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SPACE STANDARDS and GUIDELINES

COURTHOUSE REORGANIZATION & RENOVATION PROGRAM



The Courthouse Reorganization and Renovation Program assumes full responsibility for the views and findings contained in this series of monographs. The series does not necessarily represent the views of participating organizations, including those which follow: The Law Enforcement Assistance Administration and the National Institute of Law Enforcement and Criminal Justice, U.S. Department of Justice; The Rockefeller Brothers Fund; The Municipal Services Administration of the City of New York; The Port of New York Authority; The Appellate Divisions, First and Second Judicial Departments, and the New York County courts.

U.S. DEPARTMENT OF JUSTICE
Law Enforcement Assistance Administration
National Institute of Law Enforcement and Criminal Justice

SPACE STANDARDS AND GUIDELINES

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PROGRAM BACKGROUND

The Courthouse Reorganization and Renovation Program, sponsored by the Appellate Divisions, First and Second Judicial Departments, State of New York, was conceived early in 1970 to develop alternative solutions for critical space and manpower requirements through the year 2000 for structures within and related to the urban court complex of New York City's Foley Square. The Program, serving beyond Foley Square as a demonstration project with nationwide implications, has resulted in imaginative, low-cost, space use concepts designed to improve the efficiency of court administration. It is hoped, that continuing facility improvements based on these concepts will bring the administration of justice closer to its ideal.

The Program was funded to the end of March, 1972, by the U.S. Department of Justice through the Law Enforcement Assistance Administration (LEAA). Additional project support has been provided by the Rockefeller Brothers Fund and by the Municipal Services Administration of the City of New York. The Appellate Divisions and the various courts under their jurisdiction provided necessary grantee contributions. The Port of New York Authority has contributed substantially to manpower planning studies. A supplementary LEAA grant made to the project in April, 1971, has funded a courthouse security study. Under terms of the original grant, the program staff is preparing a handbook on courthouse planning, reorganization and renovation for national distribution to administrators, architects and planners at the conclusion of the project. The handbook, containing information gathered from more than thirty states, will report findings of both the space management and security studies.

Dr. Michael Wong, Director of the Courthouse Reorganization and Renovation Program, is known widely for his contributions to courthouse and law-enforcement facilities planning, design and renovation.

Dr. Wong was Associate Director of the Court Facilities Study at the University of Michigan, 1968-1970. Undertaken to establish minimum standards for court facilities, this study was sponsored by the American Bar Association and the American Institute of Architects.

A registered architect from Australia, Dr. Wong holds a Ph.D. in Architectural Science and degrees in Architecture and Urban Planning.

This series of monographs has been prepared primarily for court administrators involved in facility design and renovation projects. It is felt, however, that architects, engineers and others expecting to embark on such an undertaking will benefit from much of the information contained in the series. Included in the monograph are the following topics:

- Space Management Concepts and Applications
- Space Management Methodology
- Space Standards and Guidelines
- Manpower Projection and Planning
- A Systems Approach to Courthouse Security
- Space Management and Courthouse Security
- A Comprehensive Information Communication System
- Program Administration and Cost Planning

General editor for the series is Peter Inserra of the program staff.

Comment and criticism on the content and format of the monographs is welcome and will assist the program staff in data updating before preparing the final draft of the handbook. Letters should be directed to Dr. Michael Wong, Director, Courthouse Reorganization and Renovation Program, Suite 922, 111 Centre Street, New York, New York 10013.

A VISIT to a random number of courthouses and law-enforcement facilities around the country -- even some of the newer ones -- can be a numbing experience for those who care about the future of the law and the environment in which it finds expression.

For those who daily must use these facilities -- judges, policemen, public and others -- the constant presence of long-neglected environmental conditions is all the more debilitating.

Judges in some jurisdictions complain roundly and with good reason that chambers and conference rooms are lacking in even the remotest resemblance to the dignity of the courtroom of which these ancillary spaces are supposed to be an extension.

Policemen in many areas describe criminal arraignment facilities as a kind of "spatial checkerboard," requiring moves from one floor to another and back, with time-consuming practices at every level, and a day or more away from regular duties.

The public, whether visiting or summoned into an imposing courthouse or law-enforcement facility, rarely is spared the effects of what appropriately might be called a long-standing "edifice complex" -- a scale of design from main entrance to conference room that is unrelated to human activity, and a procedural method about which the best that can be said is that it is impersonal.

It is the public, no less than others using these facilities, which perhaps exhibits the most chilling reaction to grand scale all but devoid of human concern.

Take jury duty, for instance.

It is, most Americans grow up learning, an obligation to be willingly undertaken in exchange for the assumed inherent rights of living in an ostensibly free society. But one needs only to talk to former jurors, especially some who have served for the first time, to understand where, for at least one group of citizens, some disdain for legal institutions set in.

A businessman, in all likelihood, has to suspend his routine activities. A working man may have to give up some pay.* A professional person may have to forgo regular fees for part of the time he is on call. For most who are called (and the few who are chosen), serving two weeks on jury call can be a distinct hardship.

In return for personal inconvenience, jurors in all states receive a modest per-diem amount. But those who willingly serve on juries -- those who can not or do not find ways to be excused -- don't do it for the money.** Another kind of compensation to which jurors -- in fact,

* Most states have laws prohibiting an employer from preventing an employee to serve on jury duty or from taking punitive action against an employee who does serve; few if any states require under law that the employer pay the employee while he is on call.

** Even these small sums, it has been suggested by some in this area, would supplement the incomes of the unemployed or those on welfare, if an equitable way could be found to involve such persons more fully in the judicial process. Those looking for work could, in jurisdictions where court convenes in mid-morning and adjourns in mid-afternoon, interview when not on call or serving. In jurisdictions where experiments are underway to retain prospective jurors on call by telephone, such a system might be especially applicable. By involving on jury duty those welfare recipients who can serve, it is reasoned, the process or democracy would be better served and the welfare client, beyond adding slightly to his income, would feel a greater involvement in a system which may seem to exclude him.

all who use the courts and law-enforcement facilities -- are entitled is one to which only bare minimum attention usually is paid: an environment that not only is appropriate to dispensing justice and enforcing the law, but also one that reflects human concern.

A background knowledge of environmental standards for these special facilities could enhance planning of renovation and design projects, and it is with this concept in mind that this monograph has been prepared. In keeping with the philosophy of this monograph series this information is designed primarily for administrators. But, particularly in the case of this monograph, architects and planners who may have responsibility on such a project for the first time may discover useful guidelines. The basis for much of the information herein is the work of the Courthouse Reorganization and Renovation Program, a space, manpower and security planning project for court facilities in New York City's Foley Square complex.*

ABOUT THE STANDARDS AND GUIDELINES

The detailed standards and guidelines which follow have been developed in accordance with the work of the Courthouse Reorganization and Renovation Program for use by those associated with similar projects in other locations. Primarily applicable to courthouse and court-related facilities, the data, nevertheless, can be adapted to guide the planning of law-enforcement facilities.

Comprising the most complete information yet compiled for planning in this field, the standards and guidelines provide a measure against which preliminary planning can be evaluated for comprehensiveness and flexibility before proceeding to final design stages of renovation or new construction. By applying the range of data -- from the most basic

* For a more detailed description of the Program, see Appendix in companion monograph, "Space Management Concepts and Applications."

to the less obvious -- to local conditions facility administrators and planners should be able to construct a composite picture or overview of facility functions. The standards and guidelines also will be useful as a check on required standards in final plans before the start of actual renovation or construction.

The information in this monograph has been derived primarily from four sources:

1. Recently published reference books and journals;
2. Earlier published data relating to non-judicial facilities which can be applied to courthouse and law enforcement projects;
3. Detailed research undertaken by the author and his program staff on spatial and environmental requirements related to courthouse and court-related operations and personnel functions;
4. Interviews conducted by the author and his staff with persons functioning on various levels in courts, in court-related departments and law-enforcement agencies.

COMPUTING STANDARDS AND GUIDELINES

The data contained in this monograph can be modified according to local conditions and environmental quality sought for a particular facility. In general, courthouses and law-enforcement facilities can be categorized as to use by delineating their functions. The following categories would hold for most courthouses (a similar list could be formulated for law-enforcement facilities):

- Courtrooms and hearing rooms
- Judges' chambers
- Jury facilities
- Grand jury facilities
- Administrative and staff offices
- Prisoner holding facilities
- Other court-related facilities

COURTHOUSE GUIDELINES

GENERAL

- A courthouse is a building in which justice is administered: its architecture should express the dignity and purpose of the court.
- There are many different types of courts -- criminal, civil, family, juvenile, etc. -- and the design of courthouses for each type should reflect the goals each seeks to achieve. The design of hearing rooms for juvenile cases, for instance, would be quite different from that of trial courtrooms.
- A courthouse must be designed to accommodate many different kinds of users: judges, law assistants, district attorneys, legal aid and defense attorneys, probation officers, conciliation officers, clerks, court reporters, interpreters, medical and social agency personnel, defendants, plaintiffs, press, public, and so on.
- A careful analysis should be made of all existing courthouse and court-related facilities to determine whether renovation of existing facilities can accommodate immediate and future needs.
- Some buildings have greater renovation "potential" than others. Hurried renovation of existing facilities with functional and spatial problems may aggravate rather than resolve problems.
- Extensive renovation can be as costly as new construction. The decision to renovate should be based on economic considerations as much as on functional feasibility.
- Architectural components of a court building -- structure, services and finishes -- should be designed within a unified architectural concept.

