



CAIT

Center for Advanced Infrastructure & Transportation
Rutgers, The State University of New Jersey

QUARTERLY PROGRESS REPORT

Project Title:	Self Cleaning and De-Polluting Geopolymer Coatings for Graffiti Prevention and Removal-Demo Project		
RFP NUMBER: 200X-XXX	NJDOT RESEARCH PROJECT MANAGER: Robert Sasor		
TASK ORDER NUMBER: TO 211 / RU Acct 4-28959	PRINCIPAL INVESTIGATOR: Dr. P. Balaguru		
Project Starting Date: 10/15/2007 Original Project Ending Date: 10/15/2008 Modified Completion Date: 10/15/09	Period Covered: 3 rd Quarter 2009		

Task #	Task	% of Total	Fixed Budget	% of Task this quarter	Cost this quarter	% of Task to date	Total cost to date
1	Literatuare Search	5.12%	\$ 5,123	0.00%	\$ -	100.00%	\$ 5,123
2	Self Cleaning & Depolluting Study	28.00%	\$ 28,000	5.00%	\$ 1,400	95.00%	\$ 26,600
3	Coating Color & Field Application -A-	6.00%	\$ 6,000	4.00%	\$ 240	99.00%	\$ 5,940
4	Coating Color and Field Application -B-	6.00%	\$ 6,000	0.00%	\$ -	100.00%	\$ 6,000
5	Graffiti Removal Method	24.50%	\$ 24,500	20.00%	\$ 4,900	80.00%	\$ 19,600
6	Geopolymer Cost Estimate	1.50%	\$ 1,500	0.00%	\$ -	0.00%	\$ -
7	Compare Geopolymer to Other Coatings	3.50%	\$ 3,500	10.00%	\$ 350	10.00%	\$ 350
8	Develop Generic Specification	3.00%	\$ 3,000	5.00%	\$ 150	10.00%	\$ 300
9	Field Demostratation of Graffiti Removal	5.00%	\$ 5,000	0.00%	\$ -	60.00%	\$ 3,000
10	Monitor Coating Long Term	6.00%	\$ 6,000	20.00%	\$ 1,200	70.00%	\$ 4,200
11	Final Re[prt and Quarterly Reporting	8.88%	\$ 8,877	50.00%	\$ 4,439	50.00%	\$ 4,439
12	Training and Implementation Plan	2.50%	\$ 2,500	0.00%	\$ -	20.00%	\$ 500
13		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
14		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
15		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
16		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
17		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
18		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
19		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
20		0.00%	\$ -	0.00%	\$ -	0.00%	\$ -
	TOTAL	100.00%	\$ 100,000		\$ 12,679		\$ 76,052

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Project Objectives:

The primary objective of the proposed study is to demonstrate the effectiveness of the inorganic coating for graffiti prevention and removal. Since other formulations are available in the market, the study will have the following components.

- (1) Field demonstration of the inorganic coating for graffiti prevention and removal, and
- (2) Cost comparison of this coating with other available products, for both initial application and maintenance, based on the cost for graffiti removal.

In addition, laboratory and field studies will be conducted to document properties pertaining to:

- (3) Self cleaning, and
- (4) De-pollution.

Project Abstract:

A site has been selected for the demonstration application and testing of graffiti removal. It is a retaining wall located on a ramp from Route 1 North to the Woodbridge Mall. The wall is about 200 feet long and has an average height of about 7 feet and is easily accessible. Since the surface to be coated faces a parking lot, traffic control is not needed and sufficient space is available for both application of the coating and tests for graffiti removal. The wall and four concrete boards will be coated with the inorganic coating. Two concrete boards will be brought to the laboratory for evaluating the most efficient graffiti removal techniques and for studying self cleaning and de-pollution properties. The other two concrete boards will be kept outside the lab to test for outdoor exposure.

In addition, a specification will be prepared for using the geopolymer coating as an anti-graffiti, self cleaning and de-polluting surface treatment. A performance and cost comparison study between this coating material and other commercially available products will also be conducted.

1. Progress this quarter by task:

More laboratory and field tests were conducted for self cleaning and more laboratory tests were conducted for de-pollution studies. We are also monitoring the coatings. Method for removal for graffiti were evaluated.

2. Proposed activities for next quarter by task:

Continue the evaluation of graffiti removal techniques
Continue de-pollution study.

3. List of deliverables provided in this quarter by task (product date):

None

4. Progress on Implementation and Training Activities:

None



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5. Problems/Proposed Solutions:

Year 1 Budget	\$58,123
Years 1 & 2 Cumulative Budget	\$100,000
Years 1, 2 & 3 Cumulative Budget	
Total Project Budget	\$100,000
Modified Contract Amount:	
Total Project Expenditure to date	\$ 76,052
% of Total Project Budget Expended	76.05%

NJDOT Research Project Manager Concurrence: _____ Date: _____