it and investigating it. His hope was to "*instill in children a love for and curiosity about the natural world.*"⁷ Within the town, are several spots dedicated to outdoor learning. These areas are usually located under trees and are circular in form, with the students sitting in a circle and the professor standing in the centre.



FIGURE 43: Santiniketan Sketch

The tale of two cities

The Creation: rethinking the orphanage



Site Visit



FIGURE 44: Santiniketan Site Visit Photos

Tagore's philosophy, '**alterity**', is a philosophical term meaning 'the other': the other quality or state of being different, which is nature.⁸ He believed that an individual would truly understand him/herself if they allowed their body to be in the presence of the natural world. His educational philosophies derived from his strong foundational belief of 'the other'. Music and fine arts have been, and still are main methods of self-expression for the students of Santiniketan. Tagore had introduced various forms of art and dance into the daily life of the town, which was practiced outdoors, as he believed in a "*humane educational system that was in touch with the environment and aim[ed] at the overall development of the personality.*"⁹



FIGURE 45: Rabindranath Tagore Teaching



FIGURE 46: The beginnings of Rabindranath Tagore's School

The range of psychological and emotional complications many orphaned children suffer through, deserve immeasurable amount of love and attention. It is undeniable that the environment that a child is placed in can severely stunt a child's physical and mental growth, or it can provide a nourishing environment for proper growth. Exposure to the natural environment can provide: rich multisensory feelings; opportunities for vigorous, physically active play; opportunities for physical challenge and risk; rough, uneven surfaces for the development of physical strength, balance and coordination; and natural elements that the children can combine, manipulate and play with for their own purposes.¹⁰ Not only is the exposure to the natural environment beneficial to the children, it is also an aspect of life they truly love. If children are deprived or sheltered from the wonders of nature, they may never experience the thrill and benefits that are provided from being unified with the natural environment.

Tagore strongly believed that the mind had *"its hunger for the ministrations of nature, mother-nature... [for which reason he]... selected [a] spot where the sky is unobstructed to the verge of the horizon. There the mind [will] have its fearless freedom to create its own dreams and the seasons could come with all their colours and movements and beauty into the very heart of the human dwelling."*¹¹

The Creation: rethinking the orphanage

Geographically, the town of Santiniketan is located in a rural setting, 200 feet above sea-level. Apart from the slight fold created by the elevation, the land has minimal disturbances and is mostly a continuous plane of flat land.¹² During the monsoon season between the months of June to September, rainfall ranges between 100-150mm.¹³ The design must be so that it accommodates all seasonal changes. In Santiniketan the predominant and celebrated seasons are summer and monsoon, both of which are embraced and celebrated throughout the town. The architecture will respect the seasonal changes, and encourage the children to rejoice and interact with nature as well as draw inspiration from the natural environment.

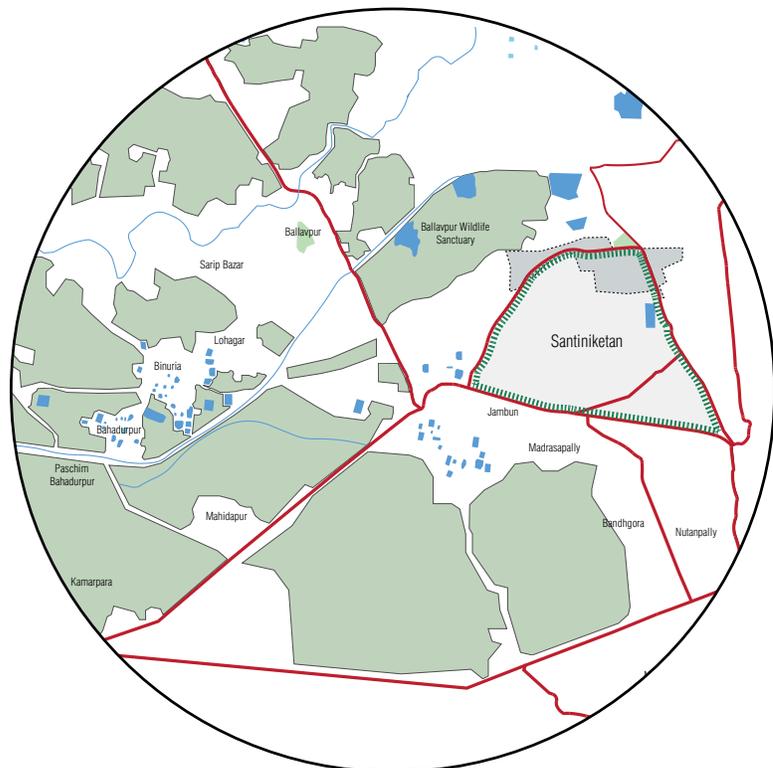


FIGURE 47: Santiniketan Map

The Creation: rethinking the orphanage

LOCATION OF PROPOSED ORPHANAGE:

Located at the edge of Visva Bharati University Campus, the site is surrounded by beautiful aged trees and carpets of red earth; the natural surrounding is the basis of all art forms in the town. Currently, the site is a large, flat plot of land that surrounded by large trees and vegetation. The most prominent trees within the site have seating underneath for the public to enjoy the peaceful atmosphere. There is an existing pathway, which runs through the centre of the site connecting a person from Sriniketan Road to Bolpur-Prantik Road. There is also another existing pathway which perimeters the site, which can serve as an implied barrier for the community that dwells within. Although there is a green metal fence protecting the site, it goes against the wishes of Tagore, as he wanted freedom in the relationship between body and nature.

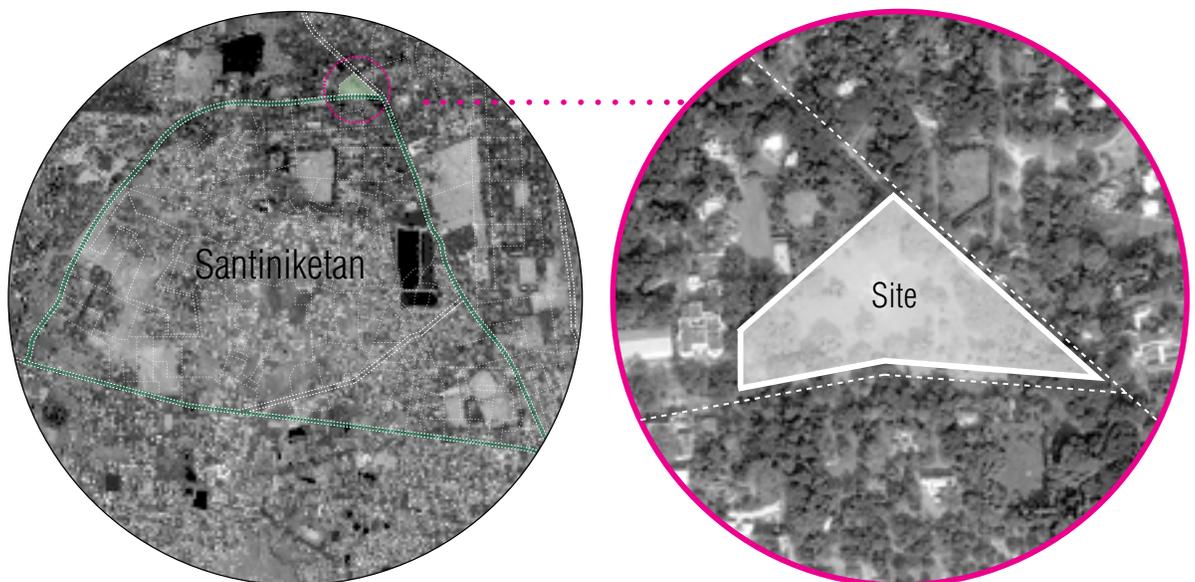


FIGURE 48: Site

The Creation: rethinking the orphanage



FIGURE 49: Site

The Creation: rethinking the orphanage

The material imagination of bamboo:

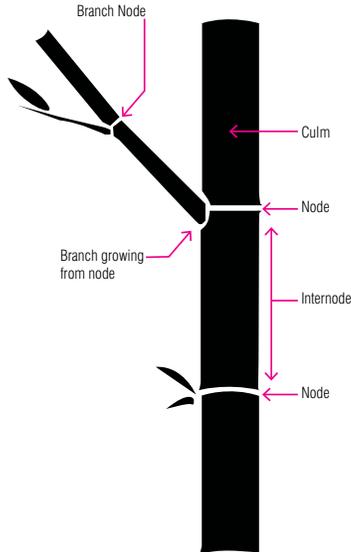


FIGURE 50: Bamboo Diagram

* "Freshly cut culms are easier to treat due to the water-filled cells providing a continuous transportation channel. Both ends of the culms should be cut up to the next node in order to remove the blockage of vessels"

http://communityarchitectnetwork.info/upload/openresources/public/Re_14062013022345.pdf

The character of the town radiates an art culture, which is internationally renowned and respected. Many, from all over the world travel to Santiniketan to witness and experience the rich culture inspired by Rabindranath Tagore's philosophies and lifestyle. There are several annual art festivals where local artists and craftsmen are given the opportunity to sell their work. There are also several areas throughout the town where artists exhibit and sell their work throughout the year. Many of these artists are knowledgeable about bamboo and have familiarized themselves with its strong aspects. This allows them to mold the material in such a way that is both stable and beautiful. Since this a common skill in the Santiniketan area, the development of the home will integrate various methods of bamboo construction as well as bamboo weaving techniques in the making of the architecture.

Bamboo is a versatile, durable, and environmentally friendly material and is known to be one of the fastest growing plants, as it produces a mature fiber that allows the plant to be used for structural purposes within after three years of cultivation.¹⁴ When constructed appropriately, bamboo's structural integrity and light weight allows resistance against wind and earthquakes. The hollow cylindrical shape of the material is known to have a "strength factor of 1.9 times over an equivalent solid pole."¹⁵ Bamboo also requires treatment for a longer life expectancy.* When treated well, starch and other soluble sugars, which attract fungi and insects, are replaced with chemicals that increases their life expectancy without losing its structural stability to approximately 50 years.¹⁶

INTRODUCTION

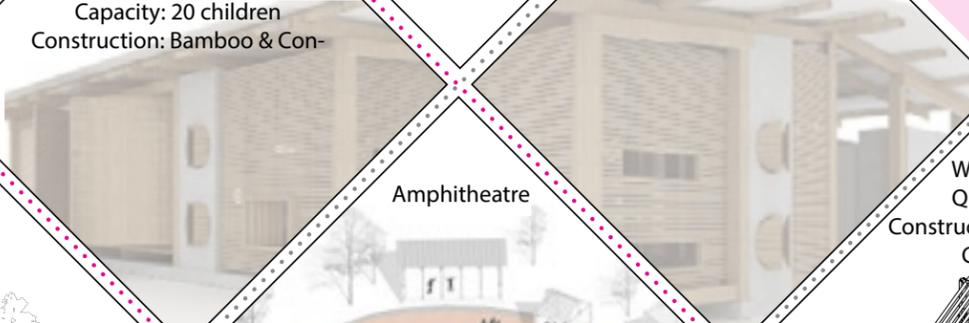
A child's journey within the orphanage will be choreographed by the distribution and arrangement of spaces. The site is arranged in such a way that the educational area is the central and pivotal part of the orphanage; every aspect of the home relates to the core. The residential units are located on the west end of the site; the boy's and girl's headquarters are divided by the dining space and movie area as an implied barrier. The learning spaces are distributed along the centre; the vocational training at the east end of the site; and various spaces for play scattered throughout the site. This dispersion provides a playful yet guided journey for the children for the betterment of their lives. They may begin their journey with doubt and sadness, however, they will be leaving the orphanage with valuable educational experiences which are heavily integrated with the arts and sensory exploration. The development will be completed in phases and will encourage participation from the community and residents of the home during the construction process.

PROGRAMMING

Residence Type 1
Quantity: 5/6 pods
Children ages 6-11
Capacity: 4-5 Kids
Construction: Bamboo

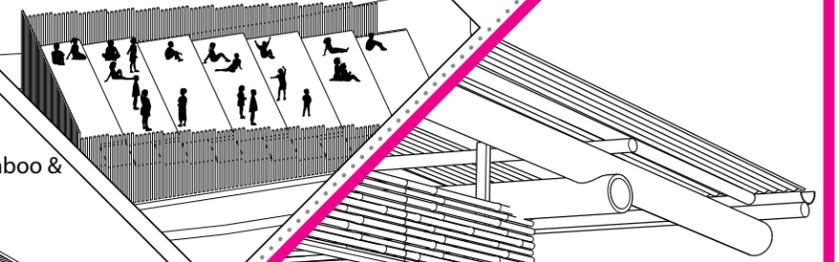


Residence Type 3
Quantity: 4 pods
Children ages 0-5
Capacity: 20 children
Construction: Bamboo & Con-



Guest House
Quantity: 1
Construction: Bamboo & Concrete

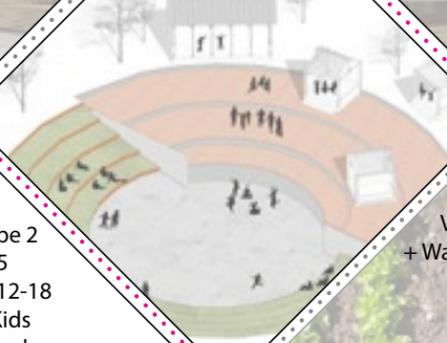
Movie Screening Area
Construction: Bamboo & Concrete



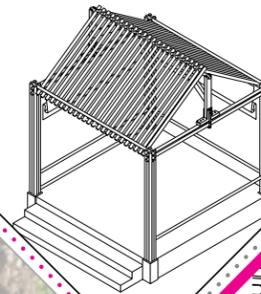
Outdoor Learning Spaces



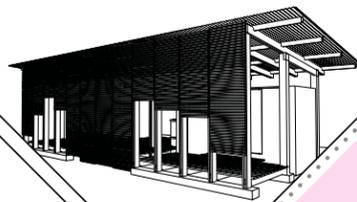
Amphitheatre



Workshops
Quantity: 4
Construction: Bamboo & Concrete



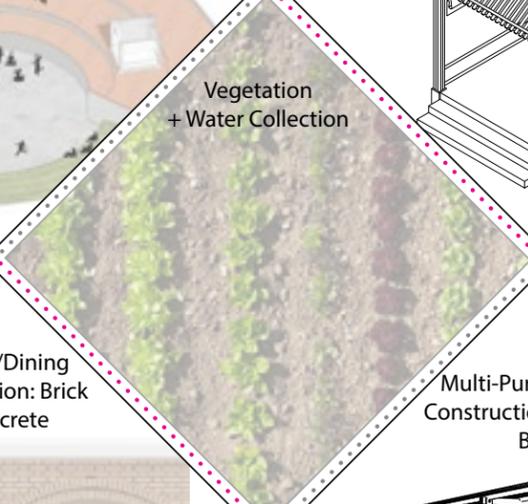
Bathrooms
Quantity: 3
Construction: Bamboo & Concrete



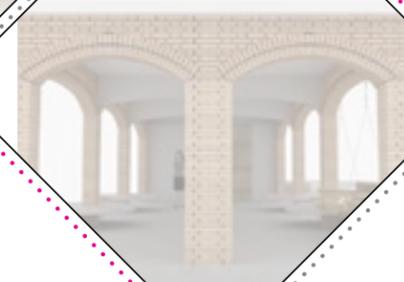
Residence Type 2
Quantity: 5
Children ages 12-18
Capacity: 8 Kids
Construction: Bamboo



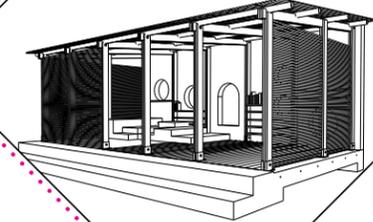
Vegetation
+ Water Collection



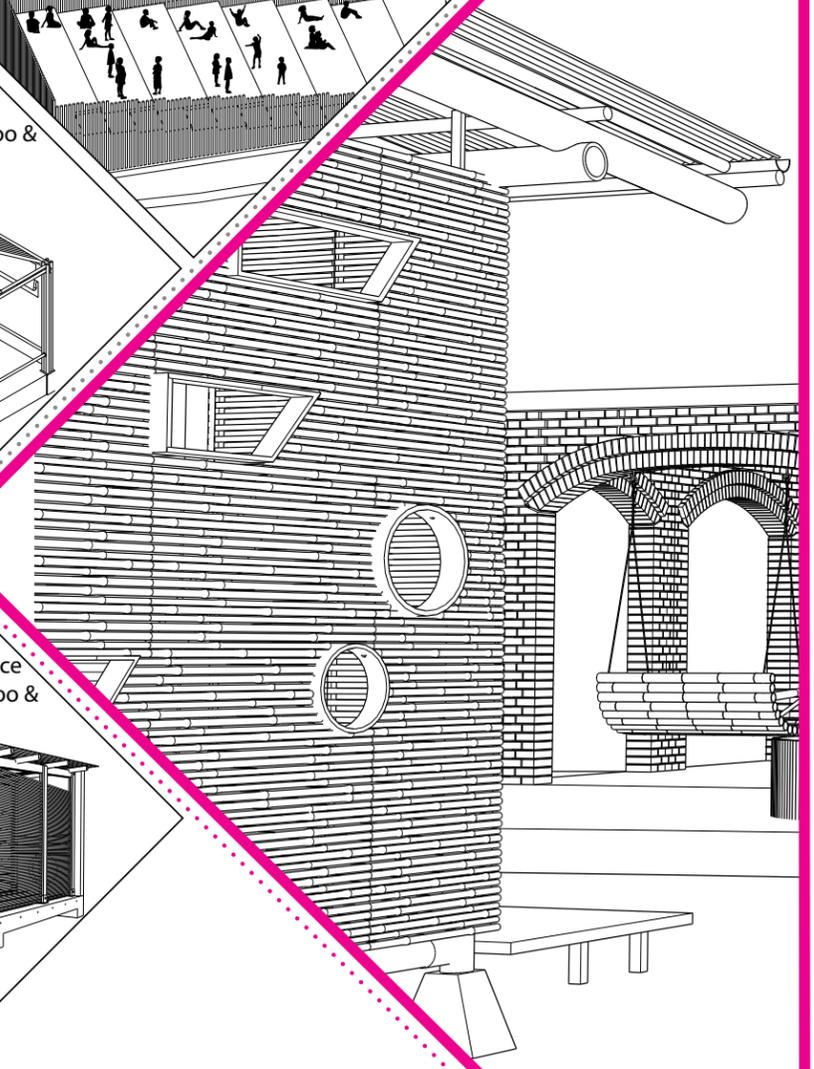
Kitchen/Dining
Construction: Brick & Concrete



Multi-Purpose Space
Construction: Bamboo & Brick



Medical Clinic
Quantity: 1
Construction: Brick & Concrete

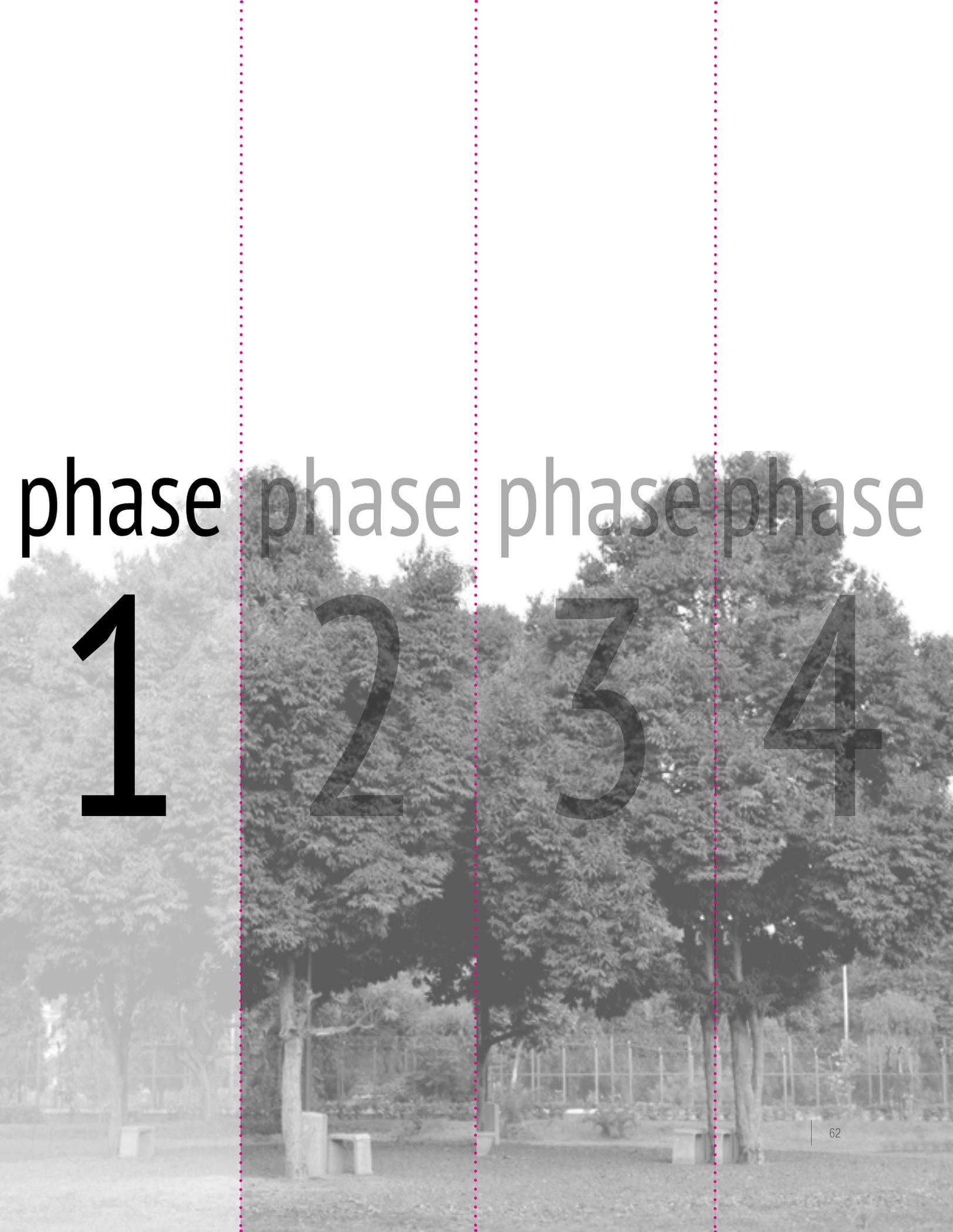




COMPLETED DEVELOPMENT



FIGURE 51: Completed Development



phase

phase

phase

phase

1

2

3

4

Overview:

In the first phase, local laborers gather to plow the earth. Major changes include altering the central pathway; instead of maintaining the linearity, a curved path will replace the existing to create a circular motion within the site. This circular motion will be a common rhythm within the development, as it will always lead the children to outdoor spaces of play and activity. In addition the site will be landscaped to integrate berms to separate the main road and the orphanage. Although this will not be enough to ensure safety, it will be a natural barrier between the town and the children's home. Fences constructed out of bamboo will also be attached to the trees to border the site and serve as a threshold.

