

I. INTRODUCTION

The purpose of this paper is to address the various basic factors and key questions which would influence a new building program and to present a preliminary overview of potential options for proposed construction in the Langley Compound. The obvious first question is "Will there be a new building?" Assuming the answer to be yes, other questions arise. What will be the scope and scale of this new facility? Will the new facility solve for Headquarters Building needs, external building needs, or both? How will the building program be funded and what time frame is acceptable? The intent of this effort is to evaluate these factors and considerations as a preliminary assessment which will provide a basis for further study, development, and future decision-making relative to such a potential program.

II. BRIEF HISTORY

Throughout the years, the Agency has strived to consolidate its Headquarters functions and holdings at one central location. Due to the approval of less than required appropriations from the Congress, only a portion of the Agency was provided for in the new Headquarters Building at Langley in early 1960. The remainder of Agency external functions were eventually relocated from temporary buildings to permanent building satellite complexes in Washington, D.C., and Northern Virginia. Several years after

the occupancy of Headquarters Building, the Printing Services Building was constructed on the Headquarters site. In 1974, the new Headquarters Motor Pool Garage was completed and occupied. A new classified waste destruction Hammermill Building will be constructed on the site within the next year. In 197_ approximately _____ acres of Department of Transportation land to the west of our Headquarters compound was assigned to the Agency as part of an underutilized federal property excessing process.

A. Current Agency MWA Facilities Posture

1. Number and Size of MWA Buildings

In addition to the facilities on the Headquarters compound, the Agency occupied _____ external buildings and _____ square feet of space in the Washington, D.C., Northern Virginia, Metropolitan Washington Area. These facilities are located in satellite complexes such as 2430 E Street [redacted] which are federally owned buildings; and Rosslyn, [redacted] which are commercially leased buildings. A specific listing of Agency occupied space in the MWA is contained in Attachment 1. Other Agency holdings such as covert, operational, or functionally incompatible space have not been included since their consideration is irrelevant to the objectives of this paper.

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2. Lease and Ownership Status

Forthcoming and on-going negotiations of leases on all commercially leased buildings will occur within the next year. Lease arrangements are intended to provide the flexibility necessary to be compatible with a seven-to-ten-year time frame anticipated for implementation of an Agency building program at Headquarters. Lease expiration dates and present lease conditions for each leased building is contained in Attachment 2.

Continuing efforts have been exerted with the General Services Administration to acquire a replacement building on an accelerated basis for Magazine Building whose lease expires in November 1975. GSA has received offerings of space from prospective building owners in response to a formal GSA request of interest and has issued solicitations for specific bid proposals which are due in mid-March for 90,000 square feet of space within a five mile radius of Headquarters Building.

External federally owned buildings occupied by the Agency appear to pose no major tenure problems. On-going construction in newly acquired space on the sixth floor [] should provide NPIC with sufficient expansion space. There are no known future

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plans for other than continued federal occupancy of which houses the OGCR/DDI Map Library. Continued Agency occupancy of the 2430 E Street Complex appears certain and unlimited. A major factor requiring its tenure is the existence of satellite telephone equipment systems in Central Building through which all telephone switching for "downtown Agency components" is accomplished. The only potential threat to continued occupancy could be the contiguous location of this complex to State Department Headquarters. It is understood that the State Department has expressed interest in these facilities in the past.

B. Previous Planning

1. Ad Hoc Study Group

In 1966 an ad hoc study group analyzed Agency space posture and recommended the need for further and serious consideration for the design and construction of a "Special Purpose Technical Building" in which all existing and proposed technical functions could be consolidated at the Headquarters site.

2. Building Planning Staff No. 2

A Building Planning Staff was established in 1969. Its major contribution consisted of an interim partial consolidation plan involving expansion of the Printing Services Building and the implementation of a Preliminary Master Plan conceptualizing the consolidation of MWA

Agency functions other than the National Photographic Interpretation Center (NPIC) and the Central Depot on an expanded Headquarters site. The consolidation was justified on the basis of cost effectiveness and operational efficiency. The exclusions of NPIC and Central Depot were due to excess size, functional incompatibility, acceptability of operational separation, and unnecessary excessive costs of reproducing perfectly adequate sophisticated facilities.