SPACE MANAGEMENT

- Complex operation and functional interactions necessitate comprehensive and integrated space management research and programming.
- Space management analysis consists of:
 - clearly defining goals and objectives of project and study

- organizing research and analytic systems
- compiling and analyzing data relating to persons involved in the judicial system, their activities and the spaces in which activities are performed
- establishing functional and spatial relationships
- studying existing manpower requirements for the estimated life span of the building, and projecting future personnel needs
- developing space use plans for each court and court-related department
- synthesizing design concepts and integrating complex planning components
- developing alternative schemes and assessing their functional, environmental and economic feasibility
- recommending the phasing of an implementation program to complete a facility project at minimum cost to the state, city or county, with minimum disruption to court operation

SITE SELECTION

- Considerations should include population growth patterns, transportation, proximity to a communal center, and accessibility of court-related facilities, such as hospital, police stations, jail, drug treatment centers, half-way houses and other related institutions.

Site should be suitable and adequate for present and expansion needs during life span of the building or building complex.

- Selection should take into account topographic, climatic and orientation factors that could influence building design.
- Consideration also should be given to the convenience of attorneys and general public. Most attorneys are located near clients, usually in commercial or financial centers of the city.

SPACE ALLOCATION

- Depending on site and location, a courthouse can be single- or multi-story -- single for small communities or as a branch of a major court building, multi-story in large metropolitan areas.
- Horizontal segmentation of a multi-story courthouse may result in unnecessary and costly duplication of spaces such as robing rooms, chambers and conference rooms.

- Courtroom, departmental and judges' floors can be planned in vertical segments, each served by its own elevators.
- Spatial layout depends largely on the method of assigning cases and judges to courtrooms, and on whether the clerk's office is consolidated or fragmented.
- Floors nearest entrance level usually are assigned as public spaces and may include clerical, administrative and jury assembly spaces. Excessive traffic load on elevators thus can be minimized.
- Escalators can move persons to and from their destination on lower public floors in a most effective and efficient manner.
- Separate entrances should be provided for judges, public, and prisoners. Prisoners can be transferred by secured elevators or stairs, physically separated from public or judges' elevators or stairs.
- Floors above those used by the public may house courtrooms and ancillary facilities including conference rooms, robing rooms, witness rooms, temporary prisoner holding and interviewing facilities, law assistants', court reporters' and interpreters' offices.
- Spaces on courtroom floors should be subdivided into public, restrictive, private and secured spaces. Courtrooms, public conference rooms and waiting rooms are readily accessible to the public; private conference rooms and departmental offices are restrictive spaces; judges' robing rooms and chambers are private spaces, and prisoner holding and interviewing facilities are secured spaces.
- Departmental offices, including those for district attorneys, legal aid attorneys or public defender, and probation officers can be located above courtroom floors. Legal aid or public defender and probation offices are more accessible to the public than the district attorney's office.
- Judges' chambers and related facilities can be located on floors above departmental offices. Among related facilities are law library and judges' dining room which require private access.
- Mechanical and electrical equipment, H.V.A.C., and elevator equipment usually are housed on the highest level of the building, or, in buildings of more than 20 stories or so, occupy as well an intermediate level to minimize long ducts runs.
- Detention facilities and any departmental offices can be located on a low-ceiling floor "sandwiched" between two high-ceiling courtroom floors.

- Detention facilities and any departmental offices also can be located on a low-ceiling floor around the central building core. Two-story courtrooms would have high-ceiling judicial areas and one-story public areas below the upper-level detention and departmental office floor.
- Basement floors should accommodate storage and locker facilities, custodian offices, mechanical and electrical equipment rooms, and, possibly, temporary prisoner holding facilities.
- Greater adoption of computerization and automation in courts will affect future personnel use, method of operation and space planning.
- Renovation of office buildings for court use may depend on structural column spacing (in older buildings usually 18-26 ft.) Courtrooms may require more substantial space than one structural bay. A solution: use one structural bay as the judicial area, surrounded on three sides by jury, press and public spaces. With careful design, four columns can be less conspicuous than one central column surrounded by four structural bays.
- Ancillary facilities, in general, occupy 60-70 per cent of courtroom space. A courtroom of 1,200-1,500 sq. ft. has approximately 700-1,000 sq. ft. of ancillary facilities.
- In large metropolitan court buildings, departmental offices for court and personnel involved in the operation of a courtroom require space three to four times the size of the courtroom. In small rural courthouses, such offices would require space approximately twice that of the courtrooms.
- There is a trend toward smaller courtrooms for hearings and trials. A small number of large courtrooms could be retained in metropolitan courts for calendaring and motions procedures.
- Hearing rooms (for hearing juvenile cases) range from 600 to 800 sq. ft. Small size non-jury courtrooms range between 800 and 1,000 sq. ft. Medium-size courtrooms for general trials with juries may require 1,200 to 1,500 sq. ft. Calendaring and motions courtrooms in large metropolitan courts may have a seating capacity of more than 200 persons, requiring more than 2,500 sq. ft.

ENVIRONMENTAL

- Ambiance of many courthouse spaces should be properly subdued -- calm, dignified, and business-like. But some contrasts in color, lighting and texture should be used to provide variations without fragmenting a unified architectural concept.
- In areas with more severe climate, all courthouses should be air-conditioned, if possible. At the very least, conditioned air should be provided for courtrooms, chambers and jury spaces. All courthouse spaces in regular use by persons must be heated where climate dictates.
- Chambers and private offices along building walls with extensive glass exposure should have undersill units with individual thermostatic control; internal spaces can be air-conditioned by a low-velocity, central-zone system with centralized control.
- Because of irregular use of courtrooms, ancillary spaces and judges' chambers, air-conditioning to these spaces should be controlled individually where feasible to minimize operating costs.
- In old court buildings, it is more economical to cool small external rooms with window cooling units than to install a central air-conditioning system with complex ducting. For large spaces, such as courtrooms and jury assembly spaces, packaged units with minimum or no ducting can be easily installed in an adjoining room.
- Design of mechanical and electrical systems should include adequate capacity to accommodate projected needs, including the use of computer equipment.
- Soundproofing of external and internal walls is essential in courtrooms, jury, grand jury, and chamber spaces.
- Separating private spaces from public spaces by means of semi-private and private corridors would alleviate considerable noise transmitted from the public spaces.
- The natural environment (climate, vegetation, sunlight, wind, etc.) should be balanced against the man-made environment (mechanical,

heating, cooling and ventilation, artificial light, etc.) in the design of interior spaces.

- Office spaces, judges' chambers and departmental offices should have external windows both for natural lighting and for visual relief.
- Courtrooms can be without windows and artificially lighted to create a constant environment. But it is advisable to provide some daylight to relieve monotony of complete enclosure. Roof lights or clerestories also can be used to advantage.
- Most courthouses over 20 years old, unless recently renovated, have very poor lighting. In renovation projects, careful checks should be made of the type, intensity and color of light fixtures to evaluate their adequacy for the people performing specific tasks.
- Assigning judges to available courtrooms rather than having courtrooms assigned to each judge will permit closing down unused courtrooms and ancillary facilities during low caseload and vacation periods. However, this advantage should be weighed against disadvantages such as greater security risk and lower flexibility in space utilization.
- In most old courthouses, periodical checks should be made of electrical, H.V.A.C. and plumbing systems to ensure proper maintenance of those systems to service building needs.

SECURITY*

- Security has to be a major consideration in the design of a courthouse, especially of criminal court and family court buildings.
- Security measures can be developed in terms of space planning concepts, detection and alarm equipment and systems, and personnel training and deployment techniques.
- In designing a new court building, the careful application of space planning concepts to increase security measures during the planning of the building costs very little and is the most effective means of providing adequate security for the building.

* See, "A Systems Approach to Courthouse Security" and "Space Management and Courthouse Security."

- Security systems in courthouses should be analyzed and implemented as an integral part of the design.
- Spaces requiring a similar level of security and privacy should be clustered on the same floors. Even in renovation projects, the relocation of departments to achieve this would be less costly, and, in many cases, equally if not more effective, than providing security manpower and equipment.
- Access to private and secured spaces should be separated whenever possible from access to public spaces.
- Devices to detect firearms, other weapons and bombs should be evaluated for implementation when economically feasible, and when space planning and existing manpower allocation techniques are not adequate.
- Alarm systems activated by foot-lift and knee-touch devices in courtrooms, judges' chambers, district attorneys offices and other critical spaces should be investigated and installed where possible.
- Each courtroom should be equipped with an intercom system connected directly to a central security control station strategically located for rapid deployment of security personnel to spaces with a security problem.
- Court security officers should be adequately trained in the use of firearms and in dealing with demonstrations or disturbances.
- Public entering courtrooms should be searched only as a last resort. Regular inspection of courtrooms and spaces easily accessible to the public may be desirable.
- Courtrooms and ancillary facilities operating after working hours should be located on the entrance level and on lower floors. All upper floors should be closed to the public to minimize vandalism and theft.
- Public spaces such as toilets, rest rooms, lounges and even conference rooms, should not directly adjoin courtrooms and should not have hung ceilings or container objects suitable for the planting of bombs. By locating such public spaces away from the courtrooms, potential physical damage and disruption of court operation is reduced.

IMPLEMENTATION

- Successful implementation of a courthouse renovation or construction project depends to a large extent on developing a good working relationship between the court and the local Department of Public Works, City Planning Department, Space Planning Consultant, and the Architect and his consultants.
- Projects can be implemented in phases, planned according to available budget.
- Projects should be scheduled by Critical Path or similar methods for effective time and cost control and for optimum efficiency in implementation.
- Successful implementation implies a centralized decision-making authority.

