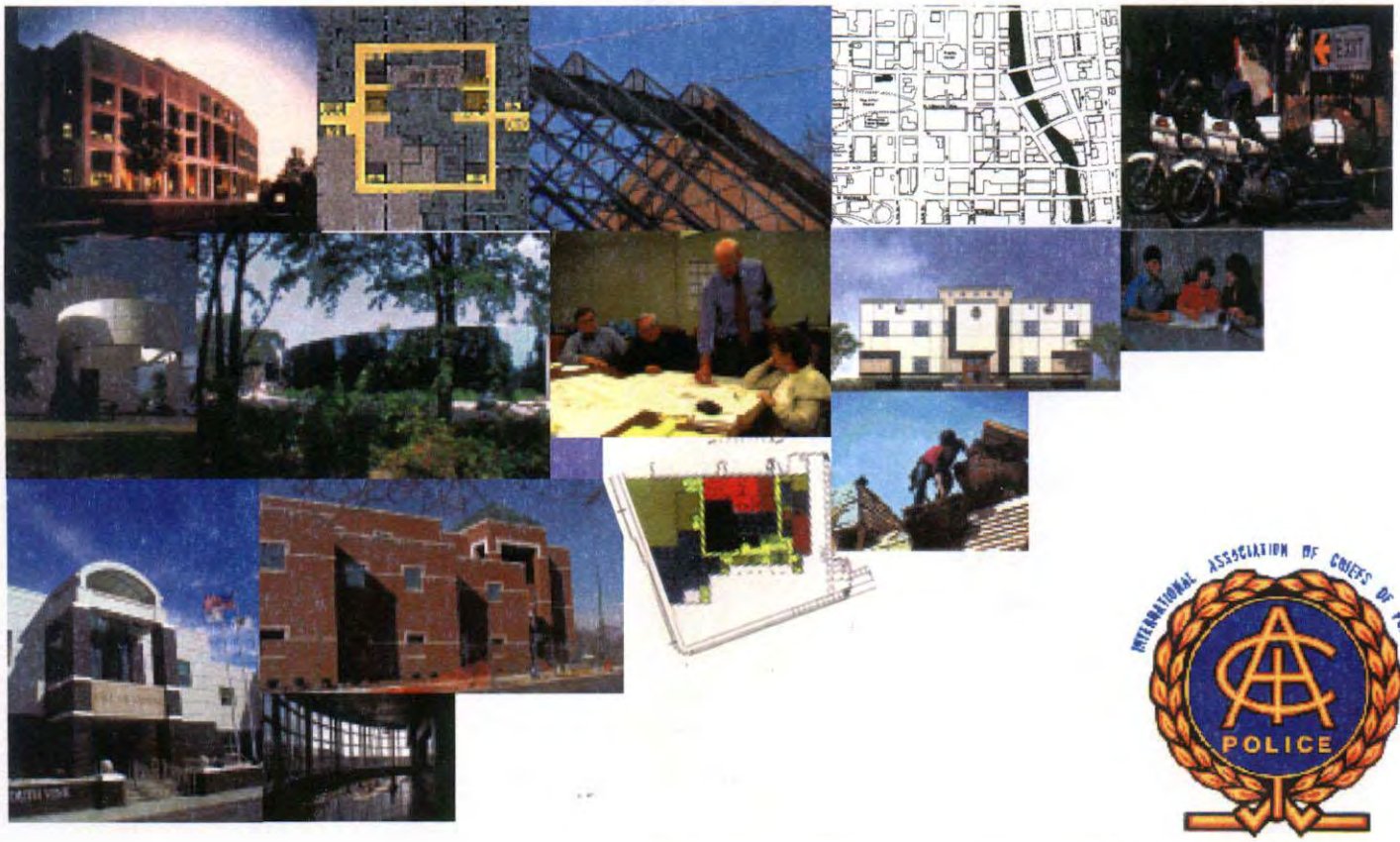
# Police Facility Planning Guidelines

## Desk Reference for Law Enforcement Executives



International Association of Chiefs of Police

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# Introduction

*"The IACP contends that architects alone cannot design a functional police structure. They need the help and guidance of qualified police administrators."*

*IACP Police Facility Design Report, 1978*

There are almost 19,000 state and local police agencies in the United States. Each has, or will in the future need to plan, design and build a new headquarters, precinct or substation. Since the useful life of a police facility can range from 20 to over 50 years, a new facility project is typically a "first time" experience for most law enforcement executives. They have little or no expertise in the subject area. Effective planning for a new or renovated law enforcement facility is the most cost-effective step a jurisdiction can take to ensure a successful project outcome.

A chief's role in the decision-making process has dramatic impact on the design, budget, use and life of a new facility. Decision making during the facility project is similar to a funnel – wide at the top and narrow at the bottom. At the beginning/planning stages, the project team has the greatest opportunity to change building philosophy, size, and design with the least impact on cost. At later design stages, opportunities for change and correction become more limited and more costly. Changes during the construction stage are the most expensive and can seriously delay a project.

This Desk Reference is designed to help chiefs and other law enforcement executives make sound decisions through use of a comprehensive planning approach. It will help chiefs design and construct a new facility, renovate an existing police facility, or adapt another type of facility to police purposes. The Desk Reference incorporates the expertise of police chiefs, police facility project managers, architects and consultants and identifies the critical project management steps involved in successful planning.

### The Problem

Most police facilities continue to operate well past the planned life span. They often become seriously overcrowded, suffer from a lack of sufficient infrastructure (HVAC, electrical, data, telecommunication) and make due with outdated security and safety systems. These conditions often impair staff efficiency and morale, occupant safety, policing effectiveness and public perception of the department.

### Focus of the Desk Reference

This Desk Reference provides police leaders with an 18-step Police Facility Planning Model applicable to all types and sizes of facility projects, regardless of complexity. The Planning Model is intended to promote a successful project outcome, whether the jurisdiction is constructing a multi-use justice complex, a police headquarters facility or any one of several smaller projects, such as a precinct facility or substation.

This document is designed principally by police chiefs and other law enforcement executives. It is designed to position the police executive and/or his or her staff in a leadership role as facility project activities ensue. The guide focuses to the greatest extent on the planning process and to a lesser extent on design or construction elements. While design and construction issues are unique to each jurisdiction, core planning steps are essential to every jurisdiction.

# The Facility Planning Model

This Desk Reference is designed around the IACP's Facility Planning Model, taking the reader through the four phases of facility planning, and the steps included in each phase. Detailed discussion helps the reader understand the value of each phase and step, and gain clarity on how each step can be successfully completed:

### Phase I: Project Initiation

This phase of the planning model contains seven project start up steps:

1. Identify and document facility problems
2. Build police internal planning team
3. Build political support
4. Identify and secure planning funds
5. Document policing philosophy
6. Establish project pre-design team
7. Establish community support for project

### Phase II: Project Planning/Pre-Design

This phase includes three steps focusing on pre-design planning issues:

8. Conduct space needs analysis
9. Evaluate facility options
10. Conduct site evaluation

### Phase III: Budgeting & Funding

This phase outlines three steps of the model that must be taken to assess and secure the necessary funds to complete the facility project:

11. Develop preliminary project design/construction costs
12. Obtain project funding
13. Secure & purchase site

### Phase IV: Design & Delivery Phase

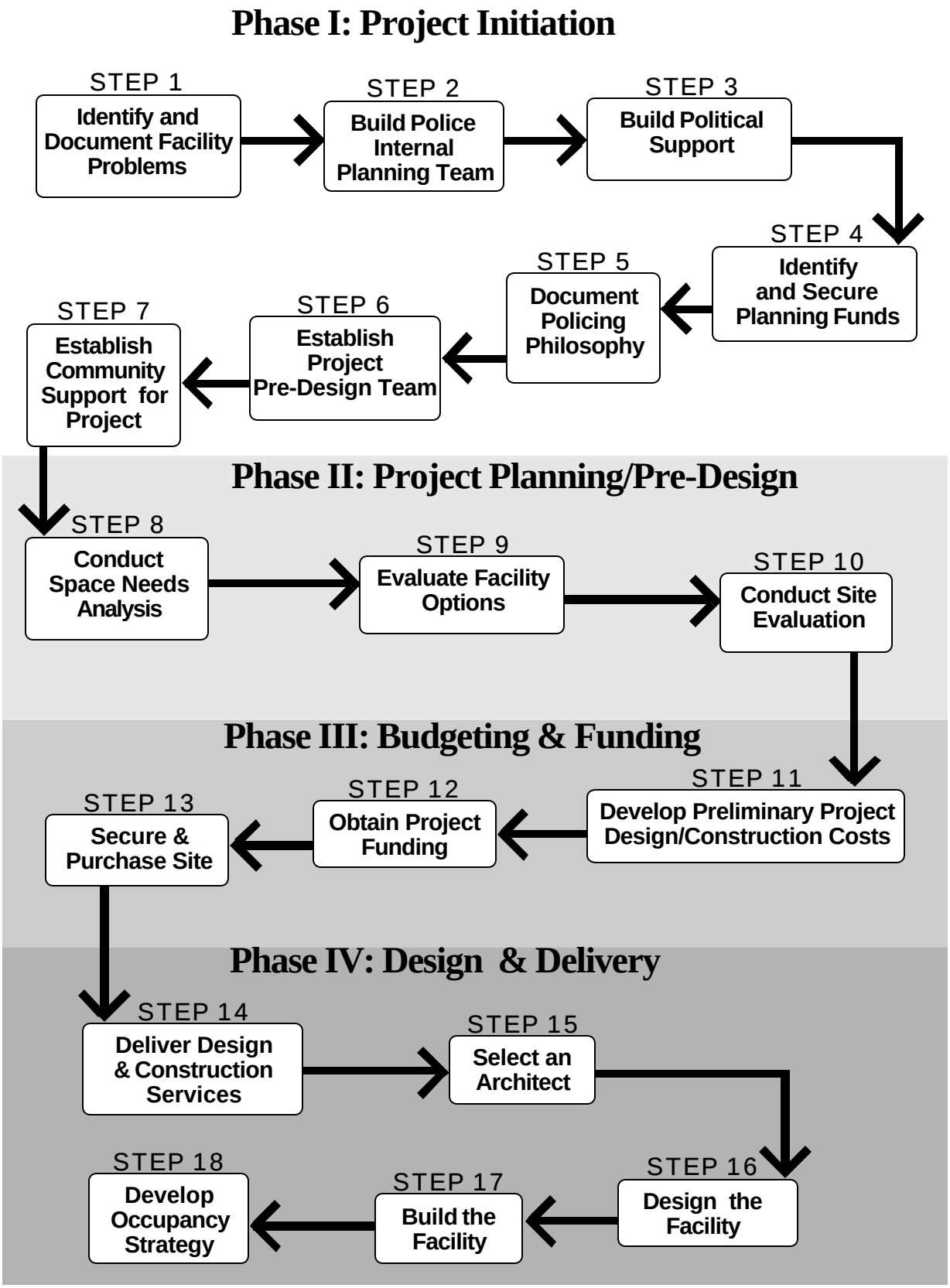
The last five steps of the model identify all necessary actions to design, construct and occupy the facility:

14. Deliver design & construction services
15. Select an architect
16. Design the facility
17. Build the facility
18. Develop occupancy strategy

While individual jurisdictions may have the need to re-order some of the steps based on unique local issues, the IACP believes that each of the 18 steps of the planning model must be accomplished successfully. Following the planning model will insure that the facility constructed reflects the mission of the department, meets all programmatic needs, fulfills all functional requirements, and has sufficient space to meet departmental needs for at least the next twenty years.

OVERVIEW

# Facility Planning Model



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Section One

# Project Initiation

The first section of the Facility Planning Model focuses on the initial actions a police chief should take to explore an existing facility's needs and deficiencies, assembling a police project team, building political support, setting goals, and examining cost implications. Also explained in this section is the process required for data collection to formulate a reliable and informative report on existing facility deficiencies. That report, along with a talented and committed project team, agency and community support, as well as a positive political climate, will hopefully be catalysts for continuing on to the next steps of a facility planning project.

PLANNING TIPS

Initial Steps

- Assemble a police planning team
- Write a mission statement
- Complete a facility deficiencies report

## Step 1: Identify and Document Problems With Current Facility

**The first step of any facility project is to identify and document the deficiencies of the existing building. Step 1 explains how to approach this task. The outcome of Step 1 is a Facility Deficiencies Document that will serve as the foundation for all subsequent project steps.**

Well-designed police facilities enable staff to perform their duties efficiently and effectively. As a facility ages, it may no longer meet the needs of an evolving department, thus negatively affecting morale, efficiency, safety, security, technology, and overall policing efforts. When these conditions occur, agencies search for alternatives. Typical remedies include expanding or renovating the existing facility, adaptively re-using an existing non-police facility, or building an entirely new facility.

To outline the possible scope of a project accurately, it is necessary to document existing facility deficiencies. A *broad-brush* approach should be used, examining all facility needs, including department, staff, equipment, fleet and public needs. A wide array of staff participation during this information collection phase is encouraged. Does the building support your policing philosophy? The agency mission statement regarding operational philosophy and goals is essential to clearly defining problems with the current building. Does the current facility design help achieve that mission? *(See Step 5, page 9)*.

During the deficiency assessment, it is vital to:

- Collect reliable and accurate data on all facility deficiencies (a recent building or code compliance assessment audit is a good place to start).

- Take slides and photos, and perhaps video, of facility deficiencies. These will greatly assist in visually expressing any deficiencies during future presentations.
- Ask relevant questions such as:
  - What current facility deficiencies prevent officers from doing a good job?
  - What delivery of services is needed for the public that the old facility cannot offer?
  - How does the proposed project align with the jurisdiction's overall strategic business plan and service goals?
  - What does a department need to make Community Oriented Policing efforts work better for themselves and the community? COP efforts are strengthened when a police department and it's employees have the correct tools. A police facility is one of those tools.
  - Are operational standards or best practices of the department compromised through use of the current facility?
  - Have customer, civilian employee, and officer surveys been completed to document their needs and perceptions of facility issues?
  - Is the building itself a hazard? Does this building meet, or can it be made to conform in a cost-effective way, to state or local structural building codes?
  - Is there space currently for police archives (police museum in larger cities) to display the history of the department for staff and public image building?
- Conduct community meetings to discuss facility deficiencies, enlighten citizens and solicit feedback. When citizens become part of a planning team and are educated as to the facility's deficiencies, they will be more likely to realize the advantages of a new or expanded facility and ultimately support your cause.
- Focus on what the public needs:
  - Public parking that is clearly marked
  - Ability to easily identify and access the entrance
  - Readily accessible and identifiable ticket sign-off parking area
  - Visitor friendly design that incorporates safety as a priority
  - Waiting area
  - One-stop shopping concept for police services
  - Easy pick up of report copies and property
  - Community Center/meeting room
- Tour other police facilities:
  - Observe the overall layout (exterior and interior)
  - Observe work flow
  - Observe interesting design features that improve efficiency
  - Question why things are designed the way they are
  - Ask how evidence, reports, and arrestees are processed; how visitors are assisted
  - Ask what does and doesn't work within the facility design—or what could work better

- Search for maintenance "headaches" and overlooked areas that are now causing problems and/or procedural changes that were not expected, but that are made necessary by the way work flows
- Note the lessons learned from good and bad design features. Document these issues with photography for later use

• Contact your current facility customers (City, County, State agencies, courts, jails, etc.) and gain insight into a different perspective of facility deficiencies.

