

PART I - Overview

A. Purpose of Manual

The University of North Dakota doing business as the State Board of Higher Education (hereafter referred to as "UND") has prepared this manual to assist the design consultants who provide professional services for all new construction, remodeling, rehabilitation and maintenance projects for UND. All information contained in this manual is available in electronic format for Consultants use.

Throughout this Manual wherever the term "consultant" is used, the term will be applicable to an Architect, Engineer or other specialized design discipline retained by UND to provide professional services. In addition, wherever the term "Planning Design Construction (PDC)" is used, it refers to the institution department which is responsible for oversight of the design and construction of capital projects. The term "Project Manager" or UND PM refers to the individual representing Planning Design Construction and/or Operations and Maintenance for the project and is an employee of UND.

Part II of this manual provides information on policy, procedures, space utilization, and contracts

Part III of this manual provides information on content for the bid documents.

Part IV of this manual is an introduction to the design specifications which are to be utilized on all projects. This section includes the minimum building requirements which UND has recognized as necessary on all projects. If deviations from the standards are necessary to satisfy the conditions of certain projects, the Consultant must notify UND Directors and / or UND PM.

B. Administration of Construction Projects

PDC is responsible to UND for managing the design and construction activities for all capital projects, regardless of the source of funding. The primary responsibilities of PDC include the following:

- Selection of design consultants as per <https://www.legis.nd.gov/cencode/t54c44-7.pdf#nameddest=54-44p7-01>
- Oversight of design efforts, including the integration of campus stakeholders with the design team.
- Coordination of construction activities with UND college/department/units.
- Oversight and management of the project budgets.

A Project Manager will be designated by PDC for each project. A Design UNDPM will conduct planning, feasibility studies, predesign efforts as well as Schematic Design and Design Development. A Construction Management PM will be involved in the Design Development and Construction Document, Bidding and Construction Administration of the project. Internally to UND these PMs will be in constant communications with each other as the project progresses. All communications from the Consultant to UND shall be directed to the Project Manager. The Project Manager will provide guidance to the Consultant and responsibility for the project to ensure it meets the established budget, schedule, quality, and users' requirements.

The following organizational units will provide input in completing the requirements of the projects, and will be involved in the review of the schematic, design development, and construction documents:

- Operations will review building operational systems quality, performance, and cost-effective maintenance issues.
- Safety and Risk Management provides advice and consultation in matters relating to the health and safety of faculty, staff, and students.
- Telecommunications departments and/or Information Technology departments review all data cabling, data infrastructure, and information technology equipment.
- Door Hardware and EDAs will be discussed with UND Lock Shop and Electronics

C. Professional Services

Professional design services for a construction project are required when the estimated cost of construction (which includes design fees) is estimated to exceed \$200,000 as per <https://www.legis.nd.gov/cencode/t48c01-2.pdf?20141124150357>

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The professional services for the project are specified in the Professional Services Agreement. The type of agreement used for each project will depend on the scope of work, budget, and construction delivery method, as defined by the University of North Dakota.

In general, UND selects an architect for most projects regardless of scope of work. The purpose for selecting an architect instead of other design disciplines relates to the architect's experience in coordination of the multiple design disciplines, administration of the contract as per NDCC 48-01.2 requirements, and the need for a broad understanding of the project needs.

The scope of work for the Architect when designing a major capital project is to be all inclusive of design needs necessary for this work. This could include, depending on project, the following services:

- Architectural design services
- Mechanical design services
- Electrical design services
- Information Technology design services
- Interior (including FF&E) design services
- Civil engineering services reviewed as per project -
- Landscape design services reviewed as per project

During contract negotiations with UND, it is paramount for the design professional to fully understand the scope of work prior to proposing a fee. Ascertaining what design services are required to complete the project must be included within the design professional's basic service. Having a full and complete design service package within one consulting contract is beneficial to UND, who in turn understands that additional costs may be incurred by the design professional for doing so. The additional costs should be enumerated and justified within the fee proposal.

The design professional is cautioned against preparation of specifications or conditions within the bid documents which contain special protections for the architect by the constructor. The contract between UND and constructor must contain no third-party conditions which may be contrary to North Dakota statute.