COURTROOM

- The courtroom should be a symbolic extension of the concept of justice; its architecture should express this ideal.
- Shape of the courtroom need not be rectangular and should be determined by functional and environmental requirements.
- Size of the courtroom should be determined by the kinds of cases handled and the routine number of participants and spectators.
- Judicial functions of a trial or hearing can be accommodated within an area of approximately 400 sq. ft. (without jury) and 600 sq. ft. (with 12-man jury).
- Size of the public observation area in most courtrooms should be determined by the size of the jury panel (usually 25 to 30 persons for a 12-man jury and 12-15 persons for a six-man jury) plus an additional 15-20 seats for the general public. (After impaneling, additional seats become available for public.)
- The trend is toward smaller courtrooms (800 to 1,200 sq. ft.) with a smaller number of large courtrooms (1,500 to 2,500 sq. ft.) for calendaring and motions functions.
- Floor-to-ceiling heights of small-to-medium-size courtrooms should be 10 to 15 ft.

- Height within a courtroom need not be uniform and should be measured by symbolic and environmental factors.
- Appearance and ambiance of a courtroom should be restrained, yet cheerful, with adequate light and color contrast to relieve monotony.
- Environmental criteria should be determined by the kind and extent of activities, and by the psychological response desired from participants and spectators.
- The courtrooms should have separate entrances for public (spectators, press, litigants, witnesses), private (judge, jury, attorneys, court personnel, witnesses), and secured spaces (prisoners, court officers).
- Entrances and exits for participants should be carefully grouped and located as close as possible to their stations in the courtroom.
- All participants in courtroom proceedings should be able to see and to hear each other clearly.
- Distance of movement and conflicting movement by participants during a trial or hearing should be avoided.
- A courtroom does not function in isolation; its necessary ancillary facilities include robing room, jury deliberation room, prisoner holding facility, witness isolation room and interview room.
- Courtroom furniture should be an integral part of the architecture, designed to accommodate human activities. Much of it can be movable (flexibility), colorful (without distraction), and durable (wear- and stain-resistant).
- Heavy furniture such as the judge's bench, clerk's station, witness box, jury box and attorneys' tables can be constructed in modular sections for rapid assembly, when necessary. Movable chairs for the public should be avoided because of noise and pilferage problems.
- Provision should be made for central recording of court proceedings; microphones should be designed as an integral part of courtroom furniture, and space and personnel required for efficient operation should be planned in advance.
- Courtroom interiors should be designed to minimize acoustical problems: volume and distance should be reduced in very large courtrooms to control reverberation time (ideal, less than 1 second), thereby avoiding echoing effect. This can be accomplished by a hung ceiling or a reduction in room size.

- Courtroom shape should not be long or narrow and walls should not be parallel or finished in sound-reflective materials. Such conditions would cause excessive sound fluttering. To alleviate this phenomenon reduce room length, avoid the use of long parallel walls, and finish with correct absorptive material.
- Courtroom shape, especially in the judicial area, should not be circular and constructed with reflective materials. Concave surfaces focus sound at the center.
- In large courtrooms, walls at the front of the courtroom should be of reflective materials so that sound generated from the judicial area is reflected to the public seating area at the rear of the courtroom. If the shape of the ceiling at the front of the courtroom were curvilinear, the ceiling could be reflective; but as it is normally flat, absorptive materials are preferred.
- Walls and ceiling at the rear of the courtroom (around the public seating area) should be finished with absorptive materials to prevent sound from reflecting back to the judicial area, creating echoing effects.
- The floor of the courtroom should be finished with carpet or padded vinyl, especially in the judicial area, for noise reduction.
- Every courtroom should have a sound lock or share one with an adjoining courtroom. By designing the sound lock so that one set of doors would generally be closed before the other set is opened, noise transmission level from public waiting or circulation spaces can be minimized.
- Fully air-conditioned courtrooms with sealed windows, especially the double-glazed type with internal venetian blinds, will have far fewer problems of high traffic noise and dust and grit level commonly associated with metropolitan centers.
- Courtrooms should be adequately air-conditioned and ventilated and standard thermal conditions should be separately controlled in each courtroom or group of courtrooms.
- An adequate number of electrical outlets should be located near anticipated power equipment placement, e.g., sound recording equipment, amplifiers, projectors, x-ray viewer, desk lamps, etc.
- A separate heating, ventilating and air-conditioning system should be installed to service night and weekend courts. The main plant can be shut down at night and during weekends.

JUDGE'S BENCH

- Symbolic of the administration of justice.
- The judge:
 - usually wears a bulky robe and requires a large armchair
 - exercises protective influence over witnesses
 - views and hears all participants in courtroom
 - speaks loudly when addressing court, instructing jurors, admonishing spectators
 - speaks softly when conversing privately with attorneys and court clerks
 - passes exhibits and documents to attorneys and court clerks
- The height of the judge's bench and platform, and its adequacy should appropriately express the role of the judge and the dignity of the court. The judge's eye level when he is seated should be higher than any other participant or spectator, standing or seated.
- The judge's bench can be constructed in modular sections for ease in moving.
- The judge's bench should be equipped with (or provision be made for) a microphone connected to an amplifier controlled either by the judge or the clerk.
- The judge's bench should have a 4-to 6-in. high railing around the work surface, and the work surface should slope toward the judge to prevent attorneys from seeing documents on the judge's bench.
- The judge should be able to communicate with his secretary in chambers directly by a telephone/intercom system.
- For security reasons, the judge should be able to alert without detection court officers in a central security control room. Court officers should be able to hear, and even see, the problem in any courtroom to take appropriate steps. They should also be able to communicate with the judge or with other court participants through a loud-speaker system during an emergency.

ATTORNEYS' AND LITIGANTS' STATIONS

- Attorneys usually are deeply involved during court procedures and the physical environment should be conducive to this condition.
- Attorneys and litigants should be able to confer in private at their stations without being overheard by jurors, opposing attorneys, opposing litigants or by others in the courtroom.
- Attorneys should be able to move easily from their stations to a lectern, the judge's bench, court clerk's station, court reporter's station, jury box and witness box.
- Attorneys and litigants should be able to see, hear, and be seen and heard by judge, witnesses, court clerk, jurors, and court reporter.
- Distance should be approximately equal between the attorneys' stations or lectern, witness box and judge's bench should be approximately equal.
- Attorneys handle and examine exhibits and legal documents; their stations should be adequately lighted to enable them to read fine print legal documents.
- Each attorney's station should be equipped with (or provision made for) a microphone connected to an amplifier controlled either by the judge or the clerk.

WITNESS BOX

- Many volunteer witnesses testify at personal sacrifice of time and money and at the risk of being harmed; they deserve the courtesy of the court and of trial participants.
- Witnesses in controversial trials should be isolated for their safety and protection.
- Witnesses may be under emotional strain; consequently, the environmental conditions in which they wait should be calm and cheerful.
- Witnesses are entitled to the protection of the court and the judge who serves as the impartial arbiter.
- Non-encroachment distance between attorneys and witnesses is at least 6 ft.

- Witnesses should be able to see, and be seen as close to full face as possible, and to hear attorneys, judge, court clerks and jurors.
- When answering attorney's questions, witness should be clearly seen and heard by attorneys, judge, jurors, and court reporter.
- Witnesses on the stand receive, examine, and return exhibits.
- Witness box should be movable and, perhaps, constructed as modular unit.
- Floor level of the witness box should be lower than that of the judge's bench.
- The witness box must be equipped with a microphone connected to an amplifier controlled by the judge or the clerk. Most witnesses are nervous and tend to speak very softly. The amplification of witness' testimony is of special importance to the court reporter.

JURY BOX

- Jurors often serve at personal sacrifice of time and money; they deserve the courtesy of the court and of trial participants. The facilities in the courtroom should be adequate, unobstructive and well-designed for their needs.
- Jurors should be adequately separated from the public to avoid interference and improper influence.
- A bailiff or court officer should be located between the jurors and the public to prevent communication between them.
- Jurors should be adequately separated in distance (min. 6 ft.) from attorneys and litigants to prevent their overhearing private conversations.
- In criminal trials, juries are selected and impaneled in court before the judge.
- In civil trials, juries can be selected and impaneled either in courtrooms or in a jury impaneling room.
- Non-encroachment distance of 6 ft. from the jury box is judge's responsibility to enforce.
- Jurors should be able to see, be seen and to hear attorneys, judge, witnesses, court clerk.

- During examination of witnesses, all jurors should be able to see attorneys and witnesses as close to full face as possible.
- Jurors receive, examine and return exhibits; hinged shelves should be designed as an integral part of the jury box on its outside surface for resting large exhibits.
- Jury box can be constructed in movable modular sections to facilitate a more flexible and efficient use of space.
- Jurors should be located on the same side of the judge as is witness.
- The floor level of the highest tier of the jury box should be lower than that of the judge's bench.
- Depending on the layout of the courtroom, it is possible to substitute the traditional "modesty rail" in front of the jury box with a table surface at 28 to 29 inches above floor level so that the front row of the jury box can be used by either the plaintiff or the defendant during a non-jury trial.
- The front row of the jury box should be on the same floor level as the judicial area of the courtroom so that if the size of the jury is reduced from 12 to 6 jurors, the front row of seats could simply be removed without extensive renovation.

COURT REPORTER'S STATION

- The court reporter:
 - is responsible for recording court proceedings by shorthand, by stenographic machine or by automatic sound recording devices
 - must see the facial expressions of witness, attorneys, and judge, and hear every word spoken
 - should be located close to the witness box approximately equidistant from the judge, attorneys, and jurors so all hear him equally well when he reads back to the court at the judge's request parts of the transcript
 - is responsible for marking and identifying exhibits before they are passed to the court clerk for safekeeping
 - should be as inconspicuous as possible, especially to the witness who should not be made to feel that every word he utters is being recorded as evidence
 - at times has to record the answers of an emotional witness by his expression and the movement of his head and hands

- Of all trial participants, the witness is most unfamiliar to the reporter. The locational relationship between the court reporter and the witness is therefore most important.
- It is important that the furniture and equipment used by the court reporter be designed as an integral part of the courtroom furniture. Design should maintain court dignity promoting orderly stacking of steno-tapes, and so on.
- When an interpreter is required, he should be located to one side of the witness, facing the court reporter, and be easily seen by the judge, attorneys and jurors.

