



*Pallet Tag Program  
Laboratory Report*

**US Stone Industries, LLC**  
Manhattan, KS



*Project No. 2003-04 PTP*

***Prepared For:***



**PROSOCO**

***Prepared By:***

*J. Lucas Comadoll*

J. Lucas Comadoll  
Project Testing Technician  
AMT Laboratories

March 2020



# LABORATORY REPORT

AMT Laboratories • 3741 Greenway Circle • Lawrence, Kansas 66046 • (888) 376-3600

**FOR:** Peggy S. Kothmann, US Stone Industries, LLC  
**cc:** Mike Dickey  
Clay Witt, PROSOCO, Inc.  
Jake Boyer, PROSOCO, Inc.  
Al Morris, PROSOCO, Inc.

**SUBJECT:** US Stone Industries, LLC  
Manhattan, KS  
Pallet Tag Evaluation

**DATE:** March 30, 2020  
**PROJECT:** 2003-04 PTP

## SAMPLES SUBMITTED:

Sample	Name	Color	Size
(5) Limestone	"Bottom Ledge Cottonwood Honed"	Buff	12" x 12" x 0.875"
(5) Limestone	"Top Ledge Cottonwood Honed"	Buff	12" x 12" x 1"
(5) Limestone	"Silverdale Honed"	Buff	12" x 12" x 1"
(5) Limestone	"Onaga Honed"	Buff and Orange	12" x 12" x 1"
(5) Limestone	"Prairie Shell Honed"	Buff with Orange Spots	12" x 12" x 1"
(5) Limestone	"Flint Hills Gray Honed"	Light Gray	12" x 12" x 0.875"
(5) Limestone	"Plaza Gray Honed"	Dark Gray	12" x 12" x 1"
(10) Limestone	"Cottonwood Split"	Buff	4" x 4" x 1"
(10) Limestone	"Silverdale Split"	Buff	4" x 4" x 1"
(10) Limestone	"Onaga Split"	Buff	4" x 4" x 1"
(10) Limestone	"Prairie Shell Split"	Buff with Orange Spots	4" x 4" x 1"
(10) Limestone	"Flint Hills Mottled Split"	Light Gray	4" x 4" x 1"
(10) Limestone	"Flint Hills Gray Split"	Light Gray	4" x 4" x 1"
(10) Limestone	"Plaza Gray Split"	Gray	4" x 4" x 1"

**SUBMITTED BY:** Peggy S. Kothmann  
US Stone Industries, LLC  
301 S. 4<sup>th</sup> St., Suite 110  
Manhattan, KS 66502



**PURPOSE OF TEST:**

- To determine the most appropriate PROSOCO, Inc. new construction cleaner(s) for the submitted samples.



---

**PRODUCTS EVALUATED:**

<b>New Construction Cleaning</b>	<b>Dilution:</b>
Sure Klean® Vana Trol®	1:6; 1:8
Sure Klean® Light Duty Concrete Cleaner	1:2; 1:3
Enviro Klean® Safety Klean	1:2; 1:3

---

## TEST METHODS: New Construction Cleaning

Sure Klean® Vana Trol®, Sure Klean® Light Duty Concrete Cleaner, and Enviro Klean® Safety Klean were evaluated to determine the optimal concentration of cleaner which leaves the external surface looking most like the uncleaned surface of the submitted samples.

**Surface Finish Removal** is the visual examination of the sample comparing the surface finish of the uncleaned surface to the surface finish cleaned with selected product(s) at given dilutions.

**Substrate Deterioration** is the visual examination of the sample comparing the uncleaned surface to surfaces cleaned with selected product(s) at given dilutions looking for any potential erosion/digestion of the sample.

**Color Change** is the visual examination comparing the color of the uncleaned surface to the color of surfaces cleaned with selected products at given dilutions.

**Staining** is the visual examination for changes that are the result of a chemical reaction that leaves a staining precipitate.

