

## **PART ONE - THE DESIGN PROCESS**

### **PROCESSING THE WORK**

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#### **00010. UNIVERSITY INVOLVEMENT**

00011. UNIVERSITY PLANNING PROCESS: The University Capital Improvements process involves the participation of many University agencies. For help in understanding the earlier planning process and his/her role in the subsequent planning events, the Associate Architect should contact the Project Architect.

00012. ASSOCIATE'S RESPONSIBILITY TO THE UNIVERSITY ARCHITECT: Project planning is a cooperative procedure involving many persons in the University and in the Office of the State Architect; yet, during design and processing of documents, the Associate, as the agent of the Department of Administrative Services, General Services Division, will be required to work directly with the University Architect and to turn to her/him for authoritative answers on all design matters and those involving coordination with the University. The University Architect will require that the Associate Architect provide a practical, aesthetic, economical and cost effective design for the project.

00013. THE PROGRAM OF REQUIREMENTS is prepared in cooperation with the Using Agency concerned and with advice from other University agencies. The Program of Requirements is the single written source of information concerning the scope of the project and the detailed requirements to be achieved by the project. It is essential, at the very beginning of the design process that the Associate seeks clarification from the University Architect regarding any question generated from his/her study of these Building Design Standards or the Program of Requirements. When appropriate the University Architect will refer these questions to the Project Planning Team for resolution and response. Program changes will not be accepted solely upon request of the Using Agency's representatives.

.1 DESIGN WITHIN AVAILABLE FUNDS: A construction/renovation budget is developed for each project that establishes the maximum funds available for construction. The Associate shall continually monitor program requirements and cost estimates to assure that the project is designed within the available funds and does not deviate from the quality standards established in these Building Design Standards. Estimates of costs shall be projected to the proposed date for receipt of bids.

Should the Associate have doubts about satisfying at least priorities 1 and 2 of the Program of requirements, he must inform the University Architect without delay. Should the lowest bona fide bids for the construction of the project exceed the Fixed Limit of Construction Cost, the Associate will be required to assist in bringing the project back within the funds available. This may require modifying the drawings and specifications for the project without additional charges as per the contract for services with the State.

.2 ADD-ALTERNATES: The State and The University prefer to avoid deduct-alternates unless circumstances justify their use and special permission is obtained from the University Architect. Carefully selected add-alternates are desirable to obtain the maximum number of priority 3 items and to fully utilize the available funds. Add-alternates must be items which can be added to the "base bid" design without causing major changes in the "base bid" design package. See 01 35 00.

00014. THE PROJECT SITE: The selected site for the project is described in the Program of Requirements. The University Master Plan, Landscape Master Plan, and District Plans, which have been adopted by the Board of Trustees, include design and development guidelines that provide a diagrammatic framework for land use, circulation, parking, landscape design,

## 00010. UNIVERSITY INVOLVEMENT (Cont'd)

and building placement. Information about those plans is available on the OSU Master Planning website ([www.fpd.ohio-state.edu/](http://www.fpd.ohio-state.edu/)). For most sites, there are area-specific guidelines that are applicable to defined sectors of the campus and provide the Associate with guidance concerning the development of the project site. The Associate shall visit the site prior to the Initial Planning Conference in order to understand the limitations and opportunities at the site and to formulate any questions about site conditions and the application of design and development guidelines. The Associate is free to suggest modifications as long as suggested rearrangements clearly adhere to plan principles and guidelines. The Associate is encouraged to retain a professional landscape architect and/or a physical planner for the purpose of dealing with site issues. The use of the services of a professional landscape architect will be required when the university determines that those services are needed to fulfill project requirements.

## 00015. CONFERENCES:

.1 INITIAL PLANNING CONFERENCE: Immediately after the Associate has been confirmed by the Office of the State Architect, the University Architect will schedule a meeting for the purpose of discussing the University Conceptual Guidelines and general requirements of the program and procedures for expediting the Associate's work. The University will be represented by the Official Planning Committee. It is MANDATORY that the Associate's professional consultants, (including his fire protection, plumbing, HVAC, and electrical consultants) attend this conference.

.2 ADDITIONAL CONFERENCES: Additional conferences will be held to (1) discuss and clarify ways in which the University's Conceptual Guidelines relate to the project, (2) to clarify the Program of Requirements, (3) to review and discuss the Associate Architect's evaluation of achievability of priority 1 and 2 requirements within budget constraints and to assist in definition of alternates, which will become an important component of the construction documents.

Participants in these conferences are named in the Program of Requirements. All conferences will be scheduled by the University Architect, or have his/her full knowledge and approval.

.3 CONFERENCE MEMORANDA: The Associate is responsible for the proper recording of the business content of all conferences. Within seven days following any conference, copies of a memorandum, containing a complete summation of decisions and actions and affecting the project, shall be delivered to the University Architect for distribution to all OSU conferees. Copy quantity for The University will be determined by adding three copies to the number of OSU participants in the meeting. The Associate will deliver memoranda copies to all conferees other than OSU participants.

.4 FORMAT FOR MEMORANDA: Memoranda shall be numbered in consecutive order. Summations shall be in outline form with numbered paragraphs and alphabetical subparagraphs. Although statements should be brief, each statement shall convey the entire message and shall clearly state the problem or directed decision. All pertinent information shall be provided in the statement: one word statements, and terse phrases and clauses should be avoided.

00016. DESIGN STAGES: During the planning period the Associate Architect is required to make submittals of three stages of the project development which coincide with the contractual agreement for fee payment. The three stages are:

**00010. UNIVERSITY INVOLVEMENT (Cont'd)**

.1 SCHEMATIC DESIGN DOCUMENT STAGE.

GENERAL NOTE: During the early stages of the Schematic Design development, the Associate is required to consult with the University Architect to review conceptual solutions. The material can be in "sketch form" showing possible design solutions that can be expanded upon during the development of the final schematic submittal. More than one study will be required for review. The purpose of these "mini design sessions" is to assist the Associate in the development of an acceptable final schematic design submittal. If this procedure is not followed, there are strong possibilities that the formal schematic design submittal will be disapproved by the University.

.2 DESIGN DEVELOPMENT DOCUMENT STAGE.

.3 CONSTRUCTION DOCUMENT STAGE.