COURT CLERK'S STATION

- The court clerk:
 - serves the court and judge
 - assists in efficient operation of courtroom procedures
 - checks case files, passes them to and receives them from the judge
 - makes records of case determinations
 - is responsible for the custody of exhibits
 - calls prospective jurors to the jury box and swears in impaneled jurors for jury duty
 - calls witnesses to the witness box and administers the oath
- The court clerk's station can be constructed in modular sections for ease of movement, when necessary.
- The court clerk's station:
 - adjoins the judge for ease of communication and for passing documents
 - accommodates a large number of case files and other legal documents and exhibits, thus requiring maximum allowable work surface area
 - should be lower in height and less significant than the judge's bench and the witness box
- The court clerk's work surface should be surrounded by a 6- to 9-in. high rail to prevent attorneys from seeing documents and to cover sound recording equipment if placed on the work surface.
- The court clerk's station should have the same alarm/intercom system as the judge: a direct intercom line to a central security control room activated by the touch of a button under the work surface.

BAILIFF'S OR COURT OFFICER'S STATION

- The bailiff or court officer is responsible for:
 - security of the courtroom and safety of participants
 - keeping order in the courtroom
 - running errands for the judge during trial or hearing
 - safety, security, and privacy of judge and jurors
 - safety and security of detained defendants
 - removal of persons causing disruptions during court proceedings
 - announcing the entry of the judge
 - calling and escorting of witnesses
- The bailiff should be strategically placed to perform the above duties effectively.
- During a public-interest trial, one court officer should be located between the jury and the public, another in close proximity to the judge, and a third for the transfer of prisoners and witnesses.
- The bailiff should be able to see all participants and the public.
- The bailiff requires a small table (on the order of 2 x 2.5 ft.) with gavel used for calling the court to order before the judge enters the courtroom.

PRESS FACILITIES

- The press has the right to report news of court cases.
- Spaces for the press can be located in the front row of the public observation area or to the side of the courtroom, often determined by local policy.
- If the press is to be located in the front row of the public area, news reporters should be no closer than 9 ft. to attorneys, and litigants who may want to engage in private conversation.
- Adequate telephone facilities should be made available to the press in close proximity to courtrooms on each floor.
- A press room should be made available in close proximity to the entrance of the building.

- A glazed partition between press and judicial areas would enable the reporter to telephone information to his editor during trial without disrupting court procedures. However, some news reporters object to the glazed partition on the grounds that they would lose the "feel" of cases.
- If press space is separated physically from the courtroom, then the sound of court proceedings will have to be transmitted into the space.
- In the foreseeable future, consideration might be given to designing a central press room away from courtrooms in which reporters could view several trials on closed-circuit television.

PUBLIC FACILITIES

- The public:
 - has the right to attend all trials and hearings in the role of spectator
 - need not be restricted to the rear of the courtroom where only backs of attorneys and litigants and sides of jurors can be seen
 - should be able to see and hear all participants as clearly as possible
 - should remain inconspicuous and unobtrusive as possible to trial participants
 - in the future may be physically separated from the courtroom in viewing spaces equipped with closed-circuit television (thereby permitting courtroom size to be reduced)
- In some courtrooms, it is possible and advantageous to plan public observation facilities to one side, preferably opposite the jurors.
- For high security courtrooms, detection devices could be installed inconspicuously at the entrance to the public observation area to detect firearms, bombs, and other dangerous weapons.
- For controversial trials, public entering the courtroom could be subject to a search by male and female court officers.
- Size of the public observation area should be determined to a large extent by the number of prospective jurors in a panel brought into the courtroom for jury selection and impaneling.
- The public observation area in a criminal trial courtroom generally requires more space than in a civil trial courtroom.

- Courtrooms in close proximity to jury assembly spaces may only require seating capacity for half a panel, the other half being brought into the courtroom only if required.
- Floors should be carpeted where possible to minimize the impact noise.
- Public entry into courtrooms should be via soundlock to minimize airborne sounds from public corridors or waiting spaces. One set of doors normally would be closed before the other were opened.

OTHER COURTROOM FACILITIES

The following facilities should only be installed where applicable:

DISPLAY EXHIBITS

- White magnetic board for charting, drawing and for holding paper exhibits
- White tack board for cardboard exhibits
- Pointer 36 to 42 in. long (can be collapsible) is essential to explain displays
- Battery-operated light pointer is useful for explaining displays, (slides or film) in a darkened courtroom.
- An adequate supply of magnetic strips, water-color markers and cleaning cloths should be provided for the length of the court proceeding.
 - Both exhibit boards can be portable or, preferably, built-in. One way of integrating boards with courtroom design is to provide a swivel-mount flush to wall with board back of the same material as the wall.
 - Each board should be at least 54 x 42 in. at 36 in. minimum height above floor level.
 - Angle of vision subtended at the boards should be greater than 45 degrees for clear viewing. Below 30 degrees, viewing becomes difficult.

PROJECTION OF IMAGES OF EXHIBITS

- Slide and movie projectors should be stored at a central location for use in courtroom, on request. Projection screen can be portable or, preferably, built in.
- If the magnetic board cannot be used as a projection screen, then a roll-up screen could be installed above the board, recessed into the wall.
- The same angle of vision subtended at the display boards applies also to the projected images on the screen.
- An electrical outlet should be provided at the expected location of projectors.
- A portable projector stand should be collapsable for easy storage; a built-in stand should be recessed into a wall.
- An x-ray viewer or a shadow box for presenting medical evidence, likewise can be integrated with courtroom wall design.

CLOCK

- An integral part of wall design, the clock should be located opposite the judge's bench.

STORAGE

- Space of at least 25-30 sq. ft. should be provided for storage of items such as display equipment and folding chairs. Interior shelves of various depths and heights from floor to ceiling should be adequately lighted (15-20 ft-candles). Storage space should be locked when not in use.
- Adjoining courtrooms and those with access through a private corridor can share storage spaces.

TABLE 1
COURTROOMS: DESIGN STANDARDS

PRIMARY PARTICIPANT	ACTIVITY	RELATED PEOPLE	FURNITURE/EQUIPMENT	PLATFORM HEIGHT above floor (inches)	AREA FURNITURE/ EQUIPMENT (sq. ft.)	CIRCULATION (sq. ft.)	TOTAL (sq. ft.)	LIGHTING LIGHT LEVEL (ft-candles)	TYPE	ACOUSTICS BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT	ACCESS SPACE	ACCESS/SECURITY
Judge	Reading, writing	-	Bench surface, swivel chair/ files, books, documents, exhibits	12-20	Bench 15-18 Chair 6-7	20-25	41-50	50-70	warm, direct, possible spotlighting	NC 25-30	-	Chambers or robing room	Private/maximum
	Talking - quiet - loud	Clerk, attorneys Balliff, jurors, attorneys, public, witnesses	Microphone	-	-	-	-	-	-	NC 25-35 NC 30-40	0.10-0.15 reflective	-	-
	Viewing	Attorneys, jurors, litigants, court reporter, clerk, witnesses	-	-	-	-	-	30 min.	warm, semi-direct and direct	-	-	-	-
Attorney	Reading, writing	-	Table surface, chair/ files, books, documents, exhibits	Floor level	Table 12-18 Chair 4-8	25-30	41-50	50-70	warm, direct	NC 25-35	-	External office D.A. or legal aid staff office	Public/minimum Private/limited
	Talking - quiet - loud	Litigants, attorneys Witness, judge, jurors, court per- sonnel, public	Lectern/microphone, files, books, exhibits	-	Lectern 7-9	5-11	16-20	50-70	Individual lighting of lectern	NC 25-35 NC 30-40	0.10-0.15	-	-
	Viewing	Witness, judge, jurors, court personnel	-	-	-	-	-	30 Min.	warm, direct or semi-direct	-	-	-	-
	Moving	Witness, judge, jurors, clerk	Files, books, docu- ments, exhibits	-	-	100-150	-	-	-	-	-	-	-
Litigant	Reading, writing	-	Table surface, chair	Floor level	Table 8-10 Chair 4-8	5-10	20-25	50-70	warm, direct	NC 25-35	-	External (on call or summons) Detention facilities	Public/minimum Private/maximum
	Talking - quiet	Attorneys	-	-	-	-	-	-	-	NC 25-35	0.25-0.30 absorptive	-	-
	Viewing	Attorneys, judge, witness, jurors	-	-	-	-	-	20 min.	warm, direct or semi-direct	-	-	-	-
Witness	Reading	Attorneys	Witness box shelf/ exhibits	6-12	Shelf 4-6 Chair 4-8	7-9	15-20	50-70	warm, direct	NC 25-30	0.10-0.15 reflective	External isolation space (sequester witness)	Public/minimum Private/maximum
	Talking - loud	Attorneys, judge, clerk, court re- porter	Microphone	-	-	-	-	-	-	NC 25-35	-	-	-
	Viewing	Attorneys, judge, jurors, litigants, court personnel	-	-	-	-	-	-	-	-	-	-	-
Jurors	Reading	Attorneys	Jury box/exhibits	Row 1 floor level Row 2-8 12 in. Row 3-12 18 in.	Chair 4-8	5-8	5-11	10-50 variable	warm, direct or semi-direct	NC 25-30	0.20-0.30	Jury assembling or sequestering space	Private/maximum
	Talking - loud	Attorneys, judge, clerk	-	-	-	-	-	-	-	NC 25-35	-	-	-
	Viewing	Attorneys, judge, clerk, litigants, court personnel	-	-	-	-	-	5-30 variable	warm, direct or semi-direct	NC 25-35	-	-	-
Court Reporter	Record proceedings	-	Chair, desk (optional) stenographic machine and tapes	Floor level max. 6 in.	Desk 6-7 Chair 3-4 Machine 1-2	5-8	15-21 (with desk)	50-70	warm, semi-direct	NC 20-25	0.25-0.40 absorptive	Staff office	Private/limited