The trees that form the site will be maintained and used as a foundational tool towards the formation of the architecture that surrounds the space.

Local Laborers

Landscapers





The Creation: rethinking the orphanage

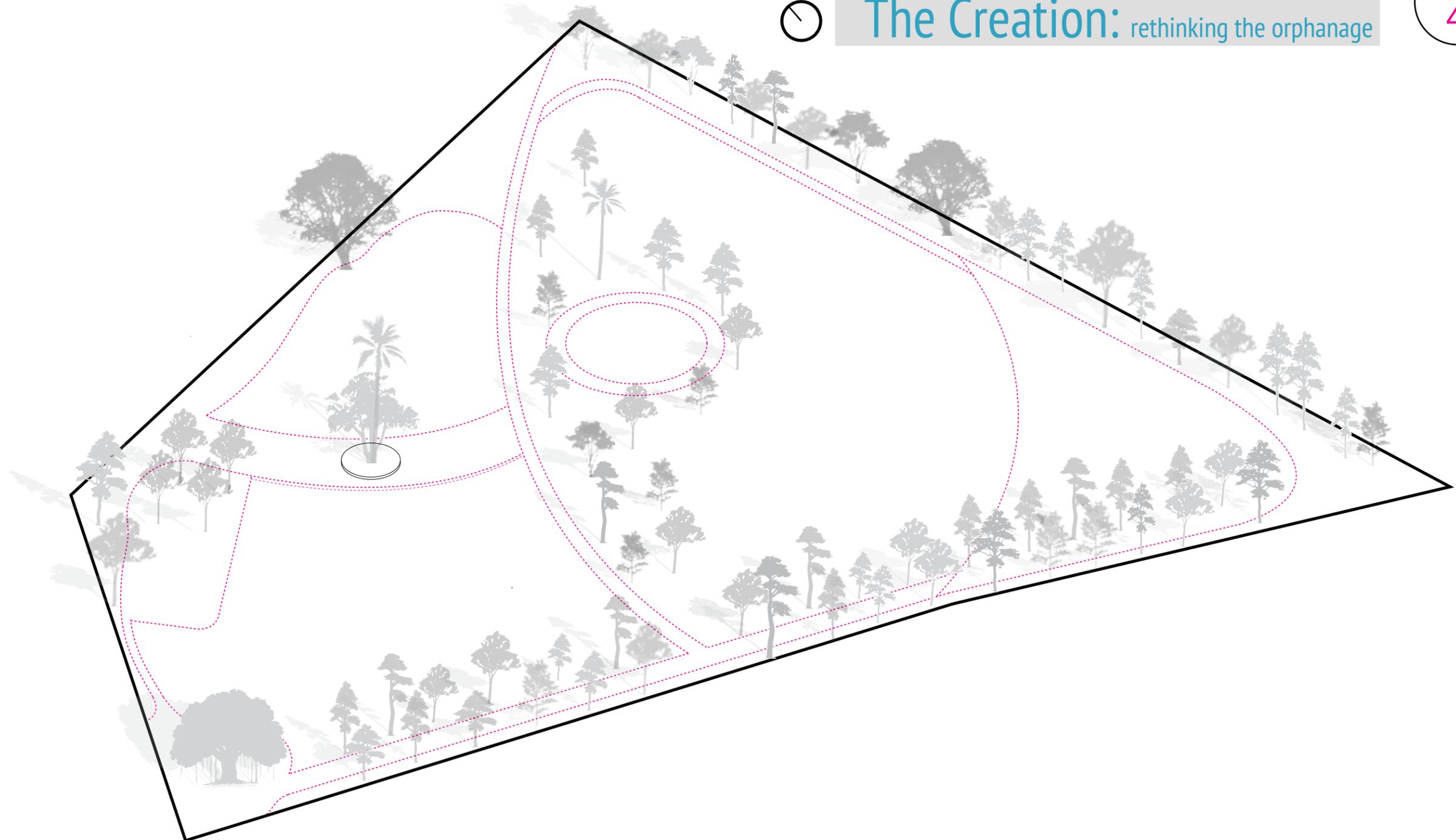


FIGURE 52: Phase 1

phase phase phase phase

1

2

3

4

Phasing Growth: *Phase 2*

The Creation: rethinking the orphanage



Overview:

During the second phase, the foundation for the residences for older children, dining area, vocational training, bathroom and amphitheatre are poured. Soon after, the framework and structural components are constructed and assembled by local laborers. The students of the university will be given the opportunity to be a part of the developmental process of the home. For example, while the structural elements are being assembled (students have the option to volunteer and aid with the process), volunteers will help weave the architectural elements and fasten them to the structural components.

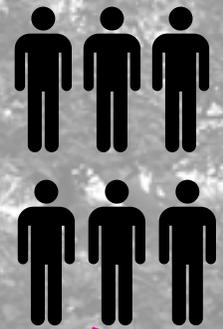
The aim of this phase is to transition the first group of children into the residences. After they are settled they will be immersed into the assembling process of the upcoming pods.

Local Laborers

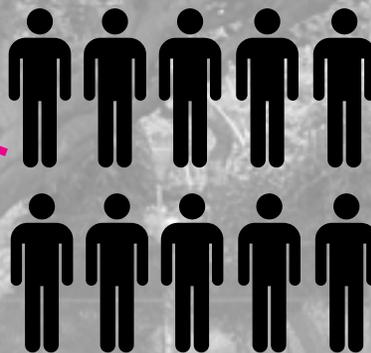
Landscapers



Construction Workers
(Specializing in Bamboo construction)



Plumbers



Student Volunteers

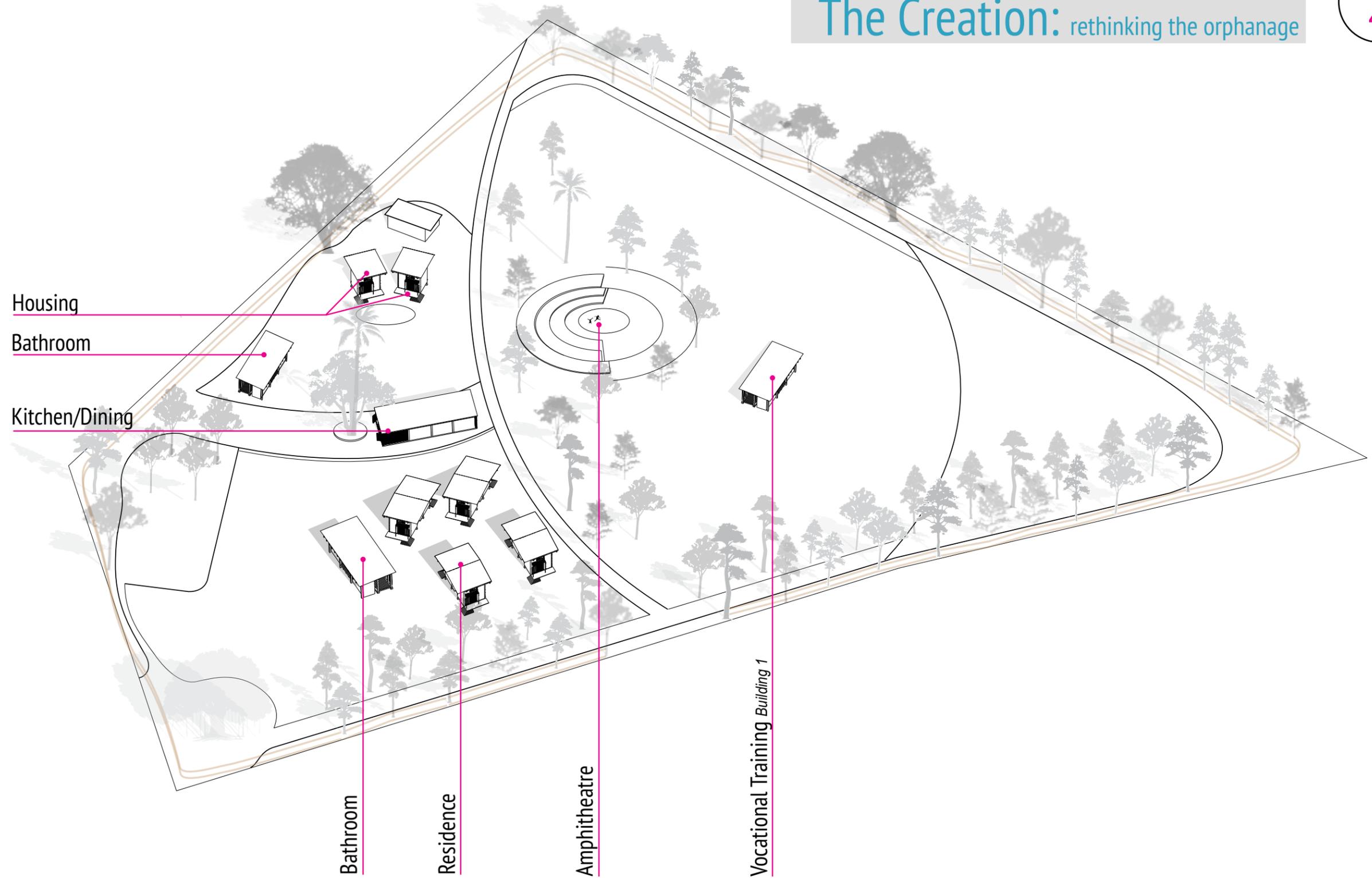


FIGURE 52: Phase 2

Phasing Growth: Phase 2

The Creation: rethinking the orphanage

Chapter
4

Residences For Teenagers:

The pod residences are little dwellings for a group of 5-6 children to live in. They are distributed throughout the west end of the site in a playful, yet systematic manner to respect and embrace the site. Each of the residences are constructed out of bamboo and are lifted two feet above grade in case of flooding. There are various parts of the shell that open towards the outdoors and allow one pod to intersect with another. During this phase one of the residences will be used as a clinic in case of any injuries during the time of construction.



FIGURE 53: Pod Type 1

Residences For Teenagers:

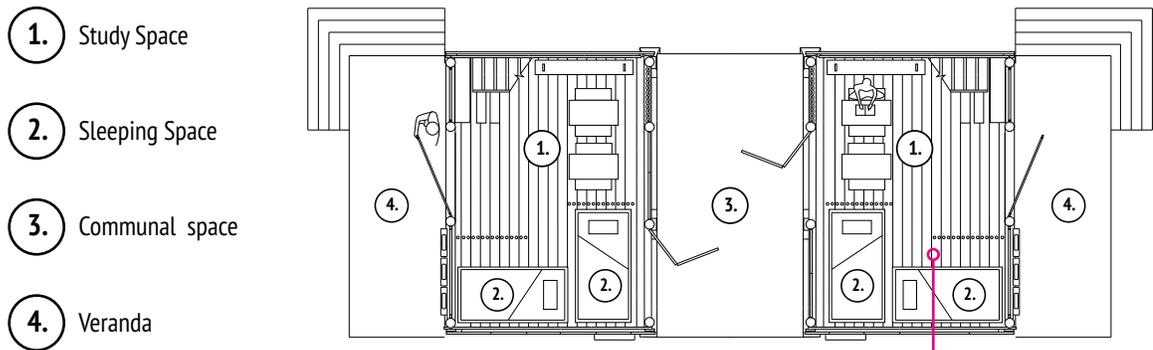


FIGURE 54: Joint Pods
Stages of Transformation
First Floor

Phasing Growth: Phase 2

The Creation: rethinking the orphanage

Residences For Teenagers:

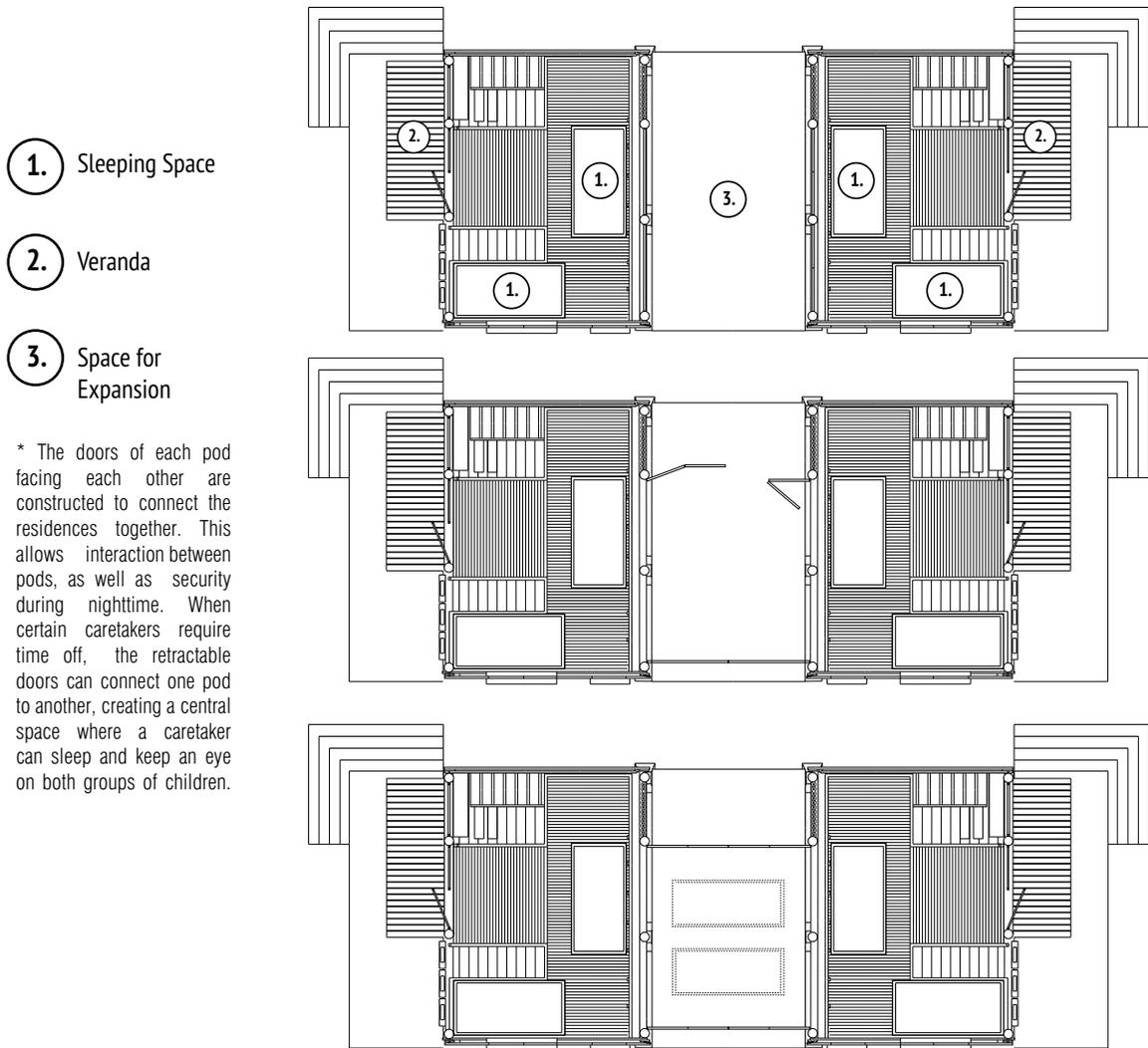


Figure 55: Joint Pods
Stages of Transformation
Second Floor

Phasing Growth: *Phase 2*

The Creation: rethinking the orphanage



Residences For Teenagers

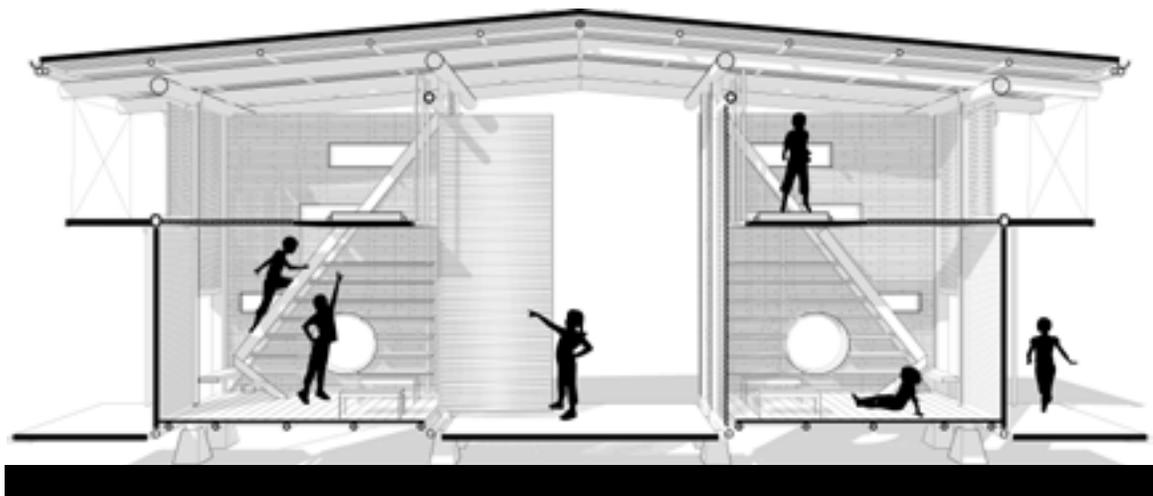


FIGURE 55: Joint Pods
Section

Phasing Growth: Phase 2

The Creation: rethinking the orphanage

Chapter
4

Residences For Teenagers:

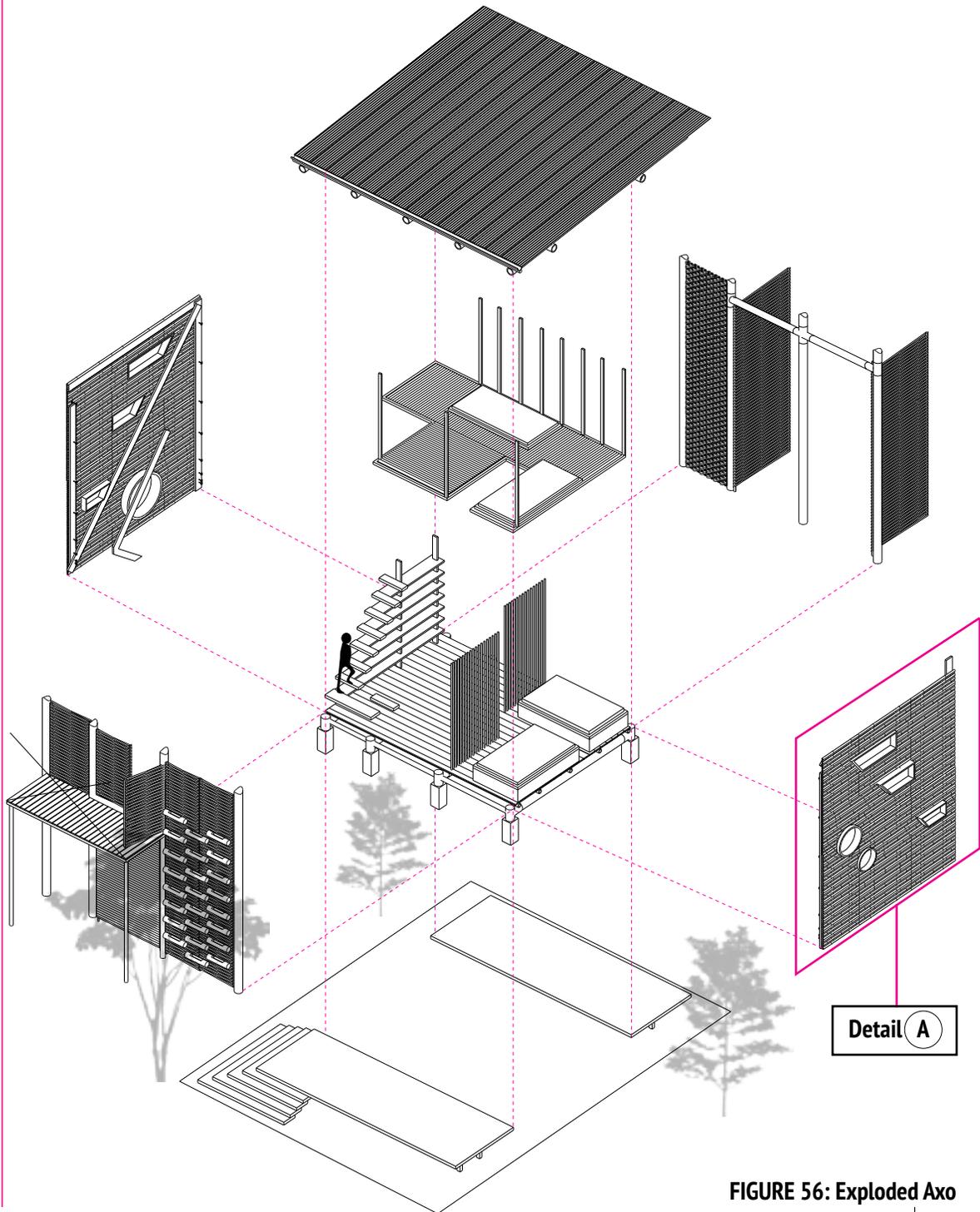


FIGURE 56: Exploded Axo

Phasing Growth: Phase 2

The Creation: rethinking the orphanage



Residences For Teenagers:

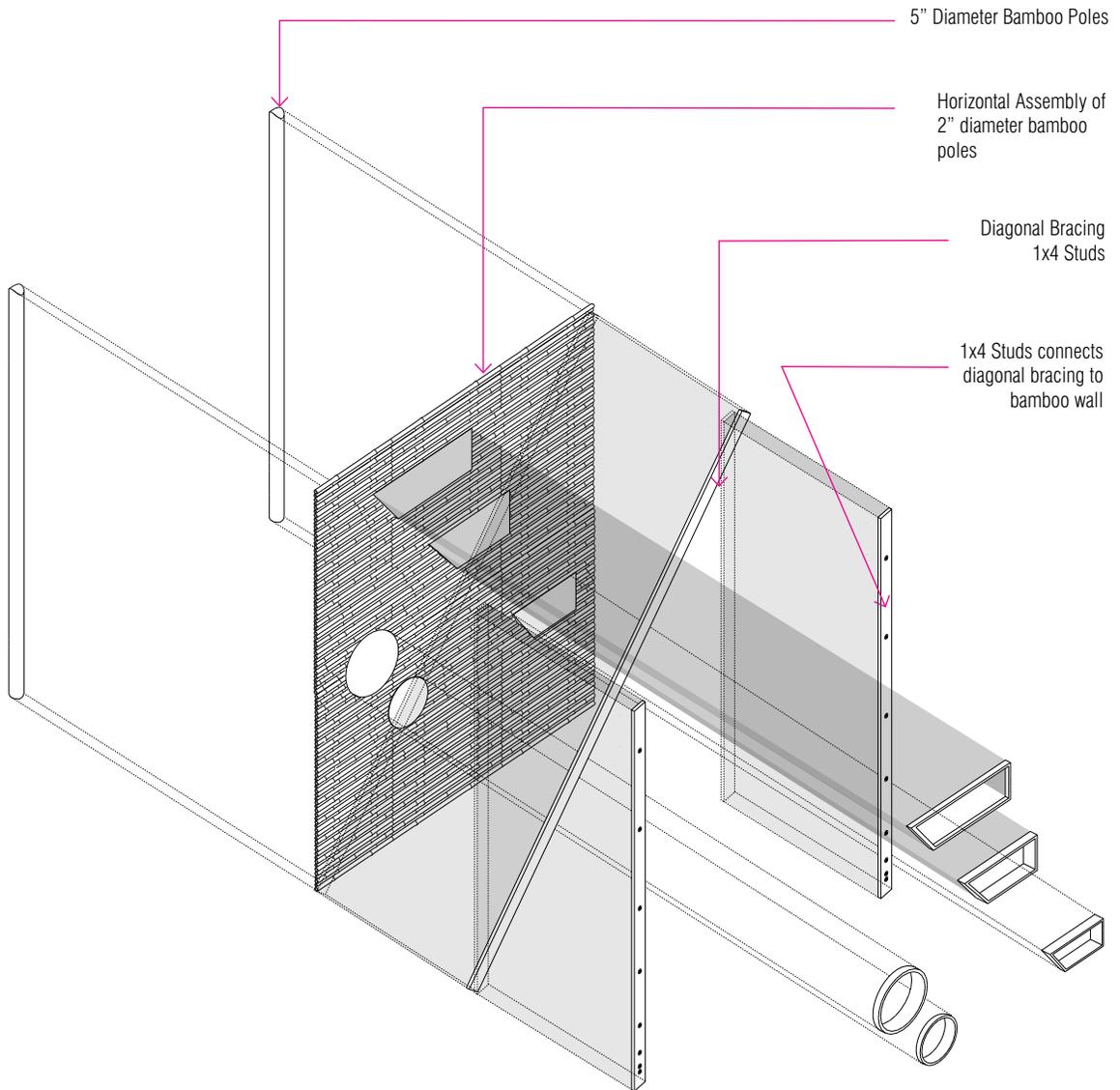


FIGURE 57: Wall Composition

Detail A
Wall Composition

Phasing Growth: Phase 2

The Creation: rethinking the orphanage

Chapter
4

Residences For Teenagers:

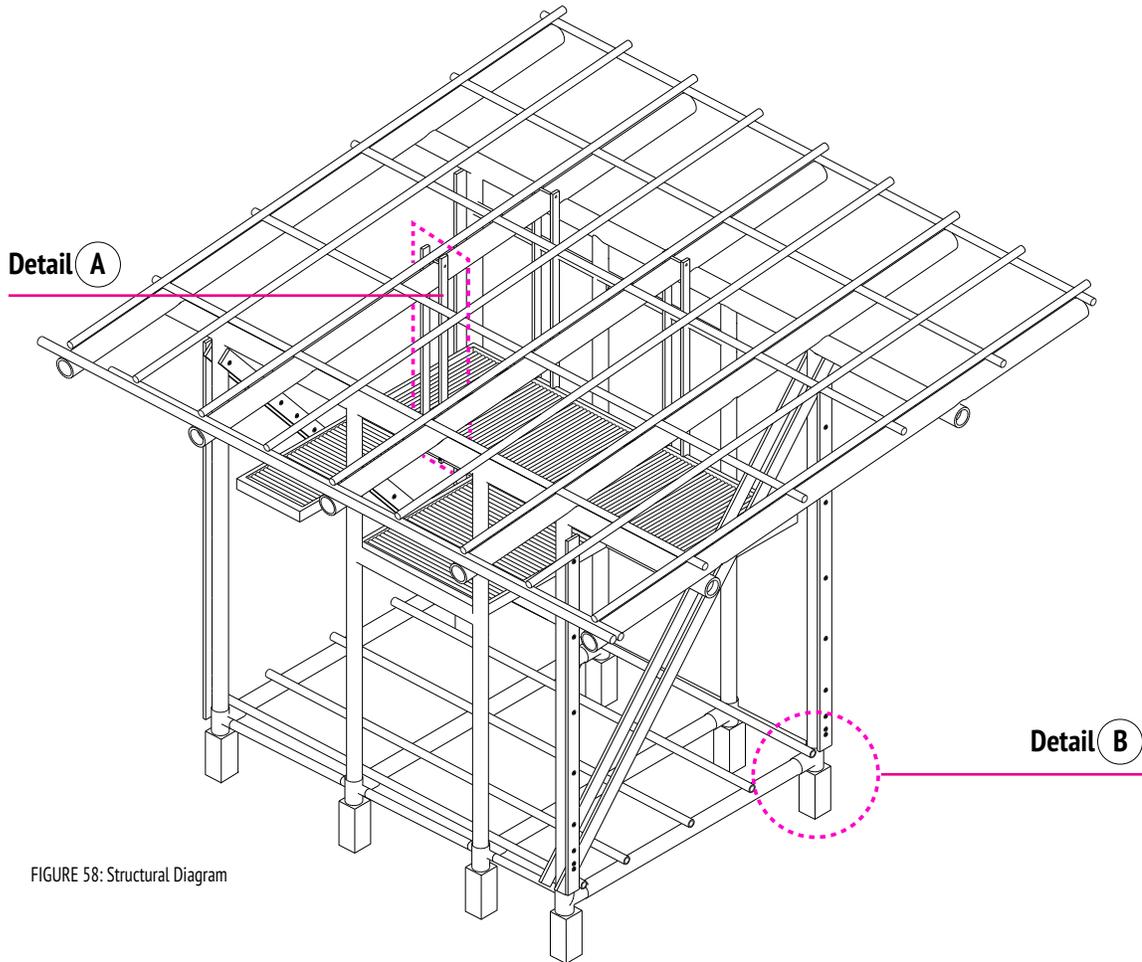


FIGURE 58: Structural Diagram

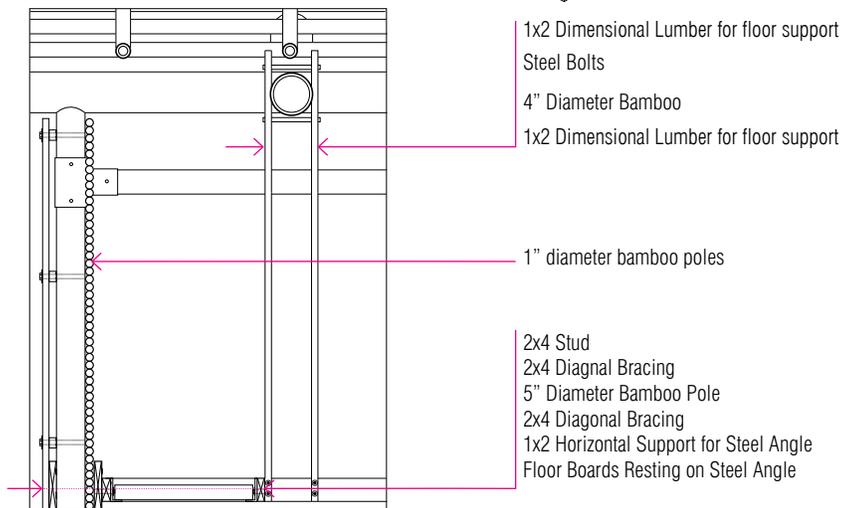
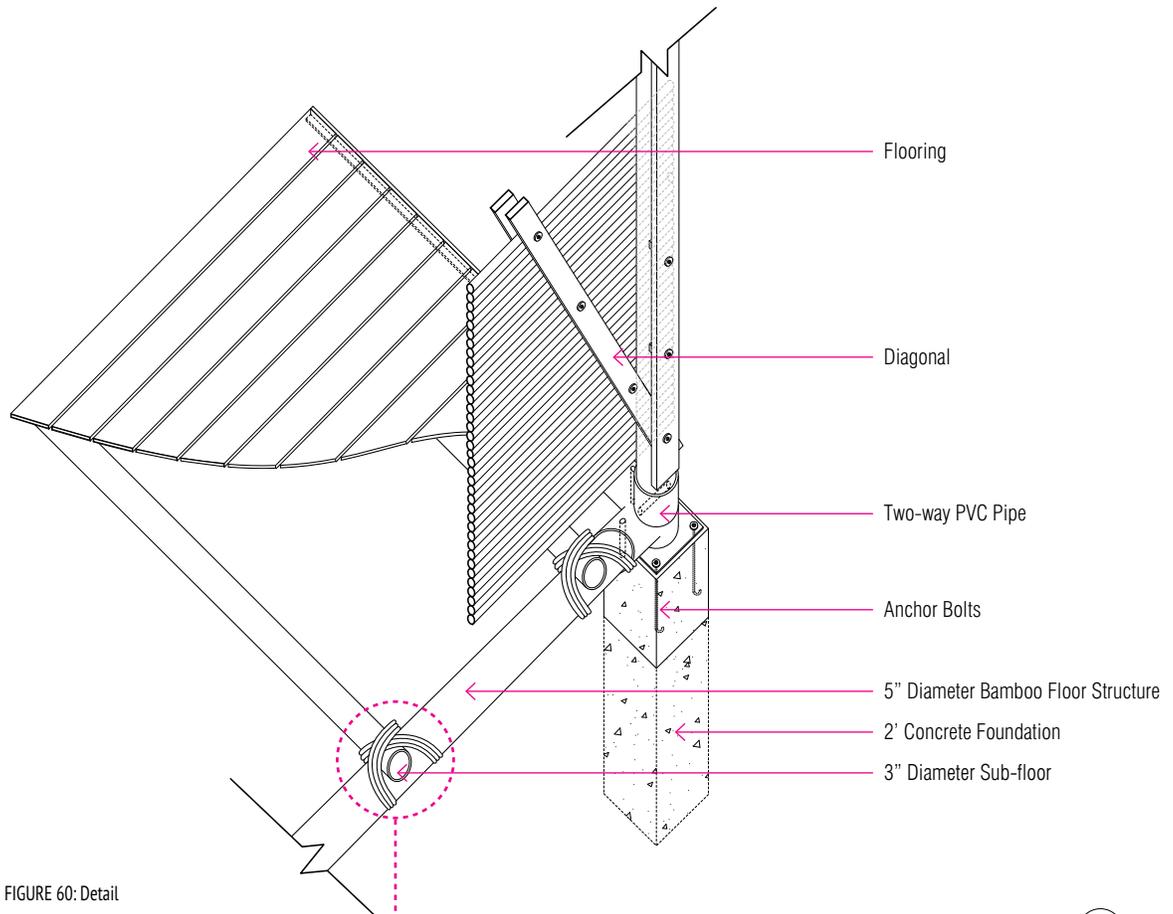


FIGURE 59: Detail

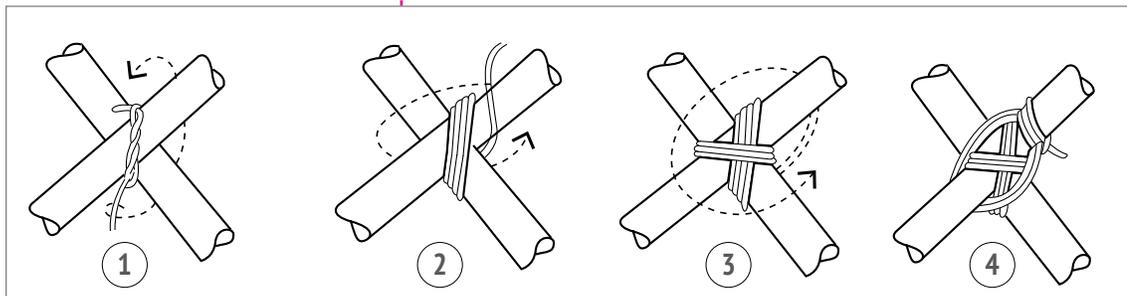
Detail A
Suspended Floor Detail

The Creation: rethinking the orphanage

Residences For Teenagers:



Detail B
Floor to Wall Connection



Bamboo Joinery For Floor Connection

Phasing Growth: Phase 2

The Creation: rethinking the orphanage



Residences For Teenagers:

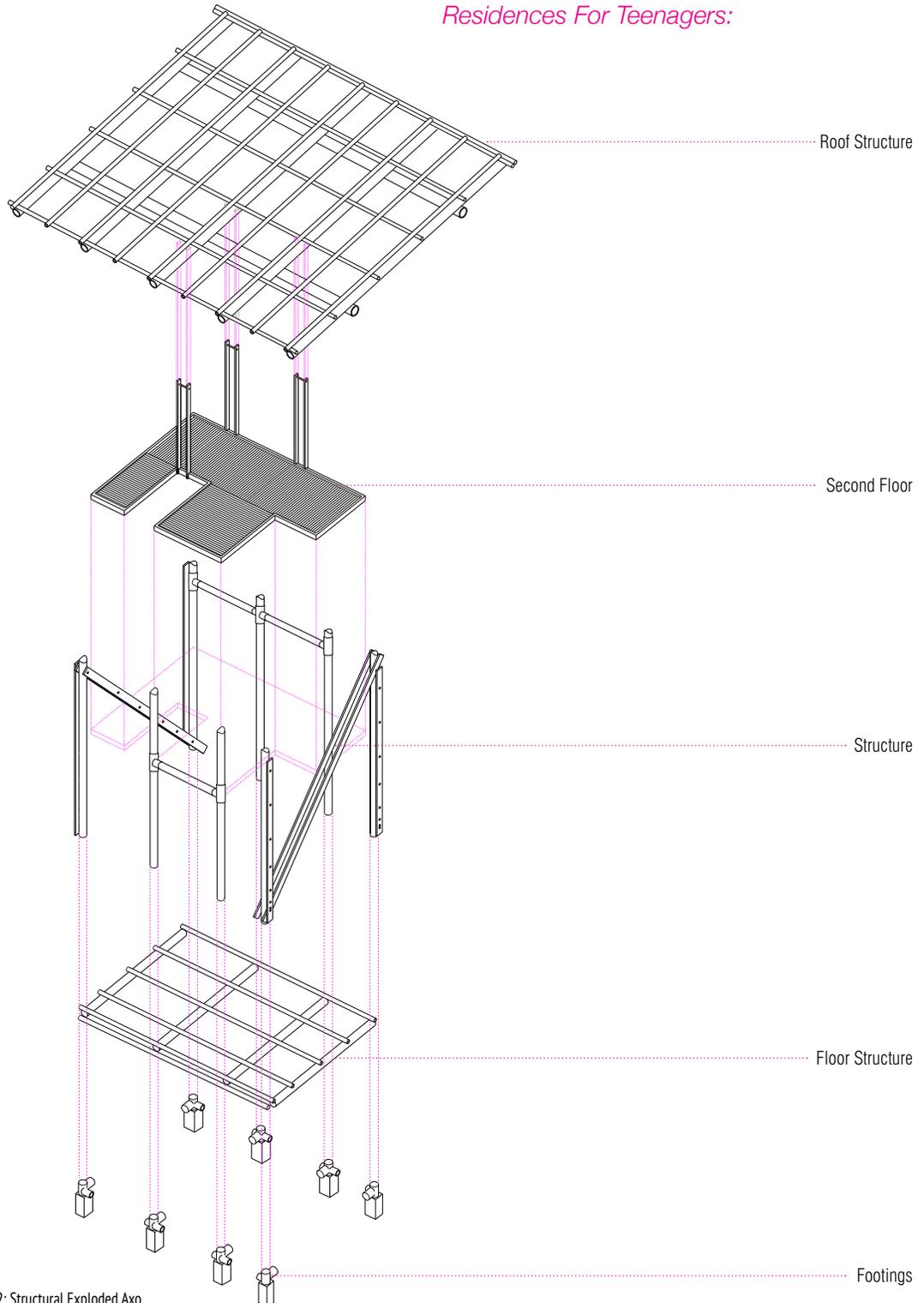


FIGURE 62: Structural Exploded Axo

Residences For Teenagers:



FIGURE 63: Monsoon Season

The Creation: rethinking the orphanage

Bathrooms

The bathrooms are located on either side of the residential quarters. Each unit has three toilets, two bathing areas and is raised two feet above grade. The architecture follows an exposed structural system, creating a connection with the site and the natural elements that surrounds the space. For privacy, a bamboo screening system that varies in height veils the facade of the structure. This playful arrangement invites children of differing heights to walk, crawl or crouch through the varied entryway heights.

