I. Informal Projects

A. Preface

Based on the North Carolina Administrative Code (NCAC), Title 01, Subchapter 30D Section 0.0300 – Selection of Designers or Consultants, 0.0304 states that the UNC system shall establish its own procedures for final designer or consultant selection. The University is required to file its procedures with the State Building Commission (SBC) for approval. This process document is intended to provide procedures which complement, not replace, the SBC designer selection policy and, accordingly, should only be used in conjunction with that policy.

A. The following procedures are unique to the UNC System:

1. Each Board of Trustees of a constituent institution of the University of North Carolina, by delegation from the Board of Governors has been assigned the authority for:
   a. Selection of architects or engineers for buildings and improvements requiring such professional services.
   b. Approval of building sites.
   c. Approval of plans and specifications.
   d. Final acceptance of all completed buildings and projects.
   e. Preparing and maintaining a master plan for the institution.

2. The requirement for the State Construction Office representation on all University pre-selection committees is waived by 01NCAC 30D.0304.

3. According to 01 NCAC 30D.0301, all designers or consultants shall file design qualifications information (Federal Standard Form 254 and other supporting material) with the State Construction Office prior to being considered by the pre-selection committee. In addition, this designer qualification information may be filed directly with the constituent institutions of The University when application is made for designer selection for a specific project.

4. GS 116-31.11 delegates the duties of the Department of Administration and the Office of State Construction to the University of North Carolina with respect to the design, construction, or renovation of buildings, utilities, and other property developments of The University of North Carolina requiring the estimated expenditure of public money of two million dollars ($2,000,000) or less.

The University has the authority to design and construct Informal projects that have total construction costs less than $500,000. These projects use the informal bid process. Open-Ended Service Agreement projects will be informal projects. These projects have the following attributes:

   a) Exemption from State Construction Office review/field oversight.
   b) Construction costs must be $500,000 or less.
   c) Single project fees shall not exceed $50,000.
   d) Projects bid through NCSU DCS Construction Management and are invited from their pre-approved bidders list.
   e) Bonds not required from bidders for projects under $100,000. Bid and performance bonds will be required for projects between $100,000 and $500,000.
   f) The State Construction Office must review of the project bid documents for code compliance and inspect all electrical and fire alarm work.
B. Types of Informal Projects based on Scope

1. Projects with construction costs under $100,000
   a) Exempt from State Construction Office field oversight.
   b) NC SCO must review project documents for building code compliance.
   c) Bid informally through NCSU DCS Construction Management.
   d) Limited designer construction administration responsibilities.
   e) 80% fee paid at conclusion of design phase, final 20% at conclusion of construction phase.

2. Projects with construction costs between $100,000 and $500,000
   a) Size of project may require more review stages.
   b) Exempt from State Construction Office field oversight.
   c) NC SCO must review project documents for building code compliance.
   d) Bid informally through NCSU Design and Construction Services department.
   e) Designer has greater responsibilities during construction to duties as described in the State of North Carolina, The Board of Governors of the University of North Carolina, Standard Form of Agreement between Owner and Designer, Capital Projects costing $2,000,000 or less (attached) as modified for specific projects.
   f) Specific design expectations for these projects will be detailed for the specific project.

II. The Informal Project Design Process

A. Initial Contact

1. A Customer requests design project, and funding is available.
2. The design PM is assigned. (A list of authorized PMs is provided in the contract.)
   A construction PM is assigned at the outset of a project also.
3. The design PM secures account number from Customer and opens a project number.
4. The PM and client decide to use an Open-Ended Service Agreement Designer (OESAD).
5. An OESAD is contacted to confirm that the OESAD is available to handle the project within projected schedule.
6. An initial meeting among the client, PM, and OESAD is scheduled. The following events occur during the meeting:
   a. Discussion of OESAD’s ability to provide design type required
   b. Discussion of OESAD’s ability to meet client’s schedule.
   c. Site visit, as required.
7. From this meeting, the OESAD will determine:
   a. Project Description and Scope, and associated cost of work
   b. Design fee/negotiation of fee
   c. Content of the Design Proposal Letter
8. The OESAD will begin work on the proposal. This may require additional site visits, meetings with the client, and/or meetings with the PM. Additional client contact or site visits must be coordinated through the PM.