• Have similar discussions with project managers and architects in your jurisdiction to gain their insight into the project.

• Elicit staff participation at all levels within the department to identify problems.

• Gain as many perspectives as possible to assist in identifying deficiencies during the preliminary deficiencies assessment phase.

All information must be formatted and eventually blended into a formal Existing Facility Deficiencies Document for broad distribution to staff, community board, citizens and others.

Existing deficiency analysis can be performed by 1) an experienced consultant or architect, or 2) in-house staff, if your department has facility planning expertise. Whomever is selected will need to work closely with the police project manager to insure good communication and oversight.

Depending on the size of the agency or project, it may be helpful to utilize a trained and experienced consultant or architect for this stage. If an architect or consultant is to be hired, a simplified Request for Proposal (RFP) can be utilized to solicit a qualified professional. It is recommended that any in-house staff selection be based upon expertise, skill and commitment.

## Step 2: Build a Police Internal Planning Team

**Early selection of a dedicated and qualified police project manager and project team is essential. Staffing and assignments can vary throughout a project, but commitment to common goals and teamwork is vital. A governance structure and a decision-making process is critical for clear roles and authority.**

Once the facility deficiencies are documented, the next (and often parallel) step is to build an internal planning team within the department. The diagram on the next page illustrates the structure and purpose of the internal planning team.

PLANNING TIPS

Key Points in Documenting Facility Deficiencies:

• Take photographs and videos

• Ask relevant questions about the buillding

• Conduct community meetings

• Tour other facilities

• Ask your customers about their needs

• Talk with staff

PLANNING TIPS

Size and complexity of police internal planning team will vary with size of law enforcement agency.

Selection of police project manager is crucial to project success.

Project Manager Qualities:

- Dedicated and formally committed to the project
- Capable of delegating
- Good listener
- Positive attitude
- Consensus builder

# Police Internal Planning Team

| Membership ê | Leadership ê | Function ê | Communication |
|---|---|---|---|
| • Project Manager or Chief Administrator<br>• First Line Supervision<br>• Sworn Staff<br>• Non-Sworn Staff | Consensus and decision-making process must be consistent. | This group directs the project from start to finish. Consistency is imperative. | One spokesperson is essential. Maintain a consistent procedure with all partners. |
| *Choose people knowledgeable in technology, construction, finance, etc. These individuals will help define the concerns of the police department and ensure the department's needs are included in planning and decision-making in the early planning stage.* | | | |

Project management is the key to any project, especially one as vital, detailed, costly, and politically sensitive as planning, designing and constructing a new police facility. Careful selection of a Police Internal Planning Team can mean the difference between project success and failure. Each team member must understand and agree to the actual time commitment involved. A three-to-five-year undertaking is normal. This could easily be extended depending upon the size and scope of the project. Part time vs. full time responsibility varies with each department team member, depending upon the role assigned and the stage of the project. The size and assignments of a police project team vary with the size and scope of a project, management philosophy, staff capabilities, project scheduling and staff availability.

### Selecting a Police Project Manager

A police project manager, pivotal during an entire project, may be either a police chief (usually the case with smaller agencies) or a designee, such as a commander, captain, lieutenant, civilian manager, facility manager. Occasionally the two may share the role, with a designee handling most of the tangible work and a chief managing the more sensitive, political aspects of the project, such as the concerns of citizens and council members.

If a chief elects to utilize a designee as a police project manager, selection should be based on expertise, skill and commitment. A background in facility planning and construction will be helpful. A genuine interest in learning and managing all aspects of a project, as well as being accountable for a project's success or failure, are strong selection criteria. The stronger the personal commitment, the better the project.

A successful police project manager should:

- Plan to stay with the project from pre-planning to dedication day
- Always know what is going on relative to the entire project
- Attend all group meetings
- Select and convene an Internal Police Planning Team
- Serve as police department representative on the Pre-design Project Team *(see page 12)*
- Sit in on all transition task force meetings to ensure necessary work is completed within set timelines
- Coordinate and schedule activities
- Be capable of delegating assignments
- Serve as a single point of contact and spokesperson

- Document the results of each planning session
- Be a good listener and have a positive attitude
- Build consensus among community agencies, members of the department, partners, planning committees and others

The police project manager must remain in place throughout the project. It is very important to have consistency in terms of leadership and project commitment; project history; philosophy; police standards; established relationships; and knowledge of the project.

**Tips for Police Project Managers**

- The more planning you do up front, the fewer problems you have at the end.
- Don't assume architects/consultants know your department's needs. Get involved! Don't let them work in a vacuum.
- Ask questions, expect answers.
- Learn how to read blueprints & specifications. Double-check all documents to ensure they meet your department's needs.
- Take the IACP Facility Planning and Design Course (See page 6).
- You can't do all the work yourself. Form transition teams as soon as possible.
- Think proactively, not reactively.
- Don't assume you know everything about your department's needs. Ask your employees, get their feedback. Involve them in the process. They will have to work in the building.
- Don't develop tunnel vision. Focus on the big picture.
- Share and document what you've learned so others can learn from mistakes and successes.

### Internal Planning Team Members

Team members may include sworn and non-sworn managers and/or employees, each representing their particular technical or operational point of view, especially during design development and the later parts of construction. Still other team members may include police line-level employees with special skills, or an interest in architectural or construction projects. The duties of these members, as well as the size of the team, can vary as the project evolves.

Part-time membership may include organization representatives, such as a buyer, who may be brought in during the acquisition process, a building maintenance representative to identify any city or agency "standards" or to offer oversight into the facility's mechanical systems and interior finishes, or public works staff who specialize in off-site work or underground utility information. Ad hoc groups may be added to the Internal Police Planning Team at various times to provide additional information. Community members with specific expertise and interest may also be on the Internal Police Planning Team at various times. Project architects and consultants, if brought on at this stage, should be considered an extension of this team.

PLANNING TIPS

Build project support within the agency by involving staff at each step.

PLANNING TIPS

Development of a governance structure and decision-making process is a crucial step in assuring an effective outcome of the Internal Police Planning Team.

Internal agency and governing body support is critical for a police facility project to move beyond Steps 1 and 2.

Many individuals in the department, each with his or her own particular interest, expertise, and level of participation, may be involved in a planning process at one stage or another. Some will be called upon from time to time to perform particular tasks or advise on particular issues. Others will provide broader reaction with less direct involvement. With the exception of the police project manager, the make up of the Internal Police Planning Team can be fluid, if need be. Depending upon the nature and detail of the work being performed at any given stage in a project, team members may be added or reassigned to best suit the needs of that project. Only the police project manager and a few key members of a planning team must remain a constant to ensure project stability.

Development of a governance structure and decision-making process is critical in assuring an effective Internal Police Planning Team. The police project manager and the chief should design the roles, responsibilities and chain of command for any decision-making of this team. All team members must understand the mission and goals of the project and the process by which information is gathered and reviewed. All data collected by individual members or committees should be presented to the police project manager who will compile the results of the deficiency report and present it to the chief. For the sake of simplicity and clarity, the police project manager should be the single point of contact through which all questions and information flows. The police project manager should also have final decision-making authority once issues have been fully explored.

At this step, and/or even up to Step 6 (expanded team with governing body members), the selected representatives should consider attending available training and education courses offered on police facility design. One example is the IACP sponsored *Planning, Designing and Constructing Police Facilities* training course. This four day intensive training session, designed for city administrators, police managers, police planners, engineers and architects examines the steps presented in this Desk Reference in greater detail and empowers local teams to work effectively to produce state-of-the-art facilities.

## Step 3: Build Consensus for Political Support

**Governing body support is critical if a project is to move beyond steps 1 and 2. The chief must fully understand governing body issues, concerns and budgetary constraints. He or she must then present any new facility planning project within that context. Tying the facility project to broad jurisdictional business plans and service goals is essential.**

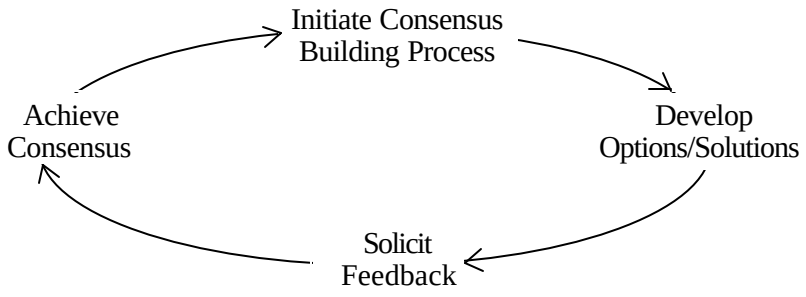
Internal agency and governing body support is critical for a police facility project to move beyond Steps 1 and 2. Existing facility deficiencies must be presented to all concerned, involved parties, at the proper time, by the proper person(s), in a logical format with complete understanding of what is important to each. Identifying and conveying the deficiencies of a current facility can be relatively easy, however convincing executive and political decision-makers of the need to move forward with a project that will require considerable amounts of funding is far more difficult. Government executives and decision-makers have political motivation, challenges and problems associated with capital projects, funding and internal infrastructure goals. Take this step slowly, attempting to discover ways to appeal to each decision-maker.

Developing project support from heads of other departments/agencies in your jurisdiction is wise, especially from the departments that have a strong relationship with the top executive decision-maker or have members on public works project teams. Gaining the support of other department heads can occasionally be the turning point for convincing the top executive decision-maker that a project is in the best interest of the entire organization. A critical step here is to prove that the project aligns with the jurisdiction's overall strategic business plan and service goals.

Government leaders may be initially resistant to police facility projects. Public safety (police, fire, EMS) budgets and staff are usually larger than other departments. Their role in life saving, emergency response and daily protection of citizens lends itself more easily to justification of funding required for new programs, staffing levels, facilities and equipment, while other government departments have a more difficult time. This may lead to animosity or resistance from other department members.

It is important to involve other departments in planning and supporting a project; however, it takes special effort to educate them and bring them into the process in a positive way. Consider joint use within a new facility to assist in gaining internal support, such as proposing a city employee fitness center, open-use lunchroom, meeting rooms, etc. Bring other organizational representatives into the process to solicit their input and ideas. Demonstrating that you are open to their inclusion can result in their support for the project.

Consensus building is an effective tool for promoting a useful dialogue and decision-making process between agencies or individuals with divergent viewpoints. The diagram below is an example of a consensus building process aimed to promote effective discussion and planning.




To gain support from other city organizations and governing bodies, you must make it clear that the police department has a stake in, and impact on, quality of life in the community. The image of a police facility must be seen as synonymous with the image of the government and community it represents.

PLANNING TIPS

Build political support by stressing business plan and service goals to:

- political allies
- city department heads
- community groups

Consider joint use for the facility.

PLANNING TIPS

Planning Funds—the most valuable investment that can be made in the project.

Front-end planning can save millions of dollars in 20-year life cycle facility costs and later renovation costs. If possible, avoid making estimates of project costs. "Ballpark" estimates are frequently wrong.

The department should take the position that actual facility costs are not and cannot be known until the planning process is put in place and specifically until Step 11 of the model is complete.

## Step 4: Identify and Secure Planning Funds

**The chief should seek a reasonable level of initial planning funds from the governing body to initiate a more comprehensive facility needs assessment. Planning funds ensure that the groundwork for all future facility design work is reliable and data-driven.**

Once facility deficiencies are documented, an Internal Police Planning Team is in place, and governing body support for the project is forthcoming, securing sufficient funds to conduct a comprehensive facility planning study becomes necessary. Planning costs will vary based on facility and departmental size and complexity. *This expenditure, which may seem large to the governing body at the time of request, is the most valuable investment that can be made in the project.* Planning funds represent the least amount of money that will be spent on the overall project while offering the most potential to ensure a successful project.

At this stage the department should obtain planning funds to, 1) confirm the commitment of the jurisdiction to a new facility project, 2) allow the department to begin to expand the project team (use of consultants), 3) travel to model sites as needed. (*See Site Visit Protocol, Appendix 2.*) Requests for up-front planning funds are supported by the materials developed by actions taken in Steps 1, 2, and 3 and should be based on the cost experiences of similar departments regionally who have already planned and designed a new facility.

**Some issues to consider when making the request to the governing body for planning funds:**

- Examine jurisdictional funding constraints and priorities
- Clarify that front-end planning costs can save millions of dollars in 20 year life cycle facility costs and in later renovation costs, as well as expedite the project by providing project justification
- Time request to coincide with city's yearly budget cycle or long range capital improvements plan
- Base consultant fees on scope of work you want them to do
- Obtain planning expenditure approval

When seeking funds for the planning stage, police leaders should refrain from making estimates of the anticipated design/construction costs of the planned facility. "Ballpark" estimates at this stage are frequently wrong, since they are not based on documented information and analysis. Estimates at this stage also become liabilities for the chief and the department, whether they are too high or too low. *The department should take the position that facility costs are not, and cannot be known until the planning process is put in place, and specifically until Step 11 of the model is completed.*

## Step 5: Document Policing Philosophy

**The chief must clarify the mission, philosophy, and goals of the department. These principals should be the driving factor in all facility planning, design and construction decisions. Absence of attention to goals and philosophy leads to a facility that does not reflect the department's true mission.**

Facility planning projects often move ahead too quickly or underestimate the time needed to undertake a comprehensive functional and/or space needs analysis. In particular, an essential step–documenting the philosophy and mission statement of the organization–is often overlooked. The mission goals, objectives and programmatic needs of an organization should dictate the design of its facility.

Most police agencies in 21st-century America have a written policing philosophy in place. The planning team must fully comprehend and document the agency's governing principles to ensure that the new facility reflects them. Mission statements regarding the operational philosophy of an agency must drive, rather than be defined, by the physical layout of the building. Balancing secure internal space and publicly accessible space, for example, requires an understanding of the mission of the department. If an agency is determined to increase contact and collaboration with the community within a community policing framework, the building must be designed to make visitors feel welcome. Fortress-like facility designs, while ensuring officer and departmental safety, are antithetical to community policing initiatives. A balance between secure internal and public spaces must be achieved in each facility project.

PLANNING TIPS

The mission, philosophy and goals of the department should drive all facility planning and design decisions.

## Step 6: Establish Project Pre-Design Team

**Before moving to the complex initial planning steps (site analysis, space needs analysis, and preliminary cost estimates) the jurisdiction must identify, select and put in place a Project Pre-Design Team to oversee the hiring of an experienced architectural firm/consultant with specific law enforcement facility planning and design experience. This is usually accomplished through an RFP, RFQ, QBS writing and review process. It is important that the police project manager be highly involved during this process.**

The Project Pre-Design Team is created after the governing body has given consent to move ahead with facility planning and provided sufficient initial planning funds to do so. Creation of this team offers an opportunity to bring all stakeholders together and create a working relationship focused on the same goals. The Pre-Design Team is an expansion of the Internal Planning Team, keeping core internal team members in place and adding additional experts from outside the department.

## Project Pre-Design Team

| Membership ê | Leadership ê | Function ê | Communication |
|---|---|---|---|
| • Police Project Manager<br>• Police Staff Representatives<br>• Ad hoc members<br>• Architects/Consultants<br>• City Planners, Finance<br>• Public Works<br>• Community Members<br>• Other Government Reps. | Makes all decisions or recommendations. Consensus is vital to project success. | Directs project and ensures the project's success through decision-making and consensus building | The importance of a consistent process to communicate to parties is vital. One spokesperson for all. |

### Project Pre-Design Team Operational Objectives

The Project Pre-Design Team provides the avenue through which all major planning, design, and construction decisions are made. The membership requires diversity and it influences the community buy-in and overall success of the project. The task of managing consultants and making decisions on complex and often tedious issues falls to this group. Once again, it is vital to the success of the project for the police project manager to be consistent from start to finish and he/she must be a consensus-builder.

