

**HARBORVIEW
MEDICAL
CENTER**



Bond Project

**Scope, Schedule & Budget
Review
of Proposed Changes to
Ninth and Jefferson Building**

Final Report

(Revision No. 1)



August 12, 2003

VANIR

Harborview Medical Center Bond Project

Ninth and Jefferson Building Proposed Additions Scope, Schedule and Budget Review (Revision No. 1)

Intent

Vanir Construction Management was contracted to review the scope, schedule and budget for proposed additions to the Ninth and Jefferson Building Project (NJB) prior to review by the Bond Oversight Committee and forwarding to the King County Council.

Our initial review was directed toward the additional parking and two shelled floors and the results were provided in a July 10, 2003 report. This revised report provides the results of a review incorporating the scope, schedule and budget impacts of that work plus the tenant improvements to the two additional floors.

This report is a review of work products describing the proposed additions to the Ninth and Jefferson Building Project. The proposed additions reviewed include:

- An additional full level of parking in the below grade garage
- Two floors of unfinished shell and core space as future research office area
- Tenant improvements to the two floors listed above

The intent is to document our findings and provide recommendations to the Bond Oversight Committee and King County Council with respect to the proposed additions to the NJB Project.

Background

During the spring of 2003 the Predesign Phase of the Harborview Medical Center Bond Project, including the Ninth and Jefferson Building Project, was completed and approved by the Bond Oversight Committee and the King County Council. The Bond Oversight Committee and the King County Council approved the commencement of the Schematic Design Phase. During schematic design HMC subsequently proposed additions to the Ninth and Jefferson Building Project to expand its capacity. UW, NBBJ and Turner Construction Company developed the scope, schedule and construction budget impact of the proposed additions. The University of Washington Capital Projects Office modified the approved C-100 for the entire Harborview Medical Center Bond Project and for the NJB project to determine the impact on project costs including consultant services, construction contracts and project management costs. In the meantime the schematic design was completed and is currently under review. That design is based on the currently approved scope for NJB – 3 stories above grade and 4 floors of parking.

Documents Considered

Members of the project team revised or developed documents that defined scope, schedule and budget for the proposed additions to the NJB. These documents were revised based on our draft comments during the early portion of our review. In addition to information gained by various e-mail messages and verbal conversations, documents considered by the Vanir review team include:

- Explanatory Information for Spreadsheet costs and Time, dated May 18, 2003, by University of Washington
- Ninth and Jefferson Building Summary of Increased Cost Impact – July 31 Start, Revised Preliminary C-100 Modified Format, Dated May 21, 2003, by University of Washington
- Bond Project and Ninth and Jefferson Building Summaries of Increased Cost Impact – August 2003 Start, Revised Preliminary C-100 Modified Format, Dated August 6, 2003, by University of Washington
- Ninth and Jefferson Building Options for Adding two Floors Above Grade and One Floor of Parking Below Grade, dated May 28, 2003, by University of Washington
- Revised HMC Bond Project Report (Including revised Bond Program Budget C-100 Forms for complete project and NJB, revised project schedule, GC/CM cost estimates, A/E cost estimates and CPO cost estimates), dated June 27, July 9 and August 1, 2003, by University of Washington
- Revised revenue and financing plans including Parking Revenue Projections, bond financial assumptions and lease payments
- Harborview Medical Center (HMC) Bond Program “White Paper” with 7-16-03 revision date
- Scope, schedule and budget documents previously reviewed during the Predesign Phase

Scope Review

The current proposed additions to NJB include:

A fifth level of below grade parking that will provide 157 additional parking spaces within a 60,000 square foot area and 54,000 square feet on two floors of above grade space built out for medical research office and clinic area. The proposed revised budget for this work is an additional \$29,600,000.

The functional types of spaces previously approved for the NJB are not changed by the proposed additions to the project. Parking is expanded by one level and medical office space is expanded by two floors.

Scope observations and recommendations:

- The proposed additions to NJB are in compliance with the Major Institution Master Plan (MIMP) requirements but are changes to the scope recently submitted and approved by the King County Council.
- The justifications for the additional building and garage space seem reasonable.
- Programming work to define the improvements within the two additional floors is still underway. However, it appears that it will consist of medical research office space and clinic space.
- The Northeast corner of the site (Block 81) has been included within the scope of work since that property is now being purchased.

Schedule Review

The Baseline Schedule previously submitted and approved did not reflect input by the GC/CM contractor. The currently proposed project schedule does and mitigates the delay associated with the longer design duration for NJB driven by the changes to the building. That includes the need to redesign the work already completed in the schematic design phase.

The GC/CM's input has revised some earlier assumptions and re-sequenced individual project activities. The key changes are to start site preparation and construction of the IEB building earlier and to have NJB follow rather than lead in the schedule. More excavation for the additional level of parking and identification of greater existing soil contamination, not directly related to additional building area, has increased activity durations. This was originally predicted to extend the total project schedule by two months. However, more recent schedule revisions have reduced this delay to just a few weeks.

Design & Construction durations and activities have been adjusted and take into consideration traffic issues, the allowable hours of operation, impact on the operation and the rate for processing of the soils on the NJB Site.

