Working in Olmsted's Shadow: Guidance for Developing a Scope of Services for the Update of the Master Plan for the U.S. Capitol and Grounds

The National Academies Press

Working in Olmsted's Shadow

Guidance for Developing a Scope of Services for the Update of the Master Plan for the U.S. Capitol and Grounds

Committee to Provide Assistance to the Architect of the Capitol to Develop a Scope of Services for the Update of the Master Plan for the U.S. Capitol and Grounds

Board on Infrastructure and the Constructed Environment

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Preface

The United States Capitol is among the most architecturally impressive and symbolically important buildings in the world. In addition to its iconic value as a shrine of democracy and national historic site, it is also a functioning workplace for thousands and a preeminent tourist attraction in Washington, DC. In March 1791 the Commissioners of the City of Washington, appointed by President George Washington, selected the French engineer Pierre Charles L'Enfant to plan the new federal city. The L'Enfant Plan expressed in physical form the concepts of separation of powers and equilibrium of federal and state governments. Symbolically balancing the executive and legislative branches, L'Enfant located the Capitol on Jenkins (now Capitol) Hill, the most prominent elevation between the Potomac and the Anacostia Rivers, and the President's House on a similarly elevated site to the northwest. In 1901, responding to concerns about reviving, refining, and extending the framework of the L'Enfant Plan to manage growth in the national capital, Congress adopted a resolution directing that a plan for the improvement of the entire park system of the District of Columbia be prepared and reported to the U.S. Senate. Senator James McMillan, as chairman of the newly created Park Improvement Commission of the District of Columbia (better known as the McMillan Commission), was responsible for this charge. For support in this endeavor, Senator McMillan enlisted such renowned experts as Frederick Law Olmsted, Jr., for the landscaping aspects of the plan and Charles McKim and Daniel Burnham for the architectural aspects. The central feature of the McMillan Commission's plan for the national capital was itself an open green space. The Mall was reconfigured to frame and emphasize the formal link between the Washington Monument and the Capitol. Reinforcing L'Enfant's themes, the McMillan Commission further highlighted the relationship among the grand axial streets and avenues, and the groupings of major public buildings along the Mall.

The Architect of the Capitol is charged with the operation and maintenance of the United States Capitol Complex, which is still governed by provisions of the L'Enfant Plan of 1792 and the McMillan Commission Plan of 1901 as well as legislation that has been enacted from time to time. The most recent master plan for future development of the U.S. Capitol grounds and related areas was developed in 1981. Although many of the recommendations of the 1981 Master Plan for new construction have been implemented, much has changed in America over the past 20 years.

Since 1983, increased security measures have been continuously put into effect, including the installation of barriers at vehicular entrances, other physical security features, and the initiation of construction of the Capitol Visitor Center. The events of September 11, 2001, and the subsequent anthrax attack on the Hart Senate Office Building in October of that year added yet another dimension to security concerns for Senators, Members, staff, and visitors. In light of the increased emphasis on security, ensuring open public access to national landmarks and maintaining the operational efficiency of the Congress and Supreme Court are paramount concerns. Additionally, planning for the Capitol Complex must also recognize the emergent goal of sustainability in the constructed environment and the potential impact of new and emerging technologies on the nature of the workplace.

The Architect of the Capitol has proposed that the 1981 Master Plan be updated and revised through a contractual effort that comprehensively addresses current and foreseeable

issues. The Architect of the Capitol requested that the National Research Council (NRC) convene a panel of experts to identify and discuss these issues, prepare a summary record of the discussions, and offer recommendations. Specifically, a workshop was to be convened to identify the topics that should be addressed in the Master Plan and discuss how they should be organized and integrated so that the scope of services set forth in the request for proposals (RFP) will be well focused, comprehensive, and unambiguous. The workshop was to give particular emphasis to such transcendent issues as security and public accessibility, sustainability, and technology and their effect on the planning and future operation of the U.S. Capitol Complex.

Under the auspices of the Board on Infrastructure and the Constructed Environment, the NRC appointed a committee of five experts in planning, architecture, public involvement, human ecology, and facilities management to plan and conduct a 1½-day workshop (see Appendix A for biographies of committee members, Appendix C for the workshop agenda). The committee augmented its capabilities by inviting thirteen additional experts of national renown from industry, academia, and government to participate in the workshop (see Appendix B for biographies of workshop participants). The Workshop to Provide Assistance to the Architect of the Capitol to Develop a Scope of Services for the Update of the Master Plan for the U.S. Capitol and Grounds was held on September 23-24, 2002, at the National Academies Building in Washington, DC.

Acknowledgment of Reviewers

This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the NRC's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We wish to thank the following individuals for their review of this report:

Nancy Rutledge Connery, Consultant
Jill Dowling, Lee and Associates, Inc.
Martha Droge, Ayers/Saint/Gross Architects & Planners
Paul R. Fisette, University of Massachusetts
Craig Zimring, Georgia Institute of Technology

Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations, nor did they see the final draft of the report before its release. The review of this report was overseen by Stuart L. Knoop, Oudens and Knoop, Architects, PC. Appointed by the National Research Council, he was responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the authoring committee and the institution.

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Workshop Synopsis

The Workshop to Provide Assistance to the Architect of the Capitol to Develop a Scope of Services for the Update of the Master Plan for the U.S. Capitol and Grounds was held on September 23-24, 2002, at the National Academies Building in Washington, DC; the workshop agenda is included as Appendix C. The general format of the meeting was to engage the participants in roundtable-type discussions, led by the committee chair, of selected topics related to campus master planning in general and current issues affecting the Capitol Complex. The Architect of the Capitol together with staff from that office and other stakeholder agencies (i.e., the House and Senate, Supreme Court, Library of Congress) provided information and answered questions posed by the participants. The synergy of these interactions elicited many useful points for the committee to consider and greatly contributed to the richness of the discussions. The findings and recommendations contained in this report, however, represent the opinion of the NRC committee that was appointed for this purpose. The responsibility for the final content of the report rests entirely with the committee.

The Capitol Complex

The U.S. Capitol Complex comprises the Capitol building, House and Senate Office Buildings, the U.S. Botanic Garden, the Capitol Grounds, the Library of Congress buildings, the Supreme Court building, the Capitol Power Plant, and various support facilities. To a large extent, the current form of the Capitol Complex was shaped by the expansion of the Capitol in the mid-19th century that added the House and Senate wings and the new dome. In 1874 Frederick Law Olmsted was commissioned to plan and oversee a major expansion of the Capitol grounds necessitated by the building additions. He directed the work on the grounds until 1889. Olmsted was determined that the grounds should complement the building and added the marble terraces on the north, west, and south sides of the Capitol. Landscaping was designed to adapt the surrounding areas to the new construction, and included grading of the ground and the planting of shrubs at the bases of walls as the progress of the masonry work allowed.