B. The Design Proposal

The OESAD will respond to the initial meeting and other preliminary investigations with a proposal, which includes the following:
1. A description of the project including existing and special conditions:

2. A project schedule through construction (allow four weeks for bidding and awarding of construction contract). Use generic weeks rather than actual dates in the schedule. (Example: Completion Date: Six weeks after receiving notice to proceed). In a typical project, the time allotted to design a project should fall within the following guidelines:
   - Up to $30,000: 6 weeks
   - $30,000 to $60,000: 8 weeks
   - $60,000 to $100,000: 12 weeks
   - $100,000 to $500,000: Up to 14 weeks

   The estimated construction schedule should be based on best available information and experience and must take into account the customer’s expectations. The designer must inform the Owner if schedule expectations are unrealistic. Long lead items and shop drawing approval durations must be considered. See III A1. B & C for a more complete discussion of the construction schedule.

3. A construction budget estimate with a 5% construction contingency allowance to enable the client to budget funds. (This estimate must be updated as design progresses).

4. A list of consultants that will be used.

5. A design fee, negotiated informally with the PM before putting it into the formal proposal letter should consider:
   a. Design time involved including review meetings with client, PM, CM, and SCO / other agency reviews.
   b. Subconsultant fees to be broken out separately.
   c. Three check sets to be submitted during the design review phase at 100%, two for the plan review room, one for the PM.
   d. When the documents are ready to bid, the Design PM will transmit to the NCSU construction project manager, 13 sets of the bid documents will be required. PDF drawings of the bid set may be requested to be sent to bidders in lieu of hard copies.
   e. Bidding and construction refer also to section III – The Informal Bid and Construction process. The designer needs to participate in:
      1. A constructability review meeting with the design and construction PMs prior to bidding
      2. A pre-bid conference
      3. A pre-construction conference
      4. Minimum of 4 site visits during construction. Note that typically for projects under $100,000 construction administration is not required of the designer, but is optional for the purpose of ensuring that the construction documents are followed and the designer has adequate knowledge of the project construction to submit a signed “Certificate of Compliance” at the completion of the project. The designer will be expected to provide interpretation of design documents as required and to review hidden conditions during construction, if they affect the design.
5. For projects between $100,000 and $500,000, construction administration as set forth in the State of North Carolina, The Board of Governors of the University of North Carolina, Standard Form of Agreement between the Owner and Designer, Capital Projects costing $2,000,000 or less (attached) applies as modified for the specific project.

6. A final inspection, punch list, and re-inspection/s, and finally completion of a Certificate of Compliance by the designer.

7. As built documents will be provided to design project manager prior to the final 20% design fee invoice being paid.

8. A separate line item for the cost of providing the proposal. This amount will be paid to the designer before design begins if the client cancels the project, otherwise this cost will be included in the total design fee. Make certain that the fee for the proposal does not exceed $500 in cost. (Most proposals are in the $300 to $500 range.) Do not proceed with design work until notification from PM is received.

C. Approval to Proceed

The OESAD will be given approval to proceed with design upon the completion of the following:

1. Review and approval of the proposal by the PM and the client.

2. Once the customer signs a contract an account number is provided. Project number given to OESAD. This project number must be included on all correspondence and construction documents for the project. Not including it on invoices will result in a delay of invoice payment. Approval to proceed is granted upon receipt of customer account number. The PM will then prepare a purchase order. A confirming purchase order will be sent to OESAD.

3. For projects between $100,000 and $500,000, the State of North Carolina, The Board of Governors of the University of North Carolina, Standard Form of Agreement between Owner and Designer, Capital Projects costing $2,000,000 or less as modified will be referred to in the proposal, the actual binding document for the design work will be the purchase order that is written and reflects the design proposal.

D. Design Work

1. All work must comply with State and university standards. The Facilities PM can provide guidance in this area. Please refer to the NC State Physical Master Plan at http://www.ncsu.edu/facilities/physical_master_plan/index.htm. Also, the “NC State University’s Construction Guidelines” shall be used as a reference to inform your design effort: http://www.ncsu.edu/facilities/con_guidelines/index.htm

2. The most important principle in producing contract documents for the university is field verification. Record drawings cannot be relied upon to provide a 100% accurate description of site conditions. The designer will be expected (among other things) to:
a. Check heating and cooling capacity. Check exhaust capacities and balancing.
b. Check power availability and routing to spare circuits or provision of new panels if necessary.
c. Check above ceilings for possible existing code violations, existing rated walls or chases, and availability of space for new equipment.
d. Check floors below and the occupancy of the lower floors.
e. Identify the need for destructive testing if necessary.
f. Identify fire separation ratings and make sure design maintains them.
g. Request from the Owner any chemical lists that may be required for SCO approval early in a project.
h. Check toilet counts that may be affected if occupancy loads change.