3. Headquarters Garage and Preliminary Master Plan
Upon the development of design drawings for the Headquarters Garage, federal law required the review of the garage design and the Preliminary Master Plan of the Headquarters site by the National Capital Planning Commission (NCPC) and a review of environmental impact descriptions for these presentations by the Environmental Protection Agency (EPA) prior to project approval. A series of discussions were held with NCPC and EPA and certain parameters were established for physical and environmental factors that would have to be considered.

4. Building Planning Staff No. 3

Re-establishment of the current Building Planning Staff resulted from the impact of an in-house Environmentally Sensitive Equipment (ESE) study which concluded that our Headquarters Building sensitive equipment functions were marginally supported in terms of reliability and safety and that trends indicated existing ESE areas could not provide an adequate environment for future equipment. Study recommendations included a proposal to renovate an area of Headquarters Building to provide adequate ESE facilities while maintaining on-going ESE operations. Affected Agency component reaction to the study favored the construction of a new ESE building rather than modification of the Headquarters Building.

Accelerated action to recruit five contract professional architects and engineers for the Building Planning Staff is underway and many of the candidates are presently undergoing concurrent background investigations and internal processing. Upon successful recruitment and staffing, the BPS will conduct the necessary surveys, research, analysis, and planning to determine Agency facilities requirements for a new building. This

effort will result in a program requirements document for internal approval which will also consist of various planning options, budgetary estimates, timing, organizational posture, and design and construction process recommendations. Upon achieving internal program approvals, a Congressional strategy and program justification will be prepared for Congressional project approval, design funding appropriations, and construction funding appropriations. The BPS will then perform as Agency focal point for the coordination, liaison, monitoring, and influencing the implementation of design and construction of the building project.

III. DISCUSSION - OPTIONS AND FACTORS AFFECTING NEW CONSTRUCTION

A. Justification

1. Cost Effectiveness

The present dispersed location of Agency functions has had a negative effect upon Agency operational efficiency and cost effectiveness in terms of personnel, money, and facilities. Agency occupancy of such multi-building locations has resulted in loss of personnel time due to travel between facilities and duplication of guards, receptionists, couriers and mail clerks, building services officers, and administrative/supervisory personnel. Large sums of money are being expended on

rents for leased commercial buildings, TWX service, telephone mileage charges, additional telephone switching equipment, reimbursement of private car use and formal vehicle and shuttle bus service. In addition, many space functions have been duplicated such as, supply rooms, receptionist areas, guard locker rooms, snack bars, and classified waste storage and collection vaults. In 1972, Building Planning Staff No. 2 prepared a study which addressed the benefits to be derived in this area through consolidation at Headquarters. The study concluded that worthwhile operational cost savings and personnel savings could be realized in the above areas and that very obvious operational efficiencies would be achieved.

2. Headquarters Overcrowding

Through the years of Agency growth and general on-going reorganization, there have been component relocations to external buildings to provide space for components whose presence is required in Headquarters Building. As Headquarters components continue to grow and new organizations are created, they are willing to accept more densely occupied space conditions in Headquarters Building in order to be more contiguous to their parent

component and achieve greater operational efficiency. Accordingly, the Headquarters Building has become overcrowded to the saturation point. Agency Headquarters standard office space occupancy rates are _____ square feet per person as compared to federal government standards of _____ square feet per person. These sub-standard levels of space occupancy are unacceptable since they create inadequate working conditions which are a deterrent to operational efficiency, employee morale, and employee health. The relief of such overcrowded conditions in Headquarters Building is one of the several logical and necessary justifications to construct a new facility.

3. Environmentally Sensitive Equipment Facilities Problems

In addition to changes in Agency organization and growth, the Agency has undergone a transition in its technological development. Increasing amounts of the building have become technically oriented and contain FSE housed in environmentally sophisticated areas which are supported by special and independent back-up utilities support systems. Continuing saturation of these areas with additional equipment is taxing the capacities of utilities support systems and present physical features

of these areas are drastically limiting further utilities distributions. The ESE study previously referred to in this paper identified marginable support posture for existing ESE areas and an inadequate environment for future equipment. Study recommendations included relocations and replacement of ESE areas within adequately designed state of the art facilities in Headquarters Building. Using components desire relocation to a new facility. The problems to be overcome and the benefits to be derived in the relocation of ESE functions would support justification of new construction or replacement construction within Headquarters Building depending upon the overall advantages to be gained by the Agency.

