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PROJECT GUIDE:
Juvenile Facility Design

Part of A Series of Guides for Planning, Designing and Constructing Adult and Juvenile Correctional and Detention Facilities on Tribal Lands
The Native American and Alaskan Technical Assistance Project (NAATAP) was created pursuant to an interagency agreement between the National Institute of Corrections and the Bureau of Justice Assistance.

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Purpose
The purpose of each NAATAP Guide is to communicate substantive information concerning a range of subjects that are relevant to the development of adult and juvenile detention and correctional facilities in Indian Country. This series of guides grew out of a recognition that there were common concerns and questions being raised by Tribes and consultants developing new correctional facilities on Native lands throughout the country. The guides seek to provide research and information on issues of common concern to the Tribes. These guides also seek to document the knowledge and experience gained by Justice Planners International LLC (JPI) while providing technical assistance to tribes engaged in the facility development process.

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PROJECT GUIDE:
Juvenile Facility Design

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Juvenile Facility Design

Good juvenile facility design derives largely from understanding the needs of those who will use the facility: the young people who reside there and the agencies responsible for the youth in their care. It is not simply a matter of creating a given amount of space or a handsome facade. Rather, good design depends on developing space that is responsive to resident and staff perceptions and behaviors, to the demands of daily programming, and to the need for safety, security, and positive management at all times.

Above all, a good facility design must take into account the overriding premise of the juvenile justice system, i.e., effective intervention in the lives of youth. Custodial care is often the last resort in a series of interventions offered by the justice system. It may also be the last chance to redirect youthful behavior before a life of serious crime ensues. To this end, it is essential that spaces, programs, and staff combine to create a residential environment that encourages positive resident response and cooperation - and a willingness to take advantage of opportunities.

Even relatively short-term pre-adjudicatory detention is viewed by professionals in the field as a “teachable moment.” Design efforts should focus on creating space that supports the teaching and learning process in all its aspects - from casual living activities and social interactions through more formal educational pursuits and family involvement activities.

Juvenile facilities, in recent years, have tended to assume more of the character of adult jails, with larger capacities, bigger housing units, and increasingly restrictive construction materials and hardware. But for most justice system professionals, juvenile facilities are not jails. They are safe places that, in the best circumstances, offer some hope for a better future for the youth they serve. This Project Guide provides information on operational and design issues that significantly influence the quality of residential services to youthful populations. These include:

- Analysis of Need
- Safety, Security and Management Priorities
- Environmental Character
- Daily Programming Activities and Opportunities, and
- Staffing Efficiency
Analysis of Need

All too often, especially in communities with few resources for youth, local authorities focus on the development of a secure juvenile detention facility as the answer to a host of problems. A facility permits a forceful response to youthful misbehavior where none may have existed. It may mean no more transportation to distant facilities. And it can also mean that law enforcement and the courts have the means to ensure that juveniles involved in delinquent behavior and their families participate in problem-solving and treatment-oriented services. Federal studies have long suggested that access to secure detention is a key ingredient of successful juvenile justice systems.¹

These same studies, however, also point out that secure detention and commitment should only be one part of a comprehensive system of responses to juvenile intervention needs. Not all juveniles need secure custody; most youth can be served well by various community-based programs without jeopardizing the safety of the youth or the community. Secure custody should be reserved only for those youth who present a clear threat to the public or the court process.

It is important to recognize that secure residential care is the most expensive response to juvenile crime. Only a relatively small number of the youth who enter the juvenile justice system need such attention. Nevertheless, many jurisdictions spend a disproportionate amount of available funds to provide secure confinement for juveniles. Often these jurisdictions find that they have little money left to address the broader range of program and service needs of youth in the community. Consequently, secure detention becomes the primary focus of juvenile justice operations, with secure facilities accepting all kinds of youthful offenders, including many who do not need physically restrictive care. This circumstance far too often prompts jurisdictions to overbuild, to plan far more secure capacity than is reasonably necessary, at the expense of other equally viable and more responsive community level programs and services.

In planning new juvenile facilities, Tribal authorities should consider

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of these services may include health, drug and alcohol prevention, family support programs and youth recreation activities.