00017. SCHEMATIC DESIGN DOCUMENT STAGE:

.1 SUBMITTAL shall consist of:

- .1.1 A site plan, showing adjacent buildings, existing and proposed contours, and existing sewers and utilities. Refer to Paragraph 00014 for requirements relative to siting of the project.
- .1.2 All floor plans - For each room or space, identify with Program of Requirements Room Name and Program of Requirements Item Number. Also see 00041.8.
- .1.3 All elevations.
- .1.4 A section through the entire building, selected to best show the relationships of architectural and engineering features.
- .1.5 Equipment and furniture layouts for all floors.
- .1.6 An isometric cubage diagram of the building (for State Architect).
- .1.7 A Database file which compares the Assignable Square Footage (ASF) of the Program of Requirements to that of the Schematic Design Document. This submittal must be in the following format:

Title Block  
Project Name:  
Project Number:  
Project total gross square feet (GSF):

Column	Column Header
1	PoR Item Number
2	PoR Room Name
3	PoR Priority
4	PoR Number of Rooms
5	PoR ASF
6	Schematic Design Number of Rooms
7	Schematic Design ASF
8	PoR/Schematic Design ASF Difference
9	Comments

## 00010. UNIVERSITY INVOLVEMENT (Cont'd)

This file should also contain a subtotal by Program Item Number Group (e.g. all spaces under Program Item Number 1.0 would be subtotaled.) A project total ASF should also be included (totals all Program Item # Group ASFs).

- .1.8 Tabulation of floor areas, cubic contents, and a construction cost estimate shall be provided in both hardcopy and electronic format (Microsoft Excel). Show estimated cost per square foot and per cubic foot. Indicate new construction costs, remodeling costs, including major and minor areas of remodeling, with approximate areas. Coordinate with Program of Requirements item numbers. Tabulations may be combined. Also see 00013.
- .1.9 An outline specification, indicating materials, and types of construction. Include a description of each plumbing, HVAC, fire protection, and electrical system design concept and an analysis of noise and vibration control for these systems.
- .1.10 Schematic models usually are not required, but study models might be considered for submittal at this stage, if unusual conditions suggest that study models might aid in the review of the drawings.
- .1.11 A letter describing energy and life cycle analysis shall be submitted.

00018. DOCUMENTS REVIEW: A conference will be held to review documents at this stage. Prior to printing the documents for distribution, the Associate Architect shall review one complete set of documents with the University Architect to verify that submittal contains sufficient information for review process. When documents are deemed acceptable, the University Architect will provide the Associate with a listing of quantity of documents required to be provided by the Associate Architect for distribution. List will consist of full sets for certain participants and partial sets or individual sheets for others with specialized interest in the project.

At least seven workdays will be required for review by the recipients prior to the scheduled meeting. See 00015 regarding memoranda.

After the documents have been received and distributed, the University Architect will schedule the review conferences and obtain approval signatures of the persons named in the Program of Requirements.

Periodically, the School of Architecture requires one set of documents for display and as teaching aids. This requirement may be limited to one or include any combination of the schematic design development and construction document submittals.

00019. APPROVAL SIGNATURES: Signatures of University officials following the words "Approved by" or "Examined by" do not express approval of technical sufficiency nor accuracy of the information shown, but do signify that the Project as shown and described by the documents generally conforms to the Program of Requirements, adequately responds to the Conceptual Design Guideline and that the estimated cost of the project is within available funds.

00020. ADDITIONAL PRINTS: After schematic drawings have been approved, two prints of each floor plan shall be furnished to the University Architect for submittal to Facility Planning for assignment of room numbers. The University Architect will return one print, with required room numbering, to the Associate for use in transferring room numbers to the project drawings. Refer to Paragraph 00041.8.

00021. DESIGN DEVELOPMENT DOCUMENT STAGE: Drawings for this submittal should be progress prints made from partially finished construction document drawings. Outline specifications shall be updated in accordance with comments received at the conference for

## 00010. UNIVERSITY INVOLVEMENT (Cont'd)

review of schematics. A quantity take off detailed estimate of cost shall be included in this submittal, and provided in both hardcopy and electronic format (Microsoft Excel).

### .1 SUBMITTAL shall consist of:

- .1.1 Site plans showing adjacent buildings, proposed site improvements, existing and proposed contours, existing and proposed sewers and utilities. Note the statutory requirements for separate site plans for General Construction; Plumbing; Heating, Ventilating, and Air Conditioning; and Electrical Work.
  - .1.1.1 When a site survey has been made by a professional surveyor, a facsimile of the surveyor's drawing must be included with the site plan prepared by the Associate. This survey plan sheet size should be the same as other sheets in the set; if surveyor's drawing is too large, a reduction in scale will be required.
- .1.2 Site development plan, prepared by a Landscape Architect when project includes substantial site work.
- .1.3 All floor plans, showing vertical pipe and duct spaces, structural columns, and principal architectural and engineering features. If sheet size is sufficient, each sheet shall contain a schedule of floor, ceiling, and wall finishes for the floor shown on that sheet. Include Program of Requirements Item Numbers, Room Names and Assigned Room Numbers. Also see 00041.8.
- .1.4 A roof plan showing all slopes; key reference roofing high point, valley and drain elevations (altitudes referenced to project benchmark); roof drains; penetrations; walkways; large piping; air ducts; fans; condensers; roof structures; equipment screens and ladders.
- .1.5 Elevation drawings of every exterior side of each structure showing materials, features, openings, floor and roof lines, grade lines, footings and everything exposed to view above eaves or parapets. Visual screening of roof mounted clutter or equipment is required.
- .1.6 Longitudinal and cross sections through the building, selected to best show the relationships or architectural and engineering features.
- .1.7 Equipment and furniture layouts for all floors.
- .1.8 Live loads for floors must be shown on plans.
- .1.9 Plumbing system, showing riser diagrams and design calculations.
- .1.10 VAC system major design calculations.
  - .1.10.1 HVAC system equipment room locations; showing equipment major piping and ductwork sized for all floors in the building shall be submitted.
- .1.11 A Database file which compares the assignable square footage (ASF) of the Program of Requirements to that of the Schematic Design Document and the Design Development Document. This submittal must be in the following format:

Title Block  
Project Name:  
Project Number:  
Project total gross square footage (GSF):

## 00010. UNIVERSITY INVOLVEMENT (Cont'd)

Column	Column Header
1	PoR Item Number
2	PoR Room Name
3	PoR Priority
4	PoR Number of Rooms
5	PoR ASF
6	Schematic Design Number of Rooms
7	Schematic Design ASF
8	PoR/Schematic Design ASF Difference
9	Comments
10	Design Development Number of Rooms
11	Design Development Room Number(s)
12	Design Development ASF
13	PoR/Design Development ASF Difference
14	Comments

This file should also contain a subtotal by Program Item Number Group (e.g. all spaces under Program Item Number 1.0 would be subtotaled). A Project total ASF should also be included (totals from all Program Item # Group ASFs).

