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TOO MUCH OF A GOOD THING CAN BE BAD

By Bob Cusumano

Most painting contractors understand the importance of proper surface preparation; it's often the most important and most expensive part of the paint job. However, sometimes this knowledge is forgotten. It is common to use novice apprentices and helpers for this important task, sometimes without supervision. The case discussed in this column is a situation where the surface preparation was subcontracted to another party. Unfortunately, several mistakes were made.

Golfer's Heaven is a resort retirement community in south Florida. One of the single family homeowners' associations at the complex decided to have their driveways and entrance walks at all seventy two homes re-coated. Bids were solicited and the job was let to a painting contractor who specified pressure cleaning and the application of two coats of acrylic-based concrete stain.

The job was initiated, but after a few driveways were completed and returned to service, some chipping and peeling of the stain was evident. When the delaminated paint chips were examined, it was noted that both new and previously applied coating was present, indicating that the new stain was well adhered to the existing coating system, but that the old coating had questionable adhesion. The contractor and the association representative carefully examined all of the driveways and decided that at forty-two homes, the condition of the existing coating warranted a more aggressive preparation than the specified pressure cleaning at 2500 PSI.

The painting contractor contacted a specialty contractor that performs water blasting at elevated pressures using a "disk" type machine. The existing coating was completely removed from two driveways and they were subsequently stained two coats as a sample. Although the surface profile was slightly rough, the association representative approved the sample, and a change order was granted for the additional cost of surface preparation.

Work then proceeded on water-blasting and staining the forty additional driveways as well as pressure cleaning and staining the remaining thirty driveways and all entry walks.

As the job was nearing completion, the association representative told the painting contractor that he thought that the water blasted driveways were "too rough". The painting contractor said that "they are fine" and wanted to continue the work. A committee of home owners met and decided to stop the work and our consulting company was engaged.

The sample driveways were visually examined for overall appearance and surface profile. Photos #1 and #2 show this area. The maximum difference in surface profile was measured using a pit gauge and was determined to be 40 mils.



Photo 1



Photo 2

The forty additional driveways that were water-blasted were compared to the samples to determine their acceptability. Of these, it was our opinion that thirty-three were unacceptable due to substantial areas where the surface profile was deep and varied greatly. At many locations the concrete peaks created by the extreme profile were broken by contact with the tires when cars were driven on them. The maximum surface profile on these driveways varied from 180 mils to 470 mils. Twenty-nine have a profile difference of at least 240 mils, six times that of the sample driveways. An additional five water-blasted driveways had most areas resembling the sample driveways but have isolated areas where the surface profile is unacceptable. Photos #3, #4, #5 and #6 show some of the deep, variable profile created. It was our opinion that only two of the forty driveways were acceptable and resembled the sample driveways.



Photo 3



Photo 4



Photo 5



Photo 6

Because the painting contractor applied stain to all of the water-blasted driveways, the repair of these surfaces is more complex. Due to the fact that the driveway surfaces in question are on grade without a vapor barrier beneath them, a “breathable” repair system had to be employed.

It was determined that the following steps must be taken to repair the condition of the driveways at Golfer’s Heaven:

1. The recently applied stain must be removed from all driveways considered defective. The most effective method of accomplishing this is wet abrasive blasting.

2. The next step is to apply a high strength cementitious surfacer to the water-blasted areas. This surfacer must be applied in a manner to fill the extreme porosity and texture created by the water-blasting. The surface profile created must resemble that of adjacent areas.

3. Finally, the resurfaced areas must be coated with two coats of concrete stain.

Because the re-surfacing operation is very labor intensive (photo #7), the total cost of repair exceeded the original cost of the water-blasting and staining.



Photo 7

This was an expensive episode for the painting contractor, but one that could have been avoided. The lessons that should be learned include:

1. Don’t assume that just because no one has complained that the work is acceptable.
2. Carefully examine the work performed by your subcontractor’s because you have the ultimate responsibility for its acceptability.
3. Seek approval of your completed work as it proceeds rather than wait till it is all finished.

The painting contractor should have recognized that the profile created by the water blasting was excessive for the thin concrete stain finishing system that he was to apply. The repair would have been much less costly had the need for a concrete resurfacer been recognized prior to staining. Because it was not, the cost of the original staining and the cost of sandblasting to remove that stain prior to re-coating were extra, costly steps in the repair process.