Schedule observations and recommendations:

- Total project completion is extended by one month. This is an excellent result for such a significant change.
- The Ninth and Jefferson Building will be completed 11 months later than originally planned.
- The Inpatient Expansion Building will still complete as originally planned.
- Much of the potential loss in time is planned to be made up by completing the demolition and construction associated with Harborview Hall and the East Clinic in roughly half the time originally scheduled.
- Key schedule revisions include implementing phased permitting and early site work to get construction underway before building design is fully completed.
- Schematic Design Phase completion has been extended for the NJB.

- Additional time required to complete Site Preparation is attributed to additional excavation, shoring & soil remediation.
- Given the magnitude of the schedule changes it is suggested that the Baseline Schedule be revised if the changes to NJB are approved. It is also recommended that the approved Baseline schedule be used to manage the HMC project.
- The impact to the HMC project of delaying a potential decision to add the proposed work will increase over time.

Budget Review

The budget presented in the revised C-100 format is an estimate of costs based largely on proposed figures from the architect and contractor. We expect that some of the figures will go down once they are negotiated with the architect and contractor, should the proposed NJB scope changes be approved. The total estimated increase of \$29.6M is apportioned approximately as follows:

		<u>New Contingency Included</u>
Construction -	\$25.03M	\$2.93M
Design & Consultants -	\$ 3.75M	\$0.37M
Project Management -	\$ 0.32M	
Other Costs -	<u>\$ 0.50M</u>	
TOTAL	\$29.60M	\$3.30M

Budget observations and recommendations:

- The construction costs per square foot for parking and core and shell are conservative and in line with the original construction budget.
- The estimated costs for construction of the tenant improvements is particularly conservative, having included plumbing, etc. for wet labs, whereas the current concept is for office and clinic space.
- Estimated design costs are higher than expected.
 - The Basic design fees are estimated using 6.66% which was derived for the original fee negotiation for NJB based on a \$50M building. Now that the building will cost about \$66M the state fee schedule calls for a lower percentage fee.
 - Additional Services fees are budgeted proportional to the original design budget. Ordinarily the added work would require less additional design services than the rest of the building since some of the required work, such as the specifications and details (windows, doors, wall sections, etc.), are already to be prepared under the original design contract and fee.
 - The need to do some rework of the schematic design effort will cause additional design expense not ordinarily expected. This is accounted for in the proposed design budget increase.

- The contractor's proposed Bid General Conditions and Risk Contingency budgets have been increased disproportionately to the increase in construction cost.
- The Management Reserve has been increased proportionately for the increase in construction cost but an additional \$500,000 has also been added. These additional funds are set aside to cover a potentially renegotiated fee for the contractor's work that would pertain to all the construction in the HMC seismic/expansion project, not just the additional construction covered by this proposed change to the NJB. As currently envisioned HMC revenues would fund the fee increase for the whole program.
 - It is suggested that the Bond Oversight Committee consider the appropriateness of this approach.
 - It may not be advisable to carry all the funds in the budget for the NJB as the money will potentially be used to pay additional fee for the other projects in the program. It appears that future Council approval would be required to shift funds from the NJB Management Reserve budget to the Contractor's Fee or Management Reserve Budgets for the other effected projects.
- Although we understand that a renegotiation of the contractor's fee is required when the MACC increases by 15% (\$23.4M) we do not believe the fee percentage should necessarily go up. Although there could be some added risk to the contractor in executing the work we believe that risk would be compensated for by providing this approximately \$19.8M in new work with no marketing cost or acquisition risk. This proposed change has value to the contractor equivalent to acquiring a good sized new project.
- The Project Management budget has gone up moderately because of economies of scale.
- Overall the budget numbers are conservative for the scope of additional work at this planning level. It is expected that they will be refined through negotiations with the architect and contractor if the decision is made to move forward with the changes.
- It is recommended that a detailed review of the budget for all components of the program be undertaken at the completion of the Schematic Design and Design Development Phases.
- The revised revenue and financing plans were reviewed with no exceptions taken.
- The magnitude of the proposed additional work is such that it may well change the overall project risk. Since the selected project management approach has thus far included performing risk analysis to determine the expected probability of meeting the budget, it initially seemed reasonable to include an assessment of risk in weighing the impact of these proposed NJB changes on the project success. However, the conservativeness of the proposed budget increases indicates that the additional risks are likely well covered.

Conclusions and Recommendations

- If such a major change in the work is to be undertaken this is the time to deal with it. The longer one waits more impact on design and construction costs, schedule and risk can be anticipated.
- It is suggested that the Bond Oversight Committee consider if, as currently planned, HMC revenues should fund all of the potential contractor's fee increase if the total of changes on the program reach 15% of the originally estimated MACC.
- Regardless of what party funds the potential contractor's fee increase, consideration should be given to making appropriate increases to the Management Reserves in each project budget rather than putting it all in the NJB budget.
- It is recommended that the approved Master Baseline schedule be updated and used to manage the project.
- The proposed additions are in accordance with the HMC project scope as defined in the approved Long Range Capital Improvement Program.
- The budget is sufficient and looks conservative for the scope and duration of the proposed additional work. The budgeted design fees and GC/CM indirect costs appear to be particularly conservative.
- The duration of the project will only increase by one month – a very positive result for such a significant change, achieved by diligent scheduling efforts by the project team.