

## **DIVISION 9 - FINISHES**

### **Section 09000 - General Discussion**

#### **Introduction**

Next to thermal and moisture protection, finishes are most critical to the projects' appearance over the long term. University facilities must have a useful life of forty to fifty years. Over this period of time there will be many changes and alterations to the building. Many user groups will occupy the facility and many students will pass through its doors. What the building will look like after a short or long period of time will be reflected in the selection of finishes and the ease of maintenance that can be provided by University staff. Also important in the appearance of the building will be the convenience and the availability of storage space for janitorial equipment and access to convenient janitor closets. These closets should be well thought out in the initial design and not become after thoughts randomly located. They should also not become the arbitrary repositories for miscellaneous items that were not considered in early design stages (i.e.: water heaters, terminal boards, mail cart storage, etc.).

- Excessively light or dark colored finishes should be avoided (especially black). Both are difficult to maintain.
- Ceramic tile should be applied to wall areas adjacent to drinking fountains or areas where water might splash and cause staining or deterioration of wall surfaces.
- Carpet should of a pattern, color or texture which will provide for wear and soil hiding characteristics. Buildings on the campus generally have the carpet cleaned annually. Funding for more frequent cleaning is not available.
- Appropriate materials should be considered for high traffic areas and mats or grilles should be placed at entries to facilities.
- Equally important are impervious floor covering materials at potentially wet areas such as toilet rooms, drinking fountains and adjacent to sinks in work areas and even conference rooms where coffee may be served (and spilled).
- Smooth wall surfaces are to be avoided. Patches and blemishes will show.
- Protection of walls and corners shall be provided in areas where carts or other items might damage wall surfaces. A wood base or chair rail may be appropriate in heavy duty areas.
- Marble is an absorbent material which stains easily and is difficult to clean. It should be applied to vertical surfaces only.
- Shiny, mirror like surfaces should be avoided, especially where touching is possible. These surfaces require additional maintenance and may not be maintained in the condition the designer intended.
- For flooring applications on concrete slabs on grade special precautions are typically necessary to alleviate the concerns for vapor transmission. Refer to Section 03300.
- To alleviate flooring material concerns associated with moisture transmission and emission through concrete slabs on grade the following preventive measures shall be prescribed.
  - An under slab vapor barrier should be specified and detailed directly under the concrete slab and on top of any subgrade or sand grading material to minimize moisture transmission through the slab. Vapor barrier shall meet the requirements ASTM E-1745 Class "C". Acceptable vapor barriers are "Stego Wrap" by Stego Industries and "Moistop Plus" by Forfiber Building Products Systems.
  - A low water to cement ratio, low slump concrete should be specified for all interior slabs where flooring is anticipated to minimize the amount of free water in the concrete. Sufficient time should be allowed with the project to allow any free moisture to evaporate from the slab.
  - Surface sealers may be considered for re-flooring applications on existing slabs.
- There are several types of exposed concrete floor finishes to be evaluated and considered during the design process and they are identified below. Once the design/construction team has determined which ones will be incorporated, a meeting should be scheduled to review with UA Custodial and any specialty subcontractors to guarantee compatibility of all materials and methods of maintenance.

- Mechanical Rooms: These are not maintained by UA Custodial and should be cured and sealed by the contractor. Products such as Super Aqua-Cure Vox, a high solids, water-based cure and seal, have been utilized in the past. Contractor should protect the floors during construction and clean and apply an additional coat of sealer before Substantial Completion.
- Custodial Closets and Classroom floors (if exposed plain concrete): These will be maintained by UA Custodial. Any cure and seal product needs to be compatible with Johnson Wax Carefree and High Mileage products. Contractor should protect the floors during construction and provide a clean floor floor upon Substantial Completion for final finishing by the UA prior to occupancy.
- Polished Concrete floors in high use public areas: Densified, ground, and polished concrete floors are being used more often on campus due to their appearance, durability, and reduced maintenance costs. The design/construction team should vet successful systems and requirements with local specialty subcontractors.
- The application of curing compounds and sealers can have a cosmetic effect on exposed concrete. A thin and even application by a trained professional is required.
- Alkali-Silica Reaction (ASR) is a concern on exposed concrete floors. Consideration should be taken to add 18-20% fly ash and shrinkage compensating add mixtures to the concrete mix.

Common sense should prevail in the selection of materials and consideration give to the fact that the University is a public facility used by thousands of people daily. Maintenance budgets are minimal and design elements which create hardships will not be attended to. This challenge can still foster creative ideas to resolve the design problem.

**End of Section 09000**