

**AGREEMENT  
BETWEEN OWNER AND PROJECT ARCHITECT/ENGINEER**

This Agreement is made as of \_\_\_\_\_, 20\_\_\_\_ (the “Effective Date”)

By and between

The **Owner:**

The University of Texas M. D. Anderson Cancer Center  
c/o Facilities Planning, Design and Construction  
6900 Fannin, Suite 1010  
Houston, Texas 77030

and **Project Architect/Engineer:**

for the following **Project:**

Renovate T. Boone Pickens Academic Tower Floors 20 - 21

**Construction Services Delivery Method:** Construction Manager at Risk

The Owner and the Project Architect/Engineer agree as follows:

*This form of agreement is for Architectural/Engineering services on projects that use an Owner-Architect/Engineer-Contractor/Construction Manager delivery method (e.g. Competitive Sealed Proposal or Construction Manager at Risk). It has been prepared by the Office of General Counsel for the University of Texas System for use on M. D. Anderson Cancer Center projects and its legal terms should not be altered without the approval of the Office of General Counsel.*

*Use this form for all appropriate M. D. Anderson Cancer Center projects after July 25, 2018.*

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## **Article 1 Project Architect/Engineer's Services and Responsibilities**

Project Architect/Engineer ("Project A/E") shall provide the usual and customary Basic Services necessary and reasonably inferable to provide design services for each phase of the Project described in Paragraphs 1.2 through 1.6, below, along with any Additional Services requested by Owner.

### **1.1 Basic Services**

1.1.1 Project A/E's Basic Services include all disciplines identified in Article 14 and all related usual and customary design, consultant, and other services necessary and reasonably inferable to complete the design for the Project, or any phase of the Project, in accordance with Owner's requirements and the terms of this Agreement.

1.1.2 The Pre-Design Document (see Article 2) shall describe the intended project scope and character along with the anticipated Project Milestone Schedule and the Preliminary Project Cost. Project A/E shall review and understand the requirements of the Pre-Design Document and perform its professional services so as to achieve those objectives.

1.1.3 The Construction Cost Limitation ("CCL") for this Project is specified in Article 14 and means the maximum amount that Owner is willing to pay for the construction of the Project. The CCL includes all costs for constructing the Project, and includes, without limitation, reasonable allowances for the Contractor's overhead, profit and general conditions costs, the cost of labor and materials furnished by the Contractor and any equipment which has been shown in the plans, specified, and specially provided for by Project A/E. The CCL does not include compensation to Project A/E and its consultants, Owner's Construction Contingency, Owner's Special Cash Allowance, the cost of the land, the cost of rights-of-way, or other costs which are the responsibility of Owner as provided in Article 2. Project A/E is responsible for managing the design of the Project so that the Construction Contract Sum does not exceed the CCL.

1.1.4 Owner may require Project A/E to provide services for the Project in multiple stages or parts identified as Construction Contract Stages ("CCS"). Each CCS shall have a unique Sub-Construction Cost Limitation ("SCCL"). Project A/E shall manage the design of each CCS so that its construction does not exceed the SCCL. Project A/E shall manage the design of the Project so that the sum of all SCCLs does not exceed the CCL.

1.1.5 Project A/E shall manage the design of the Project to achieve the objectives of scope and cost set forth in the Pre-Design Document through completion and acceptance of the Construction Documents. As part of its Basic Services, Project A/E shall advise Owner of any adjustments to the scope or quality of the Project necessary to comply with the CCL throughout the development of the design.

1.1.6 Project A/E shall submit the names of all consultants, persons, or firms, which Project A/E proposes to use in the execution of its services and shall provide Owner with a fully executed copy of each contract or agreement that Project A/E enters into with any consultant. Project A/E is responsible for coordinating the work of all of its consultants to assure that their services are appropriate for and adequately incorporated into the design of the Project. Owner reserves the right, in its sole discretion, to reject the employment by Project A/E of any consultant for the Project to which Owner has a reasonable objection. Project A/E, however, shall not be required to contract with any consultant to which it has a reasonable objection.

1.1.7 Project A/E shall pay for its consultants' services out of its fees. Owner is not responsible for any consultant fees or costs unless expressly agreed to in writing.

1.1.8 Project A/E agrees to allocate work to consultants that are historically underutilized businesses in accordance with Owner's Rider 104; Policy on Utilization of Historically Underutilized Businesses, a copy of which is included as an Exhibit hereto. No changes to the HUB Subcontracting Plan approved by Owner, a copy of which is included as an Exhibit hereto, may be made unless approved in writing by Owner. While this Agreement is in effect and until the expiration of one year after Final Completion, Owner may require information from Project A/E, and may conduct audits, to assure that the approved HUB Subcontracting Plan is followed.

1.1.9 Project A/E shall design the Project to incorporate current systems technology as appropriate to the stated mission of Owner and the programmed functional activities. The technology shall be compatible with any existing facility and acceptable to Owner.

1.1.10 Project A/E shall perform its services in accordance with the Owner's Design Guidelines, a listing of which is included as an Exhibit hereto.

1.1.11 Project A/E shall design the Project in accordance with the approved Campus Master Plan.

1.1.12 Basic design services shall include incorporation of the provisions of the Energy Conservation Design Standard for New State Buildings as administered by the State Energy Conservation Office, State Comptroller's Office of the State of Texas. Project A/E shall provide Owner with a Statement of Compliance and associated compliance documentation as required.

1.1.13 When required and as appropriate for the scope of the Project, Project A/E, as part of Basic Services, shall assist with and attend with Owner representatives an open meeting to be held pursuant to Section 2166.403(b) *Texas Government Code*, to verify the economic feasibility of incorporating alternative energy devices for space heating, cooling, water heating, electrical loads, and interior lighting into the building's design and proposed energy system. At a minimum, Project A/E shall provide an economic evaluation for the potential of renewable energy applications pursuant to the legislative requirements. Guidelines are available from the State Energy Conservation Office, State Comptroller's Office.

1.1.14 When appropriate for the scope of the Project, Basic Services shall include incorporation of the provisions of the Xeriscape Landscaping design requirements as adopted by the State of Texas Building & Procurement Division for Xeriscape landscaping, pursuant to Section 2166.404 *Texas Government Code*. Project A/E shall provide Site analysis and design to incorporate these provisions. A summary of the project requirements meeting these guidelines shall also be provided for the Design Development submittal package.

1.1.15 Project A/E, as part of Basic Services, shall engage a recognized and specialized construction cost estimating consultant acceptable to Owner to prepare detailed Estimated Construction Cost Reports of the Project in a form acceptable to Owner following the Construction Specifications Institute (CSI) format. Project A/E shall include updated and detailed Estimated Construction Cost Reports with the Drawings and Specifications submitted for review at completion of the Schematic Design phase and the Design Development phase and at the stages of completion of the Construction Documents required in Article 14. If the Estimated Construction Cost exceeds the Construction Cost Limitation at any time, Owner will determine, solely at Owner's discretion, whether to increase the Construction Cost Limitation, or to instruct Project A/E to proceed to the next stage of design with no increase in the Construction Cost Limitation, or to require Project A/E to revise, at no charge to Owner, the Project scope or quality to comply with the Construction Cost Limitation. Reductions in Project scope or quality shall be subject to Owner's review and approval. If the Estimated Construction Cost is below the Construction Cost Limitation at any time, Owner may determine, solely at Owner's discretion, whether to reduce the Construction Cost



Limitation, or to instruct Project A/E to proceed to the next stage of design with no decrease to the Construction Cost Limitation, or to require Project A/E to increase the Project scope or quality.

1.1.16 Project A/E shall submit documents to Owner for review at completion of the Schematic Design and Design Development phases and at the stages of completion of the Construction Documents as described in Article 14. Project A/E shall incorporate into the documents such corrections and amendments as Owner requests, unless Project A/E objects in writing and receives Owner's consent not to make the changes. Project A/E will be responsible for any damages incurred by Owner that are caused by Project A/E's failure to incorporate requested corrections and amendments to the documents.

1.1.17 Project A/E shall provide a review and comment form acceptable to Owner for Owner's use during document review. Owner will provide its review comments to Project A/E on the form and Project A/E shall provide a detailed written response to each of Owner's review comments indicating where and how they have been addressed in the design documents. At each required document submittal stage, Project A/E shall include the completed comment form from the preceding submittal along with a cover letter signed by a firm principal affirming that the previous review comments have been fully addressed in the current submittal. Failure to respond to the previous comments or to provide the written affirmation may result in reduction or rejection of Project A/E's then current Statement for Architectural/Engineering Services Rendered. Owner's approval of the revised drawing shall not be deemed to be an approval of any unlisted changes, and any costs or expense for any additional services subsequently incurred for such unlisted changes shall be borne or reimbursed by Project A/E.

1.1.18 Project A/E, as part of Basic Services, shall become sufficiently familiar with the existing facilities, systems and conditions at the Project location so that the proposed Project will completely and properly interface functionally with them.

1.1.19 Project A/E agrees and acknowledges that Owner is entering into this Agreement in reliance on Project A/E's represented professional abilities with respect to performing Project A/E's services, duties, and obligations under this Agreement. Project A/E shall perform its services (i) with the professional skill and care ordinarily provided by competent architects/engineers practicing in the same or similar locality and under the same or similar circumstances and professional license; and (ii) as expeditiously as is prudent considering the ordinary professional skill and care of a competent architect/engineer; and (iii) in compliance with all applicable, federal, State of Texas and municipal regulations, codes, ordinances, orders and with those of any other body having jurisdiction. There are no obligations, commitments, or impediments of any kind known to the Project A/E that will limit or prevent performance by Project A/E of its services. Project A/E hereby agrees to correct, at its own cost, any of its services, and the services of its consultants, that do not meet the standard of care.

1.1.20 Project A/E shall take reasonable precautions to verify the accuracy and suitability of any drawings, plans, sketches, instructions, information, requirements, procedures, requests for action, and other data supplied to Project A/E (by Owner or any other party) that Project A/E uses for the Project. Project A/E shall identify to Owner in writing any such documents or data which, in Project A/E's professional opinion, are unsuitable, improper, or inaccurate in connection with the purposes for which such documents or data are furnished. Owner does not warrant for the accuracy or suitability of such documents or data as are furnished unless Project A/E advises Owner in writing that in Project A/E's professional opinion such documents or data are unsuitable, improper, or inaccurate and Owner confirms in writing that it wishes Project A/E to proceed in accordance with the documents or data as originally given.

1.1.21 Project A/E's services shall be reasonably accurate and free from any material errors or omissions. Neither acceptance nor approval of Project A/E's services by Owner shall relieve Project A/E of any of its professional duties or release it from any liability, it being understood that Owner is, at all times, relying upon Project A/E for its skill and knowledge in performing Project A/E's services. Owner shall have the right to reject any of Project A/E's services because of any fault or defect in the Project due to any material errors or omissions in the Drawings, Specifications, and other materials prepared by Project A/E or its consultants. Upon notice of any such errors or omissions, Project A/E shall promptly provide any and all services necessary to correct or remedy them at no additional cost to Owner. Project A/E's obligation to correct its errors and omissions is in addition to, and not in substitution for, any other remedy for defective services which Owner may have at law, in equity, or both.

1.1.22 Project A/E shall not proceed to any phase of design not expressly authorized by Owner, except at Project A/E's own financial risk.

1.1.23 Project A/E agrees to furnish efficient business administration and superintendence and to use Project A/E's best efforts to design the Project in an expeditious and economical manner consistent with the interest of Owner and Project A/E's professional skill and care.

1.1.24 Project A/E shall allocate adequate time, personnel and resources as necessary to perform its services. Project A/E's senior principal(s) responsible for managing the Project is (are) identified in an Exhibit attached hereto and shall not be changed without the prior approval of Owner. The day-to-day Project team will be led by the senior principal(s) unless otherwise directed by Owner or prevented by factors beyond the control of Project A/E. The senior principal(s) shall act on behalf of Project A/E with respect to all phases of Project A/E's services and shall be available as required for the benefit of the Project and Owner.

1.1.25 Project A/E shall make reasonable efforts to investigate any documents provided by Owner and the visible existing conditions at the Project Site to identify existing systems and construction which must be modified to accommodate Project A/E's design for the Project and the construction of the Project. Project A/E shall identify to Owner any discrepancies between the documents and visible conditions, and shall consult with Owner on any special measures, services or further investigations required for Project A/E to perform its services free from material errors and omissions and to properly coordinate with existing systems and construction. This investigation shall be accomplished by registered, professional architects and engineers, as appropriate.

1.1.26 Project A/E, when requested by Owner, shall coordinate the purchase of additional reprographic materials for procurement purposes or when additional review sets, in excess of those required by Article 1.4 are required by Owner. Project A/E shall present a Tax Exemption Certificate to the vendor and coordinate Owner's requirements for type, quantity and invoice billing. When so requested by Owner, Project A/E will account to Owner for all additional materials ordered by Owner through Project A/E as Owner's agent and shall distinguish between those materials ordered on behalf of Owner without sales tax and any other copies thereof that Project A/E, or others, may order and pay for which includes sales tax, on its own or their behalf. Project A/E shall forward to Owner the original vendor's invoice for materials purchased by Owner and delivered to Project A/E as Owner's agent.

1.1.27 If the Project is subject to Texas Commission on Environmental Quality (TCEQ) regulations, Project A/E shall coordinate all related design efforts, including the civil engineer and landscape architect, so that consideration of site design and Best Management Practices ("BMP's") are integrated.

1.1.28 Insurance Coverage. Project A/E shall carry professional liability/errors and omissions insurance, covering the services provided under this Agreement and other coverages as required below with companies authorized to do business in the State of Texas or an eligible surplus lines insurer operating in accordance with the Texas Insurance Code, having an A.M. Best Rating of A-:VII or better, and in amounts as further described, acceptable to and approved by the Owner. The costs of such insurance will be at the expense of the Project A/E. The insurance policy shall remain in force for a period of two (2) years beyond the Final Completion Date. Each request for payment by Project A/E shall include the expiration date of the insurance. Project A/E shall deliver to Owner replacement certificates not less than thirty (30) days after the expiration of any such insurance.

- a) Professional Liability (Errors & Omissions) Insurance with limits of not less than \$1,000,000 each occurrence, \$2,000,000 aggregate. Such insurance shall cover all professional services rendered by or on behalf of the Project Architect and its consultants under the Agreement. Renewal policies written on Claims-Made basis will maintain the same retroactive date as is in effect at the inception of this Agreement. If coverage is written on a claims-made basis, Project Architect agrees to purchase an Extended Reporting Period Endorsement, effective for two (2) full years after the expiration or cancellation of this policy. No professional liability policy written on an occurrence form will include a sunset or similar clause that limits coverage unless such clause provides coverage for at least two years after the expiration of cancellation of this policy.
- b) On Site Insurance: For services performed on Owner's premises, Project A/E shall furnish to Owner Certificates of Insurance ("COIs") as set forth below prior to the commencement of any work hereunder and shall maintain such coverage during the full term of the Agreement.

Worker's Compensation	Statutory Limits
Employer's Liability	
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 policy limit
Bodily Injury by Disease	\$1,000,000 each employee
Commercial General Liability	\$1,000,000 each occurrence
	\$2,000,000 aggregate
Business Auto Liability	
Combined Single Limit	\$1,000,000 each occurrence

- c) Notice of Cancellation: Required insurance shall not be cancelable without thirty (30) days' prior written notice to Owner.

1.1.29 Evidence of insurance on a Texas Department of Insurance approved certificate form verifying the existence of all insurance after the execution and delivery of this Agreement and prior to the performance of any services by Project A/E under this Agreement. Additional evidence of insurance will be provided on a Texas Department of Insurance approved certificate form verifying the continued existence of all required insurance no later than 30 days after each annual insurance policy renewal. All insurance policies, with the exception of worker's compensation, employer's liability and professional liability will be endorsed and name The Board of Regents of The University of Texas System, The University of Texas System and Owner as Additional Insured for activities arising out of this Agreement on an ISO (CG 20 10 0704) or equivalent form. Workers compensation insurance policies will be endorsed

to provide a waiver of subrogation in favor of The Board of Regents of The University of Texas System, The University of Texas System and Owner. Commercial General Liability and Business Auto Liability insurance policies will be endorsed to provide primary and non-contributory coverage.

1.1.30 Project A/E is responsible for any self-insured retentions, or deductibles that apply to any policy limit required herein.

1.1.31 Certificates of Insurance. Approved Texas Department of Insurance certificates will be mailed, faxed, or emailed to the following Owner's contact.

1.1.32 The insurance policies required in this Agreement will be kept in force for the periods a) specified below:

- a) Required coverages will be kept in force until receipt of Final Payment to Project Architect by Owner;
- b) Workers' Compensation Insurance and Employer's Liability insurance will be kept in force until the services have been fully rendered and accepted by Owner in writing.

## **1.2 Schematic Design Phase**

1.2.1 Based on the mutually agreed upon Pre-Design Document, the Construction Cost Limitation and the Project Milestone Schedule, Project A/E shall prepare sufficient alternative approaches to design the construction of the Project to satisfy Owner's requirements and shall, at completion of this phase, submit Schematic Design Documents in accordance with Owner's Design Guidelines, Owner's Master Construction Specifications, and any additional requirements set forth in Article 14.

1.2.2 Project A/E shall provide all services necessary to perform the services of this Phase (preparation of Schematic Design documents) including, without limitation, unless otherwise approved by Owner, the preparation and prompt delivery of all items specified in Owner's Design Guidelines.

1.2.3 Project A/E shall work closely with Owner in preparation of schematic drawings and shall specifically conform to Owner's requirements regarding aesthetic design issues.

1.2.4 Project A/E shall furnish and deliver to Owner the number of complete printed sets of Schematic Design documents as enumerated in Article 14.

1.2.5 Project A/E shall direct the preparation of a detailed Estimated Construction Cost Report as described in sub-paragraph 1.1.15 to confirm compliance with the Construction Cost Limitation and include the detailed Estimated Construction Cost Report with the completed Schematic Design Documents. Project A/E shall advise Owner of any adjustments to the project scope necessary to align the Estimated Construction Cost with the Construction Cost Limitation and shall revise the Schematic Design documents, without charge to Owner, as may be required to comply with the Construction Cost Limitation. Owner may, solely at Owner's discretion and in writing, increase or decrease the Construction Cost Limitation to align with Project A/E's detailed Estimated Construction Cost.

1.2.6 Before proceeding into the Design Development Phase, Project A/E shall obtain Owner's written acceptance of the Schematic Design documents and acknowledgement of Project A/E's submission of the detailed Estimated Construction Cost and updated Project Milestone Schedule. Owner's acknowledgement of Project A/E's submission of the detailed Estimated Construction Cost Report prepared

at the Schematic Design Phase does not relieve Project A/E of its obligation to design the Project within the Construction Cost Limitation.

### **1.3 Design Development Phase**

1.3.1 Based on the approved Schematic Design documents and any adjustments to the Pre-Design Document or Construction Cost Limitation authorized by Owner, Project A/E shall prepare, for approval by Owner, Design Development documents in accordance with Owner's written requirements to further define and finalize the size and character of the Project in accordance with Owner's Design Guidelines, Owner's Master Construction Specifications, and any additional requirements set forth in Article 14.

1.3.2 Project A/E shall furnish and deliver to Owner the number of complete printed sets of Design Development documents as enumerated in Article 14.

1.3.3 Project A/E shall direct the preparation of a detailed Estimated Construction Cost Report as described in sub-paragraph 1.1.15 to confirm compliance with the Construction Cost Limitation and include the detailed Estimated Construction Cost Report with the completed Design Development documents. Project A/E shall advise Owner of any adjustments to the project scope necessary to align the Estimated Construction Cost with the Construction Cost Limitation and shall revise the Design Development documents, without charge to Owner, as may be required to comply with the Construction Cost Limitation. Owner may, solely at Owner's discretion and in writing, increase or decrease the Construction Cost Limitation to align with Project A/E's detailed Estimated Construction Cost.

1.3.4 Before proceeding into the Construction Document Phase, Project A/E shall obtain Owner's written acceptance of the Design Development documents and acknowledgement of Project A/E's submission of a detailed Estimated Construction Cost Report and updated Project Milestone Schedule. Owner's acknowledgement of Project A/E's submission of a detailed Estimated Construction Cost Report prepared at the Design Development Phase does not relieve Project A/E of its obligation to design the Project within the Construction Cost Limitation.

1.3.5 When so requested by Owner, Project A/E shall prepare presentation materials as defined in Owner's Design Guidelines at completion of Design Development and, if so requested, shall present same to the Board of Regents at a regular meeting where scheduled within the State of Texas.

1.3.6 Project A/E shall prepare preliminary recommended furniture layouts for all spaces where it is deemed important to substantiate the fulfillment of program space requirements, or to coordinate with specific architectural, mechanical or electrical elements.

1.3.7 Project A/E shall assist Owner with submitting the project to the Texas Higher Education Coordinating Board ("THECB"). Such assistance shall include (i) the preparation of a listing of the rooms, room type and usage codes, and square footages in the project, and (ii) the preparation of project cost information, in accordance with THECB Guidelines. This information shall be provided at the completion of the Design Development Phase when requested by Owner. The listing of rooms, room type and usage codes, and square footages shall then be updated to reflect any changes occurring during construction and provided to Owner at Substantial Completion.

### **1.4 Construction Document Phase**

1.4.1 Based on the approved Design Development documents and any further adjustments in the scope or quality of the Project or in the Construction Cost Limitation authorized by Owner, Project A/E

shall prepare, for approval by Owner, Construction Documents consisting of Drawings and Specifications, in accordance with Owner's written requirements, setting forth in detail the requirements for construction of the Project, including, without limitation, Owner's Design Guidelines, Owner's Master Construction Specifications and any additional requirements contained in Article 14. The Drawings and Specifications for the entire Project shall be prepared so that the construction of the Project will cost no more than the Construction Cost Limitation established by Owner. Project A/E is responsible for managing the design to stay within the Construction Cost Limitation.

1.4.2 Project A/E shall advise Owner on matters such as construction phasing and scheduling, the inclusion of alternate scopes of work, special cash allowance items, liquidated damages, the Construction Contract Time, and other construction issues appropriate for the Project.

1.4.3 Project A/E shall assist Owner in connection with Owner's responsibility and procedures for obtaining approval of all authorities having jurisdiction over the Project.

1.4.4 Project A/E shall ensure coordination and inclusion of sequence of operations for all operable systems in the Project.

1.4.5 Project A/E, at Project A/E's expense, at each stage of review described in Article 14, shall furnish and deliver to Owner the number of complete printed copies of all Drawings and Specifications of every character made or furnished in connection with defining the scope of the Work, as enumerated in Article 14, which copies shall become the property of Owner. Project A/E shall incorporate into the Drawings and Specifications such changes as are necessary to satisfy Owner's written review comments or published meeting minutes, any of which may be appealed in writing for good cause.

1.4.6 Project A/E shall pay for the reproduction of all Drawings, Specifications and other documents for use by Project A/E and its consultants and all documents reproduced for the various completion stage reviews (as set forth in Article 14) by Owner prior to the reproduction of Construction Documents. All other reproduction costs shall be borne by Owner, provided that all invoices for such reproduction work are billed directly to Owner, free of state sales taxes, and identified by Project A/E as to the Owner's project name and project number. However, addenda documents issued after the Construction Documents are reproduced, except for changes generated by Owner, shall be supplied at Project A/E's expense.

1.4.7 Project A/E shall direct the preparation of a detailed Estimated Construction Cost Report as described in sub-paragraph 1.1.15 to confirm compliance with the Construction Cost Limitation and include the detailed Estimated Construction Cost Report with the completed Construction Documents. Project A/E shall advise Owner of any adjustments to the project scope necessary to align the Estimated Construction Cost with the Construction Cost Limitation and shall revise the Construction Documents, without charge to Owner, as may be required to comply with the Construction Cost Limitation. Owner may, solely at Owner's discretion and in writing, increase or decrease the Construction Cost Limitation to align with Project A/E's detailed Estimated Construction Cost.

1.4.8 Construction Document drawings shall be produced with computer aided design software as part of Basic Services. Owner will define the design software requirements and the final media for the data.

1.4.9 Project A/E shall participate in a final review of the Construction Documents with Owner at the Project location or other location specified by Owner in the State of Texas. Prior to Owner's approval of the Construction Documents, Project A/E shall incorporate such changes as are necessary to satisfy Owner's review comments.

1.4.10 Before proceeding into the Construction Services Procurement Phase, Project A/E shall obtain Owner's written acceptance of the Construction Documents and acknowledgement of Project A/E's submission of a detailed Estimated Construction Cost Report and Project Milestone Schedule. Owner's acknowledgement of Project A/E's submission of a detailed Estimated Construction Cost Report prepared at the Construction Document Phase does not relieve Project A/E of its duty to design the Project within the Construction Cost Limitation.

## **1.5 Construction Services Procurement Phase**

1.5.1 Project A/E shall assist Owner in obtaining and evaluating bids or proposals, and assist in awarding contracts for construction services including preparation for and attendance at Pre-Submittal Conferences and HUB meetings. Project A/E shall answer inquiries from prospective respondents to requests for bids or proposals, at Owner's request, and shall prepare and issue any necessary addenda to the Construction Documents. Project A/E shall maintain a register of procurement documents, arrange for the distribution of documents to prospective respondents, and plan rooms, and, when so requested by Owner, obtain and administer deposits.

1.5.2 For solicitations based upon competitive sealed bidding, Project A/E shall review and inquire about the responsibility of apparent low bidders and inform Owner in writing of Project A/E's findings and recommendations. For solicitations based upon competitive sealed proposals, Project A/E shall review and inquire about qualifications and other pertinent proposal information and inform Owner in writing of Project A/E's findings and recommendations.

1.5.3 In the event the best value proposal or lowest responsible bid received for the Project exceeds the Construction Cost Limitation following the completion of the Construction Document Phase, Project A/E, without charge to Owner, and if so directed by Owner, shall revise the Construction Documents as necessary to bring the cost of the Project within the Construction Cost Limitation. Owner reserves the right to accept a proposal or bid and award a construction contract that exceeds the Construction Cost Limitation, if such award is determined by Owner to be in Owner's best interest.

## **1.6 Construction Phase—Administration of the Construction Contract**

1.6.1 The Construction Phase shall commence with the award of the Construction Contract, either the "Agreement Between Owner and Contractor" or the "Agreement Between Owner and Construction Manager-at-Risk", and issuance of (i) a Notice to Commence On-Site Work or (ii) a Notice to Proceed with Construction Services and terminate sixty (60) days after Final Payment to the Contractor is made, or when all of Project A/E's services have been satisfactorily performed, whichever occurs later.

1.6.2 Project A/E shall administer the Construction Contract for the Project as set forth below and in the edition of Owner's Design Guidelines current as of the date of this Agreement.

- a) Project A/E shall coordinate with the Construction Manager to establish and maintain a numbering and tracking system for all Project records, including changes, Requests for Information, Submittals, and Project A/E's supplementary instructions.
- b) Project A/E shall chair all meetings scheduled by Owner or Project A/E and shall promptly provide summary notes to all parties. Project A/E shall attend the Contractor's regularly scheduled planning meetings when requested.

1.6.3 Project A/E shall review the Contractor's list of proposed subcontractors for the work, initial administrative submittals for the Baseline Schedule, Schedule of Values, Submittal Register, and Equipment Matrix to establish appropriate bases for construction monitoring, payment processing, and system commissioning. Project A/E shall identify necessary revisions to the documents in writing to the Contractor and recommend acceptance of the documents by Owner when appropriate. Project A/E shall review periodic updates of all schedules with Owner and Contractor to evaluate appropriateness.

1.6.4 Project A/E and its consultants shall prepare appropriate materials for and conduct a Pre-Construction Conference at the Site prior to commencement of construction by the Contractor.

1.6.5 Project A/E shall be a representative of Owner during the Construction Phase, and shall advise and consult with Owner. Instructions to the Contractor shall be forwarded through Project A/E and all communication by and with Project A/E's consultants shall be through Project A/E except that Owner reserves the right to communicate directly with the Contractor and consultants as Owner deems necessary or appropriate at any time. Project A/E shall have authority to act on behalf of Owner to the extent provided in this Agreement and as supplemented by the Construction Contract Documents. Duties, responsibilities and limitations of authority of Project A/E shall not be restricted, modified or extended without written acceptance of Owner.

1.6.6 Project A/E shall visit the Site at least once each week during the entire construction period to observe the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Construction Contract Documents. Each of Project A/E's consultants shall visit the Site at least once each week during construction activities related to the consultant's discipline to observe the progress and quality of the Work and to determine in general if the Work is proceeding in accordance with the Construction Contract Documents. Project A/E and its consultants shall submit written reports of their Site visits and meetings. Project A/E shall not be required to make exhaustive or continuous onsite visits to inspect the quality or quantity of the Work.

- a) On the basis of the onsite observations, Project A/E shall keep Owner informed of the progress and quality of the Work, and shall endeavor to guard Owner against defects and deficiencies in the Work. Project A/E shall notify Owner and Contractor in writing of any portions of the Work which Project A/E has observed as not being in conformity with the Construction Contract Documents and make recommendations as to correction of the deficiencies or defects. Project A/E shall make its Site representative available and shall consult with Owner and Contractor on the occasion of all circumstances arising during the course of construction which would make such consultation in Owner's interests.
- b) In addition to Site visits for general inspection and observation, Project A/E and its consultants shall visit the Site for specific purposes related to certification of progress payments, start-up or mock-up reviews for significant work activities and for formal inspections of the Work. Project A/E and its consultants shall provide written reports of all Site visits to Owner and Contractor.

1.6.7 Project A/E shall prepare an agenda for, and conduct monthly job conferences for attendance by representatives of Contractor, Subcontractors, Project A/E and Owner, and prepare and distribute minutes of the meetings.

1.6.8 Project A/E shall not have control over, be in charge of, or be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors or any other persons performing any of the Work, or for the failure of any of them to carry out the Work in accordance with the Construction Contract Documents.



1.6.9 Project A/E shall at all times have access to the Work wherever it is in preparation or progress.

1.6.10 Project A/E shall determine the amounts owing to Contractor based on observations of Work placed at the Site and on evaluations of the Contractor's Application for Payment, and shall coordinate its review and evaluation with Owner's representatives, and shall certify Contractor's Application for Payment in an appropriate amount.

1.6.11 The certification of Contractor's Application for Payment shall constitute a representation by Project A/E to Owner, based on Project A/E's observations at the Site and on the data comprising the Contractor's Application for Payment, that the Work has progressed to the point indicated; that, to the best of Project A/E's knowledge, information and belief, the quality of the Work is in accordance with the Construction Contract Documents (subject to an evaluation of the Work for conformance with the Construction Contract Documents upon Substantial Completion, to the results of any subsequent tests required by or performed under the Construction Contract Documents, to minor deviations from the Construction Contract Documents correctable prior to completion, and to any specific qualifications stated in the Contractor's Application for Payment); and that Contractor is entitled to payment in the amount certified. However, the approval of Contractor's Application for Payment shall not be a representation that Project A/E has made any examination to ascertain how and for what purpose the Contractor has used the monies paid on account of the Construction Contract.

1.6.12 Project A/E shall be the interpreter of the technical requirements of the Construction Contract Documents and the judge of the performance of the Work of the Contractor. Project A/E shall render interpretations necessary for the proper execution or progress of the Work with reasonable promptness on written request of either Owner or the Contractor, and shall render written recommendations within a reasonable time, on all claims, disputes and other matters in question between Owner and the Contractor relating to the execution or progress of the Work or the interpretation of the Construction Contract Documents.

1.6.13 Interpretations and recommendations of Project A/E shall be consistent with the intent of and reasonably inferable from the Construction Contract Documents and shall be in written or graphic form.

1.6.14 Subject to approval of Owner, Project A/E's decisions in matters relating to artistic effect shall be final if consistent with and reasonably inferable from the intent of the Construction Contract Documents. Project A/E shall review interior designs, furniture selections or both proposed by Owner and advise Owner on their aesthetic compatibility with Project A/E's design.

1.6.15 Project A/E shall have the responsibility and the authority, with appropriate notification to the parties, to reject Work which does not conform to the Construction Contract Documents. Whenever, in Project A/E's reasonable opinion, it is necessary or advisable for the implementation of the intent of the Construction Contract Documents, Project A/E will have authority to require special inspection or testing of the Work in accordance with the provisions of the Construction Contract Documents, whether or not such Work will then be fabricated, installed or completed. Project A/E shall review construction materials testing and any special testing required and shall provide recommendations for retesting, actions, or any appropriate corrective measures as may be necessary or appropriate based on the results of such tests.

1.6.16 Project A/E and its consultants shall review and approve or take other appropriate action upon the Contractor's Submittals, such as Shop Drawings, product data and Samples, but only for conformance with the design concept of the Work set forth in the Construction Contract Documents, and shall respond to the Contractor's inquiries and questions and provide supplemental information as appropriate. Action on Submittals shall be taken with reasonable promptness so as to cause no delay to the Contractor's scheduled progress, but in any event no more than fourteen (14) Days after receipt. Project A/E's approval

of a specific item shall not indicate approval of an assembly of which the item is a component. Project A/E's review shall not constitute approval of any construction means or methods.

1.6.17 Project A/E shall clarify and interpret the intent and scope of the Construction Documents and, if necessary or appropriate, issue supplemental documents to amplify or explain portions of the Construction Documents.

1.6.18 Project A/E shall provide assistance in the review of the Contractor's requests for change orders or claims for additional time or costs, and make recommendations to Owner as to such requests or claims.

1.6.19 Unless Owner expressly directs otherwise, Project A/E shall prepare and sign Change Orders for Owner's approval and execution in accordance with the Construction Contract Documents, and shall have authority to order minor changes in the Work not involving an adjustment in the Construction Contract Sum or an extension of the Construction Contract Time which are not inconsistent with the intent of the Construction Contract Documents. In conjunction with each Change Order, Project A/E shall prepare an independent cost and time estimate for comparison with the Contractor's proposal and recommend to Owner whether the proposal is acceptable.

1.6.20 Project A/E shall prepare Proposed Change Order(s) and revise Construction Contract Documents, when appropriate, to illustrate and document the work required by approved Change Orders, addenda, Project A/E's supplemental instructions, and any other alterations to the Construction Contract Documents generated by Project A/E or Owner. All proposed changes to Drawings and Specifications, regardless of how initiated, shall be totally defined in the document depicting them as to scope of work added, removed, or changed. The original Construction Documents may be revised to show such changes, provided that all such revisions shall be separately recorded on media acceptable to Owner, including, without limitation, Owner's design software. Such revisions shall be clearly indicated and a current revision date shall be included on the document. Changes to the Specifications shall be made by consecutively numbered and dated addenda. All changes to Drawings and Specifications will be identified with date of change, revision number and other customary identification references. Areas changed on Drawings will be "clouded" to show each change. Clouds designating previous changes will be removed so that only the most recent changes will be clouded. Project A/E shall submit revised Construction Documents per Owner's native software and in Adobe PDF format and per Owner's close-out procedures.

1.6.21 Project A/E and its consultants shall conduct and participate in concealed space observations, systems start-up observations, systems integration/operational demonstrations, Substantial Completion or pre-final work observations to determine the dates of Substantial Completion, and Final Completion. In association with each observation, Project A/E and its consultants shall prepare a list of items which Project A/E and its consultants have observed as deficiencies in the Work, requiring remedial work or replacement, assemble and distribute the official Open Item List(s) and Punchlist(s) to all affected parties, and thereafter review the corrected and/or replaced work and assist in verification of correction of all items.

1.6.22 Project A/E shall review, for conformance with the Construction Contract Documents, Contractor's submission of guarantees and warranties.

1.6.23 Project A/E and its consultants shall assist Owner in checking Record Documents during the course of the Work in association with certifying Applications for Payments and shall review Record Drawings and Specifications for completeness and compliance with Construction Contract requirements at Substantial Completion and at Final Completion of the Project.

1.6.24 Project A/E shall receive and review Contractor's submission of Record Documents and Close-out Documents furnished by the Contractor, shall require necessary revisions to same, and when acceptable under the terms of the Construction Contract, shall forward to Owner. Project A/E shall execute the Certificate of Final Completion and certify Final Payment to the Contractor when the requirements of the Construction Contract have been met.

1.6.25 Project A/E shall monitor the Contractor's Work Progress Schedule for the construction phase work and assist Owner in reviewing all relevant activities and advise Owner of the Contractor's scheduled progress.

1.6.26 Project A/E shall provide assistance to Owner for the purpose of advising and counseling Owner's personnel in the usage, operation and maintenance of the building mechanical, electrical, and plumbing systems.

1.6.27 Project A/E shall be available after Final Payment to advise Owner regarding warranty items and to inspect warranty work during the Warranty Period. Project A/E shall participate in the Project's one-year warranty review.

## **1.7 Additional Services**

1.7.1 Additional Services are those services which shall be provided if authorized and confirmed in writing by Owner and for which compensation will be provided as described in this Agreement in addition to compensation for Basic Services. Prior to commencing any Additional Services, Project A/E shall prepare for acceptance by Owner an Additional Services Proposal, in the form attached hereto as an Exhibit, or other format as directed by Owner, which shall describe in detail the nature or scope of the Additional Services, the basis upon which Project A/E has determined that such services are Additional Services, and which shall set forth the proposed fee and Reimbursable Expenses for which Project A/E is prepared to perform such Additional Services, together with a proposed schedule for the performances of such Additional Service. Those services which Owner contemplates to be provided as Additional Services or considers to be Additional Services are described in Article 14. Project A/E shall proceed with rendering Additional Services only after receiving Owner's written acceptance of the Additional Services Proposal.

1.7.2 Upon acceptance by Owner, each Additional Services Proposal and the services performed by Project A/E pursuant to such Additional Services Proposal shall become part of this Agreement and shall be subject to all terms and conditions of this Agreement, as fully and completely as though the same had been included in this Agreement as a Basic Service at the original execution of this Agreement.

1.7.3 Providing services to make detailed investigations of existing conditions or facilities or to make measured drawings of them is an Additional Service except as reasonably necessary to verify the accuracy and completeness of drawings or other information furnished by Owner and to the extent necessary for Project A/E to complete its responsibilities hereunder free of material errors and omissions. Project A/E shall not be required to perform any destructive testing or to hire the services of a surveyor unless agreed to as an Additional Service.

## **1.8 Time**

1.8.1 Project A/E shall perform all of Project A/E's services described herein as expeditiously as is consistent with (1) Project A/E's best professional efforts, skill and care, (2) the orderly progress of such services, and (3) in conformance with the Project Milestone Schedules so that the desired development and construction schedule for the Project shall be maintained. Project A/E shall at all times provide

sufficient personnel to accomplish Project A/E's services within the time limits set forth in the schedules described herein.

1.8.2 The Project Milestone Schedule, attached hereto as an Exhibit, identifies the schedule for completion of each of the phases of services to be performed by Project A/E pursuant to this Agreement. The Project Milestone Schedule includes dates previously provided in the Request for Qualifications but subject to modifications made by Owner to reflect current conditions. Supplemental activities shown on the Project Milestone Schedule, and any associated dates not yet defined, shall be determined at the completion of the Pre-design Phase or at such time when both parties mutually agree that the Project is sufficiently developed and documented. Changes in this Project Milestone Schedule may be made only with the written approval of Owner. Project A/E shall perform all of its services in accordance with the then-current Project Milestone Schedule approved by Owner.

1.8.3 Project A/E shall prepare and submit on a monthly basis an updated design milestone schedule that is acceptable to Owner prior to submission of the Project A/E's Statement for Architectural/Engineering Services Rendered, in conformance with the design Project Milestone Schedule, so that the desired design schedule for the Project is maintained by Project A/E.

## **Article 2      Owner's Responsibilities**

2.1 Owner has prepared a pre-design phase summary document ("Pre-design Phase Document" in the form of either a "Facility Program" or a "Pre-Design Report"), which is attached hereto as an Exhibit, or Owner and Project A/E may agree that Project A/E shall prepare the Pre-design Phase Document as an Additional Service as set forth in Article 14 of this Agreement. The Pre-design Phase Document will set forth Owner's description of the project scope, preliminary project cost, schedule, criteria for design objectives, characteristics and constraints, space requirements and relationships, site requirements, information related to existing facilities, and desired special components, systems and equipment. If Project A/E prepares the Pre-design Phase Document, then Owner will review the Pre-design Phase Document when completed and then determine whether to proceed with the Project and authorize commencement of Basic Services. Owner reserves the right to terminate the Agreement following completion of the Pre-design Phase, and shall have no further obligation to Project A/E other than payment for services authorized by Owner and provided by Project A/E prior to such termination in accordance with the terms and conditions of this Agreement.

2.2 Owner will provide a preliminary project budget and schedule for the Project. The budget will include the Construction Cost Limitation, Owner's Special Cash Allowance, Owner's Construction Contingency, and other costs which are the responsibility of Owner. The Project Milestone Schedule attached hereto as an Exhibit, sets forth Owner's plan for milestone dates and completion of the Project.

2.3 Owner designates its Executive Director of Facilities Planning, Design and Construction as its representative authorized to act in Owner's behalf with respect to the Project. Owner's authorized representative, or her or his delegate, shall examine the documents submitted by Project A/E and shall render decisions pertaining thereto promptly, to avoid unreasonable delay in the progress of Project A/E's services. The Executive Director of Facilities Planning, Design and Construction is also designated as Owner's representative for the purpose of administering this Agreement, including determination of fees earned by Project A/E and equitable back charges against Project A/E. Owner shall have the right to withhold from payments due Project A/E such sums as Owner deems reasonably necessary to protect Owner against any loss or damage which may result from negligence by Project A/E or failure of Project A/E to perform Project A/E's obligations under this Agreement pending final resolution of such claims.

2.4 Owner, at Owner's cost, will secure the services of surveyors, geotechnical and laboratory testing engineers, or other special consultants to develop additional information to the extent necessary for the design of the project. Project A/E shall provide Owner with parameters for inclusion in Owner's instructions to such providers.

2.5 Owner shall arrange and pay for structural, mechanical, chemical and other laboratory tests as necessary during construction except as required of the Contractor in the Construction Contract Documents.

2.6 Owner shall furnish all legal, accounting, auditing and insurance counseling services as may be necessary for the Project.

2.7 The services, information, surveys and reports required by the preceding paragraphs shall be furnished at Owner's expense.

2.8 If Owner observes or otherwise acquires actual knowledge of any design flaw or defect in the Project or conflict in the Construction Contract Documents, written notice thereof will be given by Owner to Project A/E; however, Owner shall have no obligation or duty to investigate whether such flaws, defects, or conflicts exist.

2.9 Owner will review Project A/E's design at the completion of Schematic Design and Design Development and at completion of the stages of Construction Documents as described in Article 14. Comments concerning corrections or amendments to the Drawings and Specifications will be furnished in writing to Project A/E as promptly as possible after receipt of the documents for review. Owner's approval of the documents must be in writing and no approval may be deemed given in the absence of written approval. Owner may require Project A/E to halt production during design review.

2.10 Owner shall furnish required information and services and shall render approvals and decisions as expeditiously as necessary for the orderly progress of Project A/E's services and of the Work.

2.11 At the time the Construction Documents are issued for procurement of construction services, Owner shall prepare a statement calculating Project A/E's fees for the Project based upon the provisions of this Agreement and any adjustments to the fee calculation mutually agreed to during design. If Project A/E objects to the revised project fees, Project A/E must notify Owner of its objections in writing within fourteen (14) days of receipt of the fee statement otherwise Project A/E's approval of the fee amounts shall be deemed given.

2.12 Owner will furnish personnel who will be responsible for inspecting the Work, including close, on-site examination of the materials, structure and equipment; and surveillance of the workmanship and methods used to ensure that construction of the Project is reasonably accomplished in accordance with the Construction Contract Documents and good construction practices.

### **Article 3 Construction Cost—Definition**

3.1 The Estimated Construction Cost means the amount calculated by Project A/E for the total cost of all elements of the Project, including all alternate scopes of work, designed and specified by Project A/E or reasonably inferable as a usual and customary component of the Project or otherwise necessary for complete construction of the Project.

3.2 The Estimated Construction Cost shall include at current market rates a reasonable allowance for overhead, profit and general conditions costs, the cost of labor and materials to be furnished by

Contractor and any equipment which has been shown in the plans, specified, and specially provided for by Project A/E. The Estimated Construction Cost shall include and consider the cost of labor and materials necessary for installation of Owner-furnished equipment which has been shown in the plans, specified, and specifically provided by Project A/E.

3.3 The Estimated Construction Cost does not include compensation to Project A/E and Project A/E's consultants, Owner's Construction Contingency, Owner's Special Cash Allowances, the cost of the land, rights-of-way, or other costs which are the responsibility of Owner as provided in Article 2.

#### **Article 4 Direct Salary Expense**

4.1 Direct Salary Expense ("DSE") is defined as the actual salaries, expressed on an hourly wage basis, prior to deductions for employment taxes (such as FICA, Medicare, income tax withholding) and employee-paid benefits, of all personnel, including Project A/E's employees directly engaged on the Project (and performing consultations or research or preparing designs, Drawings, and Specifications for the Project). DSE shall exclude mandatory and customary fringe benefits and employee benefits (such as employer-paid insurance, sick leave, holidays, vacation, pensions and similar contributions, or additions such as bonuses or other surplus payments), overhead expense (which includes salaries of bookkeepers, secretaries, clerks, and the like), and profit relating to the Project. Any multiplier applied to such DSE shall be for the purpose of covering such fringe benefits, expense, and profit. All personnel shall mean anyone employed by Project A/E and its consultants including, but not limited to, architects, engineers, officers, principals, associates, design software technicians, designers, job captains, draftspersons, and specifications writers, who are performing consultation, research or design, or who are producing Drawings, Specifications, plans, or other documents pertaining to the Project, or who are performing services during construction at the Site that are directly attributable to, and necessary for, such construction.

4.2 The full list of all personnel titles and the hourly wage for each which has been initially accepted by Owner is included as an Exhibit hereto. With Owner's express, written approval, the hourly rates contained therein may be adjusted annually in accordance with the usual and customary salaries of the architectural profession in the area of Project A/E's home office.

#### **Article 5 Reimbursable Expenses**

5.1 Reimbursable Expenses are in addition to the compensation for Basic Services and Additional Services, and include actual out-of-pocket reasonable expenditures made by Project A/E and Project A/E's employees and consultants incurred solely and directly in connection with Project A/E's performance of its services hereunder for the following expenses:

- 5.1.1 Fees paid for securing approval of authorities having jurisdiction over the Project.
- 5.1.2 Professional models and renderings produced for presentations when requested by Owner.
- 5.1.3 Shipping or mailing of all reports, Drawings, Specifications, and other items in connection with the Project except for: correspondence between Project A/E and Owner; Project A/E's in-house work or correspondence; or work or correspondence exchanged between Project A/E and its consultants.
- 5.1.4 Expense of any additional insurance coverage or limits that exceed those required by this Agreement, when requested by Owner.

- 5.1.5 Expense of transportation and living expenses in connection with out-of-state travel approved in advance in writing by Owner and directly associated with the Project will be reimbursed in accordance with Owner's Current Employee Travel Policy, which is included as an Exhibit hereto.
- 5.1.6 Expenses of any reprographic services that are in addition to those required under Basic Services requested by Owner in writing, including, but not limited to reproduction and delivery of Drawings, Specifications, addenda, reports or other miscellaneous documents. Reprographic services may include electronic document files or paper printing and delivery. Authorized additional reprographic services that are not provided in-house by Project A/E shall be procured in the following manner:
- a) Project A/E shall develop a complete scope of services fully describing the services to be provided by the reprographic vendor. Project A/E shall submit the scope of services to and request offers from at least three reprographic vendors, including at least one woman owned Historically Underutilized Business ("HUB") and one minority owned HUB. For services projected to be less than \$25,000, three offers procured by telephone are acceptable. For services anticipated to be greater than \$25,000, three written offers are required. An updated HUB Subcontracting Plan (HSP) reflecting the new scope of work shall be submitted to Owner for approval.
  - b) Reprographic services vendor shall provide, as a minimum, the following information in its offer to Project A/E:
    - (1) Its ability to handle projected volume on given schedule.
    - (2) Its ability to receive and warehouse Project A/E's electronic document files.
    - (3) Its ability to manage construction procurement document deposit process.
    - (4) Its ability to print partial document sets as directed by Project A/E.

5.2 Unless expressly directed, and approved in advance, by Owner, transportation (including mileage and parking expenses) and living expenses incurred within the State of Texas, for firms whose principal address is within the State of Texas, will not be subject to reimbursement.

5.3 Expenses not allowed for reimbursement include the cost of review documents required to be provided to Owner under Article 14, telephone charges, FAX service, alcoholic beverages, laundry, valet service, entertainment or any non-project related items. All tips must be included within the per diem allowances.

5.4 Owner shall not pay a mark-up on Reimbursable Expenses. Project A/E shall submit receipts for all Reimbursable Expenses along with any reimbursement request.

## **Article 6 Basis of Compensation**

Owner shall compensate Project A/E for the services provided in accordance with Article 7, Payments to Project A/E, and other terms and conditions of this Agreement, as follows:

### **6.1 Basic Services Fee**

6.1.1 For Basic Services, as described in Article 1, and including all disciplines identified in Article 14.1 as part of Basic Services, Project A/E's Basic Services Fee shall be calculated as follows:

The Construction Cost Limitation times the agreed fee percentage equals Basic Services Fee (see paragraph 14.4).

6.1.2 The agreed fee percentage for Basic Services cannot exceed the maximum fee allowed as interpolated from the Architect/Engineer Fee Schedule, which is included as an Exhibit hereto.

6.1.3 Project A/E's Basic Services Fee will be based on the Construction Cost Limitation regardless of whether the actual Construction Contract Sum at time of award, less Owner's Special Cash Allowance(s) and Owner's Construction Contingency, is more or less than the Construction Cost Limitation provided that the resulting fee, when expressed as percentage of the actual Construction Contract Sum at time of award, shall not exceed the maximum percentage fee established by the Board of Regents, or any other limitations imposed by law.

6.1.4 In multi-stage projects, the Basic Services Fee for each Construction Contract Stage ("CCS") shall be calculated multiplying the Sub-Construction Cost Limitation for the CCS times the agreed fee percentage for the Basic Services Fee established in paragraph 14.5. Project A/E's total Basic Services Fee will be the sum of the Basic Services Fees for all CCSs. The total Basic Services Fee shall not exceed the maximum fee allowed as a percentage of the Construction Cost Limitation interpolated from the appropriate Board of Regents table.

6.1.5 If the description of Project A/E's Basic Services is changed materially, the applicable fee percentage shall be adjusted equitably, subject to the maximum fee limitations established by the Board of Regents.

## **6.2 Fees for Changes in Project Scope**

6.2.1 For reductions in the scope of the Project that occur after commencement of the Schematic Design Phase but before confirmation of the Construction Cost Limitation at the completion of the Construction Services Procurement Phase, Project A/E's fee for basic services related to the eliminated scope of the Project, to the extent such services are provided by Project A/E, shall be calculated using the same percentage fee used to establish the Basic Services Fee times the lowest bona fide price obtained for the eliminated scope or, if no price is obtained, an up-to-date detailed Estimated Construction Cost for the eliminated scope, but only to the extent that services for the eliminated scope were performed by Project A/E.

6.2.2 For increases in the scope of the Project that occur after commencement of the Schematic Design Phase but before confirmation of the Construction Cost Limitation at the completion of the Construction Services Procurement Phase, the fee for the Basic Services related to the additional scope, to the extent such services are provided by Project A/E, shall be calculated using the same percentage fee used to establish the Basic Services Fee times the lowest bona fide price obtained for the added scope or, if no price is obtained, an up-to-date detailed Estimated Construction Cost for the added scope, but only to the extent that services for the added scope were performed by Project A/E.

