

Pavement Technology, Inc.

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Westlake, Ohio 44145

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March 28, 2018

Mr. Robert McCaughan
Public Works Director
City of Pompano Beach
1201 NE 5th Avenue
Pompano Beach, FL 33060

Dear Mr. McCaughan:

We are pleased to offer our proposal to apply Reclamite® Asphalt Rejuvenator to the streets listed below.

Pinehurst

Street	From	To	Square Yards	Amount
Pine Dr E	SE 6th Ave	SE 11th Ave	4,947	\$3,858.66
SE 1st St E	Dead End	SE 12th Avd	2,373	\$1,850.94
SE 1st St E	SE 13th Ave	SE 17th Ave	3,011	\$2,348.58
SE 1st St E	SE 11th Ave	Federal Hwy	6,989	\$5,451.42
SE 3rd St	SE 10th Ave	SW 11th Ave	669	\$521.82
SE 6th Ave S	Atlantic Blvd	CDS	2,131	\$1,662.18
SE 9th Avenue S	SE 1st St	Pine Dr	2,198	\$1,714.44
SE 10th Ave S	Atlantic Blvd	Pine Dr	3,173	\$2,474.94
SE 11th Ave S	Atlantic Blvd	SE 6th Ter	4,218	\$3,290.04
SE 12th Ave S	Atlantic Blvd	SE 3rd St	1,918	\$1,496.04
SE 13th Ave S	Atlantic Blvd	SE 3rd St	1,920	\$1,497.60
SE 15th Ave S	Atlantic Blvd	SE 3rd St	1,927	\$1,503.06
SE 17th Ave S	Atlantic Blvd	SE 3rd St	1,898	\$1,480.44
SE 18th Ave S	Atlantic Blvd	SE 3rd St	1,838	\$1,433.64
SE 19th Ave S	Atlantic Blvd	SE 3rd St	1,880	\$1,466.40
SE 20th Ave	Atlantic Blvd	SE 3rd St	1,960	\$1,528.80
Total			43,050	\$33,579.00

Pompano Business Park

Street	From	To	Square Yards	Amount
SW 1st Ct E	Dead End	Andrews Ave	2,022	\$1,577.16
SW 2nd St E	SW 14th Ave	SW 12th Ave	1,640	\$1,279.20
SW 2nd Pl E	SW 12th Ave	Dead End	1,187	\$925.86
SW 2nd Pl E	Dead End	SW 14th Ave	829	\$646.62
SW 2nd Ct E	Dead End	SW 14th Ave	1,273	\$992.94
SW 4th St E	Dead End	Dead End	1,413	\$1,102.14
SW 14th Ave S	SW 2nd St	SW 3rd St	1,958	\$1,527.24
SW 13th Ave S	SW 2nd St	SW 3rd St	1,942	\$1,514.76
SW 15th Ave S	SW 3rd St	Dead End	1,511	\$1,178.58
SW 14th Ave S	SW 3rd St	SW 4th St	1,587	\$1,237.86
SW 13th Ave S	SW 3rd St	SW 4th St	1,593	\$1,242.54
SW 5th Ct E	SW 16th Ter	SW 13th Ter	2,347	\$1,830.66
SW 6th Ct E	SW 16th Ter	SW 13th Ter	2,347	\$1,830.66
SW 6th St E	SW 13th Ter	NW 9th Ter	2,644	\$2,062.32
SW 9th Ter S	SW 6th St	Dead End	1,558	\$1,215.24
SW 9th Ter N	SW 6th St	SW 12th Ave	1,551	\$1,209.78
SW 16th Ter S	SW 5th Ct	SW 6th Ct	1,511	\$1,178.58
SW 13th Ter S	SW 5th Ct	SW 6th Ct	1,436	\$1,120.08
Total			30,349	\$23,672.22

Hunters Manor Park

Street	From	To	Square Yards	Amount
NW 12th Ave S	MLK Blvd	Dead End	1,929	\$1,504.62
NW 12th Ave N	MLK Blvd	NW 6th St	1,384	\$1,079.52
NW 5th St E	NW 12th Ave	Dead End	582	\$453.96
NW 5th Ct E	NW 12th Ave	Dead End	558	\$435.24
NW 6th St E	MLK Blvd	Dead End	2,009	\$1,567.02
NW 8th St E	NW 12th Ave	Dead End	447	\$348.66
NW 12th Ave N	NW 6th St	Dead End	2,782	\$2,169.96
NW 12th Ter N	NW 6th St	Dead End	2,731	\$2,130.18
NW 18th Ave N	Atlantic Blvd	MLK Blvd	7,318	\$5,708.04
NW 19th Ave N	NW 3rd St	NW 9th St	4,947	\$3,858.66
NW 17th Ter N	NW 7th St	MLK Blvd	1,504	\$1,173.12
NW 19th Ter N	NW 4th Ct	NW 6th St	867	\$676.26
NW 20th Ave N	NW 4th Ct	NW 6th St	867	\$676.26
NW 20th Ter S	NW 4th St	Dead End	636	\$496.08
NW 20th Ave S	NW 4th St	Dead End	636	\$496.08

