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**UNC Capital Projects
Roles and Responsibilities
Jointly Prepared by the NC Department of Insurance –
Office of State Fire Marshal,
the State Construction Office,
and the University of North Carolina
September 1, 2008**

In an effort to improve capital project processes within the UNC system and enhance interagency coordination, representatives of the NC Department of Insurance-Office of State Fire Marshal, the State Construction Office, and the University of North Carolina met to review and reduce to writing several key aspects of the process. The intent was to develop a document that would aid project reviewers, project managers, designers, field inspectors, and all involved in various aspects of these projects in understanding the scope of responsibilities of the various agencies and the interfaces between them. This document is the product of that effort. Suggestions for additions or changes may be submitted to Susan Gentry (sgentry@ncdoi.net), Greg Driver (gregory.driver@ncmail.net), or Terry Feravich (feravich@northcarolina.edu).

Jurisdiction

With respect to State Construction Contracts, the State Construction Office (SCO) has jurisdiction over all State capital projects except University projects under \$2M in project cost. Responsibilities include plan review, contract award, construction inspection, and acceptance. SCO has authority on all projects, with the exception of the above referenced limits, and no work may be accepted by the University or agencies without the approval of SCO.

The Department of Insurance – Office of State Fire Marshal (DOI) has building code compliance jurisdiction over any construction within State-owned facilities, without regard to dollar value. The office also has jurisdiction for electrical inspections within these facilities and for annual fire and life safety inspections.

At the initiation of a privately funded project situated on leased State land, the University should determine whether the resulting project will revert to the State immediately or at some specified future date. Should State ownership be immediate or imminent, DOI and SCO will review plans, monitor construction, and complete inspections as if the project were a State property. If reversion of ownership to the State may be at some distant, unspecified future date, or perhaps not at all, the project *may* be subject to local authorities for permitting, review, inspection and acceptance. SCO and DOI will review plans to aid in ensuring that the facility will meet State standards, should reversion be contemplated in the future, unless the University is notified otherwise. Should State ownership subsequently be desired and pursued, when the University System requests the Council of State accept ownership, SCO and DOI shall inspect the building, with reports of these inspections provided to the University for appropriate action.

To determine the applicable path for such privately-funded projects on leased State land, DOI and SCO should be consulted at project onset, with a clear delineation of the agreed-upon responsibilities reduced to writing and circulated to the University, DOI, SCO, and the relevant local authority having jurisdiction, if appropriate.

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Existing Building Plans

Session Law 2006-217 (House Bill 2147) requires that State agencies use existing plans and specifications for construction projects, where feasible. State Construction must be consulted regarding the availability and feasibility of appropriate plans in order to comply with this law. A request should be made in writing, either by mail or e-mail to the Assistant Director, Design Review, prior to undertaking project planning and the response documented as part of the relevant project file. If you have a specific building in mind that meets your needs, please identify it in your request.

Review Time Frames

SCO expected plan review time frames include 30 days for the schematic design phase, 30 days for the design development phase, and 60 days for the construction document phase. See the SCO construction manual for exceptions.

It is DOI's goal to turn virtually all projects around in 30 days or less. Some larger projects will likely take the full 30 days and that is the minimum that should be scheduled for their review, although a shorter time period will be possible in some cases.

Most small, uncomplicated projects, such as roof replacement, fire alarm or sprinkler systems, minor modifications or up-fits, are placed in the "Fast Track" queue and are reviewed in anywhere from a couple of days to about 2 weeks.

In cases where a project is a true emergency, such as resulting from a natural disaster, court order, or building system failure and the consequences of delay are significant, DOI may be able to help with a "Team Express Review Meeting" (TERM) where the owner and designers are present and the project is reviewed by as many DOI staff as necessary to cover all disciplines involved in the project design. The TERM process is limited to reviews that can realistically be done in about a half-day by a group of code consultants representing all the disciplines. Thus, very large, complex projects do not fit the process unless they are at SD phase or merely need the resolution of final comments for approval. These special reviews are requested in writing, including justification, by the owner. The number of slots available is limited because of the extra staff time required and the fact that they must drop what they are doing to participate. The first and third Wednesdays of every month are set aside for applying TERM to UNC System projects. Please contact Rob Roegner (vroegner@ncdoi.net, 919-661-5880 ext. 249) to learn more about the various paths your project can take in review once it reaches DOI.

