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Changing Prisons for the Better: A New Vision for Prison Reform and the Rehabilitation of Convicts

Ar. Tauseef Rahi[1*] and Ar. Parwati[2]

[1*]Assistant Professor, Department of Architecture, Faculty of Architecture & Planning, (Affiliated to Dr. APJ Abdul Kalam Technical University), Lucknow, Uttar Pradesh, India.
[2]Assistant Professor, DY Patil School of Architecture, Lohegaon, Pune, Maharashtra, India

***Corresponding Author:** Ar. Tauseef Rahi
*Assistant Professor, Department of Architecture, Faculty of Architecture & Planning, (Affiliated to Dr. APJ Abdul Kalam Technical University), Lucknow, Uttar Pradesh, India Email- tauseefrahi2010@gmail.com

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ABSTRACT

The study examines the critical spatial parameters influencing the design and functionality of correctional facilities. It delves into various aspects such as prison layout, cell size, and communal and recreational spaces, emphasizing the need for a human-centered approach in prison design exploring how the design focused on these spaces can significantly impact the process of inmate rehabilitation. Key considerations include the optimization of lighting, ventilation, and views to enhance the living conditions and mental well-being of convicts. The paper further investigates the use of materials in constructing secure yet humane environments, balancing the stringent security requirements with the need for freedom of movement within the facility. The study explores the various ideologies and typologies of prison that evolved through time and addresses the important policies rules and regulation, that are to be considered for designing a prison campus, which reduces the stressful environment to a rehabilitation fostering and peaceful atmosphere conducive to reintegration of prisoner to society. Moreover, the integration of prison sites with nature is discussed as a crucial element in providing inmates with a sense of normalcy and tranquility. By analyzing these parameters, this research paper advocates for a holistic approach to prison reformation, aiming to create environments that are not only secure but also support the humane rehabilitation of convicts, ultimately contributing to their successful reintegration into society.

Keywords: Prison, Prisoner, Jail, Convicts, Prison Campus Design, Correctional Center

1. INTRODUCTION

Throughout human history, the notions of crime and punishment have permeated every society's culture. Even in Ancient India, as per the *Manu Smriti* (the first text of state policing, dating to pre Mauryan Period), corporal punishments included death penalty, cutting off the limb with which the offence was committed, branding on the head with some mark indicating the offence committed by them, shaving the head of the offender and parading him/her in the public. The nature and types of punishments were very cruel, inhuman and barbaric in nature. Gradually, societies worldwide shifted away from viewing punishment solely as 'retribution' or 'revenge'. This transformation led to the incorporation of prison cells in castles and fortresses for society's wrongdoers.

In recent instances, consider the infamous Kala Paani Jail located on the Andaman Islands, which carries a haunting legacy in the narrative of India's struggle for independence. For a convicted Indian Freedom Fighter, the experience of being incarcerated in this remote and desolate prison was not only a physical ordeal but also had a profound psychological and emotional impact.

2. PURPOSE OF THE STUDY

The successes and failures of the design of a prison is based on ensuring that the created environment will support the wellbeing of inmates, staff and visitors (Engstrom and Ginneken 2020). The following aspects help to explain the need and purpose of the study.

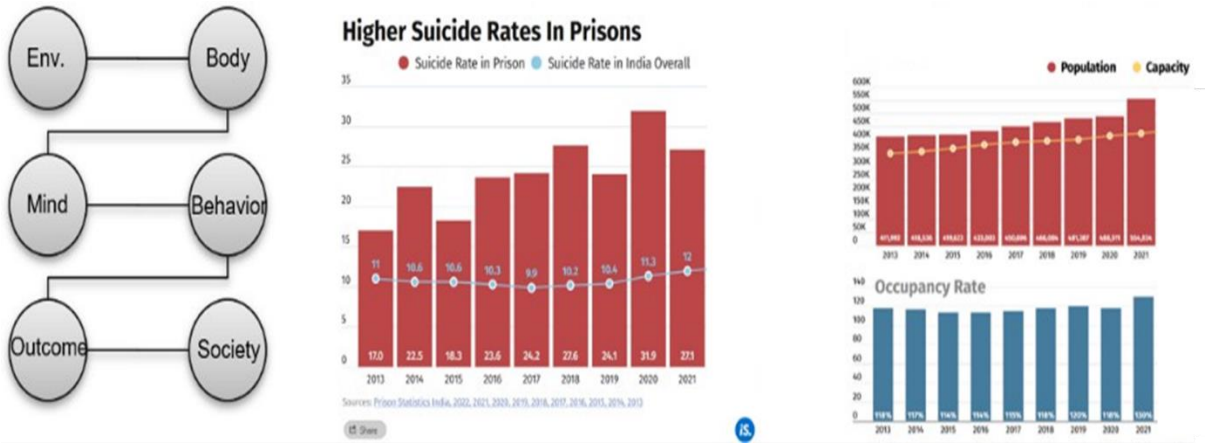

Figure 1: left to right- a) For better Society-series of influence b) Suicide Rates c) Prison Occupancy rate; Source Author, TOI,2021

- **Better Society**-To cater to the wellbeing of society by harnessing change in dangerous aspects of society as the environment of a person affects his body, body affects the mind and the mind affects the person's behavior; behavior can affect their outcomes towards the society (Cuddy 2014).

- **Recidivism & Suicide**-To help lower the rate of Incidence of recidivism, which is 1.9% in 2021 (NCRB: Prison Statistics India 2021) and bring a significant decrease in convict suicide rate (see figure 1).