- Design a facility that addresses the agency's policing philosophy and supports current and future space, equipment and technology needs
- Represent all policing agency and community interests equally
- Examine all design documents (working drawings and specifications) in detail to decrease change orders and reduce errors and omissions
- Implement and provide oversight of transitional-specific planning teams
- Enhance communication to facilitate a mutual understanding of all issues and points of view
- Operate within budget and on schedule, whenever possible
- Utilize negotiation techniques and flexibility to meet the project's many challenges
- Work closely with other departments involved in the project (public works)

### Public Works Involvement

New construction, adaptive re-use, large expansion, and extensive renovation of police facilities typically move to public works once they become formalized and recognized as capital projects. This usually occurs anytime between Step 1 and Step 11, depending upon the organization of the city government. Public works projects are usually supported by a public works agency project director. If the department of public works develops a project team and appoints a project director, the police project manager must play a major role on this team, while at the same time continuing to head up the Internal Police Planning Team. In these cases, the earlier developed Police Internal Planning Team becomes a vital technical/user sub-committee of the public works team. If the project becomes headed by public works, then this sub-committee will relay their input through the police project manager.

Whether the Pre-Design Team is public works or police based, the formal organization of a project team needs to be set, so everyone acknowledges that a certain structure exists and is agreed upon. Public works projects and

their structures already exist within most municipalities. Keeping this in mind, a governance structure will need to be developed for a team to ensure effective planning and decision-making takes place. Each agency will set formal or informal governance structures for their organizations. The structure will most likely be two tiered, composed of committees or teams with defined roles and responsibilities. These transition teams address specific impact and planning issues associated with relocating and/or transitioning to a renovated, expanded, new or adaptive re-use facility.

Agreement needs to be reached regarding the Pre-Design Team's decision-making process. Major decisions effecting project approval, funding sources, architectural or construction contract award are usually reserved for the entity's top-level decision-makers and/or elected officials. Most cities, counties and states have laws pertaining to the awarding of contracts and use of public funds which establish a set process to follow. Again, each project varies, but this needs to be discussed up-front so all team members understand and agree to the process and their responsibility to make certain decisions, whether they relate to design, budget, location, furnishings, public relations, selection of architects, contractors and consultants, or acceptance of product submittals, etc.

### Role of Architectural Consultants on Pre-Planning Team

Qualified architect/consultants, experienced in design and construction of police/law enforcement facilities, play a key role on the Pre-Design Team. Typically, they take the lead in, 1) conducting site feasibility study, 2) completing a formalized space needs analysis (see Step 8 for details) and 3) developing preliminary budget. References of qualified architectural firms or consultants can usually be gathered from local police departments who have recently gone through the building process.

Criteria to use in selecting architectural consultants should include:

- Experienced agency (well-structured and proven in law enforcement design)
- Flexibility
- Current, extensive similar project experience
- Positive relationships with contractors
- On time, within–budget delivery of projects (last five years of projects documented)
- Size of firm and years in business
- Listening and teamwork skills
- Creative talent/ strength of ideas
- Pending work schedule. Can they devote the time to your project?
- Personal chemistry/comfort level/ compatibility
- Plan for design process and possible alternatives - a problem-solving approach
- Skilled project team members with substantial law enforcement experience
- Samples of previous studies
- Reference checks

PLANNING TIPS

All members of the Pre-Design Team need to agree on a decision-making process.

PLANNING TIPS

A project manager should review the RFP, RFQ, or QBS prior to release to ensure that agency needs are covered.

Prior to awarding the contract a police project manager should:

- Contact all references
- Visit sites designed by submitting firms
- Meet with the architect

To hire an architectural consultant for the space needs and site analysis and preliminary budget development, most government organizations utilize a Request for Proposals (RFP), Request for Qualifications (RFQ), or Qualification Based Selection (QBS) process. Each process has similarities to the others; however, each has its own particular strengths and should be considered depending upon the project being proposed.

Note: *Each jurisdiction must confirm architects'/contractors' acquisition protocol with their legal counsel and purchasing departments.*

**RFP - Request for Proposals:** Bases architect/consultant selection upon a presentation of proposed project scope of services set forth by a particular firm, using a set of evaluation criteria and scoring sheets. (In this stage, the architect/consultant is only providing a space needs analysis as in Step 8). It also outlines the firm's qualifications to handle the particular project. Fees are sealed and not opened until scoring is completed and firms are ranked. Fees are then considered as part of the final selection process weighed with ability, experience and other selection criteria.

**RFQ - Request for Qualifications:** Bases architect/consultant selection upon qualifications of a particular firm to perform the required services, using a set of evaluation criteria and scoring sheets. Once considered properly qualified, selection can continue or proceed directly into fee negotiation with the firm considered most qualified, (similar to the RFP process).

**QBS - Qualification Based Selection:** Bases architect/consultant selection upon the qualifications of a particular firm using a set of evaluation criteria and scoring sheets. The emphasis is on matching the qualifications of firms to the police agency's needs, rather than comparing one firm to another. Once the match is made, the agency/municipality negotiates a mutually agreeable scope of services with that firm. (Brooks Act of 1972 mandates the QBS system be used by the federal government for procurement of architectural/engineering services on city projects where some federal money may be included).

The RFP, RFQ, or QBS document is usually written, advertised and released by an organization's public works department, or similar agency. Obtaining copies of comparable documents from local agencies that have recently built similar facilities is encouraged. A police project manager should ask to review the document prior to its release, therefore insuring the needs and viewpoints of the agency are expressed. These documents should include minimum qualifications for proposing, such as prior size and scope of previous police projects, former police project manager references, demonstrated comprehension of the applicable policing philosophy, etc.

A police project manager should carefully read over all submitted information from architectural firms proposing on the project, contact their listed references, and visit sites designed by the firms, if possible. It is not uncommon to have the submitting firm present their proposal at your agency. This can enhance the selection process. A police project manager should be a major decision-maker in the selection process to ensure department needs are represented and the quality, philosophy and personality of the architectural firm/consultant team meet the needs of the project.

## Step 7: Establish Community Support for the Project

**Gaining governing body and taxpayer support for a capital funded project is crucial. The techniques used for marketing such a project should be carefully considered. Educating the community can lead to increased project support.**

The level of success of a public project can be measured by the support it receives from the governing body, other public agencies, citizens, business leaders and associations. Such support is usually engendered through education efforts and articulation of current facility deficiencies and needs analysis results, demonstrating the benefits to each audience.

External organizations can offer their support in a variety of ways. They can support a project by commenting on it in their newsletters or speaking about it at their meetings. Business improvement organizations (BIO) groups such as the Lions, Elks or Kiwanis Club, local philanthropic and civic groups, are excellent sources of support. Organizations may also wish to sponsor furnishings for a particular room within a newly proposed facility, such as a child victim interview room, police museum, or local community room. Within some municipalities, private corporations have donated their products or furnishings to offset project costs. In California, a woman placed the Santa Ana Police Department's canine section in her will so that her estate funded their new facility canine kennels. In Chandler, Arizona, etching the names of project sponsors in the entry pavers helped to fund an officer memorial.

The ultimate goal is to gain as much support as possible from all city departments, staff, taxpayers/citizens, private corporations, press, etc. The larger the support base, the higher the probability for project funding. High level strategies are usually developed by a top executive decision making team, which in most municipal government cases, would include a city manager, police chief, director of public works, planning director and director of finance. The process may also include input from elected as well as appointed officials, chambers of commerce, etc.

If public funding is to be used, taxpayer support for a project is vital. Strategies to gain such support need to be developed. If a project is large, costly, and vital, decision-makers should consider the use of a professional marketing agency to assist in presenting the project to the public. An ongoing advertising campaign may be needed to further the reach to taxpayers.

Most strategies involve educating specific public and private sector organizations, groups and selected individuals. The education of these groups may take on many forms and be assigned to the same or different individuals. Usually, executive management such as a city manager or chief of police, will handle these high-profile meetings and public relations events. To assist in this educational process, consider the following:

- Present at community-oriented policing meetings and other similar public forums

PLANNING TIPS

The ultimate goal is to gain as much support as possible from all other city departments, staff, citizens, corporations and the press.

PLANNING TIPS

A summary of the facility deficiencies report should be disseminated to the public to confirm and document facility issues.

- Plan proactive media attention, such as television coverage and/or newspaper articles addressing current facility overcrowding, lack of detention space, citizen access concerns, etc.
- Offer tours to educate participants about an overcrowded facility
- Publicize positive aspects of possible future joint-use benefits
- Focus on life cycle cost benefits of a facility with multipurpose uses
- Highlight community oriented policing benefits for citizens and employees
- Emphasize the importance of being open to new ideas
- Utilize a marketing approach to "sell" a project to constituents, department staff and taxpayers
- Acknowledge the importance of effective presentation styles
- Stress a Community Service Center Facility concept and the enhanced quality of life that such a facility will provide
- Attempt to close any gaps between perceptions of the project
- Publicize a facility as a crucial and useful tool to facilitate community-oriented policing

A summary of the previously developed existing facility deficiencies report should be published and disseminated to the public to highlight facility issues. This document is a critical tool to engage community support.

Section Two

# Planning/Pre-Design Phase

Section Two of the Facility Planning Model focuses on the need to define and examine existing and future needs of a project. It elaborates on the selection of a qualified architect or consultant to carry out a formal space needs analysis. This section also emphasizes the site selection process and possible planning phase hazards that project teams may encounter.

## Step 8: Conduct a Space Needs Analysis

**Conducting a formal space needs analysis is an important step towards defining the scope of a facility project and developing accurate preliminary cost estimates. Hiring an experienced architect/consultant familiar with law enforcement needs is crucial to obtaining a detailed analysis addressing current and projected space needs.**

A formal space needs analysis is required for any project to move beyond a conceptual stage and into a more defined phase. A thorough space analysis must demonstrate the inadequacies of a current situation, offer reliable estimates of current and projected space requirements based upon industry standards, policing trends and client growth.

### Space Standards

One area that affects all space needs analyses is the determination of square footage allocation per occupant, or for certain rooms, offices, workstations, etc. These sizes can vary with each project, as demographics, organizational philosophies, functional needs, and other issues impact each agency's needs. While there are some minimum standards set by law, and/or accreditation agencies as to jail and holding cell sizes (state boards of corrections and state court requirements) and circulation area standards (Americans with Disabilities Act and fire codes), there are no absolute standards for offices, workstations, locker sizes, etc. Each individual agency must examine their needs while keeping in mind the standards utilized throughout other governmental offices, law enforcement facilities, etc. Harmony across government agencies is important. Consistency of space allocations across city and government offices helps with coordination of furniture purchases and simplifies the moving process between offices and agencies. When there is standardized room size and furniture across the jurisdiction departments, the overall cost to the city is lower and the effort and expense to move is dramatically reduced.

PLANNING TIPS

A formal space needs analysis is crucial for any project to move beyond a conceptual stage.

Accurate preliminary cost estimates are based on the results of the space needs analysis.

When planning office sizes, remember that consistency, or harmony across city agencies and government offices, simplifies the moving process and lowers overall expenses.

There are no absolute space standards for offices, workstations, lockers, etc.

PLANNING TIPS

The architect/consultant hired to do the space needs analysis must possess a thorough understanding of police agency operation.

The results of the space needs analysis will determine the size of a facility.

Once established, office and workstation square footage standards will be used as a basis for space allocation during the facility assessment planning process. Other areas, such as roll call or briefing rooms, lunchrooms, conference rooms, etc., may be determined upon room occupancy needs and growth factors. The space needs analysis report, which will include an examination of all existing and needed square footage, also provides estimated cost analysis for the final determined size, based upon required square footage and local construction costs of similar sized police projects.

## Preparing for the Space Needs Analysis

*Agency Background*

The architect/consultant hired as part of the Pre-Design Team (see Step 6) to conduct the space needs analysis must possess a thorough understanding of the client police agency. The following information is critical and must be shared with the architect/consultant to ensure an accurate analysis.

- Policing philosophy
- Organizational hierarchy and organizational chart
- Current and future department goals
- Jurisdictional strategic plan (mission, goals, objectives)
- Current and future staffing projections
- Department history
- Key personnel to be interviewed
- Arrests/calls-for-service data
- Prevalent types of crime within the jurisdiction
- Data collected from client facility needs questionnaire
- Space needs of the agency by function (sworn/civilian staff, justice agency staff and citizens/visitors)

*Existing Facility*

The architect/consultant also must understand the layout of the existing department's current facility as well as building codes within the jurisdiction. This information may affect a recommendation to renovate or expand the current facility. Data gathered on the current facility and relevant building codes will include:

- Review updated floor plans of current facility
- Review civic center master plan
- Review zoning, planning and building code issues
- Evaluate technological systems
- Evaluate structural systems
- Evaluate HVAC systems
- Evaluate plumbing system and fire protection
- Evaluate electrical and telecommunications systems
- Assess environmental deficiencies
- Conduct walk-through of current facility

*Future Trends*

Conducting a needs analysis requires an understanding of future policing trends, as well as specific department needs and preferences. The architect/consultant must:

- Examine future trends and needs such as:
    1. Legal changes that mandate adult and juvenile arrestee/inmate space needs, additional evidence storage capacities, space for mandated officer training, etc.
    2. Planned department growth
    3. Impact of grant financed programs, task forces, regional enforcement groups
- Identify preliminary adjacency needs for each section and department
- Identify current, future and potential shared uses such as custodial exchange, public safety use, firing range, classroom training etc.
- Assess parking/vehicle storage needs for police department staff vehicles, employees, visitors, deliveries, repairs, evidence pick up, police auction space and ticket sign-off area
- Determine life span of new facility and include associated growth factors into all calculations

*Technology Needs*

The rapidly changing information technology environment continues to impact design, space requirements and equipment specifications for facilities. The following should be closely scrutinized:

- Size, quantity and location of communications closets and potential for Emergency Command Post
- Wiring for Emergency Command Post
- Access floors and ceiling heights
- Larger computer staff and equipment areas
- Computers for training and continuing education
- Forensic and photo labs/darkrooms
- Officer information technology equipment storage needs
- General storage needs for hi-tech gear
- Wire tap rooms and associated equipment
- Satellite uplink-downlink needs
- Hi-tech driving or firearm training areas
- Lobby space for computerized interactive citizen participation
- Teleconferencing areas
- Crime task force computer needs
- Technological needs at firing ranges (computer simulation equipment)
- Proper HVAC and ventilation for electronic/technology equipment and rooms
- Workstation quantity and sizes for additional tech items

# Space Needs Analysis Checklist

The following is a checklist of areas that might be included in the space needs analysis. It is generic in nature, and will need to be adjusted (addition or deletion of areas for study) based on local needs:

## Administration

Chief's office - restroom, conference room, etc.
Staff offices
Reception areas
Professional Standards and Internal Affairs
Secured file storage - personnel records
Personnel interview and testing rooms
Legal Advisor office, law library, etc.
Management Information System
Planning and research areas