By law, UND is not allowed to retain services (design or construction) from entities barred from doing business in either the State of North Dakota and/or federal government. When retaining sub consultants for project design, the design professional must ascertain that the firms hired are not barred from doing business in North Dakota or the federal government.

PART II – Policy – Space Utilization – Contracts

A. North Dakota University System Policy and Procedure Overview

The following information is provided to assist in communicating to the design professional the regulations and requirements to be followed by all institutions within the North Dakota University System (NDUS). Note that all NDUS institutions are agencies of the State of North Dakota are subject to all policies promulgated by the North Dakota State Board of Higher Education, as well as the North Dakota Century Code (NDCC).

Governance: The North Dakota State Board of Higher Education (SBHE) is the constitutionally established governing authority over the eleven public institutions of higher education in the State. The authority of the board extends to the buildings and lands for which this PDC manual provides guidance in improving or repairing those assets. As a state agency, the SBHE mandates compliance with policy promulgated by the SBHE, as well as the statutes contained within the North Dakota Century Code, and all applicable federal laws, codes, and requirements. This is the limit of authority over the Owner's buildings and lands, with no other authority having jurisdiction.

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Consultant Selection: Design consultants are retained by UND as per statutory requirements. Design consultants are retained by one of two methods only. Refer to <https://www.legis.nd.gov/cencode/t54c44-7.pdf?20141124150553>

- Proposal submission whereby the consultant is competitively hired based on the content of written proposals solicited by UND for a specific project. This procedure is typically used for projects having an estimated cost in excess of \$200,000 or where fees are expected to be in excess of \$25,000.
- Direct hire by UND based on a limited scope of work whereby consultant fees must not exceed \$35,000. This process may be used repeatedly for the same consultant, but only up to a total of \$70,000 for any 12 month period

As many projects require the coordination of several design disciplines, the architect is most often selected as the primary design professional. In turn, the architect retains the services of the other needed design disciplines (mechanical engineer, electrical engineer, etc.) under direct contract with the architect. As a result, the architect is the only design professional contracted with UND, and subsequently made responsible for all facets of the design under his contract.

This relationship may change depending on the scope of work whereby the primary design is seated in a design discipline other than architecture, and if so the architect (if needed) is retained under direct contract with that discipline.

Allowable Methods for Obtaining Construction Services: Construction services may be acquired **ONLY** by the following methods for projects with budgets exceeding \$200,000 (NDCC 48-01.2 Threshold) at the University of North Dakota:

- A. Design-bid-build process whereby the design consultant prepares bid documents that include all plans and specifications, and subsequently must advertise for bids for three consecutive weeks. Separate bids are required for each of the General, Mechanical, and Electrical prime contracts. *This is referred to as Multiple Prime Bids.*
1. Exception: If any individual contract of the three Multiple Prime Bids is anticipated to be less than 25% of the above mentioned threshold, the work of that bid may be combined with either of the remaining prime bids. Note that consideration must be given to which remaining bid is most suitable for the addition, or it may be left as an option for each remaining bid within the bid instructions and bid form. *Note that this differs from third exception in that no bid is solicited for the work, vs. no bid is received.*
 2. Exception: If approved by UND, the bid instructions and form may also include the submission of a single bid by a contractor which includes the work of all Multiple Prime Bids, in addition to submission of separate Multiple Prime Bids. *This combination bid is referred to as a Single Prime Bid.*
 - To be awarded, the Single Prime Bid must be less than the sum total of the lowest Multiple Prime Bids. (Single Prime Bid lower than lowest General + lowest Mechanical + lowest Electrical)
 3. Exception: If no bid is received for any individual Multiple Prime Bid, UND may obtain the work of that bid through negotiation without rebidding:
 - The work must be negotiated with the individual Multiple Prime Bidder who has the largest contract for the project.
 - The negotiated work may not exceed \$150,000.
- B. Construction Manager at Risk, whereby UND solicits proposals for CMaR services. The CMaR subsequently acquires subcontractors or self performs the work. The CMaR provides UND with a guaranteed maximum price for all work.