- .1.12 Life-cycle cost analysis.
- .1.13 Energy budget (Energy Conservation Report) three copies.
- .1.14 Electrical submittal shall include:
  - .1.14.1 Electrical system showing fixtures and equipment.
  - .1.14.2 Riser diagram indicating connections and wiring to main switch, distribution, power and lighting panels.
- .1.15 Panel and switch schedule.
- .1.16 Information regarding clearances between high voltages and low voltage circuits and distances from transformers, other equipment and buildings.
- .1.17 Electrical system major design calculations and analysis of loads including short circuit calculations, photometric calculations, voltage drop calculations for service entrance, service drop and secondary conductors, demand factors used, calculations determining load availability of existing transformer and capacity to accommodate additional load.

## 00022. CONSTRUCTION DOCUMENT STAGE:

- .1 SUBMITTAL shall consist of documents complete and in the form to be printed for distribution to prospective bidders.
- .2 DRAWINGS AND SPECIFICATIONS shall be prepared in conformance with Section 153.02 and 153.03 of the Revised Code of the State of Ohio which requires separate documents for each of the following prime contracts: General; Plumbing; Heating, Ventilating, and Air Conditioning; and Electrical. If the Associate and the University Architect determine that separate contracts are desired for other parts of the work, separate documents shall be prepared for each separate contract. Check with The University Architect to determine which prime contracts are essential or desired.

**00010. UNIVERSITY INVOLVEMENT (Cont'd)**

During the review interval, any changes required by the University Architect's Office, the Industrial Compliance Division, or other State Agencies, must be made, preferably not by addenda.

- .3 CODE INFORMATION: On the title sheet of the drawings and on the title page of the specifications, show the Ohio Building Code (OBC) "updated through" date that was used for design, use group classification, type of construction classification and the area of each floor.
- .4 A Database file which compares the assignable square footage (ASF) of the program of requirements to that of the Schematic Design Document, the Design Development Document, and the Construction Document. This submittal must be in the following form at:

Title Block

Project Name:

Project Number:

Project total gross square footage (GSF):

Column    Column Header

1	PoR Item Number
2	PoR Room Name
3	PoR Priority
4	PoR Number of Rooms
5	PoR ASF
6	Schematic Design Number of Rooms
7	Schematic Design ASF
8	PoR/Schematic Design ASF Difference
9	Comments
10	Design Development Number of Rooms
11	Design Development Room Number(s)
12	Design Development ASF
13	PoR/Design Development ASF Difference
14	Comments
15	Construction Document Number of Rooms
16	Construction Document Room Number(s)
17	Construction Document ASF
18	PoR/Construction Document ASF Difference
19	Comments

This file should also contain a subtotal by Program Item Number Group (e.g. all spaces under Program Item Number 1.0 would be subtotaled). A Project total ASF should also be included (totals from all Program Item # Group ASFs).

- .5 ADDITIONAL SUBMITTALS:
  - .5.1 RENDERINGS, as required by the Associate's contract.
  - .5.2 A MODEL shall be submitted at this stage, if required by the Associate's contract.
  - .5.3 TWO COPIES OF HVAC, PLUMBING, AND ELECTRICAL DESIGN CALCULATIONS shall be furnished to assist University personnel in review of the documents.
  - .5.4 An updated detailed quantity estimate of cost showing final square foot and all material quantities shall be submitted in both hardcopy and electronic format (Microsoft Excel).

## **00010. UNIVERSITY INVOLVEMENT (Cont'd)**

00023. DOCUMENT REVIEW: See 00018.

- .1 Review of construction document submittal will require approximately ten work days or more, depending upon the complexity of the project and quantity of documents.

After approval is received from planning participants, the University Architect will obtain necessary signatures on title sheet and specification cover sheet.

Signed cover sheets will be returned to Associate Architect to secure the approval and seals of the Industrial Compliance Division and State Board of Health.

- .2 REVIEW COMMENTS: At the time of, or prior to, issuance of the last Addendum during the bidding period, the Associate shall advise the University Architect in writing that all comments, changes, etc., resulting from document review by the Industrial Compliance Division, State Architect, Fire Marshal, University, and other agencies having review authority, have been incorporated into the construction contract documents. In the case of the exceptions, the Associate must indicate date, meeting, item, etc. involved in the resolution.

## **00030. DESIGN**

00031. UNIVERSITY ARCHITECTS INVOLVEMENT IN THE DESIGN PROCESS: The Associate Architect is required to involve the University Architect in the entire design process. The University Architect is as interested in the response to the Conceptual Design Guidelines as the solution of the specific problem needs stated in the Program of Requirement. It is especially important that the Associate Architect understand the high priority that the University places upon the role of each facility in the creation of the overall campus. No building will be permitted to be designed in isolation. All buildings contribute to the achievement of overall University goals and, as a result, they will be different from buildings designed for other sectors of our society.

The Associate Architect is expected to confer with the University Architect often—especially during the early conceptual design phase. Submission of a detailed, final, schematic design without prior review may result in rejection of the entire preliminary submittal and require complete redesign. The University Architect shall be the final design jurist.

00032. QUALITY DESIGN: Unless otherwise stated in the Program of Requirements, buildings shall be designed as quality institutional buildings and heavy duty components shall be selected and specified to provide maximum life cycle usefulness. The requirement that the project be designed within available funds is not a license to design short life-cycle, speculative-type construction nor to specify inferior or inappropriate materials.

00033. USE OF PROFESSIONAL CONSULTANTS: On all architectural and engineering projects for which enclosed structures are designed, the services of licensed professional engineers are always required for the Plumbing, HVAC, Fire Protection, and Electrical design. Sprinkler consultant must be capable of hydraulic design. On major projects, the services of other licensed professional specialists (Landscape, Acoustic, Food Service, etc.) might be required, as determined by the complexity of the project. The Associate shall closely supervise work done by his professionals, whether “in-house” or independent, to assure coordination of all parts of the total project. The University Architect reserves the right to direct the work of professionals through the Associate.

