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UAP 5310: Information Technology for Facilities

University of New Mexico

5310
INFORMATION TECHNOLOGY FOR FACILITIES

Effective Date: August 1, 2007
Subject to Change Without Notice

Authorized by Regents' Policy 7.12 "Approval of Construction Projects"

1. General

The University of New Mexico recognizes the growing importance and cost of information technology (IT) in the educational, administrative, research, and public service roles of the University. This document defines the policies and procedures necessary to ensure that IT needs are adequately and cost effectively provided for in the University's facilities and utilities planning, design, and construction processes. These projects include new and renovated buildings and the outside utility systems that connect to and serve them and utility improvements to the University that may be separate from building programs which are subject to all aspects of this policy .

2. Authority

The Chief Information Officer (CIO) and the Associate Vice President for Facilities and Real Estate Management (FREM AVP) will collaborate to ensure the full and ongoing involvement of the appropriate level of IT staff and building occupants in the planning, design, and construction phases. As each phase of the project is completed, the CIO and FREM AVP or designees must approve movement to the next phase of the project.

3. Architectural, Engineering, and Contractor Services

Architectural and/or engineering firms selected for the planning and design of University buildings must provide qualified IT design expertise, including a Registered Communications Distribution Designer (RCDD), to University projects. The CIO or designee will advise the architectural and engineering selection process to ensure the selected firm can provide the expertise required for the specific project. These resources must be actively involved on their teams. General contractor bids for IT infrastructure shall include an IT subcontractor from an approved UNM list provided by the University Communications Network Services Department.

4. Funding

The CIO is responsible for identifying IT funding requirements for projects. This includes all IT systems, services, cable, wire, and routing deemed appropriate for the project. All such systems, services, and infrastructure will be funded by the project necessitating the work. Additional systems, services, and infrastructure that would benefit the University as a whole but are not required by the project should have their funding needs and funding sources identified prior to the beginning of the project.

5. Roles and Responsibilities

The FREM AVP will include the CIO in discussions concerning campus master planning and facilities development, and the CIO will advise the FREM AVP on all IT issues and projects that impact the campus. The FREM AVP will advise the CIO about all facility projects prior to the strategic initiative stage and discuss and agree to schedules and the extent of the IT to be included in the project budget at the feasibility/pre-plan stages. Overall coordination of IT planning in the building and utility design and construction processes will be through the Office of the CIO. The CIO will identify a IT Project Manager for each facility or utility project who will be the point of contact and person responsible for IT throughout the project. At the beginning of the project the IT Project Manager will provide University standards and specifications to guide the designers. The Project Manager will provide IT planning and design support and expertise to the project.

In addition the CIO will:

- Establish, maintain, and administer this policy, review it periodically, and submit any required changes to the UNM Policy Office.
- Ensure appropriate performance factors and safeguards are in place to guide IT for construction projects.
- Evaluate IT design standards and specifications.
- Provide guidelines for IT involvement in projects.
- Monitor IT funding and progress of construction projects.

6. Related Information

The following links provide information that is critical for adequately and cost effectively addressing IT needs for all construction projects.

- IT Services Covered by Policy 5310
- Building, Renovation, and Utility Planning Processes
- Guidelines for IT Involvement
- IT Design Standards and Specifications

Comments may be sent to UBPPM@UNM.edu
http://www.unm.edu/~ubppm

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Information Technology Services Covered by Policy 5310
08/01/07

Referenced by UBP Policy 5310 "Information Technology for Facilities"

The information technology services included in the facilities planning processes include the following services. This list is not necessarily all inclusive but may vary depending on the specific project.

1. Inter building campus infrastructure pathway including conduits, ducts, manholes and hand holes.

2. Inter building connections including fiber optic and copper cable and coaxial cable to support voice and data networks, wireless services, security systems, CCTV and other UNM and non-UNM campus services (QWEST, Comcast, etc.).