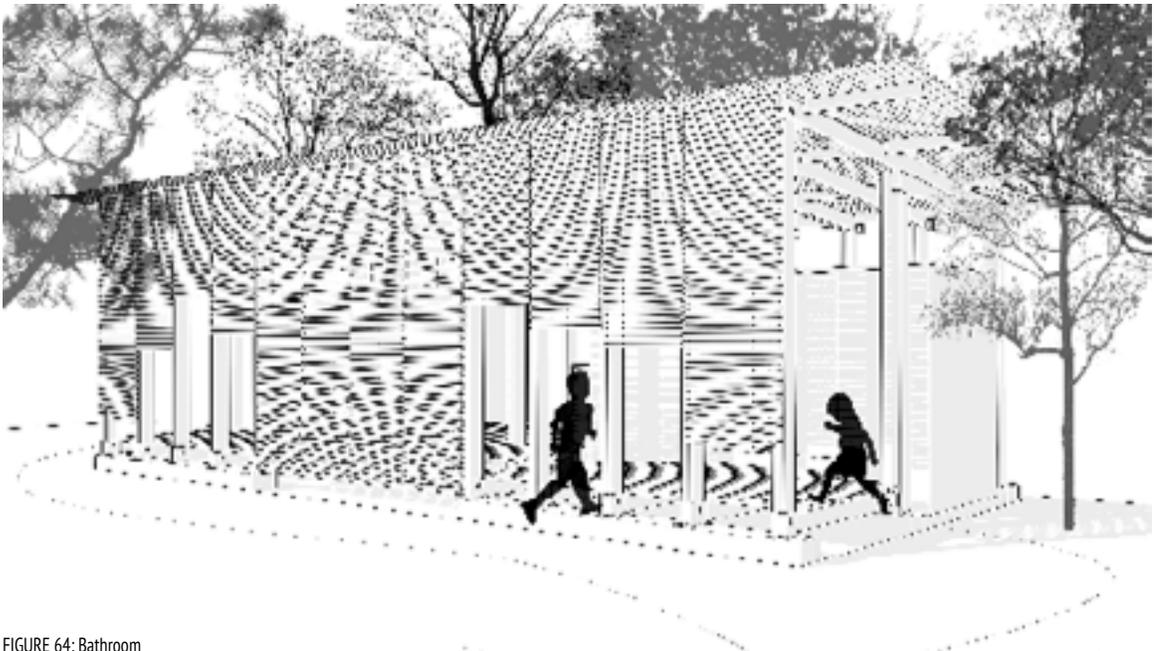


FIGURE 64: Bathroom

The Creation: rethinking the orphanage

Bathrooms

- 1. Western Bathroom
- 2. Traditional bathroom
- 3. Private Bath
- 4. Group Bath/Laundry Area
- 5. Clothes Drying Space

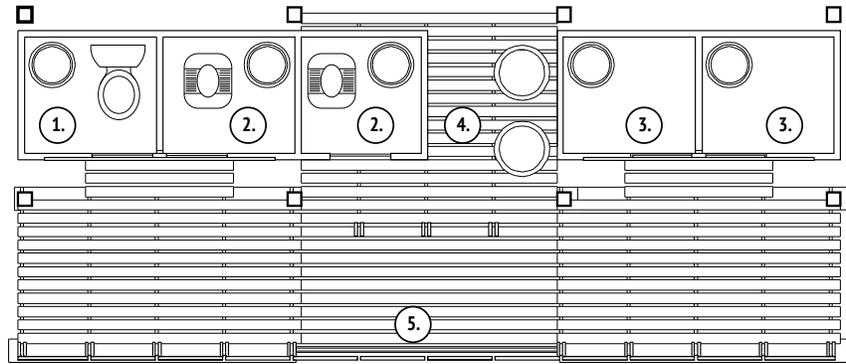


FIGURE 65: Bathroom Plan

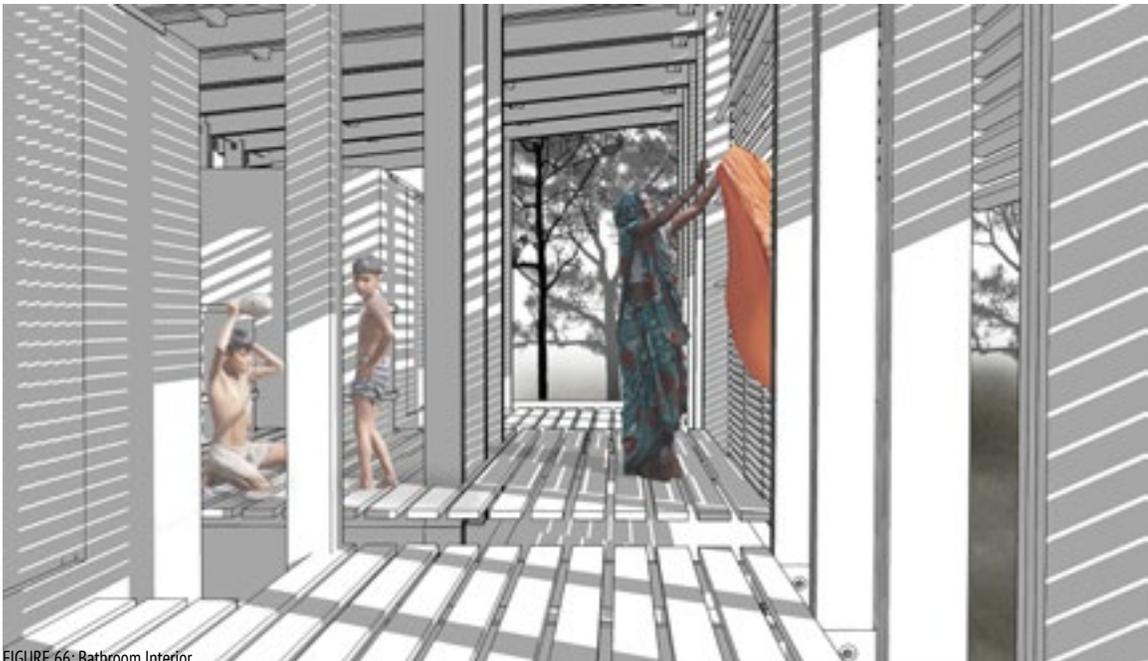


FIGURE 66: Bathroom Interior

Phasing Growth: *Phase 2*

The Creation: rethinking the orphanage



Bathrooms

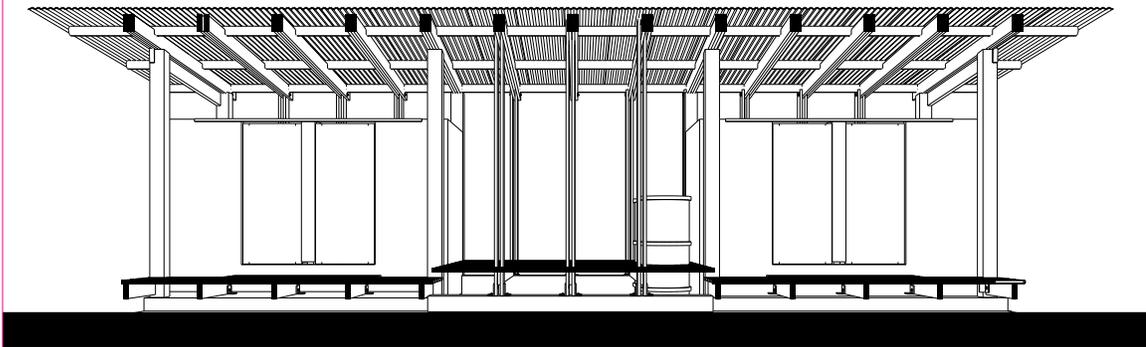


FIGURE 67: Bathroom Section

Bathroom
Section

Phasing Growth: Phase 2

The Creation: rethinking the orphanage

Bathrooms

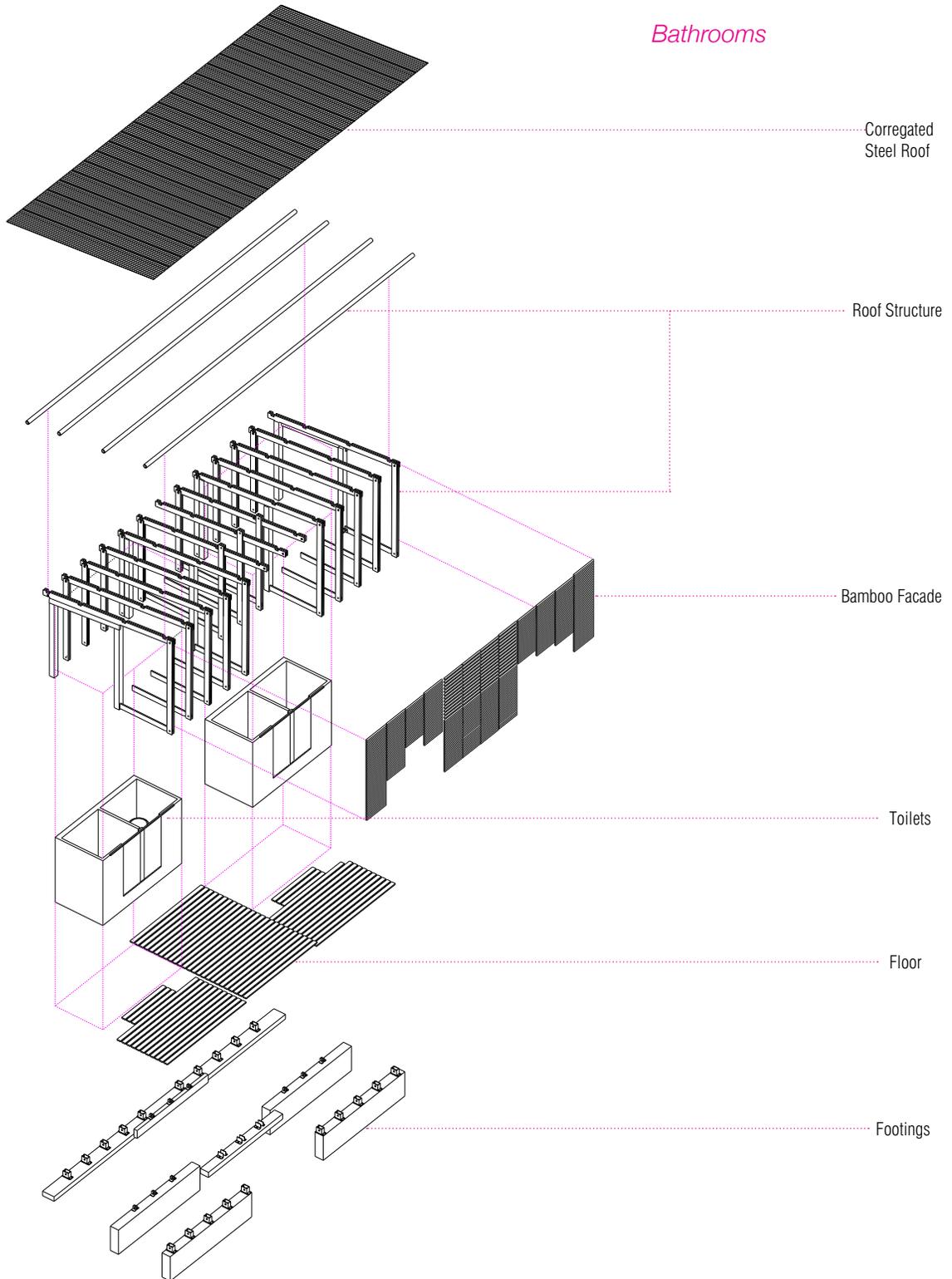


FIGURE 68: Bathroom Exploded Axo

The Creation: rethinking the orphanage

Bathrooms

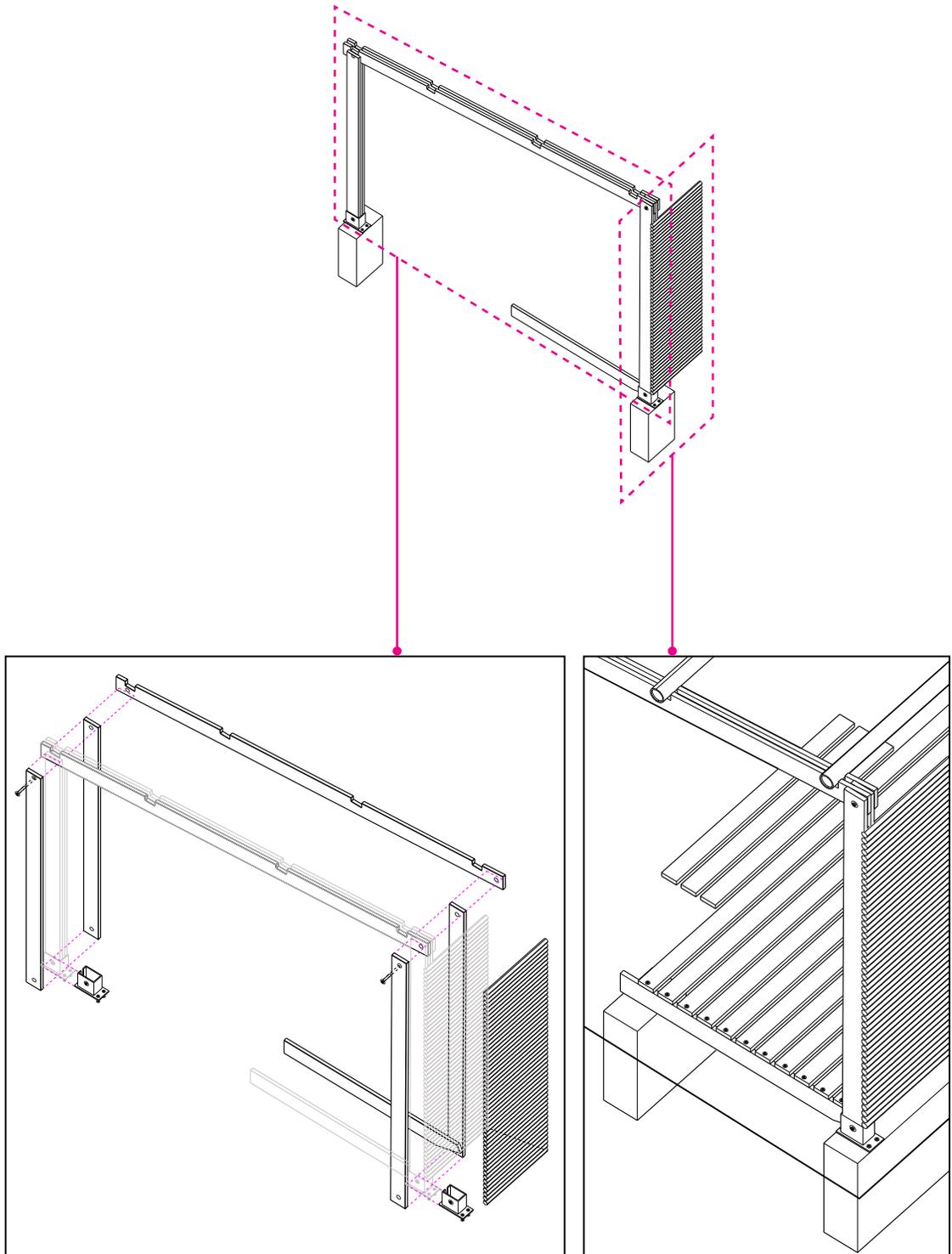


FIGURE 69: Bathroom Details

Kitchen & Dining

The curved division separating the boy's and girl's dormitories consists of the dining space and a movie screening area. Raised a foot above grade, this implied division is a common gathering space where children eat and participate in activities. In this phase the dining area is constructed for the purpose of being utilized when the first group transitions into the home.

The dining quarters is constructed of brick and concrete block. The combination of materiality and architectural form radiate warmth and invite people to gather.

The kitchen is located at the rear end of the structure. It is a large open space that permits large culinary instruments to be used for the purpose of cooking and feeding several children. A sliding bamboo door separates the dining space and the kitchen. Within the main dining area, four circular platforms are inbuilt into the structure to be used as tables for eating or seating for events.

The Creation: rethinking the orphanage

Kitchen & Dining

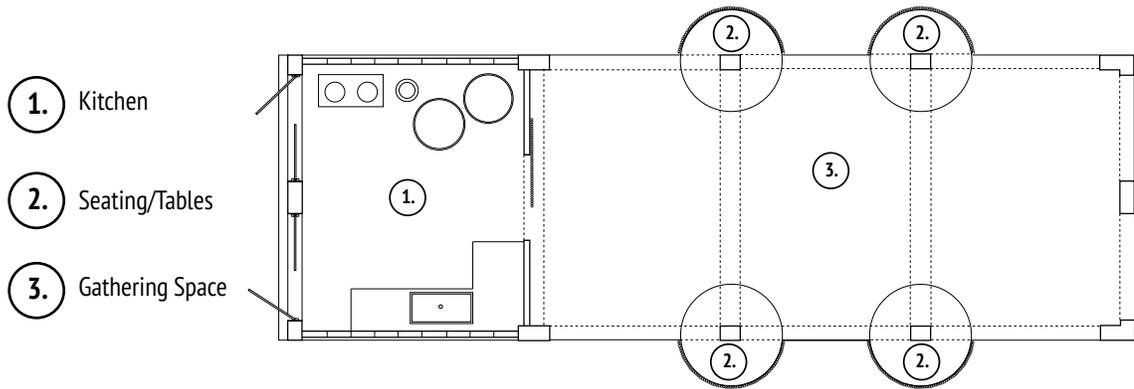


FIGURE 70: Dining Space Plan



FIGURE 71: Cooking Area

Phasing Growth: *Phase 2*

The Creation: rethinking the orphanage

Chapter
4

Kitchen & Dining

*This image illustrates the open air concept of the dining space. There is a visible relationship with the outdoor space that allows the children to transition from one space to another without hesitation.



FIGURE 72: Relationship with Outdoor Space

Phasing Growth: Phase 2

The Creation: rethinking the orphanage

Kitchen & Dining

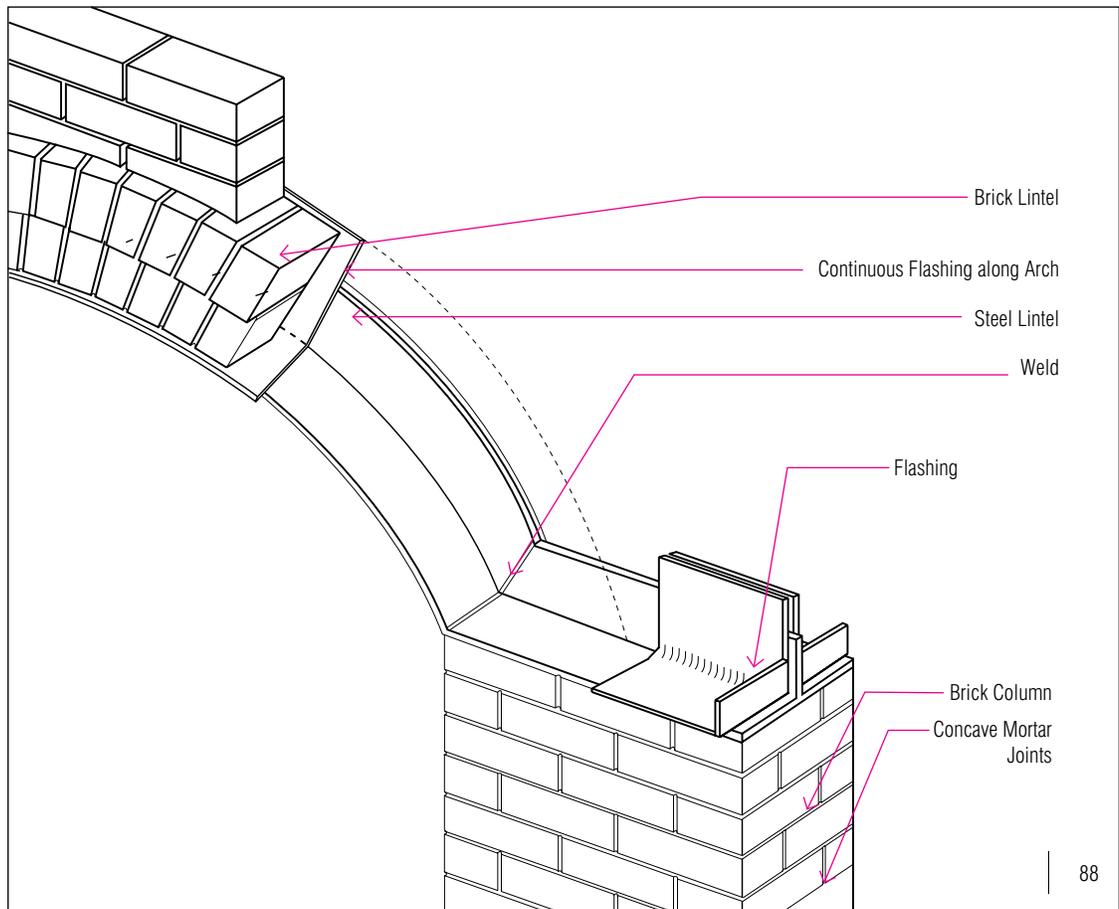
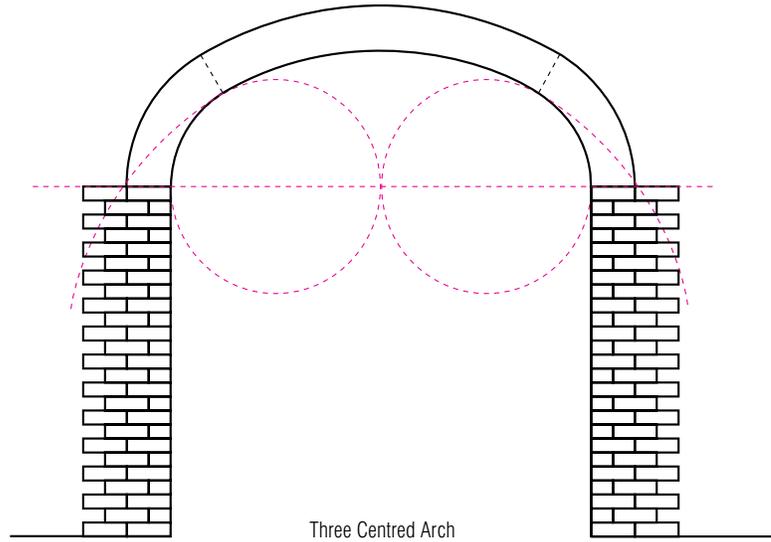