- .1 TOPOGRAPHIC SURVEYS AND SOILS ANALYSIS REPORTS: are the responsibility of the Associate to accomplish. Costs of these services will be paid from the Project funds on an actual cost basis without fee mark-up. Any available record drawings from previous projects or the Utility Atlas maintained in the Office of the University Architect and Physical Planning

### 00030. DESIGN (Cont'd)

- will be made available. The University cannot warrant that information shown on record drawings is correct; therefore, the Associate must supplement this information with field surveys and measurements. The Associate is responsible for the accuracy of information shown on the contract drawings. See Appendix for survey requirements.
00034. DESIGN FOR CONSERVATION OF ENERGY: The University is dedicated to the principle of conserving energy. University personnel will scrutinize proposed construction for means of reducing not only initial cost of energy consuming equipment, but also long-range operating costs. The Associate must work in harmony with his consultants to design new buildings and to remodel existing buildings to make the most efficient use of building materials and energy sources available. Also see Facility Services Section 6 and Appendices.
- .1 DESIGN OF HVAC AND ELECTRICAL SYSTEMS: Consideration must be given to building utilization by planning for conservation of energy during summer and winter vacations and for other periods of minimum occupancy. Research laboratories, spaces for animals, and other spaces which might require operation 24 hours a day must be serviced by systems separate from systems for offices, which might require operation for only 8 hours a day, and classrooms, which may be shut down during summer and vacation periods.
- .1 DESIGN OF HVAC AND ELECTRICAL SYSTEMS: (Cont'd)
- .1.1 PROVISIONS FOR ALTERNATE SOURCES OF ENERGY: Of extreme importance is the capability of using alternate sources of energy. If gas-fired boilers are installed, the facilities must be provided with standby equipment for use of other fuels or sources of energy.
- .1.2 LIGHTING SYSTEMS are considered a source of heat to supplement heating requirements and recovery systems shall be provided wherever practicable.
- .1.3 WINDOW BLINDS AND SHADES are considered to have a significant affect to HVAC and lighting conditions in a building. Automatic window blind and shade controls shall be provided wherever practicable to support and enhance energy efficiency for building systems.
- .2 LIFE-CYCLE COST ANALYSIS: The Associate shall submit to the University a life-cycle cost analysis, which has been prepared in cooperation with his HVAC and electrical consultants. The analysis shall be prepared pursuant to Sections 123.001, 153.01, 153.04, and 153.10 of the Revised Code of the State of Ohio and in accordance with rules adopted under Chapters 3781 and 4101.
- .3 ENERGY BUDGET: The Associate shall provide an energy budget to the University, prepared in cooperation with his HVAC, plumbing and electrical consultants. The budget shall show the estimated use of energy for the structure, calculated on a BTU per square foot per year basis. See Appendix.
00035. NOISE AND VIBRATION CONTROL: Noise and vibration in terms of emission control and transmission control is the combined responsibility of the Associate and his consultants and must be considered in the design of every building, or space, even though specific requirements might not be stated in the Program of Requirements. Three principle considerations which must be given to noise and vibration control are:
- .1 NOISE CONTROL TO PROVIDE FOR MAXIMUM USEFULNESS OF THE FACILITY by keeping levels of sound within ranges which are conducive to study and work or other uses for which the facility is designed.

**00030. DESIGN (Cont'd)**

- .2 NOISE CONTROL IN COMPLIANCE WITH OSHA REQUIREMENTS for the health and safety of building occupants; control shall be for all areas of the facility, including equipment rooms, boiler rooms, PRV stations, and fan rooms. Set a maximum acceptance level of 85 dBA for new equipment.
- .3 VIBRATION CONTROL to limit sound produced by equipment and for protection of the equipment and the building structure.
- .4 RANGES OF SOUND CONTROL LIMITS required for indoor design are shown in the Appendix. These standards must be followed.
  - .4.1 CONTROL OF BUILDING EQUIPMENT (HVAC, ELECTRICAL, ETC.): Special attention shall be given to proximity by keeping noise producing equipment removed as far as possible from areas requiring low sound levels. Refer to Division 22, 23, and 26 for specific means of reducing noises from these sources.
- .5 TESTS: A post-construction sound test shall be specified to prove the integrity of sound control where control is critical, and on a random sampling basis in other areas if deemed necessary. Specifications shall require that noise tests to be performed with a Type 1 precision sound level meter complying with ANSI - Standard S1.4-1983.

00036. PLANNING FOR SERVICE AREAS: Required, but not necessarily identified in the program. All service rooms should be adequately ventilated with airflow rates of 10 to 20 room air changes per hour where heat, noxious odors, or hazardous materials may be present. All service rooms or areas (i.e., custodial closets, trash rooms, maintenance control rooms, equipment rooms, mail rooms, etc.) shall be adequately ventilated by natural or mechanical means, especially if human occupancy is required. Airflow rates of 10 to 20 room air changes per hour should be provided in those spaces where heat, noxious odors, or hazardous materials may be present.

- .1 CUSTODIAL SPACES: For new buildings on the Columbus Campus, provide the following custodial spaces; for regional campuses, consult the Director of Building Services at the campus involved; requirements might differ from those specified herein.
  - .1.1 CUSTODIAL EQUIPMENT STORAGE ROOM: One per 22,000 square feet on one or two floors. See Appendix D.
  - .1.2 CUSTODIAL WET CLOSET: One on each floor min. serving not over 22,000 square feet each. These closets may be combined with custodial equipment storage rooms. Each closet shall be equipped with a floor sink, shelving, and mop holders. See Appendix D.
  - .1.3 CUSTODIAL RECEIVING AND STORAGE ROOM near a loading dock, or near an elevator on the lowest floor. See Appendix D.
  - .1.4 DRY TRASH ROOM opening directly onto a loading dock, and to an inside corridor. Hot water, cold water, and floor drains shall be provided in each trash room which serves a kitchen facility. Trash rooms shall be of fireproof construction, and shall be protected with sprinklers. See Appendix D.
  - .1.5 WET WASTE OR HAZARDOUS WASTE ROOM of 60 square feet minimum must be provided for chemistry or similar laboratory facilities.
  - .1.6 FACILITIES MAINTENANCE CONTROL ROOM: Locate near loading dock. See Appendix D.