TABLE 1 (continued)

COURTROOMS: DESIGN STANDARDS

PRIMARY PARTICIPANT	ACTIVITY	RELATED PEOPLE	FURNITURE/EQUIPMENT	PLATFORM HEIGHT	AREA	CIRCULATION	TOTAL	LIGHTING		ACOUSTICS		ACCESS		
				above floor				FURNITURE/EQUIPMENT	LIGHT LEVEL	TYPE	BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT	SPACE	ACCESS/SECURITY
				(inches)	(sq. ft.)	(sq. ft.)	(sq. ft.)	(ft-candles)						
Court Clerk	Feed data to computer	—	Desk (optional), chair /receptacle to coaxial cable to computer	—	Desk 6-7 Chair 3-4 Machine 1-2	6-8	16-21 (with desk)	80-70	daylight, direct	NC 25-30	0.25-0.40 absorptive			
	Talking - loud, Reading	Judge, attorneys, witnesses	—	—	—	—	—	80-70	daylight, direct	NC 25-30	0.25-0.40			
	Viewing	Judge, attorneys, witnesses, clerk, jurors	—	—	—	—	—	25 min.	—	NC 25-30	—			
	Reading, writing	—	Desk, chair/files, documents, exhibits	6-8	Desk 12-18 Chair 4-5	15-18	31-41	80-70	daylight, direct	NC 25-35	—	Clerk's office	Private/limited	
	Talking - quiet - loud	Judge	— Microphone	—	—	—	—	—	warm, semi-d.	NC 25-30	—	0.10-0.15		
	Passing documents	Judge, attorneys	/files, documents, exhibits	—	—	—	—	—	warm, semi-direct	NC 25-35	—	—		
	Communicating	Judge's personnel, computer personnel	/telephone, C.R.T. Monitor, alarm signal	—	Monitor 3-4	5-6	8-10	80-70	warm, direct	NC 25-35	0.40-0.60 absorptive	—		
	Recording	—	/recording equipment	—	Desk 4-5	5-6	9-11	80-70	daylight, dir.	—	0.5-0.6	—		
Viewing	Judge, attorneys, witnesses, jurors, court personnel	—	—	—	—	—	30 min.	warm, semi-direct	—	—	—			
Balliff or Court Officer	Calling order	Public, trial participants	Desk (optional), chair/gavel	Floor level max. 6 ins.	Desk 6-8 Chair 4-5	6-10	16-23 (with desk)	20-40	daylight, direct	NC 30-40	0.10-0.15 reflective	—	Staff offices	Private or public/minimum
	Viewing	Public, trial participants	—	—	—	—	—	30 min.	warm, semi-direct	NC 30-40	—	—		
	Running errands	Judge	—	—	—	—	—	—	—	NC 30-40	—	—		
Press	Writing	—	Shelf, chair	Floor level	Shelf 3-4 Chair 3-4	5-8	11-19	30-50	daylight, direct	NC 25-35	0.40-0.6 absorptive	—	Press room or external spaces	Public/minimum
	Viewing	Public, trial participants	—	—	—	—	—	30 min.	warm, semi-direct	NC 25-35	—	—		
Public	Viewing	Trial participants	Chair	Floor level	Chair 3-4	5-8	8-12	5-50 ^w variable	warm, semi-direct or diffused	NC 30-40	0.10-0.20 for ceiling 0.25-0.40 for walls	—	External spaces	Public/minimum

THERMAL STANDARDS: 72°-74° ET (summer), 69°-71° ET (winter)

JUDGES' CHAMBERS

- Chambers:
 - are spaces where judges conduct private research, hold conferences, receive visitors, handle correspondence, work on pending cases and relax
 - may consist of the judge's private chamber, secretary's office, law assistant's office, and judge's toilet, closet and kitchenette (if desirable)
 - in the lower courts may not include secretarial or law assistant's spaces, in which case chambers would be a judge's private office with separate toilet
 - should be accessible by private judges' corridor or staff corridor; the public should not have direct access to the judge's chamber
- The judge's private chamber should:
 - be quiet, with low background noise level (room finishings of high sound absorption value)
 - have windows for natural lighting and for visual relief
 - directly adjoin the secretary's and the law assistant's offices
 - have an alternate access which enables the judge to enter a judges' corridor without passing his secretary's office
 - have walls, ceiling and floor of soundproof construction to aid private conversation and to reduce sound transmission to adjoining spaces
 - for security reasons, a judge's work space should be equipped with an alarm/intercom system as in the courtroom to notify a central security control station of an emergency or security risk
- The judge's chamber or the secretary's office could open directly into a courtroom.
- When chambers are located on more than one floor away from courtrooms, or when judges are assigned to different courtrooms on rotating or other basis, small robing rooms usually should be provided behind courtrooms for conferences and for the judge to work during short courtroom recesses.
- Robing rooms on the same floor as private chambers are a poor use of space. Robing rooms and chambers can be combined when both are located on the same floor or one floor above or below courtrooms.

- Judge's and law assistant's work area should be well-lighted, quiet and finished in colors and textures that create an atmosphere conducive to reading and writing legal documents.
- Judge's conference area, which can be a separate room adjoining his chamber, should be well-lighted with moderately low background noise and with greater contrast in color and texture than the work area.
- If the conference area is separated from the judge's chamber, it can be much better utilized if shared by two or more judges to hold conferences with attorneys and staff.
- Judge's informal meeting area should be comfortable, relaxing and softly lighted.
- Secretary's work area should be well-lighted, cheerful, with interesting color contrasts.
- Secretary's work area should have adequate space for files, file cabinets and storage closets.
- Reception or visitors' area, which can be part of the secretary's office, should be more subdued in lighting. Deeper and richer colors and stronger textural finishes can be used.
- Reception or visitors' area should have a closet for hanging hats, coats, umbrellas and other belongings.
- The thermal environment in work spaces should be maintained at a slightly lower effective temperature than the informal meeting area.
- Air temperature in the judge's chambers should be individually thermostat-controlled.
- Furniture and equipment used in chambers should be designed as an integral part of the architecture.
- The judge's toilet facilities should consist of a washbasin, a toilet bowl, a wall cabinet for toiletries, and a wall rail for towels. While it is not necessary to provide a shower in each toilet, a shower should be provided for each group of judges' chambers.

TABLE 2

JUDGES' CHAMBERS: DESIGN STANDARDS

ACTIVITY	PEOPLE INVOLVED	FURNITURE/ EQUIPMENT	AREA	CIRCULATION (sq. ft.)	TOTAL (sq. ft.)	COLOR CONTRAST	LIGHTING		ACOUSTICS		ACCESS	ACCESS/SECURITY
			FURNITURE/ EQUIPMENT (sq. ft.)				LIGHT LEVEL (ft.-candies)	TYPE	BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT		
Working: reading, writing	Judge	Desk, desk extension, bookshelves, cabinet, swivel chair/tape re- corder, dictation equip- ment	48-50	68-70	110-120	Subdued	50-70	daylight, direct or semi-direct	NC 28-35	0.40-0.50	Courtroom, secretary's office	Private/maximum
Confering	Judge, staff, visitors	Conference table, chairs	60-85	110-118	170-180	Subdued	30-50	warm, semi-direct	NC 28-35	0.20-0.30	Conference and work areas	Private/limited or maximum
Informal meeting	Judge, staff, visitors	Lounge chairs, sofa, low tables, lamp, cabinet	48-50	48-50	80-100	Average	20-40	warm, semi-direct	NC 30-40	0.25-0.40	Conference and work areas	Private/limited or maximum
Private: toilet	Judge, visitors	Washbasin, water closet, wall cabinet, shower (optional)	8-20	22-25	30-45	High	30-50	warm, direct	—	0.25-0.40	Work and informal areas	Private/limited
kitchen	Judge	refrigerator, cupboards, sink	12-15	13-15	25-30	High	30-50	warm, direct	—	0.25-0.40	Work and informal areas	Private/limited
closet	Judge	coat closet	8-10	12-15	20-25	High	10-20	Daylight, direct	—	0.25-0.40	Work and informal areas	Private/limited
Secretarial: working reading, writing, typing	Secretary	Desk, typing extension, chair/dictation and office equipment	30-35	50-55	80-90	Subdued	50-70	daylight, direct	NC 30-40	0.40-0.50	Judge's chamber, secretary's office, conf. room	Private/limited
filing	Secretary	filing cabinets/data input and retrieval equipment	15-25	20-30	35-55	Medium	50-70	daylight, direct	NC 40-50	0.30-0.40		
receive visitors	Secretary, visitors	lounge chairs, low tables, lamps	15-20	15-20	30-40	Medium	20-40	warm, semi-direct	NC 30-40	0.30-0.40		
Legal research - working: reading, writing	Law assistant	Desk, chair, bookshelves /dictation equipment	30-35	50-55	80-90	Subdued	50-70	daylight, direct	NC 28-35	0.40-0.50	Judge's chamber, secretary's office, courtroom, law library	Private/limited or maximum
confering	Law assistant visitors	chairs	7-10	8-10	15-20	Average	30-50	warm, semi-direct	NC 28-35	0.20-0.30		

THERMAL STANDARDS: 72°-74° ET (summer), 69°-71° ET (winter).