The following is the scale used for reporting results of both categories:

- 0 – **No change** compared to uncleaned surface
- 1 – **Slight change** compared to uncleaned surface
- 2 – **Moderate change** compared to uncleaned surface
- 3 – **Significant change** compared to uncleaned surface

### Cleaning Procedure:

1. Pre-wet the surface and apply diluted cleaning solution according to PROSOCO, Inc. Product Data Sheet.
2. Allow for an appropriate dwell time:
  - Vana Trol® .....5 minutes
  - Light Duty Concrete Cleaner.....5 minutes
  - Safety Klean.....5 minutes
3. Reapply cleaning solution; do not let cleaner dry into sample.
4. Rinse thoroughly with plenty of fresh water.\*
5. Allow the sample to dry for at least 18 hours and visually examine.
6. Compare the uncleaned surfaces to the cleaned surfaces for the best match.

**\*Rinsing Equipment** – Masonry washing equipment generating approximately 700-800 psi with a water flow rate of 8 gallons per minute delivered through a 45 degree fan spray tip was used for rinsing.

**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning**

Scale used for reporting results of both categories:
0 – <b>No change</b> compared to uncleaned surface
1 – <b>Slight change</b> compared to uncleaned surface
2 – <b>Moderate change</b> compared to uncleaned surface
3 – <b>Significant change</b> compared to uncleaned surface

Name: "Bottom Ledge Cottonwood Honed" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Bottom Ledge Cottonwood Honed" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Top Ledge Cottonwood Honed" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	1*	0	1	0
Vana Trol®	1:8	1*	0	1	0
Light Duty Concrete Cleaner	1:2	1*	0	1*	0
Light Duty Concrete Cleaner	1:3	1*	0	1*	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**\*NOTE: Very slight change compared to uncleaned surface.**

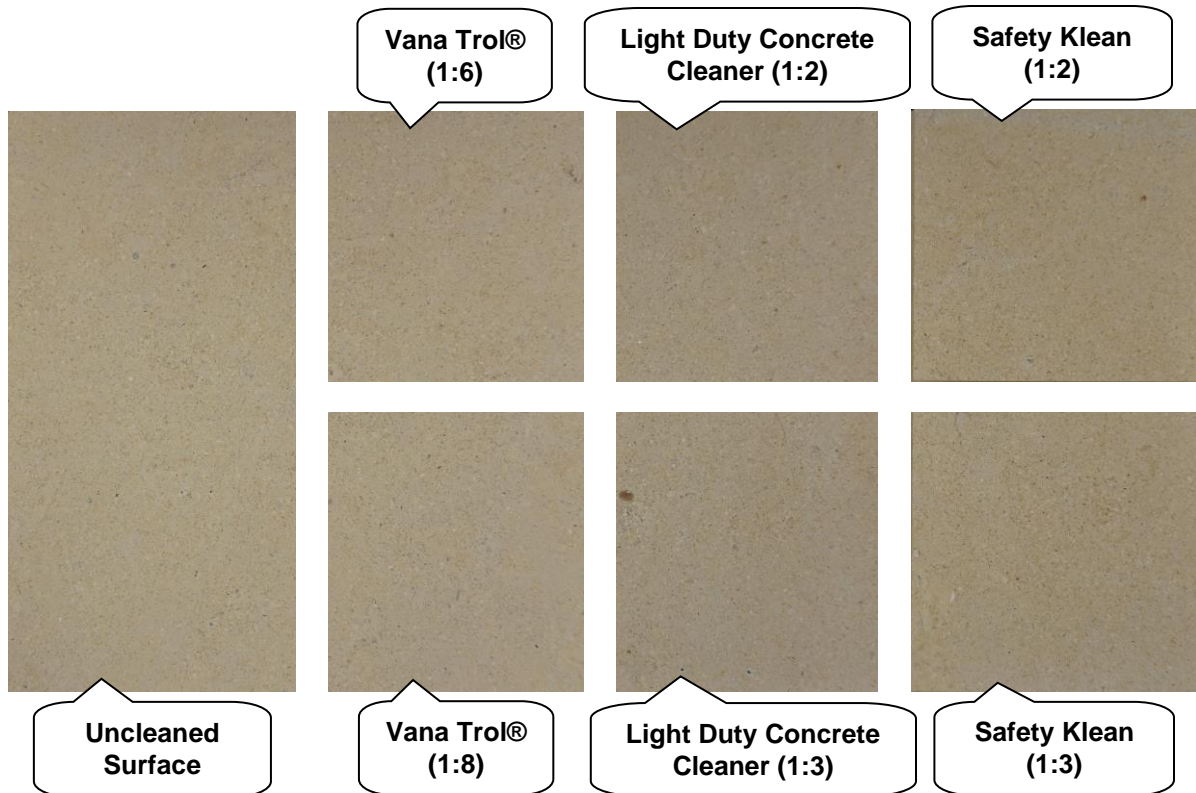
**"Top Ledge Cottonwood Honed" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Silverdale Honed" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Silverdale Honed" Limestone After Cleaning**