## 00030. DESIGN (Cont'd)

- .2 MAIL ROOM: The Associate shall provide a primary Mail Room for US Mail and University Mail delivery and distribution adjacent to the building entrance or loading dock for each new building or building renovation. Room size shall be applicable to the number of departments serviced in the building and volume of delivery. Minimum room size shall be 100 square feet. Secondary Mail Rooms on upper floors may be required for applicable mail distribution.
- .3 EQUIPMENT ROOMS: Transformers, boilers, pumps, tanks, heat exchangers, and other large equipment shall be located to permit easy servicing, operation and removal. Provide adequate circulation areas around equipment, including valves and accessory piping. Plans and elevations, at a scale of not less than  $\frac{1}{4}'' = 1' - 0''$ , shall be prepared for each room, to show that adequate circulation areas are provided.
- .3.1 TELEPHONE AND DATA COMMUNICATIONS EQUIPMENT ROOMS
- .3.1.1 MAIN EQUIPMENT ROOM: Provide a dedicated room, having 100 square feet minimum. No other services shall be included in this room. Provide appropriate electric receptacles, lighting and empty conduits. Locate near the point where main communication services enter the building and access directly from a corridor. This room is to accommodate fiber optic cables and telephone services connections.
- .3.1.2 TELEPHONE DISTRIBUTION CLOSETS: On each floor, provide a dedicated closet adequate to house distribution equipment for that floor. Locate near the telephone and communications conduit risers, provide electric receptacles and lighting and access directly from a corridor.
- .3.1.3 SONNET NETWORK ROOM: Near the Main Communications Room, provide a 100 to 150 square foot air-conditioned room for the use of UTS, in connecting local area computer networks in the building to the campus-wide SONNET network. Access directly from a corridor. Provide appropriate electric receptacles, lighting and empty conduits.
- .3.2 PROTECTION FROM FLOODING:
- .3.2.1 Electrical switchgear, panels, substations, chillers, pumps, tanks compressors, and similar items of equipment shall be placed on raised concrete pads. Pads shall be a minimum of 4 inches high to aid housekeeping and protect equipment.
- .3.3 ACCESS TO EXISTING, NEW, OR TEMPORARY UTILITY CONTROL DEVICES, valves, switches, manholes, etc. shall be maintained throughout the course of construction.
- .4 LOADING DOCKS: Provide a loading dock at each new building or major renovation. Provide the loading dock with three slots, one for deliveries, one for recyclable dumpster, and one for non-recyclable dumpster. A three-slot loading dock is especially important for buildings designed for extensive turnover of Users, extensive 'churn' of (relatively) short-term research projects, etc. Doors shall be at least 9'-0" wide and should be 12'-8" minimum on center when multiple doors are used. Pavement slope is a serious concern relative to drainage and to truck bed floor/building floor/canopy relationship. Loading docks shall be at the same elevation as a floor of the building and shall be either 44 inches minimum to 46 inches maximum above the adjacent pavement or shall be provided with a load leveler. Verify height requirements with the University Architect; a different dock height might be required if stepvan vehicles, only, are used. Loading docks must not be located at or near fresh air intakes for buildings. Unless this is done, the exhaust from idling vehicles will be drawn into buildings and expose inhabitants to toxic airborne contaminants.
- .5 TRASH DUMPSTER: The University desires to screen trash dumpsters and provide a safe efficient work place for its employees. Design for the following conditions unless this

### 00030. DESIGN (Cont'd)

requirement is waived by the University Architect: Provide interior space for two dumpsters (one for recyclables, and one for non-recyclables) at grade in front of the loading dock with 12-foot roll-up doors to allow a 'packer' truck to retrieve, empty and replace the dumpsters within the space. Provide a concrete pad 12" thick of sufficient length to accommodate a 36' long packer truck making the retrieval and replacement of the dumpsters. In addition to screening, the intent of this requirement is to allow recyclables and trash to be deposited in the dumpsters from the loading truck in a sheltered environment.

- .5.1 Construction sites: Include sufficient space and annotate on the site drawings for contractors to provide dedicated dumpsters, minimum one for recyclables and one for non-recyclables.
- .6 PIPE SPACES: Pipe spaces shall be of width required for servicing of piping, but minimum clear width shall be 2-feet 0-inches. Provide access doors with lockset. When in exposed locations, access doors and hardware shall be designed to match doors and hardware for adjacent areas.

### 00037. FURNITURE, FIXTURES AND EQUIPMENT (FF&E)

.1 LEED POLICIES: The University promotes energy efficient green design, construction and building operations. Where possible, FF&E are to be selected and specified following the United States Green Building Council LEED (Leadership in Energy and Environmental Design) Green Building Rating System® consensus-based national standard for developing high-performance, sustainable buildings. Refer to the website: <http://www.usgbc.org>. This includes LEED for Commercial Interiors (LEED-CI) which addresses the specifics of tenant space in office, retail, and institutional buildings.

.2 DESIGNS: The process of planning, design, specification and installation of FF&E is an integral part of the planning, design and construction of a project. The Associate Architect and their team of specialists, including professional interior design services, shall be responsible for the planning, design and specification of all FF&E that is associated with a project. The University Architect will be responsible for directing and coordinating interior design services by the Associate.

The Associate shall provide ample seating (construction or fixed equipment) as part of the architectural design for corridors, lobbies and other areas immediately outside classrooms and other areas of assembly.

The Associate shall not design Custom Construction or Millwork in places where there is a probability for equipment or function change as it increases future University costs for these changes. The Associate shall instead use flexible FF&E. Typical proposed substitutions are desks, counters and other office equipment areas. All proposals for Custom Construction or Millwork are to be reviewed and approved by the University Architect prior to final development of the Construction Documents.

.3 CATEGORIES: FF&E is categorized as Fixed Equipment or Movable Equipment. Refer to Division 10 SPECIALTIES, Division 11 EQUIPMENT and Division 12 FURNISHINGS for details.

.3.1 FIXED EQUIPMENT is generally defined as any manufactured product that is attached or requires significant structural or construction coordination in a building. Fixed Equipment is acquired through one or more of the construction contracts and is funded within the project construction budget. In some cases, the University may choose to purchase Fixed Equipment for a project. In these cases, the cost of the equipment is moved from Construction funds to Equipment funds for purchase. The

## 00030. DESIGN (Cont'd)

Construction Documents must include all services and construction coordination for the installation of this equipment.

.3.2 MOVABLE EQUIPMENT is generally defined as any smaller, loose products that are acquired by the University. Movable Equipment purchases utilize a fund allocation within the total project funds but independent of the construction budget. Using specifications developed by the Associate, the University will procure movable equipment by means of a bid process or by using pre-bid University or State contracts.

.3.2.1 TECHNOLOGY EQUIPMENT: Technology equipment is a sub category of the Movable Equipment noted above. The cost of technology planning, design and specification for classrooms, auditoriums, and department classroom meeting space is also included in this budget. The University Architect will contract and oversee the technology design process.

The timing for technology design must coincide with the development of Construction Documents and prior to bidding. The Associate must be involved in this design as they are responsible for the coordination of all services, structural support, blocking, riser diagrams, power, data locations and required HVAC needs for the Equipment.

**Typically, movable equipment funding allocations are provided for new building construction projects but not for remodeling/renovation projects.**

00038. MISCELLANEOUS DESIGN REQUIREMENTS: The following requirements are of a general nature and do not fit into any particular CSI division. Requirements pertaining to particular materials or work are given in the appropriate CSI division in PARTS TWO, THREE, FOUR, and FIVE.

