



Jail Design Review Handbook



**U.S. Department of Justice
National Institute of Corrections**
320 First Street N.W.
Washington, DC 20534

Morris L. Thigpen
Director

Virginia A. Hutchinson
Chief, Jails Division

Richard Geather
Project Manager

**National Institute of Corrections
World Wide Web Site**
<http://www.nicic.org>

Jail Design Review

Handbook

Mark Goldman

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ABOUT THE AUTHOR

Mark Goldman, head of the consulting firm Mark Goldman and Associates, has dedicated the past 23 years to planning juvenile and adult detention and correctional facilities. Over this time, he has planned facilities for more than 80 counties and other jurisdictions across the country, covering more than 40 million square feet, with construction costs ranging from \$200,000 to \$2 million. Unlike many in his field, he has hands-on experience in juvenile and adult corrections, having served as a staff supervisor and intake officer in a juvenile detention facility and as a programs manager, parole evaluator, prerelease counselor, and work-release supervisor in a jail. In addition to this handbook, he is the coauthor of two books and several articles on planning, programming, and controlling costs for detention and correctional facilities. Goldman has a B.S. and master's in architecture, a B.A. in sociology, and an M.S. in urban studies.

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Chapter 1

Introduction and Overview

WHAT IS THIS HANDBOOK ABOUT?

Is your jurisdiction planning and designing a new jail or renovating or building an addition to an existing one? Are you a sheriff, jail administrator, corrections officer, jail health services manager, public works manager (or staff member), city or county manager, or elected official? Will you be involved with the architects and engineers who will be working on your jurisdiction's jail project? If you answered "yes" to these questions, then this handbook is for you.



This document is intended to be used during the entire planning and design process, but it focuses particularly on the early portions of that process.

Using this document as a tool and reference book, you and others who will be working with your architects and engineers will be able to do a much better job of reviewing the design, especially in the conceptual options and schematic design phases. As a result of your diligent and enlightened design review, your jurisdiction's jail will be much more likely to—

- Meet *your* community's current and future needs.
- Support *your* community's philosophies and objectives regarding detention and corrections.
- Help *your* staff do their best at their jobs.
- Work well for *your* current and future staff and inmates.
- Fit within *your* community's budget for construction and annual operational costs.

To help you accomplish these admittedly lofty intentions, the bulk of this document is a checklist to use when reviewing designs. The checklist is organized by jail areas or components, such as housing and food services.

This document is organized as follows:

Chapter 1, Introduction and Overview, defines design review, explains its benefits, and suggests possible participants in the process.

Chapter 2, Your Jurisdiction's Involvement Throughout the Planning and Design Process, describes design review in the context of the entire design and construction process. The chapter ends with a self-assessment exercise to determine whether your jurisdiction has successfully completed all steps that should precede design, or whether it would be better in the long run to go back a few steps.

Chapter 3, How To Read Architects' Drawings, helps prepare detention and correctional administrators and staff, city and county administrators, and others for design review. This chapter describes the types of early-phase drawings. Understanding these drawings should help design reviewers identify potential problems early on so that the architect can correct them. It should also help reviewers confirm that the architect has drawn exactly what the jurisdiction wants and needs.

Chapter 4, Checklists, contains lists of questions to ask during design review. Although these questions cover all components within a jail, such as intake and maintenance, they are not exhaustive. Because every jail is different, every jail design should generate its own supplementary design review questions. The "basics" covered herein relate largely to the adequacy and appropriateness of spaces for functions, activities, programs, and people; safety and security issues; how spaces help staff do their jobs; convenience; and expandability and change over time.

The number of questions in the checklist may seem overwhelming at first, but there are several ways to make them manageable:

- **Focus on one component at a time.** For example, only a few pages of questions pertain to administration, security administration, and central control.
- **Divide and conquer.** Split the questions among teams of two or three appropriate reviewers. Those who review the design of the kitchen, for example, should include

the food services manager, a correctional officer, and a member of the maintenance staff.

- **Weed out inappropriate questions.** For example, if the population of your jail is too small to warrant an infirmary, skip the questions pertaining to the infirmary.

Chapter 5 is Conclusions and Next Steps.

A glossary defines terms that are used in this handbook that are specific to the jail planning and design professions. The glossary is followed by a bibliography.

WHAT IS DESIGN REVIEW?

Design review is the ongoing process of asking questions to ensure that the design is "right." It ensures that designs will work for *your* community, *your* inmates, and *your* staff while reviewing the work of architects, planners, and engineers.

Design review involves many different issues, including the following:

Staffing

How many staff would the design require? Is this number consistent with your jurisdiction's staffing plan and operations budget? How might the design be modified to make the jail more staff efficient? How could spaces better help staff do their jobs? How might spaces contribute to or detract from staff morale?

Safety and security

With the proposed layout, will staff have a clear view of all inmate areas without having to move or turn around so much that they get dizzy or tired? How might the design be improved to facilitate staff control and make it easier for supervisors to manage their staff? Are barriers between staff and inmates kept to a minimum, to encourage proactive communications and to prevent, rather than

Design review is the ongoing process of asking questions to ensure that the design is "right."

just react to, problems? Is the secure perimeter fully and continuously secure? Are some areas more secure—and more expensive—than necessary for their functions?

Space and functionality

Are all rooms and other spaces large enough for their intended functions? Will they accommodate anticipated numbers of inmates, staff, and visitors, both now and in the future, such as 15 years down the road? Are other spaces unnecessarily large? Are the spaces of the right type (e.g., secure single cells rather than dormitories for inmates who assault other inmates)? Will they be large enough for anticipated growth in inmates, staff, and visitors? Is there an appropriate space for every activity, function, and daily scenario? Considering security, movement, and time, are all spaces located in the best place?

Building materials

These are usually determined in later stages of design.

Are all walls, ceilings, and floors durable and appropriate for their functions? Will they be easy to maintain and economical, both initially and over the long run? Are they appropriate for security (e.g., barriers), sound absorbent, and energy efficient?

Engineering systems

These include structural, electrical, electronic, mechanical, and plumbing. Engineering systems are determined in a broad-brushed, general way during schematics but are detailed in later stages of design.

Do they have a long life cycle? Are they affordable now, easy to maintain, and economical in the long run? Are they energy efficient and appropriate for the inmate population?

Reviewing designs requires many skills and types of expertise. The people involved in the process vary from jurisdiction to jurisdiction but usually include many of the following:

- **Representatives from the jurisdiction**, including the sheriff, jail or corrections administrators, detention or

correctional staff, medical and food services staff, county or city administrators, board members or commissioners and other elected officials, a public works project manager, public works engineers and architects, an auditor, planners, and building inspectors.

- **Consultants**, including planners, architects, a variety of engineers, often a cost estimator, and, depending on your community's construction methodology, perhaps a construction or program manager.
- **State officials and inspectors**, depending on requirements in your state. At the very beginning of your project, your team must determine what types of state involvement are necessary and when they occur. One or more entities may be involved; these may consist of the state fire marshal and the state department of corrections or another department that oversees jails. Generally, states that provide partial funding have the most requirements. State approvals may be necessary for the needs assessment, operational and architectural program, and design and construction at various points of completion. Ignoring state requirements could result in costly and time-consuming changes.

WHY REVIEW DESIGNS?

Get it right!

In three words, that is the main reason to do design review. If your jurisdiction is like most others, you will never be involved in another jail construction project. This type of opportunity comes to most jurisdictions only once every 10 to 100 years. Now is the time for you to help ensure that your new, expanded, or renovated jail is right for your community. Pass up this opportunity to do it right, and your community and the next several generations are likely to regret it. Unlike the structural makeup and building systems of an office building, restaurant, or store, a jail's complex architecture and engineering are usually very expensive to fix. So take advantage of this opportunity to get it right.

But what is "right" varies. What works for the county next door or that award-winning jail in the next state may not be right for your jurisdiction. It is important to define carefully what "right" means for your jurisdiction. Without your

involvement, the planners, architects, and engineers working for your jurisdiction may not understand what you want, need, and can afford.

Design review—with the involvement of all parties with interests in the issues—can help facilitate consensus building and decisionmaking.

Not only do other communities have different definitions of “right”; in all likelihood, so do some people in your department and elsewhere in your jurisdiction. Consensus on this point is extremely important. The best decisions are made by combining different perspectives to create “win-win” situations. For example, deciding to build a single kitchen rather than two for your facility may appeal to those whose job is to be fiscally conservative or to security-oriented administrators who want to maximize control of the security perimeter and minimize contraband. It may also be desirable for the food services manager who is interested in simplifying operations and improving manageability. Design review—with the involvement of all parties with interests in the issues—can help facilitate consensus building and decisionmaking.

Without your input, your consultants and architects may make false assumptions. They may think they understand what your jurisdiction wants, but be far off the mark. Even the most experienced planners and architects could easily plan what they think is a great jail, but it may not work for you. Planners and architects with limited jail experience may have only a partial understanding of how design affects staffing and operations, how one error can result in escapes, how to meet jail standards, or how the design can affect staff morale and inmate behavior.

No matter how good they are, your jail planners and architects need your help. This document is intended to help you—administrators and staff from sheriff’s offices and jails, public works and general services departments, county administrations, and other governmental entities—help your planners, architects, and engineers design the optimal jail for your community.

Overlooking something small can cost something big

The world is full of jails with built-in mistakes that could have been prevented (or at least minimized) by good design review. Even small errors that could have been corrected in minutes during planning or initial design can result in significant problems for decades. A list of such problems could easily fill this entire document. Here are some examples:

- Several small, adjoining housing units (e.g., 12 beds each), each of which, due to its design, requires its own staff 24 hours a day.
- Escapes through overlooked “holes” in security perimeters.
- Careers cut short and costly disabilities from staff slipping on wet floors due to leaky, poorly designed roofs.
- Staff bathrooms that inmates can see into (through windows that were designed for staff to see out of).
- Bed shortages because cells designed to hold two people only meet state standards for one person, resulting in expansion much sooner than planned or budgeted.
- Large cells that cannot be double-bunked because of too few showers or inadequate dayroom space.
- Blindspots in housing units.
- Housing unit layouts that require an excessive number of staff to provide adequate supervision.
- Building all housing units as maximum security, with the most expensive doors, plumbing fixtures, and locks, rather than providing a variety of housing types that more accurately reflects the security classification of the inmate population. These alternatives are often more cost efficient and appropriate.
- Building areas that are difficult and expensive to expand on incrementally (e.g., intake areas, staff locker rooms, and infirmaries).
- Poor staff morale exacerbated by a shortage of staff toilets, undersized locker and changing rooms, insufficient staff dining and break rooms, or a dark and drab environment.

- Providing program spaces that are accessible to only one gender.
- Building insufficient food storage areas, thus necessitating more frequent (and therefore more expensive) deliveries.
- Exterior walls in high-security areas that demand resurfacing several years after building completion because soft, vulnerable materials were selected as a cost-saving measure.
- Having to replace all security electronics shortly after occupancy because companies with appropriate parts and trained service technicians were not able to respond in a timely manner, or were far too expensive.
- Failure to purchase adequate land to begin with, which can result in expensive second phases—sometimes involving parking structures, much more expensive land purchases, or even having to build a second facility.

How can your jurisdiction minimize such mistakes or catch them in time? That is the purpose of this handbook.

WHY A DESIGN REVIEW TEAM?

It is impossible for one person to catch all potential design mistakes. No single person can make sure that your jurisdiction's remodeled, expanded, or new jail perfectly meets your jurisdiction's needs. Nor can one person know all the issues and areas of expertise that go into designing a jail. For example, the expert in food production and delivery systems is almost always a different person from the one who is most knowledgeable about direct supervision and unit management. Your design review team should be composed of people with different perspectives, objectives, and backgrounds to help make sure that your jurisdiction's new facility works well in every way.

Another significant reason why your jurisdiction should have a design team composed of people with various areas of expertise is that your jurisdiction's jail should not simply reflect the perceived needs, wants, and values of the current sheriff, public works director, jail administrator, or county board members. The jail will be in operation far

longer than any current officeholder and should be as timeless as possible. Although it should meet the needs of current officials, it should work for their successors as well.

Your jail should belong to the entire community.

The best way to minimize design mistakes and to build a jail that reflects and supports your jurisdiction for decades is to take a team approach that includes the following steps. Before starting design, complete all planning tasks to your jurisdiction's satisfaction, including—

- Mission statement and objectives.
- Needs assessment study.
- Inmate population projections (may be part of needs assessment study).
- Inmate population profile (may be part of needs assessment study).
- Study of alternatives to incarceration and changes to the justice system that may help control the magnitude of construction and costs (may be part of needs assessment study).
- Analysis of bed needs by category (e.g., lower security dormitories; may be part of needs assessment study).
- Evaluation of the existing jail to consider the feasibility of options related to renovation, expansion, and new construction (may be part of needs assessment study).
- Site studies (may be part of needs assessment study or master plan).
- Master plan.
- Functional/operational program.
- Architectural ("space") program.

Your design review team should be composed of people with different perspectives, objectives, and backgrounds to help make sure that your jurisdiction's new facility works well in every way.

- Conceptual estimate of construction costs and other initial costs.
- Preliminary staffing plan.
- Conceptual estimate of annual operational costs.
- Agreement of your jurisdiction's governing body (e.g., county board), the sheriff, and other elected and appointed leaders on the project's scope and budget.

Once initial planning tasks are complete, determine the areas of expertise needed for design review. Write brief job descriptions for each. When deciding which people in your jurisdiction are well suited for these jobs, focus on who is really qualified to do each job, rather than on titles. Consider who can and would make adequate time available for design review over an extended period of time—from initial planning through occupancy. To supplement your jurisdiction's in-house expertise, consider jail consultants with one or more types of expertise. Consultants may include planners, architects, security engineers, cost estimators, and construction managers—all with jail experience.

MEMBERS OF THE DESIGN REVIEW TEAM

Administrators and staff from your jurisdiction

Your jurisdiction's design reviewers should include, wherever feasible—

- The managers of your current jail and (if different) the people who will run the new facility.
- Jail administrators or senior staff focused on security, treatment and programs, and services (e.g., food, laundry).
- Your jail's specialists in particular areas, such as the senior nurse, the food services manager, or the intake supervisor.
- Your jurisdiction's in-house architect (if there is one).
- Your jurisdiction's in-house engineer. If there are several in-house engineers, design review could benefit

from the knowledge of civil, structural, mechanical, plumbing, heating/ventilation/air-conditioning (HVAC), electrical/electronic, and communications engineers. Most of these will not be needed until the design development phase.

- Someone from your jurisdiction's finance or administration office with expertise in budgeting and fiscal management.
- A representative of the elected officials (such as county administrative staff).
- A representative (or two) from the public works or general services departments (or their equivalent) who is knowledgeable about project management, local codes, permits, scheduling, and costs.
- Local fire marshal (if there is one).
- A maintenance manager or supervisor.

State agencies

Many states have an agency that must review plans for renovating, expanding, or building new jails. Requirements regarding the timing, quantity, and focus of such reviews vary from state to state. Hence, at project initiation, it is vital that your jurisdiction check on your state's requirements—and follow them.

Transition team

Many jurisdictions appoint a transition team to work with the planners, architects, engineers, and construction or program managers throughout the planning, design, and construction process. In most places, transition teams largely consist of experienced jail operators who will work in the new facility. Frequently, transition team members are freed of all or most other responsibilities so they can focus on the new facility. In addition to design review, the transition team typically provides a lot of input during programming, design, and (when necessary) construction. Additionally, the transition team often develops the staffing plan, transition plan, facility-specific training programs, and policies and procedures.

In-house project manager

When a renowned orchestra conductor brings out the best in every musician, the resulting sound is far better than that produced by the individual performers separately. Your jurisdiction needs to have a “conductor” to take charge of the entire project, including design review. Usually it requires a full-time commitment through most of the life of the project. Depending on the resources, personalities, and talents available, this person may have an administrative, public works, architecture, or jail management background.

Consultants

Generally, jurisdictions use consultants in the following capacities in the design review process:

- The person or firm who did your facility’s planning and functional, operational, and architectural programming, or another jail planner or programmer.
- A security consultant.
- The architects.
- Civil, structural, mechanical, electrical, electronic, security, and plumbing engineers.
- A cost estimator or quantity surveyor. If initial estimates are over budget, this consultant will help the team come up with ways to reduce costs without compromising operations, security, or other objectives.
- Your construction or program manager (should you have one or both; some jurisdictions use their own staff or a combination).

You may wonder whether your jurisdiction can afford to have that many people dedicated to the new facility from project startup through occupancy. Design review and other project-related tasks take a lot of time, but relatively few people are involved in the entire process and even fewer are involved 100 percent of the time. Exhibit 1 displays the level of involvement before, during, and after schematic design review. The number in each space signifies the level of involvement of the various parties. Depending on skills, experience, and availability, roles,

responsibilities, and degrees of involvement may vary for your jurisdiction.

LEARNING TO COMMUNICATE IN TWO LANGUAGES

Jail administrators, county administrators, public works directors, architects, engineers, and others involved in the design of your jurisdiction’s jail have very different types of training, knowledge, and expertise. These differences often result in varying abilities to understand concepts, terms, and diagrams that are common

to other disciplines. While a term such as “sallyport” may be common to jail administrators and justice facility architects, it may have no meaning to a county administrator or an engineer who has no jail experience. Similarly, to an architect, “glazing” may connote “glass or polycarbonate window,” but those who have never been involved in the construction of a new building may think of the outside of a donut. For a project to be successful, the people on your design review team must learn to communicate with each other.

How can potential communication challenges be addressed? The following tactics have worked for others:

- Hire consultants who have planned and designed similar projects—people who know the building type.
- When checking consultants’ references, ask about their communications skills.
- When negotiating with the selected firms, stress the importance of incremental document and design review meetings and clear and detailed communications.
- When working with consultants, ask many questions. As do many other professionals, some jail consultants use unfamiliar terms. When responses to questions are

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Exhibit 1.

Design Review Involvement

When and How Much Should They Be Involved?

Reviewers	Before Schematics	During Schematics	After Schematics
From the jurisdiction			
Project manager	3	3	3
Jail transition team	3	3	3
Jail manager	2	2	2
Jail security administrator or staff focused on security	1	1	1
Jail programs manager or staff who manage visiting, education, recreation, religious, medical, and food services	1	1	1
Architect (if jurisdiction has one)	1	2	2
Engineer(s)	1	1	2
Finance and administration managers	1	1	1
Representatives of elected officials	1	1	1
Public works or general services managers	1	1	2
Maintenance manager	1	1	2
From the state			
State agency/state fire marshal/state inspectors	Varies	Varies	Varies
Consultants			
Planner/programmer	3	2	1
Security personnel	0	1	1
Architects	1	3	3
Engineers	0	1	3
Cost estimator/quantity surveyor	1	1	1
Construction and program managers	1	1	3

Note: Zero = no involvement; 3 = the highest level of involvement.

- unclear, say so and do not leave the topic until the answer is understood.
- Learn the basics of their language—how to read drawings and specifications and the meaning of terms that they will use frequently, such as “natural light” and “vitreous china.”
- Always remember that the more they understand the kind of jail you want, the better the job they can do for you. Take the time to explain terms that architects may not understand.
- Agree either to avoid using acronyms entirely or to use only those that are already in everybody’s vocabulary.

“NSF” may mean net square feet to an architect, but to the uninitiated, it may mean “nonsufficient funds”; to corrections professionals in the western United States, “CDC” may refer to the California Department of Corrections, but architects are more likely to think of the U.S. Centers for Disease Control and Prevention.

HOW CAN TIME AND MONEY BE SAVED?

Catch concerns and communicate early

The earlier that planners, architects, and engineers receive feedback, the better for everybody. Reviews have to be timely and, because of participants’ other responsibilities, they must be scheduled. At the same time, consultants must understand that unlike some other types of buildings, the existing jail and other jurisdictional functions must remain in operation. Therefore, some design reviewers will have ongoing operational responsibilities and may be interrupted by emergencies. Yet it is important that these busy people make time to review the documents carefully before the consultants proceed to the next stage.

Changes often cost time and money

If your jurisdiction approves preliminary design documents, the consultants will continue developing the design. If your design reviewers later revisit the earlier design documents and request changes, you will have unhappy architects and engineers. This is because they are, most likely, working for a fixed fee and as business people, time is money. Backtracking and making revisions will take extra hours. Depending upon the magnitude of the changes, this could cost designers hundreds of hours and thousands of dollars. The architects and engineers may seek a contract modification for your jurisdiction to pay for this extra cost. Nevertheless, it is still better and less expensive to make changes now than after the facility is built.

