

The Children in “Orange”

Design for the children of incarcerated parents

by

Yina Li

A thesis

Presented to the University of Waterloo

In fulfillment of the

Thesis requirement for the degree of

Master of Architecture

Waterloo, Ontario, Canada, 2019

© Yina Li 2019

AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

ABSTRACT

Behind an increasing rate of parental incarceration, the public at the outside of the barbed wires is encountering a significant amount of the children of incarcerated parents. The children who experienced the imprisonment of parents become the hidden victims under the criminal justice system. The separation that occurs when a parent enters prison plays a role in generating adverse developmental outcomes in children.

In response to the contemporary correctional philosophy, specific efforts have been provided to the purpose of rehabilitation and social reinsertion. Interactions between incarcerated parents and their children that adopted a wide range of formats have been designed due to the undeniable benefits of a secure parent-child attachment. The children-oriented visitation program and the prison nursery provide children with possibilities to continue the bonding process inside a correctional facility. Regardless of valid criticisms, the existence of both programs proves the benefits for an inmate and a child outweigh the potential negative impacts of the prison environment on the children. However, those impacts should never be ignored.

This is not a thesis about examining the correctional system, but about exploring the space designed for a group of people who are forced to experience the separation with their parents. It intends to create a children-friendly environment inside the correctional facilities to accommodate positive parent-child interactions.

ACKNOWLEDGMENTS

First and foremost, I would like to sincerely thank my supervisor Robert Jan van Pelt for his support and encouragement throughout this exciting endeavour. RJ thank you for inspiring me to explore the depths and heterogeneity of humanity that buried behind the fences and darkness.

To my committee member John McMinn, thanks for your invaluable insights and candid feedback in the design proposal. To Maya Przybylski, thank you for helping me navigate the thesis towards the right path throughout the earlier stages of this journey. To Patrice Butts, thanks for sharing your knowledge of this specific field, which made this thesis complete. To all my friends, near and far, thanks for listening and challenging me. Lastly, a special thanks to my parents, without whom I would not have made it this far, your love and support means the world to me.

TABLE OF CONTENTS

Title page	i
Author's Declaration	iii
Abstract	iv
Acknowledgments	v
Table of Contents	vi
List of Figures	viii
<u>THESIS STRUCTURE</u>	01
<u>CHAPTER 01 - CHILDREN AND THE PRISON</u>	02
01 – Parental incarceration	02
02 – Interventions	08
Visitation	09
Prison nursery	11
03 – Spatial analysis	13
Canada	17
United States	24
04 – Issues and objective	31
<u>CHAPTER 02 - PRISON SECURITY</u>	34
01 – Architecture and control	35
02 – Inmates and Guards	37
A total institution	38
From the punishment to rehabilitation	39

03 – Security Framework	41
Security Classification	12
A complex system	43
04 – Walking Cell to Cell	49
A complex	50
Panopticon	53
Supermax	35
<u>CHAPTER 03 - ARCHITECTURE FOR CHILDREN</u>	62
01 – Children’s Development	63
Infant and Toddler	66
School-age	69
Adolescent	70
02 – Case Study	72
Orphanage	73
Nursing room	77
Educational facility	78
03 – Twelve Drawings	81
<u>CHAPTER 04 - DESIGN PROPOSAL</u>	95
<u>CHAPTER 05 – CONCLUSION</u>	129
<u>BIBLIOGRAPHY</u>	131

LIST OF FIGURES

CHAPTER 01

Figure 01-01-01. A story of the children of incarcerated parents

By author

Figure 01-01-02. The Adverse Childhood Experiences Study Concept

Charles Whitfield, M.D., Centers for Disease Control and Prevention - <https://web.archive.org/web/20160116162134/http://www.cdc.gov/violenceprevention/acestudy/pyramid.html>, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=23567354>

Figure 01-01-03. A diagram of the thesis concept

By author

Figure 01-02-01. Closed visit

By author

Figure 01-02-02. Open visit

By author

Figure 01-02-03 a-f. Visiting process

The New York Times. When Mother's Day Means a Trip to Prison. Accessed May 1, 2019. <https://www.youtube.com/watch?v=gyoSbs2Hc5s&t=180s>.

Figure 01-02-04. A diagram of the visiting process

By author; derived from:

The New York Times. When Mother's Day Means a Trip to Prison. Accessed May 1, 2019. <https://www.youtube.com/watch?v=gyoSbs2Hc5s&t=180s>.

Figure 01-02-05. Mother-child program in Ohio Reformatory for Women, USA

https://www.cleveland.com/metro/2018/03/parenting_behind_bars_ohios_pr.html

Figure 01-03-01. Closed Visit Area in Kenora Jail, Canada

Independent Review of Ontario Corrections. Corrections in Ontario: Directions for Reform, 2017, 47.

Figure 01-03-02. Male Closed Visits Area in Niagara Jail, Canada

Ibid., 48.

Figure 01-03-03. Video Visit Area in Toronto South Detention Centre, Canada

Ibid., 51.

Figure 01-03-04. Medium Security Open Visit Area in Maplehurst Correctional Complex, Canada

Ibid., 49.

Figure 01-03-05. Open Visit Area in Ontario Correctional Institute, Canada

Ibid., 50.

Figure 01-03-06. Open Visit Area in South West Detention Centre, Canada

Ibid., 57.

Figure 01-03-07. Child Open Visit Area in Alouette Correctional Centre for Women, Canada

<https://www.mapleridgenews.com/news/babies-taken-from-moms-at-maple-ridge-prison/>

- Figure 01-03-08. Child Open Visit Area in Vanier Institute for Women, Canada
Independent Review of Ontario Corrections. Corrections in Ontario: Directions for Reform, 2017, 57.
- Figure 01-03-09 a-c. the location of the Grand Valley Institution for Women in Canada
Google Earth
- Figure 01-03-10. Grand Valley Institution for Women
Google Earth
- Figure 01-03-11. A diagram of the Grand Valley Institution for Women
By author; derived from: Google Earth
- Figure 01-03-12. The “Cottage” in the Grand Valley Institution for Women
<https://kitchener.ctvnews.ca/features/inside-gvi/life-in-prison-behind-the-barbed-wire-at-grand-valley-institution-1.3601895>
- Figure 01-03-13. Adjoining rooms of the mother-child program
*By author; derived from:
Vancouver Sun. A Look at Where Inmate Mothers Care for Their Babies. Accessed April 30, 2019.
<https://www.youtube.com/watch?v=AAnIv9ABNhk>.*
- Figure 01-03-14. Floor plans of the “cottage”
Phillips, Todd S., and Michael A. Griebel. Building Type Basics for Justice Facilities. Hoboken, N.J: John Wiley&Sons, INC, 2003, 145.
- Figure 01-03-15. The recreation area in the Grand Valley Institution for Women
<https://kitchener.ctvnews.ca/features/inside-gvi/life-in-prison-behind-the-barbed-wire-at-grand-valley-institution-1.3601895>
- Figure 01-03-16. Axonometric of the “cottage”
*By author; derived from:
Phillips, Todd S., and Michael A. Griebel. Building Type Basics for Justice Facilities. Hoboken, N.J: John Wiley&Sons, INC, 2003, 145.*
- Figure 01-03-17 a-f. Mother-child program in Canada federal prison
*Vancouver Sun. A Look at Where Inmate Mothers Care for Their Babies. Accessed April 30, 2019.
<https://www.youtube.com/watch?v=AAnIv9ABNhk>.*
- Figure 01-03-18. A diagram of the Indiana Women’s Prison
By author; derived from: Google Earth
- Figure 01-03-19. Prison nursery areas of the Indiana Women’s Prison
PBS NewsHour. In One Indiana Prison, a Program Allows Incarcerated Moms to Raise Their Newborns, 2018. <https://www.youtube.com/watch?v=qP8xXOou8YY>.
- Figure 01-03-20. The building for the prison nursery in the Indiana Women’s Prison
*By author; derived from:
PBS NewsHour. In One Indiana Prison, a Program Allows Incarcerated Moms to Raise Their Newborns, 2018. <https://www.youtube.com/watch?v=qP8xXOou8YY>.*
- Figure 01-03-21. Site plan of the Indiana Women’s Prison

Google Earth

Figure 01-03-22 a-1. 3D modelling of the rooms that used in the prison nursery program at the Indiana Women's Prison

By author, derived from:

PBS NewsHour. In One Indiana Prison, a Program Allows Incarcerated Moms to Raise Their Newborns, 2018. <https://www.youtube.com/watch?v=qP8xXOou8YY>.

Figure 01-04-01 A conceptual drawing of keeping innocent children inside the prison

By author

CHAPTER 02

Figure 02-02-01. The inmate and the guard.

Soliraty: Inside Red Onion State Prison. HBO, n.d.
<https://www.youtube.com/watch?v=IYKGs2MLvdA>,
<https://www.youtube.com/watch?v=chSy5Ck0OJE>.

Figure 02-02-02. Role of prison in typical justice process

United Nations Office for Project Services(UNOPS). "Technical Guidance Prison Planning 2016.," n.d, 25.

Figure 02-02-03. Newgate prison, London

Johnston, Norman Bruce. Forms of Constraint : A History of Prison Architecture. Urbana ; Chicago: University of Illinois Press, 2000, 12.

Figure 02-02-04. Eastern State Penitentiary

Mike Graham from Portland, USA - Flickr; CC BY 2.0,
<https://commons.wikimedia.org/w/index.php?curid=1146578>

Figure 02-02-05. Eastern State Penitentiary

John HavilandEngraving: Demetz and Blouet - Eastern State Penitentiary Image Library, Public Domain, <https://commons.wikimedia.org/w/index.php?curid=31256330>

Figure 02-03-01. Layers of security.

United Nations Office for Project Services(UNOPS). "Technical Guidance Prison Planning 2016.," n.d, 32.

Figure 02-03-02. West County Justice Center, Contra Costa, California, USA

Spens, Iona. Architecture of Incarceration. London: Academy Editions, 1994, 54.

Figure 02-03-03. dayroom in FCI, Federal Correctional Complex, Allenwood, USA

Ibid., 44.

Figure 02-03-04. "Cottage" in Grand Valley Institution for Women, Canada

Phillips, Todd S., and Michael A. Griebel. Building Type Basics for Justice Facilities. Hoboken, N.J: John Wiley&Sons, INC, 2003, 145.

Figure 02-03-05. Dormitory in LSCI, Federal Correctional Complex, Allenwood, USA

Spens, Iona. Architecture of Incarceration. London: Academy Editions, 1994, 45.

Figure 02-03-06. Control room in Leon County Detention Facility, Florida, USA

Ibid., 57.

- Figure 02-03-07. Entrance in Collins Bay Institution, Canada
Correctional Service Canada. "Beyond the Fence: A Virtual Tour of a Canadian Penitentiary."
Accessed August 19, 2019. <https://www.csc-scc.gc.ca/csc-virtual-tour/HTMLEn/index.html>.
- Figure 02-03-08. Window in maximum security cell, Collins Bay Institution, Canada
Ibid.
- Figure 02-03-09. Window in minimum security cell, Collins Bay Institution, Canada
Ibid.
- Figure 02-03-10. Sally port
Ibid.
- Figure 02-04-01. Floor plans of the prisons
Spens, Iona. Architecture of Incarceration. London: Academy Editions, 1994, 37.
- Figure 02-04-02. Federal Correctional Complex, Allenwood, Pennsylvania, USA
Ibid., 41.
- Figure 02-04-03. USP
Ibid., 42.
- Figure 02-04-04. Watch tower of USP
Ibid., 40.
- Figure 02-04-05. Perimeter of USP
Ibid., 41.
- Figure 02-04-06. FCI
Ibid., 43.
- Figure 02-04-07. FCI
Ibid., 44.
- Figure 02-04-08. LSCI
Ibid., 43.
- Figure 02-04-09. LSCI
Ibid., 45.
- Figure 02-04-10. Panopticon
Ibid., 12.
- Figure 02-04-11. Red Onion State Prison
Google Earth
- Figure 02-04-12. Site plan of the Red Onion State Prison
By author; derived from: Google Earth
- Figure 02-04-13. The residential building
By author; derived from: Google Earth
- Figure 02-04-14. Axonometric of the Red Onion State Prison
By author; derived from: Google Earth
- Figure 03-04-15 a-d. Red Onion State Prison
Soliraty: Inside Red Onion State Prison. HBO, n.d.

<https://www.youtube.com/watch?v=IYKGs2MLvdA>,

<https://www.youtube.com/watch?v=chSy5Ck0OJE>.

Figure 02-04-16. Cell in ROSP

By author, derived from:

Soliraty: Inside Red Onion State Prison. HBO, n.d.

<https://www.youtube.com/watch?v=IYKGs2MLvdA>,

<https://www.youtube.com/watch?v=chSy5Ck0OJE>.

Figure 02-04-17. Cell in ROSP

Soliraty: Inside Red Onion State Prison. HBO, n.d.

<https://www.youtube.com/watch?v=IYKGs2MLvdA>,

<https://www.youtube.com/watch?v=chSy5Ck0OJE>.

Figure 02-04-18 a-c. Cell door design in ROSP

By author, derived from:

Soliraty: Inside Red Onion State Prison. HBO, n.d.

<https://www.youtube.com/watch?v=IYKGs2MLvdA>,

<https://www.youtube.com/watch?v=chSy5Ck0OJE>.

Figure 02-04-19. Red Onion State Prison

Soliraty: Inside Red Onion State Prison. HBO, n.d.

<https://www.youtube.com/watch?v=IYKGs2MLvdA>,

<https://www.youtube.com/watch?v=chSy5Ck0OJE>.

CHAPTER 03

Figure 03-01-01. A jumping girl

By author

Figure 03-01-02. A chart of the children's development

By author, derived from:

Häggeström, Mikael. Child Development Stages. July 4, 2009. https://commons.wikimedia.org/wiki/File:Child_development_stages.svg#/media/File:Child_development_stages.svg.

<https://www.dietitians.ca/Dietitians-Views/Prenatal-and-Infant/WHO-Growth-Charts.aspx>

Garber, Benjamin D. Developmental Psychology for Family Law Professionals : Theory, Application, and the Best Interests of the Child. New York: Springer Pub. Co, 2010.

Figure 03-01-03. A diagram of the children's development - Infant and toddler

<https://dlpng.com/png/359227>

Figure 03-01-04. A typical nursery room

By author

Figure 03-01-05 a-d. Children furniture size

LGA Architectural Partners. "Child Care Design & Technical Guideline," n.d.

Figure 03-01-06. A typical daycare

Ontario Ministry of Children and Youth Services. "Planning & Design Guidelines for Child Care

- Centres,” January 2006. <http://www.ontla.on.ca/library/repository/mon/13000/260361.pdf>.*
- Figure 03-01-07. A diagram of the children’s development - School-age
<https://dlpng.com/png/359227>
- Figure 03-01-08. A diagram of the children’s development – Adolescent
Ibid.
- Figure 03-02-01. Orphanage
Grafe, Christoph, Walter Herfst, Suzanne Fischer, Jaime Álvarez Santana, Laurens Otto, and Janno Martens. Aldo van Eyck : Orphanage Amsterdam : Building and Playgrounds. Amsterdam: Architectura & Natura, 2018.
- Figure 03-02-02. Nursing room
<http://cheeserland.com/2015/02/traveling-with-baby-in-japan-nursing-room/>
- Figure 03-02-03. Nursery
“YM Nursery / HIBINOSEKKEI + Youji No Shiro.” ArchDaily, February 14, 2019. <https://www.archdaily.com/911502/ym-nursery-hibinosekkei-plus-youji-no-shiro>.
- Figure 03-02-04. Kindergarten
“Kfar Shemaryahu Kindergarten / Sarit Shani Hay.” ArchDaily, December 22, 2013. <http://www.archdaily.com/459642/educational-center-for-children-nil-kfar-shemaryahu-sarit-shani-hay/>.
- Figure 03-02-05. Axonometric
Grafe, Christoph, Walter Herfst, Suzanne Fischer, Jaime Álvarez Santana, Laurens Otto, and Janno Martens. Aldo van Eyck : Orphanage Amsterdam : Building and Playgrounds. Amsterdam: Architectura & Natura, 2018, 6.
- Figure 03-02-06. First floor
Ibid., 98.
- Figure 03-02-07. Second floor
Ibid., 99.
- Figure 03-02-08. Room for older kids
Strauven, Francis. Aldo van Eyck’s Orphanage : A Modern Monument. Rotterdam: NAI Publishers, 1996.
- Figure 03-02-09. Room for children aged 2-4 and 4-6
Ibid.
- Figure 03-02-10. Room for children aged 2-4 and 4-6
Ibid.
- Figure 03-02-11. Baby house and change table
Grafe, Christoph, Walter Herfst, Suzanne Fischer, Jaime Álvarez Santana, Laurens Otto, and Janno Martens. Aldo van Eyck : Orphanage Amsterdam : Building and Playgrounds. Amsterdam: Architectura & Natura, 2018, 103.
- Figure 03-02-12. Reading corner for older kids
Ibid., 119.
- Figure 03-02-13. Play house for children age 6-10

Ibid., 109.

Figure 03-02-14. The playgrounds designed by Aldo Van Eyck

Ibid., 29.

Figure 03-02-15. A playground designed by Aldo Van Eyck

Ibid., 33.

Figure 03-02-16. A playground designed by Aldo Van Eyck

Ibid., 37.

Figure 03-02-17 a-e. Japan's nursing rooms

<http://cheeserland.com/2015/02/traveling-with-baby-in-japan-nursing-room/>

Figure 03-02-18 a-f. YM nursery

"YM Nursery / HIBINOSEKKEI + Youji No Shiro." *ArchDaily*, February 14, 2019. <https://www.archdaily.com/911502/ym-nursery-hibinosekkei-plus-youji-no-shiro>.

Figure 03-02-19 a-f. Kfar Shemaryahu Kindergarten

"Kfar Shemaryahu Kindergarten / Sarit Shani Hay." *ArchDaily*, December 22, 2013. <http://www.archdaily.com/459642/educational-center-for-children-nil-kfar-shemaryahu-sarit-shani-hay/>.

**All the figures in Chapter 03-03: "Twelve Drawings" are created by the author of this thesis.*

CHAPTER 04

**All the figures in Chapter 04 are created by the author of this thesis.*

Figure 04-00-01. Current site plan and Proposed site plan

Figure 04-00-02. Axonometric of design proposal

Figure 04-00-03. Site plan of design proposal

Figure 04-00-04 a-f. Programmes analysis

Figure 04-00-05. Exploded axonometric of the visiting centre and the multi-functional space

Figure 04-00-06. Visiting centre

Figure 04-00-07. 2F of the visiting centre

Figure 04-00-08. 1F of the visiting centre

Figure 04-00-09. -1F of the visiting centre

Figure 04-00-10. Multi-functional space

Figure 04-00-11. Visiting space for school-age children

Figure 04-00-12. Visiting space for infants and toddlers

Figure 04-00-13 Visiting space for adults

Figure 04-00-14 Service areas

Figure 04-00-15. Visiting space for older kids

Figure 04-00-16. Entrance of the visiting space

Figure 04-00-17. Closed visiting space

Figure 04-00-18. Circulation analysis

Figure 04-00-19. Visitors zone

Figure 04-00-20. Inmates zone

Figure 04-00-21. Visiting area for school-age children
Figure 04-00-22. Visiting area for infants and toddlers
Figure 04-00-23. Visiting area for older kids
Figure 04-00-24. Visiting area for adults
Figure 04-00-25. Exterior of the visiting centre
Figure 04-00-26. Picnic table outside the mother-baby house
Figure 04-00-27. Visiting area for school-age children
Figure 04-00-28. mother-baby room in mother-baby house
Figure 04-00-29. Exploded axonometric of the PFV
Figure 04-00-30. PFV
Figure 04-00-31. 2F of the PFV
Figure 04-00-32. 1F of the PFV
Figure 04-00-33. Living room / Kitchen / Dining room
Figure 04-00-34. Semi-public space
Figure 04-00-35. Bedrooms
Figure 04-00-36 a-c. Different combinations of the bedrooms
Figure 04-00-37. Exploded axonometric of the mother-baby house
Figure 04-00-38. Mother-baby house
Figure 04-00-39. 2F of the mother-baby house
Figure 04-00-40. 1F of the mother-baby house
Figure 04-00-41. Living room / Play area / Nursing room
Figure 04-00-42. Kitchen / Dining room
Figure 04-00-43. Mother-baby room
Figure 04-00-44. Pregnant women room
Figure 04-00-45. Picnic table area
Figure 04-00-46. Shared bathroom
Figure 04-00-47. Semi-public area
Figure 04-00-48. Exploded axonometric of the minimum-security house
Figure 04-00-49. minimum-security house
Figure 04-00-50. 2F of the minimum-security house
Figure 04-00-51. 1F of the minimum-security house
Figure 04-00-52. Semi-public space
Figure 04-00-53. Inmate room
Figure 04-00-54. Living room / Kitchen / Dining room
Figure 04-00-55. Two types of the fence
Figure 04-00-56 a-d. Fence design

THESIS STRUCTURE

The purpose of chapter 01 is to provide the background of the thesis. It begins with a problem statement regarding the “parental incarceration”. The thesis title “The children in orange” is referred to the children of incarcerated parents. It then narrows down the topic into two existing interventions - the visitation and prison nursery. The detailed spatial analysis as well as the case study then followed to reveal the connection between the architecture and this social dilemma. An evaluation of the current interventions illustrated the issues and brought up the thesis objective in the last section.

Chapter 02 drives into an investigation of the prison security framework. It starts by depicting a picture of the architectural articulation of control, since the security framework is a physical form that translates from the power of control. The second section discusses two things about the prison that is thesis concerned with. It first looks into the prison’s key attribute as a total institution, since it has the most significant impact on the architectural language of this typology. Also, an historical context is provided in order to show how rehabilitation as a major contemporary prison philosophy evolved. A detailed description of the security framework then followed. The framework is formed by the classification system and a complex system that includes physical, procedural and dynamic security. Then the chapter concludes with the analysis of three case studies.

Chapter 03 is a study of the architecture for children. It contains two major sections: the theory of the children’s development and the case study. Then there are twelve parent-child moments selected and recreated as an essential supplement of the research.

Chapter 04 is a design proposal that tests all the theories and compiles all the research, narratives as well as the precedents. It illustrates the potential solution which achieves the thesis objective that stated at the beginning. Eventually, the conclusion of chapter 05 gives an ending of this journey.

CHAPTER 01

CHILDREN AND THE PRISON

01 – PARENTAL INCARCERATION

02 – INTERVENTIONS

VISITATION

PRISON NURSERY

03 – SPATIAL ANALYSIS

CANADA

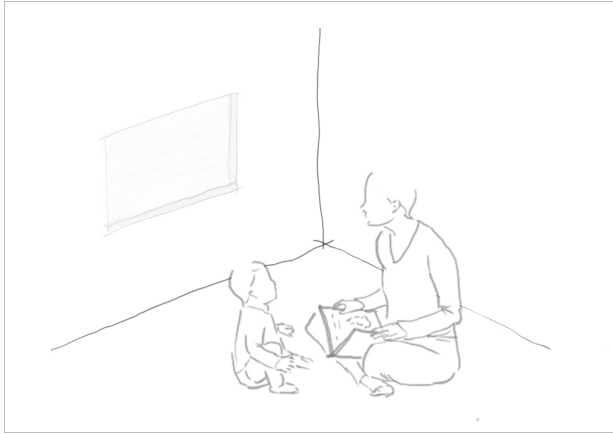
UNITED STATES

04 – ISSUES AND OBJECTIVE

01 – PARENTAL INCARCERATION

The criminal justice system in North America changed fundamentally over the past several decades. As one of the consequences, the number of inmates' children has dramatically increased because of a rise in parental incarceration. Because first, a large portion of the law-breakers were parents of minor children when they were convicted. Second, since a growing number of sentenced women are expecting children during the time of incarceration, pregnancy has become a common health issue among female inmates.

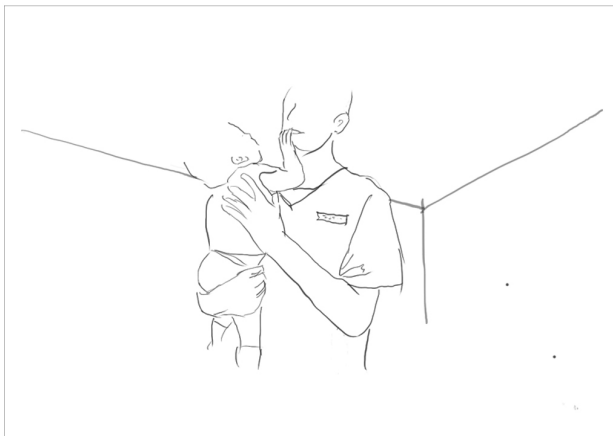
OPPOSITE: Figure 01-01-01. A story of the children of incarcerated parents



01



02



03

Imagine this

In an adult correctional facility,
there is a room full of innocent
children who are spending time
with their parents
...

04

The *Adverse Childhood Experiences Study* (ACE Study) conducted by the *American health maintenance organization* and the *Centers for Disease Control and Prevention* has identified parental incarceration as one type of childhood traumas. Hence, these children of the incarcerated parents, who have been called “hidden victims” of the criminal justice system, demand attention from society. A more thorough understanding of these children’s unique needs is essential.

First of all, parental incarceration disrupts families and generates disorders socially. This separation threatens the bonding process as these children are facing the inevitable separation from their parents. Having a parent remotely hardly brings positive impacts on children. Dozens of researches have shown the undebatable facts that this particular circumstance brings challenges to these children’s developments. For example, children with insecure attachment relationships with their parents often have difficulty with emotion management, which may further lead to poor life choices. The children will potentially develop anti-social and offending behaviour, the future



Figure 01-01-02. The Adverse Childhood Experiences Study Concept

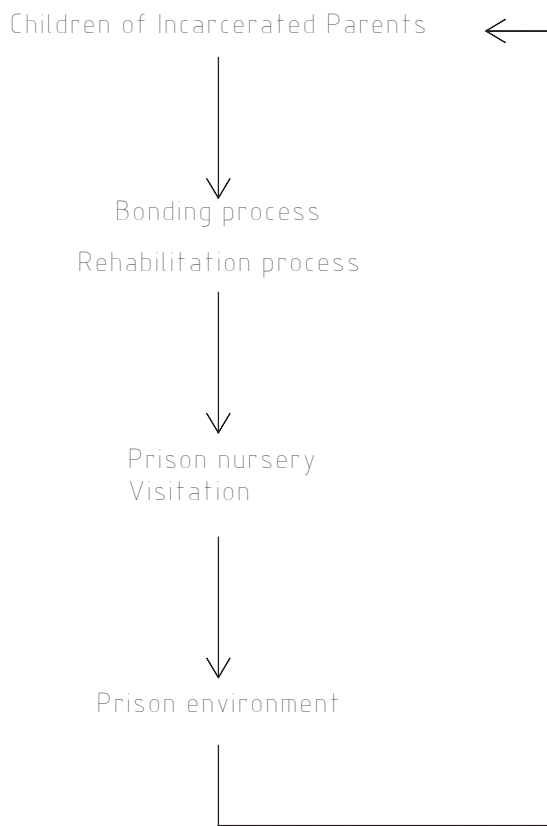


Figure 01-01-03. A diagram of the thesis concept

problems that suggested from the existing literature include cognitive delays, delinquency, anxiety, post-traumatic stress disorder, and depression.¹

Parental incarceration also has consequences for children’s living arrangements. The types(e.g. With parents, relatives, or non-kin living arrangements) and the stability(e.g. Continuity of living with a primary caregiver) of the living arrangements affect children’s well-being.² Typically, the living arrangements for them are first, to be placed with family members; second, to be put up for adoption; and third, to get fostered. Unfortunately, during the traumatic separations and unpredictable shifts between caregivers, these children do not generally receive adequate and equal comfort and support from these alternative caregivers for their emotional needs as they expect from their parents. It then seems unfair that these children are forced to

lose the right to continue bonding with one of their parents, sometimes even both of them. The parents may

1 Yvette R. Harris, *Children of Incarcerated Parents : Theoretical, Developmental, and Clinical Issues*, Book, Whole (New York: Springer Pub. Co, 2010), 47–68.

2 Ibid., 129.

lose freedom, but their children remain the right to non-discrimination. Therefore, besides the sentencing decisions, the jurisdiction should also consider the best interests of the inmates' children for their safety and security, as well as their physical, emotional and spiritual well-being.

Apart from the inmate confinement within the prison, the current correctional system in North America tends to respond to the principles of rehabilitation and social reinsertion. Underlying the purpose of the correctional facilities is the concept that the efforts of modifying the inmates' behaviour allow them to return to society as productive citizens more successfully and lower the recidivism rate eventually. Therefore, certain vital relationships deserve more considerations under the rehabilitation process, such as the relationships between incarcerated parents and their children. Although inmates' lost parental power and authority during the justice process, their concerns about the well-being of their children and the desire for parent-child reunification remain.

To resolve the issues of parental incarceration and to achieve the purpose of inmates rehabilitation, interventions that derived from a series of multi-discipline researches have been implemented to the contemporary correctional facilities. First of all, a line of scholarship on the parenting roles of individuals in prison was spawned by the parent-centred research. The programs based on such research are recognized as innovative and humane approaches to rehabilitating inmates who are parents. The relevant interventions are in favour of a goal for facilitating the change of an inmate to a responsible parent and eventually lower the recidivism rate.

The child-centred research, on the other hand, was established with the best interests of children. The interventions focus on the children's well-being and intend to break the cycle of generational imprisonment by providing children with opportunities to combat risk factors in lives with their parents involved.

02 – INTERVENTIONS

Correctional facilities have widely adopted non-custodial sentencing options on a case-by-case basis, such as home detention on pregnant women and primary caregiver with minor children or suspending sentences until their children reach certain ages. When the custodial sentencing is unavoidable, some prisons will provide children-oriented visitation programs or prison nurseries as interventions.

VISITATION

Generally, there are two types of visiting setting: Closed visit and open visit. Maximum security facilities only permit closed visit where interactions take place separated by a transparent barrier, preventing any physical contact. Whereas the open visiting allow the limited physical contact by hugging or kissing at the beginning and end of a visit and holding hands throughout their time together.³ Typically, visitors can purchase snacks and drinks for themselves and the inmates. Facilities can vary from vending machines to fully staffed canteens or even tea bars.

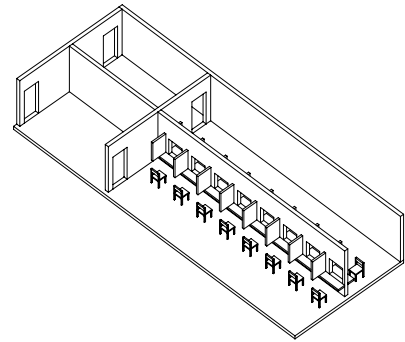


Figure 01-02-01. Closed visit

Visitation is one critical intervention by which parents can create positive parent-child interactions and maintain some relationships with their children. The families can also reunite more successfully when the inmate is released. Hence the child-oriented visitation program as an extension of the open visit has been applied in some correctional facilities. Such a program has two significant changes compared to a typical visitation program. First of all, more frequent visits, which allow children to enjoy extended time with their parents. Second, space is more structured with children-friendly design in order to deliver an accepting and non-stigmatizing environment compared to a typical prison visiting setting.

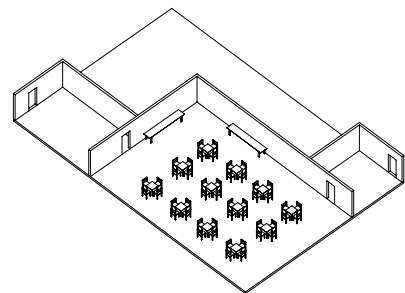


Figure 01-02-02. Open visit

Visiting a loved one in prison is never a short and pleasant process, especially for a child. For
3 Independent Review of Ontario Corrections,
Corrections in Ontario: Directions for Reform, 2017, 48.



a



Long Journey



b



Security Check



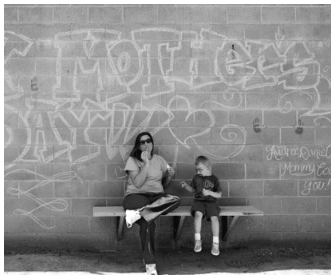
c



d



e



f

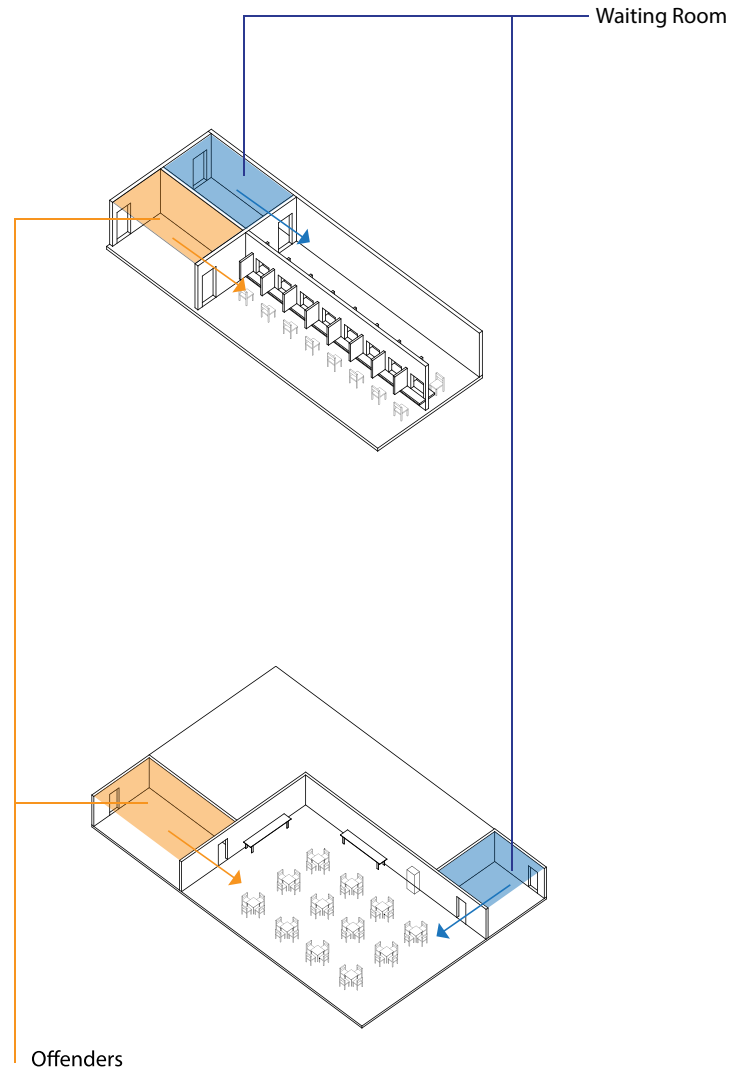


Figure 01-02-03 a-f. Visiting process

Figure 01-02-04. A diagram of visiting process

most of them who wish to visit, a long journey of a road trip is the first challenge because of the geographical isolation. All visitors, even including babies, will undergo a security check. The process will involve metal detectors (similar to those seen at the airport) and sometimes the use of a passive drug detection dog.

PRISON NURSERY

The critical operations of a contemporary correctional facility involve not only housing of the inmate population but providing programs for particular problems. The prison nursery, alternatively called the mother-child program, is one of the most controversial programs that specifically target the children of incarcerated mothers as the gender-related differences in the parenting issues and behaviours of prisoners are based in part upon the sex roles and responsibilities traditionally assigned to parents in the larger society.⁴

Prison nursery is a setting within a criminal justice facility where incarcerated women can be the primary caregivers for their children while also fulfilling their prisoner role and penal sentences. This concept involves keeping innocent children with their mothers in the prison environment, which allow an inmate mother to parent her child for a certain period of time. It not only aims to improve the positive socio-emotional functioning of children but to assist incarcerated mothers with developing positive parenting practices.⁵

4 Katherine Gabel and Denise Johnston, eds., *Children of Incarcerated Parents*. (New York, 1995), 18.

5 Ann M. Stanton, *When Mothers Go to Jail* (Lexington,



Figure 01-02-05. Mother-child program in Ohio Reformatory for Women, USA

The length of a child's stay with the mother in prison varies across jurisdictions. Some nations have no legal maximum age or fail to enforce existing laws on age limits at which a child must leave the prison setting; Some have flexible age limits that take into account the best interests of the child.⁶ The programs in the United States and the United Kingdom allow newborn to live with their mothers in the facilities until they reach eighteen months of age.⁷ The majority of countries that have prison nurseries programs allow children to stay with their mothers full-time in the facilities until the preschool-age.⁸

Although this arrangement illustrates alternatives to complete this mother-child separation, its provocative aspect that is accommodating innocent children within a prison still be considered by some to be undesirable. Therefore, the programs have become more common in the last decade but are still available only on a limited basis.

Mass.; Toronto: Lexington Books, 1980).

6 Melanie Paurus, "International Report on the Conditions of Children of Incarcerated Parents," n.d.

7 Jennifer Warner, "Infants in Orange: An International Model-Based Approach Prison Nurseries," *Hastings Women's Law Journal* 26, no. 1 (January 1, 2015): 65.

8 Ibid.

03 – SPATIAL ANALYSIS

Visitation programs and prison nurseries take many forms throughout the world, and children in these facilities have a broad range of experiences.



Figure 01-03-01. Closed Visit Area in Kenora Jail, Canada



Figure 01-03-02. Male Closed Visits Area in Niagara Jail, Canada



Figure 01-03-03. Video Visit Area in Toronto South Detention Centre, Canada

CANADA

In Canada, correctional services are operated by both the federal and provincial governments. The Correctional Service of Canada (CSC) as part of the federal correctional system is responsible for managing institutions of various security levels and supervising inmates who have been sentenced for more than two years. Inmates who are on remand, awaiting trials or receive sentences of less than two years, will be sent to the provincial facilities.

Canadian correctional policy has long recognized the importance of maintaining an inmate's connections with family. A range of measures has been put in place including closed visiting, open visiting, child-friendly visiting, private family visiting accommodations for extended stays, and mother-child programs that prevent the separation of mothers and young children.⁹ Within all types of physical spaces in the prison where inmates have access, the visiting areas are always equipped with relative minimum security.¹⁰ Generally, open visiting

9 Independent Review of Ontario Corrections, *Corrections in Ontario: Directions for Reform*, 43–59.

10 Todd S. Phillips and Michael A. Griebel, *Building Type Basics for Justice*

happen in a room with fixed furniture and constant surveillance, such as medium security open visit area in Maplehurst Correctional Complex. In Ontario Correctional Institute, open visiting areas that used for professional and personal visits also serves as the lobby and reception area. The provincial system also adopts technology into the visitation program. Toronto South Detention Centre has equipped with 70 personal video visit terminals, located in a room off the institution's front lobby. Canada correctional system has established children visiting programs to facilitate appropriate visits with children through upgraded children-friendly visiting environment in some facilities such as the South West Detention Centre and Vanier Centre for Women.

Also, In 2005, the federal government implemented the Institutional Mother-Child Program in female prisons. The components of the program that takes place in the facility include full-time residency, part-time residency and private family visits.¹¹ An inmate's child Facilities (Hoboken, N.J: John Wiley&Sons, INC, 2003), 260.

11 Correctional Service of Canada, "Study of the Mother-Child Program," September 1, 2002, <https://www.csc-scc.gc.ca/publications/fsw/fsw24/toce-eng.shtml>.



Figure 01-03-04. Medium Security Open Visit Area in Maplehurst Correctional Complex, Canada

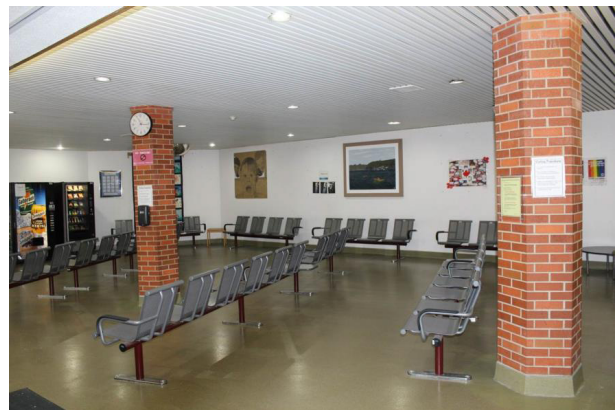


Figure 01-03-05. Open Visit Area in Ontario Correctional Institute, Canada



Figure 01-03-06. Open Visit Area in South West Detention Centre, Canada



Figure 01-03-07. Child Open Visit Area in Alouette Correctional Centre for Women, Canada



Figure 01-03-08. Child Open Visit Area in Vanier Institute for Women, Canada

who is eligible to be considered as a participant if he/she is not older than four years of age for full-time residency, or not older than six years of age for part-time residency, or under the age of majority for private family visit unit.¹² During the day, the children will be able to stay with their mothers, attend the daycare centre in the facility, or take part in preschool programs in the community.¹³ The part-time residency provides for sleepover visits. Children shall have access to the same facilities as the participants in the full-time program.¹⁴

¹² Correctional Service of Canada, "Institutional Mother-Child Program," February 27, 2003, <https://www.csc-scc.gc.ca/lois-et-reglements/768-cd-eng.shtml>.