NW 3rd St W	NW 18th Ave	NW 19th Ave	1,456	\$1,135.68
NW 4th St W	NW 18th Ave	NW 21st Ave	2,978	\$2,322.84
NW 4th Ct E	NW 20th Ave	NW 19th Ter	364	\$283.92
NW 6th St W	NW 18th Ave	NW 21st Ave	2,900	\$2,262.00
NW 7th St W	NW 17th Ter	NW 21st Ave	3,420	\$2,667.60
NW 8th St E	NW 21st Ave	Dead End	2,178	\$1,698.84
NW 9th St W	NW 18th Ave	Dead End	2,880	\$2,246.40
Total			45,373	\$35,390.94

Palm Aire

Street	From	To	Square Yards	Amount
SW 36th Ave N	McNab Rd	Palm Aire Dr W	20,280	\$15,818.40

Cypress Lake/Cypress Lake Estates

Street	From	To	Square Yards	Amount
SE 9th Ave	McNab Rd N	East & West CDS	9,844	\$7,678.32
SE 13th Ct	SE 9th Ave W	CDS	1,098	\$856.44
SE 12th St	SE 9th Ave E	SE 9th Ter	687	\$535.86
SE 9th Ter	SE 12th St N	CDS	4,322	\$3,371.16
SE 10th Ct	SE 9th Ave E	CDS	6,210	\$4,843.80
SE 10th St	SE 9th Ave E	CDS	1,353	\$1,055.34
SE 10th Way	SE 10th St E	CDS	798	\$622.44
Total			24,312	\$18,963.36

Palm Aire/Cypress Bend

Street	From	To	Square Yards	Amount
Course Dr E	Powerline Rd	S Cypress Bend Dr	2,127	\$1,659.06
Cypress Bend Dr S	S Course Dr	N Cypress Bend Dr	7,088	\$5,528.64
N Cypress Bend Dr E	S Cypress Bend Dr	S Cypress Bend Dr	3,896	\$3,038.88
Cypress Bend Dr N	N Cypress Bend Dr	N Cypress Bend Dr	5,820	\$4,539.60
N Cypress Bend Dr W	S Cypress Bend Dr	S Cypress Bend Dr	971	\$757.38
Total			19,902	\$15,523.56

Grand Total **183,266** **\$142,947.48**

Our unit price of \$0.78 per square yard is inclusive of traffic control, notification of residents and all labor and material necessary to complete the work. This proposal piggybacks our City Margate contract.

Actual field measurements will determine final quantities.

Thank you for your interest in pavement preservation with Reclamite[®].

Sincerely,

A handwritten signature in blue ink, appearing to read "Chris Evers".

Chris Evers

cevers@pavetechinc.com

RECLAMITE

Asphalt pavement rejuvenating agent



WHAT IS RECLAMITE® PRESERVATIVE SEAL?

Reclamite® is an emulsion of specific petroleum oils and resins designed to penetrate dry and weathered asphalt pavements. Reclamite® penetrates seeking the asphalt in the pavement in preference to the aggregate. The result is that Reclamite® combines with the asphalt so as to restore its original desirable properties. In some cases the asphalt is improved over the original because of the superior quality of the added components.

Reclamite® stops pavement deterioration where it begins, at the top. The light components or fractions in the asphalt binder referred to as maltenes oxidize from the binder causing asphalt to become dry and brittle. The resulting loss of aggregate, cracking and moisture intrusion furthers pavement deterioration that will eventually without

intervention, lead to total pavement failure.

Pavements exhibiting early signs of aging (hairline cracking, raveling, segregation, pitting, dryness) as well as new asphalt pavement are excellent candidates for Reclamite® Preservative Seal treatment. Reclamite® increases penetration values and reduces viscosity values. Reclamite® seals out moisture, restores the asphaltene/maltene balance. Reclamite® having natural solvency ability because of its naphthenic base, fluxes with the asphalt restoring the aggregate/asphalt bond.

Reclamite® Preservative Seal will preserve an asphalt pavement at one-half to one-third the cost of other conventional treatments.