With a jail, even small changes can be time consuming. For example, if a plumbing chase is too small, probably dozens to hundreds of other plumbing chases are too small. One change may have to be made many times, and this change may have other implications. For example, it is crucial to make sure that widening plumbing chases does not result in narrow door widths or blindspots in front of or within cells.

So, to avoid delays and additional fees, jurisdictions should—

- Provide adequate leeway in the design review schedule so that when reviewers have those inevitable emergencies, they still have time for review and comment.
- Stick to the design review schedule.
- Involve all appropriate reviewers. For example, make sure that the food services manager is involved when it is time to review the designs for the kitchen and serving areas.
- Make sure that each review is thorough and comprehensive.
- Make sure that all parties are present at design review meetings and reach consensus on changes and approvals.
- Document proceedings and decisions made at design review meetings.

Following these principles will not only help minimize delays and added costs; it will help foster team unity and minimize conflict, all critical to successful projects.

The earlier that planners, architects, and engineers receive feedback, the better for everybody.

Chapter 2

Your Jurisdiction's Involvement Throughout the Planning and Design Process

INPUT AND REVIEW FROM BEGINNING TO END (NOT JUST DURING SCHEMATICS)

For many design reviewers, the early phases of design are the most interesting. Although these guidelines focus on schematic design review, it is important for jurisdictions to work closely with architects and other consultants before that stage and to continue working with them until the facility is complete and fully operational.



For a design to be appropriate for your jurisdiction, it must—

- Meet your jurisdiction's needs based on your inmate population profile and projections, be consistent with your mission, and reflect your philosophies. These should be specified in your needs assessment study.
- Support operational requirements, as listed in your functional/operational program.
- Follow space and other architectural requirements, as listed in your architectural program.
- Be suitable for your site.
- Remain within your jurisdiction's budget.

Without adequate and appropriate input before schematics are created, the architect will have to perform a great deal of guesswork, and is therefore likely to experience many “false starts.” In turn, architects will spend considerable time with your jurisdiction dealing with issues that could have been previously resolved. Without good planning, architects will have to “go back to the drawing board” again and again. This is time consuming and frustrating for architects and reviewers alike and requires much more time than when schematics are based on well-planned documents.

Although jurisdictions make most big decisions before and during schematics, many other decisions are not made until later phases of design or during construction. Without your input, the

architect will have to guess and will often guess incorrectly. For example, the number of beds is usually determined during planning, and the layout of a high-security housing unit is developed during schematics, but the particulars about that high-security housing unit—such as the types of doors, flooring, or glazing—are often not determined until the design development stage.

USER AND CLIENT REVIEW THROUGHOUT THE PROCESS

This section takes the design reviewer through the planning, design, and construction process to clarify where and how schematic design fits. Second, it shows what types of issues and elements design reviewers should expect to see (and critique) during schematics and, to a lesser extent, in each of the other phases.

Exhibit 2 depicts the planning, design, construction, and transition process. It is followed by brief descriptions of each phase and a list of major items that need your jurisdiction’s input and review at each phase.

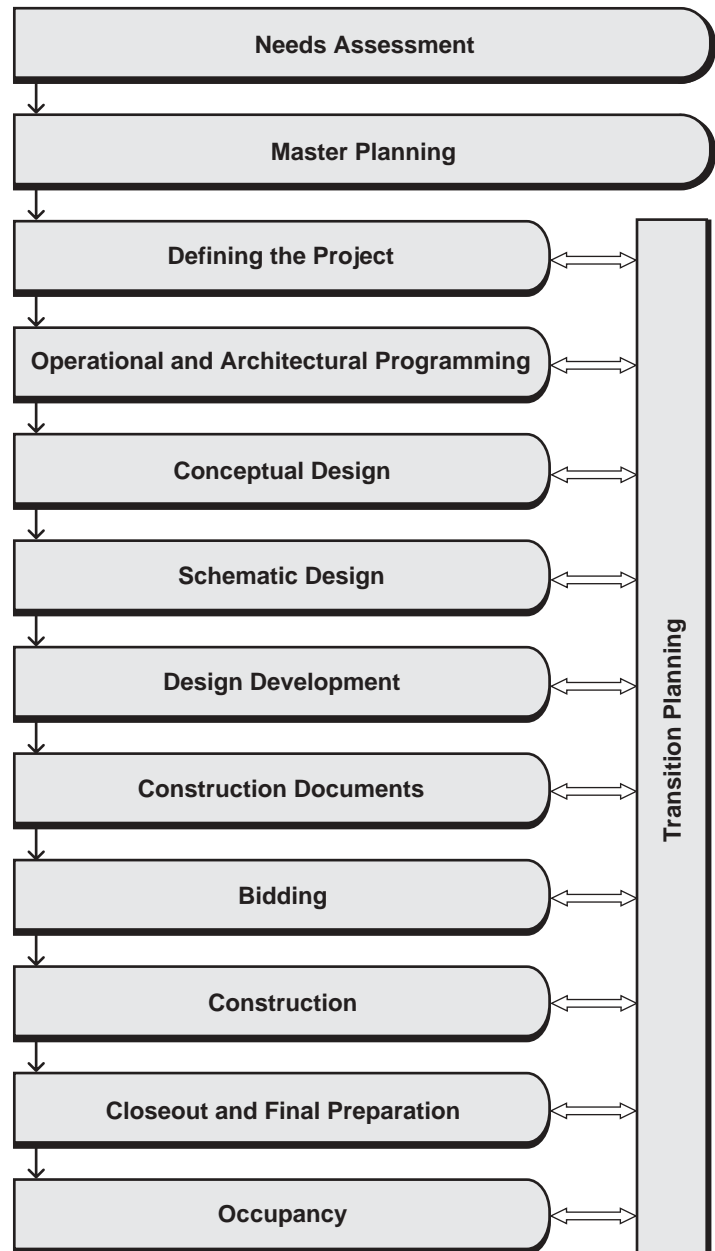
The solid arrows represent the sequence of major planning, design, and construction activities. The white arrows show the importance of ongoing operational and transition planning while other activities are taking place.

NEEDS ASSESSMENT

The first phase of the planning, design, and construction process is determining what is needed. For most jurisdictions, this involves a detention or correctional facility and a mix of alternatives to incarceration. Since building and operating a jail is far more expensive over the long run than operating noncustody alternatives, seriously considering and including alternatives as part of

Exhibit 2.

The Process: Planning Through Occupancy



the solution is vital to controlling costs. The focus should be on understanding your pretrial and sentenced populations and providing appropriate noncustody and custody placements for all. Another major part of needs assessment is to evaluate existing facilities.

Not all needs assessments are alike. For example, if your jurisdiction has already concluded that the existing jail must be closed as soon as possible, it could be a waste of time and money to study it.

Needs assessments consist of some or all of the following tasks:

- Clarification of mission statement, objectives, and philosophy.
- Population projections by time period (e.g., 5 or 10 years down the road) and category (e.g., presentenced females).
- Population profile (security levels, gender, residence, ethnicity, length of stay, release mechanism, programmatic needs).
- Study of the jail in the context of the jurisdiction's criminal justice system, focusing on ways to speed up the court process to reduce length of stay and decrease bed needs and costs.
- Analysis of alternatives to incarceration that can help reduce bed needs.
- Evaluation of the existing facility to study useful life, compliance with codes, ability to expand, cost-effectiveness of expansion, and dozens of other issues.
- Development of site criteria and evaluation of potential sites.

Key items for your jurisdiction's input and review during the needs assessment phase include the following:

- The mission and objectives of your jail.
- Which categories of presentenced alleged offenders should be incarcerated and which ones should be in alternative programs.
- Which categories of sentenced offenders should be incarcerated and which ones should be in alternative programs.
- The total beds needed now and in the future based on the current use of alternatives to incarceration.
- The total beds needed now and in the future for each category of inmate (e.g., low-security sentenced

misdemeanants) based on the current use of alternatives to incarceration.

- Potential changes in the use of alternatives to incarceration.
- The projected impact of these changes on the number and types of beds needed for pretrial and sentenced inmates.
- How well the existing facility works and how much more functional it would be with renovations or added space.
- The requirements for the new facility's site—location, proximities, access, size, costs for acquisition and site development, and so forth.
- Which sites meet these criteria.

The first phase of the planning, design, and construction process is determining what is needed.

MASTER PLANNING

Whereas a needs assessment provides your jurisdiction with information on what is needed, during the master planning phase you will explore, analyze, and decide on ways to meet those needs. Typically, master planning involves analyzing, formulating recommendations, and making decisions on alternatives to incarceration. Then, based on these decisions, bed needs are recalculated. Once the number of beds needed by category are revised, the team explores and decides on the best way for your jurisdiction to meet these needs. Master plans should include decisions on the following factors.

Alternatives to incarceration

- Programs for populations who pose little risk to others.
- Programs believed to be most effective in protecting society and keeping people from reoffending.
- Expedited court processes for those who are incarcerated to reduce pretrial length of stay and bed needs.

- Existing alternatives that should be kept, changed, expanded, reduced in scope, or terminated.
- Programs that should be added.

Building options

- The number of beds needed, by year and by category, based on decisions made on the use of alternatives to incarceration.
- The types of housing (single cells, two-person cells, or dormitories) appropriate for each category of inmate.
- Approximately how much space is needed (using rules of thumb at this point).
- The extent to which the existing facility, if there is one, is capable of meeting the needs.
- Whether the existing facility should be expanded or renovated, used as a supplementary facility, or closed.
- Where the existing facility should be expanded or a new facility built.
- The initial estimates of the costs of renovation and construction, plus other initial costs (site acquisition, site development, utilities, fees, furnishings).

Costs, funding, and affordability

- Preliminary estimate of construction costs for expanding or renovating the existing facility or building a new facility.
- Preliminary estimate of other initial costs (for site acquisition; utilities; fencing, parking, and other site development items; furniture and equipment; fees). These costs may total up to 40 percent of construction costs; hence, total initial costs may be as high as 140 percent of construction costs.
- Additional annual costs (over the amount currently spent) of alternatives to incarceration (which help limit jail construction and operational costs).
- Additional annual costs of operating the expanded or new jail, including staffing, food, maintenance, clothing, equipment, supplies, and medical care.

- Identification of funding options and analysis of the economic feasibility for all of the above.

Key items for your jurisdiction's input and review during master planning include the following:

- Which existing alternatives will be used in the future, how they will be changed, and what the targeted numbers of participants are in each alternative.
- Which new alternatives will be used in the future, for which populations, and what the targeted numbers of participants are in each alternative.
- Use of existing facility.
- Types of housing units.
- Location of new construction.
- The approximate initial and annual cost of making changes to alternatives to incarceration, building a new jail or renovating or expanding the existing one, staffing a larger jail and expanded alternatives, and other operational costs. (Note that in this phase, estimates will be preliminary. Estimates will be derived from rules of thumb and information from existing budgets and the experiences of other jurisdictions.)
- How much the jurisdiction can afford (or how much it chooses to afford) to spend on construction and renovation—including other initial costs (site acquisition, site development, utilities, fees, and furnishings).
- Whether your jurisdiction can afford these costs, and if not, what can be done to reduce initial and annual costs.
- Whether phasing will be necessary and if so, what the content, costs, and timing of each phase will be.

DEFINING THE PROJECT

This phase, which follows and builds on decisions made during master planning, clarifies the renovation or new construction. Often, this is not considered a phase in itself but simply the end of master planning. In any case, it is an essential activity that requires your jurisdiction's input and review on the following points:

- Numbers and types of cells to be renovated or built, by security classification (e.g., maximum-security single cells).
- Types of management and supervision (direct or indirect supervision).
- Preliminary staffing plan.
- Mission of the facility.
- Site.
- Substance of future phases or additions.
- Preliminary cost estimate and budget.
- Funding plan.
- Schedule (for design, construction, transition, and occupancy).

Key items for your jurisdiction's input and review while defining the project include the following:

- Which types of beds and housing units are best suited for each inmate category.
- Philosophy of management and supervision.
- Location of addition or new facility.
- Location of future additions.

DEVELOPING A FUNCTIONAL/ OPERATIONAL AND ARCHITECTURAL PROGRAM (ALSO CALLED "FACILITY PROGRAMMING")

In this predesign phase, the operational requirements of the new construction are defined and the physical provisions needed to support the operational requirements are spelled out.

Operational requirements include—

- Numbers of inmates by category.
- Activities and functions of staff and inmates.
- Operational scenarios.
- Inmate programs and services.

- Hours of operation of each area.
- Staffing requirements.

Architectural requirements include—

- Names, numbers, sizes, and types of interior spaces.
- Requirements for exterior areas for parking (numbers of spaces by category); intake and release staging and parking (other than the vehicular sallyport); outdoor recreation areas (outside the building's perimeter); service, loading, or unloading areas; and the garbage or dumpster area.
- Estimate of additional space needed for expansion.
- Adjacency or relationship requirements (in the form of "bubble diagrams" that may be accompanied by relationship matrices showing what areas need to adjoin or be near each other; flow or movement between areas).
- Major furnishings and equipment for each space (which will help determine size, configuration, and engineering and architectural elements).
- Significant architectural characteristics of each space, such as types of doors.
- Significant engineering requirements, such as stainless steel plumbing.
- Identification of all applicable building codes, standards, and (if your jurisdiction decides to follow them) guidelines.

Key items for your jurisdiction's input and review at this stage include the following (usually, a consultant works with a committee of representatives from the jurisdiction during this phase):

- Which optional services and programs will be provided?
- How will services be provided (e.g., cook-chill or traditional food production, storage, and delivery systems)?
- Which services and programs will be centralized, which will be regionalized, and which will be within or adjacent to each housing unit? For example, will inmates eat in dayrooms or dining rooms? Will sick call take place

in a central health services area or adjacent to each housing unit?

- What type of supervision and management (direct or indirect) will be used for each population (if this has not been resolved earlier)?
- Preliminary staffing plan by position, function, location, and shift.
- Ideal group sizes for housing units and various activities.
- Flow of activities (such as the intake process or the food production and delivery process).
- Space standards (some jurisdictions have existing standards applicable to offices and a few other areas).
- Which optional standards (such as those of the American Correctional Association) will be followed, if any?
- What is the policy on temporary and permanent overcrowding?
- To what extent should some components (such as food services and health services) be built to anticipate overcrowding and future additions?
- What are the parking requirements and policies for staff and visitors?
- What is the maximum size of future expansions?

CONCEPTUAL DESIGN

The early phases focused on operational and design requirements that are best described in words. Until this point, the design review team will have seen many written documents and few drawings. The usual exceptions are the bubble diagrams developed during architectural programming to depict relationships among spaces and, perhaps, site diagrams intended to help define site requirements and facilitate site selection.

Conceptual design is the first phase in which drawings are the dominant tool and product. Sometimes conceptual design is considered not a separate phase but part of the schematic design phase.

Sometimes the same consultant team that produces the planning documents will produce conceptual designs as well. Keep this in mind, however:

If your architects have not been actively involved in previous tasks, they should thoroughly review the planning and programming documents and be briefed by the major participants in the previous tasks. It is vital for the designers to understand your inmate populations, mission and objectives, philosophies, operational requirements, and architectural requirements for them to produce a conceptual design that best suits your jurisdiction.

Conceptual design is the first phase in which drawings are the dominant tool and product.

To get the optimal design for your jurisdiction, it is far preferable for your consultants to produce several different concepts, each of which should be based on all previous phases (e.g., architectural programming). Each design should be carefully reviewed and compared with other designs and with the documents produced during the previous phases. Positive and negative aspects of each concept option should be noted. Initial cost estimates for each option should be produced and compared.

Conceptual designs are the initial graphic ideas for the building and typically consist of freehand or hard-lined drawings that include the following:

- Floor plans—layout of components in *relation* to each other (e.g., intake and health services) and layout of spaces *within* each component (e.g., booking counter, holding cells).
- Building sections (especially significant in multistory buildings)—slices through the building in key areas to show the stacking of various components and spaces.
- Elevations—two-dimensional images of what the building may look like from various views.
- Site plans—layouts of the buildings and areas for staff and public parking; recreation; service and deliveries; and access for inmates, staff, and visitors.

Conceptual designs may also contain—

- Activity flow diagrams, if these were not done during architectural programming, (e.g., intake process).
- Estimates of construction costs compared with the budget.

Key items for your jurisdiction's input and review during this stage include—

- Is the design consistent with your jurisdiction's mission, philosophy, and objectives?
- Does the design fully meet operational requirements (as detailed in the functional/operational program)? Is the design completely consistent with the architectural program? Have any spaces been left out or added inadvertently? Is the design capacity correct? Does the flow work well? How is the security zoning?
- What are the relationships *among* components (e.g., the relation of food services to staff dining, warehouse, and housing units) and *within* components (e.g., food preparation, storage, and cleaning areas)? This is needed only if adjacency relationships have not been fully resolved during architectural programming).
- What are the site constraints (such as buildable areas for this project, areas that need to be reserved for other functions, setbacks, wetlands, utilities that should not be moved)? This cannot be known until a site is selected.
- How much land should be reserved for expansion of the facility?
- Are two-level (including mezzanine) or three-level housing units acceptable?
- How many recreation areas are needed and what sizes should they be (if not identified in the architectural program)?
- How many parking spaces are needed? Must staff parking be separate from visitor parking? Is secure parking needed, and if so, for whom (if not identified in the architectural program)?
- What size trucks will deliver and pick up food, garbage, and other items? How many trucks should the loading dock and staging area accommodate?
- Is a vehicular sallyport or secure vehicular yard needed? If so, for how many vehicles of what sizes (if not identified in the architectural program)?
- Are there adjoining buildings into which inmates in cells and other areas should not be able to see?
- Are there any building materials that your jurisdiction wants to use or avoid?
- What would it cost to build each option?
- How many staff would each option require?

SCHEMATIC DESIGN

After the conceptual design options are evaluated and your architect has received considerable input from your jurisdiction, the schematic design phase begins. The architect attempts to take the positives from the favored concept or concepts and minimize the negatives. Although there usually are two to four conceptual designs, only one schematic design will be produced.

The schematic design will consist of the same types of drawings as the conceptual designs, but in this phase, the drawings will be to scale and more detailed. Schematic drawings will include floor plans, building sections, elevations, and site plans.

Additionally, schematic designs almost always include—

- Code review.
- Estimate of construction and other initial costs (based on the schematic documents).
- Staffing estimate based on operational requirements and the floor plan.
- Refined project budgets for initial costs and annual operational costs.

Schematics may also include—

- Outline specifications (also referred to as preliminary engineering and architectural concepts), which indicate the types of engineering systems, glazing (glass), doors, locks, and so forth. Outline specifications are often produced during the next phase, design development.

- Three-dimensional perspectives.
- Models of the entire building or portions of the building, such as housing units. (Perspectives and models are generally considered to be nonstandard architectural services. If your jurisdiction requests these items, your architect may charge extra fees for them.)

Key items for your jurisdiction's input and review during this stage include any of the issues listed under conceptual design that have not been resolved. Additional questions that should be raised and resolved include—

- Which types of plumbing fixtures will be used in each area (commercial vitreous china, institutional vitreous, or stainless steel; combination or separate sinks and toilets)? This question and some of the others that follow may not come up until the next phase, design development.
- Which types of glazing, locks, and doors will be used in each area? Like plumbing fixtures, these usually vary from place to place within a detention and correctional facility and are based on the number and types of users.
- Which types of heating and ventilation systems will be used? Which areas will be air-conditioned?
- Which wall and floor finishes will be used in each area (e.g., vinyl tile, industrial carpet, or exposed concrete floors in dayrooms)?
- What types of lighting fixtures will be installed (again, with variations based on occupancy and security issues)?
- What types of electronic security, control, and communication systems will be used?
- Which items will need to be activated by emergency generators in the event of power failures?
- What type of cell construction will be used: premanufactured concrete or steel, precast concrete, cast-in-place concrete, concrete block, or (only in low-security or staff-secure facilities) drywall?
- What other interior and exterior building materials will be used?

- How will the building be expanded? How will more housing be added? How will intake, staff support, health services, food services, laundry, lobby and visiting, warehouse, and other areas be able to accommodate the expanded population? Which areas are oversized now, and which ones are designed for expansion?
- Are the staffing plan and schematic design fully compatible? If not, have adjustments to either or both been made?
- Do estimates indicate that the project is within the construction budget? If the project is over budget and if additional funding is not feasible, see "Value Analysis."

VALUE ANALYSIS

During schematic design as well as in earlier and later phases of the process, the cost estimate should be verified and refined. This is necessary to help ensure that the project is within budget. With more and more data, such as the selection of building materials, the estimate is increasingly likely to be accurate. If the estimate exceeds the budget, then design changes may be necessary. Although it is never easy to reduce costs and change the design, the earlier in the process that cost overruns are projected, the simpler and faster it will be for jurisdictions, architects, and other consultants to make changes in the design.