In general, the duties of the Architect of the Capitol include facility operations, mechanical and structural maintenance and repair of the buildings, the upkeep and improvement of the Capitol grounds, and the arrangement of special functions such as inaugural ceremonies and other events and ceremonies held in the building or on the grounds. Legislation has been enacted from time to time to include additional buildings and grounds within the jurisdiction and responsibility of the Architect of the Capitol. Funding for the activities of the Architect of the Capitol, including operations, construction, maintenance, and repair, is provided through congressional appropriations. The extent of the Capitol Complex is shown in Figure 1.1.

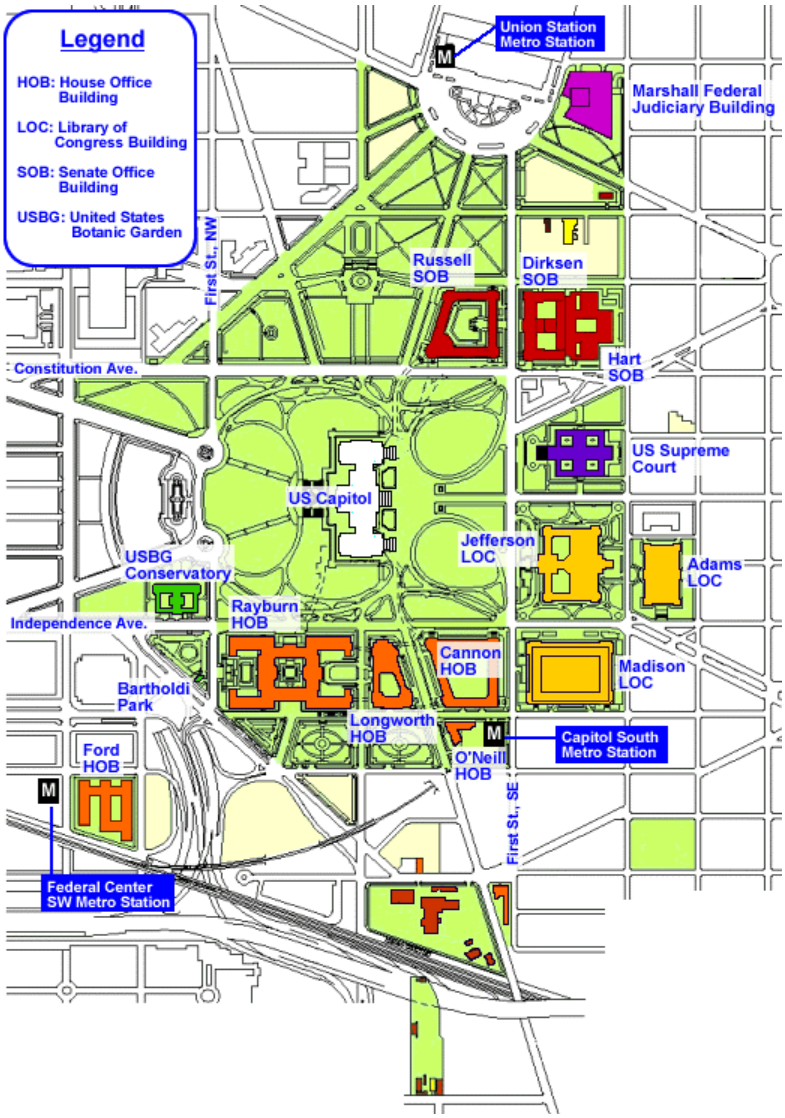

FIGURE 1.1 The U.S. Capitol Complex and Grounds. SOURCE: Architect of the Capitol.

At the present time, work is under way on the construction of a new Capitol Visitor Center, an underground facility to be located beneath the Capitol's east front plaza. Significant modernization projects are planned for the Supreme Court and the Capitol Power Plant that provides heating and cooling for the entire complex, as well as a major renovation of the National Garden of the U.S. Botanic Garden. Efforts are also under way to bring all facilities into compliance with requirements of the Occupational Safety and Health Act of 1970 (OSHA), the Americans with Disabilities Act of 1990 (ADA), and fire protection standards of the National Fire Protection Association (NFPA). Condition assessments are being conducted for the Capitol and the Senate and House Office Buildings. Finally, physical security improvements are either planned or under way for individual buildings and the Complex perimeter. The total estimated cost of this work is approximately $1 billion. A description of currently funded program activities is presented in Table 1.1.

TABLE 1.1 Ongoing Program Activities of the Architect of the Capitol

Activity	Description
Life Safety	These programs are essential for complying with the Occupational Safety and Health Act, environmental and hazardous material protection requirements, fire codes, and other regulatory matters affecting the general health and welfare of building occupants. Passage of the Congressional Accountability Act of 1995 in particular has placed significant emphasis on ensuring that the Capitol Complex is free of hazards to the Members, Senators, staff, and visitors.
Security	These programs meet the needs created by the increased risk of terrorist activity that has resulted in heightened sensitivity to threats to security at the Capitol Complex. In addition, there are security needs to protect property such as the collections at the Library of Congress.
Compliance with ADA	These are programs essential for complying with the Americans with Disabilities Act of 1990. Passage of the Congressional Accountability Act has reinforced the resolve to ensure that the Capitol Complex is free of barriers to the Members, Senators, staff, and visitors.
Cyclical Maintenance	Several buildings in the Capitol Complex are reaching an age and condition that, best practices suggest, indicate the need for major renovation or replacement of building systems. Various improvements are recommended to ensure that these building systems continue to provide services to occupants.
Improvement	Technology is changing far more rapidly than existing building infrastructures can support and adapt to. This is especially true in the rapidly expanding area of telecommunications, but there is a corollary effect that is felt in any building system that uses any sort of electronic technology for operation or support. Programs in this category support either the replacement of existing building systems or the installation of a new type of technology or structure to generate significant operational improvements or benefits.
Technology-Management Systems	These programs support the use by the Office of the Architect of the Capitol of computer applications and telecommunications systems to improve the efficiency and effectiveness of operations.

SOURCE: Architect of the Capitol.

A principal concern of the Architect of the Capitol is the need to plan, organize, and carry out short-term projects while not losing sight of their long-term physical and social implications for historic and iconic structures of national and global significance. Master planning is a proven approach for providing the policy framework on which to organize and order physical improvements on a temporal and spatial basis.

The Master Planning Process

Master planning processes for large campuses generally follow five steps:

- Observation, data collection, and analysis of the campus to obtain programmatic information for input to the master plan process,
- Preparation of a conceptual plan,
- Drafting of detailed plans for individual elements,
- Integration of the individual plans into a final plan for the overall complex, and
- Development of tools and strategies for implementation.

