



HSMM/HOK WRNMMC Joint Venture

PROJECT DESCRIPTION

As a result of the 2005 Base Realignment and Closure (BRAC) recommendation, the existing Walter Reed Army Medical Center (WRAMC) located in Washington, D.C., will be closed and military medical services in the National Capital Area (NCA) will be realigned between two primary facilities serving the northern and southern portions of the NCA. The southern NCA will be served by a new hospital at Ft. Belvoir, Virginia. The existing National Naval Medical Center (NNMC), Bethesda, Maryland will be expanded and renovated to serve the northern NCA. All existing tertiary (sub-specialty and complex care) medical services currently provided at WRAMC will be relocated to the northern facility. The expanded NNMC will be known as the Walter Reed National Military Medical Center at Bethesda (WRNMMC) and is the focus of this project.

To implement the BRAC recommendations at the National Naval Medical Center the Government has developed two design-build requests for proposal (RFPs). One RFP is for the construction of the additions and renovations and the other is for the construction of two parking structures to support the medical center construction. The scope of this RFP is for the construction of the construction of the additions and renovations to the medical facility and associated site and demolition work.

The medical facility project consists of the following.

- The construction of an approximately 533,000 building gross square feet (gsf), six story, with basement, out patient facility (Building A, Business Occupancy) and a glass entry pavilion to the north of existing facility.
- The construction of an approximately 157,000 building gsf, four story, with partial basement, diagnostic and testing/inpatient addition (Building B, Institutional Occupancy) located at the south of the existing facility and to the west of existing Buildings 9 and 10.
- The renovation of approximately 261,000 department gsf of the existing medical facility.
- Associated sitework, utilities and infrastructure modifications and expansions and modifications to the existing central equipment plant (Building 16).

The additions and renovations shall meet AT/FP requirements and comply with ADA and UFAS requirements.

The concept as submitted to NCPC & SHPO and as defined in the RFP is a result of thorough assessment of the BRAC requirements and subsequent master planning. As such, the general size, scale, massing and architectural character is not expected to change significantly and the concept design as presented will proceed through design and construction.

PROJECT OBJECTIVES

Mission Statement

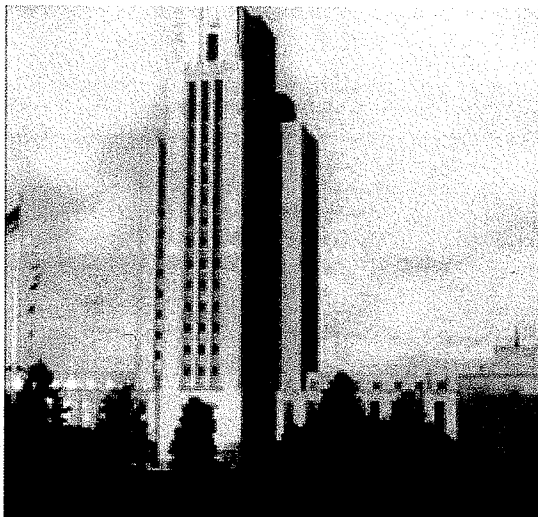
The Walter Reed National Military Medical Center at Bethesda will be a significant part of a one integrated health system which leverages the assets of all Department of Defense health care treatment facilities in the National Capital Area (NCA). The Tri-Service Walter Reed National Military Medical Center at Bethesda will be a worldwide military referral center and together with the Uniformed Services University (USU) of the Health Sciences will represent the core of this integrated

health system. All Tri-Service facilities in the NCA and USUHS will serve as a premier academic medical system focused on delivering the highest quality care, distinguished health professional education, and exemplary clinical and translational research.

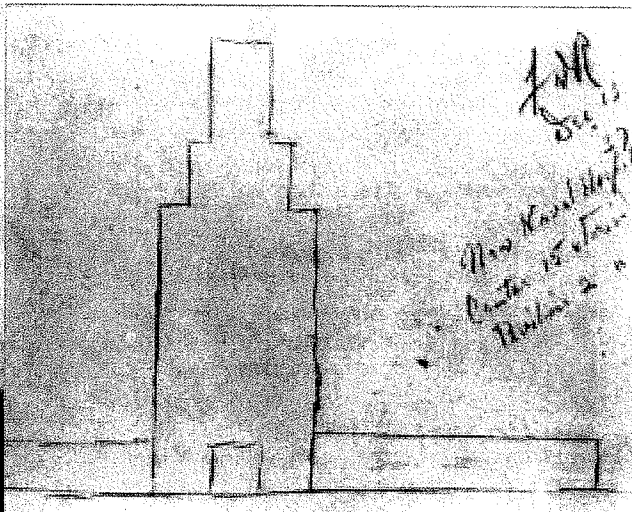
The vision for the new Walter Reed National Military Medical Center was described by LtGen Peach Taylor, Medical Joint Cross Service Group as “the centerpiece of military health care, clinical practice, education, and research. It will rival Mayo Clinic, Johns Hopkins, and the other great medical institutions of the world, and will be jointly staffed.” Further, Dr. William Winkenwerder, Jr., the Assistant Secretary of Defense for Health Affairs, added that “In Washington, the new Walter Reed National Military Medical Center will be a joint medical facility, and ... the world leader in military medicine”.

