

# Consultation-Based Building Inspection Program

**W**hile building inspections serve to verify construction corresponds to project-approved drawings and general code compliance, this might be the case only for the brief moment when the inspector is on site.

As soon as the inspector leaves, the construction may be modified and the changes covered up, unintentionally or intentionally during the building process. Anecdotal accounts of these instances abound.

Here's one:

*Many years ago as a newly appointed building official, I learned from a group of homebuilders that while they mounted shower enclosure ceramic tile on lath/plaster, they installed water-resistant sheetrock, which was at the time code-compliant, solely to pass inspection. Then they removed it to substitute lath post inspection approval. They reasoned it was more cost and time effective for them to waste labor/materials this way than to be subject to the whim of inspectors with varying views on shower enclosure lath installation.*



By Yves Khawam, PhD

## Consultation-Based Building Inspection Program *continued*

Financial and process decisions will in these instances often trump requests from building departments when these are perceived as being too onerous for no apparent gain. In these cases, the builder feels he or she is still doing the right thing and is subject to validation through warranty and state registrar of contractors' oversight through potential claims. These types of behaviors are direct outcomes of a lack of trust associated with the building department.

While the above example was resolved by providing and communicating performance criteria for shower enclosure lath installation to the industry and staff, establishing trust with the building community is essential to a successful inspection process. In fact, I would postulate that extending trust in the community transforms the role of a building department from one of enforcement to one of consultation regarding code issues, where builders voluntarily disclose deficiencies and seek advice regarding code issues.

## QUALITY

Aside from fostering an environment based on trust and consultation, it is a base responsibility of a building department to monitor program quality. In Pima County, Ariz., for example, the quality assurance program evaluates performance, quality, professionalism and process improvement for each core function. Inspections are verified against approved plans and discipline-specific checklists by a supervisor at a rate no fewer than four inspections per inspector per month, and each inspection may contain no more than the following allowable deficiencies:

- Critical items: 0
- Medium priority items: 1
- Low priority items: 3

**Critical items** are items contributing to the preservation of life-safety. These include, but are not limited to: structural load paths/components, egress systems/ components, building heights/areas, separations, fire/smoke control, protection from live parts/excessive current, safe mechanical systems/equipment and sanitary safety.

**Medium priority items** are those contributing to the durability and efficiency of buildings or building systems, or to the general public welfare attributable to zoning regulation. These include, but are not limited to: energy performance, sound transmission, non-egress illumination, moisture control and allowable use/site requirements.



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**Low priority items** are those contributing to convenience or comfort. These include, but are not limited to: temperature control, electrical receptacle spacing, junction box, access, duct and pipe cleanouts, and non-egress accessibility requirements.

Such quality monitoring assures building inspections serve their purpose in striving for code-compliant construction. However, what if we were to extend this approach to builders in lieu of inspectors? And what would such a program look like?

sions operate in the construction process. One could have an initial appointment on site to go over the approved plans with the contractor, to point out potential pitfalls of the project and to provide tips to maximize the likelihood of a successful outcome.

Hereafter, the builder could then proceed with construction without the requirement of passing inspections at specific intervals within the following context:

- The builder is encouraged to request a field inspection, video inspection or office visit whenever a code-related problem or question surfaces during construction;
- When an issue is raised by the builder, the building department assists to resolve it in a collegial context analyzing risk associated with different options;
- A quality monitoring program is implemented to provide adherence with the inspection approval requirements of the building code;
- Data for participating builders is documented and updated on a regular basis regarding project activities and quality monitoring.

Many evaluation programs employ sampling techniques in quality evaluation of construction to include RESNET (Residential Energy Services Network), where once a num-

### CONSULTATION-BASED INSPECTIONS

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### Consultation-Based Building Inspection Program *continued*

ber of houses pass testing requirements, subsequent houses require only sampling for testing purposes, and complete testing of all houses revert only upon discovery of a testing failure from the sampled set.

For building inspections, participating builders undergo traditional inspections for each phase of construction, and in so doing, are evaluated to meet the jurisdiction's quality criteria for all of their inspections conducted over three buildings. Once this level of quality has been established, builders during their subsequent projects could participate in a consultation-based environment where they would be subject to random inspection sampling at any point in the construction process.

The random sample inspection would be subject to full code compliance review for the state of construction of the building at the time of inspection and would be evaluated against the jurisdiction's quality criteria. Should the inspection meet the quality criteria, the builder remains in the consultation program. However, should the inspection fail to meet the quality criteria, the builder reverts to the standard inspection program, calling in for each inspection prior to proceeding to the next phase of construction until a certain number, such as three, consecutive buildings pass all phases of inspection measured against the quality criteria.

### BENEFITS OF A CONSULTATION-BASED INSPECTION APPROACH

From the builder's perspective, a consultation-based approach to building inspection would allow the builder to move forward with construction on a faster schedule, without having to manage work around specific stops required by a traditional inspection process.

Additionally, building permit fees could be reduced for builders successfully participating in the program. The approach also could provide a greater resource pool for the builder to have questions answered through just-in-time consultation sessions with building department office staff via phone or video in lieu of waiting for an on-site building inspector.

From the building department's perspective, a shift to a consultation-based approach would result in a much closer partnership with the building industry to include potentially more rewarding interactions; greater builder awareness and attention to quality control related to building code compliance; cost reductions; better management of resources associated with applying inspection resources where they are more needed; and poten-

tially better overall level of building code compliance for structures and regulated equipment.

### EVALUATION

We are in the process of consulting with the industry to frame out a consultation-based program. If successfully implemented, we will conduct a review comparison using our quality criteria applied to structures inspected through both our traditional and consultation programs, evaluating which type of approach is more successful in maximizing code compliant construction. This study will be the topic of a future BSJ article. **BSJO**

*Yves Khawam is an ICC certified Master Code Professional and Chief Building Official for Pima County, Ariz.*

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