Safety, Security and Management Priorities

All residential facilities for juveniles, regardless of security level, must provide a safe environment that protects juveniles from harm. Residents should understand that they are safe from external threat and from threatening behavior by other residents. Continuing staff presence and interaction with youth will promote this perception, as will small group sizes, opportunities for privacy and defined boundaries inside and outside the buildings. The absence of perceived threat will diminish territorial and aggressive behaviors. Staff must be equally confident that they are safe at all times, supported by other staff, in order to work effectively with youth. When personal safety is in question, staff may withdraw from full participation in resident activities.

To achieve the highest safety possible, residents should be observed at all times and be aware that their actions and movements are supervised. In housing areas, direct supervision of residents, with living spaces monitored by staff inside the housing areas and supported by staff located outside the housing unit as well, is preferred by a vast majority of program operators. All housing-related activity spaces should be easily monitored by staff in various locations, with clear and direct physical connection between all spaces. Housing spaces should permit a range of smaller group activities so that residents may separate themselves from others (or be separated by staff) as necessary.

In physically secure settings, the development of many and varied activity zones is essential, with staff controlling access between zones - living to multipurpose, multipurpose to housing support and outdoor space, and multipurpose to central activities such as education and recreation. Primary access control usually involves staff control of locked doors. Attention should focus on the development of easily supervised housing spaces, program areas (education, recreation, dining, visiting) and circulation routes, with clearly marked access and egress points.

A secure building perimeter is necessary to prevent unauthorized access to and egress from the facility, but security fixtures and materials within the building may be less restrictive and obtrusive. Security construction can help staff do their job by making access easier to manage and by removing the threat of escape. But security construction in itself cannot replace the safety and security achieved primarily by staff working with youth, treating them fairly, and responding to problems as they occur. Facility designs seek to ensure that all spaces used by residents are easily supervised, easily accessed and appropriately configured to support unhindered interaction between staff and residents.

48-Bed Units - Multiple Configuration Options

(Showing various staff to resident ratios)

Environmental Character

Although unobtrusive security is certainly an aspect of environmental character, it is only one part of the comprehensive effort to create a non-institutional, comfortable setting that encourages normal behaviors. Juvenile facility administrators and staff have long recognized the value of normative environments. Characteristically, such settings indicate care and concern for users, use familiar materials, and permit users some discretion in how spaces are used. From a behavioral per-
spective, familiar and comfortable surroundings contribute to smooth operations by minimizing negative resident responses such as damaging, aggressive behavior, territorial expression, and posturing for dominance and attention.

A normative, therapeutic environment prompts positive resident response and encourages resident cooperation with staff and participation in goal-directed activities. A resident willing to “work with the program” is easier to manage and far more amenable to personal accomplishment. As mentioned previously, such environments are achieved through small group size and staff presence. Normative environments are also marked by the following type of physical features:

- **open interior spaces, views to the outside, and natural lighting** that reduce perceptions of crowding;
- **read access to outdoor spaces** from housing and program areas so that the sense of confinement is minimized while program options are expanded;
- **light colors, decorative accents and changing decorations** that contribute to spatial openness, add visual variety and permit some sense of personalization;
- **movable furnishings** that permit changing use of space throughout the day and over time while offering some control over the environment;
- **spatial variety throughout the day**, with changing spatial scale and shapes that reflect those normally encountered in daily experience;
- **sound absorbing materials** that mitigate the often disruptive and disturbing noise usually generated by youthful populations living together;
- **familiar and variable construction materials** that present no overt expectation of damaging behavior, often a self-fulfilling prophecy; and
- **access to varying program activities at all times** with appropriate space for residents to engage in satisfying formal and casual pursuits through daytime and evening hours so that residents and staff have options and no unproductive down time.

These elements combine to reduce perceptions of crowding and coercive control while serving to expand spatial utility.

**Daily Programming Activities and Opportunities**

Youthful residents need structure in their daily activities. Established routines provide youth with a sense of comfort and constancy that can be counted upon. This diminishes the uncertainty of unexpected (and potentially harmful) events. A full schedule of educational, recreational, therapeutic, and family-oriented activities will ensure that youth are fully occupied, will minimize harmful behaviors, and will help prepare youth for their return to the community.

By the same token, unvarying and regimented scheduling may contribute to a more rote, institutional experience that inhibits successful intervention and resident achievement. The physical plant should encourage residents and staff to engage in enriching, worthwhile, even fun, activities at all times and in a variety of spaces.