FIGURE 73: Arch Details

Phasing Growth: *Phase 2*
The Creation: rethinking the orphanage

Chapter
4

Kitchen & Dining



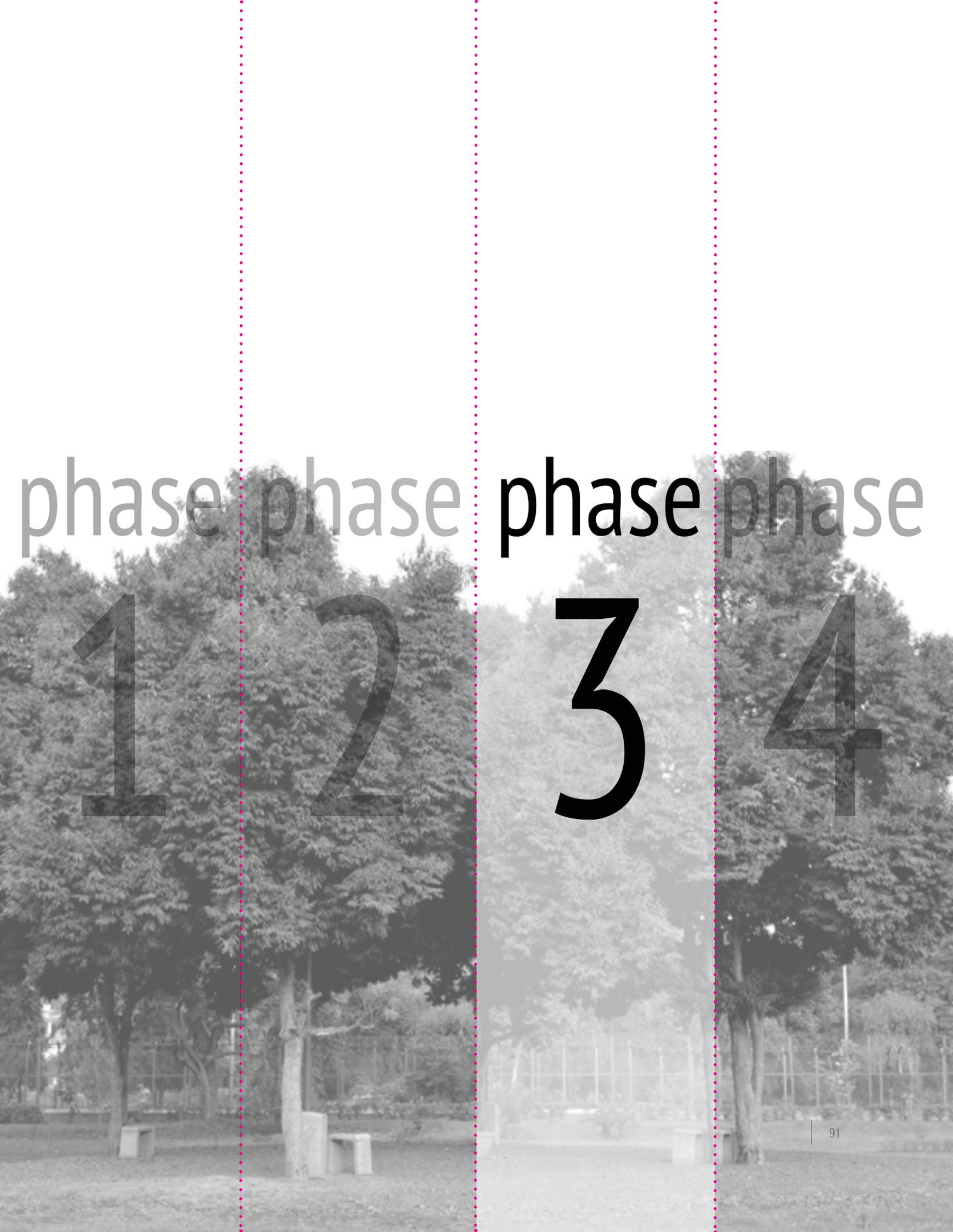
FIGURE 74: View from Girl's Headquarters

The Creation: rethinking the orphanage

Vocational Training

Vocational training is an education that “prepare[s] [a person in] a certain trade or craft”¹⁷

The space built for vocational training will give the resident’s an opportunity to explore and develop any skills required to pursue a career in the trades or arts. Some classes consist of: bamboo and masonry construction, weaving, knitting, and instrument building. This will prepare students to enter the industry if their endeavors are to do so. The first half of the school will be constructed to allow the first group of students to begin training.



phase phase **phase** phase

1 2 3 4

Phasing Growth: *Phase 3*

The Creation: rethinking the orphanage



Overview

At this point, the development will be thriving with community involvement to complete the construction process in order to transition the next group of children into the home. Local laborers, university students, the teenage residents, and the team of architects will collaborate together to complete this phase which involves the construction of the residences for pre-teen children, guest house, second half of vocational training, and outdoor learning spaces. At the end of this phase another group of children (ages 7-11) move in to the residences.

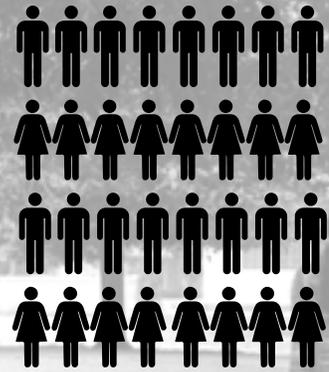
Local Laborers

Construction Workers

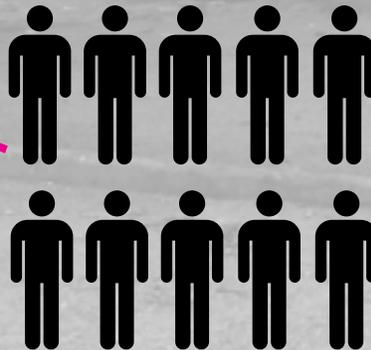
(Specializing in Bamboo construction)



Plumbers



First Group of Occupants



Student Volunteers

*Visva Bharati University Students
& International Students*

The Creation: rethinking the orphanage

Clinic

Guest House

Residence

Residence
(Future Development)

Vocational Training Building 2

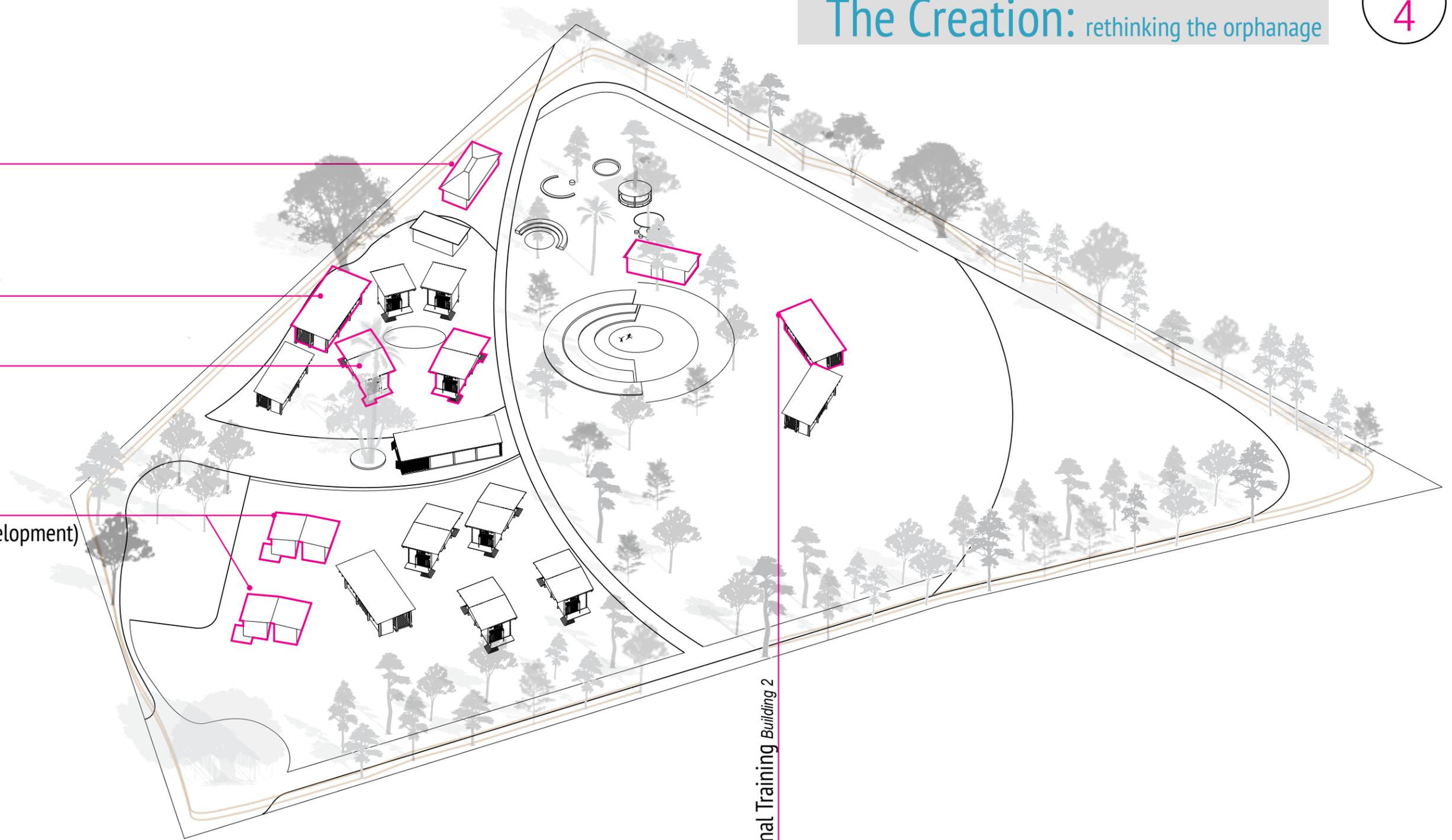


FIGURE 75: Phase 3

The Creation: rethinking the orphanage

Residences for pre-teen children

The building typology is very much similar to those built for the older kids. While the interior spaces for the older children are more orderly and consists of more private spaces for their own activity, these particular pods are much more interactive and staggered. This allows variation in movement and activity within the space. These pods, are built for a group of 5-6 to reside.

*This image illustrates the interior environment of the pods designed for the middle aged children. It is a very interactive space, which provides pockets of privacy which can be accessed through child-like movement.

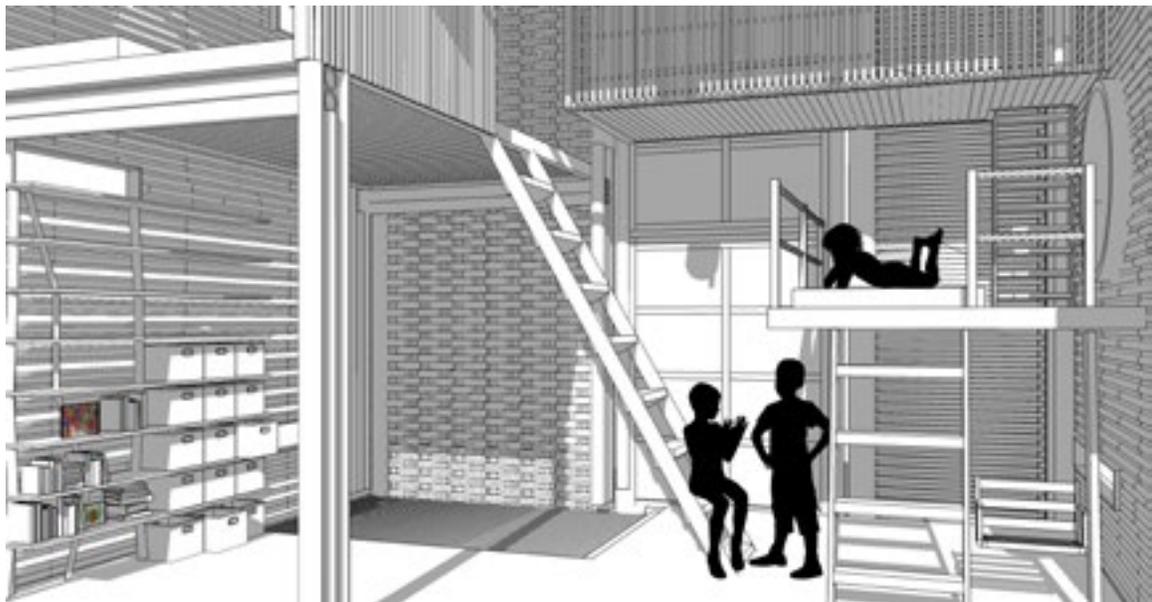


FIGURE 76: Interactive Interior Space

Phasing Growth: *Phase 3*

The Creation: rethinking the orphanage



Residences for pre-teen children



Joint Pods
Section

FIGURE 77: Section Demonstrating Interaction

Phasing Growth: Phase 3

Chapter 4

The Creation: rethinking the orphanage

Residences for pre-teen children

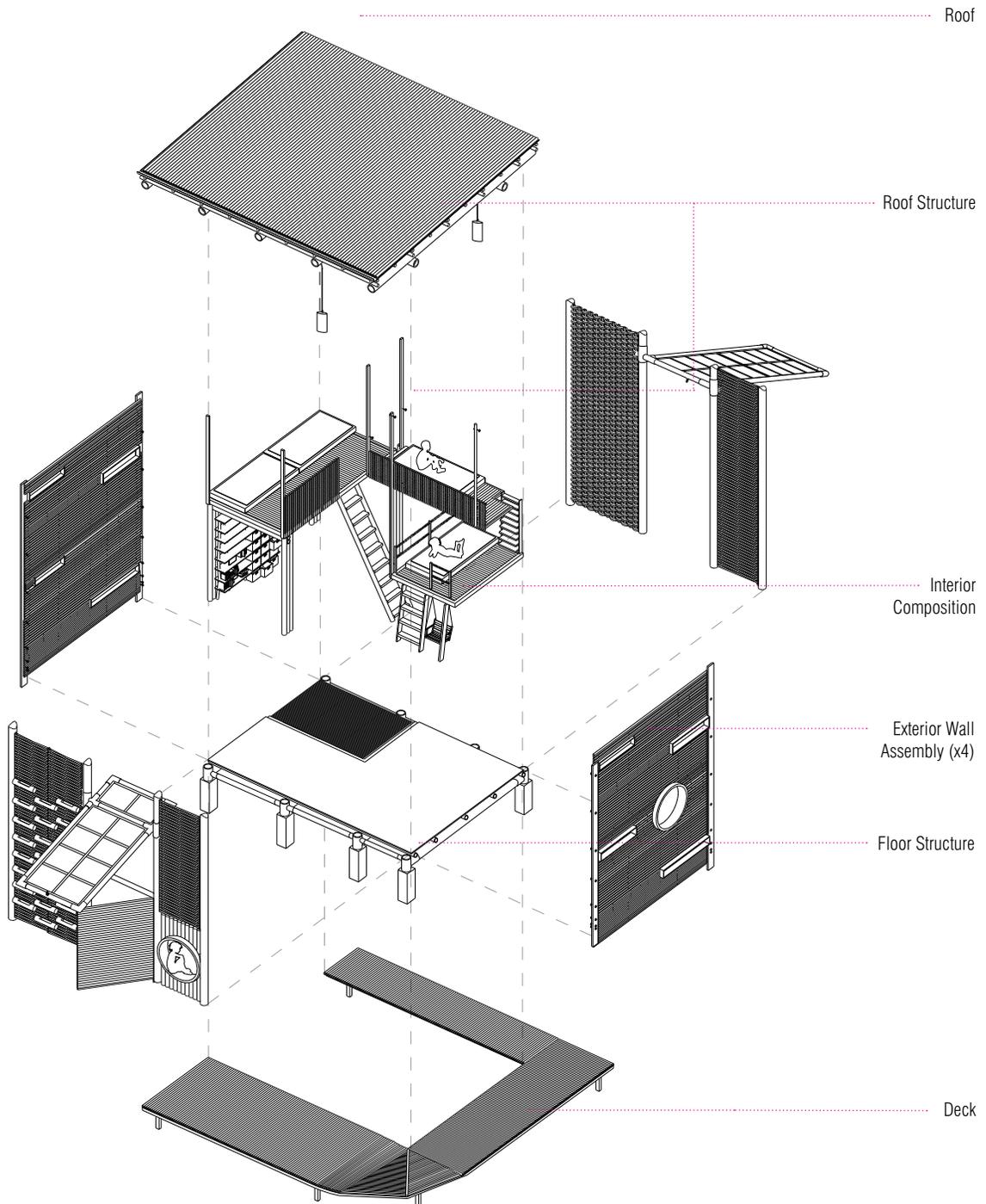


FIGURE 78: Exploded Axo

Phasing Growth: Phase 3

The Creation: rethinking the orphanage

Residences for pre-teen children

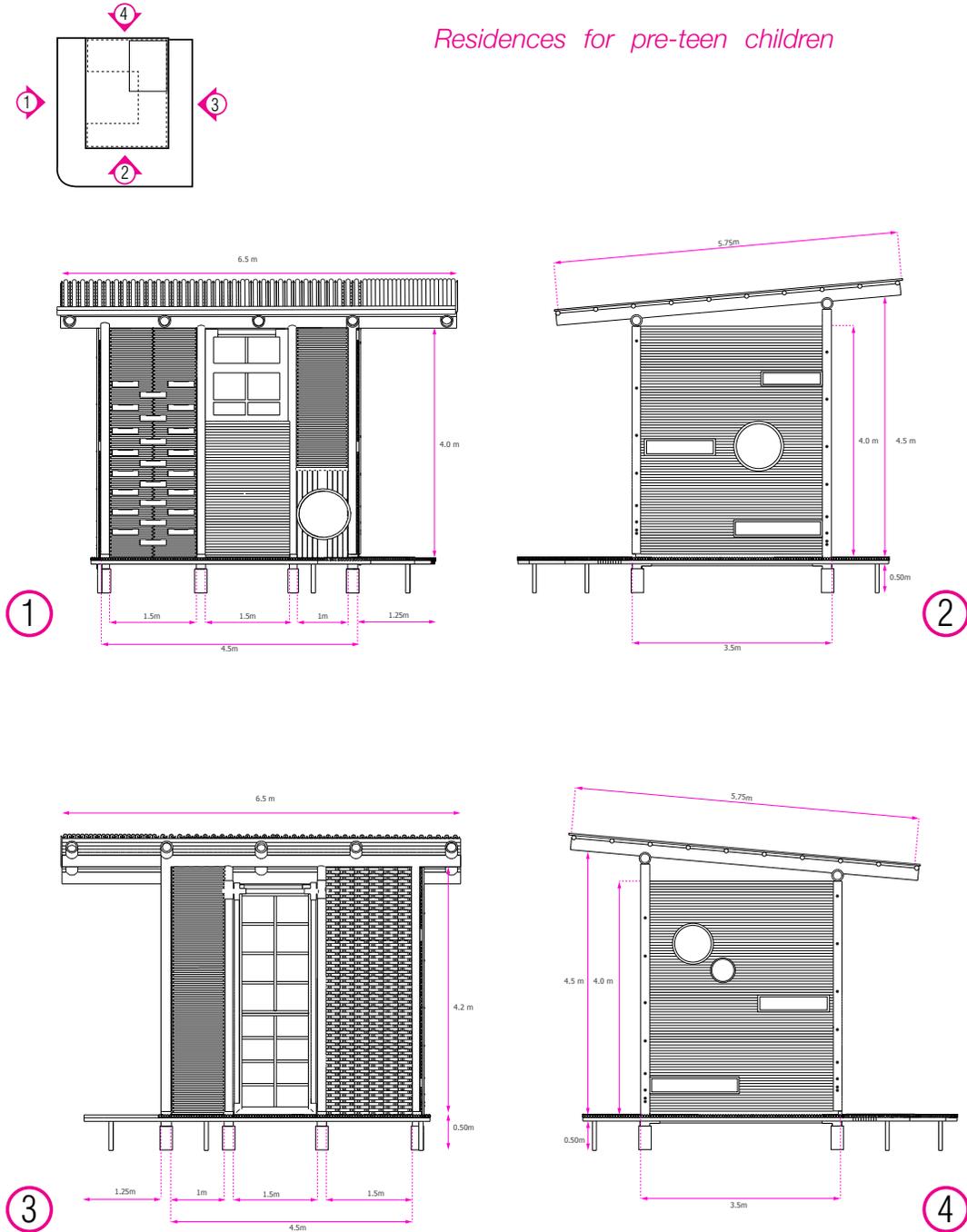


FIGURE 79: Elevations

Multi Purpose Space

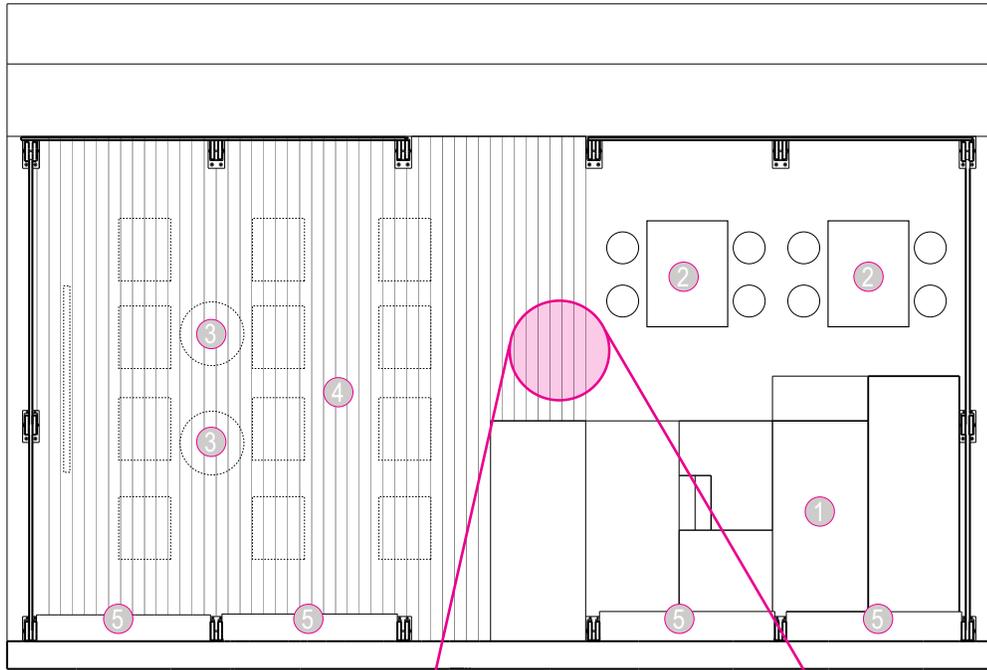


FIGURE 80: Multipurpose Space Plan

- ① Tiered Reading Space
- ② Game Space
- ③ Cocoon Hammock
- ④ Classroom Space/
multipurpose space
- ⑤ Bookshelves