TRICOR REFINING, LLC
PRODUCERS of GOLDEN BEAR PRESERVATION PRODUCTS



Appearance of fine cracks
Asphalt has become brittle



Fine aggregate material loss

HOW RECLAMITE® PRESERVATIVE SEAL EXTENDS PAVEMENT LIFE.

Reclamite® has been used successfully for over 40 years. Whether you are dealing with asphalt pavement in the hot, dry southwest United States, humid southern and southeast states or the damp and colder climates experienced in northern climates and Canada, application results are similar; improved durability of the asphalt, (durability being the interdependence between composition and aging), re-balancing the chemistry of the oxidized pavement, ability to delay the aging process and reverse premature aging.

Reclamite® Preservative Seal provides a simple, one step method for sealing and waterproofing the asphalt. It is effective for extending the life of newly constructed pavement.

Reclamite® delays the aging process by replenishing the maltenes and re-constituting the binder. Aged asphalt can be restored to a new and highly durable mix, virtually equal to or better than the original consistency.

Asphalt consists of five basic components: asphaltenes, polar compounds, first acidaffins, second acidaffins and saturated hydrocarbons. The later four are referred to as maltene fractions. These components in asphalt are subject to weathering and oxidation.

Components of Asphalt



Reclamite® is an emulsion manufactured from a naphthenic crude stock. Naphthenic base is wax free, has a natural low pour point and has excellent natural solvency ability allowing it to penetrate and absorb.

Reclamite® is spray applied. The emulsion is diluted 2:1 (product to water) or 1:1 with water. Application rates are measured in square yards or meters and vary according to pavement absorption and application needs. Normal treatment can provide 5-7 years additional service life. A second application can be considered at that time.



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Phone 661.393.7110 ext. 107
www.reclamite.com

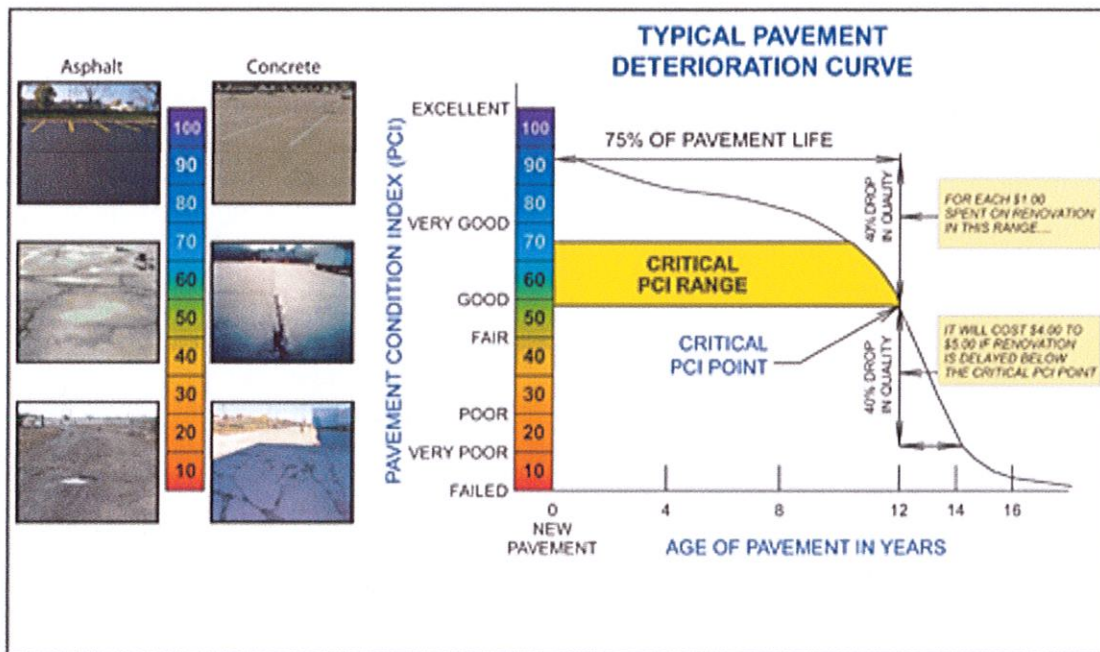
Your Reclamite Representative:



The Virtues of Pavement Preservation

Our roadway network serves as the circulatory system for our society. The economy relies on roads to function efficiently. However our infrastructure is in a state of disrepair. The American Society of Civil Engineers rates our Florida roadways a “C” overall. Many local agencies have chosen to defer transportation related spending due to the poor economy. This choice while understandable is leading to substantial deterioration in our road system and increased costs associated with rehabilitating the system later on.