## Common Facilities

Locker rooms w/showers, restrooms
Fitness Center
Community Room
Conference rooms
Interview rooms
Lunch rooms/coffee areas
General storage rooms
Electrical rooms
Communications rooms
Janitorial rooms
Building maintenance storage and repair rooms
Visitor parking
Employee parking
Marked and unmarked police vehicle parking
Delivery/load dock area
Vendor repair parking
Cart and bicycle parking
Large trash storage
Pneumatic tube systems
Restrooms and lounges

## Communications/Dispatch

Dispatch consoles and offices
Emergency Operations Center
Break room and restrooms
Training/briefing room
Lockers and storage

## Crime or Forensic Laboratory

Staff office and file areas
Photo processing/imaging areas
Evidence processing areas
Ballistics processing areas
Special computer needs
Citizen counter
Officer counter
Evidence temporary lockers
Biological drying lockers
Vehicle examination area
Equipment and photo storage areas
Specialized lab areas

## Evidence

General evidence storage
Weapons storage
Narcotics storage (special ventilation)
Evidence lockers - DNA/Biological storage
Public counter
Officer counter
Bicycle storage
Freezer and refrigerator storage rooms
Video tape storage
Video/audio tape duplicating areas
Arson storage
Hold areas for auction or destruction
Office areas
Safety precaution sinks, restrooms, etc.
Automobile storage
Large item return for citizens
Citizen viewing room

## Investigation

Staff offices
Reception areas
Secured file storage
Soft interview rooms
Hard interview rooms
Child abuse interview rooms
Juvenile and suspect restrooms
Gun lockers
Wiretap rooms
Narcotics or money storage areas
Undercover locker rooms
"Cold" or undercover phone rooms
Informant entrance
Briefing room
Equipment storage rooms
Mug/print room
Audio/visual tape equipment room
Polygraph room
Victim ID area (computer graphics)
Task force needs
Line-up and viewing room

## Patrol

Briefing/roll call room
Report writing room
Clothes and equipment lockers
Secured sallyport
Evidenced packaging areas
Hard suspect interview rooms
Soft interview rooms
Audio/visual tape equipment
Watch commander offices
Juvenile holding rooms
Adult holding rooms
Large item booking area
Radio and shotgun pick up area
Supply and uniform pick up area
Sleep center
Uniform dry cleaning drop-off/return

## Records

Citizen counter
Officer counter
General office areas
Teletype area
Report copying area
Micrographics/optical disk area
Hard copy records storage room
Supply storage

## Traffic

General office areas
Citizen counter
Motorcycle parking
Ticket storage
Accident investigations interview rooms
Ticket sign-off parking area

## Training

Driving simulator rooms
Firing range and gun cleaning rooms
Training equipment storage rooms
Ammunition and target storage
Classrooms
Video studio, duplicating rooms, etc.
Video training viewing areas
Obstacle course areas
Department weapons storage

## Other General & Specialty Areas

Central supply warehousing area
Main computer & radio equipment rooms
Computer staff offices and storage
Specialized computer training rooms
Fiscal, payroll, purchasing areas
Crime prevention areas
DARE program needs
Surplus uniform and equipment storage
Employee mailboxes
Trophy and award storage
Pay telephones
Vending machines
Automated teller machine
Copier, shredder, mailrooms
SWAT weapons and ammo storage
K-9 office and kennel
Animal control storage and offices
Gun lockers

Examination of prior police facility planning efforts shows that many of the above areas, while critical to the policing function, are often overlooked during space needs analyses. It is critical that the police agency ensures that the architect/consultant is aware of all possible space needs before completing the analysis.

The project manager should continuously re-examine, refine and redirect a project, if necessary, during the space needs analysis phase. As data is collected it can change a project's size, scope, budget and direction. It is important to include all key stakeholders in the decision making process, making all necessary changes as early as possible. The emergence of technology's role in day-to-day law enforcement suggests that an IT Specialist provide service at the earliest project stages.

Since the new facility may be in use for a life span of 20 to 50 or more years, projecting future growth is an essential part of the space planning stage. Space must be allocated to anticipate changes in staffing levels, programs, and the changing demographics of the service population. While determining future needs is difficult, jurisdictions can sometimes use past history of change (typically the last 20 years) to estimate future growth. In other locations, recent and anticipated community development can directly impact the need for increased police services and required facility space.

The results of a space needs analysis should be closely examined. These results will determine the size of a facility which usually sets the budgetary limits of a project. The project team should remain flexible and open to new ideas and changes, exploring all options for workable space alternatives.

PLANNING TIPS

Three Facility Options:

1) Renovate current building
2) Adapt an existing non-law enforcement building for police use
3) Build new

The preferred choice is selected as a result of the analysis of each option and its ability to meet functional space needs.

## Step 9: Evaluate Facility Options

**There are three basic options when considering replacing an existing police facility: Renovation of the existing building, acquisition and adaptation of an existing non-law enforcement facility, or new construction. Comparing capital and life-cycle costs for each are essential to determine the most cost-effective use of public funds.**

The space needs analysis will have identified the various functional components, adjacency requirements, security needs, movement and flow between components, and individual area requirements. This analysis data forms a solid foundation and benchmark for identifing available facility options and the evaluating of the extent to which each option can be successful in meeting the identified needs.

While the range of available facility options will vary in each individual circumstance, the following are the basic possibilities:

- Renovate and expand the existing police facility
- Acquire and adapt another existing facility
- Construct a new facility

PLANNING TIPS

In many cases, government officials will not consider a new construction project, or acquisition of an alternative facility, until the inadequacy of the existing building is clearly demonstrated.

The preferred choice is selected as a result of the analysis of each available option's ability to meet identified programmatic, functional and space needs. Each option must meet the criteria established in that jurisdiction. Beyond meeting basic square footage requirements, examples of facility evaluation criteria may include:

- Ability to meet "essential services" of building and structure code requirements
- Ability to deliver the required space identified in the space needs analysis
- Ability to group components for efficient operations (needed adjacencies)
- Ability to provide needed security zoning
- Ability to separate public, staff and prisoner movements
- Ability to achieve desired civic/police facility image
- Ability for future expansion
- Ability to accept new technology systems, furnishings, equipment, etc.
- Adequacy of parking for department and public
- Adequacy of mechanical, electrical and technology support systems
- Ability of this facility option to be accomplished within capital budget constraints for renovation or new construction
- Ability of facility to support cost-effective operations and reduce long-term life-cycle costs (for example staffing, energy, maintenance)
- Time required for implementation
- Interim relocation needs and related costs
- Facility visibility and accessibility to the public
- Achieve insurance and warranty requirements

Many of the above criteria are likely to require professional input by an architectural consultant experienced in law enforcement activities and facility needs assessments. Throughout the facility option evaluation process, police input is crucial and police needs should be the primary influence for decision-making. The general characteristics of the three basic facility options are reviewed below.

### Renovate and Expand the Existing Facility

This is frequently the first option considered. In many cases, however, the existing facility may be small, deteriorated, or so obsolete that there is no reasonable ability for it to be adequately improved. In these cases, attention can immediately move to the next two alternatives: acquisition of another building for adaptation or the option of new construction.

In those cases where it is not obvious whether the existing facility could be successfully renovated, its re-use and improvement should be explored. In many cases, government officials will not consider a new construction project, or acquisition of an alternative facility, until the inadequacy of the existing building is clearly demonstrated. If so, each of the criteria cited above needs to be considered as well as any other that may emerge. Since nearly all building codes require police facilities to conform to structural requirements for earthquakes or high winds, it is often not cost effective to expand a non-conforming building. Codes for public safety buildings are generally higher than for other buildings.

Existing facilities often fail on the criterion of adequacy of space. In most cases increases in police services and personnel have not been accompanied by in-

creased space to support them. It is common for police department staffing and operations to have expanded significantly along with community growth since the time the existing facility was built or acquired. In many cases an existing police facility may provide very little of the total required space that a detailed space needs analysis, including the application of standards, finds to be required.

The decision to re-use and expand an existing facility may be driven more by site considerations than the value of the existing structure. The ability to stay at the existing location eliminates the cost of site acquisition and the existing facility may offer space that has value in a renovated form.

When evaluating an existing facility for renovation, other criteria are likely to arise. Among these are the existing mechanical, electrical, plumbing and technology support systems. In a facility that is twenty or more years old, these systems may be obsolete or inadequate. This means that the cost of their replacement must be considered in the existing or new building. If extensive interior renovation is required, the cost of new partitions, doors, security systems, finishes and equipment can be as great or more in an existing building as in a new building. In the event of extensive renovation, the only retained value of the existing building may be the building structural and exterior enclosure. Foundations and substructure are in addition to this "frame." The enclosure may require new windows, roof and doors to extend the building life.

The evaluation must consider whether functionality is compromised by the configuration of the existing facility. Apparent cost savings achieved through renovation must be compared against potential reduction in staffing efficiency and quality of services delivered to the public as a result of facility conditions. The evaluation of options is completed by police and the architect/consultant to arrive at an accurate recommendation.

### Acquire and Adapt Another Existing (Non-Law Enforcement) Building

Specific local circumstances will govern whether this is a feasible or attractive option. The recommendation of the space needs analysis, or space program, will indicate the amount of space needed. Caution should be taken to ensure that the "useable" space in any facility under consideration is equivalent to that which the space program has identified as needed. The distinction here is between "net" square footage and "gross" square footage. The "net" space is that which exists "between the walls, paint-to-paint" in particular functional areas or the amount of space that can actually be used for the tasks or functions. The "gross" space is the total building area after allowing for such features as corridors, stairs, elevators, mechanical, toilets, structure, wall thicknesses, etc. The total gross area offered by an existing building is not going to be entirely available for police operations. A professional feasibility analysis will be required to determine this relationship.

The configuration of existing buildings not originally designed as police facilities may compromise quality, efficiency or even security of police operations. For example, a multi-story building with its space uniformly distributed over two or more floors may force some police components to be separated from other units with which they work closely. This means that staff may spend more time traveling between units, reducing their efficiency. It can also mean that needed interaction between staff is discouraged by the building configuration. In a local law enforcement facility, the majority of the operational

PLANNING TIPS

Apparent cost savings achieved through renovation must be compared against potential reduction in staffing efficiency and quality of services delivered to the public as a result of facility conditions.

Check net and gross square footage totals when considering adapting another existing building for police use.

The configuration of existing buildings not originally designed as police facilities, often compromises quality, efficiency or security of police operations.

PLANNING TIPS

It is helpful in the planning stage to compare and prioritize the features that can be obtained with new construction against those that result from renovation or adaptive re-use.

The new construction option allows the ability to design a facility that can respond directly to the local law enforcement agency's policing philosophy, mission and goals.

components will benefit from a main level (street level) location. For example, the movement of prisoners between floors, is generally less desirable from a security, operational efficiency and staff safety viewpoint. Similarly, patrol operations benefit from easy access to and from vehicular areas.

Another important configuration issue, even with a one-story building, will be the actual shape of the existing floor plan since the structural system also comes into play. The proportions of the existing floor plan will determine how needed space is arranged. For example, will staff work spaces have windows? The existing building configuration will determine this. Will separations between public, staff and prisoner movements be possible? The existing building configuration may pose challenges for movement flow and security construction. Another consideration will be where the existing building is located on the site. Adapting a retail store or office building, with parking in front, does not typically function well since a police station needs most of its parking in a secure area behind the building.

After the use potential of an existing building has been determined, the evaluation needs to determine whether any compromises from optimal relationships are created. The physical size of an alternative building being considered for law enforcement use, in relation to the amount of needed space, will not be the only consideration that determines its desirability or feasibility.

### Construct a New Facility

In both the renovation or adaptive re-use options, the greatest concern is that making use of an existing building may force an agency into a facility configuration that requires compromises in the quality, efficiency and even security of police operations. Thus it is usually helpful and cost-effective in the planning stage to compare and prioritize the features that can be obtained with new construction against those that result under either or both of the two previous options. If for no other reason, this should be done in order to see what the difference in cost would be between the choices. This information could be instrumental in tipping the scale in one direction or another, or in making it a very clear choice.

When comparing feasibility of a new facility as renovation or adaptation, it is not necessary to develop a detailed design for a new facility. It will normally be sufficient to take the total gross square footage that has been developed in the space program at an average cost per square foot according to recent construction cost experience for similar buildings in the geographic vicinity. To this, an allowance should be added for site acquisition (if any), site work, professional fees and other project expenses. The services of an experienced professional will be essential. In those instances where the feasibility of one or more sites is a question, it will be necessary to enter into a sufficient amount of design analysis to make the site determination. Included will be the consideration of parking and movement requirements, in addition to the building footprint.

The new construction option brings with it the ability to design a facility that can respond directly to the local law enforcement agency's policing philosophy, mission and goals. It allows projected needs to be anticipated in the original design so that they can be accommodated adequately or with minimal disruption when they arrive. This calls for an overall master planning strategy to be developed at earliest conceptual phase of architectural design work.

One benefit of building a new facility is the freedom to be creative in the design phase. The architect/police team can consider any number of innovative approaches to facility design, since they are not constrained by an existing shell. Such innovative designs typically maximize facility response to police mission, citizen access and overall facility efficiency.

Important budgeting information will result from the options analysis discussed above. Depending upon the source of funds for construction or remodeling, this budget assessment may establish the basis for a bond referendum or the formulation of local capital funding allocations under recurring operating revenues.

### Justice Complex/Multi-Agency Approach

While construction costs continue to increase, shared use is fast becoming a consideration to gain public and political support for new facility projects. Some agencies have discovered that incorporating other government or justice needs into the design of a facility, such as other municipal functions, court-related functions, probation offices, fire department communications, juvenile diversion centers, city council chambers, etc., can make a project more appealing and cost-effective. Using the community oriented policing philosophy as a foundation for early planning decisions allows for an inclusive perspective that considers all public safety needs, as well as other related joint uses. For instance, recreational or community centers add more community-oriented options for facility use.

The police facility planning team should take the time to brainstorm possible shared uses that meet or exceed department needs. A creative approach should be used and input from others should be solicited. Oftentimes, government approval boards allow departments to include additional areas within a facility's design if they can show an important dual use and improved community profile, revenue generating capabilities, or a feature that would add to a facility's justification. Placing another public use facility at the same site as a police facility may be considered by some as unusual; however, for some municipalities, it may be a selling point that a new facility needs in order to receive funding. Other municipalities prefer a police facility as a stand-alone for security and for a more modest project scope.

A good example of shared use options includes the co-location of police, fire, communications and EMS into one public safety facility concept. Another example is a city or county law enforcement agency, medical examiner and/or coroner located together. There are also many shared programmatic areas that several agencies in a public safety facility can potentially share, for example: vehicle storage/parking needs, training area, locker rooms, media and communications. Cost savings through common use can be substantial; however, saving should not be sought at the expense of public safety.

Many police agencies that are heavily involved in community oriented policing are now participating in multi-jurisdictional task forces to focus specifically on areas such as gangs, drugs, illegal weapons, etc. These joint task forces are usually made up of officers from different local, state and federal agencies, (such as Alcohol, Tobacco and Firearms (ATF), Drug Enforcement Administration (DEA), state parole, state probation, district attorney's office, etc). The joint use forces are becoming more and more common, and need to be considered when determining current and future space needs.

PLANNING TIPS

While construction costs continue to increase, shared use is fast becoming a consideration to gain public and political support for new facility projects.

A good example of shared use options includes the co-location of police, fire, communications and EMS into one public safety facility concept.