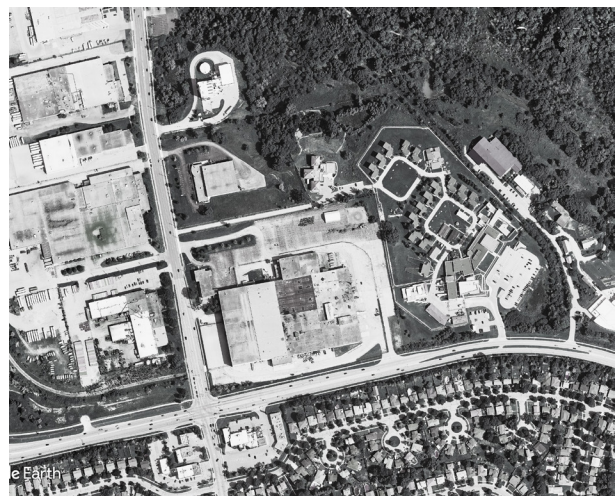
¹³ Correctional Service of Canada, "Study of the Mother-Child Program."

¹⁴ Correctional Service of Canada, "Institutional Mother-Child Program."

Grand valley institution for women

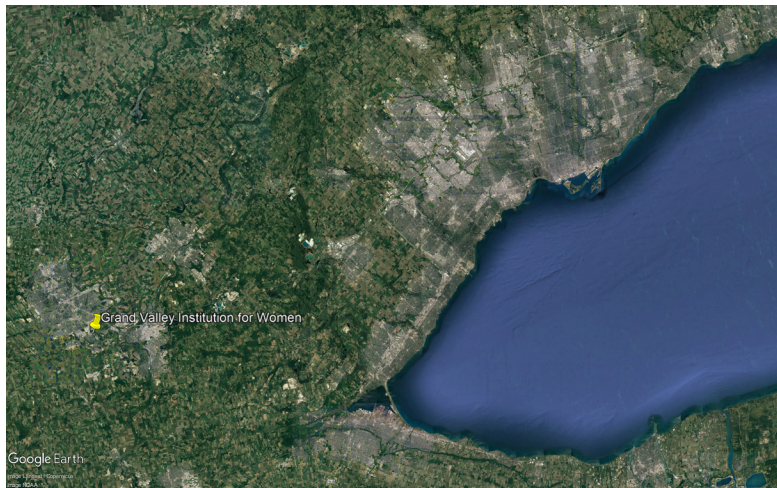
The GVIW opened in 1997 is located in Kitchener, Ontario. It is the only female prison run by the federal government. During the research on Grand Valley Institute for Women(GVIW), I reached out Patrice Butts, who is the coordinator of the mother-child initiative in this particular prison. Thanks to Patrice's detailed description and knowledge on this specific field, I was able to acquire a clear picture of the current situations of the visiting practices and mother-child program in Canada federal female prisons, especially in GVIW.

The visiting usually is on weekends, and the family members have to call in and book the visit in advance at least 72 hours before the visit. The gate of the GVIW is a single layer fence with the wires taped on the top and cameras installed. The first thing for visitors who have passed the gates is to get security clearance at the front. It is set up as the airport security checkpoint with officers, desks and the security belt. The visiting area of the multi-level visiting unit is right near the front of the main entrance. It contains tables that can share, a bit of the





a



c

Figure 01-03-09 a-c, the location of the Grand Valley Institution for Women in Canada

cafeteria area, and some vending machines. The play areas for children that Patrice has been working on over the years to create contains toys and items that children like. There is no waiting area but chairs at the main desk for people to sit and wait to get processed if there is a lineup. The visiting area has tables, chairs and officers station. There are two private rooms designed for family and children services meeting and mothers who need nursing the baby.

There is a newly built minimum-security apartment located beyond the fence. It provides not only a minimum visiting unit but also the full-time and part-time residency for mother-child program. The building has five apartments, which are more like modern student dorms. There are two full kitchens as each serves for four women. The main living area has a TV and a big table. There are eight bedrooms at the periphery. The mother-child unit has an adjoining room. If the baby is in the unit, the door where facing the hallway is always closed. Inmate mother can enter the baby's room through her room. The purpose of the adjoining rooms is to save the space as the units could be transferable and easily converted into a regular room for inmates. This building has the capacity for six children to stay (unit 5 – 2 Mother-child units, unit 4 – 3 Mother-child units, first floor – 1 Mother-child unit). Children who tend to stay usually are very young (full-time and part-time residency). There is a quite big open space upstairs for women to sit and hang out, and for children to run on little cars. In the very back of



Figure 01-03-10. Grand Valley Institution for Women

Minimum security residency / Mother-baby rooms
/Visiting center

Medium / Minimum security residency

Private family visiting houses (PFV)

Entrance / Administration / Visiting center

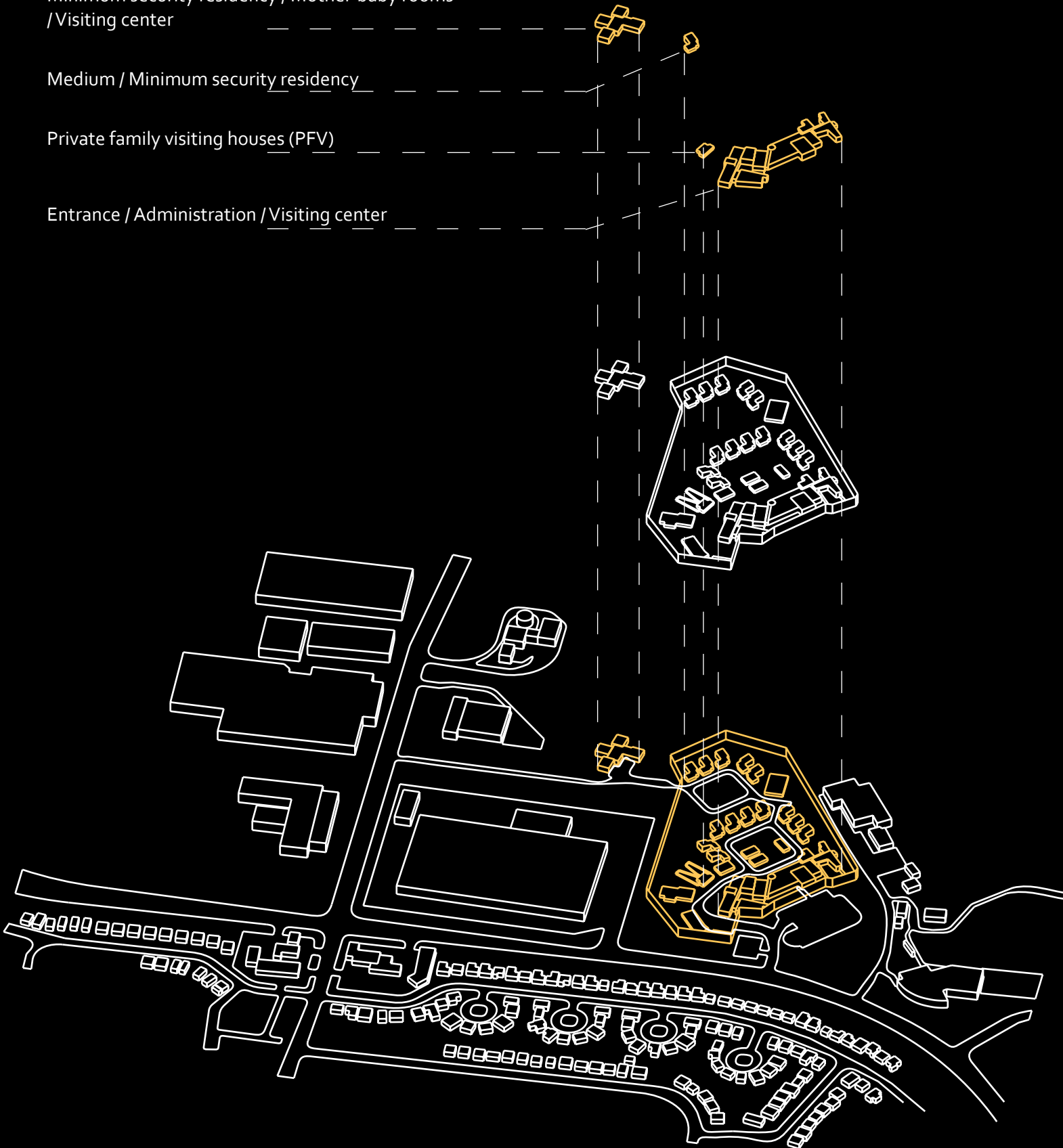


Figure 01-03-11. A diagram of the Grand Valley Institution for Women

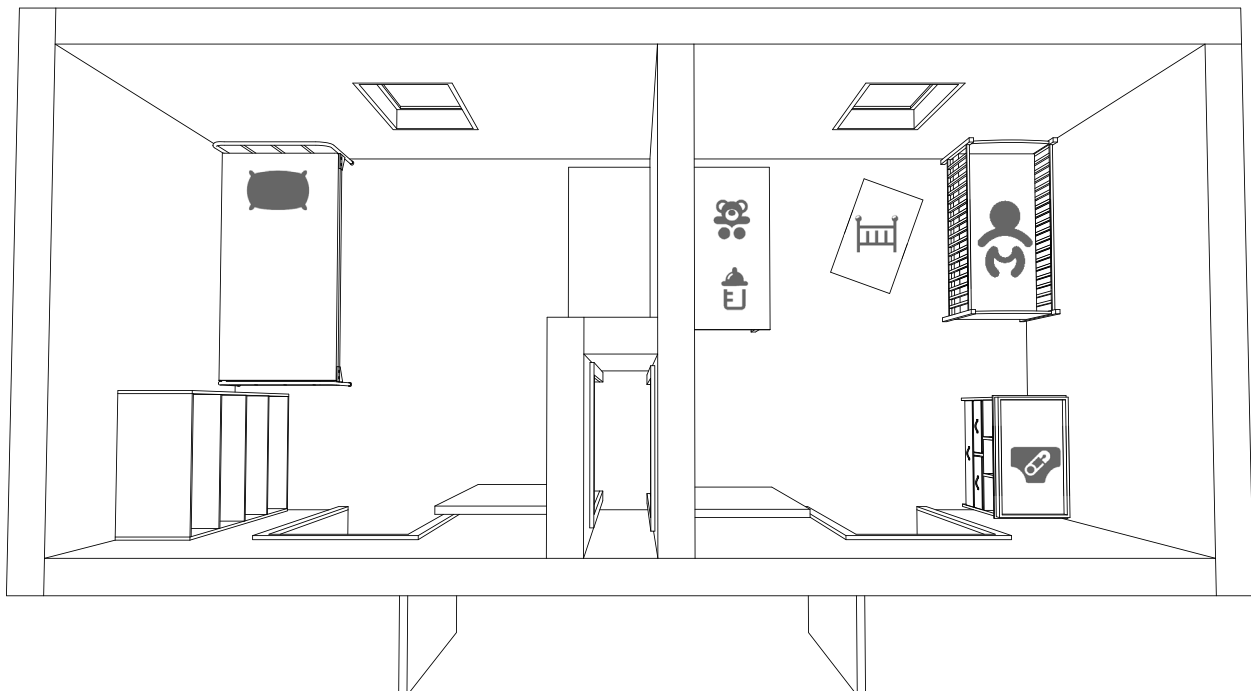
it, there is a separated playroom set up like a preschool classroom.

In the main compound, there is an apartment with two units that are referred to as Private family visiting unit(PFV). When women become eligible, they can apply for private family visiting, the family members, including children, can live with the inmates inside the prison for up to 72 hours. The inmates have to store their food, and they can go into the visiting area to pick up a few toys and items from the resources and take them into the PFVs for the family visiting.

The ongoing challenges for GVIW visiting practices and mother-child program are storage space, children



Figure 01-03-12. The "Cottage" in the Grand Valley Institution for Women



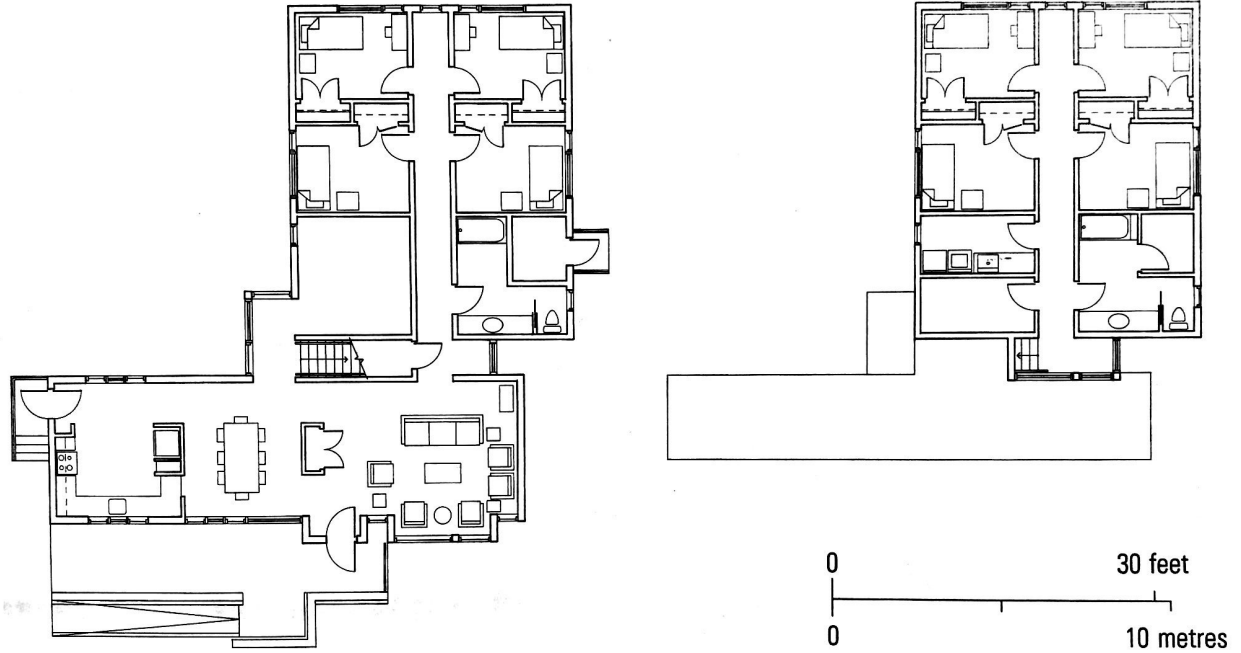
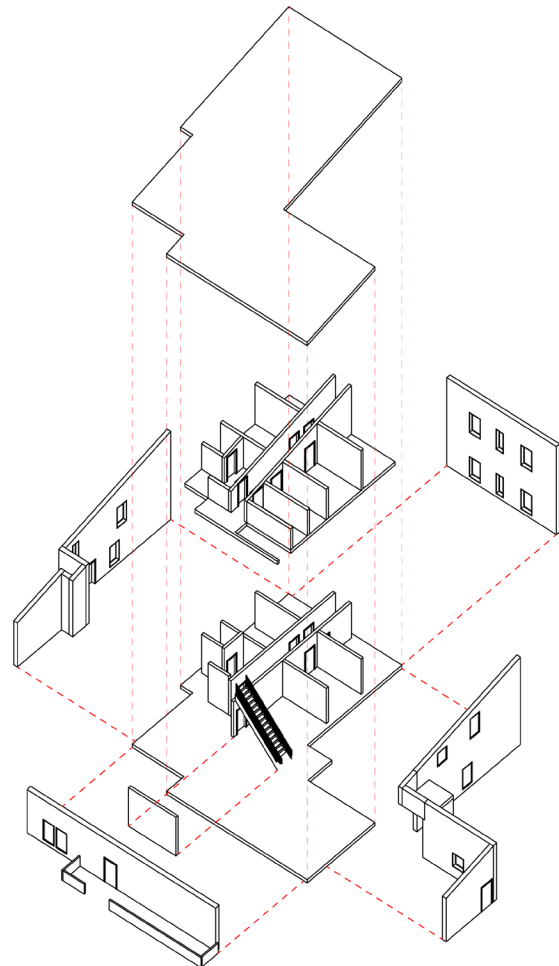


Figure 01-03-14. Floor plans of the “cottage” p145 building types



Figure 01-03-15. The recreation area in the Grand Valley Institution for Women



OPPOSITE: Figure 01-03-13. Adjoining rooms of the mother-child program

Figure 01-03-16. Axonometric of the “cottage”

safety and overall security. Children always need things to interact with their parents and things to make the visiting time enjoyable. Expecting children to only sit on the chairs during the visitation is unrealistic. Also, when the little toddlers and teenage children stay in the same multi-security level visiting room, the toys like small beads that little kids may pick up and swallow should not be prepared for the older kids as well due to the safety issues. Also, things should always be fixed, but at the same time, visual barriers are not allowed to exist because of the security.

The expectation for the current visiting areas is to develop the outside area with a playground and make use of the surrounding natural environment; however, the difficulty is security. The officers adhere to the desk also need to easily access the outside visiting area, since the clear sight view has to be guaranteed.

Figure 01-03-17 a-f. Mother-child program in Canada federal prison



a



b



c



d



e



f

UNITED STATES

In the United States, the prison nursery practice dates back to the early 20th century, the first nursery program at the Bedford Hills Correctional Facility in New York was established in 1902. Of the nine states that offer prison nurseries so far, six allow incarcerated mothers and their newborns to remain together for up to eighteen months, two allow for over eighteen months, and the other one allows for a maximum of thirty days.¹⁵

Indiana Women's Prison

In March 2008, the Indiana Women's Prison opened the Wee Ones Nursery(WON) allowing eligible incarcerated pregnant women to keep their babies in a particular housing unit of the prison for up to 18 months. The building including a yard is restricted in a specific area that is separated from the general population. It has improved cells and officers station; the normal cells are redesigned for multiple purposes. The one occupied by mother and baby is equipped with a bed for mom, a crib, a changing table and the cabinet for storage. There are other cells used for storage for babies' clothes and other supplies. Some cells are designed for the nursery which has a TV, a crib, and rocking chairs. Because of the security issue, the babies cannot be taken outside of the yard or the building.

15 Women's Prison Association, "Mothers Infants and Imprisonment: A National Look at Prison Nurseries and Community-Based Alternatives" (New York, May 2009).

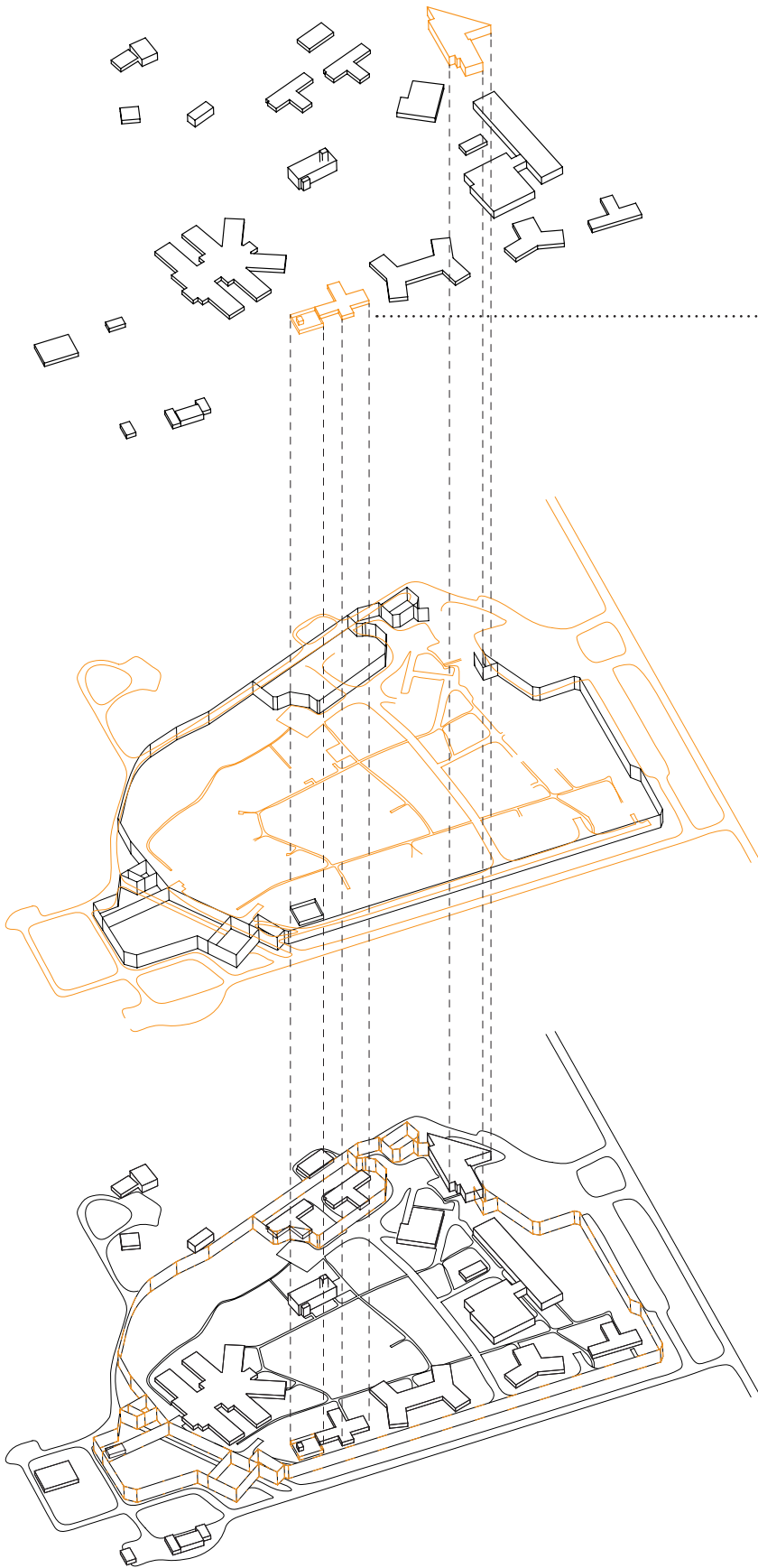


Figure 01-03-18. A diagram of the Indiana Women's Prison

Figure 01-03-19. Prison nursery areas of the Indiana Women's Prison



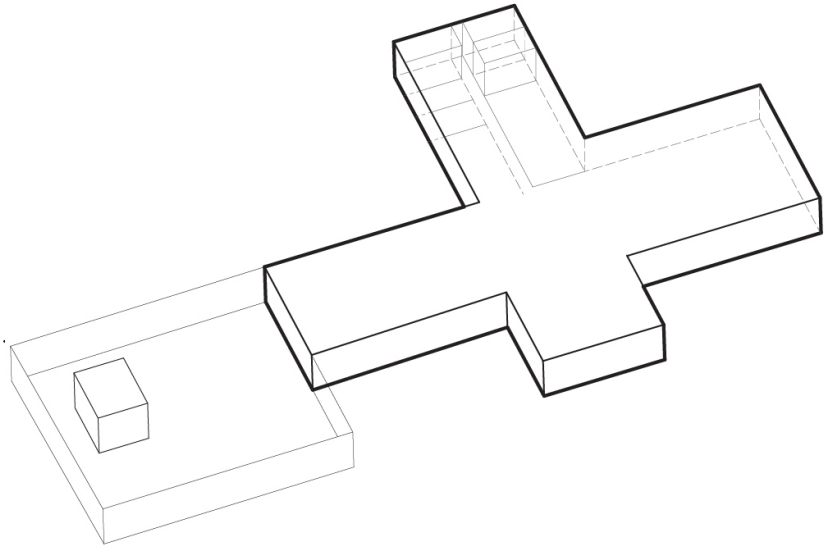
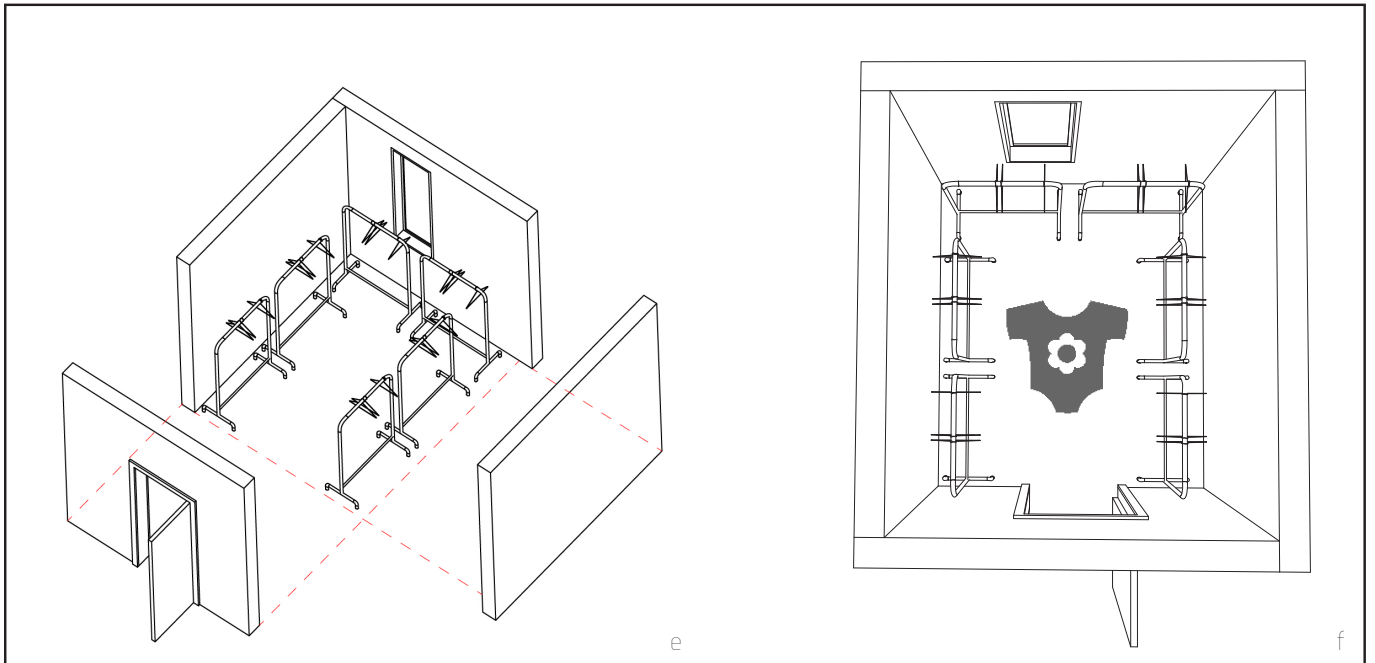
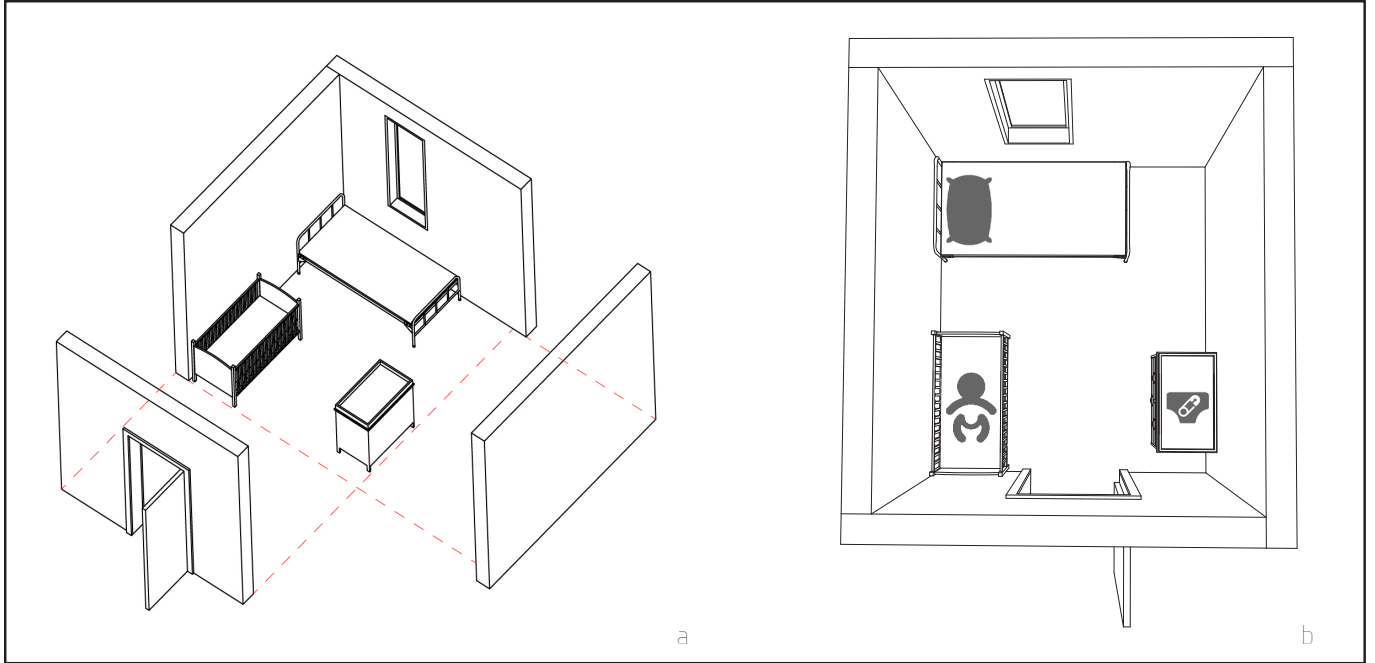


Figure 01-03-20. The building for the prison nursery in the Indiana Women's Prison

Figure 01-03-21. Site plan of the Indiana Women's Prison





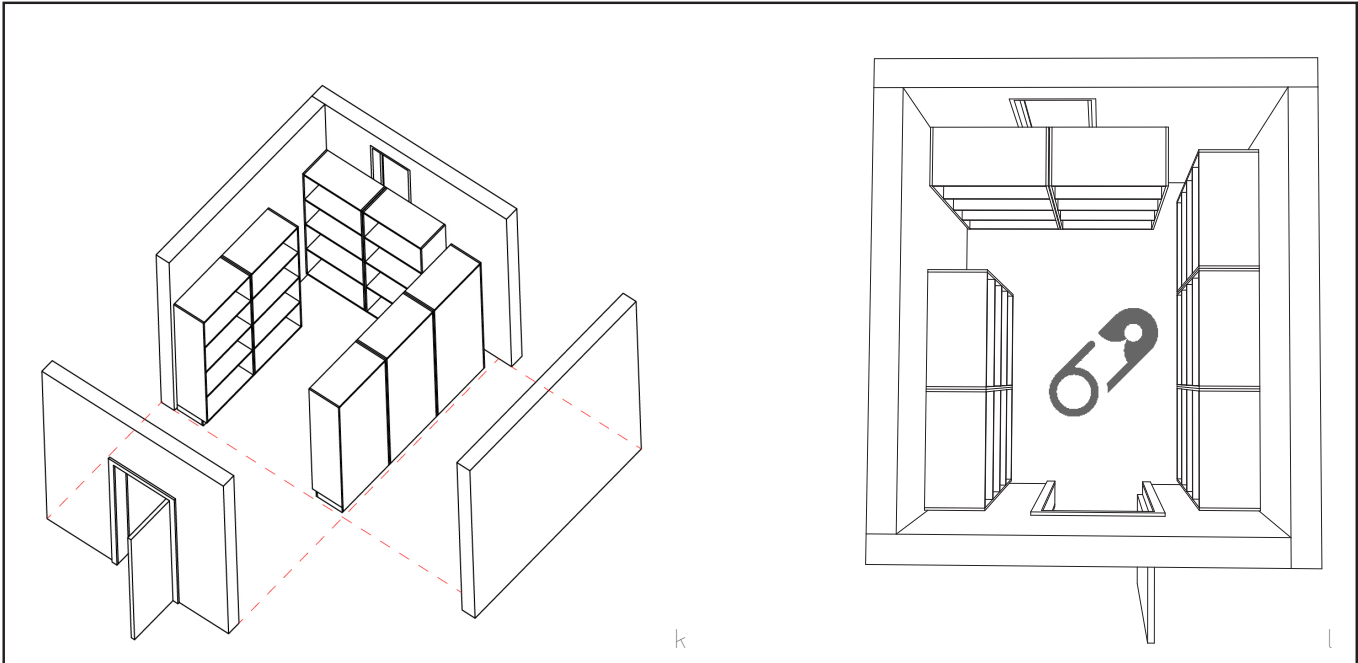
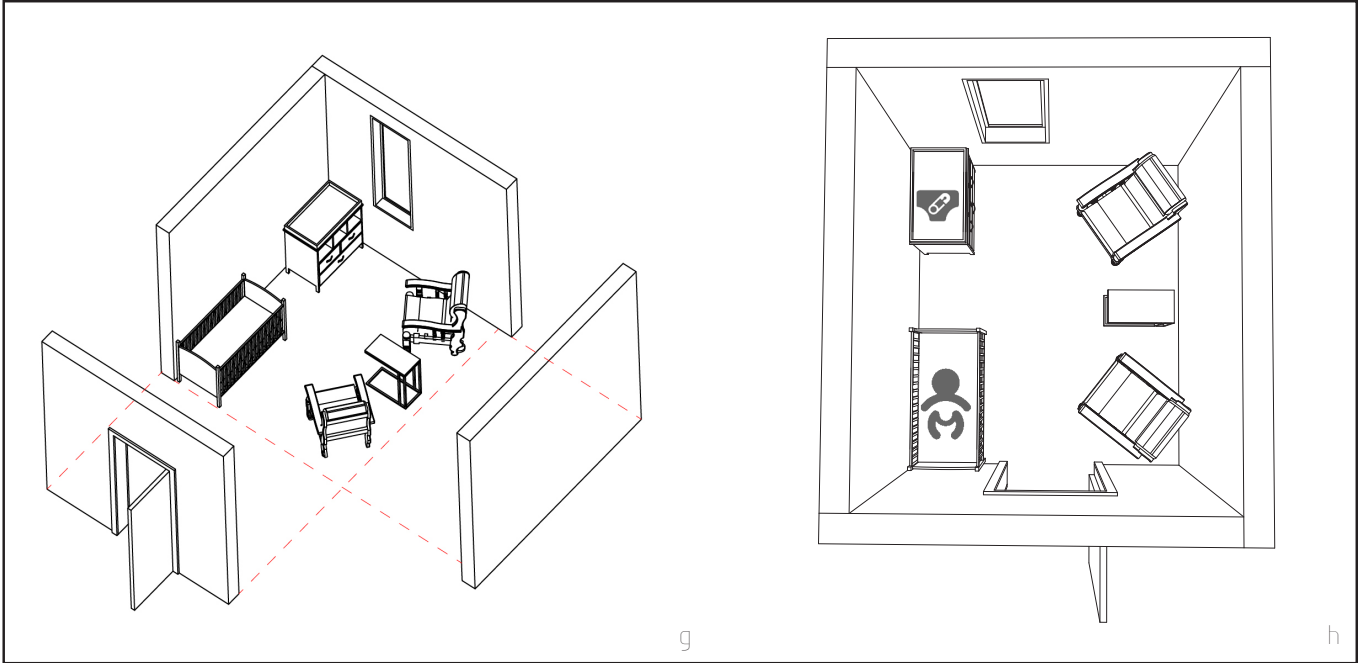


Figure 01-03-22 a-l. 3D modelling of the rooms that used in the prison nursery program at the Indiana Women's Prison

Visitation

There are a few films done by the *New York Times*¹⁶, and *ABC NEWS*¹⁷¹⁸ have documented some bus trips organized for children to visit their parents in a few prisons in the United States. The films captured the moments and interactions between the children and their parents. I have put my focus on the physical spaces to accommodate these activities. The bleakness, darkness, intimidation, crowdedness, as well as many other negative factors, can be easily found in these family reunification images.

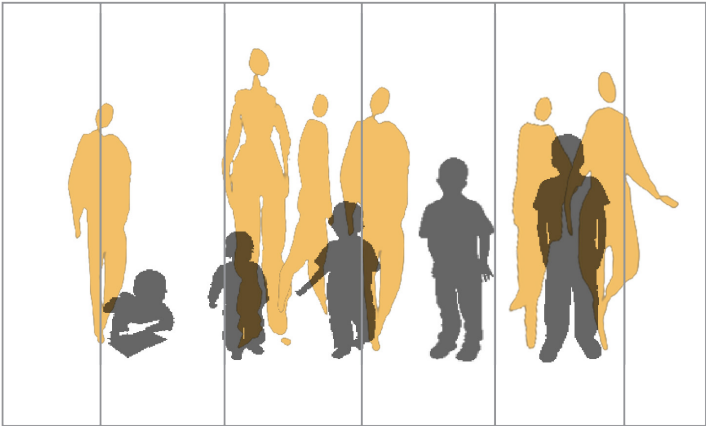
16 The New York Times, *When Mother's Day Means a Trip to Prison*, accessed May 1, 2019, <https://www.youtube.com/watch?v=gyoSbs2Hc5s&t=180s>.

17 ABC news, *Children of Prisoners Reunite with Their Fathers Behind Bars for a Day*, n.d., <https://www.youtube.com/watch?v=i5VV0og-a7w&t=85s>.

18 ABC news, *Mothers Behind Bars Get to Reunite with Kids for a Day*, accessed August 7, 2019, <https://www.youtube.com/watch?v=T431Yqz2E>.

OPPOSITE: Figure 01-04-01 A conceptual drawing of keeping innocent children inside the prison

04 – ISSUES AND OBJECTIVE



ISSUES

Whether these interventions of the prison system are in the best interest of a child depends on the conditions of the visitation program and prison. Unfortunately, we can easily see the limitations and problems behind the efforts of either delivering a children-oriented visiting center or accommodating children inside the prison with their mothers. These issues, however, contain the child's best interest, are legitimate concerns.

Many visitation spaces do not adapt to children's needs and generate unnecessary distractions. For example, since the lack of resources is a common issue that existed in most prisons, parents found visitations with children emotionally and physically draining with the long waiting lines and lack of privacy.¹⁹ Some visiting areas may limit parent-child interactions due to the large, undecorated rooms with only adult-size furniture and a shortage of toys. Also, the priority job of a guard is to ensure the security of the visiting area. Typically, direct supervision is provided; inmates are under constant surveillance. However, the surveillance sometimes can be a major interference in the children's interaction with their parents.

As for prison nursery, there has yet to be documentation of long-term or permanent adverse effects on children who participated in prison nursery programs; however, concerns related to security, program management, liability, child health, and development can be found in most relevant researches. One may argue that an institutionalizing experience the children have inside the prison could cause negative emotions like fear and frustration, which may lead to more significant issues on children.

Most of these concerns come from the fact that the institutional environment like a prison is unsuitable for children to stay. Most parents do not wish their children to stay in the area with rigid rules. The debate over the children-friendly and security of the space lead to the main issues in this typology. The outer surface of the prison where they touch the rest of society depicts a mystery picture of the inside world. The facility is constructed as a series of static physical barriers. Interiors in buildings like prisons are

19 Cynthia Seymour and Creasia Finney Hairston, *Children with Parents in Prison : Child Welfare Policy, Program & Practice Issues* (New Brunswick, N.J.: Transaction Publishers, 2001).

characterized by repetitive forms and alternative combinations of large, high-ceiling volumes and small, cellular spaces.

OBJECTIVE

In order to deliver a children-friendly building in the context of a prison saturated with institutional features, the analysis and coordination of the relationships between the prison architecture and children's perceptions of their relationships with this institutional environment are crucial.

This thesis intends to investigate the specific area in the prison that is designed for the inmates' children. With a focus on the best interest of the children, the thesis will explore an approach to the architectural design of space for prison nursery (mother-child program) and the children-oriented visitation program under the contemporary correctional system.

The design for children must anticipate and respond to the negative influences of the prisons, so as to deal with the institutional aspects. For instance, security as a dominant requirement creates physical barriers which generate a certain type of environment. It can influence people's behaviour, which causes people to lose the sense of control, then leads to uncertainty. Institutional elements will be treated independently but still relate to the security considerations to establish an overall solution to weave multiple layers together regarding the requirements of both institutional security and childcare. Massing, scale, colour, texture, details, movement and other elements need to be reimagined to compose a children-friendly structure. A line should be drawn to distinguish the spaces for children appropriately from their adult counterparts. The balance between the children's perceptions of institutional features and the appropriate children-oriented design is measured as instructions for the final design proposal.

CHAPTER 02

PRISON SECURITY

01 – ARCHITECTURE AND CONTROL

02 – INMATES AND GUARDS

A TOTAL INSTITUTION

FROM THE PUNISHMENT TO REHABILITATION

03 – SECURITY FRAMEWORK

SECURITY CLASSIFICATION

A COMPLEX SYSTEM

04 – WALKING CELL TO CELL

A COMPLEX

PANOPTICON

SUPERMAX

01 – ARCHITECTURE AND CONTROL

Architecture's legibility is elusive. The key to understanding it is the relationship between what is revealed and what remains hidden.¹

This chapter seeks to unfold the debate regarding the contradiction that defined by two opposing demands - punishment and rehabilitation. There is something that stands in between the conflicting realities such as freedom and constriction. It is expected to convert the contradiction into the interdependence.