FIGURE 81: Multipurpose Space as a Classroom

Phasing Growth: Phase 3

The Creation: rethinking the orphanage



Multi Purpose Space



FIGURE 82: Multipurpose Space as an activity Space

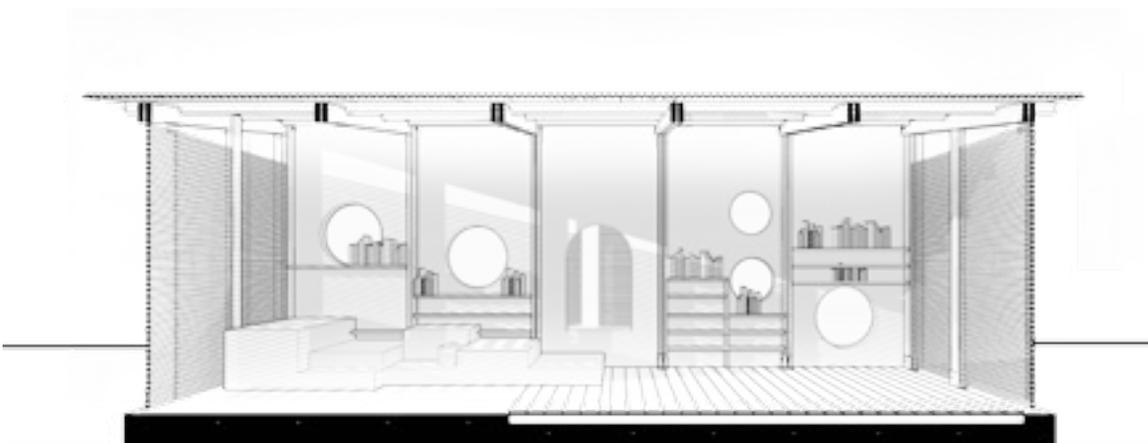


FIGURE 83: Multipurpose Space Section

Outdoor Classrooms

The learning spaces/classrooms are influenced by Rabindranath Tagore's form of *"authentic education which he believed was more true to the needs of children growing up in rural India than conventional, didactic schooling"*¹⁸ This method of learning encourages children to form a relationship with the natural world and be engrossed in the atmosphere that surrounds them.¹⁹

Scattered throughout the town of Santiniketan, are elements of rest integrated with natural elements. Trees are the foundation for the various types of seating and are utilized as classrooms as well as leisurely spaces for solitary and group activity.

The learning spaces will vary in size and structure and their placement is determined by the location of the existing trees on the site; some will have a simple relationship with the earth while others with the sky.

The Creation: rethinking the orphanage

Outdoor Classrooms

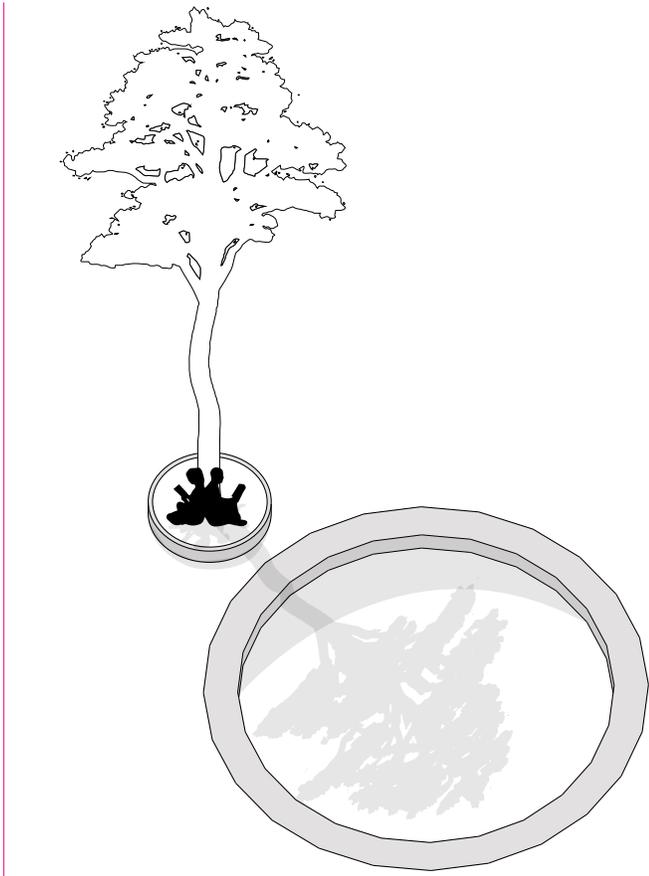


FIGURE 84: Outdoor Learning Space Type 1



The Creation: rethinking the orphanage

Outdoor Classrooms

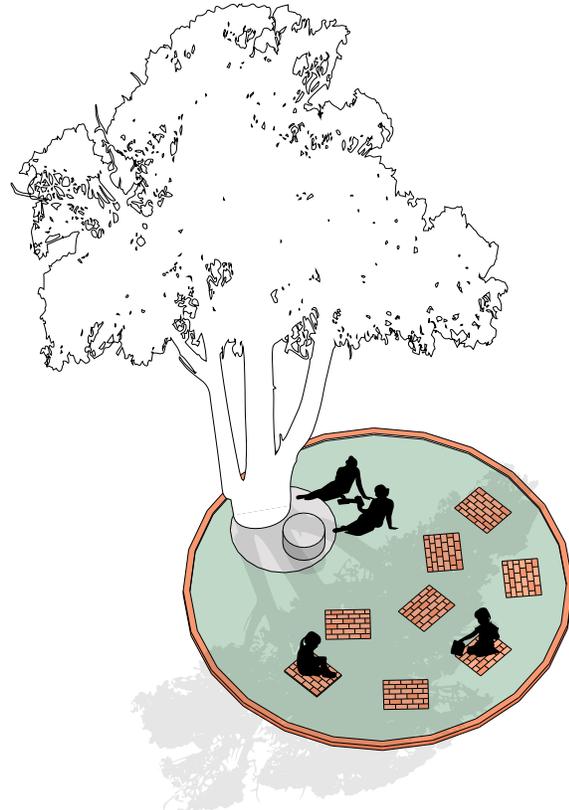


FIGURE 85: Outdoor Learning Space Type 2



The Creation: rethinking the orphanage

Outdoor Classrooms

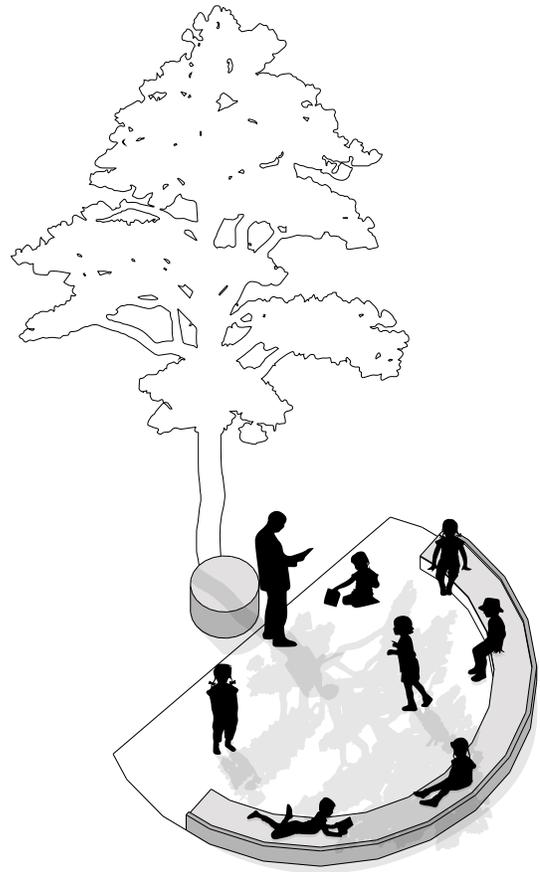


FIGURE 86: Outdoor Learning Space Type 3



The Creation: rethinking the orphanage

Outdoor Classrooms



FIGURE 87: Outdoor Learning Space Type 4



The Creation: rethinking the orphanage

Outdoor Classrooms

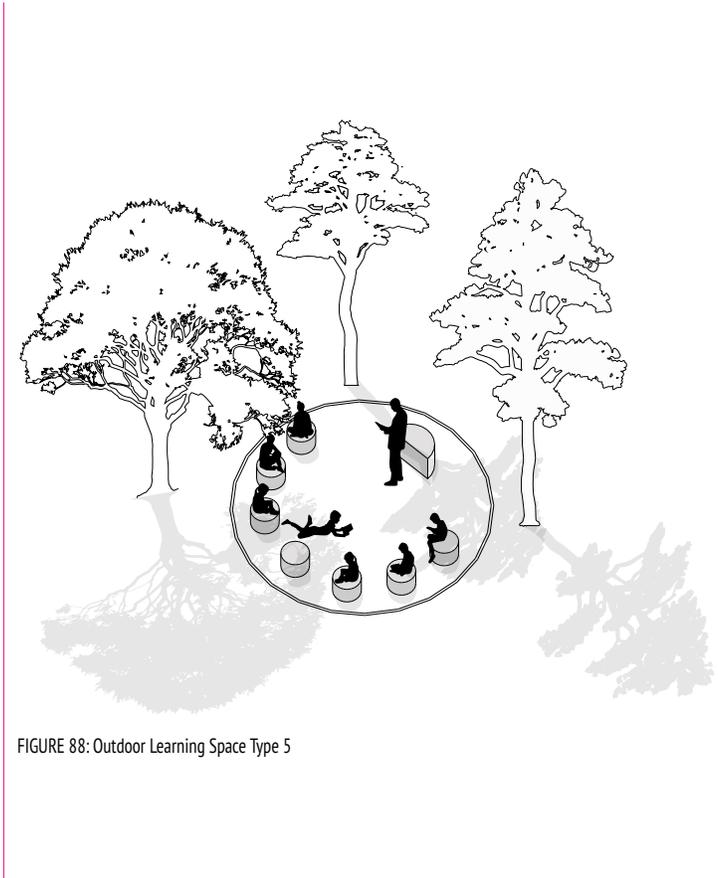
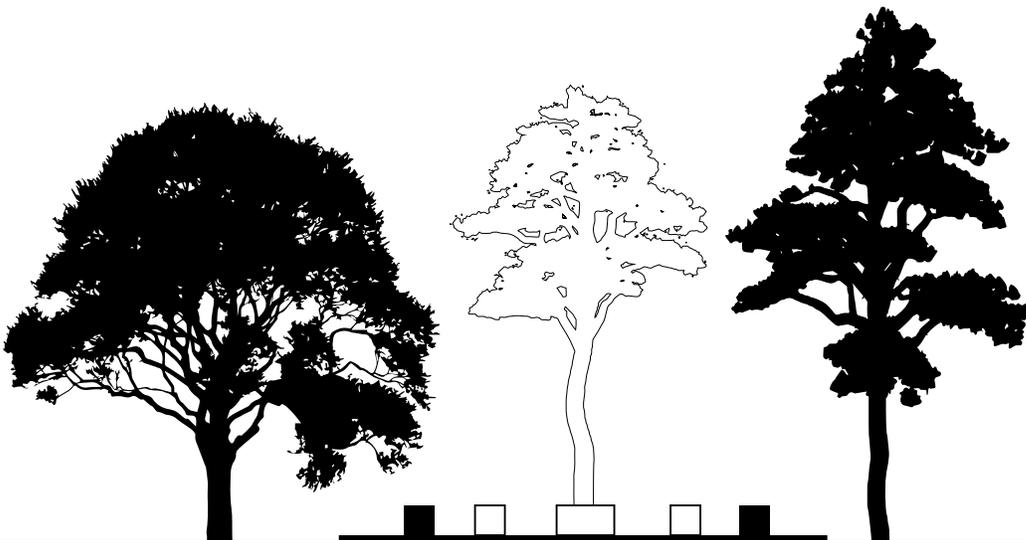


FIGURE 88: Outdoor Learning Space Type 5



The Creation: rethinking the orphanage

Outdoor Classrooms

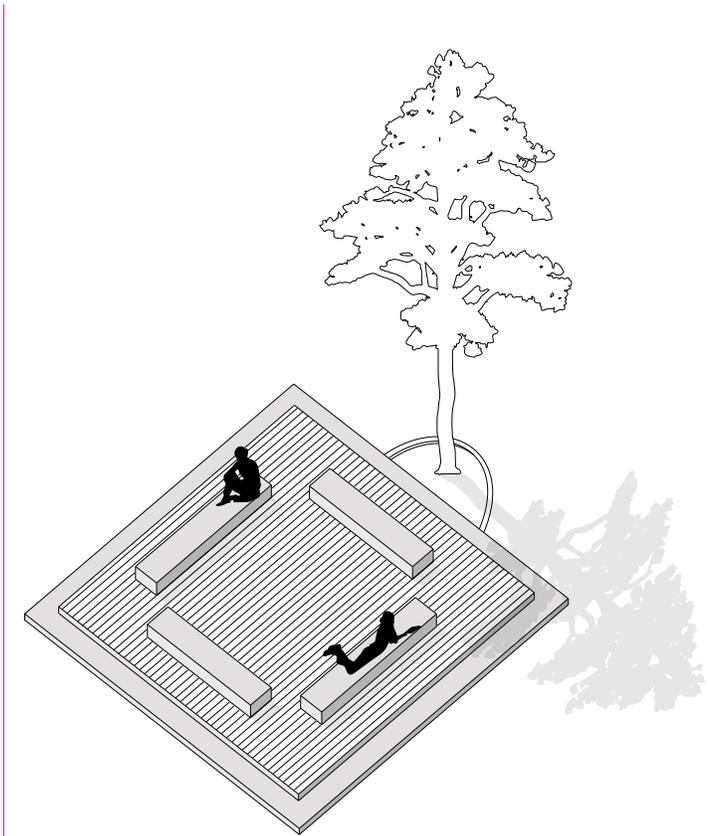
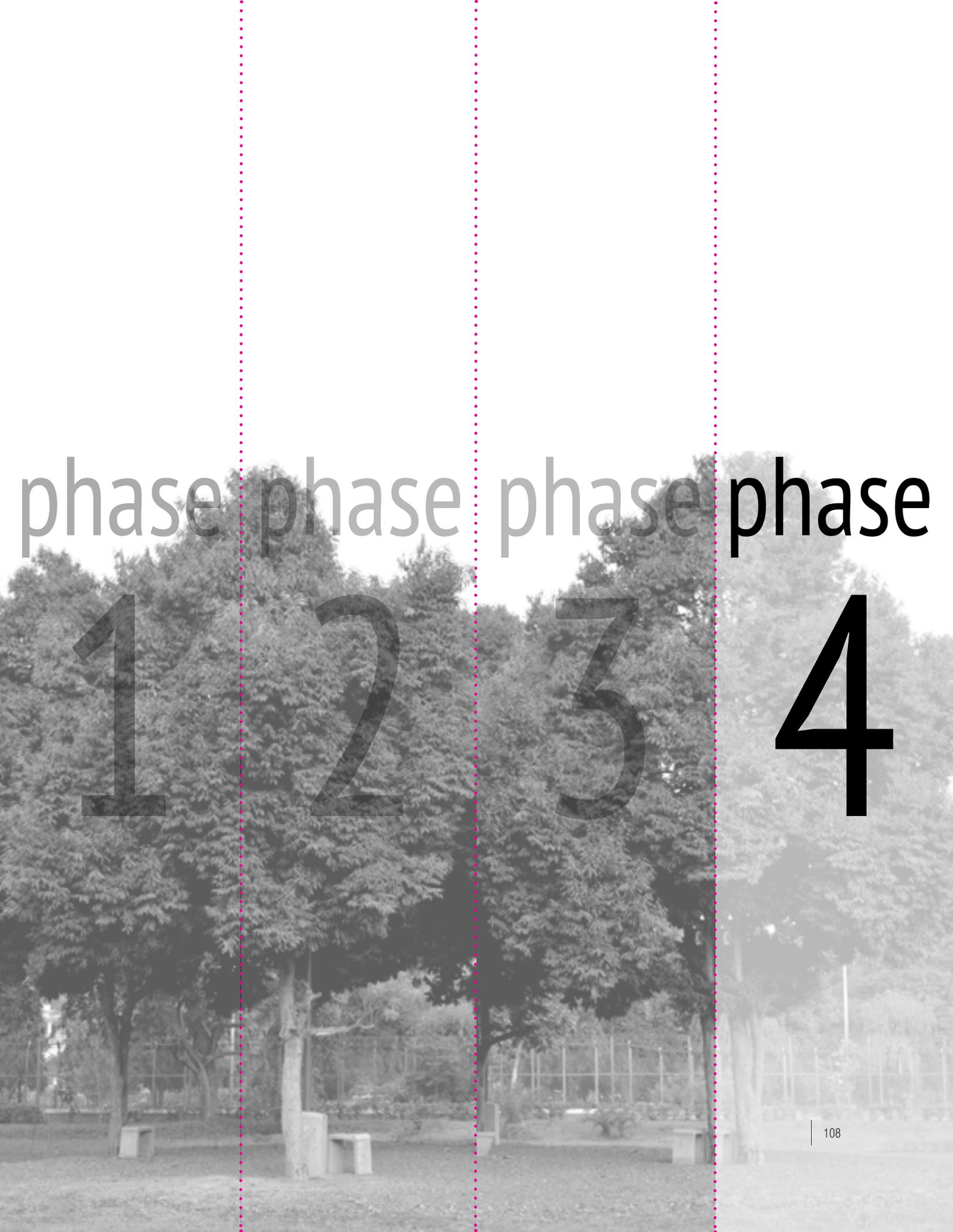


FIGURE 89: Outdoor Learning Space Type 6





phase

1

phase

2

phase

3

phase

4

Phasing Growth: *Phase 4*

The Creation: rethinking the orphanage



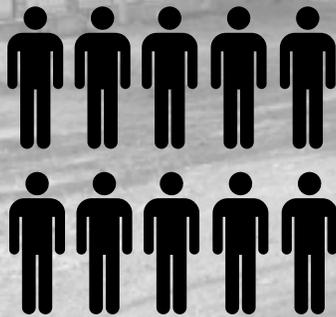
In the last phase the community continues to contribute to the developmental process of the orphanage. As the older children continue to help with the construction process, the younger children take part in personalizing the pods (painting windows and book shelves, stacking books, and weaving bamboo). The Infants home, welcome centre and prayer space and art workshops are under construction.

