

## **WINDOW REPLACEMENT PROJECTS IN SCHOOLS**

The purpose of this document is to offer guidance to local educational agencies in the planning of replacement of old (possibly energy inefficient) window systems in schools. This type of project is normally reviewed by School Planning Section of DPI prior to construction, and/or prior to funding through the Public School Building Capital Fund. Replacement of individual window units or panes of glass due to damage, vandalism, etc. is not subject to School Planning review, and is not covered by this document.

Projects estimated to cost \$300,000 or more are required to utilize the services of a registered architect or engineer (NC GS 133-1.1); however, projects of lesser value may employ such professionals at the discretion of the Owner. [Note: the threshold is \$100,000 for projects affecting life safety systems; \$135,000 for projects including major structural systems.] The Owner must comply with applicable laws relating to competitive biddings, based on the estimated value of the contract.

As a minimum, the following documentation should be provided to School Planning for review and comment:

- Floor Plan(s) showing the locations of the windows to be replaced, and room names. It makes a difference whether the windows are in classrooms, in offices, in corridors, or in other spaces. The plans may be as “simple” as a building plan with the window locations highlighted with a colored marker.
- Description of the window frames and glass types to be used.
- Elevations of the windows showing dimensions, operable sections, etc.
- Details (shop drawings are acceptable) of the window frames, showing anchoring to adjacent materials, flashing, thermal separation, locks, screens (if any), etc.
- A statement regarding how lead, asbestos, and PCBs have been (or will be) addressed. See, for example, the School Planning publication re: lead paint.

### **Code Considerations – see NC Building Code**

1. In certain locations, windows must be operable for use for emergency egress. This involves maintaining certain minimum clear opening dimensions, and installation within a certain distance from floor to sill. The submittal to School Planning must include either dimensioned drawings sufficient to confirm the applicable requirements (including an indication of which areas have sprinklers), OR a statement from the local building official that he/she is involved in reviewing the project and will confirm that requirements are met.

2. In certain locations, windows must be glazed with safety (i.e., tempered) glass. The submittal to School Planning must include either dimensioned drawings sufficient to confirm compliance, OR a statement from the local building official that he/she is involved in reviewing the project and will confirm that these requirements are met.

### **Other Considerations**

3. Generally, insulating glass will be used. It is important to confirm that the insulating units are manufactured by a reputable company, which provides an appropriate warranty against moisture leakage or condensation between the lites. In addition, the LEA should consider manufacturer’s data regarding air leakage around and through the window assembly (for energy performance), use of low-E glass, and other issues.

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