- **Overcrowding**-Architectural intervention is required in prison reforms to address the unethical issue of overcrowding (see figure 1).

3. RESEARCH AIM AND OBJECTIVES

This research aims to establish a new model for prison design based on spatial elements, in order to bring improvement in the prisoner mindset which results in development of the following four objectives.
- To study the historical trajectory and evolution of prison architecture.
- To critically examine prison system and its design through case studies.
- Analyzing the correlation between prison design and prisoner behavior.
- To derive necessary methodological consideration for humane design of prisons.

4. METHODOLOGY

The following methodology is adopted for this paper:
This research adopts a **qualitative approach**, supplemented by **quantitative insights**, to explore the effectiveness, challenges, and best practices in prison reformation and the humane rehabilitation of convicts. The methodology includes the following components:

Research Design: - A **mixed-methods research design** is employed to gain both in-depth understanding and measurable insights:

- **Qualitative** methods help explore the lived experiences of convicts, correctional officers, and rehabilitation workers.
- **Quantitative** analysis helps assess trends, recidivism rates, and policy impacts.

Data Collection Methods: -

a. Primary Data Collection
- **Interviews**: Semi-structured interviews.
- **Observational Visits**: Field visits to correctional facilities to observe current reformative programs in action.

- **Case studies** of National and international prisons.

b. Secondary Data Collection

- Review of official reports from prison departments.
- Analysis of government policies and reform programs (e.g., open prisons, parole systems, vocational training).
- Literature review from academic journals, UN reports, NCRB statistics (India), and global practices. Figure-2 represent a methodology flow chart of the research.

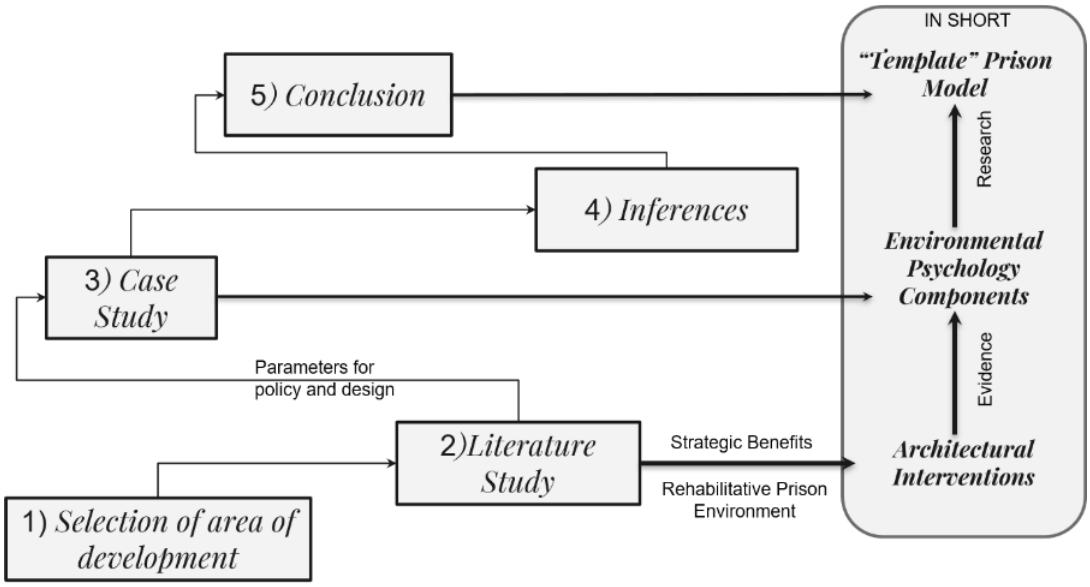

Figure 2: Diagrammatic Representation of Methodology, Source: Author

5. LITERATURE REVIEW

Prisons are designed to confine individuals who break the law, restricting their freedom for a set period. Though all prisons share this basic function, they vary in type (Fairweather and McConville 2000). A general classification of the types of prisons in a country can be judged by the level of security that is provided within the four walls of the prison campus.

Minimum Security Prisons- These correctional facilities are designated for non-violent offenders who have committed crimes such as embezzlement or fraud.

Medium Security Prisons- Also known as Low Security Prisons in some regions, these prisons, unlike minimum security prison, have fences or double fences around the perimeter to contain the prisoners.

High Security Prisons- High security prisons are reserved for the most violent and dangerous offenders like murderers, rapist, terrorist, etc. These prisons include far more guards and prisoners have very little freedom as each inmate is considered a high-risk individual.

5.1 PRISONS SYSTEMS IN INDIA

India's prison system operates at three main levels:

a) Taluka Jails (Taluka level - Sub jails) - Smaller jails, situated within a state's sub-divisional territories.

b) District Jails (District level - District jails) - In states and union territories lacking proper Central Jails - district jails serve as the primary prisons, typically housing up to 500 inmates.

c) Central Jails (Central level) – The confinement of individuals sentenced to lengthy imprisonment (exceeding two years) in central jails. These jails have higher capacity, better security and facilities while also providing additional services, including rehabilitation programs, to support the reintegration of inmates into society.

It is important to note that the terms "prison" and "jail" are used interchangeably in India, although they might relate to different forms of punishment in other countries around the world (National Human Rights Comission India 2021).

