

CALIFORNIA STATE SCIENCE FAIR 2005 PROJECT SUMMARY

Name(s)	Project Number
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	JIIZJ
Project Title	
Rubberized Asphalt: A Sound Idea	
Abstract	
Objectives/Goals Abstract	
The research and testing attached attempts to explain the effectiveness o	f rubberized asphalt as a traffic
Methods/Materials	
Decibel measurements were made by setting up two stations, one Station	n 'A' located on the rubberized
asphalt (RAC)portion of the roadway and the other Station'B' on the star	ndard asphalt concrete
(AC)portion. Reading were simultaneously taken each minute for a twer day at each station. These measurements were taken on three seperate d	lays Also a traffic count was
taken to establish the sound relation to the number of vehicles.	
Results	1 1/1 11 1 1 /
The test data determined that the rubberized asphalt portion of the roadw to 9 decibels. The rubberized asphalt was an effective method of attenus	vay reduced the sound levels by 4 at the sound levels by 4
during the day. Certain traffic conditions such as amount of heavy trucks	s, speed and flow, influenced the
decibel readings however, the reduction of noise created by the rubberiz	ed asphalt remained constant
throughout the testing.	
The results from the test concluded that the use of rubberized asphalt res	sulted in the decrease of noise by
an average of 6.5 decibels. This is an 80% reduction in sound making ru	ubberized asphalt beneficial as a
traffic noise mitigation measure. Using rubberized asphalt will reduce the	ne dependency on traditional
traine sound barriers such as wans, bernis and vegetatino surps.	
Summary Statement	
This project tests the sound levels emitted by traffic traveling over rubbe	arized asphalt vs standard asphalt
concrete.	enzed asphant vs standard asphant
Help Received	
Caltrans angineers Maurice El Hage and Nilesh Dandye supplied mans	information and allowed majorite

Caltrans engineers, Maurice El Hage and Nilesh Pandya supplied maps, information and allowed me onto the highway right of way. Mother manned one decibel meter since readings needed to be taken simultaneously, Teacher, Mr. Dolyniuk loaned the decibel meters.