

## CASE STUDY

# DIAMOND DEVIL™ IMPROVES SAFETY, SAVES MONEY, AND ENHANCES APPEARANCE OF TERRAZZO FLOORS AT NORTH ROCKLAND CENTRAL SCHOOL DISTRICT

## ORGANIZATION OVERVIEW

ORGANIZATION: North Rockland Central School District

LOCATION: Garnerville, New York

STUDENTS: 7,900+

TEACHERS: 541

STAFF: 596

URL: [www.northrockland.org](http://www.northrockland.org)

## GOALS

- Relieve safety concerns involving slips and falls due to stripping and waxing terrazzo floors
- Eliminate use of toxic chemicals
- Reduce labor and supply costs by eliminating annual stripping and waxing projects
- Further lower budget constraints by reducing amount spent on ancillary costs for wax, mops, and other items
- Save time through proactive maintenance of terrazzo floors as part of a routine maintenance program

## SOLUTION

- Diamond Devil™ Red Shine Tool
- Part of the Diamond Devil™ Terrazzo Restoration and Polishing System
- System includes a 3+1 array of polishing tools to Grind, Hone, Polish, and Shine
- Chemical-free – use water only
- Works on most existing floor equipment
- For cementitious terrazzo only

## OUTCOMES

- Significantly reduced risk of slips and falls at North Rockland schools during floor maintenance, stripping and waxing projects
- Immediate cost-savings on labor, overtime, floor stripper and wax by incorporating terrazzo cleaning and polishing into routine maintenance activities
- Replaced previous floor stripper and wax process with a greener, water-based, more cost-effective option
- Achieved superior image gloss and clarity on all terrazzo floors



## NORTH ROCKLAND SCHOOLS RESTORE TERRAZZO FLOORS IN AN EFFICIENT AND MOST IMPORTANTLY SAFE WAY BY LEVERAGING THE DIAMOND DEVIL™ RED SHINE TOOL THAT'S PART OF THE TERRAZZO RESTORATION AND POLISHING SYSTEM

Cementitious terrazzo is a great choice for schools and other commercial buildings due to its durability and sustainability over time. So, it's not surprising that the eight schools that make up the North Rockland Central School District have cementitious terrazzo flooring, that dates back to the 1960s. The material itself is so common for several reasons, with its reputation for low maintenance being chief among them. Terrazzo is inherently durable and, when you also consider its natural aesthetic appeal, it represents a perfect option for heavily trafficked schools and other commercial buildings as well.

However, it's not without potential disadvantages – as Director of Facilities for North Rockland Schools Paul Rooney learned.



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One of the major issues with terrazzo flooring is that most schools still employ a traditional “strip and wax” maintenance regimen. This is completed on an annual basis, typically during the summer as part of the preparations needed to get facilities ready for students, teachers, and other staff to return in the fall. Interestingly, terrazzo flooring itself isn’t meant to be stripped and waxed in this fashion. Floor stripper is an inherently harsh chemical by design and, over time, can permanently damage the surface of the terrazzo. Floors are extremely slippery during the strip and wax process which causes staff accidents of slipping and falling.

Equally problematic is the waxing process that most schools use, including those in the North Rockland District. Waxing cementitious terrazzo flooring leaves a residue on the top of the floor itself, making it significantly more slippery by reducing the terrazzo’s natural slip resistance. This was a particular concern for Rooney.

“My custodial staff was getting hurt in the summertime stripping the terrazzo floors so that they could re-wax them,” he said. “It can be very slippery, and they were getting injured by slips and falls.”

Not only did this create a dangerous situation for staff members across the North Rockland District – it was a costly one, too. It’s estimated that the average costs for stripping and waxing cementitious terrazzo flooring can range between \$0.40 and \$0.70 per square foot. Keep in mind that this is just for the chemicals – it doesn’t include the labor costs associated to complete the work (which often requires overtime), or the costs associated with staff injuries.

