

Testing Depth:

Testing depth is one of the important aspects of moisture testing. Moisture contents in concrete slabs differ greatly with the depth of the slab and if a moisture barrier was used. Figuring the depth and presence of barriers is essential in accurate moisture readings.

RESULTS:	
# of Tests:	514
Average Cost Each Test:	\$153.77
Average Impact:	\$4,048.97
Yes	74
No	20
Total # Jobs:	94

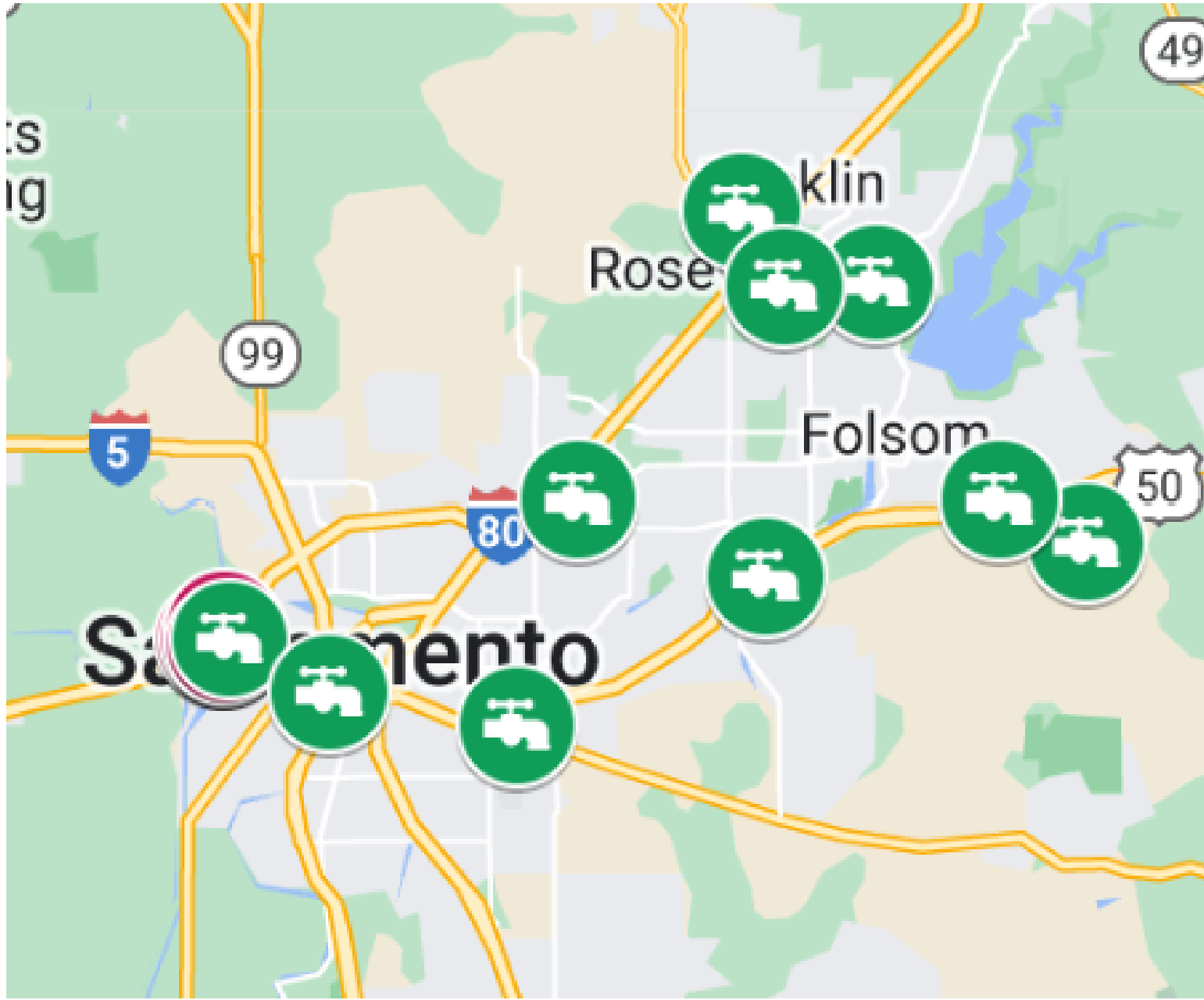
Cost Implications:

The testing data I utilized as a part of my project is condensed into a cost breakdown found here.

- The average impact to a project due to high moisture readings is greater than \$4,000.00.
- The cost of moisture remedies also greatly differs
- Seen by the difference in price between the moisture remedies Lock Dots and Moisture Extreme Adhesive. Both products are rated to withstand over 99 RH for carpet tile, but the Moisture Extreme Adhesive will cost more than 10x the amount per square foot.