PLANNING TIPS

Police leaders must gauge political and public perceptions relative to shared use facilities (police, fire, EMS, for example), before moving in that direction .

Recommended options must be framed within a persuasive cost-benefit analysis.

Shared use facility concepts may also have drawbacks. In particular, the chief of police should carefully consider citizen attitudes about public facilities. In some jurisdictions, voters are very likely to pass a bond issue to build a properly sized, practical and efficient police facility. But when the bond increases to larger proportions to include what the public may perceive as excessive space for jails or courts, the bond fails, leaving the police agency project stalled. Police leaders must be able to gauge the political and public perception issues relative to shared use before moving in that direction and must also frame the recommended option within a cost-benefit analysis that is persuasive.

Each organization needs to examine their situation and search for innovative approaches to component/agency inclusion, design and funding. Visit or contact other jurisdictions that have successfully designed and constructed joint use facilities. Contact some of the organizations listed in Appendix 1 to locate projects of this type.

## Step 10: Conduct Site Evaluation

**Careful consideration must be given to the size, location and flexibility of any existing or potential facility site. Site selection determines the maximum footprint or size of the facility and must, therefore, meet all space needs requirements. Site location determines accessibility of police facility to other government staff, the public and police officers.**

Site evaluation and selection must be carefully considered whether exploring the possibility of renovation of an existing facility, acquisition of an adaptive re-use facility or new construction. According to real estate investors, a primary rule in selecting property is location. This is also true for police facilities. There are many essential components of site evaluation:

- Cost of land
- Cost of site development
- Size and shape of site
- Potential for multiple uses
- Public access to site (vehicular and pedestrian)
- Visibility and views
- Proximity to other governmental functions
- Response to citizens needs and concerns - a neighborhood context
- Travel and mileage issues
- Positioning of new facility on site
- Security
- Noise and traffic impact
- Expansion possibilities
- Former use of identified land
- Possible ground contamination

- Possibility of locating artifacts during site preparation & excavation
- Zoning
- Utilities/easements
- Topography/geotechnical/soils
- Waterbodies/wetlands/floodplain/stormwater control

Several acquisition issues must be kept in mind. The first is cost. Are the sites being considered priced reasonably given jurisdictional budgetary constraints? Are the site owners willing to set up a reasonable timetable to acquire the site? Have EPA and other studies (for example, geotechnical) been completed and are reports available? Given the issues, it is always advisable to consider multiple sites for comparative purposes.

Site selection is occasionally imposed upon agencies when government organizations already own a new site they want to use. The site itself will dictate the maximum footprint of a facility. Occasionally, site selection will involve multiple sites until one is finally decided upon. All sites must be examined carefully for needed characteristics, functions and detractions. The planning team should remain flexible when viewing all sites as potential selections.

Site selection can also be difficult if other jurisdictional priorities intervene. Many American cities are now "built out." Buying land on the outskirts of town is no longer feasible. One faction may want to site the police facility centrally to buttress a declining downtown. Other factions similarly concerned with adaptive reuse may want to use the old junior high as a primary site consideration. In other areas of the country, decentralization and/or regionalization are strong themes and would impact and possibly limit the range of sites a department can consider. Police facility site selection in larger cities may have to begin with the completion of an organizational strategic plan to determine whether the correct long term solution is one single building or a number of strategically placed new buildings.

Expansion or extensive renovation of a current facility can necessitate the acquisition of adjoining land. Occasionally this may be difficult. Owners of adjacent property may not want to sell. Further, the expansion of the current site may not offer the optimum setting or security, etc. All of this needs to be considered if expansion or facility renovation is being considered as a viable option.

Political and executive project commitments to the community and police department, such as site and facility size, joint use, jail inclusion, security, building positioning and location, may be unachievable due to limitations of available sites or sufficient funding for site acquisition. Continued investigation of additional sites may be necessary, which can delay a project. Site selection delays can affect in turn project momentum and costs which increase with time.

PLANNING TIPS

The site itself will dictate the maximum "footprint" of a facility.

In some areas of the country decentralization and/or regionalization are strong themes and would impact and possibly limit the range of sites a department can consider.

Expansion or extensive renovation of a current facility may necessitate the acquisition of adjoining land.

Site selection delays can affect project momentum and costs– which increase with time.

Section Three

# Budgeting and Funding

Section Three of the Facility Planning Model provides information on all aspects of facility project costs and necessary funding. Steps 11 through 13 guide facility teams through the development of preliminary project costs, strategies to secure necessary project funds and cost issues relative to site acquisition.

PLANNING TIPS

Preliminary budget is based on:
- Space needs analysis
- Recommended square footage needs
- Site selection

Initial planning and cost estimates usually can be expected to change over the life of the project.

## Step 11: Develop Preliminary Project Design and Construction Costs

**Preliminary facility project costs can and should be estimated at this stage using information now available. Projections of cost at this juncture become reliable as a foundation for project funding initiatives (bonds or government support).**

At this stage the project team is poised to create a reliable budget for the entire project, based on the data collected and developed in the previous steps. New cost information must also be obtained and included at this phase.

Square foot construction costs vary across the country, fluctuate with the economy and are different depending upon the type of facility being considered. Construction costs of expansion, renovation, or adaptive re-use projects are more difficult to estimate due to the possibility of concealed conditions discovered during demolition, code compliance, etc.

Some of the critical cost-components when developing the preliminary facility budget are:

- Site and site development costs
- Site survey
- Facility costs using space needs as basis
- Related architectural, engineering and construction estimates
- Environmental standards/guidelines
- Stormwater/drainage issues
- Geotechnical evaluation
- Environmental assessment
- Asbestos assessment/abatement (older, existing facilities)
- Landscape design
- Interior design
- Furniture

- Contingencies
- Telecommunications systems
- Equipment
- Security systems

There are also other elements to be considered to further refine the budget. The quality of a facility's systems, such as its chillers and boilers, emergency generators, elevators, etc., are not defined at this stage in a planning process so estimates must be made. The quality levels of engineered systems, equipment, finishes and furnishings can affect the overall budget substantially. Efforts to broadly define expectations should be undertaken as early as possible. It is best to use qualified, experienced, and reliable cost estimators to assist in defining a budget at this time.

Too often, low estimate cost projections are publicized too early in a project, prior to the conclusion of a formal needs analysis or actual budget development. This can negatively affect a project, as strong justification may be necessary to increase the budget figure in a sensitive political arena. Avoid "ballpark" estimates whenever possible. The budget developed at this stage is based on substantial and accurate facility, space and site information and is a reliable figure for decision-making purposes.

## Step 12: Obtain Project Funding

**Once planning stages are completed, funds must be acquired to design, construct, furnish and equip the planned facility. In many cases, the jurisdiction has sufficient funds to move into this phase, in others, alternative sources of funding are required.**

At this juncture of the project, the police agency and the governing body should be ready to take steps to obtain the necessary funding to complete the project identified in the preceeding planning phases. For example, if a new building and new site are being proposed, project funding includes monies to purchase the site, design the facility, construct it, furnish it and equip it.

In many cases, jurisdictions may have capital improvement funds that can be used for the project. In the absence of available funds, bond issues or public referendums are required to raise funds sufficient to complete the project. If citizen support is not yet clear for the new project, a survey to determine support will yield useful information to propel a subsequent referendum or bond issue. Strong political support is required to seek and obtain the necessary funds for project completion.

There may be several alternative funding options (for governing body or community funds) that cities can explore. One is the "Lease-Buy Back" approach. In this funding structure, the jurisdiction enters into a lease agreement with a developer who has proposed to deliver the required facility either through new construction or renovation of an existing building for jurisdictional use. The lease payments can be structured to be credited against a predetermined purchase price at the end of a specified period. Under this funding model, the jurisdiction will generally meet its lease payments out of its operating budget. The adequacy of that budget to meet lease payments over time is a matter for analysis.

PLANNING TIPS

The quality levels of engineered systems, equipment, finishes and furnishings can affect the overall budget substantially. Efforts to broadly define expectations should be undertaken as early as possible.

Avoid "ballpark" estimates whenever possible. The budget developed at this stage should be based on substantial and accurate facility, space and site information and is clearly a reliable figure for decision-making purposes.

In the absence of available funds, bond issues or public referendums are required to raise funds sufficient to complete the project.

Strong political support is required to seek and obtain the necessary funds for project completion.

PLANNING TIPS

If a site acquisition is required for a particular project, it must be purchased prior to action on any other design or construction step.

The site selection option that yields the best long term financial flexibility to address future concerns for the jurisdiction should be selected.

## Step 13: Secure and Purchase Site

**Once a site is selected, a facility project moves from planning to implementation stage. Lease and all other options must be carefully researched prior to a decision to ensure the most beneficial outcome.**

If a site acquisition is required for a particular project, it must be purchased prior to action on any other design or construction step. Decisions on securing and purchasing the selected site should be based on all planning steps previously completed–in particular, the site evaluation completed in Step 10 (p.24). Before purchasing a site, the jurisdiction should cost out several options with contingencies:

- Purchasing site outright
- Gaining an option to purchase at a later date
- Leasing the site

The above options should be considered and the option that yields the best long term financial flexibility to address future concerns for the jurisdiction should be selected. Be aware that leases have many more conditions than ownership. Ownership, for example, may provide more flexibility of building options. The planning team must also be aware of possible unanticipated site purchase costs, such as poor soils requiring expensive foundations, or legal fees to secure clear title and must have sufficient funds to cover these costs.

Section Four

# Design and Delivery Phase

Section Four of the Facility Planning Model examines the design and delivery phase of the project by reviewing the facility design and construction approaches currently in use. At this stage of the project, a design architect is selected. It is important to emphasize that strong and continuous dialogue must be maintained between police, architect and contractor to ensure project success.

PLANNING TIPS

Regardless of the choice for design and construction procurement, it is essential that a strong, continuous dialogue be maintained between police, architect, and contractor.

## Step 14: Deliver Design and Construction Services

**A number of design and construction procurement options are available to jurisdictions—Design-Bid-Build; Design-Build; Fully Partnered Approach. It is important to test which methods may serve your organization and jurisdiction most effectively. Regardless of the choice, it is essential that a strong and continuous dialogue be maintained between the police planning teams, the architectural team and the contractor.**

Design and construction services are typically delivered through one of the following approaches:

### Design-Bid-Build

Traditionally, the most widely used method to accomplish construction/renovation of a police facility is the design-bid-build model. The process begins with the planning and programming phase (to determine facility requirements). Followed by the design phase (developing the facility plans that respond to these requirements) and ends with the construction phase (award of contracts and actual construction). In this approach, a very close dialogue between the police agency and the architect should occur when project design proceeds in Step 16. The resulting design is then the basis for the bidding and selection of a contractor to build the facility.

In most jurisdictions, applicable laws call for a design-bid-build approach. These laws call for any public project exceeding certain budget thresholds to be advertised and competitively bid. The award of the construction then goes to the lowest responsible bidding organization. If negotiations fail with the construction contractor, the jurisdiction can move onto the next contractor. The decision-making process is based upon experience and qualifications, not price alone.

PLANNING TIPS

The selection of the alternative design delivery/construction services approach, such as a fully partnered approach, will necessarily affect architect selection decisions discussed in the following section.

Selection of the architectural team to design the facility, may or may not be connected to the selection of the architect/consultant chosen previously to produce a space needs analysis.

### Design-Build

In this alternative delivery approach, a request for proposal is issued to contractor-architect teams in which an invitation is made to respond to the jurisdictions needs with a design proposal and guaranteed construction cost amount. Competitive proposals are received and evaluated in terms of both their costs and building features. Under this procurement method there must be strong and continuous dialogue between the user agency (police department) and the contractor-architect team during project formulation. The police agency must clearly define its needs up front and continue to maximize input with the architect/consultant and contractor. The focus here is to ensure that the needs and standards of the police department are fully articulated and understood. Variations of design-build approaches can include the preparation by the police agency/owner agency of a detailed set of building requirements. This can also include a detailed design development set issued to the design-build teams for further use.

### Fully Partnered Approach

In recent years, selected jurisdictions have changed procurement laws to allow (and even encourage) further alternative building delivery methods. In the fully partnered model, the jurisdiction selects the whole project team, including the contractor, based on credentials while stating a fixed budget at the outset. In this approach, the jurisdiction hires a consultant to perform the space needs analysis, then a site feasibility study. Once the size of the project is established and the particular needs of a specific site are established, a reasonable building and project budget is developed. At this point, rather than selecting a contractor based on low bid, the jurisdiction assembles a comprehensive team that links the space needs consultant, an architect and the contractor into an interdependent team. Having the contractor at the table during design eliminates miscommunication when design is transferred to the contractor. All parties work for a pre-determined development fee.

In some areas the team may be expected to sign a contract to develop the project for a predetermined “guaranteed maximum price” with the contractor “at risk,” hence, there are no change orders. In some cases this process is structured as a modified “design-build” process, while in other instances it is accomplished as a “construction management at risk” process. The selection of the alternative design/delivery/construction services approach, such as a fully partnered approach, will necessarily affect architect selection decisions discussed in the following section.

Choosing among the three design and construction delivery approaches is a difficult task with no simple answers. Jurisdictions can, however, obtain sufficient information to aid in decision-making by taking the following steps:

- Seek advice from other jurisdictions regarding recent construction by asking about the design and construction approach used and the degree of its success
- Seek local advice by asking officials about the approach predominantly used in your jurisdiction
- Review the benefits and deficits of each delivery approach to determine which approach would best fit your project

## Step 15: Select an Architect

**Selecting the architectural firm to complete the project is a complex task. Smaller local architects provide a level of familiarity and comfort, as well as a history of completed regional projects important to any client. Larger firms, particularly those based in larger cities distant from the client jurisdiction may bring unparalled expertise in the law enforcement design arena, but are often entirely unknown to the client. Teams that blend local architectural firms with nationally experienced police facility consultant architects, are a promising option.**

Selection of the architectural team to design the new facility, may or may not be connected to the selection of the architect/consultant chosen previously in Step 6 to produce a space needs analysis. Some jurisdictions make it clear in the contract for the space needs analysis that the architect chosen will not participate in the actual design, with the intent of balancing biases. Other jurisdictions find it best to contract with the planning phase architect/consultant for the purpose of project continuity. Selection will be affected by the design and construction delivery approach selected in Step 14.

For smaller projects, a single (often local) qualified architectural team may be sufficient. In cases where there may not be a local firm experienced in police facility design, an experienced consultant joining the local architect may be advisable. Occasionally, larger police projects will require the recruitment of combination teams, such as a local, architectural company developing a partnership or joint venture with a nationally experienced police facility specialist. This will allow for a local presence, while offering the experience of a larger architectural company. In any size project, it is important to hire an architectural team with experience in designing similar law enforcement facilities.

Key criteria to consider when selecting an architectural team include:

- Recent experience with law enforcement facility projects
- Experience of proposed project team members
- Good listening and teamwork skills
- Personal chemistry/comfort level
- Flexibility/creativity
- Solid, experienced organization with a good reputation
- Preliminary plan for design process and possible alternatives
- Size of firm and years in business (at least five years)
- Reference checks
- Pending work on other projects (availability)

The techniques and approaches used by architectural teams are significant. The best technical skills are only as good as the architect's ability to employ and articulate them. If an architectural team cannot establish rapport with a client, they cannot effectively use their skills to serve that client. The jurisdiction's selection team must ensure the hiring of the best-suited architect. The selected architect must ensure a successful design that meets police needs.