## **6.3 Fees for Change Order Services**

6.3.1 If revised Construction Documents are required due to material changes ordered by Owner and not due to errors and omissions on the part of Project A/E, the fee for the additional Basic Services required will be calculated using the same percentage fee used to establish the Basic Services Fee times the lowest bona fide price obtained for the changes to the Work or, if no price is obtained, an up-to-date detailed Estimated Construction Cost for the changes to the Work, but only to the extent that services for the changes to the Work are performed by Project A/E.



#### **6.4 Additional Services**

6.4.1 Fees for Additional Services, including any services identified in Article 14.2 are in addition to the Basic Services Fee described above.

6.4.2 For Additional Services of Project A/E that are not Basic Services or fees due to changes in Project scope, Project A/E's fee shall be calculated as follows.

6.4.3 The fees for Additional Services will be negotiated by Owner and Project A/E as the scope of the Additional Services is defined and shall be calculated in one of the following ways:

- a) A pre-established fixed price amount;
- b) An agreed percentage of the Contractor's cost of the Work resulting from the service being provided; or;
- c) On an hourly basis for time expended at an amount not to exceed 3.0 times the Direct Salary Expense for all personnel directly involved in providing the service.

6.4.4 In the absence of an agreement between Owner and Project A/E, the fees for Additional Services shall be calculated on an hourly basis.

6.4.5 For additional services of Project A/E's consultants that are not Basic Services or additional Basic Services due to changes in Project scope, Project A/E's fee shall be calculated as an amount not to exceed FIVE PERCENT (5%) times the amount that the consultant bills Project A/E for the additional services. The consultant's fee for the additional services shall be calculated in the same manner as described in Article 6.4.3.

#### **6.5 Reimbursable Expenses**

For Reimbursable Expenses, as described in Article 5, and any other items included in Article 14 as Reimbursable Expenses, Project A/E's reimbursement shall be calculated as an amount not to exceed 1.00 times the amounts actually expended by Project A/E, and Project A/E's employees and consultants in the interest of the Project.

### **Article 7 Payments to Project Architect/Engineer**

#### **7.1 Payments for Basic Services**

7.1.1 Payments for Basic Services shall be made at the end of each phase of services or, with Owner's approval, monthly and shall be in proportion to services performed within each phase of services, as demonstrated by work product, on the basis set forth in Article 6. The form for the Statement for Architectural/Engineering Services Rendered ("Statement for Services Rendered") to be utilized is attached as an Exhibit hereto, and Attachments H and I thereto, which concern payments planned and payments made to Historically Underutilized Businesses.

7.1.2 No partial payment made shall be, or construed to be, final acceptance or approval of the services to which the partial payment relates, or a release of Project A/E of any of Project A/E's obligations or liabilities with respect to such services.

7.1.3 Project A/E shall promptly pay all bills for labor and material performed and furnished by others in connection with the performance of the services.

7.1.4 Project A/E shall submit a final Statement for Services Rendered to Owner within thirty days after approval of the Final Payment to the Contractor.

7.1.5 The acceptance by Project A/E, or Project A/E's successors, of final payment under this Agreement shall constitute a full and complete release of Owner from any and all claims, demands, and causes of action whatsoever which Project A/E, or Project A/E's successors, have or may have against Owner under the provisions of this Agreement except those claims previously made in writing and identified by Project A/E as unsettled at the time of the final request for payment.

7.1.6 All Statements for Services Rendered shall be submitted in accordance with Owner's Rider 116, Invoice Payment Requirements, a copy of which is included as an Exhibit hereto. For purposes of Texas Government Code 2251.021, the date the performance of service is completed is the date when Owner's representative approves the Statement for Services Rendered. Owner shall make payment within 30 days of the date Owner approves the Statement for Services Rendered.

## **7.2 Payments for Additional Services and Reimbursable Expenses**

Payments for Project A/E's Additional Services and for Reimbursable Expenses shall be made monthly upon presentation of Project A/E's valid Statement for Services Rendered incurred as approved by Owner. Statements for Services Rendered shall include complete documentation of all expenses.

## **7.3 Payments Withheld**

7.3.1 Under no circumstances shall Owner be obligated to make any payment (whether a progress payment or final payment) to Project A/E if any one or more of the following conditions precedent exist:

- a) Project A/E is in breach or default under this Agreement;
- b) Any portion of a payment is for services that were not performed in accordance with this Agreement provided, however, payment shall be made for those services that were performed in accordance with this Agreement;
- c) Project A/E has failed to make payments promptly to consultants or other third parties used in connection with services for which Owner has made payment to Project A/E;
- d) If Owner, in its good faith judgment, determines that the balance of the unpaid fees is not sufficient to complete the services in accordance with this Agreement; or
- e) Project A/E has failed to achieve a level of performance necessary to maintain the Project Milestone Schedule.

7.3.2 No deductions shall be made from Project A/E's compensation on account of liquidated damages or other sums withheld from payments to Contractors or on account of the cost of changes in the Work other than those for which Project A/E may be liable.

## **Article 8 Project Architect/Engineer's Accounting Records**

8.1 Records of A/E Costs, Reimbursable Expenses, expenses pertaining to Additional Services, services performed on the basis of a multiple of Direct Salary Expense, and other Project costs shall be kept on the basis of Generally Accepted Accounting Principles and shall be available to Owner or Owner's

authorized representative business hours for a period of at least four (4) years after Final Payment or abandonment of the Project. Owner shall have the right to verify the details set forth in Project A/E's billings, certificates, and statements, either before or after payment by (1) inspecting the books and records of Project A/E during normal business hours; (2) examining any reports with respect to this Project; (3) interviewing Project A/E's business employees; (4) visiting the Project Site; and (5) other reasonable action.

8.2 Project A/E shall submit a notarized statement documenting that the Direct Salary Expenses stated on the Exhibit hereto comply with the definition for Direct Salary Expense under Article 4, Direct Salary Expense, and that any multiplier applied to DSE on the attached Exhibit complies with the definition for DSE under Article 4. Project A/E shall break down the multiplier under Article 4 for the purpose of fringe benefits, expense, and profit to justify the multiplier up to a maximum of 3 allowed under Article 6.

## **Article 9 Ownership and Use of Documents**

9.1 Drawings and Specifications as instruments of service are and shall remain property of Project A/E whether the Project for which they are made is executed or not. Owner shall be permitted to retain copies, including reproducible files in Owner's native software, of Drawings and Specifications for information and reference in connection with Owner's use and occupancy of the Project. Owner shall have an irrevocable, paid-up, and perpetual non-exclusive license and right, which shall survive the termination of this Agreement, to use the Drawings and Specifications, including the originals thereof, and the ideas and designs contained therein, for any purpose, regardless of whether Project A/E remains as Project A/E, has resigned, this Agreement has been terminated, Project A/E's scope of services has been modified, or the services herein have been completed.

9.2 Submission or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not be construed as publication in derogation of Project A/E's rights.

## **Article 10 Termination of Agreement**

10.1 This Agreement may be terminated by either party upon seven days' written notice should the other party fail substantially to perform in accordance with its terms through no fault of the party initiating the termination and such failure is not fully cured prior to the expiration of such seven-day period.

10.2 This Agreement may be terminated at any time by Owner for its convenience upon at least seven days' written notice to Project A/E.

10.3 In the event of termination not the fault of Project A/E, Project A/E shall be compensated for all services satisfactorily performed to the termination date, together with approved Reimbursable Expenses then due, provided Project A/E shall have delivered to Owner such statements, accounts, reports and other materials as required by paragraph 10.5 below together with all reports, documents and other materials prepared by Project A/E prior to termination.

10.4 A termination under this Article shall not relieve Project A/E or any of its employees of liability for violations of this Agreement, or any willful, negligent or accidental act or omission of Project A/E. The provisions of this Article shall survive the termination of this Agreement. In the event of a termination under this Article, Project A/E hereby consents to employment by Owner of a substitute Project A/E to complete the services under this Agreement, with the substitute Project A/E having all rights and privileges of the original Project A/E. Project A/E and its consultants shall not be liable for any changes made by Owner to the Drawings or Specifications (including Drawings or Specifications provided in Owner's native software or other electronic format) or for claims or actions arising from any such changes on projects in which Project A/E is not involved.

10.5 As of the date of termination of this Agreement, Project A/E shall furnish to Owner all statements, accounts, reports and other materials as are required hereunder or as have been prepared by Project A/E in connection with Project A/E's responsibilities hereunder. Owner shall have the right to use the ideas and designs therein contained for the completion of the services described by this Agreement, and for completion of the Project, or otherwise.

#### **Article 11 Successors and Assigns**

11.1 Owner and Project A/E, respectively, bind themselves, their partners, successors, assigns and legal representatives to the other party to this Agreement and to the partners, permitted successors, assigns and legal representatives of such other party with respect to all covenants of this Agreement. This Agreement is a personal service contract for the services of Project A/E, and Project A/E's interest in this Agreement, Project A/E's duties hereunder, and Project A/E's fees due hereunder may not be assigned or delegated to a third party. The benefits and burdens of this Agreement are, however, assignable by Owner.

#### **Article 12 Extent of Agreement**

12.1 This Agreement supersedes all prior agreements, written or oral, between Project A/E and Owner and shall constitute the entire Agreement and understanding between the parties with respect to the subject matter hereof. This Agreement and each of its provisions shall be binding upon the parties and may not be waived, modified, amended or altered except by a writing signed by Owner and Project A/E.

#### **Article 13 Miscellaneous Provisions**

13.1 **Captions.** The captions of paragraphs in this Agreement are for convenience only and shall not be considered or referred to in resolving questions of interpretation or construction.

13.2 **Governing Law.** This Agreement and all of the rights and obligations of the parties hereto and all of the terms and conditions hereof shall be construed, interpreted and applied in accordance with and governed by and enforced under the laws of the State of Texas, without giving effect to principles of conflicts of laws.

13.3 **Waivers.** No delay or omission by either of the parties hereto in exercising any right or power accruing upon the non-compliance or failure of performance by the other party hereto of any of the provisions of this Agreement shall impair any such right or power or be construed to be a waiver thereof. A waiver by either of the parties hereto of any of the covenants, conditions or agreements hereof to be performed by the other party hereto shall not be construed to be a waiver of any subsequent breach thereof or of any other covenant, condition or agreement herein contained.

13.4 **Severability.** In case any provision hereof shall, for any reason, be held invalid or unenforceable in any respect, such invalidity or unenforceability shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid or unenforceable provision had not been included herein.

13.5 **Independent Contractor.** Project A/E acknowledges that it is engaged as an independent contractor and that Owner has no responsibility to provide Project A/E or its employees with transportation, insurance or other fringe benefits normally associated with employee status. Project A/E is not, and will not claim to be, an officer, partner, employee or agent of Owner and shall not make any claim, demand or application to or for any right or privilege applicable to an officer, partner, employee or agent of Owner, including, but not limited to, unemployment insurance benefits, social security coverage or retirement benefits. Project A/E hereby agrees to make Project A/E's own arrangements for any of such benefits as

Project A/E may desire and agrees that Project A/E is responsible for all income taxes required by applicable law.

**13.6 Child Support Certification.** Pursuant to Section 231.006, *Texas Family Code*, Project A/E certifies that it is not ineligible to receive the award of or payments under this Agreement and acknowledges that this Agreement may be terminated and payment may be withheld if this certification is inaccurate.

**13.7 Franchise Tax Certification.** A corporate or limited liability company Project A/E certifies that it is not currently delinquent in the payment of any Franchise Taxes due under Chapter 171 of the *Texas Tax Code*, or that the corporation or limited liability company is exempt from the payment of such taxes, or that the corporation or limited liability company is an out-of-state corporation or limited liability company that is not subject to the Texas Franchise Tax, whichever is applicable.

**13.8 Payment of Debt or Delinquency to the State.** Pursuant to Sections 2107.008 and 2252.093, *Texas Government Code*, Project A/E agrees that any payments owing to Project A/E under this Agreement may be applied directly toward any debt or delinquency that Project A/E owes the State of Texas or any agency of the State of Texas regardless of when it arises, until such debt or delinquency is paid in full.

**13.9 Loss of Funding.** Performance by Owner under this Agreement may be dependent upon the appropriation and allotment of funds by the Texas State Legislature (the "Legislature") and/or allocation of funds by the Board of Regents of The University of Texas System (the "Board"). If the Legislature fails to appropriate or allot the necessary funds, or the Board fails to allocate the necessary funds, then Owner shall issue written notice to Project A/E and Owner may terminate this Agreement in accordance with Article 10. Project A/E acknowledges that appropriation, allotment, and allocation of funds are beyond the control of Owner.

**13.10 Proprietary Interests.** All information owned, possessed or used by Owner which is communicated to, learned, developed or otherwise acquired by Project A/E in the performance of services for Owner, which is not generally known to the public, shall be confidential. Project A/E shall not, beginning on the date of first association or communication between Owner and Project A/E and continuing through the term of this Agreement and any time thereafter, disclose, communicate or divulge, or permit disclosure, communication or divulgence, to another or use for Project A/E's own benefit or the benefit of another, any such confidential information, unless required by law. Except when defined as part of the Work, Project A/E shall not make any press releases, public statements, or advertisement referring to the Project or the engagement of Project A/E as an independent contractor of Owner in connection with the Project, or release any information relative to the Project for publications, advertisement or any other purpose without the prior written approval of Owner. Project A/E shall obtain assurances similar to those contained in this subparagraph from persons, vendors and consultants retained by Project A/E. Project A/E acknowledges and agrees that a breach by Project A/E of the provisions hereof will cause Owner irreparable injury and damage. Project A/E, therefore, expressly agrees that Owner shall be entitled to injunctive and/or other equitable relief in any court of competent jurisdiction to prevent or otherwise restrain a breach of this Agreement.

**13.11 Appointment.** Owner hereby expressly reserves the right from time to time to designate by notice to Project A/E a representative to act partially or wholly for Owner in connection with the performance of Owner's obligations hereunder. Project A/E shall act only upon instructions from such representative unless otherwise specifically notified to the contrary.

**13.12 Dispute Resolution.**

**13.12.1** To the extent that Chapter 2260, Texas Government Code, as it may be amended from time to time ("Chapter 2260"), is applicable to this Agreement and is not preempted by other

applicable law, the dispute resolution process provided for in Chapter 2260 will be used by Owner and Project A/E to attempt to resolve any claim for breach of contract made by Project Architect.

13.12.2 Neither the occurrence of an event giving rise to a breach of contract claim nor the pendency of a claim constitute grounds for the suspension of performance by Project Architect, in whole or in part, except as permitted by Subchapter D, Chapter 2251 of the Texas Government Code. Any periods set forth in this Agreement for notice and cure of defaults are not waived.

13.12.3 It is agreed that such process is not invoked if Owner initiates the dispute by first bringing a claim against Project A/E, except at Owner's sole option. If Owner makes a claim against Project A/E and Project A/E then makes a counterclaim against Owner as a claim under Chapter 2260 and in compliance therewith, Owner's original claim against Project A/E does not become a counterclaim and is not subject to the mandatory counterclaim provisions of Chapter 2260 of the *Texas Government Code*, except at the sole option of Owner.

13.12.4 In any litigation between the Owner and the Project Architect arising from this Agreement or this Project, neither party will be entitled to an award of legal fees or costs in any judgment regardless which one is deemed the prevailing party.

13.13 **Notices.** All notices, consents, approvals, demands, requests or other communications provided for or permitted to be given under any of the provisions of this Agreement shall be in writing and shall be deemed to have been duly given or served when delivered by hand delivery or when deposited in the U.S. mail by registered or certified mail, return receipt requested, postage prepaid, and addressed as follows:

If to Owner: Ben Melson  
Senior Vice President and Chief Financial Officer  
1515 Holcombe Blvd., Unit 0050  
Houston, TX 77030

With Copies to: James Waters, J.D., P.E.  
Director, Facilities Project Contract and Control Services  
Operations and Facilities Management  
6900 Fannin, Suite 11.1024  
Houston, Texas 77030

If to Project A/E: \_\_\_\_\_  
[Name]  
\_\_\_\_\_  
[Company Name]  
\_\_\_\_\_  
[Street Address]  
\_\_\_\_\_  
[City, State, Zip]  
\_\_\_\_\_  
[Telephone Number]  
\_\_\_\_\_  
[Email]

or to such other person or address as may be given in writing by either party to the other in accordance with the aforesaid.

13.14 **Authority to Act.** Project A/E warrants, represents, and agrees that (1) it is a duly organized and validly existing legal entity in good standing under the laws of the state of its incorporation or organization; (2) it is duly authorized and in good standing to conduct business in the State of Texas; (3) it has all necessary power and has received all necessary approvals to execute and deliver this Agreement; and (4) the individual executing this Agreement on behalf of Project A/E has been duly authorized to act for and bind Project A/E.

**13.15 Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall be deemed, construed and considered to be an original, but all of which shall constitute one and the same instrument.

**13.16 Ethics Matters; No Financial Interest.** Project A/E and its employees, agents, representatives and consultants have read and understand Owner's Conflicts of Interest Policy available at <http://www.utsystem.edu/policy/policies/int160.html>, Owner's Standards of Conduct Guide available at <https://www.mdanderson.org/patients-family/search-results.html?q=conflict%20of%20interest>, and applicable state ethics laws and rules available at [www.utsystem.edu/ogc/ethics](http://www.utsystem.edu/ogc/ethics). Neither Project A/E nor its employees, agents, representatives or consultants will assist or cause Owner's employees to violate Owner's Conflicts of Interest Policy, provisions described by Owner's Standards of Conduct Guide, or applicable state ethics laws or rules. Project A/E represents and warrants that no member of the Board has a direct or indirect financial interest in the transaction that is the subject of this Agreement.

**13.17 179 D Benefit Allocation.**

13.17.1 Owner may decide to seek the allocation of certain tax benefits pursuant to Section 179D of the Internal Revenue Code of 1986, as amended, (the "Code") through this Agreement with Project A/E.

13.17.2 If the Owner and the Internal Revenue Service (IRS) determine that the Project A/E is eligible to receive the 179D deduction allocation as a "Designer" for the purposes of Section 179D of the Code or that Project A/E could otherwise profit financially from the monetization of the benefit (separately and collectively, the "Rebate"), Project A/E hereby agrees to allocate to the Owner a portion of the Rebate in an amount to be determined and contracted for on mutually agreeable terms when the value of the Rebate becomes ascertainable, net of associated costs realized by the Owner and Project A/E. At its sole discretion, the Owner shall determine whether to receive its portion of the Rebate in cash, discounted Project A/E fees or both.

13.17.3 Owner reserves the right to retain a third party consultant (the "Consultant") to manage and administer the process of obtaining and monetizing the Rebate derived from the Project.

13.17.4 Project A/E agrees to cooperate in all reasonable respects with the Consultant's efforts to obtain and monetize any such Rebates derived from the Project on behalf of the Owner. Certification of eligibility and negotiation of the Rebates should be facilitated by the Owner's 179D Consultant.

**13.18 Disclosure of Interested Parties.** By signature hereon, Project A/E certifies that, if the value of this agreement exceeds \$1 Million, it has complied with Section 2252.908 of the Texas Government Code and Part 1 Texas Administrative Code Section 46.1 through 46.3 as implemented by the Texas Ethics Commission (TEC), if applicable, and has provided the Owner with a fully executed TEC Form 1295, certified by the TEC and signed and notarized by the Project A/E.

**13.19 Certification Regarding Boycotting Israel.** Pursuant to Chapter 2270, *Texas Government Code*, Project A/E certifies Project A/E (1) does not currently boycott Israel; and (b) will not boycott Israel during the Term of this Agreement. Project A/E acknowledges this Agreement may be terminated and payment withheld if this certification is inaccurate.

**13.20 Certification Regarding Business with Certain Countries and Organizations.** Pursuant to Subchapter F, Chapter 2252, *Texas Government Code*, Project A/E certifies Project A/E (1) is not engaged in business with Iran, Sudan, or a foreign terrorist organization. Project A/E acknowledges this Agreement may be terminated and payment withheld if this certification is inaccurate.

**13.21 Drug Testing Requirements.** Prior to commencing any services under this Agreement, Project A/E will ensure that all Project A/E Personnel have tested negative on a five (5) panel drug test. The test must include the following: (a) Amphetamines, (b) Cocaine, (c) Opiates (2000 ng/ml), (d) PCP, and (e) THC. "Project A/E Personnel" is any individual who is compensated by Project A/E, or by a consultant engaged by Project A/E, for providing a service directly to Owner, whether or not that individual is present on Owner's premises. Project A/E Personnel may include consultants, service vendor employees, construction workers, and temporary personnel needed for staff augmentation.

**13.22 Responsibility for Individuals Performing Work; Criminal Background Checks:** Each Project A/E Personnel who is assigned to perform work under this Agreement will be an employee of Project A/E or an employee of a subcontractor or subconsultant engaged by Project A/E. Project A/E is responsible for the performance of all Project A/E Personnel performing work under this Agreement. Prior to any Project A/E Personnel commencing work, Project A/E will have the following criminal background checks and screenings performed on the Project A/E Personnel assigned: (1) Positive Identification Check—Social Security Number Trace, Maiden & Alias Name Search; (2) Criminal Record Search – County, Statewide and Nationwide Level (past 15 years); (3) Employment Verification (all previous employers for past 15 years); and (4) Sex Offender Registry Search. Project A/E will be provided The University of Texas Police at Houston (the "UTP-H") Security Sensitive Investigations Criminal Background Manual (the "Manual"). Project A/E will maintain all documentation, including the results of any background checks, during the term of this Agreement and will provide UTP-H investigators copies of such documentation upon request. Project A/E will determine on a case-by-case basis whether each Project A/E Personnel assigned to perform work is qualified to do so. Project A/E will not assign any Project A/E Personnel to perform work under this Agreement who has a felony conviction or convictions of theft, embezzlement, fraud or property crime offenses of any grade, or a history of criminal conduct, or who does not otherwise comply with the Manual or MD Anderson's Criminal and Personal Background Check Policy (ADM0312). Upon request, Project A/E will provide MD Anderson a letter signed by an authorized officer of Project A/E that certifies compliance with this Section. Project A/E should send any questions regarding investigations to the UTP-H at [UTPD-SSR@mdanderson.org](mailto:UTPD-SSR@mdanderson.org).

## **Article 14 Other Conditions or Services**

Owner and Project A/E hereby agree to the full performance of the covenants contained herein.

**14.1 Basic Services.** Project A/E's Basic Services are those services described in paragraphs 1.2 through 1.6 for which Project A/E is to be paid a Basic Services Fee in accordance with the terms of this Agreement and shall include the following disciplines:

- a. Architectural Services
- b. Civil Engineering Services
- c. Structural Engineering Services
- d. Mechanical Engineering Services
- e. Electrical Engineering Services
- f. Plumbing Engineering Services
- g. Life Safety Code Compliance
- h. Life Safety Engineering Services. Project A/E shall employ a qualified Fire Protection and Life Safety Engineering Consultant experienced in the design and third-party certification of building fire alarm systems in accordance with NFPA 72 and Title 28, Part 1, Chapter 34. Subchapter F. of the Texas Administrative Code (Fire Alarm Rules). The Life Safety Consultant's services shall include, without limitation, (1) preparing fire alarm system design plans and specifications, (2) performing third party certification as outlined in attached Exhibit titled "Fire Alarm Testing and Acceptance Procedures", and (3)



participating in Owner's technical review process and responding to comments made during the reviews.

- i. Commissioning Coordination

14.2 **Additional Services.** The services identified in the following list are not included in Basic Services.

14.2.1 PRE-DESIGN SERVICES.

14.2.1.1 Before proceeding into the Schematic Design Phase, Project A/E and its entire consultant team, working with Owner, shall prepare a comprehensive Pre-Design Phase Document for the Project. For this Project, the Pre-Design Phase Document shall be a Facility Program prepared in accordance with the U. T. System Facilities Programming Guidelines, which are included as an Exhibit hereto.

14.2.1.2 The anticipated services and deliverables under the responsibility of Project A/E are summarized in the Schedule of Anticipated Pre-Design Deliverables, which is included as an Exhibit hereto. Following selection, Project A/E shall provide Owner with a written itemized cost proposal to provide the designated pre-design services. Such compensation shall be in addition to the percentage based fee for Basic Services. Project A/E shall plan to meet with representatives of Owner as required during the development of the Pre-Design Phase Document and shall revise the Pre-Design Phase Document as necessary to achieve approval of Owner. In accordance with the Professional Services Procurement Act, Owner will review Project A/E's proposal for pre-design services and attempt to negotiate a fair and reasonable fee for these services. If Owner and Project A/E are unable to do so, Owner may, at Owner's sole discretion, formally end negotiations with Project A/E and, in accordance with the Professional Services Procurement Act, engage another architect/engineer to provide the Pre-Design Phase Services.

14.2.2 CONSTRUCTABILITY SERVICES. [NOT USED]

14.2.3 HAZARDOUS MATERIAL ABATEMENT SERVICES. [NOT USED]

14.2.4 COMMISSIONING SERVICES. [NOT USED]

14.2.5 TPDES CONSULTANT. [NOT USED]

14.2.6 REGISTERED ACCESSIBILITY SPECIALIST. Services provided by an independent contract provider under contract with TDLR to include the Preliminary Plan Review and Final Plan Review and Field Inspection of placed work to coincide with the pre-final inspections. Issues regarding accessibility shall be coordinated to be included in the punch list provided to the Contractor. Design consultation services and preliminary field inspections during installation of work are optional services. These services are related to the provisions of The Texas Architectural Barriers Act (Article 9102, T.C.S.).

14.2.7 PROJECT RECORD DOCUMENTS. Project A/E shall revise the Drawings and Specifications upon Final Completion of construction, to incorporate all modifications recorded by the Contractor on the Drawings and Specifications maintained at the Site, in addition to all alterations to the Construction Contract Documents generated by Project A/E or Owner. Project A/E shall label the revised Drawings and Specifications as "Record Drawings" and "Record Specifications" and shall deliver copies to Owner for record purposes, as follows:

- All Record Drawings and Record Specifications shall be submitted per Owner's native software requirements.
- In addition, submit one (1) full size paper copy of Record Drawings.
- In addition, submit Record Documents in Adobe PDF format.

14.2.8 LIFE SAFETY ENGINEERING CONSULTANT. For this project, Life Safety Engineering Services are to be provided as a Basic Service as indicated above.

14.2.9 LEED CERTIFICATION SPECIALIZED SERVICES. [NOT USED]

14.2.10 SPECIALIZED CONSULTANTS. The specialized consultant services identified in the following list are included in Additional Services:

- Audio Visual/Data & Telecommunications Engineering
- Materials Handling Services
- Furniture and Equipment Programming, Planning, and Purchasing Support Services
- Major Medical Equipment Purchasing Services
- Security Planning Services
- Personnel and Material Transport Planning Services
- Hazardous Materials Handling Services
- Integrated Scheduling Services
- Radiation Control Services
- Graphics/Wayfinding Planning Services
- Safety Engineering Services
- Traffic Control Planning Services
- Wind Tunnel Testing/Emissions Control/Wind Pressure Analysis
- Art Procurement Consulting Services (not architectural renderings or models)

14.2.11 SPECIALIZED SERVICES. The specialized consultant services identified in the following list are included in Additional Services:

- Providing financial feasibility or other special studies.
- Providing planning surveys, site evaluations, environmental studies or comparative studies of prospective sites.
- Providing services relative to future facilities, systems and equipment which are not intended to be constructed during the Construction Phase.
- Providing services to make detailed investigation of existing conditions or facilities or to make measured drawings thereof, other than to verify the accuracy of drawings or other information furnished by Owner.
- Providing coordination of Work performed by Owner's separate Contractors or by Owner's own forces.
- Providing services in connection with the Work of a Contractor or separate consultants retained by the Owner other than commissioning consultant, testing and balance consultant, material testing firms or similar firms.
- Providing services for planning tenant or rental spaces.
- Making revisions in Drawings, Specifications or other documents when such revisions are inconsistent with written approvals or instructions previously given are required by the enactment or revision of codes, laws or regulations subsequent to the preparation of such documents or are due to other causes not solely within the control of Project A/E.

- Making extensive investigations, surveys, valuations, inventories or detailed appraisals of existing facilities, except as otherwise required by the Agreement, and services required in connection with construction performed by Owner.
- Providing consultation concerning replacement of any Work damaged by fire or other cause during construction, and furnishing services as may be required in connection with the replacement of such Work.
- Providing services made necessary by the default of the Contractor, or by major defects or deficiencies in the Work of the Contractor, or by failure of performance of the Contractor under the Construction Contract.
- Providing extensive assistance in the utilization of any equipment or system such as initial start-up or testing, adjusting and balancing, preparation of operation and maintenance manuals, training personnel for operation and maintenance, and consultation during operation.
- Providing services after the expiration of sixty (60) days following Final Payment to the Contractor, excluding any services necessary during the warranty period inspections and provided that all of Project A/E's services as required under this Agreement have been satisfactorily completed.
- Preparing to serve or serving as an expert witness at the request of Owner in connection with any public hearing, arbitration proceeding or legal proceeding.
- Providing any other services not otherwise customarily furnished in accordance with generally accepted architectural practice.

**14.3 Owner-Provided Services.** The services identified in the following list will be provided by Owner at Owner's expense.

- Surveying Services
- Geotechnical Services
- Code Check
- Plan Check
- Forensic Consultant
- Construction Auditing Consultant
- Existing Facility Surveys
- Integrated Scheduling
- Testing and Balancing
- Hazardous Materials Surveying and Abatement
- Laboratory Testing (Soils, Materials, Environmental, Welding, Steel Construction)
- Project Commissioning
- Wind Tunnel/Air Quality Analysis
- Exhaust Stack Testing
- Vibration Analysis
- Radio Frequency Interference Testing

#### 14.4 Basis of Compensation

##### 14.4.1 Basic Services.

On the Effective Date of this Agreement, the Construction Cost Limitation for the Project is stipulated to be:

**ELEVEN MILLION NINE HUNDRED THOUSAND DOLLARS AND NO/100 (\$**  
**11,900,000.00)**

Therefore, on the Effective Date of this Agreement, the Basic Services Fee for the Project is stipulated to be:

**Construction Cost Limitation X Fee % = Basic Services Fee**

**\$11,900,000 X 7.5% = \$ 892,500**

If the Construction Cost Limitation is revised, due to a change in the scope of the Project, prior to acceptance of the Contractor's bid or competitive sealed proposal or Construction Manager's guaranteed maximum price proposal, the Basic Services Fee will be adjusted based on interpolation of the attached Exhibit, The University of Texas System Office of Facilities Planning and Construction Architect/Engineer Fee Schedule, *dated December 1987*:

Over \$5,000,000	7.5%
Over \$1,000,000	8.5%
Up to \$ 200,000	9.5%

Owner may amend the Construction Cost Limitation after Owner authorizes the commencement of the Schematic Design Phase. If the Construction Cost Limitation is amended by Owner, and Project A/E has been notified in writing of such Construction Cost Limitation, then this paragraph of this Agreement shall be deemed to be amended by including such Construction Cost Limitation amount as the cost referenced in the first sentence of this paragraph of this Agreement. The Construction Cost Limitation will be confirmed or re-established at the completion of the Schematic Design Phase, at the completion of the Design Development Phase, at the completion of the Construction Document Phase, and at the completion of the Construction Services Procurement Phase.

14.4.2 Reimbursable Expenses. The maximum allowable cost on this Project for Reimbursable Expenses identified in Article 5 as approved by Owner is:

**Maximum Reimbursable Expense Amount: \$ \_\_\_\_\_**

##### 14.4.3 Maximum Contract Sum

	Description	Amount
	Basic Services Fee (Article 14.4.1)	\$892,500.00
<i>plus</i>	Additional Services Fees:	
<i>plus</i>	Maximum Reimbursable Expenses (Article 14.4.2)	
	<b>MAXIMUM CONTRACT SUM</b>	

**14.5 Progress Payments.** Payments for Basic Services shall be made as provided in Article 7 in accordance with the following schedule:

Schematic Design Phase;	15%	\$133,875.00
Design Development Phase:	20%	\$178,500.00
Construction Documents Phase:	40%	\$357,000.00
Construction Services Procurement Phase:	5%	\$44,625.00
Construction Administration Phase	20%	\$178,500.00
TOTAL BASIC SERVICES FEE:	100%	\$892,5000.00

**14.6 Review Stages.** Project A/E shall submit Drawings, Specifications, and other documents required by the Agreement to Owner for review at completion of the Schematic Design Phase, Design Development Phase and at the following stages of completion of the Construction Documents Phase:

50%, 95%, 100%

**14.7 Construction Cost Estimates.** Project A/E shall submit Drawings and Specifications, Estimated Construction Cost Reports, and other documents as described in Article 1.1.15 at completion of the Schematic Design Phase, Design Development Phase and at the following stages of completion of the Construction Documents Phase:

50%, 95%, 100%.

**14.8 Review Documents.** Project A/E shall, at its expense, furnish and deliver to Owner for Owner's review, the following number of sets of review documents at the required review stages. Review documents shall also be furnished in Adobe PDF format:

Schematic Design:	(1 Full Size & 6 half size) sets
Design Development:	(1 Full Size & 6 half size) sets
Construction Documents:	(1 Full Size & 6 half size) sets for each stage of % complete

**14.9 Partnering.** For the benefit of all parties and as a part of Basic Services, Project A/E and its entire Consultant team shall attend two (2) full day Partnering sessions in Houston, Texas; the first at the beginning of the Schematic Design Phase, and the second at the beginning of the Construction Phase.

**14.10 Design Software Standards.** Project A/E and its entire Consultant team, as part of Basic Services, shall utilize Owner's design software drawing-layering standard and shall review standard with Owner prior to commencing drawing preparation.

**14.11 Space Planning Documents.** Project A/E, as part of Basic Services, shall provide Owner with a complete current electronic set in Owner's native design software, of the architectural floor plan drawings with room names, room numbers, and room square footages indicated. Per Owner's Design Guidelines, Owner will determine when the initial drawings, defined as the "Room Number Control Set", must be submitted. Project A/E shall submit periodic updates to Owner as room name and number designations are changed.

**Article 15      Amendments to the Agreement between Owner and Project A/E when using the Construction Manager at Risk Delivery Method**

15.1      By incorporating this Article 15, Project A/E acknowledges and accepts that Owner intends to construct the Project using the Construction Manager at Risk delivery method. Therefore, Owner and Project A/E hereby agree that certain preceding terms in this Agreement are supplemented and/or modified as indicated below.

15.2      The following preceding terms of this Agreement are amended by incorporating the new paragraphs and substituting the modified paragraphs for their counterparts in their entirety. For clarity purposes only, all new contract language is indicated by *italicized type face*. Existing contract language that is unchanged by the amendments is shown in standard type face.

**1.1      Basic Services**

*1.1.30 Owner has or intends to appoint a Construction Manager-at-Risk for this project ("Construction Manager" or "Contractor"). Project A/E shall coordinate its Services (Basic and Additional) hereunder with the Construction Manager. Owner may direct Project A/E to recognize the Construction Manager as its representative for the performance of various duties hereunder which are otherwise defined as the responsibility of Owner hereunder. Project A/E hereby acknowledges such appointment. Upon request, Project A/E shall be entitled to review a redacted version of the Agreement between Owner and Construction Manager at Risk for this project ("CM Agreement"). Nothing in the CM Agreement shall confer direct responsibility on the Construction Manager for Project A/E's services, nor shall anything contained therein diminish Project A/E's responsibility for its services as set forth hereunder.*

*1.1.31 Project A/E shall participate in the development and review of the Construction Manager's Guaranteed Maximum Price ("GMP") Proposal. This GMP Proposal will include the qualifications, assumptions, exclusions, value engineering and all other requirements identified within Attachment 1 To Exhibit D (Guidelines for the Preparation of the GMP) of the CM Agreement. Following Owner's Approval of the GMP Proposal, Project A/E shall be responsible for developing the Construction Documents, consisting of Drawings and Specifications, setting forth in detail, and incorporating the aforementioned requirements described within the Attachment 1 To Exhibit D and contained in the GMP Proposal. Furthermore, Project A/E shall participate in the documentation of the Construction Manager's GMP Proposal so as to adequately understand the contents of the GMP Proposal and ultimately confirm that the Construction Documents, when complete, reflect all qualifications, clarifications and assumptions contained within the GMP Proposal. Project A/E and the Construction Manager shall jointly provide a monthly status report stating the progress of the incorporation of the GMP qualifications, clarifications, assumptions, exclusions and value engineering and all other requirements identified in Attachment 1 To Exhibit D, into the Construction Documents."*

## 1.2 Schematic Design Phase

1.2.1 Based on the mutually agreed upon Pre-Design Phase Document, the Construction Cost Limitation and the Project Milestone Schedule, Project A/E shall prepare sufficient alternative approaches to design the construction of the Project to satisfy Owner's requirements and shall, at completion of this phase, submit Schematic Design Documents in accordance with Owner's Design Guidelines and any additional requirements set forth in Article 14. *Project A/E shall review alternative approaches to design and construction for the Project and the Schematic Design Documents as they are being prepared at intervals appropriate to the progress of the Project with Owner and Construction Manager at the Project location or other location specified by Owner within the State of Texas. Project A/E shall provide the Construction Manager with copies of Project A/E's documents at the Construction Manager's expense to assist the Construction Manager in fulfilling its responsibilities to Owner.*

1.2.5 Project A/E shall direct the preparation of a detailed Estimated Construction Cost Report as described in Sub-paragraph 1.1.15 to confirm compliance with the Construction Cost Limitation and include the detailed Estimated Construction Cost Report with the completed Schematic Design Documents. *Project A/E shall review its Estimated Construction Cost Report in comparison with the construction cost estimate prepared by the Construction Manager, and shall reconcile any differences between the two construction cost estimates in coordination with the Construction Manager. If Project A/E is unable to reconcile all differences between the two construction cost estimates with the Construction Manager, then Project A/E shall provide a detailed explanation of the differences to Owner.* Project A/E shall advise Owner of any adjustments to the project scope necessary to align the Project A/E's Estimated Construction Cost with the Construction Cost Limitation and shall revise the Schematic Design Documents, without charge to Owner, as may be required to comply with the Construction Cost Limitation. Owner may, solely at Owner's discretion and in writing, increase or decrease the Construction Cost Limitation to align with Project A/E's detailed Estimated Construction Cost.

*1.2.7 Project A/E shall participate in a final review of the Schematic Design Documents with Owner and Construction Manager at the Project location or other location specified by Owner in the State of Texas. Prior to Owner's approval of the Schematic Design Documents, Project A/E shall incorporate such changes as are necessary to satisfy Owner's review comments, any of which may be appealed for good cause.*

## 1.3 Design Development Phase

1.3.1 Based on the approved Schematic Design Documents and any adjustments to the Pre-Design Phase Document or Construction Cost Limitation authorized by Owner, Project A/E shall prepare, for approval by Owner *and review by Construction Manager*, Design Development Documents in accordance with Owner's written requirements to further define and finalize the size and character of the Project in accordance with Owner's Design Guidelines and any additional requirements set forth in Article 14. *Project A/E shall review the Design Development Documents as they are being prepared at intervals appropriate to the progress of the Project with Owner and Construction Manager at the Project location or other location specified by Owner in the State of Texas. Project A/E shall provide Construction Manager with copies of Project A/E's documents at Construction Manager's expense to assist Construction Manager in fulfilling its responsibilities to Owner.*

1.3.3 Project A/E shall direct the preparation of a detailed Estimated Construction Cost Report as described in Sub-paragraph 1.1.15 to confirm compliance with the Construction Cost Limitation and include the detailed Estimated Construction Cost Report with the completed Design Development Documents. *Project A/E shall review its Estimated Construction Cost Report in comparison with the construction cost estimate prepared by Construction Manager, and shall reconcile any differences between the two construction cost estimates in coordination with Construction Manager. If Project A/E is unable to*

*reconcile all differences between the two construction cost estimates with Construction Manager, then Project A/E shall provide a detailed explanation of the differences to Owner.* Project A/E shall advise Owner of any adjustments to the project scope necessary to align Project A/E's Estimated Construction Cost with the Construction Cost Limitation and shall revise the Design Development Documents, without charge to Owner, as may be required to comply with the Construction Cost Limitation. Owner may, solely at Owner's discretion and in writing, increase or decrease the Construction Cost Limitation to align with Project A/E's detailed Estimated Construction Cost.

*1.3.8 At the completion of the Design Development Phase, or such other time as Owner may specify to Project A/E, at Owner's sole option and discretion, Owner will furnish Project A/E with the GMP Proposal prepared by Construction Manager based upon the Design Development Documents prepared by Project A/E and approved by Owner. Project A/E shall assist Owner and further advocate Owner's interests during Owner's negotiations with Construction Manager in an effort to develop a GMP Proposal acceptable to Owner, in Owner's sole option and discretion. If Owner does not accept Construction Manager's GMP Proposal, Project A/E shall participate with Owner and Construction Manager in constructability reviews and shall revise the documents as necessary in order to reach an agreement. If Construction Manager's proposed GMP exceeds the estimated construction cost furnished to Owner by Project A/E, and Owner directs Project A/E to revise the Drawings and Specifications, then Project A/E shall revise the Drawings and Specifications without charge to Owner such that the proposed GMP for constructing the Project, minus Owner's Special Cash Allowance, if any, within the proposed GMP and minus Owner's Construction Contingency, if any, within the proposed GMP, does not exceed the Construction Cost Limitation. If it is determined to be in Owner's best interest, instead of requiring Project A/E to revise the Drawings and Specifications, Owner reserves the right to accept a proposed GMP, minus Owner's Special Cash Allowance, if any, within the proposed GMP and minus Owner's Construction Contingency, if any, within the proposed GMP, that exceeds the Construction Cost Limitation. Project A/E shall analyze the final GMP Proposal, including its supporting assumptions, clarifications, and contingencies, and shall submit a detailed written analysis of the GMP Proposal to Owner. Such analysis shall include, without limitation, reference to and explanation of any inaccurate or improper assumptions and clarifications.*

*1.3.9 After Owner has accepted the GMP Proposal, Project A/E shall incorporate into the Design Development Documents all revisions which are necessary because of inaccurate assumptions and clarifications made in the development of the GMP Proposal.*

#### **1.4 Construction Document Phase**

*1.4.1 Based on the approved Design Development Documents and any further adjustments in the scope or quality of the Project or in the Construction Cost Limitation authorized by Owner, Project A/E shall prepare, for approval by Owner and review by Construction Manager, Construction Documents consisting of Drawings and Specifications in accordance with Owner's written requirements setting forth in detail the requirements for construction of the Project, including, without limitation, Owner's Design Guidelines and any additional requirements contained in Article 14 of this Agreement. The Construction Documents for the entire Project shall be so prepared that same will call for the construction of the Project which will cost not more than the Guaranteed Maximum Price accepted by Owner, or the Construction Cost Limitation approved by Owner if no proposed Guaranteed Maximum Price has been accepted by Owner. Project A/E will be responsible for managing the design to stay within such Guaranteed Maximum Price or Construction Cost Limitation. Project A/E shall review the Construction Documents as they are being prepared at intervals appropriate to the progress of the Project with Owner and Construction Manager at the Project location or other location specified by Owner in the State of Texas. Project A/E shall provide Construction Manager with copies of Project A/E's documents at Construction Manager's expense to assist Construction Manager in fulfilling its responsibilities to Owner.*



1.4.2 Project A/E shall advise Owner *and Construction Manager* on matters such as construction phasing and scheduling, design alternates for which to obtain bids or proposals, special cash allowances, liquidated damages, the Construction Contract Time, and other construction issues appropriate for the Project. *Project A/E shall assist Owner and Construction Manager in the preparation of the necessary procurement information, procurement forms, and the Owner's Master Construction Specifications Sections for Division 00, Procurement and Contracting Requirements, and Division 01, General Requirements.*

1.4.7 Project A/E shall direct the preparation of a detailed Estimated Construction Cost Report as described in Sub-paragraph 1.1.15 to confirm compliance with the Construction Cost Limitation and include the detailed Estimated Construction Cost Report with the completed Construction Documents. *Project A/E shall review its Estimated Construction Cost in comparison with the construction cost estimate prepared by Construction Manager, and shall reconcile any differences between the two construction cost estimates in coordination with Construction Manager. If Project A/E is unable to reconcile all differences between the two construction cost estimates with Construction Manager, then Project A/E shall provide a detailed explanation of the differences to Owner.* Project A/E shall advise Owner of any adjustments to the project scope necessary to align Project A/E's Estimated Construction Cost with the Construction Cost Limitation and shall revise the Construction Documents, without charge to Owner, as may be required to comply with the Construction Cost Limitation. Owner may, solely at Owner's discretion and in writing, increase or decrease the Construction Cost Limitation to align with Project A/E's detailed Estimated Construction Cost.

1.4.9 Project A/E shall participate in a final review of the Construction Documents with Owner *and Construction Manager* at the Project location or other location specified by Owner in the State of Texas. Prior to Owner's approval of the Construction Documents, Project A/E shall incorporate such changes as are necessary to satisfy Owner's review comments.

## 1.5 Construction Services Procurement Phase

*1.5.1 In conjunction with the development of the GMP, the awarding of subcontracts for construction services and at other times as appropriate to the Project, Project A/E shall assist Owner and Construction Manager by receiving and recording Invitation to Bid ("ITB") and Request for Proposal ("RFP") documents, issuing procurement documents, and accounting for procurement documents issued; receiving and resolving questions about procurement documents; preparing addenda, issuing addenda, and accounting for addenda issued; attending pre-submittal conferences and HUB meetings; obtaining and evaluating Bids and Proposals; and assisting in preparing and awarding subcontracts for construction.* Project A/E shall answer inquiries from prospective respondents to ITBs and RFPs at Owner's request, and shall prepare and issue any necessary addenda to the subcontract procurement documents.

## 1.6 Construction Phase—Administration of the Construction Contract

1.6.1 The Construction Phase shall commence with the acceptance of the Construction Manager's GMP (or acceptance of a partial GMP for a stage or phase) and issuance of (i) a Notice to Commence On-Site Work or (ii) a Notice to Proceed with Construction Services and terminate sixty (60) days after Final Payment to the Contractor is made, or when all of Project A/E's services have been satisfactorily performed, whichever occurs later.

1.6.2. c) *Project A/E shall assist Owner in making arrangements for a Pre-Construction Conference and a Partnering Workshop and shall assist in preparation of an administration booklet for the Pre-Construction Conference and shall distribute copies of the bound booklet to all parties. Project A/E and its consultants shall*

*participate in the project partnering process including attendance at all Partnering Workshops.*

1.6.5 Project A/E shall be a representative of Owner during the Construction Phase, and shall advise and consult with Owner. Instructions to the Contractor shall be forwarded through Project A/E *and all communication by and with Project A/E's consultants shall be through Project A/E, except that Owner reserves the right to communicate directly with the Construction Manager and consultants as it deems necessary or appropriate at any time.* Project A/E shall have authority to act on behalf of Owner to the extent provided in the Construction Contract Documents. Duties, responsibilities and limitations of authority of Project A/E shall not be restricted, modified or extended without written acceptance of Owner.

## 1.8 Time

1.8.2 Attached hereto as an Exhibit containing a schedule for completion of each of the phases of services to be performed by Project A/E pursuant to this Agreement. The Project Milestone Schedule contains milestone dates which have been established in the Request for Qualifications previously issued or may be modified by Owner to reflect current conditions. Supplemental activities shown on the schedule, and any associated dates not yet defined, shall be determined at the completion of the Pre-Design Phase or at such time when both parties mutually agree that the Project is sufficiently developed and documented. *Project A/E shall coordinate with Construction Manager in the preparation and maintenance of the schedule for performance of the professional services for the Project, including Project A/E's services.* Changes in this schedule may be made only with the written approval of Owner. Project A/E shall perform all of its services in accordance with the then-current schedule approved by Owner.

## Article 16 Definitions

Unless the context clearly requires another meaning, the following terms have the meaning assigned herein.

- 16.1 *Application for Payment* means Contractor's monthly partial invoice for payment that includes any portion of the Work that has been completed for which an invoice has not been submitted and performed in accordance with the requirements of the Construction Contract Documents. The Application for Payment accurately reflects the progress of the Work, is itemized based on the Schedule of Values, bears the notarized signature of Contractor, and shall not include subcontracted items for which Contractor does not intend to pay.
- 16.2 *Architect/Engineer* means a person registered as an architect pursuant to Tex. Occ. Code Ann., Chapter 1051, as a landscape architect pursuant to Tex. Occ. Code Ann., Chapter 1052, a person licensed as a professional engineer pursuant Tex. Occ. Code Ann., Chapter 1001, and/or a firm employed by Owner or Design-Build Contractor to provide professional architectural or engineering services and to exercise overall responsibility for the design of a Project ("Project A/E") or a significant portion thereof, and to perform the contract administration responsibilities set forth in the Construction Contract.
- 16.3 *Baseline Schedule* means the initial time schedule prepared by Contractor for Owner's information and acceptance that conveys Contractor's and Subcontractors' activities (including coordination and review activities required in the Contract Documents to be performed by Project A/E and ODR), durations, and sequence of work related to the entire Project to the extent required by the Contract Documents. The schedule clearly demonstrates the critical path of activities, durations and necessary predecessor conditions that drive the end date of the

schedule. The Baseline Schedule shall not exceed the time limit current under the Contract Documents.

- 16.4 *Certificate of Final Completion* means the certificate issued by Project A/E that documents, to the best of Project A/E's knowledge and understanding, Contractor's completion of all Contractor's Punchlist items and pre-final Punchlist items, final cleanup and Contractor's provision of Record Documents, operations and maintenance manuals, and all other Close-Out Documents required by the Construction Contract Documents.
- 16.5 *Change Order* means a written modification of the Construction Contract between Owner and Contractor, signed by Owner, Contractor and Project A/E.
- 16.6 *Close-out Documents* mean the product brochures, submittals, product/equipment maintenance and operations instructions, manuals, and other documents/warranties, record documents, affidavit of payment, release of lien and claim, and as may be further defined, identified, and required by the Construction Contract Documents.
- 16.7 *Construction Contract* means the entire agreement between Owner and Contractor, including all of the Construction Contract Documents.
- 16.8 *Construction Contract Documents* mean those documents identified as a component of the agreement (Construction Contract) between Owner and Contractor. These may include, but are not limited to, Drawings; Specifications; the Uniform General Conditions for University of Texas System Building Construction Contracts ("UTUGCs"), Owner's Special Conditions; and all pre-bid and/or pre-proposal addenda.
- 16.9 *Construction Contract Sum* means the total compensation payable to Contractor for completion of the Work in accordance with the terms of the Construction Contract.
- 16.10 *Construction Contract Time* means the period between the start date identified in the Notice to Proceed with construction and the Substantial Completion date identified in the Notice to Proceed or as subsequently amended by a Change Order.
- 16.11 *Contractor* means the individual, corporation, limited liability company, partnership, firm, or other entity contracted to perform the Work, regardless of the type of construction contract used, so that the term as used herein includes a Construction Manager-at-Risk or a Design-Build firm as well as a general or prime Contractor. The Construction Contract Documents may refer to Contractor as if singular in number.
- 16.12 *Construction Documents* mean the Drawings, Specifications, and other documents issued to build the Project. Construction Documents become part of the Construction Contract Documents when listed in the Construction Contract or any Change Order.
- 16.13 *Construction Manager-at-Risk*, in accordance with Tex. Educ. Code § 51.782, means a sole proprietorship, partnership, corporation, or other legal entity that assumes the risk for construction, rehabilitation, alteration, or repair of a facility at the contracted price as a general contractor and provides consultation to Owner regarding construction during and after the design of the facility.
- 16.14 *Day* means a calendar day unless otherwise specifically stipulated.