5.2 TYPES OF PRISONERS

A prisoner, as per Model Prison Manual 2016, is defined as "any person confined to a prison under the order of competent authority" (Bureau of Police Research & Development 2016).
Following are the types of prisoners classified under the Prisons Act of 1894, India:

a) **Criminal Prisoner**- Any person who has been imprisoned under the warrant or order of any Court or authority for committing a crime.

b) **Convicted Criminal Prisoner**- Any criminal person who has been detained in prison under the Code of Criminal Procedure, 1882 for committing a crime.

c) **Civil Prisoner**- Any prisoner who has been imprisoned but the offence committed by him or her is not a crime.

d) **Convict**- A prisoner found guilty of a crime and sentenced for a definite period to prison by the court.

e) **Under-Trail Prisoner**- An under-trial prisoner means a person kept in prison (judicial custody) who has a pending investigation or trail by a competent authority (National Human Rights Comission India 2021).

NOTE*- Segregation of Convicts and Under-Trial Prisoners to different accommodations with no contact, is deemed necessary under Model Prison Manual 2016.*

6. DESIGN PARAMETRS ADOPTED FOR PRISON

6.1 CIRCULATION

The zoning of prison design can be broken down into the following basic zones:

i. **Prisoner Accommodation: -** It should be located centrally for efficient access to all necessary facilities with clear, controlled pathways leading to communal areas. Pathways are monitored by security personnel to maintain order and safety.

ii. **Facilities:**
- **Dining Area** must be positioned to allow direct, supervised access from housing units and organized to manage large groups of inmates with minimal congestion.

- **Recreational Spaces** are strategically placed to ensure easy access from housing units equipped with controlled entry and exit points to monitor inmate movement.

- **Educational and Vocational Training Rooms** should be located near housing units to facilitate regular attendance connected via secure corridors to minimize inmate interaction outside of structured activities.

iii. **Support:** These may have the following guidelines-
- **Medical Facilities:** Positioned for quick access from all housing units, ensuring prompt medical attention, designed with separate entrances for inmates and staff to maintain safety and hygiene.

- **Administrative Offices:** Centralized within the facility for effective management and coordination. Includes secure pathways to prevent unauthorized inmate access.

- **Laundry and Maintenance Areas:** Located in proximity to housing units to streamline operations and minimize movement through secure zones.

6.2 PRISON CAMPUS DESIGN

According to the Model Prison Manual, 2016, The location of an institution should be determined based on its function, training and treatment emphasis, and program content. It is essential that new institutions are not constructed in flood-prone areas, near international borders, airports, or congested urban locations. When selecting a new site, consideration must be given to transport facilities, water supply, electric lighting, drainage, sewage systems, and communication facilities such as telephone and internet towers. Additionally, no buildings should be constructed within specified distances of prison walls: 150 meters for Central Prisons, 100 meters for District Prisons, and 50 meters for Sub-Prisons, with a minimum distance of 50 meters from the perimeter wall for any building inside a prison. Closed prisons should adhere to capacity limits of 1,000 prisoners for Central Prisons, 500 for District Prisons, and 300 for Sub-Prisons. Plan should be based on an analysis of the

inmate population, age groups, custodial requirements, and the need for diversified work and educational programs.

Sufficient open space must be provided within the perimeter wall for ventilation and sunlight, with guidelines suggesting 83.61 square meters per head of total capacity, or 62.70 square meters per head in areas where land is scarce. Each region will also have a dedicated women's prison, and existing women's sections in common jails will be upgraded to ensure no contact with male inmates (Bureau of Police Research & Development 2016).

6.3 ACCOMODATION DESIGN

The restrictions must be adhered to when designing accommodation spaces for prisoners. Each barrack will feature a single door with dimensions of 2.2 x 1 meter, equipped with a single shutter and a clear opening of 1 meter. The door frame will be constructed from angle iron, ensuring a minimum thickness of 10 mm for durability. The ground floor berths will be designed to measure 2 x 0.75 meters and will stand at a height of 0.45 meters. Additionally, built-in shelves will be provided for the storage of personal belongings, and adequate lighting will be installed to facilitate reading and work after dusk (Bureau of Police Research & Development 2016).

6.4 PARAMETERS

6.4.1 Prison layout

It has been observed that a wide range of prison layouts have been experimented with over time, and the impact of these layouts on well-being remains uncertain. Studies have shown that different cellblock layouts can have a significant effect on the health of incarcerated individuals.

Cellblock design impacts inmate health; open cellblocks (where inmates face each other) show higher rates of sick calls than spine cells offering more privacy (Moore 1981). Radial designs from the 1800s aimed to reduce costs, enhance security, and deter crime (Engstrom and Ginneken 2020). However, layouts that distance officers from inmates can lead to depersonalization and higher suicide risks (Wortley 2002). Campus-style layouts support positive inmate behaviour, better staff-inmate ratios, and improved access to natural environments (St. John 2020).

Overall, considering a prison's layout in the context of ethical architecture is crucial, as it can reflect institutional goals and significantly impact the experiences of both staff and inmates.

6.4.2 Size

The size and crowding within prison populations significantly affect the well-being of inmates, but there's no consensus on how to conceptualize and measure crowding (Simpson et al. 2019).

6.4.3 Communal & Recreational Spaces

In prison architecture, communal and recreational spaces refer to areas within the facility designated for group activities, social interaction, and leisure pursuits for inmates.

6.4.4 Design Focus/ Aesthetics

Design focus and aesthetics in prison architecture encompass the intentional consideration of visual appeal, architectural elements, and artistic aspects in the construction and layout of correctional facilities. This includes factors such as the use of color, lighting, materials, and spatial organization to create a more pleasant and humane environment for inmates.