Limitation on Services Provided by the Design Consultant:

- Design consultants may not have any financial interest in the constructor.
- The design consultant cannot manage the construction.
- The design consultant cannot offer design-build services.
- The design consultant may provide construction administration services but may not provide any service normally provided by the contractor or Construction Manager. Services that may be provided typically include review of contractor submitted information, pay requests, claims, and compliance with specifications and drawings.

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UND Policy Compliance: UND is responsible to ensure projects comply with SBHE policy and North Dakota statutes regulating construction. Compliance with policy and statute is critical, and the design consultant is expected to assist with compliance to the greatest extent possible. Listed below, in summary form, are important policy and statute requirements:

- Project budgets must include **ALL** project costs, including but limited to:
 - Design consultant fees and expenses
 - Land acquisition costs (if required)
 - Permits or other special fees required for the project.
 - Construction costs
 - Movable furniture, fixtures, or equipment costs when included in the budget.
- Projects with budgets exceeding \$200,000 require approval by the SBHE prior to starting any construction or retaining construction services. This pertains to awarding multiple prime bids, or accepting a GMP from the CMaR, whereby UND is contractually obligated to proceed with the work and pay the constructor.
- Projects which are funded by gifts, grants or donations and have a budget in excess of \$700,000 as per <https://www.legis.nd.gov/cencode/t15c10.pdf> require both SBHE and legislative approval prior to starting construction or retaining any construction services as indicated above.
- Projects cannot be split into smaller projects as a means to:
 - Avoid the required competitive bidding process for projects having a budget in excess of \$200,000.
 - Avoid the requirement for retaining professional design services if the project is estimated to exceed \$200,000.
 - Avoid the requirement for authorization by the SBHE and/or legislature for projects having a budget in excess of \$200,000.
- Project approval by the SBHE and legislature specifies the following criteria. Any change in criteria previously approved requires UND to seek revised authorization.
 - The total estimated project cost (budget)
 - The scope of work as defined by function, size, and other factors which were included within the request for authorization.
 - The source of funding to be used for construction of the project.

B. Space Utilization Standards

General: Space utilization refers to the relative efficiency of UND's facilities when applied to room use in occupancy and schedule. Most often applied to classrooms and teaching labs, the information is used to determine if academic / research facilities are being used to capacity. The standards included in this manual apply to all space categories, including offices and conference rooms, and must be followed unless sufficient justification is provided to vary from the standard.

Assignable vs. Unassignable Space: Assigned space is any room which can be assigned to a department or division of UND's operation. Offices, conference rooms, classrooms, and other rooms which serve some function should be considered assignable. Hallways, restrooms, stairwells, and other areas providing egress are considered unassignable. The ratio of assignable to unassignable space is a measure of efficiency within the facility as it reflects the balance between functional space and egress space.

For all construction undertaken by UND which results in new or renovated space, the minimum amount of space to be designed as assignable is 75% of the total, and subsequently 75% efficient. Note that all assigned and unassigned space must be recorded as such in UND's space utilization data base, where use codes and occupancy values are used to describe the function of the room.

C. Procedures

The following section of this document outlines general procedures for the allocation of office space. For all intents and purposes, "office space" is defined as office, office service, and conference rooms specifically assigned to support the University's academic (instructional and research) and administrative functions.

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The procedures developed to help UND allocate office space are aligned with NDUS guidelines and will assist with decisions impacting existing and future buildings. Units must refer to these procedures when planning new construction or renovations to ensure progressive compliance with the procedures. UND Facilities Management will refer to this document when working with units and architects during the design phase of all new construction and renovations. Exceptions to the procedures require the approval of the associate vice president for facilities.

If units have internal space procedures, they must align with this policy and supplemental procedure document.

New Construction and Renovation: New construction and renovation must be aligned with NDUS standards. This document is intended to provide UND units and UND Facilities Management with enough structure to guide the initial scope, feasibility, and programming phases of development. Through the various stages of construction planning and design, the standards are intended to serve as a reference for office sizes and office accessory components.

Existing Space: There are a number of considerations and limitations when renovating existing space: structural limitations, aging building systems, historic preservation, etc. When renovating existing space, it may not be possible to fully implement NDUS standards; however, wherever possible, they should be followed. If the procedure is unable to be followed, a variance must be requested. An example of where this may occur is if pre-existing offices are larger than the procedure specifies; in this situation, it is not cost effective to demolish and reconstruct offices to meet the standards.