Master plan implementation tools might include design guidelines, space standards for the various Capitol Complex jurisdictions, and development of information technology systems that allow for the convenient storage and display of information for the buildings and grounds. However, the workshop participants noted that work on campus master plans typically does not begin until institutional leaders and other stakeholders participate in the creation of a vision for the campus that provides strategic direction. Absent a clear vision, the development of a truly meaningful and inclusionary master plan becomes problematic and may not be achievable.

A Capitol Vision

A strategic vision for a master plan provides direction, unifying themes, and a context for action. First and foremost, a vision for the U.S. Capitol Complex and Grounds needs to be inspirational and convey their magnitude and symbolic importance. Second, it needs to be comprehensive, integrating the commonalities that cut across different issues and reconciling competing issues such as security and accessibility. The master plan vision provides policy direction by physical example. It should represent enduring values, set the course for exemplary facility practices, and stand the test of time. To do this, it needs to embody consensus across groups and it needs to be flexible and not prescriptive. Overall it needs to provide guidance for informed choices to people as they implement the master plan through capital investments.

To be effective, a process to develop a master plan vision should involve a bipartisan group of stakeholders of the Capitol complex, including the Senate, House of Representatives, Supreme Court, and the Library of Congress. The Architect of the Capitol should ensure that the vision statement is clearly articulated so that people understand why it's important and why they should participate in the process. The process itself should be open and inclusive and reach out to all different stakeholders and provide an opportunity for them to express their values and concerns.

Although a vision statement as described above is crucial to the development of a master plan for the Capitol Complex, some inherent conflicts with the process were noted. For example, many of the workshop discussions focused on the patriotic, historic, or symbolic nature of the buildings and their relationship with the surrounding community and the need to obtain "buy-in" from a wide range of stakeholders. However, the diverse body that ultimately must agree on the vision is most solidly unified in their relationship to the facilities as a working environment, not necessarily the higher-order iconic issues. As such, resolving the broader issue of how an

elected, partisan body will agree in a reasonable time frame on a "vision" that will both enhance and preserve the historic structures and that, at the same time, may ultimately affect and possibly restrict their day-to-day functions is challenging. Delays may be foreseeable and, at the same time, unavoidable. The workshop participants noted that ongoing programs and projects are too important to allow them to become bogged down.

While an inclusive approach certainly represents an ideal to which most of the workshop participants would aspire, whether or not it can be accomplished in a time frame that can influence ongoing efforts is open to question. For this reason, there was much favorable discussion of a parallel or "dual-track" approach—allowing critical security, life safety, and renovation projects to go forward while maintaining consistency with a longer-term view of the Capitol Complex and its multiple roles in the neighborhood, city, nation, and world. This longer-term view should embody sufficient strategic guidance to allow for the rapid reassessment of priorities in the event of a national security, financial, or other crisis that may not be anticipated.

More than once during the workshop, the Architect expressed the desire for "a process that would put ongoing projects together and pull them into a timeline to make sure they fit with one another and represent movement and real progress toward the big picture that a master plan attempts to describe." Ideally, a capital planning and programming process would permit the Architect of the Capitol to appear before appropriations committees with a plan that includes current basic system needs—e.g., new sprinkler systems in the older buildings such as the Rayburn House Office Building—in a comprehensive package for the Capitol Complex and Grounds. Such a package would show what was planned for the future and the annual level of appropriations necessary to achieve consistent funding and a realistic workflow. For budgeting purposes this would be very helpful. A capital planning and programming process would acknowledge work that has already been undertaken and would engage key staff-level players in a deliberative and interactive dialogue. Such a process could be used to identify the appropriate action for areas of particular significance, use, or concern absent formal guidance from a master plan. The initial step would thus be fairly straightforward information collection, which could be completed expediently and which would serve as the basis for the subsequent, and more time-consuming, development of the vision.

Planning Concerns

During the course of the workshop, several overarching or transcendent planning concerns were selected for discussion. These included security, sustainability, historic preservation, and the role of emerging technologies in the workplace of the future. Although the workshop participants recognized that many more issues will need to be addressed in the master plan and therefore included in the RFP, these issues were discussed at length because of their particular relevance to the future of the Capitol Complex.

Security

Since the bombings of the U.S. embassy and Marine barracks in Lebanon and other attacks worldwide in the 1980s, the United States has increasingly been the target of terrorism. The 1993 bombing of the World Trade Center in New York and the 1995 attack on the Alfred P. Murrah Building in Oklahoma City were preludes to the suicide attacks on the World Trade

Center and the Pentagon on September 11, 2001. The anthrax attacks on the Hart Senate Office Building and other targets that utilized the U.S. Postal Service in October 2001 were yet another manifestation of terrorism. These events have generated a climate of fear, suspicion, and unease to which all government entities, including the U.S. Capitol Complex, have responded. As a result, there is an ongoing program of physical security enhancements currently under way at individual buildings and along the perimeter of the Complex. This work is a continuation of the enhanced security measures that began to appear in the Complex as early as 1983.

Overall, no workshop participants took serious issue with the need to provide security for the U.S. Capitol and other structures within the Capitol Complex. However, there was wide-ranging discussion of the image that these security measures project to the nation and the world, the impact of increased physical security on employees and neighbors of the Complex, and the potential long-term impacts of "temporary" security features. The workshop discussions focused on the contrast between the physical reality of greatly enhanced security and Americans' traditional love of freedom and openness. This is perhaps the fundamental issue that will shape the Capitol Complex in the years to come. The question of security and public accessibility need not have a simple "either/or" answer because appropriate levels of security can be provided while maintaining open public access. However, there is reason for caution because in the absence of guidance to the contrary, the history of U.S. embassies has shown that fortress-type construction is often the result. There was therefore considerable discussion regarding the experience with U.S. embassies since the 1980s and the evolution toward designs that put security first, often at the expense of other desirable objectives. One approach to achieving a practical balance of security and aesthetics is to encourage public input and utilize the skills of many disciplines, not just those of security or law enforcement specialists.

Sustainability

During the workshop, the issues of energy security, energy reliability, energy effectiveness, and green design were discussed. These discussions focused primarily on energy usage for buildings, infrastructure, and transportation and the extent to which the Capitol Complex could be, or ought to be, a world showcase of American ingenuity in developing cutting-edge environmental and energy technologies and practices. The point was made that enormous amounts of energy are used to heat and cool buildings in the United States and that technologies exist—and are in use—to achieve improved building performance and comfort levels at greatly reduced cost and energy consumption. There are several areas where proven but not always commercially viable technologies could be employed to demonstrate a national commitment to sustainability while at the same time showcasing U.S. capabilities. For example, combined heat and power generation (CHP) technology can achieve 80 percent total energy efficiency compared with traditional efficiencies of about 30 percent. Advanced "smart building" technology can be cost-effective within 3-10 life cycle years (depending on the scope). Combined fuel cell, gas turbine, and absorption chiller technologies, while not currently cost-effective for typical buildings based on energy savings alone, offer enormous promise for the future from the standpoint of energy security and reduced heat and pollution loadings. This was viewed as an opportunity for the United States to lead by example in an emerging area of international importance.