**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Onaga Honed" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

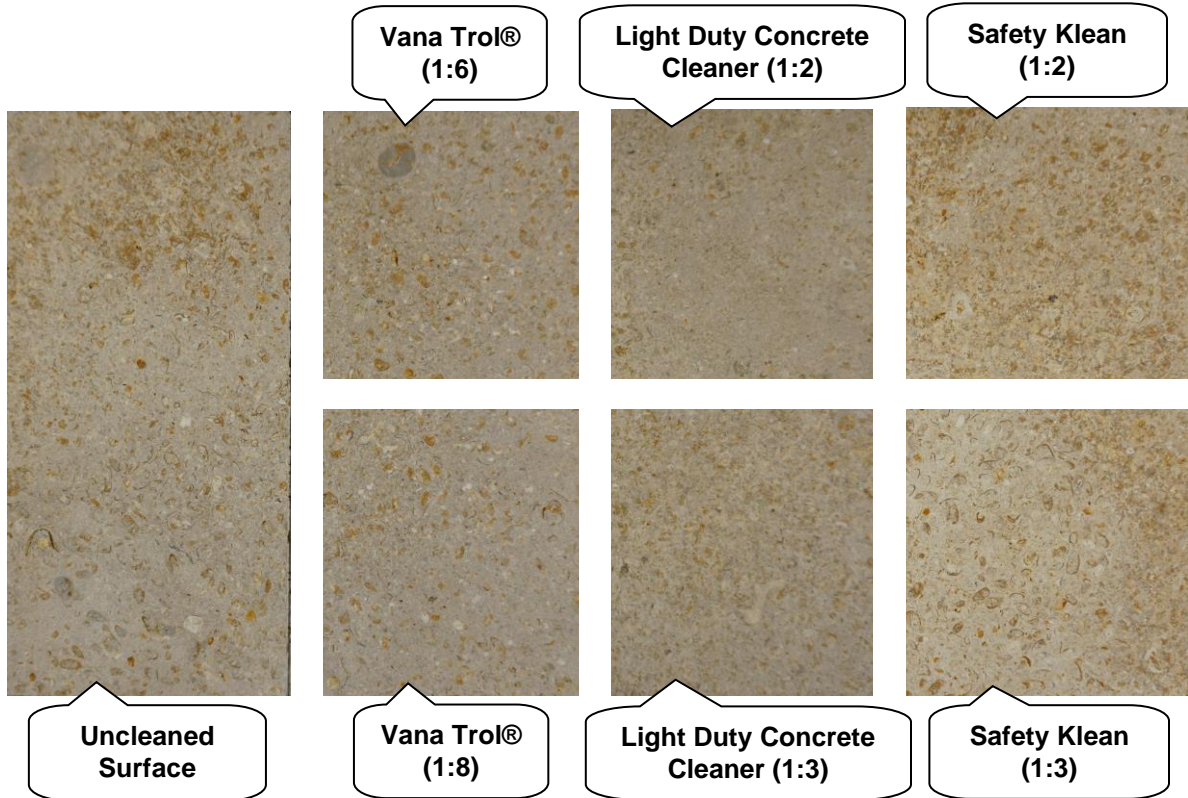
**"Onaga Honed" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Prairie Shell Honed" Limestone</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Prairie Shell Honed" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Flint Hills Gray Honed" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	1	0	0	0
Vana Trol®	1:8	1	0	0	0
Light Duty Concrete Cleaner	1:2	1	0	0	0
Light Duty Concrete Cleaner	1:3	1	0	0	0
Safety Klean	1:2	1	0	0	0
Safety Klean	1:3	1	0	0	0