3. Facilities planning for data centers, PBX and similar equipment rooms.

4. Technology rooms and communications closets, including size, location, power, security, and air conditioning requirements within the building.

5. Communications cabling risers and pathways within the building.

6. Structured cable systems within the building.

7. Educational technology infrastructure in classrooms, labs and non classroom teaching and learning areas including conference rooms.

8. Implementation and installation of systems:

- Telephones
- Data network connections
- Alarms and telemetry
- Telephone and network electronics
- Data servers
- Video
- Classroom and conference room technology systems
- Medical technologies
- Third party specialty systems
- Other systems as deemed appropriate by IT and Facilities Planners

Building, Renovation, and Utility Planning Processes
08/01/07

Referenced by UBP Policy 5310 "Information Technology for Facilities"

The University building, renovation, and utility planning processes consist of the following steps noted below. In each of these phases the CIO or appointed designee will be proactively advised of the schedule for meetings with adequate lead time to allow for the appropriate individuals to actively participate in all aspects of the planning, design, construction, acceptance and warranty processes. Problems with scheduling, ability to participate, levels of expertise and ability to produce and review planning documents in a timely manner will be referred to the CIO and the FREM AVP for prompt resolution.

1. Strategic Initiative: The initial process that determines what will be built, the schedule and the architectural and engineering design team that will be selected to assist in the planning and design processes. Funding is determined from grants, bonds, gifts and/or legislative request.

2. Feasibility/Pre-Plan: Includes budget development, site selection, development of program goals, preliminary scope, life cycle costs, and the development of business and space management plans.

3. Programming: Determination of how the building will be used and designed to effectively fulfill its stated mission, including IT scope and service requirements.

4. Schematic Design/Preliminary Design: 10% design that includes the basic requirements of the design and serves as the basis to begin thinking and commenting on the specific work to be done.

5. Design Development: Takes the design process up to the 50% to 60% level including building systems, utilities and IT infrastructure.

6. Construction Documents: Typically 90% to 100% complete with all building, utility and IT systems clearly defined.

7. Service Requirements: Development of Service Requirements occurs at each of the stages above and includes user input to develop specific IT services to be provided and their cost.

8. Budget review: Occurs in each of the above stages with financial officers.

9. Value Engineering: The optional process that reviews and refines all of the finished plans for appropriate cost, utilities, systems and services. This process is to include all engineering teams, facilities, customer and financial officers.

10. Bid: The bidding process includes a full review and understanding by all planners of the contractors and subcontractors who will be invited to respond to the bid documents. Contractors and subcontractors not fully qualified to carry out all aspects of the work, including IT, will not be invited to bid.

11. Selection: Review of returned bid documents and assisting in determining the best and most appropriate construction team to perform the work.

12. Construction: Involvement in regular job meetings and participating in quality control activities as a member of the construction management team.

13.Warranty: Warranty review and testing processes prior to accepting the work. Warranties on all IT systems are assumed and managed by the appropriate IT Department.

14. Commissioning of IT Services: Selection of outside commissioning agents and the commissioning processes. This process will be managed by UNM Telecom.

15. Acceptance: Verification that all deliverables, including documentation and test results, have been appropriately accomplished and received. Acceptance of IT services and systems will be overseen by Telecom with input from relevant IT Departments.

16. Installation and Activation of IT Services: The installation of telephones and related equipment, data servers and related equipment, cross connects and jacks. This is the responsibility of UNM Telecom in conjunction with users and related IT departments.

Guidelines for Information Technology Involvement
08/01/07

Referenced by UBP Policy 5310 "Information Technology for Facilities"

UNM IT staff have or will (through training and experience) possess a basic knowledge of the building and utilities planning, design, and construction processes, both generally and specific to UNM. The same is true of UNM planners, engineers, and construction managers in regard to the various IT areas noted on the web page "IT Services Covered by Policy 5310." As noted in Policy 5310 "Information Technology for Facilities," outside architects selected for work at UNM will have qualified IT planning and design expertise on their teams and general contractors will include approved IT subcontractors, including a BICSI certified Registered Communications Distribution Designer (RCDD). The project architect will review all appropriate drawings, showing pathways, conduits, fiber, copper, etc. that would impact the project. In addition:

1. Input from IT User Groups will come primarily from two sources which will be established and organized by the FREM AVP and CIO and their designees.