History

The Bethesda Naval Medical Center started with such a vision from President Franklin D. Roosevelt. He was tired of the government buildings being designed at the time and sketched a rough plan and elevation on White House stationery for the new Naval Hospital. According to the National Register of Historic Places these sketches were based on the 1924 State Capital at Lincoln, Nebraska by Bartram Goodhue. Architect Paul Cret was asked to work with the Navy architectural staff under Fredrick W. Southworth. The final design by Cret was larger than Roosevelt’s but followed in the same spirit. Roosevelt’s scheme went from a 15 story tower flanked by two story pavilions to a twenty story tower flanked by two “L” shaped pavilions that drop from five stories to four stories. A pavilion to the east was also designed to connect to the minor pavilions at the rear of the building. These pavilions act as a base for the tower and anchor it to the site. This original building is now known as Building One and was listed on the National Registry of Historic Places in 1978.

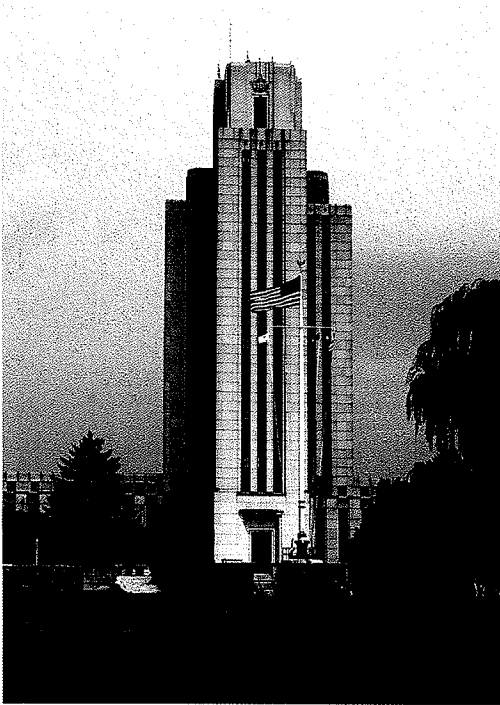


Historic Building One



Roosevelt’s Sketch

Building One was constructed in 1939 to 1942 of reinforced concrete and structural steel framing. It was enclosed in precast panels with exposed aggregate of translucent and opaque quartz mixed with quartz sand and white portland cement. The glazing is stacked for both the tower and the pavilions to produce vertical elements with bronze sashes and spandrel panels. The contrast between the bright concrete panels and the dark fenestration create the major characteristic of the design. This modernistic building has a neo-classical feeling and is strictly formal and symmetrical.



The gradually sloping landscape and terraces were also designed by Paul Cret as part of the original construction. The symmetry is expanded into the landscape design to the front of Building One with the semicircular central terrace that extends 130 feet from the entrance. The north and south retaining walls are 215 feet from the central terrace and gradually reduce from 8'-9" high at the center as they extend outwards. At the center lies the granite and bronze flagpole base. The flagpole including the base is 90 feet high. Two large anchors rest to the north and south of the flagpole. On the western side of the base there are three steps leading down to the hillside. This building rests between the north and south gate on Wood Road and is a visible symbol that is viewed as one travels down Wisconsin Ave.