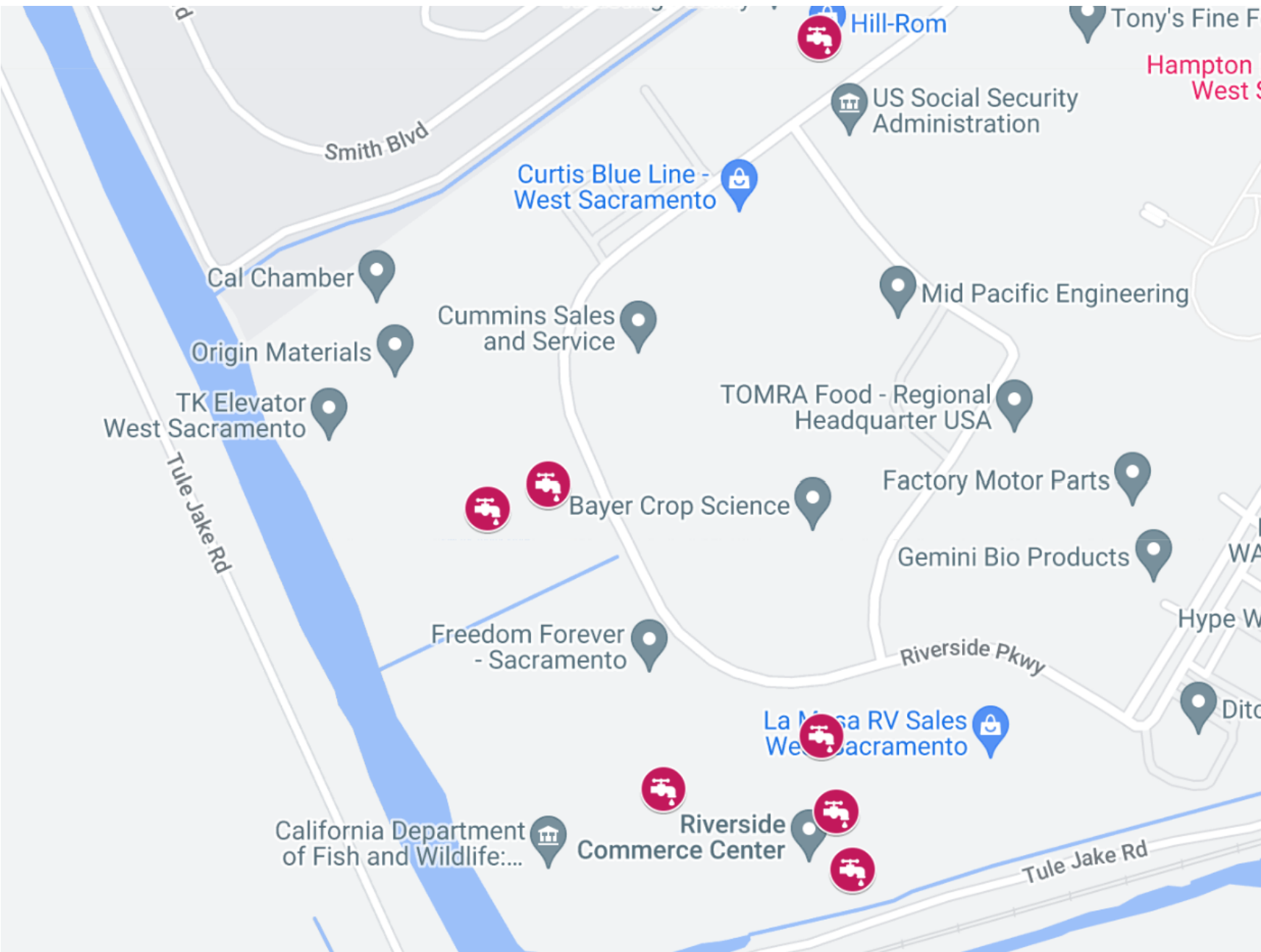
Differing Moisture Content in Concrete and Mitigation Methods: Research of Sacramento

The city of Sacramento and its concrete foundations face one of the most challenging conditions in the flooring industry, high RH Moisture. RH Moisture or Relative Humidity Moisture is one of the main causes for flooring systems to fail. The source of High Rh Moisture consist of surrounding geographic features like rivers, flood planes, and elevation; as well as improper or nonexistent use of a vapor barrier beneath the concrete foundation. Mapping and other data is used to support these claims. If a flooring system is not properly prepared for high RH Moisture levels, issues such as bubbling, delamination, and glue becoming unadhered can all lead to mass amounts of damage. I have personally set hundreds of RH Moisture tests by Wagner Meters and have collected the data to prove the issue of high RH Moisture persists in the Sacramento area. The RH Moisture testing method has become an industry favorite compared to other methods due to the capability to read the middle of the concrete slab, where others only give surface readings. Once an RH reading is established it is up to the contractor to find the best solution to the Moisture problem using a topical moisture barrier.