- .1 TEMPORARY EGRESS: Building addition and expansion projects which involve eliminating or closing an existing required means of egress shall be provided with a temporary means of egress accessible to individuals with disabilities.
- .2 STAIR DESIGN: Conform to applicable Ohio Building Code provisions.
- .3 FLOOR LOADS: Design floor loads shall accommodate all live and dead loads including concentrated loads from fixed and movable equipment. Conform to the Ohio Building Code requirements, except that design live floor loads shall be at least 100 pounds per square foot. Identify floor live loads for each room or space on each floor plan drawing.
- .4 LINES OF SIGHT INTO TOILETS shall positively be broken. Location of mirrors and reflected images shall be checked by the Associate. Direct or reflected sight lines into dressing rooms or toilets are prohibited.
- .5 CORRIDOR DOORS: Doors on opposite sides of corridors shall be offset to prevent direct view from one room to another. Classroom and laboratory room doors opening into corridors shall be recessed the width of the door to eliminate corridor obstructions.
- .6 RECESSES shall be provided for drinking fountains and telephones. The recesses shall be finished with glazed structural tile, ceramic tile, glazed concrete block, or concrete block finished with a paint which will withstand repeated scrubbing.
- .7 EXTERIOR DOORS, except those designed with hardware for emergency exit only, shall be protected by canopies and wing walls; or, doors shall be recessed.

## 00030. DESIGN (Cont'd)

- .8 HVAC IN REMODELING PROJECTS: Spaces between floor construction and suspended ceilings shall not be crowded with equipment of such size that the equipment cannot be serviced and effectively insulated for noise control. In lieu of such installations, properly insulated floor spaces, of a size which will accommodate equipment, shall be provided.
- .9 CONNECTION TO EXISTING UTILITIES: Refer to FACILITY SERVICES, Section 3, for instructions regarding design and installation of both temporary and permanent connections to existing utilities (i.e., steam, condensate return, hot water heating, hot water return, chilled water, chilled water return, domestic hot water, gas, cold water, alarm systems, emergency electric, electric, etc.) Also see 01 51 00 and 33 00 00.
- .9.1 CONNECTIONS TO CITY OF COLUMBUS UTILITIES: In OSU campus peripheral areas where connections are being made directly to City of Columbus Utility Division water and sewer mains all City utility rules and ordinances shall apply. Expect system capacity charges, which are based on water line sizes, for domestic water, fire service lines, and sanitary sewer connections. Expect to have to run separate domestic water and fire suppression lines from the public right-of-way to the building. In addition there will be tap (inspection) fees and meter charges. If a building has been demolished on the site, credits will be applied based on the size of the previous services. The Associate shall as a part of the design process deal directly with the City Division of Water and Division of Sewerage and Drainage, presenting for their approval site utility drawings. Allow a number of weeks for this process. (Start as early as possible and don't expect special treatment for University projects). Construction Documents must make clear to the bidders what City fees and charges to anticipate as some of these charges may be significant.
- Before stormwater management plans are finalized for site drainage, including roof drains, the Stormwater Office of the City of Columbus Division of Sewerage and Drainage must approve them. Flow control measures may be required. Meeting the requirements of the City may have unexpected financial impact so contact with the Stormwater Office must be made during the design development process.
- .9.2 CONNECTIONS TO UNIVERSITY WATER DISTRIBUTION SYSTEM: The Ohio State University master meters water from the City of Columbus Utilities Department. All City system capacity charges for water and sewer service have been satisfied for connections to the University water system. All the City requires, for record purposes, is a utility site plan showing water and sewer connections. This site plan shall be submitted to the OSU Facilities Operations and Development Utilities Division for transmittal at the bid document stage. The Utilities Division as part of the University's design approval process shall approve water and sewer tap locations. During construction a two-week notice to arrange utility outages is required as the outage may be disruptive to normal university functions. There are no tap (inspection) charges to the project for making connections; however, the contractor(s) will be expected to pay for Utilities Division staff time for utility outages to benefit the project. Water taps will be inspected by OSU Utilities Division and sewer taps by a civil engineer from OSU Facilities Operations and Development.
- .10 ROOF-MOUNTED EQUIPMENT: Refer to FACILITY SERVICES, Section 3 under Roof-Mounted Equipment, Flashing and Roof Penetrations. Also note that pitch pans or pitch pockets are prohibited.
- .11 ROOF STRUCTURES AND ROOFTOP EQUIPMENT SCREENS: Finish materials and colors are subject to the approval of the University Architect.
- .12 WOMEN'S TOILET ROOMS: Increase the proportion of water closets and lavatories for women beyond OBC requirements. The number of water closets will vary according to

### 00030. DESIGN (Cont'd)

- specific projects, up to a fixture ratio of 1/3 mens to 2/3 womens for building populations where occupancy is expected to be split 50% men, 50% women for the next 20 years. Confirm this with The University Architect prior to schematic document review.
- .13 Lactation Rooms: All new major buildings will include at least one lactation room. Each facility will include 2 bays with enough area to accommodate appropriate furniture, counter space with sink and a compact refrigerator.
  - .14 EMPLOYEE TOILET ROOMS: It is University policy to avoid providing separate toilet rooms for students and employees.
  - .15 Gender Neutral Restroom: Provide one gender neutral restroom in all new buildings, and, when feasible, existing buildings. Room size shall meet ADA requirements with provisions for one water closet, one lavatory and a diaper changing station. Location should be adjacent to either entrance or elevator lobby on the ground floor.
  - .16 PROVISION FOR ADDITIONAL FLOORS: All structures must be designed to accommodate the addition of two floors in the future unless this requirement is waived by The University Architect. Notations on the structural and foundation drawings must show allowable future loadings.

### 00040. PREPARATION OF DOCUMENTS

#### 00041. DRAWINGS:

- .1 MATERIALS: Schematic sketches and drawings may be prepared on tracing paper. Design development drawings may be prepared on tracing paper, cloth or mylar; however, it is advisable to prepare these on cloth or mylar since construction document drawings are required to be on either of these materials.
- .2 SHEET SIZES: The 36 by 24 inch size is preferred. Authorization must be obtained from the University Architect for use of other sheet sizes.
- .3 COVER SHEETS, properly identified as to which submittal is being made, shall be provided on each submittal of drawings. A rubber stamp may be used for this identification. Cover sheets for schematic and design development submittals may be sepia transparencies made from the cloth, or Mylar, original; for construction document submittal, the original must be provided. The project numbers assigned by the University and the State Architect shall appear on cover sheets. See 00022.3 for code information to be included on the drawing cover sheet. Obtain sample sheet from University Architect.
- .4 SIGNATURE SPACES shall be provided on the cover sheet for each submittal. The University Architect will obtain the required signatures. For construction documents, the University Architect will return the signed cover sheet to the Associate in time for submittal to the State Architect prior to the printing of bid sets.
  - .4.1 PROJECTS PRESENTED ON NOT MORE THAN FIVE DRAWING sheets may be presented with the project title on sheet 1. A space for signatures must be provided on EACH of the five sheets.
- .5 TITLE BLOCKS shall be drawn in the lower right-hand corner of each drawing sheet. The project number, assigned by the University, in addition to the Associate's job number, shall appear in the title blocks. See Appendix F for example of desired title block.