JURY FACILITIES

- The jury system ideally provides the court with a tribunal that is impartial and representative of the people.
 - The jury deliberates on matters of fact; the judge rules on matters of law.
 - Many jurors serve jury duty at personal sacrifice of time and money, and sometimes at the risk of being harmed. They deserve the courtesy of the court, court personnel and trial participants.
 - An integrated, directional sign system should be devised to guide prospective jurors to jury assembly spaces.*
 - Main jury assembly area should be planned not as a large space housing row after row of wooden pews, but in small spatial units with movable lounge or office furniture, arranged so as to stimulate interaction between prospective jurors. But the spatial arrangement of this area should not be over-fragmented to the extent that chaotic movement and activity results.
 - Adequate spaces should be provided close to the jury assembly area for jury clerks to call jury panels, prepare jury lists and arrange payment to jurors.
 - By carefully planning the location of a jury control station, part of the large jury assembly area in existing buildings can be used as a courtroom after initial assignment of jurors. This can be accomplished by using movable modular courtroom furniture.
 - Because some prospective jurors may wait long periods before being called, assembly rooms should be cheerful and spacious and be equipped for activities such as reading, television, and quiet indoor games.
 - Some prospective jurors may desire to work while waiting to be called. Appropriately designed work booths with desk, chair and telephone could be provided in a quiet environment for such jurors.
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- * For a detailed description of such a system, see companion monograph, "A Comprehensive Information Communication System."

- A telephone-alert system should be employed in metropolitan courts whereby busy prospective jurors can leave their phone numbers for calls to report for jury duty within 1-1 1/2 hours. This would eliminate the need for a large number of private work booths.
- A cafeteria should be provided to serve jurors as well as court personnel. Separate enclosed spaces could be used by impanelled jurors and by judges. A central kitchen to service this and other courthouse dining facilities is preferred.
- In civil cases (when the jury does not have to be selected in the courtroom), a number of jury impaneling rooms can be centralized around the area where jury panels are called or individually located in close proximity to courtrooms. The former requires fewer bailiffs or court officers.
- The jury impaneling room has three separate spaces: the prospective jurors' area, the selected jurors' area and the voir dire area for the attorneys and clerk.
- All jury impaneling rooms should be of soundproof construction so that voir dire is not disrupted by external noises.
- No impaneling room is necessary in a criminal court because impaneling and swearing in a jury for a criminal case is conducted in the courtroom before the judge assigned to handle the case.
- Public seating capacity of a courtroom usually is determined by the size of the jury panel. For a 12-man jury, the panel is 25-30 places, and for a 6-man jury, it is 12-15. The trend is toward smaller juries. In many states, all civil cases are heard by 6-man juries.
- The jury box should be on the same side of the courtroom as the witness so that the attorney questioning the witness will not block the jury's view of the witness.
- The jury deliberation room should be directly and privately accessible from the jury box. The jury should not have to pass in front of the public when moving to the jury deliberation room.
- The jury can spend long periods in deliberation; consequently, spaces should be designed to accommodate a variety of activities and should have windows for visual relief.
- Unless jury deliberation rooms are internal rooms, they should not be located on the ground or main floor where the public can see, or even hear jurors, or gain access to them -- a sufficient basis for a mistrial motion.

- An entrance lobby should be provided for jurors to leave coats and store personal belongings before entering the jury deliberation room. The lobby should be designed to facilitate a smooth flow of jurors from the courtroom into the jury deliberation room.
- The entrance lobby can serve as a rest area from the jury deliberation room for women jurors. A six-foot couch and one or two chairs can be provided if space permits. If the lobby is inadequate or unsuitable as a rest room, the women's toilet could be made larger to accommodate an airlock containing a bench or couch for resting. Toilets should be well ventilated and well lighted (20 ft-candles minimum).
- If possible, toilets for both men and women should be accessible from the entrance lobby. Direct access to toilets from the jury deliberation room, especially for women jurors, should be avoided whenever possible.
- Toilets can be used as sound locks between the jury deliberation room and other private and public spaces.
- Whenever possible, jury deliberation rooms should not adjoin attorney conference or witness rooms; if they must adjoin, then common walls have to be adequately sound-proofed so that even raised voices will not be heard.
- All jury spaces, including jury deliberation rooms, should be well-ventilated, air-conditioned, well-lighted and completely soundproof.
- A drinking fountain is essential in every jury deliberation room. It should be recessed and designed as an integral part of the toilet plumbing system.
- Adequate consideration needs to be given the activities and space requirement of the bailiff responsible for security and safety of jurors during jury deliberation. A recessed alcove adjoining the jury deliberation room could be designed for this purpose.
- Where alcove space is not adequate for the bailiff, a seat hinged to the wall with a spring device which raises the seat to a vertical position when unused can be provided outside the jury deliberation room.
- A push button at the jury foreman's station in the jury deliberation room when activated should start a blinking light and/or buzzing sound at the bailiff station.

TABLE 3
JURY FACILITIES: DESIGN STANDARDS

ACTIVITY	PEOPLE INVOLVED	FURNITURE/ EQUIPMENT	AREA			COLOR CONTRAST	LIGHTING		ACOUSTICS		ACCESS	
			FURNITURE/ EQUIPMENT (sq. ft.)	CIRCULATION (sq. ft.)	TOTAL (sq. ft.)		LIGHT LEVEL (ft.-candles)	TYPE	BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT	SPACE	ACCESS/SECURITY
Entry and registration	Summoned jurors, jury clerks	Lounge chairs, side tables, registration counters/office equipment	4-8	4-8	8-10	High	20-30, supplementary lighting	warm, direct or semi-direct	NC 40-50	0.30-0.40	Public space, jury impelling space, courtroom	Public/minimum
Assembly and talking	Summoned jurors, jury clerks	Chairs, side tables, informal tables/reading materials	6-7	6-10	12-17	Medium	30-40	warm, direct or semi-direct	NC 35-45	0.30-0.40	All jury assembly spaces	Restrictive/limited
Watching television	Summoned jurors, jury clerks	Chairs/television, screen, slide and movie projectors	4-8	7-11	11-16	Subdued	18-30	warm, diffused	NC 40-50	0.40-0.50	General assembly space	Restrictive/limited
Reading, writing	Summoned jurors	Tables, chairs, bookshelves/booths, journals	10-12	10-13	20-15	Medium	40-60	daylight, direct	NC 30-40	0.30-0.40	General assembly space	Restrictive/limited
Working	Summoned jurors	Table, chair, booth/telephone	13-16	12-14	25-30	Medium	40-60	daylight, direct	NC 25-35	0.30-0.40	General assembly space	Restrictive/limited
Recreation	Summoned jurors	Tables, chairs/writing materials	6-7	7-11	13-18	High	30-40	daylight, or warm, direct	NC 40-50	0.30-0.40	General assembly space	Restrictive/limited
Dining	Summoned jurors, jury clerks, court officers, jurors	Tables, chairs/utensils	6-7	9-13	15-20	High	20-30	warm, semi-direct, or direct	NC 40-50	0.30-0.40	General assembly space	Restrictive/limited
Eating (snack)	Summoned jurors	Tables, chairs or stools/food, drink, cigarette machines	4-8	4-8	8-10	High	20-30	warm, direct or semi-direct	NC 40-50	0.30-0.40	General assembly space	Restrictive/limited
Jury panel assembling	Selected jurors, jury clerk, court officer or bailiff	Jury clerk's counter, jury list, jury wheel	-	8-10	8-10	High	30-40	warm, direct or semi-direct	NC 40-50	0.30-0.40	General assembly space	Restrictive/limited
Impaneling	- selection	Selected and impaneled jurors, attorneys	Chairs	4-8	8-10	Medium	30-35	warm, dir. or semi-dir.	NC 30-40	0.30-0.40	Jury panel assembly space	Private/limited
	- voir dire	jurors, attorneys	Table(s), chairs/jury list	15-20	25-30	Medium	35-50	warm, dir. or semi-dir.	NC 30-40	0.30-0.40	Public or attorney's entrance	Public or private/limited
	- clerical	jury clerk	Table, chair/jury list, jury wheel	15-20	20-25	Medium	35-50	warm, dir. or semi-dir.	NC 30-40	0.30-0.40	Jury panel assembly space	Private/limited
Deliberating	- entry	impaneled jurors, bailiff	Coat closet, couch	2-3	5-8	High	20-30	warm, semi-direct, or diffused daylight, or warm, semi-direct, or direct	NC 35-45	0.30-0.40	Courtroom	Private/maximum
	- toilets	impaneled jurors (men and women)	Water closet (1) and wash basin (1) each for men and women	8-10 per toilet	15-20	High	20-30	warm, semi-direct, or direct	NC 40-50	0.15-0.25	Entrance lobby of jury deliberation spaces	Private/maximum
	- deliberation	impaneled jurors	Table, chairs/drinking fountain	6-8	12-15	Medium	40-60	warm, semi-direct, or direct	NC 30-40	0.30-0.40	Entrance lobby	Private/maximum

THERMAL STANDARDS: 72°-74° ET (summer), 69°-71° ET (winter)

GRAND JURY FACILITIES

- The major responsibility of the grand jury is to determine whether the district attorney or prosecuting attorney has sufficient evidence on which to prosecute a suspect.
- The grand jury usually consists of 23 persons although in some states the number is lower.
- Grand jurors normally are selected from petit jurors experienced in serving jury duty and are assumed to be better qualified.
- Grand jurors usually are impaneled in a courtroom before a judge prior to their reporting for duty at a grand jury hearing room.
- Grand jurors listen to the assistant district attorney present his evidence and question witnesses.
- After deliberation, the grand jury may return a "true bill" enabling the district attorney to prosecute the suspect, or a "no bill" prohibiting further action by the district attorney until sufficient evidence is produced.
- The grand jury foreman submits a list of determinations to the court and the judge makes appropriate court orders.
- Grand jurors should have private, secured access to grand jury spaces.
- In addition to the grand jury hearing room, the grand jury complex consists of a witness waiting area, a grand jury lounge, an office for the assistant district attorney (A.D.A.), and a defendant isolation and conference room.
- All grand jury facilities should be properly ventilated, air-conditioned where necessary, well-lighted and reasonably quiet.
- Unless the grand jury spaces are internal spaces, they should not be located on the ground floor where the public can see, or even hear, the jurors.
- Grand jury spaces are not accessible to anyone other than summoned witnesses, court reporters and interpreters.
- All spaces in the grand jury complex should be of soundproof construction.
- All spaces in the grand jury complex should be closely related to each other. Around a central grand jury hearing room should be located witness waiting space, grand jury lounge, A.D.A.'s office, and conference room.