6.4.5 Lighting

The levels of natural and artificial lighting, particularly exposure to daylight, play a significant role in influencing psychological well-being (Simpson et al. 2019). Lack of darkness during sleep harms inmate well-being and behaviour (Wener, 2012). Enhancing lighting in a space through factors like intensity, quality, direction, variability, and control of light sources can improve well-being.

6.4.6 Ventilation and Views

At least **4%** of the **net floor area**, where infeasible, must be greater than **1m²/p** (UNOPS 2016). Access to pleasant views can promote a feeling of openness and connectivity. Long-distance window views, including those with expansive depth perception, reduce boredom, fatigue, and irritability, while improving comfort and perceived safety.

6.4.7 Materials

Choice of materials significantly affects the quality of personal living spaces (Engstrom and Ginneken 2020). Custodial environments typically feature hard materials like concrete, brick, and metal, which are durable but can impact temperature and noise levels (Corrections Program Office Office of Justice Programs, 2000).

Although soft materials such as carpet, wood, and cork are less used due to cost/durability, but they improve comfort, absorb noise, and reduce monotony (Swedish Prison and Probation Service 2018).

6.4.8 Freedom of Movement

Freedom of movement in the context of prison architecture refers to the extent to which inmates can move within the facility without unnecessary restrictions. Includes access to communal spaces, education, healthcare, and outdoor recreation yards. Ensuring adequate freedom of movement is crucial for the well-being, as it enhances physical health, mental stimulation, social interaction, and overall quality of life.

6.4.9 Acoustics & Noise Management

Detention settings are notoriously loud, with noise defined as unwanted sound, significantly affecting the safety and well-being of both inmates and staff. Unfortunately, prison planners often overlook the importance of acoustics despite its major role in prison well-being of both staff and inmates (Swedish Prison and Probation Service 2018).

6.4.10 Site Integration with Nature

The presence of nature, such as trees, plants, and wildlife, offers a refreshing contrast to the often-sterile atmosphere of correctional facilities. National studies in England and Wales have shown that vegetated areas within prison perimeters correlate with improved well-being for inmates and lower staff sick leave rates, highlighting the value of integrating nature within prison settings whenever feasible.

7. CASE STUDIES

7.1 Case Study- 1: Halden Prison, Norway

Located in Halden, Norway, this facility serves a diverse demographic comprising Africans, Europeans, and Asians. It is classified as a maximum-security institution, being the second largest of its kind in the country, with a capacity to accommodate between 248 to 252 inmates with an area of 30 hectares (Fig.-3).

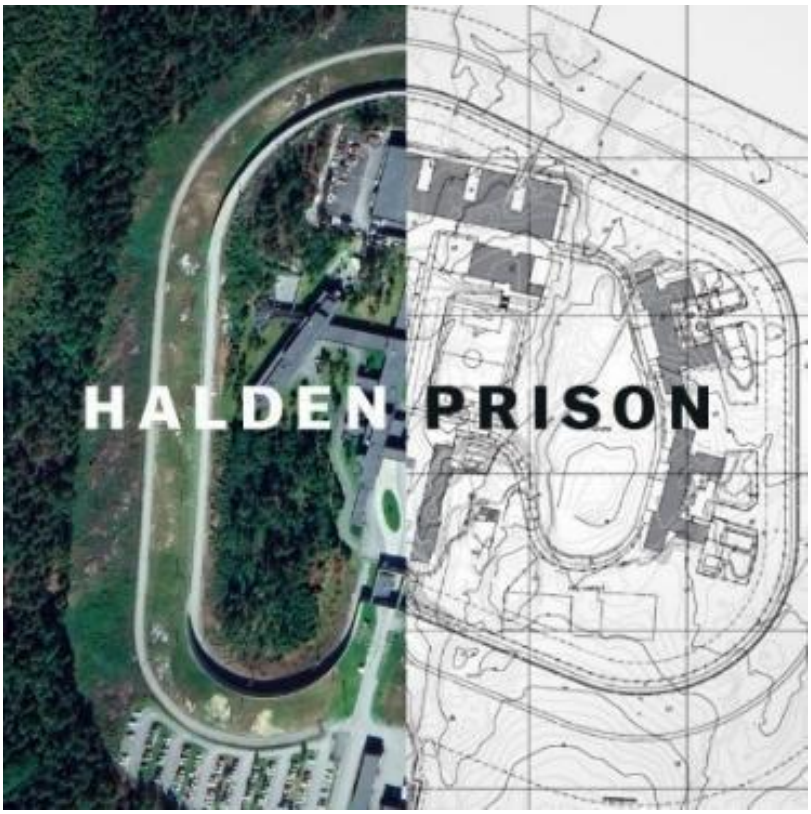

Figure 3: Halden Prison, Norway; Source: Vox.com

Despite frequent criticism for its notably liberal stance on crime and punishment, Norway places a strong emphasis on ensuring that serving time is conducted with dignity. The objective is for an inmate's sentence to act as a preparation for a law-abiding life post-release. Halden Prison in Halden, Norway, is often cited as the most humane correctional facility in the world. Halden Prison overview on the basis of, decided parameters: -

7.1.1 Prison layout

Halden Prison is designed to resemble a small village rather than a traditional prison. It is composed of various buildings spread across a wooded area, including cell blocks, communal areas, and recreational facilities. The campus layout promotes a sense of openness and community among the inmates (Fig.- 4).