Transportation for Senators, Members, staff, and visitors to the Capitol Complex also has sustainability implications. Large areas of above-ground parking are provided for private

automobiles, and more will be needed as underground garages are closed or restricted due to security concerns. Alternatives to the private automobile, such as public transportation, multi-occupant car pools, and telecommuting could greatly reduce parking requirements and demonstrate a real commitment to sustainable transportation solutions. In the tradition of Olmsted, landscaping can also play an important role in providing relief from the "heat island" effect of massed buildings and paved parking lots. The present Capitol Complex makes exemplary use of landscaping and water features as design elements but these low-technology approaches also have an important and broader role in sustainable design.

Historic Preservation

Because of the obvious importance of historic preservation in any planning for the U.S. Capitol and Grounds, the participants did not address the topic in depth. However, historic preservation was recognized as a major factor in relation to an udpated master plan. Future plans must honor the heritage not only of existing structures but also of the grounds and landscaping, which have historic significance as well. In addition, both the L'Enfant Plan of 1792 and the McMillan Plan of 1901 still retain relevance for future activities. The L'Enfant Plan expressed in physical form the concepts of the separation of powers and the equilibrium between federal and state governments. Symbolically balancing the executive and legislative branches, L'Enfant located the Capitol on Jenkins (now Capitol) Hill, the most prominent elevation between the Potomac and Anacostia Rivers, and the President's House on a similarly elevated site to the northwest. The central feature of the McMillan Commission's plan for the national capital was an open green space. The Mall was reconfigured to frame and emphasize the formal link between the Washington Monument and the Capitol. Reinforcing L'Enfant's themes, the McMillan Commission further highlighted the relationship among the grand axial streets and avenues, and the groupings of major public buildings along the Mall.

One significant historic preservation issue that must be recognized in the master planning process is that the U.S. Supreme Court, U.S. Capitol, and related buildings and grounds are legally exempted from listing in the National Register of Historic Places, according to the National Historic Preservation Act of 1966, and therefore exempted from requirements to proactively plan for preservation (Section 110) as well as the protections afforded by Section 106. In the absence of historic designation, a master plan may be the only vehicle for a reasoned approach to the facilities and grounds based on a vision that recognizes the significance of these sites. In terms of stewardship, the master plan has to establish conservation objectives and identify those issues of repair, restoration, and reconstruction that have to be resolved and that require a full understanding of the history of previous work, why a particular space is significant, and what makes it significant. How the options are evaluated, the decisions that need to be made, and the methodologies for making those decisions have to be specified. Future Architects of the Capitol and associated planners will need data on the history of the system and methods used in order to decide, for example, whether to keep a piece of marble, replace it in kind, or remove it and change it to something else entirely.

Technology and the Workplace

The workshop reaffirmed the belief that technology has the power to transform the workplace of the future. The nature of work, work environments, and monitoring and

maintenance of the workplace all could be significantly affected by new and emerging technologies. Information technologies are linked to numerous workplace-of-the-future issues, such as reduced overcrowding in offices, increased administrative flexibility, enhanced security, and improved environmental control.

Robust network infrastructures allow flexibility in worker locations, including sites away from the Capitol Complex. For example, some Members and Senators are decentralizing their staff, who now work in their own home district and state instead of the District of Columbia. Decentralization has implications in terms of space needs and changes in the size of the Complex if, in fact, there are increases in staff in the House, Senate, or Library. Flexibility in working arrangements supports space density management options, rapid relocations, and rapid business resumption options. In the long run, the master plan should guide the decisions about what uses are most appropriate for the Capitol Complex, what types of data should be collected and maintained to support the master plan, and how new technology could be introduced into the offices and conference and meeting spaces to implement that vision. Congressional offices may not need to be sized or configured exactly as they are now, and through technology there could be a different distribution of spaces in the future. For example, there is much more collaborative work now being done with a concomitant need for different kinds of work spaces and technology requirements.

Network infrastructure and document management technologies allow remote storage and retrieval of documents, and promote space density reductions, reduced floor loadings, and flexible location of staff. Networked infrastructures can also support rapid business resumption at a predetermined alternative site in case of a natural disaster, accident, or terrorist attack. The master plan could offer a range of projections of how the Congress might function in the future under different technology scenarios.

Computer-aided facility management (CAFM) technologies offer enormous potential to support operational, historic preservation, security, and space management initiatives. They also provide the infrastructure and operational models the Architect of the Capitol needs to streamline its own organization as well as its relationships with Hill-wide and external business entities. At one end of the spectrum, CAFM systems offer the ability to answer questions such as "What resources are available?," "Where are they?," and "What is their condition and mission capability?"—questions that are essential for the operation of a campus of the size and intricacy of the Capitol Complex. This capability is critically important in emergencies.

Beyond its use as an information resource, however, the Architect of the Capitol organization must be prepared to operate in the new, Internet-based economy. The ability to capture, store, and use information and manage business relationships has changed dramatically over the past 20 years, and its potential to support the Capitol Complex of the future needs to be explored through an updated master plan. Finally, the master planning effort itself will likely generate a substantial quantity of environmental, site, facility, and organizational information that should be captured, integrated, and commissioned into the Architect of the Capitol's CAFM systems.

The Procurement Process

The workshop discussions emphasized that careful preparation for a master plan procurement process is extremely important. Procurement planning addresses several key issues such as cost, timing, contracting method, and whether there will be a single or multiple contracts.

It was noted that utilizing a single core management group or firm to oversee the master planning and procurement process on behalf of the Architect of the Capitol would offer real advantages. This type of management contractor arrangement would provide the flexibility to add or subtract tasks as they were needed on a task order basis and avoid involving the Architect of the Capitol in lengthy procurement and contract negotiations with firms or individuals that might be needed for only a single activity. The management group would also be responsible for determining and integrating the collective capability of the various offerors—for example, whether any of them have worked together, how well they work together, and whether there are particularly notable teams that have worked together on similar projects.