If the project is over budget, your jurisdiction's project representatives may consider conducting several work sessions with the consultant team, including architects, planners, engineers, and cost consultants.

Value analysis (also known as value engineering) is not shown in exhibit 2 because it may occur whenever cost reductions are needed.

During schematic design as well as in earlier and later phases of the process, the cost estimate should be verified and refined.

Ways to reduce costs should be carefully reviewed by your jurisdiction and the consultants. These include the following:

The number and types of beds to be built and phasing

Because housing usually occupies at least 50 percent of a detention and correctional facility, it has the largest single impact on construction cost. Because it is the component that has by far the most occupants, three shifts a day, 7 days a week, it requires the most staff. Consequently, most of the construction costs and two-thirds to three-quarters of the staffing costs will be associated with housing. Housing costs can be reduced in several ways:

- Some housing units could be shelled in initially and completed later.
- Some housing units could be deleted from construction of this project, but with the building designed so that these could easily be added later.
- More cells could be designed for double occupancy, if your jurisdiction's operational philosophy, inmate profile, and projections support this, and if the cells meet applicable codes and standards (some standards, for example, call for single cells for maximum-security inmates and those with special needs).
- If the design calls for single- or double-celling of low- or medium-security inmates, most of them could be housed in dormitories.
- Depending upon your inmate profile and projections, the percentage of expensive maximum-security cells could be reduced and the percentage of less costly cells could be increased. Items to review with your consultants and architects include the types of cell doors (sliders with food/cuff slots are the most expensive) and plumbing fixtures (stainless steel is more expensive, but the cost difference between it and vitreous china is less dramatic than it used to be). "Dry" cells may also be appropriate for some of your population.

"Big ticket" items

Value analysis should focus on how the building can be reduced in cost with the fewest changes to the design. Your jurisdiction should consider—

- Reducing the sizes of dayrooms (as long as they still meet standards and operational requirements).
- If your climate is suitable and such changes comply with standards that your jurisdiction is following, having outdoor or indoor/outdoor recreational areas rather than fully enclosed gymnasiums.
- Again, if your climate is suitable, building a secure, double-gated, and fenced outdoor vehicular sallyport rather than a fully enclosed one.

Most of the construction costs and two-thirds to three-quarters of the staffing costs will be associated with housing.

Reconsidering space standards and reducing the sizes of areas

All areas could be reevaluated (although this is time consuming and tedious). Your consultants and your jurisdiction's project representatives could verify the need for each space. For each space that has been verified, the question may be raised: Could it be reduced in size and still support operations and users and accommodate needed furnishings and equipment?

Materials and finishes

For example, if the initial design calls for the entire building to be brick, your jurisdiction may want to consider substituting all or some of the brick with split-faced or plain concrete block or using sealed concrete rather than vinyl tile for dayroom floors.

Building shape

The old adage "keep it simple" generally applies here. Square footage being equivalent, rectangular buildings

with few “ins and outs” are cheaper to build than buildings with unusual curves or many angles.

The use of inmate labor

Rather than using contractors or subcontractors, your jurisdiction may want to consider having low-security inmates do some of the work that does not require high skill levels and will not jeopardize security or safety, such as painting or landscape installation. If you do so, however, you must keep two things in mind. First, inmate laborers must be guided by experts (such as an experienced landscaper) and supervised by security staff. These costs should be added to the equation. Second, labor union leaders might try to block inmates from doing work normally assigned to union workers.

Items that could be added later

Your jurisdiction may want to consider using some of the existing furniture and equipment initially (rather than replacing everything at once) or delaying the installation of landscaping.

Value analysis and design review cautions

During value analysis, it is critical that your jurisdiction’s representatives focus on five critical issues. Every redesign issue should be carefully reviewed and tested, with these questions in mind:

- Would the proposed design change compromise the security or safety of the public (escapes), staff, or inmates (assaults, visibility, accidents)?
- Would the proposed design change compromise the delivery of programs or services?
- Would the proposed design change result in a less staff-efficient facility? In other words, would more staff be needed to operate it properly?
- Would the proposed design change reduce the expected lifespan of the building as a whole or its elements (such as air-handling units, floor surfaces, and locks) and, therefore, increase long-range costs?

- Would the proposed design change increase the frequency, magnitude, or cost of maintenance?

If you answer “no” to any of the first three questions or “yes” to either of the last two questions, the design change should be seriously reconsidered.

DESIGN DEVELOPMENT AND CONSTRUCTION DOCUMENTS

All major design issues should have been resolved, primary decisions should have been made, and there should be a reasonable level of confidence that the project will be within budget before proceeding to design development (DD).

Design development results in detailed drawings and specifications. In this stage, floor plans, elevations, and sections are finalized and drawings that show such details as staircases, windows, and doors are produced. All drawings in this phase are to scale and, in addition to the architecture, show structure, lighting, electrical outlets, electronics, plumbing, and HVAC systems. All construction materials are also indicated. Written specifications for all building systems, materials, and finishes may have been outlined during the schematic design phase, but they are detailed during design development and finalized in the construction documents (CD) phase.

As with all previous phases, your jurisdiction should conduct both informal and formal reviews of all drawings and written documents during this time. Although your architects and engineers may disagree, it is always better to review more rather than less thoroughly.

In all probability, you know people who had a house custom designed and built. Most likely, this house does a pretty good job in meeting their needs. Even though they spent a fair amount of time with the builder or designer, however, some aspects could have been better. They may have said to you that they wish they had spent more time studying the design, that if they had better understood the design, they would have realized the negative consequences of design decisions that appeared sound at the time and would have caught some errors. As a result, their house would be even better. Jails are infinitely more complicated than

houses; design decisions can have many more potentially negative consequences, and far more can go wrong. This underscores the need for your jurisdiction's design reviewers to continue to participate actively during these later phases of design.

Although building codes and standards should have been reviewed during the architectural programming and schematic design phases, they need to be reviewed again during design development. Even if schematic designs fully complied with applicable codes and standards, design development documents show infinitely more details (such as types of glazing, locations of fire sprinklers, width of doors, types of ceilings, and placement of electrical outlets) that all must comply with building codes.

It may become obvious that during design development and the production of construction documents, your jurisdiction's design review team needs to have more technical expertise than during earlier phases of planning and design. While DDs and CDs are being produced, it is highly recommended for your design reviewers to include in-house or contracted engineers and an architect with jail experience.

During design development, your transition team should also refine and detail the staffing plan as it relates to the design of the jail. Determining exactly where staff will be located may result in design changes. For example, columns usually do not appear on drawings until design development.

During design development, your transition team should also refine and detail the staffing plan as it relates to the design of the jail.

Schematic drawings of staff stations may have appeared to provide unobstructed sightlines. Now that columns have been indicated on the drawings, however, visual obstructions of key areas may become clear. The sooner that issues like this are caught, the easier it

will be to minimize delays due to redesign and costly change orders.

There is no such thing as an absolutely perfect design, but there is a direct correlation between the quantity and quality of design input and review and the likelihood of a successful building.

Key items for your jurisdiction's input and review during the DD and CD phases include the following:

- Are there blindspots caused by columns or anything else? Can these be eliminated or minimized?
- What materials are proposed in inmate areas? Are they durable, easy to maintain, and appropriate for the population category?
- What composes the security perimeter? Are the windows, walls, ceilings, floors, doors, locks, and sallyports sufficient to keep inmates from escaping?
- Is there anything in cells or showers that inmates could use to hang themselves?
- Are windows in the right places for staff visibility? Would any of the windows allow inmates views that may compromise security or privacy?
- Are doors in locations that will work well with furniture and equipment? Should any doors be moved to enhance desired movement or control?
- Are staff stations and control rooms laid out ergonomically, so that necks, arms, and eyes are not strained?
- Is the facility fully compliant with the Americans with Disabilities Act (ADA), applicable building codes, and state and (where adopted) national standards, such as those of the American Correctional Association (ACA)?
- How will the building work in various types of emergencies? Where will inmates go in case of fire (or even fire drills) or hostage situations?
- Will staff, inmates, and visitors always feel safe? What else would make them feel safer?

- How will attempts at bringing in contraband—by visitors, incoming and returning inmates, staff, vendors, and repair people—be stopped?
- How can structural and mechanical systems and utilities facilitate expansion?
- Are the staffing plan and design fully compatible? If not, have adjustments to either or both been made?
- Is the project still within the construction budget? If not, and if additional funding is not feasible, see “Value Analysis.”

BIDDING AND NEGOTIATION

Once construction documents and specifications are complete and approved, the bidding phase begins. The drawings and written materials are distributed to interested construction firms or teams. In some jurisdictions, bidders must meet specified requirements and be prequalified.

The traditional bidding process is as follows:

1. Architects and engineers develop plans and specifications for advertisement for bids.
2. Contractors receive and open bids.
3. The jurisdiction selects the lowest qualified bidder.
4. The jurisdiction negotiates with the lowest qualified bidder.
5. If negotiations fail, then the jurisdiction negotiates with the second lowest qualified bidder.

There are several alternatives to the conventional design and construction process. In one, known as “design-build,” a team of architects, engineers, and contractors is selected to design and build the jail. The amount of designing the design-build team does varies. There are two excellent reasons for a jurisdiction to consider design-build. This process *can* reduce initial costs and design and construction time. However, design-build *can* also reduce the jurisdiction’s control and influence over the project, and with less involvement of jail operators and others, the jail may not work as well.

Design-build contracts are usually awarded to the qualified bidder with the lowest total cost. If the design-build team is not given enough information, it could design and build a jail with a low initial cost that is staff inefficient, expensive to operate or maintain, unattractive in appearance (which may not be a problem, depending on the site), inadequately secure, or unable to support intended operations. Another potential significant downside of providing too little information on the jurisdiction’s requirements is that when jurisdictions change or add requirements once a project is far along in design or construction, architects and contractors usually request additional funds for redesign or construction.

To help ensure that their new jail meets their operational needs and requirements, jurisdictions that decide to use design-build should provide the design-build team with a great deal of written and graphic information describing the requirements for their jail. This can best be achieved by providing the design-build team with a completed architectural program, schematic design, and, ideally, at least the beginnings of design development documents. Furthermore, jurisdictions should structure contracts so that they remain actively involved in the remainder of design and construction.

No matter which process is used in your jurisdiction, several primary design reviewers, including those with design and construction experience, should participate in reviewing the bids and evaluating and selecting the contractors.

CONSTRUCTION

During construction, your jurisdiction’s representatives and, ideally, an experienced in-house or contracted construction manager, will—

- Administer the construction contract.
- Inspect construction regularly for quality and consistency with drawings and specifications.
- Approve payments based on performance and percent of completion.

- Test performance.
- Review and make recommendations and decisions on your jurisdiction's and contractors' requests for change orders.
- When the contractor reports that construction is near completion, develop and manage a "punch list" of items for the contractor to complete.
- Work with the transition team in developing a move plan.
- Work with the transition team in planning for and installing furniture and equipment.
- Receive as-built drawings.
- Obtain warranties and technical manuals.
- Obtain occupancy permits.

Although a construction manager should be looking out for your jurisdiction's interests during construction, design reviewers should review the construction as it progresses, focusing on ensuring that every area is built as designed and working out operational policies and procedures that are related to the building, as part of transition planning.

TRANSITION AND OCCUPANCY

Successful jail projects almost always have transition teams that are involved, starting no later than the functional/operational and architectural programming stages and continuing until several months after occupancy. Because of the interrelationships between operations and design, your jurisdiction's design reviewers should include members of the transition team.

Jurisdictions that do too little transition planning or start transition planning too late can suffer myriad problems, including a shortage of staff or untrained staff; inadequate space; inappropriate furniture; security and safety glitches; incomplete policies, procedures, and job descriptions; delays in occupancy; and embarrassments after occupancy.

To help ensure a smooth transition, your jurisdiction should schedule 1 to 3 months between construction completion and occupancy. This will provide critical time to test and fine-tune equipment, procedures, and operations; train staff in their new workspaces; and remove construction waste that could become weapons.

Besides design review, responsibilities of transition teams usually include the following:

- Develop staff hiring and training schedules.
- Conduct public relations activities.
- Develop job descriptions.
- Develop policy and procedure manuals.
- Train staff—initially in the old facility. When the new facility is near completion but prior to occupancy, train staff in it. (Besides making sure that staff know how to do their jobs in the new environment, training staff in the new, unoccupied facility is an excellent way to ensure that all the locks, electronics, monitors, and so forth are performing as intended.)
- Select furniture and equipment.
- Develop and initiate a building maintenance program, including a schedule and plan for preventive maintenance.
- Develop and manage a plan for transferring inmates and staff to the new facility.
- For renovated and expanded facilities, develop and manage a plan for delivery of all services when construction prevents existing spaces from being used. (For example, if the kitchen is being renovated, food will have to be produced elsewhere for a period of time.)

Jurisdictions that do too little transition planning or start transition planning too late can suffer myriad problems.

Exhibit 3.

Self-Assessment Exercise

Questions	Yes	No	Not Sure
1. Have all of the following predesign tasks been completed to the satisfaction of your jurisdiction?			
A. Mission statement and objectives for your jail?			
B. Needs assessment study, including alternatives to incarceration, population projections, and population profile?			
C. Site studies?			
D. Operational program?			
E. Architectural program?			
F. Conceptual estimate of construction and other initial costs?			
G. Conceptual estimate of annual operational costs?			
2. Have your county board, sheriff, and other elected and appointed leaders agreed on the project's scope and budget?			
3. Has your jurisdiction seriously considered alternatives for pretrial alleged offenders that could help reduce project costs and the number of jail beds needed?			
4. Has your jurisdiction seriously considered alternatives for sentenced offenders that could help reduce project costs and the number of jail beds needed?			
5. Is the number of beds to be built based on population projections for at least the next 10 years?			
6. Is the jail expandable, to accommodate larger numbers of inmates in the far future?			
A. Does the architectural program call for enough space in food services and health services for the expanded population (as these two areas are difficult and expensive to renovate and enlarge)?			
B. Is there enough land to add housing units, program areas, parking, and secure outdoor recreation areas?			
C. If the jail is part of or will be part of a justice system complex, is there enough land for courts and justice system offices based on long-term projections?			
7. Were the percentages of each type of bed to be built (e.g., single cells for maximum security) based on an analysis of the current jail population?			
8. Have several design options been developed and evaluated before your jurisdiction selected which design option to implement?			
9. If your jurisdiction has decided to add on to or renovate the existing jail, has there been a thorough evaluation of the structure and mechanical, plumbing, electrical, electronic, and security systems?			
10. If your jurisdiction has decided to add on to or renovate the existing jail, has there been a thorough evaluation of areas that will serve the expanded population? These areas may include the lobby, visiting, administration, staff support, food services, intake and release, laundry, maintenance, warehouse, commissary, inmate programs, and medical services.			

IS YOUR JURISDICTION READY FOR DESIGN REVIEW?

Because most people find design more exciting and interesting than planning, it is common for jurisdictions either to skip important planning steps or to go through them too quickly and superficially. During planning, even more than during design, jurisdictions can make decisions that profoundly affect services, programs, locations, and staffing and initial and annual operating costs. Therefore, it is recommended that your jurisdiction take the self-assessment exercise in exhibit 3 to determine whether you are ready for design review or, instead,

whether it would be wise to put design on hold and go back to planning.

If all of your answers were “yes,” congratulations! Your jurisdiction has addressed all of the major issues that should be resolved before design begins. Move forward with design and design review.

If, on the other hand, some of your responses were “not sure” or “no,” it would be advisable to put your architects on hold and complete the essential planning steps that greatly affect design, staffing, operations, and construction and staffing costs.

Chapter 3

How To Read Architects' Drawings

SPEAKING EACH OTHER'S LANGUAGE

Successful design review requires effective communication skills. To produce well-executed schematic designs, architects must learn correctional terminology. Similarly, those who represent the jurisdiction in the design process must learn to read floor plans, elevations, and building sections.



ARCHITECTS' SCALE

Starting at the schematic design stage, all architectural and engineering drawings are drawn to scale. This means that the size of each line or space on a drawing is proportional to the size of the actual feature it represents. For example, on a 1 inch = 1 foot scale, 3 inches represents 3 feet; on a 1 inch = 4 feet scale, 3 inches represents 12 feet.

The first step in reviewing drawings should be to determine the scale being used. The best place to look is on the drawing itself; each architectural and engineering drawing should indicate the scale used for that drawing. For example, the site plan may say "1 inch = 16 feet."

All architects' scales (the special rulers used by architects) have three sides with a total of 11 scales (See exhibit 4.) One scale is an ordinary 12-inch ruler.

Exhibit 4.

Architects' Scale



Some scales read from left to right and others, from right to left. One-eighth-inch scales are commonly used for detention and correctional facilities. Since 1/8 inch represents 1 foot, each inch represents 8 feet. When greater detail is needed, architects often use 1/4-inch scales. With these, each quarter-inch represents 1 foot. Consequently, each inch equals 4 feet. To show even greater detail, architects may use scales ranging from 3/8 inch = 1 foot to 3 inches = 1 foot.

Common circumstances also call for the use of smaller scales. When large buildings or sites need to be shown on a single piece of paper, using 1/8- or 1/4-inch scales would result in drawings on unmanageably large sheets of paper. Therefore, smaller scales are used, which range from 3/16 inch = 1 foot to 1/16 inch = 1 foot.

Inches are always shown before the first foot. In other words, inches are to the left of 0 feet. To the left of the 0 on the 1/8-inch scale, a foot is subdivided into six segments, each of which represents 2 inches (i.e., one-sixth of a foot).

NET AND GROSS SQUARE FEET

In reviewing designs and space lists, it is critical to understand the difference between net square feet (NSF) and gross square feet (GSF). NSF (also known as usable square feet) is the amount of space that can be used for functions, people, and equipment and excludes space occupied by building structure, walls, corridors, bathrooms, staircases and elevators, mechanical rooms, electrical rooms, telephone or electronics rooms, and so forth. Some planners and architects include bathrooms on space lists (and thus, in NSF) and others do not.

GSF is the total amount of space in a building. It includes space occupied by building structure, walls, corridors, bathrooms, staircases and elevators, mechanical rooms, electrical rooms, and telephone or electronics rooms.

Exhibit 5, which illustrates the difference between NSF and GSF, also demonstrates a very important concept: The space required for a jail is much greater than the sum of its usable spaces.

In exhibit 5, the usable space is 10 feet by 10 feet, or 100 NSF. The total amount of space, including walls and corridor, is 14 feet by 11 feet, or 154 GSF.

In this example, GSF is 54 percent higher than NSF. The GSF to NSF ratio is 1.54 to 1. This ratio is also called the “gross factor,” “grossing factor,” “net-to-gross ratio,” or “efficiency factor.”

SITE PLANS

During the conceptual and schematic design stages, architects produce a variety of site diagrams that address various issues. Here are a few examples:

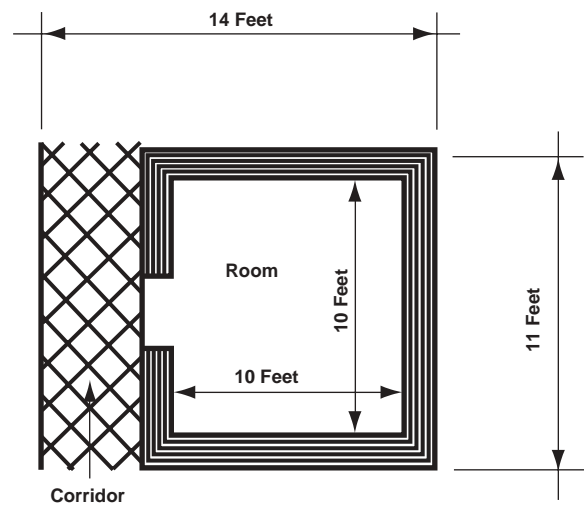
Exhibit 6 is a conceptual option developed by Len Witke of Durrant that shows the use of areas and site boundaries for a new jail, county courts, and justice system offices.

Exhibit 7, taken from the *Jail Design Guide*, illustrates points of access.

Exhibit 8 illustrates facility zoning, perimeter security, and entry points. The crosshatched box represents a secure

Exhibit 5.

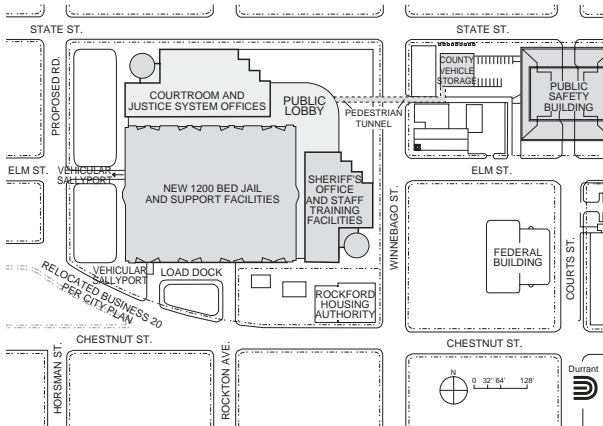
Net and Gross Square Feet



Source: Participant Manual for NIC Jail Design Review Workshop, Longmont, Colorado, February 5–9, 2001

Exhibit 6.