The good news is it doesn't have to end badly for local agencies. Public Works Professionals are beginning to adopt new strategies which have a greater ability to move the needle even in these tough economic times. What they've discovered is that by preserving pavements while they are in good condition they can lower the life cycle cost of a mile of roadway significantly.



What this illustration shows is that the first 40% drop in the quality of the pavement happens over 75% of the life of the roadway. The next 40% drop occurs in only 12% of the life of the roadway. So for every \$1 spent at the top of the curve it requires \$4 to as much as \$10 at the bottom of the curve. Public perception is the opposite. Citizens complain about roads that have lower PCI's (condition rating for the pavement) and wonder why Public Works is doing something to the “perfectly good” roads. This is

what influences policy as well and it is why we see the “**Worst First**” strategy employed so frequently.

In reality, preventative maintenance is settled science in many other facets of life. Absorbing these examples will help to put preservation in perspective. Every lane mile of milling and resurfacing costs the equivalent of a 2012 ZO6 Corvette.



At just a hair over \$75,000 imagine the logic behind not changing the oil in your new Corvette until the paint starts to fade and peel. That’s how we treat our roads even though on **Day One** oxidation begins to cause damage unseen by the naked eye.

Consequently when it comes to our roadways, by spending money at the top of the curve we are able to touch more miles, more frequently thereby lowering the “cost of ownership”. **Maltene-based asphalt rejuvenators** put back the light oils that allow the binder in hot mix asphalt to remain pliable and resist fatigue. For the cost of a single mile of hot mix asphalt, agencies can treat 6-8 miles of existing HMA roadways adding approximately 5 years to the life of those roadways. It’s the equivalent of getting a 20% discount on every ton of Hot Mix Asphalt the City lays!



Reclamite® Application



Reclamite® absorbs quickly



Road is sanded shortly after



Then swept the next day

The use of processes such as Reclamite® Asphalt Rejuvenator provides agencies a low cost treatment alternative with an excellent return on investment. Additionally, the use of “top of the curve” strategies such as Reclamite® creates less GHG emissions making for a more sustainable and environmentally friendly roadway network. Not bad for something that costs 3 quarters per square yard!

ASPHALT REJUVENATING AGENT

I. Scope:

This work shall consist of furnishing all labor, material, and equipment necessary to perform all operations for the application of an asphalt rejuvenating agent to asphalt concrete surface courses (asphalt pavement). The rejuvenation of surface courses (asphalt pavement) shall be by spray application of a maltene based cationic rejuvenating agent composed of petroleum oils and resins emulsified with water. All work shall be in accordance with the specifications, the applicable drawings, and subject to the terms and conditions of this contract.

II. Material Specifications:

The asphalt rejuvenating agent shall be an emulsion composed of a petroleum resin oil base uniformly emulsified with water. Each bidder must submit with his bid a certified statement from the asphalt rejuvenator manufacturer showing that the asphalt rejuvenating emulsion conforms to the required physical and chemical requirements.

SPECIFICATIONS

Tests	Test Method		Requirements	
	ASTM	AASHTO	Min.	Max.
Tests on Emulsion:				
Viscosity @ 25°C, SFS	D-244	T-59	15	40
Residue, % W ¹	D-244(Mod.)	T-59(Mod)	60	65
Miscibility Test ²	D-244(Mod.)	T-59(Mod)	No Coagulation	
Sieve Test, %W ³	D-244(Mod.)	T-59(Mod)	-	0.1
Particle Charge Test	D-244	T-59	Positive	
Percent Light Transmittance ⁴	GB	GB	-	30
Tests on Residue from Distillation:				
Flash Point, COC, °C	D-92	T-48	196	-
Viscosity @ 60°C, cSt	D-445	-	100	200
Asphaltenes, %w	D-2006-70	-	-	1.00
Maltene Dist. Ratio	D-2006-70	-	0.3	0.6
$\frac{PC + A_1^5}{S + A_2}$				
PC/S Ratio ⁵	D-2006-70	-	0.5	-
Saturated Hydrocarbons, S ⁵	D-2006-70	-	21	28

¹ ASTM D-244 Modified Evaporation Test for percent of residue is made by heating 50 gram sample to 149 C (300 F) until foaming ceases, then cool immediately and calculate results.

² Test procedure identical with ASTM D-244-60 except that .02 Normal Calcium Chloride solution shall be used in place of distilled water.

³ Test procedure identical with ASTM D-244 except that distilled water shall be used in place of two percent sodium oleate solution.

⁴ Test procedure is attached.

⁵ Chemical composition by ASTM Method D-2006-70:

PC = Polar Compounds, A₁ = First Acidaffins

A₂ = Second Acidaffins, S = Saturated Hydrocarbons