When allocation and/or renovation of existing space occurs, Facilities Management will work with the unit with the goal of maximizing the efficiency and flexibility of the space.

Considerations for Determining Office Types: Optimizing office space enables UND to utilize this resource effectively. The following considerations are taken into account in determining office types:

- **Appointment.** Tenured, tenure-track, and full-time, non-tenure track faculty; and full-time staff should receive a higher priority when allocating office space. Graduate students, part-time faculty and staff, and similar individuals should be assigned office space in a shared office arrangement due to a more limited time using offices.
- **Privacy.** Positions that require more privacy (e.g., confidential communications, document security) would necessitate a greater need for private office space.
- **Position.** Those individuals with an administrative role, (e.g., chairperson and higher, unit administrator, or manager of a large unit) would require private office space.

D. Office Space Allocations

There are three categories of office space: private, open, and shared. Private is an enclosed office with constructed walls. Open is an office built using office systems furniture or modular walls. Shared is space that is occupied by more than one individual. Within these categories, the office space may be large or regular size.

Within these guidelines, there are five office types:

1. **Large Private Office.** Offices for staff and faculty with functions that require high levels of privacy (need for frequent confidential meetings and/or phone conversations and working with high volumes of confidential materials) and enough space to frequently meet with four or more individuals. Typical assignments may include: president, provost, vice presidents/provosts, deans, department chairs, and directors.
2. **Regular Private Office.** Offices for 1.0 FTE staff and faculty that require high levels of privacy. Typical assignments may include: faculty, academic professionals, and managers.
3. **Regular Open Office.** Offices for 1.0 FTE staff and faculty whose functions do not require high levels of privacy and who have access to seminar or conference rooms for discussions requiring privacy. Typically, they are built using office systems furniture or modular walls. Typical assignments may include: professional staff, academic professionals, faculty, and support/clerical staff.
4. **Regular Shared Private Office.** Offices for staff and faculty below .5 FTE that require high levels of privacy. Typical assignment may include: part-time faculty, visiting scholars, interns, and graduate teaching/research/service assistants. This can also be used in a "hoteling" capacity, where work schedules allow for the sharing of one office by two staff or faculty.

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- Regular Shared Open Office.** Offices for staff and faculty whose functions do not require privacy. Additionally, a shared open option office should be used by all student employees. Typical assignment may include: support staff, student employees, and interns.

Office Type	Net Assignable Square Feet (NASF) per FTE
Large Private Office	170
Regular Private Office*	120
Regular Open Office	80
Regular Shared Private Office	100
Regular Shared Open Office	80

*NDUS guidelines allow for some variability in office size at the regular level based on the position and with justification. Some middle management positions could have increased office size that would be between the large and regular guidelines.

Accessory Spaces: There are other spaces that are associated with office space. They include conference rooms, kitchen spaces, break rooms, office service areas, lobby/reception space, reference material rooms, storage rooms, etc. These areas are important spaces for the unit to function effectively. Since every unit will have a unique need for these types of spaces, it is difficult to develop a standard. The overarching principles are optimization and effective utilization.

Academic and administrative units throughout campus have varying functional needs. While some units may need minimal or no accessory space, other units may require this type of space to meet their functional needs. Facilities Management will work with units to determine their individual accessory space needs. Units are asked to share accessory spaces whenever possible.

Accessory space can be assigned in three different ways:

- General University.** Assigned to Facilities Management, these spaces are typically the public areas of a building; for example, public restrooms, public hallways or public circulation hallways, and mechanical rooms. These spaces have either restricted access to maintenance workers or are completely open to the public.

General University spaces can also refer to conference rooms that are managed by a unit but are openly available to all UND staff and faculty. The conference rooms are usually available on a first-come, first-serve basis. These spaces are typically scheduled using one of the electronic scheduling systems See Accessory Spaces: Conference Rooms for more specific information.

- Unit Shared.** Though assigned to one unit, this accessory space is shared with other units and would include areas such as breakrooms, storage space, etc. The space is attributed to the unit to which it is assigned in the UND FAMIS system, managed by Facilities Management, unless other arrangements are made with Facilities Management. The FAMIS system does allow for percentage assignment of space.