The scope of services for the procurement should be clear, concise, and specific. There should be no question in the offerors' minds as to what they are to provide and when they are to provide it. There should also be a mechanism to measure whether the specified deliverables have been provided. The Architect's office should also define what exhibits and data are needed during the RFP process and afterward so that the contractors start out on the right foot. To speed the evaluation and selection process, the scope of services of the contract should set forth the evaluation criteria used to select the firm or group of firms that will do the work. Although quantitative evaluation criteria bring discipline and organization to the selection process, finding the best qualified offeror for a specific activity cannot always be reduced to a numerical scoring system. Multifirm teams in particular generally score well under these conditions but may still lack the outstanding capability the Capitol Complex deserves. The scope of services should be as performance-based as possible so that it does not limit solutions to a single approach or suggest solutions to the contractor.

Preproposal meetings with potential offerors are an important step in the acquisition process. Regardless of how carefully the scope of services is written, there are always many questions from potential offerors, and preproposal meetings provide the opportunity to answer them. These meetings would also provide the Office of the Architect of the Capitol with an opportunity to explain the unique relationships among the entities that are going to be affected by the contract. This includes both the organization of the Architect's office and the various organizations that occupy the Capitol Complex. The preproposal meeting could also be used to explain the interfaces with other organizations and existing plans so that the offerors know the parameters of the project. It was noted during the workshop discussion that because of the strong emphasis on design in master planning, selected elements of the procurement could be done as a competition. In particular, visual presentations such as maquettes would further demonstrate the capabilities of a team (the costs of preparing for this type of competition are sometimes offset with small stipends). Once work is under way, interim deliverables may be useful to make sure the project is on schedule and that the stakeholders know where it is going and how it compares to predetermined milestones and benchmarks.

2

Committee Recommendations

Although the workshop participants focused on the task of identifying topics to be included within a scope of services for a planning solicitation, it became obvious during the course of the workshop discussions that the challenges faced by the Architect of the Capitol related as much to short- and medium-term operational issues as to a reconceptualization of the future of the Capitol Complex itself. As a result, the NRC committee appointed to oversee the workshop and develop this report has chosen to offer recommendations that not only address the immediate charge of helping to develop a scope of services but also provide practical guidance that can facilitate ongoing capital investment and facility management efforts.

The committee recognizes that the information-gathering potential of a 1½-day workshop is limited. The recommendations that follow are based both on the workshop discussions and on the committee's own extensive background in the topics discussed. This report is not presented as a treatise on master planning or as a comprehensive assessment of all planning issues that will arise as the form and function of the Capitol Complex continue to evolve. It is the committee's intent to provide practical guidance to the Architect of the Capitol that can be used in planning and developing a solicitation package for an update of the Master Plan for the U.S. Capitol and Grounds. The workshop discussions also identified approaches that could facilitate ongoing capital improvement and facility management efforts, and the committee urges the Architect of the Capitol to consider them as well.

1. The Architect of the Capitol should prepare and maintain a 5-year rolling capital improvement plan for the Capitol Complex.

Perhaps the most daunting challenge facing the Architect of the Capitol is how to provide (1) enhanced security measures necessitated by the real threat of terrorist attack, (2) physical upgrades to bring historic buildings into compliance with U.S. laws mandating workplace safety and accessibility, and (3) ongoing facility management services in a dynamic workplace and tourist environment while maintaining fidelity to a long-established historic resource. Projects totaling almost $1 billion are currently planned or under way to address these concerns; additional funds will be requested in future budgets to complete the work.

As a first-order priority, the committee believes that the Architect of the Capitol should develop and implement a multiyear capital planning process to organize, in time and space, the approximately $1 billion in projects approved or under way in order to improve coordination and minimize disruption. A capital improvement plan would also assist in planning and coordinating future funding requests. As part of the capital improvement and investment plan, the Architect of the Capitol should annually gather, develop, and prioritize projects using a business metric, based on either internal rate of return or net present value. The capital improvement plan should express business goals in measurable terms, define the metrics, and plan for the use of information technology resources to monitor and report on progress toward achieving goals.

2. The Architect of the Capitol should solicit the services of a core management group with proven expertise in architecture, landscape design, urban design, historic preservation, facility planning, facility performance evaluation, and facility-based information management to manage the master planning effort through all of its phases.

Workshop participants devoted considerable time to discussing whether the master planning effort should be performed by a multidisciplinary team selected through a single procurement or a number of consultants selected on an as-needed basis as the master planning effort proceeds. A problem with multidisciplinary teams is that typically they are rigidly structured to respond to criteria established early in the procurement process and often lack the flexibility to go off in new directions as ideas and information are generated and priorities shift during the planning process. The committee favors the selection of a core consulting group that would develop a close working relationship with the staff of the Architect of the Capitol and, working within the overall "Capitol vision" guidelines, perform many of the day-to-day activities involved in drafting the master plan. If specialized expertise or capabilities were needed, it would acquire them, often by using task orders. Because this management group would be working in a complex political and institutional environment, its senior managers must possess uncommon communication skills and a profound appreciation for the context of the master planning effort.

The team working on the master plan should also:

- Study best practices in capitals around the nation and the world.
- Reevaluate past planning and visioning efforts.
- Extend and enhance the Architect of the Capitol's geographic information and facilities information models, which designers and stakeholders could use to explore the relationships between existing facilities, work in progress, approved projects, long-range plans, and heritage inventories.
- Conduct ongoing systematic evaluations of existing and redeveloped public spaces, workplaces, and public buildings. The evaluations should create an information base for decision making and should focus on issues such as satisfaction among workers and the public, energy and technical performance, circulation and wayfinding, support of work, and other issues as appropriate. This information should be provided to decision makers and integrated into the Architect of the Capitol's geographic and facilities information systems.
- Solicit the views of interested parties such as the Capitol Hill community, the District of Columbia government, the Washington Metropolitan Area Transit Authority, the National Capital Planning Commission, and the Fine Arts Commission, among others.

3. In support of the master planning process, the Architect of the Capitol should consider the establishment of an expert panel to advise on facility design and operational issues.

An outside advisory panel of recognized experts could provide the Architect of the Capitol with guidance for internal decision making and could help explain design policies and decisions to the public and other stakeholders. The State Department in 1953 created such a panel, which included both architects and other professions, and the General Services

Administration and Federal Reserve Board utilize similar bodies for design issues. The advisory panel for the Architect of the Capitol should possess sufficient technical depth to be able to advise in such areas as planning, architecture, landscape design, urban design, security and emergency planning, historic preservation, civil, mechanical, structural, and building systems engineering, transportation, technological infrastructure and systems, human environments, facilities performance evaluation, and sustainable design. Public participation planners will be needed to develop and implement a strategy for communicating with stakeholders and for outreach to interested groups. If such an advisory body is established, the committee believes that the Architect and elected officials and representatives of various user and stakeholder groups should oversee it.

4. A comprehensive and inclusive vision for the U.S. Capitol and Grounds should be developed to underpin the formulation of a master plan.