Existing Conditions – Medical Center

The National Naval Medical Center is comprised of multiple buildings (Building 2-10) consolidated around the historic Building One to produce what we are calling the Medical Campus. The heart of this medical campus is Building 9 which is the hub for the diagnostic and treatment departments, including the emergency department, imaging department and operating rooms. Adjacent to Building

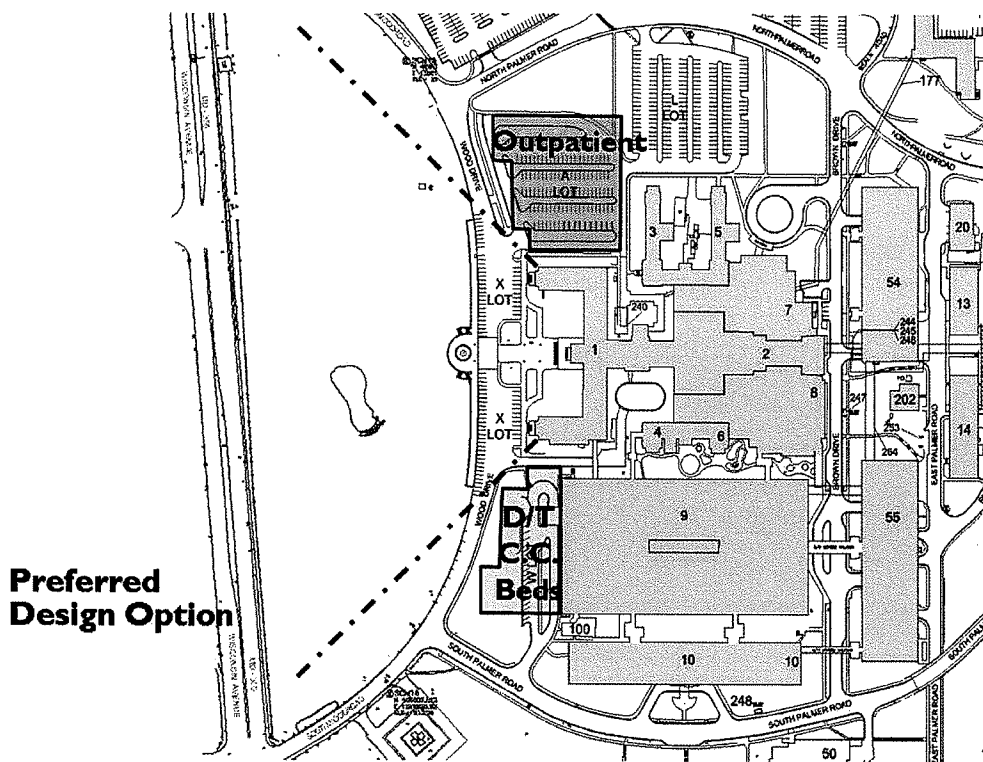
9 is Building 10 that was designed as a seven story bed tower to compliment Building 9. It currently contains the command suite and large lecture hall.

Two large parking structures are located to the rear of the medical campus off of Brown Drive. One of the parking structures is designed for patients and visitors. This parking structure connects with two enclosed raised walkways that connect to the second floor of Building 9 and Building 10. The second parking structure is designed for staff only and is located to the north of the first parking structure to the rear of Building 7.

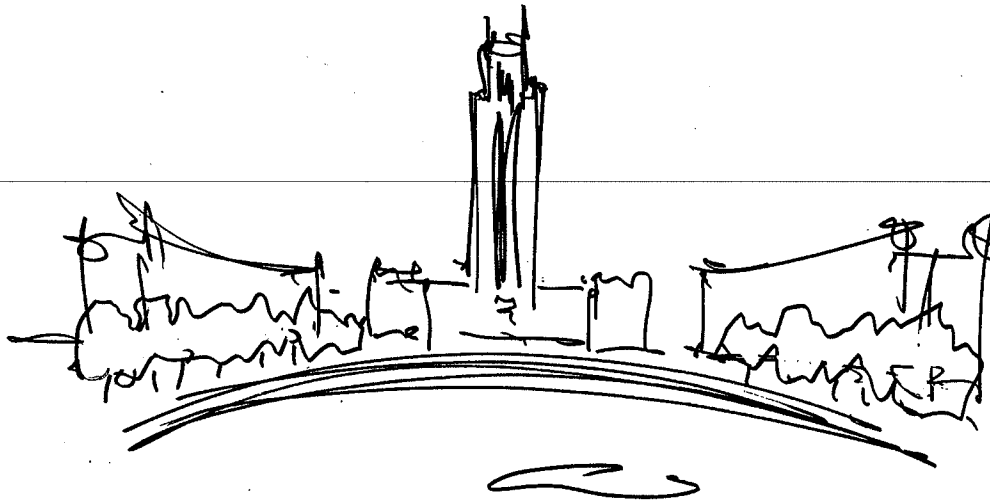
Concepts

Keeping in mind the importance of Building One and the vision for the new Walter Reed National Military Medical Center at Bethesda Naval, the design team looked at several options in preparing for a design charrette. The Charrette was held at the Washington Navy Yard on March 5th through 9th which included such stake holders as the Bethesda Naval Medical Center, Walter Reed Army Medical Center, TMA, NAVFAC and USAHFPA. The project goals, challenges and requirements were identified and four preliminary design options were discussed.