- 16.15 *Design-Build* means a project delivery method in which the detailed design and subsequent construction is provided through a single contract with a Design-Build firm; a team, partnership, or legal entity that includes design professionals and a builder. The Design-Build Project delivery shall be implemented in accordance with Tex. Educ. Code § 51.780.
- 16.16 *Drawings* mean that product of Project A/E which graphically depicts the Work.
- 16.17 *Final Completion* means completion of the Work to the extent that Project A/E and Owner certify that the Work is fully and satisfactorily complete in accordance with the Construction Contract.
- 16.18 *Final Completion Date* means the date determined and certified by Project A/E and Owner that Contractor has achieved Final Completion.
- 16.19 *Final Payment* means the last and final monetary compensation made to Contractor for any portion of the Work that has been completed and accepted for which payment has not been made, amounts owing to adjustments to the final Construction Contract Sum resulting from approved Change Orders, and release of Contractor's retainage.
- 16.20 *Historically Underutilized Business (HUB)* pursuant to Tex. Gov't Code, Chapter 2161, means a business that is at least 51% owned by an Asian Pacific American, a Black American, a Hispanic American, a Native American and/or an American Woman; is an entity with its principal place of business in Texas; and has an owner residing in Texas with proportionate interest that actively participates in the control, operations, and management of the entity's affairs.
- 16.21 *Notice to Proceed* means written document informing Contractor of the dates beginning Work and the dates anticipated for Substantial Completion.
- 16.22 *Open Item List* means a list of work activities, Punchlist items, changes or other issues that are not expected by Owner and Contractor to be complete prior to Substantial Completion.
- 16.23 *Owner's Construction Contingency* means amount, as designated by Owner, that is included within the Construction Contract Sum to be used when and as directed by Owner to pay for changes in the Work.
- 16.24 *Owner's Designated Representative (ODR)* means the individual assigned by Owner to act on its behalf and to undertake certain activities as specifically outlined in the Construction Contract. ODR is the only party authorized to direct changes to the scope, cost, or time of the Construction Contract.
- 16.25 *Owner's Special Cash Allowance* means the amount of money to be included in the Construction Contract Sum for items as clearly identified in the Construction Documents.
- 16.26 *Owner's Special Conditions* mean the documents containing terms and conditions which may be unique to the Project. Owner's Special Conditions are a part of the Construction Contract Documents and have precedence over the UTUGC's.
- 16.27 *Project* means all activities necessary for realization Owner's desired building or other structure, or renovation thereof, including all ancillary and related work. This includes design,

construction contract award(s), execution of the Work itself, work by Owner's forces and/or other contractors and fulfillment of all Construction Contract and warranty obligations.

- 16.28 *Progress Assessment Report (PAR)* means the monthly compliance report to Owner verifying compliance with the HUB subcontracting plan (HSP).
- 16.29 *Proposed Change Order (PCO)* means a document that informs Contractor of a proposed change in the Work and appropriately describes or otherwise documents such change including Contractor's response of pricing for the proposed change.
- 16.30 *Punchlist* means a list of items of Work to be completed or corrected by Contractor before Final Completion. Punchlists indicate items to be finished, remaining Work to be performed, or Work that does not meet quality or quantity requirements as required in the Construction Contract Documents.
- 16.31 *Record Documents* mean the Drawing, Specifications, and other materials maintained by Contractor that documents all addenda, Project A/E's supplemental instructions, Change Orders and postings and markings that record the as-constructed conditions of the Work and all changes made during construction.
- 16.32 *Request for Information (RFI)* means a written request by Contractor directed to Project A/E or ODR for a clarification of the information provided in the Construction Contract Documents or for direction concerning information necessary to perform the Work that may be omitted from the Construction Contract Documents.
- 16.33 *Samples* mean representative physical examples of materials, equipment, or workmanship used to confirm compliance with requirements and/or to establish standards for use in execution of the Work.
- 16.34 *Schedule of Values* means the detailed breakdown of the cost of the materials, labor, and equipment necessary to accomplish the Work as described in the Construction Contract Documents, submitted by Contractor for approval by Owner and Project A/E.
- 16.35 *Shop Drawings* mean the drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data prepared by Contractor or its agents which detail a portion of the Work.
- 16.36 *Site* means the geographical area of the location of the Work.
- 16.37 *Specifications* mean the written product of Project A/E that establishes the quality and/or performance of products utilized in the Work and processes to be used, including testing and verification for producing the Work.
- 16.38 *Subcontractor* means a business entity that enters into an agreement with Contractor to perform part of the Work or to provide services, materials, or equipment for use in the Work.
- 16.40 *Submittal Register* means a list provided by Contractor of all items to be furnished for review and approval by Project A/E and Owner and as identified in the Construction Contract Documents including anticipated sequence and submittal dates.

- 16.40 *Substantial Completion* means completion of the Work, or a portion thereof, in accordance with the Construction Contract Documents to the extent that the Project, of portion thereof, is operational and fit for the use intended.
- 16.41 *Substantial Completion Date* means the date determined and certified by Contractor, Project A/E, and Owner when the Contractor has achieved Substantial Completion of the Work.
- 16.43 *Warranty Period* means, except as may be otherwise specified or agreed, the time during which Contractor shall repair all defects in materials, equipment, or workmanship appearing within one year from the date of Substantial Completion of the Work. If Substantial Completion occurs by phase, then the warranty period for each phase begins on the date of Substantial Completion of that phase, or as otherwise stipulated on the Certificate of Substantial Completion for the particular phase.
- 16.44 *Work* means the administration, procurement, materials, equipment, construction and all services necessary for Contractor, and/or its agents, to fulfill Contractor's obligations under the Construction Contract.
- 16.45 *Work Progress Schedule* means the continually updated time schedule prepared and monitored by Contractor that accurately indicates all necessary appropriate revisions as required by the conditions of the Work and the Project while maintaining a concise comparison to the Baseline Schedule.

**[SIGNATURES PROVIDED ON FOLLOWING PAGE]**

BY SIGNING BELOW, Project A/E has executed and bound itself to this Agreement upon the execution of the Agreement by both parties. Changes in the terms and conditions under which Project A/E must perform the services to be provided hereunder shall become effective only upon the execution of a written Amendment to this Agreement. Changes in the services to be provided hereunder or to the Maximum Contract Sum shall become effective upon Owner's acceptance of Additional Services Proposal(s) or the issuance of a notice of Adjustment to Basic Services Compensation, signed by Owner's duly authorized representative. Subsequent to such acceptance or issuance, Owner will issue a revised Purchase Order. Project A/E must receive the revised Purchase Order prior to requesting compensation for the Additional Services or an increase in the Basic Services Fee in its Statement for Architectural/Engineering Services Rendered. Only duly authorized representatives of Owner's Department of Supply Chain Management are authorized to execute amendments to this Agreement and issue Purchase Orders to bind Owner for any payment to be made to Project A/E pursuant to the terms of this Agreement.

[Project A/E's Name]

By: \_\_\_\_\_

Name:  
Title:

Date: \_\_\_\_\_

The Texas Board of Architectural Examiners, 333 Guadalupe Street, Suite 2-350, Austin, Texas 78701, telephone (512) 305-9000, has jurisdiction over individuals licensed under the Architects' Registration Law, Chapter 1051, Texas Occupations Code.

CONTENT APPROVED:

THE UNIVERSITY OF TEXAS  
M. D. ANDERSON CANCER CENTER  
(Owner)

Office of Vice President  
Operations & Facilities Management

By: \_\_\_\_\_

Name: Spencer Moore  
Title: Vice President and Chief Facilities Officer

Date: \_\_\_\_\_

By: \_\_\_\_\_

Name:  
Title:

Date: \_\_\_\_\_

The following Exhibits are fully incorporated into this Agreement by reference:

EXHIBITS

- Exhibit A – Architect/Engineer Fee Schedule
- Exhibit B – Personnel Titles and Hourly Rates
- Exhibit C – Adjustment to Basic Services Compensation
- Exhibit D – Additional Services Proposal Form
- Exhibit E – Statement for Architectural/Engineering Services Rendered Form (Includes Attachments H & I – Documentation of Subcontracted Work)
- Exhibit F – Project Milestone Schedule
- Exhibit G – UT System Facility Programming Guidelines
- Exhibit H – Anticipated Pre-Design Phase Deliverables
- Exhibit I – Owner’s Design Guidelines
- Exhibit J – Owner’s Building Information Modeling Requirements
- Exhibit K – Constructability Implementation Program
- Exhibit L – Owner’s Commissioning Requirements
- Exhibit M – Rider 104, Policy on Utilization of Historically Underutilized Businesses  
Attachment 1 to Exhibit H – HUB Subcontracting Plan
- Exhibit N – Project Architect/Engineer’s Approved HUB Subcontracting Plan
- Exhibit O – Rider 105, Contractor’s Affirmations
- Exhibit P – Rider 106, Premises Rules
- Exhibit Q – Rider 107, Travel Policy
- Exhibit R – Rider 116, Invoice Payment Requirements
- Exhibit S – Rider 117, Institutional Policies
- Exhibit T – Sales and Use Tax Exemption Certification
- Exhibit U – Execution of Offer



**EXHIBIT A**

**ARCHITECT/ENGINEER FEE SCHEDULE**

**THE UNIVERSITY OF TEXAS SYSTEM  
OFFICE OF FACILITIES PLANNING AND CONSTRUCTION**

**ARCHITECT/ENGINEER FEE SCHEDULE**

DECEMBER 1987

<u>Construction Cost of Project</u>		<u>Dormitories Garages Warehouses</u>	<u>Classrooms Offices Other Buildings</u>	<u>Health Research Special Education</u>
Over	\$15,000,000	5.0%	5.5%	6.0%
Over	10,000,000	5.5%	6.0%	6.5%
Over	1,000,000	6.0%	6.5%	7.0%
Up to	200,000	7.0%	7.5%	8.0%

Remodeling and Renovation

Over	\$5,000,000	7.0%	7.5%	8.0%
Over	1,000,000	8.0%	8.5%	9.0%
Up to	200,000	9.0%	9.5%	10.0%

NOTE:           WHEN CONSTRUCTION COST FALLS BETWEEN THE TABULAR LIMITS,  
                  THE RATE WILL BE DETERMINED BY DIRECT INTERPOLATION.

**EXHIBIT B**

**PERSONNEL TITLES AND HOURLY RATES**

**EXHIBIT C**

**ADJUSTMENT TO BASIC SERVICES COMPENSATION FORM**

**ADJUSTMENT TO BASIC SERVICES FEE**

Date: \_\_\_\_\_

MD Anderson Project Name: \_\_\_\_\_

MD Anderson Project No.: \_\_\_\_\_

MD Anderson Agreement No.: \_\_\_\_\_

To: (state name and address of Project A/E)
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Attn: \_\_\_\_\_

In accordance with the provisions of the Agreement, Owner hereby amends the Basis of Compensation as described in Article 14.4 to adjust the Basic Services Fee.

The original basis for compensation shall be amended for the following reasons:

[PM describe here deviations resulting from peculiarities encountered in design or other factors altering project scope – see Art. 2.11.]

The Basic Services Fee shall be adjusted as follows. Refer to the interpolation schedule established in Article 14.4.

ORIGINAL CCL:	\$ _____.
ORIGINAL FEE PERCENTAGE:	_____.%
ORIGINAL BASIC SERVICES FEE:	\$ _____.
(as described in Art. 14.4)	

ADJUSTED CCL:	\$ _____.
FEE PERCENTAGE:	_____.%
ADJUSTED BASIC SERVICES AMOUNT	\$ _____.

OWNER'S AUTHORIZED REPRESENTATIVE:

OWNER'S 2<sup>ND</sup> AUTHORIZED REPRESENTATIVE:

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

**EXHIBIT D**

**ADDITIONAL SERVICES PROPOSAL FORM**

**[TO BE SUBMITTED ON PROJECT A/E'S LETTERHEAD.]**

Date: \_\_\_\_\_

Additional Services Proposal No. \_\_\_\_\_

Name of Project A/E firm:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Re: (project name and number)

Refer to the Agreement dated \_\_\_\_\_, 20\_\_ between The University of Texas MD Anderson Cancer Center ("Owner") and the undersigned ("Project A/E") as amended to the date hereof (such agreement as so modified and amended being hereafter called the "Agreement") pursuant to which Project A/E is to perform certain services. The terms which are defined in the Agreement shall have the same meanings when used in this letter. The fee for these requested additional services are in lieu of any other fee adjustment based on an increase to the CCL as related to these services.

1. Owner has requested the performance of the services described below which Project A/E deems to be Additional Services. Refer to "Attachment A" for complete breakdown.

(Detailed description of Services. Use attachment only for additional description)

2. The services are fully described in the following documents: (list sheet #'s and spec sections)
3. Project A/E agrees to perform the Additional Services described above subject to and in accordance with the terms and provisions of the Agreement

a.) for a *lump sum fee* which will be determined in accordance with the Agreement in an amount of:  
\_\_\_\_\_ Dollars (\$\_\_\_\_\_)

OR

b.) an *hourly amount* in accordance with the Agreement, not to exceed \_\_\_\_\_  
Dollars (\$\_\_\_\_\_)

and for reimbursement of expenses in accordance with the Agreement incurred solely in connection with the performance of such Additional Services, but which reimbursement for expenses will not exceed \_\_\_\_\_ Dollars (\$\_\_\_\_\_).

4. Project A/E will perform the services in accordance with any schedule attached hereto (attach schedule if applicable), but in any event not later than \_\_\_\_\_ (\_\_\_\_\_) days after Project A/E is authorized to proceed.

Submitted by:

[Project A/E]

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

### Current Fee Summary

ORIGINAL ADDITIONAL SERVICE FEE AMOUNT:	\$ _____.
Previously Approved Additional Services Fees:	\$ _____.
Other Pending Additional Services Proposal Amounts:	\$ _____.
This Proposed Additional Services Fee Amount:	\$ _____.
PROPOSED TOTAL ADDITIONAL SERVICES FEES:	\$ _____.
Current Basic Services Fee Amount:	\$ _____.
Current Maximum Amount for Reimbursable Expenses	\$ _____.
<b>PROPOSED MAXIMUM CONTRACT SUM</b>	<b>\$ _____.</b>

Accepted this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_. Project A/E is authorized to commence performance of the Additional Services on \_\_\_\_\_, 20 \_\_

OWNER'S AUTHORIZED REPRESENTATIVE

OWNER'S 2<sup>ND</sup> AUTHORIZED REPRESENTATIVE

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_



**EXHIBIT E**

**STATEMENT FOR ARCHITECTURAL/ENGINEERING SERVICES RENDERED  
FORM**

[To be submitted on Project A/E's letter head.]

Date:

The University of Texas MD Anderson Cancer Center  
Facilities Planning, Design and Construction  
1515 Holcombe Box 703  
Houston, Texas 77030

ATTN: [\[MD Anderson Project Representative\]](#)

Project Name:  
MD Anderson Project No.:  
MD Anderson Purchase Order No:  
A/E Project No. :

STATEMENT FOR ARCHITECTURAL/ENGINEERING SERVICES

Statement No. \_\_\_\_\_ for the period ended \_\_\_\_\_, for services provided in accordance with MD Anderson Agreement No. \_\_\_\_\_.

Professional Liability Insurance Policy expiration date: \_\_/\_\_/\_\_\_\_

I. BASIC SERVICES

Current Construction Cost Limitation (CCL) \$ \_\_\_\_\_.

Basic Services Fee Percentage \_\_\_\_\_%

Basic Services Fee (CCL x Basic Services Fee %) \$ \_\_\_\_\_.

**Services Performed to Date:**

Phase	Fee	Fee Amount	Completed to Date	Fee Earned to Date
Schematic Design	15%	\$ _____.	_____%	\$ _____.
Design Development	20%	\$ _____.	_____%	\$ _____.
Construction Documents	40%	\$ _____.	_____%	\$ _____.
Construction Svcs. Procurement	5%	\$ _____.	_____%	\$ _____.
Construction Administration	20%	\$ _____.	_____%	\$ _____.
<b>Sub-Totals</b>	<b>____%</b>	<b>\$ _____.</b>	<b>____.</b>	<b>\$ _____.</b>
<i>Less Amount Previously Billed</i>				\$ _____.
<b>Net Amount Due for Basic Services This Statement</b>				<b>\$ _____.</b>

**[To be submitted on Project A/E's letter head.]**

**II. ADDITIONAL SERVICES**

Services Performed to Date: (Attach supplemental material to support amounts billed.)

Authorization	Fee Basis	Fee Amount	Complete to Date	Amount Earned to Date
(Approved Additional Services Proposal No.)	(% of CCL, Hourly Rate up to Not-to-Exceed Amount, Fixed Price)	\$ _____.	__%	\$ _____.
(Approved Additional Services Proposal No.)	(% of CCL, Hourly Rate up to Not-to-Exceed Amount, Fixed Price)	\$ _____.	__%	\$ _____.
Insert additional	rows, as needed.	\$ _____.	__%	\$ _____.
Sub-Total Additional Services Fees Earned to Date:				\$ _____.
<i>Less</i> Amount Previously Billed:				\$ _____.
<b>Net Amount Due for Additional Services:</b>				<b>\$ _____.</b>

**III. CHANGE ORDER SERVICES**

Services Performed to Date

Proposed Change/ Change Order No.	Fee Percentage	Value of Changed Work	Fee Amount	Complete to Date	Amount Earned to Date
(Approved Additional Services Proposal No.)	____%	\$ _____.	\$ _____.	__%	\$ _____.
(Approved Additional Services Proposal No.)	____%	\$ _____.	\$ _____.	__%	\$ _____.
Insert additional rows, as needed.	____%	\$ _____.	\$ _____.	__%	\$ _____.
	Sub-Total Change Order Services Fees Earned to Date:				\$ _____.
	<i>Less</i> Amount Previously Billed:				\$ _____.
	<b>Net Amount Due for Change Order Services:</b>				<b>\$ _____.</b>

[To be submitted on Project A/E's letter head.]

#### IV. REIMBURSABLE EXPENSES

Summary of Maximum Reimbursable Expense Amount;

Initial Maximum Reimbursable Expense Amount (Agreement, paragraph 14.4.2) \$ \_\_\_\_\_.

Cumulative Adjustments to Maximum Reimbursable Expense Amounts \$ \_\_\_\_\_.

**Current Maximum Reimbursable Expense Amount** \$ \_\_\_\_\_.

Summary of Reimbursable Expenses Incurred to Date (include details and supporting documentation as an Attachment to this Statement for Services Rendered);

Type	Amount Incurred	Multiplier	Total Incurred to Date
Travel	\$ _____.	1.0	\$ _____.
Reproduction/Postage	\$ _____.	1.0	\$ _____.
Other	\$ _____.	1.0	\$ _____.
Sub-total;			\$ _____.
Less Amount Previously Billed;			\$ _____.
<b>Net Amount Due This Statement;</b>			<b>\$ _____.</b>

#### RECAPITULATION

		Net Amount Due This Statement	Total To Date
I.	Basic Services Fee	\$ _____.	\$ _____.
II.	Additional Services Fees	\$ _____.	\$ _____.
III.	Change Order Services	\$ _____.	\$ _____.
IV.	Reimbursable Expenses	\$ _____.	\$ _____.
	Total Amount Earned as of This Statement		\$ _____.
	Less Total Amount Previously Billed		\$ _____.
	<b>Total Amount Due This Statement</b>	<b>\$ _____.</b>	<b>\$ _____.</b>

I certify that the above Statement for Services Rendered is correct and now due.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

[Attach additional supporting information as appropriate for requested payment item. (e.g. for Additional Services to be compensated on an hourly-rate basis include schedule of personnel for Project A/E and each consultant who provided the service, the hourly rate, and the time expended. For Reimbursable Expenses, include receipts.)]

[To be submitted on Project A/E's letter head.]

## **FINAL PAYMENT CERTIFICATION AND LIEN WAIVER**

The Project Architect/Engineer certifies that all persons, consultants and firms who supplied services to it in connection with this Project have been fully paid for their services or work items, or that they will be fully paid immediately upon receipt of this payment, and that there are no other outstanding debts, obligations or claims related to this Project for which the Owner may be liable or for which the Project Architect/Engineer will look to the Owner for additional payment. **This payment constitutes full and final payment to the Project Architect/Engineer and its consultants for all services provided for this Project and the Owner is not obligated to make any more payments on their behalf.**

In consideration of the payment herewith made, the undersigned does fully and finally release and hold harmless Owner from any and all claims, liens or right to claim or lien, arising out of this Project under any applicable bond, law or statute.

---

Signature

---

Date

## **FINAL HUB PLAN**

The HUB Plan form for final payment is included with this Final Payment Request.

Yes \_\_\_\_ No \_\_\_\_

[To be submitted on Project A/E's letter head.]

# HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report

***This form must be completed and submitted to the contracting agency each month to document compliance with your HSP.***

Contract/Requisition Number: \_\_\_\_\_ Date of Award: \_\_\_\_\_ Object Code: \_\_\_\_\_  
(mm/dd/yyyy) (Agency Use Only)

Contracting Agency/University Name: \_\_\_\_\_

Contractor (Company) Name: \_\_\_\_\_ State of Texas VID #: \_\_\_\_\_

Point of Contact: \_\_\_\_\_ Phone #: \_\_\_\_\_

Reporting Period: ☐ - Jan. ☐ - Feb. ☐ - Mar. ☐ - Apr. ☐ - May ☐ - Jun. ☐ - Jul. ☐ - Aug. ☐ - Sept. ☐ - Oct. ☐ - Nov. ☐ - Dec.  
(Check only one Month)

Total Contract Amount Paid this Reporting Period to Contractor: \$ \_\_\_\_\_

## ***Report HUB and Non-HUB subcontractor information***

Subcontractor's Name	Subcontractor's VID or HUB Certificate Number	Total Contract \$ Amount from HSP with Subcontractor	Total \$ Amount Paid This Period to Subcontractor	Total Contract \$ Amount Paid to Date to Subcontractor	Object Code (agency use only)
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
		\$	\$	\$	
<b>TOTALS:</b>		\$	\$	\$	

Signature: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Phone No. \_\_\_\_\_

**EXHIBIT F**

**PROJECT MILESTONE SCHEDULE**

## PROJECT MILESTONE SCHEDULE

Activities shown in bold below must have the associated dates identified and included with this Agreement and represent services to be performed by Project A/E pursuant to this Agreement. Supplemental activities shown on the schedule below, for which dates are not yet defined, shall be determined at the completion of the Pre-design Phase or at such time when both parties mutually agree that the project is sufficiently developed and documented.

Activity:	Completion Date:
<b>Pre-design Phase</b>	
Owner Authorizes Project A/E to begin Pre-design (Programming) Phase	3/20/2020
Owner Approves Facility Program (Pre-design Report)	5/22/2020
Project A/E Resubmits Pre-design Report (Facility Program)	5/26/2020
Owner Approves Pre-design Report (Facility Program)	6/16/2020
<b>Agreement for Construction Manager-at-Risk Executed</b> ( <i>for Construction Manager-at-Risk Delivery</i> )	<b>7/10/2020</b>
<b>Schematic Design Phase</b>	
Owner Authorizes Project A/E to Begin	6/11/2020
Project A/E Submits SD Package for 95% Review	7/31/2020
Joint Review Meeting for Owner Comments	8/14/2020
<b>Owner Approves Schematic Design</b>	<b>9/10/2020</b>
<b>Design Development</b>	
Owner Authorizes Project A/E to Begin	9/10/2020
Project A/E Submits DD Package for 95% Review	1/8/2021
Joint Review Meeting for Owner Comments	1/28/2021
<b>Owner Approves Design Development</b>	<b>2/5/2021</b>
<b>Board of Regents Approval</b> ( <i>New Construction Projects Only</i> )	<b>2/15/2021</b>
<b>Owner Accepts Guaranteed Maximum Price Proposal</b> ( <i>CM at Risk Projects Only</i> )	<b>5/6/2021</b>
<b>Construction Documents Phase</b>	
Owner Authorizes Project A/E to Begin	2/16/2021
Project A/E Submits CD Package for 50% Review	3/23/2021
Joint Review Meeting for Owner Comments	4/15/2021
Project A/E Submits CD Package for 95% Review	5/6/2021
Joint Review Meeting for Owner Comments	5/7/2021
Project A/E Submits CD Package for 100% Review	6/1/2021
<b>Owner Approves 100% Construction Documents</b>	<b>6/28/2021</b>
<b>Construction Services Procurement Phase</b> ( <i>Traditional Delivery</i> )	
Owner posts Request for Competitive Sealed Proposals	4/21/2020
Proposal Due Date	5/12/2020
Agreement for Construction Services Fully Executed	7/10/2020
<b>Construction Phase Activities</b>	
Commencement (Construction Start) Date	5/21/2021
Substantial Completion	8/17/2022



## **EXHIBIT G**

### **UT SYSTEM FACILITIES PROGRAMMING GUIDELINES**

**Facilities  
Programming  
Guidelines**

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**The  
University of  
Texas  
System**

Office of  
Facilities  
Planning and  
Construction

# F

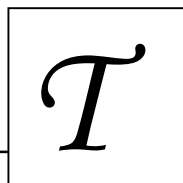
# Foreword

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The *Facilities Programming Guidelines* is a tool designed to help the Component Institutions of The University of Texas System program their capital improvement projects (CIP).

These guidelines are generic in nature and are intended to be used for both academic and health affairs projects, including projects of primarily an engineering nature. This document is a checklist of possible deliverables that may be found in a completed facility program, and contains definitions for programming deliverables that may be required in a professional agreement for programming services.

The *Guidelines* have been designed so they may be referenced in an agreement for programming services, but such an agreement should specifically identify the programming deliverables to be provided under the agreement. Appendix D provides such a checklist.



# Table of Contents

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Chapter	Page
---------	------

**Introductory Materials:**

Purpose of this Document .....	i.1
Introduction .....	ii.1
Getting Started .....	iii.1
List of Programming Tasks.....	iv.1

**The following chapters contain guidelines for producing the actual chapters that should be included in a facility program:**

Sign-Offs.....	1.1
Executive Summary .....	2.1
Project Goals .....	3.1
Space & Adjacency Requirements.....	4.1
Supporting Requirements.....	5.1
Existing Site Studies .....	6.1
Existing Facilities Studies .....	7.1
Design Parameters.....	8.1
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Project Schedule.....	10.1
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Information Specific to This Institution.....	12.1
Selecting a Delivery Method.....	13.1

**Appendices:**

Acknowledgments.....	A.1
Notes About Complying with the THECB Space Model.....	B.1
Definition of Terms Relating to Square Footage .....	C.1
Examples of OFPC Forms Described In these Guidelines .....	D.1

# *i*

# Purpose of this Document

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In December 1994, The Board of Regents of The University of Texas System implemented a new process for the delivery of capital improvement projects. A key element of this process is the need for the institutions to prepare a comprehensive program of requirements for each project before the Chancellor appoints the project architect/engineer, or additional services are requested.

This document is designed as a tool to help the institutions program the requirements for their capital improvement projects. The Board of Regents' decision to require more complete facility programming is an attempt to reduce the amount of changes and cost increases that occur during the life of a project. Other benefits from programming are:

- All interested parties have an early opportunity to provide input and discuss issues.
- Consensus can be obtained and project needs can be converted into hard requirements before design begins.
- Different concepts can be tested and options can be evaluated very inexpensively during programming.
- Before engaging architects and engineers to design a project, the institution can clearly define what it wants.
- All of the necessary information is collected at the beginning of a project and is resident in the program and its supporting appendices, and is available for everyone involved with the project to use.



## **Definition of Facility Programming**

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Facility programming is the process of collecting, analyzing, synthesizing and documenting all (or most) of the requirements for a capital improvement project prior to beginning design.

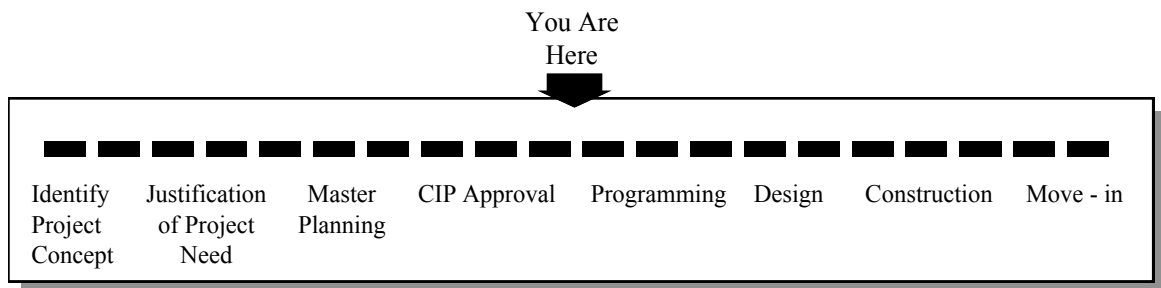
A facility program contains the information needed to design a project. Facility programs generally do not contain information that defines the need for the project (such as academic requirements), unless this information is needed by the architects and engineers to design the project.

By following the steps outlined in these guidelines, the institution will be able to develop a complete facility program ready to be submitted to the Office of Facilities Planning and Construction (OFPC) and then to the Chancellor for selection of the project architect-engineer.

### **You Are Here**

---

These guidelines are a tool to prepare a facility program for projects that have already been approved by the Board of Regents. This document does not address “**pre-CIP issues**” such as project justification, academic programming, master planning or CIP approval. These and other pre-CIP issues should already be in place and approved before beginning a facility program.



The Board of Regents recognizes that the institutions may hire outside consultants to assist them in preparing facility programs. Also, OFPC is available to assist the institutions through every step of a project.

When reading and applying these guidelines, remember that each project and each institution is unique, and this manual cannot apply equally to every project. Use these guidelines as a checklist, not as a substitute for the skills and knowledge needed to prepare a specific facility program at a specific institution.

Research conducted by the Construction Industry Institute (CII) indicates that well developed facility programming coupled with good schematic design and design development may result in:

- Reduced project costs by an average of twenty percent
- Less project variability in terms of cost, schedule, and operating characteristics
- Increased probability of the project meeting desired goals

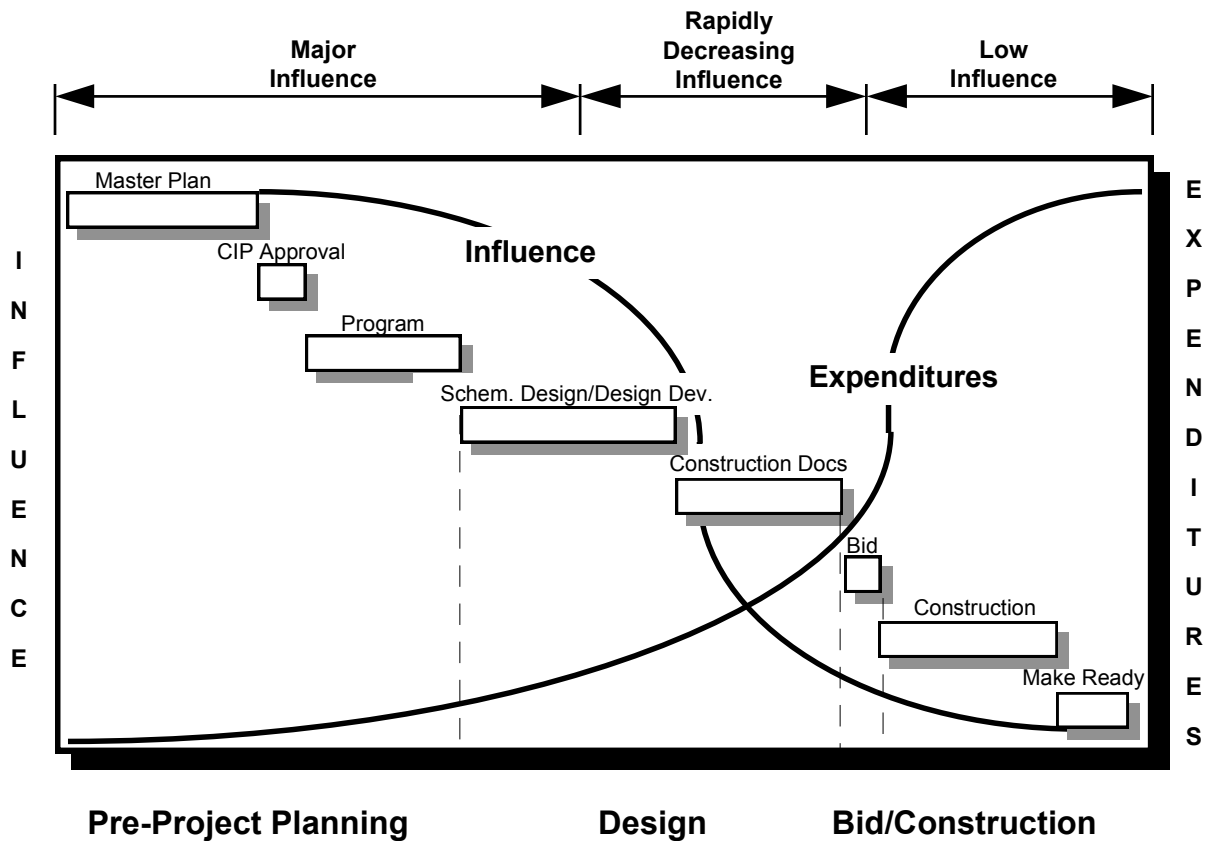
The results also indicate a direct relationship between project success and the level of early project planning. Therefore, it is important that institutions understand the underlying programming process and act quickly to effectively embrace its use.

## **Why Do Facility Programming?**

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Programming has a significant impact on the outcome of the construction of a capital improvement project (CIP). *Figure ii.1* graphically illustrates this concept. As the diagram indicates, it is much easier to influence a project's outcome during the early stages of a project (when expenditures are relatively minimal) than it is to affect the outcome as the project moves forward.





**Figure ii.1:** The curve labeled “influence” reflects an institution’s ability to affect the outcome of a project during the various stages of a project.

An analysis of projects completed during the three-year period, FY93, FY94 & FY95, by The University of Texas System indicates there is room for improvement. Construction change orders totaled approximately \$33 million; these occurred over \$425 million of projects constructed. Scope changes, which typically are a result of incomplete planning, have led to cost increases on 26 percent of the construction contracts and 64 percent of design contracts during the same period. Scope changes have also led to schedule increases on approximately 20 percent of construction and design projects during that time interval.

## The Process

---

The Board of Regents has adopted a process for capital projects. This process has the following goals:

- To reduce the probability of changes and delays during design and construction
- To streamline the approval process for capital projects
- To reduce the length of time required to deliver a capital project

The process is diagrammed in *Figure ii.2*.

***The CIP process requires each institution to submit a facility program to the Chancellor, via the appropriate executive vice chancellor, for approval before the project architect-engineer may be selected.***

The Chancellor will then appoint the project architect-engineer after selection following the Professional Services Procurement Act, Texas Government Code. (The facility program will be included as a part of the A-E Agreement.)

## The Buyer Benefit

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1. Programming provides a **forum to debate** what should be included in a project. Issues can be discussed and alternatives considered quickly and inexpensively. (This is not true once design begins.)
2. A facility program can **build consensus** and cause decisions to be made in a logical sequence.
3. The programming process will **separate “needs” from “wants”** with respect to space, equipment, and other related issues.

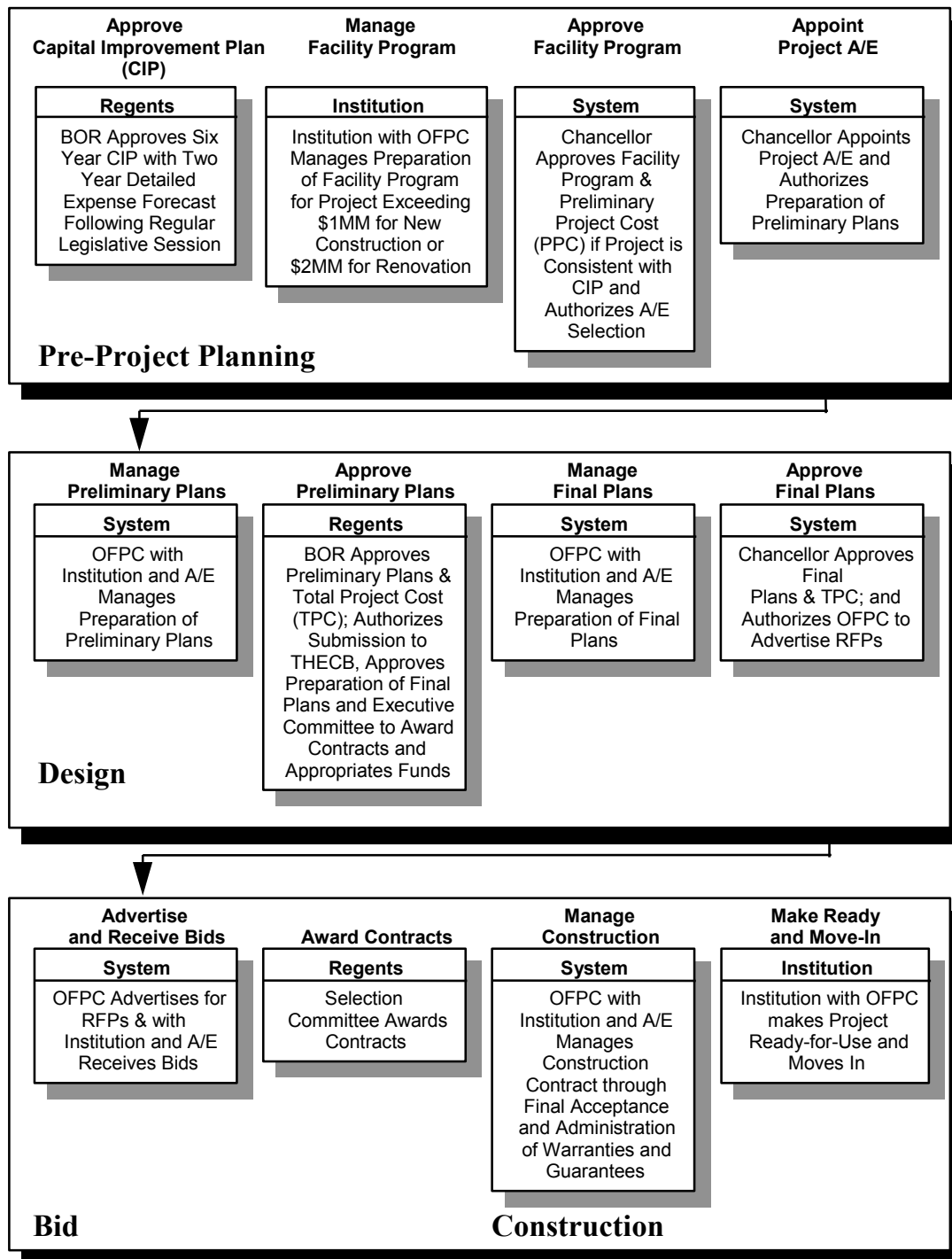


Figure ii.2: Diagram of the Capital Improvement Program project delivery process

4. The facility program is the road map for the **architects and engineers** who will design the project. Without a program, designers may deviate from the actual requirements and produce a building that does not meet the institution's needs.

---

### **What a Program Will Do**

When the programming is complete, the institution will have a program document that communicates the following to key members of the project team:

- Strategic and master planning requirements for the project (*A facility program should comply with and expand upon the already approved campus master plan*)
- Space and functional relationships
- Site selection
- Determination of the cost and schedule for the project
- Intermediate and final recommendations presented in a clear and succinct manner
- Required expertise for the project team
- Investigation of permit process
- Concerns among all interested parties to the project scope, cost, schedule, risks and plan of execution
- The Chancellor's requirements and concerns in the authorization process

---

### **How to Use These Guidelines**

**This document is a checklist for what should be contained in a typical building program.** By addressing all of the applicable parts of these guidelines, the institution will have a facility program ready to submit to the Office of the Chancellor.

**The guidelines are intended to help the *Ad Hoc* Building Committee complete its task.** The

committee chair can use these guidelines to measure the progress of the committee and make assignments to gather missing information.

The business environment at each institution is different, and every project differs in terms of size, complexity and cost. **Each institution must adapt these guidelines to meet its own needs.**

**These guidelines are generic. There are probably parts that do not apply to a particular project. If this is the case, skip over those items in the guidelines.** If this situation occurs, see if other information that is project specific should be substituted. Similarly, some of the terminology used in this manual may be different from what is used at each institution. When this occurs, use the more familiar terms.

**Like most guidelines, this document cannot address every possible issue at each institution.** Consider them a set of minimum acceptable responses for developing a facility program.

**When preparing the program, follow the chapter sequence developed in this document and retain the chapter numbering.** It will help keep track of any missing data yet to be gathered. It will also help The U.T. System Administration review all of the program submittals from each institution (and approve them to move into design).

If a chapter or section does not apply; state so in the program and then skip over that part, but do not re-number the chapters.

A good place to start is by reviewing the List of Programming Tasks in Chapter *iv*.

---

**OFPC is Ready to Help**

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The Office of Facilities Planning and Construction is responsible for reviewing each program before it is forwarded to the Chancellor for approval. As the institution is preparing the program, OFPC is available to answer questions about these guidelines, provide technical support, and otherwise help the institution develop a complete program.

There are five critical steps to getting started with the programming process.

1. The President of the institution should appoint a team to provide data and review conclusions.
2. When appropriate, select outside consultants to assist in preparing the program. (Unless the institution has experienced staff available to devote time to the task, outside consultants are required for most programming assignments.)
3. Prepare a schedule of what will occur during the programming process and review it with OFPC. This will allow OFPC to participate at appropriate times during programming. An example of a programming schedule is included later in this chapter.
4. Identify all of the participants that should be involved in the programming process within the institution and OFPC. Typical institution participants might include representatives from user groups, Physical Plant, Business Affairs, EH&S, Capital Projects, etc. Consider involving the participants in a team building process to facilitate team performance.
5. Document the decision making process. Identify who is responsible for each action and who has the authority to approve information and make each decision.

### **Skills Required to Prepare a Facility Program**

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Whether the facility program is prepared internally or with the assistance of outside consultants, be prepared to assemble a team with skills in each of the following areas:

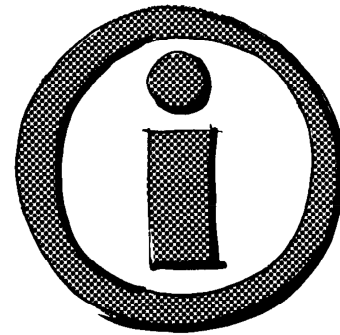
- Space requirements, functional relationships between areas, room sizes, and detailed equipment needs for each room (*see chapter 4*)
- Supporting requirements relating to access, site development, parking, etc. (*see chapter 5*)
- Evaluation and analysis of existing sites and buildings (*see chapters 6 & 7*)
- Technical building standards, engineering requirements, and building design criteria (*see chapter 8*)
- Preparing a project budget and schedule (*see chapters 9 & 10*)
- Dealing with specialized requirements included in this project
- Ability to facilitate and draw information out of people, and lead the project team

Although consultants and other experts may be significantly involved in this process, the owner must assure that it is being performed properly and follows the particular needs of the institution.



## **Professional Assistance**

If an institution does not have qualified in-house staff who are skilled in providing the information asked for in these guidelines, outside consultants should be retained. These consultants are called “facility programmers.” They are the individuals who will expand the project outline into a fully defined set of requirements for use by the project architect-engineer in design of the project. Ideally, the programmer should also be skilled at building and leading teams. There are two types of facility programmers:

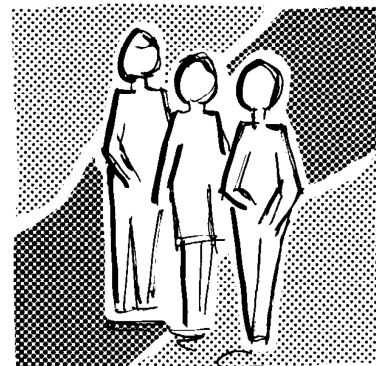


### **1. Programming Consultants:**

Although usually trained as architects, facility programming consultants do not design buildings. They specialize in defining and organizing the project’s requirements. The advantage to using a separate programming consultant is their *expertise and focus on programming*. The programming consultant can also serve as a check and balance after the design architect-engineer is selected to assure the requirements contained in the program are being incorporated in the design.

### **2. Architects/Engineers:**

Many architects and engineers are also trained in programming. An advantage of selecting an architect-engineer to prepare the program is continuity when the project later moves into design. A disadvantage of using an architect is a tendency to begin designing the project before the program is complete. In other words, the architect may try to find a design solution before fully understanding the needs of the project.



OFPC can provide guidance and help an institution select the right consultants for each project.

The most common scenarios for preparing a program are:

- The program is prepared in-house or a specialized programming consultant is engaged by the institution to help prepare the program. Once the program is complete, and is approved by the Chancellor, OFPC and the institution may undertake the A/E selection process. The Chancellor will then appoint the selected A/E.

-or-

- OFPC and the institution may undertake the A/E selection process to select an A/E to prepare the program. The Chancellor will then appoint the selected A/E. Once the program is complete, the A/E's contract may be extended for design, or a new A/E may be selected.

-or-

- OFPC and the institution may undertake the A/E selection process with the A/E using a specialized programming consultant as a sub-contractor to prepare the program. Once the program is complete, the A/E's contract may be extended for design, or a new A/E may be selected.

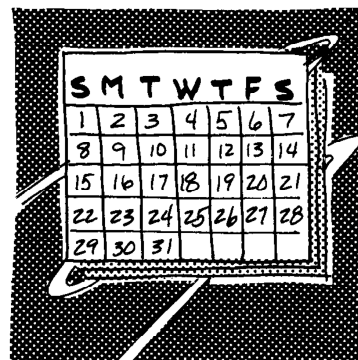
***Note: The A/E selection process must follow the Professional Services Procurement Act, Texas Government Code.***

## The Programming Schedule

The most difficult step in any project is getting started. The best way to begin developing a facility program is to agree on the following:

- ☐ **What** tasks need to be done?
- ☐ **Who** will be doing each task?
- ☐ **When** will they be doing them?

The answers to these three questions comprise the programming schedule.



*The institution must prepare a schedule of the activities that will occur during programming, including who will be responsible for each activity. Please send a copy of this schedule to OFPC so they can participate at key dates. OFPC wants to help the institution.*

### *The programming schedule should include:*

- Start of Programming
- Key meetings and workshops
- Periods for gathering data
- Site visits
- Presentations
- Review of the draft document
- Delivery of the final document

The programming schedule differs from the Project Schedule described in chapter 10 of this manual. The programming schedule deals only with activities that will occur during programming. A mock-up of a programming schedule is shown in *Figure iii.1*.

The length of time required to complete a program is a function of the complexity of the project and the availability of participants to provide information and make decisions. Typically, a facility program can be developed in 3-6 months; complex projects will take longer.

Programming Schedule														
Task	Assigned to:					Timeline								
	Chair	Committee	Subcommittee	Consultant	OFPC	Weeks								
						1	2	3	4	5	6	7	8	9
Pre-programming conference with: • OFPC • Institution • Facility Programmer To review the scope of work and develop this schedule of what needs to be done														
Facility programmer to develop and complete a list of tasks to get to the 1 <sup>st</sup> project review meeting Submit deliverables required for the 1 <sup>st</sup> project review meeting 1 <sup>st</sup> project review meeting at 50% completion of the program ( <i>usually to approve physical requirements and initial interpretation of the analysis</i> )														
Facility programmer to develop and complete a list of tasks to get to the 2 <sup>nd</sup> project review meeting Submit deliverables required for the 2 <sup>nd</sup> project review meeting 2 <sup>nd</sup> project review meeting at 90% completion of the program ( <i>usually to review a draft program</i> )														
Facility programmer to develop and complete a list of tasks to get to the 3 <sup>rd</sup> project review meeting Submit deliverables required for the 3 <sup>rd</sup> project review meeting 3 <sup>rd</sup> project review meeting at 100% completion of the program														

Figure iii.1 Mock-up of a programming schedule

Remember that the programming process is not linear. Functions can be occurring concurrently; interaction, feedback, and iteration are inherent within the process.

**Note:** The programming schedule should call for at least three project review meetings:

- at 50% complete
- at 90% complete
- at 100% complete

Progress review meetings should occur at least once each month during programming. If the programming takes longer than three months, increase the number of meetings accordingly.



Develop a staffing and team building plan that outlines the roles and responsibilities of each participant in the project during programming and beyond.

---

### Tips for Successful Programming

- Responsibility matrices highlighting the tasks and schedule to accomplish major programming activities help retain control of the process.
- Participants should report the facts concerning the financial viability of the project. In other words, “don’t shoot the messenger” when contradictory information is produced.
- Believing that a project is a “copy-cat” of a previous project can be a hazardous assumption. All projects are different and need some amount of programming.
- Be careful when making assumptions. Bad assumptions can cripple projects very quickly: investigate the assumption for proof that it is true.

## **The Rest of this Manual**

---

The Introductory Materials chapter has been written to introduce the concept of programming to the institution. Each of the following chapters in this document are mock-ups of what needs to be submitted in a facility program. From this point forward, this manual becomes a storyboard of the work to be done.

## **Text Notation Marks**

---

There are three types of graphic “bullets” used in this manual. The bullets are adjacent to the text to inform the user of important information that needs to be noted. The following is an example of each type of bullet and a description of what it means:



Tells the reader that a page (or pages) needs to be included in the submitted program.



Identifies specific information the submitted program should contain.

- Further defines a preceding concept.

# List of Programming Tasks

---

Below is a list of items that are typically included in a facility program. Obviously every item on this list will not apply equally to each project. Use this list as a checklist for determining which tasks need to be performed during the programming phase. Some items may not be appropriate for all projects. Prior to beginning the programming exercise, the institution and OFPC should meet and review the following checklist and determine which items need to be included in the facility program.

When determining what items need to be done, it is also wise to assign who will be responsible for completing each item. The chapter listed after each item refers to chapter in these *Facilities Programming Guidelines*.

Appendix D contains a copy of this list that can be used as an attachment to an Agreement for Programming Services.

---

## **Programming Schedule** (*chapter iii*)



A schedule of tasks to be done during the programming phase

---

## **Project Goals** (*chapter 3*)



A statement of agreement with the institution's mission and objective.



A statement of agreement with the institution's strategic plan.

- ☐ A statement that the project follows the institution's master plan
- ☐ A description of the programs and curricula to be housed in this project
- ☐ A summary of the need for the project
  - A brief description of the intent of the project
  - A discussion of alternative solutions that have been considered
- ☐ The objectives for the outcome of the project
- ☐ A statement that this project follows or deviates from the Coordinating Board's space model for this institution

---

**Space and Adjacency Requirements** (*chapter 4*)

- ☐ A summary space list of all areas in the project
- ☐ At least one overall adjacency diagram
- ☐ At least one stacking diagram (if appropriate)
- ☐ A discussion of future growth and phased development
- ☐ Detailed requirements for each room:
  - Space detail sheet
  - Functional relationship diagram
  - Room data sheet
  - List of furnishings and equipment
  - Description of finishes
  - Description of special access issues



**Supporting Requirements** *(chapter 5)*

---

- ☐ A list of any additional EHS requirements applicable to the project
- ☐ The requirements for site development
- ☐ A list of any additional requirements applicable to the project
- ☐ A description of the security needs of the project

**Existing Site Studies** *(chapter 6)*

---

*(May not apply to interior renovation projects)*

- ☐ An analysis of the site or sites under consideration
- ☐ An analysis of site- or institution-specific environmental or safety considerations

**Existing Facilities Studies** *(chapter 7)*

---

*(May not apply to new projects on new sites)*

- ☐ Make copies of all available drawings for the current building
- ☐ Define the extent of the renovation
- ☐ A list of items that need to be reused after the renovation
- ☐ A list of areas in the building that are known not to comply with current building codes
- ☐ A list of any known hazardous materials in the building
- ☐ Discussion of any temporary or interim facilities that are required

**Design Parameters** *(chapter 8)*

---

- ☐ List of all of the applicable codes and standards
- ☐ List of governmental agencies that have jurisdiction over the project
- ☐ List of the U.T. System's technical and design standards that apply to this project
- ☐ List of the institution's technical and design standards that apply to this project

---

**Preliminary Project Cost** (*chapter 9*)

---

- ☐ A preliminary project cost estimate using the OFPC format

---

**Project Schedule** (*chapter 10*)

---

- ☐ A preliminary schedule for the project using the OFPC format

---

**Implementation Approach** (*chapter 11*)

---

- ☐ A written plan that outlines how the project will be organized and delivered

---

**Information Specific to this Institution** (*chapter 12*)

---

- ☐ Any institution requirements that will have an impact on the project

---

**Selecting a Project Delivery Method** (*chapter 13*)

---

- ☐ Any institution requirements that will have an impact on the project

---

**Executive Summary** (*chapter 2*)

---

- ☐ A synopsis of all areas in the program

### **Sign-Offs** (*chapter 1*)


---



A sign off page with appropriate approval signatures.