- Windows in grand jury spaces should be provided for visual relief.
- Grand jurors' seating should be arranged in a tiered arc in the grand jury hearing room, with the attorneys, court reporter, interpreter and grand jury foreman located near the center of the arc for optimal visual and aural environment.
- Another arrangement for the grand jury hearing room is to locate the A.D.A.'s station behind the grand jurors, with the foreman and witness at the front. By questioning the witness from the rear, the grand jurors' attention is focussed on the witness, and the A.D.A. is assured that if he can hear the witness clearly from the rear, the grand jurors can hear as well.
- An entrance lobby with adequate closet space for personal belongings should be located outside the grand jury hearing room.
- The grand jury lounge should be furnished with comfortable armchairs and one or two small tables for writing and conference.
- The grand jury lounge should be equipped with a toilet for men and another for women, similar to those in the jury deliberation room.
- The grand jury lounge should have a drinking fountain, designed as an integral part of the toilet plumbing system.
- The witness waiting room should be controlled and supervised by a warden located between the waiting room and the grand jury hearing room.
- With careful design, a large witness waiting room can be shared by two or more grand jury hearing rooms. The entry into each hearing room would be supervised by a warden.
- The A.D.A.'s office should be located in close proximity to the A.D.A.'s station in the grand jury hearing room.
- The A.D.A., court reporter and interpreter should have private and secured access to the grand jury complex.

TABLE 4
GRAND JURY FACILITIES: DESIGN STANDARDS

ACTIVITY	PEOPLE INVOLVED	FURNITURE/ EQUIPMENT	AREA	CIRCULATION (sq. ft.)	TOTAL (sq. ft.)	COLOR CONTRAST	LIGHTING		ACOUSTICS		ACCESS	
			FURNITURE/ EQUIPMENT (sq. ft.)				LIGHT LEVEL (ft.-candles)	TYPE	BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT	SPACE	ACCESS/SECURITY
Entry	Grand jurors, warden	Coat closet, chairs (can be part of retiring room)	2-3	8-8	7-9	High	20-30	warm, semi-direct	NC 30-40	0.30-0.40	Public and private corridor, witnesses waiting room, grand jury hearing room	Private/limited
Witness waiting	Witnesses, warden	Chairs, desks, side tables/ reading materials	4-5	8-7	10-12	Medium	30-40	warm, semi-direct, or direct	NC 35-45	0.30-0.40	Entrance lobby, grand jury hearing room	Private/maximum
Grand jury hearing	Grand jurors, A.D.A., court reporter, interpreter	Tiered seats or chairs, writing surface, attorney's table	7-8 16-20	8-7 25-30	12-18 41-50	Medium	50-70	warm or daylight, direct	NC 30-40	0.30-0.40	Witnesses waiting room, grand jury retiring room	Private/maximum
Grand jury retiring	Grand jurors	Lounge chairs, side tables	4-5	4-5	8-10	High	20-30	warm, semi-direct or diffused	NC 40-50	0.20-0.30	Grand jury hearing room	Private/maximum
Private toilet	Grand jurors	Water closet (1), wash basins (2), each for men and women	15-20 (per toilet)	35-40	50-60	High	20-30	daylight or warm, direct or semi-direct	NC 40-50	0.15-0.25	Grand jury retiring room	Private/
Courtroom	See Table CT-1											

THERMAL STANDARDS: 72°-74° ET (summer), 69°-71° ET (winter)

ADMINISTRATIVE AND STAFF OFFICES

(Administrative and staff offices in office buildings have been covered fully in other reference books and publications, and very few additional guidelines are necessary outside the basic design standards contained in the accompanying table. The spaces are divided into executive and general office, conference spaces, interviewing rooms and secretarial spaces.)

- There is a trend toward greater use of interior office landscaping techniques -- basically, defining space by means of furniture, planting screens and other movable objects rather than traditional partitions and solid walls.
- If such techniques are employed during the design stage of a facility project, architecture and office landscaping could be integrated in the design to produce a solution that is both functional and spatially pleasing as well as environmentally acceptable.
- One of the problems in office landscaping is noise transmission which can be alleviated by separating noisy spaces architecturally without completely isolating them behind traditional walls.
- Office landscaping permits air conditioning and lighting systems to be simplified. Floor-to-ceiling partitions impose certain restrictions on the design and layout of ceiling air-conditioning registers. Consequently, air-conditioning and lighting costs can be reduced.
- Functional studies of interior landscaping systems have shown spaces created are more conducive to office supervision and work, resulting in improved working conditions and attitude. However, there are no measured data to prove that work output has increased due to the application of such techniques.

TABLE 5
ADMINISTRATIVE AND STAFF OFFICES: DESIGN STANDARDS

ACTIVITY	PEOPLE INVOLVED	FURNITURE/ EQUIPMENT	AREA			COLOR CONTRAST	LIGHTING		ACOUSTICS		ACCESS	ACCESS/SECURITY
			FURNITURE/ EQUIPMENT (sq. ft.)	CIRCULATION (sq. ft.)	TOTAL (sq. ft.)		LIGHT LEVEL (ft-candle)	TYPE	BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT		
Executive working	D.A., Legal Aid, Probation, SPCC, MCEP, Youth Council Bureau, police officers, clerk's office	Desk, desk extension, bookshelves, cabinet, swivel chairs/dictation and office equipment	45-50	65-70	110-120	Subdued	50-70	daylight, direct	NC 25-35	0.30-0.40	Private and general offices	Private/limited
Informal meeting	D.A., Legal Aid, Probation, SPCC, MCEP, Youth Council Bureau, police officers, clerk's office	Lounge chairs and sofa, low tables, cabinets	45-50	45-50	90-100	Average	25-40	warm, indirect	NC 30-40	0.25-0.40	Work spaces	Private/limited
Private working	D.A., Legal Aid, Probation, SPCC, MCEP, Youth Council Bureau, police officers, clerk's office	Desk, chair, bookshelves, dictation equipment	30-35	50-55	80-90	Average	50-70	daylight, direct	NC 25-35	0.30-0.40	Executive and general offices	Private/limited
General working	D.A., Legal Aid, Probation, SPCC, MCEP, Youth Council Bureau, police officers, clerk's office	Desk, chair, bookshelves, office equipment	25-30	40-45	65-75	Average	50-70	daylight, direct	NC 35-45	0.30-0.40	Private offices	Public or private/minimum
Confering	D.A., Legal Aid, Probation, SPCC, Youth Council Bureau, MCEP, police officers, clerk's office	Conference table, chairs (8 persons)	55-65	95-110	150-175	Subdued	30-50	warm, semi-direct	NC 30-40	0.20-0.30	Executive and private offices, public spaces	Private or public/limited or limited
Interviewing	D.A., Legal Aid, Probation, SPCC, MCEP, Youth Council Bureau, police officers, clerk's office	Table, chairs (interviewer and 2-3 persons)	25-30	45-50	70-80	Subdued	30-50	warm, direct or semi-direct	NC 30-40	0.20-0.30	Private and general offices, public spaces	Private or public/limited or secured
Private secretarial - typing	Secretaries, typists	Desk, typing extension, chair/dictation and office equipment	30-35	50-55	80-90	Medium	50-70	daylight, direct	NC 30-40	0.40-0.50	Executive and private offices	Public or private/limited
- filing	Secretaries, filing clerks	Desk, cabinets/data input and retrieval equipment	15-25	20-30	35-55	Medium	50-70	daylight, direct	NC 40-50	0.30-0.40		Public or private/limited
- receiving visitors	Secretaries, visitors	Lounge chairs, low tables/reading materials	15-20	15-20	30-40	Medium	20-40	warm, semi-direct	NC 30-40	0.30-0.40		Public/limited or minimum
Examination	Medical and psychiatric personnel	Desk, chairs/examination equipment	50-60	100-110	150-170	Subdued	70-100 or higher	daylight, direct with special lighting	NC 25-35	0.20-0.30		Private/secured

THERMAL STANDARDS: 72°-74° F (summer), 68°-71° F (winter)

PRISONER HOLDING FACILITIES

- Air conditioning and ventilating registers and lighting fixtures should be securely locked to prevent their removal and use as weapons.
- Each prisoner holding facility should have a combined wash basin and toilet unit constructed of stainless steel. This unit should be installed along the outer wall of the facility so that repairs can be made from the outside.
- There should be a male and female prisoner holding facility behind arraignment and high case-volume courtrooms. In metropolitan criminal courts, separate facilities may be provided for use by prisoners awaiting hearing and those awaiting transfer after hearings.
- Distance of movement of prisoners from temporary detention facilities to courtrooms should be as direct and as short as possible.
- Instead of bars to define the prisoner holding area, alternative designs should be developed and tested. The general atmosphere of these facilities should be cheerful with interesting color contrasts. The area must be designed for ease of supervision and appropriate security.
- Where prisoners have to be transferred from a holding facility on one level to a courtroom on another level, and where a prisoner elevator is not available, the prisoners should not have to be escorted by correction or court officers up or down more than two flights of stairs, one flight being the preferred maximum.
- Adequate secured interview spaces should be provided for attorneys to interview their clients. However, in most cases, tight security measures should be taken to avoid the passage of weapons and drugs into the prisoner holding facility. This is especially important in visiting spaces where relatives visit prisoners.
- All prisoner holding facilities and secured interview spaces should be properly ventilated, well-lighted and reasonably maintained.
- Prisoner holding facilities adjoining courtrooms, entered by prisoner secured access, should be designed as compactly as possible to minimize distances between these facilities and the courtrooms and detention facilities.
- The prisoner should enter the courtroom as close as possible to his station at the defense attorney's table.
- Defense attorneys should have easy access to the prisoner holding facility behind the courtroom to interview clients at spaces provided for this purpose.