The fourth option was identified and viewed as the best option to satisfying the project goals. This option was refined and developed as the Preferred Design Option.



This Preferred Design Option was presented at the March 20th meeting with SHPO and NCPC. It is viewed as having the best opportunities to enhance the historical Building One and re-vitalize the ceremonial front door of the new Walter Reed National Military Medical Center. This option also provides the greatest flexibility on the campus by addressing the two key drivers of hospital design: ambulatory care and inpatient beds. Building A - Ambulatory Care Pavilion is developed to the north of Building One as a cost effective business occupancy building type. Building B - Inpatient Addition is developed to the south of Building One as an institutional occupancy and provides the important adjacency to the existing Building 9. Building 9 is considered the heart of the hospital with the operating suite and the diagnostic and treatment facilities. Located in the Building B - Inpatient Addition will be the fifty additional critical care beds that are part the BRAC initiative. It is critical that this function be located adjacent to functions currently housed in Building 9 and easily accessible to the existing beds located in building 10.



The Design Team understands the importance of the new Walter Reed National Military Medical Center for both the national need and for its historic importance. The preferred option has already been presented at multiple meetings with representatives from the National Capital Planning Commission (NCPC) and the State Historic Preservation Planning Office (SHPO). The preferred option has been developed to incorporate the concerns and recommendation discussed at these meetings and the requirements set out by the BRAC initiative. At the last meeting the Design Team presented the progress of the design to the representative from NCPC and the SHPO and was met with positive response. The SHPO representative stated his approval and is preparing a letter stating such.



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The following is a summary of some of the items:

- The buildings must be symmetrical about Building One.
- The front corners of Building A (Outpatient Care Pavilion) & Building B (Inpatient Addition) can not be any further forward than the front of the wings of Building One.
- The fronts of Building A & Building B are to step away from the wings of Building One in relation to Wood Drive.
- The front of Building A & Building B can not be any higher than the wings of Building One.
- Additional stories not to exceed a seventh floor will be allowed as long as they set back from the front wall.
- The over-all building heights of Building A and Building B are to match.
- It is important for the design team to keep in mind the historical importance of the other buildings on the site and the courtyards.

Facility Function

The function of the new Walter Reed Naval Military Medical Center at Bethesda is to provide “state of the art” healthcare to support the medical mission. To provide this “state of the art” medical center the new program required for the BRAC initiative had to merge and compliment the existing program of National Naval Medical Center. This meant that there would be expanded functions and even some new functions brought to Bethesda. In order to accommodate this, the entire campus was master planned to ensure that all the requirements would be met and the proper adjacencies accommodated.

The Ambulatory Care Pavilion (Building A) will provide such outpatient services as the Cancer Center, Breast Care Center, Neurology, Radiation Oncology, Children’s Health, Internal Medicine and Family Practice spaces all clustered in one new building to the north of the campus. This facility will also provide for a very large and expanded mission consisting of Physical Therapy, Occupational Therapy, Orthotics/Prosthetics, and Physical Medicine/Rehabilitation which includes a physical therapy pool, track, Gait Lab and climbing wall. It will have a drop of area and adjacent outpatient parking structure to facilitate patient flow and wayfinding.

The Inpatient Addition (Building B) is adjacent to Building 9 and could be viewed as an addition to Building 9. Many functions identified in the BRAC Initiative and WRNMMC master planning required this critical connectivity. This is due to the function of existing Building 9 as it relates to the entire Medical Campus. Building 9 is considered the Diagnostic and Treatment “heart” of the medical campus. Therefore, the floors of Building B will match the floors of Building 9 and tie into the main circulation pattern of Building 9. Building B allows for the expansion and connectivity to functions housed in Building 9 and some of the new/expanded departments will actually span between the two buildings. Departments to be located in this area are the Nuclear Medicine & Radiology Suite on the first floor and the Multidisciplinary Interventional Imaging Suite on the second floor. These departments provide additional capabilities with new procedure rooms for CT scanners, Tele-Radiology, Angio, Nuclear Medicine and Ultra Sound. Also provide in Building B is the Cardiology Center with Vascular Surgery and the new Emergency Department. All of these departments are



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connected by two large trauma elevators that will carry a patient to the ICU above or the main Operating Suite in Building 9.