*Failure of the designer to perform a thorough and careful field verification check is the most common cause of construction delays and change orders on an informal project.*

3. When appropriate, the design PM will arrange meetings between the OESAD and or their consultants, and building maintenance zone mechanics. This can be useful when new power, exhaust or cooling concerns are an integral part of the project.

4. The OESAD must be mindful of how the project will affect the operation of the department during construction and keep the design PM and client informed of possible detrimental affects.

5. The project budget must be maintained. It is important that the OESAD, the Project Manager, and the client know what the budget is. As the design progresses the OESAD must inform the PM and client of any impacts to the project’s budget and construction estimate. It is the OESAD’s responsibility to keep the construction costs within the project budget. The OESAD is expected to redesign the project, as necessary at no additional cost to the owner for rebid if the project cannot be awarded within the budget at the initial bid.

E. Design Reviews

1. The N.C. State Construction Office must review and approve all design documents when there are any life safety, ADA, or electrical changes in the scope of work. An early meeting with code reviewers, the designer and PM is useful to avoid delays due to changing completed documents. The Designer will handle the submission of the construction documents to SCO for final review and approval. SCO field electrical inspections will be coordinated by the contractor and Facilities Construction PM.

2. Usually, with regular design meetings and progress reports, the PM and client will have adequate understanding of the design documents. Typically, one formal review of the documents will suffice. A constructability review with the client, construction
and design PM, at or near the completion of the documents is required prior to bidding, as long as all parties are kept informed of the design status as the work progresses.

3. Comments can be marked directly on the review prints, but shall also be submitted in a design review matrix to the designer. After the designer addresses the comments with responses, and corrects the drawings, the review set must be returned to the PM along with the final drawings.

4. Reviews are not meant to serve as a complete document check or a formal approval of the plans. Reviews do not relieve OESAD of statutory and professional responsibilities of preparing a thorough, coordinated set of construction documents.

F. Invoicing

1. For project design work on projects below $100,000, the University expects the OESAD to bill for services only twice: 80% of the total fee at the end of the design phase; and 20% after the completion of the final construction inspection and submission of Record Drawings. Under special circumstances, such as client project delays, more than one billing during the design phase may be acceptable. If the design is not implemented, under ordinary circumstance, the final 20%, will not be paid. For studies, 100% of the fee can be invoiced when the study is complete.

2. For projects between $100,000 and $500,000, payments will be made as per the schedule agreed upon and listed on the State of North Carolina, The Board of Governors of the University of North Carolina, Standard Form of Agreement between the Owner and Designer, Capital Projects costing $2,000,000 or less (attached).

3. The University expects the original fee proposal to be the total design cost. If unforeseen circumstances or clear scope changes occur during the design or construction that require additional OESAD time, a clear understanding of what constitutes the extra work must be reached before proceeding with design work. Negotiations for additional fees are required. The final agreement must be in writing. After receiving the written amendment and approval by the PM, a purchase order change order (POCO) will be issued.

4. The invoices must be clearly marked “Invoice.” Those marked as “statements” will be returned. All invoices should clearly list the project name, the NCSU project number, name of the design PM, and the P.O. number. If this information is not included, the invoice may be returned to the OESAD. Due to recent audits, the University Accounts Payable Department is requiring invoices to be paid as submitted by the designer/vendor without alterations. In the event there is an adding error or error in the percentage of work completed the PM can make corrections to the invoice and then process it for payment, otherwise the invoice will be returned to the OESAD for correction.

Special note: It is a violation to expend State funds before receiving goods or service. Violations will require restitution to the State and may result in the
termination of the Open-Ended Service Agreement with the designer, employment of the University employee(s) involved and/or criminal prosecution of both.

5. The final design invoice will not be paid until the Record Drawings and the Certificate of Compliance are received from the OESAD. The construction contractor will keep a set of documents on site and return the marked set to the construction manager at the end of construction. The contractor will give this set to the OESAD for the preparation of the Record Drawings.