Example of Conceptual Site Plan for New Jail, County Courts, and Justice System Offices



Source: Len Witke, The Durrant Group, Inc., <http://www.durrant.com>

entry, usually a pedestrian or vehicular sallyport. The dotted lines represent security fencing. The white triangles show the field of vision for staff working in the control centers.

Your architect may use different symbols to represent access, zoning, and so forth. Therefore, it is essential that your architects provide your jurisdiction with written explanations of any symbols they use.

ADJACENCY DIAGRAMS

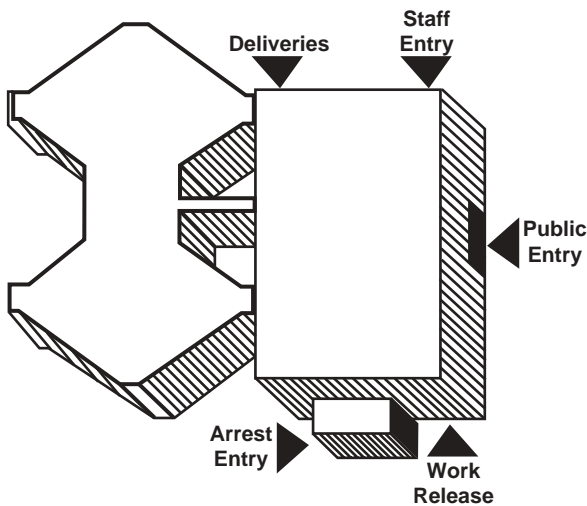
During the architectural programming stage, the consultant draws adjacency diagrams, also known as “bubble diagrams.” An example of an adjacency diagram is presented in exhibit 9. Each bubble represents a space, and the relationships among the spaces are also shown. After adjacency diagrams are reviewed and approved by the jurisdiction, the architect begins to turn them into floor plans.

Note: The condensed dark arrows in exhibit 9 indicate movement, the striped arrows show staff visibility from control points, and the lines that cross from one bubble or space to another represent doors or openings.

Exhibit 10 shows how adjacency diagrams can be used in developing and evaluating staffing plans and operational objectives and scenarios.

Exhibit 7.

Site Planning Illustrating Access Points



Source: Kimme, D.A., G.M. Bowker, R.G. Deichman, D.E. Bostwick, and J.R. Rowenhurst, *Jail Design Guide: A Resource for Small and Medium-Sized Jails*, Washington, DC: U.S. Department of Justice, National Institute of Corrections, 1998

FLOOR PLANS

Floor plans are refined, hard-lined bubble diagrams. The first floor plans in the conceptual design stage are usually single line drawings drawn to scale. They show all the spaces in each component (e.g., all the spaces comprising food services) and their proximity and connections to other components (such as housing units and the warehouse).

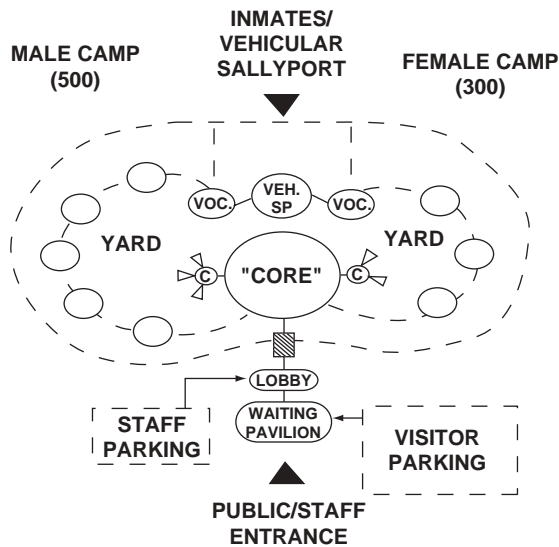
After working with consultants during the programming phase, design reviewers should be able to understand bubble diagrams like the one in exhibit 10. Floor plans evolve from bubble diagrams, so having a good grasp of bubble diagrams should help design reviewers understand floor plans. (See exhibit 11 for an example of a conceptual floor plan. An example of a schematic floor plan is presented in

Exhibit 8.

Site Diagram Illustrating Zoning, Perimeter Security, and Access Points

GUERRERO CORRECTIONAL CAMPS
Operational & Architectural Program

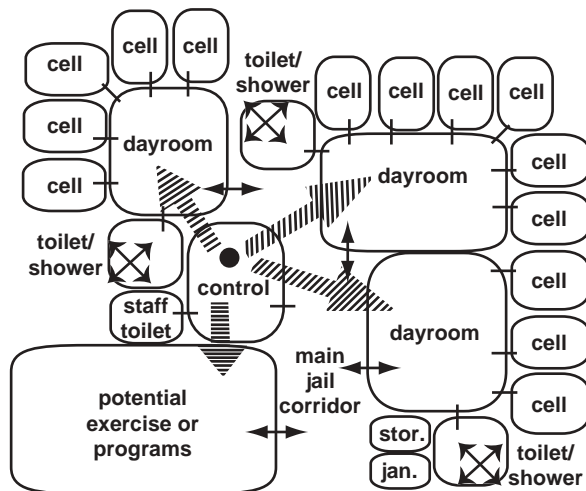
Adjacency Diagram - Overview of Camps



Source: Rosser International

Exhibit 9.

Adjacency Diagram



Source: Kimme, D.A., G.M. Bowker, R.G. Deichman, D.E. Bostwick, and J.R. Rowenhurst, *Jail Design Guide: A Resource for Small and Medium-Sized Jails*, Washington, DC: U.S. Department of Justice, National Institute of Corrections, 1998

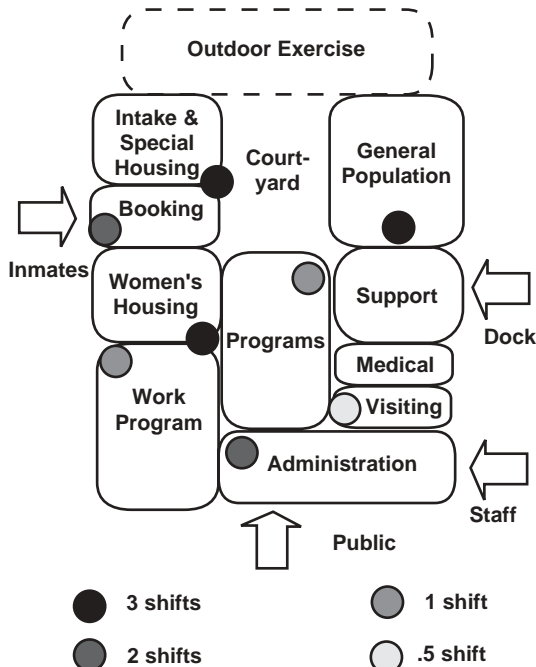
exhibit 12. An example of a design development floor plan is presented in exhibit 13.)

To get a better sense of how floor plans relate to actual buildings, try the following experiments:

- Carry a tape measure with you for a day and measure spaces that you occupy at home and at work. Also measure the size of furniture. Then, when the architect draws a 120-square foot office or a 500-square foot day-room, you will have a better idea of whether the size is too small, too large, or just right.
- Obtain floor plans for the building where you work. Ideally, these should be reduced-scale plans that are small enough to carry around. Start at the front door. With the plans in hand, trace your steps throughout the building, while referring to the floor plan. Focus on the size of the spaces and the layout of the building. Leave the other details until later.
- Sketch the floor plan of the building where you work, then compare it with the actual floor plans, noting any discrepancies.
- Once you understand layout, start noticing details—both in actual buildings and on floor plans. Look at the locations of windows and doors, the direction of the door swings, and the distance between windows, doors, and ceilings.
- Compare the initial floor plan that the architect created for the jail with the architectural program's bubble diagrams. Ask the architect to explain discrepancies in the provision and location of space. In most cases, there will be good reasons for the discrepancies; there also may be some misunderstandings or mistakes. Also look for places in the bubble diagrams where viewing angles were indicated, and see if these spaces, as depicted in the floor plan, still permit the same views (for security and safety purposes). Other important elements to look for in a jail floor plan are security perimeters and zones and locations of where staff would be based.
- Review the floor plan with the architect and ask about anything that is unclear.
- Take the floor plan and trace the flow of inmates from the secure inmate entrance to intake, housing, program areas, and release. Do the same thing with visitors going

Exhibit 10.

Adjacency Diagram and Staffing



Source: Participant Manual for NIC Jail Design Review Workshop, Longmont, Colorado, February 5-9, 2001

to the visiting area, vendors coming to the business office and delivering goods, administrative staff going to the jail staff dining room, and trash pickup. Whenever something does not make sense, ask the architect and keep asking until you understand the answer.

Like learning anything else, understanding floor plans requires practice.

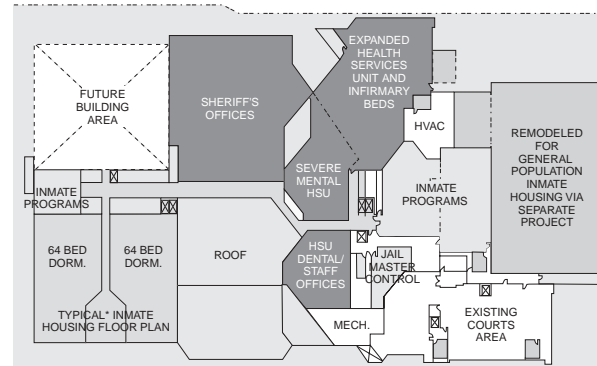
As design proceeds, more and more details are shown on floor plans. Exhibit 14 is an example of a construction document floor plan for one space.

ELEVATIONS

Elevations are drawings of how a side of a building will look. Because they are “flat” (i.e., do not show perspective), they illustrate only one side at a time. Like initial floor plans, initial elevations are part of the beginning of the design process. They show the architects’ understanding of what the building should look like. At the schematic design

Exhibit 11.

Conceptual Floor Plan



Source: Len Witke, The Durrant Group, Inc., <http://www.durrant.com>

stage, elevations show scale (height and length), exterior materials, and locations of doors and windows. Exhibit 15 is an example of an elevation drawn at this stage.

In addition to showing the jail building, elevations should show security fences; enclosed areas, such as the vehicular sallyport, secured parking, and outdoor recreation areas; and loading docks.

Later in the design process, elevations become more refined and reflect subsequent design decisions and details, such as building materials.

BUILDING SECTIONS

Building sections are three-dimensional cross-sections of floor plans. In other words, they are elevation diagrams of the inside of a building. At the schematic design stage, building sections display all levels of the building, the structure and flooring between levels, and the thickness of the walls between rooms. To illustrate scale, building sections often show people, furniture, and equipment. Ideally, staff and their field of vision are illustrated, too.

In latter phases of design, building sections contain many more details, including the locations of engineering systems and security barriers. Exhibit 16 shows building sections of a control point and housing unit, exhibit 17 shows an intake area, and exhibit 18 shows a section of one portion of a jail with housing units and other components.

Exhibit 12.

Schematic Floor Plan (for Two Adjacent Housing Units)

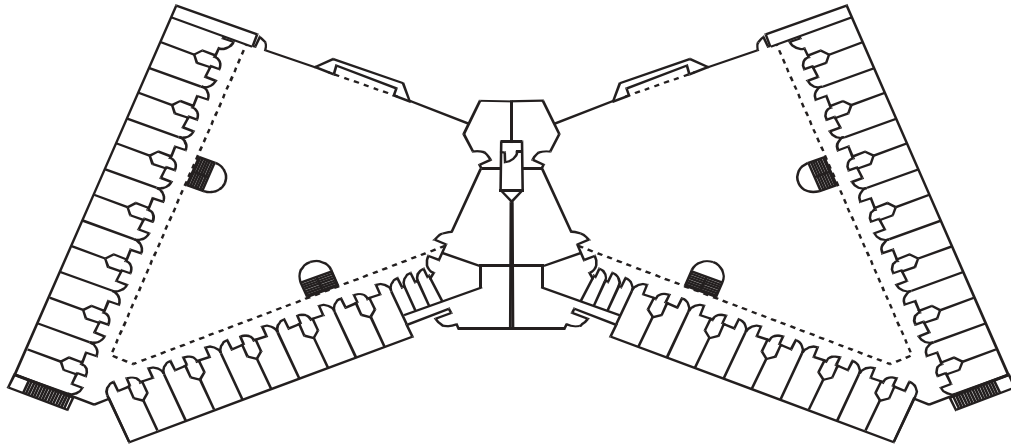
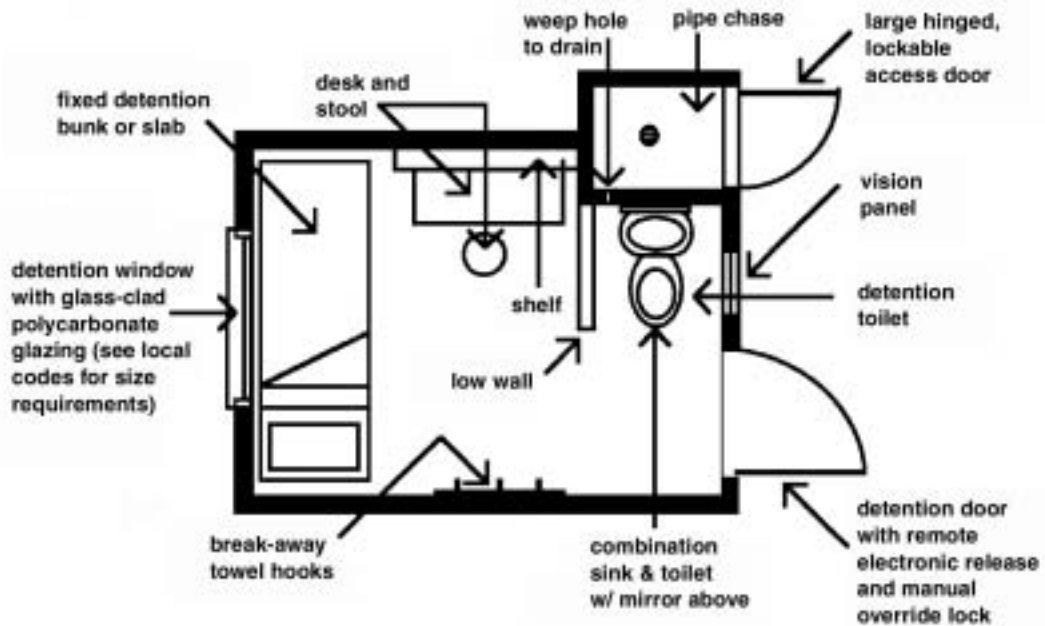


Exhibit 13.

Design Development Floor Plan of a Cell



Source: Kimme, D.A., G.M. Bowker, R.G. Deichman, D.E. Bostwick, and J.R. Rowenhurst, *Jail Design Guide: A Resource for Small and Medium-Sized Jails*, Washington, DC: U.S. Department of Justice, National Institute of Corrections, 1998

Exhibit 14.

Portion of Construction Document Floor Plan

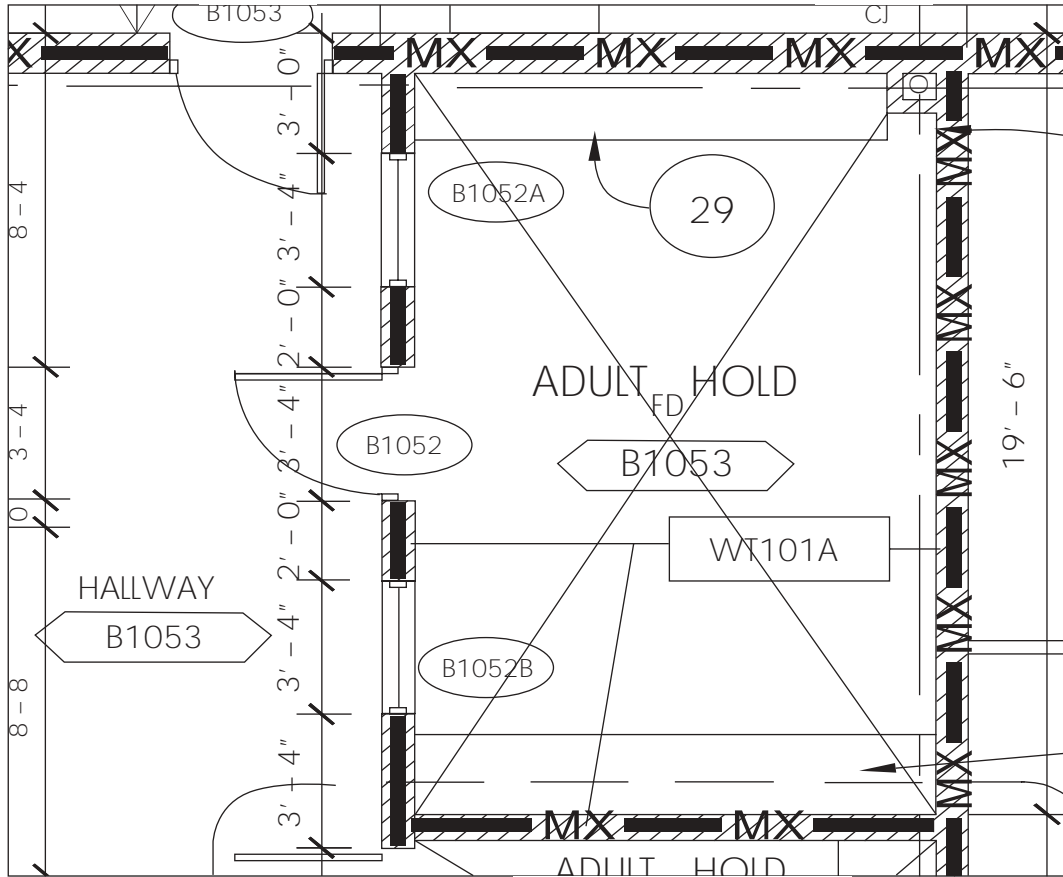


Exhibit 15.

Elevation Drawn During Schematic Design

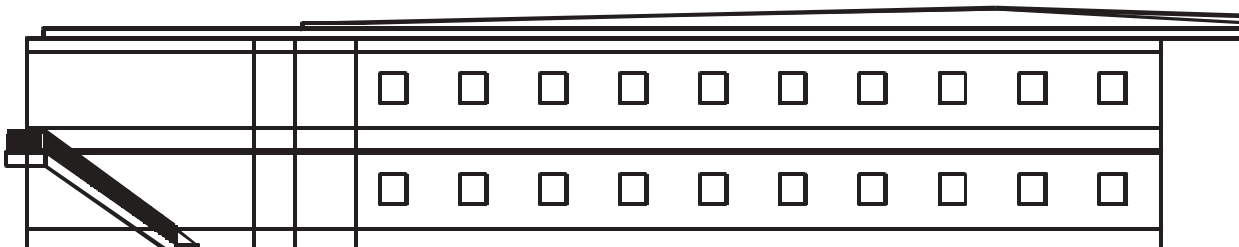
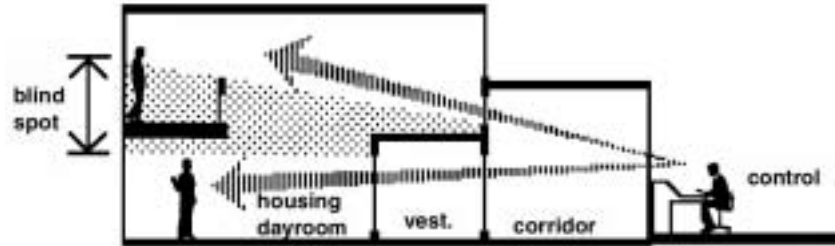


Exhibit 16.