Figure 4: Layout of spaces at Halden Prison, Norway;

7.1.2 Size

The prison spans approximately 75 acres, accommodating around 250 inmates, resulting to 8 m², designed for one person. This relatively low inmate-to-space ratio contributes to a less crowded and more comfortable environment.

7.1.3 Communal & Recreational Spaces

Halden Prison features numerous communal and recreational spaces, including a library, a gym, a music studio, and a kitchen where inmates can cook their meals. There are also outdoor areas for sports and gardening. These spaces are designed to promote social interaction, physical activity, and skill development.

7.1.4 Design Focus/ Aesthetics

The architecture incorporates modern aesthetics with clean lines, ample use of glass, and high-quality furnishings to enhance comfort. The focus is on creating an environment that feels more like a residential community than a traditional prison, fostering a sense of dignity and respect for inmates. This approach is intended to aid in their reintegration into society by providing a more normalized and positive living experience during their incarceration (Fig.- 5).

Figure 5: Design Focus of Halden, Source: HLM

7.1.5 Lighting
Natural light is a key feature of Halden Prison. Large windows in cells and communal areas ensure that inmates have access to ample daylight, which is beneficial for mental health and well-being. Artificial lighting is also designed to be soft and non-intrusive.

7.1.6 Ventilation and Views
Cells and communal areas are equipped with effective ventilation systems to ensure fresh air circulation. The large windows provide inmates with views of the surrounding forest, creating a connection with nature and a sense of tranquillity (Fig.-6).

Figure 6: Views from Halden Prison; Source: HLM

7.1.7 Materials
High-quality, durable materials are used throughout the prison to create a comfortable and humane environment. Wood, concrete, and metal are employed in a way that balances security with a homely, less institutional feel (Fig.-7).

Figure 7: Materials that absorb noise and allow natural light

7.1.8 Freedom of Movement
Inmates at Halden Prison enjoy a significant degree of freedom of movement within the facility, which is a core component of its rehabilitative philosophy. Halden Prison allows its inmates to move freely between various buildings and outdoor areas. This freedom includes access to communal spaces such as the library, gym, kitchen, music studio, and workshop areas (Fig.- 8).

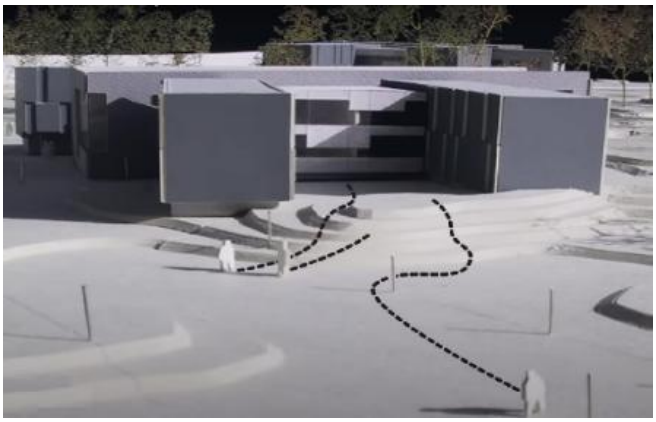

Figure 8: Movement through building in the campus; Source: Vox,2019

7.1.9 Acoustics & Noise Management

Attention is given to acoustics to minimize noise pollution. Sound-absorbing materials are used in construction to create a quieter, more peaceful environment, which is conducive to rehabilitation and reduces stress levels.

7.1.10 Site Integration with Nature

The prison is seamlessly integrated with its natural surroundings (Fig.- 9).

Figure 9: Trees planted in and around the Halden Prison Campus

7.2 Case Study- 2: Storstrøm Prison, Denmark

It aims for humane security, fosters inmate rehabilitation through architecture promoting well-being while ensuring a secure workplace for staff. Storstrøm Prison made up of 10 buildings in total covering an overall of approximately 35,000 m². It is designed as a prison that will promote all of human needs from physiological to self-actualization. This can be understood through Maslow's hierarchy of needs (Fig.- 10).

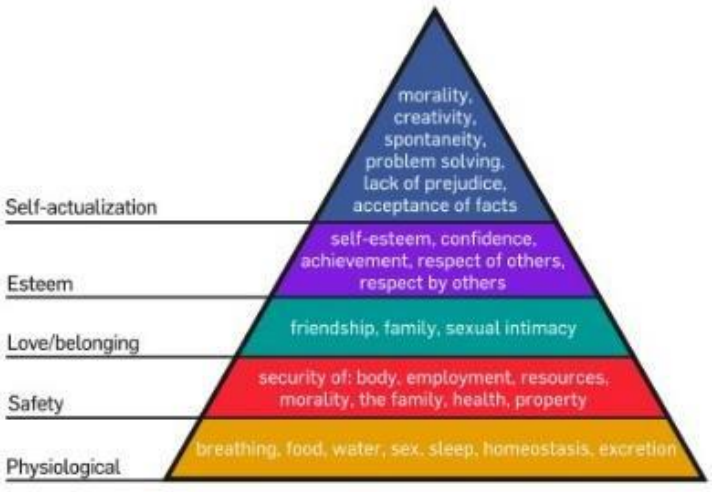

Figure 10: Maslow's hierarchy of needs. Source: Thought Co

The goal of this prison is to establish the world's most humane high-security prison, designed to contribute to inmates' social rehabilitation through architecture that enhances their mental and physical well-being, while also providing a secure and pleasant workplace for prison staff.