In total, project cost estimates range between \$0.75 to \$1.50 per square foot, per the Klein Company, Mar. 2023, ‘How Much Will My Commercial Floors Strip and Wax Job Cost in Detroit?’ <https://www.klein-cleaning.com/blog/much-will-strip-floor-wax-job-cost/>

All of this was creating a perfect storm for North Rockland and Rooney in the worst possible way. It was a time-consuming, expensive, and dangerous situation that was especially frustrating when you consider that it’s not actually recommended to strip and wax cementitious terrazzo in the first place.

This was all simply a part of “the way things had been done” up to that point. Thankfully, Rooney committed to finding a viable alternative to help maintain the 320,000 square feet of hallways and corridors under his care.

## THE QUEST TO MAKE TERRAZZO FLOORS SHINE

Immediately, Rooney and his team began their search for other products and systems that didn’t require stripping or waxing maintenance. The problem was that some alternative systems that still involved wax, did little to solve the safety and budget-related challenges they were facing. The wax still leaves behind a residue and, over time, that wax gets scratched and scuffed – something that the team experienced first-hand. While Rooney and his team did find an alternative system that didn’t require stripping or waxing, their terrazzo floors were left looking dull and missing the shine they once had.

Still, importantly, safety remained the number one priority and it seemed like all involved would have to accept the fact that reducing the risk of injuries would be the trade-off for that vibrant shine they desired. After a discussion with a vendor the district had worked with in the past, it was suggested that North Rockland try the Diamond Devil™ Red Shine Tool, part of the Diamond Devil™ Concrete and Terrazzo Restoration and Polishing System.

One reason the Diamond Devil™ Red Shine Tool is so unique is that it doesn’t use any harsh or otherwise dangerous chemicals. With only water, it’s designed to restore and maintain the natural gloss and clarity for which terrazzo is known. It’s also easy to use. The Red Shine Tool is simply placed directly onto an existing floor machine and used as part of a daily/weekly maintenance program. With regular use, the Red Shine Tool continues to hone the terrazzo improving the image gloss and clarity without the need for special projects, floor stripper or wax. And, once the tool blades are worn, a new tool can be ordered—no more replacing individual blades manually. The Diamond Devil™ Red Shine Tool is designed to be used on most standard floor machines.

### ***Big Savings, Improved Safety: Incorporating the Diamond Devil™ Red Shine Tool as a Part of North Rockland’s Daily Maintenance Routine***

Another quality that makes the Diamond Devil™ Red Shine Tool unique when compared to other options has to do with its frequency of use. Again, traditional “stripping and waxing” methods, are so time-consuming and labor intensive, that most schools complete them once a year during the summer. The Red Shine Tool, on the other hand, is designed to be used as part of the normal daily/weekly maintenance. Once the custodial team in the district began to use the Red Shine Tool regularly, they saw results immediately and were pleased.



**“THE FLOOR HAD A BETTER SHINE AND LESS MAINTENANCE THROUGHOUT THE YEAR!”**

- **Paul Rooney**, Director of Facilities,  
North Rockland Schools



“As you use it more and more, the floor gets that much shinier,” said Anthony Peluso, daytime custodian at North Rockland.

“Using the Diamond Devil™ Red Shine Tool is a cost-saving because you don’t need cleaners. You can use strictly water. It’s just a one-time cost for you. Strictly water with the blades and you’ve got a shiny floor!”

Rooney echoed those sentiments, that the floors “had a better shine and less maintenance throughout the year” when compared to the stripping and waxing method they had used

historically, as well as other products they tried during their search for a new solution.

It didn’t take long for virtually everyone, across all departments, to agree that switching to the Diamond Devil™ Red Shine Tool was a worthwhile decision. Immediately the district saved roughly two-thirds of their budget spent on chemicals and labor needed to maintain and polish their terrazzo floors. Those funds were reallocated to other areas of the school.