DOI will participate in "Code Issue Resolution" meetings during the Construction Documents phase, if needed, to explain review comments that the design team needs clarification on or to discuss possible resolution of items with which the design team is wrestling. This meeting does not constitute a project review, as the Code's scope and complexity generally prevents that from being done efficiently or effectively in an ordinary conference setting.

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If the review of a project exceeds 60 days for the construction document phase, DOI will issue, as a standard practice, upon written request from the owner when approvable documentation is submitted, conditional approvals for grading, site utilities, foundations, building framework (i.e. structural steel, concrete frame), MEP rough-in, building envelope or other partial approvals so as to allow the project to progress.

Should a project that has already entered the review process be suspended or cancelled, SCO and DOI must be notified.

Inspections

The purpose of SCO construction inspections is to determine compliance with the contract documents and amendments thereto. Determining code compliance is not the purview of SCO, however, if Code issues are identified by SCO they will be addressed. SCO will inspect all life safety and fire protection systems and the building will not be accepted without these systems functioning properly.

Code interpretation is DOI's purview and if potential code issues are identified, DOI will be consulted. Any additional recommendations are to be clearly delineated from requirements. For example, the addition of exit signs to enhance visibility may be recommended but may not be code-required if sufficient, code-compliant exit signs are already in place. Also, deficiencies that are noted in the building, but are outside the scope of the project, will not normally impact beneficial occupancy or acceptance of the project.

Changes to Approved Plans – Value Engineering, Addenda, Change Orders

Value engineering or addenda that change an approved design must be reviewed and approved by SCO and DOI.

Change orders must also be reviewed and approved by both SCO and DOI. DOI must approve any change in the work that alters the design in any way other than cosmetic, in order to ensure that design changes have not affected code compliance. While a change is under consideration at the "Request for Information" stage, it should be submitted for DOI review in order to determine the code impact prior to committing time, effort, and funding to changes that may not be permitted.

DOI is particularly concerned with change orders that may affect code compliance. Based on experience, these areas typically include:

- 1) Exits/Egress Paths – Changes involving exit stairs, exit discharge, exit access corridors, significant floor plan modifications to corridors, walls, doors, partitions, devices that could impede egress such as card access systems, electric locks, security bars, etc.
- 2) Fire Rated Assemblies – Changes involving fire-rated assemblies such as floor/ceiling, roof/ceiling, shaft wall, corridor wall, windows/doors, new/altered penetrations by duct, pipe, conduit, or altered fire-proofing material or thickness, such as a change in ceiling tile or spray fire-proofing.

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- 3) Fire Protection or Life Safety Systems – Significant changes in fire protection or life safety systems such as sprinklers, fire alarms, security systems, emergency power, emergency lighting, or smoke control measures.
- 4) Accessibility – Significant changes to accessibility such as parking spaces, ramp configuration, or toilet room location or layout.
- 5) Electrical Changes – Electrical design changes potentially affecting safety or property loss such as lightning protection, grounding, or bonding.

The change order process includes the following steps:

- 1) Change request is initiated with designer who prepares initial documentation, including sketch
- 2) Designer issues “Request for Information/Request for Proposal” to DOI for review and contractor for pricing
- 3) DOI reviews and approves or provides feedback to the designer on the nature of any changes necessary to ensure code compliance
- 4) Designer modifies and communicates with contractor as needed to correct pricing for any alternative and prepares the change order accordingly
- 5) Change order is submitted to SCO for approval and execution if the project is being monitored by SCO, and must include documentation that the change has been reviewed and approved by DOI.

See separate “Changes to DOI Approved Design Documents - Addenda, Value Engineering and Change Orders” document dated 9/1/2008 for details.