- A "Core User Group" will consist of senior staff of the departments impacted by the new or renovated facility.
- An "Extended User Group" consisting of faculty, staff and impacted students will also be established to provide input to the Core User Group and the CIO.

2. The IT Project Manager and the Facilities Project Manager will filter information garnered from user groups to the planning team.

3. The IT Project Manager and qualified IT staff designated by the IT Project Manager will provide IT design input and will work closely with specialist design expertise that is included in the architect's design team. The IT project manager will provide ongoing meeting minutes regarding IT issues to the design team as well as asking for input on relevant issues from the planning and design team. As a result of this effort, the IT Project Manager and IT staff will develop an IT Scope of Work (SOW) relevant to the project. The initial SOW will be refined and updated as the various steps of the project planning and design process are accomplished. The resulting, complete approved and complete SOW will be used and become a part of the project's bid documents.

4. During each stage of the project the IT Project Manager and IT staff, in conjunction with the planning and design team, will provide the necessary design input in meetings, narratives, contract drawings and specifications, and will contribute to and comment on similar information provided by the specialist designer(s). The IT SOW will be included in the approval process at each level of project development.

5. At the end of each stage of the project the IT Project Manager and IT staff will review the project drawings, specifications and IT budgets. The project stage will not be considered complete nor will the project proceed to the next stage until the IT design issues are fully approved by the CIO or appointed designee. Such approval will be by written form, filled out and signed by the CIO or appointed designee.

6. At appropriate points during construction the IT Project Manager and relevant project staff will review submittals, answer questions, and periodically inspect IT related work on site.

7. Upon completion of the work, the IT Project Manager and relevant project staff will make final inspections and accept the finished product.

8. The FREM AVP and CIO in conjunction with the IT Project Manager and Facilities Project Manager will make financial expertise available to these processes from the finance division of their organizations.

9. Good effective communications between user groups and facility and IT planners is critical to ensure a successful and cost effective project.

10. Any exceptions to these requirements must be reviewed by the CIO and FREM AVP and documented in the project record by the Project Manager.

Information Technology Design Standards and Specifications

08/01/07

Referenced by UBP Policy 5310 "Information Technology for Facilities"

The following Information Technology and building Design Standards and Generic Specifications will be used to guide IT and building design processes. These documents are noted here as examples and are not a specific part of these procedures. They reside in the department having authority for that particular technology. Updates and new standards are, from time to time developed as need dictates. To the extent that an approved design standard or generic specification does not exist, the design and ultimately the final design specification will be based on industry standards and best practices as determined and developed by the design team. These standards and generic specifications are primarily for guidance in the design process. Specifications for individual projects are unique to that project and are developed by the design team for inclusion in that project's construction documents.

It is preferred that the IT design specifications be written in the CSI 2004 format but they must match the format used to bid the project.

Campus Standards:	**Comments:**
Design Guidelines for Information Technology Infrastructure Facilities	Updated March 21, 2006 and originally developed for UNM by Vantage Technology Consulting Group, April 2003.
BICSI manual set	A comprehensive infrastructure standards manual produced by the Building Industry Construction Standards Institute
TIA/EIA 568-B	Commercial Building Cabling Standard
TIA/EIA 569-A	Commercial Building Pathway and Spaces Standard
TIA/EIA 607	Commercial Building Standard for Telecommunications Grounding and Bonding
Other (e.g. Classroom Standards, Video)	Others as developed and made available
Generic Specifications:	
Pathways	
Racks and Cabinets	
Horizontal Cabling	
Outside Plant	
Wireless	
Commissioning	
Other	