A bipartisan, bicameral group of congressional leaders as well as the leaders of the Supreme Court and the Library of Congress should be intimately involved in the process of creating a vision for the Capitol Complex. The vision should be inspirational and clearly articulate why the master plan is important. The vision should help identify the place of the U.S. Capitol within the world, the nation, and the local community as a shrine of democracy, temple of law, and seat of government, as well as the national library and congressional museum.

The committee believes that creating a vision for the U.S. Capitol Complex is a critical part of the master planning process. However, because the visioning process will be lengthy and involve many stakeholders, it should proceed in parallel with the many observation and analysis tasks that need to be undertaken in support of a master plan. These include such topics as origin and destination studies of employees, the condition and use of the buildings and grounds and their historic context, relevant plans and planning efforts of the District of Columbia, and the impact of the Complex's proposed development on surrounding neighborhoods.

5. The physical planning element of the master plan should provide guidance for development and change within the Capitol Complex based on the scale of the change and its relationship to the Complex and the District of Columbia.

In advance of future site planning, the site inventory needs to be updated to include information on buildings, landscapes, and other structures on the grounds, such as statues and fountains that are protected by law or need to be preserved because of their aesthetic or historic value. In the long run, a design approach that would assist in maximizing security without compromising aesthetics (as defined by the Capitol vision) and historic structures and grounds should be developed. The question of what can be done to increase the sense of comfort and security of workers and visitors as they move within the Complex should be explored, e.g., ways that parking areas could be used to both enliven the landscape and enhance security. Likely changes in the ways office and meeting space in the Capitol Complex will be used in the future as a result of new technologies and shifts in the ways people interact could have a dramatic impact on site planning. For example, computer and communications technology might make it possible for more work to be relocated to district or home offices, with less office space required at the Capitol Complex.

6. As part of the facility planning process, the master plan should address workplace-of-the-future issues.

One of the important responsibilities of the Office of the Architect of the Capitol is to set policies and standards for space utilization. Space standards must be studied in depth because the Congressional Accountability Act now establishes that federal worker health and safety standards apply to the Capitol Complex. However, the master plan should contain a facility management component that provides policy direction by concrete physical example on a number of workplace issues such as indoor air quality, thermal quality, visual and spatial ergonomics, organizational flexibility, technological adaptability, and energy and environmental effectiveness.

7. The master plan should include an element that thoroughly explores the potential of information technology (IT) to enable, monitor, and improve the working environment. It should also study improvements that might be achievable through the further integration of current IT systems supporting congressional/judicial business processes and IT systems associated with facility support.

Information technology can assist in reducing overcrowding in offices, enabling flexibility and environmental control, and improving worker health and safety. Robust network infrastructures allow flexibility in worker locations, including sites away from Capitol Hill, thereby supporting space density management options and rapid relocations. Network infrastructure, information and transaction standards, and document management technologies, which allow remote storage and retrieval of documents, enable more automated transactions, and promote space density reductions, reduced floor loadings, and flexible location of staff. They also support a more robust and secure business environment through strategies such as redundant and disbursed assets and rapid business resumption at predetermined alternative sites in case of a natural disaster or attack.

8. The master planning process should be supported by a comprehensive facility management system.

A complete inventory of current assets for which the Architect of the Capitol has management responsibility should be developed that includes, for example, both their current and projected condition, serviceability, and short- and long-term operational costs. The facility management system should formalize the scope and details of facility information management as a function of desired facilities and operational quality standards, define recommended organizational responsibilities for facility information, and make the acquisition and management of facility information an integral part of every initiative undertaken under the master plan. This information can also be used in support of building commissioning and post-occupancy evaluation (POE) activities.

9. The computer-aided facility management (CAFM) system should be continuously improved.

The Architect initiated the implementation of a CAFM program in 1998, an effort that included a strategic plan for development and maintenance of the program. The revised Master Plan for the U.S. Capitol and Grounds should incorporate the CAFM strategic plan and make use of and continue to extend capabilities in the CAFM system. It is especially important that building superintendents have ready access to performance metrics derived from information contained within the CAFM system. Superintendents and their immediate management staffs interface with customers most often and need to know the status and capabilities of their facilities as well as which projects are under way or in planning. Because craftspeople who have not yet been born will maintain and repair the Capitol Complex's buildings and grounds in the future, it is important that the CAFM system be configured to routinely capture both graphic and nongraphic data in the system in standardized formats that will be usable many years from now.

Appendixes

A

Biographies of Committee Members

Jonathan Barnett (*Chair*) is an architect and planner, educator, and author of numerous books and articles on the theory and practice of city design. He has served as an urban design advisor to many U.S. cities, government agencies, and the National Capital Planning Commission. He is a professor of city and regional planning at the University of Pennsylvania, former professor of architecture and founder of the graduate program in Urban Design at the City College of New York, and he has been a visiting professor at several universities. Mr. Barnett is a fellow of the American Institute of Architects and a member of the American Institute of Certified Planners. He holds bachelor's and master's degrees in architecture from Yale University and an M.A. from the University of Cambridge. He is a former member of the NRC Board on Infrastructure and the Constructed Environment.

Max Bond is a partner in the architectural and planning firm of Davis, Brody, Bond, LLP located in New York City and has 40 years of experience in the practice of architecture. He is a former professor of architecture and environmental studies at the City College of New York and former chairman of the Division of Architecture at Columbia University. Mr. Bond has extensive experience in the design of numerous projects for institutional clients throughout New York as well as familiarity with historic and iconic structures. He is a fellow of the American Institute of Architects, and a member of the National Organization of Minority Architects and the American Academy of Arts and Sciences. He received an A.B. from Harvard College and an M. Arch. from the Graduate School of Design of Harvard University. He is a former member of the NRC Board on Infrastructure and the Constructed Environment.

Robin Douthitt, dean of the School of Human Ecology at the University of Wisconsin-Madison since 2001, is an expert both in consumer and family issues and their impact on the workplace, and in public perceptions of individual and societal risk. Last year, she worked on the team that developed the National Science Foundation proposal to establish a Center for Building-Vulnerability Science at the University of Wisconsin-Madison, to explore this emerging field from academic, public, professional, and government perspectives. Dr. Douthitt's recent honors include being named a Distinguished Fellow of the American Council on Consumer Interests in spring 2002, in recognition of her leadership in the consumer field, and receiving the 2000 Wisconsin Alumni Association Cabinet 99 Recognition Award. In 1999 she was named the Vaughn Bascom Professor of Women in Philanthropy, the highest level of named professorship at the University. Her research interests span consumers' perceptions of risk related to biotechnology, the cost of raising children, the value of volunteer work, the role of university mentoring and more. She holds a B.S. from the Ohio State University and an M.S. and Ph.D. from Cornell University.