7.2.1 Prison layout

Storstrøm Prison is designed as a series of interconnected buildings that form a small village-like community. The layout includes separate residential units, administration buildings, and communal areas, all connected by walkways (and open spaces to encourage interaction and mobility) (Fig.- 11).

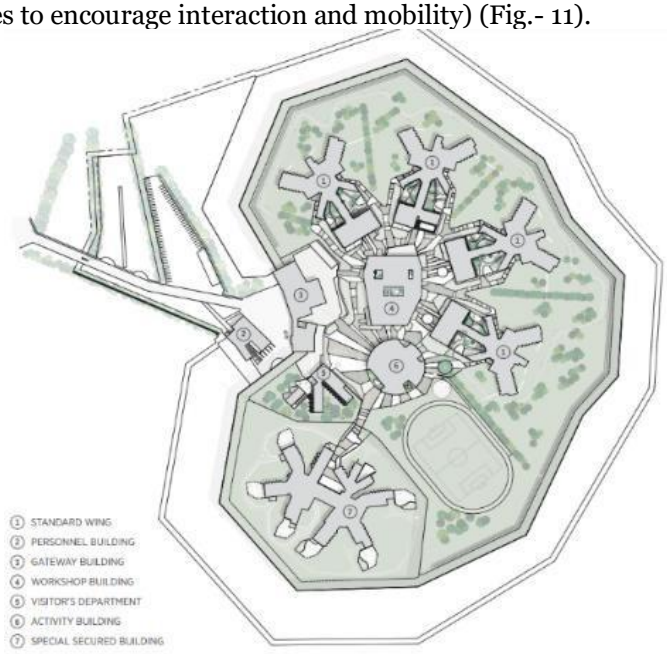

Figure 11: Layout of Storstrøm Prison; Source: Architecture Review.com

7.2.2 Size

The prison spans approximately 35,000 square meters and is designed to house around 250 inmates. The space is 12.8 m² per cell for one person. This provides ample space for both living quarters and communal activities, ensuring a comfortable and uncrowded environment.

7.2.3 Communal & Recreational Spaces

Storstrøm Prison features a variety of communal and recreational spaces, including a gym, library, workshops, and sports facilities. Inmates also have access to educational classrooms, a chapel, and communal kitchens where they can cook their own meals. These facilities aim to support social interaction, physical health, and personal development.

7.2.4 Design Focus/ Aesthetics

The design of Storstrøm Prison emphasizes normalization and rehabilitation, with a focus on creating a humane and dignified environment. The architecture features modern aesthetics with clean lines, natural materials, and an abundance of natural light. This will ensure a familiar and varied experience of the prison environment and keep the prison's institutional atmosphere to a minimum.

7.2.5 Lighting

Natural light is a key element in the design of Storstrøm Prison. Large windows and skylights are used throughout the facility to ensure that inmates have access to daylight, which is important for their well-being and mental health. Artificial lighting is designed to complement natural light, creating a bright and inviting atmosphere. The solid to void ratio is also taken into consideration to invite natural light into the spaces as much as possible. The void-solid ratios are kept comparable in building like workshop, activity and visitor buildings (Fig.- 12).

Figure 12: Large Windows provided for natural light; Source: ArchDaily,2017

7.2.6 Ventilation and Views

The prison is equipped with advanced ventilation systems to ensure a steady supply of fresh air. Large windows not only provide natural light but also offer views of the surrounding landscape, helping to create a sense of openness and connection to the outside world.

7.2.7 Materials

High-quality, durable materials are used in light colors throughout Storstrøm Prison to create a comfortable and lasting environment (Fig.- 13). The use of wood, brick, and metal provides a warm and inviting atmosphere while ensuring the facility's longevity and ease of maintenance.

Figure 13: Use of light coloured- durable materials; Source: Archdaily, 2017

7.2.8 Freedom of Movement
Inmates at Storstrøm Prison enjoy considerable freedom of movement within the facility. They are not confined to their cells and can move freely between communal spaces, various buildings and outdoor areas. These buildings are designed strategically to ensure security whilst enabling a degree of freedom to prisoner. This freedom helps to reduce stress and promote a sense of autonomy and responsibility.

7.2.9 Acoustics & Noise Management
Attention is given to acoustics to minimize noise and create a peaceful environment. Sound-absorbing materials are used in construction to reduce noise levels, enhancing the overall quality of life for inmates and staff.

7.2.10 Site Integration with Nature
Storstrøm Prison is designed to integrate seamlessly with its natural surroundings. The site features landscaped gardens and green spaces are created to mimic the surrounding village landscape and help become a part of the same. This design allows inmates to engage with nature and create a connection to the natural environment; it is intended to have a calming and restorative effect on the inmates. The architectural design has been used to create a flexible prison that can adapt to different categories of inmates & specific emergencies. This is achieved by making it possible to divide individual departments into larger and smaller sections. Storstrøm Prison exemplifies a modern, rehabilitative approach to incarceration, focusing on normalization, dignity, and preparation for life after release.

7.3 Case Study- 3: Tihar Prison, New Delhi
India has a vast number of correctional facilities, many of which struggle with effectiveness. Stories of abysmal prison conditions frequently emerge, highlighting issues such as severe overcrowding and inadequate legal assistance for inmates, leading to sub-human conditions. Tihar Jail, consisting of 9 central and 1 district jail, was relocated to its current site in 1958. Designed to house 6,250 prisoners, it currently accommodates around 13,000 on average. Despite its role as a model for correctional facilities, Tihar faces numerous challenges, including overcrowding, frequent suicides, clashes, murders, and other disturbances. As the largest prison in the world, Tihar shares common issues with other prisons but also provides a unique case for studying and addressing the broader problems of the Indian prison system.