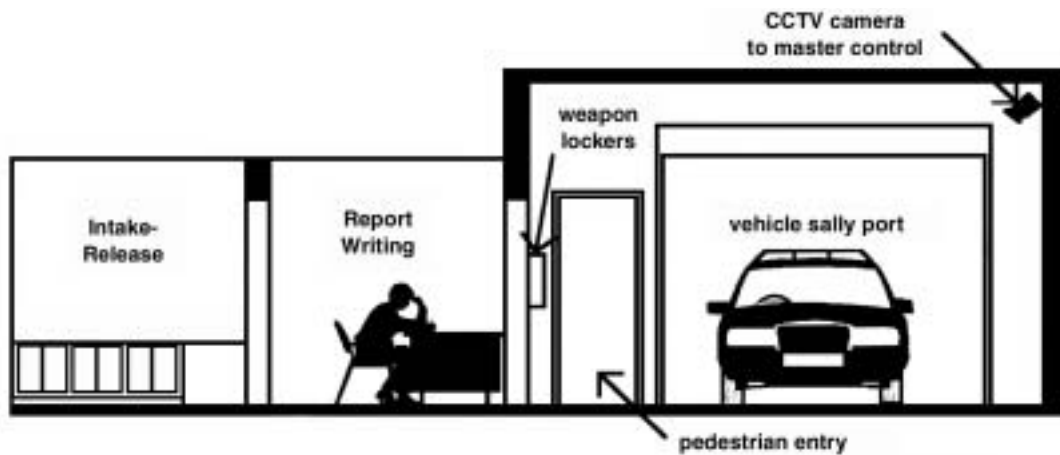
Building Sections of a Control Point and Housing Unit



Source: Kimme, D.A., G.M. Bowker, R.G. Deichman, D.E. Bostwick, and J.R. Rowenhurst, *Jail Design Guide: A Resource for Small and Medium-Sized Jails*, Washington, DC: U.S. Department of Justice, National Institute of Corrections, 1998

Exhibit 17.

Building Section of an Intake Area



Source: Kimme, D.A., G.M. Bowker, R.G. Deichman, D.E. Bostwick, and J.R. Rowenhurst, *Jail Design Guide: A Resource for Small and Medium-Sized Jails*, Washington, DC: U.S. Department of Justice, National Institute of Corrections, 1998

Exhibit 18.

A Section of One Portion of a Jail With Housing Units and Other Components



Source: Len Witke, The Durrant Group, Inc., <http://www.durrant.com>

Chapter 4

Checklists

DESCRIPTION AND PURPOSE OF CHECKLISTS

This section consists of checklists that may be helpful for jurisdiction representatives to use while reviewing designs. Although many of these questions may be obvious to some design reviewers, there are so many issues to think about while designing a jail that even the most experienced design reviewer is likely to overlook the potential impact of some design elements. Therefore, depending on experience level and background, the questions on these checklists run the gamut from self-evident to challenging.



These checklists are meant to serve as—

- Additional ways to help ensure that your jail design works well, is compatible with your jurisdiction's philosophies and objectives, promotes safety and security, and meets all applicable standards and other requirements.
- Reminders of what to look for when reviewing designs.
- Questions that can be asked of other project team members—including your jurisdiction's designers—to verify decisions.
- Means to find potential problems that need to be corrected before the design proceeds to the next phase. It is important to catch potential problems as early in the design process as possible because, as a general rule, changes made early are the easiest, quickest, and cheapest to make.
- Ways to verify that your architects are following the jail's functional/operational and architectural program.

These checklists are intended to enhance good planning and design practices, not to replace them. *They cannot take the place of any planning or design tasks or project team members.* Even if they have these checklists and other manuals, it is recommended that jurisdictions select architecture and engineering teams with extensive jail design knowledge and experience. These

checklists should help the team do a better job in meeting your jurisdiction's needs.

Most of these checklists are organized by jail component. For example, all questions regarding administration areas are grouped together. As most design review is conducted component by component, organizing the checklists in this way should expedite the design review process. The jail component checklists begin with checklist 2.

Some questions are more general and pertain to many jail components. These are grouped together in checklist 1. This checklist does not address building codes and standards; most of these vary from jurisdiction to jurisdiction and are more applicable to later phases of design. In addition to mandatory requirements such as the Americans with Disabilities Act, your jurisdiction may decide to follow optional standards and guidelines, like those of the ACA. Adhering to building codes, standards, and guidelines can enhance safety and security and help minimize or prevent successful litigation against your jurisdiction.

Because building codes, standards, and guidelines are changed periodically, it is vital that your jurisdiction obtains and uses the very latest applicable standards and guidelines at the time of design and design review. Some of ACA's commonly followed current standards are included in these checklists.

Although most of the questions on the checklists can be addressed during the schematic design process, you may find that many questions are answered during planning and programming, and others cannot be determined until later

in the process, during design development. This depends in part on the level of detail in your jail's architectural program (the more detailed it is, the greater the number of questions that should

be answered before design). It also depends on your architects' scope of services during each phase of design (some go farther during schematics than others). The checklists were developed based on the assumption that it is better to have too many questions than too few; questions that are already answered or are premature can be quickly read and skipped. It is recommended that your jurisdiction use these checklists again during design development, focusing on questions that could not be answered at the schematic design stage.

These checklists cannot be absolutely complete. First, it would make them so long and tedious that few people would use them. Second, because each jail design is at least partially unique, some questions should be developed by your jurisdiction's design reviewers based on unique features of the design. Therefore, the checklists focus on major issues and concerns and are not exhaustive of all questions that could or should be raised during schematic design review. Your jurisdiction may want to add questions that are important to your locality. Space for additional questions is provided.

These checklists are intended to enhance good planning and design practices, not to replace them.



Checklist 1. General

Each of these questions is applicable to many or all jail components. Your jurisdiction’s design reviewers may therefore wish to refer to this checklist multiple times—when reviewing each component.

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Is the jail design consistent with your jurisdiction’s mission, objectives, and philosophy on the following issues?				
• Security.				
• Protection of the public.				
• Inmate and staff safety from other inmates.				
• Provisions for staff to do their jobs.				
• Provisions for inmate or family reintegration.				
• Treatment and rehabilitation of inmates.				
• Other community concerns.				
• Relationships with other portions of your jurisdiction’s justice system.				
• Changes over time in technologies, population categories and numbers, operations and management, staffing, and programs.				
• Future expansion.				

continued on page 4-4

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
<ul style="list-style-type: none"> • Cost-efficiency: initial costs. 				
<ul style="list-style-type: none"> • Cost-efficiency: operational costs. 				
<ul style="list-style-type: none"> • Other portions of your mission statement and objectives. 				
<p>2. Is the schematic design consistent with the architectural program?</p>				
<ul style="list-style-type: none"> • Are all the spaces listed in the program document shown in the design? 				
<ul style="list-style-type: none"> • Are all the spaces in the right locations (correct adjacencies)? 				
<ul style="list-style-type: none"> • Are all the spaces the correct size and configuration to accommodate their functions and users? 				
<ul style="list-style-type: none"> • If there are differences between the schematic design and the architectural program, are these differences for good reason, and are they acceptable? 				
<p>3. Is the jail's design consistent with your jurisdiction's decision to bring services and programs to the inmates (at housing units) or to bring inmates to services and programs (e.g., central dining rooms or classrooms)?</p>				
<p>4. Does the flow of spaces—the adjacencies—fully support the movement patterns desired by your jurisdiction?</p>				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
<p>5. Do all spaces where natural light (windows) is desired face outside walls? (Note: ACA standards now accept “borrowed light”—natural light flowing from one space, such as a dayroom, into cells.)</p>				
<p>6. Are all doors and corridors through which food carts, laundry carts, medical carts, and stretchers may pass wide enough to accommodate them?</p>				
<p>7. Are all physical disabilities—not just the inability to walk—addressed?</p>				
<ul style="list-style-type: none"> • Are there raised signs with large letters and numbers and contrasts in lighting and color for the visually impaired? 				
<ul style="list-style-type: none"> • Are there visual alarms and sound-absorbing materials for the hearing impaired? 				
<ul style="list-style-type: none"> • Are telephones equipped with telecommunications devices for the deaf (TDDs) in intake and housing units? 				
<ul style="list-style-type: none"> • Are there convenient toilets and low bunks for the elderly and the pregnant? 				
<ul style="list-style-type: none"> • Do all spaces that may be occupied by wheelchair-bound individuals have 5-foot turning radii, larger toilet rooms, low counters and telephones, and ramps or elevators? 				
<p>8. Are entrances, corridors, door widths, bathrooms, and level changes in all staff and visitor areas accessible to the handicapped?</p>				

continued on page 4-6

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
9. Are all inmate common areas (intake, visiting, recreation, multipurpose, classrooms, health care, dining, and dayrooms) accessible to the handicapped?				
10. Is there a workable plan to add jail capacity in the future, if needed?				
11. Is the jail's housing capacity adequate to meet inmate projections for at least the next 10 years?				
12. Are the jail's support and program areas adequate to support inmate projections for at least the next 10 years?				
13. Can all areas support projections for the next 20 years? If not, can each area be operated differently (e.g., expanded laundry hours) or physically expanded?				
14. Are windows and yards to which inmates will have access located so that the public cannot see inmates or throw or pass contraband to them?				
15. Is the entire perimeter secure?				
<ul style="list-style-type: none"> • Are there pedestrian and vehicular sallyports and secure walls separating secure from nonsecure areas? 				
<ul style="list-style-type: none"> • Are entrances and exits through the security perimeter kept to a minimum? 				
<ul style="list-style-type: none"> • Are ceilings escape resistant (secure walls to ceilings, even where acoustical ceilings are used)? 				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
<ul style="list-style-type: none"> Do secure walls and fences (that cannot be climbed and which the public cannot see through or throw items over) surround all outdoor and indoor/outdoor recreation areas? 				
<ul style="list-style-type: none"> Are loading docks and service yards (e.g., for the kitchen) within fenced areas, and are there sallyports between service areas and areas within the secure perimeter? 				
<p>16. Are there staff toilets in or near all areas? Are they consistent with your jurisdiction's preference regarding unisex or separate male and female toilets?</p>				
<p>17. Are there inmate toilets in all areas that will be used by inmates?</p>				
<p>18. Are there janitors' closets within or close to all areas?</p>				
<p>19. Are blindspots in inmate areas kept to a minimum?</p>				
<p>20. Will security require an overreliance on cameras, or can the design be improved to increase staff observation?</p>				
<p>21. Are the design and your intended staffing plan fully compatible?</p>				
<p>22. Are layouts conducive to the supervision of inmate workers? Are all hallways and areas where inmate workers may work (kitchen, laundry, perhaps maintenance) fully visible from staff stations?</p>				

continued on page 4-8

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
23. Is the number of staff required to operate your jail acceptable to budget analysts and citizens of your jurisdiction (or can the design be modified to improve staff efficiency without compromising operations and security needs and objectives)?				
24. Will the jail be conducive to high staff morale and retention?				
<ul style="list-style-type: none"> • Will there be plenty of natural light and good airflow in staff work areas? 				
<ul style="list-style-type: none"> • Will building materials and finishes be used that absorb enough sound to minimize annoying, stress-inducing noise? 				
<ul style="list-style-type: none"> • Are staff work areas adequate in size for their functions? Are there places where staff can securely leave their purses, coats, and so forth? 				
<ul style="list-style-type: none"> • Is there a pleasant place for mid-shift meals and breaks? 				
<ul style="list-style-type: none"> • Does the design provide good visibility from staff workstations? 				
<ul style="list-style-type: none"> • Is the design supportive of manageable yet challenging and interesting assignments (ones with some variety in location and tasks)? 				
25. Is the design conducive to administrators managing staff? Will all staff stations be visible to administrators?				
26. Does the layout support a staffing plan with all positions having approximately equal workloads (such that no staff positions would result in too little or too much work)?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
27. Is the design fully supportive of positive communications among staff, inmates, and administrators?				
28. Does the jail design provide tools that staff can use to reward and discipline inmates (such as some housing units with more amenities and others that are “bare bones”)?				
29. Is the design flexible enough to support future changes in your jail’s management approach?				
30. Will the design support future changes to the population mix (e.g., if the proportion of females increases)?				
31. If the proportion of pretrial and sentenced inmates changes or the proportion of misdemeanants and felons changes, is the design flexible enough to support such changes?				
32. If inmates will be using elevators or stairs (other than open ones within housing units), are they easily monitored and controlled without requiring staff who are solely dedicated to this function?				
33. Regarding fire safety—				
<ul style="list-style-type: none"> • Has the fire marshal reviewed and approved the schematic design? (Note: This is the architect’s responsibility.) 				
<ul style="list-style-type: none"> • In the event of a fire, is it possible to evacuate inmates to confined and secure areas? 				

continued on page 4-10

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
<ul style="list-style-type: none"> • Are there secure fire evacuation areas? 				
<ul style="list-style-type: none"> • Are there two means of egress from all areas? 				
<ul style="list-style-type: none"> • Will all areas have fire sprinklers? 				
<ul style="list-style-type: none"> • Will fire sprinklers in cells and other areas occupied by inmates be tamper resistant and suicide resistant? 				
34. Regarding medical emergencies—				
<ul style="list-style-type: none"> • Is there a secure location for an ambulance (to minimize the likelihood of inmates using fake medical emergencies to escape)? 				
<ul style="list-style-type: none"> • Trace the paths between the ambulance location and all other areas. Are all corridors and elevators wide enough for stretchers and gurneys? Is there an absence of stairs? 				
35. Is there adequate storage space for the initial and expanded populations for—				
<ul style="list-style-type: none"> • Blankets, mattresses, sheets, and towels? 				
<ul style="list-style-type: none"> • Uniforms for inmates and staff? 				
<ul style="list-style-type: none"> • Food—including refrigerated, frozen, and dry commodities? 				
<ul style="list-style-type: none"> • Office supplies and equipment? 				
<ul style="list-style-type: none"> • Security equipment (e.g., weapons)? 				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
• Toilet paper and toiletries?				
• Spare parts and furniture (e.g., for plumbing or tables)?				
• Maintenance manuals and building plans?				
• Staff and inmate records?				
36. Will all or most staff workstations, offices, and control rooms permit networking to the same computer system?				
37. Will the exterior of the building and cost be acceptable to the public? If not, what needs to change?				
38. Will the business office and the loading dock be convenient and readily accessible to screened and approved vendors? Will there be adequate parking and maneuvering space for large trucks?				
39. Is there adequate and appropriate site area for—				
• Staff parking (for the two busiest adjacent shifts)?				
• Visitor parking?				
• Vehicular sallyport?				
• Loading dock, with truck parking?				
• Dumpster(s)?				

continued on page 4-12

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
• Outdoor recreation (if not within the jail's footprint)?				
• Jail expansion?				
• Sheriff's office expansion (if co-located)?				
• Other possible justice system functions (that might be co-located in the future)?				
• Buffer?				
40. Is the design fully conducive to energy efficiency? If not, what should be changed to make it more energy efficient? (Note: This is one of many questions that should be revisited during each phase of design and for each jail component.)				
41.				
42.				
43.				
44.				
45.				
46.				
47.				
48.				



Checklist 2. Lobby and Visiting Area

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Is the lobby large enough to accommodate the required number of chairs for people waiting to enter visiting areas and waiting to pick up inmates who are being released?				
2. Are there enough public restrooms adjacent to the lobby?				
3. Are there enough toilets (or toilets and urinals) and sinks for the volume of people adjacent to the lobby?				
4. Do public restrooms have space for baby-changing counters?				
5. Does the lobby have space for public telephones and a drinking fountain?				
6. Does the lobby have space for visitors' lockers? If coats are to be kept here, is there room for enough tall lockers? Are lockers located so that they do not obstruct security officers' views of the entire lobby?				
7. If your jurisdiction wants vending machines in the lobby, is there adequate space for them in a location that will not block visibility?				
8. When people are in the lobby, will they see a receptionist (or other civilian staff) to whom they can direct questions or check in for visiting? (Note: This workstation could be in an adjacent area, and this person could have other responsibilities.)				

continued on page 4-14

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
9. Will the entire lobby be visible from a control room or another continuously staffed security officer workstation?				
10. Is the amount of openness and security between the receptionist's work area and the lobby consistent with your jurisdiction's philosophies?				
11. Is there space in the receptionist's work area for a computer, printer, intercom, and telephone?				
12. Are there one or more pedestrian sallyports between the lobby and areas within the secure perimeter?				
13. When the receptionist's work area is not staffed (e.g., evenings), will there be a way for people to enter the lobby and obtain information (such as through an intercom or staff in a workstation or control room)?				
14. Is there a suitable place in the lobby for visitors to request visits (such as the receptionist's work area)?				
15. Is there a suitable place in or adjacent to the lobby for visitors to be screened?				
16. If staff will enter and exit through the lobby, can they proceed through the lobby, through a pedestrian sallyport, and into the secure perimeter without simultaneous access by unauthorized people?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
17. If there will be contact visits, is there a suitable place for a walk-through metal detector and a pocketbook or briefcase screener?				
18. Is there a discreet and secure place adjacent to a pedestrian sallyport for visitors to be checked for contraband?				
19. If your jurisdiction requires or wants contact visiting, is there a place where it can be continuously observed in a staff-efficient manner?				
20. If your jurisdiction requires or wants contact visiting, is there an entry sallyport for inmates that is accessible from housing units and another for visitors that is accessible from the public lobby?				
21. If your jurisdiction requires or wants contact visiting, are there adequate public and inmate toilets in separate areas so that inmates and visitors cannot share these spaces?				
22. If family reintegration is a goal, are visiting spaces conducive to parental bonding with babies and small children (contact visiting, noncontact visiting booths large enough for several family members, sound-absorbing materials)?				
23. Are there enough noncontact visiting booths for the anticipated numbers of inmates and the maximum amount of time that your jurisdiction may allow inmates to visit?				

continued on page 4-16

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
24. Will the visitor/public side of some non-contact visiting booths be large enough for the number of visitors that each inmate may be allowed to see at the same time (e.g., if spouses can bring children, will some booths near all housing units be large enough to accommodate one adult and three children)?				
25. Has the issue of sound control in visiting areas been adequately addressed? Are there means to keep normal levels of speech in one booth from penetrating into adjacent booths?				
26. Are all noncontact visiting booths located and arranged in a staff-efficient manner so all visitors and all inmates can be seen?				
27. If your jurisdiction may have video visiting initially or in the future, are there booths for visitors and (separately) for inmates that will accommodate such, with space for cameras and screens (and conduits)?				
28. Are all spaces that will be occupied by visitors and staff wide and large enough for wheelchairs to access and turn around?				
29. Are there one or more janitors' closets within or close to the lobby and other visiting areas?				
30.				
31.				
32.				