B. Scope and Cost Options

In order to establish a cost yardstick for general discussion purposes, an assignment of costs for various portions of this proposed building program has been projected and is submitted as Attachment 3. Cost factors used are a measure of current average square foot costs of pure office buildings and special purpose buildings in the construction industry. Total project costs also include projected yearly cost escalation; projected costs for architectural and engineering (A/E) design services, General Services Administration (GSA) services, and contingencies. Total area requirements have been determined on the basis of a ratio of 75 percent net area space to 25 percent gross area space. Cost assignments should be interpreted as general "ballpark estimates" for comparative purposes at this time. More accurate estimates will be available as specific requirements are identified through further study and project development.

1. Relieve Headquarters Overcrowding

The average rate of office space occupancy in the Headquarters Building is square feet per person and approximately square feet per person relative to all useable operational space. Such occupancy

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conditions are below comparable Federal occupancy levels of approximately 150 square feet per person for an overall building average. In order to relieve such overcrowded space occupancy conditions and provide an average of 150 square feet per person, approximately [] square feet would have to be vacated in Headquarters Building and approximately [] gross square feet of new construction at an approximate cost of 12.9 million dollars would have to be provided for relocated office type functions.

2. Relocate Headquarters Building ESE Space

The referenced ESE study identified approximately 65,000 square feet of environmentally sensitive equipment areas in Headquarters Building which should be relocated to more adequate facilities. Functions recommended to be relocated included the OJCS, ISG, OEL, computer centers, the OC signal center Max II, ACT, and Data Communications functions, the telephone frame room, and several smaller sensitive equipment areas. It is anticipated that approximately [] net square feet, including some expansion, would be required to satisfy these requirements in another facility. A new facility of approximately []

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gross square feet at a cost of approximately _____ would be necessary to adequately house such functions and provide the operational environment and the sophisticated utilities support required.

Statement of Pros and Cons

| Pros | Cons |
|---|--|
| 1. Provide adequate physical and technical state of the art environment and reliable utilities support. | 1. Extensive expenditure of sunk costs for existing ESE areas supports retention of these functions in Headquarters Building. |
| 2. Provide adequate space and expansion potential. | 2. Relocation to a new facility would separate ESE functions from parent and using components in Headquarters Building, resulting in inconvenience and a reduction of operational efficiency. |
| 3. Solve immediate, short, and long range Headquarters Building ESE problems involving a decreasing marginal ability to provide adequate utilities reliability support and safety conditions. | 3. A new facility for Headquarters Building relocated ESE functions excludes the solution of remaining special purpose areas and external facilities ESE area requirements. |
| 4. Avoid decentralized expansion of overcrowded Headquarters Building ESE areas due to restrictive permanent physical barriers. | 4. Per the ESE study recommendation, relocation of ESE areas to adequate facilities on the first floor of Headquarters Building would be less expensive than the construction of a new ESE building. |
| 5. Eliminate the perpetuation of incremental, decentralized and potentially unreliable Headquarters Building utilities system expansions due to overloaded, overcrowded, and restricted status of existing support systems. | 5. The time required for new construction would not allow for the solution of current and immediate future ESE expansion requirements and would result in duplicate Headquarters Building construction and eventual new building construction. |

Pros

Cons

6. Existing Critical and UPS power generating systems could be made to serve a new ESE building.

7. Existing independent special Headquarters air conditioning systems could be made to serve the building winter cooling load of special office functions in place of larger powerhouse air conditioning systems.

8. Recapture of Headquarters Building operational space for more suitable use as general administrative office support space could be achieved.

9. Existing special utilities support systems have reached or are nearing full capacity.

10. Special purpose space in Headquarters Building has always been adapted within an inadequate office space designed environment which is a limiting factor to existing and expansion ESE design and construction.

3. Consolidate Leased Buildings

Present lease buildings occupied by the Agency are located in three satellite locations as follows:

Rosslyn - Ames, Key and Magazine Buildings; [] - [] Building; and Fairfax - Chamber of Commerce Building.

Rosslyn:

Relocation of Rosslyn space would predominantly involve 97 percent office space and 3 percent special-use space including signal centers, computer centers, photographic dark rooms, and medical laboratory/examination facilities. A total of 339,000 net square feet or 452,000 gross square feet of space at an estimated cost of \$55,325,000 would be required to replace this space at Headquarters.