Local Laborers

Construction Workers
(Specializing in Bamboo construction)



Plumbers



Student Volunteers

*Visva Bharati University Students
& International Students*



x16 †



x16 †

First Group of Occupants



x16 †



x16 †

Second Group of Occupants



The Creation: rethinking the orphanage

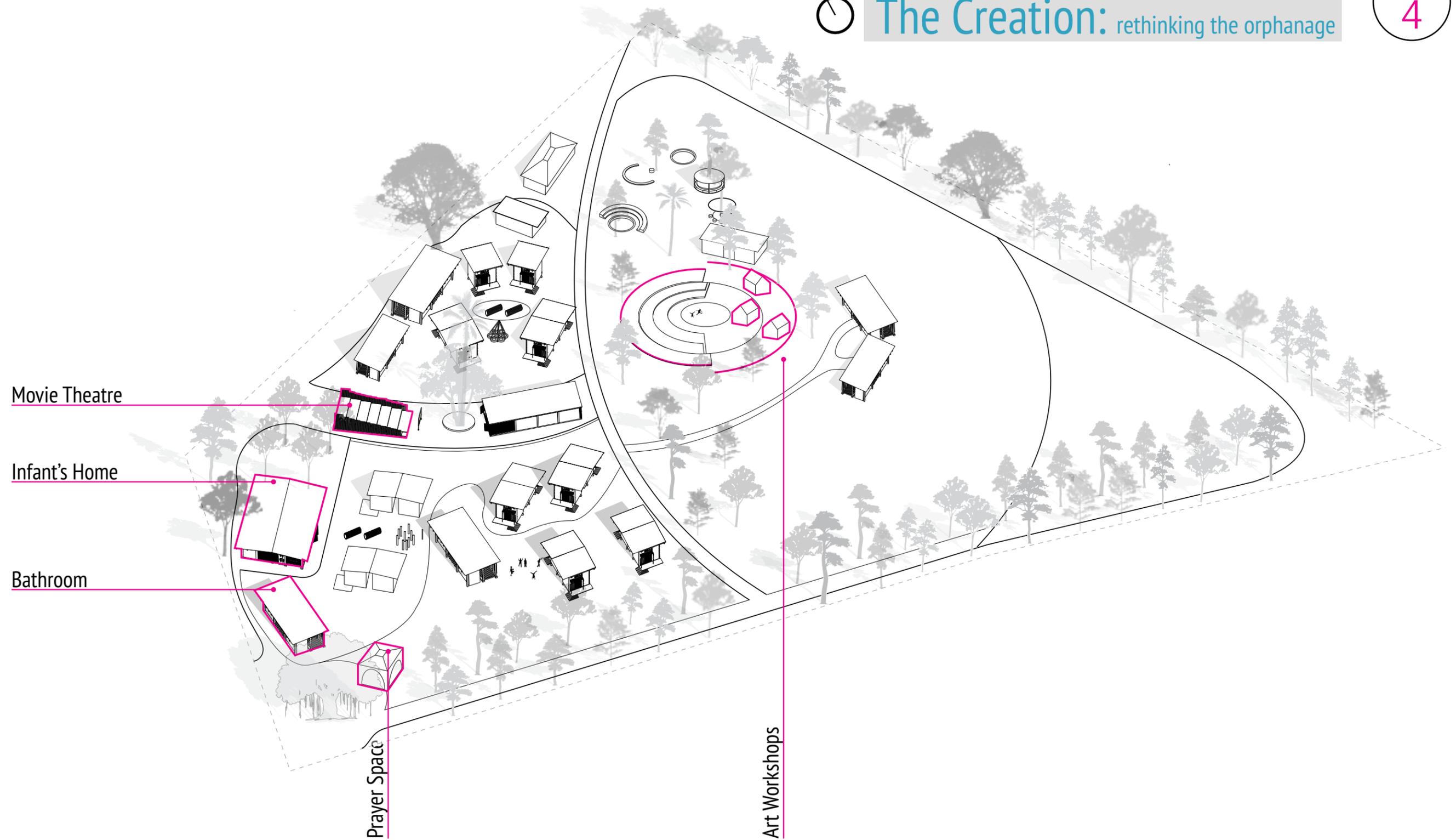


FIGURE 90: Phase 4

The Creation: rethinking the orphanage

Community Movie Theatre

A simple tiered structure serves as a gathering space and a movie screening area for the community to gather and enjoy films. The dining space and movie area are in the same location, acting as an implied divider between the male and female dormitories. It encourages interaction and building relationships with the residents of the development as well as the community.

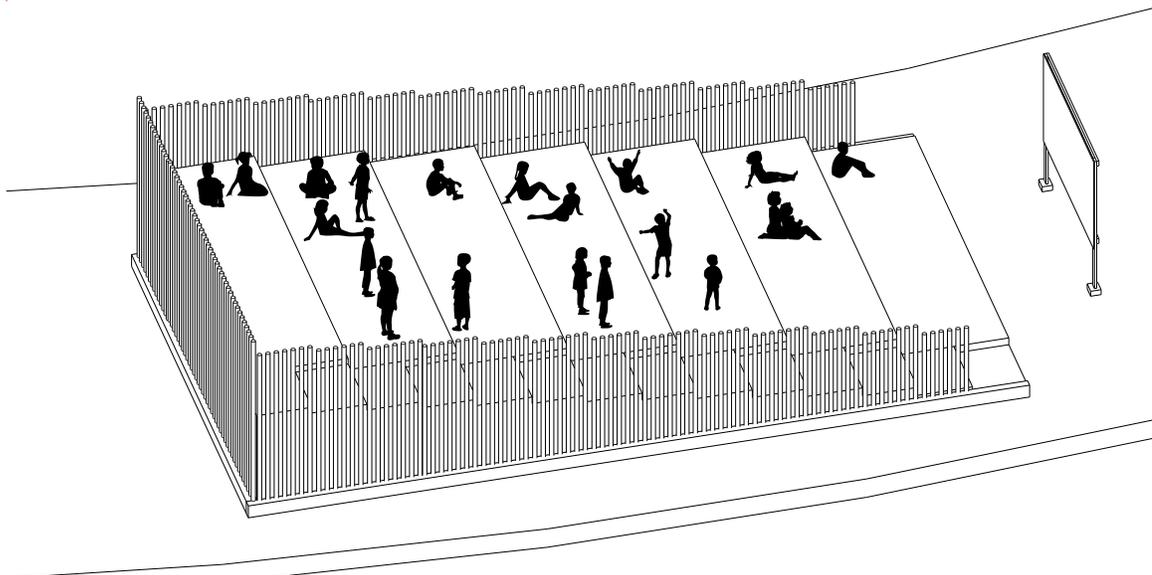


FIGURE 91: Movie Theatre Area

Phasing Growth: *Phase 4*

The Creation: rethinking the orphanage



Community Movie Theatre



FIGURE 92: Community Movie Nights

The Creation: rethinking the orphanage

Infant's Home

The space that houses the infants are relatively larger than the pod-like language that is used for the other residences. It is a one storey 'house' that shelters children between the of ages 0-5. A common play area separates the children that require a crib and the children that are able to sleep independently. The caretakers room is connected to the children's sleeping area to provide constant care. The skin of the home is also constructed out of bamboo, to continue the language used throughout the site. There are playful penetrations of various heights on the envelope to encourage the children to engage with the architecture. This also allows the child to feel connected to the outdoors and encourage them to explore the outdoor space provided.



FIGURE 93: Interior of Infants Residence

The Creation: rethinking the orphanage

Infants House

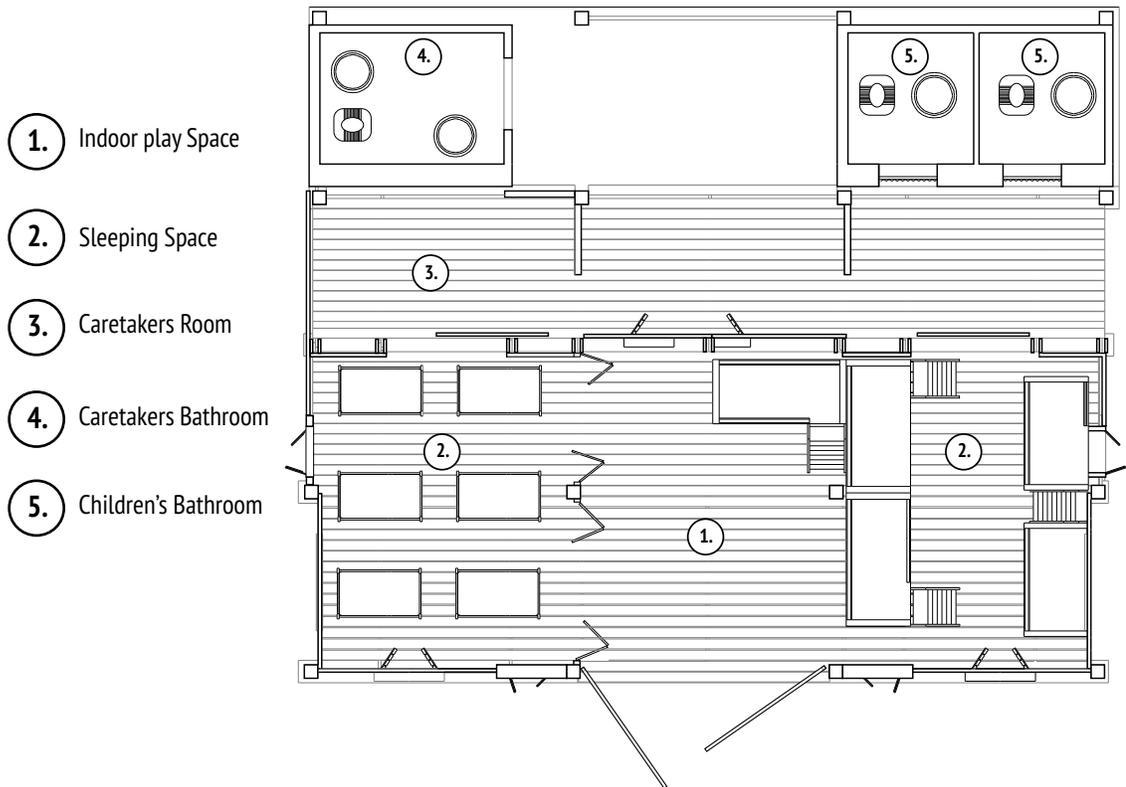


FIGURE 94: Infants Residence Plan



FIGURE 95: Infants Residence Section

Phasing Growth: Phase 4



The Creation: rethinking the orphanage

Infant's Home

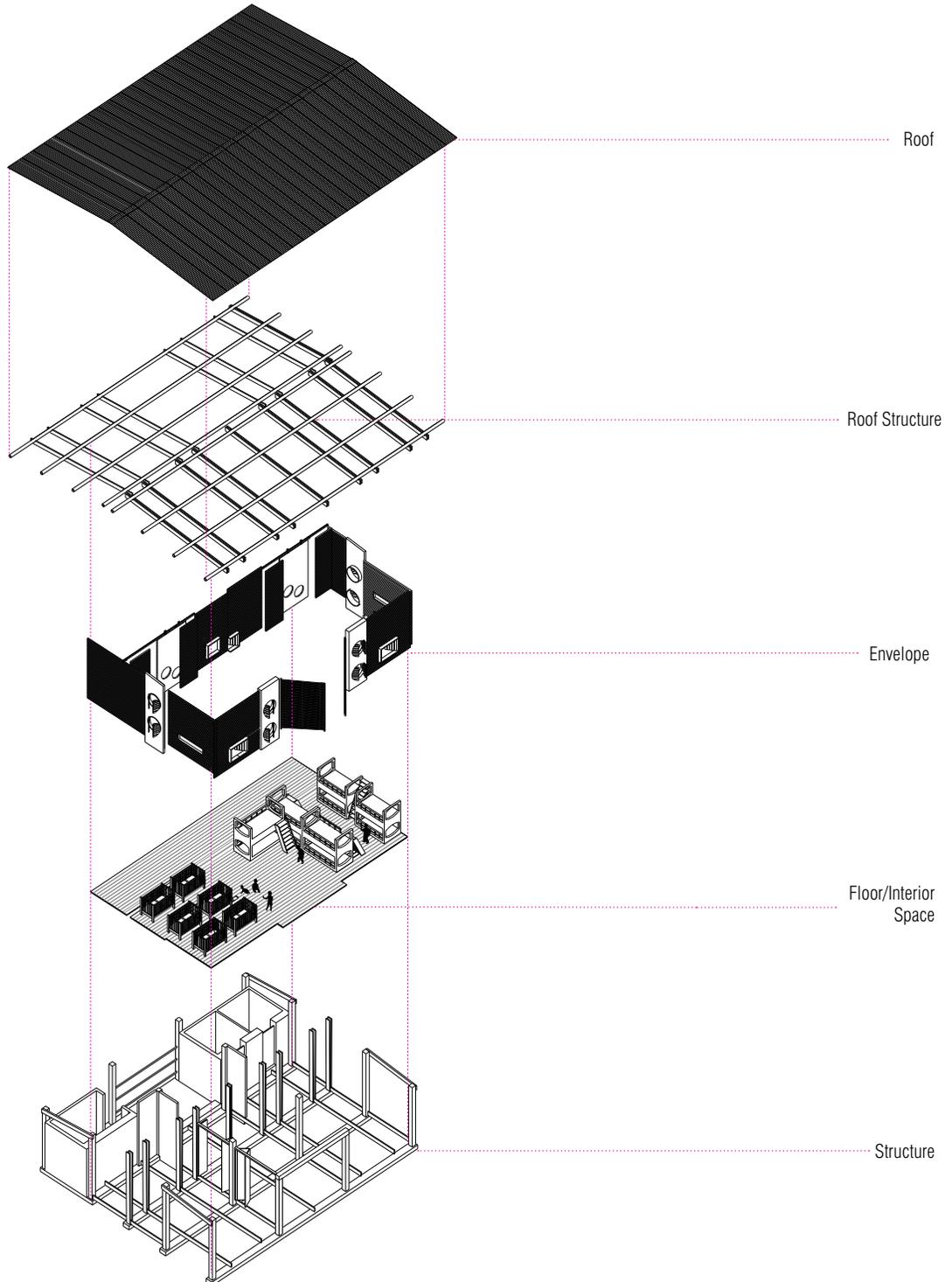


FIGURE 96: Infants Residence Axo

The Creation: rethinking the orphanage

Art Workshops & Amphitheatre

Dance.

Sing.

Draw

The amphitheatre is the core of the development. All programs surround this element, serving as a community hub where performances and exhibitions take place. The art pods are built on the perimeter of the amphitheatre as it gives the art form in creation a context. They provide a relationship to the site, through the elimination of walls and a solid roof. Instead, woven screens are inbuilt, in case of interrupting daylight. This open concept is meant to embrace the seasons and help translate their inspiration drawn from nature into an artistic expression.



FIGURE 97: Amphitheatre

Phasing Growth: *Phase 4*
The Creation: rethinking the orphanage

Chapter
4

Art Workshops & Amphitheatre



FIGURE 98: Amphitheatre & Workshop Spaces

Phasing Growth: Phase 4

Chapter
4

The Creation: rethinking the orphanage

Art Workshops

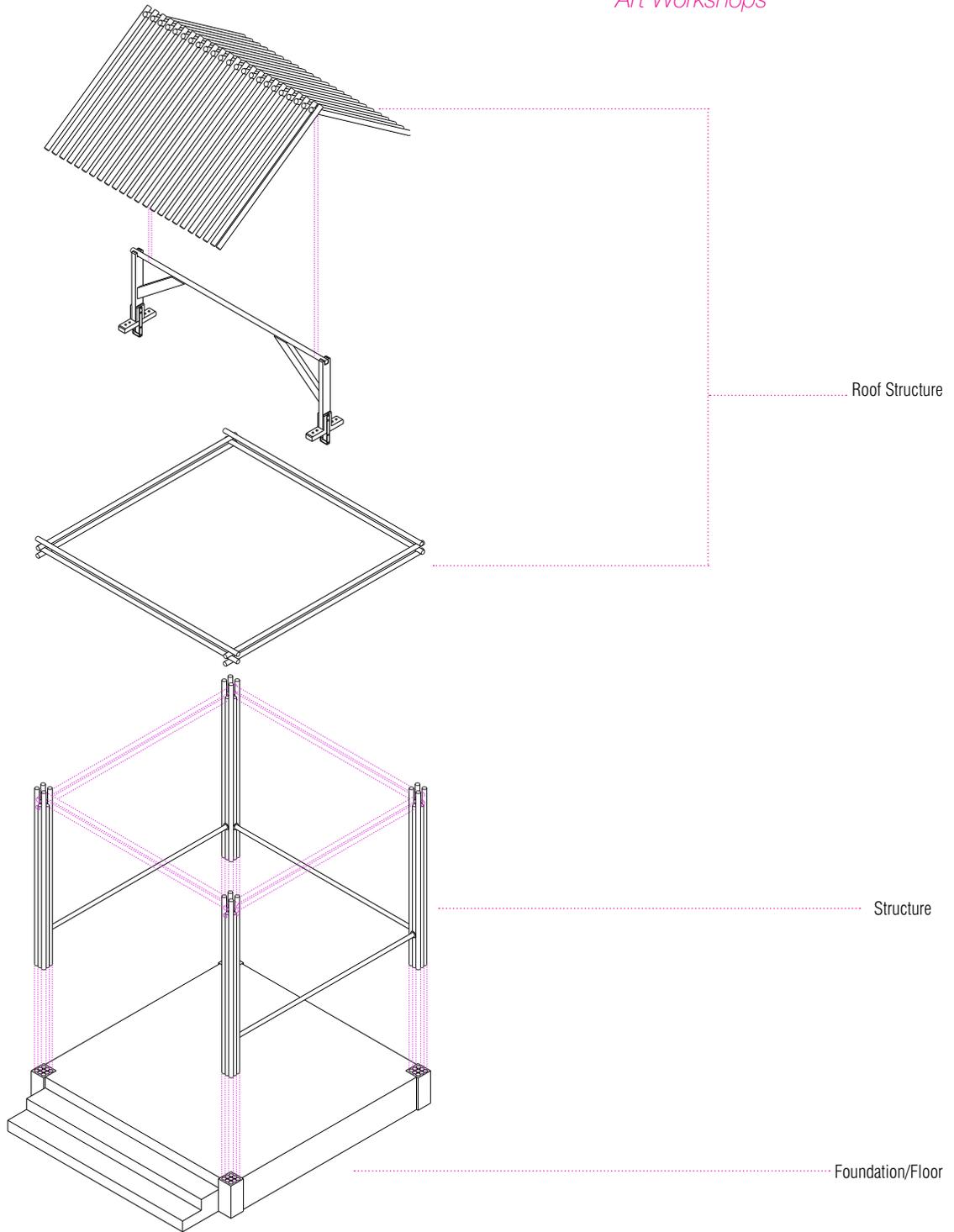


FIGURE 99: Workshop Axo

Phasing Growth: Phase 4

The Creation: rethinking the orphanage

Chapter
4

Art Workshops

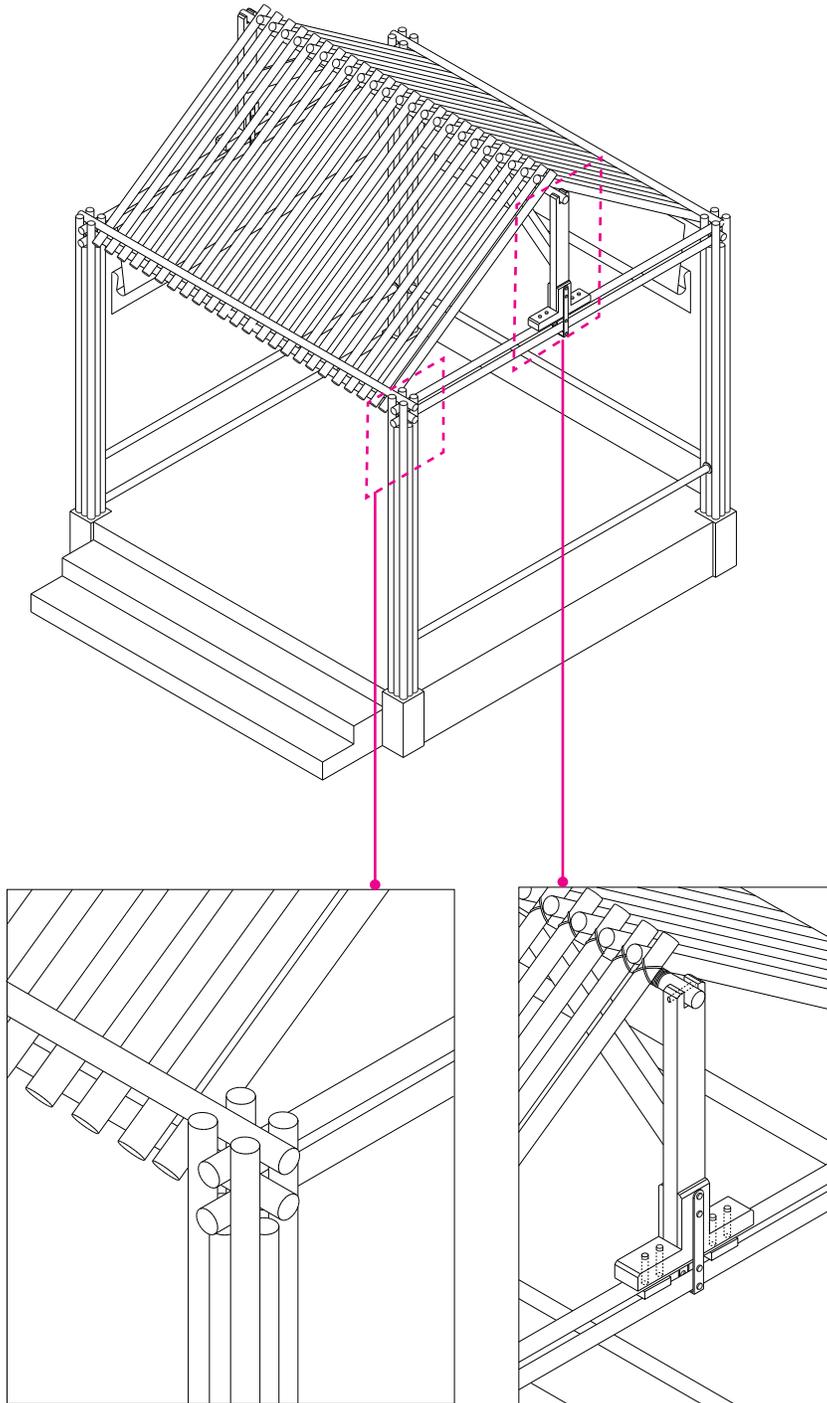


FIGURE 100: Workshop Details



FIGURE 101: View from Sriniketan Road

notes

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19. Ibid.