Checklist 3. Intake, Booking, Classification, Transportation, and Release (Including Pretrial Release)

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Is the vehicular sallyport or secure vehicular yard large enough for the number of anticipated cars, vans, and buses?				
2. Is the vehicular sallyport or secure vehicular yard laid out to avoid gridlock (is it conducive to exiting while other vehicles remain in the same place)?				
3. Can law enforcement and prisoner transportation vehicles exit without backing out? (Drive-through configurations are safer.)				
4. Is the height of the vehicular sallyport adequate for the tallest vehicles anticipated (buses or vans)?				
5. Is the vehicular sallyport well vented?				
6. Is there a dedicated place in the vehicular sallyport for secure weapons lockers? Will the lockers be visible by staff within the intake and release area?				
7. To avoid having inappropriate items stored in the vehicular sallyport, is there a separate maintenance garage and/or shops suitable for lawnmowers, paint cans, gasoline cans, and so forth? (See checklist 12.)				
8. Is there a pedestrian sallyport between the vehicular sallyport (or secure vehicular yard) and other parts of the intake and release area?				

continued on page 4-18

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
9. Are there a walk-through and a hand-held metal detector within the intake pedestrian sallyport?				
10. Is there at least one inmate toilet in or adjacent to the strip-search room that may be used immediately after strip search?				
11. Are sallyports visible by staff and controlled from a secure control room?				
12. Are there one or more places (rooms or alcoves) for strip-searching incoming inmates that maximize safety and security and provide appropriate levels of privacy for both male and female inmates?				
13. Are there places for arresting officers to complete reports (manual and via computer), make phone calls, and use a toilet away from inmates and jail staff but near the vehicular sallyport?				
14. Is there a room or alcove near the pedestrian sallyport for a breathalyzer?				
15. Is the intake and release area laid out so that incoming inmates, exiting inmates, and those going to or coming from court are separated from the other groups?				
16. If yours is a medium-sized or large jail, are there semi-separate or (preferably) fully separate prebooking, booking, and post-booking waiting areas and holding cells?				
17. Are there one or more secure connections between intake and release areas and housing units?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
18. If your jurisdiction accepts juveniles for any period of time, are there separate areas for male and female juveniles that provide sight and sound separation from adults and are continuously visible by staff?				
19. Does the layout prevent male and female inmates from looking into each other's booking or holding cells?				
20. If your jurisdiction agrees that some inmates in intake, transportation, and release areas can wait in open waiting areas (rather than in cells), is there adequate space for seating (away from circulation)?				
21. Are staff stations located so that they facilitate visibility of the fronts of all cells, waiting areas, toilets, and other spaces that will be occupied by inmates?				
22. Are there one or more safety, isolation, or detoxification cells for inmates who are belligerent or under the influence of drugs or alcohol? Do these cells have soft but durable surfaces and floor drains?				
23. Are these cells located so that they can be monitored continuously by staff who are able to have other duties?				
24. Are toilets located in holding rooms or cells that give staff sufficient visibility (of upper bodies) while still affording inmates some privacy?				
25. If there is an open waiting area for inmates, is there at least one toilet adjacent to the waiting area?				

continued on page 4-20

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
26. Are there floor drains within or outside of holding cells and showers, and in the vehicular sallyport?				
27. Are there intercoms in all holding cells and outside of vehicular and pedestrian sallyports?				
28. Are there places for pay and “free” telephones for incoming inmates and releasees that can be monitored and controlled by staff in a time-efficient way?				
29. To meet projected needs for the next 15 or 20 years, are there enough—				
• Booking stations?				
• Release stations?				
• Multiple-occupancy and single-occupancy holding cells for intake areas?				
• Waiting area(s) (open) for intake?				
• Multiple-occupancy and single-occupancy holding cells and/or waiting area for release?				
• Multiple-occupancy and single-occupancy holding cells for court staging (waiting to go to court) and for waiting to go to and from state prison and other jurisdictions' jails?				
30. Can all booking, release, and transportation workstations and other staff workstations be connected easily to the jail's computer network?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
31. Is there a place for a printer close to each booking, release, and transportation station?				
32. Is there a central and convenient place to store forms, make copies, and send and receive faxes?				
33. Is there enough space to store inmates' clothing, valuables, and other property (for current and future numbers of inmates)?				
34. Is there a staff workstation with a networked computer within or adjacent to inmate property storage?				
35. Is there a safe or vault for inmates' valuables next to or behind the property storage staff workstation?				
36. If your jurisdiction will be washing inmates' personal clothes after it is determined that they will stay at least overnight, is there an alcove or room in intake for a small laundry? If not, is the institution's laundry nearby?				
37. Is there enough space to store inmate uniforms, shoes, sheets, blankets, mattresses, towels, and toiletries (for current and future numbers of inmates)?				
38. Is the flow for intake functions conducive to security, visibility, manageability, safety, and staff efficiency?				
<ul style="list-style-type: none"> • Is this also true for those being transferred to and from court, hospitals, etc.? 				
<ul style="list-style-type: none"> • Is this also true for those being released? 				

continued on page 4-22

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
39. Is there adequate security between court staging (in the jail) and all criminal courts?				
<ul style="list-style-type: none"> • Is there a secure corridor between the jail and the criminal courts that will be used only by inmates and security staff? 				
<ul style="list-style-type: none"> • Will inmate movement to criminal courts not pass any areas occupied by the public or other justice system staff? 				
<ul style="list-style-type: none"> • Will there be secure holding rooms adjacent to all criminal courts? 				
40. Is the flow conducive to separating three different populations: those being released from jail, those coming in, and those going to and returning from court?				
41. Is there an appropriate place for medical and psychological screenings (e.g., acoustically private; visible by security staff; large enough for several chairs, a table, and, depending on desired operations, an examination table, a sink, and a counter)?				
42. Is the medical area convenient to the intake area or does the intake area have its own examination room for when initial medical examinations are needed?				
43. Are there appropriate spaces for photographing and fingerprinting inmates?				
44. Are there one or more showers with adjacent drying areas where clothing will be exchanged? (Number of showers is based on capacity, policies, and procedures.)				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
45. Is there an office for the supervisor or manager of the intake and release areas?				
46. Is there a transportation office? Is it adequate in size for the number of transportation officers?				
47. Are there offices for classification staff (these could be in or near intake housing)?				
48. Are there spaces convenient to the intake and release areas for bail bondsmen, attorneys, and law enforcement officials to interview inmates, make telephone calls, access data (computer), and complete paperwork (these may include contact and noncontact interview rooms)?				
49. Are there dedicated offices convenient to the intake and release areas for pretrial release staff to interview inmates, make telephone calls, access data (computer) and complete paperwork (these may include contact and noncontact interview rooms)?				
50. Are contact and noncontact interview rooms located so that they can be easily monitored, observed, and controlled by correctional officers?				
51. Are one or more of the contact and non-contact interview rooms wired and configured for video interviews?				
52. Does release connect through a pedestrian sallyport to the public lobby so releasees can meet those who are picking them up from the jail?				

continued on page 4-24

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
53. Are intake, release, and transportation areas all convenient to storage areas for inmates' personal property and valuables?				
54. Is there sufficient work area for all other anticipated staff?				
55. Is there sufficient staff storage area, including a lockable space for handcuffs and other items that must be secured?				
56. Is there a place for a refrigerator and, ideally, a microwave, sink, garbage can, and cabinets, so inmates who return late from court and those who are confined in intake during mealtime can have meals?				
57. Are handicapped-accessible toilets available for male and female staff? For male and female inmates?				
58. Is a janitors' closet (with a mop sink) convenient?				
59.				
60.				
61.				
62.				
63.				
64.				



Checklist 4. Administration, Security Administration, and Central Control

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Is the location of the administration area consistent with your jurisdiction's decisions as to whether it should be within or outside the security perimeter?				
2. If your jurisdiction has decided to separate official visitors (e.g., justice system administrators) from other visitors—				
• Is there adequate and appropriately located space for this function?				
• Is there a secretarial or other staff station that could be used for greeting official visitors?				
• Is there space for waiting?				
3. Is there a place for meeting public officials, community representatives, and other official visitors?				
4. Does the administration area provide adequate and appropriate space to accommodate changes in staff positions and numbers?				
5. Will all administrators who need acoustical privacy have private offices?				
6. Is there adequate space for business and personnel functions (including a secure space for personnel files)?				

continued on page 4-26

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
7. Is there adequate space for all shift supervisors and command staff?				
8. Are these spaces for shift supervisors and command staff located within the security perimeter but also convenient for staff who are starting and ending shifts?				
9. Is there adequate space both now and in the future for—				
• All administrators?				
• All secretaries, clerks, and administrative assistants?				
• Inmate files (may be elsewhere, but within secure perimeter)?				
• Staff files (secure)?				
• Office supplies?				
• Copy and facsimile machines?				
• Meetings (could be shared with muster or break room, depending on size of facility and frequency of use)?				
10. Do administrators and staff have room to take breaks without having to walk to a distant part of the facility? (Depending on the capacity and size of the facility, this space may also be usable for muster and/or meetings.) (Also see checklist 5.)				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
11. Does the break room contain a sink, counter, cabinets with space for a microwave oven, a small refrigerator, chairs, and one or more tables? (Also see checklist 5.)				
12. Is there space for inmate hearings (disciplinary, etc.)? (Note: This could be in another part of the facility that is close to housing units. It is advisable that inmates not be allowed within the main administration suite.)				
<ul style="list-style-type: none"> • If so, is it large enough and well configured for all participants? 				
<ul style="list-style-type: none"> • Is it soundproof? 				
13. Is there a secure holding room next to the hearings room?				
14. Is the central control room consistent with your jurisdiction's philosophy and preference regarding whether central control staff should be adjacent to the public lobby, public or staff corridors, visiting, or other areas?				
15. Is there a sallyport between the central control room and other spaces?				
16. Is there space in the central control room for all CCTV monitors needed initially, with room for others to be added later?				
17. In addition to CCTV monitors, is there adequate and convenient space in central control for—				

continued on page 4-28

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
• Smoke and fire monitors?				
• Door controls and alarm monitors?				
• Panic button and alarm monitors?				
• Building system (e.g., plumbing) shutoffs?				
• Audio monitoring, radios, and intercoms?				
• Telephones?				
• Air packs?				
• Fire extinguishers?				
• Emergency medical equipment?				
• Master key cabinet?				
• Storage and distribution of communication devices for correctional staff?				
18. If communication devices or keys are to be distributed from the central control room, is there space on the other side of the central control room for a secure pass-through window and for correctional officers to receive and return such items?				
19. Is the central control room adequate in space and access for future technologies for later phases of your jail expansion (e.g., to avoid having two staff-intensive central control rooms)?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
20. If the central control room is raised to make wiring in floor panels accessible, is there a ramp that meets Americans With Disabilities Act (ADA) requirements?				
21. Is the restroom to be used by central control room staff located so that it does not block important views from central control? Is it within central control's secure perimeter or nearby, depending on your jurisdiction's policies and procedures regarding restroom breaks for central control staff?				
22. Is the restroom within or close to central control handicapped accessible?				
23. Is there a central control equipment room adjacent to central control?				
24. Is the central control room designed so that—				
• Staff will be within easy and fast reach of all controls?				
• Glare is avoided?				
• Unnecessary visual distractions are avoided?				
• Other staff can be added without changing the layout or equipment?				
• Monitors are located so that they are comfortable to view (not too high) without blocking desired views?				

continued on page 4-30

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
25. Is there an armory or a closet for weapons?				
26. Is the armory outside the security perimeter, but with its own high-security entrance (sallyport) and security perimeter?				
27. In the armory, is there adequate and appropriate space for weapons, ammunition, restraints, helmets, batons, and chemical agents?				
28. Is there a designated staging area near or (ideally) adjacent to the armory for the emergency response team?				
29. Does the emergency response team's room have space for large lockers, a work counter, and benches?				
30. Is the emergency response team's room highly secure, ideally with access via a pedestrian sallyport?				
31. Are the procedures adequate for distributing, inventorying, and returning keys (or cardkeys) and staff communication devices (hand-held or on body)?				
32. Is there a very secure place for storing and repairing locks and keys (or cardkeys)?				
33. Regarding mail—				
<ul style="list-style-type: none"> Is there a dedicated room for receiving, scanning, inspecting, sorting, and distributing the institution's and inmates' mail, including packages and money orders? 				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
<ul style="list-style-type: none"> Is the mail room large enough to hold all packages, regular mail, tables or counters for sorting, a scanner, a scale, a postal meter, and a desk or work counter with a networked computer (for each mail staff member or, for small jails, for the staff there part of the time)? Depending on the distribution system, there may be a need for space for carts. 				
<ul style="list-style-type: none"> Is there a suitable wall for passthrough mailboxes or slots (for administrators and staff)? 				
<ul style="list-style-type: none"> Is it convenient for pickup and delivery? 				
34. Are all administrative areas accessible to the handicapped?				
35. Are their restrooms convenient for male and female staff working in all areas? For official visitors? And next to the hearing room, for inmates?				
36. Are janitors' closets convenient to all areas?				
37.				
38.				
39.				
40.				
41.				
42.				



Checklist 5. Staff Support

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Are there sufficient security barriers between staff vehicles, the staff (or shared) building entry, key exchange, muster/rollcall, and places where staff are assigned? Are there unnecessary bottlenecks?				
2. Does your jurisdiction want staff or visitors to enter and exit the jail via the same or separate doors and lobby? Is the staff entry to the jail consistent with this?				
3. Is the space for staff to exchange keys (or cardkeys) and communication devices conducive to staff efficiency (so that staff who distribute keys can have other responsibilities)?				
4. Are there staff weapons lockers (long and short) outside of the security perimeter?				
5. Is there enough space for staff lockers for purses, coats, umbrellas, and so forth, consistent with your jurisdiction's decisions regarding—				
<ul style="list-style-type: none"> • Whether staff will have permanently assigned or shared lockers? 				
<ul style="list-style-type: none"> • Whether lockers should be large enough for coats (therefore, long)? 				
<ul style="list-style-type: none"> • Whether support and program staff will also be able to use lockers? (This is important if your jurisdiction does not want health services, food services, or other staff to bring coats or pocketbooks to their work areas.) 				

continued on page 4-34

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
6. Are locker rooms large enough to accommodate anticipated growth in staff over time?				
7. If your jurisdiction desires a staff exercise room, is one provided? If so, is it large enough for the desired pieces of equipment and number of occupants? Is it large enough for the expanded staff?				
8. Is there at least one shower that male and female staff can use after exercise or for emergencies? Is there adjacent space to dry off and change clothes?				
9. For all security and custody staff projected to be on the day shift (the most staff-intensive shift) in 10 years, is there a muster or rollcall room that is large enough?				
10. Is there a dedicated room for classroom training or a shared space, such as the muster/rollcall room, that will be available frequently enough to meet projected training requirements?				
11. Is the classroom training room large enough for tables (or student armchairs or desks) and the maximum number of people that will be in a class?				
12. Where will physical training take place? Does it provide at least 40 square feet of space per person at the desired class size?				
13. If physical training will take place in a room used for other functions, is there a storage room that will accommodate mats and other related equipment?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
14. Is there adequate storage space for printed training materials, a large TV/VCR, and videotapes?				
15. Is there a staff dining or break room?				
16. Is the staff dining or break room within the security perimeter and quickly accessible from most staff stations?				
17. Is the staff dining room large enough for about one-fourth the number of security and custody staff expected during the day shift 10 years from now?				
18. Is there space available in the staff dining or break room for vending machines?				
19. If your jail allows staff to smoke in certain areas, are there separate smoking and nonsmoking staff break areas?				
20. If your jail allows staff to smoke only outside, is there a walled staff-only outdoor area that is inaccessible to the public and to inmates?				
21. Are there handicapped-accessible staff restrooms near all staff and volunteer work areas? (Note: During schematic design, the only indication of accessibility may be a larger size.)				
22. Are all of the following staff areas accessible to the handicapped: staff dining, classroom training, physical training, and muster/rollcall?				

continued on page 4-36

Reviewer Response

Design Review Questions	Yes	No	Not Sure	Comments
23. If your jurisdiction will be washing or dry-cleaning staff uniforms, is there appropriate space for this that is close to staff support?				
24.				
25.				
26.				
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28.				
29.				
30.				
31.				
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34.				
35.				
36.				
37.				



Checklist 6. Housing

Many of the following questions were based on American Correctional Association standards in place at the time this document went to press. It is strongly advised that your jurisdiction review all current national, state, and local standards, codes, and guidelines that it must or chooses to follow and then revise these questions appropriately.

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Are there enough housing units to fully support your jurisdiction's classification plan (categories or housing units may include initial/classification housing, maximum security, medium security, protective custody, segregation, geriatric, special needs/mental health [which may include geriatric], work release, and inmate worker)?				
2. Are all of the same categories or housing units needed for your female population, or, if your jail is relatively small and medium in capacity, is it more practical to combine some compatible categories? Are there enough units to support your classification and housing plan?				
3. Is there adequate flexibility in the use of some units for various security levels and for males or females? (Trends show that the percentage of females is rising and other population categories will change over time.)				
4. Are the housing units consistent with your jurisdiction's philosophies regarding direct and indirect supervision? Are there staff stations, and, in the case of indirect supervision, control rooms in appropriate areas?				

continued on page 4-38

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
5. Are the control rooms or staff stations located so that staff will have excellent visibility of all dayroom areas and the fronts of all cells, showers, and other adjacent spaces?				
6. Does your jurisdiction want to bring inmates to services and programs, bring services and programs to inmates, or combine the two approaches? Are there spaces in or next to each housing unit to support this (these spaces may include classrooms, food delivery areas, indoor/outdoor recreation areas, group counseling rooms, multipurpose rooms, interview rooms, or medical examination rooms)?				
7. If there are multipurpose rooms or recreation areas within or adjacent to housing units, will staff be able to see into all parts of these spaces from control rooms or staff stations?				
8. If there are multipurpose rooms in or adjacent to housing units, are these large enough for intended activities and group sizes, even with anticipated overcrowding or double occupancy?				
9. If there are recreation areas within or adjacent to housing units, are these large enough for intended activities and group sizes, even with anticipated overcrowding or double occupancy?				
10. Is there an interview room, counseling room, or office within each housing unit?				
11. If there are medical rooms within or adjacent to housing units, do they contain sinks and securable cabinets or closets?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
12. Are there drinking fountains in dayrooms and recreation areas?				
13. Are there means for staff in control rooms or staff stations to communicate continuously with inmates in cells and other spaces? (If indirect supervision is used, intercoms are especially important.)				
14. Can all cell doors be released remotely from control rooms or staff stations? Will there also be emergency overrides from central control?				
15. Trace the path that officers will take when making rounds, looking into all cells and other spaces. Are staircases and doors between units in the best possible locations to facilitate staff movement?				
16. How is visibility from staff stations and/or control rooms to the fronts of all cells and showers, all dayroom areas, and all other program and support space within (and adjacent to) each housing unit?				
17. Where are blindspots, and can these be further minimized or eliminated? Are there as few blindspots as possible?				
18. Will staff in housing units be visible by other staff? If not, will all staff have portable communications systems (such as two-way radios) with a man-down feature?				
19. Are the sizes of cells and dormitories consistent with your state's standards and those of the ACA?				

continued on page 4-40

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
20. Is the clear space within cells at least 7 feet wide and 8 feet high?				
21. Are there at least 25 square feet of “unencumbered space” per inmate in cells and dormitories? (ACA)				
22. Are the capacities of housing units, especially those under direct supervision, staff efficient? On the other hand, are any units so large that they may be unmanageable, require mixing population categories that should be kept separate, or sit half empty?				
23. In housing units where inmates may be confined more than 10 hours per day, is there at least 80 square feet per occupant? (ACA)				
24. Is the largest capacity of your dormitories no more than 64 inmates? (ACA)				
25. Are dormitories partially or fully subdivided into groups of no more than four inmates? (ACA)				
26. Is there enough capacity to accommodate populations above the anticipated average daily population without people sleeping on the floor?				
27. If there are cells that will be single occupied initially but may be double occupied in the future, are these cells large enough for furnishings and to meet standards?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
28. Are there enough showers to meet your state's standards and those of ACA, even if cells are double occupied in the future? (ACA standards require at least 1 shower for every 12 inmates.)				
29. Are there enough toilets and urinals to meet your state's standards and those of ACA, even if dormitories are double occupied in the future? (ACA requires a minimum of 1 toilet for every 12 males, up to half of which may be urinals, and 1 toilet for every 8 females.) If males and females may use the same dormitory housing units at different times in the future, the more restrictive standards should be used (one toilet for every eight inmates).				
30. Are there enough sinks to meet your state and ACA standards, even if cells are double occupied in the future? (ACA requires at least 1 sink for every 12 inmates.)				
31. Are showers, door widths, visiting booths, multipurpose rooms, and other common spaces in handicapped-accessible units also accessible?				
32. If visiting booths are in housing units, are they all noncontact? Are they located so that visitors cannot see inmates in other parts of the units?				
33. When inmates are in dayrooms, does your jurisdiction plan on locking them out of their cells? If so, is there an inmate restroom adjacent to each dayroom?				
34. If your jurisdiction plans on using unit management, is there an enclosed office within or close to every housing unit?				