Fairfax County:

The Chamber of Commerce Building consists of general office space and includes seminar rooms, classrooms, a language training laboratory, and student language training study rooms. Relocation of these functions to a new facility at Headquarters would involve 103,000 new feet or 137,300 gross square feet of space at an estimated cost of \$16,595,000.

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is essentially general office space but includes a 10,000 square foot vault, a screen room computer center, screen room communications center, a sophisticated task force briefing/conference center, emergency power, and emergency air conditioning. Replacement and relocation of these facilities and functions to a new facility at Headquarters would require 40,500 new square feet or 54,000 gross square feet of space at an estimated cost of \$7,090,000.

4. Consolidate Government-Owned Buildings:

The only Agency occupied government-owned facilities which are being considered for potential Headquarters consolidation are East Building, Central Building and South Building in the 2430 E Street complex. Functions in these buildings consist of 70 percent general office space and 30 percent special-purpose space which includes chemistry laboratories, student training photographic dark rooms, sophisticated photographic processing dark rooms, and various specialty laboratory process areas. Replacement of these functions in Headquarters construction would require 78,300 net square feet or 104,400 gross square feet of space for a total estimated cost of \$14,350,000.

5. Parking Structures

Previous parking studies indicate that total external Agency consolidation at Headquarters site would require additional parking spaces. Agency land at Headquarters presently available for a new building program is not sufficient to satisfy the total consolidation building construction requirement and total new surface parking in this amount. Therefore, it is anticipated that the parking requirement of cars for total consolidation would require approximately 654,500 square feet of elevated structured parking over either the West, South or North parking lots at an approximate cost of \$10,205,000.

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6. Single Building or Complex of Buildings

The various options available in a new building program include either a single building or a complex of buildings approach to solve for Agency potential consolidation needs. The merits of each option can be evaluated upon the comparison of pros and cons of each approach as follows:

Single Building

Pros

1. Maximize operational efficiency.
2. Maximize flexibility of organizational and functional relationships.
3. Allow the desired contiguity of office space and special purpose space.
4. Maximize limits of functional expansion area.
5. Maximize the flexibility of organizational and functional relocation between Headquarters Building and one single new building.
6. Minimize the number of utilities, housekeeping, communications, digital data, security, safety, and control systems required to operate and maintain facilities and to support Agency operations.
7. Achieve maximum amount of building for the dollar.

Cons

1. Require lengthy time frame for total implementation and occupancy.
2. Limit the ability to achieve multiphased interim occupancy to satisfy ongoing needs prior to a total one building project completion.
3. The scale of one massive structure may compete with Headquarters Building and be incompatible with the scale and character of the surrounding national park land environment.
4. The overlapping of utilities support system serving standard office space and special purpose could cause facilities environmental adequacy and efficiency problems.
5. Provides no interim alternative which would allow incremental occupancy of portions of a new single building.

Pros

8. Maximize energy conservation through the efficient utilization of minimal numbers of utilities support services located in one facility.
9. Minimize the amount of site area for building use.
10. Minimize size of security guard force required for coverage and control.

Complex of Buildings

Pros

1. Allow for the pure design characteristics of separate office buildings and special purpose buildings.
2. Allow for the specific design and independent dedication of utilities support systems to adequately and efficiently serve pure office space functions or pure special purpose functions.
3. A complex of buildings would allow multiphased or incremental smaller building completion and partial occupancy in shorter timeframes to solve key Agency ongoing requirements as they occur.
4. Multifiscal year phased project funding would be possible to achieve such multiyear phased incremental project completion and occupancy.

Cons

6. Provides no intermediate alternative other than the support and justification of a major one-time funding appropriation during a timeframe of unfavorable national economic conditions, reduced federal expenditures, and questionable congressional receptivity.

Cons

1. Project costs would be higher for a series of buildings.
2. Larger site area would be required for a series of buildings.
3. Provision of independent utility systems in separated locations would be more costly, require more space, and involve greater costs in maintenance and operation.
4. Reduce organizational and operational efficiency through separation of office and special-use functions.
5. Reduce the flexibility of component relocation, expansion options and deter accommodation of office space/special-purpose space relationships.