1 Roger Paez, *Critical Prison Design : Mas d'Enric Penitentiary by AiB Arquitectes + Estudi PSP Arquitectura*, Book, Whole (New York: Actar Publishers, 2013), 79.

Although the contemporary penal system has many variables that define what prison is, the determining feature of the prison experience is involuntary confinement. Anchored on the architectural articulation of control, the prison as a closed-off world generates its own subculture that is full of vitality blended in the monotony and bleakness. As subtle as may be at first glance, this vitality that coexisted within this totality conducts the power that continually impacts the inmates physically and psychologically.

We as architects are given the authority to construct this power by our professional abilities, including the manipulation of the physical structure and deep understanding of the users. In a sense, architects are healers in this paradoxical typology, where inmates' perceptions of themselves are symptoms. What demands to explore is the stimulus for a coherent design approach towards the perfect balance in terms of punishment and rehabilitation. Eventually, counteracting "an expensive way of making bad people worse"² and transforming the prison into an active component of civil society surely are much more intelligent.

A classic "watching and being watched" image that portrayed by the security framework draws the core of the relationship between the inmates and the guards. The following work investigates the evolvement of the security framework that buried under the countless concrete and steel layers of the prison architecture and presented several prison cases of North America and the English prison from penal revolution era.

The history gave modern prisons the form, the environment itself and a few typical architectural statements and concepts.³ What is hoped to be conveyed through the following work is a rethinking of how to define the architect's position in this typology. As the world advancing at an extremely high speed, perhaps the architect's role in shaping the prison should be more appropriate to the epoch.

2 "Hurd Takes on Prison Reform Trust," *The Independent*, January 15, 1997, <http://www.independent.co.uk/news/hurd-takes-on-prison-reform-trust-1283200.html>.

3 Iona Spens, *Architecture of Incarceration* (London: Academy Editions, 1994), 11.

02 – INMATES AND GUARDS



A TOTAL INSTITUTION

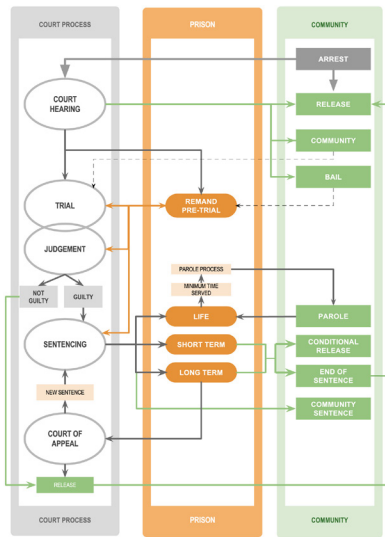


Figure 02-02-02. Role of prison in typical justice process

As a central component of the justice system, the prison, or correctional facility, is positioned to maintain the function of the society by confining and educating the individuals who have broken the law, which characterizes the prison architecture as a contradictory typology. Though there is an emphasis on the rehabilitation, the law as an instrument for regulating the penal system and the security as an overriding requirement always stand at the top of prison organization; therefore, the prison architecture is powered by two aspects – law and security.

Architects have been given the abilities to shape this power. Their capacity may be limited in the law area, but has a full impact on the architectural elements and the building itself, then successively influence the security framework. Consequently, the prison security system results in a combination of the justice system and prison architecture.

With many programmes, activities and human concentrate, the prison is a microcosm of society. As Erving Goffman described in his book “Asylums”, the prison serves as a clear example of a total institution which may be defined as “...a place of residence and work where a large number of like-situated individuals, cut off from the wider society for an appreciable period of time, together lead an enclosed, formally administered round of life.”⁴ The potency of the prison has been captured by this totality. In

OPPOSITE: Figure 02-02-01. A scene from the documentary showing the inmate and guard

4 Erving Goffman, *Asylums : Essays on the Social Situation of Mental Patients and Other Inmates* (New Brunswick, N.J.: Aldine Transaction, 2007).

order to ensure a stable and efficient progressing environment for the justice system that holds punishment and rehabilitation at the same time, architects need to take responsibility for shaping this powered totality.

FROM THE PUNISHMENT TO REHABILITATION

History of the prison, in particular, the philosophy of punishment emerged with the appearance of the *Code of Hammurabi*, following the establishments of the materiality and spatial structure in which the punishment was carried out. Such a philosophy of pure punishment can be found in the antecedents of the prison in castle, dungeon or fortress.⁵ These prisons or prison-like buildings built at the early stages of human history recognize the imprisonment as the prelude to execution.⁶ Like Nazism ideology exploited the monumental forms of the neoclassical, the prison architecture used to be these large, imposing and castellated buildings with majesty appearances, which may be accused of resembling a ducal

5 Norman Bruce Johnston, *Forms of Constraint: A History of Prison Architecture* (Urbana ; Chicago: University of Illinois Press, 2000), 5-16.

6 Ibid.

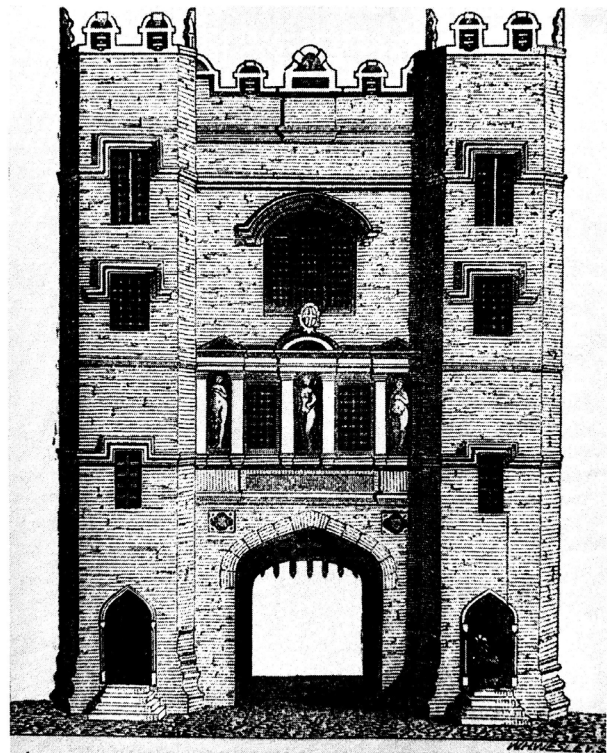


Figure 02-02-03. Newgate prison, London

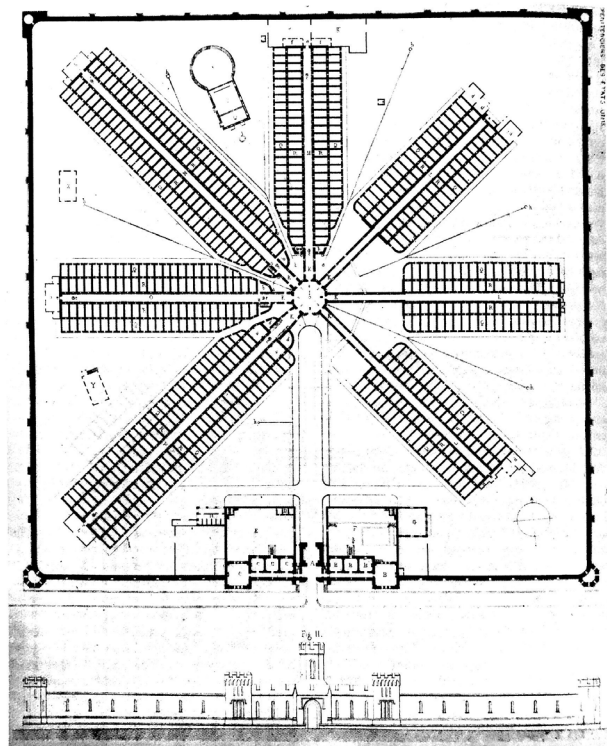


Figure 02-02-04. Eastern State Penitentiary

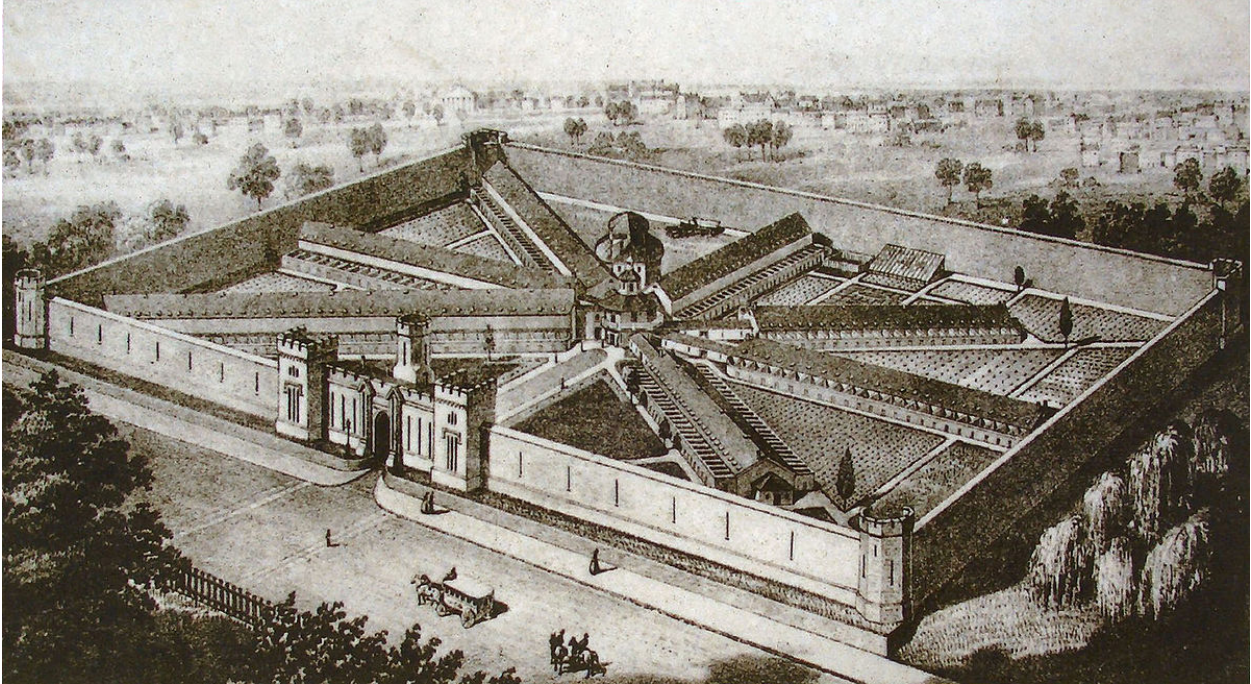


Figure 02-02-05. Eastern State Penitentiary

palace more than a place of incarceration.⁷ That was contextually indeed the proper stylistic identity and character, such as the representative of the impregnable feature.

How we treat the inmates who will become ex-inmates push us to think more of who we are. The suitable measures of security need to be limited in an atmosphere that is humane and conducive to rehabilitation as people understand that the essential problem for the prison to solve is deterring the crime.⁸

The fabrication of virtue is the title of Robin Evans' research book on the history of the nineteenth-century penal reforms that gave imprisonment a moral purpose.⁹ The reformers agreed on the value of solitary and individual separation in which the solitude was punishment, but it also gave time for reflection. It prevented plots, escapes, and attacks on keepers, which were then prevalent. Some of the most radical changes to the revolution are being articulated through the spatial and security arrangements.

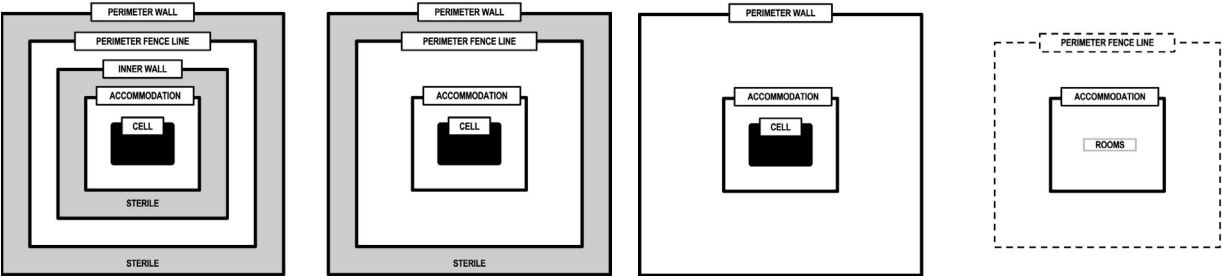
7 Spens, *Architecture of Incarceration*, 9.

8 *Ibid.*, 8.

9 Robin Evans, *The Fabrication of Virtue : English Prison Architecture, 1750-1840*, Book, Whole (Cambridge England ; New York: Cambridge University Press, 1982), 1.

03 – SECURITY FRAMEWORK

Although the contemporary correctional facilities are encouraged to build in an atmosphere that is humane and conducive to rehabilitation, the dictates of security never change. The physical organization of the facility overall is driven by the security framework. Design for a security framework requires the integration of architecture, rules and staffing. An appropriate combination of multiple security components is dependent on the degree of security level and the diverse needs of the users.



SECURITY CLASSIFICATION

By Gender / Age:

Male

Female

Juvenile

By Sentence length:

On remand / Awaiting transfer

Sentenced - Long-term

Sentenced - Short-term

By Security level:

Supermax

Max

Med

Min

Special care

Correctional facilities classify and separate inmates according to their gender, the degree of security risk, sentence length, physical and mental capabilities and other special needs.¹⁰ Underlying the classification system is the objective of maintaining better control and receiving positive correctional results as undifferentiated populations are more difficult to manage. Therefore, it is desirable to subdivide large inmate populations into smaller groups of like individuals.

There are adults and juvenile facilities separated inmates based on the ages that adopt distinct purposes and attitudes. The male and female inmates are also separated at the very beginning before they enter the systems. Then in each facility, it is common to have inmates divided into minimum-, medium-, and maximum- security; some even have particular wings to accommodate the inmates who have mental issues that may pose a danger to others or themselves. Most inmates will spend their sentences in these “general population”. However, in contemporary western penal systems, a certain percentage of inmates are under prolonged solitary confinement, one of the oldest forms of incarceration, in its newest incarnation in the prison setting - supermax prisons.¹¹ Unlike the general populations who are allowed to associate with others in designated

10 Todd S. Phillips and Michael A. Griebel, *Building Type Basics for Justice Facilities* (Hoboken, N.J: John Wiley&Sons, INC, 2003), 119.

11 Sharon Shalev, *Supermax: Controlling Risk through Solitary Confinement* (London: Routledge, 2011), 1.

areas at designated times, inmates in supermax prisons are confined in their cells for twenty-three hours per day with one-hour recreation.

A full range of the classification system reflects various requirements in terms of planning facilities, supervision methods, delivery of inmates services, housing types, operating procedures, and so on.

A COMPLEX SYSTEM

Walking through the prison development from the dungeon to the contemporary cell, the architecture of prison itself, as well as the purposes and expectations from society for this typology, evolved along with penal revolution. Prison is far more than just a bare shell. The prison, on the one hand, is a complex typology as it involves various personnel and poses multiple potentials. On the other hand, it is simple: the power of control is easy to be comprehended.

Physical security

Physical security is a reading that translated from the power of control to the physical form. The security feature that illustrated by the physical structure manifests a prison's character. Aspects of the physical security include the

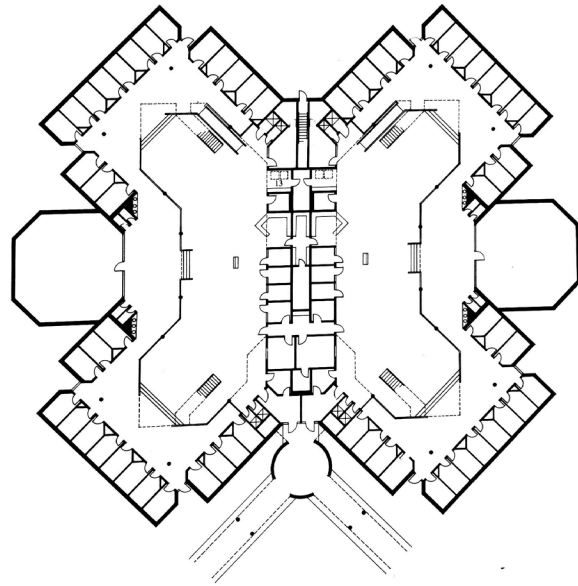


Figure 02-03-02. West County Justice Center, Contra Costa, California, USA



Figure 02-03-03. dayroom in FCI, Federal Correctional Complex, Allenwood, USA

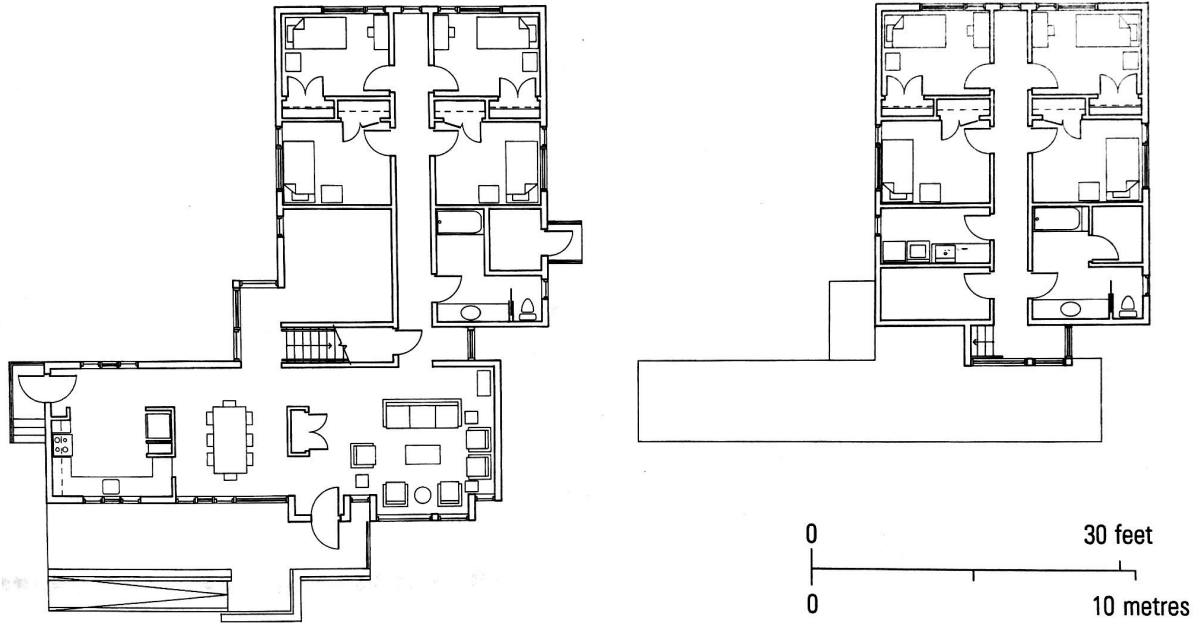


Figure 02-03-04. "Cottage" in Grand Valley Institution for Women, Canada



Figure 02-03-05. Dormitory in LSCI, Federal Correctional Complex, Allenwood, USA

perimeter design, architecture design, connections of the buildings, architectural elements, and so on.

The specification for perimeter security contains the armoured patrol vehicles, perimeter fence, guard tower, detection system, outer and inner walls. The height, width, foundations, building materials, the method of construction as well as the distance between the fence vary in accordance with the different security levels. The detection system that designed to alert staff of escape or penetration of interior or exterior security perimeter is usually installed on or to the side of perimeter fences or exterior building walls. These devices are zoned to

cover areas defined by the range limitation of the equipment and the physical design of the area.¹²

The housing types can take various forms. The most common housing type is the podular arrangement in which the cells are often stacked in several tiers with mezzanine. They are clustered in groups around a shared open area, usually called “dayroom” space. A control room with electronic monitoring over the pod for the guards is often centrally located to afford flexible visual control and immediate access to all service area. The dayroom is typically used for a limited range of activities, mostly passive recreation, such as conversation and television viewing.¹³ The majority of maximum security facility has adopted a podular housing approach with individual cells that typically have a lavatory and toilet. Whereas in medium-security facilities, inmates are assigned to single or double occupancy rooms and most of them are “dry” cells with separated grouped toilet facilities and showers where inmates have free access. For the minimum-security level, dormitory-style cubicles with

12 Phillips and Griebel, *Building Type Basics for Justice Facilities*, 268.

13 Ibid., 124.



Figure 02-03-06. Control room in Leon County Detention Facility, Florida, USA

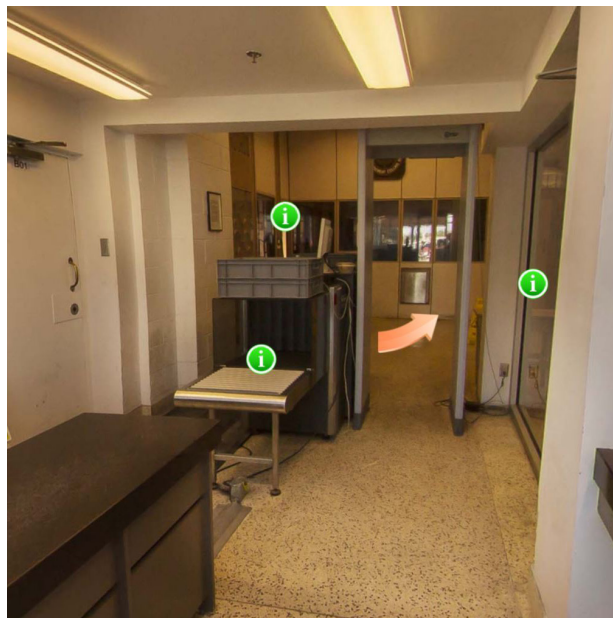


Figure 02-03-07. Entrance in Collins Bay Institution, Canada



Figure 02-03-08. Window in maximum security cell, Collins Bay Institution, Canada



Figure 02-03-09. Window in minimum security cell, Collins Bay Institution, Canada



Figure 02-03-10. Sally port

shared toilets and showers can be a satisfactory and cost-effective approach. Some campus-like compounds would consider the general apartment as a housing type for minimum-security inmates, aims at “normalizing” the living environments and preparing inmates for the reintegration.

One of the basic principles that oversee the prison design is the denial of access, that is, managing the natural or artificial physical barriers and access points between two zones or sectors such as controlling the walls, gates, doors, locks, and alarms.¹⁴ It involves thinking about the degree of restriction or limits placed on each zone and carefully reviewing relationships between spaces. The architectural elements, including the doors and walls as well as the property of these elements such as the strength of the walls or the bars on the windows, are crucial ingredients. A transition is an alternative solution such as a sally port, which is a controlled entryway consisting of two doors that are opened one at a time and separated by a small vestibule. The physical aids such as locks, cameras, alarm systems, x-ray machines, metal detectors as well as handcuffs also play a significant role in the system.

Procedural security:

Physical security is often complemented by other forms of protection that include effective systems and procedures; hence, procedural security is regarded as another fundamental aspect of the security framework. It requires staff to adopt the proper process to carry out certain functions

14 Ibid., 259.

and to respond accordingly. Typically, general procedures include admission process, inmates counts and inmate escorting. Also, it extends as the use of advanced technology increases, such as the utilization of monitoring CCTV, perimeter detection systems and electronic locking.¹⁵

The design of the entrance apparently describes this interconnection between procedural and physical security. As the first step for the inmates admitted into the facility, the physical spaces of the entrance need to be designed sequentially respond to the admission process including mugshot, searching, health exam, orientations, and so on. The entrance is the most vulnerable locations in a facility as it is where communication with the outer world happens. Therefore, everyone is considered a potential threat until the individuals pass the security clearance procedural. For instance, although visitors are innocent individuals as opposed to the inmates, they also raise a range of risks. The visitors as another type of users have contradictory demands for the prison compares to the inmates, making this interaction problematic.

Dynamic security

Correctional facilities extensively use indirect supervision, which involves the guards monitoring the inmates in an enclosed control room. However, as our knowledge of human psychology expanding, the correctional brief now directs more attention to the relationship

15 UNODC, *Handbook on Dynamic Security and Prison Intelligence* (New York, n.d.), 12.

between the guards and inmates. It is believed that eliminating the barriers facilitates direct interactions, which have the potential to instill trust between people and advance the goals of rehabilitation.¹⁶ Equally crucial to the design, it seeks to encourage reasonable social behaviour, which is the need for a secure unit that is simple and inexpensive to build, and adaptable to varying site and environmental conditions.¹⁷ Though unobstructed visual observation has been a persistent thread in the design of such typology, the guards' awareness of the inmates' situations has become an alternative instruction. Therefore many facilities have adopted direct supervision method of operation. In turn, the relationships between inmates and guards evolved in response to the distinct types of direct supervision. Dynamic security recognizes that involving human judgement and responses is the path to achieve an effective security system with positive results. In other words, the contemporary prison design demands more critical thoughts. There is a tendency of creating a prison environment that is proactive as opposed to reactive, which means to amplify and progress the function of the guards from the monotony of the former duties where they were acting purely as a 'turn-key'.¹⁸ Designing the physical space should infuse the guard's ability to anticipate and respond to various circumstances like vandalism or violence.¹⁹

16 Phillips and Griebel, *Building Type Basics for Justice Facilities*, 268.

17 Spens, *Architecture of Incarceration*, 43.

18 Ibid., 11.

19 Ibid.

A COMPLEX

The Federal Correctional Complex in Allenwood located in Pennsylvania includes three separate compounds - Low-Security Federal Correctional Institution(LSCI), Medium Security Federal Correctional Institution(FCI), and High-Security United States Penitentiary(USP).

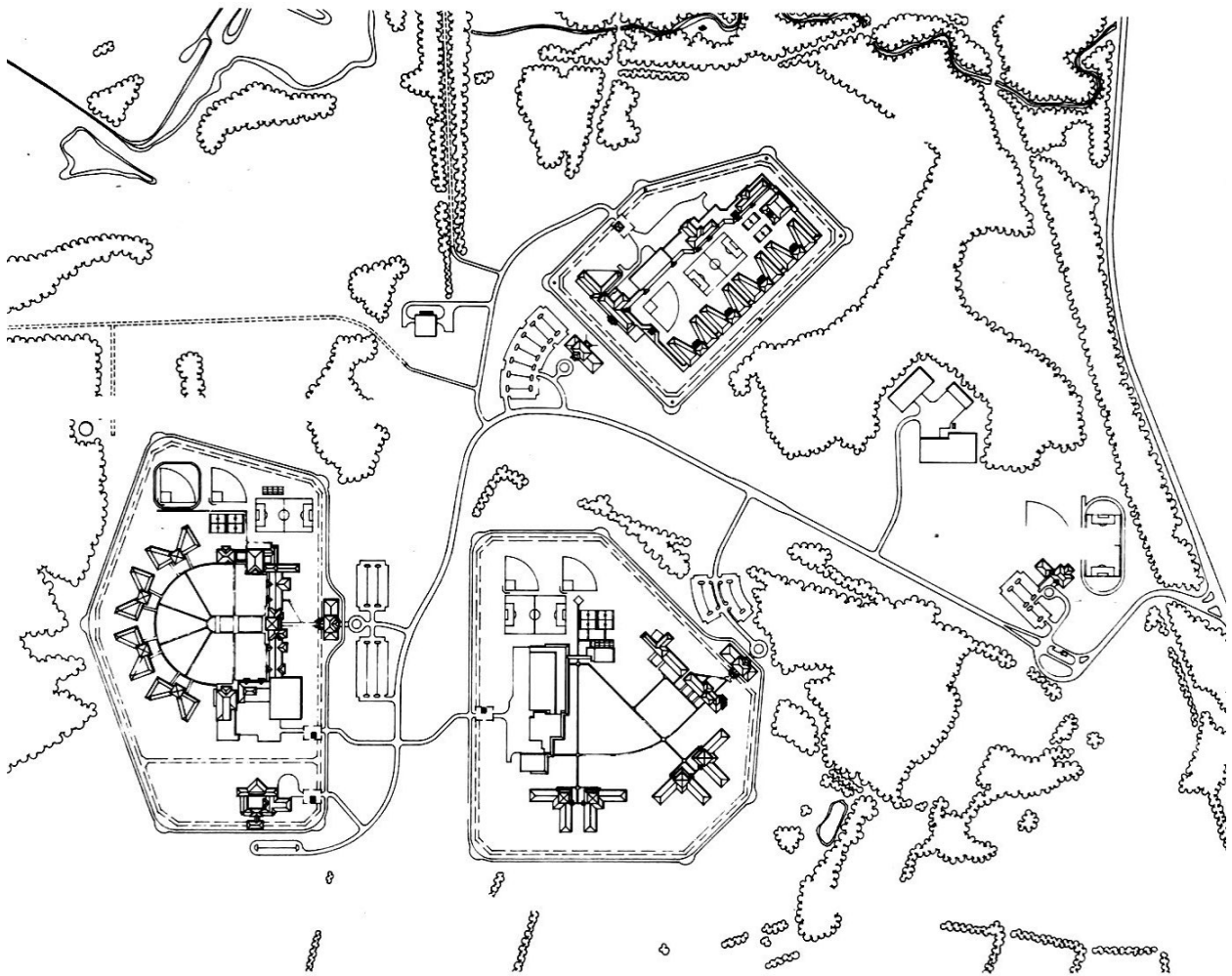


Figure 02-04-02. Federal Correctional Complex, Allenwood, Pennsylvania, USA

OPPOSITE: Figure 02-04-01. Floor plans of the prisons

The USP is internalized and isolated from contact with its surrounding environment compared to the other two compounds. The distinct maximum-security feature of the USP highlights the perimeter security. A patrol road runs at the outside of the perimeter, which is formed by an enclosed circulation corridor and six guard towers providing constant supervision. The outer perimeter is secured by a double line of fencing with rolled barbed tape and intrusion detection system installed. Another layer located at the inside fence, which consists of the perimeter wall of the four housing units that has two storeys with cells arranged around two sides of the central dayroom.²⁰ The dayroom wall of the residential building blocks the views to the surrounding site effectively. Support functions such as food service and gymnasium, are separated to avoid concentrating a large number of inmates in one place.

The FCI as a medium-security compound requires fewer guards with no reduction in control. The triangular shapes of the podular housing units allow for effective supervisory control by promoting inmate-guard interactions as

²⁰ Ibid., 42.

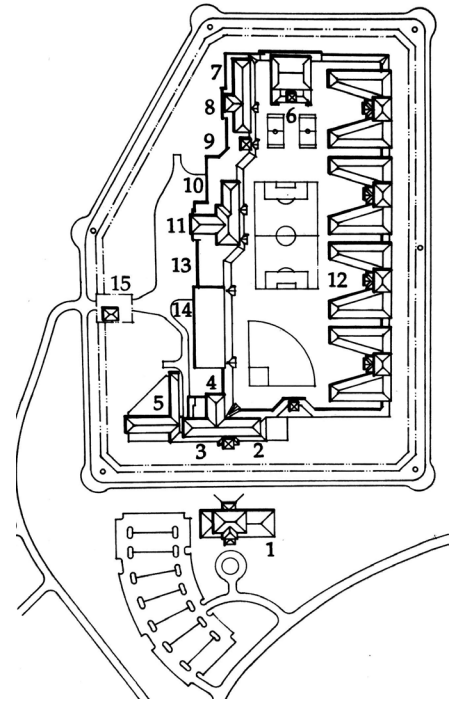


Figure 02-04-03. USP



Figure 02-04-04. Watch tower of USP



Figure 02-04-05. Perimeter of USP

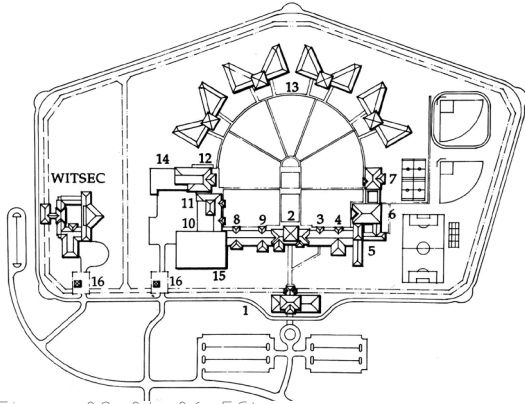


Figure 02-04-06. FCI

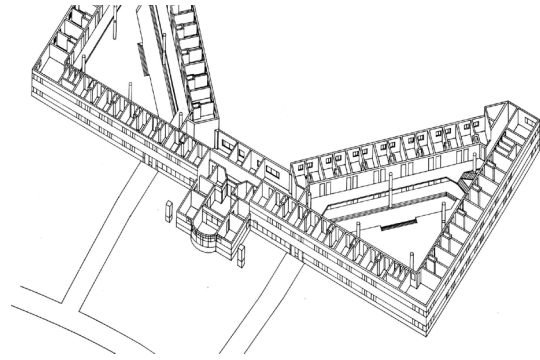


Figure 02-04-07. FCI

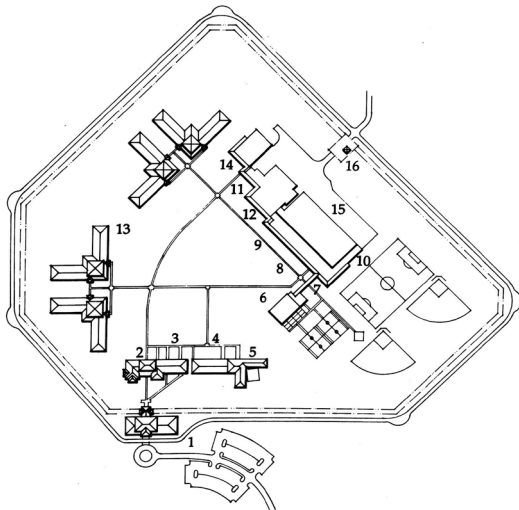


Figure 02-04-08. LSCI

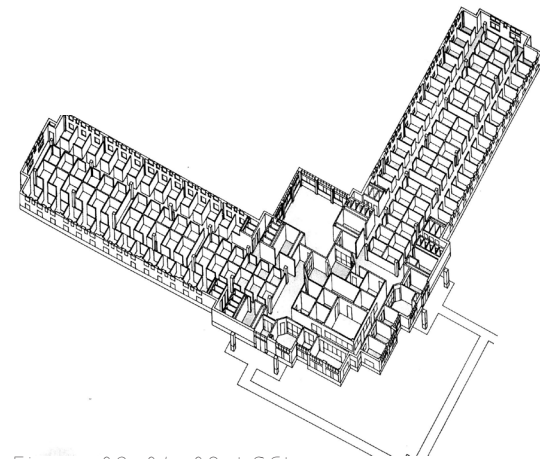


Figure 02-04-09. LSCI

opposed to the USP. An elevated officer's station near the entry to the dayroom affords maximum visual supervision of cells, corridors, dayrooms and support spaces.²¹

Unlike the maximum-security inmates whose movement is continuously supervised by guards, the design for LSCI reflects relative freedom. Perimeter security of this campus-like compound is provided by the mesh fence, detection system and armoured patrol vehicles. Four housing units adopt dormitory-style cubicles rather than cells. Each unit is arranged in two wings joined by central offices for the guards and a large multi-purpose room for inmate use. Support and smaller social spaces are grouped around the open officer's station for casual but frequent supervision.²²

21 Ibid.

22 Ibid., 43.

PANOPTICON

The panopticon is a type of prison and a control system designed by the English philosopher and social theorist Jeremy Bentham in the late 18th century. In the panopticon prison, tiered cells were arranged in a centralized configuration. The watching tower was placed at the center to facilitate surveillance involving the least amounts of guards. The guards have clear sight to oversee each prisoner who unable to see back due to the protective shield of directional light.

Consequently, the inmates were assumed under constant surveillance psychologically. According to the French philosopher Michel Foucault, The major effect of the panopticon was to induce in the inmate 'a state of conscious and permanent visibility that assures the automatic functioning of power'.²³ This power relation was independent of the person who exercised it.²⁴ He also outlined fundamental changes in the nature of power relations since the late eighteenth century, emphasized a transition from the punishment of the body to control of the mind or soul; manifested clearly in the panopticon prison.²⁵

23 Michel Foucault, *Discipline and Punish: The Birth of the Prison*, trans. Alan Sheridan, n.d., 201.

24 Spens, *Architecture of Incarceration*, 8.

25 Ibid.

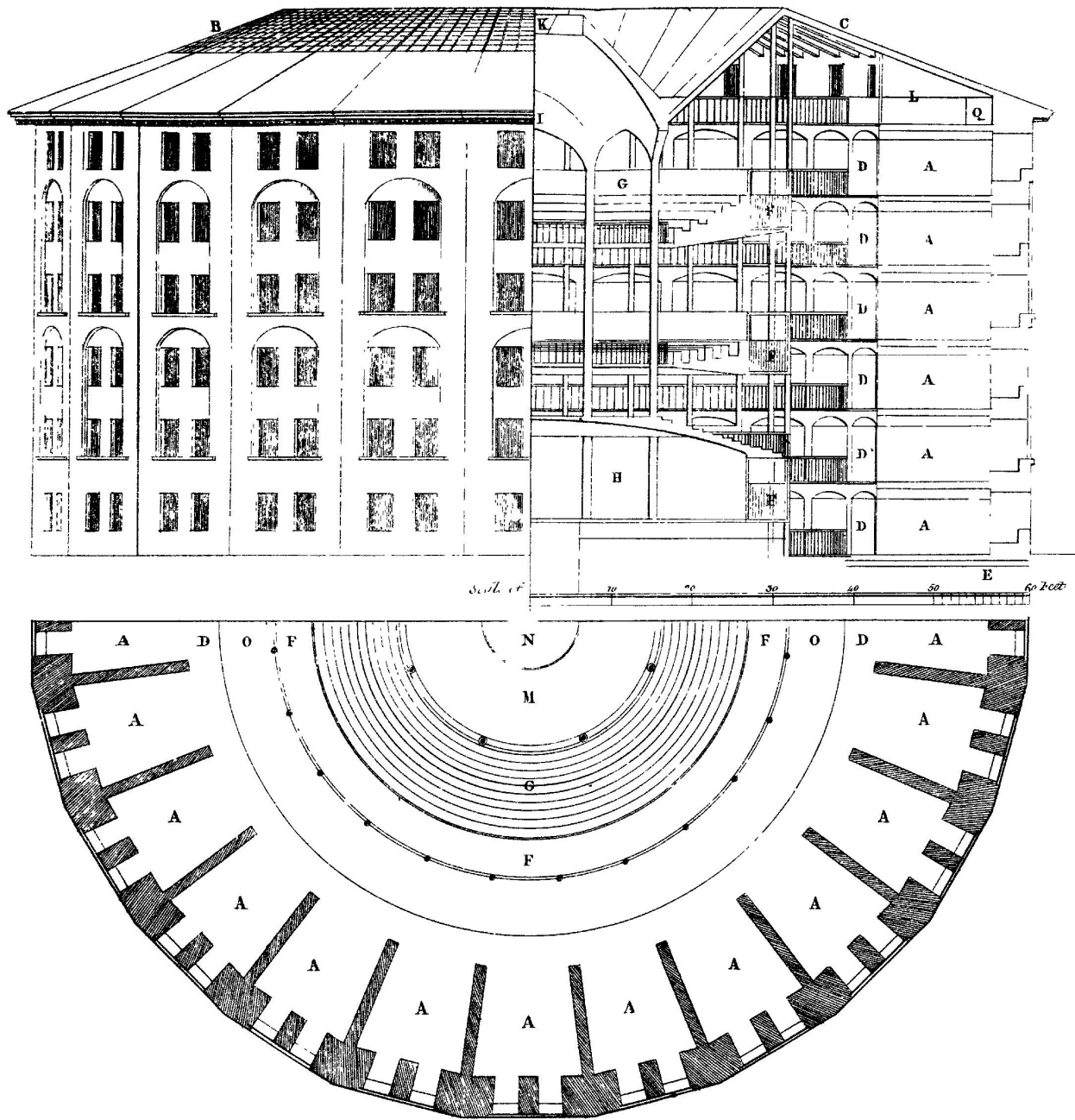


Figure 02-04-10. Panopticon

SUPERMAX

For the contemporary prison system in most western countries, supermax prison represents the highest security level. A supermax prison is a totally locked down facility or a collection of Special Housing Units (SHU) within a prison. Inmates who have violated the prison rules or have posted violent actions will be sent to supermax by prison officials for punishment, which involves solitary confinement for an indefinite period of time.

Red Onion State Prison (ROSP) is a supermax prison that opened in 1998 in Virginia of the United States. The entrance that sits at the perimeter is connected to the reception area, where holds the admission, transfer and release process.