Housing areas should support living activities such as personal hygiene, counseling, reading, homework, and passive games. At the same time, immediate access to computer games and skill building activities, table games, arts and crafts, and outdoor recreation will provide opportunities for beneficial and diverse programming, which are an inducement to positive behavior. Residents should be able to step outside their housing for group activities or personal pursuits, to enjoy a snack and fresh air, to burn off youthful energy, all the while easily supervised by staff. Staff should be able to maintain contact with residents in all areas, while easily managing a number of smaller groups in adjoining areas.

Recreation should be more than simply a scheduled event for a specified period. Physical activity of all kinds should be readily available to youth at staff discretion as a form of social interaction, a healthy way to focus energy, and/or a reward for good behavior. A variety of indoor and outdoor spaces should support physical activity of all kinds.

Education, though typically occurring in classroom spaces designed to support varied instructional activities, may also make use of housing
and outdoor areas. Teachers should have the opportunity to hold larger and smaller classes, or to schedule special events as appropriate using different spaces: housing areas, outdoor courtyards, dining or visiting areas, etc. These spaces should support such varied activity and should be easily accessed during school hours, as well as at other times as well so that staff may continue the learning process as desired.

The architecture of residential facilities for youth must be versatile and enhancing, rather than restricting the conduct of a wide range of program options. Easy access to and supervision of all program spaces, and the ability to use spaces in different ways at different times, are key considerations in the design process.

**Staffing Efficiency**

Residential facilities for youthful offenders typically feature higher staffing ratios than those of adult facilities. This is essential for purposes of managing youth directly and engaging in purposeful interaction. It is especially important when effective intervention and redirection of behavior is a priority. Staffing levels of one staff per eight to twelve residents in housing areas are fairly typical in juvenile facilities. In larger units, more than one direct care staff person is usually assigned to promote safety and appropriate interaction with residents.

Over the life of residential facilities for youth, personnel costs will account for about 80% of the total amount expended to care for residents, with the cost of the building itself representing less than 10% of the total expenditure. Every effort should be made to ensure that facility design permits appropriate and sustainable staffing levels so that residents are well managed and supervised at all times.

Smaller housing units are generally preferred since they permit improved supervision, staff/resident interaction, and resident classification. This approach may, however, result in higher staffing levels compared with larger housing units. It is important that the design strike a suitable balance so that appropriate management and staffing efficiency are achieved.

Staffing efficiency is a key concern since daily operations and program quality will suffer if appropriate staffing levels, with staff in housing units and support staff nearby, cannot be maintained. Larger units with inadequate direct supervision staff and smaller units with too few support staff to provide assistance and move residents pose equally daunting operational problems.

In contemporary juvenile facilities, housing units are frequently clustered in close proximity so that staff within units and in adjoining activity areas are able to support each other, observe resident activities and perhaps work with residents in smaller groups. This approach is consistent with advanced professional practices and may permit reduced staffing levels during sleeping hours since assigned staff are so closely connected.

Spaces for various activities are sometimes shared (e.g., visiting may occur in dining areas, meals may be served in housing areas), and certain functions may be located off-site (e.g., remote food preparation) but all functions noted above must be accommodated.

The following table illustrates representative space allocations for a 50 bed juvenile detention facility providing 620 square feet per resident.

**Primary Functional Components**

- **Housing**
  - Housing units
  - Housing support

- **Residential Programs**
  - Academic/vocational education
  - Treatment services
  - Recreation
  - Visit

- **Residential Services**
  - Medical
  - Dining
  - Laundry
  - Food prep
  - Maint & storage

- **Central Support**

- **Administration**
  - Admin offices
  - Staff
  - Admission
Planning and Design Process

Planning and designing a building that works well, that fulfills the needs of all those who will use it, requires a comprehensive understanding of all the operational goals envisioned for the facility. In the case of secure residential facilities for youth, it further demands a clear understanding of the activities that will take place throughout the day, the way residents will move through the building, and the space required to support all programs and services.

The first step in the facility planning process is operational/architectural programming. Operations programming focuses on defining the mission of the facility, operational priorities (management methods, staff-to-resident ratios), required programs, and potential activity schedules. Staffing requirements are then explored, and staffing and other annual operations costs projected. When an approach to overall operations has been established, architectural programming begins. During this phase, environmental priorities (the spatial character and appearance of the building), building code requirements, security systems, and cost/site constraints are investigated. With this information in hand, a list of all spaces, and the amount of space required for all functions, is prepared. The total space required, including net usable areas and associated grossing factors (additional space for circulation, walls, mechanical rooms), is then tabulated to develop a complete picture of the projected size of the building and the probable cost of construction.

