

Continual Stone Preservation Reflects Perpetual Beauty

Lessons Learned From Visiting the Vatican

by Gino Merendino

The Vatican, home to one of the largest collection of art treasures, is also one of the most beautiful places in the world and inspiring to all who visit. It is maintained by preservationists who are just as impressive.

Recently, I had the opportunity to meet with some of the scientists and conservators who in one way or another help preserve the marbles and granites of the Vatican.

Observing firsthand an energetic and dedicated group of scientists scrape soil from a statue of Augustus Caesar was definitely a procedure worth watching. They also repaired and restored stones and mosaic floors with great enthusiasm. The commitment they showed me was tremendous. When I came home from my trip, I felt charged and inspired. After reviewing my notes, I realized there are many correlations between the preservation of the Vatican and of a mausoleum. I hope the lessons I learned will help cemetery managers preserve their mausoleum.

First Lesson: Keep a Restoration Inventory

The Vatican has worked with the Medici group, and outsourced stone contracting company, for over 150 years. As I met with Mrs. Medici, the great grand-daughter of founder, Paulo Medici, we began reviewing the Vatican floors that were excavated from ancient Rome and are over 2000 years old. Restoration requires maintaining inventory of ancient stone in order to replace some of the stones. The firm catalogs these stones and has maintained them for decades.

The lesson here is that today's sculpting scrap will be tomorrow's restoration material, so keep extras—extra shutters, extra floor tiles, extra pieces from your sculptures. The minimal space needed to store it now will prove invaluable during restoration, especially if you need a pigment to repair a statue or a crypt front. Marbles change, quarries close, but the inventory will best protect the future for restoration and repair.

Second Lesson: Record Keeping

Part of the first lesson references cataloging. One of the catalogs that I reviewed was a 750-page book detailing each project's history. This hardbound "encyclopedia" was a collaboration of Medici and the Vatican. The purpose is to document each project's history in order to remove the guesswork for future repairs or restoration.

Keeping good records is an integral part of mausoleum conservation. It does not have to be a 750-page anthology of work and processes; it could be just a simple log. What is important is that you have a reference so you know how to remove stains, repair deterioration and locate suppliers.

Third Lesson: Protect Floors from Moisture

The marble detail and the mosaic artwork on the Vatican floors are truly incredible. Apparently the stones derived from ancient Egyptian pillars and rare Greek marbles that were used in private mausoleums and palaces. Floor preservation is extremely important, otherwise they will deteriorate. The reason floors deteriorate is that the stones in the floor wear out from moisture that is wicked from the ground, much like morning dew in a field.

The Merendino team has always believed in protecting the floors, and it was reinforced on this visit. A few tips that we have continued to emphasize with cemetery managers include:

1) Make sure that the correct moisture barrier is installed before your flooring and walls are installed;

2) Consider a breathable floor maintenance system like crystallization. It will shine a floor by crystallizing a small sacrificial layer of your marble floors. It does not discolor like routine waxing and it allows the floor to breathe, preventing flaking.

Fourth Lesson: Do Your Homework

Another portion of my visit included reviewing the complex process of statue restoration where the stone and the substances that are on the surface, such as dirt and biological growth, are analyzed using scientific methodologies, such as x-ray and SEM (scanning electron microscope) before a decision is made to remove it.

One of the Vatican's scientist, Professor Santamaria, informed me that the process is so complex because not all the substances are dirt and undesirable. The "bad dirt" is removed; the "good dirt" (called patina) adds character and interest. He elaborated by discussing how some natural aging of the surface of the stone is considered a patina, with some placed by the sculptor and some placed by prior restoration teams, and it all tells a story that has archeological significance. Dirt or patina that is unstable (acidic, alkaline) will cause further deterioration of the marble or stone. The meticulous reviewing process provides three critical lessons:

1) When choosing statuary art, or even marble or granite for your building or crypt shutters, keep in mind that it will look weathered or patined. You should expect some level of weathering even if you have a routine maintenance process. Do your homework.

2) The least harmful method of dirt removal should be employed. If necessary, sometimes a sacrificial layer of artificial skin can be put on a stone to preserve it (so that soil adheres to the artificial skin and not on the stone).

3) Remove acidic dirt as soon as possible because if moisture forms this can activate the acids in the dirt and cause etching (buildings sweat during temperature changes).

Fifth Lesson: Choose Your Method of Cleaning

While I was in the stone restoration laboratory, several statues (made from Carrara marble which is similar to that used on Michelangelo's sculptures) were being restored. The process here is as selective as removing impurities as it is meticulous in identifying them. Several cleaning methods are used which can be broken down into chemical, mechanical or a combination of both. The chemical process is typically used when grime needs to be released from the stone. Stone cleaners loosen surface soil and are wiped clean. Mechanical methods include using abrasives, air lasers, nebulizers and pressurized water.

What this means is that you should use the least aggressive method of maintenance to achieve the desired look. Neutral-pH cleaners and a steady maintenance process will not allow the soil to adhere or damage the beauty and elegance of your natural stone. Pressure washing is not necessary every time you dust your mausoleum.

The statues, floors and stones of the Vatican looked magnificent; the enthusiasm and dedication of the scientists and conservationists reflected not only in their work, but in those around them as well.

The Vatican is a place for worship and reflection, and so is the mausoleum. To comfort the grieving heart, mausoleums were created with the intention of helping family, friends and loved ones find peace in their sorrow. Take an active role in the mausoleum's preservation and you will be doing your part to both protect your cemetery's investment and inspire those who visit your cemetery.