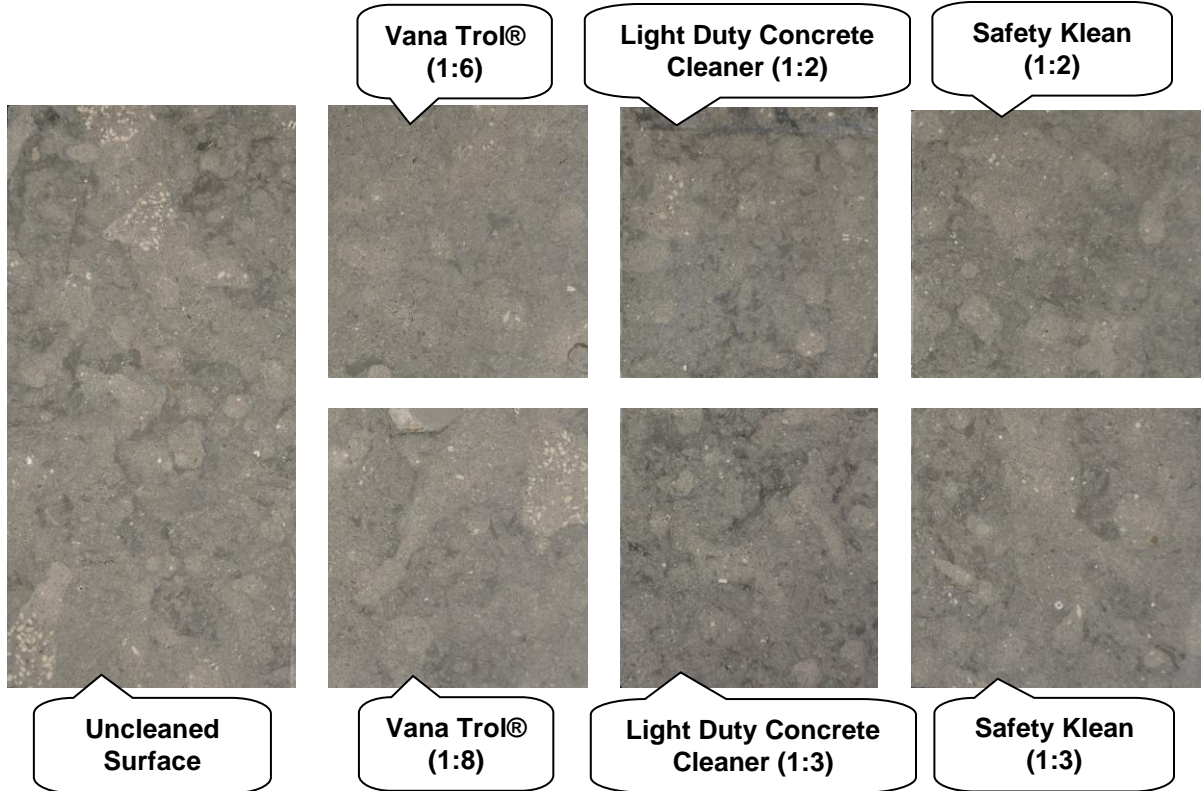
**"Flint Hills Gray Honed" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Plaza Gray Honed" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Plaza Gray Honed" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Cottonwood Split" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

