



Peer Review Checklist to Identify and Reduce Green Design & Construction Risks

Envelope Peer Review Items

- Identify the specific higher risk envelope details/wall sections for moisture intrusion problems.
- Identify areas needing additional detailing or information/instructions for the contractor.
- Identify where performance specifications should be modified to prescriptive specifications--suggest alternatives.
- Identify details/wall sections that will be evaluated for the potential for rainwater leaks, vapor diffusion problems, and outside air intrusion problems.
- Identify the primary vapor retarders and other secondary vapor retarders within the predominate wall systems
- Identify the summertime dew point location in predominate wall sections in comparison to the location of the vapor barriers.
- Identify secondary rainwater barriers and drainage points in predominate wall systems.
- Identify locations where the design is depending on a water single barrier (e.g., sealant joint) for repelling rainwater.
- Identify the items that are important enough to construct field models of (for use as job standards), items requiring close review of the contractor submittals, or where the initial installations should be field-tested.
- Identify products that should involve the manufacturer's field representative during construction. For example: the installation of rainwater, air, and vapor barriers.

Envelope Items for Peer Review (Sample List):

- Typical building wall sections w/elevation markers
- Typical enlarged section details
- Sections @ multi-material connections
- Exterior building component details
- Show and identify building material, insulation, flashing

Peer Review Checklist

- Exterior opening details (doors, windows, glazing, overhead doors, vents, etc.)
- Exterior slab and ramp details
- Exterior railing details
- Roof connection details
- Roof edge details
- Roof drainage detail
- Full height interior partition connection to structure
- Enlarged section detail of elevator shaft below grade
- Fully edited specifications section for all components and systems related to the building envelope
- Roof penetration details
- Below grade waterproofing details
- Expansion joint details
- Sealant/caulking joint details
- Coping cap/flashing cap details.

The HVAC System Checklist (Humidity & Comfort Control Issues):

- Review design of exhaust, return and makeup air systems
- Review exhaust, return, and makeup air flow rates in the various spaces
- Review duct layout and location details
- Review duct construction details
- Review filtration specifications
- Review potential for microbial growth in the supply air ductwork--materials of construction and anti-microbial coatings.
- Review control system sequences of operation for pressurization control
- Review exhaust fan sizing requirements
- Review corridor/hallway air handler systems
- Review guest room air handling unit systems
- Review control system operation for humidity control (full and part-load conditions)
- Review heating and cooling load calculations
- Review air handling unit equipment sizing for full and part-load operation
- Review air handling unit installation details.
- Review pipe insulation materials, sizing, thickness, installation details, etc.
- Review architectural details for wall construction issues that effect HVAC operation (e.g., vapor retarders and air barriers)
- Review materials chosen for air handling unit construction (materials for corrosion resistance and mold growth resistance)

Peer Review Checklist

- Review TAB, building commissioning, and system start-up specifications. Suggest additional provisions to be included in the specifications.
- Review the construction and start-up phase QA/QC procedures; suggest provisions for construction phase documentation.
- Review the first year's monitoring procedures for verification of moisture control