SQUARE FEET	SQ. FT. ESTIMATE FOR STRIP & WAX	TOTAL FOR STRIP & WAX	YEAR 1*		SUBSEQUENT YEARS**	
			ESTIMATE FOR DIAMOND DEVIL™ SYSTEM	INITIAL YEAR SAVINGS	ESTIMATE FOR RED SHINE TOOL	YEARS 2+ SAVINGS
20,000	\$0.75 - \$1.50	\$15,000 - \$30,000	\$3,700	\$11,300 - \$26,300	\$1,500	\$13,500 - \$28,500
50,000	\$0.75 - \$1.50	\$37,500 - \$75,000	\$3,700	\$33,800 - \$71,300	\$1,500	\$36,000 - \$73,500
100,000	\$0.75 - \$1.50	\$75,000 - \$150,000	\$3,700	\$71,300 - \$146,300	\$1,500	\$73,500 - \$148,500

\*Initial Diamond Devil™ investment: purchase 3 tools (hone, polish, shine). Cost based on 20" tools for single disc floor machine

\*\*Subsequent years may require purchase of one replacement Red Shine Tool at approx. \$1,500

NOTE: Estimates based on general industry knowledge

**OUTSHINING THE COMPETITION IN MORE WAYS THAN ONE**

Soon, the staff at North Rockland became increasingly enthusiastic about all that the Diamond Devil™ Red Shine Tool had to offer. In addition to the obvious benefits of creating a safer environment through the elimination of slips, trips, and falls, there were other unexpected advantages when compared to competing products.

“The biggest challenge before I found the Diamond Devil™ Red Shine Tool was finding the time to strip the floor and wax it,” said Peluso. “With the Red Shine Tool, it takes all that out of the equation. We can do this on our normal shift. We can do it at night. We don’t have to wait for the holiday to do it. We can do it at any time. That alone is huge.”

That point is particularly critical, as many competing options were not only complicated to assemble (which often led to issues regarding installation) but were noisy and cumbersome as well. The Red Shine Tool, on the other hand, is quiet to the point where it can be effectively operated during the regular night shift. Staff at the school do not have to take time and resources away from other projects to complete this work all at once during the summer or over the holiday break, for example.

## RESULTS THAT SPEAK FOR THEMSELVES

The process of maintaining the terrazzo floors is far more straightforward and efficient. Instead of staging an enormous summer project, the floors can be cared for little-by-little daily. One of the biggest advantages is that there are no more concerns about slips, trips, falls, and other dangerous scenarios – excellent news for a school district with a staff that’s already spread thin due to other labor issues and budget constraints.

In the end, maintaining polished terrazzo flooring doesn’t have to be nearly as difficult, dangerous, time consuming or as expensive as most maintenance teams contend – a lesson that Rooney and his staff learned personally. Once the floor itself has been converted from a wax polish, most environments can use the Diamond Devil™ Red Shine Tool once or even twice per week to maintain its vibrant look and shine. Not even the salt that’s tracked through the halls during the cold winter months can dull the sheen on terrazzo floors with the right tool.

Peluso said that he was continually excited about how the floors throughout the school looked after using the Diamond Devil™ Red Shine Tool. He was “very happy to see there is no residue left behind.” He said, “I don’t have to go back and rinse or clean it.”

When asked to rate the Diamond Devil™ Red Shine Tool on a scale of one to five, Rooney was clear: it had more than earned its five-star rating. “It was the best product that I found out there on the market,” he said. “It saves us time and energy with the manpower here, and it’s also a safer process.”

In the end, Rooney enthusiastically agreed, saying that the Red Shine Tool was “a greener process than stripping and waxing” that was also “much safer” at the same time. He finished his thoughts by saying that he would “recommend this tool and process to any school district, any university, anybody that has terrazzo floors.”



**Schedule a free on-site demo of the Diamond Devil™ Concrete & Terrazzo Restoration & Polishing System: 800-321-7044. Learn more by visiting the [website](#)**