PLANNING TIPS

For any size project, it is important to hire an architectural team with experience in designing similar law enforcement facilities.

The jurisdiction's selection team must ensure the hiring of the best-suited architect. The selected architect must ensure a successful design which meets police needs.

One essential element is the architectural team's expertise in the planning, design and construction of police facilities.

Whichever competitive selection process is chosen, the jurisdiction should take great care to evaluate competing firms on their knowledge, skills and abilities and then develop a short list of potential firms.

PLANNING TIPS

The design phase typically includes three steps:
1) Schematic Design
2) Design Development
3) Construction Documents

One essential element is the architectural team's expertise in the planning and design of police facilities. While almost all architectural firms seek competency in this area, many have little to no experience. Further, firms that assert "justice facility" architectural expertise may have had experience only with correctional or court facilities, but no substantial police facility exposure. The police agency must carefully assess architectural team qualifications to identify those teams with the most relevant experience.

Selection of the architect will mirror the RFQ, RFP, QBS formats detailed in Step 6. Once the selection is official and an architect is hired, the project manager will merge the architectural team into the Pre-Design Planning Team as soon as possible through a series of meetings and discussions. Whichever competitive selection process is chosen, the jurisdiction should take great care to evaluate competing firms on their knowledge, skills and abilities and then develop a short list of potential firms. If an RFP, RFQ, QBS process is mandated by law or through jurisdiction preference, the agency should keep in mind that selection focusing on a low-bid concept can be of concern. Firms lacking expertise may well submit uninformed proposals at lower amounts.

## Step 16: Design the Facility

**Preliminary designs allow for constant adjustment. More detailed final design concepts can be displayed in block model fashion, or even through interactive computer simulations/modeling. Final design documents are then prepared and serve as the guide for actual construction.**

The design phase of a police facility project typically includes three steps:

**Schematic Design:** In this stage the architectural team provides a preliminary design of the facility.

**Design Development:** After client approval of the schematic step, design development begins.

**Construction Documents:** The final step is the development of design documents that can be used for contractor bidding and building purposes. This step describes, in sequential order, the actions and decisions that typically occur and the issues addressed during the design phase of a project.

### Schematic Design: Preliminary Design/Layout Decisions

The product that results from a formal needs analysis is utilized to guide a project's preliminary design. The design must reflect the philosophy of a department, diversity of activities and future growth needs. In the preliminary design stage, layouts are not highly detailed. During this stage the architectural team provides the following services to the client:

- Review and verify the program
- Conceptual site plan
- Conceptual building plan
- Review/Establish schedule
- Review/Establish budget
- Preliminary selection of building systems and materials

- Preliminary exterior design
- Conceptual floor plan
- Preliminary interior elevations
- Preliminary building section
- Preliminary equipment list
- Preliminary MEP and FP (engineered systems)
- One major review

Key issues to consider are:

- Balancing security concerns versus openness to the public
- The role of emerging technology and community policing change the programmatic needs of a facility
- Established office standards versus design placement issues
- Creative design versus operational reality
- Economies of scale
- Vertical and horizontal adjacencies
- Interior flexibility and furniture systems. Harmonize the system to reduce cost of warranty and parts
- Department growth
- Potential to "rent" or "charge-back" space as a cost offset
- Police image
- Community policing perspective
- Police employee morale
- Location
- Scale of community versus scale of building
- Department centralization versus decentralization
- Efficient interior and exterior design
- Specialized services
- Cost of decisions
- Possible shared uses such as:
  - Custodial exchange area
  - Fire department physical training areas
  - Firing range access for other agencies
  - Community room
  - Communications
  - Courts

The preliminary design and layout decision phase will greatly impact the final design of a project. A project manager's careful planning, comprehensive understanding, attention to detail and a genuine interest in all facets of design and layout decisions made at this stage are important to a successful project.

There are a range of basic and high technology methods used by architects to address preliminary designs and layouts. By utilizing the square footage information gathered during a needs assessment, architects may prepare paper blocks or cutouts, each labeled and representing a function or section's relational size, such as records, evidence, locker room, roll call, visitor parking lot, etc. Sessions take place whereby a police planning team and architect manipulate

PLANNING TIPS

SCHEMATIC DESIGN:

Translate the building program into preliminary design/layout.

PLANNING TIPS

Preliminary design and layout decisions will greatly impact the final design of a project.

A project manager's careful attention to detail at this time will greatly influence a successful project outcome.

these blocks or cutouts, attempting to find the best adjacency fit that meets a department's needs, as well as any present site constraints. This is a very hands-on approach and allows a police planning team to be thoroughly involved in the process and discuss the realities of site constraints, functional area size, adjacency relationships, etc.

Architects will then take this information and prepare preliminary drawings. These drawings are brought to subsequent planning sessions, whereby architect and team members comment, contribute and refine them until they are satisfied with the layouts.

Some architectural firms now utilize automated computer-based methods to expand upon the preliminary design process, such as computer simulations/modeling. This approach can offer clients virtual reality tours of designed facilities. Architects can now offer traditional preliminary drawings, but also a computerized look at a facility at any stage during a design process. This new technology is becoming common place and offers the added benefits of three-dimensional, visual comprehension to the traditional two-dimensional architectural drawings. This information not only makes it easier for a planning team to understand what the layout and facility will look like or function like, but can also introduce important changes early in this planning process, with lower cost impact.

Another tool utilized by architects is the building of conceptual project models. Being able to view a three-dimensional model of a proposed facility assists everyone in visualizing how floor layouts, adjacencies, site positioning, etc., affect a design. If the appearance of a facility model is not acceptable, options can be discussed and changes can be made to the internal layout or external design again with lower cost impact than changes made during construction.

**Design Development: Finalizing the Facility Design**

After the preliminary design and layout stage, the specifics of a project's drawings, specifications and details are refined. Detailed design drawings are prepared that will later evolve into actual construction documents. Architectural team actions during this step are:

- Refinement/coordination of plans including floor plans, sections and exterior elevations
- Outline specifications by system
- Define key details
- Refinement/coordination of engineered systems
- Review of schedule
- Review of budget
- Review at 50% and at completion

Along with re-examining criteria already agreed upon, more refined aspects of a project need to be considered, such as:

- Technology access
- Infrastructure needs
- Video applications
- Nuts & bolts cabling
- Future needs
- Build in flexibility of rooms, furniture and infrastructure (wiring, cabling)

- Security
- Circulation
- Durability of finishes
- Special needs for locating:
  - General and dedicated electrical outlets
  - Telephone/data jacks
  - Light switches (including energy saving switches)
  - Intercoms, video cameras, monitors, etc.
  - Access system readers and over-ride buttons
  - Panic alarm activators
  - Paging system and radio speakers
- User safety

Functional relationships between a design team are critical at this stage. A design team must be ready to handle identified mistakes, troubleshoot, engage in *value engineering* and resolve problems that arise.

**Value Engineering:** Once a budget is refined and reflects a higher cost than anticipated or allowed, *value engineering* sessions are useful. These meetings will entail cost cutting methods and substitutions affecting quality, size and features of a project. Participation by all project team members is a must. You may encounter value engineering again when making final decisions on all design elements.

Value Engineering is a formal process that offers a way to optimize project costs. The process consists of establishing value objectives, generating alternatives, analyzing them and selecting options that meet the value objectives while offering cost savings. This process is most valuable during the design development phase and should always be included in contract negotiations with the architectural team. If value engineering occurs after the design phase as a means of cost cutting, when a contractor can offer "deducts" to the owner for such recommended cuts, it can jeopardize the longevity and function of building systems if "deducts" are not evaluated carefully. Reducing construction/installation costs by using an inferior quality of materials is not value engineering and will often increase maintenance costs in the long run.

**Scenario Testing:** Scenario testing is the step by step analysis of how various actions or activities can occur in the new facility. This practice is highly recommended at this point to ensure design layouts meet the exact operational need for which it is intended. Police project team members should examine each document, blueprint, specification and detail applying scenario testing to insure that the proposed design is effective. Check for the following:

- Specificity
- Exact location
- Anticipated use
- Durability
- Description
- Listed make/model of acceptable "contractor furnished, contractor installed" furniture, fixtures and equipment (FF&E)
- Missing or excluded items
- Lack of detail
- Mislabeled items

PLANNING TIPS

DESIGN DEVELOPMENT:
Finalizing facility design. At this stage, detailed design drawings are prepared that will later evolve into actual construction documents.

Functional relationships between a design team are critical at this stage. The team must be ready to identify mistakes, troubleshoot, engage in *value engineering* and resolve problems that arise.

PLANNING TIPS

CONSTRUCTION DOCUMENTS: Final decisions on all project design elements occur at this stage.

Architectural errors or omissions and design or owner-elected changes can be very costly to a project and should be minimized.

The more detailed inspection performed by a police planning team, the greater the chances items will be discovered that need to be changed or addressed.

### Construction Documents: Final Decisions on All Project Design Elements

The final step is the development of design documents that can be used for contractor bidding and building purposes. These sealed documents include:

- Architectural documents
- Structural documents
- Site/Site landscaping documents
- Plumbing
- Heating, ventilation, air conditioning (HVAC)
- Electrical
- Project manual which includes specifications, contracts and bidding requirements

During the construction document phase, the architect will also:

- Provide reviews at 50%, 75% and final
- Secure regulatory approvals
- Revise budget if necessary
- Revise schedule if necessary
- Obtain approval to bid
- Provide security system and acoustical design

In addition, the following are optional to construction documents list:

- Telecommunications
- Furniture
- Food service requirements

Whenever possible, changes in design, specifications, or details need to be made prior to construction documents being completed. In the Design-Bid-Build model, the general contractors base their submitted bids upon a project's construction documents. It is vital that they be detailed and complete. Architectural errors or omissions and design or owner-elected changes can be very costly to a project and should be minimized.

The length of time to transition from preliminary design through design development and finally to construction documents varies, depending upon the size and scope of a project, architect's time schedule and resource commitment, as well as the level of involvement of a police project team. Police project managers are encouraged to maintain good communication with the project architectural team, in an effort to receive all detailed drawings as soon as possible, to afford the greatest amount of time for review. Projects are on a tight schedule at this point and too often not enough time is set aside for owner examination of completed drawings.

The quantity of final drawings, specifications and details for a project can at first be viewed as overwhelming to an inexperienced police project team. Breaking down the documents by category such as: electrical, security, plumbing, furnishings, interior finishes, etc., can greatly assist in dividing them up within a team for analysis. A suggestion is to use the sticky type notes that are available and label each drawing or specification/detail that is incorrect, needs clarification, etc. It is not unusual for one blueprint page to have many of these notes attached if a team member has questions or requested changes. These marked up drawings and spec/detail books may then be given back to the architects to make changes, clarify their design decisions, etc. Drawings can be overlayed on a light table or a PC for comparative purposes.

The more detailed inspection performed by a police planning team, the greater the chances items will be discovered that need to be changed or addressed. Some examples of this include: the location or quantity of electrical outlets, selection or positioning of furnishings, concern over selected interior finishes, identification of which doors are solid and which need windows, etc. Attention to these details adds to the efficiency and durability of the future facility.

No individual team member–architect, contractor, or other, has the insight of the police facility user. A committed Police Internal Planning Team has an opportunity to pore over all drawings, specifications and details, to ensure that everything meets their needs. They can imagine the completed area or room in their minds and compare it to the drawings they are examining. When the two do not match up, changes may be discussed and made, if warranted. One strategy to ensure that final design documents reflect all user needs is to create a sign-off sheet for design documents that are filled out by all Unit Commanders and other key departmental staff. Once the plans are finalized they become construction documents and at that stage, all changes become costly. Avoiding design revisions during later construction stages will save time, money and problems for all concerned.

Throughout each of the above design steps, the jurisdiction and/or the police department has significant responsibilities to collaborate with and provide information to the architectural team. Some examples of these responsibilities are:

**Schematic Design:** Provide topographical and boundary survey, soil borings (geotechnical evaluation), program, budget requirements

**Design Development:** Review documents to ensure program requirements and standards are met

**Construction Documents:** Review all plans and specifications to ensure program requirements are met

The jurisdiction, in particular, the facility end-user, must fully understand, take on and complete all owner responsibilities to ensure that the project reflects all initial planning requirements and that the overall project proceeds in a timely fashion.

## Step 17: Build the Facility

**The police project manager should be on the construction site as often as possible to observe and attend construction meetings, approve submittals, discuss design issues and build rapport with the contractor. Continuity from pre-design to construction is essential to maintain project integrity.**

Construction times vary depending upon the size and scope of a project, schedule, natural or imposed delays such as weather or labor strikes, difficulty obtaining specific materials, or other variables. It is vital to hire an experienced and recognized general contractor who has a good track record of delivering facilities on time, within budget.

Oftentimes, contracts may include financial penalties for delays if a contractor cannot deliver a project on time per the set construction schedule, or for

PLANNING TIPS

One strategy to ensure that final design documents reflect all user needs is to create a sign-off sheet for design documents that are filled out by all Unit Commanders and other key departmental staff.

It is vital to hire an experienced and recognized general contractor who has a good track record of delivering facilities on time, within budget.

PLANNING TIPS

During construction, architectural and police team members should focus on oversight; solving design issues confronted during construction; approving submittals and substitutions; etc.

Collaboration on ideas and solutions during construction results in an even more successful project.

large cost overruns. Other contracts may include monetary incentives to contractors who finish a project ahead of schedule. This is often the case with transportation contracts, as completing a major road or bridge construction early has a direct affect on commuters. While not often used as an incentive to complete a police facility ahead of schedule, all of these incentives and/or penalties are available to jurisdictions who wish to structure their contract in such a manner. This decision is usually left up to an organization's top decision-makers and/or public works director.

Most public projects are competitively bid. The law typically requires an advertisement or invitation to bid to be published in one or more newspapers. The project architect usually prepares the advertisement for bid, which includes information such as the project location, description, type of contract, date, time, location for receiving bids, how to obtain documents and any other special requirements. Local laws vary in allowing this method (RFP, RFQ) for public projects. An attorney should be consulted before using any bidding model or bid language. Once deemed qualified (generally through documented experience in constructing similar projects of scope and size, proven record of quality constructions, etc.), bids by pre-qualified contractors are accepted and a successful bidder is selected.

The fully partnered approach (see Section Four, page 30) is especially useful during a construction process, as it promotes accountability and communication between partners responsible for design and construction. Owners, designers, construction managers and builders sign a partnership charter that commit to shared goals. This allows the parties to identify and solve problems before they occur. It is important for owners to keep in mind that the most costly changes are those that take place during construction, so it is wise to keep changes to a minimum, whenever possible.

There are a number of issues relevant to the construction phase that must be attended to by the jurisdiction. Once construction begins, police departments and their governing bodies should be aware of and be responsive to the following:

- Communication protocols between owner, architectural team and contractor
- Owner's construction project controls
- Standard types of field communication and record keeping (always keep records and signoffs)
- How to handle periodic pay requests
- How to conduct site visits
- How to understand shop drawings
- How to understand and make use of scheduling tools
- How to deal with change orders
- How to deal with periodic changes to regulations and building codes
- How to deal with unforeseen construction field conditions
- What to expect for construction close-out
- Sales tax rebates - some range from 2 to 3%
- Difference between "substantial completion" and "final completion"
- How to incorporate and manage a contingency and testing allowances into the final construction contract
- Definition of "retainage"
- Definition of "warranty period"

During construction, architectural and police team members should focus on

oversight, solving design issues confronted during construction, approving submittals and substitutions, etc. Successful accomplishment of early planning and design steps supports successful construction. Collaboration on ideas and solutions during construction results in an even more successful project.