Specific Guidance regarding Code Compliance and Renovations in Existing Buildings

Basic Presumption: Each campus in the UNC system has buildings of varying ages. For those buildings that were in full conformance with the Building Code in effect at the time they were built (or renovated), there is no current Code requirement for the entire existing structure to be brought into compliance with current code when a renovation is being done. However, there are Code requirements that may push some individual building elements, outside the owner’s intended scope of renovation work, to be brought up to current Code requirements. Those include accessible path of travel requirements per the NC Accessibility Code (NCAC), as they reflect Federal law. The NC Existing Buildings Code (NCEBC) requires that a building constructed prior to 1936 (when the first comprehensive Code was adopted by NC) must meet the 1936 NCBC in order to remain without change. In addition, NC Fire Code Sections 110 and 112, requiring abatement of identified unsafe building conditions and fire hazards, may also require that individual building elements be brought into compliance with current Code.

It is recognized that codes evolve and change with time, such that old buildings may not comply with the requirements for new construction. Except in limited circumstances, the Code is not applied retroactively. However, it is predicated on the assumption that all old buildings were constructed in compliance with the applicable building codes in effect at the time they were built and that any subsequent renovations were also in compliance with the Code in effect at the time of such renovations. All new work associated with a renovation project must

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comply with the current code. Individual building elements found not to have been constructed in conformance with the applicable code at the time must be brought up to current code. The following sections of the North Carolina Building Code are associated with existing buildings:

Chapter 34 Existing Structures:

- **New Work.** Additions, alterations or repairs to any building or structure shall comply with the requirements of the code for new construction.
- **Unaffected Space.** Portions of the structure not altered and not directly affected by the alteration are not required to comply with the code requirements for a new structure, except those included in the first two paragraphs above under “Basic Presumption.”
- **Structural.** Additions or alterations to an existing structure shall not increase the force in any structural element by more than 5 percent, unless the increased forces on the element are still in compliance with the code for new structures, nor shall the strength of any structural element be decreased to less than that required for new structures.
- **Nonstructural.** Alterations or repairs to an existing building or structure that are non-structural and do not adversely affect any structural member or any part of the building or structure having a required fire resistance are permitted to be made of the same materials of which the building or structure is constructed if in compliance when initially constructed.
- **Stairways.** An alteration or the replacement of an existing stairway in an existing structure shall not be required to comply with the requirements of a new stairway as outlined in section 1003.3.3 where the existing space or construction will not allow a reduction in pitch or slope and where the pitch or slope met the Code in effect when built.
- **Historic Buildings.** Subject to the approval of the building official and provided the building does not constitute a distinct life safety hazard in the official’s judgment, provisions of the Code regarding addition, alteration, and repair are not mandatory for historic buildings. The determination will be based on maintaining the historically significant features of the building.
- **Change of Occupancy (Higher Hazard):** A change in occupancy to a greater hazard requires that the building be brought into compliance with the current Code. Exceptions for pitch or slope of stairways still apply.
- **Change of Occupancy (Lower Hazard):** Subject to approval of the building official, changes in occupancy or use group within the occupancy to a lesser hazard may not necessitate compliance with all of the requirements of the current Code.

Building Accessibility:

- **Alterations:** If alterations affect a primary function space, the route to the space must be made accessible. An area of primary function will not include, for example, alterations only to be done in an incidental storage room, an electrical room, or boiler room. The routes shall initially include accessible parking, at least one accessible entrance and exit available to every person on the level of exit discharge, an accessible route to the altered area, accessible toilets and drinking fountains, and accessible

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telephones (if provided), but the cost of the alterations will not be required to exceed 20% of the cost of alterations to the primary function spaces. All costs associated with the alteration or reconfiguration of primary function spaces are included and subsequent alterations must continue the process of providing accessibility where the previous projects left off. See NC Accessibility Code Sections 34.2.2, 34.2.3, 34.2.5 and 34.2.6. Occasionally a change of use without reconfiguration of space will require accessibility upgrades along the path of travel.