The main components are four residential buildings that separated by the barbed wires and one services building that contains food production, clothing, and healthcare. Single-cells as the only housing type that stacked with mezzanine around a dayroom in each residential building. The control rooms with armed guards are in the conjunction of two blocks. Inmates stay in cells for 23 hours

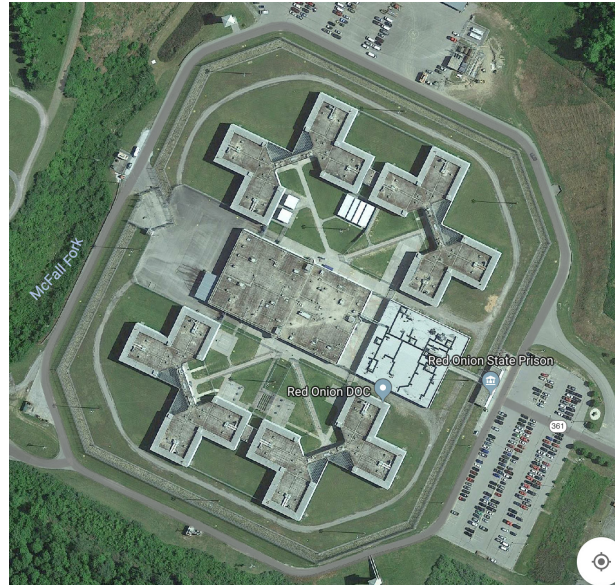


Figure 02-04-11. Red Onion State Prison



Figure 02-04-12. Site plan of the Red Onion State Prison



Figure 02-04-13. The residential building

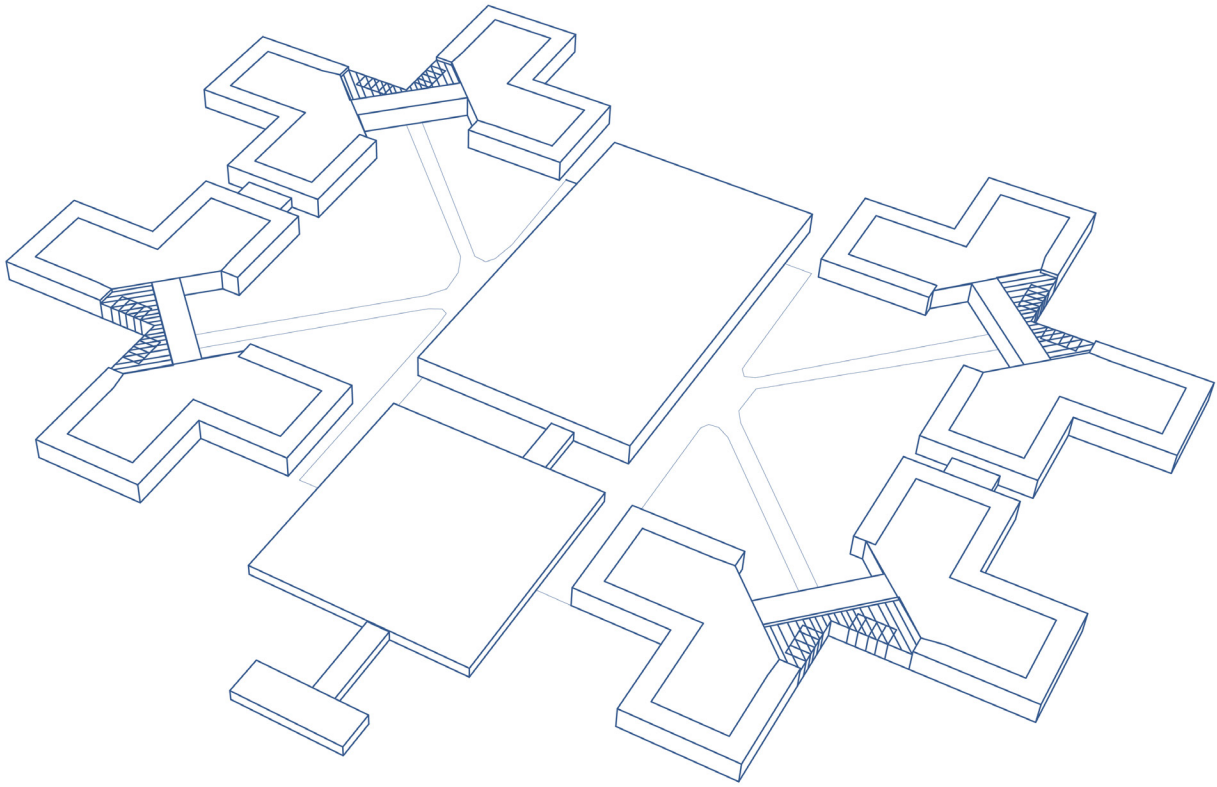


Figure 02-04-14. Axonometric of the Red Onion State Prison



a



b



c



d

Figure 03-04-15 a-d. Red Onion State Prison

a day with one-hour recreation in the designated area where contains steel cages and natural light from the skylight. Inmates are escorted to shower once a week, which is also located within the cell block. The prison offers very limited rehabilitative programs to prepare inmates to return to the general population. It can take place in the dayroom under the surveillance or can be provided through TV channels. With good behaviour, the inmates can work in the dayroom with shackle or handcuffs under constant surveillance.

The cell is measured as 8'*10' with a window that has a frosted glass

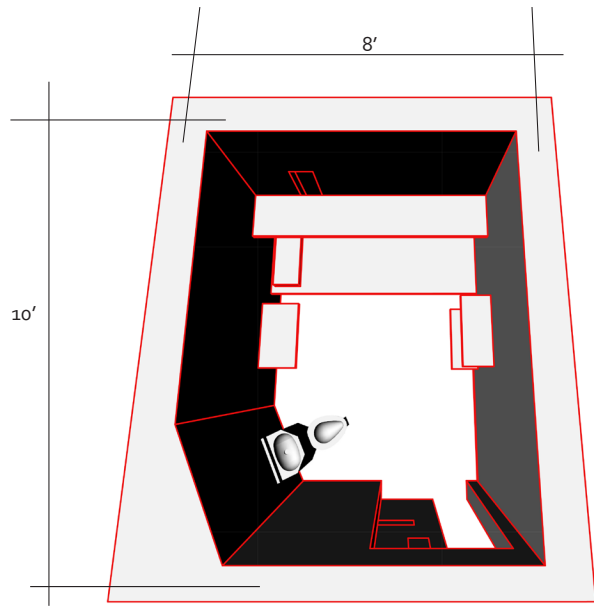


Figure 02-04-16. Cell in ROSP

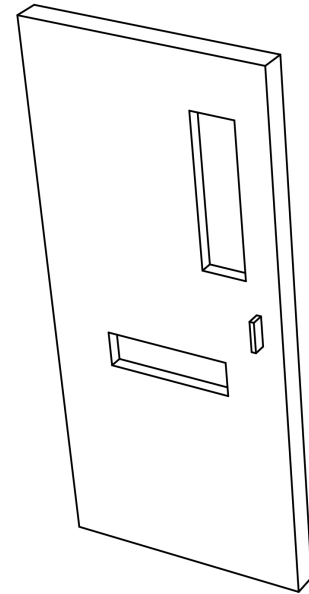
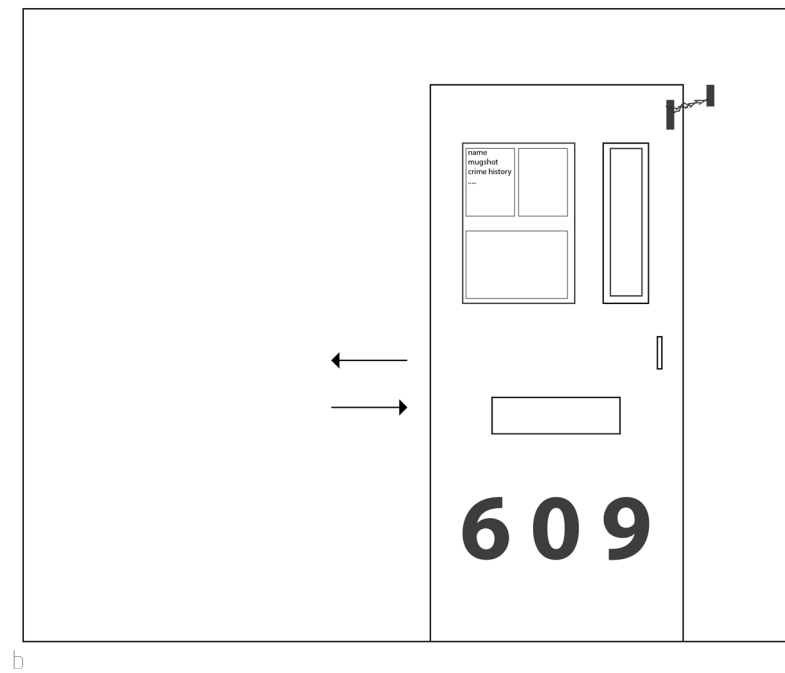


Figure 02-04-17. Cell in ROSP

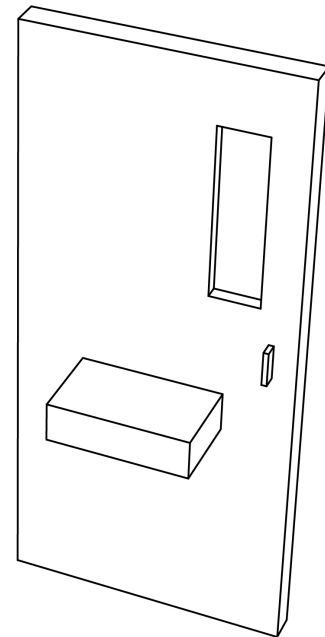
with minimum size allowing the natural light yet the view. Inmates have a minimum supply; however, they can have more items like TV if they cooperate.

The door, as the only link between the cell and the outer world, emphasizes security and control due to the facts that bad incident often happens within this range. There is a piece of glass that allows for constant surveillance. The tray slot is used for delivering the service such as the food, clothes and pills. Also, to ensure safety while opening the door, there is a procedure established. First, put the handcuffs on the inmates through the tray slot. Second, manually release the chains that connected the door and the wall. Third, signal the guards who are in the operation room to open the door remotely. Finally, put the inmates on the shackles. Then the inmate is ready to be escorted

Figure 02-04-18, a-c. Cell door design in RO SP by the guards.



a



c

PAGE 58&59: Figure 02-04-19. Red Onion State Prison





CHAPTER 03

ARCHITECTURE FOR CHILDREN

01 – CHILDREN’S DEVELOPMENT

INFANT AND TODDLER

SCHOOL-AGE

ADOLESCENT

02 – CASE STUDY

ORPHANAGE

NURSING ROOM

EDUCATIONAL FACILITY

03 – TWELVE DRAWINGS

01 – CHILDREN’S DEVELOPMENT

Architecture for children touches many disciplines. The sociology study of children’s development and behaviour provide the entry point for me. People grow up experiencing multiple stages with crucial milestones marked up. The experiences are often framed by cognitive, social-emotional development and physical growth.



In the 1970s, Swiss psychologist Jean Piaget created his cognitive development theory, which remains the most influential and broadly studied by far.¹ It is a research of how humans engage the development of understanding as a constant process from receiving to managing the knowledge. To Piaget, cognitive development is at the center of the human organism. In his theory, people progress through four developmental stages: the sensorimotor, preoperational, concrete operational and formal operational period.

If cognitive development lays the foundation for mature thinking, then a progressive social-emotional development ensures a healthy caregiver-child relationship. Social-emotional development is about building relationships with others. However, first, how humans develop a sense of “self”? The answer associates with how people experience relatedness, an encounter of give-and-take between one person and another.² The infants acquire the experience of care from the caregiver and reciprocally initialize the earliest definition of “me”.³ In a sense, identity and relatedness are developed as complementary parts. One’s sense of self and how relationships are experienced are corresponding to each other, as a back-and-forth dance of socioemotional development.⁴ Moreover, a healthy social-emotional development derived from a secure caregiver-child relationship.

In Canada, children usually go to daycare from the age of 1 to 3, following two years of kindergarten, including junior and senior kindergarten (JK and SK). Compulsory schooling begins at the age of 6. The formal elementary and secondary education covers education from the age of 6 to 18, divided into grades, and children advance one grade per year until reaching grade 12. Secondary education in Canada is for children aged from 12 to 18 (grades 7 to 12). It generally takes place in a high school, that often divided into junior and senior high.⁵ Therefore, a child will spend an amount of the time

1 Benjamin D. Garber, *Developmental Psychology for Family Law Professionals : Theory, Application, and the Best Interests of the Child* (New York: Springer Pub. Co, 2010), 45.

2 Ibid., 69–70.

3 Ibid.

4 Ibid.

5 “Public Schools,” Just Landed, accessed August 26, 2019, <https://www.justlanded.com/english/Canada/Canada-Guide/Education/Public-Schools>.

AGE	0		1	2	
GROUP	newborn(0-3M)	infancy	toddler		
INSTITUTION	Home		daycare		
Physical Growth (average)-Height	BOYS 50-87 cm				
	GIRLS 48-86 cm				
Physical Growth (average)-Weight	BOYS 3.5-12.2 kg				
	GIRLS 3.2-11.5 kg				
Motor development in first 2 years	1-4 months: Rooting, sucking, swallowing, grasping, laudau reflex, upper body parts are more active.	4-8 months: Blinking, sucking reflex becomes voluntary, using finger and thumb, put everything in mouth, holding bottle, sitting without support, rolling	8-12 months: Manipulates objects, stack objects, beginning to stand, creeps on hands and knees, develop expressive language	12-18 months: Walks sideways and backwards, runs well, falls easily Climbs stairs or up on furniture Scribbles vigorously, attempting a straight line Drinks well from a cup, still spills with a spoon	2 years: Gross motor skills are quite well refined, can walk up and down stairs on both feet with one step at a time while holding on to a rail Builds tower of five cubes Control of spoon well-developed Toilet trained during day time

AGE	3	4	5	6	7	8	9	10	
GROUP	preschooler			School-age					
INSTITUTION	kindergarten			Elementary					
	JK	SK		1	2	3	4	5	
Physical Growth (average)-Height	87-116 cm			116-137 cm					
	86-115 cm			115-139 cm					
Physical Growth (average)-Weight	12.2-21 kg			21-32 kg					
	11.5-20 kg			20-32 kg					

AGE	11	12	13	14	15	16	17	18	19
GROUP	adolescent								
INSTITUTION	Junior High				Senior High				college
	6	7	8	9	10	11	12		
Physical Growth (average)-Height	137-170 cm				170-176 cm				
	139-162 cm				162-164 cm				
Physical Growth (average)-Weight	WHO recommends BMI as the best measure after age 10								

Figure 03-01-02. A chart of the children's development

PAGE 62: Figure 03-01-01. A jumping girl

OPPOSITE: Figure 03-01-03. A diagram of the children's development - Infant and toddler



in the daycare, kindergarten and different types of classrooms during the whole childhood. These institutions group children together in diverse age-appropriate environments designed with the best interests of children.

INFANT AND TODDLER

The first two years of lives are classified by Jean Piaget as the sensorimotor period; the infant started to receive the signals from the world through five senses and physical contact, they respond accordingly by the basic reflexes like sucking or grasping. By the end of the first year, they begin to explore the environment visually, then tactilely, and later motorically; from rolling, crawling to eventually standing. As for the social-emotional development, pre-attachment Phase of a caregiver-child relationship starts from birth until eight weeks of age. The infant is described as indiscriminately sociable; only internal cues are responded by crying, cooing, or smiling.⁶ These signals attract caregivers and open the communications through the mutual emotional exchange, and preverbal sensory recognition like scent, texture and taste.⁷ Then the attachment in the Making phase happens between 2 to 8 months of age. Recognition of the familiar is accompanied. For example, the caregiver who provided warmth and smiles and satiation in the past is greeted quite differently than the caregiver

6 T. B. Brazelton and B. G. Cramer, *The Earliest Relationship: Parents, Infants, and the Drama of Early Attachment*, 2018, 117.

7 Garber, *Developmental Psychology for Family Law Professionals : Theory, Application, and the Best Interests of the Child*, 71.

whose responses have been cold and harsh and rejecting.⁸ This phase responds to cognitive development and neurological growth. Imitation of facial expressions and vocal sounds becomes possible and serves as a foundation of the caregiver-child relationship, as the infant begins to be capable of responding differentially to familiar faces through direct gazing and more accurately focus.⁹

A nursery room and the caregiver mainly consist of the entire world for an infant. Infants spend most of their time sleeping and eating in a nursery room. However, the caregivers who respond to infants signals for multiple needs are the primary users of this space. In a sense, a nursery room mainly serves for adult; it is an adult-centric world but modified with virtually and tactilely friendly for infants.

Between the age of 7 to 24 months, growing toddlers step into the Clear-cut Attachment phase of a caregiver-child relationship, which represented as children distinguish familiar and unfamiliar, and uses motor control and verbal skills to

8 Ibid.
9 Ibid.

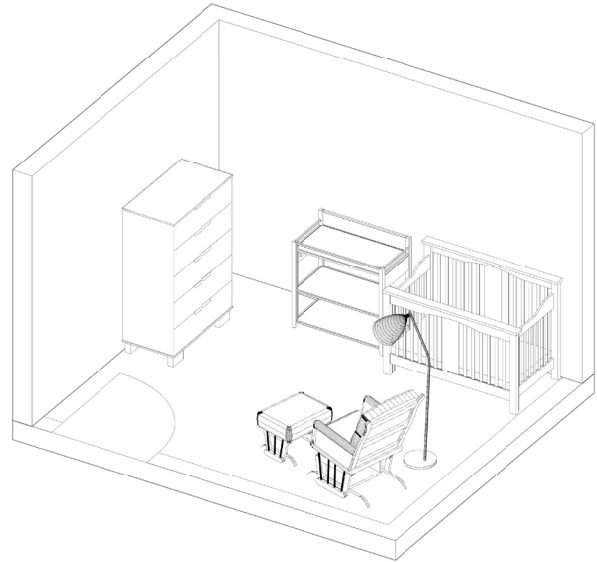


Figure 03-01-04. A typical nursery room

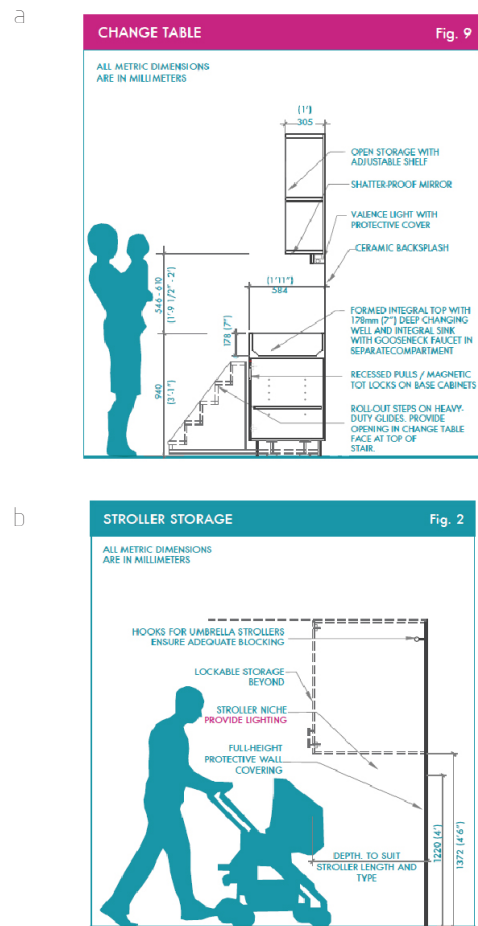


Figure 03-01-05 a-d. Children furniture size

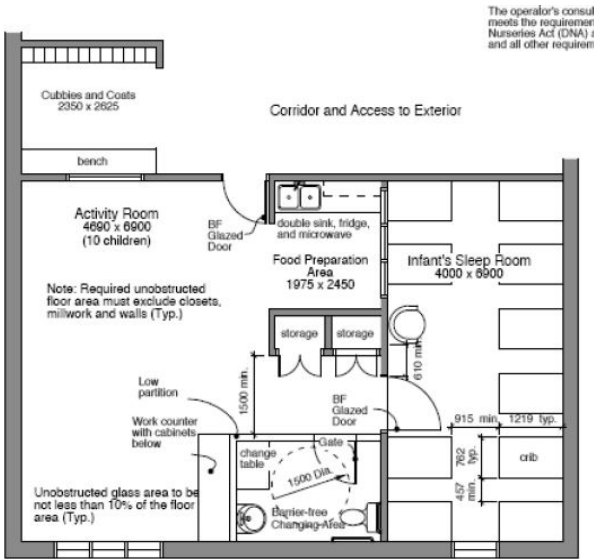
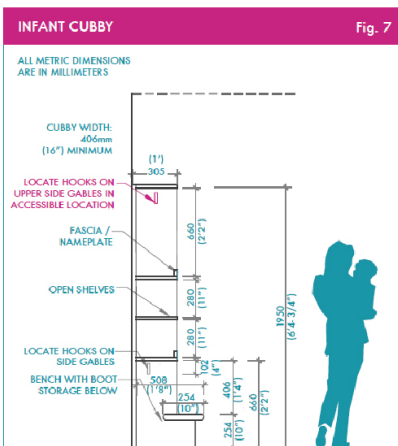
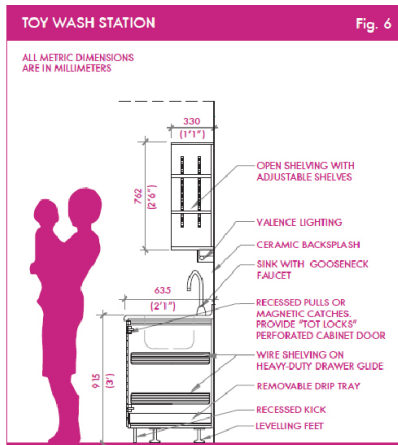


Figure 03-01-06. A typical daycare

approach and avoid accordingly.¹⁰ For instance, stranger anxiety is associated with the approach of unfamiliar persons and separation anxiety is seen in the departure of a familiar figure.¹¹ Then a leap begins by two years of age; In the Formation of a Reciprocal Relationship phase, the toddler begins to rely upon an internalized sense of a caregiver's availability as emotional fuel, which allows them to move away from the caregiver and explore the world.

Consequently, children start going to daycare. The daycare provides a nurturing environment at daytime as a replacement of the home. It is a transition from home to children-oriented institution, the school. Unlike the nursery room, the daycare devoted explicitly to a child-centric world by addressing their physical, mental and social-emotional development. The main activity of the daycare is playing, an unlimited exploratory activity and first-hand sensory experience which initiates intellectual development, or learning.¹² To encourage play and learning, the architecture of



10 Ibid.

11 Ibid.

12 "Hide and Seek: The Daycare Game," *The Canadian Architect*; Toronto 41, no. 5 (May 1996): 20–21.

daycare tends to be stimulating, playful, and educational through the oversized pop theme or electric colouring.¹³ The scale is significant in this environment; for example, kids see under tables rather than over them, windows are installed lower than usual, the floor becomes a better play area instead of a table. Children's experience extends as social skills improved by playing with other children; therefore, the function of space expands not limited to one-person use. The playground concept is inserted as the natural environment brings significant positive impacts.

SCHOOL-AGE

The preoperational period of Piaget's cognitive theory range from the age of 2 to 7. As the sense of "self" grows sophisticatedly, children's ability to consider that others have different perspective, feelings, and ideas is emerging.¹⁴ It is a stepstone for people to develop social skills since children at this stage are preschoolers who start going to kindergarten, then elementary school later. Given that the children begin to demonstrate early logical problem-solving, a child's thinking has become rich with symbolic representation.¹⁵ Objects can be represented by other objects, and events can be anticipated. Therefore, the physical space of a kindergarten or classroom of early grades tends to be constructed for learning rather than just for playing like daycare. However, a skill named conservation has yet been achieved,

13 Ibid.

14 Garber, *Developmental Psychology for Family Law Professionals : Theory, Application, and the Best Interests of the Child*, 46.

15 Ibid.



Figure 03-01-07. A diagram of the children's development - School-age

that is, the child at this age is typically unable to understand more than one attribute of an object or an event at a time.¹⁶ It is represented by certain decorations or settings, as these children are easily bored with things which are fixed and obvious in their representation.

Children from the age of 7 to 11 are classified as the concrete operational period in Piaget's theory. A pre-Concrete-Operational-period child often holds contradictory feelings and beliefs without any inherent sense of the contradiction, which helps to build a coherent sense of the world.¹⁷ The genuine logical problem-solving ability is expected to be acquired. A child at this stage understands that objects can be arranged in a graduated continuum (e.g., from tallest to shortest), and that objects can be classified according to different criteria.¹⁸ This latter skill, known as seriation allows for the emergence of conservation. However, the child's cognitive leaps at this stage are primarily restricted to immediate, here-and-now objects and events.¹⁹



ADOLESCENT

The last period of Piaget's theory called the formal operational period, which is known as the "problem solving" stage ranging from the age of 11 to 13. It is marked by the ability to think abstractly, to consider hypothetical situations and their contingent outcomes. In that individuals who attain this degree of cognitive sophistication

16 Ibid.
17 Ibid., 48.
18 Ibid., 47.
19 Ibid., 48.

Figure 03-01-08. A diagram of the children's development - Adolescent

are better able to consider problems and their potential remedies from a variety of angles and perspectives in order to come up with the most reasonable solutions.²⁰

Children who have possessed the skills to abstract, anticipated, or hypothetical would consider the physical space as an assistant to accustom themselves to the adult world. Therefore, even the stimuli in the parent-child interactions are still required, effective communication between this relationship is less restricted by physical space and objects.

20 Ibid.

02 – CASE STUDY

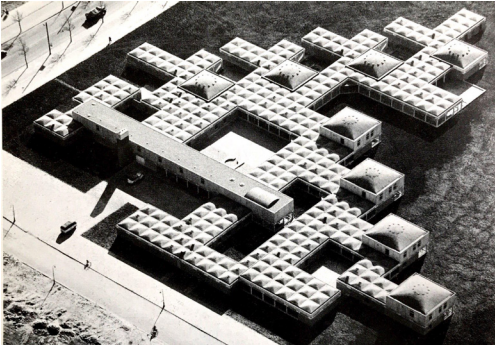


Figure 03-02-01. Orphanage



Figure 03-02-02. Nursing room



Figure 03-02-03. Nursery



Figure 03-02-04. Kindergarten

ORPHANAGE

The orphanage is a residential institution, or group home, devoted to the care of orphans and other children who were separated from their biological families.²¹ So the users are not only orphans but also children who have abusive parents or whose parents unable or unwilling to take care of them. Burgerweeshuis, a significant postwar modernism architecture located in the southern outskirts of Amsterdam, was an orphanage designed by the Dutch architect Aldo van Eyck. He was commissioned for designing this orphanage in 1954 and presented the initial design a year later. The orphanage was in use from 1960 to 1991. As children without parents are now offered foster families rather than being placed in special institutions, the orphanage gradually fell into disuse. Hence a plan to demolish the orphanage was announced in 1986. The building was a small city for 125 children. The director of the orphanage, Frans van Meurs, was raised as an orphan himself. He gave very detailed requirements to the architect about his desire to this orphanage. He

21 “Orphanage,” in *Wikipedia*, January 24, 2019, <https://en.wikipedia.org/w/index.php?title=Orphanage&oldid=880039923>.

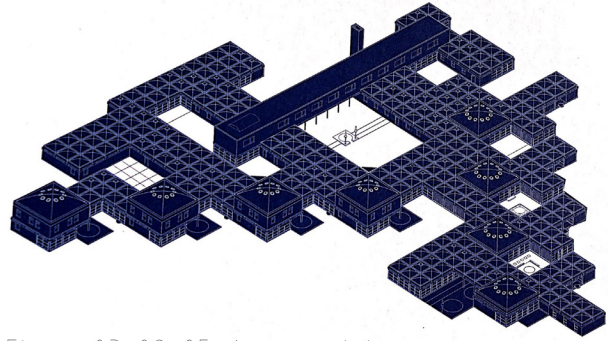


Figure 03-02-05. Axonometric

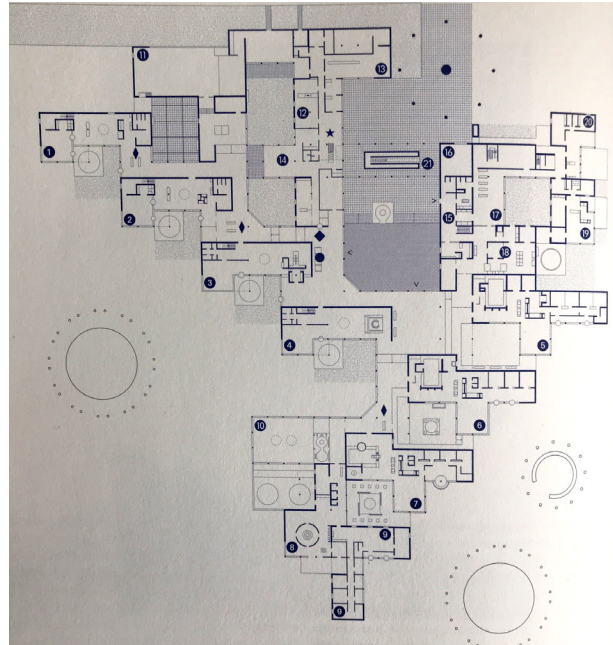


Figure 03-02-06. First floor

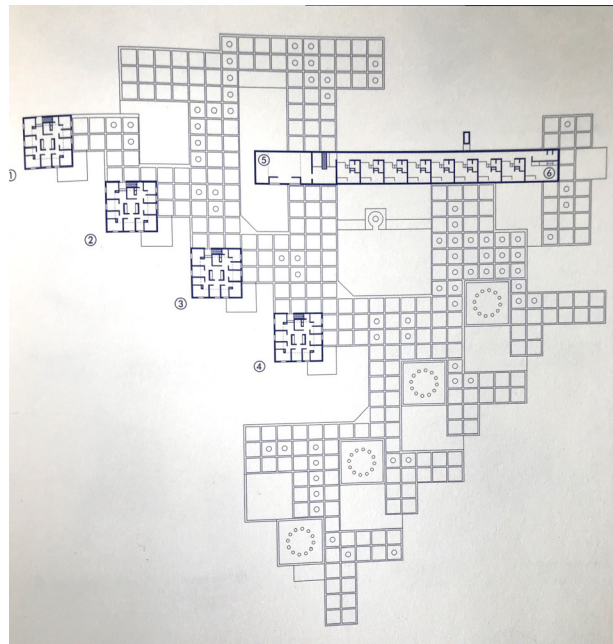


Figure 03-02-07. Second floor

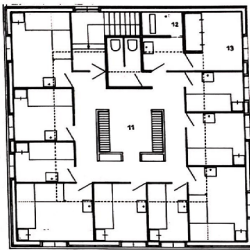
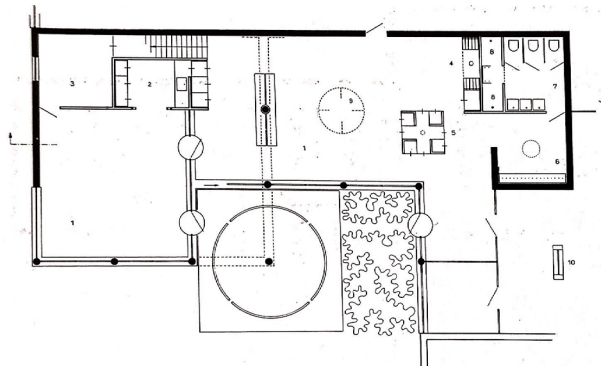


Figure 03-02-08. Room for older kids

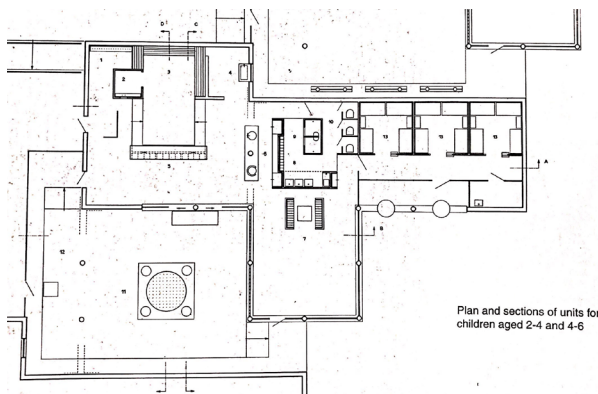


Figure 03-02-09. Room for children aged 2-4 and 4-6

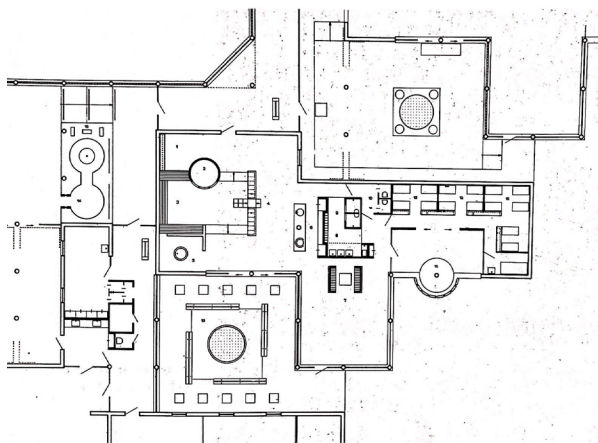


Figure 03-02-10. Room for children aged 2-4 and 4-6

wanted to move his orphans away from the city to a small, ideal world with healthy air, sunshine and greenery where they could develop in sports, handicraft, theatre and all kinds of visual expression. He said: 'What we do not desire is a large, oppressive building whose massive volume suggests a house where children are locked up and away from the world.'²²

Moreover, Van Eyck's understanding of this orphanage is not limited to a modern version of the traditional institutional building; he rejects the hierarchic ordering of functions governed by a central axis. He supported a multiplicity of inter-shifting architectural volumes. The idea was to give a friendly 'urban' relationship. He said, "What has happened to them has twisted them in many ways, and they need untwisting and gathering them together by means of architecture in such a way that they can return to society untwisted. It was a strange, disturbing problem if you think of it: to make an environment for little cast-out people within the context

22 Francis Strauven, *Aldo van Eyck's Orphanage: A Modern Monument* (Rotterdam: NAI Publishers, 1996), 7.

that cast them out.”²³

The entrance plaza, in the middle of the complex of interlinked pavilions, was directly connected to public roads through a corridor under the block with staff accommodations. A staircase beside the plaza led to an underground bike storage area. The space for the management, service area was close to the entrance, as the staff members, the director and his assistants, had to be easy to reach and could be approached informally.

There are eight domed pavilions for eight groups of children divided by age and gender, each of which would enjoy certain independence as well as informal contact with the others. The residential units are arranged in a staggered formation, thus allowing each of them to have communication with a private outdoor space and with the internal street. The result is a polycentric building, with a joint of large and small spaces. The groups were arranged according to age. This combined four mixed groups of smaller children: babies aged 0-2 and an infirmary, 2-4, 4-6, and 6-10. There are four groups of older kids: twice two groups of boys and girls, of 10-14 and 14-20. The idea behind this arrangement was that each group has its own needs and wishes. The residential units were therefore not conceived as identical, neutral rooms, but more like dwellings associate with the different lifestyle of each group. So apart from the same basic equipment like the kitchen, living/ play area, and sanitation, each group has its own

23 Christoph Grafe et al., *Aldo van Eyck : Orphanage Amsterdam : Building and Playgrounds* (Amsterdam: Architectura & Natura, 2018), 15.

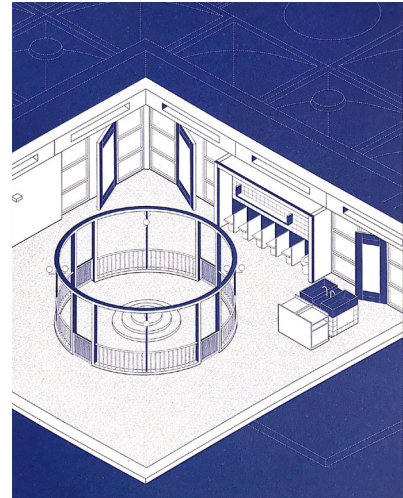


Figure 03-02-11. Baby house and change table

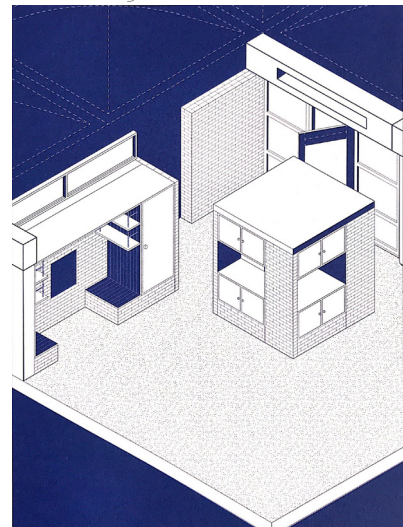


Figure 03-02-12. Reading corner for older kids

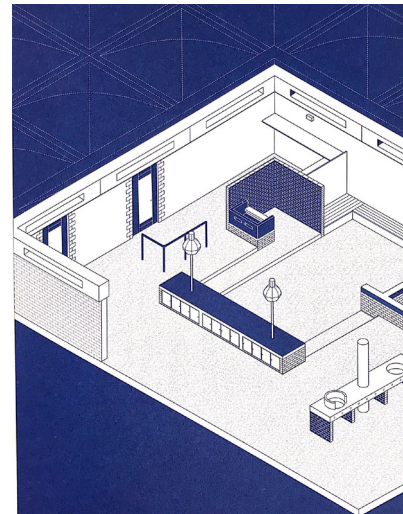


Figure 03-02-13. Play house for children age 6-10

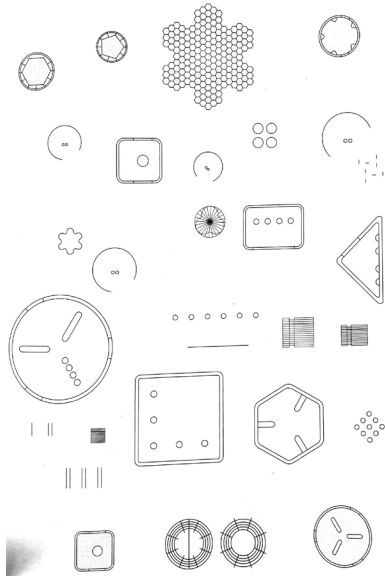


Figure 03-02-14. The playgrounds designed by Aldo Van Eyck



Figure 03-02-15. A playground designed by Aldo Van Eyck



Figure 03-02-16. A playground designed by Aldo Van Eyck

atmosphere and organization.

There are two types of residential unit conceived as dwelling houses with a variety of individual interiors and layouts. The plan for older kids has their own bedrooms, grouped on the upper level, and well-designed reading corners for both boys and girls in the living rooms on the ground floor. The living room of the 10-14 girls should have space for 'some seats that can be variously arranged.' Its kitchen had to offer the opportunity 'to cook fancy things, something girls of this age need to do'. The living room of their male peers, on the other hand, required an area of some size 'where they can work, knock things together and mess around without restriction.' There was a puppet theatre and fixed benches designed for them. In the living room for the 6-10-years-old, a raised section would function as a theatre 'for these children should be able to express their fantasy in play-acting.' The dormitories for the smaller children are on the ground floor; they were divided among "boxes" of three or four beds. The place also needed a big interior square, where they could take an afternoon nap or give free rein to their energy. Also, the windows should be the right height, so when they seat; they can easily look out and see people passing by. In the baby section, there was a baby house and change table with open toilets. The living rooms for toddlers were equipped with different play-houses and multipurpose furniture. The entrance hall for each section had to be large enough for group games, and each of the small halls at the bedrooms required a bench for reading to the

children at bedtime.

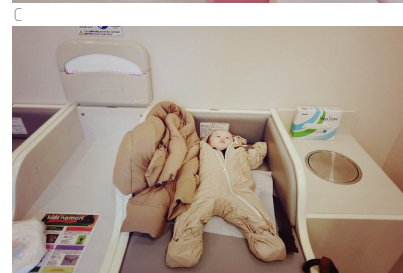
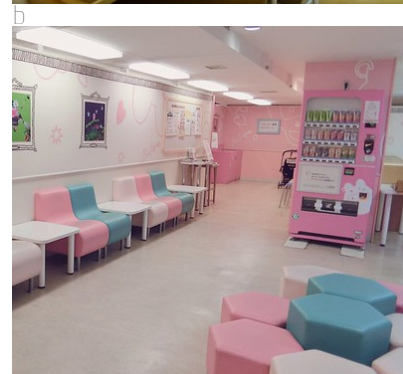
Aldo Van Eyck designed approximately 700 playgrounds in Amsterdam between 1947 and 1978. The unique about these playgrounds compared to those of other cities is that they are interstitial; that is, each playground inserted within the fabric of the city with a unique configuration where nothing comes into play except the constraints of the site. In this building, Van Eyck also designed courtyards, loggias and play elements with multiple purposes for different groups of children.

The buildings have been built with concrete floor, reinforced concrete panels and opaque brick. The ground floor consists of round poured concrete columns with prefab concrete architraves on top, often fitted with glass in a steel window. Some of the domes are covered with skylights that allow the natural light coming in. As an integral part of the sophisticated design of the orphanage, the colour palette of this building dominated by the earthy tones and grainy surfaces of bricks, concrete and natural stone.

NURSING ROOM

In Japan, most public places where families go (shopping centers, museums, parks, department stores, etc.) have designated “baby break rooms or “nursing rooms”.

These rooms often have the changing tables, bottle warmers, a sink, trash bins, a vending machine for drinks, and a section separated by



e

Figure 03-02-17 a-e. Japan's nursing rooms



a



b



c

e



f

Figure 03-02-18 a-f. YM nursery



a

doors or curtains where mothers can nurse. Both men and women are allowed in the open area while the separated section for breastfeeding is marked “women and children only.” These rooms are clean and convenient.