G. Documents

1. Typically, for project under $100,000, specifications should be included on drawings. Separately bound specifications will typically not be used. (An exception would be reroofing projects.) The design PM will provide a “Front end” comprising a cover sheet including the NC SCO Building Data Sheet (SPFIF 94) and Informal General Conditions. For projects between $100,000 and $500,000, separately bound specifications may be used for convenience and to avoid having too much printed matter on the drawings. In this case, the Informal General Conditions can be bound in with the technical specifications.

2. A specific description and scope of the project must be included on the cover sheet. Also the latest edition of the SCO Building Data Sheet (SPFIF 94) must be on the cover sheet.

3. The University project number must be on each sheet, and the SCO issued number must be on the bid set.

4. Jobs should be described on as few and as small sized sheets as is reasonable for the job. Sheets 36” x 24” should be used when possible. All construction documents must be drawn using CADD. A copy of the project disk must be submitted with the record drawings. The design PM will provide the designer with a list of the current record drawing requirements from the Office of University Architect.

5. The OESAD seals are required as described in the State Construction Office- North Carolina Construction Manual (Blue Book) latest edition.

6. All OESAD are encouraged to include drawing dates in title blocks, initials of personnel working on the project, clear distinctions between existing and new work, clear narrative of control of operation sequences, and other features which will fully define the location, intent, and scope of the project for future reference, perhaps many years later.

7. No information on contractor’s insurance requirements, payments, licensing, etc., should be included in the drawing notes. All of these items are covered in General Terms and Conditions, which are provided separately to bidders by Construction Management.

8. During design, the OESAD must not rely on so called “as-built” drawings alone, but shall field verify items such as pipe and duct sizes, existing obstruction, existing HVAC, electrical loads, etc. OESAD must also verify existing HVAC capacities and electrical power capacities.

9. In electrical renovation work, any abandoned circuits and conduit must be removed back to the source. The designer must mark the drawings accordingly and make
field investigations and surveys as required to make the bid documents explicit to what is to be abandoned and how it is removed to meet code. Failure to do this step will result in unnecessary delays and change orders to the project.

10. When design is complete and ready for bid, provide 13 sets for the PM for distribution to Construction Management for bidding. Revise original drawings at the end of construction to reflect any changes that occurred during construction (reflect “as-built” conditions). Provide these drawings to the construction PM for processing at the end a project. Contractors are instructed to keep a marked up, “redline” set of prints on the job site to keep track of changes from the original drawings. At the end of construction, these marked up sets will be transmitted to the designer to incorporate all changes into the final “as built” document set. The “as-built” conditions must also be reflected in the record drawings.

**Designer shall transmit at the conclusion of construction to NC State University (in addition to SCO code review requirements):**

(a) Two (2) hardcopies and one (1) electronic copy (PDF) of Maintenance and Operations Manuals.
(b) One (1) copy of operations and maintenance training video.
(c) Three (3) hardcopies of approved shop drawings and official shop drawing log.
(d) Two (2) hardcopies and one (1) electronic copy of as-built drawings (PDF) and Project Manual (specifications).
(e) One (1) copy of electronic source AutoCAD files of drawings. AutoCAD version to be current to within two (2) years of CD submittal date.
(f) If project is modeled in BIM: Fully coordinated architectural, structural, and MEP 3D models in Revit. Civil design may be provided in an alternate 3D modeling program. One (1) electronic copy is required.
(g) Two (2) hardcopies and one (1) electronic copy of Final Report per the attached “NC State Final Report Checklist” Include final version of Appendix E (HUB documentation) as submitted with the final pay application.
(h) Two (2) hardcopies and one (1) electronic copy of Final Acceptance/Occupancy Book.

### III. The Informal Bid and Construction Process

**A. Preconstruction Responsibilities**

The OESAD is responsible for conducting and preparing for numerous preconstruction activities, as detailed below:

1. **Prepare for the Final Design Review**

Prior to the Final Design Review that is held between the OESAD, the Design project manager, and the Construction Management project manager, the OESAD should perform the following tasks:
   A. Finalize the design and specifications so they are suitable for a review.
   B. Present and discuss the construction schedule during the final review meeting with the design project manager and the assigned construction manager. Tasks that should be
considered when preparing the estimated construction schedule are: Any special schedule considerations such as end of classes, beginning of classes, test days, etc.; Bid preparation (usually one week), Preconstruction meeting; Bonding and insurance checking and contract signature (one week); mobilization; submittal preparation, submission, and approval; demolition; various construction tasks; long lead time items; SCO electrical inspections; site clean-up; final inspection.