# 1

## Sign-Offs

 This page contains the needed signatures approving the accompanying facility program and is to be completed when programming is finished.


<b>Project Institution</b>	
<b>RECOMMENDED FOR APPROVAL:</b>	
_____	_____
_____	_____
_____	_____
President of the Institution	Date
_____	_____
Assistant Vice Chancellor for Facilities Planning & Construction	Date
<b>APPROVED:</b>	
_____	_____
Executive Vice Chancellor for Academic or Health Affairs The University of Texas System	Date

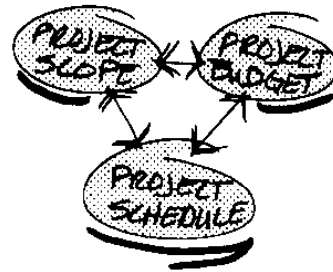
The Institution may also obtain the signatures of key project participants as appropriate

**Figure 1.1** Format for the program sign-off sheet.

# 2

## Executive Summary

 The executive summary of the facility program document should be a *one-page synopsis* of the major points contained in the program. It should provide the reader with a quick understanding of the project scope, budget, and schedule. Write the executive summary after completing all of the other chapters of the facility program.






### Project Description and Scope

Give an overview of the proposed project. Address the following (as appropriate):

- ☐ Name of the project
- ☐ Description (new building, restoration and expansion of the ..., etc.)
- ☐ Purpose of the project (to replace the..., to house a new ..., etc.)
- ☐ Primary activities to be housed and the primary users
- ☐ Shared facilities included with this project (such as classrooms, labs, meeting rooms, etc.)
- ☐ Projected size in assignable and gross sq.ft.
- ☐ Proposed location and why this site was selected



### **Project Budget**

---

-  List the preliminary project cost (PPC) from Chapter 9
-  List the preliminary project cost per gross sq. ft. (if appropriate)
-  Identify any unusual costs that are included in the PPC (such as land purchase, demolishing existing facilities, expenses for environmental remediation, etc.)

### **Project Schedule**

---


-  Summarize the milestone dates associated with the project including:
  - Chancellor's appointment of the project Architect/Engineer to prepare preliminary plans
  - FPCC Approval
  - Board of Regents' approval of preliminary plans and authorization to begin final plans
  - THECB Approval
  - Construction Notice To Proceed
  - Construction Substantial Completion
  - Owner Operational Occupancy/Move-in
-  Identify any major stages of the project:
  - To pre-purchase equipment such as boilers, chillers, cooling towers, etc.
  - Advertise for Request For Qualifications and/or Request For Proposals, and award within the overall project such as site

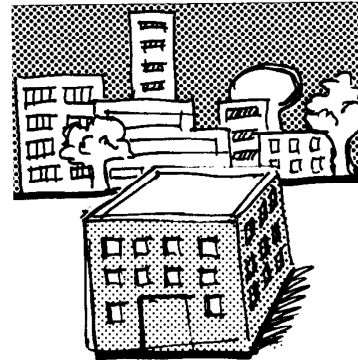
- preparation, demolition, infrastructure contracts, etc.

# 3

## Project Goals

---

 This chapter of the facility program establishes the basis for the project. It describes why the project is required and affirms that it is in keeping with the stated direction of the institution. This chapter should also address the requirements of the Texas Higher Education Coordinating Board.



### **Institution's Mission Statement and Objectives**

---



Briefly explain how this project complies with the stated mission and objectives of the institution.

### **Compliance with the Institution's Strategic Plan**

---



Briefly explain how this project fits into the context of the institution's strategic plan. Note how it will support the academic direction of the institution, and how this project is rationalized in terms of overall need for at least the next five years.

### **Compliance with the Institution's Master Plan**

---



Show that this project complies with all aspects of the master plan, or provide rationalization to deviate from the master plan. Use illustrations and text to demonstrate that this project has been properly sited and is otherwise appropriate for the intended site.



## Functional Programs Curricula Descriptions and Projections



Interpret how the institution's academic program will be supported by this project. Describe which functional programs will be housed in this project, the courses to be taught, and the numbers of students projected.

## Project Need



This section should include a *brief* description of the intent of this project. It should summarize the *status quo* and explain why the project is needed. It should also present the benefits to be gained by this project and the probable impact if it is not built. If it is necessary to include a lengthy discourse to present additional background material, move it to chapter 12 of the program or to an appendix.



List any current facilities that will be vacated (or will change occupants) as a result of this project. Explain why these facilities are no longer adequate.



Describe any alternative solutions for providing the needed additional space, (other than the proposed project), that were studied and judged as less acceptable including:

- Sharing other facilities
- Renovating an existing building instead of building new
- Using additional technology to reduce the need for more space
- Other sites

If appropriate, use a campus map or other graphics to convey information.

OPTION	~~~~~	~~~~~	~~~~~
A	✓	✗	
B		✗	
C	✓+		

## Project Objectives

---



Project objectives are different from the institution's objectives listed above. Project objectives state in very concise terms what results the project is intended to achieve. The program should include enough objectives to describe the important, "big-picture" aspects of the project. Each objective should only deal with a single subject. Avoid objectives that state the obvious or reflect "motherhood and apple pie."



Project objectives can be either **outcome** objectives (*what the project accomplishes*) or **process** objectives (*how the project is accomplished*) or both. Examples of written objectives include:

- To make this large new building appear to be a similar scale to its much smaller neighbors
- To make the new building harmonious with the existing campus by using similar materials, colors, and finishes
- To foster interaction between faculty from different departments
- To maintain ongoing facility activities during the renovation
- To minimize vehicular traffic on an already congested part of the campus

The project objectives should be prioritized from most to least important.

### Compliance with THECB Space Model

The Texas Higher Education Coordinating Board (THECB) has the statutory authority to approve or disapprove new construction, renovations, and property acquisitions funded with state money at public institutions of higher education.

The *Space Projection Model for Higher Education Institutions in Texas* guides the Coordinating Board in its approval or disapproval of new construction and renovation projects at academic and health-related institutions.



The facility programmer and institution should include a statement in the facility program affirming that the **assignable** square footage for the proposed project does not cause the institution's actual **assignable** square footage to exceed the predicted **assignable** square footage in the Model, (or if an excess of space for one factor can be justified by looking at the totals for the entire campus).



The facility program should be prepared using the Coordinating Board's definitions for square footage given in Appendix C.



The program must clearly summarize in table form, the number of rooms and assignable square footages for each of the rooms. The room types and CIP codes should be taken from *The Texas Higher Education Facilities Inventory Procedures Manual*.

#### Allocation of Assignable Sq.Ft. in the Project

Number of Rooms	Room Type	CIP Code	Total ASF



The facility programmer should work with the institution's office of institutional research (or studies) to determine the room type and CIP code for the rooms in the proposed project. They are familiar with the Coordinating Board's policies and procedures and maintain the institution's facilities inventory.

# 4

## Space & Adjacency Requirements

---

This chapter deals with the space requirements and functional relationships portion of the program. It can be considered the “*meat and potatoes*” of a facility program because this chapter describes a project in physical terms, including:

- ☐ A brief description of each room
- ☐ The number of occupants of each room
- ☐ The quantity and square footage of each room
- ☐ Affinity relationships between each room and any other
- ☐ Diagrams that locate each area on the desired floors
- ☐ Lists of furnishing and equipment for each room, along with any special requirements that need to be accommodated during the design

The space and adjacency requirements chapter will serve as a checklist for the architects as they design and lay out the interior of the building. It must be clearly organized and easy to understand.

For most projects, the following chapter relies heavily on the academic or functional programming used to justify the project. For example:

- Number of full-time equivalent students
- Class size and courses offered
- Number and frequency of medical procedures
- Business plan, etc.

If any of this background programming is incomplete or needs to be revisited, do so before continuing to prepare a facility program.

Facility programs for The University of Texas System projects should include each of the following topics, preferably in the order listed below. Each of these topics will be explained on the following pages.

---

**Related to the Entire Building:**

- Summary space list
- Overall adjacency diagrams
- Stacking diagrams
- Growth and phased development

---

**Room-by-Room Requirements:**

- Space detail sheets
- Functional relationships diagrams
- Room data sheets including furnishings, equipment and built-ins for work areas and storage, such as laboratory casework

## Summary Space List



*The first component of the space and adjacency requirements chapter of a program is the summary space list.* It summarizes on a single page all of the space requirements for the project. For each line item on the summary space list there is at least one space detail sheet that further describes the requirements.

There is not a right or wrong way to present a summary space list. The spreadsheet (*Figure 4.1*) on the next page should be considered a guide. Later in this chapter is an explanation of the space detail sheets that are used to make up each line of the summary space list.

The program should contain requirements for **all** spaces in the building, **both assignable and non-assignable** (refer to Appendix C for definitions). The assignable and non-assignable spaces are combined to obtain gross square feet.

Identify any specific programming requirements associated with non-assignable areas, such as extra wide corridors. List assumptions made during programming with regard to non-assignable areas.

It may be difficult to predict the size of certain non-assignable areas, such as corridors and wall thickness, during programming. The square footages for undefinable areas may be calculated as a percentage of the total building area. **Do not** however, rely only on a multiplier to convert assignable square footage to gross square footage.

Remember, in most cases, according to a Coordinating Board goal, gross square feet should be less than or equal to assignable square feet multiplied by 1.67.

<b>Summary Space List</b>		
<b>Space</b>	<b>Assignable Square Feet</b>	<b>Refer to Page No.</b>
<b><u>Assignable Spaces</u></b>		
Administrative Offices	4,600	69
Auditorium	2,800	23
Building Lounge	1,600	21
Center for Urban Research	1,240	43
Classrooms	19,900	28
Commons	1,800	58
Computing Facility	5,000	53
Faculty Offices	6,000	45
Food Service Cafeteria	2,500	56
Furniture and AV Storage	800	28
Library	5,000	49
Maintenance	1,860	74
Multi-purpose Room	1,600	26
Office of Extended Education	400	72
Student Services & Bursar's Office	3,000	65
Study Alcoves	1,600	68
Vending Alcoves	400	62
<b>Total Assignable Sq.Ft.</b>	<b>60,100</b>	
<b><u>Non-assignable Spaces</u></b>		
Janitor closets (1 per floor)	400	75
Mechanical rooms (1 per floor)	1,000	76
Communication / Data closets (1 per floor)	400	77
Electrical closets (1 per floor)	400	78
Elevators, passenger (4) + lobbies	3,000	80
Elevators, freight (1) + vestibules	1,000	83
Stairs (3)	3,600	84
Toilet rooms	3,000	
Loading dock	1,000	
Corridors and wall thicknesses	22,000	
<b>Total Non-assignable Sq.Ft.</b>	<b>35,800</b>	
<b>Total Gross Sq.Ft.</b>	<b>95,900</b>	

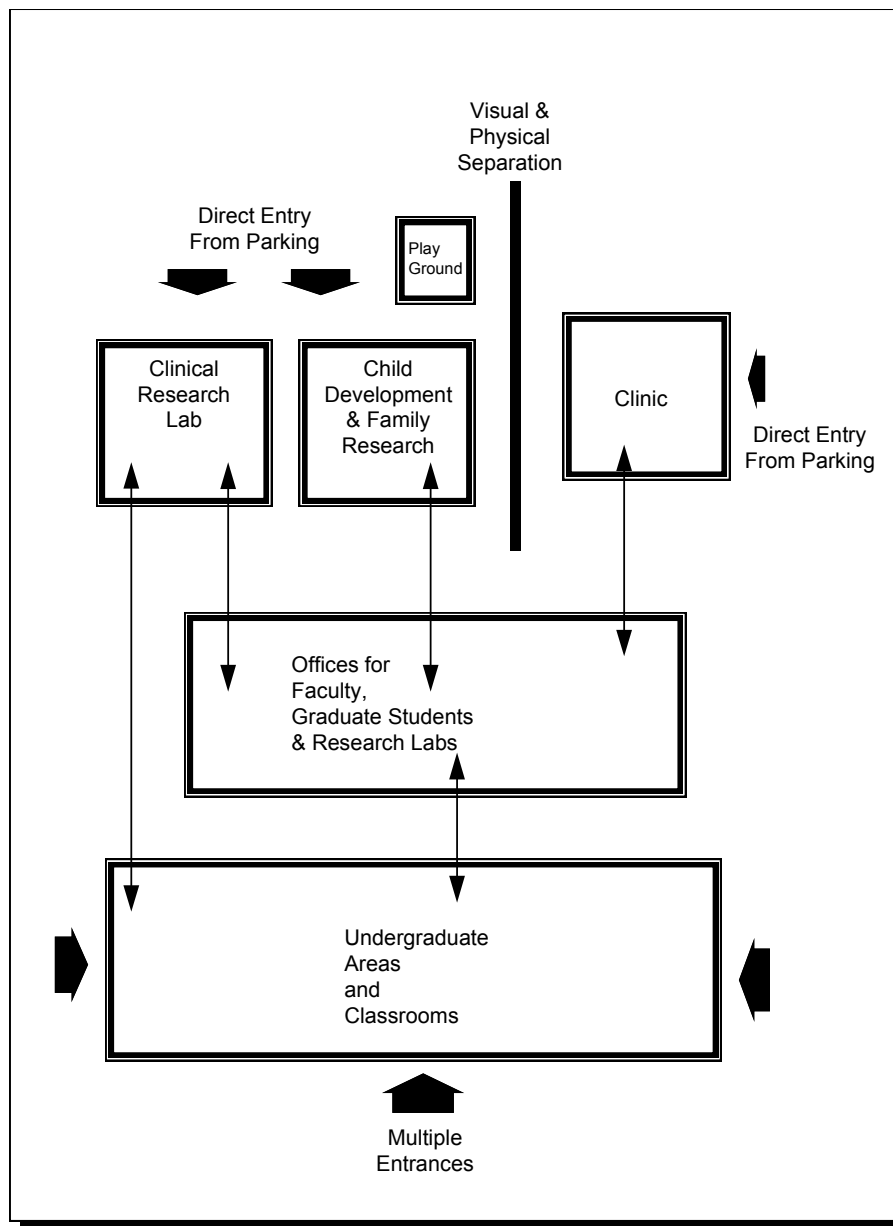
This column refers to page numbers in the programming document

Figure 4.1 Example of a typical Summary Space List Spreadsheet



## Overall Adjacency Diagram

As its name implies, an *overall adjacency diagram* capsules the most important adjacencies for the building as a whole.



**Figure 4.2** Example of an Overall Adjacency Diagram

**The program should contain enough adjacency diagrams to adequately convey the overall relationships between functional areas within the facility.**

Each major component of the building is represented using circles or rectangles. If two components should be next to each other, the shapes representing those rooms should be drawn next to each other. Movement, or a sequence of events, can be conveyed with arrows.

### **Stacking Diagram**

---

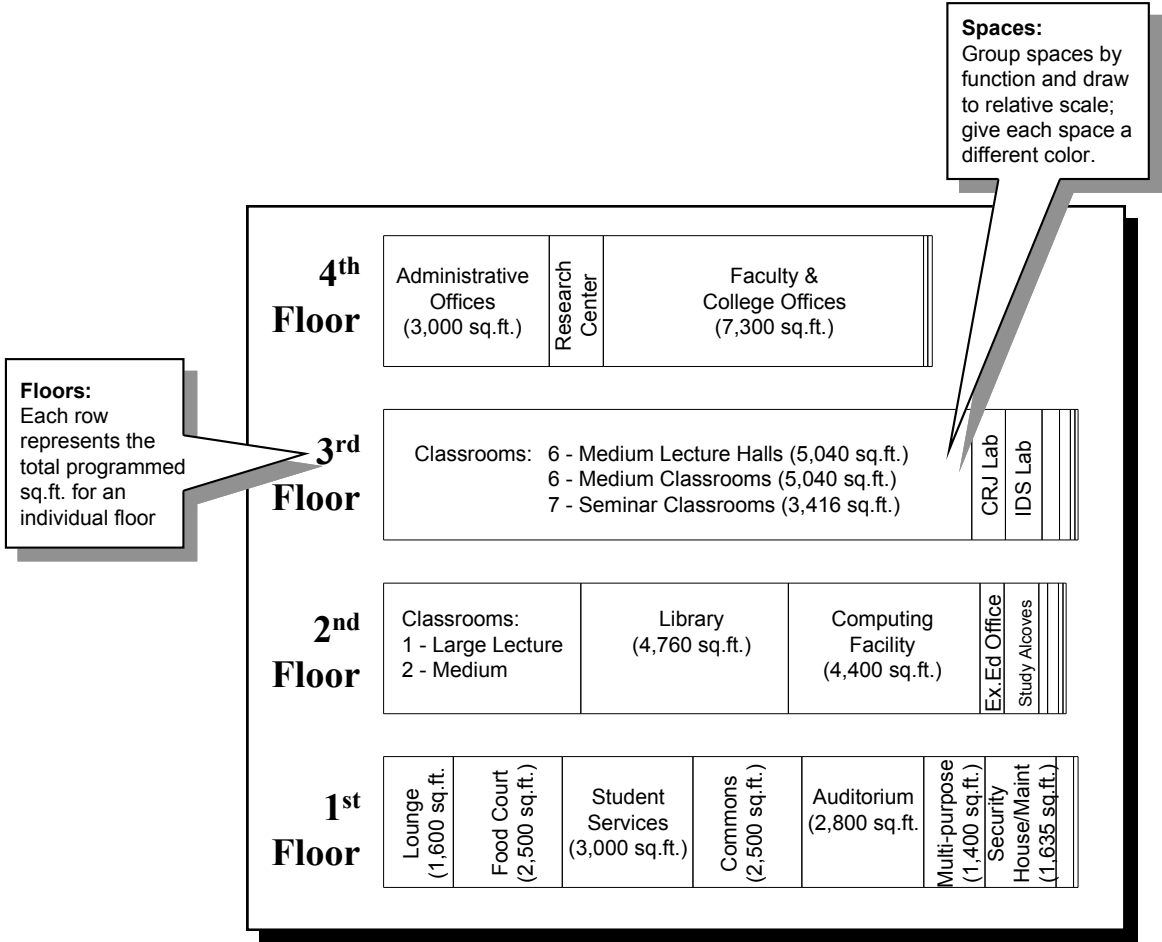


A stacking diagram is a tool to illustrate conceptually where each department or functional unit is placed, or “stacked,” vertically in a multi-story building.

***If the building is more than one story, the program should contain at least one stacking diagram. If multiple stacking alternatives are acceptable, additional stacking diagrams may be included.***

A stacking diagram is drawn to scale, with the length of each rectangle representing the square footage required for that particular component. If it is difficult to predict how the non-assignable area will be distributed throughout the building. (Example: how much of the mechanical equipment will be on a single floor?), the stacking diagram may show only non-assignable areas.

The stacking diagram can help to establish key elements of the building design, such as floor size and setbacks on upper floors.




**Figure 4.3** Example of a Stacking Diagram

Although combining functional adjacencies and space requirements drives a stacking diagram, many times it should also reflect the probable site of the project and the campus master plan. For example, the functional requirements may call for large floor plates, but contextual studies may suggest a smaller building footprint. (Refer also to chapters 5, 6 & 7.)

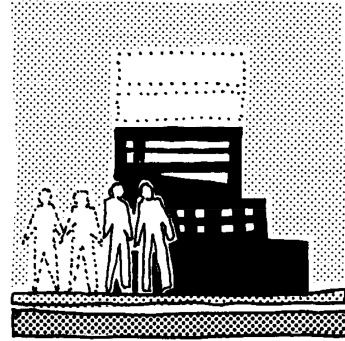
## Growth and Phased Development

---

 Many buildings are designed for expansion during a future phase. The design of the first phase requires an understanding of what will need to be accommodated in later construction.


*The program must address the following issues related to phasing:*

- ☐ Will this building likely be expanded in a future phase?
- ☐ If yes, are departments or functional areas intended to “grow in place” during the future phase?
- ☐ Compare the additional costs involved with making the building “expandable” versus the probability of the future expansion occurring as envisioned.
- ☐ If there will probably not be a future expansion of the building, how will departments or functional areas expand?
- ☐ Are any functional areas more likely than others to move out of the building in the future to allow others to expand?




## Room-by-Room Requirements

---

 All of the following room-by-room information should be presented together for each room. After one room is complete, begin on another room.

## Space Detail Sheet

 A **space detail sheet** contains the supporting information needed to build the summary space list described earlier in this chapter. The space detail sheets will usually contain a secondary spreadsheet describing several different spaces, or a suite of rooms that together make up a line item entry on the summary space list. **Space detail sheets are required for assignable and non-assignable areas.**

Classrooms: Summary				
Description of Space Requirements				
	Name of Room	Seating Capacity	Sq.Ft. per Room	Total Area
Classrooms:	1 Large Lecture Hall	120	1,928	1,928
	2 Medium-large Lecture Halls	65	1,300	2,600
	6 Medium Lecture Halls	42	540	5,040
	6 Medium Classrooms	42	540	5,040
	7 Seminar Classrooms	25	488	3,416
			Sub-total	18,824
Specialized Classrooms:	1 Forensics Instructional Lab	40	776	776
	1 Technology/Science Laboratory	32	840	840
			Sub-total	1,616
			<b>Total Sq.Ft.</b>	<b>19,630</b>

**Group by function:**  
Multiple spaces of different types, but of similar function can be grouped together on the same Space Detail Sheet

**Figure 4.4** Example of a Space Detail Sheet

In *Figure 4.4*, to support a line item entry on the summary space list entitled “**classrooms**,” the space detail sheet contains information about the capacity, quantity, and mix of each different type of classroom, plus a description of the size and desired configuration of each of the classrooms.


Like the summary space list, there is no set format for the space detail sheets, except they should be consistent throughout the program.

***There should be at least one space detail sheet (or more) to clarify and define each entry on the summary space list.***

If many rooms have the same requirements, it may be easier to note which rooms are similar instead of generating duplicate pages (as long as this shortcut does not become confusing to the reader).

### **Room-by-Room Functional Relationship Diagram**

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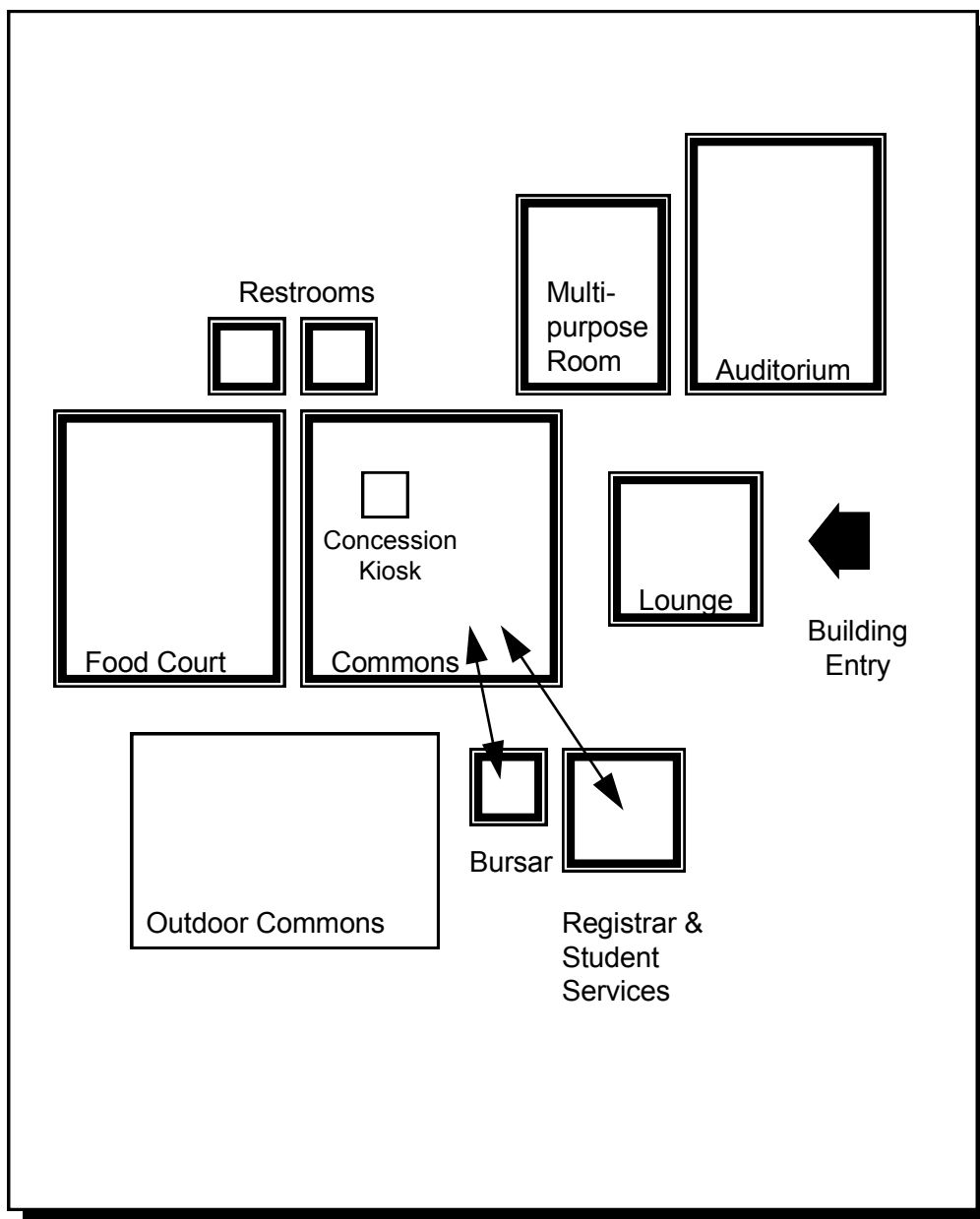
 Functional relationship diagrams, similar in concept to the example shown in *figure 4.5* are a key part of any design program.

A functional relationship diagram illustrates the hierarchy of adjacencies within a department or grouping of rooms. It is much easier to convey these adjacency requirements with a picture than with words. Once the desired adjacencies are diagrammed, it is easy for the architects to convert the diagram into an actual floor plan that maintains all of the relationships.

***There should be at least one functional relationship diagram in the program immediately following each space detail sheet.***

The graphic appearance of a functional relationship diagram is not important. Sometimes they are drawn using circles or “bubbles,” sometimes with squares and rectangles.


Large rooms should be represented with bigger squares or bubbles than small rooms. If two rooms should be next to each other, the squares or bubbles representing those rooms should be drawn next to each other. Movement or a sequence of events can be conveyed with arrows.



**Figure 4.5** Example of a Room-by-Room Functional Relationship Diagram



## Room Data Sheets

 Room data sheets, similar in concept to the example in **Figure 4.6**, contain specific requirements for each room, including furnishings and equipment.


*There should be a room data sheet for each room listed on the space detail sheet.*

Computer Classroom	
<b>Special Technical Requirements:</b>	<ul style="list-style-type: none"> <li>• Raised computer flooring</li> <li>• No carpeting</li> <li>• Sufficient power and cooling for 120 computers</li> <li>• Controlled access</li> <li>• 24-hour per day operation</li> <li>• Step-switched lighting to allow different illumination levels</li> </ul>
<b>Special Furnishing Requirements:</b>	<ul style="list-style-type: none"> <li>• 120 desks for student stations</li> <li>• 120 chairs for student stations</li> <li>• Service area for 3 staff</li> </ul>
<b>Special Equipment Requirements:</b>	<ul style="list-style-type: none"> <li>• 120 student personal computers</li> <li>• one or two server systems</li> <li>• High speed laser printer</li> <li>• Approx. 20 lower speed printers</li> <li>• 2 workbenches and storage cabinets in work room</li> <li>• Electrical outlets above workbench for testing and repair</li> </ul>

**Figure 4.6** Example of a Room Data Sheet

All of the room data sheets should have the same general format, to make it easy for the architects and engineers to find and use the information. Also, by using a consistent format it is easy to identify places where information is missing and still needs to be collected.

### **Furnishings, Equipment, and Built-ins**

 The room data sheets should contain all of the moveable furnishings, equipment and built-ins planned for each room. Refer to the applicable codes identified in Chapter 8 Design Parameters, to determine the maximum capacity in a room.

The program must distinguish between items that are new and those that are being moved from another location. Classify each item listed on the room data sheet as one of the following:

#### **New Items:**

- Contractor furnished and contractor installed
- Owner furnished and contractor installed
- Owner furnished and owner installed

#### **Existing Items:**

- Relocated as is and contractor installed
- Refurbished and installed by contractor
- Relocated as is and owner installed
- Refurbished and installed by owner

Distinguish between equipment that is moveable and equipment that is fixed in place.

The quantities of each classification of furnishings and equipment are used to prepare lines 9 and 10 of the Preliminary Project Cost in chapter 9.

Technical requirements for equipment are needed to properly engineer the project's mechanical, electrical and plumbing systems.


For each major piece of existing equipment to be reused include a manufacturer's cut sheet that lists the model number, dimensions, weight and technical specifications (electrical load, plumbing required, heat generated, exhaust required, data or communication cabling, etc.). This information can be obtained by calling the manufacturer. For new equipment provide a **generic** description, (not sole source unless justifiable), of the item and estimate its technical requirements based on existing equipment.

List any building modifications that are required to house a piece of equipment, such as strengthening the floor, extra high ceilings or extra wide access doors.

Also, identify any new items that have a long delivery time and should be ordered early.

---

## Finishes

 Develop several levels of typical room finishes that describe the quality and type of finish that are appropriate for each room. For example:

### **Type A Finishes** (might be the most utilitarian)

- Floor: vinyl composition tile
- Walls: painted

### **Type B Finishes** (might be somewhat upgraded)

- Floor: direct glue carpet
- Walls: vinyl wall covering


### **Type C Finishes** (might be even more upgraded)

- Floor: carpet over pad
- Walls: wood paneling

List the level of finish that is appropriate for each room on the room data sheet.

### **Window Coverings**


---

 Note if any special window coverings are required for each room. For example:

- Ability to black-out natural light
- Need to reduce glare for windows
- Etc.

### **Special Access**

---

 List any special access requirements on the room data sheets. Examples might include:

- This room is open 24 hours
- This room is used by students during the evenings
- This room is used after normal hours but only by authorized graduate students or faculty
- This room is secured when the building is closed
- This room can only be used by students if a faculty member is present
- Etc.

# 5

## Supporting Requirements

There are other project requirements that affect the design of a building in addition to the space needs and adjacencies already discussed. This chapter identifies those supporting requirements.

The requirements contained in this chapter are driven by the nature of the project regardless of its ultimate site. Evaluation of specific characteristics of a given site is documented in *Chapter 6*.

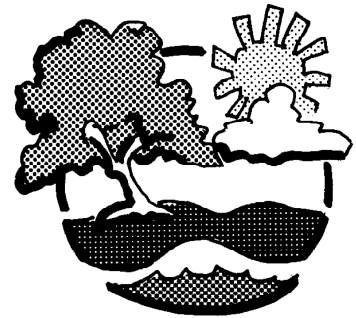
 ***In this section of the program, provide a descriptive answer for each of the following issues:***

### EHS Requirements



With input from the Institution's EHS group, describe this project's needs in the following areas as they apply to this project:

- Air
  - New Construction – New Source Review
  - Operating Permits
  - State Air Quality Codes
- Water
  - No unauthorized discharges
  - TPDES MS4 & Construction
  - Indirect discharge permits
- Waste
  - Storage and Disposal
- Endangered species, historical, archaeological
  - Survey, findings & mitigation

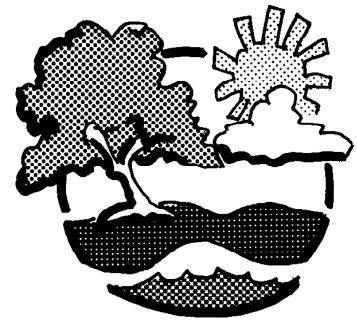


- Special BSL3 & BSL4 Lab
  - Design issues and security controls
- Asbestos and Lead
  - Survey and abatement
- Emergency Response
  - Who to Contact
  - What to do

### **Site Development & Landscaping Requirements**

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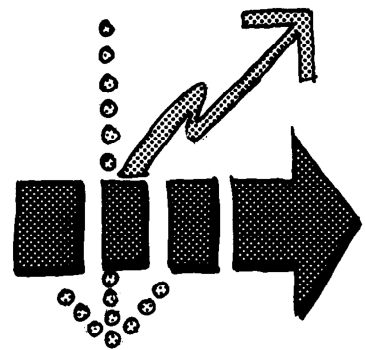
- ☐ Discuss how the spaces around the outside of the building should be designed. Are there any unusual site requirements that should be dealt with in a particular way?
- ☐ Should the project include any covered loggias or exterior plazas? If so, describe the activities that may occur in them.



- ☐ Describe how pedestrians should access the building.
  - Students and faculty
  - The general public
- ☐ Describe how vehicles should access the building;
  - VIPs
  - The general public
  - Service vehicles
  - Delivery trucks
  - Emergency vehicles
- ☐ Is a drop-off area for busses or private cars needed near the building?
- ☐ What are the parking requirements associated with this project?
- ☐ Define any other unique site development issues that are related to this program.

### **Requirements for Support Services**

- ☐ How should trash, special, and/or hazardous waste products be held prior to pick-up? How should they be disposed of or recycled?
  - General building trash
  - Radioactive
  - Infectious
  - Corrosive
  - Etc.
- ☐ Describe any fuel tank storage requirements or specialized materials storage.
- ☐ Estimate this project's need for utilities. In order to provide adequate utility service to the project from campus infrastructure, the programming



team should identify and communicate to the Owner an order of magnitude anticipated utility demand (volumes, rates and pressures) for the project for the following utility systems:

- Thermal energy (chilled water & steam)
- Electricity
- Water (potable, fire and irrigation)
- Sanitary sewer
- Storm sewer and detention
- Natural gas
- Etc.



Will utilities be available when this project requires them?



Describe the audio-visual, data and telecommunication links required for this project.

### **Security Requirements**

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Refer to the U. T. System OFPC Security Planning and Design Guidelines (latest edition). Complete the Chapter 1 – Security Assessment process in the guidelines and record the findings in this chapter of the program. Review Chapter 2 – Security Planning and where possible determine the preliminary security mitigation measures and record those recommendations in this chapter of the program. Estimate the anticipated cost for these measures and include in the Preliminary Project Cost (PPC) budget in program Chapter 9.



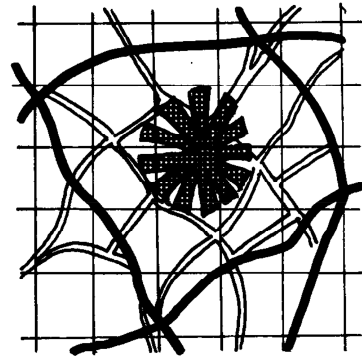


# 6

## Existing Site Studies

**This chapter of the program deals with an analysis of the proposed site (or sites if more than one are being considered) for the project.** It should address all of the factors acting upon each site that will somehow affect the design of the building. For example:

- Do the proposed sites comply with the institution's master plan?
- What impact will this project have on the campus?
- Is the project compatible with adjacent land use? Traffic patterns? Way-finding? etc.



If several sites are being considered, provide a consistent level of detail and apply uniform evaluation criteria for each site.



***This chapter on site studies should address (at least) the topics contained in the following list.*** In some cases, the detailed information may not be available. When this occurs, note that the specific information is not available, (or not appropriate), and include as much substitute information as possible. (For example, if a topographical survey has not been prepared yet, include a site plan in the program.)



Study of alternative sites



Description of who owns the proposed site(s)



Aerial photograph of the proposed site(s)

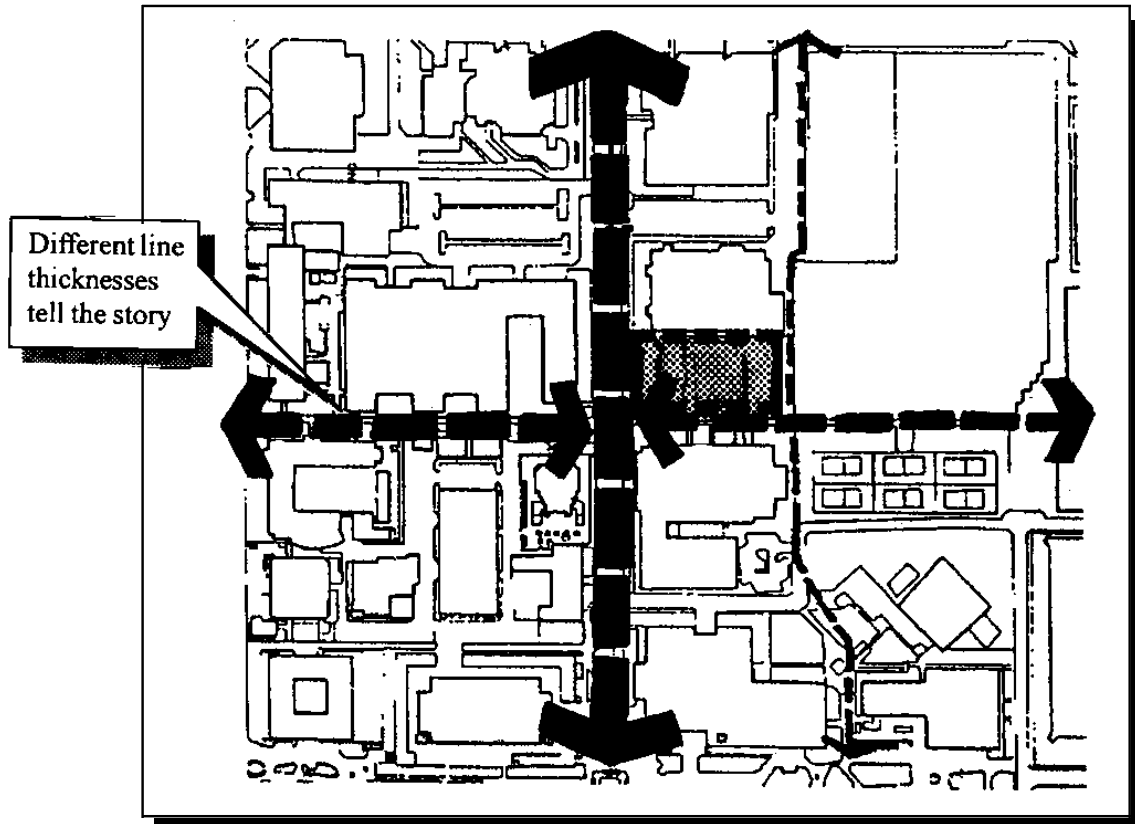


A comprehensive Category 1A Land Title Survey, showing vesting deed(s) information, all

easements, including visible and apparent, other matters of records, site boundaries, and applicable setbacks, if any. This may require a title commitment or other title investigation. Please call The University of Texas System's Real Estate office if you have questions or need help. The Real Estate office may have access to deeds or other title information.

- ☐ Topographical survey
- ☐ Geotechnical survey
- ☐ Description of existing landscaping
- ☐ Extrordinary drainage requirements and a plan to contain storm water runoff
- ☐ Any existing construction or utilities on the site
- ☐ Description of any known prior uses of the site
- ☐ Description of any known environmental issues that would limit use of the site, necessitate additional project costs such as hazardous waste cleanup, or require development of special operating protocols
- ☐ Plan to dispose of any contaminated soil
- ☐ Archeology survey
- ☐ Clearances from:
  - State Historical Commission
  - Texas Antiquities Commission
- ☐ Plan to relocate any existing occupants or equipment off of the site
- ☐ Diagram showing the intended expansion during any future phases
- ☐ Other significant site influences on the design

Figure 6.1 shows an example of a site analysis diagram illustrating pedestrian flow.




**Figure 6.1** Example of a Site Analysis Diagram for Pedestrian Flow.

# 7

## Existing Facilities Studies

This chapter deals primarily with projects that involve renovation of existing facilities. However, many aspects of this chapter will also apply if interim space will be used before the new facility is completed.

 *In this section of the program provide a descriptive answer for each of the following issues:*

### Existing Drawings and Specifications



Assemble accurate floor plans and other as-built drawings and specifications of the existing building showing the latest renovations. Make reproducible copies of these drawings for later use.

### Extent of the Remodeling

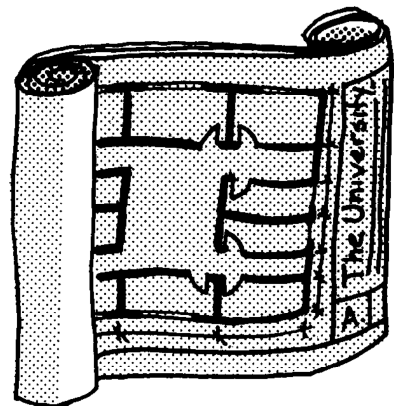


Include a reduced copy of the floor plans in the program. Outline portions of the building to be remodeled. Note where any addition to the building is most likely to occur.



List what furnishings, equipment and other items need to be salvaged for re-use after the renovation. Chapter 4, Space and Adjacency Requirements, contains a suggested format for tracking these items.

### Code Compliance



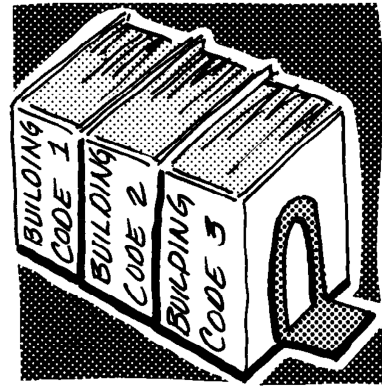


Identify those parts of the existing building that are known not to comply with current building codes and statutory requirements. Describe what work is needed to bring the current building into compliance. See Chapter 8 for a detailed discussion on this subject.

### **Hazardous Materials**



Determine if any portions of the building to be remodeled contain any hazardous materials such as asbestos, PCB's and lead. Identify the extent of the hazardous materials.



### **Temporary Facilities**



Describe any temporary or interim facilities that will be required until the project is completed. These might include:

- Space for faculty and staff
- Classrooms and labs
- Storage space for boxed files, newly ordered equipment, etc.
- Data and telecommunication links to other locations
- Parking



If specific interim facilities have been identified, include information about those facilities.

### Existing Utilities Studies

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Is the existing facility served by sufficient utility capacity for:

- water
- sanitary sewer
- storm sewer or detention
- natural gas
- electricity
- thermal energy
- (chilled water and steam)
- data
- communications
- etc.



Does the proposed project conflict with any existing utility lines?

# 8

## Design Parameters

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The **design parameters** are the standards and constraints that will control the project. This chapter of the program should address each of the following issues:

### Codes and Regulations

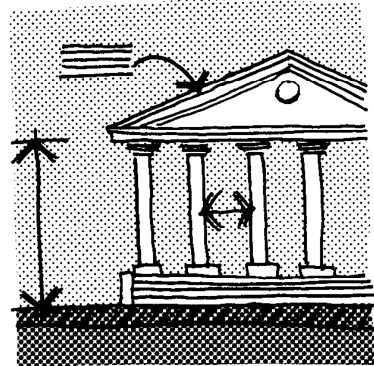
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The program should include a preliminary code analysis, which identifies major provisions of all the codes and regulations that directly influence the design and construction of the proposed facility. ***Those codes, which would have a significant impact on the project scope, cost or schedule should be investigated and explained in detail.***

There are three reasons to identify these regulatory and code requirements during programming:

- They may have a considerable effect on the physical characteristics of the project that have been developed in chapters 4, 5 & 6
- They may affect the Preliminary Project Cost (chapter 9)
- Regulatory approval processes may affect the project schedule (chapter 10)

The State Fire Marshall is the code authority having jurisdiction (AHJ) for all issues pertaining to NFPA 101 Life Safety Codes. The U.T. System Office of Facilities Planning and Construction is the code authority having jurisdiction (AHJ) for U.T. System construction projects constructed on land owned by the state for all codes other than NFPA 101 Life Safety Codes. OFPC is responsible for facilitating resolution of conflicts and





interpretations for these non-NFPA 101 codes after a thorough and joint discussion with the Institution. Construction on land not owned by the state is under local jurisdiction. OFPC reviews projects for compliance with the current OFPC approved editions of the following codes and standards. Refer to the Owner's Design Guidelines Appendix C for a current codes and standards list:

- National Fire Protection Association (NFPA) Standards, with emphasis on NFPA 101 Life Safety, including all referenced standards
- International Building Code
- International Mechanical Code
- International Plumbing Code
- National Electric Code
- Texas Department of Licensing and Regulation, Elimination of Architectural Barriers Act
- Americans with Disabilities Act, 28 CFT Part 35
- ACI - 318, building code requirements for reinforced concrete
- AISC, specifications for the Design, Fabrication and Erection of Structural Steel
- FEMA 100 year flood
- Energy Conservation Design Standards for New State Buildings, State Comptroller's Office, State Energy Conservation Office.

The nature of a project may dictate that other more specific codes, regulations or standards would apply. Compliance with these requirements would also be reviewed by OFPC. These might include:

- NFPA 45 Standard on Fire Protection for Laboratories Using Chemicals
- National Institutes of Health (NIH) Standards
- Joint Council for the Accreditation of Hospital Organizations (JCAHO) Standards
- ANSI Standards
- ASTM Standards

Many governmental authorities also have jurisdiction over typical U.T. projects and may regulate the design

and construction of the facility. The authority having jurisdiction will review compliance with these requirements, and their review processes shall be investigated and identified. OFPC will provide assistance to the institution in achieving compliance, if requested. Examples of these include:

- **Environmental Protection Agency**, for compliance with environmental protection requirements
- **Texas Department of Licensing and Regulation, Elimination of Architectural Barriers Division**, for compliance with state requirements and the Americans with Disabilities Act
- **Texas Commission on Environmental Quality**, for environmental conservation and management (i.e.: TPDES Storm Water, Air Permit, Water Pollution Abatement Plan & FEMA Flood Plain Management Standards)
- **Texas Historical Commission**, for historic landmark designation
- **Texas Antiquities Commission**, for archeologically significant sites
- **Texas Department of Health**, asbestos or lead paint abatement
- **U.S. Fish and Wildlife Service**, threatened & endangered species
- Local land use restrictions (for example, Texas Medical Center deed restrictions)
- Community fire protection requirements (U.T. System component institutions enjoy fire protection provided by the local jurisdictions and therefore must coordinate requirements with the local fire department)
- Local historic districts
- Others

## Technical Standards

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The technical standards listed below should be reviewed. The impact that these standards and their associated review processes will have on the project scope, cost, and schedule should be incorporated into the program.



### U.T. System Standards

OFPC has developed the following technical standards that apply to the design and construction of U.T. System projects and will provide assistance in interpreting these standards, if requested. OFPC maintains these standards in a document titled *A-E Design Guidelines*, which are included by reference in the A-E Agreement.

- Acoustical Design - Background Noise Design Criteria For Typical Occupancies
- Civil Engineering Criteria
- Construction Criteria
- Electrical Criteria and Guideline Specifications
- Furniture, Furnishings & Accessories Criteria
- Guidelines for Architect-Engineer Services Preparation of Project Manuals
- Constructability Standards
- Sustainable Design Criteria
- Landscape - Site Development Criteria
- Mechanical Criteria and Guideline Specifications
- Structural Criteria



### Institution Standards

In addition, each component institution has locally generated technical standards or adaptations of the OFPC standards to suit the unique requirements of their campus and/or climate, which are typically maintained by the institution's Physical Plant. Institutional

standards that have a significant impact on the design and construction of the facility should be described in the program. These might include:

- Equipment or system specifications or standards
- Existing special purchase arrangements with vendors for certain equipment/systems
- Sole source requirements for equipment or systems (to be compatible with existing systems)

### **Institutional Design Standards**

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Many institutions have aesthetic design standards and processes, which can significantly impact the project scope, schedule and budget. Definition of these requirements and the review and approval processes associated with each should be identified in the program. Examples include:

- Building design guidelines (from the institution's Campus Master Plan)
- Landscape/open space standards
- Color/material standards
- Furnishing standards
- Donor or benefactor requirements

The *design parameters* discussed in this chapter will likely have a significant affect upon the program for the project and in how the project will be accomplished. A strategy for how to manage these parameters is contained in detail in Chapter 11, Implementation Approach.

# 9

## Preliminary Project Cost (PPC)

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This Chapter deals with developing a preliminary project cost for the project. It should address all of the costs required to complete the project.

The purpose of this chapter is to offer guidance in developing a preliminary project cost estimate that is as accurate as possible. It will also serve as a checklist for the elements to be considered in developing the Preliminary Project Cost.

### **Types of Cost Estimates**

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The U. T. System Capital Improvement Program process requires that project cost estimates be prepared at various stages throughout project development. The scope, budget, and schedule for a project is first identified in the Capital Improvement Plan (CIP), with additional cost estimates planned at intervals throughout design to ensure that the project can be completed within the budget.

## Preparing the Preliminary Project Cost

---



The Preliminary Project Cost (PPC) is a prediction of all costs involved in the project. It includes all of the following:

- Estimates for the construction contract award amount, including escalation and contingencies
- Professional fees
- OFPC or Institution managed furnishings
- Other work, outside of the construction contract award amount, managed by OFPC or the Institution
- Miscellaneous expenses
- Contingencies
- Administrative costs

The facility programmer should prepare the second project cost estimate (the first estimate was included in the CIP) using the OFPC format and include it in the facility program. The format for the Preliminary Project Cost sheet is shown in *Figure 9.1* and a full-size sheet is given in *Appendix D*.

Notes for preparing the Preliminary Project Cost: Refer to the OFPC format:

- The facility programmer and OFPC should work together to develop the Preliminary Project Cost
- Include adequate notes in this chapter describing how each line of the PPC was derived
- Unit costs of comparable work may be used to prepare the cost estimate for new construction

- For renovations to existing construction (which also may be found associated with some new work and additions) the cost estimate is usually the result of estimating the cost of components, systems or even labor and materials for accuracy

Preliminary Project Cost	
Preliminary Project Cost As of: _____	
1. Base Proposal	_____
2. Alt. Proposals	_____
3. <b>Sub-total (CCL)</b>	_____
4. Special Cash Allowances	_____
5. Construction Contingency	_____
6. <b>Contract Award</b>	_____
7. Bid Contingency	_____
8. A/E Fees	_____
9. Movable Furnishings, OFPC Managed	_____
10. Movable Furnishings, Institution Managed	_____
11. Other Work, OFPC Managed	_____
12. Other Work, Institution Managed	_____
13. Miscellaneous Expenses	_____
14. Project Contingency	_____
15. <b>Sub-total</b>	_____
16. OFPC Management Fee	_____
17. <b>Total Project Cost</b>	_____
<b>Cost Per Gross Square Feet</b>	
22. Construction (line 6)	_____
23. PPC (line 17)	_____
<b>PROJECT SCOPE</b>	
24. New / Addition ASF	_____
25. New / Addition GSF	_____
26. Renovated ASF	_____
27. Renovated GSF	_____

**Construction Cost:**  
Buildings w/fixed equipment, sitework, infrastructure, thermal energy

**Special Cash Allowances:**  
Allowances, assigned proprietary work (EMS)

**Other Work, Institution Managed:**  
Equipment systems, make-ready other contracts

**A/E Fees:**  
Basic fee, additional services, as-builts, reimbursable expenses & contingency

**Other Work, OFPC Managed:**  
Materials testing, TAB, ROCIP, Interiors

**Miscellaneous Expenses:**  
Surveys, soils tests, ads, printing, partnering, & contingency

**Figure 9.1** Format for a Preliminary Project Cost Project Information Form (PIF).

\*\* If the Preliminary Project Cost exceeds the approved PPC, the Program shall identify areas of scope that may be reduced.