EDUCATIONAL FACILITY

YM Nursery

YM Nursery is a nursery project that located in Tottori of Japan. The site is surrounded by the sea and the mountain; hence, the concept “Feel nature, grow sensitivity” that illustrated by various materials was infused in the building design to bring the nature to the children.

The sensible stimulus taken by touching natural materials by hand and feet, stimulate their brain and impact on their development. Each wooden floor is different in tree species, shapes, layout and looking, of course touching by foot. Additionally, there are four kinds of metals used on the floor signs with a different sense of touching. Hence children’s sensitivity will be grown, as well as their imagination and brain development. Moreover, the toilet space is a place to play for children. The partition of each toilet is made of stainless steel, whose looking is a mirror. This design idea comes from the traditional pottery in this area, Kugogama.

Kfar Shemaryahu Kindergarten

Kfar Shemaryahu Kindergarten that located at Kfar Shamaryahu of Israel, contains a cluster of six kindergartens for children aged 3-6, a play area, and an empowerment center which provides psychological services to children. Six kindergartens that manifest diverse identity form an educational space, which provides a friendly, informal environment. Each kindergarten that extends over 150 m² was modelled based on three prototypes, and every two kindergartens share a space with site-specific furniture.²⁴

The lobby covers 250 m² and functions as a major axis, a play area as well as a passageway to the Empowerment Center. It plays a crucial role in organizing the overall compound: The child's journey at the kindergarten includes village scenes, a large-scale tractor, and sculptural amorphous islands on which Lego-like trees tower. There are images hung on the lobby and corridor walls that imitate the contours of a rural landscape: a water tower, a watchtower and various animals, all made of woodcuts in Formica on plywood.²⁵

The architects of this kindergarten considered not only the pedagogical needs but the desire for a friendly and playful setting which offers hands-on activity and lasting experience. It includes diversity space configurations that structured by

24 "Kfar Shemaryahu Kindergarten / Sarit Shani Hay," *ArchDaily*, December 22, 2013, <http://www.archdaily.com/459642/educational-center-for-children-nil-kfar-shemaryahu-sarit-shani-hay/>.

25 Ibid.

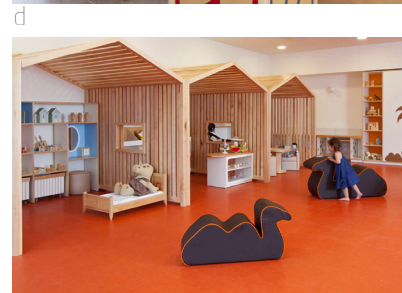


Figure 03-02-19 a-f. Kfar Shemaryahu Kindergarten

modular furniture like low, two-sided bookcases or by airy wooden huts. All the kindergartens contain open, airy spaces as well as intimate play areas, which do not interfere with teachers' ability to control the space.²⁶

26 Ibid.

03 – TWELVE DRAWINGS

The following work is a collection of parent-child moments.

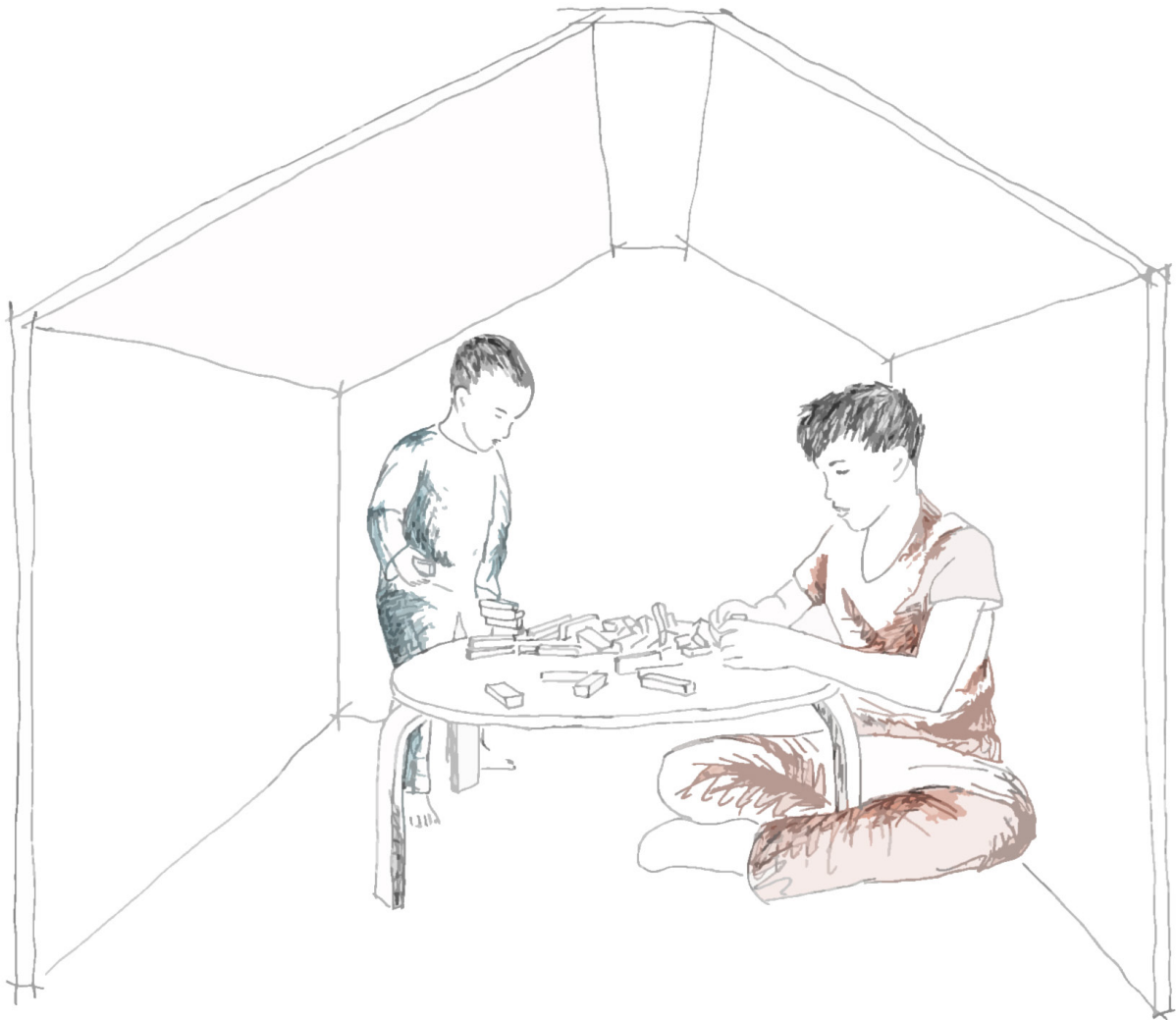
The design approach I always use includes a large number of analysis materials such as plans, digital models, photographs, and so on. I enjoy such a rational way to solve an architectural problem; however, I found its limitation when I try to dig up something beneath the surface. After carefully checked all the resources again, I picked twelve moments. They provide me with the missing piece to complete a coherent research. I was also given another perspective towards the thesis objective.

























CHAPTER 04

DESIGN PROPOSAL

I chose the *Grand Valley Institution for Women(GVIW)* as the site to develop my design proposal. Chapter 01(p16) has included an introduction of the site and a detailed spatial analysis of the current visitation practice and the mother-child program of this prison. The prison is at the Homer Watson Blvd and Manitou Dr. The north of the site is the Homer Watson Park. There is the residential area in the south, some manufacturer factories and warehouses in the west.

Most ongoing challenges for GVIW derived from a lack of resources. Therefore, unlike what it currently has, I proposed to centralize the resources and space regarding the children visiting and mother-child program. The visiting space generally associated with the entrance, which is closed to the perimeter. Also, the prison nursery always comes together with minimum-security residency. Therefore, the specific area I chose to position the new structures is where the current minimum-security apartment is. I intended to replace it and reshape the perimeter. This part of the land is a slope ranging 20 meters from the lowest point at the Northeast to Southwest of the site.

Like the existing site, I left some buildings inside the compound and some beyond the fence. There is a new visiting centre connected to a multi-functional space. Two private family visiting houses are located as an extension of the visiting centre. The four new structures that inside the compound, along with the fence, created their own courtyard that only open to the visitors and inmates who have acquired the security clearance. Beyond the fence, the building that closed to the parking lot has the entrance, administration as well as other service purposes. Unlike the existing settings, there is one mother-baby house and two identical minimum-security houses that separated the mother-baby program from the minimum-security residency.

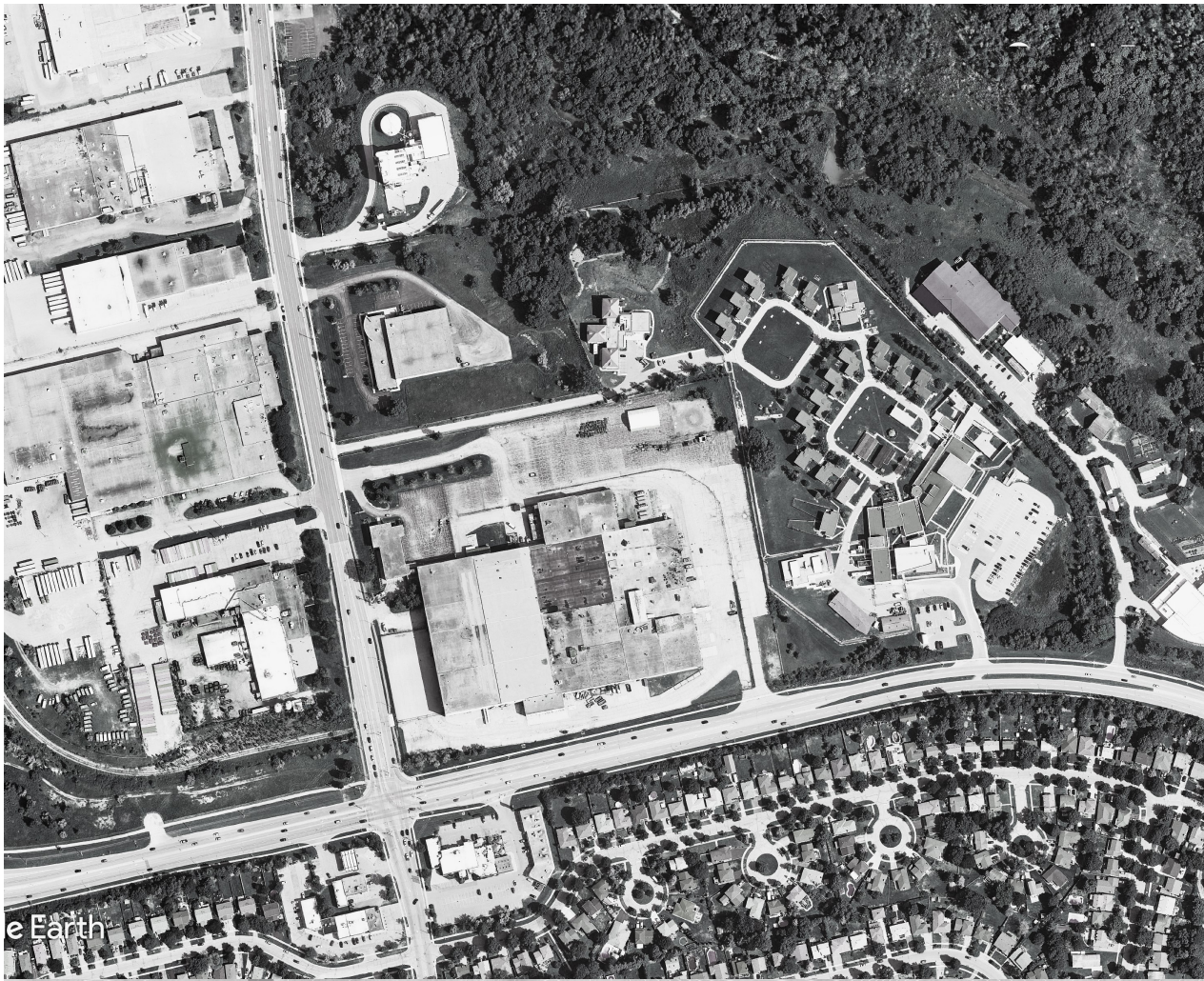
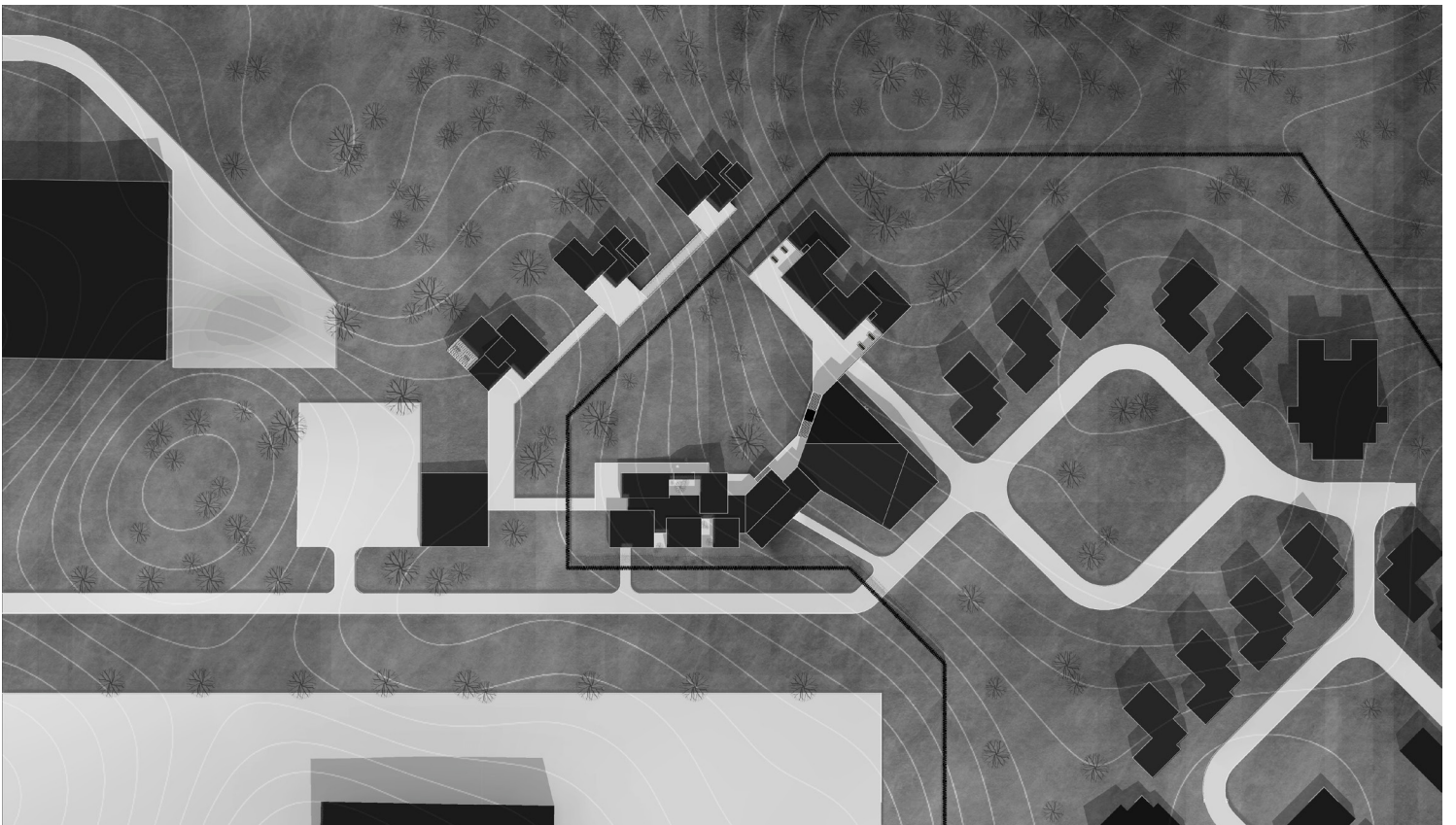


Figure 04-00-01.
Current site plan
and Proposed
site plan



Figure 04-00-02. Axonometric of design proposal



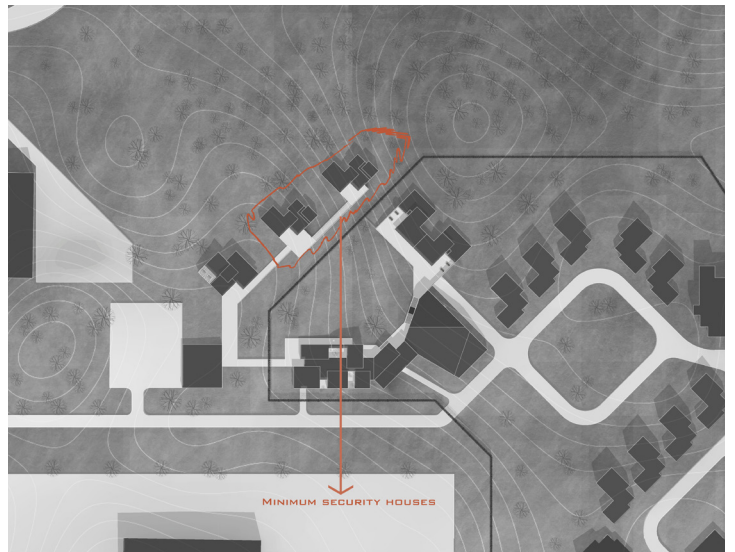
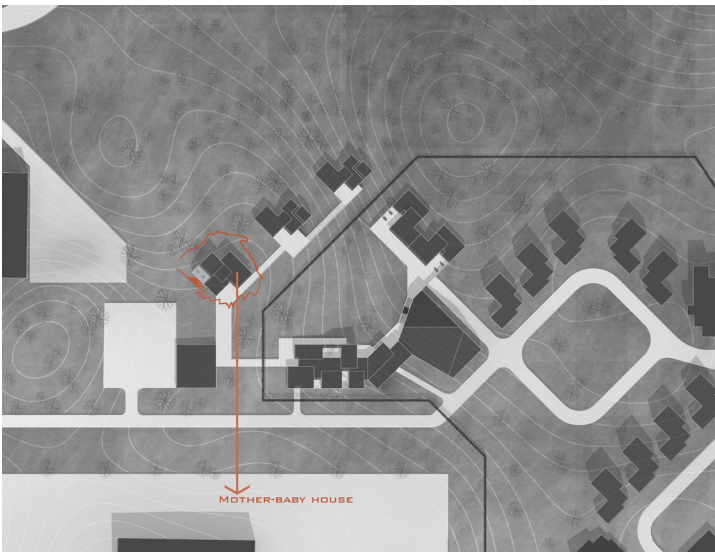
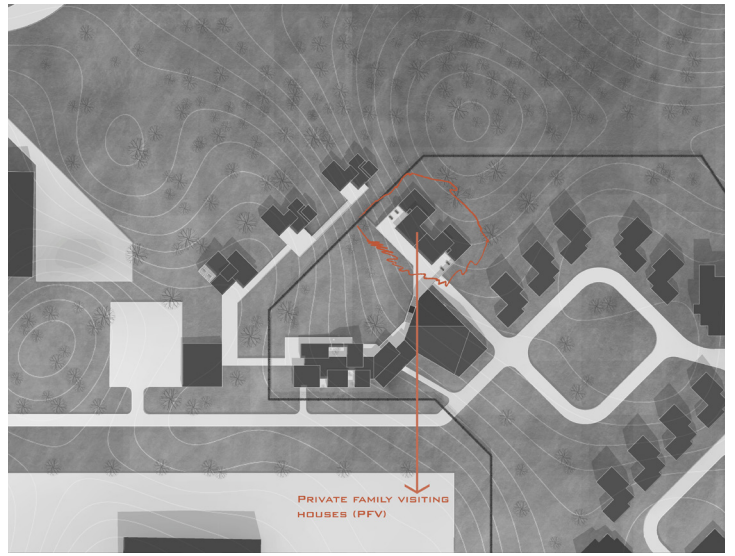
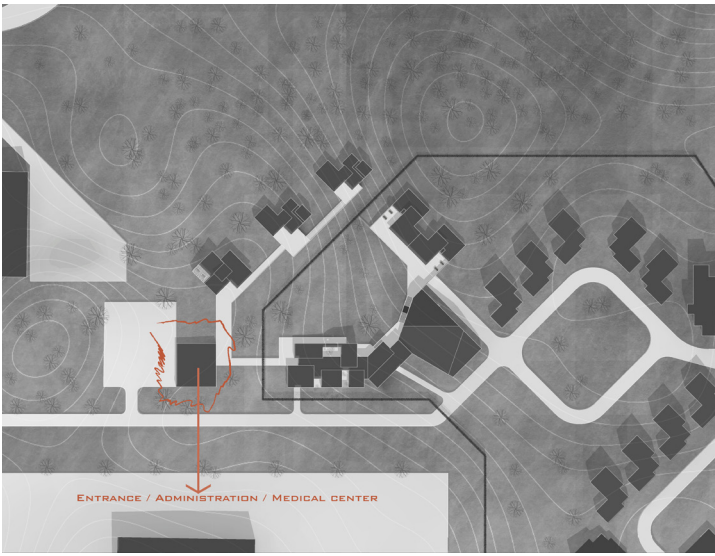
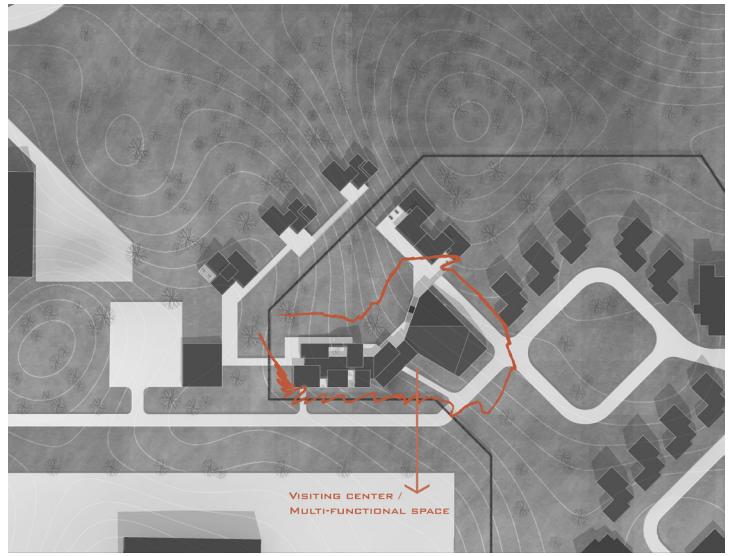
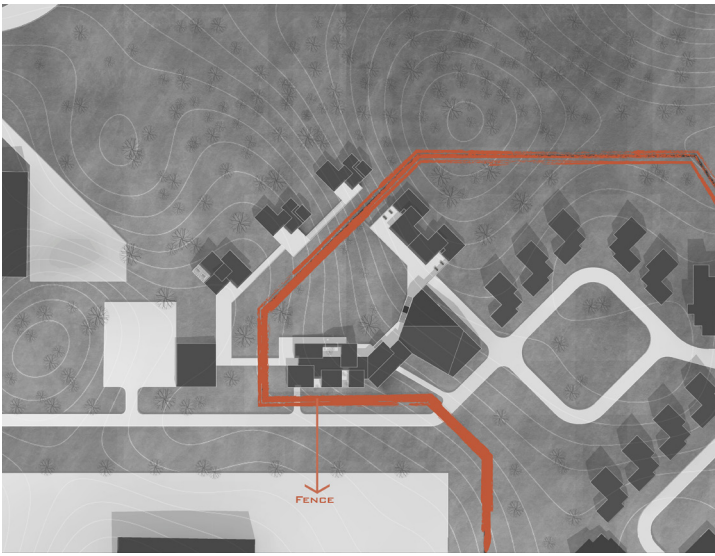


Figure 04-00-04 a-f. Programmes analysis

VISITING CENTER
MULTI-FUNCTIONAL SPACE

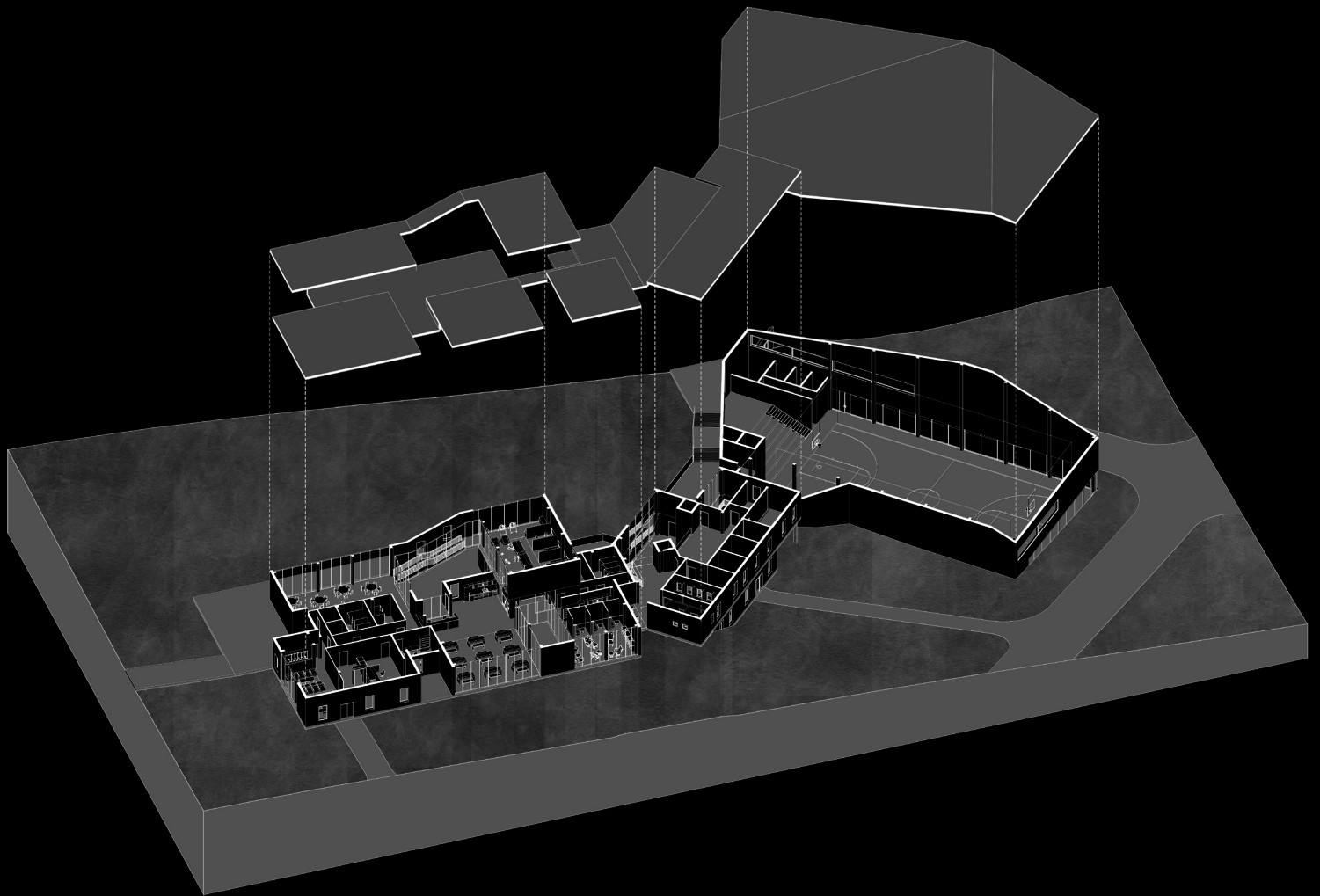


Figure 04-00-05. Exploded axonometric of the visiting centre and the multi-functional space

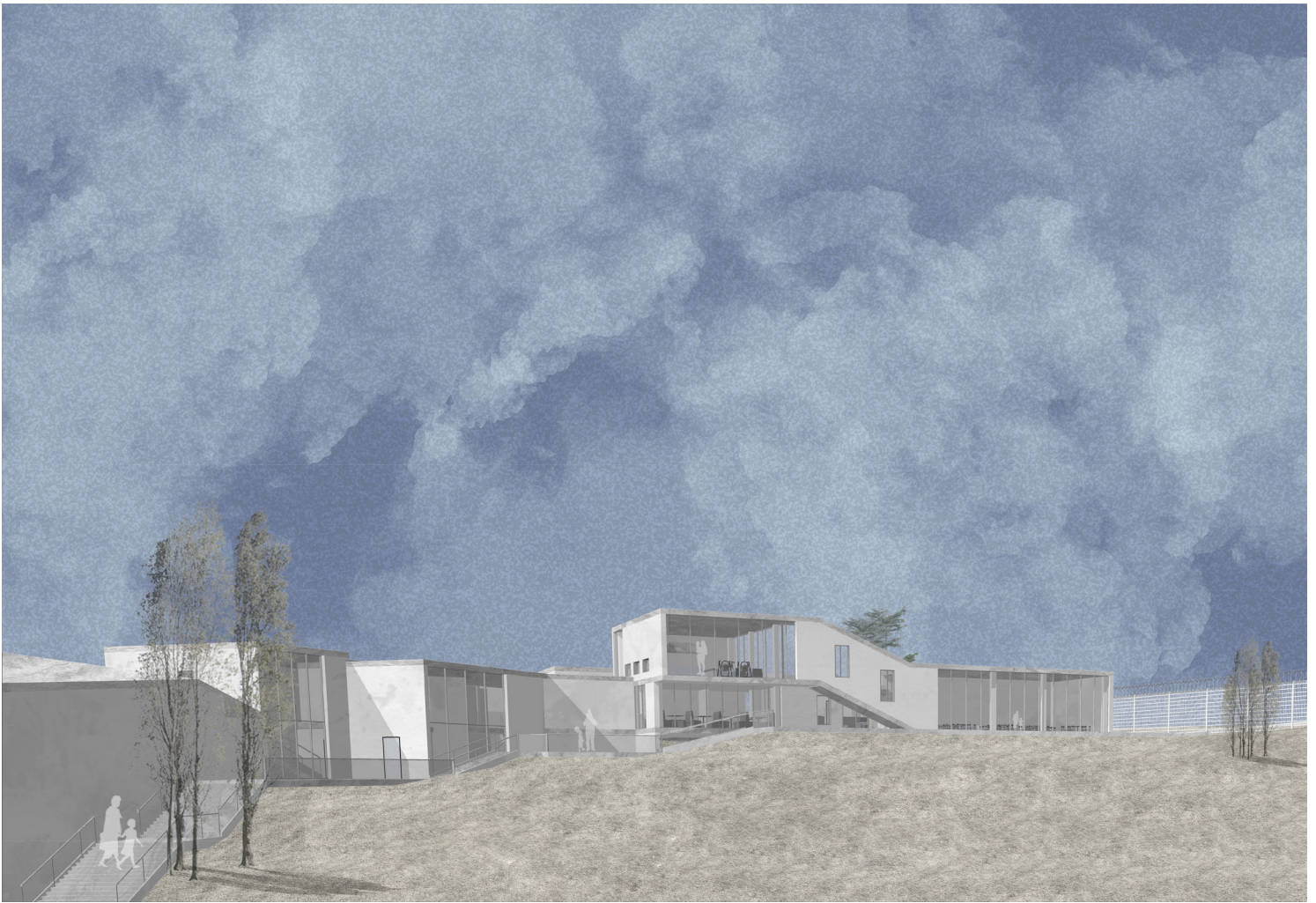


Figure 04-00-06. Visiting centre

The Visiting centre has partially two floors. The entrances for the visitors and the inmates are located on different levels, which makes the circulation more clear and easy to control by the guards. The multi-functional space has the size to fit a basketball court.

The first stop for visitors is the entrance; after registered, they can either wait at the waiting area or go through the security check, which is set up the same as the airport security checkpoint. Since prison does not allow visitors to bring personal belongings into the prison, it is necessary to have lockers that are located at the back of the entrance hall.

The main component of the visiting centre is the separated open visiting rooms with different settings. The idea was based on the theory that different age group children have different needs.

Infants and toddlers:

The room for the infants and toddlers has two parts. There is a kitchen for parents to prepare food or milk. There is an open area equipped with changing tables, rocking chairs as well as appropriate furniture for parents to feed their kids. The two parts are divided by three private rooms for nursing moms who need some privacy.

School-age kids:

This visiting area is for children who age from 4 to 11. From Piaget's theory, people at this stage start to demonstrate only early logical problem-solving and unable to understand more than one attribute of an object or an event at a time. That is why a successful interaction with these kids always involved objects like books or toys. It then means such space need more storage room. Additionally, movable furniture is necessary, so they do not get easily bored with things which are fixed and obvious in their representation. The second floor provides more private space and space with a smaller size, which intends to make these kids feel comfortable to stay.

Adolescents:

For older kids who have possessed the skills to abstract, anticipated, or hypothetical would consider the physical space as an assistant to accustom themselves to the adult world. Therefore, even the stimuli in the parent-child interactions are still required, effective communication between this relationship is less restricted by physical space and objects. All they need is a place to have a private conversation. That is why I provide furniture like the booth or the stools and tables against the curtain wall for them to sit and have a comfortable conversation without disruptions.

Others:

In order to cover the whole spectrum of different visiting settings, I also kept a visiting area for typical adults open visit and a closed visiting area at the conjunction of inmates zone and visitor zone. Both inmates and visitors should get their own security clearance before they meet each other. Moreover, both the visitors who stay at the private family visiting houses and visitors who participate in the mother-child program can use the resources in the visiting centre during the daytime. Since the most area in this design proposal is located in the minimum security zones, there are fewer limitations regarding the security; therefore, it is possible to replace the concrete with the large windows and curtain walls which can introduce much more natural light.

Service:

In the middle of the building, there are a series of service space such as the medical room as well as the separated washrooms for visitors and inmates. There is a photo center, which equipped with cameras and printers. Just like letters, photos are one of the few personal things that the inmates can possess inside the prison. The vending machine is a very common thing to have in a visiting area. There are two vending machines and a kitchen that allow people to purchase or prepare food during the visitation. The officers' station is positioned in the middle for guards to better control and monitor. Since there are visual barriers existed, the visiting center should adopt direct supervision method of operation.