7.3.1 Prison layout
Tihar Prison, one of the largest prison complexes in South Asia, is designed as a series of separate jails within the complex. Each jail operates independently with its own set of facilities, including administrative offices, barracks for inmates, and service areas. The layout of various prisons is organized to manage the large inmate population efficiently while maintaining security (Fig.- 14).

Figure 14: Layout of Tihar Jail Complex; Source Issu.com

7.3.2 Size
The prison complex spans over 400 acres and houses approximately 16,000 inmates, far exceeding its original capacity. This vast size makes it one of the largest prison complexes in the world. Below is the distribution of prisoners as of 2019.
Cell sizes ranging from: 15' by 10' with 2.54 m Height, 14' by 8' with 2.44 m Height and 10' by 10' with 2.44 m Height can be found inside the complex.

7.3.3 Communal & Recreational Spaces
Tihar Prison offers various communal and recreational spaces including areas for sports, vocational training workshops, a library, and educational classrooms. There are also facilities for cultural activities and religious practices, aimed at promoting rehabilitation and personal development.

7.3.4 Design Focus/ Aesthetics
The design of Tihar Prison focuses primarily on functionality and security, with less emphasis on aesthetics compared to some modern prisons. However, recent reforms have aimed to improve the living conditions, including better facilities and cleaner environments to support inmate rehabilitation.

7.3.5 Lighting
Natural lighting in Tihar Prison is limited, small windows are provided particularly in older sections of the complex. Efforts have been made to improve artificial lighting to ensure sufficient illumination for activities and to enhance the overall environment.

7.3.6 Ventilation and Views
Ventilation is a critical issue due to overcrowding. While newer buildings are designed with better ventilation systems, older structures often suffer from poor airflow. Inmates have limited views, primarily confined to interior courtyards or enclosed spaces.

7.3.7 Materials
The materials used in Tihar Prison are basic and utilitarian, focusing on durability and ease of maintenance. Concrete and metal are the primary materials, designed to withstand the harsh conditions and high inmate population.

7.3.8 Freedom of Movement
Inmates have restricted freedom of movement within the prison. Movement is typically limited to scheduled times for meals, work, and recreation. High-security protocols dictate strict control over inmate movements to prevent security breaches.

7.3.9 Acoustics & Noise Management
Noise levels can be high due to the dense population and the nature of the facility. Acoustic management is minimal, with noise often being a significant issue. Efforts to improve this aspect include stricter control over activities and better design in newer buildings.

7.3.10 Site Integration with Nature
Integration with nature is minimal in Tihar Prison. While there are some green spaces and gardens within the complex, the primary focus remains on security and functionality. Recent initiatives have introduced more greenery and outdoor activities to improve the environment for inmate.
Tihar Prison, while primarily functional and secure, is gradually incorporating elements aimed at improving inmate rehabilitation and living conditions. The focus remains on balancing security with the need for humane treatment and rehabilitation.

8. CONCLUSION & RECOMMENDATIONS

In conclusion, embarking on a transformative journey toward meaningful prison reform is imperative for fostering an environment that not only deters crime but also promotes the rehabilitation of convicts. A paradigm shift in our approach is necessary—moving from punitive measures to a framework centered on prison campus design, mental health support, and social reintegration.
By investing in programs that address the root causes of criminal behaviour, we can significantly reduce recidivism rates and empower individuals to reintegrate successfully into society. This new vision for prison reform necessitates collaboration among architects, policymakers, criminal justice professionals, and communities to ensure sustainable change.
Ultimately, a reformed prison system should cultivate not only safer communities but also uphold the inherent dignity of every individual, paving the way for a more equitable society. This comprehensive effort is not just

about justice; it is about humanity and our collective responsibility to foster growth, healing, and opportunity for all. We can adopt the following measures to change the prisons for the better: -

8.1 Prison layout

Campus layout is most preferable for flexibility and functionality. Women and adolescent prison should be treated equal to men's prisons in space layout.

8.2 Size

To enhance the well-being of inmates and address overcrowding, it is essential to design prisons that allow for single cells whenever possible. By tackling overcrowding, we can significantly reduce incidences of offending, assaults, recidivism, and health issues among staff.

Adhering to the guidelines on adequate cell and population sizes is crucial in cultivating safer and more purposeful environments within correctional facilities.

8.3 Communal & Recreational Spaces

Improving communal spaces in prisons is essential to support positive interactions, promote physical activities, and enhance mental well-being among inmates. By designing these areas with a focus on reducing stress, encouraging socialization, and providing constructive engagement, we can create environments that foster rehabilitation.

Prioritizing well-designed communal spaces not only aids in the rehabilitation process but also plays a crucial role in improving the overall mental health of inmates, ultimately contributing to their successful reintegration into society.

8.4 Design Focus / Aesthetics

To create a more humane environment for inmates, it is essential to prioritize design aesthetics in prison architecture. This involves carefully considering elements such as color, lighting, materials, and spatial organization, all of which can significantly enhance the psychological well-being and satisfaction of prisoners. By utilizing context-specific research insights, architects can make intentional design decisions that improve the overall atmosphere of correctional facilities, fostering a more supportive and rehabilitative space for those incarcerated.