☐ Line 1, **Base Proposal**, is the estimated costs incurred to perform the Work in compliance with the Contract Documents, less Owner's Special Cash Allowances and Construction Contingency.

☐ Line 2, **Alternate Proposals**, is the estimated cost of alternates identified by the Owner prior to issuing a Request For Proposals, or the total of the alternates accepted by the Owner after receipt of CSPs.

☐ Line 3, **Construction Cost Limitation (CCL)**, is the subtotal for lines 1 and 2. The CCL is normally included in the A/E Agreement and is the project Architect/Engineer's design budget.

☐ Line 4, **Special Cash Allowances**, is the allowance for specific work identified by the PM that may not be fully scoped by the User at bid time, or may be part of a larger system that requires a proprietary product or system.

☐ Line 5, **Construction Contingency**, is an OFPC controlled contingency for unforeseen conditions and error/omission change orders that occur during construction.

☐ Line 6, **Subtotal (Contract)**, is the subtotal for lines 3 through 5. This is the amount expected from the Contrator, Construction Manager or Design-Build Contractor.

☐ Line 7, **Bid Proposal Contingency**, is an Owner controlled contingency to cover bid/proposal over-runs. Use 5% of line 3. *This contingency is contained within the Guaranteed maximum Price for projects using Construction Manager at Risk or Design-Build.*

☐ Line 8, **A/E Fees**, is the A/E fee for Basic Services as determined from the Construction Cost Limitation (Line 3 above) times the interpolated percentage (*The University of Texas System, Office of Facilities Planning and*



*Construction, Architect/Engineer Fee Schedule).*  
Also include amounts for additional services, reimbursable expenses, record drawings and contingency. *This fee is included in Preconstruction Services for Design-Build.*



Line 9, **Movable Furnishings, OFPC Managed**, is the bare costs associated with furnishings and accessories managed by the OFPC Interiors Group. A budget should be established using the following 3 step process:



Line 10, **Movable Furnishings, Institution Managed**, is the cost associated with furnishings and accessories managed by the Institution (breakdown provided by User).



Line 11, **Other Work, OFPC Managed**, is the Costs associated with additional “large” contracts and other project costs managed by OFPC, which includes:

- Rolling Owner Controlled Insurance Program (1.76% of Line 6 above)
- Material Testing (\$0.50-1/Gsf - New)
- Test & Air Balance (\$1.50-2.50/Gsf - New)
- Interior Design Production Fee (12% of Line 9 above)
- Other costs as agreed to by OFPC Accounting



Line 12, **Other Work, Institution Managed**, is the cost associated with equipment, security systems, make project ready costs, asbestos/lead abatement, telephone/data/ communications, interior remodeling, commissioning, parking, move from existing space, artwork, graphics, easements, vending machines, outside consultants, computers, etc... (breakdown provided User).

☐ Line 13, **Miscellaneous Expenses**, is the cost associated with site surveys, geotechnical reports, cast bronze plaque (material only), soils testing, printing, partnering, postage/over-night deliveries, advertising, constructability reviews, VOC testing, hazardous materials testing/monitoring, permits, additional consultants.

☐ Line 14, **Project Contingency**, is a contingency jointly controlled by OFPC and the User to protect the project against claims and to cover unforeseen project expenses not included in lines 1 through 15.

- The contingency shall be no less than 3% of the subtotal of lines 6 thru 13.

☐ Line 15, **Subtotal**, is the subtotal for lines 6 through 15.

☐ Line 16, **OFPC Management Fee**, is the OFPC Administration Fee equals the Total Project Cost less Institutionally Managed budget line items (Lines 10 and 12 above) times the interpolated OFPC Fee Percentage, per the schedule below. (Refer to “A/E & OFPC Fee Matrix” as PAGE 4 of the PIF)

☐ Line 17, **Total Project Cost**, is the total for lines 15 and 16.

☐ Lines 22 & 23 **Per Gross Square Foot**, is the quotient of either line 6 or line 17 divided by the total GSF from lines 25 and 27.

☐ Lines 24-27, **New/Renovated ASF & GSF**, divides the project into four classifications. Divide the total GSF for the project among the categories for *New/Addition ASF and GSF* and *Renovated ASF and GSF* as appropriate.


# 10 Project Schedule

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This chapter deals with the factors that affect the time required to complete a project and must be addressed if a project is to be completed in a timely manner. Every facility program includes the preparation of a schedule for design and construction of the project.

## **Preparing the Project Schedule**


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 The facility programmer should develop the project schedule in consultation with OFPC and the institution. The schedule will include various milestones, any unusual schedule considerations, and submissions/ approvals by the Chancellor, FPCC, The Board of Regents, and The Texas Higher Education Coordinating Board. Following the Chancellor's appointment of the project Architect/Engineer, OFPC will work with the institution and the project Architect/Engineer to refine the schedule.


The facility programmer should document the project schedule in the facility program using the OFPC format for the Project Schedule. The format is shown in *Figure 10.1* and a full-sized sheet is given in *Appendix D*.


CSP & CM	Select A/E	Advertise Request For Qualifications (RFQ)	mm/dd/yy
		Receive RFQs	mm/dd/yy
		Interview A/E	mm/dd/yy
		Appoint A/E - Chancellor	mm/dd/yy
		Execute A/E Contract - AVC FPC	mm/dd/yy
CM & DB	Select CM or DB	Advertise Request For Qualifications (RFQ)	mm/dd/yy
		RFQ Pre-Proposal Conference	mm/dd/yy
		Receive RFQs	mm/dd/yy
		Issue Request For Proposals (RFP)	mm/dd/yy
		Receive RFPs	mm/dd/yy
		Interview CM/DB	mm/dd/yy
		Approve Award - EVCBA	mm/dd/yy
		Issue NTP - Part I Services (Preconstruction)	mm/dd/yy
CSP, CM & DB	Schematic Design	Authorize A/E/DB Start	mm/dd/yy
		Submit for Owner Review - A/E/DB	mm/dd/yy
		Joint Review for Owner Comments	mm/dd/yy
		Approve Schematic Design - OFPC ADPM	mm/dd/yy
	Design Development	Authorize A/E/DB Start	mm/dd/yy
		Submit for Owner Review - A/E/DB	mm/dd/yy
		Joint Review for Owner Comments	mm/dd/yy
		FPCC Meeting Project Submission Deadline	mm/dd/yy
		FPCC Meeting Approval	mm/dd/yy
		Approve TPC & Design Development - BOR/Chancellor	mm/dd/yy
		Approve DD Documents - OFPC ADPM	mm/dd/yy
	THECB	Submit Construction Application - Component	mm/dd/yy
		Approve Construction Application - THECB	mm/dd/yy
CM & DB	GMP	Receive GMP	mm/dd/yy
		Approve GMP - EVCBA	mm/dd/yy
CSP, CM & DB	Construction Document	Authorize A/E/DB Start	mm/dd/yy
		A/E/DB Submit _____ CD for Review	mm/dd/yy
		Joint Review for Owner Comments	mm/dd/yy
		A/E/DB Submit _____ CD for Review	mm/dd/yy
		Joint Review for Owner Comments	mm/dd/yy
		A/E/DB Submit _____ CD for Review	mm/dd/yy
		Joint Review for Owner Comments	mm/dd/yy
CSP	Request For Proposals	Approve 100% Construction Documents - OFPC ADPM	mm/dd/yy
		Advertise for Proposals	mm/dd/yy
		Pre-Proposal Conference	mm/dd/yy
		Receive Proposals	mm/dd/yy
		Award - EVCBA	mm/dd/yy
CSP, CM & DB	Construction	NTP for Construction & Updates	mm/dd/yy
		Substantial Completion	mm/dd/yy
		Final Completion	mm/dd/yy
		Start Furniture Move-In / Make Ready	mm/dd/yy
		Operational Occupancy	mm/dd/yy

Figure 10.1 Format of Preliminary Project Schedule


 **Select A/E Phase:** The projected/actual dates for advertising, reviewing, interviewing, selecting and executing a contract with the Project A/E.

 **Select CM/DB Phase:** The projected/actual dates to advertise a Request For Qualifications (RFQ), hold a Pre-Proposal Conference, receive RFQs, issue Request For Proposals (RFP), receive RFPs, interview CM/DB, approve the award, and issue NTP for Preconstruction Services.

 **Schematic Design Phase:** The projected/actual dates to prepare, review, submit and approve the Schematic Design for the entire project.

 **Design Development, FPCC & BOR Approval Phase:** The projected/actual dates to prepare, review and submit the Design Development for review and approval by the Facilities Planning and Construction Committee and the Board of Regents.

- These dates must coincide with regularly scheduled FPCC and BOR quarterly meetings.
- The FPCC meets quarterly on the second week of January, April, July and October. The deadline to request a FPCC agenda item is approximately two weeks prior to the meeting.
- The Board of Regents meets quarterly on the second week of February, May, August and November.
- The projected/actual date for approving the Design Development Drawings for the entire project if it is not the same date as the BOR approval.

 **THECB Review Phase:** The projected/actual dates for the the Institution and the A/E to submit the project the the Texas Education Coordinating Board for project review. (These

dates must coincide with regularly scheduled submission and meeting dates for the THECB.)

- The THECB meets quarterly in the third week of January, April, July and October. THECB applications are due thirty (30) days prior to the meetings.



**Guaranteed Maximum Price:** The projected/actual dates to receive the initial GMP and approve the final GMP by the EVCBA.



**Construction Document Phase:** The projected/actual dates to prepare, review, submit and approve Construction Documents for the entire project.

- The “blanks” may be used to identify %CDs or Bid Package Numbers.



**Request for Competitive Sealed Proposals Phase:** The projected/actual dates to advertise, meet and receive proposals from contractors.

- Allow two (2) weeks for OFPC, the institution and the A/E to confer, and the president of the institution to make a written request to the appropriate Executive Vice Chancellor for award of the contract.
- Typically allow eight (8) weeks between lines 8e and 10a for award of the construction contract to the start of contract time. (This includes time for the Notice to Proceed to take effect, which is normally 10 days from the date of contract award to the start of contract time.)



**Construction Phase:** The projected/actual dates to issue the Notice to Proceed, hold a Pre-construction/Partnering meeting, mobilize, complete the foundation, structure, building dry-in, start commissioning, pre-final inspections, achieve Substantial and Final Completion, start furniture move-in and Operational Occupancy.

# 11


## Implementation Approach

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The implementation approach should address every key element relative to *how* the project will be executed, as well as the procedures, methods, and resources that will be required to accomplish this execution. The implementation approach will vary depending upon the needs of the institution and the project, and should be a written section in the program that represents the consensus of the project team. It will form the basis for a more detailed project implementation approach developed later.

A formal implementation approach, often called execution plan or project execution strategy, is required to ensure that all tasks are identified and carried out in a timely manner, even early in project development. The approach to implementation of this Facility Program “sets the stage” for further work on the project. It provides overall direction for the project team, which must make numerous decisions throughout the course of a project. The implementation approach serves as organizer for that decision making process. It should be as detailed as possible, and should include specific roles and responsibilities.

The level of detail contained in the implementation approach should be consistent with the accuracy of the estimate, size and complexity of the project and firmness of the project scope. The implementation approach must be flexible, because plans, assumptions and design concepts developed during the pre-project activities will undergo review and possible change during subsequent phases.

-  The program should address each of the following subjects normally found in a typical implementation approach.

### **Comprehensive Project Schedule**

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In addition to the Project Schedule developed in Chapter 10, this section should address how the institutions plans to manage:

- ☐ Selection, procurement and installation of Owner furnished equipment (especially for long lead time items)
- ☐ Design of interior spaces, including furniture, furnishing and accessory selection, procurement and installation
- ☐ Multiple stages of the project, for example furniture procurement may be handled differently from general construction


### **Design Plan**

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This section defines the resources and methods to be used to provide cost effective design for the project. It also includes plans for utilizing both internal and external resources. It should include:



- ☐ Recommendation for the qualifications of the project architect-engineer and its consultants
- ☐ Suggestions for special consultants as may be required due to the nature of the project
- ☐ Need for comprehensive site investigations



-  Unusual design documentation required, emphasizing any special requirements including computer aided design and drafting (CADD), 3-Dimensional computerized modeling of MEP systems, physical models, etc.

### **Contracting Plan**

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-  State law dictates that construction contracts for higher education projects be publicly bid and awarded to the lowest responsible bidder. If the institution intends, and is able to complete any part of the project using an alternative contracting approach, this should be clarified in this section.
-  Identify any major stages of the project to pre-purchase equipment (such as boiler, chillers, cooling tower, etc.) or to separately advertise, bid and award multiple construction contracts within the overall project (such as site preparation, demolition, infrastructure contracts, etc.)


### **Permitting and Regulatory Compliance**

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This section includes a work plan to prepare, submit and track any unique approval or permit requirements identified in Chapter 8. Definition of responsibilities and coordination with OFPC, Institution EHS, and outside agencies should be discussed.

### **Safety Process**

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-  The State of Texas Uniform General Conditions and The U.T. System Supplementary General Conditions of the Construction Contract make safety during construction the responsibility of the General Contractor. If there are other safety procedures and review processes to be followed by the project for which the Owner is responsible this section should address them, including:

- Hazardous material handling
- Safety information for specialized processes and hazards
- Potential impacts to Institution security or safety during construction and operation

### **Cost and Schedule Controls**

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This section contains the overall project cost and schedule **philosophy** including:

- How project schedules and cost will be controlled
- Frequency, form, and level of detail of reporting requirements

### **Institution's Staffing and Team Building Plan**

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Update organization structure for the project during design and construction.

- Roles and responsibilities within the institution's organizational structure, including designation of a single institutional representative for the remainder of the project.

### **Project Insurance Approach**

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Construction insurance requirements for the project should be defined at the programming stage and these costs reflected in the preliminary project cost budget.

Once the program scope of the project is defined, a meeting should be held between the programming team and institutional and UT System representatives responsible for risk management and insurance issues. The purpose of the meeting is to consider including the project in the Owner's Rolling Owner Controlled Insurance Program (ROCIP) and to evaluate levels of coverage vs. risk for the anticipated scope and delivery method of the

project. These insurance costs should then be included in the appropriate line items within the preliminary project budget.

# 12

## Information Specific to the Institution

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Use this chapter to include any pertinent information that applies specifically to this institution, such as campus design or technical standards, permitting requirements, operating protocols, certifications, local preferences or other special information.

This chapter is also an appropriate place to include any supporting information used to generate the space requirements, such as activity projections or academic programming.

# 13

## Selecting a Project Delivery Method

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Texas Higher Education Codes 51 allows public institutions of higher learning, including OFPC, to use alternative delivery methods for construction of capital projects. It does not preclude use of the traditional, design-bid-build approach. Under this legislation, the new approach may result in the award of a construction contract either based solely on the lowest responsive bid, or based on the benefit of consideration of value provided, relative to established criteria, other than strict adherence to the lowest bid. The three alternate delivery methods are as follows:

### **Competitive Sealed Proposals (CSP)**

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This is the default project delivery method for the capital Improvement Program (CIP) and OFPC, and is to be used whenever the design-bid-build approach is determined for a project. The design and construction contracts are held separately and construction documents are completed prior to award of a contractor. CSP further offers benefit of some limited degree of constructability and value negotiation including some input to the determination of subcontractors, neither of which is likely when selection is based entirely on lowest price.

### **Construction Manager at Risk (CM-R)**

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This project delivery method combines the traditional design team relationship with expedited involvement by the construction team prior to the completion of contract documents. Both the design team and the CM-R are contracted separately to the Owner and each is selected through the RFQ and RFP process (2-part). Under this contractual relationship, which is similar to CSP, the Owner remains responsible to the CM-R for errors and omissions on the part of the design team. The CM-R's services are divided into Preconstruction – Preconstruction Services and Construction Services and the Owner derives benefit from “in-house” construction expertise throughout final development of the project documents and materials selections as well as budget and schedule development and tracking. Subcontractors are selected through competitively sealed proposals for trade packages. The CM-R is encouraged to utilize the CSP process to allow for consideration of values other than price.

### **Design–Build (DB)**

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This project delivery method creates a unique singular contract agreement between the Owner and a singular entity (most often a limited joint venture of construction and design firms) for both the design and construction of a project. The DB's services are divided into Preconstruction Services and Construction Services. While the Owner gives up direct control of the design process, those A/E services typically amounting to full professional services, including administering the construction phase, are included in the DB contract requirements. The Owner derives benefit from having construction expertise involved at the very beginning of design so constructability, budget, and schedule control are maximized throughout the project development.

### **Delivery Selection Matrix**

The following guideline matrix is intended to assist the project team to select the most appropriate alternate project delivery method for Capital Improvement Project. The team should identify 3-4 goals in the matrix, critical to project success. Then circle the value(s) in the corresponding columns. When all criteria have been selected and the values have been circled, total all values in each column. The column with the highest total should be considered the most appropriate project delivery method.

	<b>CSP</b>	<b>CM</b>	<b>DB</b>
Constructability is necessary for project design, budget and schedule		2	2
Construction Cost Limitation (CCL) is less than \$10,000,000	2		1
Facility Program requires further refinement during the design process	2	2	
OFPC's Project Manager is currently managing two or more CM/DB projects	3		
Owner desires some degree of participation in the subcontractor selection process		3	3
Owner requires a high level of control over the Project's design and quality	3	2	
Owner requires construction costs to be "guaranteed" during the design phase		2	2
Owner requires the ability to select the "best" design and construction firms	3	3	
Owner will allow a completed facility based on the approved Facility Program			3
Project is "complex", large, innovated or non-standard	2	2	
Project is "simple" in design and construction	3		
Project requires multiple construction stages		2	2
Project schedule is CRITICAL (eliminate CSP from consideration)		3	1
Project schedule is not critical	3	2	1
<b>TOTALS</b>			

## Delivery Method Summary Matrix

	COMPETITIVE SEALED PROPOSALS	CONSTRUCTION MANAGEMENT-AT-RISK	DESIGN-BUILD
TYPICAL PROJECT PROFILES	<p>Small to large, new or renovations projects of low to high complexity where the Owner desires control of the design and quality of materials and systems.</p> <p>-----</p> <p>The speed of project delivery is secondary to design and quality control. Cost estimates and constructability are provided by consultants typically not responsible for their accuracy.</p>	<p>Moderate to large, new or renovations projects of moderate to high complexity with phasing or detailed scheduling requirements where accurate, early cost estimates and constructability is required.</p> <p>-----</p> <p>The construction budget is established early and the speed of project delivery is primary.</p>	<p>Moderate to large, new projects, of moderate complexity where scope, budget and schedule are well defined in the Facility Program prior to selection of a Design-Build firm.</p> <p>-----</p> <p>The construction budget is established early and the speed of project delivery is secondary.</p>
SUMMARY	<p>The Owner selects two separate entities:</p> <p>-----</p> <p>An Architect/Engineer is selected to design the project to meet the Program and budget, to prepare construction documents and administer the construction contract.</p> <p>-----</p> <p>A General Contractor is selected via Competitive Sealed Proposals to provide construction services.</p> <p>-----</p> <p>This method is most similar to traditional design-bid-build.</p>	<p>The Owner selects two separate entities:</p> <p>-----</p> <p>An Architect/Engineer is selected to design the project to meet the Program and budget, to prepare construction documents and administer the construction contract.</p> <p>-----</p> <p>A Construction Manager is selected to provide pre-construction and construction services.</p>	<p>The Owner selects a single entity:</p> <p>-----</p> <p>The Design-Build firm consists of an Architect/Engineer to provide design and develop Construction Documents, and a Construction Manager to serve as the general contractor during construction.</p>



	<b>COMPETITIVE SEALED PROPOSALS</b>	<b>CONSTRUCTION MANAGEMENT-AT-RISK</b>	<b>DESIGN-BUILD</b>
<b>DESIGN</b>	<p>The Owner makes a qualifications-based selection of an A/E through a RFQ process to design the project to meet the program and budget, to provide complete contract documents, and to administer the construction contract.</p> <p>-----</p> <p>The A/E may develop the Facility Program, or the Owner may hire a separate Programming firm.</p> <p>The Owner is responsible for the performance of the A/E.</p>	<p>The Owner makes a qualifications-based selection of an A/E through a RFQ process to design the project to meet the program and budget, to provide complete contract documents, and to administer the construction contract.</p> <p>-----</p> <p>The A/E may develop the Facility Program, or the Owner may hire a separate Programming firm.</p> <p>The Owner is responsible for the performance of the A/E.</p>	<p>The Owner makes a selection based on a two-step qualifications and proposals RFQ/P process to design the project to meet the program and budget, to provide complete contract documents, and to administer the construction contract.</p> <p>-----</p> <p>The Owner hires a separate firm to develop the Facility Program.</p> <p>The Owner is responsible for the performance of the DB.</p>
<b>CONSTRUCTION</b>	<p>The Owner solicits General Contractors for competitive sealed proposals based on complete construction documents.</p> <p>-----</p> <p>Selection of the "best value" Contractor is based on a combination of price and other criteria that the Owner determines prior to solicitation.</p>	<p>The Owner makes a selection based on a two-step qualifications and proposals RFQ/P process.</p> <p>-----</p> <p>The CM typically develops a GMP based on incomplete design documents and the Owner tracks the GMP throughout the construction phase.</p>	<p>The CM typically develops a GMP based on incomplete design documents and the Owner tracks the GMP throughout the construction phase.</p>

	<b>COMPETITIVE SEALED PROPOSALS</b>	<b>CONSTRUCTION MANAGEMENT-AT-RISK</b>	<b>DESIGN-BUILD</b>
<b>SUBCONTRACTS</b>	<p>Neither state law nor the contract requires competitive bidding of subcontractors. However, both require Good Faith Efforts at obtaining, tracking and reporting HUB participation.</p> <p>-----</p> <p>-</p> <p>General Contractor procures and manages subcontracts based on complete construction documents.</p>	<p>The CM is required to follow the Contract (as required by Texas Education and Texas Government Codes) for soliciting competitive bids for Cost of Work and for providing a Good Faith Effort on HUB participation.</p> <p>-----</p> <p>The CM typically procures and manages subcontracts on bid packages based on 100% signed and sealed construction documents.</p>	<p>The DB is required to follow the Contract (as required by Texas Education and Texas Government Codes) for soliciting competitive bids for Cost of Work and for providing a Good Faith Effort on HUB participation.</p> <p>-----</p> <p>The DB typically procures and manages subcontracts on bid packages based on 100% signed and sealed construction documents.</p>



# Acknowledgments

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## **Pre-Project Planning Team**

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For assistance using these guidelines, or to make suggestions for future edits, please contact the appropriate OFPC Senior Project Manager, or the Project Improvements Coord. at 512-499-4600.

# B

## Notes About Complying with the THECB Space Model

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The Texas Higher Education Coordinating Board (THECB) was created by the Texas Legislature in 1965 as “the highest authority of the state in matters of public higher education.” The Coordinating Board recommends formulas for allocation of state funds to public institutions, works to eliminate duplication of academic programs, unnecessary construction projects and real estate acquisitions.

The *Space Projection Model for Higher Education Institutions in Texas* guides The Coordinating Board in its review of new construction and renovation projects at academic and health-related institutions. The Model uses an academic five-factor model and a health-related four-factor model to compare actual with predicted assignable square footage at each publicly supported institution of higher education in Texas.

<u>Academic</u>	<u>Health-Related</u>
Teaching	Teaching
Library	Research
Research	Office
Office	Support (includes Library)
Support	

The Coordinating Board continually updates the Model to track the use of assignable square footage at each institution. Any institution may request a copy of the current Model for its campus at any time.

The Coordinating Board evaluates proposed new construction and renovation projects based on a number of different criteria. **The assignable square footage for any proposed project may not cause the institution's actual assignable square footage to exceed the Model's predicted assignable square footage for the campus total.** In some cases, however, it may be justifiable to exceed the Model's predicted assignable square footage for a single factor as long as the campus total is not exceeded.

It is the Coordinating Board's policy to only approve projects where the assignable square footage divided by the gross square footage is sixty percent (60%) or more.



Refer to the Appendix C for the *Definition of Terms Relating to Square Footage* for Compliance with The Texas Higher Education Coordinating Board.

The U.T. System Board of Regents approves its *Capital Improvement Plan* (CIP) every two years, in which they identify and approve capital projects for further development at each institution. The facility programmer and institution should verify that the assignable square footage for the proposed project is coordinated with other projects in the CIP. The total assignable square footage for the institution's construction program in the CIP cannot exceed the Model as previously discussed.

The *Rules and Regulations* of the Board of Regents require that each institution maintain an Institutional Building Advisory Committee, whose responsibility is to advise the president regarding the overall need and long-term use of space at the institution. If the facility program should deviate in the quantity or use of space from that previously approved for the project, the proposed change should be reviewed with the Committee.

In 1970 the Coordinating Board issued Study Paper 12, *Space Factors and Space Utilization Values for Use in Meeting the Facility Needs of Texas Colleges and Universities*, which established the first facility standards in Texas. This study employed many space factors that are still valid today. If interested, a copy may be obtained from the Coordinating Board's Campus Planning Office.

# C

## Definition of Terms Relating to Square Footage

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The definitions described below must be used to illustrate project compliance with the Texas Higher Education Coordinating Board. A summary of important definitions for square footage is given below. Contact the Office of Facilities Planning and Construction for further explanations. See *Figure C.1* for a graphic illustrating the relationships of the definitions for the various square footages.

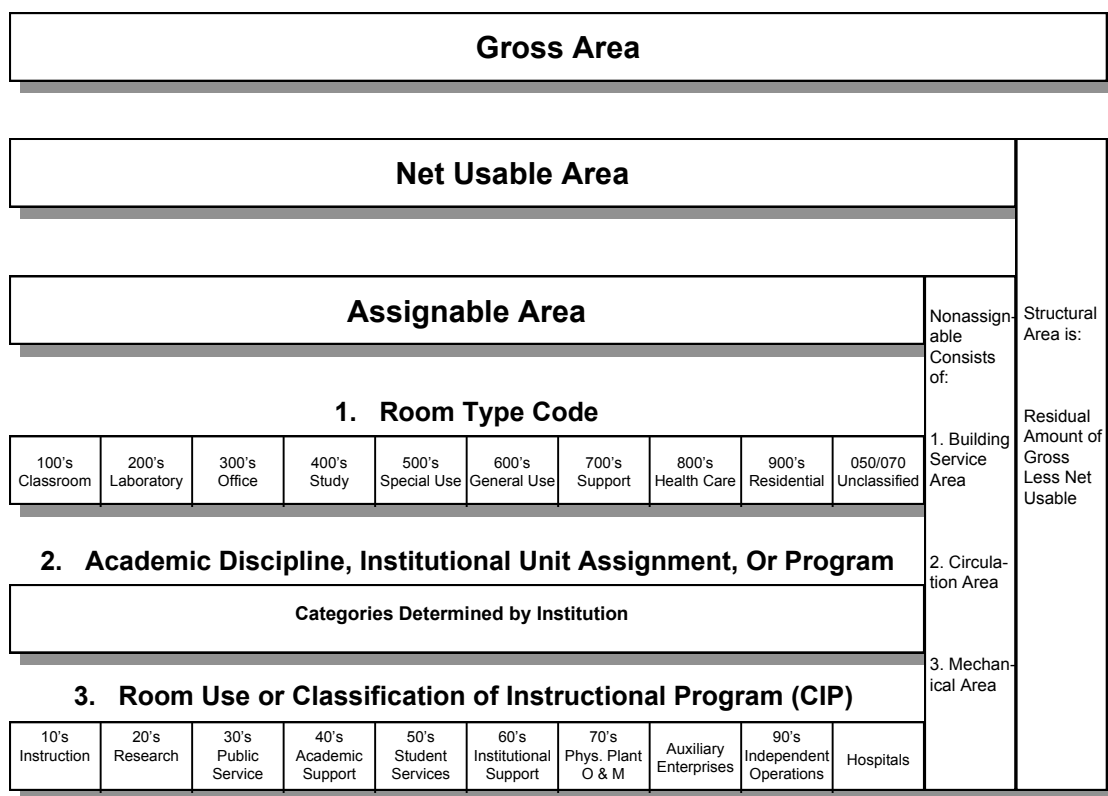
**Gross Square Feet (GSF):** The sum of the square footage of all areas on all floors of a building included within the inside faces of its exterior walls, including floor penetration areas, however insignificant, such as circulation and shaft areas that connect one floor to another.

*Basis for Measurement:* Gross area is measured from the OUTSIDE face of exterior walls, disregarding cornices, pilasters, buttresses, etc., which extend beyond the wall faces. Exclude areas having less than a 6'-6" ceiling height.

*Description:* In addition to all the internal floored spaces obviously covered above, gross area should include the following, provided they have greater than 6'-6" clear ceiling height and potential usability: Excavated basement areas; mezzanines, penthouses and attics; garages; enclosed porches, inner or outer balconies whether walled or not, if they are utilized for operational functions; and corridors whether walled or not, provided

they are within the outside face lines of the building, to the extent of the roof drip line. The footprints of stairways, elevator shafts and ducts (examples of building infrastructure) are to be counted as gross area on each floor through which they pass.

### Conceptual Framework for Analyzing Buildings



**Figure C.1** Diagram outlining relationships of the definitions for square footage according to the Texas Higher Education Coordinating Board.



**Assignable Square Feet (ASF):** The sum of the square footage of all areas on all floors of a building assigned to, or available for assignment to, an occupant or other specific program use. Exclude non-assignable area and structural area (see below).

*Basis for Measurement:* Assignable area is measured from the inside faces of surfaces that form the boundaries of the designated area. Exclude areas having less than a 6'-6" ceiling height.

*Description:* Included should be space subdivisions of the ten major room use categories for assignable space that are used to accomplish the institution's mission: classrooms, labs, offices, study facilities, special use, general use, support, health care, residential and unclassified.

Assignable Area = Gross Area minus Non-assignable Area (Building Service Area, Circulation Area, and Mechanical Area) minus Structural Area

**Non-assignable Area (Includes Building Service Area, Circulation Area, and Mechanical Area):** The sum of all areas on all floors of a building not available for assignment to an occupant for specific program use, but necessary for the general operation of a building.

*Basis for Measurement:* Non-assignable Area is measured from the outside faces of surfaces that form the boundaries of the designated areas. Excludes areas having less than 6'-6" clear ceiling height.

*Description:* Included should be space subdivisions of the three non-assignable room use categories that are used to support the building's general operation, and structural area: building service, circulation and mechanical.

**Building Service Area:** The sum of all areas on all floors of a building used for custodial supplies, sink rooms, janitorial closets and for public rest rooms. Building service areas do not include assignable areas.

*Basis for Measurement:* Building service area is computed by measuring from the outside faces of surfaces that form boundaries of the designated

areas. Exclude areas having less than 6'-6" clear ceiling height.

*Description:* Included should be janitor closets or similarly small cleanup spaces, maintenance material storage areas, trash rooms exclusively devoted to the storage of non-hazardous waste created by the building occupants as a whole, and public toilets.

**Circulation Area:** The sum of all areas on all floors of a building required for physical access to some subdivision of space, whether physically bounded by partitions or not.

*Basis for Measurement:* Circulation area is computed by measuring from the outside faces of surfaces that form the boundaries of the designated areas. Exclude areas having less than 6'-6" clear ceiling height.

*Description:* Included should be, but is not limited to, public corridors, fire towers, elevator lobbies, tunnels, bridges and each floor's footprint of elevator shafts, escalators and stairways. Receiving areas, such as loading docks, should be treated as circulation space. Any part of a loading dock that is not covered is to be excluded from both circulation area and the gross building area. A loading dock, which is also used for central storage should be regarded as assignable area. Also included are corridors, whether walled or not, provided they are within the outside face lines of the buildings to the extent of the roof drop line.

**Mechanical Area:** The sum of all areas on all floors of a building designed to house mechanical equipment, utility services and shaft areas.

*Basis for Measurement:* Mechanical area is measured from the outside faces of surfaces that form the boundaries of the designated areas. Exclude areas having less than 6'-6" clear ceiling height.

*Description:* Included should be mechanical areas such as central utility plants, boiler rooms, mechanical and electrical equipment rooms, fuel rooms, meter and communications closets and each

floor's footprint of air ducts, pipe shafts, mechanical service shafts, service chutes and stacks.

**Structural Area:** The sum of all areas on all floors of a building that cannot be occupied or put to use because of structural building features.

*Basis for Measurement:* Structural area should be construed to mean that portion of the gross area, which cannot be occupied or put to use because of the presence of structural features of the building.

*Description:* Examples of building features normally classified as structural areas include exterior walls, fire walls, permanent partitions, unusable areas in attics or basements or comparable portions of a building with ceiling height restrictions, as well as non-excavated basement areas.

# *D*

## Examples of OFPC Forms Described in these Guidelines

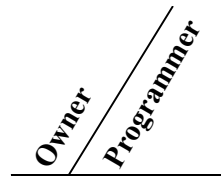
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The following pages contain:

- List of Programming Tasks from chapter iv that may be used as an attachment to a contract for services.
- Category 1A Land Title Survey Exhibit from Chapter 6

### **List of Programming Tasks**

The following list is intended to be an attachment to an Agreement for Programming Services. It identifies the tasks to be completed by the Programmer and the tasks that are the responsibility of the Owner (including the Institution, OFPC, and other parties.) The chapter listed after each item refers to chapters in the *OFPC Facilities Programming Guidelines*.



#### **Programming Schedule (chapter iii)**

- ☐ ☐ A schedule of tasks to be done during the programming phase

#### **Project Goals (chapter 3)**

- ☐ ☐ A statement of agreement with the institution's mission and objectives
- ☐ ☐ A statement of agreement with the institution's strategic plan
- ☐ ☐ A statement that the project follows the institution's master plan
- ☐ ☐ A description of the programs and curricula to be housed in this project
- ☐ ☐ A summary of the need for the project
- ☐ ☐ A brief description of the intent of the project
- ☐ ☐ A discussion of alternative solutions that have been considered
- ☐ ☐ The objectives for the outcome of the project
- ☐ ☐ A statement that this project follows or deviates from the Coordinating Board's space model for this institution

### **Space and Adjacency Requirements** *(chapter 4)*

---

- ☐ ☐ A summary space list of all areas in the project
- ☐ ☐ At least one overall adjacency diagram
- ☐ ☐ At least one stacking diagram (when appropriate)
- ☐ ☐ A discussion of future growth and phased development
- ☐ ☐ Detailed requirements for each room:
  - Space detail sheet
  - Functional relationship diagram
  - Room data sheet
  - List of furnishings and equipment
  - Description of finishes
  - Description of special access issues

### **Supporting Requirements** *(chapter 5)*

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- ☐ ☐ The requirements for site development
- ☐ ☐ A list of any additional requirements applicable to the project
- ☐ ☐ A description of the security needs of the project

### **Existing Site Studies** *(chapter 6)*

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*(May not apply to interior renovation projects)*

- ☐ ☐ An analysis of the site or sites under consideration
- ☐ ☐ An analysis of the site- or institution-specific environmental or safety considerations

### **Existing Facilities Studies** *(chapter 7)*

---

*(May not apply to new projects on new sites)*

- ☐ ☐ Make copies of all available drawings for the current building

- ☐ ☐ Define the extent of the renovation
- ☐ ☐ A list of items that need to be reused after the renovation
- ☐ ☐ A list of areas in the building that are known not to comply with current building codes
- ☐ ☐ A list of any known hazardous materials in the building
- ☐ ☐ Discussion of any temporary or interim facilities that are required

#### **Design Parameters** (*chapter 8*)

---

- ☐ ☐ A list of all of the applicable codes and standards
- ☐ ☐ A list of governmental agencies that have jurisdiction over the project
- ☐ ☐ A list of the U.T. System's technical and design standards that apply to this project
- ☐ ☐ A list of the institution's technical and design standards that apply to this project

#### **Preliminary Project Cost** (*chapter 9*)

---

- ☐ ☐ A preliminary project cost estimate using the OFPC format

#### **Project Schedule** (*chapter 10*)

---

- ☐ ☐ A preliminary schedule for the project using the OFPC format

#### **Implementation Approach** (*chapter 11*)

---

- ☐ ☐ A written plan that outlines how the project will be organized and delivered

#### **Information Specific to this Institution** (*chapter 12*)

---

- ☐ ☐ Any institution requirements that will have an impact on the project

**Executive Summary** (*chapter 2*)

---

- ☐ ☐ A synopsis of all areas in the program

**Sign-Offs** (*chapter 1*)

---

- ☐ ☐ A sign off page with appropriate approval signature



***EXHIBIT - Category 1A Land Title Survey***

***Survey Requirements.*** A current Category 1A land title survey of the Land (the "Survey") sufficient to permit modification of the standard survey exception on the Owner Policy of Title Insurance and prepared by a registered surveyor. The Survey shall include the following:

- 1) a written description of the Land containing information to properly locate the Land on the ground and containing language confirming the contiguity of the Land with adjoining land owned by the Board of Regents, if applicable; if the Land's dimensions, boundary and area are in close agreement with the existing subdivision plat, if any, then use of lot, block, and subdivision, with all appropriate recording data, filing dates, and map numbers, may be used; otherwise a metes and bounds description must be provided;
- 2) a plat showing the actual dimensions of, and area within, the Land;
- 3) the location of any easements, existing and proposed roadways, encroachments or overlaps;
- 4) the physical access to the Land from a publicly dedicated street or road;
- 5) the outside boundary lines of the Land and all improvements;
- 6) all easements and other matters that are of record and would appear on a title commitment;

- 7) all easements or rights-of-way that are apparent from an on-the-ground survey;
- 8) the identification by name and deed recording reference of adjoining property owners;
- 9) the surveyor's signature, certification in the form shown below, registered number, seal, and the date of the Survey; and
- 10) identification of any area within the Land that has been designated as a Special Flood Hazard Area on the most recent U.S. Department of Housing and Urban Development and Federal Insurance Administration Flood Hazard Boundary Map.

**FORM OF SURVEYOR'S  
CERTIFICATION**

The undersigned Registered Professional Land Surveyor ("Surveyor") hereby certifies to the Board of Regents of The University of Texas System and           [title company]           that (a) this plat of survey and the property description set forth hereon were prepared from an actual on-the-ground survey of the real property ("Property"); (b) such survey was conducted by the Surveyor, or under his direction; (c) all monuments shown hereon actually existed on the date of survey, and the location, size and type of material thereof are correctly shown; (d) except as shown hereon: (i) there are no observable encroachments onto the Property or observable protrusions therefrom, (ii) there are no observable improvements on the Property, (iii) there are no observable easements or rights-of-way either burdening or benefiting the Property, and (iv) there are no observable discrepancies, conflicts,

shortages in area or boundary line conflicts; (e) the size, location and type of improvements, if any, are as shown hereon; (f) the Property has access to and from a public roadway; (g) recorded easements and rights-of-way referenced in Title Commitment GF No. \_\_\_\_\_ (issued \_\_\_\_\_, 20\_\_\_\_) prepared by \_\_\_\_\_ have been labeled and plotted hereon, unless otherwise noted; (h) the boundaries, dimensions and other details shown hereon are true and correct and conform to the appropriate accuracy standards of the Manual of Practice for Land Surveying in Texas (\_\_\_\_) for a Category 1A Condition \_\_\_\_ (\_\_\_\_ Land Title Survey); (i) the Property is located in Zone \_\_\_\_ as delineated on the \_\_\_\_\_, Texas, Flood Insurance Rate Map Panels Numbered \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_\_\_, as published by the Federal Emergency Management Agency, which zone is defined as “\_\_\_\_\_”; and (j) the basis of bearing \_\_\_\_\_ for this survey is

\_\_\_\_\_  
\_\_\_\_\_.

\_\_\_\_\_

Name: \_\_\_\_\_

Registered Professional Land Surveyor,

Texas, No. \_\_\_\_\_

Date \_\_\_\_\_

## **EXHIBIT H**

### **ANTICIPATED PRE-DESIGN PHASE DELIVERABLES**

## ANTICIPATED PRE-DESIGN PHASE DELIVERABLES

The Project A/E shall be responsible for coordinating and compiling all of the Pre-Design Phase materials in the form of a Facility Program(with exhibits as required); in the sequence established in The University of Texas System Facilities Programming Guidelines. The primary and secondary parties responsible for generating the materials will be as follows:

<u>Work Area from Template</u>	<u>Primary/Secondary Responsibility</u>
Facility Program Schedule	Project Architect
I. Project Description	
Introduction	Owner
Background	Owner
Objectives	Owner
Proposed Resolution	Project Architect
Conditions of Approval	Project Architect/Owner
Space Requirements	Owner/Project Architect
Traffic Flows/Adjacencies	Owner/Project Architect
Support Services	Project Architect/Owner
Existing Finishes and Site Conditions	Owner/Project Architect
Adjacent Areas	Owner/Project Architect
Furniture, Fixtures and Equipment	Project Architect/Owner
Accessibility	Project Architect/Owner
Plumbing Fixture Count	Project Architect/Owner
Special Issues or Considerations	Project Architect/Owner
Scope of Work – Demolition/Construction	Project Architect/Owner
Schedule/Phasing	Project Architect/Owner
Budget/Funding	Owner
Outstanding Issues	Project Architect/Owner
Required Action/Next Steps	Project Architect/Owner
Signatures	Owner/Project Architect
Attachments	Project Architect/Owner
II. Project Design and Implementation	
TAS/ADA/Code Requirements	Project Architect/Owner
Special Issues or Considerations	Project Architect/Owner
Scope of Work – Demolition/Construction	Project Architect/Owner
Schedule/Phasing	Project Architect/Owner

## **EXHIBIT I**

### **OWNER'S DESIGN GUIDELINES**

# MD ANDERSON CANCER CENTER DESIGN GUIDELINES

## Table of Contents

## Document Version

<b>Preface</b>	-----	ODG030513
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20	Proposal, Bidding, Contracting	
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2010	<b>Instructions for the Preparation of Project Manuals</b>	-----	ODG080415
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## Construction Systems and Assemblies

### Element A - Substructure

#### A10 Foundations

A1010	<b>Standard Foundations</b>	-----	ODG070810
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A1030	<b>Slab on Grade</b>	-----	ODG091610
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### Element B - Shell

#### B10 Superstructure

B1010	<b>Floor Construction</b>	-----	ODG112211
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B1020	<b>Roof Construction</b>	-----	ODG091610
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#### B20 Exterior Enclosure

B2010	<b>Exterior Walls</b>	-----	ODG041712
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B2020	<b>Exterior Windows</b>	-----	ODG091610
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B2030	<b>Exterior Doors</b>	-----	ODG041712
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#### B30 Roofing

B3010	<b>Roof Coverings and Support Structures</b>	-----	ODG041712
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### Element C - Interiors

#### C10 Interior Construction

C1010	<b>Partitions</b>	-----	ODG030513
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C1020	<b>Interior Doors</b>	-----	ODG121312
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C1030	<b>Fittings and Interior Specialties</b>	-----	ODG030513
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C1031	<b>Fabricated Toilet Partitions</b>	-----	ODG100908
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C1038	<b>Casework</b>	-----	ODG061412
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C1039	<b>Laboratory Casework and Equipment</b>	-----	ODG051415
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#### C20 Stairs

C2010	<b>Stair Construction</b>	-----	ODG081408
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# MD ANDERSON CANCER CENTER DESIGN GUIDELINES

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## Document Version

### C30 Interior Finishes

C3010	Wall Finishes	-----	ODG032113
C3020	Floor Finishes	-----	ODG032113
C3025	Base Finishes	-----	ODG032113
C3030	Ceiling Finishes	-----	ODG013113

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D1020	Escalators	-----	ODG031009

#### D20 Plumbing

D2000	General Design Guidelines	-----	ODG120811
D200002	Parking Garage Plumbing Design Guidelines	-----	ODG010107
D2010	Plumbing Fixtures	-----	ODG081816
D201001	Emergency Shower and Eyewash Equipment	-----	ODG041113
D201002	Plumbing Fixtures for Open Parking Garages	-----	ODG010107
D2020	Domestic Water Distribution	-----	ODG121515
D202001	Domestic Water Distribution for Open Parking Garages	-----	ODG010107
D2030	Sanitary Waste and Vent	-----	ODG040512
D203001	Sanitary Waste and Vent for Open Parking Garages	-----	ODG111009
D2035	Laboratory Waste and Vent	-----	ODG111009
D2040	Storm Water Drainage	-----	ODG111110
D204001	Storm Water Drainage for Open Parking Garages	-----	ODG111009
D2050	Natural Gas Distribution	-----	ODG010107
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D2065	Laboratory Vacuum and Gas Systems	-----	ODG111512

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D300001	Renovation General Design Guidelines	-----	ODG030513
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D300101	Patient Treatment Load Calculation Criteria	-----	ODG020410
D300102	Laboratory Load Calculation Criteria	-----	ODG070810
D3002	Sound Criteria	-----	ODG120908
D3010	TECO Energy Supply	-----	ODG091610
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## **EXHIBIT J**

### **OWNER'S BUILDING INFORMATION MODELING REQUIREMENTS**

**BUILDING INFORMATION MODELING REQUIREMENTS  
FOR ARCHITECTS / ENGINEERS / CONSULTANTS / CONTRACTORS**

**PART 1 – GENERAL**

**1.1. RELATED DOCUMENTS**

- 1.1.1. Attention is specifically directed, but not limited to, the Uniform General Conditions for University of Texas System Building Construction Contracts (UTUGCs) for other requirements related to the completion and submittal of Record Documents.
- 1.1.2. Attention is specifically directed to Owner's Design Guidelines (ODGs) issued for the Project for other requirements related to the development, maintenance and exchange of design information, the formatting of design documents, and the completion and submittal of Record Documents. Particular attention should be directed to Owner's Design Guidelines Elements; Z10, Z2010 and its subsections and Z2035. Additionally, ODG Supplemental Resources; AutoCAD Standards; Equipment Matrix and Record Document Edit Log.
- 1.1.3. Attention is specifically directed to Owner's Master Construction Specifications for other requirements related to the development, maintenance and exchange of construction project information, and the completion and submittal of Record Documents. Particular attention should be directed to Division 01, General Requirements, specification sections 01 77 00, Project Closeout Procedures, and 01 78 39, Project Record Documents.

**1.2. SUMMARY**

- 1.2.1. This document establishes general and administrative requirements pertaining to Building Information Modeling (BIM) to meet Facilities Information Management (FIM) expectations for projects of various sizes and delivered under various contracting methodologies.
- 1.2.2. BIM practices require collaboration and involvement of all parties throughout the project delivery process, regardless of the delivery method being used for a given project. For BIM practices to be successful, collaboration must begin at the onset of the project development and continue throughout the Project until owner accepts all final record document requirements.
  - 1.2.2.1. To accomplish this required collaboration and successfully deliver the Project to Owner, it is mandatory that a BIM Execution Plan be generated with involvement of all Project stakeholders. Owner recognizes that the industry standard for a BEP has been developed by the building SMART alliance™ (bSa) Project "BIM Project Execution Planning" and is incorporated by the National Institute of BUILDING SCIENCES as part of its National BIM Standard – United States Version 3. Owner recommends this as a template when generating the BIM Execution Plan for the Project.
- 1.2.3. BIM practices encompass and coordinate traditionally separate functions of design (Architect/Engineer) and construction (Contractor) in order to assemble all related building information into the Equipment Matrix for building operation assets or the Project Information Matrix for all other required information. These documents will provide the information required to efficiently operate and maintain the facility once Substantial Completion has been achieved and the Project has been turned over to Owner.
- 1.2.4. It is of primary concern that all building modeling and facility information developed during the design and construction of the Project be timely and efficiently developed, maintained and exchanged from initiation of the Project through Final Completion in accordance with all Contract Documents and with Owner's operational and maintenance needs. Project A/E shall develop a BIM Execution Plan (BEP) that details how, throughout the Project lifecycle, the A/E, in collaboration with Contractor expects to systematically demonstrate to Owner that all building and system information is current to the extent that it can be at the time during the design and construction process. For a Design/Build delivery method, the BEP shall be developed jointly between the Project A/E and the Design/Build Contractor, coordinating with Owner.

- 1.2.5. It shall be the responsibility of the Project A/E, and each of its consultants, and Contractor and each of its Subcontractors, to have or obtain, at their cost, the trained personnel, hardware, and software necessary to successfully fulfill their respective obligations as set forth in the mutually developed BIM Execution Plan.

### 1.3. DEFINITIONS

Capitalized terms used in this document shall have the meanings as set forth in the applicable contract(s), the UTUGCs, or any combination thereof, unless otherwise defined or modified below. For projects implemented with the construction manager-at-risk delivery method, the term Contractor shall mean Construction Manager. For projects implemented with the design-build delivery method, the term Contractor shall mean Design/Build Contractor. To be consistent with the UTUGCs, A/E is used in lieu of, and as a synonym for, the term Project Architect that is may appear in some standard UT System construction manager-at-risk, design-build, and some design services agreements.

