CHAPTER 3  
FACILITIES ARCHITECTURAL AND ENGINEERING SERVICES

Facilities and Services provides a full range of facilities planning and programming, architectural and engineering services, and projects management either with its own professional staff or through contracts with outside professional firms.

Facilities planning and programming includes developing and maintaining the (1) University Master Plan, (2) Capital Improvement Programs, and (3) Maintenance and Repair Programs. The South Dakota State University 2025 Master Plan was approved April, 2008, by President David Chicoine. A copy of this Master Plan can be viewed in the office of the Facilities and Services Assistant Vice President.

Architectural and engineering services includes: (1) project investigation report for developing program scope and budget cost estimates, (2) preliminary design and cost estimates as required to support Capital Improvement and Maintenance and Repair programs, and (3) final design and cost estimates for the variety of construction programs.

Project management is the coordination of the planning, design, and construction of all University facilities projects. The design and/or construction may be done with in-house forces or by contract. Contracts may be managed directly by the SDSU project manager or through the Office of the State Engineer.

REQUEST FOR SERVICES

Requests for planning, architectural, or engineering support should be made in writing and submitted to Facilities and Services, Administration Building, Room 304. Details of the request should be attached and include a comprehensive statement of scope and sketches as appropriate. After your written request is received, a project manager will be assigned, who will contact you regarding the project.

CHARGES FOR SERVICES

All architectural, engineering, and project management services for academic/administrative fund supported activities, auxiliaries, approved maintenance and repair, and capital improvement projects are subject to reimbursement.

Reimbursement is always required from project budgets when the services of outside consultants, architects, or engineers are contracted.

Charges for the services of Facilities and Services facilities planning, architectural and engineering design, and project management staff are based on hourly rates applicable to completion of professional design and consulting services.
FACILITIES PLANNING POLICY

Formalities and procedures must be coordinated through the Assistant Vice President of Facilities and Services by the Buildings and Grounds Committee which has the following responsibilities:

1. Review the program which will be housed in the facility.
2. Begin the process of matching the desired program with space requirements and develop a list of priorities.
3. Suggest one or more possible sites and supporting information.
4. Consider the aesthetic qualities of the facility, parking needs, and any special requirements in site development.
5. Identify equipment needs.

The Assistant Vice President of Facilities and Services' responsibility will be to work with the committee and do the following:

1. Provide the University guidelines for certain space allocation, storage, hallways, fire exits, handicapped requirements, structural standards, etc.
2. Provide cost estimates for planning purposes.
3. Arrange meetings with the planner to discuss program and requirements.
4. Secure approval from the Buildings and Grounds Committee for the proposed site.
5. Manage the construction budget on local and Maintenance and Repair work.
6. Act as the liaison person with architect, contractor, state engineer, building authority and Regent's staff as appropriate.
7. Keep all appropriate administrative offices, including the President's Office advised.

CONCEPT PROJECT SCOPE AND BUDGET ESTIMATE

To assist in financial and program planning for facilities related projects or equipment installation that requires interface with numerous facilities utilities, Facilities and Services's Engineering Department will work with the prospective user to develop the scope and budget estimate for a prospective project. The scope would be a description of the user's program needs and service requirements. It would also include an estimate of the total project cost estimate for the renovation or new construction required to fully satisfy the project needs in conformance with applicable codes, standards, and good architectural and engineering practice. These descriptions and
estimates are prepared as general facilities estimating and planning support, and are usually completed at no charge to the end user. At the user’s request, more detailed plans, descriptions and estimates can be prepared. If this is needed or requested, a work order can be established with an appropriate account number.

PROJECT MANAGEMENT

To assure continuity of project management and coordination through all stages of project development, design and construction, a project manager is assigned from the Facilities and Services Engineering Department for each capital improvement project, and for each maintenance/repair/alteration/renovation project.

Responsibilities of project managers include:

1. Coordinating project design development and construction, both within the University and with outside architects, engineers, and other agencies.

2. Developing a proposed project schedule and monitoring progress against the approved schedule.

3. Preparing periodic project status reports.

4. Coordinating actions required for architect and engineer selections.

5. Drafting and coordinating capital improvement program submissions or other required project submissions.

6. Acting as a recording secretary for building committees.

7. Coordinating construction control order actions.

8. Coordinating all related actions required for project completion, such as furniture and furnishings procurement, separate contracts, work by owner, and telephone service installation.

CONSTRUCTION MANAGEMENT

Facilities design and construction of new facilities, major maintenance and repair, or alteration and renovation work performed by contract is administered and inspected by the Office of the State Engineer. Charges for these services are budgeted for each project as a direct project cost. All questions concerning construction work performed under contract should be directed to the Facilities and Services project manager, 688-4136. The Office of the State Engineer provides administrative and project management services for all work contracted with architects, engineers, and outside contractors on major projects.
STATE REVIEWS

A number of state agencies are responsible for review and approval of various elements of planning for all University projects. These agencies include the Office of the State Engineer, the Office of Risk Management, the Department of Water and Natural Resources, the Division of Historic Landmarks, and others. Facilities and Services schedules and/or coordinates the required reviews and approvals with applicable local agencies such as Brookings Fire Department.

PLANS & SPECIFICATIONS

Original plans and specifications are the property of Facilities and Services and shall not be permitted to leave the office. Anyone requiring access to such documents may view them in the Facilities and Services Office. Copies of floor plans are available on hard copy or electronic formats. They can be reproduced as xerographic prints, laser printer copies, or pen plotted originals and may be purchased.