Facility Planning Process

When the scope of the project is approved or modified in response to cost or operational concerns, diagrams illustrating spatial adjacencies (the desired connections between spaces) are completed as the basis for conceptual design and all subsequent design efforts. The architectural design process involves four separate phases: schematic design, design development, construction documents and construction administration. Schematic design focuses on the preparation of initial floor plan options, building sections and elevations responsive to operational requirements. The most appropriate approach is selected and further developed during the design development phase. Site and floor plans, elevations, sections, and building materials and systems are fully developed. In the construction documents phase, all plans and building details are finalized. Construction drawings and specifications are completed and prepared for final cost analysis and bidding. Construction administration describes the architectural review and oversight of all aspects of the actual building construction.
Helpful Hints

GENERAL INFORMATION

Costs
Juvenile facility costs can vary over a wide range, depending on the level of security required, the durability of construction materials and hardware, and the extent of electronic security and communications systems. Facility location can also impact total development costs: construction in urban areas is frequently more expensive than in rural locations, and different geographical locations can experience cost variations of 25 percent or more.

In 2003, medium secure juvenile facility construction costs average between $175 and $210 per square foot, though costs beyond these ranges are not unusual. This cost range assumes the moderately restrictive construction (masonry, security glazing, hollow metal doors, security hardware and electronics) typical in juvenile operations. Staff secure shelter and group care facilities may cost $50 to $60 less per square foot. These costs represent the costs of bricks and mortar alone. Additional expenditures to be considered for all building projects include:

- site development (8 to 15 percent of construction cost)
- architectural/engineering fees (6 to 10 percent of construction cost)
- contingency (8 to 10 percent of construction cost)
- furnishings (4 to 6 percent of construction cost)
- site acquisition

Total project development costs may generally be estimated at 34 to 38 percent of the cost of building construction.

Space Requirements
Juvenile facilities vary considerably in size depending on the total capacity served and the scope of programs and services offered to residents. Secure detention (short-term custody) facilities developed in accordance with professional and advanced standards of practice usually provide 500 to 650 square feet per resident, more if extensive educational and recreational components are included. Longer-term care typically requires more area per resident – 700 to 850 square feet – in support of a variety of education, vocational, recreation and rehabilita-
tive program opportunities. Smaller facilities generally have more square feet per resident than larger facilities since they do not benefit from economies of scale, i.e., the space required for certain shared activities of relatively fixed size (such as food preparation, indoor recreation, administration, admissions) are not averaged over a large number of residents.

Since juveniles in secure detention do not leave the facility except in special circumstances, secure residential facilities typically provide a full range of services and spaces to care for the health, well being and management of residents. These include:

- administrative offices
- staff lockers/break areas
- intake/admissions
- visitation
- education
- indoor and outdoor recreation
- religious services
- food services/dining
- medical services
- laundry services
- maintenance
- resident housing and related activities

Cultural/Social Issues
The development of good residential facilities for tribal youth requires sensitivity to a number of concerns closely associated with tribal cultural and social priorities. These priorities may change considerably from tribe to tribe, but recent projects demonstrate the importance attached to certain fundamental aspects of tribal life, including:

- family involvement
- respect for and participation of elders
- religious observation
- symbolism and imagery
- connection to the outdoors, and
- tribal life and traditions.

Family involvement and the participation of elders is central to the intervention and treatment programs of all the tribes. Spaces that permit a variety of formal and informal activities – teaching, counseling, singing, cooking, recreation, storytelling - with these groups are highly desired for the cultural understanding and social values they foster. Religious ceremony and tradition is equally prized for similar reasons and for the connection it offers to tribal beliefs and traditions. Sweat lodges and smoke dens are frequently incorporated to assist youth in their spiritual development.

Tribal symbolism and imagery, representing both spiritual and cultural traditions, can be key elements of facility design. The circle of life may be depicted either literally or figuratively in designs to capture the sense of rebirth and growth tribes postulate for troubled youth. Orientation to light and sun, the points of the compass, and other natural elements may reflect tribal traditions. Colors, graphic symbols and patterns specific to a tribe’s artistic and spiritual heritage may be incorporated, creating a physical and emotional presence binding the facility and its work to tribal history and goals. They may further contribute to a more familiar, less threatening environment conducive to the positive response and behavior desired of youth.

Outdoor space, and views to the outdoors, are sought to maintain a connection to the earth and to nature at large, the basis for much of tribal spiritualism and belief structure.

