

Strategy for a Hotline Call

Ward Malisch and I receive many calls on the ASCC Hotline. While most supply the needed technical information, we may need more information about the project history and players to incorporate a valid technical argument into a winning strategy. This is where interaction with, and information from each Hotline caller, is important. An example is shown below.

A concrete contractor (CC) called for help in assisting his general contractor (GC). Concrete contractors do call on occasion when helping the GC, in hopes of receiving the same benefit when they have a problem. For this 300,000 sf slab project, the drawings required a vapor retarder followed by a granular base followed by another layer of vapor retarder directly beneath the slab. The GC was responsible for, but forgot to place, the first vapor retarder. To fix the issue, the GC would need to remove the top vapor retarder and the granular base, then place the bottom vapor retarder and replace the granular base. This fix would greatly impact the schedule.

Ward and I thought this would be easy: Cite ACI 302R-04, "Guide to Concrete Floor and Slab Construction," and tell the Engineer of Record (EOR) that the bottom vapor retarder provides no benefit. Therefore, there is no problem with it not being in place. However, the Hotline Caller also indicated that the EOR believed the bottom vapor retarder would minimize curling. Thus we had three considerations (1) how to tell the EOR that his belief did not match the information in ACI 302, (2) how to tell the Owner that he paid for something that provides no benefit, and (3) how to leave out the bottom vapor retarder without making the GC or CC responsible for curling.

We kicked around ideas and decided to suggest this one: Place two layers of vapor retarder on the base directly below the concrete slab. There is technical information showing that two layers of vapor retarder reduce friction between the base and the slab, thus allowing the slab to slip more at the bottom. With shortening of the concrete slab at the top due to drying shrinkage and more than normal shortening at the bottom due to the two layers of vapor retarder, the difference in shortening between the top and bottom of the slab is reduced. The result should be less curling deflection. This strategy didn't include telling the EOR that his placement of the vapor retarder was not consistent with the information in ACI 302. Nor did it involve telling the Owner that he would have paid for a useless vapor retarder beneath the base. And the strategy could reduce curling but would not require a fix that delayed the schedule.

We relayed that message to the ASCC concrete contractor, which was followed by a decision that the bottom vapor retarder wasn't needed. But was it because of our carefully thought out strategy? Nope. The EOR decided that the impact on the schedule for the Owner outweighed his belief that the bottom vapor retarder would reduce curling. That too was a strategic decision.