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## Navy Automotive Service and Repair Facility

- Category:** Concrete Restoration
- Customer:** Navy Automotive Service and Repair Facility
- Project:** Renovate concrete service and repair facility to increase chemical resistance, safety, reflectivity, professionalism, and long term durability
- Rhino Products:** **All Concrete Areas** - Rhino™ 1501 Primer (Epoxy)  
**Service & Repair Facility** - FastFloor™ (Polyaspartic)  
**Broadcast** – 1/16" and 1/4" Chip Aggregate

### Problem

The 2,402 sq. ft. concrete service and repair facility at the Navy EOD ESU-2 Automotive Service and Repair facility in Norfolk, Virginia required considerable restoration to give them increased chemical resistance, safety, reflectivity, a professional look, and long term durability and have them return to service in approximately 36 hours. The project demanded Greenstar Coatings work around major obstacles including, vehicle lifts, benches and numerous posts.

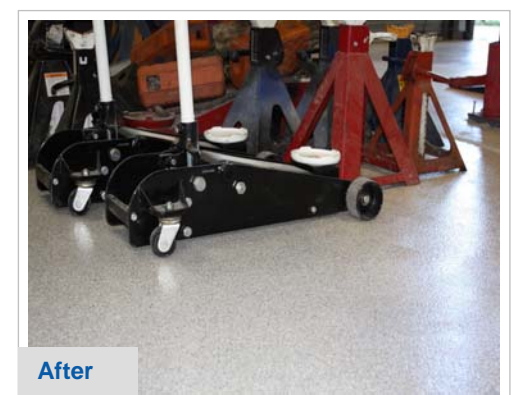
The existing flooring epoxy on both the main service floor and stairs were worn and needed replacing. The floors and stairs were scratched, cracked and peeling up in some areas. There were also areas where it was slippery from oil as the oil was soaking into the concrete. Continued attempts to paint or epoxy over existing substrate would result in continued flooring failures. In addition to the failing substrate, inadequate lighting on the stairs added an additional safety hazard that the facility complained of due to occasional power failures.

The stairs and main facility was a commercial grade concrete slab with two layers (approx 8 mil) of old epoxy flooring. The facility substrate was full of exposed re-bar, holes and cracks that needed to be repaired and was exposed to numerous years of extremely high vehicular traffic with any and all fluid and chemical exposure you can imagine in a commercial garage.

### Solution

Greenstar Coatings was selected for this concrete floor renovations project based on the company's capabilities, experience and track record with this type of flooring system.

Greenstar Coatings chose Rhino™ 1501 (Epoxy) as the all-around primer and Rhino FastFloor™ (Polyaspartic) as the service floor and stair coating. The main service floor was broadcast with 1/16" White Granite Chip aggregate into the FastFloor™ for slip prevention and 1/4" Blue Glow in the Dark chip was chosen for the stair treads to define the exits for safety purposes.



## Site Preparation

The stairs and substrate in the service facility was a commercial grade concrete slab coated with two layers (approximately 8 mils) of an unknown epoxy flooring that was in disrepair. The surface was diamond ground using a variety of floor grinders and hand grinders to level the surface while removing the two layers of epoxy. This also provided a porous substrate for the new product to adhere to. Diamond grinding, clean-up and tape preparation took one, 9 hour day and 5 hours the following day.

## Coating – Service Floor and Stairs

Greenstar Coatings chose Rhino™ 1501 primer (Epoxy), applied at 4 mils, to cover the entire 2,402 sq. ft. project because it bonds exceptionally well to existing substrates. The 4 mil epoxy primer coat was applied in 4 hours. Rhino FastFloor™ (Polyaspartic) was selected as the floor coating because it offers 24hr. return-to-service, excellent UV resistance, a high-gloss finish, and easily accepts broadcast aggregate. It also provides excellent chemical resistance against Skydrol, motor oils, and hazardous transmission fluids. The initial polyaspartic base coat was applied at 6-7 mils in conjunction with the 1/16" and 1/4" chip aggregate broadcast system to increase slip resistance while creating a professional appearance.

The final top layer of Rhino FastFloor™ (Polyaspartic) was applied after the scraping and cleaning of chip. The total thickness of polyaspartic and chip system was 15 mil. The entire application took 3 days with a crew of six. All of these enhancements gave the entire application a very professional, reflective, non-skid surface while creating an environment that allowed personnel to safely walk, stage tools, and repair the vehicles under OSHA and military QA/Safety regulations.

## Results

Greenstar Coatings efficiently restored and coated the Navy EOD ESU-2 Automotive Service and Repair Facility in Norfolk, VA giving them the chemical resistance, safety, reflectivity, a professional look, and the long term durability they demanded.

### Rhino Products Used By Greenstar Coatings:

- **All Concrete Areas** - Rhino™ 1501 (Epoxy) as the all-purpose epoxy primer that bonds well with all substrates
- **Automotive Service Floor** - FastFloor™ (Polyaspartic) with 1/16" with White Granite Chip aggregate for reflectivity, safety, gloss, and chemical resistance
- **Automotive Service Stairs** - FastFloor™ (Polyaspartic) with 1/4" with Blue Glow in the Dark Chip aggregate for reflectivity, safety, gloss, and chemical resistance

Industrial applications are highly specialized and specific consultation and training may be required to perform such applications. Rhino Linings® does not provide confined space training and/or expertise in this area. Product MSDS sheets and specific chemical properties should be evaluated before undertaking any application.



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