Project members should strive to be good neighbors during a construction phase. This can translate into project T-shirt and hat giveaways, newsletters to community members indicating a project's progress and the time of day when certain tasks are performed, so that residents bordering a construction site will know what to expect. A construction office phone number can be made available to all bordering residents so they may call and register complaints directly to a general contractor, who in turn, can handle a complaint or fix the problem.

The following responsibilities typically fall upon a police project manager during construction:

- Establishment of a facility's new door security key plan. Care should be taken to ensure a lock sub-contractor thoroughly understands a department's master key hierarchy needs, quantities required, identification stamped on each key and timing of key inventory and cabinet delivery to owner. This process offers a department an opportunity to limit the quantity of issued keys, while improving overall facility security.
- Determine responsibility for contracting and installing phone and data cable. Ensure state-of-the-art cabling is specified and sufficient lines and conduits are installed for future needs. Attempt to work out a scenario whereby installation of main communication backbone systems will be allowed during the last phases of construction. This can be accomplished by a telecommunications consultant.
- Establish an identification system for all telephone and data jacks. Ensure that installation crews label each jack and each communication room port accordingly. Record this information on a reproducible drawing for future use. (A telecommunications consultant is helpful here).
- Set up a database listing all telephone and data jack information. Include jack ID number, jack type (data or phone and how many of each per location), type of phone (analog or digital) and phone features (single line or multi line, modem or fax). Also include whether the phone has voice mail, whether any restrictions are put on the phone for outside or long distance use, etc. This will make later phone/computer moves much easier to accomplish and provide a systematic communications roadmap for the life of a facility. (A telecommunications consultant is helpful here too).
- Work closely with the architectural team, general contractor and sub-contractors to establish an organized approach to the placement of equipment within communication rooms. Most communication rooms are a conglomeration of wires, cables, trays, electrical and equipment boxes. They are often designed too small, especially now, with the rapid increase in technological equipment used in a workplace. Often during construction, each trade (electrical, security, fire control, telephone, computer, etc.) picks a location on a communication room wall and installs their equipment without consulting each other. A proactive project manager can work out a more organized solution.
- Select Transition Team leaders and assemble transition teams. Include a variety of representatives from the department (sworn and civilian) to ensure staff buy-in and consensus. Promote detailed and continuous scenario testing by transition team members.

PLANNING TIPS

Transition teams are crucial to the project's success and should be chosen early based upon commitment and organizational skills.

Transition planning refers to a relocation of personnel, equipment, documents and furnishings from an old location to a new one.

- Establish a photo/information board (aerial photos are effective) to keep employees involved in the project and update it every two to three months. Use this board as a tool to inform and maintain employee enthusiasm.
- Inquire as to what will be tested and documented to ensure functionality prior to move-in. This will reduce the list of items a Testing and Acceptance Transition Team will need to check. The architect specifies what information to include in the O&M Manuals.
- Avoid any late improvements, as cost escalates after design is completed and construction is underway.
- Establish an interior finishes file. Compile complete information on all interior and exterior paints, wall, panel and upholstery fabrics, window tinting, furniture paint, drawer pulls, millwork/furniture laminate, interior wood finishes, exterior façade materials, window glass and tinting, floor coverings, etc. Suggest compiling a sample of each, which will help a great deal when later trying to replace, repair or match a particular finish. Attempt to obtain samples from actual construction submissions.

## Step 18: Develop Occupancy Strategy: Transitioning into the New Facility

**Civilian and sworn staff satisfaction with a new facility is affected by the manner in which the transition to occupancy strategy is carried out. Confusion, loss of information and other transitional problems can negatively impact staff morale. A clear and well-designed transition to occupancy plan is required. Members of all transition teams need to be detail-oriented.**

Transition planning is a crucial element during the construction phase. Transition teams are crucial to the project's success and should be chosen early based upon commitment and organizational skills.

### TRANSITION PLANNING

Transition planning refers to a relocation of personnel, equipment, documents and furnishings from an old location to a new one. Transition teams are established to ensure detailed planning takes place, scenarios are tested and a smooth changeover occurs. It is highly advisable to include a variety of staff representative(s) on all transition teams to ensure staff buy-in and consensus.

The following list outlines recommended transition teams and their assignments.

**Recommended Transition Teams**

- **Furniture, Fixtures & Equipment** - Manage the purchase and installation of owner's new FF&E; budgeting, specification writing, phone/data cabling, data-base creation and warranty file setup.
- **Move Logistics** – Coordinate review of bids from moving companies, establish detailed inventories of what will and won't be moved, schedule employee packing seminars, determine scheduled phases of actual move, oversee movers and employee compliance and timely unpacking.

- **Orientation & Training** – Preparation for groundbreaking ceremony, official opening, monthly employee and community updates on project's progress. Coordinate and video tape employee training on new equipment and procedures. Handle requests from public, politicians, media and employees for tours and briefings.
- **Contracts & Services** – Identify and write specifications for new and renewed contracts and services, such as food service, inmate medical, building maintenance and janitorial, trash and equipment maintenance. Timelines are crucial to ensure new contracts are awarded at move-in, so services are not interrupted.
- **Policies and Procedures** – Identify and respond to possible changes due to new facility rules, layout, etc. Usually encompasses department policies dealing with visitors, handling of inmates/suspects, security or maintenance issues, etc. Changes in department policies or procedures need approval and dissemination prior to or during move-in.
- **Testing & Acceptance** – Crucial pre-occupancy testing of all items, such as locks, telephones, electrical outlets, lights, toilets, showers, furniture (ergonomic features on chairs, keyboards, drawers, etc.), panic alarms, cameras, etc. Goal is to discover problems prior to move-in and assist with repairs after move-in.

PLANNING TIPS

Most facilities are designed and built for a minimum 20-year occupancy. Furnishings, fixtures and equipment (FF&E) placed in new facilities need to be durable and functional, while blending with the aesthetics of the facility.

## Resolve All Equipment Purchase/Replacement Issues

A major concern during transition is the installation of 911 phone lines. Some areas will need to plan three to six months in advance with their local telephone company to assure on time delivery. It is important to confirm the schedule with the telephone company close to move-in date.

One approach to 911 transition is the operation of parallel systems, where the system in the old facility continues to run and take all 911 calls and the new system becomes operational simultaneously, but only to take "dummy" calls to test operability. Once operability is assured, the old system is shut down and all 911 calls are transferred to the new system.

Most facilities are designed and built for a minimum 20-year occupancy. Furnishings, fixtures and equipment (FF&E) placed in new facilities need to be durable and functional, while blending with the aesthetics of a new complex. Funding for new furnishings, fixtures and equipment can be difficult to obtain, so careful planning is important, attention to detail is vital and strong specifications are crucial to ensure high quality furnishings are obtained for the best possible price. Furniture issues can also cause delays as the transition plan begins.

It is important to determine which furnishings, fixtures and equipment are provided by a general contractor and which are provided by an owner. Most situations fall into one of the following categories:

- Contractor furnished, contractor installed (CFCI)
- Owner furnished, contractor installed (OFCI)
- Owner furnished, owner installed (OFOI)

The contractor furnished, contractor installed category limits an owner's ability to: alter colors, patterns, makes, models, or details to better fit a user, upgrade to a newer design, or address the needs of a changed department preference. Unless details of a contract specify a particular make and model of an item, such as a specific workstation and/or ergonomic keyboard holder without allowing for any substitutions, a contractor maintains control over the selection and final quality of such items.

PLANNING TIPS

It is recommended that one or two members of the purchasing department be appointed to handle all purchases related to a new facility project.

Equipment purchases should be negotiated with attention to infrastructure, space needs, installation plan and maintenance issues. Ensure all large suppliers and installers can meet project deadlines and have experience and references.

Transitional planning for a move is essential. The creation of a Move-In Logistics Transition Team is recommended.

Acknowledge the psychological stress of moving and change. Layout maps of the new facility should be provided to all staff.

It is important to note that contractor furnished, contractor installed items are specified by an architect during a design stage. Years can pass between design and actual occupancy of a facility. Thus, a technological or ergonomic specification of an item may be out of date before an owner actually starts using it, especially for items such as security/electronics, computer hardware or software, chairs and keyboard holders.

Owner furnished items present a challenge for police project managers and members of a Furnishings, Fixtures and Equipment Transition Team. This group will have an opportunity to decide what items will be moved into a new facility and what items will be replaced by new ones. Detailed planning regarding what, when and how to purchase these items are vital components that play a part in intelligently allocating a budget and keeping to the transition timeline. For example, one police department found that replating the file cabinets (to harmonize the color scheme) appeared to be less expensive than buying new ones, but found that the process took much longer and was more expensive than anticipated. The security and confidentiality of records is essential during the transition phase.

Many organizations have a separate purchasing department which handles the bid solicitations, bid openings and purchase order contracts. It is recommended that a single member, or perhaps two members of the purchasing department be appointed to handle all purchases related to a new facility project. This task can be overwhelming, especially if the FF&E budget is large. Assigning one or two people to work closely with and be members of, the FF&E Transition Team, is recommended. This procedure promotes translating the needs of the police department, to the purchasing department. Equipment purchases should be negotiated with attention to infrastructure, space needs, installation plan and maintenance issues. Ensure all large suppliers and installers can meet project deadlines and have experience and references.

### Create a Move-In Strategy

Transitional planning for a move is essential. The creation of a Move-In Logistics Transition Team is recommended. For larger organizations, a move can be compared to a military operation. Groups are moved in by priority with the following factors being considered:

- Dependence upon a working computer system
- Reliance on functional communication system
- Need for access to records
- Obligation for evidence to be secured
- Dependence upon secured suspect holding areas
- Access to citizens

Every detail must be considered, timed and pre-planned, if a move is to be successful. Acknowledge the psychological stress of moving and change. Layout maps of the new facility should be provided to all staff. When employees know the general layout of a new facility and the location of their workstation or office, the stress of moving is greatly reduced. Packing seminars can help streamline the moving process and greatly reduce employee concerns. Ensure that communication takes place as to what will and what will not be moved to a new facility. Inventory listings are a good way of documenting what will be moving and when. Ascertain what special current equipment requires vendor disassembly, moving and re-assembly, due to warranty concerns. Establish a "lost and found" for items misplaced during a move.

Encourage an appearance of organization and "back to business" as soon as possible. Set dates for unpacking and ensure staff adhere to them. Establish packing box drop off points for empty cartons and have a staff member circulate daily to remove empty boxes from hallways, storage closets, workstations, etc.

Organizations that move themselves usually regret their decision. Some important considerations to include in this decision are:

- Possible employee injuries
- Down time
- Unprofessional appearance
- Employee confrontations
- Damage to the new facility
- Overall confusion
- Delay to moving schedules:
  - Inefficient use of elevators
  - Blockage of loading/unloading staging areas
  - Driveways blocked due to quantity of vehicles on scene
  - Lack of moving equipment and elevator access
  - Employee reluctance to move heavier items

If a decision to use a professional moving company is made, a transition team should prepare specifications to allow for competitive bidding. A complete inventory of all items being moved, a moving schedule and a mandatory job walk-through of both the current and new facilities should help to obtain fair bids.

### Conduct Extensive Pre-Occupancy Testing, Training and Staff Orientation

Extensive pre-occupancy testing, commissioning, training and staff orientation should begin during the last months of construction. All transition teams should be working at full speed. The police project manager will be inundated with details and decisions. Strong organization skills, leadership, time management and stress reduction expertise will be required during this fast paced stage.

Testing and Acceptance Transition Team members should be testing everything from plumbing to electrical systems, security systems to furniture systems. It is important to clear all testing with the architectural team to avoid liability, personal injury and concerns over damage created by the owner. The more detailed the testing that takes place, the more assurances a project manager will have that a facility is ready for occupancy. Running through scenarios, such as a panic alarm activation or a loading dock delivery can ensure that all facets of these situations were considered and included in the design and furnishings. Staging other scenarios, such as an officer delivering a suspect to a holding room and conducting a taped interview or simulating the preparation and delivery of food from the holding cell kitchen to an inmate in their cell, can identify equipment that isn't working properly and ineffective procedures. Scenarios are useful tools to test the performance of elevators, security door locks, intercoms, audio/video recording equipment, gun lockers, etc. With scenario testing, potential problems can be identified, documented and repaired prior to move-in and within product warranties.

Unlike scenario-testing, commissioning is the thorough test of a system (HVAC, security, video) from A-to-Z. Depending on the time of year that you occupy the facility, one may only be able to test the HVAC cooling aspect of the

PLANNING TIPS

A complete inventory of all items being moved, a moving schedule and a mandatory job walk-through of both the current and new facilities' should help to obtain fair moving bids.

Extensive pre-occupancy testing, commissioning, training and staff orientation should begin during the last months of construction.

The more detailed the testing that takes place, the more assurances a project manager will have that a facility is ready for occupancy.

With scenario testing, potential problems can be identified, documented and repaired prior to move-in.

Verifying that everything works well assures a smoother transition during move-in.

system. So a contract should require that the HVAC contractor come back one month prior and during the heating months to commission the system. This process includes system setup, training, operation and maintenance schedules, spare parts and system testing during normal and adverse conditions.

Besides testing contractor installed items, this period of time allows for thorough examination of other items provided by an owner, such as combination and keyed locks, telephone systems, office equipment such as copiers, typewriters, furniture lighting and ergonomic features, etc. Verifying that everything works well assures a smoother transition during move-in.

Training needs to be conducted for personnel who will be using new pieces of equipment, such as laboratory fume hoods, automated shelving systems, loading dock levelers, vehicle lifts, etc. Building maintenance personnel will require many hours of detailed training on all new facility systems. It is recommended that training sessions of this type be video recorded and maintained in a training library.

### Conduct Extensive Pre-Occupancy Public Relations Events

The completion of a new building is a significant public relations opportunity for any jurisdiction or department. Use the attention wisely but ensure an extensive facility check is made prior to any event. Consider the following public relations opportunities which can be used as a "shake down" of a facility's access, traffic flow, adaptive use of space, lighting and equipment testing:

- Receptions
- Open houses
- Tours
- Media releases
- Media tour of the building and orientation

Employee public relations are important too. Smaller sectional tours are recommended to offer a more personal approach to future facility occupants. The tours should assist in familiarizing everyone with their new office space, overall building layout, etc.

Some jurisdictions use moving into a new or remodeled facility as an opportunity to evoke department pride by taking a departmental staff photograph in the new facility. This move-in event can be an exceptional and memorable event for the entire organization.

Another pre-occupancy public relations responsibility is to determine the quantity, design and location of any facility project recognition plaques. These decisions are not easily made because they can be politically sensitive. In any case, gain approval of identity, correct spelling/correct titles, order and placement of any names associated with the plaques. Also, ensure all plaques are ordered in a timely manner and are delivered and installed according to schedule.

### Commonly Forgotten Items

Frequently, general contractors are not completely finished with a project when the occupants move-in. There are always areas or equipment that are included on a "punch list" (items noted during the final walk-through by the owner that require repair, touchup, etc.). Many times, owners will move into

a facility with many items pending. The contractor will remain on site or return on a daily basis to fix some or all of the items. Completion could take months (or years in exceptional cases). The police project manager must maintain continued contact with the contractor to ensure the work is completed.

