



2009 SAE Mini-Baja  
Alabama Competition Proposal

Society of Automotive Engineers – LSSU Student Chapter



***Sponsor Information***  
***Packet***

## Introduction

The SAE Mini Baja® competition originated at the University of South Carolina in 1976, under the direction of Dr. John F. Stevens. In the 30 years since that time, the Mini Baja Series has grown to become a premier engineering design series for university teams. The Mini Baja design competition is comprised of three regional competitions that expose students to real-life engineering design processes and the challenges that are associated with them. Students gain practical experience in aspects of fundraising, engineering, design and the fabrication of a complete off-road Mini Baja vehicle.

Engineering students from Lake Superior State University in Sault Ste. Marie, MI, have the opportunity to compete in this event with universities throughout the United States, Canada, and other nations from North and South America. Our SAE student group is composed entirely of underclassmen who volunteer their time and skills to this project, while the majority of competing teams are fulfilling a senior design curriculum requirement.

## Competition Information

Our Student Engineering Chapter is currently designing and fabricating a Mini Baja vehicle for the annual competition in Alabama this April. Our Mini Baja vehicle will be tested based on differing measures of static and dynamic principles. We will be scored contingent upon our ability to maneuver an obstacle course, pull weight, climb rocks, and scale hills. Top speed, acceleration, braking, and endurance will also be measured. The event will assess the functionality of our student developed Mini Baja vehicle by its static and dynamic performance as well as a four-hour endurance test on a modified motocross track.

## Proposal

Our engineering students are committed, focused, and up to the challenge of this event. We must raise \$15,000 for the materials used to construct this innovative vehicle. Your financial support is needed! With your help, the 'First Place Trophy' will be displayed in Sault St. Marie and our community will take pride in the educational excellence Lake Superior State University has to offer.

An expected cost breakdown is attached. Thank you for providing Lake Superior State University engineering students the opportunity to compete in this event.

### Vehicle Goals and Preliminary Budget

Category	Goals	Corresponding Items	Cost
Frame	-Light Weight -Decrease angle of driver's seat	Raw Materials	\$600
Power Train	-Low center of Gravity -Maximum vehicle top speed / acceleration	Engine Transmission	Reuse \$1000
Drive Train	-Most effective -Most effective	Differential Gears, Chain	\$100 \$200
Suspension	-Maintain long travel with less weight -Minimize roll-over potential -Bearing, Bushings	Suspension Wheels and Tires Bearings, Bushings	\$1200 \$800 \$500
Steering	-Tight turning radius -Small steering ratio	Steering	\$1000
Braking	Four wheel lock up on dry pavement	Brakes	\$850
		<u>Subtotal</u>	\$6250
Safety Equipment	-No rollovers -No injuries -Meet Safety requirements	5 point harness Wrist Restraints Helmets Fire Extinguisher Foam Padding Seat	\$200 \$100 \$500 \$75 \$100 \$500
		<u>Subtotal</u>	\$1475
Marketing	-Raise Funds -Increase awareness of the competition	Advertising Copies/Postage Apparel with logo's	\$750 \$350 \$400
		<u>Subtotal</u>	\$1500
Tools	-Good quality tools, for continuous use	Hand Tools Air Tools Power Tools	\$300 \$500 \$200
		<u>Subtotal</u>	\$1000
Winter Competition	Michigan Technological University Annual Winter Baja February 2009	Transportation and Lodging to Event Entrance Fee	\$1200 \$100
		<u>Subtotal</u>	\$1300
Spring Competition	Society of Automotive Engineers Alabama Event April 2009	Transportation and Lodging to Event Entrance Fee	\$2800 \$600
		<u>Subtotal</u>	\$3400
		<u>Total Cost</u>	\$14,925

What we can do for you in exchange for your tax deductible donation  
of materials or funding:

<b>Gift in Kind</b>	<b>\$100-\$250</b>
<ul style="list-style-type: none"> <li>• Certificate for display in business</li> </ul>	
<b>Bronze Sponsorship</b>	<b>\$250-\$999</b>
<ul style="list-style-type: none"> <li>• Certificate for display in business</li> <li>• Small logo on car</li> <li>• Link and logo on team website</li> </ul>	
<b>Silver Sponsorship</b>	<b>\$1000-\$2499</b>
<ul style="list-style-type: none"> <li>• Plaque for display in business</li> <li>• Medium logo on car</li> <li>• Link and logo on team website</li> <li>• Logo on back of team shirts</li> <li>• Sponsor mentioned in publications</li> </ul>	
<b>Gold Sponsorship</b>	<b>\$2500 or Greater</b>
<ul style="list-style-type: none"> <li>• Plaque for display in business</li> <li>• Plaque displayed in donor board at LSSU</li> <li>• Large Logo on car</li> <li>• Link and logo on team website</li> <li>• Logo on sleeve of team shirts</li> <li>• Sponsor mentioned in all publications</li> <li>• Car available for booking test drive</li> </ul>	
<b>Platinum Sponsorship</b>	<b>Highest Contribution</b>
<ul style="list-style-type: none"> <li>• Plaque for display in business</li> <li>• Plaque displayed in donor board at LSSU</li> <li>• Large Logo on car</li> <li>• Link and logo on team website</li> <li>• Logo on front of team shirt</li> <li>• Primary Logo on all team apparel</li> <li>• Complimentary team hats</li> <li>• Sponsor mentioned in all publications</li> <li>• Car available for booking test drive or display</li> <li>• Company colors on car</li> <li>• Team appearance for company</li> <li>• Large company banner displayed in the pit area at the race</li> </ul>	

**Our Current Sponsors:**

- Lake Superior State University’s Engineering Department is offering matched funding.
- Polaris currently offers Baja SAE participants parts at cost.
- **“Your Company’s Name Here!”**

## *Can we count on you to join our Team?*

Company Name: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Pledged Amount: \_\_\_\_\_

Remember your contribution is tax deductible, the first half of every dollar is a tax credit the second half of your donation is a tax deduction.

*Ex. \$5000 Donation = \$2500 tax credit, \$1250 deductible income =  
\$1250 total cost to Company*

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### **Thanks!**

Potential 2008 Sponsors,

Thank you for your time and support in advance. Your contribution will allow engineering students at Lake Superior State University to learn through the best method: hands-on experience. Your sponsorship is vital to our success.

### **Contact Information**

All questions can be directed to our team Fundraising Coordinator Brandon Roy. We consider all of our Supporters to be members of our team; if you would like to become a sponsor of our team, please contact any one of the following.

#### **Engineering Advisor**

**Robert Hildebrand**

Email: [rhildebrand@lssu.edu](mailto:rhildebrand@lssu.edu) Phone: (906) 635-2139

#### **Fundraising Coordinator**

**Brandon Roy**

Email: [broy1@lssu.edu](mailto:broy1@lssu.edu) Phone: (231) 590-5606