When conference rooms are shared, an arrangement to determine who is responsible for the management of the room should be established. To maximize utilization, this procedure recommends that the space be made available to UND staff and faculty when unscheduled. It is expected that the request to schedule be made to the managing unit(s). See Accessory Spaces: Conference Rooms for more specific information.

- Unit Specific.** These spaces are assigned and used by a specific unit. They are not readily available to the general public or university community. Examples of these types of spaces include storage spaces, reference rooms, internal hallways, private restrooms, etc.

When conference rooms are specifically assigned and managed by one unit, they are labeled in FAMIS as such and all square footage is attributed to that unit. Unit specific conference spaces are typically used by the following:

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- a. Academic and administrative units who use rooms for seminar instruction or professional development. As is the case with unit shared conference rooms, this procedure recommends that the space be made available to UND staff and faculty when unscheduled; specifically, other units within their school/college or administrative area.
- b. Research groups whose conference rooms are also used as workrooms.

E. Conference Rooms

Conference rooms are an important asset and vary in size. As stated in the previous section, there are three types of conference rooms: general university, unit shared, and unit specific.

The need for conference rooms varies by unit. It is important to meet those needs, while also ensuring the conference room is being well utilized. Conference rooms can present utilization challenges because they can take up a large amount of square footage and may not be used for many hours in a day. It is required that units use a method (Outlook, Astra Scheduler, etc.) that is reportable and searchable by the campus for availability and size to track the utilization of their unit specific conference rooms. The unit should also track anticipated number of attendees to document effective use of conference rooms.

In new construction, conference rooms should be strategically planned to assist with sharing. They should be near entrances or along shared corridors.

There are three sizes of conference rooms. The following table indicates the recommended size as aligned with NDUS standards:

Conference Room	Seating	Size
Large	Seats 16 or more	400 Square Feet + 12 square feet per additional person
Medium	Seats 8 to 16	400 Square Feet
Small	Seats under 8	200 Square Feet

The number and size of conference rooms needed heavily depends on the size of the unit and the demonstrated need. How much square footage required for a conference room depends on a number of factors including: technology in the room; other furniture, such as bookcases; serving areas for food or coffee; etc. The amount of space required per person generally decreases as the room area increases, due to the ratio of space required for circulation and ADA accessibility. The square footage per person is generally 25 for small and medium conference rooms, while for large conference rooms the requirement is 25 square feet per person up to 16 people and then 12 square feet for each additional person. These amounts would need to be increased if the room also houses technology, displays, bookcases and/or shelves, etc.

F. Classrooms

Different pedagogical techniques require different types of learning spaces. UND has defined six basic classroom types that are prevalent on its campus. The recommended square footage requirements reflect the pedagogical style, and take into consideration the diversity of cultural values regarding personal space.

F.1. Classroom: Traditional: Loose Seating Traditional classrooms are our most common learning spaces. They have movable furniture, and are very flexible. Furniture can be rearranged to allow for lecture, seminar, group work, or anything else the instructor might require.

- Traditional classrooms contain 25 to 60 non-fixed seats.
- Flat floors are required.
- The instructor’s station will require 10 square feet.
- 20 – 22 square feet per student accommodates some collaborative functions.

F.2. Classroom: Traditional/collaborative: Collaborative classrooms are a subset of traditional classrooms in which the teaching methods require group work. The furniture is movable and flexible.

- Traditional/collaborative classrooms contain 25 - 40 non-fixed seats.

- Flat floors are required.
- 25 - 30 square feet per student accommodates flexibility in furniture arrangement.

F.3. Classroom: Seminar: Seminar rooms generally accommodate smaller numbers of students seated in any number of seating configurations.

- Seminar rooms contain 19 - 25 seats.
- A face-to-face seating arrangement is possible.
- The instructor sometimes sits with students.
- 25 - 30 square feet per student accommodates this type of pedagogy.