Figure 04-00-07. 2F of the visiting centre

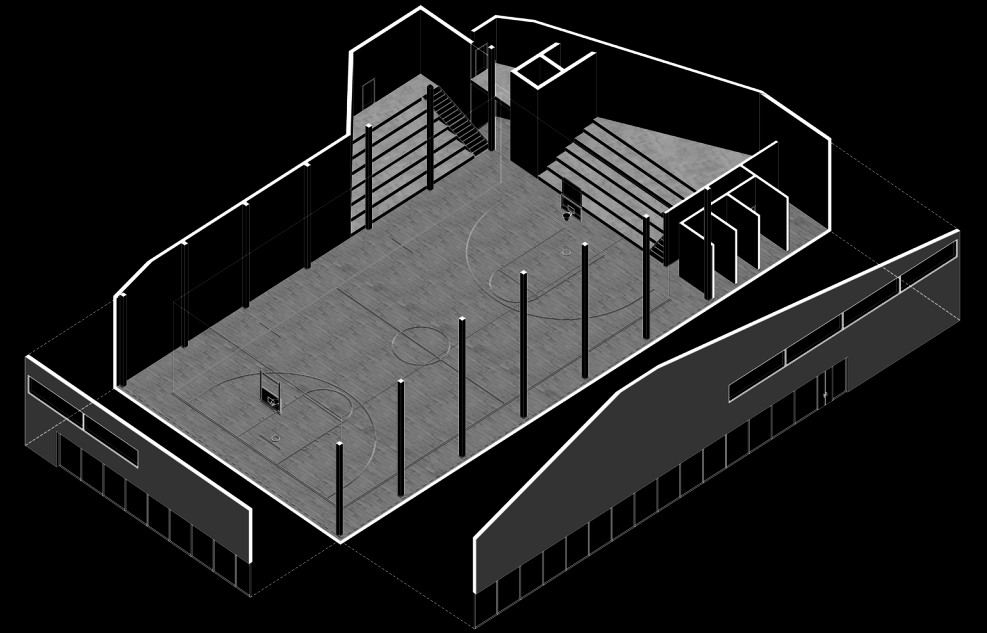


Figure 04-00-10. Multi-functional space

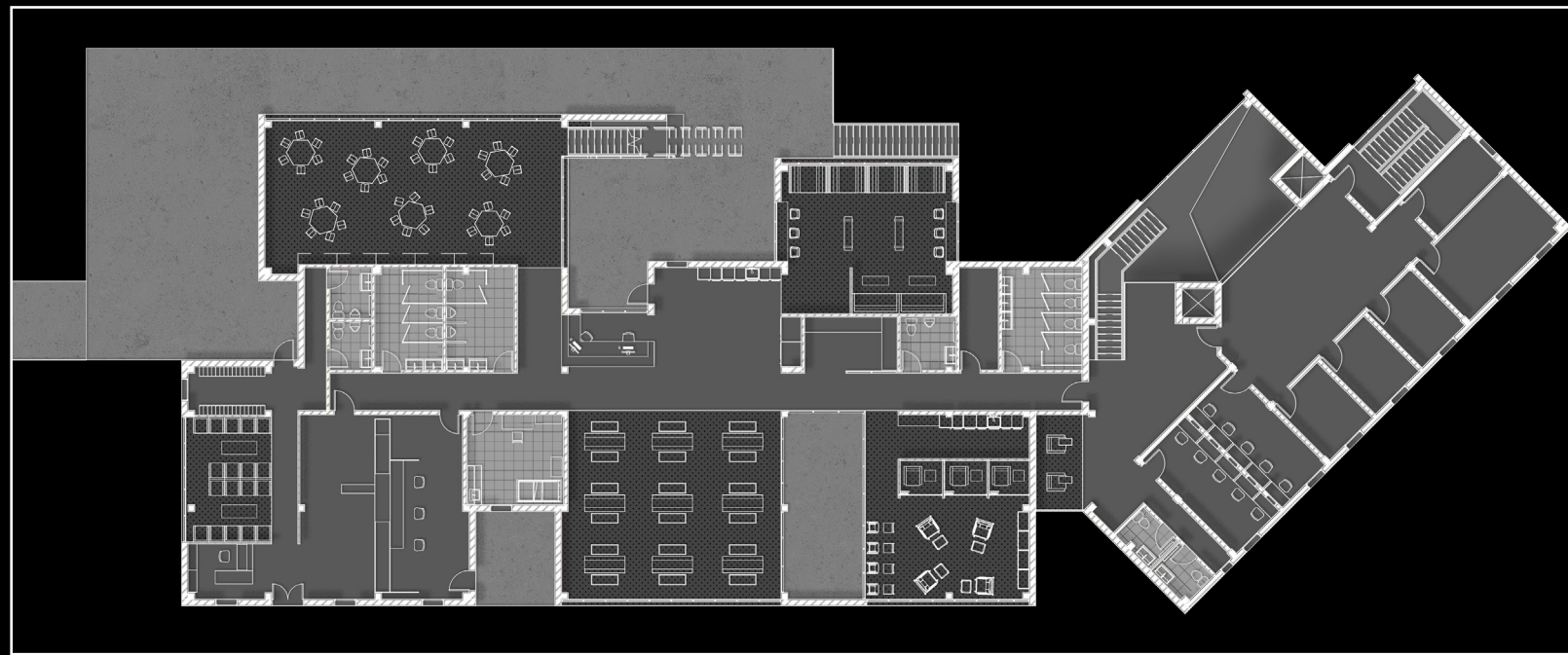


Figure 04-00-08. 1F of the visiting centre

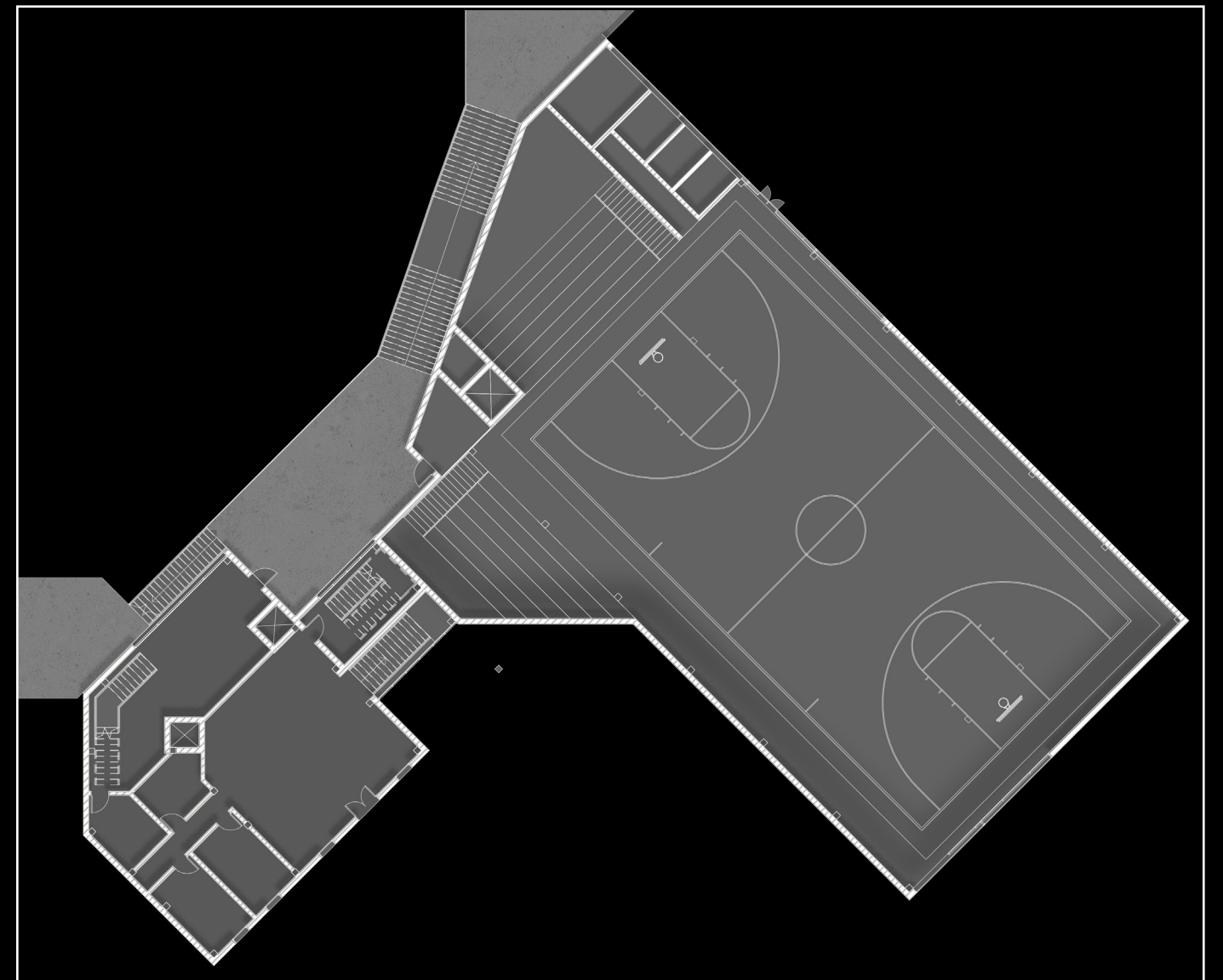


Figure 04-00-09. -1F of the visiting centre

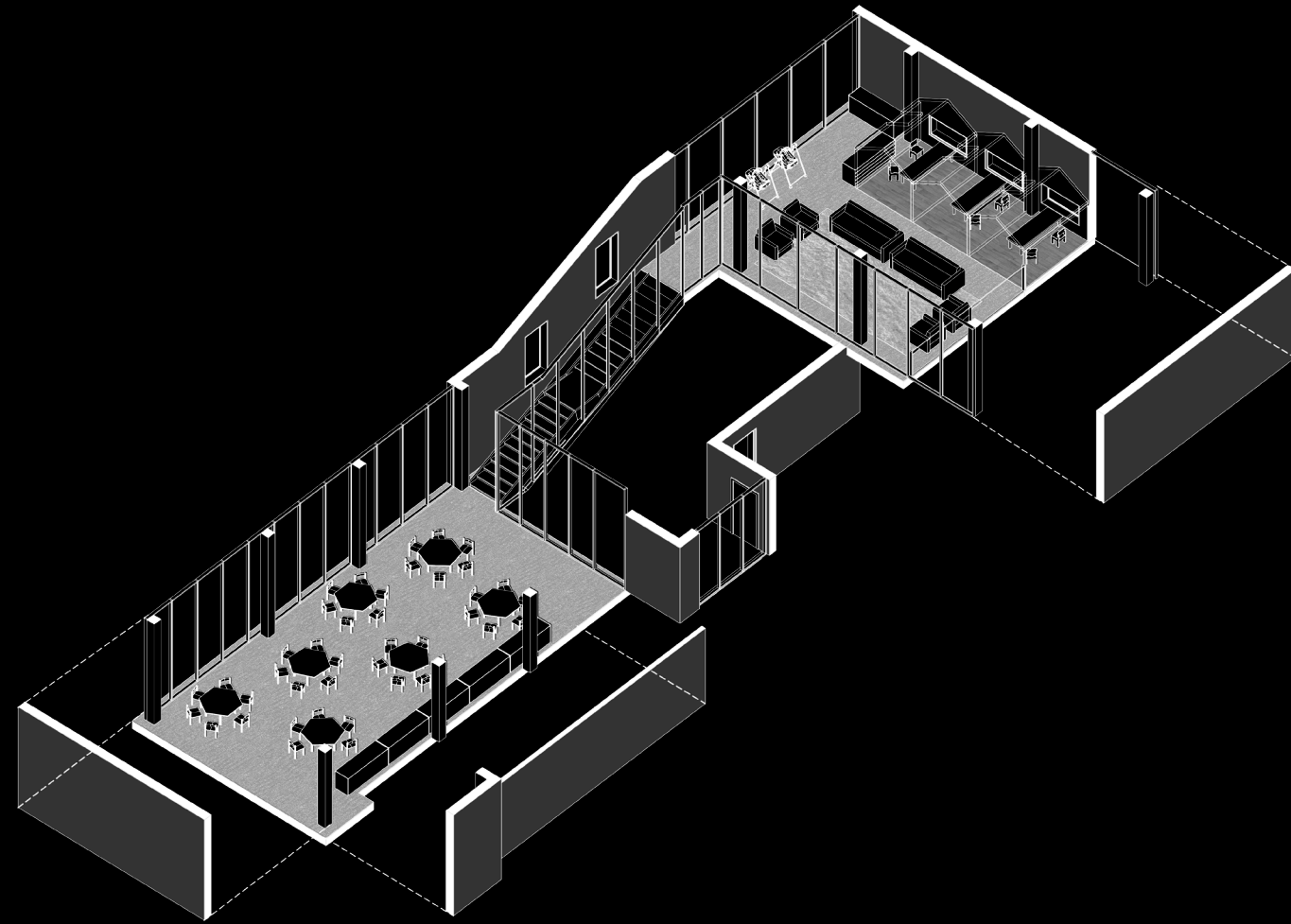


Figure 04-00-11. Visiting space for school-age children

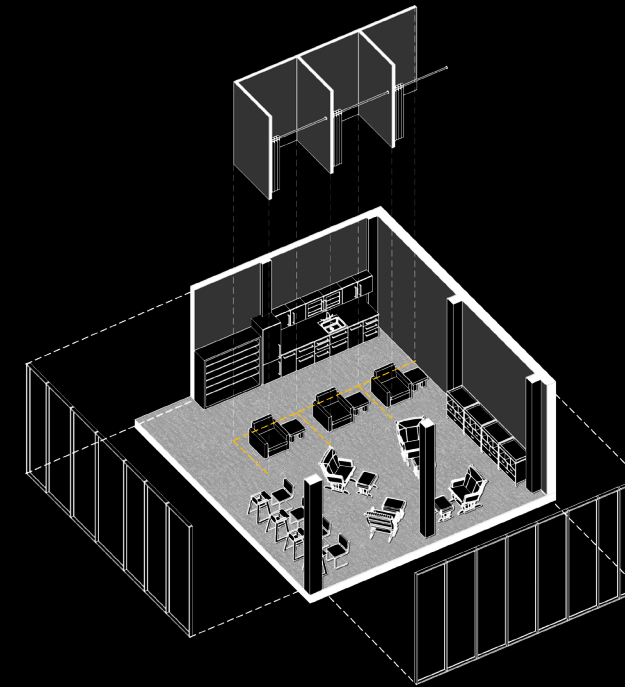


Figure 04-00-12. Visiting space for infants and toddlers

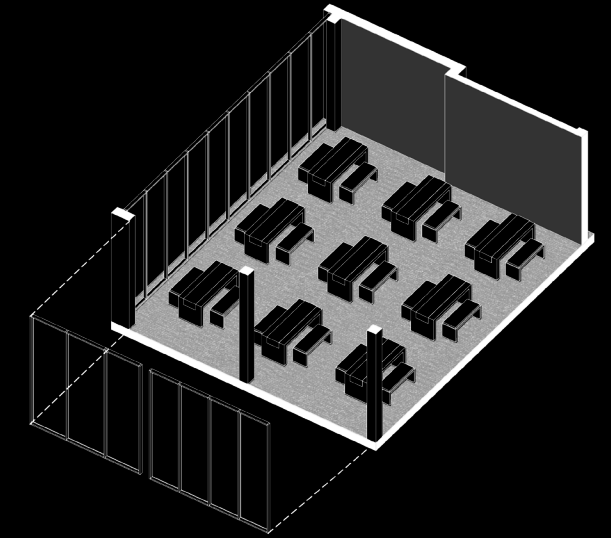


Figure 04-00-13 Visiting space for adults

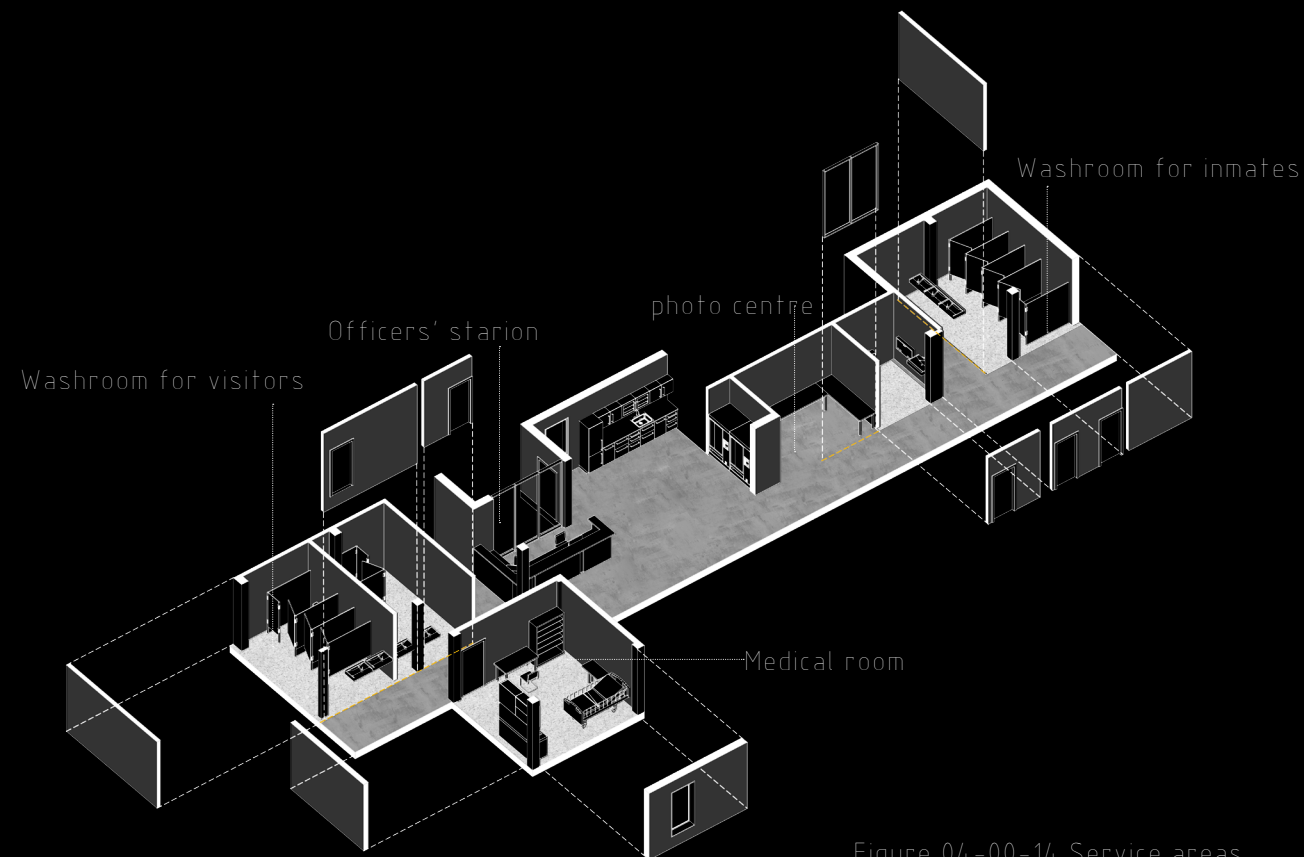


Figure 04-00-14 Service areas

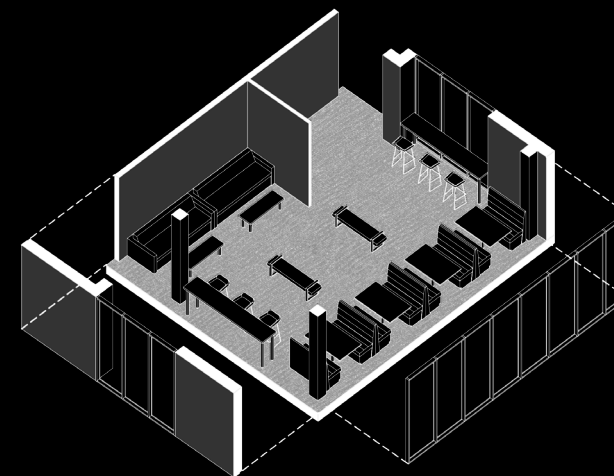


Figure 04-00-15. Visiting space for older kids

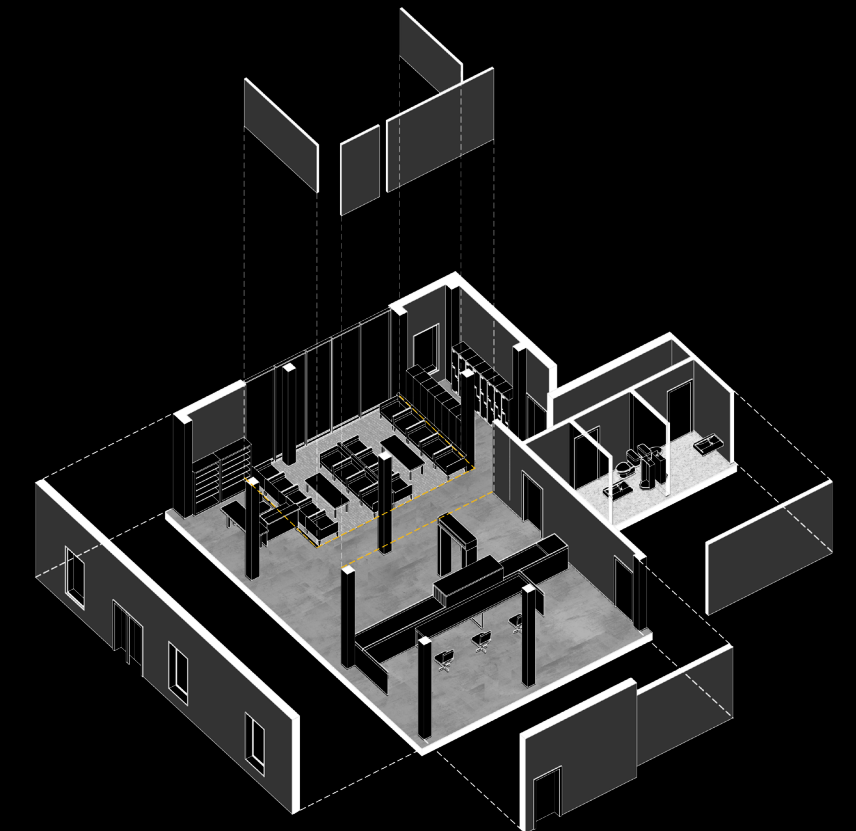


Figure 04-00-16. Entrance of the visiting space

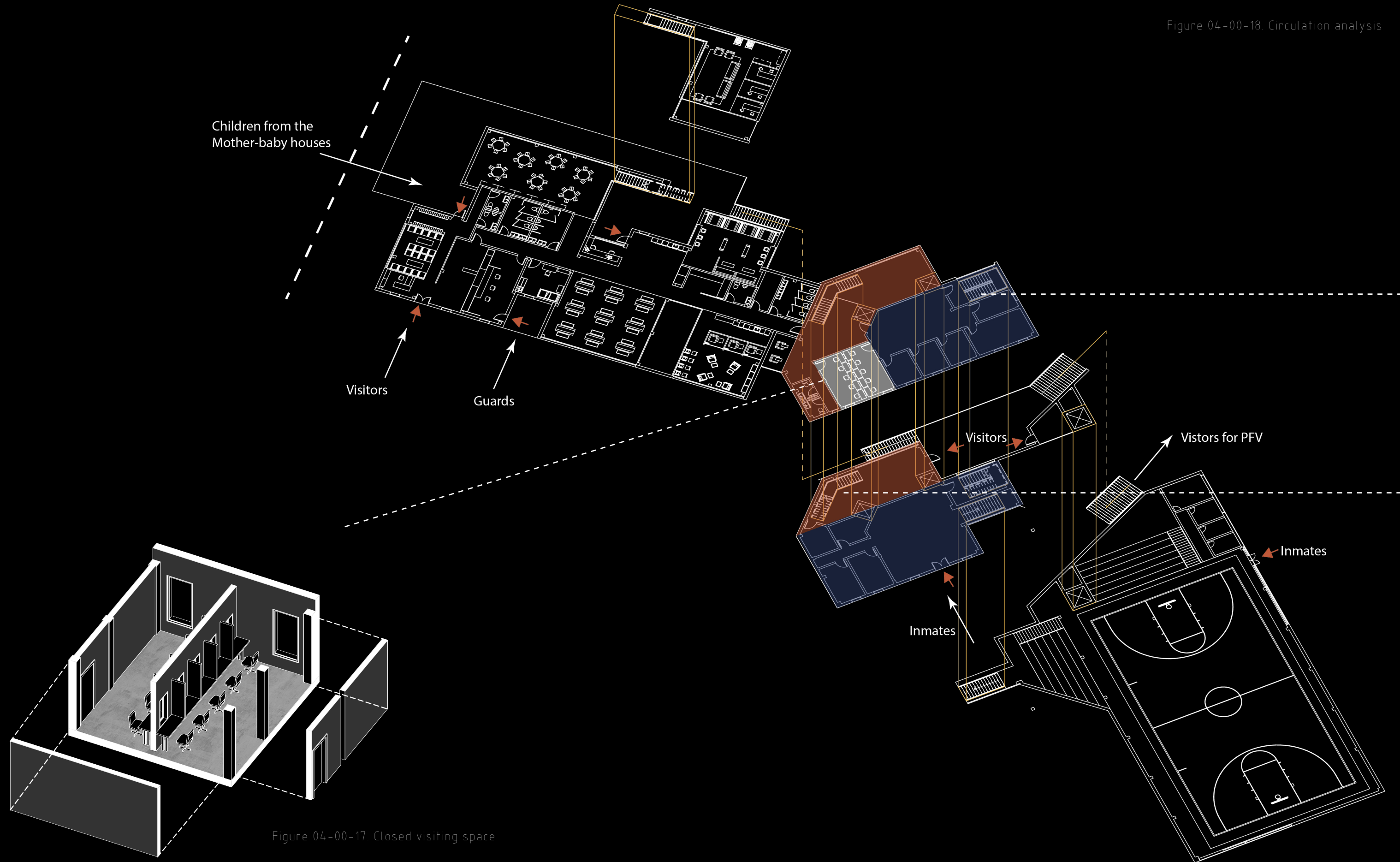


Figure 04-00-17. Closed visiting space

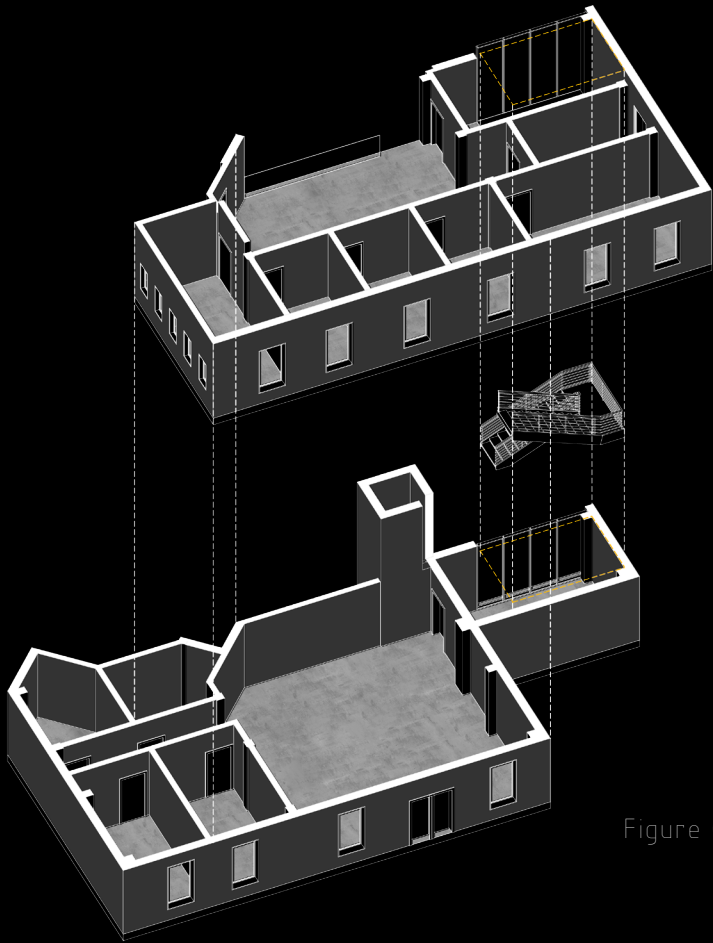


Figure 04-00-20. Inmates zone

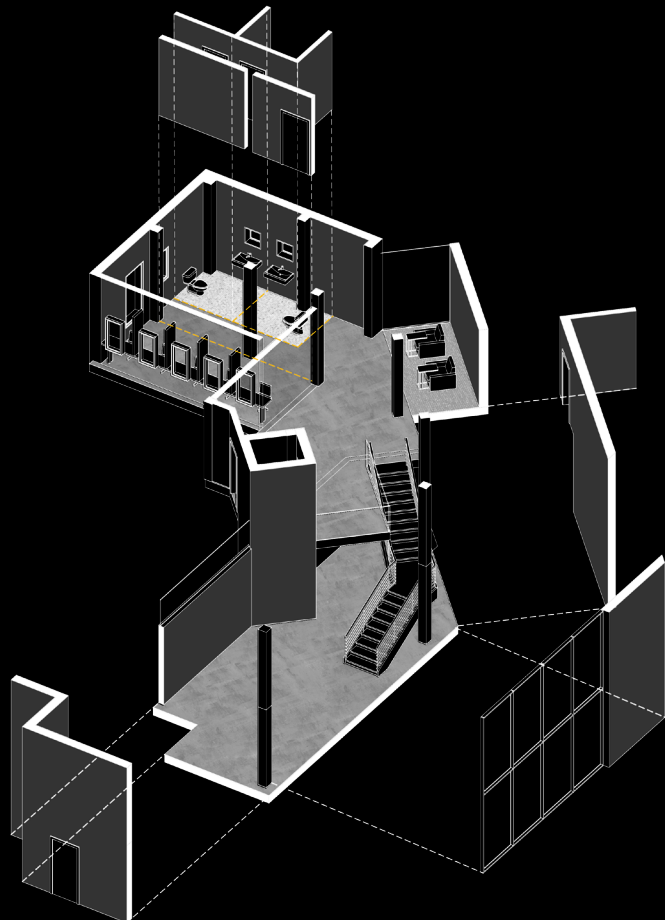


Figure 04-00-19. Visitors zone

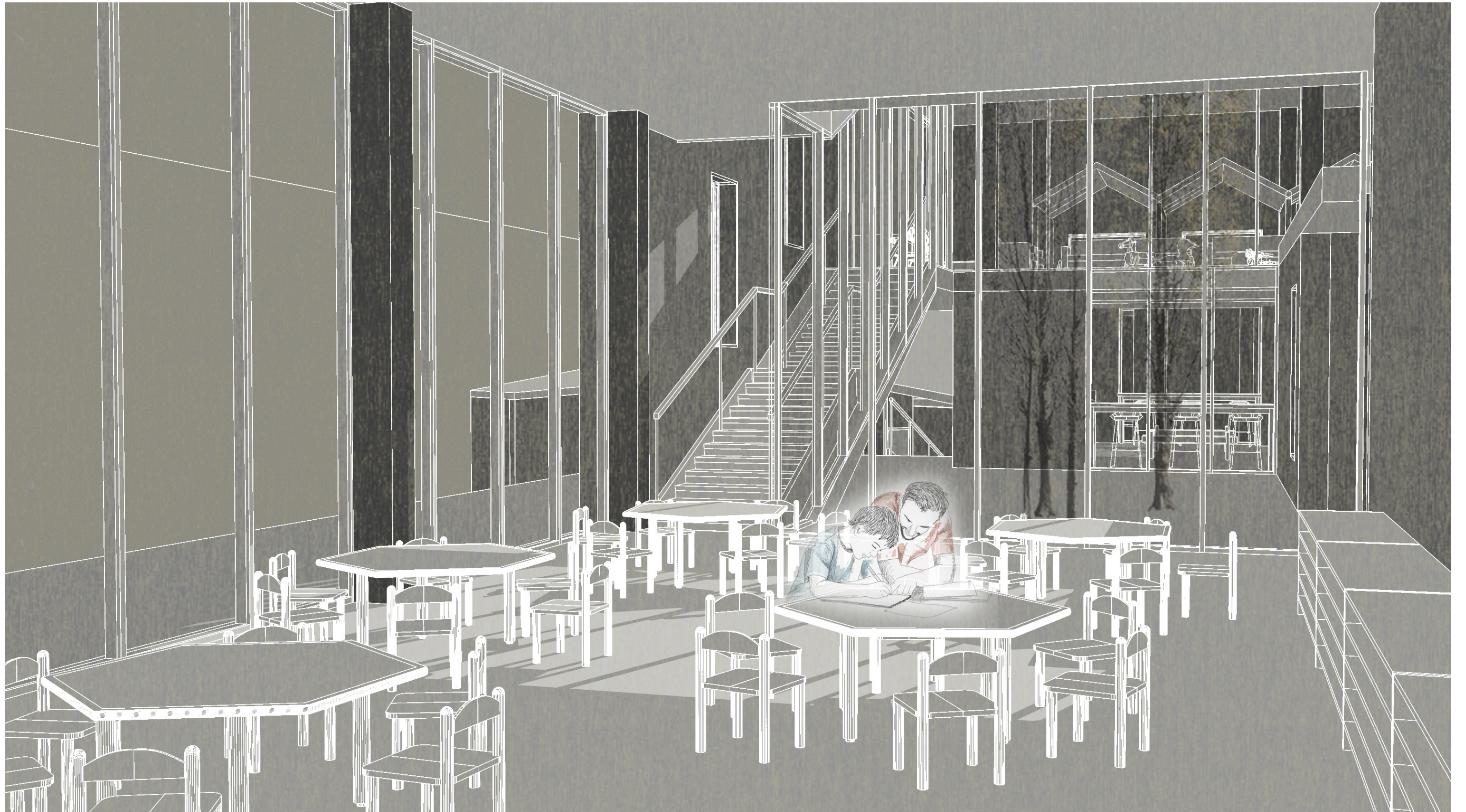


Figure 04-00-21. Visiting area for school-age children

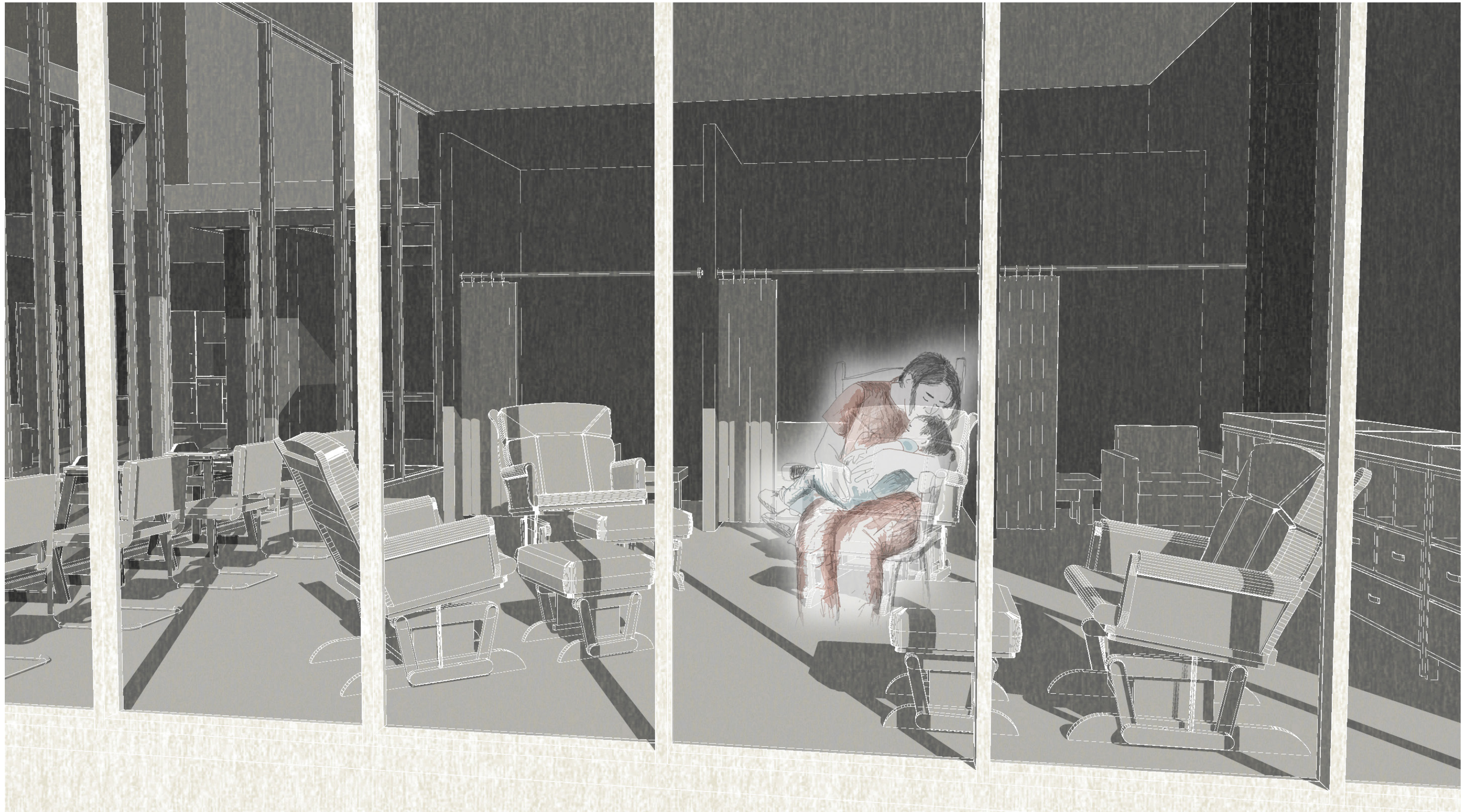


Figure 04-00-22. Visiting area for infants and toddlers

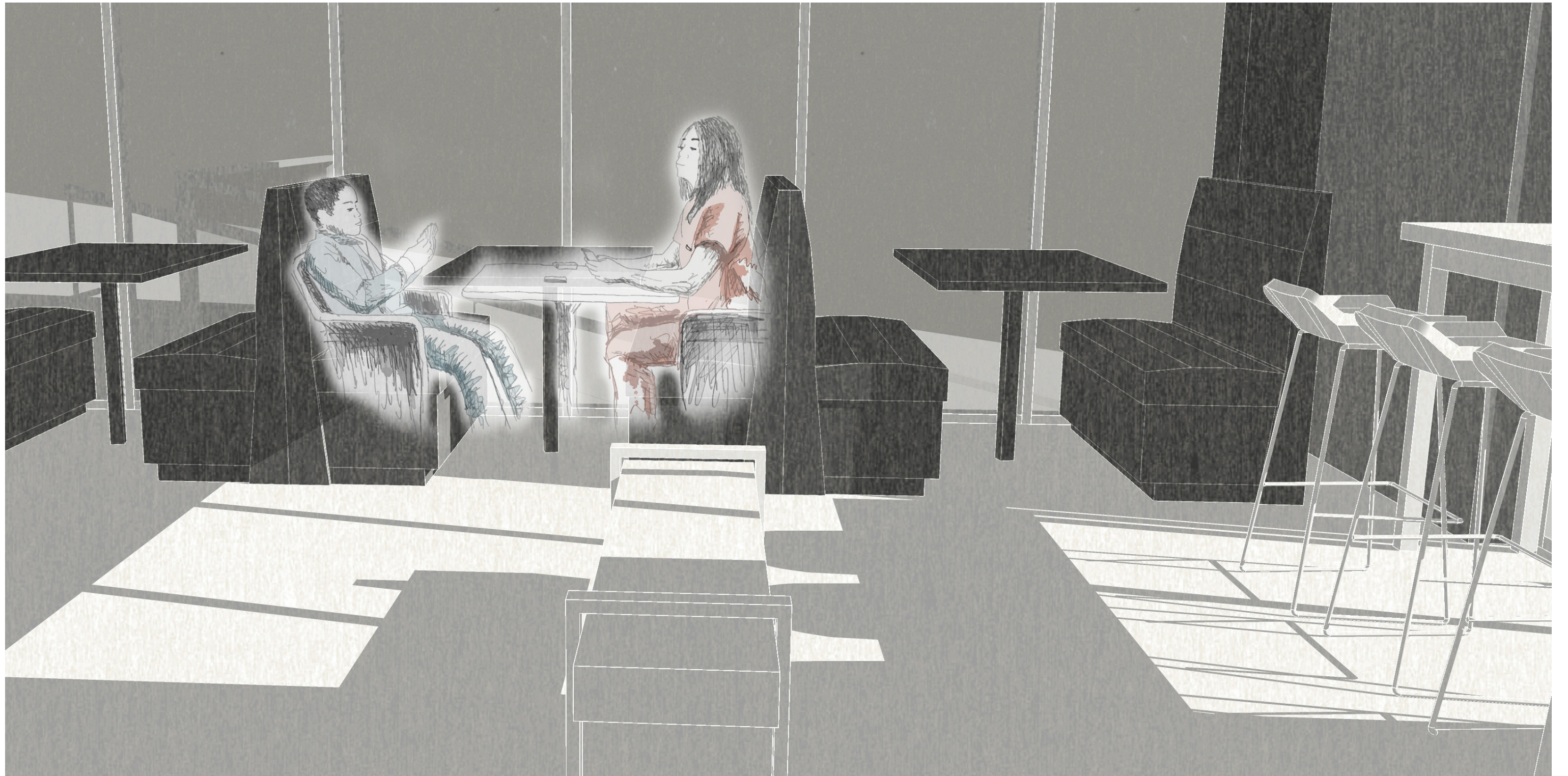


Figure 04-00-23. Visiting area for older kids

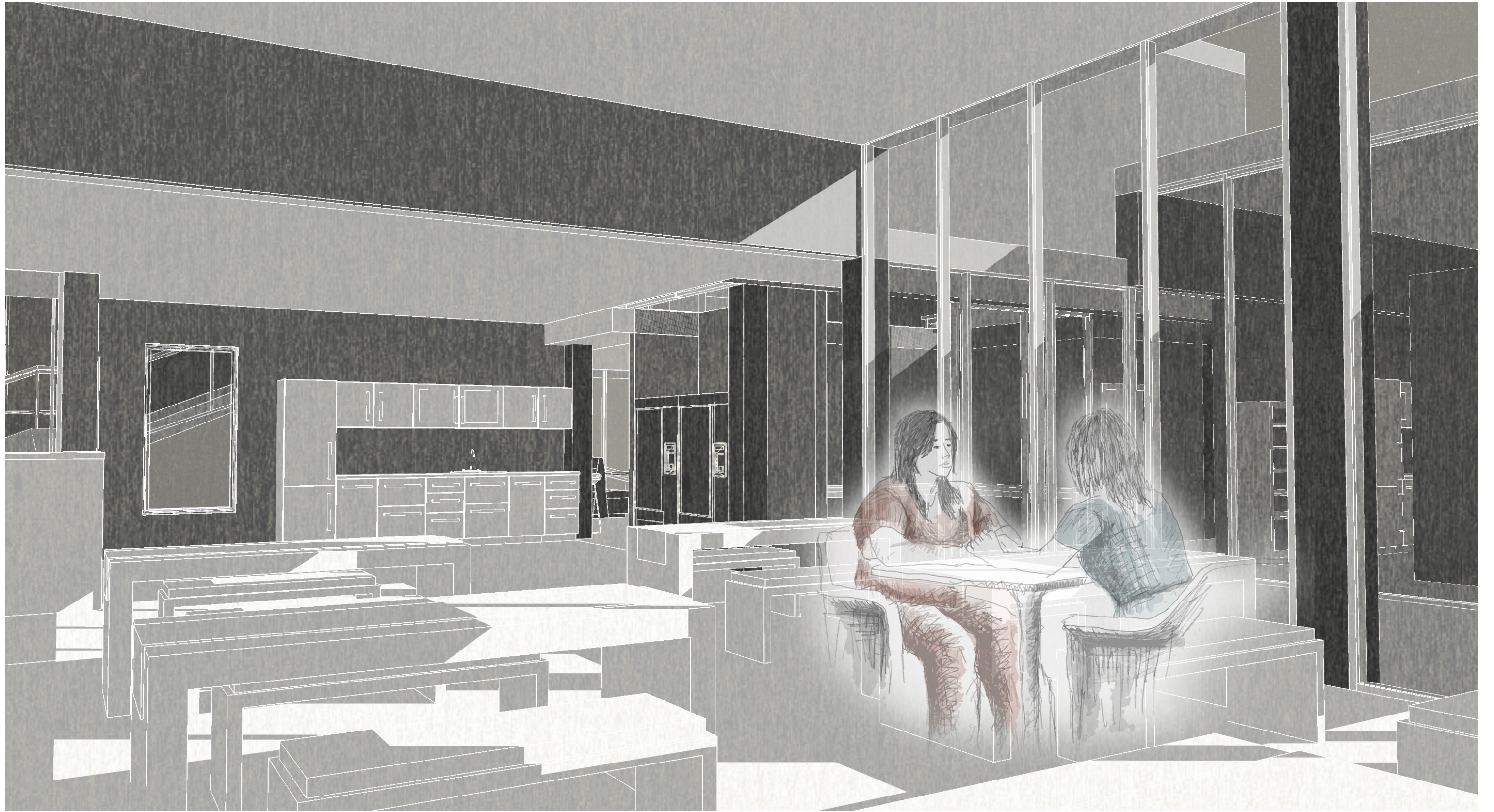


Figure 04-00-24. Visiting area for adults

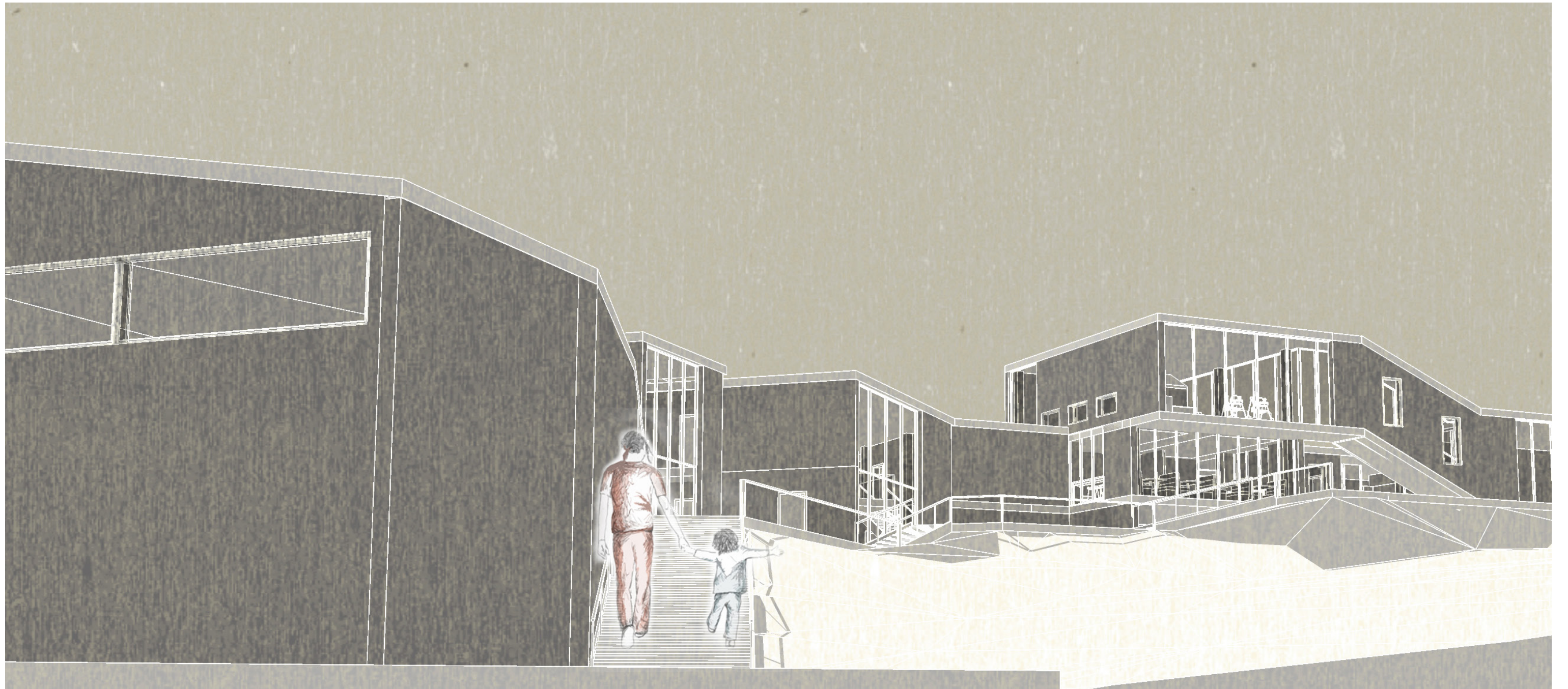


Figure 04-00-25. Exterior of the visiting centre

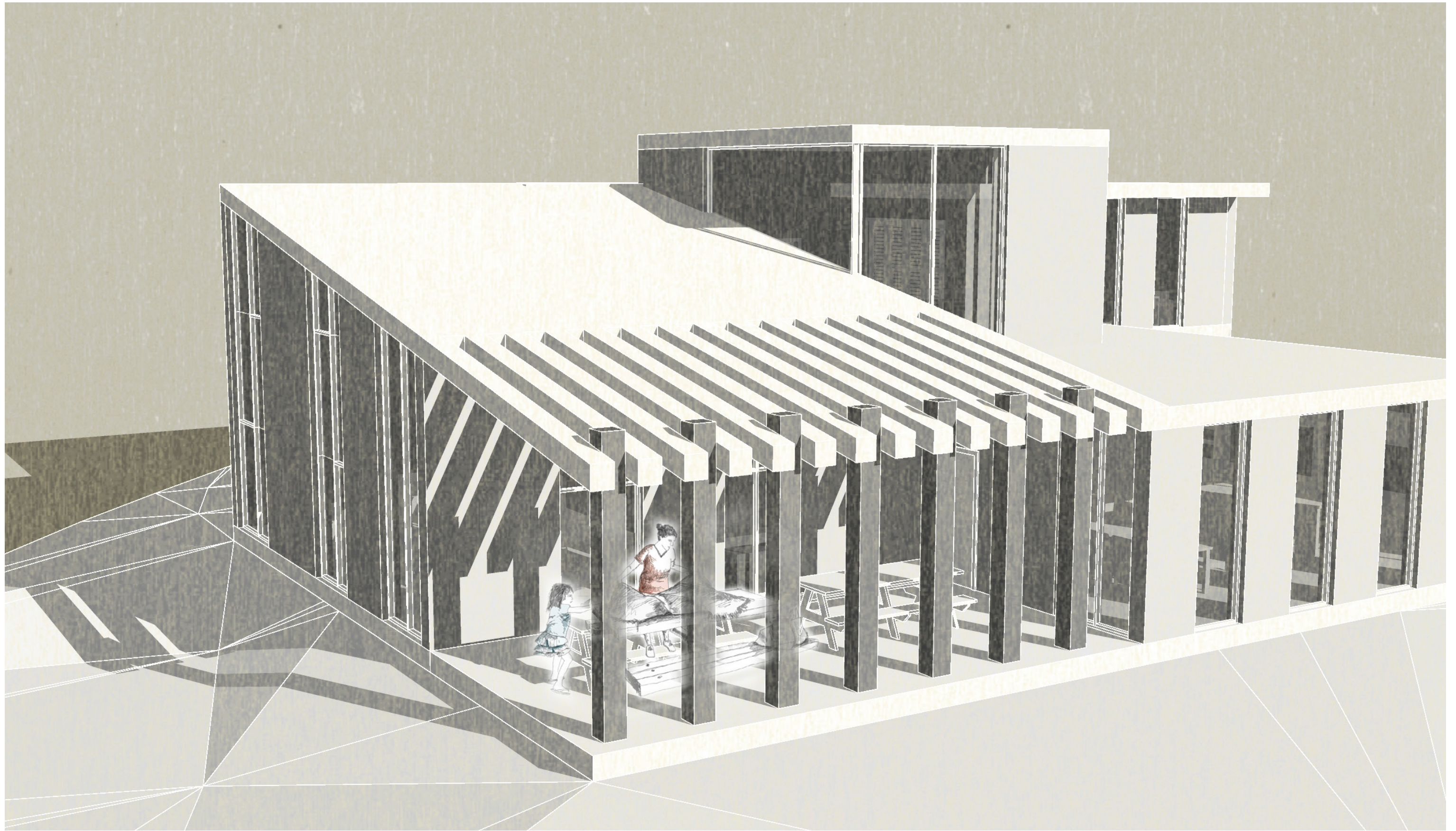


Figure 04-00-26. Picnic table outside the mother-baby house

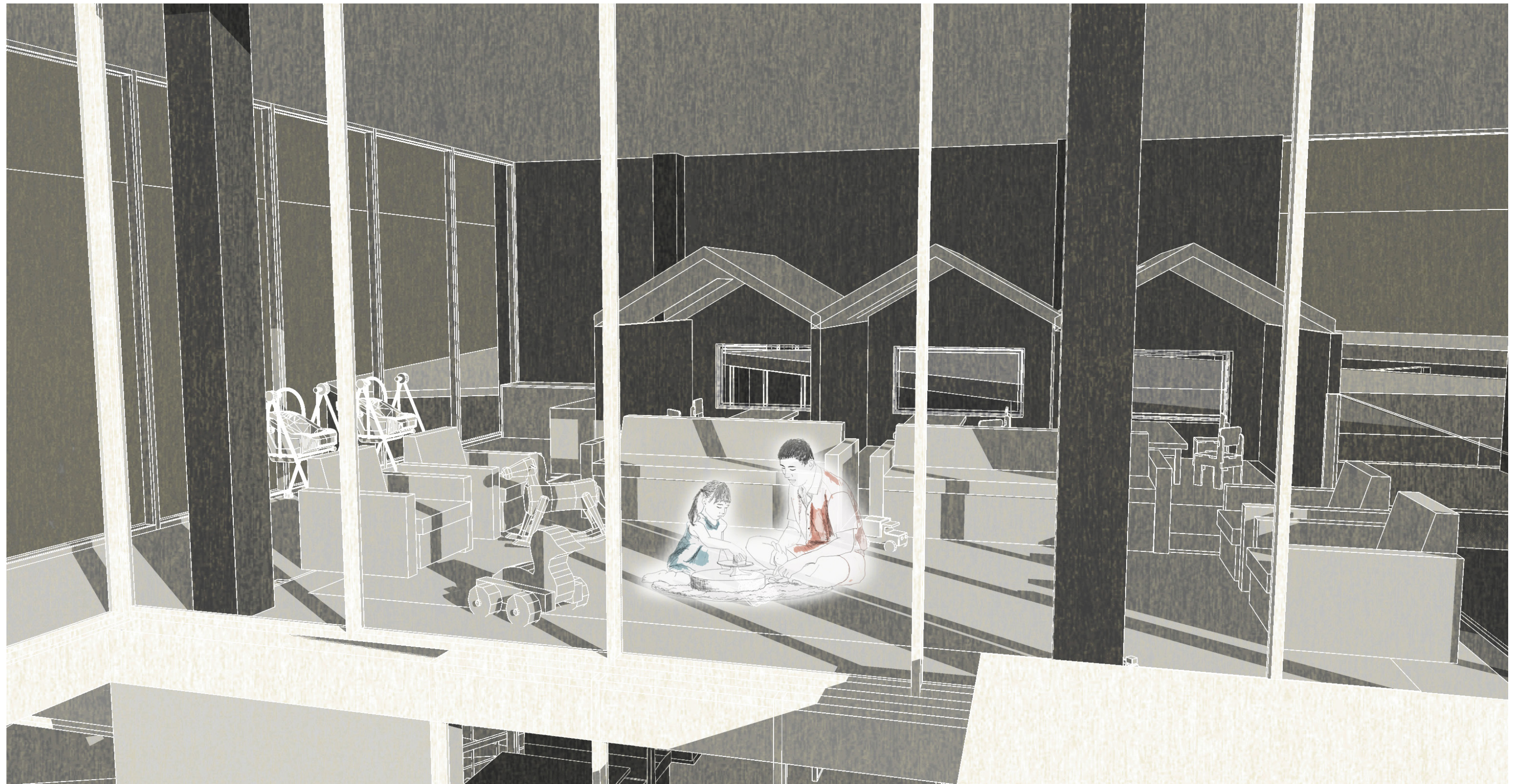


Figure 04-00-27. Visiting area for school-age children

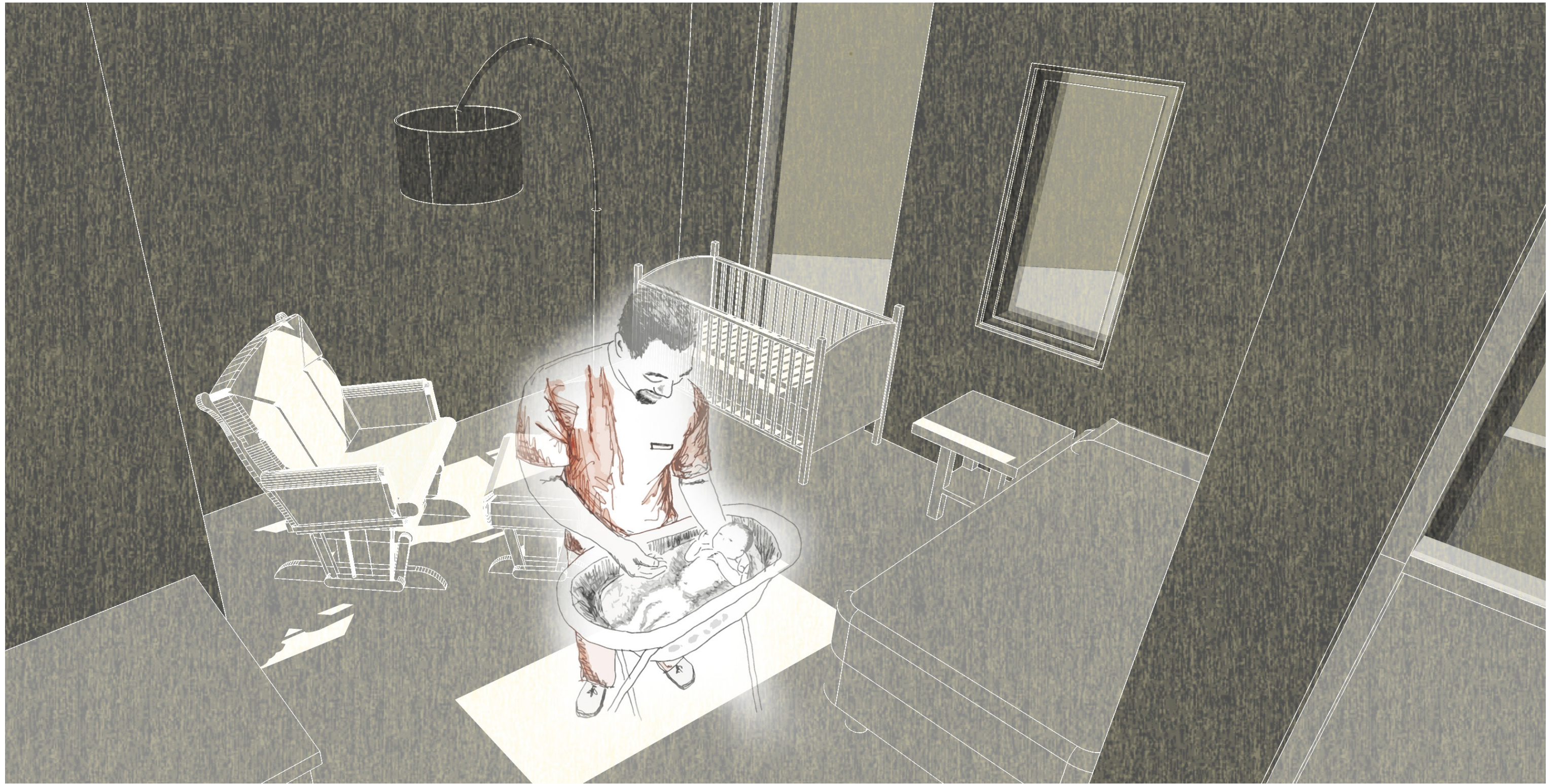


Figure 04-00-28. mother-wbaby room in mother-baby house

PRIVATE FAMILY VISITING HOUSE(PFV)

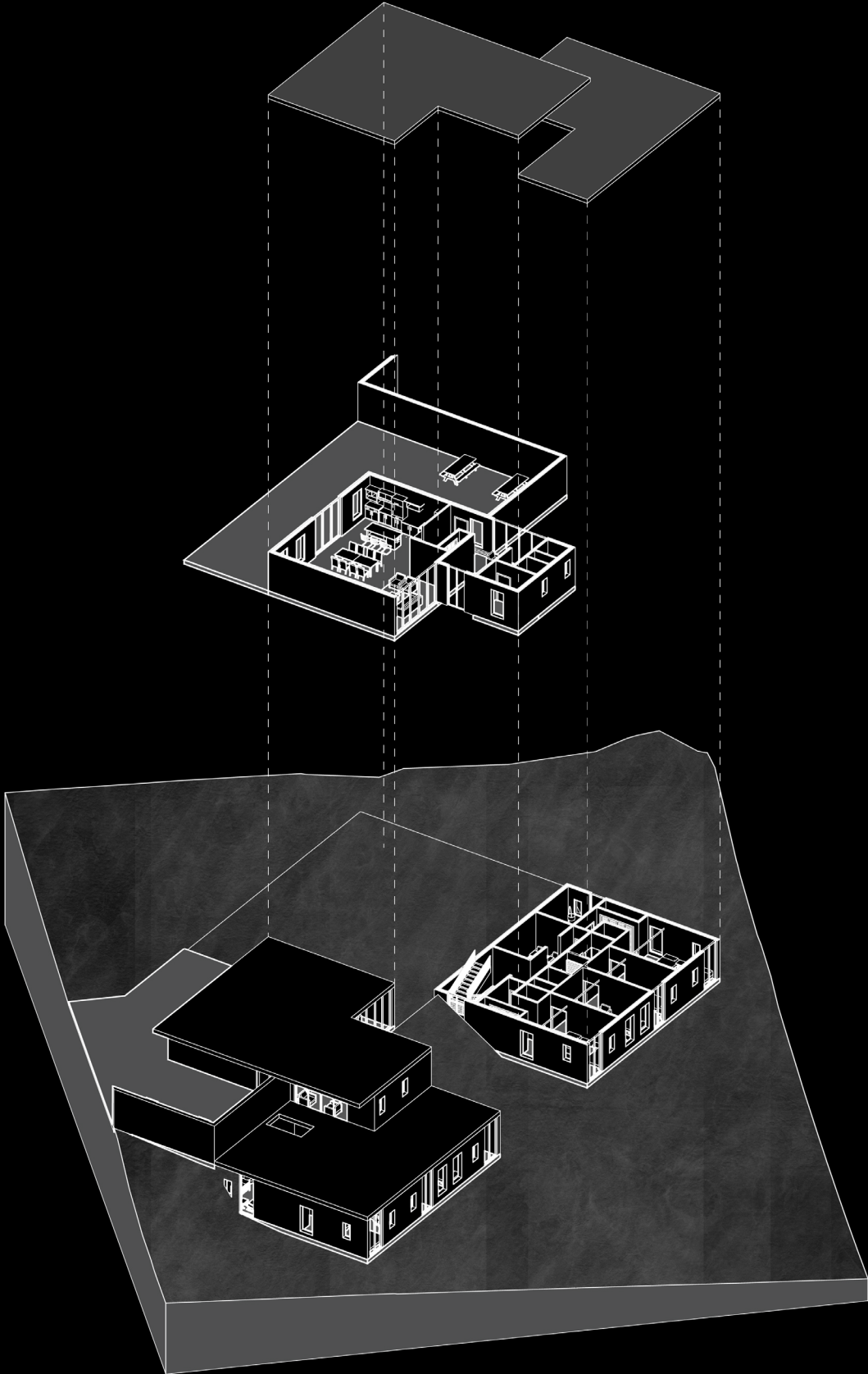


Figure 04-00-29. Exploded axonometric of the PFV

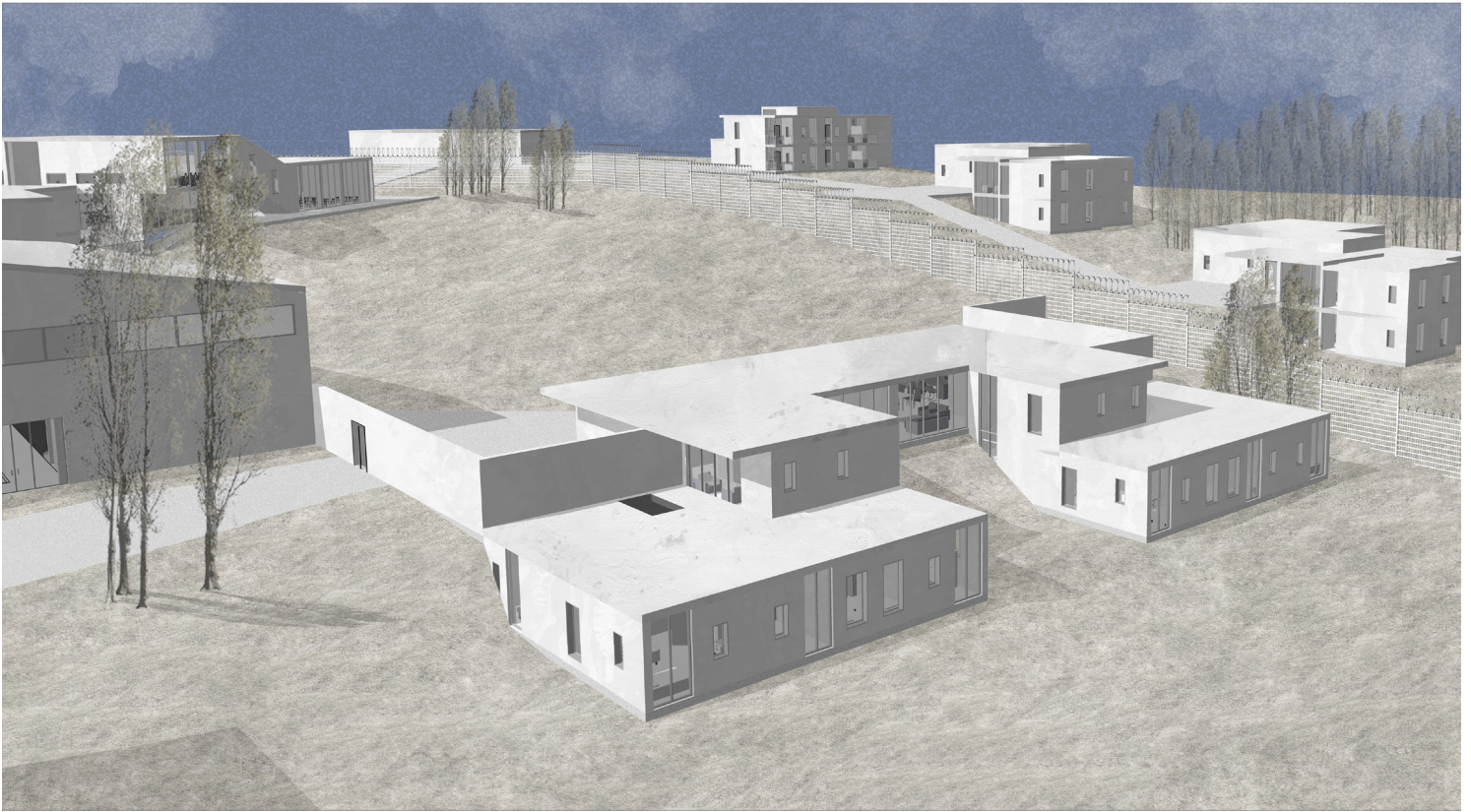


Figure 04-00-30. PFV