## **00040. PREPARATION OF DOCUMENTS (Cont'd)**

- .6 SHEET NUMBERS: Use P, H, F, E, etc. Do not use "M" (Mechanical) for Plumbing, HVAC, or Fire Protection.
- .7 DRAWINGS FOR REMODELING PROJECTS: Two drawings of each floor plan are required: One drawing is to show existing construction and demolition; the second is to show the new construction and existing construction which is to remain. When sheet size permits, the two plans shall be drawn on the same sheet, for easy comparison of the two. This requirement applies to the floor plans for all submittals and all divisions of the work. Show existing room numbers on the demolition drawings.
- .8 ROOM NUMBERS: On schematic drawings, identify rooms and other areas by the nomenclature and numbers indicated in the Program of Requirements. After numbers have been assigned by Facility Planning, Facilities Operations and Development, the assigned numbers become the permanent numbers and shall be used when making references to spaces, in notes on the drawings, in schedules, and in correspondence.
- .9 CORRIDORS, VESTIBULES, AND OTHER AREAS AND SPACES
  - .9.1 CORRIDORS, VESTIBULES, AND OTHER AREAS AND SPACES which have not been assigned numbers by the University may be assigned numbers by the Associate to suit his needs for completing room finish schedules and for use in reference notes and correspondence. These numbers are not to be considered as permanent numbers. Refer to IDENTIFYING DEVICES in Division 10 of these guides.

## **00042. SPECIFICATIONS:**

- .1 PRINTING AND BINDING: The Associate is advised to run only the number of copies required for review purposes. SETS FOR BIDDING PURPOSES SHOULD BE MADE ONLY AFTER ALL REVIEW CORRECTIONS HAVE BEEN MADE. Generally, follow instructions in the State Design and Construction Handbook for printing and binding, with the following modifications:
  - .1.1 COLOR CODING: Forms and other documents not listed herein nor in the State Handbook shall be printed on white paper.
    - .1.1.1 The Special General Conditions and Division 01 shall be printed on yellow paper. These are yellow because they apply to all contracts. General Contract divisions are on white paper; plumbing on yellow; fire protection on green; HVAC on blue; electric on pink and wage rates on green.
  - .1.2 COVER SHEETS
    - .1.2.1 The University will furnish sample printed front covers for the construction document specifications. The Associate shall duplicate the paper quality, printing colors, styles and format, fill in all required titles, names, information and shall provide matching back covers of the same size paper quality and color as the front cover samples. In binding the finished books, both front and back covers shall be doubled at the binding edge and folded over screw-post type fasteners.
  - .1.3 BINDERS: Screw-type binding posts are required. For schematic and design development submittals, these binders may be exposed; for construction document submittals, any binder used must be covered as indicated above. Roll-form plastic binders and ACCO clips are prohibited.

## **00040. PREPARATION OF DOCUMENTS (Cont'd)**

- .2 **OUTLINE SPECIFICATIONS:** Submit outline specifications with schematic drawings; update these specifications for submission with design development drawings.
  - .2.1 Outline specifications are among the most important documents to be submitted. It is by these specifications that the University Planning Committee and the State Architect determine the acceptability of material and construction proposed by the Associate.
  - .2.2 Outline specifications should contain a brief, complete description of the entire project and should explain how the total work will be accomplished, i.e., should name each separate division of the work for which a contract will be awarded.
  - .2.3 The technical sections should be in outline form to serve as a guide in writing the construction document specifications. Information contained in these sections should be concise, but must name the materials, give locations (since the drawings, at this time, are not developed to the point that locations of materials are shown), indicate method of construction or installation, and indicate the finish of the completed installation.
    - .2.3.1 **DO NOT** write lengthy installation details and **DO NOT** write outline specifications as though instructing a contractor what to furnish and how to install the specified materials; save these details for the construction documents. Use of the past participle form of verbs to describe materials in place is preferred. Terse sentences, clauses, or phrases should be used as in the following example: "Corridor Partitions: Full height construction, 8x8x16-inch non-load-bearing concrete units laid in running bond with type N mortar.
- .3 **CONSTRUCTION DOCUMENT SPECIFICATIONS:**
  - .3.1 **NOTICE TO BIDDERS:** Follow sample form in the State Design and Construction Handbook. The time for receipt of bids will be established by the University or the Office of the State Architect in cooperation with the University Architect. All copies issued must show this information. Charges for non-returned documents will be as stated in the Notice to Bidders.
  - .3.2 **"FRONT END" DOCUMENTS:** Obtain the most recent edition either from the University or from the Office of the State Architect. These documents include:

INSTRUCTIONS TO BIDDERS, DEFINITIONS, BID FORM, NON-COLLUSION AFFIDAVIT, CONTRACTOR'S MBE CERTIFICATION SET ASIDE REVIEW BOARD APPLICATION, EQUAL EMPLOYMENT OPPORTUNITY BID CONDITIONS, FORM OF AGREEMENT, CONTRACT BOND, DRUG FREE WORKPLACE CERTIFICATION, GENERAL CONDITIONS, SPECIAL CONDITIONS, CHANGE ORDER PROCEDURE AND PRICING GUIDELINES, INDEX AND WAGE RATES.

Follow the State's Table of Contents for proper order.
  - .3.3 **BID FORM ARRANGEMENT:** When possible, arrange spacing as instructed in the State's Design and Construction Handbook. If such an arrangement results in pages being less than half filled, additional divisions of the work may be placed on one page. Do not divide spaces so that parts of the proposal for any single item are on separate pages.