- **Historic Buildings** : Subject to the approval of the building official, and provided the building does not constitute a distinct life safety hazard in the official's judgment, provisions of the Code regarding addition, alteration, and repair are not mandatory for historic buildings. If maintaining the historically significant features of the building limits accessibility to a primary function space, accommodations must be made.

FROM THIS INFORMATION AND OUR REVIEW OF THE LAW AND THE REQUIREMENTS OF THE CODE WE DRAW CERTAIN CONCLUSIONS:

1. If existing buildings were in conformance with the building code in effect at the time of their construction (or the 1936 Code if they were built before it became effective), there is no Code requirement to bring entire existing structures into compliance with current Code.
2. If buildings were not in conformance with the building code in effect at the time of their construction, an alteration or repair will not precipitate a requirement to bring the entire structure into current Code unless the building official determines that the deficiency is a threat to life, such as egregious exit deficiencies. The proposed project may not exacerbate any existing life safety deficiencies. It is helpful when the owner and building official collaborate on strategies to address fire and life safety deficiencies.
3. The areas of an existing building that are altered need to comply with current Code. Those areas and systems left undisturbed and that are not indirectly* affected by the alteration can remain as they are if they were constructed in compliance with the Code in effect at the time built (or the 1936 Code if built prior to that). *Some examples of "indirect" affect include means of egress capacity or restrooms capacity not adequate for the new presumed occupant load, the need to provide an accessible route to the renovated area, or the renovated space has a new occupancy classification that triggers the need for corridor fire rating (much more likely in buildings without sprinklers).
4. The code specifically exempts stairs in existing shafts from having to comply with current rise and run requirements even when modified unless they did not comply with the Code in effect when built.
5. It is permissible, with the approval of SCO as applicable (University projects over \$2M), to advertise construction projects while awaiting final DOI approval on the project design. Communications between SCO, DOI, and owners to confirm this action are important to the timely completion of the approval process. We realize the inherent risk and that the design will have to comply with DOI comments when constructed. All

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addenda and Change Orders on any project must be reviewed by DoI and are given priority attention by DoI whenever possible.

6. The replacement of like in kind building materials as a maintenance activity is permissible by the code and no DOI review is required for these activities if the material met the Code in effect when originally installed. An example would be the replacement of worn out solid core doors with like in kind applications. An example of where DoI should review the replacement is when ceiling tiles are removed and replaced, because the owner may not be aware that the tiles were part of a rated roof/ceiling or floor/ceiling assembly, and may not replace them with the correct type of tile. Window replacement should always be reviewed by DoI to make sure that exterior wall opening requirements are met. Door hardware replacement should be reviewed by DoI because new hardware must comply with accessibility and exiting requirements. Most of the time, projects of this nature can be submitted by FAX or E-mail, or perhaps handled by a simple phone call.
7. The change of occupancy to that of a lesser hazard does not lessen the accessibility requirements related to changes in occupancy.
8. There is no need for DOI review on projects that entirely relate to underground, non-electric infrastructure such as sewers, storm drains, or steam lines. However, the following categories of infrastructure projects must be submitted for review:
 - Parking lots, crosswalks, walkways, outdoor plazas and fixed seating.
 - Any project that will temporarily impact an accessible route or a required exit from any occupied building.
 - Electrical infrastructure projects, including outdoor lighting and emergency "blue light" phones.
9. A full Chapter 34 evaluation (Excel spreadsheet model) is never required but is a very useful tool for evaluating design alternatives, especially when there is some special feature of the building that would become non-compliant because of the renovation and the owner wishes to retain it. Note that non-compliant exiting issues are not relieved by the use of a Chapter 34 evaluation.
10. If a design has been completed for six months or more and construction has not been initiated, the project must be resubmitted to DOI for re-review. However, e-mail DOI to determine if significant changes have occurred in the Code and if not, re-review may not be necessary. DOI will provide a written update on the code status of the plans and any new approval will again expire six months after the date of issue.