Douglas Sarno is a Principal with The Perspectives Group in Alexandria, Virginia. He has more than 15 years of experience promoting and implementing public participation throughout the

United States and the world. He regularly advises and provides training to government and not-for-profit organizations in areas including public participation, public education, communication, decision making, group dynamics, media relations, and strategic planning, and has written and spoken widely on these subjects. He designed and implemented the Certification Course in Public Participation of the International Association for Public Participation and wrote the public participation guidance for the U.S. Nuclear Regulatory Commission. Mr. Sarno holds a B.S. in civil engineering from the University of Virginia and an M.B.A. from the University of Maryland. He is a member of the NRC Board on Infrastructure and the Constructed Environment.

Eric Teicholz is president of Graphic Systems, Inc. (GSI), a Cambridge, Massachusetts firm specializing in facility management technology consulting and systems integration. He is a contributing editor for several magazines and the author of ten books. Mr. Teicholz lectures and writes extensively on CAFM and real estate technology. He was an Associate Professor in Architecture and a Co-Director of the Laboratory for Computer Graphics and Spatial Analysis, which performed research and software development in the area of CAD and Geographic Information Systems at Harvard's Graduate School of Design. While at Harvard, Mr. Teicholz designed and helped develop the first commercial architectural CAD system. He received his architecture degrees from Harvard University. He is a former member of the NRC Board on Infrastructure and the Constructed Environment and has recently been appointed to the Secretary of the Navy's Facility Management Panel.

B

Biographies of Workshop Participants

David G. Cotts is a management consultant specializing in advising corporate and government facilities and administrative managers and their management teams. A graduate of West Point, he has an M.S. in civil engineering from Iowa State University. He is both a registered professional engineer (P.E.) and a certified facility manager (CFM). He served worldwide during a 22-year career with the U.S. Army Corps of Engineers. In 1981 he left the Army to assist in the establishment of facility management at The World Bank headquarters in Washington, DC. He employed an international staff there in a variety of operational, planning, and design management positions prior to retirement. Mr. Cotts is past president of the International Facility Management Association and a member of its first class of Fellows. He founded a facility management certificate program at The George Washington University and managed that program there and at George Mason University for 8 years. He continues to teach and write extensively on facility management, customer-oriented services, and innovative contracting. Mr. Cotts is the author of the *Handbook of Facility Management, 2d ed*., published by the American Management Association, and is the co-author, with Stormy Friday, of *Quality Facility Management.* His new book, *The FM's Guide to Finance and Budget,* co-authored with Ed Rondeau, will be published by the American Management Association in 2003.

Jill Dowling is the Director of Cultural Resources for Lee and Associates, Inc., a landscape design and urban planning firm in Washington, DC. She holds a master's degree in heritage preservation from Georgia State University, and has 10 years of experience in historic preservation and cultural resource planning and management. Ms. Dowling was a primary author of the draft historic structure report and preservation plan for Frank Lloyd Wright's Wisconsin home, Taliesin, a National Landmark. Notably, she also developed an evaluation methodology and preservation plan for Maryland's Historic Bridges (2000), and worked with environmental scientists to quantify and analyze air pollution impacts on World Heritage Sites in Asia for UNESCO's Principal Regional Office for Asia and the Pacific (1999). Before coming to Lee and Associates, Ms. Dowling applied the National Trust for Historic Preservation's Main Street model on Capitol Hill as the founding Executive Director of Washington, DC's first "Main Street," Barracks Row/8th Street SE. In this capacity, she directed an architectural survey, extended the Capitol Hill Historic District, and developed design guidelines and a heritage trail as tools to support commercial revitalization and economic development. Ms. Dowling is currently a panel member of the NRC Transportation Research Board's National Cooperative Highway Research Program project: Evaluating Cultural Resource Significance Using Information Technology.

Martha Droge served for 7½ years as a Special Agent in the U.S. Department of State's Diplomatic Security Service. As a federal law enforcement officer, she conducted criminal investigations and implemented physical security, personal security, and counter-terrorism programs domestically and at U.S. embassies abroad. Ms. Droge holds graduate degrees in both landscape architecture and urban & environmental planning. She currently specializes in master

planning for cultural institutions and university campuses at Ayers/Saint/Gross Architects in Baltimore, Maryland.

William Dupont, AIA, is the Graham Gund Architect of the National Trust, a private, nonprofit organization chartered by the U.S. Congress in 1949 whose mission is to provide leadership, education, and advocacy to save America's diverse historic places and revitalize communities. Mr. Dupont directs or facilitates architectural and landscape projects at twenty-one National Trust Historic Sites, and also collaborates on issues of collections care as well as educational and interpretive programs. Predominantly focused on restoration and maintenance projects, Mr. Dupont also provides oversight and direction for the Associate Sites Program (launched in spring 2002) and the opening of the President Lincoln and Soldiers' Home National Monument as a historic site. Mr. Dupont, a licensed Architect, graduated from Brown University. He received a master of architecture degree and certificate in historic preservation from the University of Pennsylvania, and was awarded a traveling fellowship from Harvard University to serve as a recording architect on the Sardis Expedition's archaeological excavation. Prior to joining the Trust in 1996, Mr. Dupont worked in various architectural offices in the Philadelphia area, and also served more than 3 years as the Historical Architect for a program in New Jersey that distributed $22 million in matching funds for preservation projects during his tenure.

Alan R. Edgar is a Vice President and Senior Project Manager at Graphic Systems, Inc. (GSI) in Cambridge, Massachusetts. He is currently managing multiple government-sector projects involving facilities information assessment, business process improvement, technology evaluation, application implementation, and education. He provides research and development support for GSI in the areas of facilities information commissioning, management, integration, and end-user support. His major areas of interest are integrated life cycle approaches to the capture, management, and use of architectural and facilities information; developing and implementing more natural interfaces between sources of information, storage and retrieval mechanisms, and end-users; and integrating workflow process engines into CAFM applications. Mr. Edgar holds bachelor and master of architecture degrees from Kansas State University.