continued on page 4-42

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
35. In all dayrooms, are there at least 35 square feet of space per inmate who may be occupying the space at the same time—at least half of the housing unit’s highest capacity (except for segregation units, where dayrooms are usually used by no more than a few inmates at a time)? (ACA)				
36. Do dayrooms have space (and utilities) for a drinking fountain and collect-only inmate telephones?				
37. If inmates will eat their meals in their dayrooms, is there space in the dayrooms for the food services system you have selected? (Options include serving lines with steam tables, places to plug in cook-chill carts, and areas for other carts, beverage dispensers, microwave ovens, counters, large utility sinks, or large garbage cans).				
38. If inmates will (or may) eat their meals in their dayrooms, are floors and furnishings easy to clean?				
39. If there are mezzanines in housing units where inmates may be confined to their cells most of the time, is there a way to bring food carts (and laundry carts, commissary carts, library carts, and medical carts) from the main level to the mezzanine level (by elevator, dumbwaiter, lift, or ramp)?				
40. In housing units where inmates may be confined to their cells, are the walkways on mezzanines wide enough to accommodate carts and permit simultaneous inmate and staff movement?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
41. Is there adequate lockable storage space in (or near) every housing unit for toilet paper, basic toiletries, cleaning supplies, and at least a few extra blankets, uniforms, towels, and so forth?				
42. Is there a space for storing and cleaning mattresses (in or convenient to housing units)?				
43. Are all units located so that inmates in one unit cannot see into the windows of other units? Are housing units located so that inmates cannot see into public or staff areas?				
44. If there are secure indoor/outdoor recreation areas adjacent to housing units, are they located and designed so that—				
<ul style="list-style-type: none"> • The public and other inmates cannot pass anything to inmates? 				
<ul style="list-style-type: none"> • Inmates cannot carry on conversations with people in other areas? 				
45. Are there floor drains in all dayrooms near all cells, showers, and drying areas; food serving and eating areas; and other potentially wet areas?				
46. Are there janitors' closets on every level in each housing unit?				
47. Within special needs, geriatric, mental health, and medical housing units—				

continued on page 4-44

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
<ul style="list-style-type: none"> • Are there nurses' stations or combination correctional officers'/nurses' stations? 				
<ul style="list-style-type: none"> • Is there a higher proportion of handicapped-accessible cells and showers? 				
<ul style="list-style-type: none"> • Are there cells with complete visibility (more glazing on cell fronts) from staff stations? 				
<ul style="list-style-type: none"> • Are there call buttons or intercoms in cells? 				
<p>48. In housing units that will or may be used for females, are views of showers, cells, and toilets located to ensure privacy and visibility suitable for both genders? (If trends continue, the proportion of female to male inmates will increase and a higher proportion of female units will be needed in the future. Hence, some flexibility in designation of units is advisable.)</p>				
<p>49. In housing units that will or may be used for females—</p>				
<ul style="list-style-type: none"> • Are capacities in each female unit relatively small (so that units occupied by females and other special populations are not so large that they are half occupied while other units are overcrowded)? 				
<ul style="list-style-type: none"> • Are there areas within dayrooms suitable for small groups—two to four inmates? 				
<ul style="list-style-type: none"> • Are there hair-care areas? 				
<ul style="list-style-type: none"> • Are toilets and showers located and screened so that male staff can supervise females and always know the location of all inmates (e.g., seeing heads and feet in showers) without jeopardizing inmates' privacy? 				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
<ul style="list-style-type: none"> Is the environment conducive to staff-inmate conversations (no barriers, sound-absorbing materials, and acoustical privacy)? 				
<ul style="list-style-type: none"> Are there cells suitable for pregnant women (low beds, some handicapped-accessible cells, and call buttons or intercoms)? 				
<ul style="list-style-type: none"> For small jails where it is most practical to house all females in the same unit, is there a variety of cells within that unit, including a relatively small proportion of high-security cells and some suitable for the mentally ill? 				
<ul style="list-style-type: none"> Are there provisions to increase the female capacity without expanding the building—if recent trends continue—with housing units that meet these criteria? 				
<p>50. In housing units for inmates on work release, minimum-security inmates, inmate workers, most females, and most inmates who have special needs or are mentally ill, will there be softer (and less costly and more appropriate) furnishings and fixtures?</p>				
<p>51. If work releasees will be accommodated—</p>				
<ul style="list-style-type: none"> Will there be dedicated work-release housing units for both males and females? 				
<ul style="list-style-type: none"> Will there be an entry for work releasees with spaces for checking in and out, pat searches, coat lockers, and (with privacy screens) for strip searches? 				
<ul style="list-style-type: none"> Will work-release housing units be separated from other housing units to restrict contact between work releasees and other inmates? 				

continued on page 4-46

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
<ul style="list-style-type: none"> Will male and female work-release units have their own multipurpose rooms and mini-laundries—to minimize contraband? 				
<p>52. If some inmate workers will be working outside of the security perimeter (e.g., maintaining the grounds)—</p>				
<ul style="list-style-type: none"> Will there be spaces for inmate workers to be checked in and out, pat searches, coat lockers, and (with privacy screens) for strip searches? 				
<ul style="list-style-type: none"> Will housing units for inmate workers be separated from other housing units to restrict contact between inmate workers and other inmates? 				
<ul style="list-style-type: none"> Will male and female inmate workers have their own multipurpose rooms and mini-laundries to minimize contraband? 				
<p>53. Will the design of your jail facilitate equality between male and female inmates?</p>				
<ul style="list-style-type: none"> If there will be a work-release program, are there suitable and dedicated work-release housing units for both sexes? 				
<ul style="list-style-type: none"> If there will be inmate workers are there suitable and dedicated inmate worker housing units for both sexes? 				
<p>54. Are the differences in design and amenities between maximum-security, medium-security, and minimum-security housing units enough to encourage inmates to follow the rules (e.g., more “bare bones” dayrooms with fixed furniture in maximum-security dayrooms; space for recreation equipment and movable furniture in minimum-security dayrooms)?</p>				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
55. In segregation units and other units where cell feeding is likely, are there food (and cuff) ports in cell doors?				
56. In special needs, geriatric, mental health, and medical housing units—				
<ul style="list-style-type: none"> • Is there a higher proportion of handicapped-accessible cells and showers? 				
<ul style="list-style-type: none"> • Are there cells with complete visibility (more glazing on cell fronts) from staff stations? 				
<ul style="list-style-type: none"> • Are there call buttons or intercoms on cells? 				
<ul style="list-style-type: none"> • Is there additional space for counseling? 				
<ul style="list-style-type: none"> • Is there additional space for medical care? 				
57. Will your jail house juveniles?				
<ul style="list-style-type: none"> • If so, will juveniles be only in intake and short-term holding areas? 				
<ul style="list-style-type: none"> • If not, will they also be in housing units? 				
58. If your jail will house juveniles—				
<ul style="list-style-type: none"> • Are units for juveniles sight-and-sound-separated from areas occupied by adults? 				
<ul style="list-style-type: none"> • Have provisions been made for male and female juveniles to be separated? 				

continued on page 4-48

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
<ul style="list-style-type: none"> • Are these units located so that they are continuously supervised? 				
<ul style="list-style-type: none"> • Is there at least one dayroom and recreation area (preferably outdoor or indoor/outdoor)? 				
<ul style="list-style-type: none"> • Will the kitchen be able to accommodate their special dietary requirements? 				
<ul style="list-style-type: none"> • Will they have access to daily, full-time academic programs? 				
<ul style="list-style-type: none"> • Will they have access to visiting, counseling, and religious programs? 				
<ul style="list-style-type: none"> • Are paths between juvenile housing units and activity areas located so that juveniles do not have sight or sound contact with adults? 				
<p>59. Will all cells and dayrooms receive natural light either directly or indirectly (“borrowed light”)? (Note: ACA standards now permit cells to receive natural light that first passes through another space, such as the adjacent dayroom.)</p>				
<p>60. Is there a place within all dayrooms or an alcove off the dayrooms suitable for haircuts?</p>				
<ul style="list-style-type: none"> • Are these places visible from the staff station? 				
<ul style="list-style-type: none"> • Do they contain a securable cabinet or closet for hair-care tools and, perhaps, a movable hair-care chair? 				
<ul style="list-style-type: none"> • In units that will or may be used by females, is there a suitable sink in or near the hair-care area? 				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
<ul style="list-style-type: none"> • For inmates in segregation, and, perhaps, maximum security, will the hair-care chair or area be conducive to using restraints? 				
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Checklist 7. Inmate Programs: Library, Education, Counseling, Religious Programs, Recreation, and (in Some Jails) Vocational Training and Industries

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Is the space for the following required programs adequate in size and appropriately located:				
• Noncontact visiting?				
• Recreation?				
• Counseling?				
• Distribution of and access to general library books?				
• Access to legal materials (law books)?				
2. Has your jurisdiction determined if, how, and where it will accommodate the following activities (which may be optional in your state):				
• Contact visiting?				
• Substance abuse counseling/self-help groups (such as Alcoholics Anonymous or Narcotics Anonymous)?				
• Group counseling?				
• GED preparation and other basic academics?				

continued on page 4-52

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
• College courses?				
• Job skills and prevocational classes?				
• Other life-skills courses?				
• Vocational programs?				
• Industries?				
3. If volunteers will be leading programs—				
• Is there convenient, relatively fast access from the lobby to program areas that volunteers will use?				
• Are such places easily observable by security staff?				
4. If your jurisdiction desires to provide most programs within housing units, are there multipurpose rooms or classrooms and counseling rooms?				
5. If your jurisdiction desires to provide most programs within housing units, are there indoor/outdoor recreation areas in or adjacent to all housing units?				
6. If your jurisdiction has decided to have religious services in a chapel rather than in multipurpose rooms, is the chapel convenient to all housing units, conducive to staff control and supervision, and nondenominational (including movable religious symbols)?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
7. Whether religious services will be in a chapel or in multipurpose rooms, are there adjacent lockable storage closets for religious materials for all faiths?				
8. If your jurisdiction desires to provide programs that will serve inmates in multiple housing units, are there centrally located, easily accessible rooms that can be used for educational, religious, and counseling/ self-help programs?				
9. Do the central program areas have enough program rooms to accommodate the number of programs that your jurisdiction plans for the future with flexibility for change over time?				
10. If your jurisdiction plans on using the same spaces for various programs, are there adequate, separate, and lockable storage areas for educational and counseling/ self-help materials?				
11. Are the central program rooms arranged to facilitate unobtrusive supervision by security staff from outside the spaces (primarily through layout and glazing, perhaps supplemented by cameras)?				
12. Is there adequate office space in the central program rooms for staff, contracted teachers, volunteers, and others to work before and after presenting programs?				
13. Are the spaces likely to discourage volunteers, teachers, counselors, clergy, and others from working in your jail?				
14. Are there restrooms for inmates and staff in the programs area, and are these accessible to the handicapped?				

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
15. Are the program rooms appropriate in size for the number of inmates that your jurisdiction allows to participate at the same time with flexibility for the future?				
16. Do program areas comply with your state's standards?				
17. For providing general library services, has your jurisdiction decided to bring inmates to a central library, send book carts to the housing units on a regular basis, or have mini-libraries within all dayrooms? Is the library appropriate for this desired means of operation?				
18. If your library will use a movable cart system, is there dedicated storage space for the carts?				
19. Is there space for storing and sorting donated books, repairing books, and returning and checking out books?				
20. If some or all inmate populations will go to the library, is it large enough in size for bookshelves to be low enough to allow staff to see all library areas? (The lower the shelves, the more square feet are needed to hold the same volume of reading materials.)				
21. Is there adequate room for the desired number of tables, chairs, carrels, and magazine and newspaper racks?				
22. Whether your jurisdiction has decided to have a separate law library or to keep general and legal areas together, is there enough space for required legal documents and work areas without creating blindspots?				

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
23. Can security staff easily observe general and legal library areas without having to walk through these spaces?				
24. If your state requires a separate indoor recreational area or gymnasium, is one provided?				
25. If your state specifies a minimum amount of recreational space per inmate, does the floor plan comply?				
26. Is there lockable space adjacent to all recreation areas for storage of recreational supplies (such as balls)?				
27. Are there drinking fountains or water coolers in all active recreation areas?				
28. If your recreational areas are indoor/ outdoor and stacked, has drainage been adequately addressed?				
29. For outdoor and indoor/outdoor recreation areas, have acoustics been adequately addressed (between housing units and between housing units and the public)?				
30. Are the perimeters of all recreation areas high security?				
31. Has secure fencing been considered for the top of recreational areas that might be especially vulnerable to escapes?				
32. Does recreational space comply with ACA standards?				

continued on page 4-56

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
<p>If your jail's capacity will be less than 100—</p> <ul style="list-style-type: none"> • For outdoor recreation, at least 15 square feet per person who will be using the space at the same time, with a minimum of 750 “unencumbered” square feet. • For covered/enclosed recreation, at least 15 square feet per person who will be using the space at the same time, with a minimum size of 500 “unencumbered” square feet and a minimum height of 18 feet. 				
<p>If your jail's capacity will be more than 100—</p> <ul style="list-style-type: none"> • For outdoor recreation, at least 15 square feet per person who will be using the space at the same time, with a minimum of 1,500 “unencumbered” square feet. • For covered/enclosed recreation, at least 15 square feet per person who will be using the space at the same time, with a minimum size of 1,000 “unencumbered” square feet and a minimum height of 18 feet. 				
<p>33. If your jurisdiction will have vocational programs and/or industries—</p>				
<ul style="list-style-type: none"> • If there will be potential contraband items in this area, is there a sallyport entry with a metal detector and an adjacent strip-search area? 				
<ul style="list-style-type: none"> • Are there adequate and appropriate spaces for classroom and hands-on teaching and, in the case of industries, production functions? 				
<ul style="list-style-type: none"> • Will security staff be able to supervise these areas easily? 				
<ul style="list-style-type: none"> • Are there appropriate ventilation, plumbing, and electrical power? 				

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
• Is there adequate storage?				
• Is there an office? If so, does it provide good visibility of learning and production areas?				
• Is there convenient yet secure access from a loading dock, with wide corridors and doors?				
34. If your jurisdiction will house juveniles, are there suitable places for classes, counseling, recreation, religious services, and visiting, where juveniles will not mix with, see, or hear adult offenders?				
35. Are restrooms near all program areas? Will these require extra staff to escort inmates?				
36. Are all program areas accessible to the handicapped?				
37. Are janitors' closets convenient to all program areas?				
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42.				
43.				



Checklist 8. Health Services

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. If sick call will be partially or fully centralized, is there a secure waiting room that is easily observed by security staff?				
2. Is the inmate waiting room at the entrance to the health services area?				
3. In the waiting room and throughout the health services area—or in their housing units—does the design facilitate the provision of medical care to and the separation, observation, and control of—				
• Difficult-to-manage, incorrigible inmates?				
• Those in protective custody (who should not be mixed with general population inmates)?				
• Female inmates (who should be isolated from male inmates)?				
• Juveniles, if your jail will house them (who should be isolated from all others)?				
4. Is there an acoustically private place in the intake area for initial health screening?				
5. If initial health examinations are to occur during intake, is there an examination room in the intake area designed to accommodate an examination table, sink, counter, and lockable cabinets?				

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Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
6. Is there an adequate number of detoxification cells in the intake or health services areas?				
7. As health services is usually a difficult area to expand, are there enough of the following, not only for the initial inmate population of the jail, but also for the anticipated future population:				
• Capacity of waiting rooms?				
• Number of examination rooms?				
• Number of infirmary rooms?				
• Storage capacity for records?				
• Storage capacity for wheelchairs, medical supplies, etc.?				
8. Is there an emergency room (or a large examination room that will also be used for emergencies)?				
9. Is the emergency room large enough for a sink and work counter, a walk-around examination table, a portable x-ray machine, oxygen, splints, and so forth?				
10. Are all spaces, corridors, level changes (if necessary), and door widths in the health services area accessible to the handicapped?				
11. Is the floor plan consistent with how your jurisdiction plans on distributing medication? (In housing units, in the health services area, or where)?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
12. If pill distribution is to take place in housing units, do dayrooms have water fountains and staging areas?				
13. If pill distribution is to be centralized, is there a secure pass-through window, a waiting area, and a water fountain (on the inmate side)?				
14. Is there a pharmacy or medicine storage room?				
<ul style="list-style-type: none"> • Is its perimeter secure, and are its cabinets lockable? 				
<ul style="list-style-type: none"> • Is it adequate in size for medication and related equipment such as syringes? 				
15. If initial or all sick calls are to take place in housing units, are there examination rooms or multipurpose rooms that can be used for examinations within or adjacent to all housing units?				
16. Do all rooms where examinations will take place (in health services and in housing) have sinks, counters, securable cabinets, and space for examination tables?				
17. Are there inmate toilets with sinks next to examination rooms (for specimens)?				
18. If dental examinations or treatments will be provided in the jail—				
<ul style="list-style-type: none"> • Is there a space for one or more dental chairs with appropriate suction, sink, counter, lockable cabinets, lighting, and apparatus? 				

continued on page 4-62

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
<ul style="list-style-type: none"> • Is there an adjacent space, often called Dental Equipment, for dental plumbing and waste? 				
<p>19. Are all examination and treatment spaces located so that they can be observed and managed by both health services and corrections staff in a staff-efficient and effective manner (with glazing and viewing angles that allow multiple views from one place)?</p>				
<p>20. Is the medical records area in a convenient location for all health services staff to retrieve, review, and record information?</p>				
<p>21. Do the nurses' stations have a good visibility of—</p>				
<ul style="list-style-type: none"> • All examination and treatment areas? 				
<ul style="list-style-type: none"> • The interiors of all infirmary rooms and other infirmary areas? 				
<p>22. Is the nurses' station large enough to accommodate a security officer?</p>				
<p>23. Will there be offices for—</p>				
<ul style="list-style-type: none"> • Health services manager and/or chief nurse? 				
<ul style="list-style-type: none"> • Regular and part-time or visiting physicians? 				
<ul style="list-style-type: none"> • Psychiatrist, psychologist, and/or social workers? 				
<p>24. Are these offices located in the best places for accessibility, manageability, and security?</p>				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
25. Is there an appropriate space for—				
• Medical reference materials?				
• Meetings?				
26. Is there an infirmary?				
• Does it provide enough capacity for expected peak populations?				
27. Are there enough medical isolation cells for those suspected of having highly communicable diseases (such as tuberculosis)? Does each medical isolation cell have its own negative air system and monitor that can be turned off?				
28. Are there individual showers and anterooms for each medical isolation cell?				
29. Is there a sitz bath and at least one shower?				
30. Is there a space for physical therapy with a treatment table and parallel bars? (In smaller jails, this space may also serve other functions.)				
31. Will the infirmary accommodate inmates who are mentally as well as physically ill?				
32. If inmates who are mentally ill will be housed in the infirmary, is there at least one padded safety room?				

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Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
33. Is there a dedicated place in the health services area to store crutches, stretchers, a gurney, wheelchairs, oxygen bottles, and medical supplies?				
34. Is there a lockable closet for biohazardous medical waste that is not shared with other items or functions?				
35. In addition to or instead of the infirmary, is there a need for a special step-down housing unit for inmates who are elderly and weak, physically handicapped, mentally ill, or pregnant?				
36. If one or more step-down units are provided, do these units have adequate capacity for the present time and the future?				
37. If one or more step-down units are provided, do these units have an adequate number of handicapped cells and showers, and are all shared spaces (e.g., counseling room) accessible to the handicapped?				
38. Are there toilet rooms for health services staff as well as inmates?				
39. Is there a staff shower and eyewash in health services or nearby (for emergencies)?				
40. Are there floor drains in the infirmary and step-down unit?				
41. Is there a janitors' closet within or very close to the health services area?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
42.				
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Checklist 9. Food Services

(For questions about staff dining, see checklist 5.)

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
1. Is the loading dock large enough for incoming foods and outgoing garbage as well as other functions (which may include trash, commissary, laundry, maintenance, and storage/warehouse)?				
2. Is access from the loading dock to the kitchen such that inmate workers or other inmates cannot escape via the loading dock? Are there sallyports that control movement?				
3. Are all passage widths and heights adequate for stacked pallets and other tall and wide items?				
4. On the floor plan, trace the flow of food from trucks to cold, frozen, and dry storage areas; to the food preparation area; to the traying area; to housing units and staff, and, if provided, to inmate dining rooms; to washing areas; and to garbage and (clean trays) to food preparation areas. Is the flow of food—				
• Efficient?				
• Convenient?				
• Easy for security and food services staff to observe, supervise, and manage?				
5. Is the flow conducive to the means of food services production and delivery that your jurisdiction selected?				

continued on page 4-68

Design Review Questions	Reviewer Response			Comments
	Yes	No	Not Sure	
6. If your jurisdiction is planning on using the cook-chill method, is there adequate space for bringing large amounts of food to almost frozen temperatures, storing prepared cold foods, and reheating them?				
7. Are all areas of the kitchen—including preparation, washing, and storage areas—large enough for projected future inmate populations and staff? If not, is there a workable expansion plan?				
8. Is there a secure closet with shadow boards for knives? Is this close to and visible from the office?				
9. Is there a visible and secure area for storing yeast and other items that inmate workers may try to use for unacceptable purposes (e.g., to turn into alcohol)?				
10. Is there adequate space for—				
• Service delivery or staging?				
• Food carts?				
• Coolers and freezers?				
• Dry storage?				
• Ice machines?				
• Stoves, ovens, kettles, and deep fryers?				
• Food preparation?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comments
• Baking (if applicable)?				
• Meat cutting (if applicable)?				
• Tray assembly?				
• Dishwashing and pot washing?				
• Steam tables?				
• Managing, ordering, planning, and supervising?				
11. Between the warehouse and food services, are dry, refrigerator, and freezer storage areas large enough to accommodate the following items for initial and future needs:				
• Government-issued commodities?				
• Dairy items?				
• Meats?				
• Vegetables?				
• Fruits?				
• Paper goods?				
12. Is there an appropriate office where the food services supervisor can meet with vendors, staff, and inmate workers; menus can be developed; and food items can be inventoried and ordered?				

continued on page 4-70

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
13. Is there good visibility from this office to all food preparation and production areas and, ideally, to the loading dock?				
14. Is there adequate out-of-the-way space to store food carts and trays now and in the future?				
15. Are there a means and a place to store and reheat meals for those who return late from court, work-release, and so forth? Will this enable late meals to be served at appropriate hot and cold temperatures without being overcooked?				
16. If any populations will eat in dining rooms (other than dayrooms), will such dining rooms be adjacent to the kitchen? Will they be large enough for—				
• The expected number of diners (at each seating)?				
• A serving line?				
• Beverages, a water fountain, and an ice machine?				
• A salad bar?				
• Tray returns?				
17. Is there a suitable place for food services staff to store uniforms, change clothes, and lock up coats and purses? (Leaving purses and coats in the staff locker room reduces the likelihood of contraband.)				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comment
18. If inmate workers are to change uniforms in the kitchen, is there a suitable place for this, with lockers?				
19. Is there a staff toilet, inmate toilet, and large janitors' closet with mop sink?				
20. Is there a place for kitchen staff and inmate workers to have midshift meals?				
21. Outside, is there—				
<ul style="list-style-type: none"> • A covered loading dock with load leveler large enough for one or more trucks, dependent on the size of your institution? 				
<ul style="list-style-type: none"> • A place for a dumpster? 				
<ul style="list-style-type: none"> • A place for recycling? 				
<ul style="list-style-type: none"> • Area for at least two large trucks? 				
22. Are the outside food service elements within a secure, fenced-in area that is easily observable (by windows and/or cameras)?				
23. At the inmate-worker entrance to food services, is there a sallyport or space that can be used for stopping, pat searching, and, if necessary, strip-searching inmate workers to ensure that they do not leave food services areas with contraband?				

continued on page 4-72

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
24. Is the material selected for the kitchen floor durable, sanitary (meeting health codes), and slip resistant? Are there floor drains with proper slopes?				
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Checklist 10. Commissary (Canteen)

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
1. Is the commissary convenient to the loading dock?				
2. Is the path from the loading dock to the commissary free of narrow doors and steps? Is it conducive to the movement of large and heavy items?				
3. Are the perimeter, doors, and windows of the commissary fully secure?				
4. Is the door (or pair of doors) to the commissary at least 3 feet wide?				
5. Is the commissary large enough for—				
• The expected quantity and sizes of items for the initial inmate population?				
• The population that is projected for the future?				
• Dry storage?				
• Refrigerators and/or freezers (depending on your jurisdiction's policies)?				
• Order makeup area?				
• Cart storage?				