C. Establish a recommended construction start and completion date based upon the estimated project schedule, to be discussed at the design review.

D. Generate the final detailed cost estimate, which meets the prescribed construction budget

E. Using a template form from NC State, generate a contractor bid sheet, broken-down by appropriate line items, bid alternates, allowances, and unit costs. (attached)

F. Verify that Specifications are Non-Proprietary: Verify that specifications meet GS 133-3, the “Competitive Items” statute, for all materials specified. If an exception is expected or a justification needed, or a special bid alternate needed, then coordination should ensue through the DCS Project Manager, who will place and pay for the advertisement. The PM can provide a list of current NC State proprietary products, to include locks, toilet accessories, etc.

G. Verify durations for long lead-time materials: Call vendors to verify ordering/manufacturing/delivery durations for all times that are anticipated to need greater than a two-week period to order/manufacture/deliver to the project site.

H. Verify durations for shop drawings:
Call vendors to verify appropriate durations to generate and deliver shop drawings, if required.

I. Prepare a list of potential Vendor Contacts for nonstandard specialty items (based upon verification calls to vendors, above). Distribute this information to contractors at the pre-bid conference.

J. Prepare an outline Quality Control Plan for construction based on your knowledge of the design that would include:
   a. Mandatory inspection points or special review points during the project
   b. Recommended or required quality control testing
   c. Specific tests and related specs/standards

K. If the design has requirements for a “specialty discipline” contractor or supplier, (i.e., not mainline disciplines such as electric, mechanical, general, painting), please provide NC State University with a list of specialty contractors (with contact information) that perform the type of work required and specified. When possible, check the with the specialty contractors their HUB (Historically Underutilized Business status and note the status on your list.

2. Prepare for and Conduct a Professional Pre-Bid Conference
Prepare for and conduct a professional Pre-Bid Conference with prospective contractors.

A. See attached “Checklist for an Informal Project Pre-Bid Conference with Contractors,” that details OESAD responsibilities.

   i. The construction management PM will invite the contractors. The OESAD is responsible for following the checklist to properly prepare for and conduct the pre-bid conference in accordance with University expectations.
3. **Prepare and distribute addendums, as needed, giving contractors reasonable reaction time prior to the Bid Opening.**
   Answer contractor questions during bid preparation.

4. **Attend the Bid Opening**
   Be prepared to resolve any confusion on bid items before bids are opened.

5. **Prepare for and Attend the Pre-Construction Conference**
   A. See attached “Checklist for an Informal Project Pre-Bid Conference with Contractors,” that details OESAD responsibilities.
      1. The Construction Management department will schedule the contractor, OESAD, owner/client, and other necessary attendees.
   B. The OESAD is responsible for:
      1. Preparing for the preconstruction meeting by answering any unresolved questions.
      2. Attending
      3. Providing contractor with a log or list of required material and shop drawing submittals.
      4. Take notes and distribute minutes.
      5. Provide any supplemental information after the meeting, as requested.

B. **Construction Responsibilities**
   At a minimum, the OESAD scope of work includes certain Basic Services after the preconstruction conference. However, the Owner may elect to hire the OESAD for additional construction oversight services.

   1. Basic OESAD Construction Administration Services during construction (usual scope for projects under $100,000 in cost):
      a. Review and comment on project schedule.
      b. Review and comment on schedule of values.
      c. Review and approve material submittals. Maintain a log.
      d. Review and approve shop-drawing submittals. Maintain a log.
      e. Visit the site at least twice during construction, and more often for specific inspection points, if necessary.
      f. Attend pre-final inspections and generate/distribute punch lists
      g. Attend final inspection
      h. Provide Certificate of Compliance at the end of the project
      i. Review contractor redlines for accuracy and provide the Construction Management Project Manager with updated record drawings and CAD files as described in II.G.11. above.

   2. Full Construction Administration Services
Provide full construction administration services as described in the North Carolina Construction Manual of the State Construction Office: “Standard Form of Agreement Between Owner and Designer”, as modified below for informal projects. The OESAD will NOT have to perform the following:

a. Produce more than 13 final plan sets
b. Advertise
c. Invite contractors or maintain bidder lists
d. Generate bid tabulation and award recommendation
e. Review HUB good faith efforts
f. Verify contractor license, insurance, bonding
g. Coordinate contract signing

Any additional OESAD efforts required during construction due to design oversights, value engineering a bid higher than estimated cost, errors, or omissions will not be compensated.