Volker Hartkopf is a professor in the School of Architecture and Director of the Center of Building Performance at Carnegie Mellon University. He teaches design and building performance in the professional, master's, and doctoral programs. He has completed research and demonstration projects in the United States and abroad in industrial architecture, housing, commercial buildings, energy conservation, and whole building performance. Dr. Hartkopf was instrumental in establishing North America's first multidisciplinary graduate program in architecture, civil engineering, and urban affairs in 1975 with grants from the NSF and the building industry. At Public Works Canada, he codeveloped the Total Building Performance Evaluation method. Since 1988, Dr. Hartkopf has directed the Advanced Building Systems Integration Consortium (ABSIC), an industry-university-government partnership dedicated to improving the quality of the workplace. In 1990, he initiated, conceptualized, and raised the funds on a global basis for the Robert L. Preger Intelligent Workplace, a $4-million living and lived-in laboratory and demonstration facility. This project features unprecedented systems concepts for user satisfaction and productivity, organizational flexibility, technological adaptability, and energy and environmental effectiveness. He has contributed to over 100 technical publications. Dr. Hartkopf holds a Diplom-Ingenieur, Architect, from the Technical

University of Stuttgart, an M. Arch. from the University of Texas, and a Ph.D. from the University of Stuttgart.

Jeff S. Lee, ASLA, is the founding principal of Lee & Associates, Inc. of Washington, DC. He has long been involved in site security issues starting in 1984, when he designed U.S. embassies utilizing the "Post Beirut Bombing Site Security Requirements" for the U.S. State Department. Since that time, he has designed numerous diplomatic facilities and many site-sensitive projects in the Washington region, including the Ronald Reagan Building at the Federal Triangle and the Remote Delivery Facility and Metro Entrance Facility, both at the Pentagon. He is presently working on incorporating perimeter security measures for the Thomas Jefferson Memorial. Mr. Lee participated in the expert panel addressing "Designing Security in the Nation's Capital" at the National Park Service's January 2002 conference "Our Public Safety and Historic Places." He has served as the President of the Potomac Chapter, American Society of Landscape Architects (ASLA), and represents the Committee of 100 as a member of the National Capital Park and Planning Commission's National Capital Urban Design and Security Task Force.

Jane C. Loeffler is Visiting Associate Professor, University Honors, at the University of Maryland. She is the author of *The Architecture of Diplomacy: Building America's Embassies*, and has lectured widely and published numerous articles, including opinion pieces in the *New York Times* and the *Washington Post* ("Diplomacy Doesn't Belong in Bunkers") on the history of U.S. foreign buildings and the widening role that security has played in that story. For her contributions to international affairs, the U.S. Department of State awarded her its Distinguished Public Service Award in 1998. Professor Loeffler is a graduate of Wellesley College, where she was awarded the Plogsterth Prize in Art History, and holds a master's in city planning from Harvard's Graduate School of Design and a doctorate in American civilization from George Washington University. As consultant to the National Gallery of Art, she authored *Frederick Law Olmsted/USA* for the Gallery's first major exhibition on landscape architecture in 1973. She later served as curator at the National Building Museum, where she initiated her study of embassy architecture. Since 1993 she has been literary executor of the papers of Frederick Gutheim, the noted Washington planner and preservationist with whom she was associated for many years. Her profiles of Gutheim appeared in *Preservation* and *Washington History*.

Robert Smilowitz is a principal with Weidlinger Associates of New York. He has 24 years of experience in mathematical modeling and dynamic response calculations for ship, satellite, and hardened and conventional structures subjected to shock and vibration loading. Dr. Smilowitz has considerable expertise in blast-resistant design of structures and the vulnerability analysis of structures to vehicle-bomb attack. He has participated in the design of numerous federal courthouses and office buildings, embassy structures, airline terminals, and commercial structures. Dr. Smilowitz is a registered engineer in New York and California and has published extensively on blast-resistant and seismic design issues. He holds a BSCE from the Cooper Union for the Advancement of Science and Art and an M.S. and Ph.D. in civil engineering from the University of Illinois at Urbana-Champaign.

Lawrence J. Vale is Department Head and Professor of Urban Studies and Planning at the Massachusetts Institute of Technology. His research interests include design politics, public housing, and qualitative methods. Other research examines the architectural and urbanistic

expression of institutional power, and the growth of design and marketing efforts aimed at "imaging" places. Dr. Vale is the author of several books and numerous articles including *Architecture, Power, and National Identity, Mediated Monuments and National Identity*, and *From Façade to Interface: Representing Institutional Power in Cyberspace* (forthcoming). Dr. Vale has received many awards including Best Book in Urban Affairs (2002), the Place Research Award (2000), and the Margaret MacVicar Faculty Fellowship for excellence in teaching (1999-2000). Dr. Vale holds a Ph.D. in philosophy from Oxford University.

Dianne Walters is a graduate of Virginia Polytechnic Institute and a registered architect. She has extensive experience in planning, design and construction, facilities management, and procurement. During her career with the General Services Administration (GSA) she served as Program Executive of the Courthouse Management Group, Deputy Assistant Commissioner for Procurement, Deputy Assistant Commissioner for Design and Construction, and Director of Facilities Management and Support. Since leaving GSA, Ms. Walters has provided her expertise to organizations including the Administrative Office of the Courts and the College of Architecture at Georgia Institute of Technology.

Craig Zimring is professor of architecture and of psychology at Georgia Institute of Technology. He has developed methods, procedures, and concepts, including computer tools, for the analysis and evaluation of building issues such as wayfinding, security, and stress. He has particularly focused on how social, organizational, and behavioral information can be incorporated into design and decision making at a variety of scales and building types such as healthcare facilities, jails and prisons, courthouses, and embassies. He has served as consultant and directed research projects for a number of corporations and government agencies and served on the board of several professional organizations including the Environmental Design Research Association and the Justice Facilities Research Program. Dr. Zimring holds a B.S. from the University of Michigan and an M.S. and Ph.D. from the University of Massachusetts, Amherst. He is a member of the NRC Board on Infrastructure and the Constructed Environment.

C

Workshop Agenda

Monday, September 23, 2002

12:00 – 1:00 pm **Welcoming Luncheon**

1:00 – 3:15 pm **Briefings from the Architect of the Capitol and Congressional staff**

- *The changing nature of the Capitol Complex*
- *Security*
- *Technology implications*
- *Human resources*

3:15 – 3:30 pm **Break**

3:30 – 5:30 pm **Roundtable Discussion by Participants**

5:30 – 6:30 pm **Reception**

6:30 – 7:30 pm **Dinner**

Tuesday, September 24, 2002

8:30 – 9:00 am **Continental Breakfast**

9:00 – 9:30 am **Goals for the Master Planning Process**

Importance of the RFP in Obtaining Desired Results

9:30 – 10:30 am **Participant Discussion of Selected Issues**

- *The role of the Capitol Complex in Washington, DC*
- *The workplace of the future*
- *Technology and government*
- *Security and openness*
- *Community interface*
- *Historic preservation*

10:30 – 10:45 am **Break**

10:45 – 12:30 pm **Participant Discussion (cont'd)**

12:30 – 1:30 pm **Lunch**

1:30 – 3:00 pm **Synthesis and Summary**

3:00 – 3:30 pm **Final Thoughts and Adjourn**