- 1.3.1. Final Model –The model(s) from the Contract Documents that has been professionally electronically generated by the A/E reflecting the as-constructed conditions of the Work based upon the information provided by Contractor as reflected in the Record Documents and Contractor's construction model.
- 1.3.2. BIM Execution Plan (BEP) – A document developed by the A/E's BIM Team, in collaboration with Owner, concurrent with the start of the Project, that prescribes in detail how Building Information Modeling will be implemented for the Project and how requisite information will be transferred into the Equipment Matrix and the Project Information Matrix prior to Substantial Completion of the Project. For a design-build project, Contractor will be involved in the creation of the initial BEP with the A/E. Reference section 1.2.2.1 for recommendations on the BEP development.
- 1.3.3. BIM Level – The extent to which model and information development will be required on a specific project. The BIM Level initially will be determined by Owner but may be adjusted, with Owner's express approval, by the BIM Team over the course of the Project. The BIM Level will depend upon several factors, including the scope of project, project schedule; project cost; availability of existing BIM models; and availability of existing BIM data, etc. Reference sections 1.3.16 through 1.3.18 for Owner's definition of project levels.
- 1.3.3.1. The A/E team must provide to Contractor a level of Model that is dimensionally accurate, detailed and contains all required data to be sufficient for Contractor to accurately create and maintain its construction model throughout the construction and project close out processes. Owner is not dictating the means and methods of coordination between the A/E and Contractor, however the A/E shall be required to coordinate with Contractor to provide clarifications and additional modeling elements should the initial Design model prove to be insufficient. This shall be detailed, as well as Owner's interactions in the process, in the BEP created at the beginning of the Project and modified as needed throughout.
- 1.3.4. Building Automation System (BAS) – The distributed control system used by Owner to monitor and control infrastructure systems within its facilities.
- 1.3.5. Building Information Modeling (BIM) – The process of generating and managing building data and geometry using three-dimensional (3-D), real-time, dynamic building modeling software resulting in a Building Model and corresponding information.
- 1.3.6. Building Information Modeling Team (BIM Team): Working group made up of representative(s) from the A/E, A/E's consultants, Contractor, Subcontractors and Owner. A/E will provide ad hoc representation of the A/E's consultants on the BIM Team as required for the implementation of the BIM Execution Plan. Contractor will provide ad hoc representation of Subcontractors on the BIM Team as required for implementation of the BIM Execution Plan.
- 1.3.7. Building Model – A 3-D digital representation of physical and functional characteristics of a facility, or the components or systems thereof that encompass building geometry, spatial relationships and quantities and properties of building components and systems.
- 1.3.8. Computerized Maintenance Management System (CMMS) – The computer software package that Owner uses to manage a digital database of information related to its facilities equipment and systems

- for the purpose of optimizing its maintenance operations.
- 1.3.9. CMMS Integration Process (CIP) – The prescribed process by which the information generated during Building Information Modeling will be fully integrated into Owner's CMMS. The CIP is to be developed by the BIM Team and is to be included in the BIM Execution Plan.
  - 1.3.10. Construction Documents – Defined in the UTUGC unless otherwise defined herein. The Construction Documents shall also include the Building Models, the Equipment Matrix and the Project Information Matrix as well as all other documents required within the Specifications, Owners Design Guidelines and the BIM Requirements.
  - 1.3.11. Construction Model – A 3-D digital representation of physical and functional characteristics of a facility, or the components or systems thereof, that encompasses building geometry, spatial relationships and quantities and properties of building components and systems and that is developed by Contractor and the Subcontractors before or during the Construction Phase of the Project. Unless Owner specifically agrees otherwise, the Construction Model shall represent a spatially accurate, as-built condition. Components of the building shall be modeled and their corresponding data shall be built into the model as detailed in the project BIM Execution Plan. This includes Tier 1 & Tier 2 items as described in sections 1.3.12 and 2.2. Reference section 2.5.1.1.6.
    - 1.3.11.1 Coordination model(s) – Typically a derivation of the Construction Model in either a Navisworks or BIM 360 Glue format used by Contractor and Subcontractors to coordinate the objects and systems to be installed during the course of construction.
  - 1.3.12. Depth of Detail – A measure of the amount of information to be provided for each element within the Building Model. The Building Model and Contract Documents shall be developed so as provide information that aligns with the following tiers:
    - 1.3.12.1.1. Tier 1 Data – Information that Owner maintains about its facilities, or any components thereof, that shall reside within Owner's CMMS and is to be maintained throughout the Project in the Equipment Matrix
    - 1.3.12.1.2. Tier 2 Data – Information Owner maintains about its facilities, or any component(s) thereof, that does not reside in Owner's CMMS. This data may or may not physically reside within a model, a table, schedule, list, external spreadsheet/database, submittal, RFI, ASI, drawings or specifications etc. that pertain to final completion of the Project. This includes but is not limited to the following:
      - 1.3.12.2.1 Fixed equipment data gathered during the course of design and construction (e.g. manufacturer's information, including maintenance, related to sinks, faucets, emergency showers, light fixtures, life safety items, etc.).
      - 1.3.12.2.2 Fixed architectural and finish features (e.g. manufacturers maintenance information related to doors, hardware, finishes, glazing, etc.).
    - 1.3.12.3. Tier 1 and Tier 2 Data elements within the Equipment Matrix and PIM must reference to a specific individual, physical space utilizing the appropriate room numbering designation. Reference section 2.2 of this document.
  - 1.3.13. Design Model – A 3-D digital representation of physical and functional characteristics of a facility, or the components or systems thereof, that encompasses building geometry, spatial relationships and quantities and properties of building components and systems and that are developed during the design phase of the Project as detailed in the project BEP. Reference sections 1.3.3.1 and 2.5.1.1.5.
  - 1.3.14. Facilities Information Management (FIM) – The process of gathering, maintaining and distributing data associated with Owner's facilities for the purposes of operating, maintaining and renovating those facilities.
  - 1.3.15. Level of Development – The degree to which information included within the Building Model can be relied upon to be current and accurate
  - 1.3.16. Major Capital Project – Any project that involves the construction of a new facility and that has a total project cost of \$10 million or more (Major Capital – New Construction), or any project that involves

the renovation (repair and rehabilitation) of an existing facility and that has a total project cost of \$10 million or more (Major Capital – Renovation). Major Capital Projects may involve the rehabilitation or upgrading of mechanical, electrical, plumbing, infrastructure technology components or systems or any combination thereof.

- 1.3.17. Minor Capital Project – Any project that involves the construction of a new facility and that has a total project cost of \$100,000 or more but less than \$10 million (Minor Capital – New Construction), or any project that involves the renovation (repair and rehabilitation) of an existing facility and that has a total project cost of \$100,000 or more but less than \$10 million (Minor Capital – Renovation). Minor Capital Projects may involve the rehabilitation or upgrading of mechanical, electrical, plumbing, infrastructure technology components or systems or any combination thereof.
- 1.3.18. Operations Project – Any project that involves new construction work or the renovation (repair and rehabilitation) of an existing facility and that has a total project cost that is less than \$100,000. Operations Projects may involve the rehabilitation or upgrading of mechanical, electrical, plumbing, infrastructure technology components or systems or any combination thereof.
- 1.3.19. Project Information Matrix (PIM) – The electronic file for a spreadsheet or database that identifies the information required from the Building Model, Drawings, and any other data source(s) developed for the Project and the parameters and properties of the content. Generally, Owner initially will provide the PIM at the beginning of the Project. During the design phase, the A/E will expand and populate the PIM as information becomes available. Throughout the construction phase, Contractor and A/E will update the PIM and will issue scheduled renditions during construction in addition to the final PIM to Owner at Substantial Completion of the Project. Special attention should be given to section 1.3.12.1.2 of this document for specific requirements concerning the information to be collected in the PIM.
- 1.3.20. Project Information Core Team (PICT) – A working group comprised of Owner personnel from various departments within the Division of Operations and Facilities Management who are facilities system Subject Matter Experts (SME's). The PICT will monitor information delivery requirements for project information governance and the application of BIM requirements on projects for design, construction, construction support, professional and non-professional services. A representative of the PICT will be part of the project team and will report to the PICT on the status of the project information throughout the lifecycle of the Project.
- 1.3.21. Record Documents – Defined in the UTUGCs and Owner's Master Construction Specification Section 01 78 39, Project Record Documents, unless otherwise defined herein. Record Documents shall also include all BIM deliverables as detailed in this document; reference section 2.5 for additional detail.
- 1.3.22. System – A group or collection of items or equipment that work together or in tandem to function as a whole. Examples of systems include but are not limited to: HVAC systems, bulk gas systems (any gases or vacuum not supplied by a point-of-service device), plumbing, fire-rated assemblies such as doors/frames, glazing, etc. or any items that are commonly known as systems by the design and construction industries. If uncertainty exists, A/E and Contractor are to coordinate with Owner for clarification.
- 1.3.23. Test, Adjust, and Balance (TAB) Firm: Owner may engage a Test, Adjust, and Balance Firm for the Project under a Separate Contract. When engaged for the Project, the TAB Firm shall be a part of the BIM Team and shall provide services as set forth in the Specifications and its Separate Contract.

#### 1.4. COORDINATION

##### 1.4.1. BIM Team

###### 1.4.1.1. Owner's Members

- 1.4.1.1.1. Representatives assigned by Owner's Designated Representative, including but not limited to, the Owner's Project Manager, BIM Manager, PICT member and other SMEs, as required.

- 1.4.1.1.2. TAB Firm, when engaged for the Project.



- 1.4.1.1.3. Commissioning Agent, when engaged for the Project.
- 1.4.1.2. Architect / Engineer Members
  - 1.4.1.2.1. A/E, including A/E and its subconsultant BIM manager(s), except for projects implemented with design-build methodology. Team members for design-build projects shall include Contractor's BIM Team members, as well, with each party's responsibilities detailed in the joint BEP.
- 1.4.1.3. Contractor's Members
  - 1.4.1.3.1. Individuals, each having authority to act on behalf of the entity it represents, explicitly organized to implement all BIM activities through coordinated actions.
  - 1.4.1.3.2. Representatives of Contractor, including but not limited to
    - Contractor's project manager,
    - Contractor's BIM Manager/Coordinator
    - A/E, including A/E subconsultant BIM manager(s), (for projects implemented with design-build methodology)
    - Subcontractors, as needed for Contractor to fulfill its BIM obligations, and
    - Equipment suppliers, as needed for Contractor to fulfill its BIM obligations.
- 1.4.2. Scheduling
  - 1.4.2.1. Design (Preconstruction) Phase
    - 1.4.2.1.1. For projects implemented using the traditional or the construction manager-at-risk contracting methodology, the A/E shall integrate all BIM activities into its BEP, Project Work Plan and the design schedule.
    - 1.4.2.1.2. For projects implemented using the design-build methodology or the design assist methodology, the A/E and Contractor together shall integrate all BIM activities into the BEP, Baseline Schedule and the Work Progress Schedule and shall ensure that BIM requirements are clearly set forth in all solicitation documents used to select subcontractors or suppliers for the Project. All parties will address scheduling problems and make necessary notifications in a timely manner to expedite all BIM activities.
  - 1.4.2.2. Construction Phase
    - 1.4.2.2.1. At time of contractor selection, A/E shall provide to Contractor the A/E's up-to-date BEP for utilization in creating the comprehensive Project BEP unless the delivery method is design-build, in which case the Project BEP is developed jointly with A/E and Contractor.
    - 1.4.2.2.2. Contractor shall integrate all BIM activities into the BEP, Baseline Schedule and the Work Progress Schedule. A/E, Contractor and all other stakeholders will address scheduling problems and make necessary notifications in a timely manner to expedite all BIM activities.
    - 1.4.2.2.3. Contractor shall provide its initial BEP and schedule of primary BIM activities at the project kick-off meeting. For design-build delivery, prior to the start of Schematic Design, Contractor shall have incorporated and integrated the BEP and all BIM activities into the Baseline Schedule and Work Progress Schedule with appropriately linked predecessors and successors.
    - 1.4.2.2.4. A/E shall receive periodic as-built information from Contractor as detailed in the BEP and make all changes necessary to maintain an up-to-date, accurate as-built model throughout the construction phase of the Project to ensure that a complete as-built model and set of Construction Documents are available to Owner at time of Substantial Completion.

## 1.5. ROLES AND RESPONSIBILITIES

- 1.5.1. Roles and responsibilities of BIM Team members are set forth below to help to clarify Owner's expectations with respect to the BIM and FIM processes.
- 1.5.2. Owner's Role and Responsibilities:
  - 1.5.2.1. Provide specifications related to the format and content for the Project Information Matrix. These specifications are to include the identification of Tier 2 Data required for the Project where available.
  - 1.5.2.2. Provide specifications related to the format and content for the Equipment Matrix.
  - 1.5.2.3. Provide initial direction as to the extent the BIM is to be used on the Project, including the BIM Level to be used on the Project.
  - 1.5.2.4. Approve the BIM Execution Plan and A/E's and Contractor's schedules for completing all BIM activities.
  - 1.5.2.5. Participate in BIM Team meetings.
  - 1.5.2.6. Review and validate adequacy of Building Model development and project data collection and delivery.
- 1.5.3. A/E's Role and Responsibilities:
  - 1.5.3.1. Initiate the BIM collaboration proceedings with Owner at time of project award. Contact Owner's Project Manager to establish the BIM Coordination Kick-Off meeting with all stakeholders, including the Owner's BIM and PICT representative(s).
  - 1.5.3.2. Attend BIM Team meetings.
  - 1.5.3.3. Incorporate all BIM activities into the BEP, design Work Plan and the design phase schedule.
  - 1.5.3.4. Produce for Owner's approval, the initial BEP, prior to or concurrently with the start of the project design, the initial Project Information Matrix and Equipment Matrix of all devices, systems and equipment supplied. It is intended that the initial BEP be coordinated with and contain Owners BIM requirements including the BIM Deliverables. Reference section 2.5 – BIM Deliverables.
    - 1.5.3.4.1. The A/E BEP shall also include anticipated interactions with Contractor, Subcontractors and other stakeholders throughout the project lifecycle.
    - 1.5.3.4.2. If the delivery method is design-build, A/E shall work with Contractor to produce a single project BEP incorporating the entire Project from project inception to Final Completion.
  - 1.5.3.5. Collaborate with Contractor and approve edits to the BEP, and the PIM.
- 1.5.4. Contractor's Role and Responsibilities:
  - 1.5.4.1. Receive from A/E and assume lead responsibility for the BEP, Building Model, PIM and Equipment Matrix. If the project delivery method is design-build, Contractor shall work with the A/E to produce a single project BEP incorporating the entire project from project inception to Final Completion.
  - 1.5.4.2. Administer updates to the BEP, the Building Model, the PIM and the Equipment Matrix with the intent that all BIM-FIM Team members will have up-to-date information as the Project progresses, this includes the A/E..
  - 1.5.4.3. It is intended that Contractor will revise and refine the BEP with their responsibilities and requirements prior to the start of construction and coordinate the revised BEP with Owner and A/E by requesting a BIM Kick-Off meeting. If no BEP was supplied by the A/E, it is intended that Contractor will create a Project BEP that incorporates Owners BIM requirements including the BIM Deliverables. Reference section 2.5 – BIM Deliverables.
  - 1.5.4.4. Provide an individual, experienced in Building Information Modeling to document changes

to the Building Model and complete the implementation of the BEP. Contractor shall assign this individual to act as the BIM Coordinator, who may have additional duties such as MEP Coordinator, but shall not be Contractor's project manager or superintendent. Contractor shall submit qualifications demonstrating the BIM Coordinator's technical expertise and experience to Owner for approval. In the event that Contractor chooses to subcontract its BIM obligations, Contractor must submit the name and qualifications of the proposed subcontractor for Owner's approval.

- 1.5.4.5. Ensure that Building Modeling activities are incorporated into the BEP, Baseline Schedule and the Work Progress Schedule.
- 1.5.4.6. Schedule and conduct periodic meetings with Subcontractors and equipment suppliers related to BIM to ensure the Construction Model, Equipment Matrix and the Project Information Matrix are being routinely and accurately updated.
- 1.5.4.7. Transmit to the A/E all as-built project information as it becomes available and as defined in the BEP throughout construction.

## **PART 2- EXECUTION**

### **2.1 BIM EXECUTION PLAN**

- 2.1.1 Throughout its development, efforts shall be made to align the responsibilities set forth in the BEP with the skills customarily contributed by each party associated with the Project. The BEP shall be considered as a "living document" that is to be updated and refined throughout the life of the Project and shall be available for review and verification by Owner at any time.
- 2.1.2 To the extent practical, the BEP shall minimize redundant efforts in favor of a single, organized approach to all activities required to successfully complete the BIM - FIM process.
- 2.1.3 The BEP shall include all pertinent Project Information. Reference section 1.2.2.1 for recommendations on the BEP development and organization. It shall also identify and specify;
  - 2.1.3.1. the extent to which Building Model(s) are to be used on the Project.
  - 2.1.3.2. the expected timeline for when information will become available for the Equipment Matrix and Project Information Matrix.
  - 2.1.3.3. the information workflow process, which is to include identifying from where the information to be included in the Equipment Matrix and PIM will originate, the requirements for transferring information from and to each model and into the Equipment Matrix and PIM, the Depth of Detail and the party responsible for authoring and supplying the information at the appropriate time.
  - 2.1.3.4. A project BIM Responsibility Matrix detailing what parties are responsible for the numerous aspects of the BIM process and their products. Reference Owners sample BIM Responsibility Matrix, Attachment "A", for baseline.
  - 2.1.3.5. the version of the Autodesk Building Design Ultimate software suite into to which the project documents will be transferred.
  - 2.1.3.6. the file structure for the Building Model.
  - 2.1.3.7. all model types, names, content and relationships.
  - 2.1.3.8. the Level of Development for each element to be included within the Building Model at each stage of the Building Model development.
  - 2.1.3.9. the Depth of Detail for each element to be included within the Building Model.
  - 2.1.3.10. the drawings to be generated from the Building Model(s) and the process(es) to be used for generating two-dimensional drawings from the Building Model(s) to ensure that all generated drawings adhere to Owner's CAD Standards, drawing structure, content, data elements and

delivery as defined in the ODGs.

- 2.1.3.11. the CMMS Integration Process to be used on the Project, including the requisite process for receiving Owner's CMMS Asset Numbers and for incorporating those numbers into the design documents and the PIM.
- 2.1.3.12. the data transfer protocol.
- 2.1.3.13. conventions to be used for naming files.
- 2.1.3.14. measures to be taken to ensure that there is no significant loss of drawing entities or data during drawing generation and data extraction.
- 2.1.3.15. areas in which laser scanning is to be conducted.
- 2.1.3.16. locations and folder/file structures where all working files will be located during the lifecycle of the Project that will be accessible by all members of the BIM Team, including Owner. Coordination between the A/E, Contractor and Owner of the location, folders and files to be detailed prior to project design to ensure a seamless transfer of data and models throughout the Project life cycle and for BIM Deliverables. This must include a method for transfer to Owners control at the end of Project that does not require file re-pathing or the breaking of any links within the models and documents.
- 2.1.3.17. Agreed upon version of all software that will be utilized to create the models, drawings, etc. This may include, but not be limited to the following: AutoDESK REVIT, AutoDESK AutoCAD MEP, Navisworks and BIM 360.
- 2.1.4 Development of the BEP shall be included as an agenda item for all Project Team meetings throughout the Preconstruction (Design) Phase of the Project. When and as appropriate, and as agreed upon by Owner, the discussion items shall include, as a minimum;
  - 2.1.4.1. the status of the development of the BEP,
  - 2.1.4.2. the identification of any issues related to the timing for exchanging information between the various Building Models and the timing and the means and methods for entering information into the Project Information Matrix,
  - 2.1.4.3. the Level of Development of each of the Building Models,
  - 2.1.4.4. the Depth of Detail for information within the Building Models and to be entered into the Project Information Matrix.
- 2.1.5 Refinement and implementation of the BEP shall be included as an agenda item for all Project Team meetings throughout the Construction Phase of the Project. When and as appropriate, the discussion items shall include, as a minimum;
  - 2.1.5.1. the status of the refinement of, and any updates to, the BEP,
  - 2.1.5.2. the identification of any issues related to the timing for exchanging information between the various Building Models and the timing and the means and methods for entering information into the Project Information Matrix and the Equipment Matrix, and the impact on the delivery schedule of information as defined in the BEP.
  - 2.1.5.3. the Level of Development of each of the Building Models,
  - 2.1.5.4. the Depth of Detail for information contained within the Building Models and for information to be entered into the Project Information Matrix and the Equipment Matrix.
  - 2.1.5.5. the status of the development and implementation of the CMMS Integration Process.

## 2.2 EXTRACTED DATA

- 2.2.1 Unless Owner specifically agrees otherwise, all data input into the model(s) or Contract Documents, shall be extracted from its various sources and delivered in either the Equipment Matrix or the Project Information Matrix. All Equipment, systems, finishes, etc. installed within the course of the Project that were not identified in the initial Owner-provided Equipment Matrix or PIM are required to be included.

Data elements within the Equipment Matrix and PIM, must reference to a specific, individual, physical space utilizing the appropriate room numbering designation.

2.2.1.1 Reference section 1.3.12 – Depth of Detail, for explanation of Data types and requirements.

## 2.3 DOCUMENT INDEX

2.3.1 An index shall be included with each document delivery. The document index shall be in the form of a Microsoft Excel spreadsheet and shall identify every file included in the delivery. Identification information shall include;

2.3.1.1 Owner's project number.

2.3.1.2 Owner's project name.

2.3.1.3 File name.

2.3.1.4 File description.

2.3.1.5 Identity of the file authoring entity (i.e. who generated the file A/E, consultant, Contractor, Subcontractor).

2.3.1.6 Cross references to any required support files.

## 2.4 LASER SCANS

2.4.1 Unless Owner specifically directs or agrees otherwise, Contractor shall provide laser scans for the following types of spaces:

2.4.1.1 Operating rooms.

2.4.1.2 Intensive care units.

2.4.1.3 Imaging suites.

2.4.1.4 Mechanical equipment rooms.

2.4.1.5 Plenum, above ceiling spaces and walls through which significant mechanical, electrical, plumbing and/or information technology distribution systems are routed. When in doubt about whether a space or area requires scanning, contact the Owner's project manager and Owner's BIM manager for direction.

2.4.1.6 Spaces and areas located above hard finished ceilings.

2.4.1.7 Laser scans generated by any project team member including, but not limited to, the A/E, its consultants, Contractor or its Subcontractors, throughout the life span of the Project not specifically detailed above.

2.4.2 Laser scans shall be completed for all identified areas, including ceilings, walls and plenums before final cover-up begins.

2.4.3 Laser scan deliverables shall be in the form of three-dimensional models or two-dimensional drawings as set forth below in the BIM-FIM Deliverables section of this document and the final point cloud file generated by the laser scan used to create the models or drawings.

2.4.3.1 Documentation of what scanning hardware and software was used shall be part of the Laser Scan deliverables.

## 2.5 BIM-FIM DELIVERABLES

2.5.1 The BIM-FIM deliverables shall be set forth in the BIM Execution Plan and are based upon the Project requirements. All files delivered in portable document file (pdf) format shall be searchable (i.e. "smart" or "vector" pdf's). Unless Owner expressly agrees otherwise, the deliverables for each project type shall be as follows:

2.5.1.1 Project Deliverables

2.5.1.1.1 BIM Execution Plan

- 2.5.1.1.2 Project Information Matrix
- 2.5.1.1.3 Equipment Matrix
- 2.5.1.1.4 Final Model(s) – in the version of Autodesk REVIT agreed upon in the BEP. The Final Model may be either the Design Model, the Construction Model or a combination of elements and information from both depending on the contract language and method of project delivery. Federated REVIT Models shall be pathed and configured in such a manner that they are usable without significant re-pathing. Reference section 1.3.1.
  - 2.5.1.1.4.a All BIM Team members (A/E, consultant(s), Contractor and Subcontractor(s)) shall utilize REVIT to generate all as-constructed final models.
  - 2.5.1.1.4.b The “Final Model” shall be generated by A/E and shall be continuously updated throughout construction of the Project with all significant changes. A change shall be considered significant if the 3-D geometry related to structure, partitions walls, doors, windows, or ceilings change.
  - 2.5.1.1.4.c Tier I and Tier II construction and data elements shall be incorporated within the model structure to the extent specified in the BEP, section 2.1.4.4 – Depth of Detail, from which Contractor shall extract the data and place it into either the Equipment Matrix or Project Information Matrix.
  - 2.5.1.1.4.d A/E and Contractor shall maximize the use of REVIT Spaces and Zones within the models. Each item that is placed within the model will be linked to a room number, space and/or zone.
  - 2.5.1.1.4.e All mechanical, electrical, plumbing, security, telecommunications and all other items or equipment that are part of a System will be linked to both the space it is located within and the zone (groups of spaces and/or zones) that are served by said items or equipment.
  - 2.5.1.1.3.d.1 Systems and their related zones and spaces shall be scheduled within their respective models.
  - 2.5.1.1.4.f To the extent identified in the BEP, physical items that are documented in a table, schedule, list, external spreadsheet/database, submittal, RFI, ASI, etc. that pertain to final completion of the Project will be represented within the model as a 3-D object with inherent parameters or as part of a property set, etc.
- 2.5.1.1.5 Design Model(s) – in the version of Autodesk REVIT agreed upon in the BEP. Reference section 1.3.13. Federated REVIT Models shall be pathed and configured in such a manner that they are usable without significant re-pathing. If the final design model is federated, ensure all models properly supplied and linked to the central model utilizing a generic path.
- 2.5.1.1.6 Construction Model(s) – in the version of Autodesk REVIT agreed upon in the BEP. Reference section 1.3.11. Federated REVIT Models shall be pathed and configured in such a manner that they are usable without significant re-pathing. If the final construction model is federated, ensure all models are properly supplied and linked to the central model utilizing a generic path.
- 2.5.1.1.7 Coordination Model(s) - in the version of Autodesk Navisworks or GLUE as agreed upon in the BEP. Reference section 1.3.11.1. Final Coordination Models will have all Tier 1 data (CMMS equipment) submittals, operational data, etc., hyperlinked within the model to the appropriate information in a manner that will not result in non-functioning hyperlinks when the model is turned over Owner.
- 2.5.1.1.8 Extracted Data - Equipment Matrix containing Tier 1 data and the Project Information

Matrix containing Tier 2 data as defined in sections 1.3.12 and 2.2

- 2.5.1.1.9 Laser Scans - Laser Scans shall be delivered in 3-D REVIT models as well as the final Point Cloud file from which the model(s) were generated. Searchable PDF floor plans with scan locations identified and hyperlinked to each scan. PDF's shall be created in a manner hyperlinked that will not result in non-functioning hyperlinks when the model is turned over to Owner. Reference section 2.4 for additional requirements.
- 2.5.1.1.10 Final Documents as specified in Owner's Master Construction Specification 01 78 39.
- 2.5.1.1.11 Media Type and format - All models, drawings, submittals, RFI's, Spreadsheets, databases, and any other deliverable shall be provided to Owner through Owner's Project Management Information System (Owner's PMIS), unless otherwise agreed upon by Owner prior to the start of design or construction.
  - 2.5.1.1.11.a If any project model file(s) exceed the allowable size limit for upload into the Owner's PMIS, all model file(s) shall be delivered on a Windows 7 compatible USB 2.0 "Plug and Play" device, unless otherwise agreed upon by Owner prior to the start of design or construction.
  - 2.5.1.1.11.b All appropriate relationships, links, hyperlinks and all other required connections between models, data and documentation must be maintained or updated so that the information on the USB device or agreed upon alternative is complete, accessible and usable by Owner upon delivery.

MD Anderson Project Name: Renovate T. Boone Pickens Academic Tower Floors 20 - 21  
MD Anderson Project No.: FPDC-190808  
November 19, 2019

**ATTACHMENT "A"** (1 of 3 pages)

**R** RESPONSIBLE  
**C** CONSULTED

**A** ACCOUNTABLE  
**I** INFORMED

**BIM RESPONSIBILITY MATRIX**

	REQUIRED	MDA	BIM Team	Arch	Struct	Civil	Eng. (MEP)	GC	MEPFP	CxA
<b>BIM Execution Plan (BEP)</b>	YES									
BIM Manager	YES	C	R	A	I	I	I	A	I	C
Owner	YES	C	R	C	I	I	I	C	I	C
Commissioning Agent (CxA)	YES	C	R	C	I	I	I	C	C	A
Architect	YES	C	R	A	I	I	I	I	I	I
Structural	YES	C	I	A	R	C	C	I	I	I
Civil	YES	C	I	A	C	R	C	I	I	I
Mechanical	YES	C	I	A	C	C	R	I	I	I
Electrical	YES	C	I	A	C	C	R	I	I	I
General Contractor	YES	C	R	I	I	I	I	A	C	I
MEPFP Trades	UNKNOWN	I	I	I	I	I	I	A	R	I
<b>Design Authoring</b>	YES									
Schematic Design	YES	I	I	A,R	R	R	R	C	C	I
Design Development	YES	I	I	A,R	R	R	R	C	C	I
Construction Documents	YES	I	I	A,R	R	R	R	C	C	I
Architectural	YES	I	I	A,R	C	C	C	C	C	I
Structural	YES	I	I	A	R	C	C	C	C	I
MEP	YES	I	I	A	C	C	R	C	C	I
Civil	YES	I	I	A	C	R	C	C	C	I
<b>Existing Conditions</b>	YES	C	C	A	C	C	C	R	R	I
<b>3D Site Modeling</b>	YES	I	I	A	C	C	C	R	C	I
<b>3D Coordination</b>	YES	I	I	A	C	C	C	R	C	I
<b>4D Scheduling</b>	UNKNOWN	I	C	C	I	I	I	A	R	I
<b>5D Quantity Verification</b>	UNKNOWN	I	R	C	C	C	C	A	R	I
<b>Facility Maintenance Modeling</b>	YES	C	A	R	C	C	C	R	C	I
<b>Model Analysis</b>	UNKNOWN	C	C	A	C	C	C	C	C	C
Energy Analysis	YES	C	C	A	I	I	R	C	C	C
Lighting Analysis	UNKNOWN	C	C	A	I	I	R	C	C	I
Mechanical Analysis	UNKNOWN	C	C	A	I	I	C	C	C	C
Structural Analysis	UNKNOWN	C	C	A	R	I	I	I	I	I
Code Verification Analysis	UNKNOWN	C	C	A	C	C	C	C	C	C
<b>3D Pre-Fabrication Mockups</b>	UNKNOWN	I	C	C	C	I	C	A	R	I
<b>5D Cost Estimating</b>	UNKNOWN	I	R	C	C	C	C	A	R	I



MD Anderson Project Name: Renovate T. Boone Pickens Academic Tower Floors 20 - 21  
MD Anderson Project No.: FPDC-190808  
November 19, 2019

**ATTACHMENT “A”** (2 of 3 pages)

**R** RESPONSIBLE  
**C** CONSULTED

**A** ACCOUNTABLE  
**I** INFORMED

	REQUIRED	MDA	BIM Team	Arch	Struct	Civil	Eng. (MEP)	GC	MEPFP	CxA
<b>Revit Modeling Protocols</b>		I	C	A	R	R	R	R	C	I
Civil	YES	I	C	A	I	R	I	R	C	I
Rooms	YES	I	C	A	I	I	I	R	C	I
Walls	YES	I	C	A	I	I	I	R	C	I
Doors	YES	I	C	A	I	I	I	R	C	I
Closure and Adjacency	YES	I	C	A	I	I	I	C	C	I
MEPFP Models	YES	I	C	A	I	I	C	R	C	I
Duplication Verification	YES	I	C	A	C	C	C	R	C	I
Parametric Verification	YES	I	C	A	C	C	C	R	C	I
MDA nomenclature Verification	YES	I	C	A	I	I	I	R	I	I
Object definition Verification	YES	I	C	A	R	R	R	R	C	I
<b>Revit Warnings</b>	YES	I	R	A	C	C	C	R	C	I
<b>Model Origin</b>	YES	I	C	A	I	C	I	C	I	I
<b>Z-Dimension Accuracy</b>	YES	I	C	A	I	C	I	C	I	I
<b>Model Definition and Progression Specification (MDPS)</b>										
Uniformat Classifications	YES	I	C	A	C	C	C	R	C	I
LOD Definitions	YES	I	C	A	I	I	I	C	I	I
<b>Completeness of Models</b>	YES	C	A	R	C	C	C	R	C	C
<b>Model Property and Parameter Data</b>	YES	C	R	A	C	C	C	R	C	C
<b>Revit Model Matrix</b>	YES	C	A	R	C	C	C	R	C	C
<b>Tracking Model Revisions from CD Forward</b>	YES	I	A	R	C	C	C	R	C	I
<b>2D Supplemental Drawings during CA</b>	YES	C	R	A	C	C	C	C	I	I
<b>Model QA/QC</b>	YES	I	A	R	C	C	C	R	C	I
<b>BIM Coordination</b>										
Early Design Stage	YES	I	R	A	C	C	C	I	I	I
Design Coordination	YES	I	R	A	C	C	C	C	I	I
Spatial Analysis	YES	I	R	A	I	I	I	I	I	I
Clash Resolution	YES	I	R	A	R	R	R	C	C	I
Design Coordination Collaboration	YES	I	R	A	C	C	C	C	C	I
General Contractor Design Model Acceptance	YES	I	R	R	C	C	C	A	R	I
Construction Coordination	YES	I	R	R	C	C	C	A	R	I
Coordination-enabled Pre-Fabrication	YES	I	R	C	I	I	I	A	R	I
<b>CMMS Management</b>										
Administration	YES	R	A	C	I	I	I	C	I	C
Validation	YES	C	A	R	I	I	I	R	I	I

MD Anderson Project Name: Renovate T. Boone Pickens Academic Tower Floors 20 - 21  
MD Anderson Project No.: FPDC-190808  
November 19, 2019

**ATTACHMENT “A”** (3 of 3 pages)

**R** RESPONSIBLE  
**C** CONSULTED

**A** ACCOUNTABLE  
**I** INFORMED

	REQUIRED	MDA	BIM Team	Arch	Struct	Civil	Eng. (MEP)	GC	MEPFP	CxA
<b>BIM Information Managers (IM)</b>										
BIM Manager/Owner IM	YES	C	A	C	I	I	I	C	I	C
Architect IM	YES	I	C	A	I	I	I	I	I	I
Structural IM	YES	I	C	A	R	I	I	I	I	I
Civil IM	YES	I	C	A	I	R	I	I	I	I
Mechanical IM	YES	I	C	A	I	I	R	I	I	I
Electrical IM	YES	I	C	A	I	I	R	I	I	I
General Contractor	YES	I	C	I	I	I	I	A	I	I
MEPFP Trades IM	UNKNOWN	I	C	I	I	I	I	A	R	I
CxA IM	YES	C	C	C	I	I	I	C	I	A
<b>BIM Facility Maintenance Models and Data</b>										
Updating Design Models	YES	I	C	A,R	R	R	R	C	C	I
Equipment Matrix	YES	C	C	C	C	C	C	A	C	C
Project Information Matrix	YES	C	C	A,R	C	C	C	R	C	C
BIM Team Record Models	YES									
Final Model	YES	I	C	A,R	R	R	R	C	I	I
Architectural Models	YES	I	C	A,R	I	I	I	C	I	I
Engineering Models	YES	I	C	A	I	I	R	C	I	I
Structural Models	YES	I	C	A	R	I	I	C	C	I
MEPFP Record Models	YES	I	C	A	I	I	C	A	R	I
Federated Record Model	YES	I	C	C	C	C	C	A	C	I
Record Model Utilization Instructions	YES	I	C	A	C	C	C	C	C	I

**R** RESPONSIBLE

*Those who do the work to achieve the task.*

**A** ACCOUNTABLE

*Ultimately answerable for the correct & thorough completion of the deliverable/task, delegates the work to those responsible.*

**C** CONSULTED

*Those whose opinions are sought, typically subject matter experts; and with whom there is two-way communication.*

**I** INFORMED

*Those kept up-to-date on progress, often on completion of the task/deliverable; typically just one-way communication.*

**EXHIBIT K**

**CONSTRUCTABILITY IMPLEMENTATION PROGRAM**

# **CONSTRUCTABILITY IMPLEMENTATION PROGRAM**

## **GENERAL SCOPE OF WORK**

### **1.0 PROGRAM OBJECTIVES**

- Implement a rigorous constructability program.
- Identify and document project cost and schedule savings (targeted costs are 5% of construction costs).
- Clarification of project goals, objectives.

### **2.0 PROGRAM IMPLEMENTATION**

#### **2.1 Project Team Meeting with Constructability Consultant**

- Identification of all project team personnel and all project stakeholders.
- Team briefing of objectives, methods and concepts of constructability.
- Familiarization with implementation program.
- Preliminary identification of constructability priorities, special challenges, concerns and progress to date.

#### **2.2 Constructability Implementation**

- Review constructability program, implementation and documentation requirements.
- Establish constructability organization following.
- Identify preliminary constructability priorities and special challenges or concerns.

#### **2.3 Schematic Design Phase**

(On-going tasks during Schematic Design Phase and for final review of Schematic Design Documents)

##### **2.3.1 Constructability Consultant**

- Attend project team meetings, review documents, and develop constructability recommendations and documentation.
- Provide construction cost estimates to coincide with Project A/E's submissions. Project A/E and Constructability Consultant shall consult and resolve any differences in their respective construction cost estimates.

##### **2.3.2 Project Team and Constructability Consultant**

- Review detailed issues of front-end, high-priority concepts and identify concerns, identify information needs, start to brainstorm alternative approaches, conduct preliminary evaluation of approaches, identify needs for further analysis, chart path forward.
- Review constructability recommendations, documentation and construction cost estimates for acceptance.

#### **2.4 Design Development Phase**

(On-going tasks during Design Development Phase and for final review of Design Development Documents)

#### 2.4.1 Constructability Consultant

- Attend project team meetings, review documents, and develop constructability recommendations and documentation.
- Provide Cost Quantity Surveys to coincide with Project A/E's submissions. Project A/E and Constructability Consultant shall consult and resolve any differences in their respective Cost Quantity Surveys.
- Provide follow-up discussions on front-end, high priority concepts.

#### 2.4.2 Project Team and Constructability Consultant

- Review constructability recommendations, documentation and Cost Quantity Surveys for acceptance.

### 2.5 Construction Documents Phase

(On-going tasks during Construction Documents Phase and for final review of Construction Documents)

#### 2.5.1 Constructability Consultant

- Attend project team meetings, review documents, and develop constructability recommendations and documentation.
- Review plans and specifications developed to date, identifying sub-optimal or potentially problematic design elements.
- Recommend alternative design suggestions for consideration and document potential savings.
- Conduct value engineering investigations into selected high-cost design elements.
- Provide Cost Quantity Surveys to coincide with Project A/E's submissions. Project A/E and Constructability Consultant shall consult and resolve any differences in their respective Cost Quantity Surveys.

#### 2.5.2 Project Team and Constructability Consultant

- Review constructability recommendations, documentation and Cost Quantity Surveys for acceptance.

### 3.0 Close-out Documentation

#### 3.1 Constructability Consultant

- Complete all documentation to summarize the accomplishments or the constructability effort.

#### 3.2 Project Team and Constructability Consultant

- Review documentation for acceptance.

## **EXHIBIT L**

### **OWNER'S COMMISSIONING REQUIREMENTS**

# Element Z General Design Requirements

Owner Standards and Other  
Requirements

## Z2035 Project Commissioning

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### PART 1 - GENERAL

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#### 1.01 OVERVIEW

- A. MD Anderson is committed to commissioning our facilities to ensure that all systems are complete and functioning properly upon occupancy and that the facility staff has adequate system documentation and training. Commissioning refers to a systematic process confirming that building systems have been installed, properly started, and consistently operated according to criteria set forth in the Contract Documents, that all systems are complete and functioning in accordance with the A/E's Design Intent Document at Substantial Completion, and that the Contractor has provided MD Anderson's facility staff with adequate system documentation and training.
- B. MD Anderson may contract directly with a Commissioning Authority as an extension of Owner's staff, to perform technical reviews of project design documents, observe completion of construction, verify equipment and system startup by Contractor or Subcontractor, observe prefunctional tests and functional performance tests of systems and integrated systems against requirements of the project Contract Documents, track deficiencies, and recommend solutions. The Commissioning Authority has authority only as delegated by the Owner, but has no authority to alter design or installation procedures.
- C. To clarify the A/E's role in the design and construction process, this Design Guideline Element describes the intended scope of services that both the Commissioning Authority and A/E will be responsible for.

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### PART 2 - COMMISSIONING AUTHORITY'S RESPONSIBILITIES

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#### 2.01 GENERAL

- A. In general, the Commissioning Authority, if retained by MD Anderson, will provide the following services during the Project's Design and Construction Phases.

#### 2.02 DESIGN PHASE

- A. Review and comment on project Drawings and Specifications for clarity, completeness, and compliance with the Owner's Design Guidelines.
- B. Recommend alternative design approaches or value engineering items based on project Design Phase reviews.
- C. Work with the A/E to make modifications and/or additions to the Master Construction Specifications for coordination with Commissioning requirements specific to the project scope.

#### 2.03 CONSTRUCTION PHASE

- A. Provide input to the Contractor on the first draft Commissioning Plan. The Commissioning Plan is a document prepared by the Contractor and approved by MD Anderson that provides

# Element Z General Design Requirements

Owner Standards and Other  
Requirements

## Z2035 Project Commissioning

the structure, schedule, and coordination planning for the Commissioning process from the construction phase through the warranty period. Review the Commissioning Plan for completeness.

- B. Participate in Contractor's Pre-Installation meetings and Pre-Commissioning meetings with subcontractors.
- C. Review Contractor submittals applicable to systems being commissioned for compliance with commissioning needs, concurrent with A/E and MD Anderson reviews.
- D. Review Test, Adjust, and Balance (TAB) execution plan and review completed TAB reports.
- E. Before startup, gather and review current control sequences and interlocks and work with Contractor and A/E until sufficient clarity has been obtained, in writing, to be able to prepare detailed testing procedures.
- F. Verify start-up and prefunctional testing of all systems as defined in the Commissioning Plan. Monitor execution of functional performance testing, Owner demonstration of tests, integrated systems testing, and document results, follow-up, and signoffs.
- G. Provide solution recommendations on deficiencies noted during the Commissioning process.
- H. Perform site visits, as necessary, to observe component and system installations. Attend selected project meetings to obtain information on construction progress. Review project construction meeting minutes for revisions/substitutions relating to the commissioning process. Assist in resolving any discrepancies.

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### PART 3 - ARCHITECT/ENGINEER'S RESPONSIBILITIES

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#### 3.01 GENERAL

- A. The following describe the A/E's activities to support the commissioning process from the design phase through construction.

#### 3.02 DESIGN PHASE

- A. Document the development of design intent and operating parameters by all A/E team members within a document titled "Design Intent Document". The Design Intent Document describes the complete architectural and engineering design intent for the project including design guiding principles, assumptions, issues, recommendations, and narrative assessment of the architectural and infrastructure systems that comprise the building.
- B. Update the Design Intent Document at each phase of design to incorporate current design documentation. Refer to Design Guideline Element Z2010 Design Submittal Requirements for additional information on the Design Intent Document format.
- C. Adapt Owner's Master Construction Specifications to apply to project-specific applications.
- D. Specify control sequences of operation within the Contract Documents.



# Element Z General Design Requirements

Owner Standards and Other  
Requirements

## Z2035 Project Commissioning

- E. Clarify the operation and control of equipment and systems to be commissioned where the Contract Documents are not sufficient for writing the Commissioning Plan and detailed test procedures.
- F. Participate in project meetings related to commissioning activities.

### 3.03 CONSTRUCTION PHASE

- A. Review prefunctional checklist, functional performance test, and integrated system test procedures and results.
- B. Review functional performance test trend log data.
- C. Review training plan.
- D. Review test, adjust, and balance execution plan.
- E. Coordinate resolution of design and operational deficiencies identified during commissioning, according to the Contract Documents.
- F. Review operating and maintenance manuals.
- G. Coordinate resolution of design non-conformance and design deficiencies identified during warranty-period commissioning.
- H. Participate in project meetings related to commissioning activities.

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## PART 4 - PRODUCTS

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### 4.01 GENERAL

- A. Refer to Master Construction Specifications for fire suppression, plumbing, mechanical and electrical commissioning requirements, including examples of prefunctional checklists and functional performance tests to be used during the commissioning process.

# Element Z General Design Requirements

Owner Standards and Other  
Requirements

## Z2035 Project Commissioning

### PART 5 - DOCUMENT REVISION HISTORY

Issue	Date	Revision Description	Reviser
	01-01-07	Initial Adoption of Element	
Rev. 1	12-17-13	Changed the term "Commissioning Consultant" to "Commissioning Authority" throughout document. Added fire suppression and plumbing to 4.01 A.	DOS
Rev. 2			
Rev. 3			
Rev. 4			
Rev. 5			

END OF ELEMENT Z2035

## **SECTION 01 91 00 – GENERAL COMMISSIONING REQUIREMENTS**

### **PART 1 – GENERAL**

#### **1.1. RELATED DOCUMENTS**

- 1.1.1. The Contractor's attention is specifically directed, but not limited to, the Uniform General Conditions for University of Texas System Building Construction Contracts (UTUGCs) for other requirements.
- 1.1.2. Specifications throughout all Divisions of the Project Manual, which pertain to operable equipment and/or building systems, are directly applicable to this Section, and this Section is directly applicable to them.

#### **1.2. SUMMARY**

- 1.2.1. This Section establishes general and administrative requirements pertaining to commissioning of equipment, devices, and building systems installed on renovation and new construction projects delivered under various contracting methodologies. Technical requirements for commissioning of particular systems and components are established in the Contract Documents.
- 1.2.2. It is of primary concern that all operable systems installed in the Project perform in accordance with the Contract Documents and the specified Owner's operational needs. During Commissioning, the Contractor systematically demonstrates to the Owner that the operable systems are properly performing in strict accordance with the Contract Documents.
- 1.2.3. Commissioning requires cooperation and involvement of all parties throughout the construction process. The Contractor shall deliver a successful Commissioning process. Successful Commissioning requires that installation of all building systems complies with Contract Document requirements and that full operational check-out and necessary adjustments are performed prior to Substantial Completion, with the exception of deferred tests approved in advance by Owner.
- 1.2.4. Commissioning will encompass and coordinate traditionally separate functions of system documentation, Inspection, Prefunctional Checklists and start-up, control system calibration and point-to-point checkout, testing, adjusting, and balancing, Functional Performance Tests, Integrated System Tests, Contractor demonstration to the Owner, and training of Owner's personnel. This requires assembling all related documentation into one Commissioning Manual. Commissioning is intended to achieve the following specific objectives of the Contract Documents.
  - 1.2.4.1. Verify and document proper installation and design parameters of equipment, systems, and integrated systems.
  - 1.2.4.2. Ensure that operating and maintenance and Commissioning documentation requirements are complete.
  - 1.2.4.3. Provide Owner with functional buildings and systems that meet the Contract Document requirements at Substantial Completion.

#### **1.3. DEFINITIONS**

Capitalized terms used in this Section shall have the meanings as set forth in the Contract, the UTUGCs, or both, unless otherwise defined or modified below.

- 1.3.1. Commissioning: A systematic process confirming that building systems have been installed, properly started, and consistently operated in strict accordance with the Contract Documents, that all systems are complete and functioning in accordance with the Contract Documents at Substantial Completion, and that Contractor has provided Owner adequate system documentation and training. Commissioning includes Deferred Tests, as approved by Owner.
- 1.3.2. Commissioning Authority: Party employed on the Project, by Owner under a Separate Contract, to provide certain commissioning services as defined herein under Commissioning Authority's Role and Responsibilities. Commissioning Authority does not have authority to alter design or installation procedures without the written approval of Owner and the A/E.
- 1.3.3. Commissioning Plan: A document that provides the structure, schedule, and coordination plan for Commissioning during the construction phase and through the warranty period. The Commissioning Plan will describe the project and systems to be commissioned, Commissioning activities, procedures to follow throughout Commissioning, roles and responsibilities for each participant, and general description of testing and verification methods. The Commissioning Plan must satisfy all Test Requirements set forth in the Contract Documents.
  - 1.3.3.1 Download an electronic version of the Commissioning Plan Template for submittal purposes at the following website:  
  
<https://www.mdanderson.org/content/dam/mdanderson/documents/about-md-anderson/about-us/doing-business/owner-s-design-guidelines/supplemental-resources/Commissioning%20Plan%20Template.zip>
- 1.3.4. Commissioning Team: Working group made up of representative(s) from the A/E, Contractor, Test, Adjust, and Balance Firm, Building Automation System vendor, specialty manufacturers and suppliers, Owner, and Commissioning Authority. Contractor will provide ad-hoc representation of Subcontractors on the Commissioning Team as required for implementation of the Commissioning Plan.
- 1.3.5. Deferred Tests: Functional Performance or Integrated System Tests performed after Substantial Completion, with Owner's approval, due to seasonal requirements, site conditions, or both, that prohibit the test from being performed prior to Substantial Completion.
- 1.3.6. Deficiency: Condition of a component, piece of equipment, or system that is not in compliance with the Contract Documents.
- 1.3.7. Factory Testing: Testing of equipment at the factory, by factory personnel with an Owner's representative present, if deemed necessary by Owner.
- 1.3.8. Functional Performance Test: Test of dynamic function and operation of equipment and systems executed by Contractor. Systems are tested shall be various modes, such as during low cooling or heating loads, high loads, component failures, unoccupied, varying outside air temperatures, life safety conditions, power failure, etc. Systems are run through all specified sequences of operation. Components are verified to be responding in accordance with Contract Documents. Functional Performance Tests are executed after start-ups and Prefunctional Checklists are complete.
- 1.3.9. Functional Performance Test Procedures: Commissioning protocols and detailed test procedures and instructions in tabular and script-type format that fully describe system configuration and steps required to determine if the system is performing and functioning properly.
- 1.3.10. Integrated System Test: Test of dynamic function and operation of multiple systems. Integrated System Tests are conducted under various modes, such as fire alarm and emergency situations, life safety conditions, power failure, etc. Systems are integrally operated

through all specified sequences of operation. Components are verified to be responding in accordance with Contract Documents. Integrated System Tests are executed after Functional Performance Tests are complete and prior to Substantial Completion. Integrated System Tests provide verification that the integrated systems will properly function according to the Contract Documents.

- 1.3.11. Integrated System Test Procedures: Commissioning protocols and detailed test procedures and instructions in tabular and script-type format that fully describe system configurations and steps required to determine if the interacting systems are performing and functioning properly.
  - 1.3.12. Manual Test: Use of hand-held instruments, immediate control system readouts or direct observation to verify performance (contrasted to analyzing trend data to make the "observation").
  - 1.3.13. Non-Compliance Report (NCR): A tool used to document an item or condition that does not meet the Contract Documents.
  - 1.3.14. Prefunctional Checklist: A list of static inspections and material or component tests that verify proper installation of equipment (e.g., belt tension, oil levels, labels affixed, gages in place, sensors calibrated, etc.). The word Prefunctional refers to before Functional tests. Prefunctional Checklists must include the manufacturer's start-up checklist(s).
  - 1.3.15. Start-up: The activities where equipment is initially energized tested and operated. Start-up is completed prior to Functional Performance Tests.
  - 1.3.16. Test, Adjust, and Balance (TAB) Firm: The Owner may engage a Test, Adjust, and Balance Firm for the Project under a Separate Contract. When engaged for the Project, the TAB Firm shall be a part of the Commissioning Team and shall provide services as set forth in the Specifications.
  - 1.3.17. Test Requirements: Requirements specifying what systems, modes and functions, etc. must be tested. Test Requirements are not detailed test procedures. Test Requirements and acceptance criteria are specified in the Contract Documents.
  - 1.3.18. Training Plan: A detailed plan prepared by the Contractor, and reviewed by the Owner, that outlines the training activities, instructors, time durations, and system requirements in accordance with the Contract Documents and Commissioning Plan.
  - 1.3.19. Trending: Data collection of monitoring points using the Building Automation System or dataloggers.
- 1.4. COORDINATION

1.4.1. Commissioning Team:

1.4.1.1. Owner's Members

- 1.4.1.1.1. Representatives assigned by Owner's Designated Representative
- 1.4.1.1.2. Commissioning Authority, when engaged for the Project.
- 1.4.1.1.3. A/E.
- 1.4.1.1.4. TAB Firm, when engaged for the Project.

1.4.1.2. Contractor's Members:

- 1.4.1.2.1. Individuals, each having authority to act on behalf of the entity they represent, explicitly organized to implement all Commissioning activities through coordinated actions.
- 1.4.1.2.2. Representatives of Contractor, including but not limited to, project manager and commissioning coordinator, Subcontractors, installers, and equipment suppliers. Owner must approve Contractor's commissioning coordinator.

#### 1.4.2. Scheduling:

- 1.4.2.1. Contractor shall integrate all Commissioning activities into the Baseline Schedule and the Work Progress Schedule. All parties will address scheduling problems and make necessary notifications in a timely manner to expedite all Commissioning activities.
- 1.4.2.2. Contractor shall provide the initial schedule of primary Commissioning activities at the pre-commissioning meeting. Prior to the first Start-up or Prefunctional Checklist test occurring, Contractor shall have incorporated and integrated all Commissioning activities into the Baseline Schedule and Work Progress Schedule with appropriately linked predecessors and successors.

### 1.5. ROLES AND RESPONSIBILITIES

- 1.5.1. Roles and responsibilities of Commissioning Team members are provided in this Section to clarify the commissioning process.