Passing Test Locations Sacramento:

- Higher Elevation
- Not near Flood Plane
- Not near Flooding Bodies of Water



Failed Location Riverside Parkway:

- Low Elevation
- Near Flood Plane
- Possible lack of moisture barrier

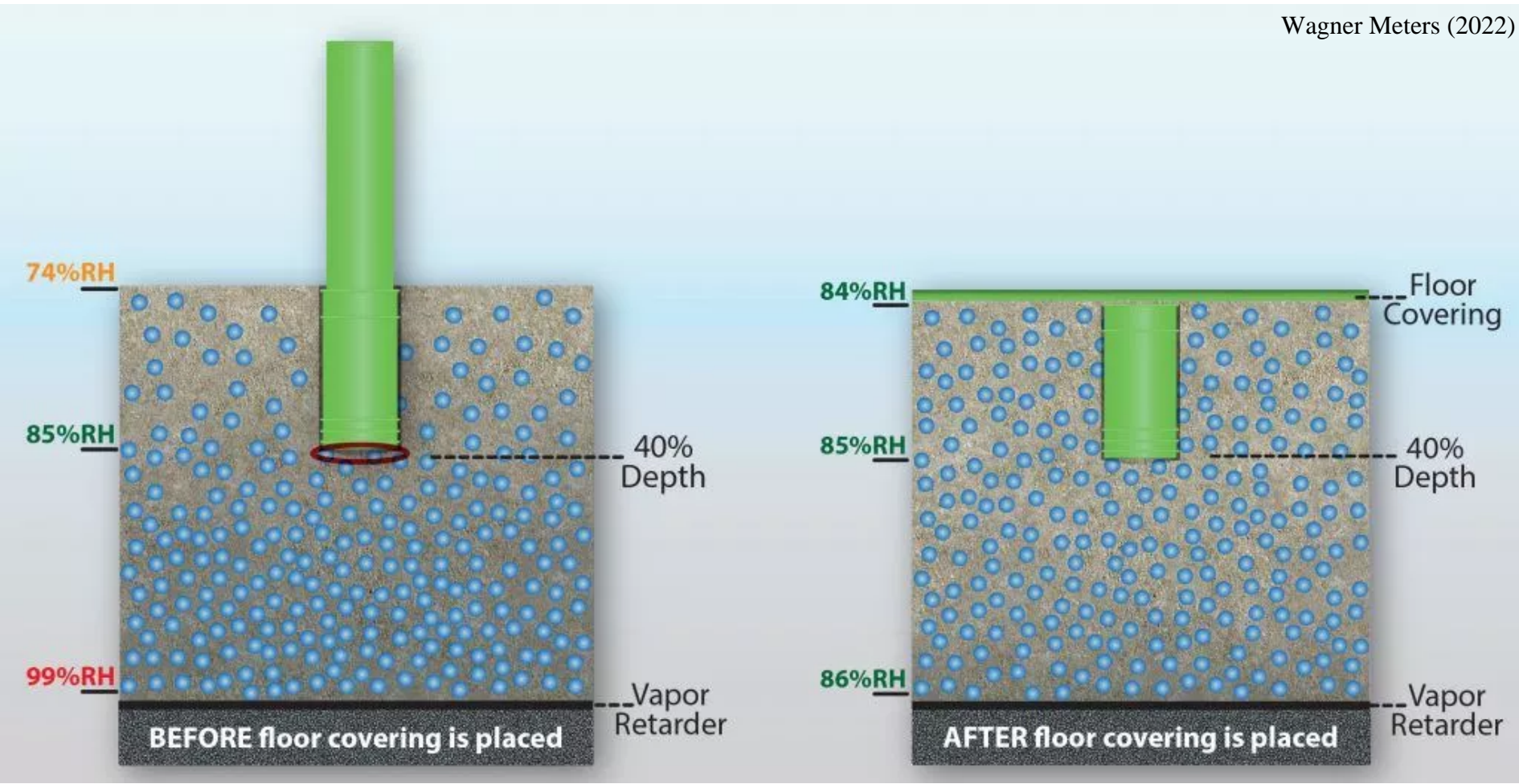
Hard Surface Moisture Remedies:



Epoxy Based Moisture Barrier

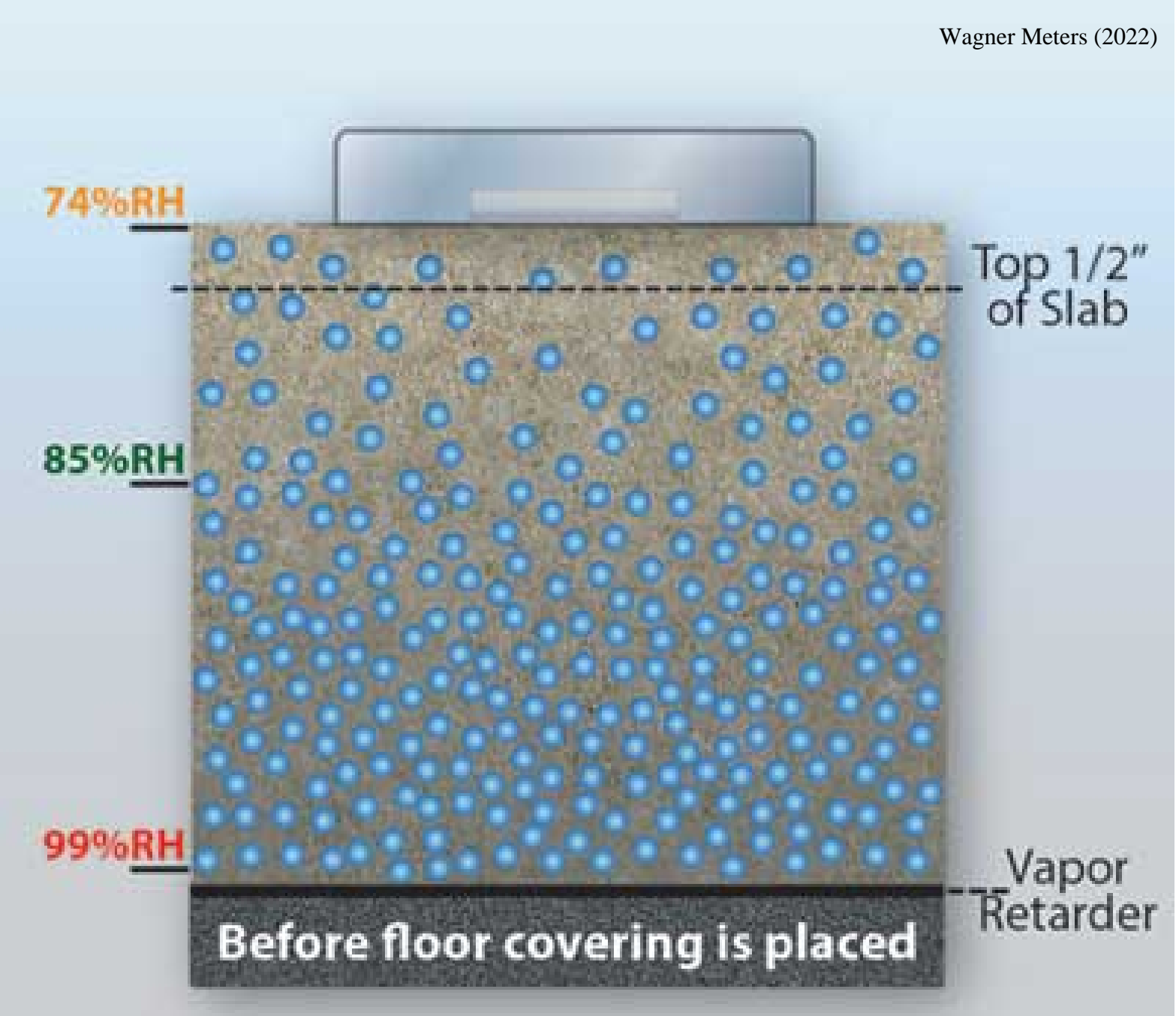


Roll Moisture Barrier



Wagner Meters RH Test:

Wagner Meters RH Test showing at a depth of 40%, the expected RH moisture content is to be around 85% RH. Tests reading over 85 Rh are typically subject to a moisture remedy. The cost of a moisture remedy is greatly dependent on the flooring system installed on the project.



Calcium Chloride Test:

Calcium Chloride tests consist of using a testing disk containing calcium chloride. The disk is placed and sealed on the concrete surface and allowed to sit. After the test has sat the weight of the the test will be compared to prior placement giving data on surface moisture content.



Plastic Sheet Test:

The plastic sheet test involves placing an 18" x 18" piece of plastic sheeting over a concrete sub floor. The Plastic Sheet is sealed to allow water to condense on the surface of the plastic. This testing method only gives an idea as to how much moisture is present as the data is hard to quantify.

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