CODE INTERPRETATION

Fire Door Policy:

An important component for smoke and fire containment is the door assemblies used in stair towers and corridors. These door assemblies provide a barrier for smoke, fire, or both. These door assemblies do not necessarily have signs; therefore they are not easily identified by occupants. All doors to enclosed exit stairs are fire containment assemblies. In general, all doors which are self-closing (either with door closures or spring tensioned hinges) are fire and/or smoke containment assemblies, including corridor doors, and therefore must remain in the closed position at all times. In general all doors to corridors are instruments of smoke containment and should remain closed. There are some exceptions, which include doors with magnetic hold-opens or fusible links. These doors will automatically close upon activation of the fire alarm or when the closer senses heat or smoke.

Considering the implications to life safety, it is important that all door assemblies intended to provide for fire/smoke separation be operated as such. For this reason, all doors which have automatic closures, must remain closed. These doors may not be blocked open for any reason. The only exception are doors which have the automatic hold-opens installed and will close in the event that they are required. Specific questions pertaining to the interpretation of codes should be referred to the Facilities and Services Office 688-4136.

Window Covering Codes

Windows must be covered by permanently flame resistant material, which meets or exceeds NFPC 701 and NFPA 101 tests.
Interior Finishes

The State Fire Marshall has the final authority to set policy and designate applicable codes, which are to be followed as they relate to life safety in all public buildings. In accordance with this policy, the following minimum specifications must be adhered to as defined by the Uniform Building Code. Note: Maintenance on walls with special wall finishes may not be available by in-house staff.

Specifications may vary for different classified occupancies, therefore it is recommended that a purchaser check with the Facilities and Services Facilities Engineering Department prior to specifying and ordering draperies, carpets, wall coverings, etc.

Exit stairways and exit passageways shall have Class A finishes, which are finishes including, but not limited to resilient floor tile, ceramic tile, concrete masonry, brick, gypsum board, acoustical ceiling panels, terrazzo, concrete, and quarry tile. Exceptions are buildings with sprinklers, where finish may be class B.

Class A - Flame spread 0 - 25, smoke developed 0 - 450. Includes any material classified at 25 or less on the flame spread test scale and 450 or less on the smoke test scale as described in U.B.C. Standard No. 42-1 (Standard Test Method for Surface Burning Characteristics of Building Materials).

All areas leading to exit passageways including exit corridors shall have class B finishes, except in buildings with sprinklers, where finish may be class C. Class B finishes include but are not limited to all Class A finishes, fire treated wood, specialty treated carpeting, sheet vinyl wall covering, plastic laminate.

Class B - Flame spread 26 - 75, smoke developed 0 - 450. Includes any material classified at more than 25 but not more than 75 on the flame spread test scale and 450 or less on the smoke test scale as described in Class A above.

Classrooms, administrative areas, offices, residence hall rooms, etc. shall have class C finishes. Class C finishes include but are not limited to all Class A and B finishes, wood, carpet, vinyl and fabric wall coverings.

Class C - Flame spread 76 - 200, smoke developed 0 - 450. Includes any material classified at more than 75 but not more than 200 on the flame spread scale and 450 or less on the smoke test scale as described in Class A above.

All carpet installed on walls or ceilings must have the approval of the Facilities and Services Facilities Engineering Department to ensure compliance with the above standards and specifications, as there are special restrictions for carpet used on walls or ceilings. Combustible materials (i.e. bulletin boards, wood trim, posters, etc.) shall not be installed in exit stairways, and shall be limited to areas in exit corridors, lobbies, and vestibules.
Carpet approved for use on University property is available upon special order request. When replacing tile with carpet, the old tile must be removed prior to carpet installation.

**Life Safety Issues in Corridors**

To insure the safety of those individuals seeking egress through corridors to exits, the following guidelines must be adhered to:

- A clear path must be maintained at all times without obstructions.
- The path shall be a minimum of at least four feet (48 inches) wide or the minimum required by the current version of the Uniform Building Code, whichever is greater.
- No furnishings, decorations, or other objects shall be placed where they may obstruct corridors, access to exits, paths of egress, the visibility of the egress path, or create a winding or indirect exit path.
- If movable furnishings and/or items restrict a clear path, those items will be removed at the departments’ expense or the department will be required to attach furnishings to the floor or wall to protect the pathway.

Flammable materials are permissible in corridors and hallways within the following restrictions:

- The total area of all flammable materials cannot take up more than 10% of the wall surface area. This includes furnishings, bulletin boards, trim around doors, coats, etc.
- The flammable materials shall be evenly distributed throughout the corridor surface and not concentrated in a single or few locations.
- Excessive paper, including magazines, test results, notes, books, etc. shall not be stored or openly displayed in corridors.

Glass enclosed metal bulletin boards, metal display cabinets, and metal lockers will be permitted in corridors and they may exceed the 10% area restriction. These items shall not interfere with the clear exit pathway noted at the beginning of this chapter. Metal filing cabinets used for storing files or other combustible materials and display cases that contain a large quantity of combustible materials shall not be permitted in any corridors unless the cabinets themselves have a 60 minute fire proof rating. SDSU has developed a standard for metal bulletin boards & display cabinets; call the Facilities and Services at 688-4136 for details.