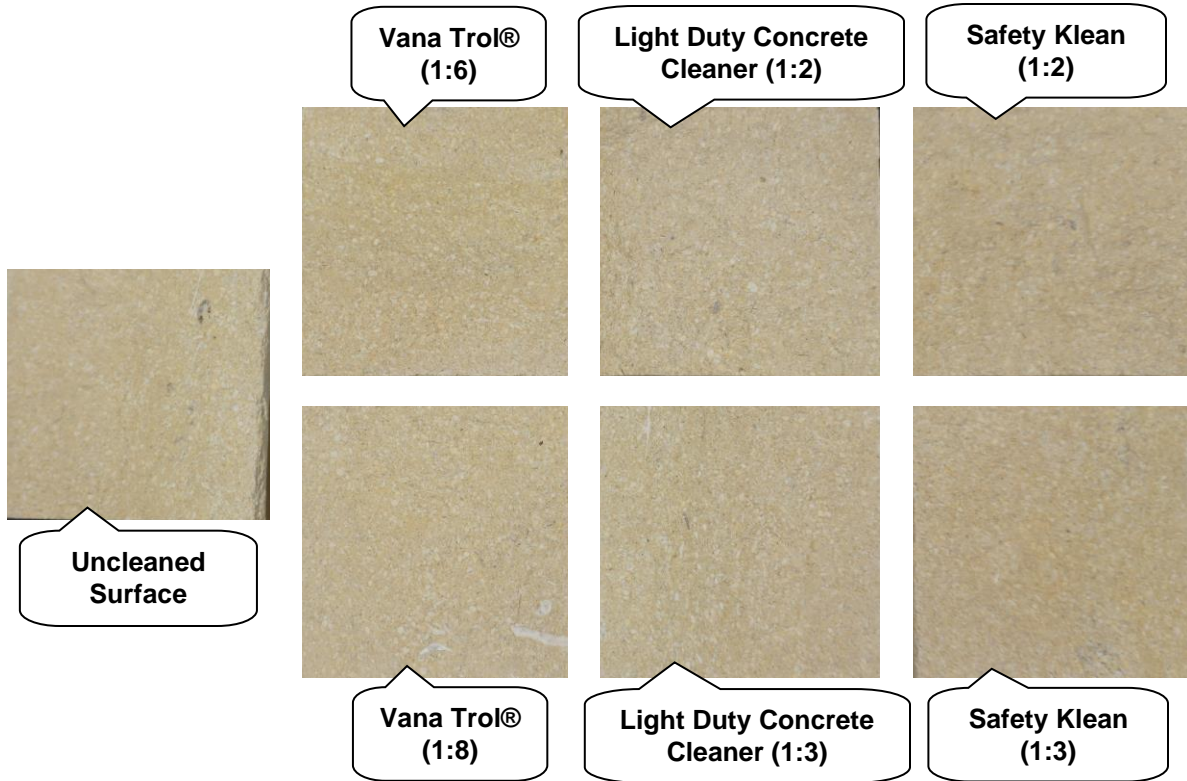
**"Cottonwood Split" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Silverdale Split" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Silverdale Split" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Onaga Split" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	1	1	0	0
Vana Trol®	1:8	1	1	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

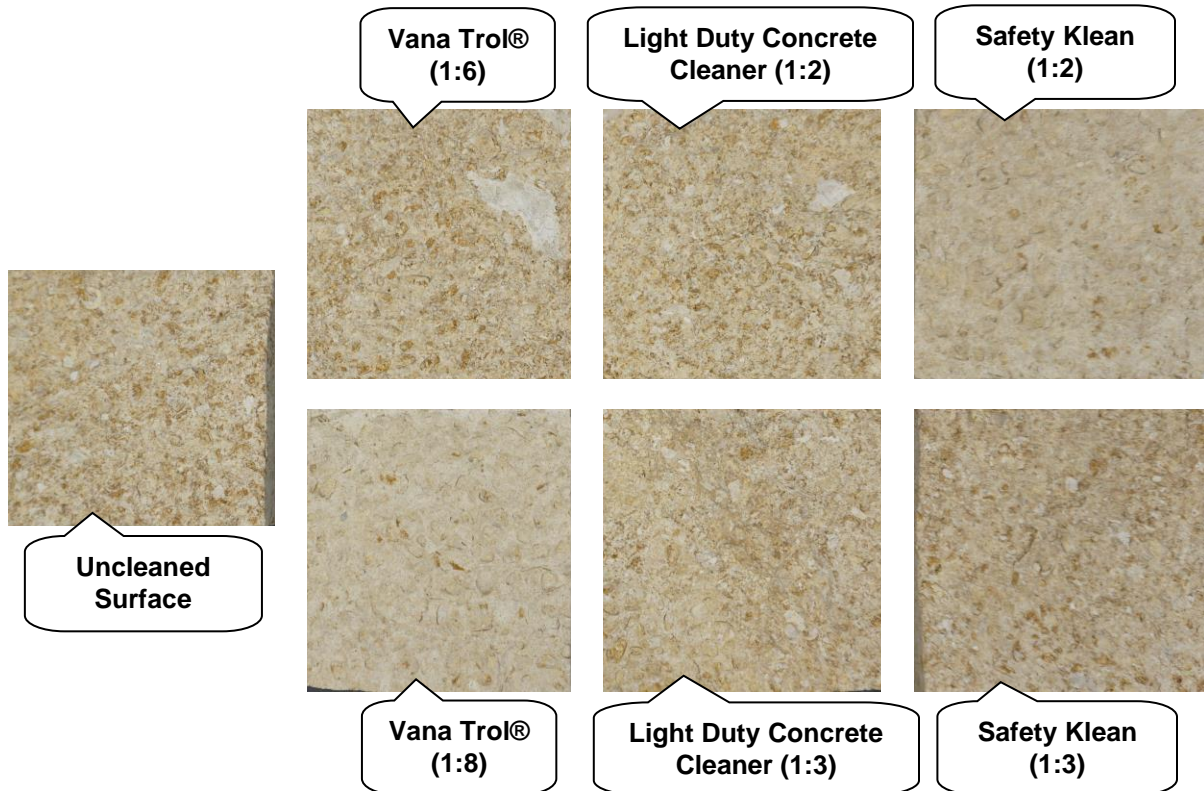
**"Onaga Split" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Prairie Shell Split" Limestone</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Prairie Shell Split" Limestone After Cleaning**