The visitors should go to the private family visiting houses through the visitor's zone of the visiting centre. There are two identical houses; each of them has two floors and can accommodate two families. The entrance and shared places such as kitchen, living room and the semi-public room are on the second floor; the bedrooms are downstairs. The focus of this building is flexibility. Economically speaking, It would make more sense to have two families share one house instead of assigning one to each family since the number of families who come to visit varies. So we can maximum use space by easily changing the combination of the bedrooms to accommodate different numbers of people. However, there is at least one nursery room for little kid in each house as an extension of the mother-baby program.



Figure 04-00-31. 2F of the PFV



Figure 04-00-32. 1F of the PFV

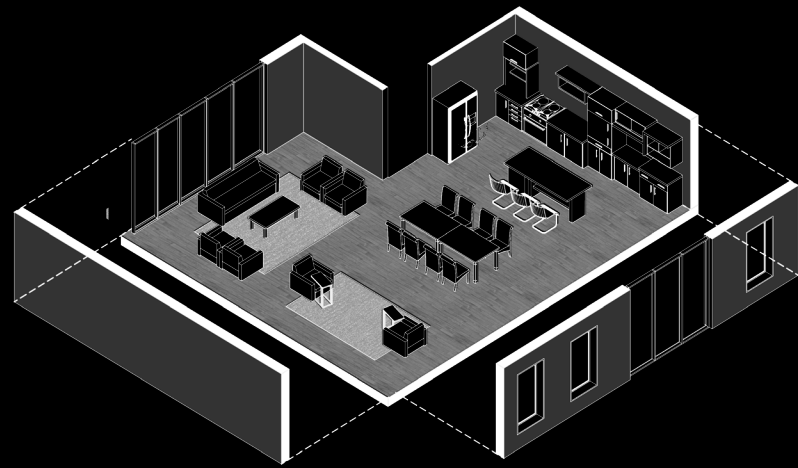


Figure 04-00-33. Living room / Kitchen / Dining room

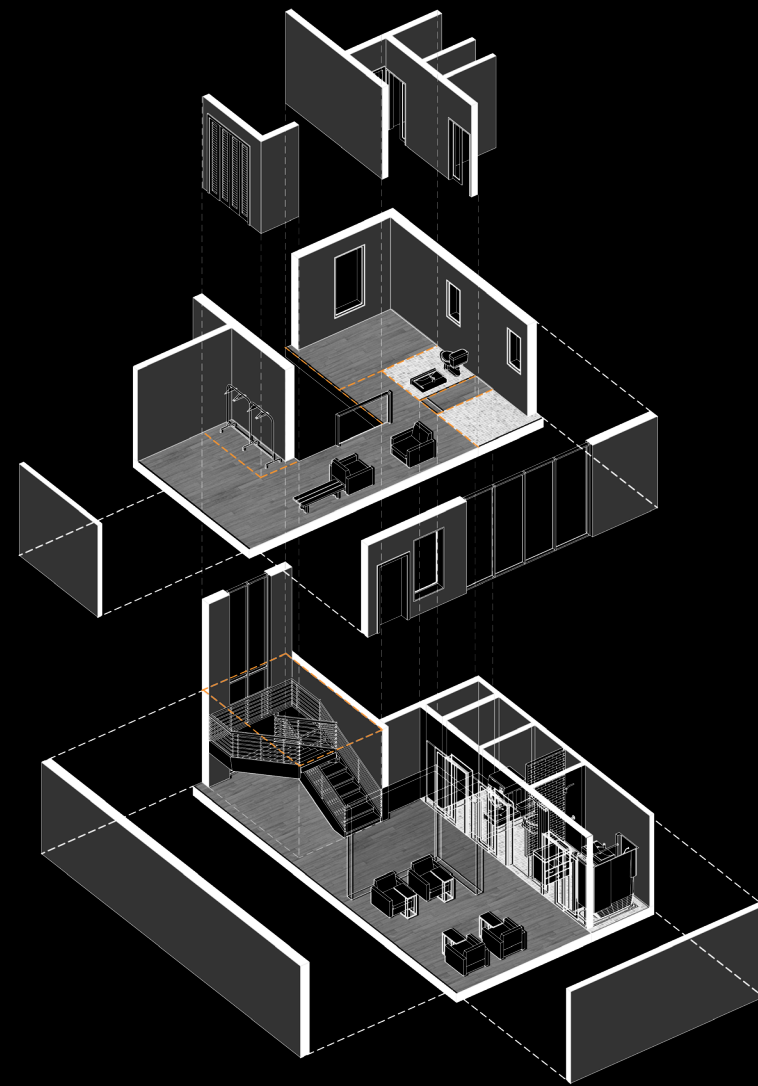


Figure 04-00-34. Semi-public space

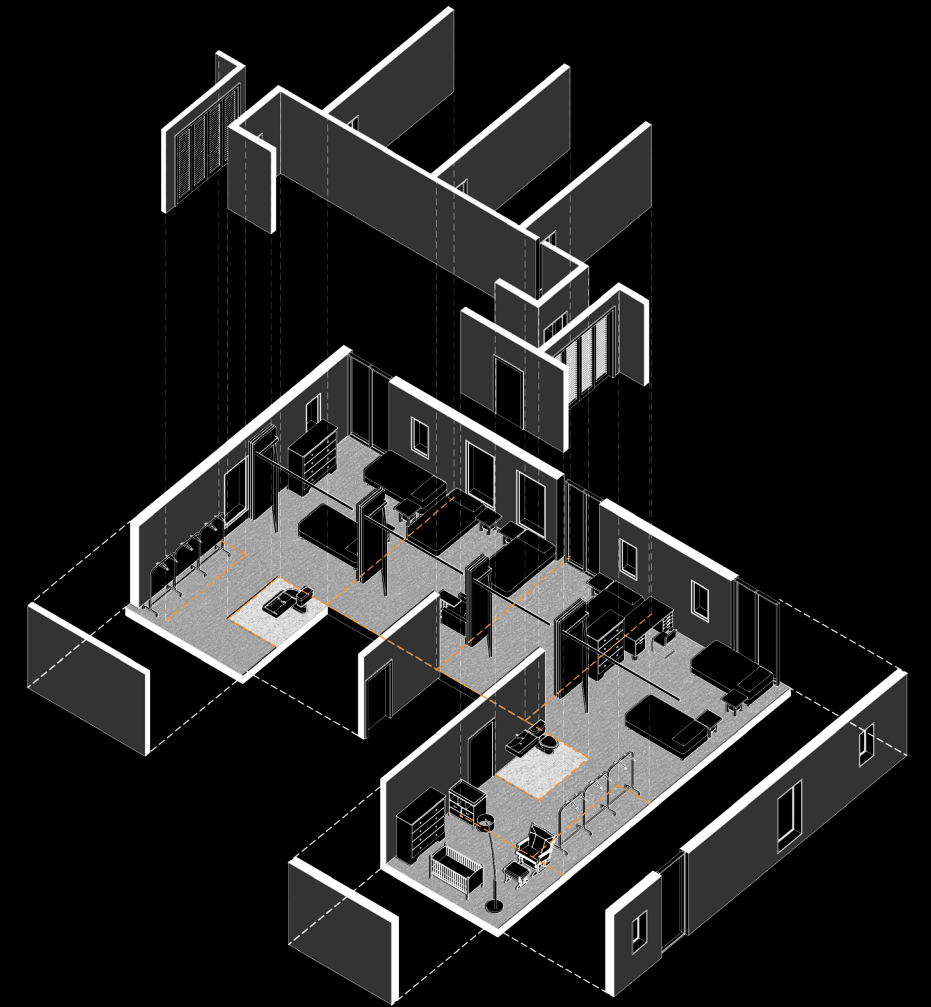
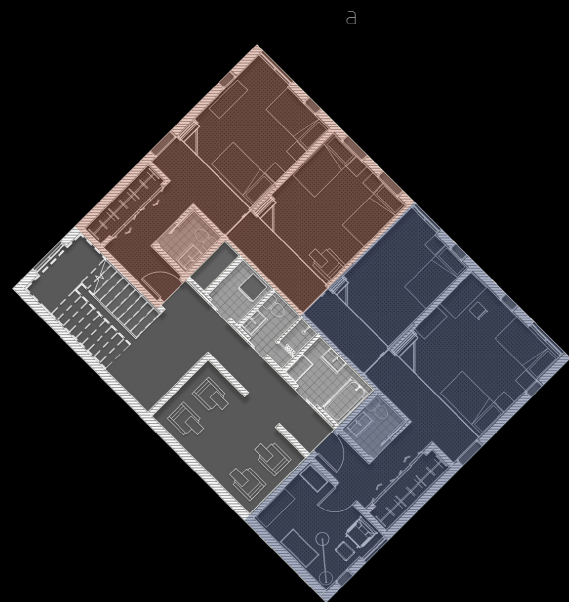
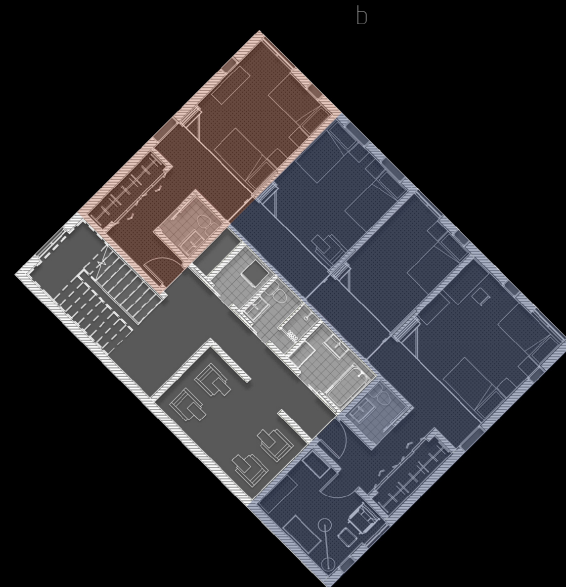


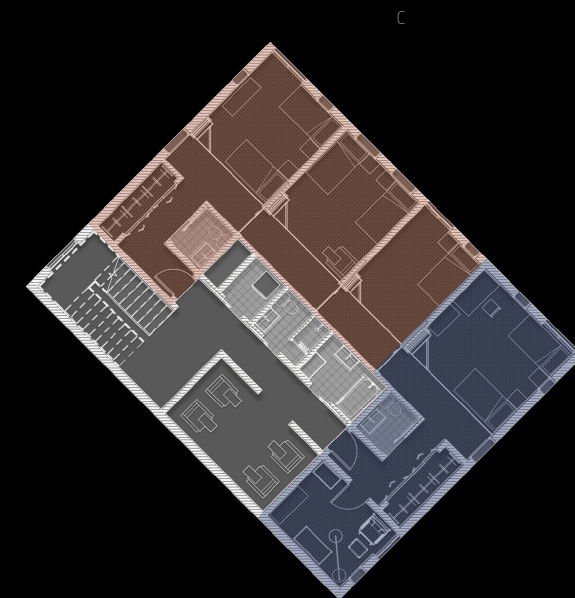
Figure 04-00-35. Bedrooms



a



b



c

Figure 04-00-36 a-c. Different combinations of the bedrooms

MOTHER-BABY HOUSE

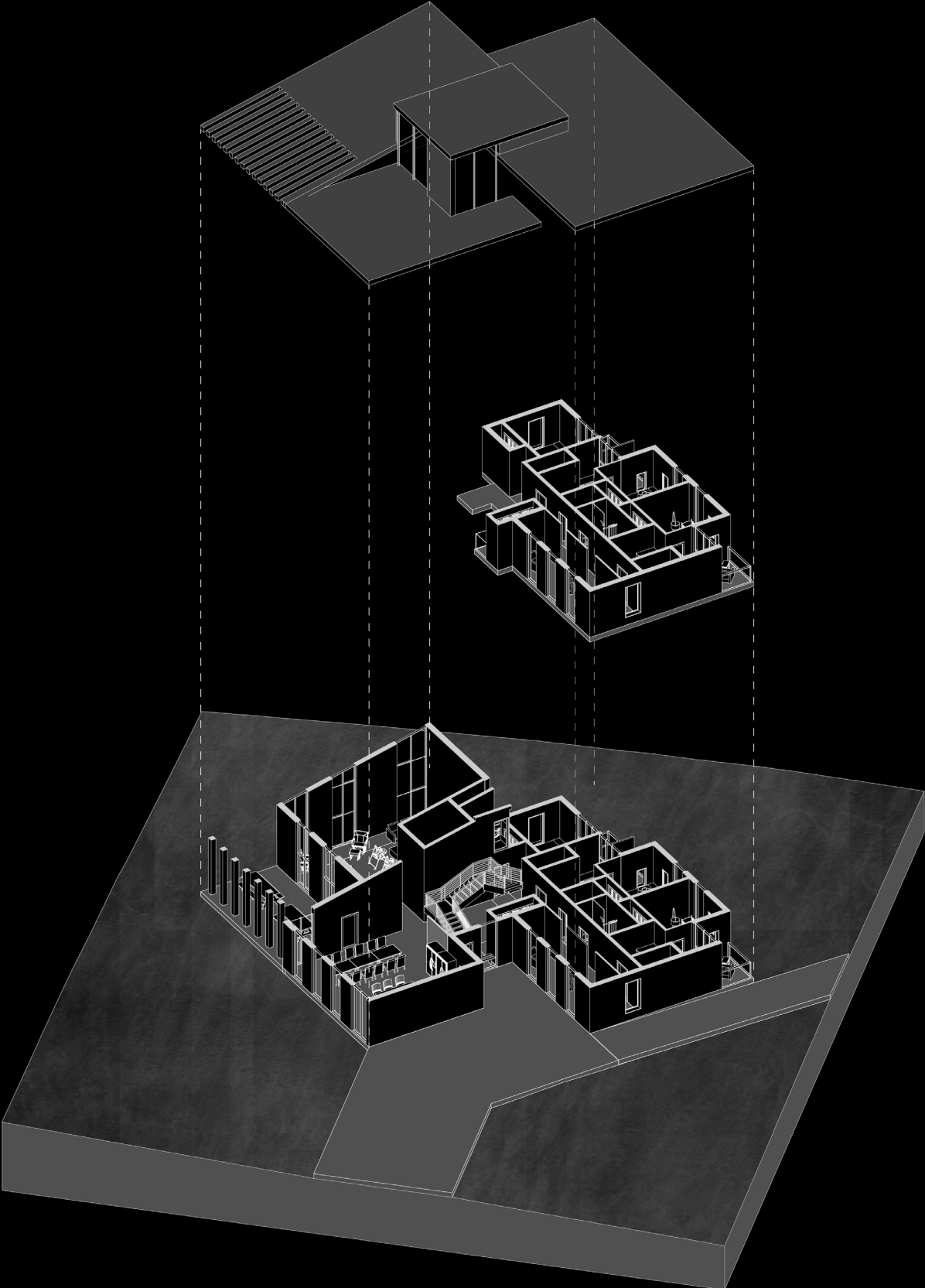


Figure 04-00-37. Exploded axonometric of the mother-baby house

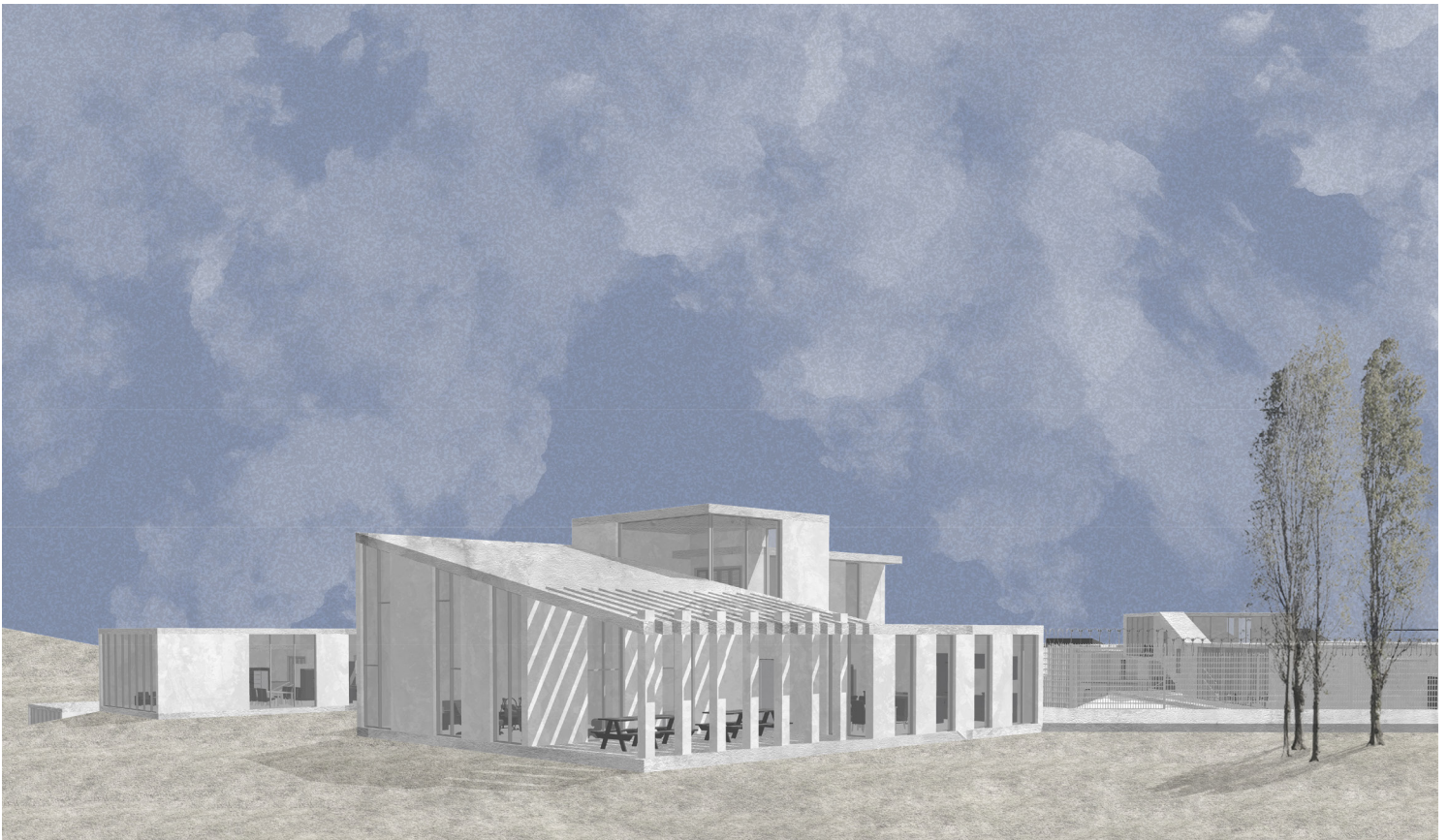


Figure 04-00-38. Mother-baby house

This type of program existed because we want to ensure a secure caregiver-child relationship. It lays the foundation of healthy social-emotional development, which is about building relationships with others.

The house has two floors; each floor has a shared shower room, bedrooms, and a semi-public area. There are four mother-baby suites in the house. Each of them has a bed for mom, a crib for a child. There is a small balcony beside the reading area. Some storage places and counter are designed closed the door for mom to prepare food or milk. And each suite is equipped with a private washroom.

Apart from the mom-baby suite, there are two rooms for pregnant women because the general population area is clearly not the right place for them to stay.

There are a kitchen and a dining room, just like what grand valley's apartment currently has. The living room inside the house is a combination of the visiting area for school-age kids and infants because the prison nursery program in Canada is opened to children from infant to preschool-age. The idea of using the wooden floor is to let children feel nature.