## 00040. PREPARATION OF DOCUMENTS (Cont'd)

- .3.3.1 THE SCHEDULE FOR LIQUIDATED DAMAGES applies to all divisions of the work. The liquidated damage each individual contractor must pay is in accordance with the estimate for the particular division of the work and in accordance with the amounts per day shown in the Bid Form. DO NOT use the estimate for the total work and divide by the number of contractors involved to derive an average amount for damages.
- .3.3.2 NUMBERING OF ITEMS: In order to distinguish CSI divisions in the specifications from divisions of the work, use Arabic numerals for CSI divisions.
- .3.3.3 WAGE RATES: Wage rates shall be bound into each set of specifications as a part of the General Conditions.
- .3.4 SPECIAL GENERAL CONDITIONS: The Associate is cautioned to study the General Conditions plus Special General Conditions before beginning the preparation of specifications and to refer to them constantly throughout the writing of specifications. Particular attention should be paid to standardized or computerized specifications written by outside firms, who are employed to write technical sections, to ascertain that nothing contained in those specifications disagrees with provisions in the General Conditions or these supplements. Complete coordination of all Construction Documents is the responsibility of the Associate.
  - .3.4.1 ARTICLES WHICH REQUIRE SPECIAL ATTENTION
    - ART. 4 DEFINITIONS, ITEM 4: The Associate shall name himself/herself and shall list its business address.
    - ART. 5 CUTTING AND PATCHING: Associate to make certain that cutting and patching instructions are consistent.
    - ART. 12 PROJECT SIGN: Signs are required only for State administered projects. Specifications for the sign should be made a part of the section entitled TEMPORARY FACILITIES.
    - ART. 14 GUARANTEE/WARRANTY: There are exceptions to the one year guarantee period. Items for which longer guarantee periods are required are indicated in PART TWO of these guides. The University Architect will indicate any other portions of the work on which a longer guarantee period is desired.
- .3.5 GENERAL CONDITIONS:
  - .3.5.1 ARTICLES WHICH MAY REQUIRE SPECIAL ATTENTION
    - SHOP DRAWINGS: Explicit instructions for these submittals, as well as for submittals of samples, if different, should be given in the section entitled SAMPLES AND SHOP DRAWINGS in Division 01.
    - CLEANING UP: Additions and modifications to this article, if lengthy, should be made in the section entitled CLEANING UP in Division 01.
    - JOB MEETINGS: Detailed instructions, if different, for scheduling meetings, keeping of records, and distribution of minutes of such meetings should be given in the section entitled SCHEDULES AND REPORTS in Division 01. In writing this section, amplify the provisions stated but DO NOT change the intent of the article.

## 00040. PREPARATION OF DOCUMENTS (Cont'd)

**PAYROLL SUBMITTALS AND WAGE DETERMINATION:** For projects in which Federal funds are involved, wage scales must be obtained from the U.S. Department of Labor. For State projects, wage scales must be obtained from the State of Ohio, Department of Commerce, Industrial Compliance Division. Ascertain, from the date on the wage scales received, that the schedule of wages will be applicable during the bidding period. Update the schedule by addenda, as required during the bidding period.

### .3.6 TECHNICAL SECTIONS:

.3.6.1 **SPECIFICATION FORMAT:** The division numbers used in PART FOUR of this publication generally conform to the Construction Specifications Institute Masterformat 2004. Include Fire Protection work under the scope of the Plumbing Contract.

.3.6.2 **NUMBERING SYSTEM:** Division numbers used in preparation of specifications shall generally conform to the CSI Format. Section numbers may be as listed in the format or sections may be numbered consecutively by either the number or the letter designations. Within the sections, the Associate may, as he chooses, use a decimal numbering system, as used in this publication, or an alphanumerical system to designate articles, paragraphs, and subparagraphs. Do not number each line. Written material shall be organized within each article so that related thoughts are grouped under one designation, either a number or a letter, in logical sequence. DO NOT number or letter each separate sentence or thought.

.3.6.3 **MATERIALS AND EQUIPMENT:** Specify by performance specifications or by manufacturers' model numbers. If manufacturers' model numbers are used, name three or more manufacturers whose products are equal or superior in:

Appearance	Function
Quality	Operation
Design	Service Life

State that the drawings and specifications are based on the first product named and that the contractor must make all changes required to accommodate products of other manufacturers. The Associate is responsible for insuring that all brands specified are compatible with the basic building design insofar as size, weight, and services and that brands specified are truly equal or superior in properties listed above.

### .3.6.4 COMPUTERIZED OR STANDARDIZED SPECIFICATIONS:

The Associate is cautioned that computerized specifications must be edited to suit the requirements of the project being specified. The plea that this mandatory editing and rewording of the Associate's "standard" specifications will result in excessive costs or delays in producing the construction document submittals will not be considered as warranting publication of a specification which does not fit the work. Computerized specifications must be printed on letter size paper and must be color-coded, both as required by the State's Design and Construction Handbook.

.3.6.5 **PROHIBITED WORDAGE:** The following words, phrases, and clauses are expressly prohibited:

## 00040. PREPARATION OF DOCUMENTS (Cont'd)

- .3.6.5.1 The note "by others". These words must not be used, either on the drawings or in the specifications. In lieu of these words, name the specific contractor or agent.
- .3.6.5.2 The word "Owner". The State is the owner of a project under construction and remains the owner until completion or later, when the University becomes the owner. Since the University becomes the ultimate owner, use the word "University" in lieu of "Owner".
- .3.6.5.3 The words "Using Agency" or "User". The University Architect acts in behalf of ALL University agencies including the using agency to see that requirements of the University are satisfied. The Associate is responsible only to the University Architect, not to the "using agency", "user", or other University agencies.
- .3.6.5.4 The words "This Contractor shall . . ." to begin instructions to a contractor. These words are redundant since instructions are directed to a single prime contractor and it should be obvious to which contractor the instructions are directed.
- .3.6.5.5 The words "alternate" or "substitute" to indicate an "option". The word "alternate" should be used only for alternative work which is specified in the technical sections of the specifications and must be included in the bidders' proposals. The word "option" should be used to indicate items for which the contractor may make a choice without affecting the contract.
- .3.6.5.6 The word "mechanical" when referring to the Plumbing Contract, the Fire Protection Contract, or the HVAC Contract, or when referring to any of the contractors for these divisions of the work. The applicable word "plumbing", "fire protection", or "heating, ventilating, and air conditioning" must be used when making these references. On drawings, avoid using "mechanical" to describe pipe or duct chases, HVAC equipment rooms, electric equipment rooms, etc.
- .3.6.5.7 The words "comparable" or "equal" or "similar". Be specific.
- .3.6.5.8 The phrase "latest edition" when referring to a code or any trade, technical, federal, military, or other "standard" specification is prohibited. The Associate must list the code or standard by name and number and indicate the date of the edition, as well as the latest revisions thereto. Referenced dates must be those in effect at time of plan approval.

**00050. DOCUMENTS FOR THE STATE ARCHITECT**

00051. SUBMITTALS FOR OFFICIAL FILES: Obtain required approvals and make submittals in accordance with instruction in the State's Design and Construction Handbook.

- .1 DELIVERY TO THE OFFICE OF STATE ARCHITECT: Bidding Documents must be delivered by the Associate to General Services Division, Department of Administrative Services on Schedule. The Associate is cautioned to allow ample time for review and approval of documents by the various State agencies and for making revisions in the documents, as required by these agencies. Neither the University Architect nor the State Architect has influence over State agencies from which approvals must be obtained and cannot help to expedite the scheduling of reviews and obtaining approvals. The Associate is solely responsible for processing this part of his work.

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END OF PROCESSING THE WORK