ENGINEERING BUILD REVIEW

For participation in the Formula Sun Grand Prix/American Solar Challenge

University Name	
Team Name	
Solar Car #	
Events & Year	☐ Formula Sun Grand Prix _____ (year) ☐ American Solar Challenge _____ (year)

This documents the review of the **solar vehicle** by a practitioner or an academic in an engineering field appropriate for this application that sound engineering practice has been applied to the design and build of the vehicle and that the vehicle is roadworthy and fit-for-purpose to participate in the identified events.

Per the event regulations, each university/team is responsible for the roadworthiness of its solar car. All solar vehicles must be maintained in a safe, roadworthy condition and be operated safely and within the law at all times. All solar vehicles are operated and driven at the team's own risk.

Each university/team is responsible for the safety of its members, and any minimum criteria specified by the Organizers via the regulations and/or correspondence between the teams and the Organizers should not be construed as design specifications for the construction of a "safe" solar vehicle. In addition, passing this engineering review does not guarantee that the solar vehicle will pass scrutineering.

Current event regulations are available at americansolarchallenge.org.

Item Reviewed	Review	Comments
Does the vehicle that has been built align with the description and analysis included in the Mechanical Vehicle Design Report?	☐ Yes ☐ No	
Is the vehicle's chassis suitable for the weight of the vehicle, including transporting the appropriate number of occupants?	☐ Yes ☐ No	
Is the vehicle's chassis adequately built to sustain front, rear, side, and rollover impacts of at minimum 5G loads, protecting the occupants inside the roll cage? *(Reg 10.3, Appendix F)*	☐ Yes ☐ No	

Has the vehicle been designed and constructed in such a way that, in the event of a collision, parts of the vehicle (especially the array & body panels) will be deflected away from the occupant space?	☐ Yes ☐ No	
Are the vehicle's occupant restraints and their attachment/anchors to the vehicle adequately constructed, suitable for the application, and fit-for-purpose?	☐ Yes ☐ No	
Are the front/rear suspension systems and their attachment to the chassis suitable for the vehicle and capable of a minimum of: • 1G turn, • 2G bump, • 1G braking case load, and • the worst-case condition of the loads combined?	☐ Yes ☐ No	
Is the steering system suitable for the vehicle and capable of a minimum of: • 1G turn, • 2G bump, • 1G braking case load, and • the worst-case condition of the loads combined?	☐ Yes ☐ No	
Are all fasteners of suitable type, strength, durability, and properly secured for their application? *(Reg 10.4)*	☐ Yes ☐ No	
Are the wheels of a suitable strength and attachment to sustain the lateral, horizontal and braking forces expected in the event?	☐ Yes ☐ No	
Is the load rating of the tires more than the maximum static load imposed by the fully-laden solar car? *(Reg 10.2.C.5)*	☐ Yes ☐ No	
Does the vehicle have two suitable, independent mechanical braking systems, such that if one system fails the other can still bring the solar vehicle to a stop? *(Reg 10.5)*	☐ Yes ☐ No	
Event Participation		
Is the vehicle suitable and fit-for-purpose for participation in the Formula Sun Grand Prix, a 3-day (8 hours per day) closed, road-course track event?	☐ Yes ☐ No	
Is the vehicle roadworthy and fit-for-purpose for participation in the American Solar Challenge, a road-rally style, open road event of 1500-2000+ miles?	☐ Yes ☐ No	

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I have reviewed the design and build of the solar vehicle specified on page 1 and the applicable regulations as appropriate:

- The solar vehicle has been designed and constructed using sound engineering practice,
- The solar vehicle meets the design parameters where stated, and
- The solar vehicle is roadworthy and fit for the purpose of being in the identified events above.

Signature	
Printed Name	
Date *(must be within 3 months of the start of the event)*	
Title	
Phone Number	
Email Address	

***** THE ABOVE REVIEWER MUST BE AUTHORIZED BY EITHER**
(1) THE TEAM ADVISOR IDENTIFIED ON THE TEAM PARTICIPATION AGREEMENT OR
(2) THE UNIVERSITY OFFICER THAT SIGNED THE TEAM PARTICIPATION AGREEMENT ***

I give authorization to the above person to complete this review on behalf of the university.

Signature	
Printed Name	
Date	
Title	
Phone Number	
Email Address	

Email a scanned copy of the completed document to ascteams@americansolarchallenge.org. Teams must bring the original document with them to present at onsite registration.