One of the most important BRAC requirements was for fifty new ICU beds that are code compliant and built to modern standards. These ICU beds must have the adjacency to the Operating Suite that is to be expanded in place on the third floor of Building 9. To accommodate this number of ICU beds and the required support space, twenty six ICU beds are designed on the 3rd floor on Building B and twenty four ICU beds are located on the fourth floor. These rooms all located at the perimeter of the floors to provide the required natural light. The third floor follows the geometry of the floors below but the fourth floor sets back from the edge and has a rectangular floor plate that is optimum for patient bed/ICU design. A percentage of the floor must also allow for support space and nurse stations to have a functioning and efficient ICU suite. Therefore, the width of the floor can not be less than 100 feet or it severely compromises the function of the ICU suite. The fourth floor is raised above the roof of Building 9 to allow for the 100 foot floor plate that cantilevers over the roof and allows for maximum natural light in the ICU bed rooms.

The renovations within the existing buildings provides for the expansion required by the new program and BRAC initiative. Some of these areas are expanding in place and some are relocated to areas that can accommodate the overall expansion. This includes renovation in Building 9 and 10.

Two new parking structures are to be constructed with the expansion of the medical center to help with the additional parking requirements defined with the BRAC initiative. One multi-story parking structure will be located at the north side of the medical campus near the Ambulatory Care Pavilion for patient and visitors. A second parking structure is to be built remote from the campus next to Building 23.

Project Specific Priorities

Sustainable Design

In accordance with Executive Order 13123 and other pertinent directives, integrate sustainable principles are to be designed, developed and implemented into the project. The A/E team is to reduce the total cost of ownership of the facility using a whole building, life-cycle approach.

The Walter Reed National Military Medical Center is to incorporate integrated sustainable design strategies and features to minimize the energy consumption. Further, the facility is to be designed to conserve resources; minimize adverse effects to the environment; and improve occupant productivity, health, and comfort.

In accordance with NAVFAC Instruction 9830.1 the facility and all site features shall be designed and constructed to meet a minimum of "Certified" in the US Green Building Councils (USGBC)

"Leadership in Energy and Environmental Design (LEED) Rating System version 2.2". The constructed facility shall be Sustainable Validated by NAVFAC as having met as many prerequisites and as many credits practical in the LEED-NC (New Construction) rating system.



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Energy Conservation

All new facilities and major renovation projects shall conform to the latest edition of ASHRAE/IESNA Standard 90.1-2004 "Energy Standard for Buildings Except Low-Rise Residential Buildings", January 2004. In addition, for new buildings, the Energy Policy Act of 2005 requires federal building designs achieve energy consumption levels 30% below the ASHRAE 90.1 baseline building. The Designer of Record (DOR) shall perform and submit an energy analysis in accordance with Appendix G of ASHRAE Standard 90.1 showing the calculated baseline building performance and the proposed building performance on an energy consumption basis to document compliance with the Act. For the ASHRAE analysis, energy for receptacle and process loads should not be included in the calculations for compliance. Laboratory hoods & kitchen hoods shall be considered non-process loads and are to be included in the 30% reduction requirements. If the 30% reduction level is not life-cycle cost-effective based on the analysis, the Designer of

Record (DOR) shall use an iterative procedure to find the lowest level of energy consumption that is life-cycle cost-effective. To determine if a feature is "life-cycle cost-effective", a life cycle cost analysis shall be performed in accordance with 10 CFR 436 Subpart A. Any of four methods are acceptable to determine LCC: (Lower LCC, Positive net savings, Investment Ratio (SIR) greater than 1, or an adjusted rate of return greater than discount rate).

Workflow Process - Hours of Operation

The primary use of the Walter Reed National Military Medical Center at Bethesda will be Monday through Friday from 0700-1800 for the clinic and diagnostic & treatment departments. However, when workload demands some of the departments may have evening and weekend hours. The emergency department and the inpatient facilities will be operating 24 hours a day for seven days a week.

Appropriate Design

The scale, massing, exterior aesthetic and detailing are of significance for the Walter Reed National Military Medical Center at Bethesda. Building One of the National Naval Medical Center at Bethesda is considered a landmark and is on the Historical Registry. Some of the other buildings and courtyards on the medical campus are also considered to have historic significance. Every effort will be made by the Design Team to compliment the existing character and architecture of the Medical Campus as defined by the historic Building One and maintain the integrity of the existing courtyards.

The Design Team has taken into account the NCPC comments from our first "Concept Approval" submittal and has included two options for the front elevation of Building A & Building B. The very large windows shown on the previous submittal have been redesigned to a smaller module keeping with the existing architecture. Option A includes a rhythm of large and small windows consistent with the overall façade of the new buildings. While Option B provides a more deferential design to relate to the historic Building One.