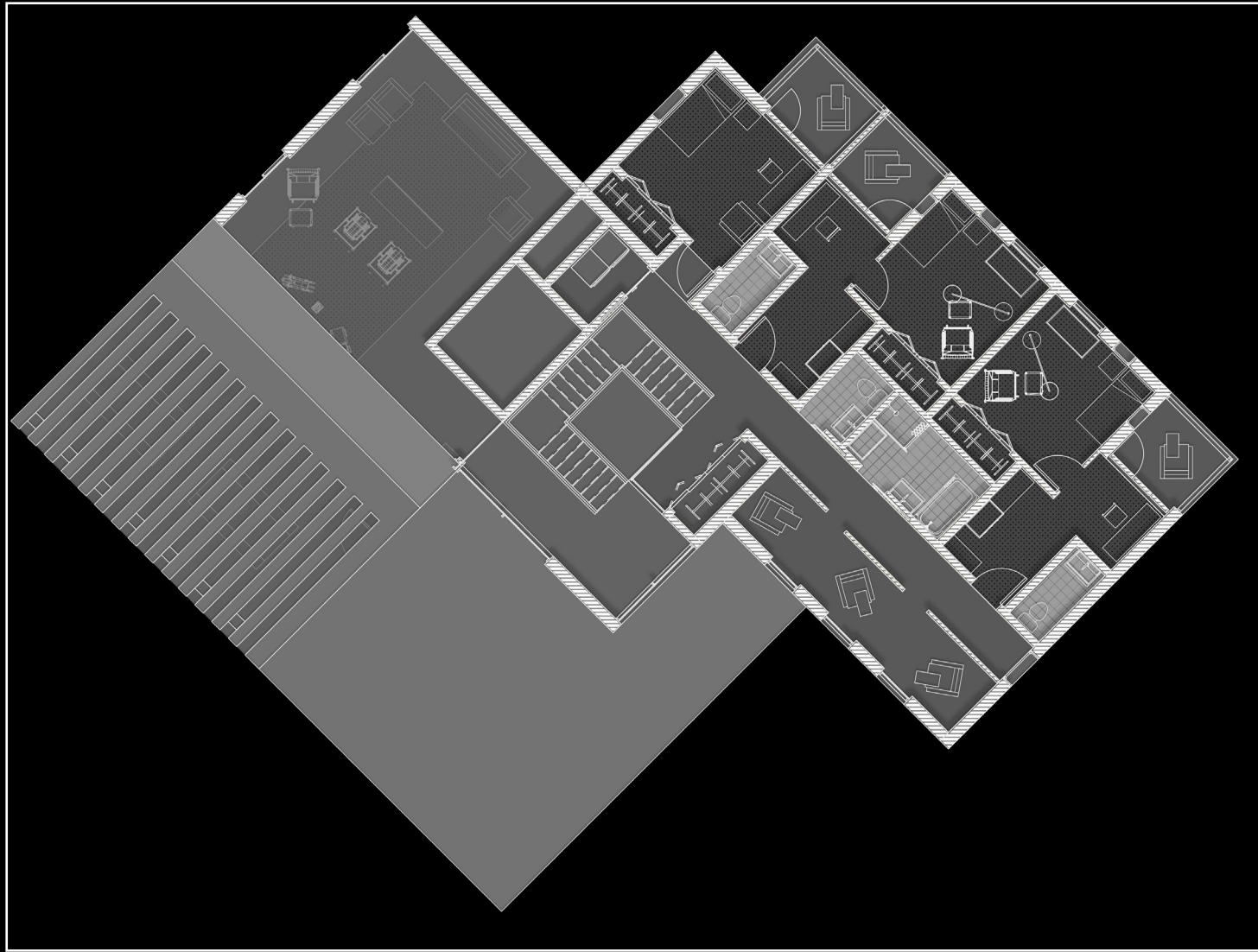


Figure 04-00-39. 2F of the mother-baby house

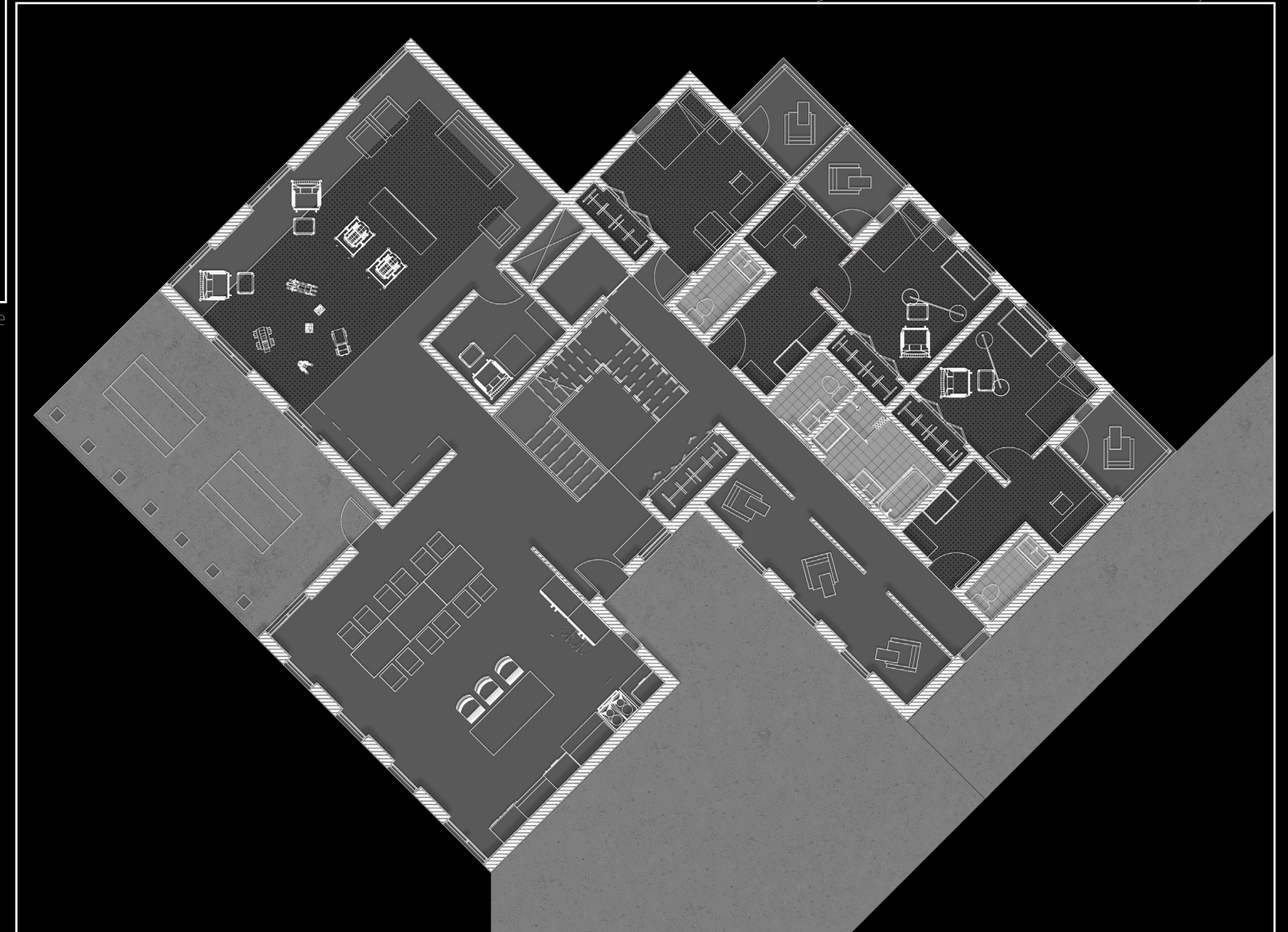


Figure 04-00-40. 1F of the mother-baby house

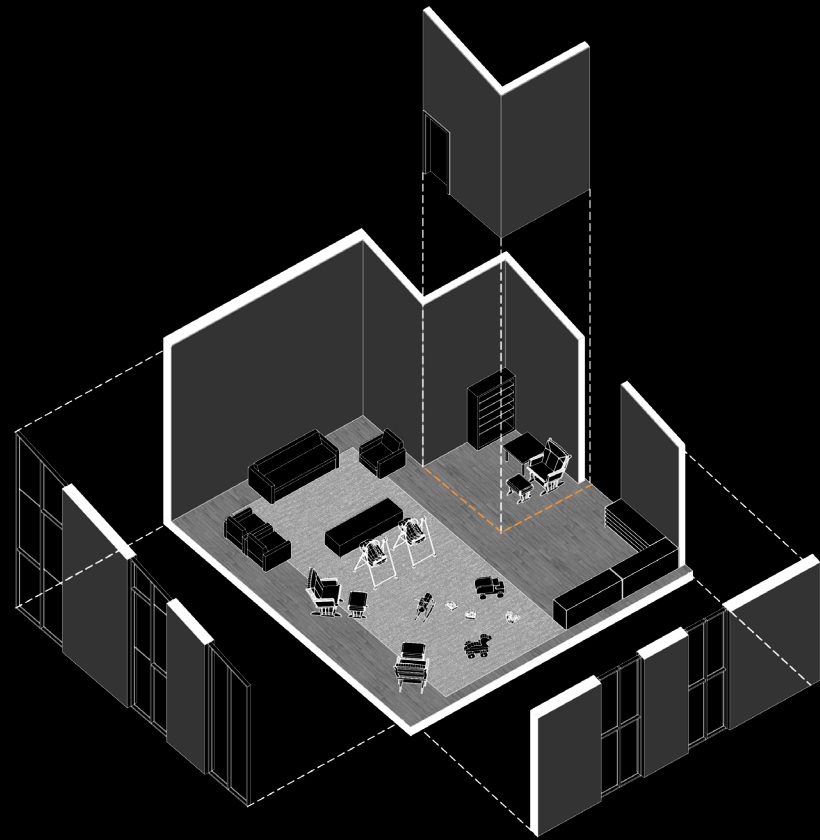


Figure 04-00-41. Living room / Play area / Nursing room

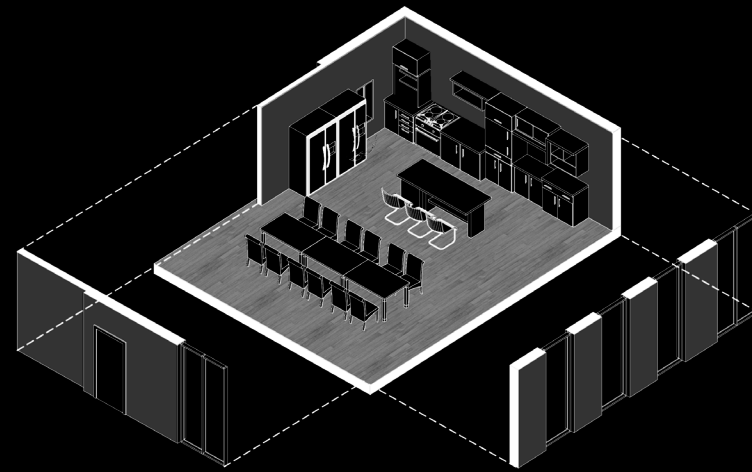


Figure 04-00-42. Kitchen / Dining room

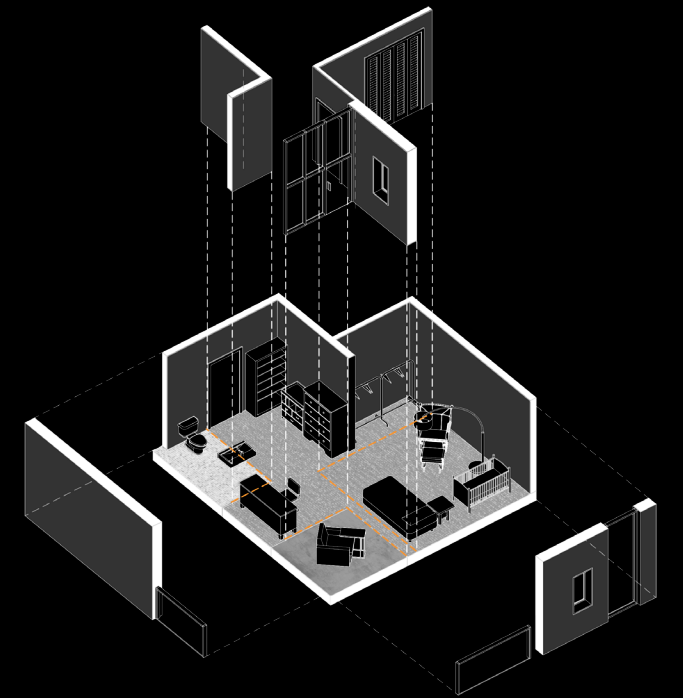


Figure 04-00-43. Mother-baby room

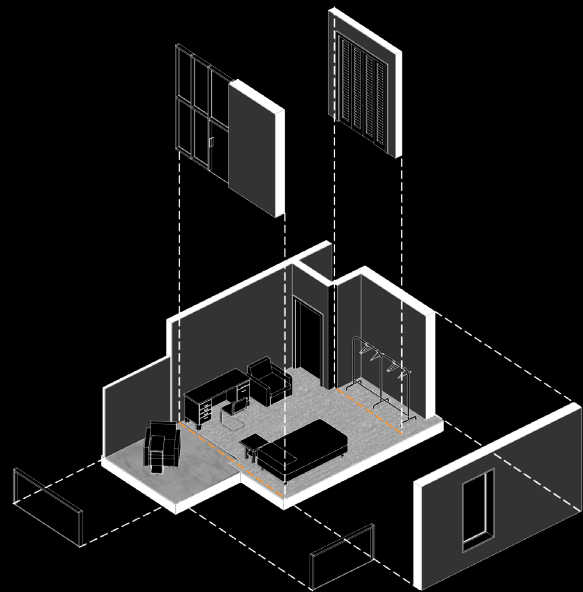


Figure 04-00-44. Pregnant women room

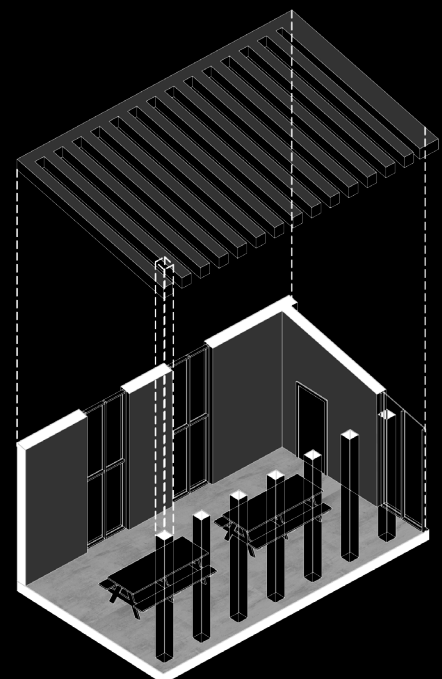


Figure 04-00-45. Picnic table area

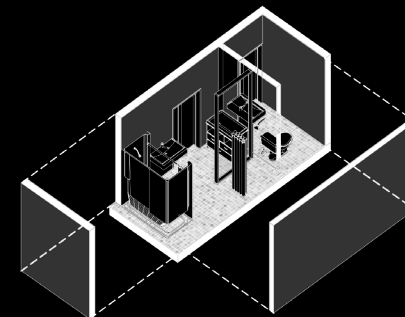


Figure 04-00-46. Shared bathroom

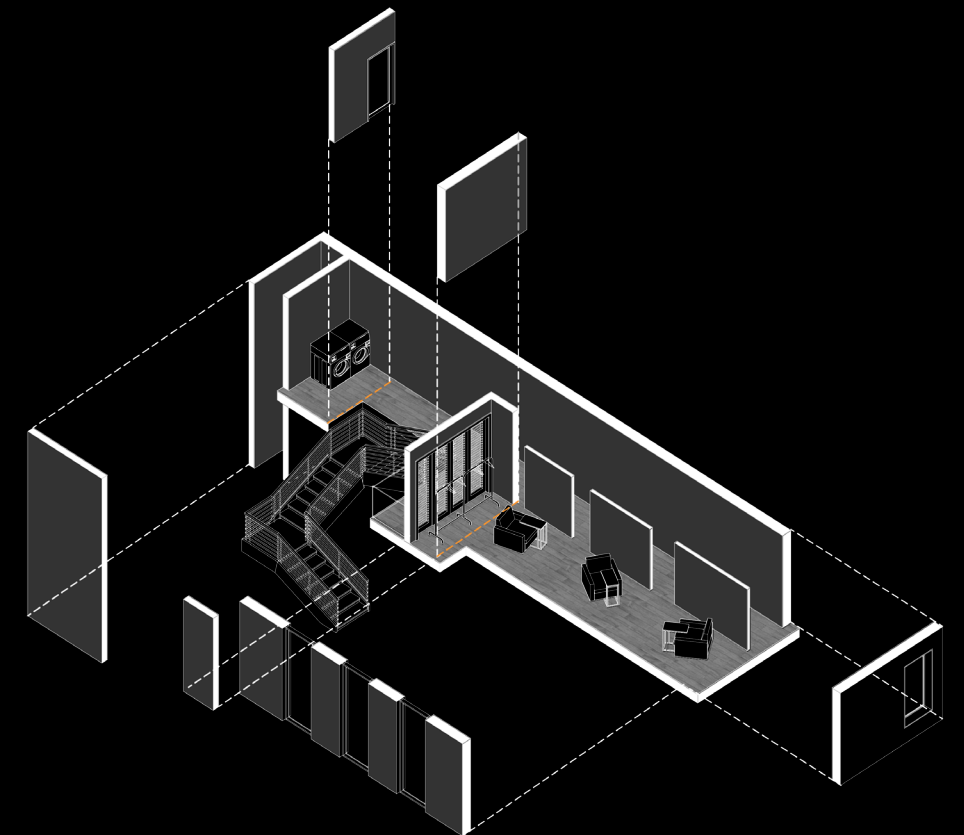


Figure 04-00-47. Semi-public area

MINIMUM-SECURITY HOUSE

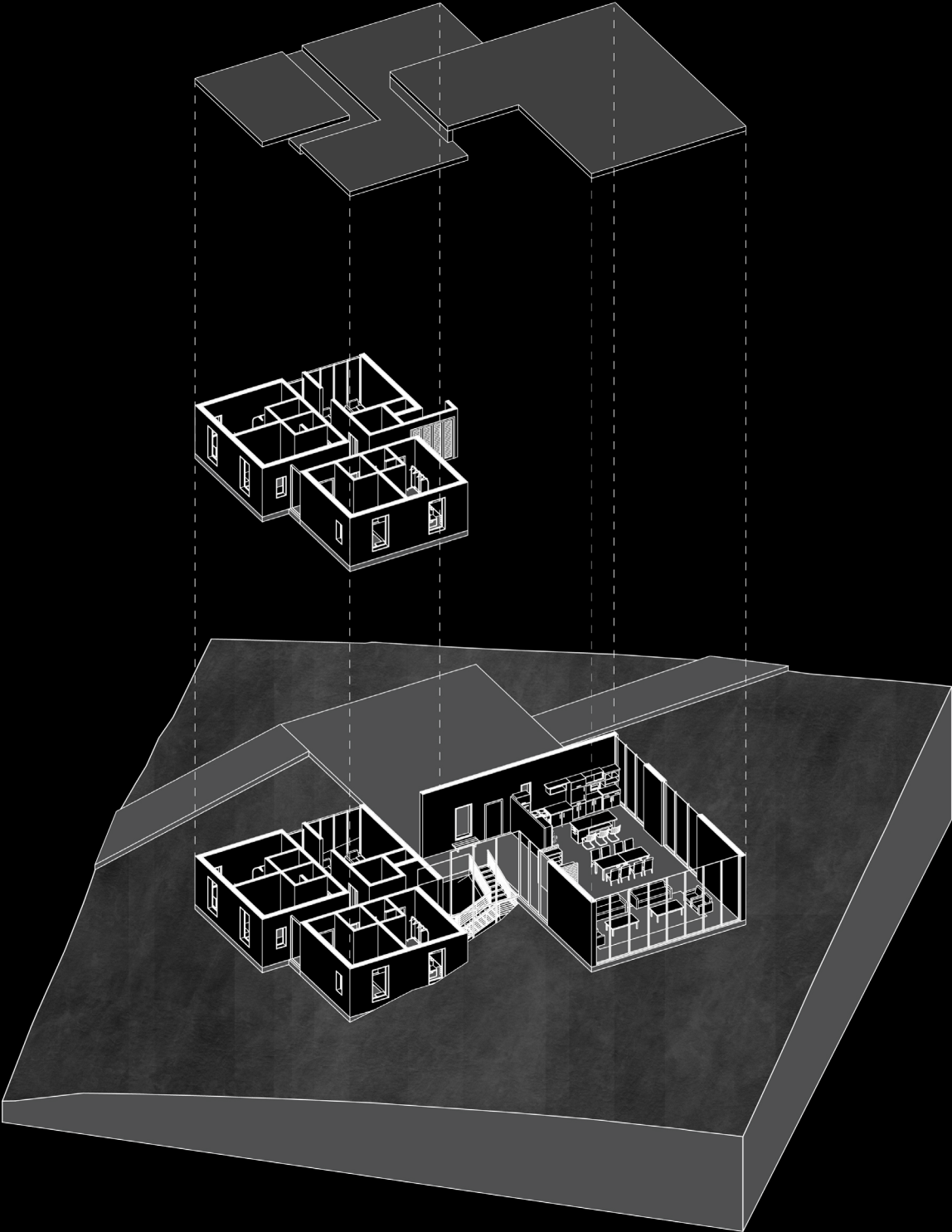


Figure 04-00-48. Exploded axonometric of the minimum-security house



Figure 04-00-49. minimum-security house

The apartment for minimum-security inmates that *Grand Valley* currently has is what we called “normative” design, which applies to design that seeks to make the environment noninstitutional without sacrificing security such as a transition between the institutional life and freedom.

The minimum-security house I proposed followed the same logic of the mother-baby house and PFV. There are four private bedrooms for the inmates since privacy is essential in the “normalizing” process. Every two rooms share the washroom and the shower. Semi-public area and shared living room provide a place for socialization. They will take care of their own food in the kitchen and dining room. Since the acoustic design is crucial, I would consider using sound-absorbing materials such as acoustic ceiling panels and carpets.

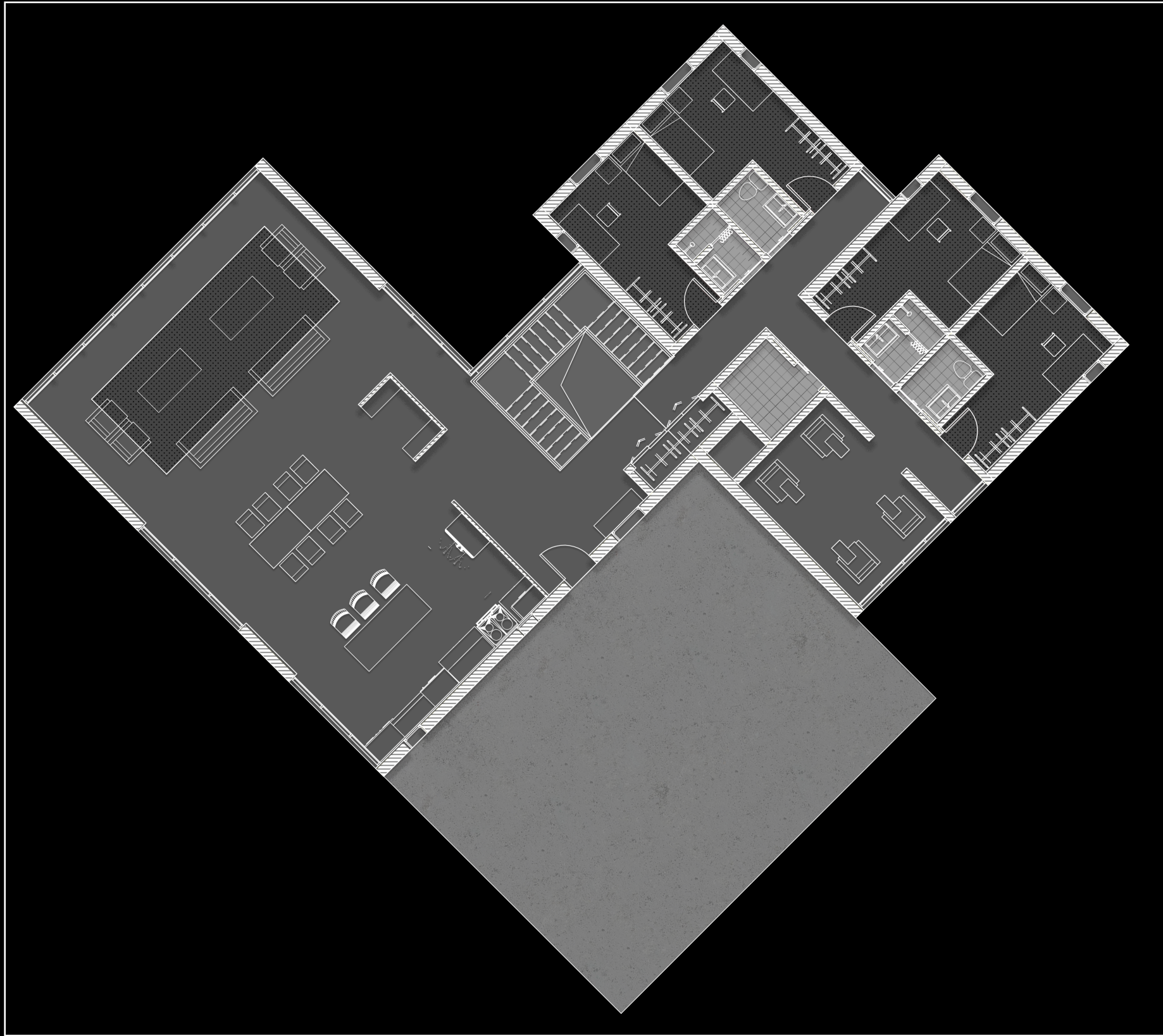


Figure 04-00-50. 2F of the minimum-security house



Figure 04-00-51. 1F of the minimum-security house

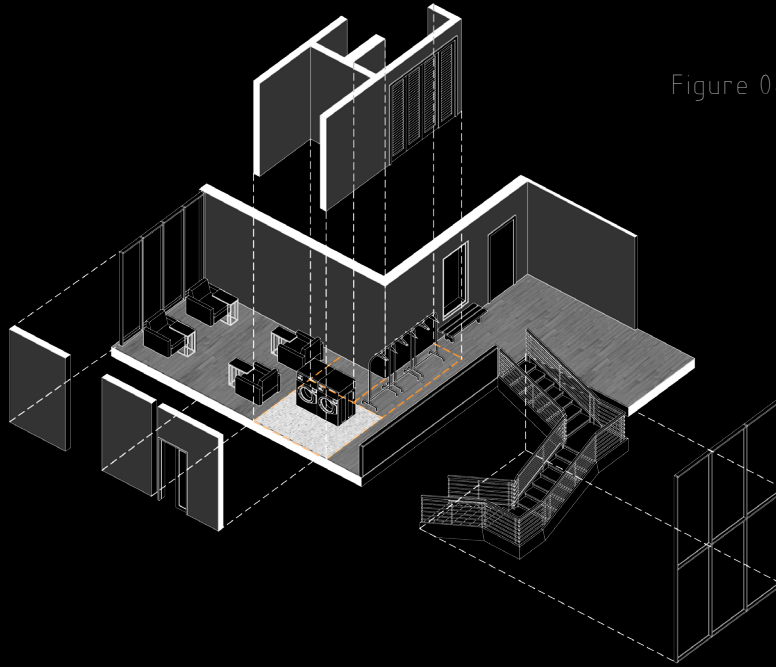


Figure 04-00-52. Semi-public space

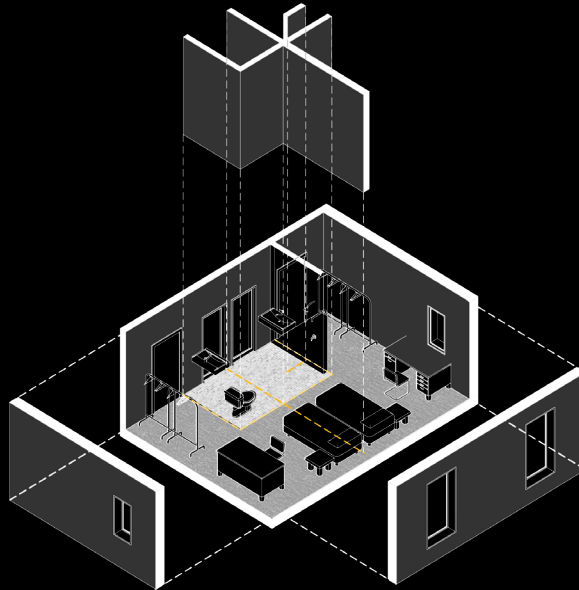


Figure 04-00-53. Inmate room

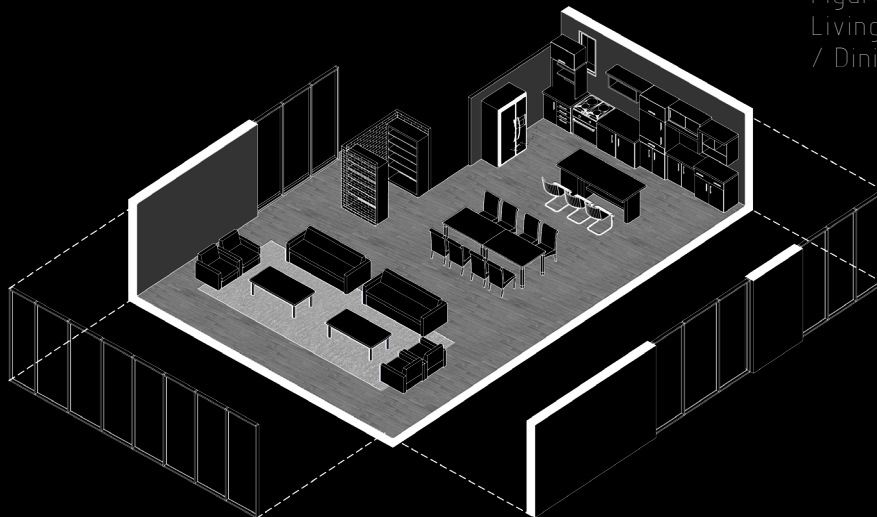


Figure 04-00-54.
Living room / Kitchen
/ Dining room

The perimeter security includes two types. Usually, there is the fence with the barbed wires on top. Alternatively, there is the concrete wall. The fence can be a negative element, so we can use specific gestures to intervene, such as using the greenery as the buffer, or transfer it into something positive that people can interact with.

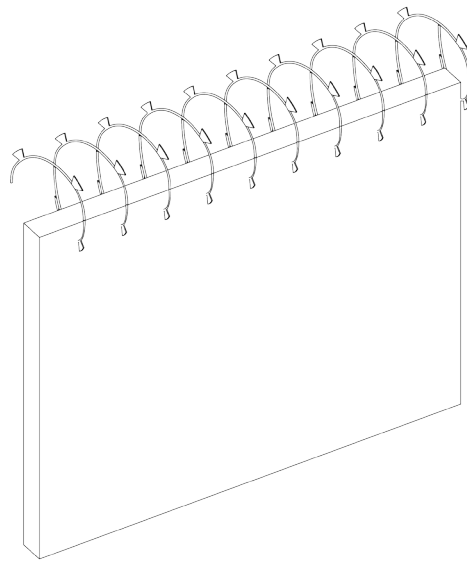
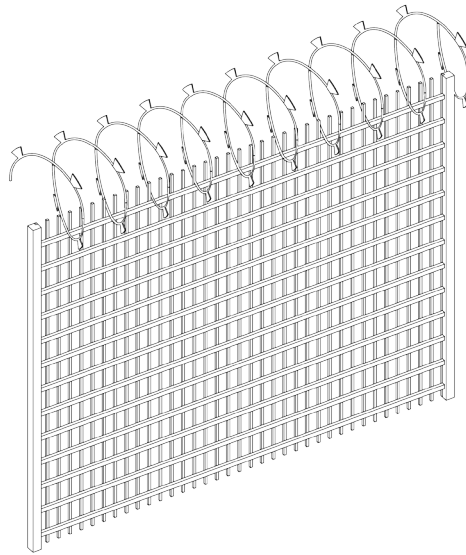
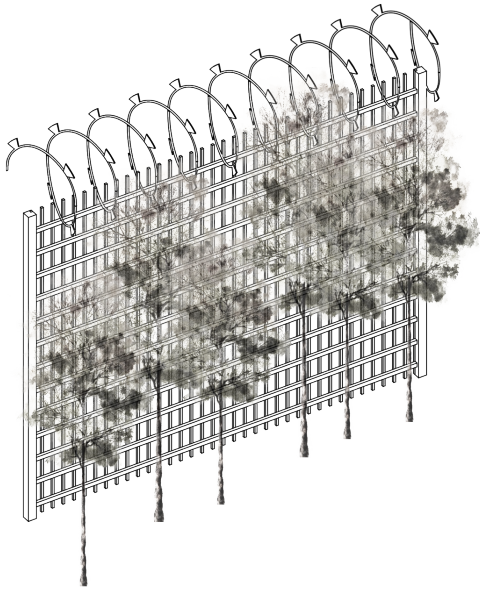
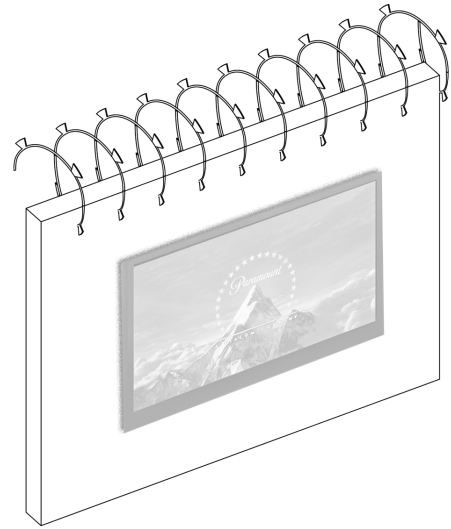


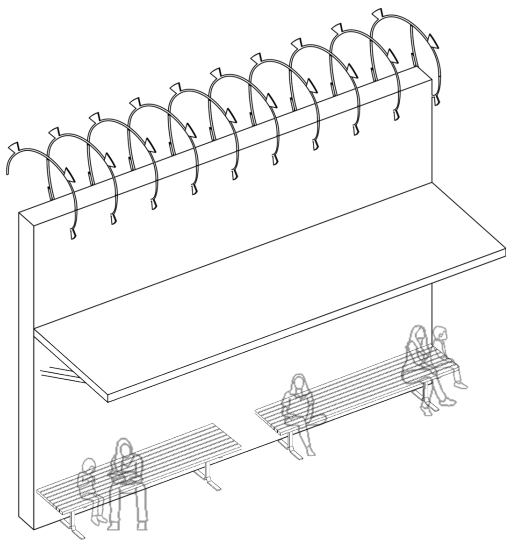
Figure 04-00-55. Two types of the fence



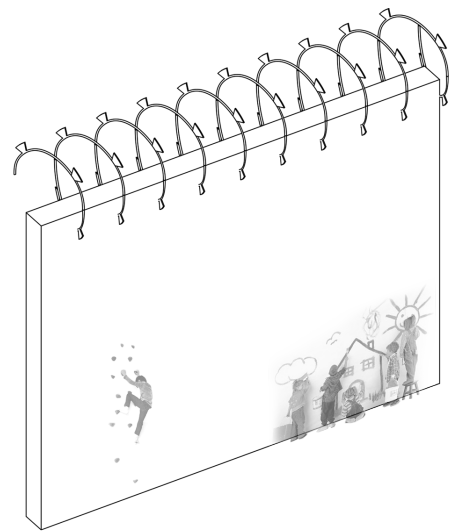
a



b



c



d

Figure 04-00-56 a-d. Fence design

CONCLUSION

This thesis is an articulation of my fascination with an architectural contradiction as well as a social dilemma. Children and prison; Rebellion and peace; Imprisonment and freedom; these opposing ideas have infiltrated the work, which makes people unconsciously reject and embrace it simultaneously. From the conflict to the interdependence, my humble maybe even naïve attempt drove me to deep humanity and create something that is idiosyncratic.

When social and economic asymmetries are extreme between two areas, the border becomes the focus of tension. It also applies to the fences that separate the freedom and imprisonment. Prison is a confined space, sometimes is even more like a taboo word filled with judgements. Paradoxically, the more we approach this most “notorious” world, the more we would like to search for the positivity and the possibility. Thus what behind this investigation is a constructively rethinking of the ideas of “social responsibility” and “rehabilitation”.

This topic not only forced me to explore what is hidden in the darkness but raised the question of what does it mean to be a child? Adults as independent beings are able to exercise conscious choices. They have possessed individuality that takes a child a long journey to develop. Children grow up as physically and emotionally exploring the world around them. The more secure they feel, the more confidently do they grow towards independence. The goal was to establish the best environment that fulfils children’s developmental needs within a complex context. It then required a delicate balance that connected diverse factors such as the children care and prison security.

I would like to compare solving an architectural problem as sorting out

a system such as an algorithm in a particular computer program. Hence what I did for this thesis was to develop an algorithm for the architectural design with a series of parts that made the whole. A spatial strategy was derived from the researches on the prison's security and the architecture for children. It is fair to say that the final design proposal is a repository of the intelligence distilled from many different disciplines, since creating architectural relationships between spaces fosters relationships between guards, inmates with different security levels, multiple age groups of children, and innocent adults who accompany the children. Besides the purely rational process, the Intuitive sometimes even become a decisive component. A collective of parent-child moments is a shortcut as well as a determinant element.

One of the major challenges for me was a lack of personal experience on this typology. Although the information that is available to me allowed me to complete the research and a design proposal, which was heavily influenced by strategies that pursue the production of certain effects such as the circulation and space adjacency, a true resonate with the users is always the missing piece.

However, the research has shown the whole potential as a stepstone, that is to say; this thesis is not the result, but rather an integral part of the preliminary practice and tryout.

BIBLIOGRAPHY

- ABC news. *Children of Prisoners Reunite with Their Fathers Behind Bars for a Day*, n.d. <https://www.youtube.com/watch?v=i5VV0og-a7w&t=85s>.
- . *Mothers Behind Bars Get to Reunite with Kids for a Day*. Accessed August 7, 2019. <https://www.youtube.com/watch?v=T431Yqz2E>.
- Brazelton, T. B., and B. G. Cramer. *The Earliest Relationship: Parents, Infants, and the Drama of Early Attachment*, 2018.
- Correctional Service of Canada. “Institutional Mother-Child Program,” February 27, 2003. <https://www.csc-scc.gc.ca/lois-et-reglements/768-cd-eng.shtml>.
- . “Study of the Mother-Child Program,” September 1, 2002. <https://www.csc-scc.gc.ca/publications/fsw/fsw24/toce-eng.shtml>.
- Evans, Robin. *The Fabrication of Virtue : English Prison Architecture, 1750-1840*. Book, Whole. Cambridge England ; New York: Cambridge University Press, 1982.
- Foucault, Michel. *Discipline and Punish: The Birth of the Prison*. Translated by Alan Sheridan, n.d.
- Garber, Benjamin D. *Developmental Psychology for Family Law Professionals : Theory, Application, and the Best Interests of the Child*. New York: Springer Pub. Co, 2010.
- Goffman, Erving. *Asylums : Essays on the Social Situation of Mental Patients and Other Inmates*. New Brunswick, N.J.: Aldine Transaction, 2007.
- Grafe, Christoph, Walter Herfst, Suzanne Fischer, Jaime Álvarez Santana, Laurens Otto, and Janno Martens. *Aldo van Eyck : Orphanage Amsterdam : Building and Playgrounds*. Amsterdam: Architectura & Natura, 2018.
- Harris, Yvette R. *Children of Incarcerated Parents : Theoretical, Developmental, and Clinical Issues*. Book, Whole. New York: Springer Pub. Co, 2010.
- “Hide and Seek: The Daycare Game.” *The Canadian Architect; Toronto* 41, no. 5 (May 1996): 20–21.
- “Hurd Takes on Prison Reform Trust.” *The Independent*, January 15, 1997. <http://www.independent.co.uk/news/hurd-takes-on-prison-reform-trust-1283200.html>.
- Independent Review of Ontario Corrections. *Corrections in Ontario: Directions for Reform*, 2017.
- Johnston, Norman Bruce. *Forms of Constraint : A History of Prison Architecture*. Urbana ; Chicago: University of Illinois Press, 2000.
- Katherine Gabel, and Denise Johnston, eds. *Children of Incarcerated Parents*. New York, 1995.

- “Kfar Shemaryahu Kindergarden / Sarit Shani Hay.” *ArchDaily*, December 22, 2013. <http://www.archdaily.com/459642/educational-center-for-children-nil-kfar-shemaryahu-sarit-shani-hay/>.
- “Orphanage.” In *Wikipedia*, January 24, 2019. <https://en.wikipedia.org/w/index.php?title=Orphanage&oldid=880039923>.
- Paez, Roger. *Critical Prison Design : Mas d’Enric Penitentiary by AiB Arquitectes + Estudi PSP Arquitectura*. Book, Whole. New York: Actar Publishers, 2013.
- Paurus, Melanie. “International Report on the Conditions of Children of Incarcerated Parents,” n.d.
- Phillips, Todd S., and Michael A. Griebel. *Building Type Basics for Justice Facilities*. Hoboken, N.J: John Wiley&Sons, INC, 2003.
- “Public Schools.” Just Landed. Accessed August 26, 2019. <https://www.justlanded.com/english/Canada/Canada-Guide/Education/Public-Schools>.
- Seymour, Cynthia, and Creasie Finney Hairston. *Children with Parents in Prison : Child Welfare Policy, Program & Practice Issues*. New Brunswick, N.J.: Transaction Publishers, 2001.
- Shalev, Sharon. *Supermax: Controlling Risk through Solitary Confinement*. London: Routledge, 2011.
- Spens, Iona. *Architecture of Incarceration*. London: Academy Editions, 1994.
- Stanton, Ann M. *When Mothers Go to Jail*. Lexington, Mass.; Toronto: Lexington Books, 1980.
- Strauven, Francis. *Aldo van Eyck’s Orphanage : A Modern Monument*. Rotterdam: NAI Publishers, 1996.
- The New York Times. *When Mother’s Day Means a Trip to Prison*. Accessed May 1, 2019. <https://www.youtube.com/watch?v=gyoSbs2Hc5s&t=180s>.
- UNODC. *Handbook on Dynamic Security and Prison Intelligence*. New York, n.d.
- Warner, Jennifer. “Infants in Orange: An International Model-Based Approach Prison Nurseries.” *Hastings Women’s Law Journal* 26, no. 1 (January 1, 2015): 65.
- Women’s Prison Association. “Mothers Infants and Imprisonment: A National Look at Prison Nurseries and Community-Based Alternatives.” New York, May 2009.