#### 1.5.2. Owner's Role and Responsibilities:

- 1.5.2.1. Review Specifications containing Commissioning requirements.
- 1.5.2.2. Provide Owner's Test Requirements to Commissioning Team.
- 1.5.2.3. Approve the Commissioning Plan, Training Program and Contractor's schedule for completing all Commissioning activities.
- 1.5.2.4. Participate in Commissioning activities, including the following:
  - 1.5.2.4.1. Commissioning Team meetings.
  - 1.5.2.4.2. Review and approve Commissioning Plan, Training Plan, Prefunctional Checklists, Functional Performance Test Procedures, Functional Performance Tests, Integrated System Test Procedures, Integrated System Tests, Deferred Tests, Trending, Training Plan and other Commissioning documents.
  - 1.5.2.4.3. Attendance at Contractor's training sessions in operation and maintenance of systems and equipment.
  - 1.5.2.4.4. Observation of Contractor's demonstration of systems and equipment operation.
  - 1.5.2.4.5.

#### 1.5.3. Commissioning Authority's Role and Responsibilities, when engaged for the project.

- 1.5.3.1. Prepare and submit the Commissioning Plan for Owner's approval.

- 1.5.3.2. Review, comment and approve on Contractor's schedule for Commissioning activities.
- 1.5.3.3. Participate in Contractor-led Pre-Commissioning Meeting.
- 1.5.3.4. Conduct and document Commissioning Team meetings.
- 1.5.3.5. Perform site visits as necessary or in conjunction with Commissioning Team meetings to observe component and system installations. Attend selected Project progress meetings to obtain information on construction progress.
- 1.5.3.6. Review and comment on Submittals and coordination drawings applicable to systems being commissioned.
- 1.5.3.7. Review and comment on Contractor-prepared Prefunctional Checklist and other Contractor-prepared documents, including Operating and Maintenance Manuals and Training Plan.
- 1.5.3.8. Prior to equipment Start-ups, review the control sequences and coordinate with the Contractor and A/E in order to prepare the Functional Performance Test and Integrated System Test procedures.
- 1.5.3.9. Witness equipment Start-ups as executed by Contractor.
- 1.5.3.10. Write Functional Performance Test Procedures and Integrated System Test Procedures for Contractor's execution of tests.
- 1.5.3.11. Witness, verify, and document results of Functional Performance Tests and Integrated System Tests.
- 1.5.3.12. Coordinate resolution of Deficiencies identified during Commissioning, Deferred Tests, and during the warranty period.
- 1.5.3.13. Review Contractor's Training Plan.
- 1.5.3.14. Compile Commissioning documentation for Contractor-prepared Commissioning and Closeout Manual including test documentation, Deficiency reports and solution results; non-compliance issue tracking; and recommendations on continuous commissioning, best practices, and preventive maintenance.
- 1.5.4. Architect/Engineer's Role and Responsibilities:
  - 1.5.4.1. Attend Commissioning Team meetings.
  - 1.5.4.2. Review and Approve Commissioning Plan, Training Plan, Prefunctional Checklist, Functional Performance Test Procedures, Functional Performance Tests, Integrated System Test Procedures, Integrated System Tests, Deferred Tests, and other Commissioning documents.
  - 1.5.4.3. Review and Approve Contractor's Training Plan.
  - 1.5.4.4. Review and Approve Test, Adjust, and Balance plan as defined in Specification 23 05 90 and 23 05 93.
  - 1.5.4.5. Approve technical requirements for correction of Deficiencies identified during Commissioning, Deferred Tests, and during the warranty period.

1.5.4.6. Review Operating and Maintenance Manuals.

1.5.5. Contractor's Role and Responsibilities:

- 1.5.5.1 Produce for Owner, Commissioning Authority and A/E's approval, the Commissioning Plan, Prefunctional Checklist, Functional Performance Test Procedures, Integrated System Test Procedures, Equipment Matrix of all devices, systems and equipment supplied, and other Commissioning documents.
  - 1.5.5.1.1 Commissioning Authority will produce the Commissioning Plan, project-specific Functional Performance Test Procedures, and project-specific Integrated System Test Procedures.
  - 1.5.5.1.2 Contractor shall review and provide comments on documents produced by the Commissioning Authority, and shall accept the Commissioning Plan, Functional Performance Test Procedures, and Integrated System Test Procedures as approved by Owner.
- 1.5.5.2 As the Project progresses, add specific checklists, test procedures, schedules, recorded results, action lists, signoff sheets and other documents for the Commissioning and Close-out Manual. Administer updates to the Commissioning and Close-out Manual with the intent that all Commissioning Team members will have up-to-date documentation as the Commissioning progresses.
- 1.5.5.3 Provide an individual, subject to Owner's approval, experienced in construction and Commissioning of building systems to organize, schedule, conduct, and document the Commissioning Plan and the Commissioning process. The Contractor shall assign this individual to act as the Contractor's Commissioning Coordinator. The Contractor's Commissioning Coordinator may have additional duties such as MEP Coordinator, but not as Project Manager or Superintendent. Submit qualifications demonstrating the Commissioning Coordinator's technical expertise and experience to the Owner for approval. In the event that Contractor chooses to subcontract its Commissioning obligations, then Contractor must submit the subcontractor's qualifications and personnel to Owner for Owner's approval.
- 1.5.5.4 Furnish and install systems that meet all requirements of the Contract Documents. Perform construction inspections, Start-ups, Prefunctional Checklists, Functional Performance Tests, and Integrated System Tests in accordance with the Contract Documents and Commissioning Plan. Correct any Deficiencies identified during these processes.
- 1.5.5.5 Ensure that Commissioning activities are incorporated into the Baseline Schedule and the Work Progress Schedule.
- 1.5.5.6 Submit inspection and Start-up documentation to Owner in accordance with this Section – 01 91 00 General Commissioning Requirements, Section 01 45 00 – Project Quality Control, Section 01 77 00 – Project Close-out Procedures, Specifications, and the Commissioning Plan.
- 1.5.5.7 Furnish copies of all Submittals, manufacturers' literature, maintenance information, and any other information required for the Commissioning process. Contractor must submit to Owner installation and checkout materials actually shipped inside equipment and actual field checkout sheet forms used by factory or field technicians. Cross-reference Section 01 31 00 – Project Administration and Section 01 77 00 – Project Close-out Procedures (Operating and Maintenance Manuals) for additional required documentation.



- 1.5.5.8 Schedule and conduct pre-installation meetings and pre-commissioning meetings with Subcontractors and equipment suppliers related to Commissioning. Contractor must invite A/E and Owner to attend the pre-installation meetings and pre-commissioning meetings.
- 1.5.5.9 Provide qualified personnel, including Subcontractors as required, to fully perform the testing and operational demonstrations required by the Contract Documents and the Commissioning Plan, including any Deferred Tests or re-testing related to warranty work.
- 1.5.5.10 Correct Deficiencies identified during any stage of commissioning prior to proceeding, unless approved by Owner.
- 1.5.5.11 Provide training to Owner. Coordinate Subcontractor and vendor participation in training sessions.
- 1.5.5.12 Perform Deferred Tests and make necessary amendments to Operating and Maintenance Manuals and Record Documents for applicable issues identified during the Deferred Tests.
- 1.5.5.13 Contractor shall be responsible for the following activities, and may contract with a Building Automation System (BAS) vendor for these activities.
  - 1.5.5.13.1 Provide on-site technician skilled in software programming and hardware operation to exercise sequences of operation and to correct controls deficiencies identified during Commissioning. Contractor must provide Record Documents reflecting correction of controls deficiencies identified during Commissioning.
  - 1.5.5.13.2 Provide instrumentation, computer, software and communication resources necessary to demonstrate compliance with the Contract Documents and the Commissioning Plan during the Prefunctional Checklist activities, Functional Performance Tests and Integrated System Tests of Building Automation System equipment.
  - 1.5.5.13.3 Attend pre-commissioning meetings and Commissioning meetings including seasonal, post occupancy, or deferred Commissioning meetings and activities as deemed appropriate by Owner. Prepare BAS Training Plans with Commissioning Team and perform training as specified in Contract Documents and Commissioning Plan.
  - 1.5.5.13.4 Maintain comprehensive system calibration and checkout records. Submit records to Owner.
  - 1.5.5.13.5 Set up, capture, analyze, and report trend logs as requested by Owner to substantiate proper systems operation.
- 1.5.6 Test, Adjust, and Balance Firm's Role and Responsibilities, when engaged for the project:
  - 1.5.6.1 Attend pre-commissioning meetings and Commissioning Team meetings including seasonal, post occupancy, or deferred Commissioning meetings and activities as deemed appropriate Owner.
  - 1.5.6.2 Submit Test, Adjust, and Balance Plan and forms describing methodology for performance of Test, Adjust, and Balance procedures specific to this Project to Owner/Engineer of record for review.

- 1.5.6.3 Cooperate with Contractor and Contractor's Building Automation System vendor, if any, during Commissioning.
- 1.5.6.4 Re-balance as needed to correct any Deficiencies identified during Commissioning.
- 1.5.6.5 Review BAS graphics and performance tests for accuracy, note deficiencies.
- 1.5.6.6 Provide T A B data to Contractor and Commissioning Team before Contractor begins Functional Performance Tests.

## 1.6 EQUIPMENT DOCUMENTATION REQUIREMENTS

### 1.6.1 Equipment Matrix:

- 1.6.1.1 Contractor shall submit a complete listing of all equipment, devices, and systems, with certain information as herein noted, within twenty-one (21) days of issuance of the Notice to Proceed with Construction and at least seven (7) days prior to submission of the first Application for Payment. This listing shall be referred to as the Equipment Matrix. Download an electronic version of this spreadsheet in Microsoft Excel format to use as a template for submittal purposes at the following website:

<https://www.mdanderson.org/content/dam/mdanderson/documents/about-md-anderson/about-us/doing-business/owners-design-guidelines/supplemental-resources/Equipment%20Matrix%20Template.xlsx>

- 1.6.1.2 Contractor shall coordinate Contractor's response to this requirement with Contractor's preparation of the Baseline Schedule, Work Progress Schedule, Submittal Schedule, Schedule of Values, and list of all equipment. Refer to Section 01 32 00 – Project Planning and Scheduling and Section 01 31 00 – Project Administration.

- 1.6.1.2.1 To the extent practical, Contractor should minimize redundant efforts in favor of a single, organized approach to all documentation required for Project equipment, systems, and devices.

- 1.6.1.3 The Equipment Matrix shall be formatted as a spreadsheet per Owner's template, with capability for printing various selected data columns to meet documentation requirements at various stages of construction, and for different purposes as required by various Technical Sections. The Equipment Matrix shall be updated as the Project progresses and submitted periodically as requested by Owner. Provide Owner with an electronic version of the final approved Equipment Matrix at or before Project Close-out.

- 1.6.1.3.1 Contractor may elect to combine the Submittal Schedule and Equipment Matrix into one spreadsheet (with multiple tabbed sheets) that Contractor updates as the Project progresses.

- 1.6.1.4 The Equipment Matrix shall identify all operable devices and equipment grouped by the Construction Specification Institute (CSI) Master Format under the system they are primarily categorized under. When sorted by the column for system identification, the resulting printout must identify all system components, regardless of whether they are mechanical, electrical, or otherwise.

- 1.6.1.5 Contractor shall continue to update the Equipment Matrix for each device or system. Owner will assist the Contractor in collecting information on Owner-furnished and Contractor-installed equipment. The Equipment Matrix shall include the following column headings, as a minimum, for each device per specification 20 05 53:

- 1.6.1.5.1 Equipment Plan Designation: Equipment Naming Convention (equipment acronym and sequential number) from Contract Documents.
- 1.6.1.5.2 Specification Section number.
- 1.6.1.5.3 Building ID: Shall be obtained from Owner.
- 1.6.1.5.4 Location / Room Number: Owner's Wayfinding Codes from Owner's Space Management database referring to room number or building location. Shall be obtained from Owner.
- 1.6.1.5.5 Asset Short Description: The asset short description is to be a very short textual description. Type a brief, identifying description for the asset followed by a comma then the "Equipment Plan Designation". If multiple units, of same type, include equipment ID number from the Construction Documents. This field is limited to 80 characters. Example= Pump, Secondary Chilled Water, SCHWP-01-2B.
- 1.6.1.5.6 Asset Long Description: A more complete description of the asset to make it clearer to the Owner's maintenance group. Include any distinguishing details relevant to identifying the asset from other identical units (color, physical location within a room, and so on. Example: Horizontal split case pump located in North end of room.
- 1.6.1.5.7 System Level Asset: Type of system that the equipment serves. Shall be obtained from Owner. Example: Domestic Hot Water
- 1.6.1.5.8 Product submittal reference number(s).
- 1.6.1.5.9 Product submittal approval date.
- 1.6.1.5.10 Name of installing Subcontractor.
- 1.6.1.5.11 Installing Subcontractor contact information.
- 1.6.1.5.12 Equipment Manufacturer.
- 1.6.1.5.13 Equipment model number.
- 1.6.1.5.14 Equipment serial number.
- 1.6.1.5.15 Emergency Power: Note whether equipment is served from emergency power system.
- 1.6.1.5.16 Equipment manufacturer's representative (Vendor).
- 1.6.1.5.17 Equipment manufacturer's representative (Vendor) contact information.
- 1.6.1.5.18 Manufacturer's purchase order number.
- 1.6.1.5.19 Asset Cost: Equipment purchase price excluding all auxiliary costs.
- 1.6.1.5.20 Start-up Date: Date of initial equipment or device start-up by the Contractor.
- 1.6.1.5.21 Prefunctional Checklist completion date.
- 1.6.1.5.22 Functional Performance Test completion date.
- 1.6.1.5.23 Integrated Systems Test completion date.

1.6.1.5.24 Substantial Completion date.

1.6.1.5.25 Manufacturer's warranty start date.

1.6.1.5.26 Warranty End Date: The date on which the asset warranty ends. (Default is one year after the Substantial Completion Date unless a longer warranty period is requested or provided.)

1.6.1.6 Owner will furnish the following additional information; allow column headings for this data:

1.6.1.6.1 Asset Number

1.6.1.6.2 Parent ID

1.6.1.6.3 Asset Group Code

1.6.1.6.4 Cost Center

1.6.1.6.5 Critical Factor

1.6.1.6.6 Estimated Asset Life

1.6.1.6.7 Asset Status

1.6.1.6.8 Work Group

1.6.1.6.9 Work Area

## **PART 2- EXECUTION**

### **2.1 COMMISSIONING PLAN**

2.1.1 When a CxA has not been engaged for the project, Contractor shall submit draft Commissioning Plan to Owner and A/E for review within twenty-one (21) days of issuance of the Notice to Proceed with Construction or within ninety (90) days prior to initial installation of materials or equipment that will undergo Start-up and Functional Performance Tests, as directed by Owner.

2.1.2 Contractor shall allow in the Work Progress Schedule a minimum of twenty-one (21) days after the receipt by the Owner of the draft Commissioning Plan Submittal for the Owner to submit review comments to Contractor.

2.1.3 Contractor shall incorporate Owner's review comments and resubmit the revised Commissioning Plan to Owner within fourteen (14) days of receipt of the review comments.

2.1.4 Contractor shall allow in the Work Progress Schedule an additional fourteen (14) days for Owner's approval of the resubmitted Commissioning Plan that incorporates Owner's review comments.

#### **2.1.5 PRE-COMMISSIONING MEETING**

2.1.6 Upon obtaining Owner's approval of the Commissioning Plan, Contractor shall schedule, plan, and conduct a Pre-Commissioning Meeting with all parties involved in Commissioning. This meeting should include the major Subcontractors, specialty

manufacturers/suppliers, A/E, Test, Adjust, and Balance Firm, Commissioning Authority, and Owner's representatives as participants.

2.1.7 Contractor shall prepare for the Pre-Commissioning Meeting by creating drafts of the following documents with input from the Owner. Commissioning Authority, when engaged for the project, will prepare the Commissioning Plan, Functional Performance Test Procedures and Integrated System Test Procedures.

2.1.7.1 Approved Commissioning Plan including the Equipment Matrix and the Close-out and Documentation Matrix as defined in Section 01 77 00 – Project Close-out Procedures.

2.1.7.2 Baseline Schedule and Work Progress Schedule incorporating Commissioning activities.

2.1.7.3 Prefunctional Checklists.

2.1.7.4 Functional Performance Test Procedures.

2.1.7.5 Integrated System Test Procedures.

2.1.8 Contractor or Commissioning Authority when engaged for the project shall conduct the Pre-Commissioning Meeting and review all aspects of the Commissioning Plan. All documentation will be discussed and all test procedures and forms reviewed for approval with the Owner. Contractor shall prepare an outline noting responsibilities of the various parties involved in Commissioning for review at this meeting.

2.1.9 The Commissioning Plan shall be reviewed with all attendees and the scope of work discussed. Contractor should be prepared to distribute copies of the pertinent sections to the various Subcontractors involved in Commissioning.

2.1.10 Contractor shall present Commissioning target dates for the Project. These dates and durations shall be incorporated in the Baseline Schedule and the Work Progress Schedule in accordance with Section 01 32 00 – Project Planning and Scheduling.

## 2.2 REPORTING

2.2.1 Contractor shall provide status reports to Owner at frequencies directed by Owner.

2.2.2 Contractor shall communicate at least monthly with all members of the Commissioning Team, keeping them apprised of Commissioning progress and scheduling changes.

2.2.3 Contractor shall submit Non-Compliance and Deficiency reports to Owner within five (5) days of the date the Non-Compliance or Deficiency is first observed. This includes responses to items noted by the Commissioning Authority.

2.2.4 Contractor shall provide final Commissioning documentation to Owner in accordance with Section 01 77 00 – Project Close-out Procedures, which will become part of the Commissioning and Close-out Manual.

## 2.3 TEST EQUIPMENT

2.3.1 Contractor shall provide all specialized tools, test equipment and instruments required to execute start-up, checkout, and testing of equipment.

- 2.3.2 All specialized tools, test equipment and instruments required to execute start-up, checkout, and testing of equipment shall be of sufficient quality and accuracy to test and measure system performance within specified tolerances. A testing laboratory must have calibrated test equipment within the previous twelve (12) months. Calibration shall be NIST traceable. Contractor must calibrate test equipment and instruments according to manufacturer's recommended intervals and whenever the test equipment is dropped or damaged. Calibration tags must be affixed to the test equipment or certificates readily available.

## 2.4 PRE FUNCTIONAL CHECKLIST

- 2.4.1 Contractor shall provide a Prefunctional Checklist for each system to Owner, Commissioning Authority and A/E for review.
- 2.4.1.1 Contractor shall provide a draft version of each individual Prefunctional Checklist at a pre-installation meeting for the system. Based on discussions at a pre-installation meeting and subsequent as-constructed conditions, Contractor shall amend and revise each Prefunctional Checklist as appropriate prior to requesting system inspection from the Owner.
- 2.4.1.2 Contractor shall submit the final approved Prefunctional Checklist and all supporting documentation prior to requesting Start-up and Functional Performance Tests.
- 2.4.2 Contractor shall review the installation and Contract Documents for each system and shall provide written confirmation of the following if not included in the Prefunctional Checklist.
- 2.4.2.1 All required test reports and certifications have been submitted and accepted by Owner. Contractor must provide certification of acceptance from manufacturer's representative.
- 2.4.2.2 Evidence that A/E has approved all Submittals for each component device.
- 2.4.2.3 All valve charts, wiring diagrams, control schematics, electrical panel directories, etc. have been submitted and approved, and that all devices have been installed in accordance with the Contract Documents.
- 2.4.2.4 All tabulated data has been submitted for each system and for each device.
- 2.4.2.5 Each component device has been installed in accordance with applicable codes, the Contract Documents, and manufacturer's written recommendations.

## 2.5 INITIAL START-UP

- 2.5.1 Start-up of Independent Devices:
- 2.5.1.1 Prior to Start-up, Contractor shall not energize or activate, or allow to be energized or activated, any operable device until Contractor has verified to Contractor's own satisfaction that all Contract Document requirements for the operable device have been met and have been documented in the Prefunctional Checklists.
- 2.5.1.2 Contractor may energize or start-up independent devices for operational check-out and testing only after Contractor and manufacturer's representative or engineering technician (if required by the Contract Documents) have inspected and accepted the installation. The installation must not vary from provisions of the applicable Specifications and the manufacturer's written recommendations for Start-up.
- 2.5.1.3 When Start-up of equipment or systems have the potential to impact Owner's daily operations or when the Contract Documents require the Owner to witness Start-up,

Contractor must provide advance notice to Owner in accordance with the procedures outlined in the Contract Documents prior to Start-up. Contractor may not proceed with Start-up without the Owner's written approval.

## 2.5.2 Start-up of Building Systems:

### 2.5.2.1 Contractor shall not energize or activate any building system until the following conditions have been met:

2.5.2.1.1 Contractor has verified that all wiring and support components for equipment are complete and have been tested in accordance with the technical specifications and the manufacturer's written recommendations.

2.5.2.1.2 Contractor has verified that each component device has been checked for proper lubrication, vibration isolation, drive rotation, belt tension, control sequence, or other conditions that may cause damage.

2.5.2.1.3 Contractor has verified that all tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer and are in compliance with applicable Contract Documents.

2.5.2.1.4 Contractor has received approved building system final inspection reports. Refer to Section 01 45 00 – Project Quality Control.

2.5.2.1.5 Contractor has provided the Owner and A/E with a written fourteen (14) day notice of intent to start-up the system for operational check-out. The notification procedures outlined in the Contract Documents shall be utilized.

2.5.2.2 Contractor shall perform Start-up under supervision of the responsible manufacturer's representative in accordance with manufacturer's instructions and specification requirements.

2.5.2.3 Contractor shall coordinate and schedule system(s) Start-up in a timely manner so that each component or system can operate for a period of time that is sufficient to evaluate and adjust performance as necessary. All building systems shall be operational and must have been successfully inspected by Owner, through attendance and concurrence with results of the Prefunctional Checklists or as otherwise approved by Owner, prior to the Contractor proceeding with Functional Performance Tests.

2.5.2.4 Contractor shall clearly list outstanding items or initial Start-up and Prefunctional Checklists items not completed successfully. Contractor shall obtain from Subcontractor completed forms documenting any outstanding Deficiency within five (5) days of completion of tests.

2.5.2.5 Contractor shall review completed Deficiency forms to determine if outstanding items prevent execution of the Functional Performance Tests and shall issue any necessary responses to the Commissioning Team.

## 2.6 REQUEST FOR START-UP AND FUNCTIONAL PERFORMANCE TESTS

2.6.2 Contractor shall notify Owner to request: (1) initial energization or operation of equipment and systems; and (2) an inspection of any system or system component for readiness prior to Functional Performance Tests.

2.6.2.1 Request for Start-up. Contractor must certify that: (1) electrical and mechanical connections have been installed and are safe for initial Start-up; (2) Contractor has

complied with Owner's utilities outage notifications; and (3) Start-up will not harm Owner's daily routine operations.

2.6.2.2 Contractor shall complete the applicable Prefunctional Checklist(s) signed by Contractor and CxA if engaged for the project, evidencing Contractor's own thorough inspection of the system and completion of Start-up activities required by the Contract Documents and the Commissioning Plan. Contractor shall submit required supporting documentation, including but not limited to, factory start-up forms, operational testing data, and certifications.

2.6.2.3 Request for Functional Performance Test. Contractor must certify that the Contractor has verified that the installation, Start-up, Prefunctional Checklists, and initial operation of the system or component are in accordance with the Contract Documents and the Commissioning Plan including manufacturer's instructions, manufacturer's requirements for maintenance of warranty, and verification that the system is ready for Functional Performance Tests. Contractor must certify that the manufacturer's representative has verified that the installation, Start-up, and initial operation of the system or component are in accordance with the manufacturer's published recommendations.

2.6.2 Contractor must obtain Owner's approval prior to proceeding with the Start-up or Functional Performance Test. All construction inspections must be completed. Any and all Deficiencies and all items included in the Non-Compliance Report have been brought into compliance with the Contract Documents..

## 2.7 FUNCTIONAL PERFORMANCE TESTS

### 2.7.2 Objective and Scope:

2.7.2.1 The objective of a Functional Performance Test is to demonstrate that the entire individual system operates according to the Contract Documents.

2.7.2.2 Contractor shall operate each system through all modes of operation (occupied, unoccupied, warm-up, cool-down, etc.) for specified system responses. Contractor is required to demonstrate to Owner's satisfaction each operational sequence.

### 2.7.2 Development of Functional Performance Test Procedures:

2.7.2.1 The purpose of a Functional Performance Test is to verify and document compliance with the stated criteria of acceptance. Contractor or Commissioning Authority if engaged for the project shall develop specific script-type test procedures and associated test forms to verify and document proper operation of each piece of equipment and system.

2.7.2.2 Contractor or Commissioning Authority if engaged for the project shall prepare Functional Performance Test Procedure forms as part of the Commissioning Plan. Once approved by Owner, Contractor shall utilize the forms for all testing activities.

2.7.2.3 Functional Performance Test Procedure forms must include the following:

2.7.2.3.1 System and equipment or component name(s).

2.7.2.3.2 Equipment location and identification number as identified in the Equipment Matrix.

2.7.2.3.3 Unique test identification number and reference to unique Prefunctional Checklist identification numbers for the equipment.



- 2.7.2.3.4 Date and time of test.
  - 2.7.2.3.5 Project name.
  - 2.7.2.3.6 Participating parties.
  - 2.7.2.3.7 Specific sequence of operation or other specified parameters, including performance data being verified.
  - 2.7.2.3.8 Instructions for setting up a Functional Performance Test.
  - 2.7.2.3.9 Specific script-type, step-by-step procedures to perform a Functional Performance Test, in a clear, sequential and repeatable format that is customized for the system being tested.
  - 2.7.2.3.10 A Pass / Fail checkbox (or data entry box as appropriate) for clearly indicating whether or not proper performance of each part of a Functional Performance Test was achieved and space for actual readings.
  - 2.7.2.3.11 Section for comments.
  - 2.7.2.3.12 Signatures and date block for participant and Owner approvals.
- 2.7.2 Contractor shall operate, or cause to be operated, each system, device, or equipment item, both intermittently and continuously, for a duration period as indicated in the Specification(s) for each item and/or in accordance with the manufacturer's written recommendations, the Contract Documents and the Commissioning Plan.
- 2.7.2 Contractor shall operate each component device and each building system to the full extent of its capability, from minimum to maximum, and under automatic control and manual control.
- 2.7.2 Contractor and manufacturer's representatives shall supervise and coordinate adjustments and balancing of all devices and systems for proper operation prior to requesting a Functional Performance Test(s).
- 2.7.2.1 Where final balancing of a system is to be performed by Owner, such as final air balancing, Contractor shall provide all services indicated in the applicable Specifications and under this Section, including the following, prior to Owner's final balancing.
- 2.7.2.1.1 Operational verification of all component devices and the total system, including automatic controls when applicable. Operational verification includes verification that all motors, fans, dampers, and other operable devices are performing in compliance with Specifications throughout their operable range and that all devices are controlled as described in the specified sequence of operation.
  - 2.7.2.1.2 All tabulated data, motor amperage readings, valve tag verifications, and other data required by the Specifications.
- 2.7.2.2 Where final balancing of a system or particular components of a system are not specifically indicated to be performed by Owner, Contractor shall provide final balancing and adjustments for operation within specified tolerances prior to Functional Performance Test of such system.
- 2.7.2.3 Coordination and Scheduling. Members of the Commissioning Team, including Owner, may observe Functional Performance Tests of equipment components and systems. Contractor shall provide written notice to Owner at least ten (10) days prior to Functional

Performance Tests of equipment components and systems. Contractor shall notify Owner in advance of any changes to the Functional Performance Test schedule. Owner may require Contractor to reschedule Functional Performance Tests to ensure availability of Owner's representative(s).

2.7.2.4 Contractor conducts Functional Performance Tests after system Start-up and Pre-functional Checklists are satisfactorily completed and have been approved by Owner. Air balancing and water balancing shall be completed before Functional Performance Tests.

2.7.2.5 Contractor conducts Integrated System Tests after Functional Performance Tests are satisfactorily completed and have been approved by Owner.

## 2.8 INTEGRATED SYSTEM TESTS

### 2.8.1 Objective and Scope:

2.8.1.1 The objective of an Integrated System Test is to demonstrate that each system operates jointly with other systems according to the Contract Documents.

2.8.1.2 Contractor shall operate each system jointly with other systems, through selected modes of operation (fire alarm integration with HVAC, emergency power modes, equipment failures among related systems, etc.) for specified system responses. Contractor is required to demonstrate to Owner's satisfaction each operational sequence.

### 2.8.2 Development of Integrated System Test Procedures:

2.8.2.1 The purpose of an Integrated System Test is to verify and document compliance with the stated criteria of acceptance. Contractor or Commissioning Authority if engaged for the project shall develop specific script-type test procedures and associated test forms to verify and document proper operation of each piece of equipment and system, jointly and independently of other systems.

2.8.2.2 Contractor or Commissioning Authority if engaged for the project shall prepare Integrated System Test Procedure forms as part of the Commissioning Plan. Once approved by Commissioning Team., Contractor shall utilize the forms for all testing activities.

2.8.2.3 Integrated System Test Procedure forms must include the following.

2.8.2.3.1 System and equipment or component name(s).

2.8.2.3.2 System and equipment location and identification number as identified in the Equipment Matrix.

2.8.2.3.3 Unique test identification number and reference to unique Functional Performance Test identification numbers for the system and equipment.

2.8.2.3.4 Date and time of test.

2.8.2.3.5 Project name.

2.8.2.3.6 Participating parties.

2.8.2.3.7 Specific sequence of operation or other specified parameters, including performance data being verified.

2.8.2.3.8 Instructions for setting up an Integrated System Test.

- 2.8.2.3.9 Specific script-type, step-by-step procedures to perform an Integrated System Test, in a clear, sequential and repeatable format that is customized for the system being tested.
- 2.8.2.3.10 A Pass / Fail checkbox (or data entry box as appropriate) for clearly indicating whether or not proper performance of each part of an Integrated System Test was achieved and space for actual readings.
- 2.8.2.3.11 Section for comments.
- 2.8.2.3.12 Signatures and date block for participant and Owner approvals.
- 2.8.3 Contractor shall operate, or cause to be operated, each system, device, or equipment item, both intermittently and continuously, for a duration period as indicated in the Specifications for each item and in accordance with the manufacturer's written recommendations, the Contract Documents and the Commissioning Plan.
- 2.8.4 Coordination and Scheduling.
  - 2.8.4.1 Members of the Commissioning Team, including Owner may observe Integrated System Tests of equipment components and systems. Contractor shall provide written notice to Owner at least fourteen (14) days prior to Integrated System Tests of equipment components and systems. Contractor shall notify Owner and A/E in advance of any changes to the Integrated System Test schedule. Owner may require Contractor to reschedule Integrated System Tests to ensure availability of Owner's representative(s).
  - 2.8.4.2 Contractor conducts Integrated System Tests after Functional Performance Tests are satisfactorily completed and have been approved by Owner.

## 2.9 DOCUMENTATION AND NON-CONFORMANCE

### 2.9.1 Documentation:

- 2.9.1.1 Contractor shall witness and document the results of all Functional Performance Tests and Integrated Systems Tests using specific procedural forms developed for that purpose or an approved electronic database program. Prior to testing, Contractor shall submit these forms to the Owner and A/E for review and approval. Contractor will include the completed, filled-out forms in the Commissioning and Close-out Manual.

### 2.9.2 Non-Conformance:

- 2.9.2.1 Contractor shall record results of Functional Performance Tests and Integrated System Tests. Contractor or Commissioning Authority if engaged for the project shall report all Deficiencies and non-conformance issues to Commissioning Team.in accordance with the procedures outlined in the Commissioning Plan.
- 2.9.1.2 At the sole discretion of Owner, Owner may permit Contractor to make corrections of minor Deficiencies observed during a Functional Performance Test or during an Integrated System Test. However, the Contractor must document the Deficiency and resolution on the appropriate report form.
- 2.9.1.3 Contractor shall make every effort to expedite testing and minimize unnecessary delays, while not compromising the integrity of a Functional Performance Test or an Integrated Systems Test.
- 2.9.1.4 Contractor, A/E and Owner will attempt to resolve Deficiencies in the following manner.

- 2.9.1.4.1 When there is no dispute about a Deficiency and Contractor accepts responsibility for correction.
  - 2.9.1.4.1.1 Commissioning Authority if engaged for the project or Contractor documents the Deficiency and the corrective actions, and then proceeds to another test or sequence. A Deficiency report is submitted to Owner. Contractor corrects the Deficiency, completes the statement of correction form certifying that the equipment or system is ready for retesting, and sends the certification to Owner.
  - 2.9.1.4.1.2 Contractor reschedules test with Owner.
- 2.9.1.4.2 When there is a dispute about whether or not the test indicates a Deficiency or the Contractor's responsibility for correction of the apparent Deficiency.
  - 2.9.1.4.2.1 Commissioning Authority if engaged for the project or Contractor documents the apparent Deficiency. A Deficiency report is submitted to Owner, including the apparent Deficiency.
  - 2.9.1.4.2.2 Contractor facilitates resolution of the Deficiency and provides recommendations to the Owner. Contractor and Owner may bring other parties into the discussions as needed. Final technical interpretive authority is with the A/E. Final acceptance authority is with the Owner.
  - 2.9.1.4.2.3 Contractor documents the resolution process.
  - 2.9.1.4.2.4 If Owner and the A/E agree with Contractor's interpretation and proposed resolution, Contractor forwards response to Owner. Contractor reschedules test with Owner. Contractor must repeat this process until satisfactory performance and Owner's approval is obtained.

## 2.10 DEMONSTRATION AND OWNER TRAINING

- 2.10.1 Contractor, in coordination with Owner shall develop the Training Plan with project specific requirements for Owner Training, after reviewing the different systems to be installed and commissioned. The purpose of the Training Plan is to specifically communicate the required content and training durations required by the Owner based upon the type of equipment and the Owner's past experience.
- 2.10.2 Refer to Section 01 79 00 - Demonstration and Training for specific requirements.

## 2.11 DEFERRED TESTS

### 2.11.1 Deferred Tests:

- 2.11.1.1 Deferred Tests shall be identified in writing and shall be approved by Owner.
  - 2.11.1.1.1 Contractor shall complete Deferred Tests as part of this Contract during the Warranty Period. Contractor shall schedule this activity with Owner. Contractor shall perform tests and document and correct Deficiencies. Owner may observe the tests and review and approve test documentation and Deficiency corrections.
  - 2.11.1.1.2 Contractor shall incorporate final updates to the Commissioning and Close-out Manual.

- 2.11.1.1.3 If any check or test cannot be completed prior to Substantial Completion due to the building structure, required occupancy condition, or other condition, performance of such test may be delayed to later in the Warranty Period, upon approval of the Owner.
- 2.11.1.1.4 Commissioning of systems which provide Life Safety (passive or active) to the building and its occupants shall not be deferred unless occupancy is deferred.

## 2.12 COMMISSIONING DOCUMENTATION

- 2.12.1 Contractor shall compile and organize all Commissioning documentation into a Commissioning and Close-out Manual and deliver to the Owner as specified in Section 01 77 00 – Project Close-out Procedures.
- 2.12.2 The Commissioning and Close-out Manual submitted to Owner shall contain all Commissioning documentation, including, but not limited to:
  - 2.12.2.1 The Commissioning Plan.
  - 2.12.2.2 Final Baseline Schedule filtered to show only the Commissioning activities.
  - 2.12.2.3 Completed Equipment Matrix.
  - 2.12.2.4 Completed Prefunctional Checklists with all required attachments,
  - 2.12.2.5 Functional Performance Test Procedures and results.
  - 2.12.2.6 Integrated System Test Procedures and results.
  - 2.12.2.7 Training Plan and all supporting documentation. Refer to Section 01 79 00 – Demonstration and Training for specific requirements.
  - 2.12.2.8 Deficiency reports and solution results.
  - 2.12.2.9 Recommendations on continuous Commissioning, best practices, and preventive maintenance.
  - 2.12.2.10 Refer to Section 01 77 00 – Project Close-out Procedures for additional Close-out documentation to be included in the Commissioning and Close-out Manual.

**END OF SECTION 01 91 00**

## Attachment No. 1 – Equipment Matrix

Download an Electronic Version of the Equipment Matrix template at the following Internet Address:

<https://www.mdanderson.org/content/dam/mdanderson/documents/about-md-anderson/about-us/doing-business/owner-s-design-guidelines/supplemental-resources/Commissioning%20Plan%20Template.zip>

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**DOCUMENT REVISION HISTORY**

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<b>Issue</b>	<b>Date</b>	<b>Revision Description</b>	<b>Author</b>
	<b>20190301</b>	<b>Original Issuance</b>	
<b>Rev. 1</b>	<b>20190901</b>	<b>Revisions per Pouyan Layegh, EHSSEM to this document and Equipment Matrix teamplate from Improve FM and approved by MSC teams. Origin of yellow highlighted areas on tabs 2 and 3 are unknown.</b>	<b>P. Layegh, EHSSEM</b>
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<b>Rev. 4</b>			
<b>Rev. 5</b>			

**EXHIBIT M**

**RIDER 104; POLICY ON UTILIZATION OF  
HISTORICALLY UNDERUTILIZED BUSINESSES**

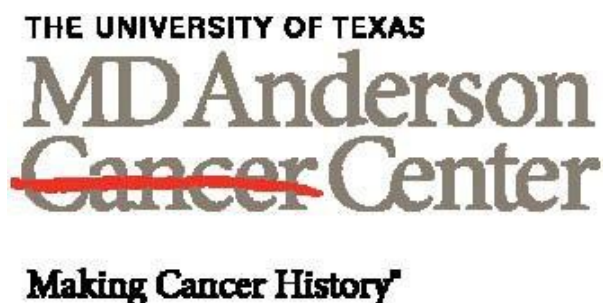


THE UNIVERSITY OF TEXAS MD ANDERSON CANCER CENTER  
July 2019

## **RIDER 104-B**

# **POLICY ON UTILIZATION HISTORICALLY UNDERUTILIZED BUSINESSES**

## **Professional Services**



**The University of Texas MD Anderson Cancer Center  
HUB and Federal Small Business Program  
Policy on Utilization of Historically Underutilized Businesses (HUBs)**

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## The University of Texas MD Anderson Cancer Center HUB and Federal Small Business Program

<b>POLICY ON UTILIZATION OF HISTORICALLY UNDERUTILIZED BUSINESSES (HUBs)</b>
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### **Introduction**

In accordance with the Texas Government Code, Sections 2161.181-182 and Title 34, Section 20.284 of the Texas Administrative Code (TAC), The Board of Regents of the University of Texas System, acting through The University of Texas MD Anderson Cancer Center's HUB and Federal Small Business Program, shall make a good faith effort to utilize Historically Underutilized Businesses (HUBs) in contracts for construction services, including professional and consulting services; and commodities contracts. The HUB Rules promulgated by the Texas Comptroller of Public Accounts (the "Texas Comptroller"), set forth in 34 TAC Sections 20.281-20.298, encourage the use of HUBs by implementing these policies through race-, ethnic- and gender-neutral means.

The purpose of the HUB Program is to promote full and equal business opportunities for all businesses in State contracting in accordance with the following goals as specified in the State of Texas Disparity Study:

- **11.2% for heavy construction other than building contracts;**
- **21.1% for all building construction, including general contractors and operative builders contracts;**
- **32.9% for all special trade construction contracts;**
- **23.7% for professional services contracts**
- **26% for all other services contracts, and**
- **21.1% for commodities contracts.**

The University of Texas MD Anderson Cancer Center (MD Anderson) shall make a good faith effort to meet or exceed these goals to assist HUBs in receiving a portion of the total contract value of all contracts that MD Anderson expects to award in a fiscal year. MD Anderson may achieve the annual program goals by contracting directly with HUBs or indirectly through subcontracting opportunities in accordance with the Texas Government Code, Chapter 2161, Subchapter F.

**SUMMARY OF REQUIREMENTS**  
**Historically Underutilized Business (HUBs) Subcontracting Plan**

It is the policy of The University of Texas System and each of its component institutions, to promote and encourage contracting and subcontracting opportunities for Historically Underutilized Businesses (HUBs) in all contracts. Accordingly, The University of Texas MD Anderson Cancer Center has adopted “**RIDER 104-A, Policy on Utilization of Historically Underutilized Businesses**”. The Policy applies to all contracts with an expected value of \$100,000 or more. The University of Texas MD Anderson Cancer Center is the contracting authority.

1. In all contracts for professional services, contracting services, and/or commodities with an expected value of \$100,000 or more, The University of Texas MD Anderson Cancer Center (“MD Anderson” or “University”) will indicate in the purchase solicitation (e.g. RFQ, RFP, or CSP) whether or not MD Anderson has determined that subcontracting opportunities are probable in connection with the contract. A HUB Subcontracting Plan is a required element of the architect, contractor or vendor Response to the purchase solicitation. The HUB Subcontracting Plan shall be developed and administered in accordance with the Policy.  
**Failure to submit a required HUB Subcontracting Plan will result in rejection of the Response.**
2. If subcontracting opportunities are probable, MD Anderson will declare such probability in its invitations for bids, requests for proposals, or other purchase solicitation documents, and shall require submission of the appropriate HUB Subcontracting Plan with the Response.
  - a. When subcontracting opportunities are probable, and the Respondent proposes to subcontract any part of the work, the Respondent shall submit a **HUB Subcontracting Plan as prescribed by the Texas Comptroller identifying subcontractors [34 TAC §20.285(d)(1)(A)(B)(C)(D) ¶(ii)(iii)(2)(3)(A)(B)(C)(D)(E)(F)(4)(A)(B)].**
  - b. When subcontracting opportunities are probable, but the Respondent can perform such opportunities with its employees and resources, the Respondent’s HUB Subcontracting Plan shall include **the Self Performance HUB Subcontracting Plan, Section 3 – Self Performance Justification as the HUB Subcontracting Plan (HSP). [34 TAC §20.85 (d)(5)(A)(B)(C)(D)].**
3. If subcontracting opportunities are not probable, MD Anderson will declare such probability in its invitations for bids, requests for proposals, or other purchase solicitation documents and shall require submission of the appropriate HUB Subcontracting Plan with the Response.
  - a. When subcontracting opportunities are not probable, and the Respondent proposes to perform all of the work with its employees and resources, the Respondent shall submit a HUB Subcontracting Plan that includes **the Self Performance HUB Subcontracting Plan, Section 3 – Self Performance Justification as the HUB Subcontracting Plan (HSP).**
  - b. When subcontracting opportunities are not probable, but the Respondent proposes to subcontract any part of the work, the Respondent shall submit a **HUB Subcontracting Plan as prescribed by the Texas Comptroller identifying subcontractors.**
4. Respondents shall follow, but are not limited to, procedures listed in the Policy when developing a HUB Subcontracting Plan.
5. In making a determination whether a good faith effort has been made in the development of the required HUB Subcontracting Plan, MD Anderson shall follow the procedures listed in the Policy. If accepted by the University, the HUB Subcontracting Plan shall become a provision of the Respondent's contract with MD Anderson. **Revisions necessary to clarify and enhance information submitted in the original HUB subcontracting plan may be made in an effort to determine good faith effort.** Any revisions after the submission of the HUB Subcontracting Plan shall be approved by the HUB Coordinator.
6. The University of Texas MD Anderson Cancer Center shall reject any Response that does not include a fully completed HUB Subcontracting Plan, as required. **An incomplete HUB Subcontracting Plan is considered a material failure to comply with the solicitation for proposals.**

7. Changes to the HUB Subcontracting Plan. Once a Respondent's HUB Subcontracting Plan is accepted by MD Anderson and becomes a provision of the contract between Respondent and MD Anderson, the Respondent can only change that HUB Subcontracting Plan if (a) the Respondent complies with 34 TAC Section 20.285; (b) the Respondent provides its proposed changes to MD Anderson for review; (c) MD Anderson (including MD Anderson's HUB Coordinator) approves Respondent's proposed changes to its HUB Subcontracting Plan; and (d) MD Anderson and the Respondent amend their contract (via a writing signed by authorized officials of both parties) in order to replace the contract's existing HUB Subcontracting Plan with a revised HUB Subcontracting Plan containing the changes approved by MD Anderson.
8. Expansion of Work. If, after entering into a contract with a Respondent as a result of a purchase solicitation subject to the Policy, MD Anderson wishes to expand the scope of work that the Respondent will perform under that contract through a change order or any other contract amendment (the "Additional Work"), MD Anderson will determine if the Additional Work contains probable subcontracting opportunities not identified in the initial purchase solicitation for that contract. If MD Anderson determines that probable subcontracting opportunities exist for the Additional Work, then the Respondent must submit to MD Anderson an amended HUB Subcontracting Plan covering those opportunities that complies with the provisions of 34 TAC Section 20.285. Such an amended HUB Subcontracting Plan must be approved by MD Anderson (including MD Anderson's HUB Coordinator) before (a) the contract may be amended by MD Anderson and the Respondent to include the Additional Work and the amended HUB Subcontracting Plan and (b) the Respondent performs the Additional Work. If a Respondent subcontracts any of the additional subcontracting opportunities identified by MD Anderson for any Additional Work (i) without complying with 34 TAC Section 20.285 or (ii) before MD Anderson and that Respondent amend their contract to include a revised HUB Subcontracting Plan that authorizes such subcontracting, then the Respondent will be deemed to be in breach of its contract with MD Anderson. As a result of such breach, MD Anderson will be entitled to terminate its contract with the Respondent, and the Respondent will be subject to any remedial actions provided by Texas law, including those set forth in Chapter 2161, Texas Government Code, and 34 TAC Section 20.285. University may report a Respondent's nonperformance under a contract between that Respondent and MD Anderson to the Texas Comptroller in accordance with 34 TAC Sections 20.101 through 20.108.
9. A Response may state that the Respondent intends to perform all the subcontracting opportunities with its own employees and resources in accordance with the Policy. However, if such a Respondent enters into a contract with MD Anderson as a result of such a Response but later desires to subcontract any part of the work set forth in that contract, before the Respondent subcontracts such work it must first change its HUB Subcontracting Plan in accordance with the provisions of Section 7 above .
10. MD Anderson shall require a vendor to whom a contract has been awarded to report the identity and the amount paid to its subcontractors on a monthly basis using **a HUB Subcontracting Plan (HSP) Prime Contractor Progress Assessment Report (PAR)** as a condition for payment.
11. If the University determines that the successful Respondent failed to implement an approved HUB Subcontracting Plan in good faith, the University, in addition to any other remedies, may report nonperformance to the Texas Comptroller in accordance with 34 TAC, Section 20.285, (g)(1) related remedies of nonperformance to professional services firms, contractor, and vender implementation of the HUB Subcontracting Plan.
12. In the event of any conflict between this "Summary of Requirements" and the remainder of the HUB Policy, the remainder of the HUB Policy will control.
13. These requirements, including the attachments referred to above, may be downloaded over the Internet at <http://www.mdanderson.org/bids>. For additional information contact the MD Anderson HUB and Federal Small Business Program at 713-745-8300.



# HUB Subcontracting Plan (HSP)

## QUICK CHECKLIST

While this HSP Quick Checklist is being provided to merely assist you in readily identifying the sections of the HSP form that you will need to complete, it is very important that you adhere to the instructions in the HSP form and instructions provided by the contracting agency.

- If you will be awarding all of the subcontracting work you have to offer under the contract to only Texas certified HUB vendors, complete:
  - ☐ Section 1 - Respondent and Requisition Information
  - ☐ Section 2 a. - Yes, I will be subcontracting portions of the contract.
  - ☐ Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors.
  - ☐ Section 2 c. - Yes
  - ☐ Section 4 - Affirmation
  - ☐ GFE Method A (Attachment A) - Complete an Attachment A for each of the subcontracting opportunities you listed in Section 2 b.
- If you will be subcontracting any portion of the contract to Texas certified HUB vendors and Non-HUB vendors, and the aggregate percentage of all the subcontracting work you will be awarding to the Texas certified HUB vendors with which you **do not** have a continuous contract\* in place for more than five (5) years meets or exceeds the HUB Goal the contracting agency identified in the "Agency Special Instructions/Additional Requirements", complete:
  - ☐ Section 1 - Respondent and Requisition Information
  - ☐ Section 2 a. - Yes, I will be subcontracting portions of the contract.
  - ☐ Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors and Non-HUB vendors.
  - ☐ Section 2 c. - No
  - ☐ Section 2 d. - Yes
  - ☐ Section 4 - Affirmation
  - ☐ GFE Method A (Attachment A) - Complete an Attachment A for each of the subcontracting opportunities you listed in Section 2 b.
- If you will be subcontracting any portion of the contract to Texas certified HUB vendors and Non-HUB vendors or only to Non-HUB vendors, and the aggregate percentage of all the subcontracting work you will be awarding to the Texas certified HUB vendors with which you **do not** have a continuous contract\* in place for more than five (5) years does not meet or exceed the HUB Goal the contracting agency identified in the "Agency Special Instructions/Additional Requirements", complete:
  - ☐ Section 1 - Respondent and Requisition Information
  - ☐ Section 2 a. - Yes, I will be subcontracting portions of the contract.
  - ☐ Section 2 b. - List all the portions of work you will subcontract, and indicate the percentage of the contract you expect to award to Texas certified HUB vendors and Non-HUB vendors.
  - ☐ Section 2 c. - No
  - ☐ Section 2 d. - No
  - ☐ Section 4 - Affirmation
  - ☐ GFE Method B (Attachment B) - Complete an Attachment B for each of the subcontracting opportunities you listed in Section 2 b.
- If you will not be subcontracting any portion of the contract and will be fulfilling the entire contract with your own resources (i.e., employees, supplies, materials and/or equipment, complete:
  - ☐ Section 1 - Respondent and Requisition Information
  - ☐ Section 2 a. - No, I will not be subcontracting any portion of the contract, and I will be fulfilling the entire contract with my own resources
  - ☐ Section 3 - Self Performing Justification
  - ☐ Section 4 - Affirmation

**\*Continuous Contract:** Any existing written agreement (including any renewals that are exercised) between a prime contractor and a HUB vendor, where the HUB vendor provides the prime contractor with goods or service, to include under the same contract for a specified period of time. The frequency the HUB vendor is utilized or paid during the term of the contract is not relevant to whether the contract is considered continuous. Two or more contracts that run concurrently or overlap one another for different periods of time are considered by CPA to be individual contracts rather than renewals or extensions to the original contract. In such situations the prime contractor and HUB vendor are entering (have entered) into "new" contracts.

(RESPONDENT'S BUSINESS LETTERHEAD)  
**To be completed ONLY if you will be subcontracting.**

**MDACC**  
**(only)**  
**Procurement**  
**please check:**

Date

Mrs. Marian Nimon  
 Associate Director, HFSB Program  
 The University of Texas MD Anderson Cancer Center  
 PO Box 301407 Unit 1680  
 Houston, TX 77230-1407

Re: Historically Underutilized Business Plan for \_\_\_\_\_ (related services)  
 RFX/PO No. \_\_\_\_\_

Dear Mrs. Nimon,

In accordance with the requirements outlined in the specification section "HUB Participation Program," I am pleased to forward this HUB Subcontracting Plan (HSP) as an integral part of our response in connection with your invitation for Request for Proposals referencing the above project.

I have read and understand The University of Texas System Policy on Utilization of Historically Underutilized Businesses (HUBs). I also understand the State of Texas Annual Procurement Goal according to 34 Texas Administrative Code Section 20.13, and the goal as stated in the Agency Special Instructions section of the HUB Subcontracting Plan, page 9.

This HSP includes Subcontracting Opportunities

Subcontractors	# of Subcontractors	Total Subcontract \$ Value	Total Estimated %	% Min Owned	% Woman Owned
HUB					
Non-HUB					
TOTAL					

I understand the above HUB percentages must represent Texas Comptroller HUB certification standards. For each of the listed HUB firms, I have attached a Texas Comptroller certification document, or, if the HUB is certified by another Texas Comptroller approved certifying agency, a copy of their approved certification document.