Postscript

“Being unwanted, unloved, uncared for, forgotten by everybody, I think that is a much greater hunger, a much greater poverty than the person who has nothing to eat.”

-Mother Teresa

<http://www.quotesworld.org/mother-teresa-quotes-thoughts-sayings-pics/>

The end of a thesis usually consists of a concluding chapter. However in reality, when there are 153 million orphaned and abandoned children worldwide who are suffering the consequences of this tragedy, there are no definite conclusions that will result in a perfectly harmonious life for the children. Personal eye witness experiences, conversations with orphaned children, and research on child psychology aided this design proposal to develop into a project that has the potential to provide the children with a healthy and interactive lifestyle. One cannot 'fix' the tragedy that overwhelms the child's life, however, an architect can take part in creating spaces that will help with the healing process through providing areas that nourish the child's mind, body and soul.

The mental health of a child is correlated closely to the environment that embodies them. The careful assimilation of outdoor spaces, which includes greenery and varied areas of play and activity, can provide orphaned children with the opportunity to develop their personality, cultivate a creative imagination, and progress in their healing process. While the provision of outdoor space is vital, the architecture of a home in which the children dwell must accommodate an environment that will allow positive mental stimulation. Materiality, spatial organization, colour, space and shape, the distribution of learning spaces, the integration of play within the home for interaction, and continuous spaces for social interaction are factors that were carefully considered and implemented into the design.

Little Dwellings Children's Home is located in a small town called Santiniketan three hours north of the metropolitan city of Kolkata. Rabindranath Tagore- teacher, poet, philosopher and the founder of the town of Santiniketan, ensured that the natural environment played a significant role in the lives of his students. His teaching method involved embracing the outdoors and inviting the natural environment to communicate with the human body, which resulted in the nourishment of the senses. The distribution of programs within the site is always in relation to the pivotal part of the development- the educational spaces, which consist of the amphitheater, art workshops and outdoor

learning spaces. This playful dispersion and organization of the different programmatic elements provides an interactive and stimulating journey throughout the site, promoting sensory exploration and constant activity.

Through spending time in both communities (Kolkata and Santiniketan), and focusing on the needs and lifestyles of the children at the orphanages, the architect was able to make design decisions appropriately. The bold reality of this existing and ongoing issue, made the architect realize that there is never 'enough' time to explore and communicate with the locals of Santiniketan and the children at the homes in Kolkata. It would have been a rewarding experience to become immersed further in the arts culture in Santiniketan; moreover, spend additional quality time with the children, if more time was available.

Little Dwellings Children's Home is a community that helps orphaned and abandoned children thrive in an artistic environment, with outdoor classrooms that embrace all the seasonal changes. This children's home provides healing through encouraging all the residents to be in constant involvement with the various creative and performance arts activities and classes provided. The relationship that each of the programmatic elements share with the natural environment is another important aspect that compliments the unique culture that Rabindranath Tagore molded Santiniketan to embody. Tagore acknowledged that "...the beauty of the sky, and the different seasons revolve before [their] eyes in all the magnificence of their colour. Through this perfect touch with nature [they] took the opportunity of instituting festivals of the seasons...The seasons of the rains often brought unexpected release from duty. Some voice suddenly would proclaim from the sky: 'Today is your holiday!'"¹ Just as he enforced such freedom in learning and living, towards his students, Little Dwellings Children's Home will also embrace this lifestyle. A lifestyle that provides a child with freedom to explore, to dance in the rain, to sing joyously, to enjoy the outdoors, but most importantly, this home will provide these children with the freedom to live- just as a child should.

notes
1. Tagore, R. (1933). *My School . Personality*
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Appendices

*Appendix A:
History of European and North American Orphanages*

*Appendix B:
Consent Form*

History of Orphanages

EUROPE + MIDDLE EAST

Orphanages “did not begin in colonial America or 18th century England, but much earlier in the cities of the Mediterranean.”¹ They can be traced back to Renaissance Italy, in wealthy cities that introduced elaborate institutions to shelter orphaned boys and girls. These homes however, were influenced by orphanages established in the cities of the Byzantine Empire – Antioch, Alexandria, Jerusalem and Constantinople.² Constantinople dedicated in 330, was not the very beginning; Christian communities introduced care for orphaned children two hundred years earlier.³ In Psalm 68, God is described as the Lord of all, and the father of the fatherless.⁴ For Christians, this was their very foundation towards the genuine care for orphans.



Figure 1: Basil of Caesarea



Figure 2: Ospedale Degli Innocenti

The first undeniable evidence of an institution built specifically for orphaned children dates back to the third century in Syria. At this time, a manual of Christian Discipline which scholars named *Didascalia Apostolorum* provided guidelines for Christian communities.⁵ According to this manual, the bishop was responsible for the care of orphanages and creating communities for their dwelling and well being. Evidence proves that Christian communities supported orphanages in the fourth century- Socrates recorded that in 358, property was purchased to house orphans and widows at Alexandria, in Byzantine Egypt.⁶ Although Socrates did not elaborate on the organization of the orphanage, Basil, the Bishop of Caesarea in Cappadocia, opened a school that served as an orphanage and had written a set of rules of how the orphanage should function, which gives scholars today a clear picture of the structure and organization of the home.⁷

History of Orphanages

The school was to care for both girls and boys who were at least six years old. Basil stressed that the girls and boys were to be housed and schooled separately. He designed a system for selecting the best and most mature among the older students to lead groups of children from the lower school. They were to help the children with their studies and to discipline them when they misbehaved. Basil enforced the orphans to remain at the school until the age of eighteen, at which point they could make the decision to join the monastery or enter society as adults.⁸ Although Basil made clear that they had the freedom of choice, records show that most of them decided to grow with the monastery. This is perhaps a result of the lack of exposure to the outside world; the fear of being part of an unknown world may have overtaken the excitement towards starting an independent life. Orphaned children should be protected, rather than being guarded from exploration.

In the later years of Western Roman provinces, orphanages continued to flourish and provide shelter to orphaned children. In 1445, the famous *Innocenti Orphanage* designed by Filippo Brunelleschi, opened doors to children. This led other Italian cities to follow its design and build similar projects.⁹ It was not long after, orphanages started integrating the arts into the children's daily routine.



FIGURE 3: Ospedale Degli Innocenti



FIGURE 4: Antonio Vivaldi: Ospedale Della Pietà

History of Orphanages

Appendix

A

In 1589- a Franciscan brother started raising money by organizing the orphans into small choirs, which sang in the squares of Naples.¹⁰ Musical instruments were soon introduced and were eventually used as part of the choir as well. By the year 1700, four Neapolitan orphanages progressed to becoming famous music schools, attracting thousands of people from Europe to travel to Venice to listen and enjoy the music. The girls from the Orphanage of the Pieta was specifically renowned, as Antonio Vivaldi, a celebrated baroque composer, spent majority of his time as a professional composer directing the girls' choir and orchestra at this orphanage.¹¹

Implementation of the arts into the lives of orphans can be viewed as a healing mechanism. Music training has proved to continually reappear as a dominant role "*in preparing [orphaned children] for the tasks of life.*"¹² Perhaps music was used as a healing mechanism for the children as it helped their mind to be distracted from the sorrow that overwhelmed them. This idea can be implemented to the design of orphanages in present day society; where the children are given the opportunity to participate in art forms to keep their minds occupied and their senses stimulated.

History of Orphanages

Appendix

A

NORTH AMERICA

During the 19th century, orphanages flourished in North America as it became the “*preferred arrangement for caring for children whose parents were deceased or unable to care for them due to poverty or other reasons.*”¹³ At this particular point in time, this method of refuge separated the children from the negative influences of the almshouse. History unfortunately contains important lessons regarding the institutional and monitored lifestyle that orphaned children have been forced to lead. European and American homes were very much structured and controlled; the children were given a limited time to play and explore, and punishment was given to those who did not sleep on time. Toys and visitors were also highly uncommon.

The children heavily suffered from various problems at the homes, due to a lack of attention, mental stimulation, and love. North American society introduced the foster care system- a system that placed orphaned children with a family until an individual/family was willing to adopt them. This system was, and still is believed to be more humane.¹⁴ Many, were not adopted, and continued a life of transition- from one home to the next; from one family to another. Stability did not exist in their life, nor did a constant source of love and care.¹⁵ In an ideal world, parentless children would not exist- every child would be given a chance to live a life with a loving family. Unfortunately, the overwhelming number of orphaned children in society exceed the number of families that are willing to adopt, which result in the constant change of families and environments.

History of Orphanages

Appendix

A

Since 1912, many child welfare reformers denounced the institutional care of children, however, two researchers at the University of California, Berkeley- Henry Maas and Richard Engler proved that foster care can no longer be considered a harmless alternative to orphanages; if used improperly, it can cause severe psychological damage. They concluded that *“Children who move through a series of families, reared without close and continuing ties to a responsible adult, have more than the usual problems in discovering who they are. These are the children who learn to develop shallow roots in relationships with others, who try to please but cannot trust, or who strike out before they can be let down.”*¹⁶

The lack of permanence and family structure in the foster care system has become a dangerous factor towards the poor psychological and emotional growth of orphaned children. When a foster child reaches adulthood, the feeling of neglect is implanted into their minds as they make their way to build a life for themselves. While the foster care system is a relatively new procedure for the placement of orphans into a family environment, it has completely replaced the traditional orphanage in North American society.¹⁷ Many third world countries however, with poor economic growth, do not have the means to change their system at this point in time, for which reason, orphanages are their only option.

notes

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Consent Form

Appendix

B



Carleton University
Research Ethics Office
Research Ethics Board
511 Tory, 1125 Colonel By Drive
Ottawa, ON K1S 5B6 Canada
Tel: 613-520-2517, ethics@carleton.ca

Ethics Clearance Form – New Clearance

This is to certify that the Carleton University Research Ethics Board has examined the application for ethical clearance. The REB found the research project to meet appropriate ethical standards as outlined in the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Human, 2nd edition*, and the *Carleton University Policies and Procedures for the Ethical Conduct of Research*.

Date of Clearance: December 19, 2014

Researcher: Nilakshi Roy (Student Research: Master's Student)

Department: Faculty of Engineering and Design\Architecture (School of)

University: Carleton University

Research Supervisor (if applicable): Prof. Federica Goffi

Project Number: 102363

Alternate File Number (if applicable):

Project Title: I'm Still a Kid! A proposal for improving orphanages through the playful integration of nature, nurture, and the senses

Funder (if applicable):

Clearance Expires: May 31, 2015

All researchers are governed by the following conditions:

Annual Status Report: You are required to submit an Annual Status Report to either renew clearance or close the file. Failure to submit the Annual Status Report will result in the immediate suspension of the project. Funded projects will have accounts suspended until the report is submitted and approved.

Changes to the project: Any changes to the project must be submitted to the Carleton University Research Ethics Board for approval. All changes must be approved prior to the continuance of the research.

Adverse events: Should a participant suffer adversely from their participation in the project you are required to report the matter to the Carleton University Research Ethics Board. You must submit a written record of the event and indicate what steps you have taken to resolve the situation.

Suspension or termination of clearance: Failure to conduct the research in accordance with the principles of the *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, 2nd edition* and the *Carleton University Policies and Procedures for the Ethical Conduct of Research* may result in the suspension or termination of the research project.



Andy Adler

Chair, Carleton University Research Ethics Board



Louise Heslop

Vice-Chair, Carleton University Research Ethics Board

List of Illustrations

All images are property of the author unless otherwise noted

FIGURE 1: Imagined Outdoor Learning Spaces

FIGURE 2: Improvising with tree trunks, ropes and netting

Day, C., & Midbjer, A. (2007). *Environment and Children: Passive Lessons from the Everyday Environment*. Burlington, USA: Elsevier.

FIGURE 3: Tug of War

FIGURE 4: Outdoor Play

FIGURE 5: Movement of Water

FIGURE 6: Light and Shade effect on the Face

Day, C., & Midbjer, A. (2007). *Environment and Children: Passive Lessons from the Everyday Environment*. Burlington, USA: Elsevier.

FIGURE 7: Outdoor Reading

FIGURE 8: Painting Outdoors

FIGURE 9: Meditation

FIGURE 10: Bushes as method of shelter

FIGURE 11: Forts in the Natural Environment

Day, C., & Midbjer, A. (2007). *Environment and Children: Passive Lessons from the Everyday Environment*. Burlington, USA: Elsevier.

FIGURE 12: Learning Outdoors

FIGURE 13: Queen of Heaven Orphanage 1910

<http://www.sunnysidedenver.org/OurCommunity/History/>

FIGURE 14: Soh Ker Tie House

<http://www.archdaily.com/25748/soe-ker-tie-house-tyin-tegnestue/>

FIGURE 15: Amsterdam Orphanage

<https://www.flickr.com/photos/quadralectics/8539713717/>

FIGURE 16: Section Through Pod

<http://www.archdaily.com/25748/soe-ker-tie-house-tyin-tegnestue/>

FIGURE 17: Overall View of Pod Assembly

<http://www.archdaily.com/25748/soe-ker-tie-house-tyin-tegnestue/>

FIGURE 18: Ruins

<http://www.tyinarchitects.com/downloads/>

FIGURE 19: Architects Sketch of Site Distribution

<http://www.tyinarchitects.com/downloads/>

FIGURE 20: Integrated Swing

<http://www.tyinarchitects.com/works/soe-ker-tie-house/>

FIGURE 21: Site Plan

<http://www.tyinarchitects.com/works/soe-ker-tie-house/>

FIGURE 22: Detailing of the Pods

<http://www.tyinarchitects.com/works/soe-ker-tie-house/>

FIGURE 23: Site Plan

<https://www.flickr.com/photos/quadralectics/8540818858/>

FIGURE 24: Architectural Details

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<https://thesleepofrigour.wordpress.com/2013/01/06/the-orphanage-amsterdam-1960-aldo-van-eyck/>

lbid

lbid

FIGURE 25: Architectural Details

<http://www.geheugenvannederland.nl/?en/items/NFA08xxCOLONxxVIC-1986-12>

lbid.

<https://thesleepofrigour.wordpress.com/2013/01/06/the-orphanage-amsterdam-1960-aldo-van-eyck/#jp-carousel-248>

FIGURE 26: Shape, Form & Texture

FIGURE 27A: Low Ceilings

Day, C., & Midbjer, A. (2007). *Environment and Children: Passive Lessons from the Everyday Environment*. Burlington, USA: Elsevier.

FIGURE 27B: High Ceilings

Day, C., & Midbjer, A. (2007). *Environment and Children: Passive Lessons from the Everyday Environment*. Burlington, USA: Elsevier.

FIGURE 28: The In-Between

FIGURE 29: Effects of Colour

Meerwein, G., Rodeck, B., & Mahnke, F. H. (2007). *Color - Communication in Architectural Space*. Basel: Birkhauser Verlag

FIGURE 30: Effects of Colour (Table)

Meerwein, G., Rodeck, B., & Mahnke, F. H. (2007). *Color - Communication in Architectural Space*. Basel: Birkhauser Verlag

FIGURE 31: Variation of Privacy

FIGURE 32: The Streets

<https://onlineonly.christies.com/s/boundless-125-years-of-national-geographic-photography/calcutta-india-2010-50/1301/>

FIGURE 33: Victoria Memorial

<http://www.skyscrapercity.com/showthread.php?t=232625>

FIGURE 34: Kolkata Street Life

FIGURE 35: Travel Map

https://www.google.ca/search?q=world+map+outline&espv=2&biw=1421&bih=718&source=lnms&tbn=isch&sa=X&ei=zrdGvcSylZK0yASIsYHwBA&ved=0CAYQ_AUoA-Q#imgrc=uFqXn_SPODHieM%253A%3Bf3wmzm60alhcXM%3Bhttp%253A%252F%252Fwww.outline-world-map.com%252Fmap-images-original%252Foutline-blank-transparent-world-map-b1b.png%3Bhttp%253A%252F%252Fwww.outline-world-map.com%252Foutline-transparent-world-map-b1b%3B1357%3B628

FIGURE 36: Volunteer Itinerary

FIGURE 37-40: Volunteer Experience

FIGURE 41: Community Artwork in Kolkata

<http://muktodhara.org/?p=317>

FIGURE 42: Kolkata to Santiniketan

FIGURE 43: Santiniketan Sketch

FIGURE 44: Santiniketan Site Visit Photos

FIGURE 45: Rabindranath Tagore Teaching

<http://www.ft.com/cms/s/2/421c4c26-d4bd-11e1-9444-00144feabdc0.html#axzz3Vw3ffuQP>

FIGURE 46: The Beginnings of Rabindranath Tagore's School

<http://archive.thedailystar.net/magazine/2006/05/01/sfeature.htm>

FIGURE 47: Santiniketan Map

FIGURE 48: Site

FIGURE 49: Site

FIGURE 50: Bamboo Diagram

<http://workflow.arts.ac.uk/view/artefact.php?artefact=820140&view=98926>

FIGURE 51: Completed Development

FIGURE 52: Phase 1

FIGURE 52: Phase 2

FIGURE 53: Pod Type 1

FIGURE 54: Joint Pods

FIGURE 55: Joint Pods

FIGURE 56: Exploded Axo

FIGURE 57: Wall Composition

FIGURE 58: Structural Diagram

FIGURE 59: Detail

FIGURE 60: Detail

FIGURE 61: Joinery Detail

FIGURE 62: Structural Exploded Axo

FIGURE 63: Monsoon Season

FIGURE 64: Bathroom

FIGURE 65: Bathroom Plan

FIGURE 66: Bathroom Interior

FIGURE 67: Bathroom Section

FIGURE 68: Bathroom Exploded Axo

FIGURE 69: Bathroom Details

FIGURE 70: Dining Space Plan

FIGURE 71: Cooking Area

FIGURE 72: Relationship with Outdoor Space

FIGURE 73: Arch Details

FIGURE 74: View from Girl's Headquarters

FIGURE 75: Phase 3

FIGURE 76: Interactive Interior Space

FIGURE 77: Section Demonstrating Interaction

FIGURE 78: Exploded Axo

FIGURE 79: Elevations

FIGURE 80: Multipurpose Space Plan

FIGURE 81: Multipurpose Space as a Classroom

FIGURE 82: Multipurpose Space as an activity Space

FIGURE 83: Multipurpose Space Section

FIGURE 84: Outdoor Learning Space Type 1

FIGURE 85: Outdoor Learning Space Type 2

FIGURE 86: Outdoor Learning Space Type 3

FIGURE 87: Outdoor Learning Space Type 4

FIGURE 88: Outdoor Learning Space Type 5

FIGURE 89: Outdoor Learning Space Type 6

FIGURE 90: Phase 4

FIGURE 91: Movie Theatre Area

FIGURE 92: Community Movie Nights

FIGURE 93: Interior of Infants Residence

FIGURE 94: Infants Residence Plan

FIGURE 95: Infants Residence Section

FIGURE 96: Infants Residence Axo

FIGURE 97: Amphitheatre

FIGURE 98: Amphitheatre & Workshop Spaces

FIGURE 99: Workshop Axo

FIGURE 100: Workshop Details

FIGURE 101: View from Sriniketan Road

APPENDIX A: List of Illustrations

All images are property of the author unless otherwise noted

FIGURE 1: Basil of Caesarea
<http://classicalchristianity.com/category/bysaint/st-basil-of-caesarea-ca-330-379-%E3%80%80/>

FIGURE 2: Ospedale Degli Innocenti
<https://www.pinterest.com/pin/384213411932328963/>

FIGURE 3: Ospedale Degli Innocenti
<https://sanslartigue.wordpress.com/tag/ospedale-degli-innocenti/>

FIGURE 4: Antonio Vivaldi: Ospedale Della Pietà
http://en.wikipedia.org/wiki/Ospedale_della_Piet%C3%A0

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