8.5 Lighting

Adequate natural lighting plays a vital role in promoting the physical and mental well-being of both inmates and staff within prison facilities. Therefore, design considerations should prioritize maximizing the ingress of natural light into buildings, especially in regions where daylight hours decrease notably during winter. By ensuring that these facilities are well-lit by natural sources, the overall atmosphere can be improved, contributing positively to the health and morale of everyone within the institution (Fig.- 15).

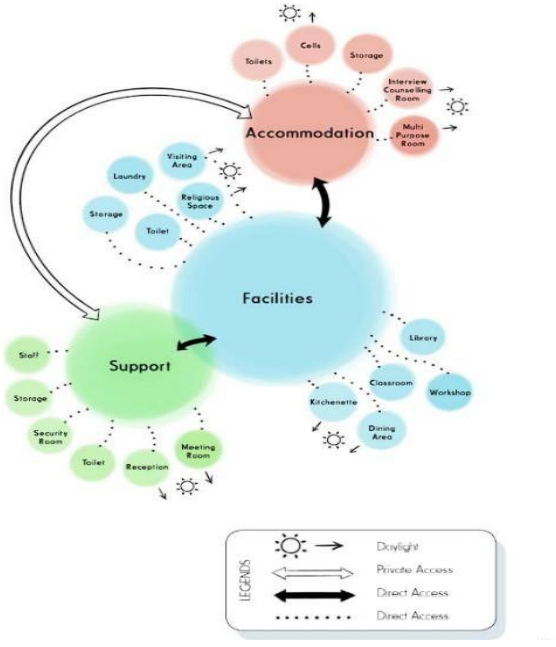

Figure 15: Spaces where natural lighting should be included through design

8.6 Ventilation and Views

Incorporating captivating nature views into prison architecture is essential, particularly in areas visible from living quarters and recreational spaces, as it helps counter feelings of isolation and enhances the overall well-being of inmates. Further to achieve this goal, a holistic approach should be adopted, integrating effective ventilation strategies that promote physical comfort alongside the aesthetic benefits of natural surroundings. By combining these elements, correctional facilities can create an environment that supports both mental health and physical comfort, ultimately contributing to a more rehabilitative atmosphere.

8.7 Materials

The quality and experience of a space are significantly influenced by the materials used within it. Soft materials play a crucial role in enhancing comfort and controlling noise, creating a more inviting atmosphere. Additionally, these materials contribute to humanizing the spaces we inhabit, making them feel more relatable and warmer.

8.8 Freedom of Movement

Enhancing freedom of movement in prisons can significantly improve health, mental stimulation, social interaction, and overall quality of life for inmates by allowing them access to various facilities with minimal restrictions. It is essential to strike a balance between security and the introduction of contemporary devices or techniques when facilitating such movement and activity. This approach can help create a positive and rehabilitative environment, fostering personal growth and development while maintaining safety within the institution.

8.9 Acoustics & Noise Management

Constant and uncontrollable noise in correctional facilities is associated with a variety of negative health effects and can lead to strained relationships between inmates and staff. To address this issue, it is essential to manage noise levels effectively through the implementation of sound-absorbing materials and thoughtful design interventions. This approach not only enhances the overall environment within these facilities but also promotes better communication and interactions among all individuals present.

8.10 Site Integration with Nature

Access to nature significantly enhances wellbeing, serving as a vital counterbalance to the sterile environments and monotony which often found in prisons. It is crucial for individuals to see and interact with nature, as this connection helps them remain in sync with time and space. Therefore, the integration of natural elements into these environments is of utmost importance for fostering a sense of peace and promoting mental health.

9. REFERENCES

1. Bureau of Police Research & Development. 2016. “MODEL PRISON MANUAL.” *Ministry of Home Affairs Government of India*.
2. Corrections Program Office Office of Justice Programs, National Institute of Justice. 2000. “Crime and Justice Atlas 2000.” 181.
3. Cuddy, Amy. 2014. “Your Body Shapes Who You Are.” *Youtube*.
4. Engstrom, Kelsey V, and Esther F. J. C. Van Ginneken. 2020. “Ethical Prison Architecture : A Systematic Literature Review of Prison Design Features Related to Wellbeing.” doi: 10.1177/1206331221104911.
5. Fairweather, L., and S. McConville. 2000. *Prison Architecture: Policy, Design, and Experience*. Architectural Press.
6. St. John, Victor J. 2020. “Placial Justice: Restoring Rehabilitation and Correctional Legitimacy Through Architectural Design.” *SAGE Open* 10(2). doi: 10.1177/2158244020919503.
7. Moore, Ernest O. 1981. “Prison Environment’S Effect on Health Care Service Demands.” *Journal of Environmental Systems* 11(1):17–34. doi: 10.2190/KM50-WH2K-K2D1-DM69.
8. National Human Rights Comission India. 2021. “Rights of Prisoners.” *National Human Rights Comission, India*.
9. NCRB: Prison Statistics India. 2020. *Prison Statistics India*.
10. Simpson, Paul L., Melanie Simpson, Armita Adily, Luke Grant, and Tony Butler. 2019. “Prison Cell Spatial Density and Infectious and Communicable Diseases: A Systematic Review.” *BMJ Open* 9(7):26806. doi: 10.1136/bmjopen-2018-026806.
11. Swedish Prison and Probation Service. 2018. *How Architecture And Design Matter For Prison Services: A Rapid Review Of The Literature*.
12. UNOPS. 2016. “TECHNICAL GUIDANCE FOR PRISON PLANNING.”
13. Wortley, Richard. 2002. “Situational Prison Control.” *Situational Prison Control* (February). doi: 10.1017/cbo9780511489365.