Should we discover additional subcontractors claiming Historically Underutilized Business status during the course of this contract we will notify you of the same. In addition, if for some reason a HUB is unable to fulfill its contract with us, we will notify you immediately in order to take the appropriate steps to amend this contractual obligation.

Sincerely,

(Signature)

\_\_\_\_\_

(Vendor's Printed Name and Title)

(Vendor's Printed Company Name)

cc: Contract Administrator

**Note: The inclusion of a HUB Subcontracting Plan is a requirement of this solicitation. Failure to submit a fully executed HUB Plan will result in rejection of your response.**

(BUSINESS LETTERHEAD)

Date

Mrs. Marian Nimon  
Associate Director, HFSB Program  
The University of Texas MD Anderson Cancer Center  
PO Box 301407 Unit 1680  
Houston, TX 77230-1407

Re: Historically Underutilized Business Plan for: \_\_\_\_\_ (Project Title)  
RFX/PO No. \_\_\_\_\_

Dear Mrs. Nimon:

In accordance with the requirements outlined in the specification section "HUB Participation Program," I am pleased to forward this Letter of HUB Commitment as an integral part of our submittal in connection with your Request For Proposal, referencing Project Number \_\_\_\_\_.

I understand that following the award of the RFP, the HUB Plan in its entirety is due prior to signing of the contract.

I have read and understand The University of Texas MD Anderson Cancer Center's Policy on Utilization of Historically Underutilized Businesses (HUBs).

Good Faith Effort will be documented with each contract and will contain a Letter of Transmittal and HUB Subcontracting Plan for each contract solicited. An updated HUB Plan will be submitted prior to the execution of each contract process. Documentation of sub-consulted work and the Progress Assessment Report must be provided with each pay request as well as to MD Anderson's HUB and Federal Small Business Program.

Sincerely,

\_\_\_\_\_  
Contractor's Printed Name and Title

\_\_\_\_\_  
Contractor's Signature

cc: Contract Manager

Letter of HUB Commitment for  
Miscellaneous Service Agreements  
Indefinite duration/indefinite quantity contracts





# HUB SUBCONTRACTING PLAN (HSP)

In accordance with Texas Gov't Code §2161.252, the contracting agency has determined that subcontracting opportunities are probable under this contract. Therefore, all respondents, including State of Texas certified Historically Underutilized Businesses (HUBs) must complete and submit this State of Texas HUB Subcontracting Plan (HSP) with their response to the bid requisition (solicitation).

**NOTE: Responses that do not include a completed HSP shall be rejected pursuant to Texas Gov't Code §2161.252(b).**

The HUB Program promotes equal business opportunities for economically disadvantaged persons to contract with the State of Texas in accordance with the goals specified in the 2009 State of Texas Disparity Study. The statewide HUB goals defined in 34 Texas Administrative Code (TAC) §20.284 are:

- **21.1 percent for all building construction, including general contractors and operative builders contracts,**
- **32.9 percent for all special trade construction contracts,**
- **23.7 percent for professional services contracts,**
- **26.0 percent for all other services contracts, and**
- **21.1 percent for commodities contracts.**

## -- Agency Special Instructions/Additional Requirements --

*In accordance with 34 TAC §20.285(d)(1)(D)(iii), a respondent (prime contractor) may demonstrate good faith effort to utilize Texas certified HUBs for its subcontracting opportunities if the total value of the respondent's subcontracts with Texas certified HUBs meets or exceeds the statewide HUB goal or the agency specific HUB goal, whichever is higher. When a respondent uses this method to demonstrate good faith effort, the respondent must identify the HUBs with which it will subcontract. If using existing contracts with Texas certified HUBs to satisfy this requirement, only the aggregate percentage of the contracts expected to be subcontracted to HUBs with which the respondent **does not** have a **continuous contract\*** in place for **more than five (5) years** shall qualify for meeting the HUB goal. This limitation is designed to encourage vendor rotation as recommended by the 2009 Texas Disparity Study.*

### HUB Goal – 23.7%

- Responses for other services and commodities that contain subcontracting opportunities **shall** include a HUB Subcontracting Plan (HSP) that meets the Good Faith Effort prescribed in Method A or Method B of the attachments.
- Responses for Miscellaneous Service Agreements for indefinite duration/indefinite quantity (IDIQ) – Two (2) part process:
  1. Submit a Letter of HUB Commitment (page 8).
  2. Submit a HSP or revised HSP as appropriate, prior to execution of each contract process.
- **Respondents shall submit a completed HUB Subcontracting Plan (HSP) to be considered responsive.** Failure to submit a completed HSP shall result in the bid, proposal or other expression of interest will be deemed as NON-responsive. Respondents who intend to Self-Perform all of their work shall submit an HSP for Self-Performance HUB Subcontracting Plan (HSP).
- Prime Contractor Progress Assessment Report (PAR) will be required monthly if subcontracting.
- **Please note that phone logs are no longer acceptable documentation of good faith effort. Only fax, e-mail and written correspondence are acceptable.**
- **\*Continuous Contract:** Any existing written agreement (including any renewals that are exercised) between a prime contractor and a HUB vendor, where the HUB vendor provides the prime contractor with goods or service under the same contract for a specified period of time. The frequency the HUB vendor is utilized or paid during the term of the contract is not relevant to whether the contract is considered continuous. Two or more contracts that run concurrently or overlap one another for different periods of time are considered by CPA to be individual contracts rather than renewals or extensions to the original contract. In such situations the prime contractor and HUB vendor are entering (have entered) into 'new' contracts.

## SECTION 1 RESPONDENT AND REQUISITION INFORMATION

- a. Respondent (Company) Name: \_\_\_\_\_ State of Texas VID #: \_\_\_\_\_
- Point of Contact: \_\_\_\_\_ Phone #: \_\_\_\_\_
- E-mail Address: \_\_\_\_\_ Fax #: \_\_\_\_\_
- b. Is your company a State of Texas certified HUB? ☐ - Yes ☐ - No
- c. RFX/PO#: \_\_\_\_\_ Bid Close Date: \_\_\_\_\_ / \_\_\_\_ / \_\_\_\_

mm/dd/yyyy)

Enter your company's name here: \_\_\_\_\_

Requisition #: \_\_\_\_\_

**SECTION 2 RESPONDENT'S SUBCONTRACTING INTENTIONS**

After dividing the contract work into reasonable lots or portions to the extent consistent with prudent industry practices, and taking into consideration the scope of work to be performed under the proposed contract, including all potential subcontracting opportunities, the respondent must determine what portions of work, **including contracted staffing, goods and services will be subcontracted**. Note: In accordance with 34 TAC §20.282., an "Subcontractor" means a person who contracts with a prime contractor to work, to supply commodities, or to contribute toward completing work for a governmental entity.

## a. Check the appropriate box (Yes or No) that identifies your subcontracting intentions:

☐ - **Yes**, I will be subcontracting portions of the contract. (If **Yes**, complete Item b, of this SECTION and continue to Item c of this SECTION.)

☐ - **No**, I will not be subcontracting any portion of the contract, and I will be fulfilling the entire contract with my own resources. (If **No**, continue to SECTION 3. And SECTION 4.)

## b. List all the portions of work (subcontracting opportunities) you will subcontract. Also, based on the total value of the contract, identify the percentages of the contract you expect to award to Texas certified HUBs, and the percentage of the contract you expect to award to vendors that are not a Texas certified HUB (i.e., Non-HUB).

Item #	Subcontracting Opportunity Description	HUBs		Non-HUBs
		Percentage of the contract expected to be subcontracted to HUBs with which you <u>do not</u> have a <u>continuous contract*</u> in place for <u>more than five (5) years</u> .	Percentage of the contract expected to be subcontracted to HUBs with which you have a <u>continuous contract*</u> in place for <u>more than five (5) years</u> .	Percentage of the contract expected to be subcontracted to non-HUBs .
1		%	%	%
2		%	%	%
3		%	%	%
4		%	%	%
5		%	%	%
6		%	%	%
7		%	%	%
8		%	%	%
9		%	%	%
10		%	%	%
11		%	%	%
12		%	%	%
13		%	%	%
14		%	%	%
15		%	%	%
Aggregate percentages of the contract expected to be subcontracted:		%	%	%

(Note: If you have more than fifteen subcontracting opportunities, a continuation sheet is available online at <http://www.comptroller.texas.gov/purchasing/vendor/hub/forms.php>)

c. Check the appropriate box (Yes or No) that indicates whether you will be using only Texas certified HUBs to perform all of the subcontracting opportunities you listed in SECTION 2, Item b.

☐ - **Yes** (If **Yes**, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method A (Attachment A)" for each of the subcontracting opportunities you listed.)

☐ - **No** (If **No**, continue to Item d, of this SECTION.)

d. Check the appropriate box (Yes or No) that indicates whether the aggregate expected percentage of the contract you will subcontract **with Texas certified HUBs** with which you do not have a continuous contract\* in place with for more than five (5) years, meets or exceeds the HUB goal the contracting agency identified on page 1 in the "Agency Special Instructions/Additional Requirements".

☐ - **Yes** (If **Yes**, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method A (Attachment A)" for each of the subcontracting opportunities you listed.)

☐ - **No** (If **No**, continue to SECTION 4 and complete an "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed.)

**\*Continuous Contract:** Any existing written agreement (including any renewals that are exercised) between a prime contractor and a HUB vendor, where the HUB vendor provides the prime contractor with goods or service under the same contract for a specified period of time. The frequency the HUB vendor is utilized or paid during the term of the contract is not relevant to whether the contract is considered continuous. Two or more contracts that run concurrently or overlap one another for different periods of time are considered by CPA to be individual contracts rather than renewals or extensions to the original contract. In such situations the prime contractor and HUB vendor are entering (have entered) into "new" contracts.

**This page can be used as a continuation sheet to the HSP Form's page 2, SECTION 2, Item b.** Continue listing the portions of work (subcontracting opportunities) you will subcontract. Also, based on the total value of the contract, identify the percentages of the contract you expect to award to Texas certified HUBs, and the percentage of the contract you expect to award to vendors that are not a Texas certified HUB (i.e., Non-HUB).

**\*Continuous Contract:** Any existing written agreement (including any renewals that are exercised) between a prime contractor and a HUB vendor, where the HUB vendor provides the prime contractor with goods or service under the same contract for a specified period of time. The frequency the HUB vendor is utilized or paid during the term of the contract is not relevant to whether the contract is considered continuous. Two or more contracts that run concurrently or overlap one another for different periods of time are considered by CPA to be individual contracts rather than renewals or extensions to the original contract. In such situations the prime contractor and HUB vendor are entering (have entered) into "new" contracts.

Enter your company's name here:

**SECTION 3:****SELF PERFORMING JUSTIFICATION (If you responded "No" to SECTION 2, Item a, you must complete this SECTION and continue to SECTION 4.)**

If you responded "No" to SECTION 2, Item a, in the space provided below **explain how** your company will perform the entire contract with its own employees, supplies, materials and/or equipment.

Provide explanation:

**SECTION-4:****AFFIRMATION**

As evidenced by my signature below, I affirm that I am an authorized representative of the respondent listed in SECTION 1, and that the information and supporting documentation submitted with the HSP is true and correct. Respondent understands and agrees that, if awarded any portion of the requisition:

- The respondent will provide notice as soon as practical to **all** the subcontractors (HUBs and Non-HUBs) of their selection as a subcontractor for the awarded contract. The notice must specify at a minimum the contracting agency's name and its point of contact for the contract, the contract award number, the subcontracting opportunity they (the subcontractor) will perform, the approximate dollar value of the subcontracting opportunity and the expected percentage of the total contract that the subcontracting opportunity represents. A copy of the notice required by this section must also be provided to the contracting agency's point of contact for the contract no later than ten (10) working days after the contract is awarded.
- The respondent must submit monthly compliance reports (Prime Contractor Progress Assessment Report – PAR) to the contracting agency, verifying its compliance with the HSP, including the use of and expenditures made to its subcontractors (HUBs and Non-HUBs). (The PAR is available at <https://www.comptroller.texas.gov/purchasing/docs/hub-forms/ProgressAssessmentReportFo.xls>)
- The respondent must seek approval from the contracting agency prior to making any modifications to its HSP, including the hiring of additional or different subcontractors and the termination of a subcontractor the respondent identified in its HSP. If the HSP is modified without the contracting agency's prior approval, respondent may be subject to any and all enforcement remedies available under the contract or otherwise available by law, up to and including debarment from all state contracting.
- The respondent must, upon request, allow the contracting agency to perform on-site reviews of the company's headquarters and/or work-site where services are being performed and must provide documentation regarding staffing and other resources.

Signature

Printed Name

Title

Date  
(mm/dd/yyyy)

- REMINDER:** ➤ If you responded **"Yes"** to **SECTION 2, Items c or d**, you must complete an "HSP Good Faith Effort - Method A (Attachment A)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b.
- If you responded **"No"** **SECTION 2, Items c and d**, you must complete an "HSP Good Faith Effort - Method B (Attachment B)" for **each** of the subcontracting opportunities you listed in SECTION 2, Item b.

## SECTION A-1 SUBCONTRACTING OPPORTUNITY

Item #: \_\_\_\_\_ Description: \_\_\_\_\_

## SECTION A.2 SUBCONTRACTOR SELECTION

[illegible]

13

# HSP Good Faith Effort - Method B (Attachment B)

Enter your company's name here: \_\_\_\_\_

RFX/PO #: \_\_\_\_\_

**IMPORTANT:** If you responded "**No**" to **SECTION 2, Items c and d** of the completed HSP form, you must submit a completed "HSP Good Faith Effort - Method B (Attachment B)" for each of the subcontracting opportunities you listed in **SECTION 2, Item b** of the completed HSP form. You may photo-copy this page or download the form at [http:// www.comptroller.texas.gov/purchasing/docs/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf](http://www.comptroller.texas.gov/purchasing/docs/hub-forms/hub-sbcont-plan-gfe-achm-b.pdf)

## SECTION B-1 SUBCONTRACTING OPPORTUNITY:

Enter the item number and description of the subcontracting opportunity you listed in SECTION 2, Item b, of the completed HSP form for which you are completing this attachment.

Item #: \_\_\_\_\_ Description: \_\_\_\_\_

## SECTION B-2 MENTOR PROTÉGÉ PROGRAM

If respondent is participating as a Mentor in a State of Texas Mentor Protégé Program, submitting its Protégé (Protégé must be a State of Texas certified HUB) as a subcontractor to perform the subcontracting opportunity listed in SECTION B-1, constitutes a good faith effort to subcontract with a Texas certified HUB towards that specific portion of work.

Check the appropriate box (Yes or No) that indicates whether you will be subcontracting the portion of work you listed in SECTION B-1 to your Protégé.

- ☐ - Yes (If Yes, to continue to SECTION B-4.)
- ☐ - No / Not Applicable (If No or Not Applicable, continue to SECTION B-3.)

## SECTION B-3 NOTIFICATION OF SUBCONTRACTING OPPORTUNITY

When completing this section you MUST comply with items a, b, c and d, thereby demonstrating your Good Faith Effort of having notified Texas certified HUBs and trade organizations or development centers about the subcontracting opportunity you listed in SECTION B-1. Your notice should include the scope of work, information regarding the location to review plans and specifications, bonding and insurance requirements, required qualifications, and identify a contact person.

When sending notice of your subcontracting opportunity, you are encouraged to use the attached HUB Subcontracting Opportunity Notice form, which is also available online at <https://www.comptroller.texas.gov/purchasing/docs/hub-forms/HUBSubcontractingOpportunityNotificationForm.pdf>

Retain supporting documentation (i.e., certified letter, fax, e-mail) demonstrating evidence of your good faith effort to notify the Texas certified HUBs and trade organizations or development centers. Be mindful that a working day is considered a normal business day of the state agency, not including weekends, federal or state holidays, or days the agency is declared closed by its executive order. The initial day the subcontracting opportunity notice is sent/provided to the HUBs and to the trade organizations or development centers is considered to be "day zero" and does not count as one of the seven (7) working days.

- a. Provide written notification of the subcontracting opportunity you listed in SECTION B-1, to three (3) or more Texas certified HUBs. Unless the contracting agency specified a different time period, you must allow the HUBs at least seven (7) working days to respond to the notice prior to your submitting your bid response to the contracting agency. When searching for Texas certified HUBs, ensure that you use the State of Texas' Centralized Master Bidders List (CMBL) and Historically Underutilized Business (HUB) Search directory located at <http://mycpa.cpa.state.tx.us/tpasscblsearch/index.jsp>. HUB Status code "**A**" signifies that the company is a Texas certified HUB.
- b. List the three (3) Texas certified HUBs you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the company's Vendor ID (VID) number, the date you sent notice to that company, and indicate whether it was responsive or non-responsive to your subcontracting opportunity notice.

Company Name	Texas VID (Do not enter Social Security Numbers.)	Date Notice Sent (mm/dd/yyyy)	Did the HUB Respond?
		/ /	<input type="radio"/> - Yes <input type="radio"/> - No
		/ /	<input type="radio"/> - Yes <input type="radio"/> - No
		/ /	<input type="radio"/> - Yes <input type="radio"/> - No

- c. Provide written notification of the subcontracting opportunity you listed in SECTION B-1 to two (2) or more trade organizations or development centers to assist in identifying potential HUBs by disseminating the subcontracting opportunity to their members/participants. Unless the contracting agency specified a different time period, you must provide your subcontracting opportunity notice to trade organizations or development centers at least seven (7) working days prior to submitting your bid response to the contracting agency. A list of trade organizations and development centers that have expressed an interest in receiving notices of subcontracting opportunities is available on the Statewide HUB Program's webpage at <http://www.comptroller.texas.gov/purchasing/vendor/heb/resources.php>.

- d. Enter the name of the trade organizations or development centers you notified regarding the subcontracting opportunity you listed in SECTION B-1. Include the date when you sent notice to it and indicate if it accepted or rejected your notice.

Trade Organizations or Development Centers	Date Notice Sent (mm/dd/yyyy)	Was the Notice Accepted?
	/ /	<input type="radio"/> - Yes <input type="radio"/> - No
	/ /	<input type="radio"/> - Yes <input type="radio"/> - No

# HSP Good Faith Effort - Method B (Attachment B) *Cont.*

Enter your company's name here: \_\_\_\_\_

RFX/PO #: \_\_\_\_\_

## SECTION B.1 SUBCONTRACTOR SELECTION

- a. Enter the item number and description of the subcontracting opportunity for which you are completing this Attachment B continuation page.

Item#: \_\_\_\_\_ Description: \_\_\_\_\_

- b. List the subcontractor(s) you selected to perform the subcontracting opportunity you listed in **SECTION B-1**. Also identify whether they are a Texas Certified HUB and their Texas Vendor Identification (VID) number or federal Employer Identification Number (EIN), the approximate dollar value of the work to be subcontracted, and the expected percentage of work to be subcontracted. When searching for Texas certified HUBs and verifying their HUB status, ensure that you use the State of Texas/ Centralized Master Bidders List (CMBL) – Historically Underutilized Business (HUB) Directory Search located at <http://mycpa.cpa.state.tx.us/tpasscmbsearch/index.jsp>. HUB status code "A" signifies that the company is a Texas certified HUB.

Company Name	Texas Certified HUB	Texas VID or federal EIN <small>Do not enter Social Security Numbers. If you do not know their VID / EID, leave their VID / EID field blank.</small>	Approximate Dollar Amount	Expected Percentage of Contract
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No		\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No	<input type="radio"/>	\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No	<input type="radio"/>	\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No	<input type="radio"/>	\$	%
	<input type="radio"/> - Yes <input type="radio"/> - No	<input type="radio"/>	\$	%

- c. If any of the subcontractors you have selected to perform the subcontracting opportunity you listed in SECTION B-1 is **not** a Texas certified HUB, justification for your selection process (attach additional page if necessary provide written

**REMINDER:** As specified in SECTION 4 of the completed HSP form, if you (respondent) are awarded any portion of the requisition, you are required to provide notice as soon as practical to all the subcontractors (HUBs and Non-HUBs) of their selection as a subcontractor. The notice must specify at a minimum the contracting agency's name and its point of contact for the contract, the contract award number, the subcontracting opportunity it (the subcontractor) will perform, the approximate dollar value of the subcontracting opportunity and the expected percentage of the total contract that the subcontracting opportunity represents. A copy of the notice required by this section must also be provided to the contracting agency's point of contact for the contract no later than ten (10) working days after the contract is awarded

# HUB Subcontracting Opportunity Notification Form

(Rev. 7/19)

In accordance with Texas Gov't Code, Chapter 2161, each state agency that considers entering into a contract with an expected value of \$100,000 or more shall, before the agency solicits bids, proposals, offers, or other applicable expressions of interest, determine whether subcontracting opportunities are probable under the contract. The state agency I have identified below in **Section B** has determined that subcontracting opportunities are probable under the requisition to which my company will be responding.

34 Texas Administrative Code, §20.285 requires all respondents (prime contractors) bidding on the contract to provide notice of each of their subcontracting opportunities to at least three (3) Texas certified HUBs (who work within the respective industry applicable to the subcontracting opportunity), and allow the HUBs at least seven (7) working days to respond to the notice prior to the respondent submitting its bid response to the contracting agency. In addition, at least seven (7) working days prior to submitting its bid response to the contracting agency, the respondent must provide notice of each of its subcontracting opportunities to two (2) or more trade organizations or development centers (in Texas) that serves members of groups (i.e., Asian Pacific American, Black American, Hispanic American, Native American, Woman, Service Disabled Veteran) identified in Texas Administrative Code §20.282(19)(C).

We respectfully request that vendors interested in bidding on the subcontracting opportunity identified in **Section C, Item 2** reply no later than the date and time identified in **Section C, Item 1**. Submit your response to the point-of-contact referenced in **Section A**.

<b>Section A</b>	<b>PRIME CONTRACTOR'S INFORMATION</b>
Company Name:	State of Texas VID #: _____
Point-of-Contact:	Phone #: _____
E-mail Address:	Fax #: _____

<b>Section B</b>	<b>CONTRACTING STATE AGENCY AND REQUISITION INFORMATION</b>
Agency Name:	_____
Point-of-Contact:	Phone #: _____
Requisition #:	Bid Open Date: _____ (mm/dd/yyyy)

<b>Section C</b>	<b>SUBCONTRACTING OPPORTUNITY RESPONSE DUE DATE, DESCRIPTION, REQUIREMENTS AND RELATED INFORMATION</b>
1. Potential Subcontractor's Bid Response Due Date:	<p><b>If you would like for our company to consider your company's bid for the subcontracting opportunity identified below in Item 2, we must receive your bid response no later than:</b></p> <p>_____ On _____ (Central Time) Mm/dd/yyyy</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><i>In accordance with 34 TAC §20.285, each notice of subcontracting opportunity shall be provided to at least three (3) Texas certified HUBs, and allow the HUBs at least seven (7) working days to respond to the notice prior to submitting our bid response to the contracting agency. In addition, at least seven (7) working days prior to us submitting our bid response to the contracting agency, we must provide notice of each</i></p> </div>
2. Subcontracting Opportunity Scope of Work:	<input type="checkbox"/> Not Applicable
3. Required Qualifications:	<input type="checkbox"/> Not Applicable
4. Bonding/Insurance	<input type="checkbox"/> Not Applicable
5. Location to review plans/specifications:	<input type="checkbox"/> Not Applicable





**EXHIBIT N**

**PROJECT ARCHITECT/ENGINEER'S APPROVED HUB SUBCONTRACTING PLAN**

**EXHIBIT O**

**RIDER 105; CONTRACTOR'S AFFIRMATIONS AND WARRANTIES**

## RIDER 105

### CONTRACTOR'S AFFIRMATIONS AND WARRANTIES

Contractor affirms, certifies, and warrants that the information set forth in this Rider is current, complete, and accurate. Contractor agrees that in the event Contractor makes a false statement by affirming, certifying, or warranting the information set forth in this Rider, MD Anderson may, at its option, terminate the Agreement/Purchase Order to which this Rider is attached without further liability, and Contractor shall be removed from all MD Anderson bid lists.

Contractor agrees to notify MD Anderson in writing within thirty (30) days of any changes in the affirmations, certifications, and warranties made by Contractor under this Rider.

1. Contractor has neither given, offered to give, and has no intention to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor or service to a public servant in connection with this Agreement/Purchase Order.
2. Neither Contractor nor the firm, corporation, partnership or institution represented by Contractor, or anyone acting for such firm, corporation, or institution, has violated the antitrust laws of the State of Texas, codified in Section 15.01, et. seq. *Texas Business and Commerce Code*, or the federal antitrust laws, nor communicated directly or indirectly Contractor's bid or proposal made to MD Anderson to any competitor or any other person engaged in such line of business. Contractor has not received compensation for participation in the preparation of the specifications for this Agreement or of the request for proposal on which this Agreement is based.
3. Contractor is not excluded, debarred, or otherwise suspended from participating in the Federal Healthcare programs, as defined in 42 U.S.C. §1320a – 7b(f), or listed in the U.S. System for Award Management's ("SAM") List of Parties Excluded From Federal Procurement or Non-Procurement Programs, or the United States Office of Inspector General's List of Excluded Individuals/Entities ("LEIE"). Contractor further acknowledges that MD Anderson is prohibited by federal regulations and arrangements with third party payors from allowing any employee, subcontractor or agent of Contractor to provide services to MD Anderson if such employee, subcontractor, or agent is not eligible to participate in the Federal Healthcare programs. Therefore, Contractor shall not assign any employee, subcontractor or agent that is excluded from participating in any Federal Healthcare program, including but not limited to Medicare, Medicaid, or Tricare, to work on an MD Anderson engagement. Contractor shall perform an LEIE, SAM, and State Medicaid sanction check monthly on each of its employees, subcontractors and agents during the time such employees, subcontractors and agents are assigned to work on an MD Anderson engagement. Contractor acknowledges that MD Anderson will require immediate removal of any employee, subcontractor or agent of Contractor assigned to work on an MD Anderson engagement if such employee, subcontractor or agent is found to be excluded from participating in any Federal Healthcare program. Upon request, Contractor will provide MD Anderson a letter signed by an authorized officer of Contractor that certifies compliance with this Section.
4. Contractor certifies it qualifies status in one of the below as defined by the State of Texas:
  - A. Contractor **is a Small Business** (as defined by Chapter 2155 of the Texas Government Code), and claims the following status:
    - \_\_\_\_\_ (100) Small Business, Non-HUB
    - \_\_\_\_\_ (100N) Disabled Person, Small Business
    - \_\_\_\_\_ (141) Black American, Male, Small Business
    - \_\_\_\_\_ (142) Black American, Female, Small Business
    - \_\_\_\_\_ (151) Hispanic American, Male, Small Business
    - \_\_\_\_\_ (152) Hispanic American, Female, Small Business
    - \_\_\_\_\_ (160) Non-minority, Female, Small Business
    - \_\_\_\_\_ (171) Asian Pacific American, Male, Small Business
    - \_\_\_\_\_ (172) Asian Pacific American, Female, Small Business
    - \_\_\_\_\_ (181) Native American, Male, Small Business
    - \_\_\_\_\_ (182) Native American, Female, Small Business
  - B. Contractor **is not a Small Business** as defined above and claims the following status:

_____ (900N) Disabled Person	_____ (971) Asian Pacific American, Male
_____ (941) Black American, Male	_____ (972) Asian Pacific American, Female
_____ (942) Black American, Female	_____ (981) Native American, Male
_____ (951) Hispanic American, Male	_____ (982) Native American, Female
_____ (952) Hispanic American, Female	_____ (900) None of the above
_____ (960) Non-minority, Female	

**RIDER 105**  
**CONTRACTOR'S AFFIRMATIONS AND WARRANTIES**

- C. Contractor is to indicate below if it is not certified by the Texas Procurement and Support Services Division of the Texas Comptroller's Office as a Historically Underutilized Business.

\_\_\_\_\_ **YES**, Contractor is certified by the Texas Procurement and Support Services Division of the Texas Comptroller's Office.

\_\_\_\_\_ **NO**, Contractor is not certified by the Texas Procurement and Support Services Division of the Texas Comptroller's Office.

- D. Contractor is:

\_\_\_\_\_ A Non-Resident Contractor (e.g., does not maintain a permanently staffed full time office in Texas).

\_\_\_\_\_ A Resident Contractor (e.g., does maintain a permanently staffed full time office in Texas).

\_\_\_\_\_ Anticipating the use of Texas Non-Resident firms as sub-contractors and will provide information of such contracts, when requested.

\_\_\_\_\_ Not anticipating the use of Texas Non-Resident firms as sub-contractors.

**[Sourcing, item 5 should only be included if the Contractor is a franchise.]**

5. If Contractor is a franchise, then:

- A. Contractor affirms, certifies, and warrants that it shall maintain such franchise in full force and effect at all times during the existence of this Agreement/Purchase Order; and

- B. Contractor shall provide MD Anderson with all data that MD Anderson, in its sole discretion, deems necessary to identify Contractor's franchise, the date on which Contractor's franchise will expire, and to certify that Contractor's franchise remains in good standing at all times during the existence of the Agreement/Purchase Order.

6. (1) No relationship (whether by blood, marriage, business association, capital funding agreement or by any other kinship or connection) exists between Contractor and an employee of MD Anderson, and (2) Contractor has not been an employee of MD Anderson within the twelve (12) month period immediately prior to the date of this Agreement/Purchase Order, or (3) in the event such a relationship does exist, full written disclosure of the relationship has been made by Contractor to MD Anderson prior the execution of this Agreement, or acceptance of Purchase Order. Contractor understands that all such disclosures will be subject to administrative review, and approval by MD Anderson prior to MD Anderson's execution of this Agreement/Purchase Order. Subsection (2) of this item does not prohibit MD Anderson from entering into a contract with a corporation, firm, or other business entity that employs a former or retired employee of MD Anderson within 12 months of the employee's leaving MD Anderson, provided that the former or retired employee does not perform services on projects for the corporation, firm, or other business entity that the employee worked on while employed by MD Anderson.
7. (1) Contractor is not a party to any agreement with MD Anderson whereby it has licensed from MD Anderson any technology, invention, or other intellectual property that relates to or is used with any goods or services being acquired by MD Anderson hereunder; and (2) as a result of the sale to MD Anderson of the goods or services hereunder, Contractor will not owe, directly or indirectly, any royalties, fees, or other consideration of any kind to MD Anderson or any employee of MD Anderson under the terms of any license agreement with MD Anderson. Contractor will advise MD Anderson in writing of any change in status with respect to the foregoing items (1)-(2), by sending written notice within ten (10) days of such status change to: Legal Services, Unit 537, The University of Texas MD Anderson Cancer Center, P.O. Box 301439, Houston TX 77230-1439, ATTENTION: Chief Legal Officer.
8. **OSHA COMPLIANCE:** By signing the Agreement, or accepting the Purchase Order, Contractor affirms, certifies, and warrants that all goods and services furnished under this Agreement/Purchase Order will meet or exceed the safety standards established and promulgated under the Federal Occupational Safety and Health Law (Public Law 91-596) and its regulations in effect as of the date on which the goods or services are furnished.
9. **AFFIRMATIVE ACTION COMPLIANCE:** In addition to the Contractor's affirmation, certification, and warranty under section 8 of this Rider, if this Agreement exceeds \$50,000.00 in value, Contractor shall provide a copy of its written Civil Rights "Affirmative Action Compliance Program" which shall be incorporated into Exhibit A to this Rider. If Contractor is NOT required to have such a written Civil Rights "Affirmative Action Compliance Program", Contractor must state the reasons why it is not required to have such a written program in

**RIDER 105**  
**CONTRACTOR'S AFFIRMATIONS AND WARRANTIES**

Exhibit A to this Rider.

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**EXHIBIT A**

**Civil Rights "Affirmative Action Compliance Program"**

**EXHIBIT P**

**RIDER 106; PREMISES RULES**

## RIDER 106 PREMISES RULES

If this Agreement requires Contractor's presence on MD Anderson's premises, buildings, grounds, facilities, or campus, whether owned, leased or otherwise controlled by MD Anderson (collectively, "MD Anderson's campus"), Contractor represents and warrants that it will ensure that its representatives, agents, employees, and permitted subcontractors are aware of, fully informed about and in full compliance with Contractor's obligations under the following rules:

- A. Contractor (and its representatives, agents, employees and permitted subcontractors) will comply with all applicable MD Anderson rules and policies, including, without limitation, those related to environmental quality, safety, fire prevention, noise, information security, and architectural barriers issued by MD Anderson's Department of Environmental Health and Safety, (713) 792-2888, and those that restrict the use of alcohol on MD Anderson's campus.
- B. MD Anderson is a smoke-free institution. Smoking, or use of smokeless tobaccos, is prohibited throughout MD Anderson's campus.
- C. Contractor will have the right to access only those areas in MD Anderson's campus that are public areas or areas that it is necessary for Contractor to access in order to provide the products and perform the services under this Agreement. Cellular telephones and two-way radios are prohibited in some areas of MD Anderson's campus and Contractor affirms, certifies, and warrants that its representatives, agents, employees, and permitted subcontractors will abide by such prohibitions.
- D. It is the policy of MD Anderson to maintain a safe environment free from violence on MD Anderson's campus. Any direct or indirect threats or acts of violent behavior are prohibited. Violence includes, but is not limited to, intimidating, threatening, or hostile behavior; physical or verbal abuse; harassment, stalking, vandalism, arson, sabotage, use of weapons, possession of weapons on institutional property, the threat of any of the above, or any other act inconsistent with MD Anderson's campus violence policy. Intentionally bringing a prohibited weapon including a licensed, concealed handgun on MD Anderson's campus is a violation of MD Anderson's campus violence policy. Furthermore, any violation of a law prohibiting violence and violent behavior (including, but not limited to, the violation of Section 37.125 of the Texas Education Code or of Section 46.03 of the Texas Penal Code) also constitutes a violation of MD Anderson's campus violence policy. Violators of MD Anderson's campus violence policy or of any law prohibiting violence or violent behavior may be removed from or refused further access to MD Anderson's campus. Contractor represents and warrants that Contractor and all of its representatives, agents, employees, and permitted subcontractors will comply with MD Anderson's campus violence policy and all laws prohibiting violence and violent behavior. MD Anderson reserves the right to pursue criminal or civil actions against violators of MD Anderson's campus violence policy or of any law prohibiting violence and violent behavior. Contractor will remove from the performance of any work under this Agreement any Contractor representative, agent, employee, or permitted subcontractor that MD Anderson, in its sole discretion, finds has violated MD Anderson's campus violence policy or any law prohibiting violence and violent behavior.
- E. Contractor will ensure all personnel sent to work at MD Anderson's campus that have direct patient care/contact under this Agreement will be able to show proof of a tuberculosis screening having been completed within ninety (90) calendar days prior to starting work at MD Anderson's campus and every two years thereafter. Contractor will also be able to show proof that these same personnel do not have active tuberculosis. Contractor will ensure all personnel with direct patient care/contact will be able to show proof of current immunization to influenza and proof of immunization or immunity to varicella (chicken pox) prior to active duty at MD Anderson. Records of screenings, vaccinations, immunity and related reports will be made immediately available to M.D. Anderson upon request. This paragraph does not apply to contractors deemed by MD Anderson to not have direct patient care/contact.
- F. Contractor will be solely responsible for ensuring that all of its agents, employees, personnel, permitted subcontractors, or representatives abide by the provisions set forth in this Rider 106.
- G. The University of Texas Police Department ("UTPD") & Security Equipment:  
  
The UTPD is the law enforcement agency of record for all property and premises owned, leased, or otherwise under the control of MD Anderson. The UTPD will be notified in matters relating to the following:
  - 1. Reporting of criminal incidents, including those occurring to or involving Contractor property and personnel if the incident occurs on MD Anderson campus;
  - 2. The investigation of crimes, including those involving Contractor's property and personnel, if the incident occurs on MD Anderson campus; and
  - 3. Reporting of security problems.
- H. Contractor will not retain the services of outside guard or law enforcement services in connection with work on MD Anderson's campus without the specific prior written approval of the Chief of the UTPD.
- I. Contractor will not install or operate any system intended to electronically control access and/or detect and report intrusion, hold-up or duress on any MD Anderson property, any MD Anderson leased premises or any premises otherwise under the control of MD Anderson. Where such systems are required due to the nature of the Contractor's operation, the UTPD will be responsible for approval, design and installation. Once approved by UTPD, the system's cost will be Contractor's responsibility.



## **RIDER 106 PREMISES RULES**

- J. Installation by Contractor of any security system is subject to the review and approval of UTPD. If Contractor desires to install an electronic security system in accordance with the terms of this Agreement, Contractor will contact the UTPD - Crime Prevention Component of UTPD at (713) 792-2890 and request that UTPD establish design criteria for the application. Contractor will provide written evidence of the estimated cost of the electronic security system to the Technical Services Component of UTPD located at 7777 Knight Road and, if the electronic security system is approved by UTPD, the Technical Services Component of UTPD will coordinate the installation of the approved system. Upon written approval of the UTPD Chief, Contractor may use a commercial installation company to install the electronic security system under the coordination of the UTPD.
- K. All security related systems must be monitored and controlled by the UTPD and UTPD must be the primary monitoring station. If Contractor utilizes the services of a commercial alarm company or a proprietary alarm monitoring station, the system may report to such location after first transmitting the alarm to the UTPD.
- L. Contractor is responsible for the performance of the persons Contractor assigns to provide services for MD Anderson on MD Anderson's campus. Contractor will not knowingly assign individuals to provide services on MD Anderson's campus who have a history of violent, unacceptable, or grossly negligent behavior or who have a felony conviction. Prior to supplying labor services under this Agreement, MD Anderson may require Contractor to provide a list identifying the individuals that may be assigned to MD Anderson along with a letter signed by an appropriate officer of Contractor that affirms compliance with this Rider. Contractor will revise such letter each time there is a change in Contractor's personnel assigned to MD Anderson's campus, but in any case, annually on the anniversary date of this Agreement.
- M. Contractor will ensure that all individuals assigned by Contractor to perform services on MD Anderson's campus will display in plain view a photo identification badge provided by MD Anderson while on MD Anderson's campus.
- N. Contractor will retain resumes of all Contractor's employees assigned to this project. Contractor will ensure the proper maintenance of these documents for a minimum of one (1) year after contract completion. Contractor will maintain all documentation, including the results of any background checks, during the term of this Agreement.
- O. MD Anderson will have the right to reject any individual(s) that Contractor offers to assign to MD Anderson's account for any reason. In addition, if Contractor and/or its personnel fail to abide by these Premises Rules, MD Anderson will have the right to deny Contractor and its personnel access to MD Anderson's campus.
- P. MD Anderson will not be obligated to pay for labor hours supplied by any individual(s) upon whom a background check and records check is not completed or who fails to meet the standards described in this Rider.

**EXHIBIT Q**

**RIDER 107; TRAVEL POLICY**

## **RIDER 107 TRAVEL POLICY**

**All travel and expense costs will be calculated as follows:**

1. Contractor must use regular coach air transportation (state rate or corporate rate, whichever is lower) for travel in excess of two hundred (200) miles, unless otherwise agreed in advance by MD Anderson. In order to maximize discounted airfares, Contractor, with the cooperation of MD Anderson, will schedule on-site visits far enough in advance to take advantage of most advance-purchase offers. In the event meetings or on-site visits are cancelled by MD Anderson, Contractor may charge for any advance-purchase cancellation penalties imposed by the airline.
2. Corporate or state rate discounts (whichever is higher) will be used for hotel accommodations.
3. Maximum billable amount per person per day for meals will be \$36.00. Departing from MD Anderson prior to 12:01 p.m. negates any billing for meals for that day. Meal expenses are reimbursable for Contractor personnel who travel fifty (50) miles or more, and stay overnight.
4. Rental cars will be the least expensive, air-conditioned, automatic transmission, mid-size car available to Contractor under corporate rate programs. Full coverage collision insurance may be used for rental cars, but personal protection plans will not be reimbursed.
5. Ground transportation, parking costs and tolls may be invoiced at cost.
6. Personal automobile mileage charges will be computed based upon actual miles to and from the appropriate Contractor office to and from the applicable MD Anderson facility. Mileage charges will be invoiced at the standard mileage rate recognized by the State of Texas at the time of invoicing.
7. Miscellaneous expenses (i.e., tips, transfers, etc.) will be invoiced in an amount not to exceed \$5.00 per person per day, if deemed reasonable.

**All travel or miscellaneous expenses must receive prior written approval by the Project Coordinator. Contractor will not be reimbursed for expenses that do not receive this prior written approval.**

**All travel or miscellaneous expenses must be submitted with an original receipt. All approved expenses will be reimbursed at “actual cost” only. Contractor will not be reimbursed for expenses that are not accompanied by original receipts.**

**EXHIBIT R**

**RIDER 116; INVOICE PAYMENT REQUIREMENTS**

# RIDER 116

## INVOICE PAYMENT REQUIREMENTS

### Section 1. CONTRACT VALUE

Absent prior written authorization, invoices for amounts in excess of the Cap Amount will not be paid and will be returned unpaid.

### Section 2. INVOICE ROUTING; FORMAT; TIMELINESS

**2.1. Invoice Submission Location:** MD Anderson cannot retrieve invoices through Contractor's website and can only accept invoices through the following format (listed in order of preference):

Submittal Format	Submittal Address
EDI	Qualifying Contractors contact: Accounts Payable 713.745.9439
E-mail (one invoice per e-mail in PDF form)	<a href="mailto:mdaccap@mdanderson.org">mdaccap@mdanderson.org</a>
United States Postal Service	Accounts Payable – Unit 1699 P.O. Box 301401 Houston, TX 77230-1401
Carrier (UPS, Fed Ex, etc.)	The University of Texas MD Anderson Cancer Center Accounts Payable 7007 Bertner Ave – Unit 1699 Houston, TX 77030

**2.2. Electronic Invoice:** An electronic invoice shall be provided in a secure, non-alterable electronic format (Adobe \*.pdf is acceptable) e-mailed directly to [mdaccap@mdanderson.org](mailto:mdaccap@mdanderson.org) with the Contractor name and invoice number in the e-mail Subject line. Do not send or copy the MD Anderson Accounts Payable representative. MD Anderson will accept only one invoice per e-mail and all invoices must include a valid MD Anderson Purchase Order Number. Invoices without a Purchase Order Number or an incorrect Purchase Order Number will be returned unpaid to the Contractor.

**2.3. Effective Invoice Period:** Contractor will submit invoices within sixty (60) calendar days after delivery of the goods or complete performance of the services invoiced. MD Anderson will not be obligated to pay invoices that are not received within sixty (60) calendar days after delivery of the goods or complete performance of the services, unless acceptable delays are identified and approved in writing by MD Anderson prior to the delay.

**2.4. Third Party Invoicing:** MD Anderson does not accept invoicing from third parties acting on behalf of the vendor.

### Section 3. ACCURATE BILLING

**3.1. Invoice Requirements:** Each invoice must include:

- Billing related to only one valid MD Anderson Purchase Order.
- Invoice should be an original version and without manual or written changes.
- Valid MD Anderson Purchase Order Number clearly stated on the face of the invoice.
- Contractor's legal name and "remit to" address, telephone and fax numbers.
- A uniquely assigned invoice number.
- An invoice date.
- The MD Anderson "bill to" address listed in Section 2.1 for the United States Postal Service submittal format.
- A description of the goods or services purchased with the line item purchase price.
- The correct invoice amount (invoices that contain an incorrect amount or a disputed amount will need to be revised and resubmitted).
- For goods, the manufacturer's part number, item description, quantity shipped, and unit price.
- A line item for all freight, shipping and handling costs related to the invoice (not billed separately).

## **RIDER 116**

### **INVOICE PAYMENT REQUIREMENTS**

- Line items matching MD Anderson Purchase Order line items (invoice lines must exactly match, or be less than, MD Anderson Purchase Order line items).

Each invoice must be a standard typed original invoice on Contractor letterhead. MD Anderson will not make payments based on statements, quotations, service contracts, shipping/packing slips, calculator tapes, work orders, pro-forma statements, Letter of Intent, Memorandum of Understanding or other non-invoice documents.

**3.2. Deductions:** MD Anderson may reduce payment to Contractor for sales tax (for more information refer to Section 8.9 of the Agreement).

**3.3. Credit Memoranda:** Credit memoranda submitted to MD Anderson must include the Invoice Requirements set out in Section 3.1 of this Rider 116, as well as the following:

- The phrase “Credit Memo” in clear and apparent text.
- A uniquely assigned Credit Memo number.
- A description of the goods or services credited.
- A valid Purchase Order Number against which MD Anderson may credit the Credit Memo amount.

#### **Section 4. ACH PAYMENT DISBURSEMENT METHOD**

**4.1. Preferred Payment Method – Automated Clearing House (ACH):** MD Anderson’s preferred process for settling financial obligations is to utilize the National Automated Clearing House Association (NACHA) standard Cash Concentration and Disbursement (CCD) format. This industry standard process is utilized and recognized by most payees as the most efficient, safe and timely way to transfer funds. Our goal is that every payment made by MD Anderson is made via electronic funds transfers, unless legally prohibited. This service may be set up by contacting MD Anderson’s Treasury Services and Operations office at 713-745-9580 or by e-mail: [TreasuryServices@mdanderson.org](mailto:TreasuryServices@mdanderson.org).

Upon payment initiation, your company will receive the remittance information by e-mail with an attached Adobe Acrobat PDF file containing information detailing the payment date, invoice number, dollar amount, etc. Questions regarding this matter can be directed to MD Anderson’s Treasury Services and Operations office at 713.745.9580 or by e-mail: [TreasuryServices@mdanderson.org](mailto:TreasuryServices@mdanderson.org).

**4.2. Check Disbursement:** MD Anderson initiates payment disbursements on Tuesdays and Thursdays with typical funds availability the following business day.

**4.3. Accounts Payable Invoice Approval Process:**

**4.3.A Goods:** MD Anderson requires a 3-way match for payment on Purchase Orders for goods. The 3-way match includes a MD Anderson Purchase Order, a MD Anderson Materials Management Receipt, and a Contractor Invoice.

**4.3.B Services:** MD Anderson requires a 2-way match for payment on Purchase Orders for services. The 2-way match includes a MD Anderson Purchase Order and a Contractor Invoice. In addition, complete performance of services must be verified by an appropriate MD Anderson representative before an invoice for such services will be paid unless otherwise stated in the Agreement.

#### **Section 5. SUPPLIER INQUIRY OPTIONS**

**5.1. Payment Inquiry:** Contractor may research invoice status by contacting the MD Anderson Accounts Payable Department through the following methods (a MD Anderson Purchase Order Number and/ or Contractor Invoice Number is required):

- E-Mail (questions only): [mdaccAPIquiry@mdanderson.org](mailto:mdaccAPIquiry@mdanderson.org)
- Telephone: 713.745.9439
- Vendor Self Service (VSS) System: VSS is a secure, web-based system that allows Contractors to research detailed information regarding invoice status and MD Anderson payments online. To register for this service visit <http://mdanderson.org/suppliers> or call 713.745.7997.

**5.2. Reconciliation of Payment:** MD Anderson notifies Contractor that invoices have been paid by payment stub for standard check payments and e-mail for ACH payments.

**RIDER 116**  
**INVOICE PAYMENT REQUIREMENTS**

**Section 6. MATERIALS MANAGEMENT**

**6.1. Freight:** MD Anderson does not accept Collect On Demand (COD) shipping.

**6.2. Receiving/Logistics/Dock:** All deliveries must reference a valid MD Anderson Purchase Order Number or risk being turned away. Purchase Orders for goods not delivered to a MD Anderson receiving dock risk payment delays, unless otherwise stated in the Agreement.

<b>MD Anderson Receiving Docks</b>	
<b>MD Anderson Hospital</b> 1515 Holcombe Blvd. Houston TX 77030-4009	<b>Basic Sciences Research Building</b> 6767 Bertner Houston, TX 77030-2603
<b>Houston Main Bldg./ Ambulatory Clinical Bldg./ Mays Cancer Prevention Bldg.</b> 1155 Pressler Street Houston, TX 77030-3721	<b>Faculty Center Building</b> 1400 Holcombe Blvd. Houston, TX 77030-4008
<b>Smith Research Bldg.</b> 7777 Knight Road Houston, TX 77054-3005	<b>South Campus Research Bldg. II</b> 7435 Fannin Street. Houston, TX 77054-1901
<b>Proton Therapy Bldg.</b> 1840 Old Spanish Trail Houston, TX 77054-2002	

**Section 7. GOVERNING LAWS**

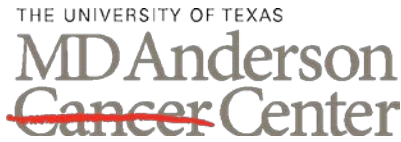
**7.1. W-9:** MD Anderson requires Contractor to have a valid W-9 on file with MD Anderson prior to all disbursements. Contractor may download the W-9 form from MD Anderson's website by accessing the Supply Chain Management Internet site at: <http://mdanderson.org/suppliers> then clicking on "Contract Information."

**7.2. Prompt Payment Act:** All funds held by MD Anderson are subject to the Texas Prompt Payment Act, Chapter 2251, *Texas Government Code*. Chapter 2251 of the *Texas Government Code* governs (i) when a payment by MD Anderson is overdue, and (ii) the rate of interest that accrues on such overdue payments.

**EXHIBIT S**

**RIDER 117; INSTITUTIONAL POLICIES**





## **RIDER 117**

### **Institutional Policies**

In accordance with the education requirements set forth in Section 6032 of the Deficit Reduction Act of 2005 (Act), MD Anderson has implemented, and Contractor agrees to abide by, the following policies, as may be subsequently amended, that are available at: <http://www.mdanderson.org/about-us/doing-business/vendors-and-suppliers/index.html>.

1. Fraud, Waste, and Abuse Policy
2. Hospital Compliance Plan
3. Non-Retaliation Policy

**EXHIBIT T**

**SALES AND USE TAX EXEMPTION CERTIFICATION**

# Texas Sales and Use Tax Exemption Certification

This certificate does not require a number to be valid.

Name of purchaser, firm or agency <b>The University of Texas MD Anderson Cancer Center</b>	
Address (Street & number, P.O. Box or Route number) <b>1515 Holcombe Blvd., Unit 1695</b>	Phone (Area code and number) <b>(713) 792-2121</b>
City, State, ZIP code <b>Houston, Texas 77030</b>	

I, the purchaser named above, claim an exemption from payment of sales and use taxes (for the purchase of taxable items described below or on the attached order or invoice) from:

Seller: \_\_\_\_\_

Street address: \_\_\_\_\_ City, State, ZIP code: \_\_\_\_\_

Description of items to be purchased or on the attached order or invoice:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_


Purchaser claims this exemption for the following reason:

EXEMPT UNDER SUBCHAPTER H, SEC. 151.309 GOVERNMENTAL ENTITIES. PURCHASER IS AN AGENCY  
OF THE STATE OF TEXAS. FEDERAL I.D. 74-6001118; TEXAS TAXPAYER I.D. 35065065068

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I understand that I will be liable for payment of all state and local sales or use taxes which may become due for failure to comply with the provisions of the Tax Code and/or all applicable law.

*I understand that it is a criminal offense to give an exemption certificate to the seller for taxable items that I know, at the time of purchase, will be used in a manner other than that expressed in this certificate, and depending on the amount of tax evaded, the offense may range from a Class C misdemeanor to a felony of the second degree.*

<b>sign here</b> 	Purchaser	Title	Date
		Senior Vice President and CFO	07/13/2017

NOTE: This certificate cannot be issued for the purchase, lease, or rental of a motor vehicle.

**THIS CERTIFICATE DOES NOT REQUIRE A NUMBER TO BE VALID.**

Sales and Use Tax "Exemption Numbers" or "Tax Exempt" Numbers do not exist.

**This certificate should be furnished to the supplier.**  
**Do not send the completed certificate to the Comptroller of Public Accounts.**

**EXHIBIT U**

**EXECUTION OF OFFER**