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Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
<ul style="list-style-type: none"> • Work area with desk, networked computer, and printer? 				
<p>6. If your jurisdiction has decided that inmates will order items while in their housing units, that staff or vendors will bag items in the commissary, and that items will be carted to housing units and distributed to inmates—</p>				
<ul style="list-style-type: none"> • Can carts be moved easily from the commissary to all housing units? (Are there no stairs, and are all doorways wide enough for carts?) 				
<ul style="list-style-type: none"> • Are there places such as dayrooms in housing units for commissary forms, commissary order boxes, and commissary distribution? 				
<p>7. If inmates will pick up items at the commissary, is there a secure, lockable pass-through window with a waiting area on the inmate side of the window?</p>				
<p>8. If your jurisdiction may have a (private) vendor operating your commissary, is the commissary in a location that can be easily observed by staff?</p>				
<p>9.</p>				
<p>10.</p>				
<p>11.</p>				
<p>12.</p>				
<p>13.</p>				



Checklist 11. Laundry

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
1. If your jurisdiction has decided that some inmate populations (such as females or work releasees) should do their own laundry, are there laundry rooms or areas in their housing units?				
2. If laundry rooms are in housing units, does each have a sink and space (and power and, perhaps, natural gas) for at least one commercial dryer and washer and a folding table?				
3. Will all or most inmate uniforms and other clothing, towels, sheets, and blankets be stored in the central laundry? If so, is it large enough?				
4. Will the central laundry be large enough for—				
<ul style="list-style-type: none"> The washing and drying of inmate uniforms and jail-issued underwear for, depending on your jurisdiction's intent, all inmates, all male inmates, or all higher security inmates? 				
<ul style="list-style-type: none"> If some or all inmates are allowed to have their own clothes, the washing and drying of such clothes? 				
<ul style="list-style-type: none"> Towels and sheets used in housing units? 				
<ul style="list-style-type: none"> Towels and sheets used in health services areas? 				
<ul style="list-style-type: none"> Towels and uniforms used in intake and release areas? 				

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Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
• Towels and uniforms used in food services areas?				
• Blankets?				
• Mops?				
5. Will the medical area have its own washer and dryer? If not, are there procedures in place for cleaning its towels, sheets, and other linens, in compliance with sanitation and health standards?				
6. Will the intake area have its own washer and dryer? If not, is the laundry convenient from the intake area? Does the laundry have adequate capacity for this additional load?				
7. Is there enough space in the central laundry for the anticipated numbers of washers, dryers, folding tables, and shelving units?				
8. Will the equipment that the laundry has been sized to accommodate be adequate for the future projected inmate population (e.g., in 15 years)?				
9. Is the laundry conducive to the supervision of inmate workers (no blindspots or low shelving)?				
10. If your jurisdiction wants mending to take place in the laundry, is there space for a sewing area?				
11. Will laundry carts fit through all doorways between the laundry and all housing units, the intake area, and the medical area?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comment
12. Is there adequate space to service washers and dryers?				
13. Can large washers and dryers easily be replaced? Are doors and corridors wide enough?				
14. Are there floor drains and adequate means of ventilation in the laundry?				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				



Checklist 12. Maintenance

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
1. Are there maintenance shops for all types of building repairs (carpentry, painting, plumbing, heating/cooling/ventilation, electrical, and electronics)?				
2. Is there a maintenance office with space for a computer, printer, plain racks or drawers, and file drawers or bookshelves for equipment manuals, catalogs, and warranties?				
3. Is there a secure tool room and/or lockable tool shadow boards for maintenance tools that could be used as weapons and other contraband?				
4. Is the tool room accessible from the maintenance shops?				
5. Is there adequate space in the maintenance area or warehouse to store replacement and repair items such as lumber, plumbing pipes, air filters, electrical wire, and paint?				
6. Is there a secure and physically isolated closet or room for chemicals, caustics, and other potentially dangerous substances? (Often, this is a separate specially built structure.)				
7. Is there enough space to store yard maintenance items such as lawnmowers, snowblowers (if needed), gasoline cans, and shovels?				

continued on page 4-80

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
8. Is yard maintenance storage secure so that tools do not become weapons or contraband?				
9. Are all maintenance areas easily visible by staff in both the office and the shops?				
10. Will the maintenance area be outside the security perimeter? If so, will other physical barriers keep inmate workers from leaving the jail?				
11. Is there a suitable place to strip-search inmate workers before they return to housing units?				
12. Will large items fit through entries to maintenance work and storage areas (with either double doors or roll-type wide doors)?				
13. Are plumbing chases in housing units, intake, medical, and other areas large enough for maintenance staff to access and make repairs?				
14. Is there an eyewash or shower in the maintenance area?				
15. Are there places for staff and inmate workers to change clothes?				
16. Are there toilets for staff and inmate workers?				
17. Is there a janitors' closet with a mop sink, a mop rack, and shelving in the maintenance area?				

Reviewer Response

Design Review Questions	Yes	No	Not Sure	Comment
18. Does the emergency generator have enough capacity for must-have electrical items throughout the jail?				
19. Are all mechanical and electrical rooms large enough for the equipment and for repair people to work on all sides of the equipment?				
20. Are elevators and corridors sufficient in size, and is there an absence of stairs between the loading dock and equipment rooms so that water heaters, HVAC equipment, etc. can be replaced easily?				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
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29.				
30.				



Checklist 13. Warehouse

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
1. Is there adequate space adjacent to the warehouse (and kitchen) for the maximum number of large trucks that will be loading and unloading items?				
2. Does the site plan show enough space for large trucks to get in and out without backing up?				
3. Is there a loading dock that will accommodate all of these trucks at the same time?				
4. Is the loading dock (or loading and unloading area) covered to protect items and people from inclement weather?				
5. Does the loading and unloading area have appropriate security measures? Does the design keep inmate workers from leaving the grounds? Does the design prevent inmate workers from receiving contraband? Does the design of the loading and unloading area inhibit the public from entering the jail (to help others escape)?				
6. Is there a covered and enclosed receiving and staging area for items entering and leaving the jail? (This could double as a sallyport.)				
7. Is the loading dock area visible from a staff station and the central control room (via camera)?				

continued on page 4-84

Design Review Questions	Reviewer Response			Comment
	Yes	No	Not Sure	
8. Based on projected numbers of inmates and staff in 10 or 20 years from now, is there adequate space for dry, refrigerated, and frozen food storage in the kitchen and/or the warehouse?				
9. Are food storage areas adequate in size for your jurisdiction to save by buying in bulk?				
10. If your jail will accept federal government commodities, is there space in the kitchen or the warehouse for these?				
11. Is there a separate and secure storage room for commissary items?				
12. Is there adequate space for storing toilet paper, toiletries, and hygiene supplies for the projected number of inmates 10 or 20 years from now?				
13. Is there adequate storage space for mattresses, towels and sheets, clothes, and shoes?				
14. Is there adequate storage space for extra toilets, sinks, desks, beds, and so forth?				
15. Is there adequate storage space for office supplies and equipment?				
16. Is there a secure and separate storage area for medical supplies (in the warehouse or the medical area)?				
17. Is there a secure and separate storage room for chemicals?				

Reviewer Response				
Design Review Questions	Yes	No	Not Sure	Comment
18. If your jail will have vocational or industry programs, is there adequate space for storing supplies and finished items?				
19. If your jail's maintenance area does not have adequate space for storage, is there adequate space in the warehouse for maintenance parts and supplies?				
20. Is there a warehouse office or workstation with good visibility of all areas that may be occupied with inmate workers?				
21. If your warehouse will accommodate food service items, is it convenient to the food services area?				
22. Are there double doors or wide roll-up doors between the loading dock and the warehouse and between the warehouse and access to other areas?				
23. If your jurisdiction wants to use pallet shelving and pallet movers, are ceilings high enough for two or three layers? Are aisles wide enough for pallet movers to maneuver?				
24. Are toilets available for staff and inmates?				
25. Is there a janitors' closet?				
26.				
27.				
28.				

Chapter 5

Conclusion and Next Steps

CONCLUSION

If this document has worked as intended, you and other design reviewers from your jurisdiction whose positions and areas of expertise complement your own have actively participated in the design review process.



You may have found that design review can be tedious, time consuming, and challenging and that it limits design reviewers' ability to do their primary jobs within normal working hours. Hopefully, your constructive comments have resulted in a better design, others have appreciated your work, and the positive and lasting affects of your review will become even more apparent once the new jail is up and running.

Ideally, your design review team and your architects and engineers are working extremely well together, and the teamwork and hard work will result in a jail that—

- Will work precisely as desired and needed by your jurisdiction, supporting its mission and needs both in the near term and in the more distant future.
- Meets the requirements of a wide array of users and owners, including intake officers, housing unit managers, cooks, counselors, jail administrators, sheriffs, maintenance staff, nurses, volunteers, county board members, chief administrative officers, budget and finance directors, and public works engineers.
- Is completely compatible with and supportive of your jurisdiction's staffing plan, policies and procedures, functions, activities, and inmate populations.
- Is safe and secure for the public, staff, and inmates.
- Is staff efficient, but not overly lean; is a place where staff will want to work; and provides an environment that will encourage staff to do their very best.
- Treats inmates humanely and provides programs consistent with standards and your community's values.

- Is within the construction budget.
- Will be durable, easy to maintain, and cost efficient to operate.

NEXT STEPS

Although the “big picture” decisions about a jail have been made by the end of the schematic design stage, the decisionmaking process continues through the remainder of the design process, construction, and activation and transition.

As described in the introduction to this handbook, hundreds if not thousands of decisions remain to be made after schematic designs are reviewed. These decisions involve items such as flooring materials, plumbing fixtures, drainage, acoustics, communications and control devices, types of glazing, locks, doors, location of electrical outlets, and furnishings. Because most of these items have an impact on the operations of a jail, it is critical that jail operators remain active in design review during the design development and construction documents stages. The design review team should include a variety of jail representatives: administrators, security staff, and those responsible for particular functions, including food services, health services, and intake. The jail transition team should continue to overlap with the jail’s design reviewers to carry out the transition and activation plan successfully.

Because the next phases of design address numerous technical issues, it is critical that those with technical expertise become even more involved in design review at these stages. These reviewers should include maintenance staff and professionals with expertise in building systems, engineering, and construction.

Based on availability of in-house expertise, time commitments, and other circumstances, it may be beneficial for your jurisdiction to bring in additional people to review design development and construction documents along with your design review team. These may include your planning and programming consultant, a jail manager who operates a facility similar to your new one, other engineers and architects with jail experience, a construction manager, a cost estimator, and/or an owner’s representative.

Finally, continue to seek guidance from other resources, such as the National Institute of Corrections’ Jail Center.

Hopefully, your jurisdiction will not need to design another jail for decades. No matter how talented or experienced your architects and engineers are, your participation in design review is needed to help them “get it right” for your community. This is your and your jurisdiction’s chance to make a difference. Seize the opportunity to improve the design—and therefore the operations, management, and costs—of your jurisdiction’s jail.

Appendixes

APPENDIX A. GLOSSARY

adjacency (or bubble) diagram. A diagram showing the relationships among spaces within the entire jail or a component within the jail (such as the food services area). Adjacency diagrams may show flow or movement within areas, such as the processing of incoming inmates.

architectural program. A document stipulating the physical provisions needed to support the operational requirements. An architectural program includes names, numbers sizes, and descriptions of spaces and adjacency diagrams and may also include lists of major furnishings and equipment for each space, significant architectural characteristics of each space, and consequential engineering requirements (such as stainless steel plumbing fixtures).

average daily population. The average number of inmates in a jail over a period of time (e.g., 1 year).

bidding. Once construction drawings and specifications are completed and approved by the jurisdiction, they are submitted to interested contractors with the resources and experience to build the facility. Each interested contractor estimates the total cost of labor, subcontractors, materials, expenses, and overhead to construct the jail and the profit he will make and submits a written bid. Often, the contractor who submits the lowest bid is awarded the project, as long as the firm meets minimum qualifications.

blindspots. Places that cannot be seen due to visual obstacles.

bubble diagram. See adjacency diagram.

building sections. Slices through a portion of a building. In the conceptual and schematic design stages, building sections show the stacking of various components and spaces. In the design development and construction documents stages, building sections show construction details.

codes or building codes. Federal, state, and local regulations that dictate the construction of a facility. Codes pertain to structure, building materials, accessibility to the handicapped, mechanical systems, electrical systems, glazing, foundations, and numerous other items.

conceptual design. The first phase in which drawings are the dominant tool and product. Usually, drawings in this phase are composed of simple, single-line floor plans, building sections, elevations, and site plans.

construction documents (CDs). Detailed floor plans, elevations, sections, and drawings of specific areas (such as window, door, and staircase details); detailed engineering plans (structural, mechanical, plumbing, electrical, electronic), and detailed written specifications (see definition). CDs are reviewed after the design development stage.

design development (DD). The period following the schematic design stage, when detailed drawings and specifications are produced. This includes detailing floor plans, elevations, and sections and producing drawings that show all building elements including staircases, windows, and doors. All drawings are to scale and, in addition to the architecture, show structure, lighting, electrical outlets, electronics, plumbing, and mechanical systems. All construction materials are also indicated.

design review. The ongoing process of asking questions to ensure that the design is “right”; helping ensure that designs will work for *your* community, *your* inmates, and *your* staff; and reviewing the work of architects, planners, and engineers.

direct supervision. The supervision and management of inmates by staff working in the housing unit. Under direct supervision, staff are responsible for a single unit.

elevations. Two-dimensional images of what a building will look like from various angles.

floor plans. Layouts of components (e.g., intake and health services areas) and spaces within components (e.g., booking counter, holding cells) in relation to each other.

glazing. Glass, windows.

gross square feet (GSF). The total amount of space in a building, including space occupied by building structure, walls, corridors, bathrooms, staircases and elevators, mechanical rooms, electrical rooms, and telephone or electronics rooms.

indirect supervision. The supervision and management of inmates primarily by staff located in a control room separated from housing units by secure windows, walls, and, sometimes, corridors. Under indirect supervision, staff control (and have visibility into) doors and other mechanisms in two to six housing units. Control room officers must be supplemented by rovers who walk through housing units periodically to enhance supervision, answer questions, and help provide services such as food distribution.

master planning. In the context of jail planning, there are two types of master plans:

- Site master plans, which show how the jail can be expanded over the next 10, 20, or more years.
- Justice system master plans, which typically include staffing and space needs projections for 10 to 20 years for the jail and sheriff’s department, courts, probation, district or state’s attorney, public defender, and court clerk’s offices; these plans also show expansion and renovation options. Justice system master plans may also include simple block drawings illustrating expansion and renovation over the duration of the plan.

natural light. Sunlight through windows or skylights.

needs assessment. Ideally, the first phase in the planning-design-construction process. This phase includes developing inmate profiles and 10- to 20-year projections, studying the jail in the context of the jurisdiction’s justice system, and the spectrum of alternatives for pretrial and sentenced offenders (note, sometimes alternatives for offenders are considered part of master planning). Needs assessments may include evaluating the existing facility, evaluating existing operations, developing site criteria, and evaluating potential sites.

net square feet (NSF). (Also known as usable square feet.) The total amount of space in a building, excluding space occupied by building structure, walls, corridors, bathrooms, staircases and elevators, mechanical rooms, electrical rooms, telephone or electronics rooms, and so forth.

operational program. A written document that specifies operational requirements for a facility. In the case of jails, these include activities, functions, programs, services, staffing levels (by shift and category), inmates (numbers by category), type of inmate management and supervision (direct or indirect), and hours of operation (for functions that do not operate 24 hours a day).

peak population. The largest total number of inmates in a jail over a period of time.

schematic design (SD). Scaled floor plans, building sections, elevations, and site plans. SDs almost always include outline specifications indicating the types of engineering systems, glazing (glass), doors, locks, and so forth and sometimes also include three-dimensional perspectives (of the exterior) and models of the entire building or portions (such as housing units) of the building. SD follows the conceptual design stage and precedes design development.

site plans. Drawings that show how buildings, parking areas, outdoor recreation areas (if not within the building) and other areas would appear from above. They may also show security perimeters, routes for service and law enforcement vehicles, landscaping, site zoning, sidewalks, how buildings can expand in the future, and neighboring streets and other buildings.

specifications. Detailed written descriptions of building systems, materials, and fixtures that supplement and add specificity to architects' and engineers' drawings.

transition team. A group of people who work together with the architect and others involved in designing the jail to plan and execute the transition from the existing jail to the new or expanded jail. Typically, transition teams are primarily composed of seasoned and energetic jail staff and administrators. They are actively involved in the planning phase, design review, developing job descriptions and policies and procedures, training, and activation and transition.

unit management. An administrative system that subdivides a prison or a medium- to large-sized jail or juvenile facility into smaller units. Generally, each unit accommodates 100 to 500 inmates, and units are further divided into housing units or pods. Under this system, staff members have decision-making authority for institutional programming and living conditions for the inmates assigned to their unit, within broad rules, policies, and guidelines established by the agency or the facility administrator.

value engineering (or value analysis). Controlling or reducing construction costs by substituting building types, building systems, materials, or finishes that reduce costs without compromising objectives and needs.

vitreous china. Porcelain. In jails, usually refers to sinks and toilets.

APPENDIX B. BIBLIOGRAPHY

American Correctional Association. *Design Guide for Secure Adult Correctional Facilities*. College Park, MD: American Correctional Association, 1983.

———. *Standards for Adult Local Detention Facilities* (3rd ed.) Lanham, MD: American Correctional Association, 1991 (reprinted in 1998).

———. *2002 Standards Supplement*. Lanham, MD: American Correctional Association, 2002.

Farbstein/Williams and Associates. *Corrections Planning Handbooks*. Sacramento: California Board of Corrections, 1982.

Henderson, J.D., W.H. Rauch, and R.L. Phillips. *Guidelines for the Development of a Security Program* (2nd ed.). Lanham, MD: American Correctional Association, 1997.

Kimme, D.A., G.M. Bowker, R.G. Deichman, D.E. Bostwick, and J.R. Rowenhurst. *Jail Design Guide: A Resource for Small and Medium-Sized Jails*. Washington, DC: U.S. Department of Justice, National Institute of Corrections, 1998.

Kitchell CEM. *More for Less: Jail Construction Cost Management Handbook*. Sacramento: California Board of Corrections, 1987.

Krasnow, P. *Correctional Facility Design and Detailing*. New York: McGraw-Hill, 1997.

Liebert, D.R., and R. Miller. *Staffing Analysis Workbook for Jails* (2nd ed.). Washington DC: U.S. Department of Justice, National Institute of Corrections, 2001.

Witke, Leonard R., (ed.). *Planning and Design Guide for Secure Adult and Juvenile Facilities*. Lanham, MD: American Correctional Association, 1999.