Since the workload of a police project team greatly increases at the later stages of a project, many areas can be overlooked or forgotten. The following list can identify potential problem areas:

- Ensure a facility's infrastructure is prepared for occupancy. Remember to order, stock and distribute all necessary items, such as paper towels, hand soap, toilet paper, janitorial cleaning equipment and chemicals.
- Coordinate a systematic approach to the facility's many keys. Inventory, tag, issue, duplicate and secure all keys (doors, furniture, files, restroom accessories, clothes lockers, mailbox, gun locker, cells, alarmed emergency exits, access system over-ride keys, mechanical equipment ignitions or locks, electrical panels, elevator keys, safes, etc.).
- Ensure warranty information files, sometimes called Operations and Maintenance Manuals, are set up and maintained. Decide who will keep equipment maintenance warranty information, furniture warranties, etc.
- Placing certain restrictions on telephones is often overlooked. Some phone systems allow for restrictions to be placed on phones to limit calling locations. Phone abuse by staff or contracted employees, usually within certain areas such as a locker room or conference room, usually cause restrictions to be placed on phones.
- Door locks and an associated master keying system needs to be dealt with prior to the move and should be re-assessed once occupancy takes place. Changes are usually needed after move-in. Staff's desire and need for privacy will have to be dealt with so that attitudes remain positive and work assignment time lines can be kept. Security issues concerning individual and group access to certain areas will need to be assessed and dealt with in a timely manner.
- Establish a phone number "hot line" or circulate repair forms where employees can report furniture, phone or equipment problems that can be addressed quickly by Testing & Acceptance Transition Team members.
- Address maintenance issues such as janitorial, steam cleaning, rodent control, trash dumpster pick-up, chemical storage, maintenance contracts for items after warranty, etc.
- Facilitate signage needs for the following: deliveries, overhead clearances, after-hours phone use, lobby hours, visitor protocol, room identity, kiosks, parking, intercom use, general directories, legal rights of arrested individuals, etc.
- Coordinate general post-occupancy tours for VIP's, project architects, other visiting public safety agencies, etc.

# Glossary of Facility Planning Terms

**Adaptive Re-use:** The acquisition of a new or used non-police facility and the redesign/transformation process necessary to adapt it into a fully usable police facility that meets all necessary structural and security requirements.

**Building Footprint:** The outer limits and configuration of a building's plan shape–(the actual building plan features).

**Change order:** A change order occurs when, during the course of a project, the owner wants to change the scope of the contract documents. A proposal request usually precedes the change order. The proposal request defines to the contractor (just like the contract documents) the scope of work the contractor is to provide (or not provide, some change orders are credits). The change order is signed by the owner, architect, and contractor. The change order modifies cost and/or time of the project.

**Construction submittals:** A general term that includes items such as shop drawings, product data, samples, warranties and mock ups that are submitted by the general contractor to the architect for review and verification that the design intent is met.

**Contingency:** A recommended design practice that utilizes a cushion of 5-15% of the construction costs (depending upon the design phase) to cover unforeseen or minor construction or other work changes which incur cost.

**FF&E:** Furniture, Fixtures and Equipment.

**Final completion:** Upon receipt of written notice that the work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the architect will promptly make such inspection and when the architect finds the work acceptable under the Contract Documents and the contract fully performed, the architect will promptly issue a final Certificate for Payment stating that to the best of the architect's knowledge, information and belief and on the basis of the architect's on-site visits and inspections, the work has become completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the contractor and noted in the final certificate is due and payable. The architect's final Certificate for Payment will constitute a further representation that conditions as precedent to the contractor's being entitled to final payment have been fulfilled.

Final payment shall not become due until the contractor has delivered to the owner a complete release of all liens arising out of this contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the owner to indemnify the owner against such lien. If such lien remains unsatisfied after payments are made the contractor shall refund to the owner all money that the owner may be compelled to pay in discharging such lien, including costs and reasonable attorneys' fees.

**FP:** Fire protection

**Gross square footage:** The space which includes corridors, stairs, elevators, toilets, mechanical, structures, wall thickness, etc.

**MEP:** Mechanical, electrical and plumbing.

**Net square footage:** That which exists between the walls, paint-to-paint in particular functional areas or that space that can actually be used for tasks or functions.

**Operations and maintenance manuals**: Equipment, FF&E, warranty information files which must be maintained and catalogued for easy access.

**Preliminary cost estimates:** The estimated cost of a new or renovated police facility that is based on the data from the space needs analysis.

**Project manual:** The document that is comprised of the front-end documents such as insurance requirements; instructions for bidders; bid bond; plans and specifications; legal components of construction; etc.

**Punch list:** A list of items noted by the architect, contractor and owner at the time of substantial completion and at final walk through. Items can be added to the punch list for several months after the owner has moved in. The contractor requests the architect to inspect the list and sign off as completed.

**Retainage** (hold back)**:** Each time a builder/contractor submits an invoice for a progress payment it is reviewed for accuracy by the architect and the owner (if the contractor claims it is 30% complete, the architect must make a value decision whether the project is indeed that far along). When the invoice is approved for payment an amount (usually 10%) is deducted and retained. When the project is approved for "final completion" all "hold backs" are released.

**Scenario testing:** A step-by-step analysis of how various actions or activities can occur in the new facility.

**Shop drawings:** Drawings prepared by contractors, subcontractors, or suppliers showing how a particular aspect of the work is to be fabricated and installed. These documents are submitted to the architect for review during construction. Other data may be included in the submittal, such as schedules; performance charts; brochures; diagrams; or samples to illustrate materials, systems, and workmanship involved.

**Specifications:** A section of the Project Manual that describes the scope, products and execution of the work, e.g. concrete, carpet installation.

**Substantial completion:** The stage in the progress of the work when the work or designated portion thereof is sufficiently complete in accordance with the contract documents so that the owner can occupy or utilize the work for its intended use. This date signals the end of the contract time and the beginning of the time when insurance responsibility is transferred from the contractor to the owner. Warranties are effective on this date. All work signed off by the architect must conform to the definition contained in the contract documents before the certificate of substantial completion is issued.

**Substitution:** An alternate product, material or method from what was proposed in the contract documents. Typically submitted by a supplier, subcontractor, or contractor to the architect, who reviews for compliance with the contract documents. The burden of proving that a substitution meets the requirements of the project is typically the responsibility of the submitting contractor. Substitutions may occur during the bidding or construction phase.

**Value engineering:** Review of FF&E materials and/or cost-cutting methods and substitutions affecting quality, size and features of a project. A formal process that offers a way to optimize project costs.

**Warranty period:** Most jurisdictions compel the contractor to provide a minimum warranty period of one year from the date of final completion. During that time they must coordinate repairs to correct flaws in workmanship and equipment. Just before the 1 year anniversary date a prudent building owner has the architect return to the site and perform a warranty inspection. Actually, many components in the building have warranties that vastly exceed one year (a 20 year roof warranty for example).

**Working drawings:** Synonymous with construction documents. Detailed plans and specifications used in bidding a project.

PLANNING TIPS

One of the best resources is the experience and knowledge of colleagues who have recently built facilities.

Site visits to recently built police facilities are beneficial to a successful building project.

## APPENDIX 1

# Useful Planning/Design Resources

There are many planning and design resources available for police project managers. One of the best resources is the experience and knowledge of colleagues who have recently built facilities. They can offer insight into their planning process, documents and contracts issued, what they would do differently, what they would do over again and can offer a unique personal and professional perspective.

Site visits to recently built police facilities are not only beneficial, but are an essential tool to clarify project goals and objectives. They also help formulate a planning team's vision and an architect's understanding of that vision. Site visits allow for a visual experience of design features, adjacencies, interior finishes, furnishings and other details, while blending with the realities of actual facility use. Site visit photos are recommended for later design clarification. Compiling an album or computerized database of photographed design features is an excellent way to preserve these items for later reference. Categorizing each facility by name and each photograph by function or design feature is especially helpful.

Compiling a business card file of all site visit contacts is highly recommended. Networking with prior project managers, discussing common pitfalls and successes of each project and ascertaining particular details related to transition or furniture specifications and purchases, are all examples of valuable information that is available.

Each of the following resources offers a different perspective and category of assistance.

**IACP - The International Association of Chiefs of Police** provides a number of resources including: A training class in Planning, Designing, and Constructing Police Facilities and information on recently constructed police facilities throughout the United States.

*(703) 836-6767 (800)-843-4227 www.theiacp.org*

**AIA - The American Institute of Architects** maintain new and archived articles available that may assist you with a specific design or construction topic. They also sponsor training seminars and conferences with police related topics and speakers.

*(202) 626-7300 www.aiaonline.com*

**NIC - The National Institute of Corrections** provides assistance in subjects dealing with jails and holding facilities. This federally funded organization offers free technical assistance with planning, designing and constructing jails.

*(800) 995-6429 www.nicic.org*

**CALEA - Commission on Accreditation of Law Enforcement Agencies** provides general guidelines for standards concerning holding facilities, property areas and communication centers.

*(800) 368-3757 www.calea.org*

## APPENDIX 2:

# Police Facility Planning Guidelines
# *Site Visit Protocol*

### Overview

There are many facets to the planning, design, and construction of a new police facility. Included here are some suggestions for agencies to follow as they contemplate model site visits- an important step in information gathering during the planning phase of a new building project.

### Choose a Site to Visit

If you have not already chosen a model site to visit, contact these resources to locate a model site near you, that reflects your department size, budget and type of policing e.g. problem-solving. The closer the comparison the more valuable the information.

### Develop a Travel Budget for Site Visits

Most police departments do not have a budget set aside for new facility planning. For this reason, it is recommended to consider visiting local agencies within a short travel distance for site visits. Even if a local site is larger or smaller than your department, valuable insights can be gained by discussing the planning, building and construction of new facilities with a colleague.

- If your department has chosen an architect, discuss with them the possibility of visiting local sites and suggest applying the travel costs to their planning/design budget.
- Check with the local municipality for a real estate representative. Some cities have real estate representatives to assist local departments to relocate or build. They may be able to cover the cost of or assist in a model site visit.
- If you are in the planning stages and funds are available to include a line item for site visits in your current budget.

### Determine a Site Visit Team

Each agency's resources and needs will be unique in this process. The municipal or departmental restrictions relative to budget, architectural selection process, etc. may well determine whether you will be able to visit model sites and, if so, who will be on the team. The most important persons to include are:

- The police chief or facility project manager
- The facility planning committee chair or member
- An architect or city planning representative
- The city manager or municipal board representative

Keep the team number small and choose the team with your goal in mind. Since you may want use this visit to instruct, plan the team and the visit around that goal.

PLANNING TIPS

**How to Plan a Site Visit:**

1. Choose a site to visit that closely reflects your building needs, size and budget
2. Develop a travel budget for site visits
3. Determine the site visit team
4. Schedule interviews for the site visit
5. Determine site visit interview questions
6. Determine the form and recipients of the site visit report

### Schedule Site Visit Interviews

Schedule interviews with the chief or project manager, building occupants, and architects. Site visit goals and outcomes are:

- To review building cost estimates and timelines
- To review building site recommendations, design options and/or restrictions
- To determine helpful strategies for dealing with planning teams or governing municipal committees
- To determine important training and/or user needs for building occupants
- To review choices of architectural firm

Ask the local chief or facility project manager who they would recommend for interviews. Inform the interviewees of the reason for the visit and the scope of your project.

### Determine Site Visit Interview Questions

Included in this document are sample questions for site visits. Determine the interview questions based on the stage of your facility planning, building process and what the goals and objectives of the visit are. Use the included questions as a template and modify them according to your needs. A user's roundtable, consisting of representatives of the occupants of the building, is strongly recommended. Design advantages or disadvantages are often uncovered at this roundtable discussion. ( A group of 5-10 is recommended).

### Decide the Form and Recipients of the Site Visit Report

The goals of the site visit will determine the form and recipients of the report. Of course, as a courtesy, provide the site visit host with a copy of the report. It may be useful to them also. Recommendations for report recipients include:

- Chief or facility project manager
- City manager or mayor
- City planner or member of the planning commission
- Architectural team
- Police union steward or employee (officer and/or civilian) representative

Include a section within the summary for conclusions. Make sure the points you need to emphasize, which support your project, are clearly stated. Provide a reference list from the site visit for your city manager or other municipal officials to contact for further information. This may prove persuasive as the project continues.

# Site Visit Suggested Questions

**BIG PICTURE QUESTIONS:** *Planning & Administrative Process Questions for the Chief*

1 How is success defined?

2 Would you consider the building of this facility a "success?"

3 How was the site location determined? What criteria was used?

4 Did you visit any other sites? Which ones and why?

5 Does this building reflect the department's policing philosophy? Examples.

6 How did you balance community access needs with the need for security?

7 Were there any unexpected stumbling blocks in the planning, design, or building process?
- *What were they?*
- *How were they resolved?*
- *Recommendations to others?*

8 What did you learn from the planning, design, building process that you think is essential for others to know?

9 Are there any unexpected problems with the current facility?

10 How was the communication between police officials and architect facilitated?
- *What ingredients made that relationship successful?*
- *What recommendations would you make for other departments/architects?*
- *How were specific police facility needs communicated to the architect?*

11 How did you choose the architect? Would you recommend that process?
- *What criterion did you use?*
- *Did you view any of their previous buildings?*

12 How was the Planning Committee decision-making process accomplished?
- *Consensus*
- *Chief (political) veto?*

13 Was adaptive re-use of existing structures ever considered? If so, why discarded?

14 Was there difficulty getting financial and community support for the facility?
- *If so, how was it resolved?*
- *How did you justify the need for a new building to local officials and community?*
- *Tips for others?*

15 What need/risk assessment tool was used? Was it accurate? Can it be recommended?

16 Did your planning process include future expansion?

**WALK THROUGH QUESTIONS:** *( Look for adequate space and ventilation of officer lockers; parking & access for officers; crime lab/forensics design; evidence storage; general work flow issues; security measures).*

1 From a staff perspective, what works best about this building?

2 Does the building design effectively support work flow (e.g. arrest, booking, holding, interviewing?)

3 What is missing that could be useful to the facility? What do you wish you had in this section? (individual working sections)

4 Has the choice of location proven to be a good one?

5 Have there been any citizen complaints or compliments about the building/location?

6 Were materials used in the building inner-outer surfaces good choices? Why?

7 Has either building access or usage become problematic? How?

- *Staff Access/Use*
- *Citizen Access/Use*

8 What, if any, are the shared uses of the building? What works, what doesn't?

**ROUNDTABLE QUESTIONS**: *( Focus here on functionality and shared uses; lighting; foot traffic flow; communication systems; heating/cooling features; staff input on design & future plans; security; staff & visitor parking.)*

1 Which section do you work in?

2 Have you done this work in another facility? Can you compare functionality?

3 How is this building an improvement over the old building?(if applicable).

4 In your view, what is the most positive characteristic of this building? The most negative?

5 Does the building contribute to greater staff efficiency? How?; Impede? How?

6 Does your section have adequate space to operate effectively?

7 How involved were you in the planning, design, building, or occupancy stages?

8 How was (is) your involvement helpful in assisting design of the work flow or business process in your work area?

9 Are there any building design or occupancy issues that you would recommend be addressed by other departments who build new facilities?

10 Are you involved in agency future plans for expansion (if there are any)?

11 Is heating/cooling system adequate?