F.4. Lecture Halls: Lecture halls are larger tiered classrooms, usually with fixed seating

- Lecture Halls contain 50 - 150 seats
- Tiered floors (aisles may be sloped but seating areas must be tiered)
- The dimensions of the seating tier must easily accommodate movement behind seats
- Theater-style seating with attached tablets or fixed tables with free-standing chairs.
- A curved configuration is preferred where possible
- 18 - 20 square feet per student overall, but at least 10.5 square feet per students for the seating area, allows for ample circulation amongst the seats.

F.5. Auditoriums

- Auditoriums contain more than 150 seats
- Aisles may be sloped but all seating areas must be tiered
- Theater-style seating with attached tablets are allowed
- A curved configuration is optimum
- 18 square feet per student overall, but at least 6.5 square feet per student in the seating area, allows for ample circulation amongst the seats.

F.6. Active Learning Classrooms

- 32 square feet per student accommodates the larger station sizes for equipment and writing space, and generous aisle widths to allow unobstructed instructor movement behind seated students.
- Design for future, and current cabling and electrical requirements.

G. Contract Overview

General: Contract between UND and Design Consultant

As per NDCC 54-44.7, the design consultant for a major project is selected using the procedures prescribed by this statute. The procedure requires that, once selected, UND will negotiate a contract with the design professional for a fair and reasonable fee. The negotiation process must include the following considerations and actions:

- The design professional must ascertain the budget and review it with UND for adequacy to meet the anticipated scope of work. The relative complexity of the project should be determined, and a list of sub-consultants prepared.
- The design professional must solicit from UND a description of the source of funds for the project, and determine if any restrictions on the funds exist which will impact the project development, scope, or construction costs.
- Once a full and complete scope of services is determined, and any cost considerations for special requirements based on the source of funds determined, the design professional should propose a fee for services, justifying the costs and providing a reasonable breakdown or summary of those costs.
- Once the fee is determined and agreed upon, a contract agreement will be prepared for signature by both parties on the appropriate form as amended by UND for specific North Dakota Attorney General requirements.

Contract agreements between the design consultant and UND, and all contract agreements between the constructor and UND, including terms and conditions of the contract documents, general conditions, are modified to meet UND requirements as well as the contracting requirements of the North Dakota Attorney General.

All contract agreements, including those previously approved as templates, must be reviewed by legal counsel prior to signature by UND. If the contract has been previously reviewed as a UND template, the time required to review is typically quite short, and the agreement is usually returned approved for signature within a few days. UND will prepare the signature-ready documents and process the forms for legal review.

As noted in the specification section of this design standard, contract documents must be included in the solicitation of bids. The form of agreements included in the bid documents should be as executed with all UND and ND Attorney General modifications included. The purpose of including the documents as executed (or as close as possible to executed form) prevents potential conflicts with the bid bond, whereby the constructor agrees to enter into a contract. If the contract within the bid documents is substantively changed for execution, the constructor may have cause to void its bid, and the bid bond surety may have no obligation to compensate UND for such refusal.

Liquidated Damages: Liquidated damages are damages sustained by UND as a result of a breach in the contract by the Constructor, most often a breach caused by a delay or failure to meet a completion date. Including a liquidated damages clause within the contract agreement requires careful consideration by the design consultant. As all claims arising from the contract agreement to construct are first considered by the architect/engineer, understanding the implications of liquidated damages as a contract term with UND is very important. The following should be used as a guide for establishing liquidated damages:

1. The parties of the contract must agree to liquidate (resolve or pay for) the damages by specifying an amount certain over a period of time. This is accomplished with language within the contract for which both parties eventually sign. Consideration must be given to the amount stipulated as it has bearing on items (2) and (3).
2. The anticipated damages to be liquidated must be difficult to define, or difficult to prove. *Note that damages which are well defined and simple to prove are recoverable by either party to the contract with, or without, a liquidated damages clause.*
3. The amount of damages must be reasonable. The design consultant must review with UND the scope of undefined or difficult to prove damages that will result from a failure to complete the project on time, and subsequently include an appropriate value. If the amount included reflects a punitive effort by UND, it will have little effect on expediting the work if the Constructor assumes the costs are unreasonable and therefore unenforceable. In addition, including liquidated damages may establish an adversarial environment within the project immediately, and subsequently give rise to other problems that may offset any benefit from including liquidated damages.