Pros

5. Separation of buildings by space type, utilities support type and timeframe of operations would minimize areas to be served utilities support after standard working hours and result in more efficient utilities use and greater energy conservation.
6. Phased incremental building program implementation would provide more flexibility in solving the variable external impacts on our external buildings and our Agency organization as a whole.
7. The scale of a complex of buildings may be more appropriate to the Headquarters site and its surroundings than a second massive single building which would compete with the present Headquarters Building and overpower the scale and character of the adjacent National Capital Park area.

Cons

6. Require duplication, redundancy, and extensive additional distribution of communications systems, digital data systems, security and safety alarm systems, and general support systems.
7. Increase the level of security guard and receptionist requirement.
8. Limit the flexibility of organizational and functional relocations between Headquarters Buildings and a series of functionally designed buildings.

C. Funding Options

1. Public Law 92-313

Under PL 92-313, a "Federal Building Fund (FBF) has been established in the Treasury into which are deposited the standard level user charges provided under the act, and from which construction of public buildings is financed.

A Federal Agency identifying a need for construction of a public building is required to prepare its requirements of the proposed facility and submit them to GSA which, in its project liaison and implementation role, approves the project and prepares a prospectus (statement of the proposed project). The prospectus is submitted to the Office of Management and Budget (OMB) for approval and then to the committee on Public Works of the Senate and the House of Representatives for their respective approvals. When approved by these Committees, the project is placed as a line item in the GSA budget for the next fiscal year. Priority of projects is determined by the Administrator of GSA on the basis of equality of geographic distribution and comparative urgency of need. The GSA budget with the assigned priorities for construction is submitted to the Appropriations Committees of the House of Representatives and the Senate for approval and then approval of appropriation by final enactment as Public Law by the Congress.

In view of the limited funds available in the FBF, GSA assigned project priority prerogatives, minimal Congressional project appropriations in descending priority order, the disadvantages of competing for priority construction position with lesser dollar value projects of other agencies, and the extensive uncontrollable timeframe required for the multifaceted standard approval and appropriations process realistic timeframe implementation of a new building program could become more increasingly difficult to predict and result in almost certain abnormally lengthier timeframes than possibly available through other approaches available to the Agency.

IV. SUMMARY

In summary, major conceptual questions, relative to a potential building program at the Headquarters site, requiring management committee resolution may be stated as follows:

1. Should the new building program attempt to solve for Headquarters Building related requirements only?
2. Should the new building program attempt to solve for a portion or for all external buildings related requirements only?
3. Should the new building program attempt to solve for both Headquarters and external requirements and achieve total ideal consolidation of the Agency at the Headquarters site.
4. Should the new building program be implemented as an incremental, multiphased project; or as a single-phased, one-time major project?

In the address and resolution of these major conceptual questions it is understood and recognized that extensive additional Building Planning Staff study and evaluations are necessary to sharpen and refine problem definition and to explore the spectrum of options in order to support or influence such resolution and decision-making.

A. Approximate Scope of Building to be Constructed

1. Subquestion: Relocate Headquarters Building ESE
or Other Special-Purpose Functions?

The ideal solution suggests relocation of Headquarters ESE and other special-purpose functions to a consolidated joint use facilities area for the longterm solution. Current and immediate future ESE and special-purpose requirements support expansions or relocations within existing facilities in view of short timeframes of ongoing mission requirements, availability of physical envelope, and sunk costs. Tentative conclusions support relocation of Headquarters ESE areas to an adequately designed new building, vice other external special-purpose functions, in order to overcome the immediate marginal ESE conditions and limit the continued expansion of such functions and forced utilities support systems in Headquarters Building. The ramifications of such a position are very extensive. Deferral of specific determination at this time with later reexamination and evaluation based upon further BPS study should result in a greater information base for more beneficial final decision-making.

2. Subquestion: One Building or Complex of Buildings?
Tentative conclusions support the one building concept in view of minimum land use, greater organizational and functional flexibility, most efficient facilities use, dual use design adequacy and operational efficiency. Although a complex of buildings would allow multiyear phased funding, design, construction, and occupancy, additional land use would be required. Each concept would impose varying building mass and configuration relationships upon the existing site and the neighboring environment. Further study and evaluation of such relationships with later reexamination based upon regulatory Agency positions on the matter should provide the necessary judgemental rationale to influence a determination.