**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Flint Hills Mottled Split" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

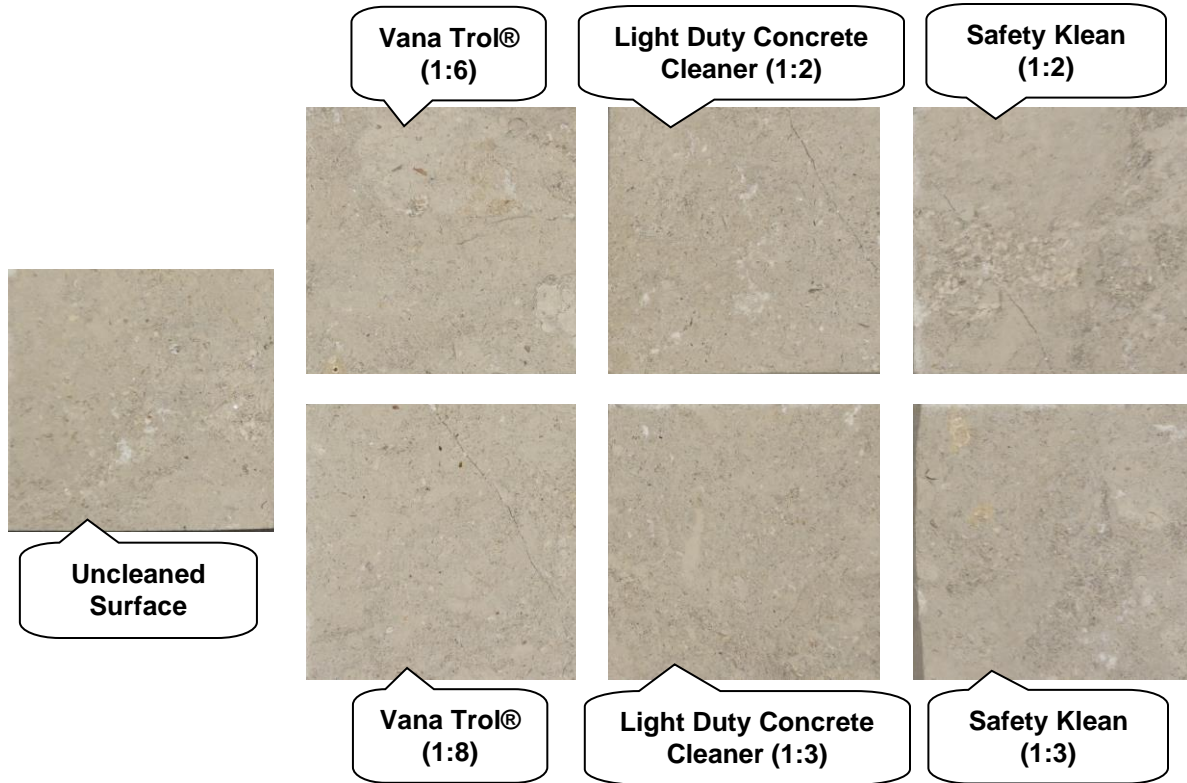
**"Flint Hills Mottled Split" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