Performance and Payment Bonds: Bonds for performance by the constructor and payment of vendor, payroll, and other related costs incurred by the constructor for completing the project are required by statute. The bonds add considerably to the project costs, and the benefit of the bonds must be pursued by UND if conditions so require.

Timely payments by the constructor to vendors and employees working on UND's projects are important in maintaining schedule and quality. It is assumed that the constructor will pay all vendors and subcontractors based on work completed less the contractual retainage. In the event the design consultant is made aware of reports that the constructor is not making timely payments, UND must be notified immediately and appropriate steps taken to rectify the problem if reports are found to be accurate. This includes notification of the surety.

It is assumed that the design consultant will review all applications for payment and subsequently confirm all work by the constructor(s) has been completed as per the contract documents. Substandard work must be identified as soon as possible, and if left uncorrected, UND must contact the surety for remediation immediately. It is considered a part of the design consultant's fiduciary interest in UND to provide this information as soon as possible, and to assist UND in pursuing any claim against the surety/constructor.

The design consultant is also required to review and approve the constructor's schedule which must be submitted prior to initiation of work. The schedule must have sufficient detail so as to inform the design consultant and UND of the status of the work, and if the work is either behind or ahead of schedule. The general conditions of the

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contract as modified by UND contain terms and conditions which identify the steps necessary to restore the construction schedule. Having clarity within the schedule sufficient to clearly identify the project status is paramount in avoiding any disagreement, and subsequent need for, remedial action by the constructor.

Part III – Bid Documents

A. Bid Documents Overview – CMaR Projects, Design/Bid/Build Projects

Design Specifications: Design Specifications shall utilize standard CSI MasterFormat Divisions. The General Requirement Section must not include or conflict with items that are already covered in the General Conditions.

The design consultant is advised to study the General Conditions before beginning the preparation of specifications, and to refer to them routinely through the preparation of specifications. Attention should be paid to standardized or computerized specifications written by outside firms who are employed to write technical sections, to ascertain nothing contained in those specifications conflicts with provisions in the General Conditions. Complete coordination of all Bid Documents is the responsibility of the design Consultant.

Prohibited Language: The following words and phrases are expressly prohibited in the specifications or on the drawings:

- The phrase “by others” must not be used. Name the specific contractor or agent responsible.
- The words “alternate” or “substitute” must not be used to indicate an “option.” The words alternate and substitute have specific definitions in the front-end contract documents. The word “option” should be used to indicate items for which the contractor may make a decision based on contractor preference.
- The word “mechanical” must not be used when referring to the Plumbing Contract, Fire Protection Contract, or the HVAC Contract, or when referring to any of the contractors for these divisions of work. The applicable trade must be used when making these references.

As Built Drawings: Indicate in specifications that constructors are responsible to maintain as-built drawings throughout the duration of the project. As-built drawings are to be submitted monthly to the design consultant and collectively at the time of substantial completion. The design consultants will transfer the as-built information to the most recent for-construction drawings and submit to UND as part of the close-out documentation. If requested, design consultants will provide final as-built drawings in electronic format, either PDF or in the file format used to prepare the drawings if compatible with UND software.

PART IV: Design Standards

A. Design Standards Overview

Buildings shall be designed as quality institutional buildings or renovations, and components shall be selected and specified to provide maximum life-cycle usefulness. The Consultant is responsible for providing and recommending cost-effective designs that meet this requirement. In addition, the Consultant shall provide all necessary value engineering to ensure the project is designed effectively and complies with the original intent of UND.

The Consultant shall perform professional services in accordance with federal and local statutes, ordinances, rules, regulations, and building codes. UND has recognized minimum building requirements and has summarized these requirements in the Design Standards.

UND is dedicated to the principle of conserving energy. UND personnel will review the proposed design for means of reducing not only initial cost of energy consuming equipment, but also long-range operational costs.

Certain design standards will be guidelines for the Consultant to develop specifications. Other standards are specifications that must be incorporated verbatim by the Consultant.

The Consultant is responsible for ensuring these standards are met, not only during the design process, but also during construction. The Consultant is also responsible for verifying that the Standards being used are current.

B. Design Specifications

The Design Specifications are organized in Construction Specifications Institute (CSI) Masterformat, Divisions 1 through 33.