TABLE 6
TEMPORARY DETENTION FACILITIES: DESIGN STANDARDS

ACTIVITY	PEOPLE INVOLVED	FURNITURE/EQUIPMENT	AREA			COLOR CONTRAST	LIGHTING		ACOUSTICS		ACCESS	ACCESS/SECURITY
			FURNITURE/EQUIPMENT (sq. ft.)	CIRCULATION (sq. ft.)	TOTAL (sq. ft.)		LIGHT LEVEL (ft.-candles)	TYPE	BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT		
Prisoner holding	Prisoners, correction, police and court officers	Cells, fixed seating, fixed water closet and wash basin	3-4 per person	6-8 per person	9-12 per person	Medium	25-30	warm, semi-direct	NC 40-50	0.40-0.50	Courtroom	Secured/maximum
Interviewing	Defendant, attorney, probation officer, MCEP, Youth Council and SFCC officers	Table surface in booths, chairs	10-12	30-23	40-45	Medium	30-40	warm, direct or semi-direct	NC 30-40	0.20-0.30	Courtroom detention facility	Secured/maximum

THERMAL STANDARDS: 72°-74° ET (summer), 69°-71° ET (winter)

TABLE 7
OTHER COURT RELATED FACILITIES: DESIGN STANDARDS

ACTIVITY	PEOPLE INVOLVED	FURNITURE/EQUIPMENT	AREA			COLOR CONTRAST	LIGHTING		ACOUSTICS		ACCESS	ACCESS/SECURITY
			FURNITURE/EQUIPMENT (sq. ft.)	CIRCULATION (sq. ft.)	TOTAL (sq. ft.)		LIGHT LEVEL (ft.-candles)	TYPE	BACKGROUND NOISE LEVEL	AVERAGE ABSORPTION COEFFICIENT		
General office	Clerks, court personnel, departmental staff, (Probation, Legal Aid, etc.)	Desk, desk extension, chairs, book shelves, filing cabinets/dilation and office equipment	25-30	40-45	65-75	Medium to high	50-70	daylight, direct	NC 35-50	0.30-0.40	All court departments	Public and private/ minimum to limited
Interview and conference spaces	Departmental staff, court personnel, defendant, relatives, attorneys	Table or desk, chair, coat closet/recording equipment (if needed)	6-8	12-15	18-23	Subdued to medium	20-50	warm or daylight, direct or semi direct	NC 30-40	0.30-0.40	All public and court spaces	Public and private/ minimum to limited
Secured interview spaces	Defendant, attorney(s), correction officers	Table surface (barrier optional), chairs	5-6	15-17	20-23	Subdued	30-40	warm, semi-direct	NC 40-50	0.30-0.40	Correction spaces (prisoners/public spaces (attorneys))	Private and secured/ maximum
Prisoner holding facilities	Defendant, correction officers	Fixed row seating/water closet and wash basin	3-4	6-8	9-12	Subdued	25-30	warm or daylight, direct or semi-direct	NC 40-50	0.20-0.30	Correction spaces	Private and secured/ maximum

THERMAL STANDARDS: 72°-74° ET (summer), 69°-71° ET (winter)

SOME TRENDS IN JUDICIAL AND LAW ENFORCEMENT FACILITY PLANNING

Over the past few years, the planning and design of judicial and law-enforcement facilities has undergone significant changes. These developments have come about on the one hand, because of a growing consciousness in many quarters of the need for improving administration and practice of judicial and law-enforcement systems, and, on the other hand, because a growing team of professional administrators realize the essential relationship existing between facility improvement and operational reform. A nationwide study and comprehensive analysis of systems and facilities over the past year by the Court-house Reorganization and Renovation Program has revealed several trends that should be useful in the planning of other judicial and law-enforcement facilities. The experienced space management analyst should be mindful of such trends that likely will affect facility planning.

COMPREHENSIVE FACILITY COMPLEX PLANNING

Administrators and consultants alike are paying greater heed to the interrelatedness of space planning and management studies, and to the need for comprehensive planning of judicial and law-enforcement facilities. The trend is toward planning of facility complexes: the comprehensive planning of court, police, correctional and other related buildings as a civic unit, rather than as a collection of isolated structures. Conversely, decentralization is increasing for social welfare and other agencies which are more community oriented and less directly related to court or law-enforcement functions.

INCREASED FLEXIBILITY IN FACILITY PLANNING

Most existing court buildings too often are inflexible in design, resulting in over-utilization or under-utilization of space. Large two-story courtrooms in most old buildings, but in some new ones as well, place constraints on the flexible use of space. A trend

toward smaller trial courtrooms with lower ceilings, is providing greater flexibility, similar to that common in modern office buildings. Structurally, it is more practical to erect a shell of the additional stories needed for future expansion than to erect the structure of the additional floors when needed. Additional structural work above the existing building would produce noise and dust and otherwise disrupt court operations in the existing building. These problems are avoided when only interior finishes are required to complete the additional floors within the completed outer shell.

Modular construction, now gaining greater acceptance, will provide still another means of accommodating spatial expansion. Similar in principle to the "Habitat" constructed for Montreal's "Expo," courtroom units with all necessary ancillary spaces, as well as modular units of departmental offices and correctional facilities, would be prefabricated for on-site assembly into a framed structure. Such self-contained, interchangeable structural units could be designed for easy assembly on rural locations to serve as single or multiple courtroom structures, with provisions for horizontal or vertical expansion. Under the present piecemeal construction of individual court buildings, such a construction technique is not economically feasible. What is required is standardization of building components and the prefabrication of large numbers of repetitive units to make the technique feasible. State takeover of court operations and facilities would be a step toward that direction.

Another related area of design flexibility is the use of movable furniture in major facility spaces, such as courtrooms. Incorporating in a plan the use of movable furniture, lightweight partitions, and other easily transported components again provides facilities with the flexibility of modern office buildings. Courtroom furniture, including judge's bench, witness and jury boxes, and clerk's station, constructed in modular units and of lightweight materials can be stored in a central area for easy and rapid movement by freight elevator or electrically-powered vehicle to any room designated as a courtroom. The routinely

long wait in submitting a request for equipment, letting a contract and furniture construction and delivery could be eliminated with a short inventory of "backup" components.

MULTIPLE-USE SPACES

Multiple use of spaces within a facility will eliminate the need to duplicate areas that, in many cases, are not used full-time. A common room could be designed, for instance, for witness isolation or jury deliberation. In large metropolitan courts, hundreds and even thousands of jurors are called for jury duty every week or every two weeks. However, that number is drastically reduced after the initial few hours on the first reporting day. By designing the jury assembly space in two parts, with a "control" area in-between (or, when one part is above the other, with public access available on one of the floors), one of the two parts can be used as the jury assembly space for uncalled and unimpaneled jurors, and the other can be converted with movable furniture into courtrooms or hearing rooms.

AUTOMATION OF COURT AND LAW ENFORCEMENT FUNCTIONS

During the past few years, court records, dockets, and civil and criminal case statistics have become more automated, with more sophisticated systems of data input and retrieval. In addition, audio-visual systems, including computer information retrieval, permit more precise control of space to improve security control. There is the beginning of a trend toward adapting videotape for recording of dispositions, especially those of medical expert witnesses who can not easily attend court sessions. A related development in cases involving a disruptive defendant, is the use of videotape for transmitting trial proceedings to a television monitor in a room adjoining the courtroom where the defendant has been transferred. Videotape possibly may be used for the official

recording of trial proceedings, made available to the jurors prior to or during jury deliberation, and perhaps to the public or press viewing in a space outside the courtroom.

There is bound to occur a more conscious application of an integrated information system for court facilities. An electrically-operated "tote board" mounted over a public waiting area, comparable to those used in airline terminals, but modified for court facilities and incorporated in the architectural design to retain procedural dignity, would direct persons to their locations within the building or facility complex.

Case data for review by judges, law assistants or attorneys easily can be retrieved from a memory bank in the computer system.

Television cameras placed at key locations in public and prisoner corridors and linked to a central security office can be used to improve safety for all who use the facility.

INTERGRATED MANAGEMENT AND FACILITY PROGRAMS

Trial courts in many states are undergoing change through reform and consolidation. Management studies frequently have been conducted without giving adequate consideration to the impact on facilities of reform and change. Management studies and facility planning are closely interrelated; management study should lead to facility analysis, and closer integration of the two disciplines is envisioned in the near future. Normally, a facilities analysis and a management study would be conducted in tandem. After recommendations for reform and consolidation have been made, existing facilities would be evaluated for adequacy and adaptability to future needs. Decisions then could be made on renovation versus new construction.

COURT SECURITY SYSTEMS

In a few states, overreaction has characterized the response to security problems in court buildings. Millions of dollars have been

spent unnecessarily for the installation of sophisticated detection and alarm systems that do not solve security problems, and what is worse, turn the courthouse into a "fortress," excluding use by the people it is supposed to serve. There no doubt will be developed, in the near future, a more systematic approach toward courthouse and law-enforcement security, striking an appropriate balance between use of existing security manpower, application of space planning concepts, improvement of court operations, and application of mechanical security systems and equipment. Significant improvement in functions of the first three components, at little or no cost, may eliminate entirely the need for installation of mechanical systems and equipment, or the provision of substantial additional manpower, both usually obtained at substantial cost.

END