The cultural and social milieu varies widely among tribes, but respect for tribal history as a bridge to tribal future remains a universal concern. The best facilities for tribal youth will be sensitive to such concerns and reflect tribal culture in the physical environment.

**FURTHER READING**

**ADA: Proposed Final Regulations for Courthouses, Jails and Prisons**
This journal article discusses reasonable accommodations and program accessibility for persons with disabilities as they enter, exit and/or pass through a building. Specifics include discussions on entrances, signage, telephones, security barriers, grab bars, visiting areas, lighting,
acoustics mobility aids, toilets, medical isolation cells, and locations of accessible cells. An ADA compliance checklist is also included.

**Anticipating Space Needs in Juvenile Detention and Correctional Facilities**
This pamphlet presents information on determining population projections and profiles based upon changing populations, admissions, length of stay, alternatives, and laws and customs, and calculations. It also explores the differences between forecasting and predicting, and it explains the necessity of keeping accurate records.

**JAIBG Bulletin: Construction, Operations, and Staff Training for Juvenile Confinement Facilities.**
This bulletin presents information on construction decisions, master planning, facility development, operations, and staff training. With its step-by-step explanation of the planning process, thorough instructions on determining the type of facility needed, and detailed discussion of the key elements of operation, the Bulletin is a valuable resource to jurisdictions. It also includes an extensive list of references, a "For Further Information" section, and a "Useful Publications" box, all of which identify additional sources of information relating to construction, operation, and staff training.
See: www.ncjrs.org/pdfiles1/ojdp/178928.pdf

**Design Considerations...For Health Care Space in a Correctional Facility**
This brief article discusses space specific requirements, numbers, acoustics, location, HVAC, lead lining of walls, plumbing, storage, privacy, security, accommodations for females and elderly and numerous other issues. It also describes issues related to hygiene, pharmaceuticals, and suicide.

**Design, Construction and Oversight of Tribal Facilities on Tribal Lands (Participant's Manual).**
National Institute of Corrections Academy (Longmont, CO). NIC accession no. 016222.
Information regarding the planning of new institutions (PONI), in particular, juvenile detention and corrections facilities on tribal lands is provided. Sections include: historical overview and evolution of juvenile detention and corrections in general and specific to Tribes; planning in the 21st Century; mission and vision statements; facility development process (FDP); planning team role clarification; direct supervision; using data for facility planning; issues in new facility staffing; operational programming; architectural programming; engaging the public; taking control of the project; site evaluation; and transition and activation.

**Design Review Handbook**
Geared for representatives from Tribal and other governments’ planning and design teams, this document provides checklists that are extremely useful during the design review process. The checklists pose dozens of questions aimed to help ensure that the design of a jurisdiction’s jail meets that jurisdiction’s needs; and supports its mission, intended operations and programs; is safe and secure; and appropriate for its offender populations. Although primarily written for jails, most of it is applicable to Tribal juvenile facilities and combined juvenile and adult facilities too.
Available from the National Institute of Corrections Information Center.

**Juveniles in Adult Correctional Systems**
This document contains articles on alternatives to incarceration, juveniles in adult facilities, transitioning from incarceration back to community, and architectural challenges to violent juveniles.
Available from The American Correctional Association, 4580 Forbes Blvd, Lanham, MD 20706.
Planning and Design Guide for Secure Adult and Juvenile Facilities
ACA’s design guide provides the necessary information for architects, planners, and administrators to design and construct a facility which is architecturally sound, yet meets safety and security requirements. Areas covered include planning, design, construction process and issues; inmate services; inmate programs, including correctional industries; administrative functions; service facilities and physical plant; security features and technology; and commissioning. It provides information on budget development, privatization, ADA guidelines, outsourcing/contract services, and staffing. Special focus is provided regarding inmate housing. Top architects, design and construction planners, and adult and juvenile administrators contributed to this guide.
Available through www.aca.org

National Institute of Corrections Academy (Longmont, CO). NIC Accession No. 016569.
The planning of new juvenile detention and correctional facilities (PONI) is discussed in the 29-hour NIC seminar known as PONI (for Planning of New Institutions). Sections in this PONI Handbook include: historical overview and evaluation of juvenile team role clarification; direct supervision; using data for facility planning; issues in new facility staffing; operational programming; architectural programming; mission and vision statements; and the facility development process (FDP), including transition and activation.