Name: "Flint Hills Gray Split" Limestone					
Product	Dilution	Surface Finish Removal	Substrate Deterioration	Color Change	Staining
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Flint Hills Gray Split" Limestone After Cleaning**



**TEST RESULTS AND PHOTOGRAPHS: New Construction Cleaning (cont.)**

<b>Name: "Plaza Gray Split" Limestone</b>					
<b>Product</b>	<b>Dilution</b>	<b>Surface Finish Removal</b>	<b>Substrate Deterioration</b>	<b>Color Change</b>	<b>Staining</b>
Vana Trol®	1:6	0	0	0	0
Vana Trol®	1:8	0	0	0	0
Light Duty Concrete Cleaner	1:2	0	0	0	0
Light Duty Concrete Cleaner	1:3	0	0	0	0
Safety Klean	1:2	0	0	0	0
Safety Klean	1:3	0	0	0	0

**"Plaza Gray Split" Limestone After Cleaning**



## **CONCLUSIONS – New Construction Cleaning**

In the majority of cleaning tests conducted, neither Sure Klean® Vana Trol® nor Sure Klean® Light Duty Concrete Cleaner nor Enviro Klean® Safety Klean caused any change to the appearance of the submitted samples.

When choosing the most appropriate product for the desired result, use Sure Klean® Vana Trol® for new masonry surfaces that are subject to vanadium, manganese, and other metallic stains. Additionally, Sure Klean® Vana Trol® is designed for use with colored mortar. Use Sure Klean® Light Duty Concrete Cleaner when removing common construction stains, efflorescence, and metallic staining. Use Enviro Klean® Safety Klean as an effective, safe alternative to acidic cleaning compounds.

It is recommended that the selected cleaners always be used in the lowest possible concentration.

**RECOMMENDATIONS: New Construction Cleaning**

Recommendations for cleaning for each sample submitted by US Stone Industries, Manhattan, KS are provided in the chart below. Recommendations are based on the cleaner and dilution that provided the best match to the uncleaned surface. **To facilitate easier removal of excess mortar and construction dirt while minimizing any potential surface alterations to the decorative finish, clean within 7 days of construction.**

Sample	New Construction Cleaning
"Bottom Ledge Cottonwood Honed"	Sure Klean® Vana Trol® (1:6) or (1:8) OR Sure Klean® Light Duty Concrete Cleaner (1:2) or (1:3) OR Enviro Klean® Safety Klean (1:2) or (1:3)
"Top Ledge Cottonwood Honed"	
"Silverdale Honed"	
"Onaga Honed"	
"Prairie Shell Honed"	
"Flint Hills Gray Honed"	
"Plaza Gray Honed"	
"Cottonwood Split"	
"Silverdale Split"	
"Onaga Split"	
"Prairie Shell Split"	
"Flint Hills Mottled Split"	
"Flint Hills Gray Split"	
"Plaza Gray Split"	

The most appropriate cleaner and dilution should be determined on the specific jobsite and will be dependent primarily on the nature and severity of soiling present at that location.

Apply all products in accordance with the manufacturer's recommendation provided on container labels and product data sheets. On-site testing should be conducted to determine the most appropriate cleaning product and procedures for a particular project. See product literature for additional application and product information.



J. Lucas Comadoll  
 Project Testing Technician

**ALL SAMPLES SUPPLIED FOR THE ABOVE EVALUATION WILL BE DISPOSED OF THIRTY (30) DAYS AFTER THE ISSUE DATE OF THIS REPORT. IF SAMPLES ARE TO BE RETAINED FOR ADDITIONAL TESTING OR RETURNED TO THE SENDER, PROVIDE WRITTEN INSTRUCTIONS TO THE LABORATORY WITHIN THIRTY (30) DAYS OF THE ISSUE DATE OF THIS REPORT.**

Recommendations made within this report are based on laboratory test applications and observations. Final determination of the suitability of a product and/or procedure should be made only after thorough job testing on actual surfaces.